West Harbor Modification Project

Final Subsequent Environmental Impact Report



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THE PORT OF LOS ANGELES

TRANSMITTAL 1

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Acronyms and Abbreviations

Acronym	Definition
2016 SPPM Addendum	West Harbor Project
ACTA	Alameda Corridor Transportation Authority
ADT	average daily traffic
AES	Audio Engineering Society
Applicant	Proposed Project developer
AQ	air quality mitigation measure
BMPs	best management practices
Board	Board of Harbor Commissioners
Caltrans	California Department of Transportation
CBC	California Building Code
CCR	California Code of Regulations
CEN	Committee for Standardization
CEQA	California Environmental Quality Act
CeSPNC	Central San Pedro Neighborhood Council
CGS	California Geological Survey
City	City of Los Angeles's
CSPNC	Coastal San Pedro Neighborhood Council
Draft SEIR	Draft Subsequent Environmental Impact Report
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPS	expanded polystyrene
Final SEIR	Final Subsequent Environmental Impact Report
General Plan	City of Los Angeles's General Plan 20235
GHG	greenhouse gas emissions
I-	Interstate
I-110	Harbor Freeway
IDA	International Dark Sky Association
IESNA	Illuminating Engineering Society of North America
IS	Initial Study
IS/NOP	Initial Study and a Notice of Preparation
LAHD or Port	Los Angeles Harbor Department
LARWQCB	Los Angeles Regional Water Quality Control Board
L_{eq} dBZ	predicted average noise level
L_{max}	maximum noise level
LOS	level-of-service
MM	mitigation measure
MMPA	Marine Mammals Protection Act
MMRP	Mitigation Monitoring and Reporting Program

Acronym	Definition
MND	Mitigated Negative Declaration
MOTEMS	Marine Oil Terminal Engineering and Maintenance Standards
ND	Negative Declaration
NEPA	National Environmental Policy Act
NOI	Notice of Intent
PCH	Pacific Coast Highway
PFAS	polyfluoroalkyl substances
Port	Port of Los Angeles
PRC	California Public Resources Code
Project site	Ports O' Call Village area
Proposed Project	West Harbor Modification Project
PS	public services mitigation measure
RWQCB	Regional Water Quality Control Board
SCH	State Clearinghouse
SEIR	Subsequent Environmental Impact Report
SMP	Soil Management Plan
SOP	Standard Operating Procedures
SPLs	sound pressure levels
SPPM	San Pedro Public Market
SPW	San Pedro Waterfront
SR-	State Route
SWRCB	State Water Resources Control Board
TDM	Transportation Demand Management
TDZ	Tsunami Design Zone
VMT	vehicle miles traveled

Chapter 1
Introduction

1.1 Organization of the Final Subsequent Environmental Impact Report

This chapter presents background and introductory information for the West Harbor Modification Project (Proposed Project). This chapter also describes the Proposed Project and its purpose under the California Environmental Quality Act (CEQA); explains the authorities of the Los Angeles Harbor Department (LAHD or Port), the lead agency preparing this Final Subsequent Environmental Impact Report (Final SEIR); the scope and content of the Final SEIR; and the public outreach for the Proposed Project. Chapter 2, *Response to Comments*, contains the public comments on the Draft SEIR and the lead agency's responses to those comments. Chapter 3, *Modifications to the Draft Subsequent Environmental Impact Report*, contains the changes made to the Draft SEIR for this Final SEIR.

1.2 California Environmental Quality Act Review Process

CEQA was enacted by the California Legislature in 1970 and requires public agency decision-makers to consider the environmental effects of their actions. When a state or local agency determines that a project has the potential for significant environmental effects, it is required to prepare an EIR. The purpose of an EIR is to identify potentially significant impacts of a project on the environment and to indicate the manner in which those significant impacts can be mitigated or avoided.

In accordance with CEQA Guidelines Section 15121(a), the purpose of an EIR is to serve as an informational document that: "will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project." The Proposed Project requires discretionary approval from LAHD and, therefore, it is subject to the requirements of CEQA.

A Final Environmental Impact Statement/Environmental Impact Report for the SPW Project was certified by the Board of Harbor Commissioners (Board) on September 29, 2009 (State Clearinghouse [SCH] No. 2005061041) (referred to hereafter as the 2009 SPW EIS/EIR). It addressed potential impacts associated with implementation of redevelopment of the SPW area. In May 2016, the Board considered an addendum to the 2009 SPW EIS/EIR prior to approving the SPPM Project (2016 SPPM Addendum). In 2019, the Board considered another addendum prior to approving the extension of Lease 915 with San Pedro Public Market, LLC for an additional 16 years. The Proposed Project herein represents a change to the SPPM and SPW Projects previously reviewed in accordance with CEQA. No changes are proposed that would affect any federal permits or require any federal

approvals. Therefore, National Environmental Policy Act evaluation is not required for the Proposed Project. Additional details are provided in Section 1.5, *Prcject Background*.

1.3 Intended Use of the Final Subsequent Environmental Impact Report

This Final SEIR for the Proposed Project has been prepared in accordance with CEQA. The LAHD is the local lead agency for the Proposed Project and has prepared this Final SEIR. This Final SEIR is an informational document that will inform public agency decision-makers and the public of the significant environmental effects of the Proposed Project and will recommend ways to minimize the significant effects. The document fulfills the requirements of CEQA (California Public Resources Code [PRC] 21000, et seq.), the State CEQA Guidelines (California Code of Regulations [CCR] 15000, et seq.). This Final SEIR will support the permitting process of all agencies, including the Los Angeles Board of Harbor Commissioners (Board), whose discretionary approvals must be obtained for elements of the Proposed Project.

1.4 Notice of Preparation and Scoping Process

1.4.1 Initial Study /Notice of Preparation

As the CEQA lead agency, LAHD was responsible for determining the scope and content of the Draft SEIR, a process referred to as *scoping*. As part of the scoping process, LAHD considered the environmental resources present within its jurisdiction and the surrounding area and identified the probable environmental effects of the Proposed Project by preparing an Initial Study and a Notice of Preparation (IS/NOP). The IS/NOP evaluated the proposed modification to the SPPM Project, previously approved in May 2016 with an EIR Addendum to the 2009 SPW EIS/EIR. The IS explained the basis for scoping the environmental resources that would warrant additional consideration in the Draft SEIR and provided the basis for the environmental resources that were excluded from further environmental consideration.

In April 2022, the LAHD issued the IS/NOP to inform responsible and trustee agencies, public agencies, and the public that the LAHD was preparing a Draft SEIR to update the 2009 SPW EIS/EIR. The IS/NOP was circulated for a 30-day public review, with the comment period starting on April 14, 2022, and ending on May 15, 2022, and a virtual scoping meeting was held on May 3, 2022. Comments received in response to the IS/NOP and during the public scoping meeting were used to inform the scope of the Draft SEIR. Based on LAHD's evaluation of the probable effects of the Proposed Project and a thorough review of the comments on the IS/NOP, the Draft SEIR analyzed effects associated with the following resources:

- Aesthetics
- Air Quality
- Biological Resources

- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Noise
- Public Services
- Transportation

Consistent with the findings of the 2009 SPW EIS/EIR, it was determined during preparation of the IS/NOP that the Proposed Project would have either a less-than-significant impact or no impact associated with the following resources:

- Agriculture and Forestry Resources
- Energy
- Geology and Soils
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Recreation
- Utilities and Service Systems
- Wildfire

The following areas were found to have No Impacts by the IS/NOP but were carried into the Draft SEIR based on the Proposed Project revision to include the 208 E. 22nd Street Parking Lot component:

- Hazards and Hazardous Materials
- Cultural Resources
- Tribal Cultural Resources

1.4.2 Draft Subsequent Environmental Impact Report and Public Review

The Draft SEIR was released for public review on November 6, 2024, for a 65-day comment period, which ended on January 10, 2025. A virtual public meeting was held on November 14, 2024. The LAHD received 232 comment letters in addition to the comments received during the virtual public meeting.

1.4.3 Final Subsequent Environmental Impact Report and Certification

This Final SEIR has been provided to the public for review and participation in the planning process. This Final SEIR is being distributed to provide the basis for decision-making by the CEQA lead agency and other concerned agencies. Certification of the SEIR for the Proposed Project must precede Proposed Project approval. Proposed Project approval requires that the Board review and consider the SEIR; adopt Findings of Fact on the environmental effects of the Proposed Project and the feasibility of mitigation measures; adopt a Statement of Overriding Considerations for the significant and unavoidable impacts; approve the Proposed Project analyzed in the SEIR; and adopt a Mitigation Monitoring and Reporting Program (MMRP).

1.5 Project Background

In 2009, LAHD certified an Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) for the San Pedro Waterfront (SPW) Project (SCH No. 2005061041) (2009 SPW EIS/EIR). One of the primary objectives of the SPW Project was to provide enhanced visitor-serving commercial opportunities within the former Ports O' Call Village area (Proposed Project site) along the Main Channel of the Port of Los Angeles (Port). Many of the potentially significant environmental impacts identified in the 2009 SPW EIS/EIR were determined to be less than significant or were reduced to a less-than-significant level through either the adoption of mitigation measures or the incorporation of project revisions. Impacts related to aesthetics, air quality and meteorology, biological resources, geology, noise, recreation, ground transportation and circulation, and water quality sediments and oceanography, however, were identified as significant and unavoidable. The Board adopted a Statement of Overriding Considerations and a MMRP containing 91 mitigation measures to address these impacts, both during construction and operation of the SPW Project.

In May 2016, the Board approved an Addendum to the 2009 SPW EIS/EIR for the San Pedro Public Market (SPPM) Project, now known as the West Harbor Project (2016 SPPM Addendum). The SPPM Project included a more specific concept for the former Ports O' Call Village site. The 2016 SPPM Addendum was prepared to address development of a smaller building area, the inclusion of a portion of the Town Square originally evaluated in the 2009 SPW EIS/EIR, reconfiguration of the waterfront promenade, extension of the proposed lease term from 30 years to 50 years, and possible modifications to the U.S. Army Corps of Engineers permits. The 2016 SPPM Addendum found that the SPPM Project would not result in any new significant impacts or a substantial increase in the severity of previously identified impacts that were analyzed in the 2009 SPW EIS/EIR. A revised MMRP identifying 28 mitigation measures that apply specifically to the SPPM Project was incorporated into the 2016 SPPM Addendum. The 2019 SPPM Addendum was prepared to extend the duration of the lease for an additional 16 years.

The Proposed Project developer (Tenant) has proposed changes to the SPPM Project, including expanding the 500-seat outdoor amphitheater to 6,200 seats and using the amphitheater area as an entertainment lawn venue for public and private events and as a passive open park space when not

otherwise programmed. The amphitheater operations will consist of 100 ticketed shows annually as well as pyrotechnics (i.e., fireworks) which may be used at certain events. Specifically, tenant-sponsored fireworks may be launched from a barge (or barges) at approximately 10 events per year, with the show lasting up to 10 minutes, with one show annually permitted to run for up to 20 minutes. Three annual Port of Los Angeles fireworks shows will also be permitted and subject to the requirements outlined in this document, with 2 shows lasting up to 10 minutes and one show lasting up to 20 minutes. In addition, the Tenant has proposed a 175-foot-diameter Ferris wheel, which differs from the 100-foot-diameter Ferris wheel that was included in and analyzed in the 2016 SPPM Addendum. The Ferris wheel would be located in the northern portion of the Proposed Project Site, in the former City Park area currently referred to as North Park.

There would also be an amusement attractions component of the Proposed Project, which was previously approved for the Discovery Sea Amusement Area in the 2016 SPPM Addendum. These would be developed in the North Park area (previously referred to as City Park Area) of the Proposed Project Site. Attractions could include a double-decker carousel, wave swings, a drop tower, or other amusement attractions found in similar waterfront destinations. These structures are not anticipated to exceed 75 feet in height.

The Proposed Project would maintain other elements and uses previously approved for the 6.4-acre Discovery Sea Amusement Area, including building improvements, park area, distributed green spaces, and garden areas on the remaining approximately 3 acres. Other previously analyzed Project elements, such as the retail, restaurant, and commercial uses, would remain the same under the Proposed Project as described and analyzed in the 2016 and 2019 SPPM Addenda. It was also determined that the Proposed Project would not affect any federal permits or require any federal approvals. Therefore, no National Environmental Policy Act (NEPA) evaluation was required.

As a result of comments received on the Notice of Preparation/Initial Study (NOP/IS), improvements to the 208 E. 22nd Street Parking Lot were added to the Proposed Project; additional spaces would be available for the project and the larger San Pedro Waterfront development. The parking lot area consists of a 20-acre site, of which 1.92 acres are developed for parking. The additional 18.1 acres would be graded and paved to accommodate up to 2,600 additional parking stalls.

1.5.1 Previous Environmental Documentation

Consistent with State CEQA Guidelines Section 15150, the following documents were used in preparation of this Final SEIR and are incorporated herein by reference.

- Port of Los Angeles. 2008. San Pedro Waterfront Project Draft EIS/EIR (SCH No. 2005061041). September.
- Port of Los Angeles. 2009a. San Pedro Waterfront Project Findings of Fact and Statement of Overriding Considerations. September.
- Port of Los Angeles. 2009b. San Pedro Waterfront Project Mitigation Monitoring Report and Program. September.
- Port of Los Angeles. 2009c. San Pedro Waterfront Project Final EIS/EIR (SCH No. 2005061041). September.

- Port of Los Angeles. 2016. EIR Addendum to the San Pedro Waterfront Project Final EIR for the San Pedro Public Market Project (SCH No. 2005061041). May.
- Port of Los Angeles. 2019. EIR Addendum to the San Pedro Waterfront Project Final EIR for the San Pedro Public Market 2 (SCH No. 2005061041). November.

1.6 Project Objectives

Proposed Project objectives include the following:

- Enhance and revitalize the existing SPW area by including a substantially larger outdoor concert amphitheater and entertainment lawn venue and additional attractions to draw visitors to the SPW area, thereby increasing the public visibility of San Pedro in general and the waterfront specifically;
- Update previously adopted mitigation measures to reflect changes since their considerations;
- Provide public access to the SPW through increased parking amenities, including the addition of the 208 E. 22nd Street Parking Lot improvements and pedestrian walkways;
- Provide for a variety of waterfront uses, including recreational, commercial, and Port-related waterfront uses; and
- Provide for enhanced visitor-serving commercial opportunities within the former site of Ports O' Call Village (Proposed Project site), complementary to those found in downtown San Pedro.

1.7 Project Location and Setting

1.7.1 Regional Setting

The Proposed Project is located within the Port of Los Angeles. The Port is located in San Pedro Bay in the County of Los Angeles, approximately 20 miles south of downtown Los Angeles. The Port is adjacent to the community of San Pedro to the west, the Wilmington community to the north, the Port of Long Beach to the east, and the Pacific Ocean to the south. In total, the Port encompasses approximately 7,300 acres of land and water along 43 miles of waterfront.

The Port is an area of mixed uses, supporting various maritime-themed activities. The Port operations are predominantly centered on shipping activities, including containerized, break-bulk, dry-bulk, liquid-bulk, auto, and intermodal rail shipping. In addition to the large shipping industry at the Port, there is also a cruise ship industry and a commercial fishing fleet. The Port also accommodates boat repair yards and provides slips for approximately 3,950 recreational vessels, 150 commercial fishing boats, 35 miscellaneous small service crafts, and 15 charter vessels that handle sport fishing and harbor cruises. The Port has retail shops and restaurants, which are primarily along the west side of the Main Channel. It also has recreation, community, and cultural facilities, such as a public swimming beach, Cabrillo Beach Youth Camp, the Cabrillo Marine Aquarium, and the Los Angeles Maritime Museum.

1.7.2 Surrounding and Nearby Land Use

The Proposed Project site is within the SPW area. Steep bluffs to the northwest provide a natural physical edge between portions of the San Pedro community and the Proposed Project site. Residences are located approximately 1,450 feet west of the Proposed Project site, and the 208 E. 22nd Street Parking Lot is located between Miner Street and Harbor Boulevard, south of the Proposed Project site.

Railroad lines that extended through the Proposed Project area—from the former Westway Terminal to just past the Project site, within the former Southern Pacific railyard, both along the eastern side of Harbor Boulevard and under the Vincent Thomas Bridge at the northern end of the SPW area—have been abandoned and removed. Just south of the Proposed Project site, in the Southern Pacific Slip, is an active commercial fishing fleet. For more than 100 years, the Port has been a premier location for commercial fishing. Today, although smaller than it once was, the commercial fishing fleet at the Port is intact, providing fresh fish to both U.S. and Asian markets. The Municipal Fish Market at Berth 72, adjacent to the Southern Pacific Slip, is associated with these fishing operations.

Berths 91 to 93, north of the Proposed Project site, are currently used by the World Cruise Center, which has been active at the Port for more than 50 years (Port of Los Angeles 2018). The World Cruise Center comprises two terminal buildings within an 18-acre dedicated cruise facility. The Los Angeles Maritime Museum is located at Berth 84.

1.7.3 Existing Land Use and Zoning

California state law (Government Code Section 65300) requires that each city prepare and adopt a comprehensive, long-term plan for its future development. This general plan must contain seven elements: (1) land use, (2) circulation, (3) housing, (4) conservation, (5) open space, (6) noise, and (7) safety. In addition to these elements, state law permits cities to include optional elements in their general plans, thereby providing local governments with the flexibility to address the specific needs and unique character of their jurisdictions. California state law also requires that the day-to-day decisions of a city follow logically from and be consistent with the general plan. More specifically, Government Code Sections 65860, 66473.5, and 65647.4 require that zoning ordinances, subdivision, and parcel-map approvals be consistent with the general plan.

The City of Los Angeles's (City) *General Plan 2035* (City of Los Angeles 2022) (General Plan) is a comprehensive, long-term plan for the physical development of the city. It includes the following 11 citywide elements: (1) framework, (2) transportation, (3) infrastructure systems, (4) housing, (5) noise, (6) air quality, (7) conservation, (8) open space, (9) historic preservation and cultural resources, (10) safety, (11) public facilities and services, and (11) land use. The Land Use Element (City of Los Angeles 2017) includes 35 local area plans, known as Community Plans, as well as plans for the Port and Los Angeles International Airport.

The Port of Los Angeles Plan is part of the General Plan and serves as the guide for continued development and operation of the Port (City of Los Angeles 2017). The primary purposes of the Port of Los Angeles Plan are as follows;

- Promote an arrangement of land and water uses, circulation, and services that contribute to the economic, social, and physical health, safety, welfare, and convenience of the Port within the larger context of the city;
- Guide development, betterment, and change within the Port to meet existing and anticipated needs and conditions;
- Contribute to a safe and healthful environment;
- Balance growth and stability;
- Reflect economic potentialities and limitations, land and water developments, and other trends; and
- Protect investments to the extent reasonable and feasible.

The Project site has a General Plan designation of General/Bulk Cargo – Non-Hazardous (Industrial/Commercial) (City of Los Angeles 2017). General cargo includes container, unit, break-bulk, neo-bulk, passenger facility, and related uses (City of Los Angeles 2017). Industrial uses pertain to those lands that are either owned or leased for institutional activities and related uses or federal, state, and city governments. Commercial uses include restaurants and tourist attractions, office facilities, retail facilities, and related uses.

1.8 Anticipated Project Approvals and Permits

The approvals or permits that could be required for the Proposed Project are anticipated to include, but not be limited, to the following.

- **City of Los Angeles**: Building, occupancy, electrical, and mechanical permits to include compliance with LID requirements;
- **Los Angeles Fire Department**: Approval of fire suppression system;
- **LAHD**: Issuance of a Harbor Engineer Permit, Coastal Development Permit, or amendment and site lease amendments, as necessary;
- **South Coast Air Quality Management District**: Permit for emergency generator;
- **State Water Resources Control Board**: Construction General Permit;
- **Los Angeles Regional Water Quality Control Board**:
    - Issuance of a National Pollution Discharge Elimination System (NPDES) permit for fireworks.
    - MS4 Permit – As of June 1, 2017, Regional Water Quality Control Boards, as the Permitting Authorities, started requiring all MS4 permits to have trash control implementation

requirements and compliance milestones to demonstrate progress towards 100 percent compliance with the Trash Provisions. On June 22, 2022, the State Water Board reissued the Statewide Department of Transportation General Permit. On September 8, 2022, the State Water Board reissued the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities. These reissued permits implement the Trash Provisions for the Department of Transportation and construction dischargers. The General Permits for Stormwater Discharges Associated with Industrial Activities and the Small MS4 General Permit will implement the Trash Provisions when reissued.

1.9 Mitigation Measure Changes

This Draft SEIR also evaluates modifications to the previously approved Mitigation Monitoring and Reporting Program (MMRP) for the 2009 SPW EIS/EIR and the revised MMRP for the 2016 SPPM Addendum. These modifications are necessary to update previous mitigation measures to current regulatory standards or modify them according to their effectiveness and need. Air Quality (AQ) and Public Services (PS) mitigation measures proposed for modification in the Initial Study (IS)/NOP (see Appendix B) are listed below. The analysis and proposed modifications included in the IS/NOP will be detailed in the respective chapters.

MM-AQ-3: *Fleet Modernization for On-Road Trucks During Construction*

MM-AQ-4: *Fleet Modernization for Construction Equipment*

MM-AQ-5: *Fugitive Dust*

MM-AQ-25: *Recycling*

MM-AQ-27: *Compact Fluorescent Light Bulbs*

MM-AQ-28: *Energy Audit*

MM-PS-4: *Comply with Assembly Bill 939*

MM-PS-5: *Water Conservation and Wastewater Reduction*

MM-PS-6: *Employ Energy Conservation Measures*

Changes to transportation-related mitigation measures were not analyzed in the IS/NOP but are addressed in Section 3.9, *Transportation*, of this Draft SEIR.

1.10 California Environmental Quality Act Baseline

CEQA requires a SEIR to assess the significance of a project's impacts in comparison to a baseline that consists of the existing physical environment conditions at and near a project site. Baseline conditions are normally measured at the time of the commencement of environmental review of a project. State CEQA Guidelines, Section 15125, subdivision (a), provides:

> An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time of the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determine whether an impact is significant.

The existing conditions are discussed above in Sections 1.7.1 through 1.7.3.

A description of the baseline conditions is included also in Chapter 2, *Existing Setting and Project Description*, of the Draft SEIR and, when special circumstances are present, details are provided in the setting of the respective resource sections in Chapter 3, *Environmental Impact Analysis*, of the Draft SEIR. These environmental conditions constitute the baseline physical conditions by which the CEQA lead agency determines whether an impact would be significant.

1.11 Proposed Project Elements

As more particularly described below, the Proposed Project would create an outdoor amphitheater that would occupy approximately 2.1 acres, including an area of more than 50,000 square feet with an artificial lawn; an approximately 35,000-square-foot stage, backstage, loading areas, and box office area; an approximately 22,000-square-foot space accommodating concessions, merchandise sales, restrooms located south of the lawn, and circulation space east and west of the lawn area. Amphitheater capacity would be 6,200 patrons.

In addition, the Proposed Project would include a 175-foot-diameter Ferris wheel, which would replace the 100-foot-diameter Ferris wheel that was included in and analyzed in the 2016 SPPM Addendum. The Ferris wheel would be located on the northern portion of the Proposed Project Site, in the former City Park area currently referred to as North Park.

Amusement attractions previously approved for the Discovery Sea Amusement Area in the 2016 SPPM Addendum would be developed in the former City Park area, currently referred to as the North Park area of the Proposed Project Site. Attractions could include double-decker carousel, wave swings, a drop tower, or other amusement attractions found in similar waterfront destinations; these structures are not anticipated to exceed 75 feet in height.

The Proposed Project would maintain other elements and uses previously approved for the 6.4-acre Discovery Sea Amusement Area, including building improvements, park area, distributed green spaces, and garden areas on the remaining approximately 3 acres. Other previously analyzed project elements, such as the retail, restaurant, and commercial uses, would remain the same under the

Proposed Project as described and analyzed in the 2016 and 2019 SPPM Addenda and are not included in this assessment.

Although the parking analyzed in the 2009 SPW EIS/EIR and 2016 and 2019 SPPM Addenda would be utilized for all uses within the Proposed Project, both existing and proposed, there was concern during the NOP scoping period that parking would be insufficient. Therefore, based on the comments received during the NOP comment period, improvements to the 208 E. 22nd Street Parking Lot have been added to the Proposed Project. Additional parking spaces would also be available for the larger SPW Project. Under existing conditions, the 22nd Street overflow lot has 150 paved and marked stalls, with an unpaved/unmarked area for approximately 500 additional cars, should the need arise. The existing combined paved and unpaved areas total 6.75 acres.

As part of the Proposed Project, the entirety of the 20-acre site at 208 E. 22nd Street, except for 1.92 acres of already-paved parking and some landscaping along the east side, would be paved and reconfigured to accommodate up to 2,600 parking stalls. A pedestrian/bicycle pathway would be constructed in the northwestern portion of the site near Miner Street and connect the western side of the parking lot to Harbor Boulevard directly north of the parking lot. A new 1,000-square-foot restroom would also be constructed at the northernmost corner of the lot. An additional entrance would be provided along Harbor Boulevard, which would require removing the existing Red Car maintenance facility, loading platform, rails, and parking lot along Miner Street, along with the Pacific Performance Racing building at the corner of Harbor Boulevard and 22nd Street. Building demolition would include the two-story, 3,500-square-foot building at 264 W. 22nd Street and the 3,000-square-foot, single-story building at 270 W. 22nd Street. Site grading would require importing up to 49,000 cubic yards of soil because of the need to cap an area of contaminated soil (Figure 2-8). Up to 5,000 cubic yards of soil would be exported from the site. Grading activities are scheduled to occur over approximately 30 days.

1.12 Changes to the Draft Subsequent Environmental Impact Report

The Final SEIR contains modifications that have been made to the Draft SEIR. Actual changes to the text, organized by chapters and sections, are presented in Chapter 3, *Modifications to the Draft Subsequent Environmental Impact Report*, of this Final SEIR. Changes noted in Chapter 3 are identified by text strikeout and/or underline. The changes and clarifications presented in Chapter 3 were reviewed to determine whether they warranted recirculation of the SEIR prior to certification according to the CEQA Guidelines and statutes. The changes would not result in any new significant environmental impacts or a substantial increase in the severity of an existing environmental effect.

Below is a brief summary of the key changes made to the Draft SEIR. These changes are described in more detail in Chapter 3 of this Final SEIR.

- **Table ES-1:** Summary of Project Impacts and Mitigation Measures has been updated to reflect minor changes to various mitigation measures throughout the Final SEIR.

- **Chapter 2 Existing Setting and Project Description:** This chapter includes revisions to the Project Objectives and revises the list of permits that could be required for Project approval.
- **Section 3.1 Aesthetics:** This section was updated to provide additional background information about the proposed fireworks shows.
- **Section 3.3 Biological Resources:** This section was updated to include additional clarifying information requested by commenters. The information includes Proposed Project-related noise sources that could affect marine mammals, as well as information about the harassment criterion for harbor seals and for all other pinnipeds. The section was updated to include additional information about the effects of nighttime lighting on marine mammals and avian species. Lastly, minor revisions were made to the mitigation measures.
- **Section 3.8 Noise:** The traffic noise section was updated, but the overall impact conclusion remains the same as in the Draft SEIR. Some of the noise mitigation measures were modified slightly based on comments received.
- **Section 3.9 Transportation:** The summary table (Table 3.9-7) was updated to clarify the change in the methods of analysis (from level-of-service [LOS] to vehicle miles traveled [VMT]) during the interim period after the 2009 SPW EIS/EIR was certified.
- **Chapter 5 Alternatives:** The Project objectives were modified to remain consistent with the changes made in Chapter 2, *Existing Setting and Project Description*.

These changes in this Final SEIR are consistent with the findings contained in the Draft SEIR. There would be no new or increased significant effects on the environment due to the changes in the Draft SEIR. Therefore, recirculation is not required per PRC Section 21092.1 and CEQA Guidelines Section 15088.5.

Chapter 2
Responses to Comments

2.1 Distribution of the Draft Subsequent Environmental Impact Report

The Draft Subsequent Environmental Impact Report (Draft SEIR) prepared for the Los Angeles Harbor Department (LAHD) for the Proposed Project was distributed to the public and regulatory agencies on November 6, 2024, for a 65-day comment period, ending on January 10, 2025. Approximately 77 hardcopies and 61 email notifications of the Notice of Availability of the Draft SEIR were mailed to various government agencies, organizations, individuals, and Port tenants. LAHD also conducted a public meeting regarding the Draft SEIR on November 14, 2024, to provide an overview of the Proposed Project and to accept public comments on the Proposed Project and environmental document.

The Draft SEIR was available for review at the following location:

- Los Angeles Harbor Department, 425 South Palos Verdes Street, San Pedro, CA, 90731

Electronic copies of the Draft SEIR were made publicly available. Due to the size of the document, the electronic versions were prepared as a series of PDF files to facilitate downloading and printing. The Draft SEIR was available in its entirety on the LAHD website at https://www.portoflosangeles.org/ceqa.

2.2 Comments on the Draft Subsequent Environmental Impact Report

The public comment and response component of the California Environmental Quality Act (CEQA) process serves an essential role. It allows the lead agency to assess impacts of the Proposed Project based on the analysis of other responsible, concerned, or adjacent agencies and interested parties, and it provides an opportunity to amplify and better explain the analysis that the lead agency has undertaken to determine the potential new or substantially more severe environmental impacts of the Proposed Project. To that extent, responses to comments are intended to provide complete and thorough explanations to commenting agencies, organizations, and individuals, and to improve the overall understanding of the Proposed Project for the decision-making bodies. LAHD received 232 comment letters in addition to the 23 comments presented during the public hearing held on November 14, 2024, during the public review period. Table 2-1 lists those agencies, organizations, and individuals who commented on the Draft SEIR.

Table 2-1. Public Comments Received on the Draft Subsequent Environmental Impact Report

Letter Code	Comment Code	Date	Page
Agencies			
California Department of Transportation	CALTRANS	12/20/24	2-8
California Geological Survey	CGS	12/11/24	2-9
City of Los Angeles–Council District 15	CD15	1/10/25	2-11
City of Rancho Palos Verdes	CRPV	1/10/25	2-11
Department of Toxic Substances Control	DTSC	1/8/25	2-13
County Board of Supervisors - Hahn, Janice	COUNTY	12/17/24	2-13
Organizations			
Advent resources	ADVENT	12/4/24	2-13
Angel's Gate Cultural Center	AGCS	1/27/25	2-14
Art PORT	APORT	12/6/24	2-14
AltaSea	ASEA	12/3/24	2-14
Boys & Girls Club of the Los Angeles Harbor	BGC	12/4/24	2-14
Central San Pedro Neighborhood Council	CeSPNC	12/17/24	2-14
CleanEarth4Kids.org	CE4K	1/9/25	2-18
Coalition for Clean Air	CCA	11/12/24	2-25
Coastal San Pedro Neighborhood Council	CSPNC	12/17/24	2-25
Garden Church	GH	1/10/25	2-41
Genton Cockrum Partners	GCP	1/10/25	2-44
Greater LA Scouting	SCOUTING	12/20/24	2-45
Harbor Community Health Centers	HCHC	12/29/24	2-45
Local 11	LOCAL11	1/10/25	2-45
Los Angeles Maritime Institute	LAMI	1/10/25	2-48
National Museum of the Surface Navy	NMSN	12/3/2024	2-48
PaddleOutPlastic	POP	1/7/25	2-48
San Pedro Bay Historical Society	SPBHS	1/6/25	2-54
San Pedro Chamber of Commerce	SPCC	1/8/25	2-55
San Pedro Downtown Waterfront	SPDW	12/9/24	2-55
SPERRA	SPERRA	1/10/25	2-55
San Pedro Property Alliance	SPPA	12/23/24	2-56
San Pedro Skatepark Association	SPSA	12/19/24	2-56
San Pedro Waterfront Arts District	SPWAD	12/9/24	2-56
Solasta Pictures	Solasta	12/19/24	2-56
South Bay Center for Counseling	SBCC	1/7/25	2-56

Letter Code	Comment Code	Date	Page
Individuals			
Abshear, Debbie	ABSHEAR	1/4/25	2-56
Aguilar, Orlando	AGUILAR	1/6/25	2-57
Alarcon, Kristie	ALARCON	12/19/24	2-597
Alexander, Linda	ALEXANDER	12/22/24	2-57
Allison, Francesca	ALLISON	1/7/25	2-57
Aragon, Andrew	ANDREW	12/3/24	2-57
Ashfield, Rock	ASHFIELD	12/19/24	2-58
B., Felicia	B-FELICIA	1/6/25	2-58
Bagakis, John	BAGAKIS	1/10/25	2-58
Bagliazo, Cathy	BAGLIAZO1	12/15/24	2-58
Bagliazo, Jack	BAGLIAZO2	12/15/24	2-58
Baker, Arley	BAKER	1/7/25	2-58
Baric, Jack	BARRIC	1/7/25	2-58
Barsness, Jennifer	BARSNESS	12/4/24	2-59
Beaty, Thomas	BEATY	1/9/25	2-59
Blazevic, Magali	BLAZEVIC	1/18/25	2-59
Borst-Smith, Chris	BORST-SMITH1	1/9/25	2-59
Borst-Smith, Dave	BORST-SMITH2	12/27/24	2-59
Borst-Smith, Janice	BORST-SMITH3	1/6/25	2-59
Boyajian, Lisa	BOYAJIAN	1/9/2025	2-59
Bradley, Sandra	BRADLEY	12/15/24	2-62
Brown, James	BROWN	1/10/25	2-62
Brownell, William	BROWNELL	1/6/25	2-62
Bruner, John	BRUNER	12/10/24	2-63
Buscaino, Joe	BUSCAINO	12/15/24	2-63
Cabrera, Ricardo	CABRERA	1/10/25	2-63
Cammareri, Mike	CAMMARERI	12/28/24	2-63
Campeau, James	CAMPEAU	1/6/25	2-63
Cerrato, Bianca	CERRATO	1/10/25	2-64
Chavez, Mike	CHAVEZ1	12/17/24	2-64
Chavez, Olga	CHAVEZ2	12/10/24	2-64
Clark, Ed	CLARK	1/3/25	2-64
Clemons, Jade	CLEMONS	1/2/25	2-64
Cocuzza, Nancy and Fabio	COCUZZA	1/6/25	2-64
Cooney, Paul	COONEY	12/3/24	2-64
Costa, Dom	COSTA1	1/5/25	2-64
Costa, Dom	COSTA2	1/5/25	2-65

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Czyz, Daniel	CZYZ	1/10/25	2-65
de la Vera, Jessica	DELAVERA	1/7/25	2-65
Deeble, Joe	DEEBLE	1/3/25	2-65
Delgado, Kimberly	DELGADO	11/29/24	2-65
DiMeglio, Vince	DIMEGLIO	1/7/25	2-66
Douglas, Jennifer	DOUGLAS	12/14/24	2-66
Dover, Sean	DOVER	1/7/25	2-66
Drown, Brian	DROWN	11/16/24	2-66
Easton, Alex	EASTON	12/27/24	2-67
Edwards-Wallis, Cameron	EDWARDS-WALLIS	12/19/24	2-67
Eldred, Charles	ELDRED	1/10/25	2-67
Espinoza, Kaeli	ESPINOZA	1/9/25	2-67
Esprabens, Christine	ESPRABENS	1/19/25	2-67
Etchepare, Maria	ETCHEPARE	3/13/25	2-67
Feldman, Laurie	FELDMAN	12/18/24	2-67
Fengler, Marann	FENGLER	12/3/24	2-68
Franden, Dan	FRANDEN	12/29/24	2-68
Franz, Allen	FRANZ	1/6/25	2-69
Freeman, Paul	FREEMAN	1/4/25	2-69
Fugate, Malinda	FUGATE	11/20/24	2-69
Galletti, Maria	GALLETTI	1/8/25	2-70
Gardner, Catherine	GARDNER	12/28/24	2-70
Gauvreau, Aimiee and David	GAUVREAU	1/7/25	2-70
Gifford, Deb	GIFFORD	1/5/25	2-70
Goldin, E.	GOLDIN	1/8/25	2-71
Gonzales, Joy	GONZALES	12/29/24	2-71
Gould, Noel	GOULD	1/11/25	2-72
Graham, Scott	GRAHAM	1/7/25	2-75
Griggs, Liz	GRIGGS	1/10/25	2-75
Gritzner, Glenn	GRITZNER	1/6/25	2-75
Gritzner, Glenn	GRITZNER2	1/6/25	2-76
Harris, Chris	HARRIS1	1/10/25	2-76
Harris, George	HARRIS2	1/6/25	2-76
Harris, Helene	HARRIS3	1/6/25	2-76
Harris, Nick	HARRIS4	12/25/24	2-76
Harris, Olympia	HARRIS5	12/18/24	2-76
Hart, Suzie	HART	12/4/24	2-76
Havenick, Richard	HAVENICK	12/24/24	2-77

Letter Code	Comment Code	Date	Page
Heery1, Clay	HEERY1	1/4/25	2-77
Heery2, Clay	HEERY2	10/5/24	2-78
Hoffman, Chris	HOFFMAN	12/3/24	2-79
Hom, Daniel	HOM	12/27/24	2-79
Howard, Diana	HOWARD	11/24/24	2-79
Huff, Emily	HUFF	1/7/25	2-79
Hungerford, Carol	HUNGERFORD1	1/4/25	2-79
Hungerford, Gabe	HUNGERFORD2	12/18/24	2-80
Hunter, Marianne and William	HUNTER	12/27/24	2-80
Jacobson, John	JACOBSON	12/18/24	2-81
James, Valerie	JAMES	1/10/25	2-81
Jiminez, Manuel	JIMINEZ	12/6/24	2-81
Johnson, Daniel	JOHNSON1	1/10/25	2-81
Johnson, Lynn	JOHNSON2	11/7/24	2-82
Johnson, Susanne	JOHNSON3	1/9/25	2-82
Jones, Leslie	JONES	12/18/24	2-82
Jones, Leslie	JONES2	12/18/24	2-82
Kato, Ray	KATO	12/29/24	2-82
Keating, Kim	KEATING	11/30/24	2-83
Khan, Tammy	KHAN	1/9/25	2-83
Kimball, Jane	KIMBALL	1/3/25	2-83
Klee, Christa	KLEE	12/3/24	2-83
Krajeck, Geralynn	KRAJECK	12/20/24	2-83
Kuklok-Waldman, Nicole	KUKLOK-WALDMAN	1/7/25	2-83
Kvatuc, Branimir	KVATUC	12/14/24	2-84
Lanning, Joseph	LANNING	11/14/24	2-84
Larson, Gary	LARSON	12/9/24	2-84
Lavon-Beaty, Michelle	LAVON-BEATY	1/10/25	2-84
Lee, Joann	LEE	1/9/25	2-84
Levine, Leanna	LEVINE	1/4/25	2-84
Lewis, Ralph	LEWIS	1/4/25	2-85
Lincir, Matt	LINCIR	12/18/24	2-85
Lindholm, Phil	LINDHOLM	11/22/24	2-85
Liu-Morales, Rebecca	LIU-MORALES	12/24/24	2-85
LoGiudice, Carl	LOGIUDICE	1/6/25	2-85
Lopez, Samuel	LOPEZ	12/25/24	2-85
Lucks, Linda	LUCKS	1/20/25	2-86
MacAinsh, Nathan	MACAINSH	12/19/24	2-86

Letter Code	Comment Code	Date	Page
Maldonado, Alma	MALDONADO1	1/2/25	2-86
Maldonado Jr., Elias	MALDONADO2	1/7/25	2-86
Mancuso, Giampaolo	MANCUSO	12/26/24	2-86
Mardesic, Nick	MARDESIC	11/30/24	2-86
Marshall, Clay	MARSHALL	11/14/24	2-87
Martin, Amanda	MARTIN1	1/8/25	2-88
Martin, Betty	MARTIN2	1/7/25	2-88
Martinez-Wehmeyer, Adriana	MARTINEZ-WEHMEYER	1/9/25	2-88
Matson, Heather	MATSON	11/22/24	2-88
Matsumoto, Brian	MATSUMOTO	10/14/24	2-88
Medina, Gabriela	MEDINA	1/2/25	2-88
Meister, Lee	MEISTER	1/3/25	2-89
Alexander, Michael	ALEXANDER	11/12/24	2-89
Mirich, Stephen	MIRICH	1/9/25	2-89
Missman, Margaret	MISSMAN	1/9/25	2-89
Moody, John	MOODY	12/1/24	2-90
Mrkich, Ziggy	MRKICH	1/10/25	2-90
Muldrew, Mary	MULDREW1	1/6/25	2-90
Muldrew, Morgan	MULDREW2	1/6/25	2-90
Munster, Noramae	MUNSTER	12/18/24	2-90
Nave, Diana	NAVE1	12/27/24	2-90
Nave, Pat	NAVE2	12/3/24	2-91
Naylor, Mike	NAYLOR	11/15/24	2-91
Neal, Daniel	NEAL	1/10/525	2-91
Nizich, Bob	NIZICH	11/15/24	2-91
Norman, Thomas	NORMAN	12/21/24	2-91
Nygren, Lisa	NYGREN	12/19/24	2-92
O'Brian, Ross	O'BRIAN	12/18/24	2-92
O'Melveny, Regina	O'MELVENY	12/29/24	2-92
Palma, Nino	PALMA	1/21/25	2-92
Parnacher, Jeremy	PARNACHER	12/26/24	2-92
Pfleger, Birte	PFLEGER	12/29/24	2-92
Pirozzi, Anthony	PIROZZI	1/2/25	2-93
Pisano, George	PISANO	1/3/25	2-94
Pocapalia1, Daniel	POCAPALIA1	1/7/25	2-94
Pocapalia2, Daniel	POCAPALIA2	1/7/25	2-94
Purcell, Tom	PURCELL	12/3/21	2-94
Pyun, Alys Chalmers	PYUN	1/10/25	2-94

Letter Code	Comment Code	Date	Page
Ragland, Cathy	RAGLAND	1/10/25	2-100
Rizzi, Gianine	RIZZI1	1/10/25	2-102
Rizzi, Gianine	RIZZI2	1/10/25	2-102
Rochat, Judy	ROCHAT	1/8/25	2-102
Sams, Nancy	SAMS	11/15/24	2-104
Sandell, Scott	SANDELL	1/10/25	2-105
Sax, Elizabeth	SAX	1/5/25	2-108
Schindler, Taran	SCHINDLER	1/3/25	2-108
Shriver, Marianne	SHRIVER	1/7/25	2-108
Shrum, JJ	SHRUM	1/9/25	2-108
Silber, Andrew	SILBER	1/18/25	2-109
Skebe, Ed	SKEBE	1/3/25	2-109
Smirke, Ann	SMIRKE	1/9/25	2-109
Springer, Cathy	SPRINGER1	12/26/24	2-109
Springer, Jay	SPRINGER2	12/22/24	2-109
St. John, Barbara	STJOHN	1/4/25	2-109
Stevens, EZ	STEVENS	1/5/25	2-109
Sutton, Mona	SUTTON1	12/18/24	2-110
Sutton, Mona	SUTTON2	12/18/24	2-110
Swensson, Heli	SWENSSON	12/18/24	2-110
Tahash, Nina	TAHASH	1/4/25	2-110
Taylor, Kimberly	TAYLOR	11/15/24	2-110
Teuber, David	TEUBER	11/28/24	2-111
Thompson, Jake	THOMPSON	1/8/25	2-111
Thornton, Dawn	THORNTON	1/7/25	2-111
Townsend, Camila and Stan Hicks	TOWNSEND	12/24/24	2-111
Trusela, Josephine	TRUSELA	1/7/25	2-111
Ungaro, Henry	UNGARO1	1/6/25	2-111
Ungaro, Henry	UNGARO2	1/7/25	2-111
Valanejad, Kamran	VALANEJAD	12/18/24	2-112
van Hoorn1, Gus	VANHOORN1	1/6/25	2-112
van Hoorn2, Gus	VANHOORN2	1/7/25	2-112
Vance, Hannah	VANCE	1/7/25	2-112
Vandewark, K	VANDEWARK	1/6/25	2-112
Von Kalinowski, Penelope	VONKALINOWSKI	12/30/24	2-113
Wallis, Cameron	WALLISC	12/19/24	2-113
Wallis, Kristie A	WALLIS1	12/19/24	2-113
Wallis, Kristie	WALLIS2	12/19/24	2-113

Letter Code	Comment Code	Date	Page
Wehmeyer, Jeremy	WEHMEYER	1/9/25	2-113
Wilkinson, Joselyn	WILKINSON	12/3/24	2-114
Wixted1, Laurie	WIXTED1	1/2/25	2-114
Yokoyama, Jerome	YOKOYAMA	1/7/25	2-114
Young, Laurie	YOUNG1	12/6/24	2-114
Young, Mike	YOUNG2	12/6/24	2-114
West Harbor Modification Project Public Meeting Transcript	WHMPM	11/16/24	2-115
Procedural			
Coastal San Pedro Neighborhood Council	CSPNC	11/9/24	2-119
Eriksen, Amy	ERIKSON	1/31/25	2-119
U.S. Army Corps of Engineers	USACE	11/18/2024	2-119

2.3 Responses to Comments

In accordance with the CEQA Guidelines Section 15088, LAHD has evaluated the comments on environmental issues received from agencies and other interested parties and has prepared written responses to each comment pertinent to the adequacy of the environmental analyses contained in the Draft SEIR. In implementing specific compliance with CEQA Guidelines Section 15088(b), the written responses address the environmental issues raised. In addition, where appropriate, the basis for incorporating or not incorporating specific suggestions into the Proposed Project is provided. In each case, LAHD has expended a good faith effort, supported by reasoned analysis, to respond to comments. This section includes responses not only to the written comments received during the 48-day public review period of the Draft EIR, but also verbal comments made in the public hearing for the Draft SEIR. Some of the written comments resulted in minor changes to the Draft SEIR; but these revisions did not change any of the conclusions. The changes and modifications to the Draft SEIR are included in Chapter 3, *Modifications to the Draft Subsequent Environmental Impact Report*, of this Final SEIR. Changes noted in Chapter 3 are identified by text strikeout and/or underline. A copy of each comment letter is provided in Appendix J.

2.3.1 Responses to Comment Letters

2.3.1.1 Agencies

Response to Comment Letter California Department of Transportation

CALTRANS-1 The comment states that the California Department of Transportation (Caltrans) received the Draft SEIR and was provided a brief description of the Proposed Project. The comment states that "Caltrans is in support of this project's pedestrian-oriented plans that help achieve state planning priorities contained in state law and meet state policy goals on transportation, VMT reduction, GHG emissions reduction, and/or

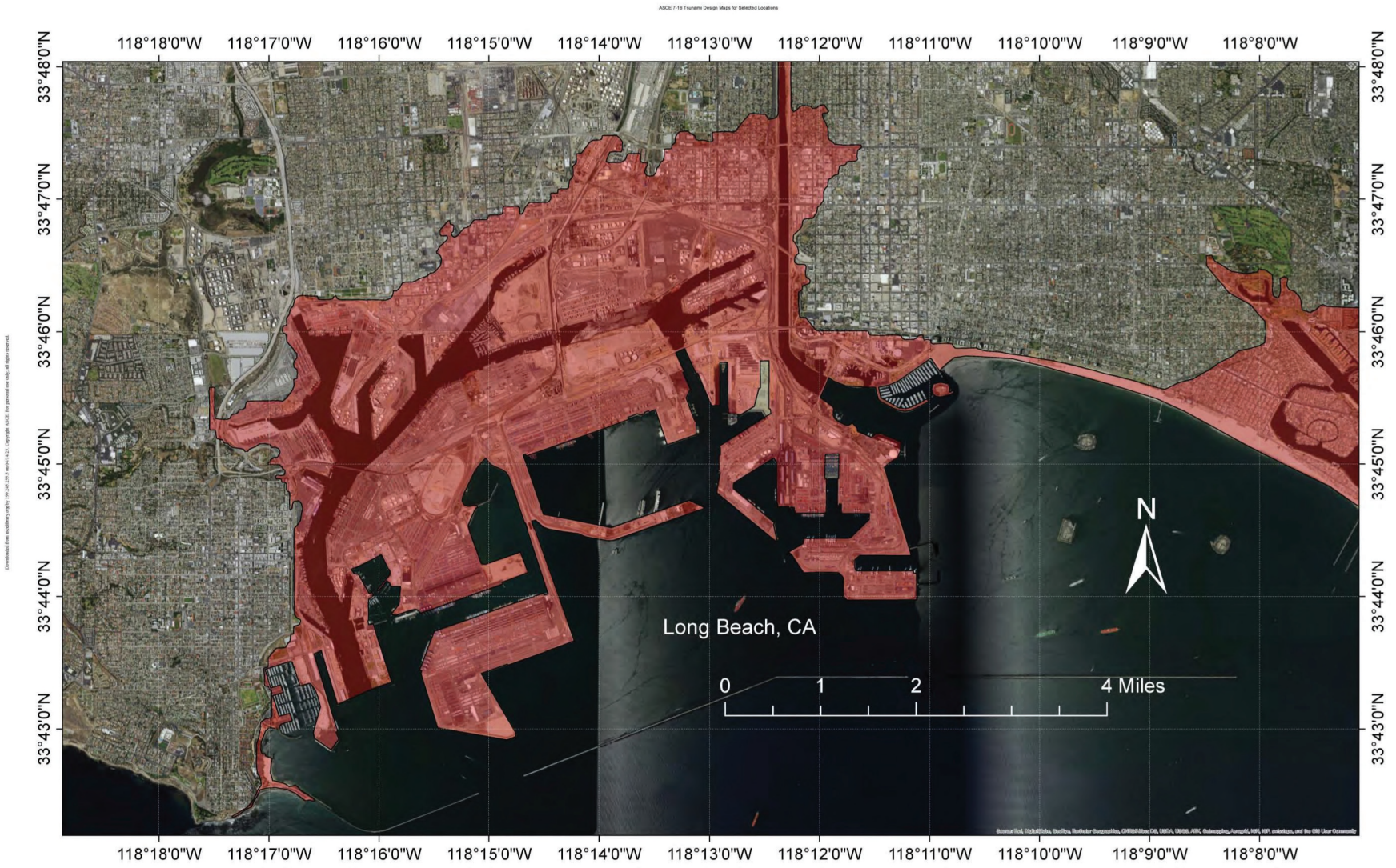
betterment of the environment and human health." The comment goes on to state that Caltrans recommends improvements for the Proposed Project, which include (paraphrased): transit usage and free bicycle parking valet service to attendees of large events at the site; reducing car parking whenever possible; constructing physically separated facilities (e.g., Class IV bikeways, wide sidewalks, pedestrian refuge islands); and visual indicators (e.g., pedestrian and bicycle warning signage, flashing beacons, crosswalks, signage, and striping). The comment also recommends that the Proposed Project conduct a post-construction vehicle miles traveled (VMT) study to confirm there are no significant VMT impacts and limit large truck travel and construction traffic to off-peak commute hours.

These strategies apply to areas outside of the Proposed Project, but most are planned as part of the larger San Pedro Waterfront development, such as mitigation measure (MM-)TC-24: Design pavement markings and signage in station areas to clearly direct pedestrians to the desired routes and MM TC 25: Construct new sidewalks to allow for the orderly movement of pedestrians. This SEIR will require implementation of MM-TRAN-1, which also includes some of the suggested improvements, such as Event-Specific Expanded Public Transit, Active Transportation Communication, and Providing End-of-Trip Bicycle Facilities. LAHD acknowledges these comments and will include them in the Proposed Project record for the Board of Harbor Commissioners to consider. .

Response to Comment Letter California Geological Survey

CGS-1 The comment states that the California Geological Survey (CGS) received the Draft SEIR and provided a brief description of the Proposed Project. The comment states that CGS has two recommendations concerning geologic and seismic hazard issues in the Draft SEIR. The first is that while the SEIR does provide a discussion of tsunami inundation hazards in the Port area, CGS notes that the Proposed Project is within a CGS Tsunami Hazard Area (THA) and recommends that the SEIR be revised to discuss the THAs and provide a map depicting them. Secondly, CGS recommends that it be determined whether the Proposed Project lies within a Tsunami Design Zone established by the California Building Code (CBC).

The Initial Study/Notice of Preparation for the Proposed Project (Appendix A-1 of the Draft SEIR determined that the Proposed Project is within a Tsunami Hazard Area (THA) but would have less-than-significant impacts associated with inundation due to a flood hazard, tsunami, or seiche (Threshold X(d)), so this topic was not directly analyzed in the SEIR. The Proposed Project is within the Tsunami Design Zone (TDZ) per the CBC. A map depicting the TDZ from the American Society for Civil Engineers is included in this comment response.


ASCE 7-16 Tsunami Design Maps for Selected Locations
118°18'0"W
118°17'0"W
118°16'0"W
118°15'0"W
118°14'0"W
118°13'0"W
118°12'0"W
118°11'0"W
118°10'0"W
118°9'0"W
118°8'0"W
33°48'0"N
33°47'0"N
33°46'0"N
33°45'0"N
33°44'0"N
33°43'0"N
N
Long Beach, CA
0
1
2
4 Miles

LAHD acknowledges these comments and will include them in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter City of Los Angeles–Council District 15

CD15-1 The commenter states that they are the Councilmember representing the 15th District of the City of Los Angeles. The commenter also states that he believes that the Proposed Project is key to the success of the redevelopment effort in the San Pedro area. The commenter goes on to request that an additional receiver get added to the Project scope, located between the Southwest Marine Facility and the United States Coast Guard Dock, directly across from the Proposed Project in order to ensure quality of life for residents and flora/fauna.

CD15-2 This comment expresses full support of the Proposed Project but that relevant environmental factors must be addressed. Specifically, the comment requests that an additional receiver be added to the Proposed Project scope, located between the Southwest Marine Facility and the U.S. Coast Guard Dock, directly across from the Proposed Project, because this area is used by marine wildlife. In response to this and other comments about the area described, an additional receiver (Receiver Point 9) has been added to the analysis of estimated noise levels for marine mammal receiver points in Table 3.3-2 and Tables 3.3-3 of the Draft SEIR. At this new receiver location, unmitigated combined noise levels (from the amphitheater and fireworks) were estimated to be 100 dBZ (decibels relative to Z) and mitigated combined noise levels were estimated to be 90 dBZ. In both cases, the noise is dominated by the amphitheater. Because the mitigated noise level of 90 dBZ would be less than the Level B harassment threshold of 100 dBZ for the species observed at the added receiver location, there would be no new impacts at this location after mitigation. The resulting updates to the Draft SEIR are described in Section 3.2 of this Final SEIR, *Changes to the Draft Subsequent Environmental Impact Report.*

CD15-3 LAHD acknowledges these comments and will include them in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter City of Rancho Palos Verdes

CRPV-1 The commenter states that the City of Rancho Palos Verdes has reviewed the Draft SEIR and appreciates the extension of the public review and comment period until after the holiday season. The comment states that ever since the plan for the 6,200-seat amphitheater was announced, residents of the Eastview neighborhood (of Rancho Palos Verdes) have shared concerns about potential noise impacts from performances and fireworks displays at the proposed venue. This comment is elaborated on and responded to further in response to comments CRPV-2 and CRPV-4. This comment does not raise any specific issue regarding the adequacy of the analysis contained in the Draft SEIR.

CRPV-2 The comment acknowledges that both favorable and unfavorable atmospheric conditions were studied but goes on to state that only the noise-sensitive locations

within the immediate surrounding area were studied and that the radius should be expanded to assess noise impacts on the Palos Verdes Peninsula community. The closest points in the City of Rancho Palos Verdes are more than two miles from the Proposed Project site and more than 2.5 miles from the Proposed fireworks launch location. Although the noise analysis does not extend quite that far, it does extend substantially farther than "the immediate surrounding area." The amphitheater noise mapping provided in the Draft SEIR covers an area of approximately 3.5 square miles and extends more than a mile to the west where the majority of nearby noise-sensitive receptors (e.g., homes) are located. The mitigated amphitheater noise levels at the west edge of the mapped area are estimated to be between 42 and 55 dBA (A-weighted decibels), depending on atmospheric conditions. These noise levels would decrease further with the increased distance to the City of Rancho Palos Verdes.

CRPV-3 The comment supports the creation of a noise complaint hotline and/or website for the amphitheater, penalties for noise violations, and requirements for a noise monitoring station and sound-monitoring data reports but states that more information is needed on how these mitigation measures will be enforced, including the specific provisions and enforcement mechanisms included in contracts, permits, or other agreements with amphitheater users. As stated in mitigation measure (MM-) NOI-3, Tier 1 Events are defined as all public or private performance events with amplified sound and intended audiences of more than 500 people including, but not limited to, Tenant events, public events, leased events, rental events, and other third-party events. Therefore, all such events would be subject to the controls mentioned by the commenter–i.e., noise limits (MM-NOI-3), noise monitoring (MM-NOI-5), noise reporting (MM-NOI-6), the noise complaint hotline (MM-NOI-7), and fines for non-compliance (MM-NOI-9). All mitigation measures are included in the Proposed Project's Mitigation, Monitoring, and Reporting Program, which will be attached to the Project/amphitheater lease as conditions of operation. Consequently, these requirements will also apply to all amphitheater users.

CRPV-4 The comment expressed concern not only about the long-term significant and unavoidable noise impacts generated by the amphitheater, but also about the proposed 25 offshore fireworks displays per year. The comment states that fireworks trigger flashbacks in veterans and terror in pets and expresses support for a mitigation measure requiring the fireworks be replaced with lighted drone displays. The Proposed Project has been modified as a result of these and similar comments to reduce the number of annual fireworks shows permitted from 25 to 13 and reduce the run-time from 20 minutes to 10 minutes for eleven 11 of the events. Two 20-minute shows would still be allowed per year. Mitigation has also been revised to prevent "salute" concussive shell fireworks that are the most disruptive to sensitive groups. Mitigation Measures MM-NOI-11, MM-NOI-12, and MM-NOI-13 from the Draft SEIR have been updated to reflect the reduction in fireworks displays (MM-NOI-11 now restricts the total number of firework displays to 13 per year; MM-NOI-12 now limits the duration of all fireworks displays to 10 minutes, except for two 20-minute shows per year; and MM-NOI-13 now eliminates the use of "salute" fireworks). The

resulting updates to the Draft SEIR are described in Section 3.2 of this Final SEIR, *Changes to the Draft Subsequent Environmental Impact Report*.

Response to Comment Letter Department of Toxic Substances Control

DTSC-1 The comment states that Department of Toxic Substances Control (DTSC) received the Draft SEIR and provided a brief description of the Proposed Project.

DTSC-2 The comment states that the 208 E. 22nd Street Parking Lot is within the boundaries of the Gatx Annex Terminal – San Pedro Site, which continues to have contamination above screening levels in the post-treatment soil. As such, DTSC recommends that any excavation within the boundaries of the 208 E. 22nd Street Parking Lot that goes deeper than 1 foot below ground surface follow details from a Soil Management Plan (SMP); and since there currently is no SMP, DTSC recommends that one be prepared and submitted to DTSC for review.

DTSC is correct that there is not currently a SMP for the Proposed Project; however, page 3.6-19 of the Draft SEIR includes mitigation measure (MM-) HAZ-1 which requires preparation of an SMP. Further, MM-HAZ-1 requires that the SMP include protocols, measures, and techniques for the proper handling, management, and disposition of affected soils found on site and in any areas of offsite work during site preparation and grading activities at the 208 E. 22nd Street Parking Lot. Because the SMP that is requested by DTSC is already required by MM-HAZ-1, the Draft SEIR remains adequate.

DTSC-3 LAHD acknowledges these comments and will include them in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter County Board of Supervisors - Hahn, Janice

COUNTY-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

2.3.1.2 Organizations

Response to Comment Letter AdventResources

ADVENT-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Project record for the Board of Harbor Commissioners' consideration.

AGCS-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Project record for the Board of Harbor Commissioners' consideration.

Response to Comment Letter ArtPORT

APORT-1 The comment states that ArtPORT LA supports the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider. The comment does not raise an issue regarding the adequacy of the analysis contained in the Draft SEIR.

Response to Comment Letter AltaSea

ASEA-1 The comment on behalf of AltaSea states that AltaSea supports the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Boys & Girls Club of the Los Angeles Harbor

BGC-1 The comment on behalf of the Boys & Girls Club of the Los Angeles Harbor supports the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Central San Pedro Neighborhood Council

CeSPNC-1 The comment on behalf of the Central San Pedro Neighborhood Council (CeSPNC) expresses willingness to work with the Port of Los Angeles, developers, and community stakeholders to ensure that the Proposed Project is completed with the least amount of environmental impact possible and in alignment with the Port of Los Angeles Plan and Port Master Plan. A list of goals from the Port of Los Angeles Plan and the Port Master Plan was provided with the comment submission. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CeSPNC-2 The comment recommends replacing the term *amphitheater* with a more appropriate term. While the term *amphitheater* typically refers to a natural or human-made half-circle with tiered structure, there are other examples of amphitheaters in the Southern California region that do not meet this criteria. Renderings of the Proposed Project were included in the Draft SEIR's Project Description. The Tenant (developer) prefers to continue using the term *amphitheater*. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CeSPNC-3 The commenter states that an increase of 25 fireworks shows per year is not accurately characterized in the aesthetic impact analysis. The Proposed Project has been modified as a result of these and similar comments to reduce the number of annual fireworks shows permitted from 25 to 13 and reduce the run-time from 20 minutes to 10 minutes for eleven of the events. Two 20-minute shows would still be allowed per year. Mitigation has also been revised to prevent "salute" concussive shell fireworks that are the most disruptive to sensitive groups. Because similar

shows already occur at the Port, including fireworks and music festivals, the Proposed Project would not be introducing any events that may change the character or use of the area. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CeSPNC-4 The comment states fireworks are known to cause significant air pollution and noise pollution, as well as require significant clean up. The Draft SEIR discusses the impacts of fireworks shows on air quality in Section 3.2, *Air Quality*, on noise in Section 3.8, *Noise*, and on water and biological resources in Section 3.3, *Biological Resources*. The Project has been modified as a result of these and similar comments to reduce the number of annual fireworks shows permitted from 25 to 13 and reduce the run-time from 20 minutes to 10 minutes for eleven of the events. Two 20-minute shows would still be allowed per year. Mitigation has also been revised to prevent "salute" concussive shell fireworks that are the most disruptive to sensitive groups. Mitigation has also been revised to prevent "salute" concussive shell fireworks that are the most disruptive to sensitive groups. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CeSPNC-5 The comment mentions MM-BIO-8, and requests that language mandating oversight by the Port of Los Angeles, ensuring that any biologist hired by the Tenant is fully qualified and that there are no real/perceived biases. LAHD will select from experienced biologists and be reimbursed by the Tenant to ensure that the biologist chosen to perform the surveys is fully qualified and provides input to guide the direction of the Proposed Project. Pursuant to Page 3.3-34 of the Draft SEIR, a *qualified biologist* is a person who, by reason of their knowledge of the natural sciences and the principles of marine biology, acquired by marine biology education and experience, performs services including, but not limited to, consultation investigation, surveying, evaluation, planning, or responsible supervision of marine biology activities when those professional services require the application of biological principles and techniques.

CeSPNC-6 This comment simply states that the commenter does not have any specific comments regarding Section 3.4, *Cultural Resources*. Since this comment does not raise an issue regarding the adequacy of the analysis contained in the Draft SEIR, .

CeSPNC-7 The comment questions the adequacy of the greenhouse gas analysis in Section 3.5, *Greenhouse Gas Emissions*, and asks for a reevaluation. The comment states greenhouse gas emissions (GHG) quantities from major sources, such as concrete or fugitive emissions, can be significant, and are often overlooked and not controlled, even while economically feasible to be avoided, reduced, or eliminated. Please refer to Section 3.5.7, *Methodology*, for more information on how the analysis was conducted. The purpose of the GHG section is to analyze if the Proposed Project would result in construction and operation activities that would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and/or increase the severity of impact considered in the 2009 SPW EIS/EIR or 2016 SPPM Addendum. The lead agency has discretion in determining

the appropriate scope and methodology for the GHG analysis. Although CEQA requires a good faith effort to assess GHG emissions, considering both short-term and long-term effects, the extent of the analysis must be supported by substantial evidence and should not be speculative. The CEQA discussion, therefore, analyzes applicable plans, policies, and regulations to ensure the Proposed Project would not exceed established thresholds.

CeSPNC-8 The comment questions the adequacy of the GHG analysis in Section 3.5 and asks for a reevaluation. The comment requests MM-AQ-27 provide additional Tenant lease requirements about mitigation through efficiency or emissions incorporating appliances, hot water, and HVAC & Refrigeration. This mitigation measure is specific to LED lighting. The buildings associated with the Proposed Project also would be subject to City of Los Angeles Green Building Code Ordinance No. 181480, which details energy efficiency requirements applicable to new construction.

CeSPNC-9 The comment references Project feature (PF-) GHG-1 and asks that the SEIR include the estimated energy or demand offset that the 1.4 megawatt solar-panel canopies would provide. The amount of energy generated by the solar panels was calculated using the U.S. Environmental Protection Agency AVERT calculator, discussed under PF-GHG-1, provided in Table 3.5-3. GHG emissions (metric tons per year), "With Mitigation and Project Features," are provided in Table B16 of Appendix C. The comment also asks that the term "design criteria" be changed to "performance criteria;" however, this is not a CEQA issue, and the terminology is consistent with what is used in the Proposed Project description for the GHG section. As such, no changes are made to the Draft SEIR as a result of this comment. The Project features are included in the Project's Mitigation, Monitoring, and Reporting Program and will be attached to the lease.

CeSPNC-10 This comment simply states that the commenter does not have any specific comments regarding Section 3.6, *Hazardous Materials*.

CeSPNC-11 The comment states that the finding of "less than significant impact" warrants additional review and also recommends that fireworks vendors be mandated to use drones for a majority of events in order to limit pollution. The Proposed Project has been modified as a result of these and similar comments to reduce the number of annual fireworks shows permitted from 25 to 13 and reduce the run-time from 20 minutes to 10 minutes for eleven of the events. Two 20-minute shows would still be allowed per year. Mitigation has also been revised to prevent "salute" concussive shell fireworks that are the most disruptive to sensitive groups. Additionally, fireworks shows will be subject to the pollution reduction management practices outlined in the Los Angeles Regional Water Quality Control Board General Fireworks Permit for firework discharge to ensure no impact on water quality, as discussed in Section 3.7, *Hydrology and Water Quality*. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CeSPNC-12 The comment requests that "the difference between Tier 1 and Tier 2 events should be further elucidated and take into consideration more than audience size." As stated in the Draft SEIR, a 500-seat amphitheater was already included in the 2009 SPW EIS/EIR and the 2016 SPPM Addendum. Tier 2 events are defined in the Draft SEIR (refer to Section 3.8.6.6, *Amphitheater Noise*) as "small events attended by 500 people or less…" Tier 2 events could include activities such as community events or viewing parties, which would be substantially smaller than Tier 1 events and would involve substantially lower noise levels. Tier 1 noise levels would be too loud to be compatible with these types of events and would be unnecessary and undesirable in this context. Tier 2 events would not be commercial concerts for which continuous sound/music is the central focus of the event, and some Tier 2 events might not require the use of the amphitheater sound system given their limited size.

CeSPNC-13 The commenter states that the Draft SEIR should take into consideration the large veteran community at Fort McArthur, many of whom struggle with post-traumatic stress disorder, as well as the larger community, including the unhoused and other vulnerable populations. The Proposed Project has been modified as a result of these and similar comments to reduce the number of annual fireworks shows permitted from 25 to 13 and to reduce the run-time from 20 minutes to 10 minutes for eleven of the events. Two 20-minute shows would still be allowed per year. Mitigation has also been revised to prevent "salute" concussive shell fireworks that are the most disruptive to sensitive groups. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider. In response to the public comments received about fireworks, MM-NOI-11, MM-NOI-12, and MM-NOI-13 have been updated to reflect the reduction in fireworks shows. MM-NOI-11 now restricts the total number of firework displays to 13 per year, MM-NOI-12 now limits the duration of all fireworks displays to 10 minutes except for two 20-minute shows per year, and MM-NOI-13 now eliminates the use of "salute" fireworks.

CeSPNC-14 The comment states that sound-monitoring data reports should always be freely accessible to the public. MM-NOI-6 has been modified to require that for "events that cause any violations of the sound level limits, or for event logs requested at any time by the Executive Director, the sound monitoring log will be furnished to the Port within 48 hours of the conclusion of the event. For all other events, the sound monitoring logs will be furnished to the Port within 30 days." The noise compliance hotline will be open during events, and real-time measures, where feasible, will be explored to address complaints.

CeSPNC-15 This comment does not raise an issue regarding the adequacy of the analysis contained in the Draft SEIR.

CeSPNC-16 This comment expresses concern with the adequacy of the cumulative traffic analysis. The Draft SEIR assesses all potential cumulative traffic impacts required under CEQA. For other transportation impacts, the LADOT Transportation Assessment Guidelines (City of Los Angeles Department of Transportation 2022) identifies the City of Los Angeles' authority to review and require correction for

transportation deficiencies that may result from a development project through the City's Site Plan Review approval process. The Site Plan Review analysis includes pedestrian, bicycle, and transit access assessment; Project access safety and circulation evaluation; Project construction; and a residential street cut-through analysis. This review is outside the scope of this Draft SEIR; however, the Project access circulation evaluation, which includes operational deficiency evaluations (i.e., level of service) for intersections in the Project vicinity, is included in this Draft SEIR as Appendix G for informational purposes only.

CeSPNC-17 This comment suggests discounted parking be offered to San Pedro residents, which is not a CEQA issue. Discounts may be available to public transit users through implementation of MM-TRAN-1. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter CleanEarth4Kids.org

CE4K-1 This comment is introductory to the comments that follow. Please refer to responses to comments CE4K-2 through CE4K-38 that address each of the specific concerns expressed in the comment letter.

CE4K-2 This comment expresses concern with the use of artificial turf for the lawn area of the amphitheater. The cited research tested several samples of turf but none provided by the supplier to be used in the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-3 This comment expresses concern with the use of plastics in synthetic and artificial turf. The studies referenced make a clear point that chronic exposure to polyfluoroalkyl substances (PFAS) and pthalates are linked to major human health concerns, especially for pregnant women and children. These are all important considerations that led to the Tenant to propose the use of turf that does not use synthetic materials as infill and meets the requirements of EN-71-3 (Part 3) Toy Testing Standards. The studies cited in the comment are also based upon chronic exposure to plastic and its potential components rather than the proposed use of sitting or standing on turf for several hours on occasion.

CE4K-4 This comment expresses concern with the use of pthalates as a plastic additive in synthetic grass. The cited studies reference adverse health outcomes associated with chronic exposure to pthalates, which is an important concern. The cited studies evaluated effects of pthalates on both humans and rodents, both of which showed an increase in endocrine system disruption, reproductive issues, and an increase in body fat and type II diabetes. These studies are important to consider for the Proposed Project and further support the use of the highest quality synthetic turf designed to prevent plastic breakdown and exposure to pthalates. While this is an important consideration for synthetic turf use in general, the temporary nature of the exposure to synthetic turf associated with the Proposed Project makes these studies less

applicable to the Proposed Project. Measures such as keeping turf from degrading and replacing worn turf may also aid in limiting exposure. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-5 This comment expresses concern with PFAS exposure related to the use of synthetic grass. The study referenced synthetic turf purchased at a Home Depot that was then tested for PFAS, and all samples indicated PFAS concentrations. The samples used were not from the manufacturer proposed for the Proposed Project. Health risks associated with exposure to PFAS indicated in this comment are based on chronic exposure to PFAS at levels above regulatory screening standards, which would not be an appropriate metric for the use expected for the Proposed Project. Despite this, the use of PFAS is an important health and environmental concern. Testing from as recently as August 2024 (TRC 2024) for PFAS in FieldTurf products indicated non-detection in several samples and detection in concentrations orders of magnitude below health screening levels. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-6 This comment expresses concern with the health and environmental effects of plastic production including plastic burning and plastic waste entering the ocean. Plastic production will not be occurring as part of the Proposed Project. The plastic planned to be used in the turf will be UV-stabilized to prevent degradation and will not be burnt. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-7 This comment expresses concern with the generation of plastic requiring fossil-fuel consumption. This is an important consideration in reducing the Proposed Project's carbon footprint. The turf considered for the Proposed Project will be partially made from recycled synthetic turf, and the porous pavement installation used beneath the synthetic turf is made from 100 percent recycled plastic to reduce the amount of plastic production. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-8 This comment expresses concern with the release of methane as polyethylene breaks down. The turf proposed for use in the Proposed Project is made with UV-stabilized polyethylene and will be resistant to breaking down from sunlight exposure. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-9 This comment expresses concern with the breakdown of artificial turf introducing microplastics into the local surface waters. This is an important concern for the Proposed Project and highlights a major problem with artificial turf use over the past several decades. The use of the turf proposed for the Proposed Project includes ultra-violet (UV)-stabilized polyethylene, which will reduce the breakdown of the turf blades from sunlight. In the studies cited in this comment letter, recent installations with this technology exponentially reduced microplastic into waterways. Despite this, the dangers of microplastics are a consideration and the Tenant will be encouraged to

maintain and replace the turf, as necessary, to prevent breakdown and microplastics from entering local waters. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-10 This comment further expresses concern with plastic in food and water supply. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-11 This comment expresses concern with the impact of microplastics on wildlife and marine ecosystems. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-12 This comment expresses concern with the United States' current capacity for recycling artificial turf. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-13 This comment expresses concern with the heat-retaining potential of synthetic turf in comparison with natural grass. The comment cites news articles reporting synthetic grass temperatures reaching 40-70 degrees (Fahrenheit) above the surrounding air temperature. Based on a review of the articles cited in the comment letter, the increased heat occurrences appear to be related to black rubber infill used in third-generation artificial turf fields. The proposed infill for the Proposed Project will be granulated olive cores or cork material to prevent this issue. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-14 This comment expresses concern with the potential for the use of turf to expose users to bacteria. The turf proposed for the Proposed Project is permeable and installed on a porous surface to promote drainage and prevent bacterial growth. This comment also discusses that the use of synthetic turf in athletic fields creates a higher incidence of athlete injury. While the amphitheater turf lawn that is part of the Proposed Project may be open for recreation when events are not ongoing, it is not proposed to be an athletic field. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-15 This comment expresses concern with the use of crumb rubber infill in synthetic fields. Crumb rubber infill will not be used for the Proposed Project's turf installation. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-16 This comment expresses concern with the use of alternative infills for artificial turf fields, specifically crystallized silica and zeolite. The turf proposed to be used for the Proposed Project utilizes inert materials such as olive cores and ground cork. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-17 This comment expresses concern with water use for regular cooling and cleaning turf fields and the loss of groundwater replenishment capability. The synthetic turf

considered for the Proposed Project has a permeable backing and is placed upon a porous installation, allowing for water percolation. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-18 This comment expresses a preference for the use of natural grass for playing fields and parks. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-19 This comment includes additional video resources about the potential harm of using artificial turf in fields. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-20 This comment reiterates the position of the organization that turf should not be used for the Proposed Project due turf's potential to contain PFAS and other chemicals. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-21 This comment urges the Proposed Project to remove the use of fireworks to protect children, the environment, public health, citizens with post-traumatic stress disorder, including veterans, and citizens with anxiety disorders. The Proposed Project has been modified as a result of these and similar comments to reduce the number of annual fireworks shows permitted from 25 to 13 and reduce the run-time from 20 minutes to 10 minutes for 11 of the events. Two 20-minute shows would still be allowed per year. Mitigation has also been revised to prevent "salute" concussive shell fireworks that are the most disruptive to sensitive groups. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-22 This comment expresses concern with the use of fireworks introducing heavy metals into the air. The comment states that 258 million pounds of fireworks are used annually in the United States, but this number, as discussed in the study cited in the comment letter, refers to fireworks purchased by individuals, not used in events by pyrotechnic professionals (that number, also referenced in the study, is 19.1 million pounds). The study primarily assessed ground-level fireworks that are not used by professionals and noted that these fireworks are often illegally manufactured and acquired and do not adhere to pyrotechnic standards for use in event fireworks displays. The Los Angeles Regional Water Quality Control Board (LARWQCB) General Fireworks Permit required to discharge fireworks for the Proposed Project has stringent best management practices (BMPs) that require the use of alternative fireworks that replace perchlorate with other oxidizers and utilize biodegradable materials. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-23 This comment expresses concern with exposure to lead. The study referenced in the comment letter primarily assessed ground-level fireworks that are used by individuals rather than professionals and noted that these fireworks are often illegally

manufactured and acquired and do not adhere to pyrotechnic standards for use in event fireworks displays. The LARWQCB General Fireworks Permit required to discharge fireworks for the Proposed Project has stringent BMPs that require the use of alternative fireworks that replace perchlorate with other oxidizers and utilize biodegradable materials. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-24 This comment expresses concern with exposure to mercury. The study referenced in the comment letter primarily assessed ground-level fireworks that are used by individuals rather than professionals and noted that these fireworks are often illegally manufactured and acquired and do not adhere to pyrotechnic standards for use in event fireworks displays. The LARWQCB General Fireworks Permit required to discharge fireworks for the Proposed Project has stringent BMPs that require the use of alternative fireworks that replace perchlorate with other oxidizers and utilize biodegradable materials. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-25 This comment expresses concern with exposure to cadmium. The study referenced in the comment letter primarily assessed ground-level fireworks that are used by individuals rather than professionals and noted that these fireworks are often illegally manufactured and acquired and do not adhere to pyrotechnic standards for use in event fireworks displays. The LARWQCB General Fireworks Permit required to discharge fireworks for the Proposed Project has stringent BMPs that require the use of alternative fireworks that replace perchlorate with other oxidizers and utilize biodegradable materials. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-26 This comment expresses concern with exposure to arsenic. The study referenced in the comment letter primarily assessed ground-level fireworks that are used by individuals rather than professionals and noted that these fireworks are often illegally manufactured and acquired and do not adhere to pyrotechnic standards for use in event fireworks displays. The LARWQCB General Fireworks Permit required to discharge fireworks for the Proposed Project has stringent BMPs that require the use of alternative fireworks that replace perchlorate with other oxidizers and utilize biodegradable materials. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-27 This comment expresses concern with exposure to air pollution as particulate matter, carbon monoxide, sulfur dioxide, nitrogen dioxide, and ozone. The article referenced in this comment letter cited an observed increase in air pollution related to fireworks that was 2,800 percent above the levels recommended by the World Health Organization. The article importantly discusses the increase in air pollution related to fireworks but focuses specifically on major world events during which the majority of cities have professional firework displays occurring at the same time as individual fireworks displays, such as on the 4th of July in the United States, or in the case of the 2,800 percent statistic, Diwali in India. While these are notable health concerns, they do not represent the density of firework use proposed by the Proposed Project,

which is 13 fireworks shows per year up to 10 minutes in duration, with the exception of two 20-minute shows annually. Additionally, the LARWQCB General Fireworks Permit required to discharge fireworks for the Proposed Project has stringent BMPs that require the use of alternative fireworks that replace perchlorate with other oxidizers and utilize biodegradable materials. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-28 This comment expresses concern with the risk of air pollution affecting pregnant women and children. This comment is an important consideration for prenatal exposure and pregnant women are typically advised to avoid inhaling smoke and particulate matter. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-29 This comment expresses concern with the risk of injury and fires associated with firework use. The data referenced are from a report on non-occupational, consumer-operated fireworks. The firework displays that will be used for the Proposed Project will be conducted by pyrotechnic professionals. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-30 This comment expresses concern with the use of balloons and confetti being used at the proposed amphitheater. Balloons are not proposed for use during Tier 1 events, and the operations of the Proposed Project will be subject to local regulations (see Section 3.3.4.3, *Local Rules and Regulations,* of the Draft SEIR), and mitigation measures (MM-) BIO-7: *Trash Management and Post-Event Cleanup* and MM-BIO-10: *Biodegradable Venue Products* will be implemented. Tier 2 events may have balloons present (e.g., graduations, birthdays, etc.), but the Tenant will inform event operators that balloons present on their site shall not be allowed to be released into the environment. Refer to Section 3.3, *Biological Resources*, in the Draft SEIR for additional details.

CE4K-31 This comment expresses concern with the use of styrene and polystyrene being used at the proposed amphitheater. The Proposed Project does not propose to use these materials, and the operations of the Proposed Project will be subject to local regulations (see Section 3.3.4.3 and Project feature (PF-) BIO-1 in the Draft SEIR), and MM-BIO-7: *Trash Management and Post-Event Cleanup* and MM-BIO-10: *Biodegradable Venue Products* will be implemented. Refer to Section 3.3, *Biological Resources*, in the Draft SEIR for additional details.

CE4K-32 This comment expresses concern with the use of single-use plastics at the proposed amphitheater. MM-BIO-10 requires that reusable, compostable, and/or recyclable products be used by venue operators. Where those types are not feasible, event organizers must use biodegradable products for all decorations, packaging, and other single-use items for all amphitheater events to prevent injury and damage to surrounding sensitive marine environments and protect species from harmful materials (e.g., plastics, mylar, metals). LAHD acknowledges this comment and will

include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-33 This comment expresses concern with PFAS in materials being used at the proposed amphitheater. Venue operations will be subject to local regulations (see Section 3.3.4.3 and PF-BIO-1 in the Draft SEIR), and MM-BIO-7: *Trash Management and Post-Event Cleanup* and MM-BIO-10: *Biodegradable Venue Products* will be implemented. Refer to Section 3.3, *Biological Resources*, in the Draft SEIR for additional details. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-34 This comment expresses concern with pthalates in materials being used at the proposed amphitheater. Venue operations will be subject to local regulations that prevent the use of single-use plastics (see Section 3.3.4.3 and PF-BIO-1 in the Draft SEIR), and MM-BIO-7: *Trash Management and Post-Event Cleanup* and MM-BIO-10: *Biodegradable Venue Products* will be implemented. Refer to Section 3.3, *Biological Resources*, in the Draft SEIR for additional details. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-35 This comment expresses concern with microplastics. Venue operations will be subject to local regulations that prevent the use of single-use plastics (see Section 3.3.4.3 and PF-BIO-1 and MM-BIO-7: *Trash Management and Post-Event Cleanup* and MM-BIO-10 in the Draft SEIR): *Biodegradable Venue Products.* Refer to Section 3.3, *Biological Resources*, in the Draft SEIR for additional details. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-36 This comment further expresses concern with plastic in food and water supply. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-37 This comment expresses concern with plastics and microplastics entering the ocean. Venue operations will be subject to local regulations that prevent the use of single-use plastics (see Section 3.3.4.3 and PF-BIO-1 of the Draft EIR), and implementation of MM-BIO-7: *Trash Management and Post-Event Cleanup* and MM-BIO-10: *Biodegradable Venue Products* will prevent the introduction of plastics into the local environment. Additionally, as of June 1, 2017, Regional Water Quality Control Boards, as the Permitting Authorities, started requiring all MS4 permits to have trash control implementation requirements and compliance milestones to demonstrate progress towards 100 percent compliance with the Trash Provisions. On June 22, 2022, the State Water Board reissued the Statewide Department of Transportation General Permit. On September 8, 2022, the State Water Board reissued the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities. These reissued permits implement the Trash Provisions for the Department of Transportation and construction dischargers. The General Permits for Stormwater Discharges Associated with Industrial Activities and the Small MS4

General Permit will implement the Trash Provisions when reissued. The Proposed Project will require utilize municipal storm drains and will require an MS4 permit. Accordingly, the Proposed Project will be subject to full trash capture requirements. Refer to Section 3.3, *Biological Resources*, in the Draft SEIR for additional details. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CE4K-38 This comment refers to the link between childhood cancers and exposure to toxic chemicals. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Coalition for Clean Air

CCA The commenter is concerned that the Proposed Project will result in significant adverse impacts on vehicle miles traveled (VMT) and recommends a commitment to install and maintain bicycle parking and lockers. The current design at 208 E. 22nd Street includes spaces for bicycle parking, and the current West Harbor parking lot includes spaces for bicycle parking. Impacts associated with VMT from the Project were analyzed in Section 3.9, *Transportation*, of the Draft EIR, which concluded that the Proposed Project would have a significant and unavoidable impact related to an increase in VMT. Methodology associated with this assessment can be found in Appendix G-2. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter CSPNC

CSPNC-1 This comment is introductory to the comments that follow. Please refer to responses to comments CSPNC-2 through CSPNC-44 that address each of the specific concerns expressed in the comment letter.

CSPNC-2 The comment recommends replacing the term *amphitheater* with a more appropriate term. While the term *amphitheater* typically refers to a natural or human-made half-circle with tiered structure, there are other examples of amphitheaters in the Southern California region which do not meet this criteria. Renderings of the Proposed Project are included in the Draft SEIR's Project Description. The Tenant (developer) prefers to continue using the term *amphitheater*. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-3 The commenter expresses the opinion that the reasoning leading to the conclusion of less-than-significant aesthetic effects from firework shows is flawed and says that the aesthetic impacts resulting from fireworks need to be re-analyzed. The impacts of fireworks on the visual landscape of the port are considered on page 3.1-13 of Section 3.1, *Aesthetics*. Pursuant to this comment and similar comments made by others, the Tenant has agreed to eliminate "salute" fireworks from the Proposed Project entirely. In addition, the number of fireworks shows that would be permitted annually has decreased from 25 to 13, and the 13 annual shows would be limited in

duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioner to consider.

CSPNC-4 The comment states that Los Angeles Municipal Code 57.5608 adopts California Fire Code Section 5608, with a few added clauses. It goes on to state that neither CFC 5608 nor the additional City Code clauses address aesthetic concerns of fireworks and, therefore, citing this code in the Draft SEIR is irrelevant to this evaluation (besides being a *pro forma* statement that the Proposed Project intends to follow the law). The comment expresses the opinion that since the presented reasoning in the Draft SEIR is inadequate for a determination, an analysis is required. The cited codes are relevant to the aesthetic impact of fireworks because they identify display requirements and place limits on the size and quantity of fireworks permitted by the City. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-5 The commenter states, "We recognize and appreciate the selection of significance thresholds (rather than the 2009 or 2016 DEIR baselines), contrary to common Port environmental analyses: Proposed Project impacts were conservatively compared directly to significance thresholds without subtracting emissions associated with land uses existing at the time of the IS/NOP. [p. 3.2-19]." LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-6 The comment implies that the Draft SEIR should have considered the impacts of multiple fireworks displays over a large geographic area as was done in the 2017 San Diego Fireworks EIR. The analysis methodology developed in the SD 2017 EIR for firework display events was used as the basis for analyzing the Proposed Project impacts in the Draft SEIR. However, whereas the project in the SD 2017 EIR was the establishment of an ordinance to govern seven existing and four new proposed firework display events within the SD Bay and Imperial Beach Oceanfront, the Proposed Project consists of a single fireworks display location. The proposed fireworks display for this Proposed Project is the only fireworks display that requires discretionary action by the LAHD and, as such, is the only fireworks display evaluated as part of the Proposed Project in the Draft SEIR. In other words, there are no other fireworks displays under LAHD jurisdiction to consider.

Comment CSPNC-6 also states that the Draft SEIR does not take regional cumulative effects of fireworks into account and references the San Diego 2017 EIR. However, the Draft SEIR does determine that the Proposed Project would make a cumulatively considerable contribution to an existing cumulatively significant impact under Cumulative Impact AQ-7.

CSPNC-7 The commenter recommends adaption and adoption of mitigation measure (MM-) AQ-2 from the San Diego 2017 Fireworks EIR. CEQA requires mitigation when impacts are determined to be significant. The Proposed Project would not exceed thresholds, would not create a new impact, and would not substantially increase the

severity of impacts identified in the 2009 SPW EIS/EIR and 2016 SPPM Addendum. However, because the Proposed Project would add to impacts already deemed significant in the 2009 SPW EIS/EIR and 2016 SPPM Addendum; those impacts (i.e., impacts identified in the 2009 SPW EIS/EIR and 2016 SPPM Addendum) would remain significant and unavoidable. Pursuant to this comment and similar comments made by others, the number of fireworks shows that would be permitted annually has decreased from 25 to 13, and the 13 annual shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes.

CSPNC-8 The comment states that lighting impacts on California least tern and marine mammals are not addressed in the Draft SEIR and that an assessment of illumination beyond the concert venue boundaries is needed. Lighting impacts on sensitive wildlife species are discussed in Section 3.3.7, Impact BIO-1, of the Draft SEIR; the text has been expanded in the Final SEIR (see Section 3.2.4, *Changes Made to Section 3.3, Biological Resources*) to assess the results of the photometric analysis that was performed for the Proposed Project in relation to wildlife and to specifically address any potential lighting impacts on California least tern and marine mammals.

Although the amphitheater has been designed to face outward towards the water so that concert sound would be directed away from nearby residential areas, the lighting has been designed to be contained within the amphitheater, and lighting reduction measures would be implemented and incorporated into the Proposed Project design to limit light spilling into the adjacent waterways. These lighting features would include shielding, glare reduction, and fixtures that are mounted lower on the poles to direct lighting to desired areas. In addition, lighting associated with the Proposed Project would be designed in consideration of the Los Angeles Waterfront Design Guidelines, which include lighting recommendations to minimize light pollution, spill light, and glare. The Proposed Project would also adhere to appropriate Illuminating Engineering Society of North America (IESNA) standards, the City of Los Angeles Bureau of Street Lighting, the International Dark Sky Association (IDA), and the City of Los Angeles Planning and Zoning Code. Incorporation of these guidelines and standards would reduce lighting impacts on adjacent waterways and any wildlife that may occur there, including California least tern and marine mammals.

The photometric analysis in the Draft SEIR determines that impacts from Project-related lighting would be minimal outside of the immediate amphitheater area (as detailed in Appendix B of the Draft SEIR). Based on the calculations, although illumination levels are high within the amphitheater (maxing out at around 52 foot-candles closest to the stage), there is a significant decrease in illumination levels at the waterways adjacent to the amphitheater site, where levels dramatically drop off to approximately 5 foot-candles along the promenade and tapering to less than 1 foot-candles at the dock bordering the amphitheater. By the time light reaches approximately 100 feet into the water, which is well outside of the areas where

California least tern and marine mammal haul out areas occur, foot-candles are measured to be less than 1, with a majority of the measurements being less than 0.5.

Because lighting levels will drop off dramatically directly outside of the Proposed Project site, impacts on wildlife species that occur well outside of this area, including nesting California least tern and marine mammal haul-out areas, are not anticipated as a result of the Proposed Project. The Proposed Project site is located approximately 1.7 miles northwest of the California least tern colony, and lighting levels drop off to less than 1 foot-candle within 100 feet of the site. Furthermore, the line of sight between the tern colony and amphitheater is blocked by multiple landmasses (e.g., Reservation Point, Contractor's Village), which contain multi-storied buildings that would obstruct the view of the amphitheater from the tern colony. Similarly, the marine mammal haul-out locations are located from approximately 0.6 to 1.5 miles from the proposed amphitheater, and all but two of these locations have obscured views of the site due to landmasses and building structures. Only two of the haul-out locations (Southwest Marine Facility/Coast Guard Dock and Main Channel [South]) have a direct line of site to the amphitheater, but they are approximately 0.3 mile and 0.7 mile away, respectively, on the opposite side of the channel, and Project-related lighting levels do not reach farther than 100 feet into the waterway.

The photometric calculations were based on the lighting plan for the Proposed Project and included not only the lighting around the seating area, but also for the entire venue, which included stage lighting and LED video screens, as well as concessions, restrooms, and other venue buildings. Therefore, any lighting associated with flanking video displays has already been included in the analysis. An assessment performed by lighting experts during the preparation of the Draft SEIR determined that the study area and facilities that were included in the photometric analysis were sufficient to capture all potential lighting impacts resulting from the Proposed Project.

Lighting effects would be grounded within the amphitheater property for safety to shipping and Port operations; they would terminate within the venue and never be aimed outside of the venue. As with other types of lighting, should any of the concerts require the use of strobe lighting or other flashing lights that can be disruptive, such lighting would be strictly controlled and prohibited from shining into the water, as flashing lights in the main channel are a navigation hazard to ships. As such, there would be no impacts on any special-status wildlife species, including California least tern and marine mammals, from lighting.

Based on the implementation of lighting reduction measures, the lighting design for the Proposed Project, the locations of sensitive wildlife species in relation to the amphitheater, and the results of the photometric analysis, it has been determined that lighting impacts on California least tern and marine mammals would be less than significant.

CSPNC-9 The comment states that the analysis of the potential impacts of fireworks and concert noise on marine mammals must be extended to other species that are fully covered by the Marine Mammal Protection Act but were not considered in the Draft SEIR's analysis. It is common to include multiple marine mammal species when considering the potential impact of underwater noise (i.e., hydroacoustics). However, the noise sources at issue in the Proposed Project analysis are fireworks and concerts, which produce in-air noise rather than underwater noise. Therefore, analysis of noise effects on marine mammals was restricted to species that would potentially haul out of the water and, therefore, be exposed to in-air noise. No additional analysis is needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-10 The comment states that the data presented in the Draft SEIR is not sufficient to support the less-than-significant determination for Project-related noise impacts on nesting California least tern. Peer-reviewed, published literature on the effects of concert-related noise disturbances on shorebirds, and avian species in general, is extremely limited. The Project administrative record included all of the studies found during the literature review. Therefore, in the absence of other data, the impact determination for Project-related noise impacts on nesting California least tern is based on the best available science and professional judgement, which is the findings of over 20 years of long-term monitoring studies of tern colonies throughout southern California, including the colony at Pier 400, and the professional assessment of the tern experts that have been studying these colonies for decades. Based on many years of monitoring the California least tern colonies in the region, the Port of Los Angeles (POLA's) tern experts have observed that terns are startled from their nests by types of sound that are typically associated with percussive, intermittent noises rather than constant increased noise levels. These differences in the type of sound between fireworks noise (i.e., percussive and intermittent) versus concert noise (i.e., a constant sound) were factored into the impact determinations for potential concert versus fireworks noise impacts on terns. The results of these long-term monitoring studies demonstrate that there would be no detrimental noise-related impacts on terns as a result of concert noise. Nothing in the peer-reviewed literature contradicts, the assessment of local tern experts, decades of onsite monitoring data, or the less-than-significant impact determination in the Draft SEIR. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

The Draft SEIR determined that there could be a potential impact on California least tern from fireworks-related noise as a result of the Proposed Project. Therefore, MM-BIO-9, which includes event monitoring and possible cessation of fireworks shows if disturbances are detected (in consultation with the wildlife agencies), would be implemented to ensure that impacts are less than significant. In addition, the plan for Project-related fireworks shows has been modified to further reduce any fireworks-related noise disturbances. The proposed number of fireworks shows under the Proposed Project has been reduced from 25 shows per year to 13 shows per year, and the duration of the shows has been reduced to a maximum of 10 minutes, with the

exception of 2 shows per year that would be no longer than 20 minutes. In addition, "salute" fireworks that would signal the end of the show with big bangs have also been eliminated from the Proposed Project so that fireworks shows would be kept at a constant noise level without any major increases and decreases in noise intensity. The Port already conducts long-term monitoring of the California least tern colony, which is performed by Endangered Species Act (ESA)-permitted biologists, as discussed in response to comment CSPNC-15.

CSPNC-11 The comment states that the requirements for the Best Management Practices (BMP) Plan under the National Pollution Discharge Elimination System (NPDES) General Permit No. CAG994007 are not sufficient to mitigate for fireworks debris and recommends that the BMPs from the San Diego 2017 Fireworks EIR be adopted instead. The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) is the appropriate agency to protect water quality and makes the determination for which requirements are necessary for the San Pedro Harbor. The NPDES General Permit No. CAG994007 (Los Angeles Water Board, Order No. R4-2023-0180, adopted May 25, 2023) is the relevant permitting mechanism in the Los Angeles region and incorporates regional expertise and an evolution in knowledge following a federal court ruling issued in 2023 (*Coastal Environmental Rights Foundation vs. Naples Restaurant Group, LLC*). Further, permit requirements can vary based on different water boards and conditions at different waterways; therefore, permit requirements are not always identical. Please see response to comment CSPNC-13 regarding anticipated BMP measures for the tenant's fireworks shows. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-12 The comment states that the fireworks BMP Plan must be made publicly available. The BMP Plan is a requirement under NPDES General Permit No. CAG994007. The requirements for the Los Angeles Water Board's NPDES General Permit to discharge fireworks are publicly available. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider. No further response is required.

CSPNC-13 The comment states that the San Diego 2017 Fireworks EIR contains more-detailed BMP recommendations than the Draft SEIR. As described in response to comment CSPNC-11, permit requirements, including BMPs, vary based on different water boards and conditions at different waterways, and the Los Angeles Water Board is the appropriate agency to protect water quality and makes the determination for which requirements are necessary for the San Pedro Harbor. NPDES General Permit No. CAG994007 specifies standard operating procedures for all public fireworks shows within surface waters in Los Angeles and Ventura Counties. A Notice of Intent and BMP Plan would be prepared to obtain coverage under NPDES General Permit No. CAG994007, specifically for the proposed fireworks shows included in the Proposed Project, to be approved by the Los Angeles Water Board through the issuance of a Notice of Applicability. The BMP Plan would be compliant with all of the applicable requirements listed in General Permit No. CAG994007 for all three

described elements to avoid and/or mitigate potential impacts on the water quality for receiving waters (i.e., pollution prevention, pollutant identification, and pollution control), as well as all recording, reporting, and enforcement requirements. It is anticipated that BMP measures would be similar to those included in the BMP Plan for the LAHD fireworks shows, also covered under General Permit No. CAG994007.

Like MM-BIO-1 from the San Diego 2017 Fireworks EIR, the BMP Plan for the Tenant's fireworks shows also requires collection, weighing, and photo evidence of debris. The addition of a 50 percent metric lacks meaningful value in reducing impacts and also is problematic from a compliance monitoring standpoint. Because debris must be thoroughly dried in order to make this requirement meaningful, and because most of the weight of a pyrotechnic device is intended to burn, defining net weight and setting performance criteria are ongoing debates in this field and, as such, these issues are not sufficiently developed to warrant imposition as a meaningful mitigation strategy. The General Permit No. CAG994007, as well as the BMP Plan for the LAHD fireworks shows and accompanying waste discharge requirements, represent regional agency knowledge, and consideration of the issue in the Draft SEIR is sufficiently protective of potential water-borne fireworks debris.

The BMP Plan for the LAHD fireworks shows also includes beneficial requirements that are not included in MM-BIO-1 from the San Diego 2017 Fireworks EIR, such as specifics on the required walls on three sides of the launch barge to trap materials and prevent debris from blowing into the water, a tighter timeline for debris clean-up and removal, and a Los Angeles Water Board-approved special study of pre- and post-water chemistry analysis of fireworks shows. As mentioned earlier in this response, it is anticipated that these requirements would be included in the BMP Plan for the Proposed Project, as well as per the requirements listed in General Permit No. CAG994007; final Project-specific requirements would be determined by the Los Angeles Water Board. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider. No further response is required.

CSPNC-14 The comment recommends that the additional features in the San Diego 2017 Fireworks EIR be incorporated into the BMP Plan for the Proposed Project. This comment relates to comment CSPNC-13; a combined response to both comments is provided in response to comment CSPNC-13. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider. No further response is required.

CSPNC-15 The comment recommends that long-term nesting success monitoring for California least tern is needed. As described in the response to comment CSPNC-16, monitoring of the California least tern colony would begin prior to the start of fireworks events, and this monitoring would capture any disturbances that may be related to both concert and fireworks events. The most direct measure of event-related disturbances is to observe the startle response of California least terns, and observations made before, during, and after the events are the best indicator of event-related disturbances; these measures are already proposed for the Proposed Project. Many

factors and variables can contribute to nesting success or failure, such as predation, availability of resources, and environmental conditions. Because of this, nesting success is not an appropriate or reliable indicator for determining event-related disturbance. The Port already conducts ongoing breeding surveys at the tern colony under a separate survey effort, which are performed by the same ESA-permitted biologists that have been granted permission to access the site that will perform the monitoring during fireworks events. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider. No further response is required.

CSPNC-16 The comment recommends that monitoring of nesting California least tern and marine mammals be expanded to include concert-related noise. Monitoring of the California least tern colony would begin prior to the start of fireworks events. The monitoring timeframe would be included in the *California Least Tern Nesting Colony Monitoring Plan*, which would be approved by the Port's Environmental Management Division and biology team; this information has been added to MM-BIO-9. Monitoring would be performed at all fireworks shows for the first two nesting seasons; the wildlife agencies (i.e., U.S. Fish and Wildlife Service [USFWS] and California Department of Fish and Wildlife [CDFW]) would determine if further monitoring is needed.

MM-BIO-9 requires that any discernable negative changes in bird behavior that are observed must be reported to LAHD, USFWS, and CDFW within 24 hours, and that consultation with USFWS and CDFW would be required to develop measures to avoid negative impacts on California least tern, up to and including cessation of firework shows.

As discussed in Section 3.3.7, Impact BIO-1, of the Draft SEIR, impacts on pinnipeds as a result of the Proposed Project are only expected from fireworks-related noise. Although concert-related noise levels do exceed the Level B harassment threshold for harbor seal at some of the haul-out locations (i.e., Fish Harbor, Cabrillo Marina [north], Main Channel [south], and Southwest Marine Facility/Coast Guard Dock), this species does not occur at these locations, and therefore, would not be affected. Project-related noise levels exceed the Level B harassment threshold for pinnipeds other than harbor seal only for fireworks-related noise, not concert-related noise. Therefore, monitoring for concert noise is not necessary for marine mammals as the Level B harassment threshold would not be exceeded.

CSPNC-17 The comment recommends that the language in MM-BIO-11 be changed to require that nest removal within the nesting season would be permitted only if an independent qualified biologist certifies that the nest(s) to be cleared are fully abandoned. MM-BIO-11 has been revised to clearly state that clearance of abandoned bird nests must occur outside of the breeding-bird season (February 15–September 1), unless a qualified biologist determines that the nest has been abandoned.

CSPNC-18 The commenter states that fireworks are known to deposit a wide range of potentially toxic material into waterbodies. A discussion of the potential for fireworks to impair local water quality is included on page 3.7-16 of Section 3.7, *Hydrology and Water Quality*. Pursuant to this comment and similar comments made by others, the Tenant has agreed to eliminate "salute" fireworks from the Proposed Project entirely. In addition, the number of fireworks shows that would be permitted annually has decreased from 25 to 13, and the 13 annual shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. Additionally, it should be noted that the Port is already required to conduct water quality testing on a regular and ongoing basis. Additionally, the Tenant will be required to obtain a NPDES permit from the Los Angeles Regional Water Quality Control Board.

CSPNC-19 The comment provided a publication by the Audio Engineering Society (AES) Working Group on Sound Exposure and Noise Pollution due to Outdoor Entertainment Events (2020-05-22) *Understanding And Managing Sound Exposure And Noise Pollution At Outdoor Events* (Technical Document AESTD1007.1.20-05), and recommended it be referenced in the Draft SEIR. The report has been reviewed and is referenced in some of the responses to comments regarding concert noise. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-20 The comment states that atmospheric effects were ignored in the analysis of construction noise and should have been included. Consistent with industry-standard practice and with the approved 2009 SPW EIS/EIR, the construction noise analysis is based on the Federal Highway Administration's *Roadway Construction Noise Model* (RCNM), which is widely used in the analysis of construction noise for all manner of projects across the United States. This model does not include specific atmospheric/weather effects, but it does include the following conservative assumptions: (1) noise attenuation due to ground effects is ignored; (2) noise attenuation due to air absorption is ignored; (3) noise attenuation due to barrier effects (e.g., terrain, buildings, walls, and other structures) is ignored. Based on the Project analysis, which uses the RCNM, the Draft SEIR discloses that construction noise impacts for the Proposed Project would remain significant and unavoidable after mitigation. This is consistent with the 2009 SPW EIS/EIR. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-21 The comment states that the traffic noise analysis is inadequate because it analyzes traffic noise solely on Harbor Boulevard and suggests that the traffic noise should also be analyzed elsewhere in the area. In response to this and other comments about how Project traffic may affect other roadways in addition to Harbor Boulevard, details have been added to the traffic noise analysis to include the traffic distribution affecting other streets. The resulting updates to the Draft SEIR are described in Section 3.2 of this Final SEIR, *Changes to the Draft Subsequent Environmental*

Impact Report. The updated data includes noise analysis of additional nearby roadways and concluded that noise impacts would not be significant.

CSPNC-22 The comment states that Tier 2 events may have sound levels comparable to Tier 1 events and that the analysis of noise effects must incorporate Tier 2 events rather than relying on the analysis in the 2009 SPW EIS/EIR and the 2016 SPPM Addendum. As stated in the Draft SEIR, a 500-seat amphitheater was already included in the 2009 SPW EIS/EIR and the 2016 SPPM Addendum. Tier 2 events could include activities such as community events or viewing parties, which would be substantially smaller than Tier 1 events and would require substantially lower noise levels. Tier 1 noise levels would be too loud to be compatible with these types of events given their size and would be unnecessary and undesirable in this context. Tier 2 events would not be commercial concerts where continuous sound/music is the central focus of the event, and some Tier 2 events might not require the use of the amphitheater sound system given their size. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-23 The comment states that predicted concert sound levels are too loud to ensure public health for concert visitors, even after implementation of MM-NOI-3 (a reduction in front-of-house sound levels). The purpose of CEQA in general, and the Draft SEIR in particular, is to analyze the potential environmental impacts of the Proposed Project on the surrounding environment. Project noise levels affecting people on the Proposed Project site is an example of the Proposed Project's impact on itself, which is not subject to analysis under CEQA. Therefore, an analysis of sound exposure within the amphitheater is not included in the Draft SEIR. In response to the general assertion that the proposed concert noise levels are fundamentally too high, it should be noted that the proposed concert noise levels are not out of the ordinary range for a major music venue. The AES Technical Document (AESTD1007.1.20-05) recommended by the commenter includes a summary of audience sound exposure regulations that range, depending on the country, from 99 to 107 dBA L_{eq} (A-weighted equivalent noise level) (a few countries also provide lower limits specifically for children). AESTD1007.1.20-05 also cites case studies with noise levels inside music venues of 98 to 105 dBA L_{eq}. The mitigated Project front-of-house noise level of 100 dBA L_{eq} is clearly within this range. Furthermore, one of the cited case studies in AESTD1007.1.20-05 states that reducing front-of-house noise levels to 95 to 96 dBA "made the stadium difficult to use as a concert venue," illustrating the intuitive fact that there are practical limits on how far music levels can be reduced before they negatively impact the listening experience for concert attendees. It is also noted that the noise level specified in MM-NOI-3 is the 5-minute A-weighted equivalent noise level of 100 decibels, designated as 100 dBA L_{eq}(5-min); this is the highest noise level allowed for any 5-minute period and would correspond to only the loudest parts of any performance. Due to the different types of artists that would perform at the venue, as well as variations (dynamic range) within each performance, the noise levels would often be below this maximum threshold. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-24 The comment states that, unless sound levels are significantly lowered, there must be a mitigation measure that specifies warning signs at the venue, in accordance with City of Los Angeles Code. As noted in response to comment CSPNC-23, the Draft SEIR is not required to analyze the impacts of noise levels within the Proposed Project site itself. The referenced signage would be included at the Proposed Project site in accordance with City of Los Angeles Code. This would be implemented, as a matter of standard practice, along with any other building and safety codes required for the construction and occupancy of the Proposed Project. Therefore, no changes to the Draft SEIR were made in response to this comment. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-25 The comment states that analysis of both concert and fireworks noise must consider L_{max} (maximum peak sound level) in addition to the existing analysis based on L_{eq} and questions the selection proxy events for the fireworks analyzed in the Draft SEIR. The Summer Pops event was selected as a proxy for the Proposed Project because it was identified as the most similar available example to what is anticipated at the Proposed Project's amphitheater. Other events considered in the referenced San Diego 2017 Fireworks EIR were substantially larger events associated with regional San Diego Bay-Wide Big Bay Boom/Fourth of July display. The scaling of noise levels proportional to the total pounds of fireworks is a basic calculation supported by the empirical data presented in Draft SEIR, Appendix F.

The 1-hour L_{eq} is used in the Draft SEIR for consistency with the City of Los Angeles Municipal Code, which serves as the basis for the threshold of impact used in the analysis for the Proposed Project. Despite using a 1-hour L_{eq} for the assessment of noise levels, the mitigation and monitoring of amphitheater noise levels would be enforced over a much shorter 5-minute period, which helps prevent short-term noise increases.

There is no L_{max} standard that applies to the Proposed Project for either amphitheater or fireworks noise. The referenced San Diego 2017 Fireworks EIR discusses L_{max} but does not use L_{max} to define any thresholds of impact for that project. The San Diego 2017 Fireworks EIR assesses fireworks noise levels using the same 1-hour L_{eq} metric used in the Proposed Project Draft SEIR. Furthermore, the San Diego 2017 Fireworks EIR had a less stringent threshold that assessed impacts when fireworks noise exceeded ambient by 10 dBA or more, rather than the 5 dBA exceedance used in the Draft SEIR. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-26 The comment states that experimental sound measurements must be made in the Port area to validate the NoizCalc model projections used in the analysis of amphitheater noise levels. Noise modeling is the primary tool used in the prediction and control of environmental noise from all types of noise sources and is a valid approach for assessing the Proposed Project. The software used in the analysis, NoizCalc, is based on recognized national and international noise calculation and propagation standards that have been widely studied and validated. NoizCalc is acknowledged in the AES

Technical Document (AESTD1007.1.20-05) recommended by the commenter, which notes that NoizCalc was developed "through a partnership with the makers of industry-standard noise modeling software, SoundPLAN." AESTD1007.1.20-05 also states that "Accurate computer modeling of the sound system design during planning stages is critical." NoizCalc is specifically designed to accomplish the type of music venue analysis required for the Proposed Project Draft SEIR and is, therefore, an appropriate tool for the assessment conducted.

The comment incorrectly implies that the model does not account for topography. NoizCalc incorporates a digital ground model of the local terrain throughout the analysis area. This terrain is included in the sound propagation calculations. The 5.5-foot and 16-foot analysis heights used in the model refer to the height of the receiver above the local terrain. The purpose of using two receiver heights was to estimate the noise levels at approximately 1st-floor and 2nd-floor elevations above the ground.

The results of the modeling are fully disclosed in the Draft SEIR, and impacts are assessed relative to the established thresholds of impact. Based on the modeling, the Draft SEIR concludes that amphitheater noise impacts would remain significant and unavoidable after mitigation. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-27 The comment states that sound measurements during fireworks events in San Pedro are required for the calibration of the sound extrapolations used in the Draft SEIR. Noise modeling based on reference noise data is a well-established method of predicting and assessing future noise levels. Reference noise data used in the analysis came from the San Diego 2017 Fireworks EIR, which employed an extensive measurement program that used six noise monitoring locations throughout San Diego Bay to simultaneously measure fireworks events from six different launch sites. The resulting noise model was calibrated based on calculated distance and air absorption effects and showed strong agreement with all the measured noise levels (within 0 to 2 dBA). The adjustment in noise levels due to the pounds of fireworks was required because the measured fireworks events for the Big Bay Boom/Fourth of July display were substantially larger than what is proposed at the site for the Proposed Project. This adjustment used the same dB scaling calculation established in the San Diego 2017 Fireworks EIR. Based on the availability of published fireworks noise data, site-specific tests in San Pedro were not necessary. In addition, it is noted that the fireworks displays and launch location proposed by the Proposed Project do not currently exist, so it would not be possible to measure them in the field. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-28 The comment states that MM-NOI-3, reducing front-of-house sound levels from 110 to 100 dBA, is inadequate because it does not reduce public impact to a sufficient degree. A reduction of 10 dBA in amphitheater noise levels is substantial because this is typically perceived as a halving of loudness. The comment uses selective data and incorrect arithmetic to calculate noise levels and, as a result, misinterprets and misrepresents the noise levels in Table 3.8-13 of the Draft SEIR. Complete mitigated

noise levels are provided in Table 3.8-12 and Table 3.8-13. As explained in Section 3.8.3.1, *Noise Fundamentals*, of the Draft SEIR, decibels are logarithmic values that are not added arithmetically. Correctly adding the highest amphitheater noise level reported in Table 3.8-13 (70 dBA) to the highest corresponding ambient noise level (55 dBA) gives a maximum combined noise level of 70.1 dBA $L_{eq(h)}$. The overall range of combined noise levels for Table 3.8-12 and Table 3.8-13 is approximately 61 to 70 dBA, not 70 to 75 dBA as stated incorrectly in the comment. The actual range of overages stated in the tables is 0 to 27 dBA, not 15 to 27 dBA, as implied by the comment. The comment that the Proposed Project is estimated "to produce sound overages above ambient in the 15–20 dBA range (27 dBA at the residential Cabrillo Marina site)" ignores the majority of receivers that would experience much lower noise overages. As stated in the Draft SEIR: "Amphitheater noise levels at residences in San Pedro, west of the Proposed Project, would not exceed daytime ambient-noise levels and would exceed evening and nighttime ambient levels by less than 5 dBA." Nonetheless, the Draft SEIR (Section 3.8, *Noise*) clearly discloses that, even after mitigation, "Amphitheater noise levels would continue to exceed ambient-noise levels by more than 5 dBA $L_{eq(h)}$ at multiple noise-sensitive receivers, including liveaboard vessels in Al Larson Marina (exceedances of 12 to 18 dBA $L_{eq(h)}$, depending on the time of day), residences at Reservation Point (exceedances of 13 to 21 dBA $L_{eq(h)}$, depending on the atmospheric conditions and time of day), and liveaboard vessels in Cabrillo Marina (exceedances of 13 to 27 dBA $L_{eq(h)}$, depending on the atmospheric conditions and time of day). Therefore, Amphitheater noise impacts would remain significant and unavoidable after mitigation." As a result, the Draft SEIR properly discloses the Proposed Project's amphitheater noise impacts. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-29 The comment states that MM-NOI-5 is inadequate because it simply enforces the "already-unacceptably high noise level." MM-NOI-5 requires noise monitoring for all Tier 1 events. The comment does not raise any specific questions or concerns about the noise monitoring methods. Comments related to the allowable noise levels are addressed in response to Comment CSPNC-28. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-30 The comment states that MM-NOI-6 must be changed to require the submission of noise reports following every event, and such records must be made public. MM-NOI-6 has been revised accordingly as shown in Section 3.2, *Changes to the Draft Subsequent Environmental Impact Report*, of this Final SEIR.

CSPNC-31 The comment states that MM-NOI-7 has no useful effect because collecting complaints does not mitigate noise levels and requests real-time management of public complaints by direct communication with event sound control staff. MM-NOI-7 serves at least two useful purposes. It provides an easily accessible and centralized way for the public to register any complaints, and it provides a tool for the Tenant and the Port to track these complaints. Nonetheless, in response to the public

comments received, MM-NOI-7 has been revised as shown in Section 3.2, *Changes to the Draft Subsequent Environmental Impact Report*, of this Final SEIR.

CSPNC-32 The comment states that MM-NOI-10 fails to limit the number of maximum noise events and must be changed to require that non-Tier 1 events will have much lower noise levels. The topic of non-Tier 1 event noise levels is addressed in response to comment CSPNC-22. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

CSPNC-33 The comment states that MM-NOI-13 limiting "salute" (concussion) fireworks shells is useless and should instead prohibit their use. Pursuant to this comment and similar comments made by others, the Tenant has agreed to eliminate "salute" fireworks from the Proposed Project entirely. MM-NOI-13 has been revised accordingly, as shown in Section 3.2, *Changes to the Draft Subsequent Environmental Impact Report*, of this Final SEIR.

In addition, the number of fireworks shows that would be permitted annually has decreased from 25 to 13, and the 13 annual shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioner to consider. .

CSPNC-34 The comment acknowledges the change in analysis from the historical level of service (LOS) impacts to the current vehicle miles travelled (VMT) emphasis in response to SB 743. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioner to consider.

CSPNC-35 The comment states that potential changes in traffic congestion will affect regional mobility is absent from the Draft SEIR analysis and says that a VMT emphasis does not absolve the proposing agency from considering how traffic will affect transportation.

The Draft SEIR assesses all potential impacts required under CEQA. For other transportation impacts, the Los Angeles Department of Transportation (LADOT) *Transportation Assessment Guidelines* (City of Los Angeles Department of Transportation 2022) identifies the City of Los Angeles' authority to review and require correction for transportation deficiencies that may result from a development project through the City's Site Plan Review approval process. The Site Plan Review analysis includes pedestrian, bicycle, and transit access assessment, Project access safety and circulation evaluation, Project construction, and residential street cut-through analysis. This review is outside the scope of this Draft SEIR; however, the Proposed Project's access circulation evaluation, which includes operational deficiency evaluations (i.e., LOS) for intersections in the Project vicinity, is included for information purposes only to this Draft SEIR as Appendix G-2.

CSPNC-36 This comment expresses concern over the occlusion of Harbor Boulevard by event traffic that could prevent residents from towing boats to the boat launch. Although there may be some overlap between Cabrillo Launch Ramp users and amphitheater

patron traffic, most performances would have a start time between 7:00 p.m. and 8:00 p.m. which means congestion would occur during a limited arrival window. The *Event Parking and* Circulation *Management Plan* (Appendix H of the Draft SEIR) aims to minimize conflicts with all travelers in the area, including those utilizing the Cabrillo Launch Ramp. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioner to consider.

CSPNC-37 This comment states that the wastewater impacts of the Proposed Project have not been adequately assessed in 16 years in light of the additional visitor traffic added to the area. As stated in the Draft SEIR, the Terminal Island Treatment Plant is still within its wastewater treatment capacity as reported in 2016, which had a higher capacity and lower use rate than the reported 2009 treatment rates. This impact was also considered in the NOP/IS (Section XIX- *Utilities and Service Systems*) which determined that the wastewater impacts of the site would be less than significant in comparison with the City's capacity as of 2022. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioner to consider.

CSPNC-38 The comment expresses concern over the number of pages allotted in the Draft SEIR to discuss the transportation impacts considered as a cumulative impact and that factors other than VMT are found in Appendix G, *Traffic*, of the Draft SEIR.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioner to consider.

CSPNC-39 The comment states that a comprehensive analysis of the Proposed Project's traffic effects in a regional cumulative context is required and says that no significant consideration is given in the Draft SEIR to how the cumulative traffic effects of the Proposed Project will affect local and regional traffic and transportation plans independent of VVMT estimates. The comment expresses concerns about the trip numbers assumed in the Draft SEIR and about other regional traffic-generating projects.

The Draft SEIR Table 4-1 includes a list of related and cumulative projects near the Proposed Project that are included in the cumulative analysis. As discussed in response to comment CSPNC-35, operational deficiency evaluations (i.e., LOS) for intersections in the Proposed Project vicinity are included for information purposes only to this Draft SEIR as Appendix G-2. This evaluation considers the list of related and cumulative projects included in the Draft SEIR Table 4-1, in addition to general regional ambient traffic growth. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioner to consider.

CSPNC-40 This comment expresses concern with the assessment of possible conflicts with regional transportation plans. The LADOT *Transportation Assessment Guidelines* states (City of Los Angeles Department of Transportation 2022):

"The threshold test is to assess whether a project would conflict with an adopted program, policy, plan or ordinance that is adopted to protect the environment… *a*

project would not be shown to result in an impact merely based on whether a project would not implement a particular program, plan, policy, or ordinance (emphasis added). Many of these programs must be implemented by the City itself over time… and it is the intention of this threshold test to ensure that proposed development projects and plans do not preclude the City from implementing adopted programs, plans and policies."

The Draft SEIR assessment in Appendix G follows the intent of the threshold in these guidelines. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioner to consider.

CSPNC-41 This comment expresses concern with the Proposed Project's impact on pedestrian access and mobility through its daily traffic cycle and a lack of mitigation aimed at minimizing effects on accessibility. The Proposed Project would not reduce pedestrian infrastructure or impact accessibility. The commenter is referred to CSPNC-40 for the threshold test described in the LADOT Transportation Assessment Guidelines (TAG). In addition, the measures outlined in MM-TRAN-1 aim to reduce traffic and increase multimodal mobility including encouraging the use of bicycles and public transportation.

The comment also states that the Proposed Project adds thousands of vehicle trips per day in a focused time period and says that retaining existing bicycle and pedestrian facilities does not assess potential impact. The comment suggests that the analysis address how the Proposed Project's traffic might affect the San Pedro Community Plan. While the Proposed Project is technically outside of the boundaries of the San Pedro Community Plan, as discussed above, the Proposed Project is not anticipated to conflict with existing plans promoting pedestrian and bicycle access and mobility.

CSPNC-42 This comment expresses concern with the Proposed Project's consideration of improvements that could mitigate Project impacts to mobility among residential areas near the Proposed Project site and with traffic being displaced into neighboring residential areas during events. The commenter is referred to CSPNC-40 for clarification regarding the assessment required under CEQA. As stated in Section 3.9, *Transportation*, of the Draft SEIR, the Project does not *conflict* with the City's policy that is identified in the comment. Furthermore, the transportation impacts assessed in Section 3.9 of the Draft SEIR concluded that transportation impacts would be significant and unavoidable and included MM-TRAN-1 to minimize traffic impacts to the extent feasible. The Proposed Project's transportation analysis did not consider improvements to nearby residential areas to mitigate Project impacts based on the volume of traffic assessed. This review is delegated to the City's Site Plan Review process. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioner to consider.

CSPNC-43 This comment expresses dissatisfaction with the conclusion that the Proposed Project will not conflict with the policy M12.4 in Appendix G to encourage new construction to accommodate zero emission vehicles and/or plug-in electric hybrids. The Proposed Project, in addition to not precluding future implementation of electric vehicle

charging, would construct conduits to encourage future implementation of electric charging stalls. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioner to consider.

CSPNC-44 This comment expresses concern with the Proposed Project's impact on pedestrian access and mobility through its daily traffic cycle and says there is a lack of mitigation aimed at minimizing effects on accessibility. The Proposed Project would not reduce pedestrian infrastructure or impact accessibility. In addition, the measures outlined in MM-TRAN-1 aim to reduce traffic and increase multimodal mobility including encouraging the use of bicycles and public transportation. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioner to consider.

Response to Comment Letter Garden Church

GC-1 The comment on behalf of the Garden Church states that the commenter agrees with the Draft SEIR's determination that the Proposed Project would result in significant air quality, greenhouse gas, noise and transportation impacts. Refer to responses to comments GC-2 through GC-10 that address each of the commenter's specific concerns.

GC-2 The comment states the proposed fireworks would result in significant air quality pollution. The Proposed Project's impacts associated with air quality, including those related to the proposed fireworks shows, were evaluated in Section 3.2, *Air Quality*, of the Draft SEIR. Pursuant to this comment and similar comments made by others, the Tenant has agreed to eliminate "salute" fireworks from the Proposed Project entirely. In addition, the number of fireworks shows that will be permitted annually is being decreased from 25 to 13, and the annual 13 shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. Additionally, fireworks shows will be subject to the pollution reduction management practices outlined in the Los Angeles Regional Water Quality Control Board's General Fireworks Permit for firework discharge. The Proposed Project would not result in new or substantially more severe air quality impacts than those previously identified in the 2009 SPW EIS/EIR. The comment does not raise any issues regarding the adequacy of the analysis contained in the Draft SEIR.

GC-3 The comment states that the proposed firework shows would result in significant noise impacts on the environment and surrounding community. Pursuant to this comment and similar comments made by others, the TenantTenant has agreed to eliminate "salute" fireworks from the Proposed Project entirely. In addition, the number of fireworks shows that will be permitted annually is being decreased from 25 to 13, and the annual 13 shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. Impacts associated with noise were evaluated in Section 3.8, *Noise*, of the Draft SEIR. The Draft SEIR found the Proposed Project would create a significant and unavoidable impact regarding noise during operation of the Proposed Project even with implementation of mitigation measures. The Proposed Project would incorporate

mitigation measures (MM-) NOI-13, *Eliminate the Use of "Salute" Fireworks*, and NOI-14, *Replace Fireworks with Drone Displays*, to reduce noise impacts associated with the fireworks shows. The comment does not raise any issues regarding the adequacy of the analysis contained in the Draft SEIR.

GC-4 The comment states that noise from the operation of the Proposed Project, particularly the concerts and fireworks shows, would result in significant noise impacts on sea life, specifically marine mammals. Impacts on sea life were evaluated in Section 3.3, *Biological Resources*, of the Draft SEIR on page 3.3-24 through 3.3-30. The Draft SEIR determined that based on the noise analysis for marine species, amphitheater events (i.e., concerts) and fireworks shows could produce noise levels which could affect marine mammals. Noise levels produced from the amphitheater and combined amphitheater events and fireworks shows have the potential to produce short-term and temporary impacts on harbor seals (and other pinnipeds), such as flushing them from their haul-out and foraging locations (although they return a short time later). However, Wood (2021) indicates that harbor seals are most commonly observed adjacent to the southern portion of Pier 400, where they have a well-used haul-out area. No harbor seals were observed at Fish Harbor, Cabrillo Marina (south), or the Main Channel. As such, impacts from noise events on harbor seal are not anticipated. Nonetheless, because noise levels would exceed the Level B harassment threshold for all other pinnipeds (i.e., 100 dBZ) from firework shows at Outer Harbor 1 and Outer Harbor 2, impacts on pinnipeds other than harbor seal at these locations and within up to a 1,500-foot radius could occur. Noise impacts would be reduced, but not eliminated, with implementation of MM-NOI-3, which would reduce noise levels from the amphitheater (see Section 3.8.8.6, *New Mitigation Measures Applicable to the Proposed Project*, of the Draft SEIR for more detail). Noise impacts on pinnipeds other than harbor seal would be reduced to less-than-significant levels with the implementation of MM-BIO-8, *Marine Mammal Monitoring During Fireworks Events.* The comment does not raise any issues regarding the adequacy of the analysis contained in the Draft SEIR.

GC-5 The comment states that the Draft SEIR did not provide sufficient information on alternative modes of transportation and that clean-up activities after events would generate significant noise impacts for the surrounding community. Through implementation of MM-AQ-31, *Zero-Emission Shuttle Buses*, the Proposed Project would be required to use zero-emission shuttle buses. In addition, through MM-TRAN-1, *TDM Strategies*, the Proposed Project would coordinate with LA Metro or LADOT to determine the feasibility of expanding services during events, as well as provide designated parking spaces for electric and clean air vehicles and provide end-of-trip bicycle facilities, such as bicycle parking and lockers. Through the implementation of MM-NOI-8, *Enforce a Curfew and Restrict the Hours of Use and Duration for the Venue's Amplified Sound System*, all events will conclude no later than 10:30 p.m. on all nights, unless prior authorization is granted by the Executive Director of the LAHD, and in no case will events extend past 11:00 p.m. Cleanup activities occurring after an event are not anticipated to reach nuisance volume levels.

Refer to responses to comments GC-3 and GC-4 for more information on the Proposed Project's noise impacts. The comment does not raise any issues regarding the adequacy of the analysis contained within the Draft SEIR.

GC-6 The comment states that the trash generated by the Proposed Project would result in impacts on people, animals, and the environment, and that vendors should be required to use reusable products and enforce a Zero Waste Policy. The Proposed Project would implement MM-BIO-7, *Trash Management and Post-Event Cleanup*, and MM-BIO-10, *Biodegradable Venue Products*, which would ensure that trash and other debris resulting from amphitheater events and/or firework show would be removed from nearby marine environments or prevented from entering the water and that biodegradable produces would be used to reduce impacts. In addition, per PF-BIO-1, event organizers would comply with City of Los Angeles Ordinance No. 187030, *Disposable Foodware Accessories and Plastic Drinking Straws*, and the City's Comprehensive Plastics Reduction Program and Zero Waste Plan. Furthermore, as detailed in Section XIX, *Utilities and Service Systems*, of the Initial Study (Appendix A of the Draft SEIR), operation of the Proposed Project would be required to comply with the City of Los Angeles's Green New Deal Sustainable City Plan, which includes a target to reduce municipal solid waste by 15 percent by 2030 and phase out single-use plastics (e.g., plastic straws, utensils, take-out containers, and polystyrene) by 2028. Tier 1 events would not have balloons as part of their normal operations, but may allow biodegradable confetti, which would be subject to MM BIO-7. Tier 2 events may have balloons present (e.g., graduations, birthdays), but the Tenant would inform event operators that balloons present on the Proposed Project site should not be allowed to be released into the environment. In addition, please refer to response to comment CE4K-37 for information about the trash capture requirements that would be implemented as part of obtaining an MS4 permit for the Proposed Project. The comment does not raise any issues regarding the adequacy of the analysis contained in the Draft SEIR.

GC-7 The comment states that effects of artificial turf were not properly evaluated in the Draft SEIR and that other ground-cover alternatives should be used for the Proposed Project. As explained on page 2-29 in Chapter 2, *Existing Setting and Project Description*, of the Draft SEIR, unlike artificial turf on a sports field, ground rubber infill would not be used for the proposed lawn. Instead, the infill materials would be sand, ground cork, granulated olive cores, or some combination of similarly inert materials. Through the use of these materials, and by avoiding ground rubber, the amount of polyfluoroalkyl substances (PFAS) would be inconsequential, thereby addressing concerns related to the use of artificial turf. In addition, the artificial turf would be vacuumed regularly and intermittently washed down, as needed. Furthermore, because the artificial lawn would be a permeable surface to promote infiltration, water quality benefits would be achieved through percolation and filtration through the underlying soil. The comment does not raise any issues regarding the adequacy of analysis contained in the Draft SEIR.

GC-8 The comment states that the proposed Ferris wheel would be an obstacle for birds and their flight patterns. The Proposed Project's impacts on wildlife movement were evaluated in Section IV, *Biological Resources*, of the Initial Study (Appendix A of the Draft SEIR). As discussed in the Initial Study, there are no known wildlife migration corridors present at the Proposed Project site. In addition, as discussed on pages 3.3-32 through 3.3-33 of the Draft SEIR, in Section 3.3, *Biological Resources*, introduction of the Ferris wheel and the amusement attractions could affect the migration and movement of avian species across the harbor. However, these impacts are expected to be minor considering the existing, highly developed nature of the Port, which includes many structures that are taller than the proposed amusement attractions (e.g., container cranes [265 feet], cruise ships [236 feet], cargo ships [116 feet], multiple bridges of varying heights). Spatially, both the Ferris wheel and amusement attractions are small in relation to other structures already present along the Port. Therefore, the addition of the Ferris wheel and amusement attractions are not expected to result in a substantial alteration of the skyline along the San Pedro Waterfront, nor result in the addition of a new feature that would disturb or harass avian species in an area where they are already acclimated to the highly modified environment. Furthermore, unlike structures where bird strikes are common (e.g., skyscrapers, wind turbines, communication towers), the Ferris wheel and amusement attractions would lack surfaces (e.g., extensive glass) that reflect the open sky or surrounding landscape, which can cause disorientation and are a major source of bird strikes. Likewise, neither the Ferris wheel nor amusement attractions would include solid red lights that attract birds to towers or attachments (e.g., thick guy wires) that birds could collide with while avoiding the main structure, and both structures would operate very slowly, allowing birds to avoid collisions. Impacts would be less than significant. The comment does not raise any issues regarding the adequacy of analysis contained in the Draft SEIR.

GC-9 The comment states that the Draft SEIR did not evaluate the effects of cigarette smoke and butts, and that the proposed amphitheater should be non-smoking. Page 2-30 in Chapter 2, *Existing Setting and Project Description*, of the Draft SEIR states, "In addition, in order to avoid concerns about both trash/waste and air pollution, the amphitheater and Ferris wheel would be 100-percent smoke/vape-free environments, which would be enforced by venue staff and third-party security contractors."

GC-10 The comment states that the issues identified in the comment letter, and as addressed in responses to comments GC-2 through GC-9, need to be studied further before the Proposed Project can be approved. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Genton Cockrum Partners

GCP-1 The comment on behalf of Genton Cockrum Partners supports the Proposed Project and conveys satisfaction that the Draft SEIR has addressed all relevant environmental issues and provided mitigation measures as needed. LAHD acknowledges this

comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Greater LA Scouting

SCOUTING-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Harbor Community Health Centers

HCHC-1 The comment on behalf of the Harbor Community Health Centers supports the Proposed Project and conveys satisfaction that the Draft SEIR has addressed all relevant environmental issues and provided mitigation measures as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Local 11

LOCAL 11-1 The comment on behalf of UNITE HERE Local 11 ("Local 11") summarizes the original SPW project certified in 2009, the 2016 Addendum and the Proposed Project. This comment is introductory to the comments of LOCAL 11-3 through LOCAL 11-10 that follow.

LOCAL 11-2 This comment summarizes the concerns regarding VMT assumptions, air quality and greenhouse gas emissions addressed in LOCAL11-3 to LOCAL 11-10. The commenter is referred to the responses in LOCAL11-3 to 11-10.

LOCAL 11-3 The comment discusses VMT-inducing assumptions, such as concluding the Ferris wheel and other amusement attractions are ancillary to the amphitheater and previously approved retail and restaurant uses and would not generate vehicle trips/VMTs independently since patrons would already be on the Project site; and concluding that the parking at the 208 E. 22nd Street parking lot would not constitute trip-generating uses. The proposed amusement park attractions were part of the 2016 SPPM Project, included and assessed in the 2016 Addendum and approved by the Board in 2016. Therefore, while the Ferris wheel's diameter has increased, these attractions are part of the already approved SPPM Project at West Harbor. The up to 2,600 space parking lot at 208 E. 22nd Street is being included to support the entire San Pedro Waterfront Project, as assessed in the original SPW EIS/EIR. People are not anticipated to drive to the area just to use the parking lot. Additionally, the VMT estimate for the Proposed Project represents a worst-case scenario for a daily, annualized average. Annualized trip generation is used for almost all traffic studies.

LOCAL 11-4 The commenter criticizes the assumptions used for VMT which based its analysis upon four comparable operations (i.e. the Greek Theater, Long Beach Terrace Theater, Kia Forum, and City National Grove of Anaheim). Pages 3.9-15 through

3.9-27 of the Draft SEIR describe the methodology for choosing the appropriate venues for comparison purposes.

As described in detail in Section 3.9.7.2, the methodology for the estimate of VMT for the Proposed Project is not only appropriate and justifiable, but it also yields a very conservative VMT estimate since it is based upon notable regional entertainment venues. For the VMT estimate calculations in the Project Vehicle Miles Traveled Calculation section, the two venues determined to be most similar to the Proposed Project in terms of seating capacity and performance type, the Greek Theater and City National Grove of Anaheim, were selected. The Long Beach Terrace Theater was removed for the Proposed Project VMT calculation because it typically serves recurring Long Beach Symphony events, as opposed to a variety of performances. The Kia Forum was removed for the Proposed Project VMT calculation due to its substantially larger capacity than the Proposed Project. Please refer to Appendix G to the Draft SEIR for more detailed information. Additionally, the Nederlander Organization, who would be the operator of the Proposed Project, is the operator of the Greek Theater, so it is an appropriate comparison of the regional draw anticipated for the Proposed Project amphitheater.

LOCAL 11-5 The comment states that if the VMT assumptions were flawed as inferred in LOCAL 11-4, this not only affects the traffic analysis; but the Draft SEIR's air quality and GHG analysis where user-defined VMT assumptions were utilized. Please refer to LOCAL 11-3 and LOCAL 11-4 for a response regarding VMT assumptions and trip length selection. As discussed in responses to comments LOCAL11-3 and LOCAL11-4, LAHD stands behind the methodology utilized to assess VMT potential impacts pursuant to CEQA Guidelines Section 15064.3(b) pertaining to VMT resultant from Proposed Project trips. As such, the Draft SEIR remains adequate with respect to the air quality and GHG emission impacts calculations that utilized VMT assumptions. Additionally, the Draft SEIR acknowledges that significant and unavoidable impacts, as anticipated with the original SPW Project, would continue to occur for Air Quality and Greenhouse Gas Emissions.

LOCAL 11-6 The comment states the Draft SEIR utilizes three main mitigation measures in order to minimize operational air quality, GHG, and VMT impacts (i.e. zero-emission shuttle buses; solar canopies over the main parking lot; and the transportation demand management (TDM) measures required by MM-TRAN-1). The comment states concern that future tenants could avoid the zero-emission shuttle buses requirement simply by reporting that they are not commercially available, or avoid the solar canopies requirement by using commercially reasonable efforts to replace the original solar contract. Lastly, the commenter states that for MM-TRAN-1 (the TDM program), there are few performance metrics provided and there is no discussion of other TDM measures that may be effective.

The Tenant and venue operator would work closely with the LAHD to implement the MMs for the Proposed Project. The Tenant would use zero emission shuttles if commercially available for amphitheater events and currently has a lease with a third-party supplier to provide solar canopy over portions of the main parking area. The

Port has the ability to review and enforce the terms regarding Tenant's compliance with the mitigation measures for the Proposed Project. The scope of the SEIR is limited to the West Harbor Modification Project components and does not modify or revise other uses within the SPW development area.

LOCAL 11-7 The comment states that PF-GHG-1 has no discussion of what would constitute commercially reasonable efforts to guide future decision-making, and there is no explanation of whether more than 1.4 megawatts is feasible, such as by requiring solar panels at the overflow parking "Bluff Lot" and 208 E. 22nd Street parking lots. The amount of energy generated by the solar panels was calculated for informational purposes using the U.S. Environmental Protection Agency AVERT calculator, discussed under PF-GHG-1, provided in Table 3.5-3. GHG emissions (metric tons per year), "With Mitigation and Project Features," are provided in Table B16 of Appendix C. Project Feature GHG-1 is not a mitigation measure, but a project feature that will be reviewed and tracked for implementation at the Proposed Project site. The planned 1.4 megawatts is maximized against underground utility overbuild constraints in the main parking lot. This project feature does not limit the developer from installing greater than 1.4 megawatts of solar panel at the site nor does it prevent LAHD from installing solar panels in other areas in the SPW, if appropriate and feasible.

LOCAL 11-8 The comment states that MM-TRAN-1 provides various general strategies but does not offer many performance metrics. The comment also states that there is no discussion of other TDM measures that may be effective, such as those recommended by CAPCOA, SCAG, CARB, OPR, and SCAQMD. The comment also states that annual reporting of the site's VMT and trip generation, including the overflow lots, should be required. As discussed in the Draft SEIR, new significant and unavoidable transportation impacts would occur because the Proposed Project would result in a net increase in regional VMT. Transportation Demand Management (TDM) strategies are required as MM-TRAN-1. However, because of the operational and administrative inefficiencies and challenges of implementing TDM for special-event venues, TDM mitigation measures are not expected to reduce the Proposed Project's VMT impact to less-than-significant levels. Additionally, please refer to the response provided for LOCAL 11-6.

LOCAL 11-9 The comment suggests that the impacts on traffic, air quality, and GHGs would require additional mitigation measures to reduce operational impacts. The commenter suggests measures include maximizing onsite solar panel use on the Proposed Project site and overflow parking lots, achieving LEED Platinum and/or achieving Tier 1 or Tier 2 CalGreen status, implementing a local hiring program, and applying an area-wide mandatory commuter reduction program. The Draft SEIR acknowledges that significant and unavoidable impacts would occur for Air Quality, Greenhouse Gas Emissions, and Transportation. Please refer to responses provided for LOCAL 11-6 through LOCAL 11-8. With respect to implementing a hiring program, the Tenant already has been working actively with Council District 15, the local Boys and Girls Clubs, and Sharefest, another non-profit who works with local youth, to hold local

job fairs to attract and employ local residents. The Tenant also has been working with Harbor Community College and its culinary arts program to attract and employ local residents by the West Harbor Project restaurant and food and beverage subtenants. While the VMT is primarily driven by patron trips not employee trips, West Harbor is committed to employing local residents. While employees associated with the Amphitheater are numerous, they are not the main VMT generating source; the patrons of the amphitheater would be the largest source, by far, of VMT. As such, additional measures associated with patron VMT reduction are infeasible to implement and therefore the impact of VMT was determined to remain significant and unavoidable even with implementation of TDM measures. However, it should be noted that the bullets listed in comment (d) are essentially the same as those listed in MM-TRAN-1; which would be implemented to the greatest extent feasible even though it is acknowledged that it would not fully mitigate VMT-related impacts.

LOCAL 11-10 The comment thanks LAHD for the opportunity to comment. The comment also urges the Port to incorporate additional mitigation measures to reduce the Proposed Project's operational impacts. The comment closes by requesting they receive notice of all CEQA actions and approvals, Project CEQA determinations, or any other public hearings. The comment specifies they would like to receive notice via electronic and regular mail. LAHD confirms that the commenting party will receive notice of the upcoming public hearing via email; and it should also be noted that Board agendas are available on the Port's website. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Los Angeles Maritime Institute

LAMI The comment on behalf of the Los Angeles Maritime Institute supports the Proposed Project and conveys satisfaction that the Draft SEIR has addressed all relevant environmental issues and provided mitigation measures as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for consideration by the Board of Harbor Commissioners. The comment does not raise an issue regarding the adequacy of the analysis contained within the Draft SEIR.

Response to Comment Letter National Museum of the Surface Navy

NMSN-1 The comment on behalf of the National Museum of the Surface Navy supports the Proposed Project and conveys satisfaction that the Draft SEIR has addressed all relevant environmental issues and provided mitigation measures as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter PaddleOutPlastic

POP-1 The comment on behalf of Paddle Out Plastic states that the organization's mission revolves around removing water-borne litter (primarily plastics) and educating and encouraging the public, business, and government in ways to reduce such litter

through reuse (instead of single use), using replacement products, and, where actually available, recycling. The comment goes on to state that the letter will address litter, but notes that the organization's impetus was and is protecting wildlife, so it will also be highlighting other aspects of the Proposed Project—specifically, other water and air pollutants—that threaten wildlife, as well as sharing observations of Los Angeles Harbor water's birds and marine mammals. This comment is introductory to comments POP-2 through POP-15; please refer to responses to comments POP-2 through POP-15 for responses to each of the specific concerns raised in the comment letter.

POP-2 The comment states that PaddleOutPlastic agrees that implementation of the Proposed Project would result in significant, unavoidable impacts, but does not agree that all of these impacts are unavoidable. The commenter goes on to state that pursuant to the Draft SEIR, the Proposed Project promises to increase pollutant discharge with more than two dozen firework shows, confetti releases, and the inevitable windblown trash that will result from food carts, kiosks and more, serving many thousands of people outdoors on disposable—rather than reusable—containers, be they plastic or biodegradable. This, notwithstanding that the City of Los Angeles General Plan includes a policy to "continue to reduce pollutant discharge into the bays from both natural and human sources." Please refer to Section 3.3, *Biological Resources*, and Section 3.7, *Hydrology and Water Quality*, which provide details about these specific issues. In particular, mitigation measure (MM-) BIO-7, *Trash Management and Post-Event Cleanup*, requires a Standard Operating Procedure (SOP) be developed for trash management and post-event cleanup; and must be reviewed by LAHD prior to implementation. At a minimum, the SOP must include the following.

- Trash receptacles must be covered containers to deter animals (e.g., gulls) from easily accessing litter and prevent wind-blown trash from entering the Harbor. The number and placement of receptacles must be adequate to accommodate the event.
- Following any events at the Project site, trash will be removed from all venue locations including at the amphitheater, parking lots, parks, surrounding walkways, and open areas as soon as practicable, and no later than 4 hours following the event. Trash and debris will be properly disposed of in accordance with all applicable regulations.

Additionally, Project feature (PF-) BIO-1 requires that the tenant ensure agreements with event organizers contain provisions regarding compliance with applicable local regulations regarding event-generated waste. Further, MM-BIO-10, *Biodegradable Venue Products*, requires that reusable, compostable, and/or recyclable products be used by venue operators; where those types are not feasible, event organizers must use biodegradable products for all decorations, packaging, and other single-use items for all amphitheater events to prevent injury and damage to surrounding sensitive marine environments and protect species from harmful materials (e.g., plastics, mylar, metals). In addition, please refer to response to comment CE4K-37 for

information about the trash capture requirements that would be implemented as part of obtaining an MS4 permit for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider. The Draft SEIR adequately addresses the concerns raised in this comment; therefore, no revisions are necessary and no further response is required.

POP-3 The commenter states that based on their 5½ years of removing trash from the Los Angeles Harbor area, it seems apparent that trash management (including the practices of tenants, vendors, service providers, and others) in the Harbor area has not been adequate to address the prevalence of water-borne trash and that absent mitigations, significantly increased public use and associated trash-producing activities under the Proposed Project would logically be expected to increase the amount of trash in general and by extrapolation the amount of trash that ends up in the water. The commenter appears to be making an observation about the Los Angeles Harbor in general and not about the Proposed Project specifically. For information about these topics, the commenter is referred to the previous comment response (POP-2). LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider. The comment does not raise an issue regarding the adequacy of the analysis contained in the Draft SEIR; therefore, no further response is required

POP-4 The commenter takes issue with the conclusion reached regarding the impacts of human-produced trash that could result from the 208 E. 22nd Street Parking Lot component of the Proposed Project. The commenter notes that both the parking lot and the amphitheater are being enlarged substantially and that while the mitigation measures proposed are valuable, they are not enough. The commenter is referred to response to comment CE4K-37 for information about the trash capture requirements that would be implemented as part of obtaining an MS4 permit for the Proposed Project. Based upon LAHD's experience at other locations and with the requirement for all receptacles to be emptied and all trash to be cleaned within 4 hours after events, the mitigation measures are deemed to be sufficient, and no revisions to the Draft SEIR are deemed to be necessary. However, in response to this and similar comments, PF-BIO-1 has been added to the Mitigation Monitoring and Reporting Program (MMRP), which states that event organizers must comply with the City of Los Angeles' zero waste policy. This comment will be included in the Proposed Project record for the Board of Harbor Commissioners to consider.

POP-5 The comment acknowledges that event organizers must comply with City of Los Angeles Ordinance No. 187030, Disposable Foodware Accessories and Plastic Drinking Straws, its Comprehensive Plastics Reduction Program, the Zero Waste Plan and Ordinance 187718 (Zero Waste at City Facilities and Events on City Property. The comment further acknowledges that compliance will be helpful in mitigating the litter at the venue as well as in the water. However, the letter expresses the belief that compliance with these ordinances will not reduce litter impacts to a less-than-significant level. Specifically, the comment cites litter impacts that could

result from the Proposed Project overall due to inherent limitations contained within those ordinances, a probable lack of third-party tenant and vendor compliance, and visitors who bring their own food and drink to the Proposed Project site. CEQA case law does not require agencies to analyze the outcomes of people, organizations, or agencies violating the law or the regulations to which they are required to adhere. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

POP-6 The comment suggests that the Proposed Project mitigation measures be improved by requiring reusable foodware instead of just encouraging it, and not only for dine-in services but for to-go services as well. Further, the comment suggests that the Draft SEIR is silent on what, if any, requirements will be placed on food and drink cart and kiosk vendors. Please note that MM-BIO-10 requires, as a first step, that the venue operators utilize reusable, compostable, or recyclable materials and, where those products are not feasible or required, the event organizers must utilize biodegradable products for all decorations, packaging, and single-use items. Additionally, as discussed in response to comment POP-4, PF-BIO-1 has been added to the MMRP, which states the event organizers must comply with the City of Los Angeles' zero waste policy. However, it is acknowledged that kiosks and vendors would only have to comply to Proposed Project-specific requirements if they are physically located within the boundaries of the Proposed Project site. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

POP-7 The comment states that biodegradable or not, the release of confetti into a marine environment should not be encouraged and is not needed for the operation of the Proposed Project. As such, it should not be allowed. This comment is acknowledged and because allowing materials to enter the water is illegal, confetti would not be allowed to enter harbor waters.. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

POP-8 The comment states that while the use of balloons is not mentioned in the Draft SEIR, balloons are a known hazard to aquatic life. Similar to the confetti mentioned in response to comment POP-7, balloons have the potential to enter the water, an activity that is illegal. Balloons are not anticipated to be a part of Tier 1 operations. Tier 2 events may have balloons present (e.g., graduations, birthdays), but the Tenant will do all they can to inform event operators that balloons present on their site shall not be allowed to be released into the environment. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

POP-9 The commenter states that the Draft SEIR acknowledges that the firework shows could draw visitors that would likely result in increased amounts of trash and debris but does not propose any mitigation in connection to this activity. Please refer to MM-BIO-7, *Trash Management and Post-Event Cleanup*, for information about the SOP that would be required for all amphitheater events in order to prevent trash and debris from entering nearby waters. One of the provisions of MM-BIO-7 is that trash

must be removed from all venue locations within 4 hours of the event ending. MM-BIO-7 notwithstanding, un-ticketed concert goers who elect to listen from nearby areas outside the Proposed Project site are outside the event organizer's control, and attempts to predict or control the behavior of these individuals would be speculative and outside the scope of this SEIR. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

POP-10 The commenter refers to a passage in the Draft SEIR that discusses the chemicals released by pyrotechnics potentially affecting the quality of the surrounding waters. The commenter goes on to state that the South Coast Air Quality Management District issued a warning of unhealthful air quality, due in large part to fireworks. Pursuant to this comment and similar comments made by others, the number of firework shows that will be permitted annually is being decreased from 25 to 13, and the annual 13 shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. Firework permitting will also require adherence to the best management practices outlined in the Los Angeles Water Quality Control Board's Fireworks General National Pollutant Discharge Elimination System (NPDES) Permit application for fireworks discharge. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

POP-11 The commenter states that other than intermittent wash-downs, the Draft SEIR does not propose mitigation to address issues related to the proposed use of artificial turf, such as food and drink spills, animal waste, vomit, and other pollutants, as well as the chemical constituents of the turf itself. The commenter is referred to page 2-29 in Chapter 2, *Existing Setting and Project Description*, of the Draft SEIR, which states that unlike artificial turf on a sports field, ground rubber infill would not be used for the proposed lawn. Instead, the infill materials would be sand, ground cork, granulated olive cores, or some combination of similarly inert materials. Through the use of these materials, and by avoiding ground rubber, the amount of polyfluoroalkyl substances (PFAS) would be reduced substantially thereby addressing concerns related to the use of artificial turf. In addition, the artificial turf would be vacuumed regularly and intermittently washed down, as needed. Furthermore, because the artificial lawn would be a permeable surface to promote infiltration, water would infiltrate into the underlying soil and would not be permitted as runoff per the SWPPP. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

POP-12 The comment refers to the eight receiver points used in the Draft SEIR for analysis of potential noise impacts on marine mammals and notes that "one of the most densely populated marine mammal haul out points in the port, immediately across from the West Harbor venue between the shuttered Southwest Marine facility and the Coast Guard dock… was not analyzed as a receiver point" and "the nearest receiver points to the proposed amphitheater are more than twice as far away (Fish Harbor, Main Channel North, and Main Channel South)." This comment is directly related to

comment POP-13, and a combined response to both comments is provided in response to comment POP-13.

POP-13 The comment summarizes part of the discussion from the Draft SEIR regarding the Marine Mammal Protection Act and potential noise effects on marine mammals and requests that the Draft SEIR be amended to include the location described in comment POP-12 as a receiver point in analysis of impacts on marine mammals and other wildlife inhabiting this location. In response to this and other comments received about the area described, an additional receiver (Receiver Point 9) has been added to the analysis of estimated noise levels for marine mammal receiver points in Table 3.3-2 and Table 3.3-3 of the Draft SEIR. At this new receiver location, unmitigated combined noise levels (from the amphitheater and fireworks) were estimated to be 100 dBZ (decibels relative to Z) and mitigated combined noise levels were estimated to be 90 dBZ. In both cases, the noise is dominated by the amphitheater. Because the mitigated noise level of 90 dBZ would be less than the Level B harassment threshold of 100 dBZ for the species observed at the added receiver location, there would be no new impacts at this location after mitigation. The resulting updates to the Draft SEIR are described in Section 3.2 of this Final EIR, *Changes to the Draft Substitute Environmental Impact Report.*

POP-14 The comment states that harbor seals have been observed throughout the harbor by PaddleOutPlastic during their organization's excursions. While harbor seals may be found throughout the San Pedro Harbor during the day, their daytime habits, when they are active and foraging, are different from their nighttime habits. Based on official Port surveys, which have been carried out over many years, harbor seals haul out and congregate at Pier 400 during the evening and nighttime hours, which is when the majority of amphitheater events, including concerts and fireworks, would occur. There are no records of harbor seals congregating at other locations in the harbor during evening and nighttime hours. Therefore, noise-related impacts on harbor seals as a result of concert and firework events are not anticipated.

POP-15 The comment states that because of the reasons listed in comments POP-1 through POP-14, the Draft SEIR should be modified to address material deficiencies. As requested by the commenter, the Draft SEIR has been modified to disclose that amphitheater noise levels are anticipated to exceed the Level B harassment criterion for harbor seals (90 dBZ) at Fish Harbor, Cabrillo Marina (north), Main Channel (south), and Southwest Marine Facility/Coast Guard Dock. Further, the Draft SEIR has been revised to state: "Based on official Port surveys, which have been carried out over many years, harbor seals haul-out and congregate at Pier 400 during the evening and nighttime hours, which is when the majority of amphitheater events, including concerts and fireworks, would occur. While harbor seals may be found throughout the San Pedro Harbor during the day when they are active and foraging, there are no records of harbor seals congregating at other locations within the harbor besides Pier 400 during evening and nighttime hours.".

Response to Comment Letter San Pedro Bay Historical Society

SPBHS-1 The comment on behalf of the San Pedro Bay Historical Society states that the Proposed Project would have significant air quality, greenhouse gas emissions, noise, and traffic and parking impacts, particularly concerning the Muller House Museum and surrounding residential neighborhoods. Refer to response to comments SPBHS-2 through SPBHS-6, which addresses each of the specific concerns expressed in this comment.

SPBHS-2 The comment states that noise generated by operation of the Proposed Project, including crowds attending events, would result in impacts on visitors of the museum and should be mitigated. As part of the Draft SEIR analysis, a noise-amphitheater sound system assessment was completed for the Proposed Project, and mitigation measures were incorporated to reduce noise impacts. The noise assessment was included as Appendix F of the Draft SEIR. In addition, as explained under Impact NOI-1 in Section 3.8, *Noise,* of the Draft SEIR, modeling conducted for amphitheater noise did not specifically quantify crowd noise, and although crowd noise would likely be audible at times and may occasionally be the dominant source of noise for short periods (e.g., cheering or clapping for musical numbers), it would not be the dominant source of noise overall when compared to the modeled music noise levels. The comment does not raise any issue regarding the adequacy of the analysis contained in the Draft SEIR.

SPBHS-3 The comment states that the proposed 25 fireworks shows would result in significant noise and air quality impacts on the environment and people. The Draft SEIR evaluated the potential environmental impacts associated with up to 25 fireworks shows per year at a duration of approximately 20 minutes. Impacts associated with air quality and noise were evaluated in Section 3.2, *Air Quality*, and Section 3.8, *Noise*, respectively, of the Draft SEIR. Mitigation measures would be implemented to reduce noise and air quality impacts on both people and the environment. Specifically, the Proposed Project would implement mitigation measures (MM-) NOI-13, *Eliminate Use of "Salute" Fireworks*, and MM-NOI-14, *Replace Fireworks with Drone Displays*, to address noise impacts associated with the fireworks shows. Additionally, in response to this comment and others, the Tenant has reduced the annual fireworks shows to 13 per year, with 11 events lasting 10 minutes and two the full 20-minute duration disclosed in the Draft EIR. The comment does not raise any issues regarding the adequacy of the analysis contained in the Draft SEIR.

SPBHS-4 The comment expresses the need for more information on how the mitigation measures to be implemented as part of the Proposed Project to reduce noise impacts will actually be enforced. The mitigation measures proposed to reduce noise impacts, along with other resource topics, would be enforced through the Project's Mitigation Monitoring and Reporting Program (MMRP). CEQA requires that a lead agency adopt an MMRP for the measures the agency has adopted to avoid or mitigate significant environmental impacts. The purpose of the MMRP is to ensure that mitigation measures identified in the SEIR are implemented, identify when they are

required to be implemented, and who is responsible for implementing them. In order to ensure compliance, the MMRP will be incorporated into the San Pedro Public Market Lease and be tracked/monitored as required under CEQA.

SPBHS-5 The comment states that the streets surrounding the Proposed Project site will experience increased traffic and parking impacts as a result of the Proposed Project and that it is not clear how the traffic control plan will mitigate these impacts. Parking and traffic impacts were evaluated in Section 3.9, *Transportation*, on pages 3.9-13 through 3.9-32 of the Draft SEIR, which determined that the Proposed Project would result in significant and unavoidable traffic impacts, consistent with the conclusions reached in the 2009 SPW EIS/EIR. MM-TRAN-1 identifies strategies for minimizing traffic impacts. In addition, the traffic control plan would be implemented in accordance with the requirements outlined in the 2009 SPW EIS/EIR MMRP for MM-TC-1, *Develop and implement a Traffic Control Plan,* throughout Project construction.

SPBHS-6 The comment states that the Proposed Project should be revised to eliminate the above identified issues by the commenter, and that the Project figures should be revised to include the areas west of Miner Street. There are numerous figures throughout the Draft SEIR that depict or incorporate the areas west of Miner Street (see Figures 2-1, 2-2, 3.2-1, 3.3-2, and 3.8-1 through 3.8-5 of the Draft SEIR). In addition, impacts on surrounding roadways, including Miner Street, and neighborhoods are considered and evaluated throughout each of the resource topics included in the Draft SEIR, as appropriate.

Response to Comment Letter San Pedro Chamber of Commerce

SPCC-1 The comment on behalf of the San Pedro Chamber of Commerce supports the Proposed Project and conveys satisfaction that the Draft SEIR has included mitigation measures for transportation impacts. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter San Pedro Downtown Waterfront

SPDW-1 The comment on behalf of the San Pedro Downtown Waterfront supports the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter SPERRA

SPERRA-1 The comment on behalf of Sperra supports the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter San Pedro Property Alliance

SPSA-1 The comment on behalf of the San Pedro Property Alliance supports the Proposed Project and conveys satisfaction that the Draft SEIR has addressed all relevant environmental issues and provided mitigation measures as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter San Pedro Skatepark Association

SPSA-1 The comment on behalf of the San Pedro Skatepark Association supports the Proposed Project and conveys satisfaction that the Draft SEIR has addressed all relevant environmental issues and provided mitigation measures as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter San Pedro Waterfront Arts District

SPWAD-1 The comment on behalf of the San Pedro Waterfront Arts District supports the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Solasta Pictures

SOALSTA-1 The comment on behalf of Solasta Pictures supports the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter South Bay Center for Counseling

SOALSTA-1 The comment on behalf of the South Bay Center for Counseling supports the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider. The comment does not raise an issue regarding the adequacy of the analysis contained in the Draft SEIR

2.3.1.3 Individuals

Response to Comment Letter Abshear, Debbie

ABSHEAR-1 The comment states that the Proposed Project would result in increased traffic, parking, and noise impacts. The Draft SEIR evaluated noise, and traffic and parking impacts in Section 3.8, *Noise*, and Section 3.9, *Transportation*, respectively. The Draft SEIR determined that the Proposed Project would result in significant and unavoidable noise impacts even with the implementation of mitigation measures. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would result from the proposed amphitheater events and fireworks displays. The implementation of mitigation

measures MM-NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination. The Draft SEIR also determined that the Proposed Project would result in a significant and unavoidable transportation impact (Vehicle Miles Traveled) even with implementation of mitigation measure MM-TRAN-1. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Aguilar, Orlando

AGUILAR-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Alarcon, Kristie

ALARCON-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Alexander, Linda

ALEX ANDER-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Alexander, Michael

ALEX ANDER-1 The comment expresses displeasure for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Allison, Francesca

ALLISON-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Aragon, Andrew

ARAGON-1 This comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has addressed all relevant environmental issues and provided mitigation measures as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Ashfield, Rock

ASHFIELD-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Project record for the Board of Harbor Commissioners' consideration.

Response to Comment Letter B, Felicia

B-FELICIA-1 This comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has addressed all relevant environmental issues and provided mitigation measures as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Bagakis, John

BAGAKIS-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Project record for the Board of Harbor Commissioners' consideration. The comment does not raise an issue regarding the adequacy of the analysis contained within the Draft SEIR

Response to Comment Letter Bagliazo, Cathy

BAGLIA ZO1 -1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Bagliazo, Jack

BAGLIA ZO2 -1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Baker, Arley

BAKER-1 The comment expresses support for the Proposed Project and states that the Los Angeles waterfront could accommodate the traffic generated by the proposed amphitheater based on the history of large traffic-generating events in the last 10–15 years. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Baric, Jack

BARIC-1 The comment expresses support for the West Habor Modification Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Barsness, Jennifer

BARSNESS-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Beaty, Thomas

BEATY-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Blazevic, Magali

BLAZEVIC-1 The comment expresses support for the Proposed Project, and states that the Proposed Project is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Borst-Smith, Chris

BORST-SMITH1-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Borst-Smith, Dave

BORST-SMITH2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Borst-Smith, Janice

BORST-SMITH3-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Boyajian, Lisa

BOYAJIAN-1 The comment expresses concern about the Proposed Project and states that as identified in the Draft SEIR, the Proposed Project would result in significant and unavoidable impacts related to air quality, noise, and transportation, with particular concern to the impacts on the community that lives in the southern portion of San Pedro. This comment is introductory to Boyajian-2-7, addressed below. LAHD

acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

BOYAJIAN-2 The comment states that the Proposed Project would affect surrounding roadway infrastructure and generate traffic. Proposed Project traffic impacts on surrounding roadways were evaluated in Section 3.9, *Transportation,* of the Draft SEIR. As detailed under Impact TRAN-2 on pages 3.9-14 through 3.9-32 of the Draft SEIR, the Proposed Project would result in significant and unavoidable impacts related to traffic even with implementation of mitigation measure MM-TRAN-1, *TDM Strategies*. The comment does not raise specific issues regarding the adequacy of the analysis contained in the Draft SEIR.

BOYAJIAN-3 The comment expresses concern about how emergency services would be provided for the Proposed Project. Impacts regarding emergency services access were evaluated in Section IX, *Hazards and Hazardous Materials*, and Section XVII, *Transportation*, of the Initial Study (Appendix B of the Draft SEIR). As detailed on page 4-44 of the Initial Study, emergency access to the Proposed Project site would be provided via proposed driveways constructed as part of the SPPM project, and on roads in the Proposed Project area. As part of the Proposed Project, fire and law enforcement services would have access to all areas of the Proposed Project site. In addition, as part of the Proposed Project's approval process, LAFD would review and approve all Project plans to ensure that they comply with all applicable access requirements. Furthermore, as detailed on page 4-28 of the Initial Study, the Proposed Project would be required to adhere to all Homeland Security, Port Police, Los Angeles Fire Department, and other applicable local, state, and federal emergency response and evacuation plans. The Initial Study determined that the Proposed Project's impacts on emergency access and response would be less than significant.

In addition, impacts on public service providers, including police and fire, were evaluated in Section 3.11, *Public Services*, of the Draft SEIR, and Section XV, *Public Services*, of the Initial Study. The Tenant considered the security and safety of its patrons and prepared an emergency plan that details how the event space will prepare for emergency concerns. The safety of the performers, guests, and staff members is a major concern, and an organized and comprehensive emergency plan is essential to address this concern. The objective of the emergency plan is to establish and define specific responsibilities, guidelines, and procedures that will facilitate an effective response by all persons connected with the facility and ensure proper protocol for any type of life-threatening incident at the amphitheater. Captain Kevin McCloskey of the Port Police provided a letter on July 7, 2023, which detailed what changes would be required to ensure adequate public services for the Proposed Project. These requirements are further detailed in mitigation measure MM-PS-7. The Proposed Project determined that with implementation of MM-PS-1, *Coordinate with Law Enforcement Agencies*, and MM-PS-7, *Improvements to Be Implemented by the Developer*, the Proposed Project would result in less-than-significant impacts on public services.

The comment does not raise specific issues regarding the adequacy of the analysis contained in the Draft SEIR.

BOYAJIAN-4 The comment states that the Proposed Project will have significant impacts regarding noise and references a large music event that was held last summer. The referenced music event was held at B46, which is in the outer harbor and 4,000 feet away from the Proposed Project location. The Proposed Project's impacts associated with noise were evaluated in Section 3.8, *Noise*, of the Draft SEIR. As part of the Draft SEIR analysis, an amphitheater sound system noise assessment was completed for the Proposed Project, and mitigation measures were incorporated to reduce noise impacts. The noise assessment was included as Appendix F of the Draft SEIR. The Draft SEIR determined that the Proposed Project would result in significant and unavoidable noise impacts. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would be created by the proposed amphitheater events and fireworks displays. The implementation of mitigation measures MM-NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination. The comment does not raise specific issues regarding the adequacy of the analysis contained within the Draft SEIR.

BOYAJIAN-5 The comment expresses concern over the Proposed Project's noise impacts on wildlife. Noise impacts on wildlife, including marine mammals and water birds, were evaluated in Section 3.3, *Biological Resources*, of the Draft SEIR. As detailed on pages 3.3-24 through 3.3-37 of the Draft SEIR, the Proposed Project would have the potential to significantly affect sensitive species as a result of noise and trash from concerts at the amphitheater and fireworks shows during special events. However, with implementation of existing 2009 SPW EIS/EIR mitigation measure (MM-) BIO-2, *Conduct Nesting Bird Surveys*, along with the identified new mitigation measures MM-BIO-7, *Trash management and Post-Event Cleanup*, MM-BIO-8, *Marine Mammal Monitoring During Firework Events*, MM-BIO-9, *California Least Tern Nesting Colony Monitoring During Firework Events*, MM-BIO-10, *Biodegradable Venue Products*, and MM-BIO-11, *Abandoned Nest Clearance Must Avoid Breeding Bird Season*, impacts would be reduced to a less-than-significant level. The comment does not raise specific issues regarding the adequacy of the analysis contained within the Draft SEIR.

BOYAJIAN-6 The comment expresses concern regarding the proposed fireworks shows and potential impacts related to noise, air quality, and increased fire danger. The Draft SEIR evaluated the potential environmental impacts associated with up to 25 fireworks shows per year at a duration of approximately 20 minutes. Pursuant to this comment and similar comments made by others, the Tenant has agreed to eliminate "salute" fireworks from the Proposed Project entirely. In addition, the number of fireworks shows that would be permitted annually has decreased from 25 to 13, and the annual shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. Impacts associated with air quality and noise were evaluated in Section 3.2, *Air Quality*, and Section 3.8, *Noise*,

respectively, of the Draft SEIR. Mitigation measures would be incorporated to reduce noise and air quality impacts on both people and the environment. Specifically, the Proposed Project would incorporate mitigation measures (MM-) NOI-13, *Eliminate the Use of "Salute" Fireworks*, and MM-NOI-14, *Replace Fireworks with Drone Displays*, to address noise impacts associated with the fireworks shows.

BOYAJIAN-7 The comment expresses concern about details regarding modifications that are part of the Proposed Project and concern about the public review process. Refer to Chapter 1, *Introduction*, of this Final SEIR for information about the Proposed Project as well as the public review process (see Section 1.2, *California Environmental Quality Act Review Process*, Section 1.4, *Notice of Preparation and Scoping Process*, and 1.6, *Project Purpose, Need, and Objectives*).

The comment also asks who the Proposed Project would benefit if not the residents. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

BOYAJIAN-8 The comment expresses opposition to the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Bradley, Sandra

BRADLEY-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has addressed all relevant environmental issues and provided mitigation measures as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Brown, James

BROWN-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Brownell, William

BROWNELL-1 The comment expresses concern about the visual effects of the proposed Ferris wheel. The Draft SEIR evaluated aesthetic impacts of the Proposed Project, including those related to the Ferris wheel, in Section 3.1, *Aesthetics*. The Proposed Project's Ferris wheel would be developed consistently with the previously approved SPPM project and would adhere to all applicable scenic regulations. The Draft SEIR determined that aesthetic impacts would be less than significant. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Bruner, John

BRUNER-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Buscaino, Joe

BUSCAINO-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Cabrera, Ricardo

CABRERA-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners' consideration. The comment does not raise an issue regarding the adequacy of the analysis contained within the Draft SEIR.

