CITY OF SAUSALITO

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2022 PMP Update
PTAP Round 23
Final Report
April 2023

Pavement Engineering Inc.

You can ride on our reputation

Table of Contents

Section I
Executive Summary

EXECUTIVE SUMMARY

The City of Sausalito currently maintains approximately 26 centerline miles of roads representing 3,292,888 square feet of pavement, with a replacement value of approximately $106,335,000 as calculated by StreetSaver®.

Pavement Engineering Inc. (PEI) updated all the streets in the City's Pavement Management Program, using the Metropolitan Transportation Commission's (MTC) StreetSaver® program. The purpose of a Pavement Management Program is to track inventory, store work history and furnish budget estimates to optimize funding for improving the City's pavement network.

INTRODUCTION

A Pavement Management Program has several distinctive uses:

- As a budgeting tool, a Pavement Management Program uses treatment costs that are based on recently bid projects, by the participating agency, so that budgets reflect historical costs for the area.
- As an inventory tool, a Pavement Management Program provides a quick and easy reference for pavement areas and use.
- As a pavement condition record, a Pavement Management Program provides age, load-related, non-load related and climate-related pavement condition and deterioration information. The Pavement Management Program uses pavement deterioration curves, based on nationwide research, which allow the program to predict a pavement's future condition.

A Pavement Management Program is not capable of providing detailed engineering designs for a street. The Pavement Management Program instead helps the user identify candidate streets for potential repair and maintenance. Project level pavement analysis and engineering is an essential feature of future pavement maintenance and rehabilitation projects. Additional investigation, or project level analysis, can optimize the City's pavement management dollars. Project level engineering examines the pavements in significantly more detail than the visual evaluation required for the Pavement Management Program Update and optimizes designs for all of the peculiar constraints of a set of project streets.

WORK PERFORMED

Pavement Distress Survey and Database Update

For this update, PEI performed inspections on approximately 26 centerline miles of road. Field inspections were completed in August 2022.

PEI measured the following distress types as part of our review: alligator cracking (fatigue), block cracking, distortions, longitudinal & transverse cracking, patching & utility cut patching, rutting / depressions, weathering, and raveling. All the collected data was entered into the City's StreetSaver® database.

As part of our field review, all the streets were measured to confirm lengths and widths. Lengths were measured using a vehicle-mounted electronic measuring device and widths were measured using a hand-held measuring wheel. Measurement discrepancies were tabulated and reviewed with the City to determine if corrections were needed.

PEI performed a quality control (QC) check on our work. PEI's QC check consists of performing a field review of any street segment where the PCI showed a decrease of 3 or more points per year, or an increase of 1 PCI without a documented M&R treatment, when compared to the last inspection for the same road segment in the StreetSaver® database. Each segment in the QC process was visually reviewed to determine if the StreetSaver® calculated PCI was representative of the observed overall pavement condition for that road segment. Variations found were re-inspected by a Senior Engineering Technician, or the Project Manager, and the segments' PCI was recalculated.

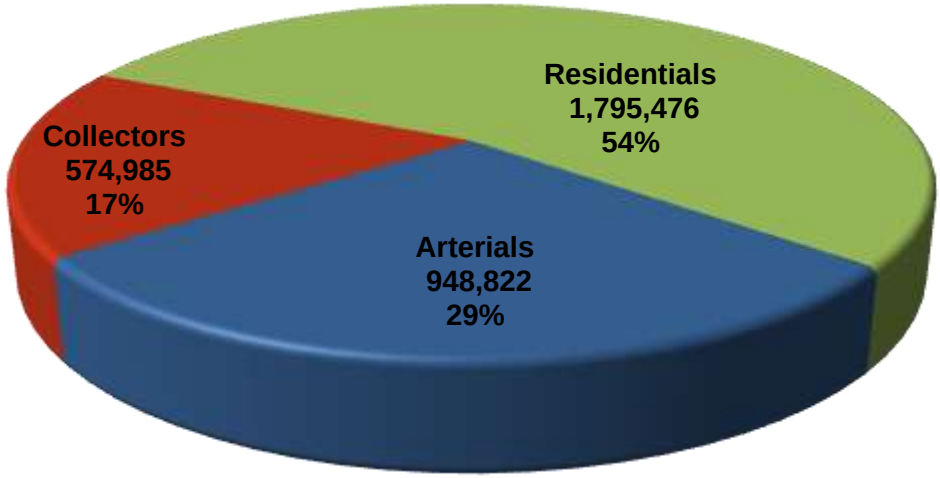
FINDINGS

The updated Pavement Management Program showed that the City's overall average PCI is **58**.

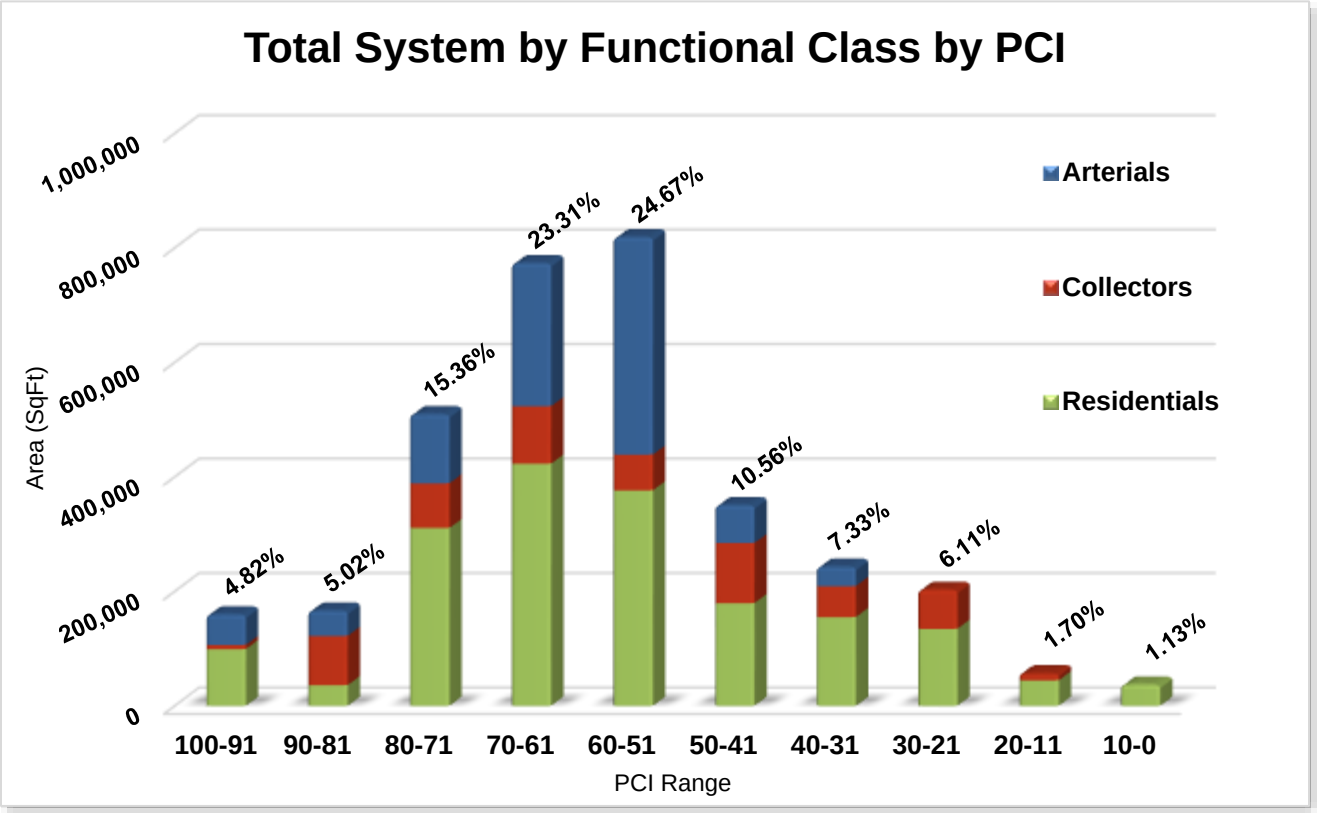
The breakdown by functional classification is as follows:

Functional Classification	Centerline Miles	Lane Miles	Pavement Area (sq. ft.)	Percent of System	Average PCI
Arterial	6.88	13.39	948,822	28.59%	62
Collector	4.34	8.76	574,985	17.32%	55
Residential	15.20	29.67	1,769,081	54.09%	57
Totals	26.42	51.82	**3,292,888**	100%	**58**

The pie graph below shows the percentage of each functional classification, by area.



The bar graph below shows the City's Street system broken down into 10-point PCI ranges.



The breakdown by Condition Category and corresponding PCI range is shown below:

Condition Category Breakdown			
Condition	**PCI Range**	**Square Feet**	**% Of Total**
Excellent	100-91	159,911	4.82%
Good	90-71	676,174	20.37%
Fair	70-51	1,592,534	47.98%
Poor	50-31	593,877	17.89%
Failed	30-0	296,787	8.94%

The analysis shows that **68.35%** of the City's pavement are in **Good** to **Fair** condition. Details of each street segment are provided in ***Section IV: Reference Reports***.

BUDGET ANALYSIS

StreetSaver® uses a decision tree to model the decision-making process that agencies follow to select a maintenance or rehabilitation strategy. The decision tree contains "branches" for each functional classification, surface type and condition category. Jurisdictions can outline their maintenance and rehabilitation strategy by choosing a treatment for each branch.

The treatments listed in the decision tree are generalized to provide a range of treatments. Typical treatments within each generalized treatment range are listed below. The exact treatment would need to be determined during the design phase of the project.

StreetSaver® assigns a treatment action and estimated cost to each street segment based on the pavement's current PCI.

Treatment Category	Typical Treatment
Light Maintenance	• Slurry Seal or Micro-Surface • Fog Seal or Scrub Seal
Heavy Maintenance	• Chip Seal, Cape Seal • Slurry Seal or Micro-Surface with Digouts • Thin Maintenance Overlay (TMO)
Light Rehab.	• Overlay (2" and under) or Thin Mill and Fill
Heavy Rehab.	• Overlay (greater than 2") or Thick Mill and Fill • Cold-In-Place Recycling • Full Depth Reclamation • Pulverize and Resurfacing
Reconstruct	• Full Section Reconstruction

Decision Tree Unit Prices

As a minimum, recent bid tabulations should be used to determine the appropriate unit costs. Further, the unit costs include other costs such as design, construction management, contingencies or other related construction costs (ADA ramps, curb & gutters, striping etc.) to form a more comprehensive unit cost for the selected treatments.

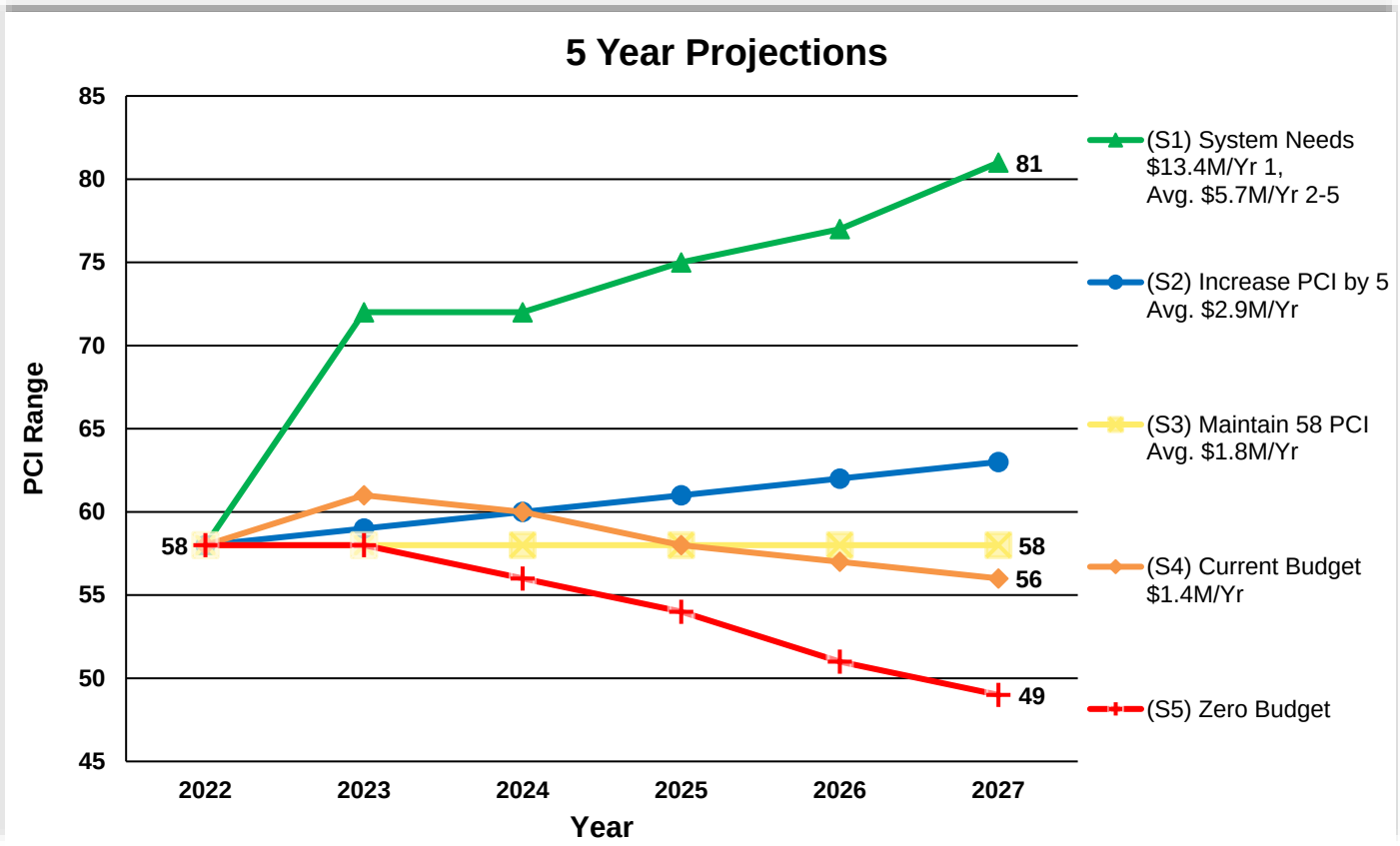
For the City of Sausalito, the unit costs on the following table were used:

TREATMENT	ARTERIAL	COLLECTOR	RESIDENTIAL
Cost/ Sq Yd			
Crack Seal ($$/LF)	$2.19	$1.81	$1.59
Light Maintenance	$6.67	$6.67	$6.67
Heavy Maintenance	$25.45	$22.19	$19.58
Light Rehab.	$54.16	$51.75	$49.85
Heavy Rehab.	$153.70	$153.70	$153.70
Reconstruct	$263.90	$263.90	$263.90
PCC SLAB REPAIR & RECONSTRUCT			
Cat. IV	$143.26		
Cat. V	$246.94		
RECONSTRUCT (PCC TO AC)	$553.90		

For this update, PEI analyzed several scenarios, which are summarized below:

Budget Scenario Projections

PEI generated Five (5) scenario projections which are represented graphically below:



A summary of each of the scenario projections are as follows:

Scenario 1: System Needs/ Unconstrained Budget ($13.4M for Year 1, Avg. $5.7M/Yr. for Years 2-5.)

Scenario 2: Amount of funding to increase PCI by 5 (Avg. $2.9M/Yr.)

Scenario 3: Amount of funding to maintain PCI of 58 (Avg. $1.8M/Yr.)

Scenario 4: Impact of the current budget amount ($1.4M/Yr.); the current PCI would decline from 58 to 56, a 2-point decrease

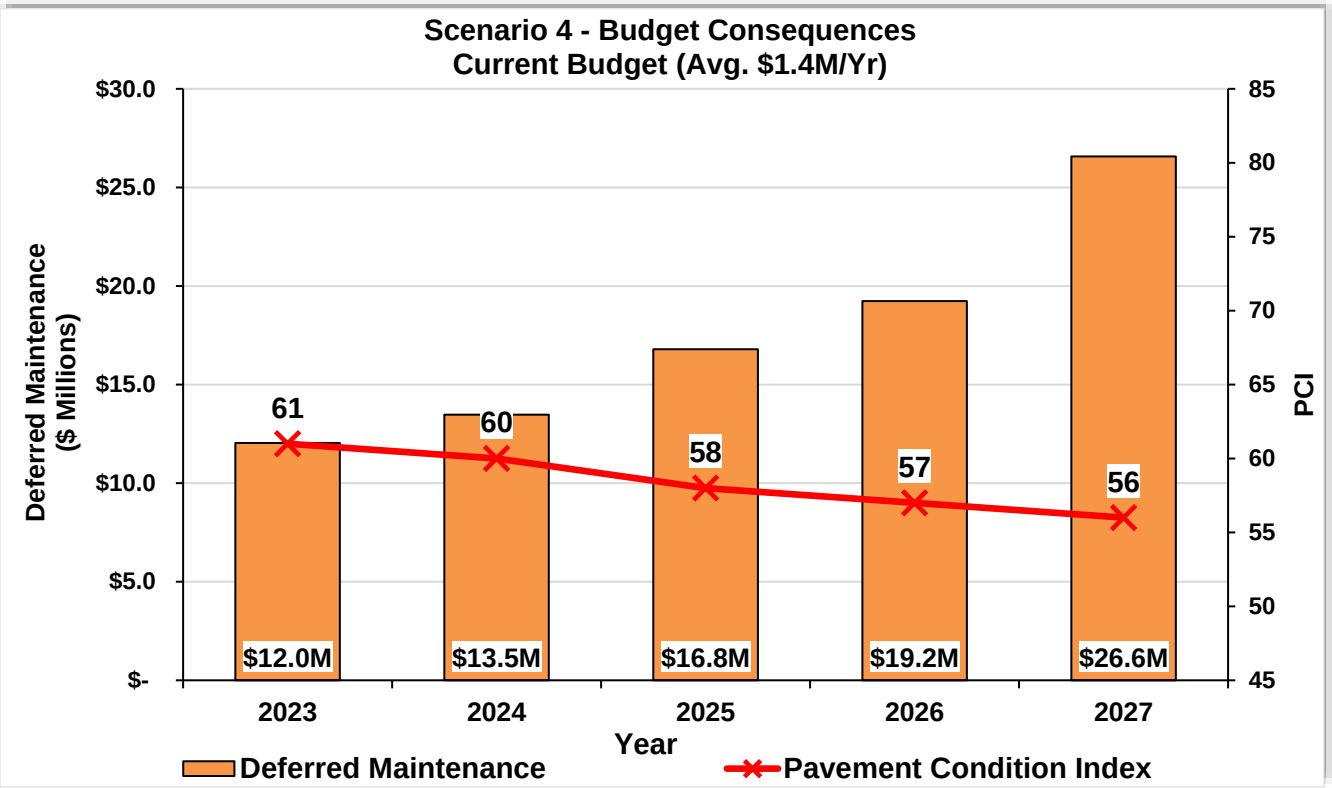
Scenario 5: Represents the impact to the PCI if Zero dollars are spent

The full report for the various budget scenarios can be found in **Appendix B**.

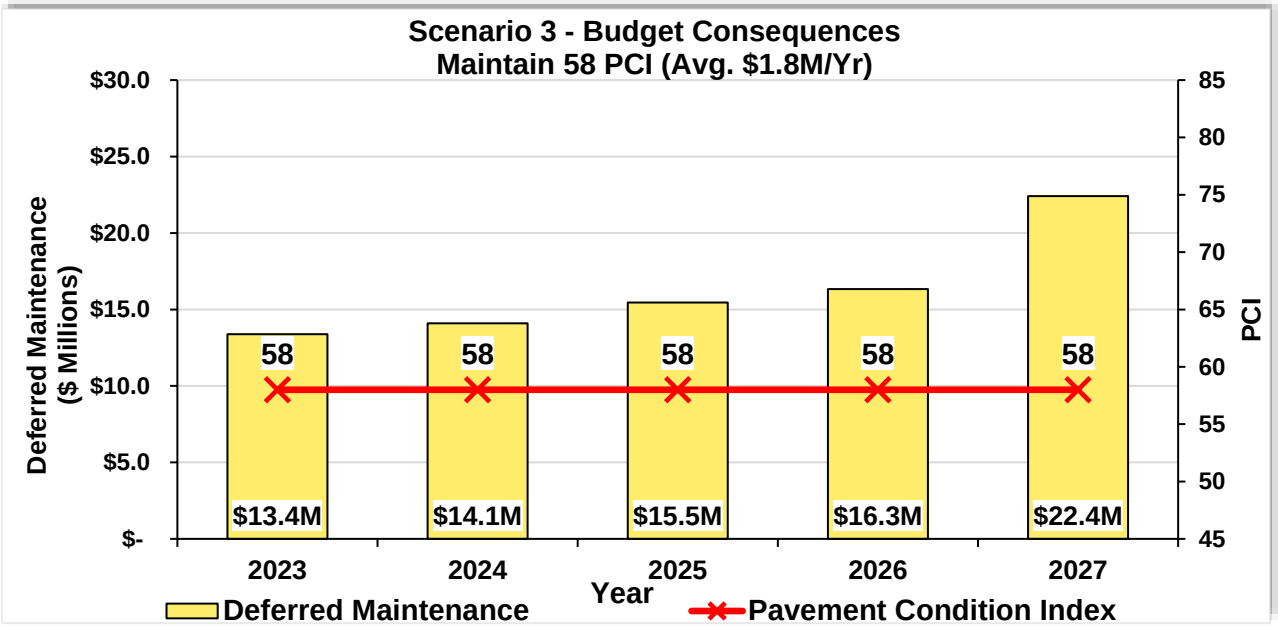
Budget Consequences

The following graphs illustrate the consequences to the City's overall weighted PCI and Deferred Maintenance Amount, based on the scenario projections:

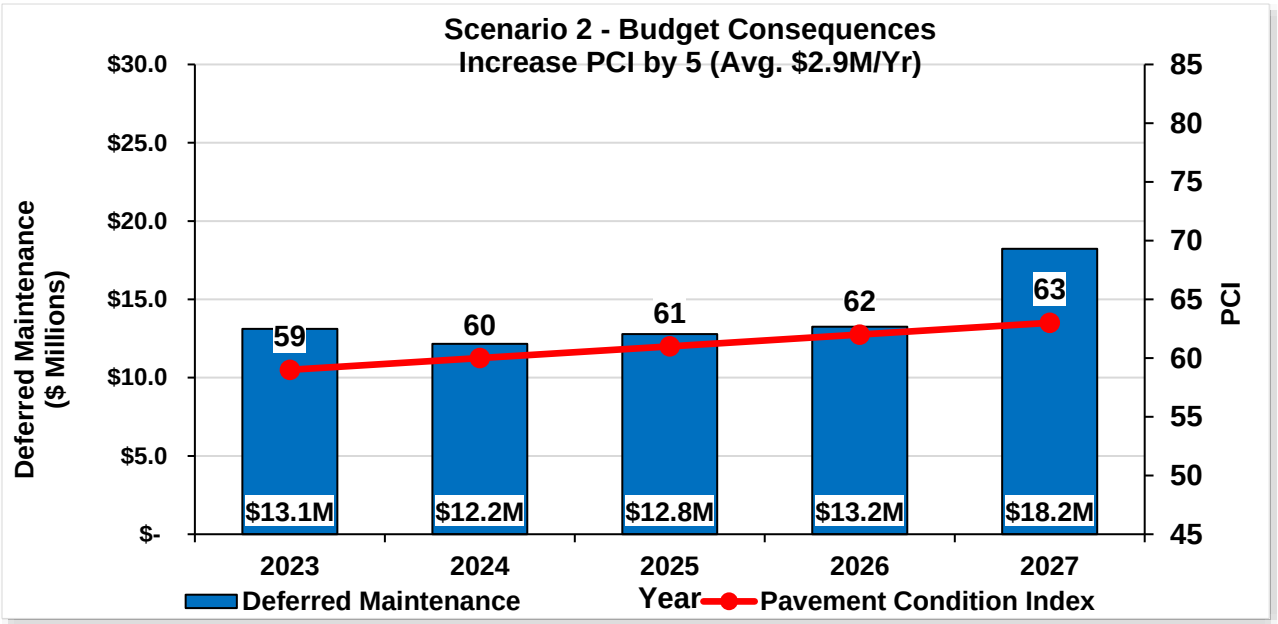
At the current budget level of $1.4K/Yr Avg, the PCI of the entire system will decrease from 58 to 56, a 2 PCI point decline over the next 5 years. In addition, the backlog of deferred maintenance grows from $12.0 million to $26.6 million, an increase of 121%.



To maintain the current PCI of 58, it is projected that an average funding level of $1.8/Yr. is necessary. At this funding level the backlog of deferred maintenance grows from $13.4 million to $22.4 million, an increase of 68%.



To increase the PCI by 5 points, it is projected that an average funding level of $2.9M/Yr. is necessary. At this funding level the backlog of deferred maintenance grows from $13.1 million to $18.2 million, an increase of 39%.



CONCLUSIONS AND RECOMMENDATIONS

This Executive Summary provides a review of the 2023 Pavement Management Program Update performed by PEI. PEI inspected all road segments in the City of Sausalito. The average overall PCI for the City is 58. 68.35% of the City's pavement is in Good to Fair condition.

To maintain the system at its current overall PCI of 58, the City will need to spend an average of $1.8 Million annually, over the next 5 years. Maintaining the current funding level of $1.4/Yr annually, will result in a PCI decrease of 2 points in 5 years to a PCI of 56.

