0150-10464-0004

TRANSMITTAL

TO	DATE	COUNCIL FILE NO.
The City Council	08/20/21	15-1313
FROM		**COUNCIL DISTRICT**
The Mayor		--

Seventeenth Amendment to Contract No. C-123897
between the City of Los Angeles and Motorola Solutions, Inc.
for Maintenance and Support of the LAPD Computer-Aided Dispatch System

Transmitted for further processing. See the
City Administrative Officer report attached.

MAYOR
(Rich Llewellyn for)

RHL:TM:04210159

CAO 649-d

Report From
OFFICE OF THE CITY ADMINISTRATIVE OFFICER
Analysis of Proposed Contract

($25,000 or Greater and Longer than Three Months)

To: The Mayor	Date: 07-20-21	C.D. No. --	CAO File No.: 0150-10464-0004
Contracting Department/Bureau: Los Angeles Police Department (LAPD)		Contact: James Aceron, (213) 486-0378	
Reference: Board of Police Commissioners transmittal dated May 13, 2021; referred for report May 18, 2021; supplemental information received June 16, 2021.			
Purpose of Contract: The proposed Seventeenth Amendment with Motorola Solutions, Inc. would extend the Agreement for approximately ten months to February 28, 2025 and add $5,970,842.50 for the maintenance and support of the LAPD PremierOne Computer-Aided Dispatch system.			
Type of Contract: ( ) New contract (x) Amendment, Contract No. C-123897		Contract Term Dates: May 8, 2014 – February 28, 2025	
Contract/Amendment Amount: $35,019,331.20 Proposed amount $5,970,842.50 + Prior award(s) $29,030,015.05 = Total $35,000,857.55; an additional $18,473.65 of unfunded Contingency Spending Authority remains available for a total potential compensation amount of $35,019,331.20.			
Source of funds: General Fund.			
Name of Contractor: Motorola Solutions, Inc. Address: 6450 Sequence Drive, San Diego, CA 92121			

	Yes	No	N/A	Contractor has complied with:	Yes	No	N/A
1. Council has approved the purpose	x			8. Business Inclusion Program	x		
2. Appropriated funds are available	x			9. Equal Benefits & First Source Hiring Ordinances	x		
3. Charter Section 1022 findings completed			x	10. Contractor Responsibility Ordinance	x		
4. Proposals have been requested			x	11. Disclosure Ordinances	x		
5. Risk Management review completed	x			12. Bidder Certification CEC Form 50		x	
6. Standard Provisions for City Contracts included	x			13. Prohibited Contributors (Bidders) CEC Form 55		x	
7. Workforce that resides in the City: 0%				14. California Iran Contracting Act of 2010	x		

RECOMMENDATIONS

That the City Council, subject to approval by the Mayor, authorize the Chief of Police, or his designee, to:

1. Retroactively authorize and execute Amendment Sixteen to Contract No. 123897, a Master Services Agreement (MSA) between the Los Angeles Police Department (LAPD) and Motorola Solutions, Inc. (Contractor), for the purpose of authorizing the use of $2,497,555 of the Contingency Spending Authority for costs to install computers and related communications equipment in 1,800 patrol vehicles and to extend the term of maintenance for the 9-1-1 Telephony Recording System from January 1, 2020 to December 31, 2021; and,

2. Execute the Seventeenth Amendment to Contract No. C-123897, a Master Services Agreement (MSA) between the LAPD and Contractor, for the purpose of adding $5,970,842.50 to maintain the PremierOne Computer-Aided Dispatch system and extend the term of the contract an additional ten months from the initial term date of May 8, 2014 to February 28, 2025, subject to the review and approval by the City Attorney as to form.

Tyler Munhall			
TJM	Analyst	04210016	City Administrative Officer

SUMMARY

The Los Angeles Police Department (LAPD) requests authority to execute the Seventeenth Amendment to Contract No. C-123897 between the City of Los Angeles and Motorola Solutions, Inc. to maintain and support the PremierOne Computer-Aided Dispatch (CAD) system and extend the term of the contract an additional ten months for a new term of May 8, 2014 to February 28, 2025. Additionally, retroactive approval of Amendment Sixteen to the contract is recommended inasmuch as the Department inadvertently executed the Amendment, which utilized $2,497,555 of the Contingency Spending Authority (CSA), without approval from the Budget and Finance Committee as previously stipulated by that Committee when utilizing the CSA. The Department reports that the LAPD and Port of Los Angeles CAD systems and the Land Mobile Radio system will continue in operation for the foreseeable future; therefore, it will be necessary to continue to utilize the services of the Contractor going forward due to the proprietary nature of these systems. This Office finds that the proposed Amendment qualifies for exemption from the contractual services policy in the Mayor's Fiscal Year 2020-21 Cost Containment Measures memo dated June 24, 2020, as the services provided through this Amendment are essential to public health and safety. LAPD reports that the Contractor has complied with all standard provisions for City contracts.

BACKGROUND

On April 25, 2014, the Mayor authorized the LAPD to negotiate and execute a Master Services Agreement (MSA) with the Contractor to allow for the purchase, on an as-needed basis, of technical services consisting of field engineering; communications system design; system upgrade or expansion; project management; system technologist; field service; installation, programming, maintenance and support; and other services associated with the LAPD's various communication systems, including the Computer-Aided Dispatch (CAD) system, Geofile, Voice Radio Systems (VRS), Data and Dispatch Radio Systems, handheld and mobile radios, and the Automated License Plate Recognition (ALPR) system. Because Contractor possesses proprietary information and technology specific to the Department's radio systems and equipment, the LAPD requested, and the City Attorney approved, the MSA as a sole-source contract. As such, the MSA serves as an umbrella agreement to be utilized when the LAPD requires services from the Contractor for a particular project that meets the description/scope of the MSA. Since the original MSA was for a term of three years (May 8, 2014 to May 7, 2017) and for an amount of less than the annually adjusted contract exemption limit, Council approval was not required.

Subsequently, the Council accepted and authorized grant funding from the 2011 and 2012 Urban Areas Security Initiative (UASI) Grant Program which increased funding for the MSA to $1,793,391 (C.F. 14-1749). On December 15, 2015, the Council approved the extension of the contract term to five years (May 8, 2014 through May 7, 2019) and the implementation of a CSA of $6.0 million for future expenses, contingent upon LAPD submitting a written report to the Council's Budget and Finance Committee with a detailed description of the projects and the required funding from the CSA. On March 18, 2016, the LAPD reported to Council that it would utilize $2.87 million of the CSA to upgrade 9-1-1 Telephony Recorders ($1.49 million) and the CAD system ($1.38 million), which left $3.13 million of CSA for undetermined future projects to be requested at a later date (C.F. 15-1313).

Contract Amendment History

A chronological history of the service agreement amendments with Motorola Solutions, Inc. is provided in a table on the following page.

Motorola Solutions, Inc. Contract Amendment History

Amendment	Date Executed	Purpose	Amount	Remaining Contingency Spending Authority
First	3/17/2014	Added funds to update the 9-1-1 Dispatch Center's geofile system and provide ongoing maintenance.	$60,000	$0.00
Second	04/02/2015	Added funds to support the Voice Radio System Upgrade Project by adding Dynamic System Resilience back-up for geographic redundancy of the radio core.	$86,951.08	$0.00
Third	04/21/2015	Added U.S. Department of Homeland Security grant funds to upgrade and repair the LAPD Radio Base System (C.F. 14-1749).	$1,646,439.92	$0.00
Fourth	12/1/8/2015	Added funding for installation of communications equipment in the Northeast Area station and added the $6.0 million CSA (C.F. 15-1313).	$261,515	$6,000,000
Fifth	3/30/2016	Utilized CSA for the telephony logging recorder system (C.F. 15-1313).	$1,489,436	$4,510,564
Sixth	3/30/2016	Utilized CSA for the Computer-Aided Dispatch system (C.F. 15-1313).	$1,382,422	$3,128,142
Seventh	5/9/2016	Added U.S. Department of Homeland Security grant funds to install Automated License Plate Recognition systems in LAPD vehicles (C.F. 14-0820).	$52,800	$3,128,142
Eighth	6/15/2016	Administrative changes.	-	$3,128,142
Ninth	9/28/2016	Administrative changes.	-	$3,128,142
Tenth	3/9/2018	Utilized CSA to implement an interface for the CAD and Records Management System; to provide onsite support; and to perform CAD network engineering, integration, testing, and support (C.F. 15-1313).	$299,794.35	$2,828,347.65
Eleventh	10/29/2018	Utilized CSA to implement interfaces between the Records Management System and the Telogis System which collects driving data from Police vehicles. (C.F. 15-1313)	$58,208	$2,770,139.65
Twelfth	4/24/2019	Added Port of Los Angeles funds for implementation of a CAD and RMS for the Port Police which will interface with LAPD-related systems (C.F. 15-1313).	$2,755,782	$2,770,139.65
Thirteenth	10/17/2019	Extended term of the Agreement for five years. Utilized CSA to add PremierCAD On-site System Administrator from January 1, 2019 to May 31, 2019 (C.F. 15-1313).	$254,111	$2,516,028.65
Fourteenth	3/19/2020	Added Port of Los Angeles funds to install, upgrade, and migrate the Harbor District public safety radio system to a 700MHz system (C.F. 15-1313).	$16,571,878.70	$2,516,028.65
Fifteenth	6/8/2020	Added U.S. Department of Homeland Security grant funds to upgrade the LAPD's radio system (C.F. 18-0397).	$1,613,122	$2,516,028.65

Sixteenth	06/09/2020	Utilized CSA to install computers and related equipment into 1,800 patrol vehicles and extend the term of support and maintenance of the 9-1-1 Telephony Recording System from January 1, 2020 to December 31, 2021. Council approval pending.	$2,497,555	$18,473.65

FISCAL IMPACT STATEMENT

Approval of the recommendations in this report will increase contract funding from the General Fund by $8,468,397.50, consisting of $2,497,555 for the Sixteenth Amendment and $5,970,842.50 for the Seventeenth Amendment. Partial funding for the Motorola Solutions, Inc. contract amendments has been provided from Fiscal Years 2019-20 ($2,497,555); 2020-21 ($1,759,510.50); and 2021-22 ($1,360,689) in the Department's Contractual Services account. The remaining amount to be funded ($2,850,643) is anticipated to be funded in Fiscal Years 2022-23 ($1,403,178) and 2023-24 ($1,447,465). Should funding in the contract out years not be appropriated to the Department, the provisions of Contract Section 3.E., *Compensation and Method of Payment, Limitation of City's Obligation to Make Payments to Contractor,* protects the City from any claims by the Contractor for payment until the City makes an appropriation of funds for such work.

FINANCIAL POLICIES STATEMENT

The recommendations in this report comply with the City's Financial Policies in that contract expenditures will be limited to the use of approved budgeted funds.

RHL:TJM:04210159

Attachment

AGENDA DATE: MAY 11, 2021

OPEN SESSION

3H

DEPARTMENT'S REPORT dated May 5, 2021 relative to a request for approval of the seventeenth amendment to the contract between City of Los Angeles and Motorola Solutions, Inc. for services and equipment for the Department's 9-1-1 dispatch and radio systems, as set forth. [BPC #21-092]

Recommendation(s) for Board Action:

APPROVE the Department's report and TRANSMIT to the Mayor.

Commissioner Decker moved, seconded by Commissioner Briggs to APPROVE the Department's report and TRANSMIT to the Mayor.

Unanimously adopted by a vote of 5/0

LOS ANGELES POLICE COMMISSION

EXECUTIVE OFFICE
POLICE ADMINISTRATION BUILDING
100 WEST FIRST STREET, SUITE 134
LOS ANGELES, CA 90012-4112

(213) 236-1400 PHONE
(213) 236-1410 FAX
(213) 236-1440 TDD

May 13, 2021

BPC #21-092

The Honorable Eric Garcetti
Mayor, City of Los Angeles
City Hall, Room 303
Los Angeles, CA 90012

Attention Heleen Ramirez

Dear Honorable Mayor:

RE: APPROVAL OF SEVENTEENTH AMENDMENT TO THE CONTRACT BETWEEN CITY OF LOS ANGELES AND MOTOROLA SOLUTIONS, INC.

At the regular meeting of the Board of Police Commissioners held Tuesday, May 11, 2021 the Board APPROVED the Department's report relative to the above matter.

This matter is being forwarded to you for acceptance.

Respectfully,

BOARD OF POLICE COMMISSIONERS

Maria Silva

MARIA SILVA
Commission Executive Assistant

Attachment

c: Chief of Police

INTRADEPARTMENTAL CORRESPONDENCE

RECEIVED
MAY 06 2021
POLICE COMMISSION

May 5, 2021
3.5

TO: The Honorable Board of Police Commissioners

REVIEWED RICHARD M. TEFANK, EXECUTIVE DIRECTOR **DATE** 5/6/21

FROM: Chief of Police

SUBJECT: REQUEST FOR APPROVAL OF THE SEVENTEENTH AMENDMENT TO THE CONTRACT BETWEEN THE CITY OF LOS ANGELES AND MOTOROLA SOLUTIONS, INC.

RECOMMENDED ACTIONS

1. That the Board of Police Commissioners (Board) REVIEW and APPROVE the attached Seventeenth Amendment between the City and Motorola Solutions, Inc.
2. That the Board TRANSMIT the Seventeenth Amendment to the Office of the Mayor for review and approval, and transmission to the City Council.
3. That the Board AUTHORIZE the Chief of Police to execute the Seventeenth Amendment upon Mayoral approval.

DISCUSSION

On May 8, 2014, the City and Motorola Solutions, Inc. (Contractor) entered into Contract No. C-123897 to provide the Los Angeles Police Department (LAPD) with services and equipment for its 9-1-1 dispatch and radio systems. Under the Sixth Amendment, the City purchased the PremierOne Computer Aided Dispatch System (P1CAD System), which is used to dispatch patrol units to 9-1-1 calls. This Seventeenth Amendment will provide the spending authority to pay $5,970,842.50 for these support and maintenance services, which were approved under the Sixth Amendment, for five years, commencing March 1, 2020 and ending February 26, 2025. This amount is authorized in the City's budget on an annual basis, so no additional funding is requested. Due to the current fiscal crisis, the Contractor provided the City a fifty percent discount for the first year of maintenance and support.

Should you have any questions concerning this request, please contact Police Administrator II Thom Brennan, Commanding Officer, Fiscal Group, at (213) 486-8590.

Respectfully,

for
MICHEL R. MOORE
Chief of Police

Attachment

BOARD OF POLICE COMMISSIONERS
Approved By May 11, 2021
Secretary Maria Lira

INTRADEPARTMENTAL CORRESPONDENCE

May 5, 2021
3.5

TO: Chief of Police

FROM: Commanding Officer, Fiscal Group

SUBJECT: REQUEST FOR APPROVAL OF THE SEVENTEENTH AMENDMENT TO THE CONTRACT BETWEEN THE CITY OF LOS ANGELES AND MOTOROLA SOLUTIONS, INC.

It is requested that the Chief of Police review, approve, and transmit to the Board of Police Commissioners for review and approval the attached Seventeenth Amendment to Contract No.C-123897 between the City of Los Angeles (City) and Motorola Solutions, Inc. (Contractor), for maintenance and support for the PremierOne Computer Aided Dispatch System (P1CAD).

On May 8, 2014, the City and Contractor entered into Contract No. C-123897 to provide the Los Angeles Police Department (LAPD) with services and equipment for its 9-1-1 dispatch and radio systems. Under the Sixth Amendment, the City purchased the PremierOne Computer Aided Dispatch System (P1CAD System), which is used to dispatch patrol units to 9-1-1 calls. This Seventeenth Amendment will provide the spending authority to pay $5,970,842.50 for these support and maintenance services, which were approved under the Sixth Amendment, for five years, commencing March 1, 2020 and ending February 26, 2025. This amount is authorized in the City's budget on an annual basis, so no additional funding is requested. Due to the current fiscal crisis, the Contractor provided the City a fifty percent discount for the first year of maintenance and support.

Should you have any questions concerning this request, please contact Senior Management Analyst II James T. Aceron, Officer in Charge, Contracts Section, Fiscal Group, at (213) 486-0112.

THOM BRENNAN, Police Administrator II
Commanding Officer
Fiscal Group

Attachments

SEVENTEENTH AMENDMENT TO CONTRACT NUMBER C-123897
BETWEEN
THE CITY OF LOS ANGELES
AND
MOTOROLA SOLUTIONS, INC.

This is the SEVENTEENTH AMENDMENT to Contract Number C-123897 between the City of Los Angeles, a Municipal Corporation, ("City"), acting by and through the Los Angeles Police Department, ("LAPD"), and Motorola Solutions, Inc., a Delaware Corporation, ("Motorola" or "Contractor").

RECITALS

WHEREAS, on May 8, 2014, the City and the Contractor entered into Contract No. C-123897 ("Original Agreement") for services; and

WHEREAS, Section 2.4 of the Original Agreement allows other City departments, including the Information Technology Agency, ("ITA"), to use the Original Agreement to make purchases of services as an "Eligible Purchaser"; and

WHEREAS, Section 5.1 of the Original Agreement provides for amendments; and

WHEREAS, the First Amendment provided for an upgrade of the LAPD's Geofile system for the 9-1-1 Dispatch Center and added a contract ceiling amount of $60,000.00; and

WHEREAS, the Second Amendment provided for a part of the upgrade of the LAPD's radio system utilizing general fund monies and increased the contract ceiling by $86,951.08 for a total of $146,951.08; and

WHEREAS, the Third Amendment provided for the balance of the upgrade of the LAPD's radio system utilizing grant fund monies and increased the contract ceiling by $1,646,439.92 for a total of $1,793,391.00; and

WHEREAS, the Fourth Amendment provided for communications equipment to be installed at the new Northeast Area station and increased the contract ceiling by $261,515.00 for a total of $2,054,906.00, provided for a $6,000,000.00 contingency fund for future projects related to Scope of Agreement of the Original Agreement, increasing the total contract ceiling to $8,054,906.00, and extended the term of the Original Agreement by two years through May 7, 2019; and

WHEREAS, the Fifth Amendment provided for the purchase of logging equipment and services related to LAPD's communications system, utilizing $1,489,436.00 from the contingency fund; and

WHEREAS, the Sixth Amendment provided for the upgrade of the LAPD's Computer-Aided Dispatch (CAD) system to the PremierOne CAD (P1CAD) and the purchase of the Premier Mobile Data Computer (PMDC), utilizing $1,382,422.00 from the contingency fund; and

WHEREAS, the Seventh Amendment provided for the payment of certain services to install additional Automated License Plate Recognition (ALPR) Systems in multiple LAPD vehicles for an amount not to exceed $52,800.00 in grant funds awarded by the U.S Department of Homeland Security and administered by the City through its Mayor's Office of Homeland Security and Public Safety; and

WHEREAS, the Eighth Amendment provided for further articulation of the existing scope of the Sixth Amendment and added a Deliverable and Payment Schedule for the work being performed under the Fifth Amendment; and

WHEREAS, the Ninth Amendment provided for the integration of the Statement of Work from the Eighth Amendment and hardware being purchased for this project through a separate City agreement into a single, integrated document and eliminated much of the cross referencing between the two (2) documents; and

WHEREAS, the Tenth Amendment restated some parts of Exhibit 2 of the Eighth Amendment entitled "PremierOne CAD/PMDC Project, Statement of Work"; provided for the payment of $50,233.00 and detailing the responsibilities, statement of work, pricing, and terms and conditions associated with implementing interfaces to the Niche Records Management System (RMS); and provided for the scope of work, time estimate and payment schedule of $157,346.35 for PremierCAD onsite support; and

WHEREAS, the Eleventh Amendment provided for the payment of $58,208.00 and detailing the responsibilities, statement of work, pricing, and terms and conditions associated with implementing interfaces to the Telogis System; and

WHEREAS, the Twelfth Amendment allowed the Los Angeles Port Police to include the provision of and payment for the mission critical P1CAD system and the Records Management System ("RMS") which will have improved features, functionality and performance, including integration with the LAPD, upon terms more fully set forth in the Master Service Agreement and the Twelfth Amendment, for a compensation amount not to exceed $2,755,782.00 in Harbor Department Capital Improvement Project Funds; and

WHEREAS, the Thirteenth Amendment was entered into to extend the term of the Agreement for an additional five-year period, through May 7, 2024; adding a PremierCAD On-site System Administrator from January 1, 2019 to May 31, 2019; amending the Scope of Work for P1CAD/PMDC Project and provided for a compensation amount not to exceed $254,111.00 in from the contingency fund for the work completed under this Amendment; and

WHEREAS, the Fourteenth Amendment allowed the Los Angeles Port Police to include the provision of and payment for the installation, upgrade and activation of the public safety radio system within the Harbor District to a 700MHz system for $16,571,878.70 in Harbor Department funds; and

WHEREAS, the Fifteenth Amendment provided for the upgrade of the LAPD's radio system utilizing grant fund monies and increased the contract ceiling by $1,613,122.00 for a total of $29,048,488.70; and

WHEREAS, the Sixteenth Amendment provided for the installation by Motorola of Intel NUC-style Computers/CPUs, Panorama antennas, Sierra Wireless modems, and related cabling into one thousand eight hundred (1,800) standard patrol vehicles (excludes command vehicles, vans, and trucks) and provided for the continued maintenance of the LAPD's 9-1-1 telephony recording system (NICE Logger), which was purchased under the Fifth Amendment to the Original Agreement; and

WHEREAS, the City and the Contractor desire that the Original Agreement be amended to allow for the Contractor to provide for the Yearly Maintenance/Support Services for the P1CAD/PDMC System, which was purchased under the Sixth Amendment; and

WHEREAS, this Amendment is necessary and proper to complete the activities specified herein under the Original Agreement; and

NOW THEREFORE, the City and the Contractor agree that the Agreement be amended as follows:

1. Exhibit 1 of the Ninth Amendment entitled "LAPD PremierOne CAD/PDMC Project, Proposal for CAD Migration" is hereby amended in its entirety and restated as Attachment 17A of this Seventeenth Amendment, which is attached hereto.

   A. Of the total amount of compensation included in Section 3.1 of the Original Agreement as amended by Section 3 below, the City will pay the Contractor for full and satisfactory performance of the Yearly Maintenance/Support Services set forth in Section 7.4 of Attachment 17A of this Seventeenth Amendment to the Master Service Agreement an amount not to exceed Five Million Nine Hundred Seventy Thousand Eight Hundred Forty-Two dollars and fifty cents ($5,970,842.50), inclusive of all local, state and federal taxes.

   B. The City will pay, upon execution of this Seventeenth Amendment, the Annual Service Fee for Year 1 and Year 2 of Maintenance/Support as set forth in Attachment 17A, Section 7.4. A breakdown of the Annual Service Fee for each Maintenance Period is provided in Attachment 17A, Section 7.4. Contractor will provide

City with written notice of, and an invoice for, the Annual Service Fees due for each subsequent Maintenance Period at least sixty (60) days prior to the expiration of the then-current Maintenance Period.

C. Payment of the Annual Service Fee entitles City to the services described in this Contract for the associated Maintenance Period. Failure of the Contractor to deliver the goods or services paid for in advance shall constitute a material breach of this Contract under which the City may immediately suspend or terminate this Contract pursuant to Section 4 of the Original Agreement.

2. Changes to Term of Agreement

Section 2.1 – Term of Agreement is hereby modified as follows:

The term of this Agreement shall be from May 8, 2014 through February 28, 2025. Said term is subject to the termination provisions contained in Section 4 of the Original Agreement.

3. Compensation and Method of Payment

Section 3.1 – Compensation, is hereby modified as follows:

A. City shall pay to Contractor as compensation for complete and satisfactory performance of the terms of this Agreement, an amount not to exceed Thirty-Five Million Nineteen Thousand Three Hundred Thirty-One Dollars and Twenty Cents ($35,019,331.20), including state and local taxes.

B. Of the total amount of compensation included in Section 3.1 (A) above, the City will pay the Contractor for services to be performed and tasks to be implemented as specified in Attachment 17A of the Seventeenth Amendment, if satisfactorily performed in accordance with the terms of this Agreement, an amount not to exceed Five Million Nine Hundred Seventy Thousand Eight Hundred Forty-Two Dollars and Fifty Cents ($5,970,842.50), inclusive of taxes. The foregoing represents the total compensation to be paid to the Contractor for services to be performed, and tasks to be implemented as specified in this Agreement.

C. Of the Thirty-Five Million Nineteen Thousand Three Hundred Thirty-One Dollars and Twenty Cents ($35,019,331.20) not to exceed amount in Section 3.1 (A) above, Twenty-Nine Million Thirty Thousand Fifteen Dollars and Five Cents ($29,030,015.05)

represents the amounts already paid through the First through Sixteenth Amendments to this Agreement.

D. The difference between the amounts specified in Section 3.1 (A) through Section 3.1 (D) above, Eighteen Thousand Four Hundred Seventy-Three Dollars and Sixty-Five Cents ($18,473.65), is designated as contingency funds to be dispersed at the sole discretion of the City in accordance with Section 5, Amendments and Change Requests, of this Agreement. The City will not be liable for payment of contingency monies unless the provisions in Section E herein are complied with.

E. Limitation of City's Obligation to Make Payments to Contractor – Notwithstanding any other provision of this Agreement, including any exhibits or attachments incorporated therein, and in order for the City to comply with its governing legal requirements, the City shall have no obligation to make any payments to Contractor unless the City shall have first made an appropriation of funds equal to or in excess of its obligation to make any payments as provided in said Agreement. Contractor agrees that any services provided by Contractor, purchases made by Contractor or expenses incurred by Contractor in excess of said appropriation(s) shall be free and without charge to City and City shall have no obligation to pay for said services, purchases or expenses.

As of the date of execution of this Seventeenth Amendment, aside from the contingency fund referred to herein, no additional funds have been appropriated for the total amount of this Agreement. Contractor shall not perform work under this Agreement until the City notifies Contractor in writing of the amount and duration of the appropriation or, if it does perform such work, it will do so at its own risk of non-appropriation of funds. Appropriations for work to be performed under this Agreement shall be announced in conjunction with the individual solicitations for proposals in the form of a work order or Amendment issued by the Department to perform work under this Agreement.

4. Ratification

Due to the need for the Contractor's services to be provided, should the Contractor provide services prior to the execution of this Seventeenth Amendment, to the extent that such services are satisfactorily performed, those services are hereby ratified.

5. In the event of an inconsistency between any of the provisions of this Seventeenth Amendment to the Original Agreement, or all prior or current

attachments, the inconsistency shall be resolved by giving previous attachments and/or amendments precedence in the following order:

1) Seventeenth Amendment through First Amendment to Contract Number C-123897, with the most current amendment having highest order of precedence; and

2) The Original Agreement.

6. Except as amended by this Seventeenth Amendment, all other terms and conditions of the Original Agreement, as amended by the First through Seventeenth Amendments, shall remain in full force and effect.

7. This Seventeenth Amendment includes seven (7) pages and one (1) attachment. The Original Agreement is hereby incorporated by reference, in its entirety, into this Seventeenth Amendment.

8. This Agreement may be executed in one or more counterparts, and by the parties in separate counterparts, each of which when executed shall be deemed to be an original but all of which taken together shall constitute one and the same agreement. The parties further agree that facsimile signatures or signatures scanned into .pdf (or signatures in another electronic format designated by City) and sent by e-mail shall be deemed original signatures.

[Signature Page Follows]

[Remainder of the Page Intentionally Left Blank]

IN WITNESS THEREOF, the parties hereto have caused this Amendment to be executed by their respective duly authorized representatives.

THE CITY OF LOS ANGELES

By: _____
MICHEL R. MOORE
Chief of Police

Date: _____

MOTOROLA SOLUTIONS, INC.

By: _____
MICAH APPLEWHITE
MSSSI Vice President

Date: 05/05/2021

APPROVED AS TO FORM:

MICHAEL N. FEUER, City Attorney

By: _____
SAMUEL PETTY
Deputy City Attorney

Date: _____

ATTEST:

HOLLY L. WOLCOTT, City Clerk

By: _____
Deputy City Clerk

Date: _____

City Business License Numbers: 18 100-004820 1105 1
18 100-001958 1105 1
18 100-000547 1105 1

Internal Revenue Service Taxpayer Identification Number: 54-1766195

Agreement Number: C-123897-17

ATTACHMENT 17A

LAPD PREMIERONE CAD/PMDC PROJECT

LAPD PREMIERONE CAD/PMDC PROJECT

Proposal for CAD Migration

MOTOROLA

15-PS-59678

TABLE OF CONTENTS

Section 7

Section 8

MOTOROLA SOLUTIONS

April 19th, 2021

Deputy Chief John McMahon
Los Angeles Police
Department100 West
First Street
Los Angeles, CA 90012

Subject:LAPDPremierOneCAD

Dear Deputy Chief McMahon:

Motorola Solutions, Inc. ("Motorola") is pleased to present the Los Angeles Police Department the following proposal for upgrade and replacement of your current Premier CAD and NG mobile platform with a PremierOne/PMDC solution. This proposal represents a firm fixed pricing with detailed documentation required by the City of Los Angeles and Motorola Solutions to execute a binding amendment # 17 to contract number C-123897 (the "Amendment"). As requested, Motorola has updated the pricing in this Amendment 9 proposal to reflect the updated maintenance pricing schedule 7.3 that will be used for the Amendment. This proposal is valid for 180 days from the date of this letter.

Motorola appreciates your consideration of the Proposal and hopes you will find it acceptable. Motorola would be pleased to address any concerns you might have and look forward to receiving your response. Please contact your Motorola Solutions Account Executive, Joe Warner (312) 204-9300, joseph.warner@motorolasolutions.com with any questions.

Sincerely,
Motorola Solutions, Inc.

Jerry Burch
MSSSI Vice President

SECTION 1

TECHNICAL SOLUTION SUMMARY DOCUMENT

1.1 SOLUTION OVERVIEW

Motorola is pleased to present the following solution for you. We believe that no two public safety entities have the exact same needs and this solution has been crafted to address your specific requirements. By leveraging Commercial off the Shelf (COTS) technology, Motorola is presenting a complete technology package built on industry standards and best practices to fulfil your public safetyneeds. While the products included in this solution have a high degree of flexibility, Motorola has also included the expertise and services of our Project Managers, System Technologists, Solution Architects and Business Analysts to ensure a successful two phased deployment.

At the core of the solution is the Motorola PremierOne CAD application and platform. This powerfulplatform is based on an Esri GIS engine and is designed from the ground up to be Next Generation ready. Built on a highly available architecture, the failure of a single component does not affect the operation of the whole. Utilizing a services oriented architecture, PremierOne CAD is designed to accommodate interfaces that are deployed once and available to both CAD and Mobile users in orderto provide greater information and situational awareness to dispatchers and first responders alike.

PremierOne CAD is a true multi-agency, multi-discipline system capable of providing the configuration necessary to accommodate closest unit response and the support of multiple agencies.

Motorola is also providing a fully redundant, geographically separate, disaster recovery system fordeployment in Phase II of the project.

Premier MDC (PMDC) is being offered to meet the capabilities that are required to operate over bothlow and high bandwidth wireless networks that are available to the City. PMDC is a proven mobile data application that coupled with PremierOne CAD will meet the mobile data needs of the Los Angeles Police Department and any future additional agencies. PMDC will be deployed in a High Availability hardware configuration.

The following applications and services are included in this solution:Phase I

- Motorola PremierOne
  - PremierOne CAD with Automatic Vehicle Location/Automatic Resource Location (AVL/ARL)
  - PMDC Mobile with Advanced Tactical Mobile Mapping (Server and 550 Clients)
    - High Availability hardware configuration
- Integration and interfaces as ecified

Phase II

- Disaster Recovery Hardware and services for PremierOne CAD
- PMDC Mobile with Advanced Tactical Mobile Mapping (950 Clients)

Optional Components

- PremierOne Integrated NG9-1-1 Call Control
- PremierOne Hand Held

1.2 APPLICATION DESCRIPTIONS

The following sections provide brief description of the PremierOne applications and other proposed applications. For more information regarding the PremierOne features, please refer to the product Functional System Descriptions (FSDs), included as separate documents that accompany this response.

