*city of*

# ROLLING HILLS ESTATES


2020

# Pavement Management System Update

*prepared by*

WILLDAN

Intentionally left blank

# TABLE OF CONTENTS

Intentionally left blank

# PART 1

Intentionally left blank

# EXECUTIVE SUMMARY

In response to the need to protect the City's large capital investment in streets, the City Council of Rolling Hills Estates retained Willdan to update the City's Pavement Management System (PMS). This report represents the results of that work effort.

A PMS is a system designed to gather, store, and analyze data about the City's streets and provide a strategized program for implementing preventive maintenance and rehabilitation projects citywide. The implementation of a PMS represents a proactive approach to maintaining the existing streets. It benefits the City by preserving investment on the roadways, enhancing pavement performance, ensuring cost-effectiveness, extending pavement life, and providing improved safety and mobility. Additionally, maintaining a fully implemented PMS protects the City's ability to acquire state and federal funding for street improvement projects. Virtually all funding sources require local agencies to plan and document ongoing maintenance of the funded street improvements. Including these streets in the City's PMS meets this requirement.

The City's street network represents one of the largest capital investments on the City's books. In the City of Rolling Hills Estates, there are 11.3 centerline miles of combined arterial and secondary streets or approximately 2,500,000 square feet of such pavement in the system included in this report. The total estimated replacement cost to replace this pavement would be in excess of $18,750,000. The total of all City roadway centerline mileage is 28.4 miles, or approximately 5,242,000 square feet with total replacement cost of $ 33,831,000 . Few assets in the City's purview rival these statistics. The sheer dollar value of the street system underscores the importance of maintaining a fully implemented PMS to protect this investment.

The City of Rolling Hills Estates Pavement Management System (PMS) has projected a total of 2.6 miles or 22.8% of the City arterial and secondary streets qualifying for major maintenance over the next 3 to 5 years. It is clear that the investments made to the arterial street system have reduced the backlog for arterial major maintenance needs since 2017, when more than 34% of the arterial streets were in need of major maintenance. However, there remain a significant number of arterial streets that have entered the progression towards the end of their lifespan and are in need of overlay. Overall, there are 8.8 total miles of streets or 31.2% of all City roadways qualifying for major maintenance at the present time.

Present day estimated cost of all streets identified for major maintenance is $3,790,000. These figures include 15% contingency on the construction cost and 25% for engineering on that total. Cost figures used in this report are intended to cover budgetary considerations, and numerous undefined factors that lie between the PMS assessment and the time of construction. Statistically, the overall backlog of major maintenance has decreased since the last PMS update was performed in 2017. This is primarily because the implementation of recommended budgeting has had the desired effect.

The following is a tabulated summary of the data figures explained above:

**OVERALL STREET INVENTORY**

| | Total Areas SF | Length (miles) |
|---|---|---|
| Local Streets | 2,742,000 | 17.0 |
| Arterial & Secondary | 2,500,000 | 11.3 |
| All Roadways | 5,242,000 | 28.4 |

**TOTAL REPLACEMENT COSTS**

| | Cost per SF | Total |
|---|---|---|
| Local Streets | $ 5.50 | $ 15,081,000 |
| Arterial & Secondary | $ 7.50 | $ 18,750,000 |
| All Roadways | | $ 33,831,000 |

**MAJOR MAINTENANCE INVENTORY**

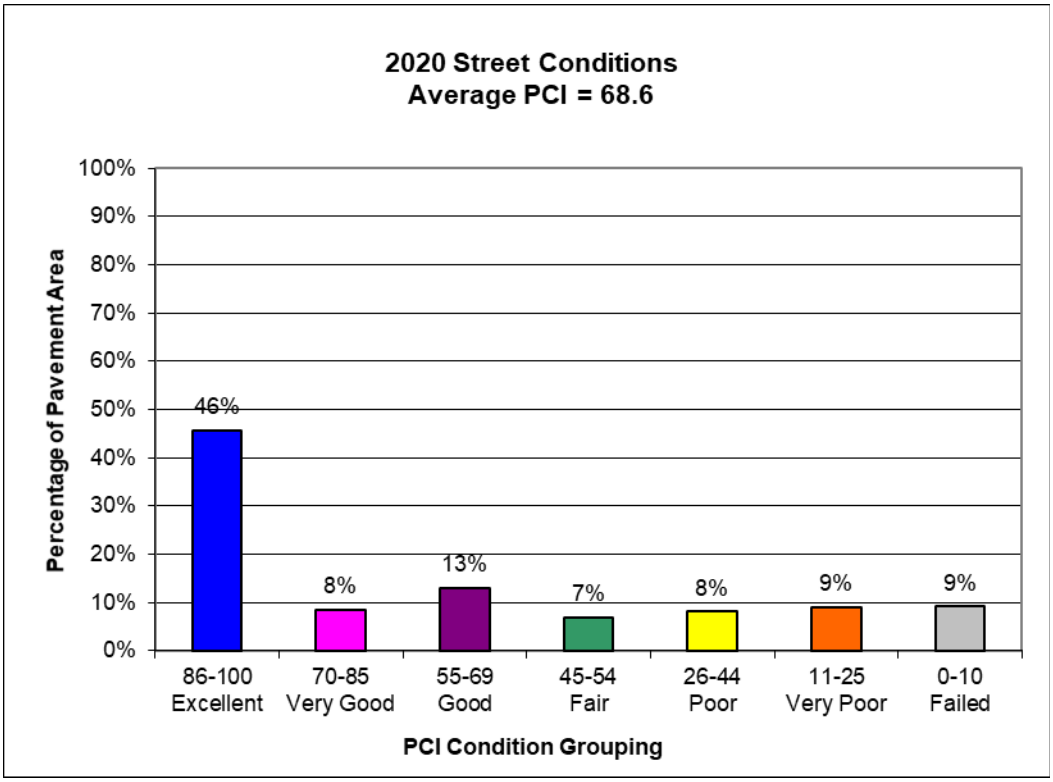
| | Total Costs | Length (miles) | Total (%) |
|---|---|---|---|
| Local Streets | $2,530,000 | 6.3 | 36.8% |
| Arterial & Secondary | $1,260,000 | 2.6 | 22.8% |
| All Roadways | $3,790,000 | 8.8 | 31.2% |