A review of the City's street system, by functional classification, shows that the Arterial streets have the highest average PCI of 62, the Collector streets have an average PCI of 55, and the Residential streets have an average PCI of 57. As a general rule, agencies typically try to keep their arterials in the best condition because they carry the bulk of the traffic and loading, followed by collectors, then the residential/ local streets.

Moving forward, PEI recommends the City carefully evaluate the overall annual budget to determine the amount it wants to commit to pavement maintenance and rehabilitation projects. We recommend the City set priorities for each functional classification and perhaps certain streets within each classification.

This Pavement Management Program will assist the City in its efforts to monitor treatments and track their effectiveness and help the City in setting future priorities and treatment policies. To ensure the City is evaluating accurate data, PEI suggests the City update its Pavement Management Program on a regular basis and review the entire system every three years, this includes a thorough review of the Decision Tree and the unit costs contained within. As the City maintains and updates its Pavement Management Program, the program will become a valuable tool in its efforts to maximize performance and minimize the spending for pavements.

Section II
Background

BACKGROUND

This section is intended to introduce important pavement design definitions and calculations as a background for understanding the Pavement Management Program (PMP) assumptions.

PAVEMENT DESIGN BASICS

Pavements are a structural support system generally considered to act like a beam. But unlike beams in buildings, which generally have static loads, the pavement structure is flexed many times from traffic loading. Cars and light trucks have little impact on the pavement structure. Larger/Heavier trucks have very significant impacts on the pavement due to the high axle weights. The impact of trucks is measured in equivalent single 18,000-pound axle loads (EALs). The total EALs are converted into a design Traffic Index (TI). As an example, a design TI of 5 is equal to 7,160 EALs. A Design TI of 8 is equal to 372,000 EALs. Therefore, the design TI is the total number of EALs that the pavement will support before it begins to fail, regardless of the passage of time. Normally for a new pavement, the EALs over a 20-year period are used. For rehabilitation treatments such as overlays, 10 years is generally used.

The other element of pavement design is the support of the beam. The support is provided by the sub-grade soils. The support value is designated by the R-value test.

Using the design TI and R-value, the pavement designer chooses various materials to construct the structural section. The most common pavement section is a thin layer of asphalt concrete over aggregate base(s). Many options are available depending on specific project requirements and conditions.

The design methods used in California is based on a 50 percent reliability. This means that the average pavement life of all pavements constructed using the design procedure will last the design life. It also means that about half will not last that long and the other half will last longer. To express this concept, a design life is often expressed in a span of years, such as 17 to 23 years for 20-year design life.

PAVEMENT DETERIORATION

The StreetSaver® Program is setup to track and mimic the deterioration that is occurring on the pavement segments. PEI takes exception to the amount of deterioration (11 PCI points) that StreetSaver® applies within the first year after a pavement has received a rehabilitation treatment. We have found this amount of deterioration to be generally excessive.

Pavement deteriorates from two processes, **fatigue** and **aging.** These processes occur simultaneously. In a well-designed and constructed pavement, the two processes result in the need to rehabilitate the pavement at approximately the same time. This is called the design life. The design life for most new pavements is 20 years. Each deterioration process has its own set of pavement defects, which are related to the process.

Fatigue

The first deterioration process is fatigue from heavy axle loads. As the pavement structure flexes or bends from heavy wheel loads, the asphalt concrete layer's ability to flex is consumed. With enough bending, the asphalt concrete layer begins to break at the bottom. These cracks progress upward until they reach the surface and appear as alligator cracking. These areas are repaired by removal and replacement of the asphalt concrete in the affected areas. These repairs are commonly called digouts.

As the pavement structure, its supporting soils, and the precise loading from wheel loads vary, so does the time it takes for alligator cracking to appear. As alligator cracking appears, the pavement should be repaired with digouts. Generally, when the total quantity of digouts, for a specific section of road, reaches approximately 10 percent, or more, of the total area, the pavement is considered to have reached its service life and will require a major rehabilitation treatment.

Aging

The major element of the pavement structure that ages is the asphalt concrete layer. To a minor extent, aggregate bases can age if contaminated by fine soil particles, which are transported from the subsoil into the aggregate base.

Asphalt concrete is composed of various sized aggregates and asphalt binder. The aggregates used are generally of fair quality and do experience some breakdown over time. Aggregate aging problems need to be addressed with maintenance treatments. The asphalt concrete binder ages as well. As the asphalt binder ages, it loses volume through the loss of volatile components in the asphalt. As the volume decreases, the pavement will progressively crack from the resulting tensile strain in the layer. Normally, these cracks first show up as transverse cracks. They also show up in weak areas, such as paving joints. These cracks widen and increase over time until the pavement has a checkerboard appearance.

The aging process also causes the pavement to become more brittle. The increased stiffness results in additional cracking from loaded vehicles. This load induced cracking from the brittleness of the asphalt concrete is very similar to fatigue cracking in appearance.

The major agent for deterioration of the asphalt binder is oxygen, whose carrier is water. Water enters the pavement either from the surface or as water vapor from underneath.

TYPICAL PAVEMENT DEFECTS

StreetSaver® identifies eight different Asphalt Concrete distresses. These are:

1. Alligator Cracking (Fatigue)
2. Block Cracking
3. Distortions
4. Longitudinal & Transverse Cracking
5. Patching and Utility Cut Patching
6. Rutting and Depression
7. Raveling
8. Weathering

These defects are common to virtually the entire pavement as aging progresses.

For purposes of understanding the levels of these distresses, the condition level descriptions from the rating manual are included herein:

Alligator Cracking (Fatigue)

Description:

Alligator or fatigue cracking is a series of interconnecting cracks caused by fatigue failure of the asphalt concrete surface under repeated traffic loading. Cracking begins at the bottom of the asphalt surface (or stabilized base) where tensile stress and strain are highest under wheel load. The cracks propagate to the surface initially as a series of parallel longitudinal cracks. After repeated traffic loading, the cracks connect, forming many sided, sharp-angled pieces that develop a pattern resembling chicken wire or the skin of an alligator. The pieces are generally less than 0.6 m (2 ft) on the longest side. Alligator cracking occurs only in areas subjected to repeated traffic loading, such as wheel paths. Therefore, it would not occur over an entire area unless the entire area were subject to traffic loading (pattern-type cracking that occurs over an entire area not subjected to loading is called “block cracking,” which is not a load-associated distress).

Severity Levels:

- **L** Fine, longitudinal hairline cracks running parallel to each other with no, or only a few interconnecting cracks. The cracks are not spalled.
- **M** Further development of light alligator cracks into a pattern or network of cracks that may be lightly spalled.
- **H** Network or pattern cracking has progressed so that the pieces are well defined and spalled at the edges. Some of the pieces may rock under traffic.

Block Cracking

Description:

Block cracks are interconnected cracks that divide the pavement into approximately rectangular pieces. The blocks may range in size from approximately 0.3 by 0.3 m (1 by 1 ft) to 3 by 3 m (10 by 10 ft). Block cracking is caused mainly by shrinkage of the asphalt concrete and daily temperature cycling (which results in daily stress/strain cycling). It is not load-associated. Block cracking usually indicates that the asphalt has hardened significantly. Block cracking normally occurs over a large portion of the pavement area, but sometimes will occur only in non-traffic areas. This type of distress differs from alligator cracking in that alligator cracks form smaller, many-sided pieces with sharp angles. Also, unlike block cracks, alligator cracks are caused by repeated traffic loadings and therefore found only in traffic areas (i.e., wheel paths).

Severity Levels: (*See definitions of longitudinal transverse cracking.)

- **L** Blocks are defined by low-severity* cracks.
- **M** Blocks are defined by medium-severity* cracks.
- **H** Blocks are defined by high-severity* cracks.

Distortions

Description:

Distortions are usually caused by corrugations, bumps, sags and shoving. They are localized abrupt upward or downward displacements in the pavement surface, a series of closely spaced ridges and valley or localized longitudinal displacements of the pavement surface. Distortions affect ride quality.

Severity Levels:

L Distortion produces vehicle vibrations, which are noticeable, but no reduction in speed is necessary for comfort or safety and/or individual distortions cause the vehicle to bounce slightly but create little discomfort.

M Distortion produces vehicle vibrations, which are significant, and some reduction in speed is necessary for safety and comfort.

H Distortion produces vehicle vibrations, which are so excessive that speed must be reduced considerably for safety and comfort.

Longitudinal and Transverse Cracking (Non-PCC Slab Joint Reflective)

Description:

Longitudinal cracks are parallel to the pavement's centerline or laydown direction. They may be caused by:

1. A poorly constructed paving lane joint.
2. Shrinkage of the AC surface due to low temperature or hardening of the asphalt and/or daily temperature cycling.
3. A reflective crack caused by cracking beneath the surface course, including crack in PCC slabs.
4. Decreased support or thickness near the edge of the pavement.

Transverse cracks extend across the pavement at approximately right angles to the pavement centerline or direction of laydown. These may be caused by conditions (2) and (3) above. These types of cracks are not usually load-associated.

Severity Levels:

L One of the following conditions exists:
- (1) non-filled crack with a width that is less than 10 mm (3/8".) or
- (2) filled crack of any width (filler in satisfactory condition).

M One of the following conditions exists:
- (1) non-filled crack with a width that is greater than or equal to 10 mm and less than 75 mm (3/8" to 3")
- (2) non-filled crack with a width that is less than or equal to 75 mm (3"), surrounded by light and random cracking, or
- (3) filled crack with a width less than or equal to 75mm (3") where the filler is no longer in satisfactory condition.

H One of the following conditions exists:
(1) any crack filled or non-filled surrounded by medium or high severity random cracking,
(2) non-filled crack with a width that is greater than 75 mm (3”.) or
(3) A crack of any width where approximately 100 mm (4 in.) of pavement around the crack is severely broken.

Patching and Utility Cut Patching

Description:

A patch is an area of pavement that has been replaced with new material to repair the existing pavement. A patch is considered a defect no matter how well it is performed (a patched area or adjacent area usually does not perform as well as an original pavement section). Generally, some roughness is associated with this distress.

Severity Levels:

L Patch is in good condition and satisfactory. Ride quality* is rated as low severity or better.

M Patch is moderately deteriorated and/or ride quality* is rated as medium severity.

H Patch is badly deteriorated and/or ride quality* is rated as high severity. Needs replacement soon.

*Ride quality is defined in the severity levels of distortions.

Rutting and Depressions

Description:

A rut is a surface depression in the wheel paths. Pavement uplift may occur along the sides of the rut, but in many instances, ruts are noticeable only after a rainfall when the paths are filled with water. Rutting stems from a permanent deformation in any of the pavement layers or sub-grades, usually caused by consolidated or lateral movement of the materials due to traffic load. Significant rutting can lead to major structural failure of the pavement.

Depressions are localized areas where the pavement structure is lower than the surrounding area, but the transition is not abrupt enough to be considered a distortion. They are often referred to as “bird baths”.

Severity Levels: (Average Rut or Depression Depth)

L 1/2" to less than 1” (13 to 25mm).

M 1” to less than 2” (25 to 50mm).

H equal to or greater than 2” (over 50mm).

Raveling

Description:

Raveling is the dislodging of coarse aggregate particles. Raveling may be caused by insufficient asphalt binder, poor mixture quality, insufficient compaction, segregation, or stripping.

Coarse aggregate refers to the predominant coarse aggregate size of the asphalt mix, and aggregate clusters refers to when more than one adjoining coarse aggregate piece is missing. If in doubt about a severity level, three representative areas of one square yard each (square meter) should be examined and the number of missing aggregate particles/clusters is counted.

Severity Levels:

M Considerable loss of coarse aggregate greater than 20 per square yard (square meter), and/ or clusters of missing coarse aggregate are present.

H Surface is rough and pitted, and it may be completely removed in places.

Weathering

Description:

Weathering is the wearing away of the asphalt binder and fine aggregates from the pavement matrix.

Fine aggregate refers to the small sized aggregates (generally different types of sand) used in an asphalt mix. Loss or dislodging of coarse aggregate is covered under Raveling. Surface wear is normally caused by oxidation, inadequate compaction, insufficient asphalt content, excessive natural sand, surface water erosion, and traffic. Weathering occurs faster in areas with high solar radiation.

Severity Levels:

L Asphalt surface beginning to show signs of aging which may be accelerated by climatic conditions loss of fine aggregate mix is noticeable and may be accompanied by fading of the asphalt color. Edges of the aggregates are beginning to be exposed (less than 0.05 inches or 1 mm).

M Loss of the fine aggregate matrix is noticeable, and the edges of the coarse aggregate have been exposed up to $1/4^{th}$ of the width (of the longest side) of the coarse aggregate due to the loss of fine aggregate matrix.

H Edges of the coarse aggregate have been exposed greater than $1/4^{th}$ of the width (of the longest side) of the coarse aggregate. There is considerable loss of fine aggregate matrix leading to potential or some loss of coarse aggregate.

PAVEMENT MAINTENANCE TREATMENTS

Pavement maintenance treatments are designed to slow the pavement aging process. Mainly, the treatments are designed to protect the pavement from the adverse effects of water and to some extent vehicle traffic.

Maintenance treatments, which protect the pavement from aging, are crack sealing, digouts, slurry seals, and cape seals. When pavements have extensive cracking and are beyond their design life, interim holding measures including skin patches and thin overlays are used as a stop gap prior to major rehabilitation.

The following outlines some of the more common types of maintenance treatments:

Crack Sealing

Crack sealing prevents surface water from getting beneath the asphalt concrete layer into the aggregate bases. Crack sealing is generally performed using hot rubberized crack sealing material. The procedure includes routing small cracks, cleaning and sealing.

Digouts

Digouts are small areas of deteriorated pavements, which are removed and replaced with new asphalt concrete. Pavement removal is accomplished by cold planning or saw cutting and excavation. New asphalt is installed in at least two lifts. The digout depth should be determined depending on the street type and construction.

Slurry Seals

Slurry seals consist of a combination of fine aggregate and emulsified oil. Slurry seals are used to protect the pavement surface from the oxidizing effects of the sun and water, as well as providing a new wearing surface for the pavement. Slurry Seals are very useful, especially when the existing pavement surface is severely raveled, but is structurally sound. When applied to the correct pavements, a slurry seal can extend the life of a pavement, by five (5) to seven (7) years.

Cape Seals (Conventional & Rubberized)

Cape seals, whether Conventional or Rubberized, are applied in a two-part process. The first part consists of placing a chip seal. The second part consists of coating the chip seal with a slurry seal. A chip seal is an application of small angular rock (chips) approximately 1/4" to 3/8” in maximum size, embedded into a thick application of asphalt emulsion, or rubberized asphalt binder.

Conventional chip seals generally incorporate polymer modified binders into the asphalt emulsion, whereas rubberized chip seals use an asphalt binder that has rubber mixed in solution. The rubberized binder gives the pavement more flexibility and resilience.

Cape seals are used on residential and collector streets to maintain a pavement, which may need an overlay, but there are not sufficient funds available. Cape seals can be placed over low to moderate alligator cracks and block shrinkage cracking. When applied to the correct pavement, a Conventional Cape Seal can extend the life of a pavement by 7 to 10 years, and a Rubberized Cape Seal can extend the life of a pavement by 7 to 12 years.

Interim Holding Measures (or "Stop Gap" in StreetSaver® Terms)

Interim holding measures or stop gap treatments are used to "hold" the pavement together until funds become available for major rehabilitation. The common holding measures used by City include skin patches and thin overlays.

Skin patches are thin lifts of fine asphalt concrete placed over deteriorated areas.

Thin maintenance overlays are placed to hold the surface together. The asphalt concrete layer is generally 1 to 1-1/2 inches thick. A 3/8 inch aggregate is used with a Terminally Blended Asphalt Rubber Binder.

PAVEMENT REHABILITATION TREATMENTS

Pavement rehabilitation consists of treatments used to restore the existing pavement quality or to add additional structural support to the pavement. Rehabilitation treatments include conventional overlays; pulverization and resurfacing; ARHM (asphalt rubber hot mix) overlays; AC removal and replacement (Mill and Fill); and reconstruction.

The following outlines some of the more common types of rehabilitation treatments:

Conventional Overlays

Conventional overlays generally consist of surface preparation, pavement fabric and varying thicknesses of asphalt concrete. Surface preparation can consist of crack filling, pavement repairs of base failures and leveling courses.

Pavement fabric is often used as a water inhibiting membrane and to retard reflective cracking. Care must be used with fabric to avoid intersections with heavy truck breaking, steep grades (generally over 8 percent), and areas where subsurface water might be trapped.

The overlay thickness is determined by the structural requirement of the deflection analysis and reflective cracking criteria. The reflective cracking criteria requires the thickness of the overlay to be a minimum 1/2 the thickness of the existing bonded layers. Pavement fabric can account for 0.10 ft of asphalt for reflective cracking criteria if the structural requirements from the deflection analysis are met.

Conventional overlays have an expected service life of 7 to 13 years if they are designed to meet structural and reflective cracking criteria and are well constructed.

RHMA Overlays

RHMA is the shortened reference for Rubberized Hot Mix Asphalt. This material uses crumb rubber mixed with traditional asphalt binders to produce a more flexible paving material than conventional dense graded hot mix asphalt (HMA).

Caltrans has developed design criteria for use of this material based on accelerated performance testing using its dual wheel accelerated pavement testing equipment. The Caltrans criteria allows RHMA to be used in a one to two ratio to conventional hot mix asphalt. Thus one (1) inch of RHMA is equal to two (2) inches of conventional hot mix asphalt for reflective cracking criteria.

RHMA costs approximately 1-3/4 times as much as conventional asphalt and provides a similar service life to that of conventional hot mix asphalt, 7 to 13 years. RHMA is generally only feasible when vertical constraints such as curb and gutter restrict the thickness of the overlay. RHMA typically has more open surface than conventional hot mix asphalt and is more difficult to obtain a high quality finished product.

Pulverization and Resurfacing

Pulverization and resurfacing is an alternative to conventional overlays for streets that are structurally adequate but exhibit sufficient cracking to warrant improvement to the asphalt surface.

Pulverization and resurfacing is an intermediate step between an overlay and reconstruction. The existing asphalt concrete is recycled into aggregate base and the recycled base increases the total structural section. The surface is re-graded to conform to flush facilities similar to the way the pavement is keycut for overlays. The re-grading allows for some improvement to the cross section and profile. This method eliminates the cracking and stress history of the old asphalt concrete pavement, thus eliminating negative impacts on the new asphalt concrete surface.

Some instability can be encountered when the pulverization method is used. PEI typically recommends budgeting 5 to 10 percent of the pulverized sub-grade area for stabilization. Stabilization can be performed using 6-inch deep lift asphalt concrete.

Pulverization and resurfacing has a life expectancy of 13 to 18 years. The life expectancy is slightly less than full reconstruction because some residual deficiencies in thickness or quality of the unaffected layers may still exist. Additional testing is necessary to determine if pulverization is a viable alternative. This testing includes measuring the existing structural section and testing the native soil for bearing capacity (R-value).

Cold In-Place Recycling (CIR)

CIR is an option when pavements are structurally adequate or slightly structurally deficient. It can be especially useful when pavements are thick (greater than 6 inches). CIR helps reduce crack history in thicker pavement and provides a green approach by using existing materials. CIR consists of either an emulsion process or a foaming process. The cold foam process can include mixing aggregate base with the asphalt.

AC Removal and Replacement (Mill and Fill)

On some thick asphalt concrete pavements, the most economical approach to rehabilitating the pavement is to remove some of the existing asphalt concrete surface, which matches the existing profile. The replacement material can be either conventional hot mix asphalt (HMA) or RHMA, depending on the design criteria.

In other cases, due to drainage or other physical constraints, additional thickness cannot be placed. If the underlying base is sufficient to support anticipated loading, the asphalt layer can be removed and replaced. Depending on existing conditions, this method should have a life of 15 to 20 years.

Reconstruction

When the pavement has severe cross section deficiencies or requires significant structural strengthening, reconstruction may be the only alternative. Generally, existing pavement materials are recycled and incorporated into the new pavement structure.

Reconstruction can consist of various alternatives including Full Depth HMA, HMA over aggregate base, or Full Depth Reclamation (FDR). Full Depth HMA is the fastest for construction but typically has higher costs than other reconstruction alternatives. FDR HMA can be a cost-effective approach but takes much longer to construct than HMA. HMA over aggregate base has a lower cost than Full Depth HMA but has significant impact on the public due to the slower construction process.

Section III
Pavement Management Program Specifics

PAVEMENT MANAGEMENT SYSTEM SPECIFICS

This section discusses the characteristics of the Pavement Management System and its application for The City of Sausalito.

BACKGROUND (STREETSAVER®)

During the early years of Pavement Management software development, many companies developed private software packages focused on management of municipal street systems. Though these programs were versatile and sophisticated, the user was also dependent upon the software vendor for training, program updates, and software servicing. Many of the vendors had difficulty maintaining their software, leaving agencies stranded after making a substantial investment.

In 1982, the Metropolitan Transportation Commission (MTC) completed a study of local road and street maintenance needs and revenue short falls in the San Francisco Bay Area. The results of the study indicated that local jurisdictions were spending only 60 percent of funds required to maintain roads in a condition considered adequate. This indicated a need to improve pavement maintenance and rehabilitation techniques and practices. A committee was formed to evaluate pavement management efforts. At approximately the same time, six public works directors reviewed a proposal to develop a prototype Pavement Management System (PMS); however, it was felt that the proposed system was too complex. This group strongly emphasized that simpliCity was the most important objective to be developed in a PMS if it was to be adopted and used by cities and counties.

In 1983, a consultant was retained to assist MTC in determining PMS needs, PMS resources, and problems. In addition, they were to develop three basic elements of a standardized prototype PMS: a pavement condition index (PCI), effective maintenance treatments for the Bay Area, and a network level assignment procedure. The result was the first version of the MTC PMS. Since that time the program has evolved into StreetSaver®.

Today, the Metropolitan Transportation Commission (MTC) for California's San Francisco Bay Area uses StreetSaver® to help local cities and counties better allocate resources, predict the future condition of their pavements at different levels of funding, and demonstrate the effects of underfunded road programs. The Bay Area was one of the first regions in the country to implement a pavement management system that is used by nearly all of its localities. Using StreetSaver®, cities and counties can plan and manage road improvement projects, document budget needs and shortfalls, and use the collected data to build support for additional transportation funding.

StreetSaver® manages a collection of related data organized for easy storage and retrieval. The StreetSaver® program includes a database comprised of several sets of related data ("tables") that contain information about the street network in the jurisdiction. This information includes pavement condition, the available maintenance/rehabilitation treatments and their costs, and the history of the network. Based on this information, budget analyses are performed. A budget analysis allows the user to project network maintenance and rehabilitation needs, and costs to evaluate the consequences of various budget allocation alternatives. Alternatives can be evaluated in terms of maintenance and rehabilitation that can actually be performed, future pavement condition, and deferred costs. For some agencies, use of the StreetSaver® program is cyclical. For others, pavement management is integrated into an ongoing effort to manage their street networks.

Implementation

There are several steps involved in implementing an effective Pavement Management System. These tasks should be completed on a periodic basis. These tasks include:

1. Collect pavement condition and maintenance/rehabilitation data.
2. Enter re-inspection data and/or applied maintenance and rehabilitation information.
3. Check/update maintenance treatment definitions and pavement category definitions.
4. Calculate Pavement Condition Index (PCI)
5. Evaluate system and current Maintenance/Rehabilitation strategies. Determine Budget needs and if necessary develop alternate Budget Summaries.
6. Present analysis outputs to funding bodies.
7. Acquire funds and apply maintenance/rehabilitation treatments.

SYSTEM ASSUMPTIONS

The goal of the Pavement Management System is to furnish budgetary amounts in order to achieve system wide improvements in the overall pavement condition. The goal of project engineering is to obtain the maximum economical affect for a given subset of the system to be maintained. Using the Pavement Management System, management is able to realistically budget for economically maintaining The City's pavement system. Annually updating maintenance activity and costs keeps the system current.

PAVEMENT MAINTENANCE AND REHABILITATION (M&R) UNIT COSTS

The reliability and accuracy of any PMS is based on the information contained in its Decision Tree. The listed treatments in the Decision Tree are generalized to provide a range of treatments. The exact treatment would need to be determined during the design phase of a project.

Typical treatments within each generalized treatment range are listed below.

Treatment Category	Typical Treatment
Light Maintenance	• Slurry Seal or Micro-Surface • Fog Seal or Scrub Seal
Heavy Maintenance	• Chip Seal, Cape Seal • Slurry Seal or Micro-Surface with Digouts • Thin Maintenance Overlay (TMO)
Light Rehab.	• Overlay (2" and under) or Thin Mill and Fill
Heavy Rehab.	• Overlay (greater than 2") or Thick Mill and Fill • Cold-In-Place Recycling • Full Depth Reclamation • Pulverize and Resurfacing
Reconstruct	• Full Section Reconstruction

Based on a street segment's current PCI condition, StreetSaver® assigns a treatment action and estimated cost to perform the suggested treatment. This cost is not just what is paid to the contractor but should include all the "Soft Costs" incurred by The City.

Soft Costs can include the surface preparation, engineering cost, materials testing, and construction inspection. Even if these tasks are done "in-house", the inclusion in combination with the construction costs will tend to show the "true picture" of the cost of a specific project.

The following costs were used to develop the indicated budget numbers for each street segment PEI reviewed. The costs include miscellaneous work such as transitions, striping, dig outs, etc.