1.2.1 PremierOne CAD with AVL/ARL

Since efficient communications coordination is necessary for effective use of field resources, Motorola has designed the multimedia PremierOne CAD application to be the central convergence point for communications from multiple sources and systems, mission-critical information and resource management.

PremierOne CAD helps agencies improve response times, efficiently allocate resources and better inform first responders. PremierOne CAD, a dynamic and intuitive application, utilizes its common services platform to compile and display precise data specific to an agency's workflow.

PremierOne CAD is proven software to manage multiple communications centers, manage multiple agency types, and multiple agencies within agency types. Sophisticated security controls provide the ability to access and control necessary information and features without jeopardizing the integrity and protection of data.

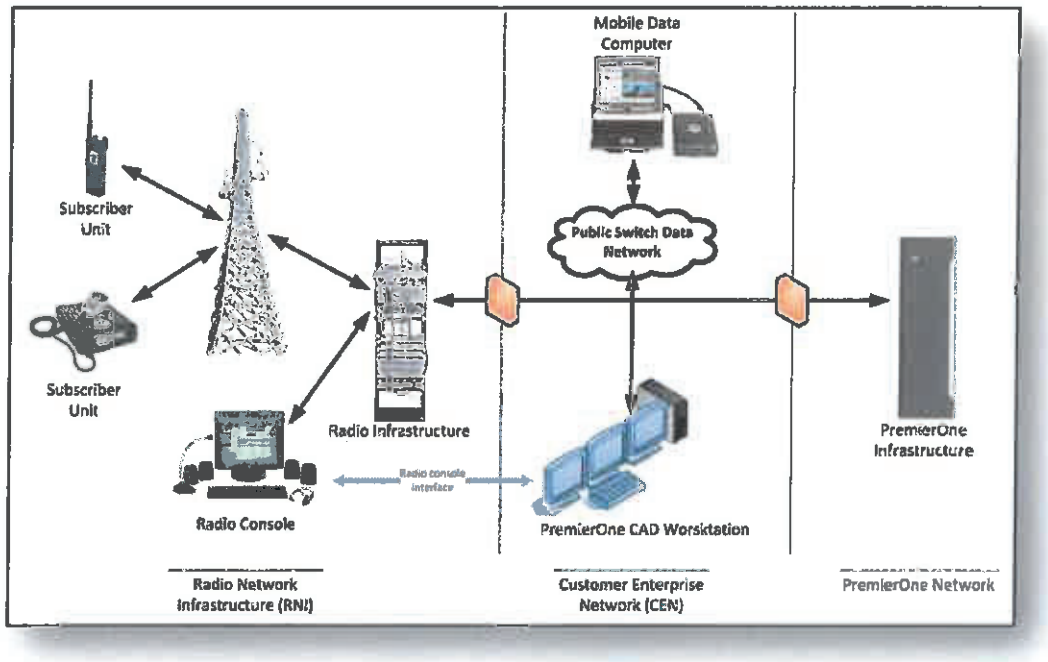
The ability for users to perform functions using a variety of methods allows an easy transition from existing applications to PremierOne CAD. Users can perform commands and functions whether using a mouse, command lines, function keys, shortcuts, or user definable right click menus.

Its highly customizable user interface offers quick access to information via a true location-based, Esri standard GIS map. This powerful GPS-aided resource management tool displays the location and identity of GPS equipped vehicles and, if deploying PremierOne Responder Location, personnel through the use of GPS and data equipped radios enabling a more efficient and coordinated response while further supporting officer safety.

1.2.2 Motorola Radio Integration

PremierOne allows your Motorola ASTRO system to be integrated to CAD. The following sections describe that integration.

With MCC7500 console integration, Push-to-Talk (PTT) IDs to be passed to PremierOne CAD along with Emergency Button activations. Status button assignments allow for status changes, location changes, and/or the adding of disposition to an incident. Channel grouping feature is also accessible within CAD. From a window within the CAD client, the user can use predefined groups or create, manage and maintain their own talk groups. These groups can be activated as multi-selects on the radio console at the discretion of the user. When the group is utilized, the CAD client will show the status and will allow the user to transmit on all the selected talkgroups. The user can make a priority transmission or may request the use of the talkgroups by alerting the other users with an audible notification. PremierOne CAD also can be provisioned to automatically load a particular channel group based on the geographical location of an incident.



CADICAD: Radio Proxy server

The PremierOne element providing the main radio infrastructure interface is the CADICAD server. This stand-alone Windows Server 2012 application utilizes SQL Server 2012 and provides proxy functions from the Radio Infrastructure to the CAD system. CADICAD can support ASTRO 25 Integrated Voice and Data (IV&D) Conventional as well as Trunking systems. There are three supported interface protocols from the ASTRO systems: CADI, ATIA, Flex ATIA and AIS. ATIA and CADI interfaces are also supported on ASTRO 25 Trunking systems. Motorola has proposed a Flexible ATIA interface for this proposal.

The CADICAD Server will provide 3 types of data from the Radio system to the CAD system. These include specific radio initiated events as follows:

- Non-PTT Events
- PTT Events
- Emergency status

Radio Emergency

The PremierOne CAD system supports notification and display of Radio/MDT Emergency status. An emergency situation can be triggered either by the Radio Emergency button or the Emergency icon on the PremierOne Mobile client. Once the emergency state is activated, an emergency notification will be posted to the units within the same geographic region (Area, Sector, Beat, and/or Zone) as the unit in emergency. All monitoring CAD Clients will also receive an emergency notification (pop-up window) of the event. The emergency event must be acknowledged by the CAD User before the window will close. The Emergency will be listed in multiple places such as the CAD Client Info Panel, the Unit Status Monitor, the PTT Status Monitor, and the Reset Emergency Indicator (RE) command List on the CAD Client.

When Popup notifications are given for a Unit/Device emergency, they must be acknowledged in order to clear them.

- Clearing an Emergency (RE) for one source clears the emergency state for the whole unit.
- Notification Pop-up windows in the CAD Mobile and CAD Client show the Unit and Logged in User.
- The Unit Status Monitor includes last known location, shows EM status, and turns red.
- PTT Status Monitor shows the radio emergency in red.

PTT

Radio Channels that are to be monitored by CAD and have their status displayed on the PTT Status monitor must be selected by the CAD User using the CT command. This allows for a dispatcher to select only those channels that need to be monitored and may be associated with a dispatcher's coverage area.

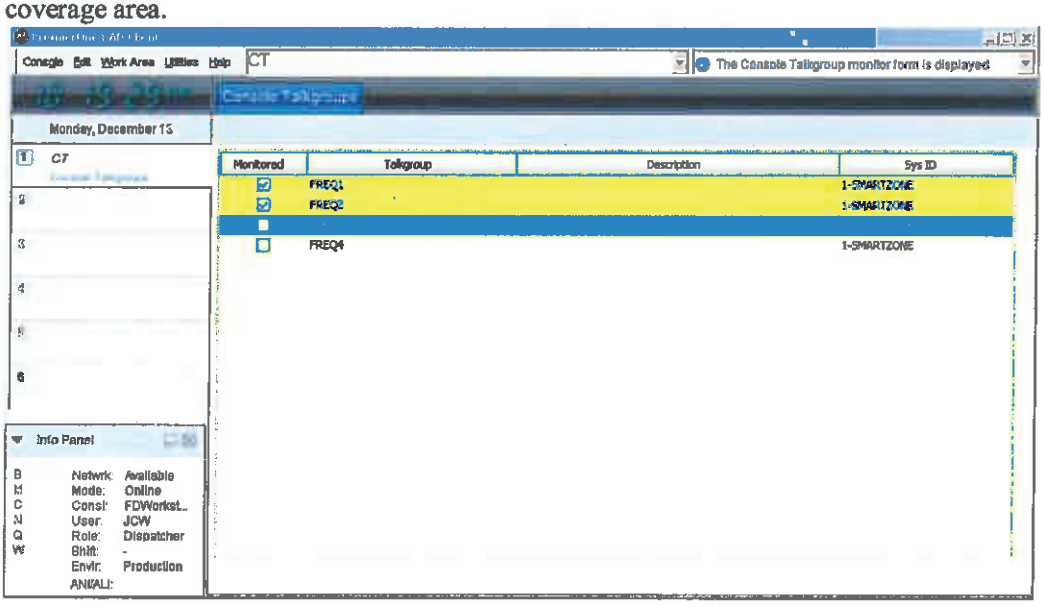


Figure 1-1: CT FORM

Once the channels are selected, enabling the PTT Status Monitor will ensure that all radio traffic on that channel is monitored and displayed.

The "CALLER" listed in the PTT Status Monitor is the highest level identification of the radio sender. This means that if the radio is assigned to a Unit, the Unit ID will be displayed; if the radio is assigned to a Person, the Person will be assigned; if no higher level assignment is made, the Radio Name (alias) will be displayed for the CALLER.

1.2.3 PMDC

Motorola's PMDC software application is a Commercial off the Shelf (COTS), fully configurable system designed for low-bandwidth networks. PMDC is designed on the principles of open architecture for maximum interoperability with PremierOne Common Services. When integrated with Motorola PremierOne Common Services, it improves dispatch capabilities and facilitates more distribution to users in the field.

Motorola's PMDC solution gives users unprecedented access quickly and securely to information about people, property, and vehicles all from their mobile workstation. Users can receive electronic dispatches, indicate their current status, complete unit-to-unit messaging, and view in-vehicle maps.

1.2.4 Optional Components

1.2.5 PremierOne NG911 Call Control Solution

NG9-1-1 Call Control simplifies incident management in an increasingly complex environment. Today, call takers often must swivel between numerous screens, keyboards and systems to gather all relevant details pertaining to a call. Motorola's PremierOne NG9-1-1 Call Control Solution streamlines and simplifies workflows by integrating call taking functionality with PremierOne CAD. Built from the ground up the application handles voice calls and as an option citizen texts simultaneously. With it, the most common call control functions can be accessed from the NG9-1-1 Call Control interface or PremierOne CAD command line. The integrated solution minimizes keystrokes, reduces errors and speeds response. Now answering a call, creating an incident, dispatching and releasing a call can be accomplished in as few as four keystrokes. With full integration of previously disparate data sources, call takers and dispatchers maintain critical focus by accessing 9-1-1 and CAD controls from one application using a single keyboard and mouse.

The specific benefits that the Optional integrated client solution would provide LAPD are as follows:

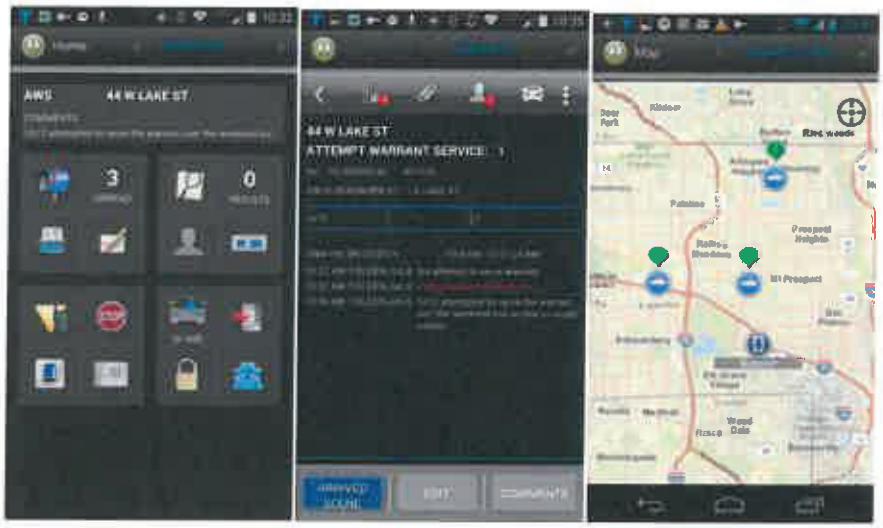
- CAD client incident workflow integration
- Client solution supporting NG9-1-1 call taking & CAD that is controlled by a single keyboard and mouse at each call-taking and/or dispatch position
- Increased productivity achieved through streamlined keystroke usage (Single command set and F-keys to control application functionality)
- Enhanced Call Taker/Dispatcher focus at the call-taking/dispatch position(s) to provide increased productivity and reduction in data entry errors
- Single password/log-on for the PremierOne suite (includes call taking and dispatch functionality)
- Combined Call Taking and CAD report generation
- Reduced client training – Single PremierOne framework; Call Control functionality is an increment to PremierOne base training
- Single service provider (MSI) across ICC core applications, e.g. 9-1-1, CAD, radio console delivering a consistent/high quality level of service for the Command/Dispatch Center applications

1.2.5.1 Optional Text-to-9-1-1 Capability

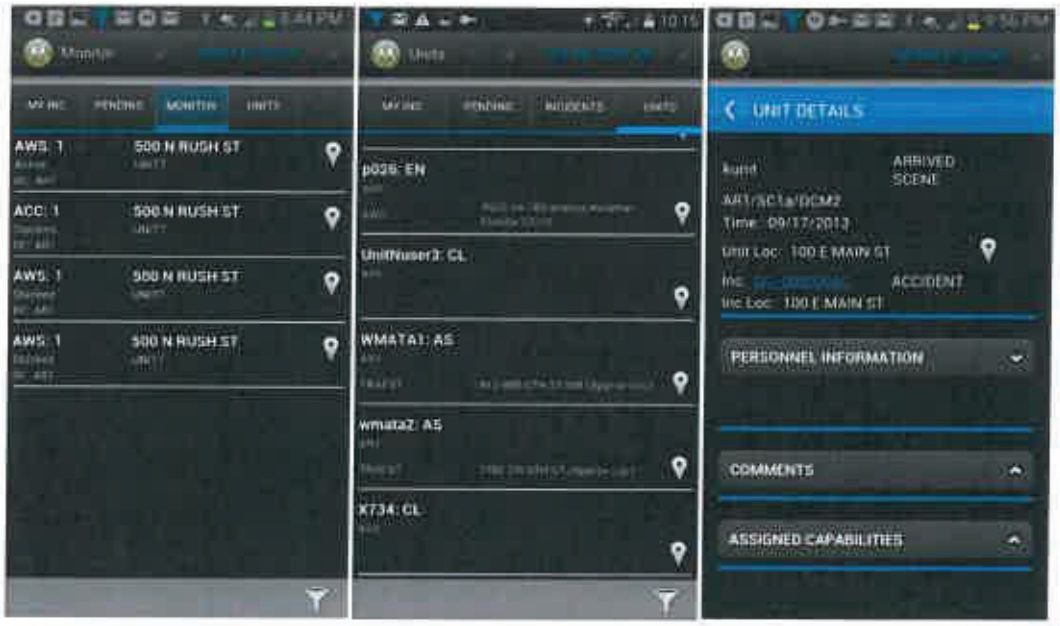
The ability to respond to citizen texts to 9-1-1 is a growing expectation that PSAPs will need to address in the near future. With support of the FCC, NENA, APCO and the nation's leading carriers, text-to-9-1-1 capability has moved from a future possibility to a critical capability. In many cases, it is the most reliable way to communicate in a major emergency/disaster or the safest way to call for help when silent communication is required. Motorola's optional citizen text capability provides a solution for PSAPs to comply with emerging standards and meet the needs of the public by seamlessly integrating text-to-9-1-1 capabilities into their PremierOne NG9-1-1 Call Control and Dispatch solutions.

1.2.6 PremierOne Handheld with Mapping

PremierOne Handheld expands the PremierOne Suite to the Android platform including embedded functionality with PremierOne CAD, Mapping and Provisioning. The integrated client is a mobility solution offering the first responder: database look-up/query, messaging, mapping, status updates, status monitoring, and dispatch capabilities on Smartphone and Tablet devices.

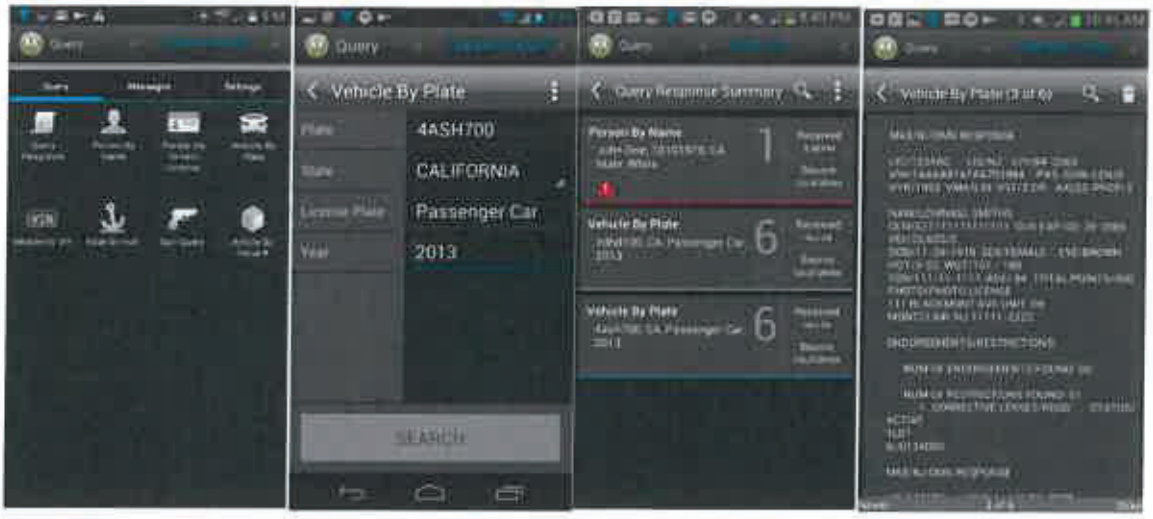


PremierOne Handheld's five (5) status monitors allow the Command Staff to have a constant view to active incidents, pending incidents and unit activities in their jurisdiction and beyond. This enables Sergeants, Lieutenants, and Chiefs to keep a pulse on their staff to monitor the operations of the department even when they are away from the office or their vehicles.



PremierOne Handheld offers seven (7) standard queries including the ability to scan a driver's license barcode to submit a person query, plus the ability to cascade queries allowing the officer to enter a plate to get both the vehicle returns and information on the registered owner of the vehicle.

PremierOne Handheld also support the CJIS Security Requirements for FIPS 140-2 encryption, two-factor authentication, audit logs, device swipes, and inactivity locks.



PremierOne Handheld delivers a true connected officer solution providing officers situational awareness such as previous incidents, premise and hazard information, location of other officers, Geofencing, and critical incident updates in the palm of their hand.

- Android 4.0.3 or higher smartphone or tablet devices
- Data Network with 4G coverage
- Static IP address
- CJIS Requirements call for a Mobile Device Management (MDM) Tool. SOTI MobiControl is included in our proposals. Alternative MDM tools may be used if desired, but require certification testing with PremierOne Handheld.
- RSA can be sold as an option if needed for two-factor authentication
- Motorola is supplying 20 licenses of PremierOne Handheld to LAPD. LAPD can then evaluate PremierOne Handheld against the Motorola Pilot Demo Servers and determine how they will be operationally deployed within the department. Optional pricing has been provided for 100 PremierOne Handheld licenses and costs for deployment configuration and training.

1.3 SYSTEM ARCHITECTURE

PremierOne is architected around a hardware agnostic enterprise level virtualized server configuration. Motorola supports Microsoft Server 2012 R2 Hyper-V and VMware vSphere 5.1 (or later) for the hypervisor.

Virtualization as implemented in the PremierOne solution lowers the total cost of ownership by simplifying the overall system administration. Server virtualization allows you to maximize the use of your hardware while also providing application isolation. Application isolation is the ability to isolate specific services for ease of diagnostics and hardware resource management.

Motorola's PremierOne suite of applications is built with the principles of Service Oriented Architecture (SOA) allowing separation of servers and services to modular components. This separation provides for:

- Faster performance

- Secured connectivity
- Increased service availability and uptime

PremierOne features integrated security throughout, as access and connectivity is provided only when needed. All CAD call data communicated between the client and server is encrypted to FIPS 140-2 compliance.

Due to its redundant components PremierOne has no single point of failure. Moreover, the PremierOne software design is also redundant, as database replication occurs across multiple servers. The entire solution is built on proven industry standard components from Microsoft .NET architecture using Microsoft Windows and Microsoft SQL Server.

PremierOne's tiered approach allows for scalability as your needs grow. The system can be expanded through the allocation of additional physical or logical resources, with additional application, database, and operations management servers. Plus, with the additional site-to-site replication, a multi-site architecture with disaster recovery has been included.

PremierOne's leveraging of SOA and virtualization simplifies your deployment and maintenance, while enhancing PremierOne's reliability, scalability and reducing Total Cost of Ownership.

1.3.1 PremierOne High Availability

Motorola has engineered PremierOne's logical architecture to be highly available. This high availability is independent of a geographically redundant disaster recovery solution. Software fault tolerance has been built into the core of PremierOne. PremierOne's active monitoring identifies problems and failures before they occur. For example, low disk space or high processor utilization will trigger an alert to be sent, to notify the recipient of a possible problems or future failure before it affects the system. During deployment, notifications are configured to be sent using your mail or mail relay server.

Application and database failovers operate independent of one another within PremierOne. This means that an application server failover does not require a database server failover. Likewise, a database server failover does not require an application server failover. In the event of a service or component failure, PremierOne will stop using the failed service or component instance. PremierOne will then automatically shift over to the secondary service or component instance without impacting operations.

The table below depicts the fault tolerant software components of the system and the type of fault tolerance within each data center.

Table 1-1. Fault Tolerant Software Components

Software Component	Type
Windows Server 2012 network load balancing (NLB) services to provide load balanced network traffic to the application services. • Proactive Component PremierOne monitors active services and restarts them as necessary. • Reactive Component In the case of a server failure, the node is disabled transferring the load to the remaining servers in the NLB cluster.	Reactive and Proactive
Replicated databases across database services on different servers. Servers are replicated in a cluster set. • Reactive Component In the case of the active database server's failure, the system transitions the inactive server to an active status without interruption.	Reactive
NIC teaming on the servers to provide fault tolerance across multiple network adapters. • Proactive Component If the Operating System detects unexpected behavior, such as the loss of heartbeat or loss of link, in one NIC, it will send all packets out the teamed NIC. • Reactive Component If a NIC fails, the Operating System will send all packets out the teamed NIC.	Reactive and Proactive
SQL Server 2012 R2 Always On to provide automatic fail-over. • Reactive Component In the case of a database server failure, there is no user intervention required. The clustered database becomes the active database without administrator intervention and continues processing transactions within the data center	Reactive
Redundant operations servers in a fault tolerant configuration. • Reactive Component Servers are configured in a NLB cluster. If one server fails, the load is transferred to the remaining servers in the NLB cluster within the data center.	Reactive
PremierOne System Manager monitoring: • CAD application • Interfaces • Network Load Balanced (NLB) cluster • Application failover • Database failover	Reactive and Proactive

The backup service (tape library and tape backup software), the Report Data Warehouse (ad hoc reporting services), and the Test/Training environments are not considered critical and are therefore not designed to meet the same high availability requirements as the production application and database servers.

1.3.2 Disaster Recovery (DR)

1.3.2.1 DR / Failover solution

Motorola's solution includes a redundant, geographically diverse, disaster recovery/failover solution, including hardware, in an active/active "Hot Standby" configuration. Under normal operation, the primary data center is actively operating while the disaster recovery data center is in standby but, is being constantly updated. Upon the need to transition operations to the disaster recovery data center, the primary data center is placed in standby while the disaster recovery data center becomes active. The transition or failover of services between the primary and disaster recovery data centers is managed by the system administrator.

1.3.2.2 Process

PremierOne Systems Management software will monitor the health of the primary data center. The system management console will raise appropriate alerts when an error condition occurs. The system administrator will review the alert and determine if initiating a site failover to a backup location/server is necessary. Most alerts will be resolved without a need for a site failover.

If the severity of the fault warrants a failover, the administrator or supervisor (with appropriate rights) can initiate a site failover from the system management console without end user intervention; except for logging off and logging back into the application. The failover script includes the steps necessary to activate the standby site for use as the active site. A step-by-step disaster recovery process and user guide is provided with other system documentation during deployment. Please note that the System Management console addresses the failover of the PremierOne solution and any network infrastructure modifications, such as DNS pointer updates, are performed outside of the PremierOne System Management console.

The failover to the backup location/server includes the execution of the following actions:

- Disaster Recovery data center will assume the identity of the failed primary data center.
- Clients access the PremierOne application servers by host name. In order to transition clients from the primary data center architecture to the disaster recovery data center architecture, the City will need to update DNS service pointer records to reflect the IP address of the disaster recovery data center. Alternatively, a script can be run on the clients to update the hosts file to point to the disaster recovery data center architecture.
- The PremierOne database servers at the disaster recovery data center will be made primary and will start processing the client requests. This process may take up to 15 minutes.
- The PremierOne application servers at the disaster recovery data center will be made active and will start accepting the client requests.
- The PremierOne application services are in a stopped state at the disaster recovery site during normal operation. These services are started using the Disaster Recovery failover process and associated failover script.

- The PremierOne database servers at the disaster recovery data center will be made active and will start processing the client requests.

The following steps will implement a fall back to the primary data center:

- Primary data center will resume role as primary data center.
- Clients access the PremierOne application servers by host name. In order to transition clients from the use of the disaster recover data center architecture to use of the primary data center architecture, the City will need to update DNS service pointer records to reflect the IP address of the primary data center. Alternatively, a script can be run on the clients to update the host file to point to the primary data center architecture.
- The PremierOne Database servers at the primary data center will be made primary and will start processing the client requests. This process may take up to 15 minutes or less depending on the City's network infrastructure.
- The PremierOne application on the primary application servers will be made active and will start accepting the client requests.
- The PremierOne application services are in a stopped state at the primary data center during disaster recovery operation. These services are started using the Disaster Recovery failover process and associated failover script.

1.3.3 Microsoft Active Directory Service

The PremierOne solution provides directory services through an isolated Microsoft Active Directory environment to support the secure management and operations of PremierOne. All servers provided with the solution will contain computer accounts in this Active Directory. Administrator user accounts and groups will be setup in Active Directory with the appropriate group memberships set. In order to facilitate ease of user account management, PremierOne can use the City's AD environment for authentication. Once the user account is built in PremierOne provisioning, it can then use LDAP to query the City's environment for the account authentication. By using this configuration, the City can enforce password policy, retention, and complexity requirements across the enterprise with a user having a singular identity.

1.3.3.1 Name Resolution

PremierOne provides host name resolution through an Active Directory integrated Domain Name Service (DNS). In order for systems residing outside of the PremierOne network to communicate with the PremierOne system, you must configure the City's DNS servers to forward PremierOne name resolution requests to PremierOne DNS servers. This will allow devices on the City network to find systems within the PremierOne environment.

For tighter integration in the other direction, your system administrator, working with Motorola, must configure the DNS servers to allow name resolution requests from within the PremierOne systems to be processed.

1.3.4 PremierOne Common Services

PremierOne Common Services is the foundation of Motorola's Service Oriented Architecture (SOA) providing the PremierOne system and system administrators the flexibility to manage internal services throughout the platform from a single point. PremierOne Common Services include GIS, System Security, Reporting, and the system tools for provisioning.

1.3.4.1 Geographic Information System (GIS)

- PremierOne uses the power of GIS for display, location validation, and unit recommendation. Through PremierOne tools made available for ArcToolbox, you can load local data manually or through an automated model, making sure that the most up-to-date data is available to the entire PremierOne Suite.
- The PremierOne Response Boundary query is an example of how PremierOne CAD ensures high performance. Deployments that support multiple jurisdictions typically maintain response boundaries in multiple layers. The PremierOne Response Boundary Data Import Tool imports and aggregates these features into a single spatial table within the PremierOne Geodatabase. This allows the system to perform a single spatial intersect query instead of multiple spatial queries against each individual response layer. Not only does this save time in terms of command execution, it allows the user to determine all possible response boundaries for an incident's location after verifying the call location and before entering the incident. Once an incident type is entered, the CAD Client simply iterates through the collection of agency/beat information returned during the background request to find the response of an agency associated with the incident type.
- GIS data is a key component of a PremierOne deployment and one that is required for PremierOne CAD. GIS provides the mechanism for location validation and recommendation for response. A well constructed and geographically accurate Geofile is required for the proper operation of PremierOne. It is your responsibility to provide a complete and accurate Geofile for use in PremierOne. If desired, Motorola can provide Geofile build and/or Geofile preparation services.
- It is important to note that proper Geofile data must exist in all areas for which incidents will be created. Each agency being added to PremierOne must have their geographic coverage included in the Geofile imported into PremierOne.
- The GIS data requirements for PremierOne are identified in Section 6: PremierOne Geographic Information Systems (GIS) Requirements.

1.3.4.2 System Security

- The PremierOne Suite is deployed within its own Microsoft Active Directory (AD) domain in its own local area network. Active Direction Domain Controllers authenticate and authorize users to perform actions within the domain making sure authorized users have appropriate access to data and services. The PremierOne user provisioning environment can be setup to query your AD environment (using LDAP) allowing for a single point of user and password management across all applications.
- The PremierOne network contains multiple virtual local area networks that are used to secure and segment traffic for purposes of user access as well as data storage and replication. In this way, traffic is protected and dedicated to provide network efficiency and security.
- Further, the PremierOne Suite architecture resides behind dual redundant firewalls to protect the PremierOne network from unauthorized intrusion and security threats. These firewalls are

provisioned in a high availability configuration so if either of the two fails, traffic and security will remain intact across the other.

1.3.4.3 Microsoft Reporting Services

PremierOne uses Microsoft SQL Server 2012 Reporting Services (SSRS) for reporting purposes. SQL Server 2012 Reporting Services is a server-based reporting platform that is used to create and manage tabular, matrix, graphical, dashboards, and free-form reports that contain data from relational and multidimensional data sources. The reports can be viewed and managed over a World Wide Web-based connection. Reporting Services include the following core components:

- A complete set of tools that can be used to create, manage, and view reports.
- A Report Server component that hosts and processes reports in a variety of formats. Output formats include HTML, PDF, TIFF, Excel, and CSV. The Report Server also supports the ability to generate graphical reports including dashboard components.
- Report scheduling with email delivery.

Visually and functionally, the reports that may be built in Reporting Services surpass traditional reporting by including interactive and Web-based features. Some examples of these features include drill-down reports that enable navigation through layers of data; parameterized reports that support content filtering at run time; free-form reports that support content in vertical, nested, and side-by-side layouts; links to Web-based content or resources; and secure, centralized access to reports over remote or local Web connections.

Some of the other advantages of leveraging this technology within PremierOne include the following:

- Central Manageability - Report management, processing, and delivery are handled from one central location, providing increased consistency and improved performance throughout the reporting process
- Scalable, Enterprise-Wide Delivery - On-demand report delivery may be enabled and event-based report distribution may be deployed. The automation of effective delivery of real-time information helps drive better decisions for users across the entire suite.

1.4 TECHNICAL ASSUMPTIONS AND DESIGN REQUIREMENTS

1. Motorola's solution is for the PremierOne server hardware, PremierOne server networking hardware, PremierOne application software, PremierOne client software, PMDC licensing, message switch hardware and interfaces.
2. The Customer will supply Windows Server 2012 R2 Client Access Licenses (CALs) for all CAD, Mobile, client devices accessing PremierOne CAD.
3. The Customer will supply Mobile Device Management (MDM) software for Handheld devices.
4. The Customer will supply Mobile Device Management (MDM) software for Mobile laptop devices, if desired.
5. The Customer will supply workstation hardware, mobile workstation hardware, operating systems, and all other software not included in this solution.
6. Motorola's hardware solution provides the most up-to-date configuration available at the time of proposal submittal. The hardware identified in this solution may be subject to change. As technology continues to advance, Motorola will take advantage of new and different offerings for the betterment of the Customer.

