

REPORT FROM

## OFFICE OF THE CITY ADMINISTRATIVE OFFICER

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Date: November 20, 2017

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Council File No.

Council District:

To: The Council  
The Mayor

From: Richard H. Llewellyn, Jr., Interim City Administrative Officer

RH  
RW

Reference: 2017 FUSE Fellow Report

Subject: **EVALUATION OF THE STATE OF STREET RELATED INFRASTRUCTURE**

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### SUMMARY

As a result of a desire of the Mayor and Council to improve the delivery of public works services, this Office retained a FUSE Corps Fellow, Laila Aleqresh, to conduct a review and prepare a report on the state of street related infrastructure. Fuse Corps deploys highly skilled and passionate entrepreneurs into public service to solve some of the biggest challenges facing communities across the country. In conducting this review, Ms Aleqresh worked with the entire Department of Public Works (all Bureaus and the Board), the Department of Transportation (DOT), the Department of Water and Power, this Office, the City Council, and the Mayor's Office. Over 400 one-on-one interviews were conducted, numerous field observations were performed and the operations of both the City of Los Angeles and other municipal jurisdictions were studied to learn from their experience.

The FUSE Report (attached) highlights several areas of opportunity for improvement. In summary, they are:

- Alignment - Address decentralized governance of infrastructure programs and differing goals which can unintentionally impact service delivery to our residents;
- Communication - Break down siloes between divisions, Bureaus and departments and share relevant information across groups in a timely manner;
- Coordination - Synchronize street related programs so activities are sequenced and completed in the correct order to preserve investments and improve on-time project delivery;
- Customer Centricity - Build stronger relationships with our constituents by putting the customer first;
- Data & Technology - Improve data collection, data sharing and usage; integrate technology solutions where appropriate to manage programs; and,
- Planning - Improve planning using a strategic, outcomes based approach that spans all street related programs.

The FUSE Report provides recommendations to address these opportunities and to improve the effectiveness of service delivery. To support City decision makers, the recommendations are

separated into three Tiers based upon the scale of the recommendations. The scale of the recommendations is determined by the potential impact, the potential cost and the timeframe over which implementation is projected to occur.

The following Tier 1 improvements represent significant structural changes that address the fragmented and siloed decision making that currently exists. This results in less strategic decision making around the City's key infrastructure assets.

The first recommendation moves DOT into Public Works as a Bureau. The second recommendation creates an Office of Infrastructure Management within the Board of Public Works. These changes are expected to provide an organizational structure that allows for better alignment of related work, provide active support for the delivery of transportation and street related services and provide a framework that further strengthens strategic delivery of capital projects.

Given the scope of these changes, it is recommended that they be considered in the context of the 2018-19 budget process. Should Mayor and Council elect to include this in the upcoming budget process, it is recommended that this policy decision be made by the end of February to allow sufficient time for inclusion in the Mayor's Proposed Budget. If approved as the policy direction, this Office will work with the Mayor's budget team to include the necessary actions for implementation.

### **Tier 1: Improvements to the City's Infrastructure Delivery Ecosystem**

*The report considers these the highest impact recommendations and recommends implementation in the near future.*

- **1.1:** Improve coordination, strengthen overall alignment, optimize synchronization of street related programs, and enhance service delivery for constituents by bringing all transportation programs into the Department of Public Works to make the Board of Public Works the single oversight authority for all activities over, on and under the street for Council controlled departments. This recommendation also includes eliminating the Transportation Commission and the Taxicab Commission and placing those responsibilities with the Board of Public Works.
- **1.2:** Address the lack of proactive strategic planning, comprehensive project management, under use of existing data sets and interdepartmental program goals by creating an Office of Infrastructure Management within the Board of Public Works that will serve as the citywide lead on all infrastructure programs to drive cross functional performance improvements.

Tier 2 and Tier 3 Recommendations are focused on more specific aspects of the City's infrastructure activities where specific improvements are recommended such as converting utility coordination from a manual process to an electronic system or implementing improvements to the City's 311 system. Additional work with the respective Departments is recommended to provide a more detailed path forward on each of these recommendations. Table A at the end of this report identifies the relevant departments that would be involved in any requested report backs.

### **Tier 2: Improvements to Infrastructure Support Systems**

*The report considers these recommendations as requiring additional policy and funding consideration, and the recommendations impact multiple departments/programs.*

- **2.1:** Strengthen oversight over underground activities, optimize time-related street activities, strengthen City paving plans, preserve City street investments, and provide transparency to City partners, utility providers and the public, by converting utility coordination from a manual process to an electronic system.
- **2.2:** Address lack of asset data, timing of maintenance activities, selection of appropriate preventative and deferred maintenance lifecycle activities and scheduling for asset upgrades by prioritizing strategic asset management activities across asset classes.
- **2.3:** Resolve consistent customer issues with closed status messaging, streamline intake process and ease of use, and provide better transparency tools by making enhancements to the LA311 CRM system.
- **2.4:** Preserve taxpayer investments in the City's street network by updating policies affecting street protections that could include establishment of a moratorium for newly reconstructed streets and a new Concrete Street Damage Restoration Fee.
- **2.5:** Establish guidelines for large, critical infrastructure investments by reinstating a Citywide Capital Expenditure Plan.
- **2.6:** Bolster proper oversight and ensure best allocation of resources to prevent multiple agencies tending to the same asset by clarifying Bureau and department roles in overlapping programs.

### **Tier 3: Improvements to Specific Infrastructure Programs**

*The report considers these recommendations as process specific, low or no cost and as items that can be implemented independent of both Tier 1 and Tier 2 recommendations.*

- **3.1:** Strengthen the city's overall street network by updating the methodology for resurfacing and slurry seal programs to employ factors beyond the PCI score to prioritize paving and maintenance projects.
- **3.2:** Support succession planning, skills development, effective program management and best in class customer service by encouraging knowledge transfer and cross-pollination of process expertise across Bureaus/departments and offering regular training regimens to employees and leaders.
- **3.3:** Promote transparency with utility partners and the public by posting the entire projected annual resurfacing plan online with monthly updates of work completion in a user friendly format.
- **3.4:** Support timely project delivery and strengthen accountability language to include performance metrics by streamlining contract processing time within Department of Public Works.
- **3.5:** Support permittees in assessing the quality of their subcontractors completing street work by educating them on city standards, non-compliant work and timeliness of repairs as indicated on the permit.

TABLE A

FUSE Recommendation	Relevant City Department(s)
<b>Tier 2</b>	
2.1	BPW, BSS, BOE, ITA
2.2	CAO, CLA, BPW, DOT
2.3	BPW, BSS, BOE, ITA
2.4	BSS, BOE
2.5	CAO, CLA
2.6	BPW, CAO, DOT
<b>Tier 3</b>	
3.1	BSS, BOE
3.2	BPW, DOT, Personnel
3.3	BSS, ITA
3.4	BPW, BCA, CAO, City Attorney
3.5	BCA
<b>Identified for Further Investigation</b>	
Manage pursuit of Grants	CAO
Centralized Grants Function	CAO
Annual Meeting of Grant Administrators	CAO
Consolidated Water Enterprise	CAO
Increase Equity and Access to Talent	Personnel
Non-Salary Staff Retention	CAO/Personnel
Opportunities for additional service realignments within the Department of Public Works	CAO/Personnel/City Attorney
Reduce Succession Planning Risks	CAO/Personnel

Our Office looks forward to working with you to review the FUSE Report and to actively improve the delivery of public works and transportation services to our constituents.

RHL:PJH:DHH:06180035

Attachment



**EVALUATION OF THE STATE  
OF STREET RELATED  
INFRASTRUCTURE  
PROGRAMS IN LOS ANGELES  
Fall 2017**



**Project Objective** .....Page 3

**Alignment with the "Back to Basics" Agenda** .....Page 4

**Executive Summary** .....Pages 5-6

**Section 1: Background** .....Pages 7-15

**Section 2: Research** .....Pages 16-60

**Section 3: Recommendations** .....Pages 61-133

**Appendices** .....Pages 134-398

### **Desired Outcomes:**

- *Improved coordination among City departments and external partners will ensure that delivery of Public Works services are delivered in the most efficient and effective manner*
- *Improved relationship between residents and their government*

### **Project Tasks:**

- *To assess the current state of Public Works activities in the City*
  - *Evaluate options for coordinating services*
- *Develop a long-term plan with specific proposals for improving accountability and service delivery*

*Note: the research objective entailed interviewing staff in a range of departments, including proprietary ones like the Department of Water and Power, Los Angeles World Airports, and Port of Los Angeles, as all are critical partners for the City's infrastructure programs. Throughout the report, references are made to overlapping or coordinating activities; however, no recommendation impacts the independent authority and governance of these entities.*

## A Prosperous City

*DPW supports the economy through the awarding and oversight of Public Works contracts*

## A Livable and Sustainable City

*DPW supports the sustainability focus of the City and higher quality of life by infusing green infrastructure, tree canopy efforts, waste collection, and cleanliness for residents*

## A Safe City

*DPW ensures safety of pedestrians and workers on projects affecting the public right-of-way and inspects ROW work to ensure City standards for safety are met. DPW also ensures street lights are working.*

## A Well Run Government

*DPW supports efficient government by having a majority of public works functions in the same department.*

**This project touches every part of the Mayor's back-to-basics platform**

Objective: This project was tasked to look at the system in which street infrastructure related services exist, to identify ways the City can improve delivery of these programs, and to highlight innovative practices within the City and other jurisdictions that can be scaled for success.

Design: Using a multi-pronged research approach consisting of staff interviews, constituent surveys, site visits, bench marking, data analysis and a problem solving Lab, a set of recommendations is being presented for adoption and implementation.

Research: Twelve groups of stakeholders were identified as part of the investigative process, including internal city departments and external partners. Over 400 interviews were conducted to gain an understanding of the effectiveness of the current system. Concerns reiterated across multiple groups included 1) programmatic vs systems thinking 2) proactive vs reactive planning 3) strategic vs tactical practice 4) lacking communication across City departments and with constituents 5) preventative vs deferred activities 6) competitive vs collaborative nature 7) lack of coordination in cross-departmental programs 8) undoing and redoing of work due to misaligned goals and 9) underuse of data in program analysis and decision making

Data collected in the design and research phases led to six central themes: Planning, Data, Coordination, Communication, Alignment, and Customer Centricity. These serve as the basis for the recommendations and each recommendation is assigned to multiple themes.

Theory of Change: The City's street network is one of its largest assets. Every infrastructure program in the City has assets under, on, or over the street. The street is the binding element for multiple departments: homes would not have water, electricity, or sewer services without connections below ground. Cars, bikes, buses would not know traffic or parking rules without signals, signage, or meters on the surface of the street. People could not walk safely in the right of way without sidewalks, crosswalks, ramps and street lights. Each recommendation considers how the upkeep and upgrade of street related assets can be strengthened.

### Key Recommendations:

(Tiered recommendations reference the scale of the recommendation, not the importance or timing)

#### Tier 1: Improvements to the City's Infrastructure Delivery Ecosystem

- 1.1: Improve coordination, strengthen overall alignment, optimize synchronization of street related programs, and enhance service delivery for constituents by bringing all transportation programs into the Department of Public Works to make the Board of Public Works the single oversight authority for all activities over, on and under the street for Council controlled departments
- 1.2: Address the lack of proactive strategic planning, comprehensive project management, data analyses, and interdepartmental program goals by creating an Office of Infrastructure Management that will serve as the citywide lead on all street related infrastructure programs to drive cross functional performance improvements

### Tier 2: Improvements to Infrastructure Support Systems

- 2.1: Strengthen oversight over underground activities, optimize time-related street activities, strengthen City paving plans, preserve City street investments, and provide transparency to City partners, utility providers and the public by converting utility coordination from a manual process to an electronic system
- 2.2: Address lack of asset data, timing of maintenance activities, selection of appropriate preventative and deferred maintenance lifecycle activities and scheduling for asset upgrades by prioritizing strategic asset management activities across asset classes
- 2.3: Resolve consistent customer issues with closed status messaging, streamline intake process and ease of use, and provide better transparency tools by making enhancements to the LA311 CRM system
- 2.4: Preserve taxpayer investments in the City's street network by updating policies affecting street protections that could include establishment of a moratorium for newly reconstructed streets and a new Concrete Street Damage Restoration Fee
- 2.5: Establish guidelines for large, critical infrastructure investments by reinstating a Citywide Capital Improvement Plan
- 2.6: Bolster proper oversight and ensure best allocation of resources to prevent multiple agencies tending to the same asset by clarifying Bureau and department roles in overlapping programs

### Tier 3: Improvements to Specific Infrastructure Programs

- 3.1: Strengthen the city's overall street network by updating the methodology for resurfacing and slurry seal programs to employ factors beyond the PCI score to prioritize paving and maintenance projects
- 3.2: Support succession planning, skills development, effective program management and best in class customer service by encouraging knowledge transfer and cross-pollination of process expertise across Bureaus/departments and offering regular training regimens to employees and leaders
- 3.3: Promote transparency with utility partners and the public by posting the entire projected annual resurfacing plan online with monthly updates of work completion in a user friendly format
- 3.4: Support timely and quality project delivery within Department of Public Works by streamlining contract processing time and strengthening contract language to consistently include performance metrics
- 3.5: Improve quality trench work by supporting permittees in assessing the performance of their subcontractors, educating them on city standards, non-compliant work and timeliness of repairs as indicated on the permit

A detailed explanation of each recommendation is included in Section 3 of the report, beginning on page 61



## Section 1: Background

- Project Context: Defining Public Works and Infrastructure – Purpose & Benefits
- Methodology and Research Design
  - In-Scope and Out of Scope
- Why is Change Needed?

## Defining Public Works and Infrastructure

Why are these services important? Why should the resident care about them? Why should the City provide them?

Definition and Purpose: according to Oxford Dictionary, infrastructure is defined as "the basic physical and organizational structures and facilities (e.g. buildings, roads, power supplies) needed for the operation of a society or enterprise."<sup>1</sup> "Infra- means "below;" so the infrastructure is the "underlying structure" of a country and its economy, the fixed installations that it needs in order to function. These include roads, bridges, dams, the water and sewer systems, railways and subways, airports, and harbors. These are generally government-built and publicly owned."<sup>2</sup>

Employees were more pointed, stating these programs as essential services: "[they are] all the services that make a City livable" and "services that touch people's lives every day." Other key definitions include:

- "Delivery of projects that people use every day – for commuting, living etc."
- "All the infrastructure in the public right-of-way"
- "No one would live here without the existence of these services"
- "Basic services that a civilization needs to survive"

<sup>1</sup> <https://en.oxforddictionaries.com/definition/infrastructure>

<sup>2</sup> <https://www.merriam-webster.com/dictionary/infrastructure>

<sup>3</sup> <https://www.cbpp.org/research/state-budget-and-tax/its-time-for-states-to-invest-in-infrastructure>

<sup>4</sup> [https://obamawhitehouse.archives.gov/sites/default/files/docs/ERP\\_2016\\_Chapter\\_6.pdf](https://obamawhitehouse.archives.gov/sites/default/files/docs/ERP_2016_Chapter_6.pdf)

<sup>5</sup> <http://www.frbsf.org/economic-research/publications/economic-letter/2012/november/highway-grants/>

Benefits: many organizations have cited research on the benefits of a strong infrastructure system. The Center on Budget and Policy Priorities shared that "the condition of roads, bridges, schools, water treatment plants, and other physical assets greatly affects the economy's ability to function and grow. Commerce requires well-maintained roads, railroads, airports, and ports so that manufacturers can obtain raw materials and parts, and deliver finished products to consumers. Improving many types of public infrastructure boosts the productivity of businesses by reducing their costs. Growing communities rely on well-functioning water and sewer systems...Better roads and public transit make it feasible (or more efficient) for workers to get from their home communities to more of the places where the jobs are. Carefully targeted initiatives to maintain and improve public infrastructure boost a state's long-term productivity, resulting in more economic growth and higher-wage jobs."<sup>3</sup>

Many academic papers attempt to showcase the community and social benefits of investments in this area, in addition to the economic effects.<sup>4</sup>

The Federal Bank of San Francisco "estimated that every dollar invested into our national infrastructure increases economic output by at least two dollars; this creates jobs upfront – and then provides economic dividends for decades."<sup>5</sup>

## Project Context

The Bureau of Economic Analysis (chart below) also conducted a review of infrastructure investments to demonstrate the impact of funding towards various programs like transit, streets, power and water systems. The multiplier effect varied from 1.6x to 3.19x in future benefit.

Table 6-3  
Input-Output Effects of Infrastructure Investment

Industry	Direct Multiplier	Indirect Multiplier on Manufacturing Industries	Indirect Multiplier on Non-Manufacturing Industries	Total Multiplier
<b>Government Investment</b>				
Federal nondefense	1.00	0.10	0.43	1.54
State and local	1.00	0.21	0.44	1.65
Passenger transit	1.00	0.88	1.30	3.19
Electric utilities	1.00	0.12	0.69	1.81
<b>Nonresidential Investment</b>				
Structures (excluding commercial and farm)	1.00	0.39	0.37	1.76
Maintenance and repair	1.01	0.42	0.47	1.89
<b>Core Infrastructure Investment</b>				
Highways and streets	1.00	0.48	0.52	2.00
Electric power generation, transmission, and distribution	1.01	0.18	0.61	1.80
Water, sewage, and other systems	1.00	0.12	0.48	1.60

Note: Multipliers represent the dollar value of output that is generated from investing \$1 of input into the industry listed.

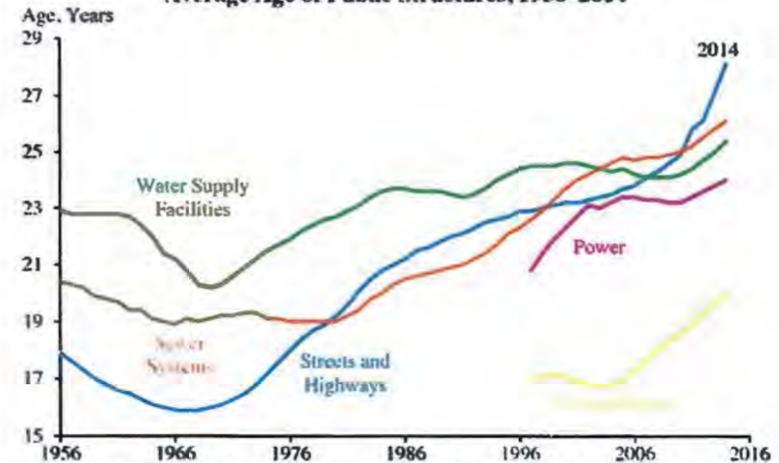
Source: Bureau of Economic Analysis, Benchmark Input-Output Accounts 2007; CEA calculations.

The backlog of investments and deferred maintenance in infrastructure has led to aging assets that are in use past

<sup>6</sup> charts: [https://obamawhitehouse.archives.gov/sites/default/files/docs/ERP\\_2016\\_Chapter\\_6.pdf](https://obamawhitehouse.archives.gov/sites/default/files/docs/ERP_2016_Chapter_6.pdf)

<sup>7</sup> Statement of Peter R. Orszag, Director, Congressional Budget Office, before the Committee on Finance, United States Senate, "Investing in Infrastructure," July 10, 2008

Figure 6-3  
Average Age of Public Structures, 1956–2014



Note: Water supply facilities and sewer systems exclude Federal structures -- which account for at most 6 percent of the value of their combined capital stock -- because disaggregated Federal data are unavailable. Data for power and transportation fixed assets begin in 1997 because disaggregated data are unavailable for years prior to 1997.

Source: Bureau of Economic Analysis.

their expected lifespan.

Although many large infrastructure projects are supplemented by federal funds, "...state and local governments pay 75% of the cost of maintaining and improving them."<sup>7</sup>

**Methodology and Research Design**

Given the complexity and breadth of infrastructure related programs in the City, the research design focused on identifying the biggest areas of impact.

Los Angeles is the second largest City in the United States by population and the fifth largest by square miles. As such, it is critical to manage these infrastructure assets as strategically as possible as these are long term investments that greatly affect the quality of life of the City's residents. For example, the City's street network is the largest of any U.S. city.

Uncovering program improvements required an assessment of the current system in which programs are delivered and accountability for the day to day execution of the program portfolio. The initial phase of the project entailed interviews with a wide range of stakeholder groups from the provider to the end users, resulting in 12 unique groups.

Each group was asked a series of questions to identify key themes of strengths (i.e. what is working) and areas of improvement (i.e. what is not working) for these citywide services.

Over 400 interviews were completed in conjunction with this project, the most of any prior assessment for this set of services. Staff members at multiple levels were interviewed in each Bureau.

<u>City Family:</u>	<u>External Entities:</u>
Business Improvement Districts	Academic institutions
City Council Offices	Air Quality Management District
Controller's Office	California Department of Transportation
Department of Building and Safety	City of Glendale
Department of City Planning	City of Inglewood
Department of General Services	Los Angeles Area Chamber of Commerce
Department of Recreation & Parks	Los Angeles County Public Works
Department of Transportation	Metropolitan Transit Authority
Department of Water and Power	Metropolitan Water District
Information Technology Agency	Orange County Public Works
Los Angeles World Airports	Utility companies
Mayor's Office	West Basin Water District
Office of the Chief Legislative Analyst	
Office of the City Administrative Officer	
Office of the City Attorney	
Neighborhood Councils	
Port of Los Angeles	
Public Works Board Commissioners	
Public Works Bureaus	
▪ Bureau of Contract Administration	
▪ Bureau of Engineering	
▪ Bureau of Sanitation	
▪ Bureau of Street Services	
▪ Bureau of Street Lighting	

As part of the research scope, data analysis was completed on key program areas based on LA311 service data. Constituents were also given an opportunity to participate in person by completing surveys at Neighborhood Council/Alliance meetings and online. Business Improvement Districts (BIDs) also completed similar surveys on city services.

Additional documents reviewed: A range of reports, articles, strategic plans, ordinances, etc. were examined to provide perspective on past issues, program changes and expansion, and City action to improve services. Academic papers provided background on materials, assets protection and maintenance cycles, etc.

- Academic reports
- City Charter
- City consultant reports
- City ordinances
- Controller's office audits
- Los Angeles Administrative Code
- Media articles
- METRO reports
- Neighborhood Council reports and White Papers
- Past Board reports
- Past Management Audits

Other data points and observations included attendance at various Commission and Stat meetings for different departments and site visits for various streets related programs.

**Project Scope:** This project originally was designed to look at the Department of Public Works where the bulk of infrastructure related services reside, but as the investigation and interviews were in progress, it was evident that the project's objective – to improve delivery of these services – was somewhat dependent on other entities, primarily the Department of Transportation. For purposes of this study:

### *In-Scope*

For this examination, items considered "in scope" were all infrastructure related programs and departments, whether or not housed within Department of Public Works, if programs and activities encroach on the public right of way.

### *Out of Scope*

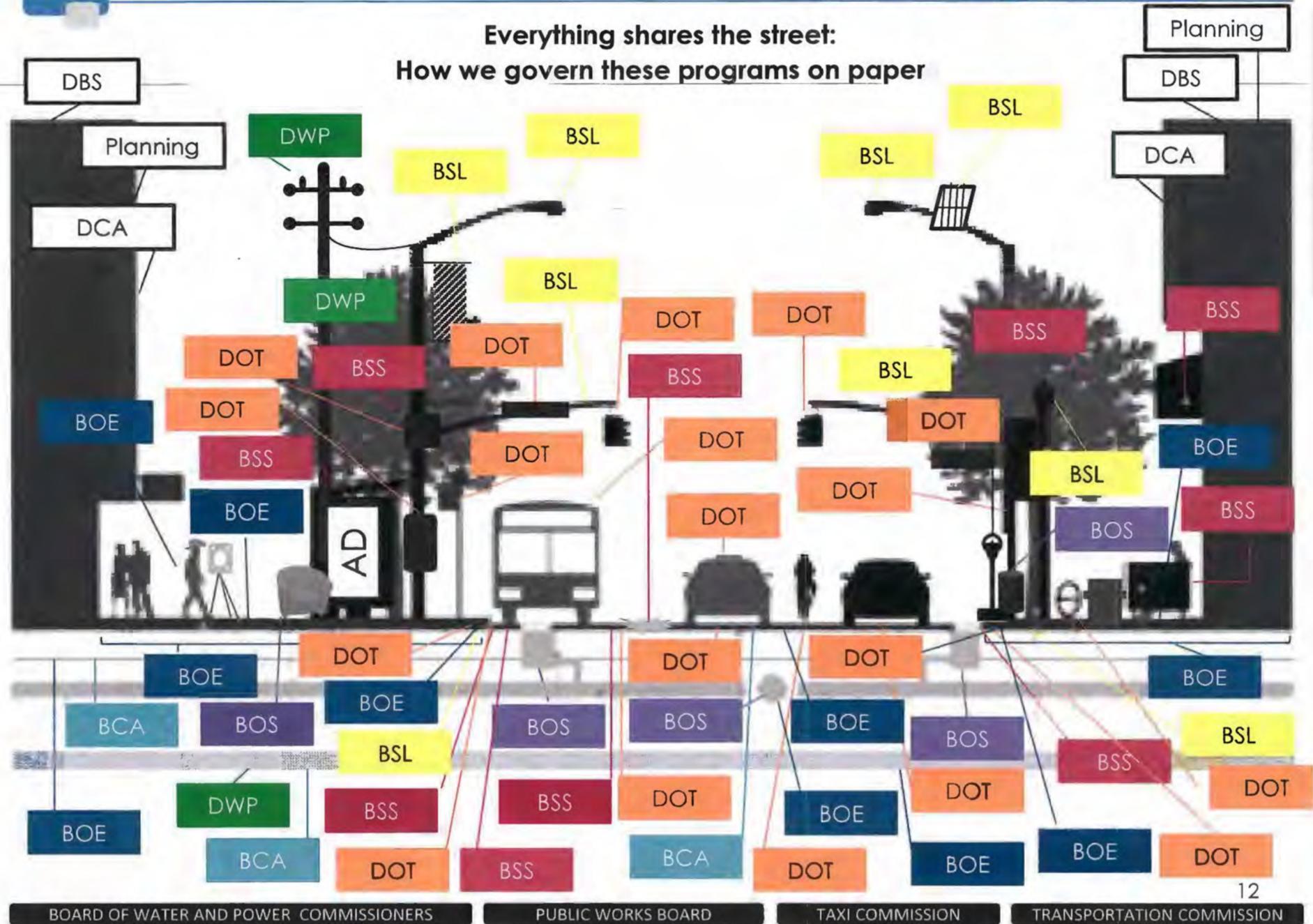
While the project focuses on the macro issues related to service delivery, there was not sufficient time to adequately and comprehensively analyze each individual program within the public works portfolio. Where interview responses overwhelmingly highlighted one or more specific programs, those were considered in more depth.

This report reviews all street related infrastructure programs including DWP, LAWA, and POLA activities due to the coordination required with Council controlled departments; however, this report does not recommend any governance changes to proprietary departments.

# Why is Change Needed?

- Department of Public Works
- Department of Transportation
- Department of Water and Power
- Other City Dept

## Everything shares the street: How we govern these programs on paper



Section 1

**Everything shares the street: How we govern these programs on paper**

**Buildings – private development**

DBS – plan review
Planning – zoning compliance
BOE – B permit
BCA - inspection
BSS – tree review
DOT – traffic plan review
Private firms

**Under the street programs**

BCA - inspection
BSS – utility coordination
BOS – sewer lines
BOE – stormwater design
DWP – water lines
BOE – sewer design
DOT – traffic plan review
Private firms

**Adjacent to the street programs**

BOE – ADA ramp design	DOT – parking meters	BSL – street light control box	BOS – trash collection
DOT – parking signs	BSS – tree trimming	DOT – ATSAC traffic control box	BOE - surveying
BSS – ADA ramps	DWP – tree trimming	BOS – illegal dumping	BCA - inspection
BSL – EV charging	DOT – tree trimming	BSS – sidewalks	BSL - banners
DWP – EV charging	Metro – tree trimming	BOE – sidewalk design	DOT – bike racks
GSD – EV charging	BOS – bulky item	DWP – electricity pole	BSS - trees
BOS - recycling	BSS – sidewalk vending	BSL – light poles	BOS – homeless encampment cleanups
DOT – traffic light	BSL – street light	DOT – signs	Metro – bus stop sign
BSL – decorative lights	BOE – permits	BSS – bus bench	DOT – walk signals

**In the street programs**

BSS – bus pads	DOT - parking	BSS – street sweeping	DOT – ATSAC sensors
DOT - DASH	BOE – U permits	DOT – taxi/carshare	BSS – curb and gutter
BOS – storm drains	BSS – special event permits	BOE – reconstructed streets	DOT – striping
DOT – crosswalk	BCA - inspection	BSS – reconstructed streets	BSL – light pole arms
BSS - pavement	DOT – bike lanes	BOS – sewer holes	DOT – traffic planning
BOE – surveying	BSS - potholes	DOT – traffic officers	BSS - medians

**What our employees and constituents say about how we deliver these services**

How well do we deliver public works services to residents? (employee perspective)

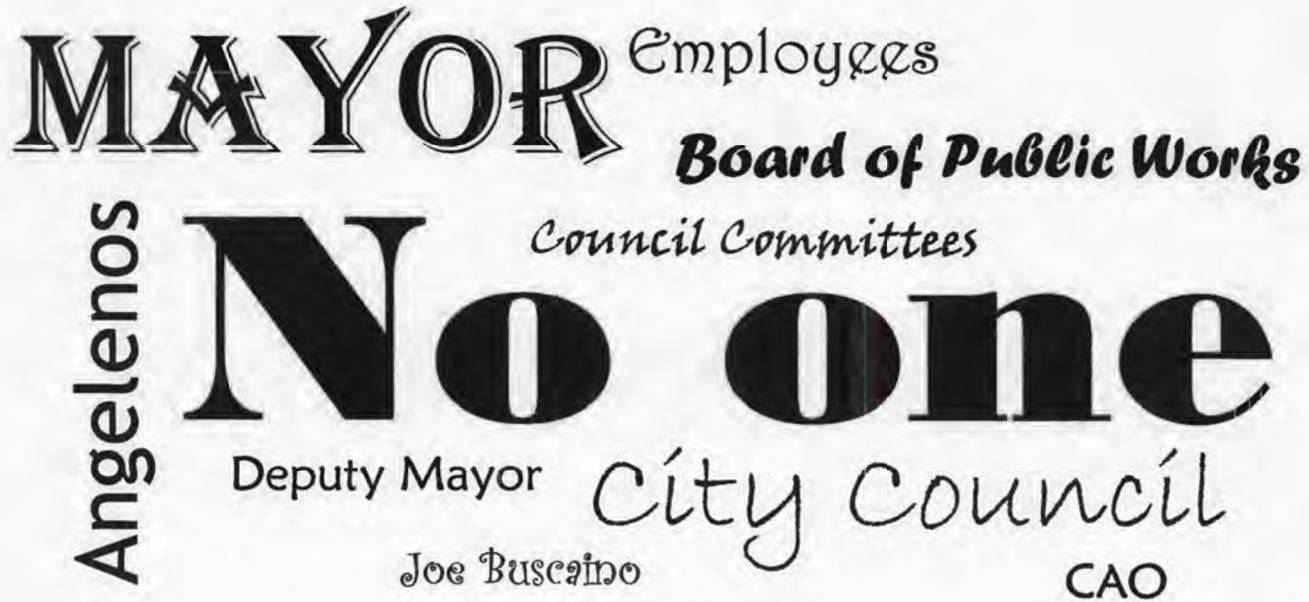
How well does the City deliver public works services? (constituent perspective)





**Who's in charge of infrastructure in the city?**

10 different responses were offered to this question. The most common answer was "no one," followed by the Mayor



Size represents frequency of responses from internal and external stakeholder interview process



## Section 2: Research

- Current Organization of Infrastructure Programs in Los Angeles
- Historical Context of Services
- Needs Assessment – Assessing the Current State of Services
  - Qualitative Interviews
    - Employee Sentiment & Feedback
    - External Partner Feedback
  - Benchmarking
  - Constituent and BID Surveys
  - Data Analysis on Service Needs
  - Rapid Innovation Lab

## Current Organization of Infrastructure Programs

Infrastructure programs that touch the public right-of-way reside in three departments in Los Angeles: Department of Public Works ("DPW"), Department of Transportation ("DOT"), and Department of Water and Power ("DWP"). The Port of Los Angeles and the Los Angeles World Authority also form part of the city's infrastructure, but their programs are specific to their facilities whereas DPW, DOT and DWP services serve constituents across the City on a daily basis. The latter, DWP, also has infrastructure in the public right of way on and under City streets. This distribution of DWP assets makes it a critical partner in coordination. Each department has a general manager except the Department of Public Works, which is managed by a group of five citizens appointed by the City Executive, the Mayor. General Managers and members of the Citizen Board are full-time employees of the City. Unlike DPW and DOT which are Council controlled departments, DWP is a publicly owned utility with a fairly independent governance structure.

The Department of Public Works is split into five divisions, or Bureaus. It holds the largest number of infrastructure related programs, ranging from contract compliance, inspection, engineering, surveying, street lighting, street trees, median maintenance, potholes, paving, street

sweeping, sewers, and storm drains. The Department of Public Works is split into five divisions, or Bureaus. Each of the five Bureaus is led by a Director, equivalent to a departmental general manager. Today, there are more than 5,500 employees with an overall adopted budget of \$611,875,743<sup>8</sup> across its 5 Bureaus and Board Offices. The budget is supplemented by fees, assessments and state and federal grants. The department's mission is to deliver public works-related "projects and programs that enhance quality of life, economic growth, public health and the environment to all Angelenos."<sup>9</sup>

The Department of Transportation, a former Public Works Bureau, was created in the late 1970s. Its main programs include multi-modal transportation planning, design and construction as well as signs, traffic signals, striping, parking, parking enforcement, and DASH transit services. It has two advisory commissions, the Transportation and the Taxicab Commissions and is led by a general manager. The Department of Transportation has an adopted budget of \$160,165,036.<sup>10</sup> The budget is supplemented by fees, state and federal grants. Its mission is to lead "in the planning, design, construction, and operations of transportation systems" and to progress transportation services and infrastructures in the City.<sup>11</sup>

<sup>8</sup> City of Los Angeles 2016-2017 Budget Summary: (<http://cao.lacity.org/budget/summary/2016-17BudgetSummaryBooklet.pdf>)

<sup>9</sup> <http://dpw.lacity.org/commissioners-boardroom>

<sup>10</sup> City of Los Angeles 2016-2017 Budget Summary: (<http://cao.lacity.org/budget/summary/2016-17BudgetSummaryBooklet.pdf>)

<sup>11</sup> <http://ladot.lacity.org/what-we-do/about-us>

The Department of Water and Power has two divisions: Water and Power. It is the largest municipal water and power utility in the United States. It provides drinking water services and electricity/power services to 681,000 water customers and 1.4 million electric customers.<sup>12</sup> Its main services are water purchases from water districts and other external entities, water treatment, maintenance of water main lines, water and electricity services, customer billing, power acquisition and maintenance of the city's electricity infrastructure. The Department is governed by the part-time Board of Water and Power Commissioners, who collectively serve as the head of the Department. With a budget of \$5.1 billion,<sup>13</sup> the Department of Water and Power delivers its services with the revenues generated from the sales of these services; moreover, it is not funded by the City's tax revenues. Rather, it is operated as a semi-autonomous (or proprietary) department within the City and is sustained by fees from ratepayers. It still receives some services from the City including personnel support and the general manager is appointed by the Mayor. The department's mission is to provide clean, reliable water and power and excellent

customer service in a safe, environmentally responsible and cost-effective manner.<sup>14</sup>

### Historical Context of Services

A brief chronological history of the three main infrastructure departments is described below to illustrate key historic events that contribute to the current organizational structure of these services. An outline of milestone events is included in Appendix A.

### Department of Public Works

The Department of Public Works has been operating for over a century. Founded in 1905, a City charter amendment established the Department and its Board of Public Works. It was responsible for designing, constructing, and maintaining of streets, sewers, storm drains, municipal buildings, garbage, sewage, street refuse, and operating all municipal utilities except for waterworks.<sup>15</sup> The 1925 City charter amendment increased Board membership from 3 members to its

<sup>12</sup> This includes regions other than the City of Los Angeles: [https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-whoweare?\\_adf.ctrl-state=xlhhyefmu\\_21&\\_afLoop=180377579775748](https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-whoweare?_adf.ctrl-state=xlhhyefmu_21&_afLoop=180377579775748)

<sup>13</sup> For fiscal year 2015-2016; LADWP 2016 Briefing Book (<https://s3.amazonaws.com/ladwp/wp-content/uploads/sites/3/2017/07/11/153559/2016-Briefing-Book-online.pdf>)

<sup>14</sup> LADWP About Us:

[https://www.ladwp.com/ladwp/faces/ladwp/aboutus?\\_afLoop=184295578190151&\\_afWindowMode=0&\\_afWindowId=yd6uho3ut\\_1#%40%3F\\_afWindowId%3Dyd6uho3ut\\_1%26\\_afLoop%3D184295578190151%26\\_afWindowMode%3D0%26\\_adf.ctrl-state%3Dyd6uho3ut\\_21](https://www.ladwp.com/ladwp/faces/ladwp/aboutus?_afLoop=184295578190151&_afWindowMode=0&_afWindowId=yd6uho3ut_1#%40%3F_afWindowId%3Dyd6uho3ut_1%26_afLoop%3D184295578190151%26_afWindowMode%3D0%26_adf.ctrl-state%3Dyd6uho3ut_21)

<sup>15</sup> The term "waterworks" refers to the drinking water services and its respective infrastructure; The LA Experience: A Century of Public Works (<http://dpw.lacity.org/blog/100-years-public-works>)

current 5 members.<sup>16</sup> By 1976, the Department of Public Works had 12 bureaus, instead of its current 5.<sup>17</sup> A trend for consolidation followed due to the "loose connection of individual bureaus" leading to costly fragmentation.<sup>18</sup> By 1990, the Department of Public Works had 7 Bureaus and the Board Offices.<sup>19</sup> Two bureaus that would later be transferred to other departments or offices were Accounting and Management-Employee Services, leading to the existing five Bureaus in the Department of Public Works.

In 1855, the election of the first City Surveyor and Engineer marked the origin of the Bureau of Engineering.<sup>20</sup> Its creation pre-dates the founding of the Board or the Department of Public Works.

The first sewers were created and maintained by City citizens circa 1860. In 1873, the City acquired these private sewers and established a public sewer system. The separation of storm drains and sewers was formed circa 1880. The latter was a pipe to the ocean.<sup>21</sup> These services

were allocated to the Bureau of Sanitation.

In 1872, the position of Superintendent of Streets and Highways was created—the first municipal street service position.<sup>22</sup> Prior to its creation, citizens were responsible for sweeping the portion in front of their property.<sup>23</sup>

In 1910, the Bureau of Street Maintenance & Inspection was created. It covered the City streets using gravel collected from business' and residents' cellars. Because the City streets were not paved at the time, the City needed asphalt to construct these roads.<sup>24</sup> In 1915, Asphalt Plant I was completed and in 1925, Asphalt Plant II was completed—they would both be used to this day to pave the streets of Los Angeles until Asphalt Plant I was taken offline in 2016 for a complete upgrade.<sup>25</sup>

In 1925, the Bureau of Street Lighting was established due to the increase in traffic and the resulting need for lighting.<sup>26</sup> The Bureau of Sanitation started its municipal management and operation of the wastewater

<sup>16</sup> LA Board of Public Works Fact Sheet ([http://dpw.lacity.org/sites/g/files/wph731/f/hist\\_factsheet.pdf](http://dpw.lacity.org/sites/g/files/wph731/f/hist_factsheet.pdf))

The LA Experience: A Century of Public Works (<http://dpw.lacity.org/blog/100-years-public-works>)

<sup>17</sup> Bureaus that would later be abolished or transferred into other offices were: Transportation, Personnel, Accounting, Right-of-Way and Land, Public Buildings, Standards, and Assessments. *Management Audit Report of the Department of Public Works*, 1977, by C. Erwin Piper, the CAO, Exhibit 11 (before page 9).

<sup>18</sup> From complications of overlap and duplication of efforts, *Management Audit Report of the Department of Public Works*, 1977, by C. Erwin Piper, the CAO, Exhibit 11 (before page 9).

<sup>19</sup> LA Board of Public Works Fact Sheet ([http://dpw.lacity.org/sites/g/files/wph731/f/hist\\_factsheet.pdf](http://dpw.lacity.org/sites/g/files/wph731/f/hist_factsheet.pdf))

<sup>20</sup> The LA Experience: A Century of Public Works (<http://dpw.lacity.org/blog/100-years-public-works>)

<sup>21</sup> The LA Experience: A Century of Public Works (<http://dpw.lacity.org/blog/100-years-public-works>)

<sup>22</sup> <http://bss.lacity.org/history.html>

<sup>23</sup> The LA Experience: A Century of Public Works (<http://dpw.lacity.org/blog/100-years-public-works>)

<sup>24</sup> LA Board of Public Works Fact Sheet ([http://dpw.lacity.org/sites/g/files/wph731/f/hist\\_factsheet.pdf](http://dpw.lacity.org/sites/g/files/wph731/f/hist_factsheet.pdf))

<sup>25</sup> <http://bsl.lacity.org/history.html>

<sup>26</sup> <http://bsl.lacity.org/history.html>

treatment plants in the same year with the establishment of Hyperion Treatment Plant.<sup>27</sup>

In 1941, the street maintenance responsibilities transferred to the new Bureau of Maintenance and Sanitation<sup>28</sup>; in 1942, the inspection responsibilities transferred to the newly established Bureau of Inspection—the precedent of the current Bureau of Contract Administration.<sup>29</sup>

In 1947, the Board of Public Works abolished the Bureau of Maintenance and Sanitation and created the Bureau of Street Maintenance—which consisted of Street Maintenance and Lot Cleaning Divisions. In 1952, the new Bureau of Street Maintenance assumed the Street Use Inspection Division from the Bureau of Inspection. The Bureau of Street Maintenance formed the Street Tree Division in 1955.<sup>30</sup> The bureau also fully implemented the slurry seal method for its street resurfacing programs in 1973.<sup>31</sup>

In 1978 the Bureau of Assessments' functions were assumed by the Bureau of Engineering<sup>32</sup> and in 1979 the

Bureau of Transportation in the DPW was transferred to the newly formed Department of Transportation. By 1990, the Department of Public Works included seven Bureaus and the Board Offices.<sup>33</sup> In 1998, the Bureau of Street Maintenance assumed the responsibilities of Capital Improvement Projects. A month later, the Bureau of Street Maintenance was renamed to Bureau of Street Services, one of the 5 current bureaus of the Department of Public Works.<sup>34</sup> In 2001, the Bureau of Street Services started the maintenance of bus shelters through the Coordinated Street Furniture Program.<sup>35</sup>

In 2006, the Bureau of Street Lighting assumed maintenance responsibilities of all street lights, taking some from the Department of Water and Power.

Section 508 added the Director of Public Works to the City Charter in 2000, who is described as a chief administrative officer. Aside from contracts, construction, maintenance, permits, accounting, employee services, and reports requested by the Mayor or board, the two other responsibilities are: "make recommendations to the board

<sup>27</sup> *The City's first wastewater treatment plant*

<sup>28</sup> <http://bss.lacity.org/history.html>

<sup>29</sup> *Management Audit Report of the Bureau of Contract Administration, Jan. 1976. CAO*

<sup>30</sup> *The tree services prior to the Street Tree Division were under the jurisdiction of the Parks Department; the Street Tree Division was renamed as the Urban Forestry Division in 2004.*

<sup>31</sup> <http://bss.lacity.org/history.html>

<sup>32</sup> *Management Audit Report of the Department of Public Works, 1977, by C. Erwin Piper, the CAO, Exhibit 11 (before page 9).*

<sup>33</sup> *Subsequently, the 2 bureaus that would later be abolished or transferred into other offices were Accounting and Management-Employee Services: LA Board of Public Works Fact Sheet ([http://dpw.lacity.org/sites/g/files/wph731/f/hist\\_factsheet.pdf](http://dpw.lacity.org/sites/g/files/wph731/f/hist_factsheet.pdf))*

<sup>34</sup> <http://bss.lacity.org/history.html>

<sup>35</sup> *Mobility Plan 2035: An Element of the General Plan, 34-36: <https://planning.lacity.org/documents/policy/mobilityplnmemo.pdf>*

about short- and long-range public works plans and programs;" and "recommend to the board prior to the beginning of each fiscal year an annual departmental budget covering the anticipated revenues." This role was reassigned to the Executive Officer via City Ordinance No. 176547 in 2005.

### Department of Transportation

The scope of these functions has been established through numerous transfers and reorganizations—the main watershed reorganizations would occur in 1949 and 1979.<sup>36</sup>

Pre-1949: The first gasoline car was introduced to the city in 1897; by 1904, there were 1,600 vehicles on the streets of Los Angeles.<sup>37</sup> The first gasoline-powered buses were introduced by the private People's Motor Bus Company in 1923.<sup>38</sup>

World War I and World War II<sup>39</sup> led to major initiatives<sup>40</sup> that addressed the issue of traffic congested streets from

unprecedented growth in the City's population, improved economic statuses of its residents, and the accessibility of motor vehicles.

Provided by private entities,<sup>41</sup> the first transportation services were guide signs that indicated community names, mileage, and directions to promote auto enthusiasts' needs. These wooden signs were provided in 1900 and were renovated to steel by 1913.<sup>42</sup> By 1930, these services were expanded to include parking signs, stop signs, warning signs, and U.S. Highway and State Highway shields. In 1930, after a re-evaluation of the structure of these private services, the City assumed the responsibilities of manufacturing and posting these traffic control signs. In 1947, the State assumed the traffic sign responsibilities on State Highways.<sup>43</sup>

Similarly, the first traffic plan was also initiated by a private group<sup>44</sup> in 1922. Passing in 1924, this plan was called the 1924 Major Traffic Plan<sup>45</sup> and would be used as the guiding force for traffic innovations to come.<sup>46</sup>

<sup>36</sup> The formation of the Department of Traffic Engineering and the establishment of the Department of Transportation, respectively.

<sup>37</sup> <http://www.laalmnagoc.com/transport/tr10.php>

<sup>38</sup> Mobility Plan 2035: An Element of the General Plan, 34-36: <https://planning.lacity.org/documents/policy/mobilityplnmemo.pdf>

<sup>39</sup> Most services were initiated after the popularization of motor vehicles that resulted from World War I. World War 2 resulted in greater traffic congestion and need for more services.

<sup>40</sup> Mostly private endeavors; due to the Department of Public Works assuming street municipal functions prior to the establishment of a department of transportation, you will not see street maintenance in the transportation/traffic departments.

<sup>41</sup> Such as the private Automobile Club of Southern California

<sup>42</sup> The new street signs were manufactured by the private California Metal Enameling Company of Los Angeles

<sup>43</sup> *Transportation Topics and Tales: Milestones in Transportation History in Southern California* Fisher

<sup>44</sup> Traffic Commission of City and County of Los Angeles, a group of private leaders of Los Angeles who pooled their resources.

<sup>45</sup> Identified the causes and the lack of systems that contributed to the traffic congestion at the time.

<sup>46</sup> *Transportation Topics and Tales: Milestones in Transportation History in Southern California, The Evolution of Traffic Management in the City*, Fisher, 46.

The first simplified traffic code passed by ordinance<sup>47</sup> in 1924 and implemented in 1925. This code condensed 134 pages to 4 pages of concise rules—including the introduction of right turns on red lights, painted curbs, pedestrian rules, and yellow school crosswalks.

A city agency, the Department of Electricity was originally in charge of installing the first automated traffic signals. By 1925, these traffic signal operations were under the jurisdiction of the Department of Building and Safety.<sup>48</sup> In 1928, operating traffic signals were transferred to the Police Department—this included painting curb lines and coordinating parking restrictions. By 1930, these traffic signal functions, along with curb and pavement markings coordination, were combined as the Bureau of Street Traffic Engineering, still under the Police Department.

Beginning in 1919, the Police Department's sworn officers were responsible for the novel parking enforcement of the 45-minute time limits in Downtown. They were also in charge of enforcing meter violations beginning in 1949.

Post-1949 and Pre-1979: After World War II, the City again faced another period of rapid growth. To address this,<sup>49</sup> the City passed an ordinance forming the Department of Traffic Engineering—the first formal department for traffic congestion and control—in 1949. This reorganization transferred all the services above<sup>50</sup> to this department. However, the City found that this department was insufficient in resolving the post-war City traffic congestion.

In 1953, a larger organization: was formed, the Department of Traffic. This department developed more intensive traffic control methods, such as new traffic policies, traffic planning functions, parking restrictions, and left turn lanes.

Post-1979: In 1979, the Department of Transportation was established by ordinance<sup>51</sup> with the goal to remove the fragmentation inefficiencies<sup>52</sup> and to implement a broader mission.<sup>53</sup> This reorganization included vast transfers of functions, officials, and employees performing

<sup>47</sup> During 1924, 73 pedestrians were killed in Los Angeles, and it was estimated that 70% of all traffic fatalities were pedestrian-related. This statistic led to landmark legislation to control pedestrians (*Transportation Topics and Tales: Milestones in Transportation History in Southern California*, Pedestrian Regulation, Fisher, 52).

<sup>48</sup> "...the electricity function became part of the Department of Building and Safety" (*Transportation Topics and Tales: Milestones in Transportation History in Southern California* The Evolution of Traffic Management, Fisher 58).

<sup>49</sup> And recommendations from the private panel, Automotive Safety Foundation (LA Traffic Association and Automobile Club of Southern California), to create a separate department for traffic with broader authority. (*Transportation Topics and Tales: Milestones in Transportation History in Southern California* The Evolution of Traffic Management in the City, Fisher, 56.)

<sup>50</sup> These services are: traffic signal operations, curb and pavement markings coordination, sign functions of manufacturing and posting street signs, and traffic planning. Note that parking enforcement remained in the Police Department till the 1979 formation of the Department of Transportation.

<sup>51</sup> Replacing the Department of Traffic

<sup>52</sup> *Management Audit Report of the Department of Public Works*, 1977, by C. Erwin Piper, the CAO, page 5

<sup>53</sup> *Management Audit Report of the Traffic Department*, 1976, by C. Erwin Piper, the CAO, page 9-10.

<sup>53</sup> Due to growing consensus that mobility problems required more than just traffic control measures, including environmental quality, gasoline rationing, carpool efforts, emergence of rail transit system and variety of paratransit modes, and ultimately emphasis on the management of transportation systems.

traffic-related activities from the Off-Street Parking Agency,<sup>54</sup> Department of City Planning, Department of Public Works, Community Development Department, Department of Public Utilities and Transportation,<sup>55</sup> and the Police Department.

After the formation of the Department of Transportation, newer services expanded its field of programs. In 1979-1983, the department initiated its bike lanes services. In 1984-1988, this new department inaugurated its transit services and initiated Metro rail coordination.<sup>56</sup> In 2016 and 2017, it initiated the bike share and car share programs, respectively.

### Department of Water & Power

In circa 1850, Los Angeles' first methods of water distribution and protection were simple: water carriers would fill their jugs and commute with wagons to distribute the water from door to door.<sup>57</sup> Nonetheless, they were municipal services.

From 1857 to 1868, private agencies attempted to incorporate a waterworks system but failed. In 1868, the City granted a 30-year lease of all City water rights and rates to the private Los Angeles City Water Company to establish and develop a waterworks system.<sup>58</sup> Over the course of the agreement, there was growing popular support for returning control of the water system to the government due to numerous violations of the lease agreements, high water rates and poor system reliability.<sup>59</sup> This support resulted in the 1899 bond<sup>60</sup> for the City's acquisition of LA City Water Company's water system, which passed with ease. By 1902, the City successfully acquired the private waterworks system and the established the Los Angeles Water Department.

Additionally, the 1902 ordinance established the Board of Water Commissioners (of 7 elected Commissioners) and that City Council "retain[ed] authority to make all appropriations from the water system revenues" plus power to set rates.<sup>61</sup>

<sup>54</sup> This agency became a bureau under the new Department of Transportation.

<sup>55</sup> Taxicab, community transit, and utility franchising functions were transferred to the new Department of Transportation.

<sup>56</sup> *Transportation Topics and Tales: Milestones in Transportation History in Southern California* The Origin and Evolution of the Department of Transportation, Fisher, 58-59.

<sup>57</sup> Year 1853 ([http://waterandpower.org/museum/Water\\_in\\_Early\\_Los\\_Angeles.html](http://waterandpower.org/museum/Water_in_Early_Los_Angeles.html)).

<sup>58</sup> Spearheaded by Griffen, Lazard, and Beaudry

<sup>59</sup> This sentence may illustrate the extent to the dissent for the lease and LA City Water Company; "In the local elections both political parties strongly advocate for the termination of the current lease with the private water company and for the creation of a municipally run waterworks system.

<sup>60</sup> Of \$2 million, year 1899 ([http://waterandpower.org/museum/Water\\_in\\_Early\\_Los\\_Angeles.html](http://waterandpower.org/museum/Water_in_Early_Los_Angeles.html)).

<sup>61</sup> Year 1902 ([http://waterandpower.org/museum/Water\\_in\\_Early\\_Los\\_Angeles.html](http://waterandpower.org/museum/Water_in_Early_Los_Angeles.html)).

In 1903, a City charter amendment re-established a 5-member Board of Water Commissioners, appointed by Mayor and confirmed by City Council—contrary to the previous structure of 7-member elected commissioners.<sup>62</sup> The Board gained autonomous authority over operations and finance of the water system—City Council lost its brief authority to make all appropriations of revenue stream and etc. City Council still had the power to approve the setting of rates. Moreover, revenues generated from water system were allocated in a special fund over which the board had exclusive authority.

As the City worked towards becoming the sole water provider, private companies were renovating the City's electric generation and distribution systems. The first electric light plant in Los Angeles was owned by a private electric company in 1882. Its success encouraged other private electric companies to expand their electric services: electricity to railways and street lights (1882), arc lights for commercial establishments (1883), store exterior (1889), more electrical plants, underground electrical current systems (1897), steam-generated electricity (1902), Kern River-LA Transmission Line—the longest transmission line at the time (1907), electricity for LA Red Car (1908), and hydroelectric plants (1911-1913).

In the period of 1903-1913, the Los Angeles Aqueduct Project<sup>63</sup> fueled the Water Board's creation of the Bureau of Los Angeles Aqueduct and the City's creation of the Bureau of Los Angeles Aqueduct Power. The former was in charge of building and managing the aqueduct, while the latter was in charge of building and managing hydro-power plants along the aqueduct. The completion of the Los Angeles Aqueduct in 1913 and the completion of the San Francisquito Power Plant No.1 in 1911 resulted in adding an abundant water source for the City and several city annexations occurred due to this new water source. This project highlights the first intersection of municipal water and power services.

In 1911, a City charter amendment created the Department of Public Service which consisted of two bureaus: the Bureau of Water Works and Supply (previously the Water Department) and the Bureau of Power and Light—each bureau overseeing its respective municipal field of utility. This initiated the consolidation of the municipal water services and power services.<sup>64</sup>

In 1916, the first municipal distribution of energy, a municipal utility pole, was constructed and displayed the expansion of the municipal control.

<sup>62</sup> The Water Department would be renamed as Bureau of Water Works and Supply in 1911.

See Footnote 4: No information regarding why this re-establishment was made. However, one reason for making the Board of Water Commissioners more autonomous was the fact that the 1902 Board's governance was "completely exposed to the changing whims of the electorate."  
([http://waterandpower.org/museum/Water\\_in\\_Early\\_Los\\_Angeles.html](http://waterandpower.org/museum/Water_in_Early_Los_Angeles.html))

<sup>63</sup> In 1906, a \$1.5 million bond passed for a feasibility study for the construction of the aqueduct and, in 1907, a \$23 million bond passed for the actual construction of the aqueduct: ([http://waterandpower.org/museum/Water\\_in\\_Early\\_Los\\_Angeles.html](http://waterandpower.org/museum/Water_in_Early_Los_Angeles.html)).

<sup>64</sup> A lack of sources suggests that the reason is unclear. The consolidation may have occurred to manage the resulting responsibilities of the utility infrastructures of the LA Aqueduct AND the San Francisquito Power Plant No. 1.

Due to economic effects of World War I<sup>65</sup> and the trend for municipal control over electrical services,<sup>66</sup> the City changed its charter to establish municipal control/ownership over electricity generating and distributing facilities in 1920. This initiated the City's acquisition of private power utility facilities; by 1931, the Bureau of Power and Light had purchased all but two private companies.<sup>67</sup>

In 1937, the Department of Public Service consolidated its two bureaus to become the Los Angeles Department of Water and Power. In 1939, the Department emerged as the sole provider of electrical services.

In 1947, City charter amendment removed the city voter approval requirement for the Department of Water and Power to issue bonds.<sup>68</sup>

Starting circa 1960, a series of changes reduced the authority of the Board of Water and Power Commissioners—placing it and the department under the control of the elected officials. "In 1977, an amendment took away salary-setting authority from DWP and gave it

to the council (Section 86)."<sup>69</sup> In 1991, Prop. 5 (charter Section 32.3) permitted the council to substitute its own action for "any action by the Board of Commissioners...by a two-thirds vote";<sup>70</sup> however, in 1999, the New Charter substituted this council substitution with a legislative veto. The 1999 New Charter also granted greater authority to the Mayor by permitting removal of a commissioner without council approval.<sup>71</sup>

<sup>65</sup> Growing costs of oil due to the war made hydro-electricity generated by the San Francisquito Power Plant No. 1 a popular, cheaper alternative. There was an expansion of municipal electricity demand. (<http://waterandpower.org/museum/First%20Electricity%20in%20Los%20Angeles.html>)

<sup>66</sup> "By 1920... Los Angeles, Pasadena, Glendale and Burbank had changed their charters to establish municipal ownership of facilities for generation and distribution of electrical energy." (<http://waterandpower.org/museum/First%20Electricity%20in%20Los%20Angeles.html>)

<sup>67</sup> Year 1931, (<http://waterandpower.org/museum/First%20Electricity%20in%20Los%20Angeles.html>)

<sup>68</sup> [http://waterandpower.org/museum/Water in Early Los Angeles.html](http://waterandpower.org/museum/Water%20in%20Early%20Los%20Angeles.html)

<sup>69</sup> *Governance In A Changing Market: The Los Angeles Department of Water and Power*, Appendix: A Brief History of DWP.

<sup>70</sup> *Governance In A Changing Market: The Los Angeles Department of Water and Power*, Chapter 2:

[https://www.rand.org/content/dam/rand/pubs/monograph\\_reports/MR1189/MR1189.ch2.pdf](https://www.rand.org/content/dam/rand/pubs/monograph_reports/MR1189/MR1189.ch2.pdf)

<sup>71</sup> *Governance In A Changing Market: The Los Angeles Department of Water and Power*; Appendix: A Brief History of DWP.

### Employee Sentiment and Feedback

An initial list of department and City leaders was identified as the first phase of interviews. Through these conversations, it became evident that a wider range of staff needed to participate to understand how infrastructure services are organized, how they are being delivered, how programs that are spread across divisions are managed, and how leaders support employees to provide service delivery to residents.



### Key Themes

#### Accountability and Governance

The overwhelming majority of both internal employees and external partners say no one is in charge of public works and infrastructure planning in Los Angeles. The second most common answer was the Mayor. Other

responses included CAO, Public Works Board, City Council, Council committee, DPW employees, and the Deputy Mayor.

This general lack of leadership led participants to agree that there is no common vision for infrastructure assets across the City. Although the bulk of services reside in one place, not one person said that the Department of Public Works operates as one department. While there is a mission statement on the Board's website, there are also individual mission statements within the Bureaus. There is no definition of success that spans the Bureaus. Those who could come up with department metrics suggested: "Maybe look at "Complete Streets" where every element has a grade – right now all compartmentalized," "create an average of all services..." and "maybe look at complaints and whether they went down...?"

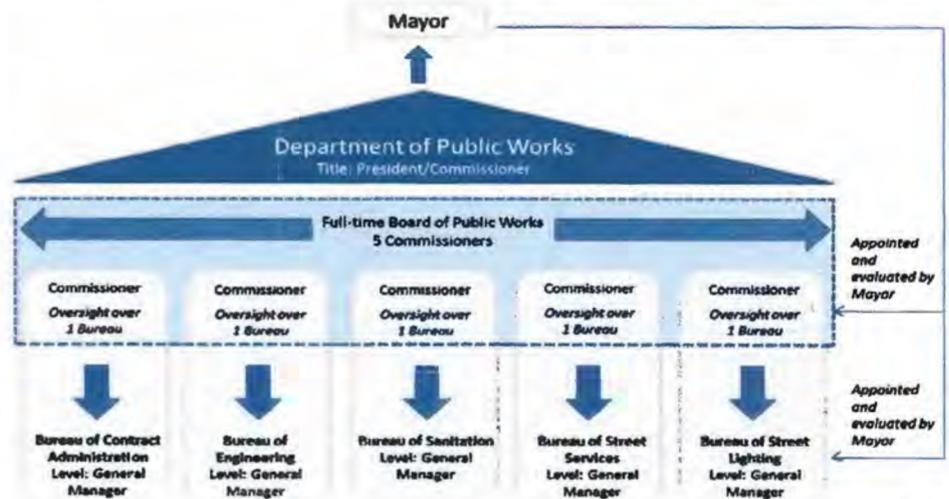
Since both Commissioners and Bureau Directors are appointed and evaluated by the Mayor, each Bureau, and the Board, is working independently to accomplish its own priorities and goals set forth by the Mayor. "Each Bureau has a metric and [they] don't cross over." This leads to issues when accomplishing a goal that requires the partnership and support of another entity. "There is no Department of Public Works, only on paper" and "Bureaus are de facto departments." In the course of interviews, the words "department" and "Bureaus" were used interchangeably on a frequent basis.

Logo:	Mission Statement:
	<p><u>Department of Public Works:</u> "To support and enhance a high quality of life for the City's residents, businesses and visitors by providing a well-planned, environmentally sensitive, cost effective infrastructure through superb customer service."</p>
	<p><u>BCA:</u> "To maintain a transparent and consistent contracting environment that delivers quality work in compliance with governing laws while encouraging an environment that promotes personal and business opportunity"</p>
	<p><u>BOE:</u> "By the end of fiscal year 2018/2019, we will be the provider of choice in the delivery of high-quality sustainable improvements"</p>
	<p><u>BOS:</u> "To protect public health and the environment"</p>
	<p><u>BSS:</u> "The Bureau is committed to providing quality street services in a timely and efficient manner"</p>
	<p><u>BSL:</u> "To provide efficient lighting and promote community safety and identity"</p>

"I would say I am a City of Los Angeles, Bureau X employee, not DPW"

Employees agreed that the Board could be more assertive in breaking down siloes between Bureaus. Instead, employees believe that the Board reinforces walls between the Bureaus by assigning a Commissioner to each Bureau when there is already a "professional, technical manager for each Bureau." 90% of interviewees also saw a clear need to have a single Director of Public Works/Infrastructure that would support efforts towards capital improvement planning, project planning, performance management and forward looking planning. And while the Charter clearly states that the Board serves as the "manager" for the Department, this is not exercised in the same way as other departments with a general manager.

"It is a political body, not a management authority."





Other city departments

There was a small minority that spoke to the divergent missions of each of the Bureaus, DOT and DWP and that size dictates the need for independent departments. Each acknowledged shortcomings by saying:

- "splitting would cause more issues"
- "need own commissions"
- "size isn't a good enough reason to separate from Public Works."

Alignment

Alignment through consolidation was another prevalent theme. Dozens of comments relating to changes that respondents believed would lead to better service delivery include "consolidate small sections into corresponding divisions" and "put all street related programs together." Uniting programs that link the actual hard surface of the street/sidewalk to activities that occur on top of the hard surface was the top proposal for improved program alignment. The second programmatic consolidation raised was water management. As "a limited resource that cannot be re-created" and given

"drought conditions," the grouping of water planning, delivery and re-use in a more cohesive, permanent way would be "important to current and future generations of Angelenos."

There is always an underlying reason why people want to combine programs, change processes, add/limit resources, etc. The suggestions above came from ideas that having all related programs in one place would lead to efficiencies in time, coordination and processes. Staff were very aware of time delays and potential duplication of efforts when planning and execution are sitting in different places.

- "it's easier to manage under one roof - if need to go to other departments [or Bureaus] there is a lag time and need for increased coordination."
- "It would be easier if the entire process for programs sat in one place"
- "need to look at where things are housed – house similar duties together."
- "reduce duplicative efforts – probably multiple people looking at the same issue, but how [would we] know all of the folks working on the same issue?"

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*"Departments have their own priorities, but no one is looking at the overlap...vision of what we want infrastructure to look like for our children and children's children."*

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Planning

A consistent theme was the lack of a comprehensive Capital Improvement Plan that affects the upgrade and maintenance of large infrastructure assets in the City. “[The City is] constantly shifting resources, adding to the cumulative effect of disrepair.” By establishing a fiscally constrained plan with a maintenance schedule and corresponding funding, theoretically the City should be able to manage these assets in a more effective manner. At present, the decentralized decision making for infrastructure assets results in City and policy leaders unclear on the true state of overall assets belonging to the City.

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*“Need systems [and/or] structure to implement multi-year planning process not just for streets, but also for sewers, sidewalks, utilities, etc.”*

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Another benefit participants gave for common oversight was the ability to better leverage all infrastructure investments across available funding streams.

The lack of planning is echoed by staff:

- “just hope in 40 years it's not worse”
- “not aware of any planning, just trying to catch up”
- “we mobilize, not organize”
- “no one is planning”
- “everything is complaint driven”
- “need to have one place with all the collective projects with prioritization”

- “just knowing the conditions of the street is a start (inventories, etc.)”

More tactical planning for program delivery like process improvements was also referenced frequently. There are “inefficiencies galore,” “outdated processes,” “stuck in time,” and “delivery mechanisms too slow.” Staff said that the recession forced Bureau management to re-think and “be creative” about delivering services but there wasn't enough change in the processes. “Process improvement is a continuous process...it shouldn't take a recession to look at it.”

Coordination

There is universal belief that better planning and coordination across Bureau siloes and beyond is absolutely necessary. “Better coordination [needed] within and across entities – involves so many meetings, emails. There has to be a better way.” “Sometimes we are waiting days for information or don't even know they went and did some work that we have to follow.” “Communication is a huge problem inter-Bureau, intra-Bureau, intra-department.” There is also a strong opinion that Bureaus do not work well together and a disconnect between management and employees. “Little competitive among Bureaus, rather than being collaborative.”

□ Communication

Internal communication between offices, bureaus and departments was also stated as a large problem. "Small or big, communication isn't working." "Even when engaging City Council about upcoming schedules, there are no proactive status updates given" (i.e. sometimes streets blocked but no one working; if project delayed, no info). "There needs to be someone – anyone – that brings people together...working on a project, a program...and can communicate progress to ALL of the stakeholders."

There was nearly complete consensus to improve external communication. "Info needs to be attainable and easy for residents." "[Our] interaction with the customer is usually due to [a] complaint." The City does not do a good job promoting the steps required for service delivery and needs to be better about sharing the City's story so residents understand the complexities in delivering service for millions of people across such a large geography. "The 'who handles what' leads to resident confusion by the time get to the right person, frustrated." Some examples to address this include: "Open houses to meet employees in charge of different service areas," and "[have] constituent engagement on what can do vs. can't do."

There was high praise for the LA311 system as a vehicle for communication with the public. "It makes us aware of issues that we would have otherwise not known about." "Need to improve the 311 system to be more backend friendly, including making the data more accessible and increasing functionality to put in notes. Staff were also aware of the multitude of users for LA311: "Have a lot of apps now but older residents not as tech savvy." Employees could relate to constituent frustrations with the system around messaging. They spoke to prioritizing the customer journey experience as much as the need for operational data to fulfill a request.

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*"What does closed mean?"*

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This oftentimes led to a discussion on equity and service delivery. "In spite of efforts to better community engagement...allow the most vocal or politicals to get larger share of resources." "Delivering service to who calls the most." There is a real belief that ad hoc service delivery is by who you know or who you have fighting on your behalf. There is also confusion on why plans are set and agreed upon and then change without explanation. There is a "lot of unnecessary confusion." Staff did comment that the regional or neighborhood offices were good and need to be kept for customer service needs.

### Data Focus

The Mayor's focus on data is well received. Employees can see real impact of this focus and Stat meetings help with accountability. "We used to say we did a good job, now we can point to the data that proves it." Many of the biggest improvements revealed by interviewees were in the adoption and use of technology. Many said we should take this focus further: "we need to invest much more in technology...it's like the Ice Age over here." Bureau leaders and division level managers asked for more tools for field crews like tablets. "Always better to have [a] supervisor in the field than at the computer at a yard," "need tablets to do work remotely instead of logging work at the yard at the end of the day," and "want to adopt newer technologies so can catch water mains when they are leaking, not breaking." Others pointed to the absence of metrics further down in a Bureau or department like "a customer seen in xx minutes." Data can improve processes and decision making but only if it available to staff throughout the organization: "Not about what we do but how we do it" and "all data should be open data...provide real time metrics for all services." Bureaus and departments also do not have regular access to staff that can run data analytics on program data. Independent data analysis can provide objective information for Bureaus. For some programs, especially those that touch multiple departments, internal data analyses are not consistently viewed as accurate. "Need better program evaluations" and "everyone should use the same system so City can

determine full cost of programs it delivers." Independent analysis removes doubt that data is being manipulated towards a specific outcome. This Administration's openness to transparency, while highly regarded, is uncomfortable for some. Data can disprove the perceived performance of some staff or leaders, with some proposing "consequences for managers." and a review of "productivity of street crews." There is a "wide range of supervision, some Bureaus operate under strict hierarchy and approvals and others have more bandwidth to make decisions or review work of field crews."

- "focus on deliverables – benchmarking, quality improvement"
- "allow more technical/process innovations to be implemented"

### Training

As more and more employees approach retirement, training new leaders is considered a high priority task. Some divisions could lose its entire management staff in two to four years if all elected to take retirement. Succession plans are important, but even more critical will be the implementation of those initiatives that support up and coming leaders. In this area, the development of a leadership development academy was mentioned by top leaders and a general training that is accessible by all employees was mentioned by division level staff. More online training was also a frequent suggestion as was

offering more site tours to new and existing employees "so they better understand services." Staff also wanted to ensure that these opportunities were not limited to downtown employees. The expected influx of new employees as staff retires makes the onboarding and training regimen essential activities. Samples of classes that would be beneficial include Cost Estimating, Scheduling, and Design. The Project Delivery training hosted by BOE was given good marks. Manuals like the Sewer Design Manual, Design Standards, etc. could be regularly reviewed so newer employees are learning current tools for their jobs. "There are 15 different programs to deal with talent loss" but few for new employees joining the City. The BOE internal rotational program was given very high praise and many advocated expansion of the initiative into other areas and departments.

□ Culture of Innovation

Managers want to be empowered and to empower their employees to bring forward ideas that would improve program and project delivery. They thought management often times would solve a problem without asking employees who face the problem in the field on a daily basis. The culture of hierarchy within Bureaus and departments handcuffs staff and does not encourage innovation. "New ideas, when presented, are not given a chance." The broader City environment of being risk averse makes employees hesitant to suggest ideas that could potentially change a process or program for the

better. Staff would like to have a mechanism in which employees can forward ideas to managers and the leadership team for review. They also want a better environment for experimentation but political environment makes it difficult to create safe zone to test"

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*"Rules and regulations take away motivation to innovate – not willing to explore something different"*

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□ Universal Painpoint – contract process:

The most cited advantage of the full-time Board is the ability to bring contracts for approval in a more expeditious fashion than other departments. However, the frequency of these meetings did not eliminate widespread feedback that the contract process could use substantial improvements. For example, it was cited that contracts go to BCA, Board of Public Works, CAO, and in some cases, City Council for approval. Contracts that are approved then go back to the Board for execution, seen as a repetitive step. Eliminating some steps in the overall process could aid in shortening contract execution time. Another frequent suggestion was decreasing review time by BCA and CAO.

Aside from processing time, additional contract related issues include reduction of steps to process invoices/payments and change orders, procurement length, numerous requirements for new bidders to navigate, low bid process, and staffing resources. Most interviewees felt that contracting should be a citywide

function. Contracting came up in every staff interview as a real hurdle to project delivery. It is important to note that the City is already moving to make improvements in this area and is currently recruiting for a Chief Procurement Officer. It is expected that this role will address some of the concerns previously mentioned.

One subcategory related to the contracting process that was often discussed was the outreach requirement. It was specifically highlighted that the City approves well intentioned ordinances and regulations that do not achieve the intended outcomes. Many suggested that the City regularly review existing rules and adjust them where needed, perhaps adding a required review cycle to the ordinance itself.

MBE/WBE outreach protocol was the most cited ordinance that led to increases in contract review time with the process not realizing the envisioned results for the City.

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*“Are all the rules and policies necessary? [The City] jump[s] too fast to creating new rules to avoid one off situation[s], need to focus on updating policies that affect bulk of work”*

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□ Universal Painpoint – hiring process:

Many parts of the hiring and promotional process were listed as inhibitors to service delivery. Many times a list is used by multiple departments, but candidates will choose departments that pay more for same job. Managers whose classifications paid less believe their access to talent was not the same as other city departments with access to higher pay scales. Rules requiring all promotional candidates to be hired first before going to the open list were viewed as too restrictive for the City to acquire the best candidate for the job. External hiring at the mid-levels was also cited frequently for “infusions of expertise.”

Given the large retirement eligible population, there is wide ranging concern that newer employees are being promoted too quickly and are not ready for management roles. City departments are also perceived as a training ground for DWP. “They will wait til we’ve trained them and then take them and we have to start over.”

Some respondents advocated for decentralizing Personnel like ITA, sharing their opinion that this would support better service support. Additional comments included evaluating functions and employee classifications to see if the classification is still valid, and making certain that the city has the right people in the right positions.

## External Partner Feedback-Key Themes

- ❑ Data management: There is no centralized data management in the City. Past projects clearly show that “systems are siloed and mostly home grown,” “missing modern functionality” and ability to capture data about the same asset or location in one place. For example, “if one goes to Los Angeles County for data, they are able to pull up a parcel and see everything related to that parcel.” For many projects that partners are involved in, the City does not have the data in one place or is unable to retrieve it without going to multiple systems.
- ❑ Better upfront collaboration: “[The City could] start with one integrated project team instead of individual staff interactions.” Example: “Need collaborative approach about what the street feels like...[from] design [to] green [to] “street culture – and not just mobility.” “We affect the street too.” “Bring together PM folks with goal of optimizing assets, similar to Environmental Review Committee in BOE/Rec and Parks – maybe have a similar Infrastructure Design and Planning Consortium?” “An Infrastructure Report Card every five years would be good.” “neighborhood input into design - don’t come and present a design, get us involved [from the beginning].”
- ❑ Streamline communication: Partners “need a primary contact” to filter requests for data or project updates. Right now this could be “up to a dozen people” Sometimes partners are “in the middle of a project and are made aware of other staff who need to be involved” from the City side. This fragmentation makes it “tough to deliver on a plan.” Partners would like a clear organizational chart or “contact list of who does what” related to working with the City at the beginning of the project.
- ❑ Increased coordination: “There is so much development happening in Los Angeles right now” that the “speed of delivery of all of these programs” makes it tough when working with City. “[We don’t want] to conflict with each other’s projects...undoing of each person’s work” but “no venue [in which] we can coordinate processes, address delays...” “DWP is tough, so busy with Metro projects right now.” “Just the permitting process and coordinating with relevant departments takes several departments, leading to delays from the start.” A specific program cited was managing homelessness up and around ramps – how to coordinate with multiple entities to tackle this issue and make progress.

### Benchmarking

As part of external research, program portfolios, best practices and lessons learned were gathered from the top 25 cities in the country. This included a mix of high density cities and those with a larger geographical area like Los Angeles. Many hours were spent with other cities discussing organizational, governance and programming matters. Benchmarking was conducted with the top 25 cities in the US and the top 10 cities in California by population.



## Key Takeaways

- Most cities have a group and system for public right of way (PROW) coordination
- Most cities own and operate public utilities for water, with electricity being outsourced in more than half of cities researched
- Cities have a capital expenditure plan that includes major infrastructure projects
- Street infrastructure departments have a dedicated group for planning, policy and performance management
- Los Angeles is the only city with a Citizen Board serving as the department executive
- No other city has departments with a dual reporting structure like Department of Public Works where both Bureau Directors (considered General Managers) and Board Commissioners report to Mayor/Council
- All street related programs, whether or not they relate to the hard surface of the street or activities over the surface of the street, are managed by one entity in the majority of cities
- Several cities have combined programs over the past five years, bringing parts of planning, processes and program execution together for better service delivery
- Most cities have a centralized contracting and procurement function

Most cities have a coordinated and strategic approach to right-of-way coordination

Top 25 U.S. Cities by Population

City	Pop.	ROW Coordination?
Austin*	932K	Department of Transportation, Right of Way Management Division
Boston	667K	Department of Public Works, Utility Coordination and Compliance
Charlotte	827K	Department of Transportation, Utility Right of Way Program
Chicago	2.7M	Department of Transportation, Office of Underground Utility Coordination
Columbus	860K	Department of Public Service, Pavement Management Group
Dallas	1.3M	Mobility and Street Services Department, Right of Way Management
Denver	683K	Department of Public Works, Right of Way Services
Detroit	677K	Department of Public Works
El Paso	681K	Streets and Maintenance Department, Pavement Cut Program
Fort Worth	833K	Department of Transportation and Public Works
Houston**	2.3M	Department of Public Works, Street Cut Permit Section
Indianapolis	855K	Department of Public Works, Right of Way
Jacksonville	868K	Department of Public Works, Right of Way and Stormwater Maintenance Division
Los Angeles	<b>4.0M</b>	<b>Department of Public Works, BSS, Coordinating Unit</b>
Memphis	656K	Department of Public Works
Nashville	655K	Department of Public Works, Pavement Management Team
New York	8.5M	Department of Transportation
Philadelphia	1.6M	Streets Department, Right of Way Unit
Phoenix	1.6M	Street Transportation Department, Utility Coordination Section
San Antonio	1.5M	Department of Transportation & Capital Improvements
San Diego	1.4M	Department of Transportation and Storm Water, Administration and Right of Way Coordination Division
San Francisco ***	865K	Department of Public Works, Street Use and Mapping
San Jose	1.0M	Department of Public Works, Utilities Section
Seattle	684K	Department of Transportation, Project & Construction Coordination Office
Washington DC	672K	Department of Transportation, Public Space Regulation Division

\*also has an Utility Location and Coordination Committee to "identify and resolve any potential conflicts before construction begins, in order to reduce the impact on existing infrastructure and transportation. Our division coordinates multiple ROW activities through routine inspection, construction phasing, sharing work zones, and identifying opportunities for joint trenching.

\*\*in an effort to manage future and ongoing efforts, regular monthly utility coordination meetings are held with the primary utility stakeholders to present updates on the progress of all City projects that require private utility relocations and review schedules for ongoing and future private utility relocation efforts

\*\*\*The Committee for Utility Liaison on Construction and Other Projects (CULCOP) is a monthly meeting chaired by Public Works. Its members include a representative from each city agency and utility company who performs excavation work within the public right of way; there is also a Committee for Planning Utility Construction Program

Cities have dedicated public utilities or departments and they are primarily focused on water services

Top 25 U.S. Cities by Population			
City	Pop.	Utility services – Internal?	Utility services – External?
Austin	932K	Austin Water Utility (potable, wastewater)	Electricity outsourced
Boston	667K	Boston Water and Sewer Commission (potable, wastewater and stormwater)	Electricity outsourced
Charlotte	827K	Charlotte Water (potable, wastewater)	Electricity outsourced
Chicago	2.7M	Department of Water Management (potable, wastewater and stormwater)	Electricity outsourced
Columbus	860K	Department of Public Utilities (potable, wastewater, stormwater, and power)	N/A
Dallas	1.3M	Water Utilities Department (potable, wastewater and stormwater)	Electricity outsourced
Denver	683K	Wastewater Management Department (includes stormwater)	Denver Water (authority from Charter, but separate from city of Denver) Electricity outsourced
Detroit	677K	Water and Sewerage Department (potable, wastewater, stormwater)	Electricity outsourced
El Paso	681K	El Paso Water (potable, wastewater and stormwater)	Electricity outsourced
Fort Worth	833K	Water Department (potable, wastewater and stormwater)	Electricity outsourced
Houston	2.3M	Department of Public Works, Water Division (potable and wastewater)	Electricity outsourced
Indianapolis	855K	Citizens Energy Group (public charitable trust) (potable and wastewater)	Electricity outsourced
Jacksonville	868K	JEA (electric, potable and wastewater)	N/A
Los Angeles	4.0M	<b>Department of Water and Power</b>	<b>N/A</b>
Memphis	656K	Memphis Light, Gas and Water	N/A
Nashville	655K	Nashville Electric Services, Metro Water Services (potable, wastewater, stormwater)	N/A
New York	8.5M	Department of Environmental Protection (potable, wastewater, stormwater)	Electricity outsourced

Cities have dedicated public utilities or departments and they are primarily focused on water services

Top 25 U.S. Cities by Population			
City	Pop.	Utility services – Internal?	Utility services – External?
Philadelphia	1.6M	Water Department (potable, wastewater and stormwater)	Electricity outsourced
Phoenix	1.6M	Water Services Department (potable and wastewater)	Electricity outsourced
San Antonio	1.5M	San Antonio Water System (potable, wastewater)	Electricity outsourced
San Diego	1.4M	Public Utilities Department (potable, wastewater)	Electricity outsourced
San Francisco	865K	San Francisco Public Utilities Commission (potable, wastewater, stormwater, power)	N/A
San Jose	1.0M	Department of Environment, San José Municipal Water System* (potable, wastewater, stormwater)	Electricity outsourced
Seattle	684K	Seattle Public Utilities (potable, wastewater, stormwater), Seattle City Light	N/A
Washington DC	672K		DC Water (potable, wastewater)** Electricity outsourced

2015 US Census Bureau estimates, City websites

\*(2 other suppliers privately owned by California Public Utilities Commission)

\*\*DC Water was created in 1996, when the District Government and the U.S. federal government established it as an independent authority of the District government.



Cities have a capital expenditure plan that includes major infrastructure projects

Top 25 U.S. Cities by Population

City	Capital Plan/Budget?
Austin	Yes
Boston	Yes
Charlotte	Yes
Chicago	Yes
Columbus	Yes
Dallas	Yes
Denver	Yes
Detroit	Yes
El Paso	Yes
Fort Worth	Yes
Houston	Yes
Indianapolis	Yes
Jacksonville	Yes
<b>Los Angeles</b>	<b>No</b>
Memphis	Yes
Nashville	Yes
New York	Yes
Philadelphia	Yes
Phoenix	Yes
San Antonio	Yes
San Diego	Yes
San Francisco	Yes
San Jose	Yes
Seattle	Yes
Washington DC	Yes

Top 10 Cities in California by Population

City	Capital Plan/Budget?
<b>Los Angeles</b>	<b>No</b>
San Diego	Yes
San Jose	Yes
San Francisco	Yes
Fresno	Yes
Sacramento	Yes
Long Beach	Yes
Oakland	Yes
Bakersfield	Yes
Anaheim	Yes

Top 10 Cities in Los Angeles County

City	Capital Plan/Budget?
<b>Los Angeles</b>	<b>No</b>
Long Beach	Yes
Glendale	Yes
Santa Clarita	Yes
Lancaster	Yes
Palmdale	Yes
Pomona	Yes
Torrance	Yes
Pasadena	Yes
El Monte	Yes
Orange County	Yes

Los Angeles is the only city with a Citizen Board serving as the department executive

Top 25 U.S. Cities by Population			
City	Pop.	Bulk of Infrastructure services reside where?	Governed by?
Austin	932K	Department of Public Works	Director
Boston	667K	Department of Public Works	Commissioner
Charlotte	827K	Department of Transportation	Director
Chicago	2.7M	Department of Transportation	Commissioner
Columbus	860K	Department of Public Service	Director
Dallas	1.3M	Mobility and Street Services Department	Director
Denver	683K	Department of Public Works	Executive Director
Detroit	677K	Department of Public Works	Director
El Paso	681K	Streets and Maintenance Department	Director
Fort Worth	833K	Department of Transportation and Public Works	Director
Houston	2.3M	Department of Public Works	Director of Public Works & Engineering
Indianapolis	855K	Department of Public Works	Director
Jacksonville	868K	Department of Public Works	Director
<b>Los Angeles</b>	<b>4.0M</b>	<b>Department of Public Works</b>	<b>Citizen Board</b>
Memphis	656K	Department of Public Works	Director
Nashville	655K	Department of Public Works	Director
New York	8.5M	Department of Transportation	Commissioner
Philadelphia	1.6M	Streets Department	Commissioner
Phoenix	1.6M	Street Transportation Department	Director
San Antonio	1.5M	Department of Transportation & Capital Improvements	Director/City Engineer
San Diego	1.4M	Department of Transportation and Storm Water	Director
San Francisco	865K	Department of Public Works	Director
San Jose	1.0M	Department of Public Works	Director
Seattle	684K	Department of Transportation	Director
Washington DC	672K	Department of Transportation	Director

No other city has departments with a dual reporting structure like Department of Public Works where both Bureau Directors and Board Commissioners report to the Mayor's office

Top 25 U.S. Cities by Population			
City	Bulk of Infrastructure services reside where?	Governed by?	Reports to?
Los Angeles	<b>Department of Public Works</b>	<b>Citizen Board</b> <b>Bureau Directors</b>	<b>Mayor/Council</b>
Austin	Department of Public Works	Director	Assistant City Manager for Infrastructure Services
Boston	Department of Public Works	Commissioner	Mayor
Charlotte	Department of Transportation	Director	City Manager
Chicago	Department of Transportation	Commissioner	Mayor
Columbus	Department of Public Service	Director	Mayor
Dallas	Mobility and Street Services Department	Director	City Manager
Denver	Department of Public Works	Executive Director	Mayor
Detroit	Department of Public Works	Director	Group Executive for Operations
El Paso	Streets and Maintenance Department	Director	Managing Director of Public Works and Transportation
Fort Worth	Department of Transportation and Public Works	Director	City Manager
Houston	Department of Public Works	Director of Public Works & Engineering	Mayor
Indianapolis	Department of Public Works	Director	Mayor
Jacksonville	Department of Public Works	Director	Mayor
Memphis	Department of Public Works	Director	Chief Operating Officer
Nashville	Department of Public Works	Director	Mayor's Office of Infrastructure, Transportation and Sustainability
New York	Department of Transportation	Commissioner	Mayor
Philadelphia	Streets Department	Commissioner	Deputy Managing Director for Office of Transportation and Infrastructure Services

No other city has departments with a dual reporting structure like Department of Public Works where both Bureau Directors and Board Commissioners report to the Mayor's office

Top 25 U.S. Cities by Population			
City	Bulk of Infrastructure services reside where?	Governed by?	Reports to?
Phoenix	Street Transportation Department	Director	City Manager
San Antonio	Department of Transportation & Capital Improvements	Director/ City Engineer	City Manager
San Diego	Department of Transportation and Storm Water	Director	Mayor (Deputy Chief Operating Officer)
San Francisco	Department of Public Works	Director	City Administrator
San Jose	Department of Public Works	Director	City Council
Seattle	Department of Transportation	Director	Mayor
Washington DC	Department of Transportation	Director	Mayor

Top 10 Cities in California			
City	Bulk of Infrastructure services reside where?	Governed by?	Reports to?
<b>Los Angeles</b>	<b>Department of Public Works</b>	<b>Citizen Board Bureau Directors</b>	<b>Mayor/Council</b>
San Diego	Department of Transportation and Storm Water	Director	Mayor (Deputy Chief Operating Officer)
San Jose	Department of Transportation	Director	City Manager
San Francisco	Department of Public Works	Director	City Administrator
Fresno	Department of Public Works	Director	City Manager
Sacramento	Department of Public Works	Director	City Manager
Long Beach	Department of Public Works	Director	City Manager
Oakland	Department of Public Works	Director	Assistant City Administrator
Bakersfield	Department of Public Works	Director	City Manager
Anaheim	Department of Public Works	Director	City Manager



## Research - Benchmarking

All street related programs, whether or not it they relate to the hard surface of the street or activities on the surface of the street, are managed by one entity in the majority of cities

Key: ● Services reside in department cited in the third column ○ Housed In another department □ Outsourced

Top 20 Cities (Ranked by Population)	Sq. Miles	Department Name	Majority of pgms in 1 place?	Typical Public Works activities										Typical Transportation activities				
				Alley	Curb and gutter	Engineering	Paving	Permits	Pothole repair	Ramps	Sidewalks	Street lights	Trees	Bike- share	Parking	Signs	Traffic signals	Street markings /striping
New York	302.6	Dept of Transportation	Y	●	●	○	●	●	●	●	●	●	○	□	●	●	●	●
Los Angeles	468.7	Dept of Public Works	N	●	●	●	●	●	●	●	●	●	●	□	○	○	○	○
Chicago	227.6	Dept of Transportation	Y	●	●	○	●	●	●	●	●	●	○	●	□	●	●	●
Houston	599.6	Dept of Public Works	Y	●	●	●	●	●	●	●	●	●	●	□	○	●	●	●
Phoenix	516.7	Street Transportation Dept	Y	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Philadelphia	134.1	Streets Dept	Y	●	●	●	●	●	●	●	homeowner	●	○	□	□	●	●	●
San Antonio	460.9	Dept of Transportation & Capital Improvements	Y	●	●	●	●	●	●	●	●	●	□	○	○	●	●	●
San Diego	325.2	Dept of Transportation and Storm Water	Y	●	●	●	●	●	●	●	●	●	●	○	○	●	●	●
Dallas	340.5	Mobility and Street Services Dept	Y	●	●	●	●	●	●	□	homeowner	□	●	□	○	●	●	●
San Jose	176.6	Dept of Transportation	Y	●	●	●	●	○	●	●	●	●	●	●	●	●	●	●
Austin	322.5	Dept of Public Works	N	●	●	●	●	○	●	●	●	●	□	●	□	○	○	○
Jacksonville	747	Dept of Public Works	Y	●	●	●	●	○	●	●	●	○	●	□	○	●	●	●
San Francisco	46.9	Dept of Public Works	N	●	●	●	●	●	●	●	homeowner	○	●	○	○	○	○	○
Indianapolis	361.4	Dept of Public Works	Y	●	●	●	●	○	●	●	●	□	●	●	●	●	●	●
Columbus	217.2	Dept of Public Service	Y	●	●	●	●	●	●	●	●	○	○	●	●	●	●	●
Fort Worth	339.8	Dept of Transportation & Public Works	Y	●	●	●	●	○	●	●	●	●	○	□	●	●	●	●
Charlotte	297.7	Dept of Transportation	Y	●	●	○	●	●	●	●	●	●	○	●	●	●	●	●
Seattle	83.9	Dept of Transportation	Y	●	●	●	●	●	●	●	●	○	●	●	●	●	●	●
Denver	153	Dept of Public Works	Y	●	●	●	●	●	●	●	homeowner	□	○	●	●	●	●	●
El Paso	255.2	Streets and Maintenance Dept	Y	●	homeowner	○	●	●	●	○	homeowner	●	●	□	○	●	●	●

2015 US Census Bureau estimates, City websites; interviews

Most cities have a centralized procurement and contracting function

City	Pop.	Centralized Contracting/ Procurement Function?	Department or Office
Austin	932K	No	Capital Contracting Department and Financial Services Department, Purchasing Office
Boston	667K	Yes	Procurement Department
Charlotte	827K	Yes	Office of Finance, Procurement Management
Chicago	2.7M	Yes	Procurement Services Department, Contract Administration
Columbus	860K	Yes	Finance and Management Department, Financial Management Division
Dallas	1.3M	Yes	Business Development and Procurement Services
Denver	683K	No	Purchasing Division (goods and services) and Contract Administration (construction projects)
Detroit	677K	Yes	Office of Contracting and Procurement
El Paso	681K	Yes	Purchasing & Strategic Sourcing Department
Fort Worth	833K	Yes	Financial Management Services, Purchasing Division
Houston	2.3M	Yes	Office of Business Opportunity
Indianapolis	855K	Yes	Office of Finance and Management, Purchasing Division
Jacksonville	868K	Yes	Finance and Administration Department, Procurement Division
Los Angeles	<b>4.0M</b>	<b>No</b>	<b>GSD, Department of Public Works, other city departments</b>
Memphis	656K	Yes	Purchasing Department
Nashville	655K	Yes	Finance Department, Procurement Division
New York	8.5M	No	Mayor's Office of Contract Services (procurement), Department of Design and Construction (construction), other city departments
Philadelphia	1.6M	Yes	Procurement Department
Phoenix	1.6M	No	Finance Department, Procurement Division and Street Transportation Department (capital improvement projects)
San Antonio	1.5M	No	Finance Department, Purchasing Division and Transportation and Capital Improvements Department (public works contracts)
San Diego	1.4M	No	Purchasing and Contracting Department and Public Works Department (CIP Program)
San Francisco	865K	Yes	Office of Contract Administration
San Jose	1.0M	Yes	Office of Finance, Purchasing Division
Seattle	684K	Yes	City Purchasing and Contracting Services (CPCS)
Washington DC	672K	Yes	Office of Contracting and Procurement

2015 US Census Bureau estimates, City websites; City interviews

## Key Takeaways

Surveys were designed, executed and analyzed to determine current levels of satisfaction and to identify service gaps. Constituents were given the opportunity to complete surveys both at in-person Alliance meetings and online via Neighborhood Council representatives. The survey asked respondents to rate the most common infrastructure programs in the City, the most improved services, which services to improve first and citywide questions on quality of life in Los Angeles. Business Improvement Districts (BIDs) were also invited to complete a similar survey.