The costs are averages. Small systems will have higher unit costs and large systems will have lower unit costs. The larger the annual project size, the better the economies of scale. Timing is also important. Bidding the work in early spring will result in significantly lower prices than bids solicited in the late summer or fall. If small packages are used, costs could be 25 to 50 percent higher.

The unit costs include a 20% increase to account for potential PCC repairs that may be triggered by applying a maintenance or rehabilitation treatment to a street section. The unit costs also include a 15% allowance to account for engineering design fees and inspection. As well as a 10% contingency. These prices are in today's dollars (2022) and do not account for inflation.

TREATMENT	ARTERIAL	COLLECTOR	RESIDENTIAL
Cost/ Sq Yd			
Crack Seal ($$/LF)	$2.19	$1.81	$1.59
Light Maintenance	$6.67	$6.67	$6.67
Heavy Maintenance	$25.45	$22.19	$19.58
Light Rehab.	$54.16	$51.75	$49.85
Heavy Rehab.	$153.70	$153.70	$153.70
Reconstruct	$263.90	$263.90	$263.90
PCC SLAB REPAIR & RECONSTRUCT			
Cat. IV	$143.26		
Cat. V	$246.94		
RECONSTRUCT (PCC TO AC)	$553.90		

Decision Trees / Treatment Strategies

The Decision Trees are broken down into two main areas; Preventive Maintenance (PM) and Rehabilitation. StreetSaver® makes preventive maintenance a top priority. The longer a segment can be kept in good condition the lower the overall cost of its treatments. Preventive Maintenance addresses the sections that have a PCI of 71 and greater. This area is further broken down to specific treatments that could be better termed as Crack Sealing, Surface Treating and Restoration Treatments.

The Decision Tree allows the user to program these treatments on a cyclical basis. As part of this cyclical process, once a road has reached the point where it can no longer be maintained by a crack seal or a surface seal the program will shift to a Restoration Treatment. The program uses this treatment to restore the pavement in long term budgeting scenarios to the Very Good category.

The Decision Tree for Preventive Maintenance and Rehabilitation was reviewed with The City of Sausalito and updated by PEI. The decision tree customizes the logic for how and what maintenance and rehabilitation treatments StreetSaver® selects.

Five general pavement treatment categories were used to account for the various treatments in the decision tree: reconstruction, heavy overlays, light overlays, heavy maintenance, light maintenance and no action. Specifying a general treatment category allows the user to stay focused on a budget level analysis rather than moving to a project level analysis.

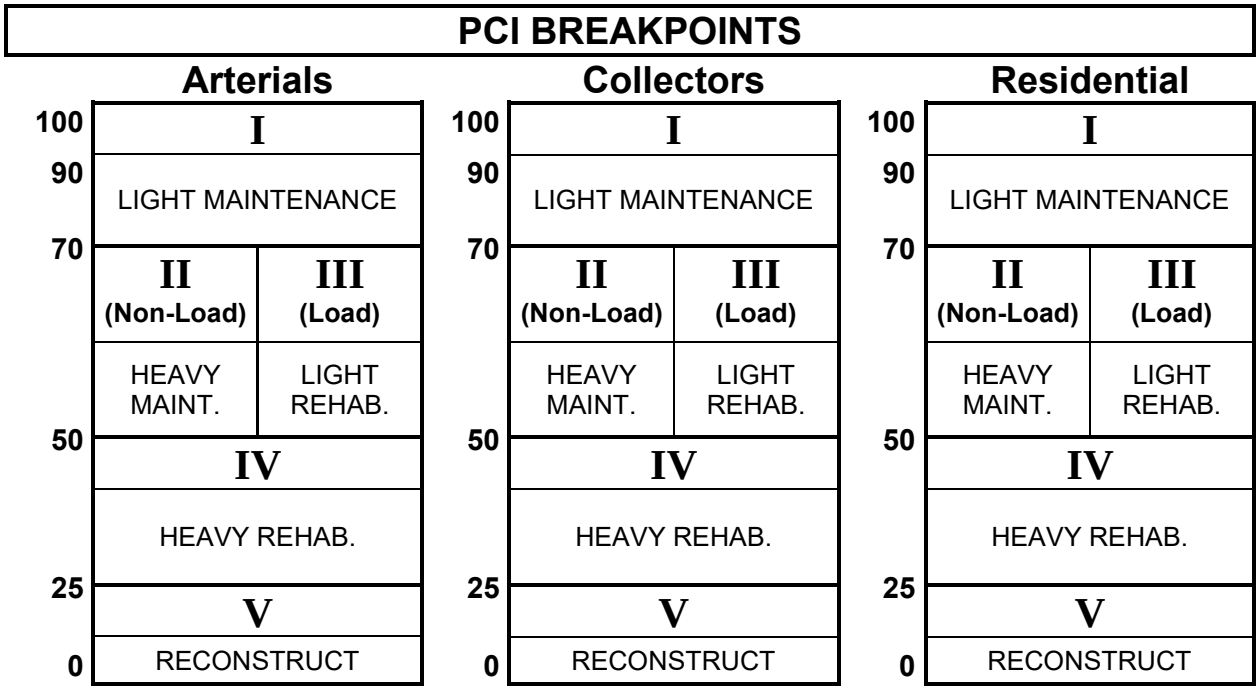
The PMS software assumes average construction and material quality. Pavement life is very sensitive to materials and workmanship quality. Poor quality new construction may result in up to a 50 percent loss in the pavement life. In other words, poor quality new construction may last 10 to 15 years, whereas excellent quality construction may last 20 to 30 years. Investing in quality, both in design and construction, provides significant returns in extended pavement life resulting in lowered annual maintenance costs.

The Decision Tree for The City of Sausalito can be found in **Appendix A** of this report.

ANNUAL PAVEMENT MAINTENANCE / REHABILITATION PROGRAM

The PCI range of 0 to 100 is broken down into five condition categories for budget calculation purposes. StreetSaver® default PCI breakpoints were used during the update of The City of Sausalito's Pavement Management System.

The default breakpoints are as follows:



When a pavement section is identified for maintenance or rehabilitation, a user defined network-level cost category for a pavement of that functional class, type and condition is used to determine the needed funds for that section. For sections falling within the preventive maintenance category, or category one (1), a time sequence is used to identify the appropriate treatment and cost.

For those sections falling into a rehabilitation category, or categories two (2), three (3), four (4), or five (5), the PCI is used to determine the repair category for a pavement section.

The repair category is combined with functional classification (as a surrogate for traffic index) and surface type (as a surrogate for structural adequacy) to identify the appropriate treatment and cost. The treatment and cost identified for the section is a network-level budget planning treatment and is generally considered as a cost category for budgeting purposes rather than an actual treatment. Some sections will require more money than estimated, some will require less. A project-level analysis is used to determine the actual treatment to be used for a given section based on condition, structural capacity and other factors.

The funding needs are summed for all sections needing work for each year of the analysis period to determine the annual budget needs. The needs analysis provides a list of sections needing work over the selected analysis period and an estimate of the funds needed. In StreetSaver®, this analysis period is 5 years. It identifies maintenance and rehabilitation needs without considering funding constraints, i.e. the Needs Analysis is unconstrained by the available budget. StreetSaver® identifies candidate sections and funds needed to provide the level of service to meet agency-defined goals.

When an agency has a considerable backlog of maintenance and repair needs, the first-year needs will include the bulk of sections needing work. From a funding standpoint, this may appear unrealistic; however, the needs analysis is only the first step in planning and programming. The information from the needs analysis is generally best presented to management as the total 5 year needs or the average needs per year of the 5-year period. Few agencies will be able to meet the first year needs as developed by the program.

The StreetSaver® Needs Analysis provides information on the condition of the network over the analysis period with and without application of the treatments. Since the application of treatments assume no limit on funds, this can be considered the upper limit of condition that could be reached by the agency and the condition without treatment can be considered the lower limit.

StreetSaver® uses a ranking process based on cost-effectiveness concepts. Basically, the longer a pavement is in good condition, the more benefit the user gets from the pavement. This can be approximated by the area under the PCI vs Time curve.

The larger that area, the longer the pavement provides the desired level of service. That area is divided by annualized costs per unit area. This ratio is weighted for different usage so that arterial streets are selected for repair before collectors in the same condition, which are selected for repair before residential/locals in the same condition. Sections of pavements that provide the best service for the least money are then selected as those that should be repaired first. StreetSaver® provides a ranked listing based on this cost-effectiveness analysis. StreetSaver® also shows the condition with and without treatment, the estimated costs for each section, the calculations used to determine the ranking, and a listing of sections not recommended for treatment.

VISUAL EVALUATIONS

PEI's technical staff evaluated all of the pavements. The streets were rated based on the StreetSaver® system described in the Background. Once the data was entered into the program, PEI completed a quality assurance review of the system and verified the results in the field. The street inventory was based on visual evaluations.

SYSTEM UPDATES

The Pavement Management System is a dynamic program. It is expected that The City will continue to visually rate the street network and update the database at least every three years. In addition to the visual review, The City should update the database by adding new streets incorporated into The City as well as new maintenance and rehabilitation work performed to any particular street segment.

Section IV
Reference Reports

Street Name Alphabetical Listing

City of Sausalito
Reference Report - Alphabetical

Street Name	Section ID	From	To	Length	Width	Area	FC	ST	PCI
ALEXANDER AVE.	1	SOUTH CITY LIMIT	SOUTH ST.	450.	24.	10,800.	A	O	46
ANCHOR ST.	1	BRIDGEWAY	HUMBOLDT ST.	192.	28.	5,376.	C	O	67
ARANA CIR.	1	KENDALL COURT LOOP	ARANA CIRCLE LOOP	225.	24.	5,400.	R	A	23
ARANA CIR.	2	ARANA CIR LOOP	ARANA CIRCLE LOOP END	715.	17.	12,155.	R	A	14
ATWOOD AVE.	1	HARRISON/BULKLEY AVE.	NORTH ST.	871.	22.	19,162.	C	A	77
BAY ST.	1	HUMBOLT ST.	BRIDGEWAY	150.	36.	5,400.	C	O	82
BEE ST.	1	CALEDONIA	BRIDGEWAY	140.	38.	5,320.	R	O	66
BEE ST.	2	CALEDONIA ST.	BONITA ST.	424.	35.	14,840.	R	A	94
BONITA ST.	1	JOHNSON ST.	LITHO STREET	1,175.	18.	21,150.	R	P	65
BONITA ST.	2	JOHNSON ST	LITHO ST	1,175.	17.	19,975.	R	A	55
BONITA ST.	3	LITHO ST	BEE ST	325.	35.	11,375.	R	A	94
BONITA ST.	4	BEE ST	NAPA ST	260.	17.	4,420.	R	A	71
BONITA ST.	5	BEE ST	NAPA ST	260.	18.	4,680.	R	P	46
BOOKER AVE.	1	SPENCER AVE.	CLOUDVIEW RD.	330.	16.	5,280.	R	O	73
BRIDGEWAY	1	PRINCESS ST.	RICHARDSON ST.	1,975.	28.	55,300.	A	O	39
BRIDGEWAY	13	PRINCESS ST.	RICHARDSON ST.	1,975.	11.	21,725.	A	P	70
BRIDGEWAY (NB)	2	JOHNSON ST.	PRINCESS ST.	1,950.	49.	95,550.	A	O	59
BRIDGEWAY (NB)	1	JOHNSON ST.	NAPA ST.	1,800.	17.	30,600.	A	O	57
BRIDGEWAY (NB)	2	NAPA ST.	SPRING ST. EAST	2,250.	29.	65,250.	A	O	58
BRIDGEWAY (NB)	3	SPRING ST.	NEVADA ST.	1,660.	33.	54,780.	A	O	54
BRIDGEWAY (NB)	4	NEVADA ST.	COLOMA ST.	1,400.	25.	36,500.	A	O	50
BRIDGEWAY (NB)	5	COLOMA ST.	CITY LIMITS EAST	1,775.	25.	44,375.	A	O	55
BRIDGEWAY (SB)	2	CITY LIMITS NORTH	COLOMA ST.	1,775.	32.	56,800.	A	O	61
BRIDGEWAY (SB)	3	COLOMA ST.	NEVADA ST.	1,500.	25.	37,500.	A	O	50
BRIDGEWAY (SB)	4	NEVADA ST.	SPRING ST.	1,660.	25.	41,500.	A	O	64
BRIDGEWAY (SB)	5	SPRING ST.	NAPA ST.	1,587.	26.	41,262.	A	O	63
BRIDGEWAY (SB)	6	NAPA ST.	JOHNSON ST.	1,800.	25.	45,000.	A	O	62
BRIDGEWAY OFFRAMP	1	BRIDGEWAY NEAR SPRING ST	EASTERBY ST.	185.	36.	6,660.	C	A	32
BUCHANAN CT.	1	BUCHANON DR.	CUL-DE-SAC	102.	34.	3,468.	R	A	64
BUCHANAN DR.	1	NEVADA ST.	LINCOLN DRIVE	1,250.	31.	38,750.	R	A	59
BUCHANAN DR.	2	LINCOLN DRIVE	CUL-DE-SAC	335.	31.	10,385.	R	A	49
BULKLEY AVE.	1	SAN CARLOS AVE.	SANTA ROSA AVE.	800.	26.	20,800.	C	A	45
BULKLEY AVE.	2	SANTA ROSA AVE.	PRINCESS ST.	1,020.	25.	25,500.	C	A	49
BULKLEY AVE.	3	PRINCESS ST.	ATWOOD/HARRISON	920.	23.	21,160.	C	A	60
BUTTE ST.	1	THE ANCHORAGE	SACRAMENTO AVE.	345.	26.	8,970.	R	A	21
BUTTE ST.	2	SACRAMENTO AVE.	TOMALES ST.	600.	21.	12,600.	R	A	51
CABLE ROADWAY	1	PROSPECT AVE.	EAST TO STEPS	208.	16.	3,328.	R	P	43
CALEDONIA ST.	1	NAPA ST.	PINE ST	1,760.	38.	66,880.	R	O	77
CALEDONIA ST.	2	BRIDGEWAY	JOHNSON ST	175.	17.	2,975.	R	O	56
CALEDONIA ST.	3	JOHNSON ST	PINE ST	425.	36.	15,300.	R	O	67
CAZNEAU AVE.	1	MARIE ST.	PLATT AVE.	700.	15.	10,500.	C	A	36
CAZNEAU AVE.	2	PLATT AVE.	FILBERT/GLEN	1,025.	20.	20,500.	R	O	51
CAZNEAU AVE.	3	GLEN DR.	GIRARD ST.	1,385.	16.	22,160.	R	O	54

City of Sausalito
Reference Report - Alphabetical

Street Name	Section ID	From	To	Length	Width	Area	FC	ST	PCI
CENTRAL AVE.	1	SAN CARLOS AVE.	WEST	1,425.	19.	27,075.	R	A	51
CHANNING WAY	1	PROSPECT AVE.	CUL-DE-SAC @ 21	400.	20.	8,000.	R	A	54
CLOUDVIEW CIR.	1	CLOUDVIEW RD.	END	125.	20.	2,500.	R	A	39
CLOUDVIEW RD.	1	PROSPECT AVE.	HWY 101	1,575.	19.	29,925.	R	A	77
COLOMA ST.	1	GATE 5 RD.	BRIDGEWAY	765.	20.	15,300.	R	A	62
COLOMA ST.	2	BRIDGEWAY	TOMALES ST.	520.	36.	18,720.	R	A	19
COLOMA ST.	3	TOMALES ST.	OLIMA ST.	450.	40.	18,000.	R	A	19
CRECIENTA DR.	1	MONTE MAR DR.	CURREY AVE.	900.	18.	16,200.	R	A	60
CRECIENTA LN.	1	CRESCIENTA DR.	END	350.	16.	5,600.	R	O	68
CRESCENT AVE.	1	SAUSALITO BLVD.	LOWER CRESCENT AVE.	387.	15.	5,805.	C	P	34
CRESCENT AVE.	2	LOWER CRESCENT AVE.	PCC / COP	843.	15.	12,645.	C	A	72
CRESCENT AVE.	3	AC / COP	MAIN ST.	120.	15.	1,800.	C	P	47
CRESCENT AVE.	4	MAIN ST.	WEST ST.	822.	15.	12,330.	R	A	56
CURREY AVE.	1	GLEN DR.	PLATT AVE.	995.	18.	17,910.	A	A	66
CURREY AVE.	2	PLATT AVE./MONTE MAR DR.	CRESCIENTA DR.	750.	20.	15,000.	A	A	72
CURREY LN.	1	CURREY AVE.	CUL-DE-SAC	1,100.	20.	22,000.	R	A	67
EASTERBY	2	105' S/O BRIDGEWAY	PEARL ST	550.	20.	11,000.	R	A	3
EASTERBY	3	105' S/O BRIDGEWAY	PEARL ST	550.	17.	9,350.	R	P	39
EASTERBY ST.	1	BRIDGEWAY/FILBERT	105' S/O BRIDGEWAY	105.	39.	4,095.	R	A	50
EASTERBY ST.	4	PEARL ST (END PCC)	WOODWARD AVE.	115.	36.	4,140.	R	A	73
EBBTIDE AVE.	1	BRIDGEWAY	100 EBBTIDE	450.	36.	16,200.	R	O	78
EBBTIDE AVE.	2	100 EBBTIDE	STANFORD WAY	500.	27.	13,500.	R	A	28
EBBTIDE AVE.	3	STANFORD WAY	OLIMA ST.	690.	13.	8,970.	R	A	21
EDWARDS AVE.	1	SAUSALITO BLVD.	ALEXANDER AVE.	1,775.	17.	30,175.	R	P	28
EL PORTAL	1	BRIDGEWAY	TRACY WY	250.	32.	8,000.	R	A	69
ENSIGN ST.	1	BRIDGEWAY	HUMBOLT AVE.	70.	45.	3,150.	R	A	72
EXCELSIOR LN.	1	BULKLEY AVE.	STEPS TO BRIDGEWAY	200.	12.	2,800.	R	P	14
FILBERT AVE.	1	EASTERBY ST.	MARIE	695.	24.	16,680.	C	A	48
FILBERT AVE.	2	MARIE ST.	GIRARD AVE.	900.	18.	16,200.	C	O	70
FILBERT AVE.	3	GIRARD AVE.	CAZNEAU AVE.	798.	18.	14,364.	R	O	66
FOURTH ST.	1	VALLEY ST.	MAIN ST.	354.	15.	5,310.	R	A	92
FOURTH ST.	2	MAIN ST.	RICHARDSON ST.	353.	15.	5,295.	R	P	32
FOURTH ST.	3	RICHARDSON ST.	NORTH ST.	353.	15.	5,295.	R	P	34
GATE 5 RD.	1	BRIDGEWAY	HARBOR DR.	1,883.	30.	56,490.	C	A	25
GEORGE LN.	1	CURRY AVE	51 GEORGE LN	644.	15.	9,660.	R	O	61
GEORGE LN.	2	51 GEORGE LN	CUL-DE-SAC	585.	18.	10,530.	R	A	42
GIRARD AVE.	1	JOHNSON ST	TURNEY ST	651.	20.	13,020.	R	A	95
GIRARD AVE.	2	TURNEY ST	LITHO ST	675.	20.	13,500.	R	P	40
GIRARD AVE.	3	LITHO ST.	FILBERT ST.	550.	20.	11,000.	C	O	69
GLEN CT.	1	ROSE CT.	GLEN DR.	450.	16.	7,200.	R	A	53
GLEN DR.	1	CAZNEAU AVE.	CURREY AVE.	436.	13.	5,668.	R	O	59
GLEN DR.	2	CURREY AVE.	SANTA ROSA AVE/ GLEN DR	944.	16.	15,104.	R	O	64
GLEN DR.	3	SANTA ROSA AVE/ GLEN DR	JOHNSON ST.	1,565.	18.	28,170.	R	A	51

City of Sausalito
Reference Report - Alphabetical

Street Name	Section ID	From	To	Length	Width	Area	FC	ST	PCI
GLEN DR.	4	JOHNSON ST.	SAN CARLOS AVE.	594.	21.	12,474.	C	A	72
GORDON ST.	1	SPRING ST.	END @ 15	185.	23.	4,255.	R	O	37
HARBOR DR.	1	GATE 5 RD.	CLIPPER YACHT (PVT ENTRANCE)	182.	35.	6,370.	R	A	69
HARBOR DR.	2	ROAD 3	GATE 5 RD.	240.	25.	6,000.	C	A	18
HARBOR DR.	3	BRIDGEWAY	ROAD 3	630.	43.	27,090.	C	A	41
HARRISON AVE.	1	ATTWOOD/BULKLEY AVE.	SAN CARLOS AVE. (S)	250.	18.	4,500.	R	A	60
HARRISON AVE.	2	SAN CARLOS AVE. (S)	PAVEMENT CHANGE	285.	18.	5,130.	R	A	62
HARRISON AVE.	3	PAVEMENT CHANGE	SANTA ROSA AVE.	1,185.	18.	21,330.	R	A	56
HARRISON AVE.	4	SANTA ROSA AVE.	GLEN DR.	770.	20.	15,400.	R	A	71
HUMBOLDT AVE.	1	END	JOHNSON ST.	350.	50.	17,500.	C	A	76
HUMBOLDT AVE.	2	JOHNSON ST.	ENSIGN ST.	260.	62.	16,120.	C	A	54
HUMBOLDT AVE.	3	ANCHOR ST.	BAY ST.	260.	57.	14,820.	C	O	36
JOHNSON ST.	1	NORTH END	COP @ 150'	150.	20.	3,000.	R	O	95
JOHNSON ST.	1A	COP 150'	BRIDGEWAY	200.	40.	8,000.	R	O	95
JOHNSON ST.	2	BRIDGEWAY	CALEDONIA ST.	250.	36.	9,000.	C	C	82
JOHNSON ST.	3	CALEDONIA ST.	GLEN DR.	775.	18.	13,950.	C	C	82
JOHNSON ST.	4	CALEDONIA	GLEN	775.	36.	27,900.	C	O	86
JOSEPHINE ST.	1	ATWOOD AVE.	NORTH ST.	200.	13.	2,600.	R	A	45
KENDALL CT.	1	NEVADA STREET	CUL-DE-SAC	325.	25.	8,125.	R	A	39
LAUREL LN.	1	TOYON LN.	CUL-DE-SAC	315.	27.	8,505.	R	P	53
LINCOLN DR.	1	BUTTE ST.	NEVADA ST.	2,565.	40.	102,600.	R	A	74
LITHO ST.	1	BRIDGEWAY	CALEDONIA ST.	130.	37.	4,810.	R	A	29
LITHO ST.	2	CALEDONIA ST.	BONITA ST.	453.	18.	8,154.	R	P	33
LITHO ST.	3	CALEDONIA ST	BONITA ST	453.	18.	8,154.	R	A	70
LOCUST RD.	1	GIRARD AVE.	STEPS TO CAZNEAU	390.	18.	7,020.	R	A	53
LOCUST ST.	1	BONITA ST	CALEDONIA ST	430.	36.	15,480.	R	C	72
LOCUST ST.	2	CALEDONIA ST	BONITA ST	150.	36.	5,400.	R	A	56
LOCUST ST.	3	BRIDGEWAY	END	300.	52.	15,600.	R	A	20
LOWER CRESCENT AVE.	1	CRESCENT AVE.	MAIN ST.	800.	13.	10,400.	R	A	59
LOWER GLEN	1	SAN CARLOS AVE	GLEN DRIVE	610.	12.	7,320.	R	A	57
MAIN ST.	1	CRESCENT AVE.	FOURTH ST	925.	25.	23,125.	C	P	38
MAIN ST.	1A	FOURTH ST.	THIRD ST.	300.	25.	7,500.	C	A	91
MAIN ST.	1B	THIRD ST.	SECOND ST	240.	25.	6,000.	C	P	22
MAIN ST.	2	SECOND ST.	EAST END (BAY)	115.	26.	2,990.	R	A	79
MARIE ST.	1	FILBERT ST.	STEPS TO WOODWARD	875.	26.	22,750.	R	O	66
MARIN AVE.	1	NEVADA ST.	ONE WAY LOOP	200.	30.	6,000.	R	A	43
MARIN AVE.	2	MARIN LOOP	WOODWARD AVE	185.	30.	5,550.	R	A	48
MARINSHIP WAY	1	HARBOR DR.	END CITY MAINTAINED / COP	425.	27.	11,475.	C	A	39
MARION AVE.	1	EDWARDS AVE.	SOUTH ST.	900.	20.	18,000.	R	A	44
MARION AVE.	2	SOUTH ST.	END	439.	14.	6,146.	R	A	45
MILLER AVE.	1	SPENCER AVE.	SAN CARLOS AVE.	725.	15.	10,875.	R	A	84
MONTE MAR DR.	1	CURREY AVE.	US 101 ACCESS	1,382.	20.	27,640.	A	A	33
NAPA ST.	1	BRIDGEWAY	CALEDONAI ST.	120.	36.	4,320.	R	A	65

