April 23, 2015

Mike Isom
Deputy City Manager
City of Roseville
311 Vernon Street
Roseville, CA 95678

Via Email

Subject: **Final Report for the 2014 Operational Performance Audit of the City of Roseville California's Public Works Department**

Dear Mike:

Leidos Engineering, LLC (Leidos), is pleased to submit this final report of the 2014 Operational Performance Audit (OPA) conducted for the City of Roseville's Public Works Department (PWD). The OPA represents a joint effort between PWD staff and Leidos. We wish to express our appreciation and thanks for your assistance in facilitating the audit site visits, interviews, workshops, and dashboards. Working with the City of Roseville and PWD has been a true pleasure—PWD is an organization which clearly exemplifies outstanding customer service, a can-do attitude, team work, and a commitment to making things better. As this report evidences, we found many examples of exemplary performance in each Division. We also identify potential opportunities in the spirit of continuous improvement.

We sincerely appreciate everyone's insight, candor, and enthusiastic commitment to the OPA and the work at hand. We well understand the competing demands on staff's time and acknowledge that this OPA added to these demands. In particular, we wish to commend Mike Isom, Rhon Herndon, Jason Shykowski, and Jerry Dankbar for rallying their teams in earnest support of this effort. We are confident that the PWD will benefit from this type of continuous improvement tool and hope the organization continues to advance from opportunities identified through this OPA and subsequent updates.

Once again, we appreciate the opportunity to be of service to the City of Roseville.

Very truly yours,

Leidos Engineering, LLC

Lisa M. Vedder, MPA, CIA, CCSA
Project Manager

Jennifer A. White
Senior Associate

PUBLIC WORKS DEPARTMENT
CITY OF ROSEVILLE, CALIFORNIA

2014
Operational Performance Audit

FINAL REPORT | APRIL 2015

leidos
ENGINEERING

This report has been prepared for the use of the client for the specific purposes identified in the report. The conclusions, observations and recommendations contained herein attributed to Leidos constitute the opinions of Leidos. To the extent that statements, information and opinions provided by the client or others have been used in the preparation of this report, Leidos has relied upon the same to be accurate, and for which no assurances are intended and no representations or warranties are made. Leidos makes no certification and gives no assurances except as explicitly set forth in this report.

2014 Operational Performance Audit
Public Works Department
City of Roseville, California

Table of Contents

List of Appendices

List of Tables

List of Figures

EXECUTIVE SUMMARY

This first in a series of four-year cyclical reviews of the Public Works Department uses the uniform framework and dashboard model developed in 2013 for Roseville Electric, the Utility Exploration Center and the Environmental Utilities Department.

In 2012, the City Council of Roseville, California (the City or Roseville) approved a four-year cycle of departmental audits to assist the City in continuing its successful record meeting challenges and delivering exceptional service to customers in a fiscally responsible way. Leidos Engineering, LLC (Leidos) was retained to conduct this initial operational performance audit (OPA) of the City's Public Works Department (PWD or the Department). Leidos' efforts were undertaken between May, 2014 and April, 2015.

This report presents the results of this OPA (Report) and is organized as follows. Section 1 sets forth the OPA scope. Section 2 presents the OPA approach. Section 3 provides the OPA results. OPA outcomes, including findings, appear in Section 4.

PWD designs, constructs and maintains the City's horizontal infrastructure (such as roads, bridges, bikeways) and vertical infrastructure such as buildings. PWD also oversees flood control and alternative transportation programs and services for the City.

This OPA is an initial assessment of Departmental performance to establish the groundwork for future efforts. As the first round of investigations, this OPA consisted of high-level reviews. Subsequent OPAs will build upon these foundational efforts and, as the process matures, incorporate detailed analysis of targeted areas as needed. This OPA uses the uniform framework for considering operational performance developed in 2013 and can be used to compare outcomes across programmatic area (PAs) within PWD and other City departments. The Vision and Mission Statements for this OPA appear in the boxes to the right. Section 2.2 discusses the Project Charter established for the PWD OPA.

PWD OPA VISION STATEMENT

We recognize the value of periodically reviewing what we are doing and how we are doing it by creating a continuous, structured assessment process that enables us to measure our performance in providing services and infrastructure to the community.

PWD OPA MISSION STATEMENT

To provide a transparent assessment of how PWD manages employees, finances, assets and risks, and performs as a steward of public funds and resources through conducting a third party review that:

- > defines where we are today
- > recognizes what are we doing well
- > identifies what we could be doing better, and
- > promotes taking actions today that anticipate what is coming in the future

ES.I. OPA Overview

PWD GUIDING PRINCIPLES

- Safety
- Pride
- Honesty
- Integrity
- Positive Attitude
- Teamwork
- Communication
- Creativity
- Community Trust
- Exceptional Results

OPA Criteria

This initial OPA assessed how PWD:

- operates relative to other similar agencies;
- manages major risks (procurement, finance, operating, etc.);
- performs with respect to internal controls; and
- performs as stewards of public funds and resources.

The outcomes of this OPA appear in Section 4.

Attributes Framework

The Attributes Framework (the Framework) was developed in 2013 for the initial OPAs of Roseville Electric, the Utility Exploration Center and the Environmental Utilities Department. The Framework captures the minimum characteristics required for a 360-degree assessment of the organization's effectiveness.

The Attributes Framework is intended to encompass all operational and organizational elements of performance. Using a uniform framework, PA-specific key performance indicator (KPI) scores can be translated into dashboard results (of red, yellow, or green as discussed in Section 1.3.3) for comparison on an inter- or intra-functional basis as well as inter- or intra-departmentally.

ATTRIBUTES FRAMEWORK

A

UNIFORM

SYSTEMATIC

TRANSPARENT

TRANSFERABLE

means to consider performance across disparate departments using dashboard scores.

The Attributes Framework for the OPA was modeled after the ten attributes identified in Effective Utility Management: A Primer for Water and Wastewater Utilities.[i] The eleventh Attribute, "Safety" was included at the City's request to incorporate the strong safety culture of the City and PWD. The Attributes Framework appearing in Table 1-1serves as the basis for performance evaluation for these OPAs.

Key Performance Indicators

Leidos worked with PWD to establish performance measures or KPIs by PA under each Attribute. As a starting point, Leidos assigned the City's existing Program Performance Measures (PPMs), as reported in its Annual Budget, to each Attribute. Leidos facilitated KPI Workshops for each PA to explain the Attributes Framework and the process for developing KPIs. Each PA then established a set of KPIs by Attribute. PAs were required to define KPIs for those Attributes most applicable to its area of operations. However, for purposes of these OPAs, each of the 11 Attributes should contain at least one KPI for the

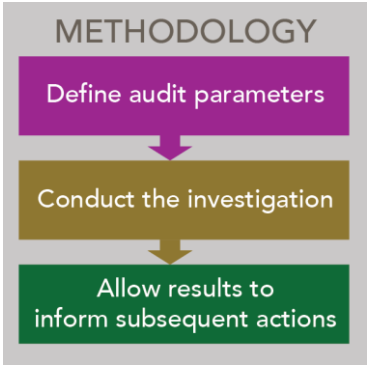
[i] *Effective Utility Management: A Primer for Water and Wastewater Utilities,* Washington, D.C., U.S. Environmental Protection Agency, 2008.

PWD as a whole. Leidos relied upon "best management practices" from the Matrix Study,[ii] KPIs established by industry trade groups, KPIs from City-commissioned studies identified in Appendix B, in combination with its technical expertise to augment and recommend changes refinements, or additions to these KPIs, as discussed herein.

Leidos combined the results of these analyses into an overall dashboard rating of green, yellow, or red by PA by attribute. The dashboard is meant to be an early warning system that provides meaningful feedback while there is time to take corrective action. A dashboard rating of green indicates that the PA is performing at or above desired levels for a given attribute. A dashboard rating of yellow indicates that the PA is not meeting its desired performance outcomes for a particular attribute. Depending on the reasons identified for the rating of yellow, immediate management attention is likely not required. A dashboard rating of red indicates that the PA is not achieving desired outcomes and management attention and/or action is likely required.

Approach

This OPA consisted of industry research, benchmarking, and interviews of key personnel at various organizational levels. The OPA was an independent review and analysis of existing data and studies. Leidos efforts included neither physical data sampling nor field audits. However, Leidos identified and reported on areas meriting closer evaluation and analysis when indicated by its operational reviews.



This OPA has three main elements: research, interviews and site visits, and benchmarking. The first element furnishes an industry point of reference. The second provides internal perspectives and first-hand observations. The third is comprised of two parts: internal—where KPIs are tracked over time and used to compare a PA's performance to that of itself; and external—where the PA's performance is evaluated against that of its peers. These elements combine to provide a 360-degree holistic view of performance, considering multiple vantage points based on a range of characteristics. For a proper assessment, all results must be considered in combination and within the context of available information. No result should be used in isolation nor should any result be used deterministically, for example to set absolute targets. The external benchmarking results are used solely to place the PA's performance in context relative to its peers. No other use is intended or appropriate.

Leidos conducted onsite interviews with key staff at various organizational levels to assess organizational structure as well as success in fulfilling departmental missions. These

[ii] *Report on the Organizational Efficiency and Effectiveness Study,* City of Roseville, California, December 15, 2011, Matrix Consulting Group. Referred to herein as the Matrix Study.

interviews were also used to identify areas requiring assessment regarding adequacy of internal controls. The onsite interviews took place over three days, June 3-5, 2014. Leidos conducted fourteen on-site interviews with twenty-six staff members. Leidos also conducted one phone interview with a staff person unable to participate in onsite interviews. Leidos toured four facilities: the Street Maintenance, Traffic Signal, and Transit Call Center facilities at the Corporate Yard, as well as the Traffic Operations Center facility located at City Hall.

Auditor's Note

An audit takes place over a defined period of time. Events and conditions reported in an audit are based on the observed conditions during that defined period of time. Actions to address issues noted in an audit may already be planned or underway. For these reasons, not all issues noted in an audit require action. Often, despite changes or corrective actions, the underlying issue may persist for several audit cycles. Items identified during this OPA that appear to lack a corrective plan or are potential areas of concern that may or may not require remedial action, are noted as Findings in Section 4.6.

Because this is the first OPA for the PWD, many KPIs lack current values and targets; in these cases, dashboard results are not available.

Finally, KPIs may change or be refined during subsequent OPAs.

Auditor Role

Leidos conducted this OPA in the role of an independent third party. All observations and finding herein are based on data provided by the City, discovered during onsite interviews and site visits, or independently gathered by Leidos as cited in this Report. This OPA was led by a Certified Internal Auditor,® and performed in accordance with industry standards such as those established by the Institute of Internal Auditors.

Leidos staff reviewed materials provided by the City. Where appropriate, Leidos conducted research and independently gathered information to verify assumptions or augment information provided by the City. Leidos exchanged emails and held meetings with key staff involved in this effort to clarify and discuss aspects of the evaluation. Leidos' professional expertise and knowledge gained through industry experience and performing similar work on behalf of other clients supplemented these materials and served as the underlying foundation for results presented herein.

ES.II. OPA Results

As part of a continual improvement process, operational audits are the Check step in a Plan-Do-Check-Act (PDCA) Cycle. By design, the OPA process consists of deciding what to investigate—defining the audit parameters—conducting the investigation, reviewing the results of the investigation, and, importantly, allowing these results to inform subsequent iterations of the process. In fact, each step of the PDCA process includes mini PDCA cycles. Course corrections and revisions are an integral part of any continuous improvement process and are crucial to ultimate process success. The process is designed to include changes and revisions over time. Such improvements and refinements are indications that the process is working not evidence that mistakes were made in prior iterations.

PDCA, Deming or Shewhart Cycle for continuous improvement

PWD OPA Summary

The Public Works Department of the City is progressive and engaged. Staff are motivated, professional, hard-working and highly committed. Staff take ownership of problems and issues and work quickly to resolve issues and do what is best for the City's customers. Staff are highly qualified to perform their respective job functions through both education and experience. Staff excel at completing large volumes of work efficiently and effectively. Staff take pride in the work they do and are good emissaries for the City. They are innovative and actively seek ways to better provide services and improve the quality of life for customers.

Leidos commends each Division of PWD for the time and industry devoted to this effort. Staff at all levels within each Division provided candid and thoughtful feedback intended to improve processes and outcomes. Staff were positive and optimistic and committed to ensuring the City remains a great place to live and work and a safe place to travel. In addition, staff are committed to sustainability and development. They evidence commitment to enhancing the quality of life in the City while seeking out efficient and economic means to maintain infrastructure and promote City initiatives. Despite the demands of their work loads, each person devoted time and energy to making this OPA a success.

PWD OPA Accolades

Over the course of the PWD OPA, Leidos found numerous examples of exemplary and even best-in-class performance by each of the PWD PAs. This section highlights those areas of performance that we feel merit acknowledgment. In particular, since PWD is often one of the first calls customers make upon identifying a question or concern, staff's willingness to take ownership of problems, see issues through to resolution and "go the extra mile" to determine appropriate routing, benefits all City departments and merits noting here.

PWD staff's willingness to own problems, see issues through to resolution and go the extra mile, benefits all City departments.

PWD Street Maintenance workers rescued a Mamma & baby ducks from a storm drain during the 2014 OPA

Leidos offers the following additional Accolades for PWD:

- Public appreciates the two or three steps further PWD takes to meet and listen to property owners impacted by projects.
- PWD proactively addresses complaints.
- PWD employees take ownership of issues/problems and resolve quickly.
- PWD employees have latitude to resolve issues (contractors and otherwise) in best interest of City.
- PWD employees have the right attitude: positive, can-do, engaged, enthusiastic, responsible.
- PWD, within Divisions, work together well and communicate well.

Roseville offers residents more than 90 miles of on-street bike lanes and 32 miles of off-street bike paths.

- SACOG (Sacramento Area Council of Governments) Awards for transit center.
- Statewide recognition from California Association of Collaborative Transit.
- Helmet program for bicyclists has saved children from serious injury.
- Attained a Bronze rating for being a Bicycle Friendly Community.[iii]

[iii] The Bicycle Friendly Community designation is awarded by the League of American Bicyclists and considers a community's record in promoting bicycling in the "five e's"—education, engineering, enforcement, encouragement, and evaluation. http://www.bikeleague.org/bfa

- Safe routes to school program encourages fewer cars and safer routes for kids while promoting healthy activities.
- Staff complete a lot of engineering projects and meet deadlines.
- Efficient roadway system that moves traffic better with resources available.
- Maintenance schedules for traffic signals have been thoroughly reviewed and compared to industry standards.
- Traffic signal failure rate very low.
- State-of-the-art Intelligent Transportation System and Traffic Control Center are best in class.
- National recognition for floodplain management—Best-in-Class performance: only community to attain CSR 1 ranking.[iv]
- Best streets around the region; clean city.
- Best-in-class practices concerning pavement management and proactive maintenance.
- PWD Street Maintenance workers went above and beyond the call of duty, rescuing a Mamma & baby ducks from a storm drain during the 2014 OPA.

ROSEVILLE: A FIRST CLASS COMMUNITY

In 2006, Roseville, earned the Nation's first-ever Class 1 designation in the National Flood Insurance Program's (NFIP) Community Rating System. Damaging floods in 1995 spurred strengthening and broadening its floodplain management program. Today the City earns points for almost all CRS creditable activities. The average premium discount for policies in the Special Flood Hazard Area (SFHA) is $832.

PWD OPA Findings

Table ES-I presents the 2014 PWD OPA Audit Outcomes based on efforts conducted in support of this study as described in this Report. PWD is a robust and well-performing department. These findings are provided to ensure its continued success and sustainability. Given the enthusiastic, can-do, engaged nature of PWD staff in each PA at every level, Leidos is confident in PWD's ability to continue to exceed customer's expectations and contribute to the enhanced quality of life in the City. Specific Findings immediately follow.

[iv] Roseville earned its Class 1 rating thanks to public officials' extensive efforts to protect their city. The community implemented numerous mitigation measures, earning it CRS points for 17 of the 18 creditable flood management activities. Some activities included educating residents about flooding, changing zoning rules and/or building regulations, and preserving floodplain open space. Specifically, Roseville initiated a 5-year, $20 million flood control improvement project that included buying out repetitive loss properties, elevating buildings at risk of flooding, and constructing berms and flood walls. http://www.fema.gov/media-library-data/1395661546460-d6859e8d080fba06b34a6f1a4d0abdba/NFIP_CRS_March+2014+508.pdf

Table ES-I 2014 PWD OPA Audit Outcomes

CRITERIA	ROSEVILLE	OPPORTUNITIES
operates relative to other similar Departments	Performing Well	**City** › Consider conducting a targeted study to assess City-wide policy & actual practices regarding filing and document storage and handling › Consider conducting a targeted study to assess City-wide policy & actual practices regarding written standard operating policies & procedures
manages major risks (procurement, finance, operating, etc.)	Performing Well in most areas Performing Satisfactorily in Communications	**PWD** › Consider conducting a targeted staffing study, in particular of the Engineering City Projects area › Consider implementing team building and leadership development activities both within and across PWD Divisions quarterly/semi-annually › Consider developing an internal communications plan › Consider developing a formal succession and workforce continuity plan › Consider instituting a formal change management process › Consider investigating IT resource adequacy, in particular in support of Engineering **City** › Consider conducting a process mapping of the plan review process that includes all Departments and Divisions involved
performs with respect to internal controls	Performing Well	**PWD** › Consider conducting control self-assessment workshops & implementing CSA surveys within PAs › Consider the adequacy of written standard operating policies and procedures in each Division and the Department
performs as stewards of public funds and resources	Performing Well	**PWD** › Consider evaluating funding levels to ensure adequacy of budget and staff › Consider incorporating transit-related KPIs in the Fleet Division dashboard established for the Central Services 2015 OPA

FINDING 1: Resource Adequacy. Leidos finds that in certain areas PWD budgets are less than most comparator cities on a per square mile and per capita basis, indicating that PWD is not funded at a similar level to comparator cities. Leidos finds that lack of resources and funding may currently be impacting staff and productivity. Over time, failure to address resource adequacy may impact infrastructure, safety, quality of life and customer satisfaction. Attention is required.

FINDING 2: Employee Training, Staffing & Succession Planning. Leidos finds that staffing, training and succession planning may not be adequate to address the current

needs of PWD given work load and retirement eligibility. Given the imminent departure of the Director, change management is also required to ensure successful transition to new leadership.

FINDING 3: Staffing Study. Leidos finds that a staffing study that considers both the adequacy of staffing levels by functional area and aligns duties, roles, responsibilities, qualifications and titles within the City's Human Resources framework is warranted. Leidos identifies this as a critical issue for study and resolution.

FINDING 4: Team Building and Communication. Leidos finds that PWD is not successfully communicating between PAs and would benefit from team building to establish a cohesive department. In addition an internal communications plan is advised. Attention is required.

ES.III. PWD Dashboard Results

Figure ES-I presents the overall dashboard for the PWD. Because this is the first OPA for PWD, many KPIs lack current values and targets. In these cases, dashboard results are not available. The KPIs appearing herein may be refined and changed based on the results of this initial OPA.

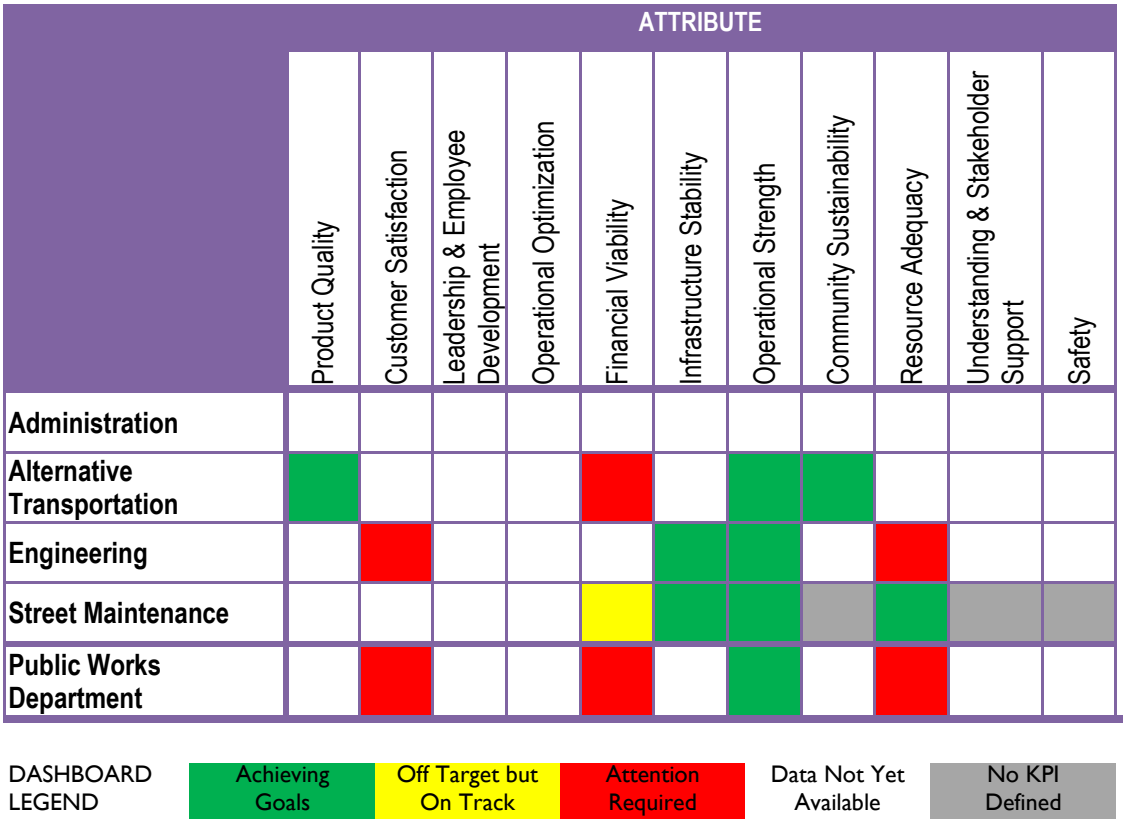


Figure ES-I: Public Works Departmental Dashboard Results

Section 1
AUDIT SCOPE

This first in a series of four-year cyclical reviews of the Public Works Department uses the uniform framework and dashboard model developed in 2013 for Roseville Electric, the Utility Exploration Center and the Environmental Utilities Department.

In 2012, the City Council of Roseville, California (the City or Roseville) approved a four-year cycle of departmental audits to assist the City in attaining its successful record meeting challenges and delivering exceptional service to customers in a fiscally responsible way. Leidos Engineering, LLC (Leidos) was retained to conduct this initial operational performance audit (OPA) of the City's Public Works Department (PWD or the Department). Leidos' efforts were undertaken between May, 2014 and April, 2015.

This report presents the results of this OPA (Report) and is organized as follows. Section 1 sets forth the OPA scope. Section 2 presents the OPA approach. Section 3 provides the OPA results. OPA outcomes, including findings, appear in Section 4.

1.1 Background

PWD designs, constructs and maintains the City's horizontal infrastructure (such as roads, bridges, bikeways) and vertical infrastructure such as buildings. PWD also oversees the City's flood control and alternative transportation programs and services.

Specifically, PWD:

- Oversees the construction of road, bridge, City building, and flood control projects;
- Maintains 438 center-line-miles of streets and 32 miles of Class 1 bike trails;
- Monitors and manages the operation of the roadway network;
- Manages the City's 2,372 acres of regulatory floodplain;
- Operates and maintains the City's flood alert system consisting of 28 remote sensor gauges and database;
- Operates and maintains the City's Intelligent Transportation System (ITS), including 167 traffic signals, nine changeable message signs, real-time bus arrival information, and Google Transit Trip Planner;
- Implements the Transportation Systems Management Ordinance by promoting alternative transportation measures with large employment centers in the city; and,

PWD GUIDING PRINCIPLES

- Safety
- Pride
- Honesty
- Integrity
- Positive Attitude
- Teamwork
- Communication
- Creativity
- Community Trust
- Exceptional Results

- Operates and maintains Roseville Transit, and provides regional services for the South Placer Transit Information Center and Transit Ambassador Program.

The Department's FY14 budget allocation is $16.1 million, including $4.7 million from the General Fund. Additional revenue sources include State Transportation Development Act funds, Solid Waste funds, Electric funds, Gas Tax funds, transit fare revenues and other federal funding sources (e.g., Federal Transit Administration (FTA) 5307 funds). The Department is comprised of 73 full time equivalents (FTEs) in four divisions. Appendix A presents the current PWD Organizational Chart.

PWD OPA VISION STATEMENT

We recognize the value of periodically reviewing what we are doing and how we are doing it by creating a continuous, structured assessment process that enables us to measure our performance in providing services and infrastructure to the community.

This OPA is an initial assessment of Departmental performance to establish the groundwork for future efforts. As the first round of investigations, this OPA consisted of high-level reviews. Subsequent OPAs will build upon these foundational efforts and, as the process matures, incorporate detailed analysis of targeted areas as needed. This OPA uses the uniform framework for considering operational performance developed in 2013 and can be used to compare outcomes across programmatic area (PAs) within PWD and other City departments. The Vision and Mission Statements for this OPA appears in the boxes to the right. Section 2.2 discusses the Project Charter for the PWD OPA.

PWD OPA MISSION STATEMENT

To provide a transparent assessment of how PWD manages employees, finances, assets and risks, and performs as a steward of public funds and resources through conducting a third party review that:

- defines where we are today
- recognizes what are we doing well
- identifies what we could be doing better, and
- promotes taking actions today that anticipate what is coming in the future

1.2 OPA Criteria

This initial OPA assessed how PWD:

- operates relative to other similar agencies;
- manages major risks (procurement, finance, operating, etc.);
- performs with respect to internal controls; and
- performs as stewards of public funds and resources.

The outcomes of this OPA appear in Section 4.

1.3 OPA Parameters

Parameters, often referred to as the audit fence-line, are used to define the scope and limit of an operational audit. The following parameters were defined for purposes of the PWD OPA:

- programmatic areas (PAs);
- the attributes framework;
- key performance indicators (KPIs); and
- comparators.

The following sections explain the four parameters established for these OPAs.

1.3.1 Programmatic Areas

At the outset, Leidos and the City[5] defined the following PAs for the PWD OPA:

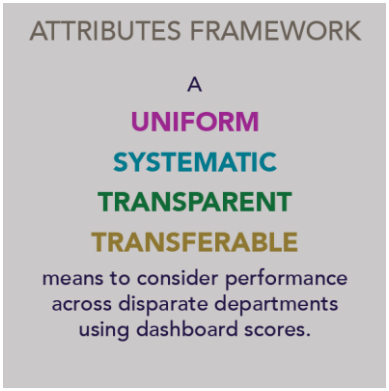
- Administration (2 FTE)
  Responsibilities:
  - Department operations
  - City Council meeting representation
  - Placer County Transportation Planning Agency (PCTPA) and South Placer Regional Transportation Authority (SPRTA) (Technical Advisory Committee & Board) meeting representation
- Alternative Transportation (10.5 FTE and 58+/- FTEs via contracted transit services)
  Responsibilities:
  - Transit operations
  - Bikeway & pedestrian planning
  - Transportation systems management
  - Communications and marketing
  - Regional Transit Information Center and Transit Ambassador Programs
- Engineering (22 FTE)
  Responsibilities:
  - City Projects
  - Traffic operations
  - Traffic studies
  - Floodplain management

[5] The term "City" is used in this context, and throughout the balance of this Report, to refer to representatives of PWD and the City Manager's office.

- Street Maintenance (39 FTE)
  Responsibilities:
  - Pavement Management System
  - Roadway pavement maintenance
  - Street sign and roadway marking maintenance
  - Storm drain system maintenance
  - Curb, gutter and sidewalk maintenance
  - Fall leaf pickup program
  - Graffiti removal
  - Street sweeping
  - Sandbags (when needed)

Appendix A provides an organizational chart for PWD. During the 2014 PWD OPA, a reorganization occurred within the Engineering Department combining Traffic Operations and Traffic Studies into one Traffic Engineering PA and separating Signal Maintenance from Traffic Operations by creating a new Traffic Signal Maintenance PA.

1.3.2 Attributes Framework



The Attributes Framework (the Framework) was developed in 2013 for the initial OPAs of Roseville Electric, the Utility Exploration Center and the Environmental Utilities Department. The Framework captures the minimum characteristics required for a 360-degree assessment of the organization's effectiveness.

The Attributes Framework is intended to encompass all operational and organizational elements of performance. Using a uniform framework, PA-specific KPI scores can be translated into dashboard results (of red, yellow, or green as discussed in Section 1.3.3) for comparison on an inter- or intra-functional basis as well as inter- or intra-departmentally.

The Attributes Framework for the OPA was modeled after the ten attributes identified in Effective Utility Management: A Primer for Water and Wastewater Utilities.6 The eleventh Attribute, "Safety" was included at the City's request to incorporate the strong safety culture of the City and PWD. The Attributes Framework appearing in Table 1-1serves as the basis for performance evaluation for these OPAs.

[6] *Effective Utility Management: A Primer for Water and Wastewater Utilities,* Washington, D.C., U.S. Environmental Protection Agency, 2008.

Table 1-1 PWD OPA Attributes Framework

ATTRIBUTE		DESCRIPTION
1	PRODUCT QUALITY	Exceeds customers' expectations by providing competitive, reliable and efficient rates while maintaining compliance with regulatory and reliability requirements and meeting customer, public health, and ecological needs.
2	CUSTOMER SATISFACTION	Provides reliable, responsive, and affordable services in line with explicit, customer-accepted service levels. Receives timely customer feedback to maintain responsiveness to customer needs and emergencies.
3	EMPLOYEE AND LEADERSHIP DEVELOPMENT	Recruits and retains a workforce that is competent, motivated, adaptive, and safe-working. Establishes a participatory, collaborative organization dedicated to continual learning and improvement. Ensures employee institutional knowledge is retained and improved upon over time. Provides a focus on and emphasizes opportunities for professional and leadership development and strives to create an integrated and well-coordinated senior leadership team.
4	OPERATIONAL OPTIMIZATION	Ensures ongoing, timely, cost-effective, reliable, and sustainable performance improvements in all facets of its operations. Minimizes resource use, loss, and impacts from day-to-day operations. Maintains awareness of information and operational technology developments to anticipate and support timely adoption of improvements.
5	FINANCIAL VIABILITY	Understands the full life-cycle cost of the Department and establishes and maintains an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues.
6	INFRASTRUCTURE STABILITY	Understands the condition of and costs associated with critical infrastructure assets. Maintains and enhances assets over the long-term at the lowest possible life-cycle cost and acceptable risk. Repair efforts are coordinated within the community to minimize disruptions.

ATTRIBUTE		DESCRIPTION
7	OPERATIONAL STRENGTH	Ensures that leadership and staff work together to anticipate and avoid problems. Proactively identifies, assesses, establishes tolerance levels for, and effectively manages a full range of business risks (including legal, regulatory, financial, environmental, safety, security, and natural disaster-related) in a proactive way.
8	COMMUNITY SUSTAINABILITY	Is explicitly cognizant of and attentive to the impacts its decisions have on current and long-term future community health and welfare. Manages operations, infrastructure, and investments to protect, restore, and enhance the natural environment; efficiently uses water and energy resources; promotes economic vitality; and engenders overall community improvement. Explicitly considers a variety of pollution prevention as part of an overall strategy to maintain and enhance ecological and community sustainability.
9	RESOURCE ADEQUACY	Ensures resource availability consistent with current and future customer needs through long-term resource supply and demand analysis, conservation, and public education.
10	STAKEHOLDER UNDERSTANDING & SUPPORT	Engenders understanding and support from oversight bodies, community interests, and regulatory bodies for service levels, operating budgets, and capital improvement programs. Actively involves stakeholders in the decisions that will affect them.
11	SAFETY	Creates a culture wherein safety is integral to every aspect of operations. Ensures that all employees are adequately trained to mitigate and manage the typical hazards associated with their sphere of responsibility and operating environment. Actively promotes safety and applies the resources necessary to establish a working environment in which hazards are mitigated and managed to a reasonable degree.

1.3.3 Key Performance Indicators

Leidos worked with PWD to establish performance measures or KPIs by PA under each Attribute. As a starting point, Leidos assigned the City's existing Program Performance Measures (PPMs), as reported in its Annual Budget, to each Attribute. Leidos facilitated KPI Workshops for each PA to explain the Attributes Framework and the process for developing KPIs. Each PA then established a set of KPIs by Attribute. PAs were required to define KPIs for those Attributes most applicable to its area of operations. However, for purposes of these OPAs, each of the 11 Attributes should contain at least one KPI for the PWD as a whole. Leidos relied upon "best management practices" from the Matrix Study,[7] KPIs established by industry trade groups, KPIs from City-commissioned studies identified in Appendix B, in combination with its technical expertise to augment and recommend changes refinements, or additions to these KPIs, as discussed herein.

Leidos combined the results of these analyses into an overall dashboard rating of green, yellow, or red by PA by attribute. The dashboard is meant to be an early warning system that provides meaningful feedback while there is time to take corrective action. A dashboard rating of green indicates that the PA is performing at or above desired levels for a given attribute. A dashboard rating of yellow indicates that the PA is not meeting its desired performance outcomes for a particular attribute. Depending on the reasons identified for the rating of yellow, immediate management attention is likely not required. A dashboard rating of red indicates that the PA is not achieving desired outcomes and management attention and/or action is likely required.

1.3.4 Comparators

Leidos worked closely with the City to identify comparators for external benchmarking of the PWD PAs. Comparators were selected based on multiple criteria including population served, location, funding structure, services offered, infrastructure assets, and regulatory requirements. In addition, Leidos researched industry best practices and other studies for public works performance data and methodologies. Leidos also consulted our internal subject matter experts.

[7] *Report on the Organizational Efficiency and Effectiveness Study,* City of Roseville, California, December 15, 2011, Matrix Consulting Group. Referred to herein as the Matrix Study.

1.4 Approach

This OPA consisted of industry research, benchmarking, and interviews of key personnel at various organizational levels. The OPA was an independent review and analysis of existing data and studies. Leidos efforts included neither physical data sampling nor field audits. However, Leidos identified and reported on areas meriting closer evaluation and analysis when indicated by its operational reviews.

1.5 Auditor Role

Leidos conducted this OPA in the role of an independent third party. All observations and finding herein are based on data provided by the City, discovered during onsite interviews and site visits, or independently gathered by Leidos as cited in this Report. This OPA was led by a Certified Internal Auditor,® and performed in accordance with industry standards such as those established by the Institute of Internal Auditors.

Leidos staff reviewed materials provided by the City. Where appropriate, Leidos conducted research and independently gathered information to verify assumptions or augment information provided by the City. Leidos exchanged emails and held meetings with key staff involved in this effort to clarify and discuss aspects of the evaluation. Leidos' professional expertise and knowledge gained through industry experience and performing similar work on behalf of other clients supplemented these materials and served as the underlying foundation for results presented herein.

1.6 Limitations

Leidos' role in this process was solely that of third-party independent auditor. Leidos reviewed data provided by the City solely for the purpose of evaluating relative performance. The PWD OPA was an independent, high-level review and analysis of existing data and studies. Leidos' efforts included neither physical data sampling nor field audits. Although such efforts may have included assessing the reasonableness of various operational aspects toward that end, Leidos did not perform in the role of consulting engineer.

The results presented in this Report are predicated on information provided and representations made by the City. Leidos made reasonable efforts, given the nature of this engagement, to obtain pertinent information relating to the scope of this effort. Leidos interviewed key staff involved in operational areas and toured several sites. However, Leidos has no means to determine the extent to which material facts concerning actual operations have been disclosed nor is this a forensic audit. All findings in this Report are

based solely on Leidos' review of materials furnished by the City, discovered through interviews or site visits, or publicly-available information as cited. Review of additional materials or disclosure of material facts could change the findings stated in this Report.

This Report documents these efforts for the sole purpose of demonstrating compliance with the contract between Leidos and the City; no other use is expressed or implied. Nothing in this report can be considered a legal opinion.