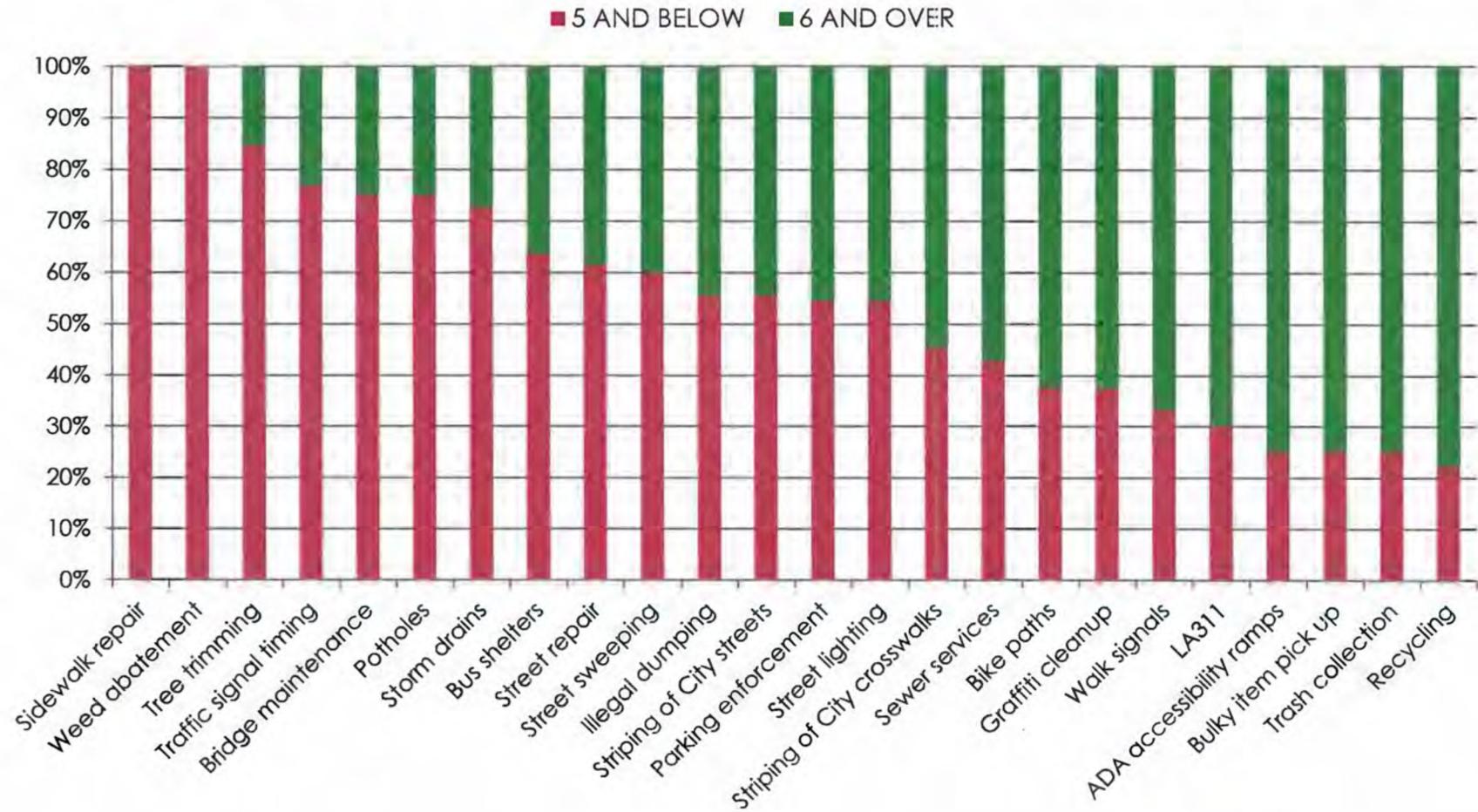
There were 186 responses\* from constituents and 25 responses from BIDs. Summary charts for both constituents and BIDs follow and a summary of overall takeaways is below.

- LA311 was cited as the most improved service by both constituents and BIDs
- Although constituents appreciated LA311, the level of responsiveness to constituent requests scored low: 100% said it was poor or fair on a four point scale. BIDs were more optimistic, with 50% citing responsiveness as Fair and the other 50% as Good
- If constituents could choose which services to improve first, the top three are: sidewalk repair, tree trimming, and street repair. For BIDs, the top three are: sidewalk repair, tree trimming and street lights
- 100% rated the cleanliness of Los Angeles as Poor or Fair on a four point scale
- 92% of constituents surveyed had visited City's website in the last six months
- Overwhelmingly, respondents follow City Facebook accounts compared to Twitter accounts (75% vs 25%)
- Although some respondents did contact their Council office to report an issue with City services, residents use LA311 more often (92%)

*\*Responses are weighted to ensure higher responses in certain neighborhoods are not overrepresented in the sample; the surveys are meant to be directional in nature and are not statistically valid*

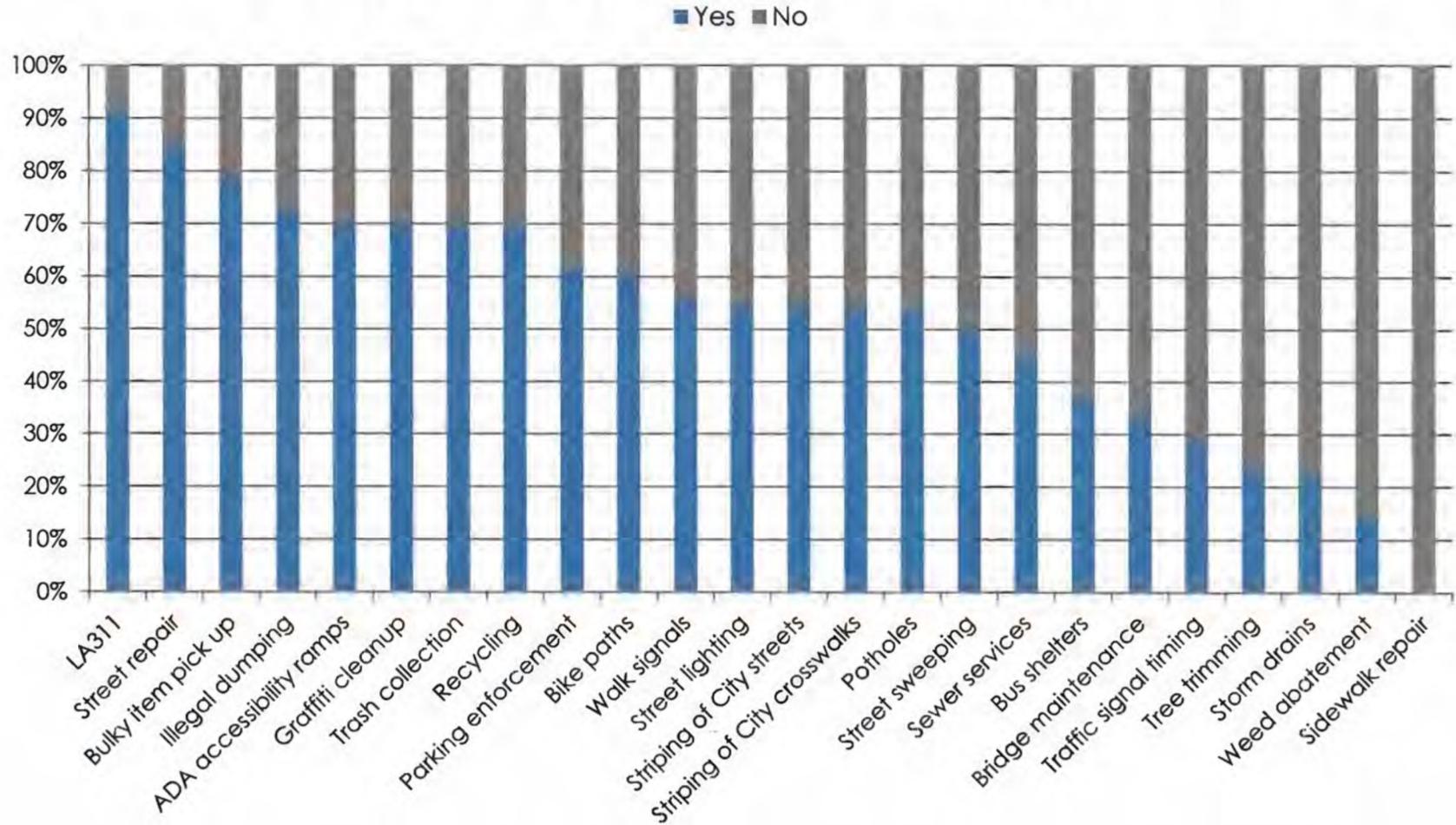


Please rate the quality of the following services on a scale of 1 to 10  
(1 = low, 10 = high):





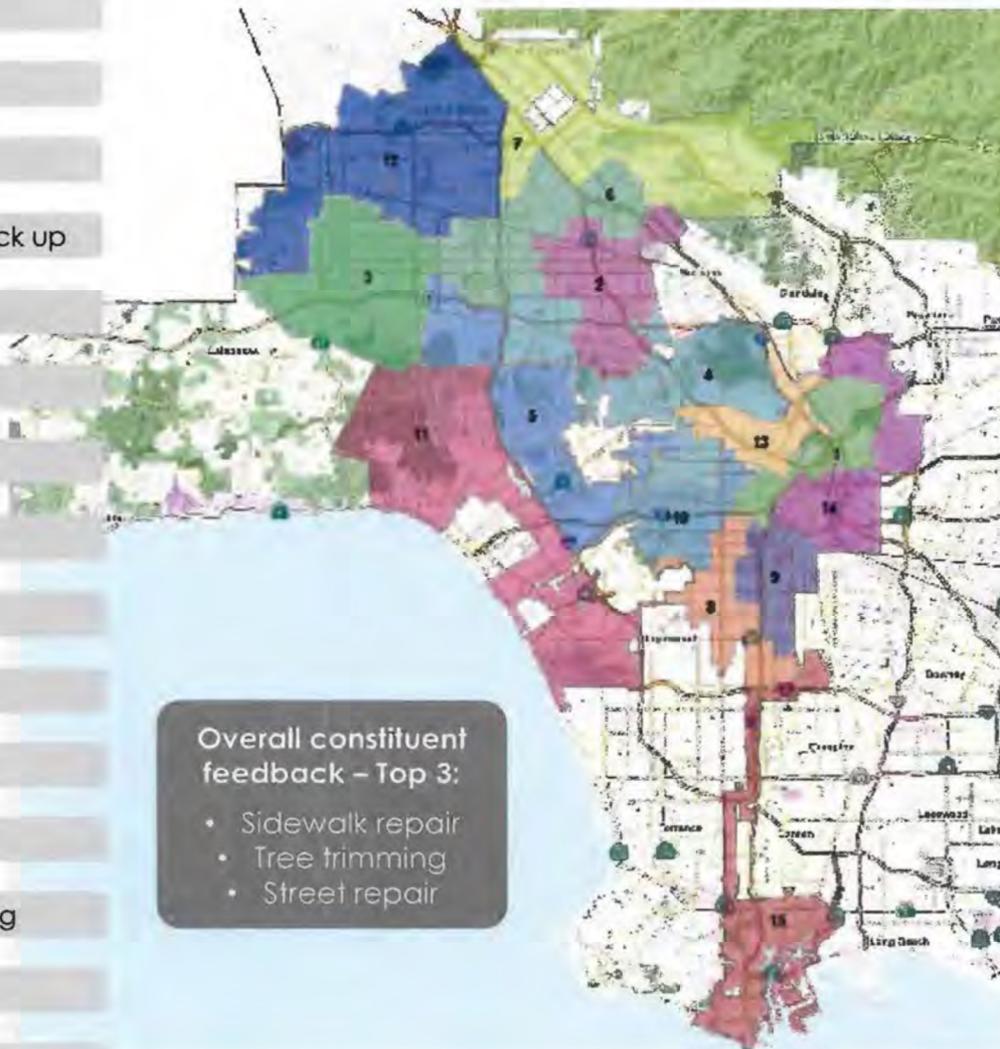
### Have these services improved over the past 5 years?

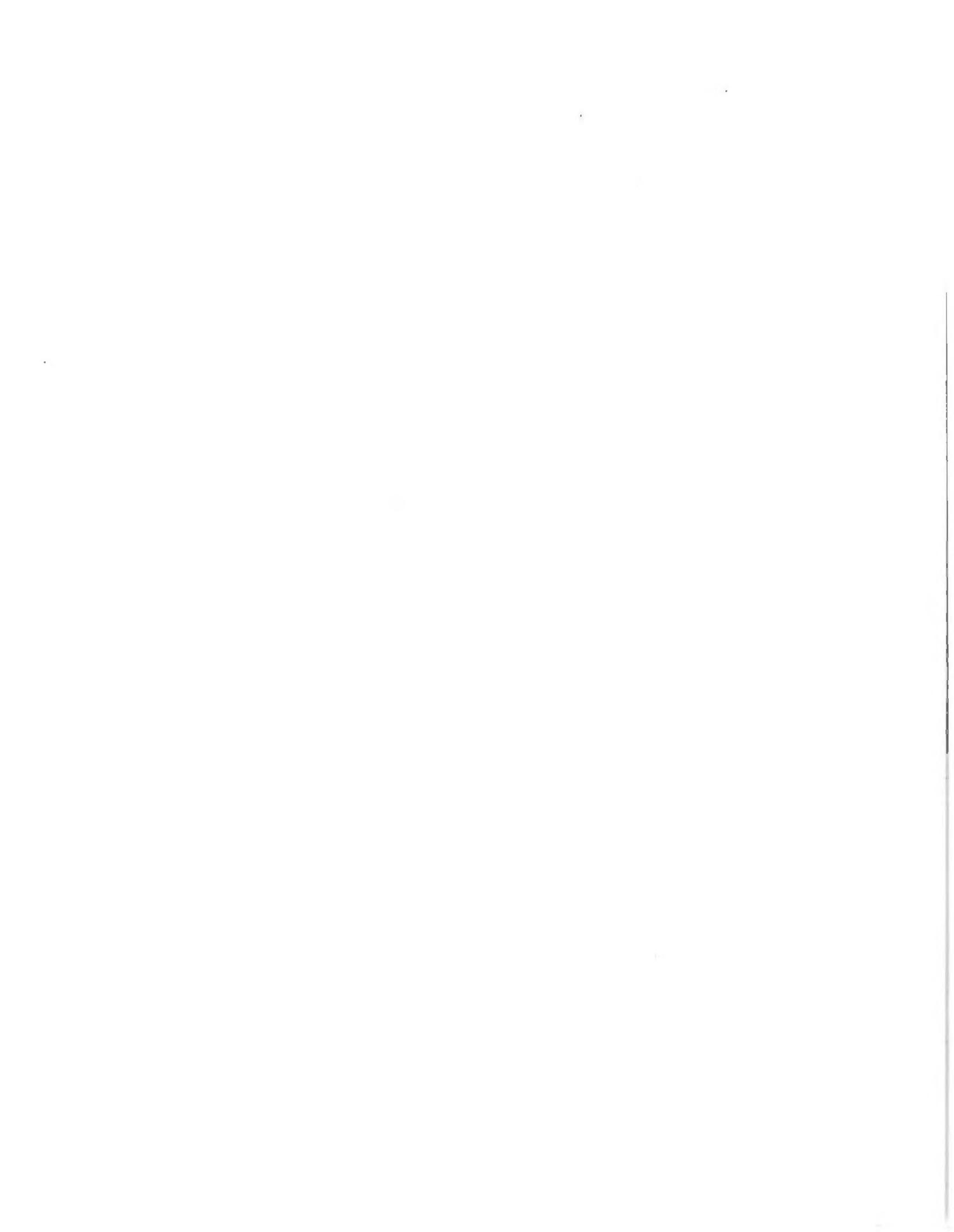


Section 2

### Of the programs listed on the survey, which services would you want improved first? (Ranked in order of preference)

- CD1: Tree trimming, sidewalk repair, street striping
- CD2: Street repair, street lighting, street sweeping
- CD3: Tree trimming, street repair, bulky item pick up
- CD4: Street sweeping, homeless encampments, bulky item pick up
- CD5: Street lighting, street signs, sidewalk repair
- CD6: Street repair, bulky item pick up, illegal dumping
- CD7: Sidewalk repair, street sweeping, street repair
- CD8: Tree trimming, sidewalk repair, street repair
- CD9: Sidewalk repair, street repair, tree trimming
- CD10: Sidewalk repair, tree trimming, weed abatement
- CD11: Sidewalk repair, Traffic light timing, illegal dumping
- CD12: Parking, traffic enforcement, street sweeping
- CD13: Street sweeping, homeless encampments, street striping
- CD14: Street lighting, tree trimming, illegal dumping
- CD15: Sidewalk repair, illegal dumping, street lighting



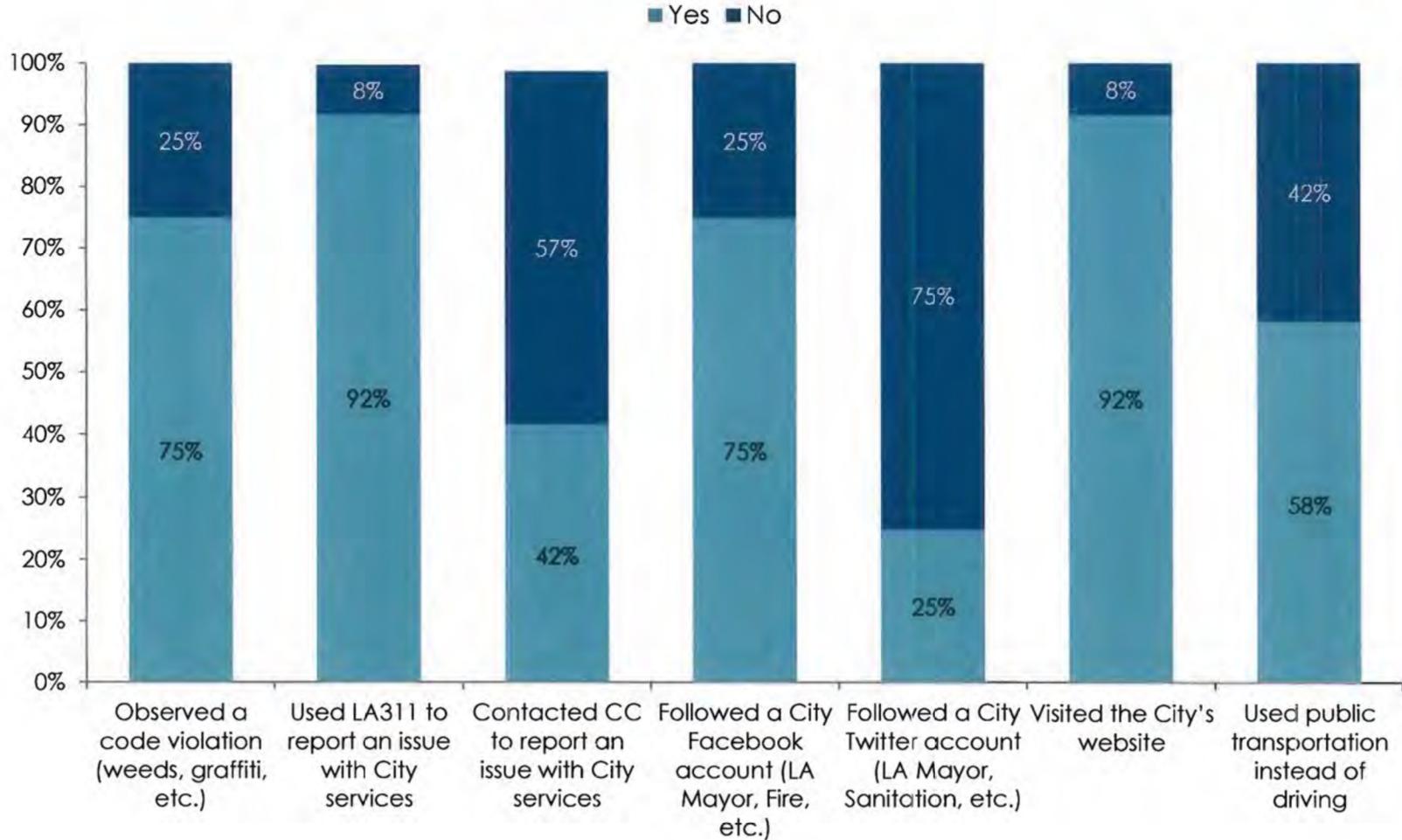




### How would you rate the following aspects of Los Angeles? (4 point scale - Poor, Fair, Good, Excellent)



**In the last 6 months, have you done any of these activities:  
(Yes or No)**



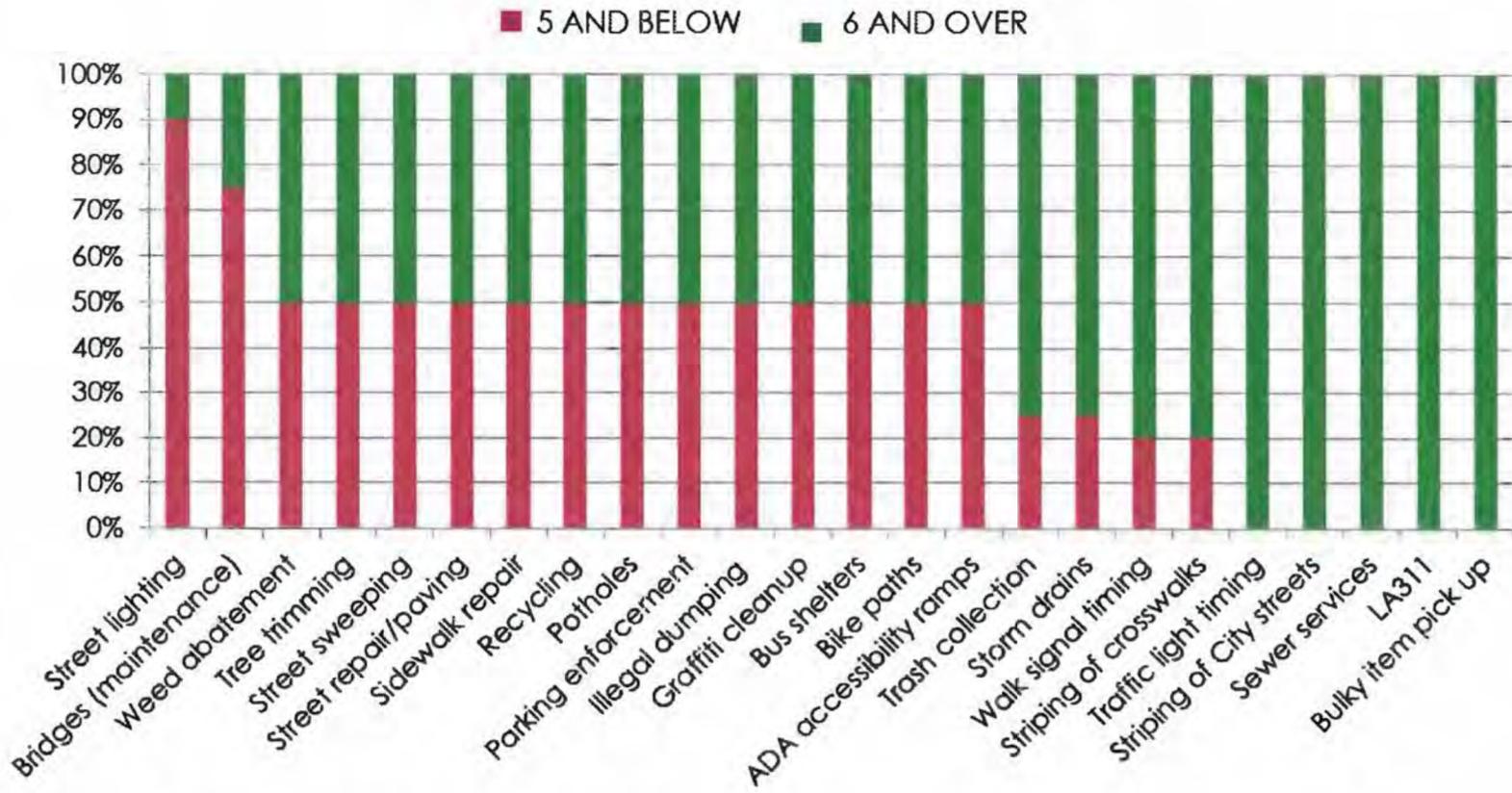
Section 2

"CC" is City Council offices in the 3rd column



BIDs are important partners in maintaining infrastructure in their respective districts. In the City, "a BID is a geographically defined area within the City of Los Angeles, in which services, activities and programs are paid for through a special assessment which is charged to all members within the district in order to equitably distribute the benefits received and the costs incurred to provide the agreed-upon services, activities and programs."<sup>72</sup> These services can range from supplemental trash collection to tree trimming services. There are currently 41 BIDs in the City and the survey had a 60% response rate.

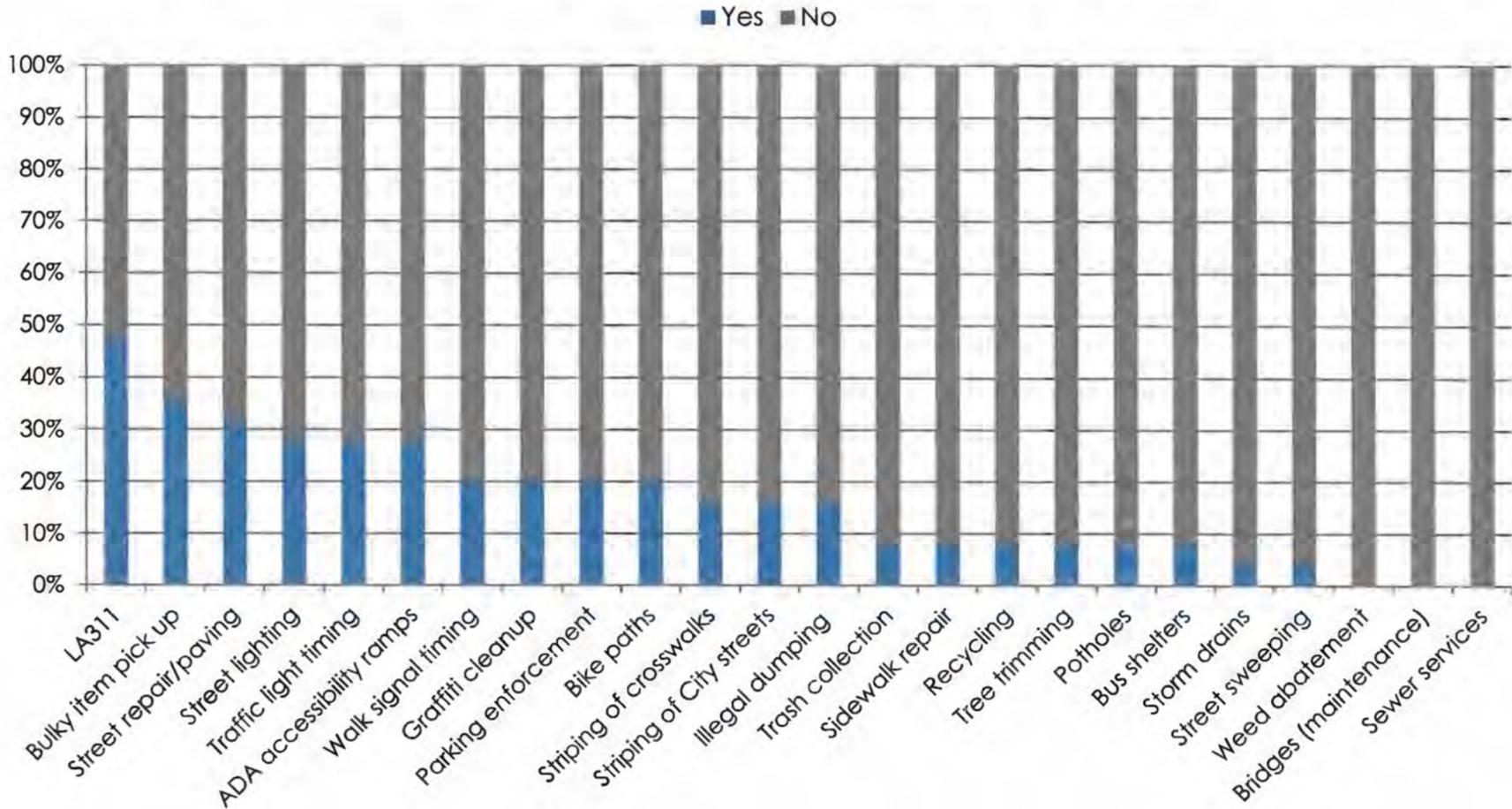
**Please rate the quality of the following services on a scale of 1 to 10  
(1 = low, 10 = high):**



<sup>72</sup> <http://clerk.lacity.org/business-improvement-districts/what-business-improvement-district>



### Have these services improved over the past 5 years?





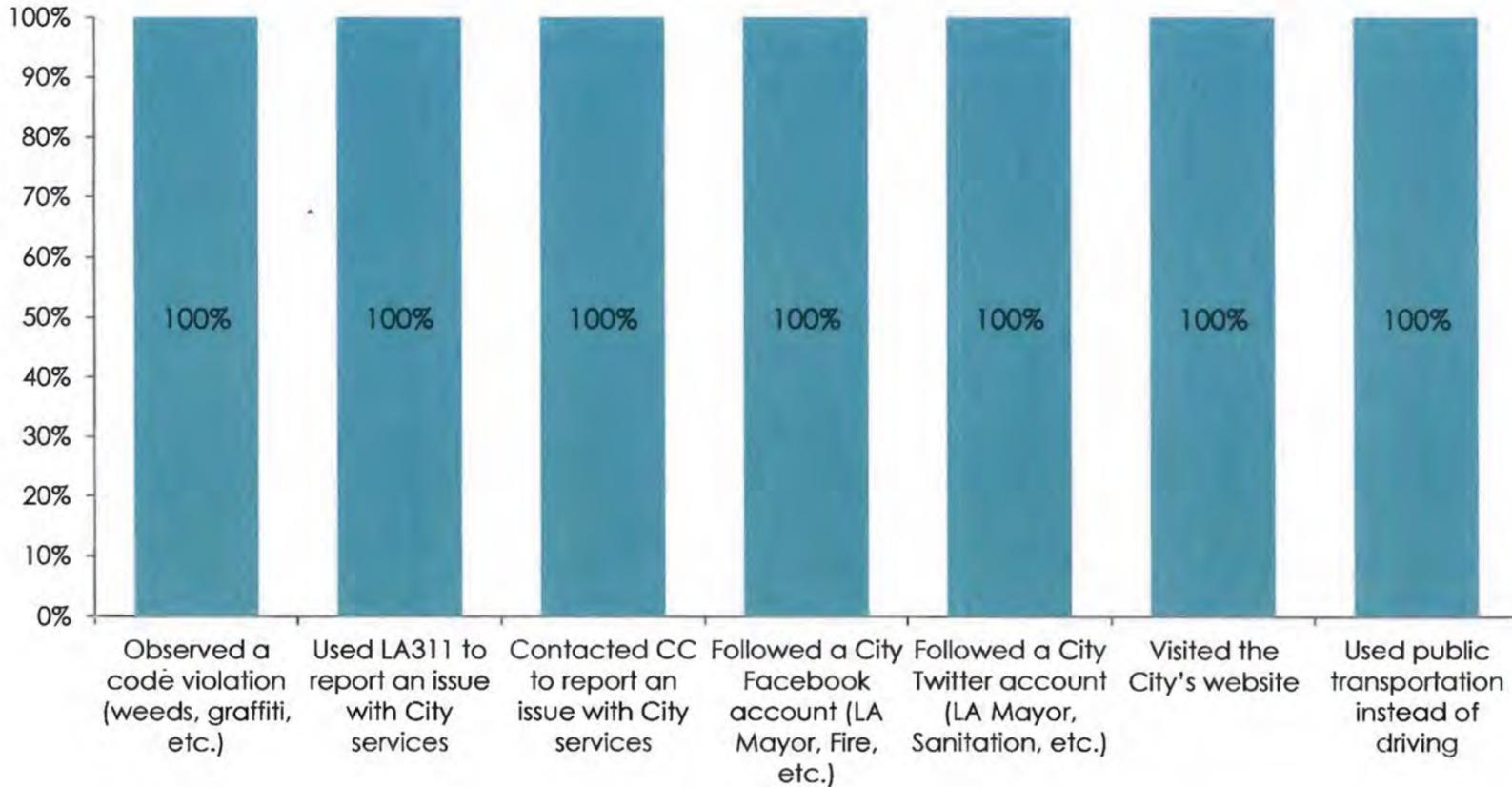
### How would you rate the following aspects of Los Angeles? (4 point scale - Poor, Fair, Good, Excellent)





### In the last 6 months, have you done any of these activities: (Yes or No)

■ Yes ■ No



Section 2

"CC" is City Council offices in the 3rd column

## Data Analysis on Service Needs

### Total requests: 1.97M\*

- FY15-16 = 868K
- FY16-17 = 1.10M
- YoY % increase = 27%

### Overall Top 3 Bureaus/Offices by Volume of Requests over last two Fiscal Years:

- BOS: 61%
- OCB: 27%
- BSS: 8%

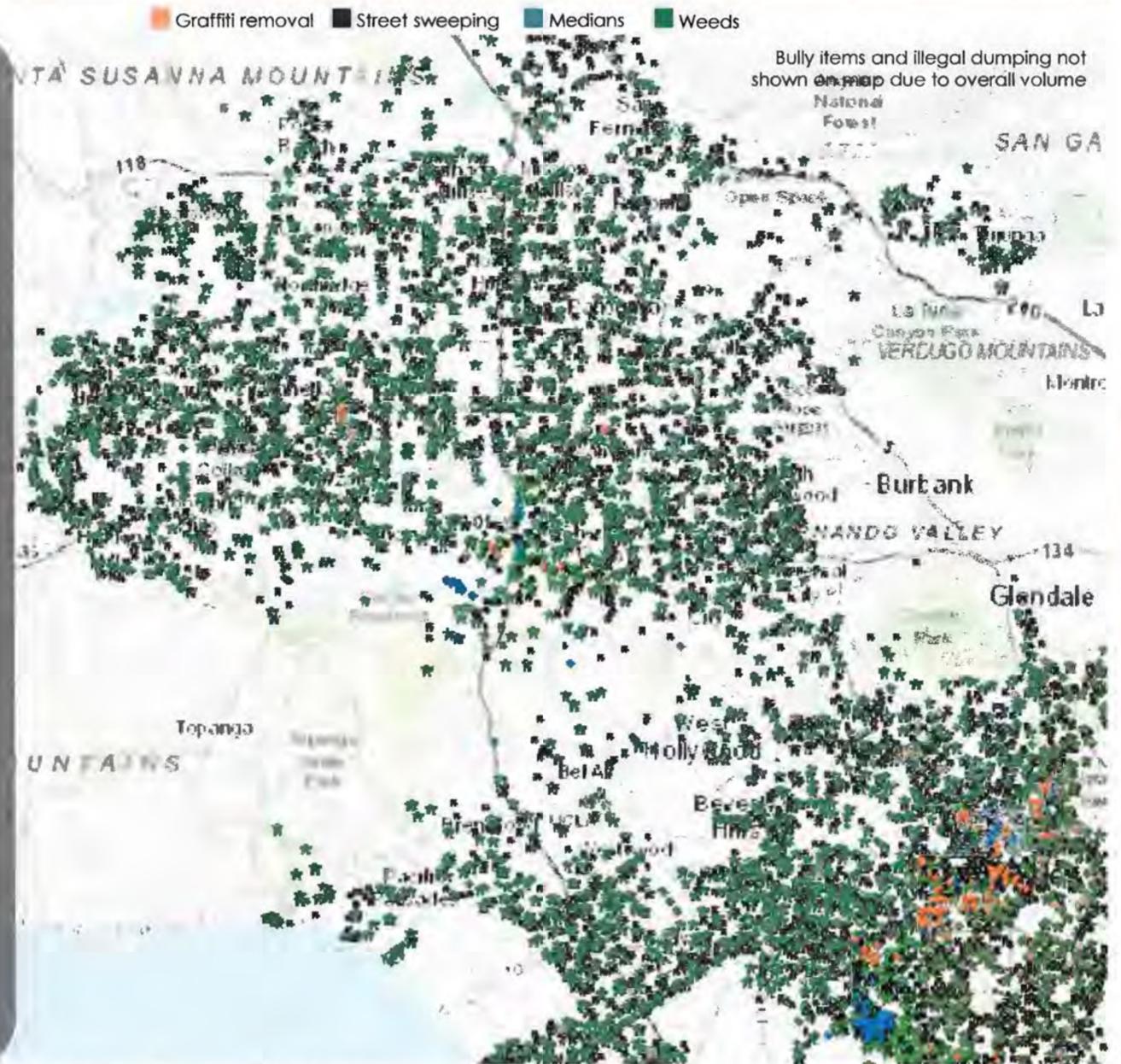
### Largest Increase in Requests by Owner:

- OCB = 88%

### Overall Top 10 Constituent Needs: (% increase year over year)

- Bulky Items
- Graffiti Removal
- Metal/Household Appliances
- Electronic Waste
- Illegal Dumping Pickup
- Dead Animal Removal
- Potholes
- Tree Emergency
- Homeless Encampment
- Other

\*FY2015 = Aug 1, 2015-Aug 4, 2016 and FY2016 = Aug 3, 2016-Aug 4, 2017 due to change of LA311 system



## Where are Service Gaps Occurring and with what Frequency?

### Example of overlapping program: cleanliness

**City Datasets included:** bulky items, illegal dumping, graffiti abatement, weeds/overgrown vegetation street sweeping, median island maintenance

**Census Datasets included:** Census block data for Los Angeles (Census blocks are those called geographic area for 1990-2000. Bureau of the Census collected and tabulates decennial census data).<sup>73</sup>

**Total Requests for Cleanliness related services:** 1.175M over past two fiscal years

**Number of Census Blocks with 100+ requests:** 2,620

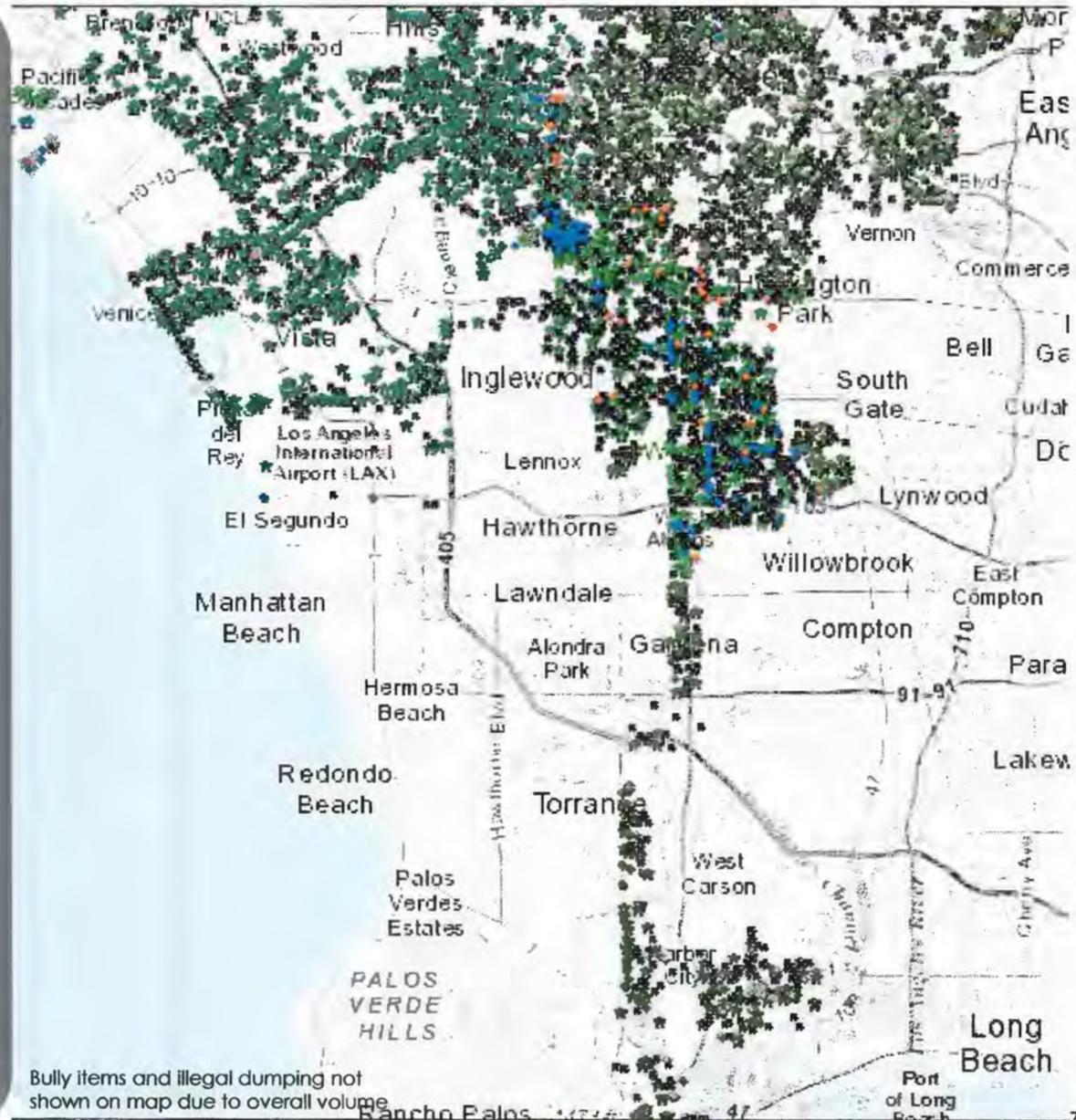
**Number of requests from Blocks with 100+ requests:** 429,748

**% of total requests from Census blocks with 100+ requests:** 36.6%

**Number of Census Blocks with 200+ requests:** 513

**Number of requests from Blocks with 200+ requests:** 147,294

**% of Total Requests from Census blocks with 200+ requests:** 12.5%



<sup>73</sup> [https://www.census.gov/geo/reference/gtc/gtc\\_block.html](https://www.census.gov/geo/reference/gtc/gtc_block.html)

## Data Analysis on Service Needs

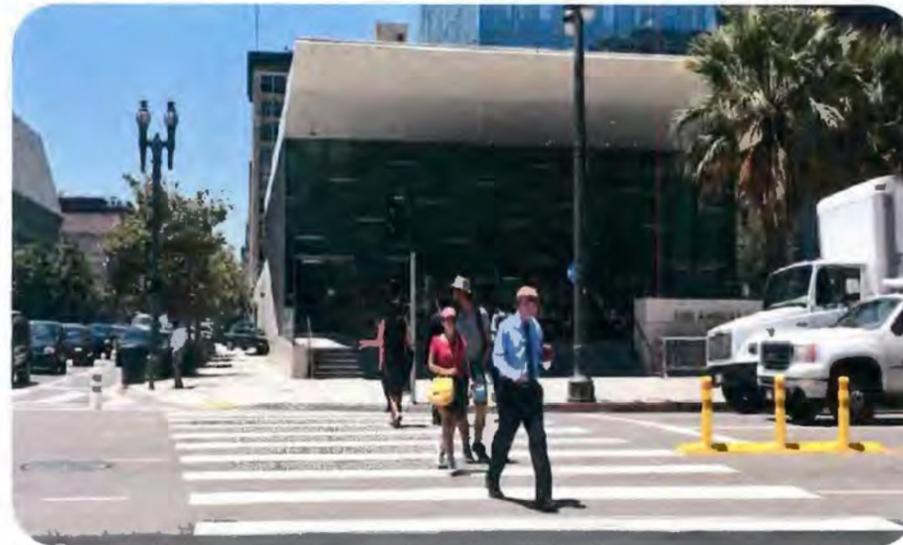
Top 3 Requested Program Improvements from Constituent Surveys	Top 3 Constituent Requests from LA311	% of LA311 Total
CD1: Tree trimming, sidewalk repair, street striping	Graffiti removal, bulky items, metal/household appliances	86%
CD2: Street repair, street lighting, street sweeping	Bulky items, graffiti removal, metal/household appliances	84%
CD3: Tree trimming, street repair, bulky item pickup	Bulky items, graffiti removal, metal/household appliances	81%
CD4: Street sweeping, homeless encampments, bulky item pick up	Bulky items, graffiti removal, metal/household appliances	80%
CD5: Street lighting, street signs, sidewalk repair	Bulky items, graffiti removal, metal/household appliances	79%
CD6: Street repair, bulky item pick up, illegal dumping	Bulky items, graffiti removal, electronic waste	83%
CD7: Sidewalk repair, street sweeping, street repair	Bulky items, graffiti removal, metal/household appliances	80%
CD8: Tree trimming, sidewalk repair, street repair	Bulky items, graffiti removal, metal/household appliances	83%
CD9: Sidewalk repair, street repair, tree trimming	Graffiti removal, bulky items, metal/household appliances	89%
CD10: Sidewalk repair, tree trimming, weed abatement	Bulky items, graffiti removal, metal/household appliances	85%
CD11: Sidewalk repair, Traffic light timing, illegal dumping	Bulky items, graffiti removal, metal/household appliances	81%
CD12: Parking, traffic enforcement, street sweeping	Bulky items, graffiti removal, metal/household appliances	82%
CD13: Street sweeping, homeless encampments, street striping	Bulky items, graffiti removal, metal/household appliances	87%
CD14: Street lighting, tree trimming, illegal dumping	Graffiti removal, bulky items, metal/household appliances	85%
CD15: Sidewalk repair, illegal dumping, street lighting	Bulky items, graffiti removal, metal/household appliances	81%
<b>OVERALL: SIDEWALK REPAIR, TREE TRIMMING, STREET REPAIR</b>	<b>Bulky items, graffiti removal, metal/household appliances</b>	<b>81%</b>

LA311 totals from data from FY15-FY17

- Purpose: Through the overall research process for this project, challenges in working across departments to deliver key infrastructure programs became a recurrent discussion topic. To uncover solutions related to interdepartmental and intra-Bureau programs, an outside facilitator was brought in to lead a real time problem solving session. This session included 35 participants from 14 departments with subject matter experts from operating and support departments/ Bureaus, policymakers, and executive leaders. The challenge statement was: *How might we remove barriers to enable and sustain high performing interdepartmental and intra-Bureau programs?*
- Process: Through an iterative process, participants identified five overarching opportunities: (listed in order of frequency by participants)
  1. Goal misalignment: Each department is working towards different goals and at times their goals may conflict, lead to competing priorities and an unwillingness to partner with each other to achieve the overarching goals of an interdepartmental or intra-Bureau program
  2. Lack of cross-functional training programs: Employees are only aware of their part in a program, and the siloeing of information does not allow for effective cross sharing; need more intense exposure to other parts of delivering a program that live in different divisions/ departments
  3. Inter-departmental Program Execution: Meetings are occurring in siloes and do not include cross departmental representation; staff do not know their counterparts in other departments or bureaus
  4. Lack of Planning: Absence of multi-departmental planning and coordination committee impacts project delivery, changing priorities, new/ unanticipated resource needs, unplanned work requests for another entity; sometimes grants are applied for even with a backlog on current projects
  5. Employee Based Solutions: Create a mechanism that empowers employees to find ideas to improve programs and processes
- Potential Solutions: Participants were then asked to develop solutions to address these opportunities. The resulting prototypes are listed below (in no particular order):
  - **CityxFit: cross departmental rotational program**  
Better understand needs of all employees working on the same program by learning more about other functions involved in delivering the program.
  - **Techno-goal: connecting technology platforms for better data and information**  
Prioritize collaborative goals based exclusively on data. Look at data across departments to problem solve and reach outcomes.

- **People Works Mover: public works special forces**  
A multi-departmental mobile response unit for all things public works. All employees commit to monthly hours in mobile service.
- **Department of Streets: All Things Street**  
Consolidate functions to deliver street projects under one management department to align priorities.
- **Round Table LA**  
Have regular meetings to bring together all City shot callers to tackle current, focused, intractable City problems.
- **LA FIT (Fitness Integrated Team): Citywide fitness program**  
Incentivize people to break down siloes via citywide fitness program, rotating venues, time and workout type on multimedia platforms.

*More information on the Innovation Lab is included in Appendix F (page 380)*



## Section 3: Recommendations

- Key Barriers to Performance
- Recommendation Prioritization
- Tier 1 Recommendations
- Tier 2 Recommendations
- Tier 3 Recommendations
- Recap of Findings
- Roadmap for Implementation

**Themes consistently cited as barriers to performance across research groups**

**Alignment:**

Need to address decentralized governance of infrastructure programs and differing goals which can unintentionally impact service delivery to our residents

**Customer Centricity:**

Need to build stronger relationships with our constituents by putting the customer first

**Communication:**

Need to break down siloes between divisions, Bureaus and departments and share relevant information across groups in a timely manner

**Data & Technology:**

Need better data collection, data sharing and usage, integrated with technology solutions where appropriate, to manage programs

**Coordination:**

Need to synchronize street related programs so activities are sequenced and completed in the correct order to preserve investments and improve on-time project delivery

**Planning:**

Need better planning using a strategic, outcomes based approach that spans all street related programs

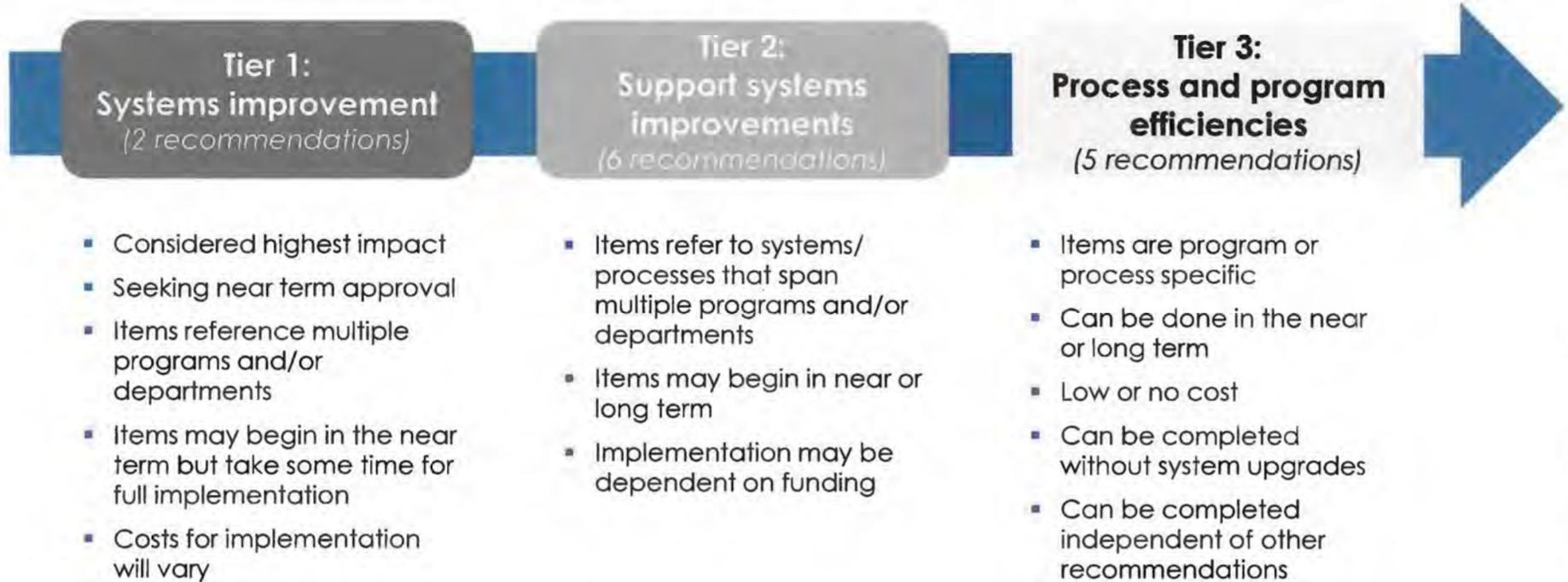
Every recommendation in Section 3 will be assigned to one or more of these themes

### Priority Criteria for Selection of Recommendations

There are more than a dozen recommendations put forward by this report that are recommended for adoption. To support decision makers, recommendations were considered against three dimensions:

- Low to high impact
- Low to high cost
- Short or long term

Tiered recommendations reference the scale of the recommendation, not the importance or the timing



## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

**1.1: Improve coordination, strengthen overall alignment, optimize synchronization of street related programs, and enhance service delivery for constituents by bringing all transportation programs into the Department of Public Works to make the Board of Public Works the single oversight authority for all activities over, on and under the street for Council controlled departments**

*Issue – Fragmentation in Decision Making for Street Related Programs:* Unlike the majority of the cities in California, or the country, programs relating to the surface of the street and activities over the street sit with two departments, DPW and DOT. By having these functions reside in multiple areas, the City takes a tactical, rather than, strategic approach to managing the movement of goods and people across the City.

This has led to a number of interdependencies over the years that continue today:

- Striping/pavement
- Street light pole/signs
- Street light pole/traffic signals
- Bike lanes/pavement
- Curb and gutter/parking
- Street sweeping/parking enforcement
- Grant projects/civil engineering
- Grants projects/street improvements
- ADA ramps/traffic control boxes
- Mobility planning/sidewalks & streets
- Bike lanes/potholes
- AT&T loops/pavement
- Filming/bike lanes

- Bike lanes/street sweeping
- Sidewalk repair/curb painting
- Sidewalk/street signs
- Sidewalk/parking meters
- Special events
- Plan reviews

Top 20 Cities (Ranked by Population)	Sq. Miles	Department Name	Majority of programs in 1 place?
<b>New York</b>	302.6	Dept of Transportation	Y
<b>Los Angeles</b>	<b>468.7</b>	<b>Dept of Public Works</b>	<b>N</b>
<b>Chicago</b>	227.6	Dept of Transportation	Y
<b>Houston</b>	599.6	Dept of Public Works	Y
<b>Phoenix</b>	516.7	Street Transportation Dept	Y
<b>Philadelphia</b>	134.1	Streets Dept	Y
<b>San Antonio</b>	460.9	Dept of Transportation & Capital Improvements	Y
<b>San Diego</b>	325.2	Dept of Transportation and Storm Water	Y
<b>Dallas</b>	340.5	Mobility and Street Services Dept	Y
<b>San Jose</b>	176.6	Dept of Transportation	Y
<b>Austin</b>	322.5	Dept of Public Works	N
<b>Jacksonville</b>	747	Dept of Public Works	Y
<b>San Francisco</b>	46.9	Dept of Public Works	N
<b>Indianapolis</b>	361.4	Dept of Public Works	Y
<b>Columbus</b>	217.2	Dept of Public Service	Y
<b>Fort Worth</b>	339.8	Dept of Transportation & Public Works	Y
<b>Charlotte</b>	297.7	Dept of Transportation	Y
<b>Seattle</b>	83.9	Dept of Transportation	Y
<b>Denver</b>	153	Dept of Public Works	Y
<b>El Paso</b>	255.2	Streets and Maintenance Dept	Y

Chart Source: US Census websites; city websites; city interviews

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

When the City consolidated transportation related activities in the late 1970s, it combined traffic and parking related programs that were housed in many different places. It was the City's third attempt to officially designate an organization after the Department of Traffic Engineering and the Department of Traffic. However, it continued the split in responsibility for the right of way & programs that operate on the surface of the right of way. Constituent surveys rated both travel by car and travel by foot as poor (73% and 55%, respectively).

Since the scope and mission of these two departments are different, each has a different focus on use of the same asset (street light pole for street lighting or traffic signals/street signs) or equivalent part of the street (street for pavement or striping for lanes/crosswalks). DOT may view the street in terms of effective striping plans to mitigate traffic; DPW may view it as rideability of the street for commuters, bus passengers, etc.

### DPW Mission:

*"support and enhance a high quality of life for the City's residents, businesses and visitors by providing a well-planned, environmentally sensitive, cost effective infrastructure through superb customer service"*

### DOT Mission:

*"leads transportation planning, design, construction, maintenance and operations in the City of Los Angeles. We work together and partner with other agencies to provide safe, accessible transportation services and infrastructure in the city and region"*

Department Mission Source: department websites

### City of San Antonio

#### Department of Transportation and Capital Improvements

*The Department of Transportation and Capital Improvements was created in January 2014. It consolidated the functions of the former Departments of Public Works and Capital Improvements Management Services to improve project delivery for residents. Prior to its creation, planning and design for projects resided in one department while execution lived in another department. Having the universe of transportation programs and key supporting functions like project delivery expertise and engineering services in one department has improved service delivery, enriched project delivery, enhanced communication and allowed tighter coordination of engineering and operations programs.*

The effect of this split decision making is felt by employees and program managers as well. Employees from both departments expressed frustration that depending on the program lead, the other department's needs are not fully accounted for in program planning. During the stakeholder interview process, having oversight over both street and transportation programs in one place was overwhelmingly the number one change interviewees wanted to see. Employees believe consolidated decision making would make a positive impact on service delivery and help them in the management of their work portfolio.

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

*Issue – Fragmentation in Oversight:* DPW is overseen by the full-time Board with jurisdiction over all public right of way programs by City Charter. DOT has its oversight split into two part-time Commissions: the Transportation Commission and the Taxi Commission. It is the only City department with two commissions.

The limited scope of these Commissions do not provide sufficient oversight over DOT, nor do they have the power to review and approve contracts. It is unclear why programs like taxi regulation, parking permits and ambulatory permits need review by a Commission compared to major programs like project delivery, grants, transit, and active transportation. The core activities like signs, signals, and striping, areas that are the bread and butter of most transportation departments, are not reviewed by either Commission.

Typically each DPW Board meeting lasts from one to two hours (equating to 12-24 hours per month) and consists of contract review and quarterly program reports from the respective Bureaus. The once a month Transportation Commission meetings last 30 minutes on average while the Taxi Commission meetings run about an hour. Historically, taxi

	DPW:	DOT:	
	Board of Public Works	Transportation Commission	Taxi Commission
<b>Source of Authority:</b>	City Charter Section 581	LAMC Section 22.484	LAMC Section 22.488
<b>Role:</b>	Head of Department, Full-Time Board	Advisory, Part-time Commission	Advisory, Part-time Commission
<b>Appointing Authority:</b>	Mayor appoints Citizen Commissioners	Mayor appoints Citizen Commissioners	Mayor appoints Citizen Commissioners
<b>Meeting Frequency:</b>	Three times a week	Once a month	Once a month
<b>Total Avg Meeting Time:</b>	12-24 hrs per month	30 minutes per month	1-2 hours per month
<b>Core Responsibilities and Agenda Items:</b>	Serves as department manager with full authority to approve contracts, and manage and review programs affecting the public right-of-way	Review of non-ambulatory passenger vehicle permits (non emergency medical transportation vehicles) and establishment of preferential parking districts form the major agenda items	Review of taxicab and carshare regulations

Chart: City Clerk files and City Charter; review of historical agendas on department websites and observation of Commission meetings

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

management was part of the scope of the Department of Public Utilities and Transportation with its own Commission.

For contract approval, most Commissions in the City have a transparent public hearing process. Because DOT Commissions do not have this authority, contracts are approved by the Mayor (if contract length is three years or less) or by Council (if contract length is three years or more). The latter does allow for public comments when a contract is on the Committee agenda.

Accountability for service request fulfillment for categories like blue curbs for handicapped parking and left turn signals, both consistent issues for residents, were not found on any previous commission agenda.

DOT also serves as administrator for state and federal grants related to streets and transportation. Reporting related to project progress, funds expended to date, and any other requirements set forth by the grant often entail data gathering from multiple groups. Since transportation grants are often connected with streetscape, street, and safety improvements, groups involved in executing the work sit in another department. In addition to tracking grant goals, the accounting codes (and systems) for these projects differ for each of the entities, making it difficult to ascertain the full project costs. Grants are a growing area for the Department, but there is rarely a discussion or update on grants projects at Transportation Commission meetings. In the past there have been issues

with grants management like Proposition C.<sup>74</sup>

Even when new programs are introduced, the existing Commissions have no authority to hold DOT accountable. Updates on specific city priorities like Vision Zero can be heard during the General Manager report out at the meetings but Commissioners cannot enforce any changes they would like to see since they are operating under an advisory capacity.

DOT has also experienced a 13% increase in its overall budget over the past three years, more than even the public safety departments over the same period.<sup>75</sup> 60% of the current fiscal year is funded by the General Fund. The trust that has been placed with the department requires that proper oversight is in place for these taxpayer programs.

Generally, the goals of alleviating congestion and improving transportation, primary rationales for creating DOT, is complex in a City of this size, made even more complicated by multiple agencies trying to plan and maintain assets on or within the same spaces. DOT has shifted its long term vision by encouraging development of multi-modal options. Residents support transit expansion and street improvements. This is evidenced by the Measure M passage, which added half a cent to the sales tax in November 2016 to fund transportation and street related improvements as well as previous ballot measures like Measure R. These new tax dollars should be held to high accountability standards for program

<sup>74</sup> 2014 Controller's Report: Audit of Proposition C: Funding the City's Transportation Priorities

<sup>75</sup> 2017 Adopted Budget Book, comparison of DOT (13%) with LAPD (10%) and LAFD (7%) from FY2015-16 Actuals to FY2017-18 Budgeted

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

delivery. However, to effectuate the intent of Measure M and other specially funded transportation measures, planning and execution support is vital from functions that do not sit in DOT or under the purview of either Commission.

*Issue – Lack of Coordination:* The absence of a coordinated approach has led to liabilities in the past, where the actions of one department created situations in which residents were more likely to be hurt.<sup>76</sup> The department is also one of top eight in the City for liability claims payouts. In FY15-16, DOT paid out the 2<sup>nd</sup> highest liability claims by department, at more than \$20M, followed by BSS at approximately \$7M.<sup>77</sup> There are also scenarios where the goals of one department conflicted with another area or constituent, leading to the undoing and then the redoing of work, wasting city dollars and staff time.

Aside from decision making, a review of past Executive Directives and Council motions show that these departments are constantly being directed to work together. During the last Council hearings, a number of members made comments on the need to better coordinate across street related groups. New programs like the Sidewalk Repair Program and Street Reconstruction/Vision Zero which are dependent on both DPW and DOT are two programmatic examples. Existing programs like pavement preservation and tree trimming are additional examples. Executive Directives like ED1, 10,

### **City of Dallas Mobility and Street Services Department**

*Created in 2016, this new department combined the programs of the Streets and Public Works Departments in one place. Formerly, planning for the street sat in one department while execution lived in another. Efficiency gains and saved capital gains were significant enough to allow the combined department to create a new division of Urban Forestry that did not exist in the past. "Logically, combining Public Works and Streets now means we work closer together, and this offers easier and enhanced coordination."*

19 also direct these departments to coordinate on specific citywide initiatives. Usually this coordination is spearheaded by the Mayor's office, who compels these groups to meet at regular intervals. City Council also requests "report backs" from departments and Bureaus, requiring them to come together on particular initiatives. DPW Bureaus and DOT are frequently asked to work together on these "report backs."

*Issue – Confusion over Owner of the Street:* For the constituent, services are simply provided by the City. A customer does not necessarily care that one program is housed in DOT or another in DPW. But there is dissatisfaction when callers are forwarded from department to department because an employee cannot provide information about their concerns. It is also confusing to go to multiple websites or call centers to

<sup>76</sup> <http://www.latimes.com/local/lanow/la-me-ln-bike-settlement-20170903-story.html>

<sup>77</sup> 2017-18 Proposed Budget Book, Volume II, page 855

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

provide details on a service gap. A review of LADOT service request data showed some customer requests for tree trimming activities, which should be in LA311. A similar review of LA311 data showed requests for illegal sign removal, which are usually a DOT service request.

The Mobility Plan, one of the elements of the City's General Plan, was adopted by DOT in 2015. It includes street infrastructure housed in DPW, recognizing the interconnected nature of these activities. However, the Mobility Plan was not heard or accepted at a Board meeting, which manages PROW including the street. The 2010 Bicycle Plan includes implementation of commuting and recreational routes that may need to be adjusted. Although the Technical Committee included staff from DPW, it too was not heard or accepted by the Board although cyclists would be utilizing lanes installed in the PROW.

Transferring the limited authority that the Commissions hold to the Board of Public Works is anticipated to have these benefits:

- Investing for impact – make strategic investments to improve the overall infrastructure environment
- People-centered infrastructure – better synchronization and coordination between "on street" and "over the street" programs that enhance planning, projects, and maintenance activities for end users
- Improved project delivery – taking into account current work loads of all affected departments
- Leaning on strengths – DOT with long term planning and transportation expertise and BSS with maintenance/operations and street expertise
- Universal alignment – embedding similar goals and priorities across street/transportation programs
- Faster contract approvals - enhanced ability to reduce DOT contract processing time given frequency of Board meetings; many contracts are already heard by the Board
- Overhead synergies - use of a single Office of Accounting for payment administration and compliance
- Full program accounting - assignment of consistent program/accounting codes across all entities that share projects to determine and track full program costs
- Streamlined communication across street related programs
- Knowledge transfer and common system usage - example: DOT recently adopted UPRS, which is BOE's primary project management tool
- One stop permitting - all parts of permitting process in one place, including traffic control plans
- All street related engineering in one place
- Data driven decision making – data sharing across groups to drive better collective decision making and management by seeing impact through numbers
- A true Complete Streets approach with visibility, planning and execution in one place

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

*(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)*

What would not change?

- All Bureau Directors and DOT are appointed and evaluated by the Mayor/Council
- All are compensated at a general manager level
- All would maintain individual budgets
- This recommendation would not require changes to Council Committee assignments

result in a substantial, long term improvement in how the City plans for and delivers these programs.

To ensure proper attention to the addition of a new set of programs to DPW, the following may be helpful:

- Establishment of a Mobility Citizen Committee, housed within the Board of Public Works
- Establishment of an interagency Complete Streets Working Group, housed within the Board of Public Works

Multiple scenarios were considered to build better alignment for street related programs, including moving "hard" infrastructure programs to DOT and creation of a new Mobility Department. However, this transfer or new department would not eliminate the divide intended to be resolved by this recommendation, especially with regard to civil engineering, street lighting and other contract needs. These activities would still require coordination with DPW whereas this recommendation fuses decision making under one body.

Modernizing decision making that brings true accountability to these core quality of life services could

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

### 1.2: Address the lack of proactive strategic planning, comprehensive project management, data analyses, and interdepartmental program goals by creating an Office of Infrastructure Management that will serve as the citywide lead on all infrastructure programs to drive cross functional performance improvements

*Issue – Siloed Program Focus instead of Systems Focus:* The City operates more than fifty infrastructure programs across the DPW, DOT and DWP in the public right of way. Some combination of these programs and assets exist on every single block in the City. Yet there is no group reviewing, coordinating, and planning activities across multiple groups and programs in a consistent way that spans Administrations. The investments that the City makes in these services like sewers, streets, and water are intended to last decades, if not generations. Although overlaps exist in many of these programs, each Bureau and department is only considering, seeing and prioritizing its own work in a silo. Having an Office that has visibility into all of the areas that operate in the street provides a stronger opportunity to collectively manage and apply a strategic approach towards infrastructure programs.

The benefit of this group is further amplified by reviewing the many City entities involved in delivering parts of a service or program. Several examples follow:

PROGRAM	GOVERNANCE (multiple departments)	JURISDICTION (city entities)
Cleanliness	BOS, OCB, BSS	<ul style="list-style-type: none"> <li>BOS - bulky item pick up, illegal dumping, trash</li> <li>OCB – graffiti abatement</li> <li>BSS – street sweeping</li> </ul>
Sidewalk Repair	BOE, BSS, BSL, DOT, DoD	<ul style="list-style-type: none"> <li>BOE – design and construction</li> <li>BSS – construction</li> <li>BSL – street light control boxes, as needed</li> <li>DOT – traffic signal boxes, as needed</li> <li>DoD – review of ramp requests</li> </ul>
Street Improvements (Grant Funded)	DOT, BSS, BOE	<ul style="list-style-type: none"> <li>DOT – grant application and administration</li> <li>BSS – grant applications, project execution</li> <li>BOE – project execution</li> </ul>
Street Resurfacing	BSS, DOT, GSD, BOE	<ul style="list-style-type: none"> <li>BSS – slurry seal, resurfacing</li> <li>DOT – street striping, crosswalks</li> <li>GSD – quality control and materials testing, fleet</li> <li>BOE - surveying</li> </ul>
Urban Forestry	BSS, DRP, DWP, homeowners and business owners	<ul style="list-style-type: none"> <li>BSS – trees in the parkway</li> <li>DRP – trees in parks</li> <li>Homeowners/business owners – trees on private property</li> </ul>
Water	BOS, BOE, DWP, BSS	<ul style="list-style-type: none"> <li>BOS – wastewater, stormwater, watershed, recycled water, storm drain</li> <li>BOE – sewer main design and construction</li> <li>DWP – potable water, watershed, recycled water, fire hydrants</li> <li>BSS –street sweeping</li> </ul>

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

Planning, when it happens, occurs in isolation for a specific asset type. For example, planning for street trees, sidewalks, sidewalk vending, street lights, trash bins - all part of the public right of way - are all managed by different groups. Even planning for the same asset can be done by different departments, like street tree maintenance. While this makes sense from a program execution view, a corresponding effort to strategically manage the infrastructure assets in a cohesive manner has not been prioritized. Part of this is the lack of staff focused on forward looking planning.

One such cross functional initiative for this group is to create a citywide infrastructure strategic plan that would bring alignment to programs, ancillary activities in the street, citywide initiatives, and the legal and regulatory environment for the public right of way. This could help decision makers, policy makers and budget staff better understand the collective strengths and gaps of the city's infrastructure network.

Simply housing related programs in one place is not enough to incentivize staff to increase working relationships or to automatically break down silos.

The cultural city barriers that have encouraged leaders to protect their staff, funding and resources do not break down when reporting relationships change. Groups will continue to operate in status quo unless they are routinely forced to work another way. Feedback from the problem solving Lab that brought together staff from multiple departments indicated that one of the highlights was meeting staff from other areas who also faced similar daily challenges in managing their work. An overarching department wide support group that will systematically look at improving the City's overall infrastructure network and meeting expectations of our residents is the mechanism by which potential benefits of having these various programs under one umbrella can be maximized.



## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

Although there are initiatives in place to improve coordination between these entities like the 2400 Working Group and the Water Cabinet that are led by the Mayor's office, these have a particular focus and are not reviewing the infrastructure network in totality. Having these groups led by the Mayor's office also could be disrupted during an Administration change.

### **Best Practice: City of San Antonio Infrastructure Management Program (IMP)**

*The City has built a program that plans multiple infrastructure improvements on a five year cycle. These programs include streets, alleys, storm drains, sidewalks, traffic signals, lane striping and active transportation projects. In their words: "The IMP provides the City of San Antonio a structured program schedule, potential for additional multiple year contract awards and improved utility coordination. During the budget process for each City fiscal year, the IMP is presented to City Council for approval. Amendments may occur throughout the year due to coordination with utilities or unforeseen conditions, such as inclement weather. The goal of the IMP is to provide the best possible maintenance for the City of San Antonio."*

Along with the City of San Antonio, cited above, Chicago (Division of Infrastructure Management), Columbus (Office of Construction Management), DWP (Corporate Performance Group) and Metro (Office of Extraordinary

Innovation) all have similar offices and teams.

*Issue – Lack of Infrastructure Project Planning:* The City maintains the Street Transportation Project Oversight Committee (STPOC) which brings accountability to projects underway relating to the streets and transportation. While this committee brings together employees to share progress and challenges to projects, there is no equivalent planning meeting from which the project list originates. During the meeting, Bureaus and DOT present a status of current projects and challenges as appropriate. Each department and group brings their own version of a status report that includes different information.

Currently decisions on proposed projects are made on an ad-hoc basis without consideration of larger city priorities. This is particularly intensified by the many offices seeking grant opportunities on top of existing work plans. This fragmentation in decision making renders a proactive planning function more vital.

Having a current comprehensive list of existing projects would enable decision makers to determine whether or not new grants should be applied for, and if they are successful, which projects would need to be deprioritized due to capacity or time constraints. Department work plans are programmed every fiscal year and adjustments to these plans should be accounted for in re-prioritizing work.

<sup>78</sup> Best Practice: <https://www.sanantonio.gov/TCI/Projects/Infrastructure-Management-Program>

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

Understandably, having a department-specific list of projects is useful for the department, but this does not aid policy makers and senior staff who are looking to understand the full landscape of projects across the City or group of programs. City leaders are also unable to gauge timelines and budget spent for collective projects in the City as budget and accounting codes vary by entity. Council staff are usually aware of projects within their respective districts but no efforts have been made to look at projects across the City. How many active projects have a green infrastructure component across all City departments? How many will increase walkability and pedestrian safety options? These are the types of strategic questions that can be answered with a complete picture of current projects. This data can then drive applications and project approvals for potential future projects based on existing gaps, historical data on cost overruns and time delays, whether or not projects are general or special funded. None of this information is accessible to City leaders in one place right now.

An example of one way to capture existing projects relative to existing projects is shown on the following page (Exhibit 1).

Resident needs should drive projects, especially if existing money is not available and special funds and/or grant money is solicited (Exhibit 2). The opposite is propelling projects now – potential funding, not resident needs. Often, these street oriented projects are not pre-baked or pre-designed. Staff rush at an open funding cycle for

grants, sending emails to ask if anyone has potential projects that could align with the goals of a grant. This is a reactive approach to grant opportunities. The City should be able to categorize a few grant types with associated uses and build out some "base" projects that can then be customized. These "base" projects should be geared towards projects that the City has been unable to fund on its own. Staff should also review past applications and identify ways to improve upon submissions, particularly if the City scored low in a category. Departments are working to create these type of projects to improve the application process.

*Issue – Underuse of Data to assess and drive Performance Improvements:* The City collects an enormous amount of data about its programs and processes. However, the organization does not have sufficient resources or staff with the right skillsets to regularly review this data to help inform better decisions. The Office of Infrastructure Management could be a consistent resource that is continually available to the Board and its Bureaus in analyzing data, building models, assessing program costs and combining complementary datasets to improve customer satisfaction. Two examples are below:

1. *Cost/ROI Analysis and Program Evaluations:* the City is the fiduciary steward of taxpayer funds and part of its responsibility is capitalizing on each dollar collected. City programs are created, programmed, resourced and often automatically renewed and funded without evaluation of how well they meet program objectives. Aside from

(continues on page 72)

# Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

## Exhibit 1

MASTER PROJECT PLANNING DOCUMENT - DRAFT

Today's Date: 1/1/2017

	Phase	CD	Funded?	Funding Sources	Project Budget	Money Spent	Initial Project Date	Project Timeline	Project Completion	Project Lead	Meets City's Capital Policy?	Criteria 1 (ex. MM Score)	Criteria 2 (ex. E Score)	Criteria 3 (ex. C Score)	Criteria 4 (ex. QOL Score)	Project Score
Project A	Close-out	1	100%	Grant + City match	\$1.5M	\$1.49M	1/2/2016	12 months	100%	BOE	Ymandated	86.25	75.00		70.00	79.06
Project B	Construction	2	100%	Grant	\$3.4M	\$2.5M		18 months	40%	DOT/BSS						
Project C	Final Inspection	3	100%	City	\$2M	\$2M		24 months	100%	BOE						
Project D	Final Inspection	4	100%	City	\$500K	\$480K		36 months	100%	BOE						
Project E	Construction	5	100%	City	\$10M	\$4.5M		36 months	50%	BOE						
Project F	Construction	6	100%	City	\$740K	\$500K		24 months	60%	BOE						
Project G	Construction	7	100%	Grant	\$250K	\$200K		12 months	65%	DOT/BOE						
Project H	Construction	8	100%	City	\$400K	\$250K		48 months	30%	BOE						
Project I	Pre-Construction	9	100%	City	\$650K	\$640K		36 months	5%	BOE						
Project J	Construction	10	100%	City	\$300K	\$310K		24 months	70%	BOE						
Project K	Bid	11	100%	Grant	\$350K	\$0		18 months	0%	Mayor						
Project L	Design	12	100%	City	\$100K	\$20K		15 months	20%	BOE						
Project M	Bid	13	100%	SCM	\$2M	\$0		32 months	0%	BOS						
Project N	Bid	14	100%	SCM	\$4.2M	\$0		18 months	0%	BOS						
Project O	Design	15	100%	City	\$6M	\$200K		15 months	10%	BOE						

This sample project list includes examples for decision criteria like multi-modal (MM) project benefits, environmental (E) project benefits, customer (C) benefits, and quality of life (QOL) benefits. Each criteria score is then averaged to produce an overall project score. This would allow the City better gauge project benefits in light of City priorities. The project score also identifies the range of benefits that a project is intended to provide and it offers an objective way to assess projects. It ranks projects based on city criteria instead of staff perceptions of the importance of a project. Having all existing projects in this format or a similar one could allow for filtering so City leaders and staff have visibility to all projects affecting mobility, environment, safety etc. This information can be used to identify where projects are needed for planning purposes.

### Multi-Modal Benefits ("M" Score)

Scale 0-100, 0 low impact, 100 high impact

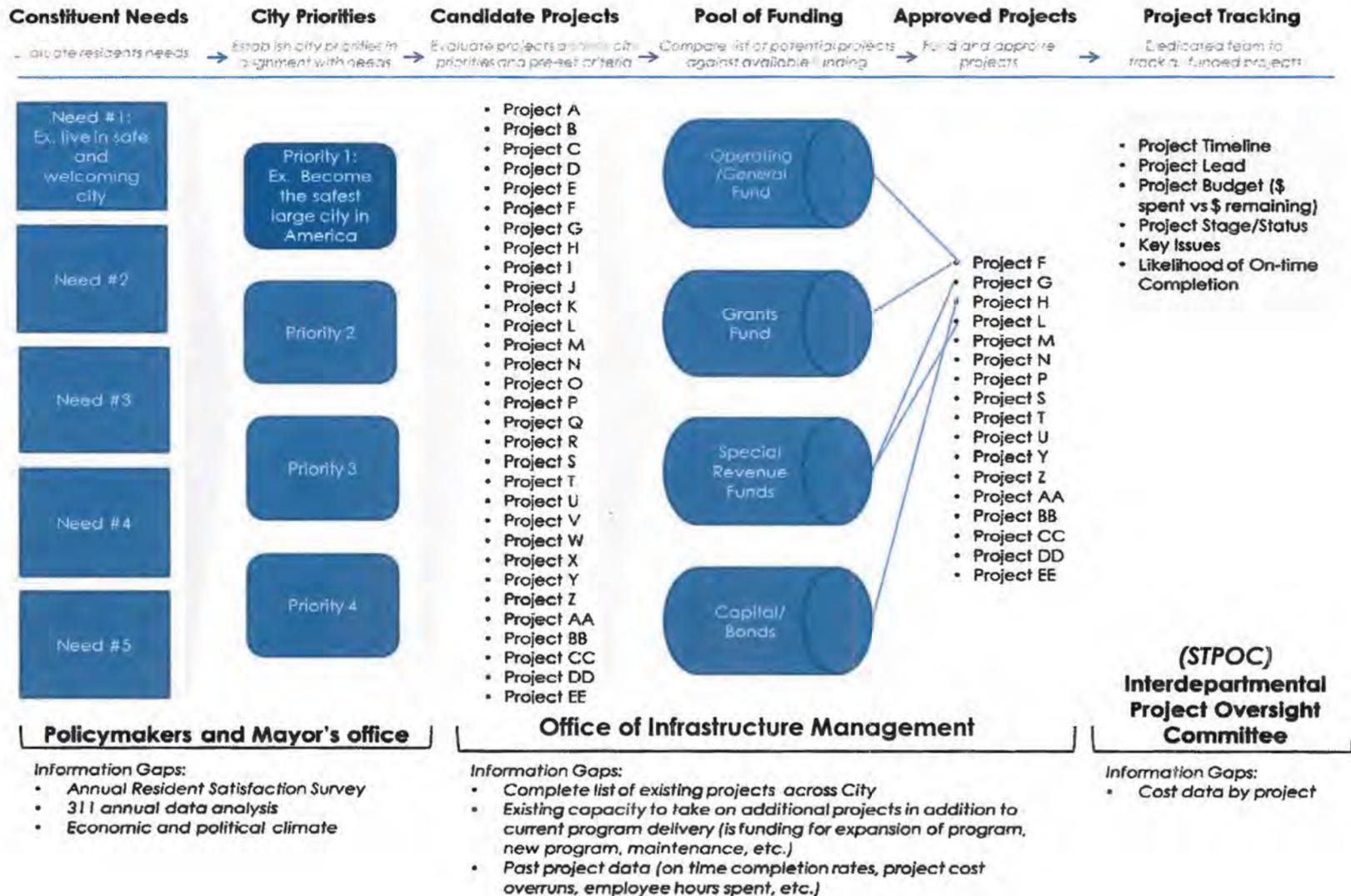
	Pedestrian Safety	Bike Safety	Driver Safety	Mass Transit	MM Score
Project A	95	80	80	90	86.25
Project B					
Project C					
Project D					
Project E					
Project F					
Project G					
Project H					
Project I					

# Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

Exhibit 2

## Theoretical Project Planning Cycle



## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

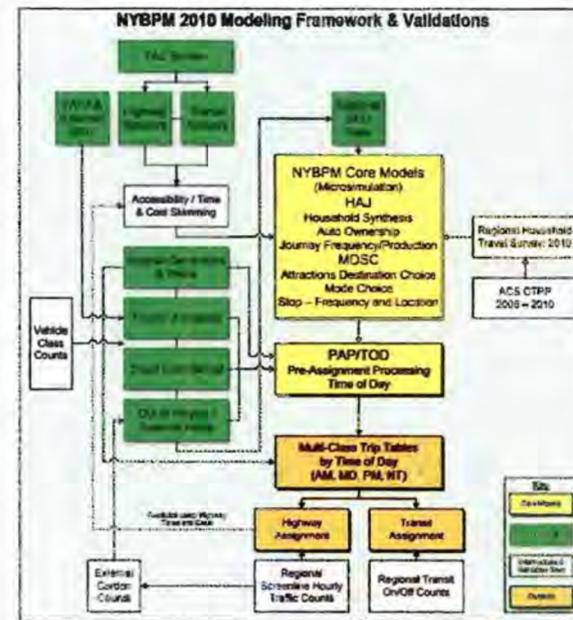
looking at data from multiple sources, strengthening understanding of program costs would enable program managers, Bureau leadership, senior city leaders and policymakers to better assess resource requests and appropriate program goals. Cost models are typically built to improve knowledge of true costs and return on investment on projects and programs. Establishment of program cost models could better inform decisions like 'is setting a higher target for performance reasonable? And 'could costs for one part of the program be re-allocated to another part without impeding performance?' Models could also identify economies of scale and leveraging of dollars from multiple sources. Such a model could allow the user to input program targets which the model translates to costs (for example, a million dollars could translate to 50 additional paving miles, two million dollars to 110 additional miles, etc.) Costs should not be assumed to be static year over year and regular review of work quantity should be completed every few years to verify if funding levels lead to projected performance and efficient use of resources. This review is even more critical for large infrastructure projects designed to last several decades like sewers.

The ability to build cost models is dependent on the underlying data - collecting the right data at the right times with minimal errors. Because of legacy systems, data pertaining to a single program (labor, material, etc.) sits in siloes, making it difficult to determine the full cost and ROI of a program. Surveying the data collected in connection with a program, evaluating data quality, and

making a list of the data gaps would be the first step to building a robust model.

### Best Practice: New York Metropolitan Transportation Council New York Best Practices Model (NYBPM)

"NYBPM predicts changes in future travel patterns in response to changes in the demographic profiles and transportation systems in the region. It incorporates transportation behavior and relationships with an extensive set of data that includes a major travel survey of households in the region, land-use inventories, socioeconomic data, traffic and transit counts, and travel times. The NYBPM is a powerful tool used to perform the federally-required Transportation Conformity Determination and Regional Emissions Analysis, and to assess projects in the Transportation Improvement Program (TIP).



It provides measures for the Congestion Management Process (CMP) and facilitates Major Investment Studies (MIS). The model outputs are used for local studies (sub-regional, corridor analysis, and project level) in the region, and by researchers all over the world."

<sup>79</sup> Best Practice: <https://www.nymtc.org/DATA-AND-MODELING/New-York-Best-Practice-Model-NYBPM>

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

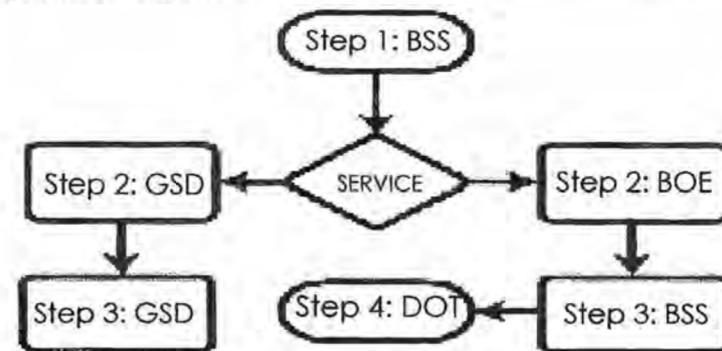
(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

2. 311 Data and Service Gaps: Analyzing 311 data on a regular basis could support operational planning and customer service. For funded service categories, LA311 is used as a portal to help guide assignments for front line crews from a tactical perspective, but not as a planning tool. For example, strategic questions that could be answered by regular review of the data include request overlap in neighborhoods or streets to coordinate cleanups, and tactical deployment of resources to common request areas. This data can also serve as an indicator of quality: if a request reappears for the same service like tree trimming or potholes, perhaps the service was not completed to the necessary level from the original request. It could also indicate a larger service issue.

*Issue – Lack of Transparency into Interdepartmental and Intra-Bureau Program Performance:* The City's infrastructure programs are highly dependent on one another. Though division level managers may direct specific parts of a program, they are rarely given opportunities to see the entire process. Many managers believe that their program begins and ends within the scope of their responsibilities. In essence, they are one piece of a much larger infrastructure system in the City. Ownership of these programs, while there may be one department lead, is shared. As such, information that will aid division level managers that contribute to a program's success should be shared regularly with all members of the team. This visibility can help managers in different

areas see bottlenecks and impact of delays at various stages of the project.

One transparency tool to aid in this process is dashboards, which could be defined at the Council level to provide more insight into projects happening in their neighborhood. Similar to the process map below, language and data regarding resources for each project would help senior leaders determine where deployment of staff, materials and equipment is needed to keep projects on track.



Abstract example

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

### Best Practice: City of Indianapolis Complete Streets Dashboard

The City created a complete streets dashboard pursuant to City ordinance to track progress of street related projects across different programs to provide a snapshot to city officials and the public

#### Complete Streets Ordinance Metrics

Projects In-Progress Between 10/1/2015 and 12/31/2015



Count of Transportation Projects Included: **80**

SIDEWALKS & TRAIL/PATH		INCIDENTS			ADA RAMP	
<b>1</b> that include sidewalks linear feet of sidewalk bid <b>9,762</b> Projects In-Progress <b>31</b> that include sidewalks linear feet of sidewalk in-progress <b>173,017</b>	<b>13</b> that include sidewalks linear feet of sidewalk completed <b>70,997</b>	Reported in Marion County for 2015 Quarter 4 Number of Automobile/Pedestrian <b>100</b> Number of Automobile/Bicycle <b>42</b> Number of Automobile <b>8,912</b>			<b>2</b> that include ADA ramps count of ADA ramps bid <b>12</b>	<b>13</b> that include ADA ramps count of ADA ramps completed <b>730</b>
<b>INTERSECTION IMPROVEMENTS</b> Intersection Improvements projects during 2015: <b>0</b> projects during 2015: <b>8</b> Projects Bidding: <b>0</b> projects going to bid with crosswalks    Projects Completed: <b>8</b> projects completed with crosswalks count of crosswalks to bid    count of crosswalks completed <b>64</b> Projects In-Progress: <b>17</b> that include crosswalks    count of crosswalks in-progress <b>257</b>		<b>KIDS WALKING TO SCHOOL</b> DPW is beginning to work with the appropriate parties to begin reporting on this metric. Quarterly reports are not required until 2014.			<b>BIKE LANES</b> Projects Bidding: <b>1</b> that include bike lanes    miles of new bike lanes bid <b>1.8</b> Projects Completed: <b>3</b> that include bike lanes    miles of new bike lanes <b>7.0</b> count of ADA ramps in-progress: <b>29</b> that include ADA ramps    count of ADA ramps in-progress: <b>1,464</b> Projects In-Progress: <b>9</b> that include bike lanes    miles of rehab bike lanes bid <b>2.9</b> miles of rehab bike lanes <b>0.1</b> count of ADA ramps in-progress: <b>9.0</b> miles of rehab bike lanes <b>5.4</b>	

Post Date: 01/26/2016

Page 1 of 1

Issue – Absence of DPW Charter Assigned Responsibilities in Practice: Of the twelve responsibilities cited in the City Charter for the Board of Public Works, three center on policy and planning. The one not in practice today is to “make recommendations about short- and

long-range public works plans and programs to the Mayor and Council.” Although budget requests imply staffing and funding changes for programs, overall long range plans can be supported by the creation of a department strategic plan rooted in data and programmatic analyses as cited earlier in this recommendation.

Planning may occur at the Bureau level but these plans are not cross referenced to maximize opportunities to improve the collective infrastructure environment in Los Angeles. As the only full-time Citizen Board, Commissioners needs regular access to data that helps them make better investment, policy and planning decisions on a range of public works issues.

The current structure of the Board has all offices reporting to the Executive Officer, whose position equates to management of all administration, financials, and operations. There is no corresponding staffer overseeing or dedicated to the stated strategy and planning functions.

This group is fundamental for the current scope of DPW. Should recommendation 1.1 move

<sup>80</sup> Best Practice: <http://www.indy.gov/eGov/City/DPW/RebuildIndy/Documents/Complete%20Streets-%20Quarterly%20Reports/Complete%20Streets,%202015%20Q4.pdf>

## Tier 1 Recommendations: Improvements to the City's Infrastructure Delivery Ecosystem

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

forward, the group will be only more critical as the number of programs will increase under the Board's management. Therefore, it is suggested that this Office reside at the Public Works Board, which has oversight over the majority of infrastructure programs in the City. Housing the function at the Board level also secures equity in access to these resources, especially for generally funded programs/Bureaus that typically do not have the budget bandwidth to request authority for these services.

Review and adjustment of the City Ordinance Section 22.320 and Article 4 of Chapter 13 of the Los Angeles Administrative Code that assigned the Executive Officer of the Board as the Director of Public Works could be adjusted to provide for leadership for this Office. Specifically, this role would focus on short and long range planning of public works programs and hold no management authority over Bureau Directors.

### Implementation Options:

- Jumpstart group with a consultant, targeting one or two high impact areas. No city staff would be needed at this point, although staff oversight would be necessary
- Use current hiring authority by reallocating one vacancy from each Bureau to staff this group. There may be incremental staff costs if existing classifications need to be changed
- Hire new staff using a shared cost model, which would require that each Bureau and Office contribute to the cost of the shared office

- Reassign utility coordination function and related staff from BSS as first primary function for this office

Each of these options is expected to take approximately one year.