7. The Customer will provide a single Geofile data including any preparation and/or editing, if necessary, to meets PremierOne Geofile Build Requirements for the purpose of address validation.
8. The Customer will supply Esri ArcGIS Desktop and Network Analyst extension software for Customer editing of GIS data.
9. The Customer will provide wireless connectivity and middleware to deliver mobile Virtual Private Network (mVPN) with routing and static IP addressing to the PremierOne network for PMDC.
10. The Customer will be responsible to ensure that both the Motorola PMDC mobile data client and the existing Los Angeles Police Department Northrop Grumman mobile data client can co-habitate (installed) on the same mobile laptop.
11. The Customer will provide, advanced authentication, for Mobile device connectivity if required.
12. The Customer will provide a site adequate for the installation, housing, operation, and maintenance of all equipment. The space provided must be able to contain the entire rack dimensions as specified in Site Requirements, Section 1.4.4.
13. The Customer will provide the appropriate power connectivity, power distribution units, and power to the system in the designated installation location. The anticipated quantity and type of connectivity as well as the power draw of the system have been identified in Site Requirements, Section 1.4.4. The final system specifications will be provided during deployment as part of the hardware ordering process.
14. The Customer will provide adequate active cooling and humidity control for the designated installation location. The cooling requirements and the operating temperature range of the system have been identified in Site Requirements, Section 1.4.4. The final system specifications will be provided during deployment as part of the hardware ordering process.
15. The Customer will provide installation and grounding of the Spectracom NetClock GPS antennas and feed line.
16. The Customer will provide network connectivity to clients as specified in the Network Requirements, Section 1.4.3. Motorola has included network hardware for the PremierOne server architecture. Networking hardware for the connectivity outside the PremierOne LAN must be provided by the Customer.
17. The Customer will provide a network diagram depicting all the devices, device types, and interfaces that the PremierOne system will connect to and through, including, but not limited to all blocked ports, hubs, switches, routers, firewalls, and any other network equipment.
18. The Customer will provide IP addresses on the Customer's network for the PremierOne Servers and third-party application servers.
19. The Customer will provide external interface connection demarcation points at locations agreed to by Motorola. These locations shall normally be adjacent to the PremierOne equipment rack.
20. The Customer will provide electrical power receptacles, and any other receptacles required within manufacturer recommended cable run lengths of the equipment and all supplemental components.
21. The Customer will provide access, administrative or otherwise, to appropriate systems, locations, information, tools, and equipment to ensure proper connectivity, installation, operations, and maintenance of the system.
22. The Customer will provide any software as required for anti-viral, anti-malware protection by the Customer for installation on the system. If the software requires connectivity to a central server for maintenance and updates, the connectivity including ports and access needs to be provided.

23. The products included in this solution are COTS. The feature enhancement of "dragging and dropping a unit to the command line" will be added to a standard release in the future; no other software customization is included in this solution.
24. Motorola is supplying 20 licenses of PremierOne HandHeld to LAPD. LAPD can then evaluate PremierOne HandHeld against the Motorola Pilot Demo Servers and determine how they will be operationally deployed within the department. Optional pricing has been provided for 100 PremierOne Handheld licenses and costs for deployment configuration and training.
25. Motorola does not guarantee feature and functionality parity between Premier CAD and PremierOne CAD or PMDC and the existing Northrop Grumman mobile application.
26. The Motorola's solution includes services for the tailoring of a single PremierOne CAD User Interface (UI) and a single PMDC Mobile Custom Pack. Should additional UI tailoring be necessary (i.e. different agencies or different disciplines), additional services may be required and costs associated with those services are the responsibility of the Customer.
27. The PremierOne version being provided is a minimum version of R4.2.
28. Motorola's solution has been sized based on the following usage scenario. This may differ from the license count provided:
    A. 6M CAD Calls for Service per year (2M 911 & 4M Officer Initiated)
    B. 170 PremierOne CAD concurrent users
    C. 800 concurrent Devices regardless of type that report GPS position at a 30 second cadence.
    D. 3% annual growth for 5 years
    E. 5 years of PremierOne CAD data retention (2 years online, 5 years reporting)

1.4.1 System Configuration

The following diagrams present a logical illustration of the solution components.

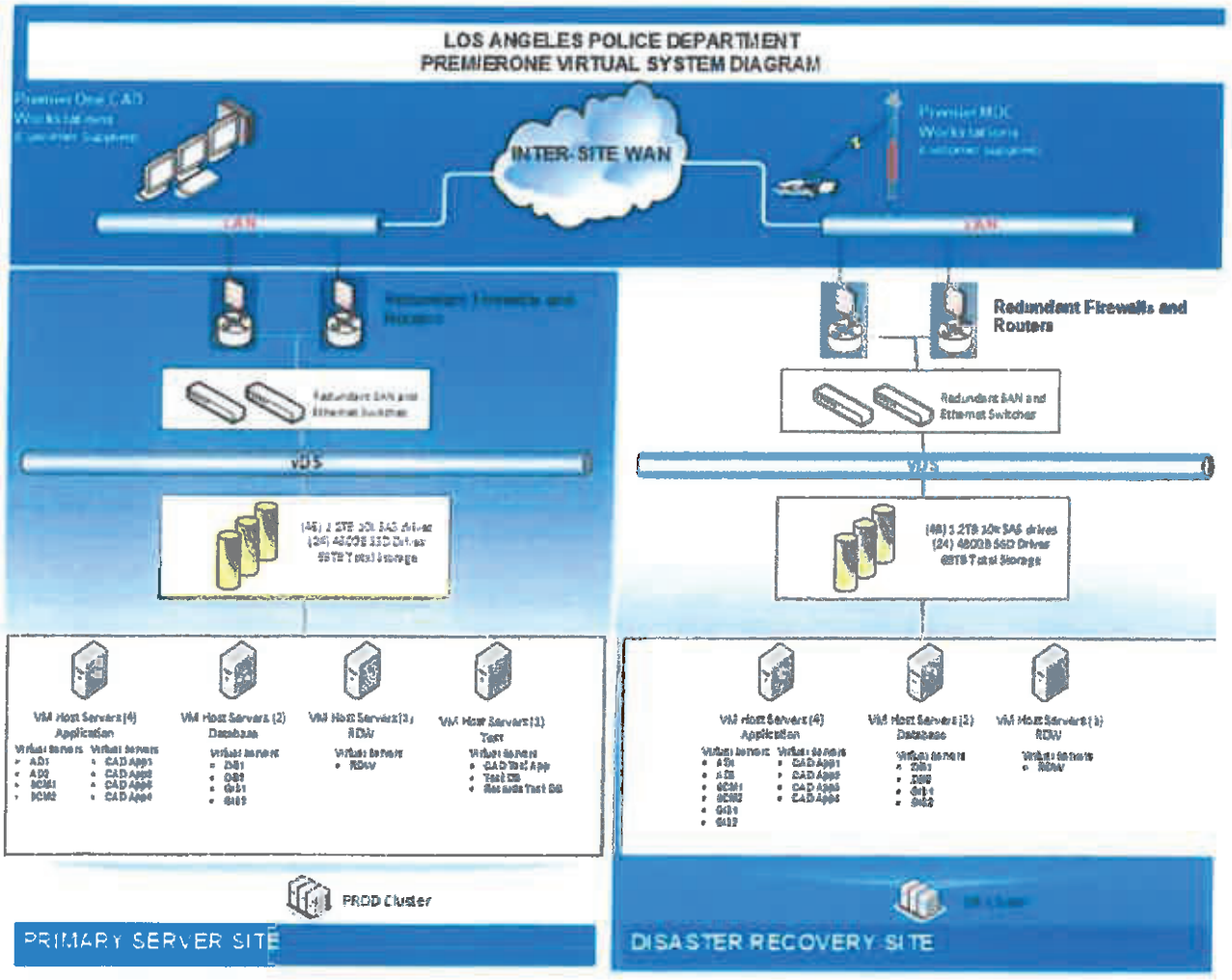


Figure 1-2: System Diagram

The configuration consists of PremierOne servers and storage area network (SAN) with a geographically separate disaster recovery site. The PremierOne architecture is provisioned in a high availability configuration so that the failure of a single server does not impact operations.

The application servers are provisioned in a Network Load Balancing (NLB) cluster that spreads the server workload during normal operations. In the event that one of the application servers fails, NLB automatically redistributes the workload among the remaining servers. Meanwhile, PremierOne attempts to restart the failed service(s) on the failed application server. Upon a successful restart of the service(s), the application server rejoins the cluster. If restarting services does not remedy the failure of the application server, the server is issued a reboot. This process is transparent and occurs without user intervention.

The database servers are clustered using SQL Server 2012 AlwaysOn technology. In the event of a failure of the primary database server, the synchronous replication partner automatically starts processing database transactions.

Motorola provides dedicated reporting servers. The reporting servers allow users to perform complex report queries without impacting the performance of the CAD system. The data on the reporting servers is batch updated as updates occur on the live CAD server. Data from the production environment is sent to the reporting server every thirty (30) seconds.

One instance of test and training application and database servers are included for PremierOne CAD. The test and training environment will have access to interfaces if test interfaces are made available by you. The deployment of one test interface will be provided for each interface included in the solution.

1.4.2 Motorola Provided System Platform and Components

This section discusses the hardware, operating system, and system software that Motorola will provide.

1.4.2.1 PremierOne Servers

Motorola's hardware solution utilizes HP blade servers as physical hosts to offer a high-density configuration with robust and flexible management capabilities. Motorola architected the PremierOne solution to operate on HP c-Class Blade Systems, as these systems provide many integrated redundant components, ease of management, and efficient power management and cooling.

The following two sections describe components of the c-Class Blade System that are part of Motorola's solution design.

Blade Enclosure

The entire blade system is housed within a HP BLc7000 blade enclosure. Included with the enclosure are a quick view diagnostic LCD panel on the front, a gigabit switch for the various VLANs, the backbone of the system network between the server blades, and remote management of the enclosure.

Host Server Blades

Host servers are HP BL460c G9 server blades configured with:

- Dual Octa-Core Intel® Xeon® E5-2667v3 processor, running at 3.3 GHz, with a 25MB L3 Cache
- Each server blade also contains direct attached storage in the form of two 300GB 10,000RPM SAS hard drives in a RAID configuration
- Four 1 Gigabit network ports
- Each server is configured with 256GB RAM.

1.4.2.2 Ancillary Components

In addition to the server components listed above, PremierOne also contains supplemental components. These components access the software on the system servers and provide temporary transitional power to PremierOne in case of power failure and fluctuations.

The following sections detail each of these supplemental components.

Keyboard and Monitor

Motorola will supply a rack-mounted keyboard and monitor. The HP Rack Model 10642 G2 with rack mount keyboard and monitor provides direct console access to the servers. This keyboard and monitor are typically used only used when a technician is working directly with the hardware in the rack; system and application software maintenance is normally performed remotely.

Server Rack

The server solution at a site is housed in a single HP 10642 G2 42U rack. The various components of the system will ship in the rack. The physical specifications of the rack are:

- Total Cabinet Dimensions
  - 78.9 in. x 39.7 in. x 24 in.
- Shipping Dimensions (with packaging materials)
  - 86.2 in. x 48 in. x 35.6 in.
- Installed Weight
  - 253 lb – Rack
  - 1682 lb – Equipment
  - 1935 lb – Total
- Shipping Weight
  - 2085 lb – Total
- Maximum Load of Rack
  - 3000 lb

Also included for deployment in the rack are HP 4.9kVA 208V power distribution units for powering various components of the system, and a sliding shelf for ease of use within the rack.

Note: It is the responsibility of the City to provide any specialized hardware and installation to ensure compliance with any local, State or Federal natural disaster safety regulations.

Rack Clearance Requirements

- Front: 48 inch
- Back: 30 inch

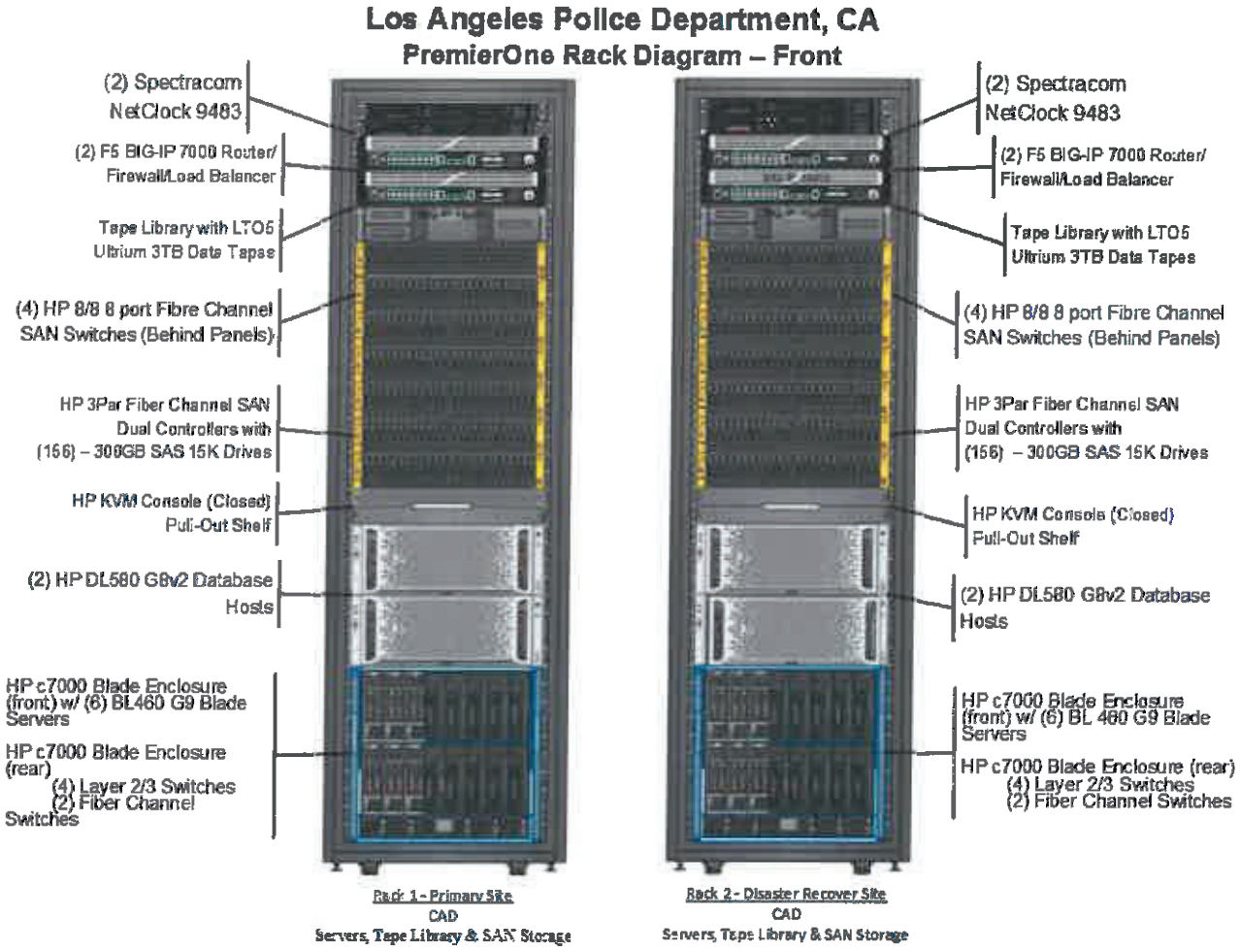


Figure 1-3: Hardware Rack Layout Primary Site

Note: This is a representative diagram only final configuration will be determined during system staging and is subject to change.

1.4.2.3 PremierOne Storage and Backup

PremierOne's Backup and Recovery subsystem includes online storage and a means to backup the system offline through HP Storage and Tape Arrays.

Motorola provides storage area arrays that are utilized by the host servers for storage and for online backups with near real-time data recovery. The HP 3PAR 7200 Series with Dual Controller Array Storage Area Network (SAN) contains 300 (GB) 15K RPM hard drives. Data is also replicated to the SAN at the disaster recovery site using SQL Always On replication to ensure its availability in the event of a failure of the primary data center. This replication processes transactional changes from the production environment to the Disaster Recovery environment. The rate at which data is transferred is dependent upon the available bandwidth and network latency between data centers.

Tape Backup

The PremierOne solution includes a tape drive and library. The tape drive and library provide a means of backing up data to external media which can be taken offline and offsite. The HP StorageWorks MSL2024 Library is controlled by an application server running HP Data Protector software for the purposes of application and database server backup and recovery. This solution provides the ability to back up 36TB of raw data and 72TB of compressed data. In addition, this tape backup solution provides mechanisms for data encryption for offsite storage as needed. The solution also includes data cartridges to be used for backup and a tape-cleaning cartridge.

HP Data Protector 9.0

HP Data Protector Software automates high performance backup and recovery, from disk or tape, over unlimited distances, to enable 24x7 business continuity and improve IT resource utilization. HP Data Protector is integrated with the HP StorageWorks disk and tape family of products. Data Protector Software simplifies the use of complex backup and recovery procedures with the fastest installation, automated routine tasks, and easy-to-use features.

Backup schedules are dependent upon your tolerance for data loss balanced with performance. Motorola will work with you to set proper backup intervals and recommends a starting point of one full backup each night, a differential backup once each day but twelve hours after the full backup, and transaction log backups every fifteen minutes.

1.4.3 Network Requirements

Motorola's solution requires the TCP/IP protocol for connectivity. All servers and workstations will connect to your existing network. You will need to provide access to facilities and a dedicated resource knowledgeable on the your WAN/LAN. Network bandwidth has been determined by the transaction volume and size of incidents and records.

PremierOne CAD Network Requirements

PremierOne is dependent on your LAN for client workstation performance. The estimated network requirement per CAD client with typical usage is 0.8 Mbps – 1.2 Mbps. The recommended built-to bandwidth for new deployments is 2.0 Mbps per workstation. Peak load events (e.g. login) require higher bandwidth and higher bandwidth will generally be required for sites with higher quantities of users and greater data intensive operations such as complex map annotation sets and map manipulation if the data resides on the server. The bandwidth recommendations account for the operation of the LAN client to not exceed the values with the map data being stored locally on the client workstation. Additional bandwidth will be required for the transfer of large multi-media files, premise hazard data files and other large attachments. Network latency plays a key role in the responsiveness of CAD client operations. PremierOne has been designed for optimal use on a local network environment where latency is very low (5ms round-trip). For this reason, it is important that efforts be made to provide the lowest latency possible between the PremierOne CAD servers and each PremierOne CAD client. PremierOne requires latency of no greater than 20ms round-trip from the client to the servers and back.

PMDC Mobile Network Requirements

PMDC is designed for legacy low bandwidth networks. A minimum of 19.2kbs can be supported without the use of multi-unit display and chat. 3G network connectivity is highly recommended where possible for full functionality. A high speed wireless LAN is highly recommended for application maintenance. You will need to provide a wireless network infrastructure and connectivity with routing between the Mobile clients and the primary and disaster recovery data centers. Mobile workstations require a static IP address which will need to be supplied.

Network Bandwidth Calculations

The following bandwidth specifications are required for system performance and have been calculated based on the custom solution provided for you. These figures represent the requirements needed to accommodate the environment. Also provided are bandwidth specifications after 5 years of annually compounded growth of 5% resulting in up to 217 client workstations. As this is a recommendation, the values represented have been rounded up.

Table 1-2. Network Bandwidth Calculations

Bandwidth Specifications for Year 1 Assuming 185 CAD Clients

CAD Client to Server Bandwidth (typical range of 0.8Mbps to 1.2Mbps)	148 to 222	Mbps
CAD Client to Server Bandwidth (recommended bandwidth of 2Mbps)	370	Mbps
Disaster Recovery Bandwidth (site to site)	180	Mbps

Bandwidth Specifications for Year 5 Assuming 217 CAD Clients

CAD Client to Server Bandwidth (typical range of 0.8Mbps to 1.2Mbps)	174 to 261	Mbps
CAD Client to Server Bandwidth (recommended bandwidth of 2Mbps)	434	Mbps
Disaster Recovery Bandwidth (site to site)	277	Mbps

1.4.4 Site Requirements

1.4.4.1 Environmental Considerations

In preparation for the installation and deployment of PremierOne servers, the data center requirements stated in the following sections must be satisfied. The data center requirements specify what you must perform, provide, or ensure in order to prepare for and aid with the solution deployment.

Included in the data center requirements are various environmental considerations for the servers and supplemental equipment, power and network connectivity, access to various information and resources, and compliance with laws and specifications.

Power Requirements and Heat Output

The following tables provide representative examples of the power utilization, heat output, and the temperature ranges for the various components of the PremierOne system and the electrical circuits needed by the overall system. It is important to note that these numbers represent an estimate only. This table will be updated for you after project kickoff and the hardware list has been finalized.

Table 1-3. Power Requirements and Heat Output

Component	Max Total Power (Watts)	Total Heat Generation (BTU/hr)
PremierOne Rack	5231	16458

It is not recommended to follow an intuitive approach to design cooling, or attempting to achieve an energy balance – that is, summing up the total power dissipation from all of the hardware. The HP servers utilize semiconductors that integrate multiple functions on a single chip with high power densities. The combination of high-power, high-density mass storage and power supplies, and the high concentration of devices in a server rack results in localized heat, and increases the potential for hotspots, which can damage the server equipment.

Cooling airflow through each server rack enclosure is front-to-back. Because of high heat densities and hot spots, you must ensure that an accurate assessment of airflow into and out of the server equipment has been performed. This is essential for reliable server operation.

Table 1-4. Temperature and Humidity Ranges

Specification	Operating
Temperature Range	50°F to 95°F
Relative Humidity Range	20% to 80% (non-condensing)

Circuit Requirements

The PremierOne racks require a specific type of connector due to the type of equipment housed in each rack. The power circuit requirements for each PremierOne server rack are contained in the table below.

Table 1-5. PremierOne Server Rack Circuit Requirements (per rack)

Voltage (VAC)	Dedicated Branch Circuit rating (A)	Quantity	Line Cord
208	30	4	NEMA L6-30P

1.4.5 Site Readiness Checklist

This document specifies a number of requirements to successfully deploy the solution. To assist you in preparation for the solution, requirements are summarized in the checklist below. This list may be used to confirm that any site changes have been performed prior to the installation of the system.

Table 1-6. Site Readiness Checklist

	Site Readiness Requirements	Evaluation	Pass	Fail	Unknown
1	The site readiness checklist to be reviewed with the City and all parties understand the site requirements.		❑	❑	❑
2	A site walk-through to be conducted at the time of project kickoff.		❑	❑	❑
3	The Site provides adequate space for the installation, operation, and maintenance of all computer server(s), workstation(s), and related peripheral equipment.		❑	❑	❑

	Site Readiness Requirements	Evaluation	Pass	Fail	Unknown
4	Space as specified in the rack clearance requirements is provided to allow room for installation and maintenance of components. Proper grounding must be made available for equipment bonding.		❑	❑	❑
5	Procedures are understood and documented to ensure acceptable site access at all facilities and locations for equipment installation and system testing.		❑	❑	❑
6	Information specific to the existing the City LAN / WAN architecture and configuration to be provided by the City, including network details for all components (workstations, printers, servers; interfaced systems, etc.) connecting to the PremierOne system.		❑	❑	❑
7	The equipment room to be supplied with the required power outlets and circuit counts as specified in the Circuit Requirements.		❑	❑	❑
8	UPS and/or generator must have the required capacity, voltage stability and frequency stability for the equipment to be installed.		❑	❑	❑
9	Supplied power to equipment meets the power and heat output specifications of the solution.		❑	❑	❑
10	Sizing of A/C cooling meets the specifications of the solution.		❑	❑	❑

	Site Readiness Requirements	Evaluation	Pass	Fail	Unknown
11	Installation of all communication lines, modems, switches and routers, cabling, equipment and other components necessary for system operation and maintenance that are not identified as deliverable products by Motorola. All lines are terminated at demarcation points at locations agreed to with Motorola.		❑	❑	❑
12	Communications lines at remote sites are terminated at extended demarcation points within each facility. These extended demarcation points are located within six cable feet of the desired location of the remote Motorola equipment. All lines are clearly identified and tested.		❑	❑	❑
13	Access to the loading dock at appropriate facilities for the delivery of equipment, to receive and secure storage of equipment shipped. Hallways and doorways must be sufficient to accommodate shipping containers. A temporary staging area for the unpacking and assembly of equipment.	Name: Phone number: Email Address: Available Loading Dock: Freight Elevator: Sufficient parking space for delivery vehicle:	❑ ❑ ❑ ❑	❑ ❑ ❑ ❑	❑ ❑ ❑ ❑
14	The City is to provide TCP/IP communications and connection to the equipment for any existing networks, workstations, and printers that are to have access to the Motorola applications.		❑	❑	❑

	Site Readiness Requirements	Evaluation	Pass	Fail	Unknown
15	A work area for Motorola on-site staff in the headquarters facility, located near the server room, but outside the data center and communications center. The room will be equipped with AC power to support four terminal devices and provide workspace for a minimum of 2 people. The area must have cable access to the servers and be equipped with a telephone line capable of making voice telephone calls, including long distance. This work area will be available during the course of the project.		☐	☐	☐
16	Access to dumpsters for the removal of trash and shipping containers.		☐	☐	☐

1.4.6 PremierOne Workstation Specifications

The following specifications are provided for your reference.

1.4.6.1 PremierOne CAD Recommended Specifications

- 3.2 GHZ quad-core processor
- 8GB memory
- 40GB available disk space
- 1Gigabit or faster Ethernet network adapter
- Three 1024x768+ pixel, 16+ bit color displays
- QWERTY Keyboard with 12 function keys
- Windows 7 Professional SP1 64-bit
- Video card with at least 256MB RAM per monitor, 24 bit capable graphics accelerator, OpenGL v2.0 runtime or higher. Latest available drivers. Shader Model 3.0 or higher is recommended.
- Adobe PDF reader (for help files)
- 2Mbps network bandwidth (to server) with 1ms or less round-trip latency

1.4.6.2 Mobile Workstation Recommended Specifications (PMDC)

- Intel or AMD 2.6GHz dual core processor
- 4GB memory
- 20GB available disk space
- One 800x600+ pixel, 16+ bit color display
- Radio / Wireless communications device, 3G or 4G network
- Standard QWERTY keyboard and Touchpad / Point Stick (or equivalent mouse device)

- Touchscreen Optional
- Windows 7 Professional SP1 64-bit
- Video card with at least 512MB RAM, 24 bit capable graphics accelerator, OpenGL v2.0 runtime or higher. Latest available drivers. Shader Model 3.0 or higher is recommended. Adobe PDF reader (for help files)

1.4.6.3 Mobile Workstation Minimum Specifications (PMDC)

WINDOWS 7:

- Intel or AMD 1GHz processor or higher
- 1GB RAM (32-bit), 2GB RAM (64-bit)
- 16GB available disk space (32-bit), 20GB available disk space (64-bit)
- One 800x600+ pixel, 16+ bit color display
- Radio / Wireless communications device
- Standard QWERTY keyboard and Touchpad / Point Stick (or equivalent mouse device)
- Touchscreen Optional
- Windows 7 requirements must meet or exceed Microsoft minimum requirements: For more hardware details, see http://windows.microsoft.com/systemrequirements

WINDOWS 8:

- Intel or AMD 1GHz processor or higher with support for PAE, NX, and SSE2
- 1GB RAM (32-bit), 2GB RAM (64-bit)
- 16GB available disk space (32-bit), 20GB available disk space (64-bit)
- One 800x600+ pixel, 16+ bit color display
- DirectX 9 graphics device with WDDM 1 driver
- Radio / Wireless communications device
- Standard QWERTY keyboard and Touchpad / Point Stick (or equivalent mouse device)
- Windows 8 requirements must meet or exceed Microsoft minimum requirements: For more hardware details, see http://windows.microsoft.com/en-us/windows-8/system-requirements?src=ia&iaaid=50007200&ialnk=title

1.5 PREMIERONE INTERFACES AND INTEGRATIONS

PremierOne interfaces exchange data and information with public safety systems both internal and external to PremierOne. Interfaces facilitate some functionality within PremierOne, such as database queries or the running of vehicle plates. The exchanged information and data can be captured and associated with the relevant system data, such as queried data from state databases stored with incidents.

Interfaces are divided into six general categories:

- **Data Views.** For this connection Motorola assists the interfacing product with how to access the appropriate sections within the RDWs to get to the information they need. Motorola does not create any custom view, triggers, stored procedures or transforms as part of this.
- **One way data feeds (DFF).** Data feeds present from the CAD environment to the target in near real time. These interfaces only allow information to be sent from CAD to the remote target however, they can be modified by you to add additional data elements if their needs change in the future.

- **One way interfaces.** One way interfaces can allow information to move from or to any of the connected systems. These communications can occur on a real time bases or near real time depending upon the needs of the system.
- **Two way interfaces.** Two way interfaces both send and receive information from PremierOne to external systems. An example of this may be a fire station alerting system where the fire station alerting system receives a dispatch and then can return status information to PremierOne showing "Bay Doors Open".
- **Application Programming Interfaces (API).** An API is a method for a third party to write to standard capabilities made available by several PremierOne applications. Writing to an API, a third party can develop interface with PremierOne application(s). APIs are licensed for each instance of use on a vendor by vendor basis. Writing to a PremierOne API means that a third party is taking responsibility for interface with standard PremierOne functionality. Additional third party services may be required to write to the API and are your responsibility.
- **Query only interfaces**. If information is needed from within CAD or RMS which is contained in an external system then a query interface is appropriate. An example would be a regional law records system.

Interfaces communicate via TCP/IP and other protocols, which require interface devices. For non-TCP/IP protocols, the protocol is converted to TCP/IP by interface devices, although conversion to TCP/IP may not be present at the same location as the rest of the system. This data is then transported to the system via TCP/IP. For high availability, two interface devices are clustered or configured in a fault tolerant manner. Motorola has included four (4) Lantronix UDS1100 serial to IP devices to support interface connectivity to E9-1-1 ANI/ALI/TDD controllers.

Interfaces that have unique requirements, such as state interfaces that require communication to be initiated from a single static IP address, are handled by the interface service through clustering.

The interface descriptions provided in this document represent the capabilities of PremierOne. Interfaces to your-provided third party system do not represent or guarantee the third party system's capabilities. If a third party application programming interface (API), Motorola PremierOne API or third party services are necessary to accommodate an interface with PremierOne, such elements and any associated third party costs will be your responsibility. In order to successfully deploy the interface, Motorola requires you to provide coordination with the third party.

Detailed interface specifications are documented and provided to you during the design document phase (post-contract execution) in an Interface Requirements Document (IRD). The development of the IRD for each interface is performed in concert with you post-contract in order to define the proper capabilities and requirements for each interface. The following is a list of the interface components which may be collected and documented in the IRD.

- Introduction
  - Interface Function
  - Responsibilities
  - Assumptions
  - Acronyms and Definitions
  - References
  - Issues
- Interface Description
  - Overview
  - Expected User Experiences
  - Error Conditions and Logging

  - Provisioning / System Administration
- Interface Requirements and High Level Design
  - Hardware Connection
  - Message Format
  - Data Elements
- Interface Constraints
  - Connectivity
  - Performance
  - Administration
  - Maintenance
  - Security
  - Test Notes

Your requirements identified in the IRD include working with the applicable third party to obtain/configure/modify the data mapping needed between the two systems, provide the connectivity between the databases, provide the access permissions for tables outside PremierOne, and provide the computing and staff resources needed for the test of the interface.

1.5.1 PremierOne Interfaces

Table 1-7. PremierOne Interfaces

INTERFACE	GROUP	TYPE	DR
E911 & TDD	CAD	One Way In	Yes
Paging (TAP)	CAD	One Way Out	Yes
SMTP	CAD	Two Way	Yes
ASTRO PTT ID	CAD	Two Way	Yes
MCC7500 Console	CAD	Two Way	Yes
CryWolf	CAD	Two Way	Yes
PMDC	Mobile	Two Way	Yes

1.5.2 Integrated Solution Interfaces

Table 1-8. Integrated Solution Interfaces

INTERFACE	GROUP	TYPE	DR
California – Los Angeles County – PMDC Mobile Query	Mobile	Query	Yes

1.6 PREMIERONE INTERFACE INFORMATION

The following sections describe the PremierOne interfaces included with Motorola's solution.