Auditor's Note

An audit takes place over a defined period of time. Events and conditions reported in an audit are based on the observed conditions during that defined period of time. Actions to address issues noted in an audit may already be planned or underway. For these reasons, not all issues noted in an audit require action. Often, despite changes or corrective actions, the underlying issue may persist for several audit cycles. Items identified during this OPA that appear to lack a corrective plan or are potential areas of concern that may or may not require remedial action, are noted as Findings in Section 4.6.

Because this is the first OPA for the PWD, many KPIs lack current values and targets; in these cases, dashboard results are not available.

Finally, KPIs may change or be refined during subsequent OPAs.

Section 2
AUDIT APPROACH

This OPA consisted of industry research, benchmarking, and interviews of key personnel at various organizational levels. The OPA was an independent review and analysis of existing data and studies as documented in Appendix B. Leidos efforts included neither physical data sampling nor field audits. However, Leidos identified and reported on areas meriting closer evaluation and analysis when indicated by its operational reviews.

2.1 Process Description

This OPA was conducted between May, 2014 and April, 2015 under the direction and supervision of a Certified Internal Auditor.® Leidos reviewed existing strategic planning documents, financials, information defining organizational structure and governance, human resource profiles, agency policies and procedures, and descriptions of current City service offerings. Leidos subsequently researched studies, best practices guides, and benchmarking analyses conducted by industry groups.
Leidos evaluated the performance of PWD against:

1. the baseline conditions identified in the Matrix Study;
2. the comparators and industry best in class performers; and
3. industry standards & trends.

The results of each PA evaluation were then rolled up into a departmental assessment. Given that this is the initial OPA conducted pursuant to the City's initiative, many defined KPIs lack data; in these cases, such analyses will occur in subsequent cycles. Finally, the departmental assessment results were rolled up into an assessment of the level to which departmental outcomes contribute to organizational success.
The major activities conducted, in support of this OPA, are discussed in the following sections.

2.2 Project Charter

During the kickoff meeting, Leidos worked closely with the City to establish a Project Charter for this OPA. The Project Charter sets forth project goals, guiding principles, mission statement, scope, success measurements, schedule, and expected deliverables. The Charter served as a project roadmap for this OPA and appears in Appendix C.

2.3 Onsite Interviews

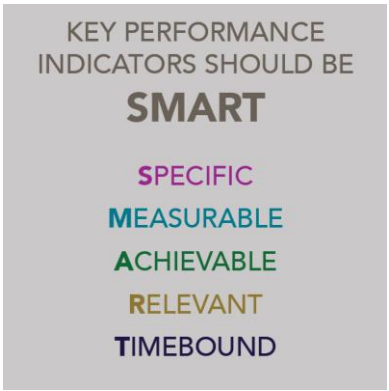
Leidos conducted onsite interviews with key staff at various organizational levels to assess organizational structure as well as success in fulfilling departmental missions. These interviews were also used to identify areas requiring assessment regarding adequacy of internal controls. The onsite interviews took place over three days, June 3-5, 2014. Leidos conducted fourteen on-site interviews with twenty-six staff members. Leidos also conducted one phone interview with a staff person unable to participate in onsite interviews. Interviews were augmented by follow-up calls or emails to clarify and/or solicit additional information. Appendix D details interview participants.

Leidos toured four facilities: the Street Maintenance, Traffic Signal, and Transit Call Center facilities at the Corporate Yard, as well as the Traffic Operations Center (TOC) facility located at City Hall.

2.4 KPI Workshops

Leidos conducted a series of KPI Workshops via webinar with PWD staff and Leidos Subject Matter Experts (SMEs). The objectives for these workshops were to:

- Introduce the Attributes Framework
- Discuss Comparators
- Discuss KPIs
  - Current PA PPMs
  - Best Practices KPIs
  - Optimal KPIs for PWD
- Clarify Existing Data and Identify Data Needs



Each workshop commenced with a brief project overview, an explanation of the Attributes Framework, and a discussion of potential comparators. Participants were instructed on the Attributes Framework using current PPMs. Upon workshop completion, participants were given templates to use for defining KPIs for their PA.

A total of ten KPI workshops were held between July 8, 2014 and July 17, 2014. Appendix E details workshop participants by PA.

2.5 Industry Research

Leidos researched studies, best practices guides, and benchmarking analyses conducted by industry groups including the American Public Works Association, Transportation Research Board (TRB), American Association of State Highway and Transportation

Officials (AASHTO), FTA), and Federal Highway Administration (FHWA) among others to update industry best practices, developments, and trends.

The City expressed interest in best practices for internal controls and methods to ensure and measure public fund stewardship performance. Leidos' research included industry best practices related to internal controls.

2.6 Definition of Comparators

Leidos worked closely with the City to identify comparators for the PAs of PWD. Comparators were selected based on multiple criteria including population served, location, funding structure, services offered, infrastructure assets, and regulatory requirements. Table 2-1 summarizes the initial list of comparators by PWD division and the final list of comparators. The Administration division did not initially have separately-defined comparators.

Table 2-1 PWD OPA Comparators by Division

Initial Comparators						
Administration	Alternative Transportation	Engineering				Street Maintenance
		City Projects	Traffic Signal Maintenance	Traffic Engineering	Floodplain	
	Elk Grove Fairfield Folsom Modesto Santa Clarita Santa Maria Santa Rosa	Citrus Heights Elk Grove Folsom Livermore Rancho Cordova Redding Rocklin Sacramento Sacramento County Santa Clarita (Valencia) Vacaville Walnut Creek West Sacramento	Anaheim Citrus Heights Concord Dublin Folsom Fresno Livermore Pleasanton Reno Riverside Sacramento Sacramento County San Jose Santa Clara	Anaheim Citrus Heights Dublin Elk Grove Folsom Fresno Irvine Livermore Pleasanton Redding Reno Riverside Sacramento Sacramento County Stockton	Charleston County, SC Fort Collins, CO King County, WA Louisville – Jefferson County, KY Maricopa County, AZ Pierce County, WA Sacramento County, CA Skagit County, WA Snohomish County, WA Thurston County, WA Tulsa, OK	Fairfield Lodi Redding Sacramento County Vacaville Yolo County

Final Comparators						
Administration	Alternative Transportation	Engineering				Street Maintenance
		City Projects	Traffic Signal Maintenance	Traffic Engineering	Floodplain	
Concord Elk Grove Fairfield Folsom Livermore Lodi Modesto Redding Santa Clara Santa Maria Santa Rosa Vacaville Walnut Creek	Elk Grove Fairfield Folsom Lodi Modesto Santa Clarita Santa Maria Santa Rosa	Concord Fairfield Folsom Irvine Riverside Santa Clara Santa Maria Santa Rosa Vacaville Walnut Creek	Anaheim Elk Grove Fairfield Folsom Irvine Redding Santa Maria	Concord Fairfield Folsom Irvine Vacaville	Fairfield Irvine Redding Skagit County, WA Snohomish County, WA Thurston County, WA	Elk Grove Folsom Lodi Redding Santa Rosa Vacaville Walnut Creek

2.7 Benchmarking

Leidos conducted high-level benchmarking analyses using the identified comparators for the PAs of PWD. Leidos collaborated with the City to develop a list of potential KPIs to benchmark across the eleven Attributes (refer to Section 1.3.2). Leidos researched best practices information and KPI data for administration, engineering, street maintenance, and alternative transportation.

Separate benchmarking comparisons are provided for Alternative Transportation, Street Maintenance and the City Projects, Traffic Signal Maintenance, Traffic Engineering, and Flood Plain Management functions under the Engineering Division. Comparators were selected based on availability of data and similarity to the City in terms of population, geographic size, and location; with the exception of those for Floodplain Management, comparators are located in California. Leidos did include PWD-requested comparators as part of the effort; but not all comparators suggested could be used due to lack of publicly available data.

All benchmarking data were obtained from publicly available sources. Benchmarking information for the comparators was obtained from the respective city's Comprehensive Annual Financial Report (CAFR) for fiscal year 2013, the city's annual report for fiscal year 2013, as available, and from the website of the city; and other publicly available sources, such as the Community Rating System website, the 2012 National Transit Database (NTD), the Pavement Conditions of Bay Area Jurisdictions Report, and similar types of information. The benchmarking data file has been provided to the City and provides all data gathered and cites sources for every data item.

2.8 Report Provisions

Leidos' role in this process was solely that of third-party independent auditor. Leidos did not perform in the role of consulting engineer. All findings are based solely on Leidos' review of materials furnished by the City as identified, discovered during onsite interviews and site visits, or publicly-available information as cited. Review of additional materials or disclosure of material facts could change the findings stated in this report. This OPA was an independent high-level review and analysis of existing data and studies. Leidos' efforts included neither physical data sampling nor field audits. Although such efforts may have included assessing the reasonableness of various operational aspects toward that end, Leidos did not perform in the role of consulting engineer.

The sole purpose of this Report is to comply with the scope of services in the executed contract between Leidos and the City; no other use is expressed or implied. Nothing in this Report is a legal opinion.

Section 3
AUDIT RESULTS

Auditor's Note

An audit takes place over a defined period of time. Events and conditions reported in an audit are based on the observations made during that defined period of time. Actions intended to address issues noted in an audit may already be planned or underway. For these reasons, not all issues noted in an audit require action. Often, despite implementation of changes or corrective actions, the underlying issue may persist for several audit cycles—as with certain issues identified in this Report. Items identified during these OPAs that appear to lack a corrective plan or are being identified for the first time as potential areas of concern appear under the Sections 4.4 and 4.5 of this Report and may or may not require remedial action.

3.1 Overview

The following sections present the results of the PWD OPA. For each PWD PA, the Matrix Study results for the PA are presented, followed by benchmarking results and, finally, the PA's dashboard results. These individual results are then rolled up into department-wide results that appear in Section 3.6.

PA OPA results are based on review of existing studies, industry research, Leidos experience, and onsite interviews. Overall interview results have been consolidated for all PAs and are presented in Section 3.7 below.

All benchmarking data were obtained from publicly available sources. Benchmarking information for the comparators was obtained from the respective city's Comprehensive Annual Financial Report (CAFR) for fiscal year 2013, the city's annual report for fiscal year 2013, as available, and from the website of the city or utility. Alternative transit data were obtained from the 2012 National Transit Database (NTD). Dollar figures have been rounded to the nearest whole dollar.

Because this is the first OPA for PWD, many KPIs lack current values and targets. In these cases, dashboard results are not available. The KPIs appearing herein may be refined and changed based on the results of this initial OPA.

3.2 Administration

The PWD Administration PA oversees Departmental operations and represents the Department at City Council, PCTPA and SPRTA meetings. This section presents the Matrix Study results for the Administration PA, followed by benchmarking results and, finally, dashboard results.

3.2.1 Administration Matrix Study Results

The Matrix Study results for PWD Administration appear in Appendix F, Section F.I.

3.2.2 Administration Benchmarking Results

This section presents benchmarking results for PWD Administration starting with a list of external comparators, followed by detailed results in various categories and concluding with an overall summary table.

Thirteen comparator cities were used to benchmark the Administration PA, all located within California, as shown in Table 3-1.

Table 3-1 Administration Comparators

PWD Administration Comparators
Concord
Elk Grove
Fairfield
Folsom
Livermore
Lodi
Modesto
Redding
Santa Clara
Santa Maria
Santa Rosa
Vacaville
Walnut Creek

3.2.2.1 Administration Detailed Benchmarking Results

Administration Geographic Footprint and Population Comparison

The first chart presented, Figure 3-1, illustrates the relative size, in terms of population and geographic footprint, for Roseville and the various comparators. In terms of geographic size, Roseville at approximately 42 square miles is larger than the comparator average of 31 square miles.[8] It is the third largest city in terms of area of the group, behind Redding (at approximately 60 square miles) and Elk Grove, which is nearly equal to Roseville at just over 42 square miles. Roseville's population of approximately 122,060 is approximately 8 percent above the comparator average of 112,817. It is the fifth largest city of the group. Modesto is the largest of the group with a population of 204,933; and Lodi is the smallest with a population of 63,338.

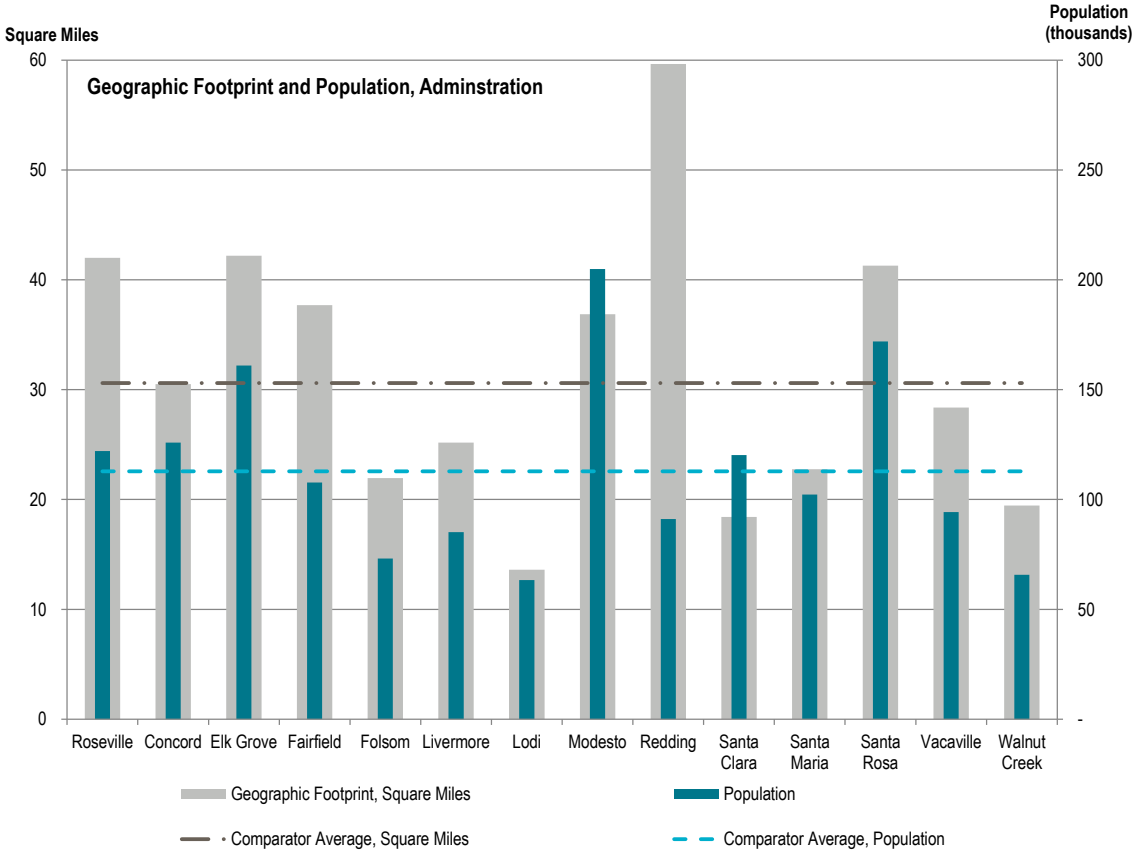


Figure 3-1: Geographic Footprint and Population, Administration Comparators

[8] The comparator average is a simple average of all of the comparators, not including Roseville.

Administration Budget Comparison (per Square Mile, FTE, & Capita)

Figure 3-2 depicts the PWD budget expenditures for Roseville and the comparators in terms of expenditures per square mile, per FTE, and per capita. These figures include transit/transportation expenditures. Under all three measures, Roseville's expenditures are less than the comparator average. Roseville's total PWD budget expenditure per square mile is $369,076, equaling only 64 percent of the comparator average of $574,573 per square mile. Roseville's expenditure per FTE of $180,582 was also less than the comparator average of $203,737, a difference of 11 percent. Roseville's expenditure of $127 per capita was also less than the comparator average of $145 per capita, a difference of 13 percent.

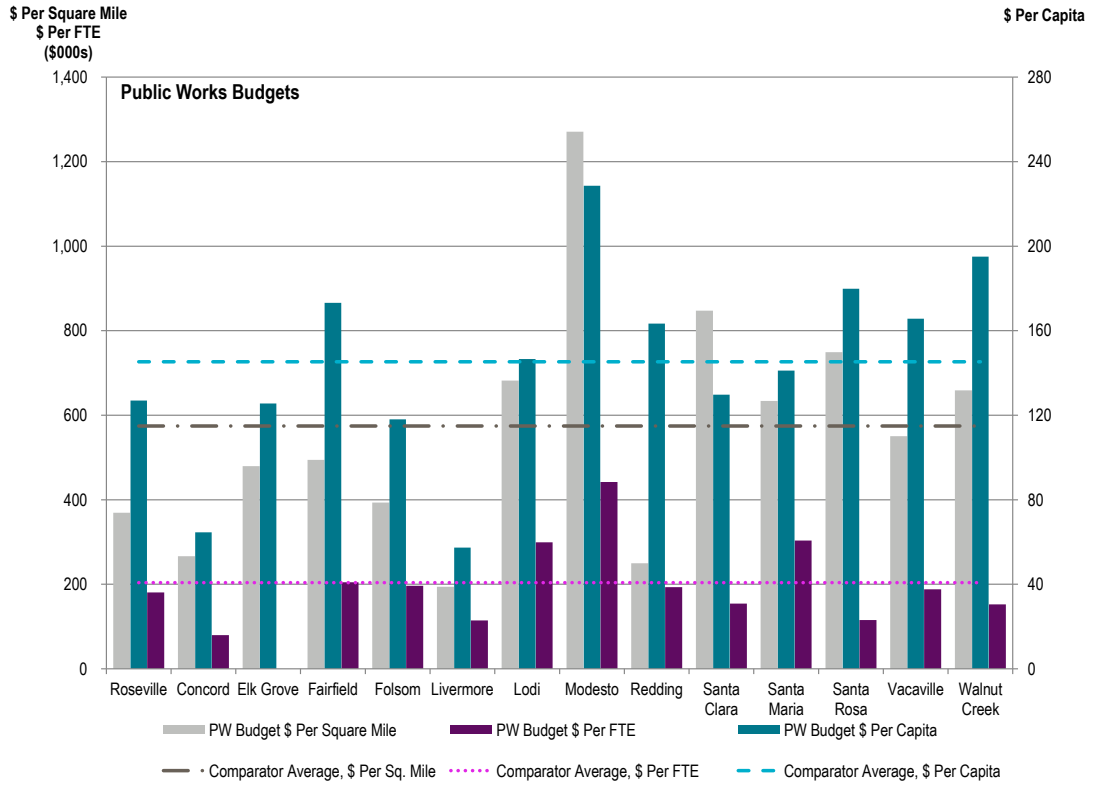


Figure 3-2: PWD Budget Expenditures, Administration Comparators[9]

[9] Please note data for PWD Budget Expenditures per FTE was not presented for Elk Grove, as the city contracts for PWD services and only maintains 13 FTE within this City Department.

Administration Non-Transit Budget Comparison (per Square Mile & Capita)

Figure 3-3 depicts the non-transit related PWD budget expenditures for Roseville and the comparators in terms of dollars per square mile and per capita. Again, Roseville's expenditures are less than the comparator average. Roseville's total non-transit PWD expenditure per square mile is $228,455, equaling only 58 percent of the comparator average of $395,587 per square mile. Roseville's non-transit PWD expenditure of $79 per capita was also less than the comparator average of $98 per capita, or 20 percent less.

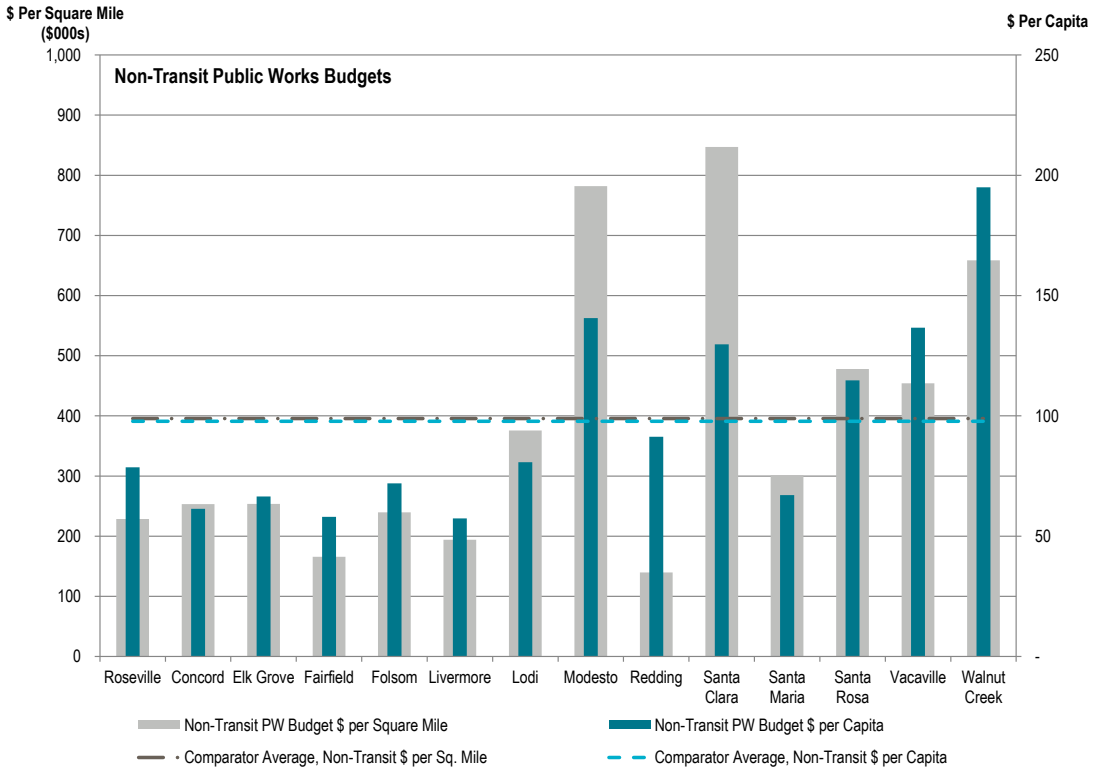


Figure 3-3: Non-Transit PWD Budget Expenditures, Administration Comparators

3.2.2.3 Administration Summary of Benchmarking Results

Table 3-2 summarizes external benchmarking results for the Administration PA.

Table 3-2 Summary of PWD Administration Benchmarking Results

Metric	Unit	Roseville	Comparator Average	Result
Geographic Footprint	Square Miles	42	31	N/A
Population	Persons	122,060	112,817	N/A
PWD Budget	$/Square Mile	369,076	574,573	36% Lower
	$/FTE	180,582	203,737	11% Lower
	$/Capita	127	145	13% Lower
Non-Transit Budget	$/Square Mile	228,455	395,587	42% Lower
	$/Capita	79	98	20% Lower

3.2.3 Administration Dashboard Results

Because this is the first OPA for PWD, many KPIs lack current values and targets. In these cases, dashboard results are not available. The KPIs appearing herein may be refined and changed based on the results of this initial OPA.

3.2.3.1 Administration Detailed Dashboard Results

Table 3-3 presents the detailed Administration Dashboard.

Table 3-3 Administration Dashboard Results

Administration						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Product Quality	Functional Area Costs Versus Budget Variance	+/-10%	TBD		25%	
	Percent Of Functional Area KPI Targets Achieved	TBD	TBD		25%	
	Percent Annual Goals And Objectives Met (including Council and City Manager Directives)	TBD	TBD		25%	
	% Of Required Updates To PWD Admin Procedure Manual & Code Book Implemented	TBD	TBD		25%	

Administration						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Customer Satisfaction	Employee Survey Satisfaction Results	TBD	TBD		14%	
	% Inquiries From The Council And The Public Responded To Within One Week	TBD	TBD		14%	
	Average Days Before/After Evaluation Due Date Of Actual Evaluation Completion	TBD	TBD		14%	
	Customer Survey Satisfaction Results	TBD	TBD		14%	
	Length Of Time To Post Updates On Website – Internet	TBD	TBD		14%	
	Length Of Time To Post Updates On Website – Intranet	TBD	TBD		14%	
	% Annual Hours Devoted To Resolving Customer Issues	TBD	TBD		14%	
Leadership & Employee Development	Training And Development Goals PWD Administration (Annual Hours Per FTE)	TBD	TBD		17%	
	Training And Development Goals Alternative Transportation (Annual Hours Per FTE)	TBD	TBD		17%	
	Training And Development Goals Engineering (Annual Hours Per FTE)	TBD	TBD		17%	
	Training And Development Goals Street Maintenance (Annual Hours Per FTE)	TBD	TBD		17%	
	% [Monthly/Bi-Weekly/Weekly] Departmental Staff Meetings Held	TBD	TBD		17%	
	Average Days Before/After Evaluation Due Date Of Actual Evaluation Completion (Yearly Average Per Supervisor For All PWD)	TBD	TBD		17%	
Operational Optimization	Budget Per FTE	TBD	180,582		25%	
	FTE Per Square Mile	TBD	2.0		25%	
	FTE Per 1,000 Capita	TBD	0.70		25%	
	Grant Funding As % Of Budget	TBD	TBD		25%	
Financial Viability	% PCTPA And SPRTA Meetings Attended Regarding Regional Projects And Roseville Funding	TBD	TBD		20%	
	Budget Per FTE	TBD	180,582		20%	
	Budget Per Square Mile	TBD	396,076		20%	
	Budget Per Capita	TBD	127		20%	
	Percent Hwy 65 JPA Meetings Attended	TBD	TBD		20%	
Infrastructure Stability	Average Annual Preventative Maintenance Budget Per 1000$ Infrastructure	TBD	TBD		20%	
	Hours Of Annual Preventative Maintenance Per FTE	TBD	TBD		20%	
	% Of Streets Rated Above X	TBD	TBD		20%	
	% Of Streets Brought Up To X Rating	TBD	TBD		20%	
	% Of Up-To-Date Corridors	TBD	TBD		20%	

Administration						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Operational Strength	% Council Communications Reviewed/Approved	TBD	TBD		25%	
	% Council Meetings Attended w/PWD Items	TBD	TBD		25%	
	Average Annual Training/Seminar Budget Per FTE	TBD	TBD		25%	
	Hours/% Of City Committee Meetings Attended	TBD	TBD		25%	
Community Sustainability	# Of Lights Converted To LED/Year	TBD	TBD		20%	
	Air Quality Improvement -- Emissions Reduction Due To Alternative Transportation (Bikeways, Buses, Rideshare Etc)	TBD	TBD		20%	
	Air Quality Improvement -- Emissions Reduction Due To Optimized Traffic Flows	TBD	TBD		20%	
	Amount Of Budgeted Buyouts For Floodplain Program Achieved	TBD	TBD		20%	
	Insurance Premium Savings Related To CRS Rating	TBD	TBD		20%	
Resource Adequacy	Succession Planning Progress Milestones	TBD	TBD		33%	
	Turnover Rate	TBD	TBD		33%	
	Critical Staffing Pipeline Target	TBD	TBD		33%	
Understanding & Stakeholder Support	Give Annual PWD Presentation At Leadership Roseville	TBD	TBD		25%	
	% Outreach Events Held	TBD	TBD		25%	
	Hours Of Pre Event Outreach Per Event	TBD	TBD		25%	
	Annual Outreach Hours	TBD	TBD		25%	
Safety	Accident Free Days	TBD	TBD		25%	
	Workman's Comp Claims	TBD	TBD		25%	
	Injury Severity Index	TBD	TBD		25%	
	Lost Time Due To Injury	TBD	TBD		25%	

3.2.3.2 Administration Overall Dashboard Results

Figure 3-4 presents the overall dashboard for the Administration Division of PWD. Because this is the first OPA for PWD, many KPIs lack current values and targets. In these cases, dashboard results are not available. The KPIs appearing herein may be refined and changed based on the results of this initial OPA.

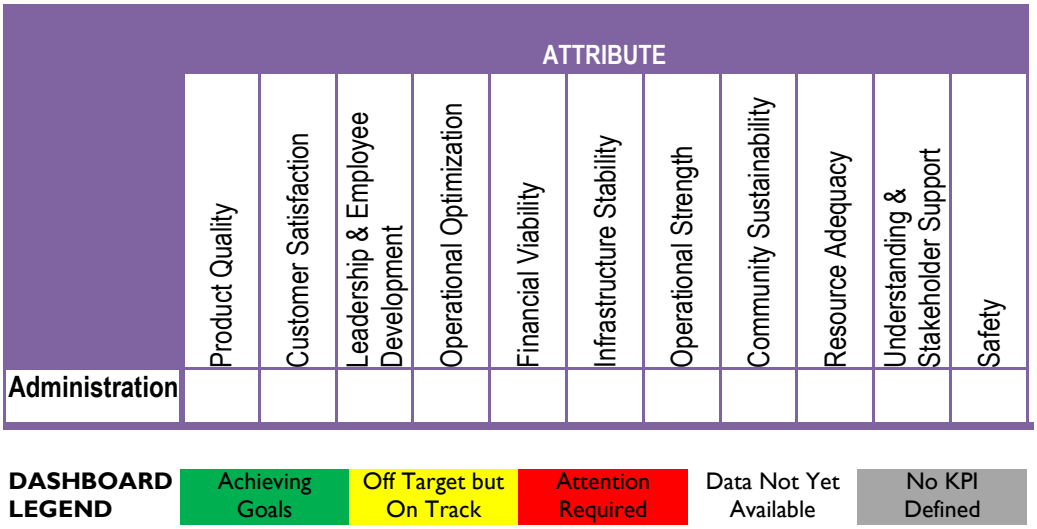


Figure 3-4: Administration—PA Overall Dashboard Results

3.2.4 Administration Conclusions and Recommendations

Because this is the initial OPA for PWD and sufficient KPI data are lacking, it is difficult to assess which attributes require prioritization and immediate attention, if any. Leidos makes the following observations and recommendations, based on the benchmarking data and interviews conducted. Leidos' Conclusions and Recommendations fall within four areas: funding, resource adequacy, and staffing/succession planning; process mapping of plan review procedure; communication; and team building.

Funding, Resource Adequacy, and Staffing/Succession Planning

Overall, PWD budgets are less than most comparator cities on a per square mile and per capita basis, which indicates that PWD is not funded at a similar level to comparator cities. This level of funding may be warranted given the characteristics of the City, its population, and the level of services provided, among other things. Funding decisions depend directly on the financial/fiscal goals of the City which experienced cutbacks following the economic disturbances of 2008. However, the downturn is abating and the City is currently experiencing increased development and growth. PWD plays an important role supporting growth, development, and, importantly, maintenance of City assets that are crucial to achieving City Council goals. Supporting PWD with adequate resources, including staff,

aligns with and makes these objectives achievable and create opportunities for even greater growth.

Leidos recommends a detailed study be conducted to assess the current level of staffing for PWD, particularly for the Engineering group. Lack of adequate staffing and resources was a clear theme during the interview process for all PAs, as discussed in more detail in Section 3.7. Inadequate resources to accomplish required functions, a stressful workload and work quality suffering due to lack of adequate time and resources were recurrent concerns voiced in interviews. The Matrix report identified span of control issues in several areas of PWD. Given the structure of PWD, Leidos' believes that this type of resource adequacy issue would be best addressed at the highest level of leadership/top management. We therefore suggest that the Administrative function take the lead on assessing the adequacy of staffing/resources.

Succession planning and career development are also serious concerns to staff members and are issues best addressed by Departmental leadership. Staff in general indicated lack of clarity concerning succession planning and the process for selection for senior positions (career development and progression). A lack of formalized knowledge transfer (written documentation for processes, procedures) and training and limited opportunities for professional development and cross-training were also recurrent themes. Leidos recommends that the Administration PA develop a plan for addressing career development within PWD. A staffing study may help to establish the guidelines for advancement, position requirements, performance and responsibilities, etc. Over the longer-term, KPIs to address succession planning, career development, and mentoring should be established for the Administration PA and incorporated into the dashboard.

Process Mapping of Plan Review Procedure

During the course of the PWD OPA, it became apparent that coordination of plan reviews within PWD as well as with other City Departments is an area that may benefit from additional study and/or action. Since this issue crosses divisions within PWD, and involves other City departments, we have included it under the Administration PA.

In the period since Development Services was moved from PWD, the City has undergone many changes. An efficient and effective plan review process is required to support the City's growth objectives while at the same time achieving quality of life and other societal goals. Given the overlap between divisions and among departments, clarification and definition of roles and responsibilities for coordination of plan review appears warranted. Although a plan review routing process currently exists, based on the results of this OPA, the extent to which the process is understood, appropriately implemented and defined is unclear. For example, although it appears that current protocols/parameters ensure each area has an opportunity to review and provide input on plans, it is not clear that stakeholders are consulted when key provisions are revised or eliminated during the subsequent review and negotiation process. Recent reorganizations may have contributed to process issues or lack of coordination. Staffing limitations may also impact this functional area. As part of this OPA, KPIs have been included in the divisional dashboards to begin tracking certain activities in PWD.

Leidos suggests that a process mapping effort be conducted of the City's plan review process (since this process involves several City departments including, among others, PWD, Development, and Environmental Utilities) with the goal of streamlining the process for the applicant while ensuring that (1) each review area is afforded an opportunity to have meaningful input, and (2) that input is reflected appropriately in final project and permit requirements. In addition, clarification concerning decision authority for revising final plan requirements appears necessary. The process mapping effort should help to codify and clarify the process for PWD staff's review and input regarding development plans, transportation-related/TSM plans, maintenance activities, and other issues which would benefit from the communication and collaboration between PWD staff and other City Departments.

Communication

Communication—content, frequency, method, tone, and overall effectiveness—is another important departmental function that results directly from choices made by the leadership of the organization. Based on Leidos' efforts, communication within each PWD PA appears fairly good, however, communication between PWD PAs and with other City Departments may not be as effective, as discussed in more detail in Section 3.7. Leidos recommends that the Administrative leadership develop a communications plan with the assistance of the Marketing & Communications Analyst within PWD and other City communications resources, as appropriate. A communications plan should cover internal as well as external-facing communications.

Team Building

Building a sense of team is another area that could most effectively be addressed by the Administration PA. As discussed more thoroughly in Section 3.7.3, Staff reported a desire for more team building activities to create cohesion and eliminate the sense of separation between the Divisions. The physical separation of certain PWD divisions contributes to but is not the sole cause of this problem. Addressing the frequently-mentioned issue of inadequate, unfitting job titles may also help to engender a greater sense of job satisfaction.

3.3 Alternative Transportation

The Alternative Transportation division oversees transit operations, bikeway & pedestrian planning, transportation systems management, Communications, the Regional Transit Information Center and Transit Ambassador Programs. MV Transportation is the contractor that operates Roseville Transit, under the management and oversight of Roseville's Alternative Transportation Division. Roseville Transit offers local fixed route services and Dial-A-Ride (DAR) within the City of Roseville, as well as commuter transit service to downtown Sacramento. Roseville Transit is advised by the City of Roseville Transportation Commission. MV Transportation also operates the City's Transportation Call Center. This section presents the Matrix Study results for the Alternative Transportation PA, followed by benchmarking results and, finally, dashboard results.

3.3.1 Alternative Transportation Matrix Study Results

The Matrix Study results for PWD Alternative Transportation appear in Appendix F, Section F.II.

3.3.2 Alternative Transportation Benchmarking Results

This section presents benchmarking results for PWD Alternative Transportation starting with a comparators list, followed by detailed results and concluding with an overall summary table.

For the Alternative Transportation Division, Roseville was compared to the eight California municipalities/cities listed in Table 3-4.

Table 3-4: Alternative Transportation Comparators

Alternative Transportation Comparators	
Elk Grove	Modesto
Fairfield	Santa Clarita
Folsom	Santa Maria
Lodi	Santa Rosa

3.3.2.1 Alternative Transportation Detailed Benchmarking Results

Alternative Transportation Geographic Footprint and Population Comparison

Figure 3-5 illustrates the relative size in terms of population and geographic scope of the various comparators for the Alternative Transportation PA. In terms of geographic size, Roseville at 42 square miles is higher than the comparator average of approximately 34 square miles. In terms of population, Roseville is approximately 8 percent below the comparator average of 132,982.

