



STAFF REPORT

Date: Tuesday, January 24, 2017
To: Bryan H. Montgomery, City Manager
From: Kevin Rohani, P.E., Public Works Director/ City Engineer
SUBJECT: Smart City Program for City of Oakley

Approved and Forwarded to City Council:

Bryan H. Montgomery, City Manager

Background and Analysis

The City of Oakley as part of its growth and progression into the future has been interested in the identification and application of smart city technologies to enhance service delivery, lower operational costs, improve residents' quality of life, and serve as a catalyst for accelerating the City's growth ambitions.

Contra Costa Transportation Authority (CCTA) has been the lead agency in providing the vision and initiative in the Smart City Program. CCTA in 2016 provided funding to start the utilization of Smart City concepts throughout the County and City of Oakley was selected as the first municipality in the county to start this program.

The transportation and technology firm of Stantec Inc. was retained by CCTA to assist the City of Oakley in developing its Smart City Program. This effort included meetings with key staff from all City departments to identify and explore a wide range of Smart City concepts that are relevant to the Oakley community.

After extensive discussions and collaborations between staff and CCTA, a presentation was made to the City Council on September 27, 2016 by staff and the CCTA team on the outline of a draft Smart City Program for the City of Oakley. Over the next few months the team worked together on developing the final City of Oakley Smart City Program. This plan identifies priorities and steps necessary to accomplish the goals of the program.

The funding of the City of Oakley Smart City Program was identified as part of the Measure X tax which was proposed by CCTA and on the general election ballot on November 8, 2016. Unfortunately Measure X tax did not receive the votes needed for passing, and as result the funding for the Smart City program has been delayed. CCTA was primarily counting on Measure X to fund various Smart City programs and is currently reviewing other funding options and alternatives. This includes applying for Federal grants. This process will take some time, especially with the administration in

Washington D.C. that may have different priorities that could impact federal grants that will be allocated to states.

Staff believes that the Smart City Program will enhance the City's ability to meet the objectives of the General Plan and ultimately position Oakley as one of the first smart cities in California. This will also increase our effectiveness in attracting commercial development, which will bring resources for funding city services.

Fiscal Impact

The funding of this Smart City program was planned into the Measure X tax measure. However, since this tax measure failed to pass in the November 8, 2016 election, CCTA will be exploring other funding sources for this program. At this time, no City general fund resources are allocated and staff will report back to the Council in the future as funding sources become available for the project implementation.

Staff Recommendation

The Oakley City Council to adopt the Smart City Program and its recommendations.

Attachment

1. City of Oakley Smart City Program Final Plan
2. Resolution

**City of Oakley
Smart City Strategic Plan
Summary and
Recommendations**

Concept Plan for Smart Mobility
Third Level Title



Prepared for:
City of Oakley

Prepared by:
Arya Rohani, PE

December 7, 2016

Background

The City of Oakley is interested in the application of smart city technologies to enhance service delivery efficiencies, lower operational costs and improve residents' quality of life. The City of Oakley Smart City Strategic Plan concept will define the steps necessary to achieve its objectives -- which is to provide the city with a blueprint to implement smart city services over time as funding becomes available.

A smart city, as defined by the Smart Cities Council, "gathers data from smart devices and sensors embedded in its roadways, power grids, buildings and other assets. It shares that data via a smart communications system that is typically a combination of wired and wireless. It then uses smart software to create valuable information and digitally enhanced services." The image below illustrates several smart city solutions that have been deployed in various cities throughout the world. But as has been stated previously each jurisdiction's smart city plans and priorities is unique to its vision of the future and therefore not all solutions necessarily apply to each smart city plan.



Source: Frost and Sullivan

Proposed Approach

Based on discussions held with the City's Mayor, Director of Public Works and three workshops with city department heads and the City Council, Oakley is highly desirous of transforming itself to a smart city over time. This is driven by the City's plans to optimize government services, attract economic development and offer its residents the quality of life they expect.

The key to any successful smart city program is building a solid foundation which can accommodate future technology and business model evolutions with minimal disruptions. In our discussions mobility and information technology solutions emerged as the most important smart city investments to meet Oakley's short and medium term needs.