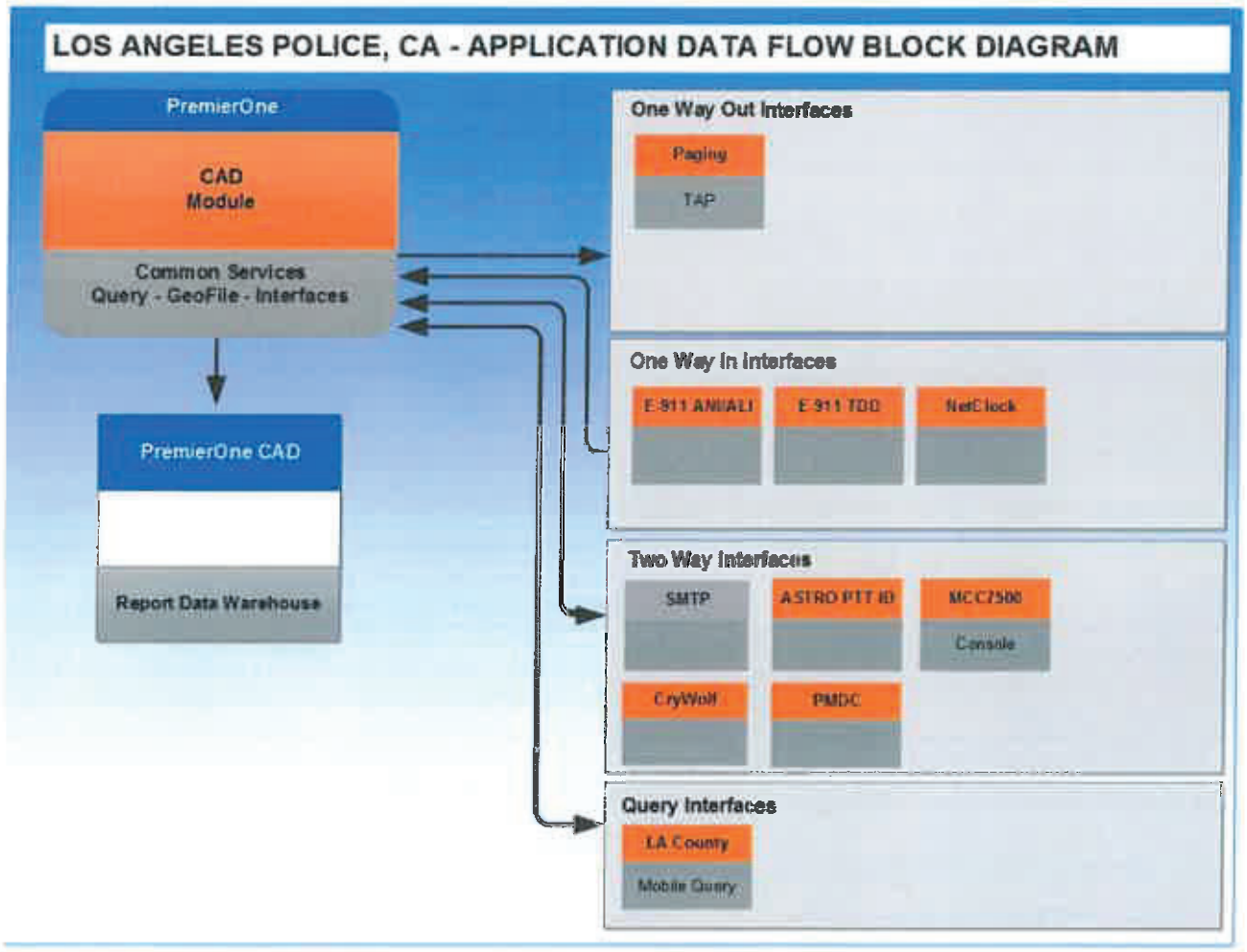
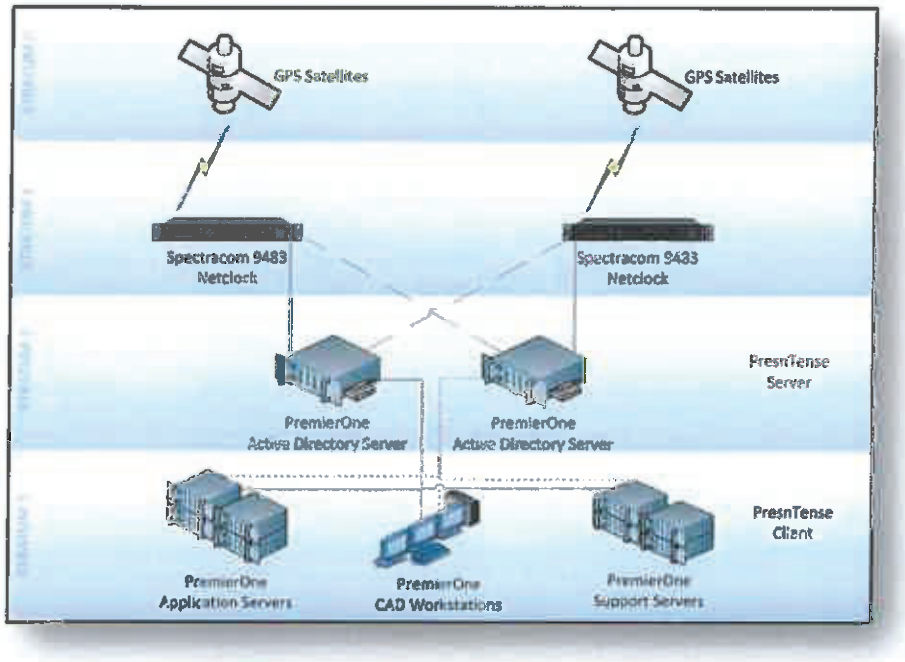


Figure 1-4: Interface Data Flow Diagram

1.6.1 PremierOne System Interfaces

1.6.1.1 SpectraCom NetClock Interface

LAPD has indicated they will be providing NetClock for the deployment with PremierOne CAD. Motorola requires 2 clock sources for Primary and 2 clock sources for the Disaster Recovery site. Netclocks will provide a unique ability to provide time synchronization services not just to the PremierOne servers but also the CAD workstations.



1.6.2 PremierOne One Way Interfaces

1.6.2.1 Generic Phone (ANI/ALI)

Overview

The ANI/ALI interface allows the population of ANI/ALI information into an Incident Initiation screen. This can be accomplished automatically if an II form is open at the time the call is answered or after the fact. The interface supports the auto populate of ANI and ALI information for the most recently answered call. Unlike Premier CAD, the ability to scroll ANI/ALI data for previously answered calls is not available. Certain functions may vary depending upon the specific vendor.

CAD Integration of ANI and ALI

PremierOne CAD supports integration with E911 systems so that as CAD Incidents are created, ANI and ALI information will automatically populate in the incident fields when available. When a 911 call is answered, the 911 system will send ANI and ALI information to the CAD Server. The 911 console that answers the incoming call is identified and sent to CAD. When the CAD Client at this same workstation location initiates an incident, the ANI and ALI information from the answered call is associated with the new incident.

If 911 data is available when the incident is initiated, the Location and Caller information can be automatically populated in the form.

Mobile Re-location (Re-bid)

A second phase of Enhanced 911 service allows for location of a mobile phone.

There are two methods of location. As with every 911 call, the initial location information is passed to CAD at the start of the call. The added challenge with mobile phone callers is that they can be moving and may not be at the same location that was provided at the start of the call. Dispatchers like

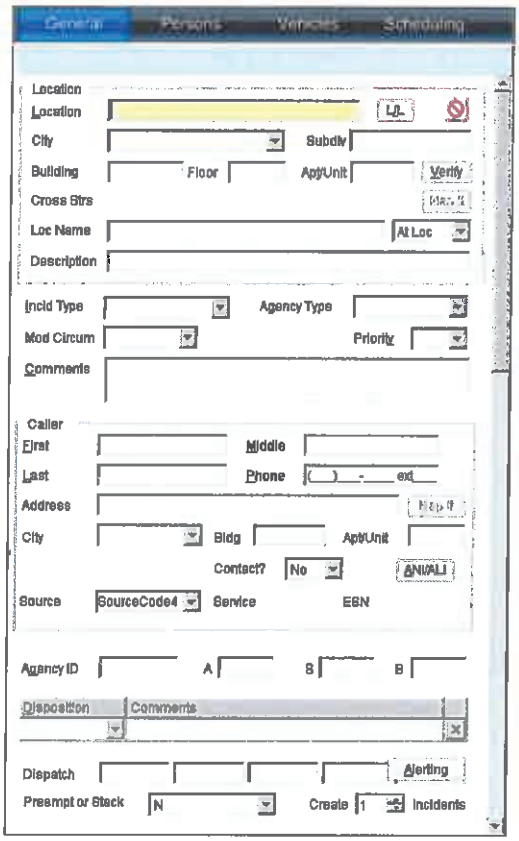
to check if mobile phone callers are where they think they are by re-bidding the ALI information during the 911 call. The initial location (GPS Coordinates) of the cell-phone at the time of the incoming call is displayed on the PremierOne MAP as long as this information is provided to CAD. Re-bidding the mobile caller is not a supported CAD function, but can be done from the 911 Console if the E911 system supports it.

The PremierOne Mapping Client will be updated if new ALI information is made available to the CAD server by the E911 system.

An icon indicating the type of ANI/ALI data displays to the right of the Contact field if the Name and Phone fields were populated by ANI/ALI data. Select the icon to refresh the ANI/ALI data.

CAD auto-populates the Source field for when ANI/ALI is used and for alarm-initiated calls. For other calls, select the appropriate source. CAD populates the Service and ESN fields for ANI/ALI calls.

This interface includes the Motorola services necessary to deploy the interface with PremierOne. Additional third party services may be required and are the responsibility of the Customer.



1.6.2.2 TDD

PremierOne supports a server interface for the phone system. The CAD Server interface connects to the centralized TDD Controller located in the Cassidian system. Telephone Device for the Deaf allows a hearing or speech impaired person to dial 911 and solicit the same emergency and public safety services as the rest of the speaking and hearing community. The Americans with Disabilities Act requires communities to provide the same level of services to those with disabilities that it provides to the average citizen. Therefore 911 Public Safety Answering Points (PSAPs) must be

compliant with the Act, and NENA-04-001, Issue 2, August 23, 2000 provides the "Standards for E9-1-1". PremierOne CAD provides Public Safety Customers a path to become compliant or maintain their compliance by supporting integration of TDD calls.

This interface includes the Motorola services necessary to deploy the interface with PremierOne. Additional third party services may be required and are the responsibility of the Customer.

1.6.2.3 Alphanumeric Paging (TAP)

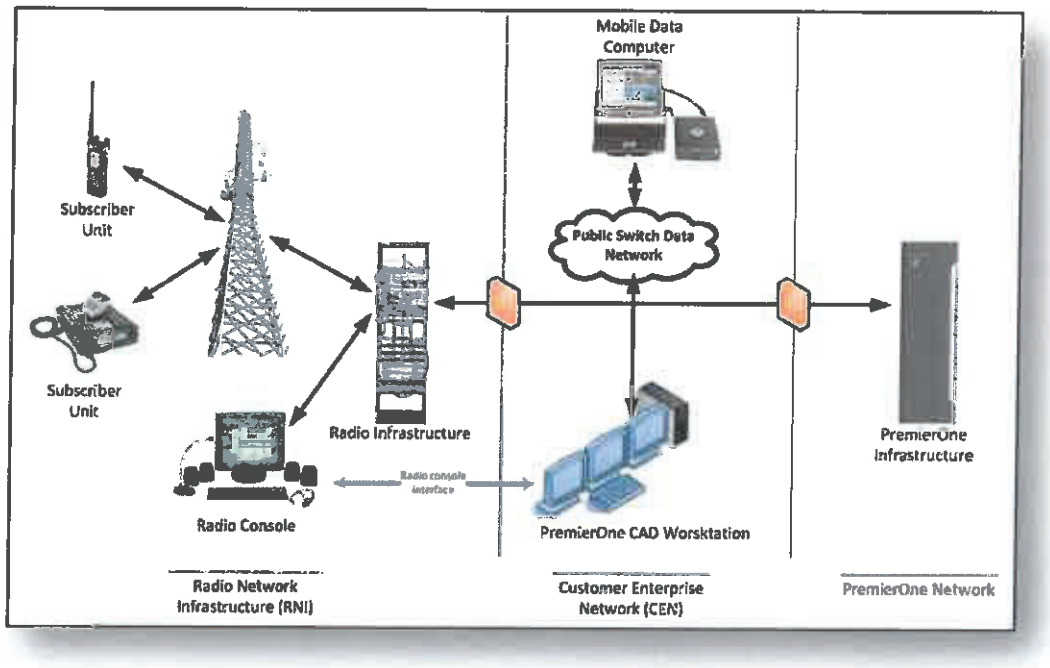
This TCP/IP interface will allow PremierOne CAD to send alphanumeric messages to a system/service that is capable to receiving the TAP protocol. The TAP protocol sends a TCP/IP message to a Lantronix device which converts the message into a serial output. That output is then connected to a modem or other device which is capable of receiving a serial TAP input.

This interface includes the Motorola services necessary to deploy the interface with PremierOne. Additional third party services may be required and are the responsibility of the Customer.

1.6.2.4 ASTRO Radio PTT ID & MCC7500 Console

PremierOne allows your Motorola ASTRO system to be integrated to CAD. The following sections describe that integration.

With MCC7500 console integration, Push-to-Talk (PTT) IDs to be passed to PremierOne CAD along with Emergency Button activations. Status button assignments allow for status changes, location changes, and/or the adding of disposition to an incident. Channel Grouping feature is also accessible within CAD. From a window within the CAD client, the user can use predefined groups or create, manage and maintain their own talk groups. These groups can be activated as multi-selects on the radio console at the discretion of the user. When the group is utilized, the CAD client will show the status and will allow the user to transmit on all the selected talkgroups. The user can make a priority transmission or may request the use of the talkgroups by alerting the other users with an audible notification. PremierOne CAD also can be provisioned to automatically load a particular channel group based on the geographical location of an incident.



CADICAD: Radio Proxy Server

The PremierOne element providing the main radio infrastructure interface is the CADICAD server. This stand-alone Windows Server 2012 application utilizes SQL Server 2012 and provides proxy functions from the Radio Infrastructure to the CAD system. CADICAD can support ASTRO 25 Integrated Voice and Data (IV&D) Conventional as well as Trunking systems. There are three supported interface protocols from the ASTRO systems: CADI, ATIA, and AIS.

The CADICAD Server is capable of providing four types of data from the Radio system to the CAD system. These include specific radio initiated events as follows:

- Non-PTT Events
- PTT Events
- Emergency status
- Unit Status Change

Radio Emergency

The PremierOne CAD system supports notification and display of Radio/MDT Emergency status. An emergency situation can be triggered either by the Radio Emergency button or the Emergency icon on the PMDC client. All monitoring CAD Clients will receive an emergency notification (pop-up window) of the event. The emergency event must be acknowledged by the CAD User before the window will close. The Emergency will be listed in multiple places such as the CAD Client Info Panel, the Unit Status Monitor, the PTT Status Monitor, and the Reset Emergency Indicator (RE) command List on the CAD Client.

When Popup notifications are given for a Unit/Device emergency, they must be acknowledged in order to clear them.

- Clearing an Emergency (RE) for one source clears the emergency state for the whole unit.
- Notification Pop-up windows in the CAD Mobile and CAD Client show the Unit and Logged in User.

- The Unit Status Monitor includes last known location, shows EM status, and turns red.
- PTT Status Monitor shows the radio emergency in red.

PTT

Radio Channels that are to be monitored by CAD and have their status displayed on the PTT Status monitor must be selected by the CAD User using the CT command. This allows for a dispatcher to select only those channels that need to be monitored and may be associated with a dispatcher's coverage area.

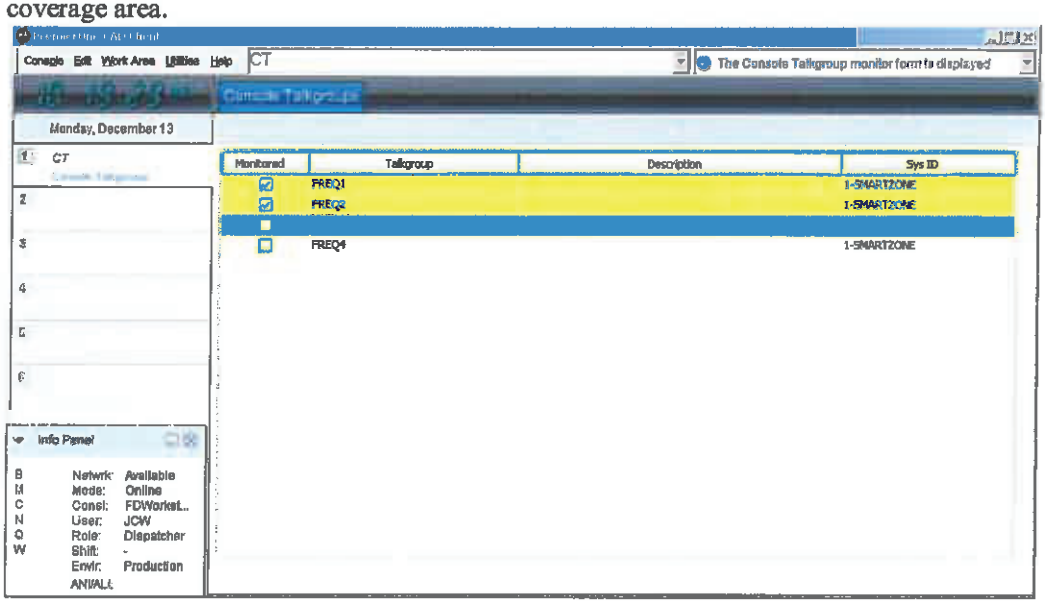


Figure 1-5: CT FORM

Once the channels are selected, enabling the PTT Status Monitor will ensure that all radio traffic on that channel is monitored and displayed.

The "CALLER" listed in the PTT Status Monitor is the highest level identification of the radio sender. This means that if the radio is assigned to a Unit, the Unit ID will be displayed; if the radio is assigned to a Person, the Person will be assigned; if no higher level assignment is made, the Radio Name (alias) will be displayed for the CALLER.

1.6.2.5 CryWolf

PremierOne interfaces to CryWolf with a two way interface.

First, CryWolf acts as the alarm detail system of record. Alarm number and associated data is input into CryWolf and sent to PremierOne as an inbound interface. Any alarm modifications occurring in CryWolf are updated to PremierOne periodically to keep the data synchronized. PremierOne takes that alarm information and makes it available for incident entry so that a call taker can simply enter an alarm number in order to initiate an incident at that alarm.

Second, PremierOne provides false alarm information back to CryWolf in an outbound interface so that False Alarm reporting and billing can occur.

This interface includes the Motorola services necessary to deploy the interface with PremierOne. Additional third party services may be required and are the responsibility of the Customer.

1.6.3 PremierOne Two Way Interfaces

1.6.3.1 Simple Mail Transport Protocol Alerting

PremierOne CAD will provide an interface to the Agency Public Safety mail or mail relay servers via SMTP to send and receive emails to addresses external to PremierOne. Additionally, notifications can be setup within PremierOne CAD to send SMTP messages (email) based on an Incident Response Factor (IRF's) or Geography. This allows triggers to be setup on specific locations, beats, sectors, or an area. Additionally the IRF trigger allows for notifications based on incident type, modifying circumstances as well as the alarm level of the incident. These triggers are setup and controlled at the agency level allowing for unique notifications per agency.

Each agency will be able to control the content of the message being sent. It can include elements such as units, personnel, address, Incident Type, priority, etc. It is important to note that not all incident elements are available to be sent automatically. This interface also allows for manual messaging to notification groups as needed. It is assumed that all units, personnel or groups, which need to be alerted, can be reached via a normally formatted e-mail address and that the Agency will provide a target server with SMTP relay capability such as an Exchange server.

1.6.4 PremierOne Query Service Interfaces (PMDC)

1.6.4.1 State/NCIC

PremierOne utilizes a standard query service to manage query, entry and update transactions to State/NCIC defined in the following list. Motorola will provide formatting for one and one response for each of the following queries from PMDC.

- Person by Name/DOB
- Person by License Number
- Vehicle by Plate
- Vehicle by VIN
- Article by Serial Number

Additional query form and response formatting may be provided, if required by you. Motorola can provide quote for these services if supplied with a list of required transactions.

SECTION 2

IMPLEMENTATION PLAN

2.1 PROJECT MANAGEMENT

Motorola's project management approach has been developed and refined based on lessons learned in the execution of hundreds of system implementations. Using experienced and dedicated people, industry-leading processes, and integrated software tools for effective project execution and control, Motorola has developed and refined practices that ensure appropriate design, production, and testing is optimized to deliver a high-quality, feature-rich system.

Motorola employs leading edge project management processes and tools such as Compass secure web-based reporting system, Oracle E-Business program management tools, Microsoft Project for schedule development and control and managing schedule and budget, and systematic Risk Management to assist the project team in accurately forecasting and effectively controlling project activities. The use of these tools results in higher quality system design and operation, quicker implementation, reduced project risk and total cost of ownership, and greater end user satisfaction.

Intelligent processes include embedded quality standards to include Digital Six Sigma for product and system development and manufacturing; rigorous and repeatable project management processes for execution and control of all project activities; and an integrated Quality Assurance Plan to measure the quality and timeliness of our work. These processes ensure that project execution efforts including system design, installation, testing, and delivery are completed on-time and to applicable specifications.

The assigned project manager for each organization shall be the business representative and point of contact for the organization, responsible for coordination of the organization's resources and activities. The project manager shall schedule all activities and resources as required to execute tasks, initiate review meetings, provide status information to their counterpart, and generally oversee the execution of this plan. Project management is an ongoing activity for the duration of the project and should be assumed to be part of every project task.

2.1.1 Motorola Project Manager

Motorola will designate a project manager who will direct Motorola's efforts and the efforts of Motorola's subcontractors and third party vendors and serve as the primary point of contact for the LAPD. The responsibilities of the Motorola project manager include:

1. Maintaining project communications with the LAPD's project manager.
2. Managing the efforts of Motorola staff and coordinate Motorola activities with the LAPD's project team members.
3. Managing subcontractors and third party vendors and integrating the delivery of third party content into the project.
4. Measuring, evaluating and reporting the progress against the project schedule.
5. Resolving deviations from the project schedule.
6. Monitoring the project to ensure that support resources are available as scheduled and as identified in the contract.
7. Coordinating and overseeing the installation of all licensed Motorola application software.
8. Reviewing and administering change control procedures through the LAPD's project manager and in accordance with the change management provisions of the Agreement.

9. Conducting status meetings in person on a monthly basis and via teleconference on a weekly basis or as may otherwise be reasonably required to discuss project status.
10. Preparing and submitting a monthly status report that identifies the activities of the previous month, as well as activities planned for the current month, including an updated project schedule.
11. Providing timely responses to issues related to project progress raised by the LAPD's project manager.

2.1.2 LAPD Project Manager

The LAPD will designate a project manager who will direct the LAPD's efforts and serve as the primary point of contact for Motorola. The responsibilities of the project manager include:

1. Maintaining project communications with Motorola's project manager.
2. Identifying the efforts required of LAPD staff to meet the task requirements and milestones in the Statement of Work and project schedule.
3. Reviewing the project schedule with Motorola's project manager and assisting Motorola in finalizing the detailed tasks, task dates and Motorola and LAPD Responsibilities.
4. Measuring and evaluating progress against the project schedule.
5. Monitoring the project to ensure that support resources are available as scheduled.
6. Attending status meetings with Motorola's project manager.
7. Providing timely responses to issues related to project progress raised by Motorola's project manager.
8. Liaising and coordinating with other agencies, LAPD vendors, contractors and common carriers.
9. Reviewing and administering change control procedures, hardware and software certification, and all related project tasks required to maintain the implementation schedule.
10. Approving and releasing payments in a timely manner.
11. Assigning one or more personnel who will work with Motorola staff as needed for the duration of the project, including at least one system administrator for CAD and one or more representative(s) from the IT department.
12. Ensuring acceptable Change Orders and Approval Letter(s) are approved by authorized signature(s).
13. Providing building access to Motorola personnel to all facilities where the system is to be installed during the project. Temporary identification cards should be issued to Motorola personnel if required for access to LAPD facilities. Access must be available twenty-four (24) hours a day during the course of this project.
14. As applicable to Motorola's installation, assuming responsibility for all fees for licenses and inspections and for any delays associated with inspections due to the required permits.
15. Providing reasonable care to prevent equipment exposure to contaminants that cause damage to the equipment or interruption of service. Ensure a safe work environment for Motorola personnel. If problems are encountered with hazardous materials, Motorola will immediately halt work and the LAPD will be responsible for the abatement of the problem or Motorola and the LAPD will jointly come to a mutual agreement on an alternative solution. Motorola will be excused from timely performance of its obligations pending such resolution.

2.2 PROJECT ORGANIZATION

The Motorola Smart Public Safety Solutions organization is comprised of business groups that support the development and implementation of complex public safety communications systems. Members of these groups are involved from the proposed solution conception through system completion.

The project implementation team that will be assigned to the LAPD's project includes the project manager (PM), solution architect (SA), system technologist (ST), and business analysts (BA) who specialize in CAD, GIS, and Records provisioning and functionality. Other groups support the efforts of the core team to ensure the successful implementation of the PremierOne solution.

Please refer to the organization chart provided in response to Section 3.5 for details about the proposed project team members.

2.3 PROJECT SCHEDULE

Implementation of this project will proceed in accordance with a project schedule that is jointly approved by the Motorola and the LAPD project manager during the project initiation phase. The mutually agreed upon project schedule will become the governing Project Schedule incorporated into the contract.

The project schedule is based upon work being accomplished Monday through Friday during normal business hours, with the exception of holidays.

Changes to the project schedule are governed by the terms and conditions of the System Agreement. A preliminary project schedule has been provided in Section 4.

2.4 PROJECT COMMUNICATIONS

Motorola recognizes the importance of effective project communications. A Project Communications Plan will be created during Project Kickoff and will include the following components:

- **Trigger.** Determines what information or event requires communication between the LAPD and Motorola (*e.g.,* status meetings, requirements documents, Test plans, training plans).
- **Frequency.** Determines the frequency of communication (*e.g.,* daily, weekly, monthly, one-time).
- **Recipient.** Determines who will receive or participate in each communication trigger, and who will be the primary member and who will be carbon copied.
- **Method.** Determines the method (*e.g.,* e-mail, conference call, formal letter) and format (*e.g.,* pre-determined form, page layout, field definition) of the communication.
- **Champion.** Determines who will be responsible for communication delivery or creation.
- **Planned Action.** Determines how the communication will be measured (*i.e.,* on-time, accuracy, professionalism).

2.5 RISK MANAGEMENT

Motorola's Project Management Plan includes the processes required to ensure project risks are managed. Motorola will develop the Risk Management Plan. Motorola and the LAPD will jointly

maintain a Risk Management Plan during the life of the project. The Risk Management Plan is an iterative process of identifying and measuring risks and developing, selecting, and managing options for handling those risks. The Risk Management Plan includes the following steps:

Identification. Determines which risks are likely to affect the project and documents the characteristics of each.

Quantification. Evaluates risks in terms of their probability of occurrence. The probability of occurrence includes the following measurements:

- Frequent: likely to occur on a continuous basis
- Probable: likely to occur several times
- Occasional: likely to occur some time
- Remote: unlikely but possible

Impact. Evaluates risks and risk interactions to assess the range of possible outcomes. The level of impact of the risk event includes:

- Critical: an event that, if occurred, would jeopardize project success
- Serious: an event that, if occurred, would cause major system cost/schedule increases
- Moderate: an event that, if occurred, would cause moderate cost/schedule increases
- Minor: an event that, if occurred, would cause a small increase in program costs and/or schedule
- Negligible: an event that, if occurred, would have insignificant effect on the project

Control. A risk control plan is established for each risk. The focus of the control plan is to manage or minimize the effect or impact of each risk by increasing the number of choices available and/or reducing the probability of occurrence. The methods for risk control include:

- Avoidance: eliminate the potential for occurrence
- Acceptance: the risk is allowed with no plan in place
- Mitigation: Steps are taken to reduce the likelihood or impact of the risk

Status. Motorola's project manager and the LAPD project manager will be responsible for the monitoring and management of the risk issues identified.

2.6 ACTION ITEM/ISSUES LOG

Motorola's Project Management Plan includes the development of an Action Item/Issues Log that will be used throughout the project. Motorola's project manager will work with the LAPD project manager during the kickoff to design and approve the format of the Action Item/Issues Log. The purpose of the log is to resolve project issues that arise within the scope of the project. Issues that change or modify the project scope, (i.e. quantities, schedule, deliverables), are handled through the Change Control process. The Action Item/Issues Log identifies the issue, provides regular status updates on specific tasks, and identifies the responsibilities of all parties.

2.7 CHANGE CONTROL

The change control process covers contract changes to the Agreement and defines the procedures by which the project scope may be changed. It includes the paperwork, tracking systems, and approvals necessary for authorizing changes.

The intent of the change control process is to ensure concurrence between the LAPD and Motorola on any changes to the contract baseline as it is currently documented and recorded.

Changes to the contract may originate for several of the following different reasons:

- Addition/deletion to scope of Project
- Complaint requiring action
- System design change
- Requirement change
- Functional change
- Milestone Payment change
- Procedural change spelled out in the contract
- Supplier change of equipment
- Alternate equipment or solution being proposed
- Schedule change to project and Modification to the Terms and Conditions of the contract

The Motorola project manager reviews the requested change with the LAPD project manager to determine the proper course of action necessary to respond to the requested change. This review may involve resources from Contracts, Engineering, and/or key subcontractors (if applicable) to properly evaluate and respond to the merits of the change. An evaluation usually determines whether a proposed change is feasible, meets the intent of the change, is appropriately priced, if applicable, and tests for acceptance of the change by both parties involved. Change orders may result in price increases, be price neutral, or may decrease the price.

Change orders must be authorized and executed by the LAPD and Motorola before work on the change order can begin.

2.8 STATUS REPORTING

Project Status includes the performance of the project in relation to project scope, schedules, issues, and quality. Project performance measurements include a list of the appropriate milestones, task completion points, and deliverables. This format will ensure that proper checkpoints are utilized to make sure the project is proceeding according to schedule.

The Motorola project manager will monitor and communicate project performance via project status reporting to the LAPD as well as internally to Motorola team members. Status reports will be provided for each monthly status meeting.

The following items will be included within the project status report.

- Completed activities, deliverables and milestones, comparing to plan.
- Work plan activities, deliverables and milestones, if any, planned for the current and the next reporting period
- Updated Action Item/Issues Log
- Project notes and comments

2.9 QUALITY ASSURANCE

Quality Assurance ("QA") processes ensure the highest level of defect-free products that consistently meet specification requirements, performance, reliability, interoperability, usability, and documentation.

QA testing begins with defined processes in the development environment that include unit and integration testing prior to the software being delivered to the QA department.

Once received in QA, an established review process is maintained for all products prior to approval for shipping, control of the final code, and oversight of the products once they have been shipped.

The QA Department is responsible for the following:

- Establishing, achieving, and maintaining Motorola quality objectives
  - Meet requirements through design concepts, testing, and validation
  - Performance measurements against objectives and requirements
  - Adhering to Six Sigma Quality Process
  - Applying ISO 9001-2008 quality management principles
- Developing, executing, and reporting standardized Test Plans
- Performing Software Configuration Management
- Reviewing activities, including requirements, design, and end-user documentation
- Controlling supplier, subcontractor, and third party software deliverables as procured, installed and configured by Motorola
- Providing Defect Control and correcting them
- Creating and maintaining quality records

All software products must pass comprehensive testing before shipping. An established policy dictates rules for acceptance/rejection of products and standards that must be met before products are authorized for shipment.