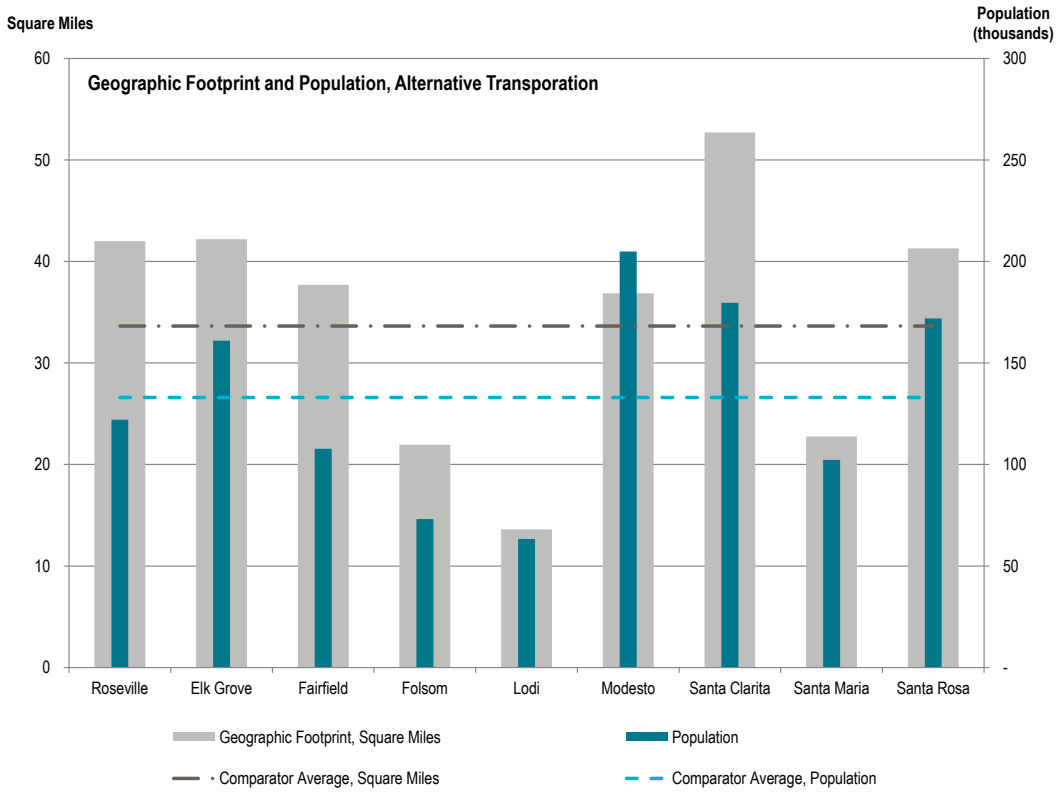


Figure 3-5: Geographic Footprint and Population, Alternative Transportation Comparators

Alternative Transportation Trips Comparison (per Square Mile & Capita)

Next is Figure 3-6 which illustrates the relative usage of alternative transportation services for comparators' citizens by comparing the average annual unlinked passenger trips per square mile and per capita. Roseville was the lowest under both measurements. For annual passenger trips per square mile, Roseville's 8,971 represented 18 percent of the comparator average. For annual passenger trips per capita, Roseville's 3.1 trips per capita was 26 percent of the comparator average of 12.1 trips per capita.

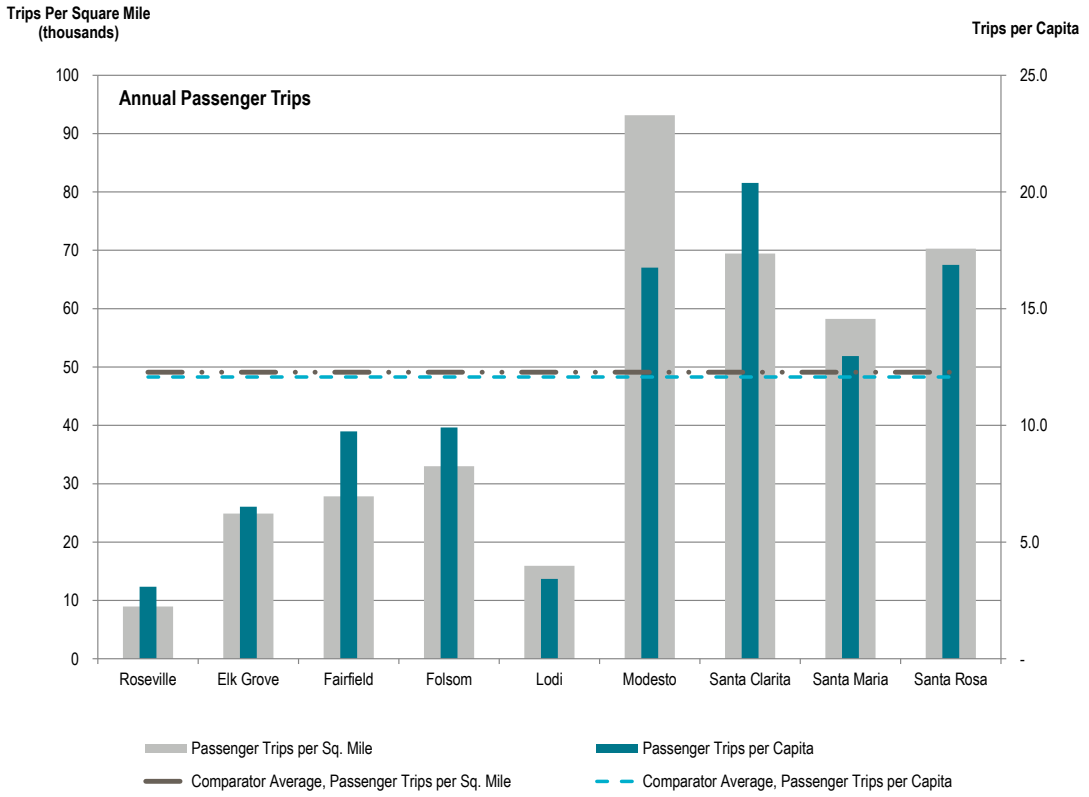


Figure 3-6: Annual Passenger Trips, Alternative Transportation Comparators

Alternative Transportation Budget Comparison (per Square Mile & Capita)

Figure 3-7 compares the relative city funding of alternative transportation for each comparator by depicting the Alternative Transportation Division budgets per square mile and per capita. Roseville's alternative transportation budget was the lowest in terms of dollar per square mile and the second lowest in terms of dollar per capita, ahead of Folsom. The comparator averages were $313,184 per square mile and $79 per person. Roseville's budget equated to $140,621 per square mile and approximately $48 per person.

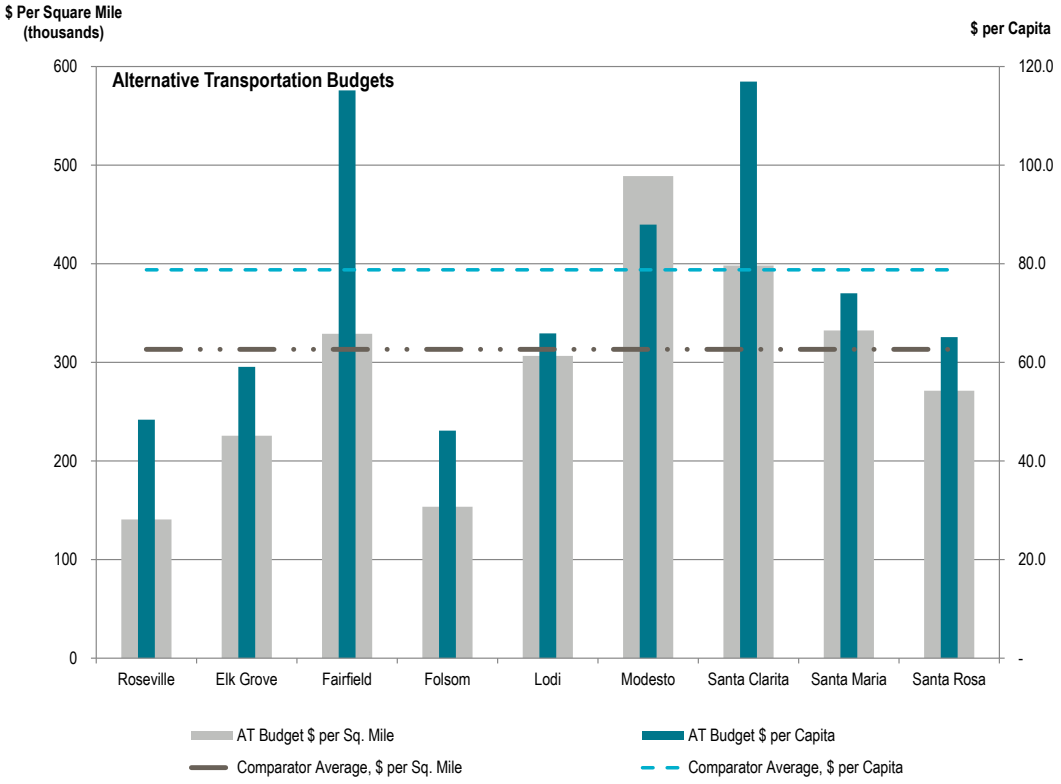


Figure 3-7: Budget $ per Sq. Mile and per Capita, Alternative Transportation Comparators

Alternative Transportation Budget Comparison (per Vehicle & Passenger)

Figure 3-8 again shows relative Alternative Transportation budget expenditures, but this time on a per vehicle and per passenger basis. Roseville's budget equated to $246,087 per maintained vehicle, or 21 percent above the comparator average of $202,745. Budget expenditures per passenger, at $16 were double the comparator average of 8 dollars.

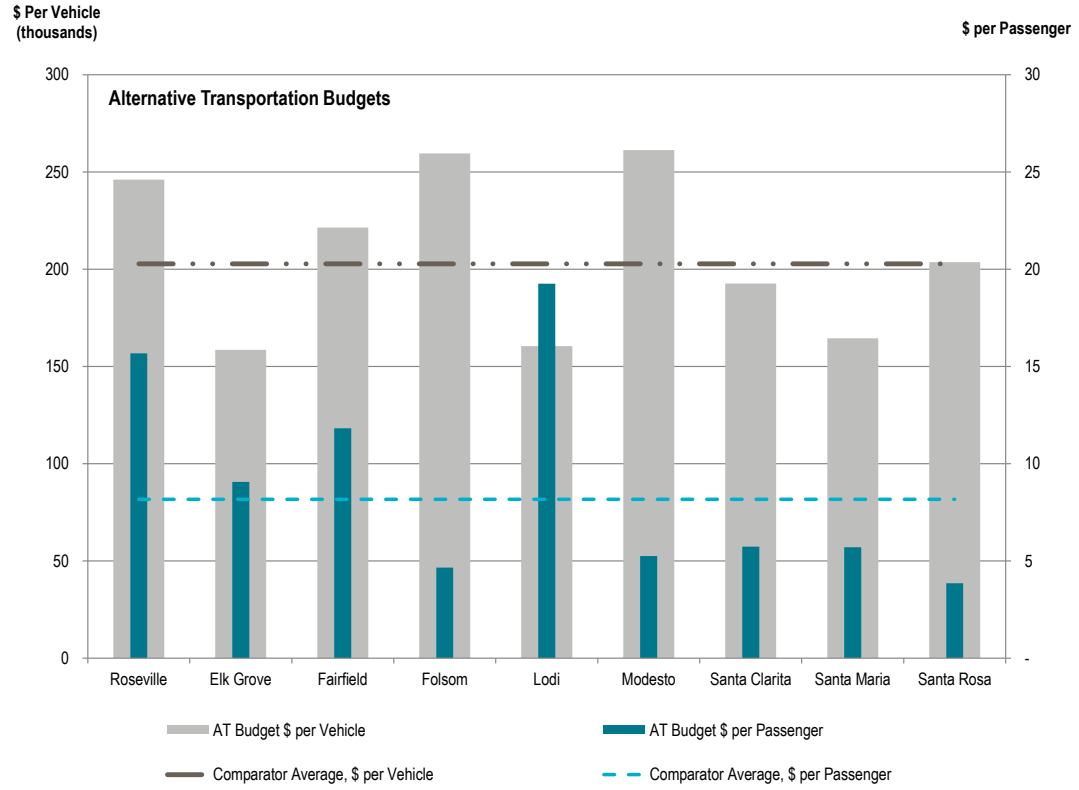


Figure 3-8: Budget Dollar per Vehicle and per Passenger, Alternative Transportation Comparators

Alternative Transportation Bus Operating Expense Comparison (per Vehicle & Vehicle Revenue Mile)

Figure 3-9 shows the reported total operating expense for bus service for Roseville and the comparators on a per vehicle and per vehicle revenue mile (VRM) basis and includes fleet age. These data exclude demand response (DR) service which is presented in Figure 3-10. Roseville's reported total operating expense of $2.8 million equated to $283,720 per maintained vehicle, which is the highest of the group, or 59 percent above the comparator average of $178,316. The operating expense per VRM at $8 is the second highest of the group, behind Santa Rosa. The comparator average per VRM is $6. Roseville's fleet age of 5.4 years was 29 percent less than the comparator average of 7.6 years.

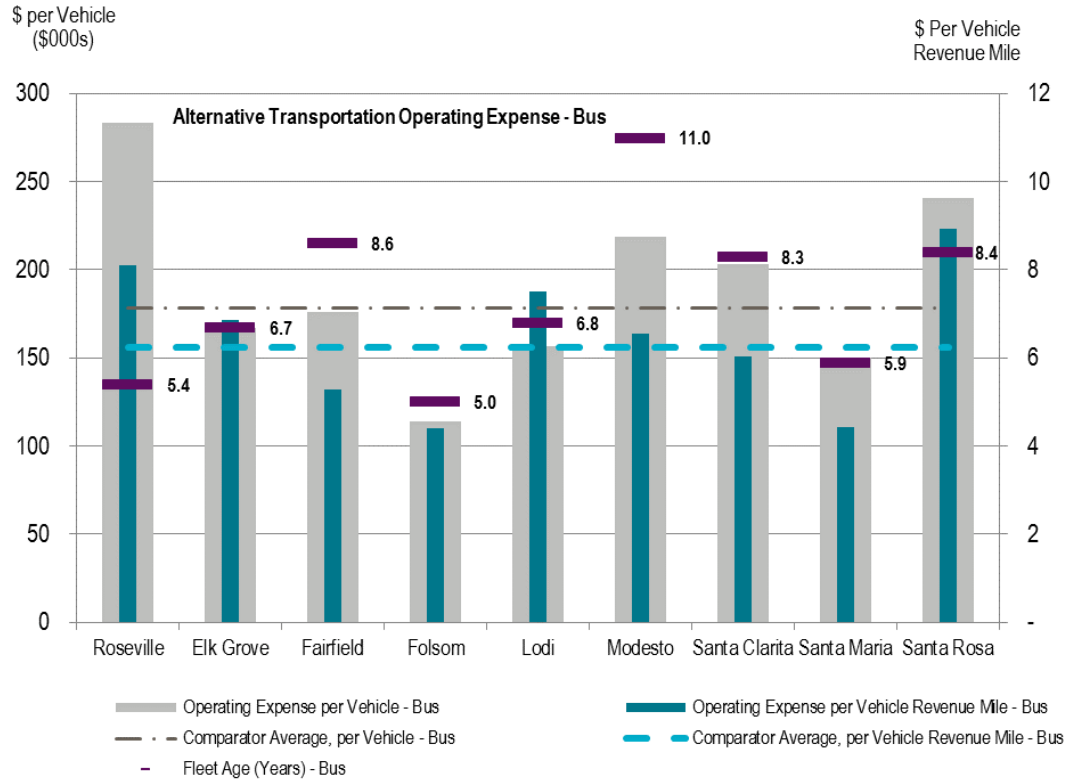


Figure 3-9: Bus Operating Expense per Vehicle and per Vehicle Revenue Mile, Alternative Transportation Comparators

Alternative Transportation Demand Response Operating Expense Comparison (per Vehicle & Vehicle Revenue Mile)

Figure 3-10 shows the reported total operating expense for DR service for Roseville and the comparators on a per vehicle and per VRM basis. This data excludes regular bus service expenses. Figure 3-10 also presents the average fleet age for DR vehicles. Roseville's reported total operating expense of $1.0 million equated to $171,632 per maintained DR vehicle, which as with bus service is the highest of the group, or 29 percent above the comparator average of $133,064. The operating expense per VRM at $8 was only the fourth highest of the group, behind Folsom, Elk Grove, and Lodi. The comparator average per VRM is $9, influenced by the outlier of Folsom, which is markedly high at $24 per VRM. Removing Folsom would have resulted in a comparator average of $7 per VRM. Again, as with bus service, Roseville's average fleet age for demand response is newer than the comparator average. Roseville's fleet age of 3.3 years was 34 percent less than the comparator average of 5.0 years.

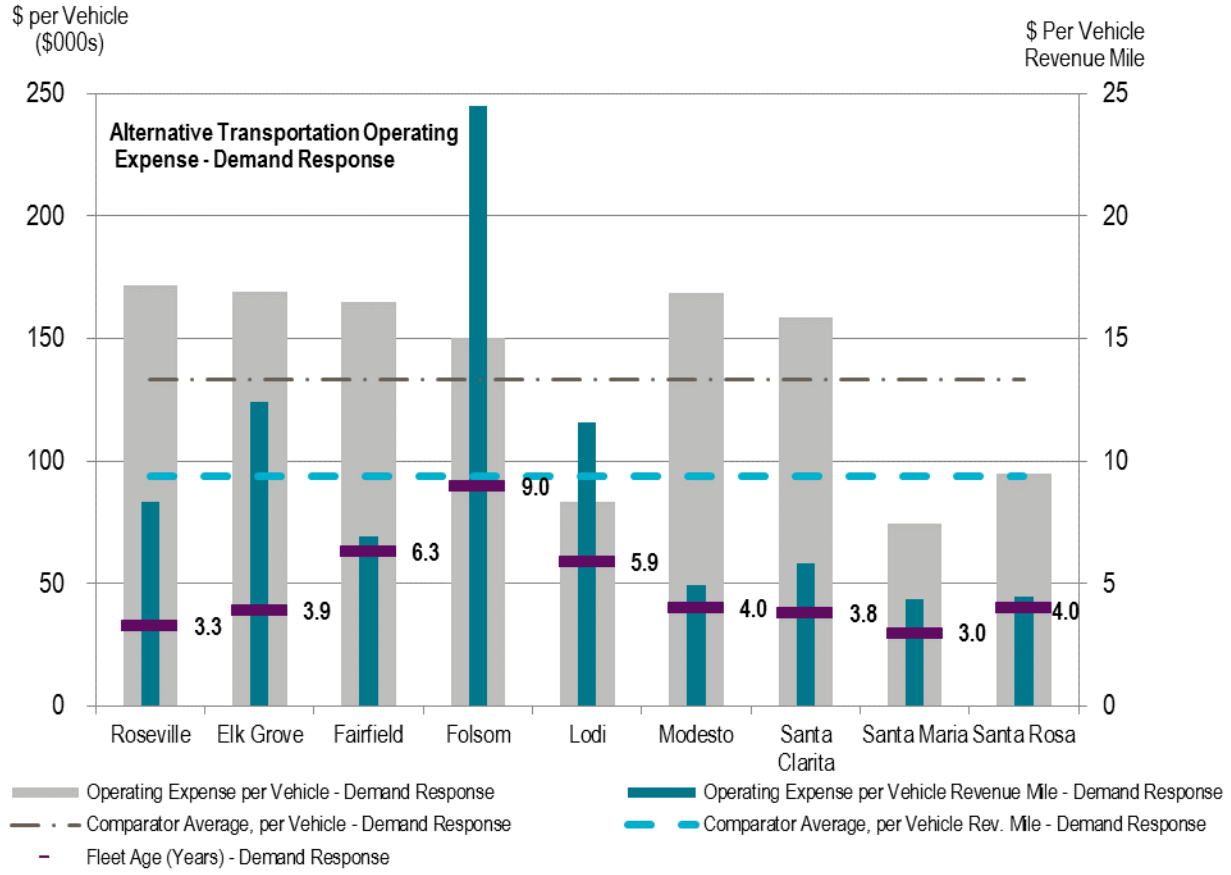


Figure 3-10: Demand Response Operating Expense per Vehicle and per Vehicle Revenue Mile, Alternative Transportation Comparators

Alternative Transportation Operating Expense Comparison (per Passenger Trip & Vehicle Revenue Mile)

Figure 3-11 shows total operating expense on a per passenger trip and per VRM basis, including all service types. Operating expense per passenger trip for Roseville was $12, or 33 percent above the comparator average of $9. VRM was 95 percent of the comparator average of $8.

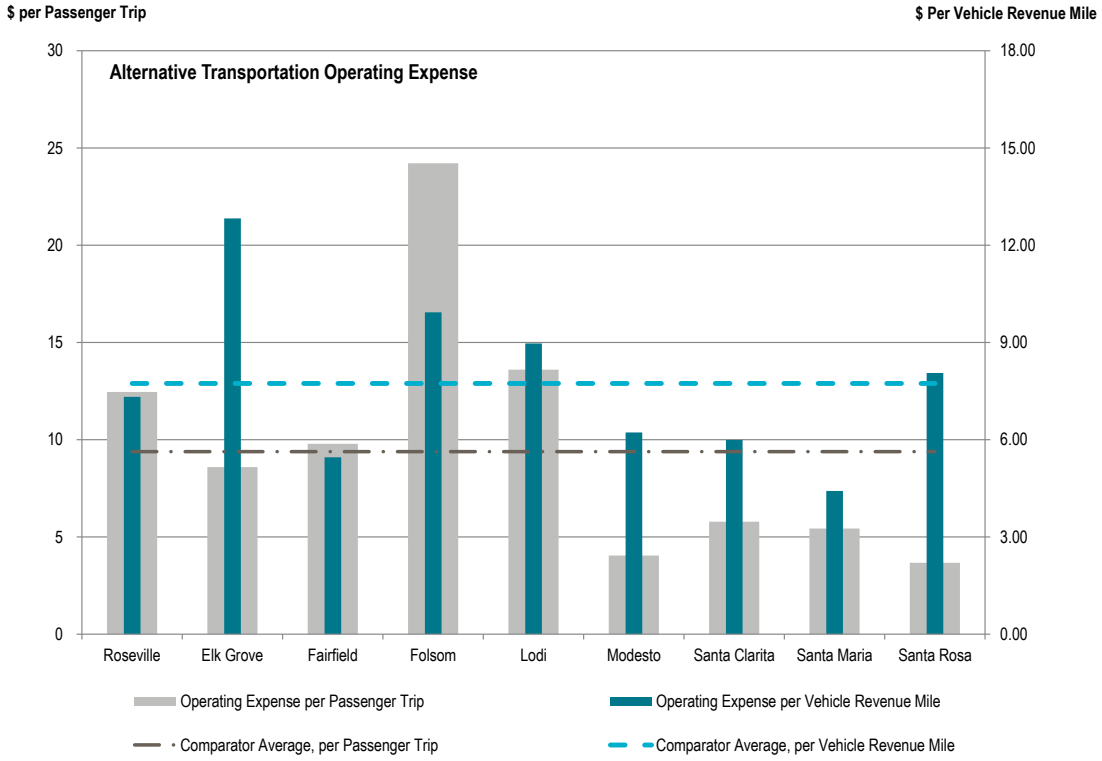


Figure 3-11: Total Operating Expense per Passenger Trip and per Mile, Alternative Transportation Comparators

Alternative Transportation Farebox Recovery Ratio Comparison

Figure 3-12 shows data related to the farebox recovery ratio, which is calculated as revenues from fares divided by total operating expenses. At 19 percent, Roseville exceeds its farebox recovery ratio target of 15 percent. The comparator average is 16 percent, which is influenced by the relatively low ratios of Folsom and Lodi. With these comparators removed, the average is 20 percent.

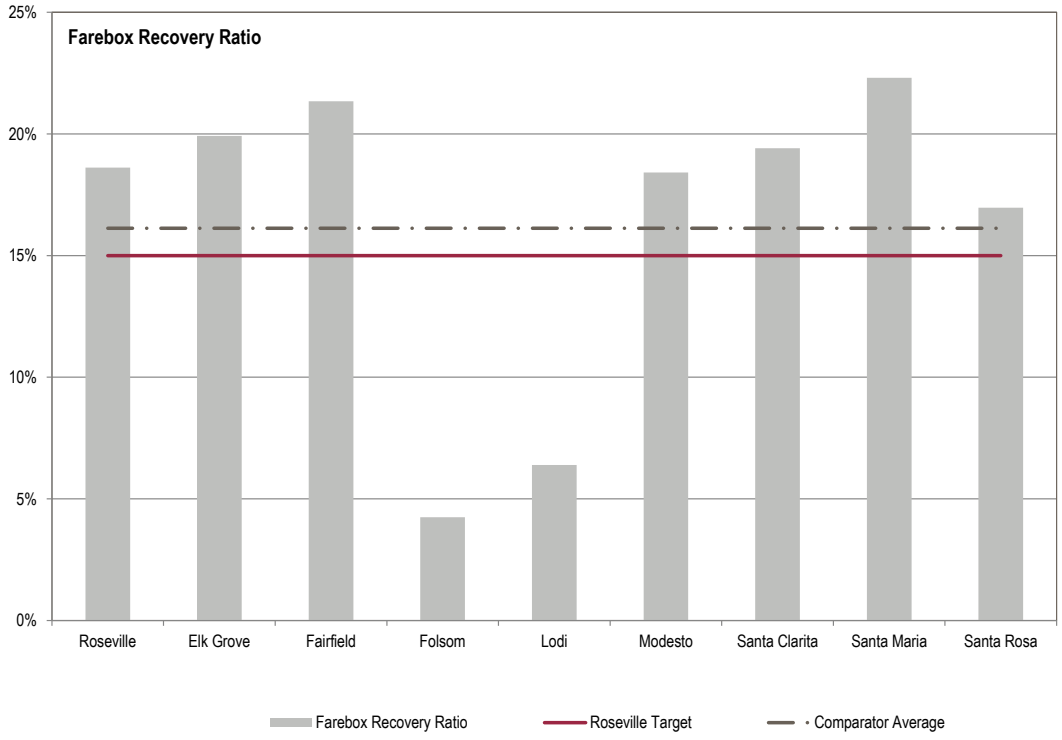


Figure 3-12: Farebox Recovery Ratio, Alternative Transportation Comparators

Alternative Transportation Class 1 Bikepath Miles Comparison

Figure 3-13 depicts the total number of Class 1 bikepath miles for Roseville and the comparators and shows bikepath miles on a per capita basis, using miles per 100,000 persons. Under both measurements, Roseville exceeded the comparator average. Roseville has 32 Class 1 bikepath miles, the comparator average is 23 miles. On a per capita basis, Roseville's Class 1 bikepath miles per 100,000 persons is 26, 19 percent higher than the comparator average of 21 miles.

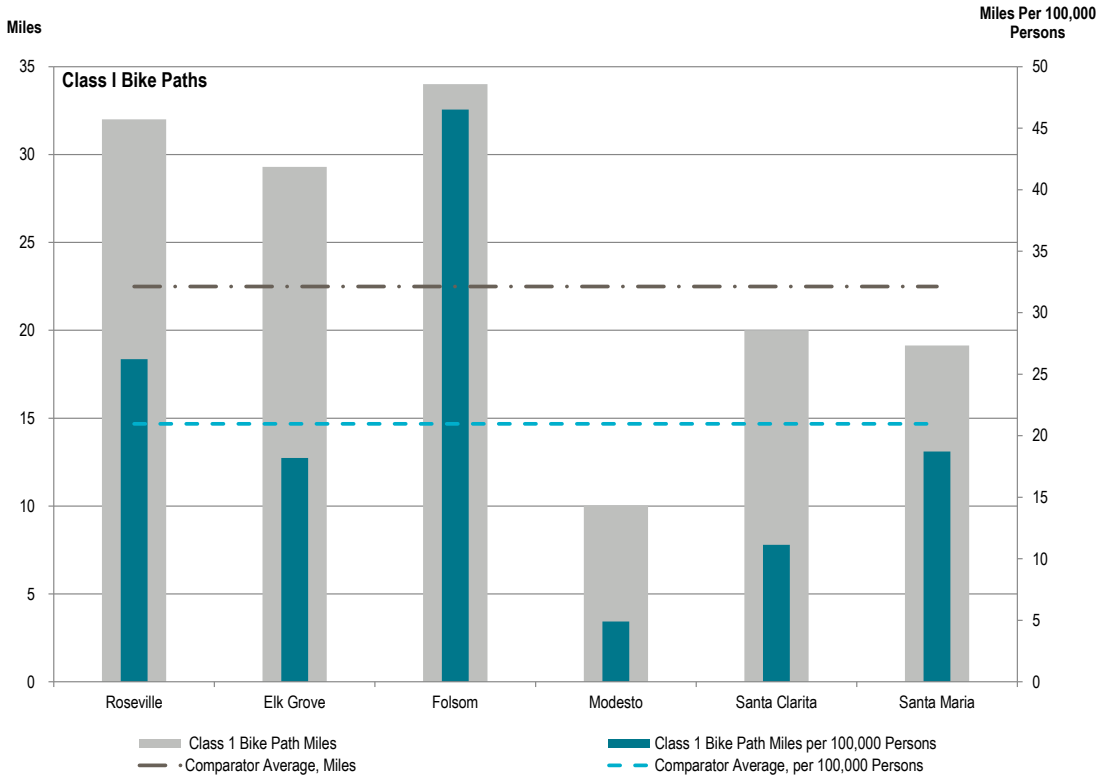


Figure 3-13: Class 1 Bike Paths, Alternative Transportation

3.3.2.2 Alternative Transportation Summary of Benchmarking Results

Table 3-5 summarizes external benchmarking results for the Alternative Transportation PA.

Table 3-5 Summary of PWD Alternative Transportation Benchmarking Results

Metric	Unit	Roseville	Comparator Average	Result
Geographic Footprint	Square Miles	42	33.6	N/A
Population	Persons	122,060	132,982	N/A
Passenger Trips	Trips/Square Mile	8,971	49,095	82% Lower
	Trips/Capita	3.1	12.1	74% Lower
Budget	$/Square Mile	140,621	313,184	55% Lower
	$/Capita	48	79	39% Lower
	$/Vehicle	246,087	202,745	21% Higher
	$/Passenger	16	8	100% Higher
Operating Expense Bus	$/Vehicle	283,720	178,316	59% Higher
	$/VRM	8	6	33% Higher
Fleet Age - Bus	Years	5.4	7.6	29% Lower
Operating Expense	$/Vehicle	171,632	133,064	29% Higher
Demand Response	$/VRM	8	7	14% Higher
Fleet Age - DR	Years	3.3	5.0	34% Lower
Operating Expense	$/Passenger Trip	12	9	33% Higher
	$/VRM	7	8	5% Lower
Farebox Recovery Ratio	%	19	16 or 20	Equal
Class 1 Bike Paths	Miles	32	23	39% Higher

3.3.3 Alternative Transportation Dashboard Results

The following sections present dashboard results for the three Alternative Transportation PAs: Bikeways, Transit and Transportation Systems Management (TSM). Because this is the first OPA for PWD, many KPIs lack current values and targets. In these cases, dashboard results are not available. The KPIs appearing herein may be refined and changed based on the results of this initial OPA.

An overall Alternative Transportation Division Dashboard appears in Section 3.3.3.4.

3.3.3.1 Alternative Transportation—Bikeways Dashboard Results

Table 3-6 presents the dashboard KPI outcomes for the Alternative Transportation Bikeways PA.

Table 3-6: Alternative Transportation—Bikeways Dashboard Results

Alternative Transportation—Bikeways						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Product Quality	Miles Of Class I Trail Per Capita	0.35	0.25		50%	
	Maintain A Pavement Quality Index Of [TBD] For Class I Bikeways	TBD	TBD		50%	
Customer Satisfaction	Customer User Satisfaction Survey Every 3 Years Good Or Above Rating	80%	TBD		25%	
	% Rate Bikefest As Good Or Better	95%	95%		25%	
	# Of Complaints Per Capita	0.10	TBD		25%	
	# Of Compliments Per Capita	0.05	TBD		25%	
Leadership & Employee Development	Hours of training per employee (yearly)	40	TBD		50%	
	Days Before/After Evaluation Due Date Of Actual Evaluation Completion (Yearly Average Per Supervisor)	30	TBD		50%	
Operational Optimization	Annual Hrs Of Internal Maintenance Coordination W/ Streets & Engineering Divisions	80	TBD		33%	
	Annual Hrs Of External Maintenance Coordination W/ Parks & Rec	TBD	TBD		33%	
	% Request For Service From The Public Responded to w/in 1 Business Day	95%	TBD		33%	
Financial Viability	Project Billable Time For Capital Improvement Projects (CIPs)	0.15	TBD		33%	
	Annual Expenditures For Trail Resurfacing ($000)	$100	$60		33%	
	Annual Expenditures For Day To Day Maintenance Of Bike Trails ($/Mile)	TBD	$3,000		33%	
Infrastructure Stability	% Of Pedestrian And Bike Trail System Bridges Inspected Annually	TBD	TBD		50%	
	Annual A.C. Biketrails Resurfaced (%)	10%	TBD		50%	
Operational Strength	Annual Number Of Regular Trail Maintenance Meetings Coordinated With Other Departments	3	4		100%	

Alternative Transportation—Bikeways						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Community Sustainability	Percentage Of Commuter Trips By Bike (American Communities Survey)	1.50%	1.00%		50%	
	Number of Annually Conduct Bike And Pedestrian Counts Conducted At Key Locations Citywide	TBD	TBD		50%	
Resource Adequacy	Number Of CIP Projects Per Employee	1	1		50%	
	Number Of Grants Per Employee	1	2		50%	
Understanding & Stakeholder Support	% Bikeway Master Plan And Pedestrian Plan Updated Every Year	20%	TBD		50%	
	% Division Report Completed Annually	100%	100%		50%	
Safety	# Of Helmet Use Tracking Updates For Collision Reports Completed Annually	TBD	TBD		25%	
	# of Regular Bike Safety Meetings Coordinated w/ Other Departments Annually	2	2		25%	
	% Of All Complaints For Bike Trails Investigated W/In 5 Business Days	95%	TBD		25%	
	% Of Bike Trails Inspected For Safety Issues Annually/Bi-Annually	95%	TBD		25%	

3.3.3.2 Alternative Transportation—Transit Dashboard Results

Table 3-7 presents the dashboard KPI outcomes for the Alternative Transportation Transit PA.

