



THE CITY OF SAN DIEGO  
**REPORT TO THE CITY COUNCIL**

DATE ISSUED: July 10, 2017 REPORT NO. #17-040  
ATTENTION: Honorable Council President Myrtle Cole and Members of City Council  
SUBJECT: CAD Replacement Project Update & Request Authorization to Approve  
Change Orders with Intergraph Corporation d/b/a Hexagon Safety &  
Infrastructure

REFERENCE:  
City Council Resolution R-308028, dated March 22, 2013,  
City Council Ordinance O-20494, dated June 11, 2015,  
City Council Ordinance O-20543, dated July 21, 2015,  
City Council Resolution R-310149, dated December 15, 2015, and  
Request for Proposals No. 10047867-15-E

REQUESTED ACTION:

- Authorize the Mayor, or his designee, to execute Change Order 6 with Intergraph Corporation d/b/a Hexagon Safety & Infrastructure for the exchange and one year warranty of 43 I/Calltaker licenses for 43 I/Dispatcher license and create an interface to the Criminal Records Management System (CRMS), for an amount not to exceed \$461,422, and an optional additional amount for annual maintenance periods not to exceed \$405,066 for a maximum of five years total.
- Authorize the Mayor, or his designee, to execute subsequent change orders with Intergraph Corporation as necessary to complete the CAD System Replacement Project, for an amount not to exceed \$110,000.
- Authorize the Chief Financial Officer to expend an additional amount not to exceed \$571,422 from CIP S-13100, CAD System Replacement Project, Fund 400265, CIP Contributions from the General Fund, for Change Order 6 and subsequent change orders as necessary for the completion of the CAD Replacement Project, contingent upon the Chief Financial Officer certifying that the funds necessary for expenditure are or will be available.

- Authorize the Chief Financial Officer to appropriate and expend an additional amount not to exceed \$134,980 projected in FY 2019 from the General Fund (100000) for year two of CAD system annual maintenance, contingent upon adoption of fiscal year annual budget appropriation ordinances and upon the Chief Financial Officer certifying that the funds necessary for expenditure are or will be available.
- Authorize the Chief Financial Officer to appropriate and expend an additional amount not to exceed \$135,021 projected in FY 2020 from the General Fund (100000) for year three of CAD system annual maintenance, contingent upon adoption of fiscal year annual budget appropriation ordinances and upon the Chief Financial Officer certifying that the funds necessary for expenditure are or will be available.
- Authorize the Chief Financial Officer to appropriate and expend an additional amount not to exceed \$135,065 projected in FY 2021 from the General Fund (100000) for year four of CAD system annual maintenance, contingent upon adoption of fiscal year annual budget appropriation ordinances and upon the Chief Financial Officer certifying that the funds necessary for expenditure are or will be available.

STAFF RECOMMENDATION:

Approve requested actions.

EXECUTIVE SUMMARY OF ITEM BACKGROUND:

**Background**

The San Diego Police Department currently uses a 26-year old Computer Aided Dispatch (CAD) system for dispatching police officers to 9-1-1 and non-emergency calls for service. Over time, the system has become prone to failure, and is difficult to support, since the software's programming language has become outdated. In March 2013, City Council approved the CAD Replacement Project be added to the Capital Improvements Program (CIP). Subsequently, a detailed Request for Proposals (RFP) process was completed, including extensive requirements gathering and evaluation of vendor proposals addressing more than 3,200 technical and functional requirements. In December 2015, City Council approved Intergraph Corporation d/b/a Hexagon Safety & Infrastructure as the selected CAD replacement vendor.

The new CAD system will provide improved reliability and integration necessary to support critical dispatching functions both for dispatchers in Communications and officers using mobile devices in their patrol vehicles, while offering newer operational features and technologies, and disaster recovery capabilities. The system is poised to allow interfaces with next generation communications, including social media and multimedia. Maintenance support for the new CAD system will allow for more system stability and high availability, and periodic software releases will enable the Department to keep current and recognize operational improvements over time.

**CAD Project Status Update**

Project kick-off with Intergraph began in January 2016 and since that time several major milestones have been completed. During the initial phases, the project schedule was finalized, hardware was ordered and delivered and the base software was installed. A comprehensive fit and gap process was completed over a several month period in 2016, in which each of the 3,211 technical and functional requirements was demonstrated using the base software to ensure all functionality performed as expected. Detailed design documents for the various interfaces to and from CAD were developed, and extensive configuration workshops were held for both CAD and the mobile application, Mobile for Public Safety (MPS), to ensure all functionality is set up to perform to SDPD specifications.

In 2017, comprehensive testing of both CAD and MPS was conducted, including pilot testing in the field, and integration and acceptance testing. Training plans and curriculum are being finalized, and all Communications staff, field officers and other staff will be trained during July through October 2017. Cutover to the new system is planned for October 2017.

### **Additional Needs**

During the course of the project changes have been identified that were necessary to provide the functionality needed by dispatchers and officers in the field, and to ensure efficient system operations within the SDPD environment. To accommodate these changes, five change orders have been executed to date. Since these change orders involved both the addition and deletion of specific components or services, the project has remained within the original contract price approved by the City Council in December 2015.