Motorola's QA process includes involving the QA team in the early stages of development. QA plays an active role in reviewing requirements and design to ensure that the maximum coverage is incorporated into the Test Plans/Procedures used by the QA team in the verification of the software.

Motorola recognizes that each LAPD's needs and configurations are different. As such, Motorola's QA processes include functional testing at the LAPD sites following installation and configuration of the software. Functional testing is completed following the initial installation as well as subsequent software upgrades.

2.10 TESTING AND COMPLETION

The Acceptance Test process confirms that the delivered solution meets product requirements as defined in the contract. All test criteria will be predicated by the contract exhibits including Motorola's responses to LAPD requirements. The Acceptance Test Plan will be jointly developed by Motorola and the LAPD and will include the test processes to be performed, the criteria by which tests will be evaluated, and resolution plans by which issues that may not successfully pass the initial testing will be addressed.

Testing task descriptions are provided in the Statement of Work in Section 3.

SECTION 3

STATEMENT OF WORK

This Statement of Work ("SOW") defines the principal activities and responsibilities of all parties for the implementation of PremierOne CAD to support public safety dispatching operations. When assigning responsibilities, the phrase "Motorola will" includes Motorola subcontractors and third-party partners.

3.1 PROJECT KICKOFF

The purpose of the Project Kickoff activity is to introduce project participants, review the scope of the project, project schedule, training plan and test plans.

Motorola Responsibilities

1. Deliver product videos for review.
2. Schedule and facilitate the kick-off meeting to clarify roles and responsibilities and establish team working relationships.
3. Review all third-party partners and proposed applications.
4. Review and work toward finalizing the project schedule dates.
5. Review and finalize the Training Plan.
6. Discuss the preliminary test plan that will include test procedures that define steps to be taken to validate functionality, pass/fail criteria, and the resolution for deficiencies. The Test Plan will be reviewed and finalized after System Provisioning and Interface Requirements Documents are completed.
7. Plan installation activities with the LAPD.

LAPD Responsibilities

1. Provide access to product videos to project participants.
2. Identify and ensure participation of key team members in kickoff and project initiation activities.
3. Provide input to the final Project schedule dates.
4. Finalize the Training Plan.

Motorola Deliverables

Title
Project Kickoff Meeting Minutes
Project Schedule
Final Training Plan

3.2 FUNCTIONAL SCOPE REVIEW

The purpose of this activity is to review the contracted functional capabilities of the PremierOne CAD and PMDC system in detail, including screens, processing, and outputs of the incident, unit, status monitoring, geofile, messaging, and reporting functional areas of the system.

3.2.1 Application Orientation

Motorola will introduce the CAD and Mobile systems to LAPD users via demonstrations and related documentation.

Motorola Responsibilities

1. Prepare demonstration CAD system: Basic Provisions for LAPD.
2. Coordinate room setup and attendees with the LAPD.
3. Prepare demo CAD system.
4. Prepare associated binders/documents for demo.
5. Review PMDC Functional Specification Document

LAPD Responsibilities

1. Review Agenda Letter with key staff Schedule stakeholders.
2. Provide room with projector, seating and AV equipment.
3. Prepare focus list for demonstration.

Title
Demo Binders
Product Demo
PMDC FSD

3.2.2 Site Survey and Infrastructure Planning

The purpose of this activity is to review the infrastructure requirements for the PremierOne CAD system and to ensure the computer room(s) and other locations are appropriate for the installation of the proposed system hardware. Motorola will facilitate a meeting following the Project Kickoff to review the Site Requirements document that accompanied Motorola's proposal and to conduct a survey of the LAPD's facilities. The objective of this review is to ensure the LAPD's existing infrastructure(s) and facilities will support an optimal installation environment for the PremierOne Records system.

Motorola's proposal makes no provision for cabling or capital improvements to the installation environment and power consumption considerations that may be required to support the PremierOne solution.

Motorola Responsibilities

1. Review Site Requirements Document with the LAPD.
2. Facilitate meetings as required to review the current infrastructure.
3. Conduct a site survey/audit of the facilities in which system hardware will be installed to assess site readiness.
4. Verify the proposed computer processor(s), operating system software, third-party software, all associated workstations, printers, communications, and related components.
5. Prepare a report that includes recommendations for any site preparation required to provide a suitable environment for installation of the system equipment and that identifies any deficiencies related to power, power supplies, cabling, network connectivity, communications equipment.

LAPD Responsibilities

1. Provide documentation on the current infrastructure, i.e. existing hardware and operating system software components and terminal networks, as well as projected utilization statistics and other information as is reasonably required to validate final hardware requirements.
2. Ensure site environment meets minimum requirements, as stated in the Site Requirements document.
3. Make appropriate staff available to explain the current architecture.
4. Provide a site adequate for the installation, operation, and maintenance of all computer server(s), workstation(s), and related peripheral in accordance with Motorola's requirements and all network infrastructures.
5. Provide a programmer work area for Motorola on-site staff in the primary facility, located near but outside of the computer machine room. The room will be equipped with AC power to support four terminal devices and provide workspace for a minimum of two (2) people. The area must have cable access to the computer and be equipped with a telephone line capable of making voice telephone calls, including long distance. This work area will be available during the course of the project.
6. Review the final hardware and operating system software configuration with the Motorola project team.

Motorola Deliverables

Title
Site Survey Results
Bill of Materials

3.2.3 IP Network Analysis

The objective of this activity is to ensure the local and wide area networks will support the proposed solution. A Motorola Network Systems analyst will conduct an on-site assessment of the existing network.

Motorola Responsibilities

1. Perform on-site network assessment.
2. Analyze data.
3. Prepare recommendations.
4. Present and discuss recommendations with the LAPD.

LAPD Responsibilities

1. Provide access to all required facilities and locations necessary to perform assessment.
2. Provide information on current network architecture and configuration.
3. Review and discuss recommendations with Motorola.

Motorola Deliverables

Title
Site Preparation Recommendations

3.3 BUSINESS ANALYSIS AND SYSTEM PROVISIONING

System provisioning includes user configurable parameters (i.e. specific values for unit names, timing of events, officer or user identification, street names, statute tables; to name a few) that are defined within the system. In order to guide the LAPD through the provisioning phase, Motorola will conduct

a series of meetings during which we will gather information necessary to provision the system to best meet the agency's functional requirements. The metrics and data gathered will be the applied during the provisioning activities.

*Note: While the focus of provisioning will be on CAD, Motorola will obtain sufficient information to provision PremierOne Mobile such that base functionality will be supported. At such time that LAPD would like to explore PremierOne Mobile, they can begin with the base provisioning and functionality. If it is determined that additional provisioning is required, Motorola will work with LAPD to develop a change order documenting the scope of the requested services.

3.3.1 CAD Business Process Review (BPR) and Requirements Gathering

Motorola Responsibilities

1. Prepare agenda and letter
2. Prepare BPR workbook
3. Work with LAPD to complete BPR workbook
4. Review site's current GIS data, including boundary information and collect sample data. Establish consistent terminology for response boundaries.
5. Complete field info gathering as needed

LAPD Responsibilities

1. Provide room, seating and AV equipment
2. Notify appropriate persons of date, hours and location
3. Schedule dispatch, police ride along
4. Prepare call and unit statistics
5. Work with Motorola to complete BPR workbook

Motorola Deliverables

Title
Pre-BPR Checklist
Completed BPR Workbook

3.3.2 Draft CAD BPR Findings, produce Vision and Scope

Motorola will develop documentation that reflects the features that will be provisioned in support of the department's workflows.

Motorola Responsibilities

1. Review BPR workbook
2. Produce Initial Vision and Scope Document
3. Review Initial Vision and Scope Document with the Department
4. Review LAPD's feedback in the Vision & Scope GAP Document
5. Produce Final Vision & Scope Document and deliver it
6. Agree upon Final Vision & Scope Document

LAPD Responsibilities

1. Review Initial Vision and Scope Document
2. Provide feedback in the Vision & Scope GAP Document
3. Review and provide feedback on the Final Vision & Scope Document
4. Approve and Sign-off on the Final Vision and Scope Document

Motorola Deliverables

Title	Description
Vision and Scope Document	
Gap Analysis	

3.3.3 GIS Boundary Workshop

Response Boundaries are features that are represented geometrically by a polygon (area) which represent the smallest level of response and resource assignment. For law enforcement agencies, a response boundary is typically referred to as a "beat" and collections of beats define the "sectors" and "areas" of response plans and/or run cards.

It is expected that PremierOne customers are already maintaining their GIS data in ArcGIS. During this activity Motorola will review the LAPD's GIS data with a focus on the response boundary requirements. The PremierOne GIS Requirements document (Exhibit XX) will be the basis of the GIS review.

LAPD personnel that participate in this activity should include those very familiar with GIS operations.

Motorola Responsibilities

1. Review the PremierOne GIS Requirements document.
2. Review the GIS data and identify the boundary requirements.

LAPD Responsibilities

1. Provide Motorola with existing GIS data.
2. Update GIS data as necessary to develop response boundaries in conformance with the GIS Requirements document.

Motorola Deliverables

Title	Description
GIS Boundary Requirements	

3.3.4 CAD Metrics/Data Gathering

Motorola will work with the Department to gather the data elements required to provision the system.

Motorola Responsibilities

1. Gather data related to provisioning and system configuration
2. Import data tables where possible

LAPD Responsibilities

1. Provide data as requested
2. Review provisioning import tables and work with Motorola to provide data in format

Motorola Deliverables

Title	Description
Data Gathering checklist	

3.3.5 Workstation Installation

Client software will be installed on up to five (5) workstations to facilitate provisioning, training and testing and provide instruction to LAPD personnel who will complete software installation on the remaining workstations.

Motorola Responsibilities

1. Verify system readiness
2. Provide instruction and documentation on client software installation on up to five (5) CAD workstations.
3. Verify client software installation

LAPD Responsibilities

1. Provide workstation hardware in accordance with specifications
2. Provide room, seats and AV equipment as requested
3. Assign personnel to observe software installation training
4. Complete installation of client software on remaining workstations.

Motorola Deliverables

Title
Pre-Install Prep Checklist
Provisioning Workbook
Installation Guide

3.3.6 Motorola Led Provisioning

Motorola will perform CAD system provisioning based on the data gathered during the BPR and completion of the provisioning workbooks.

Motorola Responsibilities

1. Review tables (configurable items) and associated customer data
2. Complete Data Entry (collaborate w/ customer)
3. Conduct Motorola Checkpoints.

LAPD Responsibilities

1. Verify data entry completed by Motorola
2. Provide data as needed
3. Conduct independent review of data entered to ensure quality
4. Participate in Motorola Data Checkpoints

Motorola Deliverables

Title
System Checkpoint milestone reports
Completed Provisioning Workbook

3.3.7 CAD User Interface Modifications

The objective of these tasks is to modify the user interface (UI) for the CAD client software. The options for modifying the UI will be presented to the LAPD and the initial modification effort will beperformed and demonstrated. A single CAD UI will be tailored. After the initial UI

modification, the LAPD will have an opportunity to identify additional modifications which Motorola will deliver as the final version. Subsequent requests for changes will be managed via the change control process.

Motorola Responsibilities

1. Present available options for modifying the CAD UI.
2. Perform the initial UI modifications.
3. Revie UI
4. Make final modification to the UI and deliver it.

LAPD Responsibilities

1. Participate in initial meetings to define requested UI modifications.
2. Evaluate the UIs after the initial delivery and identify any final modification requests.

Motorola Deliverable

Title
CAD UI

3.3.8 Provisioning Verification

Motorola and the LAPD will exercise the CAD system to verify the system has been provisioned in accordance with the Vision and Scope documents and that the system functions in accordance with the system documentation.

Motorola Responsibilities

1. Provide scripts with which to exercise system functionality.
2. Record discrepancies between data provided by the LAPD and the provisioning tables.
3. Update provisioning tables, if required.
4. Document any system defects identified during the verification process.

LAPD Responsibilities

1. Ensure the availability of the SME's that participated in the BPR and provisioning training for this activity.
2. Work with Motorola to verify provisioning has been completed in accordance with the Vision and Scope documents.
3. Work with Motorola to document any system defects.

Motorola Deliverable

Title
Provisioned System

3.3.9 PMDC Design Document

Motorola will develop the detailed design documents for PMDC Messaging based on the PMDC FSD previously reviewed. The mobile query and mobile dispatch screen layouts will be defined.

Motorola Responsibilities

1. Develop and document the requirements for the PMDC client software cut (Custom Pack)

LAPD Responsibilities

1. Work with Motorola to develop PMDC Custom Pack requirements

Motorola Deliverable

Title
PMDC Design Document

PMDC Considerations:

Motorola recognizes that the large number of MDTs in the LAPD enterprise presents unique deployment challenges related to several activities including client software installation, end user training, the initial go-live, and the logistics of future upgrades.

As it relates to client software installation, it is Motorola's understanding that the current LAPD mobile software environment requires every MDT to be physically touched by the IT staff in order to push out any software upgrade, patches, and configuration changes. Motorola has included efforts to install the PMDC client software on five (5) mobile devices and provide training to IT personnel on installation procedures. The current mobile software environment requires a large labor effort for the department to install software on the remaining mobile devices. Motorola would like to discuss the option of the department upgrading the current "DeepFreeze" environment to "Deep Freeze Enterprise" or another 3rd party Mobile Data Management deployment. Motorola believes that moving to an environment that allows for over-the-air upgrades will substantially reduce the LAPD staff effort required to deploy PMDC on the mobile fleet. Additionally, the time to push mobile upgrades in the future will be dramatically decreased, provide a significant annual savings in labor efforts of your IT staff, and a substantial improvement in efficiency to your mobile management needs, year over year. Motorola welcomes the opportunity to discuss the mobile client software installation in more detail.

3.3.10 PMDC Custom Pack

Motorola will develop an initial cut and a final cut of the PMDC custom pack that will be delivered and installed. The LAPD will review the initial cut and will identify any discrepancies or defects between the software and the specification on a defects list. Motorola will develop the final cut of the software based on that list.

Motorola Responsibilities

1. Place an internal order for production of the initial client cut of Premier MDC software.
2. Develop the initial client cut of Premier MDC software based on the design documents.
3. Install the client software on five (5) mobile devices.
4. Document client software defects, if necessary.
5. Resolve list of defects in final cut of client software.
6. Deliver final cut of client software and install it on five (5) mobile devices.

LAPD Responsibilities

1. Review the initial release of the Custom Pack and document any deficiencies or defects.
2. Install client software on all mobile devices beyond those installed by Motorola.

Motorola Deliverable

Title
PMDC Custom Pack

3.4 HARDWARE AND SOFTWARE

Motorola will procure the primary system equipment in accordance with the approved equipment list. Procurement of Disaster Recovery system equipment is not included in the scope of this contract andwill be procured during Phase 2 activities.

3.4.1 System Staging

The objective of this activity is to install the Motorola procured hardware and software components at Motorola's staging facility. The system will then be tested and verified to be operational in a staged environment. Once validated by Motorola in Schaumburg, IL, the system will be packaged and shipped to the LAPD's location for installation.

Motorola Responsibilities

1. Order all hardware, software and related components and deliver them to Motorola's staging facility.
2. Install and configure system software.
3. Load preliminary provisioning data.
4. Verify initial PremierOne and PMDC functionality in accordance with release criteria.
5. Ship staged system to the LAPD's site.

LAPD Responsibilities

1. Provide appropriate receiving facility for the system equipment.

Motorola Deliverables

Title
Equipment Inventory
Staged System Delivery

3.4.2 On-Site Installation

The objective of this activity is to install the system at the LAPD's site. The output of the activity will be an installed PremierOne system. This activity addresses physical installation activities and system connectivity verification.

Motorola Responsibilities

1. Install the staged system in the LAPD's environment.
2. Conduct a Power On test to validate that the installed hardware and software are ready for configuration.

LAPD Responsibilities

1. Certify that the server room, workstations are available and meet agreed upon specifications.
2. Install the client software on the balance of workstations.

Motorola Deliverable

Title
Power On Verification

3.5 INTERFACES

Motorola will develop and configure PremierOne interfaces to the third-party systems as listed in the TSSD. Interfaces included as part of Motorola's deliverables will be developed or configured per Interface Requirements Documents (IRD) that list the specific requirements of the contracted interfaces and are installed and validated to provide the features listed in the IRDs.

- Motorola is not responsible for managing any third-party systems and/or software not included as part of Motorola's proposed solution.
- In cases where it is necessary for Motorola to work with the LAPD's 3rd party vendors to develop interface requirements, the LAPD will be responsible for facilitating communications between Motorola and the 3rd party vendor
- LAPD will be responsible for any costs associated with efforts required of the LAPD's 3rd party vendors, which may include professional services, API/SDK fees, licenses, and configuration or development, if necessary to support desired interface functionality
- Motorola assumes no responsibility for training, installation; configuration, on-going support or warranty for any third-party systems and/or software not included as part of Motorola's proposed solution.
- Motorola assumes no responsibility for issues arising from lack of engagement of third-party and/or LAPD resources to perform work related to the interface, or troubleshooting any issues on the LAPD's third-party systems.

3.5.1 Interface Requirements Gathering

The purpose of this activity is to understand the requirements of each proposed interface by analyzing the LAPD requirements for each. The products of this exercise are Interface Requirements Documents ("IRD") that describe the connectivity and functionality for each interface.

Motorola Responsibilities

1. Conduct meetings to explain how the interface requirements are expected to be met by the PremierOne and PMDC systems and interfaces to external systems.
2. Solicit information on the business processes and workflows for each interface.
3. Document interfaces requirements.
4. Develop and deliver Interface Requirements Documents for each interface.

LAPD Responsibilities

1. Make knowledgeable individuals available for the interface requirements meetings.
2. Provide documentation on current usage of each interface and its desired interaction with the PremierOne portfolio of products.
3. Facilitate a visit to the CAD Unit, if requested.

Motorola Deliverables

Title
Interface Requirements Documents

3.5.2 Interface Installation and Configuration

Connectivity will be established between PremierOne and PMDC and the external and/or 3rd party systems to which PremierOne and PMDC will interface. Motorola will configure PremierOne and

PMDC to support each contracted interface. The LAPD is responsible for engaging 3rd party vendors if and as required to facilitate connectivity and testing of the interfaces. The LAPD will be responsible for any charges required by the 3rd party vendors, if necessary to support the interfaces.

Motorola Responsibilities

1. Establish connectivity to external and 3rd party systems.
2. Configure interfaces to support the functionality described in the IRDs.
3. Perform unit testing of each interface.

LAPD Responsibilities

1. Act as liaison between Motorola and 3rd party vendors or systems as required to establish interface connectivity with PremierOne and PMDC.
2. Provide personnel knowledgeable with the network and 3rd party systems to support Motorola's interface installation efforts.

Motorola Deliverables

Title	Description	Format
Unit Test Results	Documents that describe the results of interface unit testing.	Microsoft Word document

3.6 CAD AND PMDC TAILORING

3.6.1 Intelligent Data Dashboards

The objective of this task is to introduce the functionality available via the IDD tool, review the standard CAD dashboards, and define and develop custom dashboards. (IDD Training will be conducted in accordance with the training plan.)

This effort will utilize the LAPD's existing Microsoft SQL Server licenses and BI tools to configuredashboards and data views using data available from the LAPD's PremierOne environment.

Motorola Responsibilities

1. Conduct a two (2) day overview/consultation to review three (3) standard dashboards and define requirements for two (2) custom dashboards.
2. Document requirements for the custom dashboards.
3. Develop two (2) custom dashboards.
4. Install the standard and custom dashboards. (This task will occur during the IDD training course.)

LAPD Responsibilities

1. Assign resource(s) that have received the CAD Adhoc Reporting training to participate in the initial dashboard consultation and review delivery of the dashboards.

Motorola Deliverable

Title
CAD Dashboards

3.6.2 PMDC – CAD Summary Report Enhancement

Motorola understands the critical importance of the CAD Summary Report to the LAPD operations. Motorola is committing to providing the CAD Summary Report capabilities required by the LAPD. Motorola can offer several design options and will work to a mutually agreed to design and deployment schedule.

3.7 PROJECT EXECUTIVE SPONSORSHIP

Motorola commits to keeping Tim Boyle on the project as the executive sponsor and point of escalation.

3.8 PREMIERONE ACCEPTANCE TESTING

Acceptance tests will be performed to confirm that the PremierOne and PMDC systems perform in accordance with the Acceptance Test Plan.

3.8.1 Project Test Plan

The objective of this series of tasks is to finalize the test activities that will be conducted in accordance with the mutually developed Acceptance Test Plan.

Motorola Responsibilities

1. Review the schedule of test activities.

LAPD Responsibilities

1. Schedule appropriate resources to participate in test activities.

Motorola Deliverable

Title
Test Schedule

3.8.2 Functional Acceptance Testing

The objective of functional acceptance testing is to test each function of the system to ensure that it is performing according to the contractual requirements.

Motorola Responsibilities

1. Conduct functional acceptance testing according to the approved test plan.
2. Develop remediation plan for features that fail the test.

LAPD Responsibilities

1. Witness the functional acceptance testing and acknowledge its successful completion.
2. Participate in the documentation of items that fail testing and note the remediation action

Motorola Deliverable

Title
Completed Functional Acceptance Test Plan

3.8.3 User Acceptance Testing

Upon successful completion of the functional acceptance test, the system will be delivered to the LAPD to conduct customer-developed test scripts over a 2 week period.

Motorola Responsibilities

1. Provide support during user acceptance testing.

LAPD Responsibilities

1. Develop test scripts, as required.
2. Promptly report any anomalies discovered during the test period.

Motorola Deliverable

Title
Completed Functional Acceptance Test Plan

3.8.4 Interface/Integration Testing

The objective of Interface functional testing is to ensure that the installed interfaces perform according to the IRD requirements. Note that interfaces that cannot be tested due to connectivity issues to external systems or the unavailability of LAPD's third party vendors will be tested to the degree the PremierOne functionality can be demonstrated and considered successful upon that demonstration. Motorola is not responsible for troubleshooting any issues on the LAPD's third-party systems.

Motorola Responsibilities

1. Conduct interface functional testing according to the approved test plan.
2. Develop remediation plan for features that fail the test.

LAPD Responsibilities

1. Provide access to or a resource with access to the interfacing system to validate functionality.
2. Witness the execution of the test and acknowledge successful completion.
3. Participate in the documentation of items that fail testing and work with Motorola to develop remediation action(s).

Motorola Deliverable

Title
Completed Interface Acceptance Test Plan

3.9 PREMIERONE TRAINING

The objective of this task is to prepare for and deliver instructor-led classroom training in accordance with the Training Plan.

Motorola Responsibilities

1. Perform training in accordance with the Training Plan.
2. Provide limited remote support following the Train-the-Trainer courses while LAPD trainers conduct end user training.

LAPD Responsibilities

1. Supply suitably configured classrooms with a workstation for the instructor and at least one workstation for every two students.
2. Designate training representatives who will work with the Motorola trainers in the development and delivery of training.

Deliverables

Title
Classroom Training Materials
Training Evaluation Form
Attendance Rosters
Training Completion

3.10 GO LIVE

The objective of this task is to transition operations from the legacy operations and systems to the PremierOne CAD and PMDC Mobile system.

Motorola will work with the LAPD to develop the cutover plan. This plan will include tasks that need to be performed leading up to and following the actual cutover from legacy systems to the PremierOne system.

The cutover plan will also identify the process that may be used in the event that operations need to fall-back to the legacy system.

The transition to production use of the PremierOne system will be conducted according to the agreed cutover plan on a date and time mutually determined by the LAPD and Motorola. The timing of this event is typically during a time of low activity levels. Motorola expects the cutover to PMDC will occur several hours after the CAD go live to ensure CAD users are not experiencing any issues. This will result in no mobile dispatch or mobile communications being available until PMDC is brought up.

The outcome of these activities is the beginning of production use of the new system and commencement of the warranty period.

For Go-live with PMDC, It is Motorola's recommendation that users stop using the legacy mobile system when PremierCAD is brought down. PremierOne CAD will be brought live and will be in production use for several hours prior to bringing PMDC up. During this time, no mobile communications with PremierOne CAD will be available. Once PremierOne CAD has demonstrated reliable operations for several hours and CAD users are comfortable, production use of PMDC will commence. Motorola will work with LAPD to determine the best approach for that, i.e. bringing units up on a division-by-division basis or another method, if preferred. Motorola will support the live-cut of PremierOne CAD and PMDC for several days to ensure both systems are operating as expected. Motorola's Project Manager will work with the LAPD project manager and project staff to develop the CAD and mobile cut-over plan, taking into consideration all contributing factors.

Motorola Responsibilities

1. Facilitate meetings with LAPD staff to formulate the cutover plan.
2. Execute the cutover plan.
3. Provide on-site resources to support users with features and functions of the system.

LAPD Responsibilities

1. Arrange for the participation of appropriate technical and operational staff in cutover planning meetings.
2. Provide appropriate staff to perform/support production cutover activities.

Deliverables

Title
Go Live Briefing
Go Live

3.11 PROJECT CLOSURE – TRANSITION TO SUPPORT

Following Go Live and the performance and reliability test periods, the system is deemed complete and the completion milestone will be acknowledged by Motorola and LAPD. The system will transition to the support phase of the contract per the terms and conditions of the Maintenance and Support Agreement.

The objective of this task is to formally close the implementation project and introduce the LAPD to Motorola's Support organization.

Motorola Responsibilities

1. Initiate the Customer Support Handover document and provide it to the LAPD.
2. Review Support and Maintenance provided by third-party partners.
3. Upon receipt of the completed Customer Support Handover document schedule the support handover meeting with the LAPD and the Customer Support Manager (CSM).

LAPD Responsibilities

1. Provide information, as required, to complete the Customer Handover document.
2. Participate in the Customer Support Handover meeting.

Deliverables

Title
Customer Support Handover document

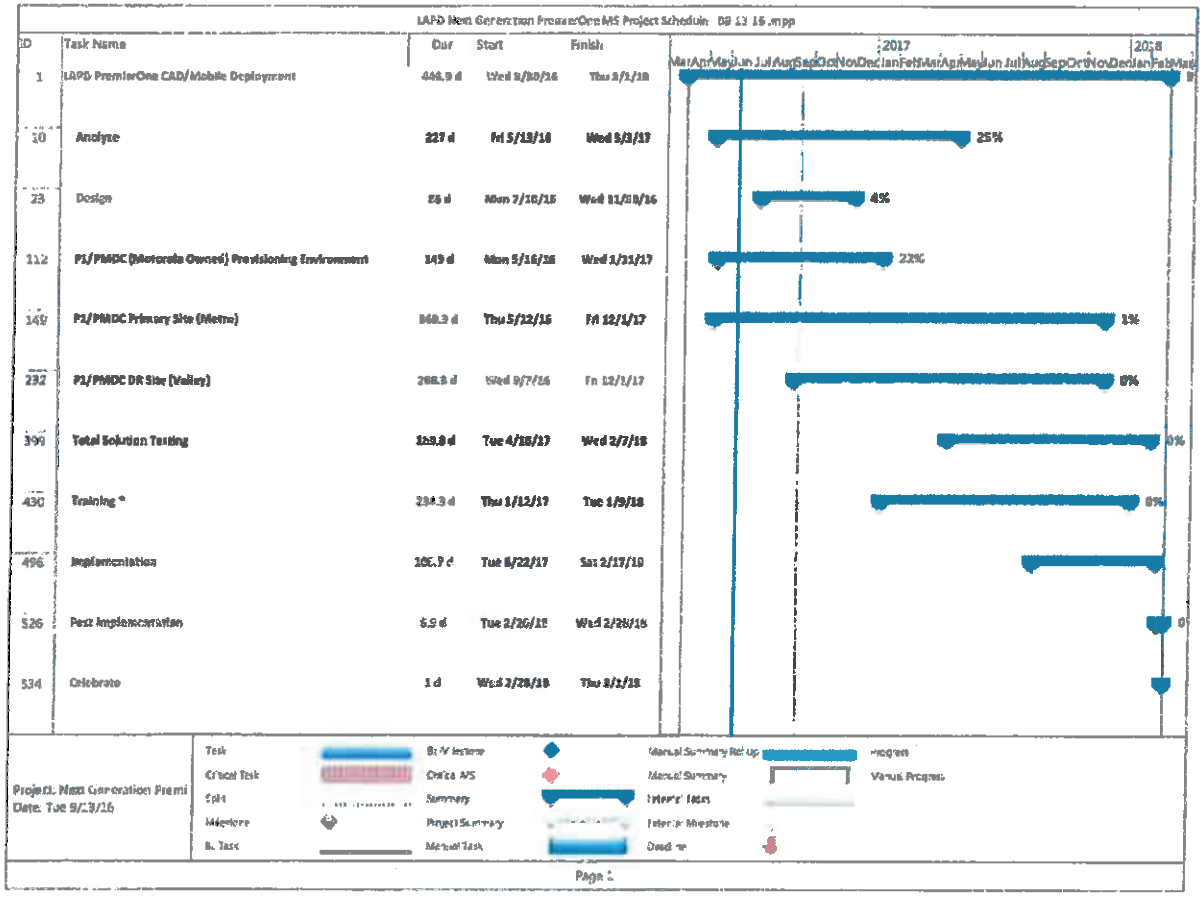
SECTION 4

PERFORMANCE SCHEDULE

The following pages provide the estimated Performance Schedule.

The Duration column shows the approximate window during which the task is to occur. The activity will not necessarily occupy the entire Duration shown.

Task order and timeframes can and will be modified by Project Manager to meet expected customer milestones.



SECTION 5

TRAINING PLAN

5.1 COURSE LISTING

The following matrix delineates the classes that have been proposed for the PremierOne product line. The matrix includes the number of classes per course type, the maximum number of participants per class and the location of each of the classes. Additional class modules may be obtained by the Customer for an additional fee.

Course Module	Maximum No. Attendees Per Class	Number of Classes Included	Total Users Trained	Location	Not To Exceed (hours) per Class
Importing GIS Data into PremierOne	4	1	4	Customer	16
PremierOne CAD Provisioning Training	6	1	6	Customer	48
PremierOne CAD Client Installation	6	1	6	Customer	4
PremierOne CAD Overview	6	1	6	Customer	40
PremierOne CAD Provisioning Verification	6	1	6	Customer	24
PremierOne Computer Aided Dispatch Train-the-Trainer	12	3	36	Customer	32
PremierOne CAD System Administrator	4	1	4	Customer	16
Ad Hoc Report Builder Training in PremierOne for CAD	6	1	6	Customer	24
Data Feed Framework Training	4	1	4	Customer	16
Premier MDC Train-the Trainer	12	9	108	Customer	8
Intelligent Data Dashboard Training	4	1	4	Customer	24

5.2 TRAINING OVERVIEW

Motorola considers training to be an extremely important aspect of the system installation and requires working closely with the Customer. Prior to the start of training, the Customer will designate a Customer Training Representative. This individual must be familiar with the Customer's daily

operations and must attend each Motorola educational course. Motorola trainers will rely on this representative to be the one point of contact for Motorola staff when policy and procedural questions arise, act as course facilitator, and act as the Customer's educational monitor. The Customer will also identify the personnel who will serve as trainers. These individuals must participate in all the Train-the-Trainer courses. In addition to the skills described below, the Customer's trainers must have prior experience as a classroom instructor and a thorough understanding of the Customer's operations. Other courses will require participants from different areas of the Customer's operations as shown in the individual course descriptions, detailed in Motorola training course descriptions.

As it relates to user training, Motorola's proposal includes nine (9) 1-day PMDC Train the Trainer courses, as described in the Training Plan. Up to twelve (12) field training officers may attend each course, resulting in up to 108 FTOs being trained. Motorola estimates the end user training will be approximately 4-5 hours. The number of end users that the FTOs can train is dependent on the number of devices which will be available for training and officer scheduling. For example, if 10 FTOs conducted two classes per shift of 5 users per class (50 mobile devices would have to be simultaneously available), 100 users would be trained per shift. If training is conducted during 3 shifts per day, 300 users will be trained per day and 6000 users can be trained in 20 days. The Motorola Project Manager and the LAPD Project Manager will review the end-user training schedule once the availability of mobile devices for training is known and update the project schedule accordingly.