Table 3-7: Alternative Transportation—Transit Dashboard Results

Alternative Transportation—Transit						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Product Quality	% Of All Trips On Time	95%	96%		20%	
	Service Miles Between Road Calls	10,000	11,380		20%	
	% Of All Active Bus Stops Cleaned Monthly	95%	100%		20%	
	% Of All Transit Transfer Points Cleaned Weekly	80%	100%		20%	
	Times per Year Fleet Interiors Cleaned	TBD	TBD		20%	

Alternative Transportation—Transit						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Customer Satisfaction	% Of All Validated Complaints Have Completed Investigations W/In 5 Business Days	95%	TBD		17%	
	% Of All Customers Communications Responded To By Staff W/In 1 Business Day	98%	TBD		17%	
	% of Google Transit And Bus Tracker Updated With Each Schedule Change	98%	100%		17%	
	% Of All Customers Are Satisfied With Overall Service	95%	TBD		17%	
	Substantiated Complaints Per 10,000 Trips	1<	1<		17%	
	Compliments Per 400,000 Trips	>1	TBD		17%	
Leadership & Employee Development	Annual Hours of Training per Employee	40	TBD		50%	
	Days Before/After Evaluation Due Date Of Actual Evaluation Completion (Yearly Average Per Supervisor)	30	TBD		50%	
Operational Optimization	% Of Requests For Transit Service Captured In Database Annually.	98%	100%		20%	
	% Of Residents And Employees In Roseville Aware Of Available Alternative	TBD	TBD		20%	
	Preventable Accident Per 50,000 Service Miles	<1	<1		20%	
	Deadhead Miles % Of All Service Miles	18%	17%		20%	
	Months to Optimize Routes After SRTP Update	12	TBD		20%	
Financial Viability	# Agencies Fares Compared With Annually (out of 5)	100%	TBD		33%	
	Farebox Recovery Ratio	15%	19%		33%	
	Grants Funds % Of Operating Revenues	10%	16%		33%	
Infrastructure Stability	Maximum Average Age Of Fleet	7.4	5.2		100%	
Operational Strength	% Of Scheduled Transit Coordination Meetings W/ Contractor Attended	90%	95%		25%	
	% Of Vehicle Maint. Mtgs With Vehicle Maintenance Attended	90%	TBD		25%	
	% Of Routes For Which Trip Subsidy Standard Is Reviewed By Transportation	100%	TBD		25%	
	Updated % of Master Plan	20%	20%		25%	
Community Sustainability	Percentage of total commute trips by transit (American Communities Survey)	1%	1%		100%	
Resource Adequacy	% Of TDA And FTA Performance Review Findings Resolved Within 6 Months	100%	100%		33%	
	Number Of Active CIP Projects Per FTE	1	TBD		33%	
	Number Of Active Grants Per FTE	1	TBD		33%	

Alternative Transportation—Transit						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Understanding & Stakeholder Support	Marketing Plan Updated Every 5 Years (20% per year)	20%	TBD		17%	
	Short Range Transit Plan Updated 5 Years (20% p.a.)	20%	TBD		17%	
	Long Range Transit Plan Updated in 7 Years (15% p.a.)	15%	TBD		17%	
	# Of Transit Awareness Marketing And Education Campaigns Promoted Annually In Community	10	12		17%	
	Transportation Commission Meetings Held Annually	6	6		17%	
	Prepare Annual Division Report.	100%	100%		17%	
Safety	% Of Altoona Testing Reports Reviewed By Alternative Transportation Before Purchase	100%	100%		17%	
	% Bus Purchases Meeting FMVSS And FTA Standards	100%	100%		17%	
	% Driver Records Reviewed With MV Safety Manager Annually	95%	100%		17%	
	# Annual Drug And Alcohol Testing Program FTA Compliance Reviews With Contractor	1	1		17%	
	# Bi-Monthly Safety Meetings Reviews With Contractor For Compliance With PT, VDDP And GPPV Requirements As Established By State DMV	6	6		17%	
	Preventable Accidents Per 50,000 Service Miles	<1	<1		17%	

3.3.3.3 Alternative Transportation—Transportation Systems Management Dashboard Results

Table 3-8 presents the dashboard KPI outcomes for the Alternative Transportation TSM PA.

Table 3-8: Alternative Transportation—Transportation Systems Management Dashboard Results

Alternative Transportation—Transportation Systems Management						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Product Quality	# Of Quarterly Trainings For On-Site Transportation Coordinators Conducted	4	4		50%	
	% Of New TSM On-Site Coordinators Met Within 30 Days	90%	100%		50%	
Customer Satisfaction	% Of All TSM Plan Reviews Completed W/In 30 Days From Submittal	90%	80%		33%	
	% Of All TSM Plans To Commission Reviewed W/In 30 Days of Complete Submittal	95%	100%		33%	
	% Of All Development Plans Reviewed And Returned To Planning Dept On Time	90%	75%		33%	
Leadership & Employee Development	Hours Of Training Per Employee (Yearly)	40	TBD		50%	
	Days Before/After Evaluation Due Date Of Actual Evaluation Completion (Yearly Average Per Supervisor)	30	TBD		50%	
Operational Strength	# of Annual Clean Air Citywide Events Actively Participated	2	2		100%	
Community Sustainability	% Participants Provided Education About Alternative Transportation At Outreach Events	10%	15%		25%	
	Community Events Attended Annually	35	58		25%	
	% Of Total Commute Trips By Modes Other Than Single Occupant Vehicles	7%	7%		25%	
	Smart Cycling Clinics Hosted Annually	4	4		25%	
Understanding & Stakeholder Support	Prepare Annual Division Report	100%	100%		100%	

3.3.3.4 Alternative Transportation—Overall Dashboard Results

Figure 3-14 presents the overall dashboard for the Alternative Transportation Division of PWD. Because this is the first OPA for PWD, many KPIs lack current values and targets. In these cases, dashboard results are not available. The KPIs appearing herein may be refined and changed based on the results of this initial OPA.

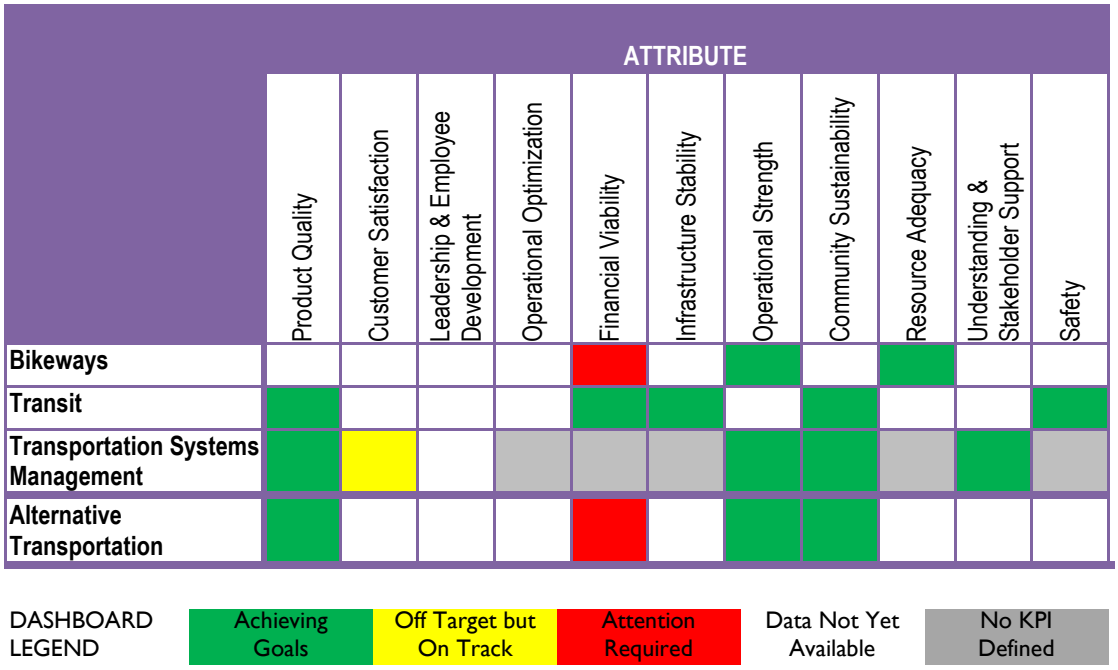


Figure 3-14: Alternative Transportation—PA Overall Dashboard Results

3.3.4 Alternative Transportation Conclusions and Recommendations

Again, because this is the first OPA and KPI data are generally unavailable for the Alternative Transportation, internal performance assessment, Leidos makes the following observations and recommendations based on external comparator benchmarking data.

Roseville is larger geographically, less populated, has lower densities and is generally wealthier than the comparator cities, factors that may influence the use of alternative transportation services available to citizens. Use of alternative transportation in Roseville is significantly lower than comparator cities on a per square mile and per capita basis. City funding of Alternative Transportation Division is also lower than comparator cities on a per square mile and per capita basis, but higher on a per vehicle and per passenger basis.

Roseville's Bus service has the highest operating costs of the group of comparators on a per vehicle basis and also a high operating cost on a per mile basis. The Roseville Bus service fleet is also younger than comparator cities. Demand response service also shows relatively high operating costs per vehicle and has a relatively young fleet. Overall, the City's Alternative Transportation expenses result in a high cost per passenger trip relative to the comparator cities. Maintenance of Alternative Transportation vehicles vests with the City Fleet Division under the Central Services Department and is outside of PWD control, therefore this issue should be assessed during the OPA of Central Services.

The Transit Dashboard includes a Safety KPI target of less than 1 preventable accident per 50,000 service miles, which translates to a target of less than 20 preventable accidents per million miles. Based on Leidos' industry experience, research and actual transit operating, data, a more reasonable target would be in the range of 8 to 10 preventable accidents per million miles, or less than 0.04 to 0.5 preventable accidents per 50,000 service miles.

The City may wish to consider reviewing its transportation planning and use goals, to assess the level to which current and future planned investment aligns with its overarching goals, and when efforts to increase ridership/use are warranted. The next Short Range Transportation Plan Update is a possible opportunity for conducting such a review.

Although not appearing in the current list of KPIs, additional KPIs were discussed as part of the OPA process and may prove informative if used in future audits. These include ways to measure Alternative Transportation's influence on air quality and emissions reductions and the implementation of electric vehicle charging stations. KPI Workshop discussions included the number of breakdowns per operated mile for transit service; rate of completion for driver pre-trip inspections; tracking the mobility cost per passenger trip; and monitoring crime rates on/at public transportation vehicles/sites.

The Alternative Transportation PA is an area of PWD for which a detailed staffing study may provide perspective as to requirements for additional resources in terms of technical experts and supporting staff.

3.4 Engineering

The Engineering Division of PWD oversees City Projects, Traffic operations, Traffic studies, and Floodplain management. During the 2014 PWD OPA this Division was reorganized, combining Traffic Operations and Traffic Studies into one Traffic Engineering PA and separating Signal Maintenance from Traffic Operations by creating a new Traffic Signal Maintenance PA. This section presents the Matrix Study results for the Engineering PA, followed by benchmarking results and, finally, dashboard results.

3.4.1 Engineering Matrix Study Comparison

The Matrix Study results for PWD Engineering are presented in Appendix F, Section F.II.

3.4.2 Engineering Benchmarking Results

This section presents benchmarking results for PWD Engineering starting with a comparators list, followed by detailed results and concluding with an overall summary table.

The Engineering Division of PWD was compared to the California municipalities/cities shown by PA in Table 3-9. Comparators for the Floodplain Management PA include counties in Washington state.

Table 3-9: Engineering Comparators

Engineering Comparators			
City Projects	**Traffic Engineering**	**Traffic Signal Maintenance**	**Floodplain Management**
Concord **Fairfield** **Folsom** **Irvine** **Riverside** Santa Clara **Santa Maria** **Santa Rosa** **Vacaville** **Walnut Creek**	Anaheim Elk Grove Fairfield Folsom Irvine Redding Santa Maria	Concord Fairfield Folsom Irvine Vacaville	Fairfield Irvine Redding Skagit County, WA Snohomish County, WA Thurston County, WA

3.4.2.1 Engineering Detailed Benchmarking Results

Engineering—City Projects, Geographic Footprint & Population Comparison

Figure 3-15 illustrates the relative size of Roseville and the comparator cities for the Engineering Division, City Projects group. Roseville is larger than the comparator average in terms of geographic size, approximately 14 percent larger than the comparator average of 37 square miles. Roseville's population is 14 percent smaller than the comparator average of 141,441, which is driven largely by Irvine and Riverside. With the removal of Irvine and Riverside, the comparator average is 107,634.

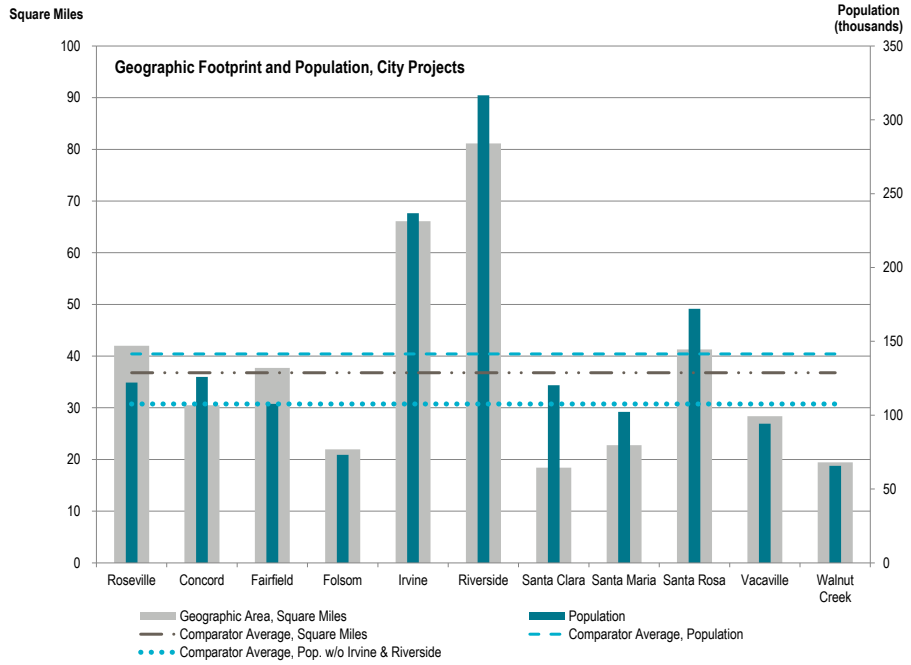


Figure 3-15: Geographic Footprint and Population, City Projects Comparators

Engineering—City Projects, Pavement Quality Index Comparison

Figure 3-16 shows the relative pavement quality indices for Roseville and the comparator cities. Roseville is meeting its target for arterials/collectors as well as Residential streets. Roseville is also exceeding the comparator average of 69, with an index of 78 for arterials/collectors; its target is 72. The industry standard is 70.

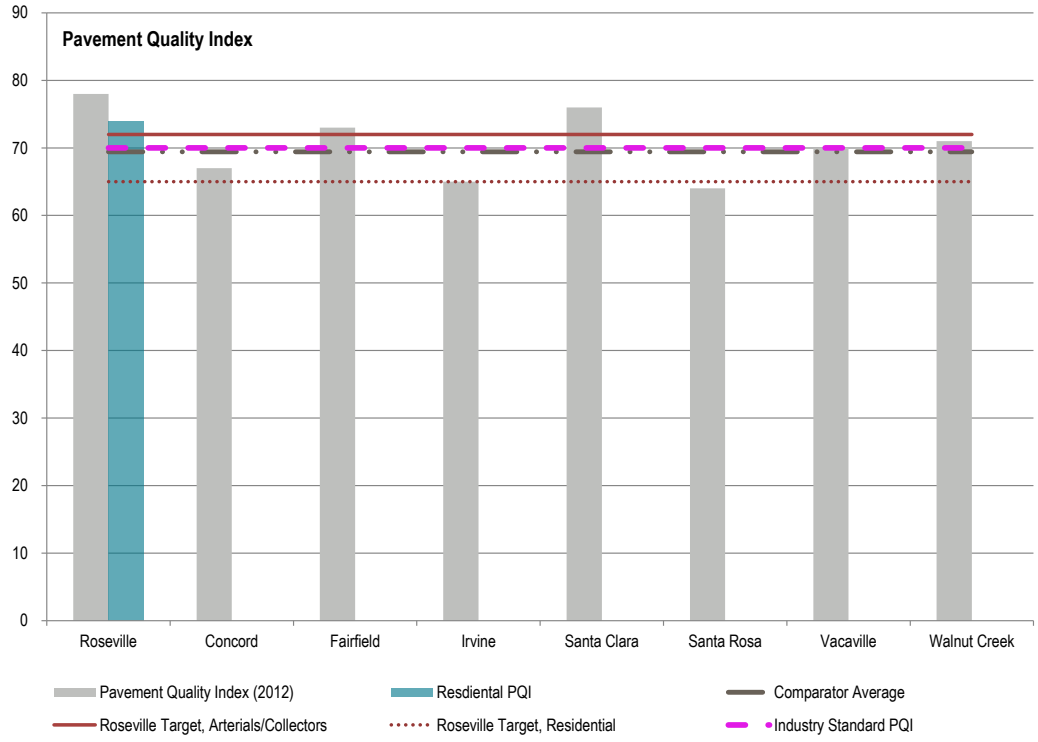


Figure 3-16: Pavement Quality Index, City Projects Comparators

Engineering Budget Comparison (per Square Mile & Capita)

Figure 3-17 compares the relative budget expenditures for the Engineering Divisions for Roseville and the comparator cities. Roseville, at $130,642 per square mile is 16 percent below the comparator average of $155,786. At $45 per capita, Roseville exceeds the comparator average of $40 per capita by approximately 12 percent.

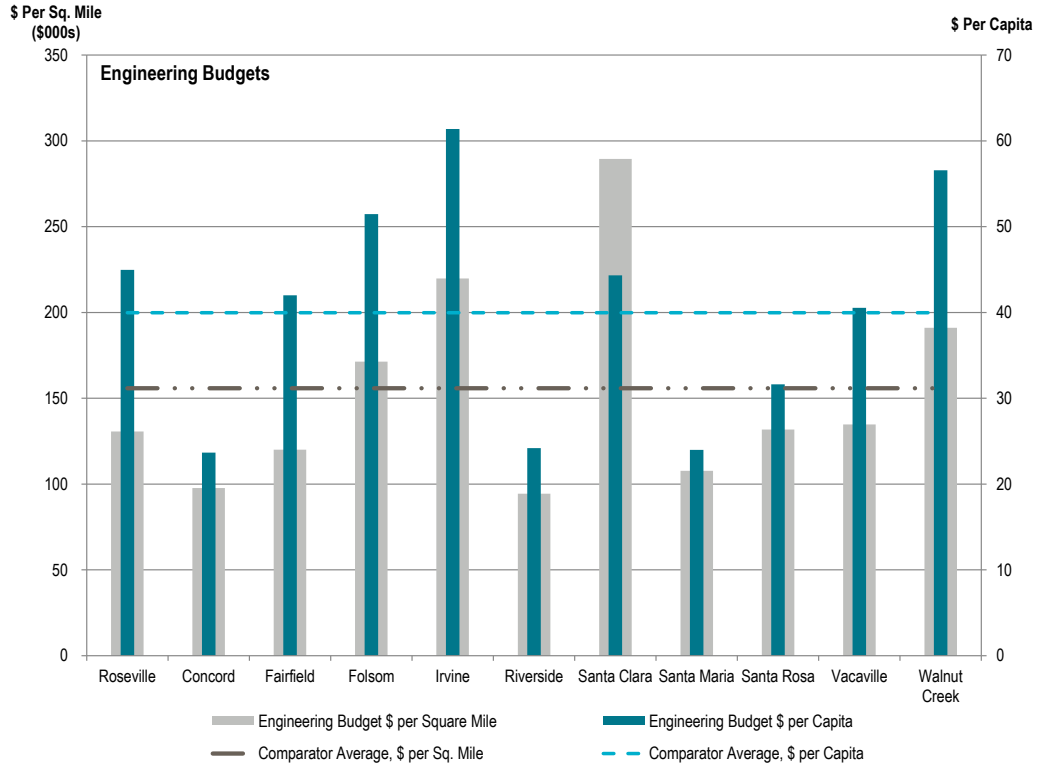


Figure 3-17: Engineering Division Budgets per Sq. Mile and Per Capita

Engineering FTE Comparison (per Square Mile & $ per FTE per Square Mile)

Figure 3-18 compares the relative level of Engineering staff and budget expenditures for the Engineering Divisions for Roseville and the comparator cities, using FTE per square mile, and budget dollar per Engineering FTE per square mile. Roseville, at .84 Engineering FTE per square mile is 11 percent below the comparator average of .94 FTE per square mile. At a budgeted amount of $3,689 per Engineering FTE per square mile, Roseville is less than the comparator average of $5,298 by approximately 30 percent.

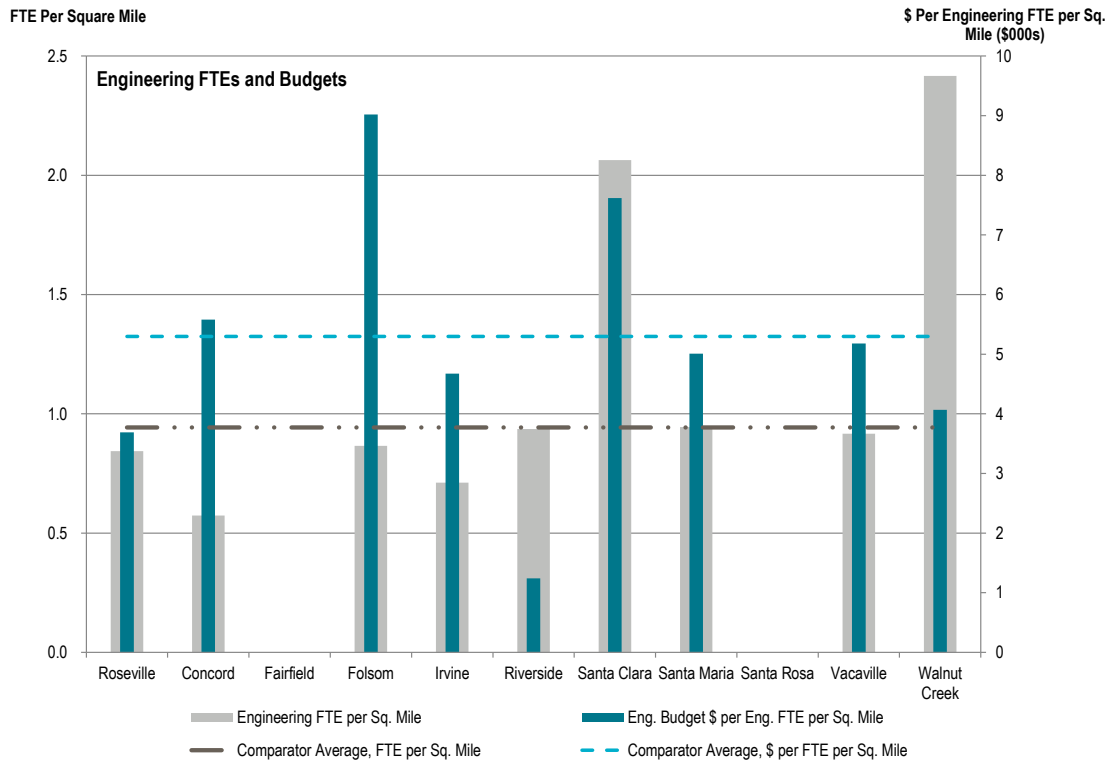


Figure 3-18: Engineering FTEs per Square Mile and Engineering Budget Dollar per FTE per Square Mile

Engineering—Traffic Engineering, Geographic Footprint and Population Comparison

For the Engineering Division, Traffic Signal Maintenance group, Roseville was compared to five California municipalities/cities as shown in the second column from the left in Table 3-9. For the Traffic Engineering group, seven California comparators were chosen, shown in the third column from the left in Table 3-9.

Figure 3-19 illustrates the relative size of Roseville and the comparator cities for the Engineering Division, Traffic Signal Maintenance group. Roseville is larger than the comparator average in terms of geographic size, approximately 14 percent larger than the comparator average of 37 square miles. Roseville's population is very close to, 96 percent of, the comparator average of 127,531.

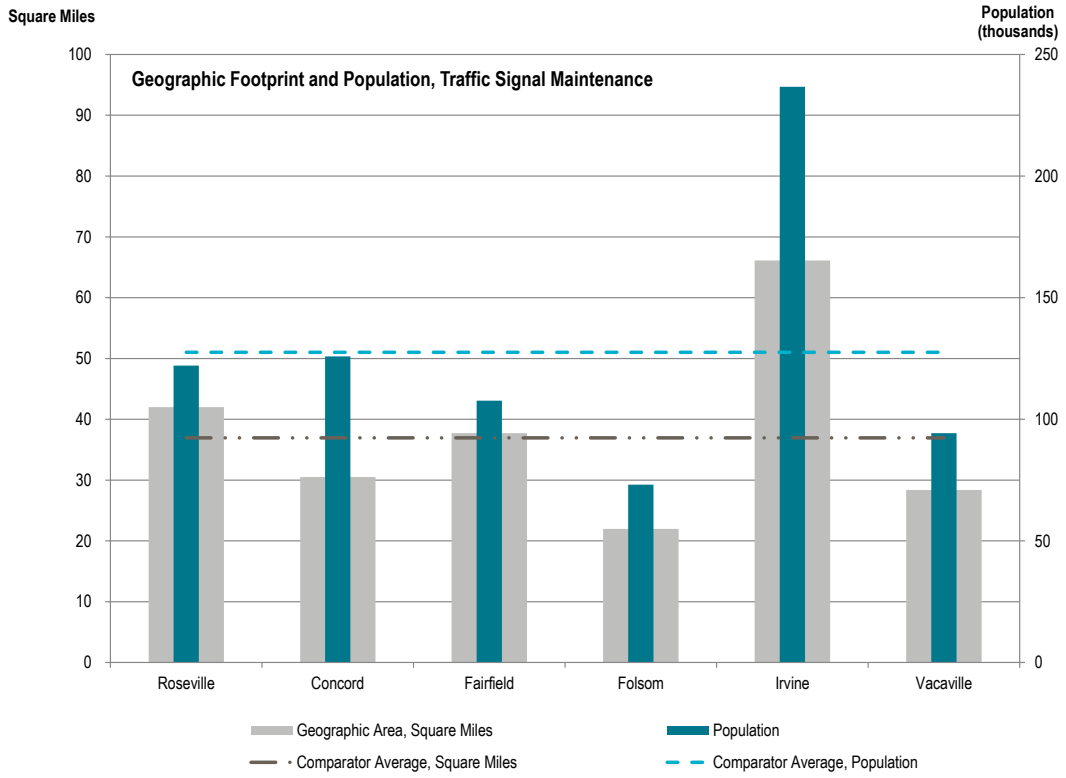


Figure 3-19: Geographic Footprint and Population, Traffic Signal Maintenance Comparators

Engineering—Traffic Engineering, Signal Comparison (per Square Mile, Budget per Signal, and Budget per FTE per Square Mile)

Figure 3-20 shows the relative level of signaled intersections as well as budget expenditures on a dollar per signal and dollar per FTE per square mile basis. Roseville's signal per square mile number of 4.0 is very close to the comparator average of 4.1. In terms of budgeted dollar per signal, Roseville's $9,145 is less than the comparator average of $12,168 by 25 percent. Roseville's budgeted dollar per FTE per square mile is $6,061, a mere 1.5 percent above the comparator average of $5,973.

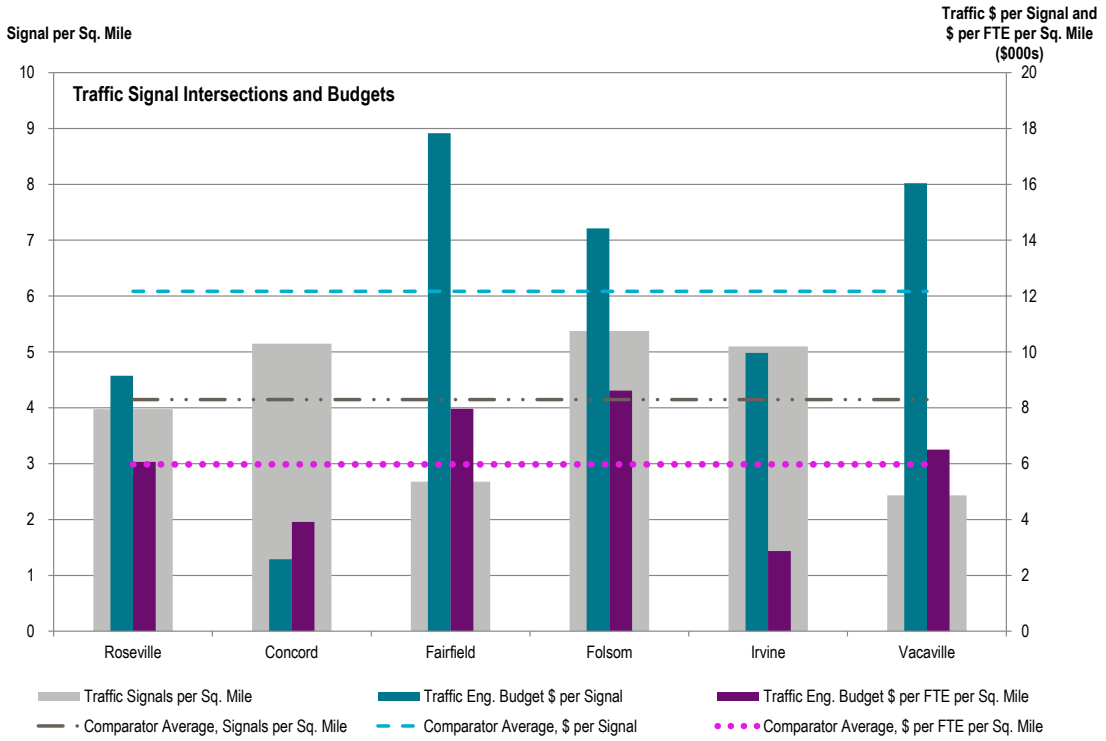


Figure 3-20: Traffic Signal Intersections and Budgets, Traffic Signal Maintenance Comparators

Engineering—Traffic Engineering, Budget Comparison (per Capita and Traffic FTE)

Figure 3-21 illustrates the relative level of budget expenditures for Traffic Engineering comparators on a per capita and per FTE basis, as well as FTE per signal. Roseville's Traffic Engineering budgeted expenditures per 1,000 persons equates to $0.05. This is 29 percent less than the comparator average of $0.07 per 1,000 persons. Roseville's budgeted expenditure per Traffic Engineering FTE was $254,549, approximately 29 percent above the comparator average of $196,580. Roseville has an FTE per signal ratio of 0.04, 32 percent less than the comparator average of 0.06.

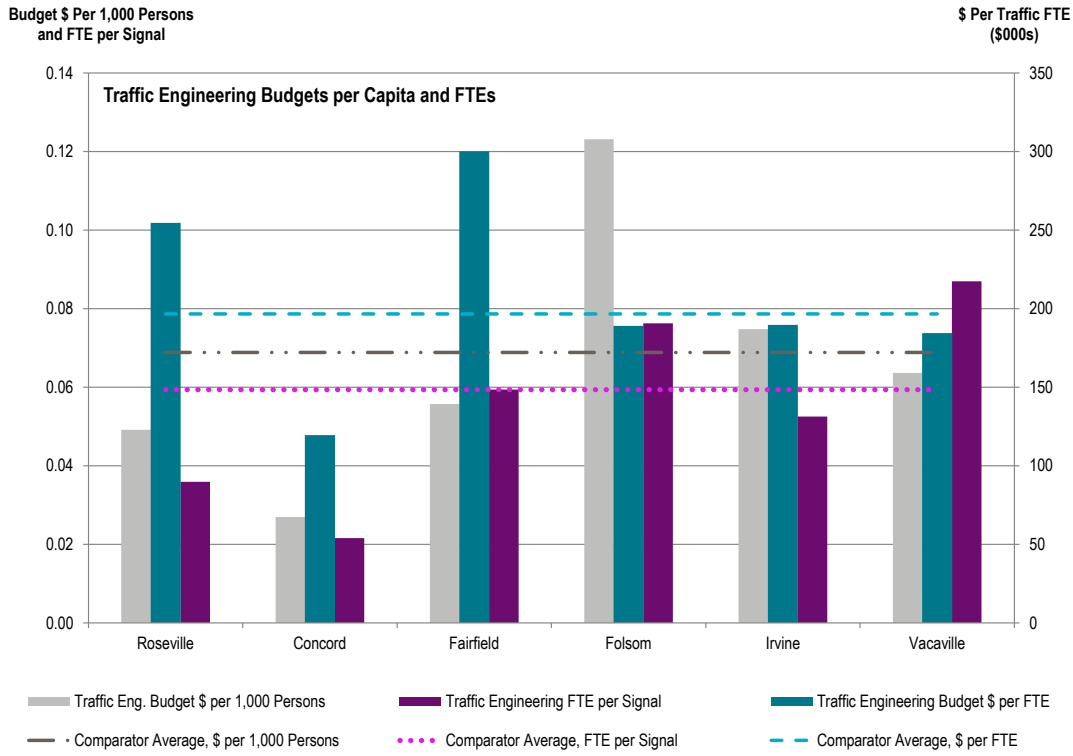


Figure 3-21: Budget Expenditures and FTEs, Traffic Signal Maintenance Comparators

Engineering—Traffic Engineering, Geographic Footprint and Population Comparison

Figure 3-22 illustrates the relative size of Roseville and the comparator cities for the Engineering Division, Traffic Engineering group. In terms of geographic size Roseville at 42 square miles is just shy of the comparator average of 43 square miles. Roseville's population is less than the comparator average of 158,301 by approximately 23 percent.

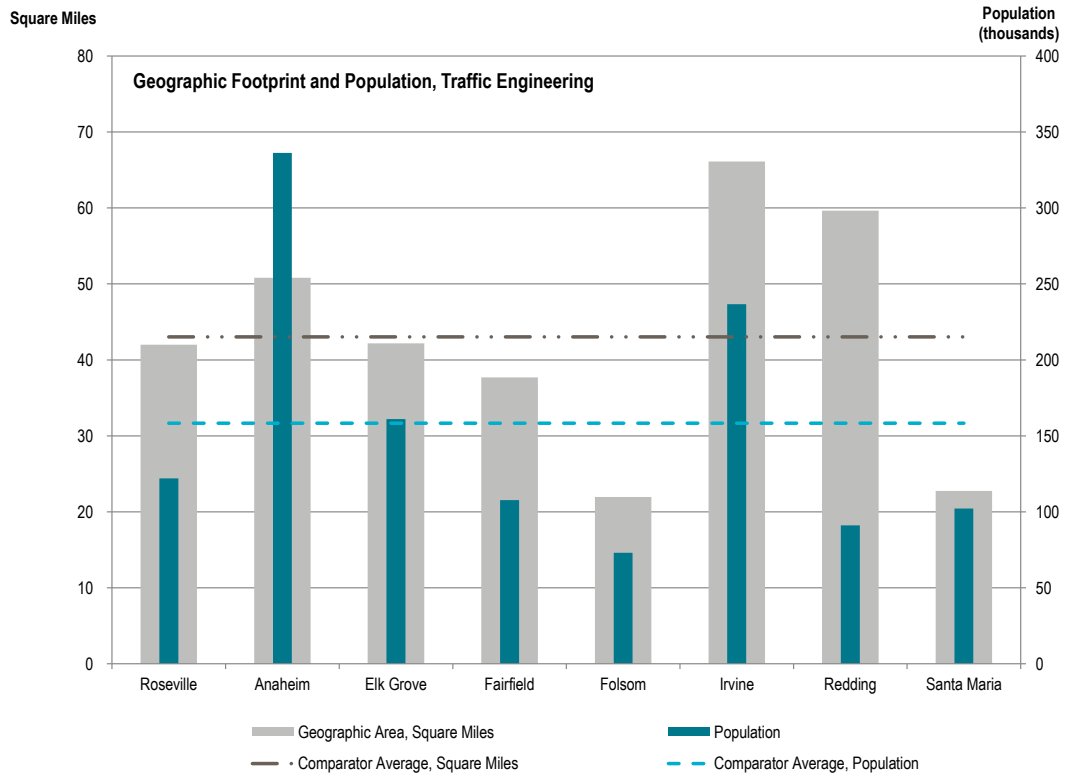


Figure 3-22: Geographic Footprint and Population, Traffic Engineering Comparators

Engineering—Traffic Engineering, Fatal and Injury Collisions per Capita Comparison

Figure 3-23 and Figure 3-24 compare fatal and injury collisions, respectively, on a per capita basis for Roseville and the comparator cities. Roseville sustained 0.049 fatal collisions per 1,000 persons, only 3 percent above the comparator average of 0.048 fatal collisions per 1,000 persons. In terms of injury accidents, Roseville sustained 2.66 injury collisions per 1,000 persons, which was 35 percent less than the comparator average of 4.10.