Response to Comment Letter Cammareri, Mike

CAMMA RERI-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Campeau, James

CAMPEAU-1 The commenter states his preference for the No Project Alternative due to specific things that were lacking in the Draft SEIR, including: (1) additional security, (2) a lack of sound modeling which accounts for solar panels at the 208 E. 22nd Street parking lot, (3) alternative stage facing east across the main channel, (4) specificity of what would occur during non-Tier 1 event days, and (5) the impacts on other nearby businesses who will not be able to control the ambiance of their establishments and events due to the proposed amphitheater. The commenter is referred to response to comment HEERY1-1 for information about security concerns. With respect to solar panels at the 208 E. 22nd Street parking lot, the solar panels are being constructed as part of the larger San Pedro Waterfront development (where the trees have already been cleared and construction is underway) and not as part of the Proposed Project. The amphitheater faces south to minimize impacts on the neighboring communities to the greatest extent feasible. Regarding non-Tier 1 event days, the commenter is referred to response to comment CeSPNC-12. Lastly, the comment about ambience does not affect the adequacy of the CEQA document as ambience is not protected by CEQA. However, LAHD acknowledges these comments and will include them in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Cerrato, Bianca

CERRATO-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Chavez, Mike (Chavez 1)

CHAVEZ1-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Chavez, Olga (Chavez 2)

CHAVEZ2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Clark, Ed

CLARK-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Clemons, Jade

CLEMONS-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Cocuzza, Nancy and Fabio

COCUZZA-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Cooney, Paul

COONEY-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Costa1, Dom

COSTA1-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental

issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Costa2, Dom

COSTA2-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Project record for the Board of Harbor Commissioners' consideration.

Response to Comment Letter Czyz, Daniel

CZYZ-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter de la Vera, Jessica

DELAV ERA -1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Deeble, Joe

DEEBLE-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Delgado, Kimberly

DELGADO-1 The comment states that the potential fireworks shows that are part of the Proposed Project would result in noise, air quality, and water quality impacts. As referenced by the comment letter, the Draft SEIR evaluated the potential environmental impacts associated with up to 25 fireworks shows per year at a duration of approximately 20 minutes. Pursuant to this comment and similar comments made by others, the Tenant has agreed to eliminate "salute" fireworks from the Proposed Project entirely. In addition, the number of fireworks shows that would be permitted annually has decreased from 25 to 13, and the annual shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. Impacts associated with air quality, water quality, and noise were evaluated in Section 3.2, *Air Quality*, Section 3.7, *Hydrology and Water Quality*, and Section 3.8, *Noise*, respectively, of the Draft SEIR. As detailed in the Draft SEIR, water quality impacts as a result of the fireworks shows would be less than significant with compliance with the Fireworks General National Pollutant Discharge Elimination System (NPDES) Permit. Mitigation measures would be incorporated to reduce air quality and noise impacts. Specifically, the Proposed Project would incorporate Mitigation Measures (MM-) NOI-13, *Eliminate the Use of "Salute" Fireworks*, and

MM-NOI-14, *Replace Fireworks with Drone Displays*, to address noise impacts associated with the fireworks shows.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter DiMeglio, Vince

DIMEGLIO-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Douglas, Jennifer

DOUGLAS-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Dover, Sean

DOVER-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Drown, Brian

DROWN-1 The comment expresses support for the Proposed Project and suggests the incorporation of noise cancellation systems to reduce potential impacts associated with the proposed amphitheater. Noise impacts associated with the operation of the proposed amphitheater were evaluated in Section 3.8, *Noise*, of the Draft SEIR. While the Proposed Project would not incorporate noise cancellation systems, the Proposed Project would be required to implement Project feature (PF-) NOI-1 (incorporate sound-focusing design into the amphitheater sound system), and mitigation measures (MM-) NOI-3 through MM-NOI-10 to reduce noise impacts to the extent feasible. There are currently no technically feasible noise-cancellation systems to reduce noise from an outdoor amphitheater. Noise-cancelling headphones work to reduce noise levels at a very small and specific location (i.e., at the listener's ear), but no equivalent system exists to cancel noise over large areas in an outdoor environment.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Easton, Alex

EASTON-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Edwards-Wallis, Cameron

EDWARDS-WALLIS-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Eldred Jr., Charles

ELDRED-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Espinoza, Kaeli

ESPINOZA-1 The comment expresses support for the Proposed Project and states that the Proposed Project would increase safety as San Pedro residents would be able to attend shows within town instead of travelling further distances outside of town. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners' consideration.

Response to Comment Letter Esprabens, Christine

ESPRA BENS-1 The comment expresses support for the Proposed Project, and states that the Proposed Project is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Etchepare, Maria

ETCHEP ARE -1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Feldman, Laurie

FELDMAN-1 The comment states that Alternative 1, No Project Alternative, should be adopted instead of the Proposed Project because it would have fewer significant impacts and that there should be no changes to the project evaluated in the 2009 SPW EIS/EIR and 2016 SPPM Addendum. As noted by the commenter and detailed in Chapter 5,

Alternatives, of the Draft SEIR, Alternative 1 would allow development of the Proposed Project site consistent with what is envisioned in the 2009 SPW EIS/EIR and as amended in the 2016 SPPM Addendum. As such, Alternative 1 would result in reduced impacts on cultural resources, noise, public services, and transportation compared to the Proposed Project, and was identified as the environmentally superior alternative. However, Alternative 1 would not meet all the Project objectives or would meet them to a lesser extent when compared to the Proposed Project. In addition, in accordance with CEQA, if the No Project Alternative (i.e., Alternative 1) is found to be the environmentally superior alternative, the EIR must identify an environmentally superior alternative among the other alternatives (i.e., Alternative 2). Furthermore, CEQA does not require the lead agency to choose the environmentally superior alternative. Instead, CEQA requires the lead agency to consider the environmentally superior alternatives, weigh those considerations against the environmental impacts of the Proposed Project, and make findings that the benefits of those considerations outweigh the harm. The comment also states the belief that sufficient mitigation efforts have not been proposed to offset the impact of a 6,200-seat venue, but the comment does not provide any specificity regarding which specific issues or mitigation measures are considered inadequate. The commenter is referred to the Mitigation, Monitoring, and Reporting Program associated with the Final SEIR.

Response to Comment Letter Fengler, Marann

FENGLER-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Franden, Dan

FRANDEN-1 The comment states that Alternative 1, No Project Alternative, should be adopted instead of the Proposed Project because it would have fewer significant impacts. The comment also states that there should be no changes to the Proposed Project evaluated in the 2009 SPW EIS/EIR and 2016 SPPM Addenda. As noted by the comment and detailed in Chapter 5, *Alternatives*, of the Draft SEIR, Alternative 1 would allow development of the Proposed Project site consistent with what is envisioned in the 2009 SPW EIS/EIR and as amended in the 2016 SPPM Addendum. As such, Alternative 1 would result in reduced impacts on cultural resources, noise, public services, and transportation compared to the Proposed Project, and was identified as the environmentally superior alternative. However, Alternative 1 would not meet all the Project objectives, nor would it meet them to a lesser extent when compared to the Proposed Project. In addition, in accordance with CEQA requirements, if the No Project Alternative (i.e., Alternative 1) is found to be the environmentally superior alternative, the EIR must identify an environmentally superior alternative amount the other alternatives (i.e., Alternative 2). Furthermore, CEQA does not require a lead agency to choose the environmentally superior

alternative. Instead, CEQA requires the lead agency to consider the environmentally superior alternatives, weigh those considerations against the environmental impacts of the Proposed Project, and make findings that the benefits of those considerations outweigh the potential for harm. The comment also states that replacing natural grass with artificial turf can increase microplastic exposure for the community. The Proposed Project is not replacing natural grass as there currently is no natural grass present. The artificial turf would be vacuumed regularly and intermittently washed down, as needed. The newest generation of artificial turf is ultraviolet stabilized to prevent breakdown from the sun's radiation. Regular maintenance and replacement as needed will ensure the turf does not reach a point where the materials start to break down, thus preventing microplastic generation. Furthermore, because the artificial lawn would be a permeable surface to promote infiltration, water contamination reduction quality benefits would be achieved through infiltration and filtration through into the underlying soil, reducing or eliminating runoff. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Franz, Allen

FRANZ-1 The comment discusses the West Harbor development being a "beacon of hope for the area, and the amphitheater is seen as a key attraction to enhance the project's appeal--and, ultimately, its success," and goes on to state that the EIR process is fraught with challenges, but that the Johnson family (Tenant/Developer) has made a good faith effort to be straightforward with the wider community. The comment acknowledges that there are locals with concerns about difficulty in finding parking during major events, trash, noise, as well as the impacts on seabirds and other creatures in the harbor area. The comment concludes by expressing support of the Proposed Project, despite these concerns, given the Proposed Project's potential benefit to the community and because the developers, the City, and public agencies are acting in good faith to address the community's concerns.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Freeman, Paul

FREEMAN-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Fugate, Malinda

FUGATE-1 The comment expresses opposition to the Proposed Project, and discusses concerns about insufficient parking, noise disturbances, and the potential for trash in the water. The commenter is referred to response CE4K-37 for information about the trash capture requirements that would be implemented as part of obtaining an MS4 permit for the Proposed Project. The parking lot at 208 E. 22nd Street is intended as

additional parking for the greater San Pedro Waterfront and is supplemental to several other lots that will serve this venue (please see parking management plans – Appendices H and I of the Draft SEIR—for additional information). The Draft SEIR evaluated hydrology impacts, noise impacts, and transportation (parking) impacts in Section 3.7, *Hydrology and Water Quality*, Section 3.8, *Noise*, and Section 3.9 *Transportation*, respectively. The Draft SEIR determined that hydrology impacts would be less than significant with implementation of mitigation measures (MM-) GW-1 and MM-GW-2; and noise and transportation impacts would be reduced by MM-NOI-1 through MM-NOI-14 and MM-TRAN-1, but would remain significant and unavoidable. The Proposed Project would not result in new or substantially more severe hydrology than those previously identified in the 2009 SPW EIS/EIR. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Galletti, Maria

GALLETTI-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Gardner, Catherine

GARDNER-1 The comment expresses opposition to the Proposed Project and states that it will be harmful to sea life, birds, and wildlife and will overtax the roads and cause congestion in local neighborhoods. The Draft SEIR evaluated biological impacts and transportation impacts in Section 3.3, *Biological Resources*, and Section 3.9, *Transportation*, respectively. The Draft SEIR determined that with implementation of mitigation measures (MM-)BIO-1 through MM-BIO-11, the Proposed Project would not result in new or substantially more severe biological impacts than those previously identified in the 2009 SPW EIS/EIR. The Draft SEIR determined transportation impacts would be reduced by MM-TRAN-1, but would remain significant and unavoidable. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Gauvreau, Aimiee and David

GAUVREAU-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Gifford, Deb

GIFFORD-1 The comment expresses opposition to the Proposed Project and states that there would be noise and air pollution. The Draft SEIR evaluated air quality impacts and noise impacts in Section 3.2, *Air Quality* and Section 3.8, *Noise*, respectively. The Draft SEIR determined that with implementation of mitigation measures (MM-) AQ-

3, MM-AQ- 4, MM-AQ-6, MM-AQ-7, MM-AQ-27, and MM-AQ-31, the Proposed Project would not result in new or substantially more severe air quality impacts than those previously identified in the 2009 SPW EIS/EIR or the 2016 APPM Addendum. The Draft SEIR determined that the Proposed Project would result in significant and unavoidable noise impacts. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would be created by the proposed amphitheater events and fireworks displays. The implementation of MM-NOI-1 through MM-NOI-14 would lessen these noise impacts but would not change the determination. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Goldin, E.

GOLDIN-1 The comment expresses opposition to the Proposed Project and states that there would be noise and air pollution. The Draft SEIR evaluated noise and air quality impacts, in Section 3.2, *Air Quality*, and Section 3.8, *Noise*, respectively. The Draft SEIR determined that with implementation of mitigation measures (MM-) AQ-3, MM-AQ- 4, MM-AQ-6, MM-AQ-7,MM-AQ-27, and MM-AQ-31, the Proposed Project would not result in new or substantially more severe and air quality impacts than those previously identified in the 2009 SPW EIS/EIR and 2016 SPPM Addendum. The Draft SEIR determined that the Proposed Project would result in significant and unavoidable noise impacts. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would be created by the proposed amphitheater events and fireworks displays. The implementation of MM-NOI-1 through MM-NOI-14 would lessen these noise impacts but would not change the determination. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Gonzales, Joy

GONZ ALES-1 The comment expresses opposition to the Proposed Project and states that there would be noise, traffic, and air pollution. The Draft SEIR evaluated noise, air quality, and traffic impacts in Section 3.2, *Air Quality*, Section 3.8, *Noise*, and Section 3.9, *Transportation*, respectively. The Draft SEIR determined that with implementation of mitigation measures (MM-) AQ-3, MM-AQ- 4, MM-AQ-6, MM-AQ-7, MM-AQ-27, and MM-AQ-31; and MM-TRAN-1, the Proposed Project would not result in new or substantially more severe air quality impacts than those previously identified in the 2009 SPW EIS/EIR. The Draft SEIR determined that the Proposed Project would still result in significant and unavoidable noise impacts. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would be created by the proposed amphitheater events and fireworks displays. The implementation of MM-NOI-1 through MM-NOI-14 would lessen these noise impacts but would not change the determination. Lastly, new significant and unavoidable transportation impacts would occur because the Proposed

Project would result in a net increase in regional vehicle miles traveled (VMT). Transportation Demand Management (TDM) strategies would be required as part of MM-TRAN-1. However, because of the operational and administrative inefficiencies and challenges of implementing TDM for special-event venues, TDM mitigation measures are not expected to reduce the Proposed Project's VMT impact to less-than-significant levels. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Gould, Noel

GOULD-1 The comment states that the letters and analysis from the Coastal San Pedro Neighborhood Council including the AES Technical Committee on Acoustics and Sound Reinforcement study titled *Understanding and Managing Sound Exposure and Noise Pollution at Outdoor Events* are incorporated by reference. This comment is introductory to the comments addressed in responses to comments for this comments GOULD-2 through GOULD-11.

GOULD-2 The comment states that the Draft SEIR for the Proposed Project is prepared by LAHD and will also be subject to approval by LAHD, which is "a built-in conflict of interest." The lead agency must prepare or contract for EIRs under CEQA (CEQA Guidelines §§15084, 15089). The Draft SEIR is prepared by LAHD, as the lead agency for the Proposed Project, with assistance from ICF, an environmental consulting firm with contracted subject matter experts in the impacts identified in the report. The certification of the Final SEIR will be the decision of the Port of Los Angeles' Board of Harbor Commissioners (CEQA Guidelines §15090). LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

GOULD-3 The comment states that the Draft SEIR uses various noise models but "there has been no actual set up of a sound system to be measured to verify the accuracy of the models…" Conducting accurate and representative sound system field tests would be impractical and prohibitively expensive because it would require constructing, installing, and testing a large and sophisticated sound system, similar to the one that would be part of the Proposed Project. Noise modeling is the primary tool used in the prediction and control of environmental noise from all types of noise sources specifically because it allows predictions and investigations before a project is constructed. As such, noise modeling is a valid approach for assessing the Proposed Project's impacts. The software used in the analysis, NoizCalc, is based on recognized national and international noise calculation and propagation standards that have been widely studied and validated. NoizCalc is specifically designed to accomplish the type of music venue analysis required for the Draft SEIR and is, therefore, an excellent tool for the assessment conducted. The results of the modeling are fully disclosed in the Draft SEIR, and impacts are assessed relative to the established thresholds of impact. Based on the modeling, as discussed in the Draft SEIR, amphitheater noise impacts would remain significant and unavoidable after mitigation.

GOULD-4 The commenter discusses people gathering in the community on the side streets, such as Beacon, Gulch, Crescent, and others for the purpose of listening to concerts for free and tailgating. The un-ticketed concert goers who elect to listen from nearby areas outside the Proposed Project site are outside the event organizer's control, and attempts to predict or control the behavior of these individuals would be speculative and outside the scope of this SEIR. Further, the areas in question are within the jurisdiction of the Los Angeles Harbor Police and not the Port Police. It would be the responsibility of the Harbor Police to enforce laws and manage violations in these areas (that are outside of the Project site). LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

GOULD-5 The comment states that the proposed sound pressure levels (SPLs) in the concert venue will create permanent hearing damage for concertgoers, the maximum allowed SPL at the front of house must not exceed 96 dBA (A-weighted decibels), and clearly legible signs must be posted at entrances that hearing damage may occur within unless hearing protection is used. The tenant will comply with City of Los Angeles Municipal Code Chapter XI, Article II, § 112.06, which requires a conspicuous and legible sign outside of the amphitheater that states, "WARNING: SOUND LEVELS WITHIN MAY CAUSE HEARING IMPAIRMENT." The purpose of CEQA in general, and this SEIR in particular, is to analyze the potential environmental impacts of the Proposed Project on the surrounding environment. Project noise levels affecting people on the Proposed Project site is an example of the Proposed Project's impact on itself, which is not subject to analysis under CEQA. Therefore, an analysis of sound exposure within the amphitheater is not included in the SEIR. In response to the general assertion that the proposed concert noise levels are fundamentally too high, it should be noted that they are not out of the ordinary range for a major music venue. The Audio Engineering Society (AES) Technical Document AESTD1007.1.20-05 (AES Working Group on Sound Exposure and Noise Pollution due to Outdoor Entertainment Events, *Understanding And Managing Sound Exposure And Noise Pollution At Outdoor Events*) (AES 2020) includes a summary of audience sound exposure regulations that range, depending on the country, from 99 to 107 dBA Leq (equivalent continuous sound level) (a few countries also provide lower limits specifically for children). AESTD1007.1.20-05 also cites case studies with noise levels inside music venues of 98 to 105 dBA Leq. The mitigated Project front-of-house noise level of 100 dBA Leq is clearly within this range. Furthermore, one of the cited case studies in AESTD1007.1.20-05 states that reducing front-of-house noise levels to 95 to 96 dBA "made the stadium difficult to use as a concert venue," illustrating the intuitive fact that there are practical limits on how far music levels can be reduced before they negatively impact the listening experience for concert attendees. It is also noted that the noise level specified in MM-NOI-3 is the 5-minute A-weighted equivalent noise level of 100 decibels, designated as 100 dBA Leq (5-min); this is the highest noise level allowed for any 5-minute period and would correspond to only the loudest parts of any performance. Due to the different types of artists that would perform at the venue, as well as variations (dynamic range)

within each performance, the noise levels would often be below this maximum threshold.

GOULD-6 The comment states that limiting the VMT analysis to Harbor Boulevard is inadequate. In response to this and other comments about how traffic may affect other roadways in addition to Harbor Boulevard, details have been added to the traffic noise analysis to include the traffic distribution affecting other streets. The resulting updates to the Draft SEIR are described in Section 3.2, *Changes to the Draft Subsequent Environmental Impact Report*, of this Final SEIR. It was found that the Proposed Project would lead to a net increase in noise levels of 0.0 to 0.5 dB CNEL (community noise equivalent level) compared to the results of the 2009 SPW EIS/EIR analysis. Overall, the increases would be very small and typically would be inaudible. Furthermore, none of the calculated increases leads to an exceedance of the established threshold of significance for potential traffic noise impacts (increases at noise-sensitive receptors of 5 dBA or greater, where the existing CNEL is less than 70 dB; or 3 dB or greater where the existing CNEL exceeds 70 dB). Further information can be found in Section 3.2.6, *Changes Made to Section 3.9, Transportation*, of this Final SEIR.

GOULD-7 The comment states that the hilly terrain of San Pedro will have the effect of directing sound upwards, a much wider range of elevations must be analyzed, all models must be verified with a similar sound system at the proposed venue location under a variety of atmospheric conditions, and the scope of the analysis is not wide enough. Please refer to the response to comment GOULD-3, which describes the model used and why it is considered appropriate for the subject analysis. Regarding terrain effects, the comment incorrectly implies that the model does not account for topography. NoizCalc incorporates a digital ground model of the local terrain throughout the analysis area. This terrain, which varies substantially, is included in the sound propagation calculations. The 5.5-foot and 16-foot analysis heights used in the model refer to the height of the receiver above the local terrain. The purpose of using two receiver heights was to estimate the noise levels at approximately 1st-floor and 2nd-floor elevations above the ground. Regarding atmospheric conditions, the noise modeling considers both favorable and unfavorable atmospheric conditions for noise propagation into the communities to the west. This provides a wide range of results, all of which are considered in the noise assessment, as illustrated in the noise maps included in the Draft SEIR. Regarding the size of the area analyzed for amphitheater noise, it is noted that the area is quite large; the amphitheater noise mapping provided in the Draft SEIR covers an area of approximately 3.5 square miles and extends more than a mile to the west where the majority of nearby noise-sensitive receptors (e.g., homes) are located.

GOULD-8 The comment states that LAHD has plans for the construction of multiple hotels and a fully developed cruise terminal which should have been considered in the SEIR's cumulative impact analysis. The cruise terminal was already considered in the 2009 SPW EIS/EIR and, as such, is covered under CEQA for this SEIR. The hotels mentioned in this comment are no longer being considered. The Draft SEIR remains

adequate, and no revisions are required as a result of this comment; therefore no further response is required.

GOULD-9 The comment states that the Project-related noise will affect nesting California least terns and requests that the analysis of impacts be performed by a qualified independent biologist. The analysis was performed by independent qualified biologists from ICF with input from the LAHD's professional biologists, which informed the mitigation measure requirements. Please see the responses to comments CSPNC-8, CSPNC-10, CSPNC-15, and CSPNC-16 for lighting and noise-related impacts on California least tern and related mitigation (MM-BIO-9).

GOULD-10 The comment states that because the Proposed Project is recreational in nature, it should not be approved using overriding considerations. The Proposed Project is commercial in nature rather than recreational, and the area for the Proposed Project is zoned for visitor-serving commercial use, under which the Proposed Project falls. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

GOULD-11 The comment states that fireworks should not be allowed. The comment is in favor of replacing the fireworks shows with electronic drone displays. Pursuant to this comment and similar comments made by others, the number of fireworks shows that would be permitted annually is being decreased from 25 to 13, and the annual shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Graham, Scott

GRAHAM-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Griggs, Liz

GRIGGS-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Gritzner, Glenn

GRITZNER1-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Gritzner, Glenn

GRITZNER2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Harris1, Chris

HARRIS1-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Harris2, George

HARRIS2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Harris3, Helene

HARRIS3-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Harris4, Nick

HARRIS4-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Harris5, Olympia

HARRIS5-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Hart, Suzie

HART-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Havenick, Richard

HAVE NICK-1 The comment expresses support for the Proposed Project provided that adequate and complete responses are provided to the comments provided by community members, specifically, the comments provided by the Coastal San Pedro Neighborhood Council. Refer to the responses to the comment letter from the Coastal San Pedro Neighborhood Council (CSPNC).

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Heery1, Clay

HEERY1-1 The comment states that the Proposed Project will have significant impacts on safety, emergency vehicle access, air quality, and noise, and references the noise complaints that were filed in response to a large music event that was held in Hollywood Park in August 2024. Impacts regarding emergency services access were evaluated in Section IX, *Hazards and Hazardous Materials*, Section XV, *Public Services*, and Section XVII, *Transportation*, of the Initial Study (Appendix B of the Draft SEIR). As detailed on page 4-44 of the Initial Study, emergency access to the Proposed Project site would be provided via proposed driveways constructed as part of the SPPM project, and on roads within the Proposed Project area. As part of the Proposed Project, fire and law enforcement services would have access to all areas of the Proposed Project site. In addition, as part of the Proposed Project's approval process, LAFD would review and approve all Proposed Project plans to ensure that they comply with all applicable access requirements. Furthermore, as detailed on page 4-28 of the Initial Study, the Proposed Project would be required to adhere to all Homeland Security, Port Police, LAFD, and other applicable local, state, and federal emergency response and evacuation plans. The Initial Study determined that the Proposed Project's impacts on emergency access and response would be less than significant.

In addition, impacts on public service providers, including police and fire, were evaluated in Section 3.11, *Public Services*, of the Draft SEIR, and Section XV, *Public Services*, of the Initial Study. The Tenant considered the security and safety of its property and prepared an emergency plan that details how the event space would prepare for emergency concerns. The safety of the performers, guests, and staff members is a major concern, and an organized and comprehensive emergency plan is essential to address this concern. The objective of the emergency plan is to establish and define specific responsibilities, guidelines, and procedures that will facilitate an effective response by all persons connected with the facility and ensure proper protocol for any type of life-threatening incident at the amphitheater. Captain Kevin McCloskey of the Port Police provided a letter on July 7, 2023, which detailed what changes would be required to ensure adequate public services for the Proposed Project. These requirements are further detailed in mitigation measure (MM-) PS-7. The Proposed Project determined that with implementation of MM-PS-1, *Coordinate with Law Enforcement Agencies*, and MM-PS-7, *Improvements to Be*

Implemented by the Developer, the Proposed Project would result in less-than-significant impacts.

The Proposed Project's impacts associated with air quality and noise were evaluated in Section 3.2, *Air Quality*, and Section 3.8, *Noise*, respectively, of the Draft SEIR. As detailed in the Draft SEIR, mitigation measures would be incorporated to reduce air quality impacts from the Proposed Project, but impacts would remain significant and unavoidable. However, the Proposed Project would not result in new or substantially more severe air quality impacts than those previously identified in the 2009 SPW EIS/EIR. The Draft SEIR determined that the Proposed Project would still result in significant and unavoidable noise impacts. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would be created by the proposed amphitheater events and fireworks displays. The implementation of MM-NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Heery2, Clay

HEERY2-1 The comment states that the Proposed Project will have significant impacts on traffic, emergency vehicles, and noise, and is not economically feasible. This comment also asks how the Proposed Project got past the "discussion" stage. This comment is introductory to the comments that follow, which are addressed in response to comments HEERY2-2 through HEERY2-4.

HEERY2-2 Refer to response to comment HEERY1-1 for information regarding the Proposed Project's impacts on emergency vehicles.

HEERY2-3 Refer to response to comment HEERY1-1 for information regarding the Proposed Project's impacts regarding noise. Additionally, it should be noted that the comment is incorrect about the Proposed Project being scaled back to 4,300 seats. The Proposed Project would construct a 6,200-seat venue.

HEERY2-4 The Proposed Project's economic effects are discussed in Chapter 6, *Growth-Inducing Impacts*, of the Draft SEIR. As detailed on page 6-2 of the Draft SEIR, the Proposed Project could indirectly result in economic growth by increasing the number of patrons along the waterfront and in downtown San Pedro. Sales would be generated by businesses that would be engaged in supplying services and materials to the visiting patrons attending amphitheater events, as well as businesses in the San Pedro area that would supply services to the amphitheater for hosting events. Amphitheater attendees eating at a local restaurant and/or shopping at a local store would create direct economic benefits for those businesses. This could, in turn, lead to more investment and growth in the waterfront and downtown area, the impacts of which were analyzed and addressed in the 2009 SPW EIS/EIR and 2016 SPPM Addendum.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Hoffman, Chris

HOFFMAN-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Hom, Daniel

HOM-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Howard, Diana

HOWARD-1 The comment expresses concern about the noise and air quality impacts of the proposed amphitheater and fireworks shows on the surrounding neighborhoods. The Proposed Project's impacts associated with air quality and noise were evaluated in Section 3.2, *Air Quality*, and Section 3.8, *Noise*, respectively, of the Draft SEIR. As detailed in the Draft SEIR, mitigation measures would be incorporated to reduce air quality and noise impacts. Pursuant to this comment and similar comments made by others, the number of fireworks shows that would be permitted annually has decreased from 25 to 13, and the annual shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. Additionally, the Proposed Project would incorporate mitigation measures (MM-) NOI-13, *Eliminate the Use of "Salute" Fireworks*, and MM-NOI-14, *Replace Fireworks with Drone Displays*, to address noise impacts associated with the fireworks shows.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Huff, Emily

HUFF-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Hungerford, Carol

HUNGERFORD1-1 The comment states that the proposed amphitheater would result in significant noise and traffic impacts. The Draft SEIR evaluated noise and traffic impacts in Section 3.8, *Noise,* and 3.9, *Transportation*, respectively. The Draft SEIR determined that the Proposed Project would result in significant and unavoidable noise and traffic impacts. New significant and unavoidable noise impacts not previously identified in

the 2009 SPW EIS/EIR or 2016 SPPM Addendum would be created by the proposed amphitheater events and fireworks displays. The implementation of mitigation measures (MM-) NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination. Additionally, new significant and unavoidable transportation impacts would occur because the Proposed Project would result in a net increase in regional vehicle miles traveled (VMT). Transportation Demand Management (TDM) strategies are required as MM-TRAN-1. However, because of the operational and administrative inefficiencies and challenges of implementing TDM for special-event venues, TDM mitigation measures are not expected to reduce the Proposed Project's VMT impact to less-than-significant levels.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Hungerford, Gabe

HUNGERFORD2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Hunter, Marianne and William

HUNTER-1 The comment states that the Proposed Project would result in significant traffic impacts, particularly to the Harbor Freeway (Interstate [I-] 110) and surrounding intersections, as well as significant noise impacts on people, business, and wildlife. Proposed Project traffic impacts on I-110 and surrounding intersections were evaluated in Section 3.9, *Transportation,* of the Draft SEIR. As detailed under Impact TRAN-2 on pages 3.9-14 through 3.9-32 of the Draft SEIR, the Proposed Project would result in significant and unavoidable impacts related to traffic with implementation of mitigation measure (MM-) TRAN-1, *TDM Strategies*. New significant and unavoidable transportation impacts would occur because the Proposed Project would result in a net increase in regional VMT. Transportation Demand Management (TDM) strategies are required as MM-TRAN-1. However, because of the operational and administrative inefficiencies and challenges of implementing TDM for special-event venues, TDM mitigation measures are not expected to reduce the Proposed Project's VMT impact to less-than-significant levels. However, the ongoing State Route 47/Harbor Boulevard Interchange Improvement Project (described in Chapter 4, Table 4-1, *Cumulative Projects List*) would improve access to the Proposed Project, including to visitors utilizing I-110.

The Proposed Project's noise impacts were evaluated in Section 3.8, *Noise*, of the Draft SEIR. Impacts to sensitive receptors, which include residents and businesses, were evaluated under Impact NOI-1 on pages 3.8-22 through 3.8-48, and Impact NOI-2 on pages 3.8-49 through 3.8-50 of the Draft SEIR. The Draft SEIR determined that that the Proposed Project would result in significant and unavoidable noise impacts. New significant and unavoidable noise impacts not

previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would be created by the proposed amphitheater events and fireworks displays. The implementation of MM-NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination.

Impacts on wildlife, including marine mammals and water birds (e.g., California least tern) were evaluated in Section 3.3, *Biological Resources*, of the Draft SEIR. As detailed on pages 3.3-24 through 3.3-37 of the Draft SEIR, the Proposed Project would have the potential to significantly affect sensitive species as a result of noise and trash from concerts at the amphitheater and fireworks shows during special events. However, with implementation of existing 2009 SPW EIS/EIR mitigation measure (MM-) BIO-2, *Conduct Nesting Bird Surveys*, along with the identified new mitigation measures MM-BIO-7, *Trash management and Post-Event Cleanup*, MM-BIO-8, *Marine Mammal Monitoring During Firework Events*, MM-BIO-9, *California Least Tern Nesting Colony Monitoring During Firework Events*, MM-BIO-10, *Biodegradable Venue Products*, and MM-BIO-11, *Abandoned Nest Clearance Must Avoid Breeding Bird Season*, impacts would be reduced to a less-than-significant level. The Aquarium of the Pacific is well outside the area for which any significant wildlife impacts from Project noise were identified.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Jacobson, John

JACOBSON-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter James, Valerie

JAMES-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Jiminez, Manuel

JIMINEZ-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Johnson, Daniel

JOHNSON1-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Johnson, Lynn

JOHNSON2-1 The comment states that the proposed amphitheater would likely result in noise pollution and asks if an environmental impact study and measures will be provided to ensure impacts on local residents are minimized. The Draft SEIR released in November 2024 assesses the environmental impacts associated with the Proposed Project, including the proposed amphitheater. In addition, an amphitheater sound system noise assessment was completed for the Proposed Project, and mitigation measures were incorporated to reduce noise impacts. The noise assessment was included as Appendix F of the Draft SEIR. The Proposed Project's noise impacts were evaluated in Section 3.8, *Noise*, of the Draft SEIR. The Draft SEIR determined that that the Proposed Project would result in significant and unavoidable noise impacts. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would be created by the proposed amphitheater events and fireworks displays. The implementation of MM-NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Johnson, Susanne

JOHNSON3-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Jones, Leslie

JONES-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Jones, Leslie

JONES2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Kato, Ray

KATO-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Keating, Kim

KEATING-1 The comment expresses displeasure and concern for potential traffic, noise, and public safety produced by the Proposed Project. The commenter is referred to response GONZALES-1 for information about traffic and noise impacts. The Proposed Project's impacts associated with noise, transportation, and safety were evaluated in Section 3.8, *Noise*, Section 3.9, *Transportation,* and Section 3.11, *Public Services,* of the Draft SEIR. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Khan, Tammy

KHAN-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Kimball, Jane

KIMBALL-1 The comment expresses displeasure and concern for potential traffic and noise produced by the Proposed Project. The commenter is referred to response GONZALES-1 for information about traffic and noise impacts. The Proposed Project's impacts associated with noise and transportation were evaluated in Section 3.8, *Noise*, and Section 3.9, *Transportation*, respectively, of the Draft SEIR. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Klee, Christa

KLEE-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Krajeck, Geralynn

KRAJECK-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Kuklok-Waldman, Nicole

KUKLOK-WALDMAN-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Kvartuc, Branimir

KVARTUC-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Lanning, Joseph

LANNING-1 The comment expresses displeasure and concern for potential noise produced by the Proposed Project. The Proposed Project's impacts associated with noise were evaluated in Section 3.8, *Noise*, of the Draft SEIR. The commenter is referred to response BOYAJIAN-4 for information about the referenced music event that was held at B46. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Larson, Gary

LARSON-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Lavon-Beaty, Michelle

LAVON-BEATY-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Lee, Joann

LEE-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Levine, Leanna

LEVINE-1 The comment expresses displeasure and concern for potential noise produced by the Proposed Project. The Proposed Project's impacts associated with noise were evaluated in Section 3.8, *Noise*, of the Draft SEIR. The Draft SEIR determined that that the Proposed Project would result in significant and unavoidable noise impacts. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would be created by the proposed amphitheater events and fireworks displays. The implementation of MM-NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Lewis, Ralph

LEWIS-1 The comment expresses displeasure and concern for potential traffic, noise, and air pollution produced by the Proposed Project. The Proposed Project's impacts associated with air quality, noise, and transportation were evaluated in Section 3.2, *Air Quality*, Section 3.8, *Noise*, and Section 3.9, *Transportation*, respectively, of the Draft SEIR. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Lincir, Matt

LINCIR-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Lindholm, Phil

LIND HOLM-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Liu-Morales, Rebecca

LIU-MORALES-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter LoGiudice, Carl

LOGIU DICE-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Lopez, Samuel

LOPEZ-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. The comment stresses that the trash pickup and security measures must be enforced. The commenter is referred to response to comment CE4K-37 for information about the trash capture requirements that would be implemented as part of obtaining an MS4 permit for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Lucks, Linda

LUCKS-1 The comment expresses support for the Proposed Project, and states that the Proposed Project is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter MacAinsh, Nathan

MACAI NSH-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Maldonado, Alma

MALDO NADO1-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Maldonado Jr., Elias

MALDO NADO2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Mancuso, Giampaolo

MANCUSO-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Mardesic, Nick

MARD ESIC-1 The comment expresses displeasure and concern for potential traffic, trash, vandalism, car theft and many more crimes produced by the Proposed Project. The commenter is referred to response to comment CE4K-37 for information about the trash capture requirements that would be implemented as part of obtaining an MS4 permit for the Proposed Project. The Draft SEIR evaluated biology impacts in Section 3.3, *Biological Resources*; transportation impacts in Section 3.9, *Transportation*; and public safety concerns in Section 3.11, *Public Services*. The Proposed Project would implement mitigation measures (MM-) BIO-7, *Trash Management and Post-Event Cleanup*, and MM-BIO-10, *Biodegradable Venue Products*, which would work to ensure that trash and other debris resulting from

amphitheater events and/or fireworks shows would be prevented from entering nearby marine environments and that biodegradable products would be used to reduce impacts. Parking and traffic impacts were evaluated in Section 3.9, *Transportation*, on pages 3.9-13 through 3.9-32 of the Draft SEIR, which determined that the Proposed Project would result in significant and unavoidable traffic impacts due to vehicle miles traveled. The Tenant considered the security and safety of its patrons and prepared an emergency plan that details how the event space would prepare for emergency concerns. The safety of the performers, guests, and staff members is a major concern, and an organized and comprehensive emergency plan is essential to addressing this concern. The objective of the emergency plan is to establish and define specific responsibilities, guidelines, and procedures that will facilitate an effective response by all persons connected with the facility and ensure proper protocol for any type of life-threatening incident at the amphitheater. Captain Kevin McCloskey of the Port Police provided a letter on July 7, 2023, which detailed what changes would be required to ensure adequate public services for the Proposed Project. These requirements are further detailed in MM-PS-7. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Marshall, Clay

MARS HALL-1 The comment expresses concerns about potential noise, traffic, and pollution from the Proposed Project. The Draft SEIR evaluated noise impacts in Section 3.8, *Noise*; air quality impacts in Section 3.2, *Air Quality*; and transportation impacts in Section 3.9, *Transportation*. The air quality impacts were determined to remain significant and unavoidable per the 2009 SPW EIR/EIS, but would not result in new or substantially more severe impacts as a result of the Proposed Project. The Draft SEIR acknowledges that impacts would remain significant and unavoidable for these three resources. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would be created by the proposed amphitheater events and fireworks displays. The implementation of mitigation measures (MM-) NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination. New significant and unavoidable transportation impacts would also occur because the Proposed Project would result in a net increase in regional vehicle miles traveled (VMT). Transportation Demand Management (TDM) strategies are required as MM-TRAN-1. However, because of the operational and administrative inefficiencies and challenges of implementing TDM for special-event venues, TDM mitigation measures are not expected to reduce the Proposed Project's VMT impact to less-than-significant levels. The commenter also suggests a certain percentage of employees are hired who live in San Pedro or other District 15 communities. The commenter also suggests that internships should be offered to local students, and that discounts/subscriptions should be offered to locals, as well as at least one free event per year. The commenter would also like to see local food and beverage be represented at the Proposed Project site. The commenter expresses concern about the naming and representation from the third-party company that may

be in charge of scheduling talent. The commenter also would like to see local merchandise vendors on the Proposed Project site. Lastly, the commenter would like discounts for local businesses who advertise on site. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Martin, Amanda

MARTIN2-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Martin, Betty

MARTIN1-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Martinez-Wehmeyer, Adriana

MARTINEZ-WEHMEYER-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Matson, Heather

MATSON-1 The comment expresses displeasure and concern for potential noise produced by the Proposed Project and suggests an upper decibel limit and an established end time for events. The commenter is referred to mitigation measure (MM-) NOI-3 which limits the maximum front-of-house noise level within the amphitheater during all Tier 1 Events to a 5-minute A-weighted equivalent noise level of 100 decibels, designated as 100 dBA Leq(5min). Additionally, MM-NOI-8 sets a curfew of 10:30 p.m. for all nights, and MM-NOI-9 sets fines for when events go beyond 10:30 p.m. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Matsumoto, Brian

MATSUMOTO-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Medina, Gabriela

MEDINA-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Meister, Lee

MEISTER-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Mirich, Stephen

MIRICH-1 The comment expresses displeasure for the Proposed Project. The comment expresses general concerns about noise from events but does not provide specific criticism of any the Draft SEIR's conclusions. Noise impacts are discussed in Section 3.8, *Noise*, of the Draft SEIR. The Draft SEIR concluded significant and unavoidable impacts related to both amphitheater noise and fireworks noise.

MIRICH-2 Please refer to response to comment MIRICH-1.

MIRICH-3 The comment provides general concerns about traffic issues and air pollution; but does not provide specific criticism of the Draft SEIR's analysis or conclusions. Specific information about the Proposed Project's traffic and air quality impacts are in Section 3.2, *Air Quality*; and Section 3.9 *Transportation*, respectively. The Draft SEIR concluded significant and unavoidable impacts related to both amphitheater noise and fireworks noise; as well as VMT-related transportation impacts.

MIRICH-4 The commenter states that San Pedro should not be used for profit and benefit of a few while sacrificing living conditions of its residents. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Missman, Margaret

MISSMAN-1 The comment expresses displeasure for the Proposed Project. The commenter provides an opinion about the amphitheater being too large a venue for San Pedro. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

MISSMAN-2 The comment expresses general concerns about air quality, traffic issues, and sound pollution, as well as air and water pollution, but does not provide specific criticism of the Draft SEIR's conclusions. The commenter is referred to response BOYAJIAN-4 for information about the referenced music event that was held at B46. The commenter will find specific information about the Proposed Project's impacts on air quality, traffic, noise, and water pollution in Section 3.2, *Air Quality*; Section 3.7, *Hydrology and Water Quality*; Section 3.8, *Noise*; and Section 3.9, *Transportation*, of the Draft SEIR, respectively The Draft SEIR concluded significant and unavoidable impacts related to both amphitheater noise and fireworks noise, as well as vehicle miles traveled-related transportation impacts.

MISSMAN-3 The commenter states that San Pedro should not be used for profit and benefit of a few while sacrificing living conditions of its residents. LAHD acknowledges this

comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Moody, John

MOODY-1 The comment expresses support for the Proposed Project and suggests a few potential opening acts for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Mrkich, Ziggy

MRKICH-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Muldrew, Mary

MULD REW1-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Muldrew, Morgan

MULD REW2-1 The comment expresses support for the Proposed Project. The commenter's suggestion for an easier way for locals to travel to the Proposed Project site has been noted. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners' consideration. The comment does not raise an issue regarding the adequacy of the analysis contained within the Draft SEIR.

Response to Comment Letter Munster, Noramae

MUNSTER-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Nave1, Diana

NAVE1-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Nave2, Pat

NAVE2-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Naylor, Mike

NAYLOR-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Neal, Daniel

NEAL-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Nizich, Bob

NIZICH-1 The comment expresses the belief that the noise analysis is not accurate, notes that noise from other local activities can be heard at large distances and suggests testing noise levels with speakers playing at the intended noise levels. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider. The comment does not specify any particular reason that the Draft SEIR noise analysis is considered inaccurate. Conducting accurate and representative sound system field tests would be impractical and prohibitively expensive because it would require constructing, installing, and testing a large and sophisticated sound system, similar to the one that would be part of the Proposed Project. Noise modeling is the primary tool used in the prediction and control of environmental noise from all types of noise sources and is a valid approach for assessing the Proposed Project. The software used in the analysis, NoizCalc, is based on recognized national and international noise calculation and propagation standards that have been widely studied and validated. NoizCalc is specifically designed to accomplish the type of music venue analysis required for the Proposed Project Draft SEIR and is, therefore, an excellent tool for the assessment conducted. The results of the modeling are fully disclosed in the Draft SEIR, and impacts are assessed relative to the established thresholds of impact. Based on the modeling, the SEIR concludes that amphitheater noise impacts would remain significant and unavoidable after mitigation

Response to Comment Letter Norman, Thomas

NORMAN-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Nygren, Lisa

NYGREN-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter O'Brian, Ross

O'BRIAN-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter O'Melveny, Regina

O'MELVENY-1 The comment expresses displeasure and concern for potential noise pollution and air pollution produced by the Proposed Project. The commenter will find specific information about the Project's impacts are in Section 3.2, *Air Quality*, and Section 3.8, *Noise*, of the Draft SEIR. The Draft SEIR concluded significant and unavoidable impacts related to air quality, consistent with the 2009 SPW EIS/EIR, and amphitheater noise and fireworks noise. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Palma, Nino

PALMA-1 The comment expresses support for the Proposed Project, and states that the Proposed Project is a transformative opportunity to revitalize San Pedro's vibrant public spaces and nearby businesses. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Parnacher, Jeremy

PARNACHER-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Pfleger, Birte

PFLEGER-1 The comment expresses displeasure and concern for potential noise pollution, air pollution, and traffic congestion produced by the Proposed Project but does not provide any specific criticism of the Draft SEIR. Specific information about the Proposed Project's impacts on these resources are in Section 3.2, *Air Quality*; Section 3.7, *Hydrology and Water Quality*; Section 3.8, *Noise*; and Section 3.9, *Transportation*. The Draft SEIR concluded significant and unavoidable impacts

related to both amphitheater noise and fireworks noise as well as vehicle miles traveled-related transportation impacts. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Pirozzi, Anthony

PIROZZI-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Pisano, George

PISANO-1 The comment expresses displeasure and concern for noise, fireworks, pollution, and traffic produced by the Proposed Project. The commenter also expresses concern about the size of the venue. Specific information about the Proposed Project's impacts on these resources are in Section 3.2, *Air Quality*; Section 3.7, *Hydrology and Water Quality*; Section 3.8, *Noise*; and Section 3.9, *Transportation*. The Draft SEIR concluded the Project would create significant and unavoidable impacts related air quality, consistent with the 2009 SPW EIS/EIR, and significant and unavoidable impacts related to amphitheater noise and fireworks noise and vehicle miles traveled-related transportation impacts. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PISANO-2 The comment expresses concerns about air pollution and noise impacts associated with the fireworks shows. The Proposed Project's air quality and noise impacts are discussed in Section 3.2, *Air Quality*, and Section 3.8, *Noise*, respectively. As detailed in the Draft SEIR, mitigation measures would be incorporated to reduce air quality and noise impacts. Air quality impacts were determined to remain significant and unavoidable per the 2009 SPW EIR/EIS, but would not result in new or substantially more severe impacts as a result of the Proposed Project. Specifically, the Proposed Project would incorporate mitigation measures (MM-) NOI-13, *Eliminate Use of "Salute" Fireworks*, and MM-NOI-14, *Replace Fireworks with Drone Displays*, to address noise impacts associated with the firework shows, as well as reducing the annual shows permitted from 25 to 13 and limiting the duration to 10 minutes, with two shows annually permitted to run up to 20 minutes. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PISANO-3 The comment expresses concerns about the size of the venue. The commenter states that the 50,000 square foot turf area could accommodate 23,227 people that are standing (instead of sitting). This would not occur because the event organizers would not be allowed to sell more than 6,200 tickets per event. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PISANO-4 The comment expresses concerns about air pollution and noise impacts associated with the Proposed Project. Specific information about the Proposed Project's impacts on these resources is in Section 3.2, *Air Quality*, and Section 3.8, *Noise*. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Pocapalia1, Daniel

POCA PALIA1-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Pocapalia2, Daniel

POCA PALIA2-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Purcell, Tom

PURCELL-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Pyun, Alys Chalmers

PYUN-1 The comment expresses opposition to the Proposed Project and states the opinion that the Proposed Project would enrich the few to the detriment of the many, as well as infringe upon the rights of citizens to clean air and peace and quiet in their homes. The Draft SEIR evaluated air quality impacts and noise impacts in Section 3.2, *Air Quality*, and 3.8, *Noise*, respectively. The Draft SEIR determined that with the implementation of mitigation measures, the Proposed Project would not result in new or substantially more severe air quality impacts than those previously identified in the 2009 SPW EIS/EIR. The Draft SEIR determined that the Proposed Project would still result in significant and unavoidable noise impacts. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would be created by the proposed amphitheater events and fireworks displays. The implementation of mitigation measures (MM-) NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-2 The comment expresses opposition to the Proposed Project and states that dancing at a Taylor Swift concert at Hollywood Park generated the energy equivalent to a .85-magnitude earthquake and that they don't want any more concerts to negatively impact their community. The concert referenced in the comment was very different

from the Proposed Project, and the referenced equivalent energy is potentially misleading. The referenced concert was a Taylor Swift concert that took place at SoFi Stadium in Inglewood and had over 70,000 attendees. Regarding the largest local magnitude of 0.85, the researchers who gathered the data put this in context saying "Keep in mind this energy was released over a few minutes compared to a second for an earthquake of that size. Based on the maximum strength of shaking, the strongest tremor was equivalent to a magnitude -2 [negative two] earthquake" (EurekAlert! 2024). It is noted that earthquakes with a magnitude of less than 3.5 are generally not felt by humans (although they can be recorded with seismographs or similar instruments) and are regarded by the U.S. Geological Survey as posing no risk of damage to buildings (USGS 2025). Researchers found that the best explanation of their data was that the motion of the 70,000-plus crowd dancing and jumping caused the measured harmonic tremor, rather than amplified music. The groundborne vibration levels generated by patrons at the proposed amphitheater would be much smaller because the maximum capacity of 6,200 attendees is less than one-tenth of the Taylor Swift concert referenced in the comment. As a result, no perceptible vibration is anticipated from the operation of the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners' consideration.

PYUN-3 The comment states that the proposed curfew of 11:00 p.m. is outdated and ineffectual and that health workers and emergency responders work 24 hours daily and have staggered sleep schedules. The commenter is referred to mitigation measures (MM-) NOI-8 and MM-NOI-9 which enforce a 10:30 p.m. curfew (11:00 p.m. with Executive Director approval) and set forth a system of fines for events that go beyond the 10:30 p.m. curfew. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-4 The comment states that residents within a 7-mile radius complained about a concert held at Hollywood Park in August of 2024. The Draft SEIR evaluated noise impacts in Section 3.8, *Noise*, and sets forth MM-NOI-1 through MM-NOI-14 to reduce/avoid impacts to the greatest extent feasible. These mitigation measures reduce noise impacts to the extent possible, including limiting, monitoring, and reporting front-of-house noise levels; establishing a noise complaint hotline; establishing a noise curfew; restricting the hours of use/duration of sound system operations; and establishing fines for excessive noise levels. The Draft SEIR acknowledges that impacts would remain significant and unavoidable even with the implementation of the mitigation measures. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners' consideration. .

PYUN-5 The commenter states the opinion that the City of Los Angeles is incapable of stopping loud, illegal vehicular mufflers or controlling illegal fireworks or regulating loud music once it is allowed to take a foothold in San Pedro. The Draft SEIR evaluated noise impacts in Section 3.8, *Noise*. The Draft SEIR acknowledges that

impacts would remain significant and unavoidable and disclosed that new significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would result from the proposed amphitheater events and fireworks displays. The implementation of MM-NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination. The proposed noise mitigation measures would be incorporated into the lease through required compliance with the Mitigation, Monitoring, and Reporting Program and include escalating financial penalties to deter noise offenses. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-6 The comment recommends replacing the term *amphitheater* with a more appropriate term. While the term *amphitheater* typically refers to a natural or human-made half-circle with tiered structure, there are other examples of amphitheaters in the Southern California region which don't strictly meet this criterion. Renderings of the Proposed Project are included in the Draft SEIR's Project Description. The Tenant (developer) prefers to continue using the term *amphitheater*. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-7 The comment states that the venue will negatively affect "residents, pets, businesses, wildlife and sea-life for possibly a 7-mile radius" and also states the belief that music has been used by the Central Intelligence Agency as a tool of psychological warfare. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider. The "possible 7-mile radius" for noise impacts appears to be based on anecdotal evidence from a much larger event at a different location (70,000 attendees at SoFi Stadium in Inglewood); however, this impact distance is not substantiated by the Proposed Project's noise analysis provided in the Draft SEIR.

PYUN-8 The commenter states that the Draft SEIR itself acknowledges that the Proposed Project would result in significant and unavoidable impacts related to noise, air pollution, and transportation issues. The Draft SEIR evaluated these impacts in Section 3.8, *Noise*; Section 3.2, *Air Quality*; and Section 3.9, *Transportation*. The Draft SEIR acknowledges that impacts would remain significant and unavoidable for these three resources but that with the implementation of mitigation measures, the Proposed Project is reducing impacts to the greatest extent feasible. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-9 The comment references the Los Angeles Almanac and states that out of the first 275 days of 2024, 207 were unhealthy to breathe in Los Angeles and states opposition to the additional days of fireworks proposed by the Proposed Project. Pursuant to this comment and similar comments made by others, the number of fireworks shows that would be permitted annually has decreased from 25 to 13, and the annual shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. LAHD acknowledges this comment and will

include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-10 This comment expresses concern with the lack of access to the venue that would add additional traffic to existing major streets and cause a parking shortage that would affect neighboring residential areas. The transportation assessment for the Proposed Project is in Section 3.9, *Transportation*, of the Draft SEIR. The event parking and circulation management plans for the Proposed Project are in Appendices H and I of the Draft SEIR. As detailed under Impact TRAN-2 on pages 3.9-14 through 3.9-32 of the Draft SEIR, the Proposed Project would result in significant and unavoidable impacts related to traffic even with implementation of mitigation measure MM-TRAN-1, *TDM Strategies*.

PYUN-11 The comment states that the 50,000 square foot turf area could accommodate 23,227 people that are standing (instead of sitting). However, this scenario would not occur under the Proposed Project because the event organizers would not be permitted to sell more than 6,200 tickets per event. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-12 This comment expresses concern about the use of artificial turf and associated issues such as heat retention, micro-plastic pollution, off-gassing formaldehyde, and other chemicals. These are all important considerations that led to the Proposed Project using turf that does not use synthetic materials as infill and meets the requirements of EN-71-3 (Part 3) Toy Testing Standards (European Committee for Standardization (CEN)). The concerns listed are principally based upon chronic exposure to plastic and its potential components rather than the proposed use of sitting or standing on turf for several hours on occasion. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-13 The comment notes that the Aquarium of the Pacific is less than 5 miles away and expresses concern that sea life would be adversely affected by amphitheater noise. Section 3.3, *Biological Resources*, of the Draft SEIR includes an analysis of potential impacts on various species, including the effects of noise on marine mammals. The Aquarium of the Pacific is well outside the area for which any significant impacts from Project noise were identified.

PYUN-14 The commenter states they live 1.38 miles from Fort MacArthur and can hear the daily bugle calls, sea lions, and the Long Beach Grand Prix cars; the commenter notes there will be decibel limitations (for the amphitheater) but expresses concern that noise will still be an issue and that music and crowd noise cannot be contained in a large, open-air venue. Section 3.8, *Noise*, of the Draft SEIR discloses predicted amphitheater noise levels, including estimated noise levels in the surrounding community under different atmospheric conditions. Noise impacts are assessed relative to the established thresholds of impact, and several mitigation measures are included to reduce the impact of amphitheater noise levels including noise limits

(MM-NOI-3), noise monitoring (MM-NOI-5), noise reporting (MM-NOI-6), a noise complaint hotline (MM-NOI-7), and fines for non-compliance (MM-NOI-9). Nonetheless, the Draft SEIR concludes that amphitheater noise impacts would remain significant and unavoidable after mitigation.

PYUN-15 The commenter states the opinion that five Port of Los Angeles Commissioners control the futures of San Pedro residents and none of the commissioners lives in San Pedro or Wilmington. It should be noted that as of the publication date of this Final SEIR, there are now two Port of Los Angeles commissioners that live in San Pedro. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-16 The comment states the belief that the five Port of Los Angeles commissioners won't have to listen to the unrelenting loud noise or breathe the pollution from the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-17 The comment states that "the review period for this project was held during our holidays when we get so distracted." CEQA requires the review period for EIRs to be at least 45 days but the review period was extended to 65 days, because it fell during the holiday season. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-18 The comment states that the "promoters present this as a charming, seaside amphitheater. Instead, it will be a Trojan Horse spreading unrelenting noise, traffic, and air pollution." The Draft SEIR evaluates noise impacts in Section 3.8, *Noise*; air quality impacts in Section 3.2, *Air Quality*; and transportation impacts in Section 3.9, *Transportation*. The Draft SEIR acknowledges that impacts would remain significant and unavoidable for these three resources even with mitigation. The air quality impacts were determined to remain significant and unavoidable per the 2009 SPW EIR/EIS, but would not result in new or substantially more severe impacts as a result of the Proposed Project. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would result from the proposed amphitheater events and fireworks displays. The implementation of MM-NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination. Additionally, new significant and unavoidable transportation impacts would occur because the Proposed Project would result in a net increase in regional VMT. Transportation Demand Management (TDM) strategies are required as MM-TRAN-1. However, because of the operational and administrative inefficiencies and challenges of implementing TDM for special-event venues, TDM mitigation measures are not expected to reduce the Proposed Project's VMT impact to less-than-significant levels. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-19 The commenter states "if the Port wants to proceed with this venue, I urge that it create a smaller music hall with state-of-the-art acoustics and seats, and enclose the

whole venue. An intimate enclosed space will help keep down the sound level and block strobing lights. Plant trees and drought-tolerant landscaping, which will help clean the air, not pollute it." This suggested alternative does not meet the Proposed Project objectives, notably Objective 1: "Enhance and revitalize the existing SPW area by including a substantially larger outdoor concert Amphitheater and entertainment lawn venue and additional attractions to draw visitors to the SPW area, thereby increasing the public visibility of San Pedro in general and the waterfront specifically." An enclosed amphitheater structure would substantially reduce the desired outdoor waterfront experience of visitors and performers to the site. While not in use for concerts, the lawn area will create an opportunity for public enjoyment of the waterfront, whereas an enclosed space would restrict both visual and recreational public access.

The outdoor amphitheater also is consistent with the project analyzed in the 2009 SPW EIS/EIR and the 2016 Addendum, which always envisioned an outdoor amphitheater. The Proposed Project is also consistent and in alignment with the State Lands Commission granting statute, Chapter 1046, Statues of 1970, specifically Sections 3 (f) which emphasizes "recreational facilities...pedestrian ways and landscaped areas" for public use as well as Section 3(h) which conditions upon the land include "For the promotion. by advertising and such other means as may be reasonable and appropriate, of maximum public use of such granted tidelands or to encourage private investment in development of such granted tidelands for the highest and best use in the public interest." The Proposed Project and Alternative 2 would allow for greater public use as the lawn area of the venue will be available to the public for recreation while not in use for events. The outdoor amphitheater best meets the objectives of the Proposed Project and aligns with the State Lands and Coastal Commission objectives to promote shoreline public access and recreation as well as to protect visual access to the waterfront. The State Lands Commission encourages projects that promote accessibility to waterfront recreational opportunities for diverse groups. For the vast number of hours, especially outside of the concert season, the venue would not be in use for a ticketed concert event but would be available for community or recreational events or as a landscaped lawn area from which to appreciate the outdoor waterfront setting with supportive accommodations and services nearby. An enclosed building would severely limit these additional public benefits and exclude entirely the outdoor waterfront aspects of this unique space. For these reasons, the suggested alternative of an enclosed amphitheater is infeasible.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

PYUN-20 The comment urges that LAHD consider the public's concerns. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Ragland, Cathy

RAGLAND-1 The comment discusses a "bridge to breakwater" redevelopment project which is part of the larger San Pedro Waterfront area; but is unrelated to the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

RAGLAND-2 The commenter states a concern about the quality of life related to the amphitheater which would be visible from their home on Crescent Avenue. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

RAGLAND-3 The comment notes that acoustical modeling was used to analyze amphitheater noise and expressed concern that the analysis in the Draft SEIR underestimates the noise levels and spillover. The comment also discusses a previous outdoor concert and associated complaints at Inglewood's SoFi Plaza and suggests noise levels for the Proposed Project "should be tested under real world conditions before the project is approved and built." Conducting accurate and representative sound system field tests would be impractical and prohibitively expensive because it would require constructing, installing, and testing a large and sophisticated sound system, similar to the one that would be part of the Proposed Project. Noise modeling is the primary tool used in the prediction and control of environmental noise from all types of noise sources specifically because it allows predictions and investigations before the Proposed Project is constructed. As such, noise modeling is a valid approach for assessing the Proposed Project. The software used in the analysis, NoizCalc, is based on recognized national and international noise calculation and propagation standards that have been widely studied and validated. NoizCalc is specifically designed to accomplish the type of music venue analysis required for the Proposed Project Draft SEIR and is, therefore, an excellent tool for the assessment conducted. The results of the modeling are fully disclosed in the Draft SEIR, and impacts are assessed relative to the established thresholds of impact. As noted in the comment, the SEIR concludes that amphitheater noise impacts would remain significant and unavoidable after mitigation.

RAGLAND-4 This comment expresses concern over the need to analyze congestion-related emissions (idling) and traffic delays from traffic building up in the area when multiple events are taking place, citing a lack of public transportation access in the area. Transportation impacts were analyzed in Section 3.9, *Transportation*, of the Draft SEIR and determined to be significant and unavoidable. As mitigation for this impact, the area will be served by shuttles to off-site parking lots on event days, and mitigation measure MM-TRAN-1 incorporates traffic management options including encouraging the use of public transportation into the area using discounted ticket prices.

The comment references traffic from cruise ships. Events at the amphitheater are mainly scheduled during the "off-peak" season for cruises, and even if there are cruises scheduled on event days, the start times for events are expected to be off-

set from the peak traffic arrival and departure times for cruises. This would minimize traffic congestion impacts for these uses.

The comment references emissions and vehicle delays due to congestion. Section 3.2, *Air Quality*, analyzed the Proposed Project's impacts on air quality, which considers average vehicle speeds, including idling. Congestion-related vehicle delays are outside the scope of this Draft SEIR but is addressed under the Los Angeles Department of Transportation's *Transportation Assessment Guidelines* as part of the City's Site Plan Review process. The access circulation evaluation for the Proposed Project (part of the City's Site Plan Review process) has been added as Appendix G-2, for informational purposes, in response to concerns regarding Project traffic volumes and intersection delay.

RAGLAND-5 The comment expresses concern about fireworks contributing to noise and air pollution and potentially to water pollution, and also that fireworks could cause anxiety in pets, marine mammals, and other wildlife. Pursuant to this comment and similar comments made by others, the Tenant has agreed to eliminate "salute" fireworks from the Proposed Project entirely. In addition, the number of fireworks shows that would be permitted annually has decreased from 25 to 13 and the annual 13 shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes. The Draft SEIR evaluates biological impacts in Section 3.3, *Biological Resources*; noise impacts in Section 3.8, *Noise*; air quality impacts in Section 3.2, *Air Quality*; water/hydrology impacts in Section 3.7, *Hydrology and Water Quality*. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

RAGLAND-6 The comment states that there is no way to prevent trash from reaching the ocean from a crowded public area on a windy waterfront. The commenter is referred to response CE4K-37 for information about the trash capture requirements that would be implemented as part of obtaining an MS4 permit for the Proposed Project. In addition, the Proposed Project would implement mitigation measure (MM-) BIO-7, *Trash Management and Post-Event Cleanup*, and MM-BIO-10, *Biodegradable Venue Products*, which would work to ensure that trash and other debris resulting from amphitheater events and/or fireworks shows would be prevented from entering nearby marine environments and that biodegradable products would be used to reduce impacts. In addition, event organizers would comply with City of Los Angeles Ordinance No. 187030, *Disposable Foodware Accessories and Plastic Drinking Straws*, and the City's Comprehensive Plastics Reduction Program and Zero Waste Plan. Furthermore, as detailed in Section XIX, Utilities and Service Systems, of the Initial Study (Appendix A of the Draft SEIR), operation of the Proposed Project would be required to comply with the City of Los Angeles's Green New Deal Sustainable City Plan, which includes a target to reduce municipal solid waste by 15 percent by 2030 and phase out single-use plastics (e.g., plastic straws, utensils, take-out containers, and polystyrene) by 2028. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

RAGLAND-7 The comment states that there is no such thing as artificial turf that does not degrade. This is an important concern in the maintenance and replacement of the turf used for Proposed Project. The turf would be maintained and replaced as necessary. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

RAGLAND-8 The comment states that the solar canopy that it says is proposed as a mitigation measure would require removal of the existing shade canopy and that any tree removal must be part of any GHG mitigation calculation. The Draft SEIR actually proposes a solar canopy as a Project feature (PF-) GHG-1, not as a mitigation measure. However, the comment is correct that a solar canopy would require removal of the existing shade canopy, and the GHG emissions analysis performed as part of this SEIR considered the removal of existing trees as part of construction activities. It should be noted that the parking lots approved as part of the larger San Pedro Waterfront project is already under construction and the existing trees have been removed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

RAGLAND-9 The commenter expresses a desire to "voice opinions on broader issues" before final approval of the modified Proposed Project. The Initial Study/Notice of Preparation was circulated for a 30-day public review, and with the comment period starting on April 14, 2022, and ending on June 15, 2022, and a virtual scoping meeting was held on May 3, 2022. The Draft SEIR was released for public review on November 6, 2024, for a 65-day comment period, which ended on January 10, 2025. A virtual public meeting was held on November 14, 2024. This Final SEIR has been provided to the public for review and participation in the planning process. The Board will consider the Final SEIR in a public meeting prior to making its determination on the Proposed Project. The Board meets regularly and considers public comments on both agenda and non-agenda items.

Response to Comment Letter Rizzi, Gianine

RIZZI1-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Rizzi, Gianine

RIZZI2-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Rochat, Judy

ROCHAT-1 This statement is introductory to the comments that follow. Please see responses to comments ROCHAT-2 through ROCHAT-5.

ROCHAT-2 This comment states that the recommended noise mitigation is appreciated, particularly mitigation that limits the noise in the amphitheater and the related mitigation monitoring and reporting. The comment asks if noise levels can be lowered to a level lower than 100 dBA at the front-of-the-house position, how the different system tuning parameters for different atmospheric conditions will be implemented, and whether unfavorable meteorological conditions settings could adversely affect ground-level patrons in the Proposed Project area outside the amphitheater. For a discussion of front-of-house noise levels, please refer to the response to comment CSPNC-23; in summary, 100 dBA is within the typical range for a dedicated music venue but this is the highest noise level allowed for any 5-minute period and would correspond to only the loudest parts of any performance; due to the different types of artists that would perform at the venue, as well as variations (dynamic range) within each performance, the noise levels would often be below this maximum threshold. Regarding the implementation and tuning of the sound system, the operator of the proposed venue provided the following details:

> …the sound system for the amphitheater to be located in the West Harbor Project has been designed and will be specifically tuned to minimize offsite noise impacts for this location. This Nederlander 'House; sound system will provide us with complete control over the volume of music and any related sound leaving the speakers. This contrasts with systems set up for one-time shows, by operators not experienced with the area, and who may never put on another show in the community. Nederlander, along with its sound system vendor partner, L'Acoustics, will be working very closely with the system manufacturer and our audio consultants. We will do sound modeling of the audience area along with the surrounding community, including the neighboring residential areas, to help us contain the sound to the audience area of the amphitheater. Additionally, there have been great strides made in the technology of the building of speaker cabinets that allow us to focus the energy coming out of the speakers.

Referring to the amphitheater noise mapping in the Draft SEIR, the noise levels at ground level within the Proposed Project site would be quite similar under both favorable and unfavorable meteorological conditions.

ROCHAT-3 This comment states that a "transportation impact is defined stating that the project would increase traffic volumes and degrade level of service along neighborhood streets. It is also stated that no feasible mitigation is identified, which would negatively impact the surrounding neighborhoods." This comment refers to a conclusion made in the level-of-service (LOS) analysis from the 2009 SPW EIS/EIR. This conclusion is not based on the Proposed Project. The comment also indicates that the traffic noise analysis stated that the number of predicted trips decreased from the 2009 analysis (with the 500-seat amphitheater) to the 2016 analysis (with 6,000+ seat amphitheater), which the comment says is counterintuitive and does not appear to match noise Tables 3.8-6 and 3.8-7 in the Draft SEIR. The comment requests more explanation. The comment misunderstands some of the data presented in the Draft SEIR. Both the 2009 SPW EIS/EIR and the 2016 SPPM Addendum considered a 500-seat amphitheater; the 6,000+ seat amphitheater was not proposed until the current (2024) Draft SEIR. The reason predicted traffic was reduced between the

2009 analysis and the 2016 analysis was not related to the amphitheater but was due to other factors, such as the removal of 75,000 square feet of proposed conference center space. It is important to acknowledge that the purpose of the Draft SEIR traffic noise analysis is to assess potential impacts relative to the baseline conditions (2007) established in the 2009 SPW EIS/EIR. Therefore, impacts were assessed based on the net change in traffic, which combines the Project traffic reduction between the 2009 analysis and the 2016 analysis, with the future traffic increases attributed to the current Proposed Project. To provide a comparison between the original (2009) analysis and the current (2024) analysis, Table 3.8-6 presents traffic noise data directly from the 2009 SPW EIS/EIR and Table 3.8-7 presents the updated traffic noise results based the predicted net increase in traffic from the 2024 Draft SEIR analysis. In response to this and other comments about how Project traffic may affect other roadways in addition to Harbor Boulevard, details have been added to the traffic noise analysis to include the traffic distribution affecting other streets. To provide a conservative assessment, the new analysis evaluated the higher traffic scenario rather than the reduction in traffic between the 2009 analysis and the 2016 analysis. The resulting updates to the Draft SEIR are described in Section 3.2, *Changes to the Draft Subsequent Environmental Impact Report*, in this Final SEIR. In addition, mitigation measure (MM-) TRAN-1 outlines measures designed to reduce traffic impacts during events.

ROCHAT-4 The comment states appreciation for MM-NOI-13 to limit the use of "salute" fireworks but says the restriction should go further by eliminating the use of the "salute" fireworks and that other more aggressive mitigation measures (including replacing fireworks with drones) should be considered. Pursuant to this comment and similar comments made by others, the Tenant has agreed to eliminate "salute" fireworks from the Proposed Project entirely. In addition, the number of fireworks shows that would be permitted annually is being decreased from 25 to 13, and the annual shows would be limited in duration to 10 minutes, with the exception of 2 shows annually being permitted to run for 20 minutes.

ROCHAT-5 The comment requests more discussion of the effects of all noise and vibration (both for construction and operations) on wildlife, particularly for marine mammals and in relation to pile driving. Effects of the Proposed Project, including noise, on wildlife are discussed and assessed in Section 3.3, *Biological Resources*, and mitigation measures for potential noise impacts are provided. The Proposed Project does not include any in-water pile driving, so there would be no hydroacoustic (underwater noise) impacts.

Response to Comment Letter Sams, Nancy

SAMS-1 The comment expresses displeasure and concern for potential noise produced by the Proposed Project. The commenter's preference for an enclosed venue is noted. The commenter is referred to response PYUN-19 for information on why an enclosed venue was not selected. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Sandell, Scott

SANDELL-1 The comment expresses opposition to the Proposed Project and states that chief concerns are noise, traffic, and pollution– all of which are included among the significant and unavoidable environmental impacts in the Draft SEIR. The Draft SEIR evaluated air quality (pollution) impacts, noise impacts, and transportation impacts in Section 3.2, *Air Quality*; Section 3.8, *Noise*; and Section 3.9, *Transportation*, respectively. The air quality impacts were determined to remain significant and unavoidable per the 2009 SPW EIR/EIS, but would not result in new or substantially more severe impacts as a result of the Proposed Project. New significant and unavoidable noise impacts not previously identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum would result from the proposed amphitheater events and fireworks displays. The implementation of mitigation measures (MM-) NOI-1 through MM-NOI-14 would lessen these impacts but would not change the determination. Additionally, new significant and unavoidable transportation impacts would occur because the Proposed Project would result in a net increase in regional vehicle miles traveled (VMT). Transportation Demand Management (TDM) strategies are required as MM-TRAN-1. However, because of the operational and administrative inefficiencies and challenges of implementing TDM for special-event venues, TDM mitigation measures are not expected to reduce the Proposed Project's VMT impact to less-than-significant levels. This comment is introductory to the comments that follow (comments SANDELL-3 through SANDELL-13). LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

SANDELL-2 The comment states the opinion that the noise analysis in the Draft SEIR is inadequate, "focuses on a narrow swath of San Pedro and Terminal Island," and ignores the potential impacts on many thousands of people. The comment also says that sounds from the port (e.g., beeping cranes, music from departing cruise ships, and the national anthem from Fort MacArthur) can travel long distances from the source. Regarding the size of the area analyzed for amphitheater noise, it is noted that the area is quite large; the amphitheater noise mapping provided in the Draft SEIR covers an area of approximately 3.5 square miles. Although the noise analysis does not extend as far as the neighboring cities, it does extend more than a mile to the west where the majority of nearby noise-sensitive receptors (e.g., homes) are located. The noise mapping covers the closest impacted receptors in all directions from the Proposed Project site, and noise would continue to attenuate with distance at locations farther from the Proposed Project site.

SANDELL-3 The comment says that, in recent years, the port has allowed concerts at Berth 46 (outer harbor area) that have disturbed residents in San Pedro and Rancho Palos Verdes and claims that, despite complaints, the port appears to have done little to mitigate the disturbances from these current concerts. The comment also mentions raves held at the Queen Mary in Long Beach that generated noise complaints in San Pedro, Rancho Palos Verdes, Rolling Hills Estates, and as far away as Lomita, Harbor City, and Torrance. It should be noted that the raves mentioned in this

comment are in jurisdictions outside the control of LAHD, and LAHD cannot comment on any sound system or decibel limits used in the raves mentioned in the comment.

SANDELL-4 The comment states lower-frequency sound waves (i.e., bass) are a particular problem and, while noise can spread in unpredictable ways, the comment claims it is actually quite predictable on San Pedro Hill. The noise modeling and analysis considered the combined music noise at all frequencies; the unmitigated and mitigated noise levels described in Draft SEIR pertain to the total noise, including low-, mid-, and high-frequency sounds.

SANDELL-5 The comment states that a much larger regional study of the noise impacts should be undertaken in any EIR for the Proposed Project and that more mitigation procedures would likely need to be explored. The amphitheater noise mapping provided in the Draft SEIR covers an area of approximately 3.5 square miles and extends more than a mile to the west where the majority of nearby noise-sensitive receptors (e.g., homes) are located. This analysis area includes all the closest noise-sensitive receptors to the Proposed Project where the greatest impacts would occur. Because mitigation measures are based on these worst-case impacts, they would not change if more distant receptors were added to the analysis.

SANDELL-6 The comment states that, with the proposed mitigation, residents would appear to have little to no recourse to address their noise complaints, and the proposed front-of-house noise monitoring would protect concertgoers, but it does not "take into account at all the noise that would be sent into the surrounding community." The topic of noise complaints is addressed in response to comment SANDELL-7. Although noise monitoring is required at the front-of-house position (MM-NOI-3), recommended noise reductions and noise limits would directly benefit the surrounding community because the noise levels inside and outside the amphitheater are directly correlated. As noted in the Draft SEIR: "For a given set of conditions (i.e., sound system setup and atmospheric conditions) a 10 dBA reduction in front-of-house sound levels will translate directly to a 10 dBA reduction in noise levels in the community surrounding the Amphitheater." The noise analysis in the Draft SEIR specifically assesses the noise levels in the surrounding community; the amphitheater noise mapping provided in the Draft SEIR covers an area of approximately 3.5 square miles and extends more than a mile to the west where the majority of nearby noise-sensitive receptors (e.g., homes) are located.

SANDELL-7 This comment objected to the language of the mitigation measure regarding a noise-complaint hotline and/or website (MM-NOI-7), noting that the measure simply requires a response within two days and asking if a "response" could simply be acknowledging the complaint, with no action. The comment stated, "it would be far more effective to have a hotline that is continuously monitored and results in an actual real-time adjustment to the concert taking place," such as was employed for a large music festival at the Queen Mary. In response to the public comments received, MM-NOI-7 has been revised as shown in Section 3.2.5, *Changes Made to Section 3.8, Noise*.

SANDELL-8 The comment states that in "news stories and on social media, assurances are being given to the public that the sound impacts on our community would be minimal. Some have claimed this proposed venue would create only a few hours of noise a few nights a week." Please see response to comment SANDELL-9, which is a combined response to both comments.

SANDELL-9 This comment states that the Draft SEIR contradicts the assurances described in comment SANDELL-8 because it states that both amphitheater and fireworks noise impacts would remain significant and unavoidable after mitigation and would "allow for lengthy periods of noise during the day and night virtually any day of the year." The Draft SEIR analyzes and assesses noise impacts under CEQA based on the Proposed Project description. The Draft SEIR is not based on, and is not responsible for, any claims or assertions made on other platforms such as news or social media. The Draft SEIR includes several mitigation measures to reduce the impacts of amphitheater and fireworks noise. However, the commenter is correct that the Draft SEIR concludes there will be significant and unavoidable impact after mitigation for both amphitheater and fireworks noise. The allowable number of amphitheater and fireworks events is addressed in response to comment SANDELL-10.

SANDELL-10 The comment notes that the Draft SEIR states that the proposed amphitheater would host up to 100 Tier 1 events per year, plus an unknown number of other events, the sound system could be used no earlier than 8 a.m., the proposed end for concerts would be 10:30 p.m., and no later than 11 p.m., and there would be up to 25 fireworks shows per year, subject to permits. In response to public comments, the mitigation measures in the Final SEIR have been updated to reduce the number of fireworks shows per year from 25 to 13 (with only2 fireworks shows per year lasting up to 20 minutes and the remaining fireworks shows lasting up to 10 minutes).

SANDELL-11 This comment summarizes the time limits on amplified noise specified by the Proposed Project mitigation measures: "On any Tier 1 Event day that includes a public or private performance, the total use of amplified sound equipment for all activities (e.g., rehearsal, soundcheck, performance) will be limited to a cumulative total of 12 hours. Sound amplification may occur over multiple distinct intervals, as long as the sum of those intervals is 12 hours or less. On non-performance days, the total use of amplified sound equipment for all amplified events will be limited to no more than a cumulative total of up to 4 hours." Response to comment SANDEL-12 addresses this comment.

SANDELL-12 This comment states that the time limits on amplified noise may be tolerable for some adults, but it is not tolerable for others including other adults, children whose studies or sleep will be disturbed, people who would like to enjoy the quiet of their home, yard or local park, or those whose options to escape the noise are limited because of work, illness or economics. The comment also states that many scientific studies have found "the effects of noise on human beings and animal life can be profoundly disruptive and harmful, especially when that noise is inescapable." The stated time limits and durations represent the worst-case conditions that could occur at the Proposed Project site and are unlikely to occur on all event days. Numerous

mitigation measures are proposed for the Proposed Project, and the Draft SEIR clearly discloses that amphitheater noise impacts would remain significant and unavoidable after mitigation. Specifically, the Draft SEIR states that, "With mitigation, Amphitheater noise levels at residences in San Pedro, west of the Proposed Project, would not exceed daytime ambient-noise levels and would exceed evening and nighttime ambient levels by less than 5 dBA. Overall, the mitigation would drastically reduce the number of residences in San Pedro west of the Project site that would be affected by Amphitheater noise levels in excess of ambient levels. However, even with mitigation, Amphitheater noise levels would continue to exceed ambient-noise levels by more than 5 dBA Leq(h) at multiple noise-sensitive receivers, including liveaboard vessels in Al Larson Marina, residences at Reservation Point, and liveaboard vessels in Cabrillo Marina,".

SANDELL-13 The comment is conclusory and summarizes concerns that have been addressed in responses to responses to comments SANDELL-2 through SANDELL-12. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Sax, Elizabeth

SAX-1 The comment expresses displeasure and concern regarding the Proposed Project. Concerns include topics such as safety, traffic, and noise. The commenter is referred to BOYAJIAN-3 and HEERY1-1 for information about security and public safety and to GONZALES-1 for information about traffic and noise impacts. The commenter's preference for an enclosed venue is noted. The commenter is referred to response PYUN-19 for information on why an enclosed venue was not selected. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Schindler, Taran

SCHINDLER-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Shriver, Marianne

SHRIVER-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Shrum, JJ

SHRUM-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Silber, Andrew

SILBER-1 The comment expresses support for the Proposed Project, and states that the Proposed Project is a long overdue opportunity to revitalize San Pedro's waterfront. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Skebe, Ed

SKEBE-1 The comment expresses displeasure and concern regarding the Proposed Project. Concerns include topics such as traffic, pollution, and noise. The commenter is referred to response to comment POP-3 for an extensive discussion about trash and pollution. Traffic, construction, and noise are discussed in Section 3.8 *Noise*, and Section 3.9, *Transportation*. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Smirke, Ann

SMIRKE-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Springer, Cathy

SPRING ER1-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Springer, Jay

SPRINGER2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter St. John, Barbara

STJOHN-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Stevens, EZ

STEVENS-1 The comment expresses displeasure and concern regarding the Proposed Project. Concerns include topics such as traffic and noise. The commenter is referred to

response GONZALES-1 for information about traffic and noise impacts. The commenter's preference for an enclosed venue is noted. The commenter is referred to response PYUN-19 for information on why an enclosed venue was not selected. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Sutton, Mona

SUTTON1-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Sutton, Mona

SUTTON2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Swensson, Heli

SWENSSON-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Tahash, Nina

TAHASH-1 The comment expresses displeasure and concern regarding the Proposed Project. Concerns include topics such as traffic, construction, trash, pollution, and noise. Please refer to response to comments POP-3 and CE4K-37 for an extensive discussion about trash and pollution. Traffic, construction, and noise are discussed in Section 3.8, *Noise*, and Section 3.9, *Transportation*. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Taylor, Kimberly

TAYLOR-1 The comment expresses general displeasure and concern regarding the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Teuber, David

TEUBER-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Thompson, Jake

THOMPSON-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Thornton, Dawn

THORNTON-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Townsend, Camila and Stan Hicks

TOWNSEND-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Trusela, Josephine

TRUSELA-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Ungaro1, Henry

UNGARO1-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Ungaro2, Henry

UNGARO2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Valanejad, Kamran

VALANE JAD-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter van Hoorn1, Gus

VAN HOORN1-1 The comment expresses concern about noise pollution produced by the Proposed Project. Please note that the venue would be designated non-smoking. Also, please refer to Section 3.8, *Noise*, of the Draft SEIR for information about noise pollution. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter van Hoorn2, Gus

VAN HOORN2-1 The comment expresses concern about noise pollution produced by the Proposed Project. Please refer to response to comment VANHOORN1-1. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Vance, Hannah

VANCE-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Vanderark, K

VANDER ARK-1 The comment expresses general concerns about air quality, traffic issues, and sound pollution, as well as air and water pollution, but does not provide specific criticism of the Draft SEIR's conclusions. Specific information about the Proposed Project's impacts in these areas is found in Section 3.2, *Air Quality*; Section 3.7 *Hydrology and Water Quality*; Section 3.8, *Noise*; and Section 3.9, *Transportation*, of the Draft SEIR. The air quality and hydrology impacts were determined to remain significant and unavoidable per the 2009 SPW EIR/EIS, but would not result in new or substantially more severe impacts as a result of the Proposed Project. The Draft SEIR concluded significant and unavoidable impacts related to both amphitheater noise and fireworks noise, as well as vehicle miles traveled-related transportation impacts. The 2009 SPW EIS/EIR similarly concluded that noise impacts associated with construction of the Proposed Project would be significant and unavoidable even with implementation of mitigation measures MM-NOI-1 and MM-NOI-2.

LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter von Kalinowski, Penelope

VONKALINOWSKI -1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. The concerns of incoming traffic in the San Pedro area are noted, and the potential solutions are appreciated. Please note that mitigation measure MM-TRAN-1 includes transportation demand management (TDM) strategies that would be implemented to the greatest extent feasible. These strategies include coordinating with LA Metro or the Los Angeles Department of Transportation to determine the feasibility of expanding services during events. The TDM also encourages the use of shuttle services from satellite parking lots. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Wallis, Cameron

WALLISC-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Wallis, Kristie A

WALLIS1-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Wallis, Kris

WALLIS2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Wehmeyer, Jeremy

WEHMEYER-1 The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Wilkinson, Joselyn

WILKINSON-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Wixed1, Laurie

WIXED1-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Wixed2, Laurie

WIXED2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Yokoyama, Jerome

YOKOYAMA-1 The comment states that the events held along the waterfront can cause echoing due to the noise bouncing off the glass condominiums on the hillside. The comment states that if an EIR was prepared they would be interested in seeing the findings. The commenter is referred to Section 3.8, *Noise*, of the Draft SEIR where the fireworks, traffic noise, concert noise, and construction noise are all modeled and analyzed. The findings are contained therein.

Response to Comment Letter Young, Laurie

YOUNG1-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter Young, Mike

YOUNG2-1 The comment expresses support for the Proposed Project and conveys satisfaction that the Draft SEIR has provided mitigation measures to address environmental issues as needed. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter West Harbor Modification Project Public Meeting Transcript

WHMPM- 1: Heyman, Bruce Exec Director, LAMI

WHMPM- 1: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-2: Noel Gould, CSPNC Board Member

WHMPM-2: This comment expresses concern with the calculations used for the greenhouse gas emissions and air quality analysis including emissions from vehicles traveling to the greater San Pedro Waterfront development. This comment expresses concern with increases to traffic causing impacts on air quality and greenhouse gas emissions. The commenter is referred to the corresponding Sections (3.2 and 3.5) for the analyses that included traffic counts in the modeling for air quality impacts. The next comment expresses concern with the ability to monitor birds and marine mammals during fireworks events. The monitoring will occur both prior to and during the events in well-lit areas during the event season, by qualified biologists who have experience monitoring the species of concern. Please see MM-BIO-8 and MM-BIO-9 regarding the event monitoring requirements. This comment also expresses concern with noise impacts in the residential area to the west of the site. The commenter is referred to Section 3.8, *Noise*, which identified the Proposed Project as having significant impacts due to increases in ambient noise levels at multiple noise-sensitive receivers, including liveaboard vessels in Al Larson Marina, residences at Reservation Point, and liveaboard vessels in Cabrillo Marina. The noise impacts from the Proposed Project were determined to be significant and unavoidable. The later comment expresses concern with bass spillover from the venue into the neighboring areas of San Pedro. The commenter also expressed concerns with tailgating and traffic. The commenter is referred to Section 3.9, *Transportation*, and response to comment HEERY1-1 for information about transportation and security concerns. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-3: James Preston Allen

WHMPM-3: The commenter expresses concern with traffic analysis including the greater San Pedro Waterfront and its impacts to Air Quality. The air quality impacts of the Proposed Project were determined to remain significant and unavoidable per the 2009 SPW EIR/EIS, but would not result in new or substantially more severe impacts as a result of the Proposed Project. The Proposed Project was considered in the context of the San Pedro Waterfront Development, and the commenter is referred to Appendix G-2 for an informational operational analysis and BOYAJIAN-2 for discussion of the findings of Section 3.9, *Transportation*. The comment expresses concern with bass spillover from the venue into the neighboring areas of San Pedro. The commenter is

referred to SANDELL-4 for a discussion of the noise modeling in the Draft SEIR. The comment also recommends replacing the term "amphitheater" with a more appropriate term. While the term amphitheater typically refers to a natural or manmade half-circle with tiered structure; there are other examples of "amphitheaters" in the Southern California region which do not meet this criteria. Renderings of the Proposed Project were included in the Draft SEIR's Project Description. The Tenant prefers to continue using the term amphitheater. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-4: Jack Baric

WHMPM-4: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-5: Joleen Deaderage

WHMPM-5: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-6: Anthony A Luna

WHMPM-6: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-7: Linda Alexander

WHMPM-7: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-8: Rock Ashfield, Chamber of Commerce, Neighborhood Council

WHMPM-8: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-9: Gabriela Medina, Board Member, San Pedro Chamber of Commerce

WHMPM-9: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-10: John Bagakis, Small Business Owner

WHMPM-10: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-11: Elise Swanson, President San Pedro Chamber of Commerce

WHMPM-11: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-12: Mona Sutton, Board of Directors, Chamber of Commerce, Coastal San Pedro Committee Member

WHMPM-12: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-13: Ryan Blaney, Exec Director, San Pedro Business Improvement District

WHMPM-13: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-14: Michael Ungaro, CEO, Fish Market

WHMPM-14: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-15: Aksel Palacios, Director of Port and Capital Projects for Tim McOsker

WHMPM-15: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-16: James Campeau

WHMPM-16: The comment expresses concern with bass spillover from the venue into the neighboring areas of San Pedro. The commenter is referred to SANDELL-4 for a discussion of the noise modeling in the Draft SEIR. The commenter also expressed a preference for classical music acts to perform at the venue. This comment does not pertain to the CEQA analysis, however, the event organizer provided a sample list of acts suitable for a venue of this size that included a variety of genres. The commenter also expressed concern with events outside of the allowed 100 Tier 1 event days. The amphitheater will be available for use for Tier 2 events oriented toward 500 or fewer

attendees but will not be permitted to operate for Tier 1 events in excess of 100 days per MM-NOI-10. This will be enforced through the Tenant's lease. The commenter is referred to response to comment HEERY1-1 for information about security concerns. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-17: Kamran Valanejad

WHMPM-17: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-18: Ann Carpenter, Braid Theory

WHMPM-18: The comment expresses support for the Proposed Project and a concern about the potential for the Proposed Project to generate microplastics. The commenter is referred to MM-BIO-10: *Biodegradable Venue Products* and CE4K-9. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-19: David Nastri

WHMPM-19: This comment expresses concern with the traffic impacts and parking limitations of the waterfront. The Draft SEIR Table 4-1 includes a list of related and cumulative projects near the Proposed Project that are included in the cumulative analysis. As discussed in response to comment CSPNC-35, operational deficiency evaluations (i.e. level of service) for intersections in the Project vicinity, is included for information purposes only in Appendix G-2 of this Draft SEIR as CEQA now requires analysis of transportation impacts under the vehicle miles traveled threshold. This evaluation takes into account the list of related and cumulative projects included in the Draft SEIR Table 4-1, in addition to general regional ambient traffic growth. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-20: Jacob Eisenberg, Board Member, San Pedro Chamber of Commerce

WHMPM-20: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-21: Alejandro Barlow

WHMPM-21: This comment expresses concern with the noise mitigation applied to the Proposed Project and cited past regional events that were audible from the area. The commenter is referred to Section 3.8, *Noise*, of the Draft SEIR and response BOYAJIAN-4 for additional discussion. The commenter is referred to response to comment HEERY1-1 for information about security concerns. The commenter also

expressed concern about limited parking availability. The commenter is referred to Appendix H, *Event Parking and Management Plan*, of the Draft SEIR, which evaluated parking for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-22: Robin Rudisill, Coastal San Pedro Neighborhood Council member

WHMPM-22: The comment expresses concern with noise volume and spillover from the venue into the neighboring areas of San Pedro and the frequency of Tier 2 events. The limitations on dBA are explained in Section 3.8, *Noise*, and as part of MM-NOI-3. The commenter is referred to SANDELL-4 for a discussion of the noise modeling in the Draft SEIR, and CeSPNC-12 for a discussion of the distinction between Tier 1 and 2 events. The comment also expressed concern with local safety related to events and requested increased security. The commenter is referred to response to comment HEERY1-1 for information about security concerns. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

WHMPM-23: Laurie Wixted

WHMPM-23: The comment expresses support for the Proposed Project. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

2.3.1.4 Procedural

Response to Comment Letter Coastal San Pedro Neighborhood Council

The comment is a dialogue between the President of the CSPNC and Port of Los Angeles staff whereby the commenter is asking about an extension to the public review period. The extension was granted and the public review period was extended to 65-days, ending on January 10, 2025.

Response to Comment Letter Erikson, Amy

The comment is a dialogue between Amy Erikson of the Angel's Gate Cultural Center and Port of Los Angeles staff whereby the commenter is asking that staff make sure the Angel's Gate Cultural Center comments reach Mike Galvin (Board of Harbor Commissioners) and the Port of LA administration. LAHD confirms that the letter did reach both parties; and this comment will be included in the Proposed Project record for the Board of Harbor Commissioners to consider.

Response to Comment Letter U.S. Army Corps of Engineers

The comment is a dialogue between USACE staff and Port of Los Angeles staff whereby the commenter is asking about in-water work; the question was answered by Port of Los Angeles staff. LAHD acknowledges this comment and will include it in the Proposed Project record for the Board of Harbor Commissioners to consider.

Chapter 3
Modifications to the Draft Subsequent Environmental Impact Report

3.1 Introduction

This chapter addresses modifications to the Draft Subsequent Environmental Impact Report (Draft SEIR) for the West Harbor Modification Project (Proposed Project). It presents all revisions related to public comments, as determined necessary by the Los Angeles Harbor Department (LAHD) as lead agency under the California Environmental Quality Act (CEQA).

The text changes described presented in this chapter update and clarify the Proposed Project information and analyses presented in the Draft SEIR. The changes do not create new significant impacts or a substantial increase in severity of a significant impact that would not be mitigated by measures already identified in the Draft SEIR. In addition, no new or considerably different mitigation measures have been identified. Finally, the changes or set of changes do not create fundamental inadequacies in the Draft SEIR. Recirculation of any part of the Draft SEIR, therefore, is not required.

3.2 Changes to the Draft Subsequent Environmental Impact Report

The following changes to the text are incorporated into the Final SEIR. Changes are provided in revision-mode text, wherein deletions of the original text are shown in strikethrough and additions to the Final SEIR are underlined. Page numbers refer to page numbers in the Draft SEIR to easily locate where changes have been made.

3.2.1 Changes Made to Executive Summary

In Section ES.1, *Introduction*, Page ES-1, text has been revised as follows:

This Draft Subsequent Environmental Impact Report (SEIR) assesses impacts related to the West Harbor Modification Project (Proposed Project) proposed by the-<u>developer (Tenant)</u>~~Los Angeles Harbor Department (LAHD)~~.

In Section ES.6.4, *Impacts of the Proposed Project Considered in this Draft SEIR*, Page ES-12, Table ES-1 has been revised as follows:

Table ES-1: Summary of Project Impacts and Mitigation Measures.

Environmental Impacts	Impact Determination	Mitigation Measure	Impacts After Mitigation
3.1 Aesthetics			
AES-1: Would the Proposed Project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the Project Site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Proposed Project is in an urbanized area, would the Proposed Project conflict with applicable zoning and other regulations governing scenic quality?	The 2009 SPW EIS/EIR finding of "less-than-significant impacts" remains valid for the Proposed Project.	None required.	No new or substantially more severe significant impacts would occur. No mitigation would be required.
AES-2: Would the Proposed Project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	The 2009 SPW EIS/EIR finding of "no impact" is no longer valid for the Proposed Project. Impacts are now less than significant.	None required.	No new or substantially more severe significant impacts would occur. No mitigation would be required.
3.2 Air Quality			
AQ-1: Would the Proposed Project result in new construction emissions that exceed the SCAQMD regional peak-daily emission thresholds of significance in Table 3.2-5 and/or increase the severity of impacts considered in the 2009 SPW EIS/EIR or 2016 SPPM Addendum?	The 2009 SPW EIS/EIR finding of "significant and unavoidable impacts" remains valid for the Proposed Project.	**MM-AQ-3** through **MM-AQ-8**	No new or substantially more severe significant impacts would occur.
AQ-2: Would the Proposed Project result in ambient air pollutant concentrations from construction activities that exceed NAAQS or CAAQS and/or increase the severity of impact considered in the 2009 SPW EIS/EIR or 2016 SPPM Addendum?	The 2009 SPW EIS/EIR finding of "significant and unavoidable impacts" remains valid for the Proposed Project.	**MM-AQ-3** through **MM-AQ-8**	No new or substantially more severe significant impacts would occur.
AQ-3: Would the Proposed Project result in new operational emissions that exceed the SCAQMD regional peak daily emission thresholds of	The 2009 SPW EIS/EIR finding of "significant and unavoidable impacts"	**MM-AQ-31**	No new or substantially more severe significant

Environmental Impacts	Impact Determination	Mitigation Measure	Impacts After Mitigation
significance and/or increase the severity of impact considered in the 2009 SPW EIS/EIR or 2016 SPPM Addendum?	remains valid for the Proposed Project.		impacts would occur.
AQ-4: Would the Proposed Project result in ambient air pollutant concentrations from operational activities that exceed NAAQS or CAAQS and/or increase the severity of impact considered in the 2009 SPW EIS/EIR or 2016 SPPM Addendum?	The 2009 SPW EIS/EIR finding of "significant and unavoidable impacts" remains valid for the Proposed Project.	**MM-AQ-31**	No new or substantially more severe significant impacts would occur.
AQ-5: Would the Proposed Project result in on-road traffic that would contribute to an exceedance of the 1-hour or 8-hour CO standards and/or increase the severity of impact considered in the 2009 SPW EIS/EIR or 2016 SPPM Addendum?	The 2009 SPW EIS/EIR finding of "less-than-significant impacts" remains valid for the Proposed Project.	None Required.	No new or substantially more severe significant impacts would occur. No mitigation would be required.
AQ-6: Would the Proposed Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people and/or increase the severity of impact considered in the 2009 SPW EIS/EIR or 2016 SPPM Addendum?	The 2009 SPW EIS/EIR finding of "less-than-significant impacts" remains valid for the Proposed Project.	None Required.	No new or substantially more severe significant impacts would occur. No mitigation would be required.
AQ-7: Would the Proposed Project expose receptors to significant levels of TACs per the following SCAQMD thresholds and/or increase the severity of impact identified in the 2009 SPW EIS/EIR or 2016 SPPM Addendum?	The 2009 SPW EIS/EIR finding of "significant and unavoidable impacts" remains valid for the Proposed Project.	**MM-AQ-3** through **MM-AQ-8** and **MM-AQ-31**	No new or substantially more severe significant impacts would occur.
AQ-8: Would the Proposed Project conflict with or obstruct implementation of an applicable air quality plan and/or increase the severity of impact considered in the 2009 SPW EIS/EIR or 2016 SPPM Addendum?	The 2009 SPW EIS/EIR finding of "less-than-significant impacts" remains valid for the Proposed Project.	None Required.	No new or substantially more severe significant impacts would occur. No mitigation would be required.
3.3 Biology			
BIO-1: Would the Proposed Project have a substantial adverse effect, either directly or through	The 2009 SPW EIS/EIR finding of "significant and unavoidable impacts"	**MM-BIO-2**, **MM-BIO-7**, **MM-BIO-8**,	No new or substantially more severe significant

Environmental Impacts	Impact Determination	Mitigation Measure	Impacts After Mitigation
habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?	remains valid for the Proposed Project.	**MM-BIO-9**, **MM-BIO-10**, and **MM-BIO-11**	impacts would occur.
BIO-2: Would the Proposed Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS?	The 2009 SPW EIS/EIR finding of "significant and unavoidable impacts" remains valid for the Proposed Project.	**MM-BIO-7** and **MM-BIO-10**	No new or substantially more severe significant impacts would occur.
3.4 Cultural Resources			
CUL-1: Would the Proposed Project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Section 15064.5?	The 2009 SPW EIS/EIR finding of "no impacts" remains valid for the Proposed Project.	None Required.	No new or substantially more severe significant impacts would occur. No mitigation would be required.
CUL-2: Would the Proposed Project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	The 2009 SPW EIS/EIR finding of "less than significant impacts" remains valid for the Proposed Project.	**MM-CR-3**	No new or substantially more severe significant impacts would occur.
CUL-3: Would the Proposed Project disturb any human remains, including those interred outside of dedicated cemeteries?	The 2009 SPW EIS/EIR finding of "less than significant impacts" remains valid for the Proposed Project.	**MM-CR-3**	No new or substantially more severe significant impacts would occur.
3.5 Greenhouse Gases			
Would the Proposed Project result in construction and operational activities that conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions and/or increase the severity of impact considered in the 2009 SPW EIS/EIR or 2016 SPPM Addendum?	The 2009 SPW EIS/EIR finding of "significant impacts" remains valid for the Proposed Project.	**PF-GHG-1**, **MM-TRAN-1**, **MM-AQ-3**, **MM-AQ-4**, **MM-AQ-6**, **MM-AQ-7**, **MM-AQ-27**, and **MM-AQ-31**	No new or substantially more severe significant impacts would occur.
3.6 Hazards			
HAZ-1: Would the Proposed Project create a significant hazard to the public or the environment	The 2009 SPW EIS/EIR finding of "less-than-significant impacts"	None required.	No new or substantially more severe significant impacts would

Environmental Impacts	Impact Determination	Mitigation Measure	Impacts After Mitigation
through the routine transport, use, or disposal of hazardous materials?	remains valid for the Proposed Project.		occur. No mitigation would be required.
HAZ-2: Would the Proposed Project create a significant hazard to the public or the environment by being located on a hazardous-materials site and through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	The 2009 SPW EIS/EIR finding of "significant impacts" remains valid for the Proposed Project.	**MM-HAZ-1**	No new or substantially more severe significant impacts would occur.
3.7 Hydrology and Water Quality			
HYD-1: Would the Proposed Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	The 2009 SPW EIS/EIR finding of "significant impacts" remains valid for the Proposed Project.	**MM-GW-1, MM-GW-2, MM HAZ-1, MM BIO-7,** and **MM BIO-10**	No new or substantially more severe significant impacts would occur.
HYD-2: Would the Proposed Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation on or off site; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?	The 2009 SPW EIS/EIR finding of "less-than-significant impacts" remains valid for the Proposed Project.	**MM-HAZ-1**	No new or substantially more severe significant impacts would occur.
3.8 Noise			
NOI-1: Would the Proposed Project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	The 2009 SPW EIS/EIR finding of "significant impacts" remains valid for the Proposed Project.	**PF-NOI-1** and **MM NOI-1** through **MM-NOI-14**	No new or substantially more severe impacts would occur as a result of construction after mitigation; New significant impacts would occur due to Amphitheater operations and

Environmental Impacts	Impact Determination	Mitigation Measure	Impacts After Mitigation
			fireworks shows~~displays~~ that would remain significant and unavoidable after mitigation. ~~Amphitheater noise impacts would remain significant and unavoidable after mitigation.~~ ~~No new or substantially more severe significant impacts would occur.~~
NOI-2: Would the Proposed Project generate excessive ground-borne vibration or ground-borne noise levels?	The 2009 SPW EIS/EIR finding of "less-than-significant impacts" remains valid for the Proposed Project.	None required	No new or substantially more severe significant impacts would occur. No mitigation would be required.
NOI-3: Would the Proposed Project be located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	The 2009 SPW EIS/EIR finding of "less-than-significant impacts" remains valid for the Proposed Project.	None required.	No new or substantially more severe significant impacts would occur. No mitigation would be required.
3.9 Transportation			
TRAN-1: Would the Proposed Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	The 2009 SPW EIS/EIR finding of "less-than-significant impacts" remains valid for the Proposed Project.	None Required.	No new or substantially more severe significant impacts would occur. No mitigation would be required.
TRAN-2: Would the Proposed Project conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)?	While t~~T~~he 2009 SPW EIS/EIR did not analyze this threshold as it did not apply at the time of the 2009 EIS/EIR, the 2009 SPW EIS/EIR finding of "significant impacts"	**MM-TRAN-1**	~~Impacts would remain significant with implementation of **MM-TRAN-1**~~ New impacts would occur due

Environmental Impacts	Impact Determination	Mitigation Measure	Impacts After Mitigation
	remains valid for the Proposed Project.		to Amphitheater operations that would remain significant and unavoidable after mitigation. ~~No new or substantially more severe significant impacts would occur.~~
3.10 Tribal Cultural Resources			
TCR-1: Would the Proposed Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe and listed in or eligible for listing in the California Register of Historical Resources or in a local register of historical resources, as defined in Public Resources Code Section 5020.1(k)?	The 2009 SPW EIS/EIR finding of "less-than-significant impacts" remains valid for the Proposed Project.	~~**MM-CR-43**~~	No new or substantially more severe significant impacts would occur.
TCR-2: Would the Proposed Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe and a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in	The 2009 SPW EIS/EIR finding of "less-than-significant impacts" remains valid for the Proposed Project.	**MM-CR-43**	No new or substantially more severe significant impacts would occur.

Environmental Impacts	Impact Determination	Mitigation Measure	Impacts After Mitigation
subdivision (c) of Public Resource Code Section 5024.1, the lead agency will consider the significance of the resource to a California Native American Tribe.			
3.11 Public Services			
PUB-1: Would the Proposed Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire or police protection?	The 2009 SPW EIS/EIR finding of "less-than-significant impacts" remains valid for the Proposed Project.	**MM-PS-1** and **MM-PS-7**	No new or substantially more severe significant impacts would occur.

CAAQS = California Ambient Air Quality Standards; CDFG = California Department of Fish and Wildlife; CEQA = California Environmental Quality Act; CO = carbon monoxide; EIR = Environmental Impact Report; EIS = Environmental Impact Statement; GHG = greenhouse gas; NAAQS = National Ambient Air Quality Standards; SCAQMD = South Coast Air Quality Management District; SPPM = San Pedro Public Market; SPW = San Pedro Waterfront; TAC = toxic air contaminant; USFWS = U.S. Fish and Wildlife Service

In Section ES.6.3, *Mitigation Measures (MM) and Project Features (PF) Referenced in this Draft SEIR*, Page ES-10, the list of noise mitigation measures has been revised text as follows:

- **PF-NOI-1:** Incorporate Sound-Focusing Design into the Amphitheater Sound System
- **MM-NOI-1**: Construct Temporary Noise Barriers, Muffle and Maintain Construction Equipment, Prohibit Idling, Locate Equipment, Use Quiet Construction Equipment, and Notify Residents
- **MM-NOI-2:** Construction Hours
- **MM-NOI-3:** Limit Noise Levels within the Amphitheater during All Tier 1 Events
- **MM-NOI-4:** Require All Tier 1 Events to Utilize the House Public Address/Sound Reinforcement System
- **MM-NOI-5**: Monitor Amphitheater Noise for All Tier 1 Events
- **MM-NOI-6**: Noise Reporting Requirements Following Amphitheater Events
- **MM-NOI-7**: Establish a Noise Complaint Hotline and/or Website
- **MM-NOI-8**: Enforce a Curfew and Restrict the Hours of Use and Duration for the Amphitheater Amplified Sound System
- **MM-NOI-9**: Fines for Non-Compliance

- **MM-NOI-10**: Restrict the Total Number of Tier 1 Event Performance Days to 100 per Year
- **MM-NOI-11**: Restrict the Total Number of Firework Displays to ~~25~~ 13 per Year
- **MM-NOI-12**: Limit the Duration of All Firework Displays
- **MM-NOI-13**: Eliminate ~~Limit~~ the Use of "Salute" Fireworks
- **MM-NOI-14**: Replace Fireworks Displays with Drone Displays

3.2.2 Changes Made to Chapter 2, Existing Setting and Project Description

In Section 2.3, *Project Objectives*, Page 2-13, text has been revised as follows:

Proposed Project objectives include the following:

- Enhance and revitalize the existing SPW area by including a substantially larger outdoor concert Amphitheater and entertainment lawn venue and additional attractions to draw visitors to the SPW area, thereby increasing the public visibility of San Pedro in general and the waterfront specifically;
- Update previously adopted mitigation measures to reflect changes since their consideration~~, including the addition of the 208 E. 22nd Street Parking Lot improvements~~;
- Provide public access to the SPW through increased parking amenities, including the addition of the 208 E. 22nd Street Parking Lot improvements, and pedestrian walkways;
- Provide for a variety of waterfront uses, including ~~berthing for visiting vessels and harbor service craft, as well as other~~ recreational, commercial, and Port-related waterfront uses; and
- Provide for enhanced visitor-serving commercial opportunities within the former site of Ports O' Call Village (now the *Project Site*), complementary to those found in downtown San Pedro.

In Section 2.4.1, Proposed Modifications, Page 2-14. Additional paragraph added following the 1st paragraph:

Although it was not evaluated in the Draft SEIR, the Tenant has agreed to evaluate the possibility of utilizing natural grass instead of artificial turf at the amphitheater. The artificial turf lawn is described in the Draft SEIR as an approximately 50,000 square-foot area which would be used for patrons of the amphitheater during events, and could be used recreationally by the general public when private events are not scheduled. Should the Tenant decide that natural grass would be suitable for use at the site, the Tenant would substitute for or replace the artificial turf with natural grass. As a result, Appendix K includes an evaluation of the potential differences in impacts between artificial turf and natural grass. The results of this analysis indicate that the substitution or replacement of artificial turf with natural grass as part of the Proposed Project would not result in new potentially significant impacts or a substantial increase the severity of impact considered in the Draft SEIR, the 2009 SPW EIS/EIR, or the 2016 Addendum, which considered landscaping and lawn areas as part of the City Park and Discovery Sea Amusement elements.

In Section 2.4.1.1, *Amphitheater Changes*, Page 2-30, text has been revised as follows:

Pyrotechnics (i.e., fireworks) may be used at certain events. Specifically, tenant-sponsored fireworks may be launched from a barge (or barges) at approximately 10~~25~~ events per year, with the show lasting up to 10~~20~~ minutes, with one show annually permitted to run for up to 20 minutes. Three annual Port of Los Angeles fireworks shows will also be permitted and subject to the requirements outlined in this document, with 2 shows lasting up to 10 minutes and one show lasting up to 20 minutes. Each event (13 in total) would undergo appropriate permitting from the Los Angeles Regional Water Quality Control Board (RWQCB) and the U.S. Coast Guard, as necessary. The U.S. Coast Guard, under the authority of the Ports and Waterways Safety Act, would ensure that the fireworks would be launched from an established safety zone and that each event would be published in the *Local Notice to Mariners* at least 20 days prior to the event.

In Section 2.5, *Anticipated Project Approvals and Permits*, Page 2-38, text has been revised as follows:

The approvals or permits that could be required for the Proposed Project are anticipated to include, but not be limited, to the following.

- **City of Los Angeles**: Building, occupancy, electrical, and mechanical permits to include compliance with LID requirements;
- **Los Angeles Fire Department**: Approval of fire suppression system;
- **LAHD**: Issuance of a Harbor Engineer Permit, Coastal Development Permit, or amendment and site lease amendments, as necessary;
- **South Coast Air Quality Management District**: Permit for emergency generator;
- **State Water Resources Control Board** (SWRCB): Construction General Permit ~~and Commercial, Industrial, and Institutional Permit (in draft)~~;
- **Los Angeles RWQCB**:

  Issuance of a National Pollutant Discharge Elimination System (NPDES) permit, authorizing discharges into waters of the United States within the Los Angeles region, subject to the waste discharge requirements in draft Order R4-2022-XXXX *Waste Discharge Requirements for Stormwater Discharges Associated with Commercial, Industrial, and Institutional Facilities in the Dominguez Channel/Greater Los Angeles and Long Beach Harbor Watershed and the Los Cerritos Channel/Alamitos Bay Watershed* (Note: The draft order was issued in July 2022, and the final order has not been issued, but is expected to be issued prior to commencement of the Proposed Project); and

  - Issuance of an NPDES permit for fireworks.
  - MS4 Permit – As of June 1, 2017, Regional Water Quality Control Boards, as the Permitting Authorities, started requiring all MS4 permits to have trash control implementation requirements and compliance milestones to demonstrate progress towards 100 percent compliance with the Trash Provisions. On June 22, 2022, the State Water Board reissued the Statewide Department of Transportation General Permit. On September 8, 2022, the State

Water Board reissued the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities. These reissued permits implement the Trash Provisions for the Department of Transportation and construction dischargers. The General Permits for Stormwater Discharges Associated with Industrial Activities and the Small MS4 General Permit will implement the Trash Provisions when reissued.

3.2.3 Changes Made to Section 3.1, Aesthetics

In Section 3.1.8, *Thresholds of Significance,* Page 3.1-9, a fireworks discussion has been added as follows:

Fireworks

The Port already conducts firework shows; therefore, the introduction of fireworks in the Proposed Project area would be consistent with current Port operations. Although additional shows would be added each year, all firework shows would comply with City of Los Angeles Municipal Code, Section 57.5608, *Fire Displays* (City of Los Angeles 2023). Because firework shows are already conducted by the Port, the Proposed Project would not be introducing a foreign event to the Project Site. ~~The frequency and duration of fireworks shows has been adjusted.~~ ~~13~~Thirteen firework shows ~~are~~ would be permitted annually, 11 of which would be permitted to run for up to 10 minutes and two of which would be permitted to run up to 20 minutes~~with a duration of 10 minutes. An additional~~Two ~~of these two firework shows will beare permitted to run up tobe 20 minutes in durationlong for an event such as the 4th of July~~. Salute fireworks no longer would be permitted. Information about potential violations would be reported to the Port. Therefore, impacts would be less than significant.

In Section 3.1.8, *Thresholds of Significance*, Page 3.1-13, a fireworks discussion has been added as follows:

Fireworks

The proposed fireworks of the Proposed Project do not represent a substantial change in the visual landscape from what was evaluated in the 2009 SPW EIS/EIR and the 2016 SPPM Addendum. The new light sources proposed would not represent a substantial change over the existing ambient illumination levels associated with the night lighting of port operations, given that the Port already uses the area for firework shows. Although the Proposed Project would increase the frequency of the firework shows, the illumination levels per show would not constitute a significant change. ~~The frequency and duration of fireworks shows has been adjusted.~~ Thirteen~~13~~ firework shows would be~~are~~ permitted annually, 11 of which would be permitted to run for up to 10 minutes, and two of which would be permitted to run up to 20 minutes ~~for an event such as the 4th of July., with a duration of 10 minutes, with. An additional two of the firework shows are permitted to be 20 minutes long for an event such as the 4th of July~~. Salute fireworks no longer would be permitted. Information about potential violations would be reported to the Port. The Proposed Project would not result in new significant Aesthetic impacts, substantially increase the severity of a previously analyzed impact, or require new mitigation measures that have not already been evaluated in the 2009 SPW EIS/EIR. Therefore, Aesthetic impacts resulting from operation of the Proposed Project would be less than significant.

3.2.4 Changes Made to Section 3.3, Biological Resources

In Section 3.3.6, *Methodology*, *Amphitheater and Fireworks Noise Analysis*, Page 3.3-16, the methodology for amphitheater and fireworks noise analysis has been revised as follows:

~~Eight~~ Nine receiver points were identified for analysis of potential noise impacts on marine mammals known to utilize the Harbor. Receiver points were located in areas where marine mammals have a high potential for being located out of the water (i.e., known haul-out locations) and at a range of distances from the proposed firework launch location. Based on standard geometric spreading of sound, noise levels attenuate (reduce) at a rate of 6 dB per doubling of distance from the source (Amphitheater or fireworks launch location), excluding any excess sound attenuation from other effects such as ground absorption, shielding, or atmospheric effects. The receiver points used in the noise analysis for marine mammals are shown on Figure 3.3-2.

The predicted average noise level (L_{eq} dBZ) at the center of each receiver point was calculated for noise generated from both the Amphitheater and proposed firework launch locations. The modeling for Amphitheater noise examined the range of noise levels that could reasonably be expected, based on the anticipated sound-system design and the range of anticipated atmospheric/weather conditions. Under the assumption that a concert would last an hour or more, it was assumed that the same noise level would occur continuously for at least an hour. The model calculations for the fireworks show were based on the distance from the fireworks barge and the proposed maximum fireworks display duration of 20 minutes; the model did not account for any variability due to atmospheric/weather conditions. Short-term maximum noise levels (L_{max}) resulting from individual fireworks detonations would be substantially higher than the hourly average noise levels. Therefore, these L_{max} values were also estimated at each receiver point.

Because the Proposed Project-related noise sources that could affect marine mammals are concerts and fireworks shows, which produce in-air noise rather than underwater noise, analysis of noise effects on marine mammals was restricted to species that would potentially haul-out of the water and, therefore, be exposed to in-air noise. The predicted average noise level (L_{eq} dBZ) at the center of each receiver point was compared to the in-air thresholds for the onset of Level B harassment, based on behavioral disturbance, for different marine-mammal hearing groups, as determined by the National Marine Fisheries Service (NMFS) and the National Ocean Service (NMFS 2023c), to determine potential noise-related impacts on marine mammals resulting from Amphitheater and/or fireworks displays.

In Section 3.3.7, *Impact BIO-1, Impacts of the Proposed Project, Operations, Amphitheater and Fireworks*, Page 3.3-24, impact assessment text has been revised as follows:

As described in Section 2.4, *Project Description*, the Amphitheater addition to the Project Site is planned to seat up to 6,200 individuals. The proposed annual schedule for the Amphitheater would include up to 100 events between April and November, with additional, sponsored, smaller events per availability. Fireworks shows would occur at certain Amphitheater events (~~approximately~~ no more than 13~~25~~ events per year), and the shows would last a maximum of 10-minutes (with the exception of two longer shows [no longer than 20 minutes] per year)~~for up to 20 minutes per event~~. When used

at an event, the fireworks would be launched from a barge, which would be placed temporarily in the Outer Harbor, just south of the Cabrillo Marina, off the edge of the eastern pier.

In Section 3.3.7, *Impact BIO-1, Impacts of the Proposed Project, Operations, Noise, Marine Mammals*, Page 3.3-25, noise impact assessment for marine mammals text has been revised as follows:

Marine Mammals

All marine mammals are protected under the Marine Mammals Protection Act (MMPA), and some are also protected by Federal Endangered Species Act (FESA). The MMPA includes protection against potential injury (Level A harassment) and disruption of behavioral patterns (Level B harassment). Under the MMPA, marine mammals are considered *harassed* when exposed to sound levels that may lead to mortality, temporary or permanent hearing impairment (i.e., Temporary Threshold Shift or Permanent Threshold Shift), non-auditory physical or physiological effects, and behavioral disturbance. Temporary Threshold Shifts qualify as a Level B harassment, and Permanent Threshold Shifts qualify as a Level A harassment.

Table 3.2-1 provides in-air thresholds for the onset of Level B harassment, based on behavioral disturbance, for different marine-mammal hearing groups, as determined by NMFS and the National Ocean Service (NMFS 2023c). Sound associated with human activities can result in negative behavioral impacts on marine mammals, including a reduction in fitness by disrupting rest periods in haul-out and other locations, particularly at night. Protecting against Level B harassment also means protecting against Level A harassment, greatly reducing the potential for potential injury.

Table 3.2-1. In-Air Level B Harassment Acoustic Thresholds

Species/Group	Threshold[1]
Harbor Seal	90 dBZ RMS, flat
All Other Pinnipeds	100 dBZ RMS, flat

Source: NMFS 2023c.
[1] Refer to Section 3.8.3.1, *Noise Fundamentals*, for additional information.
dBZ/flat = flat frequency response without any frequency-weighting adjustments (e.g., A-weighted decibels); RMS = root-mean-square sound-pressure level.

Based on the noise analysis for marine species, Amphitheater events and firework shows could produce noise levels high enough to equal or exceed the established thresholds for Level B harassment for harbor seals and all other pinnipeds, as follows (see Table 3.2-1 and Table 3.2-2).

- ~~Depending on the weather conditions, a~~Average (i.e., L_{eq} dBZ) Amphitheater noise levels are anticipated to exceed the Level B harassment criterion ~~thresholds~~ for harbor seals (90 dBZ) at Fish Harbor, Cabrillo Marina (north), ~~and~~ Main Channel (south), and Southwest Marine Facility/Coast Guard Dock.
- Average Amphitheater noise levels are anticipated to equal the Level B harassment criterion for all other pinnipeds (100 dBZ) at Southwest Marine Facility/Coast Guard Dock.
- Worst-case, maximum noise levels from fireworks shows are anticipated to exceed the Level B harassment criterion for harbor seals (90 dBZ) at Fish Harbor, Cabrillo Marina (north), Main

Channel (south), Cabrillo Marina (south), ~~Firework Barge, Bait Barge~~Outer Harbor 1, Outer Harbor 2, and Cabrillo Beach.

- Worst-case, maximum noise levels from fireworks shows are anticipated to exceed the Level B harassment criterion for all other pinnipeds (100 dBZ) at ~~Firework Barge, Bait Barge~~ Outer Harbor 1, Outer Harbor 2, and Southwest Marine Facility/Coast Guard Dock.
- Combined hourly average-noise levels from the Amphitheater and fireworks displays are anticipated to equal or exceed the Level B harassment criterion for harbor seals (90 dBZ) at Fish Harbor, Cabrillo Marina (north), Main Channel (south), ~~Firework Barge, and Bait Barge~~ Outer Harbor 1, Outer Harbor 2, and Southwest Marine Facility/Coast Guard Dock.
- Combined hourly average-noise levels from the Amphitheater and fireworks displays are anticipated to equal the Level B harassment criterion for all other pinnipeds (100 dBZ) at Southwest Marine Facility/Coast Guard Dock.
- ~~Worst-case, maximum noise levels from Amphitheater events and firework shows are anticipated to exceed the Level B harassment criterion for harbor seals at Fish Harbor, Cabrillo Marina (north), Main Channel (south), Cabrillo Marina (south), Firework Barge, and Bait Barge.~~
- ~~Worst-case, maximum noise levels from fireworks shows are also anticipated to exceed the Level B harassment criterion for all other pinnipeds at Firework Barge and Bait Barge.~~

Table 3.2-2 provides the estimated noise levels for the receiver points from the biological noise analysis performed for the Proposed Project; receiver points were based on high-population density areas for marine species (Wood 2021). See Appendix F for detailed noise calculations.

Table 3.2-2. Estimated Noise Levels for Marine Mammal Receiver Points near the West Harbor Amphitheater Project Site and Proposed Fireworks Launch Location

Marine Mammal Receiver Point	Estimated Amphitheater Noise Levels (L_{eq} dBZ)		Estimated Fireworks Noise Levels (L_{eq})			Estimated Combined Average Noise Levels (L_{eq} dBZ)		Worst-Case Maximum Noise Level (dBZ)
	1-Hour L_{eq} with Favorable Weather	1-Hour L_{eq} with Unfavorable Weather	Distance from Fireworks Barge (feet)	1-Hour L_{eq} for a 20-Minute Display (dBZ)	L_{max} During Fireworks (dBZ)	1-hour L_{eq} with Favorable Weather and 20-Minute Fireworks Display	1-hour L_{eq} with Unfavorable Weather and 20-Minute Fireworks Display	
1. Main Channel (north)	74	79	10,000	62	82	74	79	82
2. Fish Harbor	**92**[1]	89	6,800	65	86	**92**[1]	89	**92**[1]
3. Cabrillo Marina (north)	83	**92**[1]	3,700	70	**91**[1]	83	**92**[1]	**92**[1]
4. Main Channel (south)	**95**[1]	**95**[1]	2,800	73	**94**[1]	**95**[1]	**95**[1]	**95**[1]
5. Cabrillo Marina (south)	80	89	2,700	73	**94**[1]	81	89	**94**[1]
6. ~~Firework Barge~~Outer Harbor 1	89	89	650	85	**106**[2]	**90**[1]	**90**[1]	**106**[2]
7. ~~Bait Barge~~Outer Harbor 2	89	89	550	87	**108**[2]	**91**[1]	**91**[1]	**108**[2]
8. Cabrillo Beach	77	89	3,650	70	**91**[1]	78	89	**91**[1]
9. Southwest Marine Facility/Coast Guard Dock	**100**[2]	**100**[2]	5,700	67	87	**100**[2]	**100**[2]	**100**[2]

[1] Exceeds in-air Level B harassment acoustic thresholds for harbor seal.

[2] Exceeds in-air Level B harassment acoustic thresholds for harbor seal and all other pinnipeds.

dBZ = "flat" or "unweighted" decibels; L_{eq} = equivalent continuous sound level.

Areas where noise levels would exceed the Level B harassment threshold for harbor seals and all other pinnipeds would only affect haul-out areas; no breeding habitat is within the BSA, so nursery areas would not be affected. Additionally, marine mammals in the Port experience exposure to many noise-producing activities daily (e.g., large cargo ships, oil tankers, cruise ships moving through the Harbor, industrial work and machinery, cargo and freight activities), and have been exposed to temporary noise events, like firework shows (e.g., Fourth of July, Cars and Stripes events). Noise levels produced from the Amphitheater and combined Amphitheater events and firework displays have the potential to produce short-term and temporary impacts on harbor seals (and pinnipeds other than harbor seals), such as flushing them from their haul-out and foraging locations, although they return a short time later. While noise levels would exceed the Level B harassment threshold for harbor seal (i.e., 90 dBZ) from ~~both~~ concerts at the amphitheater ~~and combined amphitheater and fireworks shows~~ at Fish Harbor, Cabrillo Marina (north), ~~and~~ Main Channel (south), and Southwest Marine Facility/Coast Guard Dock receiver points, and from fireworks shows at Cabrillo Marina (north), Main Channel (south), Cabrillo Marina (south), ~~Firework Barge, Bait Barge~~ Outer Harbor 1, Outer Harbor 2, and Cabrillo Beach receiver points, harbor seal haul-out is not expected to occur at these locations. Wood (2021) indicates that harbor seals are most commonly observed adjacent to the southern portion of Pier 400, where they have a well-used haul-out area. No harbor seals were observed at Fish Harbor, Cabrillo Marina (south), or the Main Channel. Based on official Port surveys, which have been carried out over many years, harbor seals haul-out and congregate at Pier 400 and the breakwater south of Pier 400. ~~during the evening and nighttime hours, which is when the majority of Amphitheater events, including concerts and fireworks, would occur.While harbor seals may be found throughout the San Pedro Harbor during the day when they are active and foraging, t~~There are no records of harbor seals congregating at other locations. ~~within the harbor besides Pier 400 during evening and nighttime hours.~~ As such, impacts from noise events on harbor seal are not anticipated. Because noise levels would exceed the Level B harassment threshold for all other pinnipeds (i.e., 100 dBZ) from concerts at the amphitheater at Southwest Marine Facility/Coast Guard Dock and from fireworks shows at Outer Harbor 1 and Outer Harbor 2~~the Bait Barge and Fireworks Barge,~~ impacts on pinnipeds other than harbor seal at these ~~two~~ three locations could occur.

With the implementation of **MM-NOI-3** (described in Section 3.8, *Noise*, of this SEIR), Amphitheater noise levels would be reduced to below the Level B harassment thresholds at all of the receiver points for the marine mammal species expected to occur at these locations (i.e., pinnipeds other than harbor seal) (see Table 3.3-3 in Section 3.3.8.6, *Significance after Mitigation*). However, even with the implementation of **MM-NOI-3**, fireworks show noise levels at Outer Harbor 1 and Outer Harbor 2~~the Bait Barge and Fireworks Barge~~ would remain above the Level B harassment threshold for pinnipeds other than harbor seal (i.e., 100 dBZ). Particularly, the Outer Harbor 2~~Bait Barge~~ site is noted as a location of significance where pinnipeds other than harbor seals can be found (Wood 2021). Therefore, there is the potential for behavior modification to occur for pinnipeds other than harbor seal at Outer Harbor 1 and Outer Harbor 2 ~~the Bait Barge and Fireworks Barge~~ during fireworks shows. Due to the likelihood of pinnipeds other than harbor seal being present at these locations, and the potential of up to ~~25~~ 13 firework shows per year, implementation of **MM-BIO-8**, *Marine Mammal Monitoring During Fireworks Events*, would be necessary to observe potential behavior modification of pinnipeds other than harbor seal at the Outer Harbor 1 and Outer Harbor 2 ~~Bait Barge and Fireworks Barge~~ receiver points.

In Section 3.3.7, *Impact BIO-1, Impacts of the Proposed Project, Operations, Noise, Water Birds*, Page 3.3-30, event-related noise impacts from fireworks shows text for water birds has been revised as follows:

Although the most directly relevant studies indicate that fireworks shows have little or no effect on nesting terns, due to the potential of up to ~~25~~ 13 fireworks shows per year, and the likely overlap with the nesting season, **MM-BIO-9**, *California Least Tern Nesting Colony Monitoring During Fireworks Events,* will be implemented to ensure that event-related noise impacts from fireworks shows are less than significant.

In Section 3.3.7, *Impact BIO-1, Impacts of the Proposed Project, Operations, Trash and Debris*, Page 3.3-31, fireworks-related trash text has been revised as follows:

Debris generated from both the Amphitheater events and/or fireworks shows could cause injury or death to sensitive species because the waste could cause entanglement or be mistakenly consumed, causing suffocation, starvation, or debilitation. Trash and debris could also be introduced to nearby haul-out locations, beaches, and riprap within the Port, as well as open-water areas, which could deter sensitive species from using these important habitat areas. Negative impacts could also occur via contamination of the marine environment if material used to support concert events (e.g., mylar or metallic confetti) were not biodegradable and wound up in the Harbor. However, these impacts are not substantially different from what was previously analyzed in the 2009 SPW EIS/EIR. In addition, where possible, sustainable products and practices, such as biodegradable confetti, would be used during events, and care would be taken to direct the spray away from the Main Channel. This material, along with other trash, would be cleaned up after each event as a part of Proposed Project operation to prevent debris from entering the storm drain system and ocean (see Section 2.4.1). **PF-BIO-1**, *Compliance with Local Regulations*, will be implemented so that the tenant will ensure agreements with Event Organizers contain provisions regarding compliance with applicable local regulations regarding event-generated waste. Event organizers will comply with all applicable City of Los Angeles Ordinances pertaining to waste reduction, single-use plastic and expanded polystyrene (EPS) foam (or Styrofoam) bans and the reduction of disposable foodware and accessories. Furthermore, implementation of **MM-BIO-7**, *Trash Management and Post-event Cleanup,* and **MM-BIO-10**, *Biodegradable Venue Products,* would ensure that trash and other debris resulting from Amphitheater events and/or fireworks shows would be removed from nearby marine environments that could support sensitive marine species and that biodegradable products would be used to reduce impacts on nearby marine environments. In addition, event organizers would comply with City of Los Angeles Ordinance No. 187030, *Disposable Foodware Accessories and Plastic Drinking Straws* and the City's Comprehensive Plastics Reduction Program and Zero Waste Plan, with the incorporation of Ordinance 187718, *Zero Waste at City Facilities and Events on City Property*, once adopted. Ordinance 187718 contains extensive provisions, including, but not limited to, the ban of single-use plastics and EPS foam (or Styrofoam™) and the reduction of disposable foodware and accessories. The fireworks discharger would be required to comply with the requirements specified in NPDES General Permit No. CAG994007 (Los Angeles RWQCB, Order No. R4-2023-0180, adopted May 25, 2023), which specifies standard operating procedures for all fireworks shows, including a BMP Plan that will include cleanup practices following fireworks shows. A Notice of Intent and BMP Plan would be prepared to obtain coverage under NPDES General Permit No. CAG994007 specifically for the proposed fireworks shows included in this Proposed Project, to be approved by the Water Board

through the issuance of a Notice of Applicability. The BMP Plan would be compliant with all of the applicable requirements listed in General Permit No. CAG994007 for all three described elements to avoid and/or mitigate potential impacts to receiving water quality (i.e., pollution prevention, pollutant identification, and pollution control), as well as all recording, reporting, and enforcement requirements. With implementation of these mitigation measures and adherence to local and state trash ordinances and NPDES General Permit No. CAG994007 for fireworks displays, the new potential impact from Amphitheater events and fireworks shows would be less than significant.

In Section 3.3.7, *Impact BIO-1, Impacts of the Proposed Project, Operations, Night Lighting*, Page 3.3-31, night lighting impact assessment text has been revised as follows:

Night Lighting

~~Direct impacts on sensitive species resulting from Amphitheater events and fireworks shows could occur as a result of night lighting. Artificial night lighting can affect migrating birds by causing confusion and disorientation and trapping individuals in lit areas, which can, in turn, lead to exhaustion and depletion of energy reserves. Disorientation can also cause them to collide with glass buildings or windows (USFWS 2021; Audubon 2020). Although the Amphitheater venue would contain lights, it would not represent a substantial change from current ambient Port conditions. The lighting proposed would blend in with the night lighting of Port operations and would not adversely affect light-sensitive areas. Lighting associated with the Proposed Project would be designed in accordance with the *L. A. Waterfront Design Guidelines*, which include lighting recommendations to minimize light pollution, light spill, and glare, and would adhere to local and national lighting standards and guidelines (see Section 3.1.9 for details). Furthermore, species that utilize the area are already adapted to the heavily human-disturbed environment. With adherence to these national and local lighting standards and guidelines, the new potential impact from lighting would be less than significant. This impact was not assessed in the 2009 SPW EIS/EIR.~~

Impacts from project-related night lighting on special-status species, including California least tern and marine mammals, are not anticipated. Although the amphitheater has been designed to face outward towards the water so that concert sound would be directed away from nearby residential areas, the lighting has been designed to be contained within the amphitheater, and lighting reduction measures would be implemented and incorporated into the Proposed Project design to limit light spilling outside of the venue, including into the adjacent waterways (see Section 3.1.9 for details). These lighting features would include shielding, glare reduction, and fixtures that are mounted lower on the poles to direct lighting to desired areas. In addition, lighting associated with the Proposed Project would be designed in consideration of the L.A. Waterfront Design Guidelines, which include lighting recommendations to minimize light pollution, spill light, and glare. The Proposed Project would also adhere to appropriate Illuminating Engineering Society of North America (IESNA) standards, the City of Los Angeles Bureau of Street Lighting, the International Dark Sky Association (IDA), and the City of Los Angeles Planning and Zoning Code. Incorporation of these guidelines and standards would reduce lighting impacts on adjacent waterways and any wildlife that may occur there, including California least tern and marine mammals.

The photometric analysis, which included lighting for the entire venue (e.g., seating area, stage, LED video screens, concessions, restrooms) determined that impacts from Proposed Project-related lighting would be minimal outside of the immediate amphitheater area (as detailed in Appendix B of

the Draft SEIR). Based on the calculations, although illumination levels are high within the amphitheater (maxing out at around 52 foot-candles closest to the stage), there would be a significant decrease in illumination levels at the waterways adjacent to the amphitheater site, where levels dramatically drop off to approximately 5 along the promenade and taper to less than 1 within the dock bordering the amphitheater. By the time light reaches approximately 100 feet into the ~~water~~channel, which is well outside of the areas where California least tern and marine mammal haul-out areas occur, foot-candles are measured to be less than 1.0, with a majority of the measurements being less than 0.5.

Because lighting levels would drop off dramatically directly outside of the Proposed Project site, impacts on special-status wildlife species that occur well outside of this area, including nesting California least tern and marine mammal haul-out areas, are not anticipated. The Proposed Project site is located approximately 1.7 miles northwest of the California least tern colony, and lighting levels drop off to less than 1 foot-candle within 100 feet of the site. Furthermore, the line of sight between the tern colony and amphitheater is blocked by multiple landmasses (e.g., Reservation Point, APM Terminals), which contain multi-storied buildings that would obstruct the view of the amphitheater from the tern colony. Similarly, the marine mammal haul-out locations are located from approximately 0.6 to 1.5 miles from the proposed amphitheater, and all but two of these locations have obscured views of the site due to landmasses and building structures. Only two of the haul-out locations (Southwest Marine Facility/Coast Guard Dock and Main Channel [South]) have a direct line of site to the amphitheater, but they are approximately 0.3 mile and 0.7 mile away, respectively, on the opposite side of the channel and, as discussed above, Proposed Project-related lighting levels would drop off dramatically and would not reach farther than 100 feet into the waterway.

Lighting effects would be grounded within the amphitheater property for safety to shipping and Port operations; they would be aimed to terminate within the venue and never aimed outside of the venue. As with other types of lighting, should any of the concerts require the use of strobe lighting or other flashing lights that could be disruptive; they would be strictly controlled and prohibited from shining into the water, as flashing lights in the main channel are a navigation hazard to ships (as discussed Section 3.1 of the SEIR and response CSPNC-8). As such, there would be no impacts on any special-status wildlife species, including California least tern and marine mammals, from these types of lighting.

Based on the implementation of lighting reduction measures, the lighting design for the Proposed Project, the locations of special-status wildlife species in relation to the amphitheater, and the results of the photometric analysis, lighting impacts on special-status wildlife species, including California least tern and marine mammals, would be less than significant.

Direct impacts on non-special-status wildlife species resulting from Amphitheater events and fireworks shows could occur as a result of night lighting. Artificial night lighting can affect migrating birds by causing confusion and disorientation and trapping individuals in lit areas, which can, in turn, lead to exhaustion and depletion of energy reserves. Disorientation can also cause them to collide with glass buildings or windows (USFWS 2021; Audubon 2020). Although the Amphitheater venue would contain lights, it would not represent a substantial change from current ambient Port conditions. As described above, the lighting has been designed to be contained within the amphitheater, and lighting reduction measures would be implemented and incorporated into the Proposed Project design to limit light spilling outside of the venue. Furthermore, species that utilize

the area are already adapted to the heavily human-disturbed environment. With adherence to these national and local lighting standards and guidelines, the potential impact from lighting on non-special-status wildlife species would be less than significant.

In Section 3.3.7, *Impact BIO-1, Impacts of the Proposed Project, Operations, Ferris Wheel and Amusement Attractions*, Page 3.3-32, Ferris wheel and amusement attractions text has been revised as follows:

Both the Ferris wheel and Amusement Attractions would include some lighting on the structures. Artificial night lighting can cause disturbance, alteration of behavior, or disorientation in avian species, as described in the ~~*Water Birds*~~*Night Lighting* subsection above. However, as discussed above and in Section 3.1.9, lighting from the Proposed Project would not represent a substantial change from current ambient Port conditions, and lighting for Proposed Project features would adhere to national and local lighting standards and guidelines. Furthermore, species that utilize the area are already adapted to the heavily developed environment. Therefore, impacts from lighting would be less than significant.

As a result of comments expressing concern with the consumption of single-use plastics and Styrofoam at the Proposed Project site, Project Feature (PF)-BIO-1 was added to enforce compliance with local regulations.

In Section 3.3.7, *Impact BIO-1, New Mitigation Measures Applicable to the Proposed Project*, Page 3.3-34, PF-BIO-1 has been added as follows:

PF-BIO-1: Compliance with Local Regulations

Tenant will ensure agreements with Event Organizers contain provisions regarding compliance with applicable local regulations regarding event-generated waste. Event organizers will comply with all applicable City of Los Angeles Ordinances pertaining to waste reduction, single-use plastic and expanded polystyrene (EPS) foam (or Styrofoam) bans and the reduction of disposable foodware and accessories.

This measure will be incorporated into the Tenant's lease. Enforcement will include oversight by the LAHD Environmental Management and Real Estate Divisions. Annual staff reports will be made available to the Board at a regularly scheduled public board meeting. The Tenant will comply with the measure through contracts and/or agreements with all vendors operating in conjunction with the Amphitheater.

In Section 3.3.7, *Impact BIO-1, New Mitigation Measures Applicable to the Proposed Project*, Page 3.3-34, MM-BIO-8 and MM-BIO-9 have been revised as follows:

MM-BIO-8. Marine Mammal Monitoring During Fireworks Events

A qualified biologist will monitor marine mammals at ~~the Bait Barge and the Fireworks Barge~~Outer Harbor 1 and Outer Harbor 2 (see Figure 3.3-2) at Tenant expense during fireworks shows at least once per month for the first year of operation to determine whether event noises are negatively affecting marine mammals in the area. All monitoring will be conducted in accordance with a Marine Mammal Monitoring Plan that will be prepared by a qualified biologist and approved by LAHD in coordination with NMFS. A *qualified biologist* is a person who, by reason

of their knowledge of the natural sciences and the principles of marine biology, acquired by marine biology education and experience, performs services including, but not limited to, consultation investigation, surveying, evaluation, planning, or responsible supervision of marine biology activities when those professional services require the application of biological principles and techniques.

Any observed disturbances will be reported to LAHD and NMFS within 24 hours. Within 30 days following the completion of each monitoring event, the qualified biologist will prepare a report for submittal to West Harbor, LAHD and NMFS that details the findings of the monitoring results. This report will include an introduction/background, methods, results, discussion, and recommendations. Recommendations may include BMPs, additional monitoring, continuance of monitoring if impacts are observed, or other measures to ensure that no incidental harassment or other significant impact occurs at the monitoring sites, up to and including cessation of fireworks shows. If discernable negative changes in marine mammal behavior are observed, then consultation with NMFS will be initiated to develop measures to avoid negative impacts.

MM-BIO-9. California Least Tern Nesting Colony Monitoring During Fireworks Events

LAHD least tern monitors will monitor the California least tern nesting colony at Pier 400 at Tenant expense during Amphitheater fireworks shows, when terns are present during the California least tern nesting season (i.e., March 15–August 31), to ensure that event noise does not negatively affect nesting birds. Monitoring will be performed by a qualified biologist.

Any ~~nesting~~ disturbances that result from the ~~Amphitheater fireworks~~monitored activities will be reported within 24 hours to LAHD, USFWS, and CDFW. Following the first ~~two nesting~~ seasons of monitoring, results will be assessed and shared with USFWS and CDFW, who will determine whether further monitoring would be necessary. Within 30 days of each monitoring event, the qualified biologist will prepare a report for submittal to West Harbor, LAHD, USFWS, and CDFW that details the findings of the monitoring results. All monitoring will be conducted in accordance with a California Least Tern Nesting Colony Monitoring Plan that will be prepared by the LAHD in coordination with USFWS and will be approved by the Port's Environmental Management Division and biology team. This report will include an introduction/background, methods (including monitoring timeframe), life stage of California least tern present, observations of any stressors and negative bird behavior, and any recommendations. Recommendations may include BMPs, additional monitoring, continuance of monitoring if impacts are observed, or other measures to ensure that no significant impact occurs at the nesting site, up to and including cessation of firework shows. If discernable negative changes in bird behavior are observed, then consultation with USFWS and CDFW will be initiated to develop measures to avoid negative impacts on California least terns.

In Section 3.3.7, *Impact BIO-1, New Mitigation Measures Applicable to the Proposed Project*, Page 3.3-35, MM-BIO-11 has been revised as follows:

MM-BIO-11. Abandoned Nest Clearance Must Avoid Breeding Bird Season.

To avoid impacts on nesting birds protected under the MBTA and/or similar provisions of the CFG Code, clearance of abandoned bird nests on the Ferris wheel, Amusement Attractions, or other Proposed Project structures (e.g., Amphitheater) must occur outside of the breeding-bird

season (February 15–September 1), unless a qualified biologist determines that the nest has been abandoned~~cleared by a qualified biologist~~.

In Section 3.3.7, *Impact BIO-1, Significance After Mitigation*, Page 3.3-35, significance after mitigation text has been revised as follows:

For other issues that were not assessed in the 2009 SPW EIS/EIR, including impacts from Amphitheater events, fireworks shows, the Ferris wheel and Amusement Attractions, as discussed above, implementation of **MM-BIO-2**, *Conduct Nesting Bird Surveys*, **MM-BIO-7**, *Trash Management and Post-event Cleanup*, **MM-BIO-10**, *Biodegradable Venue Products*, and **MM-BIO-11**, *Abandoned Nest Clearance Must Avoid Breeding Bird Season*, as well as compliance with the requirements specified in NPDES General Permit No. CAG994007, would fully reduce impacts on sensitive terrestrial and marine species as a result of debris and trash from Amphitheater events, fireworks shows, and the Amusement Attractions to less-than-significant levels. Lighting from Proposed Project features would not represent a substantial change from current ambient Port conditions and, therefore, any impacts from night lighting would be less than significant. Noise impacts from fireworks events would be above the Level B harassment thresholds for pinnipeds other than harbor seal at ~~the Bait Barge and Fireworks Barge~~Outer Harbor 1 and Outer Harbor 2. Noise impacts would be reduced, but not eliminated, by **MM-NOI-3** which would reduce noise levels from the Amphitheater (see Section 3.8.8.6, *New Mitigation Measures Applicable to the Proposed Project*, for details); predicted noise levels after implementation of **MM-NOI-3** are summarized in Table 3.2-3, below. Noise impacts on pinnipeds other than harbor seal would be reduced to less-than-significant levels with the implementation of **MM-BIO-8,** *Marine Mammal Monitoring During Fireworks Events*. Noise impacts on nesting California least tern would be reduced to less-than-significant levels with the implementation of **MM-BIO-9**, *California Least Tern Nesting Colony Monitoring During Fireworks Events.*

In Section 3.3.7, *Impact BIO-1, Significance After Mitigation*, Page 3.3-37, Table 3.3-3 has been revised as follows:

Table 3.2-3. Estimated Noise Levels for Marine Mammal Receiver Points near the West Harbor Amphitheater Project Site and Proposed Fireworks Launch Location, after Implementation of MM-NOI-3

Marine Mammal Receiver Point	Estimated Amphitheater Noise Levels (L_{eq} dBZ)		Estimated Fireworks Noise Levels (dBZ)			Estimated Combined Average Noise Levels (L_{eq} dBZ)		Worst-Case Maximum Noise Level, dBZ
	1-Hour L_{eq} with Favorable Weather	1-Hour L_{eq} with Unfavorable Weather	Distance from Fireworks Barge (feet)	1-Hour L_{eq} for 20-Minute Display (dBZ)	L_{max} During Fireworks (dBZ)	1-hour L_{eq} with Favorable Weather and 20-Minute Fireworks Display	1-hour L_{eq} with Unfavorable Weather and 20-Minute Fireworks Display	
1.Main Channel (north)	64	69	10,000	62	82	66	70	82
2.Fish Harbor	82	79	6,800	65	86	82	79	86
3.Cabrillo Marina (north)	73	82	3,700	70	**91**[1]	75	82	**91**[1]
4.Main Channel (south)	85	85	2,800	73	**94**[1]	85	85	**94**[1]
5.Cabrillo Marina (south)	70	79	2,700	73	**94**[1]	75	80	**94**[1]
6.~~Firework Barge~~Outer Harbor 1	79	79	650	85	**106**[2]	86	86	**106**[2]
7.~~Bait Barge~~Outer Harbor 2	79	79	550	87	**108**[2]	88	88	**108**[2]
8.Cabrillo Beach	67	79	3,650	70	**91**[1]	72	80	**91**[1]
9. Southwest Marine Facility/Coast Guard Dock	**90**[1]	**90**[1]	5,700	67	87	**90**[1]	**90**[1]	**90**[1]

[1] Exceeds in-air Level B harassment acoustic thresholds for harbor seal.

[2] Exceeds in-air Level B harassment acoustic thresholds for harbor seal and all other pinnipeds.

dBZ = "flat" or "unweighted" decibels; L_{eq} = equivalent continuous sound level; L_{max} = short-term maximum noise level.

In Section 3.3.7, *Impact BIO-2, Impacts of the Proposed Project, Operations, Amphitheater and Fireworks*, Page 3.3-41, firework-related trash text has been revised as follows:

As a part of Proposed Project operation, trash would be cleaned up from the West Harbor area after each event to prevent debris from entering the storm drain system and ocean. The ~~TMDL Guidelines~~MS4 Permit and the *Statewide Water Quality Control Plan for Trash* also require measures to limit load allocations associated with trash. Storm drains within the Project Site would comply with these requirements and implement full trash-capture systems. The fireworks discharger would be required to comply with the requirements specified in NPDES General Permit No. CAG994007 (Los Angeles RWQCB, Order No. R4-2023-0180, adopted May 25, 2023), which specifies SOPs for all fireworks shows, including a BMP Plan that will include cleanup practices following fireworks shows. A Notice of Intent and BMP Plan would be prepared to obtain coverage under NPDES General Permit No. CAG994007 specifically for the proposed fireworks shows included in this Proposed Project, to be approved by the Water Board through the issuance of a Notice of Applicability. The BMP Plan would be compliant with all of the applicable requirements listed in General Permit No. CAG994007 for all three described elements to avoid and/or mitigate potential impacts to receiving water quality (i.e., pollution prevention, pollutant identification, and pollution control), as well as all recording, reporting, and enforcement requirements. Where possible, sustainable products and practices, such as biodegradable confetti, would be used during events, and care would be taken to direct the spray away from the Main Channel (see Section 2.4.1). Furthermore, implementation of **PF-BIO-1**: *Compliance with Local Regulations,* **MM-BIO-7**, *Trash Management and Post-Event Cleanup,* and **MM-BIO-10**, *Biodegradable Venue Products,* would ensure that trash and other debris resulting from Amphitheater events and fireworks shows would be removed from the Harbor and that biodegradable products would be used to reduce impacts on nearby marine environments. With the implementation of these measures and compliance with state and local trash ordinances and NPDES General Permit No. CAG994007 for fireworks displays, impacts on sensitive natural communities would be reduced to less than significant. This impact was not assessed in the 2009 SPW EIS/EIR.

In Section 3.3.10, *Mitigation Monitoring Program*, Page 3.3-44, Table 3.3-5 has been revised as follows:

Table 3.2-4. Mitigation Monitoring Program

PF-BIO-1: *Compliance with Local Regulations*: Tenant will ensure agreements with Event Organizers contain provisions regarding compliance with applicable local regulations regarding event-generated waste. Event organizers will comply with all applicable City of Los Angeles Ordinances pertaining to waste reduction, single-use plastic and expanded polystyrene (EPS) foam (or Styrofoam) bans and the reduction of disposable foodware and accessories.	
Timing	~~Prior to and immediately following events,~~Once event-related operations begin, all clean-up must be completed as soon as practicable, and no later than 4 hours following the event.
Methodology	This measure will be incorporated into the Tenant's lease. Enforcement will include oversight by the LAHD Environmental Management and Real Estate Divisions. Annual staff reports will be made available to the Board at a regularly scheduled public board meeting. The Tenant will comply with the

	measure through contracts and/or agreements with all vendors operating in conjunction with the Amphitheater.
MM-BIO-2, *Conduct Nesting Bird Surveys*: This measure applies if construction is to occur between February 15 and September 1. Prior to ground-disturbing activities, a qualified biologist will conduct surveys for the presence of black crowned night herons, blue herons, and other nesting birds within Berth 78–Ports O' Call or other appropriate and known locations within the BSA that contain potential nesting-bird habitat. Surveys will be conducted 24 hours prior to ground disturbance and/or the clearing, removal, or grubbing of any vegetation. If active nests of species protected under the MBTA and/or similar provisions of the CFG Code (i.e., native birds including, but not limited to, black-crowned night heron) are located, then a barrier installed at a 50–100 foot radius from the nest(s) will be established, and the tree/location containing the nest will be marked and will remain in place and undisturbed until a qualified biologist performs a survey to determine that the young have fledged or the nest is no longer active.	
Timing	24 hours prior to ground disturbance or the clearing, removal, or grubbing of any vegetation, if construction is to occur between February 15 and September 1.
Methodology	The constructor contractor will retain a qualified biologist to conduct preconstruction nesting-bird surveys.
MM-BIO-7, *Trash Management and Post-Event Cleanup*: To prevent trash and debris produced by Amphitheater events from entering nearby waters and causing harm to sensitive marine environments and species, a Standard Operating Procedure (SOP) will be developed for trash management and post-event cleanup. The SOP will be reviewed by LAHD prior to implementation. At a minimum, the SOP must include the following. • Trash receptacles must be covered containers to deter animals (e.g., gulls) from easily accessing litter and prevent wind-blown trash from entering the Harbor. The number and placement of receptacles must be adequate to accommodate the event. • Following any events at the Project Site, trash will be removed from all venue locations including at the Amphitheater, parking lots, parks, surrounding walkways, and open areas as soon as practicable, and no later than 4 hours following the event. Trash and debris will be properly disposed of in accordance with all applicable regulations. • For events, the event organizer will be responsible for cleaning the 208 E. 22nd Street Parking Lot. For non-concert events and general use, the Port and/or event Tenants will be responsible for cleaning the 208 E. 22nd Street Parking Lot. When used for Amphitheater concerts, the 208 E. 22nd Street Parking Lot will be subject to the requirement that all trash will be removed as soon as practicable, and no later than 4 hours following the event, as described in the above bullet point.	
Timing	Prior to and immediately following events, all clean-up must be completed as soon as practicable, and no later than 4 hours following the event.
Methodology	Per SOP for post-event cleanup.
MM-BIO-8, *Marine Mammal Monitoring During Fireworks Events*: A qualified biologist will monitor marine mammals at ~~the Bait Barge~~Outer Harbor 1 and ~~the Fireworks Barge~~Outer Harbor 2 at Tenant expense during fireworks shows at least once per month for the first year of operation to determine whether event noises are negatively affecting marine mammals in the area. All monitoring will be conducted in accordance with a Marine Mammal Monitoring Plan that will be prepared by a qualified biologist and approved by LAHD in coordination with NMFS. A *qual.fied biologist* is a person who, by reason of their knowledge of the natural sciences and the principles of marine biology, acquired by marine biology education and experience, performs services including, but not limited to, consultation investigation, surveying, evaluation, planning, or responsible supervision of marine biology activities when those professional services require the application of biological principles and techniques.	

Any observed disturbances will be reported to LAHD and NMFS within 24 hours. Within 30 days following the completion of each monitoring event, the qualified biologist will prepare a report for submittal to West Harbor, LAHD, and NMFS that details the findings of the monitoring results. This report will include an introduction/background, methods, results, discussion, and recommendations. Recommendations may include BMPs, additional monitoring, continuance of monitoring if impacts are observed, or other measures to ensure that no incidental harassment or other significant impact occurs at the monitoring sites, up to and including cessation of fireworks shows. If discernable negative changes in marine mammal behavior are observed, then consultation with NMFS will be initiated to develop measures to avoid negative impacts.	
Timing	At the time of fireworks show, at least once per month.
Methodology	Monitoring of marine mammals at ~~the Bait Barge~~Outer Harbor 1 and ~~Fireworks Barge~~Outer Harbor 2 by a qualified biologist per the Marine Mammal Monitoring Plan. Document any discernible negative changes in marine mammal behavior. Report findings within 30 days of the monitoring. Suggest future program modifications if significant impacts are observed.
MM-BIO-9, *California Least Tern Nesting Colony Monitoring During Fireworks Events*: LAHD least tern monitors will monitor the California least tern nesting colony at Pier 400 at Tenant expense during fireworks shows, when terns are present during the California least tern nesting season (i.e., March 15–August 31), to ensure that event noise does not negatively affect nesting birds. Monitoring will be performed by a qualified biologist. Any ~~nesting~~ disturbances that result from the ~~Amphitheater fireworks~~monitored activities will be reported within 24 hours to LAHD, USFWS, and CDFW. Following the first ~~two nesting seasons~~season of monitoring, results will be assessed and shared with USFWS and CDFW, who will determine whether further monitoring would be necessary. Within 30 days of each monitoring event, the qualified biologist will prepare a report for submittal to West Harbor, LAHD, USFWS, and CDFW that details the findings of the monitoring results. All monitoring will be conducted in accordance with a California Least Tern Nesting Colony Monitoring Plan that will be prepared by the LAHD in coordination with USFWS and will be approved by the Port's Environmental Management Division and biology team. This report will include an introduction/background, methods (including monitoring timeframe), life stage of California least tern present, observations of any stressors and negative bird behavior, and any recommendations. Recommendations may include BMPs, additional monitoring, continuance of monitoring if impacts are observed, or other measures to ensure that no significant impact occurs at the nesting site, up to and including cessation of firework shows. If discernable negative changes in bird behavior are observed, then consultation with USFWS and CDFW will be initiated to develop measures to avoid negative impacts on California least terns.	
Timing	At the time of Amphitheater fireworks shows, during the California least tern nesting season (i.e., March 15–August 31, as applicable).
Methodology	Monitoring of the California least tern nesting colony at Pier 400 by an LAHD least tern monitor during Amphitheater fireworks shows. Future program modifications will be suggested if significant impacts are observed.
MM-BIO-10, *Biodegradable Venue Products*: Wherever reusable, compostable, and/or recyclable products are infeasible or not required by regulations, event organizers will invest in biodegradable products (e.g., confetti, decorations, packaging, single-use items) for all Amphitheater events to prevent injury and damage to surrounding sensitive marine environments and protect species from harmful materials (e.g., plastics, mylar, metals). Event organizers are encouraged to utilize reusable food ware, drinkware, napkins, and accessories for dine-in services, to the extent feasible. Event organizers are	

encouraged to procure paper products (i.e., napkins and event literature) that are unbleached and contain a minimum of 30-percent post-consumer recycled content.	
Timing	Prior to and during events.
Methodology	Invest in biodegradable products per guidance in **MM-BIO-10.**
MM-BIO-11, *Abandoned Nest Clearance Must Avoid Breeding Bird Season*: To avoid impacts on nesting birds protected under the MBTA and/or similar provisions of the CFG Code, clearance of abandoned bird nests on the Ferris wheel, Amusement Attractions, or other Proposed Project structures (e.g., Amphitheater) must occur outside of the breeding-bird season (February 15–September 1), unless a qualified biologist determines that the nest has been abandoned~~cleared by a qualified biologist~~.	
Timing	Any nest clearance must occur outside of the breeding-bird season (February 15–September 1).
Methodology	General nest-clearance procedures will be developed that are compliant with protections under the MBTA and similar provisions of the CFG Code. This can include removal, such as scraping or pressure-washing, and disposal of unoccupied or partially constructed nests that do not contain eggs or nestlings.

BMP = best management practice; BSA = biological study area; CFG Code = California Fish and Game Code; CDFW = California Department of Fish and Wildlife; LAHD = Los Angeles Harbor District; MBTA = Migratory Bird Treaty Act; MM = mitigation measure; NMFS = National Marine Fisheries Service; SOP = Standard Operating Procedure; SPW = San Pedro Waterfront; USFWS = U.S. Fish and Wildlife Service.

3.2.5 Changes Made to Section 3.8, Noise

In Section 3.8.6.3, *Traffic Noise*, Page 3.8-17, text has been revised as follows:

3.8.6.3 Traffic Noise

Traffic noise was analyzed previously in the 2009 SPW EIS/EIR. That analysis considered traffic noise generated by the entire SPW Project site which was substantially larger than the Project Site. As a result, the 2009 SPW EIS/EIR considered a large roadway network of more than 120 roadway segments on approximately 24 roadways. The transportation analysis for the Proposed Project was ~~much more~~ focused on the routes to and from the Proposed Project site. Based on the trip generation analysis for the Proposed Project, ~~determining the vast majority~~ 95 percent of project-generated traffic would access the Proposed Project Site via Harbor Boulevard (from Interstate 110 or ~~,~~ ~~traveling south directly to the Project Site~~ from State Route 47) and 5 percent would access the Project Site via 22nd Street (including 4 percent via Gaffey Street). Therefore, the traffic noise analysis used ~~isth~~these trip assignments of 95 percent, 5 percent, and 4 percent, to ~~also focused~~ analyze potential traffic impacts on Harbor Boulevard, 22nd Street, and Gaffey Street, respectively ~~and conservatively assumed that 100 percent of the Proposed Project trips would use Harbor Boulevard~~. To evaluate potential impact changes relative to the 2009 SPW EIS/EIR, it was necessary to quantify how predicted average daily traffic (ADT) volumes have changed since the 2009 SPW EIS/EIR and compare the updated traffic volumes to the baseline established in the 2009 SPW EIS/EIR. Therefore, baseline existing traffic volumes and traffic-noise levels were obtained from the 2009 SPW EIS/EIR, as well as predicted traffic volumes for the overall SPW Project. ~~Adjustments to those project traffic volumes were made based on data in the 2016 SPPM Addendum.~~ Then the net increase in traffic noise as a result of the Proposed Project was calculated based on the predicted new vehicle trips for the proposed Amphitheater (refer to the transportation analysis in Section 3.9, *Transportation*).

In Section 3.8.8.6, *Amphitheater Noise,* on Page 3.8-19, text has been revised as follows:

a. **Wind Direction**: 85~~0~~ degrees (from east–northeast) – toward residences; and

In Section 3.8.8, *Impacts of the Proposed Project, Impact NOI-1, Traffic Noise*, starting on Page 3.8-24, Table 3.8-6, Table 3.8-7, and text have been revised as follows:

Table 3.2-5. ~~Harbor Boulevard~~ Traffic Noise Data from 2009 SPW EIS/EIR for Harbor Boulevard, 22nd Street, and Gaffey Street

Street / Segment~~Harbor Blvd Segment~~	Existing 2007 ADT	Existing 2007 Traffic CNEL at 50 feet, dB	Project ADT for 2007 SPW Project	Existing 2007 + SPW Project ~~2007~~ ADT	Existing 2007 + SPW Project ~~2007~~ Traffic CNEL at 50 feet, dB	dB Increase due to SPW ~~Proposed~~ Project
Harbor Boulevard						
Swinford Street to Beacon Street	28,625	70.9	13,000	41,625	72.5	1.6
Beacon Street to O'Farrell Street	31,700	71.4	15,538	47,238	73.1	1.7
O'Farrell Street to Santa Cruz Street	30,550	71.3	15,588	46,138	73.1	1.8
Santa Cruz Street to 1st Street	27,013	70.8	15,625	42,638	72.8	2.0
1st Street to 2nd Street	25,663	70.5	15,513	41,176	72.6	2.1
2nd Street to 3rd Street	24,400	70.3	15,525	39,925	72.4	2.1
3rd Street to 5th Street	23,801	70.2	15,725	39,526	72.4	2.2
5th Street to 6th Street	20,763	69.6	15,938	36,701	72.1	2.5
6th Street to 7th Street	18,775	69.2	17,100	35,875	72.0	2.8
22nd Street						
Signal Place to Miner Street	2,000	57.3	1,950	3,950	60.3	3.0
Miner Street to Via Cabrillo Marina	8,626	63.4	1,831	10,457	64.2	0.8
Via Cabrillo Marina to Mesa Street	8,263	63.2	1,863	10,126	64.1	0.9
Mesa Street to Pacific Avenue	9,038	63.4	1,750	10,788	64.2	0.8
Pacific Avenue to Grand Avenue	5,538	61.5	1,600	7,138	62.6	1.1

Street / Segment~~Harbor Blvd Segment~~	Existing 2007 ADT	Existing 2007 Traffic CNEL at 50 feet, dB	Project ADT for 2007 SPW Project	Existing 2007 + SPW Project ~~2007~~ ADT	Existing 2007 + SPW Project ~~2007~~ Traffic CNEL at 50 feet, dB	dB Increase due to SPW ~~Proposed~~ Project
Grand Avenue to Gaffey Street	6,425	62.0	1,500	7,925	62.9	0.9
Gaffey Street						
Miraflores Avenue to Summerland Avenue	21,600	69.8	187	21,787	69.8	0.0
Summerland Avenue to 110 Freeway	17,588	69.4	193	17,781	69.4	0.0
110 Freeway to Sepulveda Street	67,150	74.5	3,125	70,275	74.7	0.2
Sepulveda Street to 1st Street	62,988	74.3	3,112	66,100	74.5	0.2
1st Street to 3rd Street	43,613	72.8	1,038	44,651	72.9	0.1
3rd Street to 5th Street	41,925	72.6	1,037	42,962	72.7	0.1
5th Street to 6th Street	37,638	72.2	1,012	38,650	72.3	0.1
6th Street to 7th Street	36,588	72	1,006	37,594	72.1	0.1
7th Street to 8th Street	32,438	71.6	1,062	33,500	71.7	0.1
8th Street to 9th Street	31,813	71.5	1,063	32,876	71.6	0.1
9th Street to 11th Street	29,138	71	1,063	30,201	71.2	0.2
11th Street to 13th Street	29,388	71.2	1,050	30,438	71.4	0.2
13th Street to 15th Street	25,700	70.5	1,050	26,750	70.7	0.2
15th Street to 17th Street	22,050	69.8	1,037	23,087	70	0.2
17th Street to 18th Street	19,000	69.3	1,025	20,025	69.5	0.2
18th Street to 19th Street	18,513	69.1	1,037	19,550	69.3	0.2
19th Street to 20th Street	15,038	68.3	1,113	16,151	68.6	0.3

Street / Segment~~Harbor Blvd Segment~~	Existing 2007 ADT	Existing 2007 Traffic CNEL at 50 feet, dB	Project ADT for 2007 SPW Project	Existing 2007 + SPW Project ~~2007~~ Traffic CNEL at 50 feet, dB	dB Increase due to SPW ~~Proposed~~ Project
20th Street to 22nd Street	14,675	68.1	1,100	15,775	68.4	0.3

Source: LAHD 2009.
ADT = average daily traffic; CNEL = Community Noise Equivalent Level; dB = decibel; EIR = environmental impact report; EIS = environmental impact statement; SPW = San Pedro Waterfront.

The 2016 SPPM Addendum addressed various changes to the SPW Project for the Ports O'Call site and identified a reduction in predicted visitor trips to and from the SPPM Project, from 8,632 trips to 5,798 trips on weekdays (a reduction of 2,837 daily weekday trips), and 8,517 trips to 6,285 trips on weekends (a reduction of 2,232 daily weekend trips). Because the distribution of these reductions on the local roadway network (including Harbor Boulevard, 22nd Street, and Gaffey Street) is unknown, they are conservatively ignored ~~The most conservative (i.e., smallest) reduction of 2,232 daily trips is used~~ in the analysis.

Total project trip generation for the Proposed Project is predicted to be 4,862 trips per day.

Table 3.2-6 summarizes these traffic changes and compares them to the original 2007 baseline to calculate updated traffic noise levels and noise increases. The "total project" values in the table refer to the combined traffic of the original SPW Project plus the Proposed Project.

Table 3.2-6. ~~Harbor Boulevard~~ Traffic Noise Data, Proposed Project Modification Versus 2007 Baseline for Harbor Boulevard, 22nd Street, and Gaffey Street

~~Harbor Blvd~~Street / Segment	Existing 2007 ADT [a]	Existing 2007 Traffic CNEL at 50 feet, dB[1]	~~Net~~ Total ADT Increase with Proposed Project[2]	Existing 2007 + Total~~Proposed~~ Project ADT	Existing 2007 + ~~Net~~ Increase~~T~~otal Project CNEL at 50 feet, dB	dB Increase due to ~~Proposed~~ Total Project
Harbor Boulevard						
Swinford Street to Beacon Street	28,625	70.9	17,619~~15,630~~	46,244~~44,255~~	73.0~~72.8~~	2.1~~1.9~~
Beacon Street to O'Farrell Street	31,700	71.4	20,157~~18,168~~	51,857~~49,868~~	73.5~~73.4~~	2.1~~2.0~~
O'Farrell Street to Santa Cruz Street	30,550	71.3	20,207~~18,218~~	50,757~~48,768~~	73.5~~73.3~~	2.2~~2.0~~
Santa Cruz Street to 1st Street	27,013	70.8	20,244~~18,255~~	47,257~~45,268~~	73.2~~73.0~~	2.4~~2.2~~
1st Street to 2nd Street	25,663	70.5	20,132~~18,143~~	45,795~~43,806~~	73.0~~72.8~~	2.5~~2.3~~

~~Harbor Blvd~~Street / Segment	Existing 2007 ADT [a]	Existing 2007 Traffic CNEL at 50 feet, dB[1]	~~Net~~ Total ADT Increase with Proposed Project[2]	Existing 2007 + Total~~Proposed~~ Project ADT	Existing 2007 + ~~Net~~ Increase Total Project CNEL at 50 feet, dB	dB Increase due to ~~Proposed~~ Total Project
2nd Street to 3rd Street	24,400	70.3	20,144~~18,155~~	44,544~~42,555~~	72.9~~72.7~~	2.6~~2.4~~
3rd Street to 5th Street	23,801	70.2	20,344~~18,355~~	44,145~~42,156~~	72.9~~72.7~~	2.7~~2.5~~
5th Street to 6th Street	20,763	69.6	20,557~~18,568~~	41,320~~39,331~~	72.6~~72.4~~	3.0~~2.8~~
6th Street to 7th Street	18,775	69.2	21,719~~19,730~~	40,494~~38,505~~	72.5~~72.3~~	3.3~~3.1~~
22nd Street						
Signal Place to Miner Street	2,000	57.3	2,193	4,193	60.5	3.2
Miner Street to Via Cabrillo Marina	8,626	63.4	2,074	10,700	64.3	0.9
Via Cabrillo Marina to Mesa Street	8,263	63.2	2,106	10,369	64.2	1.0
Mesa Street to Pacific Avenue	9,038	63.4	1,993	11,031	64.3	0.9
Pacific Avenue to Grand Avenue	5,538	61.5	1,843	7,381	62.7	1.2
Grand Avenue to Gaffey Street	6,425	62.0	1,743	8,168	63.0	1.0
Gaffey Street						
Miraflores Avenue to Summerland Avenue	21,600	69.8	381	21,981	69.9	0.1
Summerland Avenue to 110 Freeway	17,588	69.4	387	17,975	69.5	0.1
110 Freeway to Sepulveda Street	67,150	74.5	3,319	70,469	74.7	0.2
Sepulveda Street to 1st Street	62,988	74.3	3,306	66,294	74.5	0.2
1st Street to 3rd Street	43,613	72.8	1,232	44,845	72.9	0.1
3rd Street to 5th Street	41,925	72.6	1,231	43,156	72.7	0.1

~~Harbor Blvd~~Street / Segment	Existing 2007 ADT [a]	Existing 2007 Traffic CNEL at 50 feet, dB[1]	~~Net~~ Total ADT Increase with Proposed Project[2]	Existing 2007 + Total~~Proposed~~ Project ADT	Existing 2007 + ~~Net~~ Increase Total Project CNEL at 50 feet, dB	dB Increase due to ~~Proposed~~ Total Project
5th Street to 6th Street	37,638	72.2	1,206	38,844	72.3	0.1
6th Street to 7th Street	36,588	72	1,200	37,788	72.1	0.1
7th Street to 8th Street	32,438	71.6	1,256	33,694	71.8	0.2
8th Street to 9th Street	31,813	71.5	1,257	33,070	71.7	0.2
9th Street to 11th Street	29,138	71	1,257	30,395	71.2	0.2
11th Street to 13th Street	29,388	71.2	1,244	30,632	71.4	0.2
13th Street to 15th Street	25,700	70.5	1,244	26,944	70.7	0.2
15th Street to 17th Street	22,050	69.8	1,231	23,281	70	0.2
17th Street to 18th Street	19,000	69.3	1,219	20,219	69.6	0.3
18th Street to 19th Street	18,513	69.1	1,231	19,744	69.4	0.3
19th Street to 20th Street	15,038	68.3	1,307	16,345	68.7	0.4
20th Street to 22nd Street	14,675	68.1	1,294	15,969	68.5	0.4

[1] LAHD 2009.