City of Sausalito
Reference Report - Alphabetical

Street Name	Section ID	From	To	Length	Width	Area	FC	ST	PCI
NAPA ST.	2	CALEDONIA ST.	FILBERT AVE.	556.	32.	17,792.	R	A	50
NEVADA ST.	1	BRIDGEWAY	TOMALES ST.	500.	41.	20,500.	A	A	93
NEVADA ST.	2	TOMALES ST.	WC 490' W/O TOMALES ST	490.	41.	20,090.	A	O	92
NEVADA ST.	3	WC 490' W/O TOMALES ST	RODEO AVE	980.	31.	30,380.	A	O	87
NORTH ST.	1	JOSEPHINE ST.	ATWOOD/THIRD ST.	450.	14.	6,300.	R	P	35
NORTH ST.	2	ATWOOD/THIRD ST.	FOURTH ST.	240.	25.	6,000.	R	P	56
NORTH ST.	3	FOURTH ST.	CENTRAL AVE.	240.	15.	3,600.	R	P	27
OLIMA ST.	1	EBBTIDE AVE.	COLOMA ST.	1,725.	35.	60,375.	R	A	68
OLIMA ST.	2	COLOMA ST.	BUTTE ST.	280.	22.	6,160.	R	O	84
OLIVE ST.	1	BRIDGEWAY	END (NEAR WOODWARD)	350.	23.	8,050.	R	A	40
PEARL ST.	1	EASTERBY ST.	SPRING ST.	260.	36.	9,360.	R	A	59
PEARL ST.	2	SPRING ST.	CUL-DE-SAC	125.	38.	4,750.	R	A	64
PINE ST.	1	GIRARD AVE.	BONITA ST.	210.	18.	3,780.	R	P	61
PINE ST.	2	GIRARD AVE	BONITA ST	210.	17.	3,570.	R	A	53
PINE ST.	3	BONITA ST.	CALEDONIA ST.	420.	18.	7,560.	R	P	61
PINE ST.	4	BONITA ST	CALEDONIA ST	420.	17.	7,140.	R	A	84
PINE ST.	5	CALEDONIA ST.	BRIDGEWAY	187.	18.	3,366.	R	P	50
PINE ST.	6	CALEDONIA ST	BRIDGEWAY	187.	17.	3,179.	R	A	70
PLATT AVE.	1	CAZNEAU AVE.	TOYON LN.	1,059.	18.	19,062.	R	O	95
PLATT AVE.	2	TOYON LN.	CURREY LN.	350.	22.	7,700.	R	A	46
PRINCESS ST.	1	BRIDGEWAY	BULKLEY AVE	550.	39.	21,450.	R	A	35
PROSPECT AVE.	1	SPENCER AVE.	CLOUDVIEW RD.	305.	17.	5,185.	R	A	39
PROSPECT AVE.	2	CLOUDVIEW RD.	CUL-DE-SAC @ 159	1,575.	20.	35,347.	R	A	57
READE LN.	1	BULKLEY AVE.	STEPS TO BRIDGEWAY	127.	12.	1,524.	R	P	41
RICHARDSON ST.	1	BRIDGEWAY	SECOND ST.	200.	32.	6,400.	A	O	38
RICHARDSON ST.	2	SECOND ST.	WEST ST.	750.	25.	18,750.	R	P	95
ROAD 3	1	HARBOR	DEAD END	380.	25.	9,500.	R	O	57
RODEO AVE.	1	NEVADA ST.	SAUSALITO TOWERS	920.	22.	20,240.	R	A	43
RODEO AVE.	2	US101	NEVADA ST.	770.	18.	13,860.	A	O	83
RODEO AVE.	3	SAUSALITO TOWERS	WOODWARD AVE.	300.	22.	6,600.	R	A	31
ROSE CT.	1	GLEN DR.	GLEN CT.	250.	15.	3,750.	R	O	49
SACRAMENTO AVE.	1	BUTTE ST.	WC 230' W/O BUTTE ST	230.	19.	4,370.	R	A	79
SACRAMENTO AVE.	2	WC 230' W/O BUTTE ST	CUL-DE-SAC	440.	16.	7,040.	R	A	41
SAN CARLOS AVE.	1	CALEDONIA ST.	GLEN/HARRISON	640.	20.	12,800.	A	P	91
SAN CARLOS AVE.	2	GLEN/HARRISON	SPENCER AVE.	1,200.	25.	30,000.	A	O	76
SAN CARLOS AVE.	3	SPENCER AVE.	CENTRAL/SUNSHINE	766.	18.	13,788.	C	A	66
SAN CARLOS AVE.	4	CENTRAL/SUNSHINE	HARRISON AVE.	480.	20.	9,600.	C	A	60
SANTA ROSA AVE.	1	BULKLEY AVE.	SAN CARLOS AVE.	900.	16.	14,400.	C	P	53
SANTA ROSA AVE.	2	SAN CARLOS AVE.	WIDTH CHANGE (1110') NEAR 184	1,110.	18.	19,980.	R	A	40
SANTA ROSA AVE.	3	WIDTH CHANGE (1110') NEAR 184	GLEN DR.	1,098.	16.	17,568.	R	A	30
SAUSALITO BLVD.	1	SECOND ST.	EDWARDS AVE	261.	25.	6,525.	R	A	57
SAUSALITO BLVD.	2	EDWARDS AVE	CRESCENT AVE.	3,730.	18.	67,140.	R	A	61
SAUSALITO BLVD.	3	CRESCENT AVE.	SPENCER AVE.	1,125.	20.	22,500.	C	A	84

City of Sausalito
Reference Report - Alphabetical

Street Name	Section ID	From	To	Length	Width	Area	FC	ST	PCI
SECOND ST.	1	SOUTH ST.	RICHARDSON ST.	1,036.	25.	25,900.	A	O	61
SECOND ST.	2	RICHARDSON ST.	CUL-DE-SAC END @ 318	212.	20.	4,240.	R	A	63
SOUTH ST.	1	MARION AVE.	END	416.	15.	6,240.	R	A	81
SOUTH ST.	2	2ND ST.	WEST END	239.	26.	6,214.	R	A	54
SOUTH ST.	3	ALEXANDER AVE.	2ND ST.	550.	28.	15,400.	A	O	53
SPENCER AVE.	1	SAN CARLOS AVE.	COOPER LN./SAUSALITO BLVD.	600.	20.	12,000.	A	C	71
SPENCER AVE.	2	COOPER LN./SAUSALITO	PROSPECT AVE.	700.	20.	14,000.	A	A	73
SPENCER AVE.	3	PROSPECT AVE.	MONTE MAR DRIVE	2,000.	25.	50,000.	A	A	79
SPENCER CT.	1	SPENCER AVE.	END	200.	16.	3,200.	R	P	33
SPRING ST.	1	BRIDGEWAY	WOODWARD AVE.	750.	38.	28,500.	C	O	69
SPRING ST.	2	WOODWARD	END	604.	36.	21,744.	R	A	33
STANFORD WAY	1	EBBTIDE AVE.	OLIMA ST.	765.	24.	18,360.	R	A	69
SUNSHINE AVE.	1	SAUSALITO BLVD.	SAN CARLOS AVE.	900.	15.	13,500.	R	P	30
SWEETBRIAR LN.	1	SPENCER AVE.	END @ 1	150.	15.	2,250.	R	O	74
THIRD ST.	2	VALLEY ST.	MAIN ST.	354.	16.	5,664.	R	A	92
THIRD ST.	3	MAIN ST.	RICHARDSON ST.	352.	21.	7,392.	R	P	42
THIRD ST.	4	RICHARDSON ST.	NORTH ST.	300.	25.	7,500.	C	P	89
TOMALES ST.	1	NEVADA ST.	WATEREE ST.	300.	27.	8,100.	R	O	66
TOMALES ST.	2	WATEREE ST.	BUTTE ST.	860.	22.	18,920.	R	A	66
TOYON CT.	1	TOYON LN.	SOUTH END	230.	22.	5,060.	R	A	65
TOYON LN.	1	PLATT AVE.	CUL-DE-SAC	1,340.	22.	29,480.	R	A	17
TRACY WAY	1	EL PORTAL	BRIDGEWAY	350.	22.	7,700.	R	O	79
TURNEY ST.	2	BRIDGEWAY	CALEDONIA ST.	168.	36.	6,048.	R	P	39
TURNEY ST.	3	CALEDONIA ST.	BONITA ST.	418.	16.	6,688.	R	P	33
TURNEY ST.	4	BONITA ST.	GIRARD AVE.	230.	16.	3,680.	R	P	38
TURNEY ST.	5	CALEDONIA ST	BONITA ST	418.	20.	8,360.	R	O	79
TURNEY ST.	6	BONITA ST.	GIRARD ST.	230.	20.	4,600.	R	A	78
VALLEY ST.	1	WEST ST.	2ND ST.	780.	17.	13,260.	R	A	45
VALLEY ST.	2	2ND ST.	BAY (EAST END)	120.	25.	3,000.	R	A	74
VISTA CLARA DR.	1	MONTE MAR DR.	CURREY AVE.	600.	16.	9,600.	R	A	41
WEST CT.	1	RICHARDSON ST.	END	165.	16.	2,640.	R	A	71
WEST ST.	2	RICHARDSON ST.	MAIN ST.	353.	19.	6,707.	R	A	29
WEST ST.	3	MAIN ST.	END OF BRIDGE	100.	20.	2,000.	R	P	83
WEST ST.	4	END OF BRIDGE	VALLEY ST.	210.	17.	3,570.	R	A	80
WILLIAMS CT.	1	LINCOLN DR.	CUL-DE-SAC	136.	25.	3,400.	R	O	68
WOODWARD AVE.	1	MARIN AVE.	RODEO AVE.	1,215.	22.	26,730.	R	A	61
WOODWARD AVE.	2	RODEO AVE.	SPRING ST.	445.	27.	12,015.	C	A	17
WOODWARD AVE.	3	SPRING ST	EASTERBY	370.	30.	11,100.	C	O	68
WOODWARD AVE.	5	EASTERBY	CAZNEAU AVE	1,525.	18.	27,450.	C	O	45
WRAY AVE.	1	CURREY AVE.	CUL-DE-SAC	510.	18.	9,180.	R	A	54

Street List PCI High to Low

City of Sausalito
Reference Report - PCI High to Low

Street Name	Section ID	From	To	Length	Width	Area	FC	ST	PCI
GIRARD AVE.	1	JOHNSON ST	TURNEY ST	651.	20.	13,020.	R	A	95
JOHNSON ST.	1	NORTH END	COP @ 150'	150.	20.	3,000.	R	O	95
JOHNSON ST.	1A	COP 150'	BRIDGEWAY	200.	40.	8,000.	R	O	95
PLATT AVE.	1	CAZNEAU AVE.	TOYON LN.	1,059.	18.	19,062.	R	O	95
RICHARDSON ST.	2	SECOND ST.	WEST ST.	750.	25.	18,750.	R	P	95
BEE ST.	2	CALEDONIA ST.	BONITA ST.	424.	35.	14,840.	R	A	94
BONITA ST.	3	LITHO ST	BEE ST	325.	35.	11,375.	R	A	94
NEVADA ST.	1	BRIDGEWAY	TOMALES ST.	500.	41.	20,500.	A	A	93
FOURTH ST.	1	VALLEY ST.	MAIN ST.	354.	15.	5,310.	R	A	92
NEVADA ST.	2	TOMALES ST.	WC 490' W/O TOMALES ST	490.	41.	20,090.	A	O	92
THIRD ST.	2	VALLEY ST.	MAIN ST.	354.	16.	5,664.	R	A	92
MAIN ST.	1A	FOURTH ST.	THIRD ST.	300.	25.	7,500.	C	A	91
SAN CARLOS AVE.	1	CALEDONIA ST.	GLEN/HARRISON	640.	20.	12,800.	A	P	91
THIRD ST.	4	RICHARDSON ST.	NORTH ST.	300.	25.	7,500.	C	P	89
NEVADA ST.	3	WC 490' W/O TOMALES ST	RODEO AVE	980.	31.	30,380.	A	O	87
JOHNSON ST.	4	CALEDONIA	GLEN	775.	36.	27,900.	C	O	86
MILLER AVE.	1	SPENCER AVE.	SAN CARLOS AVE.	725.	15.	10,875.	R	A	84
OLIMA ST.	2	COLOMA ST.	BUTTE ST.	280.	22.	6,160.	R	O	84
PINE ST.	4	BONITA ST	CALEDONIA ST	420.	17.	7,140.	R	A	84
SAUSALITO BLVD.	3	CRESCENT AVE.	SPENCER AVE.	1,125.	20.	22,500.	C	A	84
RODEO AVE.	2	US101	NEVADA ST.	770.	18.	13,860.	A	O	83
WEST ST.	3	MAIN ST.	END OF BRIDGE	100.	20.	2,000.	R	P	83
BAY ST.	1	HUMBOLT ST.	BRIDGEWAY	150.	36.	5,400.	C	O	82
JOHNSON ST.	2	BRIDGEWAY	CALEDONIA ST.	250.	36.	9,000.	C	C	82
JOHNSON ST.	3	CALEDONIA ST.	GLEN DR.	775.	18.	13,950.	C	C	82
SOUTH ST.	1	MARION AVE.	END	416.	15.	6,240.	R	A	81
WEST ST.	4	END OF BRIDGE	VALLEY ST.	210.	17.	3,570.	R	A	80
MAIN ST.	2	SECOND ST.	EAST END (BAY)	115.	26.	2,990.	R	A	79
SACRAMENTO AVE.	1	BUTTE ST.	WC 230' W/O BUTTE ST	230.	19.	4,370.	R	A	79
SPENCER AVE.	3	PROSPECT AVE.	MONTE MAR DRIVE	2,000.	25.	50,000.	A	A	79
TRACY WAY	1	EL PORTAL	BRIDGEWAY	350.	22.	7,700.	R	O	79
TURNEY ST.	5	CALEDONIA ST	BONITA ST	418.	20.	8,360.	R	O	79
EBBTIDE AVE.	1	BRIDGEWAY	100 EBBTIDE	450.	36.	16,200.	R	O	78
TURNEY ST.	6	BONITA ST.	GIRARD ST.	230.	20.	4,600.	R	A	78
ATWOOD AVE.	1	HARRISON/BULKLEY AVE.	NORTH ST.	871.	22.	19,162.	C	A	77
CALEDONIA ST.	1	NAPA ST.	PINE ST	1,760.	38.	66,880.	R	O	77
CLOUDVIEW RD.	1	PROSPECT AVE.	HWY 101	1,575.	19.	29,925.	R	A	77
HUMBOLDT AVE.	1	END	JOHNSON ST.	350.	50.	17,500.	C	A	76
SAN CARLOS AVE.	2	GLEN/HARRISON	SPENCER AVE.	1,200.	25.	30,000.	A	O	76
LINCOLN DR.	1	BUTTE ST.	NEVADA ST.	2,565.	40.	102,600.	R	A	74
SWEETBRIAR LN.	1	SPENCER AVE.	END @ 1	150.	15.	2,250.	R	O	74
VALLEY ST.	2	2ND ST.	BAY (EAST END)	120.	25.	3,000.	R	A	74
BOOKER AVE.	1	SPENCER AVE.	CLOUDVIEW RD.	330.	16.	5,280.	R	O	73

City of Sausalito
Reference Report - PCI High to Low

Street Name	Section ID	From	To	Length	Width	Area	FC	ST	PCI
EASTERBY ST.	4	PEARL ST (END PCC)	WOODWARD AVE.	115.	36.	4,140.	R	A	73
SPENCER AVE.	2	COOPER LN./SAUSALITO	PROSPECT AVE.	700.	20.	14,000.	A	A	73
CRESCENT AVE.	2	LOWER CRESCENT AVE.	PCC / COP	843.	15.	12,645.	C	A	72
CURREY AVE.	2	PLATT AVE./MONTE MAR DR.	CRESCIENTA DR.	750.	20.	15,000.	A	A	72
ENSIGN ST.	1	BRIDGEWAY	HUMBOLT AVE.	70.	45.	3,150.	R	A	72
GLEN DR.	4	JOHNSON ST.	SAN CARLOS AVE.	594.	21.	12,474.	C	A	72
LOCUST ST.	1	BONITA ST	CALEDONIA ST	430.	36.	15,480.	R	C	72
BONITA ST.	4	BEE ST	NAPA ST	260.	17.	4,420.	R	A	71
HARRISON AVE.	4	SANTA ROSA AVE.	GLEN DR.	770.	20.	15,400.	R	A	71
SPENCER AVE.	1	SAN CARLOS AVE.	COOPER LN./SAUSALITO BLVD.	600.	20.	12,000.	A	C	71
WEST CT.	1	RICHARDSON ST.	END	165.	16.	2,640.	R	A	71
BRIDGEWAY	13	PRINCESS ST.	RICHARDSON ST.	1,975.	11.	21,725.	A	P	70
FILBERT AVE.	2	MARIE ST.	GIRARD AVE.	900.	18.	16,200.	C	O	70
LITHO ST.	3	CALEDONIA ST	BONITA ST	453.	18.	8,154.	R	A	70
PINE ST.	6	CALEDONIA ST	BRIDGEWAY	187.	17.	3,179.	R	A	70
EL PORTAL	1	BRIDGEWAY	TRACY WY	250.	32.	8,000.	R	A	69
GIRARD AVE.	3	LITHO ST.	FILBERT ST.	550.	20.	11,000.	C	O	69
HARBOR DR.	1	GATE 5 RD.	CLIPPER YACHT (PVT ENTRANCE)	182.	35.	6,370.	R	A	69
SPRING ST.	1	BRIDGEWAY	WOODWARD AVE.	750.	38.	28,500.	C	O	69
STANFORD WAY	1	EBBTIDE AVE.	OLIMA ST.	765.	24.	18,360.	R	A	69
CRECIENTA LN.	1	CRESCIENTA DR.	END	350.	16.	5,600.	R	O	68
OLIMA ST.	1	EBBTIDE AVE.	COLOMA ST.	1,725.	35.	60,375.	R	A	68
WILLIAMS CT.	1	LINCOLN DR.	CUL-DE-SAC	136.	25.	3,400.	R	O	68
WOODWARD AVE.	3	SPRING ST	EASTERBY	370.	30.	11,100.	C	O	68
ANCHOR ST.	1	BRIDGEWAY	HUMBOLDT ST.	192.	28.	5,376.	C	O	67
CALEDONIA ST.	3	JOHNSON ST	PINE ST	425.	36.	15,300.	R	O	67
CURREY LN.	1	CURREY AVE.	CUL-DE-SAC	1,100.	20.	22,000.	R	A	67
BEE ST.	1	CALEDONIA	BRIDGEWAY	140.	38.	5,320.	R	O	66
CURREY AVE.	1	GLEN DR.	PLATT AVE.	995.	18.	17,910.	A	A	66
FILBERT AVE.	3	GIRARD AVE.	CAZNEAU AVE.	798.	18.	14,364.	R	O	66
MARIE ST.	1	FILBERT ST.	STEPS TO WOODWARD	875.	26.	22,750.	R	O	66
SAN CARLOS AVE.	3	SPENCER AVE.	CENTRAL/SUNSHINE	766.	18.	13,788.	C	A	66
TOMALES ST.	1	NEVADA ST.	WATEREE ST.	300.	27.	8,100.	R	O	66
TOMALES ST.	2	WATEREE ST.	BUTTE ST.	860.	22.	18,920.	R	A	66
BONITA ST.	1	JOHNSON ST.	LITHO STREET	1,175.	18.	21,150.	R	P	65
NAPA ST.	1	BRIDGEWAY	CALEDONAI ST.	120.	36.	4,320.	R	A	65
TOYON CT.	1	TOYON LN.	SOUTH END	230.	22.	5,060.	R	A	65
BRIDGEWAY (SB)	4	NEVADA ST.	SPRING ST.	1,660.	25.	41,500.	A	O	64
BUCHANAN CT.	1	BUCHANON DR.	CUL-DE-SAC	102.	34.	3,468.	R	A	64
GLEN DR.	2	CURREY AVE.	SANTA ROSA AVE/ GLEN DR	944.	16.	15,104.	R	O	64
PEARL ST.	2	SPRING ST.	CUL-DE-SAC	125.	38.	4,750.	R	A	64
BRIDGEWAY (SB)	5	SPRING ST.	NAPA ST.	1,587.	26.	41,262.	A	O	63
SECOND ST.	2	RICHARDSON ST.	CUL-DE-SAC END @ 318	212.	20.	4,240.	R	A	63

City of Sausalito
Reference Report - PCI High to Low

Street Name	Section ID	From	To	Length	Width	Area	FC	ST	PCI
BRIDGEWAY (SB)	6	NAPA ST.	JOHNSON ST.	1,800.	25.	45,000.	A	O	62
COLOMA ST.	1	GATE 5 RD.	BRIDGEWAY	765.	20.	15,300.	R	A	62
HARRISON AVE.	2	SAN CARLOS AVE. (S)	PAVEMENT CHANGE	285.	18.	5,130.	R	A	62
BRIDGEWAY (SB)	2	CITY LIMITS NORTH	COLOMA ST.	1,775.	32.	56,800.	A	O	61
GEORGE LN.	1	CURRY AVE	51 GEORGE LN	644.	15.	9,660.	R	O	61
PINE ST.	1	GIRARD AVE.	BONITA ST.	210.	18.	3,780.	R	P	61
PINE ST.	3	BONITA ST.	CALEDONIA ST.	420.	18.	7,560.	R	P	61
SAUSALITO BLVD.	2	EDWARDS AVE	CRESCENT AVE.	3,730.	18.	67,140.	R	A	61
SECOND ST.	1	SOUTH ST.	RICHARDSON ST.	1,036.	25.	25,900.	A	O	61
WOODWARD AVE.	1	MARIN AVE.	RODEO AVE.	1,215.	22.	26,730.	R	A	61
BULKLEY AVE.	3	PRINCESS ST.	ATWOOD/HARRISON	920.	23.	21,160.	C	A	60
CRECIENTA DR.	1	MONTE MAR DR.	CURREY AVE.	900.	18.	16,200.	R	A	60
HARRISON AVE.	1	ATTWOOD/BULKLEY AVE.	SAN CARLOS AVE. (S)	250.	18.	4,500.	R	A	60
SAN CARLOS AVE.	4	CENTRAL/SUNSHINE	HARRISON AVE.	480.	20.	9,600.	C	A	60
BRIDGEWAY (NB)	2	JOHNSON ST.	PRINCESS ST.	1,950.	49.	95,550.	A	O	59
BUCHANAN DR.	1	NEVADA ST.	LINCOLN DRIVE	1,250.	31.	38,750.	R	A	59
GLEN DR.	1	CAZNEAU AVE.	CURREY AVE.	436.	13.	5,668.	R	O	59
LOWER CRESCENT AVE.	1	CRESCENT AVE.	MAIN ST.	800.	13.	10,400.	R	A	59
PEARL ST.	1	EASTERBY ST.	SPRING ST.	260.	36.	9,360.	R	A	59
BRIDGEWAY (NB)	2	NAPA ST.	SPRING ST. EAST	2,250.	29.	65,250.	A	O	58
BRIDGEWAY (NB)	1	JOHNSON ST.	NAPA ST.	1,800.	17.	30,600.	A	O	57
LOWER GLEN	1	SAN CARLOS AVE	GLEN DRIVE	610.	12.	7,320.	R	A	57
PROSPECT AVE.	2	CLOUDVIEW RD.	CUL-DE-SAC @ 159	1,575.	20.	35,347.	R	A	57
ROAD 3	1	HARBOR	DEAD END	380.	25.	9,500.	R	O	57
SAUSALITO BLVD.	1	SECOND ST.	EDWARDS AVE	261.	25.	6,525.	R	A	57
CALEDONIA ST.	2	BRIDGEWAY	JOHNSON ST	175.	17.	2,975.	R	O	56
CRESCENT AVE.	4	MAIN ST.	WEST ST.	822.	15.	12,330.	R	A	56
HARRISON AVE.	3	PAVEMENT CHANGE	SANTA ROSA AVE.	1,185.	18.	21,330.	R	A	56
LOCUST ST.	2	CALEDONIA ST	BONITA ST	150.	36.	5,400.	R	A	56
NORTH ST.	2	ATWOOD/THIRD ST.	FOURTH ST.	240.	25.	6,000.	R	P	56
BONITA ST.	2	JOHNSON ST	LITHO ST	1,175.	17.	19,975.	R	A	55
BRIDGEWAY (NB)	5	COLOMA ST.	CITY LIMITS EAST	1,775.	25.	44,375.	A	O	55
BRIDGEWAY (NB)	3	SPRING ST.	NEVADA ST.	1,660.	33.	54,780.	A	O	54
CAZNEAU AVE.	3	GLEN DR.	GIRARD ST.	1,385.	16.	22,160.	R	O	54
CHANNING WAY	1	PROSPECT AVE.	CUL-DE-SAC @ 21	400.	20.	8,000.	R	A	54
HUMBOLDT AVE.	2	JOHNSON ST.	ENSIGN ST.	260.	62.	16,120.	C	A	54
SOUTH ST.	2	2ND ST.	WEST END	239.	26.	6,214.	R	A	54
WRAY AVE.	1	CURREY AVE.	CUL-DE-SAC	510.	18.	9,180.	R	A	54
GLEN CT.	1	ROSE CT.	GLEN DR.	450.	16.	7,200.	R	A	53
LAUREL LN.	1	TOYON LN.	CUL-DE-SAC	315.	27.	8,505.	R	P	53
LOCUST RD.	1	GIRARD AVE.	STEPS TO CAZNEAU	390.	18.	7,020.	R	A	53
PINE ST.	2	GIRARD AVE	BONITA ST	210.	17.	3,570.	R	A	53
SANTA ROSA AVE.	1	BULKLEY AVE.	SAN CARLOS AVE.	900.	16.	14,400.	C	P	53