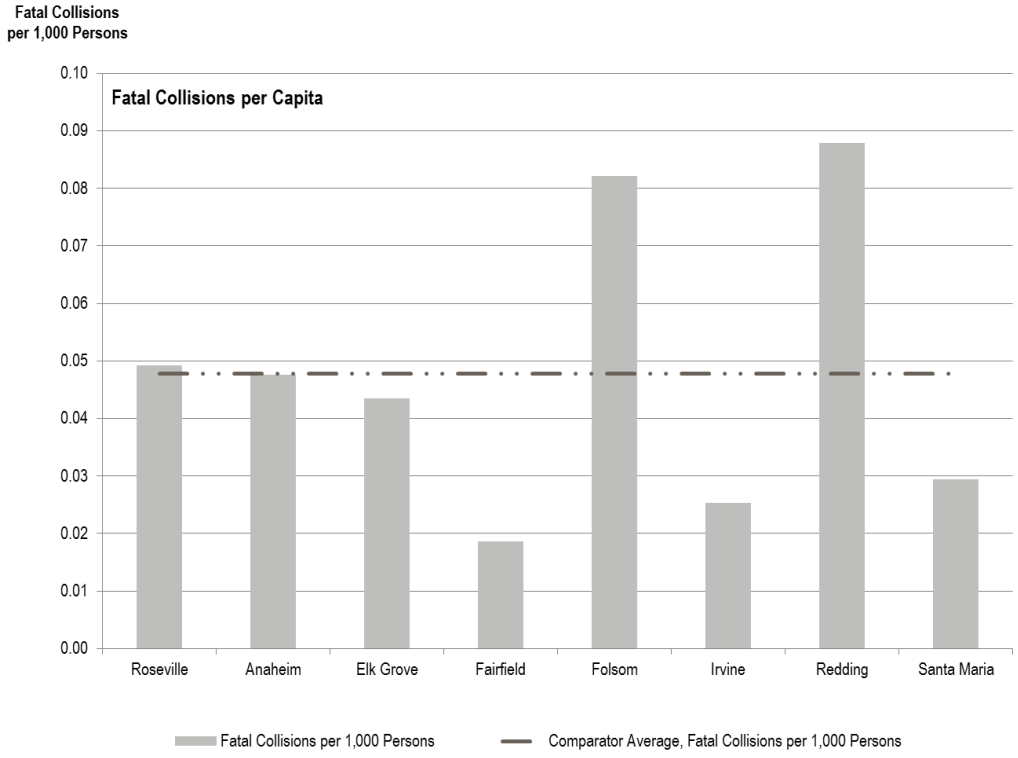


Figure 3-23: Fatal Collisions per Capita, Traffic Engineering Comparators

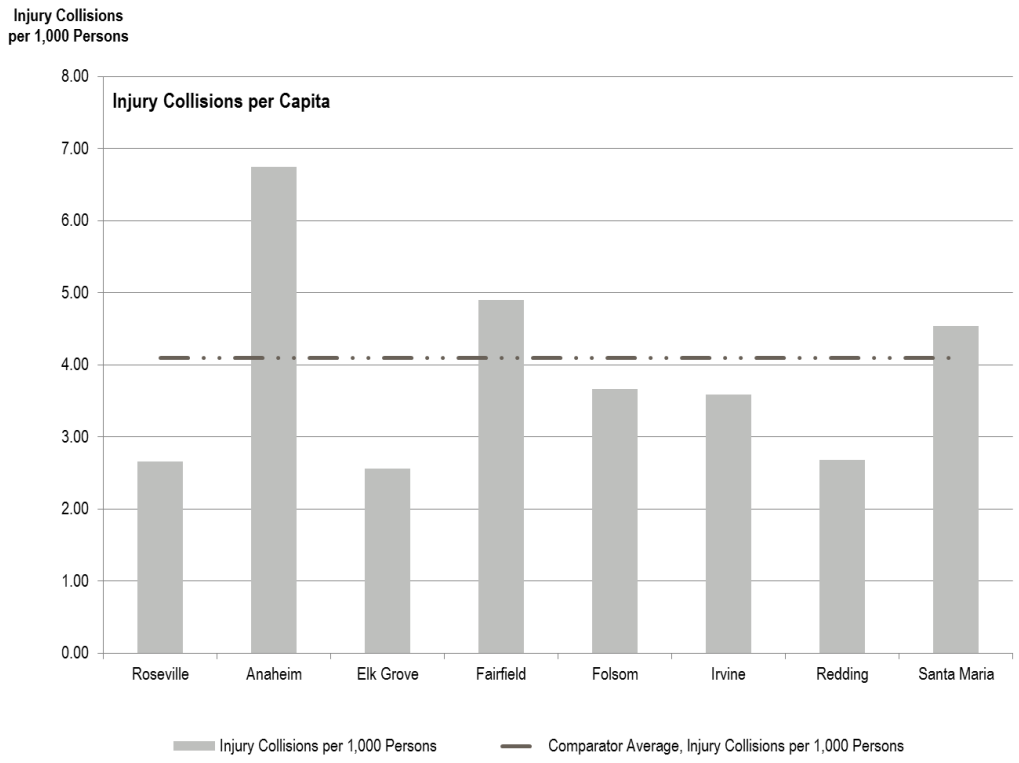


Figure 3-24: Injury Collisions per Capita, Traffic Engineering Comparators

Engineering—Traffic Engineering, Fatal and Injury Collisions per Square Mile Comparison

Figure 3-25 and Figure 3-26 compare fatal and injury collisions, respectively, on a per square mile basis for Roseville and the comparator cities. Roseville sustained 0.143 fatal collisions per square mile, 14 percent less than the comparator average of 0.166. In terms of injury accidents, Roseville sustained 7.7 injury collisions per square mile, which was 54 percent less than the comparator average of 16.8.

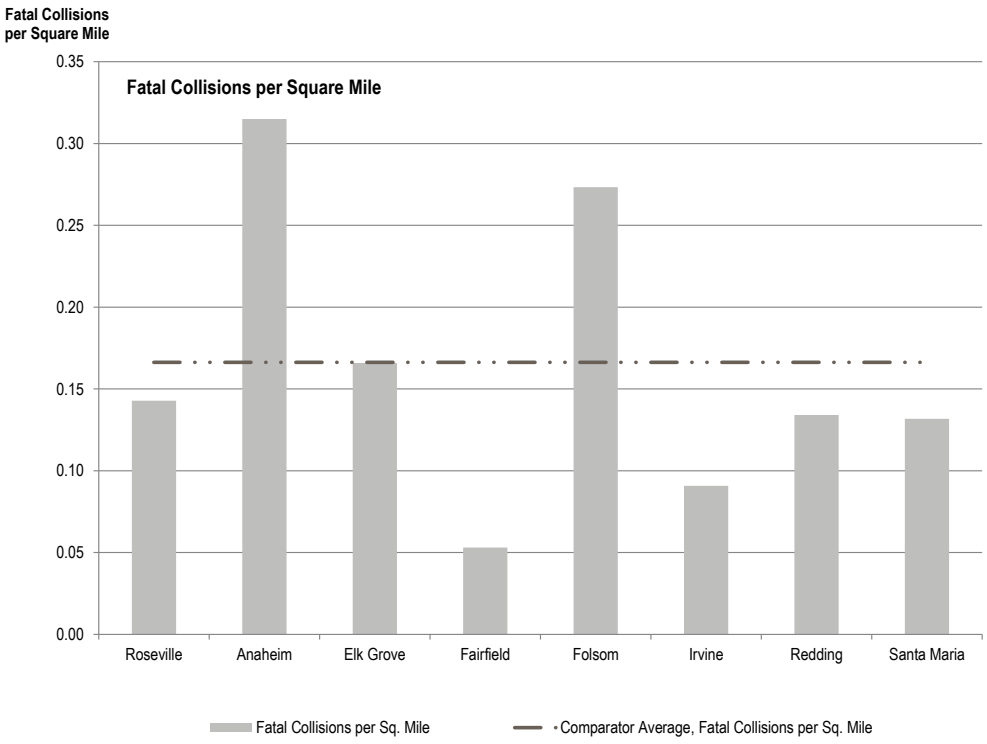


Figure 3-25: Fatal Collisions per Square Mile, Traffic Engineering Comparators

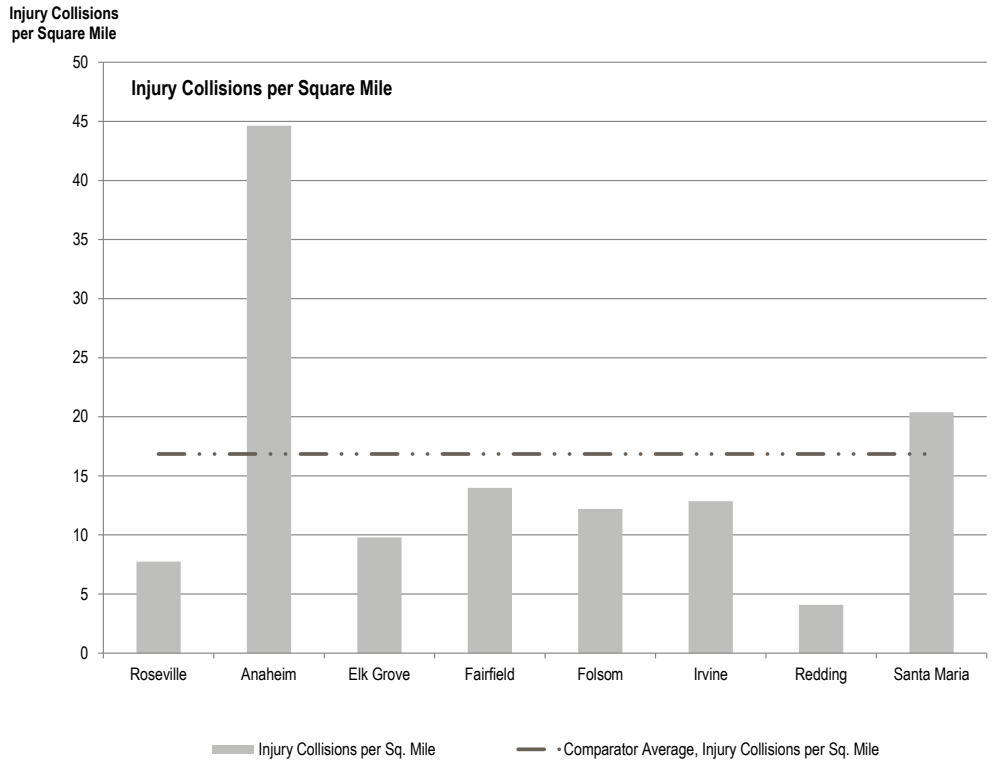


Figure 3-26: Injury Collisions per Square Mile, Traffic Engineering Comparators

Engineering—Floodplain Management, Geographic Footprint and Population Comparison

For the Floodplain Management group of the Engineering PA, six comparators were chosen, three in California and three that are counties in Washington State. These are listed in the far right column of Table 3-9.

Figure 3-27 shows the relative size of Roseville and the Floodplain Management comparators. The California cities, including Roseville are significantly smaller than the Washington State comparators in terms of geographic size. Population for Snohomish County is also significantly greater than Roseville and the other comparators.

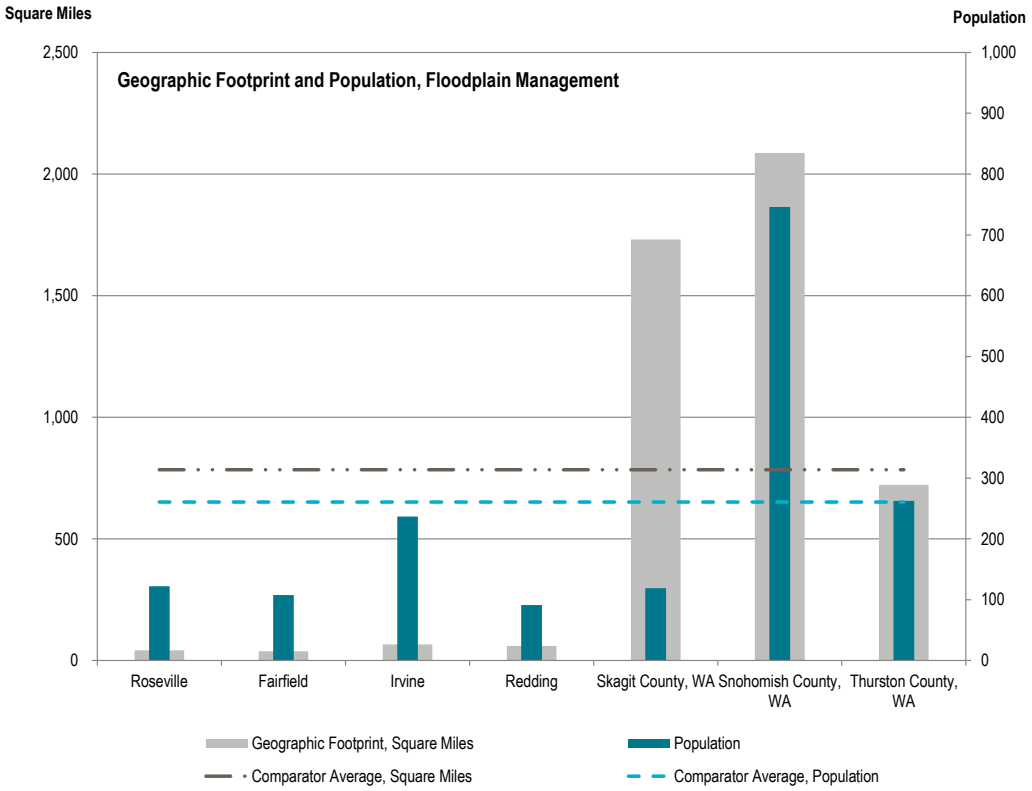


Figure 3-27: Geographic Footprint and Population, Floodplain Management Comparators

Engineering—Floodplain Management, Community Rating System Class Scored Comparison

Figure 3-28 shows the Community Rating System values for Roseville and the comparator cities. The Community Rating System (CRS) is a voluntary program within the National Flood Insurance Program (NFIP) that recognizes and encourages community floodplain management activities that exceed the minimum NFIP standards. Depending upon the level of participation, flood insurance premium rates for policyholders can be reduced up to 45 percent. By implementing certain CRS activities, projects may qualify for Federal assistance programs.[10] The CRS uses an ascending Class rating system, from 1 to 9, with 1 being the best, to determine flood insurance premium reductions for residents.

As expected, Roseville, with the only Class 1 rating in the U.S., exceeds all of the other comparator cities and sets the standard for Best in Class performance.

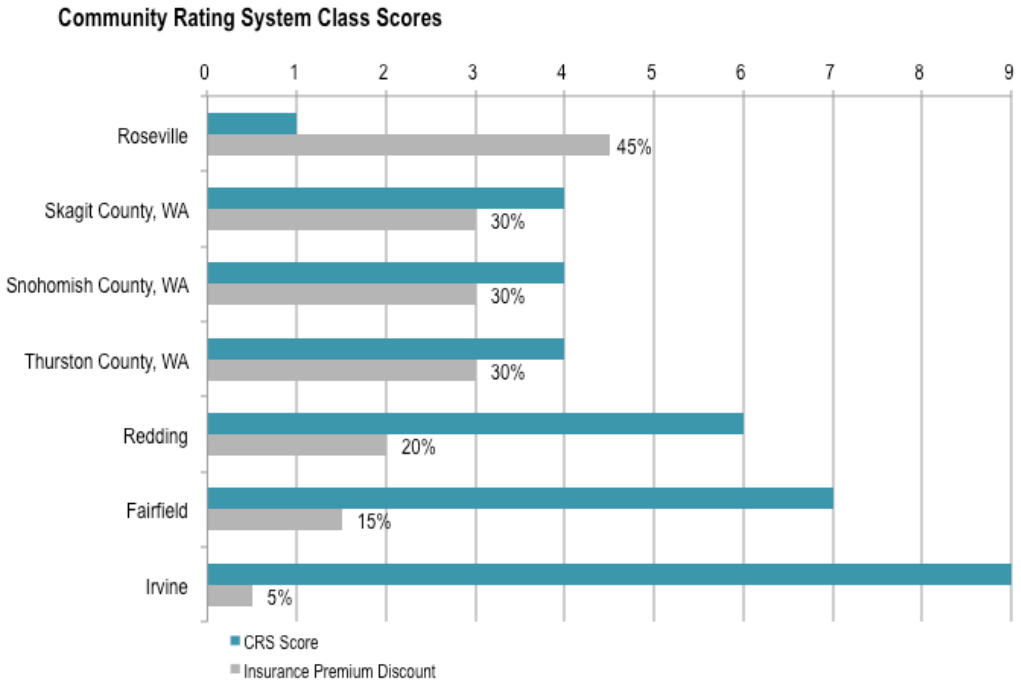


Figure 3-28: CRS Ratings, Floodplain Management Comparators

[10] www.fema.gov

3.4.2.2 Engineering Summary of Benchmarking Results

Table 3-10 summarizes external benchmarking results for the Engineering PA.

Table 3-10 Summary of PWD Engineering Benchmarking Results

Metric	Unit	Roseville	Comparator Average	Result
Geographic Footprint City Projects	Square Miles	42	37	N/A
Population City Projects	Persons	122,060	107,634	N/A
Pavement Quality Index City Projects	Arterials/Collectors	78	69	13% Higher
	Residential	72	70	3% Higher
Engineering Budgets	$/Square Mile	130,642	155,786	16% Lower
	$/Capita	45	40	12% Higher
Engineering FTEs	FTE/Square Mile	0.84	0.94	11% Lower
	$Budget/FTE/Square Mile	3,689	5,298	30% Lower
Geographic Footprint Traffic Signal Maintenance	Square Miles	42	37	N/A
Population Traffic Signal Maintenance	Persons	122,060	127,531	N/A
Traffic Signals	Signals/Square Mile	4.0	4.1	Same
	$TE Budget/Signal	9,145	12,168	25% Lower
	$TE Budget/FTE/Square Mile	6,061	5,973	1.5% Higher
	$TE Budget/1,000 Capita	0.05	0.07	29% Lower
	FTE/Signal	0.04	0.06	32% Lower
	$TE Budget/FTE	254,549	196,580	29% Higher
Geographic Footprint Traffic Engineering	Square Miles	42	43	N/A
Population Traffic Engineering	Persons	122,060	158,301	N/A
Fatal Collisions	Per 1,000 Capita	0.049	0.048	3% Higher
	Per Square Mile	0.143	0.166	14% Lower
Injury Collisions	Per 1,000 Capita	2.66	4.10	35% Lower
	Per Square Mile	7.7	16.8	54% Lower

3.4.3 Engineering Dashboard Results

The following sections present dashboard results for the four Engineering PAs: City Projects, Traffic Signal Maintenance, Traffic Engineering, and Floodplain Management. Because this is the first OPA for PWD, many KPIs lack current values and targets. In these cases, dashboard results are not available. The KPIs appearing herein may be refined and changed based on the results of this initial OPA.

An overall Engineering Division Dashboard appears in Section 3.4.3.5.

3.4.3.1 Engineering—City Projects Dashboard Results

Table 3-11 presents the dashboard KPI outcomes for the Engineering City Projects PA.

Table 3-11: Engineering—City Projects Dashboard Results

Engineering—City Projects						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Product Quality	Final Project Cost/Awarded Cost (Yearly All Project Average)	1.1	TBD		25%	
	Project Actual Working Days/Contract Working Days (Yearly All Project Average)	1.0	TBD		25%	
	Pavement Quality Index For Arterials	72	78		25%	
	Pavement Quality Index For Residential Streets	65	74		25%	
Customer Satisfaction	Lane Miles Of Streets Resurfaced Per Year	100	12.30		100%	
Leadership & Employee Development	Days Before/After Evaluation Due Date Of Actual Evaluation Completion (Yearly Average Per Supervisor)	0	TBD		100%	
Operational Optimization	Projects Worked On Versus Total Number Of Projects (Monthly, Section Average)	50%	TBD		50%	
	Planned Versus Completed Resurfacing Per Year	100%	TBD		50%	
Financial Viability	Project Billable Time	75%	78%		50%	
	Cost Of Project Change Orders/Cost Of Projects (All Projects, Yearly)	10%	TBD		50%	

Engineering—City Projects						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Infrastructure Stability	Minimum % Of Time Spent On Resurfacing Projects	50%	TBD		100%	
Community Sustainability	Pavement Quality Index For Arterials	72	78		50%	
	Pavement Quality Index For Residential Streets	65	74		50%	
Resource Adequacy	Maximum Number Of Projects Per Person (Yearly)	6	7		100%	
Understanding & Stakeholder Support	# Of Public Outreach Events/# Of Projects (Yearly)	1	1		100%	
Safety	# Of Construction Related Liability Claims/# Of Projects (Yearly)	0	TBD		100%	

3.4.3.2 Engineering—Traffic Signal Maintenance Dashboard Results

Table 3-12 presents the dashboard KPI outcomes for the Engineering Traffic Signal Maintenance PA.

Table 3-12: Engineering—Traffic Signal Maintenance Dashboard Results

Engineering—Traffic Signal Maintenance						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Product Quality	Maximum # Of Signal Malfunctions/# Of Traffic Signals (Yearly)	50%	26%		20%	
	% Completed Annual PM's	100%	97%		20%	
	% Completed Type "A" PM's (Yearly)	100%	97%		20%	
	# Of Reported Marking Errors/# Of USA Markings (Yearly)	0	0		20%	
	Time To Respond To Call-Out (Hours)	1	0.44		20%	
Customer Satisfaction	# Of Signal Malfunctions/# Of Traffic Signals (Yearly)	50%	26%		33%	
	# Of USA Related Complaints/# Of USA Marking Requests (Yearly)	0	0		33%	

Engineering—Traffic Signal Maintenance						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
	Time To Respond To Call-Out (Hours)	1	0.44		33%	
Leadership & Employee Development	Hours Of Training For Section/# Of Staff (Yearly)	20	TBD		25%	
	# PM's In Maximo/# Of ITS Locations (Yearly)	1	0.75		25%	
	Days Before/After Evaluation Due Date Of Actual Evaluation Completion (Yearly Average Per Supervisor)	0	TBD		25%	
	Max Call-Out Responses/# Of Staff (Yearly)	6	4.6		25%	
Operational Optimization	# PM's Completed/# Of Signal Technicians (Yearly)	30	26		25%	
	% Completed Annual PM's (Yearly)	100%	97%		25%	
	% Completed Type "A" PM's (Yearly)	100%	97%		25%	
	Time To Respond To Call-Out (Hours)	1	0.44		25%	
Financial Viability	Program Cost/# Signals (Yearly)	$9,000	$9,145.48		25%	
	Cost Of PM's/Total Program Cost (Yearly)	10%	9.7%		25%	
	Cost Of USA Work Orders/ Total Program Cost (Yearly)	4%	TBD		25%	
	Maximum Cost Of Call-Out Work Orders/Total Program Cost (Yearly)	1%	0.36%		25%	
Infrastructure Stability	Arterial Or Collector Centerline Miles In The City/# Of Signals (Yearly)	0.50	0.50		25%	
	Arterial Centerline Miles In The City/ Number Of ITS Asset Locations Maintained/ (Yearly)	0.45	0.44		25%	
	Miles Of Communications/Arterial And Collector Centerline Miles In The City (Yearly)	100%	100%		25%	
	Max Call-Out Responses/# Of Staff (Yearly)	6	4.6		25%	

Engineering—Traffic Signal Maintenance						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Operational Strength	# PM's Completed/# Of Signal Technicians (Yearly)	30	26		20%	
	% Completed Annual PM's (Yearly)	100%	97%		20%	
	% Completed Type "A" PM's (Yearly)	100%	97%		20%	
	# Of USA Related Complaints/# Of USA Marking Requests (Yearly)	0	0		20%	
	Time To Respond To Call-Out (Hours)	1	0.44		20%	
Community Sustainability	LED Convert Highway Safety Lighting/# Of Highway Safety Lights (Yearly)	12%	TBD		50%	
	Pounds Of Materials Recycled (Yearly)	2,500	7,160		50%	
Resource Adequacy	# Of Signal Malfunctions/# Of Traffic Signals (Yearly)	50%	26%		25%	
	% Completed Annual PM's (Yearly)	100%	97%		25%	
	% Completed Type "A" PM's (Yearly)	100%	97%		25%	
	Time To Respond To Call-Out (Hours)	1	0.44		25%	
Safety	# Of Signal Malfunctions/# Of Traffic Signals (Yearly)	50%	26%		33%	
	# Of Reported Marking Errors/# Of USA Markings (Yearly)	0	0		33%	
	Time To Respond To Call-Out (Hours)	1	0.44		33%	

3.4.3.3 Engineering—Traffic Engineering Dashboard Results

Table 3-13 presents the dashboard KPI outcomes for the Engineering Traffic Engineering PA.

Table 3-13: Engineering—Traffic Engineering Dashboard Results

Engineering—Traffic Engineering						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Product Quality	% Of Responses To A Request For Service From The Public Within 7 days (Yearly)	90%	TBD		10%	
	# Radar Enforceable Speed Limits/# Of Speed Segments (Yearly)	95%	100%		10%	
	% Of Free Mode Traffic Signals Retimed Per Year	33%	33%		10%	
	Review Two Coordination Plans Per Year	100%	100%		10%	
	# Of Traffic Control Related Complaints For Plans Reviewed (Yearly)	0	TBD		10%	
	Maximum # Of Accidents/ Capita (Yearly)	1.0%	0.27%		10%	
	# Of Students Biking/Walking To School SRTS School/# Of SRTS Participating Schools (Yearly)	60%	57%		10%	
	# Of Signs Programmed And Operating Correctly Prior To School/# Of Signs (Yearly)	100%	TBD		10%	
	# Of Crossing Guard Program Compliments/# Of Program Complaints (Yearly)	2	TBD		10%	
	# Of Incident Responses/Centerline Miles Of Roadway (Yearly)	33%	33%		10%	
Customer Satisfaction	% Traffic Studies Completed Within 3/6 Months	90%/100%	90%/100%		11%	
	# Radar Enforceable Speed Limits/# Of Speed Segments (Yearly)	95%	100%		11%	
	# Of Signal Timing Complaints/# Of Traffic Signals (Yearly)	1	TBD		11%	
	# Of Coordination Based Signal Timing Complaints/# Of Coordinated Corridors (Yearly)	2	TBD		11%	
	Average Time To Complete Plan Reviews (Days Yearly)	14	TBD		11%	
	Average Time To Complete Traffic Control Plan Reviews (Yearly)	3	TBD		11%	
	# Of Radar Feedback Sign Malfunction Complaints/# Of Signs (Yearly)	1	TBD		11%	
	# Of Crossing Guard Program Compliments/# Of Program Complaints (Yearly)	2	TBD		11%	
	# Of Incident Response Complaints/Centerline Miles Of Roadway (Yearly)	0	0		11%	

Engineering—Traffic Engineering						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Leadership & Employee Development	Traffic Studies Completed Per Staff (Yearly)	30	32		11%	
	Speed Surveys Completed Per # Of Staff (Yearly)	16	14		11%	
	Signal Timings Completed Per Staff (Yearly)	4	4		11%	
	Coordination Completed Per # Of Staff (Yearly)	0.33	0.33		11%	
	Plan Review Completed Per Staff (Yearly)	6	9		11%	
	Traffic Control Plan Review Completed Per Staff (Yearly)	30	52		11%	
	Hours Of Training For Section/# Of Staff (Yearly)	20	TBD		11%	
	Days Before/After Evaluation Due Date Of Actual Evaluation Completion (Yearly Average Per Supervisor)	0	0		11%	
	Incident Response/# Of Staff (Yearly)	8	9		11%	
Operational Optimization	% Traffic Studies Completed Within 3/6 Months	90%/100%	90%/100%		12.5%	
	Hours Spent Per Free Signal Timing Completed (Yearly)	4	4		12.5%	
	Hours Spent Per Coordination Timing (Yearly)	16	16		12.5%	
	Average Days To Complete Plan Reviews (Yearly)	14	TBD		12.5%	
	Days Spent On Traffic Control Plans (Yearly)	3	TBD		12.5%	
	# Of Students Biking/Walking To School SRTS School/# Of SRTS Participating Schools (Yearly)	60%	57%		12.5%	
	Max Staff Time Spent Programming Radar Feedback Signs/# Of Signs (Yearly)	8	8		12.5%	
	Number Of Crossing Guards/# Of Crossing Guard Locations (Yearly)	1	1		12.5%	
Financial Viability	Staff Cost Of Traffic Studies Divided By Section Staff Cost (Yearly)	TBD	TBD		10%	
	Speed Surveys Staff Cost Divided By Section Staff Cost (Yearly)	5%	7%		10%	
	Staff Cost Of Signal Timing Divided By Section Staff Cost (Yearly)	1.5%	1.5%		10%	
	Staff Cost Of Coordination Timing Divided By Section Staff Cost (Yearly)	0.4%	0.4%		10%	
	Staff Cost Of Plan Review/Section Staff Cost (Yearly)	TBD	TBD		10%	
	Staff Cost Of Traffic Control Plan Review/Section Staff Cost (Yearly)	TBD	TBD		10%	
	Cost Of Safe Routes to School Program/# Of Students Biking Or Walking To School (Yearly)	$20	$26		10%	
	Staff Cost Spent On Radar Feedback Signs/Section Staff Cost (Yearly)	1%	2%		10%	
	Cost Of Crossing Guard Program/# Of Children Crossed (Yearly)	$0.10	$0.10		10%	
	Staff Cost On Incident Management/Section Staff Cost (Yearly)	0.3%	0.3%		10%	

Engineering—Traffic Engineering						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Infrastructure Stability	Max Number Of Valid Traffic Studies Per City Resident (Yearly)	0.08%	0.098%		17%	
	Number Of Speed Limit Changes Divided By Speed Surveys Completed (Yearly)	15%	13%		17%	
	Number Of Signal Timings Changed Divided By Signal Timings Completed (Yearly)	100%	100%		17%	
	# Of Coordination Plans Changed/# Of Coordinated Corridors (Yearly)	0.25	0.25		17%	
	# Of Students Biking/Walking To School SRTS School/# Of SRTS Participating Schools (Yearly)	60%	57%		17%	
	# Of Warranted Crossing Guard Locations/# Of Crossing Locations (Yearly)	100%	100%		17%	
Operational Strength	% Traffic Studies Completed Within 3/6 Months	90%/100%	90%/100%		14%	
	% Signalized Intersections Better Than LOS C	70%	97%		14%	
	% Average Reduction In Delay From Uncoordinated Condition For Coordinated Corridors Remains	20%	25%		14%	
	Average Days To Complete Plan Reviews (Yearly)	14	14		14%	
	Average Days To Complete Traffic Control Plan Reviews (Yearly)	3	3		14%	
	Average Reduction In Accident Rate At A Location After Mitigation (Yearly)	33%	TBD		14%	
Community Sustainability	Pedestrian And Bike Improvements Made/By Total Number Of Pedestrian And Bike Requests (Yearly)	75%	80%		25%	
	% Average Reduction In Delay From Uncoordinated Condition For Coordinated Corridors Remains	20%	25%		25%	
	# Of Students Biking/Walking To SRTS School/# Of SRTS Schools (Yearly)	60%	57%		25%	
	# Of Incident Responses/ Centerline Miles Of Roadway (Yearly)	33%	33%		25%	
Resource Adequacy	% Traffic Studies Completed Within 3/6 Months	90%/100%	90%/100%		11%	
	# Radar Enforceable Speed Limits/# Of Speed Segments (Yearly)	95%	100%		11%	
	% Of Free Mode Traffic Signals Retimed Per Year	33%	33%		11%	
	# Coordination Plans Reviewed Per Year	2	2		11%	
	Average Days To Complete Plan Reviews (Yearly)	14	14		11%	
	Average Days To Complete Traffic Control Plan Reviews (Yearly)	3	3		11%	
	# Of Students Biking/Walking To School SRTS School/# Of SRTS Participating Schools (Yearly)	60%	57%		11%	
	# Of Radar Feedback Signs Programmed And Operating Correctly Prior To School/# Of Signs (Yearly)	100%	100%		11%	

Engineering—Traffic Engineering						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
	Crossing Guard Location Requests/Added Crossings Guard Locations (Yearly)	100%	100%		11%	
Understanding & Stakeholder Support	% Of Responses To A Request For Service From The Public Within 7 days (Yearly)	90%	TBD		10%	
	# Of Speed Limit Public Outreach Events/# Of Corridor Speed Limits Raised (Yearly)	100%	100%		10%	
	# Of New Signal Related Public Outreach Events/# Of New Signals Activated (Yearly)	100%	100%		10%	
	# Of Coordination Related Public Outreach Events/# Of New/Updated Coordination Plans Activated (Yearly)	100%	TBD		10%	
	# Of Major Traffic Control Notification Events/# Of Major Traffic Control Plans Approved (Yearly)	100%	TBD		10%	
	# Of SRTS Notification Events/# Of Participating Schools (Yearly)	100%	100%		10%	
	# Of Radar Feedback Sign Related Notification Events/# Of New Signs Installed (Yearly)	100%	100%		10%	
	# Of Crossing Guard Notification Events/# Of Changes In Crossing Guard Locations (Yearly)	100%	100%		10%	
	# Of New CMS Deployment Notifications/# Of New CMS Deployments (Yearly)	100%	TBD		10%	
	# Of Incident Management Notifications/# Of Incident Management Events (Yearly)	80%	70%		10%	
Safety	# Of Injuries Or Accidents While Conducting Traffic Studies/# Of Studies (Yearly)	0	0		20%	
	# Of Injuries Or Accidents While Conducting Speed Surveys/# Of Surveys (Yearly)	0	0		20%	
	# Of Corridors With Increasing Speed Limits And Yellow Time Reviewed/# On Corridors With Increasing Speed Limits (Yearly)	100%	100%		20%	
	Average Reduction In Accident Rate At A Location After Mitigation (Yearly)	33%	TBD		20%	
	Time CMS Messages Displayed/Total Time Per Year (Yearly)	25%	12%		20%	

3.4.3.4 Engineering—Floodplain Management Dashboard Results

Table 3-14 presents the dashboard KPI outcomes for the Engineering Floodplain Management PA.

Table 3-14: Engineering—Floodplain Management Dashboard Results

Engineering—Floodplain Management						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Product Quality	CRS Rating	1	1		50%	
	% Unscheduled Downtime For Flood Base Station (Annually)	10%	TBD		50%	
Customer Satisfaction	Insurance Premium Discounts Percent (Yearly)	$90,605.00	$90,605.00		20%	
	% Flood Determinations And EC's Completed Within 1 Week	75%	100%		20%	
	% Of Drainage Studies Returned Within 4 Weeks (Yearly)	100%	TBD		20%	
	% Billable Time	35%	TBD		20%	
	% Time Flood Base Station Operating (Yearly)	90%	TBD		20%	
Leadership & Employee Development	Hours Of Training For Section/# Of Staff (Yearly)	40	40		50%	
	Days Before/After Evaluation Due Date Of Actual Evaluation Completion (Yearly Average Per Supervisor)	0	TBD		50%	
Operational Optimization	Time Spent On CRS Related Tasks/Total Section Time (Yearly)	TBD	TBD		14%	
	Time Spent On Multi-Hazard Related Tasks/Total Section Time (Yearly)	TBD	TBD		14%	
	Time Spent On Emergency Management Team/EventYearly)	TBD	TBD		14%	
	Time Spent On Flood Determinations And EC's/Total Section Time (Yearly)	TBD	TBD		14%	
	Time Spent On Drainage Study Review/Total Section Time (Yearly)	TBD	TBD		14%	
	Time Spent On Supporting Tasks/Total Section Time (Yearly)	TBD	TBD		14%	
	Time Spent On Flood Alert System/Total Section Time (Yearly)	TBD	TBD		14%	
Financial Viability	Staff Cost For CRS Rating/Insurance Premiums Saved (Yearly)	TBD	TBD		50%	
	Billable Time/Total Time (Yearly)	TBD	TBD		50%	
Infrastructure Stability	Preventative Maintenance Cost/Flood Alert Station	$2,142.86	$2,142.86		50%	
	# Of Flood Alert Stations/Acre Of Regulated Floodplain (Yearly)	0.0118	0.0118		50%	
	Monthly Staff Meetings	1	1		50%	

Engineering—Floodplain Management						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Operational Strength	Preventative Maintenance Cost/Flood Alert Station	$2,142.86	$2,142.86		50%	
Community Sustainability	Insurance Premium Discounts Percent (Yearly)	$90,605.00	$90,605.00		25%	
	CRS Rating	1	1		25%	
	% Time 5 Critical Flood Alert Stations Working (Yearly)	90%	TBD		25%	
	% Time Flood Alert Base System Working (Yearly)	90%	TBD		25%	
Resource Adequacy	Time Spent On CRS Related Tasks/Total Section Time (Yearly)	TBD	TBD		20%	
	Hours Spent On Drainage Review Study/# Of Studies Reviewed (Yearly)	TBD	TBD		20%	
	Time Spent On Multi-Hazard Related Tasks/Total Section Time (Yearly)	TBD	TBD		20%	
	% Flood Determinations And EC's Completed Within 1 Week	75%	100%		20%	
	% Time Flood Alert Base System Working (Yearly)	90%	TBD		20%	
Understanding & Stakeholder Support	Staff Cost For CRS Rating/Insurance Premiums Saved (Yearly)	TBD	TBD		33%	
	Months Between Public Outreach Regarding Flood Alert System	12	TBD		33%	
	Hours Spent Working On Flood Alert District Tasks/Total Section Time (Yearly)	TBD	TBD		33%	
Safety	# Of Safety Meetings Per Year	4	TBD		50%	
	# Of Workplace Injuries	0	TBD		50%	

3.4.3.5 Engineering—Overall Dashboard Results

Figure 3-29 presents the overall dashboard for the Engineering Division of PWD. Because this is the first OPA for PWD, many KPIs lack current values and targets. In these cases, dashboard results are not available. The KPIs appearing herein may be refined and changed based on the results of this initial OPA.

