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Alameda Smart City Master Plan

Proposed Recommendations

September 7, 2021

Smart City Plan Vision

Guide City on how to use new technology to improve community members' lives.

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Smart City Objectives

- Equitable internet (City Council referral)

- Government transparency and cyber security

- Transportation operations

- Safety

- Economic vitality

- Climate goals

What's been done

- Existing Conditions Assessment
  - Establishes a baseline of City's assets

- Needs Assessment and Recommendations
  - Meet with and understand needs of various project stakeholders
  - Identify gaps in City's existing assets where needs are not met
  - Recommend improvements to address unmet needs

Needs Identification Focus Groups

– AC Transit
– Alameda Municipal Power
– Alameda Unified School District
– Business Groups
– Economic Development
– IT
– Recreation & Parks
– Public Safety
– Public Works
– Transportation Planning
– Equity Priority Communities

Recommendations

What is a "Smart City?"

The National League of Cities (NLC) describes a smart city is one "**that has developed some technological infrastructure that enables it to collect, aggregate, and analyze real-time data and has made a concerted effort to use that data to improve the lives of its residents**."

Summary of Recommendations

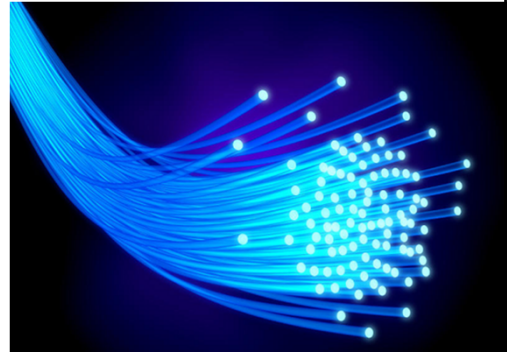| No	Recommendation	Timeframe	Approx. Cost
1	Build-Out City Communications Network	Short- to Long-Term (< 3-8+ years)	> $1 million
2	Deploy Public Wireless Networks (Wi-Fi)	Short- to Long-Term (< 3-8+ years)	$500k to $1 million
3	Deploy Citywide Emergency Vehicle Preemption	Short-Term (< 3 years)	$100k to $500k
4	Deploy Transit Signal Priority	Short-Term (< 3 years)	$100k to $500k
5	Partner with Internet Service Providers (ISPs)	Short-Term (< 3 years)	< $100k
6	Develop Dig Once and Installation Standards Policies	Short-Term (< 3 years)	< $100k
7	Implement Centralized Transportation Management	Mid-Term (3-8 years)	$ 100k to $500k
8	Interconnect Emergency Operations Center and City Facilities	Mid- to Long-Term (3-8+ years)	> $1 million
9	Implement Transportation Data Analytics	Mid- to Long-Term (3-8+ years)	$500k to $1 million
10	Deploy Traffic Monitoring Camera Network	Long-Term (8+ years)	$500k to $1 million

Recommendation 1

Build Out City Communications Network

- Foundation for Smart City initiatives
- Required to support other initiatives
- Fiber optics and wireless solutions
- Interconnects City facilities and systems
- Resilient and redundant
- Reduce dependency on AMP infrastructure
- Regional interconnectivity

Recommendation 1

Build Out City Communications Network

Slide 11

Recommendation

2

Deploy Public Wi-Fi

- Enhance internet availability, decrease digital divide
- Attract business and commerce to key business districts
- Locations are centered around public gathering places
  - Public service facilities
  - Parks
  - Commercial and business districts

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Recommendation

2

Deploy Public Wi-Fi

Recommendation

3

Deploy Citywide Emergency Vehicle Preemption

- Improve public safety
- Improve emergency response times

Recommendation

4

Deploy Transit Signal Priority

- Reduce bus delay citywide
- Enhance transportation equity and options
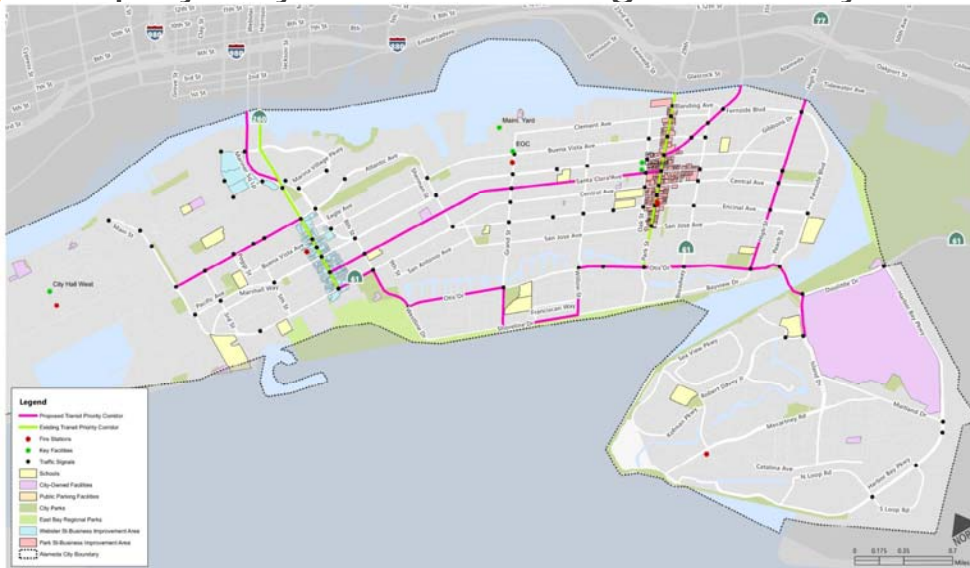- Enable AC Transit to improve service in Alameda