[2] Calculated as follows: 2007 project traffic volume (varies by roadway segment) + ~~4,862 trips (~~proposed Amphitheater trips (4,619 trips on Harbor Boulevard, 243 trips on 22nd Street, and 194 trips on Gaffey Street) ~~+ 300 trips (proposed Amusement Attractions) - 2,232 trips (reduction identified in the 2016 SPPM Addendum)~~.

ADT = average daily traffic; CNEL = Community Noise Equivalent Level; dB = decibel; EIR = environmental impact report; EIS = environmental impact statement; SPPM = San Pedro Public Market; SPW = San Pedro Waterfront.

Comparing Table 3.2-5 and Table 3.2-6, the Proposed Project would lead to a net increase in noise levels of 0.0~~2~~ to 0.5~~3~~ dB CNEL compared to the results of the 2009 SPW EIS/EIR analysis. Overall, these are very small increases that would typically be inaudible. Furthermore, none of the calculated increases lead to an exceedance of the established threshold of significance for potential traffic-noise impacts (increases at noise-sensitive receptors of 5 dBA or greater, where the existing CNEL is less than 70 dB; or 3 dB or greater where the existing CNEL exceeds 70 dB).

Based on the analysis and comparison described above, traffic-noise impacts from the operation of the Proposed Project would be less than significant. The significant and unavoidable traffic-noise impact reported in the 2009 SPW EIS/EIR for Miner Street, south of 22nd Street, would remain, but would not be directly associated with, and would not be affected by, the Proposed Project. Therefore, the Proposed Project would not create a new significant impact, increase the severity of any impacts reported in the 2009 SPW EIS/EIR, nor require the implementation of new mitigation measures.

In Section 3.8.8, *Impacts of the Proposed Project, Impact NOI-1, New Mitigation Measures Applicable to the Proposed Project*, Page 3.8-43, MM-NOI-6 has been revised as follows:

MM-NOI-6: Noise Reporting Requirements Following Amphitheater Events.

A sound-monitoring data report will be generated for each Tier 1 Event that includes all amplified activities at the Amphitheater. The report should show the measured L_{max} and L_{eq} for each consecutive 1-minute, 5-minute, and 1-hour period throughout each affected day and should indicate the start and end times of each activity (e.g., rehearsal, sound check, performance). Any $L_{eq(5min)}$ that exceeds 100 dBA at the front-of-house monitoring location will be clearly flagged in the report, and a consolidated summary of all noise exceedances (if any) throughout each day will be provided. The report will identify any actions taken to reduce excessive noise levels and should evaluate the results of these actions.

The Tenant will maintain a log of all sound-monitoring data reports to provide a permanent record and document any violations of the sound level limit(s) that occurred. For events that cause any violations of the sound level limits, or for event logs requested at any time by the Executive Director, the sound monitoring log will be furnished to the Port within 48 hours of the conclusion of the event. For all other events, the sound monitoring logs will be furnished to the Port ~~at the request of the Executive Director~~ within 30 days. All sound monitoring data and associated reports will be maintained by the Tenant for a minimum of 5 years after each event day.

In Section 3.8.8, *Impacts of the Proposed Project, Impact NOI-1, New Mitigation Measures Applicable to the Proposed Project*, Page 3.8-43, MM-NOI-7 has been revised as follows:

MM-NOI-7: Establish a Noise Complaint Hotline.

The Tenant will maintain a dedicated noise-complaint hotline ~~and/or website~~ for the proposed Amphitheater, which will be staffed during all events to respond in real-time, to the extent feasible, to any complaints. At all times, the Tenant will remain in control of the sound emanating from the venue, directly operating the sound boards and/or overseeing those that do. The phone number~~/web address~~ for the hotline will be published on the Tenant's public website. All noise complaints will be documented and addressed by the Tenant. ~~The Tenant will respond to all complaints, if requested to do so by the complainant, within 48 hours of the complaint or the end of the event that triggered the complaint (whichever occurs last).~~ Complaint logs will be provided to the LAHD on an annual basis or as requested by the Executive Director.

In Section 3.8.8, *Impacts of the Proposed Project, Impact NOI-1, New Mitigation Measures Applicable to the Proposed Project*, Page 3.8-45, MM-NOI-11, MM-NOI-12, and MM-NOI-13 have been revised as follows:

MM-NOI-11: Restrict the Total Number of Firework Displays to ~~25~~13 per Year.

The total number of firework displays will not exceed ~~25~~13 per calendar year.

MM-NOI-12: Limit the Duration of All Firework Displays.

The duration of all firework displays will be no longer than ~~20~~10 minutes on all nights, with the exception of two firework displays that will be permitted to be up to 20 minutes, unless prior written permission has been granted by the Executive Director or designated Deputy. The Tenant is responsible for recording firework display start and end times, and logs will be provided to the LAHD on an annual basis or as requested by the Executive Director.

MM-NOI-13: ~~Limit~~Eliminate the Use of "Salute" Fireworks.

Fireworks display events will not use concussion-type, non-color shells such as "salutes" (salute fireworks, also known as maroon fireworks, are fireworks designed to make a very loud bang, or "report," and an intense flash of light) ~~during the initial 25 percent of the duration of any display (e.g., within the first 5 minutes of a 20-minute display)~~.

In Section 3.8.10, *Summary of Impacts and Mitigation*, Page 3.8-52, Table 3.8-14 has been revised as follows:

Table 3.2-7. Summary Matrix of Potential Noise Impacts and Mitigation Measures for the Proposed Project

Environmental Impacts	Impact Determination	Project Feature and Mitigation Measures	Impact After Mitigation
Proposed Project			
Impact NOI-1: Would the Proposed Project generate a substantial temporary or permanent increase in ambient-noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	The 2009 SPW EIS/ EIR finding of a significant impact remains unchanged for the Proposed Project.	Mitigation measures **MM-NOI-1** and **MM-NOI-2** from the 2009 SPW EIS/EIR would apply to the Proposed Project. New mitigation measures **MM-NOI-3** through **MM-NOI-14**, as well as **PF-NOI-1** would also apply to	~~No new or substantially more severe significant impacts would occur.~~ No new or substantially more severe impacts would occur as a result of construction after mitigation;–New significant noise impacts would result from amphitheater operations and fireworks displays. Implementation **PF-**

Environmental Impacts	Impact Determination	Project Feature and Mitigation Measures	Impact After Mitigation
		the Proposed Project.	**NOI-1** and **MM NOI-1** through **MM-NOI-14** would reduce impacts, but impacts would remain significant and unavoidable.
Impact NOI-2: Would the Proposed Project generate excessive groundborne vibration or groundborne noise levels?	The 2009 SPW EIS/ EIR finding of a less-than-significant impact remains unchanged for the Proposed Project.	No mitigation is required.	No new or substantially more severe significant impacts would occur.
Impact NOI-3: Would the Proposed Project be located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	The 2009 SPW EIS/ EIR finding of a less-than-significant impact remains unchanged for the Proposed Project.	No mitigation is required.	No new or substantially more severe significant impacts would occur.
Alternative 1 – No Project Alternative			
Impact NOI-1: Would the Proposed Project generate a substantial temporary or permanent increase in ambient-noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	The 2009 SPW EIS/ EIR finding of a significant impact remains unchanged for Alternative 1.	Mitigation measures **MM-NOI-1** and **MM-NOI-2** from the 2009 SPW EIS/EIR would apply to Alternative 1.	~~No new or substantially more severe significant impacts would occur. Implementation **PF-NOI-1** and **MM NOI-1** through **MM-NOI-14** would reduce impacts, but impacts would remain significant.~~ Implementation of **MM-NOI-1** and **MM-NOI-2** would reduce impacts, but impacts would remain significant and unavoidable.
Impact NOI-2: Would the Proposed Project generate excessive groundborne vibration or groundborne noise levels?	The 2009 SPW EIS/ EIR finding of a less-than-significant impact remains	No mitigation is required.	No new or substantially more severe significant impacts would occur.

Environmental Impacts	Impact Determination	Project Feature and Mitigation Measures	Impact After Mitigation
	unchanged for Alternative 1.		
Impact NOI-3: Would the Proposed Project be located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	The 2009 SPW EIS/ EIR finding of a less-than-significant impact remains unchanged for Alternative 1.	No mitigation is required.	No new or substantially more severe significant impacts would occur.
Alternative 2 – Half-Capacity Amphitheater Alternative			
Impact NOI-1: Would the Proposed Project generate a substantial temporary or permanent increase in ambient-noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	The 2009 SPW EIS/ EIR finding of a significant impact remains unchanged for Alternative 2.	Mitigation measures **MM-NOI-1** and **MM-NOI-2** from the 2009 SPW EIS/EIR would apply to Alternative 2. New mitigation measures **MM-NOI-3** through **MM-NOI-14**, as well as **PF-NOI-1** would also apply to Alternative 2.	No new or substantially more severe impacts would occur as a result of construction after mitigation; New significant noise impacts would result from amphitheater operations and fireworks displays~~No new or substantially more severe significant impacts would occur~~. Implementation **PF-NOI-1** and **MM NOI-1** through **MM-NOI-14** would reduce impacts, but impacts would remain significant and unavoidable.
Impact NOI-2: Would the Proposed Project generate excessive groundborne vibration or groundborne noise levels?	The 2009 SPW EIS/ EIR finding of a less-than-significant impact remains unchanged for Alternative 2.	No mitigation is required.	No new or substantially more severe significant impacts would occur.
Impact NOI-3: Would the Proposed Project be located within the vicinity of a private airstrip or an airport land use plan or, where	The 2009 SPW EIS/ EIR finding of a less-than-significant impact remains	No mitigation is required.	No new or substantially more severe significant impacts would occur.

Environmental Impacts	Impact Determination	Project Feature and Mitigation Measures	Impact After Mitigation
such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	unchanged for Alternative 2.		

EIR = Environmental Impact Report; EIS = Environmental Impact Statement; SPW = San Pedro Waterfront

In Section 3.8.11, *Mitigation Monitoring Program*, starting on Page 3.8-57, Table 3.8-15, mitigation measures MM-NOI-6, MM-NOI-7, MM-NOI-9, MM-NOI-11, MM-NOI-12, and MM-NOI-13 have been revised as follows:

MM-NOI-6: Noise Reporting Requirements Following Amphitheater Events.

A sound-monitoring data report will be generated for each Tier 1 Event that includes all amplified activities at the Amphitheater. The report should show the measured L_{max} and L_{eq} for each consecutive 1-minute, 5-minute, and 1-hour period throughout each affected day and should indicate the start and end times of each activity (e.g., rehearsal, sound check, performance). Any $L_{eq(5min)}$ that exceeds 100 dBA at the front-of-house monitoring location will be clearly flagged in the report, and a consolidated summary of all noise exceedances (if any) throughout each day will be provided. The report will identify any actions taken to reduce excessive noise levels and should evaluate the results of these actions.

The Tenant will maintain a log of all sound-monitoring data reports to provide a permanent record and document any violations of the sound level limit(s) that occurred. For events that cause any violations of the sound-level limits, or for event logs requested at any time by the Executive Director, the sound monitoring log will be furnished to the Port within 48 hours of the conclusion of the event. For all other events, the sound monitoring log will be furnished to the Port ~~at the request of the Executive Director~~within 30 days. All sound monitoring data and associated reports will be maintained by the Tenant for a minimum of 5 years after each event day.

Timing	Reports should be prepared after each Tier 1 event. For events that cause any violations of the sound-level limits, the sound monitoring log will be furnished to the Port within 48 hours of the conclusion of the event.
Methodology	The requirements for sound-monitoring data reporting after all Tier 1 Events will be incorporated into the lease agreement(s) with the Amphitheater Tenant. The format and delivery of the sound-monitoring data report will be via methods deemed acceptable to the Port.

MM-NOI-7: Establish a Noise-Complaint Hotline and/or Website.

The Tenant will maintain a dedicated noise-complaint hotline ~~and/or website~~ for the proposed Amphitheater, which will be staffed during all events to respond in real-time, to the extent feasible, to any complaints. At all times, the Tenant will remain in control of the sound emanating from the venue, directly operating the sound boards and/or overseeing those that do. The phone number~~/web address~~ for the hotline will be published on the Tenant's public website. All noise complaints will be documented and addressed by the Tenant. ~~The Tenant will respond to all complaints, if requested to do so by the complainant, within 48 hours of the complaint or the end of the event that triggered the complaint (whichever occurs last).~~ Complaint logs will be provided to the LAHD on an annual basis or as requested by the Executive Director.

Timing	The hotline and/or website will be set up prior to the operation of the proposed Amphitheater and be available at least 24 hours before and 7 days after any Tier 1 or Tier 2 Event at the Amphitheater.
Methodology	Complaints will be accepted, and responses will be by one or more current communication methods (e.g., phone, text message, email, web form), and new methods may be added or substituted as they become available in the future.

MM-NOI-8: Enforce a Curfew and Restrict the Hours of Use and Duration for the Amphitheater's Amplified Sound System.

All events will conclude no later than 10:30 p.m. on all nights, unless prior written permission has been granted by the Executive Director or designated Deputy. In no case, however, will a performance extend past 11:00 p.m. The use of the sound system at the Amphitheater will start no earlier than 8:00 a.m. The Tenant is responsible for recording event start and end times and logs will be provided to the LAHD on an annual basis or as requested by the Executive Director.

On any Tier 1 Event day that includes a public or private performance, the total use of amplified sound equipment for all activities (e.g., rehearsal, soundcheck, performance) will be limited to a cumulative total of 12 hours. Sound amplification may occur over multiple distinct intervals, as long as the sum of those intervals is 12 hours or less.

On non-performance days, the total use of amplified sound equipment for all amplified events will be limited to no more than a cumulative total of up to 4 hours.

Timing	During the operation of the proposed Amphitheater.
Methodology	The curfew requirement and time restrictions will be incorporated into the lease agreement(s) with the Amphitheater Tenant. The requirements will also be included in all leases, contracts, permits, or other agreements made with all Users of the Amphitheater (e.g., musical acts, promoters, event organizers)

MM-NOI-9: Fines for Non-Compliance.

The maximum permissible front-of-house noise level within the Amphitheater is a 5-minute A-weighted equivalent noise level of 100 decibels, designated as 100 dBA $L_{eq(5min)}$. For the purposes of assessing compliance, the noise level will be assessed for each discrete consecutive 5-minute period starting at regular clock intervals (e.g., 8:00 p.m., 8:05 p.m., 8:10 p.m.). Every 5-minute interval during which the noise level exceeds 100 dBA $L_{eq(5min)}$ will be considered one Offense, with the exception that the front-of-house noise limit does not apply to noise from fireworks that are operated in compliance with the Amphitheater lease and all other applicable permits and regulations.

The noise monitoring station (as defined in **MM-NOI-5**) will include an interface that allows designated noise monitoring staff member(s) to view measured noise levels in real time. If sound levels exceed 100 dBA, sustained over any 3-minute interval, then the designated noise monitoring staff member(s) will issue the User an official warning to lower the sound levels. An official warning will be presumed to have been issued when sound levels exceed 100 dBA, sustained over any 3-minute interval, at the 3-minute mark. If additional violations occur, additional warnings and monetary penalties will apply as set forth below.

- **First Offense**: A notification of Offense, including a second warning to lower sound levels, will be issued during the performance to lower if sound levels exceed 100 dBA $L_{eq(5min)}$ over any discrete consecutive 5-minute period starting at regular clock intervals (e.g., 8:00 p.m., 8:05 p.m., 8:10 p.m.).
- **Second Offense**: A $5,000 fine.
- **Third Offense**: A $7,500 fine.
- **Subsequent Offenses**: $10,000 per violation.
- **Curfew Penalty**: A penalty of $1,000 per minute for the first 5 minutes past 11:00 p.m. the applicable curfew for the event (10:30 p.m. or as established in **MM-NOI-8**). A penalty of $5,000 per minute will be assessed thereafter.

However, should sound levels exceed 105 dBA $L_{eq(5min)}$ at any time, there will be no warnings to lower the sound, and an immediate fine of $10,000 will be assessed to the User and for any subsequent violations that also exceed 105 dBA $L_{eq(5min)}$.	
Timing	During the operation of the proposed Amphitheater, with fines (if applicable) issued following any performances with noise violations.
Methodology	~~As described in **MM-NOI-9**, with specific fine assessment and payment terms to be defined by POLA.~~Violation penalties will be placed into a Fund managed by the Harbor Department for the purposes of (1) reimbursing Harbor Department administration costs associated with mitigation monitoring and additional Harbor Department expenditures associated with Amphitheater events (additional to any Tenant-funded cost obligations) and (2) if accrued funds at any time equal $100,000 or more, a portion of such funds shall be managed by the Harbor Department as a West Harbor Mitigation Fund to fund project grants to mitigate noise impacts in the Port communities of San Pedro and Wilmington. Such potential project grants may include local San Pedro and Wilmington schools and community senior centers or 501(c)(3) charity(ies) with project purposes directly mitigating noise impacts in the Port communities of San Pedro and Wilmington. Local charities selected must not have any conflict of interest with the Tenant, unless waived by the Executive Director.
MM-NOI-10: Restrict the Total Number of Tier 1 Event Performance Days to 100 per Year. The total number of Tier 1 Event performance days will not exceed 100 per calendar year. For Tier 1 Event performances that run over multiple days, each calendar day that includes a performance will count against the allowed total. For example, a 3-night run by the same artist would count as three separate Tier 1 Event performance days, or a 2-day jazz festival would count as two separate Tier 1 Event performance days. Soundchecks or rehearsals on non-performance days will not count against the allowed total, provided they comply with all other applicable restrictions (including noise levels, curfews, and durations).	
Timing	During the operation of the proposed Amphitheater and repeated for every calendar year of Amphitheater operation.
Methodology	A list of all past and planned future Tier 1 Event counts and dates will be maintained by the Tenant and verified at least once per year by the Port. The Tenant is responsible for accurate accounting of the events and for not overbooking events in any year.
MM-NOI-11: Restrict the Total Number of Firework Displays to ~~25~~13 per Year. The total number of firework displays will not exceed ~~25~~13 per calendar year.	
Timing	During the operation of the proposed Amphitheater and repeated for every calendar year of Amphitheater operation.
Methodology	A list of all past and planned future firework display counts and dates will be maintained by the Tenant and verified at least once per year by the Port. The Tenant is responsible for accurate accounting of the firework displays and for not allowing more than 13~~25~~ events in any year.
MM-NOI-12: Limit the Duration of All Firework Displays. The duration of all firework displays will be no longer than ~~20~~10 minutes on all nights, with the exception of two firework displays that will be permitted to be up to 20 minutes, unless prior written permission has been granted by the Executive Director or designated Deputy. The Tenant is responsible for recording firework display start and end times, and logs will be provided to the LAHD on an annual basis or as requested by the Executive Director.	
Timing	During the operation of the proposed Amphitheater for all events involving fireworks.
Methodology	The requirements for limiting the duration of fireworks displays will be incorporated into the lease agreement(s) with the Amphitheater Tenant. The requirement will also

	be included in all leases, contracts, permits, or other agreements made with all Users of the Amphitheater (e.g., musical acts, promoters, event organizers) and all vendors designing, planning, and implementing the fireworks displays.
MM-NOI-13: ~~Limit~~Eliminate the Use of "Salute" Fireworks. Fireworks display events will not use concussion type, non-color shells such as "salutes" (*salute fireworks*, also known as maroon fireworks, are fireworks designed to make a very loud bang, or "report," and an intense flash of light)~~ during the initial 25 percent of the duration of any display (e.g., within the first 5 minutes of a 20-minute display)~~.	
Timing	During the operation of the proposed Amphitheater for all events involving fireworks.
Methodology	The requirements for eliminating~~limiting~~ the use of "salute" fireworks will be incorporated into the lease agreement(s) with the Amphitheater Tenant. The requirement will also be included in all leases, contracts, permits, or other agreements made with all Users of the Amphitheater (e.g., musical acts, promoters, event organizers) and all vendors designing, planning, and implementing the fireworks displays.

3.2.6 Changes Made to Section 3.9, Transportation

Section 3.9.3, *Environmental Setting, Street System*, Page 3.9-3, was revised as follows:

Freight rail activity related to the former Westways Terminal at Berth 71 no longer occurs in the vicinity of the Project Site, and the Southern Pacific Railroad (SPRR) Railyard that was located along the eastern side of Harbor Boulevard and west of Sampson Way is no longer operational. This track was previously shared by the Waterfront Red Car Line, which is also not currently operational.

The SR-47/Vincent Thomas Bridge & Front Street/Harbor Interchange Project is currently under construction to improve access to Harbor Boulevard from the SR-47.

In Section 3.9.8.3, *Impact Determination and Mitigation Summary*, Page 3.9-33,Table 3.9-7 has been revised as follows:

Table 3.2-8. Summary Matrix of Potential Impacts and Mitigation Measures Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impact After Mitigation
Impact TRAN-1: Would the Proposed Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	The 2009 SPW EIS/EIR finding of a less-than-significant impact remains unchanged for the Proposed Project.	No mitigation is required.	No new or substantially more-severe significant impacts would occur.
Impact TRAN-2: Would the Proposed Project conflict or be inconsistent	During the preparation and release of the	New **MM-TRAN-1** would apply to the Proposed Project.	~~Impacts would remain significant with implementation~~

Environmental Impacts	Impact Determination	Mitigation Measures	Impact After Mitigation
with State CEQA Guidelines Section 15064.3, subdivision (b)?	2009 SPW EIS/EIR, analysis of Vehicle Miles Traveled (VMT) was not considered for potential transportation impacts under CEQA. Impacts under the threshold applicable at that time were found ~~S~~significant and unavoidable.		~~of **MM-TRAN1**.S~~ New impacts would occur due to Amphitheater operations that would remain significant and unavoidable even with implementation of **MM-TRAN-1**~~after mitigation~~.

CEQA = California Environmental Quality Act; EIR = Environmental Impact Report; EIS = Environmental Impact Statement; MM = mitigation measure; SPW = San Pedro Waterfront

Section 3.9.10, *Significant Unavoidable Impacts*, Page 3.9-35, has been revised as follows:

As described in Section 3.9.7, above, the Proposed Project would result in a significant and unavoidable transportation impact regarding~~to~~ VMT (~~**TRAN-1**~~**TRAN-2**).

3.2.7 Changes Made to Chapter 4, Cumulative Impacts

In Section 5.1.2.1, *Past, Current, and Reasonably Foreseeable Future Projects*, Page 4-4, Table 4-1 has been revised as shown in Table 4-1 below. Note that only project #18 is being updated, and the updated project does not affect the conclusions found in Chapter 4, *Cumulative Impacts*, of the Draft EIR.

Table 3-9. Cumulative Project List

Number in Figure	Project Title and Location	Project Description	Project Status
Port of Los Angeles Projects			
1	Berth 163–164 (Nustar-Valero) Marine Oil Terminal Wharf Improvements Project	The proposed project involves demolishing the existing 19,000-square-foot timber wharf and constructing a new, steel-and-concrete loading platform, access trestles, mooring and berthing structures, and necessary utilities to comply with the Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS). The project also consists of a 30-year lease for the facility.	Initial Study (IS)/Mitigated Negative Declaration (MND) approved September 2021, construction pending.
2	Navy Way Seaside Interchange Project	Construction of roadway improvements at State Route (SR-) 47/Navy Way to eliminate traffic signal and movement conflicts. The project would augment an existing partial interchange at SR 47/Seaside Avenue/Navy Way by removing the last traffic signal and at-grade intersection between Interstate (I-) 710 and I-110, adding a new auxiliary lane and a new collector-distributor road, and implementing traffic channelization improvements.	Environmental review in process.
3	Cabrillo Way Marina Project	The proposed project includes developing, operating, and maintaining a marina, hotels, boater and visitor-serving club and meeting facilities, restaurants, retail buildings, and commercial areas at 2293 Miner Street. This project was evaluated in the *West Channel/Cabrillo Marina Phase II Development Project (Cabrillo Way Marina) Final Supplemental Environmental Impact Report* certified in December 2003.	Environmental review in process.
4	Berths 191–194 (Ecocem) Low-Carbon Cement Processing Facility	Construction and operation of a dry bulk terminal for vessel unloading, raw material milling, and storage and loading onto trucks of low-carbon construction binder.	Notice of Preparation (NOP) released in March 2022. Draft Environmental Impact Report (DEIR) released in October 2023.

Number in Figure	Project Title and Location	Project Description	Project Status
			Final Environmental Impact Report (FEIR) in preparation.
5	SA Recycling Amendment to Permit No. 750 Project	The proposed project is located at 901 New Dock Street on Terminal Island, 90731. The proposed project seeks an amendment to Permit No. 750 to allow for an up to 10-year extension of existing operations, with up to 5 additional years for use of the site as a non-operational restoration period for any necessary closure and remediation activities to restore the property.	Final Subsequent Environmental Impact Report (FSEIR) approved by the Board of Harbor Commissioners in April 2024.
6	Westway Decommissioning	Decommissioning of the Westway Terminal along the Main Channel (Berths 70–71). Work includes decommissioning and removing 136 storage tanks with total capacity of 593,000 barrels and remediation of the site.	Decommissioning completed in 2013. Remediation planning underway.
7	Berths 97–109, China Shipping Development Project	Development of the China Shipping Terminal Phase I, II, and III including wharf construction, landfill and terminal construction, and back-land development, including operation under a revised project to modify certain mitigation measures.	Final Supplemental EIR completed in 2019. Impact levels assumed in this Draft Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) are those disclosed in the Final Supplemental EIR.
8	Wilmington Waterfront Master Plan (Avalon Boulevard Corridor Project)	Planned development intended to provide waterfront access and promote development specifically along Avalon Boulevard. Project elements include a promenade, waterfront park, pedestrian bridge, location for the Wilmington Youth Sailing and Aquatic Center, public pier, and other visitor serving uses.	Construction underway in phases.
9	Berth 44 Boatyard Project	The proposed project includes redevelopment of the former San Pedro Boatworks site at 2945 Miner Street. Project components include demolition of existing structures and buildings on site, grading, paving, and constructing concrete pads, docks, gangways, slips, underground utilities, water treatment systems, storm drain, fencing, lighting, and buildings to support boatyard operations.	IS/NOP released in January 2024. DEIR in preparation.
10	Berths 206–209 Chassis Depot and Repair Facilities	Use of existing warehouses at 849 E. New Dock St and 921 E. New Dock St for chassis depot, storage, maintenance, and repair.	Final Negative Declaration (ND) approved July 2019. Addendum considered in 2023.

Number in Figure	Project Title and Location	Project Description	Project Status
11	Berths 121–131 Container Terminal Improvements Project	Demolish existing wharf at Berths 126–129, construct a new wharf, install up to 10 new wharf cranes, reconstruct the shoreline, dredge and dispose of up to 310,000 cubic yards of sediments to deepen the berth, expand the existing on-dock railyard and install electric-powered rail-mounted gantry (RMG) cranes for railcar loading/unloading.	Notice of Intent (NOI)/NOP released in 2014. EIR/EIS in preparation.
12	Berths 148–151 (Phillips 66) Marine Oil Terminal Improvement Project	Various wharf and seismic ground improvements required to comply with MOTEMS and a new 20-year entitlement.	IS/NOP released in March 2022. DEIR in preparation.
13	Terminal Island Maritime Support Facility	Development and operation of a maritime support facility on an approximately 80-acre LAXT loop site on Terminal Island.	IS/NOP released in December 2023. DEIR in preparation.
14	Maintenance Dredging	Maintenance dredging is the routine removal of accumulated sediment from channel beds to maintain the design depths of navigation channels, harbors, marinas, boat launches, and port facilities. This is conducted regularly for navigational purposes (at least once every 5 years).	Continuous, but intermittent on average every 3–5 years.
15	Outer Harbor Cruise Terminal and Outer Harbor Park	Construction of two new, cruise terminals that would total up to 200,000 square feet (approximately 100,000 square feet each) and parking at Berths 45–47 and 49–50 in the Outer Harbor. The terminals would be designed to accommodate the berthing of a Freedom Class or equivalent cruise vessel (1,150 feet in length). A proposed Outer Harbor Park would encompass approximately 6 acres at the Outer Harbor. This project was evaluated in the 2009 San Pedro Waterfront (SPW) EIS/EIR.	Draft Request for Proposal for future development released January 2023.
16	City Dock No. 1 Marine Research Project (AltaSea)	This project includes development of a marine research center within a 28-acre area located between Berths 57–72. This project would change the break bulk areas east of East Channel (Berths 57–72) to institutional uses.	Phase I development in progress since 2017.
17	West Harbor Modification Project (formerly San Pedro Public Market (SPPM))	This project includes redevelopment of 42 acres, formerly known as the Ports O' Call Village, with up to 300,000 square feet of visitor-serving commercial uses and up to a 75,000-square-foot conference center. This project would involve changing the	BHC certified the Final EIS/EIR and approved the project in 2009. Addendum 1 in May 2016 and Addendum 2 in November 2019.

Number in Figure	Project Title and Location	Project Description	Project Status
		industrial uses along Harbor Boulevard to commercial. This project also includes a waterfront promenade and 3 acres of open space. This project was evaluated in the 2009 SPW EIS/EIR and subsequent 2016 SPPM Addendum. The revised project's environmental analysis involves development of a 108,000-square-foot outdoor Amphitheater, an entertainment venue 2.1 acres in size, a 175-foot-diameter Ferris wheel, with additional amusement attractions, and other visitor-serving commercial uses. This project was evaluated in the 2009 SPW EIS/EIR.	Construction of the 2016 Project is ongoing. NOP released in April 2022. Draft Subsequent Environmental Impact Report in preparation. Conceptual planning by private developer ongoing.
18	SR-47/Vincent Thomas Bridge and Front Street/Harbor Boulevard Interchange Reconfiguration	Reconfigure the existing interchange at SR-47/Vincent Thomas Bridge and Harbor Boulevard/Front Street to improve safety and operation for vehicles exiting the highway. Improvements also include modifications of the eastbound entrance ramps and modification of Harbor Boulevard and Front Street approaching and between the ramp termini.	~~Construction underway.~~ Under construction, anticipated completion in November 2026.
19	Port of Los Angeles and Port of Long Beach Workforce Training Facility	The proposed project includes development of an approximately 20-acre site at 1440 Anchorage Road for a goods movement workforce training facility.	IS/NOP released in February 2024. EIR in preparation.
20	Al Larson Boat Shop Improvement Project	Modernization of existing boat yard and 30-year lease extension. This project was evaluated in a Final EIR approved in 2009.	Project on hold.
21	Berths 302–306 (APL now known as Fenix Marine) Container Terminal Project	Improvements and expansion of the existing terminal, including the addition of cranes, modifications to the main gate, converting an existing dry container storage unit to a refrigerated unit, and the expansion of the terminal onto 41 acres adjacent to the existing terminal. Revised project includes continued operations with minor modifications to the terminal and a 15-year lease extension through 2043. This project was evaluated in a Final EIR in 2012 and Addendum in 2016.	Expansion project on hold, revised project ongoing.
22	Berths 238–239 (PBF Energy) Marine Oil Terminal Improvement Project	Demolition of the existing Berth 238 loading platform and construction of a new platform and associated mooring structures at Berth 238, and installation of landside improvements.	Construction pending.

Number in Figure	Project Title and Location	Project Description	Project Status
23	Star-Kist Cannery Facility	Demolition of 14-acre site for future use as cargo support or container chassis storage.	BHC adopted MND February 2023; construction pending.
24	Berths 167–169 (Shell) Marine Oil Terminal Wharf Improvements Project	Various wharf and seismic ground improvements that are required to comply with MOTEMS, as well as other landside elements and a new 30-year lease. This project was evaluated in a Final EIR approved in 2018.	Construction is ongoing.
25	Avalon and Fries Street Segments Closure Project	Physical closure of segments of Avalon Boulevard and Fries Avenue by installing street modifications that include cul-de-sacs, curbs and gutters, and fencing and signage.	Construction is pending.
26	Berths 187–191 (Vopak) Liquid Bulk Terminal Wharf Improvements and Cement Terminal Project	Various wharf and improvements that are required to comply with MOTEMS, improvements to an adjacent wharf to facilitate resumption of cement terminal operations on the site, and a new 30-year entitlement.	IS/NOP issued July 2022. DEIR in preparation.
Port of Long Beach Projects			
27	Piers G & J Terminal Redevelopment Project, Port of Long Beach	Redevelopment of two existing marine-container terminals into one terminal. The Piers G and J redevelopment project is in the Southeast Harbor Planning District area of the Port of Long Beach. The project will develop a marine terminal of up to 315 acres by consolidating two existing terminals on Piers G and J and several surrounding parcels. Construction will occur in four phases and will include approximately 53 acres of landfills, dredging, concrete wharves, rock dikes, and road and railway improvements.	Approved project. Construction ongoing.
28	Pier B Rail Yard Expansion (On-Dock Rail Support Facility)	Expansion of the existing Pier B Rail Yard in two phases, including realignment of the adjacent Pier B Street and utility relocation.	FEIR certified February 2018. Construction pending.
29	Mitsubishi Cement Corporation Facility Modifications	Facility modification, including the addition of a catalytic control system, construction of four additional cement storage silos, and upgrading existing cement unloading equipment on Pier F.	Project approved in April 2015. Construction commenced June 2021.
30	Southern California Edison Transmission	Replace a series of transmission towers across the Cerritos Channel.	FEIR certified in 2017. Construction completed in August 2021. Demolition of old towers underway.

Number in Figure	Project Title and Location	Project Description	Project Status
	Tower Replacement Project		
31	Toyota Facility Improvements Project	Construction of a new consolidated Vehicle Processing and Distribution Center, Hydrogen Call and Generator Facility, and Fueling Station. Demolition of some existing facilities.	MND adopted in 2018. Construction ongoing.
32	World Oil Tank Installation Project	Installation and operation of two 25,000-barrel petroleum storage tanks.	Environmental review underway.
33	Pier Wind	Development of a 400-acre terminal to construct and assemble large offshore floating wind turbines and a 30-acre transport corridor to transport turbines for offshore wind projects in Northern and Central California coastal waters. The project will construct new land at the port and dredge approximately 50 million cubic yards for wharf construction, sinking basin, wet storage areas, and concrete piers adjacent to the transportation corridor.	IS/NOP issued January 2024. DEIR in preparation
Army Corps of Engineers			
34	Deep Draft Navigation and Main Channel Deepening Project	Dredge up to 10 million cubic yards of material to deepen channels, basins, and standby areas to improve waterborne transportation efficiencies and navigational safety for vessel operations. A new dredge substation may be constructed to provide electricity to dredge equipment.	Final EIR/EIS underway.
Alameda Corridor Transportation Authority and Caltrans Projects			
35	Schuyler Heim Bridge Replacement and SR-47 Terminal Island Expressway	Alameda Corridor Transportation Authority (ACTA)/California Department of Transportation (Caltrans) project to replace the Schuyler Heim Bridge with a fixed structure and improve the SR-47/Henry Ford Avenue/Alameda Street transportation corridor by constructing an elevated expressway from the Heim Bridge to SR-1 (Pacific Coast Highway [PCH]).	Construction completed. Elevated expressway deferred indefinitely.
36	SR-47 Vincent Thomas Bridge Deck Replacement Project	Bridge repairs including replacement of bridge deck, median concrete barrier, and guardrails and upgrading of seismic sensors.	Draft EIR released February 2024

Number in Figure	Project Title and Location	Project Description	Project Status
ICTF Joint Powers Authority			
37	Union Pacific Railroad ICTF Modernization and Expansion Project	Union Pacific proposal to modernize existing intermodal yard 4 miles from the Port.	Draft EIR on hold.
Community of San Pedro Projects			
38	John S. Gibson Truck and Chassis Parking Lot Project	Develop the 1599 John S. Gibson Boulevard 18.63-acre site with a short-term truck and chassis parking facility and related site improvements. The site is anticipated to be utilized for short-term parking, as chassis with or without containers are not anticipated to be parked on site over 24 hours. It includes paving of the site and striping of approximately 393 truck and chassis stalls. The project would be implemented in one development phase and would require a *Port Master Plan* Amendment.	IS/NOP was released in October 2023. DEIR in preparation.
39	Pacific Corridors Redevelopment Project, San Pedro	Development of commercial/retail, manufacturing, and residential components. Construction underway of four housing developments and Welcome Park.	Project underway. Estimated 2032 completion year according to City of Los Angeles Planning Department.
Community of Wilmington Projects			
40	Wilmington Redevelopment Plan Amendment/Expansion Project, Wilmington	The existing Wilmington Industrial Park would be expanded by an additional 2,487 acres, for a total of approximately 2,719 acres. Under the probable maximum level of development, the overall project area could support up approximately 7,326 residential units (primarily multifamily; zone changes under the Plan would permit multi-use and higher density residential development). In addition to the residential development, the project could accommodate up to approximately 207 acres (9 million square feet) of commercial development and up to 333 acres (14.5 million square feet) of industrial development.	NOP for Program EIR released for public review in August 2010. Currently on hold.
City of Carson			
41	Carson Stormwater and Runoff Capture Project	Excavation of 1.5-acre parcel at Sepulveda Boulevard and Figueroa Street and installation of an underground stormwater storage facility and associated infrastructure to store up to 17 acre-feet of water.	ND adopted 2017.

Number in Figure	Project Title and Location	Project Description	Project Status
42	Shell Carson Facility Ethanol (E10) Project	Conversion of existing 69,000 barrels of gasoline storage tanks to ethanol service. The EIR for this project included the following project objectives: (1) increase the Carson Facility's ethanol storage capacity by approximately 75%; (2) increase ethanol tanker-truck loading capacity by at least 75%; (3) include modifications that would minimize impacts on its existing capacity to receive, store and deliver other petroleum products at current levels; and (4) maintain operational efficiency, safety and flexibility.	FEIR published December 2012.

3.2.8 Changes Made to Chapter 5, Alternatives

In Section 5.2.2, *Project Objectives*, Page 5-2, text has been revised as follows:

Proposed Project objectives include the following:

- Enhance and revitalize the existing SPW area by including a substantially larger outdoor concert Amphitheater and entertainment lawn venue and additional attractions to draw visitors to the SPW area, thereby increasing the public visibility of San Pedro in general and the waterfront specifically;
- Update previously adopted mitigation measures to reflect changes since their consideration~~, including the addition of the 208 E. 22nd Street Parking Lot improvements~~;
- Provide public access to the SPW through increased parking amenities, including the addition of the 208 E. 22nd Street Parking Lot improvements, and pedestrian walkways;
- Provide for a variety of waterfront uses, including ~~berthing for visiting vessels and harbor service craft, as well as other~~ recreational, commercial, and Port-related waterfront uses; and
- Provide for enhanced visitor-serving commercial opportunities within the former site of Ports O' Call Village (now the *Project Site*), complementary to those found in downtown San Pedro.

Chapter 4
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Appendix G2

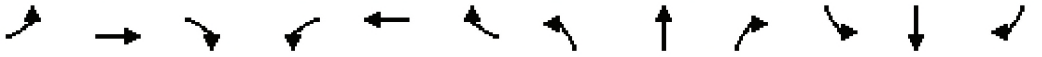
Project Access Safety and Circulation Evaluation

Table 1: Existing (2021) and Future (2027) With Project Intersection Operations

Intersection	Control	Peak Hour	Existing (2021)		2027 with Project	
			Delay (sec/veh)[1]	LOS[2,3]	Delay (sec/veh)[1,5]	LOS[2,3]
1. Front St/Knoll Dr	Signalized	Th PM	3.4	A	41.7	D
		Su PM	3.3	A	47.4	D
2. Front St/WB SR-47 On-Ramp[3]	Uncontrolled	Th PM	6.0	A	DNE*	DNE
		Su PM	6.8	A	DNE	DNE
3. Front St/Harbor Blvd/EB SR-47 Ramps/Swinford St	Signalized	Th PM	21.5	C	33.2	C
		Su PM	20.5	C	38.5	D
4. Harbor Blvd/1st St	Signalized	Th PM	9.9	A	25.0	C
		Su PM	8.8	A	21.5	C
5. Harbor Blvd/5th St	Signalized	Th PM	9.7	A	12.3	B
		Su PM	8.8	A	11.3	B
6. Harbor Blvd/7th St	Signalized	Th PM	9.4	A	12.5	B
		Su PM	8.6	A	10.6	B
7. Harbor Blvd/Sampson Wy/Miner St	Signalized	Th PM	9.9	A	11.4	B
		Su PM	10.9	B	13.1	B
8. Sampson Wy/North Driveway	AWSC	Th PM	7.1	A	13.3	B
		Su PM	7.8	A	9.6	A
9. Sampson Wy/Middle Driveway	SSSC	Th PM	8.9	A	9.7	A
		Su PM	10.5	B	21.1	C
10. Sampson Wy/South Driveway	AWSC	Th PM	7.1	A	7.5	A
		Su PM	7.8	A	8.0	A
11. Sampson Wy/22nd St	AWSC	Th PM	7.6	A	8.2	A
		Su PM	7.8	A	8.4	A
12. Miner St/22nd St	Signalized	Th PM	21.9	C	35.3	D
		Su PM	40.4	D	33.3	C
13. Via Cabrillo-Marina/22nd St[4]	Signalized	Th PM	8.1	A	7.3	A
		Su PM	9.4	A	8.8	A

Source: Fehr & Peers, 2023, 2024.
AWSC indicates All-way stop-controlled intersection.
TWSC indicates Two-way stop-controlled intersection.
Underlined text indicates a LOS of D, E, or F.
*DNE indicates intersection does not exist in given scenario
[1] Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized and AWSC intersections. The vehicular delay for the worst movement is reported for the TWSC intersection.
[2] LOS calculations performed using the *Highway Capacity Manual* 6th Edition (*HCM 6*) method.
[3] LOS calculations performed using the *Highway Capacity Manual* 2000 Edition method due to intersection control type.
[4] LOS calculations performed using the *Highway Capacity Manual* 2000 Edition method due to signal phasing
[5] Cycle lengths and splits were optimized for 2027 scenarios to represent the option for optimized time of day functions for Amphitheater event days or manual traffic control. This may result in lower average delay in 2027 compared to existing.

Existing Thursday PM



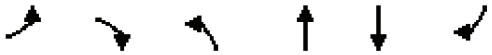
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	2	28	0	7	0	162	118	33	205	0
Future Volume (veh/h)	3	0	2	28	0	7	0	162	118	33	205	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1559	0	1559	0	1307	1307	1737	1737	0
Adj Flow Rate, veh/h	3	0	2	29	0	1	0	169	67	34	214	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	23	0	23	0	40	40	11	11	0
Cap, veh/h	22	0	20	0	0	0	0	843	320	797	1590	0
Arrive On Green	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.48	0.48	0.48	0.48	0.00
Sat Flow, veh/h	1810	0	1610		0		0	1814	664	1063	3387	0
Grp Volume(v), veh/h	3	0	2		0.0		0	118	118	34	214	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1242	1171	1063	1650	0
Q Serve(g_s), s	0.0	0.0	0.0				0.0	1.1	1.2	0.4	0.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0				0.0	1.1	1.2	1.6	0.7	0.0
Prop In Lane	1.00		1.00				0.00		0.57	1.00		0.00
Lane Grp Cap(c), veh/h	22	0	20				0	598	564	797	1590	0
V/C Ratio(X)	0.13	0.00	0.10				0.00	0.20	0.21	0.04	0.13	0.00
Avail Cap(c_a), veh/h	2180	0	1939				0	2094	1975	2077	5565	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.1	0.0	10.1				0.0	3.1	3.1	3.6	3.0	0.0
Incr Delay (d2), s/veh	5.7	0.0	4.7				0.0	0.3	0.4	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.1				0.0	0.1	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.9	0.0	14.8				0.0	3.4	3.5	3.6	3.1	0.0
LnGrp LOS	B	A	B				A	A	A	A	A	A
Approach Vol, veh/h		5						236			248	
Approach Delay, s/veh		15.4						3.4			3.2	
Approach LOS		B						A			A	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		15.5				15.5		5.3				
Change Period (Y+Rc), s		* 5.5				* 5.5		5.0				
Max Green Setting (Gmax), s		* 35				* 35		25.0				
Max Q Clear Time (g_c+I1), s		3.6				3.2		2.0				
Green Ext Time (p_c), s		3.4				2.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			3.4									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	430	280	223	12
Future Volume (Veh/h)	0	0	430	280	223	12
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	0	462	301	240	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				523	633	
pX, platoon unblocked						
vC, conflicting volume	1321	126	253			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1321	126	253			
tC, single (s)	6.8	6.9	4.5			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.4			
p0 queue free %	100	100	61			
cM capacity (veh/h)	92	907	1194			

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	462	150	150	160	93
Volume Left	462	0	0	0	0
Volume Right	0	0	0	0	13
cSH	1194	1700	1700	1700	1700
Volume to Capacity	0.39	0.09	0.09	0.09	0.05
Queue Length 95th (ft)	46	0	0	0	0
Control Delay (s)	9.9	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	6.0			0.0	
Approach LOS					

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	14	942	14	36	40	339	554	12	7	160	56
Future Volume (veh/h)	116	14	942	14	36	40	339	554	12	7	160	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1707	1707	1707	1900	1900	1900	1885	1885	1885	1796	1796	1796
Ad Flow Rate, veh/h	88	0	381	15	39	5	365	596	12	8	172	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	13	13	0	0	0	1	1	1	7	7	7
Cap, veh/h	267	0	907	108	296	39	533	954	19	28	550	240
Arrive On Green	0.16	0.00	0.16	0.12	0.12	0.12	0.15	0.31	0.31	0.02	0.16	0.16
Sat Flow, veh/h	1626	0	2829	900	2465	327	3483	3057	62	1711	3413	1488
Grp Volume(v), veh/h	88	0	381	31	0	28	365	242	366	8	172	9
Grp Sat Flow(s),veh/h/ln	1626	0	1415	1855	0	1838	1742	1244	1874	1711	1706	1488
Q Serve(g_s), s	2.9	0.0	0.0	0.9	0.0	0.8	6.0	10.1	10.2	0.3	2.7	0.3
Cycle Q Clear(g_c), s	2.9	0.0	0.0	0.9	0.0	0.8	6.0	10.1	10.2	0.3	2.7	0.3
Prop In Lane	1.00		1.00	0.49		0.18	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	267	0	907	223	0	221	533	388	585	28	550	240
V/C Ratio(X)	0.33	0.00	0.42	0.14	0.00	0.13	0.69	0.62	0.62	0.28	0.31	0.04
Avail Cap(c_a), veh/h	934	0	2067	913	0	904	2000	612	922	421	1960	855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	0.0	16.4	24.0	0.0	24.0	24.4	17.9	17.9	29.6	22.6	21.6
Incr Delay (d2), s/veh	1.2	0.0	0.5	0.3	0.0	0.3	1.6	3.1	2.0	5.3	0.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	3.6	0.7	0.0	0.7	4.3	5.2	7.6	0.3	1.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	0.0	16.9	24.3	0.0	24.2	26.0	21.0	20.0	34.9	23.5	21.8
LnGrp LOS	C	A	B	C	A	C	C	C	B	C	C	C
Approach Vol, veh/h		469			59			973			189	
Approach Delay, s/veh		18.2			24.3			22.5			23.9	
Approach LOS		B			C			C			C	

Timer Assigned Phs	1	2		4	5	6		8				
Phs Duration (G Rc), s	6.3	25.2		16.1	15.5	16.0		13.3				
Change Period (Rc), s	5.3	6.2		6.1	6.2	6.2		6.0				
Ma Green Setting (Gma), s	15	30.0		35	35.0	35.0		30.0				
Ma Q Clear Time (g_c_I1), s	2.3	12.2		4.9	8.0	4.7		2.9				
Green E t Time (p_c), s	0.0	5.6		3.6	1.3	2.3		0.3				

Intersection Summary	
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

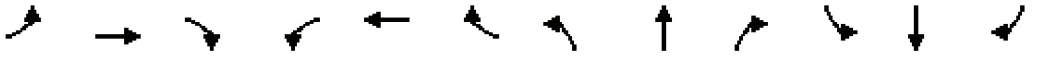
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	0	16	13	3	23	15	749	8	2	964	29
Future Volume (veh/h)	65	0	16	13	3	23	15	749	8	2	964	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1826	1826	1826	1900	1900	1900	1885	1885	1885	1900	1900	1900
Ad Flow Rate, veh/h	75	0	2	15	3	3	17	861	9	2	1108	20
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	0	0	0	1	1	1	0	0	0
Cap, veh/h	179	0	157	82	16	86	343	2252	24	8	2415	1061
Arrive On Green	0.10	0.00	0.10	0.05	0.05	0.05	0.62	0.62	0.62	0.00	0.67	0.67
Sat Flow, veh/h	1739	0	1531	1520	304	1597	503	3631	38	1810	3610	1586
Grp Volume(v), veh/h	75	0	2	18	0	3	17	425	445	2	1108	20
Grp Sat Flow(s),veh/h/ln	1739	0	1531	1824	0	1597	503	1791	1878	1810	1805	1586
Q Serve(g_s), s	3.6	0.0	0.1	0.8	0.0	0.2	1.5	10.6	10.6	0.1	13.2	0.4
Cycle Q Clear(g_c), s	3.6	0.0	0.1	0.8	0.0	0.2	10.3	10.6	10.6	0.1	13.2	0.4
Prop In Lane	1.00		1.00	0.83		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	179	0	157	98	0	86	343	1111	1165	8	2415	1061
V/C Ratio(X)	0.42	0.00	0.01	0.18	0.00	0.03	0.05	0.38	0.38	0.25	0.46	0.02
Avail Cap(c_a), veh/h	456	0	401	499	0	437	343	1111	1165	241	2415	1061
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.96	0.96	0.96	0.84	0.84	0.84
Uniform Delay (d), s/veh	37.8	0.0	36.3	40.7	0.0	40.4	10.6	8.5	8.5	44.7	7.1	5.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.9	0.0	0.2	0.3	1.0	0.9	13.7	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	0.0	0.1	0.7	0.0	0.1	0.3	6.9	7.2	0.1	7.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	0.0	36.3	41.6	0.0	40.5	10.9	9.5	9.4	58.4	7.6	5.0
LnGrp LOS	D	A	D	D	A	D	B	A	A	E	A	A
Approach Vol, veh/h		77			21			887			1130	
Approach Delay, s/veh		39.3			41.4			9.5			7.7	
Approach LOS		D			D			A			A	

Timer Assigned Phs		2		4	5	6		8				
Phs Duration (G Rc), s		65.1		14.7	4.4	60.7		10.2				
Change Period (Rc), s		4.9		5.4	4.0	4.9		5.4				
Ma Green Setting (Gma), s		26.1		24	12.0	10.1		24.6				
Ma Q Clear Time (g c I1), s		15.2		5.6	2.1	12.6		2.8				
Green E t Time (p c), s		7.8		0.1	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	1	29	1	2	0	20	605	1	0	882	112
Future Volume (veh/h)	126	1	29	1	2	0	20	605	1	0	882	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		1.00	0.98		1.00	1.00		0.99	1.00		0.99
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	0	1885	1885	1885	1885	1885	1885
Ad Flow Rate, veh/h	137	1	5	1	2	0	22	658	1	0	959	77
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	286	361	305	208	65	0	307	1677	744	0	1677	744
Arrive On Green	0.16	0.19	0.19	0.00	0.03	0.00	0.47	0.47	0.47	0.00	0.47	0.47
Sat Flow, veh/h	1810	1900	1606	1810	1900	0	548	3582	1589	0	3676	1589
Grp Volume(v), veh/h	137	1	5	1	2	0	22	658	1	0	959	77
Grp Sat Flow(s),veh/h/ln	1810	1900	1606	1810	1900	0	548	1791	1589	0	1791	1589
Q Serve(g_s), s	3.2	0.0	0.1	0.0	0.0	0.0	1.4	5.5	0.0	0.0	8.9	1.2
Cycle Q Clear(g_c), s	3.2	0.0	0.1	0.0	0.0	0.0	10.3	5.5	0.0	0.0	8.9	1.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	286	361	305	208	65	0	307	1677	744	0	1677	744
V/C Ratio(X)	0.48	0.00	0.02	0.00	0.03	0.00	0.07	0.39	0.00	0.00	0.57	0.10
Avail Cap(c_a), veh/h	788	827	699	992	827	0	408	2339	1038	0	2339	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	15.1	15.1	21.4	21.4	0.0	12.6	8.0	6.5	0.0	8.9	6.8
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.0	0.2	0.0	0.3	0.4	0.0	0.0	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	0.0	0.1	0.0	0.0	0.0	0.3	2.8	0.0	0.0	4.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	15.1	15.1	21.4	21.6	0.0	12.9	8.4	6.5	0.0	9.4	6.9
LnGrp LOS	B	B	B	C	C	A	B	A	A	A	A	A
Approach Vol, veh/h		143			3			681			1036	
Approach Delay, s/veh		18.7			21.6			8.5			9.3	
Approach LOS		B			C			A			A	

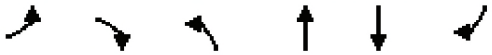
Timer Assigned Phs		2	3	4		6	7	8				
Phs Duration (G Rc), s		26.7	11.5	7.8		26.7	4.3	14.9				
Change Period (Rc), s		5.2	4.2	6.2		5.2	4.2	6.2				
Ma Green Setting (Gma), s		30	20	20		30	20	20				
Ma Q Clear Time (g_c I1), s		10.9	5.2	2.0		12.3	2.0	2.1				
Green E t Time (p_c), s		10.5	0.3	0.0		8.1	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase ma green.

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	129	39	39	477	653	216
Future Volume (veh/h)	129	39	39	477	653	216
Initial Q (Qb), veh	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach	No			No	No	
Ad Sat Flow, veh/h/ln	1870	1870	1870	1870	1885	1885
Ad Flow Rate, veh/h	147	10	44	542	742	127
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	1	1
Cap, veh/h	578	398	452	2118	1407	608
Arrive On Green	0.17	0.17	0.08	0.60	0.39	0.39
Sat Flow, veh/h	3456	1585	1781	3647	3676	1548
Grp Volume(v), veh/h	147	10	44	542	742	127
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1791	1548
Q Serve(g_s), s	1.7	0.2	0.6	3.4	7.4	2.5
Cycle Q Clear(g_c), s	1.7	0.2	0.6	3.4	7.4	2.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	578	398	452	2118	1407	608
V/C Ratio(X)	0.25	0.03	0.10	0.26	0.53	0.21
Avail Cap(c_a), veh/h	1475	809	1063	2275	2293	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	13.2	6.6	4.5	10.9	9.4
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.1	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	0.4	0.3	1.3	4.2	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.2	13.3	6.7	4.6	11.4	9.7
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	157			586	869	
Approach Delay, s/veh	17.0			4.8	11.2	
Approach LOS	B			A	B	

Timer Assigned Phs	1	2		4		6
Phs Duration (G Rc), s	9.5	23.9		13.4		33.4
Change Period (Rc), s	5.6	5.5		5.6		5.5
Ma Green Setting (Gma), s	20.0	30		20.0		30
Ma Q Clear Time (g c I1), s	2.6	9.4		3.7		5.4
Green E t Time (p c), s	0.1	8.7		0.4		5.7

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase ma green.

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	389	3	14	137	124	562
Future Volume (veh/h)	389	3	14	137	124	562
Initial Q (Qb), veh	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach	No			No	No	
Ad Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Ad Flow Rate, veh/h	437	1	16	154	139	405
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	885	458	471	1691	1086	875
Arrive On Green	0.25	0.25	0.03	0.47	0.30	0.30
Sat Flow, veh/h	3510	1610	1810	3705	3705	1559
Grp Volume(v), veh/h	437	1	16	154	139	405
Grp Sat Flow(s),veh/h/ln	1755	1610	1810	1805	1805	1559
Q Serve(g_s), s	4.4	0.0	0.2	1.0	1.2	6.5
Cycle Q Clear(g_c), s	4.4	0.0	0.2	1.0	1.2	6.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	885	458	471	1691	1086	875
V/C Ratio(X)	0.49	0.00	0.03	0.09	0.13	0.46
Avail Cap(c_a), veh/h	2539	1217	1284	2611	2611	1533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	10.6	8.1	6.1	10.5	5.6
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.0	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	0.0	0.1	0.5	0.7	5.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.4	10.6	8.2	6.2	10.6	6.2
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	438			170	544	
Approach Delay, s/veh	14.4			6.3	7.3	
Approach LOS	B			A	A	

Timer Assigned Phs	1	2				6	8
Phs Duration (G Rc), s	6.9	18.5				25.4	16.1
Change Period (Rc), s	5.6	6				6	5.6
Ma Green Setting (Gma), s	20.0	30				30	30.0
Ma Q Clear Time (g c I1), s	2.2	8.5				3.0	6.4
Green E t Time (p c), s	0.0	3.7				1.4	4.1

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	3	0	10	0	150	0	56	57	0
Future Vol, veh/h	0	0	0	3	0	10	0	150	0	56	57	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	3	0	11	0	169	0	63	64	0
Number of Lanes	0	1	0	0	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	1
HCM Control Delay	0	7.4	6.9	7.4
HCM LOS		A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	0%	23%	100%	0%	0%
Vol Thru, %	100%	100%	100%	100%	0%	0%	100%	100%
Vol Right, %	0%	0%	0%	0%	77%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	75	75	0	13	56	29	29
LT Vol	0	0	0	0	3	56	0	0
Through Vol	0	75	75	0	0	0	29	29
RT Vol	0	0	0	0	10	0	0	0
Lane Flow Rate	0	84	84	0	15	63	32	32
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0.107	0.068	0	0.019	0.089	0.041	0.026
Departure Headway (Hd)	4.585	4.585	2.884	5.098	4.659	5.11	4.609	2.908
Convergence, /N	es	es	es	es	es	es	es	es
Cap	0	780	1234	0	773	702	777	1227
Service Time	2.322	2.322	0.621	2.799	2.359	2.837	2.337	0.634
HCM Lane V/C Ratio	0	0.108	0.068	0	0.019	0.09	0.041	0.026
HCM Control Delay	7.3	7.9	5.8	7.8	7.4	8.3	7.5	5.7
HCM Lane LOS	N	A	A	N	A	A	A	A
HCM 95th tile Q	0	0.4	0.2	0	0.1	0.3	0.1	0.1

Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	99	56	5	18	44
Future Vol, veh/h	0	99	56	5	18	44
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None		None		None
Storage Length		0			160	
Veh in Median Storage, #	0		0			0
Grade, %	0		0			0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	111	63	6	20	49

Ma or/Minor	Minor1		Ma or1		Ma or2	
Conflicting Flow All		36	0	0	70	0
Stage 1						
Stage 2						
Critical Hdwy		6.9			4.1	
Critical Hdwy Stg 1						
Critical Hdwy Stg 2						
Follow up Hdwy		3.3			2.2	
Pot Cap 1 Maneuver	0	1035			1544	
Stage 1	0					
Stage 2	0					
Platoon blocked, %						
Mov Cap 1 Maneuver		1034			1543	
Mov Cap 2 Maneuver						
Stage 1						
Stage 2						

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	2.1
HCM LOS	A		

Minor Lane/Ma or Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)			1034	1543	
HCM Lane V/C Ratio			0.108	0.013	
HCM Control Delay (s)			8.9	7.4	
HCM Lane LOS			A	A	
HCM 95th %tile Q(veh)			0.4	0	

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	10	0	18	0	41	13	2	49	0
Future Vol, veh/h	0	0	0	10	0	18	0	41	13	2	49	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	11	0	20	0	46	15	2	55	0
Number of Lanes	0	1	0	0	1	0	0	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	1
HCM Control Delay	0	7.4	7.4	6.6
HCM LOS		A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	36%	100%	0%	0%
Vol Thru, %	100%	51%	100%	0%	0%	100%	100%
Vol Right, %	0%	49%	0%	64%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	27	0	28	2	25	25
LT Vol	0	0	0	10	2	0	0
Through Vol	27	14	0	0	0	25	25
RT Vol	0	13	0	18	0	0	0
Lane Flow Rate	31	30	0	31	2	28	28
Geometry Grp	8	8	7	7	7	7	7
Degree of Util (X)	0.04	0.036	0	0.039	0.003	0.035	0.022
Departure Headway (Hd)	4.636	4.295	4.707	4.418	5.086	4.586	2.884
Convergence, /N	es	es	es	es	es	es	es
Cap	770	831	0	805	703	780	1234
Service Time	2.376	2.034	2.472	2.175	2.821	2.321	0.619
HCM Lane V/C Ratio	0.04	0.036	0	0.039	0.003	0.036	0.023
HCM Control Delay	7.6	7.2	7.5	7.4	7.8	7.5	5.7
HCM Lane LOS	A	A	N	A	A	A	A
HCM 95th tile Q	0.1	0.1	0	0.1	0	0.1	0.1

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	1	16	0	2	2	22	20	0	0	21	32
Future Vol, veh/h	25	1	16	0	2	2	22	20	0	0	21	32
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	29	1	19	0	2	2	26	23	0	0	24	37
Number of Lanes	1	1	1	0	2	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	3
HCM Control Delay	7.7	7.3	7.9	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	77%	0%	100%	0%	0%	0%	0%	0%	0%
Vol Thru, %	23%	100%	0%	100%	0%	100%	25%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	75%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	13	25	1	16	1	3	21	32
LT Vol	22	0	25	0	0	0	0	0	0
Through Vol	7	13	0	1	0	1	1	21	0
RT Vol	0	0	0	0	16	0	2	0	32
Lane Flow Rate	33	16	29	1	19	2	3	24	37
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.047	0.02	0.042	0.002	0.021	0.002	0.004	0.032	0.041
Departure Headway (Hd)	5.066	4.682	5.215	4.714	4.013	4.893	4.367	4.665	3.965
Convergence, /N	es	es	es	es	es	es	es	es	es
Cap	701	757	679	750	878	736	824	759	890
Service Time	2.839	2.455	3.002	2.501	1.8	2.593	2.067	2.447	1.746
HCM Lane V/C Ratio	0.047	0.021	0.043	0.001	0.022	0.003	0.004	0.032	0.042
HCM Control Delay	8.1	7.6	8.2	7.5	6.9	7.6	7.1	7.6	6.9
HCM Lane LOS	A	A	A	A	A	A	A	A	A
HCM 95th tile Q	0.1	0.1	0.1	0	0.1	0	0	0.1	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	35	14	5	47	16	25	49	3	9	26	337
Future Volume (veh/h)	237	35	14	5	47	16	25	49	3	9	26	337
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ad Flow Rate, veh/h	272	40	6	6	54	2	29	56	1	10	30	81
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	340	1024	150	23	374	14	95	839	15	37	330	279
Arrive On Green	0.19	0.32	0.32	0.01	0.11	0.11	0.05	0.23	0.23	0.02	0.17	0.17
Sat Flow, veh/h	1810	3153	461	1810	3551	131	1810	3628	65	1810	1900	1608
Grp Volume(v), veh/h	272	22	24	6	27	29	29	28	29	10	30	81
Grp Sat Flow(s),veh/h/ln	1810	1805	1810	1810	1805	1876	1810	1805	1887	1810	1900	1608
Q Serve(g_s), s	7.8	0.5	0.5	0.2	0.7	0.8	0.8	0.6	0.7	0.3	0.7	1.8
Cycle Q Clear(g_c), s	7.8	0.5	0.5	0.2	0.7	0.8	0.8	0.6	0.7	0.3	0.7	1.8
Prop In Lane	1.00		0.25	1.00		0.07	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	340	586	587	23	190	197	95	418	437	37	330	279
V/C Ratio(X)	0.80	0.04	0.04	0.26	0.14	0.15	0.31	0.07	0.07	0.27	0.09	0.29
Avail Cap(c_a), veh/h	502	1002	1004	502	1002	1041	502	1002	1047	502	1054	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	12.5	12.5	26.4	22.0	22.0	24.7	16.2	16.2	26.1	18.7	10.8
Incr Delay (d2), s/veh	5.6	0.1	0.1	5.8	0.8	0.8	1.8	0.2	0.2	3.8	0.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.5	0.3	0.3	0.2	0.6	0.6	0.7	0.5	0.5	0.3	0.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	12.5	12.5	32.3	22.7	22.7	26.5	16.4	16.4	29.8	19.0	12.3
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		318			62			86			121	
Approach Delay, s/veh		24.6			23.7			19.8			15.4	
Approach LOS		C			C			B			B	

Timer Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G Rc), s	17.2	12.7	8.8	15.4	5.3	24.6	5.7	18.5
Change Period (Rc), s	7.0	7	6	6	4.6	7.0	4.6	6
Ma Green Setting (Gma), s	15.0	30	15	30	15.0	30.0	15.0	30
Ma Q Clear Time (g c I1), s	9.8	2.8	2.8	3.8	2.2	2.5	2.3	2.7
Green E t Time (p c), s	0.4	0.5	0.0	0.9	0.0	0.3	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase ma green.

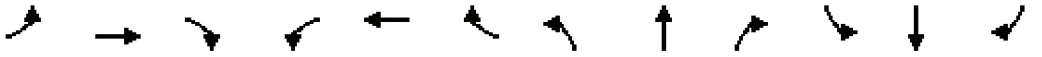
HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	199	67	73	314	62	88
Future Volume (vph)	199	67	73	314	62	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		4.0	5.0	4.2	4.2
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3452		1787	3574	3502	1615
Flt Permitted	1.00		0.53	1.00	0.95	1.00
Satd. Flow (perm)	3452		990	3574	3502	1615
Peak hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Ad . Flow (vph)	205	69	75	324	64	91
RTOR Reduction (vph)	24	0	0	0	0	58
Lane Group Flow (vph)	250	0	75	324	64	33
Confl. Peds. (#/hr)		4				
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Turn Type	NA		pm pt	NA	Prot	pt ov
Protected Phases	6		5	2	4	4 5
Permitted Phases			2			
Actuated Green, G (s)	22.2		30.0	24.6	7.8	17.4
Effective Green, g (s)	22.2		30.0	24.6	7.8	17.4
Actuated g/C Ratio	0.46		0.62	0.51	0.16	0.36
Clearance Time (s)	5.0		4.0	5.0	4.2	
Vehicle E tension (s)	6.9		3.0	6.6	6.7	
Lane Grp Cap (vph)	1576		699	1809	562	578
v/s Ratio Prot	0.07		c0.01	c0.09	c0.02	0.02
v/s Ratio Perm			0.05			
v/c Ratio	0.16		0.11	0.18	0.11	0.06
Uniform Delay, d1	7.7		3.8	6.5	17.4	10.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		0.1	0.2	0.3	0.1
Delay (s)	7.9		3.8	6.7	17.7	10.4
Level of Service	A		A	A	B	B
Approach Delay (s)	7.9			6.1	13.4	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	48.6	Sum of lost time (s)	13.2
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Existing Sunday PM



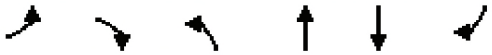
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	5	9	0	0	0	170	10	1	117	0
Future Volume (veh/h)	1	0	5	9	0	0	0	170	10	1	117	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1900	1900	1900	1900	0	1900	0	1900	1900	1885	1885	0
Ad Flow Rate, veh/h	1	0	5	10	0	0	0	185	9	1	127	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	0
Cap, veh/h	27	0	24	0	0	0	0	1683	81	887	1721	0
Arrive On Green	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.48	0.48	0.48	0.48	0.00
Sat Flow, veh/h	1810	0	1610		0		0	3596	169	1198	3676	0
Grp Volume(v), veh/h	1	0	5		0.0		0	95	99	1	127	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1805	1865	1198	1791	0
Q Serve(g_s), s	0.0	0.0	0.1				0.0	0.6	0.6	0.0	0.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.1				0.0	0.6	0.6	0.6	0.4	0.0
Prop In Lane	1.00		1.00				0.00		0.09	1.00		0.00
Lane Grp Cap(c), veh/h	27	0	24				0	868	896	887	1721	0
V/C Ratio(X)	0.04	0.00	0.21				0.00	0.11	0.11	0.00	0.07	0.00
Avail Cap(c_a), veh/h	2174	0	1935				0	3036	3138	2327	6025	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.1	0.0	10.1				0.0	3.0	3.0	3.1	2.9	0.0
Incr Delay (d2), s/veh	1.2	0.0	9.1				0.0	0.1	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.1				0.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.3	0.0	19.3				0.0	3.1	3.1	3.1	3.0	0.0
LnGrp LOS	B	A	B				A	A	A	A	A	A
Approach Vol, veh/h		6						194			128	
Approach Delay, s/veh		17.9						3.1			3.0	
Approach LOS		B						A			A	

Timer Assigned Phs		2				6		8				
Phs Duration (G Rc), s		15.5				15.5		5.3				
Change Period (Rc), s		5.5				5.5		5.0				
Ma Green Setting (Gma), s		35				35		25.0				
Ma Q Clear Time (g c I1), s		2.6				2.6		2.1				
Green E t Time (p c), s		1.6				2.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			3.3									
HCM 6th LOS			A									

Notes

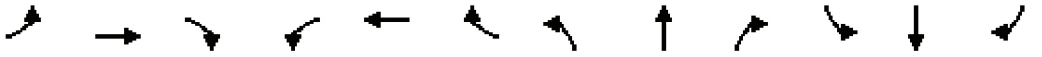
HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	476	169	121	10
Future Volume (Veh/h)	0	0	476	169	121	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	0	0	573	204	146	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				523	633	
pX, platoon unblocked						
vC, conflicting volume	1400	79	158			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1400	79	158			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	60			
cM capacity (veh/h)	80	972	1427			

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	573	102	102	97	61
Volume Left	573	0	0	0	0
Volume Right	0	0	0	0	12
cSH	1427	1700	1700	1700	1700
Volume to Capacity	0.40	0.06	0.06	0.06	0.04
Queue Length 95th (ft)	49	0	0	0	0
Control Delay (s)	9.2	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	6.8			0.0	
Approach LOS					

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	18	840	11	21	22	485	600	20	9	95	33
Future Volume (veh/h)	33	18	840	11	21	22	485	600	20	9	95	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1885	1885	1885	1900	1900	1900
Ad Flow Rate, veh/h	31	0	330	12	23	3	533	659	21	10	104	4
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	0	0	0
Cap, veh/h	291	0	1184	102	208	28	720	1039	33	37	527	230
Arrive On Green	0.16	0.00	0.16	0.09	0.09	0.09	0.21	0.35	0.35	0.02	0.15	0.15
Sat Flow, veh/h	1810	0	3220	1112	2269	305	3483	2996	95	1810	3610	1577
Grp Volume(v), veh/h	31	0	330	20	0	18	533	269	411	10	104	4
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1844	0	1842	1742	1225	1866	1810	1805	1577
Q Serve(g_s), s	0.9	0.0	0.0	0.6	0.0	0.6	8.9	11.4	11.4	0.3	1.6	0.1
Cycle Q Clear(g_c), s	0.9	0.0	0.0	0.6	0.0	0.6	8.9	11.4	11.4	0.3	1.6	0.1
Prop In Lane	1.00		1.00	0.60		0.17	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	291	0	1184	169	0	169	720	425	647	37	527	230
V/C Ratio(X)	0.11	0.00	0.28	0.12	0.00	0.11	0.74	0.63	0.63	0.27	0.20	0.02
Avail Cap(c_a), veh/h	1021	0	2483	892	0	891	1965	593	903	438	2037	890
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	0.0	13.8	25.9	0.0	25.9	23.0	17.0	17.0	29.9	23.3	22.7
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.3	0.0	0.3	1.5	2.9	1.9	3.9	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	2.8	0.5	0.0	0.5	6.3	5.7	8.2	0.3	1.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.5	0.0	14.0	26.2	0.0	26.1	24.6	19.9	18.9	33.8	23.8	22.8
LnGrp LOS	C	A	B	C	A	C	C	B	B	C	C	C
Approach Vol, veh/h		361			38			1213			118	
Approach Delay, s/veh		14.8			26.2			21.6			24.6	
Approach LOS		B			C			C			C	

Timer Assigned Phs	1	2		4	5	6		8				
Phs Duration (G Rc), s	6.6	27.7		16.1	19.0	15.3		11.7				
Change Period (Rc), s	5.3	6.2		6.1	6.2	6.2		6.0				
Ma Green Setting (Gma), s	15	30.0		35	35.0	35.0		30.0				
Ma Q Clear Time (g_c_I1), s	2.3	13.4		2.9	10.9	3.6		2.6				
Green E t Time (p_c), s	0.0	6.1		2.7	1.9	1.3		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

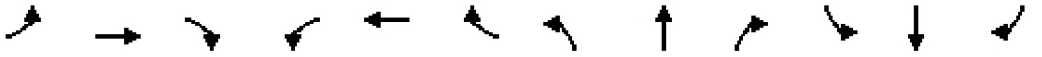
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	0	15	12	2	20	10	1010	5	4	830	35
Future Volume (veh/h)	43	0	15	12	2	20	10	1010	5	4	830	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1856	1856	1856	1515	1515	1515	1885	1885	1885	1900	1900	1900
Ad Flow Rate, veh/h	46	0	2	13	2	2	11	1074	5	4	883	23
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	26	26	26	1	1	1	0	0	0
Cap, veh/h	153	0	135	52	8	53	452	2357	11	15	2519	1108
Arrive On Green	0.09	0.00	0.09	0.04	0.04	0.04	0.64	0.64	0.64	0.01	0.70	0.70
Sat Flow, veh/h	1767	0	1556	1258	194	1280	620	3656	17	1810	3610	1588
Grp Volume(v), veh/h	46	0	2	15	0	2	11	526	553	4	883	23
Grp Sat Flow(s),veh/h/ln	1767	0	1556	1452	0	1280	620	1791	1882	1810	1805	1588
Q Serve(g_s), s	2.2	0.0	0.1	0.9	0.0	0.1	0.7	13.3	13.3	0.2	8.8	0.4
Cycle Q Clear(g_c), s	2.2	0.0	0.1	0.9	0.0	0.1	4.7	13.3	13.3	0.2	8.8	0.4
Prop In Lane	1.00		1.00	0.87		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	153	0	135	60	0	53	452	1155	1213	15	2519	1108
V/C Ratio(X)	0.30	0.00	0.01	0.25	0.00	0.04	0.02	0.46	0.46	0.26	0.35	0.02
Avail Cap(c_a), veh/h	463	0	408	397	0	350	452	1155	1213	241	2519	1108
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.93	0.93	0.93	0.93	0.93
Uniform Delay (d), s/veh	38.6	0.0	37.6	41.8	0.0	41.4	7.3	8.0	8.0	44.3	5.4	4.2
Incr Delay (d2), s/veh	1.1	0.0	0.0	2.1	0.0	0.3	0.1	1.2	1.1	8.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	0.1	0.6	0.0	0.1	0.2	8.1	8.4	0.2	4.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	0.0	37.6	43.9	0.0	41.7	7.4	9.2	9.2	52.5	5.8	4.2
LnGrp LOS	D	A	D	D	A	D	A	A	A	D	A	A
Approach Vol, veh/h		48			17			1090			910	
Approach Delay, s/veh		39.6			43.7			9.2			6.0	
Approach LOS		D			D			A			A	

Timer Assigned Phs		2		4	5	6		8				
Phs Duration (G Rc), s		67.7		13.2	4.8	62.9		9.1				
Change Period (Rc), s		4.9		5.4	4.0	4.9		5.4				
Ma Green Setting (Gma), s		26.1		24	12.0	10.1		24.6				
Ma Q Clear Time (g c I1), s		10.8		4.2	2.2	15.3		2.9				
Green E t Time (p c), s		8.4		0.1	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	1	22	0	4	0	16	937	1	0	759	76
Future Volume (veh/h)	67	1	22	0	4	0	16	937	1	0	759	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.97	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	0	1885	1885	1885	1885	1885	1885
Ad Flow Rate, veh/h	74	1	5	0	4	0	18	1030	1	0	834	50
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	191	308	253	235	103	0	380	1816	792	0	1816	791
Arrive On Green	0.11	0.16	0.16	0.00	0.05	0.00	0.51	0.51	0.51	0.00	0.51	0.51
Sat Flow, veh/h	1810	1900	1563	1810	1900	0	633	3582	1561	0	3676	1560
Grp Volume(v), veh/h	74	1	5	0	4	0	18	1030	1	0	834	50
Grp Sat Flow(s),veh/h/ln	1810	1900	1563	1810	1900	0	633	1791	1561	0	1791	1560
Q Serve(g_s), s	1.8	0.0	0.1	0.0	0.1	0.0	0.9	9.3	0.0	0.0	7.0	0.8
Cycle Q Clear(g_c), s	1.8	0.0	0.1	0.0	0.1	0.0	7.9	9.3	0.0	0.0	7.0	0.8
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	191	308	253	235	103	0	380	1816	792	0	1816	791
V/C Ratio(X)	0.39	0.00	0.02	0.00	0.04	0.00	0.05	0.57	0.00	0.00	0.46	0.06
Avail Cap(c_a), veh/h	773	811	667	1003	811	0	464	2294	1000	0	2294	999
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	16.5	16.5	0.0	21.0	0.0	10.0	8.0	5.7	0.0	7.4	5.9
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.0	0.2	0.0	0.1	0.8	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	0.1	0.0	0.1	0.0	0.2	4.7	0.0	0.0	3.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.8	16.5	16.5	0.0	21.1	0.0	10.1	8.8	5.7	0.0	7.8	5.9
LnGrp LOS	C	B	B	A	C	A	B	A	A	A	A	A
Approach Vol, veh/h		80			4			1049			884	
Approach Delay, s/veh		20.5			21.1			8.8			7.7	
Approach LOS		C			C			A			A	

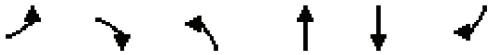
Timer Assigned Phs		2	3	4		6	7	8				
Phs Duration (G Rc), s		29.0	9.1	8.7		29.0	4.1	13.8				
Change Period (Rc), s		5.2	4.2	6.2		5.2	4.2	6.2				
Ma Green Setting (Gma), s		30	20	20		30	20	20				
Ma Q Clear Time (g c I1), s		9.0	3.8	2.1		11.3	0.0	2.1				
Green E t Time (p c), s		9.6	0.1	0.0		12.4	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase ma green.

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	102	45	56	852	617	151
Future Volume (veh/h)	102	45	56	852	617	151
Initial Q (Qb), veh	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach	No			No	No	
Ad Sat Flow, veh/h/ln	1796	1796	1870	1870	1900	1900
Ad Flow Rate, veh/h	116	12	64	968	701	120
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	7	7	2	2	0	0
Cap, veh/h	519	404	499	2151	1358	588
Arrive On Green	0.16	0.16	0.11	0.61	0.38	0.38
Sat Flow, veh/h	3319	1522	1781	3647	3705	1564
Grp Volume(v), veh/h	116	12	64	968	701	120
Grp Sat Flow(s),veh/h/ln	1659	1522	1781	1777	1805	1564
Q Serve(g_s), s	1.4	0.3	0.8	6.9	7.0	2.4
Cycle Q Clear(g_c), s	1.4	0.3	0.8	6.9	7.0	2.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	519	404	499	2151	1358	588
V/C Ratio(X)	0.22	0.03	0.13	0.45	0.52	0.20
Avail Cap(c_a), veh/h	1426	820	1070	2290	2326	1008
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	12.7	6.3	5.0	11.2	9.8
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.2	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.5	0.4	2.5	4.1	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.4	12.7	6.5	5.2	11.8	10.1
LnGrp LOS	B	B	A	A	B	B
Approach Vol, veh/h	128			1032	821	
Approach Delay, s/veh	16.9			5.3	11.5	
Approach LOS	B			A	B	

Timer Assigned Phs	1	2		4		6
Phs Duration (G Rc), s	10.7	23.0		12.9		33.7
Change Period (Rc), s	5.6	5.5		5.6		5.5
Ma Green Setting (Gma), s	20.0	30		20.0		30
Ma Q Clear Time (g c I1), s	2.8	9.0		3.4		8.9
Green E t Time (p c), s	0.1	8.3		0.3		10.2

Intersection Summary	
HCM 6th Ctrl Delay	8.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase ma green.

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	518	12	24	400	239	408
Future Volume (veh/h)	518	12	24	400	239	408
Initial Q (Qb), veh	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach	No			No	No	
Ad Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Ad Flow Rate, veh/h	595	7	28	460	275	328
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1073	575	414	1553	934	896
Arrive On Green	0.31	0.31	0.05	0.44	0.26	0.26
Sat Flow, veh/h	3456	1585	1781	3647	3647	1537
Grp Volume(v), veh/h	595	7	28	460	275	328
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1537
Q Serve(g_s), s	6.6	0.1	0.5	3.8	2.8	5.3
Cycle Q Clear(g_c), s	6.6	0.1	0.5	3.8	2.8	5.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1073	575	414	1553	934	896
V/C Ratio(X)	0.55	0.01	0.07	0.30	0.29	0.37
Avail Cap(c_a), veh/h	2257	1118	1096	2320	2320	1496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	9.4	9.9	8.4	13.5	5.3
Incr Delay (d2), s/veh	1.2	0.0	0.1	0.2	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.0	0.1	0.3	2.0	1.8	4.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.4	9.4	10.0	8.5	13.8	5.7
LnGrp LOS	B	A	A	A	B	A
Approach Vol, veh/h	602			488	603	
Approach Delay, s/veh	14.4			8.6	9.4	
Approach LOS	B			A	A	

Timer Assigned Phs	1	2				6	8
Phs Duration (G Rc), s	8.0	18.1				26.1	19.9
Change Period (Rc), s	5.6	6				6	5.6
Ma Green Setting (Gma), s	20.0	30				30	30.0
Ma Q Clear Time (g c I1), s	2.5	7.3				5.8	8.6
Green E t Time (p c), s	0.1	4.5				4.6	5.7

Intersection Summary	
HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	11	0	404	0	36	216	0
Future Vol, veh/h	0	0	0	0	0	11	0	404	0	36	216	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	0	0	0
Mvmt Flow	0	0	0	0	0	13	0	470	0	42	251	0
Number of Lanes	0	1	0	0	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	1
HCM Control Delay	0	8	8	7.5
HCM LOS		A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	0%	0%	100%	0%	0%
Vol Thru, %	100%	100%	100%	100%	0%	0%	100%	100%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	202	202	0	11	36	108	108
LT Vol	0	0	0	0	0	36	0	0
Through Vol	0	202	202	0	0	0	108	108
RT Vol	0	0	0	0	11	0	0	0
Lane Flow Rate	0	235	235	0	13	42	126	126
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0.307	0.193	0	0.018	0.061	0.166	0.107
Departure Headway (Hd)	4.7	4.7	2.965	5.882	5.159	5.274	4.772	3.068
Convergence, /N	es	es	es	es	es	es	es	es
Cap	0	759	1193	0	698	674	746	1149
Service Time	2.46	2.46	0.725	3.582	2.859	3.044	2.542	0.837
HCM Lane V/C Ratio	0	0.31	0.197	0	0.019	0.062	0.169	0.11
HCM Control Delay	7.5	9.6	6.4	8.6	8	8.4	8.5	6.2
HCM Lane LOS	N	A	A	N	A	A	A	A
HCM 95th tile Q	0	1.3	0.7	0	0.1	0.2	0.6	0.4

Intersection	
Int Delay, s/veh	6.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	278	122	6	134	80
Future Vol, veh/h	1	278	122	6	134	80
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None		None		None
Storage Length		0			160	
Veh in Median Storage, #	0		0			0
Grade, %	0		0			0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	8	8	0	0
Mvmt Flow	1	323	142	7	156	93

Ma or/Minor	Minor1		Ma or1		Ma or2	
Conflicting Flow All	507	77	0	0	151	0
Stage 1	148					
Stage 2	359					
Critical Hdwy	6.8	6.9			4.1	
Critical Hdwy Stg 1	5.8					
Critical Hdwy Stg 2	5.8					
Follow up Hdwy	3.5	3.3			2.2	
Pot Cap 1 Maneuver	500	975			1442	
Stage 1	870					
Stage 2	683					
Platoon blocked, %						
Mov Cap 1 Maneuver	445	973			1440	
Mov Cap 2 Maneuver	445					
Stage 1	868					
Stage 2	609					

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	4.9
HCM LOS	B		

Minor Lane/Ma or Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)			973	1440	
HCM Lane V/C Ratio			0.332	0.108	
HCM Control Delay (s)			10.5	7.8	
HCM Lane LOS			B	A	
HCM 95th %tile Q(veh)			1.5	0.4	

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	31	0	76	0	54	24	17	59	0
Future Vol, veh/h	0	0	0	31	0	76	0	54	24	17	59	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	12	12	12	0	0	0
Mvmt Flow	0	0	0	36	0	88	0	63	28	20	69	0
Number of Lanes	0	1	0	0	1	0	0	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	1
HCM Control Delay	0	8.1	8	7.2
HCM LOS		A	A	A

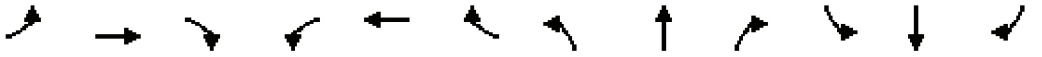
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	29%	100%	0%	0%
Vol Thru, %	100%	43%	100%	0%	0%	100%	100%
Vol Right, %	0%	57%	0%	71%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	42	0	107	17	30	30
LT Vol	0	0	0	31	17	0	0
Through Vol	36	18	0	0	0	30	30
RT Vol	0	24	0	76	0	0	0
Lane Flow Rate	42	49	0	124	20	34	34
Geometry Grp	8	8	7	7	7	7	7
Degree of Util (X)	0.06	0.065	0	0.157	0.03	0.047	0.03
Departure Headway (Hd)	5.2	4.798	5.011	4.549	5.387	4.885	3.178
Convergence, /N	es	es	es	es	es	es	es
Cap	691	749	0	791	667	736	1130
Service Time	2.915	2.513	2.727	2.261	3.098	2.596	0.888
HCM Lane V/C Ratio	0.061	0.065	0	0.157	0.03	0.046	0.03
HCM Control Delay	8.2	7.8	7.7	8.1	8.3	7.8	6
HCM Lane LOS	A	A	N	A	A	A	A
HCM 95th tile Q	0.2	0.2	0	0.6	0.1	0.1	0.1

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	1	20	0	0	0	23	22	0	0	22	63
Future Vol, veh/h	47	1	20	0	0	0	23	22	0	0	22	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	14	14	14	0	0	0	0	0	0	0	0	0
Mvmt Flow	51	1	22	0	0	0	25	24	0	0	24	68
Number of Lanes	1	1	1	0	2	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	3
HCM Control Delay	8.3	0	8	7.3
HCM LOS	A		A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	76%	0%	100%	0%	0%	0%	0%	0%	0%
Vol Thru, %	24%	100%	0%	100%	0%	100%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	15	47	1	20	0	0	22	63
LT Vol	23	0	47	0	0	0	0	0	0
Through Vol	7	15	0	1	0	0	0	22	0
RT Vol	0	0	0	0	20	0	0	0	63
Lane Flow Rate	33	16	51	1	22	0	0	24	68
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.048	0.022	0.079	0.002	0.027	0	0	0.032	0.078
Departure Headway (Hd)	5.262	4.883	5.599	5.098	4.397	5.027	3.321	4.824	4.123
Convergence, /N	es	es	es	es	es	es	es	es	es
Cap	683	736	643	705	817	0	0	746	872
Service Time	2.971	2.591	3.309	2.808	2.107	2.74	1.034	2.531	1.83
HCM Lane V/C Ratio	0.048	0.022	0.079	0.001	0.027	0	0	0.032	0.078
HCM Control Delay	8.2	7.7	8.8	7.8	7.2	7.7	6	7.7	7.2
HCM Lane LOS	A	A	A	A	A	N	N	A	A
HCM 95th tile Q	0.2	0.1	0.3	0	0.1	0	0	0.1	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	56	30	16	64	19	33	53	11	15	32	222
Future Volume (veh/h)	350	56	30	16	64	19	33	53	11	15	32	222
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1900	1900	1900	1900	1900	1900
Ad Flow Rate, veh/h	412	66	15	19	75	3	39	62	2	18	38	49
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	0	0	0
Cap, veh/h	427	1059	233	64	435	17	114	744	24	62	299	249
Arrive On Green	0.24	0.37	0.37	0.04	0.12	0.12	0.06	0.21	0.21	0.03	0.16	0.16
Sat Flow, veh/h	1781	2889	634	1781	3480	138	1810	3568	114	1810	1900	1577
Grp Volume(v), veh/h	412	40	41	19	38	40	39	31	33	18	38	49
Grp Sat Flow(s),veh/h/ln	1781	1777	1746	1781	1777	1842	1810	1805	1877	1810	1900	1577
Q Serve(g_s), s	14.3	0.9	1.0	0.7	1.2	1.2	1.3	0.9	0.9	0.6	1.1	1.3
Cycle Q Clear(g_c), s	14.3	0.9	1.0	0.7	1.2	1.2	1.3	0.9	0.9	0.6	1.1	1.3
Prop In Lane	1.00		0.36	1.00		0.08	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	427	652	640	64	222	230	114	376	392	62	299	249
V/C Ratio(X)	0.97	0.06	0.06	0.30	0.17	0.17	0.34	0.08	0.08	0.29	0.13	0.20
Avail Cap(c_a), veh/h	427	851	836	427	851	882	433	864	899	433	910	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	12.8	12.9	29.4	24.5	24.5	28.1	20.0	20.0	29.5	22.7	13.1
Incr Delay (d2), s/veh	34.7	0.1	0.1	2.5	0.8	0.8	1.8	0.2	0.2	2.5	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.9	0.6	0.7	0.6	1.0	1.0	1.0	0.7	0.7	0.5	0.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.2	12.9	13.0	32.0	25.3	25.3	29.9	20.2	20.2	32.0	23.1	14.1
LnGrp LOS	E	B	B	C	C	C	C	C	C	C	C	B
Approach Vol, veh/h		493			97			103			105	
Approach Delay, s/veh		50.8			26.6			23.9			20.4	
Approach LOS		D			C			C			C	

Timer Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G Rc), s	22.0	14.8	9.9	15.9	6.9	30.0	6.8	19.1
Change Period (Rc), s	7.0	7	6	6	4.6	7.0	4.6	6
Ma Green Setting (Gma), s	15.0	30	15	30	15.0	30.0	15.0	30
Ma Q Clear Time (g c I1), s	16.3	3.2	3.3	3.3	2.7	3.0	2.6	2.9
Green E t Time (p c), s	0.0	0.7	0.0	0.7	0.0	0.7	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	40.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase ma green.

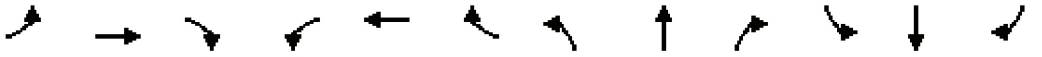
HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	210	62	87	287	75	202
Future Volume (vph)	210	62	87	287	75	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		4.0	5.0	4.2	4.2
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3458		1752	3505	3367	1553
Flt Permitted	1.00		0.48	1.00	0.95	1.00
Satd. Flow (perm)	3458		878	3505	3367	1553
Peak hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Ad . Flow (vph)	221	65	92	302	79	213
RTOR Reduction (vph)	23	0	0	0	0	118
Lane Group Flow (vph)	263	0	92	302	79	95
Confl. Peds. (#/hr)		13				
Confl. Bikes (#/hr)		2				2
Heavy Vehicles (%)	0%	0%	3%	3%	4%	4%
Turn Type	NA		pm pt	NA	Prot	pt ov
Protected Phases	6		5	2	4	4 5
Permitted Phases			2			
Actuated Green, G (s)	19.0		30.4	23.3	11.0	22.6
Effective Green, g (s)	19.0		30.4	23.3	11.0	22.6
Actuated g/C Ratio	0.38		0.60	0.46	0.22	0.45
Clearance Time (s)	5.0		4.0	5.0	4.2	
Vehicle E tension (s)	6.9		3.0	6.6	6.7	
Lane Grp Cap (vph)	1298		655	1613	731	693
v/s Ratio Prot	0.08		c0.02	c0.09	0.02	c0.06
v/s Ratio Perm			0.06			
v/c Ratio	0.20		0.14	0.19	0.11	0.14
Uniform Delay, d1	10.7		4.4	8.1	15.9	8.3
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3		0.1	0.2	0.2	0.3
Delay (s)	10.9		4.5	8.2	16.1	8.6
Level of Service	B		A	A	B	A
Approach Delay (s)	10.9			7.4	10.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	13.2
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Future Thursday PM



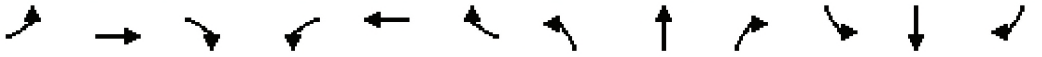
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	99	730	50	110	10	698	193	67	31	261	4
Future Volume (veh/h)	18	99	730	50	110	10	698	193	67	31	261	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1707	1707	1707	1203	1203	1203	1811	1811	1811	1811	1811	1811
Ad Flow Rate, veh/h	19	106	785	54	118	8	751	208	49	33	281	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	13	13	13	47	47	47	6	6	6	6	6	6
Cap, veh/h	101	444	1229	344	381	26	746	793	182	157	542	6
Arrive On Green	0.06	0.26	0.26	0.15	0.34	0.34	0.22	0.29	0.29	0.09	0.16	0.16
Sat Flow, veh/h	1626	1707	2547	2224	1114	76	3346	2765	636	1725	3487	37
Grp Volume(v), veh/h	19	106	785	54	0	126	751	127	130	33	139	145
Grp Sat Flow(s),veh/h/ln	1626	1707	1273	1112	0	1190	1673	1721	1680	1725	1721	1804
Q Serve(g_s), s	1.1	4.7	22.2	2.0	0.0	7.5	21.5	5.5	5.7	1.7	7.1	7.2
Cycle Q Clear(g_c), s	1.1	4.7	22.2	2.0	0.0	7.5	21.5	5.5	5.7	1.7	7.1	7.2
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.38	1.00		0.02
Lane Grp Cap(c), veh/h	101	444	1229	344	0	407	746	494	482	157	267	280
V/C Ratio(X)	0.19	0.24	0.64	0.16	0.00	0.31	1.01	0.26	0.27	0.21	0.52	0.52
Avail Cap(c_a), veh/h	354	460	1254	369	0	407	746	494	482	375	383	402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	28.2	18.7	35.3	0.0	23.4	37.5	26.5	26.6	40.6	37.4	37.4
Incr Delay (d2), s/veh	0.9	0.3	1.1	0.2	0.0	0.4	34.8	0.3	0.3	0.7	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	3.6	10.7	1.0	0.0	3.9	17.9	4.0	4.1	1.3	5.5	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.8	28.5	19.7	35.5	0.0	23.8	72.3	26.8	26.9	41.3	39.0	38.9
LnGrp LOS	D	C	B	D	A	C	F	C	C	D	D	D
Approach Vol, veh/h		910			180			1008			317	
Approach Delay, s/veh		21.3			27.3			60.7			39.2	
Approach LOS		C			C			E			D	

Timer Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G Rc), s	14.3	33.2	18.9	30.1	27.0	20.5	11.0	38.0
Change Period (Rc), s	5.5	5.5	4.0	5.0	5.5	5.5	5.0	5
Ma Green Setting (Gma), s	21	22	16.0	26.0	22	22	21.0	21
Ma Q Clear Time (g c I1), s	3.7	7.7	4.0	24.2	23.5	9.2	3.1	9.5
Green E t Time (p c), s	0.0	1.1	0.1	0.8	0.0	1.2	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	40.5
HCM 6th LOS	D

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	129	1056	15	85	0	481	794	13	95	855	90
Future Volume (veh/h)	44	129	1056	15	85	0	481	794	13	95	855	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1841	1841	1841	1900	1900	1900	1885	1885	1885	1870	1870	1870
Ad Flow Rate, veh/h	47	139	573	16	91	0	517	854	13	102	919	30
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	0	0	0	1	1	1	2	2	2
Cap, veh/h	147	312	851	69	242	359	502	1468	22	329	1203	527
Arrive On Green	0.08	0.17	0.17	0.04	0.13	0.00	0.14	0.41	0.41	0.10	0.34	0.34
Sat Flow, veh/h	1753	1841	2685	1810	1900	1610	3483	3611	55	3456	3554	1558
Grp Volume(v), veh/h	47	139	573	16	91	0	517	424	443	102	919	30
Grp Sat Flow(s),veh/h/ln	1753	1841	1342	1810	1900	1610	1742	1791	1875	1728	1777	1558
Q Serve(g_s), s	1.9	5.0	2.4	0.6	3.2	0.0	10.6	13.5	13.5	2.0	17.0	0.6
Cycle Q Clear(g_c), s	1.9	5.0	2.4	0.6	3.2	0.0	10.6	13.5	13.5	2.0	17.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	147	312	851	69	242	359	502	728	762	329	1203	527
V/C Ratio(X)	0.32	0.45	0.67	0.23	0.38	0.00	1.03	0.58	0.58	0.31	0.76	0.06
Avail Cap(c_a), veh/h	238	312	851	664	697	744	502	728	762	376	1203	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	27.4	8.6	34.3	29.4	0.0	31.5	17.0	17.0	31.0	21.7	6.8
Incr Delay (d2), s/veh	2.5	4.6	4.2	1.7	1.0	0.0	48.1	3.4	3.2	0.5	4.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	4.5	4.6	0.6	2.7	0.0	12.2	9.6	9.9	1.5	11.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	32.0	12.8	36.1	30.4	0.0	79.6	20.4	20.2	31.6	26.3	7.0
LnGrp LOS	C	C	B	D	C	A	F	C	C	C	C	A
Approach Vol, veh/h		759			107			1384			1051	
Approach Delay, s/veh		17.6			31.2			42.4			26.3	
Approach LOS		B			C			D			C	

Timer Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G Rc), s	11.0	35.3	8.8	18.5	16.0	30.3	11.9	15.4
Change Period (Rc), s	4.0	5.4	6.0	6	5.4	5.4	5.7	6.0
Ma Green Setting (Gma), s	8.0	28.9	27.0	10	10.6	24.9	10	27.0
Ma Q Clear Time (g c I1), s	4.0	15.5	2.6	7.0	12.6	19.0	3.9	5.2
Green E t Time (p c), s	0.1	7.1	0.0	1.6	0.0	3.0	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	44	24	38	31	24	20	934	48	3	1542	255
Future Volume (veh/h)	258	44	24	38	31	24	20	934	48	3	1542	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1870	1870	1870	1900	1900	1900	1885	1885	1885	1900	1900	1900
Ad Flow Rate, veh/h	297	51	11	44	36	3	23	1074	53	3	1772	262
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	0	0	0	1	1	1	0	0	0
Cap, veh/h	328	274	59	157	150	13	104	1914	94	12	2138	939
Arrive On Green	0.18	0.18	0.18	0.09	0.09	0.09	0.55	0.55	0.55	0.01	0.59	0.59
Sat Flow, veh/h	1781	1489	321	1810	1728	144	210	3473	171	1810	3610	1585
Grp Volume(v), veh/h	297	0	62	44	0	39	23	554	573	3	1772	262
Grp Sat Flow(s),veh/h/ln	1781	0	1810	1810	0	1872	210	1791	1853	1810	1805	1585
Q Serve(g_s), s	18.8	0.0	3.3	2.6	0.0	2.2	11.3	23.1	23.1	0.2	45.2	9.3
Cycle Q Clear(g_c), s	18.8	0.0	3.3	2.6	0.0	2.2	51.8	23.1	23.1	0.2	45.2	9.3
Prop In Lane	1.00		0.18	1.00		0.08	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	328	0	334	157	0	163	104	987	1021	12	2138	939
V/C Ratio(X)	0.90	0.00	0.19	0.28	0.00	0.24	0.22	0.56	0.56	0.26	0.83	0.28
Avail Cap(c_a), veh/h	356	0	362	378	0	391	104	987	1021	126	2138	939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.91	0.91	0.91	0.62	0.62	0.62
Uniform Delay (d), s/veh	45.9	0.0	39.6	49.1	0.0	49.0	41.4	16.8	16.8	56.9	18.8	11.5
Incr Delay (d2), s/veh	24.5	0.0	0.3	1.0	0.0	0.8	4.4	2.1	2.0	7.2	2.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.8	0.0	2.7	2.2	0.0	1.9	1.3	14.4	14.8	0.2	23.5	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.4	0.0	39.9	50.1	0.0	49.7	45.8	18.9	18.8	64.1	21.2	11.9
LnGrp LOS	E	A	D	D	A	D	D	B	B	E	C	B
Approach Vol, veh/h		359			83			1150			2037	
Approach Delay, s/veh		65.1			49.9			19.4			20.1	
Approach LOS		E			D			B			C	

Timer Assigned Phs		2		4	5	6		8				
Phs Duration (G Rc), s		73.0		26.6	4.7	68.3		15.4				
Change Period (Rc), s		4.9		5.4	4.0	4.9		5.4				
Ma Green Setting (Gma), s		52.3		23	8.0	40.3		24.0				
Ma Q Clear Time (g c I1), s		47.2		20.8	2.2	53.8		4.6				
Green E t Time (p c), s		4.9		0.3	0.0	0.0		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	2	51	2	3	0	40	801	2	0	1451	154
Future Volume (veh/h)	156	2	51	2	3	0	40	801	2	0	1451	154
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		1.00	0.99		1.00	1.00		1.00	1.00		1.00
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	0	1885	1885	1885	1885	1885	1885
Ad Flow Rate, veh/h	170	2	9	2	3	0	43	871	1	0	1577	129
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	216	303	256	208	99	0	187	2091	929	0	2091	929
Arrive On Green	0.12	0.16	0.16	0.01	0.05	0.00	0.58	0.58	0.58	0.00	0.58	0.58
Sat Flow, veh/h	1810	1900	1604	1810	1900	0	289	3582	1591	0	3676	1591
Grp Volume(v), veh/h	170	2	9	2	3	0	43	871	1	0	1577	129
Grp Sat Flow(s),veh/h/ln	1810	1900	1604	1810	1900	0	289	1791	1591	0	1791	1591
Q Serve(g_s), s	5.8	0.1	0.3	0.0	0.1	0.0	8.3	8.5	0.0	0.0	20.9	2.3
Cycle Q Clear(g_c), s	5.8	0.1	0.3	0.0	0.1	0.0	29.2	8.5	0.0	0.0	20.9	2.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	216	303	256	208	99	0	187	2091	929	0	2091	929
V/C Ratio(X)	0.79	0.01	0.04	0.01	0.03	0.00	0.23	0.42	0.00	0.00	0.75	0.14
Avail Cap(c_a), veh/h	227	798	674	412	804	0	198	2223	987	0	2223	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	22.6	22.7	28.0	28.7	0.0	20.7	7.3	5.5	0.0	9.9	6.0
Incr Delay (d2), s/veh	16.1	0.0	0.1	0.0	0.1	0.0	1.8	0.4	0.0	0.0	1.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.0	0.0	0.2	0.1	0.1	0.0	1.1	4.6	0.0	0.0	10.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	22.6	22.7	28.0	28.8	0.0	22.5	7.7	5.5	0.0	11.6	6.1
LnGrp LOS	D	C	C	C	C	A	C	A	A	A	B	A
Approach Vol, veh/h		181			5			915			1706	
Approach Delay, s/veh		42.1			28.5			8.4			11.2	
Approach LOS		D			C			A			B	

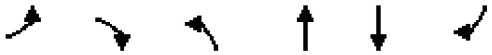
Timer Assigned Phs		2	3	4		6	7	8				
Phs Duration (G Rc), s		42.4	11.8	9.5		42.4	5.0	16.4				
Change Period (Rc), s		5.2	4.2	6.2		5.2	4.2	6.2				
Ma Green Setting (Gma), s		40	8	27		40	8	27				
Ma Q Clear Time (g c I1), s		22.9	7.8	2.1		31.2	2.0	2.3				
Green E t Time (p c), s		14.1	0.0	0.0		6.1	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase ma green.

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	145	64	53	676	1227	230
Future Volume (veh/h)	145	64	53	676	1227	230
Initial Q (Qb), veh	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach	No			No	No	
Ad Sat Flow, veh/h/ln	1856	1856	1870	1870	1885	1885
Ad Flow Rate, veh/h	165	67	60	768	1394	184
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	2	2	1	1
Cap, veh/h	495	375	338	2395	1749	758
Arrive On Green	0.14	0.14	0.09	0.67	0.49	0.49
Sat Flow, veh/h	3428	1572	1781	3647	3676	1552
Grp Volume(v), veh/h	165	67	60	768	1394	184
Grp Sat Flow(s),veh/h/ln	1714	1572	1781	1777	1791	1552
Q Serve(g_s), s	2.6	2.1	0.8	5.5	19.9	4.2
Cycle Q Clear(g_c), s	2.6	2.1	0.8	5.5	19.9	4.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	495	375	338	2395	1749	758
V/C Ratio(X)	0.33	0.18	0.18	0.32	0.80	0.24
Avail Cap(c_a), veh/h	1290	740	433	2668	1834	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	18.5	9.5	4.1	13.1	9.1
Incr Delay (d2), s/veh	0.4	0.2	0.2	0.1	2.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	0.0	0.4	2.2	11.4	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.9	18.7	9.8	4.3	15.9	9.4
LnGrp LOS	C	B	A	A	B	A
Approach Vol, veh/h	232			828	1578	
Approach Delay, s/veh	22.4			4.7	15.1	
Approach LOS	C			A	B	

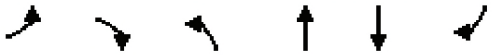
Timer Assigned Phs	1	2		4		6
Phs Duration (G Rc), s	11.4	35.4		14.4		46.7
Change Period (Rc), s	5.6	5.5		5.6		5.5
Ma Green Setting (Gma), s	9.0	31		23.0		46
Ma Q Clear Time (g c I1), s	2.8	21.9		4.6		7.5
Green E t Time (p c), s	0.0	7.9		0.7		9.9

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase ma green.

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	442	4	15	299	665	624
Future Volume (veh/h)	442	4	15	299	665	624
Initial Q (Qb), veh	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach	No			No	No	
Ad Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Ad Flow Rate, veh/h	497	2	17	336	747	463
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	873	455	303	1864	1334	978
Arrive On Green	0.25	0.25	0.03	0.52	0.37	0.37
Sat Flow, veh/h	3510	1610	1810	3705	3705	1562
Grp Volume(v), veh/h	497	2	17	336	747	463
Grp Sat Flow(s),veh/h/ln	1755	1610	1810	1805	1805	1562
Q Serve(g_s), s	6.1	0.0	0.3	2.5	8.1	7.9
Cycle Q Clear(g_c), s	6.1	0.0	0.3	2.5	8.1	7.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	873	455	303	1864	1334	978
V/C Ratio(X)	0.57	0.00	0.06	0.18	0.56	0.47
Avail Cap(c_a), veh/h	1805	882	535	2777	1783	1172
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	12.7	8.8	6.4	12.4	5.1
Incr Delay (d2), s/veh	1.6	0.0	0.1	0.1	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	0.0	0.2	1.2	4.9	6.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.9	12.7	8.9	6.4	12.9	5.6
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	499			353	1210	
Approach Delay, s/veh	17.8			6.6	10.1	
Approach LOS	B			A	B	

Timer Assigned Phs	1	2				6	8
Phs Duration (G Rc), s	7.3	24.2				31.5	17.9
Change Period (Rc), s	5.6	6				6	5.6
Ma Green Setting (Gma), s	8.0	24				38	25.4
Ma Q Clear Time (g c I1), s	2.3	10.1				4.5	8.1
Green E t Time (p c), s	0.0	8.0				3.5	4.2

Intersection Summary	
HCM 6th Ctrl Delay	11.4
HCM 6th LOS	B

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	4	0	30	0	294	0	427	227	0
Future Vol, veh/h	0	0	0	4	0	30	0	294	0	427	227	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	4	0	34	0	330	0	480	255	0
Number of Lanes	0	1	0	0	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	1
HCM Control Delay	0	9.2	8.3	15.8
HCM LOS		A	A	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	0%	12%	100%	0%	0%
Vol Thru, %	100%	100%	100%	100%	0%	0%	100%	100%
Vol Right, %	0%	0%	0%	0%	88%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	147	147	0	34	427	114	114
LT Vol	0	0	0	0	4	427	0	0
Through Vol	0	147	147	0	0	0	114	114
RT Vol	0	0	0	0	30	0	0	0
Lane Flow Rate	0	165	165	0	38	480	128	128
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0.241	0.163	0	0.064	0.713	0.172	0.111
Departure Headway (Hd)	5.246	5.246	3.542	6.648	6.006	5.349	4.847	3.142
Convergence, /N	es	es	es	es	es	es	es	es
Cap	0	685	1011	0	594	676	740	1136
Service Time	2.977	2.977	1.272	4.418	3.766	3.082	2.581	0.874
HCM Lane V/C Ratio	0	0.241	0.163	0	0.064	0.71	0.173	0.113
HCM Control Delay	8	9.6	7	9.4	9.2	20.3	8.6	6.3
HCM Lane LOS	N	A	A	N	A	C	A	A
HCM 95th tile Q	0	0.9	0.6	0	0.2	6	0.6	0.4

Intersection	
Int Delay, s/veh	6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	204	96	6	158	75
Future Vol, veh/h	0	204	96	6	158	75
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None		None		None
Storage Length		0			160	
Veh in Median Storage, #	0		0			0
Grade, %	0		0			0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	229	108	7	178	84

Ma or/Minor	Minor1		Ma or1		Ma or2	
Conflicting Flow All		59	0	0	116	0
Stage 1						
Stage 2						
Critical Hdwy		6.9			4.1	
Critical Hdwy Stg 1						
Critical Hdwy Stg 2						
Follow up Hdwy		3.3			2.2	
Pot Cap 1 Maneuver	0	1001			1485	
Stage 1	0					
Stage 2	0					
Platoon blocked, %						
Mov Cap 1 Maneuver		1000			1484	
Mov Cap 2 Maneuver						
Stage 1						
Stage 2						

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	5.3
HCM LOS	A		

Minor Lane/Ma or Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)			1000	1484	
HCM Lane V/C Ratio			0.229	0.12	
HCM Control Delay (s)			9.7	7.8	
HCM Lane LOS			A	A	
HCM 95th %tile Q(veh)			0.9	0.4	

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	24	0	31	0	69	51	14	67	0
Future Vol, veh/h	0	0	0	24	0	31	0	69	51	14	67	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	27	0	35	0	78	57	16	75	0
Number of Lanes	0	1	0	0	1	0	0	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	1
HCM Control Delay	0	7.9	7.7	7
HCM LOS		A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	44%	100%	0%	0%
Vol Thru, %	100%	31%	100%	0%	0%	100%	100%
Vol Right, %	0%	69%	0%	56%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	46	74	0	55	14	34	34
LT Vol	0	0	0	24	14	0	0
Through Vol	46	23	0	0	0	34	34
RT Vol	0	51	0	31	0	0	0
Lane Flow Rate	52	83	0	62	16	38	38
Geometry Grp	8	8	7	7	7	7	7
Degree of Util (X)	0.068	0.098	0	0.082	0.023	0.049	0.031
Departure Headway (Hd)	4.741	4.258	5.038	4.801	5.181	4.68	2.976
Convergence, /N	es	es	es	es	es	es	es
Cap	745	829	0	751	684	756	1177
Service Time	2.535	2.051	2.74	2.501	2.966	2.464	0.76
HCM Lane V/C Ratio	0.07	0.1	0	0.083	0.023	0.05	0.032
HCM Control Delay	7.9	7.5	7.7	7.9	8.1	7.7	5.9
HCM Lane LOS	A	A	N	A	A	A	A
HCM 95th tile Q	0.2	0.3	0	0.3	0.1	0.2	0.1

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	2	17	0	3	3	23	21	0	0	22	62
Future Vol, veh/h	91	2	17	0	3	3	23	21	0	0	22	62
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	106	2	20	0	3	3	27	24	0	0	26	72
Number of Lanes	1	1	1	0	2	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	3
HCM Control Delay	8.7	7.6	8.3	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	77%	0%	100%	0%	0%	0%	0%	0%	0%
Vol Thru, %	23%	100%	0%	100%	0%	100%	25%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	75%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	14	91	2	17	2	4	22	62
LT Vol	23	0	91	0	0	0	0	0	0
Through Vol	7	14	0	2	0	2	1	22	0
RT Vol	0	0	0	0	17	0	3	0	62
Lane Flow Rate	35	16	106	2	20	2	5	26	72
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.053	0.023	0.159	0.003	0.023	0.003	0.006	0.035	0.086
Departure Headway (Hd)	5.444	5.06	5.407	4.906	4.205	5.165	4.638	4.995	4.295
Convergence, /N	es	es	es	es	es	es	es	es	es
Cap	660	709	666	731	853	694	772	719	836
Service Time	3.161	2.777	3.124	2.622	1.921	2.889	2.362	2.71	2.009
HCM Lane V/C Ratio	0.053	0.023	0.159	0.003	0.023	0.003	0.006	0.036	0.086
HCM Control Delay	8.5	7.9	9.1	7.6	7	7.9	7.4	7.9	7.4
HCM Lane LOS	A	A	A	A	A	A	A	A	A
HCM 95th tile Q	0.2	0.1	0.6	0	0.1	0	0	0.1	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	101	15	6	78	17	26	64	4	10	50	352
Future Volume (veh/h)	255	101	15	6	78	17	26	64	4	10	50	352
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1885	1885	1885
Ad Flow Rate, veh/h	293	116	6	7	90	3	30	74	2	11	57	89
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	1
Cap, veh/h	305	1164	60	27	488	16	96	832	22	40	332	281
Arrive On Green	0.17	0.33	0.33	0.01	0.14	0.14	0.05	0.23	0.23	0.02	0.18	0.18
Sat Flow, veh/h	1810	3491	179	1810	3565	118	1810	3589	97	1795	1885	1595
Grp Volume(v), veh/h	293	60	62	7	45	48	30	37	39	11	57	89
Grp Sat Flow(s),veh/h/ln	1810	1805	1865	1810	1805	1879	1810	1805	1881	1795	1885	1595
Q Serve(g_s), s	9.0	1.3	1.3	0.2	1.2	1.3	0.9	0.9	0.9	0.3	1.4	2.0
Cycle Q Clear(g_c), s	9.0	1.3	1.3	0.2	1.2	1.3	0.9	0.9	0.9	0.3	1.4	2.0
Prop In Lane	1.00		0.10	1.00		0.06	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	305	602	622	27	247	257	96	418	436	40	332	281
V/C Ratio(X)	0.96	0.10	0.10	0.26	0.18	0.19	0.31	0.09	0.09	0.27	0.17	0.32
Avail Cap(c_a), veh/h	305	1157	1196	259	1112	1158	259	679	708	257	709	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	12.8	12.8	27.2	21.3	21.3	25.4	16.8	16.8	26.8	19.6	11.3
Incr Delay (d2), s/veh	41.2	0.1	0.1	5.1	0.8	0.8	1.8	0.2	0.2	3.6	0.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.4	0.9	0.9	0.2	1.0	1.0	0.7	0.6	0.7	0.3	1.1	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	13.0	13.0	32.3	22.1	22.1	27.3	17.0	17.0	30.4	20.2	12.9
LnGrp LOS	E	B	B	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		415			100			106			157	
Approach Delay, s/veh		49.1			22.8			19.9			16.8	
Approach LOS		D			C			B			B	

Timer Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G Rc), s	16.4	14.6	9.0	15.8	5.4	25.6	5.9	18.9
Change Period (Rc), s	7.0	7	6	6	4.6	7.0	4.6	6
Ma Green Setting (Gma), s	9.4	34	8	21	8.0	35.8	8.0	21
Ma Q Clear Time (g c I1), s	11.0	3.3	2.9	4.0	2.2	3.3	2.3	2.9
Green E t Time (p c), s	0.0	1.0	0.0	1.0	0.0	1.3	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase ma green.

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	299	69	75	376	64	90
Future Volume (vph)	299	69	75	376	64	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		4.0	5.0	4.2	4.2
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3492		1787	3574	3502	1615
Flt Permitted	1.00		0.51	1.00	0.95	1.00
Satd. Flow (perm)	3492		966	3574	3502	1615
Peak hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Ad . Flow (vph)	308	71	77	388	66	93
RTOR Reduction (vph)	35	0	0	0	0	65
Lane Group Flow (vph)	344	0	77	388	66	28
Confl. Peds. (#/hr)		4				
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Turn Type	NA		pm pt	NA	Prot	pt ov
Protected Phases	6		5	2	4	4 5
Permitted Phases			2			
Actuated Green, G (s)	22.4		26.8	23.0	5.2	13.2
Effective Green, g (s)	22.4		26.8	23.0	5.2	13.2
Actuated g/C Ratio	0.50		0.60	0.52	0.12	0.30
Clearance Time (s)	5.0		4.0	5.0	4.2	
Vehicle E tension (s)	6.9		3.0	6.6	6.7	
Lane Grp Cap (vph)	1753		650	1843	408	477
v/s Ratio Prot	0.10		c0.01	c0.11	c0.02	0.02
v/s Ratio Perm			0.06			
v/c Ratio	0.20		0.12	0.21	0.16	0.06
Uniform Delay, d1	6.1		3.7	5.9	17.7	11.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		0.1	0.2	0.6	0.2
Delay (s)	6.3		3.8	6.1	18.4	11.4
Level of Service	A		A	A	B	B
Approach Delay (s)	6.3			5.7	14.3	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	44.6	Sum of lost time (s)	13.2
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Future Sunday PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	344	806	30	3	6	1016	176	21	13	160	23
Future Volume (veh/h)	28	344	806	30	3	6	1016	176	21	13	160	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1441	1441	1441	1159	1159	1159	1885	1885	1885	1752	1752	1752
Ad Flow Rate, veh/h	30	374	876	33	3	2	1104	191	16	14	174	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	31	31	31	50	50	50	1	1	1	10	10	10
Cap, veh/h	110	373	1253	246	185	123	1128	1357	113	78	398	36
Arrive On Green	0.08	0.26	0.26	0.12	0.29	0.29	0.32	0.41	0.41	0.05	0.13	0.13
Sat Flow, veh/h	1372	1441	2149	2141	649	432	3483	3342	277	1668	3076	279
Grp Volume(v), veh/h	30	374	876	33	0	5	1104	101	106	14	93	97
Grp Sat Flow(s),veh/h/ln	1372	1441	1074	1071	0	1081	1742	1791	1828	1668	1664	1692
Q Serve(g_s), s	2.4	30.0	30.0	1.6	0.0	0.4	36.3	4.1	4.2	0.9	6.0	6.1
Cycle Q Clear(g_c), s	2.4	30.0	30.0	1.6	0.0	0.4	36.3	4.1	4.2	0.9	6.0	6.1
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.15	1.00		0.17
Lane Grp Cap(c), veh/h	110	373	1253	246	0	308	1128	727	743	78	215	219
V/C Ratio(X)	0.27	1.00	0.70	0.13	0.00	0.02	0.98	0.14	0.14	0.18	0.43	0.44
Avail Cap(c_a), veh/h	249	373	1253	296	0	308	1128	727	743	303	309	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	42.9	17.0	46.1	0.0	29.7	38.7	21.6	21.7	53.0	46.5	46.6
Incr Delay (d2), s/veh	1.3	47.1	1.7	0.2	0.0	0.0	21.7	0.1	0.1	1.1	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	22.0	13.0	0.8	0.0	0.2	25.5	3.1	3.3	0.7	4.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	90.0	18.7	46.3	0.0	29.7	60.4	21.7	21.8	54.1	47.9	48.0
LnGrp LOS	D	F	B	D	A	C	E	C	C	D	D	D
Approach Vol, veh/h		1280			38			1311			204	
Approach Delay, s/veh		40.3			44.1			54.3			48.3	
Approach LOS		D			D			D			D	

Timer Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G Rc), s	10.9	52.5	17.3	35.0	43.0	20.5	14.3	38.0
Change Period (Rc), s	5.5	5.5	4.0	5.0	5.5	5.5	5.0	5
Ma Green Setting (Gma), s	21	38	16.0	30.0	38	22	21.0	25
Ma Q Clear Time (g c I1), s	2.9	6.2	3.6	32.0	38.3	8.1	4.4	2.4
Green E t Time (p c), s	0.0	1.1	0.0	0.0	0.0	0.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	47.4
HCM 6th LOS	D

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	257	752	9	432	0	565	663	21	179	572	75
Future Volume (veh/h)	13	257	752	9	432	0	565	663	21	179	572	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1826	1826	1826
Ad Flow Rate, veh/h	14	282	388	10	475	0	621	729	21	197	629	22
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	5	5	5
Cap, veh/h	59	539	1307	44	534	590	623	1327	38	289	920	403
Arrive On Green	0.03	0.29	0.29	0.02	0.28	0.00	0.18	0.37	0.37	0.09	0.27	0.27
Sat Flow, veh/h	1795	1885	2812	1810	1900	1610	3483	3553	102	3374	3469	1521
Grp Volume(v), veh/h	14	282	388	10	475	0	621	367	383	197	629	22
Grp Sat Flow(s),veh/h/ln	1795	1885	1406	1810	1900	1610	1742	1791	1865	1687	1735	1521
Q Serve(g_s), s	0.7	11.7	1.3	0.5	22.2	0.0	16.5	15.0	15.0	5.3	15.1	0.8
Cycle Q Clear(g_c), s	0.7	11.7	1.3	0.5	22.2	0.0	16.5	15.0	15.0	5.3	15.1	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	59	539	1307	44	534	590	623	669	696	289	920	403
V/C Ratio(X)	0.24	0.52	0.30	0.23	0.89	0.00	1.00	0.55	0.55	0.68	0.68	0.05
Avail Cap(c_a), veh/h	193	539	1307	527	641	681	623	669	696	291	920	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	27.8	6.1	44.4	32.0	0.0	38.1	22.9	22.9	41.2	30.6	16.0
Incr Delay (d2), s/veh	4.2	3.6	0.6	2.5	12.9	0.0	35.2	3.2	3.1	6.3	4.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	9.6	2.5	0.5	17.6	0.0	15.0	10.9	11.2	4.3	10.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	31.4	6.6	46.9	44.9	0.0	73.2	26.1	26.0	47.5	34.7	16.2
LnGrp LOS	D	C	A	D	D	A	E	C	C	D	C	B
Approach Vol, veh/h		684			485			1371			848	
Approach Delay, s/veh		17.7			44.9			47.4			37.2	
Approach LOS		B			D			D			D	

Timer Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G Rc), s	12.0	40.0	8.3	32.5	22.0	30.0	8.7	32.1
Change Period (Rc), s	4.0	5.4	6.0	6	5.4	5.4	5.7	6.0
Ma Green Setting (Gma), s	8.0	34.6	27.0	14	16.6	24.6	10	31.3
Ma Q Clear Time (g c I1), s	7.3	17.0	2.5	13.7	18.5	17.1	2.7	24.2
Green E t Time (p c), s	0.0	7.3	0.0	0.4	0.0	2.5	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	38.5
HCM 6th LOS	D

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

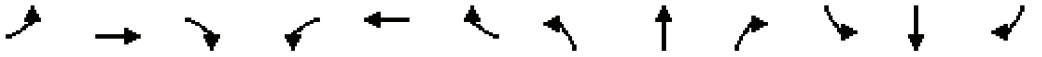
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	53	16	103	140	21	10	1096	42	5	1203	276
Future Volume (veh/h)	174	53	16	103	140	21	10	1096	42	5	1203	276
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1870	1870	1870	1841	1841	1841	1870	1870	1870	1900	1900	1900
Ad Flow Rate, veh/h	185	56	7	110	149	17	11	1166	43	5	1280	262
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	4	4	4	2	2	2	0	0	0
Cap, veh/h	228	209	26	204	189	22	200	2004	74	19	2234	982
Arrive On Green	0.13	0.13	0.13	0.12	0.12	0.12	0.57	0.57	0.57	0.01	0.62	0.62
Sat Flow, veh/h	1781	1628	203	1753	1622	185	336	3492	129	1810	3610	1587
Grp Volume(v), veh/h	185	0	63	110	0	166	11	593	616	5	1280	262
Grp Sat Flow(s),veh/h/ln	1781	0	1831	1753	0	1807	336	1777	1844	1810	1805	1587
Q Serve(g_s), s	11.6	0.0	3.6	6.8	0.0	10.3	2.3	24.6	24.6	0.3	24.1	8.7
Cycle Q Clear(g_c), s	11.6	0.0	3.6	6.8	0.0	10.3	21.2	24.6	24.6	0.3	24.1	8.7
Prop In Lane	1.00		0.11	1.00		0.10	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	228	0	235	204	0	210	200	1020	1058	19	2234	982
V/C Ratio(X)	0.81	0.00	0.27	0.54	0.00	0.79	0.05	0.58	0.58	0.27	0.57	0.27
Avail Cap(c_a), veh/h	356	0	366	366	0	377	200	1020	1058	126	2234	982
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.89	0.89	0.89	0.84	0.84	0.84
Uniform Delay (d), s/veh	48.8	0.0	45.3	47.9	0.0	49.4	20.7	15.7	15.7	56.5	12.9	10.0
Incr Delay (d2), s/veh	7.6	0.0	0.6	2.2	0.0	6.5	0.5	2.2	2.1	6.3	0.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.5	0.0	3.0	5.6	0.0	8.7	0.4	14.9	15.3	0.3	13.9	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.4	0.0	45.9	50.1	0.0	55.9	21.2	17.8	17.8	62.8	13.8	10.6
LnGrp LOS	E	A	D	D	A	E	C	B	B	E	B	B
Approach Vol, veh/h		248			276			1220			1547	
Approach Delay, s/veh		53.7			53.6			17.8			13.4	
Approach LOS		D			D			B			B	

Timer Assigned Phs		2		4	5	6		8				
Phs Duration (G Rc), s		76.1		20.1	5.2	70.9		18.8				
Change Period (Rc), s		4.9		5.4	4.0	4.9		5.4				
Ma Green Setting (Gma), s		52.3		23	8.0	40.3		24.0				
Ma Q Clear Time (g c I1), s		26.1		13.6	2.3	26.6		12.3				
Green E t Time (p c), s		18.9		0.6	0.0	9.9		0.9				

Intersection Summary	
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	2	30	0	5	0	32	1014	2	0	1184	114
Future Volume (veh/h)	100	2	30	0	5	0	32	1014	2	0	1184	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.97	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	0	1885	1885	1885	1885	1885	1885
Ad Flow Rate, veh/h	110	2	8	0	5	0	35	1114	1	0	1301	82
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	217	345	283	262	142	0	229	1852	807	0	1852	807
Arrive On Green	0.12	0.18	0.18	0.00	0.07	0.00	0.52	0.52	0.52	0.00	0.52	0.52
Sat Flow, veh/h	1810	1900	1559	1810	1900	0	395	3582	1561	0	3676	1560
Grp Volume(v), veh/h	110	2	8	0	5	0	35	1114	1	0	1301	82
Grp Sat Flow(s),veh/h/ln	1810	1900	1559	1810	1900	0	395	1791	1561	0	1791	1560
Q Serve(g_s), s	3.1	0.0	0.2	0.0	0.1	0.0	4.0	11.8	0.0	0.0	14.9	1.4
Cycle Q Clear(g_c), s	3.1	0.0	0.2	0.0	0.1	0.0	18.9	11.8	0.0	0.0	14.9	1.4
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	217	345	283	262	142	0	229	1852	807	0	1852	807
V/C Ratio(X)	0.51	0.01	0.03	0.00	0.04	0.00	0.15	0.60	0.00	0.00	0.70	0.10
Avail Cap(c_a), veh/h	268	942	773	506	949	0	241	1962	855	0	1962	855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	18.1	18.2	0.0	23.2	0.0	17.1	9.1	6.3	0.0	9.9	6.7
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.0	0.1	0.0	0.9	1.0	0.0	0.0	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	0.0	0.1	0.0	0.1	0.0	0.7	6.5	0.0	0.0	8.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	18.1	18.2	0.0	23.3	0.0	18.0	10.1	6.3	0.0	11.3	6.8
LnGrp LOS	C	B	B	A	C	A	B	B	A	A	B	A
Approach Vol, veh/h		120			5			1150			1383	
Approach Delay, s/veh		23.6			23.3			10.4			11.0	
Approach LOS		C			C			B			B	

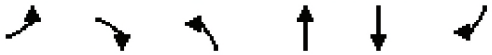
Timer Assigned Phs		2	3	4		6	7	8				
Phs Duration (G Rc), s		33.1	10.7	10.2		33.1	4.9	16.0				
Change Period (Rc), s		5.2	4.2	6.2		5.2	4.2	6.2				
Ma Green Setting (Gma), s		30	8	27		30	8	27				
Ma Q Clear Time (g c I1), s		16.9	5.1	2.1		20.9	0.0	2.2				
Green E t Time (p c), s		9.8	0.1	0.0		7.1	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase ma green.

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	111	43	55	936	1031	171
Future Volume (veh/h)	111	43	55	936	1031	171
Initial Q (Qb), veh	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach	No			No	No	
Ad Sat Flow, veh/h/ln	1781	1781	1856	1856	1900	1900
Ad Flow Rate, veh/h	126	41	62	1064	1172	142
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	8	8	3	3	0	0
Cap, veh/h	501	381	381	2271	1591	690
Arrive On Green	0.15	0.15	0.10	0.64	0.44	0.44
Sat Flow, veh/h	3291	1510	1767	3618	3705	1566
Grp Volume(v), veh/h	126	41	62	1064	1172	142
Grp Sat Flow(s),veh/h/ln	1646	1510	1767	1763	1805	1566
Q Serve(g_s), s	1.8	1.1	0.8	8.4	14.6	3.0
Cycle Q Clear(g_c), s	1.8	1.1	0.8	8.4	14.6	3.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	501	381	381	2271	1591	690
V/C Ratio(X)	0.25	0.11	0.16	0.47	0.74	0.21
Avail Cap(c_a), veh/h	1390	790	496	2648	1744	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	15.6	8.0	4.9	12.6	9.4
Incr Delay (d2), s/veh	0.3	0.1	0.2	0.2	1.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	0.0	0.4	3.3	8.7	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.6	15.8	8.2	5.2	14.5	9.6
LnGrp LOS	C	B	A	A	B	A
Approach Vol, veh/h	167			1126	1314	
Approach Delay, s/veh	19.4			5.4	14.0	
Approach LOS	B			A	B	

Timer Assigned Phs	1	2		4		6
Phs Duration (G Rc), s	11.1	29.5		13.9		40.6
Change Period (Rc), s	5.6	5.5		5.6		5.5
Ma Green Setting (Gma), s	9.0	26		23.0		41
Ma Q Clear Time (g c I1), s	2.8	16.6		3.8		10.4
Green E t Time (p c), s	0.0	7.4		0.5		13.8

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase ma green.

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	573	13	25	429	603	456
Future Volume (veh/h)	573	13	25	429	603	456
Initial Q (Qb), veh	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach	No			No	No	
Ad Sat Flow, veh/h/ln	1870	1870	1856	1856	1885	1885
Ad Flow Rate, veh/h	659	6	29	493	693	350
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	3	3	1	1
Cap, veh/h	1034	557	316	1710	1176	988
Arrive On Green	0.30	0.30	0.05	0.48	0.33	0.33
Sat Flow, veh/h	3456	1585	1767	3618	3676	1553
Grp Volume(v), veh/h	659	6	29	493	693	350
Grp Sat Flow(s),veh/h/ln	1728	1585	1767	1763	1791	1553
Q Serve(g_s), s	8.9	0.1	0.5	4.5	8.7	5.8
Cycle Q Clear(g_c), s	8.9	0.1	0.5	4.5	8.7	5.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1034	557	316	1710	1176	988
V/C Ratio(X)	0.64	0.01	0.09	0.29	0.59	0.35
Avail Cap(c_a), veh/h	1633	832	487	2493	1626	1183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	11.3	10.4	8.3	15.0	4.8
Incr Delay (d2), s/veh	1.8	0.0	0.2	0.1	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	0.1	0.3	2.4	5.5	5.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.1	11.4	10.6	8.4	15.7	5.1
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	665			522	1043	
Approach Delay, s/veh	18.0			8.6	12.2	
Approach LOS	B			A	B	

Timer Assigned Phs	1	2				6	8
Phs Duration (G Rc), s	8.4	23.7				32.1	21.7
Change Period (Rc), s	5.6	6				6	5.6
Ma Green Setting (Gma), s	8.0	24				38	25.4
Ma Q Clear Time (g c I1), s	2.5	10.7				6.5	10.9
Green E t Time (p c), s	0.0	6.9				5.4	5.2

Intersection Summary	
HCM 6th Ctrl Delay	13.1
HCM 6th LOS	B

Notes

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	19	0	427	0	255	361	0
Future Vol, veh/h	0	0	0	0	0	19	0	427	0	255	361	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	3	3	3	0	0	0
Mvmt Flow	0	0	0	0	0	22	0	497	0	297	420	0
Number of Lanes	0	1	0	0	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	1
HCM Control Delay	0	8.9	9	10
HCM LOS		A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	0%	0%	100%	0%	0%
Vol Thru, %	100%	100%	100%	100%	0%	0%	100%	100%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	214	214	0	19	255	181	181
LT Vol	0	0	0	0	0	255	0	0
Through Vol	0	214	214	0	0	0	181	181
RT Vol	0	0	0	0	19	0	0	0
Lane Flow Rate	0	248	248	0	22	297	210	210
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0	0.359	0.239	0	0.036	0.447	0.287	0.187
Departure Headway (Hd)	5.213	5.213	3.459	6.692	5.941	5.426	4.924	3.2
Convergence, /N	es	es	es	es	es	es	es	es
Cap	0	693	1040	0	600	664	730	1112
Service Time	2.93	2.93	1.176	4.453	3.698	3.155	2.653	0.946
HCM Lane V/C Ratio	0	0.358	0.238	0	0.037	0.447	0.288	0.189
HCM Control Delay	7.9	10.8	7.3	9.5	8.9	12.5	9.6	6.7
HCM Lane LOS	N	B	A	N	A	B	A	A
HCM 95th tile Q	0	1.6	0.9	0	0.1	2.3	1.2	0.7

Intersection	
Int Delay, s/veh	10

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	275	150	7	206	153
Future Vol, veh/h	0	275	150	7	206	153
Conflicting Peds, #/hr	0	0	0	240	240	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None		None		None
Storage Length		0			160	
Veh in Median Storage, #	0		0			0
Grade, %	0		0			0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	7	7	0	0
Mvmt Flow	0	320	174	8	240	178

Ma or/Minor	Minor1		Ma or1		Ma or2	
Conflicting Flow All		331	0	0	422	0
Stage 1						
Stage 2						
Critical Hdwy		6.9			4.1	
Critical Hdwy Stg 1						
Critical Hdwy Stg 2						
Follow up Hdwy		3.3			2.2	
Pot Cap 1 Maneuver	0	671			1148	
Stage 1	0					
Stage 2	0					
Platoon blocked, %						
Mov Cap 1 Maneuver		537			918	
Mov Cap 2 Maneuver						
Stage 1						
Stage 2						

Approach	WB	NB	SB
HCM Control Delay, s	21.1	0	5.9
HCM LOS	C		

Minor Lane/Ma or Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)			537	918	
HCM Lane V/C Ratio			0.595	0.261	
HCM Control Delay (s)			21.1	10.3	
HCM Lane LOS			C	B	
HCM 95th %tile Q(veh)			3.9	1	

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	31	0	74	0	85	39	15	134	0
Future Vol, veh/h	0	0	0	31	0	74	0	85	39	15	134	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	9	9	9	0	0	0
Mvmt Flow	0	0	0	36	0	86	0	99	45	17	156	0
Number of Lanes	0	1	0	0	1	0	0	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	1
HCM Control Delay	0	8.5	8.4	7.4
HCM LOS		A	A	A

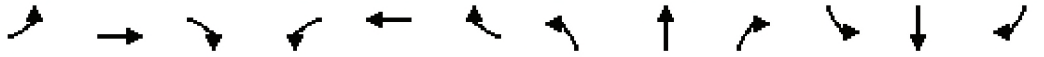
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	0%	30%	100%	0%	0%
Vol Thru, %	100%	42%	100%	0%	0%	100%	100%
Vol Right, %	0%	58%	0%	70%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	67	0	105	15	67	67
LT Vol	0	0	0	31	15	0	0
Through Vol	57	28	0	0	0	67	67
RT Vol	0	39	0	74	0	0	0
Lane Flow Rate	66	78	0	122	17	78	78
Geometry Grp	8	8	7	7	7	7	7
Degree of Util (X)	0.097	0.106	0	0.164	0.026	0.107	0.07
Departure Headway (Hd)	5.295	4.888	5.319	4.84	5.449	4.946	3.238
Convergence, /N	es	es	es	es	es	es	es
Cap	678	734	0	742	659	727	1108
Service Time	3.017	2.61	3.045	2.56	3.166	2.663	0.954
HCM Lane V/C Ratio	0.097	0.106	0	0.164	0.026	0.107	0.07
HCM Control Delay	8.6	8.2	8	8.5	8.3	8.3	6.2
HCM Lane LOS	A	A	N	A	A	A	A
HCM 95th tile Q	0.3	0.4	0	0.6	0.1	0.4	0.2

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	92	2	21	0	0	0	24	23	0	0	23	138
Future Vol, veh/h	92	2	21	0	0	0	24	23	0	0	23	138
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	10	10	10	0	0	0	0	0	0	0	0	0
Mvmt Flow	100	2	23	0	0	0	26	25	0	0	25	150
Number of Lanes	1	1	1	0	2	0	0	2	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	3
HCM Control Delay	9.2	0	8.4	7.9
HCM LOS	A		A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	76%	0%	100%	0%	0%	0%	0%	0%	0%
Vol Thru, %	24%	100%	0%	100%	0%	100%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	15	92	2	21	0	0	23	138
LT Vol	24	0	92	0	0	0	0	0	0
Through Vol	8	15	0	2	0	0	0	23	0
RT Vol	0	0	0	0	21	0	0	0	138
Lane Flow Rate	34	17	100	2	23	0	0	25	150
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.053	0.024	0.159	0.003	0.029	0	0	0.035	0.179
Departure Headway (Hd)	5.576	5.195	5.739	5.238	4.537	5.359	3.65	4.999	4.297
Convergence, /N	es	es	es	es	es	es	es	es	es
Cap	643	690	626	684	790	0	0	719	837
Service Time	3.301	2.921	3.465	2.964	2.262	3.093	1.384	2.713	2.012
HCM Lane V/C Ratio	0.053	0.025	0.16	0.003	0.029	0	0	0.035	0.179
HCM Control Delay	8.6	8	9.6	8	7.4	8.1	6.4	7.9	7.9
HCM Lane LOS	A	A	A	A	A	N	N	A	A
HCM 95th tile Q	0.2	0.1	0.6	0	0.1	0	0	0.1	0.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	101	31	17	139	21	34	67	12	16	56	232
Future Volume (veh/h)	370	101	31	17	139	21	34	67	12	16	56	232
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped Bike Ad (A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work one On Approach		No			No			No			No	
Ad Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1900	1900	1900	1900	1900	1900
Ad Flow Rate, veh/h	435	119	17	20	164	11	40	79	3	19	66	42
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	2	2	2	0	0	0	0	0	0
Cap, veh/h	476	1278	179	66	491	33	112	698	26	64	285	237
Arrive On Green	0.27	0.41	0.41	0.04	0.15	0.15	0.06	0.20	0.20	0.04	0.15	0.15
Sat Flow, veh/h	1767	3099	434	1781	3376	224	1810	3544	134	1810	1900	1576
Grp Volume(v), veh/h	435	67	69	20	86	89	40	40	42	19	66	42
Grp Sat Flow(s),veh/h/ln	1767	1763	1771	1781	1777	1824	1810	1805	1873	1810	1900	1576
Q Serve(g_s), s	16.6	1.6	1.7	0.8	3.0	3.1	1.5	1.3	1.3	0.7	2.1	1.3
Cycle Q Clear(g_c), s	16.6	1.6	1.7	0.8	3.0	3.1	1.5	1.3	1.3	0.7	2.1	1.3
Prop In Lane	1.00		0.25	1.00		0.12	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	476	727	730	66	258	265	112	355	369	64	285	237
V/C Ratio(X)	0.91	0.09	0.09	0.30	0.33	0.34	0.36	0.11	0.11	0.30	0.23	0.18
Avail Cap(c_a), veh/h	492	1159	1164	204	877	900	208	544	564	208	573	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	12.5	12.5	32.7	26.7	26.8	31.4	23.0	23.0	32.8	26.1	15.6
Incr Delay (d2), s/veh	21.2	0.1	0.1	2.6	1.7	1.7	1.9	0.3	0.3	2.6	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.5	1.1	1.2	0.7	2.5	2.6	1.2	1.0	1.0	0.6	1.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	12.6	12.6	35.3	28.4	28.4	33.3	23.3	23.3	35.3	27.1	16.5
LnGrp LOS	D	B	B	D	C	C	C	C	C	D	C	B
Approach Vol, veh/h		571			195			122			127	
Approach Delay, s/veh		38.0			29.1			26.6			24.8	
Approach LOS		D			C			C			C	

Timer Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G Rc), s	25.8	17.1	10.3	16.5	7.2	35.7	7.1	19.7
Change Period (Rc), s	7.0	7	6	6	4.6	7.0	4.6	6
Ma Green Setting (Gma), s	19.4	34	8	21	8.0	45.8	8.0	21
Ma Q Clear Time (g_c_I1), s	18.6	5.1	3.5	4.1	2.8	3.7	2.7	3.3
Green E t Time (p_c), s	0.1	2.0	0.0	0.7	0.0	1.6	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase ma green.

HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	287	64	90	390	77	207
Future Volume (vph)	287	64	90	390	77	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		4.0	5.0	4.2	4.2
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3489		1770	3539	3367	1553
Flt Permitted	1.00		0.50	1.00	0.95	1.00
Satd. Flow (perm)	3489		928	3539	3367	1553
Peak hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Ad . Flow (vph)	302	67	95	411	81	218
RTOR Reduction (vph)	36	0	0	0	0	140
Lane Group Flow (vph)	333	0	95	411	81	78
Confl. Peds. (#/hr)		13				
Confl. Bikes (#/hr)		2				2
Heavy Vehicles (%)	0%	0%	2%	2%	4%	4%
Turn Type	NA		pm pt	NA	Prot	pt ov
Protected Phases	6		5	2	4	4 5
Permitted Phases			2			
Actuated Green, G (s)	22.1		28.7	23.6	8.0	17.3
Effective Green, g (s)	22.1		28.7	23.6	8.0	17.3
Actuated g/C Ratio	0.46		0.59	0.49	0.17	0.36
Clearance Time (s)	5.0		4.0	5.0	4.2	
Vehicle E tension (s)	6.9		3.0	6.6	6.7	
Lane Grp Cap (vph)	1593		639	1725	556	555
v/s Ratio Prot	0.10		0.02	c0.12	0.02	c0.05
v/s Ratio Perm			0.07			
v/c Ratio	0.21		0.15	0.24	0.15	0.14
Uniform Delay, d1	7.9		4.3	7.2	17.3	10.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		0.1	0.2	0.4	0.4
Delay (s)	8.1		4.4	7.4	17.7	10.9
Level of Service	A		A	A	B	B
Approach Delay (s)	8.1			6.8	12.7	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	48.4	Sum of lost time (s)	13.2
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Appendix J
Comment Letters

Agencies

DEPARTMENT OF TRANSPORTATION
DISTRICT 7
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 266-3562
FAX (213) 897-1337
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Making Conservation a California Way of Life

December 20, 2024

Sarah Workman
Environmental Management Division
Los Angeles Harbor Department
425 S. Palos Verdes Street
San Pedro, CA 90731

RE: West Harbor Modification Project:
Draft Subsequent EIR
GTS # 07-LA-2022-04679
SCH # 2005061041
Vic. SR 47 PM 1.048

Dear Sarah Workman:

CALTRANS-1 Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced project. The proposed project involves the development of an approximately 100,000 square-foot-amphitheater on approximately 2 acres in the southern portion of the San Pedro Public Market Project site. The amphitheater would provide 6,200 seats and would host approximately 100 paid events per year, generally from April through November. The venue also could host smaller, local community events year-round. The Proposed Project also includes the addition of amusement attractions and a 175-foot diameter Ferris wheel, and improvements to the 208 E. 22nd Street Parking Lot to accommodate up to 2,600 parking stalls to be available for use by the larger San Pedro Waterfront. The Los Angeles Harbor Department is the Lead Agency under the California Environmental Quality Act (CEQA).

The closest state facility is SR 47. After reviewing the project's documents, Caltrans has the following comments:

Caltrans is in support of this project's pedestrian-oriented plans that help achieve state planning priorities contained in state law and meet state policy goals on transportation, VMT reduction, GHG emissions reduction, and/or betterment of the environment and human health. To achieve the goal of zero traffic-related

fatalities and serious injuries by 2050, Caltrans emphasizes the importance of enhancing pedestrian and bicyclist amenities in community destinations.

The most effective methods to reduce pedestrian and bicyclist exposure to vehicles are through physical design and geometrics, therefore Caltrans recommends the following improvements for this project:

- Promote transit usage and provide free bicycle parking valet service to attendees of large events at the site. Caltrans encourages the project and implement best practices for the siting and type of bicycle parking infrastructure (see Association of Pedestrian and Bicycle Professionals' (APBP) Essentials of Bike Parking).

CALTRANS-1 cont.

- Reducing the amount of car parking whenever possible. Research shows that abundant car parking enables and encourages driving, ultimately undermining a project's ability to encourage public transit and active modes of transportation. For any project to better promote public transit and reduce vehicle miles traveled, we recommend the implementation of Transportation Demand Management (TDM) strategies as an alternative to building an unnecessary amount of parking.

- Construct physically separated facilities such as Class IV bikeways, wide sidewalks, curb extensions, pedestrian refuge islands, landscaping, street furniture, and reductions in crossing distances through roadway narrowing.

- Include visual indicators such as pedestrian and bicyclist warning signage, flashing beacons, crosswalks, signage, and striping should be used in addition to physical design improvements to indicate to motorists that they can expect to see and yield to people walking or riding bikes.

Caltrans recommends the project conduct a post-construction VMT study to confirm there are no significant VMT impacts. Additionally, Caltrans advises limiting large truck travel and construction traffic to off-peak commute hours. A permit for any heavy construction equipment and or materials that require the use of oversized transport vehicles on State highways. If construction traffic is expected to cause issues on any State facilities, please submit a construction traffic control plan detailing potential impacts for Caltrans for review.

CALTRANS-1 cont.

If you have any questions, please feel free to contact Jaden Oloresisimo, the project coordinator, at Jaden.Oloresisimo@dot.ca.gov and refer to GTS # 07-LA-2022-04679.

Sincerely,

Anthony Higgins

Anthony Higgins
Acting LDR/CEQA Branch Chief

cc: State Clearinghouse

From: Olson, Brian@DOC
To: Ceqacomments
Cc: OPR State Clearinghouse; OLRA@DOC; Gomez, DarylAnne@DOC
Subject: West Harbor Modification Project - review comments
Date: Wednesday, December 11, 2024 12:54:28 PM
Attachments: image001.png

SCH Number
2005061041

Lead Agency
Port of Los Angeles

Document Title
West Harbor Modification Project

Document Type
SBE - Subsequent EIR

Received
11/6/2024

Present Land Use
General/Bulk Cargo – Non-Hazardous (Industrial/Commercial), [Q]M2-1, Light Industrial

Document Description
The Proposed Project would include the addition of a 6,200-person capacity Amphitheater and lawn venue, a 175-foot diameter Ferris Wheel and Amusement Attractions and improvements to the 208 E. 22nd Street Parking Lot to accommodate up to 2,600 parking stalls which would be available for use by the larger San Pedro Waterfront Area.

To whom it may concern—

Thank you for providing the Port of Los Angeles' Notice of Preparation (NOP) of a Supplemental EIR (SEIR) for our review. This email conveys the following recommendations from CGS concerning geologic and seismic hazard issues in the provided SEIR documents:

1. Tsunami Hazards

CGS-1

- The SEIR provides a discussion of tsunami inundation hazards within the Port area. We note the proposed project is within a CGS Tsunami Hazard Areas (THA). The Supplemental EIR should discuss and provide a map depicting these THAs, which are mapped along the entire California coast. The purpose of a THA is to assist public agencies in identifying their exposure to tsunami hazards. It is intended for local jurisdictional, coastal evacuation planning uses only. Additional information and map files can be found at the links below:
  https://www.conservation.ca.gov/cgs/tsunami
  https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps
  https://www.conservation.ca.gov/cgs/Documents/Publications/Tsunami-Maps/Tsunami_Hazard_Area_Map_Los_Angeles_County_a11y.pdf
- The City should also check to see if the proposed project is included in a Tsunami Design Zone established by the California Building Code (CBC). The CBC requires

CGS-1 cont.

certain design standards for essential/critical or larger structures within these zones. The following website provides additional information regarding Tsunami Design Zones: https://asce7tsunami.online/.

Please let me know if you have any questions.



@CAgeosurvey
FOLLOW US!

Brian Olson, CEG
Senior Engineering Geologist
Seismic Hazards Program
15 Years of Public Service

California Geological Survey
320 W. 4th Street, Suite 850, Los Angeles, CA 90013
M: (213) 507-1080

"A team is not a group of people who work together.
A team is a group of people who trust each other." – Simon Sinek

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TIM McOSKER
Councilmember, 15th District

January 10, 2025

Director of Environmental Management
Los Angeles Harbor Department
425 South Palos Verdes Street
San Pedro, CA 90731

Dear Director,

CD15-1 As the Councilmember representing the 15th District of the City of Los Angeles, I proudly support the West Harbor project and the proposed development of a 6,200-seat, 100,000-square-foot amphitheater on 2.1 acres of Port property leased to West Harbor. Over the past several years, the Office of Council District 15 has been dedicated to the restoration and revitalization of the LA Waterfront. I believe that the West Harbor project, along with all of its proposed amenities, is key to the success of this redevelopment effort in the San Pedro area.

CD15-2 While I fully support the project, relevant environmental factors must be addressed to ensure the quality of life of residents living near the proposed project and to protect the flora and fauna of the harbor area. Appropriate mitigation measures should be implemented to ensure that sound emitted from the project is properly documented. To this end, I would like to ensure that an additional receiver is added to the project scope, located between the Southwest Marine Facility and the United States Coast Guard Dock, directly across from the project. This area is used by marine wildlife and should be monitored closely.

CD15-3 The West Harbor project and its proposed amenities will positively impact the Harbor communities and serve as a source of economic development opportunities for generations to come. Council District 15 is in full support of the project, with the proposed addition of monitoring equipment to the sensitive areas referenced in this letter. Should you have any questions or concerns regarding this issue, please feel free to contact Aksel Palacios, my Director of Port & Capital Projects at (310) 732-4515 or via email at Aksel.Palacios@lacity.org.

Sincerely,

TIM McOSKER
Councilmember, 15th District

CITY OF RANCHO PALOS VERDES

January 10, 2025

Via Email
ceqacomments@portla.org

Lisa Wunder
Acting Director of Environmental Management
Los Angeles Harbor Department
425 South Palos Verdes Street
San Pedro, CA 90731

SUBJECT: Comments on the Draft Subsequent Environmental Impact Report (SEIR) for the West Harbor Modification Project

Dear Ms. Wunder,

The City of Rancho Palos Verdes has reviewed the Draft SEIR for the West Harbor Modification Project and offers the following comments for your consideration. We appreciate the extension of the public review and comment period until after the holiday season.

CRPV-1 Rancho Palos Verdes is a semi-rural, residential community, with a significant senior population and households with pets, especially dogs. Since plans for the 6,200-seat amphitheater were announced, residents of the Eastview neighborhood, which borders San Pedro, have shared repeated concerns with the City about potential noise impacts from performances and fireworks displays at this proposed venue.

CRPV-2 In comments on the Notice of Preparation for the SEIR, the City stated its expectation that the SEIR include a detailed noise analysis, prepared by a sound engineer, using measurable testing of noise impacts under various atmospheric conditions from the amplified sound system, fireworks displays, and crowds, including the diameter that these impacts would be experienced. While favorable and unfavorable atmospheric conditions were studied, the noise-sensitive locations in the Draft SEIR were limited to the immediate surrounding area. The radius should be expanded to adequately assess noise impacts on the Palos Verdes Peninsula community, including Rancho Palos Verdes, and provide specific data that establishes the decibel levels expected to be experienced.

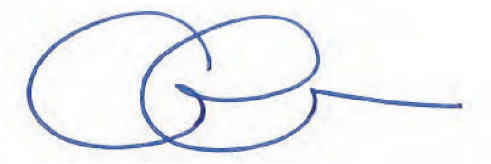
CRPV-3 We support the creation of a noise complaint hotline and/or website for the amphitheater, penalties for noise violations, and requirements for a noise monitoring station and sound-monitoring data reports. However, more information is needed on how these mitigation

CRPV-3 cont. measures will be enforced. This includes the specific provisions and enforcement mechanisms included in contracts, permits, or other agreements with amphitheater users. We remain concerned about the long-term significant and unavoidable noise impacts generated not only by the amphitheater, but by the proposed 25 offshore fireworks displays per year. These fireworks and explosives trigger flashbacks in veterans with post-traumatic stress disorder, cause pets to run away from home in terror, and cause

CRPV-4 anxiety, especially in seniors. Fireworks displays should be kept at a minimum for not only these reasons, but also because of the resulting air and water pollution in a region already heavily impacted by the twin ports. We therefore support the mitigation measure to replace firework displays with lighted drone displays to the extent possible.

Thank you for the opportunity to comment on the Draft SEIR, and we hope the final analysis will thoroughly address our concerns.

Sincerely,



Ara Mihranian
City Manager

cc: Tim McOsker, L.A. City Councilmember, 15th District
Rancho Palos Verdes City Council
Catherine Jun, Deputy City Manager

Department of Toxic Substances Control

Yana Garcia
Secretary for
Environmental Protection

Katherine M. Butler, MPH, Director
8800 Cal Center Drive
Sacramento, California 95826-3200
dtsc.ca.gov

Gavin Newsom
Governor

SENT VIA ELECTRONIC MAIL

January 8, 2025

Sarah Workman
Environmental Specialist III
Port of Los Angeles
425 S. Palos Verdes Street
San Pedro, CA 90731
sworkman@portla.org

RE: SUBSEQUENT ENVIRONMENTAL IMPACT REPORT FOR THE WEST HARBOR MODIFICATION PROJECT DATED NOVEMBER 06, 2024, STATE CLEARINGHOUSE NUMBER 2005061041

Dear Sarah Workman,

DTSC-1 The Department of Toxic Substances Control (DTSC) reviewed the Subsequent Environmental Impact Report (SBE) for the West Harbor Modification Project (Project). The Proposed Project would include the addition of a 6,200-person capacity Amphitheater and lawn venue, a 175-foot diameter Ferris Wheel and Amusement Attractions and improvements to the 208 E. 22nd Street Parking Lot to accommodate up to 2,600 parking stalls which would be available for use by the larger San Pedro Waterfront Area. DTSC recommends and requests consideration of the following comment:

DTSC-2 1. The proposed Project is within the boundaries of Gatx Annex Terminal -San Pedro Site which has a Land Use Covenant. Based on the proposed plan, the site is to be redeveloped into a parking lot. Since the purpose will not involve the facility type described in Section 3.01 of the Land Use Covenant, such as residential purposes, parks, hospitals for humans, schools for persons under 21 years of age, or day-care centers for children, and parking lot will be in

DTSC-2 cont.

open air, thus there is no risk for vapor intrusion, therefore the development of a parking lot is acceptable. However, because some contaminations above the screening level remain in the post-treatment soil, as indicated in the Closure Report GATX Terminals Corporation Annex Terminal Site dated July 30, 1993, any excavation deeper than 1 foot below ground surface will be required to follow details from a Soil Management Plan (SMP). Since there is currently no SMP, DTSC recommends the consultant to prepare a SMP and submit it to DTSC for review.

DTSC-3

DTSC appreciates the opportunity to comment on the SBE for the West Harbor Modification Project. Thank you for your assistance in protecting California's people and environment from the harmful effects of toxic substances. If you have any questions or would like clarification on DTSC's comments, please respond to this letter or via our CEQA Review email for additional guidance.

Sincerely,

Tamara Purvis

Tamara Purvis
Associate Environmental Planner
HWMP - Permitting Division – CEQA Unit
Department of Toxic Substances Control
Tamara.Purvis@dtsc.ca.gov

cc: (via email)

Governor's Office of Land Use and Climate Innovation
State Clearinghouse
State.Clearinghouse@opr.ca.gov

Julia Ye
Environmental Scientist
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Dave Kereazis
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Scott Wiley
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Scott.Wiley@dtsc.ca.gov

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES
822 KENNETH HAHN HALL OF ADMINISTRATION / LOS ANGELES, CALIFORNIA 90012
Telephone (213) 974-4444 / FAX (213) 626-6941

JANICE HAHN
SUPERVISOR, FOURTH DISTRICT

December 17, 2025

Port of Los Angeles Harbor Commission
425 S. Palos Verdes Street
San Pedro, CA 90731

Dear Members of the Board of Harbor Commissioners:

As the Los Angeles County Supervisor representing San Pedro and the Harbor Area, I am writing to express my strong support for the West Harbor Modification Project. This project is a vital investment in San Pedro's future, offering significant economic, cultural, and community benefits.

HAHN-1 The expanded amphitheater is key to this project's success. Attracting world-class performances and events will draw visitors to our waterfront, boosting tourism, creating jobs, and supporting local businesses. The amphitheater and the community lawn will serve as a gathering place for residents and visitors, strengthening San Pedro's identity as a regional destination for entertainment and recreation.

I appreciate the thoughtful mitigation measures outlined in the Draft SEIR, which address traffic, noise, and environmental concerns to ensure the project enhances the area while minimizing disruptions.

The West Harbor Modification Project is an exciting opportunity to revitalize our waterfront, drive economic development, and showcase San Pedro as a vibrant, welcoming community.

I look forward to seeing its transformative impact on the Harbor Area.

Thank you for your leadership and commitment to advancing this important project.

Sincerely,

JANICE HAHN
Supervisor, Fourth District
County of Los Angeles

JH:ap

Organizations

From: Tim Gill
To: Ceqacomments
Cc: info@westharborla.com
Subject: West Harbor
Date: Wednesday, December 4, 2024 10:30:28 AM

To whom it may concern

Our group has been in San Pedro with our business since 1988. We have lived thru the good, the bad and the ugly. Thanks in part to the efforts of our local family, the Johnsons, we are making immense progress in helping San Pedro realize its potential.

GILL-1 We fully support the requested modifications to the West Harbor project. It will do nothing but enhance the overall appeal and showcase San Pedro as a water front destination for Los Angeles and our local communities!

Feel free to contact me should you wish further comment.

Yours truly

Timothy J Gill

Tim Gill
Director

310-809-0600
TimG@adventresources.com
adventresources.com
235 W. 7th Street, San Pedro, California, 90731

Angels Gate Cultural Center

January 27, 2025

Port of Los Angeles Harbor Commission
425 S. Palos Verdes Street
San Pedro, CA 90731

Dear Harbor Commissioners,

I am writing to express our strong support for the West Harbor Modification Project. As representatives of Angels Gate Cultural Center, we are excited about the transformative potential this development holds for our waterfront community.

The proposed modifications, including the expanded amphitheater, 150-foot Ferris wheel, and additional parking facilities, align perfectly with our vision of creating a dynamic cultural destination that serves both locals and visitors. Our organization has been actively collaborating with the project team to integrate meaningful artistic elements throughout the development, ensuring that culture and creativity remain at the heart of this initiative.

The expanded amphitheater, in particular, represents a crucial investment in our community's cultural infrastructure. This versatile venue will:

AGCS-1

- Host cultural events and concerts that showcase local and national talent
- Provide a much-needed space for community celebrations and gatherings
- Create opportunities for art shows and exhibitions that highlight our vibrant creative community

The economic benefits of this project cannot be overstated. By creating a destination-worthy venue, we will:

- Keep entertainment dollars within our local economy
- Drive foot traffic to nearby businesses
- Create new employment opportunities in the arts and entertainment sector

The West Harbor Modification Project represents more than just physical improvements – it represents our community's commitment to arts, culture, and sustainable economic growth. We strongly urge the Commission to support this project, which will help establish our waterfront as a premier destination for cultural events and community gatherings.

Sincerely,

Amy Eriksen
Executive Director
Angels Gate Cultural Center

From:	connect art ort.la
To:	Ceqacomments
Cc:	a ren ohnson Alan ohnson cynthia art ort.la
Subject:	West Harbor letter of s ort
Date:	riday, December , 2024 1: :14 M

Dear Members of the Board of Harbor Commissioners,

As a stakeholder with ArtPORT LA and someone deeply involved in the arts and vibrant civic space, I am writing to express my enthusiastic support for the West Harbor Modification Project. This development promises to revitalize San Pedro's waterfront while creating spaces that celebrate creativity, culture, and community.

APOLA-1

The expanded amphitheater and community lawn will provide dynamic venues for world-class performances, cultural events, and artistic showcases. These spaces will not only highlight local talent but also attract new audiences, reinforcing San Pedro's reputation as a vibrant hub for arts and culture.

This project is also an important economic driver. By drawing visitors, creating jobs, and supporting local businesses, it will contribute to long-term growth and prosperity in our community. The mitigation measures outlined in the Draft SEIR demonstrate a thoughtful commitment to balancing progress with sustainability and the needs of the community.

The West Harbor Modification Project represents an exciting opportunity to elevate San Pedro as a destination for art, culture, and community engagement. Thank you for your leadership and dedication to bringing this vision to life.

Sincerely,

Cynthia Hirschhorn

Founder, ArtPORT LA
President, Unycyn Civic Arts
ArtPORT.la

2451 Signal Street
San Pedro, CA 90731

December 3, 2024

Harbor Commissioners of the Port of Los Angeles
425 South Palos Verdes Street
San Pedro, CA 90731

Dear Members of the Board of Harbor Commissioners,

As the Executive VP and COO at AltaSea at the Port of Los Angeles and longtime resident of San Pedro, I am writing to express my strong support for the West Harbor Modification Project. AltaSea staff and Jerico Development staff have worked hand-in-glove since the beginning of both projects and we would like to acknowledge Jerico's meaningful partnership with AltaSea and their commitment to environmental sustainability.

ASEA-1 This project exemplifies how thoughtful waterfront development can align with sustainability and community priorities. The developer's focus on environmentally responsible design aligns with AltaSea's mission to protect and enhance our harbor's natural resources. Features like the amphitheater, community lawn, and Ferris wheel will enrich our community while demonstrating how thoughtful development can create spaces that enhance quality of life and support local vitality.

I am confident that the West Harbor project will strengthen San Pedro as a vibrant, sustainable waterfront destination and highlight the power of collaboration in achieving lasting positive impacts.

Thank you for your consideration of this exciting project.

Jenny Krusoe
Executive VP & COO | AltaSea at the Port of Los Angeles

Comment Letter BGC

BOYS & GIRLS CLUBS
OF THE LOS ANGELES HARBOR

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Mark Waronek
Lee Williams
Patrick Wilson
Wyatt Wilson

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[illegible] Officer
Pete Settelmayer
Chief Development Officer
Sergio Carrillo
Chief Financial Officer
Brad Lane
Chief Operating Officer
Bryan Jebo
Chief HR Officer
Emilia Quesada

December 4, 2024

Los Angeles Board of Harbor Commissioners

Port of Los Angeles
425 S. Palos Verdes Street
San Pedro, CA 90731

Dear Board of Harbor Commissioners:

On behalf of the Boys & Girls Clubs of the Los Angeles Harbor (BGCLAH), I am writing to express our strong support for the West Harbor Modification Project, including the expanded amphitheater. This initiative represents an incredible opportunity to enhance the economic vitality of our community while providing unprecedented access to arts and culture for our youth, particularly those from underserved neighborhoods in the San Pedro, Wilmington, and Harbor areas.

The economic benefits of the West Harbor Modification Project cannot be overstated. By creating jobs and driving tourism, this development will inject vitality into our local economy, directly benefiting families and businesses. With the expanded amphitheater, we foresee not only a hub for cultural and entertainment events but also a venue that draws visitors from across the region, amplifying the economic ripple effects throughout our community.

Equally important, the expanded amphitheater will open doors to transformative experiences in arts and culture for the young people we serve. Many of our club members face barriers due to their zip code and limited resources, making access to such opportunities a rarity. This project will enable our youth to experience live performances, concerts, and cultural events that broaden their horizons, ignite their creativity, and inspire their futures. These are experiences that nurture empathy, understanding, and self-expression—qualities that contribute to building strong, vibrant communities. BGC-1

We are encouraged to see that environmental considerations and mitigation measures are integral to this project. Responsible development ensures that the West Harbor Modification Project will be a model of sustainability while creating a lasting positive impact for generations to come.

At BGCLAH, we are committed to supporting initiatives that uplift our youth and enhance the well-being of our community. The West Harbor Modification Project exemplifies this vision, and we look forward to seeing the bright future it will bring to the San Pedro, Wilmington, and Harbor areas. We urge your full support for this transformative endeavor.

Thank you for your leadership and commitment to our community.

Sincerely,

Pete Settelmayer
CEO
Boys & Girls Clubs of the Los Angeles Harbor

1200 S. Cabrillo Avenue
San Pedro, CA 90731
T 310 833 1322

Central San Pedro Neighborhood Council
West Harbor DSEIR 2024

The Central San Pedro Neighborhood Council, hereafter referred to as "CeSPNC" submits the following comments regarding the 2024 West Harbor Modification Project Subsequent Environmental Impact Report of November 2024 (DSEIR). The CeSPNC looks forward to working with the Port of Los Angeles, developers, and community stakeholders to ensure that the West Harbor Modification Project is completed with the least amount of environmental impact possible and in alignment with the Port of Los Angeles Plan and Port Master Plan.

PORT OF LOS ANGELES PLAN:

CSPNC-1

- Promote an arrangement of land and water uses, circulation, and services that contribute to the economic, social, and physical health, safety, welfare, and convenience of the Port within the larger context of the city
- Guide development, betterment, and change within the Port to meet existing and anticipated needs and conditions
- Contribute to a safe and healthful environment
- Balance growth and stability
- Reflect economic potentialities and limitations, land and water developments, and other trends
- Protect investments to the extent reasonable and feasible.

PORT MASTER PLAN:

- To develop the Port in a manner that is consistent with federal, state, county, and city laws, including the California Coastal Act of 1976 and the Charter of the City of Los Angeles
- To integrate economic, engineering, environmental, and safety considerations into the Port development process for measuring the long-term impact of varying development options on the Port's natural and economic environment
- To promote the orderly long-term development and growth of the Port by establishing functional areas for Port facilities and operations
- To allow the Port to adapt to changing technology, cargo trends, regulations, and competition from other U.S. and foreign seaports.