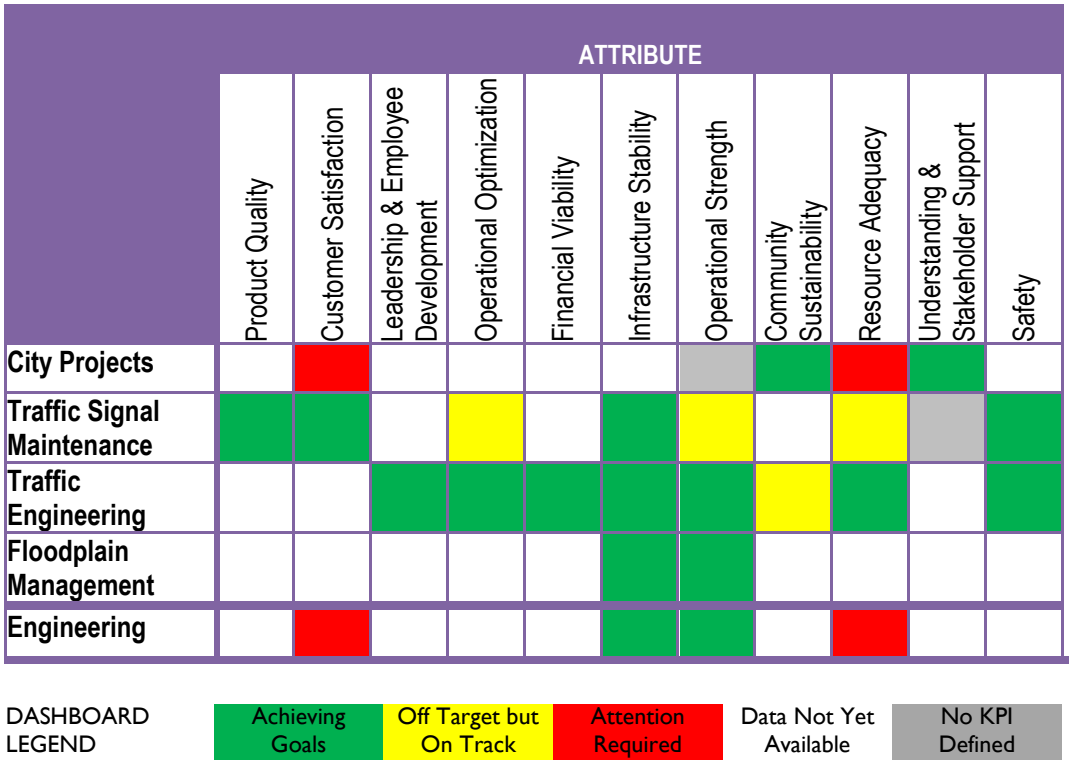


Figure 3-29: Engineering—PA Overall Dashboard Results

3.4.4 Engineering Conclusions and Recommendations

Given that this is the first OPA, sufficient KPI data to assess which attributes require immediate action and/or attention for the Engineering Division is currently not available. Leidos makes the following observations and recommendations based on the benchmarking data and interview process, which is described in further detail in Section 3.7.

Roseville has a lower population density than comparator cities which may influence the relative level of required expenditures for projects. For the City Projects PA, budget expenditures are below the comparator average on a per square mile basis, but above the average per capita. City Projects' level of staffing is below the comparator average on an FTE per square mile basis. The budgeted dollars per FTE is also low comparatively

speaking. Leidos' SME for City Projects, based on industry experience, believes that a staff of 8 would be warranted given the number of projects currently underway by this PA, approximately 50 at the time the OPA was conducted. Again, a detailed staffing study may be useful to determine what changes to engineering staff and support personnel are necessary. During the KPI workshops for the City Projects PA, the concept of tracking employee satisfaction was discussed. No KPIs were recommended by the City Projects PA related to this parameter.

For Traffic Signal Maintenance, Roseville spends less than comparators per signal and is in line with comparators on a dollar per FTE per square mile basis. Budget levels are less than comparators in terms of dollar per capita and higher in terms of dollar spent per FTE. The FTE per signal ratio is also lower than that of comparators, indicating a relatively low level of staffing given the number of signaled intersections. During KPI workshops for Traffic Signal Maintenance, the concepts of tracking reductions in vehicle emissions due to traffic signal coordination, tracking the downtime of fiber optic cables, and tracking customer satisfaction for bicycle detection were discussed as possible KPIs. These KPIs were not part of the dashboard KPIs submitted by the Traffic Signal Maintenance PA but may be considered if results would be beneficial. In the case of fiber optic cables, no means to track downtime currently exists.

Roseville is also less densely populated than its comparators for Traffic Engineering, which may influence the frequency and severity of accidents. Roseville is in line with comparators in terms of fatal collisions per capita, but experiences significantly fewer injury accidents per capita. On a per square mile basis, Roseville has a better rate than comparators in terms of both fatal and injury collisions.

For Floodplain Management, few statistics are available to help assess overall performance other than the Community Rating System scores. Roseville continues to be the highest rated city in the U.S., far exceeding the comparator average and demonstrating Best in Class performance. Leidos notes that certain aspects of flood mitigation, drainage, and issues directly related to floodplain management are housed in other Divisions and City Departments. An organizational study to assess the interdependencies and effectiveness of these various functions, both separately and as they work together, may help guide the City's strategy for meeting its overarching Floodplain Management goals. During the KPI workshops, the concepts of tracking the response to potential grant opportunities was discussed, as well as targeting dollars leveraged for buyouts. These KPI concepts were not part of the recommended KPIs submitted by the Floodplain Management PA but may merit consideration.

3.5 Street Maintenance

The Street Maintenance Division oversees the Pavement Management System and maintains: roadway pavement, street signs and roadway markings, the storm drain system, and curbs, gutters and sidewalks. In addition, the Street Maintenance Division runs the fall leaf collection program, removes graffiti, sweeps streets and places sandbags when needed.

3.5.1 Street Maintenance Matrix Study Comparison

The Matrix Study results for PWD Street Maintenance are presented in Appendix F, Section F.IV.

3.5.2 Street Maintenance Detailed Benchmarking Results

This section presents benchmarking results for PWD Street Maintenance starting with a comparators list, followed by detailed results and concluding with an overall summary table.

For the Street Maintenance Division, Roseville was compared to the seven California municipalities/cities appearing in Table 3-15.

Table 3-15: Street Maintenance Comparators

Street Maintenance Comparators
Elk Grove
Folsom
Lodi
Redding
Santa Rosa
Vacaville
Walnut Creek

3.5.2.1 Street Maintenance Detailed Benchmarking Results

Street Maintenance Geographic Footprint & Population Comparison

Figure 3-30 illustrates the relative size in terms of geographic scope and population of the various Street Maintenance comparators. In terms of geographic size, Roseville at 42 square miles is above the comparator average of 32 square miles. Roseville's population of 122,060 is also approximately 19 percent greater than the comparator average of 102,930.

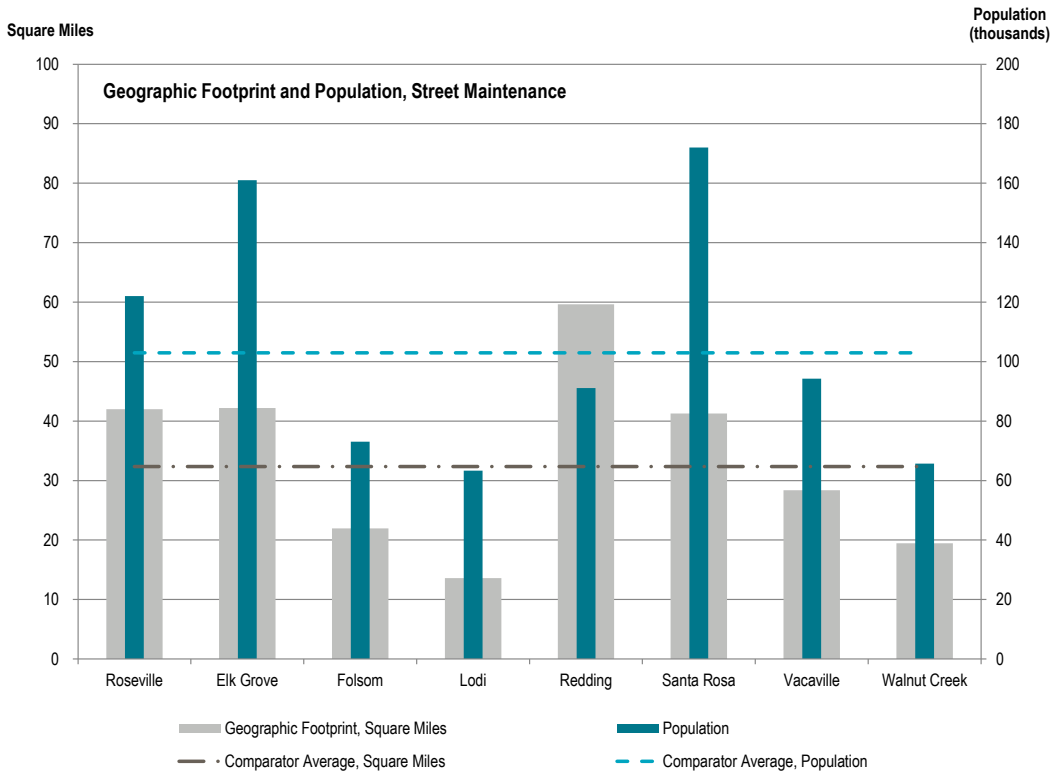


Figure 3-30: Geographic Footprint and Population, Street Maintenance Comparators

Street Maintenance Geographic Footprint Comparison (Street Miles, Storm Drain Miles, and Curb Miles Swept)

Figure 3-31 shows the relative number of street and storm drain miles, as well as curb miles of sweeping for the Street Maintenance comparators. Under all measurements, Roseville exceeds the comparator average. Roseville's 440 street miles are approximately 25 percent greater than the comparator average of 353 street miles; storm drain miles are approximately 40 percent greater than the comparator average of 267 storm drain miles. For curb miles swept, Roseville's 22,557 curb miles represents nearly double the comparator average of 12,027.

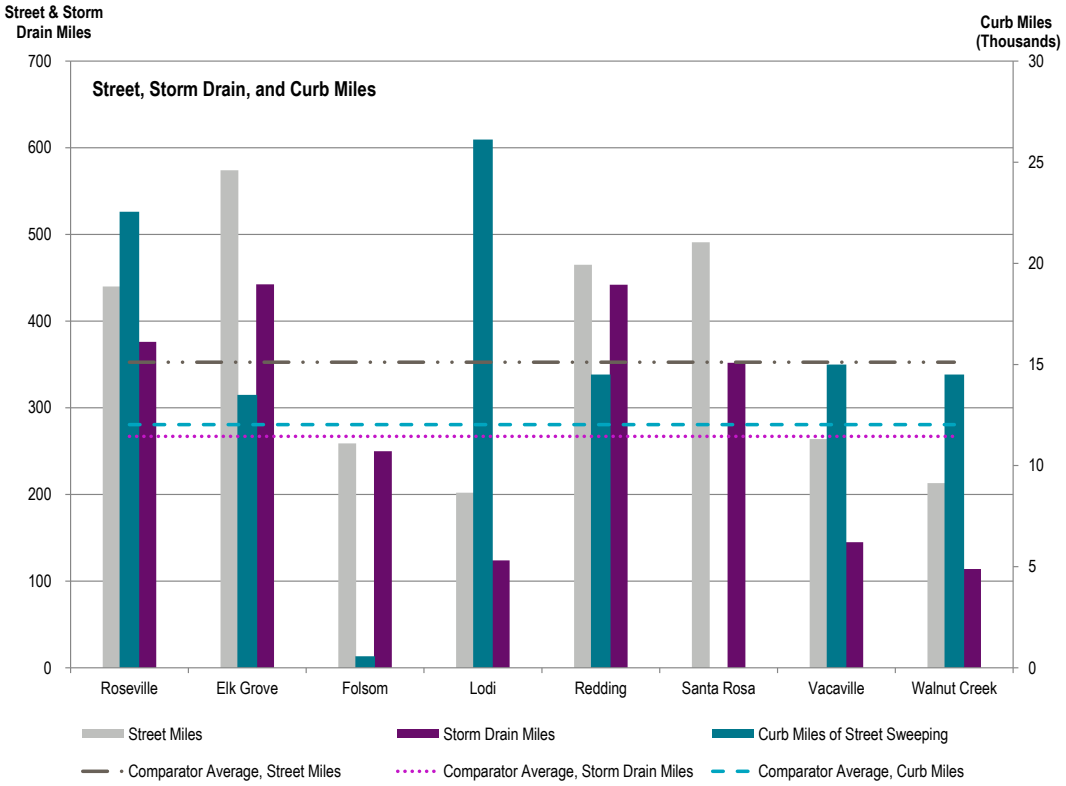


Figure 3-31: Street Miles, Storm Drain Miles, and Curb Miles of Sweeping, Street Maintenance Comparators

Street Maintenance Storm Drain Cleared Comparison (Miles and Percentage)

Data regarding the clearage of storm drains was not available for all comparators, as well as for Roseville. Figure 3-32 shows the data that was available, on a miles cleared and a percentage of total miles basis.

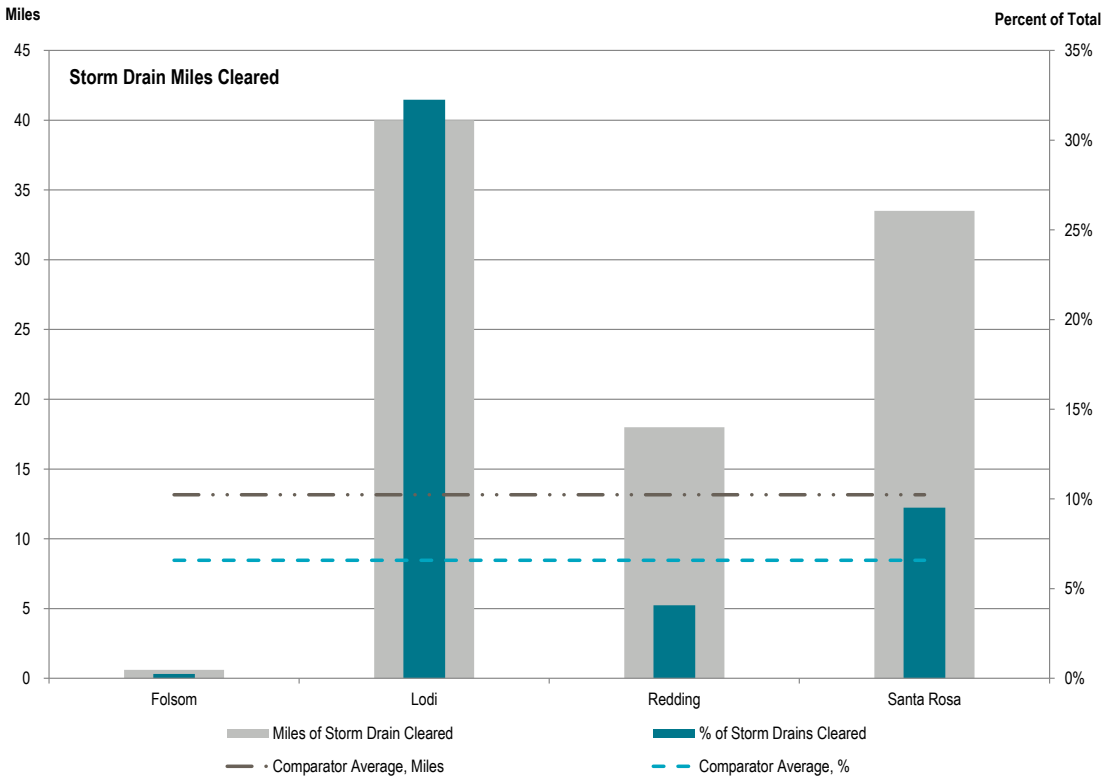


Figure 3-32: Storm Drain Miles Cleared and Percent of Total, Street Maintenance Comparators

Street Maintenance Comparison (Revenues and Expenses)

Figure 3-33 shows the drainage revenue and expenses of Elk Grove and Redding, the two comparators with drainage rates. Roseville, along with the majority of comparators, does not have a drainage rate. Table 3-16 immediately following shows the drainage rates for Elk Grove and Redding.

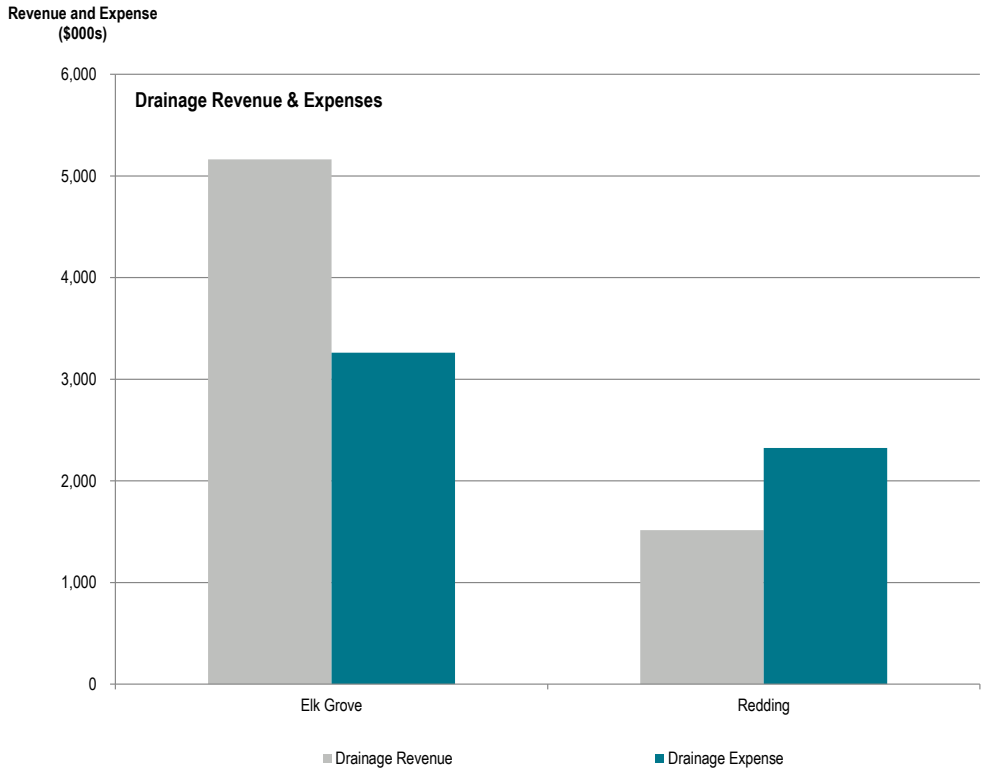


Figure 3-33: Drainage Revenue and Expenses for Comparators with Fees

Table 3-16: Storm Drain Fees

	Storm Drain Fee	Monthly Rate	Bi-Monthly Rate
Elk Grove	Zone 1 (Pre-incorporation Rate)	$5.34	$11.68
	Zone 2 (developing areas post 2004)	$16.02	$32.04
Redding	Single Family ($/Residence)	$1.32	
	Multifamily & Mobile homes ($/Unit)	$0.83	
	Commercial & Institutional by Water Usage ($/ImperviousAcre)	$19.07	

Street Maintenance Curb Comparison (Miles Swept per FTE and Times Swept)

Figure 3-34 illustrates curb miles swept per Street Maintenance FTE as well as the number of times the average curb mile is swept per year for Roseville and the Street Maintenance comparators. Roseville's 263 curb miles swept per FTE was 6 percent less than the comparator average of 279 miles swept per FTE. Removing outliers Folsom and Lodi results in a comparator average of 180 miles swept per FTE. Regarding the number of times the average curb mile is swept, Roseville at 25.63 times per year is 21 percent less than the comparator average of 28.76 times per year. Removing Folsom and Lodi results in a comparator average of 26.01 times per year.

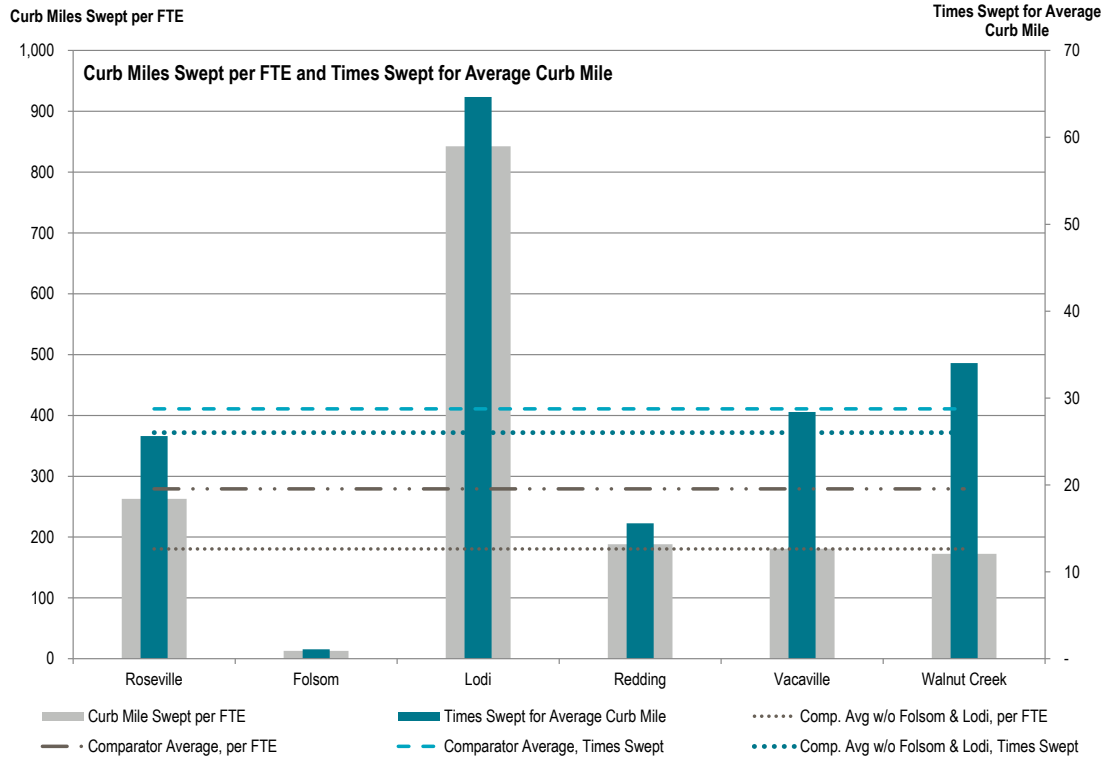


Figure 3-34: Curb Miles Swept per FTE and Times Swept for Average Curb Mile, Street Maintenance Comparators

Street Maintenance Budget Comparison (per Capita and FTE)

Figure 3-35 shows the relative expenditures in terms of Street Maintenance Division budgets per capita and per Street Maintenance FTE. In terms of budget dollar per capita, Roseville's $41 per person is 34 percent less than the comparator average of $62/Capita. In terms of Street Maintenance budget per FTE, Roseville's $58,226 is 18 percent less than the comparator average of $71,315. According to a recent study using nine benchmarks across the U.S. and one Canadian city, an average of $42 per capita is spent on street maintenance.[11] Roseville is on par with this industry average.

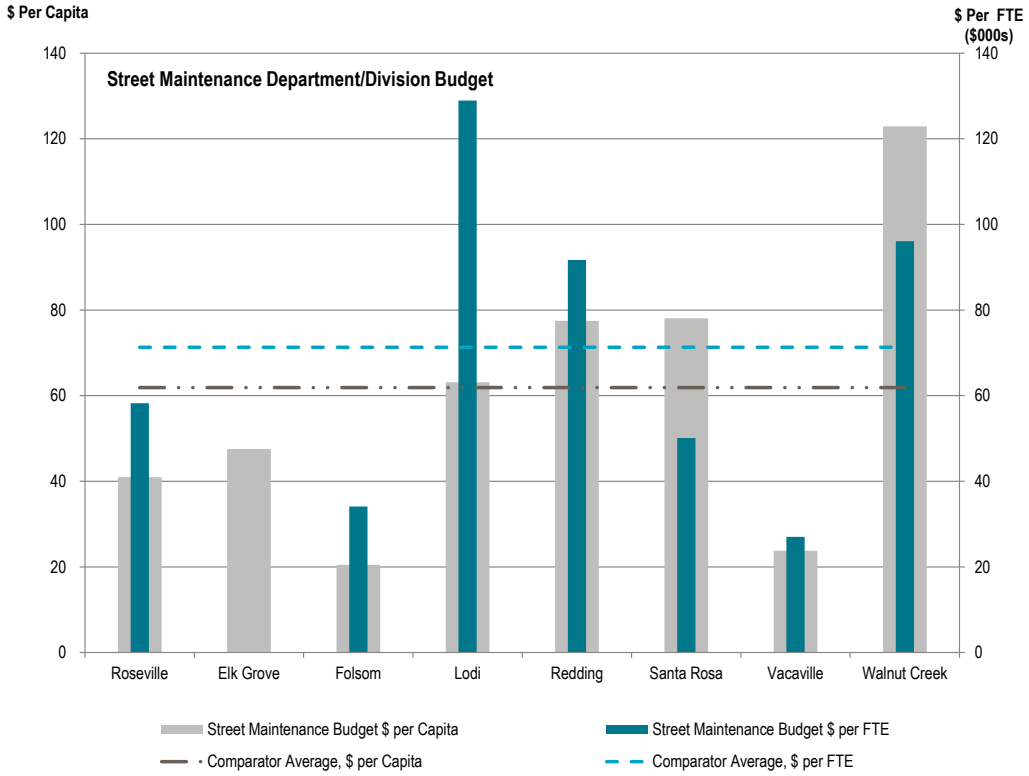


Figure 3-35: Street Maintenance Budget Dollar per Capita and Dollar per FTE, Street Maintenance Comparators[12]

[11] *City and County of San Francisco, Street Maintenance Benchmarking Report FY 2011*, Office of the Controller - City Services Auditor, May 8, 2012, p. 1. The cities included are Chicago, IL; Oakland Sacramento, San Francisco, and San Jose, CA; Seattle, WA; and Vancouver Canada.

[12] Elk Grove contracts out services and therefore comparable FTE data were not available.

Street Maintenance Budget Comparison (per Street Mile and Storm Drain Mile)

Figure 3-36 also compares relative budget expenditures, but this time on a dollar per street mile and a dollar per storm drain mile basis. Again, Roseville budgeted dollars are less than the comparator averages under both measurements. On a dollar per street mile basis, Roseville's $11,359 is 38 percent less than the comparator average of $18,258. On a dollar per storm drain mile basis, Roseville's $13,293 is 52 percent less than the comparator average of $27,983.

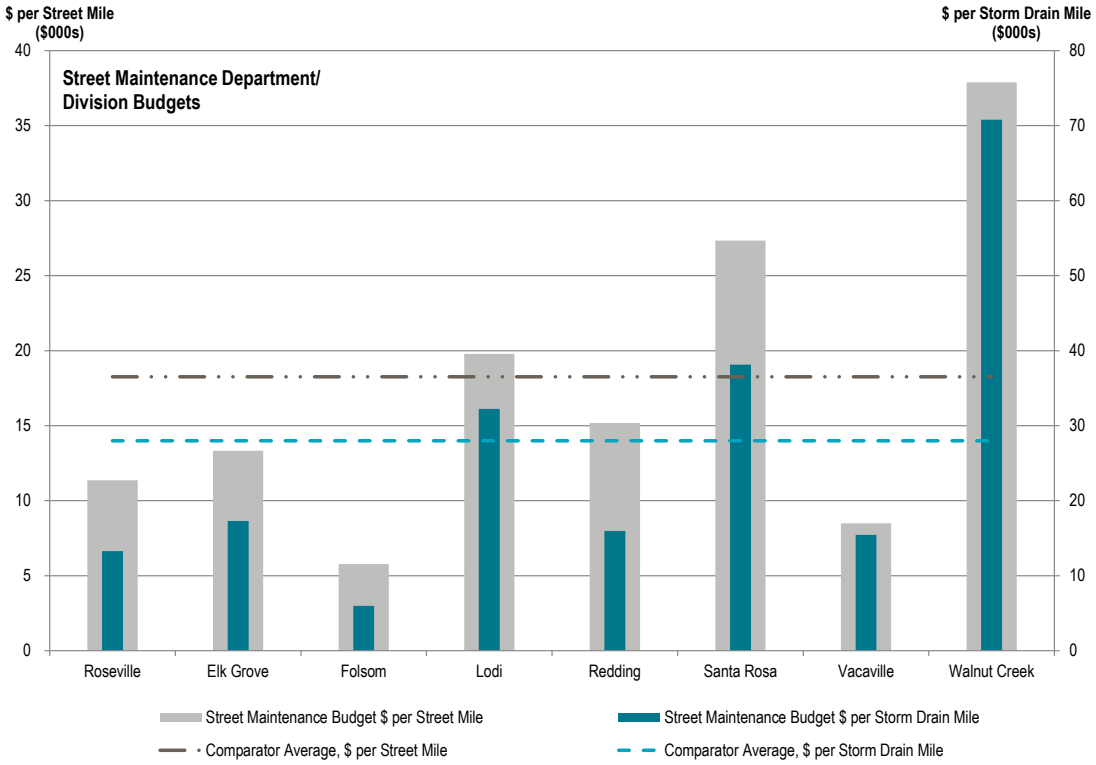


Figure 3-36: Street Maintenance Budget Dollar per Street Mile and Dollar per Storm Drain Mile, Street Maintenance Comparators

3.5.2.2 Street Maintenance Summary of Benchmarking Results

Table 3-17 summarizes external benchmarking results for the Street Maintenance PA.

Table 3-17 Summary of PWD Street Maintenance Benchmarking Results

Metric	Unit	Roseville	Comparator Average	Result
Geographic Footprint	Square Miles	42	32	N/A
Population	Persons	122,060	102,930	N/A
Streets	Miles	440	353	25% Higher
Storm Drains	Miles	376	267	40% Higher
Curbs Swept	Miles	22,557	12,027	88% Higher
	Miles Swept/FTE	263	279	6% Lower
	w/o Folsom and Lodi		180	46% Higher
	Times Swept per Year	25.63	28.67	21% Lower
	w/o Folsom and Lodi		26.01	1.5% Lower
Budget	$/Capita	41	62	34% Lower
	$/FTE	58,226	71315	18% Lower
	$/Street Mile	11,359	18,258	38% Lower
	$/Storm Drain Mile	13,293	27,983	52% Lower

3.5.3 Street Maintenance Dashboard Results

The following sections present dashboard results for the three Street Maintenance PAs: Sweeping, Drainage & Herbicides, Markings, Signs, & Graffiti, Paving & Sidewalk Repair. Because this is the first OPA for PWD, many KPIs lack current values and targets. In these cases, dashboard results are not available. The KPIs appearing herein may be refined and changed based on the results of this initial OPA.

An overall Street Maintenance Division Dashboard appears in Section 3.5.3.5.

3.5.3.2 Street Maintenance— Sweeping, Drainage, & Herbicides Dashboard Results

Table 3-18 presents the dashboard KPI outcomes for the Street Maintenance Sweeping, Drainage, & Herbicides PA.

Table 3-18: Street Maintenance—Sweeping, Drainage, & Herbicides Dashboard Results

Street Maintenance—Sweeping, Drainage, & Herbicides						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Product Quality	Cost Per Lin Ft Storm Drain Inspection/ Cleaning	$2.60	$2.75		12.5%	
	Cost Per Flood Wall Inspection/ Repair (Annually)	$1,000.00	$ 1,000.00		12.5%	
	Cost Per Pump Station Inspection/ Repair (Annually)	$1,200.00	$ 1,200.00		12.5%	
	Cost Per # Tons Leaves Picked Up	$175.00	$177.18		12.5%	
	Cost Per Square Feet Of Alley Maintained	$2.00	$2.09		12.5%	
	Staff Hrs/# Curb Miles Swept Commercial Routes Per FTE	0.25	0.28		12.5%	
	Staff Hrs/# Curb Miles Swept Residential Routes Per FTE	0.28	0.32		12.5%	
	Staff Hrs Per Lin Ft Herbicide Treated Per Yr Per FTE	TBD	0.000049		12.5%	
Customer Satisfaction	Street Flooding Average Response Time	0.50	0.75		25%	
	Staff Hours /# Tons Leaves Picked Up Per FTE	TBD	2.98		25%	
	Cost/# Curb Miles Swept Commercial Routes	$22.00	$19.63		25%	
	Cost/# Curb Miles Swept Residential Routes	$24.00	$20.25		25%	
Leadership & Employee Development	# Staff Hrs Training/Meetings	2650	2630		50%	
	# Staff Hrs Seminars	560	550		50%	
Operational Optimization	Street Flooding Average Cost Per Call	$30.00	$35.00		14%	
	Average Cost Per Manhole Inspection/Repair	$25.00	$25.00		14%	
	Average Cost Per Drain Inlet Inspection/Repair	$25.00	$25.00		14%	
	Cost Per Mile Open Channel Cleaning	$20.00	$22.73		14%	
	Average Cost Per USA Inspection	$20.00	TBD		14%	
	Cost/# Tons Sweeping Debris Collected R&C Routes	$575.00	$562.76		14%	
	Cost Per Lin Ft Herbicide Treated Per Yr	$0.003	$0.003		14%	

Street Maintenance—Sweeping, Drainage, & Herbicides						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Infrastructure Stability	Average Staff Hrs Per Manhole Inspection/Repair	0.5	0.5		33%	
	Average Staff Hrs Per Drain Inlet Inspection/Repair	0.4	0.5		33%	
	Staff Hours /# Miles Alley Maintained	0.04	0.04		33%	
Operational Strength	Staff Hrs Per Lin Ft Storm Drain Inspection/Cleaning	0.03	0.03		17%	
	Staff Hrs Per Flood Wall Inspection/Repair	15.00	20.00		17%	
	Staff Hrs Per Pump Station Inspection/Repair	0.90	1.00		17%	
	Staff Hrs Per Miles Open Channel Cleaning	0.5	0.52		17%	
	Staff Hrs/# Of USA Inspections	TBD	TBD		17%	
	# Staff Hrs Performing Preventative Veh/Equip Maint	1,755	1,940		17%	

3.5.3.3 Street Maintenance— Markings, Signs, Graffiti Dashboard Results

Table 3-19 presents the dashboard KPI outcomes for the Street Maintenance Markings, Signs, Graffiti PA.