5.2.1 System Administrator

The Customer will be obligated to appoint a key individual to act as the System Administrator. This individual will be responsible for reporting/verifying problems, completing and maintaining application configuration, and performing system administrative duties such as system back-ups, archives, etc. The designated individual should be proficient in the prerequisite technologies. These technologies are embedded in the Motorola applications; however, training in these technologies is not provided by Motorola. Below is a suggested list of courses supporting Microsoft technologies.

PremierOne clients operate on Windows 7.

Microsoft

Technologies:

- Windows Administration
- SQL Server 2012
- SQL Server Reporting Services
- System Center 2012 (SCOM)

Suggested Courses:

- 10967A Fundamentals of a Windows Server Infrastructure
- 6292 Installing and Configuring Windows 7 Client
- 10775 Administering Microsoft SQL Server 2012 Databases
- 55021 Configuring and Administering Hyper-V in Windows Server 2012
- 50273 Planning and Designing Microsoft Virtualization Solutions
- 55006 System Center Operations Manager 2012

5.2.2 Training Facilities and Schedules

The Customer shall provide facilities for training courses which are alcohol and smoke-free. Both the classroom and workshop classes will require a white-board for instructor's use and shall accommodate student note taking. The workshop format also requires multi-monitor student

workstations. Students and instructors will dedicate class time to training and will not be subject to interruptions. At least two days prior to each training course, the instructor shall have access to the training facility and all workstations for setup and workstation configuration. All training will be held at the Customer's site; the instructor shall notify the Customer in advance of any teaching about aids such as chalkboards or overhead projectors which will be required in the facility.

Motorola and the Customer shall mutually agree to training schedules to accommodate the Customer's shift operations and other site-specific requirements. Evening courses will end by 10:00 p.m.

5.2.3 Training Methods and Procedures

Motorola offers two types of training classes:

1. Administrative workshops; focused on providing specialized users with in-depth knowledge on the features, operational, and administrative functions of the system.
2. Train-the-Trainer; instructor-led classroom training that provides key individuals with extensive hands-on use of the system utilizing true-to-life incident scenarios so they can develop and provide training to new users.

Students must have a typing proficiency of 25 wpm, knowledge of PCs and Microsoft Windows, and have completed course prerequisites as listed in the course descriptions.

Designated Motorola Business Analysts will provide application instruction using several techniques and materials.

- Instructor Lesson Plan: The instructor's tool for planning the detailed course content on a module-by-module basis.
- Training Course Agenda: The student handout that outlines the course sequence of events including duration, and course modules.
- Training Course Objectives: The instructor's predefined course objectives. These are provided for Train-the-Trainer classes only.
- Training Observation Forms: The instructor's tool for tracking the student's ability to perform the skills taught in the class. These are provided for Train-the-Trainer classes only. Motorola instructors will complete the observation forms and provide them to the Customer Training Representative upon completion of the course. Motorola does not make a pass/fail determination for participating students.
- Evaluations: On the final day of a training class, the students will be asked to complete an Instructor Evaluation form. They are optional forms and anonymity is acceptable.
- Certificates of Attendance: Students completing the Train-the-Trainer class will receive Certificates of Attendance.
- Attendance Rosters: Customers will provide to the Motorola instructor a roster listing the names of training participants ten (10) days prior to the start of the course. Instructors will complete Attendance Rosters of actual participants for each day of training.
- Motorola PremierOne User Documentation: An electronic copy of the applicable Motorola Reference Manuals and documentation will be provided prior to training. The Customer is responsible for duplicating and delivering manuals to participating students prior to class commencement.

5.2.4 Training Subsystem

PremierOne has a fully functional training environment that will enable the Customer's trainers to provide on-going end-user training. This training subsystem allows training to continue without interruption of the real time operations. Use of the training subsystem is covered in the Train-the-Trainer classes.

5.2.5 Session Attendance

Motorola is committed to providing a quality training experience and desires that the Customer receives the maximum benefit from each training session. Each training session has been sized to provide the optimal training environment that meets the needs of the students in relation to the complexity of the material being presented. Given the nature of the material being presented and the intensity of the training, it is imperative that maximum course numbers not be exceeded. In the event the number of students in attendance exceeds the published maximum number of students and the list of participants identified on the training roster, Motorola will take corrective action, ensuring the integrity of the session is maintained and the student's ability to learn is protected. Motorola corrective action may include:

- Delaying the start of training until the number of students in attendance is in line with the maximum number of students allowed for the session.
- Splitting the class into multiple sessions. In such a case, the Customer will be charged for multiple occurrences of the class plus additional expenses, including travel related expenses, incurred by Motorola.

5.3 COURSE DESCRIPTIONS

The following tables provide detailed descriptions of training courses that will be provided as part of the system at the location indicated.

Table 5-1. Managing GIS Data with PremierOne Import Tool

Goal:	This course offers the skills and practice necessary to use the PremierOne Import tool and create the required databases and mxd docs for CAD. The module covers the use of the import tool to build the required file and SDE Geodatabases for the PremierOne CAD system.
Location:	Customer's facilities
Format:	Combined classroom and workshop
Course Materials:	PremierOne GIS System Administrator Training Guide
Duration:	Up to 8 hours in a single business day
Participants:	GIS personnel and GIS System Administrator(s)
Class Size:	Maximum of 4 students
Prerequisite:	Computer knowledge and PC skills including DOS and Microsoft Windows, and basic PC functionality. Completion of Windows tutorials or equivalent training. Basic understanding of geographical data and proficient in the use of ArcGIS. A day of prep to ensure a working SDE connection to the PremierOne server from the machine the GIS import tools are installed on.
Instructor:	Motorola GIS Mapping Business Analyst

Table 5-2. PremierOne CAD Client Installation

Goal:	Provide selected personnel with sufficient knowledge to install PremierOne CAD client software on workstations. Includes prerequisite third-party software. If the customer desires, an imaging solution can be presented.
Course Materials:	Course Outline
Location:	Customer's facility
Duration:	4 hours of training Contract may include time for Motorola to install on a maximum of 10 workstations
Participants:	IT staff who are responsible for installing workstation software
Class Size:	Maximum of four (4) students
Prerequisite:	Knowledge of Microsoft operating systems and basic software installation practices
Instructor:	Motorola Business Analyst
Environment Setup:	Each workstation should have a network connection to the PremierOne servers. Each workstation should meet the specifications of the appropriate set of Release Notes. Each workstations should have an operating system installed that is supported by PremierOne (as detailed in the Release Notes)

Table 5-3. PremierOne CAD Provisioning Training

Goal:	Provide detailed instruction on Computer Aided Dispatch (CAD) provisioning data files.
Course Materials:	PremierOne CAD Provisioning Guide Course Outline
Location:	Customer's facility
Duration:	Up to 24 hours per week over two consecutive weeks
Participants:	Those responsible for making the decisions on configuration options.
Class Size:	Maximum of six (6) students
Prerequisite:	Knowledge of current CAD application and configuration and agency SOPs. Microsoft and Esri proficiency as defined in the Prerequisites Section.
Instructor:	Motorola Business Analyst
Environment Setup:	One (1) workstation for each participant Instructor's workstation(s) Projector White board (if possible) Microsoft Excel should be installed on at least one training workstation
NOTE:	Allow a minimum of four weeks from the end of provisioning training and the beginning of Train-the-Trainer so that the customer can complete provisioning changes and updates.
Motorola Staff Days:	6 days (3 days onsite per week for 2 week period)

Table 5-4. PremierOne CAD /Mobile Overview

Goal:	Provide selected personnel with sufficient functional knowledge to verify system provisioning
Course Materials:	CAD User Guide Course Outline
Location:	Customer's facility
Duration:	Up to 24 hours per week over three consecutive business days
Participants:	Users that have participated in the business process review andprovisioning process.
Class Size:	Maximum of six (6) students
Prerequisite:	Knowledge of current CAD application and customer operations.
Instructor:	Motorola Business Analyst
Environment Setup:	A workstation for each participant with network connection Instructor's workstation(s) with network connection Projector White board (if possible)
NOTE:	Allow a minimum of four weeks from the end of provisioning training and the beginning of Train-the-Trainer so that the customer can complete provisioning changes and updates.
Motorola Staff Days:	One (1) day of preparation on site Three (3) days training

Table 5-5. PremierOne CAD Provisioning Verification

Goal:	Provide an opportunity for the customer to vet their provisioning decisions in a hands-on class that demonstrates PremierOne CAD functionality.
Course Materials:	PremierOne CAD Provisioning Guide PremierOne User Guide Course Outline
Location:	Customer's facility
Duration:	24 hours
Participants:	Those responsible for making the decisions on configuration options. Power users of the current CAD system.
Class Size:	Maximum of eight (8) students
Prerequisite:	Knowledge of current CAD application and configuration and agency SOPs.
Instructor:	Motorola Business Analyst
Environment Setup:	One (1) workstation for each participant Instructor's workstation(s) Projector White board (if possible) Microsoft Excel should be installed on at least one training workstation
NOTE:	This class will follow within a short time after the completion of the PremierOne CAD Provisioning Training, allowing the customer to make any desired changes early in the process.
Motorola Staff Days:	3 days

Table 5-6. PremierOne Computer Aided Dispatch Train-the-Trainer

Goal:	Provide selected personnel with sufficient knowledge to support a comprehensive end user training program.
Course Materials:	CAD User Guide Course Outline
Location:	Customer's facility
Duration:	Up to 32 hours over five consecutive business days
Participants:	Instructors who are responsible for the in house training of employees and for ongoing user training.
Class Size:	Maximum of twelve (12) students
Prerequisite:	Knowledge of current CAD application and customer operations.
Instructor:	Motorola Business Analyst
Environment Setup:	A workstation for each participant with network connection Instructor's workstation(s) with network connection Projector White board (if possible)
NOTE:	Allow two weeks from the end of train-the-trainer to the beginning of end user training to allow customer to build site-specific documentation and outline for end user classes. The Motorola Business Analyst will be available for remote consultation in producing documentation and outline.

Table 5-7. PremierOne CAD System Administrator Training

Goal:	Provides practical techniques for system administration and maintenance of the CAD components of the PremierOne system.
Course Materials:	CAD System Administration Guides Course Outline
Location:	Customer's facility
Duration:	Up to 16 hours over two consecutive business days
Participants:	Personnel responsible for the day to day management of the system.
Class Size:	Maximum of four (4) students
Prerequisite:	Knowledge of customer site network, IT policies and operations. Microsoft proficiency as defined in the Prerequisites Section.
Instructor:	Motorola Business Analyst
Environment Setup:	Instructor's workstation(s) with network connection. Projector White board (if possible)
Motorola Staff Days	One (1) day of preparation on site Two (2) days training

Table 5-8. Ad Hoc Report Builder Training in PremierOne CAD

Goal:	Provide selected personnel with knowledge on how to create ad hoc reports against the PremierOne Report Data Warehouse using Microsoft's SQL Server Reporting Service (SSRS) software.
Course Materials:	SSRS Training Guide
Location:	Customer's facility
Duration:	Up to 24 hours over three consecutive business days
Participants:	Personnel who will create ad hoc reports
Class Size:	Maximum of six (6) students
Prerequisite:	Some knowledge of creating ad hoc reports
Instructor:	Motorola SSRS and Reports specialist
Environment Setup:	A workstation for each participant with network connection Instructor's workstation(s) with network connection Projector White board (if possible)
Note:	Sufficient sample data will need to be present in order to build realistic reports during class. It is recommended that this class take place after CAD Train-the-Trainer to facilitate this need.
Motorola Staff Days:	One (1) day prep Three (3) days training

Table 5-9. Data Feed Framework Training

Goal:	Provide selected personnel with knowledge on how to export data from PremierOne CAD to third-party products using Microsoft's SQL Server Integration Services (SSIS) software
Course Materials:	Microsoft SSIS Documentation Course Outline
Location:	Customer's facility
Duration:	Up to 16 hours over two consecutive business days
Participants:	Personnel who will be responsible for managing export of data from the PremierOne CAD reports data warehouse
Class Size:	Maximum of two (4) students
Prerequisite:	Database administration experience, knowledge of data structures, data mapping, and a familiarity with Customer's operation. SQL Server administration and programming experience in SQL recommended. Working knowledge of Transact SQL and SQL Server Integration Services (SSIS) required.
Instructor:	Motorola Business Analyst
Environment Setup:	A workstation for each participant with network connection Instructor's workstation(s) with network connection The course will consist of up to sixteen (8) hours of instruction and the remaining time will be used for on-hands use of the tool with instructor support.
Motorola Staff Days:	Two (2) days training

Table 5-10. Optional NG-ICC (Call Control) Provisioning Training

Goal:	Provide detailed instruction on provisioning data files to support Next Generation Integrated Command and Control
Course Materials:	PremierOne CAD Provisioning Guide Course Outline
Location:	Customer's facility
Duration:	Up to 16 hours over two consecutive business days
Participants:	Those responsible for making the decisions on configuration options.
Class Size:	Maximum of six (6) students
Prerequisite:	Knowledge of current radio application and configuration and agency SOPs.
Instructor:	Motorola Business Analyst
Environment Setup:	One (1) workstation for each participant Instructor's workstation(s) Projector White board (if possible)
NOTE:	Allow one week from the end of provisioning training and the beginning of Train-the-Trainer for customer to complete provisioning changes and updates.
Motorola Staff Days:	One (1) day of preparation on site Two (2) days training

Table 5-11. Optional NG-ICC (Call Control) Train-the-Trainer

Goal:	Provide selected personnel with sufficient knowledge to support a comprehensive end user training program on Next Generation Integrated Command and Control
Course Materials:	Course Outline
Location:	Customer's facility
Duration:	Up to 4 hours in a single business day
Participants:	Instructors who are responsible for the in house training of employees and for ongoing user training.
Class Size:	Maximum of twelve (12) students
Prerequisite:	Knowledge of current Mobile application and customer operations.
Instructor:	Motorola Business Analyst
Environment Setup:	A workstation for each participant with network connection Instructor's workstation(s) with network connection Projector White board (if possible)

Table 5-12. Premier MDC System Administrator Training

Goal:	Provide training to staff that will be responsible for setting up and maintaining the Premier MDC Server/Message Switch, including configuration of the message switch and its components.
Location:	Customer's facilities
Topics:	▪ System overview ▪ Server hardware and software ▪ Message switch ▪ User registry management ▪ Devices ▪ Groups ▪ Departments and/or Agencies ▪ Server reports ▪ Back-up strategies ▪ Troubleshooting ▪ Customer support
Duration:	4 hours
Participants:	Customer staff that will act as administrators of the Premier MDC System
Class size:	Maximum of 4 students
Prerequisites:	System Administrator familiarity when the server/switch is installed by the Engineer, familiarity with the overall MDC System, with the general nature of data communications, with personal computers, with standard Server OS and with standard database structures (Btrieve, SQL or Oracle).
Instructor:	Motorola Business Analyst

Table 5-13. Premier MDC Client Train-the-Trainer

Goal:	Provide training for staff that will train other users on the Premier MDC Client application on the mobile devices. The class covers the main areas of the PMDC client and how they relate to each other, along with basic navigational skills. The student should have a firm understanding of the PMDC client and how information is disbursed, received, and displayed.
Location:	Customer's facilities
Topics:	▪ Terms glossary ▪ System data flow overview ▪ Mobile Hardware overview ▪ Premier MDC overview ▪ Introduction to log-off ▪ Messaging ▪ State interface ▪ CAD interface ▪ RMS interface ▪ AVL and ATMM Interface
Duration:	8 hours
Participants:	Customer staff that will train other users on the Premier MDC Client application on the mobile devices.
Class size:	Maximum of 12 students
Prerequisites:	Mobile Hardware End User Training, proficiency with Windows OS and knowledge of internal (Directives) or external (State) policy and procedure. Prior to training, Motorola's Instructor will verify that a live lab is in place with a preferred device ratio of no greater than 2 staff to 1 live device.
Instructor:	Motorola Business Analyst

Table 5-14. Intelligent Data Discovery (IDD) Training

Goal:	Provide selected personnel with knowledge to create Business Intelligence dashboards in PremierOne using SSRS.
Course Materials:	SSRS Training Guide
Location:	Customer's facility
Duration:	Up to 24 hours over three consecutive business days.
Participants:	Personnel who will create Business Intelligence Dashboards
Class Size:	Maximum of four (4) students
Prerequisite:	Previous attendance in the Building Adhoc Reports in PremierOne training class.
Instructor:	Motorola SSRS specialist
Environment Setup:	A workstation for each participant with network connection Instructor's workstation(s) with network connection Projector White board (if possible)
Motorola Staff Days:	Three days instruction on Business Intelligence Basics and 1 Dashboard building

SECTION 6

PREMIERONE GEOGRAPHIC INFORMATION SYSTEMS (GIS) REQUIREMENTS

6.1 OVERVIEW

This document contains information regarding Motorola PremierOne GIS data requirements.

A Geographic Information System (GIS) is a system used to collect, manage, analyze, and display geographic data. This document is intended for use by personnel who are responsible for administering the GIS components of the PremierOne suite. System administration requires an understanding of both current agency system administration rules and procedures and how PremierOne functions. For more information about specific applications, see the *PremierOne CAD User Guide,* the *PremierOne Mobile User Guide*, and the *PremierOne Provisioning Guide.*

6.2 PREMIERONE SERVICES GEODATABASE

A "Geodatabase" is the common data storage and management framework for ArcGIS. Among other things, it provides the ability to define table columns that use a spatial, or geometric, data type. Database tables used to implement the Geodatabase are stored in an underlying RDBMS, such as Microsoft SQL Server. Geodatabase tables that contain a spatial data type are called "Feature Classes." Feature Classes with the same spatial reference can be logically grouped within a "folder"-like entity called a "Feature Dataset." The PremierOne Data Import Tools import the customer' GIS data into an SQL Server hosted Enterprise Geodatabase. The schema of the PremierOne Geodatabase has been designed to provide optimal performance of the GIS services required by PremierOne.

6.3 GIS DATA REQUIREMENTS AND RECOMMENDATIONS

This document will describe the data values that must be available in any feature class that will be imported into PremierOne. The names of the source feature classes and their fields do not need to follow any standard. The data import tools will prompt the user to specify the source field name associated with a logical value, such as "street name" or "city."

There are two categories of GIS data utilized by PremierOne:

- Services data – Services data is imported from the customer's own GIS source for access by PremierOne's application services. This data is in a schema that is optimized for PremierOne's address verification, geocoding, routing, and jurisdiction determination services. Because this data is in a specialized schema, it is not intended to be displayed on a map for visualization by dispatch or mobile users.

- Map data – Map data is data that is displayed as geographic features on a map. As such, a map data source must contain a spatial attribute. Map data sources can be copied into the PremierOne database using a customer-defined schema and are used as data sources for layers in a map document. In addition to the spatial attribute, map data sources typically contain text/numeric attributes, such as feature names and other information of operational value.

It is expected that PremierOne customers are already maintaining their GIS data in ArcGIS. A customer's GIS data may represent data that is used for a variety of municipal purposes such as growth planning, zoning, utilities, public safety, et cetera.

6.3.1 GIS Data Supported by PremierOne Services

The following GIS feature types that can be utilized by PremierOne are as follows:

- Street Centerlines
- Address Points
- Common Places
- Motorway Junctions (only applies to UK customers)
- Response Boundaries
- Reporting District Boundaries
- Contractor Boundaries
- Map Book Page Boundaries
- Premise Hazard Areas
- Warrant District Boundaries

6.4 STREET CENTERLINE FEATURE CLASS

6.4.1 Street Centerline Feature Class

Street Centerlines are features that are geometrically represented as lines which represent an imaginary line running lengthwise along the center of street segments. Street segments are typically portions of a street that are bound on either side by an intersection with another street segment or dead end (cul-de-sac). Street segments are sometimes referred to as "blocks" (for example, the "400 block of Main Street" is a portion of Main Street that contains house numbers 400-499).

NOTE: It is expected that every address in the Master Street Address Guide (MSAG) and/or ANI/ALI Provider database be represented by a street centerline feature – regardless of whether or not an address is represented by an Address Point feature. Addresses that are not represented by a street centerline feature may need to be bypassed or validated against a nearby street centerline in order to create an incident at the specific address.

PremierOne is designed to work optimally with geodata that is synced with the local MSAG data, especially for Common Places. If there is not a match between MSAG data and the PremierOne geodata, many addresses will not validate during incident creation, and can delay the creation of calls.

A street centerline data source requires the following attributes:

- Street Name - Street names can be maintained in the GIS data source either as the entire name value in a single field or with leading and/or trailing directional and type values parsed into individual fields.
- House Number Range – The GIS data source must maintain four distinct fields for street segment house numbers: low and high house numbers for both the left and right sides of the street. The Low and High house numbers for the left side of the street must have the same parity (even/odd) and the Low and High house numbers for the right side of the street must have the same parity and the parity must be the opposite parity of the left side of the street. Not all street segments are expected to have house number values on either or both sides of the street (freeways, for example).
- City Name - Each side of the street may have a different city association, so the GIS data source must support a field for both the Left City and the Right City. The city name must match the city name coming from MSAG. The city name must be the same across the validation layers (common place, address point and street centerline)

PremierOne also supports attributes for Subdivision Name (left and right), Zip Code (left and right), State, Description, and High/Low Cross Street Names (these values are automatically generated by the PremierOne Data Import Tools, but these values can be used to override the values that are automatically calculated).). If the subdivision and zip code attributes are used in the street centerline file they must be populated (and match) across the validation layers (common place, address point and street centerline)

The algorithm for converting textual location information to a coordinate on the map is referred to as "geocoding." Street addresses verified against a street centerline feature are geocoded by interpolation as follows:

- Based on the value and parity of the house number entered by the user and the house number range values and parities of the matching street centerline, PremierOne determines the side of the street that the address is on and how far along the street the house number is (as a percentage by assuming the house numbers are evenly spaced along the street and allowing for a 20 foot buffer at the beginning and the end of the street).
- By default, the map coordinate for an address will be offset by 40 feet perpendicular to the point on the street centerline that represents the house number's interpolated distance along the centerline. The side offset is not applied if the location is verified with the "In Front Of" option.

The buffer and offset values described above are configurable in the Address component of the PremierOne Configuration tool.

```
<StreetEndOffsetDistance>20</StreetEndOffsetDistance>
<StreetEndOffsetUnitOfMeasure>Feet</StreetEndOffsetUnitOfMeasure>
<StreetOffsetDistance>40</StreetOffsetDistance>
<StreetOffsetUnitOfMeasure>Feet</StreetOffsetUnitOfMeasure>
```

6.4.2 Street Naming Requirements

The streets should be named, spelled, and abbreviated so that they match exactly with data in the MSAG and/or E911 sources. Alternative street names and spellings may be maintained in a separate Street Name Alias geodatabase table.

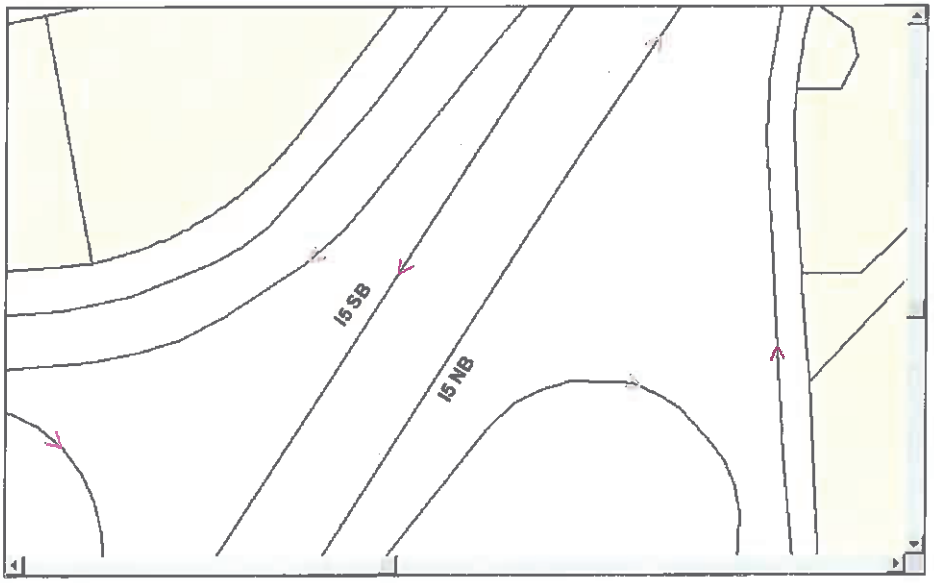
6.4.3 Freeway, highway, and ramp names

As with all street names, freeways and highways should match the MSAG information. Determine whether the route number will be the primary name or if the route name will take precedence. Determine whether to mix numeric name conventions versus alpha name conventions; a consistent pattern is recommended. For example, route numbers may be designated for all interstate, federal, and state highways but alpha names chosen for all county roads. For route numbers, an example is to use I70 for Interstate 70. The following provides examples of route naming/numbering conventions and abbreviations.

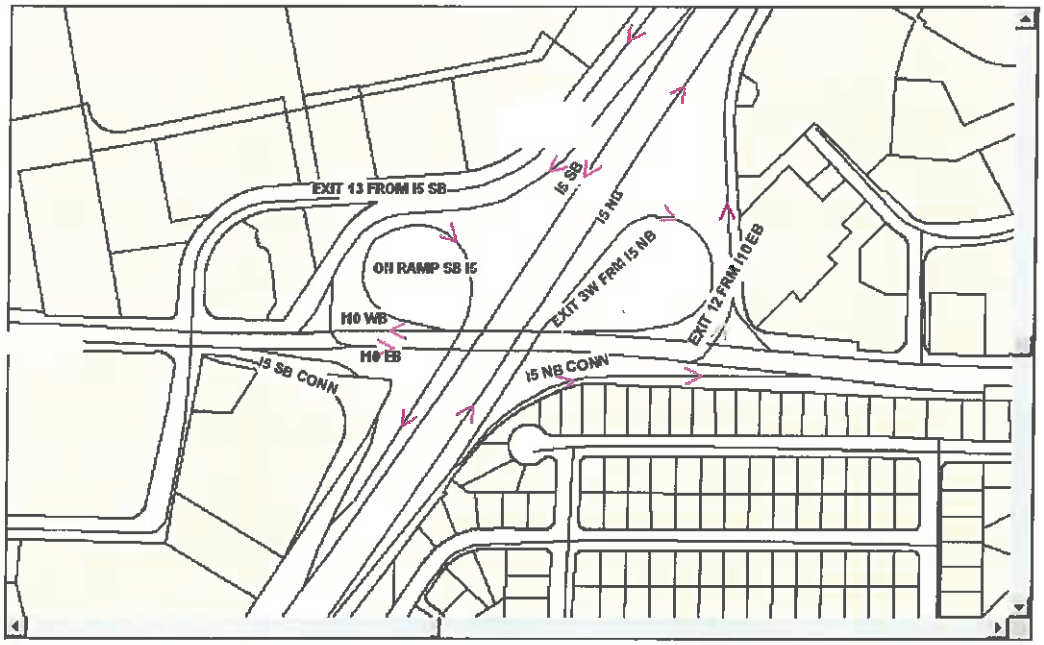
Street Name	Abbreviation
Interstate 25	I25
State Route 14	SR14
United States Highway 66	US66
County Road G5	CRG5
Scenic Route 1	SC1
Business Route 8	BR8
Interstate 25 northbound	I25NB

Since a road may have multiple route assignments, aliases for each occurrence may be required. Some highway departments have a priority level assigned to highways to determine which route number precedes another. That order is interstate, federal, state, and county. Smaller route numbers take precedence over large route numbers. So a route that has I10, SR57, and SR60 would be prioritized in that same order.

On divided freeways and highways, assigning a direction of travel to the street segments to distinguish them is a possibility. This can be represented by adding a directional suffix such as "EB, WB, NB, and SB" for eastbound, westbound, northbound, and southbound (see example below).



Freeway ramp names may be named according to the corresponding route or freeway name. For the base street name of the ramp, use the same naming standards used for the freeways and highways. Indicate the direction by using the "bound" designators (i.e., NB, SB) codes. The following provides examples.



6.4.4 Reserved CAD characters

Some keyboard characters are reserved for use in CAD. The CAD reserved characters should not be used in the street name or address fields since CAD may require these characters for function keys. The reserved characters are configurable by agency, but it is recommended that they all be avoided since one agency could choose different reserved characters than another agency, but the GIS data is typically shared by all agencies. The following characters can be configured used as reserved characters:

. (period)	, (comma)	; (semicolon)	: (colon)
# (pound)	` (accent)	$ (dollar sign)	& (ampersand)
[ ] (square brackets)	( ) (parentheses)	^ (caret)	~ (tilde)
= (equal)	% (percent)	* (asterisk)	/ (forward slash)
\ (back slash)	? (question mark)		

6.4.5 Street Addresses

In order to support range-based address verification for a given street segment, PremierOne requires addresses to be stored as address ranges. The low and high address values at each end of a street segment, for the left and right street sides, are stored in the street centerline layer as column attributes. It is understood that some streets may only have parcels on one side of the street. In this case the low and high address may both be zero, empty, or null. It is also understood that some streets may not have addresses on either side (such as highways). Such streets will still be imported for the purpose of generating intersections, but will not support street address validation. Address values are typically stored as "theoretical" or actual ranges. Either method is supported.

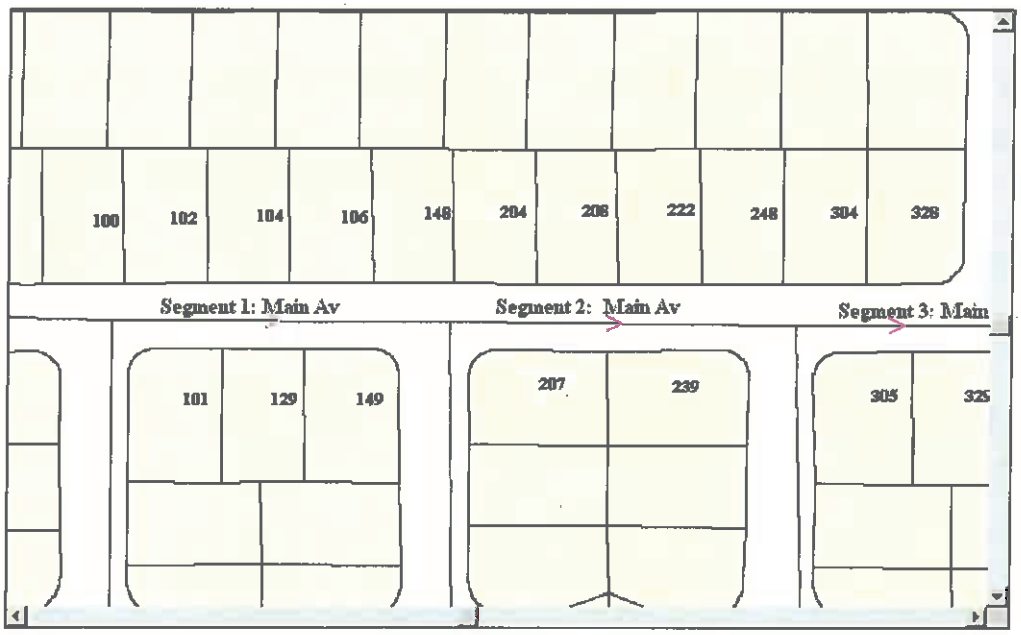
6.4.6 Continuous address ranges (theoretical)

Motorola recommends using continuous address ranges. Continuous address ranges round address values from one block to the next to eliminate address "gaps" (missing addresses) to account for all possible addresses a caller may report. Street segments without addressed structures are still assigned address ranges if they fall within a predetermined address scheme. In a continuous address range model, block addresses are typically rounded to the nearest hundred. Rounding should also occur at intersections that fall between 100 block values (so there are no gaps in address ranges). Continuous address ranges are the easiest to create and maintain. A typical standard is to round street blocks to the nearest hundredth, without duplicating the address values.