City of Sausalito
Reference Report - PCI High to Low

Street Name	Section ID	From	To	Length	Width	Area	FC	ST	PCI
SOUTH ST.	3	ALEXANDER AVE.	2ND ST.	550.	28.	15,400.	A	O	53
BUTTE ST.	2	SACRAMENTO AVE.	TOMALES ST.	600.	21.	12,600.	R	A	51
CAZNEAU AVE.	2	PLATT AVE.	FILBERT/GLEN	1,025.	20.	20,500.	R	O	51
CENTRAL AVE.	1	SAN CARLOS AVE.	WEST	1,425.	19.	27,075.	R	A	51
GLEN DR.	3	SANTA ROSA AVE/ GLEN DR	JOHNSON ST.	1,565.	18.	28,170.	R	A	51
BRIDGEWAY (NB)	4	NEVADA ST.	COLOMA ST.	1,400.	25.	36,500.	A	O	50
BRIDGEWAY (SB)	3	COLOMA ST.	NEVADA ST.	1,500.	25.	37,500.	A	O	50
EASTERBY ST.	1	BRIDGEWAY/FILBERT	105' S/O BRIDGEWAY	105.	39.	4,095.	R	A	50
NAPA ST.	2	CALEDONIA ST.	FILBERT AVE.	556.	32.	17,792.	R	A	50
PINE ST.	5	CALEDONIA ST.	BRIDGEWAY	187.	18.	3,366.	R	P	50
BUCHANAN DR.	2	LINCOLN DRIVE	CUL-DE-SAC	335.	31.	10,385.	R	A	49
BULKLEY AVE.	2	SANTA ROSA AVE.	PRINCESS ST.	1,020.	25.	25,500.	C	A	49
ROSE CT.	1	GLEN DR.	GLEN CT.	250.	15.	3,750.	R	O	49
FILBERT AVE.	1	EASTERBY ST.	MARIE	695.	24.	16,680.	C	A	48
MARIN AVE.	2	MARIN LOOP	WOODWARD AVE	185.	30.	5,550.	R	A	48
CRESCENT AVE.	3	AC / COP	MAIN ST.	120.	15.	1,800.	C	P	47
ALEXANDER AVE.	1	SOUTH CITY LIMIT	SOUTH ST.	450.	24.	10,800.	A	O	46
BONITA ST.	5	BEE ST	NAPA ST	260.	18.	4,680.	R	P	46
PLATT AVE.	2	TOYON LN.	CURREY LN.	350.	22.	7,700.	R	A	46
BULKLEY AVE.	1	SAN CARLOS AVE.	SANTA ROSA AVE.	800.	26.	20,800.	C	A	45
JOSEPHINE ST.	1	ATWOOD AVE.	NORTH ST.	200.	13.	2,600.	R	A	45
MARION AVE.	2	SOUTH ST.	END	439.	14.	6,146.	R	A	45
VALLEY ST.	1	WEST ST.	2ND ST.	780.	17.	13,260.	R	A	45
WOODWARD AVE.	5	EASTERBY	CAZNEAU AVE	1,525.	18.	27,450.	C	O	45
MARION AVE.	1	EDWARDS AVE.	SOUTH ST.	900.	20.	18,000.	R	A	44
CABLE ROADWAY	1	PROSPECT AVE.	EAST TO STEPS	208.	16.	3,328.	R	P	43
MARIN AVE.	1	NEVADA ST.	ONE WAY LOOP	200.	30.	6,000.	R	A	43
RODEO AVE.	1	NEVADA ST.	SAUSALITO TOWERS	920.	22.	20,240.	R	A	43
GEORGE LN.	2	51 GEORGE LN	CUL-DE-SAC	585.	18.	10,530.	R	A	42
THIRD ST.	3	MAIN ST.	RICHARDSON ST.	352.	21.	7,392.	R	P	42
HARBOR DR.	3	BRIDGEWAY	ROAD 3	630.	43.	27,090.	C	A	41
READE LN.	1	BULKLEY AVE.	STEPS TO BRIDGEWAY	127.	12.	1,524.	R	P	41
SACRAMENTO AVE.	2	WC 230' W/O BUTTE ST	CUL-DE-SAC	440.	16.	7,040.	R	A	41
VISTA CLARA DR.	1	MONTE MAR DR.	CURREY AVE.	600.	16.	9,600.	R	A	41
GIRARD AVE.	2	TURNEY ST	LITHO ST	675.	20.	13,500.	R	P	40
OLIVE ST.	1	BRIDGEWAY	END (NEAR WOODWARD)	350.	23.	8,050.	R	A	40
SANTA ROSA AVE.	2	SAN CARLOS AVE.	WIDTH CHANGE (1110') NEAR 184	1,110.	18.	19,980.	R	A	40
BRIDGEWAY	1	PRINCESS ST.	RICHARDSON ST.	1,975.	28.	55,300.	A	O	39
CLOUDVIEW CIR.	1	CLOUDVIEW RD.	END	125.	20.	2,500.	R	A	39
EASTERBY	3	105' S/O BRIDGEWAY	PEARL ST	550.	17.	9,350.	R	P	39
KENDALL CT.	1	NEVADA STREET	CUL-DE-SAC	325.	25.	8,125.	R	A	39
MARINSHIP WAY	1	HARBOR DR.	END CITY MAINTAINED / COP	425.	27.	11,475.	C	A	39
PROSPECT AVE.	1	SPENCER AVE.	CLOUDVIEW RD.	305.	17.	5,185.	R	A	39

City of Sausalito
Reference Report - PCI High to Low

Street Name	Section ID	From	To	Length	Width	Area	FC	ST	PCI
TURNEY ST.	2	BRIDGEWAY	CALEDONIA ST.	168.	36.	6,048.	R	P	39
MAIN ST.	1	CRESCENT AVE.	FOURTH ST	925.	25.	23,125.	C	P	38
RICHARDSON ST.	1	BRIDGEWAY	SECOND ST.	200.	32.	6,400.	A	O	38
TURNEY ST.	4	BONITA ST.	GIRARD AVE.	230.	16.	3,680.	R	P	38
GORDON ST.	1	SPRING ST.	END @ 15	185.	23.	4,255.	R	O	37
CAZNEAU AVE.	1	MARIE ST.	PLATT AVE.	700.	15.	10,500.	C	A	36
HUMBOLDT AVE.	3	ANCHOR ST.	BAY ST.	260.	57.	14,820.	C	O	36
NORTH ST.	1	JOSEPHINE ST.	ATWOOD/THIRD ST.	450.	14.	6,300.	R	P	35
PRINCESS ST.	1	BRIDGEWAY	BULKLEY AVE	550.	39.	21,450.	R	A	35
CRESCENT AVE.	1	SAUSALITO BLVD.	LOWER CRESCENT AVE.	387.	15.	5,805.	C	P	34
FOURTH ST.	3	RICHARDSON ST.	NORTH ST.	353.	15.	5,295.	R	P	34
LITHO ST.	2	CALEDONIA ST.	BONITA ST.	453.	18.	8,154.	R	P	33
MONTE MAR DR.	1	CURREY AVE.	US 101 ACCESS	1,382.	20.	27,640.	A	A	33
SPENCER CT.	1	SPENCER AVE.	END	200.	16.	3,200.	R	P	33
SPRING ST.	2	WOODWARD	END	604.	36.	21,744.	R	A	33
TURNEY ST.	3	CALEDONIA ST.	BONITA ST.	418.	16.	6,688.	R	P	33
BRIDGEWAY OFFRAMP	1	BRIDGEWAY NEAR SPRING ST	EASTERBY ST.	185.	36.	6,660.	C	A	32
FOURTH ST.	2	MAIN ST.	RICHARDSON ST.	353.	15.	5,295.	R	P	32
RODEO AVE.	3	SAUSALITO TOWERS	WOODWARD AVE.	300.	22.	6,600.	R	A	31
SANTA ROSA AVE.	3	WIDTH CHANGE (1110') NEAR 184	GLEN DR.	1,098.	16.	17,568.	R	A	30
SUNSHINE AVE.	1	SAUSALITO BLVD.	SAN CARLOS AVE.	900.	15.	13,500.	R	P	30
LITHO ST.	1	BRIDGEWAY	CALEDONIA ST.	130.	37.	4,810.	R	A	29
WEST ST.	2	RICHARDSON ST.	MAIN ST.	353.	19.	6,707.	R	A	29
EBBTIDE AVE.	2	100 EBBTIDE	STANFORD WAY	500.	27.	13,500.	R	A	28
EDWARDS AVE.	1	SAUSALITO BLVD.	ALEXANDER AVE.	1,775.	17.	30,175.	R	P	28
NORTH ST.	3	FOURTH ST.	CENTRAL AVE.	240.	15.	3,600.	R	P	27
GATE 5 RD.	1	BRIDGEWAY	HARBOR DR.	1,883.	30.	56,490.	C	A	25
ARANA CIR.	1	KENDALL COURT LOOP	ARANA CIRCLE LOOP	225.	24.	5,400.	R	A	23
MAIN ST.	1B	THIRD ST.	SECOND ST	240.	25.	6,000.	C	P	22
BUTTE ST.	1	THE ANCHORAGE	SACRAMENTO AVE.	345.	26.	8,970.	R	A	21
EBBTIDE AVE.	3	STANFORD WAY	OLIMA ST.	690.	13.	8,970.	R	A	21
LOCUST ST.	3	BRIDGEWAY	END	300.	52.	15,600.	R	A	20
COLOMA ST.	2	BRIDGEWAY	TOMALES ST.	520.	36.	18,720.	R	A	19
COLOMA ST.	3	TOMALES ST.	OLIMA ST.	450.	40.	18,000.	R	A	19
HARBOR DR.	2	ROAD 3	GATE 5 RD.	240.	25.	6,000.	C	A	18
TOYON LN.	1	PLATT AVE.	CUL-DE-SAC	1,340.	22.	29,480.	R	A	17
WOODWARD AVE.	2	RODEO AVE.	SPRING ST.	445.	27.	12,015.	C	A	17
ARANA CIR.	2	ARANA CIR LOOP	ARANA CIRCLE LOOP END	715.	17.	12,155.	R	A	14
EXCELSIOR LN.	1	BULKLEY AVE.	STEPS TO BRIDGEWAY	200.	12.	2,800.	R	P	14
EASTERBY	2	105' S/O BRIDGEWAY	PEARL ST	550.	20.	11,000.	R	A	3

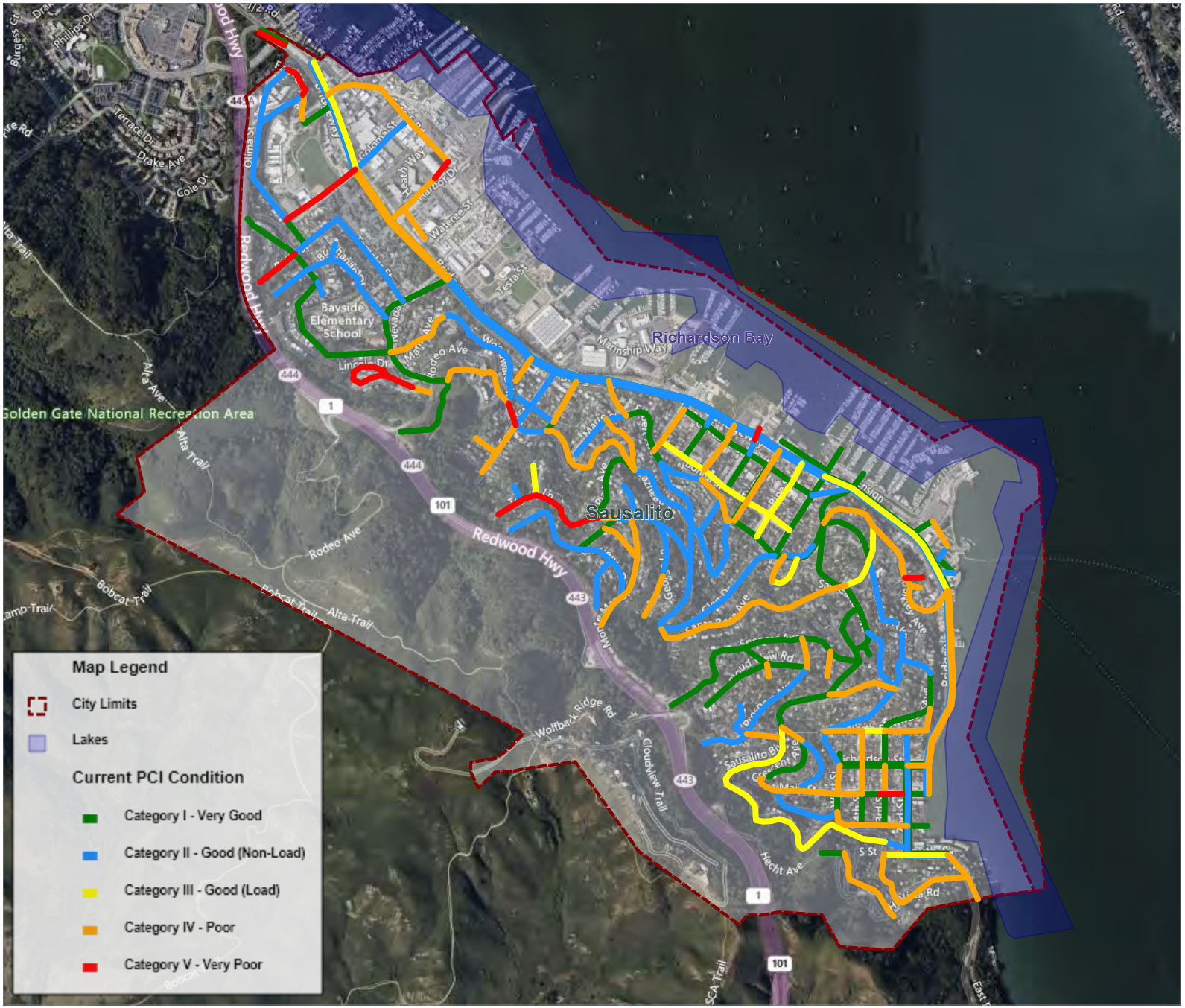
CITY OF SAUSALITO

Current PCI Condition

Printed: 1/29/2023

Feature Legend

- Category I - Very Good
- Category II - Good (Non-Load)
- Category III - Good (Load)
- Category IV - Poor
- Category V - Very Poor



City of Sausalito
2022 PMP Update (PTAP Round 23)

Data Quality Management Report

For the 2022 Pavement Management Program update for the City of Sausalito, Pavement Engineering Inc. (PEI) rated about 26 centerline miles of Arterial, Collector, and Residential roadways. Those 26 centerline miles are broken down into 214 different management segments of varying lengths and widths. PEI completed their initial rating assessment in August 2022.

Once the initial ratings were completed, the field crew then preformed a 2nd rating on a randomly selected 10% of segments. This 2nd rating is intended as a consistency check, which ensures that our raters are performing evaluations consistent with our allowable range of +/- 5 PCI points. Of the 22 segments that were part of the 10% QC, 2 were found to be outside of the allowable range. Those 2 segments were re-rated by The Project Manager. Following the 10% Field Crew QC, an additional randomly selected 5% of segments were reviewed by The Project Manager.

Furthermore, an analysis was performed on the initial ratings to see how each segment's PCI has changed since the last rating was performed. Any segment found to have deteriorated more than 3 PCI points per year, since the City of Sausalito's PCIs were last updated or have increased more than 1 PCI point without a documented M&R treatment, was then reviewed by The Project Manager.

Of the 214 segments reviewed, a total of 56.5% or 121 segments, were outside of the allowable range. These segments were then reviewed by The Project Manager. We found that of the 56.5% (121 segments), 81.8% (99 segments) were deemed to be accurate in the amount they had deteriorated. 10.7% (13 segments) were found to be rated harsher than necessary, and 7.4% (9 segments) were rated too leniently. Those segments' PCIs were re-rated and now reflect the proper deterioration amount and coinciding PCI.

Appendix A
Summarized System Information

Network Summary Statistics

Printed: 1/25/2023

	Total Sections	Total Center Miles	Total Lane Miles	Total Area (sq. ft.)	PCI
Arterial	29	6.88	13.39	948,822	62
Collector	37	4.34	8.76	574,985	55
Residential/Local	146	15.20	29.67	1,769,081	57
Total	212	26.42	51.82	3,292,888	
				Overall Network PCI as of 1/25/2023:	58
**Combined	2	0.51	1.01	26,395	N/A
Gravel	2	0.51	1.01	26,395	N/A

***** Combined Sections are excluded from totals. These Sections do not have a PCI Date - they have not been inspected or had a Treatment applied.***

Network Replacement Cost

Printed: 01/25/2023

Functional Class	Surface Type	Lane Miles	Unit Cost/ Square Foot	Pavement Area/ Square Feet	Cost To Replace/ (in thousands)
Arterial	AC	2.4	$29.32	145,050	$4,253
	AC/AC	10.2	$29.32	757,247	$22,204
	AC/PCC	0.2	$29.32	12,000	$352
	PCC	0.6	$61.54	34,525	$2,125
Collector	AC	5.2	$29.32	345,659	$10,135
	AC/AC	2.1	$29.32	147,746	$4,332
	AC/PCC	0.4	$29.32	22,950	$673
	PCC	1.1	$61.54	58,630	$3,608
Proposed; Private; Non-County	AC	0.1	$29.32	5,229	$153
Residential/Local	AC	20.6	$29.32	1,236,683	$36,262
	AC/AC	5.1	$29.32	311,298	$9,128
	AC/PCC	0.2	$29.32	15,480	$454
	PCC	3.8	$61.54	205,620	$12,655
	Grand Total:	51.9		3,298,117	$106,335

Decision Tree

Printed: 1/22/2023

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Arterial	AC	I - Very Good	Crack Treatment	CRACK SEAL	$2.21	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		5	
			Restoration Treatment	LIGHT REHABILITATION	$54.16			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$25.45		7	
		III - Good, Load Related		LIGHT REHABILITATION	$54.16			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	AC/AC	I - Very Good	Crack Treatment	CRACK SEAL	$2.21	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		5	
			Restoration Treatment	LIGHT REHABILITATION	$54.16			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$25.45		7	
		III - Good, Load Related		LIGHT REHABILITATION	$54.16			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	AC/PCC	I - Very Good	Crack Treatment	CRACK SEAL	$2.21	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		5	
			Restoration Treatment	LIGHT REHABILITATION	$54.16			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$25.45		7	
		III - Good, Load Related		LIGHT REHABILITATION	$54.16			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	1		
			Surface Treatment	DO NOTHING	$0.00		1	
			Restoration Treatment	DO NOTHING	$0.00			1
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		Slab Repair	$143.26			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$553.90			

Functional Class and Surface combination not used

Selected Treatment is not a Surface Seal

Decision Tree

Printed: 1/22/2023

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Arterial	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		15	
			Restoration Treatment	DO NOTHING	$0.00			99
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		DO NOTHING	$0.00			
		V - Very Poor		DO NOTHING	$0.00			

Functional Class and Surface combination not used

Selected Treatment is not a Surface Seal

Decision Tree

Printed: 1/22/2023

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Collector	AC	I - Very Good	Crack Treatment	CRACK SEAL	$1.83	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		5	
			Restoration Treatment	LIGHT REHABILITATION	$51.75			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$22.19		7	
		III - Good, Load Related		LIGHT REHABILITATION	$51.75			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	AC/AC	I - Very Good	Crack Treatment	CRACK SEAL	$1.83	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		5	
			Restoration Treatment	LIGHT REHABILITATION	$51.75			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$22.19		7	
		III - Good, Load Related		LIGHT REHABILITATION	$51.75			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	AC/PCC	I - Very Good	Crack Treatment	CRACK SEAL	$1.83	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		5	
			Restoration Treatment	LIGHT REHABILITATION	$51.75			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$22.19		7	
		III - Good, Load Related		LIGHT REHABILITATION	$51.75			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	1		
			Surface Treatment	DO NOTHING	$0.00		1	
			Restoration Treatment	DO NOTHING	$0.00			1
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		Slab Repair	$143.26			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$553.90			

Functional Class and Surface combination not used

Selected Treatment is not a Surface Seal

Decision Tree

Printed: 1/22/2023

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Collector	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		15	
			Restoration Treatment	DO NOTHING	$0.00			99
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		DO NOTHING	$0.00			
		V - Very Poor		DO NOTHING	$0.00			

Functional Class and Surface combination not used

Selected Treatment is not a Surface Seal

Decision Tree

Printed: 1/22/2023

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Residential/Local	AC	I - Very Good	Crack Treatment	CRACK SEAL	$1.61	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		7	
			Restoration Treatment	LIGHT REHABILITATION	$49.85			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$19.58		7	
		III - Good, Load Related		LIGHT REHABILITATION	$49.85			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	AC/AC	I - Very Good	Crack Treatment	CRACK SEAL	$1.61	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		7	
			Restoration Treatment	LIGHT REHABILITATION	$49.85			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$19.58		7	
		III - Good, Load Related		LIGHT REHABILITATION	$49.85			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	AC/PCC	I - Very Good	Crack Treatment	CRACK SEAL	$1.61	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		7	
			Restoration Treatment	LIGHT REHABILITATION	$49.85			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$19.58		7	
		III - Good, Load Related		LIGHT REHABILITATION	$49.85			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	1		
			Surface Treatment	DO NOTHING	$0.00		1	
			Restoration Treatment	DO NOTHING	$0.00			1
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		Slab Repair	$143.26			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$553.90			

Functional Class and Surface combination not used

Selected Treatment is not a Surface Seal

Decision Tree

Printed: 1/22/2023

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Residential/Local	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		15	
			Restoration Treatment	DO NOTHING	$0.00			99
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		DO NOTHING	$0.00			
		V - Very Poor		DO NOTHING	$0.00			

Functional Class and Surface combination not used

Selected Treatment is not a Surface Seal

Decision Tree

Printed: 1/22/2023

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Other	AC	I - Very Good	Crack Treatment	CRACK SEAL	$1.61	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		7	
			Restoration Treatment	LIGHT REHABILITATION	$49.85			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$19.58		7	
		III - Good, Load Related		LIGHT REHABILITATION	$49.85			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	AC/AC	I - Very Good	Crack Treatment	CRACK SEAL	$1.61	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		7	
			Restoration Treatment	LIGHT REHABILITATION	$49.85			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$19.58		7	
		III - Good, Load Related		LIGHT REHABILITATION	$49.85			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	AC/PCC	I - Very Good	Crack Treatment	CRACK SEAL	$1.61	3		
			Surface Treatment	LIGHT MAINTENANCE	$6.67		7	
			Restoration Treatment	LIGHT REHABILITATION	$49.85			2
		II - Good, Non-Load Related		HEAVY MAINTENANCE	$19.58		7	
		III - Good, Load Related		LIGHT REHABILITATION	$49.85			
		IV - Poor		HEAVY REHABILITATION	$153.70			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$263.90			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	1		
			Surface Treatment	DO NOTHING	$0.00		1	
			Restoration Treatment	DO NOTHING	$0.00			1
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		Slab Repair	$143.26			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$553.90			

Functional Class and Surface combination not used

Selected Treatment is not a Surface Seal

Decision Tree

Printed: 1/22/2023

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Other	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		15	
			Restoration Treatment	DO NOTHING	$0.00			99
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		DO NOTHING	$0.00			
		V - Very Poor		DO NOTHING	$0.00			

Functional Class and Surface combination not used

Selected Treatment is not a Surface Seal

Appendix B
Budget Scenarios

Needs Analysis
&
Zero Budget
($36.2 Million over 5 Years)

- Projected PCI/Cost Summary

Needs - Projected PCI/Cost Summary

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Year	PCI Treated	PCI Untreated	PM Cost	Rehab Cost	Cost
2023	72	58	$363,935	$13,017,797	$13,381,732
2024	72	56	$13,691	$4,200,855	$4,214,546
2025	75	54	$184,409	$6,288,961	$6,473,370
2026	77	51	$232,845	$4,366,211	$4,599,056
2027	81	49	$60,158	$7,502,790	$7,562,949

	% PM	PM Total Cost	Rehab Total Cost	Total Cost
	2.36%	$855,039	$35,376,614	$36,231,653

Needs Reports for PMP Certification Letter

(4/26/23)

- Projected PCI/Cost Summary
- Preventative Maintenance Treatment/ Cost Summary
- Rehabilitation Treatment/ Cost Summary

Needs - Projected PCI/Cost Summary

Interest: 0.00% **Inflation: 0.00%** Printed: 4/26/2023

Year	PCI Treated	PCI Untreated	PM Cost	Rehab Cost	Cost
2023	72	59	$438,876	$13,650,401	$14,089,277
2024	73	57	$13,691	$4,200,855	$4,214,546
2025	75	54	$184,409	$6,476,395	$6,660,804
2026	77	52	$233,461	$4,956,693	$5,190,153
2027	81	50	$60,196	$7,502,790	$7,562,986

	% PM	PM Total Cost	Rehab Total Cost	Total Cost
	2.47%	**$930,634**	**$36,787,134**	**$37,717,767**

Needs - Preventive Maintenance Treatment/Cost Summary

Interest: 0.00% Inflation: 0.00% Printed: 4/26/2023

Treatment	Year	Area Treated		Cost
CRACK SEAL	2025	65.82	sq. yd.	$134
	2026	2,005.25	sq. yd.	$3,475
	2027	385.93	sq. yd.	$648
	Total	2,457		$4,257
LIGHT MAINTENANCE	2023	65,798.56	sq. yd.	$438,876
	2024	2,052.67	sq. yd.	$13,691
	2027	4,510	sq. yd.	$30,082
	Total	72,361.22		$482,649
LIGHT REHABILITATION	2025	3,447.78	sq. yd.	$184,275
	2026	4,383.11	sq. yd.	$229,986
	2027	591.11	sq. yd.	$29,467
	Total	8,422		$443,728
	Total Quantity	83,240.22		$930,634

Needs - Rehabilitation Treatment/Cost Summary

Interest: 0.00% Inflation: 0.00% Printed: 4/26/2023

Treatment	Year	Area Treated	Cost
HEAVY MAINTENANCE	2023	66,694.33 sq.yd.	$1,483,976
	2024	9,341.33 sq.yd.	$212,496
	2025	4,918.67 sq.yd.	$96,307
	Total	80,954.33 sq.yd.	$1,792,780
HEAVY REHABILITATION	2023	41,964.11 sq.yd.	$6,449,884
	2024	12,248 sq.yd.	$1,882,518
	2025	19,907.44 sq.yd.	$3,059,774
	2026	16,263.44 sq.yd.	$2,499,691
	2027	24,718.56 sq.yd.	$3,799,242
	Total	115,101.56 sq.yd.	$17,691,109
LIGHT REHABILITATION	2023	7,460 sq.yd.	$371,881
	Total	7,460 sq.yd.	$371,881
Slab Repair	2023	3,580.44 sq.yd.	$512,934
	2024	374 sq.yd.	$53,579
	2026	2,545 sq.yd.	$364,597
	Total	6,499.44 sq.yd.	$931,110
RECONSTRUCT STRUCTURE (AC)	2023	17,234.44 sq.yd.	$4,831,725
	2024	7,776.67 sq.yd.	$2,052,262
	2025	8,457.78 sq.yd.	$3,320,313
	2026	7,928.78 sq.yd.	$2,092,404
	2027	12,385.56 sq.yd.	$3,703,548
	Total	53,783.22 sq.yd.	$16,000,253
	Total	**263,798.55** sq.yd.	Total Cost $36,787,134

Maintain PCI

($9.1 Million over 5 Years)

- Pavement Network Condition Lane Miles
- Network Condition Summary
- Cost Summary

Target-Driven Scenarios
Pavement Network Condition Lane Miles

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: MAINTAIN PCI

Objective: Minimum Network Average PCI | Target: Overall 58

Annual budget needs to meet target objectives

Year	Arterial	Collector	Res/Loc	Other	Preventative Maintenance	Total
2023	$0	$0	$0	$0	$0	$0
2024	$529,708	$269,045	$426,826	$0	$377,626	$1,225,580
2025	$2,513,023	$0	$143,082	$0	$134	$2,656,105
2026	$1,280,406	$595,094	$600,033	$0	$4	$2,475,534
2027	$2,776,548	$974	$697	$0	$32,112	$2,778,218

Average Yearly Total: $1,827,087

Grand Total: $9,135,437

Pavement Network prior to treatments in lane miles.