### Anticipated Benefits for the Office of Infrastructure Management:

- Breaking down siloes by providing a holistic, strategic lens on the overall infrastructure network
- Dedicated independent resource for cross-functional performance and program analyses
- Development of department wide strategic plan that cascades overarching goals to each Bureau for accountability
- Establishment of cost accounting methodology for programs to capture ROI
- Monetizing the value of street assets
- Building a culture of data driven decision making
- Mitigate risks and liabilities by factoring in past incidences into project and program planning and prioritization
- Strengthen resiliency and reduce vulnerabilities in infrastructure network by working across programs to identify collective maintenance needs
- Special events cross functional planning, like an Infrastructure Working Group for the Olympics
- Sequencing of activities across different functions to maximize funding and time
- Independent quality check and review of street work

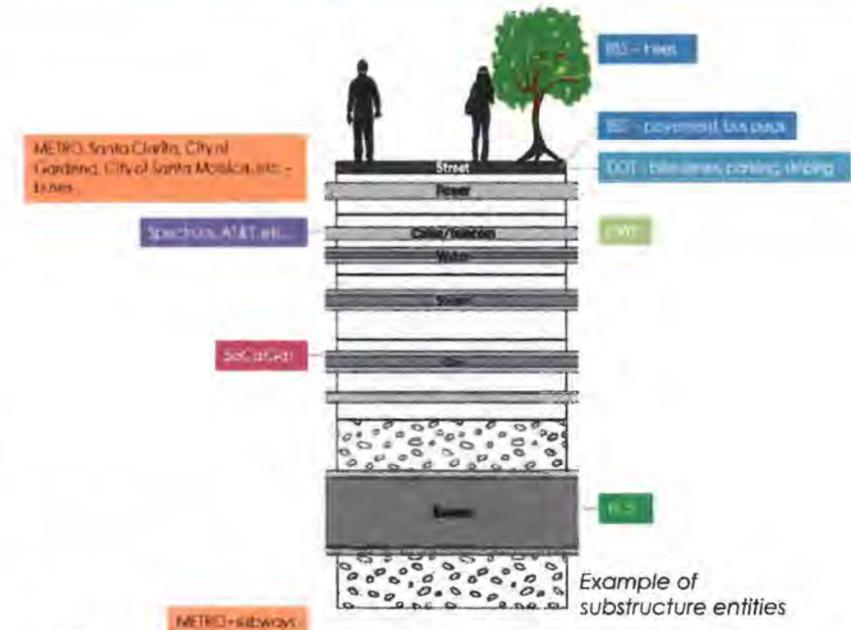
## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

### 2.1 Strengthen oversight over underground activities, optimize time-related street activities, strengthen City paying plans, preserve City street investments, and provide transparency to City partners, utility providers and the public by converting utility coordination from a manual process to an electronic system

*Issue – Manual process undermines City's ability to build Multi-year Plans:* Like other cities, Los Angeles's underground assets (sewer, water, electric lines) share space with private firms that also have assets under the street (telecommunications, gas lines, etc.) To access these assets for maintenance and/or upgrades, both City departments and private firms need to cut into the street surface. To manage these activities, the City attempts to coordinate with over 200 firms that are known to have assets below ground. Currently, there is a coordinating unit within the Bureau of Street Services. This unit of six people<sup>81</sup> works with 200+ spreadsheets provided by other City departments and external firms to coordinate its street activities. This manually intensive exercise is subject to human error, outdated spreadsheets, on-going changes to work plans by the City or a utility provider, lack of transparency, and unnecessary time lags. There are also streets in need of maintenance activities that are consistently on hold due to potential utility work that does not materialize within the estimated time frame. Streets continue to deteriorate during this period while awaiting utility work.

<sup>81</sup> Based on interviews with BSS staff; three other staff manage the pavement van and associated PCI data collection process



If the street is not maintained in good condition, it impacts a range of users traveling on the street - pedestrians, cyclists, commuters and drivers. A key management activity for the street is ensuring that the street remains in the best condition possible throughout its expected lifespan.

The City has several tools at its disposal, including:

- Public Way Reservation System (PWRS) - displays information about permitted work in the public right of way and shares information about entities that may want to work on the same street at the same time
- NavigateLA - allows the public to see what construction projects are happening across the City based on permitted work

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

Both of these tools are maintained by the Bureau of Engineering whose primary purpose in this activity is the issuance of a "U" permit for utility work. For planning and coordination purposes, the Bureau of Street Services is working on future plans with utility providers, not existing work plans which are already accounted for in the fiscal year street maintenance plan. While utility providers can view PWRS, they are not required to review conflicts in advance. The PWRS does not automatically flag conflicts, one of the major shortcomings when the City is trying to clear utility clearances for its own projects.

*Issue – Inability to coordinate universe of Substructure Activities:* Over the past three years, the City has collected more than \$21M in restoration fees from utility cuts into the street from internal and external partners. On average, 11,000 "U" permits are applied for per year.<sup>82</sup>



Many cities have improved coordination by adopting a system that aggregates and stores plans from utility providers. Benefits include immediate access to the latest updates from utility partners, automatic conflict notification when two or more entities want to work on

on the same street, overlay of street related activities like traffic detours, parades and festivals, filtered public and private views, visual mapping of work plans versus an Excel spreadsheet to see all street work across the City, and ability to remotely upload plans to a central site instead of sending it to an employee's email. The current process forces the coordination burden on the City and can delay street improvements and maintenance.

City	System
Los Angeles	None
Boston	Yes – moving from internally designed system to out of box solution
Chicago	Yes – out of box cloud solution
Houston	Yes – internal ArcGIS system
Memphis	Yes – out of box cloud solution
Nashville	Yes – out of box cloud solution
Phoenix	Yes
San Francisco	Yes – out of box cloud solution
San Jose	Yes – out of box cloud solution
Seattle	Yes – out of box cloud solution
Washington D.C.	Yes – internal IT system

*"Imagine the city as a living organism, a body consisting of various systems - respiratory, nervous, skeletal - that share the same space and even intertwine. Now imagine surgery performed on that body by a surgeon who knows the location of only one system, who looks at the body and sees only blood vessels or bones. This is the odd condition of New York-a body subject to what, viewed through a long lens, looks like perpetual triage. Each year, for repairs or to facilitate construction, the streets are sliced open 200,000 times-an average of almost 550 cuts per day, or 30 per street mile every year."<sup>83</sup>*

<sup>82</sup> BOE

<sup>83</sup> Bloomberg Businessweek, "Nobody Knows What Lies Beneath New York City," August 10, 2017

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

Example of system interface:

The screenshot displays the Envista system interface. At the top, there is a navigation menu with options like 'Projects', 'Events', 'Incidents', 'Permits', 'Conflicts', 'Documents', 'Mailbox', and 'Dashboard'. Below this, a 'Filters' panel on the left allows users to select or save current filters for various infrastructure types such as Communication, Electric, Gas, Land, Other, Reclaimed Water, Roadway, Sanitary Sewer, Storm Drain, Transit, and Water. A 'Date Range' section is set to 'Ongoing' from 09/21/2012 to 09/21/2016. The main area is a map of Boston with several infrastructure projects highlighted in different colors (red, blue, yellow). A table at the bottom lists these projects with their details.

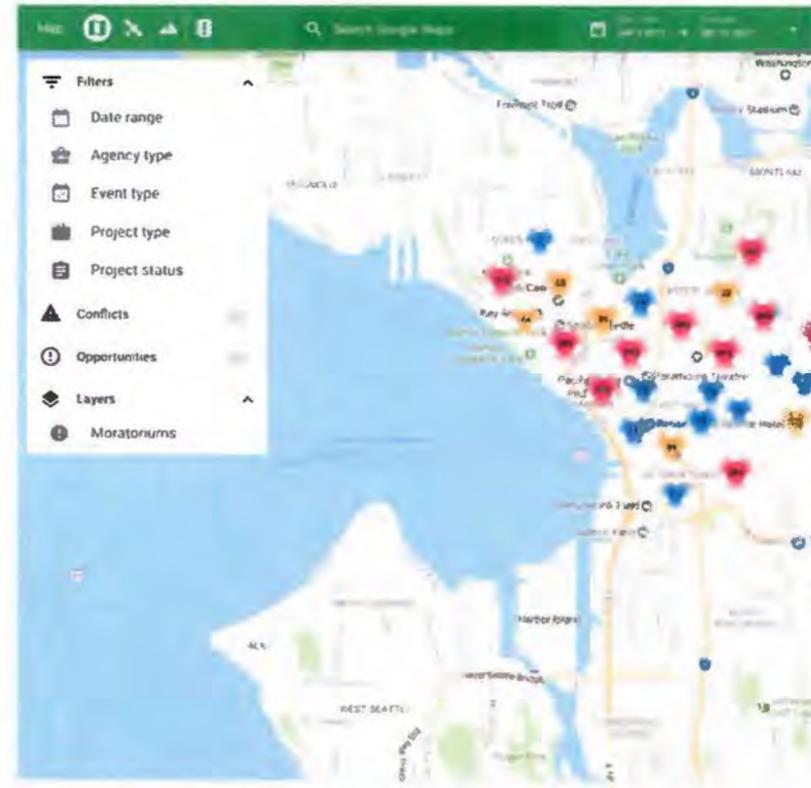
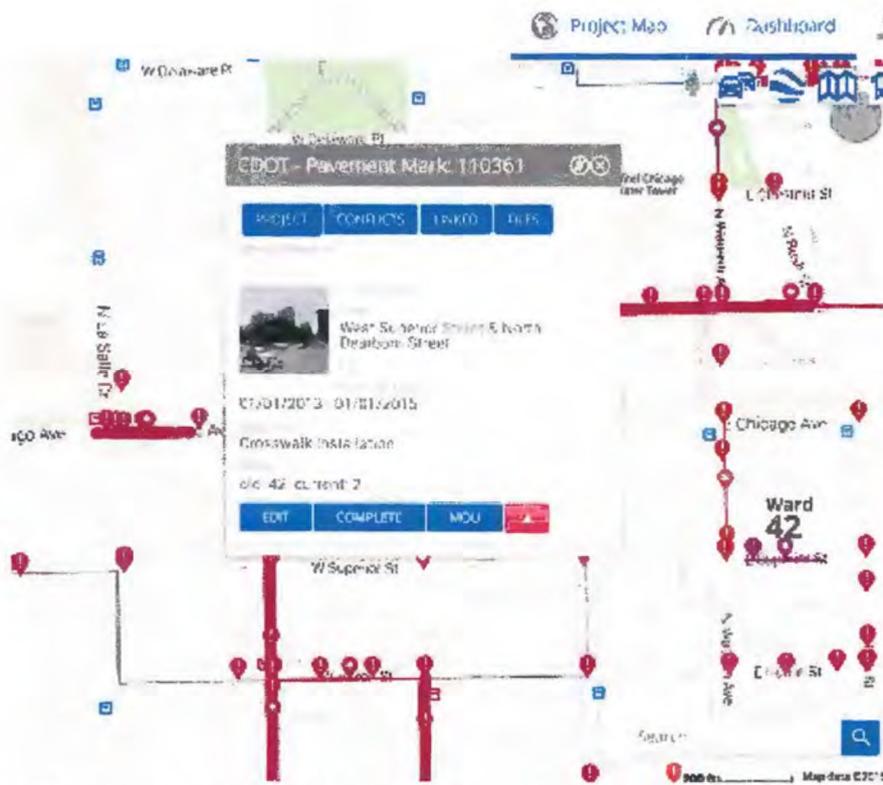
ID	Name	City	Street	Location Length (ft)	Facility Type	Start Date	End Date	Duration(days)	Contact
Boston Telecom 7851	Washington St Fiber Optic Cable Installation	Boston	Washington St	2277	Communication	09/27/2012	05/29/2012	3	Ben Sullender
PRJ-0488	Somerset St 8" Water Main Repair	Boston	Sudbury St/Tremont St	1603	Water	09/21/2012	09/27/2012	7	Ben Sullender
PRJ-0325	TD Garden - Colica Rainwater Drainage	Boston		1486	Water	08/19/2012	10/30/2012	42	Ben Sullender
Boston Electric 93005	Pickney St Utility Pole Installation	Boston	Charles St/Pickney St	1057	Electric	10/02/2012	10/03/2012	2	Ben Sullender
Boston Electric 93004	Rewiring at Kibby Pl Apartments	Boston		352	Electric	11/06/2012	11/10/2012	5	Ben Sullender
MBTA RZ-442	MBTA Red Line Expansion	Boston	Causeway St/Charles St/Stanford St	3605	Transit	11/05/2012	11/29/2012	25	Ben Sullender
PRJ-0322	Ducking Crossing Sidewalk Rehabilitation	Boston	Walnut St	2125	Lead	08/28/2012	09/24/2012	5	Ben Sullender

<http://www.envista.com/meet-envista>

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

Example of system interface:



<https://sadasystems.com/customer-stories>

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

The City should consider an electronic means of managing the many players who operate in the street and/or use the real estate below ground to connect their assets. The system would also help focus the efforts of employees on conflict resolution rather than constantly reviewing spreadsheets. It would break down data siloes between DBS, BOE, BSS, DWP, and other outside firms working to maintain their assets. The use of this system would also prove valuable for Metro projects, which are only expected to increase over the upcoming years, as well as the 2028 Summer Olympics.

Recommended Departments/ Bureaus for Inclusion	Why this department is important
Board of Public Works	Film permits
Bureau of Contract Inspection	Inspects work in the public right of way
Bureau of Engineering	Issuance of utility work permit
Bureau of Sanitation	Sewer upgrades and maintenance under the street
Bureau of Street Lighting	Sidewalk right-of-way may be blocked by maintenance and upgrade activities for street lights; revocable permits
Bureau of Street Services	Special event permits, tree permits, resurfacing, potholes programs
Department of Building and Safety	Developer permits can serve as a leading indicator of future work under the street (eventual need for new service connections with water, sewer, etc.)
Department of Cultural Affairs	Festivals and events
Department of Recreation and Parks	Film permits
Department of Transportation	ATSAC maintenance; on street improvements, traffic detours; special events
Department of Water and Power	Water main upgrades and maintenance
Los Angeles Fire Department	Film permits
Los Angeles Police Department	Film and 1 <sup>st</sup> Amendment permits

<sup>84</sup> 2015 PSOMAS report identified a list of upgrades after interviewing a number of city offices

<sup>85</sup> BOE interview and Interdepartmental Correspondence TSB-282-13, October 2013

In the past, there have been attempts to improve the process by which coordination is managed. ITA identified steps to enhance the existing PWRs platform, which was upgraded in 2014. An outside consultant also made recommendations to improve existing platforms the following year, but that plan did not move forward.<sup>84</sup>

Several Council files reference investigating or establishing a dedicated utility or construction management group as well as looking into procuring a cloud based coordination system.<sup>85</sup>

Multiple cities cited the move from a manual process to a utility coordination system as the number one recommendation for improving public works coordination, both with City departments and external partners.

Procuring and implementing a system would take time. An intermediary step would be hosting bi-annual coordination meetings with players in the right of way, perhaps utilizing one or two of the monthly meetings from the existing L.A. Substructure meeting led by BOE.

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

### Implementation Options:

- Upgrade NavigateLA, adding key functionality gaps; customizing the platform for the specific purpose of utility coordination may require a larger overall upgrade to the system itself. Future updates would require separate financial investments
- Purchase out of box solution; the cost would include general server support, monthly updates, etc.

Both options would need consideration of on-going maintenance costs.

### **Best Practice: City of Chicago Office of Underground Coordination (OUC)**

*The City adopted an out of the box solution several years ago to better appraise activities affecting the street by both city agencies and private developers. As part of the effort required to provide oversight and protection of taxpayer surface street investments, the Department uses OUC, a part of the Division of Infrastructure Management, to manage all of the coordination activities. This overhead cost is billed proportionately to all Members. "The distribution cost model is based on top impacts/users to the OUC and a function of permits pulled."*

### Anticipated Benefits:

- Minimize cuts into the street post-paving by the City
- Preserve the intended lifespan of the street
- Support partners that need to access and maintain underground assets

- Provide plan upload option for utility providers within the system that will automatically geo-code and map proposed projects across the City
- Expedite planning cycle for City's resurfacing plan by viewing partner plans online
- Allow for multi-year plan upload by utility providers that will aid the City in its pavement maintenance planning for future years
- Inclusion of other players in the street, like private development permit visibility from DBS will help DPW anticipate future cuts to the street for water, sewer, utility connections allow for potential paving projects to be completed after these connections occur
- Establish automatic utility conflict notification for alerts on moratorium streets, conflicts in work plans between partners and/or City, parades, festival permits, etc.
- View utility provider plan updates in real time
- Enhance coordination across multiple providers at once, especially when projects are in close proximity and/or plan to occur around the same time period
- Reduced financial penalties due to enhanced coordination (ex. SDRF) and/or cost sharing opportunities for repairing trench cut
- Offer private utility, City, Council District and public views
- Help City inspectors and senior staff anticipate and assign inspection duties

Cities with a system for utility coordination have already reaped financial rewards. This enhanced coordination has led to \$30M in savings in Boston and \$93M in Chicago. Seattle is estimating \$7M in savings in its 1<sup>st</sup> year of having a system.<sup>87</sup>

<sup>86</sup> Best Practice: [https://www.cityofchicago.org/city/en/depts/cdot/provdrs/construction\\_information/svcs/office\\_of\\_undergroundcoordination.html](https://www.cityofchicago.org/city/en/depts/cdot/provdrs/construction_information/svcs/office_of_undergroundcoordination.html)

<sup>87</sup> City interviews; <https://sadasystems.com/blog/google-solutions/seattle-department-of-transportation>

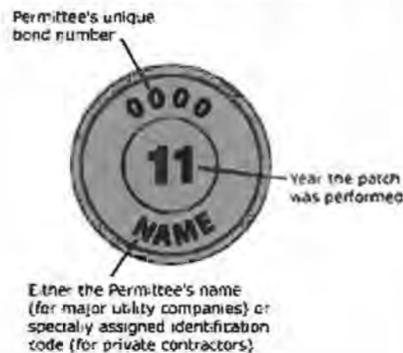
## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Alignment, Communication, Coordination, Customer Centricity, Data, Planning)

A system would allow first time visibility into all of the potential activities in the street with all of the potential players. Having a specialized system focusing on utility coordination could realize tremendous rewards for the long term care and viability of the City's street network.

### Best Practice: City of Boston Utility Tag Repair Markers

Upon completion of a permitted cut into the street for asset maintenance, repair, or upgrade, the owner of the street cut or patch is required to place a round "medallion" into the patch to identify the patch owner. In Boston, the City has moved away from the metallic medallions that are standard in most cities to the use of utility specific, color coded tags. Internal city departments are assigned a unique color as well. These medallions withstand harsh weather and bind to the surface itself.



*"The use of Utility Repair Tag pavement markers ensures accountability of each and every patch left after construction, saves the City time and resources through fast identification of patch creators, and provides an incentive for permittees to do the best possible job."*

This best Practice also aids inspectors and 311 users: if an inspector is in the field, he/she can instantly tell by the color of the medallion if the patch was completed by an internal or external partner. This will also support identification of patch owners when more than one utility cut has occurred relatively close to each other.



For the public, pedestrians, cyclists, etc. can help expand the City's eyes on the streets to let the City know where infrastructure gaps exist. Completing a service request and executing fulfillment could be expedited simply by listing the color of the patch on the service request.

<sup>88</sup> Best Practice: City of Boston and New York websites; street images from medium.com: <https://medium.com/re-form/the-streets-secret-code-e37ea0274021>

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Data, Planning)

### 2.2 Address lack of asset data, timing of maintenance activities, selection of appropriate preventative and deferred maintenance lifecycle activities and scheduling for asset upgrades by prioritizing strategic asset management activities across asset classes

*Issue – Lack of Basic Inventory Information:* The lack of a comprehensive inventory prevents the City from making strategic investment decisions on when and where to maintain and upgrade assets. This function is currently decentralized with no strategic management and many asset classes are not documented. By building a robust repository that lives in one place, City leaders can thoughtfully consider decisions about preventative maintenance based on available funding by viewing conditions across asset classes.

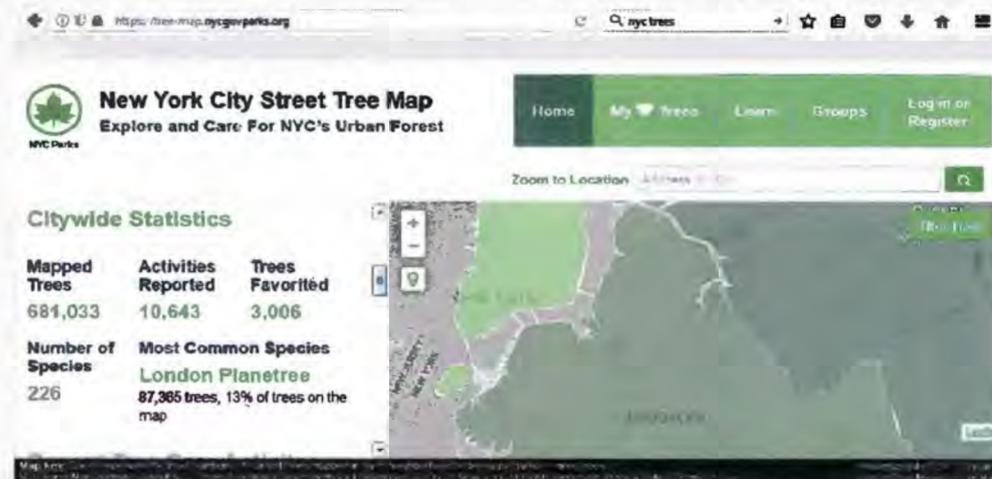
Collecting an asset inventory is a daunting task for a city of Los Angeles' size, but there are many partners, academic institutions and corporate entities that may be willing to support this endeavor. For example, there are BIDs that already have an inventory of some of the infrastructure assets in their respective districts.<sup>89</sup>

<sup>89</sup> BID meeting, August 2017

<sup>90</sup> Best Practice: <https://www.nycgovparks.org/trees/treescount>

### Best Practice: City of New York City Street Tree Inventory Process

The City mapped its entire 2015-16 street tree population of 666,134 trees using more than 2,200 volunteer forces in less than two years through the TreesCount! 2015-2016 Street Tree Census. It was the largest participatory municipal urban forestry project in United States history. Volunteers ("citizen mappers") used both high tech tools and survey wheels, tape measures, and tree identification keys to help the Department of Parks and Recreation create a spatially accurate digital inventory of NYC's street trees. This data is the backbone of Parks' internal forestry management database, and supports short- and long-term agency operations. The Department partnered with sponsors like technology firms, nonprofits and local corporations".<sup>90</sup> The census was completed twice before in 1995 and 2005 and all of the data is available on the NYC Open Data Portal for developers and the public. The Census is not static and is continually updated by department staff.



## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Data, Planning)

Below is an abbreviated list of infrastructure related assets which indicates whether or not a current inventory exists. Some inventories exist, but are outdated.

Infrastructure Asset	Inventory?	Stored as?
Buspads	Yes	Google spreadsheet
Street lights	Yes	ArcGIS
Catch basins	Yes	NavigateLA and internal spreadsheet
Streets	Yes	MICROPaver
Signs	No	N/A
Medians	Yes	Spreadsheet
Traffic Signals	Yes	ArcGIS
Signal control/pull boxes	No	N/A
Parking meters	Partial	Parking meter sensors
Street trees*	In progress	Will be stored in GIS
Sidewalks**	In progress	Will be stored in GIS
Striping (crosswalks, curbs etc.)	No	N/A
Sewers	Yes	NavigateLA and internal spreadsheet
Water mains***	Yes	Internal database

Enhancements to this list and future collection of asset information would need departmental and citywide policy guidance to establish what information should be collected, stored, and updated about each asset. For example, age and condition of the asset are critical information pieces. Frequency of collection and estimated lifecycle period for replacement of assets are other fields that would be valuable for long term planning. The Federal Government has already established guidelines for many assets that the City could follow.

Component	
Bridges	50
Roadways	25
Curbs/gutters	15
Street lights	15
Traffic signals	18
Street Signs	10

Table 43 from the GASB 34 Implementation Guide illustrates examples of estimated useful lives by asset class that could be used to calculate annualized depreciation rates. As the GASB 34 guidance notes, agencies are free to add additional categories of assets, and to subdivide them into more classes to provide more robust depreciation schedules.<sup>91</sup>

Some large assets like public facilities are managed by the CAO and have better information and maintenance schedules. The City is looking to expand this to other asset classes.

\*tree inventory was completed in 1996 but BSS estimates that a significant percentage of the inventory is no longer accurate due to tree replantings, development, tree deaths, etc. Currently a tree inventory is being completed via Google imagery as part of the Sidewalk Repair Program; however it will not capture or verify all of the previous data fields that exist as part of the old inventory

\*\*a sidewalk inventory is being developed as part of the new Sidewalk Repair program, estimated to be completed at the end of FY17-18

\*\*\*DWP is in the process of installing a new departmental asset management software that will include multiple asset categories

<sup>91</sup> [https://www.planning.dot.gov/documents/ASI\\_report/asi-09.htm#table43](https://www.planning.dot.gov/documents/ASI_report/asi-09.htm#table43)

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Data, Planning)

*Issue – Lack of Use of Asset Data for Better Management Decisions:* Currently the lack of centralized asset management means that decisions are being made in siloes about specific assets instead of viewing the infrastructure system as a whole and understanding how the system improves for the better if a particular asset is maintained more often or replaced. For example, upgrading an aging sewer or water main line could prevent interruptions in service due to a leak or spill, which could have a domino effect on other underground assets and the hard surface of the street. In a worst case scenario, the unexpected repair of such an asset inconveniences users of the street and forces the City to use funding for an emergency repair that may have been earmarked for another purpose. Emergency repairs are typically far more expensive than preventative maintenance activities.

Even in cases where programmatic inventories exist, the backlog of needed expenses is so great that it is difficult to prioritize. The water main break at UCLA's campus was caused by two corroded trunk lines. As quoted in the LA Times, "In testimony to the City Council after the flooding, a DWP official said one of the lines that burst was badly corroded and the other had had five leaks before the rupture. Neither line had been scheduled at that time for replacement, despite getting "C" and "D" grades from the utility."<sup>92</sup> This water main break not only caused damage to the school's campus but also the surrounding neighborhoods. The roads near the main break are currently rated as Poor by BSS.

<sup>92</sup> <http://www.latimes.com/local/education/la-me-in-ucla-flood-20150709-story.html>

<sup>93</sup> Best Practice: <https://ddot.dc.gov/node/509082>

### **Best Practice: Washington D.C. Proposed Tree Planting Location Map**

From the Washington D.C. DDOT website: "the tree planting map is interactive and identifies 6,400 proposed planting locations throughout the city, as well as the 4,200 trees planted last year (indicated on the map as orange points). Clicking any of planting location will call-out the species name and the street address."



The map above highlights proposed tree planting locations. A similar map in Los Angeles could aid developers who are required to follow the City's 2:1 tree replacement policy when a tree removal is needed for a project. Often, there is not sufficient real estate to plant the second tree. New York City's street tree map, "...helps us target greening initiatives, budget for and prioritize planting requests, and work with communities to enhance the tree canopy in their neighborhoods. Street trees occupy approximately 72% of the planting locations along NYC streets, with space for approximately 260,000

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Data, Planning)

### 5 Asset Management Building Blocks

#### 1. Status and Condition:

- Identify what you own and the condition of the assets
- Identify the life span and value of the asset

#### 2. Level of Service / Performance Measures:

- Describe what the asset delivers
- Identify what the organization must do to meet the delivery and how to measure the Level of Service delivery

#### 3. Risk:

- Business risk exposure objectively identifies and ranks the risk present in the system by considering the consequences and likelihood of any given type of asset failure
- Once the risk is identified, the organization can take steps in operations, maintenance, and through capital decisions to mitigate risk

#### 4. Lifecycle Cost Analysis:

- Identify the minimum cost for capital and operations & maintenance investment over the whole life of the asset, from acquisition to retirement, including rehabilitation and (partial) replacement during its life
- Cost is measured against a triple bottom line that includes social, environmental, and financial components

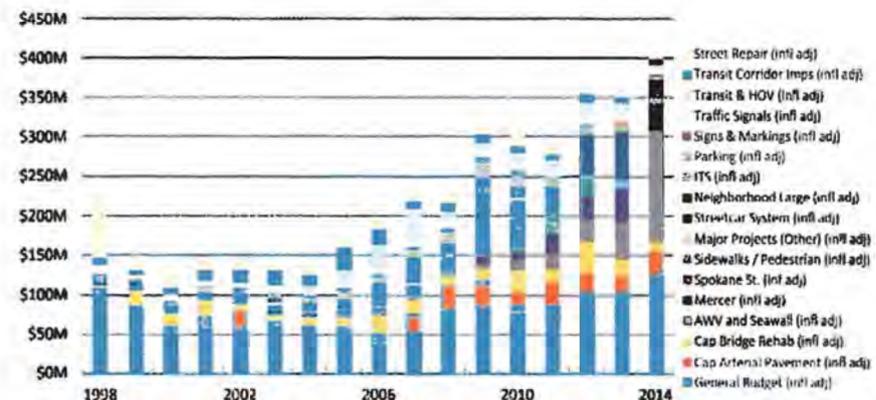
#### 5. Asset Management Plan:

- Combines information collected in the items above to build decision rules on asset investments and management and shares this information throughout the Department

### Best Practice: City of Seattle Asset Management Process

The Department maintains and owns many types of assets including bridges, pavements, signs, and marked crosswalks. To manage these infrastructure related assets, the City has a dedicated team focused on the management of assets related to the public right of way. As part of its scope, the group publishes a Status and Condition Report that includes description, condition, age, value and funding required to maintain these assets. As quoted in the report: "Asset data is utilized to provide a baseline in prioritizing Asset Management efforts in the Department; for business process improvements; and management decisions on the operation, maintenance, and preservation or replacement of SDOT-owned and maintained infrastructure."

Source: City of Seattle, 2015



<sup>94</sup> Building Blocks cited from Seattle Department of Transportation website: <https://www.seattle.gov/transportation/assetmanagement.htm>

<sup>95</sup> Best Practice and chart on right from <http://www.seattle.gov/transportation/docs/SDOT2015SCReportFinal12-7-2015.pdf>

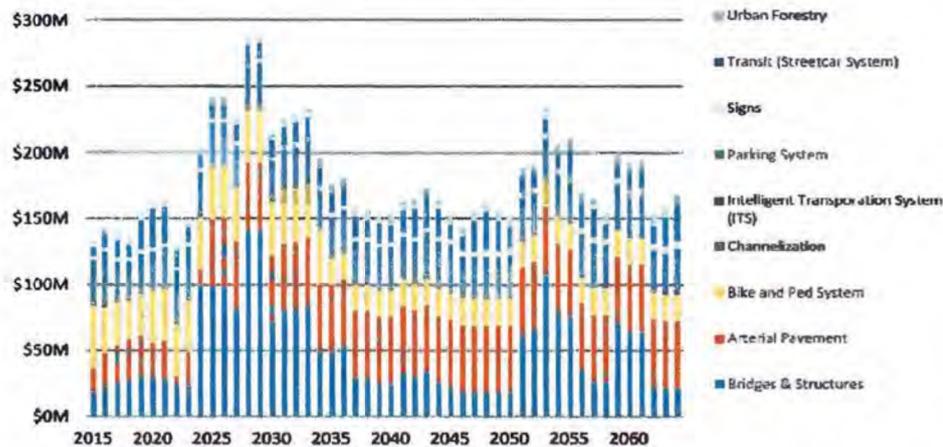
## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Data, Planning)

### Best Practice: City of Seattle, cont. Asset Management Process

This information has led to an updated method for pavement preservation work "by estimating the cost to road users (cars, trucks, and bus passengers) of deteriorated pavement conditions as well as the associated cost of appropriate treatment to restore its condition, we calculate a benefit/cost ratio for restoring each street segment. This benefit/cost ratio provides a first cut screening of street segments with highest priority to receive limited funds for pavement rehabilitation."

Chart II: 2015-2064 (50-Year) Operational Cost Forecast for SDOT  
(2015 Dollars)



BTG provided funding to improve, replace, and maintain many SDOT assets. However, SDOT funding gaps continue to persist. Factors contributing to the funding needs include:

- ✓ When new assets are installed, corresponding maintenance budgets are not always increased to sufficiently allow SDOT to sustain the new assets in good condition.
- ✓ Historically, the City has not readily established funding replacement programs for assets at the end of their useful lives.
- ✓ SDOT maintains some assets based on customer request rather than through programmed maintenance. Condition of these assets is generally unknown until they reach the point where asset replacement is required to maintain the level of service, which, depending on the asset, may be more expensive than the cost of performing timely, routine maintenance. This is particularly the case with the Intelligent Transportation System (ITS), pavement, bicycle and pedestrian system, urban forest and roadway structures.

additional trees across the five boroughs." <sup>96</sup>

#### Anticipated Benefits:

- Support strategic investment decisions related to assets
- Manage assets with strategic focus across classes instead of current siloed approach
- Build maintenance optimization cycles for each asset class to better control and prevent reactive and deferred maintenance costs, which are usually higher than preventative maintenance costs
- Help control risk exposure by identifying assets likely to underperform
- Obtain best performance of City owned assets
- Provide taxpayer value in the preservation, use and protection of City assets
- Build a collective inventory of infrastructure assets in the City
- Collect and maintain asset information in one place

#### Implementation Options:

- Use of partners, BIDs, and nonprofits to gather/verify block by block asset data
- Consultant to capture key asset data
- Existing staff
- New staff

<sup>95</sup> Best Practice:

<http://www.seattle.gov/transportation/docs/SDOT2015SCRepOrtFinal12-7-2015.pdf>

<sup>96</sup> <https://www.nycgovparks.org/trees/treescount>

92

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Customer Centricity, Data, Planning)

### 2.3 Resolve consistent customer issues with closed status messaging, streamline intake process and ease of use, and provide better transparency tools by making enhancements to the LA311 CRM system

The LA311 customer relationship management system serves as the City's primary service intake point. Every request within the existing category list is a public works related service. It was included in this study to identify where service needs exist as highlighted in Section 2: Research.

The screenshot shows the LA311 City Service Directory interface. At the top, there is a navigation bar with the Los Angeles logo, a search bar, and a 'Sign In / Register' button. Below the navigation bar is a blue header with 'MyLA 311' and 'CITY SERVICE DIRECTORY'. The main content area displays a list of service types under the 'Service Type' tab. A bracket on the right side of the list points to the text 'All public works related services'.

To create multiple requests for the same address, new requests can be made at the confirmation page from the previous request.

Service Type	Location & Contact	Details	Additional Info	Confirm
<ul style="list-style-type: none"><li>Dead Animal Removal</li><li>Investigations<ul style="list-style-type: none"><li>Homeless encampment, illegal auto repair, illegal construction, illegal construction fence, illegal discharge of water, illegal dumping in progress, illegal excavation, illegal sign removal, illegal vending, leaf blower violation, news rack violation, Obstructions and Tables, chairs obstructing and Report Water Waste</li></ul></li><li>Problems &amp; Repairs<ul style="list-style-type: none"><li>Report graffiti or issues with streetlights</li></ul></li><li>Refuse &amp; Pickups<ul style="list-style-type: none"><li>Bulky item, Containers, Electronic waste, Metal / household appliances, illegal dumping, Service not complete and etc.</li></ul></li><li>Sanitation Billing<ul style="list-style-type: none"><li>Bulky item fee, Extra capacity charge and Solid resource fee</li></ul></li><li>Street Problem/Repair<ul style="list-style-type: none"><li>Barrier removal, Bus pad/lending, Curb repair, Flooding, General street inspection, Guard/railing rail maintenance, Gutter repair, Landfill/misfills, Pothole, Resturfacing, Sidewalk repair and Street sweeping</li></ul></li><li>Trees/Vegetation<ul style="list-style-type: none"><li>Bees or wasps, Median island maintenance, Overgrown vegetation/plants, Palm fronds down, Street tree inspection, Street tree violations, Tree emergency, Tree obstruction, Tree permits and Weed abatement for private parcels</li></ul></li><li>Other<ul style="list-style-type: none"><li>To be used ONLY if the issue being reported does not fit into any of the SR Types available on this list. Select Radio buttons above to see more SR Types.</li></ul></li><li>Feedback</li></ul>				

**All public works related services**

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Customer Centricity, Data, Planning)

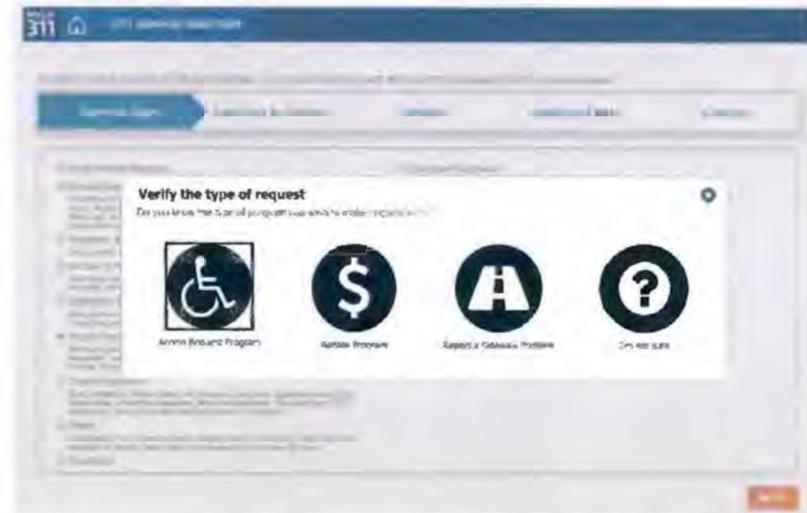
*Issue – Current User Messaging Options do not provide Sufficient Information on the City's ability to respond to Service Gaps:* LA311 serves as an important customer channel between constituents and the City. It provides an avenue by which departments, particularly those serving public works programs, can receive critical information on where service is needed or was unfulfilled. However, users inputting requests do not know if their request has also been submitted by another user or if the City is already aware of a deficiency in service. LA311 already gives more visibility to certain requests like homeless encampments when entering a service request on the address page: a pop up screen appears that lists other similar requests in the area and asks the user if he/she would like to continue with your request.



It would be equally helpful for a user to see a pop up screen for other request types. For instance, a constituent asking for repaving would be able to see a message

about the set fiscal year street resurfacing plan or the popup could contain a link to the BSS resurfacing plan webpage. LA311 could also consider embedding the list in the pop up screen.

Another program that has a pop up screen is sidewalk repair, asking which type of access request is needed, ramp, sidewalk, etc.



Adding additional information like "the City's sidewalk repair program recently restarted. Please be patient as we work to address your request" would provide better customer service. These small messages would be especially helpful for services that the City anticipates may take longer to complete, like sidewalk repair, which currently has a backlog. This would also help set appropriate expectations and reduce the number of users that call to check on the status of a request. Call

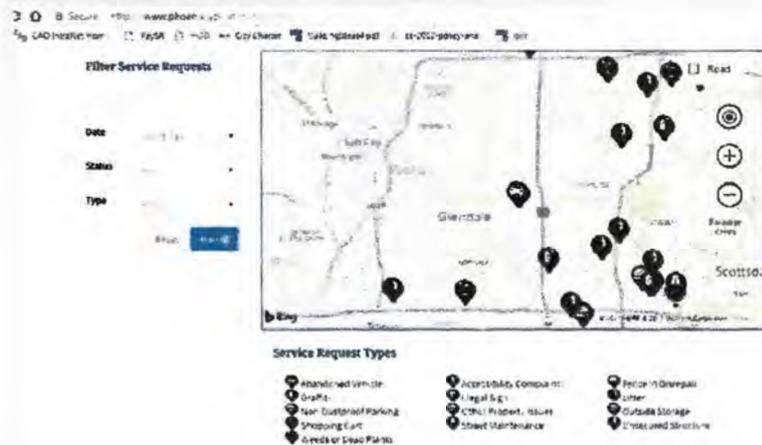
## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Customer Centricity, Data, Planning)

center staff are also not privy to average or historical response time data that they could provide to users as a proxy of how long may be required to fulfill a request.

### Best Practice: The City of Phoenix 311 system

The system allows request visualization so users can see where existing requests are located by service type. A similar map in Los Angeles would allow requesters to see the services in demand in their area, if a request has already been submitted, and when the request was inputted in the system.



*Issue – Time to input Request for Certain Categories:* The time and effort to use the system for various service types came up a significant number of times, in both Neighborhood Council meetings and constituent surveys.

<sup>97</sup> Best Practice: <https://www.phoenix.gov/atyourservice>

For example, the time to input a homeless encampment request compared to a pothole is significant. As several users stated "I stopped putting in illegal dumping requests because it took so long in 311...I don't have time to count every item. I'm driving!"

The screenshot shows a form titled 'Required' with the instruction 'Select the item types of this Homeless Encampment to be picked up'. Below this is a dropdown menu for 'Homeless Encampment item type(s) selected'. The main section is 'Describe the quantity and location of each item to be picked up'. It contains several rows, each with a text input field, a 'Select Location' dropdown, a quantity input (set to '1'), and a trash icon. The rows are: 'Boarding materials (pillows, sheets, etc.)', 'Bulky items (couch, table, chair, etc.)', 'Cardboard Boxes', 'Major Household Appliances (Refrigerators, washing machines/dryers, etc.)', 'Pallets', 'Styrofoam Boxes', 'Tents', and 'Toys'.

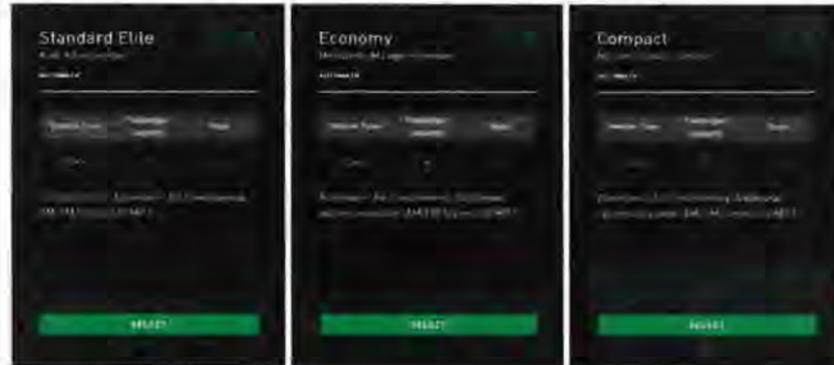
Subset of the list required for homeless encampment

There are no less than 40 categories and the user is required to select both the items and number of each to be picked up.

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Customer Centricity, Data, Planning)

Balancing the information needs of the City without turning off users is critical. From an operational standpoint, it is understandable why an item by item count is helpful for city services for illegal dumping. However, the user experience is important as well. Imagine renting a car online for a trip: the website does not ask a user to list how many passengers are joining or how many luggage pieces a driver may have. Instead most car rental sites will list the basic car types, outlining the car size and its capacity to store suitcases and carry passengers.



Source: [enterprise.com](http://enterprise.com)

Similarly, the City could consider a pop-up that has images of the types of trucks the City owns, its overall capacity, and its ability to carry hazardous waste. Or it could have images of mattress, computer and hazardous waste representing the three different waste/recycling streams to assist the Bureau in sending the right vehicle for clean-up of the dumping site. This could eliminate the input list currently on the website which customers find cumbersome.

Example:

Does your request include 1 or more of the following? Click all that apply!



Regular trash truck: Tarps, pallets, grocery carts



Special trash truck: Computers, phones, electronics



Hazardous waste truck: Mattresses

What size truck is needed?



Small pickup truck



Small truck (moving truck, rental truck)



Large truck (normal garbage truck)

Testing enhancements with constituents prior to a formal upgrade could provide useful information on how a user interfaces with the system, which part of submitting a process are difficult and what categories are missing/needed. Attending Neighborhood Council or Alliance meetings to discuss potential upgrades or to demonstrate changes would be one free way to gather feedback. Consumer research like this is standard in other sectors when launching new products and services. For certain categories in LA311, the City is putting its own operational needs before the customer experience.



## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Customer Centricity, Data, Planning)

BOS is looking into photo imagery software whereby a photo is able to identify objects, like mattresses, shopping carts, etc., similar to how Facebook uses facial recognition to identify friends in photos.

*Issue – Remove Customer Confusion by providing more Accurate Explanations on Requests with "Closed" Status:* The option of "closed" is confusing for residents and used by different departments in different ways. For the customer, closed is presumed to mean that the request was addressed and completed. Yet many requests are assigned this status when the service gap was not actually addressed. Constituents felt "ignored," "unimportant," and that their concerns were not valued by the City. Customers need better transparency about what is happening with their request throughout the process. Certain service types also have service level agreements, meaning some programs have metrics for service delivery. For example, graffiti abatement should be completed in 48 hours or less. Part of the issue for city departments is there is no open text field to communicate with customers outside of the standard response choices. Departments do not want requests left open indefinitely, yet there are limited methods by which departments can share feedback about why a request was closed. BOS has combatted this by assigning codes to certain request types. Code X will provide a standard message on the closed screen, code Y will provide another.

The 311 system currently has 4 standard drop down options to share the status of the request with the public:

open, pending, closed and referred out. Adding the ability to provide some custom message options or to expand the status options (ex. under investigation, service backlog, annual resurfacing plan set for fiscal year, etc.) would greatly enhance the customer experience.

Indicating the average historical response time for common requests would add transparency as well. Protocol needs to be established and enforced at department level that closing a request without service fulfillment is not sanctioned.

Adding custom messages would require training to ensure that the messages being selected by staff are appropriate. Agreement on some standard custom messages may be an issue depending on the service request type. Upgrades to the LA311 system for messaging can be done internally without support from the vendor.

*Issue – Lack of Proof that a Request was Fulfilled:* In addition to providing better information on the status of a request, having field crews take a photo of the completed request would increase customer confidence and satisfaction. The LA311 system already has the capability to store photos associated with a service request, although it cannot email them due to file storage limits. So the LA311 system can direct the non-anonymous user to view photos via web link or service request number. Establishing protocol that requires a completed photo to be taken before a service request is closed

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

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could also help with asset management, providing more current conditions on streets, trees, trash, etc. than google imagery and help support a photo inventory of street assets.

### **Best Practice: City of Pasadena Citizen Service Center**

*Upon completion of a service request, the City of Pasadena sends the service requestor a picture of the completed job. For instance, if a resident reports a broken street light, the field crew fulfilling the request will take a photo of the repaired street light and send it to the resident along with notification that the request is completed. This added step to confirm completion of the request receives strong positive feedback, aids in high customer satisfaction, and builds community trust.*

*Issue – Constituent Confusion on Multiple Call Centers and Certain Request Categories:* Many programs between DPW and DOT use the same real estate to deliver programs. However, reporting issues with service delivery sit in different systems. For public works services (bulky item pick-up, illegal dumping, missed trash service, paving, etc.) a customer uses 311. For DOT (non-working traffic signal, broken parking meters, etc.), a customer goes to the DOT website and completes a request there.

Separating service systems dealing with the public right of way prevents a number of efficiencies: multiple street issues requiring a customer to input requests in two

systems; confusion on certain request types like traffic light versus street light (requests for a broken light in the DOT system may mean a traffic light or street light. If the latter, this would need to be referred out, delaying fulfillment of the request); category definitions (delay, safety, detours); and taxpayer costs to hosting multiple call centers and systems. The data across departments and systems is also not cross analyzed to assess when and where the departments should coordinate.



In general, streamlining systems will likely lead to cost savings, allowing departmental employees to focus on department specific IT programs while the City's ITA agency can move to identify synergies from employing one citywide platform for service issues. This could also eliminate confusion on issues like street lights. LA311 already has a category for street lights that asks the user if the pole in need of repair is brown, indicating a DWP power pole. This allows the request to be routed more

<sup>98</sup> Best Practice: <https://ww5.cityofpasadena.net/citizen-service-center/>

<sup>99</sup> <http://myladot.lacity.org/sr/ladohtml5viewer/>

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

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quickly to the right department/program. According to ITA, there is a cost to integrate new service types into the LA311 system that would require the use of an outside vendor. However, ITA has already approached departments with the highest number of requests in the "Other" category like traffic signals, rentals, building permits, etc. and is working with them for future inclusion on the LA311 platform this fiscal year. DOT is slated to be one of these departments for Spring 2018.

Enhancements to the LA311 system, like any system, involve a financial cost. Changes like pop-up screens incur a higher cost than opening or closing screens for requests according to ITA. This could be perhaps mitigated by reviewing historical data and programming pop-up informational screens according to the most requested service types. This would allow for the phasing in of this feature, thus reducing short term costs. Adjusting the need for detailed information (like count of mattresses, carts, tarps, etc.) by narrowing down the number of categories would improve user satisfaction.

Anticipated Benefits of changes to LA311:

- Set appropriate expectations for the customer based on category type
- Enhance customer experience by streamlining intake process especially for illegal dumping and homeless encampments
- Build meaningful versus transactional relationships with customers by using 311 as a true customer relationship platform

- Offer transparency and visibility through better messaging to customers
- Reduce workload for LA311 staff by incorporating additional city departments aside from Department of Public Works programs; these "other" category requests currently require manual review by 311 staff, routing to the right department and leads to delays in request fulfillment
- Continue to move forward with LA311 becoming the City's one stop shop for customer engagement on service needs by including more departments over time, eliminating the need for customers to be transferred to another department, submit a request on a different website, or phone different call centers across the City
- Increase customer satisfaction by establishing citywide protocol for use of "closed" status to clarify if service was actually completed or not
- Foster trust in completion of service requests by requiring departmental field crews to take photos of completed work that can be linked to the service request for viewing by the customer
- Support the asset management process for the City by aggregating data on assets that were maintained or treated in response to a customer request; photos can also supplement current data on street related assets and create a visual inventory of these assets



## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

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In addition to these benefits, the regular review of 311 data across request categories would provide rich information about a range of issues that could support better planning and resource deployment, as mentioned in Recommendation 1.2. Examples are below:

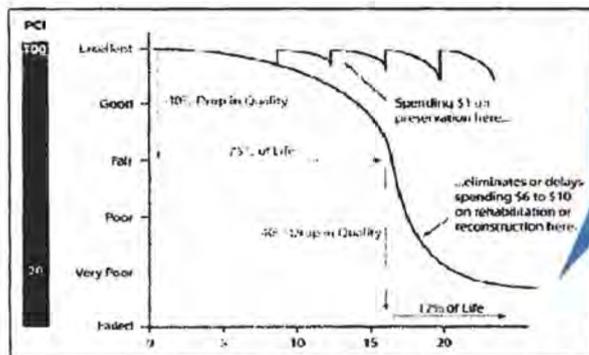
- A cleanliness issue at a particular address may entail response from OCB for graffiti abatement, BSS for street sweeping, and BOS for illegal dumping, bulky item pick up and/or storm drain cleaning. The sequencing of these activities is important as the City does not want crews to respond at the same time and need to return to the same address because the site was inaccessible. For example, illegal dumping may need to be removed prior to crews managing graffiti abatement.
- Seasonality may factor into increases and decreases in requests for certain categories. More potholes may appear after the winter, wind conditions may lead to more tree branches and palm fronds falling, heat may lead to more cracking into asphalt and resurfacing needs. Reviewing historical data for seasonality trends can help the City better understand times needed to quickly ramp up for a fixed period of time.
- Analysis of "repeat" requests can assist the City in determining if response techniques are effective. If potholes, trash pick up, graffiti, etc. are reappearing in the same location month after month or year over year, different types of intervention may be required.

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

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### 2.4 Preserve taxpayer investments in the City's street network by updating policies affecting street protections that could include establishment of a moratorium for newly reconstructed streets and a new Concrete Street Damage Restoration Fee

*Issue – No Policies in place to Protect Newly Reconstructed Streets:* New funding available through voter passed and state approved legislation will allow the City of Los Angeles to tackle improvements to the streets in the worst conditions for the first time in decades. These streets are typically defined as "D and F" streets and are in need of major rehabilitation.<sup>100</sup> More than a third of City streets are classified as "D and F" and the cost to upgrade these streets will cost at least six times the amount of normal overlay maintenance treatment. Another study by the Michigan Department of Transportation showed that for every dollar committed to preventative maintenance, \$4-10 was saved in



One third of Los Angeles' streets

<sup>100</sup> D streets have some cracking, 6% to 35% of structural failure and resurfacing treatment is required; F streets typically have major or unsafe cracking, 36% to more than 50% of structural failure, and resurfacing or reconstruction is required; PCI scores <55 (Source: BSS)

<sup>101</sup> [http://www.pavementpreservation.org/publications/WIDOT\\_TPM.pdf](http://www.pavementpreservation.org/publications/WIDOT_TPM.pdf)

Chart: [https://www.planning.dot.gov/documents/ASI\\_report/asi-01.htm](https://www.planning.dot.gov/documents/ASI_report/asi-01.htm)

\*Some have noted that reconstructed streets could be interpreted to qualify under SDRF and the one year moratorium as the final step is resurfacing the top layer of the street. However, the expenditures involved in this type of street repair warrant a dedicated restoration fee and consideration of its own moratorium period

Existing City Policies*				
	Lifespan	Estimated Cost	Penalty?	Moratorium Period?
Slurry Seal	+7 yrs	\$30K-50K	SSDRF	None
Resurfacing	+10-15 yrs	\$300K-450K	SDRF	1 yr
Reconstruction	30 yrs	\$650K-\$1M	<b>None</b>	<b>None</b>
Concrete	50 yrs	>\$1M	<b>None</b>	<b>None</b>

rehabilitation costs.<sup>101</sup>

These streets require significant repair, up to \$1M per street segment depending on the severity of the repair. Currently there is no policy in place that prevents a city department or utility provider from cutting into the street the next day, immediately reducing the lifespan of the street and the financial investment made by the City. The lack of policy can be attributed to the absence of street improvements to D and F streets and no maintenance to concrete streets for a long period of time.

The City is launching a new program, the Street Reconstruction/Vision Zero Program. If the original project list is approved, there is one concrete street slated for construction. Given that these streets typically hold a longer lifespan than even newly constructed asphalt streets, it is important that taxpayer investments are protected. The establishment of a Concrete Street Damage Restoration Fee (CSDRF) that ensures

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

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"replacement in kind" if the street is cut into after construction as well as a fee that helps the City recover the lost lifespan of the street is advised.

To protect these large taxpayer investments, most cities have also adopted "moratoriums" in which firms are restricted from working on newly reconstructed and newly resurfaced streets for a fixed period. For the City of Chicago, "the moratorium is ten (10) years and during this period permit fees are doubled" for streets that have been *reconstructed*. Los Angeles' City Council could pass a similar ordinance establishing a moratorium period for newly reconstructed streets.

*Issue – Generous Street Protection Policies:* For newly resurfaced streets, the City already has a one year moratorium in place, which was passed via City Council ordinance in January 1998.<sup>102</sup> A past CAO report (CFN 13-1300-S1) also spoke to the merits of increasing the moratorium in connection with the Save Our Streets LA funding mechanism for street and sidewalk repair and improvements. It "...recommended that the City increase the street cut moratorium from one year to five years, whether the SOSLA is approved or not. This will help reduce the rate at which streets deteriorate."<sup>103</sup> As noted on the chart to the right, even cities with multiple commuter options have a longer moratorium than Los Angeles.

Research from other cities, universities and pavement experts value a street up to five years old as a new street.

<sup>102</sup> [http://clkrep.lacity.org/online/docs/1996/96-0726\\_ORD\\_171922\\_03-27-1998.pdf](http://clkrep.lacity.org/online/docs/1996/96-0726_ORD_171922_03-27-1998.pdf)

<sup>103</sup> [http://cao.lacity.org/SOSLA/0a\\_2014%2003%2013%20SOSLA%20Cover%20Report.pdf](http://cao.lacity.org/SOSLA/0a_2014%2003%2013%20SOSLA%20Cover%20Report.pdf)

City (by Population)	Moratorium Period	Primary Mode of Commute
New York City	5 years	Transit
Los Angeles	<b>1 year</b>	<b>Car</b>
Chicago	5 years	Transit
Houston	5 years	Car
Phoenix	5 years	Car
Philadelphia	Moving to 5 years	Transit
San Diego	5 years	Car
Dallas	5 years	Car
San Jose	2 years	Car
<b>Additional Cities</b>		
Seattle	5 years	Transit
San Francisco	5 years	Transit
Boston	5 years	Transit
Washington D.C.	5 years	Transit

A street that is a year old and five years old is considered the same. Several cities have instituted a moratorium based on this research and not the planning cycle. Some have commented that the moratorium should not be altered given that the City only gives utility providers a year look ahead in terms of its own street maintenance efforts. However, many cities explained that providers are required to submit multi-year plans to the City and the City is then able to factor those streets into its own

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

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planning cycle. In this way, perhaps a gradual increase in the moratorium can be achieved to protect City streets.

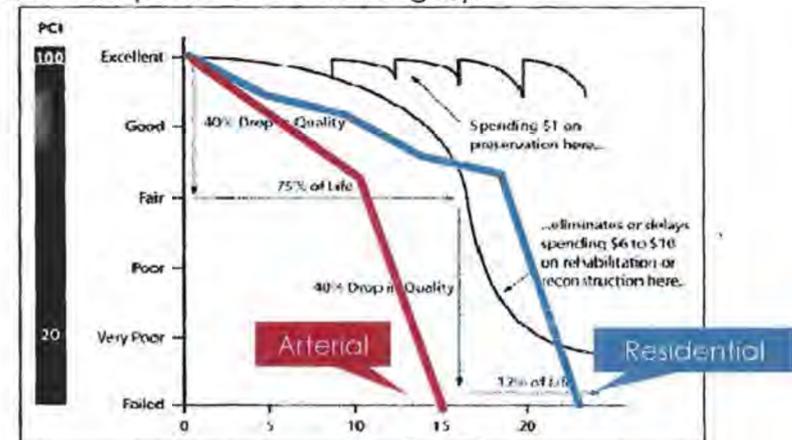
In addition, the Street Damage Restoration Fees listed below have not been altered since the inception of the fees although maintenance and labor costs have risen over the last twenty years. A developer and/or utility providers incur these fees when requesting to work under the street to connect to existing water and sewer mains or maintain an underground asset. It is meant to support more frequent street treatments like slurry seal and resurfacing, although it is unclear if fees generated from SDRF go directly towards specific streets that have been excavated.

Many times a utility provider or city department estimates the size of the cut, which may or may not be accurate. The original fee also used an inaccurate prediction of excavation volume, which resulted in a lower per unit cost. The 2014 Controller's Audit of BSS' Resurfacing and

Street Damage Restoration Fee		
Age of Street	Residential (per sq feet)	Arterial/Select (per sq feet)
≤5 years	\$7.78	\$21.26
>5 to ≤10 years	\$6.90	\$17.72
>10 to ≤15 years	\$6.48	\$14.18
>15 to ≤20 years	\$5.86	<b>No fee</b>
>20 to ≤25 years	\$5.18	<b>No fee</b>
25+ years	<b>No fee</b>	<b>No fee</b>

Maintenance Activities Finding No. 5 estimated that "...total collections have been undercharged by as much as \$190M since the fee was implemented."<sup>104</sup>

These policies were also instituted to recover the costs associated with lost lifespan of the street. In 2002, the Construction Practices Subcommittee of the American Public Works Association cited that the estimated reduction in pavement life due to a utility cut was anywhere from 20% to 56% of the original life of the pavement from a literature review on the topic.<sup>105</sup> The City should update the SDRF & SDRF to fully recover maintenance costs associated with street cuts. This fee should be flexible to allow for adjustments for cost increases and inflation (ex. raw materials like asphalt and/or transportation costs like gas).



Note: scales for residential and arterial streets are different

The assignment of streets to the categories of residential and arterial/select may be outdated as development

<sup>104</sup> 2014 City Controller's Audit of Los Angeles Bureau of Street Services' Resurfacing & Maintenance Activities

<sup>105</sup> \*[http://mpw.nashville.gov/IMS/Paving/Documents/Appendix\\_d.pdf](http://mpw.nashville.gov/IMS/Paving/Documents/Appendix_d.pdf)

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

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and traffic patterns may have shifted over the past 20 years. The Controller's office recently commented on this in a January 2017 letter<sup>106</sup> to the Board of Public Works as BSS is working with a consultant to review the fee schedules.

Like the current fee schedule (SDRF) study, the City should review existing ordinances to ensure they meet current day realities and costs. Employee interviews stated that review of policies should occur at regular intervals. The City Engineer recently updated its Plan S-477-0, which now requires T-cap on utility cuts in the street. This new repair policy is anticipated to help extend the lifespan of the street, in addition to the SDRF.<sup>107</sup>

Currently, utility cut repairs have a five year warranty, while utility cuts executed by the gas company have a lifetime warranty. These warranties are in place regardless of the age of the street; only the SDRF penalties are lifted depending on the age. In San Antonio, policies for Right of Way (ROW) restoration are dependent on the condition of the street, not the age:

*"In all ROW restoration, the ROW user guarantees its work and shall maintain it for the remaining "Life of the Street" following completion of the restoration. In the event of the failure, the ROW user shall within 48 hours of notice from the City, repair the subject of trench envelope. The "Life of the Street" guarantee period shall be applicable to failure of the pavement surface as well*

*as failure of the trench envelope. Notwithstanding remediation of the pavement structure by the City, the ROW user retains repair responsibility at all times during the guaranty period for the trench envelope. Excavations in Streets and/or ROW with PCI values of 86 or greater shall be deemed 100% loss of pavement life. These Excavations require block to block, curb to curb pavement reconstruction or use of a Hot Mix Asphalt Repaving Process."*<sup>108</sup>

**Issue – Lack of SDRF beyond Estimated Lifespan:** The current fee schedules also assume that a residential street has a 25 year lifespan while an arterial or select street only has a 15 year useful lifespan. However, the City's maintenance cycle to treat and maintain streets is longer than these assumptions, in part due to funding. The street, while not in ideal condition, is still usable after 25 and 15 years, respectively. An extension of the fees for residential streets to 30 years and select streets to 20 years is reasonable even if these streets are in Fair condition. The maintenance costs are higher for these streets and any utility cuts or excavations are further weakening the street.

### Anticipated Benefits:

- Preservation of street improvements funded by taxpayers
- Extension of street lifespan for users
- Strengthen street related policies to protect investments
- Reduced maintenance costs for the City

<sup>106</sup> 2017 City Controller Letter Re. SDRF CF: (15-0600-S22) CF: (14-1571);

[https://d3n8a8pro7vnm.cloudfront.net/controllergalperin/pages/425/attachments/original/1484868647/SDRF\\_Letter\\_170119.pdf?1484868647](https://d3n8a8pro7vnm.cloudfront.net/controllergalperin/pages/425/attachments/original/1484868647/SDRF_Letter_170119.pdf?1484868647)

<sup>107</sup> <http://eng2.lacity.org/techdocs/stdplans/s-400/S-477-0%20June%2030%202017.pdf>

<sup>108</sup> <http://www.sanantonio.gov/Portals/0/Files/CIMS/Services/ROW%20Ordinance%20reduced.pdf>

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Alignment, Coordination, Data, Planning)

### 2.5 Establish guidelines for large, critical infrastructure investments by reinstating a citywide Capital Improvement Plan

*Issue – Inability to see the Universe of Infrastructure Network Needs because of Decentralized Asset Maintenance and Upgrades:* The CAO published a Capital Improvement Plan (CIP) book until 2008. It was comprised of large investment projects underway by departments, largely around public facilities and public works. This data is not captured in the budget system so departments were requested to submit a list of projects for the CIP book. The book served as a central source for a list of capital projects, but came short of including all city departments. Furthermore, it served as a repository of projects, but it did not serve as a true capital expenditure plan which typically outlays capital investments according to city policy. Many projects included in the CIP book were bond or special funded.

The City is working to establish a formal capital policy that would guide investments in infrastructure and other areas to address the growing backlog in large asset categories. Council file CF 13-1384 directed the CAO to develop a Capital Infrastructure Framework that will build on and strengthen existing policies and help the City prioritize where and when asset upgrades should occur. The City already has a policy that aims to allocate 1% of the budget to infrastructure, although this is not always met given other city priorities and macro economic factors.

Recommendations 1.2 (Office of Infrastructure Management) and 2.2 (Prioritize Asset Management Activities) both support this endeavor; however it is noted that this report focuses on street related infrastructure assets while the CIP could impact many more departments and assets like public facilities, etc. Moreover, the implementation of these recommendations would streamline the asset collection process by going to one place (Office of Infrastructure Management) instead of five or more entities for a list of projects and assets. This was one of the difficulties in assembling the previous CIP books.

#### County of Orange Seven Year Capital Plan

*The County publishes a fiscally constrained capital plan each year that gives visibility to the funds spent, source of funding, project phase and distribution of projects across the County.*

The image shows a screenshot of a spreadsheet titled "Public Works" and "7 Year Capital Improvement Plan". The spreadsheet is a large grid with many columns and rows. The columns include project details such as "Project Name", "Location", "Start Year", "End Year", and "Funding Source". The rows list various infrastructure projects, such as "REPAIR AND MAINTENANCE OF STREETS", "CONSTRUCTION OF NEW STREETS", and "REPAIR AND MAINTENANCE OF BRIDGES". The data is organized into several sections, likely representing different years or funding categories.

<sup>109</sup> County of Orange: <http://www.ocpublicworks.com/civicax/filebank/blobload.aspx?blobid=68775>

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Alignment, Coordination, Data, Planning)

Of the top 25 cities in the country and the top 10 cities in California, Los Angeles is the only City without a formal capital plan.

### Top 25 U.S. Cities by Population

City	Capital Plan/Budget?
Austin	Yes
Boston	Yes
Charlotte	Yes
Chicago	Yes
Columbus	Yes
Dallas	Yes
Denver	Yes
Detroit	Yes
El Paso	Yes
Fort Worth	Yes
Houston	Yes
Indianapolis	Yes
Jacksonville	Yes
<b>Los Angeles</b>	<b>No</b>
Memphis	Yes
Nashville	Yes
New York	Yes
Philadelphia	Yes
Phoenix	Yes
San Antonio	Yes
San Diego	Yes
San Francisco	Yes
San Jose	Yes
Seattle	Yes
Washington DC	Yes

Chart Source: City websites, city interviews

<sup>119</sup> City of Pasadena: <https://ww5.cityofpasadena.net/public-works/engineering-and-construction/capital-improvement-program/>

### City of Pasadena Five Year Capital Plan

The City publishes an annual update to its capital plan on its website, outlining progress across major asset classes like streets, lighting, etc. This allows readers to quickly zoom in on the topic that interests them the most and city leaders to view progress by category. The process by which potential capital projects are submitted and selected is listed online as well. Select steps listed below:

- Call for Projects sent to City Council, Commission and city employees
- Projects ideas are reviewed for inclusion according to funding level (above \$75,000) and qualifications criteria (safety, urgent maintenance issue, end of life facility)
- Project ideas are reviewed by Finance and Management Division staff for completeness and is then assigned to 1 of 14 categories (street lighting, parking, street, municipal building, etc.)
- Projects are then sent to the respective department for review. As part of review, department staff reviews each project and prioritizes them as high, medium or low; department also recommends a funding plan for each project based upon the priorities.
- This list is reviewed and approved by the City Manager.
- A City Manager's Recommended CIP budget is prepared and sent to the appropriate citizens' commissions/committees for review & support.

#### Anticipated Benefits:

- Ability to time investments and upgrades based on greatest need irrespective of asset category
- Ability to review conditions of all assets sharing the same space and/or in the same neighborhood/Council district
- Ability to leverage funding across asset categories (repairing substructure before street improvements like reconstruction or concrete streets)

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Customer Centricity, Data, Planning)

### 2.6 Bolster proper oversight and direct better allocation of resources to prevent multiple agencies from maintaining the same asset or program by clarifying Bureau and department roles in overlapping programs

*Issue – No Tool to track Multiple Entities touching the Same Asset:* There are many activities in the City that touch the same asset, mainly the street. Bureaus and departments will treat the asset according to the scope of their individual programs, sometimes without knowledge of others who intend to maintain the same asset in the same fiscal year.

Some of these activities can be better coordinated by having one place that contains all asset and maintenance information. For instance, street trees is an asset that six different entities touch for various reasons. There is no uniform system or catalog that captures basic tree information (age, species, etc.) or tree maintenance activities like trimming or palm frond collection by all of these entities. This can lead to duplicative efforts where multiple agencies have completed some type of trimming or maintenance activity on the same tree. If these maintenance activities are captured, the data sits in departmental siloes within each respective department or bureau. If the City has an overarching commitment to increase the urban tree canopy in the City, understanding the current state of the trees and outlining responsibilities for each agency is necessary.

<sup>111</sup> City interviews

Entity	Tree Activity
Bureau of Street Services – Urban Forestry	planting, maintenance, trimming, stump removal of parkway trees; also manages trimming near street lights on behalf of BSL; review of tree mitigation impact from development projects
Recreation and Parks	maintenance for park trees, partnerships with nonprofits for planting; review of tree mitigation impact close to park facilities and recreation center upgrades
DWP	trimming near power poles
DOT	trimming near signs
Metro	trimming tree branches that may touch top-of-bus exhaust pipes
BIDs	may trim trees, dependent on BID focus and funds
Property owners	may trim, water, plant, remove trees
CalTrans	trees near interstates
CityPlants	plant and water trees on behalf of City

DWP has a process in place to identify and manage all trees in close proximity to power lines in the City and Owens Valley that may impact delivery of electric services. Its inventory count is more than 446,000 trees, of which more than a fourth are trimmed on average each year. It may include trees on private property if power lines are nearby. Each tree is assigned a ID. BSS' street tree inventory is about 700,000 trees from a 1996 study, of which approximately 33,000 trees were trimmed in FY16-17.<sup>111</sup> It would be beneficial if both agencies used the same ID to track maintenance efforts. Since there is no centralized database, the use of same ID can help when

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

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reaching out to inquire about a specific tree activity. Asking groups to provide a list of planned tree maintenance activities at the beginning of the fiscal year and/or a list of trees that were maintained the previous fiscal year would be a helpful planning tool. Setting up a "TreeAlert," similar to DigAlert,<sup>112</sup> can inform key departments about upcoming tree activities.

Tree trimming ranked as the third and fourth lowest performing service based on quality on constituent and BID surveys, respectively.

### Best Practice: New York City Street Tree Map

#### Pin Oak

*Quercus palustris*



[Inspect Map and Details](#)  
ID Number: 4608428  
Trunk Diameter: 3 inches  
[Report an Issue](#)  
Closest Address  
150 WORTH STREET, NEW YORK, NY 10013



#### Tree Care Activity

Date	Activity
03/17/2017	Weeded, Managed Soil
12/02/2016	Weeded, Managed Soil
08/18/2016	Weeded, Managed Soil

Get tips on tree care activities in the [Learn](#) section.



The online public map allows a resident to participate in the care of street trees through the "Record Your Care" button (circled). By clicking on a tree, tree stewardship activities are captured and retained as a part of the tree's history.<sup>109</sup> This distributes the maintenance workload of the crews, reduces paperwork on tree care through automatic logging through the system, and encourages community engagement and ownership of trees.

In addition to existing tree maintenance, there may be street and transportation grant projects, and other streetscape projects, that require tree removals and new plantings. DWP also removes trees that pose an outage risk that cannot be remedied by tree maintenance activities. Because data is not centralized, entities may be incurring costs to maintain trees that are scheduled to be removed in the near term.

Aside from trees, another similar oversight issue is with EV chargers, which currently is governed by GSD, DOT, BSL and DWP, that all play a part in developing and implementing an EV network in the City.

*Issue – Lack of Consistency in sharing Timely Data on Programs overlapping the Same Asset:* The most frequent mentioned program in stakeholder interviews was the separation of pavement preservation and striping programs. Constituent survey feedback for these services were below average for street repair, striping of City streets and crosswalks. However, a follow-up question showed that these same services have improved over the past five years. For street repair, it was cited as the second most improved program after LA311 overall. Out of the most common 25 infrastructure programs, street repair is also one of the top three programs that constituents want improved first.

When resurfacing plans for the week or month are finalized, a list of those streets is shared with DOT. The Department then mobilizes its forces to restripe the street.

<sup>112</sup> [www.digalert.org](http://www.digalert.org)

<sup>113</sup> <https://tree-map.nycgovparks.org/learn/about>

## Tier 2 Recommendations: Improvements to Infrastructure Support Systems

(Addresses themes of Communication, Coordination, Customer Centricity, Data, Planning)

and crosswalks. This may entail review the current striping plan as DOT does not have an inventory of striping patterns for streets. It may also involve changes to the striping of the street; for example DOT has adopted a new standard for crosswalks, continental style, which is more prominent and visible to other users of the street. In some instances, timely restriping does not occur. Examples of striping "gaps" after a pavement project were found multiple times in LADOT service data.

*Issue – Coordination across Multiple Entities servicing the Same Customer or Group:* The recent settlement that re-established the Sidewalk Repair Program was centered on accessibility.

Entity	Activity
DoD	City expert on needs for accessibility and disability residents; assessment of access requests
DOT	Blue curb painting and parking
BOE	ADA ramp and sidewalk design; project management for contractors
BSS	ADA ramp and sidewalk construction

The core mission of the program is repairing sidewalks and applying federal ADA standards to the City's ramps. For accessible residents, it is unclear how current blue curbs and handicapped parking are coordinated with sidewalk and ramp upgrades if street parking is required. The City can use this as an opportunity to review the existing

number of blue curbs and signage across Los Angeles and consider changes as needed. City Council has already asked for recommendations to improve access to parking for individuals with accessibility needs.

### Anticipated Benefits:

- Extension of life of asset through proper care and maintenance
- Leveraging of resources to treat and maintain a greater number of assets
- Coordination across departments and Bureaus to raise effectiveness and efficiency in programs
- Tracking of maintenance efforts by multiple entities on the same City asset
- Assignment of same ID across departments so all entities define asset in the same way
- Ability to deploy resources efficiently when maintenance has already been completed by another entity
- Creation of data bridges so data sitting in department system siloes can be shared/uploaded with multiple stakeholders
- Agreement on maintenance guidelines by all entities

## Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Communication, Customer Centricity, Data, Planning)

### 3.1 Strengthen the city's overall street network by updating the methodology for resurfacing and slurry seal programs to employ factors beyond the PCI score to prioritize paving and maintenance projects

*Issue – The current Program Approach does not account for Factors that influence the Deterioration and Protection of the Street:* Los Angeles' system for planning for resurfacing has not changed in recent times, and only uses the PCI to identify streets in need of street maintenance. Other cities have become more sophisticated by combining data sets like volume of traffic, the number of pothole requests for a street, utility cuts, types of vehicles traveling on a street, etc. A study commissioned by BSS even cited "it takes a bus lane only 4.6 years on average to drop from a PCI of 100 to 60 (from A condition to a C). In comparison, it takes 14.6 years for a street with no bus traffic to degrade to the same C condition."<sup>114</sup> Yet factors outside of PCI, utility conflicts and funding are not built into the plan. In addition, the number of residential streets selected for maintenance dwarfs the number of arterial/commercial streets which typically experience higher traffic loads and road decay.

The City's approach to building its annual resurfacing plan uses the PCI (Pavement Condition Index). It takes three years to complete a full survey of City streets, with a specially designed city van driving the right lane on all arterials (2+ lanes in either direction, major traffic) and

residential streets (usually single lane in either direction, neighborhoods with lighter traffic) and recording images and road flaws. This data is then converted to a PCI score through a somewhat manual process. Streets are graded on a scale from 0 to 100 and the numerical scores are translated to a letter grade from A through F. Streets rated as B or C are targeted for varying levels of repair and maintenance through slurry seal application or asphalt resurfacing. Once resurfaced, those streets' score are changed to a 100, or A. Streets that are slurry sealed have their scores increased by ten points (i.e. 70 -> 80).<sup>115</sup>

The PCI is used by many cities for street infrastructure, although another index called IRI (international Roughness Index) is available as well. Some cities do not have a van at its disposal, and create plans for resurfacing based on complaints or in connection with larger street improvements. Others contract out this activity. Research from several cities show an average 4:1 return on street investments.

Although B and C streets are targeted, interviews with employees and constituents have cited instances where multiple treatments of slurry seal have been applied to the same street within a few years. Typically, a slurry seal application should last 7 years, so it is unclear why the same street would be scheduled twice within that period. BSS is attempting to shift to a corridor vs. street focus and the additional treatment may bring the street into the same maintenance cycle as surrounding streets.

<sup>114</sup> 2014 City Controller's Audit of Los Angeles Bureau of Street Services' Resurfacing & Maintenance Activities

<sup>115</sup> BSS staff interviews

## Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Communication, Customer Centricity, Data, Planning)

Examples of protocol followed by other cities:

Columbus:



San Diego:



San Francisco:



Washington D.C.:



\*OCI (Overall Condition Index) Score is the mix of PCI score (amount of distresses) and Ride Condition Index (RCI) (roughness of the road). The PCI account for 60% of score and RCI, 40% ([https://www.sandiego.gov/sites/default/files/09\\_22\\_16\\_2015-2016\\_pavement\\_condition\\_assessment\\_0.pdf](https://www.sandiego.gov/sites/default/files/09_22_16_2015-2016_pavement_condition_assessment_0.pdf))

### Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Communication, Customer Centricity, Data, Planning)

Expanding from a single factor (PCI score) to multi factor planning structure would take into account the current landscape and uses of the street. Considering the shift in users, volume and the current data lag on PCI, there is ample opportunity to enhance the way the City makes decisions on where and when to pave. This index should objectively determine the streets needed for maintenance without subjective intervention and can be used to develop a multi-year plan, improving upon the City's current one year planning cycle.

In past Council files related to Save Our Streets LA (CF 13-1300-S1), BOE suggested to "apply objective criteria to candidate street segments for use in prioritizing and packaging them into projects. Examples of objective criteria...include:<sup>116</sup>

- The Pavement Condition Index (PCI) score
- Street type
- Traffic density
- Street or drainage complaints
- Readiness for construction
- Clearance of conflict with utilities and other programs
- Transit Use
- Bike Plan route type
- Proximity to other candidate streets in order to facilitate construction
- Proximity to police and fire stations, hospitals and schools

Many of these factors mirror methodology that other cities already have in place.

<sup>116</sup> [http://clkrep.lacity.org/online/docs/2013/13-1300-s1\\_misc\\_3-17-14a.pdf](http://clkrep.lacity.org/online/docs/2013/13-1300-s1_misc_3-17-14a.pdf)

<sup>117</sup> Best Practice: <http://www.streetbump.org/about>

*Issue – Time to survey City Street Network:* Because of the time it takes to survey such a large City asset, streets continue to experience "wear and tear" depending on when it was surveyed. A street score already may be three years old when the survey is complete. Using technology and existing data points, the City can collect more recent, real time information on its streets. For example, building an app similar to the one in Boston (below) could provide an easy, quick feedback

#### Best Practice: City of Boston StreetBump App

*To provide real time data about street conditions, the City's Urban Mechanics team partnered with Connected Bits, IDEO and academics to build a mobile app that crowdsources data from drivers. Drivers click the "Record a Trip" button and "End Trip and Upload" once complete. The app uses GPS and accelerometer sensors on the phone to detect "bumps." Once three or more bumps occur in the same location, the city will inspect the location for repair.*



### Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Communication, Customer Centricity, Data, Planning)

mechanism to share rideability of the streets by using it on Parking Enforcement and Sanitation vehicles/trucks, in addition to the public. This would aid drivers and cyclists who feel road impediments but can't instantaneously record the exact address or put in the request because the car or bike is in motion.

*Issue – Lack of Constituent Engagement and Partnership that could help Strengthen Street Network by drawing attention to gaps in service and programs earlier than the City anticipates:* Residents are recipients of city services, but they can also serve as important partners and inspectors in service delivery. For resurfacing, the program is fully allocated at the beginning of the fiscal year. Residents expect that a newly resurfaced street will last a set number of years. 311 data provided by constituents and cross referenced with recent resurfacing projects can help the City determine whether or not the street is deteriorating at the pace it expects or faster than expected. The number of pothole requests can also serve as an indicator of quality or road decay.

Aside from using crowdsourcing to gather real time data, both the StreetBump and Waze apps can be used to supplement LA311 data. For example, Waze also offers an option to report a road hazard in its App. If the City could create data bridges that automatically generate service

requests within the LA311 system, it would have multiple sources of requests from apps that are already in use by residents. In addition to the StreetBump App, the City of Boston has also partnered with Waze. "Waze-reported incident data will also now go directly into the hands of officials who can address the reported incidents, whether they be a five car pile-up, a broken down vehicle or a pothole."<sup>118</sup> The City already has a layer in NavigateLA with data from Waze as part of a City agreement; however no one is currently analyzing the data to fill service gaps.



*Issue – Reactive approach to Street Maintenance Activities like potholes:* Unlike resurfacing and slurry seal programs, which are pre-programmed, the small asphalt repair, or pothole, program is designed for nimble deployment in response to constituent requests in LA311. The Administration also tackles the issue with small road impediments through its Neighborhood Blitz initiative, which proactively visits each Neighborhood Council area

<sup>118</sup> <https://patch.com/california/hollywood/potholepalooza-to-continue-27efc2ad-hollywood>

<sup>119</sup> Right side image is a screenshot from Waze App

\*Additional use case: The City's Data Analytics Team "...pipes that information directly into the traffic management center and display[s] it on a map that's bumped up against our existing camera infrastructure." (<http://boston.cbslocal.com/2016/05/06/boston-finds-success-by-participating-in-wazes-connected-citizens-program/>)

### Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Communication, Customer Centricity, Data, Planning)

#### **Best Practice: City of Washington DC Waze App Data for Potholeaplooza**

*The number of Waze users in DC mirrors the population of the City at roughly 650,000. DDOT uses Waze data "for a district-wide 'war on potholes' called Potholeaplooza.*

*Waze is helping to crowdsource the discovery of potholes. So far in the 2015 fiscal year, 11,510 potholes were reported to the city by conventional methods like 311 calls from citizens and data entry by city DOT employees. After the city began collecting pothole data from Waze users on March 21, 2015, more than 10,000 pothole reports were made through Waze in less than a month. And that number is growing by the day, says the Department of Transportation."*

to address right of way and road issues. In the last two fiscal years, more than 40,000 pothole requests were recorded in LA311. There is no analysis to verify if the treatment used by crews is effective in preventing future pothole requests at the same location. Sometimes constituents report what they believe is a pothole request when the location is in need of resurfacing. These are closed without action.

Updating the methodology is anticipated to have these benefits:

- Consideration of all users of the street – from drivers to cyclists, car share/vanpool, and bus passengers

- Accounting for high volume locations like schools, hospitals, etc. and future construction work
- Differences in deterioration of the street relative to high volume, high vehicle counts versus more residential, lower volume areas versus a standard treatment cycle
- Review of historical maintenance records and LA311 customer service requests to build out stronger street improvement schedules
- Access to more recent data from street users to confirm PCI score validity, especially for streets with older scores
- Increased constituent participation and ownership through engagement with real time apps
- Assessment of frequency of maintenance needs relative to street lifespan and type of street
- Impact of street cuts to the lifespan of a street and resulting additional maintenance needs
- Leverage existing agreement with Waze to gather real time data from its users to make better programmatic decisions

<sup>120</sup> Best Practice: <https://www.fastcompany.com/3045080/waze-is-driving-into-city-hall>

## Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Customer Centricity, Planning)

### 3.2 Support succession planning, skills development, effective program management and best in class customer service by encouraging knowledge transfer and cross-pollination of process expertise across Bureaus/departments and offering regular training regimens to employees and leaders

Employees are the City's most valuable asset. They hold a wealth of information on many specialized programs. Many of these departments are facing a significant retirement eligible population over the next two years, including senior leadership. As the City approaches the 2028 Summer Olympics, it is unlikely that any of the existing leaders in infrastructure related departments will be still with the City when this event occurs. This makes it critical to uncover a cadre of potential leaders now and begin training them to step into these cross-functional management roles.

Bureau/ Department	% Retirement Eligible Workforce	Date
BCA	45%	As of 6/30/19
BOE	45%	As of 6/30/18
BOS	44%	As of 6/30/18
BSS	46%	As of 6/30/18
BSL	31%	As of 6/30/19
DOT	36%	As of 6/30/18
DWP	36%	As of 6/30/19

<sup>121</sup> Chart: From FY17-18 Department Budget Request Documents

<sup>122</sup> Best Practice: Quoted from *The Game Plan*, Bloomberg on August 30, 2017

*Issue – Lack of Informal and Structured Mentoring Opportunities:* Knowledge transfer is a two way process. New employees joining the City are unfamiliar with the City's processes, regulations and culture. On the other end of the spectrum are seasoned professionals who have successfully navigated a career in public service and can share their expertise with less tenured staff. Having opportunities to pair up these city experts with newer employees gives them a better and faster chance to ramp up and on board into the City.

#### **Best Practice: Reverse Mentorships**

*"We often think of mentorships as something young people ask of their elders. Some companies, like Target and UnitedHealth, are turning that relationship on its head with "reverse mentorships." Instead of having seasoned workers impact their wisdom on greener employees, these businesses have millennials teach boomers how to use newer technologies. The practice started, as many management initiatives did, at GE under Jack Welch, who ordered younger employees to teach senior employees computer skills. The best programs benefit both participants. The younger workers get access to senior leaders, and older workers get to learn how to use Snapchat. It's a win-win for everyone."*

*Issue – Lack of Learning and Underuse of City family Expertise by those who manage programs with similar process and program expertise:* With more than forty

### Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Customer Centricity, Planning)

departments, the City operates in information siloes common in large organizations. Division managers running programs may not realize that the fundamental processes underlying their service delivery are similar to another department's. One manager may have a database storing maintenance activities that others could benefit from, another may have great manuals in that would be useful for new employees. There is not a deliberate attempt to understand and learn across siloes or even divisions. Expertise that could be applicable in many settings often stays with one division, program, department. For example, there are currently efforts to re-route, modernize, and expand the City's street sweeping program. On the surface, skills like route optimization, refill times and disposal sites are applicable for this program. This operational expertise already exists within BOS in its waste and recycling collection programs. In its plan to expand and reshape existing routes, BSS could learn from BOS's success in this area, including from any challenges that BOS encounters when making real time adjustments. City departments should prioritize learning from internal partners before initiating consultant contracts that expend taxpayer funds.

*Issue – Lack of Overall Programmatic Understanding and Insight for Interdepartmental Programs:* The number of interconnected programs in the City related to streets is increasing. In the past year alone, the relaunch of the Sidewalk Repair Program and the launch this year of the Street Reconstruction/Vision Zero Program will be opportunities where program success rests on multiple

agencies. Typically in projects involving multiple owners, each individual manager is only aware of his/her own part in the process. To build a shared success mentality, every step with the corresponding owner and dependencies should be identified to create alignment.

#### **Best Practice: Port Authority of New York and New Jersey Leadership Fellows Program**

*Through this selective program, participants learn the fundamentals across the agency's core divisions, break down siloes across different divisions and gain a better grasp of overall operations. Modeled after the Presidential Management Fellows Program, participants also receive training in policy, leadership and management.*

To better understand the roles that managers play at each step, it is recommended that working groups similar to 2400 be established. The Innovation Lab also offered prototypes on cross functional or shadowing opportunities to achieve better understanding of different steps in successful program delivery.

In addition to providing accountability by submitting status reports at these meetings, the managers should collectively build out what the ideal process looks like, what are the predicted/current bottlenecks, what support is needed from senior staff, etc. Building out overall skills in process mapping, active problem solving as a team instead of siloes, and the ability to shadow those who manage different parts of the process, etc. are management building skills that will aid in project success,

<sup>123</sup> Best Practice: <https://www.panynj.gov/careers/leadership-fellows-program.html>

## Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Customer Centricity, Planning)

### **Best Practice: BOE Associate Rotational Program**

*BOE requires its new associates to complete three rotations across construction, environmental engineering and program management. These typically last 12 to 18 months and provide a foundation in the core work streams of the Bureau. Employees who have completed the program gave it high praise as an introduction to both the Bureau and the City.*

*Issue – Lack of Middle Management and Leadership Academies: There is no formal learning opportunities that overlap Bureaus or departments aside from required manager and employee training from the Personnel department on EEO, discipline matters, safety, etc. There are some development courses available through Personnel's online portal. It also periodically offers an Executive Leadership training class. Role specific managerial skills training are not uniformly offered to city staff, even within DPW, as Bureaus will create and deliver their own trainings. Given the extent of retirement eligible employees, especially at the managerial and senior level, this activity needs to be prioritized department wide. Functional training like Project Management offered by BOE is well received by those within the department and external employees who have taken the training.*

When an employee is promoted from one level to the next and begins to be responsible for staff and their development, there is no required management training

<sup>124</sup> Best Practice: City interviews

<sup>125</sup> Best Practice: City interviews

to support these new managers and supervisors. Although technically skilled in their work stream, there is no guarantee that these individuals will make strong managers, especially at the middle management level where service delivery is usually managed and executed.

A "Public Works University" that incorporates required comprehensive employee training for new managers could be helpful in building new skills. As the City is prioritizing new hires to balance vacancies from retiring employees, basic city and managerial training will be beneficial. Bureaus are asking for this support in their Equitable Workforce and Succession Plans.

### **Best Practice: City of New York Department of Transportation**

*The Department has a dedicated Learning Center with a catalog of courses from supervisor competencies to software training. The Center also runs a 3 month Management Certificate Program that includes discovery of each manager's skills and style through DiSC assessment; a six session Supervisor Certificate program; and a ten session Executive Leadership Program in partnership with NYU Wagner Rudin Center for Transportation Policy and Management.*

Other cities/counties, including Philadelphia, New York, Los Angeles County, Houston, and San Francisco, already have dedicated training resources and modules in place. One interim solution could be to partner with agencies

## Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Customer Centricity, Planning)

and departments with existing trainings and arrange attendance for external employees.

### **Best Practice: Los Angeles County Human Resources Executive Leadership Development Program**

*The Executive Leadership Development Program (ELDP) is offered in partnership with USC and is "designed to enhance the leadership competence of mid-to-senior level managers who aspire to executive leadership positions...[It] is a 13-week program comprised of 12 in-class sessions, web-based activities and assignments, and individualized coaching sessions. The ELDP is designed to build 10 competencies through assessments, lectures, class assignments, and a team-based project (action learning). It includes completion of a 360-degree assessment of County leadership competencies, creation of an individual development plan, and participation in a group project that addresses actual County needs. After graduation, participants continue the learning engagement and connection through membership in an alumni community of collaborative learners including hosted learning events with guest speakers."*<sup>126</sup>

*Issue – Lack of Formal Recognition and Feedback Mechanisms for Employees:* A large percentage of employees within infrastructure programs are field based.

These employees execute critical delivery of programs and are acutely aware of the challenges on the ground. These employees could offer suggestions that would help

streamline or change processes without sacrificing quality. At the Innovation Lab, multiple groups said good ideas are lost or do not get reviewed by senior leaders. Employee interviews also had multiple comments about senior leadership within Bureaus and departments who attempt to solve a issue without speaking to those employees who face the issue on a daily basis. Setting up a channel of communication between field crews and management could prove useful in program improvements.

### **Best Practice: DOT Employee Recognition**

*DOT management recognizes employees for excellent service at Commission and Transportation Committee meetings. Employees are selected each month across divisions. Both individuals and teams can be recognized for quality work effort, embodiment of core values, and going beyond the basic requirements of the job.*

Anticipated Benefits:

- Employees are better skilled and ready to move from individual contributor to management roles
- Better understanding of personal management style when managing a team
- Talent bench for leadership opportunities
- Holistic, multi-program perspective when moving into leadership roles
- Knowledge from seasoned employees is not lost when staff retires

<sup>126</sup> Best Practice: [http://hr.lacounty.gov/career-development/#executive\\_leadership\\_development\\_program](http://hr.lacounty.gov/career-development/#executive_leadership_development_program)

<sup>127</sup> Best Practice: Meeting observations and department documents



### **Tier 3 Recommendations: Improvements to Specific Infrastructure Programs**

*(Addresses themes of Customer Centricity, Planning)*

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- Knowledge and best practices are shared between divisions, Bureaus and departments to employ most efficient and effective processes for city programs
- Frontline employee ideas are heard and possibly implemented to improve programs in the field
- Employees feel valued and are recognized for their contributions to their respective Bureau/department
- Bureau and division siloes are broken down through stronger relationships across inter-Bureau and intra-departmental trainings

## Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Communication, Customer Centricity, Data)

### 3.3 Promote transparency with utility partners and the public by posting the entire projected annual resurfacing plan online with monthly updates of work completion in a user friendly format

*Issue – Lack of Communication with Public and Transparency on Work Plans:* There are a number of departments that are integral to the success of this program, including the public. Currently, the initial list of potential streets slated for street improvements is shared with utility providers and Council offices. Residents and neighborhoods do not receive more than a 30 day notice about upcoming projects and the weekly lists posted to the BSS website are listed on a sub-page. There is also a monthly committed list on the website under Zone I and Zone II Committed Projects. These lists do not use customer friendly language and often have abbreviations like 'CL,' 'D/E,' or 'E/O.'

The City can improve communication with both partners and the public by posting the entire street list online. This would enable city employees and Council staff to point both utilities and the public to the website for the latest resurfacing plan and increase transparency with the public. This will also aid constituents who may be submitting a pothole or paving request in LA311, but currently lack visibility into the resurfacing plan to check if the street is already slated for improvements. Many cities already post their plans on their website.<sup>128</sup> Communication can also be enhanced by attending

<sup>128</sup> Cities include Indianapolis, Washington D.C., San Jose, Austin, Charlotte

<sup>129</sup> <http://www.sanjoseca.gov/DocumentCenter/View/40073>

Neighborhood Council/Alliance meetings across the City once a year to share resurfacing plans directly with residents.

Posting the list online could create a promise of service delivery in constituents' minds. This risk would be mitigated by a simple disclaimer stating that the list is subject to change. For example, San Jose lists this message with its published annual list: "Please note that these streets are subject to change pending final assessments. Streets may be removed from the list to avoid project conflicts during planning and construction phases."<sup>129</sup>

During the week of August 12, 2017 through August 19, 2017, the following streets may be subject to reduced lanes or closure due to road construction and repair. The Bureau will make every effort to complete the necessary work as quickly as possible. We appreciate your patience and hope you will enjoy the improvement once it is done.