There are 8 segments with improvement costs estimated at $1,410,000 listed in serious condition, i.e. with PCI less than 20. The major maintenance costs for these segments used in this report are based on overlay rather than reconstruction, because the need for reconstruction is a rare exception that would be driven by extensive base failures – which are just not present in the City street system today. The methods utilized involve extensive use of recycled tires in the asphalt mixes, which helps divert these waste tires from the landfills. The recommended rubberized interlayer and asphalt-rubber hot mix overlay has the same appearance as normal overlays, but forms an effective substitute for reconstruction. These segments may be further analyzed by deflection testing and/or core sampling to confirm that they can successfully be resurfaced using these special treatments as assumed in this report (Strategies 8, 8A). Wherever this is possible, a savings of 50 percent is likely compared to reconstruction. Fortunately, the majority of these streets have very light traffic, and therefore continued deterioration will be very slow.

One index used to gauge the relative condition of the streets is PCI (pavement condition index), which is the conventional overall deterioration index provided in conformance with standard protocols of the U.S. Army Corps of Engineers (USACOE). The standard rankings for PCI values (per USACOE protocols) are stratified as follows:

| PCI | From | To |
|---|---|---|
| **Excellent** | 100 | 86 |
| **Very Good** | 85 | 70 |
| **Good** | 69 | 55 |
| **Fair** | 54 | 45 |
| **Poor** | 44 | 26 |
| **Very Poor** | 25 | 11 |
| **Failed** | 10 | 0 |

A PCI of 70 is considered a desirable level for an average PCI of street pavements, though most cities in Central and Southern California are near 60 and consider that to be a reasonable level. A graph of the PCI groupings for the City of Rolling Hills Estates streets is shown on the next page. The overall average PCI is 68.6, which is considered “Good” under the USACOE standard rankings. This value has increased from the average PCI of 52.7 reported in the 2017 PMS, which is expected as the backlog of unfunded maintenance has also decreased.




Based solely on PCI ratings, the Rolling Hills Estates street network has begun the steep climb from the overall rating of "Poor" condition reported nine years ago, however still remains in need of some significant funding commitments to bring the system up to an acceptable overall condition level. It should be noted that the PCI gauge is heavily influenced by non-structural distresses, such as utility cuts, surface raveling and block cracking. However, structurally speaking the street system is in much better condition than the PCI would indicate.

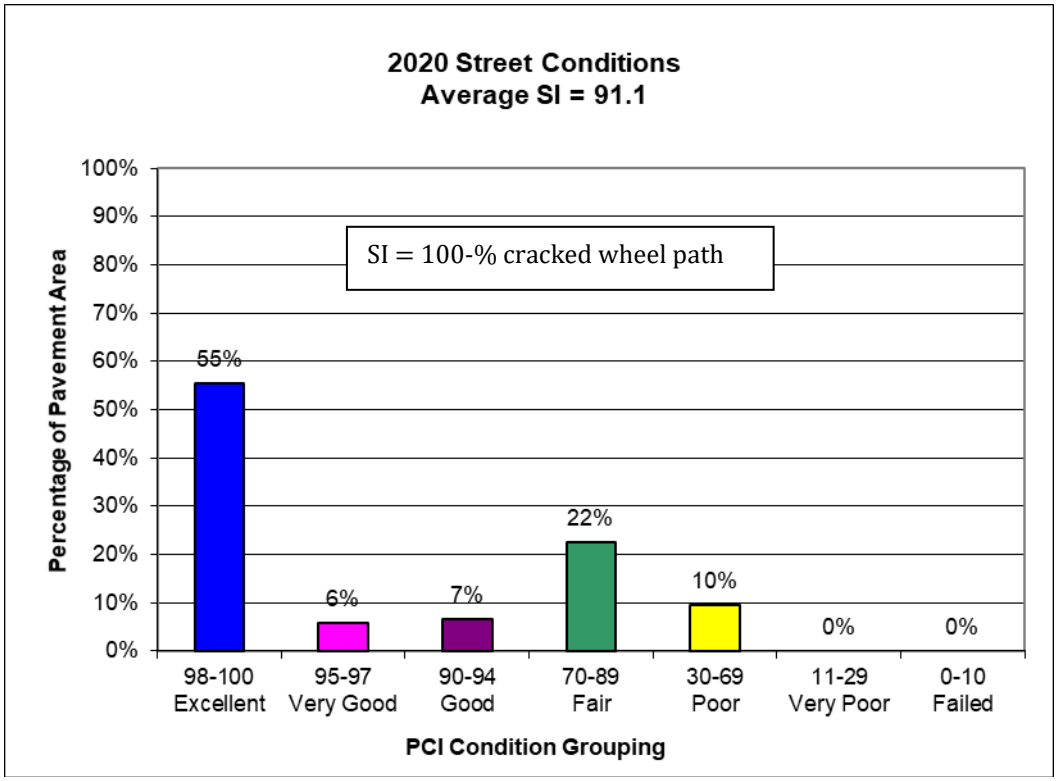
Another index used to portray street condition for asphalt concrete pavements is the SI, the structural index, which is similar to the PCI but focused solely on structural conditions – ie: cracking in the traveled way. The SI provides a different perspective on street condition than the PCI; it is a useful way to evaluate the cracking that usually drives the final decision to provide a structural upgrade (which normally takes the form of an overlay). The structural index often does not correspond very closely with the PCI because other distresses—such as surface texture, bumps, and utility cuts—can have a disproportionate impact on the PCI as compared to the SI. For example, a street with a midrange SI value of 75 may have a very low PCI value of 19. This means that this street segment does not have a lot of structural cracking; however it has significant levels of utility patching, surface raveling and/or poor ride quality which have lowered the PCI value. Using both PCI and SI indexes together in our decision process, it is apparent that a structural upgrade is a lower priority for this segment over another segment that has both a low SI and a low PCI.