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	62	6.6%	5.3%	13
Collector	56	5.2%	8.3%	10
Residential	57	13.5%	15.9%	16

Pavement Network after schedulable treatments applied in lane miles.

2023

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	62	23.0%	18.4%	13
Collector	56	29.9%	47.3%	10
Residential	57	25.2%	29.6%	16

2024

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	62	36.5%	18.4%	14
Collector	55	35.2%	47.3%	11
Residential	57	29.3%	36.0%	16

Pavement Network after schedulable treatments applied in lane miles.

2025

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	68	43.0%	15.2%	16
Collector	52	35.2%	50.1%	10
Residential	55	32.0%	38.4%	16

2026

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	69	44.7%	10.6%	17
Collector	52	45.2%	47.0%	11
Residential	54	35.3%	41.6%	15

2027

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	75	61.6%	10.6%	20
Collector	49	45.2%	52.4%	11
Residential	52	31.3%	45.1%	15

Target-Driven Scenarios
Network Condition Summary

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: MAINTAIN PCI

Objective: Minimum Network Average PCI	Target: Overall 58

Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment	Without Selected Treatment
2023	58	58	58
2024	56	58	56
2025	54	58	54
2026	51	58	51
2027	49	58	49

Percent Network Area by Functional Classification and Condition Class

Condition in base year 2023, prior to applying treatments.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	6.6%	5.2%	13.5%	0.0%	25.4%
II / III	16.9%	4.0%	24.3%	0.0%	45.1%
IV	5.3%	7.5%	11.9%	0.0%	24.8%
V	0.0%	0.7%	4.0%	0.0%	4.7%
Total	28.8%	17.5%	53.7%	0.0%	100.0%

Condition in year 2023 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	6.6%	5.2%	13.5%	0.0%	25.4%
II / III	16.9%	4.0%	24.3%	0.0%	45.1%
IV	5.3%	7.5%	11.9%	0.0%	24.8%
V	0.0%	0.7%	4.0%	0.0%	4.7%
Total	28.8%	17.5%	53.7%	0.0%	100.0%

Condition in year 2027 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	17.8%	7.9%	16.8%	0.0%	42.5%
II / III	8.0%	0.4%	12.7%	0.0%	21.1%
IV	0.3%	4.6%	16.0%	0.0%	20.9%
V	2.7%	4.6%	8.2%	0.0%	15.5%
Total	28.8%	17.5%	53.7%	0.0%	100.0%

Functional Class = A - Arterial OR Functional Class = C - Collector OR Functional Class = R - Residential/Local

Target-Driven Scenarios - Cost Summary

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: MAINTAIN PCI

Objective: Minimum Network Average PCI | Target: Overall 58

Year	Rehabilitation		Preventive Maintenance		Total Cost	Deferred
2023	II	$0	Non-Project	$0	$0	$13,381,732
	III	$0	Project	$0		
	IV	$0				
	V	$0				
	Total	$0				
	Project	$0				
2024	II	$847,953	Non-Project	$377,626	$1,225,579	$14,091,963
	III	$0	Project	$0		
	IV	$0				
	V	$0				
	Total	$847,953				
	Project	$0				
2025	II	$193,697	Non-Project	$134	$2,656,105	$15,456,193
	III	$0	Project	$0		
	IV	$2,462,274				
	V	$0				
	Total	$2,655,971				
	Project	$0				
2026	II	$126,372	Non-Project	$4	$2,475,534	$16,333,226
	III	$0	Project	$0		
	IV	$2,349,158				
	V	$0				
	Total	$2,475,530				
	Project	$0				
2027	II	$0	Non-Project	$32,112	$2,778,219	$22,409,561
	III	$0	Project	$0		
	IV	$2,746,107				
	V	$0				
	Total	$2,746,107				
	Project	$0				

Summary

Functional Class	Rehabilitation	Prev. Maint.
Arterial	$6,977,065	$122,621
Collector	$773,048	$92,065
Residential/Local	$975,448	$195,190
Total:	$8,725,561	$409,876

Grand Total: $9,135,437

Current Funding

($7.0 Million over 5 Years)

- Network Condition Summary
- Cost Summary
- Sections Selected for Treatment
- GIS Maps of Treatments by year

Scenarios - Network Condition Summary

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: Current Budget ($1.4M/Yr)

Year	Budget	PM	Year	Budget	PM	Year	Budget	PM
2023	$1,400,000	30%	2025	$1,400,000	30%	2027	$1,400,000	30%
2024	$1,400,000	30%	2026	$1,400,000	30%			

Projected Network Average PCI by Year

Year	Never Treated	With Selected Treatment	Treated Centerline Miles	Treated Lane Miles
2023	58	61	5.68	11.35
2024	56	60	2.86	5.72
2025	54	58	0.98	1.95
2026	51	57	3.36	6.70
2027	49	56	1.98	3.96

Percent Network Area by Functional Class and Condition Category

Condition in base year 2023, prior to applying treatments.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	6.6%	5.2%	13.5%	0.0%	25.4%
II / III	16.9%	4.0%	24.3%	0.0%	45.1%
IV	5.3%	7.5%	11.9%	0.0%	24.8%
V	0.0%	0.7%	4.0%	0.0%	4.7%
Total	28.8%	17.5%	53.7%	0.0%	100.0%

Condition in year 2023 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	11.3%	6.6%	16.4%	0.0%	34.3%
II / III	12.2%	2.6%	21.4%	0.0%	36.2%
IV	5.3%	7.5%	11.9%	0.0%	24.8%
V	0.0%	0.7%	4.0%	0.0%	4.7%
Total	28.8%	17.5%	53.7%	0.0%	100.0%

Condition in year 2027 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	12.3%	7.4%	18.5%	0.0%	38.2%
II / III	6.7%	0.4%	10.2%	0.0%	17.3%
IV	7.2%	5.0%	16.7%	0.0%	29.0%
V	2.7%	4.6%	8.2%	0.0%	15.5%
Total	28.8%	17.5%	53.7%	0.0%	100.0%

Scenarios Criteria: Functional Class <> O - Other

Scenarios - Cost Summary

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: Current Budget ($1.4M/Yr)

Year	PM	Budget		Rehabilitation		Preventative Maintenance	Surplus PM	Deferred		Stop Gap
2023	30%	$1,400,000	II	$607,460	Non-Project	$363,935	$56,065	$12,038,456	Funded	$0
			III	$371,881					Unmet	$26,893
			IV	$0	Project	$0				
			V	$0						
			Total	$979,341						
			Project	$0						
2024	30%	$1,400,000	II	$697,268	Non-Project	$13,691	$406,309	$13,477,001	Funded	$0
			III	$0					Unmet	$8,515
			IV	$266,671	Project	$0				
			V	$0						
			Total	$963,939						
			Project	$0						
2025	30%	$1,400,000	II	$33,678	Non-Project	$155,995	$264,005	$16,788,571	Funded	$0
			III	$0					Unmet	$10,074
			IV	$903,414	Project	$0				
			V	$0						
			Total	$937,092						
			Project	$0						
2026	30%	$1,400,000	II	$0	Non-Project	$152,198	$267,802	$19,231,962	Funded	$0
			III	$0					Unmet	$8,858
			IV	$927,050	Project	$0				
			V	$0						
			Total	$927,050						
			Project	$0						
2027	30%	$1,400,000	II	$0	Non-Project	$60,079	$359,921	$26,571,455	Funded	$0
			III	$0					Unmet	$14,604
			IV	$935,521	Project	$0				
			V	$0						
			Total	$935,521						
			Project	$0						

Summary

Functional Class	Rehabilitation	Prev. Maint.	Funded Stop Gap	Unmet Stop Gap
Arterial	$3,208,232	$386,236	$0	$17,163
Collector	$497,754	$91,995	$0	$14,555
Residential/Local	$1,036,957	$267,667	$0	$37,226
Grand Total:	$4,742,943	$745,898	$0	$68,944

Scenarios Criteria:

Criteria:

Scenarios - Sections Selected for Treatment

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: Current Budget ($1.4M/Yr)

Year	Budget	PM
2023	$1,400,000	30%
2024	$1,400,000	30%

Year	Budget	PM
2025	$1,400,000	30%
2026	$1,400,000	30%

Year	Budget	PM
2027	$1,400,000	30%

Year: 2023

Street Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surface Type	Area ID	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
SAUSALITO BLVD.	EDWARDS AVE	CRESCENT AVE.	SAUSAL	2	3,730	18	67,140	R	AC		61	61	100	$371,881	12,505	LIGHT REHABILITATION
											Treatment Total			$371,881		
ANCHOR ST.	BRIDGEWAY	HUMBOLDT ST.	ANCHOR	1	192	28	5,376	C	AC/AC		67	67	77	$13,255	9,927	HEAVY MAINTENANCE
BRIDGEWAY (SB)	NEVADA ST.	SPRING ST.	BRIDGESB	4	1,660	25	41,500	A	AC/AC		64	64	74	$117,353	10,036	HEAVY MAINTENANCE
BRIDGEWAY (SB)	SPRING ST.	NAPA ST.	BRIDGESB	5	1,587	26	41,262	A	AC/AC		63	63	73	$116,680	9,715	HEAVY MAINTENANCE
BRIDGEWAY (SB)	NAPA ST.	JOHNSON ST.	BRIDGESB	6	1,800	25	45,000	A	AC/AC		62	62	72	$127,250	9,413	HEAVY MAINTENANCE
CRECIENTA DR.	MONTE MAR DR.	CURREY AVE.	CRECDR	1	900	18	16,200	R	AC		60	60	71	$35,244	8,407	HEAVY MAINTENANCE
EL PORTAL	BRIDGEWAY	TRACY WY	ELPORT	1	250	32	8,000	R	AC		69	69	78	$17,404	7,752	HEAVY MAINTENANCE
NAPA ST.	BRIDGEWAY	CALEDONAI ST.	NAPAST	1	120	36	4,320	R	AC		65	65	75	$9,398	9,870	HEAVY MAINTENANCE
SECOND ST.	SOUTH ST.	RICHARDSON ST.	SECOND	1	1,036	25	25,900	A	AC/AC		61	61	72	$73,239	9,340	HEAVY MAINTENANCE
SPRING ST.	BRIDGEWAY	WOODWARD AVE.	SPRING	1	750	38	28,500	C	AC/AC		69	69	78	$70,268	8,153	HEAVY MAINTENANCE
WOODWARD AVE.	SPRING ST	EASTERBY	WOODWA	3	370	30	11,100	C	AC/AC		68	68	78	$27,368	10,320	HEAVY MAINTENANCE
											Treatment Total			$607,460		
ATWOOD AVE.	HARRISON/BULKLEY AVE.	NORTH ST.	ATWOOD	1	871	22	19,162	C	AC		77	77	85	$14,201	22,919	LIGHT MAINTENANCE
BAY ST.	HUMBOLT ST.	BRIDGEWAY	BAYSTR	1	150	36	5,400	C	AC/AC		82	82	90	$4,002	25,891	LIGHT MAINTENANCE
BOOKER AVE.	SPENCER AVE.	CLOUDVIEW RD.	BOOKER	1	330	16	5,280	R	AC/AC		73	73	82	$3,913	24,509	LIGHT MAINTENANCE
CALEDONIA ST.	NAPA ST.	PINE ST	CALEDO	1	1,760	38	66,880	R	AC/AC		77	77	85	$49,566	42,093	LIGHT MAINTENANCE
EASTERBY ST.	PEARL ST (END PCC)	WOODWARD AVE.	EASTER	4	115	36	4,140	R	AC		73	73	82	$3,068	23,704	LIGHT MAINTENANCE
EBBTIDE AVE.	BRIDGEWAY	100 EBBTIDE	EBBTID	1	450	36	16,200	R	AC/AC		78	78	86	$12,006	30,262	LIGHT MAINTENANCE
HUMBOLDT AVE.	END	JOHNSON ST.	HUMBOL	1	350	50	17,500	C	AC		76	76	84	$12,969	22,581	LIGHT MAINTENANCE
JOHNSON ST.	BRIDGEWAY	CALEDONIA ST.	JOHNSO	2	250	36	9,000	C	AC/PCC		82	83	90	$6,670	47,407	LIGHT MAINTENANCE
JOHNSON ST.	CALEDONIA ST.	GLEN DR.	JOHNSO	3	775	18	13,950	C	AC/PCC		82	83	90	$10,339	47,407	LIGHT MAINTENANCE
JOHNSON ST.	CALEDONIA	GLEN	JOHNSO	4	775	36	27,900	C	AC/AC		86	86	93	$20,677	18,828	LIGHT MAINTENANCE
LINCOLN DR.	BUTTE ST.	NEVADA ST.	LINCOL	1	2,565	40	102,600	R	AC		74	74	83	$76,038	23,783	LIGHT MAINTENANCE
MAIN ST.	SECOND ST.	EAST END (BAY)	MAINST	2	115	26	2,990	R	AC		79	79	87	$2,216	23,256	LIGHT MAINTENANCE
MILLER AVE.	SPENCER AVE.	SAN CARLOS AVE.	MILLEA	1	725	15	10,875	R	AC		84	84	91	$8,060	19,494	LIGHT MAINTENANCE
NEVADA ST.	WC 490' W/O TOMALES ST	RODEO AVE	NEVADA	3	980	31	30,380	A	AC/AC		87	87	93	$22,515	23,299	LIGHT MAINTENANCE
OLIMA ST.	COLOMA ST.	BUTTE ST.	OLIMAS	2	280	22	6,160	R	AC/AC		84	84	91	$4,565	37,733	LIGHT MAINTENANCE

** - Treatment from Project Selection

Scenarios Criteria: Functional Class <> O - Other

Scenarios - Sections Selected for Treatment

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: Current Budget ($1.4M/Yr)

Year: 2023

Street Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surface Type	Area ID	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
PINE ST.	BONITA ST	CALEDONIA ST	PINEST	4	420	17	7,140	R	AC		84	84	91	$5,292	19,489	LIGHT MAINTENANCE
RODEO AVE.	US101	NEVADA ST.	RODEOA	2	770	18	13,860	A	AC/AC		83	83	90	$10,272	41,807	LIGHT MAINTENANCE
SAN CARLOS AVE.	GLEN/HARRISON	SPENCER AVE.	SANCAR	2	1,200	25	30,000	A	AC/AC		76	76	85	$22,233	50,398	LIGHT MAINTENANCE
SAUSALITO BLVD.	CRESCENT AVE.	SPENCER AVE.	SAUSAL	3	1,125	20	22,500	C	AC		84	84	91	$16,675	23,935	LIGHT MAINTENANCE
SOUTH ST.	MARION AVE.	END	SOUTHS	1	416	15	6,240	R	AC		81	81	89	$4,625	22,252	LIGHT MAINTENANCE
SPENCER AVE.	PROSPECT AVE.	MONTE MAR DRIVE	SPENCA	3	2,000	25	50,000	A	AC		79	79	87	$37,056	31,429	LIGHT MAINTENANCE
SWEETBRIAR LN.	SPENCER AVE.	END @ 1	SWEETB	1	150	15	2,250	R	AC/AC		74	74	83	$1,668	25,510	LIGHT MAINTENANCE
TRACY WAY	EL PORTAL	BRIDGEWAY	TRACWY	1	350	22	7,700	R	AC/AC		79	80	87	$5,707	31,605	LIGHT MAINTENANCE
TURNEY ST.	CALEDONIA ST	BONITA ST	TURNEY	5	418	20	8,360	R	AC/AC		79	79	87	$6,196	46,119	LIGHT MAINTENANCE
TURNEY ST.	BONITA ST.	GIRARD ST.	TURNEY	6	230	20	4,600	R	AC		78	78	86	$3,409	23,564	LIGHT MAINTENANCE
												Treatment Total		$363,935		
							Year 2023 Area Total		785,365			Year 2023 Total		$1,343,276		

Year: 2024

Street Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surface Type	Area ID	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
ALEXANDER AVE.	SOUTH CITY LIMIT	SOUTH ST.	ALEXAN	1	450	24	10,800	A	AC/AC		46	43	100	$184,440	7,214	HEAVY REHABILITATION
												Treatment Total		$184,440		
BEE ST.	CALEDONIA	BRIDGEWAY	BEESTR	1	140	38	5,320	R	AC/AC		66	64	74	$11,574	6,334	HEAVY MAINTENANCE
BONITA ST.	BEE ST	NAPA ST	BONITA	4	260	17	4,420	R	AC		71	70	79	$9,616	7,790	HEAVY MAINTENANCE
BUCHANAN CT.	BUCHANON DR.	CUL-DE-SAC	BUCHAC	1	102	34	3,468	R	AC		64	62	73	$7,545	7,046	HEAVY MAINTENANCE
CALEDONIA ST.	JOHNSON ST	PINE ST	CALEDO	3	425	36	15,300	R	AC/AC		67	65	75	$33,286	6,560	HEAVY MAINTENANCE
CRECIENTA LN.	CRESCIENTA DR.	END	CRECLN	1	350	16	5,600	R	AC/AC		68	66	76	$12,183	6,801	HEAVY MAINTENANCE
CRESCENT AVE.	LOWER CRESCENT AVE.	PCC / COP	CRESCE	2	843	15	12,645	C	AC		72	69	78	$31,177	5,838	HEAVY MAINTENANCE
CURREY AVE.	GLEN DR.	PLATT AVE.	CURREA	1	995	18	17,910	A	AC		66	64	74	$50,646	7,376	HEAVY MAINTENANCE
CURREY AVE.	PLATT AVE./MONTE MAR DR.	CRESCIENTA DR.	CURREA	2	750	20	15,000	A	AC		72	70	79	$42,417	8,010	HEAVY MAINTENANCE
FILBERT AVE.	MARIE ST.	GIRARD AVE.	FILBER	2	900	18	16,200	C	AC/AC		70	68	78	$39,942	8,265	HEAVY MAINTENANCE
FILBERT AVE.	GIRARD AVE.	CAZNEAU AVE.	FILBER	3	798	18	14,364	R	AC/AC		66	65	74	$31,250	7,245	HEAVY MAINTENANCE
GIRARD AVE.	LITHO ST.	FILBERT ST.	GIRARD	3	550	20	11,000	C	AC/AC		69	67	77	$27,121	7,940	HEAVY MAINTENANCE
GLEN DR.	CURREY AVE.	SANTA ROSA AVE/ GLEN DR	GLENDR	2	944	16	15,104	R	AC/AC		64	62	72	$32,860	5,930	HEAVY MAINTENANCE
GLEN DR.	JOHNSON ST.	SAN CARLOS AVE.	GLENDR	4	594	21	12,474	C	AC		72	69	78	$30,755	5,837	HEAVY MAINTENANCE

** - Treatment from Project Selection

Scenarios Criteria: Functional Class <> O - Other

Scenarios - Sections Selected for Treatment

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: Current Budget ($1.4M/Yr)

Year: 2024

Street Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surface Type	Area ID	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
HARRISON AVE.	SAN CARLOS AVE. (S)	PAVEMENT CHANGE	HARRIS	2	285	18	5,130	R	AC		62	60	71	$11,161	6,842	HEAVY MAINTENANCE
LITHO ST.	CALEDONIA ST	BONITA ST	LITHOS	3	453	18	8,154	R	AC		70	69	78	$17,739	7,693	HEAVY MAINTENANCE
MARIE ST.	FILBERT ST.	STEPS TO WOODWARD	MARIES	1	875	26	22,750	R	AC/AC		66	65	74	$49,494	7,222	HEAVY MAINTENANCE
OLIMA ST.	EBBTIDE AVE.	COLOMA ST.	OLIMAS	1	1,725	35	60,375	R	AC		68	67	76	$131,349	7,484	HEAVY MAINTENANCE
PEARL ST.	SPRING ST.	CUL-DE-SAC	PEARLS	2	125	38	4,750	R	AC		64	62	73	$10,334	7,047	HEAVY MAINTENANCE
PINE ST.	CALEDONIA ST	BRIDGEWAY	PINEST	6	187	17	3,179	R	AC		70	69	78	$6,916	7,693	HEAVY MAINTENANCE
SPENCER AVE.	SAN CARLOS AVE.	COOPER LN./SAUSALITO BLVD.	SPENCA	1	600	20	12,000	A	AC/PCC		71	70	79	$33,933	11,387	HEAVY MAINTENANCE
STANFORD WAY	EBBTIDE AVE.	OLIMA ST.	STANFO	1	765	24	18,360	R	AC		69	68	77	$39,943	7,581	HEAVY MAINTENANCE
TOMALES ST.	NEVADA ST.	WATEREE ST.	TOMALE	1	300	27	8,100	R	AC/AC		66	65	74	$17,622	7,244	HEAVY MAINTENANCE
TOYON CT.	TOYON LN.	SOUTH END	TOYONC	1	230	22	5,060	R	AC		65	63	74	$11,008	7,147	HEAVY MAINTENANCE
WILLIAMS CT.	LINCOLN DR.	CUL-DE-SAC	WILLIA	1	136	25	3,400	R	AC/AC		68	66	76	$7,397	6,801	HEAVY MAINTENANCE
											Treatment Total			$697,268		
FOURTH ST.	VALLEY ST.	MAIN ST.	FOURTH	1	354	15	5,310	R	AC		92	90	95	$3,935	10,663	LIGHT MAINTENANCE
MAIN ST.	FOURTH ST.	THIRD ST.	MAINST	1A	300	25	7,500	C	AC		91	89	95	$5,558	19,839	LIGHT MAINTENANCE
THIRD ST.	VALLEY ST.	MAIN ST.	THIRDS	2	354	16	5,664	R	AC		92	90	95	$4,198	10,663	LIGHT MAINTENANCE
											Treatment Total			$13,691		
CRESCENT AVE.	AC / COP	MAIN ST.	CRESCE	3	120	15	1,800	C	PCC		47	46	81	$28,652	6,464	Slab Repair
PINE ST.	CALEDONIA ST.	BRIDGEWAY	PINEST	5	187	18	3,366	R	PCC		50	49	82	$53,579	5,990	Slab Repair
											Treatment Total			$82,231		
					Year 2024 Area Total		334,503				Year 2024 Total			$977,630		

Year: 2025

Street Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surface Type	Area ID	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
GIRARD AVE.	JOHNSON ST	TURNEY ST	GIRARD	1	651	20	13,020	R	AC		95	90	90	$30	583,772	CRACK SEAL
NEVADA ST.	BRIDGEWAY	TOMALES ST.	NEVADA	1	500	41	20,500	A	AC		93	87	88	$82	687,873	CRACK SEAL
NEVADA ST.	TOMALES ST.	WC 490' W/O TOMALES ST	NEVADA	2	490	41	20,090	A	AC/AC		92	88	89	$22	2,985,345	CRACK SEAL
											Treatment Total			$134		
BRIDGEWAY (SB)	COLOMA ST.	NEVADA ST.	BRIDGESB	3	1,500	25	37,500	A	AC/AC		50	44	100	$640,417	7,160	HEAVY REHABILITATION

** - Treatment from Project Selection

Scenarios Criteria: Functional Class <> O - Other

Scenarios - Sections Selected for Treatment

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: Current Budget ($1.4M/Yr)