Tentative Work Schedule for August 12, 2017 through August 19, 2017		
STREET	FROM	TO
111TH ST	ANTWERP ST	SLATER ST
113TH ST	ANTWERP ST	SLATER ST
114TH ST	PARMELEE AV	CENTRAL AV
115TH ST	EVERS AV	SUCCESS AV
118TH ST	CL E/O CENTRAL AV	BELHAVEN ST
119TH ST	CL E/O CENTRAL AV	BELHAVEN ST
242ND ST	WESTERN AV W/SERV RD	CL W/O WESTERN AV
53RD ST	ASCOT AV	HOOPER AV
58TH ST	COMPTON AV	HOOPER AV
73RD ST	SAN PEDRO ST	MAIN ST
APPERSON ST	SHERMAN GROVE AV	WILLOW SPRING LN
BROWNSTONE ST	D/E E/O LANGMUIR AV	D/E W/O LANGMUIR AV
CALLE JERMAINE	CHASTAIN PY EAST	CALLE PATRICIA
CALVIN AV	CHASE ST	ROSCOE BL
CHASTAIN PY WEST	CALLE PATRICIA	PALISADES DR
COMMUNITY ST	WYSTONE AV	TAMPA AV
CUMBRE VERDE CT	D/E E/O PIEDRA MORADA DR	DIEDRA MORADA DR
FARMINGTON AV	NEWHOME AV	D/E S/O NEWHOME AV
GRAYSTONE ST	RHODESIA AV	MCVINE AV
GROVE ST	WOODWARD AV	MCVINE AV
LANGMUIR AV	ELLENBOGEN ST	GRAYSTONE ST
MONTE ALTO PL	PIEDRA MORADA DR	D/E W/O PIEDRA MORADA DR
NASSAU AV	D/E N/O GRAYSTONE ST	GRAYSTONE ST
NEWHOME AV	FOOTHILL BL	TOPLEY LN
PALISADES DR	CALLE ARBOLADA	CHASTAIN PY WEST
RHODESIA AV	GROVE ST	GRAYSTONE ST
SHERMAN GROVE AV	LE BERTHOIN ST	WENTWORTH ST
TOPLEY LN	D/E E/O NEWHOME AV	NEWHOME AV
WALL ST	61ST ST	GAGE AV
WALL ST	59TH PL	BOTH ST
WYNGATE ST	SHERMAN GROVE AV	NEWHOME AV
YATES ST	APPERSON ST	HIDDEN OAK DR
YATES ST	HIDDEN OAK DR	D/E W/O HIDDEN OAK DR
<b>MAJOR ARTERIAL STREETS</b>		
GRAND VIEW BL	NATIONAL BL	STANWOOD DR
LINDLEY AV	SATISFY ST	SHERMAN WY
MAGNOLIA BL	WHITSETT AV	COLDWATER CANYON AV

## Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Communication, Customer Centricity, Data)

### Best Practice: Washington D.C.

#### Annual Resurfacing Plan

The City posts its annual work plan online in an easy to read format. It identifies the funding source with a proposed start date. It also has links to the previous two years on its website. The City also posts its planned sidewalks, curb and gutter and alley improvement plans in the same Google doc.

#### Sample of Washington D.C. 2016 DDOT Work Plan posted online<sup>130</sup>

DDOT Work Plan: Paving, Streets, Alleys, Sidewalks, Curb and Gutter

These locations are subject to change.

See DDOT FY16 Work Plan, [DDOT FY17 Work Plan](#), [DDOT FY18 Work Plan](#).

WORK TYPE	FUNDING SOURCE	WARD	BLOCK	STREET NAME	FROM	TO	STATUS	PROPOSED START DATE	EXPECTED DURATION (DAYS)	ACTUAL START DATE	DATE COMPLETED	PLAN YEAR
SIDEWALK REPAIR	LOCAL	1	2139	GEORGIA AVE NW	W ST NW	V ST NW	COMPLETED					2016
CURB & GUTTER REPAIR	LOCAL	1	2001	KALORAMA RD NW	CONNECTICUT AVE NW	20TH ST NW	COMPLETED	02/29/2016		04/04/2016	05/11/2016	2016
CURB & GUTTER REPAIR	LOCAL	1	1818	KALORAMA RD NW	18TH ST NW	19TH ST NW	COMPLETED	04/07/2016		03/17/2016	04/29/2016	2016

WORK TYPE	FUNDING SOURCE	WARD	STREET NAME	FROM	TO	STATUS	PROPOSED START DATE	EXPECTED DURATION (DAYS)	ACTUAL START DATE	DATE COMPLETED	MILES	PLAN YEAR
STREET PAVING	LOCAL	1	10TH ST NW	U ST NW	V ST NW	COMPLETED			3/1/2016	7/5/2016	0.08	2016
STREET PAVING	LOCAL	1	18TH ST NW	QUARRY RD NW	HARVARD ST NW	COMPLETED			3/14/2016	6/30/2016	0.02	2016
STREET PAVING	LOCAL	1	18TH ST NW	PARK RD NW	MONROE ST NW	COMPLETED	7/6/2017		9/6/2016	9/14/2016	0.06	2016
STREET PAVING	LOCAL	1	18TH ST NW	MONROE ST NW	NEWTON ST NW	COMPLETED	7/6/2017		9/6/2016	9/14/2016	0.06	2016

<sup>130</sup> Best Practice: District Department of Transportation website: <http://ddotfiles.com/db/WPFY16/>

## Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Communication, Customer Centricity, Data, Planning )

### 3.4 Support timely and quality project delivery within Department of Public Works by streamlining contract processing time and strengthening contract language to consistently include performance metrics

*Issue – Length of Construction Contract Processing Time:* The full-time Citizen Board came up in every conversation with staff. The largest advantage cited was the approval of contracts. Of the 12 listed Board responsibilities in the City Charter, 75% relate to the administration, approval and review of contracts. Interviews with the Board and review of Board agendas show that over 90% of Board meetings are spent on contract related items. The Board also relieves City Council from this workload so members can focus on policy matters.

In spite of the availability of meetings three times a week, speed of contract approvals and adjustments was cited as the number one overall bottleneck in providing services, along with the hiring process, in employee interviews. On average, a contract take 430 days to process(Appendix D).

*"It takes 3 years to process a 3-year contract"*

The administration of contract related tasks also requires processing by the Bureau of Contract Administration and the Accounting unit within the Board. When a contract is scheduled to be heard in open session, staff from the

Chart Source: City departments and BPW

#### 5 Year Historical Review of Construction Related Contracts

	5 Yr Avg \$ of Contracts Approved	5 Yr Avg Number of Contracts per Year	Avg Time from Approval to Bid Date
DPW	\$404M	58	37 days
DWP	Did not provide	Did not provide	Did not provide
LAWA	\$620M	6	27 days
POLA	\$12M	14	40 days

Bureaus attend pre-briefings to prepare Commissioners for public Board meetings. These are also supported by mandated Board reports to assess the bid strength or value of the change order. All bids are only accepted in hard copy, although efforts are in progress to automate parts of the bidding process, including acceptance of electronic bids. The latter should help with processing time.

Council has requested and received several reports addressing solutions to the contract process. The last report in April 2016 (CF 15-1507) contained several citywide recommendations to improve contract management for all contracts, not limited to construction. This report included a process map that can be used to eliminate/combine steps where possible and reduce average processing time within the authority of the Board. Recommendation 1.2 can assist in this task.

### Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Communication, Customer Centricity, Data, Planning )

The Board of Public Works has put together an Ad Hoc Committee on Procurement Reform to address vendor diversity and could be the existing vehicle through which improvements are made within the department.

City	Pop.	Centralized Contracting/ Procurement Function?
Austin	932K	No
Boston	667K	Yes
Charlotte	827K	Yes
Chicago	2.7M	Yes
Columbus	860K	Yes
Dallas	1.3M	Yes
Denver	683K	Yes
Detroit	677K	Yes
El Paso	681K	Yes
Fort Worth	833K	Yes
Houston	2.3M	Yes
Indianapolis	855K	Yes
Jacksonville	868K	Yes
Los Angeles	<b>4.0M</b>	<b>No</b>
Memphis	656K	Yes
Nashville	655K	Yes
New York	8.5M	No
Philadelphia	1.6M	Yes
Phoenix	1.6M	No
San Antonio	1.5M	No
San Diego	1.4M	No
San Francisco	865K	Yes
San Jose	1.0M	Yes
Seattle	684K	Yes
Washington DC	672K	Yes

Chart Source: City websites, City interviews

In general, most U.S. cities leverage economies of scale in purchasing by centralizing contracting and procurement services. Los Angeles only does this for commodities (copy paper, toner, etc.) through its General Services Department. All other types of contracts are department specific and may have different bidding requirements. A city with an annual spend of \$8B for commodities, construction and professional services should undertake a more strategic approach of these funds. The City has recognized this issue and is working to hire a Chief Procurement Officer that will support citywide improvements in this area.

*Issue – Lack of Consistent Accountability Standards for Contractors:* The City works hard to deliver services to residents. In some cases, the City partners with community groups, nonprofit organizations and private firms to provide raw materials, technical expertise and/or program management. Over time, these groups have had mixed reviews about their performance. Some contracts explicitly state that an inspector signs off on work completed at specific intervals, others make no reference to proof of work completed.

The Department should be consistent in its approach to contractor work by applying a “pay for performance” framework. City Council has raised several examples recently of poor contractor performance that could be remedied by requiring inspection of work before final payment is awarded. The Mayor's focus on data and metrics should extend to our partners as well, who are supporting service delivery to constituents.

### Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Communication, Customer Centricity, Data, Planning)

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*"Contract management tends to focus on compliance instead of performance improvement, with contractors held accountable for inputs and activities rather than outcomes and impacts (if performance is measured at all). Governments make insufficient use of data on past performance in making future procurement decisions, and tend not to incorporate performance incentives into contracts."*<sup>131</sup>

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Disputes have also occurred between parties when the definition of the scope of work as listed in the contract and the contractor's interpretation do not match.<sup>132</sup> Inclusion of photos of the locations, as appropriate, or required review of the worksite by the contractors could be beneficial as part of the bid process. This would not only remove contractor complaints that they were not aware of the extent of the work, but also reduce change orders over the course of the contract as bids should more accurately reflect actual work intended by the contractor.

Historical performance on contractors is not factored in the contract award process. The City/County of San Francisco noted that it found that "poor performing contractors tend to have more noncompliance notices, higher soft costs, and more change orders than high performing contractors."<sup>133</sup>

*Issue – Contract language is not consistent across*

<sup>131</sup> [http://govlab.hks.harvard.edu/files/siblabb/files/results-driven\\_contracting\\_an\\_overview\\_0.pdf?m=1456763365](http://govlab.hks.harvard.edu/files/siblabb/files/results-driven_contracting_an_overview_0.pdf?m=1456763365)

<sup>132</sup> <https://cityclerk.lacity.org/CouncilAgenda/AttachmentViewer.aspx?AttachmentID=36742&ItemID=38625>

<sup>133</sup> <http://stcontroller.org/sites/default/files/FileCenter/Documents/5377-CIT%20ContractorPerformanceEvaluationAudit.pdf>

<sup>134</sup> The 2015 City Controller Audit of the City's Change Order Management Process

*providers about when payments are made: Some contracts allow for payment at the beginning of the contract term, before any work has begun. In certain cases, the contractor needs to purchase additional supplies and equipment to complete the work outlined in the contract. In other cases, payment is stated for the end of the contract.*

*Issue – Change Order Processing Time: Contract amendments, or change orders, also involve a somewhat lengthy process that includes the submittal of another Board report stating the need to adjust the original contract amount and presentation at a Board meeting. Often this arises from unforeseen circumstances not identified in the original contract. Some contracts have multiple change orders for the contract, driving up the cost of the overall contract.*

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*"By the time change orders are added, the contractor is no longer the lowest, most responsive bidder"*

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An analysis on the number of change orders, amount of change orders per contract, and type of contract could shed greater details on how frequently change orders occur. It could also identify how often the contractor selected does not end up as the lowest bidder at the contract's conclusion. For example, a bidder selected for a contract may submit a number of change orders which drives the overall contract value higher than any of the original bids. The 2015 City Controller cited DPW as the "third in percentage of change order costs."<sup>134</sup>

### Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses themes of Communication, Customer Centricity, Data, Planning)

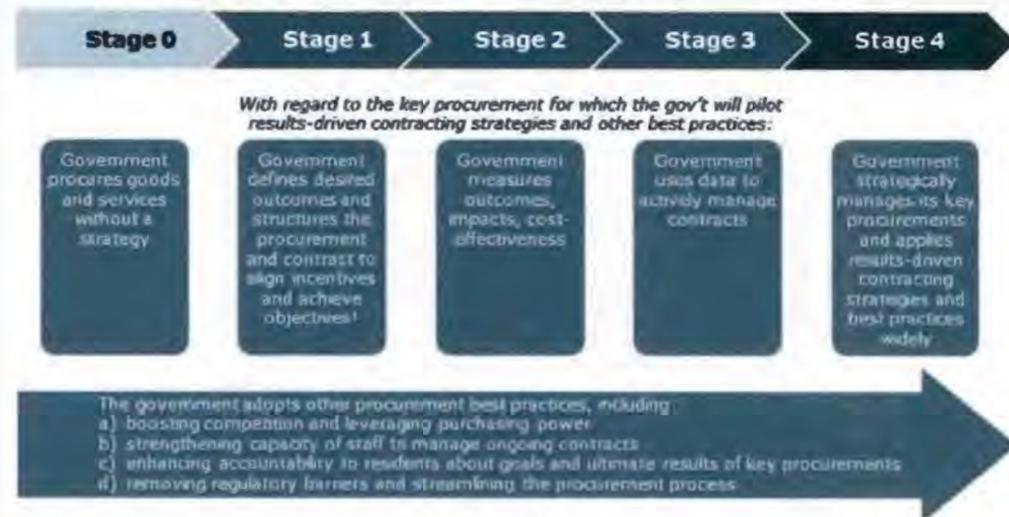
Anticipated Benefits from making adjustments to contract process:

- Contractor payouts based on strict goals and outcomes, not volume of work or activities
- Payments authorized after work is completed, not at the beginning of the contract as some contracts indicate in its terms and conditions
- Strategic vendor management by accounting for historical contractor performance in the awarding of bids, perhaps by removing/adding points on bid package in the same way veterans, etc. are given extra consideration
- Better understanding of current state of service delivery prior to contractor commencing work, and setting performance standards accordingly
- Application of vendor probation period for new vendors to test their ability to manage workload and abide by city standards
- Minimizing change orders on contracts where possible
- Maximizing taxpayer funds for city projects

#### Best Practice: Results-Driven Contracting Harvard Government Performance Lab

The Lab “provides technical assistance to cities that seek to improve the results they achieve with their contracted dollars by employing results-driven contracting strategies, including:

- Identifying goals for their key procurements and designing their procurement strategy to align the contractors' incentives with these goals;
- Setting up systems to measure outcomes, impacts and/or cost-effectiveness of procurements using analytical methods and administrative data and enabling a comparison of performance over time and across similar contractors;
- Using performance data to actively manage ongoing contracts, including by collaborating with the contractor to monitor progress, detect issues real-time and implement mid-course corrections as needed; and
- Identifying a city's portfolio of key procurements and strategically managing these procurements to continuously improve outcomes.”



<sup>135</sup> Best Practice: [http://govlab.hks.harvard.edu/files/siblab/files/results-driven\\_contracting\\_an\\_overview\\_0.pdf?m=1456763365](http://govlab.hks.harvard.edu/files/siblab/files/results-driven_contracting_an_overview_0.pdf?m=1456763365)

## Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses Alignment, Communication, Customer Centricity, Data)

### 3.5 Improve quality trench work by supporting permittees in assessing the performance of their subcontractors, educating them on city standards, non-compliant work and timeliness of repairs as indicated on the permit

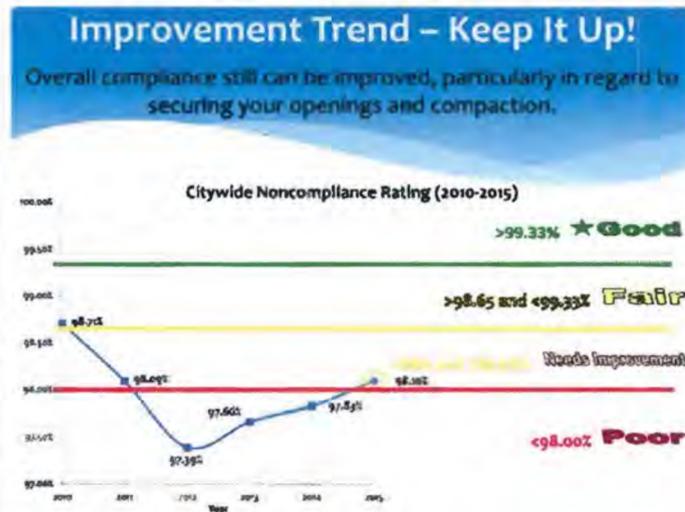
**Issue – Lack of Accountability when Subcontractor completes work versus Permittee:** The city works as a partner with private firms and its public utility, DWP, to inspect right of way work. Often these entities do not have their own in-house crews and contract permitted work out to private firms. This raises accountability issues when a City inspector comes to the site as the field crew

#### Best Practice: City of Boston Contractor Report Card

The City publishes a monthly report card that tracks permittee work & violations. The City translates that to a citywide score to ensure safety in the public right of way as well as minimize traffic inconveniences to the public by adhering to terms of permits.

City of Boston Department of Public Works  
Noncompliance Rating Summary  
Report

Category	Count	Percentage	Target
Overall Noncompliance	100	1.5%	1.5%
Openings	80	1.2%	1.2%
Compaction	20	0.3%	0.3%
Other	0	0%	0%



is not listed on the permit. Usually the City becomes aware of subcontracted work when there is an issue. Utility providers must then research the work order internally and contact the appropriate subcontractor to either repair the faulty work or demonstrate that the street issue was in place prior to its permitted work.

**Issue – Lack of Education on City Standards:** Since utility providers often work with subcontractors to complete their underground asset work, these subcontractors are not as well versed on City protocol as the permittees. Requirements that are listed on the permit may not be passed on to the subcontractor. Although the permit is pulled by a utility provider, an inspector can arrive at a work site and the permittee will not be present on site. The City's permit is not with the subcontractor, making it difficult for city inspectors to perhaps enforce permit rules. For example, every "U" permit requires the permittee to call for final inspection. This is to be done 24 hours in advance of the backfill

### Tier 3 Recommendations: Improvements to Specific Infrastructure Programs

(Addresses Alignment, Communication, Customer Centricity, Data)

process so inspectors can observe that the proper compaction has occurred. In many cases, the permittee (if they call) does not provide sufficient notice and on arrival, the trench is usually covered. The inspector is unable to see the quality of the work. The City of Boston requires attendance of all utility providers and their subcontractors wishing to work on the public right of way to an annual meeting in which City standards are shared and questions can be answered.

*Issue – Lack of Quality Trench Work:* To access underground assets for maintenance and upgrade, utility providers will apply for a permit from BOE which usually entails payment of a street restoration fee for the damage to the surface of the street. Because the City is unable to inspect the trench work as previously cited, the quality of the restoration of the trench and the street cannot be verified. This can lead to sinking pavement and potholes at the location of the trench in the future. Normally, the City will automatically come and “patch” a pothole if a customer request comes through the LA311 system. However, a number of these could be remnants of former utility cuts that should be warrantied under the permit for five years. The City does not have enough inspectors to verify restoration of the street nor to check the condition of the street one year later when most of the settling on or around the patch may occur. These street cuts also reduce the lifespan of the street itself.

BCA is considering a contractor “report card” to provide better oversight and information to permittees. This

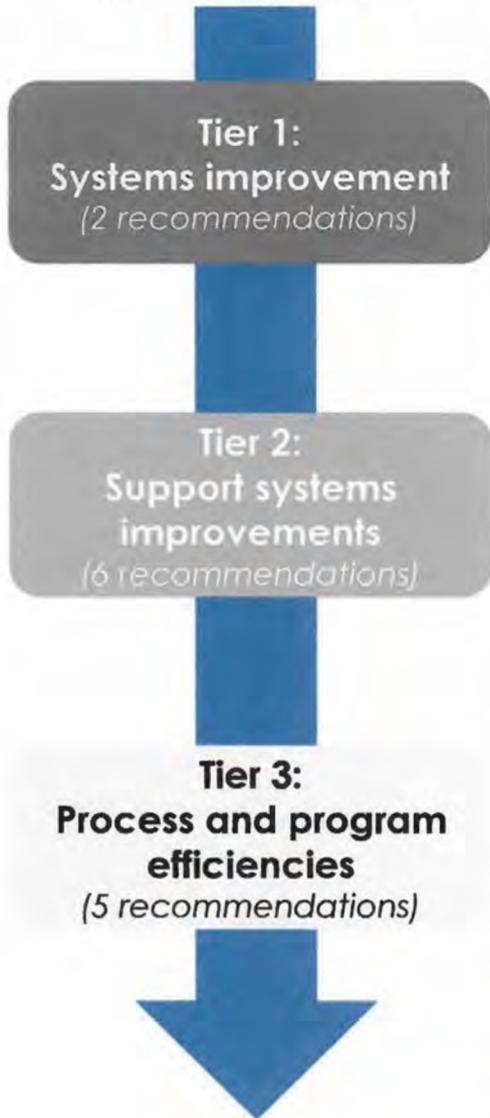
transparency should help identify consistently low performing subcontractors to the benefit of permittees. It will also help BCA deploy its limited resources to jobs where extra supervision may be necessary to preserve the City's streets.

In some cases, it also appears that subcontractors are not well supervised by the permittees, as streets are not repaired and restored to the appropriate condition. This requires BCA to reach out to the permittee, who then communicates with their general internal construction supervisor, who then needs to track down which subcontractor did not complete the job, who then needs to return to the work site and make the repairs. Disagreements between acceptable end products by the City and the permittee have occurred.

#### Anticipated Benefits:

- Street lifespan is preserved and valued by all entities
- Parties working in the street partner with BCA to ensure compliance with City standards
- Utility providers work with the City to educate their subcontractors on acceptable work products
- Subcontractors make timely repairs to deficient work

Tiers refer to the scale of the recommendation, not the importance or timing



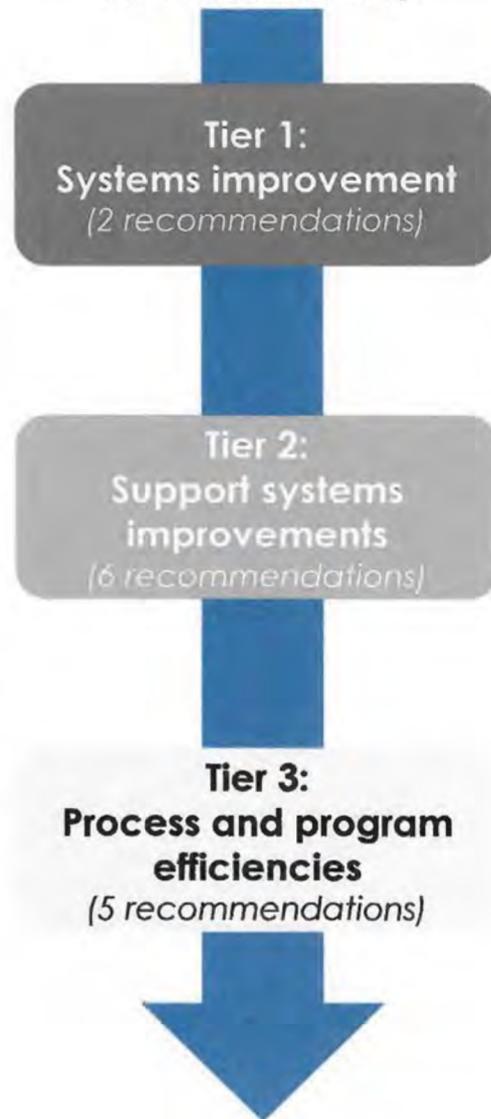
### Tier 1: Improvements to the City’s Infrastructure Delivery Ecosystem

- **1.1:** Improve coordination, strengthen overall alignment, optimize synchronization of street related programs, and enhance service delivery for constituents by bringing all transportation programs into the Department of Public Works to make the Board of Public Works the single oversight authority for all activities over, on and under the street for Council controlled departments
- **1.2:** Address the lack of proactive strategic planning, comprehensive project management, data analyses, and interdepartmental program goals by creating an Office of Infrastructure Management that will serve as the citywide lead on all infrastructure programs to drive cross functional performance improvements

### Tier 2: Improvements to Infrastructure Support Systems

- **2.1:** Strengthen oversight over underground activities, optimize time-related street activities, strengthen City paving plans, preserve City street investments, and provide transparency to City partners, utility providers and the public by converting utility coordination from a manual process to an electronic system
- **2.2:** Address lack of asset data, timing of maintenance activities, selection of appropriate preventative and deferred maintenance lifecycle activities and scheduling for asset upgrades by prioritizing strategic asset management activities across asset classes
- **2.3:** Resolve consistent customer issues with closed status messaging, streamline intake process and ease of use, and provide better transparency tools by making enhancements to the LA311 CRM system
- **2.4:** Preserve taxpayer investments in the City's street network by updating policies affecting street protections that could include establishment of a moratorium for newly reconstructed streets and a new Concrete Street Damage Restoration Fee
- **2.5:** Establish guidelines for large, critical infrastructure investments by reinstating a citywide Capital Improvement Plan
- **2.6:** Bolster proper oversight and direct better allocation of resources to prevent multiple agencies from maintaining the same asset or program by clarifying Bureau and department roles in overlapping programs

Tiers refer to the scale of the recommendation, not the importance or timing



### Tier 3: Improvements to Specific Infrastructure Programs

- **3.1:** Strengthen the city's overall street network by updating the methodology for resurfacing and slurry seal programs to employ factors beyond the PCI score to prioritize paving and maintenance projects
- **3.2:** Support succession planning, skills development, effective program management and best in class customer service by encouraging knowledge transfer and cross-pollination of process expertise across Bureaus/departments and offering regular training regimens to employees and leaders
- **3.3:** Promote transparency with utility partners and the public by posting the entire projected annual resurfacing plan online with monthly updates of work completion in a user friendly format
- **3.4:** Support timely and quality project delivery within Department of Public Works by streamlining contract processing time and strengthening contract language to consistently include performance metrics
- **3.5:** Improve quality trench work by supporting permittees in assessing the performance of their subcontractors, educating them on city standards, non-compliant work and timeliness of repairs as indicated on the permit

# Roadmap for Implementation

	Rec #	Recommendation	Assign to?	Start	FY2017-2018	FY2018-2019	Beyond FY2019
Tier 1: Systems improvement	1.1	Consolidate transportation programs into the Department of Public Works	Mayor's office, City Council, CAO, BPW	FY2018			
	1.2	Establish an Office of Infrastructure Management	Mayor's office, City Council, CAO, BPW	FY2018			
Tier 2: Support systems improvement	2.1	Convert utility coordination from a manual process to an electronic system	Mayor's office, City Council, CAO, BPW	FY2017			
	2.2	Prioritize asset management activities	CAO, BPW	FY2017			
	2.3	Make enhancements to the LA311 CRM system	ITA, relevant City departments	FY2017			
	2.4	Update policies affecting street protections	Mayor's office, City Council	FY2017			
	2.5	Reinstate Capital Improvement Plan and strengthen the City's capital policy	Mayor's office, City Council, CAO	FY2018			
	2.6	Clarify Bureau and department roles in overlapping programs	Mayor's office	FY2018			
Tier 3: Process and program efficiencies	3.1	Update methodology for resurfacing and slurry seal programs	BPW, BSS, Mayor's office, City Council	FY2018			
	3.2	Cross-pollination and training across Bureaus/departments	BPW, Personnel Dept	FY2018			
	3.3	Post the entire projected annual resurfacing plan online	Mayor's office, BPW, BSS	FY2017			
	3.4	Streamline contract processing time within DPW and strengthen performance standards	BPW, BCA	FY2018			
	3.5	Address subcontractor quality that work under permittees	City Council, BPW, BOE, BCA	FY2018			

- Grants Management and Administration:
  - Research the possible adoption of a policy to guide appropriate pursuit of grant opportunities, ensuring that doing so does not impinge on current work plans.
  - Investigate the benefits of a citywide grants function to serve as the fiscal agent of all grant funds as grant opportunities are not limited to public works or transportation; many cities centralize grant administration into a citywide function to 1) gather and disseminate grant opportunities through a monthly/quarterly newsletter to staff, 2) harness the knowledge of grant specialists who aid in completing the applications, and 3) have dedicated staff to manage grant reporting, auditing and accounting. This is usually housed in the Budget/Finance office for municipalities. Atlanta, Chicago, Houston, Miami, Philadelphia, Pittsburgh, Portland are examples of cities with a centralized grant function.
  - There are many departments in Los Angeles applying for grants like public safety and there is an opportunity to share best practices from other city departments. An annual review and meeting with all employees that manage grant administration is suggested.
  
- Water Management:
  - Complete Council action citing a report back on the feasibility and benefits of a united water enterprise for the City's constituents. Los Angeles became one of the nation's largest metropolis' because of annexations by neighboring cities that needed access to water after the L.A. Aqueduct opened. Given the severe water shortage that southern California has faced and could continue to face, a thorough analysis needs to be done to the benefits and risks of having all types of water in one place. The coordination between water related entities will only increase if current weather patterns persist.
  
- Hiring/Retention Process:
  - Investigate ways to increase equity and access to talent for all departments, especially when lists are shared among multiple departments that have varying salary levels for the same role. Consider ways to retain department staff aside from salary.
  - Reduce succession planning risks with retirements and promotions: staff in certain groups are being promoted too fast when newer hires may not be ready for leadership roles. The depth of the talent bench at the middle management level is not large enough.



## For Further Investigation

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- Infrastructure Portfolio Analysis:
  - Though out of scope for this project, a deep dive examination into all infrastructure programs to review program objectives against Bureau missions to confirm proper alignment is needed. Many programs have been housed in the same group for decades that may be better suited in other areas. Consider moving programs as appropriate.



## Acknowledgements and Thank Yous

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**Project Date:**

2017

**Project Lead:**

Office of the City Administrative Officer  
Under the leadership of Interim CAO, Rich Llewellyn, and former CAO, Miguel Santana  
and Executive Officer and Assistant CAO, Patty Huber

With support from The Mayor's office, City Council, Office of Chief Legislative Analyst, and the Board of Public Works

In partnership with FUSE Corps, Inc.

**Executive Advisory Team:**

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Patty Huber, CAO

Matt Szabo, Mayor's Office

Barbara Romero, Mayor's Office

Carol Armstrong, Mayor's Office

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John Popoch, City Council District 3, Public Works and Gang Reduction Committee

Paul Backstrom, City Council District 11, Transportation Committee

Ackley Padilla, City Council District 6, Energy, Climate Change, and Environmental Justice Committee

Kevin James, Board of Public Works

Heather Repenning, Board of Public Works

**Thank You**

A sincere thank you to each of the interviewees, internal and external, for their honest feedback  
to help the City improve the delivery of infrastructure services and programs

The Mayor's Open Data Team and ITA for their technical support



## Appendices

- **A:** Historical Timeline
- **B:** City Charter Language for Select Infrastructure Departments
- **C:** City Clerk Files on Commissions
- **D:** Various City reports (sample of reviewed files)
- **E:** Additional Best Practices and City Research
- **F:** Rapid Innovation Lab Materials

Consolidated Timeline of Major Milestones

Department of Public Works	Department of Transportation	Department of Water and Power
<ul style="list-style-type: none"> <li>▪ 1855: Election of the first City Surveyor and Engineer.</li> <li>▪ Prior to 1872: The City citizens created private sewers and were responsible for cleaning the front of their property.</li> <li>▪ 1872: The first municipal street service position created—Superintendent of Streets and Highways.</li> <li>▪ 1873: The City acquired the private sewers; established a public sewer system.</li> <li>▪ 1880: Main Street was the first paved road in the City.</li> <li>▪ 1880s: The separation of storm drains and sewers first formed.</li> <li>▪ 1894: Sewage was disposed into the ocean without filter.<sup>1</sup></li> <li>▪ 1905: City charter amendment established the Department of Public Works.</li> <li>▪ 1910: The Bureau of Street Maintenance &amp; Inspection was created. It covered streets with gravel collected from business' and residents' cellars.</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1897: The first gasoline car in Los Angeles.</li> <li>▪ 1900: First private posting of wooden guide signs indicating community names, mileage and directions—made with steel in 1913.</li> <li>▪ 1914: 1600 vehicles in Los Angeles.</li> <li>▪ 1923: First gas-powered buses introduced.</li> <li>▪ 1924: 1924 Major Traffic Plan proposed by a private commission.</li> <li>▪ 1925: First simplified traffic code passed by ordinance in 1924 was implemented—introduced right turns on lights, painted curbs, pedestrian rules, and yellow school crosswalks.</li> <li>▪ 1925: Department of Building and Safety installed and operated traffic signals.</li> <li>▪ 1928: Traffic signal operations, painting curb lines and coordinating parking restrictions transferred to the Police Department (from the Department of Building and Safety).</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1850: The city's first public methods of water distribution and protection.</li> <li>▪ 1868: 30-year lease of all City water rights and rates granted to private LA City Water Company.</li> <li>▪ Prior to 1882: The City citizens were responsible for providing light in the front of their property.</li> <li>▪ 1882: City contract to provide street lighting via electricity; first instance of public street lighting.</li> <li>▪ 1882-1913: Private companies responsible for electricity generation and distribution.</li> <li>▪ 1902: City acquisition of LA City Water Company's private waterworks system.</li> <li>▪ 1902: City ordinance established the LA Water Department and Board of Water Commissioners (7 <u>elected</u> members; mainly under the authority of City Council)</li> <li>▪ 1903: City charter amendment re-establishing a 5-member Board of Water Commissioners that are appointed by the Mayor and</li> </ul>

<sup>1</sup>[https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p/s-lsh-wwd-cw-p-hwrp?\\_adf.ctrl-state=fg9hn5c5y\\_4&\\_afLoop=10121125257417649#!](https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p/s-lsh-wwd-cw-p-hwrp?_adf.ctrl-state=fg9hn5c5y_4&_afLoop=10121125257417649#!)

Consolidated Timeline of Major Milestones

Department of Public Works	Department of Transportation	Department of Water and Power
<ul style="list-style-type: none"> <li>▪ 1915: Asphalt Plant I was constructed.</li> <li>▪ 1925: Asphalt Plant II was constructed.</li> <li>▪ 1925: The first wastewater treatment plant, Hyperion Treatment Plant was established.</li> <li>▪ 1925: Bureau of Street Lighting established.<sup>2</sup></li> <li>▪ 1925: City charter amendment increased Board membership from 3 members to its current 5 members.<sup>3</sup></li> <li>▪ 1928: Lot Cleaning Division created.</li> <li>▪ 1941: Street maintenance responsibilities transferred to the new Bureau of Maintenance and Sanitation.</li> <li>▪ 1942: Inspection responsibilities transferred to the newly established Bureau of Inspection.</li> <li>▪ 1947: Board of Public Works abolished the Bureau of Maintenance and Sanitation and created the Bureau of Street Maintenance.<sup>4</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ 1930: Establishment of Bureau of Street Traffic Engineering, still under the Police Department. Re-evaluation of street sign services that now included community names, mileage, directions, parking signs, stop signs, warning signs, and U.S Highway and State Highway shields. The "City" assumed these responsibilities.<sup>5</sup></li> <li>▪ 1947: State assumed the traffic sign responsibilities on State Highways.</li> <li>▪ 1949: City passed ordinance that established the first formal department for traffic control and congestion: the Department of Traffic Engineering, which transferred services from the Police Department.</li> <li>▪ 1953: City charter amendment passed to replace the Department of Traffic Engineering with the Department of Traffic, a more transportation-intensive organization.<sup>6</sup></li> </ul>	<p>Council. The Board also assumed more autonomous authority over operations—established as a proprietary agency.</p> <ul style="list-style-type: none"> <li>▪ 1903-1913: Water Board created the Bureau of Los Angeles Aqueduct and the Bureau of Los Angeles Aqueduct Power.</li> <li>▪ Public projects of LA Aqueduct (completed 1913) and San Francisquito Power Plant No.1 (completed 1911). This marked the initial intersectionality between water and power services.</li> <li>▪ 1911: City charter amendment established the Department of Public Service.</li> <li>▪ 1916: First municipal distribution of energy—a utility pole.</li> <li>▪ 1920: City charter amendment to establish municipal control and ownership over electricity generating and distributing facilities was passed.</li> </ul>

<sup>2</sup> due to the increase in traffic and the resulting need for lighting: <http://bsl.lacity.org/history.html>

<sup>3</sup> LA Board of Public Works Fact Sheet ([http://dpw.lacity.org/sites/g/files/wph731/f/hist\\_factsheet.pdf](http://dpw.lacity.org/sites/g/files/wph731/f/hist_factsheet.pdf))

<sup>4</sup> which consisted of Street Maintenance and Lot Cleaning Divisions

<sup>5</sup> Source was not clear as to what exact City organization.

<sup>6</sup> This new department developed more intensive services, such as new traffic policies, traffic planning functions, parking restrictions, left turn lanes.

Consolidated Timeline of Major Milestones

Department of Public Works	Department of Transportation	Department of Water and Power
<ul style="list-style-type: none"> <li>▪ 1952: Bureau of Street Maintenance assumed the Street Use Inspection Division from the Bureau of Inspection.</li> <li>▪ 1955: Tree services reassigned to the Department of Public Works, specifically the Bureau of Street Maintenance.<sup>7</sup></li> <li>▪ 1979: Transportation Bureau in DPW transferred to new Department of Transportation.</li> <li>▪ 1990: Department of Public Works had 7 bureaus.</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1979: The current Department of Transportation was established by ordinance.</li> <li>▪ 1979-1983: DOT initiated its bike lanes services.</li> <li>▪ 1984-1988: Transit services inaugurated &amp; Metro rail coordination initiated by DOT.</li> <li>▪ 2016: Bike share program initiated in partnership with Metro.</li> <li>▪ 2017: Car share program initiated</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1931: The Bureau of Power and Light<sup>8</sup> purchased all but 2 private companies.</li> <li>▪ 1937: The Department of Public Services becomes the current Department of Water and Power.</li> <li>▪ 1939: DWP emerged as sole provider of electrical services in the City.</li> <li>▪ 1947: City charter amendment removed the city voter approval requirement to issue bonds.</li> <li>▪ 1977: Charter amendment took salary-setting power from the Commission to Council.</li> <li>▪ 1984: ED39 passed by Mayor.</li> <li>▪ 1991: Prop 5 passed.</li> <li>▪ 1999: New Charter passed.</li> </ul>

<sup>7</sup> The tree services prior to the Street Tree Division were under the jurisdiction of the Parks Department; these services would lie under the Street Tree Division, renamed as the Urban Forestry Division in 2004.

<sup>8</sup> Under Department of Public Services

Board Responsibilities:

**Sec. 581. Board of Public Works.**

Members of the Board of Public Works shall devote their entire time to the duties of office. Subject to the Charter and applicable ordinances and law, the board shall have the power and duty to:

- (a) set policy for and manage the Department of Public Works;
- (b) establish procedures for the examination, consideration and preparation of requests for proposals or bids, and for the advertisement and establishment of the amount of the required bond, all as provided by Sections 370 through 378 and related ordinances, for any work or improvements;
- (c) approve the award of contracts;
- (d) fix the time when work shall be commenced and completed in accordance with applicable law;
- (e) exercise the power of eminent domain, subject to Council authorization, and lease or purchase property on behalf of the City for the construction and maintenance of public works projects;
- (f) exercise the powers and duties imposed by law or delegated by the Council relating to the award of contracts for work specified in Section 580 and the determination of benefits, damages and costs incident to a proposed change or improvement of any public place, right-of-way or property belonging to the City and the making and levying of assessments upon property to cover the damages and costs;
- (g) conduct hearings and hear appeals as authorized by ordinance relating to the work of the department, including hearings pertaining to special assessments;

(h) on its own initiative or upon complaint, investigate departmental operations and acts of employees and report findings to the Director of Public Works, the Mayor and the Council;

- (i) approve specifications for public works construction projects;
- (j) accept completed public works projects, provided that the board may delegate to the Director of Public Works the authority to accept projects involving less than one hundred thousand dollars (\$100,000) or such other amount prescribed by the board;
- (k) make recommendations about short- and long-range public works plans and programs to the Mayor and Council; and
- (l) annually present to the Council at its meeting in the second week of July, a report for the previous fiscal year stating the amount of proceeds from the sale of bonds, the purposes for which those proceeds have been expended, the amount expended, the balance in each bond fund and other information and suggestions as it deems appropriate.

The Board of Public Works shall have power to proceed with all such construction and maintenance, and to carry out any of the purposes herein mentioned from any funds under its control and available for such purposes; provided, that nothing in this section shall be construed to abridge the power of the Council to order any work or improvements and to provide the manner of paying therefor, such work or improvement, however, to be done under the superintendence and control of the Board of Public Works.

Board Powers and Duties & Transfer of Powers:

**Sec. 580. Public Works Department Powers and Duties.**

The Department of Public Works shall have the following powers and duties:

- (a) design, construct, excavate and maintain streets and public works improvements including but not limited to bridges, public parkways and rights-of-way, sanitary sewers and storm drains, water and sewer treatment facilities, landfills and public rights-of-way lighting facilities owned by the City;
- (b) design and construct public buildings belonging to the City, except those under the jurisdiction of the Proprietary Departments and the Department of Recreation and Parks;
- (c) dispose of solid waste; and
- (d) perform other duties as may be assigned by ordinance, if not inconsistent with Section 514.

**Sec. 514. Transfer of Powers.**

(a) **Charter Created Powers and Duties.** The Mayor may propose the transfer of any of the powers, duties and functions of the departments, offices and boards of the City set forth in the Charter to another department, office or board created by the Charter or by ordinance. The transfer shall be effective if approved by ordinance adopted by a two-thirds vote of the Council, or if the Council fails to disapprove the matter within 45 days after submittal by the Mayor of all documents necessary to accomplish the transfer, including the proposed ordinance transferring powers, duties or functions, and any related ordinances or resolutions concerning personnel or funds affected by the transfer. The Council on its own initiative may, by ordinance,

adopted by a two-thirds vote of the Council, subject to the veto of the Mayor or by a three-fourths vote of the Council over the veto of the Mayor, make any such transfer.

(b) **Exceptions.** The power of the Mayor and Council to act as provided in this section shall not extend to:

- (1) Elected Offices;
- (2) Proprietary Departments;
- (3) Los Angeles City Employees' Retirement System;
- (4) Department of Fire and Police Pensions;
- (5) City Ethics Commission;
- (6) The disciplinary functions of the Fire Department and the Police Department as contained in Sections 1060 and 1070; and
- (7) The Police Department and the Fire Department, if the transfer or consolidation would significantly alter or affect the primary purpose or character of the departments.

(c) **Ordinance Created Powers and Duties.** Powers, duties and functions established by ordinance may be transferred or eliminated by an ordinance proposed by the Mayor or Council. If the Mayor proposes a transfer or elimination, the action shall be effective if approved by ordinance adopted by a majority vote of the Council, or if the Council fails to disapprove the matter within 45 days after submittal by the Mayor of all documents necessary to accomplish the transfer or elimination, including the proposed ordinance transferring powers, duties or functions, and any related ordinances or resolutions concerning personnel or funds affected by the transfer or elimination.

Board of Commissioners:

**Sec. 500. Creation and Management of Departments.**

(a) There shall be the following departments each of which shall be under the control and management of a board of commissioners that shall be the head of the department:

- Fire
- Fire and Police Pensions
- Library
- Los Angeles City Employees' Retirement System
- Police
- Public Works
- Recreation and Parks

(b) There shall be the following departments each of which shall be under the control and management of a chief administrative officer, who shall be the head of the department:

- City Planning
- Personnel

(c) The phrase "departments having control of their own special funds" and "departments which have control of definite revenue or funds" and other substantially equivalent terms used in the Charter shall mean the departments of Fire and Police Pensions, Los Angeles City Employees' Retirement System, Library, Recreation and Parks, and the Proprietary Departments.

**Sec. 501. Boards of Commissioners.**

(a) **Creation.** Each department created in the Charter shall have a board of commissioners consisting of five commissioners, unless some other number is provided in the Charter for a specific board.

Each board shall be known as the Board of (insert name of department) Commissioners, except that the Board of the Personnel Department shall be known as the Board of Civil Service Commissioners.

(b) **Attendance Fees.** The Council shall, by ordinance adopted by a two-thirds vote, establish the amount of attendance fees to be paid to commissioners. Attendance fee ordinances shall be adopted no more frequently than once a year.

(c) **Term.** A commissioner term shall be five years, beginning on July 1. The terms of the commissioners shall be designated so that as much as possible the terms of office are staggered. The period of the term of each commissioner shall be designated in the appointment. An appointment to fill an unexpired term on any board shall be for the period of the unexpired term.

ORDINANCE NO. 176547

An ordinance amending Section 22.320, and Article 4 of Chapter 13 of the Los Angeles Administrative Code to redesignate the Secretary of the Board of Public Works as its Executive Officer and include within that position's responsibilities the duties of the Director of Public Works.

**THE PEOPLE OF THE CITY OF LOS ANGELES  
DO ORDAIN AS FOLLOWS:**

Section 1. Section 22.320 of the Los Angeles Administrative Code is amended to read:

**SEC. 22.320. BOARD OF PUBLIC WORKS—POWER TO APPOINT  
EXECUTIVE OFFICER AND CHIEF ACCOUNTING EMPLOYEE;  
AND TO ESTABLISH RULES.**

The Board of Public Works shall, in accordance with Charter Section 504, appoint the Executive Officer to the Board and the Chief Accounting Employee for the Department. The Board shall establish all necessary rules and regulations for the exercise of the powers conferred in this article, for the governance of the Department of Public Works as authorized in Charter Section 581, and for the regulation and conduct of its officers and employees.

Sec. 2. Article 4 of Chapter 13 of the Los Angeles Administrative Code is amended to read:

**CHAPTER 13, ARTICLE 4  
EXECUTIVE OFFICER OF THE BOARD OF PUBLIC WORKS**

Section  
22.327 Powers and Duties in General.  
22.328 Acting Executive Officer of the Board of Public Works.

**Sec. 22.327. POWERS AND DUTIES IN GENERAL.**

The Executive Officer of the Board of Public Works shall have and exercise the powers and duties of the Director of Public Works as set forth in Charter Section 582. In addition the Executive Officer shall have and exercise all the powers and duties that are now or may hereafter be conferred or imposed by law upon any board or officer of the City, relating to:

(a) The receipt, care and custody of proposals or bids for doing any of the work or making any of the improvements mentioned in this section.

(b) The care and custody of all checks and bonds accompanying such proposals or bids.

**Sec. 22.328. ACTING EXECUTIVE OFFICER OF THE BOARD OF PUBLIC WORKS.**

The Executive Officer of the Board of Public Works shall designate one assistant, who, upon taking the oath of office, shall serve as Acting Executive Officer of the Board of Public Works in the case of a vacancy in such office, until an appointment thereto is made in the manner specifically prescribed for such office. Such appointment made by the Executive Officer of the Board of Public Works shall be in writing filed with the City Clerk, and may be changed from time to time. Any person so appointed must possess the qualifications prescribed for such office and shall take the oath prescribed by Section 215 of the City Charter before assuming the duties as Acting Executive Officer of the Board of Public Works.

APPENDIX B CONTINUED:  
ORDINANCE CREATING DOT *The Los Angeles Daily Journal*

[B-1807]

ORDINANCE NO. 151832

1  
2  
3 An ordinance amending the Los Angeles Administrative  
4 Code, creating a Department of Transportation and a Board  
5 of Transportation Commissioners, and prescribing their powers  
6 and duties.

7  
8 WHEREAS, the City Council intends to provide, under  
9 the authority of Charter Section 32.1 and other authority, an  
10 orderly phased transfer and consolidation of all City govern-  
11 mental activities affecting the transportation of persons and  
12 goods in the City into a single department with authority to  
13 comprehensively and effectively address matters of transpor-  
14 tation in Los Angeles,

15 NOW THEREFORE,

16  
17 THE PEOPLE OF THE CITY OF LOS ANGELES  
18 DO ORDAIN AS FOLLOWS:

19  
20 Section 1. Chapter 20 is hereby added to  
21 Division 22 of the Los Angeles Administrative Code to read  
22 as follows:

23 CHAPTER 20

24 DEPARTMENT OF TRANSPORTATION

25  
26 ARTICLE 1

27 CREATION OF THE DEPARTMENT

28  
29 Sec. 22.480. Designation of the Department.

30 There is hereby created a Department in City govern-  
31 ment known as the Department of Transportation,  
32 hereinafter referred to as the "Department."

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ARTICLE 2

PURPOSE OF THE DEPARTMENT

Sec. 22.481. Purpose Defined.

(a) The Department is established to function as and to provide a single City government focal point for the proper planning, coordination, direction, management and operation of the City's various ground transportation and ground transportation-related activities.

The Transportation Department shall, on behalf of the City:

(1) Consolidate and carry out programs previously assigned to various City departments or bureaus which have been transferred to or consolidated in the Department; centralize authority over the planning of transportation, traffic regulation and related uses of the City's system of streets and highways; serve as the department primarily responsible for the development and coordination of plans to meet varied ground transportation needs; provide a primary interface with other governmental agencies on transportation matters consistent with prior approved City Council policies and procedures; study traffic and related matters including the effect of laws and regulations relating to traffic; and secure information upon such subjects and provide information to the various departments and offices of the City concerning traffic accidents, congestion, lighting, and other conditions affecting the

1 safe and convenient use of streets and other  
2 public ways for travel;

3 (2) Except as otherwise provided in the  
4 Charter, have authority over the location,  
5 installation and maintenance of all signs,  
6 signals, parking meters, and other traffic  
7 control devices; provided, however, that the  
8 authority conferred by this section shall not  
9 be construed to abridge the power of the Council  
10 to order any work or improvement that may affect  
11 or involve any of the aforesaid matters;

12 (3) Be responsible for the planning,  
13 acquisition, management and operation of City-  
14 owned off-street parking facilities, except for  
15 those facilities of departments having control  
16 of their own funds, and any facilities excepted  
17 as the Council by ordinance may direct;

18 (4) Regulate privately owned public  
19 utilities and administer franchises granted by  
20 the City;

21 (5) Direct traffic at intersections and  
22 elsewhere and enforce parking restrictions  
23 through assignment of Traffic Officers, and  
24 persons appointed or authorized pursuant to  
25 authority of Vehicle Code Section 21100 and by  
26 assignment of school crossing guards. Remove  
27 abandoned vehicles from public highways pro-  
28 vided that any vehicles investigated in connec-  
29 tion therewith found to have been involved in  
30 or to be the subject of a crime shall be the  
31 responsibility of the Police Department.

32 Duties performed by the Department of

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Transportation pursuant to this Subdivision (5) shall not operate to deprive Police Officers of the power or duty to act whenever necessary or appropriate within their authority.

ARTICLE 3  
CONTROL AND MANAGEMENT

Sec. 22.482. Policy and Management.

(a) The City Council, from time to time may, upon recommendation from the appropriate Council Committee or the Mayor, or upon its own initiative, establish policies governing the activities of the Transportation Department.

(b) The Department shall be under the administration, supervision, and management of a General Manager who shall be the General Manager and Chief Administrative Officer of the Department.

(c) The General Manager shall be appointed by the Mayor, subject to confirmation by the Council. The General Manager shall not be appointed or removed except in accordance with the civil service provisions of the Los Angeles City Charter.

(d) The General Manager shall designate a Chief Accounting Employee for the Department and for the Commission. The General Manager shall not be designated as the Chief Accounting Employee.

(e) There shall be a Commission to serve in an advisory capacity except as otherwise provided herein.

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~~\*~~ ARTICLE 4  
THE GENERAL MANAGER

Sec. 22.483. Powers and Duties.

(a) The General Manager shall exercise the powers and duties of General Manager as described in Section 21.1 of this Code, and be responsible, upon the provision of resources, for the proper administration of departmental activities, including:

(1) The location, installation and maintenance, operation and removal of all signs, signals, parking meters, pavement markings and other traffic control devices;

(2) Enforcement of parking regulations and removal of abandoned vehicles from public streets subject to provisions of Section 22.481(a) (5);

(3) Directing of traffic at intersections and other places;

(4) Assignment and duties of school crossing guards;

(5) Activities related to the acquisition, development and operation of off-street parking facilities;

(6) Administration of franchises granted by the City;

(7) Activities related to the regulation of privately-owned public utilities in the City of Los Angeles, subject to Commission action where required in this Chapter;

(8) Planning of ground transportation and traffic;

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(9) The overview, control and operation of intra-community transit activities and grant-funded ground transportation projects;

(10) Reviewing and furnishing the Mayor and the City Council, through its Grants, Housing and Community Development Committee, analyses and reports on all requests for grants from any agency or authority for ground transportation related projects.

(b) Assist the City Planning Director in the preparation and updating of the circulation, transportation and transit elements or components of the General Plan of the City of Los Angeles for submission as required by law, and provide analyses, reports, comments and recommendations to the City Council on similar subject plans submitted by contiguous jurisdictions for review.

(c) Recommend to the Council and Mayor, for their approval, transportation development plans, programs and improvement projects to implement the purpose of the Department as set forth in this Chapter.

(d) Prepare plans for utilization of funds available for transportation activities for consideration by the Council and the Mayor.

(e) Recommend to the Mayor and Council such further organizational changes in the structure of the City government which would eliminate duplication of functions and services relating to transportation.

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ARTICLE 5

THE BOARD OF COMMISSIONERS

Sec. 22.484. Transportation Commission.

(a) There is hereby created a "Board of Transportation Commissioners", referred to in this Chapter as the "Commission" or the "Board", which shall be the successor to the Board of Traffic Commissioners, the Board of Public Utilities and Transportation, and the Board of Parking Commissioners.

(b) The Commission shall be comprised of seven members.

(c) The Commissioners shall be appointed by and may be removed by the Mayor, subject in both appointment and removal to the approval of the Council by a majority vote. In the case of a vacancy during the term of office of any member, the same shall be filled by appointment by the Mayor for the period of the unexpired term subject to the approval of the Council by a majority vote.

(d) The original seven members of the Commission shall be appointed for such terms as shall cause two terms to successively expire on the date of June 30 in two years, three years, four years, and one to expire in five years, respectively, next following the effective date of the appointment of the original Board of Commissioners. The period of the term of each of the first seven members shall be designated in the appointment.

Thereafter, the terms of succeeding members of the Commission shall be five (5) years beginning with the first day of July following the expiration of the the prior term.

1 (e) No person shall be appointed a member of  
2 the Commission who is not a registered voter of the  
3 City of Los Angeles.

4 (f) Organization and Meetings of the Commission.

5 (1) During the last week in July of each  
6 year, the Commission, at a meeting thereof held  
7 during such period, shall elect a President and  
8 a Vice President, and each shall hold office for  
9 one year and until their successors are elected,  
10 unless their respective membership on the Com-  
11 mission ceases sooner. The Commission may fill  
12 from its members for the unexpired term, any  
13 vacancy occurring in the office of President or  
14 Vice-President. The first appointed Commission  
15 shall elect interim officers from its members  
16 to serve as President and Vice-President until  
17 succeeded as above provided.

18 (2) The Commission shall hold a regular  
19 meeting at least once a month. All meetings of  
20 the Commission shall be in a municipal or other  
21 facility open to the public and there shall be  
22 reasonable provision for notice and attendance  
23 by the public. An attendance fee of Ten Dollars  
24 (\$10.00) per meeting attended, not exceeding One  
25 Hundred Dollars (\$100.00) in any calendar month  
26 to any member, shall be paid to each Commissioner.  
27 ~~Said fees~~ shall not be paid from monies derived  
28 from Vehicle Parking Districts established under  
29 the Parking District Law of 1943 or the Parking  
30 District Law of 1951.

31 (3) The Commission shall appoint a Secretary  
32 from among employees of the Transportation

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Department. The duties of the Secretary shall be in addition to the regular duties prescribed for such employee, who shall be under supervision of the General Manager or the designee thereof.

(4) The Secretary shall keep a record of the proceedings and transactions of the Commission. The Secretary shall post and publish all orders, resolutions and notices which the Commission shall order to be posted or published, and shall perform such other duties imposed by this Article, by the General Manager, or by order of the Commission.

(5) Four members of the Commission must be present at any meeting in order to constitute a quorum, but a smaller number may adjourn from time to time until a quorum is present.

(6) The Commission may establish and empower a Committee, composed of three of its members, to conduct hearings on behalf of, and make recommendation, to the Commission.

(7) The powers conferred upon the Commission shall be exercised by order or resolution adopted by a majority of its members and recorded in the minutes with the "Ayes" and "Noes" at length. The minutes shall be attested by the signatures of the President or Vice-President, or two members of the Commission, and by the signature of the Secretary.

(g) Powers and Duties.

(1) The Commission's relationship to the General Manager of the Transportation Department shall be advisory.

(2) Notwithstanding its advisory capacity,

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the Commission shall exercise the following powers and duties, and such other powers and duties as may be conferred by ordinance;

A. Traffic and Parking.

1. No ordinance regulating the manner of the use of public streets and other public ways for travel, including the use and operation of vehicles or the placing of obstructions thereon, or ordinance enacted in the exercise of any other power relative to traffic conferred upon local authorities by any law, shall be adopted unless such ordinance shall have first been submitted to and approved by the Commission or unless adopted by a vote of at least two-thirds of the members of the Council in favor thereof. Failure on the part of the Commission to disapprove a proposed ordinance within ninety (90) days from the receipt thereof shall be deemed an approval by the Commission. Nothing in this section shall be construed to restrict or otherwise affect the granting of franchises as provided in the Charter, nor shall any of the provisions of this section apply to the routing or rerouting of street cars or motor bus lines or abridge the power of the Council to order any work or improvement as provided in the Charter.

2. The Board of Transportation Commissioners may by resolution, which

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shall become effective when published once in a newspaper of general circulation in the City, adopt rules regulating the use of the public streets or other public ways for travel, including parking or other use of vehicles thereon, when determined by the Commission to be necessary to meet an emergency. No rule adopted under the authority of this section shall remain in force longer than thirty (30) days unless incorporated into an ordinance.

3. The Commission is authorized to submit ordinances relating to traffic to the Council for adoption. Such ordinances must be adopted or rejected by the Council within ninety (90) days from receipt thereof.

4. The Commission is authorized to conduct hearings on all matters within the purview of the Department and to advise the General Manager as to its findings and recommendations.

5. The Commission shall have the authority, through and in cooperation with the General Manager, to employ such personnel as may be necessary to coordinate all matters relating to off-street parking vehicle facilities acquired by the City for public use, to expend sums for expenses incurred in the coordination and directing of the Off-Street Parking Acquisition Programs including such sums as are necessary

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for legal, engineering and other professional services required to promote the Off-Street Parking Program, subject to the prior authorization of resources by the Mayor and the Council and Charter limitations.

6. The Commission shall have control of and responsibility for, the Special Parking Revenue Fund, and shall have authority to issue purchase orders, requests and interdepartmental orders for the purchase of services, materials, and supplies that may be required for purposes set forth in Section 5.117 of the Los Angeles Administrative Code, subject to direction and approval of the City Council by ordinance or resolution, or through the Budget or any amendments thereto.

7. The Commission shall have the power, duty and responsibility of coordinating, directing, and managing all matters respecting the acquisition, and thereafter the management, of all public off-street parking places by the City except for those parking facilities which are to be under jurisdiction or control of departments controlling their own funds.

The Commission may exercise those powers and duties of Parking Place Commissioners provided in the Vehicle Parking District Law of 1943 (Chapter 8, Part 1, Division 18, Streets and Highways Code,

1 State of California), or the Parking  
2 District Law of 1951 (Chapter 4, Part 4,  
3 Division 18, Streets and Highways Code,  
4 State of California), as such now exist  
5 or may hereafter be amended, in the  
6 manner hereinabove provided.

7 B. Public Utilities.

8 1. The term "Public Utility", for  
9 purposes hereof, is defined as including  
10 the following:

11 (i) Any public service declared  
12 by the Constitution or statutes of  
13 the State of California or the  
14 decisions of the federal or state  
15 courts, to be a public utility;

16 (ii) The operation of vehicles  
17 for hire, regardless of the form of  
18 transportation;

19 (iii) Any public service declared  
20 to be a public utility by the Council  
21 by ordinance which the City has  
22 authority to adopt.

23 2. The Commission shall exercise  
24 the following powers and duties previously  
25 exercised by the Department of Public  
26 Utilities and Transportation pursuant to  
27 Article XX of the Charter:

28 (i) Investigate all privately  
29 owned public utilities in the City of  
30 Los Angeles (except utilities at the  
31 Harbor placed by the Charter under  
32 the jurisdiction of the Harbor

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Department) and compile such data as may be necessary to determine the proper services to be furnished by such utilities or the charges to be made therefor. The Commission shall have the right of access at all reasonable times to the property and records of said utilities for the purpose of investigation and may require reports respecting said matters from such utilities at such time and in such form as said Commission may prescribe.

(ii) Establish and prescribe by resolution regulations providing for the operation of, the extent, character and quality of service, the rates to be charged by and the extensions to be required of, any said utility, all in a manner not in conflict with any paramount regulation, rate fixing or extension requirements for any such utility by the state or nation. The Secretary of the Commission shall publish once in the official newspaper, a certified copy of every such proposed regulation tentatively approved by the Commission, together with a notice to any and all persons to show cause, if any, within five (5) days from the date of publication of said notice, why the proposed regulation should not be

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made effective. Any persons interested in or affected by the proposed regulation may, within five (5) days after the expiration of such publication, file objections thereto with the Secretary of the Commission, specifying the grounds of such objections. The Secretary shall lay all such objections before the Commission at its next regular meeting after the expiration of the time for filing the same, and the Commission shall then fix a date, not less than five (5) days later, for hearing any and all objections, and shall, after said hearing, finally act on said proposed regulation by approving, changing or rejecting the same, providing that any resolution of the Commission approving any such regulation shall be published once before becoming effective and shall be subject to the referendum provisions of the Charter relating to ordinances. Any resolution fixing rates must be approved by the Council, by ordinance, before taking effect. Rules and regulations previously adopted by the Board of Public Utilities and Transportation pursuant to Charter Sec. 210 and operative at the effective date of this Chapter shall remain in full force and effect.

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(iii) Investigate complaints against the services or charges of any said utility and to make orders adjusting the same.

(iv) Inspect all such utilities as to their compliance with their franchises, the ordinances of the the City and the laws of the state, and as to their service generally; and to enforce in the manner prescribed by law a compliance with the terms of such franchises and ordinances or laws applicable thereto.

(v) Keep a record of all public utility franchises granted by the City or exercised therein.

(vi) With respect to franchises, permits and privileges;

(aa) Every application made or granted by the Council for a franchise for any public utility (except utilities at the Harbor placed by the Charter under the jurisdiction of the Harbor Department), shall, before any action is taken thereon, be referred by the City Council to the Board of Transportation Commissioners for its recommendation respecting the same. Said Commission shall proceed to

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inquire into such application or grant and, within thirty (30) days after such application or grant has been referred to it, or longer if allowed by the Council, shall report to the Council its recommendations relative thereto. If, in the judgment of the Commission, such application or grant should not be advertised for sale or granted, it shall so report, stating its reasons therefor; and if, in the judgment of the Commission, such application or grant should be granted, it shall recommend the terms and conditions upon which the same should be so granted. No franchise shall be advertised for sale or granted unless such application or grant shall have been referred to the Board of Transportation Commissioners as aforesaid; provided, however, that if said Board shall fail to report thereon within the time herein prescribed, or as

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extended by the City Council, nothing herein contained shall be construed to prevent the Council, in its discretion, from proceeding to advertise such franchise for sale, or from awarding or granting the same, as provided by law. No franchise shall be advertised for sale or granted contrary to the recommendations of said Board except upon a three-fourth's vote of the entire Council.

(bb) Administer and exercise those powers and duties provided by those procedures set forth in Division 13 of this Code, as amended, for the granting of franchises, permits and privileges.

C. School Crossings.

1. Adopt policy criteria to assist the General Manager in the assignment of school crossing guards.
2. Conduct necessary hearings and provide written determinations with respect to appeals from the General Manager's school crossing assignments determinations.

ARTICLE 6  
CROSSING GUARDS

Sec. 22.485. Function.

(a) Crossing guards under the supervision of the Transportation Department shall have the function

1 and duty to carefully and with sound judgment, control and  
2 direct elementary school children in crossing streets at  
3 designated crossings and at designated times; to assist  
4 children traveling to and from school; to cooperate with  
5 school officials in enforcing school rules and regulations  
6 relating to the crossing of streets, and in instructing  
7 school children in the elements of traffic safety; and to  
8 perform related work as required by the Department.

9 (b) In accordance with such policies as the  
10 Commission shall adopt, and subject to the availability  
11 of personnel, the General Manager shall designate school  
12 crossings where crossing guards shall be assigned and  
13 shall assign crossing guards to such places.

14 (c) Any school principal of an elementary school,  
15 through his or her authorized designee, may request  
16 that the General Manager assign a crossing guard to a  
17 specific location. Upon receiving such a request, the  
18 General Manager shall conduct an investigation to  
19 determine whether such an assignment is justified under  
20 the criteria established by the Commission. If the  
21 criteria are satisfied, and subject to the availability  
22 of personnel, the General Manager shall assign a crossing  
23 guard to the requested location.

24 (1) If the General Manager is unable to make  
25 the required assignment, either because the criteria  
26 are not satisfied or because of lack of personnel,  
27 the General Manager shall give written notice thereof  
28 to the applicant who may, within twenty (20) days  
29 from receipt of said notice, file a written appeal with  
30 the Commission which shall thereafter, upon ten (10)  
31 days' notice to the applicant conduct a hearing there-  
32 on. The Commission shall make a written determination  
33 with respect to the appeal. Copies thereof shall be

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transmitted forthwith to the applicant and to the General Manager. In the event the Commission concurs with the General Manager's denial of assignment, the applicant may appeal the matter direct to the City Council in writing within ten (10) days from receipt of said notice of determination; provided, however, that if the Commission concurs in the applicant's request and in its advisory capacity recommends assignment of a guard, the General Manager shall either make such assignment or within ten (10) days transmit the file direct to the City Council for its determination and notify the applicant thereof. Upon timely receipt of such an appeal, City Council may, upon the adoption of a resolution by two-thirds' vote of the whole Council, direct the General Manager to assign a crossing guard to the requested location; provided, however, that in the event the Council directs such an assignment, it shall provide the necessary additional personnel.

(2) When a crossing guard is assigned to a location pursuant to Council action, a crossing guard shall remain assigned thereto during all days that the school in question is in session during said school year or until such time as the Council, by resolution, terminates the assignment.

ARTICLE 7

RELATED DUTIES OF OTHER DEPARTMENTS

Sec. 22.486. Cooperation-Implementation.

(a) All departments, employees, and officers of the City of Los Angeles shall cooperate to the

1 fullest extent with the Transportation Department,  
2 particularly during the period of transition in  
3 which the department is becoming fully operational,  
4 as well as thereafter; provided, however, that no  
5 such department, employee or officer shall be re-  
6 quired to do anything in this connection which would  
7 conflict with the lawful, proper and necessary con-  
8 duct of the duties of that department or person as  
9 provided by the Los Angeles City Charter.

10 (b) In order to ensure proper coordination of  
11 operations at the scene of special events, major  
12 unusual occurrences and disasters, the Department  
13 of Transportation and the Police Department shall  
14 have the following responsibilities:

15 (1) During the planning phase for such  
16 matters, the Department of Transportation and  
17 the Police Department shall meet and cooperate  
18 to establish the anticipated personnel and  
19 equipment needs therefor, as well as the means  
20 whereby each department will provide its  
21 respective part of the services required to  
22 ensure the protection of the public.

23 (2) The Department of Transportation shall  
24 be responsible for vehicular and pedestrian  
25 traffic direction and parking restriction  
26 enforcement.

27 (3) The Police Department shall be  
28 responsible for planning, directing and controlling  
29 all matters concerning criminal conduct and crowd  
30 control. Additionally, the Police Department has  
31 overall responsibility for operational control at  
32 the scene of a special event or emergency situation.

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ARTICLE 8  
OPERATIVE DATES

Sec. 22.487. Transferred Functions.

(a) Each subdivision of this subsection shall become operative at such time as personnel, funds, and equipment provided for in the Budget or any amendment thereto are first transferred to the Department of Transportation by appropriate action of the City Council and the Mayor. Rules and regulations previously authorized and adopted, and operative at the effective date of this Chapter, shall remain in full force and effect.

Between the operative date of this ordinance creating the Department of Transportation and the respective applicable effective dates of each such transfer of resources, the authority to operate the Transportation Department will be limited to an exercise of those powers, duties and functions for which resources have already been so provided by the Mayor and the City Council.

The separate powers, duties and functions to be transferred, as provided in this Chapter, are as follows:

(1) The powers, duties and functions of the Board of Traffic Commissioners and of the Department of Traffic are hereby transferred to the Board of Transportation Commissioners and to the Department of Transportation, respectively, in accordance with Charter Section 32.1.

(2) The Board of Parking Commissioners and the Off-Street Parking Agency are abolished and

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their powers, duties and functions are transferred to the Board of Transportation Commissioners and to the Department of Transportation, respectively.

(3) The powers, duties, and functions of the Department of Public Utilities and Transportation and the Board of Public Utilities and Transportation pertaining to regulation of transportation and regulation of public utilities, as provided by Article XX of the Charter, are transferred, in accordance with Charter Section 32.1, to the Department of Transportation and to the Board of Transportation Commissioners, respectively.

(4) Those powers, duties and functions of the Bureau of Engineering pertaining to transportation engineering, transportation planning, and operation of the transportation system of the City are transferred to the Department of Transportation.

(5) Subject to Section 22.483(b) and Charter limitations, those powers, duties and functions of the City Department of Planning pertaining to transportation planning and operations are transferred to the Department of Transportation.

(6) Those powers, duties and functions of the Community Development Department involving the study, control, monitoring, development and operation of transit or transportation systems are transferred to the Department of Transportation.

(7) The primary responsibility for functions and duties of the Police Department pertaining to the enforcement of parking regulations, the control

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of traffic at intersections or elsewhere by Traffic Officers and the operations of School Crossing Guards are transferred to the Department of Transportation. This shall not operate to negate the power of Police Officers to enforce traffic laws and regulations applicable to the streets and other public ways of travel in the City.

Sec. 2. Division 22 of the Los Angeles Administrative Code is hereby amended by deleting in their entirety:

- (a) Chapter 8, including Sections 22.143, 22.146, 22.147, 22.150, 22.151, 22.154 to 22.160 inclusive, 22.163, 22.164, 22.165, and 22.168;
- (b) Article 12 of Chapter 11, including Sections 22.280.1, 22.280.2, and 22.280.3; and
- (c) Article 3 of Chapter 12, including Sections 22.287, 22.288, and 22.289; and
- (d) Chapter 17, including Article 1 and Section 22.424, Article 2 and Sections 22.427 and 22.428, Article 3 and Sections 22.431, 22.432, 22.433, 22.434 and 22.435.

Sec. 3. The following sections of the Los Angeles Administrative Code are amended by deleting from each the phrase "Board of Public Utilities and Transportation" and adding in lieu thereof in each instance the phrase "Board of Transportation Commissioners":

- Sec. 13.13, 13.14, 13.18B, 13.31(1), 13.31(2), 13.54(a), 13.74, 13.77, 13.78 (first unnumbered paragraph), 13.78(a), 13.78(c), 13.79, 13.80, 13.86, 13.93, 13.94 and 13.95.

Sec. 4. The following sections of the Los Angeles Administrative Code are amended by deleting from each the two uses of the phrase "Board of Public Utilities and Transportation"

1 and adding in lieu thereof in each instance the phrase  
2 "Board of Transportation Commissioners":  
3 Sec, 13.40, 13.41 and 13.75.

4  
5 Sec. 5. Sections 13.12 and 13.72 of the Los  
6 Angeles Administrative Code are amended by deleting from  
7 each section the three uses of the term "Board of Public  
8 Utilities and Transportation" and in lieu thereof, in each  
9 instance, add the phrase "Board of Transportation Commissioners."

10  
11 Sec. 6. Section 13.71 of the Los Angeles  
12 Administrative Code is hereby amended to read:

13 Sec. 13.71. Referral by Council.

14 At its first regular meeting after the filing  
15 of such application, as aforesaid, the City Clerk  
16 shall present said application to the Council,  
17 which shall at said meeting by order or resolution,  
18 refer such application to the Transportation and  
19 Traffic Committee of the Council and to the Board  
20 of Transportation Commissioners for its report and  
21 recommendation thereon, to the Council through its  
22 Transportation and Traffic Committee as provided  
23 by Chapter 3 of this Division, prescribing the  
24 method of procedure for the granting of franchises,  
25 permits and privileges in the City of Los Angeles,  
26 Within thirty (30) days after referral thereto, or  
27 such longer period as Council may provide, the  
28 Board of Transportation Commissioners shall set a  
29 date for, and conduct, a hearing with respect to  
30 the application and in each instance provide not less  
31 than ten (10) days' notice thereof to the Board of  
32 Public Works.

1           Sec. 7. Section 13.73 of the Los Angeles  
2 Administrative Code is hereby amended to read:

3           Sec. 13.73. Objections By Property Owners.

4           The property owners herein mentioned may make  
5 written objection to the same at any time prior to  
6 the hearing of the application therefor, which  
7 objection shall contain a description of the owner's  
8 property and shall be delivered to the Board of  
9 Transportation Commissioners which shall endorse  
10 thereon the date of its reception by it. At the  
11 time specified for the hearing of said application,  
12 or until such time in which same may be heard, the  
13 Commission shall hear the application and the  
14 objection filed, and pass upon the same. Such  
15 objections shall be filed with the Commission at  
16 any time prior to its hearing on said application.  
17 The Commission shall not make a report to the City  
18 Council recommending denial of such application  
19 unless it shall have first given the applicant  
20 opportunity to be heard before the Commission at  
21 its regular meeting, or a special meeting which may  
22 be called for that purpose, and no application for  
23 such permit shall be granted by the City Council  
24 against the recommendations of the Commission,  
25 except by a four-fifths (4/5) vote of said Council.

26  
27           Sec. 8. Section 8.40 of the Los Angeles Administrative  
28 Code is hereby amended by adding thereto the phrase "General  
29 Manager, Department of Transportation."

30  
31           Sec. 9. The first unnumbered paragraph of Section  
32 22.186 of the Los Angeles Administrative Code is amended by

1 deleting therefrom "Public Utilities and Transportation" and  
2 adding in lieu thereof "Transportation", and by deleting  
3 "Traffic" therefrom.

4  
5 Sec. 10. Section 2.10 of the Los Angeles Admin-  
6 istrative Code is hereby amended at that paragraph identified  
7 as "(o)" by deleting all of said paragraph and by adding in  
8 lieu thereof:

9 (o) TRANSPORTATION AND TRAFFIC. . . Matters related to  
10 public transportation, traffic, parking, transportation,  
11 franchises, public utilities, and school crossings.

12  
13 Sec. 11. Section 21.1 of the Los Angeles  
14 Administrative Code is hereby amended by deleting the word  
15 "Traffic" from the first paragraph and by adding in lieu  
16 thereof the word "Transportation".

17  
18 Sec. 12. Section 22.279 as found in Article 1 of  
19 Chapter 12 of the Los Angeles Administrative Code is renumbered  
20 as Section 22.281.

21  
22 Sec. 13. Section 22.282 of Article 2 of Chapter 12  
23 of the Los Angeles Administrative Code is hereby amended to  
24 read:

25 Sec. 22.282. The General Manager.

26 (a) Said Department is under the control  
27 and management of a General Manager.

28 (b) The General Manager shall have power  
29 (subject to the provisions of the Charter and  
30 to such ordinances of the City as are not in  
31 conflict with the grants of power made in the  
32 Charter), to supervise, control, regulate and

1 manage the department and to make and enforce all  
2 necessary and desirable rules and regulations therefor.

3  
4 Sec. 14. Section 2.9 of the Los Angeles Admin-  
5 istrative Code is hereby amended at that paragraph identified  
6 as "(o)" by deleting the words "and Traffic" therefrom.

7  
8 Sec. 15. All funds in the fund identified by  
9 Sections 22.163, 22.164 and 22.165 of the Administrative Code  
10 as the Off-Street Parking Agency Fund are transferred to the  
11 Department of Transportation.

12  
13 Sec. 16. This ordinance shall become operative on  
14 February 25, 1979, or upon expiration of thirty (30) days after  
15 first publication hereof, whichever is later.

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Sec. <sup>7</sup>/<sub>10</sub> The City Clerk shall certify to the passage of this ordinance and cause the same to be published in some daily newspaper printed and published in the City of Los Angeles.

I hereby certify that the foregoing ordinance was introduced at the meeting of the Council of the City of Los Angeles of **DECEMBER 27 1978**, and was passed at its meeting of **JAN - 3 1979**

REX E. LAYTON, City Clerk,

By *Kevin Waldor*  
Deputy

Approved JAN 3 1979

File No. \_\_\_\_\_

*John Serrano*  
ACTING Mayor.

GEORGE G. DOUGHERTY  
Assistant City Attorney

File No. 75-589-S3A

City Clerk Form 23

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ORDINANCE NO. 151833

An ordinance amending various provisions of the Los Angeles Municipal Code to amend certain references to the Department and Board of Public Utilities and Transportation, the Department of Traffic and the Board of Traffic Commissioners as affected by creation of the Department of Transportation.

THE PEOPLE OF THE CITY OF LOS ANGELES  
DO ORDAIN AS FOLLOWS:

Section 1. The first unnumbered paragraph of Section 11.5.4 of the Los Angeles Municipal Code is amended by deleting therefrom the phrase "Public Utilities and Transportation" and adding in lieu thereof "Transportation," and by deleting "Traffic" therefrom.

Sec. 2. The definition of "Board" contained in Section 71.00 of the Los Angeles Municipal Code is hereby amended to read:

"Board" shall mean the Board of Transportation Commissioners of this City.

Sec. 3. The definition of "Department" set forth in Section 71.00 of the Los Angeles Municipal Code is hereby amended to read:

"Department" shall mean the Department of Transportation of this City.

Sec. 4. Subsection (b) of Section 71.02 of the Los Angeles Municipal Code is hereby amended by deleting therefrom the term "Board of Public Utilities and Transportation" and by adding in lieu thereof the word "Board."

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1           Sec. 5. Subsection (b) of Section 71.22 of the Los  
2 Angeles Municipal Code is hereby amended by deleting the phrase  
3 "Department of Public Utilities and Transportation" and by  
4 adding in lieu thereof the phrase "Department of Transportation."

5  
6           Sec. 6. Subsection (e) of Section 72.10 of the Los  
7 Angeles Municipal Code is hereby amended by deleting therefrom  
8 the two references to the "Board of Public Utilities" and add-  
9 ing in lieu thereof in each instance, the term "Board."

10  
11           Sec. 7. Subsection (b) of Section 80.00 of the Los  
12 Angeles Municipal Code is hereby amended to read:

13           (b) "Department" shall mean the Department of  
14 Transportation.

15  
16           Sec. 8. Subsection (d) of Section 80.00 of the Los  
17 Angeles Municipal Code is hereby amended to read:

18           (d) "Commissioners" or "Board" shall mean  
19 the Board of Transportation Commissioners.

20  
21           Sec. 9. Subsection (g) of Section 80.00 of the Los  
22 Angeles Municipal Code is hereby amended to read:

23           (g) "Traffic Officer" shall mean a civilian  
24 employee designated by the Transportation Department  
25 to direct traffic at intersections or other places  
26 and to enforce parking restrictions.

27  
28           Sec. 10. Section 80.01 of the Los Angeles Municipal  
29 Code is hereby amended to read:

30           SEC. 80.01. DUTIES OF OFFICERS:

31           Police Officers and Traffic Officers are hereby  
32 authorized to direct all traffic by voice, hand or

1 signal whenever and wherever necessary in the inter-  
2 est of safety or to expedite the flow of traffic.

3  
4 Sec. 11. Section 80.02 of the Los Angeles Municipal  
5 Code is hereby amended to read:

6 SEC. 80.02. OBEDIENCE TO OFFICERS:

7 No person shall willfully fail or refuse to  
8 comply with any lawful order, direction or signal  
9 of a Police Officer or Traffic Officer.

10  
11 Sec. 12. Section 80.03 of the Los Angeles Municipal  
12 Code is hereby amended to read:

13 SEC. 80.03. DIRECTION OF TRAFFIC:

14 No person other than a Police Officer, a  
15 person deputized by the Chief of Police, or a  
16 Traffic Officer shall direct or attempt to direct  
17 traffic by voice, hand or other signal, provided  
18 however, that a member of the Fire Department,  
19 wearing the badge or insignia of a fire fighter  
20 and acting in the course of his or her duties,  
21 may direct traffic to protect the personnel and  
22 equipment of the Fire Department. Persons may  
23 operate, when and as herein provided, any mechanical  
24 push button signal erected pursuant to this Chapter.

25  
26 Sec. 13. Subsection (a) of Section 80.05 and Sub-  
27 section (d) of Section 80.36.8 of the Los Angeles Municipal  
28 Code are amended by adding a new sentence at the end thereof,  
29 in each instance to read:

30 Nor shall such apply to any vehicle of the  
31 Transportation Department while used by a Traffic  
32 Officer in the performance of such person's official  
33 duties.

1           Sec. 14. Subsection (e) of Section 80.07, Subdivision  
2 (a) of Subsection B of Section 88.50, the preambles to  
3 Sections 88.01 and 88.52, Subsection (a) of Section 88.52,  
4 Subsections (a) and (b) of Section 88.65, and Section 80.57 of  
5 the Los Angeles Municipal Code are each hereby amended by  
6 deleting therefrom the term "Traffic Department" and by adding  
7 in each instance in lieu thereof the term "Department of  
8 Transportation."

9  
10           \* Sec. 15. Subsection (a) of Section 80.36.8 of the  
11 Los Angeles Municipal Code is hereby amended by deleting  
12 therefrom the two uses of the term "Department of Traffic"  
13 and by adding in each instance in lieu thereof the term  
14 "Department of Transportation."

15  
16           Sec. 16. Section 80.08.7 of the Los Angeles Municipal  
17 Code is hereby amended by deleting therefrom the term  
18 "Department of Traffic" and by adding in lieu thereof the term  
19 "Department of Transportation."

20  
21           Sec. 17. Section 88.51 is hereby amended by deleting  
22 therefrom the four uses of the term "Traffic Department", and  
23 by adding in lieu thereof in each instance the term "Department  
24 of Transportation."

25           Sec. 18. The title of Section 80.36.7 of the Los  
26 Angeles Municipal Code is hereby amended to read:

27           SEC. 80.36.7. CONTRA-FLOW LANES:

28  
29           Sec. 19. The title of Section 80.36.8 of the Los  
30 Angeles Municipal Code is hereby amended to read:

31           SEC. 80.36.8. PREFERENTIAL USE OF TRAFFIC LANES:

32           \*\*\*\*

1           Sec. 20. Subsection (d) of Section 80.69, Subsections  
2 (a), (b) and (d) of Section 80.66.1, the preamble and Subsec-  
3 tion (f) of Section 80.66, and the preamble and the second  
4 paragraph numbered "9" and the paragraph number "15" of  
5 Section 80.66.2 of the Los Angeles Municipal Code are hereby  
6 amended to delete therefrom the term "Board of Public Utilities  
7 and Transportation" wherever such term appears in said sections  
8 and by adding in lieu thereof the word "Board."

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10           Sec. 21. The term "Board of Parking Commissioners"  
11 as used in Sections 88.53, 88.54, 88.57 and 88.62 and as used  
12 twice in Section 88.55 of the Los Angeles Municipal Code is  
13 hereby deleted and in each instance the term "Board of  
14 Transportation Commissioners" is added in lieu thereof and  
15 said sections are hereby amended accordingly.

16  
17           Sec. 22. Subsection (p) of Section 103.111 of the  
18 Los Angeles Municipal Code is hereby amended as follows:

- 19           1. In that paragraph numbered (4), the term  
20 "Public Utilities and Transportation" is  
21 deleted, and the term "Department of  
22 Transportation" is added in lieu thereof;  
23           2. The paragraph numbered (9) is deleted in  
24 its entirety.

25  
26           Sec. 23. Subsection (b) of Section 41.20 of the Los  
27 Angeles Municipal Code is amended by deleting from the second  
28 sentence thereof the phrase "the Traffic Department and the  
29 Department of Public Utilities and Transportation for recom-  
30 mendation," and by adding in lieu thereof the phrase "the  
31 Department of Transportation for recommendation."  
32 . . .

1           Sec. 24. Subsection (f) of Section 41.20 of the Los  
2 Angeles Municipal Code is hereby amended by deleting therefrom  
3 the phrase "Traffic Department" and by adding in lieu thereof  
4 the phrase "Department of Transportation."

5  
6           Sec.: 25. Section 62.82 of the Los Angeles Municipal  
7 Code is hereby amended by adding the phrase "Department of  
8 Transportation" thereto after the phrase "Department of Public  
9 Utilities and Transportation."

10  
11           Sec. 26. Section 62.123 of the Los Angeles Municipal  
12 Code is hereby amended as follows:

13           Delete the use of the phrase "Board of Public  
14 Utilities" from the first unnumbered paragraph and  
15 also delete the eight uses of said phrase from the  
16 second unnumbered paragraph of the Section and add  
17 in lieu thereof in each instance the term "Board of  
18 Transportation Commissioners."

19  
20           Sec. 27. Subsection (f) of Section 80.00 of the Los  
21 Angeles Municipal Code is hereby amended to read:

22           California Traffic Manual shall mean that book  
23 of traffic engineering standards and instructions  
24 formulated and published by the Department of Trans-  
25 portation of the State of California. Three copies  
26 of said manual, together with all approved amend-  
27 ments and additions, shall be kept available to the  
28 public in the Department of Transportation.

29  
30           Sec. 28. Subsection (p) of Section 80.00 of the Los  
31 Angeles Municipal Code is hereby repealed.

32           . . .

1           Sec. 29. Subsection (b) of Section 80.08 of the Los  
2 Angeles Municipal Code is hereby amended by deleting therefrom  
3 the phrase "manual of Uniform Traffic Control Devices" and by  
4 adding in lieu thereof the phrase "California Traffic Manual."  
5

6           \*Sec. 30. Section 80.08.2 of the Los Angeles Municipal  
7 Code is hereby amended by deleting therefrom the phrase  
8 "California Maintenance Manual" and by adding in lieu thereof  
9 the phrase "California Traffic Manual."  
10

11           Sec. 31. Section 80.77 of the Los Angeles Municipal  
12 Code is hereby amended to read as follows:

13           SEC. 80.77. REMOVAL OF PARKED CARS:

14           (a) Police Officers and civilian employees of  
15 the Department of Transportation designated as Traffic  
16 Officers for purposes of this section are hereby  
17 authorized to remove from highways, streets or alleys  
18 within the City of Los Angeles to the nearest garage  
19 or other place of safety designated or maintained by  
20 the Police Department, any vehicle which has been  
21 parked or left standing on such highway, street or  
22 alley for 72 or more consecutive hours.

23           (b) Whenever a Police Officer or Traffic Officer  
24 removes a vehicle from a street or highway as author-  
25 ized in this section and the officer knows or is able  
26 to ascertain from the registration records in the  
27 vehicle or from the registration records of the  
28 California Department of Motor Vehicles the name and  
29 address of the owner thereof, such Police Officer or  
30 Traffic Officer shall immediately give or cause to be  
31 given notice in writing to such owner of the fact of  
32 such removal, the grounds thereof and of the place

1 to which such vehicle has been removed. In the event  
2 any such vehicle is stored in a public garage, a copy  
3 of such notice shall be given to the proprietor of  
4 such garage.

5 (c) Whenever a Police Officer or Traffic Officer  
6 removing a vehicle from a street or highway under  
7 this section does not know and is not able to ascer-  
8 tain the name of the owner or for any other reason is  
9 unable to give the notice to the owner as hereinbefore  
10 provided, and in the event the vehicle is not returned  
11 to the owner within a period of 120 hours, then and  
12 in that event the Police Officer or Traffic Officer  
13 shall immediately send or cause to be sent written  
14 report of such removal by mail to the Department of  
15 Motor Vehicles at Sacramento and shall file a copy of  
16 such notice with the proprietor of any public garage  
17 in which the vehicle may be stored. Such report shall  
18 be made on a form furnished by such department and  
19 shall include a complete description of the vehicle,  
20 the date, time and place from which removed, the  
21 grounds for such removal and the name of the garage  
22 or place where the vehicle is stored.

23 (d) Police Officers and Traffic Officers are  
24 hereby authorized to remove from streets or highways  
25 within the City of Los Angeles to the nearest garage  
26 or other place of safety, or to a garage or other  
27 place of safety designated or maintained by the  
28 Police Department, any vehicle which has been parked  
29 or left standing in violation of an official sign  
30 prohibiting the stopping or parking of vehicles and  
31 giving notice that such vehicle may be removed.

32 . . .

1           Sec. 32. The above-numbered sections of this ordi-  
2 nance shall only become operative at such time as sufficient  
3 personnel, funds, and equipment provided for in the Budget or  
4 any amendment thereto, and needed to assure full operation of  
5 the respective individual functions transferred thereby, have  
6 been transferred to the Department of Transportation by  
7 appropriate action of the City Council and the Mayor. Copies  
8 of those documents which have formally effected each said  
9 transfer shall be filed upon their adoption and approval with  
10 the General Manager of the Department of Transportation and  
11 with the City Attorney by the City Clerk.

12           Rules and regulations previously authorized and  
13 adopted, and operative at the effective date of this ordinance  
14 shall remain in full force and effect.

15           Between the operative date of this ordinance creating  
16 the Department of Transportation and the respective applicable  
17 effective dates of each such transfer of resources, the  
18 authority to operate the Transportation Department will be  
19 limited to an exercise of those powers, duties and functions  
20 for which resources have already been so provided by the Mayor  
21 and the City Council.

22  
23           Sec. 33. This ordinance shall become operative on  
24 February 25, 1979, or upon expiration of thirty (30) days after  
25 first publication hereof, whichever is later.

26 . . .  
27 . . .  
28 . . .  
29 . . .  
30 . . .  
31 . . .  
32 . . .

Sec. 34 The City Clerk shall certify to the passage of this ordinance and cause the same to be published in some daily newspaper printed and published in the City of Los Angeles.

I hereby certify that the foregoing ordinance was introduced at the meeting of the Council of the City of Los Angeles of **DECEMBER 27 1978** and was passed at its meeting of **JAN -3 1979**

REX E. LAYTON, City Clerk,

By *Erwin Walden*  
Deputy

Approved JAN 3 1979

File No. \_\_\_\_\_

*John Ferraro*  
ACTING Mayor.

GEORGE G. BUCHANAN  
Assistant City Attorney

File No. 75-589-S3A  
City Clerk Form 23

15,833

City of Los Angeles

Proof of Publication

(2015.5 C.C.P.)

STATE OF CALIFORNIA }  
COUNTY OF LOS ANGELES }

C. BRAMEILA

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer and publisher of "The Los Angeles Daily Journal," a daily newspaper printed and published in the English language in the City of Los Angeles, and a newspaper of general circulation as defined by the laws of the State of California. That the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

JAN 10 1979

all in the year 19 79

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

C. Brameila  
Signature

Date JAN 10 1979, 19 79

## Public Works Commissioners, Board of

**Number of members:** Five

**Term:** Five years

**Basis:** City Charter Sections 500 and 501; LAAC Section 22.315

**Appointing Authority:** Mayor, subject to confirmation by the City Council (Charter Sections 231(d) and 502)

**Special requirements/qualifications:** Must be a qualified elector of the City

**Time limit for appointment and Council confirmation:** Charter Section 502

**Jurisdiction:** Head of Department

**Brief description of Commission organizational structure and responsibilities:** The Board of Public Works is a full-time Commission that manages and controls the Department of Public Works and is responsible for the operation of the various Bureaus: (1) Financial Management and Personnel Services; (2) Contract Administration; (3) Engineering; (4) Sanitation; (5) Street Lighting; and (6) Street Services.

Manage the design and construction of City infrastructure as well as delivery of vital public safety and environmental programs. This entails design and construction of municipal buildings, public streets, sewage collection and treatment facilities; seismic retrofit and earthquake reconstruction; maintenance and repaving of public streets; collection, disposal, and recycling of residential refuse and wastewater; installation and maintenance of street lighting; oversight of trees and landscaping in the public right-of-way; stormwater management; prevention of improper disposal of hazardous and toxic materials; and weed abatement and lot cleaning; and provision of vital information on the City's infrastructure services and requirements in relation to permits for private development.

**Oversight Committee:** Public Works and Gang Reduction

**Ethics Review Required for Appointees:** Yes

## Taxicab Commissioners, Board of

<b>Number of members:</b>	Five
<b>Term:</b>	Five years
<b>Basis:</b>	LAAC 22.488
<b>Appointing Authority:</b>	Mayor, subject to confirmation by the City Council (Charter Sections 231 (d) and 502)

**Special requirements/qualifications:** Must be a qualified elector of the City. To the extent feasible, three of the five members shall represent the tourism industry, senior or disabled advocacy groups, the Department of Airports, and/or the taxicab industry.

**Time limit for appointment and Council confirmation:** Charter Section 502

**Jurisdiction:** Advisory to Department of Transportation, except with regard to all taxicab rules and regulations, and as outlined below.

**Brief description of Commission organizational structure and responsibilities:** Exercise all the powers and duties pertaining to taxicab regulations which were previously exercised by the Board of Transportation Commissioners, including: determine the level of taxicab service needed in franchise areas; establish regulations of, and rates for, taxicab service; investigate and prescribe remedies for complaints; investigate and verify compliance with service agreements by taxi franchisees; and, make recommendations to Council for the award of taxi service franchises and the sale or transfer of same.