Central San Pedro Neighborhood Council
West Harbor DSEIR 2024

	ITEM	SOURCE	SECTION	PAGE AND PARAGRAPH	COMMENT	RATIONALE
CSPNC-2	1.	**CeSPNC**	Chapter 2: Existing Setting and Project Description	Page 17 Para 2.4.1.1	Remove the term "amphitheater" from the DSEIR and replace with the term "event space" or other more appropriate term.	Proposed design within the DSEIR does not include any tiered seating or contoured landscape. Instead, the DSEIR proscribes a flat "50,000-square-foot lawn area in front of the stage". This is misleading.
CSPNC-3	2.	**CeSPNC**	Chapter 3: Environmental Impact Analysis	Page 9 Para 3	Re-evaluate the environmental impact of fireworks to state "Significant Impact" rather than "Less than Significant Impact"	Paragraph 3 states, "Because firework shows are already conducted by the Port, the proposed Project would not be introducing a foreign event to the Project Site. Therefore, impacts would be less than significant". This finding is not based on factual precedence. The Port of Los Angeles currently performs only a few fireworks shows a year. The Port of Los Angeles recently modified the date and format of the 2024 Cabrillo Beach 4th of July Fireworks show, partly due to

	ITEM	SOURCE	SECTION	PAGE AND PARAGRAPH	COMMENT	RATIONALE
CSPNC-3 cont.						the expense of post-fireworks clean up over the Harbor. That is only one firework show and the DSEIR is expecting roughly 25 fireworks shows a year.
CSPNC-4	3.	**CeSPNC**	Section 3.02 Air Quality	Page 24	Finding of "Less than Significant Impact" warrants additional review. Recommend that fireworks vendors be mandated to use drones for a majority of events, whenever possible, in order to limit pollution both air-born and particulate.	Fireworks are known to cause significant air pollution and noise pollution, as well as require significant clean up (paper, cardboard, cotton, metal, plastic). Such findings are stated throughout the DSEIR itself.
CSPNC-5	4.	**CeSPNC**	Section 3.03 Biological Resources	Page 34	MM-BIO-8 states, "A qualified biologist will monitor marine mammals at the Bair Barge and the Fireworks Barge at Tenant expense during fireworks shows at least once per month for the first year of operation…" Please include language mandating oversight by the Port of LA, ensuring that any biologist hired by Tenant is fully qualified and that there are no real/perceived biases	Port of LA needs to ensure that any wildlife studies performed are done by qualified Biologists, unbiased, and without conflicts of interest.

	ITEM	SOURCE	SECTION	PAGE AND PARAGRAPH	COMMENT	RATIONALE
CSPNC-5 cont.					or conflicts of interest with said Biologist.	
CSPNC-6	5.	**CeSPNC**	Section 3.04 Cultural Resources	No Comments	No Comments	
CSPNC-7	6.	**CeSPNC**	Section 3.05 Green House Gases	ALL	The SEIR states that no new or substantially more severe significant impacts to GHG emissions would occur, based on a 2009 study. Consider incorporate updated quantities of Scope 1-3 emissions or embodied carbon.	Greenhouse Gas Emissions quantities from major sources such as concrete or fugitive emissions can be significant, are often overlooked and not controlled even while economically feasible to be avoided, reduced or eliminated.
CSPNC-8	7.	**CeSPNC**	Section 3.05 Green House Gases	Page 33	MM-AQ-27 Please provide additional tenant lease requirements about mitigation through efficiency or emissions incorporating appliances, hot water, HVAC & Refrigeration.	Lighting often accounts for less than 10% of an operation's energy usage. Other MEP systems, like hot water HVAC & Refrigeration systems account for more significant operational GHG emissions.
CSPNC-9	8.	**CeSPNC**	Section 3.05 Green House Gases	Page 34	PF-GHG-1 Please include the estimated energy or demand offset that the 1.4 MW solar-panel canopies will provide. Also change	This puts the developer's renewable energy investment into perspective regarding the overall project operating

	ITEM	SOURCE	SECTION	PAGE AND PARAGRAPH	COMMENT	RATIONALE
CSPNC-9 cont.					design criteria to performance criteria.	emissions impact. Also, this ensures PV system performance is maintained.
CSPNC-10	8.	**CeSPNC**	Section 3.06 Hazards	No Comments	No Comments	
CSPNC-11	9.	**CeSPNC**	Section 3.07 Hydrology	Page 17	Finding of "Less than Significant Impact" warrants additional review. Recommend that fireworks vendors be mandated to use drones for a majority of events, whenever possible, in order to limit pollution both air-born and particulate. See MM-NOI-14	Fireworks are known to cause significant air pollution and noise pollution, as well as require significant clean up (paper, cardboard, cotton, metal, plastic).
CSPNC-12	10.	**CeSPNC**	Chapter 3.08 Noise	Page 27	The difference between Tier 1 and Tier 2 events should be further elucidated and take into consideration more than audience size.	The DSEIR states "Tier 2 Events would not create new significant noise impacts, increase the severity of any previously identified impacts, nor require the implementation of new mitigation measures…". The difference between Tier 1 and Tier 2 events is not clear.
CSPNC-13	11.	**CeSPNC**	Chapter 3.08 Noise	Page 39-40	When analyzing the potential effects of fireworks on ambient noise the DSEIR should take into	The DSEIR notes that the closest homes are military housing at Fort McArthur.

	ITEM	SOURCE	SECTION	PAGE AND PARAGRAPH	COMMENT	RATIONALE
CSPNC-13 cont.					consideration the large veteran community at Fort McArthur, many of whom who struggle with PTSD, as well as the larger community to include homeless and other vulnerable members of the community.	While Community Noise Levels are provided for Fort McArthur Housing, there is no mention of the potential negative effects of fireworks on military members with PTSD or the effect on other sensitive/vulnerable groups within Fort McArthur including retired seniors.
CSPNC-14	12.	**CeSPNC**	Chapter 3.08 Noise	Page 57	Sound-monitoring data reports should always be freely accessible to the public.	Most average citizens do not have sophisticated sound monitoring equipment. Without free and open access to sound-monitoring data, any noise complaints made via the hotline will be likely based on individual perceptions, which can differ wildly based a person's location and distance from the venue. Thus, it becomes difficult to discern a potentially legitimate complaint from a potentially spurious one,

	ITEM	SOURCE	SECTION	PAGE AND PARAGRAPH	COMMENT	RATIONALE
CSPNC-14 cont.						overwhelming both Tenant LAHC resources.
CSPNC-15	13.	**CeSPNC**	Chapter 3.09 Transportation	No Comments	No Comments	
	14.	**CeSPNC**	Chapter 3.10 Tribal Cultural	No Comments	No Comments	
	15.	**CeSPNC**	Chapter 3.11 Public Services	No Comments	No Comments	
CSPNC-16	16.	**CeSPNC**	Chapter 4 Cumulative	Page 42	Reassess the project's potential impact on transportation. With an estimated 100 publicly ticketed concerts events annually, combined with additional public improvement projects within the LA Harbor, the DSEIT must consider the large strain on transportation infrastructure.	The DSEIR states, "Table 4-1 includes a list of related and cumulative projects near the Proposed Project, provided by the Port. The projects listed in Table 4-1 are included for informational purposes, and none are anticipated to result in a substantial increase or decrease in the Proposed Project's VMT or a change in the Proposed Project's transportation-impact determinations." This is a woefully inadequate

	ITEM	SOURCE	SECTION	PAGE AND PARAGRAPH	COMMENT	RATIONALE
CSPNC-16 cont.						assessment of the overall impact this project will have on transportation infrastructure.
CSPNC-17	17.	**CeSPNC**	Chapter 4 Cumulative		The DSEIT should also consider the potential for discounted parking for San Pedro residents throughout the city to include the additional parking at 22nd St.	

CleanEarth4Kids.org

January 9, 2025

RE: Proposed West Harbor Modification Project: No Plastic Grass/Artificial Turf. No Fireworks. No Balloons. No Confetti. No Styrofoam. Reduce Single Use Plastics. Educate. Install Signage. Enforce.

The draft SEIR for the proposed West Harbor Modification Project severely underestimates the harm to our water, wildlife, the environment, public health, children's health and future, public lands, and current and future taxpayers.

CE4K-1

Attendance at the amphitheater events is expected to increase approximately 12 times as stated in the draft SEIR and there will be a corresponding increase in trash, plastics, micro plastics, and toxic chemicals entering and harming our water, wildlife, public health, children's health and future generations and the integrity of our coast and ocean.

The draft SEIR must be amended to account for this massive increase in pollution and the proposed mitigation of picking up trash is not nearly enough. The Port of Los Angeles must stop pollution at its source to protect the bays, wildlife, biodiversity and human health.

The current draft SEIR does not protect water, birds, fish, marine mammals, wildlife, children's health, public health, families, future generations, or taxpayers!

The SEIR must include:

1. **No Plastic Grass/Artificial Turf**
2. **No Fireworks**
3. **No Balloons/Confetti**
4. **No Styrofoam**
5. **No Single Use Plastics**

No Plastic Grass/Artificial Turf

CE4K-2

We oppose the proposal to include any plastic grass/artificial turf (PFAS, plastics, microplastics, lead, heavy metals...) This would lead to massive amounts of plastic, micro plastics, PFAS, toxic chemicals, and heavy metals dumped into the harbor.

Doctors, nurses, health professionals, children's health organizations, public health organizations, researchers, and the public are deeply concerned with the toxic and carcinogenic chemicals, heavy metals like lead and cadmium, benzene, Polycyclic

CE4K-2 cont.

Aromatic Hydrocarbons (PAHs), phthalates, styrene, Volatile Organic Compounds (VOCs) and per- and polyfluoroalkyl substances (PFAS) are found in the plastic blades, backing, underlayment pads and in some plant based infills added to keep the blades upright.[1,2]

The use of toxic plastic grass has nothing to do with equity or equality. Equity is NOT exposing environmental justice communities to MORE toxic chemicals!

Synthetic Turf/Artificial Grass is PLASTIC

Synthetic turf/artificial grass is made of mixed plastics, such as polyethylene, polypropylene, nylon and more.[3]

CE4K-3

Over 16,000 chemicals are used in plastics. At least 4,200 (26%) are chemicals that are highly hazardous to human health and the environment, yet only 980 have been regulated anywhere around the world.[4] All major plastic types tested leached hazardous chemicals, including food packaging, which alone can contain over 400 chemicals of concern.[5] Additionally, there is little to no hazard information available for over 10,000 of these chemicals.[6]

Chemicals commonly found in plastics, like PFAS and phthalates, can impair reproduction, growth, and cognition.[7] Children are the most vulnerable due to developmental windows, more rapid metabolism, respiratory rates, cardiac output and greater caloric intake per pound. Chemicals in plastics have been linked to childhood obesity, hyperactivity, ADHD, low IQ, and asthma.[8]

Unborn children are especially vulnerable to toxic exposures from plastics in utero which can "increase risks of prematurity, stillbirth, birth defects in the reproductive organs, neurodevelopmental impairment, impaired lung growth, and childhood cancer."[9]

Dangers of Phthalates

CE4K-4

Phthalates are typically added to most plastics to make them pliable and are commonly found in plastic grass.[10,11] Phthalates are both endocrine disrupting as well and neurotoxic. Men with higher phthalate levels have higher risk of cardiovascular

[1] https://theintercept.com/2019/10/08/pfas-chemicals-artificial-turf-soccer/
[2] https://www.hilarispublisher.com/release-of-pahs-and-heavy-metals-from-rubber-crumb
[3] https://www.plymouth.ac.uk/discover/why-are-artificial-lawns-bad-for-the-environment
[4] https://www.cnn.com/2024/03/14/health/toxic-unregulated-chemicals-report-wellness?cid=ios_app
[5] https://plastchem-project.org/wp-content/uploads/2024/03/PlastChem-Press-Release_English-v1.pdf
[6] https://plastchem-project.org/
[7] https://www.sciencedaily.com/releases/2020/12/201215131242.htm
[8] https://www.naturalsuperkids.com/health-effects-plastic-exposure-children
[9] https://www.genevaenvironmentnetwork.org/resources/updates/plastics-and-health/
[10] https://www.nytimes.com/article/plastics-to-avoid.html
[11] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10262297/

disease and type 2 diabetes.[12] In midlife and postmenopause, women, phthalates can lead to increased body fat, a higher BMI, and increased waist circumference.[13] Phthalates can also cause increased rates of hot flashes.[14] Phthalates are linked to birth defects, infertility, miscarriages, as well as other neurological issues during child development and can harm the endocrine system.[15,16]

CE4K-4 cont.

Women exposed to phthalates during pregnancy are at greater risk of preterm delivery.[17] Human studies have determined that in-utero phthalate exposure can cause later development of type II diabetes, and insulin resistance, obesity, asthma, higher systolic blood pressure. Female offspring are more likely to experience reproductive problems, including pregnancy loss, low birth weight infants, preterm birth and earlier menopause.[18] Other human studies have linked phthalates to impaired motor skills in children and delayed language development.[19] In male adults, a reduction in sperm quality and quantity has also been observed.[20]

PFAS in Synthetic Turf/Artificial Grass

PFAS are used to aid the extrusion of plastic yarns for the "grass" blades.[21]

Every plastic grass field tested[22] has been found to contain toxic PFAS,[23] with industry stating plastic grass can not be made without PFAS.[24] Turf companies claiming their product is PFAS free are intentionally misrepresenting their data.[25]

CE4K-5 There is no safe level of PFAS![26]

PFAS can be absorbed into the body from skin contact with synthetic turf/artificial grass.[27]

PFAS (perfluoroalkyl and poly-fluoroalkyl substances) are a class of over 15,000 synthetic (man-made) chemicals found in many products like artificial grass/synthetic turf, food packaging, waterproofing sprays, household cleaners, stain-resistant carpet, nonstick cookware, fire fighting foam, clothing, makeup, toilet

[12] https://www.diabetes.co.uk/news/2017/jul/everyday-plastic-chemicals-linked-to-type-2-diabetes
[13] https://www.sciencedirect.com/science/article/abs/pii/S0013935123001482
[14] https://www.sciencedirect.com/science/article/abs/pii/S0013935121001857
[15] https://birthdefects.org/phthalates/
[16] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8157593/
[17] https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(23)00270-X/fulltext
[18] http://www.ncbi.nlm.nih.gov/pmc/articles/PMC8157593/#B32-healthcare-09-00603
[19] http://health.harvard.edu/blog/something-else-to-avoid-in-pregnancy-phthalates-201903151622 4
[20] https://www.sciencedirect.com/science/article/abs/pii/S0304389417304570?via%3Dihub
[21] https://www.documentcloud.org/documents/6434596-Kulikov2005.html
[22] https://www.eenews.net/articles/our-community-has-been-deceived-turf-wars-mount-over-pfas/
[23] https://ceh.org/latest/press-releases/new-testing-reveals-high-levels-of-toxic-pfas-in-artificial-turf/
[24] https://www.theguardian.com/environment/2024/mar/15/athletes-higher-pfas-levels-artificial-turf
[25] https://youtu.be/G7Tw6Utl-Rw
[26] https://theconversation.com/pfas-why-epa-set-drinking-water-limits-for-these-health-harming-contaminants
[27] https://peer.org/pfas-in-artificial-turf-coats-players-skin

paper, personal care products, textiles, children's products and much more.[28,29] PFAS as a class share many characteristics and toxicities.[30]

CE4K-5 cont.

PFAS are toxic, linked to diseases and cancers. According to the CDC,[31] EPA,[32] and the European Union Environment Agency,[33] PFAS are linked to low birth weight, thyroid disease, increased cholesterol, liver damage, kidney cancer, and testicular cancer. They are also linked to liver cancer,[34] diabetes,[35] endocrine disruption, and other serious health problems.[36]

PFAS bioaccumulate in our bodies, making the risk of cancers and other health problems more likely as we get older.[37]

Plastic Pollution! Plastic Harms the Environment and Our Health

Each stage of the plastic lifestyle harms human health and the environment.[38]

CE4K-6

For example, "Cancer Alley" is an 85 mile piece of land in Louisiana where nearly 150 oil refineries, plastics plants and chemical facilities including the world's largest manufacturer of polystyrene (Styrofoam) spew toxic chemicals into the air, land and water.[39,40] Cancer Alley has the highest risk of cancer in the nation, 50x the national average along with 27% low birth and 25% preterm birth rates.[41,42]

The use of plastic continues environmental injustice because low-income communities suffer the worst environmental consequences of plastic production.[43] Studies clearly show plastic production is disproportionately situated in "low- and mid-income countries or in poor and minority communities within high-income countries."[44]

Plastics have a major carbon footprint, emitting about 3.4% of our total global greenhouse gas emissions.[45] After use, less than 9% of plastics are recycled with the rest littered, dumped in landfills or burned.[46]

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[28] https://comptox.epa.gov/dashboard/chemical-lists/pfasmaster
[29] https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html
[30] https://experts.unthsc.edu/en/publications/response-to-comment-on-scientific-basis-for-managing-pfas
[31] https://www.atsdr.cdc.gov/pfas/health-effects/index.html
[32] https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas
[33] https://www.eea.europa.eu/publications/emerging-chemical-risks-in-europe
[34] https://www.insider.com/study-confirms-link-between-forever-chemicals-and-liver-cancer-risk-2022-8
[35] https://pubmed.ncbi.nlm.nih.gov/35970987/
[36] https://pubmed.ncbi.nlm.nih.gov/32476019
[37] https://www.mdpi.com/2305-6304/10/2/44
[38] https://www.nature.com/articles/s41578-022-00419-y
[39] https://news.un.org/en/story/2021/03/1086172
[40] https://www.propublica.org/article/welcome-to-cancer-alley-where-toxic-air-is-about-to-get-worse
[41] https://www.theguardian.com/us-news/ng-interactive/cancertown-louisana-reserve-special-report
[42] https://www.theguardian.com/us-news/2024/jan/25/louisiana-cancer-alley-low-birth-weight
[43] https://www.montereybayaquarium.org/stories/true-cost-plastic-pollution
[44] https://www.washingtonpost.com/health/2022/04/02/plastic-pollution-health-poverty/
[45] https://www.oecd.org/plastics/increased-plastic-leakage-and-greenhouse-gas-emissions.htm
[46] https://www.consumerreports.org/environment-sustainability/the-big-problem-with-plastic/

Around 70% of the pollution in the ocean is from plastic, with an estimated 12.7 million tons of plastics dumped into our oceans every year.[47]

CE4K-6 cont.

Burning plastic releases greenhouse gasses and toxic air pollutants like furans, mercury, polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs).[48] Even after burning, 30% of plastic remains as ash which is typically buried, poisoning our soil, or blown in the air.[49]

The making and burning of plastic products in 2019 had about the same emissions as 189 coal power plants, releasing 850 million metric tons of greenhouse gasses.[50]

Plastics are Fossil Fuels

Over 99% of plastics are made from fossil fuel based chemicals and plastics are predicted to drive almost half of the demand for oil and methane in the coming decades.[51,52]

CE4K-7

As the world transitions from fossil fuels to renewable energy, the fossil fuel industry is focused on plastics and petrochemicals,[53] as stated by both ExxonMobile[54] and British Petroleum, who continue to place profits over climate, human and environmental health.[55]

This focus on plastics and petrochemicals is the reason for the push for fracking in the US as ethane is separated from methane (natural gas) and then "cracked" to make ethylene, the building block for most plastics.[56] This process produces a massive amount of pollution and greenhouse gases.[57]

It is estimated the plastic industry could be 19% of the total global carbon budget by 2040 if we do not take action.[58] We must remove plastic from our daily lives and stop the fossil fuel industry from destroying our planet for money.[59]

Plastic and Methane

CE4K-8

Methane is 80x more potent at warming than carbon dioxide and is responsible for 25% of global warming.[60]

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[47] https://kids.frontiersin.org/articles/10.3389/frym.2021.574637
[48] https://breathelife2030.org/news/burning-plastic-waste-adds-global-air-pollution-problem
[49] https://environmentaldefence.ca/2022/03/18/burning-plastic-is-a-terrible-idea
[50] https://www.ciel.org/plasticandclimate/
[51] https://www.earthday.org/from-fossil-fuels-to-plastic-addiction-unveiling-the-hidden-link
[52] https://www.cnbc.com/2022/01/29/how-the-fossil-fuel-industry-is-pushing-plastics-on-the-world-.html
[53] https://www.sciencedirect.com/science/article/pii/S259033222300252X
[54] https://corporate.exxonmobil.com/Energy-and-environment/Outlook-for-Energy-A-perspective-to-2040
[55] https://www.scientificamerican.com/article/bp-pledges-to-go-carbon-neutral-how-remains-an-open-question/
[56] https://www.climaterealityproject.org/blog/ethane-cracker-plants-what-are-they
[57] https://insideclimatenews.org/plastics-hub-appalachian-fracking-ethane-cracker-climate-change-health/
[58] https://stories.undp.org/what-do-plastics-have-to-do-with-climate-change
[59] https://www.motherjones.com/environment/2020/03/your-plastic-addiction-is-bankrolling-big-oil/
[60] https://ecology.wa.gov/Blog/Posts/February-2023/The-trash-climate-connection-what-you-need-to-know

Polyethylene is the most common plastic used to make synthetic turf/artificial grass and is known to release more methane than other plastics as it breaks down.[61]

CE4K-8 cont.

Dr. Sarah-Jeanne Royer of the Scripps Institution of Oceanography who discovered this wrote a letter in opposition to synthetic turf/artificial grass, citing methane as a major concern.[62]

During the breakdown of polyethylene, the release of methane gas accelerates as the surface area of the plastic increases, reacting more with the sunlight and releasing more methane.[63] Synthetic turf/artificial grass fields are constantly releasing methane, damaging our climate.

Microplastics and Nanoplastics

Synthetic turf/artificial grass is a major source of microplastics, with each field dumping between 200-3200 pounds of plastic every year into the environment.[64] Microplastics harm wildlife, threatening the Northwestern Pond Turtle and other wildlife like hawks and herons that live in the Golden Gardens Park area.[65]

Plastic fibers from synthetic turf/artificial grass are a widespread water pollutant with over 15% of plastic debris in rivers and sea-water, coming from plastic grass with concentrations during the rainy seasons.[66]

CE4K-9

In addition to seasonal effects, these plastic fibers undergo significant weathering which directly contributes to the increase in chemicals leached from them into rivers and sea-water.[67]

These plastic fibers, like all plastics, do not decompose[68] like plants; they just break into smaller and smaller pieces, leading to micro and nano plastics that can be eaten, drank or breathed in[69] by animals or humans and are even absorbed by plants.[70]

Plastic first breaks down into microplastics, smaller than 5mm, and then nanoplastics which are less than 100 nm.[71] By comparison, a sheet of paper is about 100,000 nm thick.

Microplastics have been found in human blood, the placenta, and the feces of infants and adults.[72] Research has linked ingested microplastics to inflammatory bowel

[61] https://www.bbc.com/news/science-environment-45043989
[62] https://drive.google.com/file/d/1Q9NHwhVtY0ygHCcZDHhufkfcRdGFA35k/view
[63] https://www.surfrider.org/new-study-shows-plastic-as-source-of-greenhouse-gases-potentially-contribut
[64] https://www.beyondplastics.org/fact-sheets/synthetic-turf
[65] https://www.cwhc-rcsf.ca/docs/fact_sheets/Wildlife%20ingestion%20of%20microplastics.pdf
[66] https://www.sciencedirect.com/science/article/pii/S0269749123010965
[67] https://www.sciencedirect.com/science/article/pii/S0269749123010965#bib38
[68] https://www.scienceabc.com/nature/how-do-we-know-plastic-will-take-so-long-to-decompose.html
[69] https://www.theguardian.com/environment/microplastics-found-in-human-blood-for-first-time
[70] https://www.sciencedirect.com/science/article/abs/pii/S0165993622003727
[71] https://www.iaea.org/research-on-the-possible-effects-of-micro-and-nano-plastics-on-marine-animals
[72] https://www.theguardian.com/environment/microplastics-found-in-human-blood-for-first-time

disease[65] and metabolic diseases including obesity, diabetes, and chronic liver disease.[73] The ability to be absorbed from the digestive tract allows microplastics to be transported to other organs, including the brain, and increases the risk of stroke.[74]

CE4K-9 cont.

Nanoplastics have been found deep in human lungs.[75] Research shows it is likely plastics can cross the blood-brain barrier, causing inflammation in the brain itself.[76] Microplastics in the human brain could damage brain cells and dementia-like symptoms have been seen in mice exposed to microplastics.[77,78]

These microscopic bits of plastic can increase our chance of stroke and heart attacks as nearly 60% of clogged arteries in a recent study were found to contain plastic.[79]

Plastics In Drinking Water And Food

Each person consumes an estimated 5 grams of plastic, the equivalent of a credit card, every week.[80]

CE4K-10

Plastics have been found in 83% of tap water and 93% of bottled water sampled.[81,82]

The food chain has also been affected by microplastics with microplastic contamination found in fish, shellfish and crustaceans, canned fish, sugar, salt, honey, beer, fruits and vegetables, milk, rice, meat, and other common food products.[83,84]

Microplastics Harms Wildlife and Marine Ecosystems

Many wildlife accidentally eat plastic after mistaking it for food which not only can cause them to choke or starve, but can poison them as plastics contain toxic chemicals.[85,86]

CE4K-11

Plastic pollution harms "all sea turtle species, half of marine mammal species, and one-fifth of seabird species."[87]

In the past decade the amount of plastic dumped in our oceans has increased and

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[73] https://www.theguardian.com/microplastics-may-be-linked-to-inflammatory-bowel-disease-study-finds
[74] https://www.euronews.com/green/how-much-plastic-do-you-eat-it-could-be-as-much-as-a-credit-card-a-week
[75] https://www.theguardian.com/environment/microplastics-found-deep-in-lungs-of-living-people-for-first-time
[76] https://www.sciencealert.com/microplastics-could-trigger-inflammation-in-human-brain-cells
[77] https://www.sciencedirect.com/science/article/pii/S0013935117310770?via%3Dihub
[78] https://futurism.com/neoscope/scientists-microplastics-cause-dementia-mice
[79] https://www.sciencealert.com/plastic-found-inside-more-than-50-of-plaques-from-clogged-arteries
[80] https://wwf.panda.org/Revealed-plastic-ingestion-by-people-could-be-equating-to-a-credit-card-a-week
[81] https://beachapedia.org/Plastic_Pollution_Facts_and_Figures
[82] https://www.bonappetit.com/story/microplastics-food
[83] https://www.sciencedirect.com/science/article/pii/S0048969722069340
[84] https://www.sciencedirect.com/science/article/abs/pii/S0025326X22008827
[85] https://www.plasticsoupfoundation.org/en/plastic-problem/plastic-affect-animals/animals-eat-plastic/
[86] https://www.nationalgeographic.com/environment/article/plastic-pollution
[87] https://www.nrdc.org/sites/default/files/choked-plastic-pollution-marine-life-fs.pdf

reached up to 350 million tons of plastic.[88]

Microplastics and nanoplastics can harm entire marine ecosystems with 15–51 trillion microplastic plastic particles floating in the ocean.[89] Microplastics can enter marine animals as they "breathe," allowing them to accumulate in organisms. These plastics also hurt corals which are essential for fisheries and are crucial for the health of marine ecosystems, providing "habitat, feeding, spawning, and nursery grounds for over one million aquatic species, including commercially harvested fish species."[90]

CE4K-11 cont.

Additionally, over 800 marine species are directly harmed by plastic, leading to "starvation, malnutrition, intestinal blockage, and intake of toxins."[91]

Synthetic Turf/Artificial Grass is NOT Recycled

Replaced every 7-10 years, the average synthetic turf/artificial grass soccer field produces 40,000 lbs of plastic carpeting and 400,000 lbs of infill of waste.[92]

CE4K-12

Despite what the synthetic turf industry claims, there is no proof that actual recycling is occurring. The plastic carpet and infill are often dumped or sent to landfills as there are no recycling facilities for synthetic turf in the US.[93,94]

Reuse is not recycling[95] and so called "chemical recycling" is just greenwashing for incineration.[96] Burning is not recycling!

Synthetic Turf/Artificial Grass is HOT

Synthetic turf/artificial grass is 40°-70° hotter than surrounding air temperatures and has burned hands and feet.[97] Natural grass releases water vapor and this evaporation means natural grass fields rarely get above 100° F.[98] But the surface temperature of synthetic turf/artificial grass has been found to be 37° higher than asphalt and 86.5° hotter than natural grass.[99] A study found that in 90° weather, the surface temperature of a natural grass field was 98° while an artificial grass/synthetic turf field was over 160°.[100]

CE4K-13

Shoes have melted from the heat on synthetic turf/artificial grass with players and

[88] https://plasticseurope.org/wp-content/uploads/2021/10/2018-Plastics-the-facts.pdf
[89] https://kids.frontiersin.org/articles/10.3389/frym.2021.574637
[90] https://www.epa.gov/coral-reefs/basic-information-about-coral-reefs
[91] https://www.nrdc.org/sites/default/files/choked-plastic-pollution-marine-life-fs.pdf
[92] https://www.beyondplastics.org/fact-sheets/synthetic-turf
[93] https://www.theatlantic.com/science/artificial-turf-fields-are-piling-no-recycling-fix/603874/
[94] https://www.msn.com/how-pennsylvania-became-a-dumping-ground-for-discarded-artificial-turf
[95] https://peer.org/artificial-turfs-big-lie-old-fields-not-recycled/
[96] https://www.nrdc.org/stories/chemical-recycling-isnt-actually-recycling
[97] https://www.safehealthyplayingfields.org/heat-levels-synthetic-turf/
[98] https://www.nrpa.org/parks-recreation-magazine/synthetic-sports-fields-and-the-heat-island-effect/
[99] https://aces.nmsu.edu/programs/turf/documents/brigham-young-study.pdf
[100] https://www.center4research.org/injuries-related-to-artificial-turf/

CE4K-13 cont.

coaches getting blisters on the bottom of their feet through their shoes.[101] First-degree burns occur at 118° with blistering and second-degree burns at 131°.[102] Several artificial grass/synthetic turf fields in the Los Angeles Unified School District are currently closed due to high heat and melting surfaces.[103]

Playing on synthetic turf/artificial grass can increase the chance of heat stroke, dehydration, and other heat-related illnesses.[104,105] Synthetic turf/artificial grass fields also create heat islands which cause higher daytime and nighttime temperatures along with higher levels of air pollution.[106,107]

Synthetic Turf/Artificial Grass is Dangerous to Athletes

Synthetic turf/artificial grass fields contain bacteria and must be regularly cleaned with chemicals.[108] Turf burns from artificial grass/synthetic turf can become infected with bacteria like staph and MRSA which can be life-threatening.[109] An EPA study found MRSA in 70% of the fields tested.[110]

CE4K-14

Playing on synthetic turf/artificial grass can cause more injuries. According to an NFL Players Association (NFLPA) study, playing and practicing on synthetic turf/artificial grass increases the chance of a lower extremity injury with a 69% higher rate of non-contact foot/ankle injuries than on natural grass.[111] The NFLPA has called for all NFL fields to be natural grass.[112]

A study of National Collegiate Athletic Association (NCAA) athletes found playing on synthetic turf/artificial grass greatly increased the chance of knee ligament injuries while a study of high school athletes found they were 58% more likely to sustain an injury playing on synthetic turf/artificial grass than natural grass.[113,114]

Studies have also shown that more serious concussions come from playing on synthetic turf/artificial grass compared to natural grass.[115]

The United States Men's Professional Soccer Team and other national teams only play on natural grass in the World Cup, and the United States Women's Soccer Team sued FIFA to not play on synthetic turf/artificial grass due to the increased risk of

[101] https://ftw.usatoday.com/2015/08/its-so-hot-in-texas-turf-is-melting-cleats
[102] https://www.nist.gov/el/fire-research-division-73300/firegov-fire-service/fire-dynamics
[103] https://www.latimes.com/sports/highschool/story/2022-08-17/synthetic-l-a-unified-out-of-commission
[104] https://www.npr.org/2008/08/07/93364750/high-temps-on-turf-fields-spark-safety-concerns
[105] https://www.tandfonline.com/doi/full/10.1080/02656736.2019.1605096
[106] https://aces.nmsu.edu/programs/turf/documents/brigham-young-study.pdf
[107] https://www.epa.gov/heatislands/heat-island-impacts
[108] https://sportsturfnw.com/wp-content/uploads/2015/11/Bass-paper-in-big-sky-journal.pdf
[109] https://www.healthline.com/health/turf-burn#pictures
[110] https://www.epa.gov/sites/default/files/2019-08/documents/tc_public_webinar_-_august_6_2019.pdf
[111] https://nflpa.com/posts/only-natural-grass-can-level-the-nfls-playing-field
[112] https://apnews.com/article/9b34d4402f2f82ae60708605f65aa560
[113] https://pubmed.ncbi.nlm.nih.gov/30995074/
[114] https://www.uhhospitals.org/articles-and-news/articles/2019/08/artificial-turf-vs-natural-grass
[115] https://journals.sagepub.com/doi/10.1177/03635465000280050401

injury.[116,117] Soccer legend Lionel Messi will only play on natural grass.[118]

CE4K-14 cont.

Upon hearing of the death of David West, the sixth player from the Philadelphia Phillies to die of the same rare form of brain cancer (glioblastoma), *Philadelphia Inquirer* investigative journalists David Gambacorta and Barbara Laker investigated pieces of AstroTurf from Veterans Stadium, which was the Philly home stadium until 2004.[119,120] The pieces of turf analyzed from 1977 and 1981 were found to contain at least 16 different PFAS. They determined that in the summer, the synthetic turf/artificial grass would heat up to 165℉, increasing the release of toxins into the air, creating additional modes of transmission to the players.

Crumb Rubber Infill is Toxic

Made from ground-up tires, crumb rubber is a very common infill for synthetic turf/artificial grass fields and is full of heavy metals and toxic chemicals.[121] Over 300 chemicals have been found in crumb rubber infill with 58 classified as known carcinogens and 197 predicted to be carcinogenic.[122]

CE4K-15

6PPD and its derivative 6PPD-quinone are very highly toxic pollutants to all aquatic organisms and are responsible for wiping out over 90% of endangered Coho Salmon in CA, OR, and WA every year.[123] While there is limited information on the impacts of 6PPD and 6PPDq to human health, 6PPD is currently listed as a presumed human reproductive toxicant by the European Chemicals Agency (ECHA).[124]

Humans can be exposed to these toxic chemicals in crumb rubber through inhalation, ingestion, and skin contact, leaving humans vulnerable to carcinogenic exposure in many different ways.[125] Alternative infills like TPE or cork have inhalation and chemical risks as well.[126]

The Norwegian Institute for Water Research conducted a risk assessment on runoff from synthetic turf/artificial grass fields, finding a significant risk of environmental effects on surface water.[127] The Connecticut Department of Environmental Protection (DEP) also concluded runoff from synthetic grass/artificial turf fields was a potential risk to surface waters and aquatic organisms.[128]

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[116] https://www.sportsbusinessjournal.com/Articles/2023/11/06/america-stadiums-side
[117] https://www.npr.org/353312770/soccer-players-sue-over-proposed-turf-field-for-womens-world-cup
[118] https://www.sbnation.com/soccer/lionel-messi-inter-miami-mls-turf
[119] https://deadspin.com/philadelphia-phillies-brain-cancer-tug-mcgraw-1850202995
[120] https://www.mediaite.com/sports/6-phillies-players-died-of-same-brain-cancer/
[121] https://www.sciencedirect.com/science/article/pii/S0048969721076208
[122] https://www.sciencedirect.com/science/article/pii/S0013935118305528
[123] https://www.ezview.wa.gov/Stormwater/Tianetal.2022.Revisedtoxicityassessment06PPD-quinone.pdf
[124] https://echa.europa.eu/registration-dossier/-/registered-dossier/15367/5/1
[125] https://ncceh.ca/documents/guide/human-health-risk-assessments-addressing-artificial-turf
[126] https://www.safehealthyplayingfields.org/the-problem-with-alternative-infills
[127] https://www.isss-sportsurfacescience.org/downloads/documents/5VEU2CZB25_NIVAEngelsk.pdf
[128] https://portal.ct.gov/-/media/DEEP/artificialturf/DEPArtificialTurfReportpdf.pdf

Alternative Infills Are Not Safe

One alternative infill is crystallized silica from quartz rock which contains up to 95% silicon dioxide which is extremely toxic, long associated with diseases like silicosis, a progressive lung disease which can develop into lung cancer.[129,130]

The International Agency for Research on Cancer (IARC), classifies crystallized silica as a known carcinogen in humans.[131]

CE4K-16

Long term exposure to crystallized silica can cause permanent lung scarring, known as pulmonary fibrosis.[132] Silicosis is the most prevalent chronic lung disease in the world and because of the size of the crystallized silica used in synthetic turf fields, dust can easily reach the terminal bronchioles and alveoli of the respiratory system.[133]

The infill zeolite, a crystallized aluminosilicate compound, increases the risk of developing mesothelioma.[134]

Other alternative infills like cork or coconut husk have inhalation and chemical risks as well.[135]

Synthetic Turf Does Not Save Water

On average, 980 gallons of water is needed to support 1 square meter of plastic grass which would water 1 square meter of natural, organic grass for up to 18 years.[136]

CE4K-17

Because of heat, water is used to cool synthetic turf fields where natural grass does not need it because of evaporative cooling.[137,138] In addition, synthetic turf/hot, toxic plastic grass must be cleaned several times a week, using even more water.[139]

Synthetic turf/artificial grass uses just as much or even more water than natural grass.[140] Unlike natural grass, synthetic turf/hot, toxic plastic grass prevents rain water from filtering through the soil, regenerating groundwater.[141]

CE4K-18

Natural Grass is Best

[129] https://www.osha.gov/enforcement/directives/cpl-02-02-007
[130] https://www3.epa.gov/pesticides/chem_search/reg_actions/reregistration/fs_G-74_1-Sep-91.pdf
[131] https://www.atsdr.cdc.gov/toxfaqs/tfacts211.pdf
[132] https://www.lung.org/lung-health-diseases/lung-disease-lookup/silicosis
[133] https://www.ncbi.nlm.nih.gov/books/NBK594245/#:~:text=Silicosis
[134] https://www.healthyplayingsurfaces.org/chemicals
[135] https://www.safehealthyplayingfields.org/the-problem-with-alternative-infills
[136] https://www.waterwise.org.uk/2022/09/21/new-uk-water-efficiency-strategy-to-2030-published/
[137] https://scisoc.confex.com/crops/2017am/webprogram/Paper106290.html
[138] https://documents.coastal.ca.gov/reports/2023/12/W13.1a/W13.1a-12-2023-report.pdf
[139] https://ideal-turf.com/turf-sports-field-maintenance/
[140] https://www.stma.org/wp-content/uploads/2017/11/Artificial-Turf-Booklet-2.pdf
[141] https://westernresourceadvocates.org/wp-content/uploads/2023/01/2022_WRA_Artifical_Turf_Report.pdf

CE4K-18 cont.

Natural grass is the healthiest choice for playing fields and parks.[142] Natural grass fields are more cost-effective than synthetic turf/artificial grass fields which have higher maintenance and long-term costs.[143,144] Natural grass fields are also cheaper to install than synthetic turf/artificial grass.[145]

Natural grass fields can be effectively maintained using organic land management practices, especially for playing fields.[146] Please watch this video, *Pesticide Free Parks*, on organic management.[147]

High-use, organically managed, natural grass fields have been in use in many areas including Irvine, CA.[148,149]

With proper care and maintenance, a natural grass field can accommodate any amount of play as demonstrated by Marblehead, MA with 20 acres of organically managed fields for over 15 years.[150]

Score Card: Synthetic Turf vs. Natural Grass Playing Fields

Impact	Synthetic Turf	Natural Grass	Comments
Oil extraction/fracking	Yes	No	Emissions of GHG, particulate matter, VOC's and hazardous air pollutants in sacrifice zones Source: Sierra Magazine 9/15/22
Petrochemical refining	Yes	No	
Manufacturing synthetic turf & underlayment pads	Yes	No	
Field Temperature - heatstroke, dehydration and thermal burns	Temperature is 40-70 F above ambient air	Temperature is equal to ambient air	Measured on warm sunny days
Release of PFAS, UV stabilizers, heavy metals, plasticizers ...	Yes	No	Natural grass fields need to avoid synthetic pesticides and fertilizers
Release of microplastics	Yes	No	Inhaled/ingested/released to env.
Infection risk - MSRA (Methicillin-resistant Staphylococcus aureus)	Pathogens survive on plastic surface	No	Synthetic turf fields require bactericidal chemical treatment
Sports injuries	Higher incidence	Absorbs impacts better	
Robustness to intense use	Yes	Yes	Both require maintenance
Water use	Manufacturing process Cooling and cleaning	Drought tolerant turf grass	
Installation and maintenance cost	$1.2M/field; 8-10 yr life	Lower installation cost	Maintenance costs ~equal
Climate change	Methane from mfg. End of life off gassing for 450 years	Carbon sequestration	
Soil biome health	Baked/compacted soil	Maintains healthy soil	
Hazardous waste disposal of at end of life (8-10 years)	Yes, 50 tons/acre	No, composted	

Ron Askeland, Chair, Sierra Club Conservation Committee. San Diego Hi Sierran Volume 84 No. 3

These Are the New Titans of Plastic: Pennsylvania is just the latest sacrifice zone for the plastics industry
https://www.sierraclub.org/sierra/2022-3-fall/feature/these-are-new-titans-plastic-shell-pennsylvania-fracking

Costs: Grass vs. Synthetic Turf
https://www.safehealthyplayingfields.org/cost-grass-vs-synthetic-turf

[142] https://www.safehealthyplayingfields.org/health-benefits-of-natural-turf
[143] https://www.safehealthyplayingfields.org/s/Natural_Grass_Athletic_Fields_Ppoint_Final.ppt
[144] https://www.safehealthyplayingfields.org/maintenance-grass-vs-synthetic-turf
[145] https://www.safehealthyplayingfields.org/cost-grass-vs-synthetic-turf
[146] https://www.turi.org/var/application/982fb1bc7bb561b4ce07072c5d26ab11.pdf
[147] https://youtu.be/oJZgy8MOMYU
[148] https://www.nontoxiccommunities.com/organic-athletic-fields.html
[149] https://online.flippingbook.com/view/535223568/32/
[150] https://www.turi.org/content/NaturalGrassPlayingFieldCaseStudyMarbleheadMAJune202019.pdf

Additional Video Resources:

Tire Particulate Matter in Synthetic Turf and Children
Failing Synthetic Turf Fields
Artificial Turf is Not Recycled
CE4K-19 Environmental Health Impacts of Synthetic Turf and Safer Alternatives
Insult to Injury: Plastic Fields Hurt Players
The High Costs of Fake Plastic Fields
The Hazards of Artificial Turf: Learn the Latest from Leading Experts
Conversation on Synthetic Playing Surfaces
Health and Environmental Hazards of Artificial Turf and Safer Alternatives

Stop Synthetic Turf/Artificial Grass

The use of synthetic turf harms our children and families, athletes, pets and wildlife
CE4K-20 and our water, soil and planet. Please stop all uses of hot, toxic plastic grass.

Every plastic grass field tested has been found to contain toxic PFAS and there are no safe levels of PFAS. And there are MANY other toxic chemicals in plastic grass than PFAS!

No Fireworks

CE4K-21 CleanEarth4Kids.org asks you to not allow fireworks to protect water, birds, fish, wildlife, children's health and future, public health, veterans, people with PTSD and anxiety disorders.

Fireworks Release Heavy Metals and Particulate Matter

Fireworks release toxins and metals into the environment, such as copper, lead, sulfur, cadmium, aluminum, manganese, arsenic, iron dust, strontium, barium, antimony, benzene and microscopic particulate matter (PM2.5).[151] Americans use 258 million pounds of fireworks annually, releasing a massive amount of toxic pollution.[152]

CE4K-22 Heavy metals like lead, copper, cadmium, manganese can cause neurotoxicity, which occurs when the regular operation of the nervous system is harmed by exposure to dangerous substances (neurotoxicants).[153] This may disrupt or even end neurons (nerve cells) which are essential for transmitting and processing signals in the brain and other regions of the nervous system.[154] Neurotoxins can harm children's health by damaging brain development, reducing attention spans, delaying action, and causing poor school work.[155]

[151] https://particleandfibretoxicology.biomedcentral.com/articles/10.1186/s12989-020-00360-4
[152] https://phys.org/news/2020-07-common-fireworks-toxic-metals-air.html
[153] https://www.ninds.nih.gov/health-information/disorders/neurotoxicity
[154] https://www.sciencedirect.com/topics/medicine-and-dentistry/neurotoxicity
[155] https://www.forbes.com/sites/alicegwalton/2014/02/15/11-toxic-chemicals-afffecting-brain

Lead

Lead is a neurotoxin that can harm children by damaging their brain, and nervous system, hindering growth and development, and causing hearing and speech issues.[156] Exposure to lead can seriously harm a child's health, including damage to the brain and nervous system, slowed growth and development, learning and behavior problems, as well as hearing and speech problems.[157]

CE4K-23

There is no safe level of exposure to lead, according to the World Health Organization,[158] Centers for Disease Control[159] and the American Academy of Pediatrics.[160] Lead is incredibly toxic to children and unborn babies.[161] Lead damages children's brains and nervous systems lowers IQ, causes behavior problems, and is linked to higher rates of suspension and detention along with lower reading and math test scores.[162,163] Most health impacts from lead exposure are lifelong and irreversible.[164]

Mercury

CE4K-24

Mercury can harm children by threatening their early development and cause kidney, skin, and eye issues, and poor nervous, digestive and immune systems.[165]

Cadmium

CE4K-25

Cadmium is harmful at even low levels and is a known human carcinogen.[166] Cadmium accumulates in the body, leading to various health issues like kidney disease and fragile bones.[167,168] It is also a developmental toxin, harming children in their early childhood development.[169]

Arsenic

CE4K-26

Arsenic is highly toxic and can cause cancer, skin lesions, cardiovascular disease and diabetes while harming cognitive development in children.[170] It can also lower IQ and compromise the immune system.[171]

CE4K-27

Air Pollution Harms Public Health

[156] https://www.cdc.gov/nceh/features/leadpoisoning/index.html#:~:
[157] https://www.cdc.gov/nceh/features/leadpoisoning/index.html
[158] https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health
[159] https://www.cdc.gov/nceh/lead/faqs/lead-faqs.htm
[160] https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/lead-exposure/Pages/default.aspx
[161] https://www.cdc.gov/nceh/lead/prevention/health-effects.htm
[162] https://www.nber.org/papers/w23392
[163] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4387706/
[164] https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health
[165] https://www.who.int/news-room/fact-sheets/detail/mercury-and-health#:~:text=Exposure
[166] https://progressreport.cancer.gov/prevention/cadmium
[167] https://www.atsdr.cdc.gov/csem/cadmium/Biological-Fate
[168] https://www.cdc.gov/biomonitoring/Cadmium_FactSheet.html
[169] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8207007
[170] https://www.who.int/news-room/fact-sheets/detail/arsenic
[171] https://sites.dartmouth.edu/arsenicandyou/arsenic-and-children/

Fireworks cause air pollution by increasing the concentrations of several dangerous pollutants, including particulate matter (PM), carbon monoxide, sulfur dioxide, nitrogen dioxide and ozone.[172] For example, Indian scientists saw firework pollutant concentrations exceeded 2,800% above the levels recommended by the WHO. Unfortunately, these pollutants often remain in the air for several days and can even be blown into surrounding communities.

Pollutants from fireworks can travel quite a distance, over 62 miles downwind, contributing to toxic pollution in the air and then taking their toxicity to watersheds when the heavy metals are washed out of the air by rainfall.[173]

In the US, particulate matter concentrations increase by up to 370% in the 24 hours after an Independence Day firework display.[174]

CE4K-27 cont.

Air pollution continues to be a global health crisis. The WHO (World Health Organization) identified air pollution as the most significant environmental risk to human health,[175] taking the lives of 1 in 12 individuals globally each year,[176] causing 25% to 33 % of all deaths related to heart disease, stroke, lung disease, and cancer.[3-177] Domestically, air pollution causes 1 in 49 deaths annually, and over 100 million Americans reside in nonattainment areas, based on the EPA's Criteria Air Pollutants regulation.[178]

The release of pollutants is exceptionally harmful to public health.[179] For example, particulate matter is linked to higher rates of cancer and asthma and neurological disease, like dementia, Alzheimer's, Parkinson's and other diseases.[180] It is even linked to increased depression in older adults. Children are especially vulnerable to air pollution; it harms their lungs, hearts, brains, and learning potential.[181]

Not only does fireworks affect our children, but it can also harm our environment. Fireworks can start wildfires that release more particulate matter.[182] Extended exposure to PM2.5 is responsible for 62% of all deaths from air pollution in 2019.[183] PM 2.5 is especially deadly[184] because its small size allows it to enter deep into the lungs and pass into the bloodstream,[185] making it a significant contributor to cardiovascular disease and mortality.[186] PM2.5 also increases heart disease, lung

[172] https://www.foxweather.com/fireworks-blast-holiday-bust-lungs-health-air-pollution-air-pollution-nightmare
[173] https://earth911.com/living-well-being/eco-unfriendly-fireworks/
[174] https://research.noaa.gov/article/ArtMID/587/ArticleID/706/Nationwide-study-measures-
[175] https://www.bbvaopenmind.com/en/science/environment/air-pollution-environmental-risk-health/
[176] https://www.who.int/health-topics/air-pollution#tab=tab_1
[177] https://www.ccacoalition.org/news/who-report-air-pollution-leading-contributor-noncommunicable-diseases
[178] https://nca2018.globalchange.gov/chapter/13/
[179] https://source.colostate.edu/fossil-fuels-are-bad-for-your-health-and-harmful
[180] https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2801241
[181] https://source.colostate.edu/fossil-fuels-are-bad-for-your-health-and-harmful-in-many-ways
[182] https://deq.utah.gov/air-quality/fireworks-air-quality-wildfires
[183] https://www.stateofglobalair.org/health/pm#major-impacts
[184] https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm
[185] https://www.ahajournals.org/doi/10.1161/JAHA.120.016890
[186] https://www.lung.org/clean-air/outdoors/what-makes-air-unhealthy/particle-pollution

CE4K-27 cont.

cancer, COPD (chronic obstructive pulmonary disease), lower-respiratory infections, pneumonia, stroke, type 2 diabetes, and other severe conditions, including gastrointestinal illness.[187,188] People with tuberculosis exposed to PM2.5 had increased replication[189] of the disease. PM2.5 impacts our most vulnerable populations.

Air Pollution Harms Pregnant Women and Children

Air pollution harms nearly every cell and organ in the human body, and pregnant women and children are especially vulnerable.[190] For example, childhood exposure to PM2.5 is linked to asthma,[191] which is the leading cause of school absences[192] and the third leading cause of hospitalizations among children under 15.[193] Poor air quality increases the likelihood of asthma attacks, breathing difficulty,[194] increased emergency room visits,[195] and hospitalization.[196] Air pollution can also inflame the brain, central nervous system, and hearts in children.[197,198]

CE4K-28

The health effects of air pollution start before a child is even born.[199] Pollutants can harm a fetus's brain, liver, lungs, and other organs because pollutants can travel to the tissues and organs of fetuses after being inhaled by pregnant women.[200,201] Exposure to air pollution during pregnancy and infancy[202] is linked to increased rates of stillbirth,[203] preterm birth,[204] low birth weight,[205] SIDS[206] (Sudden Infant Death Syndrome), and decreased development of the brain, among other long-term severe effects.[207] Exposure to air pollution, even at relatively low levels during pregnancy and childhood, significantly harms children's health.[208]

Maternal exposure to air pollution during pregnancy increases the risk of ASD (Autism Spectrum Disorder), a neurodevelopmental condition affecting speech, behaviors, thought patterns, interactions, and communication.[209] Air pollution is a

[187] https://www.stateofglobalair.org/health/pm
[188] https://www.sciencedirect.com/science/article/pii/S0147651323002063
[189] https://www.sciencedirect.com/science/article/pii/S0013935123004875
[190] https://www.who.int/teams/environment-climate-change-and-health/air-quality-and-health/health-impacts
[191] https://www.sciencedirect.com/science/article/pii/S0160412022002240
[192] https://aafa.org/asthma/asthma-facts
[193] https://www.epa.gov/children/childrens-environmental-health-facts
[194] https://resphealth.org/clean-air/understanding-air-pollution/
[195] https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2801735?resultClick=3
[196] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6546668/
[197] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7352229
[198] https://pubmed.ncbi.nlm.nih.gov/35921508
[199] https://www.jpedhc.org/article/S0891-5245(21)00189-9/fulltext
[200] https://www.theguardian.com/environment/2022/oct/05/toxic-air-pollution-particles-found-in-lungs
[201] https://pubmed.ncbi.nlm.nih.gov/32556259
[202] https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2767260
[203] https://www.sciencedirect.com/science/article/abs/pii/S0269749121003328
[204] https://med.nyu.edu/pediatrics/divisions/environmental-pediatrics/air-pollution-preterm-births
[205] https://pubmed.ncbi.nlm.nih.gov/22726801/
[206] https://www.sciencedirect.com/science/article/abs/pii/S0045653520337139
[207] https://www.washington.edu/news/uw-link-between-air-pollution-and-child-brain-development/
[208] https://www.lung.org/clean-air/outdoors/who-is-at-risk/children-and-air-pollution
[209] https://ehp.niehs.nih.gov/doi/10.1289/ehp.1408133

CE4K-28 cont.

"risk factor for autism, and reduced exposure during pregnancy could lead to lower incidence of ASD and reduce the substantial, increasing economic burden of ASD on families and society."[210] As autism rates are increasing all over the world, we must reduce air pollution.[211] Exposure to PM2.5 and Nitric Oxide (NO) significantly increases[212,213] the risk of ASD in children.

Fireworks are Dangerous

CE4K-29

In 2021, fireworks started over 12,000 in the US, including over 2,000 structure fires and over 300 vehicle fires, causing $59 million in property damage.[214] Firework related injuries sent around 11,500 people to the emergency room with children under 15 almost 25% of the injuries.[215]

Explosions of fireworks can cause birds to collide, bees to leave their hives and not return, and fireworks can trigger PTSD in veterans and others who have experienced trauma.[216] The suicide rate for veterans is tragically high.[217]

No Balloons/Confetti

Balloons and strings are commonly found items during beach, waterway and park cleanups and are incredibly deadly to marine life.[218,219]

CE4K-30

Balloons are petroleum-based or latex-based with petroleum-based additives that leach dangerous chemicals into our water, land and air.[220,221] Then these balloons break down into harmful microplastics.[222]

Like balloons, confetti is pollution, most often made from PVC (polyvinyl chloride) which is highly toxic, and breaks down into microplastics which threatens wildlife and human health.[223]

No Styrofoam

CE4K-31

Styrene & Polystyrene Are Toxic

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[210] https://ehp.niehs.nih.gov/doi/10.1289/EHP9509
[211] https://ehp.niehs.nih.gov/doi/10.1289/ehp.1408133
[212] https://www.hsph.harvard.edu/air-pollution-linked-with-increased-risk-of-autism-in-children/
[213] https://jamanetwork.com/journals/jamapediatrics/fullarticle/2714386
[214] https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Seasonal-fire-causes/Fireworks
[215] https://www.cpsc.gov/s3fs-public/2021-Fireworks-Annual-Report.pdf
[216] https://www.va.gov/hines-health-care/stories/how-your-fireworks-may-affect-americas-veterans/
[217] https://americanaddictioncenters.org/veterans/suicide-among-veterans
[218] https://nc-cleanwater.com/2019/05/15/what-goes-up-must-come-down/
[219] https://gaia.vcu.edu/portal/apps/storymaps/stories/83154e32217a4c15b4c29aaa2c82c966
[220] https://medium.com/balloon-releases-have-deadly-consequences-were-helping-citizen-scientists-map-them
[221] https://www.sciencedirect.com/science/article/abs/pii/S0304389420316150
[222] https://danawharf.com/blog/why-ballons-are-dangerous-for-marine-life/
[223] https://www.csulb.edu/sustainability/article/glitter-litter

Polystyrene is toxic to marine animals, the environment and wildlife.[224] It disintegrates, creating thousands of microplastics that enter our storm drains, rivers, and oceans where it can be eaten by marine life and wildlife, which can be fatal.[225,226] Toxic chemicals leaching from polystyrene into water are a direct threat to marine life.[227] The potential threats wildlife face due to polystyrene exposure include damages to the stomach, kidneys, liver and other organ systems.[228]

Polystyrene (styrofoam) is a polymer made from styrene.[229] Polystyrene leeches styrene and benzene into water and the environment.[230] Styrene is linked to genetic white blood cell damage and high cancer risk.[231] Styrene is listed as a carcinogen under California's Proposition 65 as is benzene.[232,233]

CE4K-31 cont.

Although polystyrene is a significant problem for humans, this issue extends to our oceans as well. Polystyrene has a direct path towards marine ecosystems through fisheries, water sports and other human activities.[234] It is common for buoys, fish boxes and marina platforms to contribute to this issue.[235] These structures can all be easily destroyed within storms, exposure to wave erosion or even gusts of wind.

This commonly used carcinogen heavily impacts the health of our marine life. As mentioned earlier, it is not only toxic but has been linked to health effects. The exposure to polystyrene can result in oxidative damage within the cell's lipids.[236] These serious implications include but are not limited to cell death and inhibition of the growth of cell morphology.[237] Impacts of polystyrene exposure have been shown to increase oxidative stress and decrease survival rates within marine life.[238]

Additionally, exposure and consumption of polystyrene can impact the future of marine life. Consumption can lead to infertility and alter development.[239] Although these effects may seem minor, they can impact a whole food chain, starting with base organisms.[240]

Chronic exposure to styrene has been linked to severe health effects such as depression, headaches, fatigue, weakness, hearing loss, disrupted kidney function,

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[224] https://medium.com/why-styrofoam-expanded-polystyrene-should-be-banned-everywhere-in-the-world
[225] https://www.fauna-flora.org/app/uploads/2020/07/FFI_2020_Breaking-Down-Ocean-Polystyrene_Scoping-
[226] https://ohvec.org/the-truth-about-polystyrene/
[227] https://www.sciencedirect.com/science/article/pii/S0045653522008669
[228] https://environmentamerica.org/wp-content/uploads/2018/04/Polystyrene-Factsheet-w-Sources.pdf
[229] https://www.sciencedirect.com/topics/chemical-engineering/polystyrene
[230] https://pubmed.ncbi.nlm.nih.gov/24383702/
[231] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3165940/
[232] https://www.p65warnings.ca.gov/fact-sheets/styrene
[233] https://www.p65warnings.ca.gov/fact-sheets/benzene
[234] https://phys.org/news/2019-12-big-problem-ocean-polystyrene-pollution.html
[235] https://phys.org/news/2019-12-big-problem-ocean-polystyrene-pollution.html
[236] https://www.sciencedirect.com/S235218642300069X
[237] https://www.sciencedirect.com/S235218642300069X
[238] https://www.sciencedirect.com/S235218642300069X
[239] https://phys.org/news/2019-12-big-problem-ocean-polystyrene-pollution.html
[240] https://phys.org/news/2019-12-big-problem-ocean-polystyrene-pollution.html

CE4K-31 cont.

and white blood cell damage that can lead to various cancers.[241,242] Styrene causes endocrine disruption, reproductive organ toxicity and skin, eye and lung irritation, and it can cause chromosomal damage which can cause cancer in humans.[243] It can also increase the risk of leukemia, lymphoma, and cancer mortality.[244]

Reduce Single Use Plastics

Plastics are Made of Toxic Chemicals

There are over 16,000 chemicals used in the making of plastics with at least 4,200 of them (26%) are highly hazardous to human health and the environment, but only 980 of them are regulated around the world.[245] All tested plastics leached hazardous chemicals and each major plastic type, including food packaging, can contain over

CE4K-32

400 chemicals of concern.[246] Additionally, there is little to no hazard information available for over 10,000 of these chemicals.[247]

Chemicals commonly found in plastics like PFAS and phthalates can impair reproduction, growth, and cognition.[248] The most vulnerable population are children and plastic is linked with obesity, hyperactivity, ADHD, low IQ, and asthma.[249]

Unborn children are especially vulnerable to toxins in plastics which can "increase risks of prematurity, stillbirth, birth defects of the reproductive organs, neurodevelopmental impairment, impaired lung growth, and childhood cancer."[250]

PFAS

PFAS (perfluoroalkyl and poly-fluoroalkyl substances) are a class of over 14,000 synthetic (man-made) chemicals found in many products like plastic bags, artificial grass/synthetic turf, food packaging, waterproofing sprays, household cleaners,

CE4K-33

stain-resistant carpet, nonstick cookware, fire fighting foam, clothing, makeup, toilet paper, personal care products, textiles, children's products and much more.[251,252] PFAS as a class share many characteristics and toxicities.[253]

PFAS are known as "forever chemicals" as they are extremely strong and don't break down in the environment or in our bodies. Once in the body, they accumulate in the

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[241] https://cehn.org/our-work/eco-healthy-child-care/ehcc-faqs/faqs-styrofoam/
[242] https://ntp.niehs.nih.gov/ntp/roc/content/profiles/styrene.pdf
[243] https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/HESIS/CDPH
[244] https://pubmed.ncbi.nlm.nih.gov/8070875/
[245] https://www.cnn.com/2024/03/14/health/toxic-unregulated-chemicals-report-wellness?cid=ios_app
[246] https://plastchem-project.org/wp-content/uploads/2024/03/PlastChem-Press-Release_English-v1.pdf
[247] https://plastchem-project.org/
[248] https://www.sciencedaily.com/releases/2020/12/201215131242.htm
[249] https://www.naturalsuperkids.com/health-effects-plastic-exposure-children
[250] https://www.genevaenvironmentnetwork.org/resources/updates/plastics-and-health/
[251] https://comptox.epa.gov/dashboard/chemical-lists/pfasmaster
[252] https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html
[253] https://experts.unthsc.edu/en/publications/response-to-comment-on-scientific-basis-for-managing-pfas

kidneys and liver with a biological half-life of 3-8 years.[254] PFAS are found in the blood of 97% of Americans and even in umbilical cords.[255,256]

CE4K-33 cont.

PFAS are toxic. According to the CDC,[257] EPA,[258] and the European Union Environment Agency,[259] PFAS are linked to low birth weight, thyroid disease, increased cholesterol, liver damage, kidney cancer, and testicular cancer. They are also linked to liver cancer,[260] diabetes,[261] endocrine disruption, and other serious health problems.[262]

PFAS bioaccumulate in our bodies, making the risk of cancers and other health problems more likely as we get older.[263]

Dangers of Phthalates

CE4K-34

Phthalates are typically added to most plastics to make them pliable and are often found in single-use plastic water bottles.[264,265] Men with higher phthalate levels have higher levels of cardiovascular disease and type 2 diabetes.[266] In midlife and postmenopausal women, phthalates can lead to fast body fat gain, a higher BMI, and increased waist circumference.[267] Phthalates can also cause increased rates of hot flashes.[268] Phthalates are linked to birth defects, infertility, miscarriages, as well as other neurological issues during child development and can harm the endocrine system.[269,270] Phthalates are endocrine disruptors that impact the delicate balance of hormones in our bodies.[271]

Women exposed to phthalates while pregnant are at greater risk and are more likely to have a preterm birth.[272] Human studies have determined that in-utero phthalate exposure can cause later development of type II diabetes and insulin resistance, obesity, asthma, higher systolic blood pressure, and reproductive problems in women, including earlier menopause, low birth weight, pregnancy loss, and preterm birth.[273] Other human studies have linked phthalates to impaired motor skills in

[254] https://www.niehs.nih.gov/health/topics/agents/pfc/index.cfm
[255] https://www.atsdr.cdc.gov/pfas/health-effects/us-population.html
[256] https://www.theguardian.com/environment/2022/forever-chemicals-found-umbilical-cord-blood-samples
[257] https://www.atsdr.cdc.gov/pfas/health-effects/index.html
[258] https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas
[259] https://www.eea.europa.eu/publications/emerging-chemical-risks-in-europe
[260] https://www.insider.com/study-confirms-link-between-forever-chemicals-and-liver-cancer-risk-2022-8
[261] https://pubmed.ncbi.nlm.nih.gov/35970987/
[262] https://pubmed.ncbi.nlm.nih.gov/32476019
[263] https://www.mdpi.com/2305-6304/10/2/44
[264] https://www.nytimes.com/article/plastics-to-avoid.html
[265] https://www.foodpackagingforum.org/news/phthalates-in-bottled-water
[266] https://www.diabetes.co.uk/news/2017/jul/everyday-plastic-chemicals-linked-to-type-2-diabetes
[267] https://www.sciencedirect.com/science/article/abs/pii/S0013935123001482
[268] https://www.sciencedirect.com/science/article/abs/pii/S0013935121001857
[269] https://birthdefects.org/phthalates/
[270] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8157593/
[271] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7559247/#
[272] https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(23)00270-X/fulltext
[273] http://www.ncbi.nlm.nih.gov/pmc/articles/PMC8157593/#B32-healthcare-09-00603

CE4K-34 cont.

children as well as delayed language development.[274] In male adults, a reduction in sperm quality and quantity has also been observed.[275]

Microplastics and Nanoplastics (MNPs)

Plastics do not decompose[276] like plants; they just break into smaller and smaller pieces, leading to MNPs that can be eaten, drank or breathed in[277] by animals or humans and are even absorbed by plants.[278]

Plastic first breaks down into microplastics, smaller than 5mm, and then nanoplastics which are less than 100 nm.[279] By comparison, a sheet of paper is about 100,000 nm thick.

CE4K-35

MNPs have been found in human blood, the placenta, and the feces of infants and adults.[280] The ability to cross through human digestion is especially concerning as preliminary studies have discovered links between ingested plastic and inflammatory bowel disease.[281]

Ingesting MNPs can change the gut microbiome which is linked to metabolic diseases like obesity, diabetes, and chronic liver disease.[282]

MNPs have been found deep in human lungs with polypropylene, used in plastic packaging, and PET, used in plastic bottles, the most common found.[283] Research shows it is likely MNPs can cross the blood-brain barrier, causing inflammation in the brain itself.[284] MNPs in the human brain could damage brain cells and dementia-like symptoms have been seen in mice exposed to microplastics.[285,286]

These microscopic MNPs can increase our chance of stroke and heart attacks as nearly 60% of clogged arteries in a recent study were found to contain plastic.[287]

Plastics In Drinking Water And Food

CE4K-36

Each person consumes an estimated 5 grams of plastic, the equivalent of a credit card, every week.[288]

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[274] http://health.harvard.edu/blog/something-else-to-avoid-in-pregnancy-phthalates-2019031516224
[275] https://www.sciencedirect.com/science/article/abs/pii/S0304389417304570?via%3Dihub
[276] https://www.scienceabc.com/nature/how-do-we-know-plastic-will-take-so-long-to-decompose.html
[277] https://www.theguardian.com/environment/2022/mar/24/microplastics-found-in-human-blood-for-first-time
[278] https://www.sciencedirect.com/science/article/abs/pii/S0165993622003727
[279] https://www.iaea.org/research-on-the-possible-effects-of-micro-and-nano-plastics-on-marine-animals
[280] https://www.theguardian.com/environment/microplastics-found-in-human-blood-for-first-time
[281] https://www.theguardian.com/microplastics-may-be-linked-to-inflammatory-bowel-disease-study-finds
[282] https://www.euronews.com/green/2022/04/11/how-much-plastic-do-you-eat-it-could
[283] https://www.theguardian.com/environment/microplastics-found-deep-in-lungs-of-living-people-for-first-time
[284] https://www.sciencealert.com/microplastics-could-trigger-inflammation-in-human-brain-cells
[285] https://www.sciencedirect.com/science/article/pii/S0013935117310770?via%3Dihub
[286] https://futurism.com/neoscope/scientists-microplastics-cause-dementia-mice
[287] https://www.sciencealert.com/plastic-found-inside-more-than-50-of-plaques-from-clogged-arteries
[288] https://wwf.panda.org/Revealed-plastic-ingestion-by-people-could-be-equating-to-a-credit-card-a-week

Plastics have been found in 83% of tap water and 93% of bottled water sampled.[289,290]

CE4K-36 cont. The food chain has also been affected by microplastics with microplastic contamination found in fish, shellfish and crustaceans, canned fish, sugar, salt, honey, beer, fruits and vegetables, milk, rice, meat, and other common food products.[291,292]

Plastics Harm Wildlife and Marine Ecosystems

Many wildlife accidentally eat plastic after mistaking it for food which not only can cause them to choke or starve, but can poison them as plastics contain toxic chemicals.[293,294]

Plastic pollution harms "all sea turtle species, half of marine mammal species, and one-fifth of seabird species."[295]

CE4K-37 In the past decade the amount of plastic dumped in our oceans has increased and reached up to 350 million tons of plastic.[296]

Microplastics and nanoplastics can harm entire marine ecosystems with 15–51 trillion microplastic plastic particles floating in the ocean.[297] Microplastics can enter marine animals as they "breathe," allowing them to accumulate in organisms. These plastics also hurt corals which are essential for fisheries and are crucial for the health of marine ecosystems, providing "habitat, feeding, spawning, and nursery grounds for over one million aquatic species, including commercially harvested fish species."[298]

Additionally, over 800 marine species are directly harmed by plastic, leading to "starvation, malnutrition, intestinal blockage, and intake of toxins."[299]

Stop Cancer and Toxic Chemicals

CE4K-38 90–95% of cancers are caused by environmental and lifestyle factors while our children are surrounded by an estimated 350,000 synthetic/man-made chemicals and chemical mixtures every day, nearly all of them invented since 1950.[300,301]

There is clear evidence that exposure to these chemicals is an important contributor

[289] https://beachapedia.org/Plastic_Pollution_Facts_and_Figures
[290] https://www.bonappetit.com/story/microplastics-food
[291] https://www.sciencedirect.com/science/article/pii/S0048969722069340
[292] https://www.sciencedirect.com/science/article/abs/pii/S0025326X22008827
[293] https://www.plasticsoupfoundation.org/en/plastic-problem/plastic-affect-animals/animals-eat-plastic/
[294] https://www.nationalgeographic.com/environment/article/plastic-pollution
[295] https://www.nrdc.org/sites/default/files/choked-plastic-pollution-marine-life-fs.pdf
[296] https://plasticseurope.org/wp-content/uploads/2021/10/2018-Plastics-the-facts.pdf
[297] https://kids.frontiersin.org/articles/10.3389/frym.2021.574637
[298] https://www.epa.gov/coral-reefs/basic-information-about-coral-reefs
[299] https://www.nrdc.org/sites/default/files/choked-plastic-pollution-marine-life-fs.pdf
[300] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2515569/
[301] https://pubmed.ncbi.nlm.nih.gov/31968937/

to childhood cancer.[302]

CE4K-38 cont.

A 50 year review of pediatric cancer found cancer is now the leading cause of death by disease in US children under 15 with rates of leukemia, the most common cancer in children and adolescents, having increased by 21% in children since 1976 with brain cancer rates increasing by 45%.[303,304]

With about 43 children diagnosed with cancer every day, we must reduce their exposure to toxic chemicals.[305] We must protect the places where they run and play, the water they drink, the food they eat and the air they breathe.

The decisions we make today affect our children's health and future.

Sincerely,

Suzanne Hume
Educational Director and Founder
S@CleanEarth4Kids.org
CleanEarth4Kids.org

[302] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6546253/
[303] https://www.annals-research-oncology.com/pediatric-cancer-and-the-environment-a-fifty-year-perspective/
[304] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5550103/
[305] https://www.stjude.org/get-involved/other-ways/childhood-cancer-awareness-month.html

COALITION FOR CLEAN AIR

Coalition for Clean Air
617 W 7th St, Los Angeles CA 90017
November 12th, 2024

To: ceqacomments@portla.org
CC: Sarah Workman, POLA Environmental Specialist – CEQA

Re: West Harbor Mitigation Project EIR

To Whom It May Concern,

CCA-1

In response to the West Harbor Mitigation Project Environment Impact Review, the Coalition for Clean Air has a couple of concerns and questions about the project's air quality and transportation impacts. We appreciate that the plan includes efforts to reduce pollution from fireworks by considering drone displays.

We are concerned that the West Harbor project will have a significantly adverse impact on Vehicle Miles Traveled (VMT) in the region, and that the port has tentatively concluded that there are no feasible mitigation measures to address these VMT impacts. Without specific mitigation measures put into place, associated car and truck emissions will increase and add further to the already considerable adverse air quality and public health impacts of port operations. To this end, we propose that the port consider and adopt additional feasible mitigation measures, including the creation of protected Class I bike lanes that connect local neighborhoods to the project facilities, pedestrian walkways and access improvements, micromobility accommodations (e.g., implementation of the South Bay Cities Council of Governments' "Local Travel Network Playbook" in San Pedro and preferred parking accommodations for neighborhood electric vehicles at the project site), and better public transit services to the San Pedro Waterfront in addition to event-specific expanded public transit services.

We support the proposed commitment to install and maintain bicycle parking and lockers and ask that the port specify how many bicycles will be able to use the parking infrastructure and how many lockers will be available so that the full extent of the mitigation benefits can be known. Please don't underestimate the demand for bicycle lockers, the absence of which creates a barrier to using active transportation to get to otherwise accessible destinations. We also support the proposed event-specific expanded public transit services but ask that the port identify specific commitments in terms of the frequency, types, and quantity of services that will be provided (e.g., buses, shuttles, paratransit, etc.). Without specific commitments to improved event-related transit services, the port cannot make a fully informed decision about the environmental impacts of the proposed project.

With the additional parking infrastructure, we ask that the port includes light duty public charging and charging for delivery vehicles to the venue, as well as significant tree and shade coverage in the parking lot to mitigate localized pollution and heat.

CCA-1
cont.

We also ask that the port consider pavement coverage like permeable pavement and rubber modified asphalt to reduce tire wear impacting particulate matter and 6PPD-quinone in our water.

Please let us know which of the above or additional elements will be included in the plan to increase non-vehicular access to the West Harbor and reduce air emissions impacts to the local San Pedro and portside communities. The mitigation measures we propose have been implemented elsewhere and, therefore, have proven feasible.

Sincerely,

Dori Chandler

Policy Advocate, Coalition for Clean Air
Dori@ccair.org

COASTAL SAN PEDRO NEIGHBORHOOD COUNCIL

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1840 S Gaffey St., Box 34 ● San Pedro, CA 90731 ● cspnclive@gmail.com

December 17, 2024

ceqacomments@portla.org

Re. West Harbor Modification Project

Lisa Wunder and Sarah Workman
Los Angeles Harbor Department
Via email: ceqacomments@portla.org

Dear Lisa and Sarah,

The following resolution was approved by the Coastal San Pedro Neighborhood Council at its December 16, 2024 Board meeting:

CSPNC-1 Resolved, Coastal San Pedro Neighborhood Council shall file comments on the Draft Subsequent Environmental Impact Report for the West Harbor Modification Project.

Please see attached comments.

Sincerely,

Douglas Epperhart

Doug Epperhart, President
On behalf of the Coastal San Pedro Neighborhood Council Board

cc
cc: Councilmember Tim McOsker Councilmember.McOsker@lacity.org
Harbor Commissioners Commissioners@portla.org
Mike Galvin Mike.Galvin@portla.org
Augie Bezmalinovich ABezmalinovich@portla.org
Alan Johnson alan@victory-group.com
Pamela Thornton, CD-15 Pamela.Thornton@lacity.org
Drew Leach, CD-15 Drew.Leach@lacity.org

Attachments:

From: Douglas Epperhart, President, Coastal San Pedro Neighborood Council

To: Director of Environmental Management, Los Angeles Harbor Department

Date: 17 December 2024

Re: Comments on the Draft Subsequent Environmental Impact Report for the West Harbor Modification Project at the Port of Los Angeles (SCH No. 2005061041)

We welcome the opportunity to file comments on the Draft Subsequent Environmental Impact Report for the West Harbor Modification Project at the Port of Los Angeles (referred to as "DSEIR" below), and we are grateful for the extension provided for comments. On 16 December 2024, the Board of the Coastal San Pedro Neighborhood Council unanimously passed a resolution to submit the following comments.

For context, we note the following descriptions, used as the proposed venue usage estimates in formulating the comments below.

> "… approximately 100 publicly ticketed concert events annually, generally from April through November. No more than one ticketed event per day is expected. Concerts would typically start between 7:00 p.m. and 8:00 p.m. and last approximately 3 to 4 hours. The Amphitheater would also be used for community, charity, and sponsored events, which would be held year-round. These events are not analyzed in this document because they were included in the 2009 SPW EIS/EIR." [p 2-29]

CSPNC-1 cont.

> "Pyrotechnics (i.e., fireworks) may be used at certain events. Specifically, fireworks may be launched from a barge (or barges) at approximately 25 events per year, with the show lasting up to 20 minutes." [p 2-30]

That implies events occurring from 7pm to 11pm approximately every three days and a fireworks display every week and a quarter during the active season.

For reference, much of the analysis of fireworks effects in the DSEIR is based on the analysis performed for an Environmental Impact Report prepared for the San Diego Bay and Imperial Beach Oceanfront Fireworks Display Events Project (March 2017). In comments below, this will be referred to as the "San Diego 2017 Fireworks EIR":

> Criteria and toxic pollutant emissions from proposed firework displays were calculated by scaling the analysis of firework displays in the 2017 San Diego Bay and Imperial Beach Oceanfront Fireworks Display Events Project EIR (San Diego Unified Port District 2017)" [DSEIR p. 3.2-24]

Chapter 2 Project Description

Use of the term "amphitheater" is incorrect and misleading for this project and must be revised out of the DSEIR document.

In the transition from the Initial Study/NOP phase to the DSEIR phase of this project, the design was changed to remove the landscape contouring that originally caused the project to be called an "amphitheater". Specifically:

CSPNC-2

2009 San Pedro Waterfront Project: Recommendation from Staff: Final Proposed Project Summary:

> … a sloped area that would serve as an amphitheater with lawn seating for 500 people, and possible water features are envisioned [p. 7]

2016 Addendum to the San Pedro Waterfront Project Environmental Impact Report for the San Pedro Public Market Project:

> … a 500-seat amphitheater, which was previously evaluated in the SPW Project EIS/EIR." [p. 2-6]

2022 West Harbor Modification Project Initial Study/Notice of Preparation:

> … creation of an approximately 50,000-square-foot sloped and terraced lawn area to be used as an outdoor amphitheater and entertainment venue. [p. 2-5]

2024 West Harbor Modification Project Draft Subsequent Environmental Impact Report:

> … an approximately 50,000-square-foot lawn that would be used primarily as park and open public space as well as for the outdoor Amphitheater [*sic*] and other entertainment venue uses. [p 2-17]

CSPNC-2 cont.

The current design is for a flat, artificial-turf covered space ("lawn"). It is on this "lawn" that the so-called "Amphitheater" usage is proposed to take place. All definitions of the word "amphitheater" include tiered seating around a focal flat space. The current design has only flat space. Continued use of the word "amphitheater" is incorrect and misleading, particularly in the context of evaluating light and sound propagation from the site. The terminology of the SEIR must reflect the current project. Therefore the word "amphitheater" as part of the venue name or description must be removed from the SEIR.

Chapter 3.1 Aesthetics

The reasoning leading to the conclusion of "less than significant" aesthetic effects of firework shows is irredeemably flawed. An actual analysis of aesthetic impacts of fireworks for the Proposed, Alternative, and No Project levels is required.

The reasoning in the DSEIR for "less than significant" conclusion is this:

> The Port already conducts firework shows; therefore, the introduction of fireworks in the Proposed Project area would be consistent with current Port operations. Although additional shows would be added each year, all firework shows would comply with City of Los Angeles Municipal Code, Section 57.5608, Fire Displays (City of Los Angeles 2023). Because firework shows are already conducted by the Port, the Proposed Project would not be introducing a foreign event to the Project Site. Therefore, impacts would be less than significant. [p 3.1-9, with similar text on p 3.1-13]

CSPNC-3

There are two elements in this argument:

1. The Port has had fireworks shows.
2. Fireworks shows will comply with City of Los Angeles Municipal Code 57.5608.

This reasoning fails to support a conclusion of "less than significant" impact for the following reasons:

For item 1: At present, there are 1–2 fireworks shows in the Port per year. The proposed number of shows is 25 per year — 10–20 times the current number. An increase of 10–20 times is dramatically incomparable to the current level. Because of the massively changed event frequency, simply noting that fireworks existed in the past does not in any way remove the requirement to analyze the impact of 25 fireworks shows per year.

For item 2: Los Angeles Municipal Code 57.5608 adopts California Fire Code Section 5608 with a few added clauses. Neither CFC 5608 nor the additional City Code clauses address aesthetic concerns of fireworks at all. Therefore citing this code is irrelevant to this evaluation (besides being a *pro forma* statement that the project intends to follow the law).

CSPNC-4

Since the presented reasoning is inadequate for a determination, an analysis is required.

Chapter 3.2 Air Quality

CSPNC-5 We recognize and appreciate the selection of significance thresholds (rather than the 2009 or 2016 DEIR baselines), contrary to common Port environmental analyses:

> Proposed Project impacts were conservatively compared directly to significance thresholds without subtracting emissions associated with land uses existing at the time of the IS/NOP. [p. 3.2-19]

Analysis of the cumulative effects of fireworks in a regional context must be included in this DSEIR.

The San Diego 2017 Fireworks EIR found significant impacts of fireworks displays when considered in a larger spatial context (that study covered multiple fireworks events over a large geographic area):

CSPNC-6

> Implementation of the proposed project would violate an air quality standard or contribute substantially to an existing or projected air quality standard." [p 4.2-34 San Diego DEIR vol. 1]
>
> Implementation of the proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard. [p. 4.2-44 San Diego DEIR vol. 1]

The analysis in the current DSEIR does not take regional cumulative effects of fireworks into account. Based on the San Diego 2017 Fireworks EIR, which reached a conclusion of significant impacts when a broader scale of urban events was considered, a cumulative region-wide analysis is required.

We recommend adaptation and adoption of mitigation measure MM-AQ-2 from the San Diego 2017 Fireworks EIR.

Some very specific mitigation measures were critical to achieving reasonable environmental outcomes for fireworks in the San Diego area, based on the San Diego 2017 Fireworks EIR, and were incorporated into San Diego City Code.

> [San Diego Unified Port District EIR] **MM-AQ-2:** Implementation of Air Quality-Related Conditions of the Proposed Ordinance.
>
> The fireworks organizer and operator are required to comply with the following air quality-related conditions of the proposed ordinance.
>
> Section X.07 – Permits – Conditions of Approval
>
> (f) Best Management Practices. Fireworks display events shall implement the following BMPs for fireworks display event preparation, discharge and clean-up:

CSPNC-7

> 1. Fireworks display events on barges shall be set up at a loading facility in accordance with the requirements and under the supervision of the municipal fire department with jurisdiction over the event. Barges shall be inspected for leaks and other potential safety issues. Idling time for delivery trucks and loading equipment shall not exceed three (3)minutes and all such trucks and equipment shall be shut down when not in use.
>
> (d) Fireworks Chemical Composition and Packaging.
>
> 1. Chemical Composition.
>
> B. All fireworks display events shall use alternative fireworks produced with pyrotechnic formulas which replace perchlorate with other oxidizers and propellants that burn cleaner, produce less smoke and reduce pollutant waste loading to surface waters, unless the Applicant establishes in writing and to the satisfaction of the Executive Director that such alternative fireworks are not commercially available.

We highlight the importance of section (d)1.B which requires low-polluting fireworks.

Although some of the mitigation measures specified in the San Diego 2017 Fireworks EIR have been expressed in the NPDES Permit No. CAG994007 (also see below under Chapter 3.3 Biological Resources), that permit is concerned primarily with debris pollution, not air quality.

CSPNC-7 cont.

The area around the Port of Los Angeles is well known to have some of the most heavily and chronically polluted air in the United States. Therefore the NPDES Permit No. CAG994007 clause allowing fireworks with highly polluting explosives and propellants unless alternatives are "… practicable and economically achievable" is inadequate protection. We insist that adoption of a mitigation measure (like MM-AQ-2 of the San Diego 2017 Fireworks EIR) that mandates the use of alternative formulas independent of their comparative cost is essential for the Los Angeles area.

Chapter 3.3 Biological Resources

Analysis of light/illumination impacts on biological resources beyond the concert venue boundaries is required. This must include impacts on marine mammals, endangered species (California Least Tern), and should include ongoing monitoring analogous to the monitoring proposed for noise mitigation.

CSPNC-8

The photometric analysis (including Appendix B — Photometric Study) is restricted to the immediate area of the concert venue. While useful, that does not begin to address potential impacts on more distant targets. Consideration in Chapter 3.1, of course, is limited to impact on humans, so does not address this problem.

Orienting the venue to face southeast points it away from many human targets but points it directly towards the nesting site of the endangered California Least Tern (of which only a few thousand breeding pairs exist in the world). The anticipated concert season (April through November) fully covers the entire breeding season of the California Least Tern (mid-April to mid-September). The potential impact of concert lighting, complete with flashing and strobe effects, including the flanking video displays, must be analyzed.

Analysis of negative effects of fireworks and concert noise on marine mammals must be extended to other species that are fully covered by the Marine Mammal Protection Act, but were not considered in this analysis.

CSPNC-9

Pages 3.3-25 *et seq.* provide some analysis of sound effects on Harbor Seals and "Other Pinnipeds", finding that there will be significant effects on marine mammals, despite mitigation measures. It is not stated anywhere why the analysis was restricted to those taxa. Excluding analysis of possible effects on other marine mammals is an unacceptable omission. For example, there are numerous whale species that are covered by the Marine Mammal Protection Act (and are also Federally Endangered and/or California State Fully Protected) that are known to migrate very close to the Port. This noise analysis must be extended to cover other marine mammals that might be affected.

The evidence and reasoning cited for the conclusion that there will be no harmful effects of concert and fireworks noise on birds is completely flawed and hence an actual impact analysis is required. In particular, this analysis must involve both field sound tests and long-term monitoring (also see comments below regarding MM-BIO-9).

CSPNC-10

The DSEIR states:

> …impacts from concert-related noise on nesting California least tern would be less than significant. [p 3.3-29]

The evidence cited for this conclusion is entirely inadequate to support this conclusion and in many cases contradicts a "less than significant" conclusion. Following are the references cited to support the conclusion of "less than significant" impact of noise [p 3.3-29 – 3.3-30]:

- *Langdon Biological Consulting (2024).* The total reference is: "Based on… the professional expertise of the senior tern monitor, noise from the amphitheater concerts would not result in harmful effects (e.g., abandonment of the nesting site) on the California least tern nesting colony at Pier 400" [p 3.3-29]. Respectful though we are of the monitoring staff, this is a personal opinion, not evidence.
- *Boylan and Nordstrom (2014)* is an unpublished 12-page report describing observations of birds at a single July 4th fireworks event.
- *Langdon Biological Consulting (2021)* is a single November "Field Memo Observation".
- *San Diego Unified Port District (2017)* is an EIR prepared by the same company that prepared this DSEIR, hence does not constitute independent evidence.
- *Scott Cawley (2015)* is an unpublished 18 page assessment of concert effects, primarily on bats, presented to a County Council in Ireland. It includes observations on about half a dozen individual birds and a small flock of mallards on July 3–4, 2015.
- *Fanning et al. (2020)* is a peer-reviewed research paper. It found that animals were disturbed by concert noise, despite the fact that the animals studied were in a zoo (these animals would be expected to be highly human-tolerant).

CSPNC-10 cont.

- *Harley et al. (2022)* is a peer-reviewed research paper. It found that animals were disturbed by concert noise (again, human-acclimated zoo animals). Notably, the sound "overage" of the concert was less than 2 dBA (sound level went from 49.8 dBA ambient to 51.7 dBA during the concert) — far less than the sound increment proposed for this concert venue.
- *Battisti (2024)* is a peer reviewed research paper that found bird diversity loss in response to an outdoor concert.

Nothing in the references cited (other than the personal opinion of the monitoring biologist) supports a conclusion that there will not be a substantial adverse effect on species identified as a Candidate, Sensitive, or Special-Status Species in local or regional plans, policies, or regulations or by CDFW or USFWS.

There is no analysis of potential sound impacts at the Least Tern nesting site in Chapter 3.3 Biological Resources, Chapter 3.8 Noise, or Appendix F Noise-Amphitheater Sound System. Assessing this impact will require field sound tests. The model used to predict sound propagation in this study (the Nord2000 algorithm in "NoizCalc" software) "… provides acceptably acccurate noise predictions up to 3 km from a source." (Audio Engineering Society, Inc. [2020] Technical Document AESTD1007.1.20-05 Understanding and managing sound exposure and noise pollution at outdoor events.) The Least Tern nesting site is just at that outer limit of prediction, hence requires field testing of potential impacts.

For mitigation of fireworks physical debris, we strongly urge adaptation and adoption of MM-BIO-1 from the San Diego 2017 Fireworks EIR (over and above the minimal requirements of NPDES permitting), with provision for public records of fireworks Best Management Practice (BMP) program operations.

CSPNC-11

We note the reference to the CA Regional Water Quality Control Board Los Angeles Region Order No. R4-2023-0180 General NPDES Permit No. CAG994007 "Waste discharge requirements for discharges of residual firework pollutants from public fireworks displays to surface waters in Los Angeles and Ventura Counties" (presumably inserted in response to the Sierra Club's Los Cerritos Task Force comment to the NOP). But the NPDES outlines only minimal requirements for a Best Management Practices (BMP) plan and lacks public record-keeping and accountability requirements, which are essential to encourage and monitor ongoing compliance.

CSPNC-12 The fireworks BMP (required under the NPDES permit) must be be made publicly available. We also strongly recommend that documentation of adherence with the BMP be made publicly available for review in an ongoing manner.

CSPNC-13 MM-BIO-1 from the San Diego 2017 Fireworks EIR contains more-detailed BMP recommendations. This was a critical addition to San Diego City Code that was adopted subsequent to the EIR. We particularly point out the requirements to photo-document and weigh collected debris upon cleanup and the requirement that a documented minimum of 50% of the fireworks net weight must be retrieved by the debris-collection program (with mitigating penalties for failure to achieve the cleanup goals).

The additional features in the BMP outlined in the San Diego 2017 Fireworks EIR must be incorporated into the BMP developed in response to the NPDES Permit. Note that this is completely in addition to MM-BIO-7 of the West Harbor DSDEIR, which covers only visitor-generated trash, not fireworks debris.

> [San Diego Unified Port District EIR] **MM-BIO-1**: Implementation of Biological Resources–Related Conditions of the Proposed Ordinance for Direct Impacts. The fireworks organizer and operator are required to comply with the following biological resources-related conditions of the proposed ordinance.
>
> (d) Fireworks Chemical Composition and Packaging.
>
> 2. Packaging.
>
> A. Prior to commencement of a fireworks display event, the fireworks operator shall remove and properly dispose of all packaging, wrapping and labels from all fireworks to be used in the event.
>
> B. Fireworks that include a plastic outer casing or non-biodegradable inner components that make up more than five (5) percent of the mass of the shell or device are prohibited.
>
> (f) Best Management Practices (BMPs). Fireworks display events shall implement the following BMPs for fireworks display event preparation, discharge and clean-up:
>
> CSPNC-14 1. Fireworks display events on barges shall be set up at a loading facility in accordance with the requirements and under the supervision of the municipal fire department with jurisdiction over the event. Barges shall be inspected for leaks and other potential safety issues. Idling time for delivery trucks and loading equipment shall not exceed three (3) minutes and all such trucks and equipment shall be shut down when not in use.
>
> 2. Fireworks shall be brought to the barge and loaded in their California Department of Transportation (DOT)-approved shipping cartons. Fireworks shall be encased in paper to prevent spillage of loose compounds. All packaging material and debris, including fuses, wires, shipping cartons and other wrapping, shall be properly disposed of in trash receptacles as the fireworks display event is set up. Unless prohibited by the municipal fire marshal with jurisdiction over the fireworks display event, barges shall be equipped with a fire-retardant debris barrier that extends six feet (6') in height, with openings no larger than ¼ inch, around the perimeter of the Fireworks launch area to contain debris.
>
> 3. Wires from the electric match placed in the fireworks fuse shall be wrapped around nails that are installed on the racks to prevent wires from being pulled out and falling into the water. Wire cables connected to computer firing equipment modules shall also be properly secured to ensure they remain on the barge during the fireworks display event.
>
> 4. Once the fireworks are prepared for launch, all trash and debris shall be removed from the barge while it is at the loading facility and prior to the barge being moved into position. No loose material shall be allowed on the barges during the fireworks display event.
>
> 5. Following the fireworks display event and upon expiration of any safety period required by the municipal fire marshal with jurisdiction over the fireworks display event, the fireworks operator shall pick up all loose material on the barge, including all trash and debris resulting from the discharge of the fireworks, to prevent it from being discharged into the water while the barge is underway.
>
> 6. Upon return to the loading facility, the fireworks operator shall clean the barge of all fireworks related material and shall photograph and properly dispose of all fireworks trash and debris. Unexploded fireworks and related components shall be collected and disposed of by the fireworks operator in accordance with all applicable regulations. fireworks operators shall photograph the barge prior to and after cleaning.

7. Following the fireworks display event and upon expiration of any safety period required by the municipal fire marshal with jurisdiction over the event, the fireworks organizer shall provide cleanup crews and boats to conduct sweeps of the fireworks detonation zone to gather any floating debris from spent fireworks using hand held fishnets, pool skimmers, or other similar equipment.

8. The morning after the fireworks display event, the fireworks organizer shall conduct another sweep of the fireworks detonation zone and quays, piers and docks adjacent to the fireworks detonation zone to remove fireworks trash and debris. The fireworks organizer shall collect, bag, weigh and photograph all trash and debris collected prior to its disposal.

CSPNC-14 cont.

9. The morning after the fireworks display event, the fireworks organizer shall perform a cleanup of the shoreline using crews of not fewer than five persons per barge on the shoreline adjacent to each barge location. Each crew member shall be equipped with trash bags and a trash grabber. The fireworks organizer shall collect, bag, weigh, and photograph all trash and debris collected prior to its disposal.

10. Within five (5) business days after a fireworks display event, the fireworks organizer shall provide the Executive Director with the photographs and written evidence of the weight of the fireworks trash and debris collected pursuant to subdivisions (5) through (9) above. If the weight of the fireworks trash and debris collected is less than fifty percent (50%) of the net weight of fireworks launched during the fireworks display event, the fireworks organizer shall offset the remaining amount by providing a crew of not fewer than two (2) persons for each barge or other launch site used in the fireworks display event to participate in the next scheduled "Operation Clean Sweep" or other District-sponsored clean-up event prior to the end of the calendar year to recover trash and debris from San Diego Bay and/or the Imperial Beach Oceanfront.

MM-BIO-9 — Add long-term comprehensive monitoring of noise and light effects on Least Terns.

CSPNC-15

At-event monitoring is necesssary but not at all sufficient [p. 3.3-34]. In extreme cases, behavioral effects may be observed on nesting birds. However, what matters is nesting success (the number of successfully fledged chicks). To determine whether this chronically repeating noise is affecting nesting success requires a comprehensive before-and-after population study to determine whether there is: (a) a decrease or no decrease in successful fledging rates; and (b) a decrease or no decrease in nesting rates.

MM-BIO-8 and MM-BIO-9 — Expand monitoring to cover concert noise as well as fireworks (marine mammal and Least Tern monitoring and mitigation).

CSPNC-16

Monitoring must be expanded to cover concert noise as well as fireworks. In particular, the mitigation measures (possible cessation of fireworks) must be expanded to include real-time sound adjustments during events, sound limitations, or elimination of events. Without monitoring for concert noise as well as fireworks noise, the determinations of less-than-significant impacts after implementation of MMs is untenable because a major source of disturbance is simply being ignored.

MM-BIO-11 — Prohibit abandoned nest clearance.

CSPNC-17

The intent of this mitigation [p 3.3-35] is to minimize impact on bird nesting success. Allowing the removal of nests if the removal is "…cleared by a qualified biologist" is no different than removing a nest without such clearance. This mitigation measure should be changed to require that nest removal within nesting season would be permitted only if an independent qualified biologist certifies that the nest(s) to be cleared are fully abandoned.

Chapter 3.7 Hydrology/Water Quality

A mitigation measure to measure ongoing, cumulative effects of fireworks on water and sediment quality is required.

CSPNC-18

Fireworks are known to deposit a wide range of potentially toxic materials into water bodies. The results from studies summarized in the San Diego 2017 Fireworks EIR mostly suggest minimal impact. However, the proposed frequency of the proposed fireworks presentations in this project, repeated 25 times per year at a single site, mandate a Mitigation Measure to do ongoing water- and sediment-chemistry studies near and away from the fireworks displays. This study should report regularly to determine if there are cumulative rises in firework-deposited potential toxins that merit mitigation. In the event significant accumulations arise, mitigation measures including limitation or cessation of fireworks should be adopted.

This water- and sediment-quality monitoring program could be incorporated into the NPDES-mandated Best Management Practices program for fireworks pollutant control.

Chapter 3.8 Noise

CSPNC-19

As a general recommendation relevant to much of the analysis of concert noise, we strongly recommend consulting the recent publication by the Audio Engineering Society (AES) Working Group on Sound Exposure and Noise Pollution due to Outdoor Entertainment Events (2020-05-22) Understanding And Managing Sound Exposure And Noise Pollution At Outdoor Events (Technical Document AESTD1007.1.20-05). The AES is a widely-respected professional society, and this publication contains a masterful summary of modern research on noise issues at outdoor events. Much of its content would have been useful in preparing this DSEIR, and will doubtless be useful in revising it. We attach it for reference.

Construction noise analysis of the additional (assumed to be "heavy") construction needed for the concert venue (termed "Amphitheater" despite the lack of tiering) must include consideration of weather effects.

CSPNC-20

As acknowledged in the concert noise analysis in this DSEIR, atmospheric conditions can substantially alter sound propagation. Choosing to take atmospheric effects into account for concert noise but ignoring them for construction noise is inconsistent. Construction noise analysis must be amended to include atmospheric effects on propagation during the construction period.

Traffic noise analysis is inadequate since it analyzes traffic noise solely on Harbor Boulevard. Traffic noise must be reanalyzed to take into account the increase in traffic elsewhere in the area.

CSPNC-21

Traffic spillover from this project, including responses by local residents anticipating events, will affect Gaffey St., Pacific Ave., and roads leading from Western San Pedro to 22nd St. and Miner. With the completion of the Ponte Vista development, there will be increased traffic down Western to 25th St. and then from 22nd St. to Miner. These routes will be heavily travelled approach routes for visitors from Lomita and Torrance. Because Harbor Blvd. will be the main approach for visitors coming from the I-110 Freeway (many of whom live outside of San Pedro), local residents will certainly displace their own traffic to alternate streets in San Pedro.

Therefore a traffic noise analysis including areas that will reasonably be expected to be impacted outside of Harbor Blvd. is essential.

Concert sound analysis must be performed again with the acknowledgement that Tier 2 events may have sound levels comparable to Tier 1 events.

The DSEIR states:

> Tier 2 Events (i.e., small events attended by 500 people or less) at the Amphitheater would be consistent with the 500-seat amphitheater options analyzed and cleared under CEQA as part of the 2009 SPW EIS/EIR and the 2016 SPPM Addendum. Therefore, Tier 2 Events would not create new significant noise impacts, increase the severity of any previously identified impacts, nor require the implementation of new mitigation measures, and they are not analyzed further as part of the Proposed Project. [p 3.8.27]

CSPNC-22

This assertion is factually incorrect because the installed sound system for the newly proposed concert venue is dramatically louder than anything contemplated in earlier review of the previously proposed 500-seat amphitheater. There is no reason that the proposed sound system could not or would not be used for Tier 2 events.

Therefore analysis of noise effects must incorporate Tier 2 events, and cannot dismiss them as adhering to the prior analyses, since the sound system is no longer similar to the previously proposed sound system.

Concert sound levels predicted for this project are too loud to ensure public health by concert visitors, both in the main proposal and following MM-NOI-3 (a reduction in front of house sound levels). Concert sound levels must be reduced to levels similar to those accepted as limits in comparable local venues (*e.g.* 95 dBA at the Greek Theater).

The EIR analysis is based on concert sound levels of L_{eq} = 110 dBA at front of house. MM-NOI-3 proposes lowering L_{eq} at front of house to 100 dBA. Even as long ago as the 1979 U.S. Environmental Protection Agency Model Noise Ordinance, these levels, experienced for the length of a concert, were considered to pose an immediate threat to human health and welfare. Following is Table 4 from that publication, which indicates that exposure to 100 dBA for the duration of a concert poses a threat to health:

Table 4. Continuous Sound Levels which Pose an Immediate Threat to Health and Welfare (Measured at Receiver). [1979 U.S. Environmental Protection Agency Model Noise Ordinance]

CSPNC-23

Sound level limit (dBA)	Duration
90	24 hours
93	12 hours
96	6 hours
99	3 hours
102	1.5 hours
105	45 minutes
108	22 minutes

Concert exposure times would reasonably be expected to be continuous for an hour or more (making the effects documented in the EPA Table 4 directly relevant), contrary to the assertion of the DSEIR:

> To provide a reasonable worst-case analysis, it is assumed the maximum specified $L_{eq(5min)}$ within the Amphitheater could persist for a full hour. In reality, hourly noise levels could be lower because of changes in music levels and quieter portions of the performance, including breaks when no music is being played. [p 3.8-27]

Most rock concerts today last for two hours or more, often with multiple acts lasting several hours. Depending on the act, it is reasonable to expect maximum volume for the entire concert, notably for punk rock (and San Pedro is renowned as a birthplace of Punk Rock). Some main stage acts play two sets with a break in between, but incidental popular music is generally played through the sound system during band breaks. Prior to and at the end of shows it is common for advertising to be played on screen with sound on the sound system, prolonging the duration of sound exposure.

Unless sound levels are adopted that are significantly lower than the levels specified in the proposal and in MM-NOI-3, there must be a mitigation measure that specifies warning signs at the venue, in accordance with City of Los Angeles Code.

CSPNC-24

Sound levels above 95 dBA require warning postings, according to City of Los Angeles Building Code Chapter XI Article 2 Special Noise Sources, Section 112.06 Places of Public Entertainment:

> It shall be unlawful for any person to operate, play, or to permit the operation or playing of any radio, television receiver, phonograph, musical instrument, sound amplifying equipment, or similar device which produces, reproduces, or amplifies sound in any place of public entertainment at a sound level greater than 95 dB(A) at any point that is normally occupied by a customer, unless a conspicuous and legible sign is located outside such place, near each public entrance, stating:
>
> "WARNING: SOUND LEVELS WITHIN MAY CAUSE HEARING IMPAIRMENT."

Analysis of both concert and fireworks noise must consider L_{max} in addition to the existing analysis based on L_{eq}.

The DSEIR defines L_{eq} as follows:

> Equivalent noise level is the average A-weighted noise level during the measurement period.

This noise level (assessed for periods of 5 minutes, 1 hour, or 24 hours, depending on context) is certainly important for gauging annoyance values of long-term sounds. Peculiarly, the basis for the selection of the "Summer Pops" fireworks events in the San Diego 2017 Fireworks EIR as the comparable noise proxy for the fireworks proposed in this DSEIR is based on scaling the total number of pounds of explosives detonated during displays. While the time-averaged total noise may scale with the total mass of explosives detonated during a fireworks display, the noise effects of individual explosives are clearly independent of total weight of explosives detonated through an event.

CSPNC-25

Momentary percussive sounds such as concert drums and fireworks explosions have important momentary sound effects, much better assessed as L_{max} in addition to L_{eq}. The San Diego 2017 Fireworks EIR defines L_{max} as follows:

> L_{max} and L_{min} refer to the maximum and minimum sound levels, respectively, that occur during the noise measurement period. More specifically, they describe the root-mean-square sound levels that correspond to the loudest and quietest 1-second intervals that occur during the measurement." [Vol 1 4.8-6]

This DSEIR's analysis, using an hourly average sound measurement, $L_{eq(h)}$, even for the momentary percussive sounds generated by 20-minute long fireworks displays, is inadequate by not including consideration of L_{max} (p. 3-8.39 – 3-8.40). This discrepancy can be highlighted by the following summary statement in the DSEIR:

> Hourly noise levels from 10-minute fireworks displays are not expected to exceed evening ambient-noise levels at San Pedro residences west of the Amphitheater. [p 3.8-40]

While the sound of a 10-minute display averaged over an hour may not exceed evening ambient-noise levels, thousands of San Pedro residents living west of the venue can testify that past fireworks displays in the Port are exceedingly audible, entirely due to momentary percussive sounds.

Strangely, the DSEIR defines noise level measurement terms that might have been useful in analyzing momentary sounds, but never uses them after their definition:

> The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period are expressed as L_{01}, L_{10}, L_{50}, L_{90}, respectively. [p 3.8-4]

This analysis must include consideration of L_{max} values as well as time-averaged sound levels.

Experimental sound measurements must be made in the Port area to validate the "NoizCalc" model projections used in Chapter 3.8 Noise and Appendix F.

Model results, while interesting, cannot be used as policy guidance without validation. The model results must be tested and validated using experimentally generated controlled sounds and calibrated measurements. In the absence of model validation, model results are unusable.

CSPNC-26 The sole published field validation of the "NoizCalc" software appears to be an unreviewed presentation from a conference in Berlin in 2017 (Belcher *et al.* [2017] Noise prediction software for open-air events part 2: Experience and validation. AES Convention 142, Paper 9791). Regrettably, the authors of the presentation are employees of d&b audiotechnik GmbH, the same company that provides the software, hence it is not an independent test.

This is particularly important given the amphitheater shape of the community surrounding the proposed project location. That topography adds considerable challenge to proper sound disperal modelling, and is certainly not accomodated by the 5.5 foot and 16 foot elevation calculations.

Sound measurements during fireworks events in San Pedro are required for calibration of the sound extrapolations based on measurements made in the San Diego 2017 Fireworks EIR that are being suggested as evidence in noise analysis.

CSPNC-27 The "Summer Pops" events from the San Diego 2017 Fireworks EIR were selected as comparable to the fireworks in the proposed project, and their sound analysis was adopted by proxy for the San Pedro project. However, sound measurements were not made during the Summer Pops events. The Summer Pops sound levels in the San Diego 2017 Fireworks EIR were only extrapolations from other measured events. Therefore it is imperative that sound measurements are made in San Pedro. Adopting extrapolated results from a different event in a different setting is entirely inadequate to evaluate sound levels at this site.

MM-NOI-3, reducing front of house sound levels from 110 to 100 dBA is inadequate as a mitigation since it does not reduce public impact to a sufficient degree. Sound levels must be far lower than this proposed mitigation.

CSPNC-28 Proposed concert sound levels are far too high to be acceptable to nearby communities. Using Tale 3.8-13 from the DSEIR, the noise levels, even after implementation of MM-NOI-3, are estimated to produce sound overages above ambient in the 15–20 dBA range (27 dBA at the residential Cabrillo Marina site). Ambient levels at night are around 55 dBA, yielding estimated sound levels in the 70–75 dBA range.

According to table 3.8-2 of the DSEIR, after MM-NOI-3 is implemented, this yields a noise environment perceptually equivalent to "Gas lawn mower at 30 meters / Vacuum cleaner at 3 meters" to "Garbage disposal at 1 meter".

It is unacceptable to propose a mitigated plan estimated to subject neighborhood residents to the equivalent of a garbage disposal at 1 meter for hours at a time 100 times per year.

MM-NOI-5 is entirely inadequate as mitigation, since it simply enforces the already-unacceptably high noise level.

CSPNC-29

The modelled sound levels are far above acceptable for the modelled 100 dBA at 95 feet from front of stage. This enforcement mitigation does not reduce noise to acceptable levels.

MM-NOI-6 must be changed to require submission of noise reports following every event, and such records must be made public.

CSPNC-30 As written, this mitigation measure makes it impossible to determine when or if any violations of sound limitations occurred, except on the basis of self-incrimination by the Tenant. Without ongoing access to noise reports from the venue, measured violations will not be possible to detect. Given the modern sound level monitoring and reporting software that will be employed by the (required) house sound system controllers, submission of reports is not at all onerous and must be a part of regular venue use. All reports should be submitted to to Port within 48 hours of the conclusion of the event and made publicly available immediately by the Port.

MM-NOI-7, as written, has no useful effect. Collecting complaints does not mitigate in any way. This mitigation must be changed to include real-time management of public

CSPNC-31 **complaints by direct communication with event sound control staff.**

Collecting complaints, and even responding to a complaint within 48 hours, does not mitigate noise problems. This mitigation measure must be expanded to include real-time response to complaints by immediate contact with event sound control staff.

MM-NOI-10 fails to limit the number of maximum noise events and must be changed to require (not just imply) that non-Tier 1 events will have far lower noise levels.

CSPNC-32 The implication of MM-NOI-10 is that there should be a limit of 100 Tier 1 events per year, therefore limiting the number of loud events to 100 or fewer. However, there is no requirement that non-Tier 1 events cannot use the house sound system at full volume. Hence, this mitigation measure, as written, has no effect on the number of high-noise events per year. Therefore, this mitigation must include the requirement that non-Tier 1 events are required to use dramatically lower sound levels than are permitted for Tier 1 events.

MM-NOI-13 [3.8-45] limiting "salute" (concussion) shells to the last 75% of a fireworks display is useless as a mitigation measure, particularly for biological targets (marine mammal and endangered species). Instead, this mitigation should prohibit their use.

No rationale is given for proposed mitigation measure MM-NOI-13, which would require intense "salute" fireworks to be detonated only in the last 75% of the duration of a fireworks display. It is likely that this is considered to reduce the psychological startle effect of an initial

CSPNC-33 percussive noise, allowing exceptionally high volume (and high flash) explosives only after listeners are habituated to the display.

Though this reasoning (again, presumed, not documented) might be thought to apply to human listeners, there is no evidence that postponing exceptionally loud explosions until other explosions have occurred has any mitigating effect on other biological targets (*e.g.* marine mammals and nesting birds).

Therefore this mitigation measure should prohibit "salute" fireworks in all cases, similar to "Alternative 3 — No Salute Fireworks Alternative" as proposed in the San Diego 2017 Fireworks EIR.

Chapter 3.9. Transportation

CSPNC-34 We acknowledge the change in analysis from the historical "Level of Service" (LOS) impacts to the current "Vehicle Miles Travelled" (VMT) emphasis in response to SB 743.

CSPNC-35 However, consideration of how potential changes in traffic congestion will affect regional mobility is breathtakingly absent. A VMT emphasis does not absolve the proposing agency from considering how traffic will affect transportation.

CSPNC-36 To point out only one local issue that is completely ignored: visitors entering San Pedro who are hauling boats on trailers to use the Cabrillo Launch Ramp at Cabrillo Beach are directed to use Harbor Blvd. Occlusion of Harbor Blvd. on 100+ days per year will have a significant and unavoidable effect on surrounding streets that are not well designed to handle towed boat traffic.

The majority of traffic impacts would likely have been analyzed properly under Chapter 4. Cumulative and will be commented on below.

Chapter 3.11. Public Services

Wastewater impacts of the project must be properly assessed in the light of the significant increment in visitor traffic and the time since the last analysis. No assessment of wastewater disposal impacts is present in this DSEIR.

Prior analyses consist entirely of the following statements:

> Proposed project-generated wastewater would constitute 1.1% of the TITP daily capacity, which exceeds the baseline levels of 0.9%. However, because the TITP currently operates at 55% capacity, these increases would be considered negligible. The proposed Project would not exceed the capacity of the TITP or conveyance system to accommodate anticipated increases. The minimal amount of increased wastewater generated by proposed project construction and operations would not exceed the 30-mgd capacity of the TITP or sewer trunk lines in the proposed project area.
> *2008 Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for San Pedro Waterfront Project [p 3.13-26] (unchanged in the 2009 San Pedro Waterfront Project Final EIS/EIR).*

CSPNC-37

> Water supply sources and forecasts have remained the same, and the Terminal Island Treatment Plant is still within its wastewater treatment capacity and currently processes approximately 15 million gallons per day (LA Sanitation 2016). This is a slight decrease from the amount of wastewater treatment of 16 to 17 million gallons per day that was reported in the SPW Project EIS/EIR.
> *2016 Addendum to the San Pedro Waterfront Project Enviromental Impact Report for the San Pedro Public Market Project [p 3-16]*

It's been about 15 years since the initial (and superficial) analysis, and the revised project has a very different visitor number and usage pattern than the original analysis. Facilities may have changed since then. A revised analysis is necessary.

Chapter 4. Cumulative

CSPNC-38 Transportation impacts considered as a cumulative impact rate barely more than two pages of dismissal in the main text of Chapter 4 (4-41 – 4-43). Discussion of factors other than Vehicle Miles Travelled (VMT) is relegated to Appendix G. Appendix G reviews the potential that the projected development could conflict with regional circulation plans.

A comprehensive analysis of this project's traffic effects in a regional cumulative context is required.

CSPNC-39 Critically, no significant consideration is given to how the cumulative traffic effects of this project will combine with traffic effects of other planned projects to affect local and regional traffic and transportation plans. This is independent of Vehicle Miles Travelled (VMT) estimates, and has implications for a variety of other environmental effects and potential conflicts with local, city, and regional plans.

CSPNC-39 cont.

The DSEIR assumes an incremental increase of 4,862 event-day trips. This is in the context of some 20,000 trips per day for West Harbor, an unknown number visiting the Ferris Wheel, 6,000 – 8,000 for the cruise terminals, and a number of high-density housing projects coming on line in San Pedro, in addition to Ponte Vista and other regional traffic-generating projects.

A cumulative analysis is necessary.

CSPNC-40

The topic-by-topic analyses of potential conflict with regional transportation plans in Appendix G amount almost entirely to negligent dismissal of any possible conflict based on the concept that existing facilities will be retained. This entirely ignores the potential that the proposed project may overwhelm existing facilities or require consideration of new accomodations. This section must be significantly revised to reflect the actual impact of the increased vehicle and pedestrian traffic that this project will create.

Over and over throughout the various subsections of Appendix G that assess possible conflict against specific clauses of numerous regional plans, the language simply asserts the persistence of existing infrastructure as evidence that the proposed project creates no conflict with plan goals. This approach is negligently oblivious to the actual impact that the project could have. The point of this analysis should be to examine the current infrastructure, estimate how the proposed project would affect it, and present the possible outcomes. Simply asserting that existing infrastructure will remain is entirely insufficient.

A few examples will be provided for illustration, but this problem pervades nearly every response in this section.

> G.2 Review of Consistency with "Connect SoCal: A Plan for Navigating to a Brighter Future", The Southern California Association of Governments' 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy (SCAG RTP/SCS) — Policy 03 Pursue the development of Complete Streets that comprise a safe, multimodal network with flexible use of public rights-of-way for people of all ages and abilities using a variety of modes (e.g., people walking, biking, rolling, driving, taking transit)
>
> • The proposed Project would not conflict with this policy, as current conditions of multimodal mobility on the existing nearby roadway environment, which includes crosswalks and curb ramps with truncated domes, would be retained, and the proposed Project would not preclude the development of additional Complete Streets infrastructure. [p G-2]

CSPNC-41

The proposed project estimates 4,862 vehicle trips per day on Harbor Blvd., where pedestrians of all mobility abilities are expected to cross to reach the project venue. Simply retaining existing crosswalks and truncated domes does not begin to address how the project will impact pedestrian access (and certainly does not address mitigation). **Analysis must address how this project will affect access to multimodal mobility throughout its daily traffic cycle and recommend mitigations for anticipated impacts.**

G.3 Review of Consistency with San Pedro Community Plan — Policy M3.2 Priority pedestrian routes: Selected streets within commercial, mixed-use and employment districts should have pedestrian priority establishing pedestrian needs as paramount to vehicular circulation needs and encouraging investment in pedestrian improvements and programs for these segments.

CSPNC-41 cont.

• The proposed Project would not conflict with this policy, as existing bicycle and pedestrian facilities, which include Class II bike lanes and marked crosswalks with curb ramps, would be retained. [p G-7]

Thje proposed project adds thousands of vehicle trips per day in a focussed time period. Simply retaining existing bicycle and pedestrian facilities does not in any way assess potential impact. **The analysis must address how the proposed project's traffic might affect this element of the San Pedro Community Plan.**

Policy M8.2 Traffic mitigations for development: Require major developments to mitigate traffic impacts on residential neighborhoods.

• The proposed Project would not conflict with this policy, as it would not preclude mobility improvements to residential neighborhood streets. Additionally, Primary Project access is via Harbor Boulevard, and West 5th, 6th, and 7th Streets, so residential cut-through traffic is not anticipated. [p G-9]

CSPNC-42

This is a patent sidestepping of analysis. Stating that a project would not preclude improvements does not at all address whether such improvements will be needed to mitigate project impacts. Additionally, the idea that project traffic occluding Harbor Blvd. will not generate residential cut-through traffic is contradicted by many residents' experience during multiple Port public events in the past. **Analysis must address how this project's development will affect neighborhood traffic and must consider mitigation measures.**

Policy M12.4 Connections for electric vehicles: Encourage new construction to include vehicle access to properly wired outdoor receptacles to accommodate zero emission vehicles (ZEVs) and/or plug-in electric hybrids (PHEV).

CSPNC-43

• The proposed Project would not conflict with this policy, as it would not preclude the implementation of wired outdoor receptacles for ZEVs or PHEVs. [p G-10]

Again in this case, an assertion that the project's development would not preclude future implementation of EV charging stations is not at all consistent with the policy recommendation to install connections for EVs. **The proposed project must plan to install EV charging to avoid conflict with Policy M12.4.**

G.6 Review of Consistency with Citywide Design Guidelines — Section 1: Pedestrian-First Design… Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all.: Design projects to be safe and accessible and contribute to a better public right-of-way for people of all ages, genders, and abilities, especially the most vulnerable — children, seniors, and people with disabilities.

CSPNC-44

• The proposed Project would not conflict with this policy, as existing pedestrian infrastructure along Harbor Boulevard, which includes sidewalks, marked crosswalks, and curb ramps with truncated domes, would be retained.

Similar to the lack of analysis in G.2 above, simply retaining existing infrastructure does not analyze the proposed project's impact on accessible pedestrian access, let alone recommend mitigations for the effects. **Analysis must address how this project will affect access to multimodal pedestrian mobility throughout its daily traffic cycle and recommend mitigations for anticipated impacts.**



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Understanding and managing sound exposure and noise pollution at outdoor events

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AES Technical Committee on Acoustics and Sound Reinforcement
Technical Document

Understanding And Managing Sound Exposure And Noise Pollution At Outdoor Events

2020-05-22

Prepared by the Working Group on Sound Exposure and Noise Pollution due to Outdoor Entertainment Events

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1. Overview

Sound exposure and noise pollution due to outdoor entertainment events carry implications spanning public and private life. This isn't a new issue. The AES library contains papers published over 50 years ago discussing these issues, although judging by the continued discussion and debate, it's clear that the industry has yet to produce a universally-accepted solution (or even a robust understanding) of the relevant problems.

In the UK alone, live music contributed to around £1 billion in gross added value to the economy and employed over 28,000 people in 2017. Furthermore, 29 million people enjoyed live music in the UK that year. This occurred in parallel with a decline in the recording industry brought about by the digital age of free streaming and downloads. Artists now tour as their primary source of income rather than touring to advertise an album. This has resulted in a greater demand for tours and festivals which has in turn significantly increased the number of events and the adoption of new venues – all of which increase the potential risk of audience sound exposure and environmental noise disturbance.

There has been a significant amount of recent work, largely carried out by the World Health Organization (WHO), to develop a comprehensive set of objectively-derived community noise regulations [1]. These guidelines present advice for understanding, monitoring and controlling noise from roads, rail, air travel and wind turbines. The section dedicated to leisure noise (which outdoor entertainment events fall under) highlights the lack of unbiased objective research carried out, resulting in no new guidelines presented. The 2018 guidelines instruct readers to continue to use the 1999 guidelines for community noise [2] as well as the 2009 night noise guidance [3]. It is disappointing, to say the least, that this is the present level of understanding of leisure noise, considering the problem has been discussed for at least half a century.

A recent working group called Live DMA (a European network of live music associations including venues, clubs and festivals) set out guidance for the drafting of a good urban policy in relation to live music in mid-2019 [4]. The overarching message in this guidance is that "music is not noise," and therefore should not be treated as such in regard to regulations for both audience sound exposure and community noise (where they imply that minimal or light-touch regulation is appropriate). There is certainly truth in treating music as separate to noise, but it should be stressed that one person's music is likely to be another person's noise. Diminishing attention to audience safety and community well-being on account of a supposed greater social value of live music is a counterproductive and dangerous stance to take.

The stance set out in Live DMA's white paper demonstrate the danger of not consulting a wide range of audio engineering and electroacoustic professionals with experience in the live event industry when developing such guidelines. The majority of such professionals (who this AES working group consists entirely of) strongly support properly designed and implemented regulations.

The key message that is presented throughout this report is that the problems/ambiguities with current regulations are due to a lack of unbiased, scientifically-based research, which is in line with the WHO's findings [1]. As will be shown in this report, it is possible to deliver acceptably high sound levels to audience members in a safe manner (minimizing risk of hearing damage) while also minimizing annoyance in local communities. It is the view of this working group that solutions to the on-site and off-site problems should begin with a well-informed sound system design. Only with a properly designed sound system can sound/noise regulations be realistically applied. This working group aims to cooperate with regulating bodies and live music associations to ensure the delivery of high-quality and enjoyable live entertainment while keeping audiences safe and minimizing annoyance in the local communities.

This report is intended to present the current state of affairs surrounding the issue of outdoor event-related sound and noise. The two principal areas of investigation are sound exposure on-site and noise pollution off-site. These issues are different in nature and require distinct approaches to mitigate the associated negative short-term and long-term effects.

In this report, a distinction is made between on-site sound and off-site noise. On-site, the audience and performers (and to an extent the staff) are actively engaged listening to the event, hence on event grounds the issue is referred to as *sound exposure*. Off-site, members of the local community aren't actively engaged in listening to the event, therefore outside the event grounds the issue is referred to as *noise pollution*. This convention is sustained throughout the report.

The report begins in Section 2 by focusing on audience experience, specifically on expectations (in terms of sound quality/delivery) and issues related to sound exposure (with a focus on hearing damage, but also covering cardiovascular, neurological and psychological disorders).

Section 3 gives an abbreviated overview of system design procedures for high-quality audience experiences with minimal health risks (with an extended discussion on the appropriateness of using ground-based subwoofer systems at large-scale events, due to the unsafe sound pressure levels experienced by members of the audience and event staff closest to the stage).

Having covered the audience experience, Section 4 moves on to community noise pollution where environmental noise regulations across the globe are summarized, covering international, national and local noise laws. The takeaway from this section is that there is little consensus on what level of noise is appropriate in residential areas. There are few examples of regulations that specifically consider information-carrying noise (i.e. music and speech) and even fewer regulations that aren't based on A-weighting. The use of A-weighting largely ignores low-frequency noise even though this is typically the principal noise issue stemming from live events.

Since noise levels received within a community from an outdoor event are generally short-lived and low in level, direct physical health issues aren't necessarily a problem. The issue is annoyance caused by pulsing/beating low-frequency noise (and occasional broadband signals, due to specific atmospheric situations) which could lead to certain mental health issues. The focus of entertainment-related noise should be on limiting annoyance; something that is addressed in few existing regulations (although there are some good examples where the issue is addressed in a reasonably robust manner), especially in terms of information-carrying noise.

Section 5 builds upon the findings in Section 4, where a brief overview of noise measurement/monitoring regulations is given, followed by a summary of noise monitoring, management and prediction practices. This section also includes insight into how to work with local noise regulations and instances where following such regulations is unlikely to solve the problem. This is followed by examining both standard and state of the art noise monitoring practices (ranging from sound level meter-based approaches to more "intelligent" software-based methods) to highlight how primary noise sources can be identified for straightforward noise control. The section also discusses what's known about quantifying annoyance due to information-carrying noise in order to better understand how such noise pollution may be addressed. A selection of case studies is presented for illustrative purposes.

Finally, Section 6 details methods for noise pollution suppression. This section includes good practice for venue configuration to limit noise spill and information on recent advancements in so-called *secondary* sound systems, which are deployed on an event's perimeter in an attempt to cancel low-frequency content from permeating off-site. A discussion on maintaining a high-quality audience

experience while simultaneously controlling off-site noise pollution is presented to complete the section.

The report is concluded in Section 7, not with a set of recommendations for control of sound exposure and noise pollution from outdoor entertainment events, but with a set of questions to be answered before a definitive set of recommendations or guidelines can be produced. These questions will inform the remaining work of this group, but more importantly should focus the wider audio engineering and acoustics community on what work is necessary to resolve the current ambiguities in these areas.

In particular, a suggestion to form an event noise initiative, provisionally termed the Healthy Ears, Limited Annoyance (HELA) Initiative, is detailed at the end of Section 7. This is drawn out of necessity, as it is improbable that this (or any) work in this area will result in sound exposure and noise pollution regulations changing on an international scale (at least in the near future). An initiative which allows relevant parties (event promoters, production teams, musicians, venues, etc.) to join would allow wide-scale adoption of best practice while still adhering to local and national regulations. Such an initiative would give events the ability to clearly indicate to the audience and local community that they are committed to providing a safe, sustainable and unobtrusive event. This approach would allow work derived from this report to progress in a more efficient and effective manner as compared to pursuing a regulatory route (although this remains a longer-term goal).

Though commercial products are referenced at various places throughout this report their inclusion should not be interpreted as an endorsement or recommendation.

2. Audience experience

The public has enjoyed attending live events for many centuries, although it hasn't been until relatively recently (the past century or so) that these events have included electronically-amplified sound (as opposed to naturally-amplified sound). With the ever-increasing capabilities of sound reinforcement systems in terms of power, efficiency and bandwidth, audiences have been subjected to increasingly greater sound pressure levels (over wider bandwidths), which consequently pose a risk to the health and safety of event attendees.

This section focuses on issues related to delivering a high-quality audience experience while simultaneously preventing audience exposure to harmful sound pressure levels over long durations. The discussion begins with an analysis of typical audience expectations in terms of audio quality followed by how this relates to recreational sound exposure. The section is concluded with a survey of regulations pertaining to current audience sound exposure limits and measurement protocols.

2.1. Perception and expectations

Audiences typically pay to attend live events for entertainment and enjoyment. A central focus of sound engineers and system designers is therefore to deliver a high-quality and enjoyable listening experience to the audience. It follows, then, that a clear definition is necessary regarding what an audience classifies as a high-quality listening experience.

There have been a handful of studies investigating this issue, conducted predominantly over the past twenty years [5-14]. Many of these studies investigate aspects related to amplified sound's frequency response, time response, overall level and "punchy-ness". Much of this work has found that, as expected, the listening experience is far from objective and in some cases the sound is used more for facilitation of social interactions than for an enjoyable listening experience.

There currently exists no agreed standard for high-quality sound. A study conducted in 2013 investigated eight different indoor live event venues in an attempt to determine key indicators for high-quality sound using a combination of measurements and audience surveys [6]. In each venue at least nine measurements were taken from within the audience area, with results showing that there was typically a variation in mean SPL of ±5 dB across an audience area. In most cases there was a strong boost in low-frequencies below 100 Hz, which is typical of modern-day popular music sound reinforcement, both indoor and outdoor. The measured systems generally exhibited roll-offs below 40 Hz and above 12.5 kHz. This is assumed to be the typical spectrum of popular music throughout this report.

The key finding in the 2013 study [6] was that audience perception of sound quality was strongly influenced by Early Decay Times (EDT) at low-frequencies. The best performing venues showed low-frequency EDTs of around half a second while the poorly-rated venues had low-frequency EDTs above one second. The researchers noted, though, that it's difficult to make reliable comparisons between venues due to the varying topology and musical content. A separate study found that 75% of the overall impression of concert sound is related to bass clarity and that venues should be as dry as possible in the low-frequency region, especially around the 63 Hz octave band [7, 11]. It is important to note that the studies in [6], [7] and [11] were conducted in internal venues where reverberant properties are key – this is not the case outdoors, therefore further investigations are required ensure both indoor and outdoor scenarios are considered.

The central perceptual attribute could be a reinforced sound's "punchy-ness", which has recently been studied in [12], where a metric is proposed for quantification. In this study, low-frequency content was found to heavily influence the perceived "punchy-ness" of a sound system. Further

work is needed to confirm how significant this perceptual attribute is in relation to the previously described bass clarity and low early decay times (in indoor venues). It is likely that these attributes are strongly correlated.

Drawing upon the findings in [6] and the widespread practice of large low-frequency boosts in recorded popular music and sound reinforcement [13, 15], it is important to understand the motivation for strong low-frequency, especially in terms of the psychoacoustical and physiological effects the enhanced low-frequency has on audience members.

A study conducted in 2008 looked into the importance of bass clarity in popular music venues [7]. An interesting note within this study's introduction is that strong low-frequencies are known to stimulate the part of the brain that controls basic instincts such as sexual desire and hunger. This is supported by an extensive study from 2017 in which a general investigation was carried out (in nightclubs) to try to understand why people like loud sound [8]. This work identified (through a survey of audience members) four themes explaining why people like loud music:

1. High sound levels induce feelings of arousal and excitement

2. High sound levels mask unwanted external sound and/or thoughts (allowing audience members to tune-out of their lives for a short period of time)

3. High sound levels facilitated increased social interaction (requiring closer proximity to people to have a conversation as well as increased confidentiality – it being difficult to overhear a conversation in such an environment)

4. High sounds levels emphasized and enhanced audience members' personal identity

The above list has less to do with sound quality and more to do with masking effects and brain stimulation as a result of experiencing sound at very high levels. The study in [8], however, focuses on sound reproduction in nightclubs, not large-scale outdoor live events, which tend to be different in terms of level, dynamic range and bandwidth, not to mention audience attention. Further work is needed to determine if the same findings hold true for large outdoor events.

Recent research suggests a link between the saccule, part of the vestibular system in the inner ear (primarily responsible for maintaining balance), and the enjoyability/preference for loud music [14, 16, 17]. The research shows that the saccule is most sensitive between 200 – 400 Hz and can be strongly excited in environments above 90 dBA. The acoustically-evoked saccular response will then provide a similar sensation of going on a roller coaster (or similar), making the experience as "sound as force," rather than the classical "sound as text" [18], due to the vestibular, not cochlear, origin of the response. Clearly, the experience at popular music live events isn't solely auditory – all senses should be considered when addressing audience expectations.

In terms of playback level, the measurements from [7] highlight a trend in data from many studies: that sound level steadily increases as the event progresses. One reason for this is that the headline act of the event usually requires their set to be louder than any support act set (although this requirement is rarely written or spoken – it's more commonly an unspoken understanding), but there exist further factors that cause this behavior.

First, as an event progresses the audience and sound engineer's hearing will experience a Temporary Threshold Shift (TTS) resulting in lower sensitivity to sound. To maintain the same perceived sound level over the course of the event, the objective sound reinforcement level must be boosted as compensation for TTS. Additionally, there has been research carried out regarding alcohol consumption's effect on sound level [9]. This work showed a direct relationship between the amount

of alcohol consumed and preferred sound level. What's interesting is that the relationship works in both directions: drinking more results in the desire for louder sound as well as louder sound results in audience members drinking more.

This is closely related to research carried out on the topic of background music in restaurants (faster paced and louder music results in patrons eating quicker) [19, 20]. The effect of alcohol on preferred sound level (and the reverse) was found to have the strongest effect on males and in rural areas. What wasn't explored in this study was any relationship between this behavior and musical genre preference. Again, it must be noted that this study took place in nightclubs, rather than at large-scale live music events, so further work is necessary to determine if the findings translate to large outdoor events (especially considering that at high-profile events it's becoming increasingly rare to find sound engineers drinking excessively).

Returning to the point of sound level creep over the duration of an event, most prior studies have collected data from indoor music venues. At large outdoor events, sound level monitoring is commonly used at the mix engineer's position. Sound level restrictions are typically in place and often vary between support acts and headliners. These restrictions serve to keep any natural level creep (due to TTS, alcohol consumption or any other factor) in check. This was shown clearly in a case study from a large American music festival [21], where there was no significant statistical link between set time during the day and overall mix level. A detailed analysis of sound level monitoring and management at live events will be presented in Section 5 of this report.

Ultimately, modern day audiences expect sound to be delivered to them with minimal effort on their own part and can be described as sonic "couch potatoes" [10]. Therefore, the expectation is for strong, high quality sound delivered to every seat in the house. This includes (but is not limited to) excellent intelligibility, clarity, broadband magnitude response (not necessarily flat) and wide dynamic range [13]. Additionally, most audiences at modern pop music concerts have come to expect a strong tactile response, primarily delivered with large and powerful subwoofer systems [22]. Whether this is something that audiences actually prefer or have simply become accustomed (or addicted) to is open to debate [14].

The high expectations of modern audiences were illuminated by the recent Spice Girls reunion tour, where audience members complained of poor intelligibility during the first number of concerts [23]. The poor intelligibility was likely related to the very high audience noise (i.e. screaming and singing along) in addition to lighting and video taking precedence over audio, restricting speaker placement, the movements of the performers (often in front of the sound system) and the often poor acoustics of large sports stadiums. Based on the audience reaction, the label of sonic "couch potato" seems appropriate. It should be noted, though, that the issues from the Spice Girls' tour was potentially blown out of proportion as the number of complaints were relatively few, compared to the total number of audience members.

The vast majority of audience expectations can be achieved with modern day sound reinforcement technology (although there certainly isn't a one-size-fits all solution and the sound will never please everyone in attendance due to its highly subjective nature). This isn't a problem, although it's still a challenge for system designers. What's problematic are the health and safety (and noise pollution) implications that come along with the above-mentioned audience expectations. Common-sense measures should be taken to protect everyone on- and off-site and there's little reason why this can't be achieved with minimal impact on the audience (and performer) experience. The underlying health and safety issues are the focus of the remainder of this section.

2.2. Recreational sound exposure

Members of the public attend events of the type concentrated on in this report for entertainment purposes. Currently, only a minority of attendees will be conscious of the risks they are exposing themselves to and an even smaller minority will take preventative measures to protect themselves.

This was made clear in a survey conducted in 2002, where over 600 attendees of a festival in Switzerland were surveyed to gather data on their use of hearing protection at such events [24]. It was found that 5% of the surveyed attendees always wore ear plugs during the show and a further 34% wore ear plugs occasionally. The remaining 61% of the surveyed attendees took no protective measures against hearing damage due to sound exposure. Of those surveyed, 36% reported issues with tinnitus due to their attendance at the festival. It should be noted that sound exposure was strictly monitored at this particular festival, so all sound pressure levels were within legal limits – the mean exposure of 10 volunteers who wore noise dosimeters was 95 dBA with only 8% of the total festival duration exceeding 100 dBA.

These findings were supported by a thorough summary of previous research into music-related noise exposure and hearing disorders in 2009 [25]. In this review, issues related to music-based noise exposure were discussed in regard to musicians, venue staff and attendees. The general findings for all three categories of individuals were a high incidence of tinnitus (mostly temporary for the attendees, but permanent for many of the musicians and members of staff) and a worryingly sparse use of hearing protection. In a specific study covered in this work, 29 concert attendees were given noise dosimeters, with results showing a mean sound intensity of 99.8 dBA with a peak of 125.6 dBA [26]. Again, the majority of the concert adhered to the generally accepted mean audience level limit of 100 dBA, but there is clear evidence of potentially damaging exposure in terms of peak levels.

2.2.1. Measuring hearing damage

A study conducted in 2015 at a festival in Amsterdam monitored Temporary Threshold Shifts (TTS) of 86 volunteers after attending a festival with a duration of 4.5 hours [27]. Half of the group was given ear plugs while the other half of the group received no hearing protection. The TTS tests indicated that 8% of the group with hearing protection experienced a noticeable TTS, while 42% of the group without any hearing protection experienced TTS. A separate study found that 80% of surveyed festival goers have experienced TTS and/or tinnitus [68].

It should be noted that separate research findings indicate that TTS is an unreliable measure for such scenarios and point to Octoacoustic Emissions (OAE) as a more reliable measure of the effects of sound exposure to audience members [29, 30]. Furthermore, research has demonstrated that TTS (as well as Permanent Threshold Shift – PTS) is not a reliable indicator of hearing damage on the whole [31-33]. What TTS/PTS do not directly relate to is Sensorineural Hearing Loss (SNHL – also known as hidden hearing loss). TTS/PTS can be measured with audiometric thresholds, but these tests do not always reflect reported hearing difficulties [14, 32, 34]. Most commonly, difficulty hearing in noisy environments is reported, even when audiometric tests reveal no problems [31].

Recent research gives indication (although not inarguable proof) that the tectorial membrane in the cochlea plays an important role in returning hearing to normal after noise exposure [33]. It is thought that this membrane is used as storage for calcium ions that contribute to the regulating function of sensory cells (which are responsible for relaying auditory information from the inner ear through the auditory nerve to the brain) [33]. Upon exposure to high levels of noise, the calcium ions store is drained, causing the sensory cells to cease their function. Normal hearing resumes after the calcium ion supply is restored. This is thought to relate to temporary and permanent SNHL.

While PTS is a strong indicator of damage to the outer hair cells in the inner ear, it does not give any meaningful indication of damage to Inner Hair Cells (IHC, which are connected to the sensory neurons) until the neural loss is in the region of 80 – 90% [32]. Studies on lab animals indicate that the most vulnerable parts of the inner ear are these synaptic connections between the IHCs and the sensory neurons. An improved understanding of this mechanism is essential, as the health implications for humans could be profound. Although early experimental results conflict in places, there is some indication that such damage may be reversible through various means, which is encouraging [32].

In terms of sound exposure at large live events, further research is required to determine what level/duration of exposure will result in SNHL. Past lab-based experiments on animals have been conducted at extremely high sound pressure levels and durations, which is not representative of real-world live events. The need for specific research for such recreational sound exposure is already noted in the reviewed work [31, 32].

Returning to audience sound exposure, the overall trend observed is that (at least in Europe) sound system operators are adhering to local/national audience exposure guidelines (discussed in Section 2.3). The problem is that event attendees seem to be either unaware of the sound exposure risks or are ambivalent towards the risk. A driving issue in this area is the problem that sound exposure (especially in the low-frequency band) has a cumulative effect [35] and hearing damage tends to not reveal itself until the event has concluded (where permanent damage can take many years to be revealed) [8]. Looking at the situation from a young person's perspective, the immediate social/emotional rewards from attending a loud concert will outweigh any consideration towards the long-term costs of the sound exposure [14].

2.2.2. Low-frequency sound exposure

While the effects of long term and/or high intensity sound exposure in the high frequency range (above approximately 200 Hz) is relatively well-known and covered in regulations pertaining to occupational noise exposure, audience sound exposure and community noise pollution, there is significantly less knowledge (and consensus) on the effects of such exposure in the low-frequency band (especially in the infrasound region, below 20 Hz). There have been a handful of studies on the effects of low-frequency sound exposure over the past few decades, with varying degrees of agreement between published work [35-39].

Early research into the area of low-frequency noise exposure (primarily infrasound) was carried out by NASA when developing their launch vehicles as part of the Apollo program [36]. In general, their findings were that there was no serious health risk to noise exposure of this kind, although this was in terms of highly-trained and monitored astronauts, which isn't necessarily representative of the general public, who are unlikely to actively monitor their noise exposure and/or take preventative measures.

At the time of writing this report, a large American technology firm introduced a noise monitoring app for their devices which "helps users understand the sound levels in environments such as concerts and sporting events that could negatively impact hearing" [40] using WHO noise exposure guidelines [1]. This is certainly a step in the right direction, although it's unclear whether microphones within such smart devices can handle the sound pressure levels typically encountered at live events (especially in regard to low frequencies).

Beyond the early studies into low-frequency noise exposure, there seems to be little knowledge of high-intensity low-frequency sound exposure on the order experienced at typical entertainment events. Most reviewed studies in this report focus on exposure only up to 100 dB [36]. Some of the

earlier studies tested well beyond this level (in some cases approaching 170 dB peak [39]), but it's unlikely that such studies will be feasible/ethical nowadays due to health and safety considerations of test subjects. The lack of data is problematic, since audiences are exposed to significantly higher levels of low-frequency sound at events (often exceeding 130 dBC peak [21]). This is addressed in the UK's Purple Guide to Health, Safety and Welfare at Music and Other Events [68] and will be discussed in detail in the proceeding section.

In the research that is available on the effects of low-frequency sound exposure, there are some key points to keep in mind. As will be mentioned throughout this report, the vast majority of regulations and measurement methods for noise utilize the A-weighting curve. This weighting is an approximation of the 40-phon equal loudness contour, which isn't representative of levels experienced by audiences at entertainment events [36]. Furthermore, the reality of the A-weighing curve is that it doesn't actually approximate the 40-phon equal loudness contour and was instead designed to fit within the limitations of analog electronics of the day.

In recent years, there have been updates to some regulations to include peak level limitations using C-weighting, but these currently are the exception not the rule. Peak equivalent C-weighted sound pressure level ($L_{Ceq,peak}$) has been part of European law since 2003 with 10/EC/2003 [41] which handles occupational noise exposure. This has subsequently influenced various event noise regulations across Europe (highlighted in Section 4) and certain pieces of monitoring software (highlighted in Section 5).

It has been proposed in previous work that the difference between dBC and dBA or dBZ and dBA be used as a simple indicator of a potential noise exposure (or off-site annoyance) issue at low-frequencies. If either of these differences is beyond 20 dB, then the low-frequency region must be examined in more detail to avoid an unmeasured risk to audiences (and workers). If the primary issues are identified to exist in the infrasonic region, then ISO 7196 (1995) [42] describes the G-weighting curve which is centered in this frequency range. It has been cautioned, though, that G-weighting can't be used in isolation, as it underemphasizes content between 30 – 80 Hz, which is often significant in modern music [36].

The physiological and psychological effects of exposure to low-frequency noise are interesting and conflicting between certain studies. A comprehensive review is presented in [36], indicating that certain exposure will cause heightened alertness, while a different variety of exposure will cause drowsiness and decreased cognitive function. Certain studies on lab animals have given proof of clear neurological impairments after significant exposure to infrasound over long durations [35, 39]. Recovery times are on the order of days for sound exposure similar to that of a typical multiple day music festival, which should lead to some concern about sound engineers and musicians who are exposed to such levels on a nearly daily basis [36]. As infrasound is becoming increasingly common at live events [43], this is a problem that must be better understood in the context of this industry to ensure risks to permanent hearing damage aren't being inflicted on both audiences and working personnel. It must be noted that considering the intensity and duration of low-frequency sound exposure to audience members at large events, standard ear protection is ineffective at low frequencies. This will be discussed in Section 3.2.1 in relation to ground-based subwoofer systems.

In addition to audience exposure, considerations must be made in regard to infrasound propagation. In this spectral region, propagation will be both through the air and through the ground and nearby structures, which has been well documented in the specific context of live events [44-46]. This will be discussed in Section 4 in relation to noise regulations and Section 5 in regard to noise prediction, measurement and monitoring.

2.2.3. Noise vs. music induced hearing loss

Lastly on the subject of recreational sound exposure, a handful of researchers have questioned whether noise exposure is the appropriate focus [14, 47-51]. Most regulations and recommendations give guidelines focused on the prevention/limitation of Noise Induced Hearing Loss (NIHL). This is in line with the vast majority of studies on noise exposure, as lab-based tests use broadband noise and/or pure tones to evaluate the effects of noise exposure. For many years, though, a small group of researchers has emphasized the point that the characteristics of noise and music are very different, especially in terms of temporal properties.

A study published in 1994 examined listeners who were exposed to 96 dBA of pink noise followed by 96 dBA of music [47]. The pink noise was rated as unpleasant by listeners, while the music (at the same measured level) was judged to be too quiet for a rock concert. This led to the question of whether music exposure is as damaging as noise exposure. Unfortunately, no further noteworthy work has been done in this area since this publication and the published results leave more questions than answers (and the method of the experiment itself is questionable).

A review of previous literature in the 1994 study gave some indication that music is not as damaging as noise. In one study where participants were exposed to one hour of noise or music, the measured TTS of the participants exposed to music was 9 dB less than those exposed to noise. Another study showed that risk of TTS from music exposure was less than noise exposure from factory work by a factor of between 4 and 5. The question was raised of whether pleasurable sounds are less physically damaging than unpleasant sounds. This, of course, has yet to be proven either way and is a contested point due to the lack of scientific evidence supporting it. As noted above, the fact that TTS isn't related to SNHL also leads to the assertion here to be called into question, pointing towards necessary further research into this area.

More recent work looking into NIHL vs. Music Induced Hearing Loss (MIHL) indicate that perhaps a separate set of regulations/recommendations is required based on MIHL for entertainment events due to the known differences between signal characteristics and physiological/psychological effects [48, 49]. Much of the existing regulations (detailed in Section 2.3) are based on industrial noise exposure [29], which isn't necessarily appropriate to apply to leisure-sound exposure, especially if such exposure occurs infrequently. This is supported findings from an experiment comparing TTS and recovery after energy-equivalent exposure to industrial noise and classical music [52]. The classical music resulted in significantly lower TTS than the equivalent energy noise. Of course, classical music is extremely different from popular music, but the findings at least point to further research required: "...the conventional approach of rating sound exposures exclusively by the principle of energy equivalence can lead to gravely misleading assessments of their actual physiological costs" [52]. A later study [53], however, did investigate the difference in TTS between classical and popular music exposure and found a significant difference (as expected).

Again, more scientific and unbiased research is needed in this area. Based on published research, the nature of hearing damage due to music is likely to be different to that of noise, indicating that a focus is required on MIHL for this work rather than NIHL (although this is not to say all work on NIHL is irrelevant to this study – it should be considered, but with the understanding that findings may differ when replacing noise with music). The effect of high levels of harmonic distortion in the reproduced sound should also be considered, as this will likely result in great hearing damage. This is particularly an issue for smaller indoor venues (where sound system are more likely to be overloaded, introducing distortion), but still must be kept in mind for larger outdoor applications.

Overall, audience members (especially those closest to the stage) are potentially exposed to dangerous amount of sound energy, where low-frequency exposure is particularly problematic and

not addressable using conventional hearing protection. The next section will focus on existing regulations in this area, with analysis provided pointing to further research and development that is necessary to ensure live events are safe places for members of the public to enjoy listening to music, without any danger of developing lasting and life-altering hearing damage.

2.3. Level and measurement regulations

Audience level regulations, recommendations or guidelines are few and far between across the world, with significant variation in practice. Table 2.1 contains current audience sound exposure regulations across Europe [49], which is the furthest progressed in this area as compared to the rest of the world.

Location	Limit 1 (dB)	Weighting	Integration time	Limit 2 (dB)	Weighting	Integration time	Ref.
Austria	100	A	1 min				[55]
Belgium (Brussels)	100	A	60 min	115	C	60 min	[56-58]
Belgium (Flemish region)	100	A	60 min	102	A	15 min	[59]
France	102	A	15 min	118	C	15 min	[60]
France (children < 6 y.o.)	94	A	15 min	104	C	15 min	[60]
Germany	99	A	30 min	135	C	35 ms (peak)	[61,62]
Netherlands	103	A	15 min	140	C	35 ms (peak)	[63]
Netherlands (children < 13 y.o.)	91	A	15 min				[63]
Netherlands (children 14-15 y.o.)	96	A	15 min				[63]
Netherlands (children 16-17 y.o.)	100	A	15 min				[63]
Norway	99	A	30 min	130	C	35 ms (peak)	[55]
Sweden	100	A	event duration	115	A	125 ms (fast)	[55]
Sweden (children < 13 y.o.)	97	A	event duration	110	A	125 ms (fast)	[55]
Switzerland	100	A	60 min	125	A	125 ms (fast)	[64,65]
Switzerland (children < 16 y.o.)	93	A	60 min				[66,67]
United Kingdom	107	A	event duration	140	C	35 ms (peak)	[68]
WHO	100	A	240 min (4 times/year)				[69]

Table 2.1 Audience sound exposure limits in European countries [49]

There is no consensus or standard practice concerning audience level regulations, although Table 2.1 indicates that there is some generally shared practice across a number of European countries. All published regulations give primary limits using A-weighting, which fails to address the typical spectral balance of a modern pop music event and, more importantly, isn't representative of the

characteristics of the human hearing system at such levels (C-weighting provides a more accurate measure of perceived loudness, but even this isn't representative of the standardized equal loudness curves detailed in BS ISO 226:2003 [54]).

The conjecture that A-weighting is unsuitable for on-site measurements is supported by a significant amount of previous research [24, 30, 55, 70], particularly pointing to the fact that audiences at pop music events are exposed to high sound pressure levels, causing A-weighting measurements to grossly underestimate exposure [21]. Furthermore, as discussed above, modern day live music is rich in low-frequency content, where A-weighting significantly underestimates the low-frequency contribution to sound exposure. This is especially important considering that research has shown low-frequency sound exposure to cause hearing damage at high frequencies [71-73]. It is relevant, then, to consider adopting C- (or Z-) weighted measurements (for both long and short integration times) for regulating audience sound exposure.

Integration time for the primary limits range from 1 minute to 240 minutes. Interestingly, the minimum (Austria) and maximum (WHO) integration times have exactly the same limit (100 dBA). Considering the transient and changing nature of a music event, it seems more reasonable to integrate over a longer period to better represent the noise dose received by the audience, rather than risking data being skewed by a particularly (but infrequent) loud portion of the musical event. On the other hand, integrating over too long a time period may have the damaging effect of sound level limit transgressions earlier in the event making it impossible to meet the long-term averaged limit, even if the sound system is turned off for the headliner's set. A compromise must be reached. In most cases in Europe, a 15-minute integration time is applied in practice along with real-time monitoring.

Most of the secondary limits detailed in the European regulations focus on peak levels, with C-weighting measured over 35 ms in a number of cases. This may be reasonable, although considering the emphasis on low-frequencies in modern sound reinforcement systems perhaps the integration time is too short. Research has indicated that at low-frequencies the hearing system's integration time is around 170 ms [74]. Nonetheless, levels of 140 dBC are significant and should be avoided to prevent serious hearing damage. It should be noted that a few of the secondary limits do take C-weighted readings over longer integration times (up to 60 minutes). It may be that this sort of monitoring practice is more useful than the primary A-weighted approach as it will closer represent the actual perception of the audience, although it must be stressed that such long integration times are likely to make the job of the front of house (FOH) engineer very difficult, especially towards the end of an event when most of the "loudness capital", so to speak, has been spent.

As an aside, NASA's technical standards for human factors, habitability and environmental health during space flight [75] adopts ACGIH's infrasound exposure limits which state that sound pressure levels for frequencies between 1 – 80 Hz (in 1/3 octave bands) can be no higher than 145 dBZ (peak) and no more than 150 dBZ (peak) measured over the entire spectrum [76]. No integration times are specified. Additionally, if low-frequency sound is centered in the region that causes chest resonance (roughly 50 – 60 Hz); this has the potential to cause whole-body vibration which can lead to annoyance and/or discomfort. In such cases, a reduction in sound pressure level is necessary [76]. Such sound levels aren't unheard of at live events (especially for the audience members standing directly in front of a large subwoofer array [21]). NASA's primary focus is the wellbeing of their astronauts and they've adopted unweighted measurements to best quantify low-frequency noise exposure. In the live event industry, A-weighting is still used, which (as stated earlier) largely ignores low-frequency content. There is a serious disagreement in practice here, where although the two industries are greatly different, the nature of the sound/noise exposure isn't as dissimilar as one would imagine.

It isn't out of the realm of possibilities to implement a dynamic weighting curve that adjusts depending on the received unweighted sound levels according to equal loudness contours. This would ensure accurate readings of noise exposure for dynamic, ever-changing entertainment events. Modern day devices should have little problem providing adequate computing power to achieve this, although such an approach will need to be formalized though technical standards and be included in revised noise regulations before wide adoption could be expected. A change such as this would take many years to achieve. At present, it's important to work with existing measurement standards/regulations and equipment to achieve a reasonable and realistic approach to ensure audiences are kept safe at entertainment events. However this by no means indicates that the industry shouldn't strive to update current measurement procedures, looking towards the future. There's no benefit of an unwavering devotion to long-used measurement procedures if there's evidence that said procedures are inadequate (although it's much easier to stick with the old – and familiar – practice).

It should be noted that it's encouraging to see stricter limits in place for children's events. While there is no conclusive research to show that children's hearing systems are more sensitive to noise exposure and thus more susceptible to damage, it is known and agreed that hearing loss at an early age will detract from an individual's quality of life and accelerate the onset of age-related hearing loss [77-80]. Furthermore, research has shown that individuals with existing hearing loss requiring hearing aids are much more susceptible to further hearing loss by attending live events, with the study showing that this prevents such people (especially youths) from attending events, thus missing out on important and enjoyable social interactions [81].

2.3.1. Measurement and monitoring procedures

In terms of measurement procedures for audience sound exposure, there appears to be no consensus between countries. Some countries specify a measurement location at the front of house mix position (FOH), while others allow readings to be taken anywhere accessible to the public. In the UK, it is recommended that sound exposure be measured at the loudest area of the audience at head height [28]. Germany and France also specify measurement at the loudest position in the audience. A relatively arbitrary measurement location in the audience is problematic, as research has shown that in-situ measurements at music festivals exhibit differences in SPL horizontally across an audience of upwards of 13 dB (or more) [24]. Also, due to the impracticality of such a monitoring location, correction values can be implemented by measuring the relative difference between the loudest location in the audience and a practical monitoring location (usually FOH).

While efforts should be made to achieve a consistent energy distribution across the audience (as will be discussed in Section 3), this highlights the problem of specifying a single measurement point for monitoring audience exposure. A recent study has given indication that if a single measurement location is necessary/unavoidable, that the FOH mix position tends to give good estimates of overall audience exposure [55]. This assumes that the sound system has been designed so that the received response at FOH is representative of the response across the audience and that crowd noise won't overpower the sound reinforcement system. This goal is a primary focus in Section 3 of this report.

DIN15905-5 from Germany (a technical standard, not a law [61, 62]), raises an interesting issue in audience sound level monitoring. It requires compliance to the stated limits (99 dB $L_{Aeq,30\ min}$ and 135 dBC peak) at the loudest point in the audience. There have been legal cases brought based on hearing damage suffered due to attendance at large-scale outdoor events, which in part cites DIN15905-5. A listing of key legal cases can be found in [82].

As mentioned above, the front of house mix position (FOH) is most commonly the monitoring location during an event, but this poses an issue. During pop music events, crowd noise can easily

exceed stated limits, even without the sound system active [83]. If the measurement microphone is placed at FOH, crowd noise will result in limit infractions that have nothing to do with the sound system. It has been suggested, therefore, that the measurement microphone is placed near to the sound system to avoid influence of the audiences [83]. This also has issues, as monitoring a single sub-system can give a false reading of what the full system is providing to the crowd. Also, the high sound pressure levels experienced near to a large sound system can cause the measurement microphone to malfunction, rendering the measurements useless (this is clearly expressed in DIN15905-5). A straightforward solution is to have a FOH measurement location, where the monitoring software has knowledge of the input signal to the sound system to ignore sound level limit infractions due to crowd noise. This method is implemented (to an extent) in existing sound level monitoring software and is discussed in Section 5.

Overall, it is clear that much work is required in the area of audience sound exposure regulation. There exist some regulations which are likely to be close to something appropriate for the reality of the situation at modern day live events, but there is no accepted standard practice across the world. While the broadband spectrum should be considered in terms of potential noise or music related hearing loss, low-frequencies may pose the greatest risk due to common system design practices, whereby subwoofer systems are often ground-based only a few meters from the nearest audience members (while line arrays are suspended well above an audience), resulting in sound exposure exceeding many recommended limits. As discussed in this section, such levels expose the audience to potential temporary or permanent hearing loss, as well as additional (potential) neurological and sociological impairments over extended periods of time. More research and practical experiments are needed in this area. This will be discussed further in Section 3.2.1.

2.3.2. Preventative measures

Numerous pieces of published research have given strong indication that a public education program is necessary to assist the avoidance of hearing damage due to regular attendance at live events [28, 77, 84-87]. In one study, participants took part in a six-month education program on the risks of high-level sound exposure at live events [85]. After the program, 12% more of the participants used hearing protection at events, although this result can't be conclusively pinned to the education program. It was noted that younger participants seemed less influenced by the program.

What most studies related to public education on sound exposure risks suggest is that if sound levels are expected to exceed accepted regulations/recommendations for audience exposure, there should be clear signs in the venue stating there is a risk of hearing damage due to sound exposure. It is also suggested that in such cases, hearing protection (in the form of ear plugs) is provided either free of charge [86] or for a small cost [87]. The availability of hearing protection (as well as clear notifications of dangerous sound levels) at venues is likely to result in greater caution by audience members.

The effectiveness of standard hearing protection to limit damage from low-frequencies must be questioned, though, due to bone/tissue conduction transmission paths. The issue is well-known by individuals working on aircraft carriers [88-90] as well as by NASA who clearly state in their flight technical standards [75] that hearing protection can never be used to satisfy requirements for low-frequency noise exposure. In the case of high levels of low-frequency sound exposure, therefore, there is no reasonable hearing protection device that will provide adequate (or any) protection in this area.

2.3.3. Approach to sound exposure regulations

Ultimately, the worry is (and has been within the AES since the 1970s) that if those responsible for the design and operation of large-scale sound reinforcement systems don't actively contribute to the development of reasonable and accurate audience sound exposure regulations, it is almost certain that governments will step in and impose unrealistic/impractical regulations that the live event industry will have no choice but to adhere to. This has already begun to happen.

The problem was emphasized in 1976 in an AES paper [91]: "If we ourselves do not come up with some guidelines, some government agency will step into the void." Another study from the same year [92] expresses a similar sentiment: "It is not good enough to provide means for the generation of louder and louder noises without any consideration for the possibility of proven harmful effects." Again, this statement was specifically targeting AES members.

A later study in 1980 [84] made it clear that it's the responsibility of members of the AES to protect the public from the risk of serious hearing damage due to live events, pointing out that if we don't address the problem it's almost certain that governments will over-regulate: "Our civil liberties would be eroded by any government dictation or control of our leisure life styles, but this intervention can definitely occur sooner or later unless an aroused citizenship assumes the initiative to counteract the tidal wave sweeping our civilization into the insidious undercurrent of aural incapacitance... It is hoped that the profession can hear the whispered hint. If it is not yet deafened into insensibility."

While this working group fully supports the research and development of suitable and effective sound exposure regulations and guidelines for audiences at live events, this activity on its own is insufficient. Management of audience sound exposure must begin with appropriate sound system design. With this in place, regulations can then be realistically applied without compromising the high-quality listening experience of the audience members. It is critical to understand that for both on-site and off-site sound/noise issues, the solution has to start with the sound system design. This point appears to be absent in much of the discussion surrounding these issues in published literature. Sound system design is therefore the focus of the next section.

3. System design

Sound system design and optimization has progressed significantly over the past half-century. With technological innovations such as Meyer Sound's Source-Independent Measurement (SIM) system in the 1980s [93], which gave sound system engineers the ability to inspect detailed time, frequency and phase data from in-situ measurements, to the advent of the modern day line array by L-Acoustics in the early 1990s [94], and the current developments of source-oriented (a.k.a. hyper-realistic immersive) sound reinforcement systems such as L-Acoustics' L-ISA [95] and d&b's Soundscape [96], the goal of homogeneity of listening experience across a wide audience is closer to becoming a reality.

There exist a number of textbooks focused on sound system design and optimization [10, 97, 98], written by well-respected and highly-experienced engineers. This section will not attempt to cover all aspects of system design and optimization, as this wouldn't be useful in regard to the purpose of this report. Instead, core principles will be briefly highlighted, pointing to key references for further reading, with a more detailed focus on recent developments in system design which aim to further the quest towards uniform high-quality coverage across an audience with minimal energy leakage into noise-sensitive areas.

The focus on uniformity in coverage is central to this report's focus on audience sound exposure. Uniform audience coverage allows engineers and acoustic consultants to precisely track audience sound levels without the need for many monitoring locations (as alluded to in Section 2). This makes audience sound exposure monitoring and management more practical and accurate, while simultaneously ensuring all audience members receive a high-quality listening experience.

For the remainder of this report, systems labeled as *primary* will refer to the sound reinforcement system designed to deliver audio content to the audience as well as musicians on stage. Systems labeled as *secondary* will refer to active noise cancellation systems decoupled from the primary sound system with the purpose of limiting off-site noise pollution. Primary sound systems will be the focus of this section while Section 6 will detail recent work on secondary sound systems.

3.1. Main PA

The majority of modern-day large-scale sound reinforcement systems consist of flown broadband Variable Curvature Line Sources (VCLS), commonly referred to as line arrays [99], although it must be noted that for some applications point source technology will more adequately meet the sound reinforcement requirements. The most common configuration of such line source systems is in a spaced left/right system, where identical arrays are flown symmetrically at the sides of a stage. While such systems are technically capable of stereo reproduction, most program material sent to the system is center-panned, resulting in multiple-mono system behavior.

The reason for this multiple-mono approach is dictated by audience configuration. At large events, the audience is spread in front of and off to the sides of a stage. Employing stereo mixing practices will result in (1) the audience located to the side of a venue not receiving adequate signal level from instruments hard-panned to the opposite side of the system and (2) the stereo effect being lost on everyone other than a relatively narrow area of audience central to the main PA [10, 43]. The benefits of mixing in stereo are outweighed by the drawbacks in most cases.

This leads to an issue in terms of sound reinforcement uniformity across a wide audience. If the left and right line arrays are fed identical signals, then coherent interference will occur. At high frequencies, this can manifest itself as the perception of "phaseyness" as one moves their head even slightly from side to side (or when the wind causes varying temperature gradients in the acoustic

signal path, resulting in varying propagation times for system elements). This presents no issue in terms of audience sound exposure, however, so won't be discussed further here.

At lower frequencies (below 200 Hz), however, coherent interference causes areas of the audience to suffer from a complete lack of acoustic energy over specific (position-dependent) narrow frequency bands. While these effects may not be noticeable to the general concert-goer, who may not move significantly during the course of an event, it does hinder a system engineer's aim of achieving democracy of sound (i.e. the same high-quality objective listening experience to all audience members) as well making it more difficult to accurately track audience sound exposure.

There already exist solutions to the low-frequency coherent interference problem (although these aren't necessarily widely adopted, as of yet). Three possible approaches are detailed here.

3.1.1. Center arrays

Center arrays avoid coherent interference because the main sound source is coming from a single line array (or a cluster of multiple, coupled arrays). It is unlikely to be a suitable option, though, for wide audiences unless the individual elements in the array (or cluster) exhibit wide horizontal coverage.

This approach has limitations in terms of interfacing with the lighting and video systems, where a center hang could potentially block important sightlines. Most large-scale productions require a letter-box/landscape view of the stage, unimpeded by obstructions such as loudspeakers. In general, a stage of 18 m (60') x 12 m (40') x 1.8 m (6') is standard, with a requirement that there be 12 m (40') clearance between the stage surface and any overhead structure. These requirements are focused on the "look" of an event, where sound requirements are currently less of a priority (something which this working group hopes to see changed in the near future). Barring any adjustment to production priorities, center-hung arrays would have to fit within this existing framework in order to be widely adopted.

Nonetheless, it is well documented that a centrally-flown main sound system is capable of delivering a homogeneous listening experience to large audience areas [10, 99]. This is particularly possible for cases where a central array is rigged high for sightline purposes, thus providing more even front-to-back coverage. Additionally, this single source of sound potentially makes easier the role of secondary systems in cancelling sound energy traveling off-site.

In situations where stereo sound reinforcement isn't important (remembering that use of multi-mono systems is currently widespread) and there exist no serious sightline or rigging issues, a center array is quite a good option.

3.1.2. Signal decorrelation

If a multiple-mono system is implemented which has the capability of reproducing the low-frequency range (some large-scale main systems currently available extend down to 50 Hz) and is used in conjunction with a subwoofer system, low-frequency coherent interference can be mitigated by decorrelating the left and right line array drive signals (over the broadband spectrum or focusing solely on the low-frequency range, below 200 Hz).

A rudimentary application of this sort has been used in the industry for many years, primarily for left/right subwoofer decorrelation [100]. In this approach, an independent equalizer channel is applied to the left and right signals individually. Different EQ is applied to each channel so that the phase relationship between the left and right signals varies by frequency, thus partially randomizing the location of strong peaks and dips in the acoustic response due to comb filtering. Alternatively,

consultants installing permanent systems into venues have regularly employed separate allpass filters to each sub-system to achieve a certain level of decorrelation [101]. The authors of this report don't recommend these approaches, as they have the potential of reducing the sound quality delivered to audience members and are commonly unacceptable to sound engineers.

A more robust solution for decorrelation is known as Diffuse Signal Processing (DiSP) [74, 102-104]. DiSP operates by convolving the audio stream going to the left and right arrays with different temporally diffuse impulse responses (TDIs). The TDIs exhibit a full-scale impulse at time zero, followed by an exponentially decaying noise tail, generated with random phase noise exhibiting frequency-dependent decay. TDIs can be synthesized to provide decorrelation over the full frequency spectrum or for select frequency bands. In most cases, broadband decorrelation is unnecessary, with a focus instead on the low-frequency band or crossover region(s).

As long as TDIs are generated to ensure transparency [74], the result will be a reduction in coherent interference effects, resulting in a more homogeneous response across the audience. Additionally, transient preservation can be embedded in the algorithm to ensure audiences receive the expected impact from the sound system while still benefiting from sufficient decorrelation [74, 102].

For indoor venues, it is possible to implement dynamic DiSP to decorrelate not only the direct sounds from each other but the early reflections from the direct sounds using time-varying TDIs (in other words, for every audio frame received by the signal processor, that frame will be convolved by a different TDI than its predecessor and successor) [102]. Experiments have shown that this process significantly improves objective listening response homogeneity across an audience for systems with even only a single sound source and increasing in performance as more degrees of freedom (sound sources) are included [105].

In terms of practical implementation of DiSP (or similar), it must be kept in mind that there exists minimal time for system tuning for most touring productions. Such a system would need to be easily incorporated into the system, without a lengthy calibration procedure. DiSP is designed specifically to meet this requirement, where the algorithm can be applied in its own networked device (or be built into an existing piece of equipment such as a mixing desk or system processor) and requires no calibration measurements. It functions as a turn-key solution, requiring little to no extra time on-site.

DiSP's ability to improve consistency in audience sound coverage along with its ease of implementation and flexibility can directly contribute to ensuring audience sound exposure can be accurately tracked and managed while ensuring the best-possible high-quality listening experience for everyone in attendance. Front-to-back coverage inconsistencies, though, can't be resolved using any form of decorrelation and therefore still pose a potential issue for audience sound exposure.

3.1.3. Source-oriented systems

The past few years have seen the emergence of what some term *source-oriented sound reinforcement systems*, largely owing to work carried out by L-Acoustics and d&b audiotechnik. Such systems strive to deliver identical immersive listening experiences to every audience member [43, 95, 96]. This is achieved with multiple horizontally-distributed line arrays (at the front of the venue with the possibility of expanding the system to the sides and rear of the venue as well) with individual elements exhibiting wide horizontal coverage patterns. Mixing is done using an object-based approach, whereby the engineer specifies where each individual instrument/voice should be localized within the venue (along with the apparent source width).

Such systems' design philosophy, though, is in opposition to conventional wisdom. Traditionally, the approach to sound system design is to avoid significant overlap between decoupled loudspeakers to minimize spectral and ripple variance [10]. Spatial crossover regions between elements should be made as narrow as possible so that time alignment can be meaningfully and effectively applied to maintain low variance in listening experience in these regions. Object-oriented sound systems often (but not always) deploy loudspeakers with wide horizontal coverage patterns with the aim of covering as much of the audience as possible. This means that significant inter-element overlap usually will occur. As ideally the line arrays will be closely spaced, there is the possibility to have the arrays coupled at low-frequencies, thus limiting the issue of coherent interference causing inconsistent coverage below around 200 Hz in the audience. It is common to have a centrally flown subwoofer array in such systems, which can provide very consistent audience coverage (as discussed in Section 3.1.1).

In order for increased uptake of object-oriented sound reinforcement systems, it will be essential for live event production to refocus on the importance of audio, instead of the current situation where loudspeaker placement is restricted based on the needs of lighting and video, causing main line arrays to be pushed outwards and upwards into non-ideal locations – especially for adequate sonic imaging (in terms of audio-visual fusion) [43].

While there are greater requirements in terms of equipment and rigging, there are likely to be benefits from such systems beyond those of immersive audio. One such benefit is due to the distributed nature of the sound system, comprising of many small line arrays/point sources. This may require less output from each individual component in the system, which is likely to avoid exposing audience members closest to the system to unreasonable and dangerous sound pressure levels as well as potentially reducing sound energy traveling off-site, thus reducing noise pollution. The distributed nature of the system also has the potential to provide consistent audience coverage horizontally and front-to-back, thus making audience sound exposure monitoring and management easier. As such systems are relatively new to the market, further research is needed to provide clear conclusions on these points.

It is still open to debate, however, whether such systems can and will be adopted by the touring side of the live event industry. As stated earlier, time- and equipment-efficiency is central to most touring operations, which is why only a limited number of productions have taken such systems on the road to date.