Change Orders 1 - 3 were to obtain refreshed hardware quotes to ensure the latest releases of equipment was purchased, and included minor hardware additions. Change Order 4 included a workstation exchange to enable improved geographic information systems (GIS) support for critical mapping capabilities, and an additional Intergraph-led configuration workshop series for dispatchers. Change Order 5 included an exchange of software components, additional Intergraph mapping and reporting consulting services, software to enable comprehensive system performance monitoring, and an interface between the new CAD and a third-party tow request system. Change Orders 1-5 resulted in a cumulative project credit balance of \$25,416 to the City, including initial purchase and first year warranty.

Over the past few months during the extensive testing processes, additional functionality improvements to the proposed solution were identified as necessary for Call takers, who answer 9-1-1 and non-emergency calls from the public. These improvements include the ability for Call takers to view unit locations displayed on a map, which is especially important during emergency events, so Call takers know how far away units are when responding to events. Also needed is the ability for Call takers to access unit history information that is critical to maintaining officer safety, including which units are responding to a specific event, and which officers and vehicle are assigned to each unit. Call takers also need the ability to request a tow truck to respond to an event.

These functional requirements are essential for Call takers to maximize efficiency and safety for citizens, and are not included in the I/Calltaker software proposed by Intergraph for Call takers.

However, this functionality is available in the more robust I/Dispatcher software proposed for Dispatchers, who are responsible for dispatching officers to events that are created as a result of calls from the public or field initiated activities. In order to ensure the necessary functionality is available to Call takers, the I/Calltaker software needs to be upgraded to the I/Dispatcher software for the 43 Call taker workstations.

Additionally, an upgrade to the interface between the new CAD system and the Department's Criminal Records Management System (CRMS) are needed in order to support continued efficiencies related to crime and arrest report generation and storage. The initial cost of the software exchange and updated CRMS interface is \$368,772, and the first year warranty cost is \$118,066.

As the project nears completion, several other needs are anticipated to assist the Department with a smooth transition to the new system. Dispatchers have recognized significant benefits from the on-site presence of an Intergraph CAD subject matter expert during configuration workshops and acceptance testing. Additional assistance during the training and post training phases will enable fine-tuning as more dispatchers are exposed to the system.

Additional Integraph assistance regarding report creation is needed in order for supervisors to efficiently direct and monitor officer activity. Funding is also requested in the event additional engineering or customization is needed. These items are estimated to cost up to \$110,000. Approval is being requested now in order to complete the project on time and to minimize the overall risks associated with implementing this critical system.

### **Conclusion**

The CAD Replacement Project is progressing on schedule for cutover in October 2017. Throughout the course of this complex project, five change orders have been executed, resulting in a project credit balance of \$25,416 to the City, including initial purchase and first year warranty. During the extensive testing processes, an additional critical need to upgrade the proposed I/Calltaker software to I/Dispatcher was identified. The upgraded software is essential to providing the necessary tools Call takers need to ensure officer safety and to coordinate efficient responses to calls for assistance from the public. An upgrade to the CAD to CRMS interface is necessary to ensure continued efficiencies with reporting. Funding for additional Intergraph assistance is also anticipated to be needed in the final phases before cutover in October 2017.

### **CITY STRATEGIC PLAN GOAL(S)/OBJECTIVE(S):**

Goal # 1: Provide high quality public service

Objective #4: Ensure equipment and technology are in place so that employees can achieve high quality public service

Goal #2: Work in partnership with all of our communities to achieve safe and livable neighborhoods

Objective #1: Protect lives, property, and the environment through timely and effective

response in all communities  
Objective #2: Reduce and prevent crime  
Objective #4: Foster services that improve quality of life

FISCAL CONSIDERATIONS:

The initial costs and first year warranty of up to \$571,422 associated with these additions will be funded by available funds in CIP S-13100, CAD System Replacement Project, Fund 400265, CIP Contributions from the General Fund.

The original approved maintenance costs are \$786,743 for FY 2019, \$794,841 for FY 2020, and \$803,182 for FY 2021. Additional annual maintenance costs of up to \$135,065 per year for the FY 2019 through FY 2021 is contingent upon the adoption of the Appropriation Ordinance for the applicable Fiscal Year, and contingent upon the Chief Financial Officer furnishing a certificate certifying that funds necessary for expenditure are, or will be, on deposit with the City Treasurer.

EQUAL OPPORTUNITY CONTRACTING INFORMATION (if applicable)

This action is subject to the City's Equal Opportunity Contracting Ordinance (San Diego Ordinance No. 18173, Section 22.2701 through 22.22708) and the City's Non-Discrimination in Contracting Ordinance (San Diego Municipal Code Sections 22.3501 through 22.3517).

PREVIOUS COUNCIL and/or COMMITTEE ACTIONS:

City Council Resolution R-308028, dated March 22, 2013, authorized the creation of CIP S-13100, CAD Replacement Project.

City Council Ordinance O-20494, dated June 11, 2015, authorized the Master Lease Agreement to partially fund the CAD Replacement Project.

City Council Ordinance O-20543, dated July 21, 2015, adopted the FY 2016 Annual Budget, which authorized \$5.1 million transferred to the CIP.

City Council Resolution R-310149, dated December 15, 2015, authorized contract award and execution with Intergraph Corporation.

COMMUNITY PARTICIPATION AND OUTREACH EFFORTS: N/A

KEY STAKEHOLDERS AND PROJECTED IMPACTS

San Diego Police Department, and the residents of the City of San Diego.

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Police Department

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Deputy Chief/Chief Operating Officer