**Oversight Committee:** Transportation

**Ethics Review Required for Appointees:** Yes

## Transportation Commissioners, Board of

<b>Number of members:</b>	Seven
<b>Term:</b>	Five years
<b>Basis:</b>	LAAC Section 22.484
<b>Appointing Authority:</b>	Mayor, subject to confirmation by the City Council (Charter Sections 231 (d) and 502)
<b>Special requirements/qualifications:</b>	Must be a qualified elector of the City
<b>Time limit for appointment and Council confirmation:</b>	Charter Section 502
<b>Jurisdiction:</b>	Advisory

**Brief description of Commission organizational structure and responsibilities:** The Transportation Commission, notwithstanding its advisory capacity to the Department of Transportation exercises the following powers and duties with respect to traffic and parking, public utilities, and school crossings, and such other powers and duties as may be assigned by ordinance: 1) approves ordinances regulating the manner of use of public streets and other public ways for travel, including the use and operation of vehicles or the placing of obstructions thereon, (unless approved by the City Council by two-thirds vote). The Commission must act within 90 days from the receipt of a proposed ordinance or it shall be deemed an approval by the Commission. Ordinances submitted to the Council for adoption by the Transportation Commission must be adopted or rejected by the Council within 90 days from receipt; 2) conducts hearings on all matters within the jurisdiction of the Transportation Department and advises the General Manager as to its findings and recommendations; 3) controls and has responsibility for, the Special Parking Revenue Fund; 4) has the power, duty and responsibility of coordinating, directing, and managing all matters concerning the acquisition, and management, of all public off-street parking places by the City except for those parking facilities which are to be under jurisdiction or control of departments controlling their own funds; 5) investigates all privately owned public utilities in the City of Los Angeles (except utilities at the Harbor) and establishes and prescribes by resolution regulations providing for the operation of, the extent, character and quality of service, and the rates to be charged by any facility; 6) investigates complaints against the services or charges of any utility; 7) inspects utilities as to their compliance with their franchises, the ordinances of the City and the laws of the State; 8) adopts policy criteria to assist the General Manager in the assignment of school crossing guards, and conducts necessary hearings and provides written determination with respect to appeals from the General Manager's school crossing assignments determinations.

**Oversight Committee:** Transportation

**Ethics Review Required for Appointees:** Yes

## Water and Power Commissioners, Board of

**Number of members:** Five

**Term:** Five years

**Basis:** Charter Sections 600 and 670

**Appointing Authority:** Mayor, subject to confirmation by the City Council  
(Charter Sections 231 (d) and 502)

**Special requirements/qualifications:** Must be a qualified elector of the City

**Time limit for appointment and Council confirmation:** Charter Section 502

**Jurisdiction:** Head of Department

**Brief description of Commission organizational structure and responsibilities:** The Board elects a President and a Vice-President and each holds office for one year, and until their successors are elected, unless their respective membership on the Board ceases sooner. The Board of Water and Power Commissioners: 1) controls, regulates and manages the Department; 2) makes and enforces all necessary and desirable rules and regulations regarding the exercise of powers conferred upon the Department by the Charter; 3) controls, orders appropriates and expends all monies from the Water Revenue Fund and the Power Revenue Fund; 4) invests surplus funds in bonds or other evidence of indebtedness and deposits the derived income into the City treasury to the credit of the Water Revenue Fund and Power Revenue Fund; 5) engages in the interchange and/or sale of surplus electric energy or standby or emergency service in connection with the transmission and utilization of power from the Colorado River or from any other source of electric power; 6) enters into contract with any public agency for the exchange of water; 7) has the power and authority to supply and distribute and fix rates relative to reclaimed water; 8) authority to enter into contracts with the United States government and Southern California Edison relative to operation and maintenance of the Boulder Dam Power Plant; 9) authority to contract with other agencies for the construction, ownership, operation and maintenance of facilities for the generation, transformation and transmission of electric energy; and, 10) authority to regulate and control the use, sale and distribution of water and electric energy owned or controlled by the City.

**Oversight Committee:** Energy and Environment

**Ethics Review Required for Appointees:** Yes

Appendix C: Commissions

Commission	Number of Members	Commission Type
Affordable Housing Commission	7	Advisory
Board of Airport Commissioners	7	Head of Department
Board of Animal Services Commissioners	5	Head of Department
Area Planning Commission: Central Area	5	Quasi-judicial in accordance with procedures prescribed by Ordinance
Area Planning Commission: East Area	5	Quasi-judicial in accordance with procedures prescribed by Ordinance
Area Planning Commission: Harbor Area	5	Quasi-judicial in accordance with procedures prescribed by Ordinance
Area Planning Commission: North Valley Area	5	Quasi-judicial in accordance with procedures prescribed by Ordinance
Area Planning Commission: South Los Angeles	5	Quasi-judicial in accordance with procedures prescribed by Ordinance
Area Planning Commission: South Valley	5	Quasi-judicial in accordance with procedures prescribed by Ordinance
Area Planning Commission: West Los Angeles	5	Quasi-judicial in accordance with procedures prescribed by Ordinance
Board of Building and Safety Commissioners	5	Advisory, with certain modification powers by Board resolution
City Ethics Commission	5	Head of Department
City Planning Commission	5	Advisory over Planning Department operations. Has quasi-judicial authority over many land use matters, with some decisions appealable to the Council
Board of Civil Service Commissioners	5	Advisory to Personnel Department except the Board has the power and the duty to make and enforce Civil Service Rules and to establish and maintain the Civil Service System
Commission for Community and Family Services	15	Advisory
Community Development Bank, Board of Directors	15	Governing
Community Forest Advisory Committee	16	Advisory

Appendix C: Commissions

Commission	Number of Members	Commission Type
Los Angeles Convention and Exhibition Center Authority	15	Los Angeles Convention and Exhibition Center Construction
Convention and Tourism Development Board	5	Advisory
Board of Cultural Affairs Commissioners	7	Advisory
Cultural Heritage Commission	5	Advisory
Commission on Disability	9	Advisory
Disabled Access Appeals Commission	5	Enforcement agent of Title 24 of California Administrative Code regarding handicapped access.
El Pueblo de Los Angeles Historical Monument Authority Commissioners	9	Head of Department
Employee Relations Board	5	Investigate, dispute resolution, and determine contested matters especially regarding employees, employee representation units, and/or individuals and organizations.
Board of Fire and Police Pensions Commissioners	9	Head of Department
Board of Fire Commissioners	5	Head of Department
Board of Harbor Commissioners	5	Head of Department
Health Facilities Authority Commission, Los Angeles County	7	Governing body of the Authority
Housing Authority of the City of Los Angeles	7	Head of Agency
Human Relations Commission	11	Advisory, with power to appoint and remove the Executive Director pursuant to Charter Section 508
Industrial Development Authority of the City of Los Angeles	7	Vested responsibilities under the California Industrial Development Financing Act
Board of Information Technology Commissioners	5	Advisory
Innovation and Performance Commission	15	Provide the Mayor and the City Council with the benefit of additional private and public sector experience, expertise, information and recommendations relating to improving productivity and work measurement within City government
Board of Library Commissioners	5	Head of Department

Appendix C: Commissions

Commission	Number of Members	Commission Type
Board of Administration of the Los Angeles City Employees' Retirement System	7	Head of Department
Los Angeles Export Terminal (LAXT), Inc. Board of Directors	3	Limited to representing the City's interests on the Board of Directors, LAXT, Inc.
Los Angeles Homeless Services Authority	10	The Authority is authorized to do all acts necessary for the exercise of said common powers
Metropolitan Transportation Authority (MTA), Board of Directors	4 from LA	Governing Body
Metropolitan Water District of Southern California	7 City appointed	Governing Body
Native American Indian Commission, Los Angeles City/County	15	Advisory
Board of Neighborhood Commissioners	7	Policy setting and oversight, but not responsible for day-to-day Department management
Board of Police Commissioners	5	Head of Department
Police Permit Review Panel	7	Hear and decide certain police permit cases as provided for by passage of Proposition F on June 2, 1992
Board of Public Works Commissioners	5	Head of Department
Board of Recreation and Park Commissioners	5	Head of Department
Relocation Appeals Board	7	Advisory
Rent Adjustment Commission	7	Specific authority over rent Stabilization Ordinance matters
Commission on the Status on Women	7	Head of Department
Board of Taxicab Commissioners	5	Advisory to Department of Transportation, except with regard to all taxicab rules and regulations
Board of Transportation Commissioners	7	Advisory
Board of Water and Power Commissioners	5	Head of Department
Water Conservation Appeals Board	3	Hearings before a conservation appeal board to review the Department's decision affecting the customer made pursuant to this article (L AMC Section. 121 et seq.)
Board of Zoo Commissioners	5	Advisory

# PUBLIC WAY RESERVATION SYSTEM REQUIREMENTS REPORT

Version 1.1

## Contents

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## Summary

The City uses a Public Way Reservation System (PWRS) to coordinate public and private activities within the public right of way. Coordination reduces project conflicts that interrupt the flow of vehicular and pedestrian traffic thereby impeding conflict and community mobility.

The existing PWRS system is being reviewed to identify opportunities to enhance its effectiveness. The first step in this process was to conduct an assessment of needs by meeting with key City stakeholders. This Requirements Report summarizes requirements for an enhanced PWRS.

### **Key findings presented in this report:**

- The existing PWRS has most of the required functions
- Public Way reservations need more specificity to their location and time period
- Active enforcement of reservations is needed
- An improved PWRS system will improve right of way management effectiveness by providing greater information accessibility, relevant data (using configurable filters, reports and alerts), and more effective conflict resolution capabilities
- PWRS should be integrated with existing permitting and inspection systems to reduce or eliminate redundant data entry
- PWRS data should be exposed to other systems in an open data format to improve information dissemination beyond PWRS users
- Greater PWRS administrative oversight is needed to ensure adopted policies and procedures are enforced

### **PWRS next steps presented in this report:**

- Determine PWRS technology direction 1) No change, 2) Enhance existing PWRS, or 3) Procure commercial PWRS solution
- Consider policy change to perform active conflict resolution and require more specific reservation locations and timeframe
- Prepare PWRS functional requirements
- Develop implementation plan

## Background

The City of Los Angeles (City) recognizes the importance of optimizing the use of road right-of-ways by mitigating the impacts of construction and maintenance activities within the streets and adjacent areas. Section 62.251 of the Municipal Code establishes a Public Way Reservation System (PWRS) to coordinate activities that are disruptive to traffic, businesses, and residents. The PWRS identifies the location, agency/private entity, time period, and type of work proposed. Through this system, project conflicts based on location and time can be identified and coordinated.

Use of the PWRS is required for all permitted activities and for non-permitted activities performed by all City departments. City agencies that issue permits for street related activities use the PWRS to establish a reservation for such activities prior to approving a permit. Non-city agencies are also required to use PWRS to identify reservation conflicts, resolve them, and communicate the determination of conflicts and their resolution with City agencies with which they coordinate.

The Construction Coordination Task Force (CCTF), through its mission to improve coordination of City streets, is a key stakeholder of the PWRS. Although the CCTF has a focus on large Metro projects, the PWRS reservation process has substantial merit for all projects in the public right of way across the City. PWRS includes projects involving City capital improvement projects, utility providers, special events, and first amendment permit activities. The BOE, BSS, DOT, LAPD, DWP, and Film LA are all major stakeholders benefiting from right-of-way project coordination activities.

The City of Los Angeles, Bureau of Engineering (BOE), is leading an initiative to expand and improve tracking and coordinating impacts to the public right of way from construction projects and permit activities in the City. The future of PWRS will need to be defined by the technical and functional requirements, governed by practical implementation requirements. These requirements will then guide development, acquisition, deployment, and sustained operations of the future PWRS that will achieve the vision and goals set forth by CCTF.

The City engaged Psomas to perform consulting services to develop PWRS requirements and implementation plan with the following objectives:

- Engage stakeholders to identify PWRS needs and gaps
- Document needs, gaps, and opportunities to improve PWRS
- Document and clarify business needs of each major stakeholder group
- Evaluate existing processes, systems, and data
- Identify and prioritize system and process capability needs
- Identify gaps between needs and the current environment
- Develop an action roadmap for improving capabilities in subsequent projects

The requirements report (this document) presents a summary of needs identified during the assessment phase of the project. The purpose of this report is to validate the prioritized needs identified by the stakeholders and present these needs as implementation recommendations.

The assessment phase consists of existing environment and usage of PWRs, and interview sessions with the following PWRs stakeholder groups:

- Mayor's Office
- Planning
- Bureau of Street Services
- Bureau of Contract Administration
- Department of Transportation
- Bureau of Engineering/Mapping

This Report includes the following sections:

- Public Way Coordination Needs: primary business drivers for PWRs
- Existing Environment: current system specifications, and user environment
- Needs Assessment Findings: key findings, gaps, and business implications of unmet needs
- Functional Requirements for Enhanced PWRs: technical and functional elements of the needs
- Operational and Management Requirements for Implementation: requirements for successful and sustained implementation and operations of future PWRs
- Appendix: Interview Summaries

This Report is intended to present the summary of findings and requirements, gaps, and unmet needs identified during the needs assessment phase. This document, once approved by the stakeholders, will form a foundation for implementation plan.

## Public Way Coordination Needs

The public right of way enables commerce and societal activities for residents and businesses thus enabling a robust economic and social environment for City. All activities and events that impede efficient use of the public way reduces the effective commerce and societal benefits accordingly.

At any given day, City's public ways are impacted by various events and activities: construction and maintenance of surface and underground assets and utilities, development, public events, and private events, such as filming that can impeding normal traffic flow, impacts local businesses. Furthermore, adjacent activities, serial activities, and concurrent activities can create amplified impacts from multiple projects that undermines the vision and primary objectives of City's public ways.

Defining features of the PWRS include:

- A means to create a public way use reservation including identification of the entity making the reservation, activity type, ROW impact, location, and time period.
- Automatic advanced detections of events that create public way conflicts that require coordination or mitigation actions.
- Conflict identification rules enable various means to define conflicts between scheduled right of way reservations using activity definitions, time period, and location.
- Facilitate conflict resolution to mitigate impacts of conflicting activities among involved parties.
- A process and tools for the City sponsor/governing body to monitor conflicts and mitigations.
- The PWRS is readily available as an online application tailored to each type of user (City agency, public, utility, contractors, etc.)
- PWRS information is accurate and current.
- PWRS presents information in various ways including high level dashboards to track impacts and the ability to view reservation and conflict details.
- PWRS operations require ongoing stakeholder outreach and education of the needs, available tools, and requirements for public way reservation and coordination.

## Existing Environment

Currently the City's public way coordination is initiated by reservations entered into the PWRS by parties responsible for the events and activities that will impact the streets and sidewalks. It is described as an "honor system" where all participants will reserve location/area and time/duration in accurate manner with commitment, and will proactively identify and resolve conflicts.

The users of PWRS are represented by all stakeholders benefiting from right-of-way project coordination, including BOE, BSS, BCA, DOT, LAPD, DWP, Film LA, private utility and telecommunication firms, developers, contractors, and other street maintenance providers. The PWRS Geocoder allows users with an account to draw their Points, Lines, and Polygons to show the extent of their project.

The BOE's permit system is integrated with PWRS and Navigate LA; and City staff can access permit and reservation information interchangeably. Using Navigate LA, everyone has access to PWRS viewer by going to the Advanced Tools button, clicking Show Me, and then clicking Public Way Reservations.

The current PWRS is City-developed and maintained system with the following technical specifications. There are two separate versions of the PWRS Viewer: 1) MapGuide, and 2) ESRI ArcGIS Server.

- The software is running on Windows 2008 and requires IIS, Autodesk MapGuide Server for map display and Coldfusion 11 for reports and database functionality.

- The database server is Oracle 10g and contains the spatial data which MapGuide uses for display and for querying data in Coldfusion.
- The Windows Server is running on a VMSphere virtual machine with 4 CPU and 8GB of RAM and is located in the DMZ at ITA City Hall.
- Oracle server is located in our office at 201 N Figueroa and is running on UNIX.
- The architecture is 3 servers: IIS / Coldfusion Server, ESRI ArcGIS Server (3 servers in itself), and SQL Server 2008.
- The IIS / Coldfusion server is on the same IIS / Coldfusion Server as the MapGuide PWRS above. SQL Server 2008 which stores the spatial features and PWRS data is located at Public Works building at 1149 Broadway.
- When someone geocodes data into PWRS (Oracle) it gets geocoded into SQL Server spatial also. ArcGIS Server is located at Public Works building and is running on 3 servers. The IIS web server has ArcGIS Web Adaptor are installed which acts as a proxy and load balancer to forward requests to 2 ArcGIS Servers.
- All 3 servers are running on Windows 2008 on Hyper V virtual machines. The ArcGIS web adaptor server has 6 GB of RAM and 4 CPU. The 2 ArcGIS Servers each have 4 CPU and around 24 GB of RAM allocated.
- The physical machine that hosts the 3 servers is running Windows 2008 and has Hyper V installed to run the VM's. It is a Dell Server PER 510 has 64 GB of RAM and an Intel Xeon X5670 2.93 GHZ (2 processors).

## Needs Assessment Findings

The needs assessment phase consists of 1) assessment participation definition, i.e. group, staff, 2) pre-interview survey, 3) stakeholder group interviews, 4) draft interview minutes, 5) review, comment, and finalize into interview summary, 6) compile and analyze findings, and 7) develop PWRS Requirements Report.

The following list represents the standard questions for that interviews that led to discussion, definition, identification, and description of current usage, desired state, gaps, and needs for PWRS.

- What is your vision for the enhanced PWRS?
- What are your department's business needs for the enhanced PWRS and what are the benefits?
- What are unmet needs from PWRS in support of these business functions and activities?
- What information within the PWRS is your department responsible for?
- What are data gaps in your needs vs. what is available/accessible?
- What external systems or databases should be integrated to expand the PWRS?

City of Los Angeles  
Public Way Reservation System  
Requirements Report

- What are the critical success factors for the enhanced PWRS?
- What challenges do you anticipate with implementing an enhanced system?
- Who are the key stakeholders in managing and maintaining the system and its data?
- What other systems or data should be integrated?
- What outcomes from the enhanced PWRS are expected and what difference will it make to the City, businesses and the public?

The table below presents the key findings and corresponding level of agreement by each interview group.

ID	Key Findings	Mayor's Office	Planning	BCA	BSS	BOE Mapping	DOT
1	Current PWRS supports 80% of functional needs, however it needs technology upgrade to comply with industry standards and City's integration requirements.	High	Medium	High	Medium	High	High
2	The primary gap in PWRS is not functional (what it does) but procedural (how it does). Current PWRS is a "passive system" that identifies reservations and conflicts. The future PWRS requires "active system" to automate/ensure notifications and conflict resolution procedures.	High	Medium	High	Medium	High	High
3	Data from PWRS must improve in accuracy (location and time) to realize City's business benefits and seamless integration with external stakeholders, technology solutions, and social platforms.	High	Medium	High	Medium	High	High
4	City staff also requires seamless integration with all available City data and systems, in addition to "customized dashboard" for business specific automation, and technology platform that enables seamless integration of mobile devices.	High	Medium	High	Medium	High	High
5	Future PWRS needs City commitment in management oversight, ongoing maintenance, and continued funding; PWRS can potentially become self-funded program by expanding reservation and enforcement cost to corresponding stakeholders.	High	Medium	High	Medium	High	High
6	Incorporate workflow process with automation and enforcement in "conflict notification" and "conflict resolution" modules.	High	Medium	High	Medium	High	High
7	Capability to set automated notification via customized dashboard based on business functions.	High	Medium	High	Medium	High	High
8	Integrate City mobile devices for field data collection, location tracking, and tactical operations management.	High	Medium	High	Medium	High	High
9	Integrate with external data source and public outlet, such as WAZE to dynamically validate data, and to serve as public notification platform.	High	Medium	High	Medium	High	High
10	Develop reservation standards to which all parties must comply; these standards include proper location designation and reservation date/time commitment. This is the primary strategy in improving data quality and addressing the most critical gap for PWRS.	High	Medium	High	Medium	High	High
11	Clearly define policies and procedures on monitoring and enforcement of the compliance to reservation standards and commitment.	High	Medium	High	Medium	High	High
12	Comprehensive training curriculum: library of online materials, including the recordings of the live training sessions, and indexed online user manual.	High	Medium	High	Medium	High	High

**Color Code Designation**

High	Medium	Low	N/A
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## Functional Requirements for an Enhanced PWRS

The functional needs for PWRS by the following definitions.

- Existing functions/tools in PWRS – Meet identified requirements
- Existing functions in PWRS that should be enhanced to address the gap/needs
- New functions desired/required to address the gap/needs
- System integration needs
- Data integration needs

The table below presents the summary of functional requirements from the interview summaries.

ID	Functions	Existing	Enhance	New	System Integration	Data Needs
1	GIS interface					
2	Map navigation					
3	Production: print maps, reports, etc.					
4	Search, filter, and access reservation information, permits, and documents					
5	Reservation area designation					
6	Reservation detail entry and enhanced status categories					
7	Reservation acceptance or conflict escalation					
8	Customized dashboard per user profile with filters/notifications to show operational and tactical display					
9	WAZE integration: publish information and receive dynamic data					
10	Search, filter, and access detail project information					
11	Spatial analysis tools, i.e. historical data, performance projections					
12	Ability to receive real-time data from mobile devices; status updates using GPS location					
13	Ensure ease of use and acceptable system performance from all user level					
14	Enhance/automate the data loading script to enable more granular project data; i.e. monthly, weekly, daily, etc.					
15	Public notification and alerts					
16	Enhanced layer control integrated with City's GIS HUB and access to City-wide data					
17	Integrate with BSS systems and database with street section ID					
18	LADOT in-street sensors and tracking meters					
19	Integrate data associated with traffic management plan, common throughout the City					
20	Integrate inspection data: schedule, location, status, etc.					
21	Integrate with Planning's internal systems and boundary data					
22	Integrate with BSS' Micro PAVER: BSS uses for planning purposes and does not see the need to integrate with PWRS					
23	Integration into Future BuildLA					
24	Integrate with Capital Project					

## Operational and Management Requirements for Implementation

This section presents the compiled and analyzed requirements, identified during the interviews, in the following definitions:

- Organization
- Policy & Procedure
- Operations & Maintenance

The table below presents the summary of implementation requirements.

<i>ID</i>	<i>Implementation Requirements</i>	<i>Organization</i>	<i>Policy &amp; Procedure</i>	<i>Operations &amp; Maintenance</i>
1	Establish responsible sponsor for PWRS, with authority to make decisions on behalf of the City's best interest and maintain sustained operations.			
2	Develop reservation data entry standards with 1) accurate location/area, and 2) time/duration commitment.			
3	Define stakeholder groups and communication policy and procedures.			
4	Define user groups with roles, responsibilities, access, and security requirements.			
5	Develop operations and usage monitoring program with predefined goals and key performance indicators.			
6	Develop reservation conflict escalation, resolution, and acceptance criteria, policy, and standards.			
7	Develop policy and/or other mechanism to encourage and/or enforce reservation commitment.			
8	Establish, operate, and maintain enforcement resources and standard procedures; i.e. inspection and closeout.			
9	Establish user feedback protocol and response standards.			
10	Develop and maintain a comprehensive training curriculum with online system with predefined/archived resources.			

## PWRS Enhancement Directions

The next phase of this study will identify alternative strategies for addressing the unmet needs of the PWRS. Preliminary directions for consideration are 1) keep the current PWRS as-is, 2) enhance the existing PWRS technology to address certain gaps, and 3) procure new technology solutions for PWRS that will broadly fulfill the needs of the PWRS.

Regardless of technology solutions, Psomas strongly suggest modifying the current practices for defining and managing the reservations. Specifically narrowing the time window of the reservation as project certainty increases and increasing the locational precision so that PWRS identified conflicts are real and can be managed. With this change in place, the conflict resolution process should be changed to an active resolution process with City oversight rather than the current passive resolution process that delegates the conflict resolution to the parties in conflict resulting in less than optimal outcomes.

The PWRS Implementation Plan will include:

- Future PWRS alternatives: use existing PWRS, enhance existing, or procure a new system
- Functional recommendations: detailed functional PWRS specifications to aid in alternatives evaluation
- System and technology recommendations
- Organizational, policy, and management recommendations
- Implementation phasing
- Implementation timeframe and costs
- Sustained operations, maintenance, and support recommendations

## Appendix A: Interview Summaries

Attached are individual interview summaries with the following stakeholder groups:

- Mayor's Office
- Planning
- Bureau of Street Services
- Bureau of Contract Administration
- Department of Transportation
- Bureau of Engineering/Mapping



# PUBLIC WAY RESERVATION SYSTEM IMPLEMENTATION PLAN

Version 1.0

**PSOMAS**  
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## Executive Summary

Public Way Reservation System (PWRS) is an online mapping application available for entities that intend to engage in activity or work in major, secondary, and collector streets. The PWRS users include Bureau of Engineering, Department of Transportation, Bureau of Contract Administration, Bureau of Street Services, LAPD, LA Film Commission, public/private utilities, private developers and contractors, and the citizens who live and work in the City of Los Angeles (City.) The City utilizes the PWRS to capture initial requests, display/notify conflicts, and promote coordination among stakeholders and reserved activities within the public right of way. The City engaged Psomas to assess the current implementation of PWRS and recommend an implementation strategy and action plan.

### *Needs Assessment Findings*

The needs assessment phase identified the following key findings.

- The existing PWRS performs basic functions that support the intended use and processes, however there are opportunities for major enhancements to improve PRWS effectiveness by upgrading the underlying information technology, improving usability, and increasing integration with city business systems.
- Current PWRS is a “passive system” that identifies reservations and conflicts. The future PWRS requires “active system” to automate/ensure notifications and deploy predefined conflict resolution procedures.
- Data from PWRS must improve in accuracy (location and time) to fully realize the benefits of a comprehensive coordination platform.
- City staff also requires seamless integration with all available City data and systems.
- Future PWRS needs City commitment in management oversight, appropriate organizational structure, ongoing maintenance responsibilities, and continued funding.
- PWRS should be integrated with external data source and public outlet, such as WAZE to dynamically validate data, and to serve as public notification platform.
- PWRS must be supported by policies to ensure compliance by stakeholders.

### *Recommendations*

Based on the technical and functional requirements, Psomas recommends the following for PWRS implementation. The detailed functional specification document is attached in Appendix A.

- Establish organizational and policy framework to own, sponsor, and support the PWRS deployment and sustained operations
- Define all required workflows and develop official documents, including diagrams and manuals
- Develop data standards, including reservation submission standards to be complied to

- Procure commercially available system that will address all items listed in the functional specification, and
- Implement and deploy all items in the functional recommendations in this study.

*Implementation Road Map*

Implementation steps for a new PWRS define a sequence of actions to manage, procure, implement, and operate a new PWRS. The corresponding budget and schedule are presented in the *Implementation Recommendation* section of this document.

*Task 1. Establish PWRS Management Structure:* establish official sponsorship and charter by the executive management team, and functional committees to ensure execution and operations.

*Task 2. Develop Operational Framework:* develop policies and standards designed to proactively manage usage, coordination, accountability, and compliance.

*Task 3. Procure New System:* based on the final system specification, solicit for proposal, perform evaluation, select commercial solution, and complete procurement process.

*Task 4. Configure and Deploy PWRS:* establish a project team to lead the testing, configuration, and final deployment of the new system.

*Task 5. Perform Ongoing Maintenance and Technical Support:* sustain ongoing operations, including updates, maintenance, and technical support.

## Study Overview

The City utilizes the PWRS to capture initial requests, display/notify conflicts, and promote coordination among stakeholders and reserved activities within the public right of way. The proactive coordination minimizes the negative impacts to the public ways which interrupt the flow of vehicular and pedestrian traffic.

### *Objectives*

The City initiated the study to review the existing PWRS system and identify opportunities to enhance its effectiveness with the following key objectives:

- Engage stakeholders to identify PWRS needs and gaps
- Document needs, gaps, and opportunities to improve PWRS
- Document and clarify business needs of each major stakeholder group
- Evaluate existing processes, systems, and data
- Identify and prioritize system and process capability needs
- Identify gaps between needs and the current environment
- Develop an action roadmap for improving capabilities in subsequent projects

### *Methodology*

The study followed the methodology defined below which culminated in this report: PWRS Implementation Plan.

- Project initiation and stakeholder orientation to establish common understanding and expectations
- Pre-interview memorandum to prepare interview participants
- Facilitate interviews with the following stakeholder groups
  - Mayor's Office
  - Planning
  - Bureau of Street Services
  - Bureau of Contract Administration
  - Department of Transportation
  - Bureau of Engineering/Mapping
- Develop interview summary for each group, distributed, and validated the needs for future PWRS
- Conduct management presentation to CTFF, ensuring management approval and support

- Develop implementation plan that recommends the future PWRS definition, implementation road map, and operational elements to ensure successful implementation and sustained support

The implementation plan maps out practical recommendations and functional specification to ensure that PWRS continues to enable commerce and societal activities for residents and businesses thus enabling a robust economic and social environment for City, while minimizing events and activities that impede efficient use of the public way, effective commerce, and societal benefits accordingly.

## Needs Assessment Findings

This section presents the summary of key findings from the needs assessment phase of the study, in three categories: 1) needs summary, 2) functional requirements, and 3) implementation requirements. These are derived from a) gap analysis between current deployment and desired implementation, b) stated unmet needs, and c) compilation and assessment to identify enterprise-level requirements in functional/technical components and logistic/implementation elements.

### *Needs Summary*

The summary list below presents the overarching and thematic needs that the stakeholder groups consistently identified for the new PWRS must address.

1. The existing PWRS performs basic functions that support the intended use and processes, however there are opportunities for major enhancements based on the current technology and best practices.
2. A thematic gap in PWRS is not only functional (what it does), but just as much related to policy and procedural (how it does) needs. Current PWRS is a “passive system” that identifies reservations and conflicts. The future PWRS requires “active system” to automate/ensure notifications and deploy predefined conflict resolution procedures.
3. Data from PWRS must improve in accuracy (location and time) to fully realize the benefits of having information that PWRS maintains, and allow seamless integration with external resources, technology solutions, and social media platforms.
4. City staff also requires seamless integration with all available City data and systems, in addition to “customized dashboard” for business specific automation, and technology platform that enables seamless integration of field activities and corresponding mobile devices.
5. Future PWRS needs City commitment in management oversight, appropriate organizational structure, ongoing maintenance responsibilities, and continued funding.

### *Functional Requirements*

The functional requirements represent technical gaps that future PWRS needs to address and provide.

1. Technology infrastructure and platform that is industry standard, ensure sustained operations, and comply with City’s technology and integration requirements.
2. Enhance all functionality of the existing PWRS: i.e., reservation interface, permit system integration, map interface, search, data entry, and reporting, with current and available technology.
3. Incorporate workflow process with automation and enforcement in “conflict notification” and “conflict resolution” tasks.

4. New dashboard enabling customized display of specific information and automated notification based on user needs in business, operations, location, and contents.
5. Integrate City mobile devices for field data collection, location tracking, and tactical operations management.
6. Integrate with external data source and public outlet, such as WAZE to dynamically validate data, and to serve as public notification platform.

#### *Implementation Requirements*

The implementation requirements represent management, operations, and logistic needs to successfully deploy and maintain PWRS.

1. City needs a primary owner/sponsor group to serve as the authoritative body to provide decisions on City's best interest, ultimate source for conflict resolution, management oversight, and operational responsibilities.
2. Develop reservation standards to which all parties must comply; these standards include proper location designation and reservation date/time commitment. This is the primary strategy in improving data quality and addressing the most critical gap for PWRS.
3. Clearly define policies and procedures on monitoring and enforcement of the compliance to reservation standards and commitment.
4. Develop conflict resolution procedures that can be automated into the future PWRS.
5. Comprehensive training curriculum: library of online materials, including the recordings of the live training sessions, and indexed online user manual.

## PWRS Technical Recommendations

The recommendation phase of the study identified alternative strategies for addressing the unmet needs of the PWRS. Preliminary directions for consideration were 1) keep the current PWRS as-is, 2) enhance the existing PWRS technology to address certain gaps, and 3) procure new technology solutions for PWRS that will broadly fulfill the needs of the PWRS. The study considered the alternatives 2 and 3 from above in developing the recommendations.

Regardless of technology solutions, it is strongly recommended to modify the current practices for defining and managing the reservations. Specifically narrowing the time window of the reservation as project certainty increases and increasing the locational precision so that PWRS identified conflicts are real and can be managed. With this change in place, the conflict resolution should be changed to an active resolution process with City oversight from the current passive resolution process that delegates the responsibilities to the parties in conflict without oversight or accountability.

This section presents the technical recommendations based on studying the alternatives and functional requirements, supported by the PWRS Functional Specification in Appendix A.

### *Functional Recommendations*

The functional recommendation is designed to provide the thematic and strategic directions that guide to development of detailed functional specification, presented in Appendix A. This specification can be used to enhance the current functionalities of PWRS regardless of the technology alternative selected.

The new PWRS must:

1. Comply with City's IT standards (infrastructure, security, etc.) and integration requirements with ongoing enterprise technology initiatives.
2. Utilize the current and appropriate technology to enable new and enhanced capabilities.
3. Automate conflict notification and conflict resolution workflows.
4. Provide a dashboard with customized user login, preferences, views, contents, and notifications.
5. Be seamlessly accessible and usable on City approved mobile devices.
6. Have a deployment-ready connection point to external systems and data sources, i.e., WAZE.

### *PWRS Alternatives: Enhance Existing vs. Procure New System*

The study assessed the alternatives between enhancing the existing vs. the new system procurement. The assessment below reviewed the benefits and challenges for each alternative in their ability and practicality of addressing the functional recommendations presented above.

Alternative 1: Enhance Existing PWRs

By enhancing the existing PWRs, the City will continue to use the technology framework of the existing system and build new capabilities through customized development in programming, database, and reporting. As with all customized applications, this alternative allows the flexibility to design and develop the system in return for associated cost and uncertainties for now and the future. This alternative is best suited for business, operations, and procedure that are not supported by commercially available software, or subject to complex compliance requirements enforced from external stakeholders.

*Benefits*

- No need to develop basic functions already in operation
- User familiarity with the existing system and operational knowledge
- Ability to program for exact workflows and requirements
- Flexibility to modify as requirements change

*Challenges*

- Efforts are required to define exact specifications for customized development
- Continued and modular development may negatively impact existing program, database, etc.
- Need to continuously monitor/update based on changes to underlying infrastructure/software
- Every updates to underlying infrastructure requires effort in upgrade, testing, and modifications

Alternative 2: Procure New System

By selecting and implementing commercial software pre-designed to perform workflows required by PWRs, the City will need to validate, and modify if necessary, its desired processes that are in conflict with the new system's built-in procedures. However, the burden of system maintenance, as technology landscape, trends, and tools change, is placed on the system vendor for ongoing maintenance to ensure that desired and purchased functions continue to be operational.

*Benefits*

- Eliminates the need and effort associated with development and programming
- Latest technology and capabilities are built in and continuously monitored, updated, and tested
- Commercially proven software, both in functions as well as user interface
- Complex and costly capabilities new to the existing PWRs is likely already built in

*Challenges*

- City does not own the underlying technology in code and functions

- City may have to alter its workflows and procedures to fit prebuilt system
- Need to secure funding for initial procurement cost, and budget for mandatory maintenance

*Recommendations*

Based on the technical needs, implementation requirements, alternative analysis, and functional specification, the following defines the recommendations:

- Establish organizational and policy framework to own, sponsor, and support the PWRS deployment and sustained operations
- Define all required workflows and develop official documents, including diagrams and manuals
- Develop data standards, including reservation submission standards to be complied to
- Procure commercially available system that will address all items listed in the functional specification
- Implement and deploy all items in the functional recommendations in this study

## Implementation Recommendations

This section presents the recommendations specific to practical implementation of the new PWRS and necessary framework to ensure sustained operations and maintenance. The implementation recommendations are addressed in the following categories:

- Organization, policy, and management
- Implementation scope of work
- Expected outcome and deliverables
- Schedule and budget

### *Organization, Policy, and Management*

The successful implementation starts with an overarching framework that enables planning, procurement, deployment, operations, support, and management. The most foundational component of this framework establishes the oversight and management through appropriate organization structure and official policies which guides the implementation and operational processes. The list below defines the core elements to this management framework.

- City's executive level body that sponsors with ownership and funding authorities
- Operational oversight committee empowered to represent City's interest and decisions
- Technical committee to identify, validate, and manage ongoing maintenance
- City's official policy on public way reservation, usage, and compliance mandate
- Official standard procedures on conflict identification, escalation, and resolution
- Data standards on initial reservation and subsequent update requirements

### *Implementation Scope of Work*

The proper implementation is achieved through a clearly defined scope of work that defines tasks, sequencing, and required outcome/deliverables. These tasks are defined below.

#### **Task 1. Establish PWRS Management Structure**

- 1.1 Commission executive sponsor and ownership*
- 1.2 Develop PWRS charter document*
- 1.3 Define PWRS funding structure and commitment*
- 1.4 Establish PWRS operational oversight committee*
- 1.5 Assign PWRS technical workgroup*

**Task 2. Develop Operational Framework**

- 2.1 Develop an official policy for PWRS reservation, usage, and compliance mandate*
- 2.2 Develop an official reservation submission and data standards*
- 2.3 Develop and document standard workflow processes for PWRS operations, compliance tracking, conflict processing and resolution, and data maintenance*
- 2.4 Develop specifications for statistic, activities, tracking, and monitoring reports*
- 2.5 Develop system maintenance and update standards*

**Task 3. Procure New System**

- 3.1 Develop system and functional specifications*
- 3.2 Develop, authorize, process, and manage official Request for Proposal*
- 3.3 Select and procure commercial system for the new PWRS*
- 3.4 Develop and authorize the new PWRS deployment plan, including public outreach and training program*

**Task 4. Configure and Deploy PWRS**

- 4.1 Define and establish deployment project team and stakeholder groups*
- 4.2 Test deploy and configure the new system per the approved specifications*
- 4.3 Perform testing in staging environment and necessary modifications*
- 4.4 Final migration to production environment and conduct acceptance testing*
- 4.5 Execute public outreach and training program*

**Task 5. Perform On-going Maintenance and Technical Support**

- 5.1 Define and initiate PWRS help desk program through City's IT technical support system*
- 5.2 Assign PWRS technical workgroup to oversee and manage regular system updates, and as-needed updates required by City's technology infrastructure and operating software changes*
- 5.3 Continue to manage the system warranty and maintenance agreement*
- 5.4 Execute data maintenance monitoring program to ensure update compliance by data owners*
- 5.5 Generate weekly and monthly system performance and usage reports*

*Expected Outcome and Deliverables*

- City of Los Angeles PWRS Program Charter with executive sponsorship and funding mechanism
- Committee charters for PWRS operational oversight committee and technology workgroup
- PWRS usage and compliance policy
- PWRS standards
- PWRS workflows document
- PWRS reports design specification

- PWRS system and functional specifications
- PWRS system Request for Proposal
- PWRS deployment plan
- PWRS public outreach and training plan
- PWRS testing plan with acceptance criteria matrix
- PWRS help desk system and manual
- PWRS system performance and usage reports

#### *Budget and Schedule*

Based on the implementation scope of work defined in this study, this section presents planning level budget and corresponding schedule for the full implementation of the new PWRS.

#### Budget

The implementation budget is defined by the following components.

- Implementation (Deployment) Cost
  - Consultant labor cost
  - Direct cost including hardware, software, equipment, and other consultant direct cost
  - City staff hours
- Annual Maintenance Cost
  - Annual consultant labor cost
  - System maintenance cost and other direct cost
  - Annual City staff hours

The full implementation cost breakdown is presented in the following table.

City of Los Angeles  
Public Way Reservation System  
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ID	Task	Implementation			Maintenance		
		Consultant Cost	Direct Cost	City Staff Hours	Consultant Cost	Direct Cost	City Staff Hours
1	Establish PWRS Management Structure						
1.1	Commission executive sponsor and ownership	\$0	\$0	40	\$0	\$0	0
1.2	Develop PWRS charter document	\$0	\$0	80	\$0	\$0	0
1.3	Define PWRS funding structure and commitment	\$0	\$0	60	\$0	\$0	0
1.4	Establish PWRS operational oversight committee	\$0	\$0	80	\$0	\$0	0
1.5	Assign PWRS technical workgroup	\$0	\$0	40	\$0	\$0	0
Task 1 Total		\$0	\$0	300	\$0	\$0	0
2	Develop Operational Framework						
2.1	Develop an official policy for PWRS reservation, usage, and compliance mandate	\$4,000	\$0	80	\$0	\$0	80
2.2	Develop an official reservation submission and data standards	\$17,600	\$0	100	\$0	\$0	80
2.3	Develop standard workflow processes for PWRS operations, compliance tracking, conflict resolution, and data maintenance	\$27,200	\$0	150	\$0	\$0	0
2.4	Develop specifications for statistic, activities, tracking, and monitoring reports	\$15,600	\$0	40	\$0	\$0	0
2.5	Develop system maintenance and update standards	\$9,800	\$0	180	\$0	\$0	0
Task 2 Total		\$74,200	\$0	550	\$0	\$0	160
3	Procure New System						
3.1	Develop system and functional specifications	\$6,500	\$0	60	\$0	\$0	0
3.2	Develop, authorize, process, and manage official Request for Proposal	\$0	\$0	140	\$0	\$0	0
3.3	Select and procure commercial system for the new PWRS	\$5,200	\$250,000	260	\$7,200	\$30,000	300
3.4	Develop and authorize the new PWRS deployment plan, including public outreach and training program	\$23,400	\$0	60	\$0	\$0	0
Task 3 Total		\$35,100	\$250,000	520	\$7,200	\$30,000	300
4	Configure and Deploy PWRS						
4.1	Define and establish deployment project team and stakeholder groups	\$0	\$0	70	\$0	\$0	0
4.2	Test deploy and configure the new system per the approved specifications	\$33,600	\$0	180	\$0	\$0	0
4.3	Perform testing in staging environment and necessary modifications	\$13,600	\$0	280	\$0	\$0	0
4.4	Final migration to production environment and conduct acceptance testing	\$13,600	\$0	130	\$0	\$0	0
4.5	Execute public outreach and training program	\$10,400	\$0	120	\$0	\$0	0
Task 4 Total		\$71,200	\$0	780	\$0	\$0	0
5	Perform On-going Maintenance and Technical Support						
5.1	Define and initiate PWRS help desk program through City's IT technical support system	\$0	\$0	280	\$0	\$0	440
5.2	Assign PWRS technical workgroup to oversee and manage system updates and City technology requirements	\$0	\$0	100	\$18,000	\$0	100
5.3	Continue to manage the system warranty and maintenance agreement	\$0	\$0	100	\$0	\$0	180
5.4	Execute data maintenance monitoring program to ensure update compliance by data owners	\$0	\$0	100	\$0	\$0	180
5.5	Generate weekly and monthly system performance and usage reports	\$0	\$0	100	\$0	\$0	180
Task 5 Total		\$0	\$0	680	\$18,000	\$0	1080
Total Cost and City Staff Hours		\$180,500	\$250,000	2830	\$25,200	\$30,000	1540

Note:

1. "Maintenance Cost" and "Maintenance City Staff Hours" are per annual basis.

City of Los Angeles  
 Public Way Reservation System  
 Implementation Plan

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Schedule

The implementation schedule is presented below, presenting each task's execution/deployment, and associated and required maintenance activities for next 3 years.

No	Implementation Task	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Establish PWRS Management Structure	■				■				■			
2	Develop Operational Framework	■				■				■			
3	Procure New System		■	■	■								
4	Configure and Deploy PWRS					■	■						
5	Perform On-going Maintenance and Technical Support							■	■	■	■	■	■

*Procurement, deployment, and implementation* ■  
*Ongoing management and Maintenance* ■

## Appendix A: PWRS Functional Specification

The new PWRS functional specification is attached in the following pages. These specifications include the preferred set of PWRS capabilities. The presentation format is a worksheet that can be used to assess alternative solutions being considered.

The capabilities are indicative of functions that are envisioned in a fully implemented PWRS. Each capability is written as a high level indication of need, but they are not prescriptions for how the capability must be implemented. This approach provides flexibility in solutions being considered so that existing commercial solutions may fulfill the needs 1) as offered, 2) with configuration, 3) with customization or, 4) with third party product integration.

Moreover, the needs may not be fully addressed by an initial implementation of a new PWRS. Depending on commercial offerings, the City may choose to phase functionality implementation based on available features, priority of features, a desire to initially keep the new system as simple as possible, then add more complex features, and to manage costs.

The City may modify the list of requirements as commercial offerings are evaluated and better understood as to their ability to address the fundamental needs of the City. Commercial solution methods may accomplish business needs in different ways that could negate the need for some of the capabilities listed. Additionally, the list may be augmented as the City advances the new PWRS and gains a greater understanding of processes and information needs in the context of the new system.

City of Los Angeles  
 Public Way Reservation System  
 Implementation Plan | Appendix A: Functional Needs

	Off the Shelf	Configurable	Customized	Third Party	Module that Supports Requirement	Comment
<b>1. Business Requirements</b>						
1.1. Facilitate departments and utilities to coordinate project planning and enforcement						
1.2. Provide efficient process for contractors and project owners to plan and execute their projects						
1.3. Deploy as an everyday tool that is sought after because of its ease of use, information reliability, and ability to help users perform their duties						
1.4. The ability to inform the public of upcoming projects						
1.5. Provide a framework to improve collaboration across multiple project focusing on future planning of geographic areas so that all stakeholders can better see what each other is planning and in what timeframe. The result could be better project coordination and less negative impacts.						
1.6. PWRS should support multi-project coordination based on planning areas so that clusters of projects are considered in coordination activities						
1.7. Long range planning and mobility planning updates - major projects that impact public right-of-way (ROW)						
1.8. Special projects –information on short term reservations/conflicts, i.e. special events and temporary bike route						
1.9. Traffic modeling - historical reservation/case/closures, etc. to perform analytics						
1.10. Street resurfacing program – communicate BSS projects impacting the public ROW						
1.11. Street services project coordination - reconcile subsequent project conflicts						

City of Los Angeles  
 Public Way Reservation System  
 Implementation Plan | Appendix A: Functional Needs

	Off the Shelf	Configurable	Customized	Third Party	Module that Supports Requirement	Comment
1.12. Need the ability to have advanced insight into projects, locations, and schedules looking forward so that BCA activities are more tactical and less responsive						
1.13. Improved ability to manage and coordinate utility activities.						
1.14. Transportation planning: need the ability to access and overlay necessary data/layers to perform historical assessment and predictive analysis on PWRS projects and permit impacts to LA transportation network.						
1.15. Traffic operations and management: need ability to review on daily basis to the most current and accurate conflicts, as well as automated notifications on existing and new conflicts as they occur.						
1.16. Integrate with existing business and permitting systems to minimize redundant information entry						
<b>2. Core Application Requirement</b>						
2.1. Create reservations from input form						
2.2. Allow nested or grouped reservations that make up a larger project sharing common characteristics such as the applicant, contact information etc. Each individual project maintains its own footprint, schedule, and other attributes. Grouped reservations automatically represent duration and footprint from aggregated reservations.						
2.3. Reservation footprints are defined with high definition boundaries to identify areas of impact such as number of lanes, sidewalk areas, etc. by drawing on a high resolution aerial photo or uploading shape						

City of Los Angeles  
 Public Way Reservation System  
 Implementation Plan | Appendix A: Functional Needs

	Off the Shelf	Configurable	Customized	Third Party	Module that Supports Requirement	Comment
2.4. Reservations may have different levels of location and time period correlated to remaining days to start. This will allow the creation of reservations during a planning stage when the details of the project are less certain, then exact as the project becomes more concrete during the project lifecycle.						
2.5. Conflict detection engine supports different levels of conflict based on precision of area, reservation type, date range, or other parameters. A concept of variable reservation definition from fuzzy to precise should be supported to allow reservation scoring and prioritization using the resolution of information as a criteria.						
2.6. Conflict detection is performed prior to saving reservation.						
2.7. Reservation Lock reservation editing when reservation is created through API						
2.8. Reservation requirements validation prior to acceptance; location, duration, etc.						
2.9. Reservation information contains a description and type of project, regulatory point of contact, client point of contact, time constraints, etc.						
2.10. Reservation data is automatically verified for mandatory fields and domain value consistency.						
2.11. Reservations have a status code to show if the job is planned, active, dormant, or has final acceptance.						
2.12. GIS data layers may be turned on or off by the user						
2.13. Alternative GIS base maps may be selectable by the user – i.e. aerial photos, street map, right of way map						
2.14. GIS based traffic feeds are available to show real-time traffic congestion						

City of Los Angeles  
 Public Way Reservation System  
 Implementation Plan | Appendix A: Functional Needs

	Off the Shelf	Configurable	Customized	Third Party	Module that Supports Requirement	Comment
2.15. Available GIS layers are associated with a user profile to minimize clutter.						
2.16. Documents can be linked to reservations and retrievable by any user. Document content could include ROW activity plans – traffic plans, or other documents.						
2.17. Hyperlinks to document archives should be supported in addition to attached documents						
2.18. Document viewing is supported within the application and users need not install a separate document reader application.						
2.19. Enable users (public and agency) to set profiles to filter content by types of projects, timeframes, geographic area, type of projects, etc. so that the resulting set of projects represent meaningful information						
2.20. User defined filters should persist between user sessions						
2.21. Automatically generate moratorium areas based on project type and status.						
2.22. Search for projects by location to view project summary information – nature of the project, regulatory point of contact, client point of contact, time constraints, etc.						
2.23. Online training process using predefined and archived materials						
<b>3. User Interface</b>						
3.1. Interface includes map and tabular means for viewing and accessing information						
3.2. Adjusts map view based on location of mobile user						

City of Los Angeles  
 Public Way Reservation System  
 Implementation Plan | Appendix A: Functional Needs

	Off the Shelf	Configurable	Customized	Third Party	Module that Supports Requirement	Comment
3.3. Ability to easily find data layers of interest but not be cluttered with excessive list of content choices – Search, with filter and sort						
3.4. User permissions are set based on user association with a role						
3.5. Role configuration can control access levels (read, update, create) associated with specific data sources						
3.6. Dashboard display showing relevant permits and configurable by user; i.e. daily conflicts within designated area. Different data views can be configured for dispatch, inspectors, or other roles so the display focuses in on their relevant information needs.						
3.7. Real time visualization of tactical map: inspector, location, status, backlog, permits, complaints, etc.						
3.8. Selection lists are contextual to the reservation type for logical consistency and integrity management						
3.9. The PWRS must always be quick to access, otherwise users will be deterred						
3.10. User may edit reservation conditions supplementing or replacing default conditions						
3.11. User may select a project type with pre-defined conditions						
3.12. Attractive user interface with intuitive design that encourages efficient user interaction						
3.13. Projects with final acceptance would drop off the display by default.						
3.14. Is responsive design supporting desktop, tablet, and smartphone use.						

City of Los Angeles  
 Public Way Reservation System  
 Implementation Plan | Appendix A: Functional Needs

<b>4. Analyses</b>						
4.1. Correlation analysis between projects and traffic impacts to develop statistical predictions of impact in similar project types						
4.2. Dynamic reservation conflict detection module that predefines required actions by all parties involved, notifies them of the responsible tasks, progress the resolution through the process, enforcing resolutions prior to any work taking place						
4.3. Dynamic display from mobile data source for activities that falls within 4 hour moratorium; i.e. tree trimming, private utilities, inspections, etc. to assist with field enforcement actions						
4.4. Dynamic traffic volume analysis including prediction and dynamic feedback of actual volume to improve predictions for future reservations						
4.5. Review closure history and corresponding specifics – aid in closure recommendations, public information and relations, support traffic modeling, etc.						
4.6. Model traffic impacts based on expected ROW activities including analysis of adjacent or nearby projects that compound local traffic impact						
4.7. Spatial analysis tools to perform historical inspection trends and projections						
<b>5. Alerts</b>						
5.1. Describe how the system supports the configuration, detection, and notification of alerts						
5.2. Named users have the ability to configure alerts tailored to their individual role						
5.3. Support public registration to receive alerts and notifications. Explain the level and type of configurability						

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5.4. Integration with social media for alerting and project status communication						
5.5. Automated data alerts or notifications; BCA should receive conflict notifications 1 day prior to starting work						
5.6. Automated data alerts or notifications; expand to external social media, etc.: change the mode of access from users having to continuously check for data and/or changes, PWRS should send notifications to alert the user based on pre-selected criteria. This can be implemented to public who are interested in receiving traffic related events and restrictions.						
5.7. Configure alerts based on types of projects, timeframes and geographic footprint.						
5.8. Create alerts and notifications based on individual user configuration choices						
5.9. Send notifications to local population and businesses impacted by projects						
5.10. Notifications are configurable to email, text, or device messaging						
<b>6. Workflow</b>						
6.1. What capabilities are provided to assist in work scheduling based on the daily project activities and locations?						
6.2. What processes if any are supported for sign off of project activities that may affect reservation status?						
6.3. How are reservation conflict resolution processes defined? Are the workflows variable based on project and reservation characteristics?						
6.4. For field inspectors, are inspection areas dynamic to reflect workload changes and the need to balance workload across available inspectors?						

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6.5. Inspection and sign-off process; i.e. private utilities does not close out/sign off by not doing the final inspection						
<b>7. Integration (Data and Systems)</b>						
7.1. Create or update reservation through API to facilitate integration of existing business systems used by PWRS permitting authorities showing permits, status, and inspection records						
7.2. Use API to incorporate tactical and operational data in weekly or even daily formats, thus increasing the resolution of planned field activities						
7.3. ATSAC (Automated Traffic Surveillance and Control)						
7.4. BOE permits- CIP Engineering projects, special events, DWP, Street Services- special events						
7.5. BSS systems and database with street section ID						
7.6. BuildLA: PWRS will have to be integrated with the new system since key data source to PWRS, such as permit data, maybe migrated and maintained within this new application						
7.7. Capital program						
7.8. Capital Project – uniform project reporting system						
7.9. Field inspector mobile inspections data with status updates live to the PWRS						
7.10. FilmLA						
7.11. GIS HUB – This is the comprehensive GIS repository being implemented by the Mayor’s office; PWRS should have access to all layers in GIS HUB; giving users expanded ability to bring in layers, perform ad-hoc analysis, generate exhibits, etc.						
7.12. LADOT in-street sensors and tracking meters						
7.13. Lane requirements for projects from the Transportation Construction Management						

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7.14. LAPD first amendment						
7.15. Links to permits and plans						
7.16. Metro Transit projects						
7.17. Moratorium layer by BSS integrated with peak-hour and holiday moratorium layers						
7.18. Navigate LA						
7.19. Port and Airport project information system						
7.20. Street Services permit system & committed list						
7.21. Street surfacing layer						
7.22. WAZE (or equivalent) - Shows real time traffic, public road incident reporting, and allows PWRS events to be posted to inform the public						
7.23. ZMAS, PCTS – planned on being integrated with BuildLA						
<b>8. Database Management</b>						
8.1. Describe level of transaction association to user ID, date/time, and location for purposes of transactional auditing?						
8.2. What failover and recovery mechanisms are in place to maximize system availability and limit the loss of data?						
8.3. What mechanisms are provided for data integrity management?						
<b>9. Application Administration</b>						
9.1. Configure roles based on departmental functions						
9.2. Create user, assign to role, manage status- active, inactive, etc.						
9.3. Administrative roles must be provided to each participating business entity so that they can manage their own user and workflows						

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9.4. Ability to define project types with associated default conditions						
9.5. Ability to put in project-conditional specifics in lieu of definitive reservation – i.e. streetscape plan						
9.6. Configurable selection lists are presented to users to speed information entry and maintain integrity						
9.7. Configuration of business rules associated with project or activity types – priorities, moratoria,						
9.8. Form designer allows content ordering, mandatory and optional field determinations, domain value management						
<b>10. Hosting, Support, and Training</b>						
10.1. Is the system a Software as a Service Solution?						
10.2. Is the system software licensed and installed on client systems?						
10.3. Is a native mobile application offered? What operating systems are supported?						
10.4. If a SaaS offering, please state your service level agreement parameters.						
10.5. Describe system security measures associated with users and external unauthorized intrusions						
10.6. Describe helpdesk and user training and support alternatives						
<b>11. Performance and Capacity</b>						
11.1. The system must support 50 concurrent users						
11.2. Describe factors affecting system response time for office and mobile users						
11.3. Provide upper limits of response times for user verification, search, map display, map based feature selection, standard reporting, and other key functions						

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<b>12. Maintenance</b>						
12.1. Describe the warranty associated with custom software development / configuration that may be required in association with system deployment						
12.2. What is the process for bug reporting, prioritization, and fixing?						
12.3. Provide evidence of your software enhancement frequency and changes over the last two years						

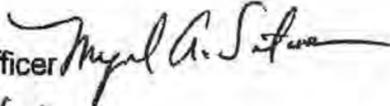
FORM GEN. 160

**CITY OF LOS ANGELES**  
INTER-DEPARTMENTAL CORRESPONDENCE

0220-04799-0002

Date: March 17, 2014

To: The Council

From: Miguel A. Santana, City Administrative Officer 

Gerry F. Miller, Chief Legislative Analyst 

Subject: **SAVE OUR STREETS LA BALLOT MEASURE (CFN 13-1300-S1)**

In August 2013, the City Council instructed our Offices to report back on 24 requests for information related to the potential consideration of the Save Our Streets Los Angeles Ballot Measure (SOSLA). As initially envisioned, the SOSLA would provide funding to service streets in the greatest state of disrepair throughout the City. Additionally, a General Obligation Bond (GOB) was initially put forth as the SOSLA funding mechanism.

The Council instructions addressed by this report were the result of extensive outreach efforts made by Councilmembers Englander and Buscaino, the authors of the Motion that began this process. Our Offices responded directly to some of the requests for information and worked with other departments to answer other requests (see Discussion Section). Aside from our Offices, these report backs involved the Office of the City Attorney, the Department of Public Works (the Board and the Bureaus of Street Services, Engineering, Contract Administration and Sanitation), the Information Technology Agency and the Departments of General Services, Housing, Planning and Transportation.

The intent of this report is to provide responses to the 24 requests for information as they relate to SOSLA. These responses cover the following four categories:

1. Service components the SOSLA would fund;
2. Long term plan for maintaining City streets;
3. Funding options for service components not covered by SOSLA; and,
4. Program management and oversight.

To complete one of the requests for information, the Bureau of Engineering (BOE) engaged an independent civil engineering design expert (Harris & Associates) to review the Bureau of Street Services' estimate of a street repair program, which would include the rehabilitation of D and F rated (the most severe category) streets. Specifically, Harris & Associates reviewed the work program's magnitude and \$3 billion cost estimate, along with the feasibility of a 10 year program duration and construction schedule. Reports from the Bureau of Engineering and Harris & Associates are attached (Attachments 1 and 2). These reports state that a 10 year program duration composed of planning, construction and closeout periods is not likely feasible for a variety of reasons provided in their reports. They recommend a 20 year program duration composed of 3 years for planning, 15 years for construction and 2 years for closeout. Because of the annual escalation of costs, the extended program duration of 20 years (with a 2015 commencement) raises the cost estimate to \$3.86 billion. This scenario is illustrated in the Harris & Associates report.

Given the revised cost estimate, we reviewed numerous potential funding sources for SOSLA. These included:

- Use of existing funding sources such as Proposition C, Measure R, Gas Tax and Street Damage Funds. Use of these funding sources would increase pressure to reduce other critical City services such as street sweeping, traffic sign and signal maintenance, pedestrian and bicycle safety programs, pavement preservation and maintenance of bridges and tunnels. Even if 100 percent of these funding sources were used for SOSLA, they are unlikely to provide sufficient funding. (Attachment 3);
- Use of the General Fund would limit the ability to provide adequate funding for critical public safety services;
- Use of other funding mechanisms such as the Parking Occupancy Tax, Refuse Collection Franchise Fees and Documentary Transfer Tax would not generate enough General Fund revenue for SOSLA;
- Use of a voter approved General Obligation Bond (GOB) or Special Tax Assessment. Both of these property tax funding mechanisms are not recommended for the following reasons:
  - Neither reflects citizen input received at public meetings held to discuss SOSLA. At these meetings, attendees preferred a funding mechanism that would not place the entire burden on property owners but rather spread it across as many users of the streets as possible;
  - GOBs involve added costs in the form of interest payments, as well as, debt issuance and debt administration costs;
  - Funding derived from GOBs is limited to capital improvements. Therefore, some of this funding could not be used for certain needed street repair work; and,

- Although Special Tax Assessments can be used as a pay-as-you-go funding mechanism, they involve the calculation of the benefit received by each property owner. This would be burdensome to administer for a Citywide street repair program and would raise the overall cost of repairs. Additionally, costs for individual property owners could vary significantly with some having little or no assessment and others having higher assessments.
- Use of a voter approved sales tax increase would spread the costs for the street repairs to a broader spectrum of the infrastructures' users, including those who do not live within the City but still use the City's streets. Additionally, it would serve as a pay-as-you-go funding mechanism at a lower cost.

Given the above review, our Offices recommend that a half-cent sales tax increase serve as the SOSLA funding mechanism, and that the funding be used for a street repair program, as well as, a much needed sidewalk repair program. The street repair program would rehabilitate D and F rated (the most severe category) streets and install curb ramps where warranted. The sidewalk repair program would focus on the removal of barriers to mobility on City sidewalks. An SOSLA designed to fund these service components would serve as the foundation and provide opportunities to pursue additional potential funding for other program options discussed in this report. A half-cent sales tax increase that would sunset after 15 years would provide an estimated total of \$4.5 billion in funding. This would provide funding required to repair the City's worst streets (estimated at \$3.86 billion) and provide funding (potentially \$640 million) for the repair of the City's worst sidewalks.

A half-cent sales tax increase is recommended over a General Obligation Bond as the SOSLA funding mechanism for the following reasons:

- It spreads the costs for the street repair and sidewalk repair programs to a broader spectrum of the infrastructures' users, including those who do not live within the City but still use the City's streets. An important message communicated by participants of public outreach meetings has been that the SOSLA not be solely financed by property owners;
- It is estimated that a half-cent sales tax increase would generate sufficient revenue to fund the proposed repairs within the 15 year construction window recommended by the Bureau of Engineering and Harris & Associates;
- A half-cent sales tax increase would enable the street repair and sidewalk repair programs to be financed on a "pay-as-you-go" basis unlike a General Obligation Bond, which would require the payment of interest and a repayment schedule that would extend significantly beyond 15 years; and,

- In our April 2013 report regarding the use of a GOB funding mechanism, we estimated that for a 10 year, \$3 billion street repair program the owner of a \$350,000 home would pay an average of \$121 more in property taxes per year (approximately 33 cents per day), over a 29 year period. With a half-cent sales tax increase, which sunsets in 15 years, we currently estimate that for 20 year street and sidewalk repair programs funded at \$4.5 billion, a City household would pay approximately \$91 per year for 15 years (approximately 25 cents per day) as illustrated on page 13 of the Discussion.

Additional information on a proposed sales tax increase is provided in the Discussion Section A and Attachment 4.

### **Service Components the SOSLA Would Fund**

#### *Rehabilitation of D and F Rated Streets and Warranted Curb Ramp Installations (Street Repair Program)*

The magnitude of the recommended street repair program, if not properly planned and executed, would cause significant disruption to communities and traffic patterns across the City. Therefore, the program would require the City to develop a strategic and coordinated implementation plan to prioritize streets to ensure that vehicular movement is not unduly constrained.

Staff considered a 10 year, 15 year, and 20 year construction period for street repairs and warranted curb ramp installations. Multiple scenarios were thoroughly reviewed. A 10 year construction period appears to be a significant challenge. A 15 year construction period appears to be more feasible as it accounts for a more practical scale of construction on an annual basis and minimizes escalation costs. Additionally, the BOE estimates that three years would be needed to properly prepare, plan and coordinate with other agencies before commencement of construction work, and two years would be needed for project and program closeout following the construction period. Therefore, the street repair program under this scenario would take 20 years to complete with commencement in 2015 and a median cost estimate of \$3.86 billion. This scenario is illustrated in the Harris & Associates report. The \$3.86 billion amount assumes a three percent annual cost escalator throughout the duration of the street repair program to account for inflation.

#### *Sidewalk Repair Program*

One of the August 2013 report backs was that our Offices, with assistance from the Bureau of Street Services (BSS), provide cost estimates, and report on the feasibility of including a sidewalk repair program as part of SOSLA. Based on community input obtained from outreach efforts, sidewalk repair is of high priority. We recommend inclusion of a sidewalk repair program with funding from SOSLA because both focus on the repair of existing infrastructure, instead of creating new infrastructure, and both address existing City liability.

The Bureau of Street Services does not currently have complete data regarding the condition of City sidewalks. Based on limited observations, BSS estimates that approximately 40 percent of the City's sidewalks may be in need of repair/replacement with a majority of them having been damaged by tree roots. It is unclear how much funding would be required to address all needed sidewalk repairs. This proposal would provide up to approximately \$640 million of the estimated incremental half-cent sales tax revenue to be used on sidewalk repairs. Although the proposed funding mechanism would go towards street and sidewalk repairs, it is recommended that separate street repair and sidewalk repair programs be established and operated for the following reasons:

- Sidewalk barrier removal and mobility is an issue that deserves a singular focused effort and will require close coordination with urban forestry efforts to ensure that tree root damage is effectively addressed;
- Sidewalk repair projects could be overshadowed by large roadway reconstruction projects if both are operated under a singular work program;
- While there is overlap between both street and sidewalk repair efforts and a definite need to coordinate closely to ensure efficiencies, not all failed streets will require sidewalk repair;
- The initial focus and strategy in the sequencing of repairs will likely differ significantly between programs. For example, a focus on pedestrian access issues for sidewalks will likely lead to an early focus on high pedestrian traffic areas first, while a focus on street damage issues will likely lead to attention on significantly damaged roadways; and,
- The street repair program is further along with a detailed cost estimate that was prepared over the past several months using data collected over multiple years, and validated through sampling performed by Harris & Associates. The scope and cost of the sidewalk repair program is still in the early stages of development.

### **Long Term Plan for Maintaining City Streets**

In our joint report, dated April 2, 2013, our Offices advised that a successful street repair program would be contingent upon also providing sufficient funding to the City's Pavement Preservation Program and the Physical Plant Capital Improvement Program both during and after implementation of SOSLA.

### *Pavement Preservation Program*

We estimated that it will cost approximately \$3 billion to continue the Pavement Preservation Program (PPP) over the life of the SOSLA Program. This is important to avoid creating a large inventory of new failed streets while repairing the current inventory of failed streets.

Additionally, we project that cost increases will continue to challenge the City in providing sufficient funding for this Program. Discipline will be required to ensure that this is properly funded during the course of the proposed SOSLA Program.

### *Capital Improvement Program*

The Capital Improvement Program (CIP) has historically included repair to some significant failed streets (generally those that are collapsing or have serious structural issues and are a public safety concern). The funding provided for SOSLA would also allow the City to address these types of projects (e.g. Paseo Del Mar; Asilomar; various bulkheads and retaining walls). Other CIP items such as ventilation fans for tunnels, guardrails, and berm replacement will still require funding separate from SOSLA.

### **Funding Options for Service Components not Covered by SOSLA**

The SOSLA will provide opportunities to accomplish multiple goals. Focused effort should be made to develop other revenue streams (including grant opportunities) to allow for the leveraging of SOSLA funds to construct appropriate green street elements, streetscape (complete street) elements, cool street elements, and Great Street neighborhoods. Descriptions for these items are provided in the Discussion section and corresponding attachments.

### **Program Management and Oversight**

The SOSLA funds should be overseen by the City Council through an Administrative Oversight Committee and Citizens' Oversight Advisory Committee. This is a successful formula the City has used to oversee GOB funds and corresponding programs/projects. The Discussion section herein provides further information.

Implementation of street and sidewalk repair programs funded by SOSLA will be done in the most cost-effective manner. This will include the use of both City staff and contractors as described on page 5 of the Bureau of Engineering report (Attachment 1).

July 16, 2014	Last day for Council adoption of all resolutions placing proposed measures on the ballot [Election Code Section 601(b)].
August 8, 2014	Last Day for Council to request consolidation with State General Election [California Elections Code 10403].
August 11, 2014	Last day to file ballot arguments with the City Clerk [Election Code Section 605(e)].
August 21, 2014	Last day to file rebuttal arguments with the City Clerk [Election Code Section 605(e)]
August 26, 2014	Last day to file impartial summaries and financial impact statements with the City Clerk [Election Code Section 604(a)].

The City Clerk estimates that placement of the SOSLA ballot measure on the November 2014 ballot will cost approximately \$4.4 million.

## **RECOMMENDATIONS**

That the Council, subject to the approval of the Mayor:

1. Request the City Attorney, working with the Chief Legislative Analyst and City Administrative Officer, to prepare resolutions and an ordinance for a November 2014 ballot measure to enact a one-half cent sales tax over a 15 year period and dedicate resulting revenue towards the rehabilitation of D and F rated (the most severe category) streets, the installation of curb ramps where warranted, and sidewalk repairs aimed at the removal of barriers to mobility, and further, request the Mayor to include in his fiscal year 2014-15 proposed budget funding for said ballot measure;
2. Request the City Attorney, working with the City Administrative Officer, to prepare and present appropriate material for the Council to approve an SOSLA Oversight Structure consistent with this joint report from the CLA and CAO and report back to Council concurrently with the ballot measure for the enactment of the above sales tax measure;
3. Modify the Street Damage Repair Program as follows:
  - a. Request the City Attorney to prepare, and present for Council consideration an ordinance to increase the current moratorium on excavations in streets resurfaced from one year to five years, unless the permittee resurfaces the entire block curb face to curb face and/or intersection containing such cuts and/or excavations;
  - b. Request the City Attorney to work with the Bureau of Contract Administration to amend Section 62.02(f)2., Article 2, Chapter VI of the Los Angeles Municipal Code to modify the exception to requiring utility companies and their contractors to provide liability insurance;

- c. Request the City Attorney to work with the Bureau of Contract Administration to amend Section 62.02(g), Article 2, Chapter VI of the Los Angeles Municipal Code to require all utility owners to provide to the Bureau of Contract Administration (Inspector of Public Works), written affidavits designating their authorized representative (contract/subcontractor) who will be performing the work described in a permit;
  - d. Request the City Attorney to work with the Bureau of Contract Administration to amend Section 62.04(b), Article 1, Chapter VI of the Los Angeles Municipal Code to include notification requirements on permits for utility service work cuts of less than 100 square feet;
  - e. Instruct the Bureau of Street Services to report back with recommendations relative to the current Street Damage Restoration Fee to account for the increase in salaries and materials that has occurred since the last fee increases were approved eight years ago; and,
  - f. Request the City Attorney, City Administrative Officer, and the Bureau of Contract Administration to report back within 90 days with recommendations to increase the City's current fines and penalties associated with failing to comply with the City's permit requirements.
4. Instruct the Bureau of Engineering, with support from the Information Technology Agency as required, to immediately proceed to enhance the Public Way Reservation System (PWRS) to provide a more customer friendly public interface and to increase the accuracy and depth of available information; and,
- a. Instruct the City Administrative Officer to work with all departments and FilmLA to ensure that data provided to the PWRS is complete and is refreshed as frequently as possible and report back within 90 days;
  - b. Subject to the approval of the Mayor, instruct the City Engineer and request the Controller to appropriate \$200,000 of available cash within the Engineering Special Services Fund, Fund 682, Department 50, to a new account (Account number to be determined) entitled "PWRS Enhancement";
  - c. Authorize the City Engineer to execute a contract for information technology services to assist with the PWRS Enhancement, subject to City Attorney review; and,
  - d. Authorize the City Engineer, with the concurrence of the City Administrative Officer, to make any technical corrections required to carry out the intent of the Council and Mayor.
5. Should the Council desire to add Complete Street projects to the SOSLA Ballot Measure, it is recommended that the Council:
- a. Instruct departments to give top priority to submitting requests for funding of Complete Streets to Metro's Call For Projects;
  - b. Instruct the Director of City Planning, the City Administrative Officer and the Chief Legislative Analyst to establish a template for use in future development agreements that will assist in the funding of Complete Street projects; and,
  - c. Should the proposed ballot measure be approved:

- i. Task the Proposed SOSLA Citizens' Oversight Advisory Committee (COAC) working with the City Complete Streets Committee to create a strategic approach to locating, scoping and prioritizing Complete Street projects for review and approval by the Proposed SOSLA Administrative Oversight Committee (AOC) and the City Council; and,
  - ii. Within the strategic approach created by the COAC and approved by the Administrative Oversight Committee and the City Council, encourage departments to apply for grants to assist with leveraging City funds in implementation of the Complete Street Projects.
6. Should the Council desire to add Green Street projects to the SOSLA Ballot Measure, it is recommended that the Council:
  - a. Instruct all departments to:
    - i. Work with the City Administrative Officer and Chief Legislative Analyst to seek additional funding sources to fund the incremental costs of Green Streets;
    - ii. Consider simpler, more cost effective installations than the Elmer Avenue model; and,
    - iii. Prioritize projects that can help alleviate flooding as well as assist with infiltration.
  - b. Should the proposed ballot measure be approved:
    - i. Task the Proposed SOSLA Citizens' Oversight Advisory Committee (COAC) working with the City Green Streets Committee to create a strategic approach to locating, scoping and prioritizing Green Street projects; and,
    - ii. Within the strategic approach created by the COAC and approved by the Administrative Oversight Committee and the City Council, encourage departments to apply for grants to assist with leveraging City funds in implementation of the Green Street Projects.
7. Should the Council desire to add Great Streets projects to the SOSLA Program, it is recommended that the Council encourage all departments to leverage City funds by seeking outside funding, including applying for grants to fund the implementation of Great Streets projects.

## **FISCAL IMPACT STATEMENT**

The City Clerk estimates that placement of the SOSLA ballot measure on the November 2014 ballot will cost approximately \$4.4 million in fiscal year 2014-15. Additionally, a maximum of \$200,000 will be spent from uncommitted funds within the Engineering Special Services Fund to enhance the Public Way Reservation System.

To complete one of the requests for information, the Bureau of Engineering (BOE) engaged an independent civil engineering design expert (Harris & Associates) to review the Bureau of Street Services' estimate of a street repair program, which would include the rehabilitation of D and F rated (the most severe category) streets. Specifically, Harris & Associates reviewed the work program's magnitude and \$3 billion cost estimate, along with the feasibility of a 10 year program duration and construction schedule. Reports from the Bureau of Engineering and Harris & Associates are attached (Attachments 1 and 2). These reports state that a 10 year program duration composed of planning, construction and closeout periods is not likely feasible for a variety of reasons provided in their reports. They recommend a 20 year program duration composed of 3 years for planning, 15 years for construction and 2 years for closeout. Because of the annual escalation of costs, the extended program duration of 20 years (with a 2015 commencement) raises the cost estimate to \$3.86 billion. This scenario is illustrated in the Harris & Associates report.

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- Use of a voter approved General Obligation Bond (GOB) or Special Tax Assessment. Both of these property tax funding mechanisms are not recommended for the following reasons:
  - Neither reflects citizen input received at public meetings held to discuss SOSLA. At these meetings, attendees preferred a funding mechanism that would not place the entire burden on property owners but rather spread it across as many users of the streets as possible;
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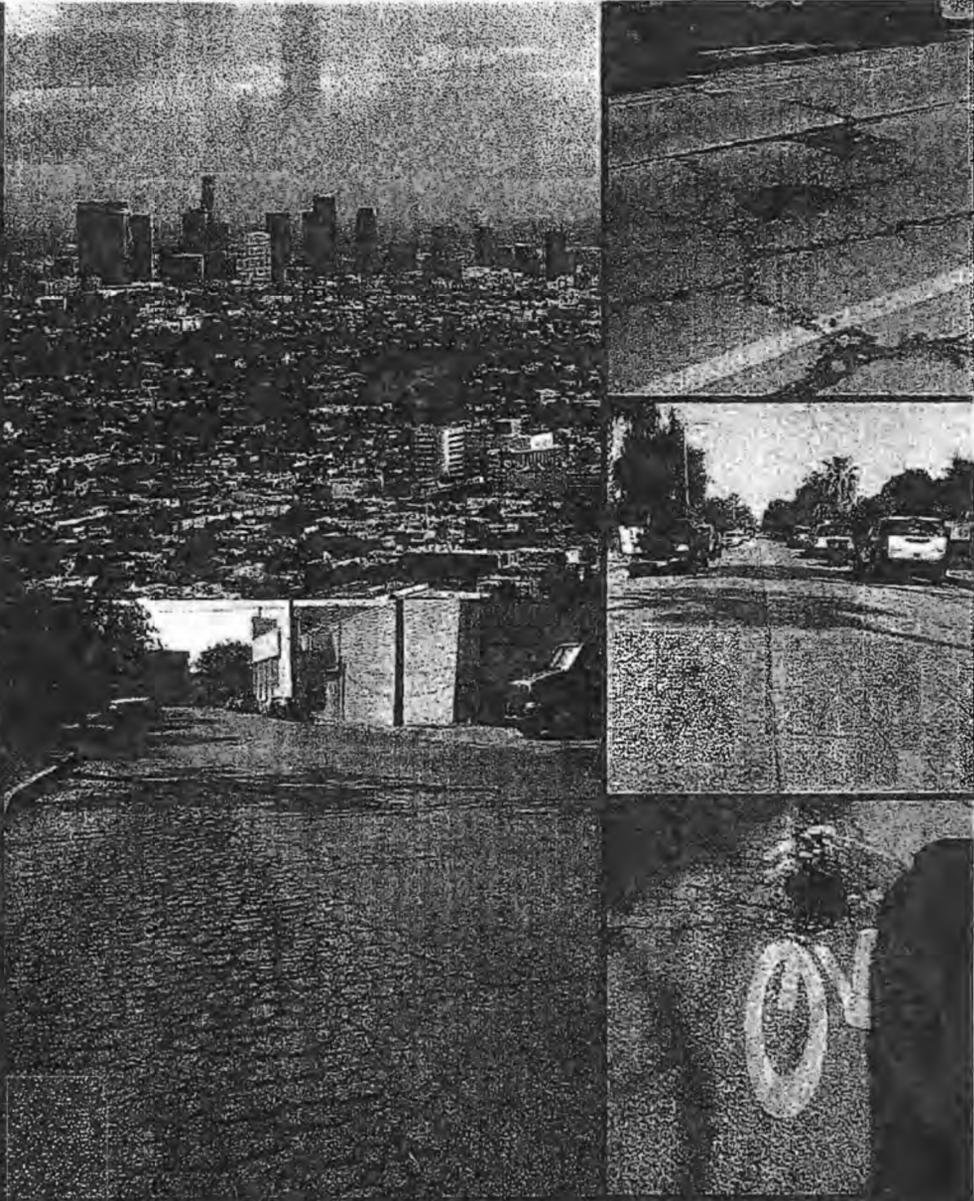
- Although Special Tax Assessments can be used as a pay-as-you-go funding mechanism, they involve the calculation of the benefit received by each property owner. This would be burdensome to administer for a Citywide street repair program and would raise the overall cost of repairs. Additionally, costs for individual property owners could vary significantly with some having little or no assessment and others having higher assessments.
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- A half-cent sales tax increase would enable the street repair and sidewalk repair programs to be financed on a "pay-as-you-go" basis unlike a General Obligation Bond, which would require the payment of interest and a repayment schedule that would extend significantly beyond 15 years; and,

# City of Los Angeles



**Harris**<sup>®</sup>

## Save Our Streets Los Angeles Program Estimate Report

February 27, 2014



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## Appendices

Appendix A	Estimate Details
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## 1. EXECUTIVE SUMMARY



The City of Los Angeles has the largest municipal street system in the nation with over 6,500 centerline miles of improved residential and arterial streets. It is estimated that over 35% of the roadway system, approximately 2,400 centerline miles (8,200 lane miles), are currently failing or in near failing (Grade D or F) condition. The program scope estimated in this report also provides for an additional 500 lane miles that may deteriorate during the life of the program, for a total of 8,700 lane miles. The proposed Save Our Streets LA (SOSLA) Program (Program) would provide the funding for implementation, rehabilitation and reconstruction of these streets to improve the City's overall roadway network service level.

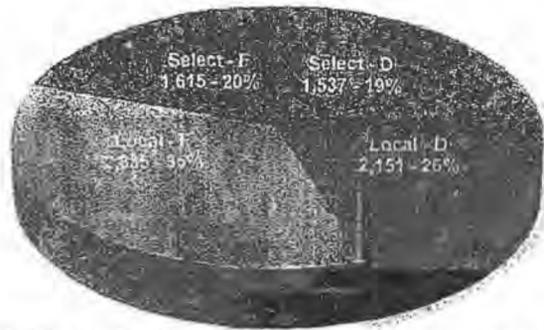
Harris & Associates (Harris) was retained by the City's Bureau of Engineering (BOE) to develop an independent program level cost estimate (Estimate) to confirm and/or refine previous estimates prepared by the City's Bureau of Streets Services (BSS). The focus of the Estimate is to develop a baseline cost for the reconstruction of roadway improvements with pedestrian access ramps. A minimal amount of adjacent concrete improvements are also included in the Estimate, but are limited to those required for the roadway reconstruction. The Estimate is based on utilizing traditional roadway construction methods and materials and does not include other elements such as 'Great Streets', 'Complete Streets', 'Green Streets', alley improvements, traffic signal modifications, water quality elements, sidewalk improvements, utility relocations, or storm drain and sewer improvements. Some of the basic Program elements such as construction duration and program delivery were reviewed to assess their impact on the overall Program cost. The Estimate is further broken down by Arterial (Select) and Residential (Local) street type, and by grade (D and F).

BSS developed and maintains a Pavement Management Program (PMP) that assesses the condition of streets within the City's roadway system. The PMP is considered a network level tool that has information on roadway types and conditions, is primarily used for planning purposes, and is not intended to be used in the development of actual construction quantities or contract documents. The roadway pavement condition is expressed in terms of a Pavement Condition Index (PCI), which is a scale from 0 to 100, 100 being best. The streets considered for the SOSLA Program are based on the PCI condition ratings established by the City's PMP, and are identified as streets being in failed (grade-F, PCI range of 0-40) and near failing (grade-D, PCI range of 41-55) condition.



In October of 2013, BSS provided PMP data for grade D and F streets. This data included a total of approximately 2,400 centerline miles or 8,200 lane miles of pavement. Since fiscal year 2011/12, it has been the City of Los Angeles' policy to stabilize the condition of the road network at a weighted average PCI of 62, by funding at least 800 lane miles of annual resurfacing and 1,200 lane miles of annual slurry seal. For the purposes of the Estimate, it was assumed that up to 500 lane miles of streets might deteriorate to D or F conditions during the 18 year program as a result of unforeseen utility trenches, transit bus wear, and other factors. These 500 lane miles were added to the original 8,200 lane miles provided by BSS, by adding approximately 6% to the quantities established for each of the subcategories including: Select streets, grade D and F, and Local streets, grade D and F. This resulted in the 8,700 lane miles established for the Estimate. The 8,700 lane miles included in the Estimate is proportional to the original 8,200 lane miles and is comprised of 1,717 lane miles of "Select" F Streets, 1,634 lane miles of "Select" D Streets, 2,287 lane miles of "Local" D Streets, and 3,067 lane miles of "Local" F Streets. See Figure 1-1 for the distribution of streets by grade and type for the original 8,200 lane miles provided by BSS. Figure 1-2 shows a similar distribution of streets by grade and type for the projected 8,700 lane miles used for the Estimate.

Distribution of D and F Rated Street by Type  
8200 Lane Miles (Current)  
By Lane Miles (LM)



Total Local: 5,036  
 Total Select: 3,152  
 Grand Total: 8,188 LM

Select - D Streets     Local - D Streets  
 Local - F Streets     Select - F Streets

FIGURE 1-1

Distribution of D and F Rated Street by Type  
8700 Lane Miles (Projected)  
By Lane Miles (LM)



Total Local: 5,354  
 Total Select: 3,351  
 Grand Total: 8,705 LM

Select - D Streets     Local - D Streets  
 Local - F Streets     Select - F Streets

FIGURE 1-2



Construction durations of 10, 15 and 20 years were analyzed to determine a realistic time period for the Program delivery. Based on this analysis, it is recommended that a 15-year construction period is most appropriate for use in developing the Estimate. A 10-year construction duration would require constructing approximately 250 centerline miles per year, and would require full production in the first year of the construction phase, and that full production be maintained through the last year. This would be difficult to achieve on both ends. It would be more efficient to ramp up production in the beginning of the program as staff is hired and trained. Also, achieving full production in the last year would be very difficult as well because the odds of all remaining projects in that last year not having any type of challenges would be remote.

If a 10-year construction duration were to accommodate scaling up and down, the remaining full years of production would require approximately 300 centerline miles per year, which is considered too aggressive, especially considering that the BSS resurfacing program will be continuing as well. Overall, the 10-year construction duration is thought to be technically feasible, however, staffing levels for those early full production years would be very difficult to achieve. Proper coordination of work would likely be an extreme challenge and the potential for increased traffic impacts would be high. A 15-year construction duration allows additional time for the construction level to scale up and down in the first and last few years of construction, and therefore would allow for more efficient staffing and for time for Program coordination. It would also offer much more of an opportunity to coordinate with potential grant funding that might be obtained for elements related to things such as 'Green Streets' and 'Great Streets' by leveraging the basic street work funding. Delivery of the program over a 15-year construction period would still not be easy by any means, as the peak construction years would still require completing about 200 centerline miles per year, but it would be much more manageable. A 20-year construction period would offer further opportunities for coordination and ramp-up of staffing and construction, however, the benefits of a 20-year construction period are not found to outweigh the extra escalation cost that would be incurred. It is estimated that the overall Program delivery period will be approximately 20-years for a 15-year construction period, with approximately 3 years of pre-construction activities required prior to the start of major construction activities in 2017, and approximately 2 years needed after the 15-year construction period to close out projects and the Program's coordination, financial and administrative elements.

Unit prices for construction costs were developed based on the cost of labor and material for similar types of projects in the greater Los Angeles area in 2012 and 2013. These costs were adjusted to reflect Program economy of scale and complexity of projects for Select and Local streets. In establishing unit costs for year one of the Program, unit prices for 2012 and 2013 were escalated to November of year 2017 (assumed year one for commencement of Program construction). From there the unit prices were escalated to the middle of the 15 year construction period (2024). The unit prices estimated for the middle of the construction period represent the 'average' unit price for the entire construction period and were used as the unit prices shown in the Estimate over the 15 year construction period. Escalation factors used in the Estimate were based on historic construction cost indexes developed by Engineering News Record (ENR) in the greater Los Angeles Area over the last 20 years. An average escalation of 3% was used in the Estimate to coincide with the historic average over the last 20 years. Soft costs were based on a percentage of construction costs and from feedback obtained from BOE based on their historic program delivery costs, adjusted downward to account for an expectation of a streamlined design process and economy of scale.



Two estimates were developed for the Program based on a 15-year construction period. The separate Estimates vary based on the percent of the pavement area requiring removal and reconstruction. The percentage of reconstruction area is one of the most significant factors influencing the construction cost. The range of the percentage of reconstruction was established based on a random field sampling of the current D and F streets. The field sampling results were statistically analyzed and a range of removal percentages was established for the high, mean and lower range of reconstruction. The First Estimate for the SOSLA program is \$3.85 Billion. This estimate uses an average escalation of 3% and the mean range of removal percentages.

The Second Estimate was developed using an average escalation of 3% and the lower range of the percentage of reconstruction that may be required. This was done to present a potential lower Program cost option. Using these lower values, the program is estimated to cost approximately \$3.54 Billion. However, it is important to note that during construction, should the actual reconstruction percentage be greater than the lower range, additional funding may be needed to complete the program.

The following pages summarize the two Estimate scenarios developed based on the ranges for the percent of roadway reconstruction.

This report was in response to a request from the Los Angeles City Council (CF 13-1300-S1). Under the leadership of Councilmember Mitchell Englander and Councilmember Joe Buscaino, the Bureau of Engineering was asked to take the lead in developing program costs. We would like to thank Deborah Weintraub and her staff Ted Allen, Mati Laan, Shauri Yepremian and others from Engineering for their leadership and close collaboration on this report. In addition, the assistance from Nazario Saucedo and his staff from the Bureau of Street Services was important. Input from John Reamer and his staff from the Bureau of Contract Administration was also invaluable. Feedback and input from Miguel Santana and his staff from the City Administrative Office, and from Gerry Miller and his staff from the Chief Legislative Analyst's Office has also been significant.