6.4.7 Exact address ranges (actual)

This method is typically preferred by GIS Planning agencies. Exact address ranges list the exact low and high address values found on each street segment. Streets without civic house numbers are stored with zeros for addresses. This method does not expand the address values past the known extremes and creates what is called a "gap" from one block to the next. One block may contain odd addresses 101-149, while the next block may contain odd address 207-239 (as in example below). Addresses 151-205 are not accounted for since they don't exist. This model narrows the address values on each segment for greater accuracy of address location interpretation.

The disadvantage to this method is that the Call Taker must bypass any incidents that occur on streets with missing addresses since the addresses don't exist in the database. For instance, if a caller reports a fire at house 201 MAIN AV and this address doesn't exist in the database, the CAD response information will not be available for this specific address. The following provides examples of how addresses are represented by each model.



Street Segment	Continuous Left Side Right Side	Exact Left Side Right Side
Segment 1: MAIN AV	100-198 101-199	100-106 101-149
Segment 2: MAIN AV	200-298 201-299	204-248 207-239
Segment 3: MAIN AV	300-398 301-399	304-328 305-325

6.4.8 Invalid addresses

The following describes some of the invalid address conditions that should be corrected before uploading GIS data to PremierOne.

6.4.9 Overlapping addresses

Indicates street records with the same name in the same city that contain duplicate or overlapping addresses. For instance, 100-198 MAIN ST may exist in CITY A. Erroneously 150-198 MAIN ST may also exist in CITY A. Duplicate or overlapping addresses create dispatching problems, as they create a condition where an address cannot be uniquely identified.

6.4.10 Unique address conditions

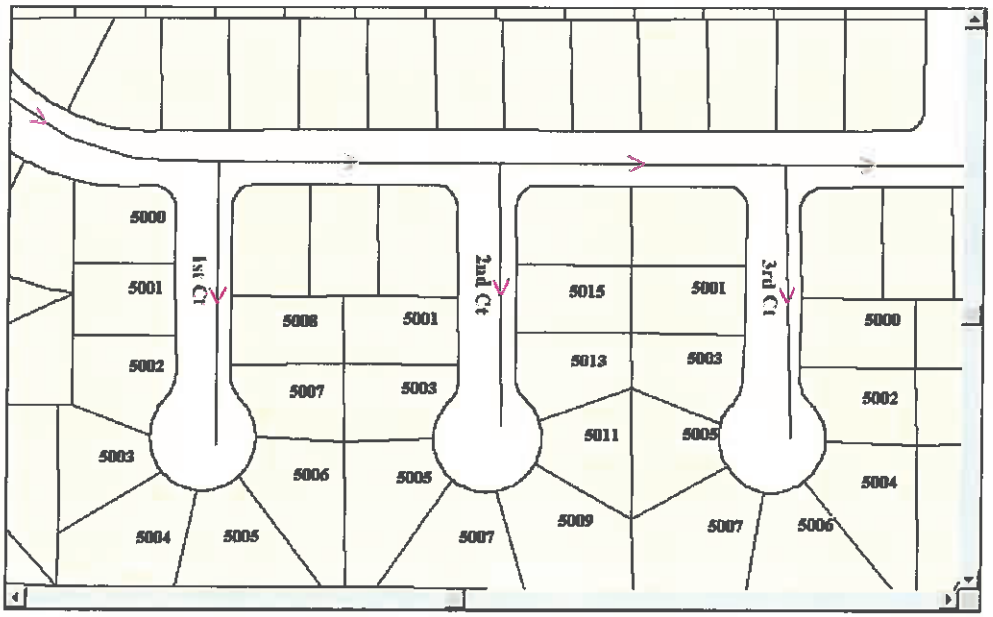
There are unique address conditions that make following an addressing model difficult. These instances may occur when isolated addresses do not follow the normal addressing scheme for the area. This happens frequently with dead-end courts, non-standard portions of road, and when addresses on courts, for instance, are all odd or even addresses (on both street sides). It is recommended that Address Points be used for any scenarios in which street centerline verification and/or geocoding are non-standard. Address Points that match the PremierOne user entry are always given priority over street centerline matches.

6.4.10.1 Mixed or single parity

It is possible for odd and even numbers to physically be on the same side of the street, however these segments will not upload to PremierOne and must be corrected in order to address validate for dispatching.

The image below displays the following:

- 1ST CT displays odd and even addresses on both street sides (mixed parity).
- 2ND CT displays odd addresses on both street sides (single parity).
- 3RD CT displays odd addresses on west or right street side, and even addresses on east or left street side.

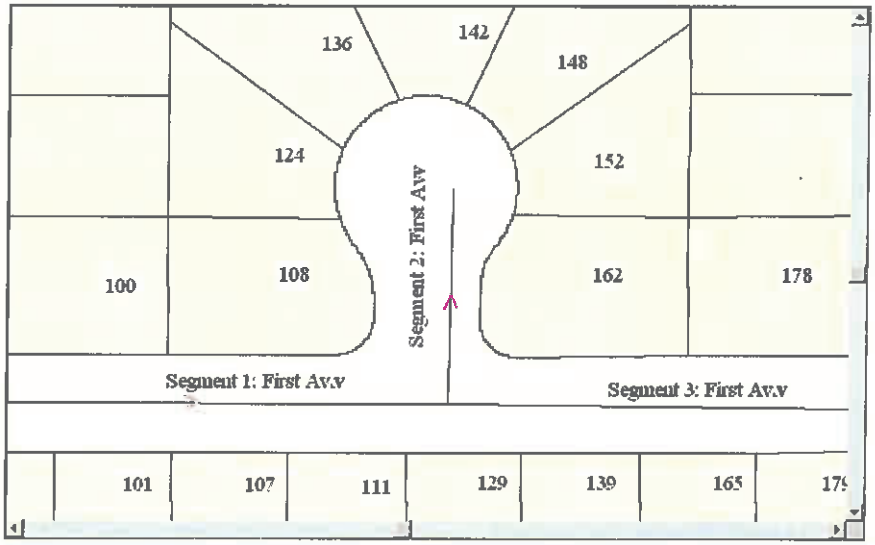


Motorola recommends adding contiguous address ranges (as displayed in the table below); the odd addresses are forced on one street side and even addresses on the other street side.

Street Name	Standard address (recommended) Left Side Right Side
1ST CT (mixed parity)	5000-5098 5001-5099
2ND CT (single parity)	5000-5098 5001-5099
3RD CT	5000-5098 5001-5099

6.4.11 Non-standard portion of street

A condition similar to court addressing is "non-standard portion of street." This is similar to a court feature except it is actually a spur from the primary street; the street name and addresses are actually part of the main portion of the road (see image below). The same addressing approach that is used for courts can be used for this type of street; be sure not to introduce duplicate addresses.



Segment Name	Contiguous addresses Left Side Right Side	Zero on right side of Segment 2 (recommended approach) Left Side Right Side
Segment 1: FIRST AV	100-108 101-111	100-108 101-111
Segment 2: FIRST AV	110-162 113-127	110-162 0-0
Segment 3: FIRST AV	164-198 129-199	164-198 113-199

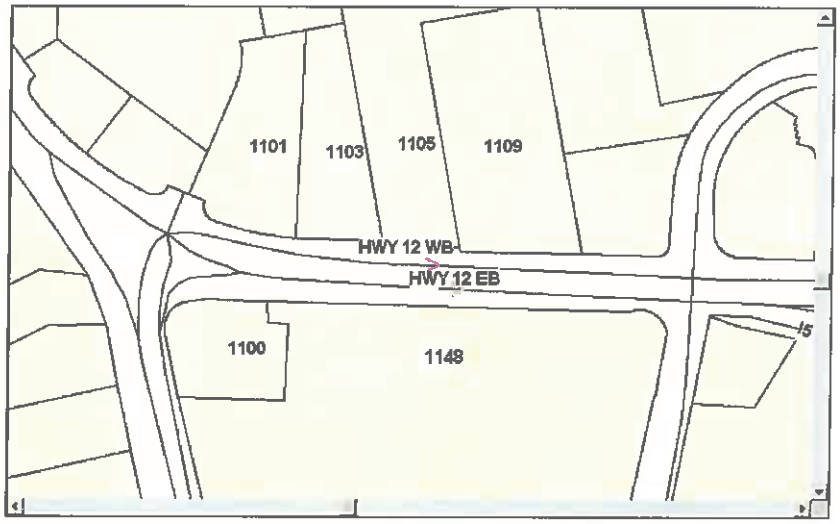
6.4.12 Valid address errors

It is common to encounter addressing situations that produce addressing errors in the GIS data. These are considered "valid" or acceptable warnings rather than errors. It may be beneficial to set a standard so that these warnings are consistent and easily identified as valid errors.

6.4.13 Streets without addresses

Freeways, underpasses, overpasses, and ramps are typically unaddressed; highways may also be unaddressed. Unaddressed streets with zero addresses will be written to the error log.

When a road is digitized to show the divide, zeros are typically inserted where the center divider belongs to prevent address duplication as in the example below.



Street Segment	Address Assignment LEFT RIGHT
HWY 12 WB	1101-1199 0, 0
HWY 12 EB	0, 0 1100-1198

6.4.14 Streets with valid address gaps

When using continuous address ranges, address gaps are removed. In some cases, the jump in addresses from one block to the next is so great that leaving it as an address gap is acceptable. This occurs when address schemes change or an unusually large shift in addresses exists. Forcing two address schemes is not recommended since it may cause address duplication with other streets in your service area. For instance, if one block ends at address 199 and the next block starts at address 5000, don't force the addresses in between to be continuous (without address gaps). This gap is too large and may overlap with other addresses in your database. Decide how much of an address jump should exist before a gap is allowed; this may be set to 100 or some other desired value.

6.4.15 Non-standard civic numbers

Because addresses are typically stored as integers in the database, storing a range of low and high addresses works efficiently. In some cases, modifiers are used for duplexes, apartments, and character addresses. For modifiers such as 1234 Main St Apt# ABC, an additional column should be added to the street attribute data for the apartment/suite numbers.

6.4.16 Annexations

It is common for a street block to contain both city and county addresses. In order to assign the appropriate city and county response boundaries, the street is typically split at jurisdiction changes. For instance, the city may annex address 121 MAIN ST (a McDonald's business), while the remaining house addresses on the block are in the county. The 100 block of MAIN ST is then split at the 121 address to account for the jurisdiction change. The 1st segment addresses would be 101-119 and 100-120. The 2nd segment addresses would be 121-121 and 0, 0. The third segment addresses would be 123-199 and 122-198. A county boundary would then be created to include the 121 address.

6.4.17 Street Layer Requirements

The input street centerline table must be an ArcGIS Feature Class and conform to the following guidelines.

- All required input fields must exist in the source feature class. Parent-Child table relationships are not supported.
- Street segments should not overlap; streets should contain separate segments between intersections (streets should break at intersections to define a new street segment record). It is acceptable for an elevated road, such as an overpass, to cross another street segment without splitting the streets to share a junction. However, cases like this will not generate an intersection record that can be used for address verification.
- Street segments should be connected to at least one other segment (segments should not have a dangling node at both ends).
- The street centerline feature class should contain four user-defined address columns that correspond to the left low address, left high address, right low address, and right high address.
- Street-type naming conventions be used consistently (i.e., BLVD vs. BL, BLV) for dispatching purposes. For optimal CAD performance these naming conventions should match the MSAG naming conventions
- A street name consists of the prefix, type, name, and suffix. The street name may be parsed into separate fields or the name may exist in a single user-defined field (i.e., STREET NAME).
- Street segments do not need to be "split" at points where a response or reporting boundary intersects it. However, if a response boundary intersects a street segment, street centerline geocoding may not be accurate enough to ensure that a particular parcel is contained within a particular beat. In these cases, Address Points should be used as needed.
- A Street segment should be split at points where a municipal (Subdivision, City, Zip Code) boundary intersects it.
- City name attributes must be present in the street centerline file for both the left and right side of the street.
- Alias names must be maintained in a separate Geodatabase table **(see Street Name Alias Table)**
- PremierOne attempts to standardize addresses based on standard Directionals (i.e. "N," "S," "E," and "W". There may be a situation where the standardization incorrectly interprets a street name as a directional (for example "100 E ST"). Addresses like this must be maintained in a separate Geodatabase table **(see Street Name Standardization Exceptions table)**
- Optional fields supported are Left and Right Subdivision name, Left and Right Zip Code, State, Description, Low and High Cross Street Override, and Cross Street Bypass.

- The field size limits are as follows:

Field	Required	Data Type	Description
Left Low House	Yes	String(25)	Field contains the starting house number on the left side of the street. A house number may be numeric or in a supported alphanumeric or hyphenated format
Left High House	Yes	String(25)	Field contains the ending house number on the left side of the street. A house number may be numeric or in a supported alphanumeric or hyphenated format
Right Low House	Yes	String(25)	Field contains the starting house number on the right side of the street. A house number may be numeric or in a supported alphanumeric or hyphenated format
Right High House	Yes	String(25)	Field contains the ending house number on the right side of the street. A house number may be numeric or in a supported alphanumeric or hyphenated format
Street Name Part Fields	Yes	String(100)	A list, in order, of the fields in the source Feature Class that make up the street name. This may include parsed fields containing the prefixes, suffixes, and name or the street name may be stored entirely in a single concatenated field.
Left CITY	Yes	String(150)	The city name for the left side of the street matching MSAG/E911
Right CITY	Yes	String(150)	The city name for the right side of the street matching MSAG/E911
Left Subdivision	No	String(150)	The name associated with a small area (neighborhood, business park, etc) within a city on the left side of the street.
Right Subdivision	No	String(150)	The name associated with a small area (neighborhood, business park, etc) within a city on the right side of the street.
Left Zip Code	No	String(20)	The Postal Code or City on the left side of the street.
Right Zip Code	No	String(20)	The Postal Code or City on the right side of the street.
State	No	String(50)	The State/Province in which the street exists.
Description	Optional	String(100)	The field in the source Feature Class containing a free-text description of the street segment. This can be used to differentiate street segment features with similar names and address ranges.
Low Cross Street Override	Optional	String(100)	PremierOne automatically generates the cross streets based on the street centerline file during the import process. If a different low cross street is desired it must be entered in this field to override the automatic assignment.

Field	Required	Data Type	Description
High Cross Street Override	Optional	String(100)	PremierOne automatically generates the cross streets based on the street centerline file during the import process. If a different high cross street is desired it must be entered in this field to override the automatic assignment.
Cross Street Bypass Field	Optional	String(2)	Denotes which cross street fields need to be protected – L represents the Low Cross Street Name, H represents the High Cross Street name, and LH represents both the Low and High Cross Street names.
Cost (Time)	Yes	Double	1. There must be a field in the source street centerline feature class that represents the average time required to traverse the segment. There may be separate values for the left and right side of the street segment if necessary. A formula to determine the travel cost: Minutes: (length of segment in feet x .0114) / speed (mph) or Seconds: (length of segment in feet x .682) / speed (mph)
FromElevation	No	Long Integer	Specifies the 'elevation' of a segment FROM node. This field does not require actual elevation in terms of real-world measurements. The value is only used to determine whether a turn is allowed from one street to a street that intersects it in a 2-dimensional space.
ToElevation	No	Long Integer	Specifies the 'elevation' of a segment TO node. This field does not require actual elevation in terms of real-world measurements. The value is only used to determine whether a turn is allowed from one street to a street that intersects it in a 2-dimensional space.
OneWay	No	Double	Specifies the allowed traffic flow on a street segment with respect to the **FROM** and **TO** nodes. Valid Values are: **FT** that specifies the traffic may only flow in the direction from the FROM node to the TO node. **TF** which specifies the traffic may only travel from the TO node to the FROM node. **NT** which specifies that traffic does not flow on the segment. **NULL** or any other designation defines that traffic may flow in either direction (FROM node to TO node, TO node to FROM node)

6.5 STREET NAME ALIAS TABLE

Motorola will provide a schema definition for maintaining street name aliases within a Geodatabase table. The format of this table is as follows:

Field	Data Type	Description
GRID	String (8)	Alpha "grid" part – required for alphanumeric house numbers
LOW_HOUSE	Long integer	The low house numbers for which the alias should be applied. If the alias should be applied to the entire range of the street, simply use 1-999,999,999.
HIGH_HOUSE	Long integer	The high house numbers for which the alias should be applied. If the alias should be applied to the entire range of the street, simply use 1-999,999,999.
REAL_PRE_DIR	String (4)	Prefix Direction of "real" street name
REAL_PRE_TYPE	String (8)	Prefix Street Type of "real" street name.
REAL_STREET_NAME	String (76)	"Real" street name
REAL_SUF_TYPE	String (8)	Street suffix type of "real" street name
REAL_SUF_DIR	String (4)	Street suffix direction of "real" street name
ALIAS_PRE_DIR	String (4)	Prefix direction of "alias" street name
ALIAS_PRE_TYPE	String (8)	Prefix street type of "alias" street name
ALIAS_STREET_NAME	String (76)	"Alias" street name
ALIAS_SUF_TYPE	String (8)	Street type of "alias" street name
ALIAS_SUF_DIR	String	Suffix direction of "alias" street name
CITY	String (150)	Name of the city in which the street belongs. Aliases will only be applied to street segments where the street name parts **and** the city name match **exactly**

6.6 STREET NAME STANDARDIZATION EXCEPTIONS TABLE

Motorola will provide a schema definition for maintaining street name standardization exceptions within a Geodatabase table. The format of this table is as follows:

Field	Data Type	Description
Full_Street	String(100)	The entire street name with prefixes and suffixes.
Pre_Dir	String(4)	Prefix Direction.
Pre_Type	String(8)	Prefix Street Type
Street_Name	String(76)	Street Name.
Suf_Type	String(8)	Street Type.
Suf_Dir	String(4)	Suffix Direction

For example, if you have a street called "W ST," PremierOne may interpret "W" as the Prefix Direction and "ST" as the Street Name. To create a standardization exception, enter "W ST" in the Full_Street field, "W" in the Street_Name field, and "ST" in the Suf_Type field.

6.7 LOCATION POINT LAYER REQUIREMENTS

6.7.1 Address Point Feature Class

Address Points are features that are represented geometrically by a point which represents the precise map location associated with a specific address.

NOTE: It is critical to understand how PremierOne utilizes Address Points when deciding whether or not to import them into PremierOne and, if so, to what extent.

Address Point features can be used to provide better geocoding accuracy than interpolating a location using a street centerline feature or where house numbers do not follow the standard addressing rules, such as requiring that all house numbers on the same side of the street have the same numerical parity (odd/even). It can also be used in situations where the house number does not provide enough granularity to identify the location, such as in a mobile home park where all homes have the same street address plus a "unit," or "space," number. The location point feature class will be used to supplement the street centerline-generated match candidates during address verification.

Note: The naming conventions for the address points must match the naming conventions on the street centerline file and the city name must match the street centerline data.

A source feature class containing address points must contain the following fields

Table 6-1. Address Point Feature Class

Description	Required	Data Type	Description
Address	Yes	String(100)	The main street address (including house number) of the location, not including apartment or building numbers if applicable. The values may exist in the source feature class as a single field, or parsed into two or more separate fields.
SUBHOUSE	No	String(18)	Used to store supplemental address information, such as a unit, space, or suite number (if applicable).
BUILDING	No	String(20)	Used to store building name or number (if applicable)
CITY	Yes	String(150)	The name of the city for which the address point belongs.
Subdivision	No	String(150)	A well-known name associated with a small area (neighborhood, business park, etc) within a city.
Description	No	String(256)	A description can be helpful in situations where locations need to be distinguished from each other, such as in a case where a particular street intersects another street in two distinct places.
Zip Code	No	String(20)	Zip (Postal Code) in any format.
State	No	String(50)	Name of State, Province, etc.

In most cases, street centerline geocoding will calculate a map location that sufficiently represents the location of a street address. However, there are some scenarios in which this might not be the case:

- Street segments where addressed structures are not evenly spaced across the segment – particularly in rural areas where street segments are of an unusually long length and where the structures may be physically located off of a private drive much further than the configured offset value from the street associated with their address.
- Street segments where house numbers do not meet the parity requirements or where house numbers are assigned sequentially clockwise or counter-clockwise around a cul-de-sac.
- Areas where structures do not actually face the street associated with their address, but rather face short, unnamed arteries off of the street.
- Residential or business complexes that consist of several detached structures having the same street address but distinct building or unit numbers.

NOTE: Using Address Points can have an unexpected side effect on routing and ETA calculation. Currently, PremierOne uses the precise location of the address point as the destination point for routing calculations. However, if that point is closer to another street segment than the street segment associated with its address, the system may produce a route ending on a street segment that does not provide access to the address' structure.

Address Points are *not* used to determine whether an Apartment/Unit or Building value is valid for a particular address. For example, if you import ten address points for "123 MAIN ST" to represent a range of buildings from #1-10 and a user attempts to validate "123 MAIN ST, Building 11", the user will not be given an indication that "123 MAIN ST, Building 11" has not been imported as an address point. Rather, the system will geocode the location to "123 MAIN ST" using the **street centerline** and will retain "Building 11" in the incident's location information. The reason it is not considered an "error" for a user to enter an Apartment/Unit or Building value is because PremierOne does not expect (and Motorola Solutions does not recommend) every apartment/building number for every address to be imported as an address point.

While the address point data source may support Z-levels (altitude), PremierOne does not currently support map display or spatial calculations in 3D. In other words, there is virtually no value in importing distinct address points for apartment numbers in multi-level buildings.

An address point data source requires the following attributes:

- Street Address - Street addresses can be maintained in the GIS data source either as the entire value in a single field or with the house number and street name value (or individual street name parts) parsed into individual fields. The street name must match the street name on the street centerline file. Every street address must also be represented in the street centerline file (i.e. if you have an address point at 230 W HOLLY AVE you must also have a street segment in the street centerline layer with a range that encompasses 230 with a street name of W HOLLY AVE)
- City Name. The city name must match the city name used in the common place file and the street centerline file.

PremierOne also supports attributes for Sub-house (apartment/unit), Building, Subdivision Name, Zip Code, State, and Description. If the subdivision, zip code, sub-house, building and state attributes are used in the address point file they must be populated (and match) across the validation layers (common place, address point and street centerline)

6.8 COMMON PLACE LOCATION POINTS

Common Places are features that are represented geometrically by a point which represents the precise map location associated with a specific place. The difference between a Common Place and an Address Point is that Common Places are used for locations that are more commonly referred to by name rather than address (such as businesses and government buildings). In fact, not all Common Places will have an address associated with them (Highway mile markers and call boxes, geographic/recreational points of interest, et cetera).

NOTE: Motorola Solutions recommends extensive use of Common Places because it simplifies the entry of incident location information at businesses and other named locations. However, there are two implications of using common places that should be understood:

1. Some Common Places may produce the same unexpected routing behaviors as described in the Address Points section. The same interim workarounds are recommended. Also, if you are using a common place to represent the location of a geographic feature such as a large park, it may be beneficial to create several common places representing the distinct access locations and/or areas within the park (i.e. "CITY PARK – NORTH ENTRANCE", "CITY PARK – SOUTH ENTRANCE", "CITY PARK – BASEBALL FIELD", et cetera) rather than a single common place location somewhere in the middle of the park.
2. The location of a common place is geocoded using the exact coordinate of the common place's point feature. Many common places have addresses associated with them. The geocoded coordinate of a Common Place will likely be slightly different from where the address would be geocoded by PremierOne against the street centerline representing the address. Therefore, if the user enters an address associated with a Common Place, the geocoded map coordinate will likely by different depending on whether the user chooses to subsequently associate the address with a Common Place at that address or not.

While the common place point data source may support Z-levels (altitude), PremierOne does not currently support map display or spatial calculations in 3D. In other words, while importing common places that exist in multi-level buildings will still provide a 2D map coordinate to represent the location of the place, PremierOne cannot perform routing functions or determine responses that are dependent the floor of which the place exists.

A common place data source requires the following attributes:

- Place Name – The Common Place name as it will appear on the incident form and subsequently in the historical information. The Place Name must match the MSAG name.
- City Name – City name must be the same as the City names used for Address Points and Street Centerline. The City name must also match the city name in the MSAG.
- If the subdivision, zip code, sub-house, building and state attributes are used in the address point file they must be populated (and match) across the validation layers (common place, address point and street centerline)

PremierOne also supports attributes for Address (either as a single value or parsed into individual fields representing the house number and street name), Place Type (i.e. School, Business, or any other user-definable category name), Sub-house (apartment/unit), Building, Subdivision Name, Zip Code, State, and Description.

NOTE: Understanding how data is likely to be imported through the ANI/ALI interface (MSAG data) is important to accurate address validation. If MSAG data does not match Common Place names, this will result in no valid address being found for the Common Place and operators will not be able to validate the Common Place as an incident location.

PremierOne is designed to work optimally with geodata that is synced with the local MSAG data, especially for Common Places. If there is not a match between MSAG data and the PremierOne geodata, many address will not validate during incident creation, and can delay the creation of calls.

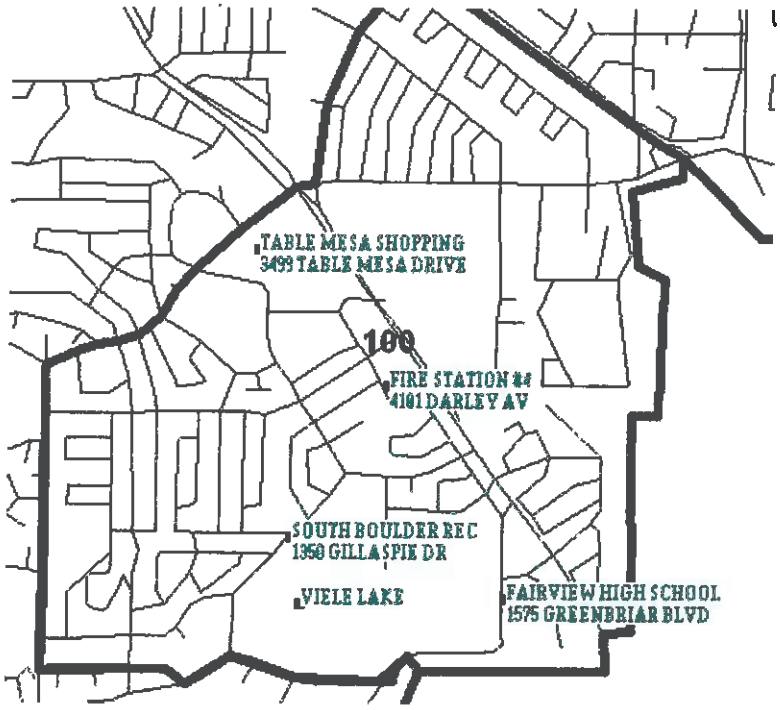


Table 6-2. Location Point Feature Class

Description	Required	Data Type	Description
Place Name	Yes	String(100)	The name used to refer to the location.
Place Type	No	String(25)	A user-defined category for which the location belongs (i.e. SCHOOL, BUSINESS, POLICE STATION, etc)
Address	No	String(100)	The main street address (including house number) of the location, not including apartment or building numbers if applicable. The values may exist in the source feature class as a single field, or parsed into two or more separate fields.
SUBHOUSE	No	String(18)	Used to store supplemental address information, such as a unit, space, or suite number (if applicable).
BUILDING	No	String(20)	Used to store building name or number (if applicable). If the location represents a store in a mall, the BUILDING value could be used to store the name of the mall. This allows for alternate search methods by Place Name or Building Name.

Description	Required	Data Type	Description
CITY	Yes	String(150)	The name of the city for which the address point belongs.
Subdivision	No	String(150)	A well-known name associated with a small area (neighborhood, business park, etc) within a city.
Description	No	String(256)	A description can be helpful in situations where locations need to be distinguished from each other, such as in a case where a particular street intersects another street in two distinct places.
Zip Code	No	String(20)	Zip (Postal Code) in any format.
State	No	String(50)	Name of State, Province, etc.
Place Name Alias	No	String(100)	One or more fields containing place name aliases can be defined.

6.8.1 Common Place Layer Requirements

- Place Type codes may be added to common places for use in Mobile and tactical mapping to distinguish different common place types. This will allow the dispatcher to display or not display specific types of common places by type. For instance, mile markers should contain "MILE MARKERS" (or some type of designator) in the common place classification field.
- **Milepost markers:** Mileposts are not required in CAD; however, if mileposts are part of your GIS application, it is recommended that the names specify the direction of travel, as it is important to distinguish "NB" from "SB" in the name field to prevent duplication.

6.8.2 Common Place Alias Table

Common place aliases may reside in the common place feature class or they may be maintained in a separate table. A schema definition file that can be used to create this table will be provided by Motorola.

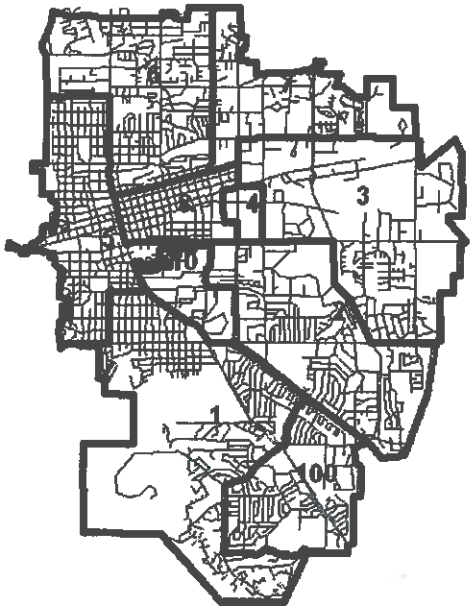
Table 6-3. Common Place Alias Table

Field	Data Type	Description
ALIAS_PLACE_NAME	Text (100)	Alias common place name
REAL_PLACE_NAME	Text (100)	"Real" common place name
REAL_PLACE_ADDRESS	Text (100)	"Real" common place address.
REAL_PLACE_CITY	Text (150)	"Real" common place city identifier

6.9 BOUNDARY (POLYGON) REQUIREMENTS

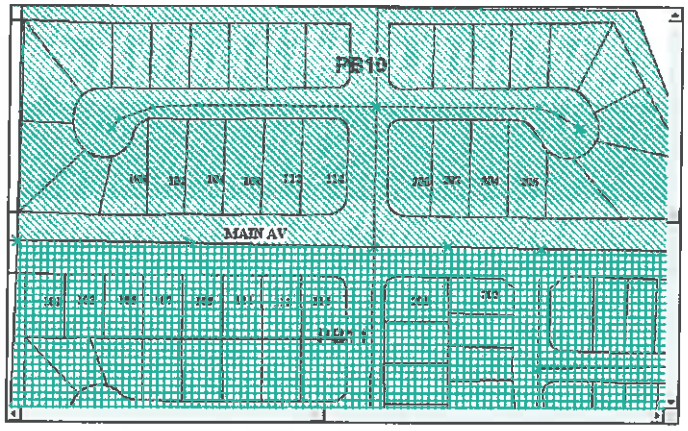
6.9.1 Definition

Boundaries are represented by closed shape polygons in the GIS data. The purpose of creating boundaries, for use in CAD, is to recommend the streets, intersections, and common places to the boundaries they fall within. The image below represents police boundaries (polygons) that are named along with streets that fall inside each boundary.



6.9.2 Boundary digitizing

If the boundary response is different for addresses on the north and south street sides, the boundary should be digitized down the street centerline (the boundary and street centerline points should be geographically coincident). In the example below, house addresses north of MAIN ST fall in police beat PB10, while house addresses south of MAIN ST fall in police beat PB11. The adjacent police boundaries follow the MAIN AV street centerline points.



6.9.3 Boundary "slivers"

Avoid creating "slivers" (gaps between boundary lines) when digitizing adjacent boundaries. Boundary slivers result when two adjacent boundaries do not share the same points (they are not coincident); pockets without boundary coverage exist. If any streets, intersections, or common places fall in the areas without boundary coverage, they may not be recommended to the correct boundary on CAD.

6.9.4 Boundary "overlaps"

The opposite of creating a sliver is to create a boundary overlap. This must be avoided to prevent incorrect recommendations for street, intersection, and common place boundaries on CAD. When creating adjacent boundaries within the same layer, follow the existing boundary points for shared lines.