SI values are computed by starting with a nominal value of 100 to represent a street with no cracking in the wheel path area, then subtracting the percentage of cracked wheel paths in a target segment.

The SI values are arrayed as follows:

| SI | From | To |
|---|---|---|
| **Excellent** | 100 | 98 |
| **Very Good** | 97 | 95 |
| **Good** | 94 | 90 |
| **Fair** | 89 | 70 |
| **Poor** | 69 | 30 |
| **Very Poor** | 29 | 11 |
| **Failed** | 10 | 0 |

The current structural conditions of pavements in the street network can be represented by an average SI that ranges 0 to 100, and is normalized among all the streets in Rolling Hills Estates by area of pavement. The more cracking that occurs, the lower the structural index becomes. A graph of SI groupings for the City of Rolling Hills Estates streets is shown below; the qualitative difference between the SI groupings and the PCI distribution is quite apparent when the SI results are compared to the PCI graph. The overall average SI for the streets in Rolling Hills Estates is a 91.1, which is considered "Good" condition.

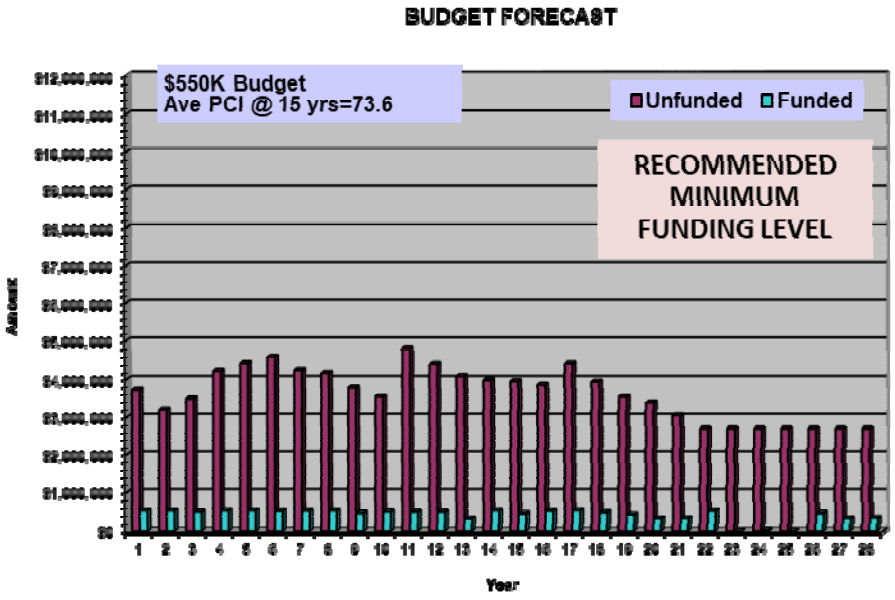



The structural distress on roadways within the City is a function of many factors, including age and traffic. Once a pavement becomes cracked in a traffic area, the structural deterioration accelerates. Stopping this process requires major maintenance, and identifying the needs and the optimal approach and timing to fill those needs is a primary function of the PMS. This is also the foundation for setting priorities in the system. The savings that can be attained by providing major maintenance before deterioration occurs is the basis on which priorities are founded. This benefit—divided by the cost of the major maintenance—normalizes the benefit and allows for comparison of one segment to

another. This is commonly called the benefit/cost ratio.

The benefit/cost ratio is a rigorous engineering economics value derived by weighing benefit against cost; it indicates the annual return that would accrue by investing in the overlay at this time. For example, a benefit/cost ratio of 0.04 indicates that an overlay of that street would offer a return on the investment of 4% per year. Street deterioration accelerates over time, imposing greater costs for repairs made prior to any overlay, and also requiring thicker overlays. Avoidance of these extra costs by doing an overlay now (as opposed to later) is the "benefit" in the benefit/cost ratio.