**Estimate - SOSLA Cost Estimate**  
CONSTRUCTION COST ESTIMATE (Level 'C')

REVISED 2-18-14

15 Year Construction Period  
20 Year Program Delivery  
2550 Centerline Miles/ 8700 Lane Miles  
Average 170 Miles (Ranging from 64 to 230 Miles per Year)  
Mean Range of Pavement Removals  
Unit Costs Includes 3% Annual Escalation

Item No.	Item Description	Unit Cost	Units	Probable Quantity	Item Total	% of Total Cost	Basis/ Assumption
<b>Hard Construction Costs</b>							
1	Construct 2-inch Asphalt Concrete (AC) Surface Course	\$1.50	SF	501,045,300	\$751,568,085	19.68%	Total Area
2	Remove & Replace Failed Roadway - Select (12" Removal, Replace 6" AC/ 6" AB)	\$9.30	SF	45,437,730	\$422,570,889	10.95%	25% to Total Area Based Field Reviews (Appendix)
3	Remove & Replace Failed Roadway - Local (6" Removal, Replace 2" AC/ 6" AB)	\$4.80	SF	50,982,770	\$287,917,296	7.40%	20% to Total Area Based Field Reviews (Appendix)
4	Removal of failing APC and PCC (12-inch Depth) and Construct 6" AC/6" AB - Select	\$13.75	SF	5,305,960	\$70,198,700	1.82%	8% of APC and PCC Areas Outside HPOZ (Appendix)
5	Removal of failing APC and PCC (8-inch Depth) and Construct 2" AC/6" AB - Local	\$7.30	SF	6,459,970	\$47,440,785	1.23%	8% of APC and PCC Areas Outside HPOZ (Appendix)
6	Remove and Replace PCC Roadway in HPOZ (8" Thick) - Local	\$14.80	SF	814,870	\$12,134,113	0.31%	20% of PCC Area in HPOZ
7	Remove and Replace PCC Roadway (10" Thick, HPOZ) - Select	\$21.10	SF	89,570	\$1,889,527	0.05%	20% of PCC Area in HPOZ
8	Access Ramps - Local (includes removals)	\$9,995.00	Each	48,570	\$174,609,150	4.53%	2.5 Ramps Per Segment (Appendix)
9	Access Ramps - Select (includes removals)	\$9,970.00	Each	20,690	\$91,980,500	2.32%	3 Ramps Per Segment
10	Grinding/ Coldmilling	\$6.45	SF	312,340,910	\$140,353,965	3.64%	Local - 6" wedge grind along gutter (AC & PCC) Select - Total Area
11	Adjust Surface Utility to Grade	\$620.00	Each	60,240	\$37,348,800	0.97%	Length/ 250' (Local), Length/ 175' (Select)
12	PCC Curb and Gutter R&R - Local ( 6-inch )	\$34.75	LF	490,440	\$17,042,790	0.44%	5% of Centerline Length
13	PCC Curb and Gutter R&R - Select ( 8-inch )	\$42.00	LF	183,780	\$7,717,080	0.20%	5% of Centerline Length
14	Bus Pads - Select Streets only	\$24.45	SF	591,570	\$13,280,747	0.34%	1 Bus Pad per Mile, Includes removal of existing
15	PCC Cross Gutter R&R 8-inches - Local	\$17.45	SF	348,060	\$6,101,567	0.16%	15% of Existing to be Reconstructed (0.60 per Segment)
16	PCC Cross Gutter R&R 8-inches - Select	\$24.85	SF	72,280	\$1,798,158	0.05%	15% of Existing to be Reconstructed (0.20 per Segment)
17	Striping Replacement - Local	\$1.20	LF	9,808,910	\$11,770,692	0.31%	Lineal foot of striping (1 x Centerline Length)
18	Striping Replacement - Select	\$1.20	LF	22,048,420	\$26,458,104	0.69%	Lineal foot of striping (6 x Centerline Length)
19	Traffic Loops - Select	\$440.00	Each	58,790	\$25,887,600	0.67%	20 Loops per Signalized Intersection (Assume Intersection at every 1250')
Sub-Total =					\$2,138,255,345		
<b>Misc Construction Costs</b>							
20	Mobilization	2.00	%	Hard Cost	\$42,765,107	1.13%	Assumed based on Past Construction Projects
21	Traffic Control	1% to 3%	%	Hard Cost	\$42,258,436	1.10%	1% Local streets, 3% for Select streets
22	SWPPP Implementation	0.75	%	Hard Cost	\$16,036,915	0.42%	Assumed based on Past Construction Projects
23	Construction Staking and Monument Preservation	1.50	%	Hard Cost	\$32,073,830	0.83%	Assumed based on Past Construction Projects
Misc Construction Cost Sub-Total =					\$133,134,288		
Construction Cost Sub-Total =					\$2,271,389,634		
15% Construction Contingency =					\$340,707,995	8.89%	
Construction Cost =					\$2,612,097,628	67.01%	
<b>Program Delivery Costs</b>							
24	Material Testing for Construction (Batch Plant inspections & in-place testing)	2.00	%	Construction Cost	\$52,241,893	1.95%	Assumed based on Past Construction Projects
25	Program Management & Public Outreach	6.05	%	Construction Cost	\$158,031,725	4.10%	Performed by City & Consultant Staff
26	Design - Local (Includes, Survey, Geotechnical, Deflection Testing, PS&E)	8.50	%	Local Streets Construction Cost	\$112,615,655	2.92%	Performed by City & Consultant Staff
27	Design - Select (Includes, Survey, Geotechnical, Deflection Testing, PS&E)	10.00	%	Select Streets Construction Cost	\$128,720,457	3.34%	Performed by City & Consultant Staff
28	Construction Management	8.50	%	Construction Cost	\$222,028,043	5.79%	Performed by City & Consultant Staff
29	Inspection	8.50	%	Construction Cost	\$222,028,043	5.79%	Performed by City & Consultant Staff
Project Delivery Cost Sub-Total =					\$895,665,816	23.21%	
Sub-Total =					\$3,507,763,445		
10% Program Contingency =					\$350,776,344	9.99%	
Total Cost =					\$3,858,539,789		



**Alternative Estimate - SOSLA Cost Estimate**  
CONSTRUCTION COST ESTIMATE (Level 'C')

REVISED 2-18-14

15 Year Construction Period  
20 Year Program Duration  
2550 Centerline Miles/ 8700 Lane Miles  
Average 178 Miles (Ranging from 64 to 230 Miles per Year)  
Lower Range of Pavement Removals  
Unit Costs Includes 3% Annual Escalation

Item No.	Item Description	Unit Cost	Units	Probable Quantity	Item Total	% of Total Cost	Basis/ Assumption
<b>Major Construction Costs</b>							
1	Construct 2-inch Asphalt Concrete (AC) Surface Course	\$1.80	SF	501,045,390	\$751,568,085	21.20%	Total Area
2	Remove & Replace Failed Roadway - Select (12" Removal, Replace 6" AC/ 6" AB)	\$9.30	SF	37,323,850	\$347,111,805	9.79%	23% to Total Area Based Field Reviews (Appendix)
3	Remove & Replace Failed Roadway - Local (8" Removal, Replace 2" AC/ 6" AB)	\$4.80	SF	54,529,750	\$261,742,982	7.38%	20% to Total Area Based Field Reviews (Appendix)
4	Removal of failing APC and PCC (12-inch Depth) and Construct 6" AC/6" AB - Select	\$13.75	SF	1,814,510	\$24,824,513	0.74%	6% of APC and PCC Areas Outside HPOZ (Appendix)
5	Removal of failing APC and PCC (8-inch Depth) and Construct 2" AC/6" AB - Local	\$7.30	SF	2,738,825	\$19,976,825	0.56%	8% of APC and PCC Areas Outside HPOZ (Appendix)
6	Remove and Replace PCC Roadway in HPOZ (8" Thick) - Local	\$14.80	SF	814,370	\$12,134,113	0.34%	20% of PCC Area in HPOZ
7	Remove and Replace PCC Roadway (10" Thick, HPOZ) - Select	\$21.10	SF	88,570	\$1,869,827	0.05%	20% of PCC Area in HPOZ
8	Access Ramps - Local (includes removals)	\$2,585.00	Each	48,570	\$124,603,150	4.93%	2.5 Ramps Per Segment (Appendix)
9	Access Ramps - Select (includes removals)	\$3,970.00	Each	20,050	\$80,980,500	2.31%	3 Ramps Per Segment
10	Grinding/ Cold Milling	\$0.45	SF	312,340,810	\$140,553,865	3.97%	Locals - 6' wedge grind along gutter (AC & PCC) Select - Total Area
11	Adjust Surface Utility to Grade	\$620.00	Each	60,240	\$37,348,800	1.05%	Length/ 25' (Local), Length/ 175' (Select)
12	PCC Curb and Gutter R&R - Local ( 6-inch )	\$36.75	LF	480,440	\$17,641,780	0.48%	5% of Centerline Length
13	PCC Curb and Gutter R&R - Select (8-inch)	\$42.00	LF	183,740	\$7,717,080	0.22%	5% of Centerline Length
14	Bus Pads - Select Streets only	\$22.45	SF	591,570	\$13,280,747	0.37%	1 Bus Pad per Mile, includes removal of existing
15	PCC Cross Gutter R&R 6-inches - Local	\$17.45	SF	348,660	\$6,101,567	0.17%	15% of Existing to be Reconstructed (0.60 per Segment)
16	PCC Cross Gutter R&R 8-inches - Select	\$24.85	SF	72,280	\$1,786,158	0.05%	15% of Existing to be Reconstructed (0.20 per Segment)
17	Striping Replacement - Local	\$1.20	LF	9,808,910	\$11,770,692	0.33%	Linear foot of striping (1 x Centerline Length)
18	Striping Replacement - Select	\$1.20	LF	22,048,420	\$26,458,104	0.75%	Linear foot of striping (6 x Centerline Length)
19	Traffic Loops - Select	\$640.00	Each	58,750	\$37,867,000	0.73%	20 loops per Signalized Intersection (Assume intersection at every 1250')
<b>Sub-Total =</b>					<b>\$1,965,276,812</b>		
<b>Misc Construction Costs</b>							
20	Mobilization	2.00	%	Hard Cost	\$39,305,336	1.11%	Assumed based on Past Construction Projects
21	Traffic Control	1% to 3%	%	Hard Cost	\$36,138,985	2.08%	1% Local streets, 2% for Select streets
22	SWPPP Implementation	0.75	%	Hard Cost	\$14,735,576	0.42%	Assumed based on Past Construction Projects
23	Construction Staking and Monument Preservation	1.50	%	Hard Cost	\$29,479,152	0.83%	Assumed based on Past Construction Projects
<b>Misc Construction Cost Sub-Total =</b>					<b>\$121,663,250</b>		
<b>Construction Cost Sub-Total =</b>					<b>\$2,086,940,062</b>		
<b>15% Construction Contingency =</b>					<b>\$313,041,009</b>	<b>0.83%</b>	
<b>Construction Cost =</b>					<b>\$2,399,981,071</b>	<b>97.1%</b>	
<b>Program/ Delivery Costs</b>							
24	Material Testing for Construction (Batch Plant Inspections & In-place testing)	2.00	%	Construction Cost	\$47,959,821	1.35%	Assumed based on Past Construction Projects
25	Program Management & Public Outreach	6.05	%	Construction Cost	\$145,198,855	4.10%	Performed By City & Consultant Staff
26	Design - Local (Includes, Survey, Geotechnical, Deflection Testing, PS&E)	8.50	%	Local Streets Construction Cost	\$107,096,530	3.02%	Performed By City & Consultant Staff
27	Design - Select (Includes, Survey, Geotechnical, Deflection Testing, PS&E)	10.00	%	Select Streets Construction Cost	\$114,002,150	3.22%	Performed By City & Consultant Staff
28	Construction Management	8.50	%	Construction Cost	\$203,988,391	5.76%	Performed By City & Consultant Staff
29	Inspection	8.50	%	Construction Cost	\$203,988,391	5.76%	Performed By City & Consultant Staff
<b>Project Delivery Cost Sub-Total =</b>					<b>\$822,293,978</b>	<b>23.20%</b>	
<b>Sub-Total =</b>					<b>\$3,222,275,048</b>		
<b>30% Program Contingency =</b>					<b>\$922,227,505</b>	<b>0.79%</b>	
<b>Total Cost =</b>					<b>\$4,144,502,553</b>		

## 2. GLOSSARY OF TERMS

Term	Definition
AB	Aggregate Base is a mixed gradation of rock and sand that is placed and compacted in place to create the underlying layer of the roadway section.
AC	Asphalt Concrete is a mixed gradation of rock and sand bound together by a bituminous/asphalt. Asphalt concrete is mixed and placed hot and compacted in place to create the upper layers of the roadway section.
Access Ramp	Access ramps at street corners as required by the Americans with Disabilities Act (ADA) when performing roadway reconstruction and resurfacing.
APC	An existing Portland Cement Concrete (PCC) roadway covered with a layer of Asphalt Concrete (AC).
Appendix	See the appendix of the report for supporting data and documentation of assumptions.
Asphalt Overlays	This technique involves adding one or more Asphalt Concrete layers to an existing asphalt or concrete pavement.
Base Failure	Base failures occur when the layer beneath the binding layer and driving surface can no longer adequately support the weight of vehicular traffic. Base failures can occur for a number of reasons, including: ground water, excessive load counts (too much weight), and inadequate design.
Base Repair	Localized reconstruction of full section of failed pavement area.
Batch Plant	Outdoor plant/facility where asphalt concrete (AC) is created from a stockpile of materials. Process includes using large industrial equipment and machinery to create hot AC that is carried to the job site by trucks.
BMP	Best Management Practices (related to control of storm water runoff).
BOE	City of Los Angeles Department of Public Works Bureau of Engineering
BSS	City of Los Angeles Department of Public Works Bureau of Street Services
CAO	City Administrative Officer
Centerline Mile	Length of street measured along the center of the roadway.
CEQA	California Environmental Quality Act
CIPR Technology	A process in which the asphalt pavement is recycled in-place (cold in-place recycling (CIPR) process), where the Recycled Asphalt Pavement is combined without heat and with new emulsified or foamed asphalt and/or a recycling or rejuvenating agent, possibly also with virgin aggregate, and mixed at the pavement site, at either partial depth or full depth, to produce a new cold mix end product.
Collector Streets	The collector street system provides both land access service and traffic circulation within residential neighborhoods, commercial and industrial areas. It differs from the arterial system in that facilities on the collector system may penetrate residential neighborhoods, distributing trips from the arterials through the area to the ultimate destination.



Term	Definition
Construction Contingency	Contingency added to over all construction cost to account for unforeseen conditions or changes during construction. Unforeseen items could include: damage due to tree roots, poor underlying soil that is difficult to compact and will require additional excavation and reconstruction, utility conflicts and repairs, and unstable roadways in hilly areas.
Crack Sealing	A specially prepared mixture of asphalt emulsion, well graded fine aggregate, and water and mineral filler used to fill and seal surface cracks on a pavement.
Dig-Out	Localized reconstruction of full section of failed pavement area.
Distress	External (visible) indications of pavement defects or deterioration.
Distress Quantity	Amount of external (visible) indications of pavement defects or deterioration typically measured as length or area.
Distress Severity	Level of external (visible) indications of pavement defects or deterioration. Typically expressed as low, medium and high.
Distress Type	Identification and categorization of external (visible) indications of pavement defects or deterioration.
LADOT	City of Los Angeles Department of Transportation
ENR	Engineering News-Record is a weekly magazine that provides news, analysis, data and opinion for the construction industry worldwide. It is owned by The McGraw-Hill Companies. Cost indexes published by ENR are widely-used benchmarks used by the industry.
Escalation	The annual change in construction material and labor costs based on historic records, such as those from Engineering News Record (ENR) magazine.
ft	Feet
GIS	Geographic Information System
Grinding/ Coldmill	The removal of damaged pavement with specially designed equipment.
Harris	Harris and Associates, Inc.
HPOZ	Historic Preservation Overlay Zone. PCC Streets in HPOZ's are replaced in kind to maintain historic materials.
Improved Streets	Developed street complying with city standards, typically, paved with an asphalt or concrete surface from curb to curb.
Lane Mile	A lane mile is equal to an 11 foot wide lane that is one mile long. Area = 11' x 5,280' = 58,080 sf. Example: A roadway that is 64' wide and 1000' long, $(64' \times 1000') / 11' / 5280' = 1.1$ lane miles.
LF	Lineal Foot
Local/ LO	Local or Residential Streets
MicroPAVER™	A pavement management system developed by the US Army Corps Of Engineers. MicroPAVER™ provides pavement management capabilities to: develop and organize pavement inventory; assess the current condition of pavement; develop models to predict future conditions; report on past and future pavement performance; develop scenarios for maintenance and rehabilitation based on budget or condition requirements; and plan projects.
NPDES	National Pollutant Discharge Elimination System
PCC	Portland Cement Concrete

Term	Definition
<b>PCI</b>	Pavement Condition Index. Standardized rating system on a scale of 0 to 100. 100 being a new roadway and 0 being a completely failed roadway at the end of its life cycle. PCI's for this estimate are established by the BSS.
<b>PMP</b>	Pavement Management Program
<b>Primary Arterials</b>	The principal arterial system serves the major centers of activity of a metropolitan area, the highest traffic volume corridors, and the longest trip desires; and carry a high proportion of the total urban area travel on a minimum of mileage. The system should be integrated, both internally and between major urban connections.
<b>Program</b>	Includes all program elements such as Management, Design, Construction and Administration.
<b>R&amp;R</b>	Remove and replace, includes removal of existing and replacement of existing improvements with new construction.
<b>Reconstruction</b>	This technique involves the removal and replacement of the entire existing pavement structure.
<b>Residential Streets</b>	The local street system comprises all facilities not on one of the higher systems. It serves primarily to provide direct access to abutting land and access to the higher order systems. It offers the lowest level of mobility and usually contains no bus routes. Service to through traffic movement usually is deliberately discouraged.
<b>Resurfacing</b>	This technique involves the removal and replacement of one or more layers of an existing asphalt or concrete pavement without replacing the base material.
<b>Secondary Arterials</b>	The minor arterial street system interconnects with and augments the urban principal arterial system and provide service to trips of moderate length at a somewhat lower level of travel mobility than principal arterials. This system also distributes travel to geographic areas smaller than those identified with the Primary Arterial system.
<b>Segment</b>	Equal to one street segment as defined by the PMP, typically from block to block.
<b>Select/ SE</b>	Collector and arterial streets
<b>SF</b>	Square foot
<b>Slurry Sealing</b>	A specially prepared mixture of asphalt emulsion, well graded fine aggregate, water and mineral filler used to provide a surface seal to a structurally sound pavement.
<b>Structural condition</b>	The design integrity of the pavement, capable of supporting vehicle traffic loads.
<b>Surface operational condition</b>	The operability of the pavement ensuring a safe and smooth ride for the commuter.
<b>Surface utilities</b>	Utility covers that are visible in the roadway surface such as maintenance holes and water valve frames and covers.
<b>SWPPP</b>	Storm Water Pollution Prevention Plan, consists of best management practices related to controlling storm water run off during construction.
<b>Traffic Loop</b>	A cable imbedded in the roadway surface that detects vehicles or bicycles at signalized intersections.

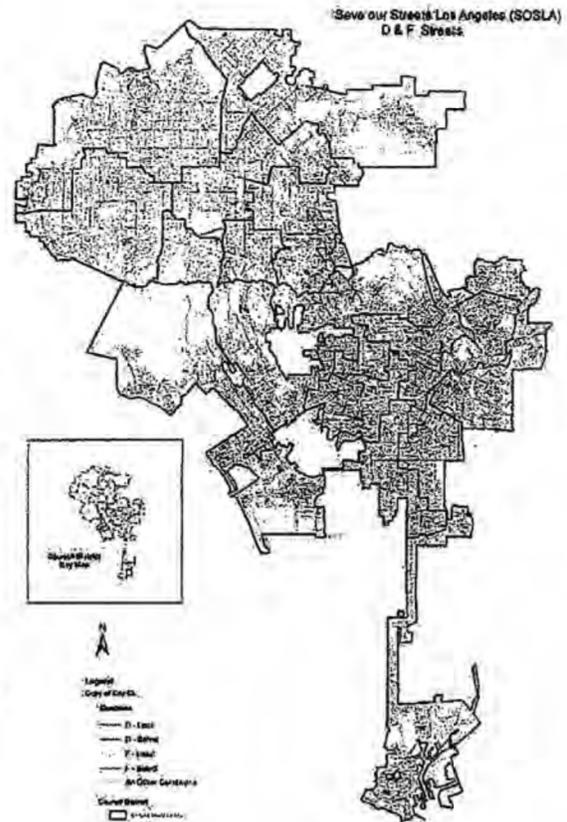


### 3. BACKGROUND

The City of Los Angeles has the largest municipal street system in the nation with over 6,500 centerline miles (28,000 lane miles) of residential and arterial streets. The roadway network represents one of the City's largest and most visible assets. Many of the streets in the roadway system are nearing, or beyond, the end of their intended life cycle and showing signs of distress and deterioration. An estimated one third of the system, over 500 million square feet of pavement, equating to 2,550 centerline miles (8,700 lane miles) will require major rehabilitation beyond the City's existing maintenance efforts and funded expenditures. The proposed Save Our Streets LA (SOSLA) Program would provide needed funding to deliver a program focused on the reconstruction and rehabilitation of the network's failing streets.

In August of 2013, a motion initiated by Councilmembers Joe Buscaino and Mitchell Englander was adopted (Council File No. 13-1300-S1) directing city staff to develop a joint report based on 24 separate items requested in the Council File. The joint report was requested to gain additional information regarding the SOSLA initiative. The singular form of the word 'Estimate' used in this report is intended to include the two separate estimates, collectively, that are presented in the report.

The focus of the Estimate is to develop a baseline cost for the reconstruction of roadway improvements with pedestrian access ramps. A minimal amount of adjacent concrete improvements, such as the repair damaged curbs and gutters and construction of access ramps, are also included in the Estimate, but are limited to those required for the roadway construction. The Estimate is based on utilizing traditional roadway construction methods and materials and does not include other elements such as 'Great Streets', 'Complete Streets', 'Green Streets', alley improvements, traffic signal modifications, water quality elements, sidewalk improvements, utility relocations or storm drain and sewer improvements. Some of the basic program elements such as construction duration and program delivery were reviewed to assess their impact on the overall Program cost.



## 4. DATA COLLECTION

The Bureau of Streets Services (BSS) developed and maintains a Pavement Management Program (PMP) and performs roadway maintenance throughout the City. BSS utilizes specialized automated vehicles to capture data on existing pavement distresses. This data is analyzed using MicroPAVER software to assess the condition of the streets within the City's roadway network. The PMP is a network level analysis that uses basic roadway information such as work history, street types and current condition for forecasting, budgeting and maintenance planning. The overall roadway condition in the PMP is expressed in terms of a Pavement Condition Index (PCI). The PCI ranges between "0" and "100". A PCI of "0" would correspond to a severely deteriorated pavement with virtually no remaining life, while a PCI of "100" would correspond to a properly engineered and constructed roadway at the beginning of its life cycle.

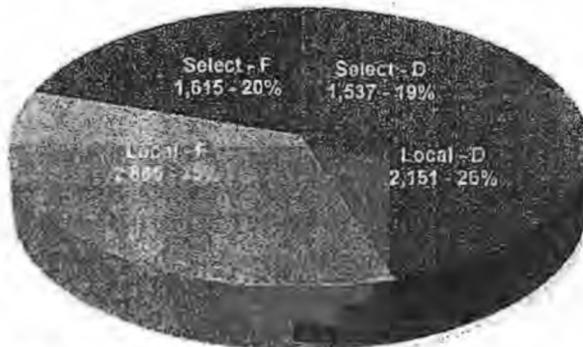
Streets are constantly in a state of deterioration, and for this reason the pavement condition changes with time. Re-inspections, utilizing the automated vehicles, are performed approximately every three years to obtain current condition data and update the PCI ratings. Streets that have been Slurry Sealed since the last inspection are typically excluded from re-inspections in the following cycle. MicroPAVER establishes the PCI for streets based on distress inspection data, recent work histories and life cycle curves that simulate the deterioration of the roadway.

The MicroPAVER data used to determine the streets to be included in the Estimate was provided by BSS in October of 2013 and included 8,200 lane-miles for streets that had PCI's in the range of 0-55 (D and F). The PCI ranges for this report were separated into two major categories: Grade D (PCI 41-55) and Grade F (PCI 1-40). Streets were further broken down into residential streets (Local) and arterial and collector streets (Select).

Since fiscal year 2011/12, it has been the City of Los Angeles' policy to stabilize the condition of the road network at a weighted average PCI of 62. For the purposes of the Estimate it was assumed that up to 500 lane miles of streets might deteriorate to D or F conditions during the 18 year span required to complete the construction of the Program as a result of unforeseen utility trenches, transit bus wear, and other factors. These 500 lane miles were added to the original 8,200 lane miles provided by BSS, by adding approximately 6% to the quantities established for each of the subcategories including: Select streets, grade D and F; and Local streets, grade D and F. This resulted in the 8,700 lane miles established for the Estimate. The 8,700 lanes miles included in the Estimate is proportional to the original 8,200 lane miles and is comprised of 1,717 lane miles of "Select" F Streets, 1,634 lane miles of "Select" D Streets, 2,287 lane miles of "Local" D Streets, and 3,067 lane miles of "Local" F Streets.



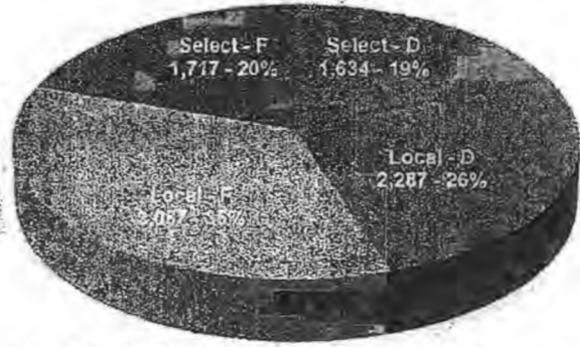
Distribution of D and F Rated Street by Type  
8200 Lane Miles (Current)  
By Lane Miles (LM)



Total Local: 5,036  
Total Select: 3,152  
Grand Total: 8,188 LM

Select - D Streets     Local - D Streets  
 Local - F Streets     Select - F Streets

Distribution of D and F Rated Street by Type  
8700 Lane Miles (Projected)  
By Lane Miles (LM)



Total Local: 5,354  
Total Select: 3,351  
Grand Total: 8,705 LM

Select - D Streets     Local - D Streets  
 Local - F Streets     Select - F Streets

Review of the BSS PMP data indicates that the City's street network information is reasonably current, with nearly 90% of the streets having been inspected or received maintenance treatments within the last three years. Figure 4-1 shows the distribution of recent work or re-inspection of the base 8,200 line miles included in the existing BSS data.

Latest Inspection or Work Completed on D and F Streets		
Year of Last Inspection or Work	Number of Street Segments	Percentage of D & F Streets
2000 - 2007	272	1.10%
2008	444	1.79%
2009	409	1.65%
2010	1635	6.61%
2011	8896	35.94%
2012	6504	26.28%
2013	6590	26.63%
	24750	100.00%

FIGURE 4-1

## Additional Data Assessments

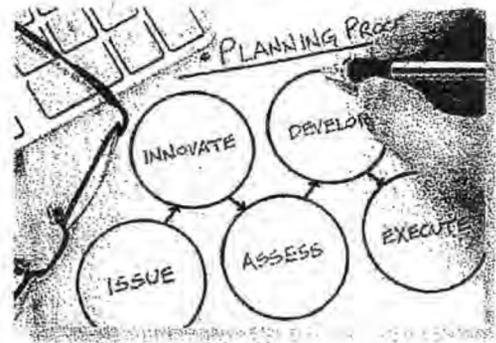
The accuracy of the Estimate is dependent on the amount of information available and assumptions used to determine the type of construction and material quantities. Consideration was given to potentially collecting additional data to improve the accuracy of the Estimate. Additional methods considered for developing more data on the existing pavement condition included use of the automated data collection vehicles driving each and every lane of the existing 8,200 lane-miles. Additional data collected from this process would include crack detection and severity, rutting, pot holes, patching, raveling, and joints in concrete. 3D imaging, asset inventory, ground penetrating radar and deflection testing were also considered. Although additional data would be useful in developing the Estimate, these additional assessments were considered to be too costly and time prohibitive to be used in the Estimate. It is recommended that these data collection methods be considered during the design and development phase within the ramp up years of the Program.



## 5. ESTIMATE DEVELOPMENT METHODOLOGY

### 5.1 COST ESTIMATE CLASSIFICATION

Typically PMP data is not used in the development of actual construction quantities or contract documents. One of the challenges in developing the Estimate was digesting and interpreting a range of network level information to determine estimated construction level quantities and costs. The development of this Estimate was performed within a relatively short time frame using existing available data and information supplemented by visual and statistical analysis. The degree of accuracy of the Estimate is consistent with a Class "C" cost estimate, as identified in the BOE Street Design Manual Section E 141, which is intended to indicate a preliminary estimate and is subject to revisions and refinements based on the design development phase. The ultimate selection of candidate streets to be included in the Program will require a more detailed investigation during the design development phase of the Program.



### 5.2 HARD AND SOFT COSTS

There are two main types of costs associated with the Program:

- Hard Costs - These are associated with construction activities, including cost of material, labor and equipment necessary to construct the proposed roadway improvements.
- Soft Costs - These are associated with Program delivery and include program management, design, construction management and inspection, and overall program administration.

#### 5.2.1 PAVEMENT REHABILITATION

Developing quantity and cost estimates for rehabilitation of pavement sections required the following data:

- Street length
- Street width
- Street classification
- Thickness of treatments
- Type of resurfacing treatment (i.e. AC reconstruction, AC overlay or PCC reconstruction)
- Square foot area of pavement requiring localized or total reconstruction



MicroPAVER data information obtained from BSS provided adequate information to determine the length and width, and square foot area of street segments.

Developing a quantity for the percentage of pavement area requiring reconstruction could not be determined from the information available in the PMP data, so it was necessary to develop a methodology for estimating the removal quantities. The methodology used for the developing the reconstruction quantities in the Estimate consisted of a visual survey of a random sampling of the current grade D and F streets.

The field survey sample obtained was approximately 3% of the candidate streets (775 out of 24,700 segments or 257 out of 8,200 lane-miles). This was a random sample representing all 15 Council Districts. A breakdown of the sampling is as follows:

- Local – AC Sample % by area=4.32%
- Local – PCC Sample % by area=2.02%
- Select – AC Sample % by area=3.55%
- Select – PCC Sample % by area=3.79%

Estimated quantities for reconstruction areas are based on standard pavement sections as indicated in Section E 422.116, Recommended Standard Practices of BOE Street Design Manual and on input from BOE.

The quantity for Portland Cement Concrete (PCC) roadways designated as D and F streets was also determined utilizing the PMP data. The rehabilitation method primarily used for PCC streets includes applying an asphalt concrete surface over the existing PCC. The final Estimate accounts for PCC streets and streets within Historic Preservation Overlay Zones (HPOZ). Candidate PCC Streets within HPOZ's require special consideration for rehabilitation to retain their historic character. Consequently PCC streets within these historic areas will be reconstructed in kind using PCC instead of resurfacing with asphalt concrete.

Since the reliability of estimating the percent of pavement areas requiring reconstruction is so critical to the confidence level of the overall Estimate, Harris retained True North Research, Inc., a firm specializing in statistical analysis. True North estimated the reliability of the projected percent reconstruction needed based on the results of the random sampling of streets.

Table 5-2 presents the results of the analysis to estimate the reliability of the percent reconstruction estimates based on the visual sampling. Because, in practice, streets that are determined to have 50% or greater removal will be completely removed and reconstructed to gain better construction production and a uniform structural section, all streets in the database that had a percent removal value of 50% or greater were recoded to have 100% removal. By making this adjustment prior to the analysis, the percent removal estimates shown in Table 5-2 factor in this consideration.



Descriptive Statistics						95% Confidence Interval		
# of streets	Minimum % Removal	Maximum % Removal	Mean % Removal	Standard Error	Standard Deviation	Lower Bound	Mean % Removal Estimate	Upper Bound
<b>All Streets</b>								
773	0	100	23.19	1.209	33.610	20.82	23.19	25.56
<b>Local AC Streets</b>								
514	0	100	22.32	1.477	33.481	19.42	22.32	25.21
<b>Local PCC Streets</b>								
38	0	100	18.45	5.476	33.754	7.72	18.45	29.18
<b>Select AC Streets</b>								
189	0	100	27.80	2.490	34.228	22.92	27.80	32.68
<b>Select PCC Streets</b>								
32	0	100	15.66	5.268	29.799	5.33	15.66	25.98

TABLE 5-2 RESULTS OF PERCENT DIG-OUT ANALYSIS BASED ON RANDOM SAMPLE

For each category of street shown on the left of the table, Table 5-2 represents the number of streets in the sample for that category, the minimum and maximum percent reconstruction among streets in the sample, the mean (average) percent for that category, as well as the standard error and standard deviation for the mean estimate. For example, there were a total of 773 total streets in the all streets categories. Among all streets, the minimum percent reconstruction was 0% and the maximum 100%, with a mean of 23.19% reconstruction. The standard error of the mean estimate is 1.209, with a standard deviation of 33.61.

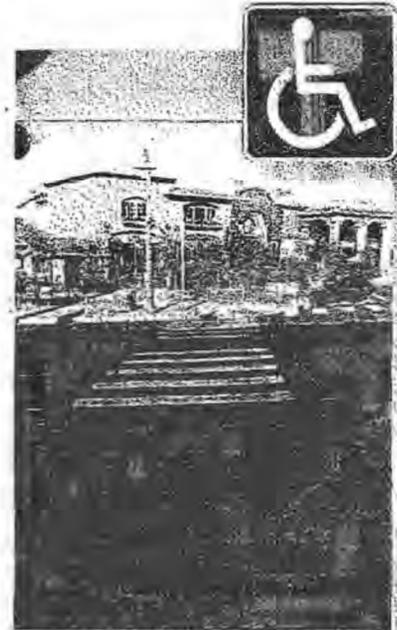
Shown on the right side of the table is the 95% confidence interval that surrounds the mean estimate for each category. Keeping with the "All Streets" categories as an example, the mean estimated percent reconstruction is 23.19%, with the lower bound of the 95% confidence interval being 20.82% reconstruction and the upper bound being 25.56% reconstruction. In other words, we can be 95% confident that the actual mean percent removal and reconstruction for all streets in the Program from which this sample was drawn will average between 20.82% and 25.56%. This is a percentage of the total surface area and includes localized reconstruction on some streets and complete reconstruction on other streets.

As shown in the Table 5-2, there is substantial variation in the mean percent reconstruction estimates across the subgroups, ranging from a low of 15.66% for Select PCC streets to a high of 27.80% for Select AC streets. The table also makes clear that although streets with a sufficiently large sample size have reasonably tight confidence intervals about the mean estimate (i.e., All Streets, Local AC Streets, and Select AC Streets), categories for which there were few streets sampled (Local PCC Streets and Select PCC Streets) have very large confidence intervals and thus a lower degree of reliability for the mean estimate.

### 5.2.2 ACCESS RAMPS

A significant amount of concrete improvements directly adjacent to the proposed roadway reconstruction is included in the Estimate. The majority of this adjacent work will be the construction or the reconstruction of access ramps at street intersections. At an escalated cost of approximately \$3,000-\$4,000 per ramp, these costs are a significant percentage of the overall Program cost. The approach to develop the quantity and costs for these ramps was as follows:

- Conduct a random sampling of two areas within each of the 15 Council Districts using maps and desktop visual surveys using publicly available digital street imagery.
- Determine the number of access ramps required per street segment based on this sampling.
- Exclude residential neighborhoods with no sidewalk and/or having rural settings from ramp construction requirements.



Based on the analysis, it was determined that the number of ramps required equates to approximately 2.5 ramps per street segment for Local streets with sidewalks and approximately 3 ramps per street segment for Select streets. The above findings were then broadcast over all street segments to determine the potential total number of access ramps required.

### 5.2.3 INCIDENTAL IMPROVEMENTS

Incidental improvements include several improvement items that are required for pavement rehabilitation and reconstruction work. Some of these items include:

- Adjustment of surface utilities, i.e. maintenance holes, valves, vaults, etc.
- Replacement of traffic loops
- Replacement of damaged curbs, curb and gutter and cross gutters
- Replacement of affected striping and pavement markers
- Mobilization of contractors' construction forces and equipment
- Traffic control and construction staging
- Construction staking and survey monument preservation
- Material testing during construction
- Construction of concrete bus pads on Select streets
- Storm Water Pollution Prevention Plans (SWPPP) during construction



The methodology for developing the quantities, for the incidental improvements, is listed in the right hand column of the Estimate and is typically a percentage of the hard construction costs or an assumed numerical value.

### 5.3 Soft Costs

Soft costs associated with the Program include the following key items:

#### 1. Program Management

- Program Planning, including identifying overall Program goals and general road map
  - » Set project priority lists
  - » Identify project groupings
  - » Coordinate work assignments among all parties
  - » Reporting and oversight
  - » Resource acquisition (contracts/staffing)
- Design Team Oversight to ensure project objectives, and goals are met consistently
  - » Multiple design team oversight (possibly 4 or more separate teams)
- Program administration and tracking, including scheduling, financing and reporting
- Community outreach
- Procurement of professional services and construction contractors throughout the life of the program

2. Design costs for preparation of construction documents for the Program. Design costs were adjusted for Local and Select streets based on the complexity of the design efforts required.

3. Construction management, construction inspection, material testing for the Program.



## 6. DEVELOPMENT OF UNIT PRICES

### 6.1 HARD COSTS

Unit prices for construction costs were developed based on the cost of labor and material for similar types of projects in the greater Los Angeles area in 2012 and 2013. These costs were adjusted to reflect Program economy of scale and the complexity of projects for Select and Local streets. In establishing unit costs used in the Estimate, unit prices for 2012 and 2013 were escalated to year 2017 (assumed year one for commencement of Program construction). Unit prices were then escalated to the middle of the 15 year construction period (2024), based on the escalation factors discussed in the section below. The unit prices estimated for the middle of construction are considered the 'average' unit price for the entire construction period and were used as the unit prices shown in the Estimate.

### 6.2 SOFT COSTS

Soft costs were based on percent of construction costs, and from feedback obtained from BOE based on their historic program delivery costs, adjusted downward to account for an expectation of a streamlined design process and economy of scale. The percentages used for the various soft costs are listed in the Estimate.

### 6.3 COST ESCALATION

Cost escalation is defined as the probable change in the cost of construction over the life of the Program, and is a standard component of any Construction Program estimate. Escalation is similar in concept to inflation and deflation, except that in this case escalation is specific to construction and not general in nature as is overall inflation. While escalation includes general inflation related to the money supply, it is also driven by changes in supply-demand imbalances that are specific to construction in a given economy. For example, while general inflation may be less than 3% for any given time period, construction prices may increase (escalate) by over 5% because of a supply-demand imbalance. Over a long period of time, as market supply and demand imbalances are corrected, escalation will tend to more-or-less equal inflation, unless there are sustained impacts specific to the construction industry.

In cost engineering, escalation and contingency are both considered risk mitigation factors that should be included in estimates. When projected escalation is minimal, it is sometimes included in the contingency. However, this is not a best practice, particularly when potential escalation is significant.

The starting point for the escalation used in the Estimate is based on historic construction cost indices developed by Engineering News Record (ENR). ENR has been collecting and publishing price data on different construction labor and materials, in 20 major U.S. cities (including the greater Los Angeles area) on a monthly basis for over 50 years. ENR uses data to create two index numbers each month known as the Construction Cost Index (CCI). The CCI is a widely used benchmark for measuring changes in construction



costs over the years. Figure 6-1 shows a table and graph of the historic changes in construction cost in the greater Los Angeles Area. Based on this data the cost of construction has increased an average of 3.90% and 2.7% over the last ten and twenty years, respectively. Based on this data, the escalation of cost used in the Estimate could be as low as 2.7% based on the 20 year average. The average escalation of 3% was used in the Estimate to reflect the approximate average over the last 20 years. What costs a dollar today escalated at 3% would cost approximately \$1.70 at the end of the projected construction period.

## 6.4 CONTINGENCY

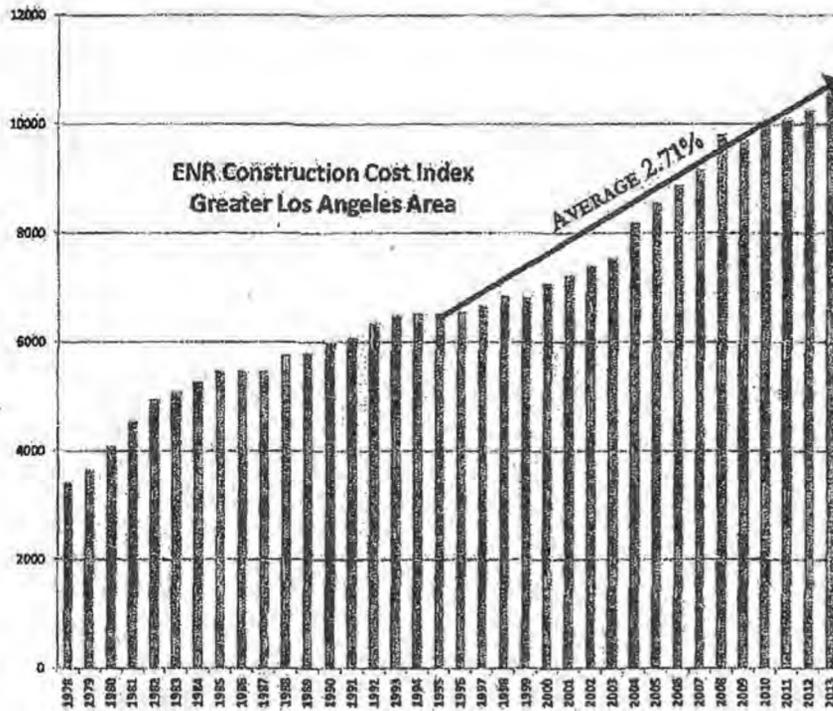
In general, the contingency included in the Estimate is based on a percentage of the estimate's costs and is included to account for unforeseeable risk factors and expenses during construction and delivery of the Program. For the Estimate, a contingency was applied to the construction cost as well as the overall cost of the Program, which includes both construction and program delivery cost.

Construction contingency accounts for risk factors associated with constructing the project and include unforeseen conditions including: increase of pavement reconstruction areas; inclement weather, relocation/reconstruction of existing shallow utilities impacted by construction; increased thickness of assumed pavement structural section on Select streets due to high truck traffic volumes; and other factors that are not accounted for in the Estimate. Due to the aforementioned risk factors, a 15% construction contingency was added to the estimated hard construction costs to account for unforeseen construction conditions.

A 10% Program contingency was applied to the entire Program cost, to account for general risks in delivering the overall Program not directly related to construction field conditions. General risk factors include such items as: an increase in the assumed cost escalation for material, equipment and labor, including the cost of oil -- a component of asphalt. Risks also include such items as: future regulatory requirements related to both design and construction that do not currently exist; the availability of professional labor such as engineers, construction managers and program managers needed to staff the Program; and potential additional general and regional cost escalation.

At the regional level, there are several other large agencies in the Los Angeles area that have plans for major construction programs over the next ten years. These agencies include: the Los Angeles County Metropolitan Transportation Authority (Metro); the Ports of Los Angeles and Long Beach; and the Los Angeles International Airport. These proposed regional programs will increase the demand for construction material and labor in the region. The magnitude of the cost escalation, attributed to these general and regional risk factors, is difficult to determine given the limited time frame available to perform the Estimate.





Year	Construction Cost Index	% Change	Year	Construction Cost Index	% Change
1978	3421.25	8.20%	1986	6558.44	-4.90%
1979	3638.61	6.36%	1987	6663.55	1.60%
1980	4102.37	12.74%	1988	6851.85	2.83%
1981	4530.98	10.45%	1989	6625.97	-0.38%
1982	4934.14	8.90%	2000	7068.04	3.55%
1983	5063.89	2.63%	2001	7226.82	2.25%
1984	6268.93	3.87%	2002	7402.75	2.43%
1985	6446.69	3.55%	2003	7631.77	3.74%
1986	5452.2	0.10%	2004	8182.14	8.77%
1987	5474.14	0.40%	2005	8567.42	4.58%
1988	5770.84	5.42%	2006	8678.87	3.64%
1989	5788.77	0.33%	2007	9181.87	3.41%
1990	5994.56	3.54%	2008	8823.18	6.99%
1991	6080.12	1.59%	2009	9769.68	-0.61%
1992	6348.56	4.24%	2010	10004.3	2.46%
1993	6477.84	2.04%	2011	10088.8	3.33%
1994	6532.86	0.85%	2012	10270.83	1.81%
1996	6528.22	-0.10%	2013	10740.83	4.58%
Average - 2010-2013 = +3.04%					
Average - Last 10 Year = +3.60%					
Average - Last 20 Year = +2.71%					

FIGURE G-1



## 7. PROGRAM DELIVERY

### 7.1 PROGRAM DURATION

Another consideration affecting the Estimate is the overall duration and schedule of Program delivery. The hard and soft costs associated with the Program will increase with time based on the escalation factors applied to materials and labor. A longer overall Program duration will have a higher cost relative to a shorter Program. A Program of this scale is unprecedented and will require a massive coordination effort for its success. Construction durations of 10, 15 and 20 years were considered to determine a realistic time period for the Program delivery. Consideration was given to the factors that would affect the Program duration and overall coordination. BOE and Harris interviewed representatives from the construction industry and investigated other citywide street programs in the cities of San Francisco and Santa Ana. This section includes an analysis of the factors and concerns that could affect the Program duration and provides a preliminary concept of how the Program would be structured.

A primary question was to consider how many years would be required for the construction of approximately 8,700 lane-miles of roadway improvements? This is a complex question with many factors to consider, including the capacity of the contracting community, consultant and City staffing required, ability of the roadway network to handle traffic restrictions and the public's tolerance of traffic delays. There are multiple factors that could cause delays to individual projects or streets or to the Program as a whole. Table 7-1 shows a list of considerations for a 10, 15 or 20 year construction period.

TABLE 7-1

No.	Subcategory	Consideration	Comments
<b>Category: Program Management</b>			
1	Scope	Prioritization and Annual Selection of Streets & Traffic Impacts	The approach to how the streets will be packaged each year could have a significant influence on cost and traffic impacts. One approach would be to objectively analyze every street segment, package projects to maximize contractor efficiency and minimize traffic impacts. Another would be to annually package those streets that are most desired to be completed. A blended approach would start with a small number of the highest priority streets and then build efficient packages around those.
2	Scope & Public Expectations	Definition of Eligible Streets	The pavement condition shown in the database of D & F streets will change over time as streets age and complete assessments are conducted. The SOSLA program should not limit the eligible streets to those currently mapped in order to ensure that the streets most in need in the future can be repaired.
3	Scope & Public Expectations	Green/Green/Complete Street Elements Not Included in Estimate, Schedule	The current program schedule and cost estimate does not include construction beyond fundamental needs for paving, access ramps, and curb and gutter repair. However, the funding of these elements will increase the likelihood of leveraging them to obtain grant or other funding for other elements such as Green/Green/Complete/Cool Street concepts. Including of these items will be more feasible with a longer construction period.
4	Scope & Public Expectations	Sidewalks/Stormdrains/Alleys/Grill/Rh Park Not Included in Estimate, Schedule	Very similar to Green/Green/Complete street elements; sidewalks, stormdrains and alleys are not included in the cost estimate or schedule. A limited level of sidewalk and storm drain reconstruction will likely be necessary whether officially part of the program or not, just to be able to reconstruct failed curb and gutter locations and install new access ramps. However, a longer construction duration would provide a greater ability to coordinate effectively with a sidewalk or other related program should one be funded separately.
5	Cost/Time	Cost Escalation	Cost estimates for all schedule options are heavily influenced by the assumed escalation rate and thus the actual future escalation compared to the assumed rate will have a greater influence on whether the full program can be delivered within the estimated cost. A shorter construction schedule results in less cost due to escalation, however a schedule that is too short may also result in increased costs due to potential delivery inefficiencies and saturation of the construction marketplace.

TABLE 7-1

No.	Subcategory	Consideration	Comments
6	Cost/Time	Schedule Delays and Overlaps	There are many items that could cause construction delays such as unforeseen field conditions or contractor insolvency. Shorter program timelines have less tolerance for recovering from project schedule issues.
7	Staffing	Staffing Implementation	The magnitude of this construction program will be immense. Even though a large portion of staffing would be provided by consultants a significant number of City staff will also be required. It will still take a great deal of time and effort to put the full team together. It will require many rounds of interviews and hiring of City and consultant staff, as well as the allocation and execution of consultant contracts and the definition and issuance of work tasks. Selected consultants will also need to hire new staff and train them for a program of this size. Longer program schedules will allow for smoother and more efficient staffing and will actually reduce the overall number of people that would need to be hired by spreading the work such that less would need to be delivered each year.
8	Staffing	Necessary Staffing Level	We can estimate the staffing needs, but because a program of this type and magnitude in LA is unprecedented it will not fully be known until we are underway and have delivered some projects. Longer timelines allow for some early learning at a lower delivery level before needing to fully staff and therefore allow for an optimized staffing plan avoiding potential excess costs of overstaffing.
9	Coordination	Coordination with Other Programs (Water, Gas, Sewer, Storm Drain, DWP, BSS)	Ideally this program will be well coordinated with planned work and system upgrades with City projects as well as other utilities with projects in the streets such that construction work among the various agencies would be coordinated to coincide or be back to back when possible but at the very least would avoid situations where new streets would be cut. Longer programs offer more time for coordination of work.
10	Cost/Time	Ramping Up - Building Public Trust and Incorporating Lessons Learned	The early years of the program will be under great public scrutiny. A longer program duration offers the ability to start on a smaller scale with well thought out projects to build public trust and incorporate lessons learned before rolling out a massive scale of projects.
11	Cost/Time	Definition of Eligible Time Period	It is almost certain that there will be some projects that encounter delays for a variety of reasons, or that should be put on hold for a reasonable time period to coordinate with other outside work or new grants. If the target time frame for construction is warded in the funding eligibility as a hard requirement, it could result in not being able to complete some of the projects in the program or not being able to coordinate effectively in the latter years of the program.
12	Staffing	Trees - Need for Arborists to Address Root Pruning	Although the early program description and cost estimates do not provide for sidewalk repair, there will be some cases where sidewalk repair will be required or where curb/gutter repairs will require tree root pruning which will require the services of specialized arborists. Some of these may also require coordination with private property owners.
13	Staffing	Monument Preservation	The City is required, per Business and Professional Code 8771, to maintain a network of survey monuments which are used by public and private surveyors. The preservation of survey monuments is very important because every lost monument will require more than double the cost to replace as compared to the cost to preserve the monument in coordination with construction. Shorter programs with less ramp-up times will be more of a challenge to monument preservation.
14	Coordination	Permits and Railroad Permits	Permits such as those take a lot of lead time, sometimes years, and some of the subject streets will require them.
15	Maintenance	Future Maintenance by BSS	With a greater inventory of streets with ratings from A-C, Bureau of Street Services will need to do more annual maintenance. Longer program timelines allow for a more gradual adjustment.
<b>Category: Design and Construction</b>			
16	Utilities	Utility Coordination - Street Cuts	The City will issue an estimated 55,000 utility and sewer permits for the candidate streets during a 15 year construction program. The SOSLA program will be coordinated with utility companies to minimize new streets from being damaged, however due to the sheer volume of work, street cuts are unavoidable. Longer programs offer opportunity to better coordinate projects and for utilities to get their work done prior to construction.
17	Unforeseen Conditions	Variations in Existing Street Thickness	Due to the age of the street system, the thickness of existing streets is often not well known and thus assumptions have been made to develop a cost estimate. Variations from the assumed thicknesses could result in significant cost impacts.
18	Construction Contracting	Project Construction Contract Procurement Process (and the Impact on the Marketplace)	The shorter the timeline, the greater the risk that the marketplace for contractors and materials will be saturated and thus drive up the price due to material cost escalations or a reduction in competitiveness.
19	Construction Contracting	Trucking Availability	Trucking costs for the sizes of the construction program will be influenced by the length and design of the program.
20	Traffic Coordination	Reducing Traffic Impact	The program could gridlock traffic in certain areas if not carefully planned and implemented. It will be critical to package and phase projects to minimize traffic impacts. Longer program schedules will reduce the annual impact and allow for more effective coordination.
21	Traffic Coordination	Coordination with Transit	A street program of this magnitude will require extensive coordination with transit agencies for transit route adjustments.
22	Unforeseen Conditions	Incident Weather	Incident weather is a significant uncertainty. Some years have little rain while others have rain on and off for months. Streets are not reconstructed during rainy weather because the exposed subgrade becomes saturated and muddy resulting in delays and extra costs. The shorter the timeline to complete the program, the more significant it would be to make up time lost to rain delays.
23	Traffic Mitigation	Construction During Peak Hours	Currently work is not allowed on City streets during peak traffic hours. But, in some cases, full or partial exemptions are approved because it may make sense to get the street back in service quicker. Longer program timelines allow for more planning and less concurrent construction.
24	Utilities	Street Cut Moratorium	A One Year Street Cut Moratorium exists currently. Extension to a longer moratorium for streets would preserve pavement.
25	Unforeseen Conditions	Changes in Oil Prices	Asphalt is a large portion of the cost of the program and asphalt prices are tied to oil prices. Increases in oil prices could result in additional cost escalation.
26	Unforeseen Conditions	Need for Soil Stabilization	The cost estimate assumes that reconstructions will require base and paving reconstruction, but in some areas subgrades may require improvements that are not included in the cost estimate.
27	Nonstandard Areas	Hilly Areas - Drainage Patterns Could Increase Liability	Extra care must be taken in hilly areas that may not have regular curb/gutters with subsurface storm drain systems because errant runoff can result in slope damage and liability. Even maintaining existing geometry may increase liability because it could be argued that the street should have been improved via the project.
28	Nonstandard Areas	Hilly Areas - Road Stabilization	Hilly areas often contain unique challenges including the absence of curbs and thus the need for special edge confinement and/or support that will require extra design and will cost more, but early estimates have not had the time/resources to estimate the full impact.
29	Utilities	Utility Impacts	Project delays due to unforeseen utilities, accidental utility damage and/or utilities with prior rights. These will likely consist of vaults, cabinets (in curb ramps), meters, etc., as opposed to utility pipelines.



TABLE 7-1

No.	Subcategory	Consideration	Comments
<b>Category: Public Relations</b>			
30	Business Impacts	Business Coordination and Impact	Coordination with businesses is often significant even with small street projects. A program of the SOSLA magnitude will require extensive coordination effort. Longer timelines reduce the annual coordination effort and also provide more flexibility in scheduling. Longer durations allow for more notice for businesses to prepare for the disruption.
31	Community	Coordination With Schools and Community Events	Shorter program timelines make community coordination more challenging due to the magnitude of the annual workload and the short ramp-up period.
32	Community	Public Relations (Neighborhood meetings, Media, Website)	Shorter program timelines make public relations more challenging due to the magnitude of the annual workload and the short ramp-up period.
33	Environment	Public Works Green Street Policy	The Board of Public Works adopted a green street policy on July 11, 2011, which, among other things, calls for the incorporation of green street elements and BMP's whenever funding is available. With a program of this size, it would be desirable to have at least some green street elements in suitable projects. Longer program timelines give more time to study and implement such features.
34	Traffic Impacts	Unique Impacts to Hillside Neighborhoods	Hillside areas are often more challenging for mitigation of construction impacts. For example, detours can be more challenging due to the irregularity of the road network.
35	Traffic Impacts	Impacts to Traffic and Parking on Local and Select Streets	Longer Programs offer opportunity to spread work out and reduce traffic impacts
36	Community	Planning Mobility Element	Planning has initiated a mobility element in the new City General Plan, and the feedback from this should be captured in the paving effort.
37	Community	2010 Bicycle Plan Not Incorporated	The 2010 bicycle plan adopted by City Council March 1, 2011 (C.F. 102385-S2) and also implemented under Executive Directive 20 (AV Series July 1, 2011) is not currently incorporated into the work plan or the cost estimates. While some elements such as striping could likely be incorporated into the projects, there would still be some complications because many streets only have patchwork segments rated as D or F which would be problematic unless there is a plan to carry the striping through the other segments as well.
38	Community	Trucking Haul Routes	Truck haul routes could have significant community impacts and thus would require careful review and coordination.

It is recommended that a 15-year construction period be used for the Program Estimate because it offers a balance between constructing the work in a relatively short time to minimize costs, and allowing for adequate time to plan and coordinate the work. All references in this document to construction periods are intended as "scheduled construction periods" and are not intended to be interpreted as a proposed funding eligibility window.

A 10-year construction duration would require constructing approximately 250 centerline miles per year, and would require full production in the first year of the construction phase, and that full production be maintained through the last year. This would be difficult to achieve on both ends. It would be more efficient to ramp up production in the beginning of the program as staff is hired and trained. Also, achieving full production in the last year would be very difficult as well because the odds of all remaining projects in that last year not having any type of challenges would be remote.

If a 10 year construction duration were to accommodate scaling up and down, the remaining full years of production would require approximately 300 centerline miles per year, which is considered too aggressive, especially considering that the BSS resurfacing program will be continuing as well. Overall, the 10 year construction duration is thought to be technically feasible, but staffing for those early full production years would be very difficult. Proper coordination of work would be an extreme challenge and the potential for increased traffic impacts would be high. A 15-year construction duration allows additional time for the construction operations to scale up and down in the first and last few year of construction, and therefore would allow for more efficient staffing and for time for Program coordination. It would also offer much more of an opportunity to coordinate with potential grant funding that might be obtained for elements related to things such as 'Green Streets' and 'Great Streets' by leveraging the basic street work funding. Delivery of the program over a 15-year construction period would still not be easy by any means, as the

SOSLA Program - Illustration of Potential Annual Cost (Estimate 1)

Revised 1-23-14

Year	Program 1 2015	Program 2 2016	Program 3 2017	Cont. 1 Program 4 2018	Cont. 2 Program 5 2019	Cont. 3 Program 6 2020	Cont. 4 Program 7 2021	Cont. 5 Program 8 2022	Cont. 6 Program 9 2023	Cont. 7 Program 10 2024	Cont. 8 Program 11 2025	Cont. 9 Program 12 2026	Cont. 10 Program 13 2027	Cont. 11 Program 14 2028	Cont. 12 Program 15 2029	Cont. 13 Program 16 2030	Cont. 14 Program 17 2031	Cont. 15 Program 18 2032	Program 19 2033	Program 20 2034	Totals	
Program Start November 2014							179 Miles								179 Miles							
Miles Constructed Per Year				64 Miles												64 Miles						2,554 Miles
Annual Construction Cost																						\$1,823,256,000
Annual Total Construction Cost																						
Annual Program Delivery Cost - Annual % of Total Program Delivery Cost																						\$48,214,000
Total Annual Program Cost - Annual % of Total Program Cost	\$1,827,000 0.56%	\$2,276,000 0.54%	\$34,613,000 0.69%	\$13,353,000 2.42%	\$144,404,000 3.74%	\$185,737,000 4.81%	\$225,160,000 5.94%	\$275,184,000 7.34%	\$297,124,000 7.70%	\$406,130,000 9.89%	\$315,305,000 8.17%	\$338,764,000 8.42%	\$134,502,000 3.47%	\$181,531,000 4.52%	\$250,240,000 6.53%	\$149,549,000 3.87%	\$184,943,000 4.59%	\$161,486,000 4.07%	\$16,628,000 0.43%	\$37,972,000 0.98%	\$2,828,237,000	

- 15 YEAR CONSTRUCTION PERIOD
- 3 YEAR PROGRAM PRE-CONSTRUCTION
- 2 YEAR PROGRAM POST-CONSTRUCTION

FIGURE 7-2



SOSLA Program - Illustration of Potential Annual Cost (Estimate 2)  
Period 2-23-14

Year	Program 1 2015	Program 2 2016	Program 3 2017	Const 1 Program 4 2018	Const 2 Program 5 2019	Const 3 Program 6 2020	Const 4 Program 7 2021	Const 5 Program 8 2022	Const 6 Program 9 2023	Const 7 Program 10 2024	Const 8 Program 11 2025	Const 9 Program 12 2026	Const 10 Program 13 2027	Const 11 Program 14 2028	Const 12 Program 15 2029	Const 13 Program 16 2030	Const 14 Program 17 2031	Const 15 Program 18 2032	Program 19 2033	Program 20 2034	Total	
Program Start November 2014							179 Miles								170 Miles							
Miles Constructed Per Year				57 Miles												140 Miles			107 Miles		64 Miles	
Annual Construction Cost				\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000
Annual % of Total Construction Cost				0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Annual Program Delivery Cost	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000	\$22,000,000
Annual % of Total Program Delivery Cost	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Total Annual Program Cost	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000
Annual % of Total Program Cost	0.56%	0.57%	0.57%	0.52%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%	0.51%

- 15 YEAR CONSTRUCTION PERIOD
- 3 YEAR PROGRAM PRE-CONSTRUCTION
- 2 YEAR PROGRAM POST-CONSTRUCTION

FIGURE 7-3

peak construction years would still be completing about 200 centerline miles per year, but it would be much more manageable. A 20-year construction period would offer further opportunities for coordination and ramp-up of staffing and construction, however, the benefits of a 20-year construction period were not found to outweigh the extra escalation cost that would be incurred. It is estimated that the overall Program delivery period will require approximately 20 years for a 15-year construction period, with approximately 3 years of pre-construction activities required prior to the start of major construction in 2017, and approximately 2 years needed after the 15 year construction period to close out projects and the Program's coordination, financial and administrative elements. A cash flow diagram of a 15-year construction program for each estimate is diagrammed in Figures 7-2 and 7-3.

## 7.2 PRIORITIZATION OF STREETS

As stated previously, PMP data is limited and not typically used in the development of actual construction quantities or contract documents. The ultimate selection of streets to be included in the Program should not be based solely on the PCI rating developed from the PMP. The 8,700 lane miles, used for this estimate, is representative of the anticipated scale and scope of the Program based on the information that is presently available. The actual streets and number of lane miles to be constructed under the proposed Program is difficult to predict at this time. Selection of streets to be included in the Program is subject to refinement as streets are prioritized and more details are obtained during the design and development phase of the Program. A preliminary method for prioritizing streets was considered and is outlined below.

It is recommended that a Geographic Information System (GIS) be developed in the early years of the program to apply objective criteria to each street segment for use in prioritizing them and packaging them into projects.

The system would assign a weighted score to each street segment based on specific criteria, such as:

- PCI rating
- Street type
- Traffic density
- Street or drainage complaints
- Readiness for construction
- Clearance of conflict with utilities and other programs
- Public Transit Use
- Bike Plan route type
- Proximity to police and fire stations, hospitals and schools.

Street segments are recommended to be grouped into projects by geographic location such that the segments in an individual project would be in a similar area, and that the projects as a whole would be distributed throughout the City to minimize the impact to individual areas and to provide all areas and Council Districts of the City with some benefit each year.



## 8. ESTIMATE

Two estimates were developed for the Program based on a 15-year construction period. The separate Estimates vary based on the percent of the pavement area requiring removal and reconstruction. The percentage of reconstruction is one of the most significant factors influencing the construction cost. The range of the percentage of reconstruction was established based on a random field sampling of the current D and F streets and as described in Section 5 of this report. The First Estimate for the SOSLA program is \$3.85 Billion. This estimate uses an average escalation of 3% and the mean range of removal percentages.

A Second Estimate was also developed using an average escalation of 3% and the lower range of the percentage of reconstruction that may be required. This was done to present a lower Program cost option. Using these lower values, the Program is estimated to cost approximately \$3.54 Billion. However, it is important to note that during construction, should the actual reconstruction percentage be greater than the Lower range, additional funding may be needed to complete the Program.

The following pages summarize the two Estimate scenarios developed, based on the ranges for the percent of roadway reconstruction.



**Estimate - SOSLA Cost Estimate  
CONSTRUCTION COST ESTIMATE (Level 'C')**

15 Year Construction Period  
20 Year Program Delivery  
2550 Centerline Miles/ 5700 Lane Miles  
Average 170 Miles (Ranging from 64 to 520 Miles per Year)  
Major Risks of Payment Removals  
Unit Costs Includes 3% Annual Escalation

REVISED 2-18-14

Item No.	Item Description	Unit Cost	Units	Probable Quantity	Item Total	% of Total Cost	Units/ Assumption
<b>Street Construction Costs</b>							
1	Construct 2-inch Asphalt	\$1.50 SF	SF	501,045,390	\$751,568,085	10.40%	Total Area
2	Remove & Replace Failed Shoulder - Select (12" Removal, Includes 6" x 6" S-Sub)	\$9.30 SF	SF	45,897,730	\$427,570,869	10.85%	25% to Total Area Broad Road Right-of-Way (Appendix)
3	Remove & Replace Failed Roadway - Local (6" Removal, Replace 2" AC/ 6" AB)	\$4.80 SF	SF	53,982,770	\$259,917,296	7.46%	20% to Total Area Broad Road Right-of-Way (Appendix)
4	Removal of failing APC and PCC (12-inch Depth) and Construct 6" AC/6" AB - Select	\$11.75 SF	SF	5,105,360	\$70,158,760	1.82%	50% of APC and PCC Areas Outside HPOZ (Appendix)
5	Removal of failing APC and PCC (6-inch Depth) and Construct 2" AC/6" AB - Local	\$7.50 SF	SF	6,199,970	\$46,498,783	1.23%	10% of APC and PCC Areas Outside HPOZ (Appendix)
6	Remove and Replace PCC Roadway in HPOZ (6" thick) - Local	\$14.90 SF	SF	814,370	\$12,134,113	0.31%	100% of PCC Area in HPOZ
7	Remove and Replace PCC Roadway (10" thick, HPOZ) - Select	\$21.10 SF	SF	469,370	\$1,009,227	0.09%	20% of PCC Area in HPOZ
8	Access Ramps - Local (includes removals)	\$3,595.00 Each	Each	48,370	\$174,609,150	4.53%	2.5 Ramps Per Segment (Appendix)
9	Access Ramps - Select (includes removals)	\$4,970.00 Each	Each	20,650	\$103,590,500	2.13%	3 Ramps Per Segment
10	Grinding/Controlling	\$0.45 SF	SF	\$12,940,810	\$140,553,268	3.45%	Locals - 6" wide grind along gutter (AC & PCC) Select - Total Area
11	Adjust Surface Utility to Grade	\$600.00 Each	Each	50,240	\$37,548,800	0.97%	Length/250' (local), Length/175' (select)
12	PCC Curb and Gutter R&R - Local (6-inch)	\$94.75 LF	LF	490,440	\$17,042,760	0.44%	5% of Centerline Length
13	PCC Curb and Gutter R&R - Select (6-inch)	\$42.00 LF	LF	183,740	\$7,772,080	0.20%	5% of Centerline Length
14	Bus Pads - Select Streets only	\$22.45 SF	SF	891,570	\$112,880,747	0.94%	1 Bus Pad per Mile, includes removal of existing
15	PCC Cross Gutter (6A, 6Amples) - Local	\$37.45 SF	SF	349,660	\$6,101,567	0.16%	15% of Existing to be Reconstructed (0.50 per Segment)
16	PCC Cross Gutter R&R 6 inches - Select	\$54.85 SF	SF	72,280	\$1,798,158	0.05%	15% of Existing to be Reconstructed (0.20 per Segment)
17	Striping Replacement - Local	\$1.20 LF	LF	9,408,910	\$11,770,692	0.31%	Linear foot of striping (1 x Centerline Length)
18	Striping Replacement - Select	\$1.20 LF	LF	22,048,030	\$36,458,100	0.89%	Linear foot of striping (6 x Centerline Length)
19	Traffic Lights - Select	\$400.00 Each	Each	54,780	\$25,967,600	0.67%	20 Lights per Signalized Intersection (Average Intersection Every 1.587)
Sub-Total =					\$2,184,255,345		
<b>Misc Construction Costs</b>							
20	Mobilization	2.00 %	%	Hard Cost	\$42,765,107	1.11%	Assumed based on Part Construction Projects
21	Traffic Control	1% to 3%	%	Hard Cost	\$12,295,438	1.10%	1% Local streets, 3% for Select Streets
22	SWPPP Implementation	0.75 %	%	Hard Cost	\$10,605,915	0.42%	Assumed based on Part Construction Projects
23	Construction Staking and Monument Preservation	1.50 %	%	Hard Cost	\$32,073,850	0.89%	Assumed based on Part Construction Projects
Misc Construction Cost Sub-Total =					\$103,151,288		
Construction Cost Sub-Total =					\$2,287,406,633		
15% Construction Contingency =					\$340,707,585	6.83%	
Construction Cost =					\$2,628,114,218	67.70%	
<b>Program Delivery Costs</b>							
24	Weighted Testing for Construction (based on Plant Operations & In-place Testing)	2.00 %	%	Construction Cost	\$52,341,093	1.55%	Assumed based on Post Construction Projects
25	Program Management & Public Outreach	6.00 %	%	Construction Cost	\$158,031,725	4.10%	Performed by CH&C Consultant Staff
26	Design - Local (includes Survey, Geotechnical, Definition, Utilities, P&E)	6.50 %	%	Local Street Construction Cost	\$112,635,655	2.92%	Performed by City & Consultant Staff
27	Design - Select (Hydrants, Survey, Geotechnical, Definition, Testing, P&E)	10.00 %	%	Select Streets Construction Cost	\$128,720,457	3.94%	Performed by City & Consultant Staff
28	Construction Management	2.50 %	%	Construction Cost	\$22,028,043	0.75%	Performed by City & Consultant Staff
29	Construction Management	8.50 %	%	Construction Cost	\$22,028,043	0.75%	Performed by City & Consultant Staff
Project Delivery Cost Sub-Total =					\$595,665,918	23.21%	
Sub-Total =					\$3,283,780,445		
10% Program Contingency =					\$328,378,044	9.89%	
Total Cost =					\$3,612,158,489		



**Alternative Estimate - SOSLA Cost Estimate**  
**CONSTRUCTION COST ESTIMATE (Level C)**

REVISED 2-18-14

15 Year Construction Period  
20 Year Program Delivery  
2550 Centerline Miles/ 8700 Lane Miles  
Average 178 Miles (Ranging from 64 to 230 Miles per Year)  
Lower Range of Pavement Removals  
Unit Costs includes 3% Annual Escalation

Item No.	Item Description	Unit Cost	Units	Probable Quantity	Item Total	% of Total Cost	Basis/ Assumption
<b>Hard Construction Costs</b>							
1	Construct 2-in ch Asphalt Concrete (AC) Surface Course	\$1.50	SF	501,045,390	\$751,568,085	21.20%	Total Area
2	Remove & Replace Failed Roadway - Select (12" Removal, Replace 6" AC/ 6" AB)	\$9.30	SF	37,323,850	\$347,121,805	9.79%	25% to Total Area Based Field Reviews (Appendix)
3	Remove & Replace Failed Roadway - Local (8" Removal, Replace 2" AC/ 6" AB)	\$4.60	SF	54,528,790	\$261,742,992	7.38%	20% to Total Area Based Field Reviews (Appendix)
4	Removal of failing APC and PCC (12-inch Depth) and Construct 6" AC/ 6" AB - Select	\$13.75	SF	1,914,510	\$26,324,513	0.74%	65% of APC and PCC Areas Outside HPOZ (Appendix)
5	Removal of failing APC and PCC (8-inch Depth) and Construct 2" AC/ 6" AB - Local	\$7.30	SF	2,736,825	\$19,978,825	0.56%	8% of APC and PCC Areas Outside HPOZ (Appendix)
6	Remove and Replace PCC Roadway in HPOZ (8" Thick) - Local	\$14.90	SF	814,370	\$12,134,113	0.34%	20% of PCC Area in HPOZ
7	Remove and Replace PCC Roadway (10" Thick, HPOZ) - Select	\$21.10	SF	88,570	\$1,868,927	0.05%	30% of PCC Area in HPOZ
8	Access Ramps - Local (includes renovals)	\$3,395.00	Each	48,570	\$174,609,190	4.93%	2.5 Ramps Per Segment (Appendix)
9	Access Ramps - Select (includes removals)	\$3,970.00	Each	20,650	\$81,990,500	2.31%	3 Ramps Per Segment
10	Grinding/ Coldmilling	\$0.45	SF	912,340,810	\$410,653,365	3.97%	Locals - 6" wedge grind along gutter (AC & PCC) Select - Total Area
11	Adjust Surface Utility To Grade	\$620.00	Each	60,240	\$37,348,800	1.05%	Length/ 250' (local); Length/ 175' (select)
12	PCC Curb and Gutter R&R - Local ( 6-inch )	\$24.75	LF	490,440	\$17,042,780	0.48%	5% of Centerline Length
13	PCC Curb and Gutter R&R - Select ( 8-inch )	\$42.00	LF	183,740	\$7,717,080	0.22%	5% of Centerline length
14	Bus Pads - Select Streets only	\$22.45	SF	591,570	\$13,260,747	0.37%	1 Bus Pad per Mile, includes removal of existing
15	PCC Cross Gutter R&R 6-inches - Local	\$17.45	SF	349,660	\$6,101,565	0.17%	15% of Existing to be Reconstructed (0.60 per Segment)
16	PCC Cross Gutter R&R 8-inches - Select	\$24.85	SF	72,280	\$1,796,158	0.05%	15% of Existing to be Reconstructed (0.20 per Segment)
17	Striping Replacement - Local	\$1.20	LF	9,808,910	\$11,770,692	0.33%	Linear foot of striping (1 x Centerline Length)
18	Striping Replacement - Select	\$1.20	LF	22,048,420	\$26,458,104	0.75%	Linear foot of striping (6 x Centerline Length)
19	Traffic Loops - Select	\$440.00	Each	16,790	\$7,387,600	0.21%	20 Loops per Signalized Intersection (Assume Intersection at every 1250')
Sub-Total =					\$1,965,276,812		
<b>Misc Construction Costs</b>							
20	Mobilization	2.00	%	Hard Cost	\$39,305,536	1.11%	Assumed based on Past Construction Projects
21	Traffic Control	1% to 3%	%	Hard Cost	\$38,138,985	1.06%	1% Local streets, 3% for Select streets
22	SWPPP Implementation	0.75	%	Hard Cost	\$14,738,576	0.42%	Assumed based on Past Construction Projects
23	Construction Staking and Monument Preservation	1.50	%	Hard Cost	\$29,473,152	0.80%	Assumed based on Past Construction Projects
Misc Construction Cost Sub-Total =					\$121,653,250		
Construction Cost Sub-Total =					\$2,086,940,062		
15% Construction Contingency =					\$313,041,009	8.83%	
Construction Cost =					\$2,399,981,071	67.21%	
<b>Program Delivery Costs</b>							
24	Material Testing for Construction (Batch Plant Inspections & In-place testing)	2.00	%	Construction Cost	\$47,996,021	1.35%	Assumed based on Past Construction Projects
25	Program Management & Public Outreach	6.0%	%	Construction Cost	\$145,198,855	4.10%	performed by City & Consultant Staff
26	Design - Local (includes Survey, Geotechnical, Deflection Testing, PSAE)	8.50	%	Local Street Construction Cost	\$107,096,530	3.02%	Performed By City & Consultant Staff
27	Design - Select (includes Survey, Geotechnical, Deflection Testing, PSAE)	10.00	%	Select Street Construction Cost	\$114,002,190	3.22%	Performed By City & Consultant Staff
28	Construction Management	3.50	%	Construction Cost	\$203,998,391	5.76%	Performed By City & Consultant Staff
29	Inspection	8.50	%	Construction Cost	\$203,898,381	5.76%	Performed By City & Consultant Staff
Project Delivery Cost Sub-Total =					\$622,233,978	23.20%	
Sub-Total =					\$3,222,275,048		
10% Program Contingency =					\$322,227,505	9.09%	
Total Cost =					\$3,544,502,553		

## APPENDIX A: ESTIMATE DETAILS

### SOSLA - Cost Estimate - Summary

REVISED 2-18-14

Local 'D' - Draft Cost Estimate	Mean Range of Removals	Low Range of Removals	2,287 Lane-miles
Hard Construction Costs	\$458,300,077	\$439,157,268	56% of Total
Misc Construction Costs	\$24,060,754	\$23,055,757	3% of Total
Construction Cost Sub-Total	\$482,360,831	\$462,213,025	
15% Contingency on Construction	\$72,354,125	\$69,331,954	9% of Total
Local 'D' Construction Cost	\$554,714,956	\$531,544,978	
Project Delivery Costs	\$186,106,868	\$178,333,340	23% of Total
10% Program Contingency	\$74,082,182	\$70,987,832	9%
<b>Local 'D' Total Cost</b>	<b>\$814,904,006</b>	<b>\$780,866,150</b>	
	\$356,372	\$341,486	Cost Per Lane-mile

Local 'F' - Draft Cost Estimate	Mean Range of Removals	Low Range of Removals	3,067 Lane-miles
Hard Construction Costs	\$636,311,145	\$601,808,692	56% of Total
Misc Construction Costs	\$33,406,335	\$31,594,956	3% of Total
Construction Cost Sub-Total	\$669,717,480	\$633,403,649	
15% Contingency on Construction	\$100,457,622	\$95,010,547	9% of Total
Local 'F' Construction Cost	\$770,175,102	\$728,414,196	
Project Delivery Costs	\$258,393,747	\$244,382,963	23% of Total
10% Program Contingency	\$102,855,885	\$97,279,716	9%
<b>Local 'F' Total Cost</b>	<b>\$1,131,425,734</b>	<b>\$1,070,076,875</b>	
	\$368,924	\$348,920	Cost Per Lane-mile

Select 'D' - Draft Cost Estimate	Mean Range of Removals	Low Range of Removals	1,634 Lane-miles
Hard Construction Costs	\$506,927,296	\$446,191,152	59% of Total
Misc Construction Costs	\$36,752,229	\$32,493,861	4% of Total
Construction Cost Sub-Total	\$543,679,524	\$480,685,053	
15% Contingency on Construction	\$81,551,929	\$72,102,758	9% of Total
Select 'D' Construction Cost	\$625,231,453	\$552,787,811	
Project Delivery Costs	\$219,143,624	\$193,752,128	24% of Total
10% Program Contingency	\$84,437,508	\$74,653,994	9%
<b>Select 'D' Total Cost</b>	<b>\$928,812,585</b>	<b>\$821,193,932</b>	
	\$568,351	\$502,498	Cost Per Lane-mile

Select 'F' - Draft Cost Estimate	Mean Range of Removals	Low Range of Removals	1,717 Lane-miles
Hard Construction Costs	\$536,716,828	\$476,119,660	55% of Total
Misc Construction Costs	\$38,911,970	\$34,518,675	4% of Total
Construction Cost Sub-Total	\$575,628,797	\$510,638,335	
15% Contingency on Construction	\$86,344,320	\$76,595,750	9% of Total
Select 'F' Construction Cost	\$661,973,117	\$587,234,086	
Project Delivery Costs	\$232,021,578	\$205,825,547	24% of Total
10% Program Contingency	\$89,399,469	\$79,305,963	9%
<b>Select 'F' Total Cost</b>	<b>\$983,394,164</b>	<b>\$872,365,596</b>	
	\$572,769	\$508,101	Cost Per Lane-mile

All Streets - Draft Cost Estimate	Mean Range of Removals	Low Range of Removals	8,705 Lane-miles
Hard Construction Costs	\$2,138,255,345	\$1,965,276,812	55% of Total
Misc Construction Costs	\$133,131,288	\$121,663,250	3% of Total
Construction Cost Sub-Total	\$2,271,386,633	\$2,086,940,062	
15% Contingency on Construction	\$340,707,995	\$313,043,009	9% of Total
<b>Total Construction Cost</b>	<b>\$2,612,094,628</b>	<b>\$2,399,983,071</b>	
Project Delivery Costs	\$895,665,816	\$822,293,978	23% of Total
10% Program Contingency	\$350,776,044	\$322,227,505	9%
<b>All Streets Total Cost</b>	<b>\$3,858,536,488</b>	<b>\$3,544,802,553</b>	
	\$443,274	\$407,197	Ave Per Lane-mile



REPORT FROM

## OFFICE OF THE CITY ADMINISTRATIVE OFFICER

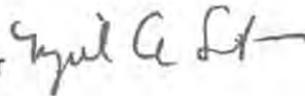
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Date: April 15, 2016

CAO File No.  
Council File No. 15-1507  
Council District: All

To: The Council  
The Mayor

From: Miguel A. Santana, City Administrative Officer



Reference: C.F. No. 15-1507

Subject: **STREAMLINE CONTRACT PROCESS**

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### SUMMARY

The City Council (C.F. No. 15-1507) instructed the Department of General Services (GSD), City Administrative Officer (CAO), Public Works' Bureau of Contract Administration (BCA), Information Technology Agency (ITA), and any other relevant departments, to work with the Mayor's Operations Innovation Team (O-Team) to develop a comprehensive plan to streamline and improve the City's procurement and contracting practices and to prepare a report with specific actionable recommendations, including but not limited to:

- a. How the City can significantly decrease the length of time to process bids, reduce paperwork for both bidders and departments, and expedite the application process by allowing for one-time data entry to a central database, among other things.
- b. How to expedite payments to businesses that have been awarded contracts and performed their obligations.
- c. The type of resources and policy changes needed to advance a plan forward and achieve measurable progress.

The City's procurement environment and contracting practices are complex, and a significant effort has been dedicated to identifying opportunities for improvement. Some short term solutions can include developing a formal training program for contract staff, exploring technology solutions to improve vendor experience and City contract forms processing, and beginning the effort to standardize and collect procurement data to help facilitate comparison of contracting terms and conditions and procurement pricing analysis to begin to leverage this information to obtain favorable and competitive procurement terms and conditions. Larger scale reform efforts, such as the potential creation of a City Procurement Office will require further discussion, including feasibility, scope, expectations, and resources.

## BACKGROUND

As reported by the O-Team, the City's contracting process can take 432 days before a contract is executed and can result in higher pricing for services. The O-Team further identified the following City challenges to best practices in contracting:

1. No central shared database for active or pending service contracts;
2. Up to seven City entities needed to authorize service contracts (Attachment 1 - Procurement Responsibilities - Contracting in Los Angeles); and
3. Between 11 and 20 non-interactive compliance forms.

Each of these challenges contributes to the length of time required to execute service contracts. Accordingly, the O-Team has worked with City departments and outlined the following objectives for procurement:

- Develop a cost-analysis of the City's procurement practices and spending across all departments and purchases.
- Implement actionable steps to achieve savings, increase supplier participation and diversity, and reduce time needed to buy goods and services.
- Implement coordinated management and optimization of the City's contract and commodities spending to drive long-term procurement excellence.

The following priority initiatives have been identified to begin to address those objectives:

1. Develop vendor intelligence and procurement performance;
2. Improve procurement programs and vendor experience; and,
3. Establish Procurement Leadership for the City.

The City is not alone in its efforts to address procurement challenges. In February 2016, the Governing Institute reported on a year-long survey and assessment of 39 states on the following 10 factors impacting procurement:

- **Relationship Management** - establishment of an effective relationship between the purchasing agent and customer departments;
- **Sourcing** - availability of a variety of sourcing methods and the flexibility to try new methods;
- **Contract Administration** - a clear outline of responsibilities for those charged with managing contracts and managerial accountability for the success of each contract;
- **Use of Technology** - improvement of outcomes through data analysis, enabling better management of vendors and agencies and making procurement more flexible and innovative;
- **Information Technology Procurement** - evidence of close collaboration between information technology and procurement staff;
- **Workforce, Training, and Certification** - availability of training plans and professional certification for procurement staff;

- **Organizational Structure and Authority** - the view of procurement as a strategic function with performance measures and opportunities for innovation;
- **Pre-sourcing and Procurement Planning** - a clear understanding of business objectives and expectations through market and risk analysis;
- **Organizational Culture and Leadership** - an effective delegation of authority with clear qualifications for employees and vendors and well-defined procurement methods and procedures; and,
- **Performance Measures** - clear identification of goals, whether they are being met and customers are satisfied, and understanding of what works effectively.

Several recurring themes emerged from this study:

1. **Data and analytics tools are valuable.** This data can identify market metrics and purchasing and spending trends, which can help structure future solicitations to get more favorable pricing. It can also be used to identify staff performance gaps and training needs resulting from any repetitive errors that may occur.
2. **Training for procurement staff is critical.** Training can help staff retain skill and institutional knowledge as retirements and other attrition occurs. Staff are better equipped to track procurement from start to finish, which then results in better contract administration and enforcement ensuring that both parties adhere to the contract terms. Several governmental entities have also implemented certification programs for those staff who have attained a high level of training. Such certification is then tied to delegation of contracting authority. In addition to having a training program, those governmental entities with efficient contracting operations also highlight the importance of communication among contract administrators and the availability of pertinent reference material such as an updated contract administration manual.
3. **Technology is also a useful management tool.** It can improve communication and expedite processes, thus improving contract outcomes. It can also broaden competition and help promote diversity among suppliers.

These themes are consistent with the O-Team findings and can inform next steps for the City.

## **CITY PROCUREMENT ENVIRONMENT**

The City's procurement environment and contract processes are complex, governed by State law, the City Charter, several administrative ordinances, and varying rules and regulations depending on the type of contract (construction, commodities, or personal services). Besides the Mayor, City Council, and the department that awards contracts, several departments play key support roles in the contract development and execution process:

- GSD, as the City's Purchasing Agent, handles commodity purchases and oversees the City's supply management system.
- ITA manages communications, electronics, and technology purchases.
- BCA administers the City's Contract Compliance program, which includes minority business enterprise utilization, prevailing and living wage compensation, and local worker and business participation.

- The CAO (1) reviews insurance and indemnification provisions, (2) maintains the Contract Clearinghouse, a database of anticipated contracts and amendments in all City Departments (except the Department of Water and Power) that provides current and timely notification to labor organizations about proposed City contracts, and (3) reviews and reports on proposed contracts at the request of the Mayor or City Council.
- The Personnel Department reviews proposed contracts to determine whether the scope of work can be performed by City employees in accordance with Charter Section 1022.
- With limited exceptions, no contract is valid without the signature of the City Attorney.

The City's contracting practices are further complicated by being decentralized in terms of awarding and tracking processes. Each department has a designated contract coordinator, but many are administrative staff assigned to manage contractor solicitation and evaluation, contract negotiation, and contract execution as an ad hoc responsibility. BCA conducts periodic meetings for these DCCs (department contract coordinators) to disseminate information, share knowledge, and provide support. While these meetings are a useful tool, department contract staff could benefit from additional support.

The O-Team provided the attached Contracting Process Flowchart (Attachment 2), which outlines the process followed by a Public Works consultant contract and is provided for informational purposes.

## **ETHICS CONTRACT DATABASE**

Until recently, City departments have not been required to create lists of their bidders and contractors. In 2013, the Mayor and City Council directed the Ethics Commission to provide an official, electronic City database for all City bidders and contracts labeled as restricted sources (C.F. 13-1082, codified in Los Angeles Municipal Code Article 9.5 Section 49.5.11(B)). The Ethics Commission is now creating and will maintain a searchable Citywide database of all City bidders and contractors. The database will provide City officials and the public with information about City contracts and those involved with them. Once the database is in place, City agencies will need to enter all contracts, vendors, and bidders that were active for the first two quarters of 2016 (January 1 through June 30, 2016) by August 1, 2016. Moving forward from there, information must be entered into the database every quarter. The Municipal Code contains sanctions for departments that fail to comply.

## **NEXT STEPS**

Meaningful procurement reform will require discussion and action on policy and legislative options. Some items can be addressed immediately, while some may require additional resources, a feasibility review, or a policy debate. Items that the City can begin to address now include development of a training program, exploration of feasible technology tools, and baseline data collection as described below.

### **Procurement Process and Administrative Training**

As highlighted by the Governing Institute survey, training can provide significant and

potentially immediate benefits. As an initial step, BCA, Personnel, GSD, CAO, and the City Attorney can develop training curriculum for City department contract coordinators. This training should include information on the different types of contracts that are awarded, the competitive bidding and selection process, business registration, and the administration and review of contracts for compliance with the City's contracting requirements, policies and procedures, with a goal of offering a voluntary certification opportunity for those employees interested in contracting as a professional specialty. While BCA requested staff resources in 2016-17 to develop training programs and online training modules, using existing Personnel Department resources to develop and implement this program would enable the training to be incorporated into the City's Online Training Academy.

The Personnel Department manages the City's Online Training Academy which offers a range of training courses, including supervisory and safety training online to City employees. A City contracting course which would encompass online training modules and provide employees an opportunity to achieve certification could be hosted on the Online Training Academy at a minimal cost. It is, therefore, recommended that Personnel, GSD, BCA, CAO, and the City Attorney create a training curriculum for City department contract coordinators, which may include the creation of a Citywide Procurement Manual and the method and frequency by which the training would be conducted, and report in four months on the status of this effort. It is anticipated that BCA will take the lead in developing the training content. In addition, as part of the effort to improve overall communication among contract administrators, the CAO will ensure its contracting resources intranet site is updated with applicable reference material and made available to City DCCs.

### **Technology Tools and Improved Vendor Experience**

The City's outward facing Business Assistance Virtual Network (BAVN) provides a consolidated listing of contracting opportunities, allows users to register in the network and then automatically notifies those users of contracting opportunities of interest, and provides other helpful links. According to ITA, the Mayor's Office of Small Business, the Office of Finance, ITA, and BCA have developed a new business portal that will provide a "wizard" application that can walk a person through the steps to "start a business" in Los Angeles, with access to LATAX for applying or paying for necessary permits, as well as links to external governmental organizations (County and State). The portal will also provide general information on doing business in Los Angeles. The business portal will be beta tested to gather feedback prior to a full site launch.

While the business portal is an important next step, it does not tie together all of the systems that are touched by City contracts. Attached is a diagram of procurement lifecycle and current gaps that shows those elements of the contract lifecycle that will still require manual processing (Attachment 3). To determine the most feasible approach to address those manual elements and the corresponding gap in systems, the City will need to define and map out the scope and function of what should be included in a contract management system. To accomplish this effort, it is recommended that ITA act as the

project manager with involvement from various City business owners; notably, GSD, City Attorney, and BCA. ITA has indicated that consulting services will also be needed at an estimated cost of \$200,000 to \$300,000. This funding is not recommended as part of this report. Should the City Council act to move forward with this effort, funding would need to be identified.

### **Data and Analytics Tools**

The collection and reporting of procurement data across all City departments is integral to the improvement of the City's procurement practices. Standardizing the City's procurement data will help to facilitate comparison of contracting terms and conditions and procurement pricing analysis. The City could then leverage this information along with the size and scope of its collective entities to obtain favorable and competitive procurement terms and conditions.

Data analytics tools are available to assist the City in collecting and standardizing the large volume of its procurement data. Before such tools can be implemented effectively, the City must first identify the type and quantity of data that is available for collection and reporting and establish a baseline set of data with which to measure the procurement process, including the costs of current city procurement practices. The BCA, with the assistance of the O-Team, could research data collection methodologies and provide a recommendation on standardization of the City's procurement data. Once this baseline is established, specific data analytics tools could be utilized to facilitate analysis and comparison of various components of the procurement process including bidding, pricing, awarding, executing, and evaluation of City contracts. This data analysis could inform the contract awarding process, resulting in more competitive contract pricing and ultimately cost savings.

### **Longer Term Item for Discussion: Centralized Procurement Office**

The O-Team has proposed the creation of a centralized Procurement Office led by a Chief Procurement Officer. This office could offer contract concierge service to assist departments with contractor solicitation and evaluation, contract negotiation, and contract execution. It could also be responsible to identify, collect, and analyze spending and performance data that can (1) support "strategic purchasing goals" and performance metrics to create accountability, and (2) help structure future solicitations so that the City can get more favorable pricing. As discussed by the Governing Institute, procurement offices are demonstrating that it is possible to maintain accountability and spend public money responsibly while also pursuing new technology innovations and promoting stated policy goals. Nonetheless, such an approach would require further discussion that would need to include strategic goals of the office and a clearly articulated expectation of what success would look like, long-term placement of roles and responsibilities, and the most feasible and affordable path for implementation of initiatives.

## **PAYMENT PROCESSING REVIEW**

The Council action included an instruction on how to expedite payments to businesses that have been awarded contracts and performed their obligations. However, a recommendation to address contractor payment processing requires an understanding of the nature of any payment delays. The Controller's input is especially necessary to identify and assess any recurring trends or systemic problems that may impact timely contract payments. In this way, a solution can be fashioned to address those concerns specifically since they could arise from a variety of factors, such as incomplete information from the contractor, delay in department approval of contract deliverables, or temporary staffing issues. The Controller's office may find it necessary to follow up with key departments as deemed appropriate.

## **LETTER OF AGREEMENT (LOA) ON OUTSOURCING OF UNIT WORK**

In December, the Mayor and City Council, as part of a Settlement Agreement with the Coalition of Los Angeles City Unions, approved a Letter of Agreement (LOA) on Outsourcing of Unit Work (C.F. 15-1423). While this LOA has some elements in common with the procurement reform effort it also differs in some respects as outlined below. The LOA directs the Bureau of Contract Administration with the assistance of GSD, Bureau of Engineering, and CAO to study and provide recommendations on best practices for municipal government contracting of services to include the following key elements:

1. Review of decisions to contract out
2. Prescreening contractors for responsibility
3. High standards for wages and benefits
4. Incentives to raise wages and benefits above the legal floor
5. Performance standards and measurement
6. Strong post-award enforcement
7. Increased data collection and transparency
8. Consistency of procedures applicable to departments outsourcing bargaining unit work (e.g. new contracts; extensions; amendments to existing contracts and the use of pre-qualified on-call/bench lists; and required information, including the nature of the work, duration, amount of work, estimated cost of contract, wage rates and benefits paid by contractor, expected overtime, local hiring, prior performance by contractor, record of compliance with applicable laws, performance standards, and reporting requirements).

The LOA includes a request that the Controller establish, maintain, and make available to the public a central online database on City contracts covering bargaining unit work, beginning with the Bureaus of the Department of Public Works and the Departments of General Services, Transportation, Recreation and Parks, and all other departments, excluding the Department of Water and Power and the Housing Authority of the City of Los Angeles.

Further, the LOA contains an agreement between the parties that the Union may file a grievance regarding the Charter 1022 notification as follows:

- A. A grievance challenging the 1022 notification shall be filed within 15 calendar days of the

Union's knowledge of the alleged deficient notification.

- B. The grievance will be submitted to an expedited informal arbitration process. The arbitration shall be conducted within 30 days of the filing of the Union's grievance. The arbitration fees shall be shared equally between the Union and the City.
- C. The arbitrator shall determine if the City has violated the 1022 notification procedures. The arbitrator's remedy shall be limited to ordering the City to reissue the 1022 notification. In no event will the arbitrator have the authority to void a Council-approved contract. The arbitrator's decision is binding on the parties.

Finally, the LOA states that the City shall propose amendments to the Public Infrastructure Stabilization Ordinance to expand the Department of Public Works Project Labor Agreement to all Council-controlled departments. Prior to proposing amendments, the City will negotiate in good faith the proposed amendments with the Los Angeles/Orange Counties Building and Construction Trades Council. BCA has begun work on this portion of the LOA. Rather than potentially duplicating a central online database on City contracts, the City should explore the Ethics database as a means to address the information required by the LOA. The remainder should be undertaken as outlined in the LOA with a follow up report to the City Council in four months.

## RECOMMENDATIONS

That the Council,

1. Instruct the Personnel and General Services Departments, Public Works Bureau of Contract Administration, and City Administrative Officer, with the assistance of the City Attorney to create a training curriculum for City department contract coordinators, which may include the creation of a Citywide Procurement Manual and the method and frequency by which the training would be conducted, and report in four months on the status of this effort.
2. Instruct the Information Technology Agency, as the project manager, General Services Department, Public Works Bureau of Contract Administration, and City Administrative Officer with the assistance of the City Attorney and Mayor's Operations Innovation Team to define and map out the scope and function of what should be included in a contract management system, and report in four months on the status of this effort.
3. Instruct the Public Works Bureau of Contract Administration with the assistance of the Mayor's Operations Innovation Team to research data collection methodologies and provide a recommendation on standardization of the City's procurement data, and report in four months on the status of this effort.
4. Request the Controller to identify and assess any recurring trends or systemic problems that may impact timely contract payments, and report in four months on the status of this effort.
5. Instruct the Public Works Bureaus of Contract Administration and Engineering, City Administrative Officer, and Personnel Department with the assistance of the Controller and

the City Attorney to report in four months on the efforts made to comply with the Letter of Agreement on Outsourcing of Unit Work, and report in four months on the status of this effort.