Development and implementation of the Oakley Smart City Strategic Plan was largely predicated on the successful passage of Measure X on the November ballot. Due to its expressed interest and commitment to smart city solutions the City of Oakley was selected as an early "pilot" project which could then be accelerated and implemented once Measure X passed, which included \$62 million in funding for smart city improvements.

As Measure X was not successful It is now prudent to plan ahead with the reality of available funding sources for projects that the City of Oakley in collaboration with CCTA and other state and federal agencies can pursue. Therefore projects and priorities should be developed which can attract funding in the current environment. These include smart mobility projects along with information technology investments that can be linked to transportation improvements. In the final smart city workshop held on November 1, 2016 the following priorities were identified:

Initial Smart City Priorities:

- IT Services Assessment
- Economic Development, Community Vitality and Viability
- First Mile/Last Mile (FM/LM)
- GIS
- Transportation: Signals, TMC, Communications (fiber optics, wireless), Public Safety integration, CCTV, etc.
- Traffic Calming (proposal submitted per City Manager request)

Two strategies form the core of most smart city strategic planning efforts: Moving People and Moving Information. Several examples of these types of projects are shown below:

Moving People:

- FM/LM (including shared economy solutions such as car and bike sharing)
- Shared Autonomous Vehicles (SAV)
- Traffic calming
- Intelligent Transportation Systems (ITS)
- Traffic Management Center (TMC)
- Traffic signal interconnects
- Fiber optics and wireless communications
- CCTV's at all intersections for traffic and public safety uses



Moving Information:

- GIS
- Cloud services
- Data analytics
- Mobile apps
- Citizen services

- Asset location/tracking
- Wi-fi services
- Internet of Things

Recommendations

Based on the information developed as part of the smart city strategic planning process and various workshops and meetings, the following recommendations are offered for your consideration. Please note that in light of the Measure X situation the ability of the proposed projects/initiatives to attract funding was a key consideration. It should be further noted that the majority of outside funding opportunities require city matching funds which can vary in terms of total share of project costs.

Moving People:

Conduct an Intelligent Transportation Systems (ITS) study to evaluate the city's current traffic management policies, procedures and assets and recommend measures to enhance the city's ability to offer innovative traffic management and mobility services including FM/LM, SAV, TMC, Wireline and Wireless Communications.

Moving Information:

Conduct an assessment of City of Oakley's current IT service provider against industry best practices (i.e., cloud services, cyber security, support and software-as-a-service) to ensure Oakley receives the highest levels of services at lowest costs and build the foundation for future smart city services. This will include the city's need for a GIS system and addressing online citizen services in order to connect Oakley residents and businesses to city services such as online reservations, information, feedback, surveys, etc. This activity is consistent with the "Moving People" strategy as an effective, high performance and scalable IT network is key to any modern transportation system and funding agencies will consider such requests.

On a final note, a combination of local city funding along with regional, state and/or federal grant programs will be required to fully implement these recommendations beyond the assessment stages.

RESOLUTION NO. ___-17

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF OAKLEY APPROVING AND ADOPTING THE SMART CITY PROGRAM FOR THE CITY OF OAKLEY

WHEREAS, the City of Oakley is a progressive organization and strives to use technological advancements to improve service delivery to the community; and

WHEREAS, A Smart City gathers data from smart devices embedded in its roadways, buildings, and other assets and then uses smart software to create valuable information and digitally enhanced services; and

WHEREAS, Contra Costa Transportation Authority (CCTA) is the lead agency in the County in assisting municipalities with implementing Smart City programs and has offered consulting resources with this task; and

WHEREAS, Contra Costa Transportation Authority has hired Stantec, Inc. to work in collaboration with City staff and has prepared the Smart City Program for the City of Oakley; and

NOW, THEREFORE, BE IT RESOLVED AND ORDERED, that the City Council of the City of Oakley hereby approves and adopts the Smart City Program for the City of Oakley.

PASSED AND ADOPTED by the City Council of the City of Oakley at a meeting held on the 24th of January, 2017 by the following vote:

AYES:
NOES:
ABSENT:
ABSTENTIONS:

APPROVED:

ATTEST:

Sue Higgins, Mayor

Libby Vreonis, City Clerk

Date