An additional exhibit—one of the tools for optimizing budget planning—is provided below. This projection simply indicates the potential for long-term developments based on a particular budget strategy being applied to a set of major maintenance activities across corresponding PCI categories. The major maintenance needs are identified consistent with the Logic Tree criteria shown in Figure 1 and Table 1 of the Pavement Management Systems section of this report. The 28-year projection graph below shows, by present value, how a recommended annual budget of $550,000 will reduce the work backlog over time, and result in a corresponding improvement in overall average PCI of the street network.




This graph represents the results of an optimization of strategies and assignment of funds to various deterioration levels: (1) worst case; (2) rapidly deteriorating; and (3) just before start of rapid deterioration. The optimization process establishes two primary parameters to be used as a basis for the budget forecast. The first parameter is the PCI ranges that define the three deterioration categories. The second parameter is the proportions for assignment of budgeted funds.

For this budget forecast model, the following PCI ranges and corresponding budget assignments were found to be the optimal parameters:

| Assignment of Funds | | Streets PCI Ranges | |
|---|---|---|---|
| **Deterioration Category** | **Portion of Budget** | **Upper PCI Limit** | **Lower PCI Limit** |
| Worst Case | 20% | 10 | 0 |
| Rapidly Deteriorating | 35% | 20 | 11 |
| Prior to Start of Rapid Deterioration | 45% | 45 | 21 |

The key goal of the budget forecast is to demonstrate a solid reduction of the unfunded major maintenance over time. Improvements in the PCI and SI will naturally follow along. Lowering the funding level significantly could lead to the accumulation of unsatisfactory levels of unfunded major maintenance in later years and corresponding low overall PCI values.

Being a candidate for major maintenance does not necessarily mean a particular street is in bad condition; it only means the cracking on the street has reached a stage where a progression toward failure has begun. That progression runs for a long time on residential streets, normally a decade or two.

Lists of overlay candidates are provided sorted in a number of ways are provided: 1) By a priority factor that includes both structural cracking and return on investment in the improvements, 2) By benefit/cost ratio to show just the return on the investment of funds, 3) By overall pavement condition index (PCI), and 4) Alphabetically. These reports are in the Major Maintenance Inventory in Appendix C.

By updating this report triennially, the effectiveness of the program can be maintained throughout succeeding years.

A more detailed discussion of the report findings can be found in the Findings and Recommendations section of this report.

# GLOSSARY OF TERMS

Certain terms used in this report may not be familiar to all readers. A review of the following list of terms and their definitions will make for easier reading:

AC: Asphalt concrete (normal material used to construct street pavement).

ACTIVITY: The next activity needed for maintenance on the segment.

ALLIGATOR CRACKING: Pattern of cracks usually 4 to 6 inches apart, resembling texture of alligator skin.

ARAM: Asphalt-rubber and aggregate membrane is placed on a deteriorated street either by itself, with a slurry, or with an overlay on top. Forms a layer that is highly resistant to cracks coming through it.

ARHM: Asphalt-rubber hot mix, similar to AC, but asphalt-rubber is used as cement instead of plain asphalt oil.

BASE FAILURE: Area of alligator cracking deteriorated such that the support material underlying the pavement has been damaged and/or where the alligator pavement is loose without interlocking support.

CROWN: Where central area of street is high in elevation relative to edges of roadway.

DI: Same as PCI, termed Distress Index in the Cartegraph documentation, because it takes into account all distresses, not just cracking.

INTERLIFT: A layer of highly flexible interlayer material between the overlay and the underlying existing pavement that absorbs the stresses of reflection cracking such that the overlay experiences only low stresses. The material is ¾" thick and provides a structural element of that same thickness.

MAJOR MAINTENANCE: Includes any improvement to a pavement that adds significantly to structural strength. This usually involves adding a layer of asphalt. Reconstruction is included in the term Major Maintenance.

MINOR MAINTENANCE: Includes any improvements that generally do not add structural strength, for example crack sealing or slurry seals.

NPR: Network Priority Ranking is the benefit/cost ratio for the project. Provides for a normalized relative comparison of projects and is an approximation of the return on the investment in the improvement. Slurry projects have no NPR, because they have only a subjective and minor financial return.

ORIGINAL CONSTRUCTION: Defined as that portion of the existing pavement that was constructed on the natural soil. (Each latest reconstruction project replaces the previous original construction.)

OVERLAY: A layer of AC or ARHM on existing pavement.

PCC: Portland cement concrete (normal concrete).

PCI: Pavement Condition Index from 0 to100 indicating the overall condition of the pavement based on distresses, where 0 is extremely poor and 100 is excellent.

RAVELING: Pavement surface where fine rock particles in the AC have worn away, leaving larger rocks protruding with little surrounding support.

RECONSTRUCTION: Involves the removal of existing pavement and replacement with a new pavement.

RESTRUCTURING: Involves addition of layers of pavement that increase the structural strength without removal of the existing pavement.

RESURFACING: A supplemental layer of asphalt concrete over the existing pavement surface to restore the ride quality and/or add structural strength.

R-VALUE: The R-Value (resistance value) is an index of the capability of a soil to resist deformations from wheel loads, beyond which the soil will not "spring back" to its original surface elevation. It ranges from 0 to 100.

SI: Structural Index from 0 to 100, 100 means no cracking in the wheel path and 0 means full wheel path alligator cracking.

STRUCTURAL SECTION: Includes all of the layers placed over the natural soil to form the actual structure of the pavement. This includes all aggregate base layers, asphalt concrete, Portland cement concrete, and structural interlayers.