6.9.5 Response Boundary (Polygon) Requirements

Response Boundaries are features that are represented geometrically by a polygon (area) which represent the smallest level of response and resource assignment. For law enforcement agencies, a response boundary is typically referred to as a "beat" and collections of beats define the "sectors" and "areas" of response plans and/or run cards.

Each response boundary feature is specific to a single agency. Motorola Solutions recommends that all response boundaries for a particular agency type (i.e. Law, Fire, Medical, et cetera) be maintained in a single GIS data source. This will allow the GIS Administrator to set snapping options and topologies to ensure that there aren't any unintended "holes" or "slivers" between response boundary features. PremierOne does not prevent two boundaries of the same agency or agency type from overlapping. However, if a location is verified at a coordinate coincident with more than one response boundary belonging to the same agency type, the call-taker will be required to select which agency/beat the incident should be associated with.

6.9.6 Response Boundary table columns

Response Boundary features are the smallest named geographic areas used to determine which agency and beat-assigned resources are responsible for responding to incidents created within a specific area.

Column	Required	Data Type	Description
NAME	Yes	String(100)	The name of the boundary, such as "BEAT 100", "STATION 5", or "WEST SUBURBS"
Agency	Yes	String(25)	The PremierOne Agency ID corresponding to the agency responsible for responding to incidents create within this boundary

6.9.7 Response Boundary (Polygon) Layer Requirements

Motorola's PremierOne system supports an unlimited number of response boundary layers. The boundary layers are user-defined and may include law beats (for agencies requiring law dispatch), fire zones (for agencies requiring fire dispatch), EMS zones (for agencies requiring emergency medical dispatch, etc.

Boundaries for use in CAD must conform to the following guidelines.

- When building response boundaries, create the smallest boundary that represents the geographic area that is used for dispatching to the area. Note that response boundaries may be grouped together using the CAD Beat Plan Configuration Menu to form larger response zones. For instance, due to officer availability, time of day, or other factors, a law agency may create new response zone via CAD based on combinations of existing law beats that exist in the GIS law layer. Response beats may also be defined in CAD with a primary responder and secondary responder.
- Customers may maintain separate boundary feature classes per agency, agency type, or system. It is acceptable for boundaries within any boundary feature class to overlap with other boundary features. However, the union of all boundary feature classes must not create a situation where two or more boundaries belonging to the same Agency Type overlap, since this will adversely affect street, intersection and common place boundary recommendations.
- Adjacent boundaries within the same layer are typically coincident (they share the same shape points or vertices). In some cases, "holes" may exist in boundary coverage. For instance, a county sheriff agency that does not provide service within a particular city; the city area may not have sheriff agency coverage. In this case, a "ring" is created inside the city boundary and a county boundary is created inside the ring.
- Boundaries that follow street centerlines should be geographically coincident.

6.10 REPORTING DISTRICT BOUNDARY (POLYGON) REQUIREMENTS

6.10.1 Reporting District Boundary table columns

Reporting District Boundaries are features that are represented geometrically by a polygon (area) which represent the geographic areas used for reporting.

Each reporting district boundary feature is specific to a single agency. Motorola Solutions recommends that all reporting district boundaries for a particular agency type (i.e. Law, Fire, Medical, et cetera) be maintained in a single GIS data source. This will allow the GIS Administrator to set snapping options and topologies to ensure that there aren't any unintended "holes" or "slivers" between reporting district boundary features. PremierOne does not prevent two boundaries of the same agency or agency type from overlapping. However, if a location is verified at a coordinate coincident with more than one reporting district boundary belonging to the same agency, PremierOne will associate all of them with the incident. However, this may cause issues with the Reporting Data Warehouse transformation routines. Therefore, Motorola Solutions recommends not allowing reporting district boundaries to overlap for a particular agency.

Motorola Solutions recognizes that reporting district names/areas may be the same for multiple agency types; however we wanted to provide the highest amount of flexibility in defining them. In such a case, the GIS Administrator should create copies of the reporting district data source for each agency type and modify the agency ID values in them accordingly.

A reporting district boundary data source requires the following attributes:

- Boundary (District) Name
- Agency ID (must match an Agency ID provisioned in PremierOne)

Column	Required	Data Type	Description
Name	Yes	String(50)	The name of the boundary, such as "A100," NW14, 362, etc...
Agency	Yes	String(25)	The PremierOne Agency ID corresponding to the agency associated with the reporting district.

6.11 CONTRACTOR BOUNDARY (POLYGON) REQUIREMENTS

6.11.1 Contractor Boundary table columns

Contractor Boundaries are features that are represented geometrically by a polygon (area) which represent the geographic areas used to define contractor rotations.

Each contractor boundary feature is specific to a single agency. Motorola Solutions recommends that all contractor boundaries for a particular contractor type (i.e. Towing, Taxi, et cetera) be maintained in a single GIS data source per agency type. This will allow the GIS Administrator to set snapping options and topologies to ensure that there aren't any unintended "holes" or "slivers" between contractor boundary features. PremierOne does not prevent two boundaries of the same agency or agency type from overlapping. However, if a location is verified at a coordinate coincident with more than one contractor boundary belonging to the same agency, PremierOne will non-deterministically select one of the boundaries to associate with the contractor request.

Motorola Solutions recognizes that contractor boundary names/areas may be the same for multiple agency types; however we wanted to provide the highest amount of flexibility in defining them. In such a case, the GIS Administrator should create copies of the contractor boundary data source for each combination of contractor type and agency type and modify the agency ID values in them accordingly.

A contractor boundary data source requires the following attributes:

- Boundary Name
- Agency ID (must match an Agency ID provisioned in PremierOne)
- Contractor Type (i.e. Towing, Taxi, or any other user-definable type name)
- **It is a Motorola Solution recommendation that you do not use special characters (underscore, ampersand, star, etc) or spaces in the **Contractor Type** name.

Column	Required	Data Type	Description
Name	Yes	String(25)	The name of the boundary, such as "BEAT 100", "STATION 5", or "WEST SUBURBS"
Agency	Yes	String(20)	The Agency ID corresponding to the agency responsible for responding to incidents create within this boundary

6.12 MAP BOOK FEATURE CLASS

Map Book Page Boundaries are features that are represented geometrically by a polygon (area) which represent the geographic areas defined in a paper map book. Typically, these polygons are square or rectangular depending on the pages of the physical map book.

Map Book boundaries are not specific to an agency or agency type.

A Map Book boundary data source requires the following attributes:

- Map Book Name (i.e. Title of the map book, such as "Thomas Brothers Map")
- Page Number Field (optional)
- Grid Reference (i.e. "B7")

PremierOne also supports an attribute for the page number associated with a map page boundary.

Table 6-4. Map Page Feature Class

Field	Required	Data Type	Description
BOOKNAME	Yes	String(25)	The name of the map book
PAGE NUMBER	No	String(8)	
GRID REFERENCE	Yes	String(8)	The grid name specific to the page (for example, "A1").

6.13 PREMISE HAZARD AREAS

Premise Hazard Areas are features that are represented geometrically by a polygon (area) which represent geographic areas associated with specific premise/hazard information. The initially intended use case for Premise Hazard areas was for the purpose of associating gate codes for with incidents created within gated communities. Premise Hazard records created at a particular address, place, or intersection will be associated with an incident that occurs within a specified radius of the premise hazard location. However, Premise Hazard Areas provide a way to define precise areas to associate with a particular premise hazard record when a simple radius search is not sufficient.

Premise Hazard areas are not specific to an agency.

A premise hazard boundary data source requires the following attributes:

- Premise Hazard Area Layer Name – Unlike the other Data Import Tools, the Premise Hazard Area Import tool does not accept a geodatabase feature class as the input source. Rather, it accepts a layer file which can be exported from a layer item in ArcMap. By using a layer file, the color and transparency properties configured for the map layer can be imported along with the data, allowing the layer display properties to be carried over when the premise hazard areas are displayed on the PremierOne Client maps.
- Area Name – Field containing a short name associated with the Premise Hazard Area

PremierOne also supports an attribute for a Description. This can be used to associate a longer description to describe the premise hazard area than the Area Name value supports.

6.14 MAP_LAYERS

The PremierOne Geodatabase schema will create a Feature Dataset called "MAP_LAYERS." This is the recommended place to store any feature classes to be used as map layers in the CAD/Mobile mapping clients. The MAP_LAYERS feature dataset uses a WGS 1984 spatial reference, as all internal and external coordinates in PremierOne use that spatial reference.

The PremierOne mapping client uses ArcMap documents (*.mxd files). ArcMap documents will contain any CAD layer that the customer desires, as well as the PremierOne STREET_CENTERLINE layer (required for the Road Closures feature). Separate *.mxd files should be created for each Geodatabase on the system (i.e. Production and Staging on both the Primary and Failover database servers, and Production and Staging File Geodatabases used by PremierOne Mobile clients). Information about the creation and building of an *mxd file can be found in your Esri application documentation. Contact your GIS database administrator for further information, if needed.

SECTION 7

PRICING

7.1 PRICING SUMMARY

	Original Pricing
Motorola Application Software	$2,952,500
PremierOne CAD Enhancement	$486,000
PremierMDC Applications Software	$1,233,100
Advanced Tactical Mapping	$973,500
Motorola Interface Fees	$---
Other Hardware/Software	$516,278
Server Hardware/Software	$2,631,264
Third Party Partner Software and Implementation	$35,000
State Reporting (IBR/UCR/TAR)	$---
Implementation/Installation Interfaces, less PMDC, less Disaster Recovery PMDC Provisioning Disaster Recover, includes Interfaces HW/SW Installation Kickoff Tailoring Training CAD ATP Go Live PM/Admin	$2,444,907
Subtotal	$11,272,549
LESS: Migration Discount	($3,607,000)
CAD Strategic Discount	($950,000)
PremierOne CAD Enhancement Discount	($486,000)
PMDC Systems Discount	($329,306)
Sales Tax	$316,832
Grand Total	$6,217,075

Motorola pricing is based on a complete system solution. The addition or deletion of any component(s) may subject the total system price to modifications.

The Migration Discount included above is being granted because the customer has an existing Maintenance and Support Agreement (MSA) with Motorola. Customer agrees to retain its MSA during implementation of the PremierOne System. Upon acceptance of the PremierOne System, the price for the MSA will be based on the maintenance pricing for the new software and hardware which is summarized below in the •year 1 Maintenance Summary.• This pricing is subject to change as indicated.

Pricing for this System offering is based on Motorola's typical pricing methodologies for systems of this nature and is not based upon the specific services rates and equipment discounts set forth in the Master Services Agreement and Master Equipment Agreement between the City and Motorola. However, Motorola has included asystem discount so that the net effect is the offered pricing for the system is better for the City than simply applying the master agreement services rates and equipment discounts.

7.2 PROPOSAL PRICE DETAIL

Category / Description		Amount
PremierOne CAD (includes CAD Enhancement)		**$3,438,500**
P1 Query Service Server License	*1*	
P1 GIS Editing Client Plug-In License	*1*	
PremierOne CAD & Mobile Reporting Service Server License	*2*	
PremierOne Mapping Server License	*2*	
P1 CAD Server License (Primary)	*1*	
P1 CAD API	*1*	
MIGRATION Only- P1 CAD Dispatch (CAD Client and Mapping)	*185*	
P1 ARL Vehicle Tracking Module License	*1*	
Motorola PMDC Software		**$2,206,660**
Premier MDC Disaster Recovery Server	*1*	
Premier MDC Server License (1001+ units)	*1*	
Premier MDC Client License (1001+ units)	*515*	
ATM Vehicle Client (1001+) – Charge per User	*515*	
GPS Integration Client Module (Charge per User)	*515*	
ATMM (Mobile Mapping) Integration Client Module (Charge per User)	*515*	
Motorola Interfaces (included in SW)		**$466,206**
Generic E911	*1*	
Spectracom NetClock	*1*	
Motorola PMDC Mobile	*1*	
Generic TDD	*1*	
MCC 7500 Radio Console	*1*	
Motorola Astro Flexible ATIA	*1*	
CryWolf False Alarm Billing Interface - Bidirectional	*1*	
State/NCIC	*1*	
SMTP Server Interface	*1*	
State Query Interface Transaction Bundle	*1*	
Server Hardware and Software		**$2,631,264**
HP Rack Model 10642 G2 with Rack Mount Keyboard & Monitor	1	
Cable Management Panel	2	

Category / Description		Amount
HP 24A High Voltage Modular PDU	12	
HP Ultrium 3 RW Bar Code Label Pack - Bar Code Labels	1	
HP Power Cords (2.5m)	8	
HP Power Cords-15pack (1.37m)	1	
Ethernet Cables - Cat 6 Cables	1	
HP Blade Enclosure Hardware Model c7000 Half Height	1	
HP Blade Enclosure Hardware HP GbE2c Layer 2/3 Ethernet Blade Switch	4	
HP San Switch HP B-Series 8112c Blade System San Switch	2	
HP 8112c Blade System 12-Port Upgrade LTU	2	
HP San Switch HP 8Gb Long Wave B-series 10km Fibre Channel SFP+ 1 Pack	8	
HP Host Server HP BL460c Gen9 - Host Server (Dual 8-core Gen9 v3 Process	6	
HP Host Server Model DL580 G8v2 wth 1TB RAM, 2x1.2TB HD-Quad 8-Core	2	
Perimeter Router and Firewall F5 BIG-IP 7000 series Load Balancer	2	
HP Host Server HP DL380c Gen9 - PMDC Host Server - (Dual 8-core Gen9v3	2	
Storage Hardware and Software		**$1,223,237**
Storage HP 3PAR Storage Array and Physical Storage ProcessorStorage 3PAR 7200 Drive Enclosure	1	
Storage (4) HP 3PAR 7200 M6710 300GB 6G SAS 15K HDD	7	
Storage HP 3PAR Storage Array and Physical Storage ProcessorStorage 3PAR 7200 Drive Enclosure	156	
HP MSL9096 1 LTO-5 Ultrium 3000 16 Gb FC Tape Library	1	
Storage HP 8GB Short'l',8ve B-series FC SFP+ 1 Pack (for Switch)	4	
Storage HP 2m Multi-mode OM3 LC/LC FC Cable	4	
Storage HP LT05 Ultrium 3 RW Bar Code Label Pack	1	
Storage HP StorageWorks LTO-5 Ultrium 3TB Data Cartridge for MSL 2024	96	
Storage HP StorageWorks Ultrium Cleaner Cartridge	1	
Storage HP Data Protector Software	1	
Other Hardware and Software		**$516,278**
NetClock/GPS Master Clock Model 9483 with OCXO Oscillator (Includes Embed)	2	
GPS Antenna Surge Protector - Model 8226	2	
GPS/GLONASS Antenna Outdoor Model 8230	2	

Category / Description		Amount
GPS 200 ft. Plenum-Rated Coax Antenna Gable Terminated with Type N Connect	2	
Lantronix UDS1100 (one required for each 911 interface)	2	
ESRI ArcGIS Desktop 10	1	
ESRI ArcGIS Desktop 10 Network Analyst Extension	1	
Distinct ONC RPC/XDR for CAD/ Server Connection - For SmartZone Radio Int.	1	
PresenTense Software - CAD Clients and Servers	178	
Microsoft SQL Server Enterprise Runtime Core 2012 ALNG Embedded MVL 2 Li	23	
Microsoft®SysCtrDatacenter 2012R2 AllLng Embedded MVL 1License 2Proc	10	
Third Party Partners		**$35,000**
#1 - Query Services - Software Licenses and Implementation Services	*1*	
Implementation/Installation		**$2,444,907**
Project Administration		
Kickoff/Contract Design Review		
Provisioning		
Hardware/Software		
Tailoring (UI, /DD, Custom Pack)Training		
Training		
CAD Acceptance Testing		
Go-Live		
PremierOne Mobile (for mobile command vehicle pilot)	**10**	**$0**

7.3 MAINTENANCE SUMMARY

LOS ANGELES POLICE DEPARTMENT - PROJECT CAP15I10SA ON PREMIERONE CAD, PREMIERMDC, SOFTWARE UPGRADE SERVICES & DEDICATED ON-SITE RESOURCE
TOTAL CONTRACT VALUE - P1 CAD/PMDC PHASE 1 AND PHASE 2. EQUIPMENT, SERVICES, MAINTENANCE &SUPPORT, LIFE CYCLE SUPPORT SERVICES (UPGRADES,FULL TIME RESOURCE)

PRODUCT	YEAR 1 3/1/20-2/28/21	YEAR 2 3/1/21-2/28/22	YEAR 3 3/1/22-2/28/23	YEAR 4 3/1/23-2/29/24	YEAR 5 3/1/24-2/28/25	5-YEAR TOTAL 3/1/20-2/28/25
PREMIERONE CAD	$578,991.00	$725,903.00	$751,715.00	$778,509.00	$806,317.00	$3,641,375.00
PREMIERMDC	WARRANTY	$901,513.00	$313,888.00	$329,585.00	$346,062.00	$1,291,046.00
Software Upgrade Services with Disaster Recovery (Up to 2 SW Upgrade available)	$63,032.00	$63,032.00	$63,032.00	$63,032.00	$63,032.00	$315,160.00
One (1) Full-time On Site Dedicated Resource	$265,457.00	$265,457.00	$265,457.00	$265,457.00	$265,457.00	$1,327,285.00
One-time Annual Escalator Reduction Discount - Upgrade Services	($615.00)	($615.00)	($615.00)	($615.00)	($615.00)	($3,075.00)
One-time 5 Year Funded Maintenance Discount for Multi-Year Commitment-10%	($32,788.00)	($32,788.00)	($32,788.00)	($32,788.00)	($32,788.00)	($163,940.00)
Additional Discount for Year 1 for Customer Satisfaction Issue	($437,008.50)	N/A	N/A	N/A	N/A	($437,008.50)
GRAND TOTAL	$457,008.50	$1,322,502.00	$1,360,689.00	$1,403,178.00	$1,447,465.00	$5,970,842.50

7.4 TOTAL CONTRACT VALUE - P1CAD/PMDC PHASE 1 AND PHASE 2. EQUIPMENT, SERVICES, MAINTENANCE & SUPPORT, LIFE CYCLE SUPPORT SERVICES {UPGRADES, FULL TIME RESOURCE}

Phase I Equipment and Services	$ 3,703,295	2016
Phase 2 Equipment and Services	$ 2,513,780	2017
Year 1 Maintenance / Support	$ 437,008.50	3/1/2020 to 2/28/2021
Year 2 Maintenance / Support	$ 1,322,502	3/1/2021 to 2/28/2022
Year 3 Maintenance / Support	$ 1,360,689	3/1/2022 to 2/28/2023
Year 4 Maintenance / Support	$ 1,403,178	3/1/2023 to 2/29/2024
Year 5 Maintenance / Support	$ 1,447,465	3/1/2024 to 2/28/2025
Total Five Year Cost of Ownership	**$12,187,917.50**	

7.5 PAYMENT MILESTONES

Phase 1:		

Execution of Contract	$0	July 2016
System kickoff meeting and Acceptance of the Functional System Description	$1,382,422	Oct 2016
Delivery of applicable System Hardware and Application Software to Customer Site	$2,320,873	Dec 2016
Phase 2:		
Delivery of Application Software (Appl. SW, PMDC, Enhancement, Advanced Tactical Map)	$1,257,915	2017
Disaster Recovery Server Hardware/Software Delivery	$819,117	2017
Other Software and Hardware, taxes	$436,688	2017
Total Phase 2 Equipment & Services (before taxes)	**$2,513,780**	

TERMS AND CONDITIONS

Terms and Conditions

The City of Los Angeles (the "City") and Motorola Solutions, Inc. ("Motorola") have two master agreements that are relevant to this Motorola Proposal. Concerning Radio Communications Equipment, the City and Motorola have previously entered into Contract No. 59456 (the "Master Equipment Agreement"). Concerning services and systems, the City and Motorola have previously entered into a Master Services Agreement identified as City Contract No. C-123897 and Motorola Contract No. 1000409608 (the "Master Services Agreement").

The Master Services Agreement contains a Communications System Agreement, including its exhibits, asExhibit C (referred to as the "Communications System Agreement"). In accordance with the last paragraph of Section 2.2 of the Master Services Agreement, the proposed transaction is a "system transaction" and, as such, this Motorola Proposal is based upon the Communications System Agreement, the other applicable provisions of the Master Services Agreement, and the Master Equipment Agreement (to the extent necessary, applicable, and not covered by the Communications System Agreement and the Master Services Agreement).

Pricing for this System offering is based on Motorola's typical pricing methodologies for systems of thisnature and is not based upon the specific services rates and equipment discounts set forth in the Master Services Agreement and Master Equipment Agreement between the City and Motorola. However, Motorola has included system and other discounts so that the net effect is the offered pricing for the system is significantly better for the City than simply applying the master agreement services rates and equipment discounts. This Motorola Proposal is a "Proposal" as that term is used in Section 2.2 of the Master Services Agreement and contains various additional documents (e.g., System Description, Equipment List, Statement of Work, Performance Schedule, Acceptance Test Plan, and Payment Schedule showing the payment milestones, etc.). Further, because of the nature of this offered System, additional "Supplemental Provisions" are needed, and they are included in the Proposal.

Total contract value including five years of maintenance, support and life cycle services is $8,831,250.

Supplemental Provisions

1. The following additional definitions apply to this transaction.

   "Microsoft Product" means a Microsoft SQL Server and/or a Microsoft System Center Operations Manager, either or both of which may be integrated with the Motorola Products. Microsoft Productsare subject to the following acknowledgement: "© Copyright 20_ Microsoft Corporation. All rightsreserved."

2. The following is added to the Agreement.

   THIRD PARTY PRODUCTS.

   1. MICROSOFT PRODUCTS

   a. As to any Microsoft Products being furnished, the Microsoft software for those Microsoft Products is sublicensed to Licensee from Motorola pursuant to the Customer's Motorola Software License Agreement and is subject to the additional Microsoft End-User License Agreement terms, Exhibit A-2.

b. Notwithstanding any provisions herein to the contrary, the following provisions apply concerning the Microsoft Products. If Customer is acquiring from Motorola a Microsoft SQL Server and/or a Microsoft System Center Operations Manager, then Customer warrants 1) that the number of users that may access the System are correctly indicated in the Exhibits to this Agreement; 2) that Customer is not being licensed the SQL Server or Microsoft System Center Operations Manager under a license from Microsoft, but rather under a sublicense from Motorola' 3) that the copies of the referenced Microsoft Products it receives from Motorola do not entitle it to maintain on its computer systems any more copies of the Microsoft Products than it previously licensed from Motorola or Microsoft; 4) that Customer possesses and will maintain sufficient quantities of fully valid Microsoft licenses to support the maximum number of users and/or devices that may access or use the System under the provisions of the End-User License Agreement, 5) that Microsoft will be an intended third party beneficiary of the End-User License Agreement, with the right to enforce the warranties and any other provisions of the End-User License Agreement provisions and to verify compliance of the End User with the same, 6) that Customer shall not run on a mirrored database server for more than 30 days without obtaining a SQL license for that server, 7) that the Customer grants permission for the disclosure of End-User information by Motorola as required in Motorola's Monthly royalty reports and ordering information reports to Microsoft, 8) that Microsoft does not transfer any ownership rights in any Product, and 9) that Motorola is solely responsible for providing technical support for the Microsoft Products.

c. The rights granted in this Agreement with respect to Microsoft Products are subject to the following limitations: 1) Customer has no copyright interest in the Microsoft Products; 2) Customer may not rent, lease, lend or provide hosting services with the Products; 3) Customer may not reverse engineer, decompile or disassemble any Product; 4) Customer may not remove, modify or obscure any copyrights, trademarks or other proprietary right notices contained in the Products; and 5) The Microsoft Products are not designed or intended for use in any situation where failure or fault of the product could lead to death or serious bodily injury of any person, or to severe physical or environmental damage ("High Risk Use"). Motorola's right to sublicense Microsoft Products excludes the right to use, or distribute the Microsoft Products for Customer's use in, or in conjunction with, High Risk Use, therefore, High Risk Use is strictly prohibited. High Risk use, by way of example, includes aircraft or other modes of human mass transportation, nuclear or chemical facilities, and Class III medical devices under the Federal Food, Drug and Cosmetic Act. Notwithstanding the foregoing, as long as PremierOne CAD is used in a manner for which it was designed and in accordance with the documentation provided, Motorola declares such use is not considered to be High Risk Use as defined by Microsoft.

2 Esri OEM SOFTWARE. Notwithstanding any provisions herein to the contrary, the following provisions apply concerning the Esri OEM Software.

a. The use of Esri OEM Software is restricted to executable code.

b. The following are prohibited: (i) transfer of the OEM Software, except for a temporary transfer in the event of a computer malfunction; (ii) assignment, time-sharing, lend or lease, or rental of the OEM Software or use for commercial network services or interactive cable or remote processing services; and (iii) title to the OEM Software from passing to Customer or any other party.

c. Also prohibited are the reverse engineering, disassembly, or decompilation of the OEM Software and the duplication of the OEM Software, except for a single archival copy; reasonable Customer backup copies are permitted.

d. To the extent permitted by law, Esri's liability is disclaimed for any damages, or loss of any kind, whether special, direct, indirect, incidental, or consequential, arising from the use of the OEM Software, including damages resulting from any Esri provided Data (Data is not warranted) and damages resulting from use in High Risk Activities such as the operation of nuclear facilities, aircraft navigation or aircraft communications systems, air traffic control, life support, or weapon systems. Esri specifically disclaims any express or implied warranty of fitness for High Risk Activities.

e. Upon termination of the contract, Customer agrees to certify in writing to Motorola that it has discontinued use and has destroyed or will return to Motorola all copies of the OEM Software and documentation.

f. Customer will fully comply with all relevant export laws and regulations of the United States to assure that the OEM Software, or any direct product thereof, is not exported, directly or indirectly, in violation of United States law.

g. Customer shall not remove or obscure any copyright, trademark notice, or restrictive legend.

h. In any sublicense to the United States Government, the OEM Software shall be provided with "Restricted Rights."

1. The following is added to the Agreement.

SOURCE CODE ESCROW. Motorola, after final system acceptance and upon Customer's written request, will deposit the source code for the installed and accepted Motorola software applications with Iron Mountain Intellectual Property Management, Inc. in accordance with an established Three Party Master Depositor Escrow Service Agreement ("Escrow Agreement"), naming the Customer as a "Beneficiary" thereto, provided the Customer is in good standing with this Agreement, the Software License Agreement and a Maintenance and Support Agreement. Upon request, Motorola will provide Customer a copy of the Escrow Agreement.

Once Customer is established as a Beneficiary to the escrow account, deposits of source code associated with any future releases that the Customer installs will be deposited into the same escrow account provided the Customer remains in good standing with license and support agreements for the applicable software. The cost of the escrow will be allocated between Motorola and the Customer as provided in the Escrow Agreement.

The deposited source code will be released to the Beneficiary in the event Motorola becomes bankrupt, discontinues business operations or materially breaches the Maintenance and Support Agreement, all pursuant to the terms as more fully stated in the Escrow Agreement. In the event the source code is released to the Beneficiary, the Beneficiary agrees to use the code exclusively for internal purposes under terms and conditions of the Software License Agreement, and solely for trouble analysis, namely isolating, diagnosing, and fixing problems in the applicable Software. Motorola retains all of its intellectual property rights in and to the source code. Nothing in this provision provides for escrow of source code associated with any third party products or Motorola's firmware, embedded, or radio software. In the event the Customer materially breaches the PSA System Agreement, Software License Agreement, Escrow Agreement or fails to keep the Maintenance and Support Agreement in effect, Seller's obligations under this provision will cease.

2. The following supplemental warranty provisions are added to the Agreement.

a. THIRD PARTY PRODUCTS. Notwithstanding any provisions herein to the contrary, the following provisions apply to the following Third Party Products:

b. Microsoft Products are not fault tolerant or free from errors, conflicts, interruptions or other imperfections. Performance may vary depending upon what hardware platform they are installed on, the interactions with other software applications and each product's configurations.

c. Microsoft Corporation is providing the Microsoft Products "as-is" with no warranty of any kind and disclaims all warranties, express and implied, to the maximum extent allowed by applicable law. Microsoft further disclaims any liability of Microsoft for any damages, whether direct, indirect incidental or consequential, as a result of the use or installation of the Products. Additionally, to the extent permitted under applicable law, Microsoft Corporation excludes for itself and its suppliers all warranties of any kind, including:

i. any warranties of title, non-infringement, merchantability and fitness for a particular purpose;

ii. any implied warranty arising from course of dealing or usage of trade;

iii. any common law duties relating to accuracy or lack of negligence with respect to the Microsoft Products, any Master Copy, and any Software Documentation; and

iv. that the products will operate properly in connection with the System, the Motorola products or on any Customer system(s).

If applicable law gives Customer any implied warranties, guarantees or conditions despite the foregoing exclusion, those warranties will be limited to one year and Customer remedies will be limited to the maximum extent allowed by this Agreement.

d. As to Esri OEM Software, during the term of this Agreement Esri represents and warrants the Software will substantially perform in conformance with the Specifications and its Documentation, provided the Software is used as specified in the Documentation, and will provide Updates, Upgrades, timely system releases, error corrections, and such improvements outlined in the Esri life cycle maintenance policy. The foregoing warranties do not apply to errors, defects, or nonconformities due to: a) misuse of the Software solely by the Customer; b) unauthorized modification of the Software by Customer; or c) failure of Customer to use compatible hardware and software as set forth in the specifications.

e. If included under this Agreement, the Data has been obtained from sources believed to be reliable, but its accuracy and completeness is not guaranteed. The Data may contain some nonconformities, defects, errors or omissions. Esri and Motorola make no warranty with respect to the Data. Without limiting the generality of the preceding sentence, Esri and Motorola do not warrant the Data will meet the Customer's needs or expectations, the use of Data will be uninterrupted, or that all nonconformities can or will be corrected. Esri and Motorola are not inviting reliance on the Data, and Customer should always verify actual Data, including, but not limited to, map, spatial, raster and tabular information.

f. EXCEPT FOR THE ABOVE EXPRESS LIMITED WARRANTIES, Esri DISCLAIMS ALL OTHER WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINTERFERENCE, SYSTEM INTEGRATION AND NON-INFRINGEMENT. Esri DOES NOT WARRANT THAT THE DATA WILL MEET CUSTOMER'S NEEDS OR EXPECTATIONS, THE USE OF THE SAME WILL BE UNINTERRUPTED, OR THAT ALL NONCONFORMITIES CAN OR WILL BE CORRECTED.

g. Customer's exclusive remedy and Esri's entire liability for breach of the limited warranties set forth herein shall be limited, at Esri's sole discretion, to (a) replacement of any defective media; (b) repair, correction, or a work-around for the Software subject to the Esri Support Services Policy, (c) return of the license fees paid for the Software, Data, or Documentation that does not meet Esri's limited warranty, provided that Customer uninstalls, removes, and destroys all copies of the Software, Data, or Documentation and executes and delivers evidence of such de-installation and destruction to Esri.

3. Motorola's Maintenance and Support Agreement and Third Party Software Licenses that apply to this transaction are included below. Concerning the offered maintenance and support services, Motorola has proposed multi-year discounts that would apply only if Customer contractually committed at execution of the Maintenance and Support Agreement to the full five (5) years of maintenance and support. To receive these multi-year discounts, in addition to executing the Maintenance and Support Agreement, Customer will issue a purchase order or contract amendment that will state: "Upon contract execution, the City authorizes Motorola to proceed per the terms and conditions of the Maintenance and Support Agreement. The City affirms that Motorola shall not wait for or require a future purchase order or contract amendment to perform or commence work as stated in the Maintenance and Support Agreement statement of work. Motorola shall issue an invoice for each year of Maintenance and Support (2-5). The Termination for Convenience provision in Section 4.3 of the

Master Services Agreement applies to the Maintenance and Support Agreement, except that in addition to the amounts to be paid to Motorola under this Termination for Convenience provision, the City will also pay to Motorola a termination fee equal to the previously applied multi-year discounts."