Recommendation 4 — Deploy Citywide Transit Signal Priority

Recommendation 5 — Partner with ISPs

- Enhance internet availability and bandwidth for all
- Lower internet costs on the island
- Mitigate predatory pricing tactics

Recommendation 6

Develop Dig Once & Installation Standards Policies

- Protect City's infrastructure
- Proactively build-out City's infrastructure needs
- Inform private developments of their responsibilities when building new developments on Alameda
- Improve joint trenching opportunities with utility companies
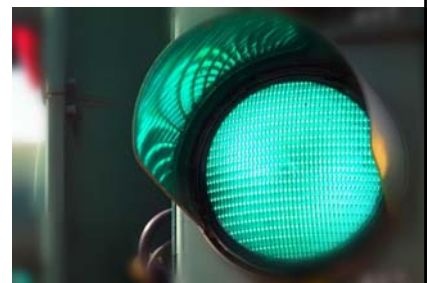
Recommendation 7

Implement Centralized Transportation Management

- Enable City's ability for real-time traffic management and incident response
- Provide a dashboard for signal performance measurement and management
- Assist with emergency response
- Reduce signal maintenance effort

Recommendation 8

Interconnect EOC & City Facilities

- Establish a central location for City services management
- Enhance IT support and maintenance across City facilities
- Reduce dependency on AMP infrastructure
- Empower cyber security implementation

Recommendation 9

Implement Transportation Data Analytics

- Enable high-resolution data collection and abiding by the city's Data Privacy policies
- Support deployment of Signal Performance Measures (SPM)
- Bring current hardware up to current standards
- Improve planning, operations and management
- Reduce delay and carbon emissions

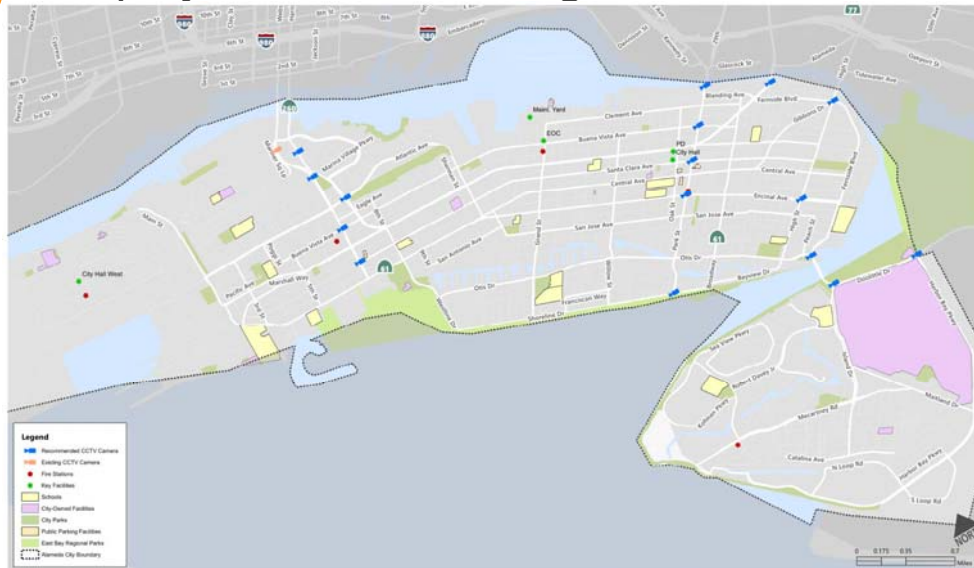## Recommendation 10 — Deploy Traffic Monitoring Camera Network

- Improve real-time traffic management and incident response
- Enhance incident detection and emergency response
- Enable bridge monitoring for emergency route planning
- Locations are focused at:
  - Entry/exit points to Alameda
  - Commercial corridors

Recommendation 10 — Deploy Traffic Monitoring Camera Network

Potential Funding Sources

- Smart City Master Plan & Broadband proposed project for $6 million to be funded from the $28.68 million in American Rescue Plan Act (ARPA)

- This will build out a fiber network to improve connectivity across a core area of Alameda

  - Provide the fiber network needed to implement the Top Ten recommendations including public Wi-Fi to business districts and equity priority community members

Next Steps

- Finalize Recommendations
- Complete Master Plan Document
  - Collate all existing conditions and needs assessment data
  - Identify all potential funding sources
  - Enhance Smart City documentation and strategy recommendations
- Come back to Council for final approval

Questions?