TI: The Traffic Index is a numerical representation of traffic loading, but not simply traffic volume. It has a range from 4 for neighborhood streets to 12 or more for freeways. It is primarily dependent on percentage of truck traffic.

WHEEL PATH: Area of pavement where wheels of predominant traffic pass directly over.

# PAVEMENT MANAGEMENT SYSTEMS

## INTRODUCTION

Nationwide, municipalities are faced with ever increasing street maintenance budget problems due to reduced availability of funds. The problem is compounded, due to an apparent increase in deteriorated streets each year and a disproportionate increase in the cost per mile for maintenance.

Street pavement is one of the major capital investments of a municipality. It is also one of its most important assets. Without a well-maintained street system, the transportation needs of the public, business, industry, and government cannot be met. In general, local real property values tend to suffer from poorly maintained streets. Therefore, it is important that agencies at all levels of government develop improved means of allocating their limited financial resources to maintain street pavement.

A pavement management system (PMS) is being used increasingly by agencies as a way of meeting this need. PMS is not a new concept. It has been in use for many years, and has become fairly prevalent in public works administration.

The basic idea behind a PMS is to improve the efficiency and effectiveness of management decision-making in the allocation of limited funds for maintenance, resurfacing, and reconstruction of a community's roadway facilities.

A PMS is an orderly listing of all roads maintained by an agency and the condition they are in. This listing usually includes information such as the type of surface, condition of pavement, width of pavement surface, street length, data of resurfacing or seal coating, etc. A computer can sort the “databank” in a variety of useful ways. In addition, a PMS provides the means to assign meaningful priority rankings of projects and their associated costs to assist in multi-year programming and annual budgeting for maintenance and capital improvements. Once implemented, the PMS must be updated tri-annually in order to be an ongoing, effective management system.

This section presents an overview of pavement management systems (PMS), how they are used and ways that a system can be beneficial to a community. Included are an historical overview and a general description of the types of systems that have been used by other agencies. This material is presented for the benefit of those who want to more fully understand what a PMS is and the associated benefits.

## HISTORY

Diminished funding, or lack of funding increases, has caused cities to reevaluate their historical approach to pavement maintenance and seek other alternatives for pavement management. Earlier non-systematic approaches resulted in gradual overall deterioration and higher than necessary costs. Major backlogs or work were common.

Prior to the development of PMS, cities typically established yearly street maintenance budgets that emphasized maintenance improvements on a worst-case first basis, or in response to citizen complaints and political priorities. This approach worked satisfactorily for some communities, as long as sufficient funding was available. However, while funding

sources dried up and maintenance budgets decreased or stayed constant, the need for improvements increased due to greater traffic volumes, aging of pavement and inflated material costs.

Instead of providing preventive structural maintenance at an early stage, streets were left until much more expensive reconstruction was needed. Unfortunately, the short span of extra service years, during the delay of maintenance, was purchased at a very high price in terms of increased structural upgrade costs. To orderly prioritize streets for maintenance at the earlier, cost-effective time, a PMS was needed.

Initial efforts to use PMS occurred in the late 1960's. The States of Texas and California were researching various uses of system procedures for application to pavement design and management. In 1973, the first definitive publication on PMS was authored. By 1974, a number of states had initiated studies and developed programs designed to improve pavement management processes, which included simple database management programs. The Federal Highway Administration recognized the importance and benefits associated with the PMS concept and designated pavement management as an emphasis area in Fiscal Year 1979. The significance of such a decision was to encourage states and local agencies to review PMS and appreciate their usefulness.

Every city and county throughout California has developed and is currently implementing pavement management programs.

## A PMS DEFINED

In order to discuss the benefits and uses of a PMS, it is first necessary to understand the major components of PMS. The primary purposes of any PMS are: 1) to improve the efficiency of making decisions; 2) to provide feedback as to the consequences of these decisions; 3) to ensure consistency of decisions made at different levels within the same organization; and 4) to improve the effectiveness of all decisions in terms of efficiency of results. These all relate to maintaining good control over street maintenance. The general means for accomplishing these purposes include:

1. A systematic method for collecting and storing data.
2. A method to effectively analyze data.
3. A process to retrieve data in a meaningful format.
4. Procedures for decision-making based on data
5. Procedures for updating the database (including data from outside research).

## PROJECT SCOPE

The PMS developed for the City includes public streets, which are considered arterial for traffic circulation within the City, as well as all paved local public streets and alleys. The basic PMS components are:

- Data Acquisition Process
- Database
- Retrieval Methods
- Analysis Methods
- Updating Procedures

The current database was established in 2008 using a combination of data contained in the City's 2003 PMS, field inventory and data research methods to further develop the information needed for good pavement maintenance decision making. It included a pavement condition survey and rating of every street to identify structural deterioration, surface deterioration/condition, ride quality, skid resistance, potholes, and related data.

At that time, data was also compiled from record data on pavement width, length, structural sections, maintenance histories, and traffic conditions. One of the main benefits of the database is this inventory of streets.

The collected data, which forms the heart of the PMS, was stored on a microcomputer for ease of database sorting, updating, and retrieval. The computer program operates on a personal computer. The program used is MicroPAVER version 6.1.

Updating the database and analysis of the resulting new information is recommended to be accomplished every 3 years in conjunction with the budget preparation process. The last triennial update was accomplished in 2017. The scope of this report represents an update to the 2017 database to reflect changed conditions, update cost factors, and develop new budget scenarios by the use of the computer.