3.1.4. Design objectives

A key contributor to audience satisfaction is the "democracy of sound." This phrase has recently been adopted by at least one major manufacturer [312] and reflects a growing movement among engineers and system designers to achieve nearly uniform high-quality coverage over the entire audience area. This ideal has only been achievable relatively recently as understanding of line array physical deployment has matured, including effective optimization through DSP-based optimization.

There are four variances that should be minimized [10]:

1. Level variance

   Difference in sound pressure level across the audience area.

2. Spectral variance

   Difference in spectral characteristics across the audience area.

3. Ripple variance

   Differences in spectral characteristics across the audience area due to coherent interference between system elements and reflections (i.e. comb filtering).

4. Sonic image variance

   Differences in spatial impression of sound reinforcement across the audience. Emphasis given to agreement between aural and visual cues.

The primary issues related to level variance come down to loudspeaker make/model, source physical deployment (position, trim height, aiming, splay angles), source electronic settings (frequency response, processing) and global system layout (frontal, distributed, in the round). It is important to understand that absolute minimization of level variance is unreasonable in most venues. It should be accepted that there will exist a certain degree of level attenuation towards the rear of a large audience area (but ideally no more than 6 dB).

The important aspect of main PA design in regard to noise pollution relates to the coverage pattern of the overall system. The challenge to system engineers/designers is to optimize audience coverage for minimal variance while simultaneously avoiding unacceptable sound levels in noise-sensitive areas (such as the stage, on-site quiet areas, and surrounding communities). With conventional line arrays, the primary focus should be on configuring the system, using manufacturer-provided software, to ensure the coverage ends where the audience ends.

Many modern processors manipulate the input signal for each individual speaker component to help the system achieve a homogenized response over the audience area. This has several advantages in terms of noise concerns. Effective use of FIR processing means that, for a large system, level variance can be minimized over the audience area and between the mix position and the audience area.

A potential issue arises from line arrays capable of reproducing strong low-frequency content (many modern arrays are marketed to operate downwards of 50 Hz). An extended main array frequency response means that since more low-frequency content is being distributed via the main arrays, fewer auxiliary subwoofers are required. This is good for audience members close to the stage (as there will be reduced sound pressure levels from ground-based subwoofers) and audience members further from the stage (since there will be more even front-to-back low-frequency coverage) but such systems, if implemented in a typical left/right configuration, will reintroduce a power alley of low-frequency energy, as well as comb-filtering horizontally across the audience, and therefore should be processed to decorrelate the left and right signals. This has already been mentioned in Section 3.1.2, but will be covered in greater detail in Section 3.2, especially in relation to subwoofer systems.

Main line array length must also be considered in terms of audience coverage and noise pollution. It is not the case that bigger is always better. Implementing too long of a line array (resulting in either a very long throw or an array that physically extends almost to the stage/ground or both) is likely to cause more problems than it solves (it is generally recommended that a line array be flown at three times its length to achieve the desired and predicted performance). Too long of an array can result in great difficulty in controlling the throw of the system due to limitations of array curvature. Additionally, it will likely result in poor front-to-back audience coverage consistency. While in some cases, individual elements can be addressed within the array to adjust their drive signal to avoid some of these issues, it is better practice to implement an array that is suitable to the venue and event. In certain cases, smaller line arrays or short-throw distributed elements may be advantageous over large line arrays. Analysis must be carried out for each event where a cookie-cutter style

approach should be avoided. Careful analysis to ensure appropriate system design and implementation will help to ensure a good audience experience while minimizing annoyance caused in surrounding communities.

Overall, main PAs should be designed to deliver the majority of the spectral content to the majority of the audience with minimal sound energy spillage beyond the defined audience area. The physical deployment of a source (location, aiming, precise splay angles settings for a line source) should be optimized first. It minimizes the need for electronic processing that would otherwise be used to correct poor design choices and could degrade sound quality or even create secondary lobes outside of the audience coverage. Manufacturer software is essential in achieving this – both during the design stage and during deployment, in addition to on-site measurements when tuning the system with an appreciation for how environmental factors can significantly distort the predicted system response.

3.2. Subwoofer systems

Due to the limited transducer size and array length of main PA line arrays, a subwoofer system is usually required to reinforce/reproduce the lower range of the frequency spectrum (below 100 Hz). Such systems can be deployed as flown arrays, generally in close proximity to the main PA (to allow for coupling), or as ground-based systems (in many cases in a horizontal array). There are advantages and disadvantages to each approach, which are detailed below.

3.2.1. Ground-based

Ground-based subwoofer systems may be viewed as a holdover from the days when sound systems consisted of stacked point sources on either side of the stage. Usually the main PAs embedded subwoofers within their design, alternating broadband boxes and subwoofers. When flown point source arrays became common, the broadband loudspeakers moved above the stage, often leaving the subwoofer system alone on the ground [22]. Initially, subwoofers were kept in left/right configurations, which caused coherent interference issues described in Section 3.1. Such a configuration results in a strong *power alley* down the center of an audience (assuming a symmetrical subwoofer layout) surrounded by areas of significantly lower amplitude low-frequency (the precise location of these dead spots is frequency dependent), along with sidelobes which will stretch off to the sides of the stage. If the individual subwoofers are omnidirectional in nature, then this pattern will be mirrored in the backwards-facing direction (i.e. the stage).

This results in significant spectral variance across the audience as well as propagation into noise-sensitive areas. The only practical way to avoid this issue is to apply a form of decorrelation to the left/right system, by using individual EQ/allpass filters for each side of the system (which has the potential of perceptible signal distortion) or using a more robust (and perceptually transparent) approach such as DiSP. This has already been discussed in Section 3.1.

If free space exists in front of the stage, then the subwoofer system can be deployed as a horizontal array. There are some benefits to this approach, primarily based on the improved control of the system's sound radiation pattern over the traditional left/right systems. Steering and optimization techniques for ground-based horizontal arrays are well-known and researched [10, 22, 106-108]. In general, electronic delay, polarity and/or amplitude can be adjusted for each element in the array in order to produce the desired polar response with as little deviation across the subwoofer frequency band as possible.

As with main PA line arrays, subwoofer arrays such as this necessitate a considerable length/depth in order to accurately control directivity at the lowest frequencies (stretching into the infrasonic range in some cases [43, 106, 109]). In general, the array will be able to control frequencies with

wavelengths equal to or less than the overall array width (although based on practical experience, this limit can overestimate effectiveness at such low frequencies) [110].

In regard to noise pollution, ground-based subwoofer arrays do not limit off-site low-frequency noise levels due to acoustic absorption in the audience (as is commonly claimed). There should therefore be minimal difference in noise pollution off-site between ground and flown subwoofer systems (assuming the systems are properly configured). It's important to note, though, that these systems, even if designed for even horizontal coverage, can suffer from some spectral variance within the audience due to low-frequencies reflecting at the boundaries of the audience due to impedance mismatches. The effect is most pronounced with dense audiences that terminate abruptly. Gradual audience density roll-offs avoid this issue [111], but this is impossible to arrange for in practice.

While horizontal ground-based subwoofer arrays can easily achieve tightly controlled coverage of the audience area (with minimal radiation into noise-sensitive areas) – at least horizontally, but perhaps not from front-to-back – there exists a serious health risk from such systems that has been brought up in past publications [21, 49, 68], but little seems to have been done to address the issue.

Such ground-based systems are typically placed in between the stage and the crowd barrier, often leaving only a meter or two between the first row of audience and the subwoofers. Inspecting manufacturer-provided datasheets, many professional-grade large-scale subwoofers are capable of producing peak levels of 140 dB (or more) at 1 m [112-115]. In regard to the audience sound exposure, such systems will almost certainly be in breach of all regulations and recommendations detailed in Section 2.1. Considering that audience members at the front of an audience are usually the biggest fans of the performers on stage, it can be reasoned that they will attend more concerts than the average member of the public. This means that the biggest fans of a popular music group will be put at significantly more risk of permanent hearing damage due to this activity (where they have absolutely no control of the system).

As detailed in Section 2, there is ample evidence in published research showing that conventional hearing protection is of minimal use at low frequencies, since sound not only travels through the ear, but also through bone and tissue in the body. Blocking the ear canals only removes one transmission pathway, leaving all others open (although previous research indicates that these remaining pathways are less efficient at transmitting airborne noise into the body and through to the inner ear [14]). Unless a similar methodology deployed on aircraft carriers is implemented for audience members near ground-based subwoofers – where full body suits and helmets are worn to decouple a person from the surrounding acoustic environment (which is clearly impractical for live events) – there is no way to avoid such sound exposure from these subwoofer systems. There is an element of duty of care from the system engineers and operators in this case that shouldn't be taken lightly (but usually is ignored).

In addition to this, recent research has given clear evidence that ground-based subwoofers fail to provide minimal level variance from front-to-back of an audience due to the significant difference of propagation paths between the front row and back row of audience [99]. In the tested cases, a front-to-back difference of over 30 dB was regularly observed. This is unacceptable in terms of low-frequency level variance. In terms of spectral variance, if the main PA exhibits no more than 10 dB level variance from front-to-back, the problematic subwoofer level variance would result in up to 20 dB spectral variance for the overall sound system across the audience (which is unacceptable).

Furthermore, a ground-based subwoofer system proves challenging in terms of time alignment with the main PA. Assuming the main PA and subwoofers are fed coherent signals, proper time alignment is necessary in terms of spectral variance as well as transient response (assuming that the audience receives similar sound pressure levels in the subwoofer crossover region from the subwoofer system

and other system elements). A misalignment will result in comb-filtering in the spectral crossover region as well as smearing of the transient response in the low frequency range. Considering the evidence presented in Section 2 regarding sound quality being closely linked to bass clarity and accuracy, this is sure to detract from the listening experience.

Unfortunately, with such a configuration there is no way to time align the subwoofers to the main PA so that all audience areas are properly aligned. Alignment can only be performed in one location and the further away from this location, the further misaligned the received response will be. Research is ongoing, however, to identify the most effective time-alignment approach for such systems [116].

Considering the above-mentioned concerns over ground-based subwoofers, it would seem suspicious why such systems are so commonly deployed at large-scale live events. Likely reasons for this are the ease of implementation (stage roof rigging capacity, time requirements, associated costs, etc.) and potential for higher sound pressure levels at the mix position (which isn't necessarily the case). Ground-based systems require no rigging and therefore are much quicker (and cheaper) to deploy. Central ground-based systems largely avoid coherent interference issues, giving the audience (from left to right, at least) a consistent listening experience. Front-to-back, although experiencing significant level differences, benefit from tonal consistency (minimal spectral variance) in the subwoofer range. Additionally, if a horizontal ground-based array of omnidirectional subwoofers is used, there will likely be significant issues on stage (unacceptable low-frequency sound level, feedback problems, etc.). In such cases, the array should consist of (or be configured to replicate) cardioid subwoofers.

3.2.2. Flown

Considering the analysis presented in the previous section on ground-based subwoofer systems, it would seem logical that flown subwoofer systems are a more sensible choice for large-scale sound system design. In many respects, this is true, but there are also drawbacks that must be carefully considered when designing a system.

The most common implementation of flown subwoofer systems is in the form of vertical arrays flown just beside or behind the main PA. The key benefit to this is that the subwoofers will now directly couple to the main PA, avoiding the tricky issue of time alignment experienced with ground-based systems. This coupling can also be beneficial in terms of rear rejection, allowing to create a cardioid type behavior of the coupled flown broadband line source array and subwoofer system in the shared bandwidth. This is the approach taken by L-Acoustics using combinations of large scale K1 or K2 line source arrays with K1SB flown arrays and applying end-fire processing as an alignment strategy. The relative positioning of the subwoofer array against the broadband source further allows choosing the direction of cancellation.

Unfortunately, left/right configurations suffer the same coherent interference issues as main left/right PAs, giving rise to significant spectral variance across an audience. As discussed earlier, this can be (at least partially) mitigated using a form of decorrelation such as DiSP (which can be implemented in a perceptually-transparent manner only in the frequency band(s) where decorrelation is necessary) [102]. Rudimentary forms of this are sometimes put in place in industry, but signal processing such as DiSP should be more seriously considered, especially in the subwoofer region, as it is likely to allow for a more consistent audience listening experience (with minimal/no perceptual artifacts), hence more accurate monitoring and management of sound exposure levels.

Research looking into flown subwoofer arrays share the same conclusion: a centrally-flown subwoofer array is the best possible option in regard to all of the above-mentioned considerations [22, 43, 99, 106, 117, 118]. Central flown subwoofer arrays achieve consistent frequency-

independent coverage across the audience, both from left-to-right and front-to-back. The only area of concern in terms of audience coverage is time alignment with the main PA (assuming it is still in a typical left/right configuration). This problem will be somewhat easier to solve, though, since the difference in propagation distance from the subwoofers to audience and main PA to audience isn't as severe as with a ground-based system. There is still unlikely to be a perfect time alignment solution.

One commonly-held belief regarding flown subwoofer systems is that they will be 6 dB less efficient than ground-based systems due to lack of the Waterhouse effect (coupling between the direct sound and ground reflection [360]). It is unlikely that ground-based horizontal subwoofer arrays consisting of stacked units will benefit from a full 6 dB boosted output, due to the distance between the ground and the top transducer in the stack. The supposed loss in efficiency for flown systems was shown to be untrue in recent research [99]. Through a series of electroacoustic models and mathematical analysis, the researchers found that the 6 dB loss in efficiency can in reality be as little as 1 dB. In certain configurations, such as a centrally-flown array, it was shown that a 6 dB boost in efficiency was achieved (where they considered efficiency not in terms of absolute output of the sound system, but in terms of sound energy delivered throughout the audience). Considering the improved front-to-back consistency (flown arrays showed a loss which is roughly in line with main PA behavior, while ground-based systems exhibited greater than 30 dB loss over the length of the audience), any small loss in efficiency is justifiable.

The work resulted in a useful metric known as DHER (Distance-to-Height Efficiency Ratio), which is the ratio of the listening distance at which the flown system is within 1 dB of the equivalent ground-based system (which approximates to two times the subwoofer height) and the height to the lowest flown subwoofer. DHER can be used to either specify a minimum listening distance at which full subwoofer system efficiency is observed or to determine the maximum allowable height of the subwoofer array to ensure good efficiency. An example given in the paper is for a 50 m deep venue with a standing audience (DHER = 5). In this case, the subwoofer array can be flown up to 10 m off the ground without losing any efficiency at the back of the audience (front to back reduction is 12 dB lower than with an equivalent ground-based system).

Another perceived drawback to flown subwoofer arrays is the issue of ease of propagation off-site due to no absorption (other than negligible effects of air absorption) in the direct sound's path or due to meteorological effects [119]. This is why in Amsterdam flown subwoofer arrays are outlawed (a case study is given in Section 5). For a flown system this *may* pose a noise pollution risk, although current published research into this area is inconclusive. In any case, a straightforward solution to this problem, which for unknown reasons isn't universally adopted as standard practice, is to apply line array directivity control to the flown subwoofer arrays. Some production companies physically angle the arrays so that they point downward towards the audience, but this may place unacceptable loads onto rigging points. Instead a solution well within the reach of modern-day live sound technology is to electronically steer the array towards the audience (and away from neighboring communities or on-site performance stages) [22, 106, 118].

The effectiveness of array steering at low frequencies is a direct function of the array length. For example, if the array was 8 m long, accurate beam width steering can be expected down to around 45 Hz. Amplitude tapering can be applied to the array so that side lobes are reduced (which otherwise could cause noise pollution problems) [97, 120, 121]. This means that the lowest frequencies in the subwoofer band may still cause issues off-site, but the extent of the issue may be similar in scale to ground-based systems due to low levels of audience or ground absorption at such frequencies [111]. Steering the main beam of a flown subwoofer array towards the audience and ground does run the risk of causing a strong ground reflection, which may result in noise pollution problems due to environmental effects on sound propagation. Aspects related to this will be

discussed in Section 5, but it should be mentioned here that further research is needed in this area. It's worth noting that the effect of a low-frequency ground reflection is well-known to researchers working with wind-turbine farms [122].

It must also be re-emphasized that many main PAs are regularly operated down to 70 Hz and in some cases to 50 Hz and below. This results in a significant spectral crossover between the main PA and the subwoofer system, making low-frequency steering a challenge that can't be limited in scope to subwoofer array processing – the main PA must also be considered in order to get acceptable results. As the subwoofer system is generally driven on an auxiliary send, separate to the main PA sends, the subwoofer and main arrays will be partially correlated, again increasing the challenge of effective low-frequency steering. Research investigating this subject in the context of the main PA and subwoofer system is needed, as most previous work treats on the two systems in isolation.

3.2.3. Performance quantification

There is a distinct lack of accessible methods for practitioners to quantify live sound system performance (although there is indication in recent releases of manufacturer system design software that this may be changing [123]). What system designers do in lieu of clear performance metrics is to inspect spatial and spectral plots of predicted system performance in manufacturer-supplied software. While this is likely to be sufficient for experienced system engineers, individuals with less experience may struggle to meaningfully and reasonably interpret the displayed data. Such human-centered analysis leaves the door open to human error/misunderstanding.

Two recent pieces of research [99, 121] have put forward methods to quantify various aspects of subwoofer system performance. It is likely that some of these metrics can be adapted to allow for broadband analysis of system performance, but work is required to confirm this.

The first paper published on the topic [121], proposes three central objectives for subwoofer system performance at live events:

1) Tonal consistency across an audience

2) Acceptable system headroom

3) Minimal difference between the mix position and mean audience level

In the conclusion of this work, a fourth objective is identified which should be included in further work on the subject:

4) Minimal noise spill into noise-sensitive areas

The second paper [99] made improvements on the recommendations in [121], where instead of acceptable system headroom (which was originally calculated based on the difference between the target and achieved SPL at FOH) used to determine system efficiency, a far-field SPL efficiency criterion, labeled *L-EJf*, was proposed, which is the difference between the mean SPL at the rear of the audience with the full system and the mean SPL at the rear of the audience with a single subwoofer. The higher *L-EJf*, the better "return on investment."

Additionally, instead of basing the FOH to audience consistency (3) on mean audience level, the paper [99] recommends using the 95% interval of audience SPL to better capture the full range of sound energy across a large area (especially paying attention to audience members at close listening positions).

The work in the first paper [121] went a step further to combine all relevant metrics related to system performance into a single value, termed Array Performance Rating (APR), which exists on a scale between 0 – 1. Each individual metric can be weighted depending on the design requirements and the overall system performance can be mapped to a letter grade for simple communication to clients and other non-technical interested parties (Figure 3.1).

Grade	*APR range*
A	[0.80 – 1.00]
B	[0.65 – 0.80)
C	[0.50 – 0.65)
D	[0.35 – 0.50)
F	[0.00 – 0.35)

Figure 3.1 APR letter grading scale for subwoofer system performance quantification [121]

An additional metric that must be investigated for inclusion in something like APR is a measure of a subwoofer system's waveform fidelity (or impulse integrity). In light of the audience subjective preferences outlined in Section 2, the transient performance (accuracy) of a subwoofer system is equally (if not more) important than the steady-state response. The inclusion of such a time domain-based metric within APR (or similar) would ensure the overall metric effectively enables the design of a subwoofer system that achieves a high-quality listening experience when incorporated with the other PA elements. It also should be noted that if a wide-bandwidth main PA is used (which can extend down in frequency to the subwoofer band) both the subwoofer system and main PA must be analyzed with APR (or similar) to ensure consistent low-frequency coverage with full system operation.

Regardless of the metrics used, both papers redefine efficiency in regard to subwoofer systems. For many years, system engineers talked about system efficiency in terms of electrical power sent to the loudspeakers, which is why amplitude tapering has been strongly resisted by many professionals (since it requires attenuating signals towards the outside of the array, thus wasting power amplifier resources). While it's true that amplitude tapering won't use all available amplification resources, it has been shown in many cases to allow for a more even sound distribution across a wide area and result in higher SPL in the audience [121, 124] due to the elimination of side lobes. It should be clear that such a system would be far more efficient than without amplitude tapering. It uses less power and delivers more sound energy to the audience in a more consistent manner. Further research is required, however, to inspect the effects of amplitude tapering on a realistic subwoofer system, where compression/limiting within the processors/amplifiers and power compression in the loudspeakers is considered. There is the possibility that such nonlinearities could limit the effectiveness of amplitude tapering (which is typically modeled as a linear time-invariant system). Due to these unknowns most manufacturers currently don't recommend amplitude tapering of subwoofer arrays.

3.3. Additional sound sources and other considerations

Aside from the main PA and subwoofer system, large-scale sound reinforcement systems may also contain (depending on the venue) front-fills, out-fills, in-fills, down-fills and delay towers/units. These subsystems are generally included within a PA to ensure adequate coverage of areas beyond what is considered the main audience area.

Front-fills, in-fills and down-fills are intended for coverage of the front-most center portion of the audience that can't be covered by a standard left/right main PA. It has been emphasized by a number of sound engineers that it's essential to get these systems configured correctly, since the audience members in these areas are typically the biggest fans of the performers for general admission events (or the highest payers for tickets at seated events – these two groups aren't necessarily related to each other) [43]. As these systems only require modest levels and don't reproduce significant low-frequency content (due to the lower directionality of the subwoofer system), they won't be major contributors to sound exposure on-site or noise pollution off-site and won't be discussed further in this report.

Out-fills are usually placed in close proximity to the main PA and are typically in the form of a smaller line array than the main PA. Due to this close proximity, the out-fill arrays can be considered coupled to the main PA (at least in the low- and low-mid frequency ranges). As these sub-systems are pointed outward from the stage to cover side areas, it is important to design the arrays to avoid overshooting the audience area to limit risk of unintended noise pollution. In practice, it is often found that out-fills are the source of noise pollution issues, in many cases due to a symmetric system design implemented when symmetry wasn't appropriate considering the layout of the event grounds or where the out-fills were radiating sound onto large reflective surfaces such as fencing, tour busses or trucks. The same level of attention must be paid to out-fill coverage on- and off-site as with the main PA.

Delay towers are commonly implemented to counteract sound attenuation of mid- and high-frequencies over long distances, which will have negative effects on speech intelligibility, and also attenuation of low-frequencies when subwoofers are ground-based. When flown subwoofers are used, delay systems aren't required to produce significant low-frequency content, since the acoustic energy from the subwoofers is likely to encounter limited attenuation across an audience. The same considerations must be made for delay towers as with out-fills: careful design to avoid unintended noise pollution.

One aspect of sound reinforcement systems that is often ignored when considering noise pollution is the stage monitoring system. While monitor wedges are usually pointed towards standing musicians and have limited low-frequency content, side-fills and drum/DJ-fills usually resemble a sound system that could be found at a small to medium sized indoor venue and have the potential to emit considerable low-frequency (and in some cases high-frequency) content into the crowd and beyond. Such systems should be considered in regard to time alignment of the overall sound system [10] as well as potential noise pollution issues [119].

While considerable effort is usually made to achieve adequate directionality of the audience-facing PA to avoid spill into noise-sensitive areas, the stage monitoring system is commonly overlooked. Stage monitors have been shown in recent studies to be a significant contributor to off-site noise [119] and will be discussed further in Section 5.

Lastly, a common element separate from the sound system can prove to be extremely problematic for both audience coverage and noise pollution on site: temporary "soft" structures (tents, marquees, etc., consisting of frames bounded in taut fabric). Such structures will act as large radiating surfaces (especially at low frequencies), causing inconsistent audience coverage inside and unpredictable noise pollution outside. To the knowledge of the authors of this report, no in-depth study has been conducted on such structures. Such a project is essential to gain a better understanding of the acoustic excitation and radiation properties of these structures. This knowledge will allow a more focused and informed approach to implementing sound reinforcement systems within and around them to simultaneously give the audience a good listening experience and limit annoyance in the neighboring community.

3.4. PA shoot-outs

It is often the case that multiple sound systems are directly compared in what are known as "PA shoot-outs" to help engineers and management decide which system to use for an event or to invest in for their company. While such shoot-outs have been taking place for many years, both indoor and outdoor, it is often the case that the test procedure isn't completely transparent and the results are ambiguous [125].

While there have been standardized methods of testing loudspeakers using a double-blind approach for quite some time now, it is often difficult to apply these principles to large-scale sound reinforcement systems due to the physical size of such systems and limitations in terms of rigging. Additionally, it is rare to have access to a large indoor venue for such testing purposes, therefore many of these shoot-outs take place outdoors.

Attempting to run such tests outdoors is fraught with problems, principally dynamic meteorological conditions. Since these systems are often tested for audience coverage and rejection in noise-sensitive areas (on-site and off-site), measurements and subjective evaluations must be carried out at great distances from the sound systems. Any change in wind speed, temperature or humidity during the tests can largely invalidate the results [116, 125].

An additional issue with PA shoot-outs is lack of comparability of the systems under inspection. This may be due to vastly different system designs and sizes, but more often comes down to vastly different placement of the systems. This can result in one system being placed more favorably than another, thus skewing the measurements and subjective evaluations [125].

It is imperative, therefore, that large-scale loudspeaker testing and evaluation (a.k.a. PA shoot-out) is standardized. A bespoke standard for larger-scale systems is needed which takes the various practical limitations into account and specifically addresses the numerous problems associated with testing outdoors. At the time of writing this report, initial work looking into this issue has already commenced [125]. Until this happens, it is likely that most PA shoot-outs will lead to highly-contested results and potentially poor choices in sound system design as a result.

4. Noise regulations

This working group has striven to present a broad and comprehensive an overview of noise pollution in order to highlight areas of good and poor practice throughout the world. The collection of regulations presented in this section are to be viewed as wide-reaching, but not entirely comprehensive as there are over one thousand regulations across the globe on the international, national, regional and local levels. Nonetheless, trends are clear and areas of good practice stand well-apart from many of the other examples.

4.1. Motivation

There has been considerable work over the past couple of decades on modernizing noise pollution regulations at all levels (international, national, etc.). The majority of this work has focused on road, rail, wind turbine and occupational noise. Significantly less attention has been paid to entertainment/leisure noise, although (as will be highlighted in the following section) this is largely due to a serious lack of objective research in the area [1]. Consequently, most noise regulations relating to leisure noise are based on occupational noise exposure (although some exceptions exist). It must, therefore, be a central focus of this working group to critically examine existing regulations in the context of noise from live events and point towards necessary further research to lead to better-informed, accurate and suitable regulations.

There are three primary groups that are directly impacted by noise pollution regulations: event audiences, event staff/volunteers, and members of the local community in the vicinity of the outdoor event in question. This report focuses on two of the three groups: the audience and the local community. Members of staff at events are covered by various national occupational noise regulations, although volunteers are not [68]. The question of whether volunteers should fall under regulations for the audience or staff needs to be addressed.

In terms of the audience, a selection of existing regulations have already been detailed in Section 2 of this report and won't be repeated here, although it should be re-emphasized that there is significant work to be done in this area to ensure audiences are sufficiently protected at outdoor entertainment events. Aspects of system design (covered in Section 3) are highly relevant in this regard.

Turning to members of the local community, there is clear motivation for ensuring regulations are fit for purpose. Residents living near a large outdoor event effectively have no control over the noise emitted from such an event, aside from the ability to raise a complaint. It is necessary, then, to ensure noise control and monitoring procedures are as effective and realistic as possible (but not overly-restrictive) to ensure such individuals don't have an unwanted intrusion affecting their quality of life. As such outdoor events are becoming increasingly common in heavily populated areas (for business purposes) [43], the situation has become sensitive, where great care must be taken in system design and operation to ensure all parties involved are happy. In this section, the existing regulations are presented, while Section 5 contains a discussion on the application of regulations including a number of instructive case studies.

The remainder of this section inspects current regulations, highlighting those that demonstrate good practice while equally illustrating examples of poorly-informed practice. It is important to note that the majority of regulations presented in this section were not developed with temporary/infrequent outdoor music events in mind. In the absence of a bespoke regulation for such events, however, these regulations are often what event organizers must abide by, hence their inclusion in this report. The hope is that with this review, a clearer picture of what can and should be done to avoid unacceptable noise pollution into local neighborhoods becomes clearer than it is at present.

Satisfying the regulation requirements shouldn't be the focus here; satisfying the local community is what's really important.

4.2. World Health Organization

The World Health Organization (WHO) released their Environmental Noise Guidelines for the European Region [1] in 2018. These guidelines build upon previous guidelines, namely the WHO Guidelines for Community Noise [2] and WHO Night Noise Guidelines for Europe [3]. The 2018 work specifically made a point to ensure all guidelines were based on unbiased objective studies, giving evidence-based recommendations. As part of this work, systematic reviews were carried out on subjects including: transport noise interventions and their impacts on health [126], environmental noise and adverse birth outcomes [127], environmental noise and annoyance [128], environmental noise and cardiovascular and metabolic effects [129], environmental noise and cognition [130], environmental noise and effects on sleep [131], environmental noise and permanent hearing loss and tinnitus [132], and environmental noise and quality of life, wellbeing and mental health [133]. In the context of this working group, the reviews on annoyance [128] and hearing loss [132] are of particular relevance, as the other topics are more applicable to long-term sound exposure from permanent sources in the environment rather than the temporary nature of outdoor live events (although even these reviews predominantly focus on persistent noise sources, not infrequent noise encountered from outdoor events).

The 2018 WHO guidelines are based around four principles [1]:

1) Reduce exposure to noise, while conserving quiet areas.

2) Promote interventions to reduce exposure to noise and improve health.

3) Coordinate approaches to control noise sources and other environmental health risks.

4) Inform and involve communities potentially affected by a change in noise exposure.

A number of different metrics are discussed in the guidelines, all serving different purposes. A central metric used in the guidelines is the day-evening-night weighted sound pressure level, L_{den}, which is in accordance with ISO 1996-1:2016 [134]. This is an adjusted measure of $L_{Aeq,24h}$, to account for different sensitivities to noise from day, to evening, to night. L_{den} is calculated using Eq. 4.1.

$$L_{den} = 10\log_{10}\left[\frac{1}{24}\left(12\cdot 10^{\frac{L_{day}}{10}} + 4\cdot 10^{\frac{L_{evening}+5}{10}} + 8\cdot 10^{\frac{L_{night}+10}{10}}\right)\right] \tag{4.1}$$

Typically, the daytime range is defined as either between 07:00 – 19:00 or 06:00 – 18:00 and carries no penalty imposed to the level limits. The evening time range is defined as either between 19:00 – 23:00 or 18:00 – 22:00 with a +5 dB penalty imposed on the level limits. The nighttime range is defined as either between 23:00 – 07:00 or 22:00 – 06:00 with a +10 dB penalty imposed on the level limits. Measurements should be taken at the façade most exposed to the noise (outdoors).

The guidelines expand upon this to give correction values to relate outdoor measurement to indoor levels. When windows are fully closed, half open or fully open, the indoor-outdoor difference will be 25 dB, 15 dB and 10 dB, respectively. The WHO guidelines note, though, that a more accurate estimation is covered in a previous study, which includes frequency-dependent data [135]. Figures 4.1 and 4.2 show a sampling of the indoor-outdoor level relationships for overall L_{Aeq} and frequency, respectively. The lack of data below 50 Hz in Figure 4.2 should be noted as well as the high variance

of results across the frequency bands (observe that in some cases the indoor noise was at a higher level compared to the outdoor noise at low-frequencies, which is likely due to room modes).

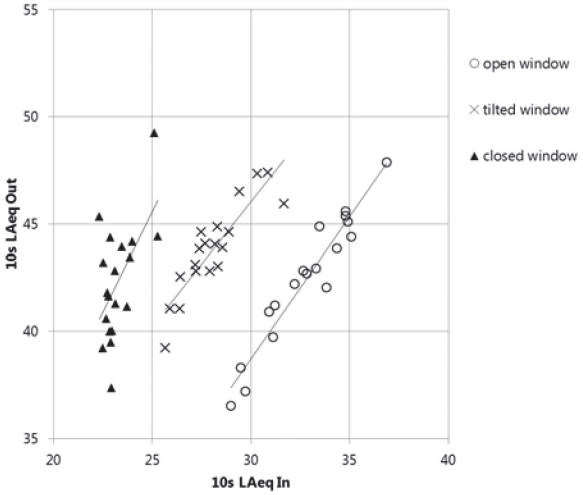

Figure 4.1 Sample of data comparing $L_{Aeq,10s}$ for indoor and outdoor measurements [135]

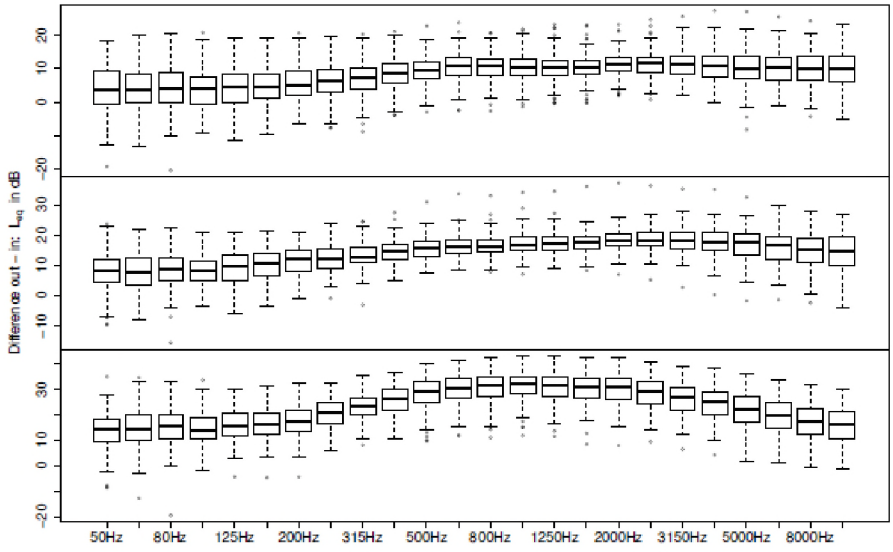

Figure 4.2 Analysis of outdoor-indoor differences over frequency. The top, middle and bottom plots represent data for the open, tilted and closed windows, respectively [135]

There are some important practical aspects of using L_{den} for live event noise monitoring. As the metric utilizes different limits between day, evening and night (which immediately switch over at the defined times), problems have been known to arise when an act's set at an outdoor event spans two of these time ranges. The change in limit during a performance makes on-site and off-site noise monitoring problematic in practice, due to a requirement for a quick cut in sound level (to the detriment of the audience experience). Additionally, it has been observed that the +5/10 dB penalties for night/evening times were arbitrary figures, not necessarily based on any robust scientific underpinnings. The use of L_{den} is therefore currently being questioned by professionals in terms of its suitability for environmental noise monitoring.

Although the 2018 WHO guidelines are meant to supersede the 1999 Community Noise Guidelines [2], due to the insufficient reliable data to present updated limits for leisure noise, the 1999 guidelines are still viewed to be valid, with live event-specific guidelines given in Table 4.1.

Specific environment	Critical health effect(s)	L_{Aeq} [dB(A)]	Time base [hours]	L_{Amax} fast [dB]
Outdoor living area	Serious annoyance, daytime and evening Moderate annoyance, daytime and evening	55 50	16 16	- -
Dwelling, indoors Inside bedrooms	Speech intelligibility & moderate annoyance, daytime & evening Sleep disturbance, night-time	35 30	16 8	 45
Outside bedrooms	Sleep disturbance, window open (outdoor values)	45	8	60
School class rooms & pre-schools, indoors	Speech intelligibility, disturbance of information extraction, message communication	35	during class	-
Pre-school bedrooms, indoor	Sleep disturbance	30	sleeping-time	45
School, playground outdoor	Annoyance (external source)	55	During play	-
Hospital, ward rooms, indoors	Sleep disturbance, night-time Sleep disturbance, daytime and evenings	30 30	8 16	40 -
Hospitals, treatment rooms, indoors	Interference with rest and recovery	#1		
Industrial, commercial shopping and traffic areas, indoors and outdoors	Hearing impairment	70	24	110
Ceremonies, festivals and entertainment events	Hearing impairment (patrons:<5 times/year)	100	4	110
Public addresses, indoors and outdoors	Hearing impairment	85	1	110
Music and other sounds through headphones/ earphones	Hearing impairment (free-field value)	85 #4	1	110
Impulse sounds from toys, fireworks and firearms	Hearing impairment (adults) Hearing impairment (children)	- -	- -	140 #2 120 #2
Outdoors in parkland and conservations areas	Disruption of tranquillity	#3		

Table 4.1 Community noise guidelines values from 1999 WHO Community Noise Guidelines [2].

The indicated limit of 100 dB L_{Aeq} (over 4 hours) and peak of 110 dB $L_{A,max}$ is what many of the audience exposure limits presented in Section 2 are based on. In practice, a 4-hour integration time is problematic, as over the four-hour period there are likely to be multiple performers on stage, each with a different mix engineer. Should an engineer early on in the event exceed the stated limits, this could result in engineers later in the day effectively being required to turn off the sound system to ensure the 4-hour level reading is at or below the 100 dBA limit. This is clearly unreasonable.

A potential solution to this issue could be to introduce a three-tier level guideline for live events. The first limit will be for peak-levels, the second limit for inter-set levels (15 minutes, covering at most two or three songs) and the third limit spanning the duration of the event. This will ensure that reasonable adjustments can be made throughout the day, where engineers won't be penalized for

transgressions of other engineers. This approach will be discussed in more detail in Section 5, pointing towards necessary further research.

Lastly, on the subject of WHO guidelines, there is considerable information contained within the 2018 report which builds upon what was initially presented in the 2009 WHO Night Noise Guidelines for Europe [3]. Nearly all of these guidelines (1999 and 2018) are focused on road, rail and other non-live event related noises. They look at long-term exposure to such noise in terms of health effects (hearing damage, cardiovascular effects, sleep disturbance, psychological disorders, annoyance, etc.). While impulsive noises are covered in the guidelines, these can't be seen to directly relate to noise pollution from live events, as virtually none of the noise sources covered in these documents contain information.

In this case, information can be viewed as musical content in the noise. It is more likely that individuals exposed to this variety of noise will have lower annoyance thresholds, while adverse health effects from the relatively short and infrequent exposure is unlikely. The problem that must be addressed, therefore, is minimization of annoyance to reduce the risk of formal complaints from the local community, which could easily cause the festival to no longer be allowed to operate at a given site. This topic will be expanded upon in Section 5.

Overall, the WHO guidelines present a step in the right direction and ensure that limits are based on objective and unbiased research. What's clear, though, is that there exists a significant lack of unbiased scientifically-derived knowledge in the area of leisure noise, especially noise stemming from outdoor live events.

4.3. North America

In general, North American countries each have their own federal guidelines regarding noise, with the ability for states/provinces/municipalities to use these to formulate appropriate noise codes/ordinances. This section will highlight some (but not all) of such laws.

4.3.1. Canada

Out of the three countries in North America, Canada appears to be most forward-thinking in terms of defining both indoor and outdoor noise limits, with adjustments based on the impulsiveness of the noise, the time of day, and (in some cases) the specific frequency content and information contained within the noise.

Noise codes are typically set out by the provinces and further defined within municipalities. A selection of noise regulations across Canada is given in Table 4.2.

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
Toronto (advisory)	2015	dBA	50/45	85/60	✓	✓		Clear misunderstanding of what dBA and dBC represent.	[136]
Toronto (law)	2009	LAeq, 5 min		/85		✓		Measured 20 m from event site property line.	[137]
Montreal	2012	LAeq	45/38	60/50	✓	✓		Lower limits for information bearing sound (speech or music).	[138]
Ontario	2013	LAeq, 1 hr	45/40	45/40	✓			Logarithmic Mean Impulse Sound Level (LLM) dBA used for impulsive sounds (industrial).	[139]
Nova Scotia	2005	dBA		65/55				Municipalities still responsible for nuisance noise (music).	[140]
Quebec	2006	LAeq		45/40					[141]
Yukon	2002							Between 11pm - 7am nuisance noise not tolerated.	[142]
Calgary	2004	LAeq or LCeq, 1 hr		/65		✓		Measured level must be at least 5 dB over ambient noise level. 85 dBC limit for night.	[143]
Edmonton	2018	LAeq		75/65				Adjustments detailed for duration of noise.	[144]
Halifax	2005							Prohibited times defined. No limits given.	[145]
Vancouver	2018			60/55		✓		Some measurements in dBA (Leq, 5 min), most are undefined.	[146]
Victoria	2015	LAeq		60/55	✓	✓	✓	Adjustments for tonality in specific frequency bands. Also considers intermittency.	[147]

Table 4.2 Selection of noise regulations in Canada

With the exception of Calgary, all noise regulations surveyed across Canada impose limits based on A-weighted measurements over a defined duration (ranging from 5 minutes to however long the noise persists). As discussed in Section 2, A-weighting is unlikely to capture the primary noise components that will cause annoyance due to outdoor events (usually centered in the 63 or 125 Hz octave band).

In terms of noise limits, there is great variability between provinces/cities. Outdoor daytime limits range from 45 – 75 dBA, where outdoor nighttime limits range from 40 – 85 dBA (note that the 85 dBA limit is specifically for permitted outdoor events and doesn't represent the noise limit for everyday occurrences [137]).

One of the most comprehensive noise regulations identified across Canada are those of the city of Victoria [147]. Although still using A-weighting, which can cause issues (as will be discussed in Section 5), they provide information to allow for measurements to be adjusted based on tonality and intermittency. This sort of approach is moving in the right direction in terms of converting basic measurements into something that reflects perception. Similar procedures are present in Montreal, where legal noise limits can be adjusted if noises contain information (such as speech or music) [138].

Overall, Canada appears to have some examples of good practice in the area of noise regulations, but there are a few of examples of ill-informed regulations, most commonly due to the misuse of A-weighting, where in one particular case there seems to be a misunderstanding of what the weighting curves represent [136].

4.3.2. Mexico

While there exists considerable information on occupational noise regulations in Mexico, there is very little in the way of regulations focused on noise pollution. The single example identified is the Official Mexican Standard NOM-081-SEMARNAT-1994, which establishes the maximum permissible limits for noise emission of fixed sources and a method of measurement [148]. This law gives ordinary people a chance to defend themselves from "acoustic terrorism."

All measurements are specified as A-weighted, with only outdoor limits given (55 dBA and 50 dBA during the daytime and nighttime, respectively, in residential areas). The standard specifies that for special events, the limit should be 100 dBA on -site over 4 hours, which is directly in line with the 1999 WHO Community Noise Guidelines [2]. Table 4.3 shows the limits described in the standard (translated from Spanish).

Zone	Timetable	Max. permissible limit (dBA)
Residence (outside)	6:00 to 22:00 22:00 to 6:00	55 50
Industrial & commercial sites	6:00 to 22:00 22:00 to 6:00	68 65
Schools (outdoor play areas)	During recess	55
Ceremonies, festivals & entertainment events	4 hours	100

Table 4.3 Noise pollution limits from Mexican Standard NOM-081-SEMARNAT-1994 [148]

It is encouraging that Mexico has taken on board the WHO on-site guidelines for live events (which can't be said for most countries), but like Canada, they still are fixated on using A-weighting which may be missing the primary offending noises due to live events. As mentioned previously, the 4-hour integration time is unreasonable for live event engineers as it makes it extremely difficult to compensate for transgressions earlier at the event.

4.3.3. United States

Within the United States there are three tiers of noise regulations: federal, state and local. The federal regulations are largely used as a framework for states and local communities to write their own laws. The basis of most of this stems from the Environmental Protection Agency's (EPA) Model Noise Ordinance in 1975 [149]. The ordinance makes clear that assessment of unwanted sound (specifically *not* referred to as noise) should be completely objective, requiring no additional subjective assessment. All limits are defined based on measurements taken at property boundaries.

The EPA's 1975 ordinance gives some general guidance regarding what levels pose health risks, considering both continuous and impulsive sounds (Figure 4.3).

TABLE IV
CONTINUOUS SOUND LEVELS WHICH POSE AN IMMEDIATE THREAT TO HEALTH AND WELFARE
(Measured at 50 Feet or 15 Meters)*

Sound Level Limit—(dBA)	Duration
90	24 hours
93	12 hours
96	6 hours
99	3 hours
102	1.5 hours
105	45 minutes
108	22 minutes

* Use equal energy time-intensity trade-off if level varies; find energy equivalent over 24 hours.

TABLE V
IMPULSIVE SOUND LEVELS WHICH POSE AN IMMEDIATE THREAT TO HEALTH AND WELFARE
(Measured at 50 Feet or 15 Meters)

Sound Level Limit (dB)	Number of Repetitions per 24 Hour Period
145	1
135	10
125	100

Figure 4.3 Levels for continuous (left) and impulsive (right) sounds that pose health risks [149]

An earlier document from the US Department of Housing and Urban Development (called the Noise Guidebook, 1971) sets out acceptable noise levels for various settings in the community (Figure 4.4) [150]. Note that L_{dn} is as described by Eq 4.1, while NEF (Noise Exposure Level) is a coefficient used to represent noise exposure, which was primarily used in the 1970s and 80s, but has since been largely replaced by L_{dn} (or similar metrics).

It may have been possible for clearer federal noise regulations, but the office responsible for regulating and enforcing noise, the Office of Noise Abatement and Control (ONAC) at the United States Environmental Protection Agency (EPA), was defunded by the Reagan administration in 1981. Despite the funding cut (and subsequent closing of the ONAC), the Noise Control Act of 1971 was never repealed, meaning that it exists to this day with no method of enforcement aside from assuming that the individual states will regulate themselves. No replacement has ever been created to fill this void. This is the primary reason why the United States is significantly lagging behind the rest of the Western world in noise regulation and management. It is generally seen as a public policy failure [151].

The existing federal guidelines now only serve to inform the formulation of state and local guidelines. Following this, and considering the size of the United States, it shouldn't be surprising to find that there exist hundreds of noise ordinances/regulations within even a single state (such as California) (Table 4.4). Note that the data in Table 4.4 is taken from a 1997 survey [152], so it should be considered fairly out of date, but still provides a good representation of the complexity of noise law in the United States. It is therefore difficult to formulate an overall impression of noise regulations across the entire country. Instead, a selection of noise regulations will be presented here to provide a general idea of the current situation.

With the exception of Wyoming (the least populous state in the USA), all states have at least one noise law on the books. A sizeable minority of states have regulations which feed into local regulations. A smaller number of states give model ordinances for local governments to adopt for their own regulations. Few regulations give any information on limits for impulsive sound. Fewer still make any mention of outdoor entertainment event noise.

A selection of current noise laws at the federal, state and local levels is presented in Table 4.5.

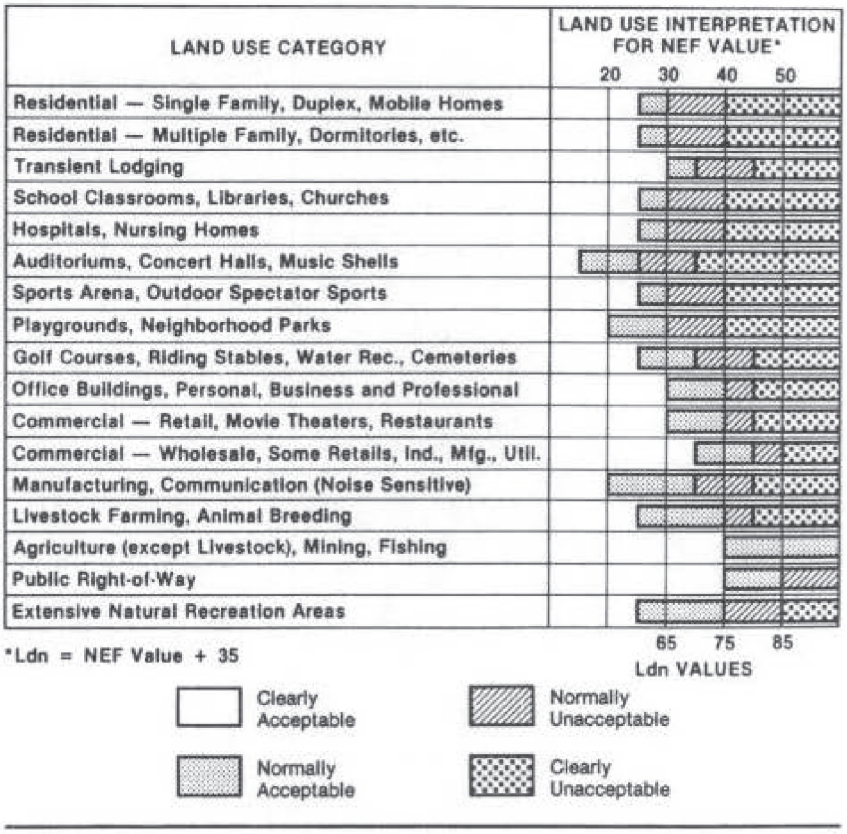

Figure 4.4 Acceptable noise levels for various locations within the community [150]

State	State reg.	Local regs.	Impulse	Model Ord.
AK		1		
AL		6		
AR		5		
AZ		12		
CA		124		✓
CO		15		
CT	✓	8	✓	✓
DC	✓	1		
DE	✓	1	✓	
FL		34		
GA		11		
HI	✓	1	✓	
IA		6		
ID		3		
IL	✓	18	✓	✓
IN		11		
KS		6		
KY	✓	2		✓
LA		6		
MA	✓	13		
MD	✓	5	✓	✓
ME	✓	2		
MI		17		
MN	✓	7		✓
MO		9		
MS		2		
MT		2		
NC		14		
ND		1		✓
NE		2		
NH		2		
NJ	✓	46	✓	✓
NM		4		
NV		5		
NY		19		
OH		9		
OK		6		
OR	✓	12		✓
PA		7		
RI		5		
SC		5		
SD		2		
TN		6		
TX		51		
UT		9		
VA		12		
VT		1		
WA	✓	14		
WI		14		
WV		1		
WY		0		

Table 4.4 1997 survey of noise regulations across the United States [152]

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
EPA	1975	LAeq, 24 hr			✓			Only guidelines for setting up specific limits + info on hearing loss/damage.	[149]
Delaware	1982	LAeq, 24 hr		65/55	✓	✓		Noise must exceed ambient noise level by 10 dBA.	[153]
Illinois	2003	LAeq		Various	✓	✓	✓	Limits based on octave bands. Very specific.	[154]
California	2009	LAeq, 24 hr		50/45	✓			Various corrections for noise characteristics/location.	[155]
Colorado		dBA		55/50	✓			10 dB increase in limits allowed for noises occurring no more than 15 mins/hr.	[156]
Hawaii	1996	dBA (fast)		55/45		✓			[157]
Maryland	2010	LAdn		65/55					[158]
Massachusetts	1990	LA,90						Violation of noise regs if 10 dB above ambient noise.	[159]
Minnesota	2017	dBA (fast)		65/50 (L50)	✓			L10 values also given.	[160]
New Jersey	2012	dBA		65/50	✓		✓	Impulsive sound allowed up to 80 dBA.	[161]
Oregon	2018	dBA		50/45 (L50)	✓	✓	✓	L10 and L1 values also given.	[162]
New York City	2005	dBA					✓	Indoor noise limits (unclear whether day or night).	[163]
Chicago	2006					✓		Can't have sound over conversational level 100' away (unless permit holder).	[164]
Chicago	2019					✓		Must submit noise control plan for approval.	[165]
Los Angeles	2013	dBA		50/40	✓		✓	Corrections: duration, impulsive, steady, time of day. Map sound level to octave bands. Incl. ambient noise level.	[166]
Las Vegas	2017				✓		✓	Limits given for octave bands. Gaming Enterprise District exempt. Limits can be exceeded by 10 dB < 15 mins.	[167]
IFC	2007	LAeq, 1 hr		55/45				3 dB max. increase beyond ambient noise level.	[168]
ASHRAE	2009	NOT dBA					✓	Thorough noise guidelines for HVAC including annoyance quantification.	[169]

Table 4.5 Selection of noise regulations in the United States

With the exception of New York City [163], there is no mention of indoor noise limits (only outdoor values are given). There appears to be less variation in the outdoor limits as compared to Canada, ranging from 50 – 65 dBA during the day and between 40 – 55 dBA at night. Again, all measurements are A-weighted, which can pose an issue in terms of quantifying annoyance due to outdoor events. The guidelines for Los Angeles are particularly detailed, giving correction values for most aspects of a sound (steady/impulsive, frequency content, time of day, ambient noise level, etc.) [166].

While many states give exemptions to these guidelines for permitted outdoor events, very few place stipulations on the requirements of said events in terms of noise pollution. One notable exception is Chicago, which regularly holds large-scale events in its downtown area in the summer. Event organizers must provide details within the permit application covering what the sound system will consist of and how they will control the noise pollution to surrounding areas (with further information required as to how they can further limit noise should it pose a problem as the event progresses) [165]. This should be viewed as an area of good practice, where the local government is placing the noise coordination responsibility on the event organizers, where they must submit in writing their noise control plan (and they will be held to it).

A number of the state ordinances indicate that if no clear local ordinances are available to refer either to the International Finance Corporation (IFC) noise guidelines [168] or the ASHRAE Noise and Vibration Control Guidelines [169]. The IFC guidelines are very brief, stating only that the outdoor noise levels can be no higher than 55 dB and 45 dB during the day and night, respectively. Also, they indicate that noise can cause no more than a 3 dB increase beyond the background noise in residential areas. This relative noise limit is similar to what is increasingly implemented across Western Europe. All measurements are to be taken over one hour with A-weighting.

The ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) guidelines, while seemingly unrelated to outdoor live event noise, are in fact quite useful in terms of mapping noise measurements to annoyance. It is one of the very few published sets of guidelines to recommend against using A-weighting, as it makes clear that most offending noises are in the low-frequency range and therefore not accurately represented by A-weighting. It goes further, stating that single metric noise monitoring isn't useful, as sound propagates in a frequency-dependent manner. It recommends using either one octave or one third octave band measurements of the sound source (or preferably sound power level) and sound level at a distance to better gauge noise pollution issues. This is in line with research findings from a long-term study conducted in Sweden [170].

The ASHRAE guidelines don't go so far as to identify a single method of noise measurement, but they do highlight a small selection of potential metrics, such as NC, RC (Mk 2), NCB and RNC. Many of these methods, though, are focused on rating in-room noise (ASHRAE are interested in HVAC system noise, not leisure noise). It isn't clear whether these metrics would be appropriate for noise originating at outdoor live events (especially due to the infrequent nature of these events).

Of all the noise guidelines/standards/laws reviewed across North America, it appears that the ASHRAE guidelines take the most common-sense and informed approach to quantifying and dealing with noise and should be considered when developing any new and revised noise guidelines specifically for live events.

4.4. Central America

Although nearly every country in Central America has occupational noise exposure regulations, very few countries have any law related to noise pollution and only two countries (Nicaragua and Panama) make any mention of music-related noise [171, 172]. Table 4.6 details the available noise regulations in Central American countries.

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
Belize	2003	dBA		70/45	✓			Limits given based on duration, 3 hr duration given here.	[173]
Costa Rica	2015	dBA		65/45	✓			Adjustments for impact + intermittent noise.	[174]
Nicaragua	2006	Unclear	30	45	✓	✓		Adopted from WHO recs. 110 dB limit on event sites. 45 dB limit for impulsive sound.	[171]
Panama	2002	dBA	50/45	55/50		✓		Ambient noise must be considered. Music sources = 65 dBA max.	[172]

Table 4.6 Selection of noise regulations in Central America

While there aren't nearly as many laws in place to control noise pollution as there are in North America, the Central American laws are all relatively new, indicating that these countries are only beginning the process of addressing these issues. Of the identified regulations, half of them specify both indoor and outdoor limits as well as considerations for outdoor events (generally indicating that permits can be granted for exemptions from regulations within certain times). Like all of the North American regulations, dBA is used exclusively.

In Panama's regulations, music-based noise is allowed up to 65 dBA, but only in non-residential areas. Presumably, this is to ensure commercial establishments can have live music or music playback for their customers. Nicaragua gives an on-site limit for event sites at 110 dB, which is in line WHO guideline's peak limit. It is unclear what weighting is to be used when making measurements and whether the 110 dB is a peak limit measured with C-weighting. If so, this would be in line with the WHO guidelines, but the ambiguity in the regulations here makes it likely that it will be used incorrectly.

4.5. South America

The situation in South America is similar to that in Central America, where it appears that work has been taking place in recent years to develop suitable noise regulations beyond the existing occupational noise laws. Table 4.7 details the surveyed noise regulations in South American countries.

Of the South American countries, Argentina and Brazil have the most extensive noise codes, with many large cities in these countries possessing detailed laws which expand upon the national laws. Only Rio de Janeiro in Brazil has any regulations focusing on noise within living environments (in this case focused on ensuring people's comfort) [175].

Of the examined regulations, only Colombia's has any information on frequency-specific limits/adjustments. All others primarily use A-weighted measurements. The limits across countries are generally in agreement (typically 50 or 55 dBA during the day and 45 dBA at night), but there are some exceptions. For example, Guyana allows 75 dBA during the day and 60 dBA at night [176], which seems to be entering the territory of hearing damage with long-term exposure. Virtually no attention is paid to event-based noise in any of the reviewed regulations.

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
Argentina	2012	dBA		55/45	✓			Adjustments for zone, impulse, holiday.	[177]
Rosario, Argentina	2012	dBA		/45	✓			65 dBA for frequent peaks, 70 dBA for infrequent peaks.	[177]
Party de La Plata, Argentina	2012	dBA		60/	✓				[177]
Brazil	2003	LAeq		50/45	✓			Evaluation of noise in inhabited areas, aiming at the comfort of the community.	[178]
Rio de Janeiro, Brazil	1992	dBA + NC	45/35					Noise limits for comfort (indoor values only).	[175]
Curitiba, Brazil	1995	dBA		55/45					[179]
Sao Paulo, Brazil	2016	dBA		50/45					[180]
Chile	2011	NPC dBA		55/45				Or 10 dB over ambient noise.	[181]
Colombia	2007	LAeq		65/55	✓		✓	Adjustment values for duration, frequency content, impulsiveness. Very thorough.	[182]
Guyana	2000	Unknown		75/60		✓			[176]
Peru	2003	LAeq		60/50					[183]
Venezuela	1992	LAeq		55/45	✓			Or 10 dB over ambient noise.	[184]

Table 4.7 Selection of noise regulations in South America

4.6. Europe

Of all the regions in the world, Europe is most forward-thinking in terms of noise regulation for entertainment events (and general consistency of environmental noise regulations). This is in large part thanks to the clear guidelines developed by the WHO over the past twenty years focused on community noise in Europe.

This is not saying that the noise regulations in Europe are perfect. There is room for improvement and expansion. Tables 4.8 – 4.10 give a collection of general environmental noise regulations from countries in the European region. The vast majority of regulations here are based on LAeq measurements, meaning that annoyance due to low-frequency musical content will be missed by such approaches and may not give a clear indication of the true situation regarding noise pollution from outdoor entertainment events.

An emerging trend in the European regulations (which can be seen elsewhere in the world, but not to the same extent) is setting noise limits relative to ambient noise levels (typically allowing for somewhere between 3 – 15 dB of noise above the ambient level). This seems to be very reasonable, as background noise levels vary significantly from region to region and city to city. There exist

numerous studies on this, but aren't presented here, as this would be beyond the scope of this work.

Most EU countries have adopted the use of L_{den} for noise monitoring, where individual limits for day, evening and night are presented in their respective regulations (only day and night limits are given in this report's tables). Counties such as Denmark, France, Ireland, Slovakia and the UK have separate limits for the low-frequency bands (typically defined as 63 and 125 Hz, but extended to 32 Hz for some city limits, such as in parts of London).

Out of the 37 European countries surveyed, only 16 make specific reference to entertainment/event noise in their national (Tables 4.8 – 4.9) or local regulations (Table 4.11). These counties include: Austria, Belgium, Croatia (Zagreb), France, Finland (Tampere), Germany (Munich), Greece, Hungary, Ireland (Dublin), Italy (Florence and Turin), Netherlands (Utrecht and The Hague, as well as most other cities), Norway, Portugal, Spain, Sweden (Stockholm), Switzerland and the UK (national and London and Manchester).

Of the specific entertainment event regulations, there is a moderate amount of variation across those surveyed, but the general trend is that higher-profile events tend to be granted more leeway in terms of noise pollution (upwards of 85 dBA in residential areas), usually up to 11pm. Similar noise curfews exist in cities across the world, where breach of the curfew can result in heavy fines and revocation of an event's permits.

The improved consistency of the European regulations as compared to the rest of the world should be attributed to the work of the WHO in publishing their clear guidance for community and night noise [1, 3, 2]. While there still exists variation between countries (especially on the local level), outliers are few and far between, with the trend being that of caution rather than negligence.

Despite the continued work in Europe to appropriately address the issue of community noise, there still appears to be more work needed in the area of outdoor entertainment events, largely focused on appropriate characterization of the music-based noise and how it specifically relates to annoyance, which will be the primary reason for complaints from the community.

There is a fair amount of evidence indicating that communication with the local community prior to an event goes a long way in limiting complaints [185, 186, 187, 188], as they will have the understanding of the time limits of the noise and what is being done to minimize any intrusion into their lives. Additionally, steps have been taken in certain cases where a noise hotline is put into place, allowing residents to phone in concerns about noise as an event progresses, giving them a certain sense of control over the noise. These aspects of noise management will be addressed in Section 5.

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
Albania	2007							Limits according to WHO guidelines (1999 CNR).	[189]
Armenia	2002	LAeq		55/45				Max limits (LAmax) = 70/60 dBA.	[190]
Austria	2000	LAeq		80/60		✓		Normal limits = WHO. Levels for permitted events (decrease with freq. of events/year). Guidelines for sound system design.	[191]
Austria	2010	LAeq		50/40	✓			Various adjustments indicated. Focused on road/rail noise.	[192]
Azerbaijan	2008	LAeq		55			✓	<63 Hz considered vibrations (different limits).	[193]
Belgium	2018	LAeq, 1hr	33/28	45/35	✓	✓		Normal limits = WHO. Above 100 dBA LEQ 1hr forbidden. Peak given for LAeq, 1s, max.	[59]
Bosnia and Herzegovina	2012	LAeq		55/45				Normal limits = WHO. Peak limits also given (L10 = 65A dB, L1 = 70 dBA).	[194]
Bulgaria	2006	LAeq	35/30	55/45	✓			Normal limits = WHO. +5 dB for impacts. Ordinance 9/2010 gives infrasound limits.	[195]
Croatia	2004	LAeq		55/40				Normal limits = WHO.	[196]
Cyprus	2006	LAeq		50/35				Also following WHO guidelines (1999 CNR).	[197]
Czech Republic	2006	LAeq		50/40				Corrections details for music (-5 dB).	[198]
Denmark	2012	Lr, LAeq	30/25	45/40	✓		✓	5 dB penalty for impulse and tonal noise. Correction also given for noise duration. Limits for infrasound are also given (Lael + LGeq).	[199]
Denmark	2001	LAeq, LGeq	25/20 85/85					Focus on LF noise and infrasound.	[200]
Estonia	2016	LAeq		50/40	✓		✓	Corrections for tonality/impulsiveness. Focused on traffic/industrial noise.	[201]
Finland	1992	LAeq		55/45	✓		✓	5 dB penalty for impulse and tonal noise.	[202]
France	2017	LAeq				✓	✓	Leq or indiv. bands = no more than 3 dB above ambient noise for music-based signals at night. 7 dB excess allowed for 125/250 Hz bands.	[203]
France	1998	LAeq, 30 min	22			✓	✓	Limitation a LF (66 - 75 dB sound insulation required in venues). No more than 3 dB above ambient noise 125 Hz to 4 kHz.	[204]
Germany	1998	LAeq	35/25	55/40	✓			Short duration peaks can't go more than 10 dB above state limits.	[205]
Greece	2012	LAeq		55/45		✓		Limits to avoid disturbance of sleep due to recreation activities.	[206]
Hungary	2007	LAeq		50/35	✓	✓		Correction equation for leisure noise.	[207]
Iceland	2016	LAeq	30/25	50/40					[208]

Table 4.8 Selection of general noise regulations in Europe – part 1

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
Ireland	2016	LAeq		55/45	✓		✓	Corrections for tonality based on frequency band. Specific emphasis on addressing LF noise. 5 dB penalty for impulsive noise.	[209]
Italy	1997	LAeq		50/40				Mostly focused on traffic noise.	[210]
Italy	1997	LAeq, 1min	25	40				Outdoor value for open window. No more than 3 dB above ambient noise.	[204]
Latvia	2014	LAeq		55/45	✓		✓	Corrections for impulsiveness and tonality.	[210]
Lithuania	2011	LAeq	45/35	55/45	✓			Corrections for impulsive noises.	[210]
Luxembourg	1990	LAeq		55/40				Based on German laws.	[210]
Malta	2013	LAeq		55/45				No formal limits set, but recommendations for traffic noise given.	[210]
North Macedonia	2015	LAden	40/30	50/40	✓			Based on EU DIRECTIVE 2002/49/EC.	[211]
Norway	1997	Lael	/25	35				Max values = 30 dBA, 45 dBC. Entertainment venue limits also given (95 dBA Leq, 110 dBA fast, 130 dBC peak).	[204]
Poland	2002	LAden		55/45				Based on EU DIRECTIVE 2002/49/EC.	[212]
Portugal	2007	LAeq		55/45				Does not apply for outdoor ambient levels below 45 dBA or indoor levels below 27 dBA.	[213]
Portugal	2000	LAeq, 22h-7h				✓		Music-based noise no more than 3 dB above ambient level.	[214]
Romania	2014	LAeq	35/30	55/45					[215]
Serbia	2009	LAeq	35/50	55/45	✓			Based on EU DIRECTIVE 2002/49/EC.	[216]
Slovakia	2006	LAeq, 24 hr	40/30	55/45	✓		✓	Also includes infrasound limits (G-weighted), various corrections for noise characteristics.	[217]
Slovenia	2004	LAeq		55/45					[218]
Spain	2007	LAeq	40/30	65/55	✓	✓	✓	5 dB penalty for transients. Indoor limits of 35/25 dBA for adjacent premises activities.	[219]
Sweden	1998	LAeq	/30	50/40	✓			Largely focused on traffic noise. 5 dB allowance for occasional noises at night.	[220]
Switzerland	1986	LAeq		55/45	✓		✓	Corrections for impulsive noise and music.	[219, 220]
Switzerland	1999	LAeq, 10s	34/24	44/34	✓	✓	✓	Corrections for impulsiveness and tonality.	[204]
Turkey	2010	LAeq		60/50				Mostly focused on industrial noise.	[221]

Table 4.9 Selection of general noise regulations in Europe – part 2

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
United Kingdom	2011	LAeq, 15 min		75,65 +15		✓	✓	For concerts (based on number of events per year and location, +15 dB above LA90 is absolute limit). 63/125 Hz = 70 dB OK, 80 dB causes disturbance. Overnight events can't be audible in bedrooms with open windows. No more than 15 dB above ambient level for concerts. See Table 5.2 for further details.	[185, 203, 222]
United Kingdom	2014	LAeq, 15 min			✓		✓	Details correction values for impulsive + tonal noises.	[223]
United Kingdom	2009	LAeq		65/45	✓	✓		Focused on construction site noise. Adjustment of limits + times based on ambient noise.	[224]

Table 4.10 Selection of United Kingdom noise regulations

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
Zagreb, Croatia	2011	LAeq		50/40		✓		Predominantly commercial zones limits = 65/50 dB.	[203]
Tampere, Finland	2011	LAeq, 10 min		/75		✓		Special exception limits = 85 dB.	[203]
Munich, Germany	2011	LAeq, 1 or 2 hr		65, 55		✓		First limit between 20:00 - 22:00, second limit after 22:00.	[203]
Dublin, Ireland	2011	LAeq, 15min		/75		✓		Noise curfew = 11pm. Limited number of events allowed per venue.	[203]
Florence, Italy	2011	LAeq, 15min		70/60		✓		Special exception limits = 80/75 dB. Maximum event length = 3 days.	[203]
Turin, Italy	2011	LAeq, 30min		/70		✓		If traffic noise > 65 dB (1 hr Leq), limit raises to 73 dB. Big-named concerts have limit of 80 dB.	[203]
Utrecht, Netherlands	2011	LAeq, 2 min LCeq, 2min		80, 90		✓		Measured at closest house to event or 100m from source (inner city), 200 m from source (outer city).	[203]
The Hague, Netherlands	2011	LAeq, 10 min		75		✓		Very large concerts limit = 85 dB. Noise curfew = 11pm. Limited number of events per venue.	[203]
Stockholm, Sweden	2011	LAeq, 15/30min		50/40		✓		Specifically for outdoor events.	[203]
Manchester, UK	2015	Leq	47, 41			✓	✓	Unweighted Leq for 63/125 Hz (music noise). Makes clear existing standards are not appropriate for LF noise evaluation. Limits given for 63 Hz and 125 Hz bands.	[225]
London, UK	2008	Leq, 15min		80		✓	✓	London Borough of Lambeth. Unweighted measurements at any octave band from 32 - 125 Hz can't be above 80 dB. Called Bass Music Noise Level (BMNL).	[226]

Table 4.11 Selection of entertainment event specific noise regulations for selected cities in Europe

It is instructive to inspect the work carried out in the UK over the past 25 years. In 1995, the Noise Council published its Code of Practice on Environmental Noise Control at Concerts [222]. The recommendations contained in this document are reflected in the first entry for the UK in Table 4.10

and are used extensively by UK acoustic consultants for noise control and monitoring of outdoor events as well as by local councils for setting noise limits for infrequent outdoor events.

The Noise Council Code of Practice is used to this day in the UK for noise control purposes. The Council was dissolved shortly after publication of the document, resulting in no updates based on new knowledge. This means that it should be used with caution and it should be seriously considered whether an updated code of practice is required, nearly twenty five years after the original code's publication. It is important to note that the code gives information based on one-octave frequency bands, but in industry this is often misrepresented as one-third octave bands, resulting in poorly informed (and ineffective) methods of noise pollution control from large outdoor events.

Currency and misinterpretation of the code aside, it has been the basis of a number of in-depth studies into entertainment noise pollution, largely supported by DEFRA in the UK. This will be discussed in detail in Section 5.1. There is also an interesting historical regulation from Edinburgh, Scotland which was based on inaudibility of music-based noise in residences. This will also be highlighted in Section 5.1 as a cautionary tale of overly-restrictive noise regulations.

At the writing of this report, a working group within the UK's Chartered Institute of Environmental Health was in the process of drafting a "Good Practice Guide for Noise Control at Outdoor Concerts and Similar Events." This work has the potential to bring outdated practice contained within the 1995 code of practice up to date to allow for more effective noise monitoring and management at events.

4.7. Asia

Tables 4.12 and 4.13 present a survey of regulations across Asian countries. Interestingly, most of these regulations were discovered through official environmental impact reports from mining and construction companies bidding for projects in these countries (the regulations were extremely difficult to find through official governmental channels). It appears than many Asian countries based their environmental noise laws on the recommendations of the World Bank Group (which correspond to the IFC recommendations [168]) (Figure 4.5).

An example of good practice in Asia can be seen in the regulations of Taiwan [227]. Taiwan considers both traffic noise and entertainment noise and splits limits between wideband noise and low-frequency noise. Dubai imposes strict indoor noise limits (30 dBA during the night) [228], where these limits are based on British Standard BS8233:1999 [229], although caution must be exercised here as these regulations are not based on infrequent entertainment noise. Kuwait, Mongolia and Tajikistan have similar limits.

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
Afghanistan	2007	dBA		65/45					[230]
Armenia		dB		40/30					[231]
Azerbaijan	2008	dBA		55				65 dBA allowed for road vehicles.	[232]
Bahrain				55/45				Same as WHO 1999 CNR.	[233]
Bangladesh	1997	LAeq		50/40					[234]
Bhutan	2010	dBA, max		55/45					[235]
Cambodia	2000	dBA		60/45					[236]
China	2011	dBA		55/45				Unclear if these are current regulations.	[237]
India	2000	LAeq		55/45		✓		Sound from loudspeakers can't be any more than 5 dB about ambient level. Permits allow relaxation of limits.	[238]
Iraq	2015	dBA		55/45					[239]
Israel	1990	LAeq		45/35	✓		✓	Time-based limits. Tonality + impulsive corrections. Limits to level above BG noise.	[240]
Japan	1998	dB		55/45				Noise control must be applied if night time levels exceed 73 dB.	[241]
Kazakhstan	1997	dBA		70/				Focused on road noise.	[242]
Kuwait	2001	dBA	40/30	50/45				Ultrasonic limits given by frequency band (unweighted), for occupational noise.	[243]
Kyrgyzstan	1994	Leq		55/45				Maximum values = 70/60 dB.	[244]
Laos	2009	LAeq, 24hr		55/45					[245]
Lebanon	1996	LAeq		50/45					[246]
Malaysia	2007	LAeq		55/45					[247]
Maldives	2018	LAeq		55/45				Follows World Bank Group guidelines.	[248]

Table 4.12 Selection of noise regulations in Asia – part 1

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
Mongolia	2016	LAeq	/30	55/				Unclear if limits are law or based on other recommendations.	[249]
Myanmar	2015	dBA		55/45				Maximum 3 dB increase to ambient noise levels.	[250]
Oman	2001	LAeq		55/45				Higher limits for road and aircraft noise.	[251]
Pakistan	1997	dBA		55/45				Limits are recommendations. Currently not part of the environmental law.	[252]
Philippines	1976	dB		55/45					[253]
Qatar	2002	dB		55/45					[254]
Russia	2019	LAeq		55/45	✓		✓	Maximum limits = 70/60 dBA. Octave bands for steady and impulse noises. Infrasound limits included.	[195]
Saudi Arabia	2015	LAeq		55/45				Metrics to predict annoyance and sleep disturbance.	[255]
Singapore	2018	LAeq, 15 min		65/55	✓		✓	Focused on HVAC systems. Corrections for tonality, impulsiveness, LF noise (using LCeq) and intermittent noise.	[256]
South Korea	2010	dBA		65/60		✓		Different limits based on where sound is generated (outdoor given, indoor = 55/45). Applies to music venues.	[257]
Sri Lanka	1996	LAeq		55/45	✓		✓	Noise no higher than 3 dB above ambient noise. Corrections for impulsive/tonal noise.	[258]
Taiwan	2008	LAeq		37/27 57/47		✓	✓	Separate LF and WB limits (LF+WB given here). Limits for entertainment noise. Evening levels over 40 dBA must implement noise control.	[227]
Tajikistan	1996	dBA	40/30	55/45	✓		✓	Octave band limits also given. Impulsive/tonal corrections provided.	[259]
Thailand	2007	LAeq, 24hr		70				Maximum limit = 115 dBA. Avoid 10 dB over ambient noise to prevent annoyance.	[260]
Timor-Leste	2002	LAeq		55				Based on World Bank Group guidelines. 3 dB above ambient noise allowed.	[261]
Turkey	2010	LAeq		60/50				No more than 5 dBA above background noise.	[228]
Dubai, UAE	1999	LAeq	35/30	50/40	✓		✓	Based on BS8233:1999.	[262]
Uzbekistan	1996	dBA	65/60	75/75				Level can't be more than 3 dB over ambient noise.	[263]
Vietnam	2010	LAeq		70/55				Follows ISO 1996-2:2007.	[264]
Yemen	2008	dBA		55/45					[229]

Table 4.13 Selection of noise regulations in Asia – part 2

Table 1.7.1- Noise Level Guidelines[54]		
	One Hour L_{Aeq} (dBA)	
Receptor	Daytime 07:00 - 22:00	Nighttime 22:00 - 07:00
Residential; institutional; educational[55]	55	45
Industrial; commercial	70	70

Figure 4.5 IFC/WBG noise level guidelines [168]

On the other side of the spectrum, countries such as Kazakhstan, Vietnam and Thailand have noise limits that are either based on extremely high ambient noise levels or are simply unfit for purpose [242, 263, 260]. In the case of Kazakhstan and Vietnam, the former may be the case, as all regulations seem solely focused on road noise. In Thailand, however, this does not seem to be the case. The 24-hour LAeq limit is 70 dBA with a maximum limit of 115 dBA. Additionally, the regulations state that 10 dB over the ambient noise should be avoided to minimize annoyance. The relative limit seems roughly sensible, but allowing for 70 dB across the entire 24-hour day appears to be very generous and may not help to mitigate any noise problems.

Overall, Asian noise regulations are much more consistent than in the Americas, largely thanks to the guidelines set out by the World Bank/IFC. Only India, South Korea and Taiwan give any indication of limits for entertainment-based noise, so there is more work to be done to ensure live events can take place without causing serious disruption to local communities.

4.8. Africa

A selection of environmental noise regulations across the countries of Africa can be seen in Table 4.14. Only 18 out of the 52 countries in Africa are represented in the table, as there were no regulations identified for any of the other countries.

Of the countries surveyed, there exists consistency between regulations, largely due to most regulations being based on the WBG recommendations [168] or the 1999 WHO community noise guidelines [2], which are around 55 dBA and 45 dBA for daytime and nighttime, respectively.

The countries of Liberia, Nigeria and Uganda have regulations specifically targeting entertainment (music) based noise. The regulations for these three countries [265, 266, 267] are identical and appear to have originated with Uganda's 2003 regulations [267]. They limit noise coming from entertainment venue or event to 60 dBA during the daytime and 40 dBA during the nighttime. All values are set for outdoor measurements in residential areas.

With the exception of a few countries where weighting isn't specified, all African countries use A-weighting. Integration time for Leq is only mentioned specifically for Cameroon [268], where 1-hour measurements are required. Additionally, the Cameroon regulations specify a relative noise limit of no more than 3 dB above ambient noise. While no entertainment-specific regulations are given, Cameroon's regulation for relative noise level is in line with trends seen in European regulations of recent years and should be considered an example of good practice (along with the three countries identifying limits for entertainment-based noise).

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
Algeria	1993	LAeq		70/40				Information on façade sound insulation requirements.	[269]
Cameroon	1998	LAeq, 1 hr		55/45				Follows World Bank Group guidelines (1998). No more than 3 dB above ambient noise.	[268]
Congo, Democratic Republic of the	2007	dBA		45/40					[270]
Egypt	1994	LAeq		60/50					[271]
Eritrea	2010	LAeq		55/45				Based on World Bank Guidelines. No more than 3 dB above ambient noise.	[272]
Ghana	2008	dBA		55/48					[270]
Kenya	2009	LAeq + NR	45/35	50/35				NR limits = 35/25 indoor, 40.25 outdoor.	[273]
Liberia	2017	LAeq		50/35	✓	✓		60/40 limits for noise from entertainment venues.	[274]
Mauritius	2007	LAeq		60/50					[270]
Nigeria	2009	LAeq		50/35	✓	✓		60/40 limits for noise from entertainment venues. Identical to Uganda's 2003 limits.	[266]
Rwanda	2014	dB, max	55/45	55/45	✓				[274]
Senegal	2001	dB		55/40					[275]
Seychelles	2007	LAeq		60/55	✓				[270]
Sierra Leone	2015	dB		35-40					[276]
South Africa	2008	LAeq		50/40	✓		✓	In line with WHO CNR 1999.	[277]
Tanzania	2015	LAeq		50/35					[239]
Uganda	2003			50/35	✓	✓		60/40 limits for noise from entertainment venues.	[267]
Zimbabwe	2002	LAeq		55/35				Based on WHO guidelines. Permits available for events.	[278]

Table 4.14 Selection of noise regulations in Africa

4.9. Australia and Oceania

Of the countries in the Australia and Oceania region of the world, only Australia and New Zealand's regulations were identified in this study (Table 4.15). The regulations between these two countries are consistent, calling for LAeq, 15min measurements and outdoor residential limits of around 55 dB and 45 dB for daytime and nighttime respectively.

Interestingly, Australia's national guidelines specify penalties to the published limits for each "characteristic" contained in the noise, which can be taken to refer to information carried within the noise (such as is the case with music). One characteristic results in the limits dropping by 5 dB, two characteristics give a drop of 8 dB and 3 or 4 characteristics result in 10 dB subtracted from the limits [279]. A separate document specifies what's required for outdoor event noise in Australia [280].

In New Zealand, there aren't penalties due to noise characteristics, but there are adjustments to the limits based on level in each octave band as well as based on the duration of a noise [281]. The national regulations are clearly designed to allow scope for setting local noise limits. An example is given in Table 4.14 with Auckland's noise regulations [282]. These regulations build upon the national regulations by specifying octave band noise limits for indoor measurements with an overall outdoor limit given based on Ldn.

While Australia and New Zealand are more advanced than many countries in the world in terms of noise regulations, the complete lack of regulations for the remainder of the countries in the region point to the need for further work in this area (although most of these countries are classed as micro-nations, so it may be the case that they don't host large-scale outdoor events, making well-defined entertainment-related noise limits unnecessary). Australia and New Zealand's regulations, though, should be seen as examples of good practice, with sensible and clearly-defined noise limits/guidelines. The potential issue of measuring with A-weighting is avoided with octave band limits (or similar).

Location	Year	Measurement method	Indoor (day/night)	Outdoor (day/night)	Impulse?	Events?	Octave bands?	Notes	Ref.
Australia	2007	LAeq, 15min		52/45	✓	✓		Noise with 1, 2, 3/4 "characteristics" = 5, 8, 10 dB penalty, respectively. Event instructions in separate document [280].	[279]
New Zealand	2008	LAeq, 15min		55/45			✓	Noise duration adjustments. LAFmax = 75 dB. Adjustments for tonality by freq. band. Guidelines for setting local limits.	[281]
Auckland, NZ	2013	LAeq, 15min	45/35	50			✓	Octave band limits given (for internal measurements). Outdoor limit is Ldn.	[282]

Table 4.15 Selection of noise regulations in Australia and New Zealand

4.10. Discussion

As demonstrated in this section, noise regulations vary widely across the world. In some regions, such as Europe, the regulations have been going through a refinement process for many years, while in other regions, such as parts of Asia, the regulations are in the formative stages with high variability from country to country. In large countries such as Canada and the United States, national noise regulations aren't very prescriptive, but instead provide guidance for formulating regulations on the state/province or local level. While a reasonable approach on the surface, due to the varying requirements and characteristics of localities across these vast areas, the differing regulations from city to city in some instances can cause a great deal of confusion, especially for touring acts. The American state of California, for instance, has well over 100 local noise ordinances in place. In this instance the approach could be seen as counterproductive, where a state-wide regulation may be more appropriate for ease of implementation and enforcement (especially in the case of entertainment events).

Looking specifically into entertainment event noise-related laws, the countries possessing these are in a small minority across the world. Countries such as (but not limited to) France, The Netherlands

and Australia demonstrate good practice in this area, but their approaches are widely different. This stems from the lack of thorough research into the area of noise pollution from such events. It is still encouraging, though, that countries such as these are attempting to address the growing issue.

The majority of countries with noise regulations specify measurements using the A-weighting scale over a specified time interval (Leq). While A-weighting may be suitable for general environmental noise monitoring, it is clear that such measurements will miss potentially annoying low-frequency noise. A few countries (such as Denmark and The Netherlands) give additional limits for C-weighting and/or G-weighting (infrasound) to account for this. A more focused discussion on the suitability of the various weighting curves in terms of noise annoyance will be given in Section 5. Time intervals range from 10 seconds to 24 hours. The extremes of this range are unsuitable for the dynamic nature of outdoor events. Looking through event-specific regulations, a 15-minute integration time appears to be favored, which roughly corresponds to three songs in a band's set.

Looking at the bigger picture across the world, histograms can be generated to view the trends in residential noise limits between daytime and nighttime and indoor and outdoor (Figure 4.6).

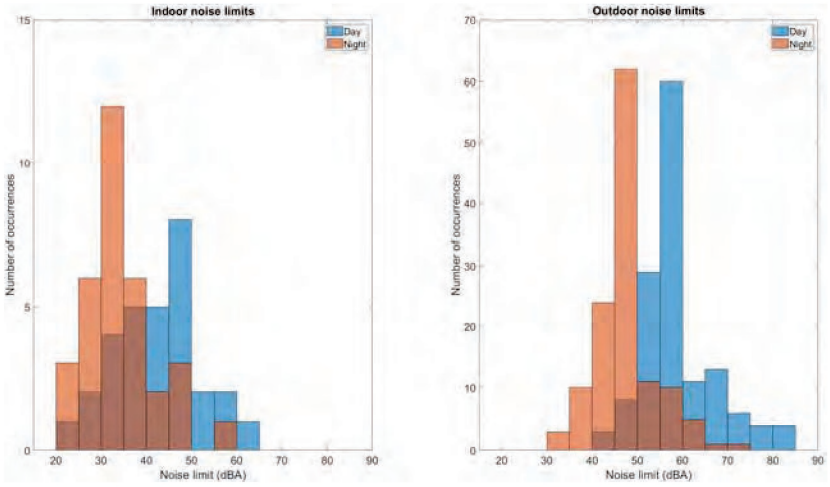

Figure 4.6 Histograms of indoor and outdoor residential noise limits from countries across the world

While the spread of limits is quite wide (45 dB and 55 dB for indoor and outdoor limits, respectively), the general consensus and the moment is for indoor day/night limits of 50/30 dBA and outdoor day/night limits of 60/50 dBA. Although it's potentially dangerous to follow general trends in data, in this case it can be assumed that at least some of these noise regulations are rooted in a certain level of scientific understanding. The data is therefore indicative of what's deemed acceptable levels of environmental noise in residential areas across the globe (though perhaps not a good indicator of acceptable levels of entertainment event-derived noise).

5. Noise prediction, measurement, monitoring + management

Considering the complexities involved with setting effective and practical noise regulations, as discussed in Section 4, it may be surprising to find that defining noise limits is relatively easy compared to predicting and monitoring in-situ noise. This section looks into current capabilities in terms of noise prediction, measurement and real-time monitoring as well as noise management techniques.

A question affecting all of Section 4 (on noise regulations) is what level of entertainment event-derived noise is problematic in residential areas? It is unlikely that such noise will pose significant health risks due to the infrequent nature of outdoor events. The likely effect of event noise in residential areas is annoyance. As the issuance of many event permits are dependent on the potential for annoyance (to minimize complaints from nearby communities), it is essential to understand what constitutes an annoying sound.

This section begins with a broad overview of published literature on noise-based annoyance. With a general understanding of the likely offensive levels of noise, consideration can be given on how to best approach regulation. This is essential, as it is often the case that meeting local/national noise regulations does not adequately limit the level of noise-based annoyance. The result is neighbor complaints will persist and cause issues for event organizers. We then present an overview of the differing regulations for measuring and monitoring environmental noise.

The second half of this section will focus on noise prediction, monitoring and management practices. A few software packages for these purposes will be highlighted. A selection of case studies is presented to illustrate how noise monitoring can be used in a pragmatic way to mitigate problems stemming from noise pollution from outdoor events.

5.1. Annoyance due to entertainment-derived noise

Annoyance is defined as: *A feeling of displeasure associated with any agent or condition believed by an individual to adversely affect him or her* [283]. There exists a considerable body of research on noise-related annoyance [36, 170, 185, 222, 284-295, 299]. Most of this work focuses on industrial- and transportation-based noise, rather than music-based noise, but there are some exceptions.

5.1.1. Music-derived noise

One of the most comprehensive reviews on noise-derived annoyance [36] specifically states in its introduction that all noise sources are considered in the review *except* music. Considering the infrequent nature of outdoor entertainment events, this is a reasonable approach to such research, as traffic and industrial noise can be persistent and result in lasting negative effects to a community's health and wellbeing. The purpose of this report is to consider noise from outdoor entertainment events, so it is necessary to review information on annoyance due to noise from musical sources.

One relatively recent study was conducted on behalf of the Danish Environmental Protection Agency in 2002 [284]. This study devised a series of lab-based listening tests focused on noise annoyance due to eight different noise signals. All but one of these signals were from industry/HVAC/traffic. The one non-standard noise signal was music, recorded outside a local entertainment venue. A list of the considered noises is given in Figure 5.1.

No.	Name	Description	Tones, characteristics
1	Traffic	Road traffic noise from a highway	None – broadband, continuous
2	Drop forge	Isolated blows from a drop forge transmitted through the ground	None – deep, impulsive sound
3	Gas turbine	Gas motor in a power-and-heat plant	25 Hz, continuous
4	Fast ferry	High speed ferry; pulsating tonal noise	57 Hz, pass-by
5	Steel factory	Distant noise from a steel rolling plant	62 Hz, continuous
6	Generator	Generator	75 Hz, continuous
7	Cooling	Cooling compressor	(48 Hz, 95 Hz) 98 Hz, continuous
8	Discotheque	Music, transmitted through a building	None, fluctuating, loud drums

Figure 5.1 List of noises used in the noise annoyance study from [284]

In the study, the noise samples were recorded indoors or filtered to simulate indoor reception (using a filter approximating outdoor to indoor transmission loss). The signals were additionally filtered to remove strong resonances due to room modes. Annoyance was rated by participants on a 10 point scale and tested at three levels: 20 dB, 27.5 dB and 35 dB (measured with A-weighting between 10 – 160 Hz).

The results from the test were interesting, since the two most annoying noises were (by far) the drop-forge and the popular music. The primary results are shown in Figure 5.2.

Nominal presentation level	20 dB	27.5 dB	35 dB
Noise example	Subjective annoyance Night	Subjective annoyance Night	Subjective annoyance Night
Traffic noise	1.6	3.4	5.2
Drop forge	4.3	5.9	6.9
Gas turbine	0.9	2.5	5.2
Fast ferry	0.9	3.2	5.4
Steel factory	1.0	2.7	4.9
Generator	1.7	3.2	5.0
Cooling compressor	2.7	4.4	6.0
Discotheque	3.0	5.4	6.7

Figure 5.2 Subjective annoyance (out of 10) for noises at the three tested levels [284]

The drop forge and popular music signals were quite different in nature (as shown by their 1/3 octave band spectra in Figure 5.3). In terms of the low-frequency noise limits analyzed, the popular music signal was most regularly in breach of 1/3 octave band limits in the 80 and 125 Hz bands. It was found through statistical analysis of how well existing low-frequency noise regulations predicted the annoyance levels found in the tests that the Danish method was most accurate [296], where a best fit line to the data was derived to predict annoyance based on how much a given noise exceeds the published 1/3 octave band limits (Equation 5.1).

$$y = 1.61 + 0.26x \tag{5.1}$$

where the predicted annoyance (out of 10), y, is based on how much a noise exceeds a given 1/3 octave band limit, x (dB) [284]. The excess value can either be taken as an average over all analyzed octave bands or inspected based on the worst offending band. Based on the data, every 1.5 dB above a stated threshold resulted in a 2/10 increase of annoyance at low-frequencies.

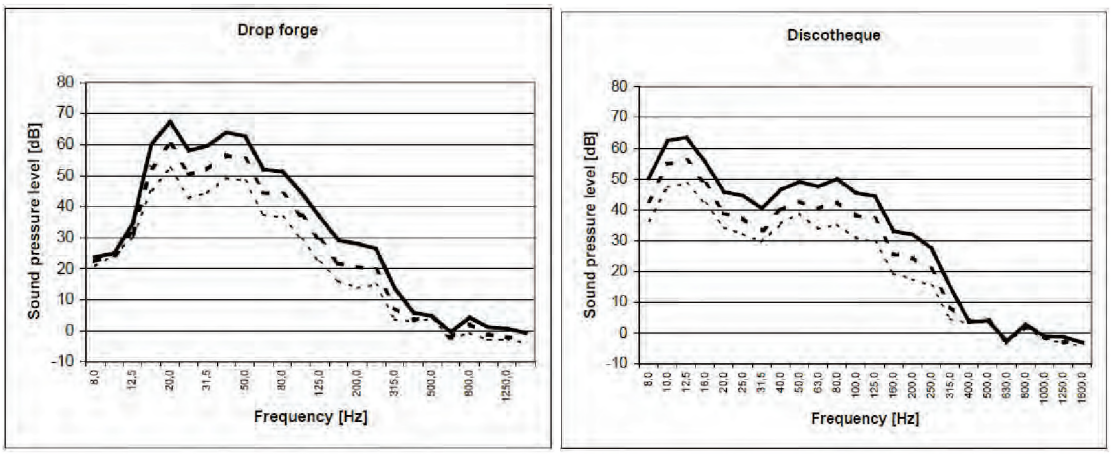

Figure 5.3 1/3 octave band spectra of the drop forge (left) and music (right) noise samples [284]

A selection of criteria for low-frequency noise annoyance is shown in Figure 5.4. Again, it was the Dutch curve that was found to be the best predictor of low-frequency noise annoyance in this study.

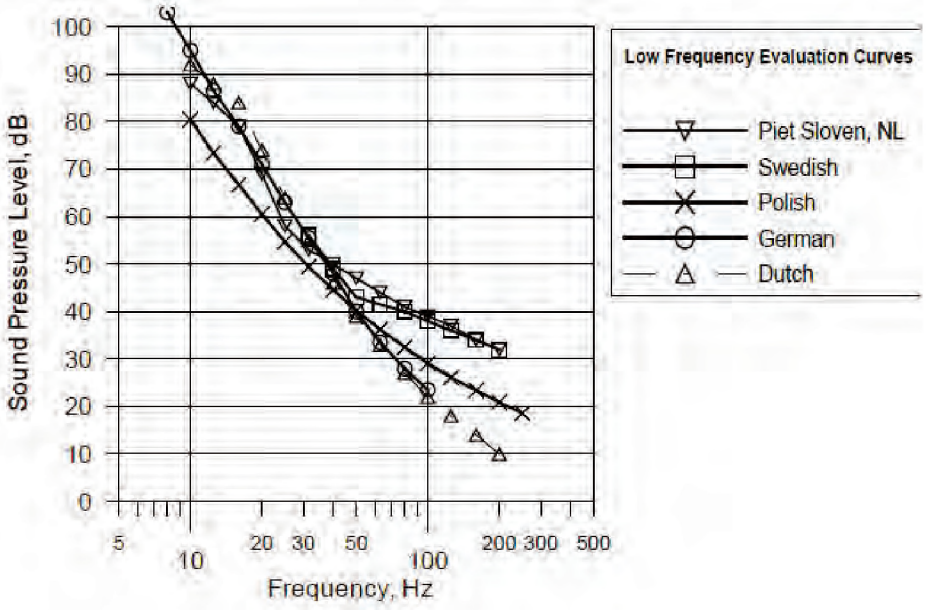

Figure 5.4 Low-frequency noise criteria curves inspected in the annoyance tests from [284]

When comparing the two worst offending signals, the drop forge and the music, there are clear differences (aside from spectral). When the music noise was measured with A- and C-weighting, it resulted in the lowest measured noise levels over all analyzed signals and playback levels. Furthermore, the subjective loudness ratings for the music signal were rated close to average of the loudness for all signals. These metrics won't accurately predict music-based annoyance.

The percentages of participants who were annoyed by the music were 47.2%, 80.6% and 94.4% for 20 dB, 27.5 dB and 35 dB playback, respectively. These were closely in line with the drop forge ratings and were greater than any of the other noise sources. Participants also rated the noise annoyance based on a combined day/night scenario and a nighttime-only scenario. There was an observed downward shift in the annoyance thresholds of 5 dB between day and night.

While the results in the study from [284] indicate that the Dutch low-frequency noise annoyance criteria is most accurate for annoyance prediction, the authors of the study suggest that perhaps this isn't the most reliable method (using hearing thresholds) and that a loudness growth analysis would be more appropriate, especially for intermittent noises. They note, though, that this process is much more time consuming and not entirely straightforward at low-frequencies.

The results from the Danish study [284] are reflected in a study conducted the following year by a team of Swedish researchers [170]. In this study, the focus was on the effectiveness of Sweden's community noise guidelines, which were adopted in 1996. These guidelines specify noise limits based on 1/3 octave band readings, rather than a single A-weighted metric (which was used in the old guidelines). Thirty-seven local Environmental Health Authorities (EHA) were surveyed (out of a total of 289 EHAs in Sweden). 62% of the surveys EHAs reported a decrease in noise complaints after implementation of the new guidelines, while only a single EHA reported an increase in complaints. Other EHAs didn't report a noticeable change in complaints received due to noise.

From the survey, a list of the worst offenders for noise complaints was compiled. The worst offenders were as follows (expressed as a percentage of total complaints received): 21% air handling systems, 18% music, 17% compressors, and 16% laundromats. Low-Frequency Noise (LFN) accounted for 35% of the total complaints received. As this particular study investigated complaints over a 14 year period, it was identified that there is a steady and significant increase in low-frequency noise-related complaints over time. Whether the LFN is objectively increasing or whether people are becoming more sensitive to LFN is left unanswered here.

5.1.2. Time relationship

Looking into the time relationship between loudness and annoyance, a recent study [286] found that perceived loudness and annoyance don't change with time in the same manner. At low frequencies (below 50 Hz), annoyance may rise over the first few minutes of exposure, while perceived loudness decreases. After a few minutes, though, both annoyance and perceived loudness decrease, just at different rates (perceived loudness decreases faster than annoyance) [286]. Even if a low-frequency noise isn't perceptible, it has been shown that it can trigger a fight or flight response in people (inducing a nervous, hormonal and/or vascular change) [283]. This sort of effect has even been observed when people are asleep, although this has been due to continuous industrial noise and may not be relevant to short and infrequent exposure to event-based noise.

NASA also has investigated how noise-related annoyance varies over time as well as how it can be influenced by other noises/sounds [297]. The purpose of their research was to assess how astronauts on deep-space missions will react to persistent noise over long periods. The work details how habituation to noise annoyance is a form of coping mechanism, where annoyance tends to decrease over time if a certain offending noise persists for a long duration. Interestingly, in one reported study 16 seconds of noise played back at 78 dB was rated significantly more annoying than the same 16 seconds of noise at 78 dB being followed directly by 8 seconds of noise at 66 dB. This seems to indicate that the perceived annoyance of a noise source is relative to additional environmental noise. This supports the trend in many European countries (as discussed in Section 4) to set noise limits based on an offending noise's relative level to the background noise. It also gives some level of indication that a short period of loud noise from an outdoor event may be tolerable to local residents if it is followed by lower level noise (or the most serious offending noises being short in duration and spaced widely throughout an event).

5.1.3. Small indoor venue noise

A two-phase research project looking into noise annoyance from clubs and pubs in the UK was carried out from 2005-2006 [290, 298]. The commonly-quoted outcome of this work was that absolute LAeq was conclusively proven to be the ideal metric for measuring and monitoring off-site noise from entertainment sources. Looking at the two phases of the work in detail, though, it would appear that this is a weak conclusion.

Phase two of the work [298] aimed to identify the best metric for quantifying noise issues from entertainment sources. Two tests were conducted: a highly-controlled laboratory experiment and a field test with real-world venues. The laboratory-based testing was carried out in two houses at Building Research Establishment Ltd. (BRE), where the noise was monitored in three upstairs bedrooms. The sound system was representative of that found in a small club. For half of the tests, the system was placed downstairs in the houses while the other half of the tests, the system was placed outside. Results from 30 participants gave strong statistical evidence that absolute LAeq was the best predictor of annoyance due to the received noise (which was musical in nature).

The field tests were carried out at 10 venues around the UK. A similar test procedure was followed in collecting data from participants, except this time they were tested with the actual noise coming from the venues. From these tests, the best predictor of annoyance was the LA10-LA90, although there was a greater margin of error, indicating that these results were less conclusive.

The fact that the conclusions of phase 2 of the DEFRA-backed work state in no uncertain terms that absolute LAeq should be exclusively used for measurement and monitoring of night time noise from pubs and clubs is misleading. The results from the two experiments don't agree, and therefore a clear conclusion is impossible. Interestingly, this point is briefly mentioned in the summary of the second phase of the work [298], but is contradicted in the next section of the same summary. The recommendations, nonetheless, have been applied to monitor/manage noise from clubs and pubs with good levels of success, but it must be stressed that pub/club noise is characteristically different from noise emitted from large-scale outdoor entertainment events.

There are a number of issues in applying the findings from [290, 298] to large-scale outdoor entertainment events, principally because the study was focused on night time noise from pubs and clubs. First, in the laboratory experiment, the system used is not representative of what is used at large outdoor events, especially in terms of low-frequency reproduction capabilities. Second, the placement of the sound system, while possibly realistic for clubs and pubs (which was the focus of the study), is far from realistic for large outdoor events where the sound system will be significantly further away from residences. More work is needed to inspect noise annoyance predictors specifically for large-scale events. Until this happens, there is no evidence to support any single metric being ideally suited for measuring and monitoring event stemming from large outdoor events.

Even though most existing literature (aside from the examples discussed above) focuses on industrial and traffic noise rather than music, there are some interesting conclusions can be made. It has been shown that annoyance is significantly greater when a noise contains strong low-frequency components. This is confirmed in the reviewed music-based noise studies. Additionally, if noise is intermittent rather than continuous, the noise is more annoying (which is reflected by many noise regulations imposing a 5 dB penalty on limits for impulsive noise [285]).

5.1.4. Factors unrelated to audio

A different DEFRA-backed a study into local resident's attitudes towards environmental noise from concerts was carried out in 2011 [185]. The key findings from this work focused on the importance of effective communication between event organizers and local residents. Of those pre-warned of an event taking place, only 14% were annoyed by the resulting noise. Of those not notified in advance, 35% reported annoyance. Households with children under the age of nine or individuals with hearing-impairment were statistically more likely to complain (at first glance, it may be surprising that the hearing-impaired group is more annoyed by noise than the average person. Considering that most entertainment-based noise pollution is rooted in the low-frequency range, and that a significant portion of hearing loss is in the high frequency range (along with a reduced auditory dynamic range), this finding is believable.

A similar piece of research from the Netherlands [289] found that three groups of people showed greater sensitivity to specifically low-frequency noise: women, the elderly, and people who were unhappy. The explanation for increased sensitivity of the elderly was the same in both studies, with no commentary provided for the other two groups.

What is clear from the work in [185] is that effectively managing the attitudes of the local residents to the event taking place can significantly lower annoyance (often to the point where few complaints will be made). In many cases, when the public was aware of the event, noise was heard but perceived as positive. This effect will be revisited later in this section, as this aligns closely with findings from independently-conducted research, including that of NASA in [297], where subjects without any perceived control of an annoying noise often became angry, while this was not the case when subjects had some *perceived* level of control of the annoying noise.

An individual's degree of annoyance can be influenced by a number of factors such as: time of day, unpleasant characteristics in the noise, duration/intensity of the noise, meaning associated (i.e. information contained within) with the noise, and nature of the person's intended activity that is being disrupted by the noise (i.e. work, sleep, etc.) [283]. In terms of a person's sensitivity to noise (threshold for annoyance), this can be affected by: fear of the noise source, conviction that the noise could be controlled by a third party, the degree of personal control over the noise, whether the noise originated from important economic activity, and whether the noise is predicable or not [283].

Another influential factor on sensitivity to noise is an interesting one: whether the noise originated from important economic activity. There are a number of local noise regulations that allow for heightened noise limits during evening hours for outdoor events (where especially large events are allowed more noise pollution than smaller events) [203]. Whether on purpose or not, these regulations take into account that residents of the neighboring community may be more accepting of entertainment-based noise if the event is seen to be beneficial to the local economy. This is directly in line with the previously-mentioned findings from [185].

The primary author of this report, as it turns out, grew up in such a neighborhood. The city of Highland Park, Illinois, USA has had a well-known outdoor music venue, Ravinia Festival (the oldest outdoor music festival in the US), located within Highland Park for most of the city's history. It is accepted that during many evenings each week over the summer months there will be noise from the venue (ranging from classical to pop music). To the author's knowledge there are relatively few noise complaints (as compared to similar venues) and, in fact, many residents see it as pleasant background noise (especially for barbeques). The community regards these events as part of what defines the city and contributes significantly to the local economy. The relationship has developed over the past 100+ years, so this isn't something that can happen overnight, but demonstrates how

noise annoyance can be mitigated through continued development of positive relationships with local residents.

5.1.5. Prediction methods

One model developed for predicting noise-related annoyance was developed by Zwicker and was investigated in [287]. The model predicts noise nuisance, based on loudness, sharpness, roughness and fluctuations in strength of a noise. The analysis is performed for each critical band of the human hearing system (24 in total) and generates a nuisance level in each band on a 100-point scale. Each of the four contributing metrics feeding into the nuisance rating is subjectively-based (rooted in subjectively-defined metrics that are more precise than simple A- or C-weighting). In this specific study, as with some of the other reviewed research in this report, outdoor measurements were taken and a filter was applied to the results to mimic indoor measurements.

It is interesting to observe that such a model exists and has been verified to be accurate [287], but it is completely absent in any of the reviewed pieces of regulation or recommendations. It may indeed be found to be useful for noise-based music annoyance quantification and prediction, but may have been overlooked due to its perceived complexity of implementation (it can't easily be measured using industry-standard noise monitoring equipment).

On the matter of conventional noise measurement techniques, there is a growing body of evidence that A-weighting is unsuitable for noise when considering annoyance [36, 288, 289]. While A-weighting is generally suitable (and *roughly* approximates human hearing) at low noise levels, the weighting curve (as standardized in ISO 226:2003) doesn't extend into the infrasonic region (note that the music spectrum from the [284] study in Figure 5.4 shows significant energy below 10 Hz).

A study into annoyance due to continuous and modulated noises (focused on HVAC systems) found that unmodulated noise annoyance is best predicted using C- or Z-weighting, but modulated noise is best predicted using C-weighting [288]. Further work supports this finding, which was focused more on music-based noise and found that C-weighting was most appropriate out of the available weighting curves [285]. This work makes clear that averaging of measurements over time can be counterproductive as much of the annoyance is rooted in the time-varying properties of the noise, which is included as part of Zwicker's model [285].

Some regulations take a 20 dB (or so) difference between C- (or Z-) and A-weighting measurements to indicate a low-frequency noise issue. However this may be over-simplifying the situation and missing some of the crucial information in the actual noise that is causing an annoyance [285, 289]. The work in [285] recommends that to account for fluctuations in the noise any time an overall fluctuation of 10 dB or more is observed, 5 dB should be taken away from the noise criteria. LC10 and LC90 can be used to ascertain the maximum and minimum values for the noise over time.

The focus on C-weighting for more accurate assessment of noise annoyance was indicated by a DEFRA-sponsored report, where it makes clear that if there are any prominent low-frequency components in a noise, then A-weighting measurements are inappropriate [36]. The findings from the survey in [36] resulted in criteria and procedures for assessing low-frequency noise disturbances [300, 301], although these were based on industrial and traffic noise, without any consideration of music-based noise [36]. The key findings in the DEFRA documents, which can be seen as relevant to music noise, is that single number measurements aren't appropriate. Spectrum-based criteria and measurements are required for accurate noise monitoring and prediction. If any 1/3 octave band is found to have noise exceeding the given criteria, annoyance due to the noise is likely [289].

In contrast to the bulk of the previously reviewed work included in this section, a recent study calls into question the culpability of low-frequency noise as the primary source of annoyance [283]. The research, based on formulating a set of indoor low-frequency noise annoyance thresholds for noise originating from live music events, suggests that the key factor of residents' annoyance is misappropriated to the subwoofer/infrasonic range and the more problematic spectral range is 160 – 315 Hz. While the work didn't conduct any subjective evaluations of its own, it uses data from a set of well-regarded studies alongside new measurements of façade isolation. Interestingly, when the in-room noise is modeled to reflect lightly- or heavily-compressed music (as is common with popular music), the resulting annoyance thresholds are largely in line with existing regulations and guidelines, notably those put forward by the WHO [1-3].

The finding that the subwoofer/infrasonic spectral range is less important in terms of annoyance is supported by a Danish study [287] which found that low-frequency noise sources aren't usually obvious and the true noise source is often unknown (even to the person making the complaint). The research concluded that existing criteria have no simple relationship to the complaints surveyed in the study. Clearly, there is more work required to resolve the ambiguities exposed here in relation to low-frequency noise and annoyance.

5.1.6. Inaudibility criteria

A historic noise regulation focused on annoyance minimization is an excellent example of significant problems arising due to an overly-restrictive limit being imposed by local authorities. It should be clear by this point that accurately predicting annoyance from music-based noise is an extremely difficult task due to the many influential psychological factors. From a regulatory point of view, it would be much easier to place a blanket ban on any audible noise stemming from music venues.

This is precisely what occurred in the city of Edinburgh, Scotland starting in the late-1990s. In Planning Advice Note PAN 56 (1999) Planning and Noise, states in clause #6 [302, 303]:

> *A noise limit that is close to the background level will be difficult to monitor. Conditions that seek to safe- guard levels of amenity by ensuring that noise resulting from a proposed development is inaudible in adjacent noise sensitive premises may be appropriate in cases where the noise lends itself well to fine tuning (e.g. amplified music) although should be used sparingly. In every case, conditions should be considered in terms of the six tests set out in Circular 4/1998.*

This policy was adopted within the City of Edinburgh bylaws, where noise policy simply became: if a resident can hear any noise from an entertainment event there is a breech in the regulations. The rise of inaudibility as policy clearly stems from the inability to accurately measure offending/annoying noises since they were low-frequency in nature. As A-weighting was (and still is) the most commonly used measurement method, there is no way to accurately measure a low-frequency music noise in the heart of a large city where other noise sources such as traffic and weather will easily mask or corrupt the measurements [302].

This policy (which many experts viewed as draconian) resulted in over-enforcement of entertainment noise from local venues, even resulting in some venues to close. This eventually sparked a heated debate within the UK's Institute of Acoustics (IoA), where arguments were made for the inaudibility policy [304, 305] and against [302, 306]. All of the referenced arguments are from industry professionals or academics with many years of experience. Ultimately, professional and public pressure resulted in Edinburgh relaxing their nuisance criteria in 2016, removing the inaudibility requirement, bringing the city in line with the rest of the UK [307]. Unfortunately, during the time of the inaudibility policy, many live music venues were forced to shut their doors in

Edinburgh. It is still the case in the UK (and elsewhere) that such venues are under an ever-increasing threat of closure due to noise complaints from local residents, where cities are becoming increasingly dense and housing prices are reaching levels well beyond what was previously typical in the neighborhoods home to well-established live music venues.

5.1.7. Summary

Overall, annoyance due to music-derived noise is certainly problematic, which is demonstrated in the work from [284]. The difference between industrial/traffic noise and entertainment noise is that while the former tends to be present in the long term, the later only occurs in the short term, generally only a handful of time each year. This means that health effects due to long-term noise pollution aren't necessarily important here (although residents living near permanent indoor venues may have issues, this report is focused on temporary outdoor events). It is annoyance that should be the central focus in this instance, where significant (and in some cases not-so-significant) annoyance levels (likely stemming from large amounts of low-frequency energy) will result in formal complaints, which can in turn put the future of a given outdoor event in jeopardy.

Much more research is needed in this area. Unbiased scientific studies are required which specifically look into music-based noise (especially in regard to large outdoor events), including how to best predict, quantify and measure such annoyance (and how to minimize it, of course). One aspect that was largely avoided in the reviewed research is the effect of room modes on low-frequency noise. While living rooms won't support room modes in the infrasonic region, they will have room modes at frequencies above approximately 40 Hz which, as has been shown, is a prominent component of most music-based noise. This is compounded by the fact that long-distance propagation of noise will exhibit significant attenuation of high-frequency components on top of further high-frequency attenuation from transmission through building materials. Depending on where a resident is located within a room, the noise can be greatly exaggerated due to room-modes (potentially a 20 dB boost or more). This would make noise that is measured as insignificant outdoors to be problematic indoors. This is another area that requires more research, although a current technological solution to this problem is discussed in Section 6.2.3.

5.2. Approach to noise regulations

As discussed in the preceding sections, noise regulations are relatively well-suited for persistent environmental noise from traffic or industry, but generally not fit for purpose for noise control and monitoring of outdoor entertainment events (although at least two studies disagree [293, 298]). Nevertheless, until any changes are made to specify regulations for music-based noise, practitioners should ensure everything is done to comply with local/national regulations that are in place and being enforced. Otherwise, the future of an event may be placed in jeopardy or fines could be levied.

Considering that the overall goal for an outdoor event is to please the event organizers, crew and attendees with high-quality listening experiences while simultaneously appeasing local residents [308], a pragmatic approach must be taken. Of course, if noise control was the solitary goal, the easiest solution would be to not hold an event in populated areas. If audience experience was the solitary goal, then sound systems would be designed to deliver what the audience expects without consideration of directionality, perhaps with the exception of towards the stage area. In reality, both goals must be considered.

The truth of the situation is that many existing noise regulations that are particularly detailed (and tend towards the academic side) can make it difficult for event organizers, managers and engineers to fully understand the requirements to appropriately address the situation [309]. Additionally,

when an event is in progress, most of the technical staff will be busy with providing for the musicians and audience with little attention paid to noise pollution. An increasingly common solution at large-scale events (at least in Europe) is to bring in a separate technical staff to monitor and manage noise pollution both on and off-site. This can either be instigated by the local authorities or event organizers – or both. At multi-stage festivals, noise pollution can be problematic between stages, which further complicates the issue as in such cases engineers much avoid sound spilling into other stage/audience areas as well as avoid noise pollution in the local community. Methods of addressing this in an informed manner are highlighted in Section 5.5.

At permanent venues in Brussels, for example, regulations state that there should be a "decibel officer" on staff for all entertainment events, whose role is to monitor and control noise [309]. This officer would go through training so that they are fully aware of how to interpret the regulations and carry out appropriate measurement and control practices. Additionally, they must ensure forgery-proof data logging [309]. Software such as 10EaZy includes a log file validation function for just such purposes [310].

Whatever method is deemed appropriate for noise management, monitoring and control, it is important to understand that keeping to the regulations won't guarantee local residents won't be annoyed. Keeping to regulations will ensure (in most cases) that there will be no serious repercussions. In all cases, a clear written Noise Management Plan (NMP) should be produced in advance of the event.

5.3. Measurement regulations

The noise regulations surveyed in Sections 2 (audience sound exposure) and 4 (community noise) detail a wide range of measurement procedures. A comprehensive discussion of all of these wouldn't be useful for the purpose of this report. Instead, this section will be kept brief, only highlighting important aspects of a selection of regulations and standards that will help inform best practice for measurement and monitoring of music-derived noise from outdoor entertainment events.

In the UK, BS7445-1:2003 [311] details description and measurement of environmental noise. This standard is identical to ISO 1996-2:1987. The standard opens with a general statement alluding to the complexity of noise regulations at present [311]:

> *Extensive research concerning the way in which human beings are affected by noise from a single kind of source such as rail or road vehicles, aircraft or industrial plants, has led to a variety of measures for assessment of different kinds of noise, many of which are in common use. Conversion from one measure to another is often beset with serious uncertainty. If an acoustical environment were always dominated by a single kind of noise, the confusion caused by the existence of different measures would not be so severe. But often environmental noise is a composite of the sounds from many sources, and the distribution of the different kinds of noise is likely to change from moment to moment.*

The standard goes on to suggest that due to the complexities and confusion resulting from the various proposed and implemented measures that equivalent continuous A-weighted sound pressure level should be adopted for all noise measurements. Considering the discussion earlier in this section, this suggestion is not suitable for music-based noise, as the most common problem associated with such noise is annoyance. Interestingly, researchers at one of the contributing institutions to this standard expressed the view that A-weighting is completely inappropriate for noise containing significant low-frequency components [36]. These documents were published in the same year, indicating a worryingly mixed message coming from researchers working within the same

department. It must be noted that the British Standard was only adopted in 2003 and is identical to the ISO from 1996. Nevertheless, the lack of consensus among professionals is reason for concern considering the growing complexity of the noise situation worldwide.

Disregarding the issue with A-weighting in the standard [311], there is some instructive information (even though the standard isn't specifically focused on entertainment event-based noise). One of the central challenges in noise measurements is that there is rarely a single noise source present in an environment. Multiple simultaneous noises cause confusion with single measurements. The challenge, then, is to identify the *specific noise* from the offending source while discarding the *residual noise*. According to the standard (page 3), this should be carried out via acoustical means (with the possibly incorrect assumption that this means using a measurement). On the other hand, on page 8 of the standard it indicates that the individual taking the measurements should strive to log the source(s) of offending noises. The text is ambiguous at best, contradictory at worst.

For the example of an event taking place near a residential area, how can people monitoring noise be sure that the measurements prove the offending noise came from the concert or from another unrelated source? This common challenge has been emphasized by practitioners and researchers [308, 43]. BS7445-1:2003 [311] only indicates that care must be taken by the individual taking the measurements to document the most probable source of noise. LAeq measurements give no information in this regard.

While highlighting this conflict is a step in the right direction, placing the burden of noise source identification on an individual opens up the possibility of human error. In the case where there is a multiple stage festival taking place, how is the responsible person to identify where the offending noise source? It is unlikely that accurate assessments will be made. Technological solutions to this problem are discussed in detail in Section 5.5.

In terms of measurement location, BS7445-1:2003 [311] represents the general consensus of the noise regulations across the world. Outdoor measurements should be taken 1 – 2 m from the façade of a building and 1.2 – 1.5 m off the ground. Indoor measurements should be taken 1 m from any wall, 1.2 – 1.5 m off the floor and around 1.5 m from any window [311]. No instruction is given on how to deal with room-mode effects. This is not surprising since low-frequency noise is largely ignored by the standard. Additionally, outdoor measurements should be taken in stable meteorological conditions to ensure accuracy and repeatability. Fluctuating noise is classified as noise that differs by more than 5 dB during the course of the measurement. Guidelines are given in the standard on how to use averaging to avoid skewing data, but the fluctuating nature of the noise should be recorded by the measurement taker. Again, this is (at least quantitatively) ignoring the time-variant nature of the noise, which is clearly a strong factor in annoyance and potential physiological effects from noise. While a 5 dB penalty can be imposed on set noise limits due to such fluctuations in the noise, it should be seriously questioned (through further research) whether this is sufficient.

Lastly, measurement integration time should be considered, specifically in regard to annoyance. The audience sound level limits discussed in Section 2 highlight grossly varying practice (even across Europe) in terms of integration time (ranging from 1 minute to 4 hours). Even taking a moderate integration time of 15 minutes as "standard", this may be too long to properly relate to annoyance due to noise pollution. Contributors to this report have noted that music-based noise pollution causing annoyance is best measured with short integration times (around 3 minutes). If the on-site sound level monitoring is operating over 15 minutes, this will allow the mix engineer to have multiple loud peaks (L10 – L90) without breeching any limits. Off-site, though, these peaks often can result in annoyance. It has been suggested that Leq integration times be synchronized between on-site and off-site, where precedence is always given to the shorter duration [21]. At present, this issue

isn't addressed in any known standard, regulation, or law. Further work is needed to develop and validate idea solution.

5.4. Noise prediction

Environmental noise propagation models have existed for many years and are used extensively in atmospheric and underwater acoustics. In the context of this report, a special noise propagation model is required. Unlike standard noise analysis where individual noises are incoherent, noise from outdoor entertainment events comes from multiple loudspeakers which output approximately coherent signals. Consequently, complex summation (as opposed to energy summation) is required to accurately predict noise levels at receiver positions. Until recently, no publicly available software existed for such purposes.

5.4.1. Modeling approaches

German loudspeaker and amplifier manufacturer d&b audiotechnik [312] set out to provide such software, through a partnership with the makers of industry-standard noise modeling software, SoundPLAN [313]. The aim was to bridge the divide between the work of the sound system designer and the environmental consultant by linking system design software, ArrayCalc [314] and terrain data from Google Earth [315]. This work resulted in the freely-available software NoizCalc [316-318].

NoizCalc includes modified implementations of ISO 9613-2 and Nord2000 propagation models. ISO 9613-2 is the most commonly used model in environmental acoustics. This model is empirically-derived and is generally agreed to be acceptably accurate over 1 km. The ISO model aims to give a worst-case prediction of noise (using the meteorological conditions that best favor noise propagation) [317]. In general, ISO 9613-2 predicts noise propagation using Equation 5.1.

$$L_r = L_w + D_c - A \tag{5.1}$$

where the noise level (dB) at the receiver, L_r, is calculated based on the sound power level of the source (dB), L_w, the source directivity factor (dB), D_c, and the total attenuation from the source to the receiver (dB), A. The attenuation factors include geometric divergence, atmospheric absorption, ground effect, attenuation due to barriers and any additional attenuation (such as foliage).

Nord2000 is more advanced than ISO 9613-2, as it includes more accurate modeling of ground effects, surface reflections and scattering. This provides acceptably accurate noise predictions up to 3 km from a source. The Nord2000 calculation is carried out using Equation 5.2 [317].

$$L_r = L_w + \Delta L_d + \Delta L_a + \Delta L_t + \Delta L_s + \Delta L_{re} \tag{5.2}$$

where the noise level (dB) at the receiver, L_r, is calculated based on the sound power level of the source (which includes a correction for source directivity), L_w (dB), and the attenuation due to geometrical divergence, air absorption, ground effects and barriers, scattering, and reflections from obstacles, ΔL_d, ΔL_a, ΔL_t, ΔL_s, and ΔL_{re}, respectively (all in dB).

To overcome the inherent limitation due to the assumption of incoherent noise sources in both standards, complex summations were carried out for frequencies of 160 Hz and below. Higher frequencies were allowed to maintain the usual energy summations, as coherent interference is less problematic in this portion of the spectrum [317].

The makers of NoizCalc recommend that system designers inspect noise propagation not only due to the worst-case scenario, but for other likely meteorological conditions that could arise during the

event, to allow for quick on-site adjustments to be made to limit noise pollution due to a known weather condition. The better prepared a system operator/technician is in this area, the smoother an event will run with turn-key solutions at hand [317].

The environmental noise propagation model used in NoizCalc was verified using measurements from three outdoor music festivals [318]. The validation was performed in a slightly different way to what would be normally done in practice, as the exact weather conditions at the events were known before running the model (the simulations were conducted after the events). Overall, the model was shown to be in good agreement with the measurements, generally erring on the side of safety (1 dB overestimate of noise levels compared to reality). To improve confidence in the model, further work is needed to compare predictions made prior to an event to measurements, as all practical scenarios for noise management don't allow for tuning of the model after an event.

The interlinked sound system design and noise control software provided by d&b should be seen as a step in the right direction in terms of overall sound system design for a large outdoor event. It brings environmental noise prediction in line with the realities of entertainment events, which typically use coherent sources. In large multi-stage festivals, however, such software is still of limited use, as it can't handle numerous sound emission points (stages, tents, buildings, etc.) and is therefore not accepted as evidence of noise pollution management planning in certain jurisdictions (such as Rotterdam, Netherlands).

It has been found by some practitioners that currently available commercial software packages (free or otherwise) struggle to accurately predict low-frequency propagation in heavily built-up areas. Firms such as Rocket Science and SPLtrack (who employ two of the contributors to this report) have developed their own proprietary modeling software for this reason, which has been shown to provide more accurate predictions in these cases [319]. In general, it was found that noise propagation models based on Nord2000 or ISO 9613-2 don't sufficiently take into account interference from coherent sound sources and reflections or diffraction from large objects/structures. The general recommendation from the Rocket Science report (which analyses most available sound propagation modeling approaches) is to consider BEM or FDTD for low-frequency noise propagation modeling purposes [319]. SPLtrack augments classical noise modeling with empirical data to continuously update their model. This will be discussed in greater detail later in this section.

5.4.2. Meteorological effects

Despite any achieved accuracy in existing noise propagation prediction software, there are meteorological effects that can be difficult to predict using current software and these potential issues should be well-understood by those involved with the sound system's operation at an outdoor event. The first primary issue, which is generally well-known among practitioners, is that of sound refraction. Refraction is due to the sound wave encountering a temperature gradient (which can be due to a number of factors such as the wind or a large group of people). As the speed of sound is directly related to air temperature, as a sound wave encounters a temperature gradient, it will tilt towards the cooler region of the gradient. This is illustrated in Figure 5.6. Similarly, refraction due to wind-caused temperature gradients is illustrated in Figure 5.7.

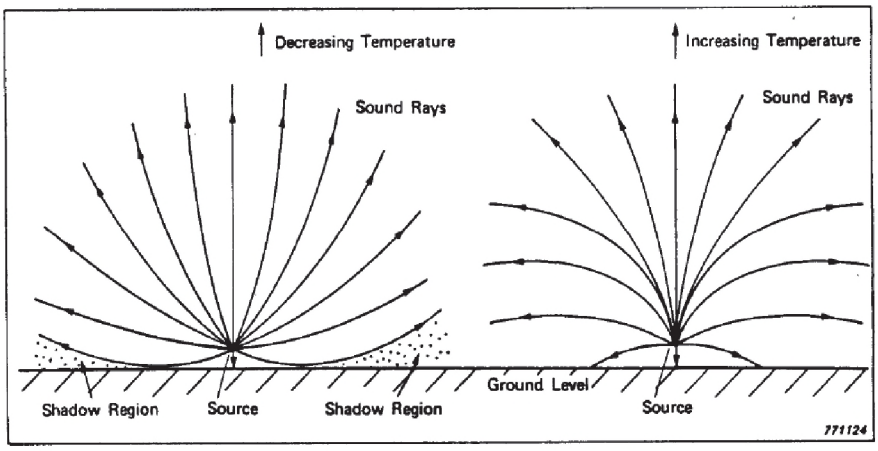

Figure 5.6 Illustrations of sound refraction due to temperature gradients in the air [320]

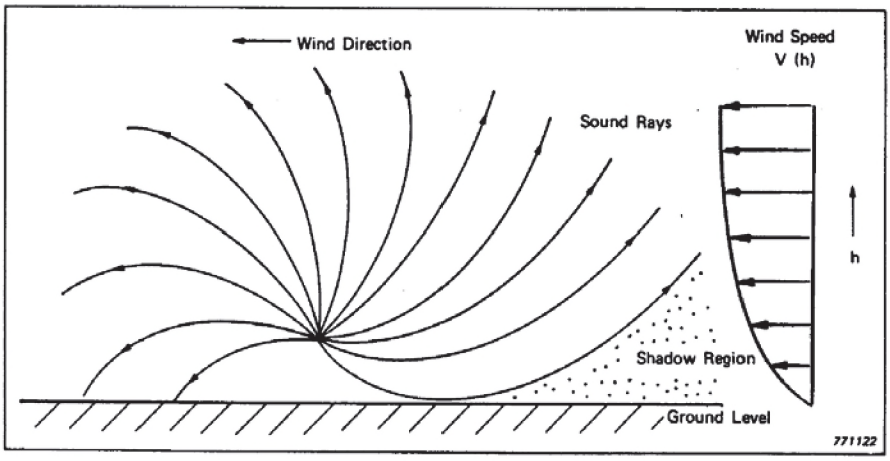

Figure 5.7 Illustration of sound refraction due to wind-based temperature gradients [320]

Considering that at large outdoor events there will be a densely-packed audience which generates heat (especially later in the day when there will be more people present for the headliner's set), there is likely to be a strong temperature gradient which bends the sound from the event upwards towards the cooler air at night. With increasing altitude, though, wind speed is typically greater than at ground-level [276]. This has the potential to cause the sound to curve back down towards the ground away from the event site (due to the corresponding temperature gradient), resulting in strong noise pollution in neighboring communities. Should noise complaints start to occur (or monitoring equipment detects a rise in noise level), this is potentially what is causing the issue. In terms of correcting for this effect, though, it is hard to say what can be done other than turning down the offending frequency bands on site. The problem is complicated by the fact that such temperature gradients are regularly observed to vary (and in some cases completely reverse) during the course of an event. Most noise prediction software doesn't currently consider this.

An additional consideration is low-frequency noise propagation over long distances. It is commonly assumed that in the far field of a loudspeaker array sound will propagate spherically (-6 dB per doubling of distance). It has been found in research related to wind turbines [122], however, that this is not necessarily the case. In this area, low-frequency noise propagation beyond 200 m is modeled as cylindrical propagation (-3 dB per doubling of distance) due to the combined effects from temperature inversion and low-level jets.

Additionally, noise from wind turbines is known to be influenced by ground reflections. This is approximated as a corrective value applied in noise propagation predictions. A corrective value of +1.5 dB, +3 dB, or +6 dB is used, depending on which guideline is followed (Danish, Swedish, and field observations, respectively) [122]. The Swedish guideline is specifically focused on the 63 Hz octave band, which is directly relevant to low-frequency noise from music events. Comb-filtering due to ground reflections often isn't an issue. Assuming a propagation distance of 800 m, a source height of 75 m, and a microphone height of 1.5 m, (the first comb filtering frequency is 625 Hz. Lower source heights (as used at outdoor events) will be even less sensitive to comb-filtering at low-frequencies. Due to these influences, experts on wind turbine noise caution that in certain scenarios it is possible to observe no significant attenuation of low-frequency noise over long distances.

It may also be useful to consider any noise transmission by vibrations through the ground or surrounding structures of an event. This is a low-frequency (including infrasonic) issue and could cause unexpected problems far from the source. In one instance, a building's engineer informed the sound system engineers that unsafe low-frequency vibrations were reaching the building's foundation (it was a very old building). As a consequence, the subwoofer system had to be bandlimited and slightly reduced in level to avoid any structural issues to the venue. While this was not a large outdoor event, it demonstrates a less-discussed transmission path for noise. While there is currently no published guidance in this area for music-based noise, BS5228-2 [321] specifically addresses noise and vibration control on construction and open sites. Whether ground- or structure-based noise transmission poses a serious risk in the context of outdoor music events remains unclear and requires further investigation.

Lastly, there is a lesser-known effect that is directly related to sound refraction and can cause noise to propagate extremely long distances with minimal attenuation. This is known as acoustic tunneling or channeling. Little research has been done on this in the field of atmospheric acoustics, but there has been significant research carried out in the field of underwater acoustics [322-324].

In underwater acoustics, this effect is known as a sound fixing and ranging channel (SOFAR). Initial tests to confirm its existence were carried out in 1943 by detonating 1 pound of TNT underwater in the Bahamas. The blast was easily detected over 2000 miles away off the coast of West Africa [279]. Most published research was done in the 1960s and 70s when the US Navy was exploring its use for long-range submarine detection and monitoring [324].

It is now known that the long-range low-attenuation propagation is due to the laws of refraction, where the underwater sound is trapped (so to speak) in a channel where the speed of sound is at a minimum. This is due to fluctuations in pressure and temperature with depth in water. The effect can be thought of as a sound waveguide. Professionals working in atmospheric acoustics have come across such SOFAR-like effects in air, where sound is trapped in a stream of cool air surrounded by warmer air, thus trapping the sound in a narrow channel, allowing it to propagate for significantly longer distances than would be expected. This has caused unexpected issues with some outdoor events. Even with knowledge that this is a possibility, such occurrences are extremely difficult (if not impossible) to predict or control for. At the very least, if noise levels are suddenly found to be above expectations at very far distances from an event, environmental noise consultants can have an explanation ready. Informally speaking to consultants as part of the research for this report, most had encountered such effects on at least one occasion in their careers.

In response to all of the above issues (noise propagation model accuracy/reliability, sound system model accuracy, meteorological effects), engineers at SPLtrack developed an empirical noise pollution model which uses real-time data acquired from field sensors to continuously update the model. This model, known as SPæL, is used in the construction, motorsport and live event industries. The model's accuracy has been shown in tests to predict noise pollution levels to within 1 dB

accuracy (where competing models showed greater than 10 dB of error). Aside from accounting for meteorological effects, it was found that a common source of error for the competing models was due to inaccurate sound system prediction when line arrays were flown too close to the ground (so that they wouldn't exhibit their intended behavior when deployed in the real-world). This is why the recommendation of flying line arrays no lower than three times their length is important when relying on modeling to predict behavior on- and off-site. The accuracy of SPæL demonstrates the importance of noise propagation models supporting tuning functions using field data to ensure accuracy. Without this, there is no practical method for handling the ever-changing meteorological effects as well as non-ideal sound system configurations.

5.5. Noise monitoring

Noise monitoring has become indispensable over the past couple decades at large outdoor (and indoor) entertainment events. This includes monitoring at the front of house mix position (FOH) as well as in selected locations in the community (where specific locations are chosen according to their noise sensitivities). A number of contributors to this report have significant experience in noise monitoring of outdoor events, primarily in Europe. One group member set out phases for sound level management at events in a recent publication [325], as reproduced here in Figure 5.8.

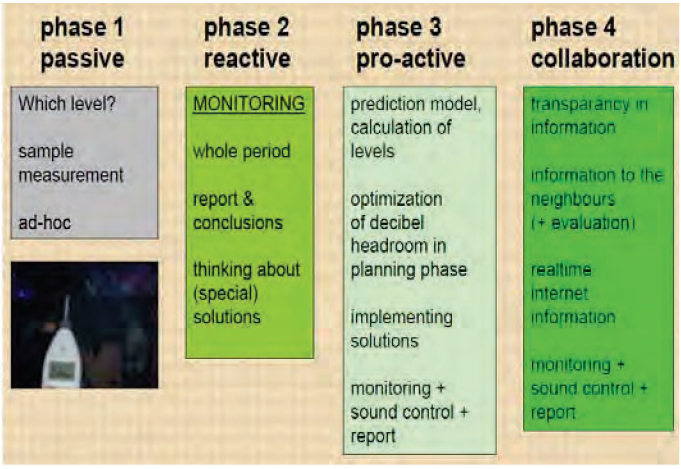

Figure 5.8 The so-called "phases" of sound level management at events [325]

In the working group's opinion, sound level management at outdoor events is inconsistent across the world and generally can be classified as phase 1, 2, or 3. A select few live events have recently made efforts to move towards a phase 4 approach to sound/noise level management. Some examples will be discussed here as well as in Section 5.6.

The primary author of this report has been responsible for designing and operating sound systems at large-scale festivals in the American Midwest since the early 2000s. In his experience, most of these festivals can be classified as Phase 1 (Figure 5.8). No clear limits are set prior to the events and generally the event management hastily agrees on limits about five minutes after the first band begins to play. At this point it becomes obvious that these individuals have minimal knowledge of sound measurement protocols. For example, one festival manager imposed a limit of 90 dBC, fast response, at FOH. This limit was unrealistic. The main sound system was briefly muted to demonstrate that the limit was still exceeded due to sound coming from the stage monitoring system and the band's instruments. Generally, at such events the only noise control specified is the noise curfew (time(s) at which the sound system must be turned off).

This is not to say that all outdoor events in the US are in such a poor state for noise control. Large cities such as New York or Los Angeles do specify limits (as seen in the noise regulations survey in Section 4). The issue is whether these limits are enforced. This usually falls to the local fire station, where (from experience) it is evident that the individuals tasked with noise monitoring are insufficiently trained.

Fortunately, many touring engineers have adopted various pieces of sound level monitoring software to ensure they adhere to specified on-site local limits. Such engineers will confirm their SPL limit at FOH upon arrival and input this into their monitoring software to ensure they keep to the stated limit for the duration of the show. This good practice is already widespread.

5.5.1. Front-of-house (FOH) monitoring software

One of the most commonly used pieces of software for this purpose is 10EaZy [310]. The software provides engineers with real-time data covering aspects of sound level including time-averaging in reference to a defined limit, full graphical history of the sound level, and a comprehensive warning system (Figure 5.9), indicating when (and what) action must be taken to resolve a sound limit breech. Similar functionality is available in other software of this variety.

In Europe, it can be said that most large-scale professional outdoor entertainment events are more noise-conscious, falling into Phase 3 and possibly Phase 4 of Figure 5.8. It is standard practice for most festivals (or local authorities) to employ noise consultants to monitor levels in the surroundings areas during the festival. In most cases, any issues identified can be immediately corrected by liaising with the FOH engineer at the stage under question.

Aside from 10EaZy, which is focused on monitoring sound level from the mix position at an event, there are other pieces of software which incorporate community noise monitoring on top of on-site monitoring, such as MeTrao [326], SPæL [327], Wavecapture RT-Capture 3 [328] and Horecasense [329]. Regardless of the specific software package chosen, there are some similarities in functionality. Multiple monitoring locations can be set up and fed either to a base station or to the cloud (for analysis online). In most cases remote monitoring is readily available, so that consultants don't have to be on site at all times, allowing for professional advice available to a greater number of simultaneous events.



Figure 5.9 10EaZy user interface – warning example

One of the most useful features of these advanced noise monitoring platforms is the ability to precisely identify the source of noise, in many cases down to the 1/3 octave band. This is especially

useful at a multi-stage festival (Figure 5.10). For monitoring off-site it's essential to know which stage is contributing to the noise pollution and at what frequency band(s). Without this, noise control would be largely left to a series of educated guesses.

All of the monitoring information can be seen at all times by users of the system (including FOH engineers), which meets the transparency of information criteria of Phase 4. Additionally, such software can generate noise reports on demand, which is useful for post-event reporting. This is highly recommended in order to deal with any subsequent complaints [325] and is useful in dealing with complaints during the event.



Figure 5.10 User interface for MeTrao Super-Correlator, used to identify source and frequency bands of noise issues at multiple stage festivals and to predict potential problems with noise pollution

5.5.2. Effectiveness of FOH monitoring software

An important caveat to using such monitoring software should be noted. During the review of available software for this report, user testimonials were examined. These testimonials fell roughly into two groups. The first group was as expected: the user expressed gratitude for helping them ensure that the audience got the experience they came for while making sure the local residents weren't overly annoyed by ensuring the noise stayed within legal limits.

The second group of users appears to use the software in a different manner. These users expressed gratitude for allowing them to get their mix as loud as possible. One particular engineer who expressed this sentiment was mixing for what would be considered a soft folk rock act, yet he was boasting that the software allowed him to ensure his mix was the loudest out of all the bands on the bill that night.

While the software companies advertise the two forms of testimonial in equally positive light, the second form of testimonial should trigger caution within the industry. A recent research project confirmed this [330, 331]. The work looked at whether introducing sound level monitoring (in this case 10Eazy software) into music venues would help limit sound exposure to staff and attendees.

The investigation was split into two stages. The first stage (labeled A) involved monitoring the sound levels for a number of concerts, but not giving the FOH engineer access to the readings during the show. The second stage (labeled B) was the same as the first stage, but this time the FOH engineer could see the meter readings and where his/her mix was sitting relative to the set level limit. The

results are reproduced here in Figure 5.12 and Table 5.1. The complete set of data is available in a paper that was published at the time this report was being finalized [331].

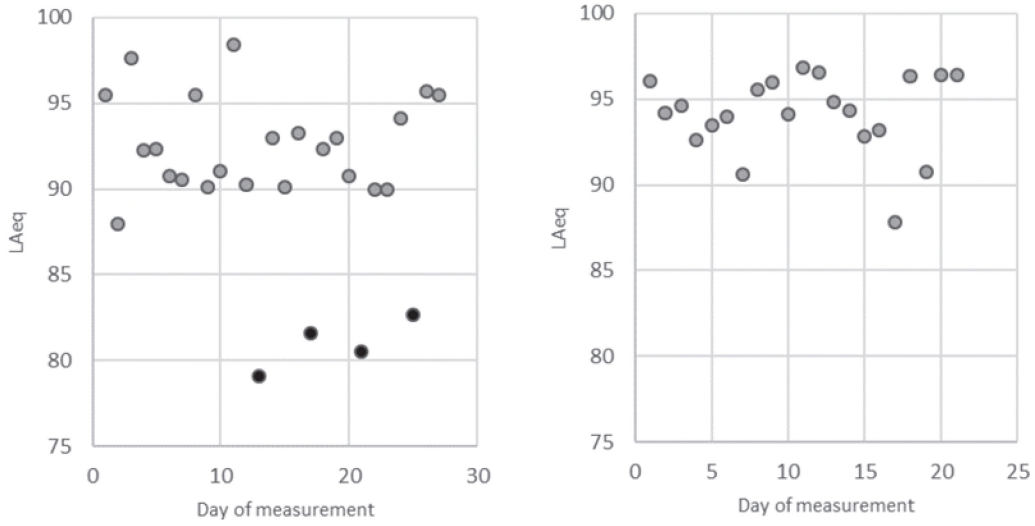

Figure 5.12 LAeq measurements for each individual concert measured where the engineer couldn't (left) and could (right) see the sound level monitor software. The black circles represent data points that were omitted from the study due to various issues [330]

	LAeq		LCpeak	
	Phase A	Phase B	Phase A	Phase B
Stage	105 (3900%)	103 (2000%)	135	132
Dance floor	99 (1000%)	100 (1000%)	132	131
Bar	96 (500%)	97 (500%)	126	123
Sound desk	95 (400%)	96 (400%)	125	127
Ticket desk	86 (50%)	87 (50%)	120	118

Note: Percentage values show the daily noise exposure dose (rounded) as calculated per Australian occupational noise management standards (Standards Australia, 2005).

Table 5.1 Noise dose and peak level readings for the investigation in [330]

The authors identified that the worst offenders of the noise limit were brought under control using the sound level monitoring software, but a worrying trend also appears in the data that the researchers also took note of. It seems to be that once the engineers could see their mix level relative to the limit, they naturally increased the level until they were at the limit (in other words, using the monitoring software to set a target rather than a limit). This is evidenced by the data in Figure 5.12 showing all events clustered around the set limit for the venue. As the 10EaZy software uses a Maximum Average Manager interface, it is clear that achieving the maximum allowable mix level is the goal, which is roughly seen in the results from [330]. The data in Table 5.1 gives some indication of this where the measured level at the sound desk on average increased by 2 dB when the engineer could see the level monitoring software. Note that a direct comparison of the data between phase A and B in Table 5.1 isn't possible since these readings only took place on one night for each phase.

While certainly an interesting trend, the data did not indicate this as a statistically significant finding. Further work is needed in this area to better understand how sound level monitoring software affects sound engineering practice. This should include the exploration of different sound level

monitoring interfaces that don't focus on level maximization, but on a less "louder is better" approach.

In terms of noise dose for everyone in the venue, there was no significant effect due to the software, but the question must be asked whether this is a universal trend – will engineers who see that they are mixing below the maximum sound level limit naturally increase the level of the mix (whether it's artistically relevant or not) until they reach the limit? Is monitoring software doing more harm than good in certain situations? Additionally, in light of these findings we must ask which is worse:

- avoiding any breach of the set sound level limits but having all events increase in level due to access to the level monitoring software?, or

- allowing the occasional event to go above set limits but maintain the natural level of all other events (which will likely be below the limit)?

User interface design for existing monitoring software has the potential to result in the former scenario.

Further work is needed to determine if this is a significant problem with such software and, if so, what can be done to rework the user interface to avoid, or reduce, this issue. As the study in [330, 331] was based on indoor venues, further work is required to see if the observed trends hold for large outdoor events. A recent case study repeated the indoor music venue experiment from [330] at a large-scale outdoor music festival [21]. This research is detailed as a case study in Section 5.6.6 and provides early indications regarding the effect of sound level monitoring software at large-scale outdoor entertainment events.

5.5.3. Communication

After many years of noise monitoring, Dutch company dBcontrol [332] found that every problem with sound/noise levels could be traced to communication errors (many of which occurred in the preparatory phase of the event). They have championed a human-centered augmentation to noise monitoring in the form of "Sound Guards" [325]. This is similar to the "decibel" officers recommended in Brussels, but in this case the "Sound Guards" can be hired for one-off events. They are meant to be a means of communication between all stakeholders at an event. Figure 5.11 highlights the key responsibilities of such a position.



Figure 5.11 Communication channels tended by the dBcontrol "Sound Guards" [325]

The use of software like 10EaZy, SPæL and MeTrao, along with qualified personnel to act as intermediaries between stakeholders at events must be viewed as good practice in the industry. With this in mind, noise control operations at European outdoor events should be taken as a model to draw upon for noise control and monitoring purposes across the globe. SPæL specifically allows local residents to send messages using a simple mobile phone app or web browser directly to the FOH mix position and noise consultants, allowing for real-time communication between the engineers responsible for sound levels and local residents. This provides a strong sense of control over potentially annoying noise for residents, which as discussed earlier in this report is a well-known method of annoyance mitigation. A direct communication approach such as this should be regarded as good practice.

5.6. Case studies

A collection of case studies is presented in this section in order to demonstrate various consultants' approach to noise control for outdoor entertainment events. A particular emphasis on good practice will be made within each case study, to make clear what approaches are most effective and practical.

5.6.1. Emirates Stadium (London, UK)

While the primary purpose of Emirates Stadium is for soccer (a.k.a. football) matches, the stadium is also designed to be able to host live music a limited number of times per year. The local council must approve all concerts in the stadium since the stadium is in very close proximity to residential areas. All information in this case study is taken from the acoustics report put together by the UK-based consultancy, Vanguardia [186, 333].

The council follows the UK's Noise Council Code of Practice (1995) [222] with limits given in Table 5.2 (the same as discussed in Section 4).

Concert days per calendar year, per venue	Venue Category	Guidelines
1 to 3	Urban Stadia and Arenas	The MNL* should not exceed 75dB(A) over a 15 minute period
1 to 3	Other Urban and Rural Venues	The MNL should not exceed 65dB(A) over a 15 minute period
4 to 12	All Venues	The MNL should not exceed the background noise level # by more than 15dB(A) over a 15 minute period

*The Music Noise Level (MNL) value is the L_{Aeq} due to music measured at a distance of 1 metre from the facade of any noise sensitive premises.

The background noise level is the $L_{A(90)}$ measured at a time indicative of when events are to take place at the Stadium.

Table 5.2 Allowable concert limits in the UK, followed for the noise control planning in [222]

As the stadium in question was in an urban location, up to three concerts were allowed per year, which is what the council was prepared to approve. In addition to the limits given in Table 5.2, there are additional recommendations for the low-frequency bands of 63 Hz and 125 Hz. Measured levels up to 70 dB are considered acceptable, while anything over 80 dB is likely to be problematic. Note

that these assumptions are those of the consultants, which are not necessarily shared by all contributors to this report.

An additional issue raised by the council is that there are high-rise buildings in the vicinity of the stadium, which due to their height may experience more noise than lower altitude dwellings. To avoid any issues, the council required sound insulation to be installed in the buildings if internal levels (in the residencies) were expected to exceed 57 dB (LAeq, 15min) according to BS 8233:1999 [229]. If this condition could be met, then any form of concert would be allowed. If it couldn't be met, then only "soft" music will be permitted (i.e. not rock or pop).

In order to comply with the local council, the event organizers must submit a feasibility study no less than 28 days before a concert, which should include noise predictions. Additionally, a noise management plan must be in place, which should include clear liaison with local residents and a hotline for the residents to call during the event if there is an issue.

Tests were carried out before any concerts were booked into the stadium to ensure it could comply with the council's requirements. The consultancy firm did on-site testing using a popular rock track as well as pink noise. The resulting measurement data is reproduced here in Table 5.3.

No	Site	Source	Internal LAeq	External LAeq	Maximum Allowable Mixer LAeq based on 75LAeq external
1	Northern Triangle (ground)	Music	105	79	101
		Pink	102	77	100
2	Drayton Park	Music	105	67	113
		Pink	102	65	112
3	Hornsey Road	Music	105	73	107
		Pink	101	71	105
4	Northern Triangle (7th Floor)	Music	104	78	101
		Pink	101	76	100
5	Northern Triangle (8th Floor)	Music	105	79	100

Table 5.3 Measurement data from consultancy-led testing at Emirates Stadium [222]

The measurement data shows that in certain areas around the stadium the noise levels are in breach of the stated 75 dBA limit. Based on these findings, the consultancy advised that a FOH limit of 98 dBA must be set to ensure all community noise is kept within legal values. Low-frequency noise was found to be around 90 dB in many places, but the consultant advised that from experience this shouldn't be a problem as the regulations are aimed at distances of 2 km from a source, not in close proximity. Whether this is accurate or not is hard to say, as there is no scientific evidence to support the claim. In addition to the recommended FOH limits, the report also suggests that additional acoustical treatment be applied to the stadium to further reduce noise spill into the community.

Based on this work and the following high-profile concerts, sound levels at FOH needed to be reduced further to between 95 to 96 dBA which made the stadium difficult to use as a concert venue. Options were reviewed for a temporary noise barrier to be installed in the large gaps at all four corners of the stadium, however the cost of implementing such a solution was not supported by the income from such concerts. There would also be additional effort required to rig and de-rig the barriers each time such an event was held.

Good practice within this case study includes the Noise Management Plan (NMP) in regard to interfacing with local residents, including a noise hotline during the event. This would give residents a perceived level of control over the noise, which has been shown to go a long way in reducing the high levels of annoyance. Additionally, the pre-event testing in the surrounding areas allows for accurate prediction of expected noise levels in local residences, which can inform limits at the mix position in the venue. Unfortunately, the measurements all use A-weighting, which has the potential to miss the most problematic noise components in the low-frequency range. The notion that the problem changes in nature based on proximity to the noise source doesn't agree with published research covered in previous sections of this report.

5.6.2. BAT Test (Amsterdam, Netherlands)

The city of Amsterdam regularly holds outdoor entertainment events within its densely populated city center. To ensure the best practices are put into place to control noise pollution from events within the city, Amsterdam commissioned Event Acoustics to carry out a detailed investigation. The lead engineer on the project is a contributor to this report. All information in this section comes from [119].

The test intended to identify the Best Available Techniques (BAT) for limiting noise pollution from outdoor events and was conducted on the outskirts of the city, near the airport and a motorway. Testing consisted of four sound systems, supplied by local companies. All sound systems consisted of line arrays (in a left/right configuration), a separate subwoofer system and a DJ monitoring system on stage. Four separate stages were set up, side by side at the end of the test field (Figure 5.13).

The aim of the test was to determine if there is a preferable configuration for a sound system that minimized off-site noise while delivering a consistent high-quality listening experience for the audience. All measurements were taken using C-weighting (which is in line with Amsterdam's local regulations) and each system was calibrated to deliver a standard 100 dBA at FOH (120 dBC). The DJ monitors were required to reach 105 dBA at a distance of 2 m. As noise pollution issues are generally low-frequency in nature, the tests only considered frequency content at 630 Hz and below.



Figure 5.13 Photo of the test layout for the experiments in [119]

Each sound system provider was told that their PA must evenly cover from 12.5 m to 50 m in front of the stage edge over a width of 35 m while minimizing noise pollution to the surrounding areas. SoundPLAN 8 [313] was used to create a reference (ideal) system design and noise prediction which represented the ideal scenario (Figure 5.14). Note that SoundPLAN 8 includes complex summation, which is essential for sound system-based noise predictions, as discussed in Section 5.4.

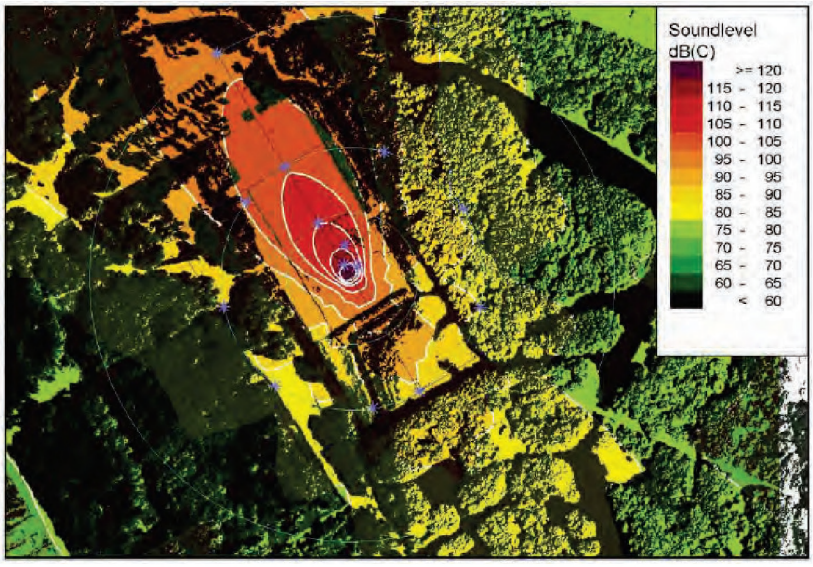

Figure 5.14 Ideal sound system coverage from reference model [119]

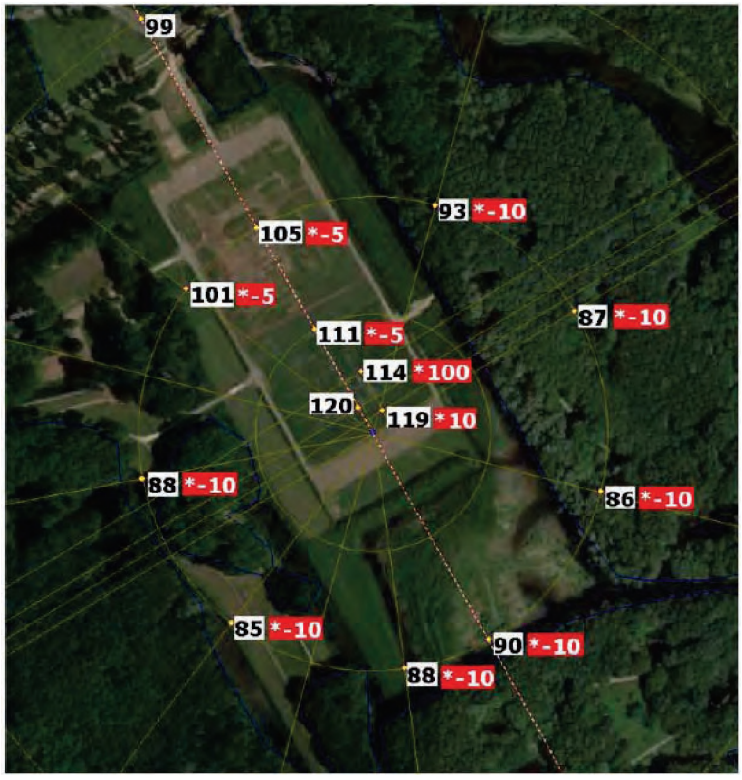

Figure 5.15 Reference point locations with corresponding weighting values [119]

A points-based system was derived to rate the performance of each system. Reference measurement points were given weightings (Figure 5.15) so that high- and low-priority areas could be defined. As a starting point, the audience consistency was given a high weighting, indicating that this was an important aspect of this exercise, not to be overlooked. The point rating for each system was calculated using Equation 5.3.

$$PTS = \sum_{i=1}^{N} \left(meas_i - ref_i \right) weighting_i \tag{5.3}$$

The points-based rating (*PTS*) is calculated based on the difference between the measured system responses (*meas*) and the reference response (*ref*, from SoundPLAN), both at point *i*, multiplied by the weighting factor at the ith point. All individual measurement points are summed to get the overall rating. Before calculating the ratings, each measurement was corrected based on a flat magnitude response at FOH to ensure consistency of analysis between systems (Figure 5.16). The analysis was repeated a number of times using different approximated music spectrums to simulate different varieties of events.

Receiver	Leq/dB(C)	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630
FOH_25m	120	104.8	112	116.3	112.7	109.3	107.3	104.5	101.4	97	93.6	92	88.1	86.7	85.3

Example: when a system produces 110dB(C) for the 50Hz one-third octave band in the FOH-position, then the 50Hz values for all measurement positions with 116.3-110=+6.3dB will be corrected.

Figure 5.16 Example of measurement corrections (based on FOH) applied prior to analysis [119]

All measurements were taken over 1/3 octave bands (Leq, 1 s) at 28 measurement points, where five separate trials were run for each sound system:

1) Full system (tops, subs, DJ)
2) Full PA (no DJ)
3) Tops only
4) Subs only
5) DJ only

To avoid negative influence due to weather conditions, each trial was measured for 2 minutes using intermittent pink noise with a 20 – 250 Hz sine sweep superimposed onto the signal. The signal possessed a crest factor of 4.5 dB. It is unclear whether this test signal was based on any prior research findings or if it is proprietary. Additionally, to ensure correct tracking of background noise, the test signal would be on for 20 s and off for 10 s. If any more than 3 dB of corrections were required to take the background noise into account, then that specific measurement would be deemed unreliable. Over the course of the tests, only frequency bands above 1 kHz encountered this issue, but these bands weren't used within the analysis. The wind was reported as fairly constant throughout the day at around 6 m/s blowing 250° relative to the stage. The temperature was a consistent 20° C.

All systems were roughly the same (in terms of using line arrays and ground-based subwoofers), but they differed in physical size (length of arrays) and layout. System 1 included stacks of shipping containers directly behind the line arrays to shield rear-going sound propagation (which is moderately common practice and is usually part of the stage structure), although none of the other

systems used this. This poses an issue in terms of direct comparability of the systems as this approach prevents like-for-like comparisons. This should be kept in mind when analyzing the results. Current issues surrounding large sound system evaluations – a.k.a. shoot-outs – are discussed in Section 3.4.

The staff from Event Acoustics reserved the right to reconfigure any of the systems for further trials to inspect whether any optimization could be achieved. Make and model information for the loudspeakers was deemed irrelevant and not disclosed. It was assumed that professional-grade sound systems are at a high enough standard that sound coverage is largely a function of configuration.

The principal conclusions of the test are reported here as quotations alongside comments from regarding areas with limited evidence available. The conclusions regarding flown subwoofers have been discarded as no flown subwoofer arrays were considered during the test.

- *Size matters.* "The best performing system during this test according to the predefined conditions is also the largest system in terms of dimensions. This is not accidental; it is a fact that larger dimensions lead to greater control at lower frequencies." [119]

- *Height matters.* "During the process of taking measurements at 200 meters distance, wind influence causes up to approx. 10dB(C) difference between lower and upper wind points on the transfer. The wind speed during the process of taking measurements was approx. 6m/s. This influence caused by the wind in the transfer is greater than the current applied calculation models predicted. The biggest influences are on the line-arrays, the influences on the sub-layer systems are smaller. The reason for this has not been demonstrated, but it is probably because the wind speed on the ground is lower than at the height of the line-arrays... In these tests, there is no direct correlation between the height of the sound systems and the test scores. This measure appears to be especially important if the sound system is not well-directed (straight ahead). However, it appears that the wind influences on the systems in the air are greater than on the systems on the ground. This calls for this measure." [119]

  Author's note: Looking closely at the published results of this study, this finding doesn't appear to be conclusive. The vagueness of the data can largely be attributed to coarseness of the angular sampling resolution (45 degrees). Earlier in the report it remarks that "[t]he reason all systems are influenced by the wind to varying degrees is unclear for the time being." This points to further research needed before any conclusion on height of a sound system (especially concerning subwoofers) can be made. It is likely that height can't be considered on its own. Height as well as physical speaker orientation and electronic steering (if used) most likely have to be considered together instead of in isolation.

- *Ground-based horizontal subwoofer arrays are preferable.* "The measurements show that the emission with overhead subs in the 90-180 degree area is about 10dB worse than with a cardioid sub-array. In addition to this, it appears that the wind influence on the overhead subs is much greater than on sub-arrays on the ground... The measurements show that overhead subs have a negative influence on the sound. This is because all line-arrays have significantly less direction in the dB(C) values compared to the sub-arrays. It also appears that systems that are higher up from the ground are more subject to wind influences." [119]

  Author's note: A flown subwoofer array wasn't tested as part of this study. This recommendation is in opposition to the analysis from Section 2 on audience sound exposure. Further research is necessary to make a clear conclusion regarding ground versus

flown subwoofer arrays. Considering the relevant research detailed in other sections of this report, the conjecture that ground-based subwoofer systems are easier to control in terms of noise pollution is questionable. As flown subwoofer systems are currently banned in Amsterdam (on the supposed fact that they result in greater noise pollution), it is very important to resolve this ambiguity to avoid ill-informed regulations.

- *Cardioid subwoofer arrays are essential.* "The use of a cardioid sub-array is clearly better than when the array is not cardioid or when a left-right sub-arrangement is used. Compared to the left-right setup tested here, the tested cardioid sub-array is 9 to 15 dB(C) quieter on the sides and rear of the stage. The recommendation is to apply a cardioid sub-array at all times when control of the emission is important. The array must continue uninterrupted." [119]

  Author's note: This isn't supported in the published results. Only rear-propagating sound radiation was reduced. It must also be noted that a cardioid polar response at low frequencies can be achieved by positioning a flown subwoofer array in close proximity to the main line array, creating an end-fire or gradient loudspeaker configuration for the spectral region of overlap between the two arrays.

- *Extreme far-field source behavior:* "The measurements show that a cardioid sub-array in the direction of play from 100 meters away simply behaves as a point source and declines by 6dB/ doubling of the distance. The idea that these systems "reach further" than other systems is therefore incorrect. These effects only occur in the nearby field up to about 50 meters (depending on the array size)." [119]

  Author's note: Further research is required here, as this finding is in direct opposition to what is known (from extensive research) about noise propagation from wind turbines [122].

- *Higher crossovers are preferable.* "In systems where a measurement difference x-over between sub-array and line-arrays was made at 80Hz or at 40/60Hz, the higher x-over points were found to score better each time. The sub-layer systems are also clearly less affected by the wind. This measure can therefore be considered effective." [119]

  Author's note: At stated above, this finding is open to debate as the published results are unclear on this point, where in some cases there is no observable difference between the tested crossover points. Further work is needed and should be linked to additional investigations looking into sound radiation control of ground versus flown subwoofer systems. At present there is insufficient evidence to make a clear recommendation.

- *The DJ fill matters.* "The test shows that DJ monitoring can contribute significantly to total emissions. As a result, the following 2 recommendations regarding the DJ monitoring can be made: 1 - If subwoofers are used, these must be implemented as cardioid stack behind the DJ. 2 - The DJ monitoring must be controlled by the FOH sound table at all times." [119]

These findings are already used to inform system design for large outdoor entertainment events taking place in Amsterdam. Contributors to this report have noted that Amsterdam already has a ban on flown subwoofer arrays to limit noise pollution. As this approach is in opposition to the discussion on audience sound exposure, an investigation is necessary to resolve this conflict. The results presented in this case study are inconclusive on this point.

5.6.3. National Bowl (Milton Keynes, UK)

An interesting case study can be drawn from an event at the National Bowl in Milton Keynes in 2010 [188]. The Bowl, which is a permanent structure, with a stage and hard standing areas, was originally classified by the local council as a "Other Urban and Rural Venue", using the terminology from the Noise Council's *Code of Practice on Environmental Noise Control at Concerts* (1995) [222]. This resulted in a maximum noise level being imposed of 65 dBA. Interestingly, the council didn't set clear off-site limits for this venue (unlike other major venues in the UK). Instead, an internal limit was set at the edge of the bowl, focused exclusively on low-frequency noise, as this was what most residents complained about. A survey of UK venue noise limits is given in Figure 5.17, for comparative purposes.

Venue	Internal Condition	Off-site Condition	Low frequency limit
Lancashire County Cricket Club	None	80LAeq	No
Heaton Park, Manchester	None	80LAeq	No
Hyde Park, London	None	75LAeq	No
Victoria Park	None	75LAeq	No
RDS Showground, Dublin	None	75LAeq	No
Twickenham Stadium	None	75LAeq	No
Hampden Park, Glasgow	None	75LAeq	No
Ricoh Stadium, Coventry	101LAeq	75LAeq	No
Don Valley, Sheffield	None	75LAeq	No
Portman Road, Ipswich	None	75LAeq	No
Madejski Stadium, Reading	None	75LAeq	No
St Marys, Southampton	None	75LAeq	No
Rosebowl, Southampton	None	75LAeq	No
Stadium of Light, Sunderland	None	75LAeq	No
The National Bowl	***Yes***	***No***	***Yes***

Figure 5.17 Survey of major UK venue noise limits [188]

Due to the noise limits imposed by the local council, the venue gained a reputation as being unusable by major touring acts. This came to a head when The Prodigy was booked to play the venue in 2010. The event would be the band's largest show ever and there was significant incentive to make it as good an experience for the audience (and band) as possible. UK-based consultancy, Vanguardia [333], was brought in to contribute to a legal case against the local council to get the venue reclassified with conventional noise limits [188].

The outcome of the case was that Vanguardia was able to prove that the venue should be reclassified under the "Urban Stadia and Arenas" label, which would raise the allowable noise limit from 65 dBA to 75 dBA. The council's argument that their venue was similar to those of Glastonbury and Knebworth was disproven, as Glastonbury operates all day, thus necessitating stricter noise limits, while Knebworth (and Glastonbury, for that matter) aren't stadia or arenas, but open fields in rural areas.

It was stressed that care must be taken not to confuse industrial noise limits with leisure noise limits, as industrial noise tends to be persistent throughout the year, thus imposing a potential health and safety risk as well as ongoing annoyance. Concerts are infrequent events, where there is no health and safety concerns for the local residents. The potential issue (as stated earlier in this report) is

annoyance, which can be (and is regularly) managed through effective communication with local residents in the run up to the event. Experience dictates that with these communication measures in place (as well as the infrequency of such events), local residents are much more accommodating than if the noise were originating from a permanent industrial source.

Ultimately, the local council had to adjust the venue's noise limits to be in line with UK regulations and standard practice. The restrictive low-frequency limit was removed and replaced with off-site noise monitoring in sensitive areas, as is standard for such venues hosting large events. Although the recommendations (and resulting changes) adopted an LAeq limit – justified based on the DEFRA Pubs and Clubs study [290, 298], which is in opposition to other research reviewed in this report – the outcomes should still be seen as positive where the venue's overly-prescriptive limits were normalized to match practice across the UK.

5.6.4. Victorious Fest 2014 (Portsmouth, UK)

Another example of noise assessment and management at UK festivals from UK-based consultancy, Vanguardia, was from Victorious Fest, held in Portsmouth in 2014 [187]. The festival consisted of a main stage, a big top tent stage and a smaller local act stage. The event was planned to run for two days from 10am until midnight.

Drawing again from the Noise Council's 1995 Code of Practice, it was clear that after 11pm the noise as measured externally to a noise-sensitive property must be no more than 45 dB (LAeq, 15 min) so that the music-based noise will be completely inaudible in the dwelling with the windows open for ventilation purposes. Other than during this last hour of the event, the limit was 65 dBA (LAeq, 15 min) as the venue was classified as "Other Urban and Rural Venue." The report gives a nice summary of noise limits at similar venues across the UK (reproduced in Table 5.4).

For the noise predictions, there was an assumed maximum level of 98 dBA at FOH (where 95 dBA at FOH was considered to be unacceptable for such events). The corresponding noise predictions for a worst-case scenario for all stages operating simultaneously are reproduced here in Table 5.5.

Victorious Festival	Main Stage (dBA)	Stage 2 (dBA)	Stage 3 (dBA)	Total (dBA)
9 Clarence Parade	57.3	58.6	46.8	**61.2**
Palmerston Court	64.8	63.4	51.7	**67.3**
53 Clarence Parade	69.0	64.1	56.1	**70.4**
Lennox Mansions	74.0	63.2	59.0	**74.4**
27 South Parade	72.2	59.2	54.1	**72.4**

Table 5.5 Worst-case scenario noise predictions with all stages operating simultaneously [187]

In this scenario, all but one measurement location is in breach of the 65 dBA limit, while all locations are well-above the 45 dBA post-11pm limit. Note that the data in Table 5.5 doesn't consider any attenuation effects from the surroundings, so these levels are unlikely to occur in reality.