### **FISCAL IMPACT STATEMENT**

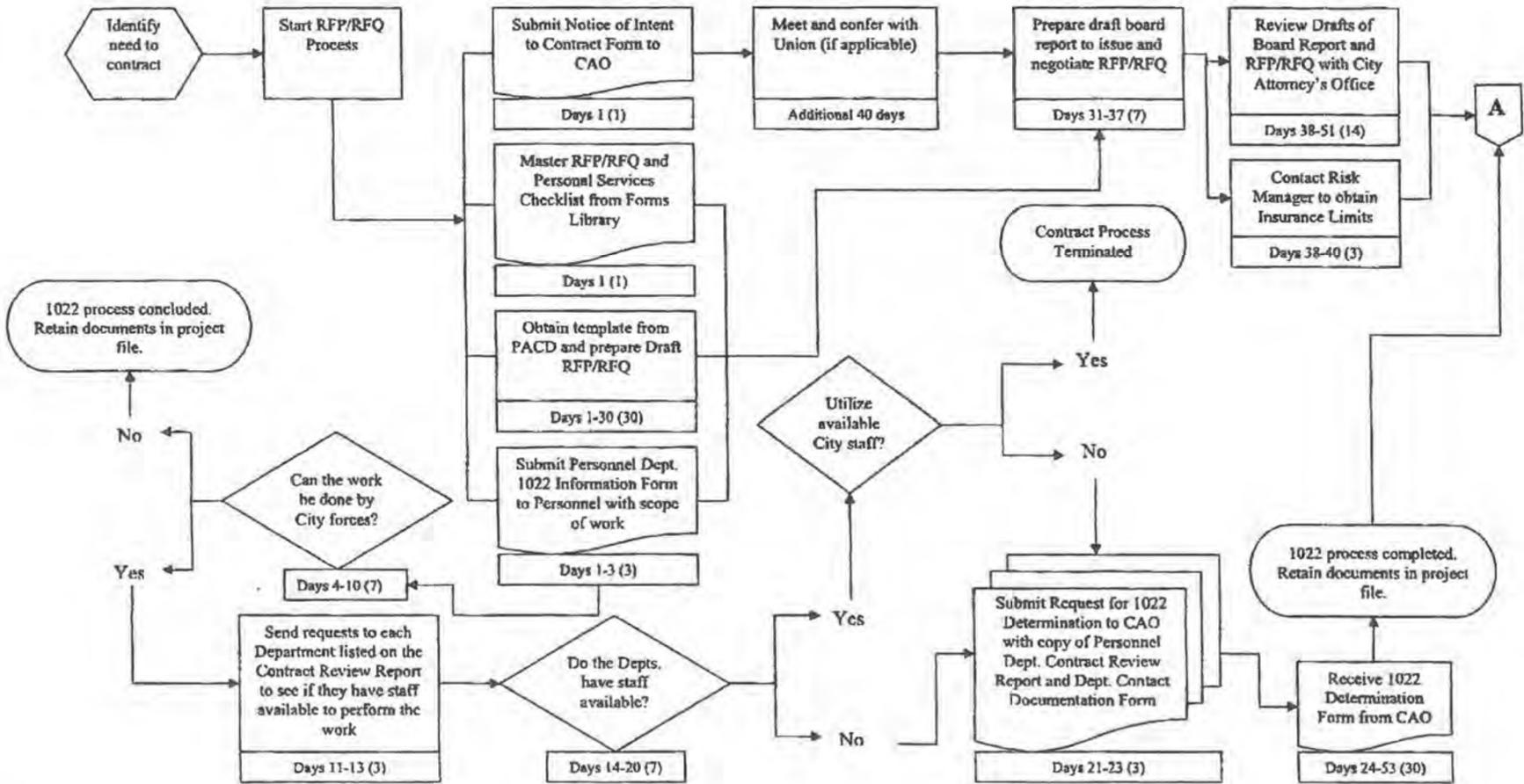
Investing in procurement reform may result in future year costs based on the actions undertaken to implement this effort. Future year costs will likely increase the General Fund costs as more detailed work plans are developed and implemented. Ongoing costs could be offset by potential savings resulting from procurement reform due to efficiency in processes and reduction in operating costs.

#### *Attachments*

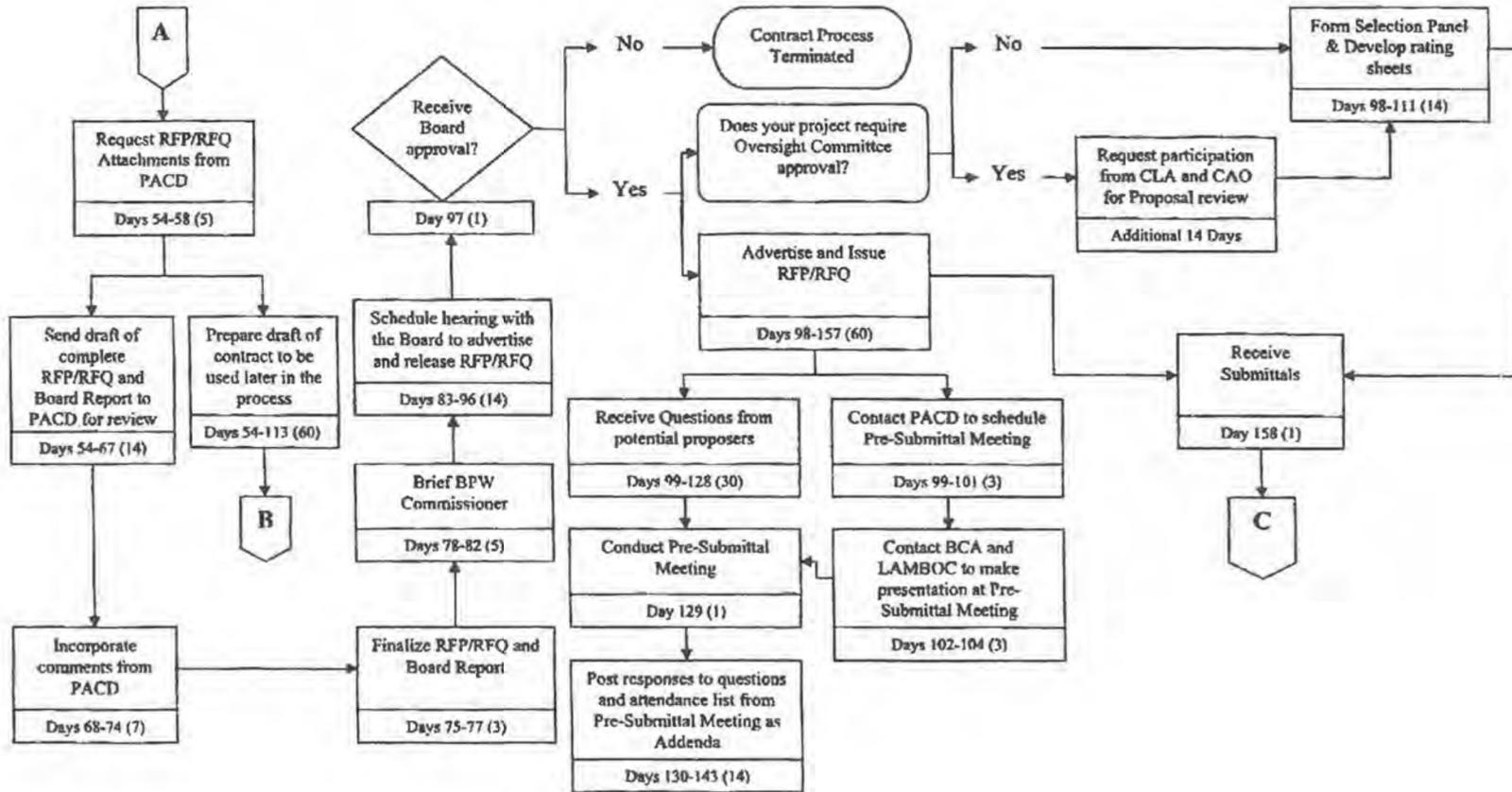
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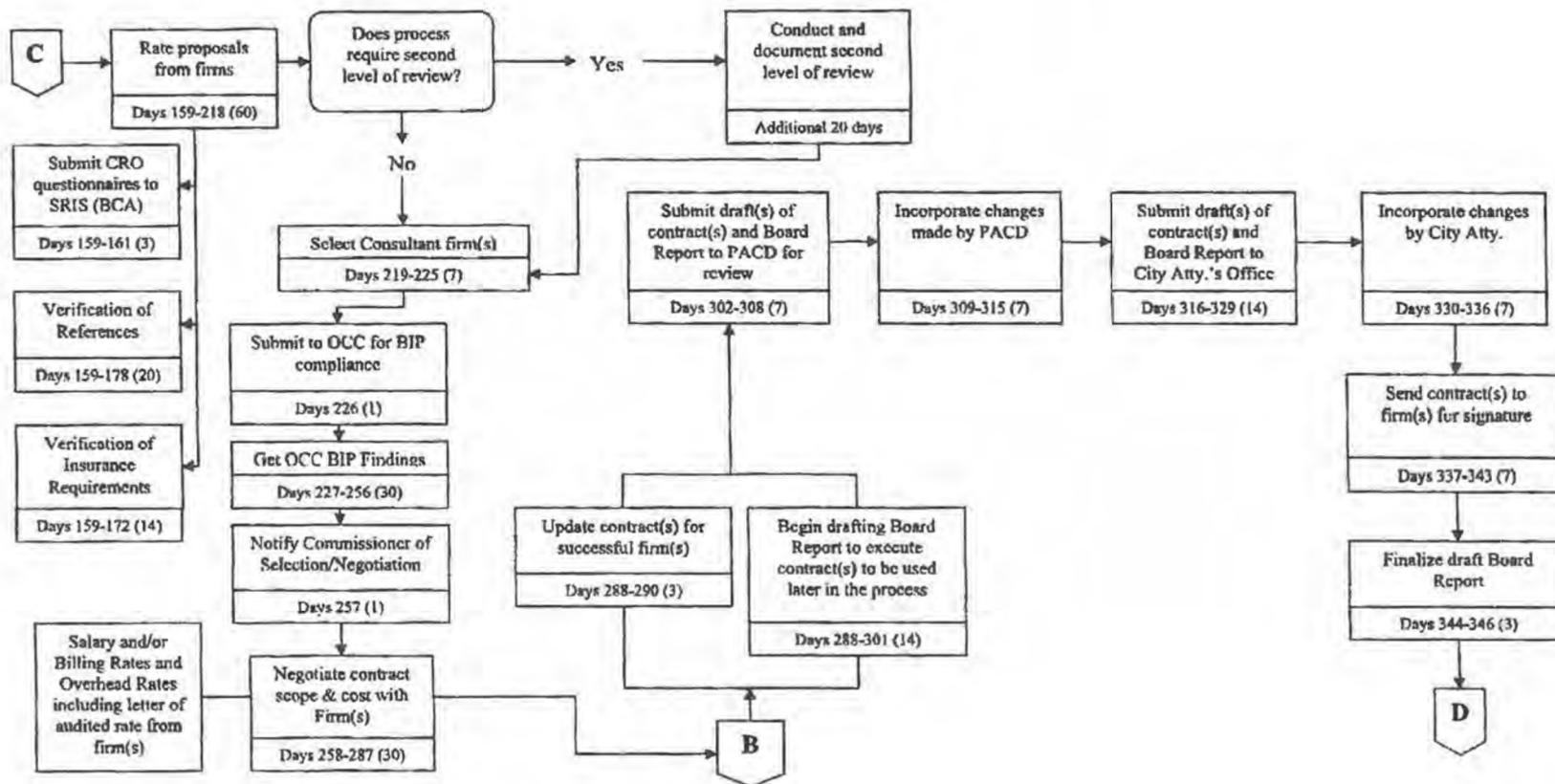
CONTRACTING PROCESS FLOWCHART



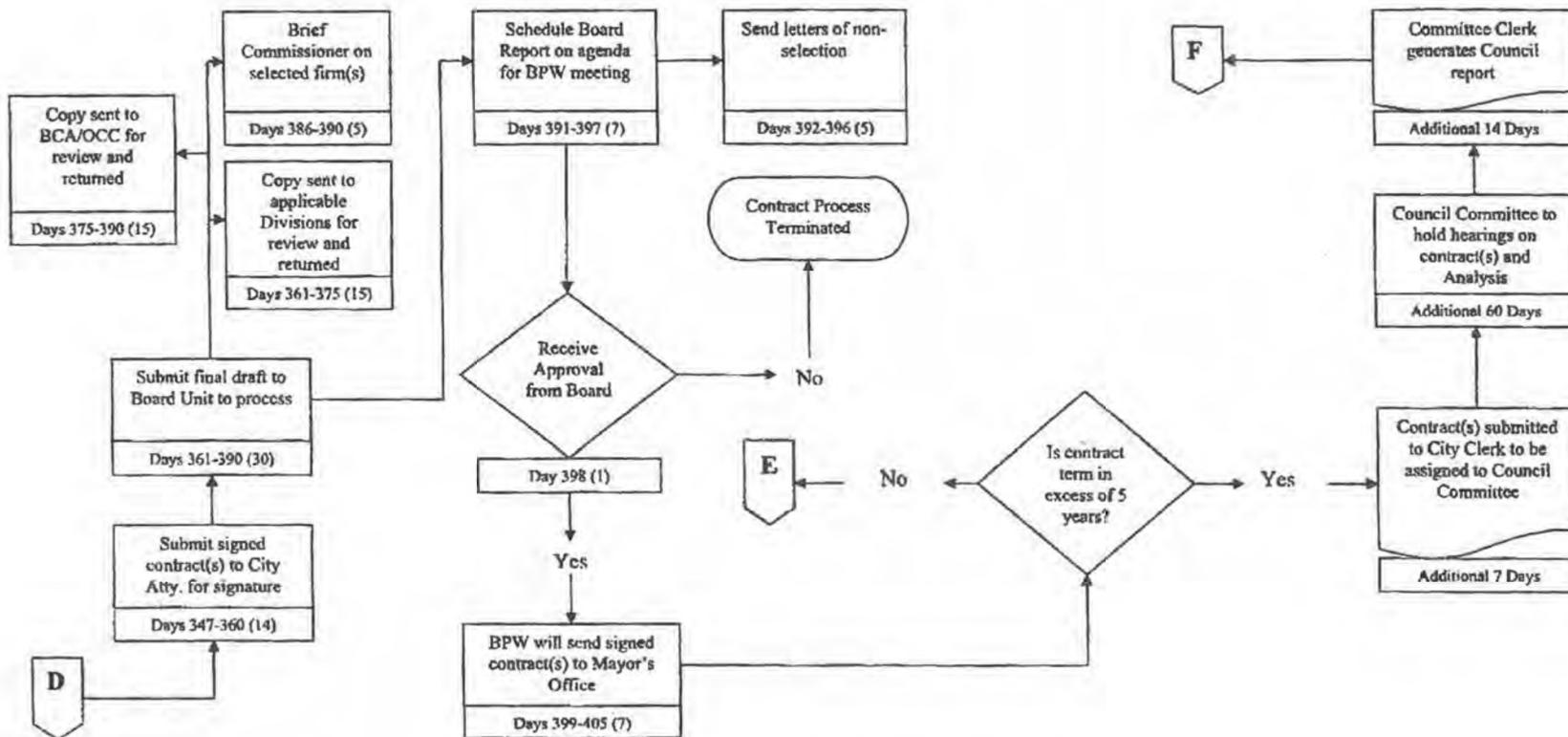
### CONTRACTING PROCESS FLOWCHART



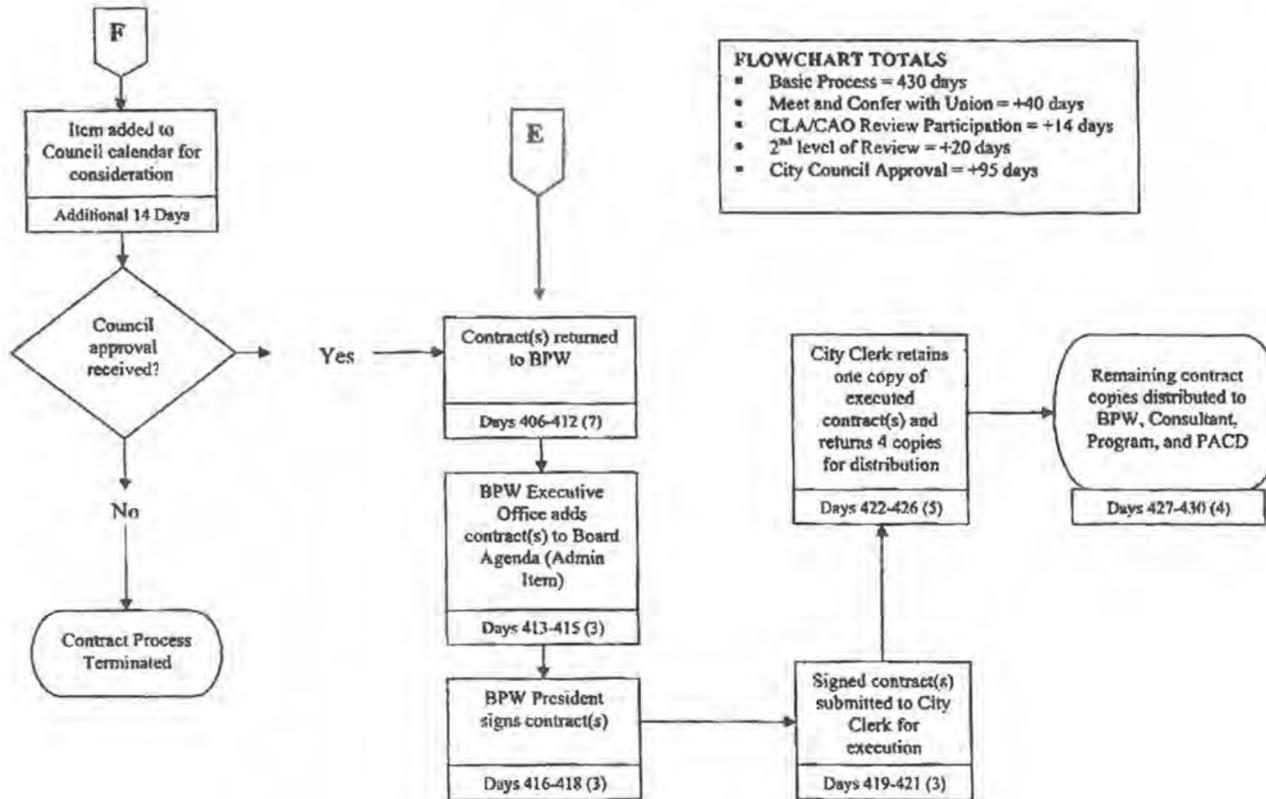
### CONTRACTING PROCESS FLOWCHART



### CONTRACTING PROCESS FLOWCHART



## CONTRACTING PROCESS FLOWCHART



**FLOWCHART TOTALS**

- Basic Process = 430 days
- Meet and Confer with Union = +40 days
- CLA/CAO Review Participation = +14 days
- 2<sup>nd</sup> level of Review = +20 days
- City Council Approval = +95 days

GLOSSARY	
BAVN	- Business Assistance Virtual Network
BCA	- Bureau of Contract Administration
BIP	- Business Inclusion Program
BPW	- Board of Public Works
CAO	- Office of the City Administrative Officer
CLA	- Chief Legislative Analyst
LAMBOC	- Los Angeles Minority Business Opportunity Center
OCC	- Office of Contract Compliance
PACD	- Project Award and Control Division
RFP	- Request for Proposal
RFQ	- Request for Qualifications
SRIS	- Special Research & Investigation Section

**Contract Lifecycle**

Manual	BAVN	Manual	Manual	FMS 2.0	Vendor Self Service (VSS)
<ul style="list-style-type: none"> <li>Decision to Contract</li> <li>1022 Process</li> <li>Identify Financing/Budget</li> <li>Build Templates for RFPs, Bid Evaluations and Contracts</li> <li>Draft RFP</li> <li>Edit/Review/Approve</li> <li>RFP Document Repository</li> </ul>	<p><u>City:</u></p> <ul style="list-style-type: none"> <li>Upload and Publish RFPs</li> <li>Automatic Email Notifications to Registered Vendors (RFPs, Amendments, Status Changes)</li> <li>Calculates BIP Outreach</li> <li>Requirements</li> <li>Monitor &amp; Reports on Vendor BIP Participation</li> <li>Review and Verify Vendor Compliance Docs</li> </ul> <p><u>Vendor</u></p> <ul style="list-style-type: none"> <li>Vendor Registration</li> <li>Submit Compliance Docs Online</li> <li>Maintain Vendor Profile including Certifications</li> <li>Download RFP</li> <li>Prime Contractors Outreach to Subcontractors</li> <li>Completes BIP Outreach</li> <li>Submit BIP Summary Sheet Online</li> </ul>	<ul style="list-style-type: none"> <li>Bids are submitted and received</li> <li>Bid Evaluation (Evaluated, Scored, Selected, Appealed)</li> <li>Bid Repository</li> </ul>	<ul style="list-style-type: none"> <li>Dept Selects Vendor</li> <li>BCA verifies Vendor's Compliance Documents in BAVN</li> <li>Award Vendor</li> <li>Draft Contract</li> <li>Negotiate Contract</li> <li>Edit/Review/ Approve</li> <li>Execution of Contract</li> <li>Contract Document Repository</li> </ul>	<ul style="list-style-type: none"> <li>Establish Vendor in FMS (if necessary)</li> <li>Enter Contract into FMS</li> <li>Contract Attachments</li> <li>Contract Amendments</li> <li>Contract Reporting</li> <li>Control/Monitor Spending</li> </ul>	<p><u>City:</u></p> <p><b>VSS Features Not Implemented</b></p> <ul style="list-style-type: none"> <li>Upload, Publish RFPs</li> <li>Automatic Email Notifications to Potential Bidders</li> <li>Commodity Solicitation</li> <li>RFP Response Tracking</li> </ul> <p><u>Vendor:</u></p> <p><b>VSS Features Implemented in 2017</b></p> <ul style="list-style-type: none"> <li>Maintain Vendor Profile &amp; User Accounts</li> <li>View Contract Information Online</li> <li>Online invoice submission</li> <li>Review Payments/Invoices</li> <li>Maintain Financial Account Info</li> </ul> <p><b>VSS Features Not Implemented</b></p> <ul style="list-style-type: none"> <li>Vendor Registration</li> <li>Download RFP</li> <li>Online Bid Submittal</li> </ul>
Pre-Solicitation	Solicitation /Opportunities	Bid Evaluations	Contracting	Monitoring and Managing Contracts	

Green: Functionality in a Current System

Red: Performed Manually

Purple: System Available 2017

Black: VSS

Features Not Implemented

APPENDIX D, CONT.: VARIOUS CITY REPORTS

File No. 14-1571, 14-1571-S1, 14-1570-S1, 14-1156

PUBLIC WORKS AND GANG REDUCTION COMMITTEE REPORT relative to consideration of departmental reports in response to Street Smart Initiatives.

Recommendations for Council action, SUBJECT TO THE APPROVAL OF THE MAYOR:

1. REQUEST the City Attorney, with assistance from the City Administrative Officer (CAO), to prepare and present an ordinance within 60 days to amend sections of the Los Angeles Administrative Code (LAAC) to update the Street Damage Restoration Fee (SDRF) to a level that results in full cost recovery based on the original fee study completed in 1996.
2. AUTHORIZE the Bureau of Street Services (BSS) to enter into a Sole Source Personal Services Contract with Shahin and Associates to update the original SDRF study from 1996 with the scope of work described in the BSS, CAO and Bureau of Engineering (BOE) report's Discussion Section, attached to the Council file, as part of a longer term effort to ensure a full cost recovery fee structure.
3. INSTRUCT the CAO to identify the funding required to enter into the Personal Services Contract (approximately \$350,000) with Shahin and Associates.
4. INSTRUCT the BOE and the Los Angeles Department of Transportation (LADOT) to report within 90 days with the required scope of services and funding to enable hiring of an engineering consultant to estimate roadway damage created by construction activity and heavy load carriers and to make recommendations on how to recover these repair costs.
5. INSTRUCT the CAO, with assistance from the BSS and BOE, to report with the findings of the updated SDRF fee study to be completed by Shahin and Associates, including but not limited to, a plan for periodic review and future updates of the SDRF to ensure that full cost recovery is maintained from year to year.
6. INSTRUCT the BOE to report within 90 days on best practices for performing and repairing street cuts that minimize damage to the street.
7. MODIFY the instructions to the City Attorney contained in Council file No. 14-1571-S1 which requested the preparation of a draft ordinance incorporating the following guidelines:
  - a. Keep the existing one-year moratorium on street excavation cuts.
  - b. Formalize the term Street Cut Moratorium in the Los Angeles Municipal Code (LAMC) section 62.06.
  - c. Modify the existing moratorium to require that any work performed under an exemption to the moratorium pay a SDRF sufficient to recover the full cost of damage inflicted by the street cuts. The SDRF would apply to work performed under categorical exemptions as well as individual project exemptions.
  - d. Find that the minimum amount of such damage would equal the SDRF amount used for street cuts from one year and one day to five years after resurfacing, and authorize the use of that rate until a study can provide for the amount of the damages

for the zero to one-year time period.

- e. Continue the categorical exemption from the moratorium for cases where it can be shown that the property owner was not properly notified of proposed street resurfacing.
  - f. Formally recognize a categorical exemption from the moratorium for emergency work as defined in LAMC 62.61(a)2 and in accordance with the requirements of LAMC 62.02(a)6.
  - g. Authorize the Board of Public Works (BPW) to grant project specific exemptions to the moratorium where it is deemed that the proposed project need was not known at the time the street was resurfaced or that it is otherwise in the City's best interest to grant the exemption.
  - h. Authorize the creation of additional categorical exemptions by Council Resolution.
  - i. Instruct the BPW to recommend additional categorical exemption categories based on their experiences with the oversight of the exemption process in the case that such a need is determined to be beneficial to the City.
  - j. Authorize the City Engineer to maintain standard repair requirements for work performed under an exemption to the moratorium which may go beyond the normal street repair methods for non-moratorium work.
  - k. Authorize the BPW to impose additional requirements when approving project specific exemptions.
  - l. Establish a fee for an Application for Exemption from the Street Cut Moratorium based on recommendations from the CAO, BOE, BSS, and the Bureau of Contract Administration (BCA).
  - m. Continue the requirement that entities making street cuts without an approved exemption be required to repave the full block from curb face to curb face rather than pay a SDRF.
8. AMEND the SDRF to include a categorical exemption for major telecommunications projects.
9. ADOPT a policy prioritizing arterial streets for Pavement Preservation funding, when available, over that required to maintain the overall street network condition.
10. AUTHORIZE implementation of a pilot program whereby the BCA and BOE will actively test the RFID technology for use on its utility trench permit sites.
11. INSTRUCT the City Clerk to place on the agenda for the first regular Council meeting after **JUNE 30, 2015**, or shortly thereafter, the following instructions:

That the Council, subject to the approval of the Mayor:

- a. Authorize the BCA to appropriate \$17,300 within the Bureau's Operating Supplies

Account 006020, Fund 100/76 for the radio frequency identification (RFID) Pilot Project and to contract out for the Pilot, subject to the approval of the City Attorney.

- b. Authorize the CAO to make any technical adjustments required to implement the intent of the Council and Mayor.

Fiscal Impact Statement: Neither the CAO nor the Chief Legislative Analyst has completed a financial analysis of these reports.

Community Impact Statement: None submitted.

### SUMMARY

At the meeting held on June 3, 2015 your Public Works and Gang Reduction Committee considered Council files associated with the Street Smart Initiatives. These are Council files 14-1571, 14-1571-S1, 14-14570-S1, and 14-1156.

Council file 14-1571 is a BSS, BOE, and CAO report relative to taking various actions with respect to street cuts and the City's SDRF. BSS staff presented an overview of the matter. Further testimony was provided by the CAO. An opportunity for public comment was provided. After a brief discussion, the Committee moved to approve the recommendations contained in the report as detailed above in Recommendations One through Six.

Council file 14-1571-S1 is a BOE report relative to authorizing the BPW to make exemptions to the one-year moratorium; and investigating the feasibility of increasing the City's street cut moratorium from one to three years. BOE staff presented an overview of the matter. Comments were also heard from Council District Three staff in support of the project. The representative also requested that the Committee add the recommendation to amend the SDRF to include a Categorical Exemption for major telecommunications projects. An opportunity for public comment was provided. After a brief discussion, the Committee moved to approve the recommendations contained in the BOE report as amended as detailed above in Recommendations Seven and Eight.

Council file 14-1570-S1 is a BSS report relative to prioritizing the improvement of streets with high traffic volumes and/or high weight limitation loads, when excess funding is available. BSS staff presented an overview of the matter. During the discussion of the matter, the Chair requested to change the word Consider to Adopt to have the recommendation read: Adopt a policy prioritizing arterial streets for pavement preservation funding, when available, over that required to maintain the overall street network condition. An opportunity for public comment was provided. After a brief discussion, the Committee moved to approve the recommendation as amended in Committee as detailed above in Recommendation Nine.

Council file 14-1156 is a BCA report relative to the feasibility of utilizing RFID tag technologies to better identify and track utility contractors and private developers undertaking street cuts within the public-right-of-way. BCA staff presented an overview of the matter. Further testimony was provided by CAO staff. During the discussion of the matter, the CAO asked to include recommendations for the City Clerk regarding the transfer of funds that were read into the record. An opportunity for public comment was provided. After a brief discussion, the Committee moved to approve the recommendations contained in the BCA report as amended in Committee as detailed above in Recommendations 10 and 11.

These matters are now forwarded to the Council for its consideration.

Respectfully Submitted,

PUBLIC WORKS AND GANG REDUCTION COMMITTEE

A handwritten signature in cursive script, appearing to read "Joe Bruno".

<u>MEMBER</u>	<u>VOTE</u>
BUSCAINO:	YES
PRICE:	YES
CEDILLO:	ABSENT

ME

**-NOT OFFICIAL UNTIL COUNCIL ACTS-**

APPENDIX D, CONT.: VARIOUS CITY REPORTS

~~PUBLIC WORKS & GANG REDUCTION~~

~~ARTS, ENTERTAINMENT, PARKS, AND RIVER~~

MOTION

Downtown Los Angeles is in the midst of a historic growth period that will reshape our city for the next 100 years. While the growth and construction is a major boon for the city, it is vital that construction is done in a way that respects the community and minimizes impacts to the public.

The city maintains the Public Right of Way Reservation System (PWRS) which was designed to ensure construction projects do not overlap with each other, however PWRS does not detail the extent of what part of the public right of way is closed and does not provide real time information about closures to the public.

The sheer amount of construction and filming means that lanes and sidewalks are closed repeatedly without ample notice to the public. Updates to the City's system are needed to coordinate construction closures and ensure that the public receives prior notice before closures take place

I THEREFORE MOVE that the Department of Transportation, the Bureau of Street Services, Bureau of Contract Administration and Bureau of Engineering report back on the current procedures for notification to the public on lane closures, sidewalk closures, and parking removal; and,

I FURTHER MOVE that these departments, in coordination with the Information Technology Agency and FilmLA, report back on opportunities to either update and enhance PWRS or develop a real-time right of way closure online portal that displays what travel lanes, sidewalks, and parking spaces are closed at any given time to the public; and develop standard notification procedures that are employed across all projects and are required as part of any permits that are issued by the City.

PRESENTED BY:

  
JOSE HUIZAR  
Councilmember, 14th District

SECONDED BY:



AUG 29 2017



ORIGINAL

APPENDIX D, CONT.: VARIOUS CITY REPORTS

**CITY OF LOS ANGELES**

CALIFORNIA



**ANTONIO R. VILLARAIGOSA**  
MAYOR

**BOARD OF PUBLIC WORKS  
MEMBERS**

**CAPRI W. MADDOX**  
PRESIDENT

**VALERIE LYNNE SHAW**  
VICE PRESIDENT

**STEVEN T. NUTTER**  
PRESIDENT PRO TEMPORE

**WARREN T. FURUTANI**  
COMMISSIONER

**JERILYN LÓPEZ-MENDOZA**  
COMMISSIONER

Attachment B  
**OFFICE OF THE  
BOARD OF PUBLIC WORKS**

200 NORTH SPRING STREET  
ROOM 361, CITY HALL  
LOS ANGELES, CA 90012  
(213) 978-0261  
(213) 978-0278 Fax

**ARLEEN P. TAYLOR**  
EXECUTIVE OFFICER

<http://www.bpw.lacity.org>

May 29, 2013

#3 BCA/BOE

City Council  
Room No. 395  
City Hall

**Subject: AMENDMENT AND ADDITIONS TO SECTION 62.02 ARTICLE 2, CHAPTER VI OF THE LOS ANGELES MUNICIPAL CODE STRENGTHENING REQUIREMENTS FOR UTILITY CONTRACTORS WORKING IN THE PUBLIC RIGHT-OF-WAY**

As recommended in the accompanying report of the Directors of the Bureaus of Contract Administration and Engineering, which this Board has adopted, the Board of Public Works hereby transmits for your approval the Amendment and Additions to Section 62.02 Article 2, Chapter VI of the Los Angeles Municipal Code Strengthening Requirements for Utility Contractors Working in the Public Right-of-Way, for the reasons set forth in the accompanying report. This is a result of a Council Motion (CF 11-1935) dated November 16, 2011, presented by Councilmember Mitchell Englander.

Respectfully submitted,

Arleen P. Taylor, Executive Officer  
Board of Public Works

APT/TS:mp





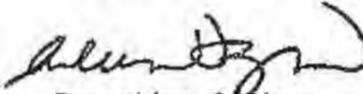
DEPARTMENT OF PUBLIC WORKS

BUREAU OF CONTRACT ADMINISTRATION  
BUREAU OF ENGINEERING  
JOINT REPORT NO. 3

May 29, 2013

C.D. No. All

ADOPTED BY THE BOARD  
PUBLIC WORKS OF THE CITY  
of Los Angeles California  
AND REFERRED TO THE CITY COUNCIL  
MAY 29 2013

  
Executive Officer

Honorable Board of Public Works

AMENDMENT AND ADDITIONS TO SECTION 62.02 ARTICLE 2, CHAPTER VI OF  
THE LOS ANGELES MUNICIPAL CODE STRENGTHENING REQUIREMENTS FOR  
UTILITY CONTRACTORS WORKING IN THE PUBLIC RIGHT-OF-WAY

RECOMMENDATIONS

1. Adopt this report.
2. Authorize Bureau of Contract Administration to transmit this report to City Council pursuant to its direction.

TRANSMITTALS

1. Motion (Englander) November 16, 2011, [C.F.11-1935]
2. Sample Utility Permit (Excavation "U" Permit).
3. Process flow charts addressing current and proposed permit issuance and inspection methods.
4. City Administrative Officer "Track4LA Website."
5. Amendment Language as recommended to City Council.
6. Authorized Utility Permittee/Contractor Affidavit.

DISCUSSION

On April 18, 2012, following a November 16, 2011, motion by Hon. Mitchel Englander, (Transmittal No. 1), the Bureau of Contract Administration was directed by City Council to research and propose solutions for strengthening of the City's authority in gaining compliance from utility contractors operating in the City right-of-way.

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## Page 2

While the Department's permitting process is clear, and while requirements for working on permitted work in the right-of-way are published and well defined for permittees and contractors alike, a growing number of instances where these requirements are not met has caused a deterioration in the quality of our streets as well as effectiveness of enforcement.

Several main causes of these infractions have direct consequences on both quality of work, public convenience and safety. With an average of between nine and ten thousand utility permits issued yearly, the City can no longer rely simply on the cooperation of all individuals operating in the City right-of-way.

### Common Issues Involving Non-Compliance

Among other requirements printed on the permit itself (Transmittal No. 2), the following have always been stated clearly:

**(Note 4) Notify the Bureau of Contract Administration prior to noon the day before work commences.**

Utility Contractors who are unaware, or indifferent, to the necessity of informing the Bureau when they wish to operate in the right-of way jeopardize this agency's ability to carry out necessary steps that ensure proper safety standards for work in the street. Informing the Bureau's dispatch center in the proper time period before work, provides the permittee/contractor the initial contact with inspection personnel who have knowledge of the current status of the permit, any latest intelligence on conditions at the site, and whether or not they may indeed proceed. It is at this time also, that the utility inspector for the project is assigned and is aware that activity will occur in the right-of-way. Without this required notification, Bureau field personnel are not able to function at the level needed for public safety or quality assurance.

**(Note 5) Notify the Bureau of Contract Administration prior to noon the day before permanent resurfacing.**

Permanent resurfacing of excavations comes only after the inspector has verified that the right-of-way has been properly backfilled and re-compacted to support traffic again.

Materials used in restoration of the right-of-way are also strictly monitored with regard to City materials standards. Permittees/contractors who return to temporarily re-surfaced work and complete the work without inspection create seven potential problems:

1. No verification that proper traffic controls were in place during the work or that proper hours were observed
2. No verification that proper materials were applied to the work.
3. No verification of Trench Backfill Compaction
4. No work-quality control by the City (which is a condition of the permit)
5. No opportunity for Inspector to enforce "Medallion" requirement.
6. No final acceptance, hence no permit closure.
7. Inability of agency to account to the community for the activity.

**DEPARTMENT OF PUBLIC WORKS**

**BUREAU OF CONTRACT ADMINISTRATION  
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JOINT REPORT NO. 3**

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**(Note 11) Maximum time stipulated for permanent resurfacing (3 Weeks)**

When permanent resurfacing is not completed in an acceptable timeframe, the unfinished work can present a public hazard, and a liability to the City for damage to property or personal injury. When this is compounded by activities for which there has been no notification, the results can have serious consequences and unfinished work can linger indefinitely providing an opportunity for injury.

**(Note 12) Approved marker required on permanent trench paving ("Medallion")**

Approved markers ("Medallions") are devices which identify the company owning the utility. This identification is important since it provides immediate information on the trench for city agencies. These devices show the company name and the date the permanent paving was completed. Such data is pertinent since utilities warranty their work in the right-of-way for 5 years, during which time, should there be a failure of the trench, they are required to restore the paving for the City at no charge. The absence of these medallions inhibits City agencies in matters where the identification of a utility installation is critical.

**Additional Administrative Permit Matters**

Another important requirement for any permitted work in the right-of-way is that permittees must positively identify their authorized representative (contractor) who is performing the work on their behalf. In cases where the scope of work is large, such as privately financed development ("B" Permit), permittees are notified in writing by the Bureau of Contract Administration at the initial issuance of their permit, that they must provide this information.

Such documentation affords City inspectors the authority to issue orders to the acknowledged representative of the permittee, therefore ensuring that the permittee has been served officially with the instruction. It also affords that permittee added assurance that it is being made aware of any pertinent developments concerning its project.

Enabling City agencies to control the transmission of their instructions back to the principle entity ensures that communication lines with the parties ultimately responsible for the conduct and performance of their contractors are continuous and that they are empowered to act if need be.

In the case of utility permits, utility companies often apply for numerous permits simultaneously owing to their project or program schedules, and, then, bid groups of these out to contractors as a package. The consequence is that quite often, the operative name on the

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permit, is not the actual entity that is working in the street. In cases where there is either property damage, or personal injury, the City's ability to deal with eventual litigation is compromised.

A further complication is that, in the private sector, contractors are not so strictly regulated as to whom they sublet their contracts. Many contractors, after being awarded a private utility contract, will sublet the contract to another firm exacerbating the City's inability to accurately track and hold responsible, the parties representing the permittee.

More stringent requirements on documenting those who are authorized to work in the public right-of-way, have proven to be necessary. The requirement for a permittee to have on file with the Bureau of Contract Administration a valid and current list of any contractor employed on utility work, will provide more control for enforcement. Affidavits consisting of a declaration of authority and demonstrating a concrete relationship between a utility/permittee and its contractor will strengthen the Bureau's role in managing work in the City right-of-way. If a contractor cannot present such an affidavit at the site, or if the Bureau of Contract Administration has not been provided one by the utility company, the contractor may not proceed.

### **Mitigation and Deterrence**

In cases where private developers or utility companies subcontract their right-of-way projects to independent firms, a good number of these firms are not adequately familiar with the requirements for such work. Others simply do not care to observe them. In addition, many developers are not completely familiar with such requirements and rely heavily on their contractors' expertise to fulfill their obligations.

It is therefore necessary to enhance the requirements for performance of such contractors and their crews, rather than re-adjust specification and codes that are already in effect. Ignorance or disregard for such requirements causes behavior that results in the problems previously discussed, thus transferring the liability for such conduct to the City and its constituents.

When activities in the right-of-way go undiscovered, and unfinished, or when finished, are performed without the proper quality control services from City staff, the consequences of litigation and claims for injury or property damage are born by the constituency, not the wrong-doer. Incentives must be put into place to compel wrongdoers to pay more attention, and also to discourage those who would hire them. In addition, a deficient repair or restoration of public property presents a "real-time" public hazard that should not wait on cumbersome administrative remedies for resolution.

Further, when illegal activities in the right-of-way are discovered, there should be tangible consequences which will produce an environment of deterrence. More energetic enforcement of existing codes must be put forth.

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[1] Liability Insurance for Utilities and Their Contractors.

Many types of public construction overseen by this Board have presently mandated insurance requirements which must be adhered to by contractors and permittees prior to permit issuance and actual work commencing.

A current exception to this is the exemption from liability insurance for any utility company regulated by the California Public Utilities Commission, or the utility's contractors.

*(Excerpted here)*

Subsection (f) of Section 62.02 of Article 2 of Chapter VI of the Los Angeles Municipal Code currently reads as follows:

*(f) liability Insurance.*

*1. Insurance Required. A permit to excavate issued pursuant to the provisions of this Section shall not be issued until the applicant has filed with the City Engineer a policy of protective liability insurance naming the City as an insured or a co-insured with the permittee. The policy of insurance shall insure the City and its departments, officers and employees, while acting with the scope of their duties, against all claims arising from or in connection with the operations of the permittee, or any contractor or subcontractor of the permittee, undertaken pursuant to the provisions of the permit.*

*2. Exception. The provisions of this Subsection shall not apply to the Federal Government, the State of California, any county, city or county, municipal corporation, irrigation district, school district, district established by law, any political subdivision of the Federal Government or State of California, any public utility regulated by the Public Utilities Commission of the State of California, or any contractor or subcontractor while performing work under contract to any such entity pursuant to a permit issued under the provisions of this Section.*

Section 62.02(f)2., Article 2, Chapter VI of the Los Angeles Municipal Code shall be amended as follows (Transmittal No. 5):

*2. Exception. The provisions of this Subsection shall not apply to the Federal Government, the State of California, any county, city or county, municipal corporation, irrigation district, school district, district established by law, any political subdivision of the Federal Government or State of California, ~~any public utility regulated by the Public Utilities Commission of the State of California,~~ or any contractor or subcontractor while performing work under contract to any such entity pursuant to a permit issued under the provisions of this Section.*

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*Notwithstanding the provisions of the section in reference to municipal corporations, the Los Angeles Department of Water and Power and its contractors, and subcontractors are bound by the requirements set forth in this code.*

By this removal of exemption for utilities and their contractors, the City places a higher standard of performance upon those who work in the public right-of-way. Contractors and utilities will be required to carry the same liability insurance as set forth in the ordinance. This insurance shall be registered with the City's Risk Manager at the office of the City Administrative Officer, and the data shall be accessible to both the Bureau of Engineering for the issuance of permits, and Contract Administration for the purposes of verifying coverage for work in the right-of-way.

By this, the City enhances its self-protection with the assurance that those working in its streets are backed by responsible carriers in the event of a claim.

[2] Authorized Representative Affidavit

Utility companies often subcontract their right-of-way work to private contractors. This means that, should the utility apply for a permit itself, there is no guarantee that the party listed on the permit will be the one working in the street. Conversely, contractors often pull permits for developers or property owners, and the legal relationship between who is responsible for the work is obscure. To further complicate the issue, contractors obtaining work from utilities, often sublet these contracts to other parties unbeknownst to the original client.

The result is that, often there is no formal establishment of the relationship between the permittee and who is actually in the right-of-way. Utilities themselves have been victimized by this problem, not to mention the public being affected. Often, a utility company will pay the contractor without first checking to see if the prescribed work performed on their behalf has even been completed acceptably.

In cash contracts issued by this and other city departments, all City awarding authorities carry in their contracts and agreements, the specific requirement that no prime contractor may sublet any portion of the work without that awarding authority's knowledge and approval. In the private sector, this is not always enforced. Hence no utility can be absolutely certain if the work is performed by those they hire.

Requiring permittees to submit an affidavit formally naming those who represent it in the right-of-way would strengthen the City's ability to manage such contractors while providing an additional layer of protection for utilities. This process already exists and is applied uniformly during the issuance of a privately financed public improvement ("B") Permit. A letter is issued from the Bureau of Contract Administration informing the permittee of several primary requirements for the conduct of their operations throughout the work. One of these requirements is for the permittee to submit to the Bureau in writing, the name of the party that will be their authorized representative at the project site. Any communications or directions given to that party by BCA field inspectors are considered delivered to the permittee.

## DEPARTMENT OF PUBLIC WORKS

BUREAU OF CONTRACT ADMINISTRATION  
BUREAU OF ENGINEERING  
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Establishing this direct link between the owner and the City by using the party stipulated by the owner affords the permittee protection as well as enhances the efficiency with which enforcement can be performed. In this new program for utility permit work, such a system will be implemented with the Bureau of Contract Administration keeping, on file, an active list of written authorizations to work, submitted by the various utility partners in the City.

Some utility companies may have quite a few contractors listed as authorized, - some may have only a handful. However a BCA field inspector will have the authority to stop work in the right-of-way if a contractor appears at a permit site, for which the utility has not provided written recognition. While this adds another step in the course of doing business with the City, it also affords major utilities with a significant degree of protection because it will assist them in controlling who, in fact, is operating on their behalf.

This list of documents will reside with BCA Administrative and Field dispatch staff for reference and as public record. Contractors who do not have formal authorization to represent a utility company will not be allowed to proceed. The utility company will also be informed of the issue.

[3] Fines and Penalties for Misconduct

The Los Angeles Municipal Code is clear in both its intent to discourage scofflaw behavior and the means available to City personnel to deal with such.

In particular; L.A.A.C. §62.61., known commonly as the "Peak Hours" Ordinance, is actually entitled WORK WITHIN OR ON A PUBLIC STREET OR RIGHT-OF-WAY, OBSTRUCTION OF A PUBLIC STREET OR RIGHT-OF-WAY - PERMIT REQUIRED, REGULATIONS, PENALTIES FOR NON-COMPLIANCE.

This ordinance, while defining "emergency work", and setting strict requirements for the times of operation in the streets, is also a robust tool for addressing many permit violations.

§§(d)1.A of the ordinance states: "...the violation of any special condition or requirement of a valid construction permit issued pursuant to the Los Angeles Municipal Code, shall subject the violator to administrative penalties as follows: (1) For each violation listed on the initial citation, \$250.00; (2) For each violation on a second citation, issued to the same person or entity, if the violations occurred within 12 months of the first citation date, \$500.00; (3) For each violation on a third citation, issued to the same person or entity, if the violations occurred within 12 months of the first citation date, \$1,000.00."

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Working in the Right-of-way without a permit, or failing to notify the Bureau of Contract Administration prior to work commencing and closing a traffic lane without approval, are all violations of this code, and punishable under the provisions of L.A.M.C. 80.06.1.

While citation for offenses is not the best of all solutions, and since it does not necessarily serve to prevent bad behavior before the behavior creates problems, it is still a tool which should be expanded upon in the future. With more stringent penalties in place the Department can exercise more stringent control over the community's streets in the interest of public safety.

### **Operational Methodology**

#### **[1] Liability Insurance for Utilities and Their Contractors.**

Following amendment of the abovementioned Municipal Code to require liability insurance for all utility contractors (Transmittal No. 5), these contractors and their brokers will submit such documentation to the City Administrative Officer's (CAO) Risk Manager. The process for monitoring whether or not a particular contractor is insured will be jointly administered by the Bureau of Engineering during the permit process, and the Bureau of Contract Administration at time of Notification (Transmittal 3). The CAO will post this information on its Track4LA interactive website (Transmittal 4). Such information can be viewed by both Bureau of Engineering for permit issuance criteria, and Bureau of Contract Administration Field Dispatch personnel for right-of-way control.

Permit applicants not fulfilling the insurance requirements, (therefore not listed on CAO Track4LA) will not be issued a permit at all by the Bureau of Engineering.

Contractors/permittees calling for inspection will be checked by Contract Administration Field Dispatch, and if not listed on Track4LA, will not be allowed to work in the street.

#### **[2] Authorized Representative Affidavit**

Following program implementation, outreach will be conducted by Contract Administration to communicate the requirements for these forms and to coordinate their submittal, collection and maintenance.

Contractors (*not the permittee's workforces*) calling for permit inspection will be checked by Contract Administration Field Dispatch, and if not found to be authorized by the utility owner, will not be allowed to work in the street. (Transmittal 6).

Individuals or companies unable to show authentication as a legitimate representative of the permit owner will not be allowed to perform work in the right-of-way.

Utility companies that employ independent contractors on their right-of-way projects will be required to register those contractors with the Bureau of Contract Administration. The BCA

DEPARTMENT OF PUBLIC WORKS

BUREAU OF CONTRACT ADMINISTRATION  
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JOINT REPORT NO. 3

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will then, in turn, make such information available to any City agency with inquiries pertaining to such work. Such affidavits will also be treated as Public Information.

[3] Fines and Penalties for Misconduct

The operational models for expanding patrols, inter-Bureau communications, and citation processing already are in existence and are tested thoroughly by 6 years of field experience. While budgetary and staffing issues have severely affected coverage, the Bureau still maintains a dedicated and highly motivated cadre of Code Enforcement Officers who work hand in hand with BSS Street Use Investigators.

The Bureau has already issued 8 citations for failure to notify Dispatch personnel in the past 3 months, and has deployed Code Enforcement inspectors in trouble areas to mitigate problem activities. The Bureau will continue to aggressively address the issue of illegal work.

The combination of these three elements is intended by City Council to provide the Department practical tools with which to further ensure that the performance of contractors working in public streets is the best and most conscientious that we can achieve.

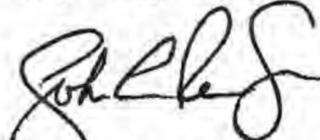
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Report prepared by:

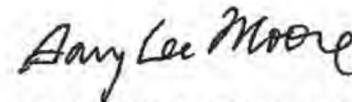
R. Strazzella

Special Projects Division  
R. Strazzella  
Chief Construction Inspector  
213-847-2406

Respectfully submitted,



JOHN L. REAMER, JR.  
Inspector of Public Works



GARY LEE MOORE, P.E.  
City Engineer

NOV 16 2011

11-1935

PUBLIC WORKS

MOTION

Every year the City issues over 10,000 permits for utility installation and repairs. Many of these permits for work in the public right-of-way, conducted by outside contractors, result in the removal and repaving of large sections of City streets. The City requires that this work be inspected to ensure adherence to traffic safety and quality control standards. In addition, permittees are required to notify the City prior to commencing work.

The Bureau of Contract Administration advises that despite these requirements, work occurs and street resurfacing is completed without the City being properly notified. An unfortunate consequence with failure to notify the City is that completed work is not inspected and is often below City standards. Low quality repairs that are not performed to City standards compromise the integrity of the City's streets.

Similar problems regarding sewer construction have been mitigated through increased bonding requirements and regulation of contractors. As such, the City should consider similar actions to improve its regulation of private utility work performed in the public right-of-way.

I THEREFORE MOVE that the Bureau of Contract Administration, with the cooperation of the Bureau of Engineering, be instructed to report to the Public Works Committee with recommendations to ensure that all street repairs are completed to City standards.

PRESENTED BY:

*M. Englander*  
MITCHELL ENGLANDER  
Councilmember 12<sup>th</sup> District

SECONDED BY:

*[Signature]*

ORIGINAL

*[Handwritten initials]*

NOV 16 2011

TRANSMITTAL 1

## Excavation (U) Permits

Less than 100 sq. ft.

ISSUED BY:

\* P = Proposed A=Actual

**GENERAL CONDITIONS:**

1. A COPY OF THIS PERMIT MUST BE ON THE JOB SITE AT ALL TIMES.
2. CALL UNDERGROUND SERVICE ALERT (U.S.A.) AT LEAST 48 HOURS PRIOR TO START OF WORK: 1-800-277-2800.
3. CALL THE FOLLOWING AT LEAST 48 HOURS PRIOR TO THE START OF WORK: BUREAU OF STREET LIGHTING: (213) 485-5924, DEPT. OF TRANSPORTATION, TRAFFIC SIGNAL CONSTRUCTION: (213) 847-2944

**INSPECTION**

4. **BUREAU OF CONTRACT ADMINISTRATION INSPECTION WORK MUST BE REQUESTED NO LATER THAN NOON OF PRECEDING WORK DAY. FOR INSPECTION, PLEASE CALL DISPATCH AT: (213) 485-5080. DISPATCH HOURS ARE 7:00 A.M. TO 3:30 P.M.**

5. **CALL FOR INSPECTION OF PERMANENT RESURFACING NO LATER THAN NOON OF THE PRECEDING WORK DAY.**

6. ALL CHANGES IN SKETCHES AND PERMIT LIMITS MUST HAVE PRIOR APPROVAL BY THE CITY'S BUREAU OF ENGINEERING.
7. PEDESTRIAN AND VEHICULAR ACCESS MUST BE MAINTAINED AT ALL TIMES.
8. IF BARRICADES AND PROTECTIVE DEVICES ARE NOT FURNISHED BY THE CONTRACTOR AS REQUIRED, THE CITY OF LOS ANGELES MAY, AT ITS OPTION, PROVIDE THEM FOR A FEE TO THE CONTRACTOR.
9. TRAFFIC REQUIREMENTS: ALL TRAFFIC LANES IN MAJOR, SECONDARY AND COLLECTOR DESIGNATED STREETS SHALL BE UNOBSTRUCTED FROM 6 AM TO 9 AM AND 3:30 PM TO 7 PM. ONE TRAFFIC LANE MAY BE CLOSED AT ALL OTHER TIMES.
10. THE JOB SITE, INCLUDING TEMPORARY RESURFACING, MUST BE MAINTAINED BY THE PERMITTEE UNTIL PERMANENT RESURFACING IS COMPLETED.

11. **ALL PERMANENT RESURFACING MUST BE COMPLETED WITHIN 3 WEEKS OF THE TEMPORARY RESURFACING OR THE COMPLETION OF THE JOB.**

12. **ALL PERMANENT RESURFACING MUST BE IDENTIFIED BY AN APPROVED MARKER/TAG IDENTIFYING PERMITTEE AND THE YEAR THE WORK WAS COMPLETED. TAGS ARE TO BE PLACED AS CLOSE TO THE CURB AS POSSIBLE. FOR EXCAVATIONS LESS THAN 50' LONG, ONLY ONE TAG SHOULD BE PLACED IN THE MIDDLE. FOR LONGER EXCAVATIONS, TAGS SHOULD BE PLACED AT 50' INTERVALS AND AT BOTH ENDS.**

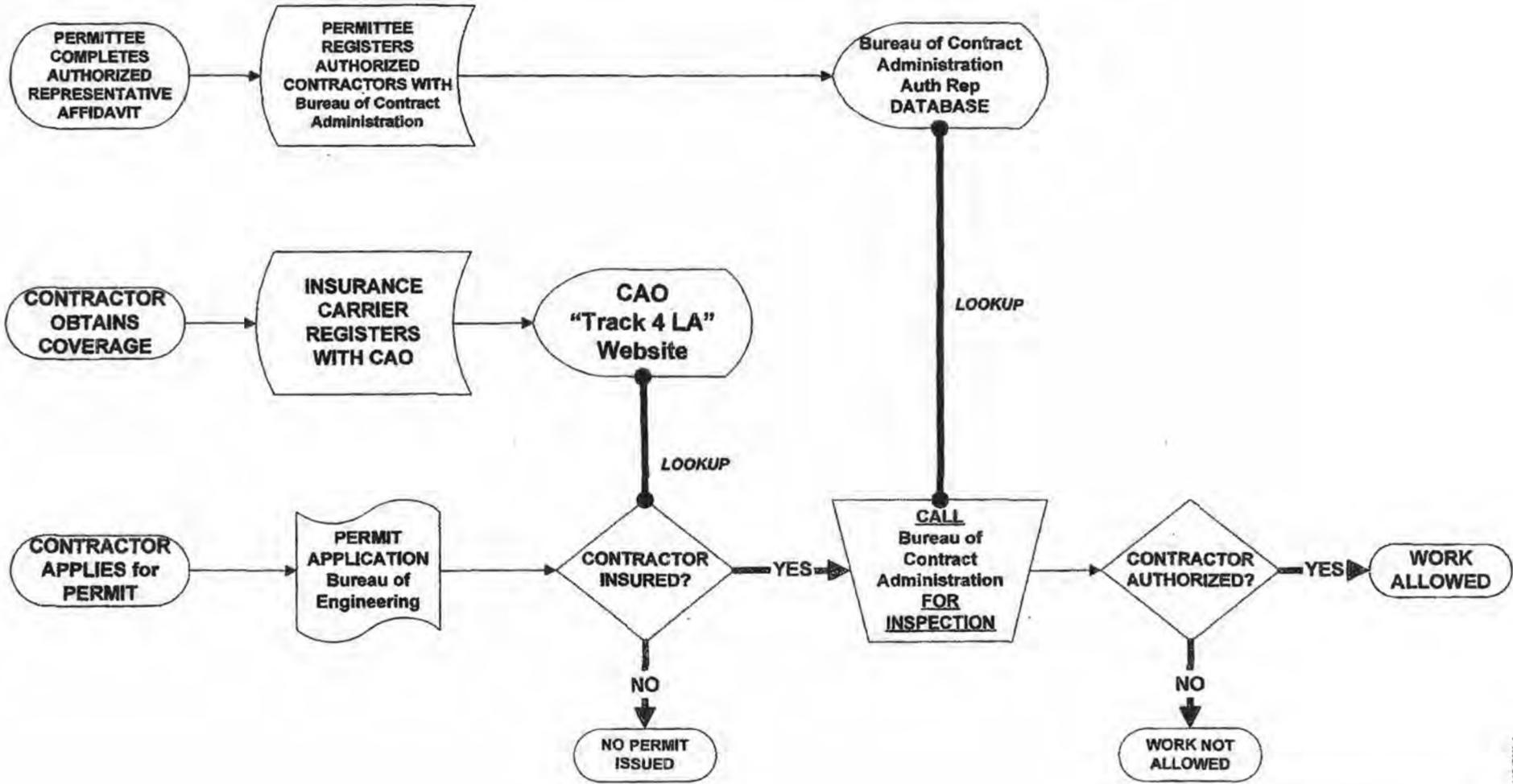
13. THIS PERMIT EXPIRES 6 (SIX) MONTHS FROM THE DATE OF ISSUANCE UNLESS WORK HAS COMMENCED (LAMC 62.02).
14. PERMITTEE SHALL STOP WORK AND CONTACT THE PERMITTING AGENCY PRIOR TO CUTTING OR EXCAVATING ANY DECORATIVE SIDEWALK, PAVEMENT, OR CROSSWALK.
15. ANY DAMAGE TO DECORATIVE SIDEWALK, PAVEMENT, OR CROSSWALK MUST BE REPAIRED IN KIND OR RECONSTRUCTED IN KIND BY THE PERMITTEE, AS DIRECTED BY THE PERMITTING AGENCY, IN A MANNER SATISFACTORY TO THE CITY ENGINEER AND THE INSPECTOR OF PUBLIC WORKS.
16. ISSUANCE OF A PERMIT DOES NOT INVALIDATE THE NEED TO GET APPROVALS OR PERMITS FROM OTHER GOVERNMENTAL AGENCIES THAT MAY HAVE JURISDICTION OVER A SPECIFIC LOCATION SUCH AS THE CALIFORNIA COASTAL COMMISSION

**PERMIT REQUIREMENTS:**

1. **"SDRF" TO BE BILLED**  
TOTAL SQ. FT. = 12.00 SQ. FT.  
TOTAL SDRF FEE = \$0.00  
1. MUST CALL FOR INSPECTION 213-485-5080 24 HOURS BEFORE START OF WORK.

TRANSMITTAL 2

# PERMITTING PROCESS FLOW FOR UTILITY CONTRACTORS WITH LIABILITY COVERAGE AND PERMITTEE AUTHORIZATION



**TRANSMITTAL 3**

JFH 3 BGA BOE 05-29-2013  
 Attachment B

CITY ADMINISTRATIVE OFFICER – RISK MANAGEMENT -- “TRACK 4 LA”

1

Documents submitted to the City of LA are public records and will be available for public inspection and copying as required by law.

For more information contact the City of Los Angeles Risk Management Department at:

Phone: 213-480-1447  
 Email: RMA@lacity.org  
 Address: 1200 17th Street

For questions regarding the City of Los Angeles Risk Management Department, please contact:

Phone: 213-480-1447  
 Email: RMA@lacity.org  
 Address: 1200 17th Street

Property of The City of Los Angeles, California

**Search on Contractor Name**

TRANSMITTAL 4

TT#3 BAA BOE 05-29-2013  
 Attachment B

# CITY ADMINISTRATIVE OFFICER – RISK MANAGEMENT -- “TRACK 4 LA”

2



Track4LA Search Results: Click a Certificate Approval (CA) number to see detailed acceptance insurance information

InsuredName	CA No.	Cancel/Reinstate Status	Cancel/Reinstate letters
John T Malloy Incorporated	8634		
John T Malloy Inc.	8126		

Records 1 to 2 of 2

Search Results: Click a Certificate Approval (CA) number to see detailed acceptance insurance information

Insured Name	Document	CA No.	Contract No	Cancel/Reinstate Status	Coverage Type	Limits	Effective Date	Expiration Date

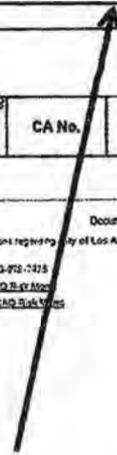
Records 1 to 0 of 0

Documents submitted to the City of LA are public records and will be available for public inspection and copying as required by law.

For questions regarding the City of Los Angeles Insurance Portal, please contact:  
 Phone: 213-912-7215  
 e-mail: CAOB@cityofla.org  
 Website: CAOB Risk Tools

For questions regarding the City of Los Angeles Harbor Department Insurance Bonds, please contact:  
 Phone: 310-712-3722  
 e-mail: POC@hpd.org  
 Website: POC Insurance

Property of The City of Los Angeles. [Privacy Policy](#)



**Required Documentation**

**TRANSMITTAL 4**

Attachment B



***Section 62.02(f)2., Article 2, Chapter VI of the Los Angeles Municipal Code shall be amended as follows:***

**2. Exception.** The provisions of this Subsection shall not apply to the Federal Government, the State of California, any county, city or county, municipal corporation, irrigation district, school district, district established by law, any political subdivision of the Federal Government or State of California, or any contractor or subcontractor while performing work under contract to any such entity pursuant to a permit issued under the provisions of this Section.

Notwithstanding the provisions of this Subdivision, the Department of Water and Power, and its contractors and subcontractors, are subject to the provisions of this Subsection.

***62.04(d) (Permits kept on jobsite) is amended as follows:***

**§§ (e – m) shall be re-designated as §§ (s – u), and a new §§ “e” is added.**

***(e) Contractors and subcontractors employed by any utility provider or private developer shall present to the Bureau of Contract Administration, and have available at their permit worksite, a City-approved affidavit from the utility owner authorizing that contractor/subcontractor to perform work in the City Right of Way on its infrastructure. No contractor shall perform work in the City Right-of-Way without such authority from the utility or the private developer to whom they are contracted.***

***This applies not only to utility company workforces and their contractors, but any party performing construction work in the public Right-of-Way.***

**Section to be determined**

In the event a utility/permittee fails to respond to all **warnings and notices** made by the City, to gain compliance in restoring the right of way, the utility/permittee will receive a written FINAL notice from the Inspector of Public Works (Bureau of Contract Administration). Such Final Notice shall advise the utility/permittee of the necessary actions for acceptance of the permit work, and provide the utility/permittee 5 calendar days with which to comply with the order.

The Final Notice shall also provide for the Inspector of Public Works to notify the utility's liability insurance carrier of a pending claim against the insured. This action shall include the suspension of all rights to reside on the City's CAO Risk Manager's list and shall exhaust all administrative remedies.

The decision of the Inspector of Public Works or his/her duly authorized representative will be **final, and no further appeal is provided.**



**CITY of LOS ANGELES DEPARTMENT OF PUBLIC WORKS  
INSPECTOR of PUBLIC WORKS**

**BUREAU of CONTRACT ADMINISTRATION  
PERMITTEE'S AUTHORIZED REPRESENTATIVE AFFIDAVIT**

\_\_\_\_\_  
DATE \_\_\_\_\_  
**UTILITY/DEVELOPER NAME**

\_\_\_\_\_  
City Permit Number      Work Order (if applicable)      Utility Program or Various-Location Project

\_\_\_\_\_  
**Job Address as shown on permit (Not Applicable on Program or Project authorization)**

*The contractor listed here is either contracted or authorised by this utility provider for performance of utility work for the address or programs described herein:*

\_\_\_\_\_  
**CONTRACTOR NAME**

Numeric Field \_\_\_\_\_ Text \_\_\_\_\_  
**CALIFORNIA CONTRACTORS' STATE LICENSE #      CLASSIFICATION**

*We have solely authorized this contractor to represent our interests and to prosecute the work to completion. We understand that Full Final Acceptance of the work by the Bureau of Contract Administration is predicated upon compliance with all conditions of this permit.*

\_\_\_\_\_  
**Signed (Permittee)**

This form must be submitted to the Bureau of Contract Administration Dispatch Center prior to requests for inspection of the work. A copy of this document along with a copy of the permit application must be presented on demand of any City personnel. This form may be faxed or mailed to the address at the bottom of this affidavit.

Print Form

**BUREAU OF CONTRACT ADMINISTRATION**  
1149 South Broadway St., Suite 300 (Public Works Building)  
Los Angeles, California 90015  
ph 213/485-5080  
FAX 213/847-2711

TRANSMITTAL 6



APPENDIX D, CONT.: VARIOUS CITY REPORTS

B17F  
018-HF

MOTION NUMBER 18  
ADOPTED   
NOT ADOPTED

**MOTION**

I MOVE that the Budget and Finance Committee report on the Mayor's Proposed Budget for 2017-18 be amended to instruct the City Administrative Officer and Chief Legislative Analyst to report with recommendations on technology, personnel and organizational improvements within the Bureau of Engineering, Department of Transportation, and others, as necessary, that will ensure all transportation-related construction projects, including sidewalk repair, street reconstruction and Vision Zero projects, are designed, sequenced, coordinated, and executed in the most cost-effective manner.

TOTAL CHANGE \$ -0-

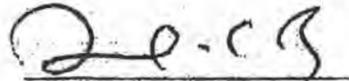
Change such other affected totals, subtotals, summaries, scheduled or supporting data as are necessary to conform to modifications hereinabove made.

PRESENTED BY:



JOE BUSCAINO  
Councilmember, 15<sup>th</sup> District

SECONDED BY:



# CITY OF LOS ANGELES

CALIFORNIA



ERIC GARCETTI  
MAYOR

## BOARD OF PUBLIC WORKS MEMBERS

VACANT  
PRESIDENT

VALERIE LYNNE SHAW  
VICE PRESIDENT

STEVEN T. NUTTER  
PRESIDENT PRO TEMPORE

WARREN T. FURUTANI  
COMMISSIONER

JERILYN LÓPEZ-MENDOZA  
COMMISSIONER

## OFFICE OF THE BOARD OF PUBLIC WORKS

200 NORTH SPRING STREET  
ROOM 361, CITY HALL  
LOS ANGELES, CA 90012  
(213) 978-0261  
(213) 978-0278 Fax

ARLEEN P. TAYLOR  
EXECUTIVE OFFICER

<http://www.bpw.lacity.org>

July 3, 2013

#1 BOE

City Council  
Room 395  
City Hall

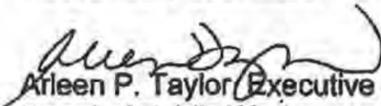
Subject: REPORT ON THE PUBLIC WAY RESERVATION SYSTEM, LOS ANGELES  
MUNICIPAL CODE (L.A.M.C.) SECTION 62.251 (ORDINANCE NO. 177902)

As recommended in the accompanying report of the City Engineer, which this Board has adopted, the Board of Public Works recommends approval and consideration to rescind the request to prepare an ordinance authorizing the City Departments to require reservations in the public-right-of-way (Council File No. 08-1369); instruct the City Attorney to prepare the proposed ordinance to repeal Los Angeles Municipal Code (L.A.M.C.) 62.251 as recommended in this report; direct all City offices that issue permits to register activities within the public right-of-way on the Bureau of Engineering's Public Way Reservation System (PWRS); and direct all City offices that perform construction work in the public right-of-way, not requiring a permit, to make a reservation on the PWRS.

### FISCAL IMPACT

There is no impact to the General Fund.

Respectfully submitted,

  
Arleen P. Taylor, Executive Officer  
Board of Public Works

APT:mp

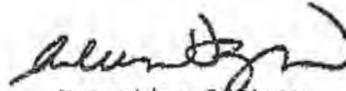


Department of Public Works

Bureau of Engineering  
Report No. 1

July 3, 2013  
CD Nos. All

ADOPTED BY THE BOARD  
PUBLIC WORKS OF THE CITY  
of Los Angeles California  
AND REFERRED TO THE CITY COUNCIL  
JUL - 3 2013

  
Executive Officer

**REPORT ON THE PUBLIC WAY RESERVATION SYSTEM (PWRS), LOS ANGELES MUNICIPAL CODE (L.A.M.C) SECTION 62.251 (ORDINANCE NO. 177902)**

**RECOMMENDATIONS**

1. That the Board of Public Works (Board) approves this report along with the recommendation to repeal L.A.M.C. Section 62.251, Coordination of Activities within The Public Way Reservation System (PWRS).
2. That the Board transmits a copy of the approved report to the City Council for consideration and approval, recommending the following actions:
  - a. Rescind the request to prepare an ordinance authorizing the City Departments to require reservations in the public right-of-way (Council File No. 08-1369).
  - b. Instruct the City Attorney to prepare the proposed ordinance to repeal L.A.M.C. 62.251 as recommended in this report.
  - c. Direct all City offices that issue permits to register activities within the public right-of-way on the Bureau of Engineering's (BOE) PWRS.
  - d. Direct all City offices that perform construction work in the public right-of-way, not requiring a permit, to make a reservation in the PWRS.
3. Transmit a copy of this report to the following Departments and Bureaus:
  - a. BOE, Central District Office at 201 North Figueroa Street, 3<sup>rd</sup> Floor, Los Angeles, CA 90012, Mail Stop 503, Attention: Lemuel Paco, P.E., District Engineer.
  - b. Bureau of Street Services (BSS), 600 South Spring Street, Suite 1200, Los Angeles, CA 90015, Mail Stop 550.
  - c. Bureau of Contract Administration (BCA), 1149 South Broadway Street, Suite 300, Los Angeles, CA 90015, Mail Stop 480.
  - d. Department of Transportation (DOT), 100 South Main Street, 1<sup>st</sup> Floor, Los Angeles, CA 90012, Mail Stop 740.
  - e. City Attorney.

**TRANSMITTAL**

L.A.M.C. Section 62.251.

**DISCUSSION**

In 2006, the City added L.A.M.C Section 62.251 to establish a pilot program, the PWRS, in the BOE's Central District Office to coordinate non-emergency activities and construction work in the City's sidewalks and streets (public rights-of-way). The purpose of the PWRS was to effectively coordinate work to be performed in the same area by different entities and thus minimize the impact of such work on area residents, businesses, and traffic.

At the end of the pilot program, the City Council concurred with BOE's recommendation to request the City Attorney to draft an ordinance to apply the PWRS to activities and construction work throughout the City, and not just in BOE's Central District. After extensive review by BOE staff and the City Attorney's Office, and in consideration of the goals of the PWRS, the BOE now believes that the desired regulation can be more effectively implemented through the City's permitting process and that it is not necessary to compel regulation by amendment of the L.A.M.C. Accordingly, the BOE recommends that the Council request the City Attorney to prepare and present an ordinance to repeal Section 62.251, and that it concur with the BOE recommendation to achieve the desired regulation through the City's permitting process.

As currently written, the PWRS ordinance imposes certain requirements on permit applicants and others desiring to perform certain work in a public right-of-way, and pursuant to the provisions of L.A.M.C. Section 11.00 (m), a violation of any of the requirements is a misdemeanor, although the City Attorney may charge a violator with a misdemeanor or infraction. The PWRS ordinance does not impose any civil penalties that may be administratively imposed.

It was never the City's intention to impose criminal penalties on persons who failed to comply with the PWRS ordinance; rather, the City intends that applicants voluntarily comply with the requirements, and that the BOE could enforce its provisions by preventing applicants from proceeding with the construction work or other activity, if necessary. The BOE discussed the possibility of presenting a draft ordinance imposing civil penalties for failure to comply with the City Attorney, but concluded that to effectively impose such penalties the City would need to establish administrative hearing and notice procedures that would have to be funded by regulatory fees. We rejected this approach as unnecessary and in keeping with the City's efforts to minimize regulatory burdens on persons doing business with and in the City.

The BOE recommends that to implement the PWRS citywide, the City include in all permit applications the following language:

July 3, 2013  
Page 3

*"An applicant requesting permission to occupy the public right-of-way shall, after issuance of a permit, verify that prior to occupying the public right-of-way a prior reservation does not conflict for the location and time of the intended activity. If a conflict exists, the applicant must coordinate its activities with other reservations in the area. Reservations and conflicts must be verified using the Public Way Reservation System at <http://navigatela.lacity.org/pwrsview/default.cfm>. Failure to verify the lack of a prior conflicting reservation shall be grounds for the City to prevent the applicant from occupying the public right-of-way until such time as there is no conflicting reservation.*

#### **History of the PWRS**

In 2000, the Walters-Hernandez-Pacheco Motion (Council File 00-2219) requested a policy for coordinating downtown telecom related activities. On April 24, 2001, the Public Works Committee recommended the approval of the Downtown Construction Management Committee (DCMC) which focused on the unique needs of telecommunications companies in the downtown area and the resulting construction. The DCMC was developed as a working group chaired by the BOE and on May 11, 2001 the City Council adopted the DCMC Policy. A draft ordinance was prepared but never finalized due to lack of consensus from its stakeholders. The last revision was done on April 17, 2002.

On August 11, 2003, BOE resubmitted the DCMC policy as a recommendation in response to the LaBonge-Zine Motion (Council File 03-0580) to review policies regarding non-emergency construction activities during rush hour periods. However, in February 2005, BOE revised the DCMC proposal into the PWRS because it was determined by some stakeholders that the DCMC could negatively impact their activities.

A PWRS pilot program was developed by BOE through meetings and workshops with stakeholders in order to obtain a "buy-in" on the concept, which was to capture all information on street work and activities in City streets, place it under one database and use it as a "tool" for coordinating activity. The stakeholders included, but were not limited to, the Los Angeles Police Department (LAPD), FilmLA, BSS, Chief Legislative Analyst (CLA), City Administrative Office (CAO), BCA and the Downtown Business Improvement District (BID). The pilot system was implemented to meet the City's goal of traffic congestion relief by requiring those that work within the public right-of-way to coordinate their activities and minimize disruptions to the flow of traffic in City streets.

Later in June 2006, City Council adopted the BOE recommendations to request the City Attorney to prepare the PWRS ordinance for Council action and implement the PWRS to serve as a pilot program in BOE's Central District. On September 28, 2006 the ordinance was adopted, published and became effective 30 days later.

#### **Central District Pilot Program**

The BOE's Central District Office was selected for the pilot program to test the effectiveness of the online tools that were developed and to determine the impact on those required to make a reservation. Staff developed and optimized a web based

decentralized  
problem solving -  
no one in  
charge of  
resolving conflicts

Report No. 1

Page 4

system to provide complete information about activities in the public right of way that would be accessible to all stakeholders, the public and city staff.

The PWRS web-based application was developed by BOE's Mapping and Land Records Division to provide an effective means and a single source of capturing all street construction and activities that take place in City streets. All city and non-city entities engaged in regulated activities within the designated streets are required to make a street reservation through the online application. The designated streets include the major, secondary and collector streets as defined in the Transportation Element of the General Plan.

There are no fees associated with entering, viewing, and coordinating PWRS reservations. Reservations are entered as part of the construction work or activity associated with regulating the work in the public right-of-way. Potential conflicts in reservations are coordinated by the entity or applicant reserving the work and if necessary, are mediated by the District Engineers in the BOE. Since this was viewed as a voluntary agreement, there was no enforcement authority, fees, fines or administrative hearing procedures established.

#### CONCLUSION

The BOE has completed the pilot program for the PWRS and is ready to promote and implement the system citywide through the City's permitting process. The BOE recommends repeal of L.A.M.C Section 62.251 and that all City offices that issue permits be directed to continue to register activities in the online PWRS application and that all City offices that perform construction work in the public right-of-way not requiring a city issued permit to make a reservation in the PWRS. We are confident that the PWRS will help with the City's goal in improving traffic congestion in city streets through the use of a centralized reservation system available online to the City departments, developers, the film community and the citizens of Los Angeles.

( LMP JRP RMK MEK )

Report reviewed by:

BOE (ADM)

Report prepared by:

Mapping and Land Records Division

Randy Price, P.E.  
Division Engineer  
Phone No. (213) 482-7120

RP/05-2013-0091.MLR.ldm

Questions regarding this report  
may be referred to:  
Writer: Randy Price, Division Manager  
Phone No. (213) 482-7120  
E-mail: Randy.Price@lacity.org

Respectfully submitted,

  
Gary Lee Moore, P.E.  
City Engineer

**SEC. 62.251. COORDINATION OF ACTIVITIES WITHIN THE PUBLIC WAY - PUBLIC WAY RESERVATION SYSTEM (PWRS).**

**(Added by Ord. No. 177,902, Eff. 10/29/06.)**

**A. General Provisions.**

1. **Purpose.** The purpose of this section is to improve coordination of construction activities and other encroachments, reduce related effects on businesses and residents and minimize the loss of traffic capacity resulting from construction or maintenance (including rail, utility, private development, street improvement, street maintenance, location filming and still photo shoots), or any other activity within the Street.

2. **Scope.** This section shall apply to all permits issued by the City that will allow encroachment on any Street within a defined Impact Area commencing with the effective date of this ordinance. This section shall also apply to any activity not requiring a permit by any City agency or other entity that will encroach on any Street.

Twelve months after the effective date of this ordinance, the Public Way Reservation System Management Committee shall evaluate the effectiveness of this ordinance and transmit a report with recommendations to the Board of Public Works and City Council.

**B. Definitions.** For the purposes of this article, the following definitions apply:

1. **Activity or Work Within the Street.** Activity or Work is any occupation of the Street that requires the closure, restricts the full or partial use of any sidewalk(s), curb lane(s) and traffic lane(s) or the closure of Street(s) for any purpose and having a duration greater than four hours.

Activity includes, but is not limited to, Street and sidewalk maintenance, opening of utility maintenance access holes; block parties and other special events; location filming and still photo shoots; storage of material or equipment; placement of trash bin(s); pedestrian canopy(s) in the Street or sidewalk; or any activity performed with or without City issued permits that restricts public access to, or use of the Street.

Work is any construction or maintenance performed under permit or by City crews or contractors that require obstruction or partial closure of the Street. Work may include, but is not limited to, cutting, boring, excavating, installation of equipment, installation of utilities, installation of traffic signals or signs, pot-holing, resurfacing (including slurry sealing), street construction, street lighting, tree trimming, or any project in the Street that restricts the public access or use of the Street.

2. **Central District Impact Area.** The Impact Area is the Bureau of Engineering Central District for the duration of the one-year pilot study. The Bureau of Engineering Central District is generally bounded by 120th Street to the south, the City boundary to the east, Mulholland Drive and Barham Boulevard to the north and Wonderland Avenue and Robertson Boulevard to the west.

3. **Effective Period.** The Effective Period is a time period that commences 30 days after the publication of this ordinance and extends for a period of 12 months, or until the adoption by the Board of Public Works with recommendations from the Public Way Reservation System Management Committee evaluating the effectiveness of this ordinance.

TRANSMITTAL

4. **Emergency Work.** Emergency Work is immediate action that must be taken to alleviate a hazardous condition that represents an immediate threat to life, health, safety, or property. This includes the restoration and repair of facilities damaged by accident, natural disaster or other emergency.

5. **Encroachment.** Encroachment is any use, occupation or activity, which requires the closure of any portion of the Street.

6. **Public Way Reservation System (PWRS).** The PWRS is an internet based geographic information system, which displays (geo-codes) proposed work or activity within an arterial street or highway and identifies the entity performing or permitting the work along with the scope and scheduled time.

7. **Public Way Reservation System Applicant (PWRS Applicant).** PWRS Applicant(s) is any agency, entity or permit applicant which is attempting to reserve space for their proposed construction.

8. **Street(s).** Street(s) is any arterial street classified as any Major Highway, Secondary Highway or Collector Street, as identified by the Master Plan, which includes any portion of the street, sidewalk or parkway.

9. **Public Way Reservation System Management Committee (PWRSMC).** The PWRSMC is a group or committee that may be formed and that has a chairperson. The City Engineer or his representative shall be the chairperson of the Committee.

**C. Public Way Reservation.** All entities that intend to encroach are required to reserve space within the Street and coordinate that activity or work, using the PWRS. Coordination shall include joint discussion with other PWRS Applicants as required to mitigate and minimize traffic interference. All reservations shall require a contact name and telephone number that other PWRS Applicants can call to resolve conflicts in scheduling reservations. This contact person shall have the knowledge and authority to resolve the conflict on the PWRS Applicant's behalf.

1. **City Agencies Performing Work Within the Street.** All City agencies that perform work within the Street are required to reserve space and coordinate their work through the PWRS. Before entering the Street, each agency shall update its reservation with any changes in scope, location or schedule. Each City department or agency performing work or activities within the Street, which work does not require a permit from the Department of Public Works, shall designate a PWRS Coordinator for authorizing that Department's reservations. All reservations shall be reviewed and authorized by the Department's PWRS Officer or designated representative in advance of performing the work. The authorization shall certify that the work has been coordinated with all other reservations in the vicinity and that traffic interference has been minimized.

2. **City Agencies Issuing Permits Within the Street.** All City Agencies that process permits for work or activities within the Street shall verify that each permit applicant has reserved the appropriate location using the PWRS, and has coordinated the work with all other activities in the vicinity. If the applicant has a reservation, and all other permit requirements are complied with, the City agency shall process the permit. If the applicant has no PWRS reservation, the

permit shall be denied. Issuance of a permit shall constitute verification of the reservation by the issuing agency.

**3. Requirements for Non-City Agencies Performing Work Within the Street Requiring a Permit from the Board of Public Works.** An applicant for a permit to perform work within the Street shall first verify with PWRS that no conflicts exist for the location and time of their activity. If no scheduling conflict exists, the permit applicant may continue with the permit issuance procedure. The appropriate City agency shall submit the reservation in PWRS. If a conflict exists, the permit applicant must coordinate the work activities prior to permit issuance. In certain cases, the non-City agency may be granted authorization to enter reservations in PWRS. These agencies will be determined by the PWRSMC.

**4. Requirements for Non-City Agencies Performing Work Within the Street Not Requiring a Permit from the Board of Public Works.** All non-City agencies that perform work within the Street shall use the PWRS as a tool to coordinate the request for work prior to obtaining required approvals through the appropriate City agency. If no conflict exists, the non-City agency shall relate this information to the appropriate City agency prior to receiving approvals. If a conflict exists, the non-City agency must coordinate the work activities prior to receiving approvals for work. In certain cases, non-City agencies may be granted authorization to enter reservations in PWRS. In this case, the reservation must be submitted prior to receiving approvals from the appropriate City agency.

**D. Dispute Resolution.** If a dispute arises amongst PWRS Applicants when coordinating conflicts, the Bureau of Engineering Central District Engineer may be requested to mediate the dispute. Decisions made by the District Engineer may be appealed to the PWRSMC. The committee will then make a determination on which activity or work will take precedence. The PWRSMC shall establish rules, guidelines and procedures for the use of PWRS and the appeal process.

**E. Exemptions.** The following work or activity shall be exempt from the reservation requirements of this article:

1. Emergency Work as defined in Subsection B. of this section. For Emergency Work requiring a permit, a permit must be obtained within one business day of the commencement of the Work.
2. Maintenance Work or Activity that will take no more than four hours.
3. Any Work or Activity within a Street classified as a Local Street.
4. Transportation related activities currently regulated by LAPD and LADOT such as delivery of freight.

**F. Fees.** PWRS reservations will not require additional fees. Permit fees shall remain the same as currently authorized by the City Council. The PWRSMC shall evaluate the need for additional fees at the end of the 12-month period and present its findings to the Board of Public Works and the City Council.

FORM GEN. 160 (REV. 6-80)

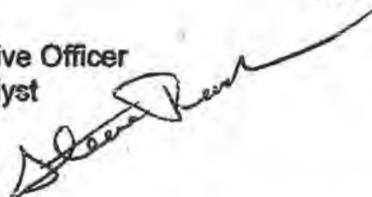
**CITY OF LOS ANGELES**  
**INTER-DEPARTMENTAL CORRESPONDENCE**

Date: October 23, 2013

REF: TSB-282-13

To: Miguel Santana, Chief Administrative Officer  
Gerry Miller, Chief Legislative Analyst

From: Steve Reneker, General Manager  
Information Technology Agency



Subject: **SAVE OUR STREETS LA (SOS LA) – PUBLIC RIGHT-OF-WAY ACTIVITY  
COORDINATION SOFTWARE SYSTEM (COUNCIL FILE No. 13-0612)**

**BACKGROUND**

On January 15, 2013, the City Council considered a motion relative to placing a \$3 billion street repair general obligation bond program on the May 2013 General Municipal Election Ballot (Englander/Buscaino – Krekorian, et al. - C.F. 13-1300-S1). The proposal would provide \$300 million annually for the next ten years to repair more than 8,700 lane miles of streets in the City that are in the worst condition. Council adopted an amending motion (Buscaino – Englander, C.F. 13-1300-S1) that referred this matter to the Public Works Committee to allow more time for study, debate, public input, and outreach on this proposal.

On August 7, 2013, the Public Works Committee approved the recommendations communicated from Councilmembers Buscaino and Englander regarding the public outreach initiatives undertaken and the 24 detailed recommendations created based on input from the public. On August 21, 2013, Council adopted the Public Works Committee report relative to the SOS LA program and requested a comprehensive report on these recommendations from the CAO and the CLA within 45 days.

Upon request of the CAO and CLA, the Information Technology Agency is submitting this report in response to recommendation #22 of the Public Works Committee Report and the Council Motion (Englander - Buscaino - C.F. 13-0612) which recommends that: CAO and CLA, with assistance from Bureau of Engineering, Bureau of Street Services, and Bureau of Contract Administration, report back with recommendations for procuring a new, cloud-based, public right-of-way activity coordination software system. (Council File No.13-0612). The information below summarizes our research and recommendations.

**OVERVIEW**

Public right-of-way coordination software is an electronic tool used by municipalities to synchronize and communicate activities that impede the public right-of-way (City streets and sidewalks). Common activities tracked in this type of software include street resurfacing, construction, utility repairs, special events, movie filming, etc. This type of

software requires data entry of all permitted work into a central repository. The objective is to improve:

- coordination across departments (e.g. prevent conflicting projects on same street at same time),
- collaboration between departments (i.e. opportunity for multiple projects to be combined to minimize closure time),
- communication to the public (e.g. easy-to-use website to geographically show existing and planned work),
- prevention of re-work (e.g. moratoriums on recently paved roads to prevent construction soon after resurfacing).

After discussions with vendors and City departments, most notably the Public Works Bureau of Engineering, Bureau of Contract Administration, and Department of Transportation, the ITA identified several key success factors for an effective public right-of-way coordination software.

1. The system must incorporate all relevant activities that impede the public right-of-way (street resurfacing, utility work, filming, etc.).
2. The system must interface with existing department permit and work management systems. This allows automated transmission of planned and existing closures into the central repository.
3. The system must provide tools to foster coordination and collaboration between City departments (e.g. warning messages, attachments of source documents, reports, etc).
4. The system should support mobile devices and the review/update of projects from the field.
5. The system should effectively communicate current and planned closures to the public (e.g. easy-to-use website).
6. The City should establish a strong policy that enforces consistent department usage of the centralized system (regardless of software used). This requires a strong governance process to ensure all relevant departments are logging all relevant activity into the centralized system.

After identifying key features of a public right-of-way coordination software and the necessary City policy to ensure usage, we researched available options for the City of Los Angeles. The following options were evaluated by the ITA:

- A. Utilize the existing City of Los Angeles Public Way Reservation System (PWRS). This is an in-house map-based application system implemented through a 2006 pilot program (L.A.M.C 62.251) and managed by the Department of Public Works, Bureau of Engineering (BOE).
- B. Acquire and implement a commercial, cloud-based public right-of-way coordination software.

For a side-by-side comparison of functions and features between the City of Los Angeles Public Works Reservation System (PWRS) and a sample cloud-based system

(Envista) refer to Appendix A - COMPARISON OF FEATURES (City PWRS and Envista).

### **OPTION A – UTILIZE EXISTING PUBLIC WAY RESERVATION SYSTEM (PWRS)**

Motivated by the 2000 Democratic National Convention in Los Angeles, the City of Los Angeles has since been developing software and processes for the coordination of public right-of-way closures. In 2006, the City added L.A.M.C 62.251 to establish a pilot program, the Public Way Reservation System (PWRS), in the BOE Central District Office to coordinate non-emergency activities and construction work in the City's sidewalks and streets. The objective was to coordinate work to be performed in the same area by different entities and to minimize impact on area residents, businesses, and traffic. At the end of the pilot, BOE recommended implementation of the PWRS citywide. Council approved the recommendation for City Attorney to draft an ordinance that required use of the PWRS throughout the City. However, draft versions of the ordinance raised the concern that the Municipal Code may not be the best vehicle for ensuring compliance and may create unintended consequences (e.g. criminal penalties). Recently, BOE has submitted a transmittal through the Board of Public Works requesting to eliminate any proposed changes to the L.A.M.C. in favor of simply using the permitting process as the vehicle to implement citywide usage. The PWRS continues to be used by multiple departments during this policy discussion.

After a PWRS demonstration from the BOE, ITA identified that the current Public Way Reservation System (PWRS) incorporates much of the key functions needed by a public right-of-way coordination software. The system currently captures relevant activities that impeded the public right-of-way via City permits (street construction, utility work, filming permits, etc). Since inception, the PWRS has already incorporated over 46,000 permits provided by PW BOE, PW Street Services, Department of Transportation (DOT), DWP (Power), DWP (Water), FilmLA, LAPD, and periodically from MTA. This information is captured under one database and used as a "tool" for coordinating activity, including conflict reports, mapping software for geographic representation, department contact information, etc. This system was developed by BOE programmers with input from its key stakeholders, including the Los Angeles Police Department (LAPD), FilmLA, Bureau of Street Services (BSS), Chief Legislative Analyst (CLA), City Administrative Office (CAO), Bureau of Contract Administration (BCA) and the Downtown Business Improvement District (BID).

The PWRS is highly integrated with existing BOE departmental permit systems, accounting for 80% of all City permits entered into the system. In addition, BOE has already established processes with multiple other departments to ensure the data entry of all new activities (DWP power and water projects, FilmLA for central city area, PW BSS Street Preservation, LAPD first amendment marches, DOT ATSAC projects, etc). The PWRS also includes an interactive map that geographically demonstrates planned and current work (see Image 1 below). This includes icons that can be clicked on to provide detailed documentation about the project, including contact information for questions and conflicts.

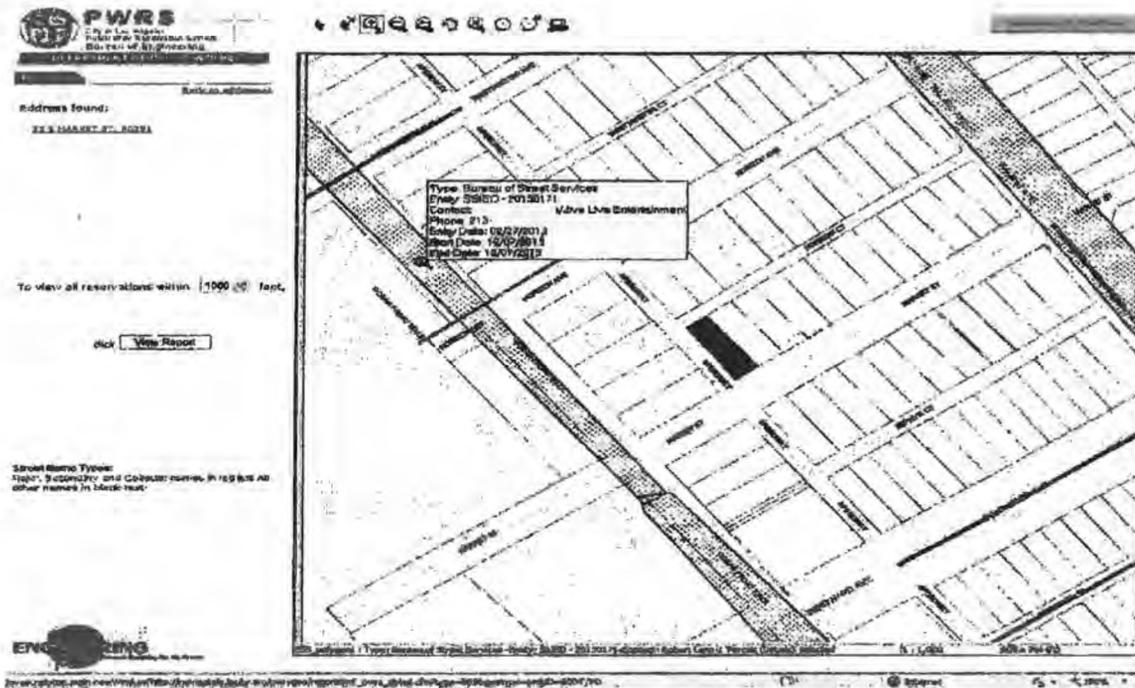
The goal of the original PWRS pilot was to minimize traffic impacts. While the existing PWRS firmly met many of the objectives of public right-of-way coordination software, both ITA and BOE readily admit that some key improvements would be needed to support the enormity and visibility of the SOSLA initiative. Upgrades to the PWRS are proposed to add additional features and tools, developed with stakeholder input, to enhance project planning, scheduling and coordination to minimize street cuts. BOE staff will upgrade the PWRS using Esri ArcGIS technology for mapping, Javascript API, ColdFusion for programming, and Microsoft SQL server for the database. The following tasks are planned to be completed by BOE to upgrade the PWRS by June 30, 2014.