Once the database was updated, the data was used for analyzing each street (between major intersections or shorter when necessary), pavement major or minor maintenance identification, ranking the candidate projects, and formulating recommended annual programs based upon different funding scenarios. This is accomplished through the use of a computer.

The following sections of the report provide a more complete description of (1) what a PMS is; (2) the methodology and information used to compile the City's database; (3) the data analysis program; and (4) the results of the analysis, including computer printouts of the various reports and recommendations.

### The Data

The effectiveness of any PMS is dependent upon the data being used. Four primary types of data are needed: pavement condition ratings, costs, roadway construction and maintenance history, and traffic loading.

A major emphasis of any PMS is to identify and evaluate pavement conditions and determine the causes of deterioration. To accomplish this, a pavement evaluation system

should be developed that is rapid, economical and easily repeatable. An example of such a system that is widely used is the MicroPAVER pavement management system. It uses a pavement condition index from 0 to 100, based on up to 19 deterioration categories, each weighted as along a curve as a function of area of the pavement affected. Each of these categories have 3 levels of severity: low, medium and high. Nearly all pavement management systems use this same type of data and deterioration assessment. They all in one way or another, arrive at a condition evaluation, an associated strategy for improvement and respective costs. The best systems provide accurate costs for individual segments and reliable priorities. By far the best priority basis for major maintenance (structural overlay) is the benefit/cost ratio, which normalizes the priority based on all factors including cost and traffic.

Pavement condition data must be collected periodically to document the changes of pavement conditions.

Typically, condition inventories are input, stored, and retrieved on a roadway segment basis. Segments were defined as reasonably sized projects of 1,000 feet to ¼ mile in length, beginning and ending at intersections. Occasionally, varying traffic or construction history make shorter segments necessary.

The maintenance costs used in a PMS usually include the best available information on the cost of activities normally conducted in the community. Costs are typically shown as total unit cost per square foot for activities. Cost information must be easily updated to reflect current dollar values. The cost data is used to make estimates for maintaining a pavement at a given condition and for projecting long-range budgets, based on the condition of the pavement.

Additional data that can be used for pavement management systems include drainage conditions, roadway shoulder conditions, ride quality, utility cuts, and soil conditions. This listing is not meant to be exhaustive, since any other unique information or conditions can be included within the database. However, the extent of such additional data should be evaluated to determine its usefulness versus cost for collecting the information. It is important to keep in mind that a PMS is only as accurate and useful as the type and quality of data stored in the database.

Data Analysis

The analysis of the database can be done at any one of the following levels: 1) network, 2) project, and 3) implementation. The network level analysis is best used for overall budget estimates, scenario building, or for policy "what if" situations. The project level analysis involves assessing the causes of pavement deterioration, determining potential solutions, analyzing alternative benefits, carrying out lifecycle costing, and ultimately designing and selecting the preferred approach. Implementation level analyses are generally developed on an "as-needed" basis in the form of tables, charts or graphs, depending on specific requirements. They are often concerned with assessing the results of projects after completion.

Data Retrieval

It is critical that the data be easily retrieved, and in such a format that it is meaningful.

The computer has the advantage of quick retrieval at a single source, plus the flexibility to display data in any format desired. The computer is essentially unlimited in this capacity to prepare tables, graphs, and charts. In comparison, doing the simplest tasks of this type from files is very time consuming.

The database can be used to answer special questions at each level of decision-making. Questions concerning the entire system, individual projects or implementation can be asked, and the PMS can provide answers. Such questions could include: What will be the effect and budget implications of increased improvement costs? If additional funding can be provided each year, what is the increase in number of streets improved?

A PMS has the potential to answer numerous questions of this type, through straightforward manipulation of data. Usually a computer program is developed to provide the information in the desired format, from the database within the computer memory.

Updating Data

As mentioned previously, an efficient procedure for updating the database must be included within the PMS. The procedures should easily update information on pavement conditions, pavement history, cost of improvements, and traffic loading.

## USE OF A PMS

With an understanding of the database, an examination of the typical uses of a PMS can be undertaken. The following material briefly describes the main areas where a PMS is applied and the benefits achieved from each.

Street Inventory

The most immediate use of the PMS is in having a complete and readily accessible inventory of the City's street system including up-to-date conditions. This information is frequently very valuable for day-to-day use in tracking maintenance work and for reference in preparing reports or studies.

Developing Maintenance Budgets

Rather than preparing the typical 1-year maintenance budget, a PMS allows a city to prepare a series of budgets. These budgets can be in the form of a multi-year program, identifying not only short-term (1 year) needs, but outlining needs over the course of many years. Further, alternatives or options can be prepared and presented to the budget decision makers.

Prioritization

A PMS allows for the prioritization of maintenance projects based on condition ratings primarily, and possibly other factors such as traffic, soil and cost. The next step can be the selecting and ranking of projects for the upcoming budget year, as well as for long term financial planning.

## SUMMARY

These are the components and capabilities that are typically found in a PMS, resulting in numerous benefits including:

- Inventory of Street System
- Overall Pavement Condition Rating
- Annual Budget Estimates for Various Scenarios
- Project Identification and Ranking
- Improved Decision Making

Obviously, some of the benefits are more quantifiable than others. Regardless, implementation of a PMS results in improved pavement conditions and more effective use of limited funding resources.