Year: 2025

Street Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surface Type	Area ID	Treatment Current PCI	Treatment PCI Before	Treatment PCI After	Treatment Cost	Rating	Treatment
SOUTH ST.	ALEXANDER AVE.	2ND ST.	SOUTHS	3	550	28	15,400	A	AC/AC		53	48	100	$262,998	7,006	HEAVY REHABILITATION
											Treatment Total			$903,414		
SECOND ST.	SOUTH ST.	RICHARDSON ST.	SECOND	1	1,036	25	25,900	A	AC/AC		61	68	100	$155,860	14,238	LIGHT REHABILITATION
											Treatment Total			$155,860		
LOCUST ST.	BONITA ST	CALEDONIA ST	LOCUSS	1	430	36	15,480	R	AC/PCC		72	69	78	$33,678	7,850	HEAVY MAINTENANCE
											Treatment Total			$33,678		
					Year 2025 Area Total		147,890				Year 2025 Total			$1,093,087		

Year: 2026

Street Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surface Type	Area ID	Treatment Current PCI	Treatment PCI Before	Treatment PCI After	Treatment Cost	Rating	Treatment
ANCHOR ST.	BRIDGEWAY	HUMBOLDT ST.	ANCHOR	1	192	28	5,376	C	AC/AC		67	73	75	$43	882,636	CRACK SEAL
BOOKER AVE.	SPENCER AVE.	CLOUDVIEW RD.	BOOKER	1	330	16	5,280	R	AC/AC		73	77	79	$31	739,476	CRACK SEAL
CALEDONIA ST.	NAPA ST.	PINE ST	CALEDO	1	1,760	38	66,880	R	AC/AC		77	82	84	$269	1,570,644	CRACK SEAL
EASTERBY ST.	PEARL ST (END PCC)	WOODWARD AVE.	EASTER	4	115	36	4,140	R	AC		73	77	79	$25	720,091	CRACK SEAL
EBBTIDE AVE.	BRIDGEWAY	100 EBBTIDE	EBBTID	1	450	36	16,200	R	AC/AC		78	83	84	$62	1,119,072	CRACK SEAL
HUMBOLDT AVE.	END	JOHNSON ST.	HUMBOL	1	350	50	17,500	C	AC		76	78	80	$114	587,083	CRACK SEAL
JOHNSON ST.	NORTH END	COP @ 150'	JOHNSO	1	150	20	3,000	R	AC/AC		95	89	89	$0	14,699,444	CRACK SEAL
JOHNSON ST.	COP 150'	BRIDGEWAY	JOHNSO	1A	200	40	8,000	R	AC/AC		95	89	89	$1	14,699,444	CRACK SEAL
JOHNSON ST.	BRIDGEWAY	CALEDONIA ST.	JOHNSO	2	250	36	9,000	C	AC/PCC		82	87	88	$14	3,222,761	CRACK SEAL
JOHNSON ST.	CALEDONIA ST.	GLEN DR.	JOHNSO	3	775	18	13,950	C	AC/PCC		82	87	88	$22	3,222,761	CRACK SEAL
JOHNSON ST.	CALEDONIA	GLEN	JOHNSO	4	775	36	27,900	C	AC/AC		86	86	87	$66	1,266,163	CRACK SEAL
MILLER AVE.	SPENCER AVE.	SAN CARLOS AVE.	MILLEA	1	725	15	10,875	R	AC		84	86	87	$37	746,777	CRACK SEAL
NEVADA ST.	WC 490' W/O TOMALES ST	RODEO AVE	NEVADA	3	980	31	30,380	A	AC/AC		87	86	87	$77	1,654,673	CRACK SEAL
OLIMA ST.	COLOMA ST.	BUTTE ST.	OLIMAS	2	280	22	6,160	R	AC/AC		84	88	89	$5	4,826,105	CRACK SEAL
PINE ST.	BONITA ST	CALEDONIA ST	PINEST	4	420	17	7,140	R	AC		84	86	87	$24	746,753	CRACK SEAL
PLATT AVE.	CAZNEAU AVE.	TOYON LN.	PLATTA	1	1,059	18	19,062	R	AC/AC		95	89	89	$2	14,699,444	CRACK SEAL
RODEO AVE.	US101	NEVADA ST.	RODEOA	2	770	18	13,860	A	AC/AC		83	86	87	$42	1,748,272	CRACK SEAL
SAN CARLOS AVE.	GLEN/HARRISON	SPENCER AVE.	SANCAR	2	1,200	25	30,000	A	AC/AC		76	81	82	$195	1,227,795	CRACK SEAL
SAUSALITO BLVD.	CRESCENT AVE.	SPENCER AVE.	SAUSAL	3	1,125	20	22,500	C	AC		84	85	86	$90	726,213	CRACK SEAL
SOUTH ST.	MARION AVE.	END	SOUTHS	1	416	15	6,240	R	AC		81	84	85	$25	768,550	CRACK SEAL

Scenarios - Sections Selected for Treatment

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: Current Budget ($1.4M/Yr)

Year: 2026

Street Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surface Type	Area ID	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
SPRING ST.	BRIDGEWAY	WOODWARD AVE.	SPRING	1	750	38	28,500	C	AC/AC		69	73	76	$225	693,302	CRACK SEAL
SWEETBRIAR LN.	SPENCER AVE.	END @ 1	SWEETB	1	150	15	2,250	R	AC/AC		74	78	80	$13	791,367	CRACK SEAL
TRACY WAY	EL PORTAL	BRIDGEWAY	TRACWY	1	350	22	7,700	R	AC/AC		79	84	85	$25	1,285,188	CRACK SEAL
WOODWARD AVE.	SPRING ST	EASTERBY	WOODWA	3	370	30	11,100	C	AC/AC		68	74	76	$86	925,581	CRACK SEAL
											Treatment Total			$1,494		
BRIDGEWAY (NB)	NEVADA ST.	COLOMA ST.	BRIDGENB	4	1,400	25	36,500	A	AC/AC		50	41	100	$623,339	7,274	HEAVY REHABILITATION
											Treatment Total			$623,339		
CURREY AVE.	GLEN DR.	PLATT AVE.	CURREA	1	995	18	17,910	A	AC		66	69	100	$107,778	14,905	LIGHT REHABILITATION
PEARL ST.	SPRING ST.	CUL-DE-SAC	PEARLS	2	125	38	4,750	R	AC		64	69	100	$26,310	10,866	LIGHT REHABILITATION
VALLEY ST.	2ND ST.	BAY (EAST END)	VALLEY	2	120	25	3,000	R	AC		74	69	100	$16,617	10,853	LIGHT REHABILITATION
											Treatment Total			$150,705		
BONITA ST.	BEE ST	NAPA ST	BONITA	5	260	18	4,680	R	PCC		46	42	80	$74,495	5,077	Slab Repair
SANTA ROSA AVE.	BULKLEY AVE.	SAN CARLOS AVE.	SANTAR	1	900	16	14,400	C	PCC		53	49	82	$229,216	6,600	Slab Repair
											Treatment Total			$303,711		
					Year 2026 Area Total		454,233				Year 2026 Total			$1,079,249		

Year: 2027

Street Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surface Type	Area ID	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
ALEXANDER AVE.	SOUTH CITY LIMIT	SOUTH ST.	ALEXAN	1	450	24	10,800	A	AC/AC		46	87	88	$22	1,856,465	CRACK SEAL
BONITA ST.	BEE ST	NAPA ST	BONITA	4	260	17	4,420	R	AC		71	74	76	$30	663,204	CRACK SEAL
CRECIENTA LN.	CRESCIENTA DR.	END	CRECLN	1	350	16	5,600	R	AC/AC		68	71	73	$41	569,785	CRACK SEAL
FILBERT AVE.	MARIE ST.	GIRARD AVE.	FILBER	2	900	18	16,200	C	AC/AC		70	73	75	$130	699,030	CRACK SEAL
GIRARD AVE.	LITHO ST.	FILBERT ST.	GIRARD	3	550	20	11,000	C	AC/AC		69	71	74	$91	673,640	CRACK SEAL
LITHO ST.	CALEDONIA ST	BONITA ST	LITHOS	3	453	18	8,154	R	AC		70	73	76	$58	647,795	CRACK SEAL
MAIN ST.	FOURTH ST.	THIRD ST.	MAINST	1A	300	25	7,500	C	AC		91	89	90	$22	744,081	CRACK SEAL
PINE ST.	CALEDONIA ST	BRIDGEWAY	PINEST	6	187	17	3,179	R	AC		70	73	76	$23	647,769	CRACK SEAL
SAUSALITO BLVD.	EDWARDS AVE	CRESCENT AVE.	SAUSAL	2	3,730	18	67,140	R	AC		61	87	88	$73	2,094,689	CRACK SEAL
THIRD ST.	VALLEY ST.	MAIN ST.	THIRDS	2	354	16	5,664	R	AC		92	88	89	$16	689,726	CRACK SEAL
WILLIAMS CT.	LINCOLN DR.	CUL-DE-SAC	WILLIA	1	136	25	3,400	R	AC/AC		68	71	73	$25	569,734	CRACK SEAL

** - Treatment from Project Selection

Scenarios Criteria: Functional Class <> O - Other

Scenarios - Sections Selected for Treatment

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: Current Budget ($1.4M/Yr)

										Treatment Total			$531			
BRIDGEWAY (NB)	SPRING ST.	NEVADA ST.	BRIDGENB	3	1,660	33	54,780	A	AC/AC	54	43	100	$935,521	7,216	HEAVY REHABILITATION	
										Treatment Total			$935,521			
BEE ST.	CALEDONIA	BRIDGEWAY	BEESTR	1	140	38	5,320	R	AC/AC	66	68	100	$29,467	11,341	LIGHT REHABILITATION	
										Treatment Total			$29,467			
NEVADA ST.	BRIDGEWAY	TOMALES ST.	NEVADA	1	500	41	20,500	A	AC	93	84	91	$15,193	27,300	LIGHT MAINTENANCE	
NEVADA ST.	TOMALES ST.	WC 490' W/O TOMALES ST	NEVADA	2	490	41	20,090	A	AC/AC	92	85	92	$14,889	30,816	LIGHT MAINTENANCE	
										Treatment Total			$30,082			
					Year 2027 Area Total		243,747			Year 2027 Total			$995,600			
					Grand Total Section Area:		1,965,738			Grand Total			$5,488,841			