- Meet with all departments and agency PWRS coordinators
- Review and confirm PWRS system improvements. This includes improved integration with existing stakeholder work management applications
- Modernize and upgrade the public viewer (public facing website)
- Develop and deploy PWRS access through mobile devices
- Upgrade the reservation and coordination system module to include the enhanced features identified in Appendix A
- Coordinate with all stakeholders, departments and agencies that issue permits to occupy the public right of way
- Conduct training for and outreach to all stakeholders

The current Public Way Reservation System is managed and supported by BOE. Hardware and software already used for NavigateLA is currently available for BOE to host and run the application. The software uses BOE hardware (servers) and is managed through the existing City data networks. While these servers require periodic replacement (typically every 5 years), BOE does not foresee a near-term investment required for new servers to support a SOSLA initiative. BOE estimates requiring a contractor for the one-time update (1 FTE) at an estimated cost of \$200,000 to develop the PWRS enhancements listed above. This one-time investment would greatly improve the look-and-feel of the current system, increase system capabilities, and provide additional easy-to-use tools for City departments and the public. Ongoing maintenance requires about 20 hours per month from an existing employee.

Alternatively, BOE has an option of using its existing PWRS as a system that interfaces with a centralized commercial public right-of-way coordination system (described below). This would leverage existing PWRS system functions and integration with the modern look-and-feel of the commercial system. However, this would be the most expensive alternative (paying for the maintenance of the existing system and the implementation of a new one).

## SOSLA – Public Right-of-Way Coordination Software Analysis Page 5



**Image 1 – Example of Public Way Reservation System (PWRS) Viewer Module. Users can navigate to geographic area and view project details through the map**

### **OPTION B - IMPLEMENT A NEW CLOUD-BASED PUBLIC RIGHT-OF-WAY COORDINATION SYSTEM**

Several U.S. cities and utility companies have implemented public right-of-way (PROW) coordination systems that are commercially developed and available in the market. Today, such systems are available to municipalities and utility companies as map-based “software-as-a-service” (SaaS). These SaaS systems are “cloud-based” solutions that do not require hardware and software investments from the municipality. These offerings typically require a one-time setup cost, a service cost to develop integration between existing City systems and the SaaS software, and an ongoing annual subscription. Listed below are notable cities that are currently using a cloud-based, public right-of-way coordination software.

- City of Baltimore
- City and County of San Francisco
- Washington D.C.
- City of Memphis
- City of Pittsburg
- City of Boston (Pilot Mode)

As an example, the City of Baltimore (referenced in C.F. 13-0612) utilizes the Envista product. The functions provided by this software include:

- Entry of new projects online or through automated interface

- Easy-to-use map of planned and current projects (see Image 2 below).
- Automated identification of project conflicts
- Creation of both project moratoriums & "opportunities" (allowing other departments to piggyback on project to minimize total closure time)
- E-mail integration
- Dedicated, easy-to-use Citizen's view (public facing map via website)

To implement a new cloud-based public right-of-way coordination system, the City would be required to do the following:

- Develop and publish a Request for Proposal (RFP) for commercial, cloud-based public right-of-way coordination systems.
- Negotiate pricing and scope of work.
- Contract professional services to integrate commercial system with existing department IT systems (e.g. BOE, DWP, etc.).
- Revise existing process to ensure that all new work activities were being entered and coordinate through the new commercial system.

A benefit to the SaaS, cloud-based solution is that the City would not need to make a hardware (server) investment every five years to support the system. In addition, any vendor enhancements made to the software would be automatically implemented in future versions free-of-charge. However, the City would pay a substantial annual subscription for the life of the system (potentially decades). It is estimated that a 10-year subscription to such products, including one-time setup costs, will range from \$5 Million to \$7 Million over 10 years (\$500,000 to \$700,000 per year). In addition, the City would still need to maintain its existing departmental systems, such as the PWRS, as they would still be required to interface into a potential new cloud-based application.



**Image 2 – Example of a Popular Commercial Cloud-Based Public Right-of-Way Coordination System Used by City of San Francisco (Envista)**

### **RECOMMENDATION**

Based on the proposed SOSLA initiative and the key requirements of a public right-of-way coordination system, the ITA recommends the following:

1. The City of Los Angeles utilize its existing Public Way Reservation System (PWRS) to support the SOSLA initiative and ongoing functions. To fully satisfy the requirements of a SOSLA initiative, the existing PWRS would need additional enhancements and improvements through contractor programming services estimated at a one-time cost of \$200,000.
2. Improve City policies to enforce the citywide usage of the Public Way Reservation System (PWRS). During ITA's research, multiple City departments stressed the importance of a stronger process to ensure citywide usage (regardless of software tool being used), such as a Mayoral Executive Directive. These types of systems require both the technical solution (e.g. PWRS system) and a strong business process to ensure departments are entering their activity, coordinating with other departments, and abiding by moratoriums to ensure street resurfacing is not quickly marred by subsequent construction.

**FISCAL IMPACT STATEMENT**

The BOE has estimated the one-time cost of enhancing the existing PWRS at \$200,000 through contract programming services. No additional, near-future technology-related costs are anticipated.

**Attachment**

cc: Ted Ross, Information Technology Agency  
Maryam Abbassi, Information Technology Agency  
Paul Smith, Chief Legislative Analyst  
Matias Farfan, Chief Legislative Analyst  
David Hirano, City Administrative Officer  
Staci Sosa, City Administrative Officer  
Randy Price, Public Works – Bureau of Engineering  
Russ Strazzella, Public Works – Bureau of Contract Administration  
Jay Kim, Department of Transportaion

**APPENDIX A - COMPARISON OF FEATURES (City PWRS and Envista)**

As requested by the City Council Public Works and Gang Reduction Committee, the following table provides a side-by-side comparison of functions and features between the City of Los Angeles Public Works Reservation System (PWRS) and the cloud-based Envista system.

Functions	Features	City PWRS	Envista
<b>Projects</b>	Create, view, and update a new project	✓	✓
	Enter, view, and update project schedule (start and end date)	✓	✓
	Enter, view, and update project location (graphically on the map)	✓	✓
	Enter, view, and update project type	✓	✓
	Enter, view, and update project contact information	✓	✓
	Link source documents to a project	✓	✓
<b>Moratoriums</b>	Generate a moratorium when creating a project	June 30, 2014	✓
<b>Opportunities</b>	Select a project as an opportunity	June 30, 2014	✓
<b>Special Events</b>	Enter, view, and update events (including parades, festivals, road races, political rallies, etc.)	✓	✓
<b>Traffic Reroutes/Impacts</b>	Identify traffic re-routes associated with event or project		✓
<b>Right-of-Way (ROW) Permits</b>	Create, view, update, and delete ROW permits	✓	✓
<b>Conflict Management and Resolution</b>	Ability to detect and generate a conflict when two projects or events are proposed in the same location or during the same time period	✓	✓
	Ability to report conflict and contact info for resolution	✓	✓
	Ability to send email relative to a conflict	June 30, 2014	✓
<b>Documentation Library</b>	Ability to upload and retrieve plans/documents associated with a project	✓	✓
<b>Public Website</b>	Provides for public view of information on projects, events, street closures, permits status, etc.	✓	✓
	Allows drill-down to closures based on specific address and timeframe	✓	✓
<b>Email Notifications / Alerts</b>	Ability to setup automatic email notifications to specified users	June 30, 2014	✓
<b>User Interface / Map Platform</b>	Create, view, update and delete projects and events directly on the map	✓	✓
	Ability to show or hide various layers (icons, routes, labels, etc.)	✓	✓
<b>Reports</b>	Ability to generate pre-defined standards reports	✓	✓
	Ability to generate custom reports		✓
	Generate report in various formats, such as .pdf	✓	✓
	Export reports to MS Excel .xls file format	June 30, 2014	✓
<b>Mobile Access</b>	Ability to access and use the system via mobile devices	June 30, 2014	
<b>Integration with City Systems</b>	Existing electronic interfaces with over 80% of City PROW systems/processes	✓	
<b>Cloud-Based Model</b>	Cloud software that allows periodic vendor updates and no hardware investment		✓

APPENDIX D, CONT.: VARIOUS CITY REPORTS



RON GALPERIN  
CONTROLLER

January 19, 2017

Kevin James, President  
Public Works Commission  
200 North Spring Street, Room 361  
Los Angeles, CA 90012

Nazario Saucedo, Director  
Bureau of Street Services  
1149 South Broadway, Suite 400  
Los Angeles, CA 90015

**Re: Street Damage Restoration Fee (SDRF) CF:(15-0600-S22) CF:(14-1571)**

The City currently assesses a Street Damage Restoration Fee (SDRF) on utility companies to recover the cost of the additional resurfacing and repairs needed to mitigate the impact of the excavation. The Controller's Audit, dated July 31, 2014, "Audit of Los Angeles Bureau of Street Services Resurfacing & Maintenance Activities", pointed out that because the City has not updated its calculations of SDRF since the year of 2006, the City has not optimized the opportunities to generate additional revenues that are so very needed for street repairs.

On May 16, 2016, the Department of Public Works executed a contract with an outside consultant to conduct a review of the way the SDRF is calculated and make recommendations as to how to develop a new SDRF in order that the City may be able to fully recover the costs associated with street excavations. The consultant, Shahin and Associates, is currently working with the BSS to select an appropriate street sample in order to perform the pavement testing necessary to obtain an accurate assessment of the activities associated with repairing the street after a utility company has conducted an excavation. Based on this analysis, the consultant will be able to provide an analysis of the work and update the SDRF accordingly.

Recent meetings between the Controller's Office, the Bureau of Street Services, and Dr. Shahin have led us to conclude that an expanded scope of this report is needed, to include issues which will allow the City to truly achieve cost recovery for utility excavations -- and to provide much needed dollars to the Bureau of Street Services.



The following factors are thus critical to examine if the City is to optimize its collections:

- **Street type / designation** – The City currently categorizes streets into two categories: select and local. Select can be mostly associated with commercial type streets versus local, closer identified as residential street. Roughly 1/3 of L.A.'s streets are currently designated select vs. 2/3 local. Notably, the City assesses a significantly higher SDRF for select streets (commercial) than for local (residential). However, select streets have an assumed useful life of just 15 years, vs. an assumed useful life of 25 years for local streets. The designation of whether a street is select or local was typically made many years ago, there is now a need to reevaluate the designation of LA streets, in order to ensure the appropriate amount is being charged after excavation.
- **Useful life** – Currently, the City does not charge SDRF for streets past their defined 'useful' life (15 or 25 years). This may very well be shortchanging the City of much-needed funds for street restoration. The City defines useful life of any street as "economic" or "functional economic" useful life. Meaning, there is an average of how long a street should and will be useful based on designation and general assumptions.

However, as is evident in L.A., we have many streets with a different (and often longer) useful or actual life than may have been applied thereto. The City, along with the consultant, should examine how different definitions and choices of useful life might impact the percentage of loss of life – and thus the sums recoverable by the City.

How useful life is defined, on any given street, can have a profound impact on the SDRF charges. For example, an excavation of a street which would cut short useful life of that street could calculate out to a higher dollar amount with a longer assumed useful life.

In addition, after the so-called useful life of a street has passed, the City should consider implementing a new SDRF charge for subsequent excavations. Currently, the City does not charge SDRF after the useful life has passed.

The City's consultant stated to the Controller's office that he is basing calculations of SDRF fees on existing City assumptions regarding useful life and street type. Over the decades as L.A. has further developed, what were purely local streets have become denser and well-traveled. Accordingly, it behooves the City to consider basing useful life (and SDRF) with a broader range of designated street types. (i.e., principal, arterial, collector, etc.).

Without an adequate assessment of whether these assumptions are truly optimal, it will not be possible to know that we have optimized the amount of SDRF to which the City is, in fact, entitled. Accordingly, any fee evaluation conducted by the City must include an evaluation of the underlying assumptions.

Additional points to consider:

- **Cost recovery** – Our office was informed that the current basis for calculating cost recovery is based on an estimation of only "direct" City costs that would be associated with pavement deterioration. Such a cost recovery model fails, however, to fully capture the true costs to the City, including all overhead, benefits, etc. There would appear to be no reasonable reason to not fully capture both direct and indirect costs in calculating cost recovery for the City.

- **Cost increases** – The City used Caltrans' Price Index for Asphalt Pavement Concrete unit costs from 1996 through 2005 as the basis for increasing SDRF in 2006. However, the City's actual costs may very well likely exceed such calculations. Accordingly, the City should consider the possibility of adjusting costs annually based on the higher of State or other increases and/or actual increases in City costs.

- **Concrete streets** – Currently we are not assessing SDRF for concrete streets. These streets make up approximately 5% of L.A. City streets and are largely very much older streets with arguably little useful life remaining. Notwithstanding, it would behoove the City to assess the feasibility the possible benefits of extending SDRF to concrete streets.

It is also of important to note that the calculations of the City's consultant are based on test of selected excavated pavements throughout the City – and comparison thereof to a nearby so-called "control" pavement that does not have any excavations. According to the consultant, the conditions of the streets generally in L.A. are such that it has been difficult to find control pavement areas with no excavations. It would be helpful to ascertain from the consultant how this may impact the calculations that will be used as the basis for the City's calculations of SDRF:

In addition, the consultant informed us that his SDRF study does not incorporate benchmark data. It would, however, be advisable for the study to include at least some benchmark data. A cursory review by our office found interesting and, we believe, useful analysis conducted by other jurisdictions of fees and fee structures. Some jurisdictions, for example, charge both a flat administrative fee and a fee per square foot and/or per linear foot for utility excavations. Some jurisdictions also charge differential fees based on the depth of cuts or for dry vs. wet utilities.

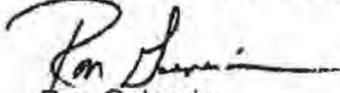
As detailed in our Audit, the Controller's Office believes it is vital the SDRF be applied to all utility companies -- including Sempra (which heretofore has been exempted therefrom). Moreover, the City should establish a practice of incorporating SDRF calculations in all future franchise agreements – this would serve to ensure compliance but also allow full cost recovery associated with specific activity.

Moreover, the City should consider additional ways to apply SDRF calculations to other activities, such as construction or heavy hauling.

January 19, 2017  
Page 4 of 4

It is our request that the issues discussed in this letter be incorporated into any SDRF study currently being done by Dr. Shahin and Associates, and this matter be expedited so that any relevant information can be used in budget discussions this coming fiscal year.

Respectfully submitted,



Ron Galperin  
CITY CONTROLLER

CC: All Public Works Board  
Mayor  
City Council

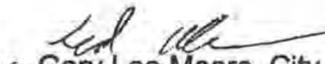
APPENDIX D, CONT.: VARIOUS CITY REPORTS

FORM GEN. 160 (Rev. 6-80)

**CITY OF LOS ANGELES  
INTER-DEPARTMENTAL CORRESPONDENCE**

Date: May 29, 2015

To: Honorable Joe Buscaino,  
Chair of the Public Works and Gang Reduction Committee  
All Council Members

From:  for Gary Lee Moore, City Engineer  
Bureau of Engineering

Digitally signed by Gary Lee Moore on 05/29/2015 1:22:20 PM

Subject: **Street Cut Moratorium Council Motion (Council File 14-1571-S1)**

This document is prepared in response to the Motion (Buscaino – Englander; CF 14-1571-S1) relative to the City's moratorium on street excavation cuts within the first year following resurfacing. Specifically, the Motion instructed the Department of Public Works with the assistance of the City Administrative Officer (CAO) and the Chief Legislative Analyst (CLA) to investigate the feasibility of increasing the City's street cut moratorium (moratorium) from one year to three years, and report on the potential operational and financial impacts. The Council Motion also requested that the City Attorney prepare and present an ordinance that conveys to the Board of Public Works the authority to grant exemptions to the moratorium, and to require that exempted permittees pay a Street Damage Restoration Fee (SDRF) sufficient to recover the full cost of damage inflicted by the shortened lifespan of the street.

**RECOMMENDATIONS:**

The Bureau of Engineering (BOE), the Bureau of Street Services (BSS) and the Bureau of Contract Administration (BCA) have had extensive discussions with representatives from the Mayor's Office, Council District 15, the CLA and the CAO on this topic. After much consideration, the working group concluded that it would not recommend extending the moratorium at this time as discussed later in this report. However, in discussing and analyzing the moratorium in general, the group did produce a number of other recommended improvements to the current code section. Those discussions and thought processes are also summarized in this report. Following is the recommendation of the working group:

1. Modify the instructions to the City Attorney contained in CF 14-1571-S1 which requested the preparation of a draft ordinance to incorporate the following guidelines:
  - a) Keep the existing one year moratorium on street excavation cuts.
  - b) Formalize the term "Street Cut Moratorium" in the Los Angeles Municipal Code (LAMC) section 62.06.
  - c) Modify the existing moratorium to require that any work performed under an exemption to the moratorium pay a SDRF sufficient to recover the full cost of

- damage inflicted by the street cuts. The SDRF fee would apply to work performed under categorical exemptions as well as individual project exemptions.
- d) Find that the minimum amount of such damage would equal the SDRF fee amount used for street cuts from 1 year and one day to five years after resurfacing, and authorize the use of that rate until a study can provide for the amount of the damages for the zero to one-year time period.
  - e) Continue the categorical exemption from the moratorium for cases where it can be shown that the property owner was not properly notified of proposed street resurfacing.
  - f) Formally recognize a categorical exemption from the moratorium for emergency work as defined in LAMC 62.61 (a) 2 and in accordance with the requirements of LAMC 62.02 (a) 6.
  - g) Authorize the Board of Public Works to grant project specific exemptions to the moratorium where it is deemed that the proposed project need was not known at the time the street was resurfaced or that it is otherwise in the City's best interest to grant the exemption.
  - h) Authorize the creation of additional categorical exemptions by Council Resolution.
  - i) Instruct the Board of Public Works to recommend additional categorical exemption categories based on their experiences with the oversight of the exemption process in the case that such a need is determined to be beneficial to the City.
  - j) Authorize the City Engineer to maintain standard repair requirements for work performed under an exemption to the moratorium which may go beyond the normal street repair methods for non-moratorium work.
  - k) Authorize the Board of Public Works to impose additional requirements when approving project specific exemptions.
  - l) Establish a fee for an "Application for Exemption from the Street Cut Moratorium" based on recommendations from the CAO, BOE, BSS, and the Bureau of Contract Administration.
  - m) Continue the requirement that entities making street cuts without an approved exemption be required to repave the full block from curb face to curb face rather than pay a SDRF.

### **BACKGROUND AND DISCUSSION:**

**Establishment of the Street Cut Moratorium:** Los Angeles Municipal Code Section 62.06, established by Ordinance No. 171922 (CF 96-0726), was approved February 18, 1998. The ordinance established the SDRF and also established in subsection "D" that excavations in streets scheduled to be repaved within one year would be exempt from the SDRF. It appears that in the original form the code was exempting utility cuts from paying the SDRF if they occurred up to one year prior to resurfacing. LAMC 62.06 subsection "D" was later amended to add a requirement that entities making pavement cuts "within the one year period must repave the entire street block from curb face to curb face", thus treating the one-year period as the period after resurfacing. The code change appears to have taken place under Ordinance 174021 (CF 99-0412) which became effective July 23, 2001, although it is possible that it happened earlier because it is not called out as a specific change in the ordinance.

LAMC 62.06 Subsection D was later revised further by Ordinance Number 175525, Eff. 11/16/03 (CF 03-1695), to the current form which provides for exceptions to the requirement to pave the entire street block "when it can be sufficiently demonstrated to the Director, Bureau of Street Services that the City's 30 day notice of a scheduled street resurfacing project was not mailed to the correct property owner of record at the time of notification, and the adjacent property owner made significant efforts to promptly notify the Bureau of Street Services of any planned street excavations. The adjacent property owner would be required to obtain the applicable permits and repave the excavated area."

It is worth noting that the word "moratorium" does not exist in the current code. However the term is commonly used to describe the one-year period following resurfacing during which time an entity is required to pave the entire street block if they make pavement cuts. This report similarly uses the term "moratorium".

**Moratorium Duration:** The primary objective of the working group was to analyze the feasibility of extending the current one-year moratorium to three years. Initially the discussion leaned toward such a recommendation, along with a recommendation for additional categorical exemptions from the moratorium, such as for new service connections. Additional categorical exemptions were felt to likely be necessary for a three year moratorium because in many cases private property owners may not know about future service connection needs extending three years out into the future.

After thinking about it further the group consensus was that it may be better to maintain a one-year moratorium with less exemptions because it is short enough that even private property owners should generally know of any needs for service connections that far into the future, and even in cases where they don't they would potentially be able to wait out the moratorium. It was felt that the City may therefore get more from the one-year moratorium than it would from a three-year moratorium with increased exemptions.

The group did consider the possibility of a three-year moratorium solely for utility capital improvement projects because those are generally planned further in advance. In that scenario the one-year moratorium would have been preserved for others. The working group determined that this may be a recommended change at some point in the future, but most of the group felt that it would be best to wait to make such a change until after implementation of some of the coordination improvements that are being made on the City side to give utilities an improved long range outlook at planned resurfacing.

**Existing Exemptions from the Current Street Cut Moratorium:** The current one year moratorium on street cuts requires the resurfacing of the entire street block from curb face to curb face if the moratorium is violated. As previously outlined, the only provision for exceptions is for cases where it can be demonstrated that the owner was not properly notified and they made significant efforts to promptly notify the Bureau of Street Services.

Emergencies were not specifically exempted from the moratorium under LAMC 62.06, but the Bureau of Engineering has historically exempted them from the full-block repaving requirement in accordance with LAMC 62.02 (a). As outlined in Bureau of Engineering Special Order 06-0807, in lieu of full-block paving for emergencies the

Bureau of Engineering requires a special "T-Cut" repair and the payment of a SDRF at the rate for cuts from one year and one day to five years. Additional exemptions have been granted by the City Council on a case by case basis. Because the current SDRF fee structure assumes that cuts will not occur in the first year, there is no set fee for the first year period and therefore moratorium exemptions must require the payment of a SDRF, otherwise the SDRF cannot be collected at all during the moratorium period.

One of the recommendations of this report is that future SDRF revisions establish a rate for the moratorium period, and that in the meantime the code be revised to explicitly state that moratorium exemptions must pay the SDRF rate and that if a rate has not been established for the moratorium period that the applicant shall pay the highest established rate.

**Additional Exemptions from the Current Street Cut Moratorium:** The working group concluded that additional blanket categorical exemptions would not be needed if staying with a one-year moratorium. However, there have been a relatively small number of individual cases in the past where the City Council has found it appropriate to grant project specific exemptions from the moratorium. Generally these have been cases where new service connections are urgently needed but the owner did not know of the need at the time the street was resurfaced, or the owner may have changed. The current code does not explicitly provide any process for project specific exemptions.

It is recommended that the Board of Public Works be authorized to issue project specific exemptions in cases where the entity can demonstrate that they did not know of the need for the street cut at the time the street was resurfaced or where it can otherwise be demonstrated that it is in the best interest of the City to grant the exemption. It is further recommended that the City establish a "Street Moratorium Exemption Fee" to be charged to applicants requesting an exemption in order to recover the cost to the City to process the application.

Although additional categorical exemptions from the moratorium are not recommended at this time, it is recommended that the LAMC language be modified to allow for the establishment of additional categorical exemptions by Council Resolution and that the Board of Public Works be instructed to recommend additional exemptions based on their experience overseeing the exemption process in the case that such a need is determined to be beneficial to the City.

**Repair Methods for Moratorium Exemptions:** Currently emergency projects that are exempted from the moratorium are required by the Bureau of Engineering to utilize pavement repair methods that go beyond those required in non-moratorium circumstances in order to preserve the integrity of the newly resurfaced street to the maximum extent possible. It is recommended that the Bureau of Engineering be explicitly authorized in the code to establish standards for trench repair methods for those projects receiving exemptions to the street cut moratorium which may exceed standard trench repair requirements.

It is further recommended that the Board of Public Works be authorized to require repair methods which may exceed the Bureau of Engineering standards when granting project specific exemptions. This would enable the Board of Public Works flexibility in dealing with unusual circumstances where they may find it appropriate to essentially grant a

"partial exemption" from the full block resurfacing requirement. For example, Figure 1 depicts trench details for which the Board of Public Works might require the entire shaded area to be resurfaced if not already called for in the Bureau of Engineering Standard:

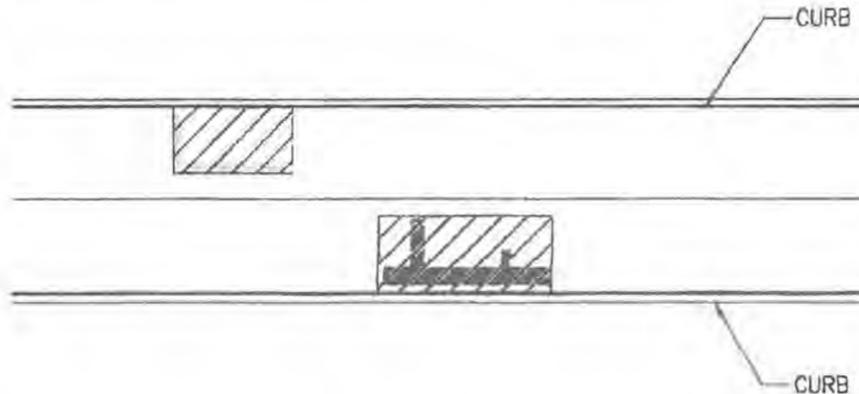


Fig. 1

Depiction of rectangular restoration pattern.  
(City of San Francisco - Regulations for Excavating and Restoring Streets)

**Moratorium Effectiveness:** Overall the current one-year moratorium on street cuts after resurfacing has been effective in encouraging entities to coordinate their work with the BSS. The number of cuts in newly resurfaced streets is significantly less than it was prior to the moratorium, and the quality of the repairs for those cuts that are allowed is better than before. The recommendations contained in this report are expected to further improve the effectiveness of the moratorium while at the same time providing an official process to request exemptions.

### **CONCLUSION:**

It is recommended that the current street cut moratorium be maintained at one-year and that the City Attorney be requested to draft an ordinance which would implement the other recommendations contained in this report.

CC: Kevin James, BPW  
 Matt Szabo, BPW  
 Miguel A. Santana, CAO  
 Sharon M. Tso, CLA  
 John Reamer, BCA  
 Nazario Saucedo, BSS  
 David Hirano, CAO  
 Paul Smith, CLA  
 Russ Strazzella, BCA  
 Ron Olive, BSS  
 Ted Allen, BOE



APPENDIX D, CONT.: VARIOUS CITY REPORTS

**CITY OF LOS ANGELES**  
INTER-DEPARTMENTAL CORRESPONDENCE

Date: August 2, 2017

To: The Honorable City Council  
c/o City Clerk, Room 395, City Hall  
Attention: Honorable Mike Bonin, Chair, Transportation Committee

From: Seleta J. Reynolds, <sup>50</sup>General Manager, Department of Transportation  
Ted Ross, General Manager, Information Technology Agency *Ted Ross*  
Nazario Saucedo, Director, Bureau of Street Services *Nazario Saucedo*

Subject: **PARKING REFORM: USING TECHNOLOGY TO REDUCE STREET SWEEPING TICKETS  
(COUNCIL FILE 15-1449)**

**SUMMARY**

This report provides an update on the efforts to develop digital street sweeping routes, communication system between street sweepers and parking enforcement handhelds, a notification system to inform residents of when they can park on a street after it has been swept, and resource needs to develop such a system.

**RECOMMENDATIONS**

That the City Council:

1. INSTRUCT the Los Angeles Department of Transportation (LADOT), Bureau of Street Services (BSS), and Information Technology Agency (ITA) to work with City Administrative Officer (CAO) and Chief Legislative Analyst (CLA) to identify the necessary funding to initiate the pilot program.
2. INSTRUCT the General Manager of LADOT to execute a change order to the contract with Conduent (formerly Xerox) for the additional scope of work to implement the handheld integration with street sweeping data.
3. INSTRUCT LADOT, ITA, and BSS to report back to the Transportation Committee in 120 days with an update on the progress of a pilot program.

**BACKGROUND**

In June 2014, Mayor Garcetti engaged a group of stakeholders to discuss opportunities to improve the parking experience throughout Los Angeles. This group, called the Los Angeles Parking Reform Working Group, was subsequently formed with residents, business owners and representatives of different organizations. Over the course of seven months, the Los Angeles Parking Reform Working Group reviewed and analyzed a wide variety of potential parking reforms. The Los Angeles Parking Reform Working Group released their comprehensive report and recommendations for consideration in 2015. One of the recommendations was to reduce the overall number of citations issued for street cleaning violations by better using technology to improve the operational efficiency of and coordination between city departments and residents.

In December 2015, City Council approved a motion to direct departments to incorporate GPS tracking on all street sweeping vehicles; improve communication between sweeping vehicles, traffic control officers and the public; examine the feasibility of creating a digital street cleaning notification system for subscribers; map and catalog all street cleaning routes and reevaluate the schedules to ensure that street sweeping activities do not conflict with hours of peak parking demand and school pickup/drop-offs.

In June and August 2016, Transportation Committee heard updates on the multidepartment effort to meet the goals of the council motion. At its meeting in August, the Committee directed the departments to report back with resource needs required to create the pilot program that tests the capabilities of the notification system and coordination of the street sweepers with parking enforcement handhelds.

## DISCUSSION

### Global Positioning System (GPS) Hardware on Street Sweepers

In order to create digitized street sweeping routes, the General Services Department (GSD) and their vendor, Orpak USA Inc. (Orpak), completed installation of the GPS hardware and sensors on all 100 motor sweepers that service posted routes. The calibration and testing of the GPS devices and sensors, which is needed to ensure the accuracy of the data, is 95% complete. There is sufficient information available from the hardware to be used for a pilot program.

In addition, Orpak will provide a web service that validates the status of street sweeping routes (i.e. swept, cancelled, etc.) and the location of sweepers to identify blocks that the sweeper swept, and provide relevant information which will be utilized by ITA's Notification System and LADOT's citation processing contractor, Conduent (formerly Xerox).

Orpak drafted the attached Preliminary Feature Specification document to begin the process of developing the web service. Assuming that the City wishes to move forward with a six month pilot program, Orpak estimates that it will take up to six months of development and testing. The total estimated cost for the feature is \$108,468 consisting of the following:

- Programming, testing and deployment = \$108,000
- Ongoing operational expenses = \$468\*

\* Data consumption and storage cost increase from \$16.95 to \$29.95/per month/per vehicle.

BSS needs four new positions in order to: (i) ensure that every weekday morning, each sweeper rolling out to service posted routes is accurately transmitting GPS data; (ii) advance the digital route mapping project; and (iii) utilize the GPS data to continuously improve the efficiency and effectiveness of the motor sweeping program.

### Digital Route Maps

BSS completed digital turn-by-turn maps for 11 of approximately 900 street sweeping routes. It is expected to take an approximately six months at an estimated direct cost of \$40,000 to complete this effort.

### Notification System

Based upon the result of an initial feasibility study, ITA determined it is feasible to implement a notification system to inform residents of when the street has been swept and could be available for parking. The street sweeping status will be provided by Orpak Street Sweepers' GPS via a web service. It should be noted that the street will not necessarily be shown as available for parking immediately after being swept. There may be a delay in releasing the street for multiple reasons including, but not limited to, allowing time for parking enforcement to cite the illegally parked vehicles that prevented the street sweeper from sweeping the curb and/or roadway. Communication of when it is legal to park will be critical to ensure motorists do not mistakenly assume that once the sweeper passes it is immediately safe to park on the street.

If the City Council approves funding, ITA recommends using the MyLA311 Constituent Relationship Management (CRM) system as a solution for the resident registration and notification. The resident would register in either the MyLA311 portal or mobile app with the information stored in MyLA CRM system. The registered resident would be allowed to subscribe to one or more addresses to receive notification of when BSS has swept the street via a map interface. The user can select how they want to be notified (email or push notification via the mobile app). Depending on the volume, additional costs may be needed for an external mass email system like MailChimp or Constant Contact. The system would also display a map of street sweeping information on MyLA311 mobile app and lacity.org.

The total estimated cost is \$219,840, with an estimated timeline of three to four months. The cost\* consists of the following:

- Implementation = \$180,000
- MyLA311 user license (2 users) = \$3,040
- Ongoing annual support and maintenance = \$36,800

\* Assumptions: (1) Street swept information will be provided and managed by Orpak's GPS system; and (2) BSS will provide and maintain digital route maps of street sweeping schedules.

### Parking Enforcement Handhelds

Using GPS technology installed on the City's street sweepers, Orpak will provide a web service that validates the status of street sweeping routes (i.e. swept or cancelled), the location of sweepers to identify blocks that the sweeper swept, and provide relevant information to LADOT's citation processing contractor, Conduent, in order to prevent LADOT's Parking Enforcement Officers from issuing street sweeper citations on blocks that are either cancelled or swept. This will require the current handheld devices to determine whether or not to issue a citation based on their current location before starting the citation issuing process.

Conduent drafted the attached Street Sweeping Pilot Requirements Document and change order to the existing contract to begin the process of developing the handheld feature. Assuming that the City wishes to move forward with a six month pilot program, Conduent estimates that it will take up to four months of development and testing. The total estimated cost for the feature is \$67,250 consisting of the following:

- Programming, testing and deployment = \$35,000
- Ongoing operational expenses = \$32,250\*

\* Wireless plan increase to 1GB Plan is \$4,500/per month (\$7.5 Increase In wireless cost x 600 devices x 6 months) plus additional PocketPEO® software maintenance cost of \$875/per month.

Program Implementation

The notification system and handheld feature will be implemented in two stages: creating a six month pilot program, and a phased citywide rollout. There are 24 street sweeping districts with approximately 900 posted routes in the City. The pilot program will initially take place in two of these districts, one in the Woodland Hills community of San Fernando Valley, and the other in West Los Angeles. These locations were selected in different parts of the City to test the communications and data transmission activities across different geographic regions.

The pilot program is expected to take approximately 8 to 10 months to implement and complete following adoption of this report's recommendations and securing the necessary funding. Table 1 shows the details of the timeframe.

Table 1: Pilot Program Timeframe

Phase	Task	Duration
Planning	<ul style="list-style-type: none"> <li>• Perform project planning and initiation activities</li> </ul>	8 weeks
Requirements Gathering	<ul style="list-style-type: none"> <li>• Gather requirements for all necessary applications and components</li> </ul>	ITA: 3-4 weeks Orpak: 4 weeks Conduent: 3-4 weeks
Development & Unit Testing	<ul style="list-style-type: none"> <li>• Ongoing creation of digital street sweeping route maps</li> <li>• Design, develop and unit test application components</li> </ul> <p>*Includes testing &amp; deployment of pilot</p>	ITA: 6-8 weeks Orpak: 16-24 weeks* Conduent: 12-16 weeks*
User Acceptance Testing and Deployment of Pilot Program	<ul style="list-style-type: none"> <li>• Perform integration test with all application components</li> <li>• Perform user acceptance testing</li> <li>• Add map to Lacity.org</li> <li>• Launch the pilot project</li> </ul>	ITA: 4 weeks
System Stabilization	<ul style="list-style-type: none"> <li>• Monitor system performance and make necessary correction/adjustment</li> <li>• Address system defects</li> </ul>	8 weeks

The total estimated cost for delivering the pilot program is \$573,316. The one-time costs are shown in Table 2. The six month operation and maintenance costs are shown in Table 3.

Table 2: One-Time Costs for Pilot Program

Provider	Deliverable	Amount
GSD/Orpak	1. Application programming Interface (API) to provide real-time section coverage data per street sweeper (to be used by the City system and Conduent's handheld devices for Parking Enforcement Officers). 2. Application for BSS staff to manage daily routes cancellation.	\$108,000
LADOT/Conduent	Enhancements to Parking Enforcement Officers' handheld devices to include the ability to determine whether or not to issue a citation.	\$35,000
ITA and 3DI Inc.	User subscription and notification features in MyLA311 portal and mobile app.	\$183,040
	<b>TOTAL</b>	<b>\$326,040</b>

Table 3: Six Month Operation and Maintenance Costs for Pilot Program

Provider	Item	Amount
GSD/Orpak	Continuous data processing of API providing real-time street sweeper coverage status and application for BSS staff to manage daily routes cancellation. (Additional \$13 per vehicle x 6 x 6 months)	\$468
LADOT/Conduent	Enhancements to Parking Enforcement Officers' handheld devices (1GB plan - \$4,500/month) plus additional PocketPEO maintenance cost (\$875/month)	\$32,250
ITA and 3DI Inc.	Subscription and notification features in MyLA311 portal and mobile app	\$36,800
BSS	Two GIS Specialists (7213) and two Systems Analysts (1596) – Direct salaries	\$177,758
	<b>TOTAL</b>	<b>\$247,276</b>

The pilot program will be successful if the following tests yield favorable results:

1. Residents can subscribe/unsubscribe to notification of when a street has been swept;
2. Residents can check if one can park on the street based on location;
3. Parking Enforcement handhelds can query the cloud-based server maintained by Orpak;
4. Few instances of wireless communication issues or if the Orpak service is not available, and prompt reporting of the issue back to the City;
5. Orpak service recognizes street name and block number entered in the handheld or transmit latitude/longitude information from handheld and returns a response.

6. The Orpak service accurately indicates if the block entered by the Traffic Officer has been swept or not via manual query; and
7. Conduent eTIMS® citation database note accurately reflects the response received from Orpak.

Assuming the pilot program is successful, the program will be rolled out citywide incrementally as digitized street sweeping routes become available. We will provide a timeline for citywide expansion after the successful conclusion of the pilot program. There are not expected to be any additional one-time costs to expand the program citywide. However, the annual operation and maintenance costs will increase to \$472,416. The breakdown of the annual operation and maintenance costs for citywide expansion are shown in Table 4.

Table 4: Annual Operation and Maintenance Costs

Provider	Item	Amount
GSD/Orpak	Continuous data processing of API providing real-time street sweeper coverage status and application for BSS staff to manage daily routes cancellation. (Additional \$13 per vehicle x 100 x 12 months)	\$15,600
LADOT/Conduent	Enhancements to Parking Enforcement Officers' handheld devices (1GB plan - \$54,000/year) plus additional PocketPEO annual cost (\$10,500)	\$64,500
ITA and 3Di Inc.	Subscription and notification features in MyLA311 portal and mobile app	\$36,800
BSS	Two GIS Specialists (7213) and two Systems Analysts (1595) – Direct salaries	\$355,516
	<b>TOTAL</b>	<b>\$472,416</b>

#### FISCAL IMPACT STATEMENT

The total estimated cost for delivering the six month pilot program is \$573,316, which includes the costs from Tables 2 and 3. Table 2 costs represent one-time expenses and will not be a consideration when the notification program expands to include all posted sweeping routes citywide. Funding for the pilot has not yet been identified. The potential impact to the General Fund by the reduction in street sweeping citation revenue during the pilot program is estimated to be between \$82,000 to \$214,000. Conduent estimates the annual revenue impact by expanding the program citywide is between \$4.5 million and \$11.8 million. The citywide estimate will be refined following an analysis of the revenue impact upon completion of the pilot program.

#### Attachments

# Appendix A -Requirements

Conduent Transportation  
Parking & Mobility Solutions



City of Los Angeles  
Dept. of Transportation

Street Sweeping Pilot Requirements  
Document

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Other company trademarks are also acknowledged.

Document Version: 1.1 (February 2017).

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## 1. Introduction

At the request of the Mayor and City Council, the Los Angeles Department of Transportation, Bureau of Street Services, Fleet Services, and Information Technology Administration are developing a system that will allow constituents to park on streets posted for no parking during street sweeping hours if the street sweeping is canceled or the street sweeper has swept the street. Using GPS technology installed on the City's street sweepers, the City's vendor Orpak will provide a web service that validates the status of street sweeping routes (i.e. swept, cancelled, etc.) and the location of sweepers to identify blocks that the sweeper has swept, and provide relevant information to Conduent in order to prevent LADOT's Traffic Officers from issuing street sweeper citations.

### Conduent's Objective

To provide an additional feature to the current handheld devices that LADOT Traffic Enforcement Officers are using; adding the ability to determine whether or not to issue a citation based on their current location (block number and street name) before starting the citation issuing process.

### Assumptions

A system hosted by Orpak will contain all streets on the sweeping routes, the days and times that street sweeping and parking restrictions are in place for each of the routes. Orpak's web service will have the ability to ingest, analyze, and correlate the street number and name and optionally the latitude/longitude and return a message that the Officer can use to issue or not issue a citation. The street table in the handhelds is generated from the Conduent PocketPEO® handheld software that is currently in use, the Latitude/Longitude information is generated from the Handhelds location (not correlated to the street number and name) The Officer will conduct an initial check to ensure the route is enforceable and will be able to issue citations for that route in "Street Sweeping" mode (i.e. Quick Ticket). If the Officer for any reason issues a citation in a different category (i.e. Red Zone), and returns to street sweeper violation the validation needs to be done again. The Officer will need to conduct a validation each time a new street sweeper route is enforced and need to be familiar with the routes.

## 2. Requirements

### Street Sweeping check via handheld

Traffic Officers can have a separate screen (prior to issuing a citation) to validate the type of citation they are about to issue (e.g. Street Sweeper). The Officer will be prompted to enter a street name and address (e.g. 1435 S MAIN ST) into their handheld device to validate if the route is enforceable. The handheld device will send the street number and name and optionally the latitude and longitude to the web services provided by Orpak to query if the route has been cancelled or swept. Upon receiving a response, the handheld will display a message indicating if the Officers should proceed to the citation issuing application and issue a citation or not issue a citation. If the message returned is to "Issue a Citation," the handheld device will enable the officer to issue a citation. The Officer will be able to utilize the same functionality to issue a "Quick Ticket". In the event where the Officer enforces areas away from the street sweeper route and/or issues a "non-sweeper" citation, a re-verification would need to be conducted once the Officer returns to street sweeping enforcement or beginning of a new street sweeping route.

#### *Example:*

1. Officer arrives at a Street Sweeping route and logs on to the handheld devices.
2. The Officer will select pre-verification :
  - a. The Officer is asked to enter a Street Number and Street Name.
  - b. Officer enters an address (Street Number and Street Name) into the handheld device (i.e. 1435 S MAIN ST) from a pre-existing list of streets
  - c. The handheld sends a query to Orpak's web services using the address that Officer entered previously (i.e. 1435 S MAIN ST) or
  - d. The handheld sends a query to Orpak's web services using the handhelds Latitude/Longitude information (not tied to address the Officer entered).
  - e. Orpak sends a response back to the handheld device, Conduent translates the messages based on business rules to be identified and relays the message to the Officer that states to "Issue a Citation" or "Don't Issue a Citation." This can be based on the fact that the street sweeper has gone by, certain restrictions, and/or the route has been cancelled. Don't Issue a Citation (if the sweeper route has been cancelled and/or the sweeper has gone by) – no further action. Officer is prompted back to the first screen on the handheld device. The response from Orpak can be logged in PocketPEO® for reporting and analysis. Reporting requirement will need to be defined.
  - f. Issue a Citation – Officer is prompted to the citation issuance screen and citation is issued as currently done.

### Citations to note response received from Orpak

When a street sweeping citation is issued successfully, the handheld will save the comments received from Orpak, and save those notes as part of the Conduent eTIMS® citation history.

*Example:* The Conduent eTIMS® citation database comments for a street sweeping citation issued at 3:22PM on 12/21 will show: "Issue Citation" response received 3:22PM 12/21/2016."

### 3. Pilot and Testing Plan

#### Communications Testing

1. Test communications between handheld and Orpak's system by:
  - a. Ensure that handhelds can query the cloud-based server maintained by Orpak.
  - b. Determine if there are any instances of wireless communication issues or if the Orpak service is not available, and report back to LA City. Additional log will be provided to officers to track any instances where wireless communication on the handheld is not working and when Orpak doesn't return a response.
2. Test ability to recognize street name and block number entered in the handheld and return a response.
  - a. Check list of number and street names in Orpak server must match table in Conduent PocketPEO® handheld software. OR
3. Test ability to transmit Latitude/Longitude information from handheld device and return a response.
4. Test accuracy of response to queries by:
  - a. Look-up function: Check manually that the response from the Orpak service accurately indicates if the block entered by the Traffic Officer has been swept or not.
5. Test that Conduent eTIMS® citation database note accurately reflects the response received from Orpak.

#### Latitude and Longitude GPS Accuracy

There are number of factors that contribute to the accuracy of GPS devices that are outside Conduent's control. The GPS radio signals encounter differing conditions while travelling through the atmosphere, causing signal delays, and therefore affecting accuracy. The geometry of the satellites being used will impact accuracy as well as the number of satellites that the handheld device is locked onto. In addition accuracy is also affected in an urban environment where GPS signal can bounce off of buildings or other objects. Based on the reasons mentioned we do not think using the GPS coordinates from the handheld devices is a feasible solution to determine the location of the Officer in order to issue a citation or not to issue a citation.

## 4. Project Team

Name	Role	Email
Armen Kazaryan	Conduent – Regional Director	Armen.Kazaryan@Conduent.com
Kevin Albanese	Conduent – Systems Development Manager	Kevin.Albanese@Conduent.com
Suhella Haider	Conduent – Program Manager	Suhella.Haider@Conduent.com
Alex Schaffer	Conduent – Associate Program Manager	Alexander.Schaffer@Conduent.com

This document is Conduent's understanding of the project requirements and what role Conduent will be responsible for. By signing below, both parties agree to the roles and responsibilities of Conduent.

**Deliverable Title: Street Sweeping Citation Program**

**Signature Page - Requirements**

**Signature and Approval**

---

Wayne Garcia  
Senior Management Analyst II  
City of Los Angeles, Department of Transportation

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Date

---

Armen Kazaryan  
Regional Director of Operations  
Conduent Transportation

---

Date

**CHANGE NOTICE NUMBER #4**  
**TO THE DEFINITIVE AGREEMENT**  
**DATED SEPTEMBER 26, 2014**  
**BY AND BETWEEN**  
**THE CITY OF LOS ANGELES AND**  
**CONDUENT STATE & LOCAL SOLUTIONS, INC.**  
**Contract #C124676**

This CHANGE NOTICE is issued this \_\_\_\_\_ day of August \_\_\_\_\_ 2017 ("Effective Date"), by and between the City of Los Angeles, a municipal corporation ("CITY"), and Conduent State & Local Solutions, Inc., ("CONDUENT", formerly XEROX), individually referred to as "party" and collectively as "parties," with reference to the following:

WHEREAS, CONDUENT has entered into an Agreement on September 26, 2014, with the CITY for the purpose of providing Parking Citation Processing and Collection Services ("Prime Contract") Contract #124676;

WHEREAS, Section 10.1 of the Prime Contract specifies that a Change Notice is appropriate for any change which does not significantly affect the scope of work, as set forth in the Statement of Work;

WHEREAS, CONDUENT and CITY have completed various discussions concerning the clarification and expansion of the scope of work of the Agreement;

NOW, THEREFORE, for and in consideration of the mutual promises and covenants made herein, and other good and valuable consideration, the receipt of which is hereby acknowledged, CITY and CONDUENT mutually agree to modify Agreement as follows:

- 1) Contract Section 1 Applicable Documents is hereby modified by replacing the order of precedence with the following chart
  - i. The Main Body of this Agreement
  - ii. Exhibit 1 – Scope of Services
  - iii. Exhibit 2 – This Contract (Rev. 3/09)
  - iv. Exhibit 3 – Xerox' Proposal & BAFO
  - v. Exhibit 3.5 – Appendix A - Street Sweeping Pilot Requirements Document
  - vi. Exhibit 4 – CITY's RFP and Addendums
  
- 2) EXHIBIT 1, SECTION 1.8.9 – HANDHELD APPLICATION is hereby modified to add the following:

**Street Sweeper handheld application** - To provide an additional feature to the current handheld devices that LADOT Traffic Enforcement Officers are using; adding the ability to determine whether or not to issue a citation based on their current location (block number and street name) before starting the citation issuing process.

- 3) SECTION 7.0: CITATION PROCESSING COST is hereby modified to add the following section and text after the VOIDED CITATION section and before the MOST FAVORED PRICING GUARANTEE section:

**STREET SWEEPER PILOT**

Compensation for Street Sweeper Pilot are as follows:

- Programming, testing and deployment = \$35,000 – billed at acceptance for up to 200 hour of development (additional hours will be billed at \$175/per hour)
- Monthly Billing\* = \$5,375
- \* Wireless plan increase to 1GB Plan is \$4,500/per month (\$7.5 increase in wireless cost x 600 devices) plus additional PocketPEO® software monthly maintenance cost of \$875 per month.

All other terms and conditions of the Agreement for “Citation Processing and Operation of Parking Customer Service Center” between the City of Los Angeles and Conduent State & Local Solutions, Inc. (formerly Xerox State & Local Solutions, Inc.) dated September 26, 2014, Contract #124676 and all prior Change Notices remain in full force and effect.

**IN WITNESS WHEREOF**, CITY and CONDUENT have caused this Change Notice to be signed by their duly authorized officers or representatives on the Effective Date.

**ACCEPTED AND AGREED:**

\_\_\_\_\_  
Seleta Reynolds                      Date  
General Manager, Dept. of Transportation  
City of Los Angeles

\_\_\_\_\_  
Kirk Strassman                      Date  
Vice President  
Local Government Solutions  
Xerox State & Local Solutions, Inc.

**APPROVED AS TO FORM:**  
Mike Feuer, City Attorney

**ATTEST:**  
Holly L. Wolcott, City Clerk

\_\_\_\_\_  
Michael Nagle      Date  
Deputy City Attorney

\_\_\_\_\_  
By                      Date

ORPAM



# FOREFLEET – CITY OF LA SWEEPER COVERAGE REPORTING

Feature specification - preliminary

Version 2



**FUELING YOUR BUSINESS FOR SUCCESS**

# 1 Overview

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Streets in City of LA are marked with times when there will be street sweeping. During this timeframe residents cannot park on the streets. If the cars are left parked during a street sweeping schedule, DOT (Department of transportation) parking officers issue parking tickets (using Conduent parking management system and terminals).

In order to ease the parking situation in City of LA the city wants to provide notifications to its subscribers (residents) when the street is cleaned and available for parking. The notifications will be sent to DOT officers also so that they don't issue tickets if the street sweeping is completed. These notifications will be generated by the City's systems based on sweeping data received from ForeFleet.

Orpak's responsibility in this solution – ForeFleet system shall provide the GPS data necessary by pushing updated data when street sweeping is completed using Section ID (the city streets are broken down into sections, usually between crossings, defined in the city GIS).

The solution should be based on the DPLs installed on the sweepers, and the system should report over API to the city servers the completion of sweeping by section.

## 2 Feature description

---

### 2.1 City of LA GIS data

Section GIS data will be retrieved from the city centerline layer as shapefile or KML at:

[http://geohub.lacity.org/datasets/d3cd48afaacd4913b923fd98c6591276\\_36](http://geohub.lacity.org/datasets/d3cd48afaacd4913b923fd98c6591276_36)

The section data will be imported into ForeFleet servers, to be used for the section sweeping reporting.

### 2.2 Section coverage monitoring

The system will monitor the sweeping coverage by section according to DPL location reporting and Broom status, based on the section GIS definitions.

As long as at least one of the brooms is down, the sweeper is considered to be sweeping.

Completion of a section is considered to be one pass of the section in either direction while in sweeping state all throughout the section.

Each instance of sweeping a section should be reported independently, i.e. if a sweeper sweeps a street on one direction and then back to the other direction, each will be considered one section covered.

## 2.3 Cancelled sections

The city might sometimes cancel planned sweeping route for a specific day. If a route is cancelled, all the associated section IDs have to be marked 'cancelled' for that day, so they can be reported as cancelled in queries by location as detailed below in 2.4.2.

Route cancellation will be reported at the beginning of the day if needed by the City. In order to do that, a new GUI tab will be added to the system, as well as a user permission to view this tab and manage the cancelled routes. The new tab will include a list of all existing sweeping routes with a checkbox next to each route. All cancelled routes will be checked and the user will submit the list. All sections associated with these routes will be marked 'cancelled' for the day.

The list of routes and associated sections will be stored in the system database. Each route will have a name and a list of associated Section IDs. This data will be provided by the City to Orpak in an agreed format (such as Excel spreadsheet) and will be loaded to the database. There will be no GUI to manage the route list, and if an update is required from time to time (assuming once every few months), an updated list will be provided to Orpak to be loaded into the database.

## 2.4 API reporting

### 2.4.1 City server API – Query by sweeper and time frame

The system API (SOAP web service) will provide the section coverage data per sweeper, to be used by the city's systems. It will report all sections completed per sweeper during a certain period of time.

The API request will specify the sweeper ID, start time and end time.

The data reported will be an XML which will include the following data per section covered:

- Section ID
- Device ID
- License plate
- Section start time – first sample in section
- Section end time – first sample outside the section (with or without broom)
- Direction

API specification will be provided by Orpak prior to implementation.

### 2.4.2 Parking officer terminal API – Query by location

Parking officers should be able to Query ForeFleet server over an API (SOAP web service) to get coverage status of a section for the current day (starting midnight local time).

There are around 600 terminals in the City which will need to get API access.

The Conduent terminal will send the Query with Address data. The address received will be geocoded by ForeFleet server using Google Maps online API. The address format provided in the query should be compatible with Google Maps API requirements to ensure successful geocoding ([https://developers.google.com/maps/fac#geocoder\\_queryformat](https://developers.google.com/maps/fac#geocoder_queryformat)).

Based on the address received, the server should determine the SectionID and reply with the following data:

- Section ID
- Coverage status – one of the following:
  - o Swept – In case at least one pass of section sweeping had been completed (in either direction) since the beginning of the day
  - o Cancelled – If the section was marked 'Cancelled' for the day
  - o Not Swept – If not swept nor cancelled

\* If a section is both cancelled and swept for the day it will be reported as cancelled.

## 2.5 Assumptions

- Maximum sweeper speed while sweeping is 10MPH.
- There is no crossing inside a section, i.e. a sweeper will enter or exit the section through its edges
- If the sweeper is switched off (ignition off) while sweeping a section, it will not be considered completed.
- The terminal API response should cover any section completed up to 60 seconds before the time of query. This performance is under the assumption of up to 14,000 sections covered per day (Assuming 70 sweepers active x 3 routes on average per sweeper x 60 average sections per route).
- Total number of routes is around 900.
- Total number of sections for the entire city is around 70,000.

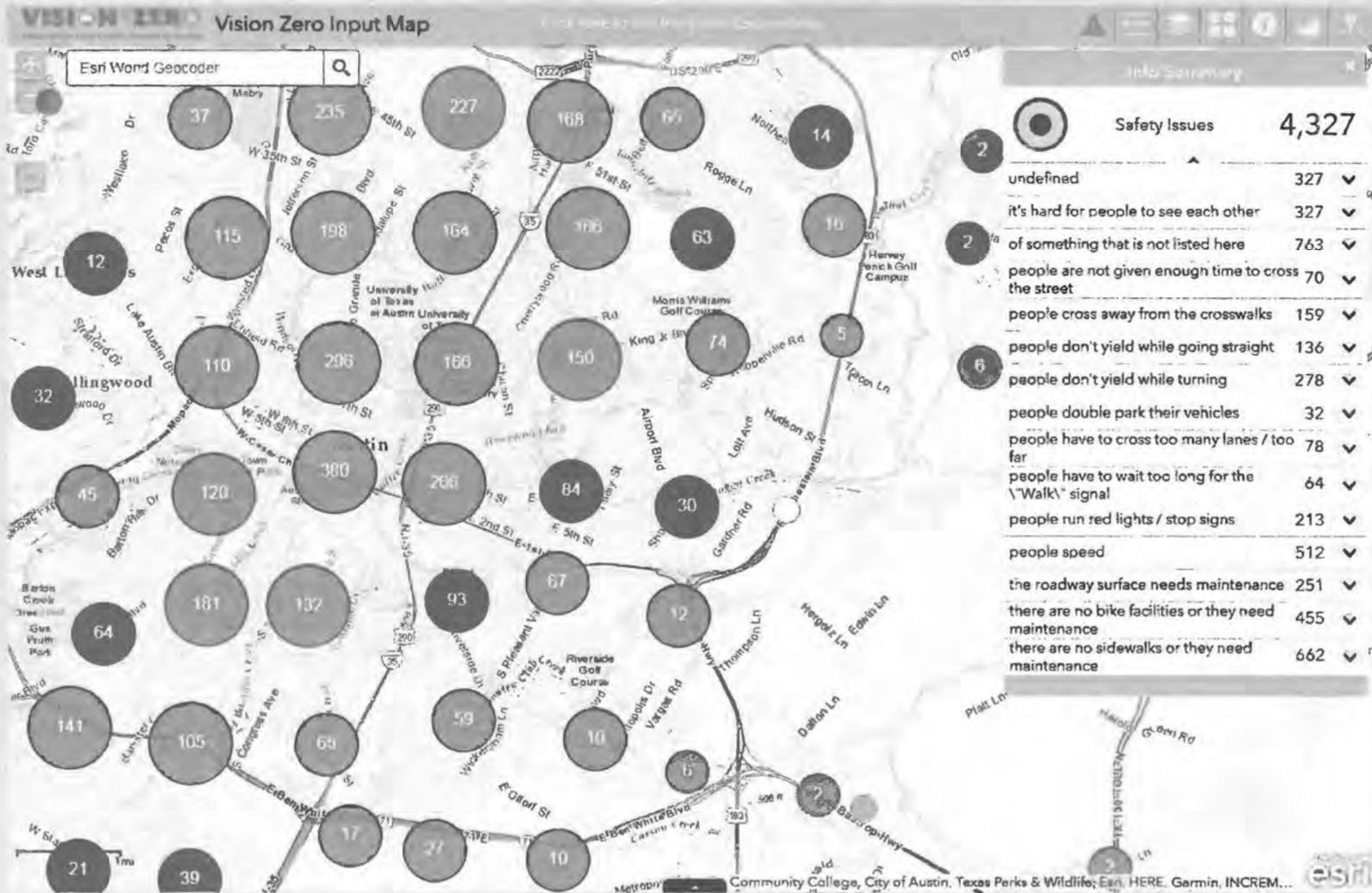
**Best Practice: City of New York  
Identifiers for New Tree Plantings**

NYC Parks foresters have distributed the following notifications to provide awareness of where planting is taking place:



- **I'M NEW Decal** – This sticker shows where a new tree is going to be planted in the sidewalk. The decal will be removed when the sidewalk is excavated for planting.
- **I'M NEW Flag** – This flag indicates a new tree planting in a lawn strip or an existing tree bed. If there is a stump located in the tree bed, it will be removed during the planting process.

### Best Practice: City of Austin Safety Reasons for All Users of the Street



**Best Practice: Flexipave**

"Flexi-Pave is made from recycled rubber, stone and a urethane binding agent, capable of supporting heavy vehicles. It is extremely porous (23%) and has the ability to clean the water that passes through by removing significant amounts (up to 90%+) of soluble phosphates and nitrates. This material is already used in several hundred cities."



### **Best Practice: City of Chicago Complete Streets**

"The City of Chicago's on-street bike network consists of over 225 miles of barrier protected bike lanes, buffer protected bike lanes, conventional bike lanes, marked shared lanes and neighborhood bike routes. The network of bike facilities is growing every year with the goal of providing residents and visitors the opportunity to feel comfortable riding a bike throughout the City. Chicago has a plan to build a continuous network of 645 miles of on-street bikeways throughout the City. The overall system consists of three smaller systems: Neighborhood Bike Routes that utilize residential streets, Crosstown Bike Routes that use collector and arterial roadways, and Spoke Routes that connect all corners of the City to Downtown."

<http://chicagocompletestreets.org/streets/bikeways/>

### **Best Practice: City of Paris Bike Highway**

The City of Paris is building a 28 mile dedicated network for bicycles to be completed by 2020 called the Réseau express vélo ("REVe"). It will include advance stop lines at red lights where cyclists are not stopped by car traffic or signals and two way bike lanes on one-way streets.



<https://www.citylab.com/transportation/2016/07/why-paris-is-building-highways-for-bikes/489341/>

**Best Practice: The Netherlands  
Advanced Warning System for Drivers**

A Dutch firm has pioneered technology to warn cars about approaching cyclists when paths may cross. "Radar trackers positioned along the road for the 50 meters leading up to the intersection measure the changing positions of cyclists and pedestrians, as well as cars. The trackers analyze the data continuously, estimating speed and time of arrival at the crossing. If there's a risk of collision, the LED lights lining the intersection will flash, warning cars to stop."

"...local traffic control can monitor the effects of BikeScout through an app, and the technology collects and stores data from the intersection, making it a useful tool for cities to consult when developing future infrastructure projects."



<https://www.heijmans.nl/en/bikescout/>

Quoted from CityLab: <https://www.citylab.com/transportation/2016/04/the-latest-in-cyclist-safety-a-light-up-intersection-in-the-netherlands/480051/>

**Best Practice: State of Massachusetts  
PAYT/SMART Programs (Pay-As-You-Throw/Save-Money-And-Reduce-Trash)**

"In a PAYT/SMART solid waste program, residents pay a per-unit fee for disposal of the solid waste that they generate. MassDEP has found that PAYT/ SMART is the most effective mechanism for encouraging real waste reduction at the municipal level. Most programs utilize pre-printed trash bags or stickers. The price of the bag or sticker reflects the cost to dispose of the waste. Residents are not charged a direct fee for recycling. As residents pay directly for the amount of trash they dispose, they have a financial incentive to reduce their waste through recycling, composting, and waste reduction. Some municipalities use the name "Save Money and Reduce Trash (SMART)," for their bag or sticker programs. Whether described as PAYT or SMART, unit-based pricing programs for municipal solid waste enable municipalities to simultaneously reduce waste tonnage disposed and more equitably distribute the cost of disposal among residents.

Within the 145 municipalities out of 352 overall in Massachusetts that have adopted this approach, (about 20% of the total households in the state) solid waste tonnage was reduced by 25-50% through a combination of increased recycling, diversion to reuse, repair, donation, composting, and other methods of disposal. In 2015, the average solid waste generated per household in PAYT/SMART municipalities was 1,092 lbs, only 64% of the 1,710 lbs per household average generated in municipalities without PAYT/SMART programs."

From U.S. Department of Transportation Publications Page on Pavement Utility Cuts

### Appendix A. Sample Degradation Fee Calculation

This appendix contains a sample method of computing the pavement degradation fee for the effect of utility cuts on the pavement structure. This calculation is comprised of four steps, calculating an appropriate degradation fee per unit area:

- Calculate the future cost of rehabilitation.
- Calculate the equivalent uniform annual cost (EUAC) of future rehabilitation for new design life.
- Calculate the value of the EUAC for remainder of original design period.
- Calculate the present value of the future EUAC.

*Step 1: Calculate the future cost of rehabilitation*

$$F_{\text{repair}} = P_{\text{repair}}(1 + i)^{N_{\text{RL}}} (1)$$

where:

$F_{\text{repair}}$  = future cost of  $P_{\text{repair}}$

$P_{\text{repair}}$  = present day pavement repair cost

$i$  = discount rate

$N_{\text{RL}}$  = number of years to end of service life, after cut is made

*Step 2: Calculate the equivalent uniform annual cost (EUAC) of future rehabilitation for new design life.*

(2)where:

$A$  = Annual cost of rehabilitation (over its design life) performed at end of current (adjusted) service life

$N_d$  = Design life of new rehabilitation

*Part 3: Calculate the value of the EUAC for remainder of original design period.*

(3)where:

$P_{\text{rehab}}$  = cost of portion of rehabilitation that will carry the pavement section to the end of the original design life

$L_L$  = lost life due to utility cut

*Part 4: Calculate the present value of the future EUAC.*

(4)where:

$P_{\text{rehab}}$  = Cost of rehabilitation earlier than expected

PLRC = Present value of future rehabilitation ( $P_{\text{rehab}}$ ) to carry pavement to end of original design life.

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**City of Chicago, Department of Transportation**

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**Office of Underground Coordination**

**Procedures and Requirements**

Members Guide



Monday, June 17, 2013

# City of Chicago, Department of Transportation

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# **OFFICE OF UNDERGROUND COORDINATION PROCEDURES AND REQUIREMENTS**

## **OVERVIEW**

The Office of Underground Coordination (OUC) is the distribution agency within the Chicago Department of Transportation, Division of Infrastructure Management, for all requests regarding utility information and the review/approval of construction work in or adjacent to the public way, including large projects with deep excavations and penetrations, such as foundations (piles, caisson, etc.), earth retention systems or major piping installations. The OUC is responsible for the protection of the City's surface and subsurface infrastructure from damage due to planned and programmed construction projects. These projects must be processed through the OUC, prior to the issuance of permits and construction start.

# OFFICE OF UNDERGROUND COORDINATION PROCEDURES AND REQUIREMENTS

## MISSION

To provide a forum for coordinating all construction activities in the Public Way which may directly or indirectly affect members of the Office of Underground Coordination who operate above ground and/or underground facilities.

## MEMBERSHIP (Open to:)

1. All governmental agencies who maintain above ground and/or underground facilities and/or are responsible for the maintenance or construction of surface facilities used by the traveling public.
2. All private utility companies which operated underground facilities within Chicago's corporate limits.
3. All private companies authorized to operate an underground plant for the purpose of providing a service to multiple users.

## Utilities providing technical review

### **City Departments**

Street and Sanitation  
-Bureau of Forestry

Transportation  
-Division of Infrastructure Management  
-Division of Engineering  
-Division of Project Development  
-Division of Electrical Operations  
-Red Light Camera section

Water Management  
Water Services  
Sewer Services

### **Private Utilities**

Peoples Gas  
ComEd  
AT&T Illinois (SBC)  
Looking Glass Networks  
JC Decaux  
Level 3 Communications  
Abovenet / Zayo

MCI  
RCN  
AT&T Local Network Services  
Comcast  
Lake Side Technology Center  
MDE/Thermal Chicago Corporation  
Sunesys

### **Governmental Agencies**

Chicago Transit Authority  
-Traffic Management  
-Facilities Maintenance

Chicago Park District  
Metropolitan Water Reclamation District (MWRD)

## **OFFICE OF UNDERGROUND COORDINATION PROCEDURES AND REQUIREMENTS**

### **PURPOSE**

**INFORMATION ONLY:** to act as a disseminating body for information which may be of use to the membership.

**INFORMATION RETRIEVAL:** to act as focal point for providing information of public way occupancy by members for any interested party.

**EXISTING FACILITY PROTECTION:** to act as authority to insure the satisfactory protection of a member's existing plant during major underground construction in and adjacent to the Public Way.

**CONSTRUCTION COORDINATION:** to act as lead agency in coordination of construction activities by members and private companies; to minimize damage to city surface and subsurface infrastructure through planned and programmed construction projects; to facilitate scheduling of planned improvements and to avoid location conflicts.

### **REVIEW CRITERIA**

**INFORMATION ONLY:** No formal review required. Information is for member's use. If the information results in any changes to a member's scheduling; this should be incorporated into the member's 5 year schedule of planned improvements and disseminated at the earliest possible periodic update meeting. Information will conform to the following criteria:

1. Activities or events affecting use of the public way.
2. Developments being planned which may affect a member's planning.

**INFORMATION RETRIEVAL:** The review consists of administrative action for each member to return the information requested to the Office of Underground Coordination. Information will relate to the location and description of existing facilities within portions of the Public Way.

**CONSTRUCTION COORDINATION:** The review consists of scheduling and updating the member's construction program to accommodate other member's planned activities. The intent is to provide a mechanism by which public way construction activities are integrated into a comprehensive project which will minimize disturbance to any portion of the Public Way. Information will include the following:

1. Governmental agency pavement reconstruction/resurfacing 5 year programs
2. Governmental agency viaduct and bridge reconstruction/repair 5 year programs. In addition, specific project details (except for above-ground repairs) will be sent for EXISTING FACILITY PROTECTION Review when they are available.
3. Each member's 5 year underground construction program schedule.
4. Specific project details on planned maintenance or rehabilitation of an existing public way

## **OFFICE OF UNDERGROUND COORDINATION PROCEDURES AND REQUIREMENTS**

facility having a length greater than 25ft. In addition, specific project details will be sent for EXISTING FACILITY PROTECTION review if the project also meets the criteria set forth.

5. Specific project details on all planned relocations or new construction. In addition, specific project details will be sent for EXISTING FACILITY PROTECTION Review if the project also meets the criteria set forth.

**EXISTING FACILITY PROTECTION:** The review consists of detailed engineering analysis by each member regarding the effect of a project on any member's existing facility. The intent is to assure that any affected member's protection requirements are resolved prior to any authorization by permit for construction in or adjacent to the Public Way. It is expected that some of the projects reviewed for Construction Coordination will also have to be reviewed by the members for Existing Facility Protection. Projects requiring this level of review shall conform to the following criteria:

- a. New installations or Relocations greater than two (2) feet from the existing facility which parallels traffic flow including all street intersection areas when an opening in the street pavement or into a vaulted sidewalk area is required.
- b. New installations or Relocations within alleys, parkway areas and under on-grade sidewalks when the depth of excavation is greater than eight (8) feet.
- c. Maintenance, Repair or Relocation within two (2) feet of an existing facilities involving excavations or earth retention system penetrations deeper than twelve (12) feet within the Freight Tunnel System Area which is bounded by Cermak Road, Halsted Street, Chicago Avenue and Lake Michigan.
- d. Maintenance, repairs or construction in existing vaults requiring demolition of or excavation beyond the existing floor, walls or roof.
- e. Exploratory Borings and Excavations deeper than twelve (12) feet within the Freight Tunnel System Area as defined above in item C. This is applicable to all public right-of-way and private property.

## **OFFICE OF UNDERGROUND COORDINATION PROCEDURES AND REQUIREMENTS**

Private Developments which have excavations, foundations or earth retention system penetrations deeper than twelve (12) feet below adjacent public way grade or when excavations deeper than four (4) feet extend beyond the development's property lines and into public way.

- f. Any project that requires issuance of a Harbor Permit which involves below-grade excavations or penetrations.
- g. New directional borehole installation under public ways and water ways; and under private property when penetration is deeper than 12 ft.
- h. Interior Freight Tunnel Construction.
- i. Excavation deeper than eight (8) feet when within eight (8) ft. of an existing Transportation Structure (i.e.: CTA "El", Viaduct, RR. Overpass, etc.); in this instance, the permit application must contain C.T.A., C.D.O.T., I.D.O.T., C&NW RR., etc.).

### **MEMBER PARTICIPATION/ REQUIREMENTS**

The OUC is made up of both city agencies and private entities which review construction documents to determine the effect these proposed projects will have on their existing facilities within the City of Chicago's Corporate limits. Any disruption, adjustments and/or relocation of their facilities, when affected, are reviewed, commented upon and authorized prior to OUC approval and permitting.

Each member agency shall designate the individual to review request processed through via the ChicagoOUC Electronic review site administered from:

30 N. LaSalle St., Suite 310  
Chicago, IL 60602  
Phone (312) 744-4828  
Fax (312) 742-3138

The following criteria/guidelines are prerequisites to the issuance of a public way opening permits. Without corroboration of completion of review by the Manager (or his designate) of the Office of Underground Coordination, a pavement-opening permit may not be issued.

**INFORMATION ONLY:** Each member agency shall designate the individual to receive this type of information. Appropriate information shall be given to agency's planning unit for inclusion in their 5-year Program if desirable from agency's viewpoint. No meetings will be held specifically to discuss this information; members shall integrate their findings into the 5-year Program scheduling update meetings.

## **OFFICE OF UNDERGROUND COORDINATION PROCEDURES AND REQUIREMENTS**

**INFORMATION RETRIEVAL:** Each member agency shall designate the individual to receive this type of request and who will be responsible for response. Every member shall return an electronic response via the ChicagoOUC Site along with the requested information (your agencies atlas plans, drawings showing any existing facilities) to the Office of Underground Coordination by the required date. Drawings can be attached to the site or hard copies sent to the OUC Administrative Office. No meetings will be held to discuss an INFORMATION RETRIEVAL Request.

**EXISTING FACILITY PROTECTION:** Each member agency shall designate the individual to receive this type of request and who will be responsible for response. Each member shall make an engineering analysis of the documents provided, and return an electronic response via the ChicagoOUC Site and requested detailed information to the Office of Underground Coordination by the required date. This information is being distributed to each member so that they are afforded an opportunity to obtain/secure protection for their existing property. If the response is not received by the required date, the Office of Underground Coordination will assume that the member has already made its own arrangements with the Constructor of the proposed project, and, will not attempt to resolve any conflicts. The required permits will be released as if that member's facility does not required protection. Meetings will only be held if enough members are affected to warrant full discussion by all interested members. Revisions to a member's 5 year program resulting from these types of reviews will be noted at monthly meetings held in regard to CONSTRUCTION COORDINATION.

**CONSTRUCTION COORDINATION:** Each member agency shall designate the individual responsible for initially preparing and submitting a 5-year Program Schedule to the Office of Underground Coordination. These schedules will be updated monthly by The Office of Underground Coordination so that utility work can precede pavement rehabilitation or construction. Periodic meetings (monthly or bi-monthly) will be held by the full OUC membership to update and revise the entire Infrastructure 5-year Program Schedules. Attendance by all members is mandatory as revisions by one member may affect all members. As construction contracts are awarded, the detail plans shall be transmitted through the Office of Underground Coordination either for additional Conflict Coordination or, if appropriate, for EXISTING FACILITY PROTECTION.

**NOTE:** Refer to "Agency Guide to Using the Transmittal and Review Form" documentation for Electronic Review Procedures.

**OFFICE OF UNDERGROUND COORDINATION  
PROCEDURES AND REQUIREMENTS**

**OPERATION COST – FEE STRUCTURE**

Each member is required to provide financial support for the day to day operation and management of the Office of Underground Coordination. Each member shall be billed annually (by the Chicago Department of Transportation (CDOT) for their proportionate share of the total operating cost (reflects salary of the Manager, plus overhead determined by the City).

The following table sets forth the proportionate share (percentage) of operating cost for each of the Members.

Executive Members	Proportionate share (percentage)
City of Chicago	20%
Peoples Gas	20%
AT&T- Illinois (SBC)	20%
ComEd	20%
Chicago Transit Authority	10%
MCI Metro (ATS)	5%
Comcast	5%

Associate Members	Proportionate share (percentage)
Associate Members	1 ½ % of Total Operational Cost

Associate members shall be responsible for 1 ½% of the total operating cost.  
(Average cost for Associate Members for 2012, including overhead = \$24,105.41)

**OFFICE OF UNDERGROUND COORDINATION  
PROCEDURES AND REQUIREMENTS  
APPLICATION**

---

**Company/Agency Name**

---

**Street Address**

**City**

**State**

**Zip**

---

**Representative (name)**

**Phone No.**

**Fax No.**

**Email address**

---

**Billing address & contact name if different from above**

---

**DEFINE ORGANIZATION (Check all that apply)**

**Utility Company**

**Telecommunications**

**Electric/Power/Gas**

**Governmental Agency**

**Private Facility Owner**

**Cable Company**

**State**  **City**  **County**

**Other** \_\_\_\_\_

---

**AGREEMENT:**

Applicant agrees upon acceptance as a member of the City of Chicago, Department of Transportation, Office of Underground Coordination (OUC) to execute and to be bound by all provisions of the OUC ("Membership Requirements and Responsibilities") applicable to the members, (as may be amended from time to time) and to abide by all applicable provisions set forth in the OUC Procedures. Applicant also agrees to pay all initial bills and fees commensurate with its status as a member of the OUC. Applicant also agrees, accepts and understands that failure to comply with any of the above may result in termination of membership in the OUC.

---

**SIGNATURE OF COMPANY/AGENCY/AUTHORITY**

---

**DATE**

---

**NAME OF COMPANY/AGENCY/AUTHORITY**

---

**TITLE**

OUC Members Guide.doc  
June 17, 2013

OUC Members Guide.doc - Rev 06/17/2013

# Rapid Innovation @ Los Angeles City Administrator's Office



July 24, 2017  
Lisa Gans  
@SmallifyLabs

APPENDIX F: RAPID INNOVATION LAB MATERIALS



Bet Small. Go Big. Fast.™

[www.smallify.it](http://www.smallify.it)

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**FIT**  
**CROSS-DEPT**  
**ROTATIONAL PROGRAM**



- **Table of Contents**
- **Lab Agenda**
- **Our Challenge**
- **The SMALLIFY Way**
- **Our Prototypes**
- **Next Steps & Recommendations**
- **Reading List + Contact**

2  
Division Level Mgr. 1  
and/or 1 below



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## Our (starting) challenge:

*“How might we break down barriers to enable and sustain high performing inter-departmental and intra-bureau programs?”*





# Agenda

- Intros, Goals and Context (THINK BIG)
- Adopting an Innovator's Mindset (FEAR LESS)
- Surface Key Insights (OPEN UP)
- Generate Ideas (SAY YES)
- Rapid Prototyping (MAKE STUFF)
- Design Experiments (BET SMALL)
- Final Presentations
- Next Steps, Reflection, and Close (GO BIG)



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## Our Method:

# SMALLIFY'S FIVE TOOLS OF RAPID INNOVATION™



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## FEAR LESS

### WHAT:

*Adopt a “growth mindset.” Experiment to learn.*

### WHY:

*A willingness to experiment, make mistakes and learn is a key trait of innovative leaders and organizations.*

### HOW:

*Learn from mistakes. Take the “Failure Bow” and move on.*



## OPEN UP

### WHAT

*Identify and understand unmet needs by engaging the people and places around you.*

### WHY

*The most important part of solving a problem is solving the **right** problem.*

### HOW

*Reframe your challenge around an unmet need in the form: “What can I create for [user] that helps her/him [need]?”*



**SAY  
YES**

## **WHAT**

*Get into a creative space and mindset to generate a wide range of possible solutions to your challenge.*

## **WHY**

*Saying yes removes the blockers that can stifle innovative thinking.*

## **HOW**

*If you're stuck on a problem, use "yes, and" or adopt a different point of view: "How would [famous person] solve my problem?"*



**MAKE  
STUFF**

**WHAT**

*Bring your idea to life in a tangible, visual form quickly and affordably.*

**WHY**

*Rapid prototypes let you to test your idea for quick validation with users without spending a lot of time and resources.*

**HOW**

*In 15 minutes, draw a storyboard of your idea and how people will experience it. Show it to potential users for fast feedback.*



## WHAT

*Create and commit to a low risk experiment to discover, develop, and test an idea.*

## WHY

*Small bets give us permission to move insights into action, to move from ideas to innovation.*

## HOW

*Define what's "affordable loss" to you. Ask yourself, "What can I do 'on Monday' to test my idea with the resources I have?"*

# Lab Work Product: Initial Prototypes and Key Insights

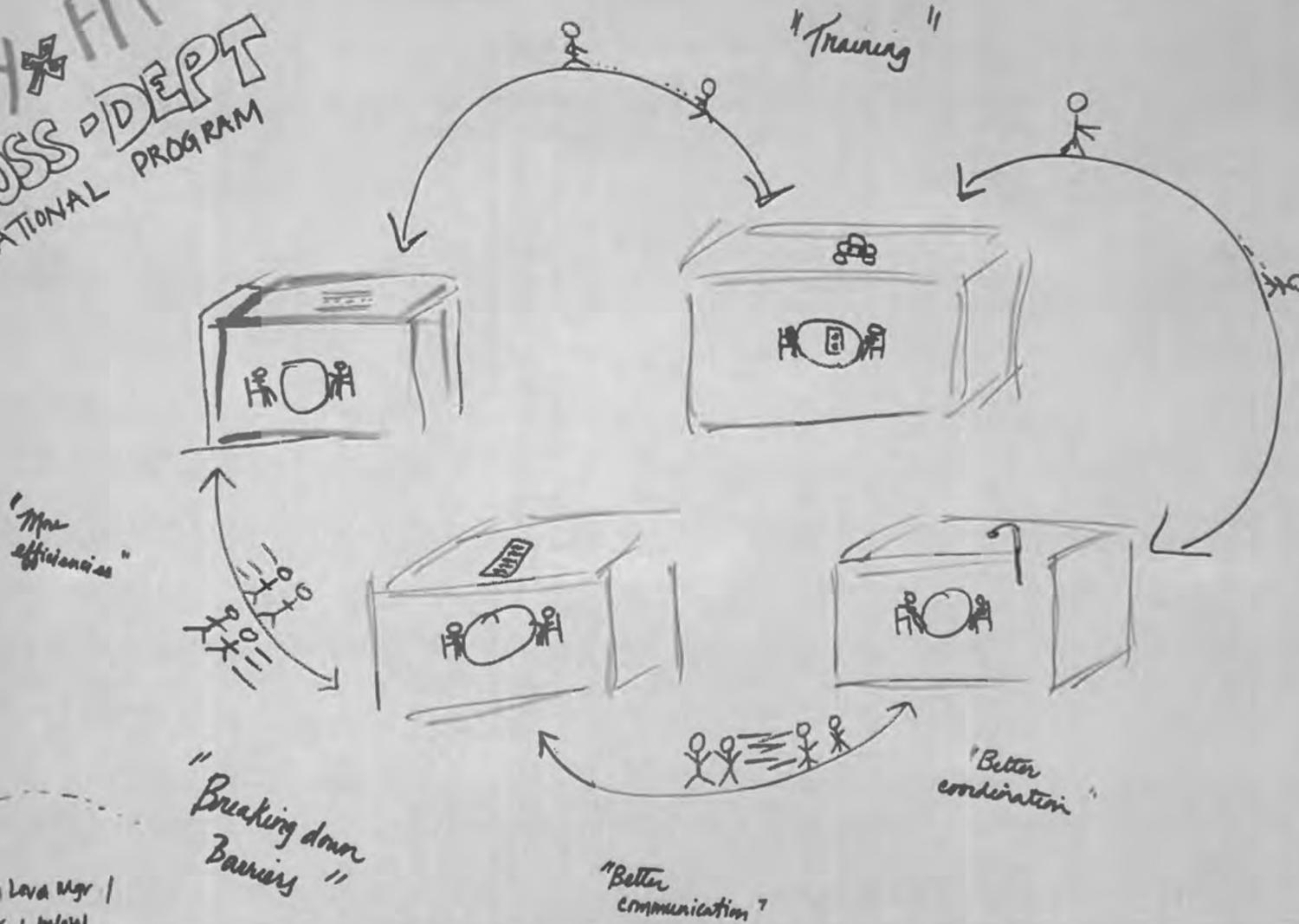
*View prototype videos [here](#).*



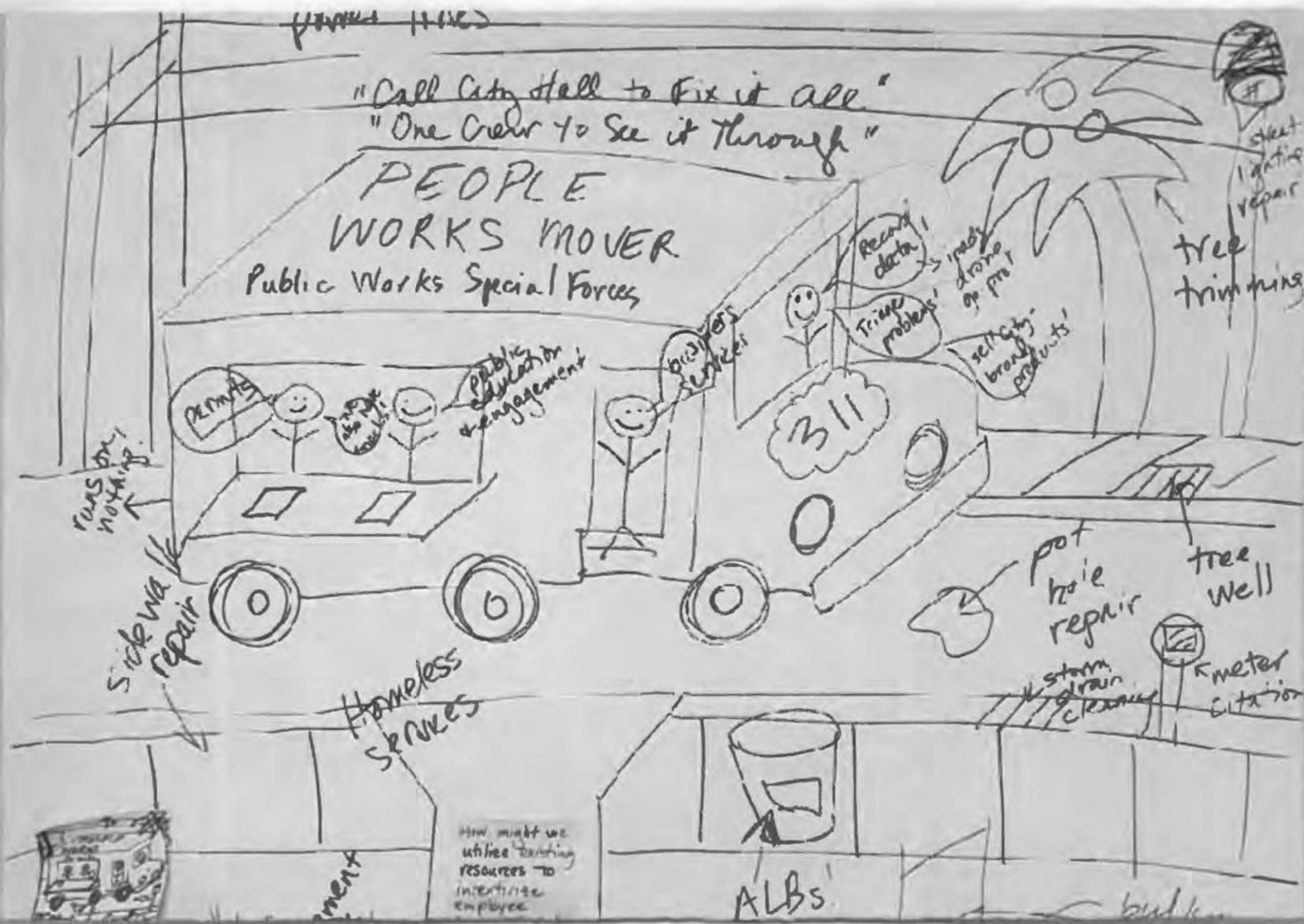
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# CITY X FIT GROSS-DEPT ROTATIONAL PROGRAM



**City X Fit: Cross-Department Rotational Program**



**People Works Mover - Public Works Special Forces:  
"Call City Hall to Fix it All - One Crew to See it Through"**



**Round Table LA: Teaming Up to Go Back to Basics**







- Different locations, workouts, times  
 - BREAKING DOWN SILOS  
 - SHARE GOALS

- ① INSTAGRAM
- ② YOUTUBE
- ③ CHANNEL 35
- ④ TWITTER
- ⑤ FACE BOOK

- ④ BREAKING DOWN SILOS THROUGH FITNESS
- \* WELLNESS PROGRAM

City Mommy Exercise	City Work out program
Bring people together	Multiple Media platforms

**LA Fit - Fitness Integrated Team: "Working it out together"**

# **Small Bets: Moving Insights Into Action**

## *(What will we “do on Monday?”)*

- **Review, prioritize and select one or more concept solutions prototyped during the lab (or new ideas not yet prototyped) to develop further. Launch a project team to develop and test assumptions with target customers.**
- **Make small bets! Execute the small bets identified in each team’s prototype. The goal of “small bets” in short testing cycles is to produce “small wins” to move insights into action and to highlight these wins to build momentum.**
- **Develop next-resolution prototypes and begin testing with your target users and stakeholders over the next 30 days to validate your assumptions.**
- **Schedule 30-day check-in cycles to review progress from your small bets. Be disciplined and keep to this schedule. At each checkin, validate assumptions, iterate the design, and test again until you’ve found a solution your customer loves.**
- **Continue to build internal capacity for rapid innovation skills, tools and mindsets through additional labs and/or training and certification in rapid innovation methods.**



Bet Small. Go Big. Fast.™

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# What We're Reading



**IT'S NOT HOW GOOD YOU ARE, IT'S HOW GOOD YOU WANT TO BE.**

The world's best selling book by **PAUL ARDEN.**

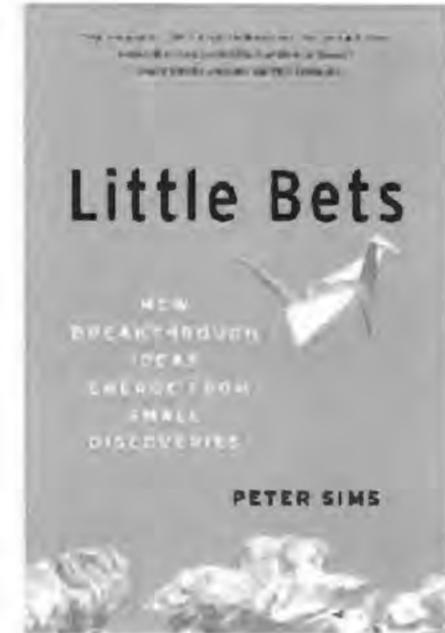
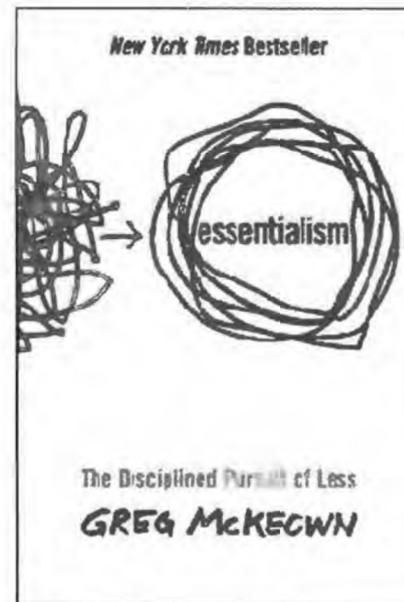
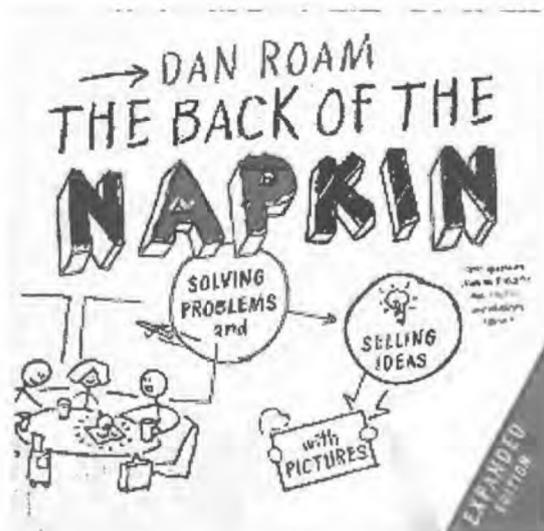
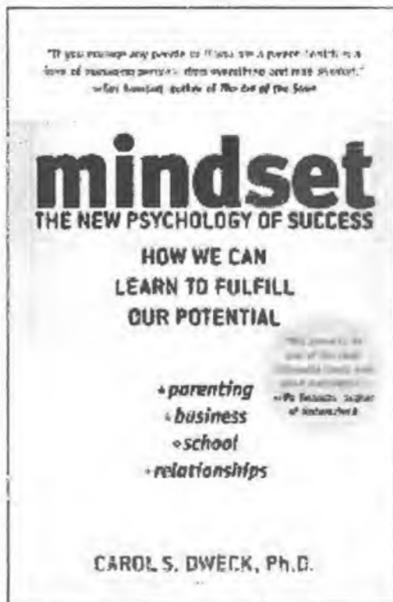
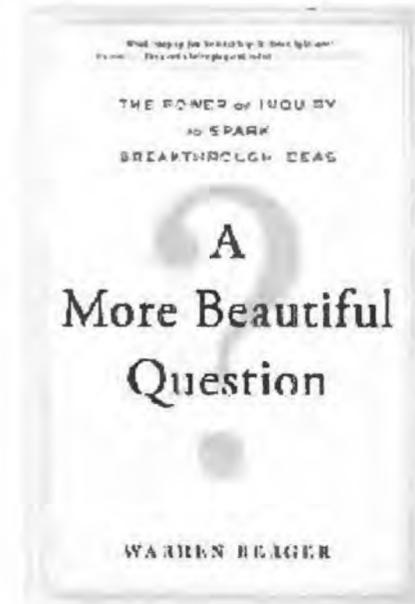
PHAIDON

**improv wisdom**



Don't Prepare. Just Show Up.

Patricia Ryan Madson



A black and white photograph of the Space Shuttle Columbia during launch. The orbiter is attached to the external tank and solid rocket boosters. The orbiter's nose is visible, with the letters 'S A' on it. An American flag is on the side of the orbiter. The orbiter is surrounded by a complex network of scaffolding and support structures. The background is a bright, hazy sky.

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