# THE ROLLING HILLS ESTATES PAVEMENT MANAGEMENT SYSTEM

The Rolling Hills Estates Pavement Management System (PMS) uses the MicroPAVER system as its platform for the four basic components:

1. Collection and Storage of Data
2. Analysis of Data
3. Retrieval of Data
4. Update of Data

Further extensions of these are: 1) decision making based on data; and 2) outside research related to those decisions. It is for these latter two that the Willdan enhanced MicroPAVER system was developed. The MicroPAVER system does not provide condition states other than the generic PCI, which is a combination of all deterioration factors. Therefore, it cannot reliably distinguish between the need for an asphalt overlay or a slurry seal, for example. So the type and cost of maintenance and a priority value for maintenance are not available from the system. The Willdan enhancements provide these very important aspects.

The following sections of the report cover the four main forms of data handling in the Rolling Hills Estates PMS.

## DATA COLLECTION AND STORAGE

Parameters

The first step in developing the PMS for the City of Rolling Hills Estates was to select specific fixed parameters, under which the program would operate such as construction inflation rates and nominal design lifespans of improvements.

Pavement Condition Survey

Each street within the City of Rolling Hills Estates was visually surveyed to determine the condition of the pavement. The survey concentrated on determining structural deterioration, which is the primary source of increased maintenance cost.

One hundred and thirty-eight field rating forms were prepared for roadway segments within the City. These forms were then entered on a matching computer screen by the same trained technician that performed the field rating. The pavement distress information recorded on the rating forms was then processed for use as part of the database system for the 2020 PMS.

"As Built" and Maintenance History Records

The original Willdan PMS collected information on improvements going back to the year 1992. The historical maintenance construction records can provide information on the effectiveness of various improvements conducted over the lifespan of the streets in the City of Rolling Hills Estates. A study of this nature was not included in this PMS update, but a casual review over time of selected streets with known traffic conditions can provide some interesting findings.

Traffic Data

Willdan's staff performed a detailed review of conditions, including estimates of truck volumes. By reviewing traffic volumes, including the estimated percentage of truck traffic, a traffic index (TI) was assigned to each roadway segment of the City.

Cost Data

Cost factors used in estimating costs of improvements were determined from average recent construction bids on representative projects for each type of construction within this report.

The cost estimates used in the PMS are considered to be representative for the upcoming year. To give a general indication of future years costs, an inflation factor of 3 percent has been included within the computer program to adjust for expected increases in cost. This applies to all future projections.

To ensure accuracy for future program years, it is recommended that cost data be updated annually to give an accurate account of the fluctuations in construction costs.

A total cost for each segment is calculated by multiplying the area of pavement in the segment by the unit cost.

## DATA ANALYSIS

Having accumulated the information contained within the database, the next step was to proceed with analysis of the data. The data analysis phase involved the development of a computer program that utilized the database to determine project recommendations. The following discussion describes the components of the data analysis. The overall processing of information to attain the principal information that has the most useful value is shown in the flowchart Figure 1, at the end of this report section. The key elements of analysis are outlined directly below, with descriptive information that describes their meaning, usefulness and how they are derived.

Pavement Condition Index (PCI)

One index used to gauge the relative condition of the streets is PCI (pavement condition index), which is the conventional overall deterioration index provided in conformance with standard protocols of the U.S. Army Corps of Engineers (USACOE). The PCI is developed by assigning points to be deducted from a maximum score of 100, which is a PCI value representing a street in excellent condition in every respect. These deduct points are assigned individually for each type of deterioration, and one set for each of 3 severity levels (low, medium and high) within each deterioration type. For example, alligator cracking is one type of deterioration. The quantity of each level of deterioration (low, medium and high) is stored separately for the observed alligator cracking. Quantities of 15 types of deterioration are stored in a similar manner.

The standard rankings for PCI values (per USACOE protocols) are stratified as follows:

| PCI | From | To |
|---|---|---|
| **Excellent** | 100 | 86 |
| **Very Good** | 85 | 70 |
| **Good** | 69 | 55 |
| **Fair** | 54 | 45 |
| **Poor** | 44 | 26 |
| **Very Poor** | 25 | 11 |
| **Failed** | 10 | 0 |

The PCI algorithm assigns deduct points for each severity level of each deterioration type. The sophistication of the MicroPaver system is in the way these points are combined such that the total deduct points never reach 100, so the final PCI is never less than zero. Willdan further enhanced this system such that the principal driver of PCI is cracking in the traffic area. Other factors only modulate this value. This ensures that the primary consideration is the potential financial loss that will occur if cracked pavement is allowed to completely fail under traffic loads. When this happens, full pavement reconstruction is necessary which generally costs close to 3 times the cost of pavement restructuring performed prior to failure. The result is a PCI that closely reflects benefit/cost ratio for each street segment. This is the basis of valid engineering economics, which normalizes projects for comparison of merit based on financial return on investment. This is the primary goal of a PMS, to sort the pavements in a large network to prioritize for the most cost effective expenditure of funds.

As stated, all other deterioration types other than cracking simply modulate the basic PCI. For example, a PCI of 40 would normally extend from significant alligator wheel path cracking. If there were some significant raveling and utility cuts, the PCI for a street with very little alligator cracking could be adjusted down to about 40 from a higher level. During the field review, these non-structural conditions are recorded. They include such items as low skid resistance, potholes, sags, bumps, buckling, and ripples in the pavement. By adjusting the PCI in this manner the program is able to establish a final priority, which is based upon both structural and other needs. Major maintenance priorities range from zero to 70.