** - Treatment from Project Selection

Scenarios Criteria: Functional Class <> O - Other

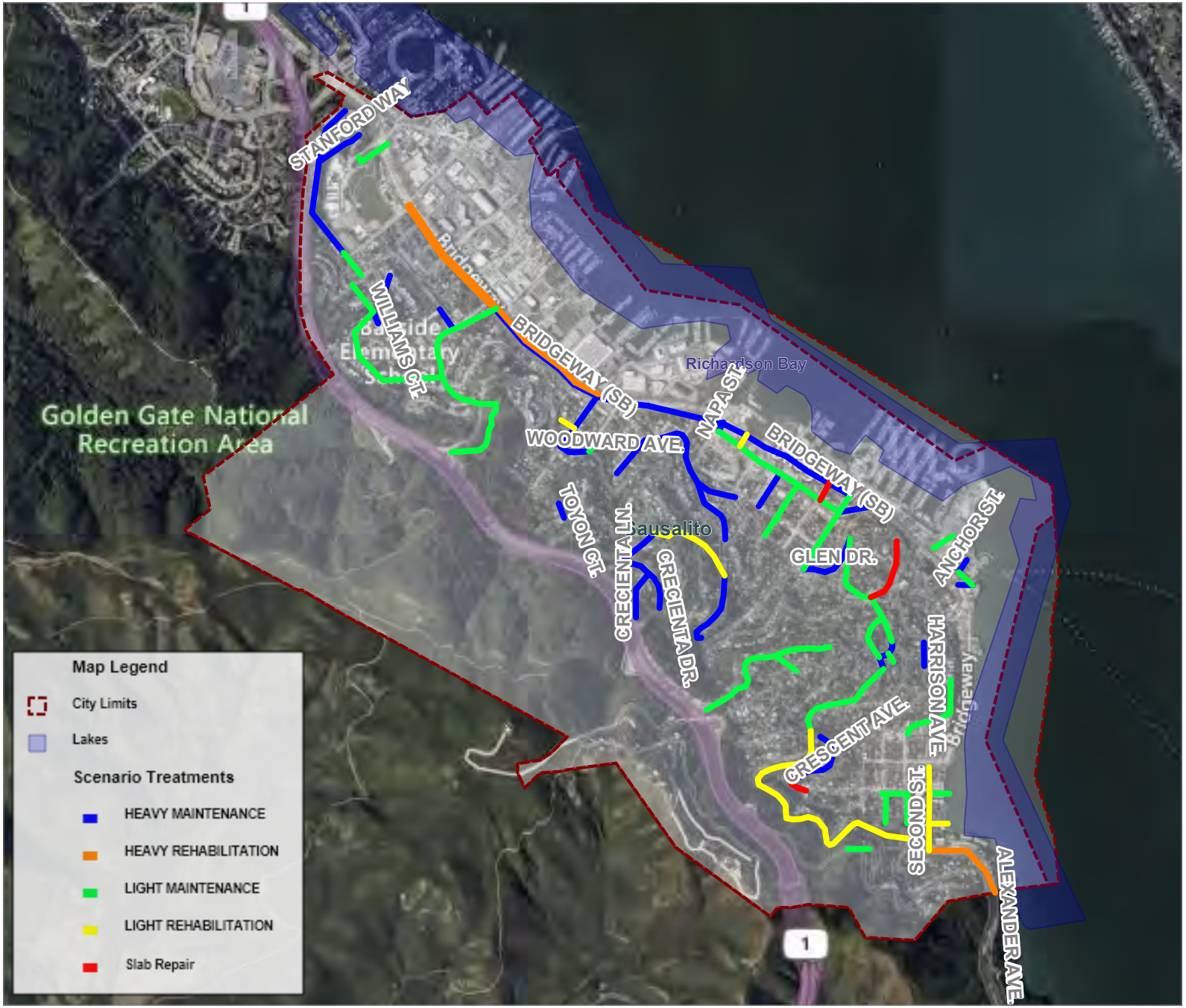
CITY OF SAUSALITO

Scenario Treatments

Current Budget ($1.4M/Yr) - All Project Periods - Printed: 1/29/2023

Feature Legend

- HEAVY MAINTENANCE
- HEAVY REHABILITATION
- LIGHT MAINTENANCE
- LIGHT REHABILITATION
- Slab Repair



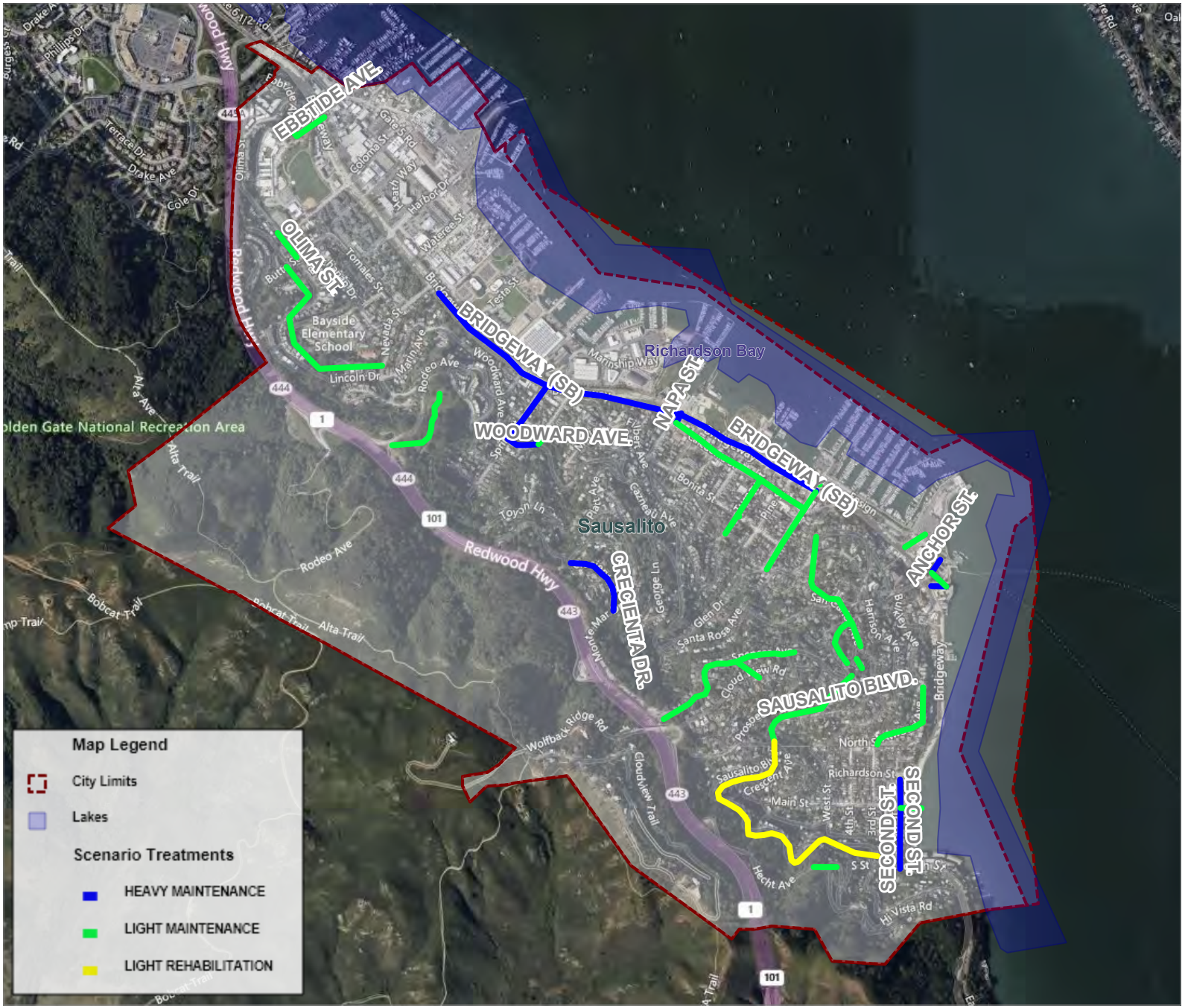
CITY OF SAUSALITO

Scenario Treatments

Current Budget ($1.4M/Yr) - Year 1 - Printed: 1/29/2023

Feature Legend

- HEAVY MAINTENANCE
- LIGHT MAINTENANCE
- LIGHT REHABILITATION



CITY OF SAUSALITO

Scenario Treatments

Current Budget ($1.4M/Yr) - Year 2 - Printed: 1/29/2023

Feature Legend

- HEAVY MAINTENANCE
- HEAVY REHABILITATION
- LIGHT MAINTENANCE
- Slab Repair

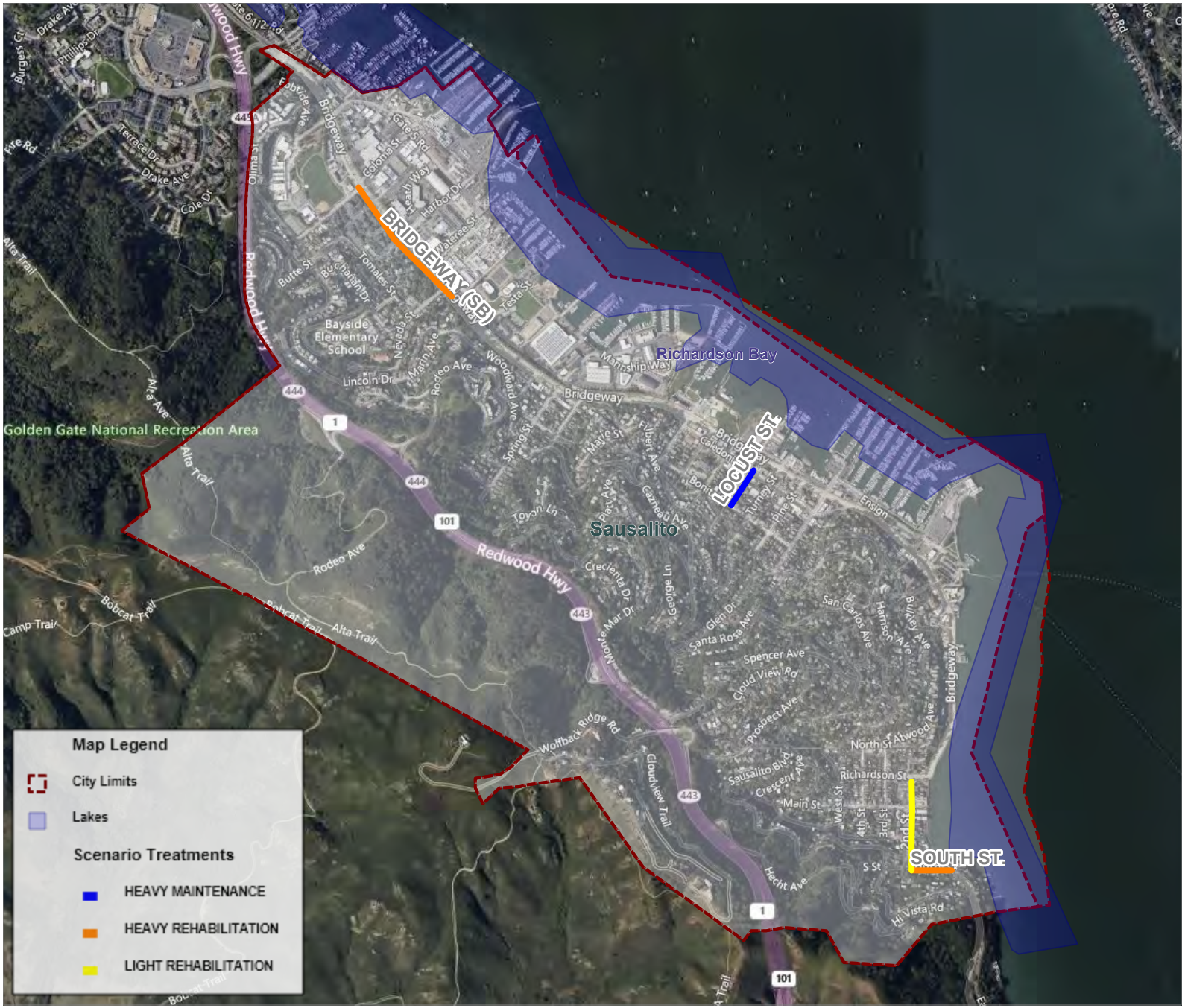
CITY OF SAUSALITO

Scenario Treatments

Current Budget ($1.4M/Yr) - Year 3 - Printed: 1/29/2023

Feature Legend

- HEAVY MAINTENANCE
- HEAVY REHABILITATION
- LIGHT REHABILITATION



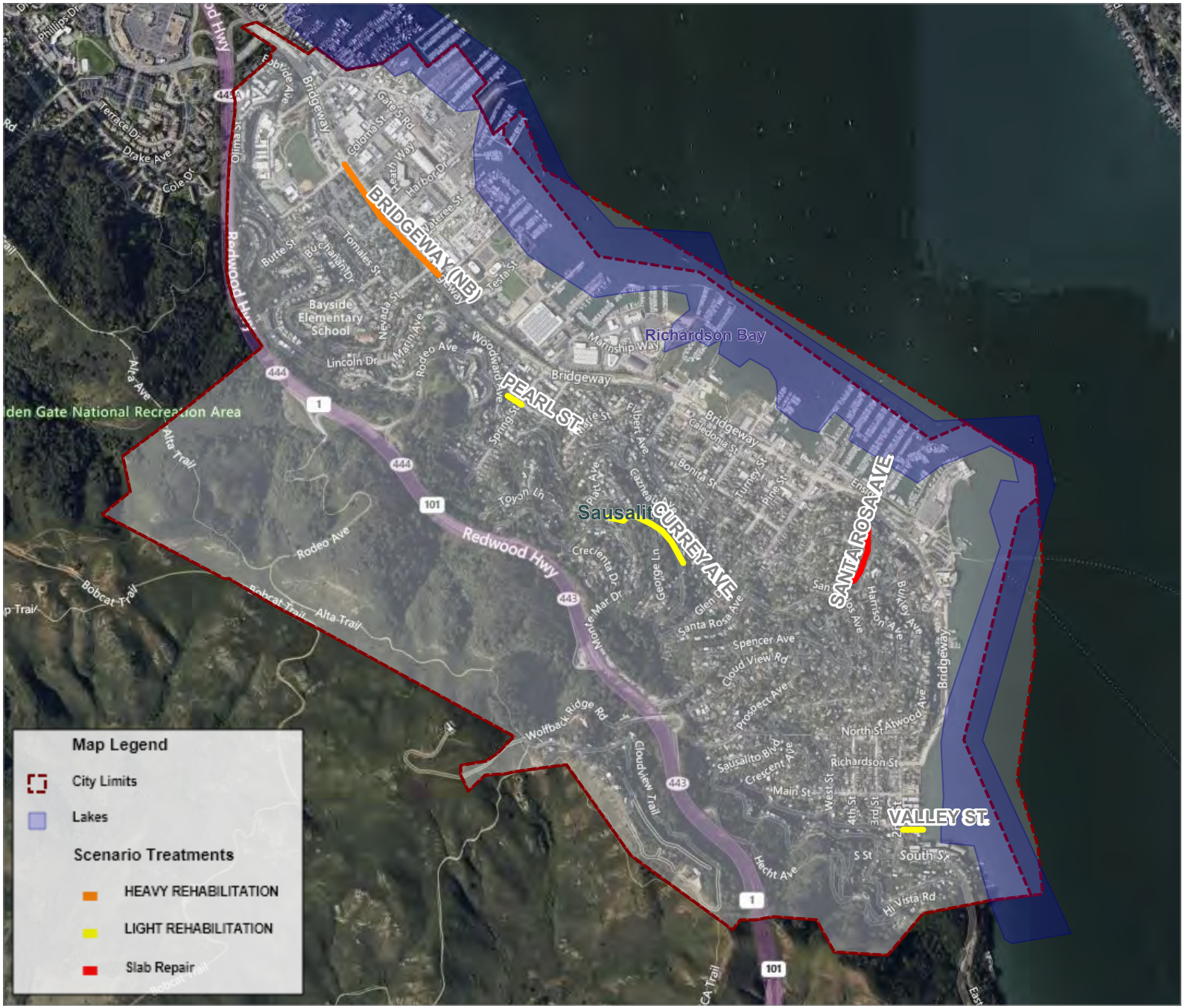
CITY OF SAUSALITO

Scenario Treatments

Current Budget ($1.4M/Yr) - Year 4 - Printed: 1/29/2023

Feature Legend

- HEAVY REHABILITATION
- LIGHT REHABILITATION
- Slab Repair



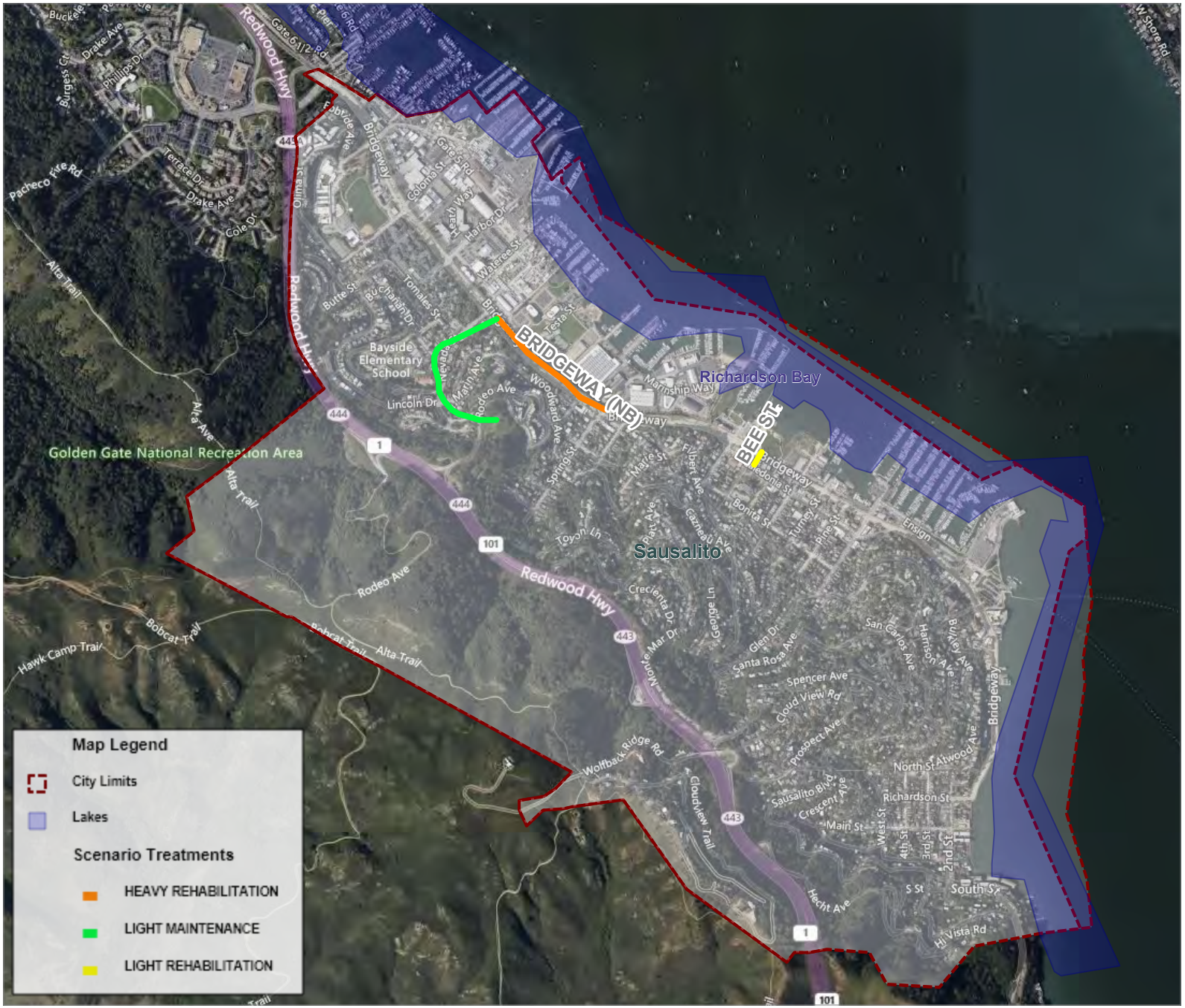
CITY OF SAUSALITO

Scenario Treatments

Current Budget ($1.4M/Yr) - Year 5 - Printed: 1/29/2023

Feature Legend

- HEAVY REHABILITATION
- LIGHT MAINTENANCE
- LIGHT REHABILITATION



Increase PCI by 5

($14.6 Million over 5 Years)

- Pavement Network Condition Lane Miles
- Network Condition Summary
- Cost Summary

Target-Driven Scenarios
Pavement Network Condition Lane Miles

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: INCREASE BY 5 PCI

Objective: Minimum Network Average PCI | Target: By Year

Year	Value	Year	Value	Year	Value	Year	Value
Year 1	59	Year 2	60	Year 3	61	Year 4	62
Year 5	63						

Annual budget needs to meet target objectives

Year	Arterial	Collector	Res/Loc	Other	Preventative Maintenance	Total
2023	$69,561	$37,686	$159,658	$0	$266,904	$266,904
2024	$1,958,989	$321,944	$609,435	$0	$110,723	$2,890,368
2025	$1,956,449	$710,777	$957,583	$0	$134	$3,624,809
2026	$522,817	$229,342	$3,149,094	$0	$771	$3,901,253
2027	$2,776,453	$526,132	$575,151	$0	$31,478	$3,877,735

Average Yearly Total: $2,912,214

Grand Total: $14,561,069

Pavement Network prior to treatments in lane miles.

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	62	6.6%	5.3%	13
Collector	56	5.2%	8.3%	10
Residential	57	13.5%	15.9%	16

Pavement Network after schedulable treatments applied in lane miles.

2023

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	63	23.0%	18.4%	14
Collector	56	29.9%	47.3%	11
Residential	58	25.2%	29.6%	17

Pavement Network after schedulable treatments applied in lane miles.

2024

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	67	47.3%	9.4%	16
Collector	56	39.9%	47.0%	11
Residential	58	35.8%	35.7%	17

2025

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	70	48.8%	9.4%	17
Collector	57	47.2%	42.6%	13
Residential	57	38.4%	34.9%	17

2026

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	69	45.8%	9.4%	17
Collector	54	49.7%	42.6%	13
Residential	61	47.4%	29.5%	19

2027

Functional Class	PCI	Percentage of the Network in Very Good Condition	Percentage of the Network in Poor or Very Poor Condition	Remaining Life
Arterial	76	62.7%	9.4%	20
Collector	54	55.0%	42.6%	13
Residential	60	45.3%	31.1%	19

Target-Driven Scenarios
Network Condition Summary

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: INCREASE BY 5 PCI

Objective: Minimum Network Average PCI | Target: By Year

Year	Value	Year	Value	Year	Value	Year	Value
Year 1	59	Year 2	60	Year 3	61	Year 4	62
Year 5	63						

Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment	Without Selected Treatment
2023	58	59	58
2024	56	60	56
2025	54	61	54
2026	51	62	51
2027	49	63	49

Percent Network Area by Functional Classification and Condition Class

Condition in base year 2023, prior to applying treatments.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	6.6%	5.2%	13.5%	0.0%	25.4%
II / III	16.9%	4.0%	24.3%	0.0%	45.1%
IV	5.3%	7.5%	11.9%	0.0%	24.8%
V	0.0%	0.7%	4.0%	0.0%	4.7%
Total	28.8%	17.5%	53.7%	0.0%	100.0%

Condition in year 2023 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	6.6%	5.2%	13.5%	0.0%	25.4%
II / III	16.9%	4.0%	24.3%	0.0%	45.1%
IV	5.3%	7.5%	11.9%	0.0%	24.8%
V	0.0%	0.7%	4.0%	0.0%	4.7%
Total	28.8%	17.5%	53.7%	0.0%	100.0%

Condition in year 2027 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	18.1%	9.6%	24.3%	0.0%	52.0%
II / III	8.0%	0.4%	12.7%	0.0%	21.1%
IV	0.0%	2.9%	8.5%	0.0%	11.3%
V	2.7%	4.6%	8.2%	0.0%	15.5%
Total	28.8%	17.5%	53.7%	0.0%	100.0%

Functional Class = A - Arterial OR Functional Class = C - Collector OR Functional Class = R - Residential/Local

Target-Driven Scenarios - Cost Summary

Interest: 0.00% Inflation: 0.00% Printed: 1/25/2023

Scenario: INCREASE BY 5 PCI

Objective: Minimum Network Average PCI | Target: By Year

Year	Value	Year	Value	Year	Value	Year	Value
Year 1	59	Year 2	60	Year 3	61	Year 4	62
Year 5	63						

Year		Rehabilitation	Preventive Maintenance		Total Cost	Deferred
2023	II	$0	Non-Project	$266,904	$266,904	$13,114,828
	III	$0	Project	$0		
	IV	$0				
	V	$0				
	Total	$0				
	Project	$0				
2024	II	$1,196,244	Non-Project	$110,723	$2,890,368	$12,160,271
	III	$0	Project	$0		
	IV	$1,583,401				
	V	$0				
	Total	$2,779,645				
	Project	$0				
2025	II	$33,678	Non-Project	$134	$3,624,809	$12,784,258
	III	$0	Project	$0		
	IV	$3,590,998				
	V	$0				
	Total	$3,624,675				
	Project	$0				
2026	II	$0	Non-Project	$771	$3,901,253	$13,249,987
	III	$0	Project	$0		
	IV	$3,900,482				
	V	$0				
	Total	$3,900,482				
	Project	$0				
2027	II	$0	Non-Project	$31,478	$3,877,735	$18,226,171
	III	$0	Project	$0		
	IV	$3,846,257				
	V	$0				
	Total	$3,846,257				
	Project	$0				

Summary

Functional Class	Rehabilitation	Prev. Maint.
Arterial	$7,161,505	$122,762
Collector	$1,733,844	$92,037
Residential/Local	$5,255,711	$195,210
Total:	$14,151,060	$410,009

Grand Total: $14,561,069

Appendix C
Definitions

DEFINITIONS

This section is intended to define important pavement design acronyms and terms used when discussing a Pavement Management Program (PMP).

GENERAL TERMS

PMP - Pavement Management Program - A program to aid in tracking the condition of roads and a means to help quantify the cost of maintaining the roads in a given area.

TI - Traffic Index - Cars and light trucks have little impact on the pavement structure. Larger/Heavier trucks have very significant impacts on the pavement due to the high axle weights. The total EALs is converted into a design Traffic Index (TI). The design TI is the total number of EALs that the pavement will support before it begins to fail, regardless of the passage of time. Normally for a new pavement, the EALs over a 20_year period are used. For rehabilitation procedures such as overlays, 10 years is generally used.

PCI - Pavement Condition Index - A rating scale for the condition of a road segment. 100 represents no defects and recent major rehabilitation.

CRITICAL PCI - The PCI value at which the rate of loss increases with time, or the cost of applying a maintenance treatment increases significantly.

CLS / FC - Functional Classification is the process by which streets and highways are grouped into classes, or systems, according to the character of traffic service that they are intended to provide. There are three highway functional classifications: arterial, collector, and local roads. All streets and highways are grouped into one of these classes, depending on the character of the traffic.

Arterials - provide the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control.

Collectors - provide a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials.

Residential/Local - consists of all roads not defined as arterials or collectors and primarily provides access to land with little or no through movement.

- (*Excerpted from the U.S. Department of Transportation, Federal Highway Administration web site on "Functional Classification".)*

EMULSION - A chemical added to water and asphalt that keeps the asphalt in a stable suspension in the water.

AC - Asphaltic Concrete - A plant mixed asphalt binder (asphalt cement that is classified according to the Standard Specification for Performance Graded Asphalt Binder) and aggregate (rocks) thoroughly mixed and compacted into a mass.

PCC - Portland Cement Concrete

OVERLAY - The placement of asphaltic concrete mix over an existing asphaltic concrete or portland cement concrete surface.

Light Overlay - would include any overlay of less than 2 inches of asphalt.

Heavy Overlay - is a thicker layer of asphalt and might include such items/operations as, but not limited to fabric, milling/grinding and reconstruction.

PREVENTIVE MAINTENANCE - Provides budget dollars for localized pavement repairs such as digouts and crack filling.

SLURRY SEAL - Includes a graded aggregate along with emulsion and water. Generally squeegeed and generally consists of two layers.

REFLECTIVE CRACKING - Cracks that occur in new "thin" overlays that are identical to the cracks that were present in the existing pavement.

ALLIGATOR CRACKING - Alligator or fatigue cracking is a series of interconnecting cracks caused by fatigue failure of the asphalt concrete surface under repeated traffic loading. Cracking begins at the bottom of the asphalt surface (or stabilized base) where the stress and strain are highest under a wheel load. The cracks propagate to the surface initially as a series of parallel longitudinal cracks. After repeated traffic loading, the cracks connect, forming many sided, sharp-angled pieces that develop a pattern resembling chicken wire or the skin of an alligator. Alligator cracking occurs only in areas subjected to repeated traffic loading, such as wheel paths. (Pattern-type cracking that occurs over an entire area not subjected to loading is called "block cracking," which is not a load-associated distress.)

BLOCK CRACKING - Block cracks are interconnected cracks that divide the pavement into approximately rectangular pieces. Block cracking is caused mainly by shrinkage of the asphalt concrete and daily temperature cycling (which results in daily stress/strain cycling). It is not load-associated. Block cracking usually indicates that the asphalt has hardened significantly. Block cracking normally occurs over a large portion of the pavement area, but sometimes will occur only in non-traffic areas. This type of distress differs from alligator cracking in that alligator cracks form smaller, many-sided pieces with sharp angles. Also, unlike block, alligator cracks are caused by repeated traffic loadings, and are therefore found only in traffic areas (i.e., wheel paths).

LONGITUDINAL / TRANSVERSE CRACKING - Longitudinal cracks are parallel to the pavement's centerline or laydown direction. Transverse cracks extend across the pavement at approximately right angles to the pavement centerline or direction of laydown. These types of cracks are not usually load-associated.

WEATHERING & RAVELING - Weathering and raveling is the wearing away of the pavement surface due to a loss of asphalt or tar and dislodged aggregate particles. These distresses indicate that either the asphalt binder has hardened appreciably or that a poor quality mixture is present. In addition, raveling may be caused by certain types of traffic, i.e., tracked vehicles. Softening of the surface and dislodging of the aggregates due to oil spillage are also included under raveling.

BUMPS & SAGS - Bumps are small, localized, upward displacements of the pavement surface. They are different from shoves in that shoves are caused by unstable pavement. Sags are small, abrupt, downward displacements of the pavement surface. If bumps appear in pattern perpendicular to traffic flow and are spaced at less than 3 m (10 ft), the distress is called corrugation. Distortion and displacement that occur over large areas of the pavement surface causing large and/or long dips in the pavement should be recorded at “swelling.”

RUTTING / SHOVING - A rut is a surface depression in the wheel paths. Pavement uplift may occur along the sides of the rut, but, in many instances, ruts are noticeable only after a rainfall when the paths are filled with water. Rutting stems from a permanent deformation in any of the pavement layers or subgrades, usually caused by consolidated or lateral movement of the materials due to traffic load.

Shoving is a permanent, longitudinal displacement of a localized area of the pavement surface caused by traffic loading. When traffic pushes against the pavement, it produces a short, abrupt wave in the pavement surface. This distress normally occurs only in unstable liquid asphalt mix (cutback or emulsion) pavements.

PATCHING & UTILITY CUTS - A patch is an area of pavement that has been replaced with new material to repair the existing pavement. A patch is considered a defect no matter how well it is performing (a patched area or adjacent area usually does not perform as well as an original pavement section). Generally, some roughness is associated with this distress.

POTHOLES - Most often are structurally related distresses and should not be confused with raveling and weathering.

PAVEMENT PRESERVATION - Applying the Right Treatment to the Right Pavement at the Right Time using the Right Materials.

R-VALUE - A test to evaluate the base, subbase and subgrades of an area to be used in pavement designing for thickness of asphalt.

ESAL - The impact of trucks is measured in equivalent single
18,000 pound axle loads (EALs).

STREETSAVER DEFINITIONS

MANAGEMENT SECTION - This is used to maintain an inventory of all the roads and road sections in your jurisdiction.

EVENTS – This provides for viewing and maintaining of Events or changes that have been made on a management section. The Events that are included are:

- Management Section Creation.
- Results from Maintenance and Rehabilitation treatments that have been applied to the Management Section.
- Results from Visual Inspections of Management Sections.
- Listing of changes/edits of information on a Management Section.

DETERIORATION CURVE - This provides a graphical representation of the current pavement condition index and the historical PCIs for each section of road in your jurisdiction.

MAINTENANCE/REHABILITATION - This is used to review the proposed maintenance, new maintenance, and rehabilitation for any road section in your jurisdiction.

BRANCH - Generally a road name or a road name with a direction of travel.

SECTION - Usually a branch or road is large and needs to be divided into smaller pieces to maintain. These smaller pieces are labeled as “sections” and designated with a number and a beginning and ending location.

DISTRESSES - Defects found in asphalt concrete pavements or portland cement concrete. These defects degrade the condition of the road.

RATING - The rating is the weight cost - effectiveness ratio of the recommended treatment.

% OF ENVIRONMENT - The percentage of the pavement distress in a management section that is an environment related distress.

% LOAD RELATED - The percentage of the pavement distress in a management section that is load related distress (caused by excessive weight on the pavement surface).

% OTHER - Is the percentage of the pavement section that is not a load related or environment related distress.

ACTIVE - Indicates whether or not the current record is active.

AREA - Contains the area of a section in square feet. This is automatically calculated using the values that are entered in the Length and Width fields. However, if the section is irregularly shaped the area can be entered by the user.

AREA ID - Is an optional, jurisdiction defined field to identify the area in which the section is located. For example, each neighborhood or subdivision, or each geographic type (mountain, valley, coast, etc.) in the jurisdiction may be assigned a letter of the alphabet.

BASE BUDGET - Provides an area for you to enter the dollar amount of your base budget.

BASE BUDGET INCREASE FACTOR - Stores the percent that the base budget will increase each year.

BASE PM SPLIT - Percent of the base budget that has been set aside for preventive maintenance.

BEGINNING LOCATION - Identifies the point that defines the beginning of the section. This is generally the name of a cross road or other landmark.

CONDITION - Column lists the condition levels (2-5) that require stop-gap treatments.

COST/ SQ YD - Indicates the cost per square yard of road for the suggested treatment.

CURRENT PCI - Calculated from either a visual inspection or a maintenance treatment.

DESCRIPTION - Displays a description of the item named in the previous column in a grid.

DISTRESS - Contains the type of distress present on a section of a road.

END LOCATION - Identifies the point that defines the end of the section. This is generally the name of a cross road or other landmark.

EVENT ACTIVE - Indicates whether an Event is currently part of the active history for the current Section.

EVENT PCI - The PCI after the selected Event occurred.

EVENT TRANSACTION TYPE - Includes: Creation, Inspection, Treatment, Split, Combine, Attribute Change and Core Data Change.

EVENT VALID - Indicates if an Event can be activated and made part of the valid events for the current section.

FUNDING SOURCE - Is an optional, jurisdiction defined field to identify the funding source for the section; an example might be G for general fund.

GENERAL CODE - Is an optional, jurisdiction defined field used to identify sections of pavement sharing common characteristics, i.e., drainage type.

INFLATION RATE - Is the inflation used throughout your jurisdiction. You may wish to consult your financial department with this value.

INSPECTION AREA - Is the total area of the inspection unit.

INTEREST RATE - Contains the interest rate used throughout your jurisdiction.

LIFE EXTENSION - Is the number of years that a maintenance treatment extends the life of a pavement surface.

MAINTENANCE DATE - Displays the date the maintenance was completed.

MANAGEMENT UNIT - Relates a project to a management unit.

MILEPOSTS - Display the beginning and ending points of a management section.

NEW PCI - Stores the PCI value that was calculated after a treatment was applied.

NUMBER OF SURFACE SEALS BEFORE OVERLAY - Displays the recommended number of surface seals before the application of an overlay.

OLD PCI - Displays the pavement condition index before a treatment was applied.

OTHER - Displays the weighting factor applied to management sections with functional classes other than arterial, collector, and residential.

OVERLAY - Displays the overlay code that corresponds to an overlay procedure.

OVERLAY CODE - Is an identifier for the treatment type; use one of the six codes from the pop-up list that appears when this is activated.

PCI CAP - Stores the maximum PCI value that will be included in needs and scenario calculations. If a PCI value is larger than the PCI Cap value, it will not be included.

PCI EFFECTIVENESS CUT-OFF - Contains the minimum PCI value used in calculating the area under the projected performance curve. That area is used in ranking sections needing work, and the area below the PCI Cut-Off value is not included in that area. It should generally be the lowest PCI value that defines the minimum acceptable condition for all of the pavement types and functional classification groupings.

PCI HIGH - LOW > 25 - Is marked if the difference between the high and low PCI values is greater than 25.

PCI HIGH VALUE - Is the maximum PCI value for an inspection unit used in the last PCI calculation for a management unit.

PCI LOW VALUE - Is the minimum PCI value for an inspection unit used in the last PCI calculation for a management unit.

PM% - Scenarios based on a yearly budget, this column stores the percent that has been set aside for preventive maintenance.

REPLACEMENT COST - Is the cost per square yard to install a new pavement surface.

RESIDENTIAL $ - Indicates the cost of a stop-gap treatment per square yard when applied to a road with a residential functional class and a given condition.

ROAD ID - Contains a two-character identifier that was assigned to the road. The combination of Road Number, Road Name, and Road ID must be unique for each road section.

ROAD NAME - Displays the name of the road that corresponds to the road number and road ID. The combination of Road Number, Road Name, and Road ID must be unique for each road section.

ROAD NUMBER - Contains the number that was assigned to a road. The combination of Road Number, Road Name, and Road ID must be unique for each road section.

SECTION ID - Is an identifier that is unique for each section of a given street. Note that the Street ID and the Section ID combined describe the individual section. Therefore, that combination must be unique. The same Section ID can be reused as long as it is used in conjunction with a different Street ID each time.

SEGMENT LENGTH - Is the length in feet of the management section.

SELECT MANAGEMENT SECTIONS - Allows you to calculate PCI values based on selected management sections. If this button is marked, the management sections that have had records updated since the last calculations are displayed in a grid. Select the management sections you want included in the calculations from this grid.

SPECIAL - Check box is marked if the displayed inspection unit is non-representative of a section as a whole.

SPECIAL UNIT - The information will either be Y or blank. Y is an indication that this inspection unit is in some way non-representative of the section as a whole, and would receive a different maintenance/rehabilitation treatment from the rest of the section.

STANDARD INSPECTION UNITS - Is the typical number of inspection units that would be used for a particular management section.

STOP-GAP APPLICATION INTERVAL - Indicates the number of years between the applications of stop-gap treatments.

STREET ID - Is an identifier that is unique for each street. The Street ID usually bears some similarity to the actual street name.

STREET NAME - Is the full name of the street including “Street”, “Way”, “Court” etc.

TREATMENT - Contains the type of treatment the road received or will receive.

TREATMENT COST - Is an optional field giving the cost in dollars and cents of the treatment.

UNIT OF MEASURE - Displays the units of measure used to measure an item.

UNIT PRICE - Displays the price paid for an inventory item.

VISUAL PCI - Used to identify PCI calculations that have been determined based upon a visual inspection. If this check box is blank, then the PCI was extrapolated based upon the maintenance treatment that has been applied to a management section.

WEIGHTING FACTORS - Section displays the weighting factors established by your jurisdiction for the functional classes.

YEAR OF MAINTENANCE - Stores the proposed year of a treatment.

YEARS BETWEEN CRACK SEALS - Displays the number of years between the application of crack seals for the functional class with a specific severity.

YEARS BETWEEN SURFACE SEALS - Displays the recommended number of years that should come between surface seal application for the functional class with the indicated severity.

YEARS TO CALCULATE - Stores the number of years you want to include in the Budget Needs calculation. The number of years cannot be less than 5 or more than 20.

REPORT DEFINITIONS

ZONES - Geographical areas of the city defined by city staff to aid in the development of a maintenance plan for residential roads.

CL - Centerline Mile - a measuring of the length of a road regardless of the width of the road.

LM - Lane Mile - a measurement of the length of all the lanes for a given FC or area.

ACTION / TREATMENT - A proposed type of rehabilitation work that should be used on a given road segment, based on PCI, FC and engineering evaluation.

ANNUAL BUDGET - The amount of money that is available each year to be used for pavement maintenance. These funds can come from various sources and can vary from year to year, although it is generally a fixed figure.