Table 3-19: Street Maintenance—Markings, Signs, Graffiti Dashboard Results

Street Maintenance— Markings, Signs, Graffiti						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Product Quality	Total Staff Hours/# Of Transportation Permits Per FTE	TBD	TBD		14%	
	Cost /# New Signs ROW	$95.00	$93.84		14%	
	Cost /# Repaired/Replaced Signs ROW	$60.00	$63.97		14%	
	Cost/ # Sq Ft Legends Removed Grinding	$2.50	$2.38		14%	
	Cost /# Delineators Installed	$70.00	$75.05		14%	
	Cost /# Raised Pavement Markers Installed	$3.75	$3.71		14%	
	Staff Hours /# Sq Ft Graffiti Abated City Assets Per FTE	0.010	0.011		14%	
Customer Satisfaction	% Transportation Permit Response 48 Hours or Less	100%	100%		25%	
	Staff Hours/# Trees Trimmed Per FTE	TBD	TBD		25%	
	% Of Graffiti Abatement City Assets Response Time Of 48 Hours Or Less	90%	TBD		25%	
	Staff Hrs Traffic Control /# Special Events Per FTE	8	7.48		25%	

Street Maintenance— Markings, Signs, Graffiti						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Leadership & Employee Development	# Staff Hrs Training/Meetings	2630	2630		50%	
	# Staff Hrs Seminars	560	560		50%	
Operational Optimization	Cost/# Trees Trimmed	TBD	TBD		25%	
	Cost/# Sq Ft Legends/ Thermoplastic	$8.25	$7.49		25%	
	Cost/ # Sq Ft Legends Painted	$1.75	$1.85		25%	
	Cost /# Sq Ft Graffiti Abated City Assets	$0.60	$0.59		25%	
Financial Viability	Total Transportation Permit Fees Collected/# Of Permits	$54.00	$48.00		50%	
	Total Reimbursement For Traffic Control /# Special Events	4,170	4,300		50%	
Infrastructure Stability	Staff Hours /# Repaired/Replaced Signs ROW	0.85	0.84		25%	
	Staff Hours/# Trees Trimmed	1.00	1.00		25%	
	Staff Hours/ # Sq Ft Legends Removed Grinding	0.05	0.05		25%	
	Staff Hours/# Delineators Installed	0.80	1.00		25%	
Operational Strength	Staff Hours /# New Signs ROW	1.25	1.50		20%	
	Staff Hour/# Sq Ft Legends/ Thermoplastic	0.13	0.13		20%	
	Staff Hours/ # Sq Ft Legends Painted	0.04	0.04		20%	
	Staff Hours/# Raised Pavement Markers Installed	0.14	0.14		20%	
	# Staff Hrs Performing Preventative Veh/Equip Maintenance	875	1,070		20%	
Resource Adequacy	Staff Hours For Traffic Study & Special Projects	535	548		100%	

3.5.3.4 Street Maintenance— Paving & Sidewalk Repair Dashboard Results

Table 3-20 presents the dashboard KPI outcomes for the Street Maintenance Paving & Sidewalk Repair PA.

Table 3-20: Street Maintenance—Paving & Sidewalk Repair Dashboard Results

Street Maintenance— Paving & Sidewalk Repair						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
Product Quality	Staff Hours/# Potholes Repaired	0.50	0.56		20%	
	Staff Hours/# Lin Ft Neighborhood Walkway Maintained	TBD	TBD		20%	
	Staff Hrs For Project Management/Yr Weed Abatement/Mowing	TBD	570		20%	
	Staff Hours/# Paving & Sidewalk Repair Projects From Engineering	TBD	TBD		20%	

Street Maintenance— Paving & Sidewalk Repair						
Attribute	KPI	Roseville Target	Roseville Actual	KPI Dashboard Result	Weighting	Attribute Result
	Staff Hours /# Call Outs Emergency Response	3.00	3.10		20%	
Customer Satisfaction	Staff Hrs Per Square Ft Sidewalk Repaired	TBD	1.01		20%	
	Staff Hrs /# Of Temporary Sidewalk Repairs	1.00	1.03		20%	
	Average Pothole Repair Response Time	24	29		20%	
	Cost/# Lin Ft Neighborhood Walkway Maintained	TBD	TBD		20%	
	Average Response Time For Call Outs Emergency Response	0.75	1		20%	
Leadership & Employee Development	# Staff Hrs Training/Meetings Per Year Per FTE	104	104		50%	
	# Staff Hrs Seminars	TBD	TBD		50%	
Operational Optimization	Cost Per Sq Ft Sidewalk Repaired	$44.00	$48.38		12.5%	
	Cost Per Lin Ft Curb/Gutter Repair	$42.00	$45.08		12.5%	
	Cost /# Of Temp Sidewalk Repairs	$45.00	$46.34		12.5%	
	Cost /# Sq Ft Of Asphalt Removed/Replaced	$2.00	$2.36		12.5%	
	Cost /# Sq Ft Of Asphalt Skin Patch	$0.90	$0.92		12.5%	
	Cost /# Potholes Repaired	$23.00	$24.67		12.5%	
	Cost /# Lane Ft Crack Filling	$5.75	$5.92		12.5%	
	Cost /# Call Outs Emergency Response	$175.00	$175.33		12.5%	
Infrastructure Stability	Staff Hrs Lin Ft Curb/Gutter Repair	0.75	0.91		25%	
	Staff Hours /# Sq Ft Of Asphalt Removed/Replaced	0.02	0.02		25%	
	Staff Hours /# Sq Ft Of Asphalt Skin Patch	0.01	0.01		25%	
	Hours/# Lane Ft Crack Filling	0.01	0.01		25%	
Operational Strength	Total Cost Per Sq Ft Lane Miles Resurfaced/Yr	$0.90	$1.10		33%	
	Total Cost # Sq Ft Centerline/Lane Miles Resurfaced/Yr	TBD	TBD		33%	
	# Staff Hrs Performing Preventative Veh/Equip Maint Per FTE Per Day	1.0	1.5		33%	
Resource Adequacy	Staff Hrs For Project Management/Yr Crack Filling	4,100	4,195		33%	
	Staff Hrs For Project Management/Yr Fence Repair/Replacement	7	7		33%	
	Staff Hrs For Project Management/Yr Guard Rail Repair/Replacement	10.00	14.00		33%	

3.5.3.5 Street Maintenance—Overall Dashboard Results

Figure 3-37 presents the overall dashboard for the Street Maintenance Division of PWD. Because this is the first OPA for PWD, many KPIs lack current values and targets. In these cases, dashboard results are not available. The KPIs appearing herein may be refined and changed based on the results of this initial OPA.

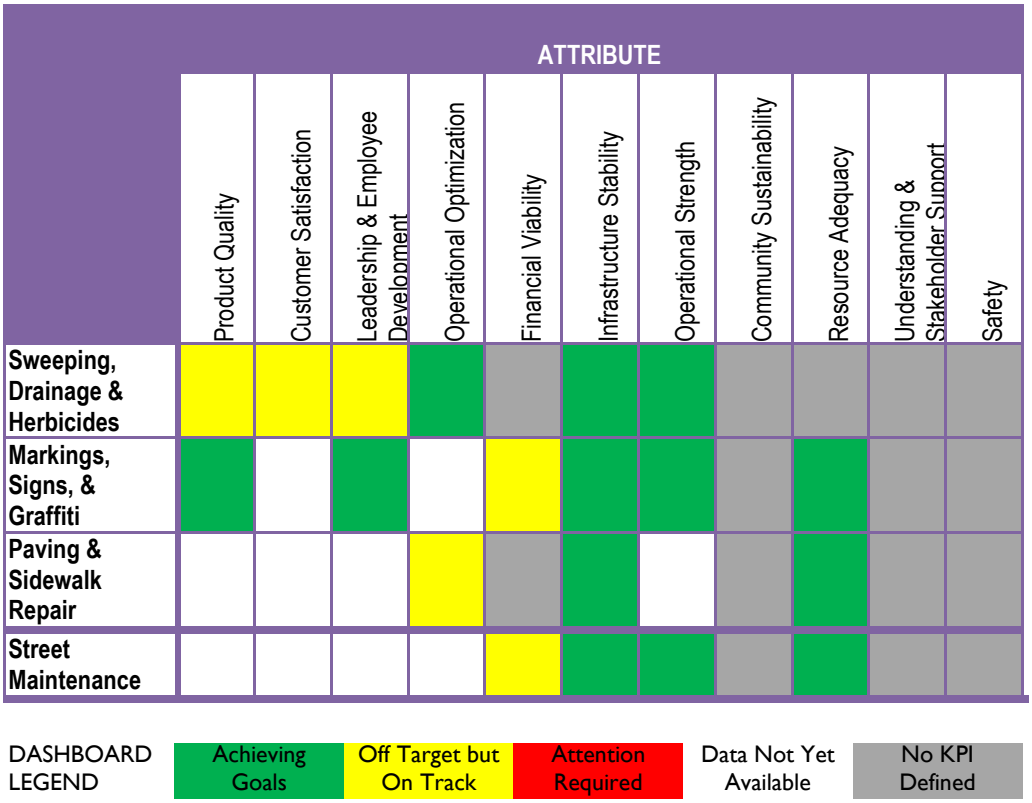


Figure 3-37: Street Maintenance—PA Overall Dashboard Results

3.5.4 Street Maintenance Conclusions and Recommendations

As with the other PAs, because this is the first OPA, insufficient KPI data are currently available to assess which attributes require immediate attention and/or action. Leidos makes the following observations and recommendations based on the benchmarking data and interviews conducted.

Roseville is in line with the comparator cities in terms of curb miles swept per FTE and in the number of times swept for the average curb mile. Budget expenditures for Street Maintenance on a per capita basis are lower than the comparators as are budget

expenditures on an FTE basis. The City's budget expenditures on a per street mile and per storm drain mile basis are also lower than comparator cities. These data indicate that, relatively speaking, Roseville spends less than comparator cities on Street Maintenance. However, the City's street maintenance expenditures are in line with the industry average of $42 per capita.

The difficulty hiring adequate levels of temporary staff was an issue brought up during interviews with staff. Again, as with the other PAs, a staffing study may provide insight as to the appropriate level of Street Maintenance staffing and assist with career development goals.

The overall effectiveness, ease-of-use, and implementation of Maximo were other top-of-mind issues for Street Maintenance PA staff.

Table 3-21 summarizes Street Maintenance KPI activities discussed in the Leidos KPI Workshops that did not appear in the KPIs recommended by the Street Maintenance PA but may merit consideration.

Table 3-21: Street Maintenance PA KPI Workshop Results

Street Maintenance		
Sweeping, Drainage & Herbicides	**Markings, Signs, & Graffiti**	**Paving & Sidewalk Repair**
# of storm drains inspected and drains cleared Manholes repaired Storm response time Leaf clearing % of catch basins requiring cleaning when inspected Reduction in accumulation of salt and solid waste	Maintain inventory of assets and condition Reflectivity of Signs/Markings Maintenance scheduling	Pavement Quality Index % of older streets brought above 70 PQI Tracking streets on age and PQI Keeping up with annual prep work % of streets targeted for prep work accomplished % of validated complaints resolved within 2 weeks Weighting old and new streets with PQI

3.6 Public Works Department Dashboard Results

Figure 3-38 presents the overall dashboard for the PWD. Because this is the first OPA for PWD, many KPIs lack current values and targets. In these cases, dashboard results are not available. The KPIs appearing herein may be refined and changed based on the results of this initial OPA.

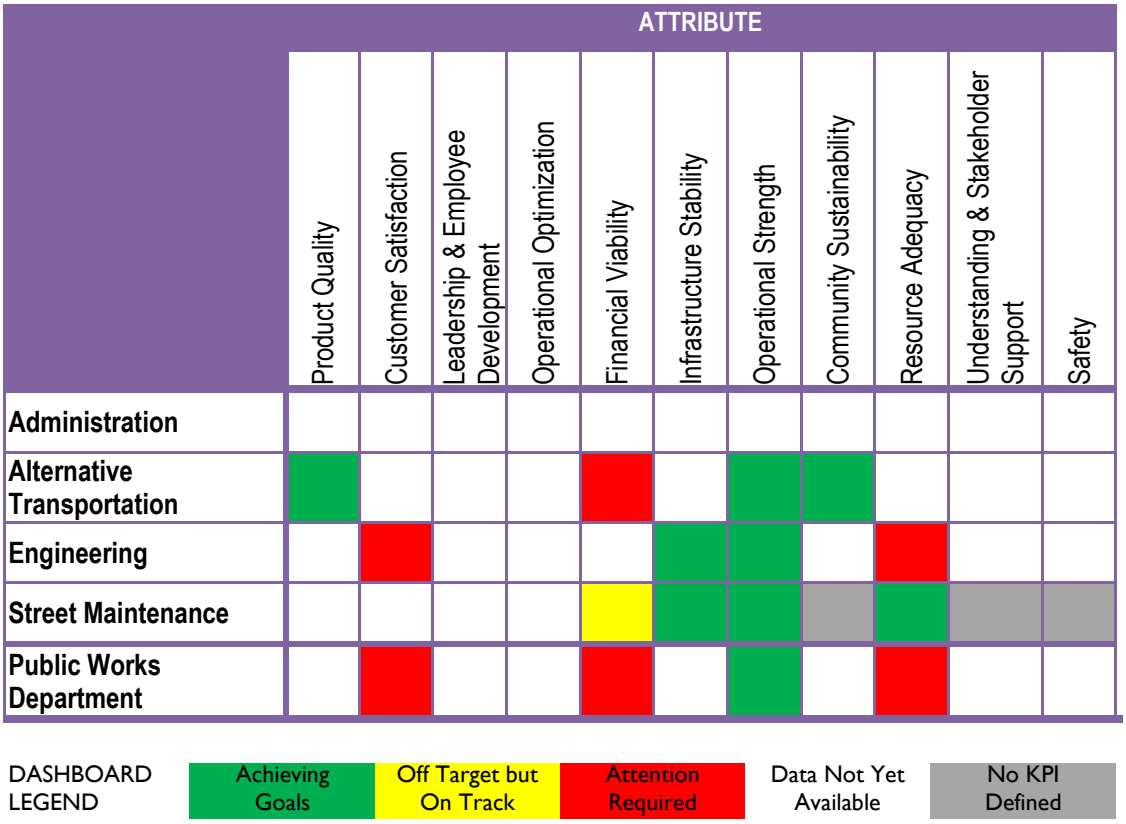


Figure 3-38: Public Works Departmental Dashboard Results

3.7 Interview Results

Leidos conducted onsite interviews with key staff at various organizational levels to assess organizational structure as well as success in fulfilling departmental missions. These interviews were also used to identify areas requiring assessment regarding adequacy of internal controls. The onsite interviews took place over three days, June 3-5, 2014. Leidos conducted fourteen on-site interviews with twenty-six staff members. Leidos also conducted one phone interview with a staff person unable to participate in onsite interviews. Interviews were augmented by follow-up calls or emails to clarify and/or solicit additional information. Appendix D details interview participants.

Leidos toured four facilities: the Street Maintenance, Traffic Signal, and Transit Call Center facilities at the Corporate Yard, as well as the Traffic Operations Center facility located at City Hall.

3.7.1 Resources and Staffing

Interviewees agreed that although resources are extremely limited, staff make the most of the resources they have. Staff are motivated, professional, hard-working and highly committed. Staff take ownership of problems and issues and work quickly to resolve issues and do what is best for the City's customers. Staff are highly qualified to perform their respective job functions through both education and experience. Staff excel at completing large volumes of work efficiently and effectively. Interviewees expressed pride in the skills, knowledge, and camaraderie of peers. Interviewees believe that the City and PWD are innovative and actively seek ways to better provide services and improve the quality of life for customers.

In order to keep providing this high level of service, staff believe that increased funding and staffing is necessary. Among all issues, the most prevalent one discussed during interviews was the concern that current staffing levels are inadequate to fulfill the duties, responsibilities, and job functions required. Consistently, across all divisions and from top to bottom, interviewees expressed that they are doing much more with less. Responsibilities increase without additional funding or resources. The idea that being "general funded" equated to not getting the necessary funding came up in many of the interviews.

Specifically, a lack of administrative employees meant staff were stretched so thin they couldn't focus on pressing matters and priority job functions. Time spent on the telephone answering questions from the public was inordinate because Public Works is a "catch-all" and often the first area contacted for public inquiries. To maintain the City's excellent customer service, PWD staff spend a lot of time simply tracking down to whom questions should be directed.

Staff need more resources to produce quality products; lack of time and staff meant quality was suffering. The fear that the quality of work was diminishing due to a lack of personnel was a theme in nearly every interview. Staff expressed that everything they do is important

and a priority so simply not doing things, or saying no to new tasks/projects/responsibilities was not a real option. Falling behind on simple things like preventative maintenance meant that more expensive fixes would be required later. The excessive time demands of the job meant many sacrifices were being made in personal lives. The words "overwhelmed," "stressed out," and "need more hours in the day" were pervasive throughout the interviews. Though not universal, some staff expressed that morale was extremely low.

3.7.2 Communication

Within the three major divisions—Alternative Transportation, Engineering, and Street Maintenance—interviewees feel that staff work well together and a good sense of team and teamwork exists. Staff communicate well within their own divisions and with the respective head of their divisions; but interviewees felt that communication between the three Public Works divisions and with other City departments can be challenging at times. In all areas, interviewees felt that mid- and lower-level staff are given the opportunity to provide input on processes and procedures and that their input is valued.

Interviewees discussed the need to improve communication between the three divisions and there was a general sense that Alternative Transportation and Street Maintenance were more "separate" from the rest of the department than Engineering. General comments indicated that communication would likely improve if staff were not so overworked and stretched so thin. Communication with other City departments was spotty and inconsistent, particularly related to plan reviews for new development activities, coordination with inspectors located within the Development Department, and incorporation or due consideration of the input from Alternative Transportation and Traffic Studies.

3.7.3 Sense of Team

Consistently, interviewees stated that they desired more team building exercises and funding for employee events. Staff feel that there used to be a better sense of team because there was greater funding for events and acknowledgement of jobs well done. These efforts have gone by the wayside as a result of budget cuts resulting from the economic downturn. They would like to see renewed commitment to team building.

Again, general comments were made across all divisions that Alternative Transportation and Street Maintenance feel more separate from the rest of PWD. Some staff expressed the belief that PWD accolades center on Engineering and the projects and services provided within that division while other parts of PWD fail to receive a similar level of attention or interest—from PWD or the City as a whole. The physical location of Alternative Transportation and Street Maintenance personnel, at the Corporate Yard instead of at the Civic Center, contributes to this sentiment.

Some staff in each division of PWD consistently expressed dissatisfaction with job titles and stated the job titles within PWD did not appropriately reflect roles and responsibilities. These staff felt that job titles do not make sense and are inconsistent across City departments as well as externally in certain cases when compared to industry norms. It is believed that this disparity in job titles leads to inequities in terms of respect and compensation.

3.7.4 Succession Planning, Staff Development, and Training

Another key issue that came up consistently was the lack of succession planning and the lack of staff development. Staff felt expressed a desire for clear succession planning for the Director and other senior PWD positions, and clarity regarding the process for qualifying for and filling senior positions. Staff expressed a desire for a clearer sense of career paths and a true mentoring program. Staff expressed a desire to compete fairly for open positions and a change from predetermined or "foregone" conclusions regarding promotions. Whether these issues are real, at a minimum these comments reflect a lack of effective internal communications, transparency and may indicate weaknesses of the City's Human Resources (HR) functions, issues that fall outside of the scope of this OPA.

Interviewees expressed the need for a formal system to manage knowledge transfer. Few written policies and procedures are in place to help new staff understand the needs of a job and how to handle certain issues/projects once senior staff leaves the organization. As senior staff leaves, given a lack of written policies and procedures, a wealth of valuable knowledge may also walk out the door. Staff also expressed the a desire for more cross-training opportunities or a job rotation program to learn about other jobs within a division, prevent burnout, and improve teamwork. Such a program would benefit PWD and the City.

With the exception of a few interviews, the lack of funding and time available for training was discussed with nearly every interviewee. Staff felt the lack of training was directly contributing to PWD falling behind in terms of professional/technical knowledge, skills, and credentials as well as inhibiting the City's ability to implement new advancements. These advancements, such as new industry know-how or a new technology, could save the City money and provide higher quality products to customers. Because of the lack of training and lack of attendance in regional and industry conferences, it is difficult to know what the City is missing out on or what they should be doing that they are not.

3.7.5 Information Technology

Difficulties with Maximo and related programs were issues discussed often in a majority of the interviews. There was a general sense that Maximo has positive attributes and may be successful given time and additional resources. But currently Maximo is not working well,

experiencing numerous integration issues, missing the necessary level of technical support, and taking focus off of "what is really important," i.e., core job duties and functions.

Another issue discussed was the lack of appropriate City IT support. Computers and programs are old and outdated, slow, and inefficient. In some cases, staff has been waiting years for new computers and the arrival keeps getting pushed out. Some doubt they will ever get them, even though they have been promised. IT services are generally viewed as not responsive to their needs. Lack of IT technology and support is hindering productivity and efficiency.

3.7.6 Meeting Customer Needs

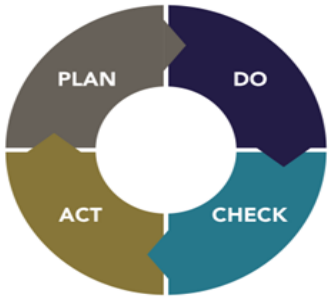
Consistently, interviewees expressed they feel they are meeting customer needs and provide an excellent level of customer service. Interviewees demonstrated pride in PWD's role in service to the community as well the quality of projects provided. In particular, responsiveness to customers' concerns and going to great lengths to resolve customer issues quickly and satisfactorily were areas of pride throughout PWD. PWD employees believe their roles help to create a city that is on the forefront of planning, technology, and services. Staff and management believe their work directly contributes to making the City a great place to live—a city with excellent roadways, improved traffic, quality transit services and alternative transportation; and a city that is clean, cares for its citizens, and is aesthetically pleasing.

Section 4
AUDIT OUTCOMES

This Section presents an overview of the OPA process followed by OPA outcomes for PWD. Observations, accolades, recommendations and findings are presented.

4.1 Overview

As part of a continual improvement process, operational audits are the Check step in a Plan-Do-Check-Act (PDCA) Cycle. By design, the OPA process consists of deciding what to investigate—defining the audit parameters—conducting the investigation, reviewing the results of the investigation, and, importantly, allowing these results to inform subsequent iterations of the process. In fact, each step of the PDCA process includes mini PDCA cycles. Course corrections and revisions are an integral part of any continuous improvement process and are crucial to ultimate process success. The process is designed to include changes and revisions over time. Such improvements and refinements are indications that the process is working not evidence that mistakes were made in prior iterations.



PDCA, Deming or Shewhart Cycle for continuous improvement

This OPA, the first in rounds of four-year cyclical reviews, was intended to furnish a high-level assessment of current conditions and identify areas requiring further attention. Subsequent OPAs will build on these efforts as the process matures over time, affording increased granularity and opportunities for targeted research.

4.2 PWD OPA Summary

This OPA has three main elements: research, interviews and site visits, and benchmarking. The first element furnishes an industry point of reference. The second provides internal perspectives and first-hand observations. The third is comprised of two parts: internal—where KPIs are tracked over time and used to compare a PA's performance to that of itself; and external—where the PA's performance is evaluated against that of its peers. These elements combine to provide a 360-degree holistic view of performance, considering multiple vantage points based on a range of characteristics. For a proper assessment, all results must be considered in combination and within the context of available information. No result should be used in isolation nor should any result be used deterministically, for example to set absolute targets. The external benchmarking results are used solely to place the PA's performance in context relative to its peers. No other use is intended or appropriate.

4.3 PWD OPA Accolades

Over the course of the PWD OPA, Leidos found numerous examples of exemplary and even best-in-class performance by each of the PWD PAs. This section highlights those areas of performance that we feel merit acknowledgment. In particular, since PWD is often one of the first calls customers make upon identifying a question or concern, staff's willingness to take ownership of problems, see issues through to resolution and "go the extra mile" to determine appropriate routing, benefits all City departments and merits noting here.

PWD staff's willingness to own problems, see issues through to resolution and go the extra mile, benefits all City departments.

PWD Street Maintenance workers rescued a Mamma & baby ducks from a storm drain during the 2014 OPA

Leidos offers the following additional Accolades for PWD:

- Public appreciates the two or three steps further PWD takes to meet and listen to property owners impacted by projects.
- PWD proactively addresses complaints.
- PWD employees take ownership of issues/problems and resolve quickly.
- PWD employees have latitude to resolve issues (contractors and otherwise) in best interest of City.
- PWD employees have the right attitude: positive, can-do, engaged, enthusiastic, responsible.
- PWD within Divisions, work together well and communicate well.
- SACOG (Sacramento Area Council of Governments) Awards for transit center.
- Statewide recognition from California Association of Collaborative Transit.
- Helmet program for bicyclists has saved children from serious injury.

Roseville offers residents more than 90 miles of on-street bike lanes and 32 miles of off-street bike paths.

- Attained a Bronze rating for being a Bicycle Friendly Community.[13]
- Safe routes to school program encourages fewer cars and safer routes for kids while promoting healthy activities.
- Staff complete a lot of engineering projects and meet deadlines. Efficient roadway system that moves traffic better with resources available.
- Maintenance schedules for traffic signals have been thoroughly reviewed and compared to industry standards.
- Traffic signal failure rate very low.
- State-of-the-art Intelligent Transportation System and Traffic Control Center are best in class.
- National recognition for floodplain management—Best-in-Class performance: highest rating in the country and only community to attain CSR 1 ranking.[14]

ROSEVILLE: A FIRST CLASS COMMUNITY

In 2006, Roseville, earned the Nation's first-ever Class 1 designation in the National Flood Insurance Program's (NFIP) Community Rating System. Damaging floods in 1995 spurred strengthening and broadening its floodplain management program. Today the City earns points for almost all CRS creditable activities. The average premium discount for policies in the Special Flood Hazard Area (SFHA) is $832.

- Best streets around the region; clean city.
- Best-in-class practices concerning pavement management and proactive maintenance.
- PWD Street Maintenance workers went above and beyond the call of duty, rescuing a Mamma & baby ducks from a storm drain during the 2014 OPA.

4.4 PWD OPA Observations

Leidos was asked as part of this assignment to conduct an organizational "scan" to evaluate the Departmental structure, the success in fulfilling the Departmental mission, staffing levels and performance, and the use of financial resources by the department. Leidos was also asked to identify "red flags" related to questionable financial expenditures or the

[13] The Bicycle Friendly Community designation is awarded by the League of American Bicyclists and considers a community's record in promoting bicycling in the "five e's"—education, engineering, enforcement, encouragement, and evaluation. http://www.bikeleague.org/bfa

[14] Roseville earned its Class 1 rating thanks to public officials' extensive efforts to protect their city. The community implemented numerous mitigation measures, earning it CRS points for 17 of the 18 creditable flood management activities. Some activities included educating residents about flooding, changing zoning rules and/or building regulations, and preserving floodplain open space. Specifically, Roseville initiated a 5-year, $20 million flood control improvement project that included buying out repetitive loss properties, elevating buildings at risk of flooding, and constructing berms and flood walls. http://www.fema.gov/media-library-data/1395661546460-d6859e8d080fba06b34a6f1a4d0abdba/NFIP_CRS_March+2014+508.pdf

misuse of City resources. In response to these requests, Leidos presents the following observations.

4.4.1 PWD Organizational Structure

PWD is organized according to a logical and easy-to-understand divisional and reporting structure. The three main Divisions, Engineering, Street Maintenance, and Alternative Transportation, are aligned internally in terms of functions and goals. Leidos found no indication that major functions within any of them would be better housed in an alternative Division or Department. Leidos has discussed and understands the City's decision to house certain functions within the Development Services Department; though there are some shared functionalities between PWD and Development Services and the perceived need for better and more consistent communication between these two Departments; as discussed in the Stakeholder interviews detailed in Section 3.7.2 "Communication."

Within the three Divisions, additional efficiencies may be gained through a modest reorganization; however, Leidos cautions that it may be best to track and monitor performance against the established KPIs before instituting such changes. An example of one potential change, which was discussed with management and staff, would be to have Traffic Operations and Traffic Studies to be combined as one group within the Engineering Division; this change occurred during this PWD OPA. Reorganizing Engineering City Projects into two groups: Structures and Bridges and Transportation and Roadway, may be an additional area warranting future investigation, although the current division size may preclude the usefulness of such a reorganization.

4.4.2 Success in Fulfilling Departmental Mission

The OPA is designed to measure how effectively the Department is performing in terms of the pre-defined eleven key Attributes. Leidos translates the fulfillment of these attributes, through the use of KPIs as detailed in Section 1.3.3, to overall success in fulfillment of the Departmental mission. Although PWD does not have a specific "Mission Statement," it does use a "Vision Statement" to provide the purpose and overarching goal of the Department. Leidos believes the Department is generally attaining its purpose and overarching goal according to this "Vision Statement."

4.4.3 Staffing Levels

Generally speaking, program staffing levels and performance are evaluated by reviewing where PWD is meeting and where it is falling short in terms of fulfillment of the eleven attributes and the KPIs within each Attribute. KPIs that are consistently not being met, or are consistently "in the red," will need to addressed through a number of approaches; including:

- revisiting the KPIs over time to make sure they remain realistic and reflective of the Department's goals;
- determining the underlying cause for failure to meet the KPI;
- developing strategies and tactics to address the shortfall in performance, as appropriate; and
- continuing to track and monitor KPIs and allowing these outcomes to inform future planning and activities.

In looking at overall performance and staffing levels, the Department will want to prioritize areas of focus. PWD should then determine the strategies and tactics to allow PWD to attain or exceed KPI target performance. Such strategies may include additional staffing or reorganization of staff.

Leidos has included a staffing study(ies) as part of the recommendations for this OPA. In Sections 3.2.4, 3.3.4, 3.4.4, 3.5.4, and 3.7.1, Leidos has provided additional comments on staffing based on interviews conducted as part of this effort and based on guidance from Leidos SMEs.

4.4.4 Inspection of PWD Projects

Leidos was asked as part of this effort to evaluate the City's approach to inspection of PWD projects should the City utilize Development Services Department staff, private consultants, or other internal group to perform inspections. After conducting this OPA, Leidos is of the opinion that this issue is part of a broader organizational question that involves several City Departments, including PWD and therefore falls outside of the scope of this OPA. As noted in Section 3.2.4, given the interdependencies and coordination requirements on plan review, Leidos recommends that that City engage in a process mapping effort for the plan review process. PWD inspections, as well as all City inspections, should be included in the scope of this review and mapping effort. At a minimum, this effort should include PWD, Development Services, and Environmental Utilities, as well as key City staff. The results of this effort will provide information crucial to determining the best approach to PWD inspections.

Leidos found nothing in the Department's current inspection methodology that conflicts with industry best practices, but Leidos cannot attest to the City meeting its legal and regulatory compliance requirements as they relate to inspections of City projects. Once the

appropriate approach is determined, KPIs should be established to track outcomes through appropriate dashboards.

4.4.5 Pavement Quality Index (PQI) targets

Leidos was asked to evaluate the City's Pavement Quality Index (PQI) targets for street maintenance, how PWD targets compare with other agencies, and whether the City is using available funds in the most efficient manner to maintain roadways. As shown in the benchmarking analysis in Section 3.4.2 and Figure 3-16, PWD has an aggressive PQI target for residential street and arterials of 65 and 72 respectively and currently exceeds these targets. According to Leidos' SMEs and industry standards[15] at an average PCI around 66 pavement may decline rapidly and repair costs increase. Therefore, a PQI of 70 is often targeted however PWD's targets are reasonable although PWD may wish to consider establishing a residential target of 70. For reference, Sacramento uses a target PQI of 75. In addition, during the KPI Workshops conducted as part of this OPA, Leidos SME's identified potential KPIs focused on classifying the state of existing streets and tracking performance towards upgrading the entire stock (refer to Table 3-21). Illustrating these concepts, Figure 4-1 provides data on the percentage of paved lane-miles with PQIs greater than 60 for eight major cities in the US and Canada from a 2012 study.

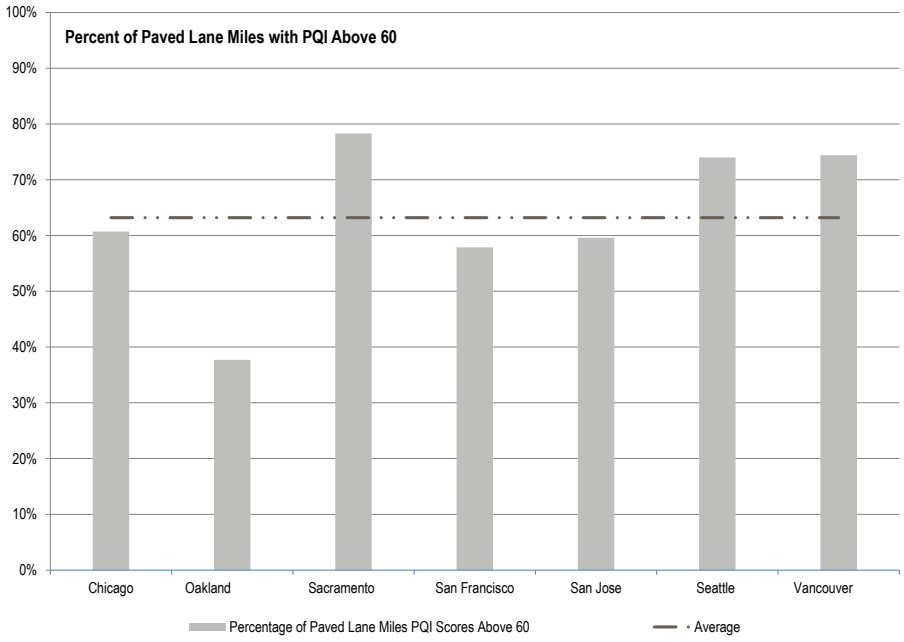


Figure 4-1:Percentage of Paved Lane Miles with PQI Above 60 [16]

[15] See for example www.pavementpreservation.org.
[16] Op. cit. Footnote 11, p. 18.

4.4.6 Filing/Document Storage System

Though not a specific task to be conducted as part of the OPA scope of work, the City asked Leidos to evaluate the PWD filing/document storage system compared to other agencies and industry best practices. Leidos' understanding of the Department's filing/document storage system derives solely through interviews with staff; Leidos did not conduct any onsite inspection or review of the document storage system, methodology, practices and procedures. Neither did Leidos benchmark the Department's filing/storage system against other agencies. However, Leidos understands, based on staff interviews, that the City does not have a robust filing system and the Department is lacking adequate storage and filing systems, both in electronic and physical forms. Governmental requirements are that the City maintains certain records for seven years and there is simply not adequate space for storage of important, required documents. A fire or other catastrophic event would mean the permanent loss of documents, as there are little to no electronic backups or off-site copies retained. Leidos is of the opinion that the filing/document storage system issue should be more fully investigated by the City so that it can be determined how best to meet the everyday needs of the Department as well as mitigate risks associated with inadequacies of the current system.

In addition to the mere filing and storage system, documentation of policies and procedures is very scant. Engineering, for example, appears to lack comprehensive written procedures for how to execute projects from concept to completion. As senior management and staff leave, remaining junior and new senior staff will have to know/remember what to do and how to do it; as there are few written references to assist them. If the Department experiences a departure of any number of individuals, the normal, preferred way of doing things may be compromised. In addition to City projects, there was indication by staff of the need to have standard operating procedures written and documented for dealing with a variety of other work tasks and problems.