Venue	Number of Concert Days per Year	Licence Condition	Additional Information
London			
Hyde Park	11 in 2012	75dBLAeq,5min measured 1m from the façade of any noise sensitive premises	
Victoria Park	5 in 2013	70dBLAeq,15min (75dbLAeq,15min at Waterside Close) measured 1m from the façade of any noise sensitive premises – Now 75dB LAeq,15min at all locations	Low frequency limit removed from previous events
Trafalgar Square	40 events with amplified music	75dBLAeq,5min measured 1m from the façade of any noise sensitive premises	
Clapham Common	4 approx	Up to 71dBLAeq,15min depending on monitoring location. Based on background noise level.	Additional Low Frequency Limit
Central Park, East Ham	4 in 2007	75dBLAeq,15min measured 1m from the façade of any noise sensitive premises	
Kennington Park	Unknown	Up to 72dBLAeq,15min depending on monitoring location	Additional Low Frequency Limit
Streatham Common	Unknown	Up to 72dBLAeq,15min depending on monitoring location	Additional Low Frequency Limit
Brockwell Park	Unknown	Up to 70dBLAeq,15min depending on monitoring location	Additional Low Frequency Limit
Regents Park	Unknown	Up to 69dBLAeq,15min depending on monitoring location	Low frequency assessed but no limit set
Crystal Palace Park	No longer used	75dBLAeq,5min measured 1m from the façade of any noise sensitive premises	
Other UK Venues			
Platt Fields	2 in 2012	Not to cause a nuisance. A limit of 75dBLAeq,15min measured 1m from the façade of any noise sensitive premises has been adopted for the event	
Bestival	3	75dBLAeq,15min measured 1m from the façade of any noise sensitive premises until 0000hrs	
Isle of Wight Festival	3	75dBLAeq,15min measured 1m from the façade of any noise sensitive premises until 0000hrs	
V Festival Telford	2	70dBLAeq,15min measured 1m from the façade of any noise sensitive premises	Limit increased from 65dBLAeq,15min from previous events
Heaton Park, Manchester	3 in 2012	80dBLAeq,15min measured 1m from the façade of any noise sensitive premises	
The Den, Teignmouth	2	84dBLAeq,15min measured 1m from the façade of any noise sensitive premises	
Reading Festival	3	68dBLAeq,15min (70dBLAeq,15min for last 2 acts each day) measured 1m from the façade of any noise sensitive premises	Limit increased from 65dBLAeq,15min from previous events
Milton Keynes National Bowl	2 in 2011	75dBLAeq,15min measured 1m from the façade of any noise sensitive property	Low frequency limit removed from previous events
Godiva Festiva, Coventry	3	70dBLAeq,15min (68dBLAeq,15min on Sunday) measured 1m from the façade of any noise sensitive premises	Limit increased from 65/60dBLAeq,15min from previous events
Mercedes Benz World, Weybridge	3	70dBLAeq,15min at the nearest noise sensitive premises	
South Park, Oxford	1	75dBLAeq,5min measured 1m from the façade of any noise sensitive premises	
Warwick Castle	Approx 3	70dBLAeq,1min measured 1m from the façade of any noise sensitive premises	
Bellhouston Park, Glasgow	3 in 2013	75dBLAeq,15min measured 1m from the façade of any noise sensitive property	

Table 5.4 Noise limits set by various similar venues across the UK [187]

Additional predictions were generated for more likely scenarios (with attenuation sources included), showing that most measurement locations will be within the stated limits. To ensure the noise impact is limited the consultancy advised that all sound systems be flown and directed down towards the audience with as narrow as possible horizontal dispersion pattern (while still adequately covering the audience area). It is assumed that this includes the subwoofer system, which is in direct contrast to the case-study from Amsterdam where flown subwoofers were strongly discouraged, due to the likelihood of low-frequency noise propagation due to varying meteorological conditions (although it must be re-emphasized that the results from the Amsterdam study were inconclusive on this point).

The key recommendation is how to effectively communicate with local residents. This is a feature of all of Vanguardia's work, where residents are notified in advance of the event and given information about a hotline to call during the event to report any issues. This process (and how it feeds back to those controlling the sound system) is reproduced here in Figure 5.18. Adopting such practice has shown at past events to significantly reduce complaints, allowing for large-scale outdoor events and local residents to exist in relative harmony (provided the events are infrequent, of course).

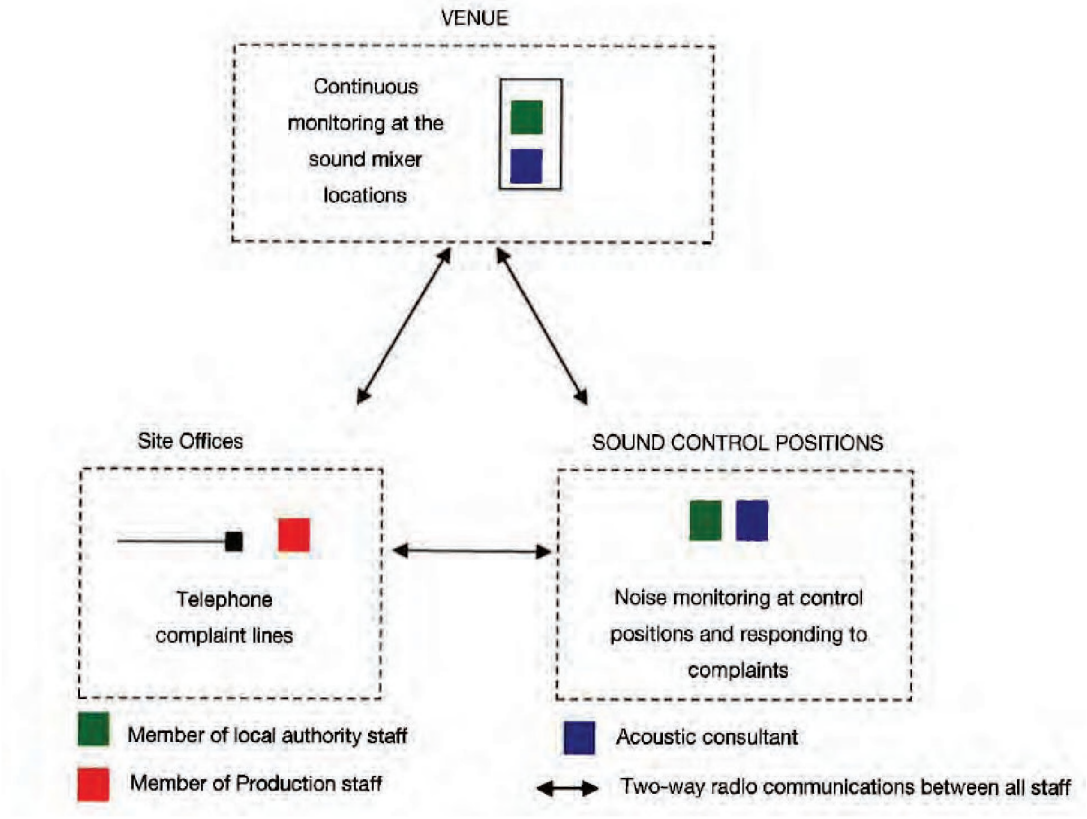

Figure 5.18 Diagram of communication channels during the event [187]

5.6.5. Colorado State University (Fort Collins, CO, USA)

Colorado State University planned to build a new football (a.k.a. American football) stadium on their campus in 2014 and conducted a study of the potential noise pollution that could arise due to the new stadium. All information in this section is taken from their published report [334].

Noise predictions were carried out using SoundPLAN [313] for both sporting event and concert scenarios. While the sporting events won't be discussed here, it should be noted that they had planned to install a distributed sound system to avoid noise pollution in local residential areas (the closest of which is directly across the street). The proposed stadium is a horseshoe shape (it has one closed end and one open end), meaning that any residences in the path of sound emitting from the open end of the stadium could receive problematic noise levels.

The university wasn't legally required to follow local Fort Collins noise limits but, in an effort to be good neighbors, would do their best to abide by the regulations. For Fort Collins, residential areas should be exposed to no more than 55 dBA and 50 dBA during the day and night, respectively. This is roughly in line with regulations reviewed in Section 4 of this report.

The consultants also noted that the US Department of Housing and Urban Development's (HUD) recommended noise limit was 75 dBA during the day (L_{dn}). This highlights the disjunctive nature of US noise regulations, whereby local communities impose strict limits (in line with most of the world), but the federal government's published limits are extremely relaxed.

For the noise predictions, the consultants assumed an average of 22 dB outdoor-to-indoor attenuation, which resulted in a worst-case scenario of 53 dBA inside a residence due to a concert at the stadium (corresponding to roughly 75 dBA at the property line). The predictions over the event duration as well as the entire day (L_{dn}) for both possible stage locations in the stadium are reproduced in Figures 5.19 – 5.22.

The primary finding from the predictions is that for concerts, the stage should always be positioned facing away from the open end of the stadium to avoid excessive noise levels in the surrounding areas. The conclusion of report, though, is slightly ambiguous as it states that the predicted noise levels are in clear breech of the local regulations (and reiterates that the university is committed to being a good neighbor). It states that it is expected that the local residents will grow accustomed to the events at the stadium over a year or so of operation and it will become part of local life and points out that the noise predictions are roughly within the US HUD guidelines. This is a good example of the issues with US noise regulations. In this case, the authors of the report may well be correct that the noise from the stadium won't be seen as a problem, but it is a risky approach.

Near the end of the report, however, the author does note that if concerts are deemed to be an issue, a system can be implemented where each concert has to apply for an individual operating permit, which then allows for the local community to prohibit a proposed event. Even if this doesn't come to fruition, the recommended approach is to limit the number of concerts at the stadium to a handful per year (similar to the UK guidelines).

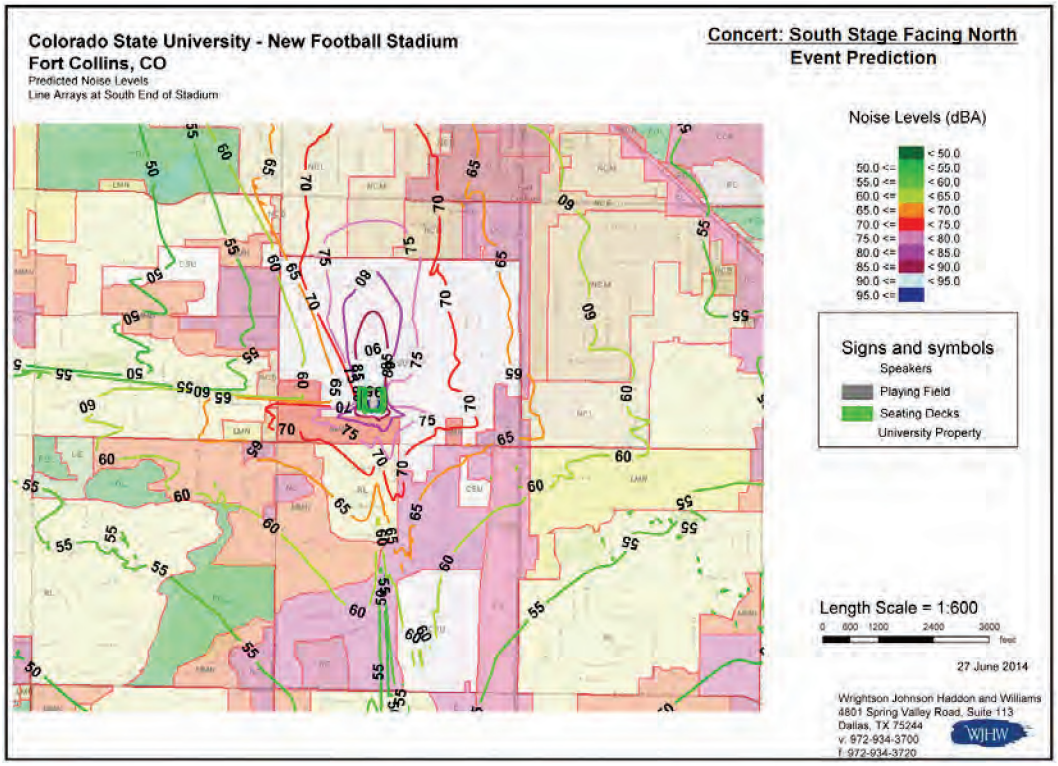

Figure 5.19 Noise prediction over a concert duration with a south stage location, facing north [334]

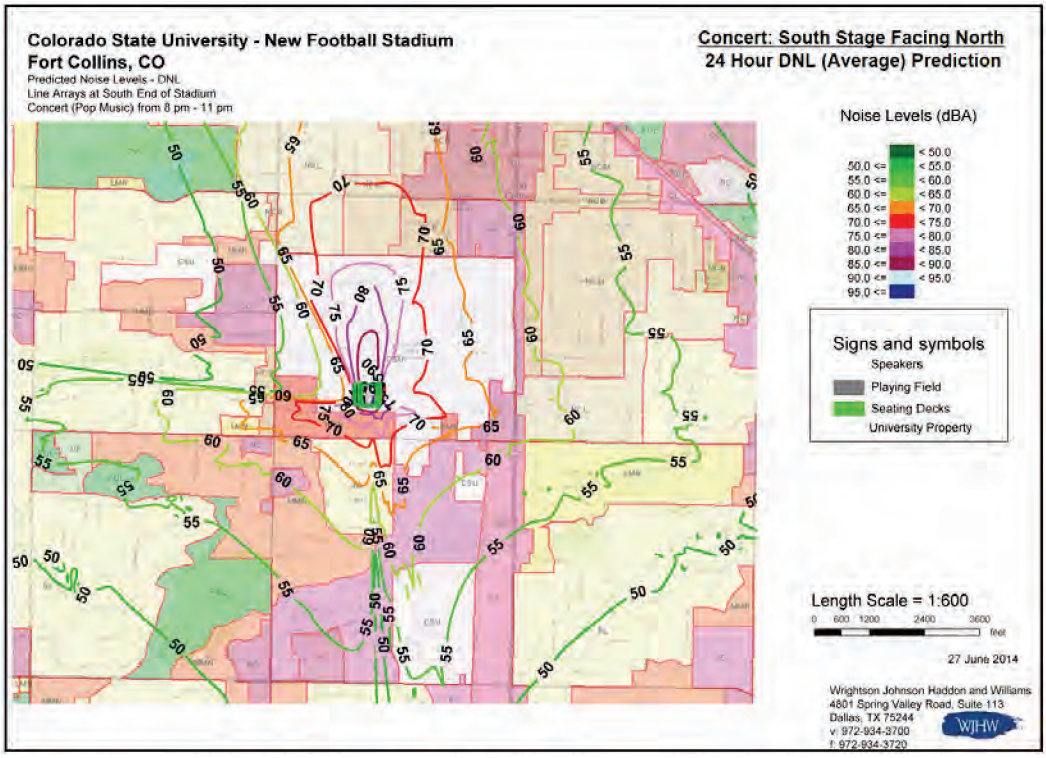

Figure 5.20 Noise prediction over a day (Ldn) with a south stage location, facing north [334]

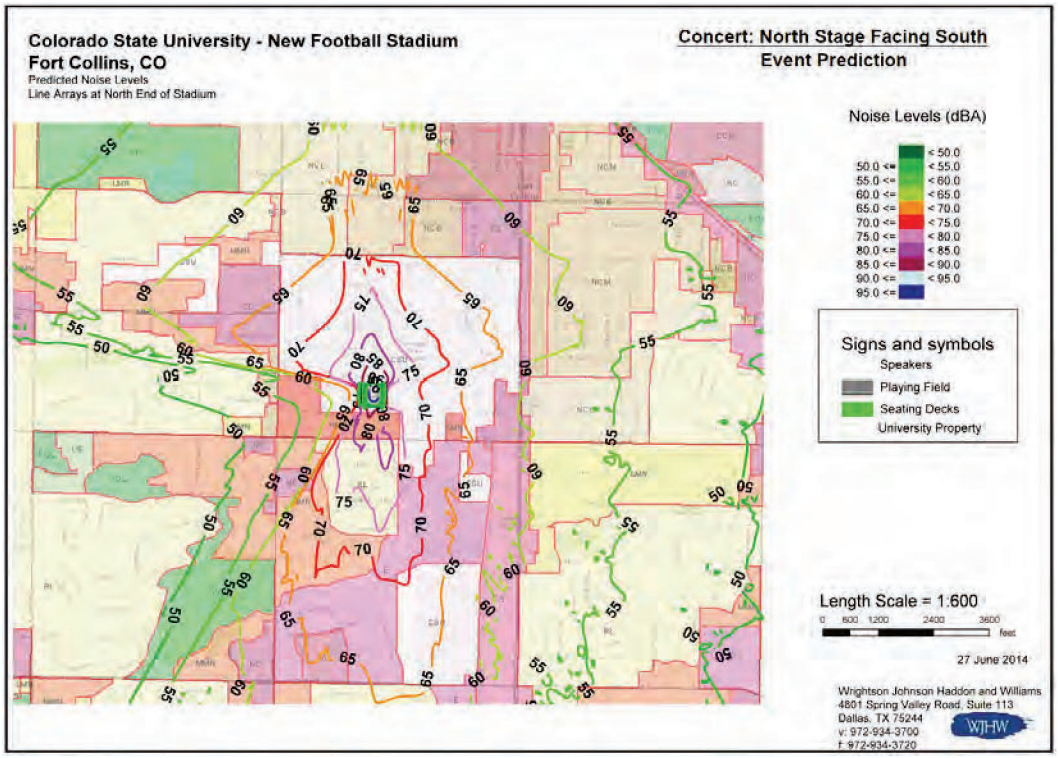

Figure 5.21 Noise prediction over a concert duration with a north stage location, facing south [334]

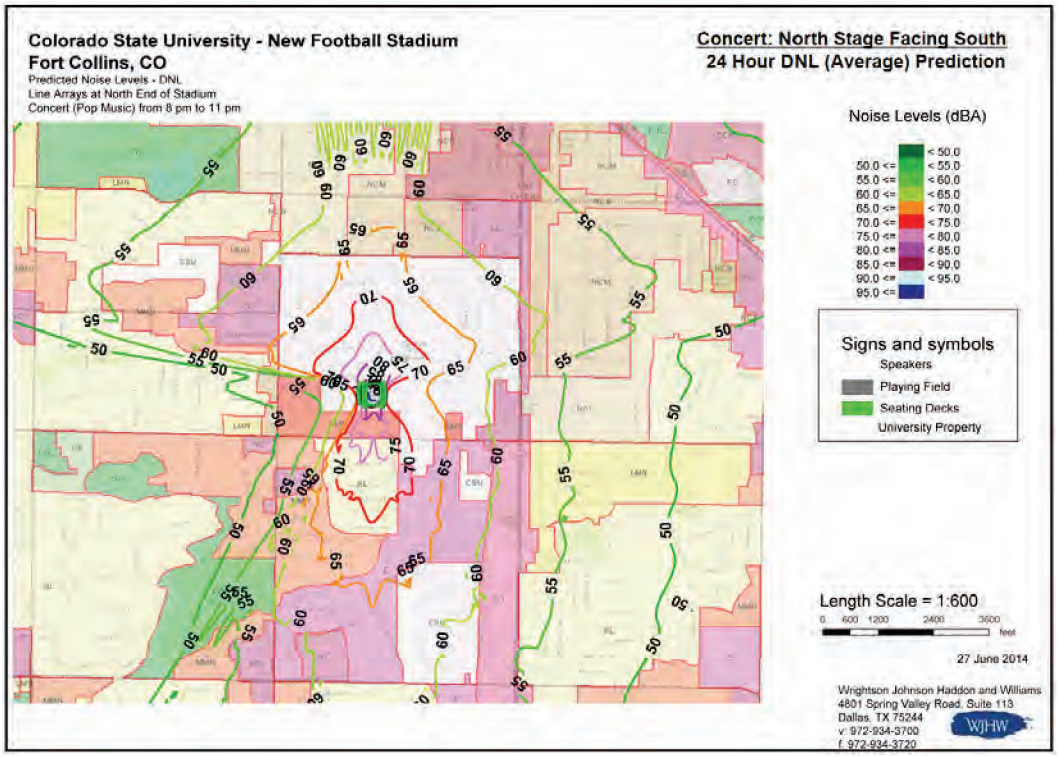

Figure 5.22 Noise prediction over a day (Ldn) with a north stage location, facing south [334]

5.6.6. Pitchfork Music Festival 2019 (Chicago, IL, USA)

A recent case study conducted by some of the contributors to this report focused on applying the experimental technique used in the Australian indoor music venue study in [330, 331] to determine if similar trends would be observed at a large outdoor music festival [21]. The experiment took place on the two main stages at Pitchfork Music Festival in Chicago, Illinois, USA near the end of July, 2019. On one of the stages (labeled the Red Stage), sound engineers had sight of sound level monitoring software (10EaZy) giving information on the current mix level in comparison to the set festival limits (96 and 100 dBA LAeq, 5 min for support acts and headliners, respectively). The other stage (labeled the Green Stage) had no sight of the sound level monitoring software, but the software still logged data from that stage with the same level limits.

Both stages had nearly identical sound systems (with the exception of different subwoofer models used in the ground-based subwoofer arrays) allowing for acceptable comparisons between the measurement data. In addition to the front-of-house (FOH) sound levels, audience distribution and density were tracked along with music genre and engineer type (house or band engineer). Measurements at various positions in the audience were taken prior to the start of the festival to allow for indirect tracking of audience sound pressure levels throughout the event. This data would be critical in determining the extent of audience sound exposure at such an event.

The raw FOH sound level data is reproduced in Figure 5.23. The data shows that with sound level monitoring, the level limits were exceeded roughly 3% of the total "live" time on the stage, while without the software, the level limits were exceeded roughly 38% of the time.

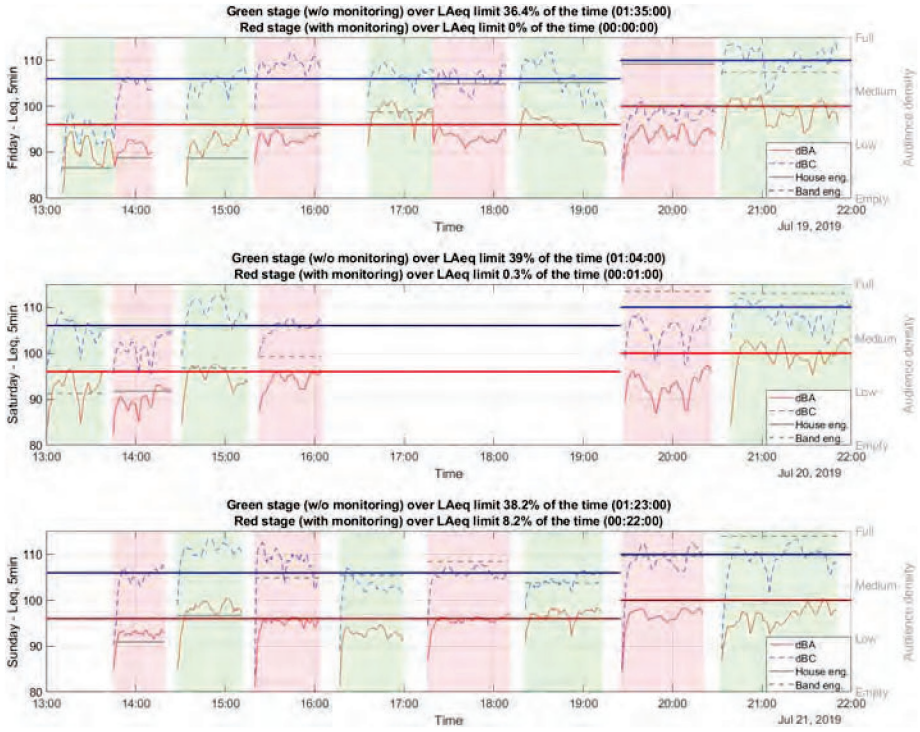

Figure 5.23 FOH sound pressure level data over the course of the festival [21]

An interesting consequence of engineers mixing to the limit with the sound level monitoring software was that the dynamic range (quantified as LA10 – LA90 averaged over 1 second) decreased by more than 3 dBA (Figure 5.24). C-weighted dynamic range showed no significant change. The A-weighted change was due to two primary factors: first, that the level monitoring used A-weighting

therefore changes to low-frequency content would have less impact on the measured levels. Second, the subwoofer system was driven by a mono auxiliary send from the mixing console. When engineers saw they were in breach of the level limits, it was observed that they always decreased the level of the main left/right send and never touched the separate subwoofer send. This would therefore impact the A-weighted levels, but leave the C-weighted levels untouched. The impact this had on the audience listening experience is at present unknown. Further research is required to determine the just noticeable difference in dynamic range at such events (for A- and C-weighted measurements) before the audience notices a change in sound quality).

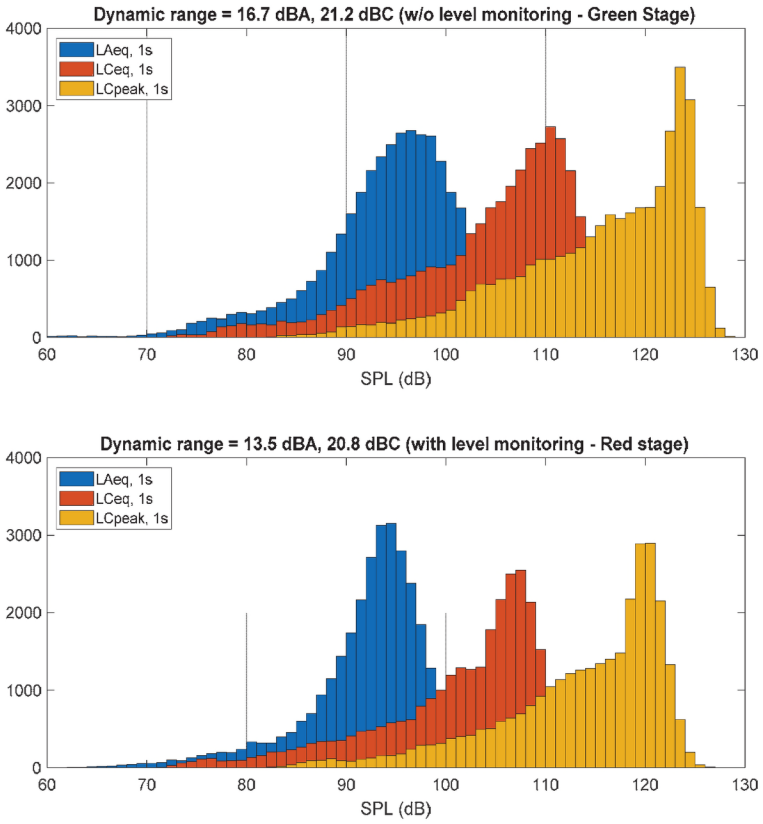

Figure 5.24 Calculated dynamic range for the Green Stage (top) and Red Stage (bottom) [21]

The audience exposure throughout the festival was tracked using the pre-festival audience measurements (relative to FOH) where the front-center audience location was estimated for sound exposure. Peak C-weighted values (averaged over 1 second and 5 minutes) were determined and are reproduced here in Figure 5.25. The data shows that the front center portion of the audience regularly was exposed to peak C-weighted sound pressure levels between 120 – 130 dBC (5-minute moving window average) and experienced absolute peaks of approximately 140 dBC (1-second averaging) each day of the festival. Based on the discussion in Section 2 of this report, such levels are beyond safe limits for low-frequency sound exposure, where foam ear plugs can't provide any meaningful protection. This data (not the first to show this, it must be noted) should be viewed as a warning sign that ground-based subwoofer systems are indeed exposing portions of the audience to dangerous sound levels and therefore pose a health and safety risk.

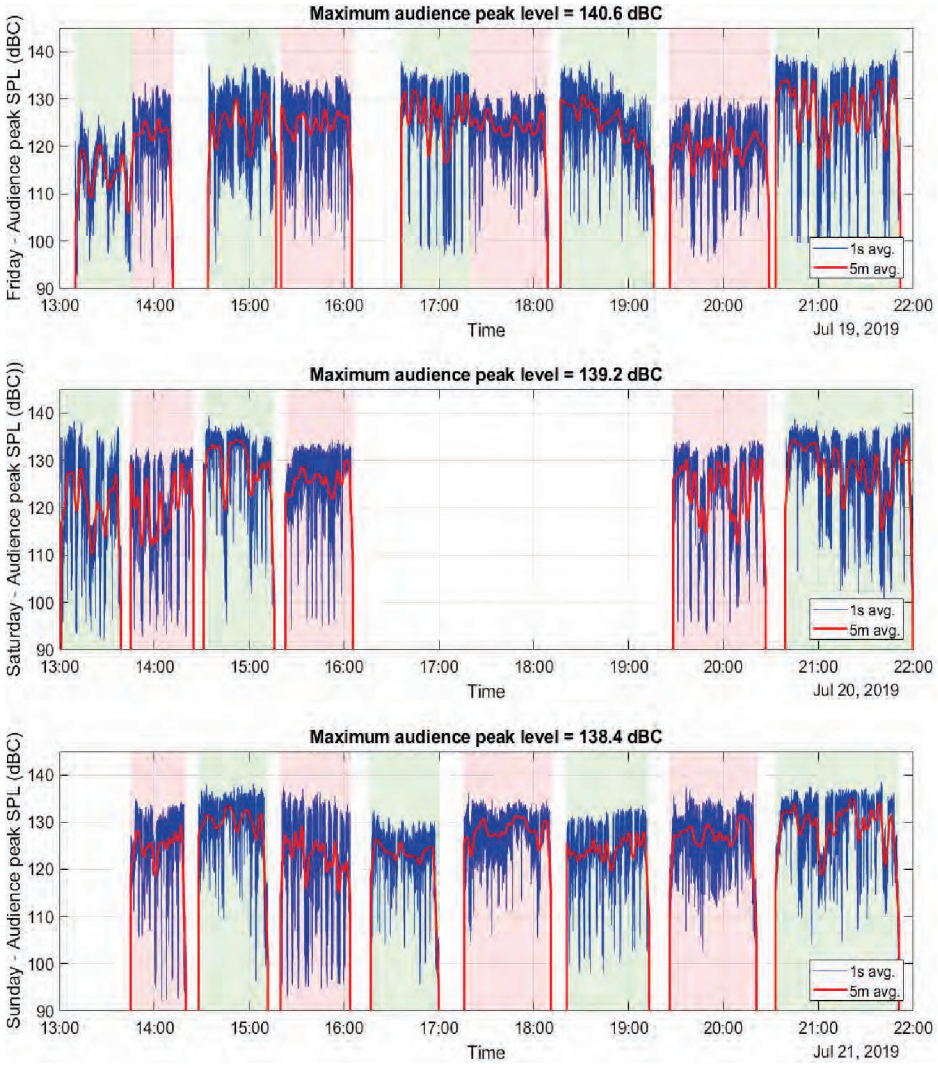

Figure 5.25 Estimated peak audience levels (dBC) during the festival [21]

The data showed that use of noise monitoring software caused a statistically significant reduction on sound level (relative to the set limits) of approximately 2 dB. Crowd size and engineer type (house or band) produced a statistically significant effect on absolute sound level. No factor showed a statistically significant impact on dynamic range (although the use of sound level monitoring software came very close). No statistically significant interaction between factors was identified.

As this is a case study involved a single festival, the findings should be used with caution. Nevertheless, the results suggest further work is needed to inform ways to simultaneously provide a safe festival experience for both audience and staff members while minimizing annoyance in the local community.

5.6.7. Case studies summary

This review reveals the extent of the problem with management of sound exposure and noise pollution from outdoor entertainment events. Practice varies greatly over the included case studies with some of the implemented solutions directly in opposition to the research detailed in the previous sections of this report. The differences primarily concern the use of A-weighting in regard to low-frequency noise pollution as well as with aspects of system design for limited noise pollution.

Common to some of the case studies is the emphasis on importance of effective communication. The process of pre-warning local residents of upcoming outdoor events, with the inclusion of a noise hotline they can call during events if there is an issue, goes a long way in limiting complaints. This ties into the previously-discussed research in this area showing that noise is perceived as less annoying when the listener believes they have some control over the offending noise [185]. In this case the noise hotline gives residents a direct line of communication to the event staff. While it's not guaranteed that phoning the hotline with result in any change to the event's sound system operation, it is likely that the simple act of listening to concerned residents will go a long way to limit annoyance and the corresponding complaints.

While noise regulations and measurement and monitoring practice aren't yet based on unbiased scientific evidence, this human-centered approach to managing noise pollution issues can and should be adopted by organizers of large events. This will be discussed further in Section 6.

6. Noise suppression techniques

Previous sections of this report have focused on national and local noise regulations, audience sound exposure levels, prediction/measurement/monitoring practices, and illustrated these using a collection of case studies. Techniques for actually suppressing noise pollution in surrounding areas (or at nearby stages at music festivals) will now be considered. Simply turning down the level is currently a common approach to dealing with the problem (often targeting specific 1/3 octave bands), but it must be stressed that this isn't the only option. In many cases it isn't the best solution. The dual goal here is to minimize noise propagating to local residential areas and delivering consistently high-quality and appropriate listening experiences for all audience members.

This section will first discuss venue configuration options for limiting noise pollution, some of which have already been highlighted previously in this report. This will be followed by an extended discussion on cutting edge developments into so-called secondary sound systems which are usually set up on the perimeter of outdoor entertainment events for the sole purpose of cancelling low-frequency sound before it exits the event grounds. Lastly, it is critical that any deployed noise suppression technique doesn't degrade the audience experience. This will be the focus near the end of this section. Noise control solutions that negatively impact the audience experience can't be considered appropriate.

6.1. Venue and sound system configuration

A considerable number of noise pollution issues can be resolved by intelligently configuring an outdoor venue. Accurate computer modeling of the sound system design during planning stages is critical. Without this, it will be nearly impossible to efficiently and effectively control noise on-site and off-site during an event.

Common practice dictates experimenting with stage orientation within computer models in order to achieve four primary goals for multiple stage music festivals:

1. Minimize noise pollution to surrounding noise-sensitive off-site areas.
2. Minimize noise pollution to other stages and designated quiet areas on-site.
3. Maximize allowable sound levels at FOH.
4. Ensure all audience members are protected from over-exposure to sound.

Items (1), (2) and (3) can be largely controlled by proper orientation and location of performance stages and suitable sound system configuration. Point (4) is only dependent on the sound system configuration.

Stage orientation must be considered for addressing points (1) and (2) on the above list, as this will affect noise off-site (annoying residents) and on-site (annoying the audience, staff and musicians and other stages). Simply rotating the stage 90° can mitigate noise issues in a particular area, although care must be taken that addressing noise in one area doesn't negatively affect another area. This situation was encountered by the consultant working on Reading Festival in the UK [335], where the 90° rotation caused more issues that it solved.

Stage orientation alone can't address noise issues. Sound system configuration is essential in this area. Various aspects of this have already been addressed in Section 3 of this report. Straightforward design considerations such as physically or electronically steering flown systems so that coverage terminates at the back of the audience area are achievable for most medium- to large-scale scenarios, provided the line arrays can be flown sufficiently high that loudspeakers don't radiate parallel to the ground plane. It is essential to understand that a sound system's throw will vary

throughout the course of an event due to dynamic meteorological conditions, so system design based on idealized conditions will never be completely impervious to noise issues.

The underlying control factor for sound systems used at outdoor events is the sound power level used to achieve the required audience sound level and coverage pattern. Sound power level refers to the absolute energy output of the sound system, with no consideration of propagation distance. The sound power level required for a given event will largely depend on the effectiveness of the system design. A sound system that directs the majority of its energy at the audience and away from noise-sensitive areas will require less overall sound power than a system that is less directive, wasting much of the energy on non-audience areas. It is therefore essential to focus on minimization of sound power level when designing a system. This will result in lower off-site noise pollution and in general a more efficient and effective sound system design.

Advanced signal processing functions can be useful here, such as d&b audiotechnik's Array Processing [312] or L-Acoustics Soundvision (including Autosplay, Autofilter and Autoclimate functions) [123]. With these (and similar) approaches, various audience distribution and weather conditions can be pre-set or continuously adjusted to suggested settings on the system. With a press of a button the system can be reconfigured electronically to restore the intended frequency response and coverage pattern. For example, this could be due to the audience only filling the first half of a field early in the day (therefore deeming the top half of the line array unnecessary) or temperature and humidity shifts causing changes in sound propagation (including effects due to sound refraction from temperature gradients). Such functions are becoming increasingly used in practice.

It should be noted that most loudspeaker manufacturer-provided software will only be reliable within the limits dictated by the geometry of the audience plane and the sound system elements' rigging height and dimensions. A rule of thumb used by some in industry is that the rigging point for any line array should be at least three times the length of the array to ensure the software-based predictions are within an acceptable margin of error. The software will often recommend attenuating the bottom loudspeakers in a long array flown at a low height to give an even audience coverage. This may be acceptable in the near field, but such a configuration causes a significant amount of energy to propagate parallel to the ground plane. Refraction due to temperature gradients is likely to cause this sound to curve upwards, resulting in poor audience coverage at the rear of a venue and off-site noise pollution issues.

In many cases the solution is to use a shorter line array to ensure precise sound field control is achievable in practice. This precision of sound field control is particularly important when holding events in large marquee structures, to avoid directing significant sound energy towards the structure, which will result in problematic reflections inside and re-radiation of particular low-frequency bands outdoors.

One additional option that has been used for indoor and quasi-outdoor venues in recent years is using variable acoustic technology in the form of low-frequency absorption [336]. Large inflatable thin plastic membrane tubes can be installed in venues to increase low-frequency absorption. The membranes can be inflated or deflated, depending on how much absorption is required. An example application for the Eurovision Song Contest in 2014 is given in Figure 6.1.

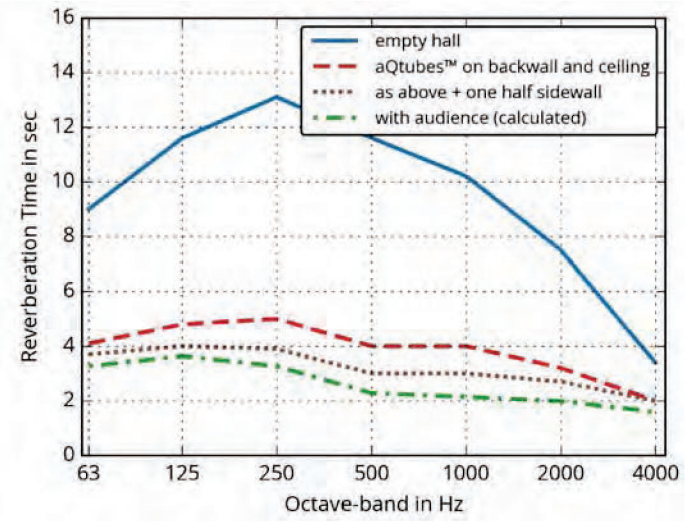

Figure 6.1 Reverberation time due to inclusion of variable acoustic technology for low-frequency absorption (applied to roof, rear wall and half of the side walls) [336]

Placement is usually on the roof, but they have been deployed on rear and side walls as well as behind stages to minimize rear-radiation to empty areas of a stadium. One deployment was for a popular music concert at Amsterdam Arena, where the arena has a partial glass roof that can be opened. The tube absorbers were installed in the roof areas surrounding the glass roof as well as behind the stage to minimize sound propagation into the empty (and highly reflective) portions of the arena (Figure 6.2). Application of the technology in this instance was shown to reduce low-frequency reverberation times by 50% or more from their original peak values (when the venue is empty) (Figure 6.3).



Figure 6.2 Example application of low-frequency tube absorbers at Amsterdam Arena [336]

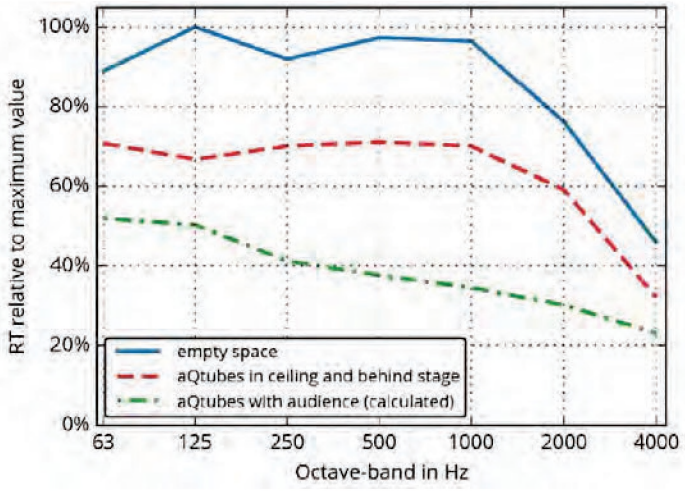

Figure 6.3 Resulting reverberation time reduction (based on original empty arena measurements) in Amsterdam Arena with the additional low-frequency absorbers installed [336]

While this technology is focused on indoor venues, there are some suggestions that it can assist with noise issues for at least quasi-outdoor venues (such as with the previous example). Limiting low-frequency reverberation in large venues will ultimately limit noise spilling out of the venue into the local environment (as well an increase the perceived quality of sound on-site – as discussed in Section 2). With reverberation under control, attention can be devoted to the direct sound, where the task will be much more straightforward to avoid radiation off-site. For completely outdoor events, though, the issue of wind is likely to prevent adoption of this technology, as it would be expected that the tubes would act as large sails, placing unsafe loads onto temporary structures.

The stage structure itself can play a large role in sound propagation. Experience by the primary author of this report has found that non-acoustic transparent stage skirts can degrade a ground-based subwoofer system's cardioid response, causing greater sound levels in noise-sensitive areas or in some cases diminished levels in the audience. A similar effect (in terms of loss of cardioid response) can be caused by subwoofer placement underneath a stage. This has been investigated in previous research [337] with results independently replicated in [338] and [339], where the work in [338] makes clear that stage "catwalks" will also result in a similar loss of directionality. The key experimental findings are reproduced in Table 6.1 and Figure 6.4. The findings from [338] are also reproduced in Figure 6.5.

An important question has been posed by an industry expert on this subject, asking if the stage structure diminishes the subwoofer system's directivity in the audience area – is the same effect seen off-site or is it more of a local effect? This question requires further research to answer.

Additionally, it was demonstrated in a case study included in Section 5.6.2 that providing shielding to the rear-moving sound energy from flown line arrays (in this example with shipping containers) can provide improved noise control. In reality, this can be achieved with part of the stage structure in combination with use of a cardioid pattern line array, such as Nexo Geo-T [340] or d&b SL-series [341] with cardioid subwoofers or alternatively a combination of a standard broadband line source and a subwoofer array such as an L-Acoustics K1 and K1-SB [342].

In the case of using shipping containers to control off-site noise in the rearward direction to the sound system, care must be taken to avoid any significant acoustic slap-back (reflection) propagating back through the stage area to the audience, thus interfering with sound coverage consistency. Alternatively, it has been found that straw bales and trackway baffles can provide a level of acoustic

absorption/insulation when placed in appropriate areas to avoid sound propagation off-site. These methods tend to be most effective at higher-frequencies, but can have a modest effect at low-frequencies provided they are deployed appropriately.

Configuration	Small stage		Large stage	
	39 – 110 Hz	20 – 300 Hz	39 – 110 Hz	20 – 300 Hz
Under stage	-5.43 dB	-6.06 dB	-6.40 dB*	-5.63 dB*
On top of stage	-6.40 dB	-3.97 dB	-3.28 dB	-3.15 dB
In front of stage	1.34 dB	1.41 dB	0.92 dB	2.78 dB

Table 6.1 Mean front-to-back sound pressure level difference for each tested configuration (using the no stage configuration measurements as a reference) (* modeled data due to stage height restrictions) [337]

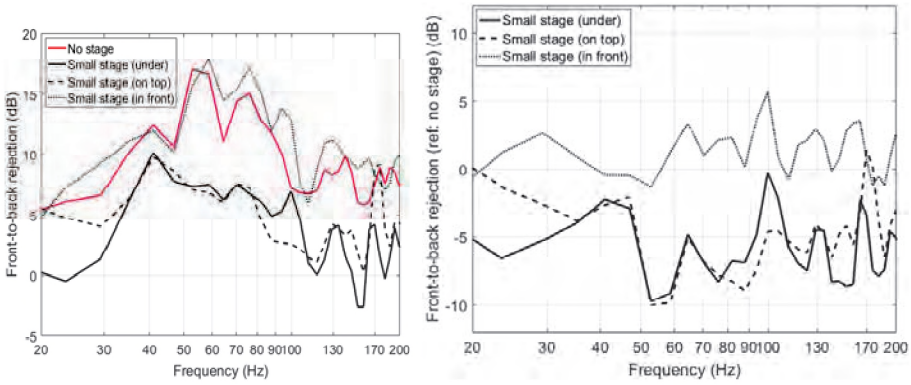

Figure 6.4 Comparison of front-to-back rejection for each of the subwoofer locations (left = direct comparison to stage-less configuration, right = deviation from the stage-less configuration) [337]

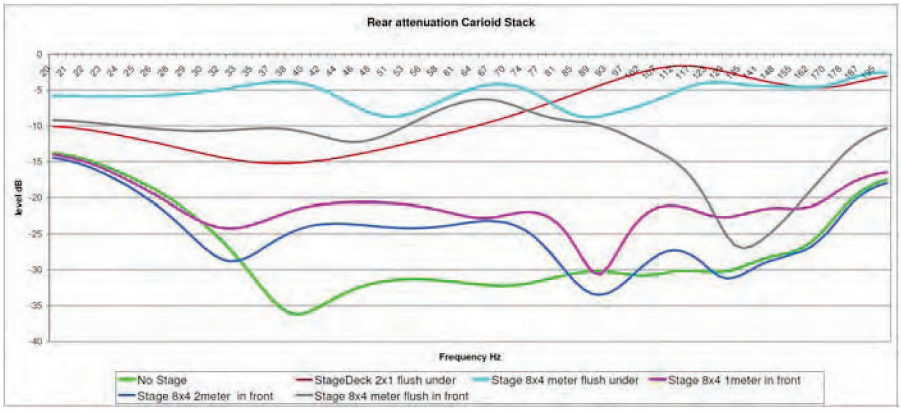

Figure 6.5 Modeled front-to-rear rejection of a cardioid subwoofer for various configurations [337]

As an extension to the case-study presented in Section 5.6.2 (from Amsterdam), further study of the effectiveness of shielding materials behind a sound system was conducted using BEM software. The key findings are shown in Figure 6.6 [338].

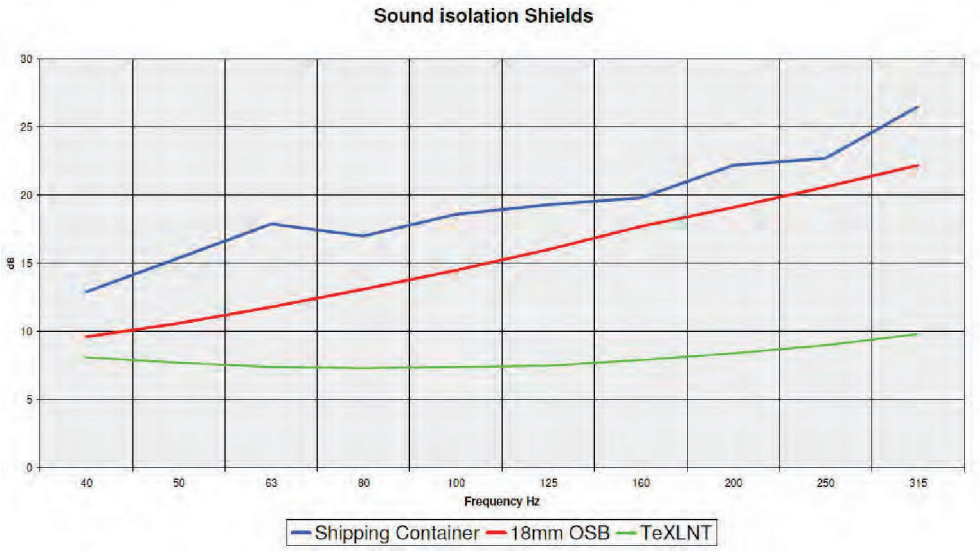

Figure 6.6 Frequency-dependent effectiveness of the three tested shielding materials from the BEM-based study in [338]

The use of shipping containers was shown to be most effective across the subwoofer band (tested from 40 – 315 Hz in this instance), followed closely by 18mm wood paneling affixed to the stage structure directly behind the PA. Proprietary modular low-frequency baffling [343] was found to be least effective, although it should be noted that the deployment of these baffles doesn't detract from the look of the stage (the baffles fit around the sound system and are colored black).

In all cases it was found that placing the shielding as close to the sound system as possible will maximize effectiveness. It should be noted that this data is based on a BEM model, therefore material properties (especially in terms of reactance) may not be accurately modeled. The aforementioned slap-back issue must also be considered. The research in [338] was focused only on the geometry of the various shielding materials. Further work is needed in this area to confirm the results in Figure 6.6 are accurate.

Some additional observations from the study in [338] should be noted. First, is the diffractive effect of the edges of shielding materials. In all cases, sound radiation to the sides of the stage area was increased, while the rear-moving sound radiation was decreased. One solution to this issue would be to deploy shields with rounded edges, although in terms of practicality this isn't necessarily possible as shipping containers with rounded edges don't exist. Alternative shielding structures may be more suitable for such applications.

The study in [338] also notes the destructive interference effect of the reflection off the shielding structures in the forward-moving direction, resulting in lower sound pressure levels in the audience area (thus lowering system efficiency). This has the potential to significantly impact sound quality in the audience and should be carefully considered when choosing noise shielding methods.

If using cardioid subwoofers (or clusters to achieve a cardioid pattern), it must be understood that (as with placing subwoofers underneath a stage), placing such sources very close to a large shielding structure will result in the loss of the cardioid pattern [338]. In this study, it was shown that a cardioid subwoofer system placed in front of a shielding material resulted in a polar response nearly identical to that of an omnidirectional subwoofer system. As most noise pollution complaints arise due to low-frequency content, this raises a problem. In terms of system design, cardioid subwoofers are regularly used to limit sound levels on stage, but if a large shield is put into place, this may

negatively impact this (especially where the subwoofers are flown, where they will be closer to the shield, resulting in a more pronounced degradation of the cardioid pattern).

Similarly, if subwoofer arrays are to be flown along with the main line arrays, electronic steering can be used to direct the sound energy to the audience, avoiding forward radiation off-site. In this instance, cardioid subwoofers would be appropriate. This is simply demonstrated in Figure 6.7. If possible, the absorbing tubes from [336] can be installed, if the stage structure permits it, to further minimize rear-going sound radiation.

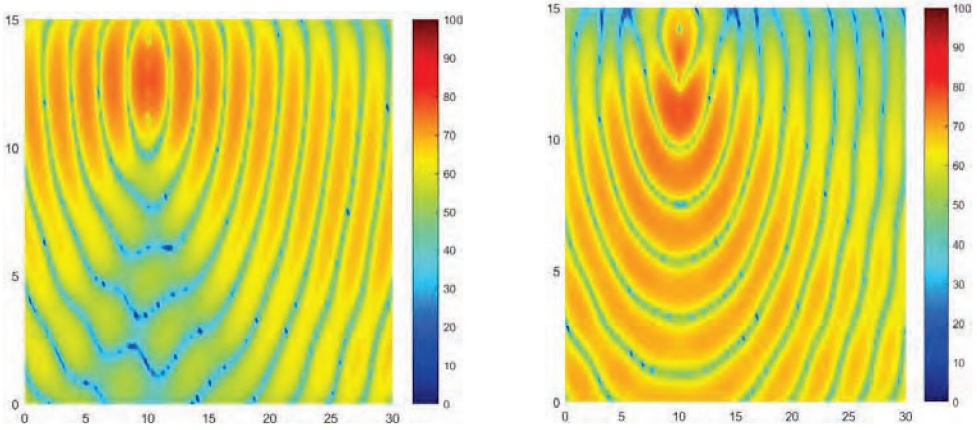

Figure 6.7 Vertical coverage pattern of a flown vertical array (four omnidirectional units with one meter spacing) without steering (left) and with steering – focused at 20 m into the audience (x- and y-axes are length and height of the venue (m), respectively) [117]

By implementing these relatively straightforward techniques during the planning stage of an outdoor event, there will be a much higher likelihood of a smooth-running event with few noise complaints from local residents or engineers/musicians at other on-site stages.

6.2. Bandwidth extension

An unconventional approach to noise suppression due to large-scale outdoor entertainment events is based on current trends in the industry to incorporate subwoofers capable of infrasound reproduction into primary sound systems [43, 106, 109]. The question posed was whether bandwidth extension (in the downward direction with the use of infrasound-capable devices) results in a perceived increase in loudness. If this were shown to be the case, then the overall subwoofer system could be operated at a lower level while maintaining (and possibly enhancing) the audience's listening experience (which includes a strong tactile element). This would alleviate pressure on the FOH engineer to keep within the specified sound level limits, as the subwoofer system would be operating with lower output.

This hypothesis was investigated through a series of in-situ listening tests conducted during the European leg of The Prodigy's 2017 tour, by the band's FOH engineer, Jon Burton (who is a contributor to this report). The findings were reported in [106, 109] and will be summarized here.

The listening tests were carried out at three sites, all 10,000+ capacity arenas with the tour's L-Acoustics V-Dosc system [94] and d&b audiotechnik subwoofer system (consisting of B2 subwoofers [334] and J-Infra subwoofers [345]). The system is depicted in Figure 6.8.



Figure 6.8 Primary sound system used for the listening tests including the main line arrays (A), the standard bandwidth subwoofers (b) and infrasound subwoofers (C) [109]

The standard bandwidth subwoofers had a lowpass filter applied at 90 Hz while the infrasound subwoofers were low-passed at 54 Hz with a 6 dB boost applied at 35 Hz. The overall subwoofer array was optimized to give a consistent coverage pattern horizontally across the audience area using d&b's ArrayCalc software [314]. All subwoofers were located at ground level. Magnitude responses for the three separate system elements are reproduced in Figure 6.9.

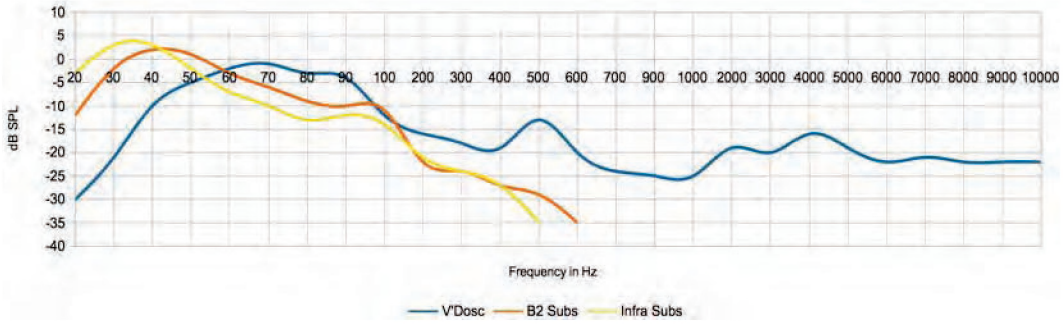

Figure 6.9 Magnitude responses for the main line arrays (blue), standard bandwidth subwoofers (orange) and infrasound subwoofers (yellow) [109]

The listening tests were conducted in two stages. In both stages, participants were told to listen to playback of one out of three selected test tracks (of popular music) and adjust the subwoofer system level until they were happy with the playback level. The participants were only presented with a single control for this purpose and there was no indication given of the corresponding measured sound pressure level (which was tracked using 10EaZy [310]).

The first stage of the test included only the standard-bandwidth subwoofers activated. The second stage of the test included all subwoofers (standard-bandwidth and infrasound). The preferred listening levels were then compared between the two stages. The results from the test (separated by music genre of the test signal) are reproduced in Figure 6.10.

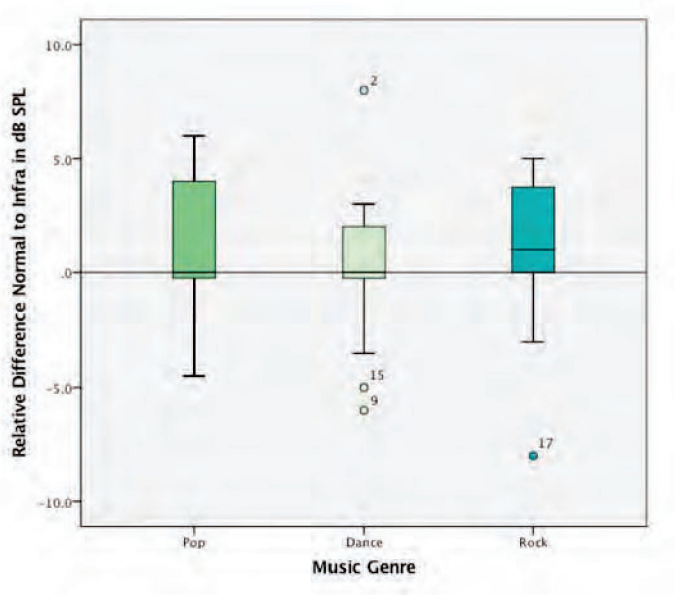

Figure 6.10 Listening test results for extended bandwidth subwoofer system investigation in [109]

Data in Figure 6.10 indicate the difference in preferred playback levels between the standard-bandwidth and extended bandwidth systems. Positive values indicate that the extended bandwidth system (with the infra subwoofers) was played back at a lower level than the standard bandwidth system.

The results from this study give indication that there may be a trade-off between perceived loudness and bandwidth. In this case, the subwoofer system could be operated at lower SPL if the bandwidth was extended by roughly 10 Hz in the downward direction (towards infrasound). In actuality, there was still little infrasound present in the infra-enabled system, just more frequency content in the 20 Hz region, which isn't always reinforced by modern day large format subwoofers. The addition of very low-frequency content using this approach does open the possibility of an increase in off-site noise pollution (and annoyance) since such low frequencies can experience very low absorption as they propagate from on-site to off-site and pose the risk of causing vibration of off-site structures.

The highly variable results indicate that further work is required in this area. These findings should prompt a more focused effort by practitioners to consider bandwidth extension as a viable option for control of sound exposure on-site and noise pollution off-site of large-scale outdoor events.

6.3. Psychoacoustically-based suppression

One FOH level monitoring software provider, Event Acoustics (makers of MeTrao), offers an additional solution to low-frequency noise pollution: BassCreator [347]. BassCreator is similar in functionality to MaxxBass (now a Waves plugin) [348], where virtual bass is used to subjectively boost the perception of low-frequencies without an increase in low-frequency energy. This is a similar approach used in a different research project focused on small-room room-mode correction [349].

Virtual bas synthesis is well-known [349] and won't be covered here. The effect maintains high-quality audience experiences while simultaneously limiting noise pollution. If a certain low-frequency band needs to be attenuated to comply with local noise regulations, the system attenuates the offending spectral content and replaces it with virtual bass content, resulting in a

subjectively-similar listening experience. Overuse of this effect can result in synthetic sound which lacks impact, a critical component of live sound [349].

6.4. Secondary sound systems

In this report, a *primary sound system* is responsible for delivering consistent high-quality and appropriate sound to the audience. A *secondary sound system* is responsible for preventing as much sound energy as possible from the primary system propagating off-site to noise-sensitive areas.

There are two groups currently leading development of secondary sound systems for outdoor entertainment events: Rocket Science GmbH (Switzerland) [350] and the Acoustic Technology Group at the Technical University of Denmark as part of the MONICA project [351], although there are other groups also exploring such technology. Both groups' work will be discussed in this section. Note that there are patents describing technology which limits outdoor noise propagation to sensitive areas [346, 352].

6.4.1. Active noise cancellation (ANC) systems

Rocket Science [353], whose founder is a contributor to this report, focuses on minimizing sound propagation off-site in a direction on-axis to the primary sound system. The reasoning is that the primary system (focusing on the subwoofers) should be designed to equally cover the audience area with minimal noise spill into non-audience areas (as well as minimal side lobes off-axis). Information on how to best achieve this (in terms of the primary system) is given in [353] and briefly summarized in Section 3 of this report.

Noise from the primary system is prevented from propagating off-site by an Active Noise Cancelling (ANC) array near the perimeter of the event site. In this case, the secondary system is only focused on the subwoofer range. The ANC array is required to reproduce the coverage pattern of the primary system as accurately as possible over the entire subwoofer range in order to be maximally effective. The arrays operate on a filtered-X LMS approach using a single in, single out (SISO) DSP unit.

To properly calibrate the filtered-X LMS process, the transfer function of the secondary path is required. The secondary path transfer function is that defined between the secondary sound system and the error microphone (typically placed a distance in front of the secondary system). The calibration is usually performed before the event commences by injecting low-level pink noise through the secondary system and measuring the response at the error microphone (although the calibration can be repeated during the event, providing the pink noise signal isn't disruptive to the event and provides enough signal-to-noise ratio for an accurate reading). With calibration completed (and using wirelessly transmitted real-time knowledge of the FOH signals), the ANC array operates according to Figure 6.11.

The ANC array's performance is directly related to the distance between the primary and secondary arrays and the desired silent zone. Cancellation efficiency is ideal for a given distance away from the secondary array and then loses its effectiveness due to atmospheric effects. Figure 6.12 illustrates this clearly, as reproduced from [353].

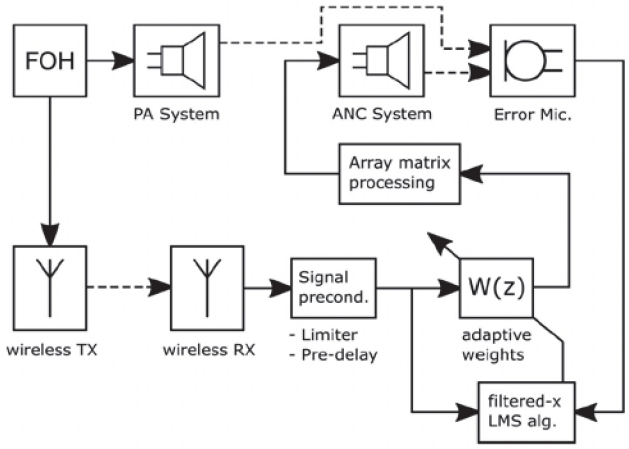

Figure 6.11 Block diagram of ANC array Filtered-X LMS process for noise cancellation [353]

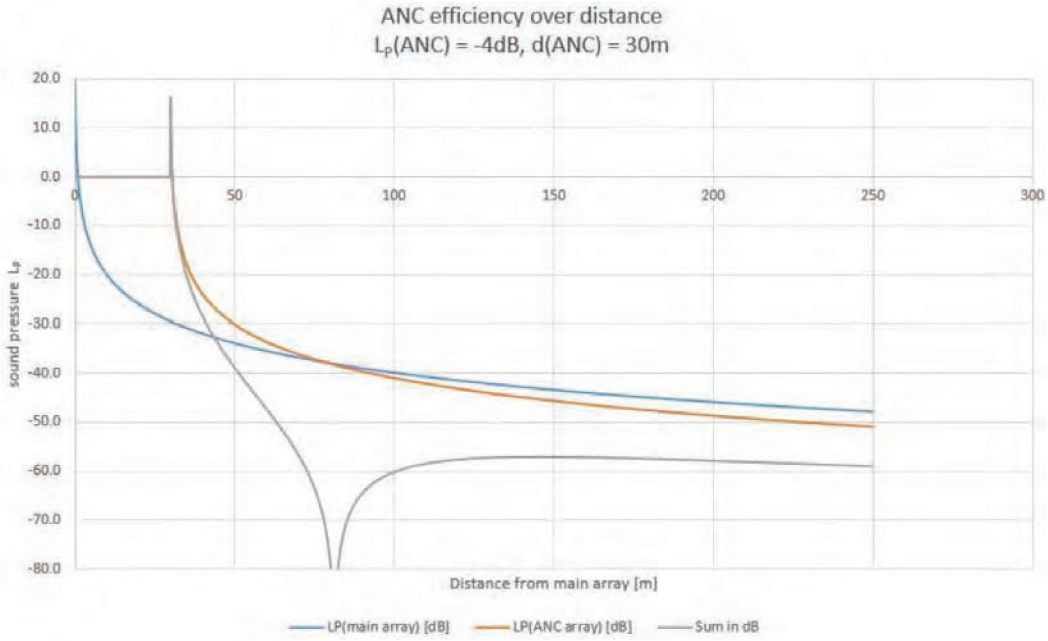

Figure 6.12 ANC array effectiveness over distance (simulated results) [353]

Practical implementations of such a system have been carried out at a number of music festivals in Europe. An example scenario is reproduced here, where the simulated results are given in Figure 6.13 and the measured results are given in Figure 6.14. This specific application included a primary subwoofer system of 14 elements and a secondary subwoofer system of 20 elements (located 65 m from the primary system).

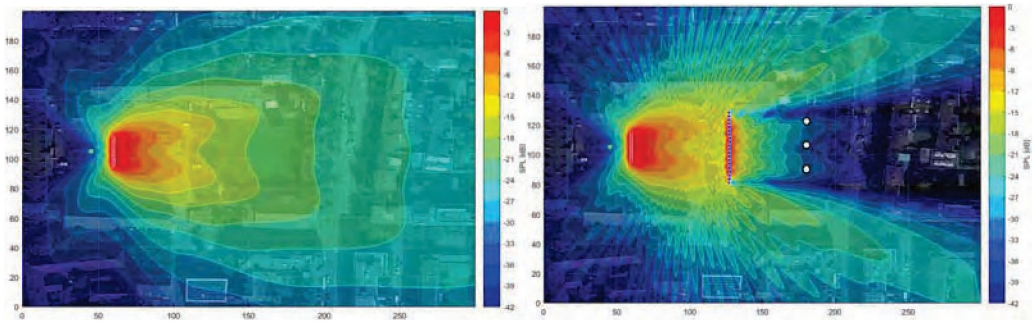

Figure 6.13 Simulated results of sound pressure level distribution over a festival site and off-site for the primary system only (left) and the primary + secondary systems (right) [353]

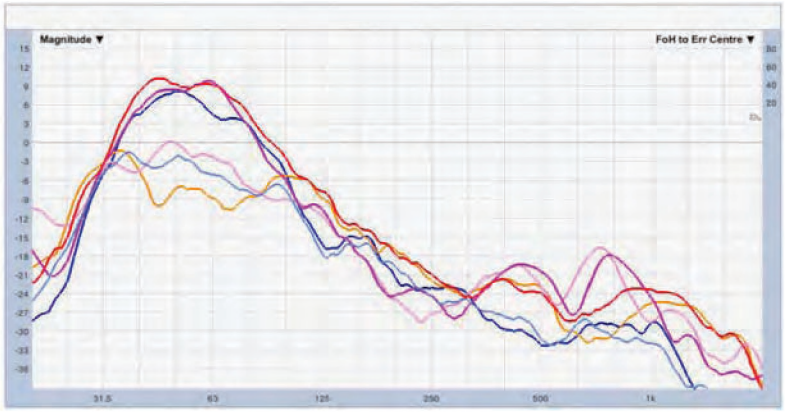

Figure 6.14 Measured results of sound pressure level distribution at three test points off-site, but on-axis to the primary system. The magenta, pink and dark blue traces are the primary system on its own, while the pink, light blue and orange are with the secondary system applied [353]

Both the simulations and measurements show an attenuation of off-site low-frequency noise between 15 – 18 dB. The best results in the measurements are seen around 50 Hz, with efficiency inversely proportional to frequency. This is expected due to the increasingly-complex propagation characteristics with increasing frequency. This is an encouraging result and one which is likely to bring any noise infractions under control in a local community in the direct path of the primary system. Significant energy is still expected to propagate to off-site locations.

As with any engineering challenge a compromise needs to be made between system effectiveness and practicality. The performance could likely be improved with many more subwoofers in the secondary system, but this would cost more and consume more space. When the secondary system is already larger than the primary system, this would be a difficult proposal to justify. The practicality is a central focus of the engineers as Rocket Science and should be seen as an area of good practice.

6.4.2. MONICA project

The other group researching secondary systems highlighted in this report is the Acoustic Technology Group at the Technical University of Denmark (DTU), as part of their involvement with the MONICA project [351]. MONICA is a European Union-based project focused on using the internet of things (IoT) to manage sound and security for outdoor events. The idea is to use a cloud-based network of sensors to monitor noise in real-time to reduce low-frequency noise outside venues while maintaining a good audience experience (and potentially allowing for a quiet zone within the concert site) [308]. The secondary system research at DTU is a significant component of the noise control

aspects of the MONICA project. A number of publications are available covering this aspect of the project [354-357], which will be summarized here.

In [354] a proposed noise cancellation system is investigated using Pressure-Matching Acoustic Contrast Control (PM-ACC). The assumption is that the secondary system will be completely independent from the primary system (unlike with the Rocket Science filtered-X LMS approach). The goals of the work are exactly the same as with Rocket Science: minimize noise off-site (termed "dark zones" here) and cause minimal audible impact in the audience area (termed "bright zones" here).

The algorithm uses regularization to ensure the optimization solution is insensitive to any noise present in the measurements and applies a weighting factor to prioritize the optimization between noise minimization in the dark zones and minimizing impact in the bright zones. The use of weighting for assignment of priorities is similar to the case-study from Amsterdam in Section 5.6.2. The mathematics behind the algorithm are explained in [354] for those interested.

In this work, two metrics are used to judge performance of the secondary system. Insertion loss (IL) quantifies how much the secondary system reduces SPL within the dark zone (the sensitive area). Primary to Secondary Ratio (PSR) quantifies the ratio of sound energy coming from the primary system to that coming from the secondary system within the bright zone (audience area). Both metrics are calculated in decibels, where larger values indicate better performance.

Three experiments were conducted using this technology. The first was a highly-controlled test in an anechoic chamber. The primary and secondary systems consisted of 6 and 12 loudspeakers, respectively, where the secondary system required twice as many loudspeakers as it was a dual-layer implementation with one layer facing the primary system and one layer facing the dark zone. If the loudspeakers are cardioid over the targeted frequency range, then the secondary system can be a single layer, thus requiring half the loudspeakers.

To calibrate the system for the anechoic experiment, 700 transfer functions were measured (one between every loudspeaker and microphone), where the measurement locations were split between the bright and dark zones. The results show an IL of around 10 dB (up to 1 kHz) and a PSR of at least 18 dB (up to 1 kHz). There were severe dips in PSR at 400 and 800 Hz which were due to the physical spacing of the dual-layer secondary system (40 cm). This issue could be avoided if cardioid loudspeaker were used. The results from this experiment are reproduced in Figure 6.15.

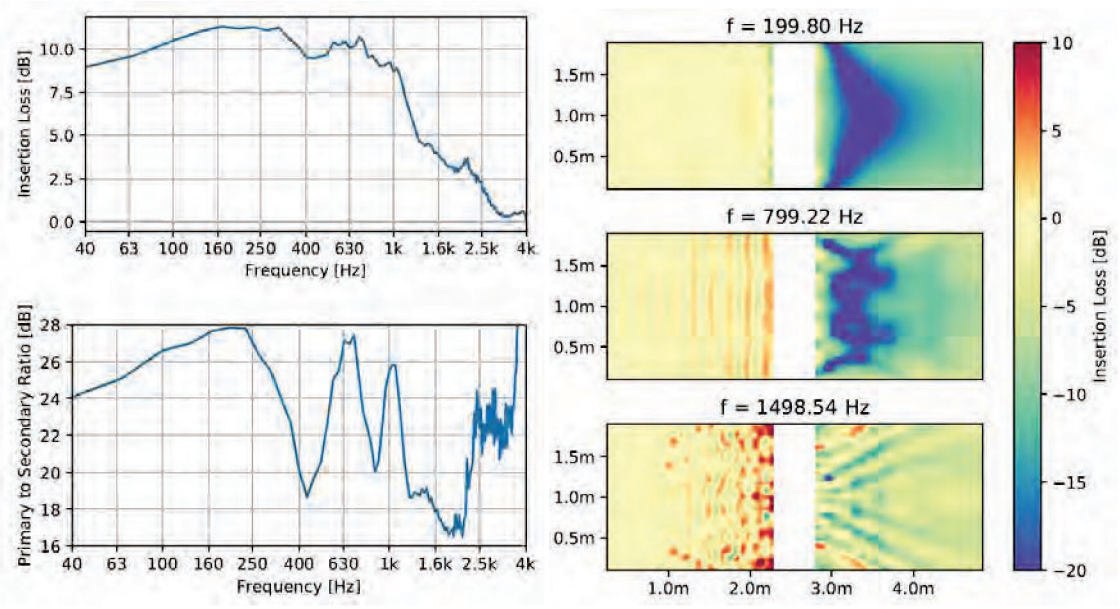

Figure 6.15 Anechoic experimental results from DTU showing measured IL (top left), PSR (bottom left) and insertion loss distribution between the bright and dark zones (right) [354]

The anechoic experiments were followed by a large-scale outdoor experiment, closely resembling conditions for a medium-scale event. In this experiment the primary and secondary systems consisted of 10 and 20 subwoofers, respectively, where the secondary system was implemented with a dual-layer approach. The subwoofers were cardioid between 37 – 115 Hz and it was found that there was a negligible difference between a dual- and single-layer implementation, confirming the theoretical analysis.

The transfer functions were measured as before, but this time over 100 points, split between the bright and dark zones. IL was estimated to be 12 – 14 dB, but the measured results weren't as good. PSR was greater than 15 dB over the entire targeted frequency range (45 – 85 Hz). Using the single-layer secondary system, PSR increased by 2 – 10 dB over the frequency range. The results from this experiment are reproduced in Figure 6.16.

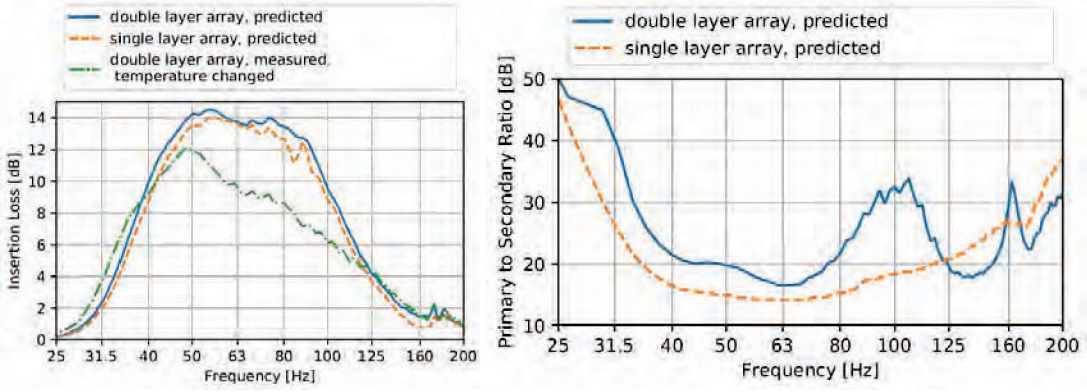

Figure 6.16 Predicted and measured results of the large-scale experiment from DTU for IL (left) and PSR (right) [354]

Finally, the PM-ACC system was implemented at a music festival in Turin, Italy. In this scenario, the primary system consisted of 20 cardioid subwoofers, while the secondary system consisted of 16

cardioid subwoofers facing the primary system. The layout is reproduced here in Figure 6.17. 50 measurement points were used for transfer function measurements. The measured results are given here in Figure 6.18, where overall it was found that IL was around 6 dB.

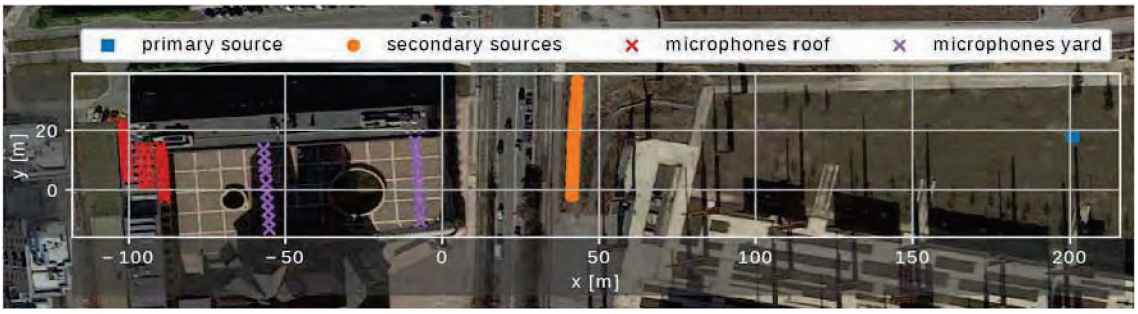

Figure 6.17 Real-world implementation of DTU system [354]

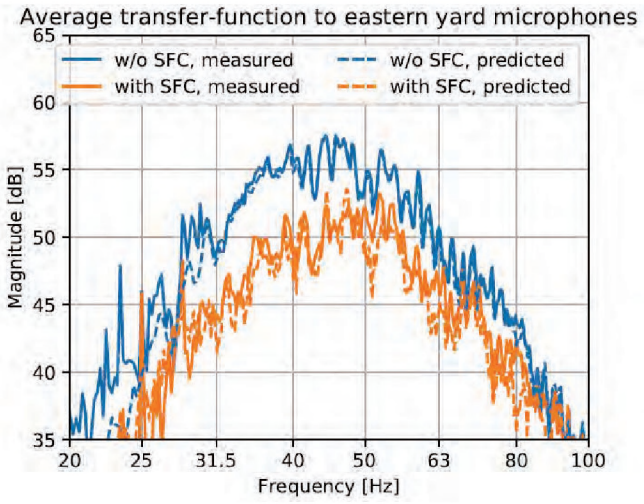

Figure 6.18 Predictions and measurements for the real-world application of the DTU system [354]

The results from the real-world application of the DTU approach indicates that the PM-ACC algorithm needs further work or another approach is necessary. A suggestion near the end of the paper is to use an acoustic model to generate transfer functions. This would save considerable time on-site and allow for adjustments due to weather fluctuations (which was found in the large-scale experiment to diminish system effectiveness).

DTU has also been exploring using a filtered-X LMS solution to the problem, similar to Rocket Science [355]. This work won't be elaborated on here, as the solution and results are very much in line with the Rocket Science findings presented earlier in this section. It should also be noted that DTU are investigating an adjoint-based time domain approach to sound field control with the aim to intelligently control the radiation pattern of the sound system to evenly cover an audience while minimizing noise pollution to sensitive areas [356]. Whether this sort of approach would be acceptable to sound system designers and engineers has yet been addressed in the work.

6.4.3. In-home noise cancellation

A different approach to noise control in residential areas has also been developed by Rocket Science. In this case, the secondary system isn't located on the event site, but in the bedrooms of local

residents [350]. This can be considered a distributed secondary system. An image of the required hardware is given in Figure 6.19.



6.19 Rocket Science's in-room distributed secondary system hardware [350]

In terms of noise control fundamentals, this isn't ideal (as noise should be controlled at the source, ideally), but it can be seen as a worst-case scenario solution. If the sound can't (or won't) be controlled by the event, this will allow residents to control the noise from within their own homes. Interestingly, this approach could also address room-mode problems, where certain low-frequency noise components have the potential to be greatly amplified, causing more disturbance/annoyance. At the time of writing this report, there was no published data available on the effectiveness of this system – only anecdotal evidence.

6.5. Automated sound level control

A final example of a possible noise suppression technique is automated sound level control. This approach was investigated in a recent research project [358] which primarily considered audience sound exposure, but is equally relevant to off-site noise pollution control. A first-order prediction model for daily noise exposure was implemented and fed into a dynamic range limiter (in line with the main PA) to ensure that an audience isn't exposed to a dangerous amount of sound at an event. The prediction was based on mixing desk output levels along with a necessary acoustic calibration measurement. This approach was chosen due to practical issues involved with audience members or staff wearing noise dosimeters and reporting the data back to the base station in real-time.

This system was tested in a lab-based experiment, using popular music tracks as test signals. The system showed good results in predicting sound exposure approximately two minutes into the future (based on the previously observed audio signal) and required the sound system to be attenuated by roughly 1 dB at worst.

In reality, this system is unlikely to be easily accepted. Sound system designers and operators are generally weary of automated controls in a system, especially if such automation is based on predicting what will come in the future. There are also problems with multi-act events, where such a system may require the headline act to be limited to a lower SPL due to prior transgressions. This is effectively an automated version of the issue encountered with long integration times used for

sound level monitoring. The project researchers note that their intention is to introduce imperceptible attenuation to the output of a sound system. However, it is likely that much more robust practical experimentation is required before practitioners will accept such an approach to sound exposure/noise pollution suppression, especially at large-scale outdoor events.

6.6. Audience impact and practical issues

As discussed earlier, a goal for all secondary sound systems (in addition to limiting noise pollution off-site) is to ensure there is minimal to no impact on the audience's listening experience. This is critical, as secondary system-based approaches to noise control are unlikely to see wide-scale adoption if they negatively affect the audience experience.

Of the systems described above, the filtered-X LMS approach currently appears to be the best option to ensure minimal audience impact. This is due to the use of an error microphone to continuously adapt the noise cancellation algorithm. This ensures weather changes and effects of an audience will be taken into account to give consistent performance. Also, these systems have cardioid subwoofers facing away from the audience area, further reducing the chance that there will be a noticeable impact on the listening experience. This assumes the secondary array is properly configured to avoid strong side-lobes, which can be accomplished with amplitude tapering.

It should be noted that if local residents see a large subwoofer array aimed at their homes, complaints could increase due to perceived annoyance (which has been shown to be irrespective of actual received level in many cases). If such systems are used, a robust public communication/education campaign (such as those described in many of the case studies earlier in Section 5) must be implemented to ease concerns.

One aspect of such systems that hasn't yet been explored (or at least published) is noise control with secondary systems that aren't in line with the primary system. Can these systems operate covering a wider area? Of course, there are practical limitations here, such as budget and space for a large additional subwoofer array, likely placed within public areas. The possibilities need to be explored to see how far the secondary system approach can be pushed.

Secondary systems are ground-based and therefore can do little to limit noise pollution due to sound refraction (or any noise not travelling off-site at ground level). It must be investigated whether such ground-based systems have the potential to cause additional noise away from the ground-plane. To date, there is no clear published research in this area. The effective height of secondary systems is an interesting question that is partially explored in some of the referenced DTU research, but results indicate that the effective control height is usually much lower than where people may be living in built-up areas. More research is needed before a clear conclusion can be reached. It is unlikely that flown secondary systems would be a practical alternative.

7. Conclusions

The challenges surrounding sound exposure and noise pollution due to outdoor entertainment events are numerous and extremely complicated. The duality faced by the audio engineer at such events is problematic. On the one hand, the engineer strives to design a sound system that delivers uncompromising, consistent, high-quality audio to all audience members. This requires wide-bandwidth sound reinforcement/reproduction and (usually) high sound pressure levels. On the other hand, the engineer must strive to limit noise pollution to the surrounding areas. This requires precise control of the sound system's directivity (which can be especially problematic at low-frequencies) and careful planning for possible weather conditions. In summary, the audience wants to hear the music clearly and loudly and residents usually don't want to hear anything.

This report presents no definitive solutions. It does offer a number of potential solutions, all of which require further research to validate and refine. We have presented a broad overview of the variables at play at outdoor entertainment events, including existing research to support various practices and understandings. Most sound exposure and noise pollution research is focused on industrial- or traffic-based noise, which tends to be persistent year-round. Music-based event noise is short-lived and infrequent, so it's not surprising that it is rarely addressed in the literature. When it is, it plays a minor role in the overall focus of the research.

The research identified here that does specifically examine music-based noise presents findings that are often contradictory. In some cases, this can be attributed to difficulty in designing adequate experiments. In a few cases, it appears that conclusions have been pre-determined, where results were analyzed to fit expectations. Following the WHO's lead in their current set of community noise guidelines, it is essential that any research used to inform policy must be unbiased and objective in nature. Not all work covered in this report meets this requirement, which is why the 2018 WHO report couldn't provide updated guidelines for leisure noise [1]. Clearly, much more scientific, unbiased research is required in this area.

While no definitive solutions have been identified, there are clear questions that have arisen through the course of this work. These can be broadly split into three categories of stakeholders at outdoor live events: audience, community, and engineers. The key questions arising within this report are presented here, with all instances of "further research required" given in Appendix A.

7.1. Audience-focused questions

1) What is the best approach to measuring and monitoring audience sound exposure?

   Would it be possible to take measurements at various points within the audience area before an event to generate transfer functions between the measurement locations and the chosen monitoring location (roughly similar to DIN15905-5)? This would allow the data to be inputted into appropriate monitoring software to give real-time audience sound exposure values, based on the monitoring location (where it is essential to choose an appropriate monitoring location).

2) What is an appropriate sound exposure limit for the audience?

   Is it possible to achieve a consensus on level limits, including integration time, peak limits and appropriate weighting? Integration times must be practical (15 minutes seems to currently be favored by engineers, while 60 minutes is favored by regulators and health experts. Both could be too long when considering off-site annoyance). A-weighting is inappropriate for the levels present in audience areas. However, much is known about hearing damage in terms of A-weighted measurements – so perhaps A-weighting should be maintained for these purposes

until more data using alternative weightings becomes available. Should C- or Z-weighting be used? Or would 1/3 octave band criteria be more appropriate and useful? One-third octave band criteria, while more specific, might pose a challenge for the bodies responsible for noise monitoring, due to the current lack of appropriate equipment and training. Nonetheless, examples exist of favorable responses from local authorities after the introduction of such methods.

3) Does Noise-Induced Hearing Loss (NIHL) correspond to Music-Induced Hearing Loss (MIHL)?

   The majority of literature informing many audience limits is based on NIHL. If MIHL doesn't possess the same triggers and characteristics as NIHL, then what are appropriate sound exposure limits based on MIHL? As music is dynamic in nature (and variable across genres) is it even possible to create limits based on MIHL? It must be noted that the human ear does not discriminate between noise and music (as far as is currently known), so noise-based limits shouldn't be discarded. There is currently a significant amount of research focused on hearing loss from personal listening devices, which may provide key information on this topic.

4) Are audience members (and staff) situated near ground-based subwoofer systems receiving dangerous noise doses?

   Considering that most large-format subwoofers are capable of producing 140 dB (or more) at 1 m, which is in some cases is the distance to the first audience members (and also security, video crew and pit photographers), this is an extremely serious question. Is it a dereliction of duty on the part of the system designer to place such high-powered sources in close proximity to audience members (who have no control over the system)? Should limits be imposed on how close these systems can be placed to audience members?

5) What are the physiological and psychological effects of high-levels of infrasound (at the level/duration experienced at a typical outdoor event)?

   All available research on this topic is lab-based and not focused on this industry. It needs to be determined if there is any risk (beyond hearing damage). Considering that subwoofer systems are continuously extending their range downward (many now operate well into the infrasonic region), this must be investigated.

6) Considering (5), does standard hearing protection available at events (typically foam plugs) do anything to protect from hearing damage at low frequencies?

   Drawing on what's known by the military and NASA on protecting their crews, the answer appears to be no. Bone/tissue conduction (which is significant at low-frequencies) can bypass the sound's standard route to the inner ear and can cause damage. It must be determined whether the military knowledge is applicable to this industry. It is likely that it is and will be especially relevant for audience members located nearest to any ground-based subwoofer system.

7) What should be done to best educate audiences of the risks of sound-exposure at large events?

   A number of reviewed studies in this report have indicated that an educational program targeting concert-goers can be at least somewhat effective in increasing the use of hearing protection. This can go a long way in preventing temporary and permanent hearing loss. What should such educational programs consist of? How can they be delivered to achieve maximal effectiveness? Can some of this be provided at events? What's the best practice in terms of warning signs posted at events? This should be seen as a critical set of questions, as it appears

(based on the research detailed in this report) that audience members are generally oblivious or ambivalent to the serious risk of hearing damage due to high levels of sound exposure. This is a public health issue and must be taken seriously.

7.2. Community-focused questions

8) What is best practice to achieve high-quality audience listening experiences while minimizing off-site noise?

   Can community annoyance be managed through public relations campaigns, where residents are pre-warned about the event, informed about the logistics and how to register a complaint during the event, and reminded of the positive economic impact of the event. Past experience has shown this to be extremely effective. This should be considered alongside any system design approaches. Opinions appear to be split on best practice for system design and calibration. It is clear that current noise monitoring and control methods used in Europe are effective and practical.

9) Is there an opportunity to standardize entertainment event noise regulations?

   Through the review conducted for this work, it was found that relatively few countries possess clear entertainment event noise regulations. The regulations that do exist are predominantly based on industrial and traffic noise regulations. Is there an opportunity here (through some in-depth unbiased objective research and consultation with industry) to devise practical and effective regulations that can be promoted as best practice? Looking over past attempts at this, the answer would appear to be no, as all previous work seems to end in groups dissolving into factions, but this shouldn't rule out a fresh effort, if it were deemed appropriate. Perhaps an industry-driven initiative would be more appropriate in the short- to mid-term, as this could be implemented much more quickly as compared to pursuing the regulatory route. This is discussed in more detail at the end of this section.

10) When analyzing acoustic models for noise prediction, should it be standard practice to include the stage monitoring system?

    One of the case studies in this report measured DJ fills on stage as part of an in-depth study of noise pollution due to sound system configuration. The DJ fills were found to strongly contribute to the noise pollution in the community. It would seem reasonable to include such systems when modeling noise. Without these elements, can the noise predictions cannot be considered accurate.

11) When planning noise control measures, is there any practical method to predict and correct for the effects of sound refraction (especially if SOFAR-like long-distance propagation is encountered) or is this uncontrollable?

    Sound refraction due to temperature gradients in the air causes a great deal of variability in sound propagation over long distances. In extreme cases, the propagation can span multiple miles with minimal attenuation of low-frequencies. Is there any way to deal with this aside from simply having a broad understanding of the effects? The answer to this is likely to be no, but at the very least, system designers and operators as well as acoustic consultants need to made aware of the potential effects of such meteorological conditions. It may be useful to take cues from the wind turbine industry, as they have recently been dealing with such issues and have amassed a fairly sizeable relevant knowledge base.

12) What is the most accurate and practical method for predicting noise annoyance in the community?

    Community noise regulations (whether for music events or otherwise) tend to focus on annoyance rather than serious health effects, as the received noise levels are usually low. Most noise pollution that causes annoyance is low-frequency. The vast majority of measurement regulations dictate the use of A-weighting, although there is little research identified that suggests A-weighting is appropriate. Should a different weighting be used (such as C- or Z-weighting) for identifying low-frequency noise? What about 1/3 octave band noise criteria? How can fluctuations in the noise be included in measurements and monitoring? Are flat decibel penalties appropriate? What experiments are necessary to identify the appropriate approach in this area?

13) Is it possible to standardize noise monitoring practices at large-scale outdoor events?

    There appears to be a wide variety of practices, ranging from little to no consideration of noise, to ill-informed monitoring, to highly-transparent, informed and coordinated efforts. Events encountering the least amount of problems with noise pollution all share the fact that they have benefitted from proper consideration of noise control during the planning stages. Many employ professionals to monitor noise during the event itself. Communication between all relevant stakeholders has been demonstrated to be key. A robust noise management plan is key. How can these practices be encouraged on a wider scale?

14) How problematic are room-modes in domestic environments that receive music-based low-frequency noise pollution?

    Most reviewed literature sidesteps this issue, but it appears that room-modes can cause a significant increase in received sound level in the low-frequency range. Typical living room or bedroom sizes are likely to support room-modes spanning the 63 Hz and 125 Hz bands, which are generally the worst offending noise components. Can this effect be adequately predicted from outdoor measurements? It is unlikely without knowledge of the receiving space's topology which varies between residences.

15) How effective are in-room noise cancellation devices?

    There exist commercially-available devices that aim to cancel low-frequency noise received in domestic settings. It is unclear how effective these devices are and how sensitive they are to placement. If such devices are proven to be effective in limiting noise annoyance, would it be worth considering distributing these to residences near event sites in an effort to minimize annoyance?

7.3. Engineer-focused questions

16) Do flown subwoofer systems generate greater noise pollution off-site? If so, what can be done to avoid this issue while still using flown systems?

    In some of the reviewed literature, flown subwoofers were (at least loosely) identified as serious contributors to community noise pollution due to their height above the ground (although the data leading to this conclusion contains many ambiguities). Can mechanically or electronically steering flown array(s) towards the audience mitigate the (potential) problem? It is unclear how often this approach is currently implemented, but it seems to be a logical solution to the problem (and would improve system efficiency). It also needs to be confirmed if the use of flown

subwoofer arrays actually poses a greater risk of noise pollution off-site as compared to ground-based systems.

17) Can the same audience experience achieved with a ground-based subwoofer system be delivered with a flown subwoofer system?

    Some professionals have argued that ground-based systems are necessary to achieve the sound pressure levels and horizontal consistency required and that flown arrays would severely limit headroom. This is contradicted by recent research into this area explored in this report. The work found flown systems lost 1 dB in some cases and were 6 dB more efficient than ground-based subwoofer arrays in others. It should be noted that flown arrays achieve greater front-to-back consistency. The inherent problem with flown systems is that if a left-right array is required, then coherent interference will degrade the horizontal consistency. In such cases, can the two sides of the system be effectively decorrelated to limit these effects? Existing solutions in this area were discussed in this report, but it is yet to be seen whether these are practical.

18) Do source-oriented systems result in lower audience sound exposure levels?

    Considering the increasing use of such systems and their distributed nature (many small elements distributed around the stage area – and sometimes to the sides and rear of the venue), would the lower drive levels of the individual components make for a safer listening environment? Can these systems be practically deployed at large-scale events (including touring productions)? How would this work if implemented at a music festival? Early work is being done in this area, but more information is needed to determine if such systems are practical for wide adoption in the industry.

19) Should greater use of virtual bass be recommended to mitigate noise issues?

    Virtual bass can be used to enhance or replace certain low-frequency components in musical signals for on-site sound. There exist products in this area that are aimed at live events. More research is needed to see how much these systems help in noise control off-site (and possibly audience exposure) and whether or not they degrade the audience listening experience through over-use.

20) Is it possible to exchange sound level for system bandwidth?

    Recent in-situ experiments have shown that allowing subwoofer systems to extend to the infrasonic range results in a slightly lower preferred listening level. Do the potential reductions in level make this effect worth exploring in greater detail? Considering the case studies included in this report, any SPL reduction without any discernable effect on the audience experience would be beneficial for noise control. The problematic lack of absorption in the infrasonic range, however, must be considered with this approach, as this has the potential to increase annoyance in the local community.

21) If a stage structure causes the degradation of a subwoofer system's cardioid pattern in the stage and audience area, is this effect seen in the extreme far-field (i.e. the community)?

    Past research indicates that poor cardioid subwoofer placement (generally too close or under a stage) results in the subwoofer displaying omnidirectional characteristics. The question is whether this effect transfers to off-site noise propagation or is it local to the stage and audience areas?

22) How effective are secondary sound systems?

Secondary sound systems attempt to cancel low-frequency noise propagating off-site. Recent research (both lab-based and practical) has shown mixed results. To date, these systems seem to be potentially capable of providing around 10 – 15 dB of attenuation at low frequencies, which is significant in terms of noise pollution. As practical issues dictate that these systems are ground-based, what is the maximum effective height that they can control? Will this affect residents in high-rise towers? Will sound refraction allow noise to bypass such systems? Are there issues with cancelling semi-correlated signals (such as low-frequencies from main PAs and subwoofers, which are driven separately at the mixing desk)? Can these systems be deployed to limit noise in all directions relative to the stage or are they only practical operating in the on-axis direction? This may be an important point to address for multiple stage events.

23) Is it worth exploring more widespread use of low-frequency absorbing tubes at live events?

    These absorbers are becoming popular for indoor arenas in Europe to limit low-frequency reverberation. Are there any practical applications for outdoor (or quasi-outdoor) events or will wind issues make deployment impossible?

24) Is automatically mixing to the sound level limit practical?

    Some research showed that when engineers had sight of sound level monitoring software, they tended to mix to the given sound level limit, even though a louder mix may not have been appropriate. This research was performed on smaller indoor venues, though other research at a large-scale outdoor event didn't show this trend. More work is needed, as this was limited to a single outdoor event. Research should be conducted to determine if FOH mixes naturally gravitate to the stated limits if engineers can see how much headroom they have available.

25) How can large-scale PA shoot-outs be conducted to guarantee reliable and unbiased data? Is it worth standardizing this?

    There are numerous examples of large-scale PA shoot-outs where the results are either highly biased or unusable due to various factors (meteorological effects tending to be the most significant issue as well as equivalent spacing of the sound systems under inspection). Would it be worth exploring the possibility of standardizing a loudspeaker test procedure for large-scale sound reinforcement systems, similar to how standardized testing exists for smaller-scale loudspeakers? The significant variability in test procedure and data analysis leads to incompatible data between (and even within) tests.

It must be emphasized that the authors of this report are not the noise police. Many of us have designed and operated live sound systems for many years and are more focused on audio engineering than environmental noise. The aim of this work was to review the current state of sound exposure and noise pollution at large-scale outdoor entertainment events and to identify sensible questions that need to be answered to improve the current situation.

If this report raises awareness of key issues relating to live sound exposure and noise pollution, this would justify the effort invested in its drafting. It is hoped, though, that the work leads to a renewed effort in focused, unbiased research to address the questions it has raised. The ultimate goal is for the live sound sector to routinely deliver a high-quality listening experience to every seat in the house while avoiding annoying the neighbors or giving the audience and staff a dangerous noise dose, and to achieve this using practical, effective, and efficient solutions.

In conclusion, we present a proposal for the formation of a live event sound/noise initiative to address these issues. We acknowledge that any regulatory change, while worth pursuing, faces a

long hard road to fruition. Nevertheless, existing knowledge identified within this report can be used to good effect in the near-future.

7.4. The Healthy Ears, Limited Annoyance (HELA) Initiative

This report makes clear the complex international regulatory climate surrounding sound exposure and noise pollution from outdoor events. This is in large part due to the lack of unbiased scientifically-based research needed to create unambiguous, practical and effective regulations in these areas. Much of this is identified in the WHO's 2018 community noise guidelines [1]. At present, while some regulations appear to be roughly sensible and practical, the confusion stemming from the contradictory data identified in this report has resulted in poor sound/noise control practices at many large-scale live events.

This working group supports the pursuit of updated and better-informed regulations on an international scale. We realize that such ambition and effort must be sustained over many years before substantive change will occur. Sound exposure on-site and noise pollution off-site should be viewed as critical to the health and well-being of everyone involved. Something needs to be done aside from waiting for the research and regulations to catch up.

We propose that a live event sound/noise management initiative be created, focused on the dual-nature of the problem: on-site sound exposure and off-site noise pollution. Such an initiative would detail current best practice in these areas and would allow venues, events, manufacturers and even possibly performers to pledge voluntary compliance. This could be marketed through a logo on their websites and other materials. Use of the logo would signal commitment to the well-being of all on-site individuals (musicians, technical staff, volunteers, vendors, security, press, and – most importantly – the audience members) as well as residents in the off-site surrounding community.

Participating in such an initiative would allow members of the public to understand what a given event or venue has done to promote the health of all stakeholders. The initiative would encompass current best practice in all areas discussed in this report, and would be updated periodically as new information becomes available. Members of the initiative would implement accepted and informed standard practices.

In addition to the primary goal of standardizing practice at large outdoor live events, the initiative would also support and take the lead on key research required to answer the many questions raised here (and others that will inevitably come up). Such research would eventually inform work on new regulations and standards. Bringing together professionals committed to achieving these goals would gather the expertise and drive research to insure on-site and off-site experiences of outdoor events are as safe and enjoyable as possible.

The working name for this initiative is The Healthy Ears, Limited Annoyance (HELA) Initiative. *Healthy Ears* indicates a commitment to preserving healthy hearing of all individuals on an event site (whether they are working, volunteering or in attendance). *Limited Annoyance* focuses on the off-site community, striving to avoid excessive annoyance due to noise pollution from an event. The word *limited* is used as it is understood that it is impossible to avoid all annoyance. Limiting noise-based annoyance as much as practical must be the target. The acronym, HELA, is a play on a common slang term used in California, "hella", meaning *very*. In this case, any member of the initiative would be considered *HELA-compliant* (read: very compliant).

Such an initiative will not be successful without input and sustained participation from organizations outside of the Audio Engineering Society. Groups such as the World Health Organization (WHO) – which is championing safe listening practices through their Make Listening Safe initiative [359], the

Institute of Acoustics, (IOA) and the Acoustical Society of America (ASA), to name but a few, should be included.

7.5. Closing remarks

The information contained within this report should be seen as an informed starting point on the journey to achieve a healthy and sustainable environment surrounding large-scale outdoor live events. Key questions have been raised, stemming from conflicting conclusions in previously published research, pointing to numerous required areas of further research, spanning many different disciplines. The authors of this report plan to contribute to the necessary research highlighted in this report, but a sustained effort by many individuals and organizations is required to adequately address each of these questions and satisfy the corresponding research needs.

Discussion and feedback on the points raised in this report are welcomed and encouraged. This can be through meetings of the Audio Engineering Society Technical Committee on Acoustics and Sound Reinforcement (AES TC-ASR), held at every AES convention, or by contacting this report's primary author, Adam Hill (a.hill@derby.ac.uk). Regular updates on work stemming from this report will be published on the AES TC-ASR webpage [361] and through panel sessions at AES conventions.

The working group hopes that this report will spur a well-informed and sustained discussion and debate focused on the best way forward. We hope the live event sector will embrace and support local communities to help them grow their local economies, protect their residents from harmful effects of sound exposure and noise pollution, and deliver awe-inspiring (but safe) experiences to audiences at outdoor events.

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9. Appendix A – Areas for further research

All instances where the authors believe further research is necessary are listed below, organized by the core report sections. Many of these topics are reflected in the 25 core research questions highlighted in the conclusion of this report. There are additional topics listed in this appendix which also merit attention from researchers to provide the best possible knowledge base covering the topics relevant to sound/noise exposure management at outdoor live events.

9.1. Audience experience

1. **Punchy-ness as a metric for perceptual quantification of LF content:** "Further work is needed to confirm how significant this perceptual attribute is in relation to the previously described bass clarity and low early decay times (in indoor venues). It is likely that these attributes are strongly correlated." (p.8)
2. **Reasons for enjoying loud music playback – the same at outdoor events as in clubs?** "The study in [8], however, focuses on sound reproduction in nightclubs, not large-scale sound reinforcement of live music, which tends to be different in terms of level, dynamic range and bandwidth, not to mention audience attention. Further work is needed to determine if the same findings hold true for large outdoor events." (p.8)
3. **Link between alcohol/drug consumption and preferred listening level (for both the audience and engineer):** "Again, it must be noted that this study took place in nightclubs, rather than at large-scale live music events, so further work is necessary to determine if the findings translate to large outdoor events (especially considering that at high-profile events it's becoming increasingly rare to find sound engineers drinking excessively)." (p.9)
4. **Question of whether strong tactile LF response at live events:** "Whether this is something that audiences actually prefer or have simply become accustomed (or addicted) to is open to debate [14]" (p.9)
5. **Hidden hearing loss (SNHL):** "In terms of sound exposure at large live events, further research is required to determine what level/duration of exposure will result in SNHL. Past lab-based experiments on animals have been conducted at extremely high sound pressure levels and durations, which is not representative of real-world live events. The need for specific research for such recreational sound exposure is already noted in the reviewed work [31, 32]." (p.11)
6. **NIHL vs. MIHL:** "The question was raised of whether pleasurable sounds are less physically damaging than unpleasant sounds. This, of course, has yet to be proven either way and is a contested point due to the lack of scientific evidence supporting it. As noted above, the fact that TTS isn't related to SNHL also leads to the assertion here to be called into question, pointing towards necessary further research into this area." (p.14)
7. **THD vs. hearing damage:** "The effect of high levels of harmonic distortion in the reproduced sound must also be considered, as this will likely result in great hearing damage. This is particularly an issue for smaller indoor venues, but still much be kept in mind for larger outdoor applications." (p.14)
8. **Dynamically-weighted noise measurement devices:** "Modern day devices should have little problem providing adequate computing power to achieve this, although such an approach will need to be formalized though technical standards and included in revised noise regulations before wide adoption could be expected." (p.16)
9. **Audience sound exposure regulations:** "Overall, it is clear that much work is required in the area of audience sound exposure regulation. There exist some regulations which are likely to be

close to something appropriate for the reality of the situation at modern day live events, but there is no accepted standard practice across the world." (p.17)

9.2. System design

1. **Effect of source-oriented systems:** "One such benefit is due to the distributed nature of the sound system, comprising of many small line arrays/point sources. This may require less output from each individual component in the system, which is likely to avoid exposing audience members closest to the system to unreasonable and dangerous sound pressure levels as well as potentially reducing sound energy traveling off-site, thus reducing noise pollution. The distributed nature of the system also has the potential to provide consistent audience coverage horizontally and front-to-back, thus making audience sound exposure monitoring and management easier. As such systems are relatively new to the market, further research is needed to provide clear conclusions on these points." (p. 22)
2. **Effect of ground-reflection from flown subwoofer array:** "Steering the main beam of a flown subwoofer array towards the audience and ground does run the risk of causing a strong ground reflection, which may result in noise pollution problems due to environmental effects on sound propagation. Aspects related to this will be discussed in Section 5, but it should be mentioned here that further research is needed in this area." (p.28)
3. **Interaction between main PA and flown subwoofer system for steering:** "This results in a significant spectral crossover between the main PA and the subwoofer system, making low-frequency steering a challenge that can't be limited in scope to subwoofer array processing – the main PA must also be considered in order to get acceptable results. As the subwoofer system is generally driven on an auxiliary send, separate to the main PA sends, the subwoofer and main arrays will be partially correlated, again increasing the challenge of effective low-frequency steering. Research investigating this subject in the context of the main PA and subwoofer system is needed, as most previous work treats on the two systems in isolation." (p.29)
4. **Metric for waveform fidelity:** "An additional metric that must be investigated for inclusion in something like APR is a measure of a subwoofer system's waveform fidelity (or impulse integrity). In light of the audience subjective preferences outlined in Section 2, the transient performance (accuracy) of a subwoofer system is equally (if not more) important than the steady-state response." (p.30)
5. **Effect of system nonlinearities on array amplitude tapering:** "Further research is required, however, to inspect the effects of amplitude tapering on a realistic subwoofer system, where compression/limiting within the processors/amplifiers and power compression in the loudspeakers is considered. There is the possibility that such nonlinearities could limit the effectiveness of amplitude tapering (which is typically modeled as a linear time-invariant system). Due to these unknowns most manufacturers currently don't recommend amplitude tapering of subwoofer arrays." (p.30)
6. **Acoustic excitation and radiation properties of large marquees:** "Lastly, a common element separate to the sound system can prove to be extremely problematic for both audience coverage and noise pollution on site: temporary "soft" structures (tents, marquees, etc., consisting of frames bounded in taut fabric). Such structures will act as large radiating surfaces (especially at low frequencies), causing inconsistent audience coverage inside and unpredictable noise pollution outside. To the knowledge of the authors of this report, no in-depth study has been conducted on such structures. Such a project is essential to gain a better understanding of the acoustic excitation and radiation properties of these structures in order to develop a more focused and informed approach to implementing sound reinforcement systems

within and around them to simultaneously give the audience a good listening experience and limit annoyance in the neighboring community." (p.32)

7. **Standardized method for PA shoot outs:** "It is imperative, therefore, that large-scale loudspeaker testing and evaluation (a.k.a. PA shoot-out) is standardized similar to that of smaller-scale loudspeakers. A bespoke standard for larger-scale systems is needed which takes the various practical limitations into account and specifically addresses the numerous problems associated with testing outdoors" (p.32)

9.3. Noise regulations

1. **Volunteers at events:** "The question of whether volunteers should fall under regulations for the audience or staff needs to be addressed." (p.33)
2. **Potential for a three-tier limit:** "A potential solution to this issue could be to introduce a three-tier level guideline for live events. The first limit will be for peak-levels, the second limit for inter-set levels (15 minutes, covering at most two or three songs) and the third limit spanning the duration of the event. This will ensure that reasonable adjustments can be made throughout the day, where engineers won't be penalized for transgressions of other engineers. This approach will be discussed in more detail in Section 5, pointing towards necessary further research." (p.37)

9.4. Noise prediction, measurement, monitoring + management

1. **LFN vs. annoyance:** "The finding that the subwoofer/infrasonic spectral range is less important in terms of annoyance is supported by a Danish study [294] which found that low-frequency noise sources aren't usually obvious and the true noise source is often unknown (even to the person making the complaint). The research concluded that existing criteria have no simple relationship to the complaints surveyed in the study. Clearly, there is more work required to resolve the ambiguities exposed here in relation to low-frequency noise and annoyance." (p.64)
2. **Room-modes' influence on indoor LF noise issues:** "One aspect that was largely avoided in the reviewed research is the effect of room modes on low-frequency noise. While living rooms won't support room modes in the infrasonic region, they will have room modes at frequencies above approximately 40 Hz which, as has been shown, is a prominent component of most music-based noise (especially considering that long-distance propagation of noise will exhibit significant attenuation of high-frequency components on top of further high-frequency attenuation from transmission through building materials). Depending on where a resident is located within a room, the noise can be greatly exaggerated due to room-modes (potentially a 20 dB boost or more). This would make noise that is measured as insignificant outdoors to be highly problematic indoors." (p.66)
3. **Predicting music-based noise annoyance:** "Unbiased scientific studies are required which specifically look into music-based noise (especially in regard to large outdoor events), including how to best predict, quantify and measure such annoyance (and how to minimize it, of course)." (p.66)
4. **Suitability of 5 dB penalty for fluctuating noises in measurements:** "Again, this is (at least quantitatively) ignoring the time-variant nature of the noise, which is clearly a strong factor in annoyance and potential physiological effects from noise. While a 5 dB penalty can be imposed on set noise limits due to such fluctuations in the noise, it should be seriously questioned (through further research) whether this is sufficient." (p.69)
5. **Leq integration time for on-site and off-site:** "It has been suggested that Leq integration times are synchronized between on-site and off-site, where precedence is always given to the shorter

duration [21]. At present, such an issue isn't addressed in any known standard/regulation/law/etc. Further work is needed to develop and validate this idea." (p.69)

6. **Sound level monitoring software + interface:** "Further work is needed in this area to better understand how sound level monitoring software affects sound engineering practice. This should include the exploration of different sound level monitoring interfaces that don't focus on level maximization, but on a less "louder is better" approach." (p.79)
7. **Similarity between noise monitoring trends indoor and outdoor:** "Further work is needed to determine if this is a true problem with such software and, if so, what can be done to rework the user interface to avoid this issue. As the study in [330, 331] was based on indoor venues, further work is required to see if the observed trends hold for large outdoor events." (p.79)
8. **System height vs. propagation/wind effects:** "This points to further research needed before any conclusion on height of a sound system (especially concerning subwoofers) can be made. It is likely that height can't be considered on its own. Height as well as physical speaker orientation and electronic steering (if used) most likely have to be considered together instead of in isolation." (p.85)
9. **Ground vs. flown subwoofer array sound propagation:** "Further research is necessary to make a clear conclusion regarding ground versus flown subwoofer arrays. Considering the relevant research detailed in other sections of this report, the conjecture that ground-based subwoofer systems are easier to control in terms of noise pollution is questionable." (p.85)
10. **LF noise propagation (6 or 3 dB):** "Further research is required here, as this finding is in direct opposition to what is known (from extensive research) about noise propagation from wind turbines [122]." (p.86)
11. **LF noise propagation vs. crossover point:** "Further work is needed and should be linked to additional investigations looking into sound radiation control of ground versus flown subwoofer systems. At present there is insufficient evidence to make a clear recommendation." (p.86)
12. **Just noticeable difference in dynamic range at live events:** "Further research is required to determine the just noticeable difference in dynamic range at such events (for A- and C-weighted measurements) before the audience notices a change in sound quality)." (p.95)

9.5. Noise suppression techniques

1. **Stage degradation of cardioid response in far-field:** "An important question has been posed by an industry expert on this subject, asking if the stage structure diminishes the subwoofer system's directivity in the audience area – is the same effect seen off-site or is it more of a local effect? This question requires further research to answer." (p.101)
2. **Use of shielding materials near PAs:** "In all cases it was found that placing the shielding as close to the sound system as possible will maximize effectiveness. It should be noted that this data is based on a BEM model, therefore material properties (especially in terms of reactance) may not be accurately modeled. The aforementioned slap-back issue must also be considered. The research in [343] was focused only on the geometry of the various shielding materials. Further work is needed in this area to confirm the results in Figure 6.6 are accurate." (p.103)
3. **Extended bandwidth subwoofers/SPL trade-off:** "The high variability in the results indicate that further work is required in this area, but these findings should prompt a more focused effort by practitioners to consider bandwidth extension as a viable option for control of sound exposure on-site and noise pollution off-site of large-scale outdoor events." (p.106)

4. **Secondary sound system's effective coverage:** "One aspect of such systems that hasn't yet been explored (or at least published) is noise control with secondary systems that aren't in a straight line. Can these systems operate covering a wider area?" (p.114)
5. **Effective height of a secondary system:** "It must be inspected whether such ground-based system have the potential to cause additional noise away from the ground-plane. To date, there is no clear published research in this area. The effective height of secondary systems is an interesting question that is partially explored in some of the referenced DTU research, but results indicate that the effective control height is usually much lower than where people may be living in built-up areas. More research is needed before a clear conclusion can be reached. It is unlikely that flown secondary systems would be a practical alternative." (p.115)

The Garden Church



Feed and Be Fed

January 10, 2025

The Garden Church
429. W. 6th Street
San Pedro, CA 90731
www.gardenchurch.org
WEST HARBOR MODIFICATION PROJECT - SEIR COMMENT LETTER
Via email to ceqacomments@portofla.org

Director of Environmental Management
Los Angeles Harbor Department
425 South Palos Verdes Street
San Pedro, CA 90731

The Garden Church has comments as follows on the Subsequent Environmental Impact Report for the Proposed Waterfront Amphitheater.

GC-1 The Garden Church agrees with the Draft SEIR's determination that implementation of the proposed project would result in significant impacts related to air quality, including greenhouse gases, noise and transportation. Therefore, we would like to emphasize areas that need to be researched in more detail before a vote is made on this project.

GC-2

1. Pollution from Fireworks. Fireworks contain heavy metals, including perchlorate, which leave metal particles, dangerous toxins, harmful chemicals and smoke in the air for hours and days. Some of the toxins never fully decompose or disintegrate, but rather hang around in the environment, poisoning all they come into contact – air, water, and soil. There is no way to mitigate around these harmful effects on humans, sea birds and mammals. Once again, we suggest that fireworks are not a part of this project. Please evaluate alternatives such as drones, LED displays or lasers and prohibit the use of pyrotechnics.

GC-3

2. Frequency of Fireworks. The SEIR suggests that shows in the proposed Amphitheatre would begin at 7 or 8 pm on weekends, and last up to 3 hours. Then, there would be 20-minute fireworks displays, which would therefore start around 11 pm on weekends, up to 25 times a year. This is unacceptable. In addition to the environmental impacts, the human impacts on the local community are enormous. Having lived in this area, it is well known that noise from fireworks that are displayed in the Harbor can travel easily 8 – 10 miles, under given conditions. Many people are asleep at that time of night, and to wake them every weekend is not fair to the

GC-3 cont.

community. In addition, people with PTSD will be affected adversely from the weekly assaults to their nervous systems. Drones, however, or laser shows, do not make much noise.

GC-4

3. Noise. The noise from the fireworks and the concerts will affect the sea life, particularly the marine mammals and birds that have made this area their home. More research is needed to address this concern. The SEIR states, "The most notable impact on sensitive species from implementation of the Proposed Project would be the introduction of noise from concerts at the Amphitheater and fireworks shows during special events, which could negatively affect marine mammals and water birds, including nesting California Least Tern."

GC-5

4. Noise, Pollution, Trash, Congestion, Air quality, and Quality of Life. 100 concerts a year will bring all of these issues into play every weekend. Not enough emphasis on alternative methods of transportation were provided in the SEIR, such as electric transportation. Because of the suggested time for concerts, ending near midnight, the four-hour clean-up times would occur from 12 – 4 am every weekend. The noise from the clean-up would continue to be a nuisance to the community which is used to it being quiet at night – a reasonable expectation.

GC-6

5. Trash. Reusable products should be required by all vendors. Confetti should not be allowed, nor balloons of any type. The sheer number of plastics and microplastics that is a daily burden on our oceans and increasingly being found within human bodies as well as other animals, should be a concern for all. There are many cost-effective solutions available in the marketplace today. We suggest that a Zero Waste Policy should be embraced for this Project.

GC-7

6. Artificial Turf. Evaluating the many down-sides to this product should have resulted in the elimination of this as an option. There are low growing natural ground-covers that are drought tolerant that would be a better option. This was not properly vetted in the SEIR.

GC-8

7. Birds and their flight patterns. Saying that birds fly into tall structures already, so why not have a couple of more obstacles in their way, e.g. a 175' Ferris wheel is not an acceptable solution.

GC-9

8. Pollution from Cigarettes. There is no mention of the effects of cigarette smoke and butts – the venue should be non-smoking.

GC-10

Thank you for the opportunity to comment.

We respectfully believe the above issues need to be more fully studied before a vote on this project should be made.

Sincerely,

The Garden Church Board

Dottie Wine Board Chair	Dr. Rev. Amanda Riley Lead Pastor	Connie McOsker Licensed Pastor
Carl John Sandgren Board Vice-Chair	Elizabeth Sala Secretary	Renee Almanza-Anderson Member
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GENTON COCKRUM PARTNERS

JONATHAN A. GENTON
WILLIAM M. COCKRUM, IV
Senior Managing Partners

Comment Letter GCP

January 10, 2025

The Port of Los Angeles
425 South Palos Verdes Street
San Pedro, CA 90731

Subject: **Letter of Support – West Harbor Modification Project**

Dear Members of the Board of Harbor Commissioners,

As a stakeholder with Genton Cockrum Partners (which is developing 300 apartments over approximately 30,000 square feet of ground floor retail on the nearby County of Los Angeles San Pedro Courthouse site), I am writing to express my strong support for the West Harbor Modification Project. This development will revitalize San Pedro's waterfront and serve as a major catalyst for economic growth and additional investment in the area.

GCP-1 The expanded amphitheater is central to the project's success and a key driver of economic development for the surrounding area. By hosting world-class performances and events, the amphitheater will attract visitors, increase tourism, and generate significant economic activity that supports local businesses and creates jobs. It will establish the waterfront as a vibrant cultural hub and strengthen San Pedro's role as a premier destination in Southern California.

The mitigation measures outlined in the Draft SEIR, including strategies for managing traffic, noise, and environmental impacts, ensure that this project is both thoughtfully designed and community-focused. These measures balance progress with preserving the quality of life for nearby residents.

The West Harbor Modification Project is essential to unlocking San Pedro's full potential as a thriving community and economic hub. Thank you for your leadership in moving this transformative initiative forward.

Sincerely,

Bill

William M. Cockrum IV
President

GREATER LOS ANGELES SCOUTING

December 20, 2024

Dear Members of the Board of Harbor Commissioners,

As a 50+ year San Pedro resident and local stakeholder with Greater LA Scouting/Cabrillo Beach Youth Center, I am writing to express my most enthusiastic support for the **West Harbor Modification Project.** This development promises to revitalize San Pedro's waterfront, creating much-needed recreational spaces while strengthening the local economy.

The expanded amphitheater and community lawn will provide exciting opportunities for world-class performances, cultural events, and community gatherings, including but not limited to use during the annual LA Fleet Week event over Memorial Day weekend. These spaces will foster a vibrant atmosphere that benefits both residents and visitors, reinforcing San Pedro's identity as a premier waterfront destination.

SOVA-1

This project is also an important economic catalyst by driving tourism, creating jobs, and supporting local businesses. It will contribute to long-term growth and prosperity in our Port Town community. The comprehensive mitigation measures outlined in the Draft SEIR demonstrate a thoughtful approach to addressing potential impacts, ensuring the project remains sustainable and community-focused.

The West Harbor Modification Project represents an exciting step forward for San Pedro, and I look forward to seeing its positive impact on our community. Thank you for your leadership and commitment to making this vision a reality!

Respectfully,

Jenny Sova

Jenny Sova
Executive Director, Cabrillo Beach Youth Center

HARBOR COMMUNITY HEALTH CENTERS
YOUR HOME FOR HEALTH

6TH STREET HEALTH CENTER
593 West 6th Street
San Pedro, CA 90731
310.547.0202

PACIFIC AVENUE HEALTH CENTER
425 S. Pacific Avenue
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HCHC-1

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Los Angeles City Council
15th District

Dear Members of the Board of Harbor Commissioners,

As the Chief Executive Officer (CEO) of Harbor Community Health Centers, I am writing to express my support for the West Harbor Modification Project. This transformative initiative presents an exciting opportunity to enhance the San Pedro community by revitalizing our waterfront, promoting economic growth, and creating vibrant public spaces.

The expanded amphitheater and community lawn will serve as invaluable community assets, offering venues for cultural events, gatherings, and recreation that foster social connection and well-being. As an organization committed to improving community health, I recognize the critical role that accessible, engaging spaces play in supporting physical and mental health.

I am also impressed by the mitigation measures outlined in the Draft SEIR, which address potential concerns around traffic, noise, and environmental sustainability. These thoughtful strategies reflect a commitment to ensuring the project benefits the community while minimizing its impact.

Beyond its recreational and cultural benefits, the project's economic impact will be significant. By creating jobs and drawing visitors, the West Harbor Project will strengthen our local economy, contributing to a healthier and more vibrant community for all.

Thank you for your leadership and thoughtful consideration of this vital project. I look forward to seeing its positive impact on our community.

Sincerely,

Tamra King
Chief Executive Officer

LAW OFFICE OF JORDAN R. SISSON

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January 10, 2025

VIA EMAIL:

Nicole Enciso, Los Angeles Harbor Department (NEnciso@portla.org)

RE: Draft SEIR Comments for West Harbor Modification Project (SCH # 2005061041)

Dear Ms. Enciso:

On behalf of UNITE HERE Local 11 ("Local 11"), this office respectfully submits these comments[1] to the Los Angeles Harbor Department ("LAHD") regarding the above-referenced Draft Subsequent Environmental Impact Report ("SEIR"),[2] which considers the impacts of modifications of a previously approved project calling for the redevelopment of San Pedro Waterfront ("SPW") located on a 42-acre, former site of Ports O' Call Village between the Port's Main Channel and Harbor Boulevard, from Berth 73-Z to 83 located within the Port of Los Angeles ("POLA") ("Site").

LOCAL 11-1

For background, the SPW project was subject to the Final Environmental Impact Statement/ Environmental Impact Report ("EIS/EIR") certified by the Board of Harbor Commissioners ("Harbor Board") in 2009. (SEIR, PDF p. 14.) In May 2016, the Board approved an addendum to the 2009 SPW EIS/EIR for the San Pedro Public Market ("SPPM") project ("2016 SPPM Addendum"), which has been renamed the West Harbor Project. (id.) The Draft SEIR considers the changes from the SPW and SPPM projects (the "Proposed Project"), which includes but not limited to: (i) a larger relocated amphitheater of approximately 100,000 square feet ("sf") with capacity to accommodate 6,200 patrons (as compared to previously approved 500-seat amphitheater); (ii) a larger 175-foot tall Ferris wheel (previously approved 100-foot Ferris wheel) and installation of other attractions (e.g., carousel, wave swing, drop tower, etc.); (iii) additional 20 acres of paved parking adding more than 2,000-space increase from what was previously proposed. (Id., at PDF p. 18-20, 60-64, 69-90.)

In short, Local 11 has some concerns about the Proposed Project's environmental review under the California Environmental Quality Act ("CEQA").[3] As discussed below, Local 11 is concerned with some of the Draft SEIR's assumptions related to vehicle miles traveled ("VMT"), which may underestimate impacts affecting traffic, air quality, and greenhouse gas ("GHG") emissions. There are also some concerns with the enforceability of several mitigation measures and design features intended to reduce operational impacts affecting air quality, GHG, and traffic. Collectively, these flaws may underestimate impacts that warrant further mitigation—particularly those feasible measures that can reduce VMTs and associated emissions—such as the following:

LOCAL 11-2

a. Maximizing onsite solar panel use on the Site and overflow parking lots (i.e., Bluff Lot, 22nd Street lots);
b. Achieving LEED Platinum and/or achieving Tier 1 or Tier 2 CalGreen status;

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[1] Herein, page citations are either the stated pagination (i.e., "p. #") or PDF-page location (i.e., "PDF p. #")
[2] See https://files.ceqanet.opr.ca.gov/85061-8/attachment/VzvbqJCF0fm-IQks4H0kEH7ymyTfoS3An2zdakVcKqe7TsnGiY5zswRysYqln_3EAwUPSpLy27YOGwgj0.
[3] Pub. Res. Code § 21000 et seq. and 14 Cal. Code Regs. ("**CEQA Guidelines**") § 15000 et seq.

c. Implementing a local hiring program, which could lead to reduced VMTs and emissions by reducing potential worker commutes; and
d. Applying an area-wide mandatory commuter reduction program,[4] which could include:

LOCAL 11-2 Cont.

- A specific performance level to be reached (e.g., specific VMT or average daily trip reduction or both);
- A specified participation level (e.g., 100% of employees);
- Participation in guaranteed ride programs;
- Incentives such as employee carpool/vanpool access to preferential parking spaces;
- Subsidized transit passes for workers and patrons taking public transit; and
- A dedicated shuttle service (available during non-ticketed events) for workers and patrons toward nearby destinations.[5]

Local 11 has a significant interest in the Proposed Project given that they represent more than 25,000 workers employed in hotels, restaurants, airports, sports arenas, and convention centers throughout Southern California and Phoenix, Arizona—including thousands who live in Long Beach, Los Angeles, and areas surrounding POLA. Local 11 respectfully urges LAHD to consider a revised Draft SEIR that addresses the following issues and considers implementing additional mitigation measures (like those listed above and referenced on pages 4-5 of this comment letter).

LOCAL 11-3

1. VMT-Inducing Assumptions: The Draft SEIR assumes that the Ferris wheel and other amusement attractions are ancillary to the amphitheater and retail and would not generate vehicle trips/VMTs independently since patrons would already be on the Site. (Draft SEIR, PDF pp. 389, 411.) The Draft SEIR also states that the increased parking at the 208 E. 22nd Street parking lot would not constitute "trip-generating uses in and of itself" based on the assumption that it would serve as overflow parking for the amphitheater and other uses. (PDF p. 411.) However, these assumptions seem unsubstantiated given that the Ferris wheel and other attractions seem to be operational throughout the year (i.e., 100 % of the time) while the amphitheater would be limited to 100 ticket events per year with one event per day (i.e., 27% of the time) mainly during April through November. (PDF p. 84.) Additionally, while sea-adjacent Ferris wheels and attractions are relatively unique,[6] retail and restaurants are more generic and comparable to other coastal and inland offerings. Furthermore, the addition of 2,000-plus additional parking spaces (PDF p. 395) would clearly increase the Site's capacity to accommodate more patrons throughout the year with improvements proposed at the 22nd Street Parking lot. (PDF pp. 1050, 1055.) Thus, it is reasonable to assume patrons would be drawn to the Site by the Ferris wheel and other attractions independent of the retail and amphitheater, including during non-event theater days, which does not appear to be included in the Project's VMT analysis.

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[4] See e.g., CAPCOA (Dec. 2021), ibid., pp. 77, 100-102 (Measure T-6 including Measures T-7 through T-11 plus additional requirements like monitoring, plus additional enhancements like T-12 and T-13 measures).
[5] See e.g., Santa Monica Municipal Code § 9.5.130(B)(2)(b); https://www.octa.net/getting-around/rideshare/oc-rideshare/employers/guaranteed-ride-home-program/; https://www.ci.healdsburg.ca.us/AgendaCenter/ViewFile/Item/3098?fileID=21731.
[6] See e.g., See Visit California listing three similar attractions near the ocean including the Balboa Fun Zone Ferris Wheel (Newport Beach), the Pike Outlets Ferris Wheel (Long Beach), and the Pacific Wheel (Santa Monica). (See Visit California Website, 7 Fabulous California Ferris Wheels, https://www.visitcalifornia.com/now/7-fabulous-california-ferris-wheels/.)

2. VMT Trip Length Assumptions: The Draft SEIR provided an estimated VMT for event days based on four comparable operations (i.e., the Greek Theater, Long Beach Terrace Theater, Kia Forum, and City National Grove of Anaheim). (PDF p. 398.) While the Draft SEIR states that the Proposed Project and these four other operations are regional serving (PDF p. 408), it primarily relied on trip length and other VMT data from the Greek Theater and National Grove of Anaheim to provide an estimated VMT analysis, which have a lower average trip length (i.e., 16.3 and 16.9, respectively). (PDF pp. 398, 408.) It excluded the Long Beach Terrace Theater (i.e., 18.3-mile average length) and the Kia Forum (i.e., 19.3-mile average length) because, unlike the Proposed Project, these locations either serve recurring symphony events or have a larger capacity (respectively). (PDF p. 408.) However, this justification ignores the fact that the Long Beach Theater and Kia Forum are the most similar to the Proposed Project in terms of location (i.e., roughly a 6- and 16-mile distance as the crow flies from POLA, respectively) as compared to the National Grove and Greek Theater (i.e., roughly a 23- and 27-mile distance as the crow flies from POLA, respectively), which is an important consideration in estimation of vehicle trips here. Additionally, the Proposed Project's 6,200-guest amphitheater (PDF p. 396) is arguably more comparable to the more-nearby 17,505-seat Kia Forum (2.8 times larger than the Proposed Project) than to the 1,700-seat National Grove (3.64 times smaller than the Proposed Project). Thus, it is reasonable to assume that VMTs generated by the amphitheater would have a larger average trip length than the 16.6 average trip length used in the Draft SEIR (PDF p. 408), which may have resulted in an underestimation of the Proposed Project's estimated 83,292 event-day VMTs. (PDF pp. 408-410.)

LOCAL 11-4

3. VMT Assumptions Affect Emissions Analysis: Collectively, the above-mentioned issues may have resulted in the underestimation of VMTs. This not only affects the Draft SEIR's traffic analysis but also infects its air quality and GHG analysis where user-defined VMT assumptions were utilized in the air quality/GHG emissions modeling (via CalEEMod) (see e.g., PDF p. 685) and mobile sources (i.e., vehicles) are a major contributor of operational air emissions (see e.g., PDF pp. 132-134, 145, 146) and the chief contributor in GHG emissions (see e.g., PDF pp. 253, 266). Thus, this may result in the need for additional mitigation measures to address operational air quality and GHG impacts.

LOCAL 11-5

4. Additional Mitigation Measures: To minimize operations impacts on air quality emissions, GHG, and VMTs, the Draft SEIR relies significantly on three main measures, including: (i) a new mitigation measure using zero-emission shuttle buses from POLA parking lots to the Site during ticketed events (i.e., MM-AQ-31) (see e.g., PDF pp. 23, 130, 145, 148, 153, 172, 251); (ii) a new design feature of installing solar canopies over the main parking lot (i.e., PF-GHG-1) (PDF pp. 23, 267, 273); and (iii) new mitigation measures of implementing a Transportation Demand Management ("TDM") Strategies (i.e., MM-TRANS-1) (PDF pp. 24, 414-416). However, there are several concerns with these proposed measures, including:

LOCAL 11-6

a. For MM-AQ-31 (Zero-Emission Shuttle Buses), the measure would not be implemented if the future tenant reports that zero-emission shuttle buses are not commercially available to rent within the local and greater Los Angeles region. (PDF pp. 172-173, 251.) However, there is no discussion of what will constitute commercially available to guide future decision-making. Nor does it explain why a zero-emissions shuttle fleet is infeasible, especially if utilized for the entire Site operations and not limited to only amphitheater events—such as scheduled shuttles from the Site to major transit locations (e.g., Metrolink Blue and Silver stops). Nor does the Draft SEIR identify alternative mitigation measures in the event shuttle busses are not implemented.

LOCAL 11-7

b. For PF-GHG-1 (Install Solar Canopies over Main Parking Lot), the measure states it requires approximately 1.4 megawatts of electric generation, but if the future tenant fails to implement the solar improvement, the future tenant need only use commercially reasonable efforts to replace the original solar contract. (PDF p. 273.) However, there is no discussion of what will constitute commercially reasonable efforts to guide future decision-making. Nor is there an explanation whether more than 1.4 megawatts is feasible, such as by requiring solar panels at the overflow parking "Bluff Lot" and 208 E. 22nd Street parking lots. (PDF pp. 557, 1047, 1058, 1061.)

LOCAL 11-8

c. For MM-TRANS-1 (Implementation of TDM Program), the measure provides various general strategies (e.g., coordinating with LADOT, providing transit information, wayfinding, social media, etc.). (PDF pp. 412-413.) However, there are few performance metrics provided, nor is there discussion of other TDM measures that may be effective (with the co-benefit of reducing air/GHG emissions)—such as those recommended by the California Air Pollution Control Officers Association ("CAPCOA"), Southern California Association of Governments ("SCAG"), California Air Resources Board ("CARB"), Office of Planning Research ("OPR"), and South Coast Air Quality Management District ("SCAQMD").[7] Additionally, annual reporting of the Site's VMT/trip generation should be required, including the Site's usage of overflow lots (i.e., Bluff Lot, 22nd Street parking lots). (PDF pp. 557, 1047, 1058, 1061.)

LOCAL 11-9

5. Additional Feasible Measures are Available: Collectively, the above-mentioned issues may indicate the need for additional feasible mitigation measures to reduce operational impacts on traffic, air quality, and GHGs. In addition to the measures recommended by various public agencies (referenced herein and explained in greater detail in referenced documents),[8] Local 11 urges LAHD to consider the following measures:

a. Maximizing onsite solar panel use on the Site and overflow parking lots (i.e., Bluff Lot, 22nd Street lots);
b. Achieving LEED Platinum and/or achieving Tier 1 or Tier 2 CalGreen status;
c. Implementing a local hiring program, which could lead to reduced VMTs and emissions by reducing potential worker commutes; and

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[7] See e.g., CAPCOA (Dec. 2021) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, pp. 31-32, 73, 76, 80-96 (listing numerous strategies related to transportation, energy, water, lawn and landscaping, solid waste, natural and working lands, construction, refrigerants, and miscellaneous strategies), https://www.airquality.org/ClimateChange/Documents/Final%20Handbook_AB434.pdf; CAPCOA (Aug. 2010) Quantifying GHGs and Mitigation, pp. 64-74 (same), https://www.contracosta.ca.gov/DocumentCenter/View/34123/CAPCOA-2010-GHG-Quantification-PDF; SCAG (Dec. 2019) Final Program EIR, pp. 2.0-18 – 2.0-71 (see project-level mitigation measures ("PMM") for air quality, GHG, and transportation impacts), https://scag.ca.gov/sites/main/files/file-attachments/fpeir_connectsocal_complete.pdf?1607981618; SCAG (May 2020) PEIR MMRP, pp. 2-52 (same), https://scag.ca.gov/sites/main/files/file-attachments/exhibit-a_connectsocal_peir.pdf?1606004156; SCAG (Apr. 2024) Final Program EIR, MMRP, pp. A-7 – A-47 (same), https://scag.ca.gov/sites/main/files/file-attachments/exhibit_a_mmrp_508_final.pdf?1712003625; CARB (Dec. 2022) 2022 Scoping Plan, pp. 267-271, https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf; id., Appendix D, pp. 27-33, https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf; CARB's 2017 Scoping Plan, Appendix B-Local Action, pp. 7-10, https://www.arb.ca.gov/cc/scopingplan/app_b_local_action_final.pdf; OPR (Dec. 2018) Technical Advisory, pp. 27, https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf;

[8] Ibid.

LOCAL 11-9 Cont.

d. Applying an area-wide mandatory commuter reduction program,[9] which could include:

- A specific performance level to be reached (e.g., specific VMT or average daily trip reduction or both);
- A specified participation level (e.g., 100% of employees);
- Participation in guaranteed ride programs;
- Incentives such as employee carpool/vanpool access to preferential parking spaces;
- Subsidized transit passes for workers and patrons taking public transit; and
- A dedicated shuttle service (available during non-ticketed events) for workers and patrons toward nearby destinations.[10]

LOCAL 11-10

In closing, Local 11 thanks LAHD for the opportunity to provide these comments and urges it to consider the incorporation of additional feasible measures to reduce the Proposed Project's operational impacts (such as those listed above). Local 11 reserves the right to supplement these comments at future hearings and proceedings for this Project. (See *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal.App.4th 1109, 1120 [CEQA litigation not limited only to claims made during EIR comment period].) This office requests, to the extent not already on the notice list, all notices of CEQA actions and any approvals, Project CEQA determinations, or public hearings to be held on the Project under state or local law requiring local agencies to mail such notices to any person who has filed a written request for them. (See Pub. Res. Code §§, 21092.2, 21167(f) and Gov. Code § 65092.) Please send notice by electronic and regular mail to the address identified on page one of this letter.

Thank you for consideration of these comments. We ask that this letter be placed in the administrative record for the Project.

Sincerely,

Jordan R. Sisson
Attorney for Local 11

[9] See e.g., CAPCOA (Dec. 2021), ibid., pp. 77, 100-102 (Measure T-6 including Measures T-7 through T-11 plus additional requirements like monitoring, plus additional enhancements like T-12 and T-13 measures).
[10] See e.g., Santa Monica Municipal Code § 9.5.130(B)(2)(b); https://www.octa.net/getting-around/rideshare/oc-rideshare/employers/guaranteed-ride-home-program/; https://www.ci.healdsburg.ca.us/AgendaCenter/ViewFile/Item/3098?fileID=21731.

National Museum of the Surface Navy
at the Battleship IOWA

Dear Members of the Board of Harbor Commissioners,

In my official capacity as President & CEO of the Pacific Battleship Center, dba Battleship IOWA Museum, I am writing to express my strong support for the West Harbor Modification Project.

Since our arrival in 2012, we have eagerly awaited the transformation of the LA Waterfront into a world-class destination. The proposed enhancements in the West Harbor Modification Project promise to be a rising tide that lifts all boats, benefiting not only the local community but also businesses, visitors, and the broader Los Angeles region.

The expansion of the amphitheater and community lawn, along with the addition of the Ferris wheel, will create unique opportunities for residents and visitors to gather, celebrate, and enjoy the waterfront. These features will not only enhance the recreational and cultural life of San Pedro but also bring an influx of visitors who will invigorate our local economy.

NMSN-1

I am encouraged by the thoughtful mitigation measures outlined in the Draft SEIR. These efforts demonstrate a balanced and sustainable approach to development that considers both environmental and community impacts. The project's commitment to minimizing disruption while maximizing benefits for all stakeholders reflects an understanding of the interconnectedness of our harbor's ecosystem—both natural and economic.

With dedicated spaces for local businesses and recreational activities, this project embodies the spirit of community upliftment. It has the potential to boost tourism, generate local jobs, and further the revitalization of San Pedro, fostering prosperity for everyone who calls this vibrant area home. Just as the ocean's rising tide lifts all boats, the success of the West Harbor Modification Project will uplift our entire community.

Thank you for your thoughtful consideration of this project. I am confident that the West Harbor will serve as a shining example of how development can celebrate the beauty, culture, and potential of our waterfront.

Sincerely,

Jonathan Williams

President & CEO

Pacific Battleship Center dba Battleship IOWA Museum

jwilliams@labattleship.com



PADDLE OUT PLASTIC

paddleoutplastic@gmail.com

Director of Environmental Management
Los Angeles Harbor Department
425 South Palos Verdes Street
San Pedro, CA 90731

Sent via email to: ceqacomments@portla.org

Re: West Harbor Modification Project

Paddle Out Plastic is a California nonprofit with a mission revolving around removing water-borne litter (primarily plastics) and educating and encouraging the public, business, and government in ways to reduce such litter through reuse (instead of single use), using replacement products, and, where actually performed, recycling. Our comments in this letter will address litter, but it is worth noting that our organization's impetus was and is protecting wildlife, so we would be remiss to not highlight other aspects of the project that threaten wildlife—specifically, other water and air pollutants—just as we would be remiss to not share our observations out in LA Harbor waters weekly, seeing birds and marine mammals where they forage and play, which we believe are missed in the Draft SEIR.

POP-1

Our comments will focus on

- ways the proposed project will increase water-borne pollution including through disposable foodware and products, confetti, fireworks and artificial turf, and the inadequacy of the mitigation measures identified in the Draft SEIR;
- request adoption of an additional receiver point where marine mammals routinely haul out less than half the distance from the closest receiver points used in the Draft SEIR; and
- correct what we believe to be a faulty premise in the Draft SEIR regarding harbor seal behavior in the Port of LA.

The Draft SEIR has determined that implementation of the proposed project would result in significant, unavoidable impacts. We agree that the proposed project would result in significant impacts, but do not agree that all of these impacts are unavoidable. Pursuant to the Draft SEIR, the proposed project promises to increase pollutant discharge with more than two dozen fireworks shows, confetti releases, and the inevitable windblown trash that will result from food carts, kiosks and more, serving many thousands of people outdoors on disposable—rather than reusable—containers, be they plastic or biodegradable. This, notwithstanding that the City of Los Angeles General Plan includes a policy to "*continue to reduce pollutant discharge into the bays from both natural and human sources*." We believe that in some instances the impacts may be greater than reported, but we also believe that some <u>are</u> avoidable with modifications to the project that eliminate certain pollution-prone materials as further discussed below. We note that the developer and the City should have a shared interest in reducing materials pollution as much as possible, as such pollution creates a visual blight, replaces community pride with

POP-2

POP-2 cont. negative feelings, and engenders disrespect for the very natural environment that is the developer's draw to this area in the first place.

Water-borne Pollution

Based on our organization's 5½ years of removing trash from the Los Angeles Harbor area, it seems apparent that trash management (including the practices of tenants, vendors, service providers, and others) in the Harbor area has not been adequate to address the prevalence of water-borne trash, although recently we have noticed increased water cleanups by Port of Los Angeles staff or contractors, which is certainly welcomed. Since June 2019, Paddle Out Plastic volunteers have removed 270,151 pieces of litter, weighing in at 8,935 pounds, from the water in LA Harbor alone (Paddle Out Plastic also works in other Southern California waters). Of that total, these are some of the most prevalent items and number removed from LA Harbor waters:

POP-3

Food wrappers: 42,526
Product wrappers: 13,522
Bottle caps and other lids: 26,503
Plastic bottles, cups and other containers: 21,527
Straws: 9,964
Plastic bags: 10,509
Plastic fragments (hard plastic, soft film, and foam): 123,019

Absent mitigations, significantly increased public use and associated trash-producing activities under the proposed project would logically be expected to increase the amount of trash in general and by extrapolation the amount of trash that ends up in the water.

POP-4 The Draft SEIR acknowledges that "*Operation of the 208 E. 22nd Street Parking Lot could result in the production of human-produced trash that amasses in the parking lot and in trash receptacles, which can find its way into nearby waters, where sensitive species could consume it, causing suffocation, starvation, or debilitation or resulting in species becoming entangled in the debris."* The Draft SEIR concludes, however, that *"these impacts are not substantially different from what was previously analyzed in the 2009 SPW EIS/EIR*." We take issue with this conclusion. The Draft EIR analyzes what is approximately a 12 times increase in the number of potential attendees at amphitheater events by increasing its size from that of a community playhouse to larger than the Greek Theater, and also includes other attendance-increasing project changes, including a larger Ferris wheel. The parking lot will be enlarged significantly to accommodate the very significant increase in daily attendance arising from these venue changes, and the attendance increase will bring with it more litter-producing activity. The Draft SEIR indicates that trash management mitigation measures will be to use covered trash receptacles and cleaning up within 4 hours after events. However, based on our continually high trash counts from collections made over multiple years during which the harbor area has already had similar measures in place, we do not believe such measures alone will be adequate to address the litter problem in the area of the proposed project, which is highly impacted by wind and immediately adjacent to the water. This is not to say the proposed mitigation measures are not valuable, only that they are not enough.

POP-5 The Draft SEIR acknowledges that event organizers must comply with City of Los Angeles Ordinance No. 187030, *Disposable Foodware Accessories and Plastic Drinking Straws*, its Comprehensive Plastics Reduction Program, the Zero Waste Plan and Ordinance 187718 (*Zero Waste at City Facilities and Events on City Property*; City of Los Angeles 2024). Ordinance 187718 contains extensive provisions including, but not limited to, the ban of single-use plastics

POP-5 cont. and the ban of expanded polystyrene foam and the reduction of disposable foodware and accessories. We acknowledge that this will be helpful in mitigating the litter at the venue as well as in the water. We do not believe it will reduce to less than significant the litter impacts that ensue from the proposed project overall due to inherent limitations contained within those ordinances, a probable lack of third-party tenant and vendor compliance, and visitors who bring their own food and drink to the proposed project.

POP-6 The reusable foodware aspect of the 187718 Ordinance applies to indoor food venues, while the greatest risk from single-use foodware on the waterfront comes from outdoor use. The SEIR states that "*Wherever reusable, compostable, and/or recyclable products are infeasible or not required by Regulations, event organizers will invest in biodegradable products (e.g., confetti, decorations, packaging, single-use items)*. What, if any, requirements will be placed on food and drink cart and kiosk vendors? The Draft SEIR is silent on that, and from this silence the public must assume that there will be none.

We suggest the proposed project mitigation measures be improved by <u>requiring</u> reusable foodware instead of simply "encouraging" event organizers to utilize reusable foodware, drinkware, napkins, and accessories, and not just for dine-in services, but for to-go services, as well.

POP-7 In addition, the proposed project ought to confront problematic practices, such as release of confetti, more directly. The Draft SEIR states that "*where possible, sustainable products and practices, such as biodegradable confetti, would be used during events, and care would be taken to direct the spray away from the Main Channel.*" Releasing confetti into the environment is not a requirement of the operations of the proposed project; it's purely optional. Actions speak louder than words, and the release of this material into the environment conveys a terrible message to the public condoning the release of trash into outdoor spaces and the water, in particular. It should not be allowed.

POP-8 Although the use of balloons is not mentioned in the Draft SEIR, balloons are a known hazard to aquatic life, being frequently identified as a cause of death to pinnipeds, cetaceans and others due to ingestion. We have retrieved hundreds of balloons from harbor waters. As with fireworks, our organization opposes the use of balloons at waterfront venues due to the strong likelihood that balloons will end up in the water and present an unnecessary threat to marine life.

POP-9 The Draft SEIR also acknowledges that "*The proposed firework shows could draw a significant number of visitors to the [San Pedro Waterfront], with many visitors viewing the fireworks show outside of the Amphitheater from developed shorelines, the proposed lawn area, and other nearby locations. Increases in visitors to this area would likely result in increased amounts of human-generated trash and debris from picnics, parties, and other gatherings along the shorelines that could wash into adjacent Harbor waters.*" Despite this recognition, the Draft SEIR does not propose any mitigations in connection with that activity.

POP-10 Regarding fireworks, the Draft SEIR recites the chemicals released by pyrotechnics: "*after fireworks explode, they can release into the water some polluting chemicals and materials, including aluminum, antimony, barium, carbon, calcium, chlorine, cesium, copper, iron, potassium, lithium, magnesium, oxidizers (including nitrates, chlorates, and perchlorates), phosphorus, sodium sulfur, strontium, titanium, and zinc. Particulate matter and debris from exploded fireworks and unignited pyrotechnic material, as well as paper, cardboard, wires, and fuses from ignited pyrotechnic material, can also adversely affect the quality of the surrounding waters.*" Moreover, on New Years Day 2025, SCAQMD issued a warning of unhealthful air

POP-10 cont.

quality due in large part to fireworks, giving our organization pause to proceed with a planned cleanup in LA Harbor. Yet despite the acknowledgement in the Draft SEIR and the known health issues as advised by SCAQMD, fireworks remain in the proposed project.

Artificial Turf

POP-11

The *San Pedro Waterfront and Promenade Design Guidelines* were developed as part of the 2009 SPW EIS/EIR to provide the framework for projects that would be constructed along the Port's waterfront. These include "*Select . . . groundcovers that can serve as wildlife habitat, encouraging the presence of migratory birds, butterflies, and other species*." Instead, the Modification Project includes artificial turf, itself pollutant-laden. Moreover, the SEIR claims that the artificial turf would be "*vacuumed regularly and intermittently washed down (approximately four times per yea*r)". It seems unlikely that this approach would be adequate to address anticipated food and drink spills, animal waste, potentially vomit, and other bacteria-laden and mold-producing pollutants (not to mention the harmful chemical constituents which artificial turf is known to produce) from leaching into the water, especially during rains and during wash downs. The Draft SEIR does not propose further mitigations to address these issues.

Receiver Points

POP-12

The Draft SEIR indicates that "e*ight receiver points were identified for analysis of potential noise impacts on marine mammals known to utilize the Harbor. Receiver points were located in areas where marine mammals have a high potential for being located out of the water (i.e., known haul-out locations)."* Yet, one of the most densely populated marine mammal haul out points in the port, immediately across from the West Harbor venue between the shuttered Southwest Marine facility and the Coast Guard dock (see photo, below), was not analyzed as a receiver point. As a result of this significant omission, neither average noise levels (from the amphitheater) which could be expected to last an hour or more, nor short-term maximum noise levels (from firework detonations), were reported for this location and included in the analysis. Instead, the nearest receiver points to the proposed amphitheater are more than twice as far away (Fish Harbor, Main Channel North, and Main Channel South).



(Photo credit Laura Raab, paddler with Paddle Out Plastic)

POP-13 As the Draft SEIR points out, "*under the MMPA [Marine Mammal Protection Act], marine mammals are considered harassed when exposed to sound levels that may lead to mortality, temporary or permanent hearing impairment (i.e., Temporary Threshold Shift or Permanent Threshold Shift), non-auditory physical or physiological effects, and behavioral disturbance. Temporary Threshold Shifts qualify as a Level B harassment, and Permanent Threshold Shifts qualify as a Level A harassment. . . . Sound associated with human activities can result in negative behavioral impacts on marine mammals, including a reduction in fitness by disrupting rest periods in haul-out and other locations, <u>particularly at night</u>* [emphasis added]. We ask that the Draft SEIR be amended to include this location as a Receiver Point with thorough analysis of noise and other impacts to the marine mammals and other wildlife inhabiting this location.

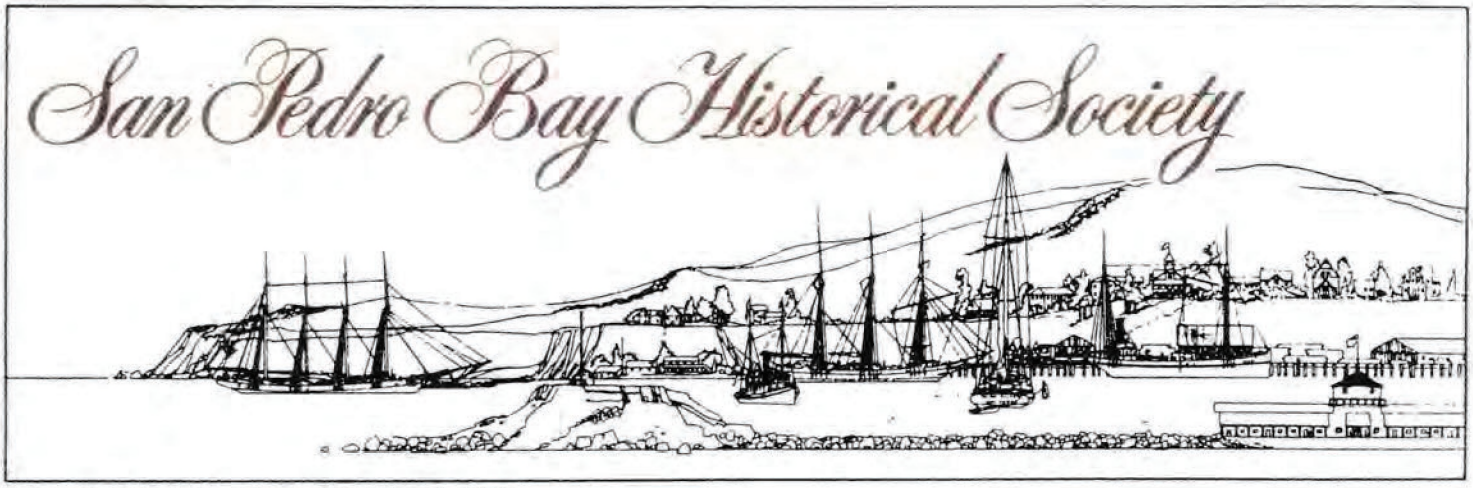
Harbor Seal Habits

POP-14 The SEIR analysis acknowledges that noise levels from amphitheater and firework shows are anticipated to exceed harassment levels for harbor seals at Fish Harbor, Cabrillo Marina (north and south), and Main Channel (south) and to exceed harassment levels for harbor seals and other pinnipeds at Firework Barge and Bait Barge. Yet, the SEIR concludes that "*impacts from noise events on harbor seals are not anticipated",* based on the premise that seals are most commonly observed at Pier 400.

While the observation that seals are seen most commonly at Pier 400 is consistent with our experience, being out on the water in LA Harbor almost weekly down at the level of harbor seals foraging and playing, we see harbor seals pop up and rest on buoys throughout LA Harbor, not just at Pier 400. Therefore, the conclusion that impacts from noise events on harbor seals are not anticipated relies on a faulty premise and should be reassessed.

POP-15 For the reasons set forth above, we believe modifications should be made to the Draft SEIR to address material deficiencies in the analysis and proposed mitigations, and a resubmission should be presented to the public prior to a vote on approval.

Sincerely,
Eva Cicoria
President Paddle Out Plastic



P.O. BOX 1568, SAN PEDRO, CALIFORNIA 90733

January 6, 2025

Director of Environmental Management
Los Angeles Harbor Department
425 South Palos Verdes Street
San Pedro, CA 90731

Re: Comments on Draft SEIR for West Harbor Modification and Negative Impacts of the Project

As indicated in the POLA notice of November 6, 2024, the West Harbor amphitheatre project will cause a harmful decline in air quality, produce significant greenhouse gas emissions, and elevate the ambient noise during construction (and most certainly during operations). The residents of San Pedro are already subjected to higher impacts in these areas due to port operations. They shouldn't have to endure more.

SPBHS-1

The Board of the San Pedro Bay Historical Society (hereafter "the Society") has serious concerns about the negative impacts the proposed West Harbor amphitheatre will have on our museum, the Muller House Museum, located at 1542 S. Beacons Street in San Pedro. The museum sits on a bluff overlooking the Miner Street and the site of the amphitheatre. Our concerns extend to the impact the amphitheatre will have on the densely populated residential neighborhood along Beacon Street, including points west and southwest. For the operation of the Muller House Museum, the noise, traffic, and loss of street parking generated by the amphitheatre promise to create the most direct negative impacts.

<u>Noise</u>

SPBHS-2

The proximity of the amphitheatre to the Society's museum will disrupt the programs we hold there and the weekend tours given to museum visitors. The mitigation measures for noise cannot adequately shield us, given the decibel level of today's concerts and the direction which the stage will face. The number of Tier 1 performance days (up to 100 per year) likely means that there will not be a single weekend free from the overpowering blare and thump coming from the amphitheatre sound system.
It must also be remembered that crowds, too, produce noise. How will crowd noise be mitigated?

SPBHS-3 We question the necessity of up to 25 fireworks events, when it's now understood that fireworks come at a serious cost to the environment. The Society is committed to creating a healthy environment for humans and wildlife. The draft SEIR fails to address how the impact of disruptive, startling noise and pollutants on marine wildlife and the immediate neighborhoods will be mitigated. Additionally, limiting the duration of fireworks has not been clearly defined.

SPBHS-4 Monitoring noise levels, creating a hot-line for noise complaints, and fines sound hopeful on paper, but where is the evidence that these measures encourage compliance with maximum allowable levels. Once the damage has already been done, the fines will not directly benefit the "injured parties."

SPBHS-5 Traffic and Parking

Beacon Street, Crescent Avenue, and the other streets near the Muller House Museum already suffer traffic and parking impacts when large events are held in the Outer Harbor. Once parking fees are implemented for the West Harbor lots, the scramble for parking will grow worse, and the Society stands to lose visitors to the museum. How a traffic control plan will mitigate the back-ups and hazards occurring along these narrow residential streets has not been defined.

SPBHS-6 In sum, the present plans fall far short in respecting the operations of the Muller House Museum, the quality of life in the immediate neighborhoods, and the welfare of the environment. We ask that the amphitheatre plans be revised to eliminate the adverse impacts described here. Additionally, maps showing the footprint of the amphitheatre and the West Harbor developments must include the areas west of Miner Street to accurately show the proximity of those most affected.

Sincerely,

Mona Dallas Reddick

Mona Dallas Reddick, PhD
President, SPBHS

Frank B. Anderson

Frank B. Anderson
Secretary, SPBHS &
Landmarks Chair

January 8, 2025

Port of Los Angeles
Environmental Division
425 S. Palos Verdes Street
San Pedro, CA 90731

Sent via email: ceqacomments@portla.org
RE: West Harbor Modification Project Draft Subsequent EIR

To Whom it May Concern,

SPCC-1

On behalf of the San Pedro Chamber of Commerce, I am writing to express our strong support for the West Harbor Modification project, including its signature 6,200-seat amphitheater. This transformative 42-acre development represents a crucial opportunity for San Pedro and the Harbor Area to strengthen our position within Los Angeles' thriving tourism, entertainment, and hospitality sectors.

We have reviewed the Draft Subsequent EIR and appreciate the recommendation for implementation of MM TRAN-1. This measure requires the West Harbor development team to implement comprehensive transportation demand management strategies, promoting carpooling and public transit use for amphitheater events. As an organization that has helped to staff many large tourism activities, such as LA Fleet Week and the Lobster Festival, we know that the ongoing development of transportation and parking management including the addition of 2,600 new parking spaces will effectively facilitate visitor movement during large-scale events.

The 6,200 seat amphitheater is a critical component of the West Harbor development. We have witnessed the increased economic activity in our restaurants when concerts have taken place on the waterfront. We fully support the amphitheater going from 500 seats to 6,200 seats. The venue will use an advanced in-house sound system designed with sound focusing technology to keep sound within the concert area. We appreciate that professional staff will monitor noise levels to adjust in real time during shows if complaints are received from community members. The use of advanced sound equipment and professional in-house staff will greatly reduce issues that have been created by recent music events.

The amphitheater will also be key for the economic growth of many area businesses and nonprofits. We face growing demand for public gathering spaces, with local businesses and nonprofits struggling to find adequate venues for events. The versatility of the amphitheater with the great lawn will address this critical need, while also serving as a key facility for San Pedro's Croatia House during the 2028 Olympics.

The San Pedro Chamber of Commerce looks forward to the completion of West Harbor. This transformative development will create hundreds of local jobs, generate millions in annual revenue, and establish the LA Waterfront as a premier destination. By attracting visitors from across the region and worldwide while serving our local community, the project represents a crucial investment in San Pedro's economic future. We urge you to approve and expedite the West Harbor Modification Project without further delay.

Sincerely,

Elise Swanson
President/CEO
San Pedro Chamber of Commerce

Dear Members of the Board of Harbor Commissioners,

As stakeholders in the Historic Downtown of San Pedro, we are writing to express our strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

SPDW-1

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and we are excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Ryan Blaney

Ryan S. Blaney, Esq.
President/CEO
San Pedro Property Alliance
rblaney@sanpedrobid.com

January 10th, 2025

Eduardo Rangel
Sperra
2451 Signal St.
San Pedro, CA 90731

Dear Members of the Board of Harbor Commissioners,

As an organization that has proudly called San Pedro home for the past three years, Sperra enthusiastically supports the West Harbor Modification Project and its vision for revitalizing our waterfront community. Operating out of AltaSea, Sperra is deeply invested in advancing research and innovation for the blue economy, and we are excited about how this project will enhance the vitality of San Pedro and bring new opportunities to our community.

SPERRA-1

The expanded amphitheater and community lawn are poised to transform the West Harbor area into a vibrant hub for world-class performances, cultural events, and community gatherings. By drawing more visitors to AltaSea, where Sperra and many other forward-thinking organizations are located, this project will spotlight the groundbreaking work being done in marine science, renewable energy, and ocean conservation. It will inspire community members—especially young people—to explore careers in science and technology, furthering the development of a skilled and innovative workforce.

As a part of the AltaSea community, Sperra recognizes how this project will bolster San Pedro's identity as a premier waterfront destination while enhancing opportunities for education, collaboration, and innovation. We thank you for your leadership in making this vision a reality and look forward to seeing the positive impact it will have on our community.

Sincerely,



Eduardo Rangel
Mechanical Engineer
Sperra

San Pedro Skatepark Association
"Community-led for over 2 decades"
www.sanpedrosk8.org

Dear Board of Harbor Commissioners,

SPSA-1

My name is April Jones, member of the Board of Directors for the San Pedro Skatepark Association, a local nonprofit dedicated to serving youth for over 2 decades. I am writing to express our strong support for Jerico Development's West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

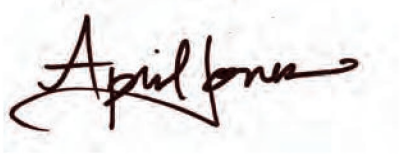
The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability. Their development respects the community's history while building a promising future that benefits everyone. By prioritizing transparency and active engagement, listening to residents, businesses, and local organizations like ours, it ensures the development reflects the community's collective vision.

The expanded amphitheater and community green space will bring new opportunities for performances, cultural events, and community engagements. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

We are excited about the proposed amphitheater, which will become a vital cultural and economic hub that fosters connection, equity, and growth. It will open up access to creative industries and opportunities for artistic expression, community events, and youth engagement—values that align closely with the mission of our organization.

Sincerely,

April Jones
Film Director | Board of Directors
Concrete Law | San Pedro Skatepark Association



Linda L. Grimes
Executive Director
Eighteenth Street Marketing

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Musician/Conductor
Candice Gawne
Neon Artist
Terrelle Jerricks
Random Lengths News Managing Editor

FOUNDING PARTNER
Arts Unted San Pedro

December 9, 2024

Port of Los Angeles CEQA Comments
425 Palos Verdes Street
San Pedro, CA 90731

RE: West Harbor Amphitheater

Dear Port of Los Angeles -

SPWAD-1

On behalf of the Board and staff of the **San Pedro Waterfront Arts District**, we are pleased to submit this letter of support for the West Harbor Amphitheater.

We firmly believe that the West Harbor Project (Project), a 42-acre waterfront destination for dining, retail, and entertainment, developed on the former Ports O' Call site in San Pedro, Los Angeles, will provide substantial economic, workforce, and cultural benefits to San Pedro. Analyzed in the 2009 San Pedro Waterfront Project Environmental Impact Statement/Environmental Impact Report and the 2016 Addendum for the San Pedro Public Market Project, the Project is the culmination of decades-long community input and participation in revitalizing the LA Waterfront.

The Draft Subsequent Environmental Impact Report (SEIR) for the West Harbor Modification Project, released by the Port of Los Angeles for public review and comment on November 6, 2024, analyzes proposed changes to the Project, including in particular, **the increase in the size of the previously approved outdoor amphitheater from a small 500-seat venue to a mid-size 6,200- seat venue,** as well as an Increase in Ferris wheel height from 100 feet to up to 175 feet, and additional parking on adjacent Port property at 22nd and Signal Street

We are truly excited about the potential impact of these initiatives to downtown San Pedro, including:

- **Tourism and Entertainment:** The expanded amphitheater will allow San Pedro to participate in two of Los Angeles' leading industries—tourism and entertainment—and become a key economic driver for the region.
- **Iconic Draw:** A mid-size amphitheater, combined with our unique waterside setting, will attract nationally recognized talent, patrons, and visitors from across the region, establishing our community and historic arts district as a premier destination.
- **Boost for Local Businesses:** More visitors will drive an increase in commerce to downtown and along the LA Waterfront, with potential sales increases of 15-25% for local restaurants and businesses.
- **Job Creation:** The project will create employment opportunities ranging from the construction and operation of the amphitheater to the hiring of staff for new restaurants, retail spaces, and attractions. Additionally, the project will provide business opportunities for small start-ups, well-established area businesses, and the arts.

As a local non-profit organization committed to supporting the arts and culture of San Pedro, the San Pedro Waterfront Arts District proudly lends its support to this important initiative, contributing our voice to making the amphitheater a reality. We encourage the continued development of this visionary project and look forward to its positive impact on our community.

Sincerely,
Linda L. Grimes

Executive Director, San Pedro Waterfront Arts District
55lindagrimes@gmail.com
cc: L Johnson

From: billing@solastapictures.com
Sent on: Thursday, December 19, 2024 7:03:27 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor DSEIR

Dear Members of the Board of Harbor Commissioners,

Solasta-1

As a San Pedro resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

South Bay Center for Counseling
540 N Marine Avenue
Wilmington, CA 90744
(310) 414-2090 Fax (310) 414-2096
EIN: 23-7360521
www.sbcc.community

January 7, 2025

Dear Members of the Board of Harbor Commissioners,

SBCC-1

As a stakeholder with South Bay Center for Counseling (SBCC), I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Colleen Mooney

Colleen Mooney
Executive Director
SBCC

Individuals

From: Debbie Abshear
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Saturday, January 4, 2025 6:36:47 AM

ABSHEAR-1

I am extremely concerned about the proposed modifications to the amphitheater at the West Harbor Project. My concerns involve increased traffic, lack of parking and the increased noise.

I have been visiting Ports of Call for at least 50 years. My then boyfriend, now husband of 50+ years, spent many of our dates walking the village. We continued to enjoy Ports of Call regularly even with our grandchildren.

My children had their wedding reception at the now closed Ports of Call restaurant.

I used to exhibit my paintings at a gallery there on the waterfront.

We considered that area to be part of our own personal history and are extremely concerned about the direction this project is taking. While I understand improvements needed to be made, this is not and will not be an improvement!

Please reconsider this modification.

Debbie Abshear
15616 Faysmith Avenue
Gardena, CA 90249
(310) 989-9906 Debbie cell
www.debbieabshear.com
<https://urldefense.com/v3/__http://www.debbieabshear.com__;!!Ad2px7zmCw!gyO05uEbJHcXwBN40_MLCX_neBOuqh9hJQ6Lx9PFy6zm8uhPCWt8puHSmuK4W-vjDdQDpEjRFINnP8e_ag8$>

From: r ando
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Monday, January 6, 2025 6:30:22 PM

Sent from my iPhone Dear Members of the Board of Harbor Commissioners,

As a stakeholder and long term tenant of both the Port of Los Angeles and now West Harbor, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

AGUILAR-1

For nearly 20 years we at San Pedro Fish Market helped produce the Port of Los Angeles Lobster Festival which was a 3 day food and music festival that drew in people from all over the country. In addition, we also hosted a Railroad Revival Tour with Mumford and Sons as the headliner in our parking lot with 10,000 in attendance. All of these events were incredibly successful bringing people to our waterfront, generating tax revenues, creating jobs, and providing a space for families to enjoy our beautiful waterfront!

Economically, this project will be a major asset to our community in the same way. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Orlando Aguilar

From: Kristie Wallis <kristie.alarcon@gmail.com>
Sent on: Thursday, December 19, 2024 7:11:31 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor DSEIR

Dear Members of the Board of Harbor Commissioners,

As a San Pedro resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Alarcon-1

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Best,
Kristie Alarcon

Dear Members of the Board of Harbor Commissioners,

ALEXANDER-1

As a resident, I am writing to express my strong support for the West Harbor Modification Project. I have lived in San Pedro and the South Bay for over 30 years. San Pedro was always a town way past its prime and always hopeful that it would someday reach its potential. Well now, with the West Harbor development we are indeed seeing San Pedro's potential as a destination not only for the region but for visitors from out of state as well.

As a member of the Central San Pedro Neighborhood Council, I have attended multiple presentations and have studied its progress. At each step, the developers have listened to the community and have responded positively to the concerns expressed.

West Harbor leads the way to economic improvement and job opportunities. Exciting plans in entertainment, cultural events and community activities add vibrancy to our community and beyond.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Linda Alexander
1170 W 11th St. #1
San Pedro, Ca 90731

From: Kimberly A <carolinaheat13@hotmail.com>
Sent on: Tuesday, February 4, 2025 2:12:00 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor project

Allen-1

I wholeheartedly support the West Harbor project! It looks like a fantastic opportunity for families and local communities to come together.

I lived in San Pedro for 10 years, and my husband and his family are lifelong residents, with several active and retired longshoremen among them.

Thank you for the opportunity to share my support.

Kimberly Allen

Get Outlook for iOS

Uploaded 2 items to Emails 6_4_25

January 7, 2025

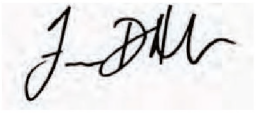
To Whom It May Concern:

I am writing to show my support of the West Harbor Modification Project. I grew up in the Point Fermin area and I was lucky enough to have a view of the LA Waterfront. As a child, I always knew San Pedro had a bustling port seeing many ships coming and going, but for the most part, San Pedro was a little bit of a sleeping village. I currently reside in San Pedro with my husband, and young children, so it is nice to see the waterfront being transformed in a positive way by West Harbor.

ALLISON-1

Additionally, I am also an ambassador for the Battleship IOWA Museum and I have helped bring our community together with many events on the ship. I know firsthand how special it is to have a venue with the backdrop of the LA Waterfront. I support West Harbor in helping create a unique destination for events and concerts with the expanded amphitheater. It will help put San Pedro on the map, and it will assist with the economic growth of our community.

Thank you for allowing me to share why I believe this project continues to move forward. Let's help support each other with the creation of a vibrant waterfront destination.



Francesca Allison
San Pedro Resident
Ambassador- Battleship IOWA Museum

Andrew Aragon

Executive & Development Assistant, Grand Vision Foundation

—

Andrew Aragon
926 W 13th St.
San Pedro, CA 90731
310.251.1186
andrew@grandvision.org

3 December 2024

Director of Environmental Management
Los Angeles Harbor Department
425 South Palos Verdes St
San Pedro, CA 90731

Dear Members of the Board of Harbor Commissioners,

As a resident of San Pedro and an employee working every day in our beautiful downtown area, I am writing to voice my strong support for the West Harbor Modification Project. The proposed enhancements, including the amphitheater, community lawn, and Ferris wheel, will create vibrant recreational spaces, attract visitors, and support our local economy.