The Department will have to weigh the costs and benefits of embarking on the creation of these types of standard operating procedure documents and determine where best to focus its efforts first. However this issue also merits City-level input as an attempt should be made to impose consistent requirements across City-Departments and allocate resources accordingly to ensure goals are attainable. Therefore this issue falls outside of the scope of this OPA.

4.5 PWD OPA Recommendations

As part of the 2014 PWD OPA Leidos makes the following recommendations.

4.5.1 Staffing Study

The City RFP asked that the OPA evaluate current staffing models, including the correct balance of regular employees versus contractors, and each department's use of temporary staff. Typically, a staffing study would be conducted as a separate discrete effort once the goals, priorities, and performance of the Department over time have been established. Leidos SMEs are of the opinion that the number of City projects being conducted by Engineering Division staff (on a number of projects per person basis) is unusually high compared with other municipal clients with whom we have worked. The Leidos SMEs related to Engineering—City Projects expect that at current project levels, approximately 50 at the time of the PWD OPA, a staff of approximately 8 would be expected. Multiple interviewees across PAs indicated that the Engineering staff were in need of additional resources. Additional staffing resources may be warranted in each PWD PA.

Leidos recommends that a targeted staffing study of PWD be undertaken within the next year. Failure to maintain adequate staffing resources can negatively impact employee morale, work quality, and impact safety and therefore should be addressed as soon as possible. Such study should incorporate review of employee accident rates, use of outsourcing and complexities resulting from the Affordable Care Act.

4.5.2 Alternative Transportation KPIs for Fleet

Leidos was asked to provide comparisons of transit maintenance costs and certain transit KPIs (mean miles traveled between breakdowns, cost per mile, etc.) and provide recommendations to further control maintenance costs. These issues should be addressed during the Central Services OPA in 2015 as the maintenance of transit vehicles is conducted by the Fleet Division and PWD has little to no influence over these costs. The scope of this OPA does not include an assessment of the performance of Fleet; therefore these issues are not addressed herein.

Leidos recommends that as part of the Central Services OPA in 2015, transit KPIs should be incorporated into the Fleet dashboard. Representatives from PWD and other City Departments that rely on Fleet should participate in development of Fleet dashboard KPIs.

4.5.3 Filing/Document Storage System and Written Standard Operating Procedures and Policies Study

Leidos is of the opinion that the filing/document storage system issue should be more fully investigated by the City so that it can be determined how best to meet the everyday needs of all Departments, including PWD, as well as mitigate risks associated with inadequacies of the current system. In addition to the mere filing and storage system, documentation of policies and procedures is limited in PWD, and other City departments. Written standard operating procedures should be created for every city department. However as this issue merits City input and crossed departments, an attempt should be made to impose consistent requirements across City-Departments and allocate resources accordingly to ensure goals are attainable. This issue therefore falls outside of the scope of the PWD OPA. However Leidos recommends the City conduct a study to evaluate filing and document storage as well as City policy for Written Standard Operating Procedures and Policies.

4.5.4 Plan Review Process Mapping Effort

Leidos was asked as part of this effort to evaluate the City's approach to inspection of PWD projects and whether the City should utilize Development Services Department staff, private consultants, or other internal group to perform inspections. After conducting this OPA, as discussed in Section 3.2.4, Leidos is of the opinion that this issue is part of a broader organizational question that involves several City Departments, including PWD and therefore falls outside of the scope of this OPA. In the period since Development Services was moved from PWD, the City has undergone many changes. An efficient and effective plan review process is required to support the City's growth objectives while at the same time achieving quality of life and other societal goals. Given the overlap between divisions and among departments, clarification and definition of roles and responsibilities for coordination of plan review appears warranted. Given the interdependencies and coordination requirements on plan review, Leidos recommends that that City engage in a process mapping effort for the plan review process. PWD inspections, as well as all City inspections, should be included in the scope of this review and mapping effort. At a minimum, this effort should include PWD, Development Services, and Environmental Utilities, as well as key City staff. The goal of this effort would be to create a systematic review process that allows each area appropriate input and consideration while ensuring timeliness and customer responsiveness.

4.6 PWD OPA Findings

As part of the 2014 PWD OPA Leidos makes the following findings. Despite these findings, Leidos reiterates its belief that PWD is a robust and well-performing department. These findings are provided to ensure its continues success and sustainability. Given the enthusiastic, can-do, engaged nature of PWD staff in each PA at every level, Leidos is confident in PWD's ability to continue to exceed customer's expectations and contribute to the enhanced quality of life in the City.

4.6.1 Resource Adequacy

Leidos finds that in certain areas PWD budgets are less than most comparator cities on a per square mile and per capita basis, indicating that PWD is not funded at a similar level to comparator cities. Leidos finds that lack of resources and funding may currently be impacting staff and productivity. Over time, failure to address resource adequacy may impact infrastructure, safety, quality of life and customer satisfaction.

Attention is required.

4.6.2 Employee Training, Staffing & Succession Planning

Leidos finds that staffing, training and succession planning may not be adequate to address the current needs of PWD given work load and retirement eligibility. Given the imminent departure of the Director, change management is also required to ensure successful transition to new leadership. Attention is required.

4.6.3 Staffing Study

Leidos finds that a staffing study that considers both the adequacy of staffing levels by functional area and aligns duties, roles, responsibilities, qualifications and titles within the City's HR framework is warranted.

Leidos identifies this as a critical issue for study and resolution.

4.6.4 Team Building and Communication

Leidos finds that PWD is not successfully communicating between PAs and would benefit from team building to establish a cohesive department. In addition an internal communications plan is advised. Attention is required.

4.6.5 Audit Findings Summary

Leidos presents the 2014 PWD Audit Outcomes in Table 4-1 below.

Table 4-1: 2014 PWD OPA Audit Outcomes

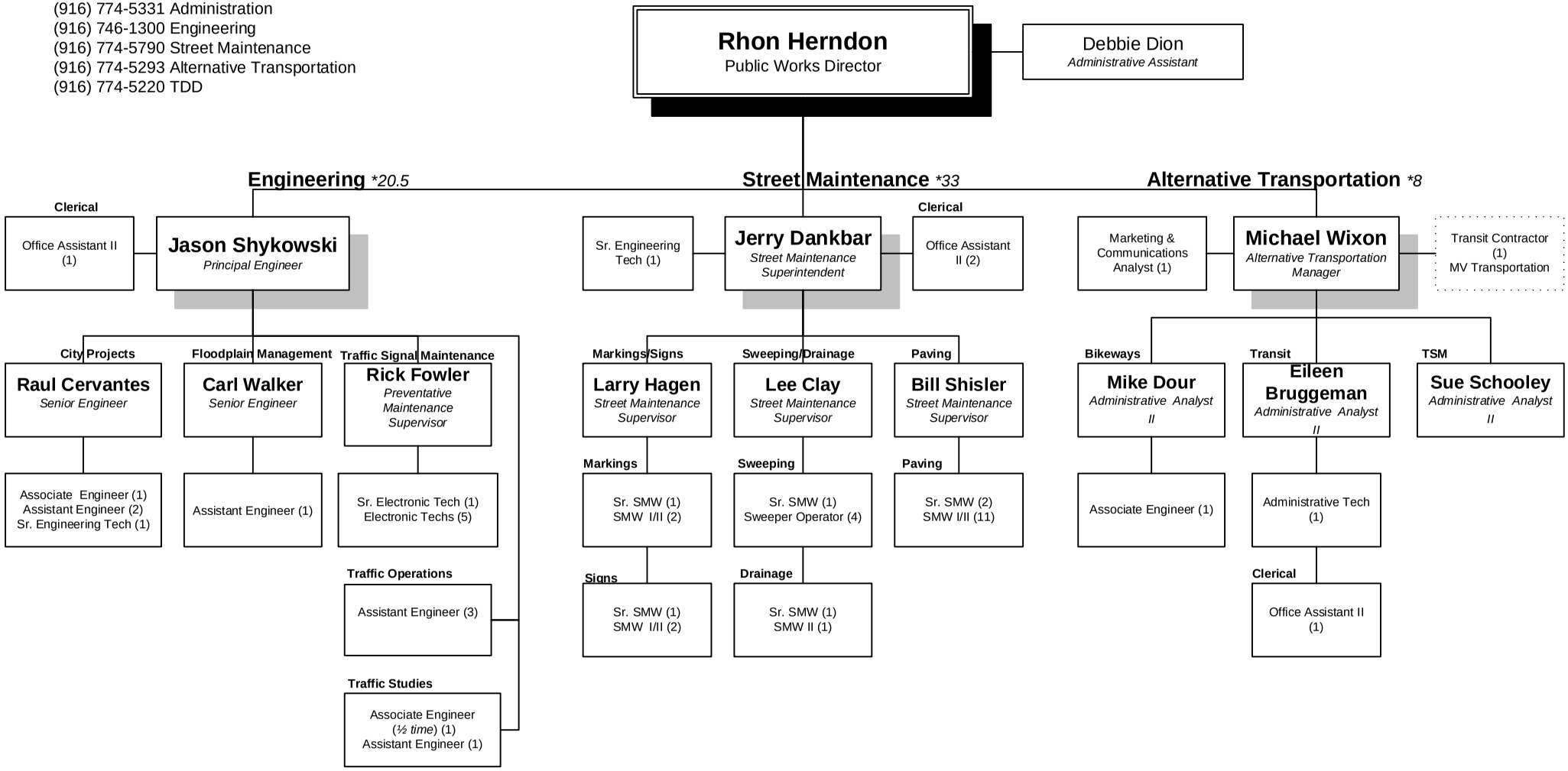
CRITERIA	ROSEVILLE	OPPORTUNITIES
operates relative to other similar Departments	Performing Well	**City** › Consider conducting a targeted study to assess City-wide policy & actual practices regarding filing and document storage and handling › Consider conducting a targeted study to assess City-wide policy & actual practices regarding written standard operating policies & procedures
manages major risks (procurement, finance, operating, etc.)	Performing Well in most areas Performing Satisfactorily in Communications	**PWD** › Consider conducting a targeted staffing study, in particular of the Engineering City Projects area › Consider implementing team building and leadership development activities both within and across PWD Divisions quarterly/semi-annually › Consider developing an internal communications plan › Consider developing a formal succession and workforce continuity plan › Consider instituting a formal change management process › Consider investigating IT resource adequacy, in particular in support of Engineering **City** › Consider conducting a process mapping of the plan review process that includes all Departments and Divisions involved
performs with respect to internal controls	Performing Well	**PWD** › Consider conducting control self-assessment workshops & implementing CSA surveys within PAs › Consider the adequacy of written standard operating policies and procedures in each Division and the Department
performs as stewards of public funds and resources	Performing Well	**PWD** › Consider evaluating funding levels to ensure adequacy of budget and staff › Consider incorporating transit-related KPIs in the Fleet Division dashboard established for the Central Services 2015 OPA

Appendix A
PWD Organization Charts

Public Works Department

Senior Staff & Positions

311 Vernon Street
Roseville, CA 95678
(916) 774-5331 Administration
(916) 746-1300 Engineering
(916) 774-5790 Street Maintenance
(916) 774-5293 Alternative Transportation
(916) 774-5220 TDD



Total Permanent Employees – 61.5/FTE 73
*Division Employee Total

Updated 11/05/13 DDion

\\oak-nt-nas-cp\my_documents$\diondebbie\My Documents\Org Charts\Public Works 2013_3.vsd

Appendix B
Existing Studies

Leidos researched studies, best practices guides, and benchmarking analyses conducted by industry groups and governmental agencies applicable to this PWD OPA to establish current industry best practices, developments, and trends.

Leidos used the following City-provided resources as a starting point:

- Citywide Organizational Efficiency and Effectiveness Study—Matrix Study—(February 2012)
- Materials Management for All Asset Groups – Findings and Best Practices Recommendations (April 2012)
- Transit Development Act Triennial Performance Audit (2013)

Appendix C
2014 PWD OPA Charter

PROJECT CHARTER

June 11, 2014

PROJECT NAME	ROSEVILLE PUBLIC WORKS DEPARTMENT OPERATIONAL PERFORMANCE AUDIT (OPA)
SPONSORS	Mike Isom and Rhon Herndon
BACKGROUND	The City of Roseville has retained Leidos to conduct an OPA of the City of Roseville Public Works Department (PW). This OPA is the first in a series of four-year cyclical audits intended to establish a baseline for future audits and to be part of a continual improvement process.
GOALS	To conduct an OPA to assess how the PW Department: › operates relative to other similar agencies; › manages major risks (procurement, finance, operating, etc.); › performs with respect to internal controls; and › performs as a steward of public funds and resources.
MISSION STATEMENT	To provide a transparent assessment of how Public Works manages employees, finances, assets and risks, and performs as a steward of public funds and resources through conducting a third party review that: › defines where we are today, › recognizes what are we doing well, › identifies what we could be doing better, and › promotes taking actions today that anticipate what is coming in the future.
VISION STATEMENT	We recognize the value of periodically reviewing what we are doing and how we are doing it by creating a continuous, structured assessment process that enables us to measure our performance in providing services and infrastructure to the community.
GUIDING PRINCIPLES	› Safety › Pride › Honesty › Integrity › Positive Attitude › Teamwork › Communication › Creativity › Community Trust › Exceptional Results
SCOPE	› PW Administration › PW Engineering › PW Street Maintenance › PW Alternative Transportation

PROJECT CHARTER

June 11, 2014

PROJECT NAME	ROSEVILLE PUBLIC WORKS DEPARTMENT OPERATIONAL PERFORMANCE AUDIT (OPA)	
DELIVERABLES	**Task 1: Data Request**	› Data request › Data register › Supplemental data requests as needed
	Task 2: Kickoff Meeting	› Agenda › Communications Plan › Meeting Summary › Master Project Schedule › Kickoff meeting and Webinar
	Task 3: Industry Research	› Document List › Survey of resources › Preliminary approach recommendation › Final approach
	Task 4: Audit Parameters	› List of current City Programmatic Performance Measures (PPM) by attribute › Preliminary & Final Defined Performance Measures (DPMs) lists › One DPM definition workshop webinar per Programmatic Area › Preliminary & Final lists of comparators
	Task 5: Interviews	› Working papers and interview notes › Supporting analyses
	Task 6: Benchmarking	› Register of third party data › Database/model of comparator data › Benchmarking analysis › Summary of results
	Task 7: Final Report	› Draft report › Supporting workpapers and analyses › Final report
	Task 8: Presentations	› PowerPoint presentation › Handouts

PROJECT CHARTER

June 11, 2014

PROJECT NAME	ROSEVILLE PUBLIC WORKS DEPARTMENT OPERATIONAL PERFORMANCE AUDIT (OPA)
ORGANIZATIONAL SUPPORT OF PROJECT	› Provide requested data in a timely fashion › Meeting attendance by key personnel › Input and feedback in a timely fashion › Furnish supplemental data in a timely fashion › Webinar participation by key personnel › Final sign-off on Attributes, PAs, DPMs and comparators › Arranging and coordinating interviews › Ensuring that selected interviewees are available and accessible › Excel-based files containing all required benchmarking data for each PA and DPM for the historic period agreed upon › Coordinate City Council presentation
LIMITATIONS ON SCOPE	Scope is limited to that set forth in the Professional Services Agreement executed on March 31, 2014.
POTENTIAL RESOURCES	› Prior Studies Commissioned by the City › Existing City data through December 31, 2013 › Citywide Organizational Efficiency and Effectiveness Study—Matrix Study—(February 2012) › Materials Management for All Asset Groups – Findings and Best Practices Recommendations (April 2012) › Transit Development Act Triennial Performance Audit (2013) 2012-2013 Annual Directory & Statistical Report › Economic Research Institute (ERI) › American Public Works Association (APWA) › Transportation Research Board (TRB) › American Association of State Highway and Transportation Officials (AASHTO) › Federal Transit Administration (FTA) › Federal Highway Administration (FHWA) › Research and Innovative Technology Administration (RITA) › American Productivity & Quality Center (APQC) › Roseville employee interviews › Subject Matter Experts
TIMEFRAME	May 2014 – November 2014
SCHEDULE	See Master Schedule (to come)

PROJECT CHARTER

June 11, 2014

PROJECT NAME	ROSEVILLE PUBLIC WORKS DEPARTMENT OPERATIONAL PERFORMANCE AUDIT (OPA)	
STEERING TEAM	ROSEVILLE › Mike Isom › Rhon Herndon › Jason Shykowski › Jerry Dankbar › Mike Wixon	LEIDOS › Lisa Vedder › Patty Cruz › Matthew Eckhart › Aruna Mathuranayagam › Kreg McCollum › Rebecca Shiflea › Jennifer White
CORE GROUP	ROSEVILLE › Mike Isom › Jason Shykowski › Jerry Dankbar › Mike Wixon	LEIDOS › Lisa Vedder
SUPPORTING PARTICIPANTS	› Subject Matter Experts › Interviewees › KPI Workshop Participants	
FUNDING	Per Council Approval Granted	
APPROVAL	[executing parties]	

Appendix D
Interview List

Tuesday 6/3/14

	FUNCTIONAL AREA	ATTENDEES
6:00	Street Maintenance Site Visit	
6:20	Garage Site Visit / Signal Tech	
7:45	Transit Call Center Site Visit	
9:00	Engineering - CIP	Jason Shykowski, Principal Engineer / Eng Div Mgr Raul Cervantes, Senior Engineer
10:30	Administration	Rhon Herndon, PW Director Debbie Dion, Administrative Assistant
1:00	Engineering – Traffic Signals	Rick Fowler, Preventative Maintenance Supervisor Zach Hopkins, Electronics Technician II
2:30	Engineering	Tito Zamora, Assistant Engineer Noah Siviglia, Senior Engineering Technician Nina Buelna, Associate Engineer
4:00	Alternative Transportation	Mike Wixon, Alternative Transportation Manager

Wednesday 6/4/14

	FUNCTIONAL AREA	ATTENDEES
8:00	Alternative Transportation – Bikeways & TSM	Mike Dour, Alternative Transp Analyst II (Bikeways), Sue Schooley, Alternative Transp Analyst II (TSM)
9:30	Alternative Transportation	Eileen Bruggeman, Alternative Transp Analyst II, Elizabeth Haydu, Administrative Technician Helen Dyda, Marketing & Communications Analyst II
1:00	Street Maintenance	Bill Shisler, Street Maintenance Supervisor Lee Clay, Street Maintenance Supervisor
2:00	Street Maintenance	~~Larry Hagen, Street Maintenance Supervisor~~ (need phone interview follow up) Rob Kunkle, Sr Street Maintenance Worker Jeff Wilcox, Sr. Engineering Technician Kelly Rock, Office Assistant II
3:30	Street Maintenance	Jerry Dankbar, Street Maintenance Superintendent

Thursday 6/5/14

	FUNCTIONAL AREA	ATTENDEES
8:00	Central Services - Fleet / Garage	Paul Diefenbach, Central Services Director
9:00	Engineering - Floodplain Management	Carl Walker, Senior Engineer
10:00	Engineering – Traffic Studies	Jana Cervantes, Associate Engineer
11:00	MV Transportation (transit contractor)	Rich Frost
12:00	Traffic Operations Center Site Visit	

Appendix E
KPI Workshops

FINAL KPI WORKSHOP SCHEDULE

July 7, 2014

FUNCTIONAL AREA	WORKSHOP	LEIDOS ATTENDEES	CITY OF ROSEVILLE CA PUBLIC WORKS DEPARTMENT ATTENDEES	DATE & TIME (Pacific Time)
Administration	**Workshop #1** › PW Administration › Communications	L. Vedder P. Cruz J. White M. Eckhart	Rhon Herndon PW Director Debbie Dion Administrative Assistant Diane Mangino	Timeslot F Weds July 9 1pm to 2pm
Alternative Transportation	**Workshop #2** › Public Transportation › Transit Planning › CIP › Grant Management › Call center › Mobility Management › Communications	L. Vedder J. White M. Eckhart A. Mathuranayagam J. Trombly T. Phillips	Mike Wixon (Dir) Alternative Transportation Manager Eileen Bruggeman (Mgr) Alternative Transp Analyst II Elizabeth Haydu, Administrative Technician Helen Dyda Marketing & Communications Analyst II Rich Frost GM MV Transportation (transit contractor) Eric Kaiser	Timeslot D Weds July 9 8:30am to 10am

FINAL KPI WORKSHOP SCHEDULE

FUNCTIONAL AREA	WORKSHOP	LEIDOS ATTENDEES	CITY OF ROSEVILLE CA PUBLIC WORKS DEPARTMENT ATTENDEES	DATE & TIME (Pacific Time)
	Workshop #3 › Bikeways Planning › Bikeways O&M › Bikeways CIP › Transportation System Management › Triennial TSM Survey	L. Vedder J. White M. Eckhart M. Judd C. Woodside R. Dudeck T. Phillips	Mike Wixon (Dir) – *optional* Alternative Transportation Manager Mike Dour (Mgr) Alternative Transp Analyst II (Bikeways) Sue Schooley (Mgr) Alternative Transp Analyst II (TSM) Cathy Gosalvez	Timeslot B Tues July 8 10am to 11:30am
Street Maintenance	**Workshop #4** › Markings › Signs › Graffiti	L. Vedder J. White A. Mathuranayagam C. Ogilvie	Jerry Dankbar (Dir) Street Maintenance Superintendent Larry Hagen (Mgr) Street Maintenance Supervisor Rob Kunkle Sr Street Maintenance Worker Jeff Wilcox Sr. Engineering Technician Kelly Rock Office Assistant II	Timeslot A Tues July 8 8am to 9:30am
	Workshop #5 › Sweeping › Drainage › Herbicides	L. Vedder J. White R. Dudeck A. Griffith	Jerry Dankbar (Dir) Street Maintenance Superintendent Lee Clay (Mgr) Street Maintenance Supervisor	Timeslot C Tues July 8 12:30pm to 2pm

FINAL KPI WORKSHOP SCHEDULE

FUNCTIONAL AREA	WORKSHOP	LEIDOS ATTENDEES	CITY OF ROSEVILLE CA PUBLIC WORKS DEPARTMENT ATTENDEES	DATE & TIME (Pacific Time)
Engineering	**Workshop #6** › Paving › Sidewalk Repair	L. Vedder J. White R. Dudeck D. Kranz	Jerry Dankbar (Dir) Street Maintenance Superintendent Bill Shisler (Mgr) Street Maintenance Supervisor	Timeslot K Thurs July 17 8am to 9:30am
	Workshop #7 › City Capital Projects › Roadway CIPs › Resurfacing	L Vedder J White S. Dopudja M. Savovic M. Judd D. Kranz R. Dudeck S. Tryon	Jason Shykowski (Div Mgr) Principal Engineer Raul Cervantes (Mgr) Senior Engineer Noah Siviglia Senior Engineering Technician Nina Buelna Associate Engineer	Timeslot J Thurs July 10 1:30pm to 3pm
	Workshop #8 › Floodplain	L. Vedder J. White E. Stevens K. Erickson	Jason Shykowski (Div Mgr) Principal Engineer Carl Walker (Mgr) Senior Engineer	Timeslot E Weds July 9 10:30am to noon
	Workshop #9 › Traffic Engineering › ITS Management › Traffic Studies	L. Vedder J. White A. Mathuranayagam T. Phillips J. Baeur	Jason Shykowski (Div Mgr) Principal Engineer Tito Zamora Assistant Engineer Jana Cervantes Associate Engineer	Timeslot G Weds July 9 2:30pm to 4pm

FINAL KPI WORKSHOP SCHEDULE

FUNCTIONAL AREA	WORKSHOP	LEIDOS ATTENDEES	CITY OF ROSEVILLE CA PUBLIC WORKS DEPARTMENT ATTENDEES	DATE & TIME (Pacific Time)
	Workshop #10 › Traffic Signal Maintenance	L. Vedder J. White A. Mathuranayagam C. Ogilvie	Jason Shykowski (Div Mgr) Principal Engineer Rick Fowler (Mgr) Preventative Maintenance Supervisor Zach Hopkins Electronics Technician II	Timeslot H Thurs July 10 8am to 9:30am

FINAL KPI WORKSHOP SCHEDULE

July				
time	8 TUES	9 WEDS	10 THURS	17 THURS
8	A W#4		H W#10	K W#6
		D W#2		
9				
10	B W#3			
		E W#8		
11				
Noon				
	C W#5			
13		F W#1		
			J W#7	
14				
		G W#9		
15				
16				

Appendix F
MATRIX STUDY COMPARISON

F.I. ADMINISTRATION MATRIX STUDY COMPARISON

Table F-1 presents the Matrix Study results for PWD Administration.

Table F-1 Administration Matrix Study Comparison

Matrix Study Performance Target	Leidos Comment
Management information systems are in place to assess and evaluate whether services are being properly managed and whether objectives are being met. Service assessments are routinely completed monthly.	Not a KPI
An effective Capital Improvement Program and asset management system has been installed that includes an inventory of infrastructure and assets to be maintained, a computerized maintenance management system, condition assessments, replacement and rehabilitation strategies, and sustainable funding levels for rehabilitation and replacement.	Not a KPI
An effective and formal storm water quality program has been developed in conjunction with the State issued MS4 permit to manage the response to construction site storm water runoff.	Not a KPI
An effective and formal floodplain management program has been developed to manage the response to severe storms and assure an effective and timely response. The floodplain management program also provides services to the community required by the National Flood Insurance Program.	Not a KPI

F.II. ALTERNATIVE TRANSPORTATION MATRIX STUDY COMPARISON

Table F-2 presents the Matrix Study results for PWD Alternative Transportation.

Table F-2 Alternative Transportation Matrix Study Comparison

Matrix Study Performance Target	Leidos Comment
The Alternative Transportation Division operates three transit services – local or fixed route services, Dial-A-Ride services, and commuter services. Each service has defined measures of performance identified in a Short Range Transit Plan and in the Program Performance Report.	KPIs defined in Transit
An annual audit of financial statements is performed by an outside agency, the Placer County Transportation Planning Agency (PCTPA). Annual reporting of financial statements and other transit performance measures are reported to the State Controller's Office and the National Transit Database.	Not a KPI
The Division continues to develop and follow a Capital Plan, which is part of the City Council approved Short Range Transit Plan. The Capital Plan will program the year in which vehicles are replaced or added to the fleet based upon the approved service plan.	Not a KPI
The Division has adopted a written fare policy (15% farebox recovery ratio) that has been adopted by the City Council and Placer County Transportation Planning Agency. The farebox recovery ratio accounts for three transit services – local fixed route, dial-a-ride, and commuter.	KPI defined in Transit under Financial Viability (Farebox Recovery Ratio)
The Division's fare products include such products as monthly passes, ticket books, the weekend day pass, regional smart card fare payment systems, etc.	Not a KPI
Bikeways are planned, constructed and maintained at high levels. Bike education and use are also provided at Bikefest, Safe Routes to School, and May is Bike Month events.	KPIs defined in Bikeways
The Division provides transit data on schedules, routes, and other information useful to Transit's customers using third-party applications such as Google Transit, Onebusaway.org, etc.	Not a KPI
The Division utilizes scheduling software to assist the Section in the highly technical and data driven process of schedule development.	Not a KPI
The Division conducts a comprehensive route optimization (or global optimization) process on an annual basis that utilizes the scheduling software to run simulations that consider every route in the system at the same time and pair routes together in ways that reduce excessive recovery time, the most cost-effective starting point to and from the ends of the route, opportunities to inter-line routes, etc.	Not a KPI

Matrix Study Performance Target	Leidos Comment
In completing roundtrip cycle time analysis, the Division has defined the acceptable level of buses that complete their trip or route on time each time as 90% to 95%. In other words, 90% to 95% of the buses will not arrive at the end of the route after the bus is already scheduled to depart for the next trip.	KPI defined in Transit under Product Quality (% of all trips on time)
Implement the TSM Ordinance by continuing to process and approve TSM Plans.	Not a KPI
Complete the Triennial Survey as a method if evaluating the performance of the TSM Ordinance.	Not a KPI

F.III. ENGINEERING MATRIX STUDY COMPARISON

Table F-3 presents the Matrix Study results for PWD Engineering.

Table F-3 Engineering Matrix Study Comparison

Matrix Study Performance Target	Leidos Comment
An effective and formal storm water quality program has been developed in conjunction with the State issued MS4 permit to manage the response to construction site storm water runoff.	Not a KPI
An effective and formal floodplain management program has been developed to manage the response to severe storms and assure an effective and timely response. The floodplain management program also provides services to the community required by the National Flood Insurance Program.	Not a KPI
Engineering services are centralized to ensure economies of scale.	Not a KPI
Staffing requirements for the all of the capital projects in the first year of the five-year capital improvement program have been identified.	Not a KPI
Staffing for design and inspection of capital projects is based upon cost of construction guidelines.	Not a KPI
A Gantt chart schedule has been developed for capital improvement projects for a two to three year period.	Not a KPI
There are clear, easily read capital improvement program and project status reports that match the level of detail needed by the expected audience.	Not a KPI
The customer departments receive quarterly updates that contain status, schedule, task/time assessments, budget update, program update, potential problems, and critical issues.	Not a KPI

Matrix Study Performance Target	Leidos Comment
A project cost accounting system is utilized to enable comparisons of planned versus actual staff hours for the design and inspection of capital projects.	KPI defined in CIP dashboard under Product Quality (Project actual/Contract) & Resource Adequacy (Projects/Employee)
The expected costs and time for completing the design, design administration, construction management, and construction inspection are routinely provided to customers prior to commencement of design.	Not a KPI
A project management procedures manual has been developed for capital project management and construction management.	Not a KPI
Plan for and maintain the directed level of services as it relates to the transportation needs of the City.	Not a KPI
Assure that the necessary funds are collected with Traffic Mitigation Fees and that the fee is regularly updated to include new projects, new land plan areas, and inflationary costs and adjustments.	Not a KPI This function now resides in Development Services
Assure that new developed areas are consistent with the Subdivision Map Act and that improvement plans meet the intent of the City's Improvement Standards.	Not a KPI This function now resides in Development Services
Provide updates to the PWD Development standards on an ongoing basis with a comprehensive review on a 5-year interval.	Not a KPI This function now resides in Development Services
Provide constructive and relevant field inspection. Protect the City's infrastructure investment.	Not a KPI
The street light bulbs used in the light fixtures are high-pressure sodium. Public Works only maintains the street lights at signalized intersections. Roseville Electric maintains all other streetlights.	Not a KPI
Signalized intersection streetlights are inspected for "burnouts" once a year.	KPI defined in TSM under Product Quality, Operational Strength, & Resource Adequacy (% completed Annual PMs)
The City owns its streetlights.	Not a KPI
Traffic signals at critical intersections have a UPS (uninterruptible power source).	Not a KPI
The City has implemented an Intelligent Transportation System technology.	Not a KPI
All of the traffic signal lamps have been converted to LED (light emitting diodes).	Not a KPI
Traffic signal cabinets are preventively maintained once a year including performing the input/output test, cleaning the cabinet, checking detectors, testing the conflict monitor, and a visual inspection.	KPI defined in TSM under Product Quality, Operational Strength, & Resource Adequacy (% completed Annual PMs)
All traffic signals are reviewed by an engineer and their signal timings updated once every three years.	Not a KPI

Matrix Study Performance Target	Leidos Comment
The City has coordinated their traffic signals along all major corridors. These timing plans are updated on a rotating basis with two corridors reviewed per year by an engineer.	KPI defined in TE under Product Quality & Resource Adequacy (Review two coordination plans/year)
The City has a traffic signal technician available for signal malfunctions 24/7. They can be dispatched by Emergency Services or the automated traffic signal monitoring system. They should acknowledge receipt of a callout page within 15 minutes and respond to the trouble call within 1 hour.	KPI defined in TSM under Product Quality, Customer Service, Operation Optimization, Operational Strength, Resource Adequacy & Safety (Time to respond to call-out)
Keep the number of signal malfunctions to no more than 1 per signal per year.	KPI defined in TSM under Customer Service & Safety (# of malfunctions/# of signals)
Monitor and manage traffic in the City.	Not a KPI
Review traffic signal, striping, and traffic control plans in a timely manner.	Not a KPI
Track, review, and respond to signalized intersection complaints.	KPI defined in TSM under Customer Service
Traffic signal heads are preventively maintained once a year including re-lamping for yellow lamps, cleaning the lens and reflectors, checking the head alignment, and painting the poles, mast arms, and control cabinets.	KPI defined in TSM under Product Quality, Operational Strength, & Resource Adequacy (% completed Annual PMs)
Evaluate traffic study requests, complaints, and suggestions for traffic safety improvements in a timely manner.	Not a KPI
Identify the top 10 High Incidence Locations throughout the City to help identify opportunities to mitigate traffic safety issues.	Not a KPI
Update city's speed limits every 5, 7, or 10 years as required by state law.	Not a KPI
The average pavement condition index for the City's street network ranges between 65 and 75. Our target for the Pavement Quality Index is 62 to 75. This was lowered two years ago when we started transferring $1 million dollars from gas tax funds to general funds to offset employee salaries. Gas Tax funds are typically used for resurfacing contract work and/or special projects.	KPI defined in CIP under Product Quality & Community Sustainability (PQI)
Subsequent to the Matrix Study, the following items now reside with Development Services	
An automated voice-activated inspection request system (IVR) is utilized.	Not a KPI
Combination inspectors are utilized.	Not a KPI
Building inspectors use automated input devices to record inspection results or to display inspection history while in the field.	Not a KPI
An automated permitting system is utilized. This system makes information internet accessible.	Not a KPI
50% to 75% of the building permits requiring plan checks are checked over-the-counter.	Not a KPI
Building permit plan checking is accomplished concurrently by all of the departments/divisions involved in the process.	Not a KPI

Matrix Study Performance Target	Leidos Comment
Building Inspector responds to inspection requests within one workday.	KPI defined in CIP under Product Quality, Operational Optimization, Resource Adequacy & Understanding & Stakeholder Support
The Division utilizes a case management system to manage the length of time required for building permit plan checks.	Not a KPI
Checklists have been developed for various types of submittals. Checklists are available on the Division's web site.	Not a KPI
A one-stop shop exists for submittal of building permit plan applications.	Not a KPI
Cycle time objectives for completion of the first plan check have been set and are monitored.	Not a KPI
The Division utilizes the most current version of the ICC Building Codes	Not a KPI
Proactive enforcement is utilized for target sweeps based on such factors as complaint volume and property condition.	Not a KPI
All code enforcement calls have an initial field response within 5 days of assignment.	Not a KPI
At least 80% of the assigned code compliance cases are closed within 30 days of receipt.	Not a KPI

F.IV. Street Maintenance Matrix Study Comparison

Table F-4 presents the Matrix Study results for PWD Street Maintenance.

Table F-4 Street Maintenance Matrix Study Comparison

Matrix Study Performance Target	Leidos Comment
Potholes are patched within one workday of receipt of the complaint.	KPI defined in PSW under Customer Service (avg. pothole repair response time)
The average pavement condition index for the City's street network ranges between 65 and 75. Our target for the Pavement Quality Index is 62 to 75. This was lowered two years ago when we started transferring $1 million dollars from gas tax funds to general funds to offset employee salaries. Gas Tax funds are typically used for resurfacing contract work and/or special projects.	KPI defined in CIP under Product Quality & Community Sustainability (PQI)
Major road repairs and reconstruction are contracted out. This includes all road work and drainage assets in the right of way.	Not a KPI
Storm water catch basins, box culverts, and drainpipes are cleaned annually.	Not a KPI
Storm water ditches are cleaned annually.	Not a KPI

Matrix Study Performance Target	Leidos Comment
Sign reflectivity is checked once every two years and regulatory signs are replaced when their reflectivity falls below acceptable standards.	Reflectivity is not a KPI Signs replaced is a KPI in MSG
School crosswalks are painted annually, and other cross walks are painted bi-annually. Legends on arterials are painted every year, collectors at 18 months and residential at 2 years.	Not a KPI
Street sweeping service levels are targeted as follows: (1) Residential-once a month; (2) major commercial areas-twice a week.	Not a KPI
A formalized sidewalk inspection and repair program is in place.	Not a KPI