ARAGON-1

I am confident in the mitigation measures outlined in the Draft SEIR, which demonstrate a thoughtful approach to addressing potential impacts while ensuring the project's long-term success. These measures reflect a commitment to sustainability and community benefit. I don't think the noise created by the amphitheater will create a negative impact on the San Pedro community, and the creation of a large music venue will build upon the historic support our town has always shown for the arts.

This project has the potential to boost tourism, create jobs, and further San Pedro's revitalization. I look forward to seeing our waterfront transformed into a more vibrant and welcoming destination.

Thank you for considering this important project.

Sincerely,



Andrew Aragon

From: Rock Ashfield <rockashfield@gmail.com>
Sent on: Thursday, December 19, 2024 8:32:04 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor SEIR

Dear Members of the Board of Harbor Commissioners,

Ashfield-1

As a 23-year resident of San Pedro, a Chamber member and a local business man, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth. The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture. And yes, they will come.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability. (And I believe they did a great job responding to certain concerns raised two years ago).

And as a local realtor who is involved with downtown San Pedro projects, the amphitheatre will only add to what already is going on in downtown San Pedro (which I commonly refer to as DTSP). The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Put me down as a strong proponent for this development. Thank you for your leadership and dedication to advancing this important project.

Kind regards,

Rock Ashfield



ROCK ASHFIELD
Commercial Division Director, Realtor - Keller Williams LA Harbor
562-243-2809 | rockashfield@gmail.com

From: s_f ea_ ao_com
To: Ceqacomments
c: _auren_ jerico de_e o_ment com info_ _estharbor a com
Subject: Am_hitheatre in San Pedro
Date: Monday, January 6, 2025 7:33:02 PM

Dear Members of the Board of Harbor Commissioners,

As a long time resident of San Pedro, I support the West Harbor Modification Project. The expanded amphitheater will create vibrant spaces for entertainment events, while boosting tourism and supporting local jobs. The south bay area needs an entertainment area that is permanent and offers seating, unlike the "festival type temp venue's" that are standing room only. The larger the capacity of seating at this amphitheatre the more popular and current the artists will be that will be willing to perform. Bring the people to Pedro with top performing bands and make it a world class entertainment venue and the rest of the town and other businesses will flourish.

B-FELICIA-1

I also appreciate the thoughtful mitigation measures outlined in the Draft SEIR, which address traffic, noise, and environmental concerns. These measures reflect a commitment to balancing growth with the needs of the community.

This project is an exciting opportunity to revitalize San Pedro's waterfront and strengthen our local economy. I am looking forward to securing season tickets to the new amphitheatre in town so I don't have to drive out of the area. Let's get some big name performers and drive our economy up while doing it

Thank you for your leadership in advancing this important initiative. Go Big, we need it!

Sincerely,
Felicia B.

From: John Bagakis <bagak82@yahoo.com>
Sent on: Friday, January 10, 2025 11:41:39 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor Modification Project

Dear Members of the Board of Harbor Commissioners,

Bagakis-1

As a lifelong resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

I could not be more excited to see the Port of Los Angeles be on the map in the retail, dining, and entertainment industry as it is currently with shipping, harbor tours and cruises. The amphitheater project is quite simply a game changer. Thousands of residents of the Harbor Area and beyond will choose San Pedro as a place to spend their dollars and enjoy dining and entertainment. The local business community will greatly benefit from this. As San Pedro grows and develops this project will bring more tourism, residents, and more importantly jobs and opportunity for our home-grown work force.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

John Bagakis
Big Nicks Pizza
The Corner Store
310-701-1894 cell

From: Cathy a ia o
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Sunday, December 5, 2024 :42:5 AM

BAGLIAZO1-1 I support the West Harbor Modification Project because the project will enrich our waterfront and provide economic benefits to the region. I welcome the project because:
There will be a multitude of activities for everyone and it has been planned very thoughtfully. I love entertainment and food and this project is the whole package.
Cathy Bagliazo
90731

Sent from my iPhone

From: Cathy a ia o
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Sunday, December 5, 2024 :3 :0 AM

BAGLIAZO2-1 I support the West Harbor Modification Project because the project will enrich our waterfront and provide economic benefits to the region. I welcome the project because:
Jack Bagliazo
90731

Sent from my iPhone

From: Ar ey a er
To: Ceqacomments
Subject: Su ort for West Harbor S
Date: uesday, January 7, 2025 :52:27 PM

January 7, 2025

ATTN: WEST HARBOR SEIR ADMINISTRATORS

SUBJECT: Project support for West Harbor SEIR

TO WHOM IT MAY CONCERN:

BAKER-1

As a 20-year communications and community relations executive at the Port of Los Angeles (2004-2024) who worked directly to promote stakeholder engagement during the 2009 San Pedro Waterfront EIR process in 2009 and, subsequently, worked with local business stakeholders and several visitor-serving waterfront tenants to establish and activate the "LA Waterfront" as a tourism destination, I am writing to support the projects assessed in the West Harbor SEIR.

Over the past decade, the Port has invested tens of millions of dollars to bifurcate and substantially improve the roadway configuration along the waterfront, specifically traffic flow to/from AltaSea at the Port of Los Angeles and the future West Harbor development and, separately, traffic flow to/from CRAFTED at the Port of Los Angeles, B46, Cabrillo Marina, and other destinations south and west of those locations.

Over the past 10 to 15 years, traffic flow has also been repeatedly pressure-tested by major LA Waterfront events like LA Fleet Week, Cars & Stripes Forever, and July 4th at Cabrillo Beach. As a result, it has been demonstrated that there is undoubtedly parking capacity and traffic management flexibility to manage 2000-3000 vehicles driven by 6,200+ visitors to West Harbor's proposed amphitheater.

The proposed amphitheater and large, iconic Ferris wheel assessed in this SEIR are also in strong alignment with the port and local stakeholders' longstanding vision of a vibrant, one-of-a-kind, world-class waterfront destination that creates and builds on the array of job clusters at the Port while generating revenue that will benefit our local and regional communities as well as the Port and its tenants.

I therefore support and encourage the Harbor Commission's approval of this SEIR.

Arley Baker
562-225-8320
arleybaker@gmail.com

From: Jac aric
To: Ceqacomments
Subject: West Harbor Modification Project
Date: uesday, January 7, 2025 :4 :46 PM

Dear Member of the Board of Harbor Commissioners,

As a born and raised San Pedran and longtime community activist, I am writing to strongly urge you to support the West Harbor Modification Project.

I have had an up close and personal view of waterfront development for more than twenty years. I first wrote about a proposed waterfront promenade in 2002 when I was the publisher and editor in chief of *San Pedro Magazine* (now *San Pedro Today*). I was later the chairman of the economic development committee of the San Pedro Chamber of Commerce in 2009 when the Harbor Commission approved the EIR that paved the way for waterfront development.

BARIC-1 The one consistent fact that has held true all these years is the desire that an overwhelming majority of San Pedrans have had for waterfront development to be completed. We have waited so long and it is our hope that our patience will be rewarded with nothing short of a world class waterfront that we locals can enjoy and that attracts visitors to both the development and to our historic downtown business district.

The prime waterfront property along the West Channel is uniquely positioned to be one of the great tourist attractions of California. In my opinion, as Harbor Commissioners, it is your duty to maximize this wonderful asset that we have at the port and the West Harbor Modification project represents a wonderful opportunity to do this.

Thank you in advance for your leadership and bold vision in paving the way for a place that future generations will enjoy, a place that will become an important engine of economic opportunity for San Pedro and all of Los Angeles.

Sincerely,
Jack Baric

Sent from Outlook

From: arsness, Jennifer M
To: Ceqacomments
Subject: West Harbor Project
Date: Wednesday, December 4, 2024 2:25:47 PM

Dear Members of the Board of Harbor Commissioners,

As a resident, I am writing to express my strong support for the West Harbor Modification Project. This transformative development will revitalize San Pedro's waterfront, providing much-needed recreational spaces and boosting our local economy.

BARSNESS-1 The expanded amphitheater and community lawn will bring new opportunities for world-class entertainment and community gatherings, fostering a vibrant cultural hub that benefits both residents and visitors. These enhancements will strengthen our connection to the waterfront and create a dynamic space for recreation and engagement.

This project is a significant economic driver for our community. By attracting visitors, generating jobs, and supporting local businesses, it will ensure long-term growth and prosperity for San Pedro. The thoughtful mitigation measures outlined in the Draft SEIR further reinforce the project's commitment to sustainability and addressing community concerns.

The West Harbor Modification Project represents a bold and exciting vision for San Pedro's future. Thank you for your leadership and thoughtful consideration of this impactful initiative.

Sincerely,
Jen Barsness

UCLA HEALTH SCIENCES IMPORTANT WARNING: This email (and any attachments) is only intended for the use of the person or entity to which it is addressed, and may contain information that is privileged and confidential. You, the recipient, are obligated to maintain it in a safe, secure and confidential manner. Unauthorized redisclosure or failure to maintain confidentiality may subject you to federal and state penalties. If you are not the intended recipient, please immediately notify us by return email, and delete this message from your computer.

Thomas Beaty

758 W. 22nd Street

San Pedro, CA 90731

January 9th, 2025

Director of Environmental Management
Los Angeles Harbor Department
425 South Palos Verdes Street
San Pedro, CA 90731

RE: Proposed West Harbor Amphitheater – in San Pedro at Port of Los Angeles, CA

Dear Director of Environmental Management,

BEATY-1

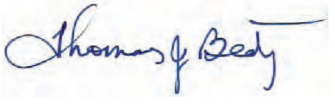
I am writing in support of the proposed 6,200 seat amphitheater being planned as part of the new West Harbor waterfront development in San Pedro. I am currently a San Pedro homeowner/resident and have enjoyed living in this lovely community for almost 7 years and in greater Los Angeles for over 20 years.

We are excited for the West Harbor development in general, and since my wife and I are music lovers, will enjoy attending amphitheater concerts and other events if and when the facility opens. I understand that Nederlander Concerts may be the entertainment promoter/producer of the amphitheater, and that confirms for me the quality and diversity of the performance acts will be great, judging from my previous experiences attending many of their productions in the Greek Theatre and Pantages.

I strongly feel the proposed West Harbor amphitheater will be a fantastic addition to the San Pedro community. Adding creative and diverse performance acts to the restaurants, galleries, and more are welcome additions to the West Harbor development; providing needed entertainment and dining options that will appropriately serve our community for years to come.

Please let me know if you want to discuss my support further. My phone is 310-694-6069. Thank you.

Sincerely,



Thomas Beaty

From: Ma_a i Martin
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Saturday, January , 2025 :0 :44 PM

Dear Members of the Board of Harbor Commissioners,

As a local resident, mother, and teacher, I am writing to express my strong support for the West Harbor Modification Project. I believe this development will bring exciting opportunities for youth and families in our community.

The expanded amphitheater and community lawn will create new spaces for concerts, cultural events, and family-friendly activities. I'm especially excited about the potential for youth-centered programming, arts education, and opportunities for students to experience live performances right here in San Pedro. These additions will help inspire and engage our young people, giving them positive outlets and new experiences.

I also see this project as a way to boost local businesses, create jobs, and encourage economic growth, all of which will benefit the families I work with every day. I appreciate the thoughtful approach to addressing community concerns outlined in the Draft SEIR, ensuring that the project will positively impact the area while minimizing disruptions.

Thank you for your leadership and commitment to making San Pedro a better place for our families and future generations. I look forward to seeing the positive changes West Harbor will bring to our community.

Best,

Magali Blazevic

From: Chris orst Smith
To: Ceqacomments
Subject: West Harbor DS
Date: hursday, January , 2025 :05: PM

Dear Members of the Board of Harbor Commissioners,

As a 40 year resident of San Pedro, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth. We have needed this for so long!!!

BORST-SMITH1-1

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture. This will really put San Pedro on the map! It will finally be an actual destination to come visit in Los Angeles. This town has much needed this upgrade!

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am

BORST-SMITH1-1
cont.

excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Please let the Amphitheater and other proposed attractions come to life! The opportunities are endless. And so are the benefits for all! It's a total win for San Pedro.

Thank you,

Chris Borst-Smith

From: Da e orst Smith
To: Ceqacomments
Subject: West Harbor DS
Date: riday, December 27, 2024 2: :3 PM

Dear Members of the Board of Harbor Commissioners,

BORST-SMITH2-1

As a resident of San Pedro for over 42 years, I am writing to express my strong support for the West Harbor Modification Project and especially for the proposed 6,200 capacity amphitheater. This venue, to be run and booked by Nederlander, a true leader in the United States for talent booking and venue management, would guarantee success for the overall West Harbor project. The amphitheater, as THE anchor point for the whole development, would create the opportunity for great success for all tenants already committed to the West Harbor project. It would generate a built-in flow of foot traffic concert goers to and from the events, ("A rising tide lifts all boats"). Also, a seven to eight month concert season would showcase some of the top names in entertainment. Nederlander's skills with booking them and their amphitheater management will create that! Concert goers get hungry and thirsty so ALL of West Harbor will benefit. This is a transformative opportunity to revitalize San Pedro's waterfront and downtown areas creating vibrant public spaces while driving economic growth.

Having known and worked for The Nederlander Organization for many years in the '80's and 90's, I know their ability, their integrity and the "family" feel that the company brings to the table for our harbor and for our town. We are a family town, spearheaded by Jerico Development on the project, a family company of great people who care about San Pedro. The Nederlander Organization is a perfect fit for the character of our town, unlike other corporate music

conglomerates out there that would not have our best interest at heart. It is really exciting to have them aboard and I know personally their track record, past and present; how they successfully ran the Greek Theater L.A. for four decades, Vina Robles in Paso Robles more recently, and their years of Broadway experience. I feel privileged to have been part of that in my younger days and know first-hand that they have the ability to bring San Pedro and surrounding areas the very best in entertainment that is out there. It will put us on the map.

BORST-SMITH2-1 cont

This amphitheater, in my opinion, is the key to the success of the whole development. It is a "must opportunity" and not one that should be missed. A summer season of artists touring through Los Angeles could bring San Pedro 60 -100+ shows which translates to hundreds of thousands of people each year. Economically, this project will be a major asset to our community attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. A great success story for West Harbor, downtown businesses of Sixth and Seventh Street and our port town in general.

The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability. Thank you for your diligence in this, your leadership and dedication to advancing this important project. I am excited to see it come to life.

Sincerely,
Dave Borst-Smith

310 519 8000

From: Janice orst Smith
To: Ceqacomments
Subject: West Harbor DS
Date: Monday, January 6, 2025 :07:35 PM

Dear Members of the Board of Harbor Commissioners,

BORST-SMITH3-1

As a 42 year resident of San Pedro/lifetime resident of the South Bay, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and it has my complete support. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Mrs. Janice Borst-Smith

From: isa oyajian
To: Ceqacomments
Subject: West Harbor Modification Project
Date: hursday, January , 2025 :56:0 PM

BOYAJIAN-1 My name is Lisa Boyajian. I am a 30-year homeowner who lives in the Point Fermin area of San Pedro, within walking distance of this project. I recently toured this West Harbor site, and unfortunately remain quite concerned, especially in regards to the proposed amphitheater.

The CEQA Report states that there will be significant, unavoidable,negative impacts to the air quality, noise, and transportation of our community. What it should also say is that it will affect primarily those of us who live in the southern portion of San Pedro.

BOYAJIAN-2 We are all aware of how crowded the limited roads/arteries in/out of San Pedro have become. The increase of truck/port traffic and traffic from so many additional residents makes leaving and returning home very problematic. Adding a concert venue with at least 100 concerts per year only causes an undue amount of stress to our already poor infrastructure.

BOYAJIAN-3 The concertgoers will also stress a poor emergency system. Who will provide for their medical needs? We do not have adequate care for our residents, both current and future.

BOYAJIAN-4 However, what I am most concerned about is the noise from this proposed amphitheater and the negative impact to our quality of life. The comparisons to Fleet Week are irrelevant. We got a taste of these negative effects last summer with the 3-day Punk Rock Concert. It was Point Fermin's residents who retreated indoors and were subjected to the noise that easily carried into our neighborhood from that location.

BOYAJIAN-5 In addition, I cannot understand how this can be considered a green project? Some of these concerts /noise will occur during the gray whales' migrations, sea lions pupping seasons, and nesting seasons of our peregrine falcons, red-tailed hawks, great horned and western barn owls. All of these creatures and thousands more are important habitants of our coastal community. Their needs must also be considered.

BOYAJIAN-6 What makes these proposed concerts even worse are the proposed 25 fireworks shows. While fireworks are being banned in the more affluent South Bay cities, why is LA planning to increase them? Our neighborhood , including our pets, is already suffering from the noise, pollutants, and increased fire dangers they bring (e.g. illegal fireworks at Angel Gate at midnight while much of LA was burning).

BOYAJIAN-7 Lastly, I am concerned about the lack of transparency regarding the modifications to this project. Why did this public comment period coincide with the holidays? Why was there so much vagueness to specific questions during the tour? The potential problems I could easily see with the projects' physical structures did nothing to make me confident that issues surrounding the amphitheater would be successfully addressed. Why did it become apparent during the tour that there was more concern for San Pedro's realtors, business owners, potential newcomers and tourists rather than its longtime residents? Who's benefiting at our expense?

BOYAJIAN-8 This modification involving the amphitheater should be denied or at least delayed until there

BOYAJIAN-8 cont.

can be some serious input from those of us in Point Fermin- who will be the most impacted!

Sincerely, Lisa Boyajian

December 15, 2024

Port of Los Angeles
Board of Harbor Commissioners
425 South Palos Verdes St.
San Pedro, CA 90731

Re: West Harbor Modification Project

Dear Members of the Board of Harbor Commissioners,

As a resident living in and employed at Grand Vision Foundation in San Pedro, I am writing to voice my strong support for the West Harbor Modification Project. The proposed enhancements, including the amphitheater, community lawn, and Ferris wheel, will create exciting and vibrant recreational spaces, attract visitors, and support our local economy. It will bring new visitors to San Pedro and hopefully local businesses like the Grand Annex Music Hall and the Warner Grand Theatre (upon its renovations) will see an increase in business and support.

BRADLEY-1 As one of the founders of the Port of Los Angeles Charter High School (developed on Port of Los Angeles property), I have had experience with SEIRs, and I am confident that the mitigation measures outlined in the Draft SEIR, will successfully address potential impacts while ensuring the project's long-term success. These measures reflect a commitment to sustainability and community benefit. This project will be a long-needed addition to our beautiful community.

This project has the potential to boost tourism, create jobs, and further San Pedro's revitalization and support local businesses such as the Grand Vision Foundation and the Grand Annex. I look forward to seeing our waterfront transformed into an exciting and welcoming destination for locals and the greater Los Angeles Community alike.

Thank you for considering this important project.

Sincerely,

Sandra Bradley
Finance Manager, Grand Vision Foundation
Co-founder, Port of Los Angeles Charter High School
Former Teacher, Los Angeles Unified School District

From: James ro n
To: Ceqacomments
Subject: West Harbor Am hitheater SP C P C Su ort
Date: riday, January 0, 2025 2: 7:35 PM

To Whom It May Concern,

BROWN-1

I am writing to support the proposed amphitheater project at West Harbor.

I have owned and operated San Pedro Brewing Company since 1999 and also own/operate the recently opened Port Town Brewing Company. Both businesses are located in DTSP. The addition of the amphitheater will be welcomed with open arms by many of our downtown businesses as concert goers look to have a bite to eat or grab a beer before or after a show.

Business has been extremely slow to normalize after the pandemic and with the advent of West Harbor opening later this year, I fully give my support to this ultimate game changer of a project that will revitalize not only our beautiful waterfront but our historic DTSP Arts and Entertainment District!!

James Brown
Owner
San Pedro Brewing Co.
Partner
Port Town Brewing Co.

From: Wi iam ro ne
To: Ceqacomments
Subject: Poor Desi n West Habror
Date: Monday, January 6, 2025 2:27:36 PM

To whom this may concern,

BROWNELL-1

I love the idea of west harbor to build a new gathering area for the community.

However,,,,, who decided we needed a Carousel? This west harbor design should be innovative and not stuck in the gilded age of 1960's ports o call. This is tacky and cheapens the aesthetic.

Regards,
William Brownell
San Pedro Resident.

From: John runer
To: Ceqacomments
Subject: West Harbor Modification Project
Date: uesday, December 0, 2024 7: 4:00 PM

BRUNER-1 I completely support the addition of the amphitheater to the West Harbor LA project. I look forward to attending events there by various performers and spending the day eating at the restaurants on the other parts of the property. It is a great proposal.

John Bruner
West Carson Resident

Sent from Yahoo Mail for iPhone

From: Joe uscaino
To: Ceqacomments
Subject: Stron Su ort for the West Harbor Am hitheater and Par in De e o ment
Date: Sunday, December 5, 2024 7:26:4 PM

Hon. Joe Buscaino
Former Councilmember, 15th District
City of Los Angeles

December 15, 2024

Los Angeles Harbor Commission
425 S. Palos Verdes Street
San Pedro, CA 90731

Subject: Strong Support for the West Harbor Amphitheater and Parking Development

Dear Commissioners,

As the former Los Angeles City Councilmember representing the 15th District, I am writing to express my full support for the West Harbor amphitheater and parking improvements. This project is a key piece of the bold vision we set in motion years ago to transform the LA Waterfront into a world-class destination, and it represents the fulfillment of a promise to the people of San Pedro and the surrounding communities.

BUSCAINO-1

During my time on the City Council, I worked tirelessly to champion the modernization of the LA Waterfront, understanding its critical role in revitalizing the economic, cultural, and social fabric of the Harbor Area. The development of the West Harbor amphitheater is a vital part of this transformation, aligning perfectly with the original vision of a vibrant waterfront that attracts visitors, creates jobs, and energizes the local economy.

The amphitheater will serve as a beacon for high-caliber entertainment and cultural events, drawing thousands of visitors each year. But more importantly, it will anchor a dynamic community hub that enhances local businesses, fosters tourism, and creates new opportunities for San Pedro residents. This is exactly the type of development we envisioned—a project that not only respects the character of our community but elevates it to new heights.

BUSCAINO-1 cont.

The plan before you is solid, thoughtful, and rooted in years of community engagement and environmental consideration. It balances ambitious goals with practical solutions, ensuring that this project will serve both the people of San Pedro and the greater Los Angeles region for generations to come. From the addition of the state-of-the-art amphitheater to the much-needed parking improvements, this project is a critical step in making the LA Waterfront a vibrant, walkable destination that is second to none.

I urge the Harbor Commission to approve this project and continue supporting the ongoing revitalization of the LA Waterfront. The West Harbor amphitheater is not just a project—it is the realization of a vision that will define the future of the Harbor Area.

Thank you for your leadership and dedication to ensuring this vision becomes a reality.

Sincerely,
Hon. Joe Buscaino
Former Councilmember, 15th District
City of Los Angeles

Get Outlook for iOS

BUSCAINO-1

From: Ricardo Cabrera
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Friday, January 10, 2025 7:30:15 PM

Dear Members of the Board of Harbor Commissioners,

I am writing to you as a dedicated San Pedro Fish Market employee for the past nineteen years and a proud stakeholder of the Port of Los Angeles and the West Harbor. I wholeheartedly support the West Harbor Modification Project, which offers an excellent opportunity to revitalize San Pedro's waterfront. This project aims to create a vibrant space for the community and visitors while promoting economic growth.

I am particularly excited about the proposed expansion of the amphitheater and community lawn. These additions will provide a welcoming venue for live performances, cultural events, and community activities, transforming our waterfront into a dynamic and engaging destination. Initiatives like this are crucial for establishing San Pedro as a hub for entertainment and culture.

CABRERA-1

Over the years, I have witnessed the significant impact of events such as the Port of Los Angeles Lobster Festival and the Railroad Revival Tour, which featured Mumford & Sons and attracted an impressive crowd of 10,000 people to our area. These events showcased the beauty of our waterfront, generated substantial tax revenue, created jobs, and brought families together to celebrate in a cherished space.

I am confident that the West Harbor Modification Project will yield similar benefits and more. This development will sustain San Pedro's economic future while enhancing its appeal by attracting tourism, supporting local businesses, and creating new job opportunities. The mitigation measures outlined in the Draft SEIR demonstrate thoughtful planning to balance progress with sustainability.

It is inspiring to see a bold vision like this take shape, and I am genuinely excited about the positive changes it will bring to our community. Thank you for your leadership and commitment to making this project a reality.

Sincerely,

Ricardo Cabrera
(310) 987-1867
General Manager San Pedro Fish Market on Alamitos Bay

From: Mi e Cammareri
To: Ceqacomments
Subject: West Harbor Am hitheater
Date: Saturday, December 2 , 2024 : :55 AM

Dear Members of the Board of Harbor Commissioners,

As a resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

As a board member of the Little Italy of Los Angeles Association, I greatly support this project which will compliment the many event we will be having as the Piazza Miramare gets completed by Q2 in 2025..

Sincerely and thank you for your support..

Mike Cammareri (1320 west 36th San Pedro)
(LILAA board member)

From: cam eau j mai com
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Monday, January 6, 2025 3:02:54 PM

Hello,

My CEQA comments regarding the West Harbor Modification Project is for an ALTERNATIVE 1- NO PROJECT ALTERNATIVE.

CAMPEAU-1

This is due to the impact elements omitted in the report.

1. ADDITIONAL SECURITY: There are no additional security plans for the huge influx of people that will flood our local neighborhood community, nor the street parties that will occur with the free viewing of the concerts from the hillsides, streets and parks around and above the proposed, incorrectly named, Amphitheater and of the impact it will have.

2. SOLAR PANEL STRUCTURES: There are no additional plans or sound modelling for solar panel structures that will inevitably be installed at 208 E. 22nd Street for the new parking area. The sound modeling should be repeated with those reflective surfaces added to the analysis. These structures will be a definite sound resonator not determined in the Port's impact statement or sound modelling.

3. ALTERNATIVE STAGE DIRECTION: There is no alternative proposed for facing the stage entirely to the east direction across the main channel toward Terminal Island industrial area complex. It would be informative (and very low-cost) to run the sound models for the setup facing that east direction.

4. Non-Tier 1 EVENT DAYS: There is nothing specified in writing regarding the other 265 days, during which Nederlander is not running the facility and what type of events the Harbor Department will permit for the use of the performance space. The non-Tier 1 events will use the same new sound system as the "new" Tier 1 events, making the prior analysis inapplicable.

5. SOUND BLAST: The impact to other businesses, restaurants, brewery, hotel, Cabrillo Marina Plaza events, who will not be able to control the ambience of their establishments and events, due to the sound blast from the new proposed, incorrectly named, Amphitheater.

Thank you,

James Campeau

From: ianca Cerrato
To: Ceqacomments
Subject: West Harbor DS
Date: riday, January 0, 2025 3:2 :05 PM

Dear Members of the Board of Harbor Commissioners,

CERRATO-1

I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Bianca

From: Michae Cha e
To: Ceqacomments
Subject: West Harbor S
Date: uesday, December 7, 2024 :2 :27 AM

Good morning,

CHAVEZ1-1 Thank you for providing a platform for the communities voices to be heard as the West Harbor project proposes new ideas that will impact San Pedro. As a local to the area, I would like to express my strong support for the proposed 6,200-seat amphitheater and Ferris wheel as part of the revitalization of the San Pedro waterfront. These additions will not only enhance the area's cultural and recreational offerings but also attract visitors, create jobs, and contribute to the economic growth of the region.

I look forward to seeing the project progress and am confident it will bring lasting positive changes to the community.

Best regards,

Michael Chavez

From: a Cha e
To: Ceqacomments
Subject: Su ort for West Harbor Modification Project
Date: uesday, December 0, 2024 7:45:33 PM

Dear Members of the Board of Harbor Commissioners,

As a longtime resident of San Pedro, I am excited to express my strong support for the West Harbor Modification Project. This development has the potential to truly revitalize our beautiful waterfront, creating new recreational spaces that will not only attract visitors but also enhance the quality of life for all of us who call San Pedro home.

The expanded amphitheater and community lawn will serve as unique venues for entertainment and community events, providing opportunities for connection and celebration. Additionally, the addition of features like the Ferris wheel will undoubtedly enhance the area's appeal as a regional destination, drawing more people to experience everything that San Pedro has to offer.

CHAVEZ2-1

Importantly, this project will also support local nonprofits by increasing visibility and engagement opportunities. The new venues can host nonprofit events, fundraisers, and community outreach programs, allowing organizations to connect with a broader audience. The expected boost in tourism will create additional funding opportunities, enabling nonprofits to further their missions and better serve our community.

I greatly appreciate the thoughtful mitigation measures outlined in the Draft SEIR, which actively address traffic, noise, and environmental concerns. These strategies reflect a genuine commitment to minimizing impacts while ensuring the project's overall success.

By boosting tourism, creating jobs, and supporting our local businesses, this project will have a lasting positive impact on our community. Thank you for your consideration and for your leadership in advancing this important initiative. I look forward to seeing how this project will shape the future of our waterfront.

Sincerely,

Olga G Chavez
San Pedro resident
C 310-408-5787

From: d C ar
To: Ceqacomments
Subject: West Harbor Modification Project
Date: riday, January 3, 2025 6:05:0 PM

To Whom It May Concern:

CLARK-1 I, Edmund Clark, a resident of San Pedro at 2828 Baywater Ave Apt 4, write to express my full support for the West Harbor Modification Project. An opponent is trying to drum up opposition on Nextdoor, so I wanted to make sure that you also hear from the many supporters of this project.

Thanks,
--Ed

January 2, 2025

RE: West Harbor Modification Project

Dear Members of the Board of Harbor Commissioners,

CLEMONS-1

As a stakeholder who works in San Pedro, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Jade Clemons

Jade Clemons

Director, Economic and Workforce Development

AltaSea at the Port of Los Angeles

From: _ancy _im Cocu _a
To: Ceqacomments
Subject: West Harbor Am hitheater Project
Date: Monday, January 6, 2025 :5 : PM

COCUZZA-1 We support the amphitheater and the vision for a revitalized waterfront in San Pedro. We are huge supporters of the west harbor project that will bring in revenue and bring the community together as well.

Best regards,

Nancy and Fabio Cocuzza

Sent from my iPhone

From: Pau Cooney
To: Ceqacomments
Subject: esident Su ort: West Harbor S Modification Prcject
Date: uesday, December 3, 2024 3:0 :37 PM

Hello,

I am writing to express my support and excitement for West Harbor (SEIR) Modification Project inclusive of:

1. Expansion of outdoor amphitheater from a small 500-seat venue to a mid-size 6,200-seat venue.
2. Increase in Ferris wheel height from 100 feet to up to 175 feet.
3. Additional parking on adjacent Port property at 22nd and Signal St.

COONEY-1

As a San Pedro resident and property owner, I believe these modifications will further enhance the appeal of our vibrant community. Building a world-class amphitheater with larger capacity will draw top artistic talent and therefore economic activity in the neighborhood.

I would ask that you kindly consider (approve) the proposed enhancements for the betterment of community members such as myself.

--
Best,
Paul Cooney
310-795-4584
Linkedin

From: Coach Dom Costa
To: Ceqacomments
Subject: S AMPH S
Date: Sunday, January 5, 2025 :53:04 AM

Dear Members of the Board of Harbor Commissioners,

As a 65 year resident of San Pedro, I am writing to express my strong support for the West Harbor Modification Project. Approve this project and let's go full speed ahead! You are all going to be part of a legacy product that is going to really increase the specialness of this Los Angeles Port community! You are creating a beautiful destination spot for people that will generate tons of income going forward into the future as well!

COSTA-1

(MAKE IT BIG & REMARKABLE) The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Coach Dom Costa
Find me on all social media as Coach Dom Costa or call me anytime at 310-717-9250.

PS-people don't like change, but life is chang! This place has been dying for decades and what you guys have in front of you is such a special chance to make something great! Ignore the naysayers and let's take the leap and be grand and bold! This place, San Pedro really needs it! This project will flip Los Angeles on its ear lol! LET'S GO!!!!
Sent from my iPhone

From: Coach Dom Costa <coachdomcostahustles@gmail.com>
Sent on: Sunday, January 5, 2025 7:58:32 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: Build it BIG!!! This SP native is a HUGE YES!!!!!

Dear Members of the Board of Harbor Commissioners,

As a 65 year resident of San Pedro, I am writing to express my strong support for the West Harbor Modification Project. Approve this project and let's go full speed ahead! You are all going to be part of a legacy product that is going to really increase the specialness of this Los Angeles Port community! You are creating a beautiful destination spot for people that will generate tons of income going forward into the future as well!

(MAKE IT BIG & REMARKABLE) The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Costa-1

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Coach Dom Costa
Find me on all social media as Coach Dom Costa or call me anytime at 310-717-9250.

PS-people don't like change, but life is change! This place has been dying for decades and what you guys have in front of you is such a special chance to make something great! Ignore the naysayers and let's take the leap and be grand and bold! This place, San Pedro really needs it! This project will flip Los Angeles on its ear lol! LET'S GO!!!!

From: Danie C y
To: Ceqacomments
Subject: West Harbor Modification Prcject
Date: riday, January 0, 2025 3:0 :3 PM

Dear Members of the Board of Harbor Commissioners,

CZYZ-1

I am writing to express my enthusiastic support for the proposed amphitheater at West Harbor. As someone who both lives and works locally, I believe this venue would be a tremendous asset to the area. The convenience of having a music venue of this caliber in the region would provide local residents with new job opportunities, better access to attend live events and concerts, and a new venue to perform/participate in live events. Its location is ideally situated with easy accessibility to and from the venue, encouraging more people to visit from nearby regions.

As a local musician, I am especially excited about the opportunity to perform at or collaborate with such a venue. It would provide a much-needed platform for local talent and the chance for artists to showcase their work in a cool location and well-equipped space. I am also enthusiastic about the potential job opportunities within the amphitheater, and I look forward to applying for positions that will allow me to contribute to this exciting new chapter in our community.

I am confident that this project will be a valuable asset to our town and look forward to its realization.

Sincerely,
Daniel Czyz

JDLV-1

Dear Members of the Board of Harbor Commissioners,

I'm writing to express my strong support for the West Harbor Modification Project and the positive impact it will have on San Pedro's waterfront and community. As someone who has seen firsthand how important this development is for the area, I believe the expansion of the amphitheater and community lawn will be a great addition, creating a lively space for events, concerts, and gatherings that bring people together.

San Pedro has always been a unique and vibrant destination, and projects like this help it continue to grow in a way that benefits both residents and visitors. Events in the past have drawn large crowds, supported local businesses, and boosted the local economy. The West Harbor project has the potential to do even more, providing jobs, attracting tourism, and making our waterfront an even more engaging place.

I appreciate the effort that has gone into planning this project and ensuring it is a well-thought-out addition to our community. I look forward to seeing it come to life and the many opportunities it will bring to San Pedro.

Thank you for your time and consideration.

Jessica De La Vara
Sales & Events Manager
310.483.2338*

*Signature block was added to this letter after email circulation.

San Pedro Fish Market
Celebrating Food & Family™
www.sanpedrofish.com

IG | FB | TT | YT | SHOP
Watch Kings of FI$H

From: joe deeb e
To: Ceqacomments
Subject: West Harbor am hitheater
Date: riday, January 3, 2025 :56:30 AM

DEEBLE-1

We are excited to have the venue here and look forward to many great nights ahead.
Joe Deeble
Deeblejoe@yahoo.com

From: imber y De ado
To: Ceqacomments
Subject: Waterfront roject feedbac
Date: riday, o ember 2 , 2024 :34:56 PM

Hello

DELGADO-1

As a concerned citizen of San Pedro for 25 years, I was very disappointed to hear about potential for up to 25 fireworks shows per year. We have far too many illegal fireworks going off for the months of June and July already, and many others randomly throughout the year. Animals, including my dogs and cats, as well as veterans and other people, are traumatized by fireworks. I would be very disappointed if more than a couple fireworks shows were held per year, both for my pets and the environment (they are very bad for water and air quality too).

Thank you for your consideration.

Kim Delgado
1023 w Sepulveda st
310-200-1408

From: _ince DiMe_ io
To: Ceqacomments
Subject: Wet Harbor DS
Date: uesday, January 7, 2025 4:27:22 PM

DIMEGLIO-1

Dear Members of the Board of Harbor Commissioners,
As a stakeholder within the San Pedro Business Improvement District, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.
The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.
Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.
The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Vince DiMeglio
310-502-9205 Mobile
310-547-5565 Office
vinced55@yahoo.com

From: Jennifer
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Saturday, December 4, 2024 2:7:4 PM

DOUGLAS-1

I support the West Harbor Modification Project because the project will enrich our waterfront and provide economic benefits to the region. I welcome the project because San Pedro is ready for change! I'm especially excited for the open spaces, the music venue and use of the water space. I'm looking forward to having more diverse places to eat in town as well.
I believe there's plenty of parking spaces to support the traffic and I'm not worried about the influx of people for events and concerts. I believe you have created an incredibly thoughtful plan to utilize the space for the community's benefit.

My one specific request is please NO Starbucks. I hope for the smaller retail spaces you seek out local small business owners and more boutique options to make it less commercial and more 'San Pedro'
Jennifer Douglass
90731

From: Sean Do er
To: Ceqacomments
Subject: West Harbor Modification Prcject
Date: uesday, January 7, 2025 6: :05 PM

Dear Members of the Board of Harbor Commissioners,

DOVER-1

As a resident, I am writing to express my enthusiastic support for the West Harbor Modification Project. The planned enhancements, such as the amphitheater, community lawn, and Ferris wheel, will bring new energy to our waterfront by creating vibrant spaces for recreation and entertainment while driving econimic grouth.

The mitigation measures outlined in the Draft SEIR highlight a thoughtful and proactive approach to addressing potential impacts. These strategies underscore the project's commitment to sustainability and ensuring long-term benefits for the community.

With its potential to attract visitors, generate jobs, and further San Pedro's revitalization, this project represents a transformation step forward for out community. I am excited to see the waterfront evolve into a destination that reflects the unique character and vitality of San Pedro.

Thank you for your leadership and thoughtful consideration of this important project.

Sincerely,

Sean Dover

Comment Letter DROWN

Outlook

West Harbor Modification Project

From Brian Drown <bfdrown@gmail.com>
Date Sat 11/16/2024 11:00 PM
To Ceqacomments <Ceqacomments@portla.org>

DROWN-1

> Looking forward to the amphitheater. Very much in support of Nederlander running it. It would be appropriate to setup the amphitheater with noise cancellation systems to decrease the possibility of negative effects from sound affecting homes on hillsides.
> Thank you for continuing to grow and expand our community entertainment options.

Brian Drown

From: Alex Easton <alex.j.easton@gmail.com>
Sent on: Friday, December 27, 2024 9:58:09 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor DSEIR

Dear Members of the Board of Harbor Commissioners,

Easton-1

As a resident of San Pedro, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Alex Easton

From: cameron so asta ictures com
To: Ceqacomments
Subject: West Harbor DS
Date: hursday, December , 2024 0:56:4 AM

Dear Members of the Board of Harbor Commissioners,

EDWARDS-WALLIS-1

As a San Pedro resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Cameron Edwards-Wallis

From: char es e dred
To: Ceqacomments
Subject: West Harbor roject and Am hitheatre
Date: riday, January 0, 2025 :26:27 PM

Charles R. Eldred Jr
1413 Westmont Dr
San Pedro, California, 90732
10 January 2015

Port of Los Angeles
Community Relations Division
425 S. Palos Verdes Street
San Pedro, CA 90731

Subject: Personal Letter of Support for the Proposed Amphitheater in San Pedro

Dear Community Relations Team,

I am writing as a proud resident of San Pedro to express my strong support for the proposed amphitheater project. This initiative represents a tremendous step forward in transforming our waterfront and replacing the outdated Ports O' Call Village with a vibrant, modern space that benefits both our community and visitors.

The amphitheater's potential to stimulate the local economy is one of its most exciting aspects. By hosting concerts, cultural events, and other gatherings, it will draw more visitors to San Pedro, providing a boost to local businesses, restaurants, and shops. This increase in activity will create jobs, encourage investment, and solidify San Pedro's role as a key cultural and economic destination in Southern California.

ELDRED-1

Beyond the economic benefits, this amphitheater will be a much-needed cultural hub for our community. It will provide a space for shared experiences that bring neighbors together, whether through music, art, or community celebrations. I believe this project will create a lasting legacy, revitalizing our waterfront and enhancing San Pedro's reputation as a vibrant and welcoming community.

As someone who deeply cares about the growth and success of our town, I urge you to move forward with this project. The amphitheater is exactly the kind of development San Pedro needs to honor our rich history while embracing an exciting future.

Thank you for considering my support for this vital project.

Sincerely,
Charles R. Eldred Jr.

January 9, 2025

Dear Members of the Board of Harbor Commissioners,

ESPINOZA-1

My name is Kaeli Espinoza and I am the leader of San Pedro Run Crew, a run club founded in 2023 by my sisters and I. We meet every Saturday on the coast of San Pedro, where Paseo Del Mar ends and White Point trail begins. As a resident of San Pedro for more than 15 years, I have come to realize that San Pedro thrives on one special thing in particular - our community. The West Harbor Modification Project is particularly important to me in the same way starting a run club was. This project will allow locals and those from outside cities to discover San Pedro in an entirely new, refreshing way.

Through our run club community, I am able to see the need for West Harbor expansion firsthand. Every week I speak with newcomers from the Valley, Orange County, and Downtown Los Angeles. The majority of these people have never heard of San Pedro, let alone visited. The West Harbor Modification Project, including the 6,200 seat amphitheatre, would open a whole new world to them, and more importantly to us locals.

Concerns most likely have risen regarding noise and traffic, which are often associated with any structure of this size. These factors are not major issues if prepared with organization and advanced technology, which West Harbor will act on. In actuality, the construction and proposed expansion of this amphitheatre would increase safety. San Pedro citizens have always traveled to cities such as Downtown Los Angeles and Long Beach for concerts or shows because most performers do not visit San Pedro, nor was there a large enough space to hold the event. San Pedro can safely enjoy entertainment in their own backyard now.

I am confident and excited to see the West Harbor project progress, as this development will serve as a beacon to our community for years to come.

Thank you,
Kaeli Espinoza

1/18/25

Dear Members of the Board of Harbor Commissioners,

ESPRABENS-1

As a resident of San Pedro, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

West Harbor has been a long time in coming! I'm thrilled to see the beginnings of it this year, 2025!

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Christine Esprabens

1711 S Walker Ave

San Pedro, CA 90731

From: Maria Etchepare <mariaonthego@yahoo.com>
Sent on: Thursday, March 13, 2025 5:39:02 AM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: Support for West Harbor Amphitheater

Greetings,

Etchepare-1

I have been a San Pedro resident for decades and support this Amphitheater.

Please advise how I may assist.

Thank you - Maria

Comment Letter FELDMAN

Outlook

west harbor modification project

From Laurie Feldman <laffnp@gmail.com>
Date Wed 12/18/2024 2:26 PM
To Ceqacomments <Ceqacomments@portla.org>

FELDMAN-1

This comment references the Chapter 5: Alternatives section of the West Harbor Modification Project, specifically:

5.2.3.1 Alternative 1 – No Project Alternative This alternative considers what would reasonably be expected to occur on the site if the Proposed Project were not implemented. In this case, Alternative 1 would not allow implementation of the Proposed Project or other physical improvements associated with the Proposed Project. Without the development of the Proposed Project, the area would still be developed under the approved 2009 SPW EIS/EIR and 2016/2019 SPPM Addenda, as applicable, for the Proposed Project Site. As described in Table 2-2 of the Project Description, the development allowed under the 2009 SPW EIS/EIR, as amended by the 2016/2019 SPPM Addenda, would include: • City Park: Within the Ports O'Call, this area was formerly Fisherman's Park, with 3 acres of lawn space, and a 500-seat Amphitheater. This was amended in 2016 to be a 4.3-acre multipurpose plaza with landscaping, hardscaping, outdoor furniture, and lighting. • Discovery Sea Amusement Area: This was introduced to the Ports O'Call area in 2016 and included a 6.4-acre amusement area with playground facilities, 100-foot-diameter Ferris wheel, carousel, entertainment attractions, gardens, and a 500-seat Amphitheater.

My comment is as follows:
I support the Alternative I - No Project Alternative option as detailed in the 2024 Draft Subsequent Environmental Impact Report (SEIR) for the West Harbor Modification Project.
Having reviewed the alternatives and their impacts on local air quality, wildlife, traffic and residential quality of life, I do not believe that sufficient mitigation efforts have been proposed to offset the impact of the operation of a 6,200 seat live entertainment venue at the proposed site. The venue is too large and remote vis-a-vis the visiting public to be anything other than problematic for local residents as well as highly destructive to sensitive wildlife habitat.
I urge you to oppose any change to the 2009 SPW EIS/EIR as amended by the 2016/2019 SPPM Addenda.

Sincerely,
Laurie Feldman
2004 S Meyler St.
San Pedro, CA 90731
530-521-6696

From: Marann en er
To: Ceqacomments
Subject: West Harbor
Date: uesday, December 3, 2024 2:24:3 PM

Dear Members of the Board of Harbor Commissioners,

As a stakeholder with Batt eshi WA, I am writing to express my support for the West Harbor Modification Project. The proposed enhancements will bring a variety of benefits to our community by creating new recreational spaces, attracting more visitors, and supporting our local economy.

The expansion of the amphitheater and community lawn, along with the Ferris wheel, will provide our community with unique entertainment and leisure opportunities right on the waterfront. These features will not only draw visitors but also offer residents accessible ways to enjoy our beautiful harbor.

FENGLER-1

I am also confident in the mitigation measures outlined in the Draft SEIR, which demonstrate a thoughtful approach to addressing potential environmental and community impacts. These measures reflect a commitment to ensuring that the project is both sustainable and beneficial for all stakeholders.

With carefully planned spaces for local businesses and recreational activities, this project has the potential to boost tourism, generate local jobs, and support San Pedro's ongoing revitalization. I am excited about the positive impact these improvements will bring to the area and look forward to seeing our waterfront become an even more vibrant and welcoming destination.

Thank you for your consideration of this project.

--
ind y,

Marann en er
Communications S ecia ist
ffice of the C
Pacific att eshi Center ationa Museum of the Surface a y at att eshi WA
250 S Harbor d , San Pedro, CA 073
ffice a : 77 446 26 7

Ce ebrate reedom of the Seas secure your a er in our F today

From: Dan randen
To: Ceqacomments
Subject: Am hitheater Concerns
Date: hursday, December , 2024 :30:30 AM

FRANDEN-1

This comment references the Chapter 5: Alternatives section of the West Harbor Modification Project, specifically:

5.2.3.1 Alternative 1 – No Project Alternative This alternative considers what would reasonably be expected to occur on the site if the Proposed Project were not implemented. In this case, Alternative 1 would not allow implementation of the Proposed Project or other physical improvements associated with the Proposed Project. Without the development of the Proposed Project, the area would still be developed under the approved 2009 SPW EIS/EIR and 2016/2019 SPPM Addenda, as applicable, for the Proposed Project Site. As described in Table 2-2 of the Project Description, the development allowed under the 2009 SPW EIS/EIR, as amended by the 2016/2019 SPPM Addenda, would include: • City Park: Within the Ports O'Call, this area was formerly Fisherman's Park, with 3 acres of lawn space, and a 500-seat Amphitheater. This was amended in 2016 to be a 4.3-acre multipurpose plaza with landscaping, hardscaping, outdoor furniture, and lighting. • Discovery Sea Amusement Area: This was introduced to the Ports O'Call area in 2016 and included a 6.4-acre amusement area with playground facilities, 100-foot-diameter Ferris wheel, carousel, entertainment attractions, gardens, and a 500-seat Amphitheater.

My comment is as follows:
I support the Alternative I - No Project Alternative option as detailed in the 2024 Draft Subsequent Environmental Impact Report (SEIR) for the West Harbor Modification Project. Having reviewed the alternatives and their impacts on local air quality, wildlife, traffic and residential quality of life, I do not believe that sufficient mitigation efforts have been proposed to offset the impact of the operation of a 6,200 seat live entertainment venue at the proposed site. The venue is too large and remote vis-a-vis the visiting public to be anything other than problematic for local residents as well as highly destructive to sensitive wildlife habitat. Further, replacing natural grass with artificial turf can increase microplastic exposure for our community, both through direct shedding of microplastics and through environmental runoff. I urge you to oppose any change to the 2009 SPW EIS/EIR as amended by the 2016/2019 SPPM Addenda.

Sincerely,
Dan Franden

From: A en ran
To: Ceqacomments
Subject: West Harbor
Date: Monday, January 6, 2025 4: :4 PM

To Whom it may concern,

I write regarding the modified amphitheater component of the West Harbor development on the San Pedro Waterfront.

The San Pedro waterfront is a distinctive feature of the community, but has historically been managed by the City of Los Angeles and the POLA administration as an asset chiefly for the benefit of the coffers of the City of Los Angeles--25 miles away--and the members of the Pacific Maritime Association, i.e. the shipping industry. Since the decline of fishing and canning operations and the demise of the Ports of Call waterfront attraction, the adjacent historic core of San Pedro has been increasingly marginalized by newer developments along Gaffey St., Western Ave., and elsewhere. Businesses in the historic core have struggled, despite the various amenities and attractions in the area.

The West Harbor development is a beacon of hope for the area, and the amphitheater is seen as a key attraction to enhance the project's appeal--and, ultimately, its success. The Johnson family, the major local proponents of the West Harbor project, are long-term members of the community and have made recurrent efforts to solicit and respond to community input.

FRANZ-1

The EIR process is fraught with challenges, given the ever-increasing number of consultants adept at identifying loopholes and circumventing requirements of the process; the range of impacts that can be dismissed as "not significant" is sometimes mind-boggling. In the case of West Harbor, though, the Johnsons have made a good-faith effort to be straightforward with the wider community.

There remain significant concerns. Many locals anticipate increased difficulty finding parking in their neighborhoods, especially during major events. There are concerns over the potential impact of trash generated by event attendees. Residents of San Pedro, especially those to the south of the West Harbor site, there are concerns about noise impacts and the validity of studies meant to assess acoustic impacts. Given the physical orientation of the amphitheater, there are misgivings about the impact of noise on sensitive populations of seabirds, as well as on seals, sea lions, and other creatures in the harbor area who communicate acoustically.

I support the project, given its potential benefit to the community, and ask that the developers, the City, and public agencies accountable for environmental standards act in good faith in addressing the community's

FRANZ-1
cont.

concerns and bringing the project to fruition.

Respectfully,

Allen Franz, Ph.D.

From: Pau reeman
To: Ceqacomments
Subject: West Harbor concert enue
Date: Saturday, January 4, 2025 6: :3 AM

FREEMAN-1 I think it's a great idea
Sent from my iPhone

From: Ma inda u ate
To: Ceqacomments
Subject: West Harbor modification roject
Date: Wednesday, o ember 20, 2024 0:43:47 AM

Hello,

FUGATE-1

I am a San Pedro resident who lives extremely close to the waterfront development. I am quite concerned about the current parking plans. The Draft SEIR only lists 2600 parking stalls for a 6,000 plus seat theater and other waterfront visitors. This is very insufficient. Recently, a music festival on the waterfront resulted in neighborhood parking issues for an entire weekend. At one point, I needed to stay overnight with a friend because there was no parking available in a safe distance, as concert-goers parked on the streets and walked to the festival. If this is what to expect whenever there is an event at the new amphitheater, it is not feasible for residents. Additionally, if there is a significant cost for visitors to park at West Harbor, it is likely that they will choose our street parking even before the WH parking is full. The current plans are setting up a very difficult situation for residents, beyond what is reasonable for us to adapt to.

This also does not account for the noise disturbances on a regular basis or the potential for more trash to end up in the water.

Thank you for considering the impact this massive development will have on the people of San Pedro. We are sacrificing a lot so that other people can profit. Many aspects of West Harbor will negatively change our daily lives, and respect and care is much needed in your plans.

Malinda Fugate

From: Maria a etti
To: Ceqacomments
Subject: he West Harbor Modification Project
Date: Wednesday, January , 2025 0:5 : 5 AM

Dear Members of the Board of Harbor Commissioners,

I am a lifelong resident of San Pedro as well as an employee of San Pedro Fish Market. We have been a tenant of both the Port of Los Angeles for many years and now a tenant of the West Harbor Development.
I am writing to express my strong support for the West Harbor Modification Project. This development is an amazing opportunity for San Pedro. The waterfront means so much to so many people and the development will create a much needed and inviting local venu that will also help our economy.

To be able to have an amphitheater right here in our home town will be wonderful. It will bring so many new opportunities to many people. The concerts and events will attract patrons from great distances as well. The possibilities are endless.

GALLETTI-1 For nearly 20 years we at San Pedro Fish Market helped produce the Port of Los Angeles Lobster Festival which was a 3 day food and music festival that drew in people from all over the country. In addition, we also hosted a Railroad Revival Tour with Mumford and Sons as the headliner in our parking lot with 10,000 in attendance. All of these events were incredibly successful bringing people to our waterfront, generating tax revenues, creating jobs, and providing a space for families to enjoy our beautiful waterfront!

The tourism, jobs, and support for local businesses will be a much needed positive addition to our community. The long- term effect will be life changing. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a beacon of hope for a prosperous and community unifying future for San Pedro. I am immensely excited to see it come to fruition. Thank you for your leadership and dedication to advancing this important project.

Kind Regards,

Maria Galletti
Accounting Manager

San Pedro Fish Market on Alamitos Bay

KOF, LLC

Corporate Office- 310-832-4251 (Ext 211)

San Pedro Fish Market
Celebrating Food & Family™
www.sanpedrofish.com

IG | FB | TT | YT | SHOP
Watch Kings of FI$H

From: Cata inaCat__
To: Ceqacomments
Subject: West Harbor Modification Prcject on the A Waterfront: Am hitheater Project
Date: Saturday, December 2 , 2024 5:43:20 PM

o Port of os An e es:

GARDNER-1

P ease do not roceed ith he Harbor Am hitheater Project he Port of os An e es and San Pedro does require such a enue n fact, it i be not on y harmfu to the u nerab e sea ife, birds and i d ife hich stru e to sur i e, it i o erta the roads and con estion of the oca nei hborhoods and ser e the community eo es n fact, if you thin about it, bui din it ou d harm a oca i in thin s or hat Money

San Pedro as a community i benefit from this ni htmare, but de rade it further
Ma in San Pedro as a bedroom community SS desirab e

P ease use some common sense, sto this roject i e San Pedro some financia he in ositi e ays: m ro e roads and ar in , su ort the sma business corredors that are stru in , c ean u raffiti, increase street i htin , add more street trees, the ist oes on

Sha in my head that anyone ou d a ree this am hitheater is a ood idea

Sincere y,
P Catherine ardner
57 arcissa Dri e
ancho Pa os erdes, CA 0275

From: Aimiee au reau
To: Ceqacomments
Subject: West Harbor Modification Project
Date: uesday, January 7, 2025 :2 :2 PM

Dear Board of Harbor Commissioners:

GAUVREAU-1

Thank you for caring so deeply about the city of San Pedro. We have enjoyed visiting the Los Angeles Port for many decades, and we love the history and cultural significance of this community. We are excited about what the future holds for all of us with the creation of West Harbor and hope to spend many more day and weekend excursions there!

We often go for the delicious seafood at the San Pedro Fish Market and the impressive vistas of LA's only port. We've enjoyed Fleet Week many times over and purposefully look for entertainment in Pedro over downtown Los Angeles. The overall ambience of this fine city is better! We are especially excited about the proposed amphitheater and intend it to become our number one concert venue. Currently, we spend too much time on the freeway, and we would much rather stay local, contributing to the robust businesses that the West Harbor Modification Project is attracting to San Pedro. We discuss with our friends and neighbors all of the time how nice it will be to see a concert at the port in the new amphitheater, then stay the night at a nearby hotel so that we can have brunch the next morning!

There is so much anticipation and eagerness in the South Bay about this project, so many who wish to support San Pedro in revitalizing the LA Waterfront. Allowing this project to reach its full potential will benefit all aspects of San Pedro, and for generations to come, people will bring their children to West Harbor, creating new memories in this historical setting. Please support this project; fully revitalizing it means preserving it for the future!

Sincerely,

Mr. and Mrs. David L. Gauvreau

From: Deb ifford
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Sunday, January 5, 2025 0:3 :0 AM

GIFFORD-1 I have been a resident of the Palos Verdes Peninsula for more than 50 years. I am opposed to the amphitheater modifications. After reading the adverse effects presented in the environmental report I am concerned about the noise and air pollution that this presents for our community.

Debborah F Gifford

Sent from my iPhone

From: ocean a m
To: Ceqacomments
Subject: Pro osed West Harbor Modification Pro ram
Date: Wednesday, January , 2025 6:3 :03 AM

GOLDIN-1

This proposed project strikes me as one of the most ignorant and anti-community ideas possible. Who benefits? The noise pollution, fireworks pollution and general air pollution in our town is already at a stunning level. So bring on more? Genius!

I strongly oppose the proposal and its potential approval by individuals who live in locations which will be unscathed by the impact.

E. Goldin
San Pedro

From: Joy on a e
To: Ceqacomments
Subject: Pro osed West Harbor Am hitheater
Date: Sunday, December 2 , 2024 6: 2:2 PM

GONZALES-1 Local San Pedro residents value our quiet community and we really hate the idea of a large amphitheater that hosts up to 100 outdoor events a year. This is noise pollution on a grand scale, which would really impact our way of life, besides adding to traffic and air pollution. We urge you to consider an indoor theater venue, if hosting events is such a priority for the port. Surely the port generates enough revenue without having to ruin our local way of life.

Joy Gonzalez
San Pedro artist

From: oe ou d
To: Ceqacomments
c: im Mc s er Counci member CD 5 Dou erhart
Subject: West Harbor Modification Project
Date: Saturday, January , 2025 2:25:46 AM
ttac me t : CSP C etter e ardin West Harbor Modification Project SD a ro ed December 6 2024 df
2024 2 7 Coasta San Pedro C West Harbor Project DS Comments df
nderstandin and mana in sound e osure and noise o ution at outdoor e ents 2 df

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o:
Christo her Cannon
Director of n ironmenta Mana ement
os An e es Harbor De artment
425 South Pa os erdes Street
San Pedro, CA 073

e: West Harbor Modification Project additiona areas that require further ana ysis

GOULD-1 ncor orated by reference are the etters and ana ysis from the Coasta San Pedro ei hborhood Counci inc udin the A S echnica Committee on Acoustics and Sound einforcement study tit ed nderstandin and Mana in Sound osure and oise Po ution at utdoor ents his study as re ared by sound reinforcement e erts from across the obe ith the aim of ana y in current state of the art techno o y to find the best ays to achie e de e o ment of successfu outdoor concert enues in a ay the ro ides ma imum audience e erience hi e minimi in otentia ne ati e effects on surroundin communities, and this document must be studied and methods and ractices must be incor orated into the desi n of the ro osed concert enue at West Harbor

GOULD-2 ne of the most disturbin as ects of this rocess is the fact that the P A re ares the DS and then the P A is res onsib e for a ro in it hich has a bui t in conf ict of interest An inde endent body of e erts must be brou ht in to be the decision ma er re ardin the a ro a of the DS

GOULD-3 2 hrou hout the DS , there are arious mode s of ho sound i su osed y affect the surroundin community, ho e er, there has been no actua set u of a sound system to be measured to erify the accuracy of the mode s, therefore, the mode s are meanin ess he mode s must be erified ith rea or d testin

GOULD-4 3 here are numerous concerns co ected durin the P rocess, such as eo e atherin in the community on side streets such as eacon, u tch, Crescent, and others for the ur ose of istenin to concerts for free hi e tai atin creatin additiona noise and o ution from e haust of cars and additiona traffic con estion, and none of this has been ana y ed in the DS hese im acts must be ana y ed

GOULD-5 4 he ro osed sound ressure e e s SP s in the concert enue i create ermanent hearin dama e for concert oers 0d A 03d A he ma imum a o ed SP at H must not e ceed 6d A and c ear y e ib e si ns must be osted at entrances that hearin dama e may occur ithin un ess hearin rotection is used

GOULD-6 5 imitin M ana ysis to Harbor d a one is entire y inadequate and a the streets eadin to the ro osed concert enue must be ana y ed as e

GOULD-7 6 he hi y terrain of San Pedro i ha e the effect of directin sound u ards imitin ana ysis to 5 5 foot and 6 foot hei hts is entire y inadequate, and a much ider ran e of e e ations must be ana y ed, not sim y mode ed A ain, a mode s must be erified by settin u a simi ar sound system at the ro osed enue ocation ayin at ro osed SP s hich must then be measured durin a ariety of atmos heric conditions and times a the ay u the hi he sco e of the ana ysis is not near y ide enou h to consider the ho e community that i be affected

GOULD-8 7 he P A has ans for the construction of mu ti e hote s and a fu y de e o ed cruise termina , and the additiona cumu ati e im act of those future rojects has not been considered and must be ana y ed

GOULD-9 Section 7 states in art: Ho e er, none of the Pro osed Project e ements ou d resu t in irre ersib e en ironmenta dama e or e am e, the Pro osed Project ou d not ha e a si nificant im act on aesthetic resources, historica resources, *or sensiti e bio o ica s ecies or communities that cou d not be miti ated to ess than si nificant e e s* he Pro osed Project

GOULD-9 cont.

ou d not resu t in a oss of si nificant en ironmenta resources or irre ersib e chan es et as stated in CSP C s ana ysis, the roject oints direct y to the nestin area of the Ca ifornia east urn hich is e treme y endan ered he ro osed miti ation is ho y inadequate and must be redone by a qua ified inde endent bio o ist

GOULD-10

he entirety of this roject is desi ned for recreationa ur oses and must under any circumstances be a ro ed usin o erridin considerations hen ne ati e im acts can not be adequate y miti ated he San Pedro Community must not be made to suffer to satisfy the rofit aims of a fe ea th indi idua s and the P A n ess the ne ati e im acts CA be adequate y miti ated to ess than si nificant, the roject shou d be a ro ed

GOULD-11

0 ast y, fire or s shou d be a o ed he on y ossib e a ternati e, hich has been ro osed, ou d be the use of e ectronic drone dis ays

Sincere y,
oe ou d
3 0 625 57

From: raham Scott
To: Ceqacomments
Subject: West Harbor Modification Project S
Date: uesday, January 7, 2025 :50:20 AM

Dear Members of the Board of Harbor Commissioners,

GRAHAM-1

As a local resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth for all to enjoy.

The expanded amphitheater and associated community lawn park space will bring new opportunities for performances, cultural events, and community activities. A taller Ferris Wheel attraction and the additional 2,600 public parking spaces will enhance the Los Angeles Waterfront and benefit the surrounding community of San Pedro. These additions will help support a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Graham J. Scott

From: i Wea er ri s
To: Ceqacomments
Subject: d: West Harbor
Date: riday, January 0, 2025 2:3 :22 PM

Dear Members of the Board of Harbor Commissioners,

GRIGGS-1

As a South Bay resident, I am writing to express my support for the West Harbor improvements as it will enhance and broaden the appeal of San Pedro to visitors and residents throughout Southern California.

Clearly, this unique location offers a tremendous opportunity to revitalize the Los Angeles waterfront in San Pedro by creating a dynamic experience recognized for its vibrant waterfront, variety of offerings and entertainment venue. The expanded amphitheater will improve the quality of performers, number of attendees and variety of performances better serving the diverse communities of Los Angeles, attracting families and people of all ages.

Economically, this project will be a game changer for the community. By creating jobs, enriching the arts, supporting local businesses, and attracting tourism, it will foster long-term growth and prosperity. A thoughtful and long-term approach to addressing potential challenges were outlined in the Draft SEIR.

This is a bold vision for the future of San Pedro and will be exciting to realize.

Your leadership and dedication to approving this vital project is greatly appreciated.

Respectfully ~ Liz Griggs

From: enn rit ner
To: Ceqacomments
Subject: West Harbor DS
Date: Monday, January 6, 2025 3:06: 5 PM

Dear Members of the Board of Harbor Commissioners,

As a San Pedro resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

GRITZNER-1

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

PS – I know you have gotten other emails along these lines, but it really does make the right points. West Harbor is truly transformative not only for San Pedro but for the region, and I can tell you firsthand that, while I'm sure people have concerns, the overwhelming sentiment in the community is pride and hopefully anticipation that this project comes to fruition as soon as possible.

Sincerely,
[Your Name]

From: Glenn Gritzner <ggritzner@gmail.com>
Sent on: Monday, January 6, 2025 11:06:08 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor DSEIR

Gritzner2-1

Dear Members of the Board of Harbor Commissioners,
As a San Pedro resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.
The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.
Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.
The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.
PS – I know you have gotten other emails along these lines, but it really does make the right points. West Harbor is truly transformative not only for San Pedro but for the region, and I can tell you firsthand that, while I'm sure people have concerns, the overwhelming sentiment in the community is pride and hopefully anticipation that this project comes to fruition as soon as possible.

Sincerely,
[Your Name]

Dear Members of the Board of Harbor Commissioners,

As a lifelong San Pedro resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a much needed update to San Pedro's waterfront, that will create vibrant public spaces while driving economic growth.

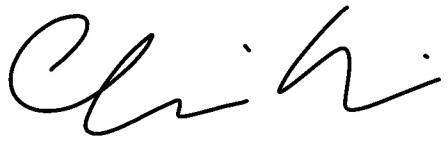
I'm excited to attend cultural events and performances at the proposed amphitheater and community lawn. These additions will create a dynamic waterfront experience, benefiting both residents and visitors by making San Pedro a hub of commerce and entertainment.

HARRIS1-1

I feel that San Pedro is a hidden gem, but I sometimes hear from others that San Pedro is past its prime. Economically, this project will be a major asset to our community that helps San Pedro to meet its immense potential. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,



Chris Harris

From: jhinc ao com
To: Ceqacomments
Subject: : W S HA M D CA P J C
Date: Monday, January 6, 2025 :2 :05 PM

Dear Members of the Board of Commissioners,

HARRIS2-1 I strongly support the West Harbor Modification Project. I was born in San Pedro in 1951 and I am a life long resident of San Pedro.
This development is way overdue and will help bring our town much needed economic growth. The addition of the expanded 6,200 amphitheater, 175' Ferris Wheel, community lawn and additional 2,600 parking spaces will make San Pedro a destination for the surrounding counties and create a dynamic waterfront experience benefiting both residents and visitors alike while reinforcing San Pedro's reputation as a destination for entertainment and culture. Economically, this project will be a major asset to our community. The added tourism will create more jobs, support the local businesses, and foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro's waterfront creating vibrant public spaces while driving economic growth. I am excited to see it come to life. Thank you Port of Los Angeles for your leadership and dedication to advancing this important project. Thank you to the developers for their vision and tenacity during this long process.

Sincerely,

George Harris

From: S aran is, He ene
To: Ceqacomments
Subject: West Harbor Modification Prcject
Date: Monday, January 6, 2025 4:4 :03 PM

Dear Members of the Board of Harbor Commissioners,

SPARANGIS-1

As a stakeholder within the community, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Helene Harris

--

Helene (Eleni) Harris
Website
<https://urldefense.com/v3/__http://helenesparangis.weebly.com__;!!Ad2px7zmCw!nF2i02ph2EunmjSDLiW-e3NTM1R_Uq97fN99Nsw3XRW5SdlNh_xoxynDNq9i0R3TIDZfPY1jKCooTZzPaW8b$>

From: ic Harris
To: Ceqacomments
Subject: West Harbor DS etter of Su ort
Date: Wednesday, December 25, 2024 :25:44 AM

Dear Members of the Board of Harbor Commissioners,

As a member of the community, I am writing to express my support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.
The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities in our local community. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while helping to enhance San Pedro's reputation as a destination for entertainment and culture.

HARRIS3-1

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Nick Harris

 Comment Letter HARRIS4

Outlook

West Harbor DSEIR

From Olympia Harris <olyharris@sbcglobal.net>
Date Wed 12/18/2024 12:47 PM
To Ceqacomments <Ceqacomments@portla.org>

Dear Members of the Board of Commissioners,

HARRIS4-1

I would like to voice my support for the West Harbor Project. Although I was not born in San Pedro, I've lived here for 37 years, having married a San Pedro native. I visited the old Ports O Call Village as a young girl and remember being charmed by the glass blower there. Having a love and great respect for all that is old, history and tradition, the village was wonderful for it's time - but it's time is gone and the world is a new place that San Pedro needs to be a part of....

I've come to know that San Pedro will never all agree on the direction that the revitalization of the water front should go, but I think what is planned will help bring our town much needed economic growth and attention. The open spaces, amphitheater and businesses of the development will bring not only tourists, but I think the community will benefit as well, bringing jobs, entertainment, new life and eyes to our waterfront. Out of towners, and some locals, will be able to discover the charm of our downtown area as well, benefiting everyone. The best of both the old and the new.

This is a huge undertaking, not only for the developers, but for the Port and the community. It will be a challenge, but I think it is well planned and addresses the potential problems that our unique area has and come with a project like this.

I can't wait!!!!

Sincerely,

Olympia Harris

From: S HA
To: Ceqacomments
Subject: Su ort W S HA
Date: Wednesday, December 4, 2024 2:56:25 PM

HART-1 I am so excited for this wonderful spot in wonderful San Pedro!! Keep up the good work-it will be amazing!!
Suzie Hart

December 24, 2024

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HAVENICK-1

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From: Cay Heery
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Saturday, January 4, 2025 0:24:4 AM

Hello:

HEERY1-1

The following comments were posted on "Nextdoor." I agree with them.

However, what the OP did NOT mention was the effect that 2000+ vehicles per event will have on SAFETY. There's only ONE way - in or out - of the harbor area, which means traffic jams for EVERY event. Does that mean that EMERGENCY VEHICLES won't be able to get through? You betcha. Does that mean people will die? Cost of doing business, I guess.

"The Port of Los Angeles intends to build a large outdoor amphitheater, presented as a "Charming, Seaside Amphitheater" at the new San Pedro West Harbor Complex: 1196-1194 Nagoya Way in San Pedro. If the project proceeds we will be bombarded with loud and obnoxious noise. On August 4, 2024, residents within a seven-mile radius of Hollywood Park called 911 to complain about a wildly loud and obnoxious concert. The noise affected residents in homes from Manhattan Beach to Marina del Rey to Ladera Heights and El Segundo. The callers complained that the rumbling bass was causing migraines, rattling doors and windows, and disrupting sleep. The police asked the public to stop calling 911. They knew the noise was loud but they had no power to stop the disturbance. Residents had to put up with this insanity for two days and nights from 2 pm to 10 pm! It was surmised that the raised stage caused the loud, low-end noise to travel across the 7-mile radius. Now the Port of Los Angeles wants to offer 100 events per year in San Pedro at the West Harbor venue! Concerts such as Electronic, House, Techno, Dubstep, Drum and Bass, Hip-hop, and Rave will blast our residents, parks and beaches. The Port of L.A.'s environmental report acknowledges that the proposed project would result in significant and unavoidable impacts related to noise, air pollution (significant greenhouse gases), and transportation issues. Air pollution: L. A. Almanac published that out of the first 275 days of 2024, 107 were unhealthy to breathe in Los Angeles. West Harbor now wants to add 24 more days of Fireworks! This is irresponsible for the added pollution that it will create and the added noise. Noise from fireworks create extreme stress and anxiety for our dogs, pets, wildlife and us. In 2019 a 500-seat venue was approved. Now West Harbor has increased that 12 times to 6,200 non-permanent folding seats. But how many people will actually be attending these events? A new trend in concert-going is for participants to stand. Seats are not wanted. Crowds stand for hours, stomp, dance and chant loudly. The 50,000-square-foot artificial turf can accommodate approximately 23,227 people (without seats)! This is called "STANDING CROWD DENSITY". Also, the stage is elevated like the stage at Hollywood Park which is surmised to have been the cause of so much unwanted radiating noise. The Port also touts, that when there are no concerts, people can relax on the artificial turf. Does that sound appealing? Five Port of LA Commissioners control our future. Not a single one lives in San Pedro or Wilmington. So, all five out-of-town commissioners will hold the fate of over 83,000 San Pedro residents, Wilmington's 52,000, and tens of thousands of East Rancho Palos Verdes and Miraleste residents. If passed, these 5 Commissioners and their families won't have to listen to the loud unrelenting noise and air pollution they helped to create."

Personally, I can't believe that this monstrosity has gotten this far along. I guess "The Fix" is in. I hope somebody goes to jail over this.

Sincerely,

Clay Heery

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From: C ay Heery
To: Ceqacomments
Subject: West Harbor Am hitheater Project
Date: Saturday, ctober 5, 2024 6:52:2 PM

Hello!

I understand that you are soliciting comments on the above-captioned project.

My thoughts are these:

1. How did this ever get past the "discussion" stage? The person who thought this up really needs a hard dose of REALITY. Did somebody really look at a patch of land and think, "Hey, let's put an unsustainable concert arena here!"

HEERY2-1

2. I understand that the project has been scaled "back" to 4300 seats from 6200. That does translate into parking for 2000+ cars. That just ain't gonna work. Plus there will be traffic jams, and access for EMERGENCY VEHICLES will be non-existent, which means some people may/will die.

3. The noise. Oh, the noise! People in San Pedro complain about the noise coming from music events in LONG BEACH. How big of a sound system do you need to reach 4300 people? Well - and this is just a guess, knowing how sound travels across the water - one big enough to reach Catalina. So most of Pedro gets a free concert, whether they want one or not. Yay! Free stuff! But how much are headphones?

4. It's just not economically feasible. People will soon get fed up having to wait in their cars for HOURS for the venue's access and egress, so they'll just stop coming. Neiderlander will want out within 8 months, my guess.

Thanks for reading my rant. Somebody posted some similar - but far more extreme - views on a San Pedro Facebook page and it got hundreds of "likes." So I know I'm not alone.

Best regards,

Clay Heery
San Pedro

Sent with Mailsuite · Unsubscribe

From: Chris Hoffman
To: Ceqacomments
Subject: Su ort for the West Harbor Modification Project
Date: uesday, December 3, 2024 3: 7:44 PM

Dear CEQA Team,

I am writing to express my enthusiastic support for the West Harbor Modification Project, particularly the planned expansion of the amphitheater. This project represents a transformative opportunity to create a vibrant, cultural, and economic hub that will benefit our community for years to come.

HOFFMAN-1

The amphitheater will serve as a cornerstone of this vision, providing a venue for concerts, cultural events, and entertainment that will draw visitors from near and far. By fostering economic vitality, the project promises to generate jobs, support local businesses, and strengthen San Pedro's waterfront as a destination.

Moreover, I appreciate the project's commitment to environmental responsibility, as outlined in the mitigation measures. It's reassuring to know that community enrichment can coexist with efforts to protect our local environment.

This initiative will revitalize the area and bring us together as a community, creating a space where culture, connection, and opportunity thrive. I urge you to approve this project and help make this vision a reality. Thank you for your consideration.

Sincerely,
Chris Hoffman
942 W. Paseo Del Mar, San Pedro

From: Danie
To: Ceqacomments
c: Danie Hom
Subject: West Harbor DS
Date: riday, December 27, 2024 0:04:07 PM

Dear Members of the Board of Harbor Commissioners,

HOM-1

As a frequent visitor to San Pedro to support the arts community, I wanted to express my support for the proposed larger amphitheater at West Harbor. This facility will create a hub of cultural arts entertainment in the San Pedro area that would attract visitors and tourists who would have discretionary income to support the restaurants, shops, and many other business venues.

Clearly with the remodeled Warner Grand Theater, the Grand Annex Theater, and a few other local music and dance theaters, San Pedro will become a very attractive destination for the arts in addition to generating employment opportunities and substantial tax receipts for the city.

If there are any questions regarding my support you can call me at 310.489.2524. Thank you for your leadership in this once in a lifetime project.

Sincerely,

Daniel Hom

Bravo! music school
"Teach.Connect.Perform"
22767 Hawthorne Blvd Torrance CA 90505
P 310.375.7511
C 310.489.2524
www.bravomusicschool.com

From: diana ho ard
To: Ceqacomments
Subject: West Harbor Modification Project
Date: hursday, o ember 4, 2024 6:20:2 PM

HOWARD-1

As a resident of Palos Verdes i am very concerned about the amphitheater noise & fireworks.
we already have to deal with music on the queen mary that causes our windows to vibrate! please don't add to the problem. and as far as fireworks/they contribute to noise pollution & air pollution.

i am very concerned with how this will impact our rural neighborhoods.

thank you.

Dr Diana Howard

Sent from my iPhone

From: mi y Huff
To: Ceqacomments
Subject: West Harbor Modification Project S
Date: uesday, January 7, 2025 4:4 :34 PM

Dear Members of the Board of Harbor Commissioners,

As a San Pedro resident, Board Member of several local organizations, and Development Director of the Friends of Cabrillo Marine Aquarium, I am writing to express my strong support for the West Harbor Modification Project. This project is a vital step in revitalizing San Pedro's waterfront and expanding recreational opportunities for the community while boosting the local economy.

HUFF-1

The expanded amphitheater and community lawn will create new spaces for performances, cultural events, and community gatherings. These additions will enhance the waterfront experience for residents and visitors, further establishing San Pedro as a vibrant destination for arts, entertainment, and leisure.

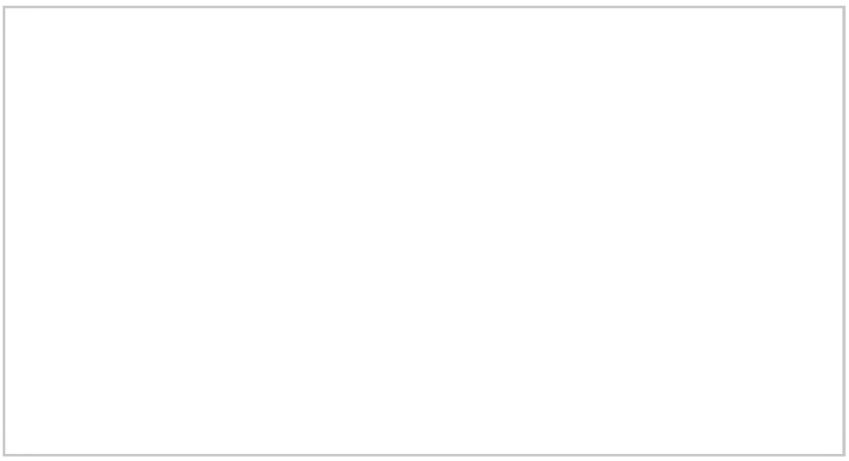
Beyond its cultural benefits, this project will provide significant economic value by attracting tourism, generating jobs, and supporting local businesses. The mitigation measures outlined in the Draft SEIR reflect careful planning to address traffic, noise, and environmental concerns, ensuring that the project benefits the community while minimizing disruptions.

The West Harbor Modification Project is an exciting opportunity to drive growth and revitalize our waterfront. I appreciate your leadership and commitment to advancing this important initiative.

Sincerely,
Emily Huff

Emily Huff
Development Director

FRIENDS of Cabrillo Marine Aquarium
3720 Stephen M. White Drive
San Pedro, CA 90731
P: (310) 548-7546
emily.huff@cmaqua.org
www.friendsofcabrilloaquarium.org



From: Caro
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Saturday, January 4, 2025 :0 :34 AM

To whom it may concern,

HUNGERFORD1-1

I am one of the many people living in San Pedro who have only recently been made aware of the massive outdoor amphitheater being planned for our small coastal community. Such a large project is out of line with San Pedro and really shocking particularly with its end result of disrupting everyone living anywhere near this site, which I understand can be 7 miles. Of particular concern are the people working the early morning hours on the dock and fishermen, not to mention the thousands working normal hours needing uninterrupted rest. Not only are we concerned about obviously violating quiet hours but to have concerts going on at the pace of up to a third of the year is completely unacceptable and irresponsible for anyone caring about people, wildlife and traffic.
When Saint John Fisher in RPV built their new church ten years ago they had to set their electronic bells ringing occasionally in the day, to an acceptable decibel for the neighbors. I find it laughable that this outdoor venue can push such an unrealistic and unreasonable situation on 80,000 residents that will impact far beyond ambient noise levels demanded in normal building projects.
If this project is even considered they should be at the very least, than they must enclose the venue in a bricks and mortar building keeping their noise to themselves. This is the only just answer. The other issue that must be solved for the people living working in San Pedro is traffic. We know the city is limiting people's right to travel by the shrinking of needed lanes so how is this new venue of so many cars going to be addressed? You can't have it both ways limiting car access and jamming the lessened roadways with massive venue traffic.

Elected and unelected bureaucrats have a responsibility to the people first and 80,000 residents cannot justly be impacted by one business. People living and working close by must respect their neighbors and do no harm.

Thank You,

carol hungerford
all rights reserved
carolhungerfordart.com
310-245-0517

 Comment Letter HUNGERFORD2

Outlook

West Harbor DSEIR

From Hungerford, Gabriel @ Los Angeles <GHungerford@trammellcrow.com>
Date Wed 12/18/2024 12:08 AM
To Ceqacomments <Ceqacomments@portla.org>

HUNGERFORD2-1

ɛmbers of the Board of Harbor Commissioners,

As a life-long South Bay resident and supporter of San Pedro, I am writing to express my strong support for the West Harbor Modification Project. My brother went to Mary Start High School, my parents live on 17th Street, and my mom runs the Los Angeles Harbor Arts artist studios on Mesa. My first musical gig was at Scared Grounds Coffee Shop when it used to be located on the corner of 6th and Mesa. This is our community, and it's long overdue for a great project like the West Harbor project.

This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth. The expanded amphitheater and community lawn will bring new opportunities for performances (just like I had in San Pedro 20 years ago!), cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture. This an opportunity to make the best parts of San Pedro made even better.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability. It is clear that this project is going above and beyond to minimize the impact to the community while providing significant benefits.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Gabe Hungerford

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From: 2hunter
To: Ceqacomments
c: Ara Mihranian
Subject: West Harbor Modification Project
Date: riday, December 27, 2024 4:27:23 PM

We are longtime residents of RPV and have had a slip in the Cabrillo Marina. We also live near a music venue.

The San Pedro music venue, as described is a nightmare of problems.

HUNTER-1

It's proposed size creates a traffic mess. Getting off of and onto the 110 fwy already creates long backups. Wastes time and fuel. Blocks intersections the streets of San Pedro aren't equipped to handle such crowds. *Keep in mind also that PVDS is a logical link between So Bay residents and San Pedro. PVDS, in the landslide, cannot sustain any further traffic.

Volume. The sound and vibrations will impactfully reverberate throughout a large area. It will disrupt families, businesses, the marina, the Aquarium and wildlife.

A limited number of Concerts of controlled size and decibels can be considered. But NOT 100 events. Not enormous crowds. Not unregulated/policed volume/vibration.

The quality of life of citizens of San Pedro and surrounding areas needs to be the PRIORITY of the commission.

Marianne & William Hunter
Portuguese Bend
2hunter@cox.net

From: johnjacobson386@gmail.com
Sent on: Wednesday, December 18, 2024 8:01:39 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor's DSEIR

Dear Members of the Board of Harbor Commissioners,
Being born and raised in San Pedro, I am writing to express my strong support for the West Harbor Modification Project.
This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities.
These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation
as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life.
Thank you for your leadership and dedication to advancing this important project.
Sincerely,
John Jacobson
562-773-4821

Jacobson-1

From: a erie James
To: Ceqacomments
Subject: West Harbor Modification Project
Date: riday, January 0, 2025 3:55:5 PM

Dear Members of the Board of Harbor Commissioners:

I am writing to express my support for the West Harbor Modification Project. I work for Jerico Development and I am also a proud resident of San Pedro. This project is critical to unlocking the full potential of our beautiful community and will bring lasting economic, cultural, and community benefits.

The amphitheater will bring world-class performances and events to our waterfront, enriching the experiences of residents and visitors alike. This venue will establish San Pedro as a key destination for entertainment, strengthening our identity and providing a new space for diverse artistic expression.

JAMES-1

The West Harbor development will generate new jobs during both construction and operation, boosting our local economy. By attracting tourists and hosting major events, the project will drive increased revenue for local businesses, from restaurants to retail, creating a vibrant hub for commerce and tourism on the waterfront and Downtown San Pedro.

The project will also enhance the overall quality of life for residents, like me, by providing a new public park space with waterfront access, and family-friendly events and attractions. The amphitheater and Ferris wheel will be iconic landmarks, further connecting our community with greater LA, Southern California, and beyond.

The West Harbor Modification project will be a transformative asset for San Pedro, and I am committed to ensuring its success both professionally and personally, and I strongly encourage the Board of Harbor Commissioners to approve this project to help us realize the full potential of our wonderful town and waterfront.

Thank you for your consideration.

Sincerely,

Valerie M. James

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JIMINEZ-1

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From: ynn Cam be
To: Ceqacomments
Subject: West Harbor modification roject
Date: hursday, o ember 7, 2024 7:46:47 AM

To whom it concerns,

CAMPBELL-1 In reference to the proposed amphitheater along the harbor, the likely level of noise pollution gives me pause.

May I assume an environmental impact study will be conducted and further will there be assurances that local residents may sleep peacefully should such an artifice move forward?

Sincerely

Lynn Johnson
Oceanview Terrace
San Pedro

From: Danie Johnson
To: Ceqacomments
Subject: West Harbor Modification Project S
Date: riday, January 0, 2025 :5 :3 PM

Dear Members of the Board of Harbor Commissioners,

As a lifelong Angelino and south bay resident, I am writing to express my strong support for the West Harbor Modification Project (SEIR). West Harbor is a highly anticipated development project for me and many like me.

The expansion of the amphitheater from 500 to 6,200 seats is something I couldn't be more excited about. This will no doubt drive many more visitors and allow for a wider range of concerts and shows to be performed in San Pedro allowing the rest of the development to flourish. This will allow San Pedro to compete with other venues that have been home to concerts and festivals that attract hundreds of thousands of people per year.

JOHNSON1-1 Parking is always a concern in southern California, and I was happy to hear the proposed addition of 2,600 parking spaces to the project, something that would benefit not only West Harbor but the surrounding community of San Pedro.

I was thrilled to read the modification for increasing the ferris wheel's height, as the sprawling views of the ports, ocean and greater Los Angeles will be more thoroughly enjoyed by patrons of West Harbor. This addition in height will make the ferris wheel a great attraction, and I can only imagine the video footage that will go viral from atop the wheel, further adding buzz to the project, driving more tourism and visitors.

These modifications show me there is wise leadership behind these moves, leadership that is taking the public's interest seriously while developing and delivering a world class port attraction. I couldn't be more supportive of these modifications and I thank you for your efforts in making this incredible project a reality.

Sincerely,
Daniel Johnson

From: susanne johnson
To: Ceqacomments
Subject: West Harbor Project S
Date: hursday, January , 2025 3: : 0 PM

Dear Members of the Board of Harbor Commissioners,

JOHNSON2-1

I am writing to express my strong support for the West Harbor Modification Project (Draft SEIR). I believe this development will be a great way to revitalize San Pedro's waterfront, for many surrounding communities.

The amphitheater and community lawn park space will bring new opportunities for performances, cultural events, and community activities. These additions will help support a dynamic waterfront experience, benefiting both residents and visitors to this wonderful port town.

This project will be a major asset to tourism, creating jobs, and supporting local businesses. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely, Susanne Johnson

Comment Letter JONES

Outlook

West Harbor SDEIR

From Leslie <omelette4you@yahoo.com>
Date Wed 12/18/2024 9:11 AM
To Ceqacomments <Ceqacomments@portla.org>

Dear Members of the Board of Harbor Commissioners,

JONES-1

As a resident-stakeholder I am writing to express my very strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.
The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.
Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.
The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.
Sincerely,

Leslie Jones

From: Leslie Jones <lljonesin33@yahoo.com>
Sent on: Wednesday, December 18, 2024 3:41:28 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor SDEIR

Dear Members of the Board of Harbor Commissioners,

Jones2-1

As a resident/stakeholder,
I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.
The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.
Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.
The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Leslie Jones

From: ay ato
To: Ceqacomments
Subject: West Harbor DS
Date: Sunday, December 2 , 2024 2:05:30 PM

Dear Members of the Board of Harbor Commissioners,

KATO-1

As a resident of Los Angeles County's South Bay Area, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth. It is exciting to think about the possibilities for the area which had been on the decline once Ports O' Call had aged out.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. I plan to visit West Harbor many times once in operation and have many friends who will do the same. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Ray Kato
Rolling Hills Estates, CA

From: im eatin
To: Ceqacomments
Subject: his is i e y to be s am er P A sender ro erties Am hitheater
Date: Saturday, o ember 30, 2024 :35:23 AM

KEATING-1 I do not want this amphitheater project to move forward. It will disrupt the community in ways that will inconvenience the residence. This includes noise, congestion, parking issues, and public safety.

Kim Keating
San Pedro resident

Get Outlook for iOS

From: _ammy _han
To: Ceqacomments
Subject: West Harbor DS
Date: hursday, January , 2025 2:3 :3 PM

Dear Members of the Board of Harbor Commissioners,

KHAN-1

As a San Pedro Chamber Board Member, I am writing to express my strong support for the West Harbor Modification Project. Revitalizing San Pedro's waterfront will be transformative — creating vibrant public spaces while driving economic and cultural growth.

The expanded amphitheater and community lawn will bring new opportunities for high-caliber performances, cultural events, and community activities. These significant additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

This project promises to be a major economic asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Tammy Khan
Board Member, San Pedro Chamber of Commerce

Tammy Khan / Vice President of Operations
455 W. 6th Street, San Pedro CA 90731
C: 310-213-9329 / **O:** 310-935-2003
sheikhimpact.com
Facebook / LinkedIn

From: Jane imba
To: Ceqacomments
Subject: West Harbor Modification Pro ram
Date: riday, January 3, 2025 3:30: PM

KIMBALL-1 Along with every tax paying voter I know in San Pedro (and I have been here for decades), I 100% object to the proposed music venue at West Harbor. The effect on the quality of life in our town will suffer immeasurably. The noise, the traffic, the hassle will be unbearable. Who allowed this developer to make these plans to torture us all?

Jane Kimball
1136 S Weymouth Avenue
San Pedro, CA 90732

From: Christa ee
To: Ceqacomments
Subject: n Su ort of the West Harbor Modification Project
Date: uesday, December 3, 2024 :4 :5 PM

Dear Members of the Board of Harbor Commissioners,

I am writing to voice my strong support for the West Harbor Modification Project. The proposed enhancements, including the amphitheater, community lawn, and Ferris wheel, will create vibrant recreational spaces, attract visitors, and support our local economy.

The performing arts sector needs more accessible venues in San Pedro. Our community also needs more safe gathering spaces.

KLEE-1

I am confident in the mitigation measures outlined in the Draft SEIR, which demonstrate a thoughtful approach to addressing potential impacts while ensuring the project's long-term success. These measures reflect a commitment to sustainability and community benefit. I have complete faith in Jericho Development, that they will complete this project in a way that is best for San Pedro. They truly do care about uplifting the community.

This project has the potential to boost tourism, create jobs, and further San Pedro's revitalization. San Pedro has grown so much since I moved to SoCal in 2013 and it is such a warm and welcoming community, I'm excited to see our waterfront transformed into a more vibrant destination.

Thank you for considering this important project.

Best,

Christa Klee, Marketing Specialist
(pronouns: she/her/hers - what's this?)
Grand Vision Foundation
The Grand Annex Music Hall | Meet the Music | Friends Group to The Warner Grand Theatre
434 W. 6th St., San Pedro, CA 90731
310.833.4813 | www.GrandVision.org

From: A AJ C
To: Ceqacomments
Subject: West Harbor Modification Project
Date: riday, December 20, 2024 :5 :2 AM

KRAJECK-1 I support the West Harbor Modification Project because the project will enrich our waterfront and provide economic benefits to the region. I welcome the project because it will bring new entertainment and restaurants and improvements to the harbor and provide a place for cruise passengers to visit while enjoying the activities at the Port of LA.

I'm a homeowner in San Pedro for over 25 years and welcome West Harbor's vision and community improvements.

Geralynn Krajeck
90731
Gkrajeck@aol.com

Sent from my iPad

From: ico e u o Wa dman
To: Ceqacomments
Subject: West Harbor DS
Date: uesday, January 7, 2025 :52:2 PM

Dear Members of the Board of Harbor Commissioners,

KUKLOK-WALDMAN-1

As a Land Use Lawyer and Planning Professor at USC, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth. It is time for a wonderful upgrade for the entire community.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture. This is a win-win for tourists and the community that supports the key cruise ship and shipping sector of the economy.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability. This is a true upgrade and opportunity for live, work, and play in San Pedro.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Nicole Kuklok-Waldman

From: A M A C
To: Ceqacomments
Subject: Stron Su ort for the West Harbor Am hitheater and Par in De e o ment
Date: Saturday, December 4, 2024 :04: 7 AM

Branimir Kvartuc
511 Harbor Blvd., #825
San Pedro, Ca 90731

Los Angeles Harbor Commission
425 S. Palos Verdes Street
San Pedro, CA 90731

Subject: Strong Support for the West Harbor Amphitheater and Parking Development

Dear Commissioners,

KVARTUC-1

As a longtime stakeholder of Downtown San Pedro, I am writing to express my enthusiastic support for the development of the West Harbor amphitheater and parking improvements. For decades, Downtown San Pedro has been a quiet, underutilized area, and this project represents the kind of transformative development our community has been waiting for.

San Pedro is a place of rich history and potential, but for too long, the heart of our downtown has lacked the vibrancy and energy that other neighborhoods across Los Angeles have experienced. The addition of a world-class, 6,200-seat amphitheater at the West Harbor development is exactly the kind of investment that will breathe life into our streets, attract visitors, and create a walkable, dynamic neighborhood that supports new businesses and opportunities.

Across Los Angeles, we've seen how projects like this become catalysts for revitalization. With the amphitheater bringing concerts, performances, and cultural events to San Pedro, we have a chance to create a true destination that blends our unique waterfront charm with the kind of modern energy that draws people in. As more visitors come to the amphitheater, they'll explore our local businesses, eat at our restaurants, and enjoy the walkability of our downtown—injecting the kind of vitality we've long wanted to see.

This is exactly the type of development that aligns with what our community wants: a place where residents and visitors alike can gather, experience great entertainment, and explore a thriving, walkable downtown. It's the kind of project that will bring much-needed energy and optimism to our neighborhood, while maintaining the character that makes San Pedro special.

KVARTUC-1
cont.

I urge the Commission to approve the amphitheater and parking improvements as part of the West Harbor project. This is a once-in-a-generation opportunity to create a San Pedro that's not just a place to live, but a place to thrive.

Thank you for your time and dedication to the future of our community.

Sincerely,
Branimir Kvartuc
San Pedro Stakeholder

KVARTUC-1

Outlook

West Harbor Modification Project

From Joe Lanning <jplanning@yahoo.com>
Date Thu 11/14/2024 6:46 PM
To Ceqacomments <Ceqacomments@portla.org>

LANNING-1

The Harbor Amphitheater Project will be a perpetual nuisance, degrading the quality of life for many thousands of San Pedro & RPV residents if it is allowed to be built. The racket from the concerts & events already allowed at the harbor are extremely bothersome & disturb residents' peace & quiet, often well into the early morning hours.
I urge that this abominable project be cancelled!
Joseph Lanning, San Pedro

From: arson
To: Ceqacomments
Subject: ote of su ort for West Harbor Modification e anded am hitheater
Date: Monday, December , 2024 :03:37 AM

To Whom it may concern,

I am writing to express my enthusiastic support for the West Harbor Modification Project, specifically the expanded amphitheater. I have reviewed the provided fact sheet and am pleased with the project's commitment to environmental responsibility and mitigation measures.

I believe the amphitheater will be a tremendous asset to the community, providing a dynamic venue for cultural events, concerts, and entertainment. This project aligns perfectly with the vision of creating a vibrant and accessible waterfront destination.

LARSON-1

The economic benefits of the expanded amphitheater are also significant. It will attract visitors, create jobs, and generate revenue for local businesses.

The Johnson families commitment to San Pedro is unmatched. With out their support landmarks like the Warner Grand would a faint memory, not an active, vital venue it is, just to name one of their many contributions to San Pedro. The current project demonstrates a thoughtful approach to development that prioritizes both community needs and environmental protection, a hallmark of the Johnson family.

I urge the Port to approve the West Harbor Modification Project and the expanded amphitheater. This project represents a fantastic opportunity to enhance our waterfront and create a thriving destination for residents and visitors alike.

Sincerely,

Gary Larson
Past: President San Pedro Chamber of Commerce; President San Pedro Revitalization Corporation; San Pedro Bay Historical Society Preservation Chair; San Pedro Peninsula Hospital Foundation Director; San Pedro Downtown Business Association Chair; Los Angeles Conservancy; San Pedro Business Improvement District board member; San Pedro CRA Advisory Committee Member; Founder of San Pedro Bay Company; Co-Founder of Grand Vision Foundation

From: uminated Presents
To: Ceqacomments
Subject: n Su ort of the San Pedro Am hitheater
Date: riday, January 0, 2025 2:0 :45 PM

January 10, 2025

To Whom It May Concern:

LAVON-BEATY-1

I am writing in support of the proposed amphitheater project at the LA West Harbor in San Pedro CA. I've been a homeowner in San Pedro for close to seven years, and a resident of Los Angeles for over 20 years. As many residents I have watched the progress of the demolition of the old Ports O' Call Village. With excitement to see what will come and gratitude to see what has stayed. I am an entertainment producer and performer and so have a specific reason why I am excited for a new type of venue and community center to be a part of where I live and work.

It is my understanding that the Port of Los Angeles is currently in the process of a supplemental EIR under the CEQA Act to determine the environmental impacts of the proposed 6,200-seat waterfront venue West Harbor amphitheater. This letter is my official support of this project as a resident and tax payer.

I am grateful that the Port and the City of LA are taking the time to monitor and protect environmental impacts of anything built here. I am also grateful for the potential opportunities that may come in experience and enterprise from the successful completion of the amphitheater.

Thank you for your time,

Michelle LaVon Beaty
758 W 22nd St
San Pedro, CA 90731

From: Joann ee
To: Ceqacomments
Subject: West Harbor Modification Project
Date: hursday, January , 2025 4:56:57 PM

To Whom It May Concern,

As a lifelong San Pedro resident, I am looking forward to all that West Harbor will bring to our town and the Port of L.A. I fondly remember going to Ports o' Call with my family as a youngster, and even as a teen although it was pretty vacant by then. It's high time that our harbor become a destination for locals and visitors alike. The restaurants, shops, and recreation facilities will create hundreds of jobs. The thousands of cruise passengers arriving to/departing from here will have more reason to spend time in Pedro, boosting our local economy.

LEE-1

I am especially excited about the proposed amphitheater. The excitement is shared by the group of folks that I joined on recent tour of the West Harbor development. The flexibility of the event space from large-scale concert to smaller community event is appealing. I'm also pleased that Nederlander Concerts, a renowned promoter and production company, will be involved with operating the amphitheater. It's an ideal location to draw concert-goers from L.A. as well as from Long Beach/Orange County (especially since the closure of FivePoint Amphitheatre in O.C,). Music brings people together, literally and figuratively; as a live music aficionado, it fills me with joy that this venue will be in our backyard.

The revitalized waterfront will definitely draw people from near and far, and should continue to do so as long as it offers a different experience and is not like other cookie-cutter outdoor malls. The West Harbor Modification Project proposes that unique destination that we support.

Sincerely,

Joann Lee

From: eanna e ine
To: Ceqacomments
Subject: to outdoor concert enue in the San Pedro aterfront
Date: Saturday, January 4, 2025 :22: 5 PM

LEVINE-1

The noise travels very far in an open seaside venue, and music now is heavy on base which travels even further.

Please respect the people living on the hills surrounding the proposed venue and deep six this anti-community open air noise bomb.

Thank you,

Leanna Levine
San Pedro resident.

From: ra h e is
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Saturday, January 4, 2025 5:40: 6 PM

Hello Ms. Wunder

LEWIS-1

I am deeply concerned about the plans to build a large outdoor amphitheater at the new San Pedro West Harbor Complex at 1196-1194 Nagoya Way in San Pedro. Once open, the ambitious event calendar will serve to cause unbearable living conditions, resulting from loud and obnoxious noise, dangerously adverse impact on air quality and substantially increased traffic in an already congested community. The considerable reduction in quality-of-life and, more than likely, property values, will impact residents withing at least a 7-10 mile radius of the venue.

Thank you very much for your immediate steps to pause and re-think the consequences and advisability of proceeding with this project.

Respectfully,

Ralph Lewis
4031 Miraleste Drive
Rancho Palos Verdes, CA 90275
310-847-9017 - Mobile

Outlook

West Harbor DSEIR

From Matt Lincir <matt@alvas.com>
Date Wed 12/18/2024 12:15 PM
To Ceqacomments <Ceqacomments@portla.org>

Dear honored members of the Board of Harbor Commissioners,

LINCIR-1

As a resident/business owner since 1952 I am writing to express support to the West Harbor Modification Project.

This change is for the better of all. Shining a light on an area that is overlooked by so many in the greater Los Angeles. Locally I can't think of anyone that wouldn't benefit from this amazing waterfront transformation. It will set such a positive direction which will help everything and everyone. Literally "float all boats with a rising tide" sorry I couldn't help that.

The Amphitheater, Ferris Wheel, Community Lawn, will bring new opportunities for performances, cultural events, and community activities, creating a world class dynamic waterfront experience!

Attracting tourism, creating jobs, supporting local businesses, and more are all included In this transformation, fostering long term economic growth and prosperity.

After studying this plan and visiting the site recently I have concluded that this amazing West Harbor Modification Project reflects a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability. Extremely well thought out!

The West Harbor Modification Project is a bold vision for the future of San Pedro! I am excited to see it come to life.
Thank you for your leadership and dedication to advancing this important project.

With great respect,

Matt | Managing Director; Showroom Manager

Matt Lincir
Alvas LLC
1413 W 8th St
San Pedro, CA 90732
Ph 310-519-1314
Alvasllc.com

Legacy Dance Studio for Lease: Rosalie & Alva School of Ballet and Arts.

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From: Phi indho m
To: Ceqacomments
Subject: West Harbor Am hitheatre
Date: riday, o ember 22, 2024 3:44:3 PM

LINDHOLM-1 As a boater in San Pedro, I think the revitalization of this stretch is sorely needed, and an amphiteatre would only further enhance the area as a true entertainment destination. I wholeheartedly support it.

Phil Lindholm

From: ebecca iu Mora es
To: Ceqacomments
Subject: West Harbor DS Su ort etter
Date: hursday, December , 2024 :22:27 PM

Dear Members of the Board of Harbor Commissioners,

LIU-1

As a San Pedro native, I am writing to express my strong support for the West Harbor Modification Project. The addition of a 6,200-seat amphitheater, a 175-foot Ferris wheel, and expanded parking presents an exciting opportunity to revitalize the waterfront for residents and visitors alike while solidifying San Pedro's reputation as a cultural and entertainment hub.

The larger amphitheater will provide a venue for nationally recognized performers and local events, including festivals and graduations, while serving as a valuable gathering space for the community.

Economically, the project promises significant benefits, from boosting local business revenue to creating construction and operations jobs. Restaurants and retailers are likely to see increased activity during events, driving sustained growth.

The project also prioritizes sustainability, with commitments to LEED Silver Certification, noise and traffic mitigation, and eco-friendly materials. Coordination with agencies like LADOT will ensure efficient traffic flow and accessibility.

West Harbor represents a thoughtful blend of community priorities, economic development, and environmental stewardship. I strongly urge the Port of Los Angeles to approve these modifications.

Thank you for your time and consideration.

Sincerely,

Rebecca Liu Morales

From: Mona Sutton <owsqueen@yahoo.com>
Sent on: Wednesday, December 18, 2024 3:39:20 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor SDEIR

Dear Members of the Board of Harbor Commissioners,

As a resident/stakeholder,

LJSutton-1

I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Leslie Jones

From: car san edrofish com
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Monday, January 6, 2025 4:2 : 3 PM

Dear Members of the Board of Harbor Commissioners,

LOGIUDICE-1

As the Chief Marketing Officer and long-time member of the San Pedro Fish Market team, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating a world-class destination while driving economic growth.

The proposed expanded amphitheater will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

We at San Pedro Fish Market helped produce the Port of Los Angeles Lobster Festival which was a 3-day food and music festival that drew in people from all over the country. In addition, we also hosted a Railroad Revival Tour with Mumford and Sons as the headliner in our parking lot with 10,000 in attendance. All of these events were incredibly successful bringing people to our waterfront, generating tax revenues, creating jobs, and providing a space for families to enjoy our beautiful waterfront!

Economically, this project will be a major asset to our community in the same way. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Carl LoGiudice
CMO
951-760-3537

San Pedro Fish Market

Celebrating Food & Family™
www.sanpedrofish.com <https://urldefense.com/v3/__https://www.sanpedrofish.com/__;!!Ad2px7zmCw!iFuuUCG-Fj_vrL2s2d881d7uRlcICRdaseAz9IvLLCzGgNFx1kt6DZYqpjpmRB7RtiBDFl0dV2B8HDMxiKQG$>

IG <https://urldefense.com/v3/__https://www.instagram.com/sanpedrofish/__;!!Ad2px7zmCw!iFuuUCG-Fj_vrL2s2d881d7uRlcICRdaseAz9IvLLCzGgNFx1kt6DZYqpjpmRB7RtiBDFl0dV2B8HDH41y3c$> | FB <https://urldefense.com/v3/__https://www.facebook.com/sanpedrofish__;!!Ad2px7zmCw!iFuuUCG-Fj_vrL2s2d881d7uRlcICRdaseAz9IvLLCzGgNFx1kt6DZYqpjpmRB7RtiBDFl0dV2B8HITXp7Tp$> | TT <https://urldefense.com/v3/__https://www.tiktok.com/@sanpedrofish?lang=en__;!!Ad2px7zmCw!iFuuUCG-Fj_vrL2s2d881d7uRlcICRdaseAz9IvLLCzGgNFx1kt6DZYqpjpmRB7RtiBDFl0dV2B8HMif-MT7$> | YT

<https://urldefense.com/v3/__https://www.youtube.com/user/sanPedroFish__;!!Ad2px7zmCw!iFuuUCG-Fj_vrL2s2d881d7uRlcICRdaseAz9IvLLCzGgNFx1kt6DZYqpjpmRB7RtiBDFl0dV2B8HGJI-CeN$> | SHOP <https://urldefense.com/v3/__https://sanpedro.fish/__;!!Ad2px7zmCw!iFuuUCG-Fj_vrL2s2d881d7uRlcICRdaseAz9IvLLCzGgNFx1kt6DZYqpjpmRB7RtiBDFl0dV2B8HKD6pAAT$>
Watch Kings of Fi$H <https://urldefense.com/v3/__https://amzn.to/4cobWDN__;!!Ad2px7zmCw!iFuuUCG-Fj_vrL2s2d881d7uRlcICRdaseAz9IvLLCzGgNFx1kt6DZYqpjpmRB7RtiBDFl0dV2B8HIMg3OFG$>

From: Samue o e
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Wednesday, December 25, 2024 : :33 AM

Hello,

I would like to express my support of the West Harbor Modification Project.

As a local resident and live music fan myself, I am excited about the potential economic and cultural opportunities that an amphitheater would bring.

LOPEZ-1

Although I was very happy to read about the noise and traffic mitigation measures, I would greatly appreciate your diligence with respect to measures concerning trash cleanup and security (policing). Anyone that's been to enough live music events could tell you how important adequate funding/resources, and communication/marketing about a clean and safe event environment is.

I understand how large and complex of a project this is. I really hope the teams are highly motivated to do this work to pull it off correctly. If they do, they may transform San Pedro in an incredible way.

Thank you,

Sam Lopez
21st St, San Pedro

From: inda uc s
To: Ceqacomments
Subject: d: etter of su ort for San Pedro s West Harbor Project
Date: Monday, January 20, 2025 5:3 :42 PM

Linda Lucks
Lindalucks@gmail.com
tel: 310-505-4220

---------- Forwarded message ---------
From: **Linda Lucks** <lindalucks@gmail.com>
Date: Sun, Jan 19, 2025 at 6:07 PM
Subject: letter of support for San Pedro's West Harbor Project
To: <cequacomments@portla.org>

Dear Members of the Board of Harbor Commissioners,

LUCKS-1

As a decades long resident of the Venice/Marina del Rey tourist destination areas to in CD11, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach

to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership

LUCKS-1 cont.

and dedication to advancing this important project.

Sincerely,

Linda Lucks
13100 Maxella Ave. #4
Marina del Rey, CA

Tel: 310-505-4220

Nathan MacAinsh
1522 S Walker Ave, San Pedro, CA, 90731
(562)234-1406
nmacainsh@gmail.com

12/19/2024

Dear Members of the Board of Harbor Commissioners,

MACAINSH-1

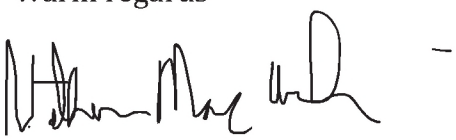
As a resident and principal of a local school, South Shores Elementary, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Warm regards



Nathan MacAinsh

From: A ma Ma donado
To: Ceqacomments
Subject: West Harbor DS
Date: hursday, January 2, 2025 2:03:57 PM

Dear Members of the Board of Harbor Commissioners,

MALDONADO1-1

As an LA resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Alma Maldonado

--

Alma N. Maldonado
323.804.2561

From: ias Ma donado Jr
To: Ceqacomments
Subject: West Harbor Modification Project
Date: uesday, January 7, 2025 4:35: 6 PM

Dear Members of the Board of Harbor Commissioners,

MALDONADO2-1

I am writing to you as a dedicated San Pedro Fish Market employee for the past twenty three years and a proud stakeholder of the Port of Los Angeles and the West Harbor. I wholeheartedly support the West Harbor Modification Project, which offers an excellent opportunity to revitalize San Pedro's waterfront. This project aims to create a vibrant space for the community and visitors while promoting economic growth.

I am particularly excited about the proposed expansion of the amphitheater and community lawn. These additions will provide a welcoming venue for live performances, cultural events, and community activities, transforming our waterfront into a dynamic and engaging destination. Initiatives like this are crucial for establishing San Pedro as a hub for entertainment and culture.

Over the years, I have witnessed the significant impact of events such as the Port of Los Angeles Lobster Festival and the Railroad Revival Tour, which featured Mumford and Sons and attracted an impressive crowd of 10,000 people to our area. These events showcased the beauty of our waterfront, generated substantial tax revenue, created jobs, and brought families together to celebrate in a cherished space.

I am confident that the West Harbor Modification Project will yield similar benefits and more. This development will sustain San Pedro's economic future while enhancing its appeal by attracting tourism, supporting local businesses, and creating new job opportunities. The mitigation measures outlined in the Draft SEIR demonstrate thoughtful planning to balance progress with sustainability.

It is inspiring to see a bold vision like this take shape, and I am genuinely excited about the positive changes it will bring to our community. Thank you for your leadership and commitment to making this project a reality.

Sincerely,

--

Elias Maldonado Jr.
Commissary and Purchasing Manager

310-350-5872

San Pedro Fish Market

Celebrating Food & Family™

From: iam ao o Mancuso
To: Ceqacomments
Subject: West Harbor DS
Date: hursday, December 26, 2024 :27:0 AM

Dear Members of the Board of Harbor Commissioners,

MANCUSO-1

I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Giampaolo Mancuso
OMNIA USA, LLC
"Just Pure Value"
21592 Surveyor Circle
Huntington Beach, CA 92646
O: 714 374-7175
gp@omniausa.com
www.omniausa.com

Sent from my iPhone

From: Mardesic, ic
To: Ceqacomments
Subject: West Harbor modification roject
Date: Saturday, o ember 30, 2024 :4 :04 AM

Hello,

MARDESIC-1 As a 44 year resident of San Pedro, we all strongly opposed this amphitheater, our small town is not big enough for all this traffic, trash, vandalism, car theft and many more crimes that will come with it. This might be suitable for Long Beach or Central Los Angeles, but not here. Please rethink this project, we don't what happens to Las Vegas and other major music events coming to San Pedro. This community will be scarred for life with these traumatic events if they were to take place, and you will be liable. Theirs is enough crime here. There are 14 gangs in this little town, and we definitely do not need out of town problems, we have enough as it is. I suggest you rethink this through.

Best,
Nick

From: caymarsha ao com
To: Ceqacomments
Subject: West Harbor Modification Project
Date: hursday, o ember 4, 2024 :36:47 PM

Hi,

I attended today's Zoom presentation but was concerned that my comments would take longer than three minutes, so I figured it'd be best to type them instead.

I was glad to hear so much support voiced for the amphitheater today, and I hope the important concerns about noise, traffic and pollution can all be addressed. My personal concerns are admittedly more micro, but can be summed up by strongly urging those who end up operating this venue to try to connect it to our community as much as possible. To wit, I suggest the following:

--Commit to hiring a certain percentage of workers (concessionaires, parking attendants, ushers, full-time venue staff, etc.) who live in San Pedro and other District 15 communities.

MARSHALL-1

--Offer internships to local students with an interest in the arts, and offer local students (whether it's school bands, local "school of rock"-type programs, Boys & Girls Club battles-of-the-bands or whatever) the opportunity to perform there at certain points throughout the operating season.

--Offer discounted event tickets and/or subscription packages to residents of San Pedro and the surrounding communities.

--Ensure that local food and beverage offerings are available. (Think Brouwerij West and San Pedro Brewing Company/Port Town Brewing beers on tap next to the big corporate brands.)

--Require that a representative of whichever of Live Nation/AEG/Nederlander ends up operating the venue to regularly attend local neighborhood council meetings to actively communicate with stakeholders.

--Pledge that whatever company ends up buying the naming rights has to do more than just write a check. We don't need the Boeing Bowl or the Allegiant Amp or anything-dot-com. Something that's already connected to or makes sense for San Pedro (e.g., Evergreen) would be ideal, but if that's not possible, ideally the company could also develop or curate some sort of local footprint, become involved in local charities, sponsor local events, etc.

--Commit to having at least one free event each operating season.

--Should there be venue merchandise available for purchase, source it from local vendors/printers whenever possible.

MARSHALL-1
cont.

--Extend discounts to local businesses who choose to advertise on-site.

In closing, I hope this venue -- which could (and should) become synonymous with San Pedro, especially if it can be enthusiastically embraced by locals after steps like the above are taken -- won't only attract attention (and attendees) from other parts of town. With the right touch, it can become a civic nucleus that residents of this community can be proud of.

Thanks,
Clay Marshall
San Pedro, CA

From: Ma_a i Martin
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Saturday, January , 2025 :0 :44 PM

Dear Members of the Board of Harbor Commissioners,

MARTIN-1

As a local resident, mother, and teacher, I am writing to express my strong support for the West Harbor Modification Project. I believe this development will bring exciting opportunities for youth and families in our community.

The expanded amphitheater and community lawn will create new spaces for concerts, cultural events, and family-friendly activities. I'm especially excited about the potential for youth-centered programming, arts education, and opportunities for students to experience live performances right here in San Pedro. These additions will help inspire and engage our young people, giving them positive outlets and new experiences.

I also see this project as a way to boost local businesses, create jobs, and encourage economic growth, all of which will benefit the families I work with every day. I appreciate the thoughtful approach to addressing community concerns outlined in the Draft SEIR, ensuring that the project will positively impact the area while minimizing disruptions.

Thank you for your leadership and commitment to making San Pedro a better place for our families and future generations. I look forward to seeing the positive changes West Harbor will bring to our community.

Best,

Magali Blazevic

From: etty Martin
To: Ceqacomments
Subject: West Harbor DS
Date: uesday, January 7, 2025 : 4:27 PM

Dear Members of the Board of Harbor Commissioners,

The right thing to do now is approve this project!!! West Harbor will be THE REVITALIZATION of San Pedro in so many ways, with the Amphitheater, Great Park and Ferris Wheel as the headliners to draw folks here.

I am a resident of San Pedro but grew up in Glendale in the 60's and remember the wonderful times in high school when we would drive down to Port's O'Call on a Saturday afternoon!! Just to see the ships and shops and have fresh fish!!!

MARTIN1-1

Imagine how many people will be drawn to the waterfront, a concert, maybe a family picnic, or a child's first ride on a giant Ferris wheel!!! San Pedro already has a thriving concert community, but IMAGINE concerts, outside, on the waterfront driven by Nederlander!!! Wont' get any better!!!

Hate to do this but....."If you build it, they will come." Jobs will be created, folks will come and see and maybe want to become part of a community with so much going on. The more folks, the more the housing market will thrive. The cruise lines will create land excursions to visit West Harbor, just like they used to in the 60's-70's.

When we have a thriving Waterfront, retail and restaurants will follow, again, more jobs!

I hope you are planning to move forward with this project NOW!! I'd like to see a concert here while I can still see!!!!

Thank you,
Betty Martin

From: mandeemartin ao com
To: Ceqacomments
Subject: Am hitheater de e o ment
Date: Wednesday, January , 2025 :04: 6 AM

To whom it may concern.

MARTIN2-1

I am a long time resident of both San Pedro and Palos Verdes. I want to state my enthusiasm for the Waterfront
project. I believe that the new development at the port is going to bring San Pedro into a major point of interest and a very positive draw in Los Angeles.
I understand that the development of the amphitheater is receiving some resistance from some locals, and want to
lend my support for its future. I am so excited for its completion and the opportunity to enjoy major talent acts so close to home for the first time in my life. It is my sincere hope that the new attractions are successful and that the community continues to be enriched by all of the shops, great food and events.

Please continue to fight for the amphitheaters development. When it is completed, I believe that even the sceptics will stand to benefit.

Thank you,
Amanda Martin

From: Adriana Martine Wehmeyer
To: Ceqacomments
Subject: West Harbor Su ort
Date: hursday, January , 2025 3:23:05 PM

Esteemed Members of the Board of Harbor Commissioners,

MARTINEZ-WEHMEYER-1

As a homeowner and resident of San Pedro, I am writing to indicate my support for the West Harbor development project. Ports O Call was a beloved destination in need of serious rehabilitation, and West Harbor will serve as that upgrade, attracting both locals and tourists. I view it as an important piece of our city's revitalization efforts.

Attending a recent West Harbor open house only solidified my support. It's comforting knowing that the leadership involved are locals who have the best interests of San Pedro at heart. I'm excited to spend time on the promenade with my husband, to proudly bring friends and family when they visit, and to attend a concert at the new amphitheater for the first time. Thank you for your dedication over the past 14 years to bring this vision into fruition.

Warmly,

Adriana Martinez Wehmeyer

From: Heather Matson
To: Ceqacomments
Subject: West Harbor Modification Project
Date: riday, o ember 22, 2024 4:07:53 AM

MATSON-1

I have significant concerns about the increase in noise during evening concerts. We are only a couple of blocks away from the upper end of the project and already deal with noise from the cranes working through the night moving cargo containers around. Might I suggest that there be a required upper decibel limit on outdoor concerts and an appropriate end time so the neighbors can sleep.
Respectfully, HH Matson
Sent from my iPhone

From: rian Matsumoto
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Saturday, December 4, 2024 2:07:50 PM

MATSUMOTO-1

I support the West Harbor Modification Project because the project will enrich our waterfront and provide economic benefits to the region. I welcome the project because I moved to San Pedro five years ago and the area has pretty much been closed the entire time.

Brian Matsumoto
90731

Sent from B. Mobile

January 2, 2025

Dear Members of the Board of Harbor Commissioners,

As a resident of San Pedro and an active stakeholder of the port communities for the past two decades, I am writing to express my strong enthusiastic support for the West Harbor Modification Project. This development is a transformative opportunity that will revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth and opportunities for our region.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

MEDINA-1 I still remember the trips my family would make from South Central to Ports O'Call, it felt like we were going on a mini staycation. We walked the waterfront, ate at the Fish Market, and watched the ships come in and out of the Port. San Pedro is going through its renaissance, but it will always hold on to its historical significance, especially for lifelong Angelenos like myself.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project. I look forward to seeing this project come to fruition, thank you.

Sincerely,

Gabriela Medina
390 W 8th Street, San Pedro CA 90731
uclatn@gmail.com | 310-987-8411

From: ee Meister
To: Ceqacomments
Subject: West Harbor
Date: riday, January 3, 2025 4:52:37 PM

I have owned a home in San Pedro since 1994. Many people are excited about what is happening at the new West Harbor development. This will be a crucial investment for the local San Pedro and regional economy.

Specifically, any ferris wheel has great potential to become a significant Los Angeles landmark. The Hollywood sign is immediately recognized as part of this great city. The new "London Eye" ferris wheel has also become recognized as part of London. on the Thames. As the gateway to Asia, why not a LA Harbor ferris wheel ?

MEISTER-1 The expanded Amphitheater also has my full support. The complaints of a few should not diminish the benefits for all. With the investment by Nederlander Concerts and new sound technology the larger theater can be professionally managed, with attention to the surrounding community. Additionally the theater configuration seems to be pointed out towards the ocean area which will help control sound spill over. Change is a factor everyone must expect. I am positive that when tuna canneries were first built some people in the area likely objected, but the long term economic and historical benefits cannot be overlooked.

I truly hope the downtown core of San Pedro and the region will continue to revitalize.
I believe an important factor will be the West Harbor project. Any modification to support the core investment value of West Harbor will only benefit a majority of people and the local regional economy.

Sincerely
Lee Meister
730 W. 21st San Pedro, CA. 90731

From: Michae A e ander
To: Ceqacomments
Subject: West Harbor Modification Prcject
Date: uesday, o ember 2, 2024 4: 0: PM

MICHAEL-1 | on the ro osed Am hitheater

MP A WA : his emai and ar.y attachments is on y intended for the use of the erson or entiiy to hich it is addressed, and may contain information that is ri i e ed and or confidentia ou, the reci ient, are ob i ated to maintain it in a safe, secure and confidentia manner nauthori ed re disc osure or fai ure to maintain confidentia ity may sut ject you to federa and state ena ties f you are not the intended reci ient, ease immediate y notify me ty return emai , and de ete this messa e from your com uter

From: Ste hen Mirich
To: Ceqacomments
Subject: West Harbor Modification Project
Date: hursday, January , 2025 :2 :57 AM

MIRICH-1 No on the Proposed LA Waterfront Out Door Amphitheater.

Noise from events that have been held in the harbor have already disrupted peace and tranquility in my home. I live 5 miles from the harbor and booming noise levels can be heard withing my home during events.

MIRICH-2 Fire Work events will have significant and unavoidable impacts related to noise and air pollution.

MIRICH-3 The additional cars to and from events will greatly effect the traffic in San Pedro that already reaches "grid lock" without being addressed. This will also add to the air pollution.

MIRICH-4 San Pedro should not be used as a "Cash Cow" for profit and benefit of a few while sacrificing living conditions of its residents.

Sincerely,

Stephen Mirich

1825 El Rey Road
San Pedro, CA 90732
70 year resident of San Pedro

From: Mar 333
To: Cegacomments
Subject: : West Harbor Modification Project
Date: hursday, January , 2025 :33:47 AM

MISSMAN-1

No on the Proposed LA Waterfront Out Door Amphitheater.

I feel that the Amphitheater project is just too large a venue for San Pedro.

MISSMAN-2

Noise from events that have been held in the harbor have already disrupted peace and tranquility in my home. I live 4 miles from the harbor and booming noise levels can be heard within my home during events. We can handle some of these events, and are tolerant of them, but I fear that the Amphetheater project will just bring way too much more.

Fireworks events will have significant and unavoidable impacts related to noise and air pollution.

The additional cars to and from events will greatly effect the traffic in San Pedro that ALREADY reaches “grid lock” without being addressed. This will also add to the air pollution.

MISSMAN-3

San Pedro should not be used as a “Cash Cow” for profit and benefit of a few while sacrificing living conditions of its residents.

Thank you for your consideration of these views.

Sincerely,

Margaret Missman

1825 El Rey Road
<https://urldefense.com/v3/__https://www.google.com/maps/search/1825*El*Rey*Road*San*Pedro,*CA*90732?entry=gmail&source=g__;KysrKysrKw!!Ad2px7zmCw!nAmKm4evLz4GBCR79IFuJKps9tS8GhByrg8UeF8h9wAbDTr0b60fkQW-Ph75E7cyV1ctiiwr2lqujTArPNIY8yMpKziNoQ$>
San Pedro, CA 90732
<https://urldefense.com/v3/__https://www.google.com/maps/search/1825*El*Rey*Road*San*Pedro,*CA*90732?entry=gmail&source=g__;KysrKysrKw!!Ad2px7zmCw!nAmKm4evLz4GBCR79IFuJKps9tS8GhByrg8UeF8h9wAbDTr0b60fkQW-Ph75E7cyV1ctiiwr2lqujTArPNIY8yMpKziNoQ$>

70 year resident of San Pedro

From: john
To: Ceqacomments
Subject: uestion My in ut
Date: Sunday, December , 2024 4:06:06 PM

Hello West Harbor LA,

I'm a 4th generation San Pedran, SPHS Cass of 1973.

I left San Pedro in 1973 to NYC then back to California before joining the US Army in 1976 as a guitarist.

MOODY-1

My input, I see no other band then San Pedro's own 'Ambrosia' opening the new West Harbor Amphitheater.

Ambrosia has several #1 and top 40 hits and is San Pedro's musical chain to fame.

You can contact Joe Puerta for booking info.
(414) 217-5106

Another South Bay native is the jazz guitarists Larry Carlton, who I don't know personally.

Thanks for 'listening'.

John Moody
801.372.3982
johnmoody1@hotmail.com

Sent from my T-Mobile 4G LTE Device

From: mana er c a fm
To: Ceqacomments
Subject: C A Comment
Date: riday, January 0, 2025 2:4 :55 PM

Dear Members of the Board of Harbor Commissioners:

MRKICH-1

As a resident of San Pedro and founder of Radio KCLA-LPFM and San Pedro Film Festival, I am writing to voice my strong support for the West Harbor Modification Project. This project represents an incredible opportunity to enhance San Pedro's waterfront, providing new public spaces and revitalizing the local economy.

The expansion of the amphitheater and community lawn will create venues for performances, community events, and cultural gatherings. These improvements will attract visitors and give residents more ways to enjoy our waterfront, helping to establish San Pedro as a thriving destination for entertainment and recreation.

In addition to creating new spaces, this project will generate jobs, increase tourism, and stimulate local business growth. I appreciate the thoughtful mitigation measures outlined in the Draft SEIR, which address traffic, noise, and environmental impacts, ensuring that the project benefits the community while minimizing disruptions.

The West Harbor Modification Project is a vital step in San Pedro's continued growth, and I am excited to see the positive changes it will bring. Thank you for your leadership and dedication to making this vision a reality.
This is an exciting opportunity to revitalize San Pedro and bring awareness to surrounding areas.

Sincerely,

Ziggy Mrkich
Station Manager
KCLA-LPFM
KCLA.fm

Art In Motion, Inc.
CA Non Profit EIN 35-2474605

From: Mary Mu dre
To: Ceqacomments
Subject: Am hitheater
Date: Monday, January 6, 2025 :37:4 PM

MULDREW1-1 An amphitheater can have so many uses and will bring a festive, entertaining venue that will add participation in the area as well as income. I have seen the incredible use of a similar venue on the beach in Oceanside Ca. It was been there for years and there were talks about demolishing it to make a better view for new hotels being built. The citizens were up in arms and protested. The city decided to move it several feet North and it's more popular than ever!

Respectfully,

Mary Muldrew

From: Mor an Mu dre
To: Ceqacomments
c: Mor an Mu dre
Subject: S to West Harbor Am hitheater
Date: Monday, January 6, 2025 :0 :0 PM

Hello,

I am a resident of San Pedro and am proud to call this city my home.

I am strongly encouraging you to approve the amphitheater here at the West Harbor Development.
This will be an extremely positive addition to the whole revitalization of the area.

MULDREW2-1

I previously lived very near the Greek theater and know personally how well of a job Nederlander does at running everything smoothly so that the neighbors are not bothered and can say how lovely it was to sometimes hear the tune on my evening stroll.

Most importantly: All towns change. It is up to us to embrace the most positive version of that change available to us, and we are not going to get a better opportunity than this. It is sad to see business I love here struggling- we MUST create events that draw people to our lovely little corner of LA, our local businesses dereve more patrons and what a joy to share this city with our friends and family visiting for concerts.

If I may make one suggestion: There should be ways for locals to easily access the amphitheater (gold cart parking? Local Gem carts? Local trolly?)

Thank you for considering,
Morgan Muldrew
San Pedro Resident
760-685-3771

From: oramae Munster
To: Ceqacomments
Subject: West Harbor DS
Date: Wednesday, December , 2024 :24:30 AM

Dear Members of the Board of Harbor Commissioners,

As a 33 year resident of San Pedro, I am writing to express my enthusiastic support for the West Harbor Modification Project, and all of the progressive modifications it offers. This evolving development continues to present opportunities to make the San Pedro waterfront all it can be by ensuring it offers truly signature experiences that have been proven to be successful on other waterfronts.

MUNSTER-1

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities and amenities to an historically underserved Harbor (and adjacent) community. These unique resources will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture. San Pedro already has a 100 seat theater in the Grand Annex, 400 seats at the Cabrillo Aquarium, and up to 1500 in the Warner Grand. We do not need more of what we already have. A 6000 seat theater represents a significant step in the right direction for the World-Class facility West Harbor intends to be.

The West Harbor Modification Project is a logical and responsive evolution of the existing plan that captures the imagination! I am most hopeful that we all have the vision to realize an opportunity as substantive and powerful as this one!

Thank you for your leadership and dedication to advancing this important project.

Earnestly,
Noramae Munster

From: Diana a e
To: Ceqacomments
Subject: West Harbor Modification Project
Date: riday, December 27, 2024 :23:53 AM

Dear Members of the Board of Harbor Commissioners,

NAVE1-1

I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront with vibrant public spaces while creating opportunities for local employment.

The project promises to be a major asset to our community. I am particularly looking forward to enjoying performances, cultural events, and community activities in the proposed amphitheater and great lawn of this iconic waterfront setting.

Diana Nave

From: _at na_e
To: Ceqacomments
Subject: West Harbor
Date: uesday, December 3, 2024 6:3 :2 PM

NAVE2-1

I have read the DEIR for the West Harbor project. I am satisfied that you have adequately considered the impacts of the project, and that the proposed project should be approved.

Early on, one of our community leaders said that "we have the eat and drink, now it is time to have the 'be merry'". I agree with that sentiment and believe that the community, the Port and the operator can and will adjust to any traffic and sound impacts that may result during operation of the amphitheater. These types of impacts are variable and can be addressed as operations proceed at the theater.

Please approve the DEIR. Let's get on with it!

Comment Letter NAYLOR

Outlook

Project title (West Harbor Modification Project)

From mike.naylor@compass.com <mike.naylor@compass.com>
Date Thu 11/14/2024 8:35 PM
To Ceqacomments <Ceqacomments@portla.org>

NAYLOR-1 To whom it may concern,
The entire West Harbor development is something I have eagerly awaited, imagining the vibrancy and renewed life it will bring to our beloved community. As a life-long San Pedro resident, I carry a deep sense of pride in this town. We're a proud and loyal bunch, always quick to speak up when something feels out of place for our unique port town.

West Harbor has stirred a lot of excitement, curiosity, and yes, a little apprehension. There are those who find it hard to see past the memories of the old Ports O' Call. Some worry about the influx of visitors, traffic, noise, or even the aesthetics that a new development brings. Yet, for others—like myself—the project offers hope, inspiration, and an opportunity to grow.

For me, the amphitheater is a particular highlight, and I've been crossing my fingers that it receives approval. I truly believe it will be a gift to this city. An amphitheater would be more than a venue; it would be a gathering place, a symbol of community, and a space where locals and visitors alike can come together to share in music, culture, and connection.

San Pedro deserves a place that reflects the beauty, resilience, and spirit of its people. West Harbor and an amphitheater would offer just that. Thank you for considering a vision that not only respects our past but also celebrates our future.

Warm regards,
Mike Naylor

Comment Letter NEAL

From: Danie ea
To: Ceqacomments
Subject: San Pedro am hitheater West Harbor
Date: riday, January 0, 2025 :06:06 AM

Dear Harbor Commissioners,

I am writing to express my strong support for the proposed . As a resident of San Pedro and fan of live music and local events, I believe this project will enhance the area's entertainment offerings and attract both locals and visitors looking for new experiences.

NEAL-1

The amphitheater will contribute to the area's transformation into a must-see destination, revitalizing the waterfront. Local restaurants, shops, and hotels will benefit from increased foot traffic and the attention of new visitors. This development will play a pivotal role in the continued growth and prosperity of the harbor area, turning it into a dynamic hub of activity that benefits residents, businesses, and visitors alike.

I urge you to approve this development, as it promises to provide a boost to the South Bay's entertainment landscape and the area economy.

Sincerely,

Daniel Ashton Neal

Comment Letter NIZICH

Outlook

West Harbor Modification Project

From Robert Nizich-Atty- nizich <nizich@pacbell.net>

Date Fri 11/15/2024 11:15 AM

To Ceqacomments <Ceqacomments@portla.org>; Councilmember McOsker <councilmember.mcosker@lacity.org>

NIZICH-1 I live in San Pedro and daily at 4:30 pm hear (without objection) taps and the national anthem. I have read the EIR noise portion and do not believe it is accurate in anyway. When Red Bull races on 22nd street I hear the engines as if they were next door. The last concert could be heard all the way to 1st and Western The testing area did not include Averill Park and other areas .Before you waste a ton of money and ruin everyone's quiet enjoyment, why don't you place concert speakers in any direction you want and play sound at the decibels intended?

Bob Nizich

From: homas J orman
To: Ceqacomments
c: homas J orman homas orman
Subject: West Harbor DS Comments from Dr homas J orman
Date: Saturday, December 2 , 2024 0:3 :2 AM
ttac me t : ut oo j 45o e3 n

Dear Members of the oard of Harbor Commissioners,

As a on time resident of San Pedro, am ritin to e ress my stron su ort for the West Harbor Modification Project Ha in re ie ed the Draft S , am articu ar y im ressed by the com rehensi e annin that has one into this 42 acre aterfront de e o ment, hich thou htfu y ba ances community benefits ith en ironmenta ste ardshi

he e ansion of the am hitheater from 500 to 6,200 seats, cou ed ith the reat a n conce t, i create a ersati e community asset that ser es mu ti e ur oses n sho days, it i attract nationa y reco ni ed ta ent, ositionin San Pedro as a remier entertainment destination n other days, it i function as an o en community s ace erfect for oca e ents, festi a s, mo ie ni hts, and sim e enjoyment of our beautifu aterfront m encoura ed by the robust noise miti ation measures anned, inc udin ad anced sound focusin techno o y, continuous monitorin , and a dedicated hot ine for community feedbac Ha in toured the site am eased that oca artists i contribute to some of the a s in this roject and note the si nificant community outreach the de e o ers ha e en a ed in durin the de e o ment rocess

NORMAN-1 As a ei hborhood Counci Member these de e o ers ha e s ent many, many hours at community e ents not on y istenin to community feedbac and concerns but ma in tan ib e chan es that sho a true concern for a id concerns about traffic, noise and connectin the ort to the do nto n area

he economic benefits of the ne attractions are com e in oca restaurants a ready re ort 5 25 sa es increases durin e ents, and the roject i enerate si nificant em oyment o ortunities across construction, o erations, and oca businesses he traffic mana ement an, inc udin 2,600 additiona ar in s aces and com rehensi e transit strate ies, demonstrates carefu attention to community concerns ur community needs more jobs and o ortunities to encoura e our youn eo e to stay in the area As a rofessor ho has istened to feedbac from my students a of them ha e been incredib y e cited to earn about the ros ect of ar er concerts, the ferris hee and the art endor and ha e shared this ou d i e them a reason to re a and socia i e near the ater rather than do nto n or West Ho y ood

m articu ar y im ressed by the roject s en ironmenta commitments, inc udin D Si er certification, com rehensi e trash mana ement, and use of anet friend y materia s hese features ensure that our aterfront de e o ment i be both economica y ibrant and en ironmenta y res onsib e

he West Harbor Modification Project re resents a thou htfu e o ution of our aterfront, creatin a s ace that i ser e both residents and isitors hi e dri in sustainab e economic ro th han you for your consideration of this im ortant roject

Sincere y,

T oma orma D
ro e or o a a eme t

ou c member o Sa e ro e bor oo ou c a r o ort ro me t
Su ta ab t omm ttee
ce a r o t e o at o cubator
oro Au i iary Partners oard of Directors
Academic Senate of the Ca ifornia State ni ersity
Ca ifornia State ni ersity, Domin ue Hi s
000 ast ictoria Street, d oom 4507
Carson, CA 0747
T: (310) 243-2146 | E: tnorman@csudh.edu
www.csudh.edu

From: isa y ren
To: Ceqacomments
Subject: West Harbor DS
Date: hursday, December , 2024 :0 : 2 AM

Dear Members of the Board of Harbor Commissioners,

As a proud San Pedro resident, I am writing with heartfelt enthusiasm to voice my unwavering support for the West Harbor Modification Project. This visionary endeavor holds the power to reimagine San Pedro's waterfront, breathing new life into our community and creating an iconic destination that inspires both locals and visitors alike.

The expanded amphitheater and community lawn will serve as the beating heart of our waterfront—a stage for unforgettable performances, vibrant cultural events, and cherished community gatherings. These spaces promise to transform the area into a dynamic, inclusive hub that celebrates the diversity, creativity, and spirit of San Pedro.

NYGREN-1

Beyond its cultural significance, this project is a game-changer for our local economy. By drawing tourism, generating jobs, and empowering small businesses, it paves the way for lasting prosperity. The carefully crafted mitigation measures outlined in the Draft SEIR exemplify a commitment to thoughtful planning and environmental stewardship, ensuring the project harmonizes with our shared values of sustainability.

The West Harbor Modification Project is not just a development; it is a bold and inspiring vision for the future of San Pedro. It promises to elevate our community, ignite our economy, and foster a legacy we can all be proud of. I urge you to champion this transformative project and bring this dream to fruition.

Thank you for your leadership, foresight, and dedication to creating a brighter future for San Pedro,

Lisa Nygren

Ross H. O'Brien
1158 West 11th Street, Unit K
San Pedro, California 90731
310-567-4109
ross58@cox.net

VIA ELECTRONIC MAIL ONLY

December 18, 2024

Dear Members of the Board of Harbor Commissioners,

As a San Pedro resident and stakeholder affiliated with several local nonprofit organizations, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

O'BRIAN-1

The expanded amphitheater and community lawn will attract new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft Subsequent Environmental Impact Report reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Ross H. O'Brien

Ross H. O'Brien

From: A M
To: Ceqacomments
Subject: ar e harbor am hitheater roject
Date: Sunday, December 2 , 2024 2:33:43 PM

To Whom it May Concern,

My family has been a resident of the San Pedro/Miraleste area for over 40 years. We have been fortunate to enjoy the peace and beauty of our area.

O'MELVENY-1 The proposed amphitheater project will disrupt that peace. Though we live some distance from the harbor, we often hear the trains and ships. But these are only muted occasional sounds. Should the amphitheater project go forward, we will no longer have the quality of life for which we are now grateful, and the noise and air pollution will harm everyone in the area, people and animals alike.

Please withdraw this project for the sake of the entire community. The profits that will ensue from the project are not worth it.

Thank you,
Regina O'Melveny

From: _ino Pa ma
To: Cegacomments
Subject: West Harbor DS
Date: uesday, January 2 , 2025 :53:00 AM
ttac me t : ima e00 n

Dear members of the board of harbor commissioners.

PALMA-1

I am writing this email to express my strong support for the West Harbor Modification Project . as a resident and owner of A1 imports on 8st downtown San Pedro. this store as been serving our community for 77 years.
And with this development is a transformative opportunity to revitalize San Pedro waterfront vibrant public spaces and nearby business like ours too.
I believe the expanded amphitheater and community lawn will new opportunities, great performances, cultural events, and community activities . this will make San Pedro a destination for entertainment and culture.
Witch economically this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local business like A1.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you in advance for your leadership and dedication to advancing this important project.

Nino Palma
Director of Business Development; M&A
Southwind Foods / Great American Seafood Imports Co.
Certi-Fresh Foods / Terra-Sea Foods
20644 Fordyce Avenue
Carson, California. 90810
213-305-6226 (Cell Phone)
323-262-8222 (Office)
www.southwindfoods.com
www.certi-fresh.com

Please click link below for the Southwind product catalog and the NEW Certi-Fresh & Terra-Sea Product Catalog.
http://productcatalog.southwindfoods.com/2020/welcome/

https://productcatalog.certi-fresh.com/2022/welcome/

From: Jeremy Parnacher
To: Ceqacomments
Subject: West Harbor DS
Date: hursday, December 26, 2024 : 6:5 AM

Dear Members of the Board of Harbor Commissioners,

PARNACHER-1

As a resident of San Pedro, I am writing to express my enthusiastic support for the West Harbor DSEIR and the proposed development. This project offers a unique opportunity to transform our waterfront, enhancing the vibrancy of our community while promoting long-term economic growth.

The addition of an expanded amphitheater and community lawn will provide much-needed spaces for performances, cultural events, and local activities. These developments will not only create a dynamic and inviting atmosphere but also strengthen San Pedro's reputation as a cultural and entertainment hub.

From an economic perspective, this project holds great promise for our community. It will attract visitors, generate new jobs, and support local businesses, all of which will contribute to the ongoing prosperity of San Pedro. I also appreciate the thoughtful mitigation strategies outlined in the DSEIR, which reflect a commitment to addressing potential challenges while prioritizing sustainability and environmental responsibility.

The West Harbor DSEIR represents an exciting vision for the future of our community, and I am eager to see it come to life. Thank you for your continued leadership in moving this important project forward.

Sincerely,

Jeremy

Jeremy Parnacher

|e| jparnacher@gmail.com

My LinkedIn Profile

From: Pfe er, irte ritta
To: Ceqacomments
Subject: osition to ro osed Am hitheater
Date: Sunday, December 2 , 2024 3: 2: PM
ttac me t : ut oo unf y2 n

To Whom It May Concern:

I am a homeowner at 3073 Crest Road, RPV 90275 and I **strongly oppose** the proposed amphitheater project in the new San Pedro West Harbor Complex at 1196-1194 Nagoya Way for the following reasons:

PFLEGER-1

- **Noise pollution** — with 100 events planned annually and sound traveling and being amplified by the building design and the environment, this project will severely impact everyone's quality of life in the surrounding area, including domestic animals and wildlife.
- **Air pollution** - with 24 days of fireworks proposed the air quality will be reduced.
- **Traffic congestion** - with the additional traffic the already terrible traffic and air quality will get even worse.

I am already living with the noise and pollution of the harbor. An amphitheater would have catastrophic consequences for people's health, property values, and negatively impact the entire community.

This project must not be completed as planned.

Sincerely,

Birte Pfleger, PhD
Professor of History

DHSI Fellow for ACUE
California State University, Los Angeles
5151 State University Drive
Los Angeles, CA 90032
T 323.343.2032

calstatela.edu | *We Are LA*

From: Anthony Piro i
To: Ceqacomments
Subject: West Harbor DS
Date: hursday, January 2, 2025 :55: 4 PM

Dear Honorable Members of the Port of Los Angeles Board of Harbor Commissioners,

I hope this email finds you all doing well!

I am writing to express my strong support for the West Harbor Modification Project. As the LA Waterfront development continues to transform the water's edge of San Pedro and Wilmington, the vision contained within the West Harbor DSEIR takes the development to the next level!

First, the expanded amphitheater and community lawn not only allow for the opportunity to bring top entertainment to our waterfront but also makes way to host watch parties such as the FIFA World Cup, UEFA European Cup, the Olympics, the World Series and many other events unimagined at this time. It is also an opportunity to create opportunities to teach our youth about careers in the Entertainment industry.

PIROZZI-1

The Ferris Wheel brings with it a new dimension of entertainment. In the past San Pedro had the Space Needle, which didn't always work. In this case the wheel brings with it a rare experience that will take visitors to new heights overlooking our working port! That will be something.

Lastly, the additional parking is a welcome sight especially to support many of the other events held and envisioned for the LA Waterfront and the Outer Harbor.

Economically, this project will be a major asset to our community bringing with it the entry level jobs and adjacent career opportunities lost over the decades. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity for the harbor area.

The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project continues the bold vision for the LA Waterfront and the future of San Pedro.

Thank you for your leadership and commitment to advancing this important project.

Sincerely,
Anthony Pirozzi, Jr
Former POLA Harbor Commissioner

From: _isanos__ao_com
To: Ceqacomments
Subject: West Harbor Modification Project
Date: riday, January 3, 2025 :35:24 PM

PISANO-1

It has come to my attention that the Port of Los Angeles wants to offer 100 events per year in San Pedro at the West Harbor venue. As a resident of East Rancho Paos Verdes, and as an owner of rental units in San Pedro, I am opposed to this proposed West Harbor modification.

Concerts such as Electronic, House, Techno, Dubstep, Drum and Bass, Hip-hop, and Rave will blast our residents, parks and beaches. The Port of L.A.'s environmental report acknowledges that the proposed project would result in significant and unavoidable impacts related to noise, air pollution (significant greenhouse gases), and transportation issues.

PISANO-2

Air pollution: L. A. Almanac published that out of the first 275 days of 2024, 107 were unhealthy to breathe in Los Angeles. West Harbor now wants to add 24 more days of Fireworks! This is irresponsible for the added pollution that it will create and the added noise. Noise from fireworks create extreme stress and anxiety for our dogs, pets, wildlife and us.

PISANO-3

In 2019 a 500-seat venue was approved. Now West Harbor has increased that 12 times to 6,200 non-permanent folding seats. But how many people will actually be attending these events? A new trend in concert-going is for participants to stand. Seats are not wanted. Crowds stand for hours, stomp, dance and chant loudly. The 50,000-square-foot artificial turf can accommodate approximately 23,227 people (without seats)! This is called "STANDING CROWD DENSITY". Also, the stage is elevated like the stage at Hollywood Park which is surmised to have been the cause of so much unwanted radiating noise. The Port also touts, that when there are no concerts, people can relax on the artificial turf. Does that sound appealing?

PISANO-4

Five Port of LA Commissioners control our future. Not a single one lives in San Pedro or Wilmington. So, all five out-of-town commissioners will hold the fate of over 83,000 San Pedro residents, Wilmington's 52,000, and tens of thousands of East Rancho Palos Verdes and Miraleste residents. If passed, these 5 Commissioners and their families won't have to listen to the loud unrelenting noise and air pollution they helped to create.

George Pisano

From: Danie Poca a ia
To: Ceqacomments
Subject: West Harbor De y
Date: uesday, January 7, 2025 5:24:2 PM

POCAPALIA1-1

I am 73 years old and have lived my entire life in San Pedro and the Palos Verdes Peninsula. For the last 50 years the previous development on this site became a
beacon of despair. The new development will be an economic shot in the arm for San Pedro residents. The addition of a small concert venue and a ferris wheel can only enhance the site. I can't count the number of times I've seen the Santa Monica Ferris wheel on tv. A concert venue would be awesome!!!' Those that don't like the Ferris wheel might might be happy if we planted a hedge of trees so no one would have to look at all the containers. Music?? I can't get enough. If you build it - they will come.

Dan Pocapalia
Sent from my iPhone

From: Danie Poca ia
To: Ceqacomments
Subject: West harbor modification roject
Date: uesday, January 7, 2025 2: 4: 6 PM

POCAPALIA2-1

I am a lifetime resident of San Pedro and Rancho Palos Verdes. I am for the Ferris Wheel, Amphitheater and Additional parking lot. All will be great assets to our community.
Sent from my iPhone

From: om Purce
To: Ceqacomments
Subject: Su ort for the West Harbor Modification Project
Date: uesday, December 3, 2024 6:5 :43 PM

Dear Members of the Port of Los Angeles,

As a lifelong resident of San Pedro, I am writing to express my enthusiastic support for the proposed West Harbor Modification Project, particularly the expanded amphitheater. As a passionate music fan and someone who values dynamic entertainment venues, I am thrilled by the opportunities this project will bring to our community.

The addition of the expanded amphitheater will not only elevate the cultural and entertainment offerings at the waterfront but also provide a much-needed platform for live music, performances, and community events. I am especially excited about the chance to experience world-class entertainment right here in the heart of the Los Angeles Harbor area. The combination of music, arts, and a revitalized waterfront will undoubtedly make West Harbor a vibrant hub for locals and visitors alike.

PURCELL-1

Beyond entertainment, I believe the project will play a significant role in boosting local businesses, creating jobs, and fostering a sense of pride within our community. By transforming the waterfront into a premier destination, the West Harbor project will enhance the cultural and economic vitality of the region.

I commend the Port of Los Angeles for recognizing the importance of this project and investing in the future of our community. I urge you to move forward with the West Harbor modification plans, as they represent a bold and exciting step toward creating a thriving, inclusive, and engaging space for everyone.

Thank you for considering my support for this transformative initiative. I am looking forward to seeing this vision come to life and enjoying the incredible entertainment experiences it will offer.

Sincerely,
Tom Purcell

West Harbor Modification Project Letter of Concern 1/10/25

Dear Ms. Wunder,

PYUN-1 This project will harm our communities in many ways. It will wildly enrich the few to the detriment of the many, and one's money-making venture should not infringe on the rights of our citizens: **the right to clean air, and peace and quiet in our homes**.

NOISE

PYUN-2 **Research confirms that concert volume levels have steadily increased over the years**. Now, overly loud concerts are the norm. According to a study by Caltech in 2023, dancing at a Taylor Swift concert at Hollywood Park generated energy equivalent to a .85-magnitude earthquake. Taylor Swift fans warn one another to wear earplugs. At the Port's Outer Harbor (Berth 46), concerts with thunderous music have negatively impacted our community. We don't want more of it.

PYUN-3 **The proposed curfew of 11:00 pm is outdated and ineffectual. Our health workers and emergency responders, among others, work 24 hours daily and have staggered sleep schedules.** Noise pollution is a real danger to our health and ability to sleep. **Loud noise is a particular risk for Newborns, who require 14 to 17** hours of quality sleep per day. Elementary school kids need 9 to 12 hours and high school kids need 8 to 10. We should be seeking to curb unnecessary noise, not create more.

PYUN-4 On August 4, 2024, many residents within a seven-mile radius of Hollywood Park called 911 to complain about a wildly loud and obnoxious concert. The noise affected residents in homes from Manhattan Beach to Marina del Rey to Ladera Heights and El Segundo. **The callers complained that the rumbling bass was causing migraines, rattling doors and windows, and disrupting sleep.**

The police asked the public to stop calling 911. The police knew the noise was loud, but were powerless to stop the disturbance. Hollywood Park did nothing to remedy the issue. Residents had to put up with this disruption of the peace for two days and two nights. It has been surmised that the raised stage caused the loud, low-end noise to travel across the 7-mile radius. Bass frequencies cut through walls and obstructions with abandon.

PYUN-5 Now, the Port of L. A. is asking to bring 100 plus such disruptive events annually to San Pedro! Residents will be asked to endure concerts with highly amplified *Punk, Electronic, House, Techno, Dubstep, Rave*, and *Hip-hop* reverberations. Nearly once every three days this audio assault of

PYUN-5 cont.

thumping low-end beats and screaming crowds will blast into our homes, parks, businesses, living rooms and bedrooms. We should not have to endure this violation of our peace.

Presently, the City of L. A. is incapable of stopping loud, illegal vehicular mufflers or controlling illegal fireworks. It is wishful thinking that they could regulate loud music once allowed to take a foothold in San Pedro.

PYUN-6

While the Port describes this venue as an amphitheater, it is not. It is an elevated outdoor stage that will regularly employ electronic amplifiers. The design of which will transmit in every direction these loud, abusive music events with their attendant screaming crowds. The topography of San Pedro Hill and Miraleste will further exacerbate this toxic noise.

PYUN-7

The upshot is we will be bombarded regularly with loud and obnoxious music if the project proceeds. This venue will negatively affect our residents, pets, businesses, wildlife, and sea-life for possibly a seven-mile radius.

Yes, music like rock and heavy metal, etc., has even been used by the CIA and others as a tool of psychological warfare. The term is "music torture".

PYUN-8

The Environmental Report itself acknowledges that the proposed project would result in **significant and unavoidable impacts** related to noise, air pollution, and transportation issues.

Consider:

PYUN-9

Air pollution: L. A. Almanac published that so far, out of the first 275 days of 2024, (October 2), 107 were unhealthy to breathe in Los Angeles. West Harbor now wants to add 24 more days of Fireworks! Is it reasonable or responsible to allow the added smoke, chemical, and noise pollution this venue will bring? It is well known that noise is especially harmful to dogs. Fireworks create extreme stress and anxiety in dogs, causing them to run away, or get hit by cars.

PYUN-10

Traffic issues: This location will be mostly accessed from our few north entry and exit points into San Pedro. Water borders our east and our south. Palos Verdes Drive is not viable. With the extra traffic, the Harbor Freeway and the bridges will be stressed with idling cars and trucks, and there will be insufficient parking to address these crowds. Tailgaters will park in residents' street parking.

Crowd Control: In 2019 a 500-seat venue was approved. Now, West Harbor has increased its capacity 12.4 times to 6,200 non-permanent folding seats set upon artificial turf. But how many people will attend these events? **A new trend in concert-going is for participants to stand. Seats are not wanted. Crowds stand for hours, stomping, dancing, and chanting loudly**.

PYUN-11

The 50,000-square-foot artificial turf **could potentially accommodate 23,227 standing people**! This is called *Standing Crowd Density*. Of course, the profit motive will see ticket sales and attendance levels creep up to higher capacities. The proposed stage is elevated similar to the stage at Hollywood Park, the design contributing to a resonance that is presumed to have caused so much of the unwanted, radiating noise described in the above incident.

Environmental Pollution: Now let's consider Artificial turf and its many issues: heat retention (summer temps can reach 180°), micro-plastic pollution, off-gassing formaldehyde, and too many more chemicals to list

PYUN-12

here. The turf harbors dust, pet waste, bird droppings, hair, mold, and other harmful bacteria-ridden substances that normally would be broken down by soil microbes, thus requiring ongoing disinfection. These pollutants will wash into the harbor area with each rainfall.

Other issues: The Aquarium of the Pacific is less than 5 miles away. How

PYUN-13

could its delicate sea life not be adversely affected by hours of vibrations from loud booming base noise?

I live 1.38 miles from Fort MacArthur Air Force Base. I hear the daily bugle calls emitting from their tiny speaker. I can also hear sea lions and the Long

PYUN-14

Beach Grand Prix cars. The Port states there will be decibel limitations, but it is unlikely they will be low enough not to be an issue. These money-making touring bands depend on unrelenting, mind-numbing vibrations and ensuing crowd noise, which cannot be contained in a large, open-air venue.

Five Port of LA Commissioners control our future. Not a single one lives in San Pedro or Wilmington. We used to have three local commissioners on the

PYUN-15

board, but they were replaced. So, all five out-of-town commissioners will hold the fate and sanity of over 83,000 San Pedro residents, Wilmington's 52,000, Harbor City's 36,000 and tens of thousands of East Rancho Palos Verdes and Miraleste residents.

PYUN-16

If passed, these five Commissioners and their families won't have to listen to the unrelenting loud noise or breathe the pollution they

PYUN-16 cont. **helped create. I pose the question, would they tolerate this sort of audio onslaught every few days in their own living rooms and bedrooms?**

PYUN-17 One thing to note: the review period for this project was held during our holidays when we get so distracted. This issue may have gone unnoticed by many of our area residents who will be negatively impacted by it.

PYUN-18 The promoters present this as a charming, seaside amphitheater. Instead, it will be a Trojan Horse spreading unrelenting noise, traffic, and air pollution.

PYUN-19 **If the Port wants to proceed with this venue, I urge that it create a smaller music hall with state-of-the-art acoustics and seats, and enclose the whole venue. An intimate enclosed space will help keep down the sound level and block strobing lights. Plant trees and drought-tolerant landscaping, which will help clean the air, not pollute it.**

PYUN-20 We live in extraordinary times. As I write this letter Los Angeles is ablaze with fires as a result of decades of ignoring environmental issues. Please consider our words of concern very seriously.

Respectfully,

Alys Chalmers Pyun

Please confirm receipt of this email.

RAGLAND-1 I am a long-time San Pedro resident who has invested many hours in activities related to waterfront development proposals. I have been attending meetings, reviewing documents and drafting comments for many years. I must point out that the "bridge to breakwater" redevelopment concept came out of environmental justice considerations - acknowledgement that communities near the port had suffered negative consequences of ever-expanding industrial operations. Initially, there was a lot of talk of harm reduction, but for the Harbor Department the "Project Objective" seems to have always been maximizing profit, not mitigating negative impacts. Early focus on the "grand promenade" emphasized waterfront access for residents and for visitors, but the current focus on attracting visitors may come at the expense of attracting potential residents who are looking for walkable neighborhoods and access to outdoor recreation. This, in my opinion, is a sadly missed opportunity.

RAGLAND-2 I can see the proposed "amphitheater" location from my home on Crescent Avenue. I am extremely concerned that a large concert venue at this location will significantly degrade the quality of life for me and my neighbors.

RAGLAND-3 Port staff utilized acoustical modeling to evaluate noise from Tier I events at the "amphitheater". I have no expertise in this field, but common sense tells me that the tables and sound maps included in the EIR underestimate the noise levels and spillover distribution that would be expected. Last year, an outdoor concert at Inglewood's So-Fi Plaza generated so many noise complaints that future outdoor concerts have been banned at that location. I and my neighbors have been dealing with a growing number of loud events on Port property, some of which have been extremely disruptive, even inside my home with doors and windows closed. The EIR concludes that noise impacts from the "amphitheater' will be significant, but suggests that sound engineering and limiting sound volume within the venue could minimize noise spillover to acceptable levels. This should be tested under real world conditions *before* the project is approved and built.

RAGLAND-4 Harbor area neighborhoods are densely populated and street parking is in short supply. The area is poorly served by public transportation. On weekends, if multiple cruise ships are in port and simultaneous events are scheduled at more than one venue, traffic gridlock and parking nightmares are likely. The EIR addresses emissions from vehicle miles travelled, but not congestion-related emissions from idling vehicles. Congestion-related vehicle delays are not addressed.

RAGLAND-5 Fireworks contribute to noise and air pollution, and potentially, to water pollution. Fireworks are known to cause extreme anxiety in pets, and it must be assumed that marine mammals and other wildlife are similarly affected. The only way to mitigate these negative effects is to limit the number of fireworks events to far fewer than 25. In then past, fireworks have been part of 2-3 events per year. An increase in frequency should not be allowed.

RAGLAND-6 There is no way to prevent trash from reaching the ocean from a crowded public area on a windy waterfront.

RAGLAND-7	There is no such thing as artificial turf that does not degrade.
RAGLAND-8	Placing solar panel canopies on the proposed parking lot on 22nd Street is a proposed greenhouse gas mitigation measure. However, the proposed solar canopy would presumably require removal of the existing shade tree canopy. Any tree removal must be part of any greenhouse gas mitigation calculation.
RAGLAND-9	My final comment is about the public comment process. We are invited to comment on the draft EIR, but people have many concerns not related to specific regulatory compliance issues. Those of us who have participated in this planning process for years want an opportunity to voice opinions on broader issues before final approval of the modified project.

From: ianine i i
To: Ceqacomments
Subject: etter of su ort for West Harbor Am hitheater and e ita i ation Project
Date: riday, January 0, 2025 : 2:0 AM

To Whom it may Concern,

RIZZI-1 This letter is to show my unwavering support for the West Harbor Revitalization project and Amphitheater.
This is a much needed and long overdue element our community will benefit from. For years we have had to travel outside our community to enjoy basic forms of entertainment and hospitality.
I look forward to this project being completed and seeing new economic growth and tourism in our San Pedro community.

Thank you,
Gianine Rizzi

From: Gianine Rizzi <grizzi@sanpedrobid.com>
Sent on: Friday, January 10, 2025 4:34:58 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: Letter of Support for WH Revitilization and Amphitheater

To Whom it may Concern,

GRizzi-1

This letter is to show my unwavering support for the West Harbor Revitalization project and Amphitheater.
This is a much needed and long overdue element our community will benefit from. For years we have had to travel outside our community to enjoy basic forms of entertainment and hospitality.
I look forward to this project being completed and seeing new economic growth and tourism in our San Pedro community.

Thank you,

Gianine Rizzi
Marketing & Events Coordinator
Economic Development Coordinator
San Pedro Property Owners' Alliance - PBID
Phone: 310-832-2183 **Cell**:310- 408-4243
Email: grizzi@sanpedrobid.com
Discoversanpedro.org

From: Judy ochat
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Wednesday, January , 2025 3:44:43 PM

Hello -

ROCHAT-1 I have the following comments and questions regarding the West Harbor Modification Project -

ROCHAT-2 1. Regarding the amphitheater noise, the recommended noise mitigation is appreciated, particularly limiting the noise in the amphitheater and the related monitoring and reporting. Considering the significance of the predicted noise impacts even after mitigation measures are applied, can it be lowered to a level lower than 100 dBA at the front of the house position? Also, it's really unclear how the different system tuning parameters for different atmospheric conditions (discussed as part of PF-NOI-1) will be implemented. It's appreciated that an advanced system will be used to help focus the sound within the Amphitheater, but please explain how the engineers for the performance will properly obtain the appropriate weather conditions for a performance (wind speed, wind direction, change in wind speed with height above ground, change in temperature with height above ground) for a very large area in the vicinity of the venue. What weather stations would be used for this, and will the settings change during a performance if the weather changes? Please explain how PF-NOI-1 can be properly implemented. Also, during the unfavorable meteorological conditions setting, does this adversely affect ground level patrons in the project area outside the amphitheater (or other nearby land uses) due to louder sound?

ROCHAT-3 2. A transportation impact is defined stating that the project would increase traffic volumes and degrade level of service along neighborhood streets. It is also stated that no feasible mitigation is identified, which would negatively impact the surrounding neighborhoods. Then the traffic noise analysis makes some assumptions about the increase in traffic volumes. It's stated that the number of predicted trips decreased from the 2009 analysis (with the 500 seat amphitheater) to the 2016 analysis (with 6000+ seat amphitheater). This seems counter-intuitive. Also, it doesn't seem to be reflected in the noise tables 3.8-6 and 3.8-7, which show traffic volume increases from one table to the next. There needs to be more explanation on what exactly is represented for the traffic applied, to help further understand why there isn't a traffic noise impact along Harbor Blvd.

ROCHAT-4 3. Regarding noise mitigation measure MM-NOI-13 Limit the Use of "Salute" Fireworks: while the intention is appreciated to reduce the startle effects of the concussion type of fireworks, the restriction should go further by eliminating the use of the "Salute" Fireworks. The fireworks are predicted to still cause noise impacts, even with the recommended mitigation measures (including MM-NOI-11, MM-NOI-12, and MM-NOI-13), and the most offensive part of fireworks are the loud bangs. Why would more aggressive mitigation measures not be considered (in addition to MM-NOI-14, drones)? To help protect the nearby communities, including animals that are extremely sensitive to the loud bangs, the concussion fireworks must be eliminated. Also, the use of a drone display MM-NOI-14 replacing fireworks should be seriously considered.

ROCHAT-5 4. For all noise and vibration sources (both for construction and operational) please discuss more the effects on wildlife, particularly marine mammals in close proximity. Please also

ROCHAT-5 cont.

discuss potential mitigation measures, particularly involving pile driving.

Thank you for your consideration -

- Judy Rochat

Outlook

West Harbor Modification Project

From nancy sams <n_sams@yahoo.com>
Date Fri 11/15/2024 11:33 AM
To Ceqacomments <Ceqacomments@portla.org>

SAMS-1

I live near UCLA in Rancho Palos Verdes and am against the amphitheater. It will be a source of misery for not only those poor souls living nearby but also for those living miles away.

Sound carries. Every evening I hear Taps blasting from Fort McArthur, approximately six miles away, and very ofter Reveille in the morning, and the national anthem. As loud as if being played in my back yard. I hear music from San Pedro high school football games. Several months ago Long Beach had a weekend long concert that tortured my ears for two days. The thought of ingoing sound from an amphitheater is horrifying and will only benefit the wallets of those operating it. If they must have this thing at least put a roof over it.

Nancy Sams
Rancho Palos Verdes

From: scott sande
To: Ceqacomments
c: counci member mcos er acity or ourthDistrict bos acounty o
Subject: West Harbor Modification Prcject
Date: riday, January 0, 2025 :44:42 AM

Dear Ms. Wunder,

I am writing in regard to the West Harbor Modification Project's 2024 Draft Subsequent Environmental Impact Report and, specifically, about the proposed 6,200-seat amphitheater.

SANDELL-1 I am among the many residents of San Pedro and Rancho Palos Verdes who are concerned about the potential negative impacts of this proposed 6,200-seat venue or its 3,100-seat alternative. Chief among those concerns are noise, traffic and pollution -- all of which are included among the "significant and unavoidable environmental impacts" in the draft SEIR.

I would like to focus on the issue of noise, which is of great concern because this outdoor concert venue would be located within range of schools, churches, hospitals, care facilities for children, the elderly and wildlife, and thousands of residences.

With all due respect, the analysis of noise impacts and noise mitigation efforts in the draft SEIR is wholly inadequate. The analysis focuses on a narrow swath of San Pedro and Terminal Island directly around the proposed venue. This completely ignores the effects on many other areas of San Pedro and on Rancho Palos Verdes and potentially other cities, including Rolling Hills and Rolling Hills Estates.

SANDELL-2 The draft SEIR ignores the potential impacts of an outdoor concert venue on many thousands of people, who could be subjected to up to 12 hours of noise anytime from 8 a.m. to 11 p.m., more than 100 days per year, and up to four hours of noise on non-performance days.

As anyone who has lived in the area knows, sounds from the port can travel long distances and be heard in Rancho Palos Verdes and many parts of San Pedro, even if they may not be clearly audible within the areas closest to the source. Among those current sounds are beeping cranes, music from departing cruise ships, and the national anthem from Fort MacArthur, all of which are ostensibly at a far lower decibel level than what would be generated from the operation of the proposed outdoor concert venue.

Furthermore, in recent years, the port has allowed concerts at Berth 46 (outer harbor area) that have disturbed residents in San Pedro and Rancho Palos Verdes. Despite complaints, the port appears to have done little to mitigate the disturbances from these current concerts.

SANDELL-3

We have also clearly heard noise from the large raves that Long Beach has held at the Queen Mary, which were much farther away but still generated noise complaints in San Pedro, Rancho Palos Verdes, Rolling Hills Estates, and as far away as Lomita, Harbor City and Torrance.

Lower-frequency sound waves (i.e. bass) are a particular problem, as they tend to rattle and cut through other ambient sounds. While it is true that noise can spread in unpredictable ways SANDELL-4 due to atmospheric conditions and topography, it is actually quite predictable on San Pedro Hill. As at least one person said during the port's Nov. 14 public meeting on the project, San Pedro Hill can act as a natural amphitheater itself.

SANDELL-5 For all of these reasons, a much larger regional study of the noise impacts should be undertaken in any EIR for this project. Then, more mitigation procedures would likely need to be explored.

SANDELL-6 Regarding current mitigation proposals, if this concert venue is built, residents would appear to have little to no recourse to address their noise complaints.

Among the proposed mitigation measures is "a permanent noise monitoring station at the front-of-house sound mixing location" where noise levels would be monitored there for violations. That may be for the protection of concertgoers, but it does not take into account at all the noise that would be sent into the surrounding community. As such, it is inadequate.

SANDELL-7 Another mitigation measure would be "a dedicated noise-complaint hotline and/or website." The draft SEIR states that "the Tenant will respond to all complaints, if requested to do so by the complainant, within 48 hours of the complaint or the end of the event that triggered the complaint (whichever occurs last)."

As proposed, that is also completely inadequate. Simply requiring a "response" within two days is not enough. Would a "response" be simply acknowledging the complaint, with no action? It would be far more effective to have a hotline that is continuously monitored and results in an actual real-time adjustment to the concert taking place. In November 2024, such a measure was employed for a large music festival at the Queen Mary.

SANDELL-8 A few other notes on the scope of the potential noise impact:

In news stories and on social media, assurances are being given to the public that the sound impacts on our community would be minimal. Some have claimed this proposed venue would create only a few hours of noise a few nights a week.

SANDELL-9 The draft SEIR itself contradicts those assurances, as it states broadly that "amphitheater noise impacts would remain significant and unavoidable after mitigation" and "fireworks noise impacts would remain significant and unavoidable after mitigation" and more specifically that it would allow for lengthy periods of noise during the day and night virtually any day of the year.

SANDELL-10 The draft SEIR states that this proposed amphitheater would host up to 100 Tier 1 events per year, plus an unknown number of other events. The sound system could be used no earlier than 8 a.m. The proposed end for concerts would be 10:30 p.m., and no later than 11 p.m. There would also be up to 25 fireworks shows per year, subject to permits.

SANDELL-11 Here is what the draft SEIR states would be the acceptable time limits of noise:

"On any Tier 1 Event day that includes a public or private performance, the total use of amplified sound equipment for all activities (e.g., rehearsal, soundcheck, performance) will be limited to a cumulative total of 12 hours. Sound amplification may occur over multiple distinct intervals, as long as the sum of those intervals is 12 hours or less. On non-performance days, the total use of amplified sound equipment for all amplified events will be limited to no more than a cumulative total of up to 4 hours."

SANDELL-12

Perhaps for some adults that is a tolerable, but it is not tolerable for all adults and certainly not for the children whose studies or sleep will be disturbed. It is not tolerable or for those who would like to enjoy the quiet of their home, yard or local park at their leisure, or those whose options to escape the noise are limited because of work, illness or economics. As many scientific studies have found, the effects of noise on human beings and animal life can be profoundly disruptive and harmful, especially when that noise is inescapable.

SANDELL-13

I understand there are a number of business and political interests who support this large amphitheater, and some people who just want to enjoy a concert locally. In the end, we all want to see San Pedro and West Harbor thrive. I am not alone in thinking an outdoor concert venue of this scope is the wrong way to do it.

The first rule of any project should be "do no harm" and unfortunately this proposed venue would create harm, as outlined in the draft SEIR, by disturbing thousands of people's peace, quiet, and mental and physical health, not to mention affecting sensitive wildlife -- even if it is intended to bring joy to people's lives, and even if economic and cultural benefits would accrue to the community.

I understand a decision will come later by the Harbor Commission. But for now, I ask that you address the inadequacies in this draft SEIR, especially as they relate to noise.

Thank you.

Scott Sandell

From: i abeth Sa
To: Ceqacomments
Subject: West Harbor modification roject
Date: Sunday, January 5, 2025 :05:2 AM

SAX-1

I urge you not to vote for this amphitheater project going forward. The surge in noise, crowds and environmental impact will be devastating to those living in the vicinity.

Pedro is special for its strong sense of community, its working harbor and generations of hard working trade employees that often need to wake up very early in the morning for their jobs. This project could strongly effect their health, livelihoods and lifestyles. The impact of the noise, traffic, residual partying and potential riffraff would be harmful to the residents and potentially their property and property values.

If the project must go forward consider creating a venue that is enclosed to reduce noise impact (not open) and make sure it is for far less people attending.

Elevate the cultural experience in San Pedro with class not just crowds. Have some compassion for those that live in the surrounding area that will be negatively impacted when there are other ways to bring in funds to the city.

Respectfully,
Elizabeth Sax

January 3, 2025

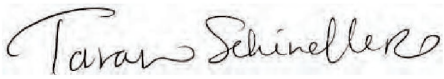
Dear Members of the Board of Harbor Commissioners,

I've lived in San Pedro for nearly a decade and worked downtown for 20 years. I care deeply about this community and strongly support the West Harbor Modification Project. The planned parks, amphitheater, and Ferris wheel will energize our waterfront, attract visitors and new businesses and boost the local economy.

SCHINDLER-1 I appreciate the attention to potential impacts and concerns for sustainability in the Draft SEIR. This shows care for the community and sets the project up for success.

This thoughtfully designed project has the potential to turn the waterfront into a classy, fun, destination for tourists as well as locals, and I'm excited to see it come to life. Thank you for considering this important project.

Sincerely,



Taran Schindler
San Pedro Resident & Stakeholder

From: Marianne Shri er
To: Ceqacomments
Subject: West Harbor Modification Prcject
Date: uesday, January 7, 2025 :3 : PM

Hi,

SHRIVER-1

My family and I support the West Harbor project, especially the live music amphitheater. San Pedro can absolutely handle concerts and crowds . I've been to several music events in that space along the water, no problem.

The people designing it are taking every consideration to make it safe and sane. The letter I received from people opposed to it do not seem to have the facts and are just reacting to change.

Thank you,
Marianne Shriver

Sent from Yahoo Mail for iPad

From: jje e
To: Ceqacomments
Subject: : West Harbor Su ort
Date: hursday, January , 2025 :0 :4 PM

----- Forwarded Message -----
From: jjewelz <jjewelz@cox.net>
To: jjewelz@cox.net <jjewelz@cox.net>
Sent: Thursday, January 9, 2025 at 07:17:03 AM PST
Subject: West Harbor Support

Hello,

SHRUM-1

I'm in full support of the positive changes West Harbor will bring to the Port of LA. It's been a joy to see life return to a once thriving port community.
I moved to the area in the early 1960's, like many, I enjoyed everything San Pedro had to offer.
Being informed about the progress and the environmentally conscious approach moving forward is refreshing.
The proposed next phase updates to increase the size of the amphitheater and Ferris wheel, leaving less of an imprint, while being mindful of the nearby neighborhoods of a thriving West Harbor has my full support.

Sincerely,
JJ Shrum

Dear Harbor Commissioners,

I am writing to express my strong support for the West Harbor Modification Project.
(I appreciate that my letter should have been sent some weeks ago, but I urge you to consider its contents anyway).

This project and its development will be a long-overdue opportunity to revitalize San Pedro's waterfront.

If encouraged to succeed, without unnecessary impediments, West Harbor MP will drive economic growth in San Pedro and the Harbor area for decades to come.

The addition of an expanded amphitheater and community lawn will create an additional mighty draw to the waterfront experience. It will obviously provide many opportunities for top quality stage/concert performances and local community activities.

SILBER-1 I can see West Harbor as continuing the *growth in Port of LA's successful image building as partner to our San Pedro and Wilmington communities.*
So much has been done already to show the world that a thriving, dynamic port can be an excellent and valuable neighbor to an historic waterfront community.
This is a great way to improve that good work.

You will already be well aware the West Harbor project will be a huge asset to local communities.
It will create large number of jobs of all varieties and will undoubtedly increase tourism, both local and long-distance.
These benefits will not be temporary, - but will endure for the rest of our lifetimes and beyond.

Mitigation measures described in the Draft SEIR would seem to me, (no expert), to address any potential challenges that I can think of.

It is not an exaggeration for me to say that the West Harbor Modification Project presents a once-in-a-lifetime opportunity for the future of San Pedro.

Thank you for your thoughtful consideration. I urge you, please, to do whatever you can to ensure that this vital project is realized.

Sincerely,
Andrew Silber
San Pedro Resident for 29 years.
Previous owner of The Whale & Ale Restaurant. 7th St. San Pedro.
Vice Chair – San Pedro Waterfront Arts District

From: _d S_ebe
To: Ceqacomments
Subject: West Harbor Am hitheater comments
Date: riday, January 3, 2025 0:53:46 AM

Hello,

SKEBE-1

Please consider my comments when deciding on the West Harbor Amphitheater. I live on the bluff above the Cabrillo Beach Tide Pools.

Noise:
Noise from the Long Beach Grand Prix travels all the way from downtown Long Beach to the San Pedro Bluffs. How can concerts with 6,000 yelling participants just down the hill from thousands of homes not have a significant impact.
Occasional party boats depart the harbor blasting music which is clearly heard throughout the hillside. How can concerts with 6,000 yelling participants just down the hill from homes not have a significant impact.

Traffic:
If 6,000 audience averages 3 per car it still results in 2,000 vehicles. Gaffey and Pacific are already crowded, and adding 2,000 vehicles heading to Harbor Blvd would create a traffic nightmare.
I am 78 and have attended hundreds of events. Most people arrive around an hour prior to the start and head home immediately after. The notion that most would come early and stay late to eat or entertain in San Pedro is without merit.

Environment:
Many vehicles are electric, but a significant number are still gas powered. Cars idling stuck in traffic both coming and going would create a significant amount of pollution.

Thank you for considering my comments,
Ed Skebe
4020 Bluff Place
San Pedro
424-224-7779

From: ann smir e
To: Ceqacomments
Subject: West Harbor Modification Project S
Date: hursday, January , 2025 2:47: 7 PM

Hello and Happy New Year to the Members of the Board of Harbor Commissioners,

I wanted to share my solid support for the West Harbor Modification Project and let me tell you why.

I moved down to the San Pedro/Rancho Palos Verdes area in 1984. There were so many wonderful aspects of these towns that captured my heart and I never left. Back then, it was all about Ports O' Call Village with their quaint shops and restaurants. However, over the years it became tired and worn down and my visits began to wane as the appeal and excitement lessened by the year. What was to come of this beautiful destination? I often thought.

SMIRKE-1

Then the talk of a new development was on the table. Boy was I ever excited. A total facelift and something new and exciting once again would be there to fill our cravings even better than before. An amphitheater for live music, wow, really? Finally, a venue that won't require me to sit and drive in traffic for an hour plus to see class acts! Sign me up! A well planned space for a community park which could provide a space for endless events and cultural gatherings! Or just a place to enjoy the beautiful weather that we often have. And then the talk of a Ferris Wheel? Wow, these types of things only happened in more progressive communities. But now its gonna be right here in San Pedro. The need for
placement of additional parking is key as people WILL come. From our local community and afar.

In addition, I can only see this project adding to the economics of the community. Creating more jobs and enhancing the support of local businesses. Progression is a good thing and it's hard to stop when its done right.

I am proud to support the project as it represents what a renewed and exciting place San Pedro can become once again. Thank you to all the people that have worked tirelessly to push forward with this project. Let's do this!!

Most sincerely,

Ann Smirke

From: cathy s rin er
To: Ceqacomments
Subject: Waterfront e ansion
Date: hursday, December 26, 2024 :05:52 PM

Dear Members of the Board of Harbor Commissioners,

SPRINGER1-1 As a resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity.

The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Cathy Springer

From: Jay S rin er
To: Ceqacomments
Subject: West Harbor DS
Date: Sunday, December 22, 2024 5:50:25 PM

To the Board of Harbor Commissioners,

SPRINGER2-1

I am a resident of the San Pedro area and am writing to express my strong support for the West Harbor Modification Project. This development is a once in a generation opportunity to transform and revitalize San Pedro's waterfront, creating much better public spaces and providing an extraordinary chance for economic growth in the Harbor.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will provide opportunities benefiting residents, visitors and local businesses while providing an opportunity to enhance San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity.

The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Jay Springer

From: arbara St John
To: Ceqacomments
Subject: Su ort of West Harbor
Date: Saturday, January 4, 2025 7:46:2 AM

Dear Members of the Board of Harbor Commissioners,

STJOHN-1

As a [resident/stakeholder of San Pedro, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Barbara St John

From: e ste ens
To: i abeth Sa
c: Ceqacomments
Subject: e: West Harbor modification roject
Date: Sunday, January 5, 2025 4:54:4 PM

I agree with you.

On Sun, Jan 5, 2025 at 8:05 AM Elizabeth Sax <saxhouse1@gmail.com> wrote:

> I urge you not to vote for this amphitheater project going forward. The surge in noise, crowds and environmental impact will be devastating to those living in the vicinity.
>
> Pedro is special for its strong sense of community, its working harbor and generations of hard working trade employees that often need to wake up very early in the morning for their jobs. This project could strongly effect their health, livelihoods and lifestyles. The impact of the noise, traffic, residual partying and potential riffraff would be harmful to the residents and potentially their property and property values.
>
> If the project must go forward consider creating a venue that is enclosed to reduce noise impact (not open) and make sure it is for far less people attending.
>
> Elevate the cultural experience in San Pedro with class not just crowds. Have some compassion for those that live in the surrounding area that will be negatively impacted when there are other ways to bring in funds to the city.
>
> Respectfully,
> Elizabeth Sax

STEVENS-1

Comment Letter SUTTON

Outlook

West Harbor DSEIR

From Mona Sutton <monasutton63@yahoo.com>
Date Wed 12/18/2024 9:07 AM
To Ceqacomments <Ceqacomments@portla.org>

Dear Members of the Board of Harbor Commissioners,

SUTTON-1

As a resident-stakeholder, I am writing to express my very strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Mona Sutton

Sent from my iPhone

December 18, 2024

Dear Members of the Board of Harbor Commissioners,

SWENSSON-1

As a San Pedro resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater, community lawn and the 175' Ferris Wheel will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

The 2,600 additional parking spaces will make it convenient to attend the events and to visit the restaurants and shops.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Heli Swensson
300 South Miraleste Drive, Unit 6
San Pedro, CA 90732

From: _ina_ahash
To: Ceqacomments
Subject: Am itheater
Date: Saturday, January 4, 2025 6:46:04 AM

To whom it may concern,

TAHASH-1

As a san pedro resident and someone who works in live events, I offer my concern in the west harbor amphitheater project. With the Vincent Thomas bridge allegedly needing to be shut down for a lengthy amount of time for matnience, Western ave constant fixing and the devastation of Rancho Palos Verdes land shift can this peninsula really handle anymore construction and traffic?
The trash from a venue, the pollution to the sea life. Just consider the land. The noise echos the whole peninsula. There is enough venues in los angeles and san pedro already.
Sincerely
NT

From: imber y ay or
To: Ceqacomments
Subject: West Harbor Modification Prcject
Date: riday, o ember 5, 2024 6: :47 PM

TAYLOR-1

I am proud of San Pedro and the West Harbor LA developments, but cannot and do not support the furthering of this anticipated amphitheater project.

This idea is just... off base and out of touch, especially for your team members and developers who do not live nearby, likely have never/will never live nearby, and will not be enduring the results of such development.

We are San Pedro and NOT San Diego, guys... C'mon... Let us enjoy the redeveloped waterfront (finally) with its carnival rides and new architecture, and WITHOUT this amphitheater. San Pedro does not need to have *it all* in this way, I promise you!!!

I humbly ask that you PLEASE reconsider the amphitheater and instead let the Queen Mary have her anticipated venue, as she is more suited for it and already operates in such a way. Thank you.

Kindly,

Kimberly Taylor
Resident of 514 W 26th St
San Pedro, CA 90731

From: Da id euber
To: Ceqacomments
Subject: West Harbor Modification Project
Date: hursday, o ember 2 , 2024 2:02:40 PM

To whom it may concern,

TEUBER-1 I would like to comment that I am in favor of approving the proposed amphitheater for West Harbor. I have lived in San Pedro nearly my entire life and feel this amphitheater would be a welcome addition to our community.

Sincerely,

David Teuber

From: Ja e hom son
To: Ceqacomments
Subject: Su ort for the West Harbor Modification Project
Date: Wednesday, January , 2025 2:25:07 PM

Dear Members of the Board of Harbor Commissioners,

THOMPSON-1

As a resident of San Pedro and a board member of the San Pedro Waterfront Arts District, I would like to express my strong support for the West Harbor Modification Project. This development will not only revitalize San Pedro's waterfront by creating new recreational spaces and driving economic growth but will establish San Pedro as a premier center for arts and culture.

With the installation of the amphitheater and community lawn, the development will provide exciting opportunities for performances, events, and community gatherings. These enhancements will play a key role in establishing San Pedro as a sought-after, waterfront destination as well as demonstrating a commitment to the arts within the community.

The project will generate new jobs, attract tourism, and support local businesses, contributing to the long-term economic success of our community. As a resident, we have witnessed the closing of several local small businesses and this has been devastating to the overall economic development. I also appreciate the mitigation measures outlined in the Draft SEIR, which address concerns such as traffic, noise, and environmental impact, ensuring the project is both beneficial and sustainable.

I believe the West Harbor Modification Project is a significant step forward for San Pedro, and I look forward to its positive impact on our community. Thank you for your leadership and thoughtful consideration of this important initiative.

Sincerely,

Jake Thompson

1918 Emilia Pl San Pedro, CA 90732

From: Da n hornton
To: Ceqacomments
Subject: West Harbor Modification Project
Date: uesday, January 7, 2025 3:5 : 5 PM

Dear Members of the Board of Harbor Commissioners,

As a stakeholder and long term tenant of both the Port of Los Angeles and now West Harbor, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

THORNTON-1

For nearly 20 years we at San Pedro Fish Market helped produce the Port of Los Angeles Lobster Festival which was a 3 day food and music festival that drew in people from all over the country. In addition, we also hosted a Railroad Revival Tour with Mumford and Sons as the headliner in our parking lot with 10,000 in attendance. All of these events were incredibly successful bringing people to our waterfront, generating tax revenues, creating jobs, and providing a space for families to enjoy our beautiful waterfront!

Economically, this project will be a major asset to our community in the same way. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

--

Dawn Thornton
Regional Culinary Training Manager
310.809.5817 (cell)

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www.sanpedrofish.com

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From: Cami a o nsend
To: Ceqacomments
Subject: West Harbor DS
Date: uesday, December 24, 2024 :25: 4 AM

Dear Members of the Board of Harbor Commissioners,

TOWNSEND-1

As a 43 year resident of San Pedro in the South Shores district, we are writing to express our strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and we are excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Camilla Townsend and Stan Hicks.

From: Jose hine ruse a
To: Ceqacomments
Subject: West Harbor Modification Project
Date: uesday, January 7, 2025 :32:32 AM

TRUSELA-1

Dear Members of the Board of Harbor Commissioners, I am writing to you as a dedicated San Pedro Fish Market employee for the past seven years and a proud stakeholder of the Port of Los Angeles and the West Harbor. I wholeheartedly support the West Harbor Modification Project, which offers an excellent opportunity to revitalize San Pedro's waterfront. This project aims to create a vibrant space for the community and visitors while promoting economic growth. I am particularly excited about the proposed expansion of the amphitheater and community lawn. These additions will provide a welcoming venue for live performances, cultural events, and community activities, transforming our waterfront into a dynamic and engaging destination. Initiatives like this are crucial for establishing San Pedro as a hub for entertainment and culture. Over the years, I have witnessed the significant impact of events such as the Port of Los Angeles Lobster Festival and the Railroad Revival Tour, which featured Mumford & Sons and attracted an impressive crowd of 10,000 people to our area. These events showcased the beauty of our waterfront, generated substantial tax revenue, created jobs, and brought families together to celebrate in a cherished space. I am confident that the West Harbor Modification Project will yield similar benefits and more. This development will sustain San Pedro's economic future while enhancing its appeal by attracting tourism, supporting local businesses, and creating new job opportunities. The mitigation measures outlined in the Draft SEIR demonstrate thoughtful planning to balance progress with sustainability. It is inspiring to see a bold vision like this take shape, and I am genuinely excited about the positive changes it will bring to our community. Thank you for your leadership and commitment to making this project a reality.

Best,

Josephine Trusela
Director of Business Development
25 ia Cabrillo Marina Dr 2
San Pedro, Ca
- 2- 25 e t 2

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Watch ings of FI H

From: Henry Jr n aro
To: Cegacomments
Subject: West Harbor Modification Project
Date: Monday, January 6, 2025 3:0 :26 PM

Dear Members of the Board of Harbor Commissioners,

UNGARO1-1

I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

For nearly 20 years we at San Pedro Fish Market helped produce the Port of Los Angeles Lobster Festival which was a 3 day food and music festival that drew in people from all over the country. In addition, we also hosted a Railroad Revival Tour with Mumford and Sons as the headliner in our parking lot with 10,000 in attendance. All of these events were incredibly successful bringing people to our waterfront, generating tax revenues, creating jobs, and providing a space for families to enjoy our beautiful waterfront!

Economically, this project will be a major asset to our community in the same way. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Henry Ungaro Jr.
Restaurant Technology Manager
(310) 897-0336

San Pedro Fish Market Enterprises, INC
Celebrating Food & Family™
www.sanpedrofish.com
<https://urldefense.com/v3/__https://www.sanpedrofish.com/__;!!Ad2px7zmCw!l2ypBrlLNxQpTp51hfGG0r6j5KuSy9ek7xI7g8DG6mEhKgWuzLeFFq-wMQJfpJZ8cNb1QsnDqIO-LQNDvdrI-eKE$>

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January 07, 2025

Board of Harbor Commissioners

Port of Los Angeles

Subject: Support for the West Harbor Modification Project SEIR

Dear Members of the Board of Harbor Commissioners,

As the Chief of Business Development and one of the owners of San Pedro Fish Market, I am writing to express my full support for the West Harbor Modification Project (Draft SEIR). This project represents a unique and transformative opportunity to enhance the LA Waterfront and revitalize San Pedro as a world-class destination for residents and visitors alike.

The proposed expansion of the outdoor amphitheater to a 6,200-seat venue, the increase in the Ferris Wheel height to 175 feet, and the addition of 2,600 public parking spaces will significantly enhance the appeal and functionality of the waterfront. These enhancements are not only vital for the development of West Harbor but also pivotal in ensuring its long-term success as a vibrant hub of culture, entertainment, and community gathering.

UNGARO2-1

As an anchor business in the area, San Pedro Fish Market has witnessed firsthand how such projects bring life to the waterfront. Events at the amphitheater will stimulate economic growth, drive tourism, and provide opportunities for local businesses. Studies show that similar events in San Pedro boost local restaurant sales by 15–25%, a trend we anticipate will continue with this expansion.

Moreover, the environmental and operational mitigation measures outlined in the SEIR reflect a thoughtful and responsible approach to development. The measures to manage noise, traffic, and sustainability show a commitment to balancing growth with community well-being and environmental stewardship.

The West Harbor Modification Project aligns perfectly with San Pedro's vision of creating spaces that foster connections, celebrate culture, and drive economic prosperity. On behalf of the San Pedro Fish Market and as a lifelong advocate for our community, I urge you to approve this project and ensure its success.

Thank you for your dedication to advancing the LA Waterfront and for considering my letter of support.

Sincerely,

Henry V Ungaro

Chief of Business Development

San Pedro Fish Market

From: Michae n aro
To: Ceqacomments
Subject: West Harbor Modification Project
Date: Monday, January 6, 2025 :57:36 PM

Dear Members of the Board of Harbor Commissioners,

As a stakeholder and long term tenant of both the Port of Los Angeles and now West Harbor, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

UNGARO3-1

For nearly 20 years we at San Pedro Fish Market helped produce the Port of Los Angeles Lobster Festival which was a 3 day food and music festival that drew in people from all over the country. In addition, we also hosted a Railroad Revival Tour with Mumford and Sons as the headliner in our parking lot with 10,000 in attendance. All of these events were incredibly successful bringing people to our waterfront, generating tax revenues, creating jobs, and providing a space for families to enjoy our beautiful waterfront!

Economically, this project will be a major asset to our community in the same way. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Michael Ungaro
CEO
310-350-8793
San Pedro Fish Market
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Comment Letter VALANEJAD

Outlook

West Harbor DSEIR

From KamranV <kv@themajestic.la>
Date Wed 12/18/2024 9:02 AM
To Ceqacomments <Ceqacomments@portla.org>

Dear Members of the Board of Harbor Commissioners,

VALANEJAD-1

As a stakeholder with a new restaurant opening in San Pedro, I am writing to express my strong support for the West Harbor Modification Project.

This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth. The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture. Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity.

The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability. The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

Kamran Valanejad

From: us an Hoorn
To: Ceqacomments
Subject: West Harbor Modification Project Director A Harbor n ironmenta Mana ement
Date: Monday, January 6, 2025 : :4 PM

Greetings.

VANHORN1-1 Only last week did I hear to my consternation from fellow San Pedro friends about the planned amphitheater to be constructed where two day concert happenings will take place several times a year, and I have read the very well reasoned objections they filed against the Project. I will add to that my personal objection to all the negative aspects for the community addressed in those filings. I am very sensitive to loud noises: they truly sicken me when I feel a rush of adrenalin in response to them. I do not begrudge people inclined to enjoy earth shaking drumbeats carried by superlative decibels as long as their pleasure of necessity affects me and my community's health and humor, as much as I begrudge a smoker's joy as long as it does not go at someone else's expense, don't smoke in my elevator, house, street where it pollutes my fresh air, I am surprises and upset that I have not heard from the planners Themselves but had to learn it coincidentally from friends.

Augustinus "Gus" van Hoorn
28000 S. Western Ave 320
San Pedro, CA 90732
I do not know how to put my signature on this email

From: us an Hoorn
To: Ceqacomments
Subject: West Harbor modification roject
Date: uesday, January 7, 2025 :24:4 PM

VANHORN2-1

Only a few days ago did I learn from two fellow San Pedro friends about this project, to my consternation I should add .
I do not begrudge the crowds that enjoy such
decibel larded earthshaking drum beat
concerts their pleasure
as long as it is not at my and my communities' harmful detriment .
The objections for the multiple reasons convincingly expressed
by my friends are irrefutable and I fully subscribe to them also.
Noise pollution is harmful.
Smoking is not illegal, but
smoking in an elevator or any place where the act
pollutes the air someone nearby wants to breathe
is been ruled to be illegal
A valid analogy, me thinks
Sent from my iPhone

From: Hannah ance
To: Ceqacomments
Subject: West Harbor DS
Date: uesday, January 7, 2025 3:20:02 PM

Dear Members of the Board of Harbor Commissioners,

VANCE-1

We are writing to you today to express our strong support for the West Harbor Modification Project. Our San Pedro based company, SHEIKH/Impact, believes that this development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth for the entire region.

As proud members of the downtown San Pedro community, we are very excited about the expanded amphitheater and community lawn which we know will bring new opportunities for performances, cultural events, and community activities to the area. Not only will these additions create a dynamic waterfront experience, but it will also benefit San Pedro's reputation as a destination for entertainment and culture, both for residents and visitors alike.

One of San Pedro's biggest industries, tourism, will be greatly bolstered by these significant assets to our community. It would not only create jobs and support the surrounding local businesses, but it will also foster long-term growth and prosperity for the community's economy. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and we are excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,

SHEIKH/Impact

<https://lh7-rt.googleusercontent.com/docsz/AD_4nXfD5GsHcgmqbzEslPWnsf0PIYgRIHzU6vhj2w1A4c2V4no2osZXHkvxnAiRgfRzCwt2W52uk8wg_J_Cq_CPtXc3SO8T6-tndYMY6TaCis36yC6_hDDFbgZiISxvOx628TcN-wcoSSOTpZKCyrzrYsXS8Vvf?key=yqoxdD_az537Wc32xGWg3Q>

Hannah Vance / Executive Assistant

455 W. 6th Street, San Pedro CA 90731

C: 310-404-6625 / O: 310-935-2003

sheikhimpact.com
<https://urldefense.com/v3/__http://sheikhimpact.com__;!!Ad2px7zmCw!lgNnMPZLiakTxdzTsFpTEXsJQ3O02a6s4jN0BLqtf6DY6-zImOiG0xXd327fzWGs07-b2bpZM6Qr_uwFJ3fAxj4$> Facebook
<https://urldefense.com/v3/__https://www.facebook.com/SheikhImpact__;!!Ad2px7zmCw!lgNnMPZLiakTxdzTsFpTEXsJQ3O02a6s4jN0BLqtf6DY6-zImOiG0xXd327fzWGs07-b2bpZM6Qr_uwFCTrOlY0$> / LinkedIn
<https://urldefense.com/v3/__https://www.linkedin.com/company/71641797/admin/dashboard/__;!!Ad2px7zmCw!lgNnMPZLiakTxdzTsFpTEXsJQ3O02a6s4jN0BLqtf6DY6-zImOiG0xXd327fzWGs07-b2bpZM6Qr_uwFxJ7-L7Y$>

From: ande ar
To: Ceqacomments
Subject: Pro osed West Harbor Am hitheatre
Date: Monday, January 6, 2025 :05:43 PM

To the Harbor Commissioners of the Port of LA.

100 LOUD electronic concerts proposed per YEAR???

How many of you live in the area where you propose to create traffic issues and sound pollution? Not to mention that of air and water. While air quality in the San Pedro/Wilmington/Long Beach basin has improved over time, what will 100 fireworks displays do for it? I doubt there will be an improvement. And we will be inhaling this, not you. Not to mention the stress and anxiety these issues will cause to residents not only of San Pedro but Wilmington, Harbor City, Miraleste, Palos Verdes peninsula?

VANDEWARK-1

Where will all these concert cars park, gasoline fumes accumulate, attendees with no concern for the area they visit, end up? Of course the hope is they will spend more $$$ at WH restaurants, filtering into downtown. And how much of this $$ will find its way into your personal pockets? Will enough concert related jobs be created to offset the damage caused to our environment?

It seems the probability of any sound, pollution control on the part of city employees will be from negligable to nonexistent. Your tax base should not have put up with this.

A concerned, long-time resident of the port.

From: Penny on ainos i
To: Ceqacomments
Subject: West Harbor DS
Date: Monday, December 30, 2024 :5 : 3 AM

Dear Members of the Board of Harbor Commissioners,

VONKALINOWSKI-1

As a resident of San Pedro and a stakeholder with a database of over 900 other local residents, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

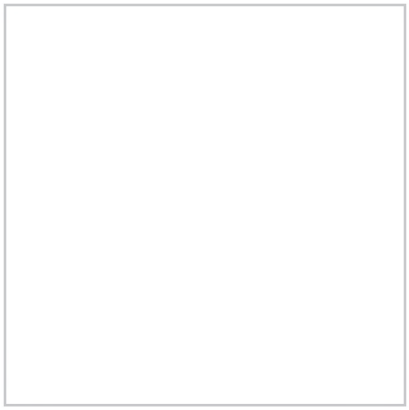
My only concern is about incoming traffic to the San Pedro area - but I'm hopeful that this can be dealt with in a way that can solve such a challenge. Perhaps bussing car passengers from a large parking area outside the area or a light rail solution could be introduced.

The expanded amphitheater and community lawn will certainly bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Most sincerely,



Penelope J. von Kalinowski

PRESIDENT

Cell: 310.592.6455

Email: Penelope@PvKAssociates.com

LinkedIn: https://www.linkedin.com/in/pvkassociates

From: ris Wa is
To: Ceqacomments
Subject: West Harbor DS
Date: hursday, December , 2024 :02:3 AM

Dear Members of the Board of Harbor Commissioners,

WALLIS-1

As a San Pedro resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

From: creative@solastapictures.com
Sent on: Thursday, December 19, 2024 7:49:16 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor DSEIR

Dear Members of the Board of Harbor Commissioners,

C.Wallis-1

As a local San Pedro business owner, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Cameron Wallis
Solasta Pictures
+1 310 801 0202
solastapictures.com

From: Kristie Wallis <kristieannwallis@gmail.com>
Sent on: Thursday, December 19, 2024 7:14:25 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor DSEIR

Dear Members of the Board of Harbor Commissioners,

KAWallis-1

As a San Pedro resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

From: Kristie Wallis <kriswallis22@gmail.com>
Sent on: Thursday, December 19, 2024 6:54:43 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: West Harbor DSEIR

Dear Members of the Board of Harbor Commissioners,

K.Wallis-1

As a San Pedro resident, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These additions will create a dynamic waterfront experience, benefiting both residents and visitors while reinforcing San Pedro's reputation as a destination for entertainment and culture.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and supporting local businesses, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your leadership and dedication to advancing this important project.

Sincerely,
Kris Wallis

From: ichard Wehmeyer
To: Ceqacomments
Subject: West Harbor
Date: hursday, January , 2025 :02:23 PM

Members of the Board of Harbor Commissioners,

WEHMEYER-1 I am writing as a homeowner and resident of San Pedro in strong support of West Harbor. Looking forward to enjoying a beer on the new and improved promenade.

Cheers,

Jeremy Wehmeyer

From: Jose yn Wi inson
To: Ceqacomments
Subject: Comment in Su ort of West Harbor
Date: uesday, December 3, 2024 3:32:4 PM

Dear Members of the Board of Harbor Commissioners,

WILKINSON-1

I work in San Pedro and I am writing to voice my strong support for the West Harbor Modification Project. The proposed enhancements, including the amphitheater, community lawn, and Ferris wheel, will create vibrant recreational spaces, attract visitors, and support our local economy.

I am confident in the mitigation measures outlined in the Draft SEIR, which demonstrate a thoughtful approach to addressing potential impacts while ensuring the project's long-term success. These measures reflect a commitment to sustainability and community benefit.

This project has the potential to boost tourism, create jobs, and further San Pedro's revitalization. I look forward to seeing our waterfront transformed into a more vibrant and welcoming destination.

Thank you for considering this important project.

Sincerely,

Joselyn Wilkinson
Development and Advancement Officer

Grand Vision Foundation | Meet the Music
434 W. 6th St., San Pedro, CA 90731
joselyn@grandvision.org | 310.833.4813 | www.grandvision.org

Laurie Wixted Inc

January 2, 2024

Dear Members of the Board of Harbor Commissioners,

As a native San Pedran from a longstanding maritime family and business community member, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth and we need to get it right. I know from my 37 years in Commercial Real Estate that these additions are an essential component in creating and ensuring a successful project for the Waterfront and the overall experience.

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These enhancements, benefiting both residents and visitors, also help to re-establish and ensure San Pedro's reputation as a destination for entertainment and dining. Having an attraction such as "the largest coastal Ferris wheel" is something needed and appealing to all demographics and ages, plus the best way to share and capitalize on our amazing Port and coast views.

WIXTED1-1

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and providing the much needed support to local businesses and downtown, it will foster long-term growth and prosperity. It will not only increase revenues and demand for downtown restaurants but will also "connect" the 22nd street attractions at Warehouse 9 & 10 to the visitors of West Harbor. The mitigation measures outlined in the Draft SEIR reflect a thoughtful approach to addressing potential challenges while prioritizing sustainability. I am especially happy to see the importance and detail placed upon planet friendly materials, microplastic prevention, and noise mitigation.

The West Harbor Modification Project represents the right vision for the future of San Pedro, and I am excited to know it is finally here. Thank you for your insight, leadership and dedication to advancing this important project.

Sincerely,

Laurie Wixted

Laurie Love Wixted

Laurie Wixted Inc

December 31, 2024

Dear Members of the Board of Harbor Commissioners,

As a native San Pedran from a longstanding maritime family and business community member, I am writing to express my strong support for the West Harbor Modification Project. This development is a transformative opportunity to revitalize San Pedro's waterfront, creating vibrant public spaces while driving economic growth and we need to get it right. I know from my 37 years in Commercial Real Estate that these additions are an essential component in creating and ensuring a successful project for the Waterfront and the overall experience.

WIXTED2-1

The expanded amphitheater and community lawn will bring new opportunities for performances, cultural events, and community activities. These enhancements, benefiting both residents and visitors, also help to re-establish and ensure San Pedro's reputation as a destination for entertainment and dining.

Economically, this project will be a major asset to our community. By attracting tourism, creating jobs, and providing the much needed support to local businesses and downtown, it will foster long-term growth and prosperity. The mitigation measures outlined in the Draft SEIR reflect a thoughtful and balanced approach to addressing potential challenges while prioritizing sustainability.

The West Harbor Modification Project represents a bold vision for the future of San Pedro, and I am excited to see it come to life. Thank you for your insight, leadership and dedication to advancing this important project.

Sincerely,

Laurie Wixted

Laurie Love Wixted

From: jerome yo oyama
To: Ceqacomments
Subject: West Harbor Modification Project
Date: uesday, January 7, 2025 7:55: 3 AM

Dear Sir or Madam,

YOKOGAMA-1

First of all, I'm all for the West Harbor which will bring needed restaurants, entertainment, events and general cleanup of the area but the reason I'm writing this letter is comment on the planned Amphitheater. I live in the Whiskey Flats area of San Pedro which is located across Fort Macarthur around 30th and Pacific Avenue. When there are events along the Waterfront the noise reaches excessive levels by "bouncing" off the huge glass Condominiums located along the hillside. The fireworks are especially excessive because of the "echoing" they receive off these buildings and noting that the Amphitheater is scheduled for 10+ fireworks events a year is unacceptable in our area. If there is an Environmental Impact Study on the noise levels that are produced by fireworks in our area I'd certainly be interested in those findings. I hope that the Port of LA does take a reading of the decibel level in the Whiskey Flats area when fireworks are used and prove to our community that the noise level is below thresholds designated by the City of Los Angeles.

I invite the Port of LA to take decibel readings during a fireworks event in the Whiskey Flats area and you'll be able to hear the multiplier effect the hillside buildings have on the noise level.

Sincerely,

Jerry Yokoyama
2848 S. Carolina St
San Pedro, CA 90731

YOUNG1-1

Dear Members of the Board of Harbor Commissioners,
As a longtime resident of coastal San Pedro, I am thrilled by the possibilities the West Harbor Modification Project brings to our community. This project represents an incredible opportunity to revitalize our waterfront and create spaces that will bring people together for years to come.
The new amphitheater and community lawn promise to be valuable additions, offering unique venues for events, performances, and gatherings that will enrich the cultural fabric of San Pedro. These spaces will provide our community with more ways to connect, celebrate, and enjoy the beauty of our harbor.
I am also confident in the thoughtful approach to traffic and noise mitigation outlined in the plans. These efforts demonstrate a clear commitment to addressing potential concerns while ensuring the project benefits the entire community.
I am excited about the positive energy and opportunities this project will bring to our neighborhood and look forward to seeing it come to life. Thank you for your dedication to making projects like this a reality for our community

Laurie Young

YOUNG2-1

Dear Members of the Board of Harbor Commissioners,
As a longtime resident of Coastal San Pedro, I am excited about the transformative potential of the West Harbor Modification Project. This development has the opportunity to elevate our waterfront into a premier destination, drawing visitors from near and far while creating new opportunities for our community.
The addition of the amphitheater is especially exciting, as it will allow San Pedro to host world-class acts and events, placing our town on the map as a cultural and entertainment hub. This venue will provide a unique experience for residents and visitors alike, showcasing the beauty of our waterfront while bringing life and energy to the area.
I am confident that the project's plans, including thoughtful measures to address traffic and noise, will ensure this transformation is positive for everyone. This is a chance to reimagine San Pedro as a vibrant destination that benefits our community and celebrates its unique character.
Thank you for your leadership in bringing this vision to life.

Mike Young

WEBVTT

1
00:00:05.170 --> 00:00:32.769
Sarah Workman: All right. Good afternoon, everyone, and welcome to the virtual public meeting for the draft. Subsequent Environmental Impact report for the West Harbor Modification project. My name is Sarah Workman. I'm an environmental specialist for the port of La in the Environmental Management Division. We'll give everyone a minute to join. And this meeting is also going to be translated simultaneously into Spanish, so I'll allow our translator a little time to introduce the instructions on how to join the Spanish Channel.

2
00:00:34.710 --> 00:00:57.469
Mario Barrera: Buena tardes la presentadora de hoy esar workmen y es especialista invental en a division de gestion ambiental del Porto de los Angeles Esta ronion tambiense traduciral, Si multani amente por personas que preferen noy la presentacione en fabor de unic alcanal en precionando el icono de en su pantalla prefer

3
00:01:00.430 --> 00:01:02.249
Mario Barrera: you can move me over now, Sam.

4
00:01:12.170 --> 00:01:13.429
Sarah Workman: All right next slide.

5
00:01:15.860 --> 00:01:36.519
Sarah Workman: All right. In this meeting. We're going to be reviewing the California Environmental Quality Act or Ceqa process for approving projects, we'll be providing an overview of the proposed project as well as reviewing the determinations made in this report. We'll also provide the new and updated mitigation measures and project features related to the project. And then we'll allow some time for public comments

6
00:01:38.140 --> 00:01:39.280
Sarah Workman: next slide.

7
00:01:41.160 --> 00:01:45.850
Sarah Workman: The West Harbor Modification Project is a draft subsequent environmental impact report

8
00:01:46.160 --> 00:01:56.110
Sarah Workman: to the 2,009 San Pedro waterfront environmental impact statement, slash environmental impact report that encompasses the greater San Pedro waterfront

redevelopment.

9
00:01:57.050 --> 00:02:07.149
Sarah Workman: A subsequent eir is utilized when a substantial change is made to a previously certified and approved project that may result in impact termination changes.

10
00:02:07.490 --> 00:02:18.690
Sarah Workman: There were also 2 addenda to the original document in 2016 and 2019 to include minor changes to the spw projects that did not require additional environmental analysis.

11
00:02:20.940 --> 00:02:26.419
Sarah Workman: The notice of preparation and initial study for this project was released in April of 2022,

12
00:02:26.560 --> 00:02:30.769
Sarah Workman: and public comments were accepted until June 15th of 2022

13
00:02:31.980 --> 00:02:36.819
Sarah Workman: comments received in the public review period. For the 2022 Nopis

14
00:02:36.870 --> 00:02:39.850
Sarah Workman: were incorporated into this draft. Seir.

15
00:02:41.570 --> 00:02:47.899
Sarah Workman: based on the results of the initial study. Additional analysis of environmental impacts was deemed to be warranted.

16
00:02:47.940 --> 00:02:59.529
Sarah Workman: which is where the subsequent Eir process began. We are now in the public and agency input phase of the Ceqa process as indicated by this chart. You can see us down here we are in the public meeting.

17
00:02:59.880 --> 00:03:08.149
Sarah Workman: Comments received during this period will be incorporated into the final subsequent Eir, which will then go to the board for certification

18
00:03:12.500 --> 00:03:13.570
Sarah Workman: next slide.

19
00:03:15.870 --> 00:03:19.399
Sarah Workman: The draft document was released last Wednesday, the 6, th

20
00:03:19.470 --> 00:03:28.719
Sarah Workman: and is available for review on the port's website as well as at the Harbor Department office. If you wish to review a hard copy in person, you can reach out to schedule an appointment.

21
00:03:29.240 --> 00:03:38.539
Sarah Workman: We have also received requests for extensions of the public review period, and have extended an additional 15 days to January 10, th 2025,

22
00:03:38.660 --> 00:03:42.710
Sarah Workman: please be advised. All comments received will become part of the public record.

23
00:03:46.970 --> 00:03:48.400
Sarah Workman: All right. Next slide.

24
00:03:50.860 --> 00:04:00.629
Sarah Workman: This diagram includes the San Pedro public market area, which is outlined in yellow and the portions in red are specific to this West Harbor modification project.

25
00:04:03.670 --> 00:04:04.750
Sarah Workman: Next slide.

26
00:04:06.260 --> 00:04:10.700
Sarah Workman: Here we have a zoomed in version of the site plan again for the San Pedro public market.

27
00:04:10.830 --> 00:04:12.809
Sarah Workman: which is outlined here in red

28
00:04:12.990 --> 00:04:17.290
Sarah Workman: and the blue areas outlined represent the proposed project areas

29
00:04:21.899 --> 00:04:22.970

Sarah Workman: next slide.

30
00:04:25.590 --> 00:04:36.859
Sarah Workman: So, as I mentioned before, this project is a subsequent report to the 2,009 San Pedro Waterfront Environmental Impact Report and the 2016 and 2019 San Pedro public Market Addenda.

31
00:04:37.250 --> 00:04:44.840
Sarah Workman: The 2,016 addendum included the development of a 6.4 acre amusement area with a 100 foot Ferris wheel, carousel.

32
00:04:44.880 --> 00:04:48.410
Sarah Workman: entertainment, attractions, and a 500 seat amphitheater.

33
00:04:49.870 --> 00:04:54.770
Sarah Workman: The amphitheater was previously featured as part of the City park area in the 2,009 document.

34
00:04:54.930 --> 00:05:00.619
Sarah Workman: As a result, these elements of the project that have been previously assessed, including the amusement attractions.

35
00:05:00.740 --> 00:05:05.589
Sarah Workman: are deemed approved in prior documents, and will not be addressed specifically in this document

36
00:05:05.970 --> 00:05:16.239
Sarah Workman: the 2,019 addendum added an additional 16 years onto the lease of the property for the San Pedro public market, and did not introduce additional analysis or mitigation.

37
00:05:16.810 --> 00:05:25.729
Sarah Workman: Determinations made in this document are compared to prior determinations, and have been assessed, based on whether or not they substantially increase the severity of impacts

38
00:05:25.750 --> 00:05:32.109
Sarah Workman: or meet criteria to be considered a significant and unavoidable impact based on new project elements.

39

00:05:35.410 --> 00:05:36.510
Sarah Workman: Next slide.

40
00:05:39.100 --> 00:05:47.960
Sarah Workman: This project includes the construction and operation of a 6,200 person capacity amphitheater, with lawn seating on the southern portion of the site.

41
00:05:48.350 --> 00:05:55.630
Sarah Workman: as mentioned before, the prior documents had approved a 500 person capacity amphitheater. So this one is going to be substantially larger.

42
00:05:56.530 --> 00:06:00.160
Sarah Workman: based on comments received on the initial study in 2022,

43
00:06:00.310 --> 00:06:07.280
Sarah Workman: an additional parking lot, with up to 2,600 parking stalls at 208 East 20 Second Street was added to this project

44
00:06:07.670 --> 00:06:12.200
Sarah Workman: also the previously approved 100 foot Ferris wheel has been reassessed in this document

45
00:06:12.230 --> 00:06:16.370
Sarah Workman: since the diameter size is now 175 feet, which is substantially larger.

46
00:06:20.170 --> 00:06:21.210
Sarah Workman: Next slide.

47
00:06:24.970 --> 00:06:36.490
Sarah Workman: The project objectives include the enhancement and revitalization of the San Pedro waterfront by including a substantially larger outdoor concert amphitheater and park space to attract visitors to the San Pedro waterfront.

48
00:06:37.060 --> 00:06:45.259
Sarah Workman: as well as to update update previously adopted mitigation measures and include improvements to the 208 East 20 Second Street parking lot

49
00:06:45.630 --> 00:06:54.890
Sarah Workman: to provide public access to the San Pedro waterfront and to provide

for waterfront uses and visitors serving commercial opportunities in the former ports call village

50
00:07:01.780 --> 00:07:02.850
Sarah Workman: next slide.

51
00:07:07.000 --> 00:07:11.419
Sarah Workman: The amphitheater is going to be a 12,000 square foot stage building.

52
00:07:11.510 --> 00:07:17.420
Sarah Workman: It will be 60 feet tall and be raised 6 feet off the ground for the stage.

53
00:07:17.690 --> 00:07:23.410
Sarah Workman: It will consist of 6,000 square feet of stage area and 6,000 square feet

54
00:07:23.670 --> 00:07:27.100
Sarah Workman: of a support office and backstage area

55
00:07:27.410 --> 00:07:30.089
Sarah Workman: there will be a 50,000 square foot lawn

56
00:07:30.530 --> 00:07:36.790
Sarah Workman: in front of it. It will be made from artificial field turf, which is specifically designed for festivals and event spaces.

57
00:07:37.090 --> 00:07:44.249
Sarah Workman: The fibers are made from UV stabilized polyethylene with polyurethane coated backing to prevent degrading in the sun.

58
00:07:44.710 --> 00:07:47.840
Sarah Workman: The ground rubber infill will not be used in this turf.

59
00:07:47.870 --> 00:07:55.299
Sarah Workman: It'll be using sand, ground, cork, or other inert materials to prevent exposure to polyfluoroalkyl substances or pfas.

60
00:07:56.080 --> 00:08:08.690

Sarah Workman: A 22,000 square foot. Two-story facility behind the lawn will be constructed with restrooms, a concession space, a Vip area, a 1st Aid station security lockers and venue support spaces.

61
00:08:10.590 --> 00:08:14.380
Sarah Workman: The project is anticipated to begin construction in 2025,

62
00:08:14.450 --> 00:08:17.170
Sarah Workman: and will take approximately 15 months to complete

63
00:08:21.890 --> 00:08:22.900
Sarah Workman: next slide.

64
00:08:25.230 --> 00:08:30.689
Sarah Workman: The amphitheater is anticipated to have a hundred events annually, generally from April. Through November.

65
00:08:31.160 --> 00:08:38.230
Sarah Workman: the event space will be fenced off with temporary fencing during events, so that the rest of the San Pedro public market will be accessible to the public

66
00:08:39.409 --> 00:08:44.510
Sarah Workman: concerts, will typically start between 7 and 9 Pm. And last approximately 3 h.

67
00:08:44.940 --> 00:08:51.640
Sarah Workman: and up to 25 fireworks shows per year are anticipated to accompany amphitheater events lasting up to 20 min.

68
00:08:52.070 --> 00:08:57.190
Sarah Workman: the fireworks would be launched from a barge near berth 46, which is approximately a mile south of the site

69
00:08:57.370 --> 00:09:02.109
Sarah Workman: and must be permitted through the Los Angeles Regional Water Quality Control Board and the Us. Coast Guard

70
00:09:06.750 --> 00:09:07.790
Sarah Workman: next slide.

71
00:09:10.430 --> 00:09:22.340
Sarah Workman: The Ferris wheel, as we mentioned, will be 175 feet in diameter. It'll be made from prefabricated parts, which will be shipped from the manufacturer to the location and assembled over approximately 60 days.

72
00:09:22.910 --> 00:09:33.619
Sarah Workman: The amusement attractions which again were previously included in a 2016 analysis can include a carousel wave swings in or drop tower, or similar mechanical rides.

73
00:09:36.810 --> 00:09:37.829
Sarah Workman: Next slide

74
00:09:42.560 --> 00:09:55.089
Sarah Workman: development of the parking lot at 208 East 20 Second Street would involve the removal of existing structures, followed by grading and paving, to provide up to 2,600 additional parking stalls for use by the greater San Pedro waterfront.

75
00:09:59.990 --> 00:10:01.060
Sarah Workman: Next slide

76
00:10:03.930 --> 00:10:13.069
Sarah Workman: a notice of preparation. Initial study was performed in 2022. As we mentioned before, this study uses a Ceqa checklist to determine the scope of the draft Seir.

77
00:10:13.580 --> 00:10:22.610
Sarah Workman: The areas listed above were found to have no impacts or less than significant impacts for the proposed projects. They include agriculture and forestry, resources.

78
00:10:22.650 --> 00:10:29.120
Sarah Workman: energy, geology and soils, land use and planning, mineral resources, population and housing

79
00:10:29.420 --> 00:10:32.559
Sarah Workman: utilities and service systems and wildfires.

80

00:10:33.600 --> 00:10:45.860
Sarah Workman: The 2 subject areas at the bottom of the slide were found to have no impacts in the 2022 initial study, but were added to the draft. Seir, following the inclusion of the 208 East 20 Second street parking lot redevelopment.

81
00:10:45.910 --> 00:10:50.210
Sarah Workman: And those include hazards and hazardous materials as well as cultural resources.

82
00:10:54.220 --> 00:10:55.449
Sarah Workman: Next slide. Okay?

83
00:10:56.060 --> 00:11:06.899
Sarah Workman: So the impacts listed on the left side of the slide were determined to be less than significant, and therefore will not be discussed further. In this presentation. The impacts on the right hand side were determined to be significant.

84
00:11:07.210 --> 00:11:12.310
Sarah Workman: The impacts with an asterisk were determined to be less than significant with mitigation implemented.

85
00:11:12.540 --> 00:11:13.909
Sarah Workman: Those include

86
00:11:14.450 --> 00:11:21.230
Sarah Workman: air, quality, biological resources, hazards and hazardous materials, greenhouse gas emissions and public services.

87
00:11:24.960 --> 00:11:26.720
Sarah Workman: and the impact areas

88
00:11:27.580 --> 00:11:32.900
Sarah Workman: that were not considered less than significant. Following mitigation or transportation and noise.

89
00:11:33.360 --> 00:11:38.599
Sarah Workman: Again, we will be discussing all of the issues listed on the right hand side of this slide throughout this meeting.

90
00:11:41.670 --> 00:11:42.660

Sarah Workman: Next slide.

91
00:11:45.150 --> 00:11:48.569
Sarah Workman: So the 1st significant impact we will discuss is transportation

92
00:11:48.870 --> 00:11:56.420
Sarah Workman: in 2,009 level of service or los was used to determine transportation impacts in the form of vehicle delays.

93
00:11:57.510 --> 00:12:02.309
Sarah Workman: The 2,009. Report included mitigation measures, Tc. One through 26,

94
00:12:02.810 --> 00:12:07.830
Sarah Workman: which include development of a traffic control plan, modification of signals and streets.

95
00:12:07.870 --> 00:12:10.020
Sarah Workman: reconfiguring of harbor boulevard.

96
00:12:10.120 --> 00:12:17.039
Sarah Workman: minimizing conflicts with existing attractions in the area providing traffic control and offsetting parking loss.

97
00:12:18.320 --> 00:12:23.220
Sarah Workman: These mitigation measures are in the process of being implemented throughout the larger spw projects

98
00:12:24.140 --> 00:12:35.900
Sarah Workman: as of 2020. The guideline for the analysis of transportation impacts was changed to be calculated as vehicle miles traveled which takes into account the average trip length of patrons and employees.

99
00:12:36.660 --> 00:12:44.440
Sarah Workman: The analysis for this project was based on data from comparable event venues, including the Greek Theater in Los Angeles and the Long Beach Terrace Theater.

100
00:12:45.270 --> 00:12:52.650
Sarah Workman: due to the potential increase in vehicle miles traveled as a result of the amphitheater. This impact is considered significant and unavoidable.

101
00:12:57.050 --> 00:12:58.060
Sarah Workman: Next slide

102
00:12:58.680 --> 00:13:12.469
Sarah Workman: because of the significant, unavoidable determination. Feasible mitigation must be included in the project. So in this case transportation demand management strategies are going to be implemented to reduce the transportation impacts of the proposed project.

103
00:13:13.130 --> 00:13:18.830
Sarah Workman: These strategies include event-specific, expanded public transit event ticket packaging

104
00:13:18.960 --> 00:13:21.190
Sarah Workman: traveler information wayfinding.

105
00:13:21.210 --> 00:13:29.740
Sarah Workman: event-specific education and outreach carpooling incentive program designating priority, parking spaces for electric and clean air vehicles.

106
00:13:30.020 --> 00:13:32.909
Sarah Workman: encouraging the use of satellite, shuttle service.

107
00:13:33.410 --> 00:13:35.830
Sarah Workman: carpooling, application, coordination.

108
00:13:35.960 --> 00:13:41.050
Sarah Workman: active transportation, communication and providing end of trip bicycle facilities

109
00:13:43.600 --> 00:13:44.660
Sarah Workman: next slide

110
00:13:47.030 --> 00:13:56.290
Sarah Workman: in terms of parking that will be available for West Harbor and the San Pedro waterfront project will set up a parking system that distinguishes between premium and general parking

111

00:13:57.170 --> 00:14:03.950
Sarah Workman: premium parking will be located in the West harbor and bluff lots which are closest to the amphitheater, and are pictured here in blue.

112
00:14:05.550 --> 00:14:14.239
Sarah Workman: General parking will be located in the 20 Second street lot, and a shuttle service will be available to transport guests from the off-site parking to the amphitheater

113
00:14:15.130 --> 00:14:22.630
Sarah Workman: event. Attendees will have the option to purchase parking in advance when buying tickets to help ensure smoother access to parking on event days

114
00:14:23.660 --> 00:14:26.239
Sarah Workman: now going to hand this over to Carrie Cartwright.

115
00:14:26.650 --> 00:14:29.070
Sarah Workman: Port of Los Angeles, Director of Goods Movement.

116
00:14:29.490 --> 00:14:31.010
Sarah Workman: to discuss the

117
00:14:31.100 --> 00:14:33.360
Sarah Workman: traffic operational analysis.

118
00:14:35.050 --> 00:14:35.950
Kerry Cartwright: Thank you, Sarah.

119
00:14:36.683 --> 00:14:40.760
Kerry Cartwright: I'm going to provide a brief overview of the traffic. Analysis is conducted.

120
00:14:41.462 --> 00:14:42.489
Kerry Cartwright: For this project

121
00:14:42.980 --> 00:14:46.879
Kerry Cartwright: and elaborate a little bit on some of the

122
00:14:47.320 --> 00:14:51.269

Kerry Cartwright: identified traffic management plan measures.

123
00:14:52.177 --> 00:14:54.239
Kerry Cartwright: In addition to the Td measures that Sarah

124
00:14:54.490 --> 00:14:58.740
Kerry Cartwright: talk about previously, this table, I know, is a lot of data or information.

125
00:14:58.900 --> 00:15:02.820
Kerry Cartwright: And it's additional information that's not required

126
00:15:03.270 --> 00:15:06.079
Kerry Cartwright: by state ceqa guidelines.

127
00:15:06.460 --> 00:15:10.380
Kerry Cartwright: It's identified as additional analyses

128
00:15:10.430 --> 00:15:13.460
Kerry Cartwright: that we do for all our projects.

129
00:15:14.193 --> 00:15:20.259
Kerry Cartwright: And it's also required by the Los Angeles Department of Transportation. It's supplemental information

130
00:15:21.057 --> 00:15:24.259
Kerry Cartwright: to convey to the public at large

131
00:15:24.570 --> 00:15:27.530
Kerry Cartwright: and our board members. But it's not used for identifying

132
00:15:27.650 --> 00:15:29.760
Kerry Cartwright: Ceqa impacts.

133
00:15:31.600 --> 00:15:52.950
Kerry Cartwright: And what you see is estimated traffic operations identified with the metric a measurement of delay, average delay that would be experienced by all vehicles at these intersections. Again, it's an average weighted delay.

134
00:15:53.403 --> 00:15:56.469
Kerry Cartwright: Some vehicles might be delayed a little bit

135
00:15:56.480 --> 00:15:58.790
Kerry Cartwright: longer and a little bit shorter.

136
00:15:59.360 --> 00:16:03.629
Kerry Cartwright: and the grade that you see there under the level of service column

137
00:16:03.730 --> 00:16:06.700
Kerry Cartwright: as a standard grade used by

138
00:16:06.780 --> 00:16:09.560
Kerry Cartwright: traffic engineers throughout the world.

139
00:16:10.400 --> 00:16:18.239
Kerry Cartwright: And for many decades, in terms of measuring the performance of of traffic operations

140
00:16:18.270 --> 00:16:20.380
Kerry Cartwright: based upon that

141
00:16:20.480 --> 00:16:23.280
Kerry Cartwright: average delay per vehicle

142
00:16:24.195 --> 00:16:27.919
Kerry Cartwright: throughout the the course of a peak hour

143
00:16:28.270 --> 00:16:30.170
Kerry Cartwright: of of traffic.

144
00:16:30.760 --> 00:16:31.990
Kerry Cartwright: And

145
00:16:32.370 --> 00:16:37.189
Kerry Cartwright: typically and it's discussed in the appendices. But typically

146

00:16:37.210 --> 00:16:41.889
Kerry Cartwright: a level service A through C is is excellent to very good

147
00:16:42.030 --> 00:16:45.939
Kerry Cartwright: operations, and D is considered acceptable.

148
00:16:46.140 --> 00:16:49.629
Kerry Cartwright: and you can see in this table

149
00:16:49.730 --> 00:16:51.150
Kerry Cartwright: that the

150
00:16:52.080 --> 00:16:53.960
Kerry Cartwright: projected

151
00:16:54.190 --> 00:16:56.310
Kerry Cartwright: operating conditions

152
00:16:56.380 --> 00:16:58.820
Kerry Cartwright: under the opening day

153
00:16:58.870 --> 00:17:03.169
Kerry Cartwright: scenario for this project 2027. The time that this analysis was conducted.

154
00:17:03.674 --> 00:17:10.159
Kerry Cartwright: Not sure if that'll slip to your 2028 or not, but you can see that all the intersections we analyzed

155
00:17:10.420 --> 00:17:14.619
Kerry Cartwright: from all the way up to the Vincent Thomas Bridge interchange

156
00:17:14.940 --> 00:17:18.039
Kerry Cartwright: down to 20 Second Street

157
00:17:18.180 --> 00:17:24.390
Kerry Cartwright: is projected to operate at most of them at a excellent to very good level of service. C.

158
00:17:25.096 --> 00:17:29.384
Kerry Cartwright: With really only one location or 2 locations.

159
00:17:29.970 --> 00:17:31.890
Kerry Cartwright: on a Sunday, Pm. Peak.

160
00:17:31.950 --> 00:17:34.120
Kerry Cartwright: Estimated level of service D,

161
00:17:34.130 --> 00:17:42.410
Kerry Cartwright: and so we consider that fairly good conditions that are projected, and you can see the corresponding measured

162
00:17:42.910 --> 00:17:49.340
Kerry Cartwright: level service or operating conditions from actual traffic counts for the year 2021.

163
00:17:50.720 --> 00:17:55.979
Kerry Cartwright: The other thing to note that we obviously, as you can see on the table. We looked at 2 scenarios

164
00:17:56.250 --> 00:17:58.310
Kerry Cartwright: and evening

165
00:17:59.153 --> 00:18:05.019
Kerry Cartwright: performance at the amphitheater and a Sunday evening weekday and weekend

166
00:18:05.462 --> 00:18:08.989
Kerry Cartwright: but this analysis, when you see pm, it means the

167
00:18:10.520 --> 00:18:13.180
Kerry Cartwright: peak hour, or the commute peak hour.

168
00:18:13.320 --> 00:18:17.319
Kerry Cartwright: which is typically anywhere between 4 and 6 Pm.

169
00:18:17.785 --> 00:18:27.040

Kerry Cartwright: Along this quarter it varies obviously by day and over time. Sometimes it might be 4 and 5, 4, 30 to 5, 35 to 6.

170
00:18:27.541 --> 00:18:30.350
Kerry Cartwright: So that is the the hour that's being

171
00:18:30.390 --> 00:18:32.270
Kerry Cartwright: measured for its performance

172
00:18:32.290 --> 00:18:38.299
Kerry Cartwright: on both the weekday and the weekend, and in this analysis, for

173
00:18:38.530 --> 00:18:41.107
Kerry Cartwright: both the weekday and week weekend, which is

174
00:18:41.922 --> 00:18:47.469
Kerry Cartwright: for the most part 5 to 6 to be conservative, to

175
00:18:47.630 --> 00:18:51.710
Kerry Cartwright: also account for arrivals to the amphitheater

176
00:18:51.910 --> 00:18:54.149
Kerry Cartwright: before the the venue

177
00:18:54.310 --> 00:18:57.560
Kerry Cartwright: event commencing at 7 Pm.

178
00:18:58.053 --> 00:18:59.746
Kerry Cartwright: That that in air

179
00:19:00.180 --> 00:19:02.109
Kerry Cartwright: hour was analyzed

180
00:19:02.580 --> 00:19:09.809
Kerry Cartwright: and we didn't analyze the outbound, because we know that obviously traffic volumes a lot lower, as say, at 10 o'clock at night.

181
00:19:09.830 --> 00:19:13.950

Kerry Cartwright: But we are obviously looking at

182
00:19:14.000 --> 00:19:21.530
Kerry Cartwright: traffic control measures for the outbound as well. Whether it's a weekend or weekday that I'll show on the the next slide

183
00:19:24.120 --> 00:19:25.320
Kerry Cartwright: next slide, please.

184
00:19:27.600 --> 00:19:31.410
Kerry Cartwright: These are the various measures that will be implemented

185
00:19:32.335 --> 00:19:34.240
Kerry Cartwright: for the event.

186
00:19:35.825 --> 00:19:39.099
Kerry Cartwright: And the port has extensive experience

187
00:19:39.270 --> 00:19:41.919
Kerry Cartwright: dealing with high levels of traffic

188
00:19:42.100 --> 00:19:43.915
Kerry Cartwright: along Harbor, Boulevard

189
00:19:44.890 --> 00:19:47.919
Kerry Cartwright: or special events, such as Fleet Week, which is

190
00:19:47.930 --> 00:19:50.290
Kerry Cartwright: obviously not nearly the amount of

191
00:19:50.560 --> 00:19:53.519
Kerry Cartwright: patron, is expected to join an event here.

192
00:19:53.970 --> 00:19:56.600
Kerry Cartwright: and also the cruise facility

193
00:19:56.650 --> 00:19:59.530
Kerry Cartwright: traffic Control officers will be stationed accordingly.

194
00:20:00.528 --> 00:20:03.879
Kerry Cartwright: To control traffic where it's felt that the

195
00:20:04.310 --> 00:20:10.260
Kerry Cartwright: volume of traffic is overwhelming. The the signal phasing and timing.

196
00:20:10.480 --> 00:20:13.859
Kerry Cartwright: and they would give priority control to

197
00:20:14.400 --> 00:20:17.151
Kerry Cartwright: for events right before

198
00:20:18.040 --> 00:20:21.699
Kerry Cartwright: The event opening and on the outbound departure

199
00:20:21.750 --> 00:20:23.679
Kerry Cartwright: for the North South movements

200
00:20:23.780 --> 00:20:27.850
Kerry Cartwright: obviously still providing for any other movements in and out of the intersection.

201
00:20:28.000 --> 00:20:30.740
Kerry Cartwright: This is typically done at many venues

202
00:20:30.960 --> 00:20:35.720
Kerry Cartwright: frankly around North America and specialized traffic control for big events

203
00:20:36.902 --> 00:20:42.229
Kerry Cartwright: pedestrian control and crossing guards as well. Obviously pedestrian safety is going to be key for those people that choose to park

204
00:20:42.360 --> 00:20:47.480
Kerry Cartwright: and public parking locations on street or off street to the west

205

00:20:47.880 --> 00:20:49.059
Kerry Cartwright: of the area

206
00:20:49.250 --> 00:20:50.800
Kerry Cartwright: in San Pedro.

207
00:20:52.154 --> 00:20:55.495
Kerry Cartwright: And they and even those that might get dropped off

208
00:20:55.930 --> 00:20:56.695
Kerry Cartwright: by

209
00:20:58.180 --> 00:21:04.049
Kerry Cartwright: Uber or the like, before they they enter into Harbor Boulevard.

210
00:21:04.420 --> 00:21:07.910
Kerry Cartwright: Portable, changeable omissa signs. They'll be deployed

211
00:21:08.150 --> 00:21:11.270
Kerry Cartwright: key locations along this route.

212
00:21:11.440 --> 00:21:12.325
Kerry Cartwright: and

213
00:21:13.450 --> 00:21:19.006
Kerry Cartwright: We'll be also looking to work with Caltrans if we expect a

214
00:21:19.580 --> 00:21:21.840
Kerry Cartwright: a maximum capacity event

215
00:21:21.950 --> 00:21:24.250
Kerry Cartwright: to possibly use their existing

216
00:21:24.300 --> 00:21:26.160
Kerry Cartwright: fix. Changeable message signs

217
00:21:27.503 --> 00:21:37.850
Kerry Cartwright: to provide real time info on the traffic routing. If our boulevard

is is queued up significantly to direct them to other routes. Accordingly.

218
00:21:37.870 --> 00:21:38.860
Kerry Cartwright: temporarily

219
00:21:40.060 --> 00:21:41.490
Kerry Cartwright: for inbound

220
00:21:41.670 --> 00:21:44.940
Kerry Cartwright: and also for parking areas

221
00:21:45.790 --> 00:21:49.459
Kerry Cartwright: and information of one parking lot is full versus the other.

222
00:21:49.880 --> 00:21:52.699
Kerry Cartwright: And we'll also look at potential Lane

223
00:21:52.820 --> 00:21:54.286
Kerry Cartwright: control measures.

224
00:21:55.090 --> 00:22:00.440
Kerry Cartwright: which would entail use of delineators and or cones

225
00:22:00.900 --> 00:22:05.980
Kerry Cartwright: to possibly provide a 3rd lane southbound for arrivals

226
00:22:06.430 --> 00:22:09.329
Kerry Cartwright: and northbound for departures

227
00:22:10.220 --> 00:22:13.560
Kerry Cartwright: between 7th Street and and the the freeway.

228
00:22:13.910 --> 00:22:30.149
Kerry Cartwright: to expedite moving in and out. If we have maximum capacity events. That it it's prudent to do such deployment of temporary measures. And of course that would be subject to the city of Los Angeles Department transportation

229
00:22:30.470 --> 00:22:33.949

Kerry Cartwright: because they own and control Harbor Boulevard.

230
00:22:35.730 --> 00:22:38.539
Kerry Cartwright: That concludes my slides on traffic

231
00:22:38.870 --> 00:22:39.850
Kerry Cartwright: aspects.

232
00:22:43.140 --> 00:22:53.539
Sarah Workman: All right. So the air quality analysis indicated that no newer, substantially more severe impacts would occur to air, quality and health risk than were previously analyzed. In the 2,009 document

233
00:22:53.670 --> 00:23:02.979
Sarah Workman: the project specific emissions would be below thresholds for all pollutants, but as a whole, again, the greater San Pedro waterfront project emissions would remain significant and unavoidable

234
00:23:05.140 --> 00:23:06.160
Sarah Workman: next slide.

235
00:23:09.420 --> 00:23:18.739
Sarah Workman: As a result, the mitigation measures listed here are discussed in this draft. Seir, in relation to the proposed project and are mostly carried forward from the 2,009 document.

236
00:23:18.950 --> 00:23:30.969
Sarah Workman: They include construction related requirements for fleet modernization, dust control, best management practices and special precautions near sensitive sites, as well as the use of led light bulbs throughout the project. To increase efficiency.

237
00:23:31.210 --> 00:23:42.529
Sarah Workman: mitigation. Measure. Aq. 31 is a new mitigation measure specific to the proposed project and stipulates the use of 0 emission shuttle buses for amphitheater events to the extent commercially available.

238
00:23:44.200 --> 00:23:45.200
Sarah Workman: Next slide.

239

00:23:47.410 --> 00:23:58.519
Sarah Workman: The proposed project also has potential to have a significant effect on marine mammals and water birds, due to noise from events and fireworks as well as trash. Entering waterways. Following these events.

240
00:24:00.580 --> 00:24:01.640
Sarah Workman: next slide

241
00:24:03.990 --> 00:24:08.269
Sarah Workman: to reduce the potential for these impacts, the following mitigation measures are included.

242
00:24:08.300 --> 00:24:15.199
Sarah Workman: mitigation measure bio 2, which is carried over from the 2,009 document is applicable to construction activities.

243
00:24:15.480 --> 00:24:25.359
Sarah Workman: Mitigation measures 7 and 10 involve the use of biodegradable venue products and requirements for trash cleanup following events to prevent plastic and paper waste from entering the harbor.

244
00:24:25.770 --> 00:24:34.600
Sarah Workman: Mitigation measures 8 and 9 require a monitor to observe marine, mammal, and California least turn populations at nearby sites during fireworks events.

245
00:24:36.110 --> 00:24:39.589
Sarah Workman: and to report any change in behavior in relation to fireworks

246
00:24:39.620 --> 00:24:42.129
Sarah Workman: to prevent distress to sensitive species.

247
00:24:43.130 --> 00:24:45.370
Sarah Workman: Mitigation measure. Bio 11

248
00:24:45.450 --> 00:24:54.000
Sarah Workman: relates specifically to project structures such as the Ferris wheel and amusement attractions and prevents the clearance of abandoned nests during the breeding bird season.

249

00:24:57.630 --> 00:24:58.680
Sarah Workman: Next slide

250
00:24:59.580 --> 00:25:11.129
Sarah Workman: similar to the air quality analysis, the greenhouse gas emissions. Analysis indicated that no new or substantially more severe impacts would occur than were previously analyzed. In the 2,009 document.

251
00:25:11.450 --> 00:25:25.729
Sarah Workman: The impact assessment for greenhouse gas consists of reviewing plans and policies intended to reduce Ghg emissions and climate change impacts and determining whether or not the project would be in conflict with any established plans and policies.

252
00:25:26.140 --> 00:25:29.280
Sarah Workman: This project was not determined to be in conflicts.

253
00:25:29.370 --> 00:25:35.840
Sarah Workman: but the impact determination remains significant, based on the assessment of the San Pedro waterfront project as a whole.

254
00:25:38.100 --> 00:25:45.419
Sarah Workman: So a new project feature was added to address greenhouse gas emissions for this project. That's project feature, Ghg. One.

255
00:25:45.720 --> 00:25:52.910
Sarah Workman: This involves the installation of solar canopies over the main parking lot that will generate approximately 1.4 megawatts of energy.

256
00:25:53.770 --> 00:26:03.630
Sarah Workman: The additional mitigation measures listed here are included from transportation and air quality chapters because they co-benefit the greenhouse gas emissions. Reduction efforts for this project.

257
00:26:07.250 --> 00:26:08.370
Sarah Workman: Next slide

258
00:26:10.860 --> 00:26:17.709
Sarah Workman: operational noise from the amphitheater was assessed to determine impacts on nearby noise-sensitive receptors.

259
00:26:18.410 --> 00:26:25.689
Sarah Workman: The assessment is based on a focused technical study as well as measured ambient noise levels existing in the surrounding area.

260
00:26:26.340 --> 00:26:35.199
Sarah Workman: The analysis indicated that significant impacts would occur to residences on Terminal Island, as well as to liveaboards in the marinas nearest to the site.

261
00:26:36.040 --> 00:26:42.430
Sarah Workman: Noise from proposed fireworks displays would also create significant impacts to these specific residences.

262
00:26:42.790 --> 00:26:50.700
Sarah Workman: In both cases project features and mitigation measures would reduce noise impacts, but the impact determination remains significant and unavoidable.

263
00:26:52.370 --> 00:26:53.380
Sarah Workman: Next slide.

264
00:26:56.890 --> 00:27:03.350
Sarah Workman: So the listed project feature, mitigation measures here are intended to reduce the impacts of noise on the surrounding area

265
00:27:03.980 --> 00:27:10.199
Sarah Workman: project feature Noi. One incorporating sound focusing design into the amphitheater sound system

266
00:27:10.400 --> 00:27:16.999
Sarah Workman: is intended to direct noise southward toward the audience and to prevent excessive noise from being amplified into the surrounding community.

267
00:27:17.470 --> 00:27:32.860
Sarah Workman: The additional mitigation measures serve to limit construction, noise, and to establish enforcement of any noise that is outside of the parameters of a tier. One event which includes the 100 events at the amphitheater that will be permitted to use amplified noise for more than 500 patrons.

268
00:27:34.610 --> 00:27:40.919
Sarah Workman: Mitigation measures 11 through 14 also limit the frequency and

duration of firework shows permitted.

269
00:27:48.150 --> 00:27:49.190
Sarah Workman: Next slide.

270
00:27:50.970 --> 00:28:02.620
Sarah Workman: The hazards and hazardous materials. Impact area was brought into this document as a result of the addition of the 2 0 8 East 20 Second Street parking lot to address existing contamination at that site

271
00:28:02.950 --> 00:28:08.390
Sarah Workman: with the implementation of mitigation Measure House one, the development of a soil management plan for the site.

272
00:28:08.450 --> 00:28:11.960
Sarah Workman: This impact determination was reduced to less than significant.

273
00:28:20.690 --> 00:28:29.330
Sarah Workman: The analysis of public services. Impacts indicated that temporary impacts to emergency access could occur during construction of this project.

274
00:28:29.510 --> 00:28:39.779
Sarah Workman: The operation of this project is expected to increase demand for public services, especially during events, but it will be reduced to less than significant levels with the mitigation measures provided

275
00:28:42.960 --> 00:28:43.940
Sarah Workman: next slide.

276
00:28:45.040 --> 00:28:54.379
Sarah Workman: The public services, mitigation measures include coordination with law enforcement agencies during the construction phase to reduce impacts on emergency access during construction.

277
00:28:54.430 --> 00:28:57.159
Sarah Workman: And that's carried over from the 2,009 document.

278
00:28:57.540 --> 00:29:03.879
Sarah Workman: In addition, the mitigation measure, Ps. 5 is related to wastewater conservation and wastewater reduction.

279
00:29:04.020 --> 00:29:07.040
Sarah Workman: and is also carried forward from the prior document.

280
00:29:07.830 --> 00:29:12.260
Sarah Workman: Mitigation measure, Ps. 7 is a new public services mitigation measure

281
00:29:12.380 --> 00:29:16.070
Sarah Workman: that includes installing blue phones for emergency services.

282
00:29:16.120 --> 00:29:19.570
Sarah Workman: preventing traffic backups with signage and coordination

283
00:29:19.620 --> 00:29:31.069
Sarah Workman: incorporating closed circuit cameras throughout the site to provide footage to the emergency logistics team that will be available to police during events and up to 28 days following events as needed

284
00:29:34.450 --> 00:29:35.540
Sarah Workman: next slide.

285
00:29:36.930 --> 00:29:42.499
Sarah Workman: So Ceqa also requires that cumulative impacts of projects be considered regionally

286
00:29:42.920 --> 00:29:52.229
Sarah Workman: under the cumulative impact determination. We assess the project's impact in combination with 42 other concurrent projects that are happening in and around the port.

287
00:29:52.750 --> 00:30:02.620
Sarah Workman: This project would contribute to cumulatively considerable impacts in both air quality and greenhouse gas emissions, which is consistent with what was assessed in the prior document.

288
00:30:02.640 --> 00:30:05.650
Sarah Workman: It will not be increased substantially by this project

289
00:30:09.580 --> 00:30:10.680

Sarah Workman: next slide.

290
00:30:11.770 --> 00:30:16.659
Sarah Workman: So some of the mitigation measures that we've mentioned that were brought forth from the prior document

291
00:30:16.670 --> 00:30:19.829
Sarah Workman: have been updated or removed, and those ones are listed here.

292
00:30:20.530 --> 00:30:27.309
Sarah Workman: These mitigation measures have been changed or removed, due to technological updates, redundancy or increased standards.

293
00:30:28.000 --> 00:30:32.010
Sarah Workman: For instance, the fleet modernization for construction equipment

294
00:30:32.060 --> 00:30:44.290
Sarah Workman: now includes updated standards for efficiency and mitigation measure, Aq 27 now includes the use of led bulbs, which are more efficient than the previously required compact, compact, fluorescent light bulbs.

295
00:30:48.200 --> 00:30:52.369
Sarah Workman: Ceqa also requires that project alternatives be considered next slide

296
00:30:54.570 --> 00:31:04.329
Sarah Workman: a no project alternative is typically considered which in this case would consist only of elements that have been previously approved in the prior documents, including, for instance.

297
00:31:04.540 --> 00:31:09.470
Sarah Workman: the 500 seat outdoor venue, a 100 foot Ferris wheel, and the amusement attractions

298
00:31:10.570 --> 00:31:19.749
Sarah Workman: for the second alternative, a reduced project was considered in this case all project elements would remain the same, but the amphitheater would have half the capacity.

299
00:31:20.510 --> 00:31:29.980
Sarah Workman: the half capacity alternative would not meet the objectives of this

project because the reduced capacity would limit the type and quality of performances that the venue would be able to entice.

300
00:31:34.080 --> 00:31:46.450
Sarah Workman: This concludes the impact determination portion of this presentation. I'm now going to be handing this off to Nicole and Ciso, Marine environmental supervisor who will be facilitating the public comment portion of this meeting.

301
00:31:48.210 --> 00:31:49.239
Nicole Enciso: Thanks, Sarah.

302
00:31:49.330 --> 00:31:50.780
Nicole Enciso: good afternoon, everyone.

303
00:31:51.050 --> 00:31:58.579
Nicole Enciso: This is the public comment portion of the meeting, as Sarah mentioned, so speakers will be given 3 min to speak.

304
00:31:58.920 --> 00:32:03.960
Nicole Enciso: If you wish to speak, please press the raise hand button to provide verbal comments.

305
00:32:04.160 --> 00:32:17.430
Nicole Enciso: Once your name is called, it will be stated that you have been unmuted to speak. Please state your 1st and last name clearly, spell your name for the record, and identify if you are representing an agency or organization.

306
00:32:17.670 --> 00:32:24.159
Nicole Enciso: If you have joined us by dialing in and wish to speak, please raise your hand by pressing Star 9.

307
00:32:24.290 --> 00:32:28.010
Nicole Enciso: When it is your turn to speak, you will hear the prompt. You have been unmuted.

308
00:32:28.100 --> 00:32:38.590
Nicole Enciso: Please unmute yourself by pressing Star 6. State your 1st and last name clearly, spell your name for the record and identify if you are representing an agency or organization.

309

00:32:40.147 --> 00:32:48.719
Nicole Enciso: Just as a note. This is a public meeting in which we will be accepting all of your comments, but we will not be responding in real time to any questions posed.

310
00:32:49.100 --> 00:32:53.249
Nicole Enciso: If we could please. Now move to the timer, that would be awesome.

311
00:33:08.390 --> 00:33:09.590
Nicole Enciso: perfect. Okay.

312
00:33:09.660 --> 00:33:12.469
Nicole Enciso: and we'll start the timer after you have

313
00:33:12.860 --> 00:33:19.230
Nicole Enciso: stated your name for the record. So the 1st person I have is Bruce Heyman. I'm gonna

314
00:33:19.300 --> 00:33:23.860
Nicole Enciso: ask. Go ahead and allow allow you to speak. If you could unmute yourself. Please.

315
00:33:24.920 --> 00:33:28.170
Bruce Heyman - LAMI: Good afternoon. Have I successfully unmuted myself.

316
00:33:28.170 --> 00:33:29.909
Nicole Enciso: You have. Thank you so much.

317
00:33:30.090 --> 00:33:39.459
Bruce Heyman - LAMI: Excellent. I am Bruce Heyman, BRUC. Eman, HEYM. A. N. I'm the immediate past chair.

WHMPM-1

318
00:33:39.490 --> 00:33:54.830
Bruce Heyman - LAMI: board chair for the San Pedro Chamber of Commerce, and I'm also the Executive director for Los Angeles Maritime Institute, and I'm speaking on behalf of both organizations and encouraging the project to go forward

319
00:33:55.260 --> 00:34:14.000
Bruce Heyman - LAMI: first.st I'd like to thank both the port of Los Angeles and the West Harbor developer for working so well with our nonprofit. We've been able to

serve thousands of kids all through the construction project which we very much appreciate.

320
00:34:14.320 --> 00:34:32.109
Bruce Heyman - LAMI: I'd also like to specifically thank the developer West Harbor for making use of a special pile driving technology, I believe, augering or vibrating them in and greatly reducing the noise during a construction project.

321
00:34:32.270 --> 00:34:48.190
WHMPM-1 cont.
Bruce Heyman - LAMI: Lastly, I'd like to, while I am an electrical engineer. I'm not an audio engineer, but I am impressed with the level of attention and detail and design in coming up with an audio solution that

322
00:34:48.270 --> 00:34:57.589
Bruce Heyman - LAMI: makes the best trade-off between what the participants will experience and creating the best environment for our residents.

323
00:34:57.680 --> 00:35:07.420
Bruce Heyman - LAMI: And so, in conclusion, I just want to say thank you very much, and and hope the project goes forward quickly. I think it's going to be great for our community. Thank you.

324
00:35:12.460 --> 00:35:13.519
Nicole Enciso: Thank you.

325
00:35:13.670 --> 00:35:16.260
Nicole Enciso: Next we have Noel gold.

326
00:35:17.260 --> 00:35:19.230
Nicole Enciso: Please go ahead and unmute yourself.

327
WHMPM-2
00:35:20.600 --> 00:35:37.170
Noel Gould: Hi, before you start the timer. I just wanted a clarification on the deadline when you said it's been extended to January 10.th I just want to make sure that that's been extended for all public comments, not just Neighborhood Council. Public comments. Is that correct?

328
00:35:38.200 --> 00:35:43.279
Nicole Enciso: That is correct. It is going to be an extension for all written comments till January 10, th 2025.

329
00:35:43.280 --> 00:35:52.020
Noel Gould: Great. Thank you so much for doing that big difference. My name is Noel Gould, NOEL. GOUL. D.

330
00:35:52.090 --> 00:36:02.379
Noel Gould: I'm on the Coastal San Pedro Neighborhood Council as a board member. I chair the Coastline and Parks Committee. I'm also a member of the planning land use and Transportation Committee

WHMPM-2 cont.

331
00:36:02.730 --> 00:36:15.760
Noel Gould: and I'm speaking as an individual right now. And I appreciate you guys coming out and giving this presentation. And I hope that we could have another one before the end of the public comment period would be a great idea.

332
00:36:16.178 --> 00:36:27.159
Noel Gould: In the eir. And please direct me to the right place if I just haven't found it. But it said that the Nop public comments were supposed to be

333
00:36:27.300 --> 00:36:41.219
Noel Gould: all included, and they're supposed to be an appendix a. And you found some summaries, but didn't find the complete public comments. So I wanted to bring that to your attention in case that was an oversight.

334
00:36:41.630 --> 00:36:47.360
Noel Gould: You make comment on greenhouse gases, and saying that

335
00:36:47.530 --> 00:36:59.990
Noel Gould: there could be less than significant with with mitigation. But the 1st thing that came to mind is, and you said that because the impacts of the entire West Harbor area were incorporated.

WHMPM-3

336
00:37:00.030 --> 00:37:05.149
Noel Gould: But there's going to be so many more cars that are coming through that area.

337
00:37:05.160 --> 00:37:08.719
Noel Gould: coming to park and coming to concerts, etc.

338
00:37:08.970 --> 00:37:22.350
Noel Gould: that there's going to be a lot more exhaust that's going to be blowing

WHMPM-3 cont.

around. And so I think it's so important to factor that in. So you actually may need to do a bit more analysis on that same thing applies to air quality.

339
00:37:22.480 --> 00:37:31.110
Noel Gould: When you talk about the marine mammals and birds, and then observing the marine mammals at night during fireworks displays.

340
00:37:31.170 --> 00:37:38.830
Noel Gould: That's a really challenging ask. I think, that you know if animals were scared of the fireworks going off, etc. Etc.

WHMPM-4

341
00:37:39.230 --> 00:37:43.900
Noel Gould: And then diving into the water, or just hiding out in general.

342
00:37:44.440 --> 00:38:12.029
Noel Gould: observing them at night. During these time periods would be would be a difficult thing to do. So that's something to consider also. And you mentioned Terminal Island residents and onboard residents as being affected by noise. But you didn't make any mention of the large number of residences on the land that start about 1,400 feet or so from where this project site is.

343
00:38:12.530 --> 00:38:15.719
Noel Gould: So it was really important to include them. Also.

344
00:38:15.830 --> 00:38:20.120
Noel Gould: another thing, when you were talking about Pfn 0, 1

345
00:38:20.220 --> 00:38:22.470
Noel Gould: in the noise section

WHMPM-5

346
00:38:22.480 --> 00:38:30.640
Noel Gould: supply a lot more detailed comments later. But one of the things is tremendously difficult to control and mitigate

347
00:38:30.740 --> 00:38:44.170
Noel Gould: is bass spillover. You have an easier time mitigating high frequencies and mid frequencies in the venue area. But that bass is going to be propagating everywhere once it's

348
00:38:44.170 --> 00:39:02.870

Noel Gould: out of the subwoofers and creating that bumping, thumping, and, you know, sound that tends to annoy people. Also, when you're using the noise mitigation measures when atmospheric conditions are unfavorable, they kind of throw the mitigation measures out of the window. Also

349
00:39:03.030 --> 00:39:27.860
Noel Gould: Dba ratings, which is pretty standard, still ignores the low frequency information so traffic and tailgating in the nearby community of people trying to hear the concerts also is something that you haven't addressed. But that definitely was mentioned in the Nop. Because I know I mentioned it in my comments, and that's something that's got to be in there. People are going to go park in the community to try to hear the concerts for free.

WHMPM-5 cont.

350
00:39:28.280 --> 00:39:30.079
Nicole Enciso: Thank you for your comments. We appreciate.

351
00:39:30.080 --> 00:39:32.400
Noel Gould: Thanks for the thanks for the few extra seconds.

352
00:39:34.720 --> 00:39:37.460
Nicole Enciso: All right. We will now be moving on to

353
00:39:37.480 --> 00:39:39.000
Nicole Enciso: rock the house.

354
00:39:39.820 --> 00:39:42.509
Nicole Enciso: Go ahead and unmute yourself, please.

WHMPM-6

355
00:39:53.360 --> 00:39:56.749
Nicole Enciso: Again we are trying to have rock the house.

356
00:39:58.560 --> 00:39:59.660
Nicole Enciso: give their comment.

357
00:40:10.250 --> 00:40:19.670
Nicole Enciso: It seems like we might be having technical difficulties. So I'm going to go ahead and move on to the next speaker, and we'll come back to you after they've concluded.

358
00:40:20.860 --> 00:40:24.309

Nicole Enciso: So the next person will be James Preston Allen.

359
00:40:25.240 --> 00:40:27.760
Nicole Enciso: You should be able to unmute yourself.

WHMPM-6 cont.

360
00:40:34.110 --> 00:40:36.059
Nicole Enciso: I cannot hear you either.

361
00:40:36.450 --> 00:40:37.180
james preston Allen: Me!

362
00:40:38.060 --> 00:40:41.450
Nicole Enciso: Oh, I can barely hear you. Do you mind getting closer to the mic.

363
00:40:42.660 --> 00:40:43.500
Nicole Enciso: Oh, there you are.

364
00:40:44.020 --> 00:40:44.770
Nicole Enciso: you now.

365
00:40:45.310 --> 00:40:48.799
WHMPM-7
james preston Allen: Okay. James Preston Allen.

366
00:40:49.700 --> 00:41:02.559
james preston Allen: I am a member of many different groups in the community, but I am commenting here simply as a concerned citizen of San Pedro for over 50 years

367
00:41:03.295 --> 00:41:08.054
james preston Allen: the 3 items that need to be carefully discussed and

368
00:41:08.750 --> 00:41:10.350
james preston Allen: deal dealt with

369
00:41:10.920 --> 00:41:12.450
james preston Allen: traffic mitigation

370
00:41:13.874 --> 00:41:20.950
james preston Allen: the mitigation on this project cannot be seen as separate from

the inclusive

371
00:41:22.390 --> 00:41:27.379
james preston Allen: mitigation efforts for the entire waterfront bridge to breakwater project

372
00:41:28.290 --> 00:41:29.370
james preston Allen: when you

373
00:41:29.470 --> 00:41:31.429
james preston Allen: just segment out

374
00:41:31.980 --> 00:41:35.229
WHMPM-7 james preston Allen: the impacts of this one project
cont.

375
00:41:35.450 --> 00:41:39.269
james preston Allen: and don't consider all of the other developments

376
00:41:39.460 --> 00:41:41.760
james preston Allen: that are planned.

377
00:41:42.848 --> 00:41:45.140
james preston Allen: What we realize is that

378
00:41:45.340 --> 00:41:49.740
james preston Allen: we really don't have a good traffic plan for the waterfront.

379
00:41:49.770 --> 00:41:53.459
james preston Allen: Even the connectivity plan did not truly address

380
00:41:53.730 --> 00:41:56.010
james preston Allen: the traffic mitigation issue.

381
00:41:56.510 --> 00:42:05.109
james preston Allen: The traffic mitigation issue is, as Mr. Gould said, is going to
WHMPM-8 impact air quality

382
00:42:05.310 --> 00:42:11.419

james preston Allen: and air quality is an overarching goal of the port of Los Angeles as well as the communities.

383
00:42:12.020 --> 00:42:13.989
james preston Allen: in which case the less

WHMPM-8 cont.

384
00:42:14.710 --> 00:42:19.849
james preston Allen: pollution that comes from traffic into the community the better off we are.

385
00:42:20.180 --> 00:42:25.063
james preston Allen: Now. There's some terminology here that I think is a little bit

386
00:42:25.860 --> 00:42:27.210
james preston Allen: deceiving.

387
00:42:27.640 --> 00:42:30.829
james preston Allen: This is called an amphitheater.

388
00:42:31.350 --> 00:42:35.289
james preston Allen: and anybody that knows anything about architecture

WHMPM-9

389
00:42:35.370 --> 00:42:39.289
james preston Allen: or Greek history knows what an amphitheater is.

390
00:42:39.690 --> 00:42:42.510
james preston Allen: An amphitheater happens to be a

391
00:42:43.278 --> 00:42:46.271
james preston Allen: half of a circle here.

392
00:42:48.303 --> 00:42:49.950
james preston Allen: Seating arrangement

393
00:42:50.110 --> 00:42:58.909
james preston Allen: in which the performers can stand on a stage, and with very little amplification

394

00:42:59.240 --> 00:43:01.659
james preston Allen: can be heard at the very top

395
00:43:01.700 --> 00:43:05.040
james preston Allen: tier of of the seating arrangement.

396
00:43:05.430 --> 00:43:17.560
james preston Allen: My suggestion here is that they actually create an amphitheater in such a way so that they can mitigate by the natural shape of the amphitheater.

397
WHMPM-9 cont.
00:43:18.110 --> 00:43:25.679
james preston Allen: The sound impacts on the rest of the community. What what you have proposed here is basically a lawn

398
00:43:25.770 --> 00:43:27.660
james preston Allen: with removable chairs.

399
00:43:27.770 --> 00:43:37.579
james preston Allen: and that is a misnomer as being a amphitheater. So those are my 3 comments. Thank you for your time today.

400
00:43:39.800 --> 00:43:41.079
Nicole Enciso: Thank you for your comment.

401
00:43:42.210 --> 00:43:50.750
Nicole Enciso: I'm going to go ahead and try to allow Rock the house to try to provide their comment again. Please go ahead and try to unmute yourself.

402
00:43:53.200 --> 00:43:55.569
Nicole Enciso: I am still not hearing anything

403
WHMPM-10
00:43:57.600 --> 00:43:59.060
Nicole Enciso: on our end.

404
00:44:04.060 --> 00:44:10.870
Nicole Enciso: I do apologize. Perhaps maybe if you can log out and log back in. If you raise your hand again I will

405
00:44:10.980 --> 00:44:13.119

Nicole Enciso: call you after the next

406
00:44:13.420 --> 00:44:14.360
Nicole Enciso: commenter.

407
00:44:17.340 --> 00:44:20.660
Nicole Enciso: We'll now move in on to Jack Barrack.

408
00:44:21.810 --> 00:44:23.559
Nicole Enciso: Please go ahead and unmute yourself.

409
00:44:27.020 --> 00:44:27.780
jackbaric: Hello!

410
00:44:28.520 --> 00:44:29.250
Nicole Enciso: Hi.

411
00:44:29.250 --> 00:44:35.029
WHMPM-10 cont.
jackbaric: This is Jack Barrage. My 1st name is spelled JACK. Last name is spelled BARI, C.

412
00:44:35.880 --> 00:44:40.900
jackbaric: And I am commenting as an individual not representing any organization.

413
00:44:42.404 --> 00:44:44.625
jackbaric: I was actually on the

414
00:44:45.670 --> 00:44:51.670
jackbaric: board of the Chamber of Directors in 2,009. I was the chairman of the Economic Development Committee

415
00:44:51.700 --> 00:44:54.949
jackbaric: when that 1st Eir was signed in 2,009.

416
00:44:55.440 --> 00:45:04.770
jackbaric: Excuse me, and one of the things that was really really important to our local residents and business community was that we created this thing we called the seamless interface

417
00:45:05.060 --> 00:45:07.620
jackbaric: between the waterfront and downtown.

418
00:45:07.650 --> 00:45:13.069
jackbaric: so that any new waterfront development would support downtown business and not take away from it.

419
00:45:13.990 --> 00:45:18.705
jackbaric: And so what I like about this project, about the amphitheater and and the

420
00:45:19.390 --> 00:45:22.030
WHMPM-10 cont. jackbaric: and and the Ferris wheel is that

421
00:45:22.440 --> 00:45:39.740
jackbaric: there's much, much parking that can be put into the downtown area and directed into the downtown area with shuttle service into the West Harbor area and into the amphitheater, which then thereby encourages our out of town visitors to explore an area that maybe they would have never seen before.

422
00:45:39.760 --> 00:45:52.360
jackbaric: and contributes greatly to our local economy, which subsequently can encourage other people to open more business businesses. And it's something we've been trying to accomplish for many, many years.

423
00:45:52.683 --> 00:45:56.200
jackbaric: I think this is a a great way to help accomplish that.

424
00:45:56.260 --> 00:46:02.880
jackbaric: and to create that bustling, thriving, vibrant downtown that us local residents have

425
00:46:03.400 --> 00:46:17.649
jackbaric: wanted for many years and are happy to see starting to develop, and has been developing over the last 15 or 20 years, and I think this project would greatly impact that in a positive way. And for that I'm I'm really happy and give it my full
WHMPM-11 support.

426
00:46:17.660 --> 00:46:22.360
jackbaric: So that's it. Thank you for the time, and I'll pass it on to the next speaker.

427
00:46:25.120 --> 00:46:34.569
Nicole Enciso: Thank you for your comment. I'm going to go ahead and try to allow Rock the house one more time to provide their comment. Let me see.

428
00:46:35.210 --> 00:46:39.239
Nicole Enciso: I believe that I've allowed you to talk. Please attempt to unmute yourself.

429
00:46:42.330 --> 00:46:45.588
Nicole Enciso: Gosh! I was really hoping 3rd time would be a charm. Okay,

430
WHMPM-12 00:46:46.310 --> 00:46:47.920
Nicole Enciso: rock the house I am.

431
00:46:48.680 --> 00:46:58.070
Nicole Enciso: if you would like to submit a comment to the if there's a Q&A function or a chat with panelists, if you want to go ahead and send that to me, I can read it into the record.

432
00:46:58.290 --> 00:47:01.739
Nicole Enciso: So I I do apologize for the technical difficulties

433
00:47:03.970 --> 00:47:07.230
Nicole Enciso: I'm now going to move on to Jolene.

434
00:47:08.910 --> 00:47:15.259
Nicole Enciso: Please go ahead and unmute yourself and state your name, spell it for the record, and identify if you're representing an agency.

435
00:47:16.160 --> 00:47:22.309
WHMPM-13 Joleen: Okay, great. My name is Jolene Deathridge, JOLE, EN,

436
00:47:22.510 --> 00:47:26.270
Joleen: DEAD, HER.

437
00:47:26.280 --> 00:47:27.829
Joleen: A, GE.

438
00:47:28.480 --> 00:47:39.250
Joleen: I'm the executive director of Katahd and Productions, a nonprofit documentary film company based in Los Angeles. But I'm here today representing myself.

439
00:47:39.720 --> 00:47:50.920
Joleen: I currently live on Bluff place in the coastal San Pedro Neighborhood Council District. From my balcony I can see Cabrillo Beach and the outer harbor.

440
00:47:51.500 --> 00:47:58.759
Joleen: I was born in La I was raised in Redondo Beach, but I've called San Pedro home for about 40 years.

441
00:47:59.380 --> 00:48:07.239
Joleen: I have a little story to tell as part of my support for the West Harbor. My 1st real job was in 1970,

WHMPM-13 cont.

442
00:48:07.330 --> 00:48:11.499
Joleen: at a little fashion boutique located in the Portsa Call village.

443
00:48:11.530 --> 00:48:20.869
Joleen: That job allowed me to buy my 1st car a beige Vw. Bug that occasionally broke down on the 110 harbor freeway.

444
00:48:20.910 --> 00:48:26.649
Joleen: I remember that bustling ports of call with fondness. It was such a unique, vibrant space.

445
00:48:27.030 --> 00:48:32.579
Joleen: I remember the cruise ship passengers who would visit the village and the boutique where I worked.

446
00:48:32.680 --> 00:48:41.969
Joleen: I was introduced to travelers from around the world, and it really sparked my interest in travel and adventure, the arts and culture.

447
00:48:42.870 --> 00:48:49.080
Joleen: It's been very disheartening to watch the deterioration of Portsa call village over the decades.

448
00:48:49.310 --> 00:48:56.690
Joleen: But I believe the West Harbor development will reignite the same type of experience for young people in our community

449
00:48:56.890 --> 00:48:58.990
Joleen: that I had as a young woman.

450
00:48:59.340 --> 00:49:10.869
Joleen: So I'm here today to voice my support for West Harbor and Jericho development. Specifically, I've known the Johnson Brothers, Eric Allen and Craig for over a decade.

451
00:49:11.210 --> 00:49:18.740
Joleen: Alan Johnson introduced me to many of the nonprofits here in San Pedro that I've actually had the privilege of working with.

452
00:49:19.020 --> 00:49:26.900
Joleen: He's 1 of the kindest people I know and genuinely cares about our community. I say that with all confidence.

WHMPM-13 cont.

453
00:49:27.290 --> 00:49:33.950
Joleen: So I know there are traffic and environmental impacts to be worked out, which I do have concerns about.

454
00:49:34.250 --> 00:49:35.770
Joleen: and I'm happy

455
00:49:36.060 --> 00:49:39.679
Joleen: that these concerns are being addressed and mitigated.

456
00:49:40.180 --> 00:49:42.900
Joleen: So I'm here today to voice my confidence

457
00:49:43.420 --> 00:49:45.710
Joleen: in the Johnson Brothers.

458
00:49:46.100 --> 00:49:51.520
Joleen: which is why I can confidently support the West Harbor Community Project.

459
00:49:51.600 --> 00:49:53.789
WHMPM-13 Joleen: Thank you for letting me speak today.
cont.

460
00:49:55.640 --> 00:49:57.170
Nicole Enciso: Thank you for your comment.

461
00:49:58.680 --> 00:50:02.209
Nicole Enciso: We'll now move on to Anthony A. Luna.

462
00:50:02.290 --> 00:50:08.810
Nicole Enciso: Please go ahead and unmute yourself. State your name for the record. And please let us know if you're with an organization.

463
00:50:08.810 --> 00:50:10.590
Anthony A. Luna - Coastline Equity: Yes, thank you so much.

464
00:50:10.620 --> 00:50:35.440
Anthony A. Luna - Coastline Equity: So Anthony spelled a NTHO, NY. Luna, LUNA. I am speaking on behalf of myself, but also as a member of the San Peter Chamber of Commerce as the vice chair for the Chamber, and also individually and personally, as a local neighbor. I live 2 blocks away from the West Harbor development, actually
WHMPM-14 closest to the amphitheater, which I think is probably biggest impact in this latest revision

465
00:50:35.440 --> 00:50:51.700
Anthony A. Luna - Coastline Equity: and just want to share the positive feedback I have as a local resident, you know, growing up in San Pedro and waiting for this development to finally happen, and to see where we are today. You know, as a local resident that lives 2 blocks away. Many days I have to walk down to to the harbor to see

466
00:50:51.700 --> 00:51:18.609
Anthony A. Luna - Coastline Equity: the progress of the waterfront, because the West Harbor developers have done such a great job with mitigating any sound issues already in the construction period, and it really shows me a level of confidence and positivity that we're going to be able to expect the same level of care to our local neighborhoods and to the local residents, and really allow for the continued expansion of the economic development that we need for our community and increase jobs that the amphitheater and the entire project are going to bring to San Pedro.

467
00:51:18.640 --> 00:51:20.700

Anthony A. Luna - Coastline Equity: So thank you so much for the opportunity to share.

WHMPM-14 cont.

468
00:51:23.230 --> 00:51:24.650
Nicole Enciso: Thank you for your comment.

469
00:51:26.130 --> 00:51:28.659
Nicole Enciso: We are now going to move to

470
00:51:29.200 --> 00:51:34.309
Nicole Enciso: L. Alex. I apologize. If I pronounced that wrong, please go ahead and unmute yourself.

471
00:51:34.390 --> 00:51:39.640
Nicole Enciso: state your name for the record, spell your 1st and last name, and identify if you're representing an agency.

472
00:51:40.830 --> 00:51:59.449
lalex: This is Linda Alexander LIND. a a LEXA NDER. I'm speaking on my own behalf. However, I have been a longtime member of the Central San Pedro Neighborhood Council.

WHMPM-15

473
00:52:00.370 --> 00:52:05.710
lalex: Well, I 1st moved to San Pedro in 1982,

474
00:52:05.820 --> 00:52:11.530
lalex: and there was a great deal of discussion and consternation about

475
00:52:11.790 --> 00:52:15.120
lalex: San Pedro having great potential.

476
00:52:15.210 --> 00:52:25.990
lalex: I didn't stay in San Pedro at the time, because there was really no indication that any movement was being made to to meet that potential.

477
00:52:26.390 --> 00:52:29.890
lalex: I came back 20 years ago, and

478
00:52:29.900 --> 00:52:34.480

lalex: a similar situation was at that time.

479
00:52:34.720 --> 00:52:46.509
lalex: however, in then we had the new buildings apartment buildings coming in, and that was very exciting, except we hit the 2,008 recession.

480
00:52:46.650 --> 00:52:52.419
lalex: So I have been extremely happy to see that

481
00:52:52.770 --> 00:52:59.309
lalex: we are starting to meet our potential. It's such a vibrant community, it has so much to offer.

482
00:52:59.320 --> 00:53:11.180
lalex: And we're finally getting where we need to be for our children to find work and industry to be involved with, to

483
00:53:11.320 --> 00:53:14.540
lalex: bring people to this wonderful area

WHMPM-15 cont.

484
00:53:14.630 --> 00:53:29.629
lalex: and the the buildings, the apartment buildings that are being built are are drawing some exceptional people that enhance our community, and to me the West harbor development is

485
00:53:29.840 --> 00:53:36.270
lalex: the icing on the cake. This is truly going to meet our potential.

486
00:53:36.440 --> 00:53:44.699
lalex: My concerns at the beginning of this process was primarily the waterfront pollution and trash.

487
00:53:44.820 --> 00:54:01.799
lalex: But I see that there's been a comprehensive and very detailed project, wide trash management plan, and I find that very reassuring that not only that, but the other areas that have been in concern

488
00:54:01.830 --> 00:54:06.810
lalex: that need to be mitigated have been so thoroughly researched

489
00:54:06.850 --> 00:54:17.519
lalex: and so deeply considered, that I feel really confident now in the developers

490
00:54:17.550 --> 00:54:29.419
lalex: moving forward with this project. I think it will do nothing but enhance our area. And specifically, the people who live and love

491
00:54:29.440 --> 00:54:30.729
lalex: to be in

WHMPM-15 cont.

492
00:54:30.760 --> 00:54:32.370
lalex: our community.

493
00:54:32.550 --> 00:54:33.439
lalex: Thank you.

494
00:54:35.510 --> 00:54:36.940
Nicole Enciso: Thank you for your comment.

495
00:54:37.778 --> 00:54:43.249
Nicole Enciso: I noticed that rock. The house has raised their head one more time. I'm going to try and allow you to talk.

496
00:54:43.360 --> 00:54:50.040
Nicole Enciso: and unfortunately, if this doesn't work, please submit your comment via writing I

497
00:54:50.410 --> 00:54:54.430
WHMPM-16 Nicole Enciso: I have allowed you permission to speak. Please go ahead and unmute yourself.

498
00:54:55.810 --> 00:54:56.779
'Rock the House': Can you hear me now?

499
00:54:57.410 --> 00:54:58.000
Nicole Enciso: Yes!

500
00:54:58.180 --> 00:55:12.080

'Rock the House': Okay, so thank you. At least, the great thing is is everybody's heard my name 15 times now so very appreciative of that, Sarah, that was very workmanlike presentation. I don't know if you ever heard that before, but there you go

501
00:55:12.717 --> 00:55:19.499
'Rock the House': as someone who sits on committees with the Chamber and the Neighborhood Council. We've seen developers come and go.

502
00:55:19.500 --> 00:55:24.499
Nicole Enciso: Sorry to interrupt you. Do you mind providing your name, spelling it for the record, and thank you.

503
00:55:24.500 --> 00:55:28.549
'Rock the House': RORO. CKAS. HFIE. LD.

WHMPM-16 cont.
504
00:55:29.190 --> 00:55:48.540
'Rock the House': Bought here in San Pedro in 2,001. I'm a local realtor as well. Also looking at development in downtown, I can tell you I'm very impressed. We had an Economic Development Committee meeting this week very impressed with the the mitigation issues to the things that were raised 2 years ago.

505
00:55:49.180 --> 00:55:59.900
'Rock the House': With regard to Astroturf or everything else they've addressed all these issues, I'm very impressed. And we see the buildings going up. And I can tell you, people we are not. La's best kept secret anymore.

506
00:55:59.920 --> 00:56:21.310
'Rock the House': People are moving to San Pedro, because of this project and overwhelming supported. So I do as well. We actually presented our local 200 plus realtor real estate company yesterday about what's going on, and they support it as well. So thank you for all the work that the port has done that you have done and the developers have done. Thank you.

507
00:56:23.600 --> 00:56:25.159
Nicole Enciso: Thank you for your comment.

508
00:56:25.720 --> 00:56:28.569
WHMPM-17 Nicole Enciso: We'll now move on to Gabriella Medina.

509
00:56:29.080 --> 00:56:34.710

Nicole Enciso: Please state your name, spell it for the record and notify us if you're representing an agency. Thank you.

510
00:56:35.970 --> 00:56:56.820
Gabriela Medina | SoCalGas: Good afternoon, Gabriella Medina, GABR. IELA, MEDI NA. And I am a board member of the San Pedro Chamber of Commerce. I did want to state my support for the project today, and outside of providing a huge debt of gratitude, not just for the port of Los Angeles staff, who has

511
00:56:56.830 --> 00:57:09.850
Gabriela Medina | SoCalGas: put so much just thought and dedication into this project, but really also the developers. I think that a magical thing has happened here, a perfect marriage of individuals that

512
00:57:09.850 --> 00:57:36.860
Gabriela Medina | SoCalGas: are from this community. They understand our voices, our concerns, and our vision for the future. They are with us on 1st Thursdays. They are with us at festivities throughout the community, and they're also with us when we face challenges. And, like one of the speakers mentioned. They're not going to go anywhere. We know they are our friends, and they are amongst us, and so we're very excited to see that this project is a shared vision amongst the entire community.

WHMPM-17 cont.

513
00:57:36.940 --> 00:57:54.860
Gabriela Medina | SoCalGas: near and far, and with Fifa World Cup coming, the Nba all-star weekend super bowl, and mostly the Olympics. The eyes will be on Los Angeles, and I'm just very thankful that San Pedro has answered that call to action to make sure that we become a premier community within this.

514
00:57:57.520 --> 00:58:16.020
Gabriela Medina | SoCalGas: when the project is complete, and I can continue to do my morning walks out there. I agree with Anthony as well as Jack Barrack and other speakers who spoke extensively about how much thought has been put into just the construction phase. I walk every morning, and I'm not impacted by the noise.

515
00:58:16.020 --> 00:58:39.649
Gabriela Medina | SoCalGas: In fact, I'm just always filled with excitement to see the project unfold. I've seen the events that the court has put on on the weekends bringing thousands of people here to the harbor. And honestly, it happens without a single disruption to our community. So I hope and understand that the same dedication will be made when we have these big events surrounding the amphitheater, and I'm very confident

516
00:58:39.650 --> 00:58:52.429

WHMPM-17 cont.

Gabriela Medina | SoCalGas: that those impacts will also be mitigated at the time, so I won't repeat myself as well as the the comments of others. I'll go ahead and surrender my time to the next speaker, but just wanted to just say, Thank you very much, and I look forward to it all.

517
00:58:54.240 --> 00:58:55.730
Nicole Enciso: Thank you for your comment.

518
00:58:56.520 --> 00:59:03.200
Nicole Enciso: All right, I do apologize if I get your pronunciation wrong. But next is John Bagakus.

519
00:59:03.690 --> 00:59:11.359
Nicole Enciso: Please go ahead and unmute yourself. Please state your name clearly, spell it for the record, and identify if you're representing an agency.

520
00:59:11.750 --> 00:59:29.289
John Bagakis: Good afternoon. Perfect pronunciation. Thank you. John begakis, JOHN, BAGA, KISI am speaking to you as a born and raised San Pedron and small business owner here in North San Pedro and also in coastal San Pedro. I'm a resident

521
00:59:29.768 --> 00:59:35.600
WHMPM-18 John Bagakis: of downtown San Pedro, one block from the Town Square promenade on 6th and Harbor.

522
00:59:35.830 --> 00:59:42.399
John Bagakis: And basically I'm here to lend my complete support to this project. I just want to throw out the fact that on October 5th

523
00:59:42.620 --> 01:00:05.550
John Bagakis: of this year we had 3 cruise ships in town, an Italian festival on 6th Street that brought over 10,000 people and a concert in the outer harbor that brought 15 to 20,000 people. We saw no issues with parking. We saw no issues with getting through town. We saw economic booms in all the restaurants in downtown San Pedro.

524
01:00:05.680 --> 01:00:26.819
John Bagakis: This project will create jobs. It'll bring new visitors and, more importantly, residents to the San Pedro area, and it'll help our current local businesses. People have been complaining for years about empty storefronts in downtown San Pedro. When you bring projects like this to town and more people to town. You fill those storefronts, and we will see

525
01:00:26.820 --> 01:00:51.850
John Bagakis: success for years to come. I'm not concerned about any noise issues. When you have a a company like Meter Lander, a family run company that ran the Greek theater and has been doing this for over a hundred years, I trust, putting the sound and any effects of sound on residents and neighbors in their hands. They know what they're doing, they are experienced.

526
01:00:51.850 --> 01:01:04.509
WHMPM-18 cont.
John Bagakis: they? There are residents near the Greek theater, and they have no issues there. So I'm fully supportive of this project. This is going to be great for the history of San Pedro and for the future of San Pedro.

527
01:01:04.520 --> 01:01:17.290
John Bagakis: This is our moment to shine and be on the map. I'm tired of spending our hard earned dollars in other beach communities. And now I'm ready for other beach communities to come. Spend their dollars in our community. Thank you for allowing me to comment.

528
01:01:18.970 --> 01:01:20.429
Nicole Enciso: Thank you for your comment.

529
01:01:20.750 --> 01:01:28.279
Nicole Enciso: All right. Next up we have San Pedro Chamber of Commerce. Please provide your name, spell it for the record. And

530
01:01:28.390 --> 01:01:31.039
Nicole Enciso: I believe we know which organization organization you're with.

531
01:01:31.220 --> 01:01:55.910
San Pedro Chamber of Commerce: Yes, thank you. Elise Swanson, ELIS. ESWA. NSON.
WHMPM-19
President of the San Pedro, Chamber of Commerce, a San Pedro Resident and a member of the Coastal San Pedro Neighborhood Council Planning and Transportation Committee. Tonight I am here to express the San Pedro Chamber's strong support of the West Harbor project

532
01:01:55.920 --> 01:02:11.860
San Pedro Chamber of Commerce: that includes the amphitheater is a 6,200 seat venue. The amphitheater and community gathering space is critical to the redevelopment of the La waterfront, and we look forward to the positive economic impact

533

01:02:11.860 --> 01:02:36.189
San Pedro Chamber of Commerce: through increased tourism spending, we know, as has been mentioned by others, that our restaurants see a 15 to 25% increase in revenues during Major la waterfront events, our small businesses, as has been mentioned, are crying out for increased foot traffic in downtown San Pedro, so they don't have to close their doors.

534
01:02:36.190 --> 01:02:40.599
San Pedro Chamber of Commerce: This project brings those tourism dollars to our community.

535
01:02:40.840 --> 01:03:08.749
San Pedro Chamber of Commerce: I'm very excited to see the proposed traffic mitigation measures, including smart parking improvements, wayfinding signage, and just the whole connectivity, plan, and integration of downtown in the waterfront as somebody who personally has worked la Fleet Week Lobster Festival, was an ambassador, and helped with traffic on the Cirque when Cirque du Soleil was here. Twice

536
WHMPM-19 cont.
01:03:08.750 --> 01:03:20.829
San Pedro Chamber of Commerce: I have seen personally, and our chamber ambassadors have seen these traffic mitigations work, so we're excited to see them included in this mitigation.

537
01:03:20.830 --> 01:03:44.259
San Pedro Chamber of Commerce: Such an important project. I, too, agree that I trust the Nederlanders to have state of the art sound technology equipment. We understand that event operators will be required to use the House sound reinforcement system, and that there will be constant, sound monitoring. So I think we have great operators in the Nederlander family.

538
01:03:44.260 --> 01:04:01.100
San Pedro Chamber of Commerce: I, too, want to thank the port of Los Angeles, the West Harbor developers for your commitment to communicating with our community to being with us and always available to answer questions. As this project moves forward.

539
01:04:01.100 --> 01:04:20.680
San Pedro Chamber of Commerce: Personally, I've been working on la waterfront redevelopment since 2,001, and it is thrilling to see all of our community efforts reaching this point where we're seeing a fully redeveloped la waterfront and a fabulous amphitheater that we can all be proud of. So thank you so much for the time.

WHMPM-19 cont.

540
01:04:23.090 --> 01:04:24.700
Nicole Enciso: Thank you for your comment.

541
01:04:24.800 --> 01:04:28.530
Nicole Enciso: We'll now move on to Mona Sutton.

542
01:04:28.640 --> 01:04:35.549
Nicole Enciso: Please go ahead and unmute yourself. State your name clearly, spell it for the record and identify. If you're involved with an organization.

543
01:04:35.940 --> 01:04:41.749
Mona Sutton: So I'm Mona Sutton, MONA, SUTT. ON.

544
01:04:42.110 --> 01:04:54.120
Mona Sutton: I also am a board of directors participant in the San Pedro Chamber, as well as I sit on the Coastal San Pedro Neighborhood Council planning and land Use committee.

WHMPM-20

545
01:04:54.360 --> 01:05:08.999
Mona Sutton: I'm also a 34 year resident that lives directly across from the you know the the current pier that is being used for new concerts. I live right above Cabrillo Beach.

546
01:05:09.180 --> 01:05:25.629
Mona Sutton: So when I think about this project as a long term resident, and I also own a business, a restaurant on Gaffey Street, and when I think about all the positive comments that have been had. I'm speaking for myself as a resident, and the impact of

547
01:05:25.810 --> 01:05:28.000
Mona Sutton: the potential of us not

548
01:05:28.520 --> 01:05:35.309
Mona Sutton: moving forward. You know, looking at the considerations. That are being brought forward with the

549
01:05:35.780 --> 01:05:37.819
Mona Sutton: with the larger

550

01:05:38.885 --> 01:05:45.830
Mona Sutton: you know the larger amphitheater as well as what's also proposed to the larger. I'm thrilled

551
01:05:46.040 --> 01:05:58.350
Mona Sutton: with all of the infrastructure creations. I believe in the Johnsons, I believe in their commitment, and I also believe in the ports commitment. Finally.

552
01:05:58.390 --> 01:06:03.620
Mona Sutton: after 24 years to bring forward an amazing development.

553
01:06:03.920 --> 01:06:18.799
Mona Sutton: You know the economic benefits and the job creation, you know. Finally, we're going to have an iconic draw, we will have something that our tourists get to see as well as benefit from with having a 1st class destination

WHMPM-20 cont.

554
01:06:18.930 --> 01:06:27.079
Mona Sutton: versus an embarkation zone, and no longer will we have to be embarrassed for a waterfront that

555
01:06:27.170 --> 01:06:33.050
Mona Sutton: you know that that suffered as well as the rest of us in business for so many years.

556
01:06:33.320 --> 01:06:39.389
Mona Sutton: I want to express my sincere support as I've looked through the idea of.

557
01:06:39.880 --> 01:06:58.030
Mona Sutton: you know, the parking solutions and all the other considerations for pollution as well as noise, mitigation for those of us that do live directly along the coast across from this I believe in the Johnsons as local developers. I believe in their commitment to getting it right.

558
01:06:58.420 --> 01:07:01.160
Mona Sutton: and I cannot wait

559
01:07:01.470 --> 01:07:11.199
Mona Sutton: for us to experience this 1st class destination. Let's let's get with it. Let's bring it on, and I can't wait for public comment to be closed

560
01:07:11.390 --> 01:07:19.610
WHMPM-20 cont. Mona Sutton: and for the support to go forward. Thank you to the port, you know, for bringing this forward this evening, and thank you for hearing my comments.

561
01:07:21.060 --> 01:07:22.529
Nicole Enciso: Thank you for your comment.

562
01:07:22.850 --> 01:07:26.740
Nicole Enciso: We're now going to move on to Ryan Blaney.

563
01:07:26.940 --> 01:07:32.929
Nicole Enciso: Please go ahead and unmute yourself. State your name and spell it for the record, and let us know if you're part of an organization.

564
01:07:33.700 --> 01:07:35.139
Ryan Blaney: Good evening. Can you hear me?

565
01:07:35.140 --> 01:07:36.069
Nicole Enciso: Yes, I can.

WHMPM-21
566
01:07:36.360 --> 01:07:52.120
Ryan Blaney: Hi, this is Ryan Blaney, RYAN. BLAN. EY. I'm a San Peter residence. I'm also executive director of the San Peter Business Improvement District, which is roughly our historic core, and the entire waterfront

567
01:07:52.656 --> 01:07:56.030
Ryan Blaney: and wanting to add, on behalf of our business Improvement district.

568
01:07:56.452 --> 01:08:00.159
Ryan Blaney: A resounding support of this project, including the amphitheater

569
01:08:00.220 --> 01:08:01.920
Ryan Blaney: and the Ferris wheel.

570
01:08:02.375 --> 01:08:05.699
Ryan Blaney: For 3 main reasons. One is local commerce.

571
01:08:05.760 --> 01:08:15.150

Ryan Blaney: 2. I want to address the noise and 3 jobs. So in terms of attendance in the past year, concerts that have

572
01:08:15.710 --> 01:08:18.350
Ryan Blaney: occurred, or events in outer hardware

573
01:08:18.420 --> 01:08:40.370
Ryan Blaney: have sold out our local hotels. A previous person had talked about our businesses. I get feedback that they had the best sales days ever you know. Our downtown is just craving for foot traffic and having concerts having events such as these will bring those dollars to our community which is really needed. I know there are concerns with traffic.

574
01:08:40.520 --> 01:08:50.409
Ryan Blaney: Currently, we don't have any traffic in our downtown. So it would be nice to have you know, patrons using our attending our restaurants and going to events here.

575
WHMPM-21 cont.
01:08:50.960 --> 01:09:12.990
Ryan Blaney: Secondly, when it comes to noise, I am very confident with the developers as well as Nederlander, and addressing noise in real time. I do remember going to a dance concert last year, and the 1st night there was tremendous concern from the local community about noise. I got calls from lots of constituents, complaining

576
01:09:13.556 --> 01:09:20.680
Ryan Blaney: the event producer took the heartless concerns, and on the second and 3rd day of the concert I drove within

577
01:09:21.529 --> 01:09:35.369
Ryan Blaney: a few 100 feet of the facility, and you could not hear the noise at all. Because it was redirected towards the waterfront. So I think there are technical ways to address that in real time, and I think those concerns can be alleviated.

578
01:09:35.460 --> 01:09:57.240
Ryan Blaney: And lastly, in terms of the amphitheater, the jobs that it can bring to our community. You know there's discussion about. Yes, there's low wage jobs when it comes to servers and janitorial, but also the amphitheater. This could bring very, very well paid high end jobs. So we're talking about sound techs, event producers, directors, talent.

579

01:09:57.952 --> 01:09:59.297
Ryan Blaney: catering services.

580
01:10:00.330 --> 01:10:19.549
WHMPM-21 cont. Ryan Blaney: our community has been a bedroom community for decades. It'd be nice if our youth can now not have to commute to downtown Los Angeles or the West Side or Orange County, but they can stay in the community, live in the community and work in the community. So again, resounding support for this for this project, thank you.

581
01:10:21.250 --> 01:10:22.790
Nicole Enciso: Thank you for your comment.

582
01:10:22.910 --> 01:10:26.469
Nicole Enciso: We are now going to move on to Michael Ongaro.

583
01:10:26.880 --> 01:10:32.460
Nicole Enciso: Please go ahead and unmute yourself. State your name for the record, and let us know if you're part of an organization.

584
01:10:32.610 --> 01:10:47.029
Michael Ungaro: Hello, everyone, Michael lingaro here, MICH, a, ELUN GARO. I am one of the owners, and the CEO of the San Pedro Fish market, as well as the Kings of Fish TV Series, now streaming on Amazon Prime. If you want to learn all about

585
01:10:47.110 --> 01:10:56.479
WHMPM-22 Michael Ungaro: our temporary location inside of West Harbor, which we've been operating since Cinco de Mayo of last year. Really excited to be part of the project.

586
01:10:56.490 --> 01:11:10.504
Michael Ungaro: We have officially signed a lease to move into our next phase, which will be opening, I believe, in the coming weeks, and additionally, we're negotiating a 49 year lease with West Harbor and Eric and Alvin great with this to be

587
01:11:11.090 --> 01:11:18.378
Michael Ungaro: a very long term tenant. Obviously inside the project. Couple of things. I know there's been some concerns. I've listened around

588
01:11:20.070 --> 01:11:22.930
Michael Ungaro: biodegradable, compostable and recyclable

589
01:11:23.020 --> 01:11:48.419
Michael Ungaro: to go containers. If you visited our temporary location where we're currently existing. Most of what we do is actually in aluminum pans. And we've have researched and are instituting a whole bunch of different ways to continue on, so that the serving, how we serve our food will continue to be environmentally friendly. Additionally, I know there's a lot of issues around parking. And I was listening to some people somebody earlier mentioned.

590
01:11:48.420 --> 01:12:00.999
Michael Ungaro: I think it was a lease around the lobster fest, as many of you know. You know, we've brought in millions of customers over the years to our project just in the temporary location alone. I think half a million people have visited us just the 1st year.

591
01:12:01.000 --> 01:12:17.220
Michael Ungaro: but in addition to that, we were serving millions of people on top of doing the lobster Fest concurrently, and we're always able to work with the port of the Los Angeles police department, which are great, really great. In addition to outside services to manage parking.

WHMPM-22 cont.

592
01:12:17.220 --> 01:12:40.999
Michael Ungaro: and it was always manageable, is always something that we were able to to handle with our existing customer base as well as the port of Los Angeles visitors, and we also did a great event. Gosh! I think it's been 13 years ago, where we had Mumford and Sons, and 10,000 people visit us on a Good Friday. So we're really excited to continue on with entertainment. And being a really good member, not just of the community, but a good, a good

593
01:12:41.370 --> 01:13:07.470
Michael Ungaro: we're really excited to be part of West Harbor and to continue on, I'm 3rd generation moving on to 4.th Again, you can watch our TV show and see how we function, how we work as a family unit inside of the business. So I think it's great to be part of what the Johnsons have created as a family owned and operated business with us coming together and our family. It's going to be great. We're really excited about it. We'll fully support everything that's moving forward, so I'll end it there, and let the rest of people comment and thank you all for your time.

594
01:13:09.090 --> 01:13:10.599
Nicole Enciso: Thank you for your comment

595
01:13:11.060 --> 01:13:15.969
Nicole Enciso: again. Apologies for pronunciation. We're going to move on to Axel Palacios.

WHMPM-23

596
01:13:16.290 --> 01:13:18.300
Nicole Enciso: Please go ahead and unmute yourself.

597
01:13:18.729 --> 01:13:23.070
Nicole Enciso: Spell and state your name for the record and identify if you're with an organization.

598
01:13:23.340 --> 01:13:24.500
Aksel Palacios: Yes. Can you all hear me?

599
01:13:24.700 --> 01:13:25.230
Nicole Enciso: I can.

600
01:13:25.580 --> 01:13:25.930
Aksel Palacios: Okay.

601
01:13:26.040 --> 01:13:34.159
Aksel Palacios: Okay. Great. My name is Axel Palacios, A. KSEL. PALA. CIOS. And great pronunciation. Almost nobody ever gets it on the 1st try.

WHMPM-23 cont.

602
01:13:34.300 --> 01:13:39.710
Aksel Palacios: and I am the Director of port and capital projects for the office of Council Member Tim Mccosker.

603
01:13:39.870 --> 01:13:48.030
Aksel Palacios: I'm here to express Council Member Mccosker's full support of the West Harbor Project and its full scope, including the amphitheater and Ferris Wheel.

604
01:13:48.270 --> 01:13:56.380
Aksel Palacios: The merits of this project have been expressed thoroughly by previous speakers, but I will reiterate its importance as a catalyst for economic and workforce development.

605
01:13:56.480 --> 01:13:58.420
Aksel Palacios: Tourism and cultural placemaking.

606
01:13:58.800 --> 01:14:08.599
Aksel Palacios: This effort is the culmination of a decades-long process which has

allowed the private and public sectors to collaborate, to create a world-class destination worthy of worthy of the residents of this community.

607
01:14:09.040 --> 01:14:23.400
Aksel Palacios: San Pedro, of course, has immense pride in its history, and the port of Los Angeles was a catalyst for the growth of Los Angeles as its city and its inception, and I believe now it not only is just an economic powerhouse in terms of the port of Los Angeles and cargo movement.

WHMPM-23 cont.

608
01:14:23.430 --> 01:14:34.580
Aksel Palacios: but will also be a world class destination for generations to come. So just want to reiterate the Council members full support of the project, and we look forward to seeing this move on to its finalized. Thank you very much for your time.

609
01:14:36.630 --> 01:14:43.290
Nicole Enciso: Thank you for your comment. We're gonna go ahead and again apologies for pronunciation, and

610
01:14:43.430 --> 01:14:52.339
Nicole Enciso: invite James Kempow to share their comment. Please unmute yourself, state your name, spell it for the record, and let us know if you're part of an organization.

611
01:14:52.990 --> 01:14:55.179
James Campeau: Hi! Hi! Can you hear me?

612
01:14:56.090 --> 01:14:56.929
Nicole Enciso: Yes, I can.

WHMPM-24

613
01:14:57.650 --> 01:15:05.169
James Campeau: Yes. James Campo, last name CAMP. EAU. I'm speaking as a individual today.

614
01:15:05.737 --> 01:15:11.700
James Campeau: I've lived in San Pedro since 1985, I've been working in a community

615
01:15:11.970 --> 01:15:15.259
James Campeau: community advocate for 35 years.

616

01:15:15.872 --> 01:15:21.059
James Campeau: I support the port. I support its success for the West harbor.

617
01:15:21.180 --> 01:15:39.509
James Campeau: and I want it to be a success for everybody, not only for all the businesses and everything, but for the community who have to listen to the expanded noise. Noise is a real problem out here where we live in the hillside area, looking out onto the harbor.

618
01:15:39.660 --> 01:15:42.060
James Campeau: It all funnels out from

619
01:15:42.160 --> 01:15:52.944
James Campeau: the port the everywhere. And we're we're like the amplifier we're the hillside we get. We get all that ways. I don't think dressed enough. I've asked

620
01:15:53.670 --> 01:16:13.950
James Campeau: Alan Johnson a year ago, if they could tweak it. The stage facing east, and the newspaper article said they've tweaked it a little bit, but a little bit really won't cut it. It needs to face East. I support it. I support all the businesses. I want this to be a success for everybody.

WHMPM-24 cont.

621
01:16:14.762 --> 01:16:22.009
James Campeau: And the only residents I know that live out on Terminal Island are the Federal prisoners and the Coast Guard.

622
01:16:22.040 --> 01:16:35.969
James Campeau: so I think they could, you know, handle it a little better than the many, many residents here out at Point Furman, and and Sound can't be equated that it's just gonna travel in a pipe going out to the south.

623
01:16:36.120 --> 01:16:52.250
James Campeau: We have so many atmospheric conditions here. It really spreads around and we get it. And the outer harbor is a mess. The kind of acts they bring in there. They're just blasting, rattling our doors windows. We really don't want that.

624
01:16:52.350 --> 01:17:09.700
James Campeau: and I don't see even if it was a reduced size. 3,000 seat amphitheater. If we could bring in quality acts not only just this noise that you know you can hear the bass from over in Catalina. It's why can't we have classical music some other venues?

625
01:17:09.840 --> 01:17:10.860
James Campeau: And

626
01:17:11.370 --> 01:17:26.439
James Campeau: is Netherlander going to what happens after the 100 days? Is is there going to be other special events that they are not in control of. So any special events we can't call the port police to have them reduce it. It's a contract, and the thing goes to midnight, or whatever.

627
01:17:26.650 --> 01:17:50.580
James Campeau: Another thing is security. The outside the Freebie concerts. They're going to be hanging all over the hills, bluffs, block field, Beacon Street minor. They'll be out there in slip, Sp slip in the commercial fishermen areas they're going to be everywhere. It'll be a party. Central Lapd can't enforce that these are should be some of the

WHMPM-24 cont.

628
01:17:50.590 --> 01:17:52.790
James Campeau: mitigating factors as well.

629
01:17:53.270 --> 01:18:04.400
James Campeau: so I hope we could turn the stage facing east. That was really could handle a help a lot, I would appreciate it, and I hope it's a successful

630
01:18:04.990 --> 01:18:06.880
James Campeau: endeavor for us all. Thank you.

631
01:18:09.390 --> 01:18:10.960
Nicole Enciso: Thank you for your comment.

632
01:18:11.340 --> 01:18:14.659
Nicole Enciso: Next, we have Cameron V.

633
01:18:14.960 --> 01:18:20.789
Nicole Enciso: Please unmute yourself, state and spell your name for the record, and let us know if you're part of an organization.

WHMPM-25

634
01:18:20.980 --> 01:18:22.649
KamranV: Sure thing. Can you hear me? Okay.

635

01:18:22.650 --> 01:18:24.210
Nicole Enciso: Yes, I can. Great.

636
01:18:24.210 --> 01:18:29.219
KamranV: I am Kamran Valanjad. It's spelled KAMR. A. N.

637
01:18:29.390 --> 01:18:33.380
KamranV: Last name is V. As in Victor A. LANE.

638
01:18:33.540 --> 01:18:34.840
KamranV: JAD.

639
01:18:35.320 --> 01:18:38.430
KamranV: I am an audio engineer

WHMPM-25 cont.

640
01:18:38.530 --> 01:18:52.070
KamranV: and researcher in Mit Spatial Sound Lab, as well as an emeritus board member of the Echo Park, Chamber of Commerce and a Current Board member of Dublab, a nonprofit radio station and Arts organization.

641
01:18:52.390 --> 01:19:03.059
KamranV: As a part of the Echo Park Chamber, I produced over a decade of Echo Park, rising festivals which take over the whole town.

642
01:19:03.090 --> 01:19:17.070
KamranV: working closely with the city and and neighbored stakeholders successfully. In the past. I've also produced an event called Moogfest as a citywide music event in Durham, North Carolina, where I had the privilege of working with a similar group

643
01:19:17.490 --> 01:19:37.690
KamranV: of multi-generational local developers that were highly vested in the community, like the Johnsons who are developing the West Harbor project through that project, Moogfest and others. I've been able to see firsthand how these kinds of large arts aligned projects enhance the community.

644
01:19:38.050 --> 01:19:39.890
KamranV: I'm also

645
01:19:39.920 --> 01:19:57.325
KamranV: co-owner of the Majestic, a forthcoming restaurant just up the hill in the

former Y.M.C.A. The current Harbor House apartments. That's opening next year. I am, with all of that, said I'm commenting as an individual and not on behalf of those organizations.

646
01:19:57.970 --> 01:20:03.840
KamranV: through my own professional experience. Upon learning about the details of this project

647
01:20:03.900 --> 01:20:14.330
KamranV: and getting to know the people involved and their plans. I'm very supportive of the West Harbor project, not only for my own future business up the hill.

648
01:20:14.460 --> 01:20:21.369
KamranV: but for the meaningful quality of life and cultural opportunity that the project provides.

WHMPM-25 cont.

649
01:20:21.580 --> 01:20:46.829
KamranV: that I've again seen through my own experience in these other projects as an audio expert. I was pleasantly surprised to see the thoughtful forward thinking, planning, and design of the amphitheater in particular. I can also say through my own experience that with keen systems, designs and modern multi-channel audio technology.

650
01:20:48.320 --> 01:21:00.479
KamranV: effective audio spillage mitigation can be achieved not only for the mitigation aspect, but also provide a unique creative opportunity for the venue which is very exciting to me.

651
01:21:00.520 --> 01:21:04.230
KamranV: I'm excited for what's to come, and thank you for the time for my comment.

652
01:21:06.150 --> 01:21:07.509
Nicole Enciso: Thank you for your comment.

653
01:21:07.900 --> 01:21:10.819
Nicole Enciso: Next, we have Anne Carpenter.

WHMPM-26

654
01:21:10.870 --> 01:21:17.289
Nicole Enciso: Please unmute yourself, state and spell your name, and identify if you're part of any organization. Thank you.

655
01:21:17.650 --> 01:21:20.239
Ann Carpenter, Braid Theory: Hello. My name is Ann Carpenter.

656
01:21:20.790 --> 01:21:22.360
Ann Carpenter, Braid Theory: A, NN.

657
01:21:22.570 --> 01:21:29.300
Ann Carpenter, Braid Theory: CARP. ENTE. R. I'm CEO of braid theory

658
01:21:29.817 --> 01:21:35.630
Ann Carpenter, Braid Theory: venture advisory firm currently at Altacy, at the port of Los Angeles.

659
01:21:35.670 --> 01:21:43.299
Ann Carpenter, Braid Theory: have been there since we were tenant number one in 2017. I am a long time resident.

WHMPM-26 cont.

660
01:21:43.470 --> 01:21:51.659
Ann Carpenter, Braid Theory: a resident of San Pedro, currently, and for the last 30 plus years in Point Furman. I am

661
01:21:51.670 --> 01:21:59.289
Ann Carpenter, Braid Theory: also a long standing member and former Board, member of the San Pedro Chamber of Commerce, and I run

662
01:21:59.310 --> 01:22:02.009
Ann Carpenter, Braid Theory: the. I had chaired the committee

663
01:22:02.020 --> 01:22:14.330
Ann Carpenter, Braid Theory: for the port's public access investment program for the Chamber to bring the voice of the Chamber into port investments, community investments.

664
01:22:14.440 --> 01:22:28.599
Ann Carpenter, Braid Theory: I'm speaking on behalf of myself and my company that we are, that I am thrilled. Our company is thrilled to welcome this project in its entirety with the full

665

01:22:28.650 --> 01:22:31.150
Ann Carpenter, Braid Theory: 66,000 plus

666
01:22:31.300 --> 01:22:36.379
Ann Carpenter, Braid Theory: seat amphitheater, and Ferris wheel highly highly support it.

667
01:22:37.970 --> 01:22:41.400
Ann Carpenter, Braid Theory: I want to acknowledge the speaker before me.

668
01:22:41.530 --> 01:22:48.979
Ann Carpenter, Braid Theory: You are exactly who we are, thrilled to have welcoming into our community, and I think

669
01:22:49.010 --> 01:23:02.289
Ann Carpenter, Braid Theory: it is folks like that gentleman that we will continue to attract and bring into San Pedro to keep it a vibrant living community, not one

WHMPM-26 cont.

that

670
01:23:02.470 --> 01:23:15.170
Ann Carpenter, Braid Theory: that for too long the the old parts of call was just allowed to decay and decay and decay, and was left on people's memories. And now we have the chance to see

671
01:23:15.430 --> 01:23:25.991
Ann Carpenter, Braid Theory: how brand new memories can be created. I appreciate the very thoughtful mitigation member. measures. And I just

672
01:23:27.240 --> 01:23:39.859
Ann Carpenter, Braid Theory: teeny, tiny comment because of the kind of work. We do. Please go a little bit further with the bioplast or with the biodegradable materials.

673
01:23:39.880 --> 01:23:42.982
Ann Carpenter, Braid Theory: Is that that, they don't

674
01:23:43.630 --> 01:23:55.640
Ann Carpenter, Braid Theory: that they're not biodegradable plastics that can be microplastics that go into ocean, because that actually can make the situation worse. But when you're going down to that little bit of detail

675
01:23:56.790 --> 01:23:58.190
Ann Carpenter, Braid Theory: to find

676
01:23:58.370 --> 01:24:00.239
Ann Carpenter, Braid Theory: anything to bring up.

WHMPM-26 cont.

677
01:24:00.300 --> 01:24:08.440
Ann Carpenter, Braid Theory: possibly negative. It shows you how strong this proposal is in its entirety. Thank you very much.

678
01:24:09.730 --> 01:24:11.179
Nicole Enciso: Thank you for your comment.

679
01:24:11.190 --> 01:24:17.620
Nicole Enciso: We will now move on to David. Please unmute yourself, state your full name for the record.

680
01:24:17.650 --> 01:24:20.530
Nicole Enciso: and let us know, if you're part of any organization.

681
01:24:21.790 --> 01:24:22.690
David: Can you hear me?

682
01:24:22.690 --> 01:24:23.540
Nicole Enciso: I can.

WHMPM-27

683
01:24:23.790 --> 01:24:34.599
David: David Nastri, NAST. RII am a local resident kind of new. I've only been here on and off since 1978.

684
01:24:35.310 --> 01:24:36.400
David: I

685
01:24:36.490 --> 01:24:53.309
David: the love fest that's been going on. I'm I'm appreciative of. I have a few concerns being a local resident. I live along down in lower and the lower residential part of the of the port. We'll call it 19th and Crescent.

686

01:24:53.769 --> 01:24:57.119
David: So this thing's gonna pretty much face my face where I live.

687
01:24:58.630 --> 01:25:21.801
David: Having experience in San Diego when they open cricket, amphitheater and the nightmarish traffic that was caused in the neighborhoods and the freeway in the neighborhoods around cricket when it opened, and the years ensuing. The size of the amphitheater at 6,000 6,200 really concerns me. I think it's too big for the area. It's too big for the nature of the rest of the development. I think it's oversized.

688
01:25:22.290 --> 01:25:29.113
David: I believe that the parking is not great enough. There was a gentleman earlier that talked about the Punk Festival out at the

689
01:25:29.440 --> 01:25:56.009
David: out at Pier 46, a couple of months ago in early October. Those people all parked in the neighborhood around, you know, in the in the between 20 Second and and 15th Street and from Beacon up to through Pacific. That's where they parked. There was not a single parking place in the neighborhood available in that. When that concert went on, great group of people. The music was fine, not a problem there, but they parked in the neighborhood. They didn't park where they were told.

WHMPM-27 cont.

690
01:25:56.657 --> 01:26:00.072
David: And that is of of concern.

691
01:26:00.970 --> 01:26:08.147
David: I have read through the traffic study that accompanied the the the the

692
01:26:08.660 --> 01:26:34.640
David: the draft, eir. I have some experience in reading these and working on these, and I believe that it was flawed because I don't believe it took into account the gross number of traffic trips. It was just focused on on this, not the overall development. And it's and I believe that the traffic study is flawed and the number of vehicle miles traveled, and the number of additional car trips per day was only focused on.

693
01:26:34.990 --> 01:26:38.180
David: Excuse me, the amphitheater. Sorry if it blew anybody's ear out on that

694
01:26:38.450 --> 01:26:56.262
David: so I believe that is flawed, and I think that ties back to my my comments about the 3,000. The the 3,000 be more appropriately sized for the size of the West

Harbor development. Finally, I'm concerned on an ongoing basis of I I understand there's a love fest going on for the Johnsons and the development and everything else.

695
01:26:56.730 --> 01:27:13.479
David: West Harbor has taken way way too long. I've been in the in the development, the business of building things and developing land for the better part of 30 years. This should have been done 3 or 4 years ago. Even downtown. Disney was built faster than this thing, and on the whole, California adventure was built faster than this.

WHMPM-27 cont.

696
01:27:13.560 --> 01:27:32.320
David: There there should be some. The port should be forcing liquidated damages on whoever is party to this contract to make sure it gets done in time for the Olympics, because at this point I'm afraid that we won't be have. This thing won't be open in time for the Olympics. None of this will, so I appreciate everything everybody's doing. I welcome it to San Pedro, but at the same time

697
01:27:32.500 --> 01:27:34.849
David: there's gotta be some limits. Thank you.

698
01:27:37.350 --> 01:27:38.769
Nicole Enciso: Thank you for your comment.

699
01:27:40.880 --> 01:27:43.489
Nicole Enciso: We are now moving on to

700
01:27:43.800 --> 01:27:49.970
Nicole Enciso: Jacob Planet. Please state and spell your name for the record, and let us know, if you're part of an organization.

701
01:27:52.070 --> 01:28:05.569
Jacob Planet: Hi. My name is Jacob Eisenberg, JACO. BEIS. ENBE, RG. And I'm with the Renaissance Group. I am a board member of the San Pedro Chamber of Commerce and a

WHMPM-28

702
01:28:05.660 --> 01:28:18.260
Jacob Planet: treasurer of the San Pedro business Improvement district. Today I come as an individual. I'm very excited for this project. I think it's going to do wonderful things for all the small businesses in San Pedro.

703
01:28:18.460 --> 01:28:34.320
Jacob Planet: and we're built off small businesses. I mean, we're gonna bring in

amazing people from all around La. And they're gonna experience San Pedro. They're gonna see the Vincent Thomas Bridge. They're gonna spend money in our restaurants, and it's gonna be

704
WHMPM-28 cont. 01:28:34.808 --> 01:28:53.679
Jacob Planet: wonderful. I mean, this project will benefit the entire community by revitalizing the waterfront and providing new opportunities for cultural and economic enrichment. So I'll keep it short and sweet. And that's it. Thank you. I hope you have a wonderful evening.

705
01:28:55.060 --> 01:28:56.589
Nicole Enciso: Thank you for your comment.

706
01:28:57.710 --> 01:29:02.640
Nicole Enciso: We are going to go ahead and move on to Alejandro Barlow.

707
01:29:02.950 --> 01:29:08.180
Nicole Enciso: Please go ahead and unmute yourself. State and spell your name, and let us know if you're part of an organization.

708
01:29:09.310 --> 01:29:10.490
Alejandro Barlow’s iPhone: Hello! Yes.

709
01:29:10.640 --> 01:29:16.730
Alejandro Barlow’s iPhone: My name is Alejandro Barlow, a LEJN DRLB RLOW.

WHMPM-29

710
01:29:16.870 --> 01:29:23.440
Alejandro Barlow’s iPhone: I'm an intern at random links news. But I'm speaking as a concerned citizen.

711
01:29:24.310 --> 01:29:30.760
Alejandro Barlow’s iPhone: I'm a lifelong resident here in my early twenties born and raised here.

712
01:29:31.140 --> 01:29:33.640
Alejandro Barlow’s iPhone: and some of the concerns that I see

713
01:29:33.650 --> 01:29:34.900
Alejandro Barlow’s iPhone: is that

714
01:29:35.740 --> 01:29:56.129
Alejandro Barlow’s iPhone: although there are some mitigations being made for the noise, there's not enough being made. Because when the Long Beach has their Grand Prix, or we have the rally cross at berth 47. Those vehicles can go up to 1, 47 decibels, which is

715
01:29:56.220 --> 01:30:05.370
WHMPM-29 cont.
Alejandro Barlow’s iPhone: about 20 or so decibels louder than a concert. Venue. However, that is much further away at Long Beach

716
01:30:05.550 --> 01:30:10.240
Alejandro Barlow’s iPhone: and I can still hear, as at my Residency.

717
01:30:10.980 --> 01:30:20.032
Alejandro Barlow’s iPhone: which that would be concerning if it's an hour long festival. And then the the carnival stuff that we got going on here.

718
01:30:20.820 --> 01:30:43.509
Alejandro Barlow’s iPhone: I I do know that that Ferris wheel is very slow, and is is more of pods, but the rest of the the carnival, like games and such that draws a certain crowd, and then the the beers and the bars there that draws another crowd
WHMPM-30
along with the

719
01:30:43.510 --> 01:30:51.849
Alejandro Barlow’s iPhone: the festival is drawing a 3rd type, and having all those mixed that may be a little bit concerning having small children with drunk individuals.

720
01:30:53.640 --> 01:30:59.930
Alejandro Barlow’s iPhone: And then along that the the stage is more so. Just a

721
01:30:59.980 --> 01:31:16.038
Alejandro Barlow’s iPhone: a permanent pop up feature rather than anything else. Because if you look at Coachella, it is almost the exact same setup as one of those
WHMPM-31
venues at Coachella, and is not even remotely close to an amputer

722
01:31:17.320 --> 01:31:21.619
Alejandro Barlow’s iPhone: and if it's named an amphitheater for legal reasons, that's 1 thing. But

723

01:31:22.097 --> 01:31:25.759
Alejandro Barlow’s iPhone: to get around certain things like a a

724
01:31:25.870 --> 01:31:31.219
Alejandro Barlow’s iPhone: permanent temporary feature like that stage or

725
01:31:31.420 --> 01:31:51.032
Alejandro Barlow’s iPhone: other permanent temporary features, such as chain link fences around that. Just make a brick wall, and it will be much better for everyone. Also to mitigate parking in the area. Simply build a parking structure that can hold 2,000 vehicles

726
01:31:51.620 --> 01:32:00.159
WHMPM-31 cont.
Alejandro Barlow’s iPhone: that way. It takes up less space. Don't have to worry about shuttles and other things of that nature also could use. The

727
01:32:00.180 --> 01:32:11.840
Alejandro Barlow’s iPhone: cruise ship parking as well cause that is right over there. And if there is a concern about that, well, you got all the fishermen at 20 Second Street

728
01:32:12.391 --> 01:32:20.169
Alejandro Barlow’s iPhone: Park that need that more than a lot of the other people do. That's the comments that I have for. Now. Thank you.

729
01:32:22.080 --> 01:32:23.609
Nicole Enciso: Thank you for your comment.

730
01:32:23.900 --> 01:32:32.909
Nicole Enciso: We'll now move on to Robin Rudisil. Please unmute yourself, state, and spell your name for the record, and let us know if you're part of an organization.

731
01:32:33.480 --> 01:32:50.859
WHMPM-32
Robin Rudisill: Good evening. I'm Robinson. I'm a member of the Coastal San Pedro, Neighborhood Council Board and Chair of the Planning Land Use and Transportation committee. But speaking here as an individual.

732
01:32:50.970 --> 01:33:00.339
Robin Rudisill: there are a lot of great things about this project, but there are many members of the community who are very concerned about the impact of noise on

their quality of life.

733
01:33:00.520 --> 01:33:15.409
Robin Rudisill: A 100 major concerts are mentioned, but then there's the wild card of other local events, unlimited that needs to be better explained and analyzed. Also, in reviewing the new report, I've spoken with sound and other professionals.

734
01:33:15.700 --> 01:33:31.389
Robin Rudisill: First, st the report mentions levels of 106 Dba. At the front audience, and 110 Dba. At the mix position, 75 feet back, which it seems like that must be reversed, since it's louder at the front, nearer the sound source

735
01:33:31.400 --> 01:33:40.490
Robin Rudisill: that said, I've learned that those volume levels are in the range that cause damage to human hearing and to marine life.

WHMPM-32 cont.

736
01:33:40.710 --> 01:33:52.120
Robin Rudisill: The Greek theater, which the report frequently mentions starts their mixed position, their Red Zone volume at 96 Dba. With peaks rarely above 103 dba.

737
01:33:52.120 --> 01:34:16.599
Robin Rudisill: So the proposed sound pressure levels within the space seem to be way too loud. I would appreciate if you could please provide us an analysis of sound limits of other similar venues, and show that comparison, spillover sound into the community will be exacerbated by unfavorable atmospheric conditions, such as temperature, inversion, and that is most prominent. 3 h prior to sunset and 3 h after sunset, which is

738
01:34:16.640 --> 01:34:18.460
Robin Rudisill: prime concert time.

739
01:34:18.820 --> 01:34:48.229
Robin Rudisill: The wind and humidity are also major factors, and that must be considered. The mitigation measures just don't work as well. During unfavorable atmospheric conditions. These discrepancies and possible emissions in the noise analysis in the report are concerning, and I hope the analysis will be both corrected and expanded for these. Lastly, I'd like to know how many people the grassy area at the amphitheater can hold, and how that has been factored into the parking and transportation analysis.

WHMPM-33

740
01:34:48.260 --> 01:35:11.090
Robin Rudisill: Some community members are also very concerned about safety. It may

not be addressed in an Eir. But please consider the impacts of concertgoers who decide to go to our local parks and keep partying after the concerts and the tailgaters who will enjoy the concert from the surrounding streets and parks. As James Campo mentioned. We hope there will be increased

741
WHMPM-33 cont.
01:35:11.090 --> 01:35:28.459
Robin Rudisill: police during concert times. I think West Harbor would also be an awesome project without the giant amphitheater, with a significantly smaller concert venue. So I hope you will more carefully consider the impacts on the community of the noise. In particular. Thank you.

742
01:35:30.060 --> 01:35:31.520
Nicole Enciso: Thank you for your comments.

743
01:35:35.810 --> 01:35:39.149
Nicole Enciso: At this time we have taken comments from all

744
01:35:39.170 --> 01:35:45.700
Nicole Enciso: that have their hand raised. We'll wait for a minute or so to see if we have any additional new comments

745
01:35:50.310 --> 01:35:55.333
Nicole Enciso: while we wait on that. I oh, I do see a hand raised.

746
01:35:57.470 --> 01:36:00.089
Nicole Enciso: We have Lori Wicksted.

WHMPM-34
747
01:36:00.550 --> 01:36:05.739
Nicole Enciso: Please unmute yourself, state and spell your name, and let us know if you're part of an organization.

748
01:36:05.740 --> 01:36:24.159
Laurie Wixted: Yes. Hi, thank you. You got my pronunciation right. Lori Wickstead. I'm not officially part of the organization, but I do have represent a lot of landlords and tenants in the downtown area. I have done, you know, hundreds of commercial leases, and worked

749
01:36:24.430 --> 01:36:31.870
Laurie Wixted: the San Pedro marketplace for over 35 years. I also grew up here and lifelong resident of San Pedro and the Peninsula.

750
01:36:32.228 --> 01:36:43.390
Laurie Wixted: So yeah, actually, I wasn't gonna speak because a lot couple of things that I just wanted to press upon have already been said but so I just very quickly want to kinda

751
01:36:43.540 --> 01:36:46.150
Laurie Wixted: emphasize again that the downtown

752
01:36:46.735 --> 01:36:52.959
Laurie Wixted: our downtown is, you know, finally coming together after many years. And it's it's very exciting to see.

753
01:36:52.970 --> 01:37:01.149
Laurie Wixted: But you know it's very challenging when we bring people down from La or the West Side to try to put a restaurant or do something because

WHMPM-34 cont.

754
01:37:01.934 --> 01:37:23.800
Laurie Wixted: of the lack of foot traffic. And of course, West Harbor is awesome, and you know that's a different destination. So the amphitheater is super important to get people to explore downtown, maybe for a concert book, a dinner reservation. It's really critical, as couple have said to, you know.

755
01:37:23.800 --> 01:37:32.088
Laurie Wixted: bring more life there and and make it more economical for the people that are there. So I just wanted to impress upon that and

756
01:37:32.800 --> 01:37:34.880
Laurie Wixted: also the aspect of

757
01:37:35.220 --> 01:37:52.190
Laurie Wixted: youth employment, because many of us who grew up here may have worked at Marineland, or have friends that did. And they, you know, got their 1st job in the parking lot, or working in a snack shack or something. So the jobs that opportunities that will be there are just good hands on local jobs for our young people.

758
01:37:52.720 --> 01:37:53.630
Laurie Wixted: That's it.

759
01:37:55.750 --> 01:37:57.219

Nicole Enciso: Thank you for your comment.

760
01:37:59.288 --> 01:38:04.309
Nicole Enciso: I am not seeing any other hands raised, but I did want to take a moment to mention

761
01:38:04.732 --> 01:38:13.140
Nicole Enciso: that we have. Thank you for pointing out the comment letters we're missing. We have uploaded those to the website. So please

762
01:38:13.670 --> 01:38:16.920
Nicole Enciso: check www.portoflosangeles.org

763
01:38:17.020 --> 01:38:25.909
Nicole Enciso: forward slash Ceqa, which is Ceqa. And under the other project files you'll find the comment letters received to the Nopis.

764
WHMPM-35 01:38:29.190 --> 01:38:34.400
Nicole Enciso: We do not have any additional raised hands, so we'll wait a few moments before concluding

765
01:38:34.990 --> 01:38:35.840
Nicole Enciso: the meeting.

766
01:39:01.280 --> 01:39:06.970
Nicole Enciso: All right, Sarah. I don't believe we have any additional comments, so I'll go ahead and hand it back to you.

767
01:39:08.870 --> 01:39:27.720
Sarah Workman: All right. So if you wish to provide any additional comments after tonight's meeting once again, we will be accepting comments until January 10th of 2025. And those comments, again, can be sent via mail to the address listed on the website or to the Ceqa. Comments at Port la email also listed.

768
01:39:28.020 --> 01:39:34.670
Sarah Workman: Please be sure to include the Project title in the subject line. Again, that's the West Harbor Modification Project.

769
01:39:34.880 --> 01:39:39.249
Sarah Workman: And just as a final reminder all comments received will become part

of the public record.

770
01:39:40.680 --> 01:39:47.069
WHMPM-35 cont. Sarah Workman: Thank you all for attending this meeting. We hope you have a good rest of your evening, and appreciate your participation.

771
01:40:31.840 --> 01:40:35.020
Nicole Enciso: Sam, I think we're good to close off the meeting. Thank you.

Procedural

COASTAL SAN PEDRO NEIGHBORHOOD COUNCIL

Doug Epperhart
President

Dean Pentcheff
Vice President

Sheryl Akerblom
Treasurer

1840 S Gaffey St., Box 34 ● San Pedro, CA 90731 ● cspnclive@gmail.com

November 9, 2024

Lisa Wunder
Acting Director of Environmental Management
Los Angeles Harbor Department
via email: ceqacomments@portla.org

Re. West Harbor Modification Project

Dear Lisa,
We request a 60 day extension to the deadline for public comments on the Draft Supplemental EIR on the West Harbor Modification Project (ending on 21 February 2025).

CSNPC-1

The DSEIR's Executive Summary notes that (as is legally required), the "[w]ritten comments received during the scoping process are included..." However, none of the comments are included (only interpreted summaries). We request that the public comments be posted as soon as possible.

At your earliest convenience, please confirm that this extension is approved and when the public comments posting will occur.

I appreciate it.

Sincerely,

Douglas Epperhart

Doug Epperhart, President
On behalf of the Coastal San Pedro Neighborhood Council Board

cc
cc: Augie Bezmalinovich ABezmalinovich@portla.org
Sarah Workman ceqacomments@portla.org

From: Amy Eriksen <amy@angelsgateart.org>
Sent on: Friday, January 31, 2025 1:36:08 AM
To: Ceqacomments <Ceqacomments@portla.org>
CC: Sarah Al-Mulla <sarah@angelsgateart.org>
Subject: Letter of Support for West Harbor from Angels Gate Cultural Center
Attachments: West Harbor LoS Angels Gate.doc (98 KB)

Eriksen-1 Please make sure that Mike Galvin, the Harbor Commissioners and the Port of LA administration receive our letter of support for the important West Harbor project.

-Amy Eriksen-
Angels Gate Cultural Center
310.519.0936 x107

From: Ste ens, heresa C SA M C SP SA
To: nciso, ico e
c: Wor man, Sarah
Subject: : Comment Period tension: otice of A ai abi ity West Harbor Modification Project
Date: Monday, o ember , 2024 0:37: AM

Thanks!

From: Enciso, Nicole <NEnciso@portla.org>
Sent: Monday, November 18, 2024 10:30 AM
To: Stevens, Theresa CIV USARMY CESPL (USA) <Theresa.Stevens@usace.army.mil>
Cc: Workman, Sarah <SWorkman@portla.org>
Subject: [Non-DoD Source] RE: Comment Period Extension: Notice of Availability - West Harbor Modification Project

Good morning Theresa,

This project does not include or alter any of the in-water work previously analyzed.

Regards,

Nicole Enciso
Marine Environmental Supervisor - CEQA
Office: (310) 732-3615
Mobile: (424) 342-3199
Port of Los Angeles
Environmental Management Division

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From: Stevens, Theresa CIV USARMY CESPL (USA) <Theresa.Stevens@usace.army.mil>
Sent: Monday, November 18, 2024 8:35 AM
To: Enciso, Nicole <NEnciso@portla.org>
Subject: FW: Comment Period Extension: Notice of Availability - West Harbor Modification Project

USACE-1 | Hi, is there anything I should know about before diving into the supplement? Does this alter any of the in-water work?? Thanks-

From: Ceqacomments <Ceqacomments@portla.org>
Sent: Thursday, November 14, 2024 6:07 PM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: [Non-DoD Source] Comment Period Extension: Notice of Availability - West Harbor Modification Project

Good Evening,

This email is to inform you that the public comment period for the Draft Subsequent Environmental Impact Report (SEIR) to the 2009 San Pedro Waterfront EIR, known as the West Harbor Modification Project, has been extended. Public comments will now be received until Friday, January 10, 2025. Please review the attached notice for additional information.

Regards,

Nicole Enciso
Marine Environmental Supervisor - CEQA
Port of Los Angeles
Environmental Management Division

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From: Workman, Sarah <SWorkman@portla.org>
Sent: Wednesday, November 6, 2024 8:09 AM
To: Ceqacomments <Ceqacomments@portla.org>
Subject: Notice of Availability - West Harbor Modification Project

Good Morning,

This email is to inform you that today, November 6th, the Los Angeles Harbor Department will release a Draft Subsequent Environmental Impact Report (SEIR) to the 2009 San Pedro Waterfront EIR, known as the West Harbor Modification Project.

The Proposed Project would include the addition of a 6,200-person capacity Amphitheater and lawn venue, a 175-foot diameter Ferris Wheel and Amusement Attractions, and

improvements to the 208 E. 22nd Street Parking Lot to accommodate up to 2,600 parking stalls which would be available for use by the larger San Pedro Waterfront Area.

A virtual public meeting will be held for the proposed project on November 14th, 2024 at 4pm. Information on how to join the meeting and a copy of the document is available on our website at www.portoflosangeles.org/ceqa. We are accepting comments until December 23rd, 2024. For additional information, please refer to the attached Notice of Availability.

Please let me know if you have any questions. Thank you.

Regards,

Sarah Workman (she/her)
Environmental Specialist – CEQA
Port of Los Angeles
Environmental Management Division

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Appendix K
Natural Turf Changes

K.1 Environmental Analysis

The analysis contained herein demonstrates and provides substantial evidence that no new potentially significant impacts would occur, nor would the severity of other impact areas be increased by the potential substitution or replacement of artificial turf with natural grass for the 50,000- square-foot Amphitheater lawn area, as compared to the impact determinations made in this Final SEIR.

K.1.1 Aesthetics

The substitution or replacement of artificial turf with natural grass would not present a major change to the aesthetic impact of the Proposed Project because the appearance would be generally the same. Artificial grass is manufactured to recreate the look of natural grass. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.2 Agriculture and Forestry Resources

The substitution or replacement of artificial turf with natural grass would not have any impact on Agriculture and Forestry resources as the Proposed Project area is not located in any area zoned for agricultural use and does not change the existing use of the surrounding area in any way or beyond what was previously analyzed in this Final SEIR.

K.1.3 Air Quality

The substitution or replacement of artificial turf with natural grass would not result in any changes to the proposed operation of the previously approved project that would have new or substantial impacts to air quality as the installation process for artificial turf and natural grass is very similar. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.4 Biological Resources

The substitution or replacement of artificial turf with natural grass would not change the Proposed Project structurally or result in alterations to the natural environment nearest the site. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.5 Cultural Resources

The substitution or replacement of artificial turf with natural grass would not require additional ground-disturbing work beyond what has already been analyzed in this Final SEIR and would not result in any changes to cultural resources compared to the Proposed Project. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.6 Energy

The substitution or replacement of artificial turf with natural grass would not change the construction and operation of the site. The replacement of artificial turf with natural grass is not anticipated to result in wasteful, inefficient, or unnecessary consumption of energy resources nor would it conflict with or obstruct a state or local plan for renewable energy or energy efficiency since it does not require manufacturing. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.7 Geology and Soils

The substitution or replacement of artificial turf with natural grass would not substantially change the installation process in the lawn area and would not result in exposure of people or structures to substantial adverse effects, substantial soil erosion or loss of topsoil, nor is it located on a geological unit that is unstable or would become unstable. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.8 Greenhouse Gas Emissions

The substitution or replacement of artificial turf with natural grass over the 50,000-square-foot amphitheater lawn area would not result in an increase in greenhouse gas emissions. The implementation of natural grass rather than artificial turf also includes a potential reduction in greenhouse gas emissions as a benefit of this Project change. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.9 Hazards and Hazardous Materials

The substitution or replacement of artificial turf with natural grass would not result in any changes to hazards and hazardous materials compared to the previously approved project. Utilizing natural grass would bring natural resources to the site instead of an artificial material. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.10 Hydrology and Water Quality

The substitution or replacement of artificial turf with natural grass would not result in changes to hydrology and water quality, as the infiltration and percolation of water into soils occurring in natural grass is deliberately mimicked by the artificial turf. As discussed on page 3.7-15 of the Draft SEIR, the Proposed Project would be designed and maintained in accordance with the Los Angeles RWQCB water quality requirements, such as the Los Angeles Regional MS4 permit, and would comply with the Construction General Permit post-construction stormwater management measures and the City of Los Angeles LID ordinance. Consequently, potential surface water quality impacts from operation of the Proposed Project would not violate any waste-discharge requirements or otherwise substantially degrade water quality. Because the Proposed Project would continue to be required to comply with the above water quality regulations, the minimal use of pesticides, herbicides, and fertilizers associated with maintaining natural grass instead of artificial turf would not cause any change to the impact determination made in this Final SEIR. As discussed on page 3.6-15 of the Draft SEIR, maintenance of landscaped areas could involve the use of pesticides and/or herbicides. However, these materials would be used in small amounts, intermittently, and with proper care, as directed by their accompanying Safety Data Sheets (SDS). Thus, Proposed Project operations are not expected to create a significant hazard to the public or the environment related to the routine transport, use, or disposal of hazardous materials. Because the Proposed Project would continue to use pesticides, herbicides and fertilizers in small amounts, intermittently, and with proper care, the use of natural grass instead of artificial turf would not cause any change to the impact determination made in this Final SEIR. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.11 Land Use and Planning

The substitution or replacement of artificial turf with natural grass would not cause a physical divide to an established community nor would it conflict with any plan, policy, or regulation as the site is consistent with City zoning and the Port Master Plan's land use. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.12 Mineral Resources

There are no known mineral resources near the lawn area that would be impacted due to this development. As such, the substitution or replacement of artificial turf with natural grass would not cause any change to the impact determination made in this Final SEIR.

K.1.13 Noise

The substitution or replacement of artificial turf with natural grass would not result in any changes to the proposed operation and noise generating activities of the Proposed Project. As such, the

substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.14 Population and Housing

The substitution or replacement of artificial turf with natural grass would not induce population growth, displacement of existing housing or a substantial number of people. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.15 Public Services

The substitution or replacement of artificial turf with natural grass would not result in any impacts to the performance of fire protection, police protection, schools, parks, or other public facilities beyond what has previously been evaluated. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.16 Recreation

The substitution or replacement of artificial turf with natural grass would not increase demand on existing recreational facilities nor require the construction of new recreational facilities. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.17 Transportation

The substitution or replacement of artificial turf with natural grass is not expected to result in an increase to worker and consumer-related trips associated with the Proposed Project. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.18 Tribal Cultural Resources

The substitution or replacement of artificial turf with natural grass would not result in additional ground-disturbing work beyond what has already been analyzed in this Final SEIR. In addition, the substitution or replacement would not result in any changes to the operation and development activities of the Proposed Project. As such, the substitution or replacement would not cause any change to the impact determination made in this Final SEIR.

K.1.19 Utilities and Service Systems

The substitution or replacement of artificial turf with natural grass would not have any impact on the current wastewater treatment facilities nor would it require the construction of an additional wastewater facility. Additionally, water use for maintenance of lawn areas and landscaping was considered as part of the 2009 SPW EIS/EIR and the 2016 Addendum. Additional demands for water supply are anticipated as a result of this change but are not expected to exceed the capacity of the local municipal water supply. Based on a preliminary review of anticipated regional water requirements for a lawn of this size, the area would need between 19-60 minutes of irrigation (spread over 1-3 waterings) weekly, with the exception of weeks with adequate rainfall, and depending on the season. The current estimated use of 23,000 gallons of water per day for restrooms would increase by approximately 3,000 gallons per day to account for an average of 1,056,490 gallons per year required to maintain a 50,000 square foot hybrid Bermuda grass lawn (POLA, 2025). In comparison, the Los Angeles Department of Water and Power (LADWP) supplies an average of 447 million gallons per day (LADWP, 2021-2022). Utilization of efficient watering systems and regular maintenance to prevent leaks and wasted water can further reduce the water requirements of a natural grass lawn. In contrast, while artificial turf does not require water for irrigation purposes, the proposed artificial turf for the lawn venue would also require washing down following events. Additionally, this change to the Proposed Project would not require or result in the relocation or construction of new or expanded water facilities which could cause significant environmental impacts. As such, the substitution or replacement would not cause any change to the impact determination for utilities and service systems made in this Final SEIR.

K.1.20 Wildfire

The Port of Los Angeles is not located in or near a state responsibility area or lands classified as very high fire hazard severity zones (California Fire, 2016; Los Angeles Fire Department, 2019). Therefore, this section of the CEQA Guidelines checklist does not apply. However, the substitution or replacement would not impair an adopted emergency response plan or emergency evacuation plan or exacerbate wildfire risks. Therefore, the substitution or replacement would not cause any change to the impact determination for wildfire made in this Final SEIR.

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