Structural Index (SI)

The SI, the structural index, is similar to the PCI but focused solely on structural conditions. The SI provides a different perspective on street condition; it is a useful way to evaluate the cracking that usually drives the final decision to provide a structural upgrade (which normally takes the form of an overlay). The structural index often does not correspond very closely with the PCI because other distresses—such as surface texture, bumps, and utility cuts—can have a disproportionate impact on the PCI as compared to the SI. For example, a street with a midrange SI value of 75 may have a very low PCI value of 19. This means that this street segment does not have a lot of structural cracking; however it has significant levels of utility patching, surface raveling and/or poor ride quality which have lowered the PCI value. Using both PCI and SI indexes together in our decision process, it is apparent that a structural upgrade is a lower priority for this segment over another segment that has both a low SI and a low PCI.

SI values are computed by starting with a nominal value of 100 to represent a street with no cracking in the wheel path area, then subtracting the percentage of cracked wheel paths in a target segment. The results are arrayed as follows:

| SI | From | To |
|---|---|---|
| **Excellent** | 100 | 98 |
| **Very Good** | 97 | 95 |
| **Good** | 94 | 90 |
| **Fair** | 89 | 70 |
| **Poor** | 69 | 30 |
| **Very Poor** | 29 | 11 |
| **Failed** | 10 | 0 |

Major Maintenance Strategies

Roadway conditions vary in the City of Rolling Hills Estates and, therefore, a system for grouping street segments with similar conditions was needed. The extent of structural failure and other deterioration factors determine street condition groupings. The condition groupings and their corresponding strategies for major maintenance are shown in Table 1 at the end of this section. Once strategies were assigned to each of the various condition states, base costs were determined for the construction activities used to implement the strategies, followed by calculation of structural factors that vary between individual streets, and then final costs for each street segment.

The structural distress in streets within the City is a function of a number of factors: 1) fatigue from repetitive stresses of traffic; 2) temperature changes coupled with advanced oxidation of the asphalt cement (the tendency for asphalt to oxidize with age, making the pavement brittle, amplifies the stresses of both traffic and temperature); and 3) settlement of the road bed, due to water reaching the subgrade soil. These processes working together lead first to extensive cracking and finally to structural (base) failure.

Once cracked, water can move into the underlying soil causing loss of support to the pavement in surrounding areas. An acceleration of the spread of cracking usually is the result. Further deterioration of a different type follows, beginning at the originally cracked area. Water and traffic will cause a base failure, such that reconstruction is necessary. This secondary deterioration is also accelerative, in that the more base failure there is; the faster is the spread of base failure in surrounding areas.

Stopping all of these processes requires major maintenance and is a primary function of the PMS. This is also the foundation for priorities in the system. The savings from providing major maintenance before deterioration occurs is the basis in which priorities are founded.

The major maintenance strategy recommended is dependent upon the extent to which the pavement has failed or deteriorated, and represents a cost-effective method of repair. The strategies can vary from a 2-inch asphalt concrete hot mix overlay to a 2.5 -inch asphalt-rubber hot mix overlay. Some arterial streets may require reconstruction to achieve a satisfactory lifespan with a conventional asphalt concrete overlay. Asphalt rubber hot mix is much more flexible and durable than conventional asphalt concrete and has a longer lifespan as a result. Therefore it is considered as an option in this report. Coincidentally,

tire rubber from waste tires is recycled into the roadway. The tire rubber extends many of its properties to the asphalt including resistance to aging and crack reflection, which are major components in limiting lifespan of pavements.

The intent of the major maintenance strategies is to add an additional 15 years of life to the pavement before it fails again. This is more a goal for arterial streets, and will be well exceeded for local streets, where minimum constructability issues dictate overlay thicknesses that yield much longer lifespans. The 15 years is considered optimal for a rehabilitation program, in that even though 10 years is commonly used, it has proven to be unrealistic to maintain a cycle of rehabilitating all arterial streets in a city every ten years. The logistics of budgeting for design through completion of construction averages about 3 years, which would put about 30% of streets into some phase of that sequence at any given time. Also, the efficiencies are not there in a 10-year program, when an additional ½ inch of asphalt can typically buy another 5 years at practically the cost of the asphalt material alone.

The assigned strategy is a general representation of the type of improvement, which may be undertaken for each segment in order to arrive at estimated improvement costs. It should be recognized that the final scope of improvements for any segment would have to be determined through more detailed field investigation and engineering analysis including soils investigations. The actual costs of construction will vary from these estimates.

Nine different basic condition states and associated maintenance and rehabilitation strategies were developed for the City of Rolling Hills Estates, based on the pavement condition on street segments (refer to Table 1). Each condition state was divided into two categories based on traffic level. For example, a 4A strategy has the same pavement conditions as a Strategy 4, but 4A is the condition with lower traffic. Two strategies then apply to each pavement condition state, one for low traffic and one for high traffic. The maintenance strategies are applied corresponding to PCI ranges, while major maintenance (rehabilitation) strategies are assigned to SI ranges, i.e. restructuring with an overlay is appropriate based solely on the available crack data.

A tenth strategy is also defined as full reconstruction of the street section. However, the strategy used in this report for all high stress conditions utilizes a rubberized interlayer with an asphalt-rubber overlay (Strategies 8, 8A or 9, 9A). This treatment can substitute quite effectively for reconstruction in most cases. It is far less expensive and avoids the potential problems of major change orders on contracts where wet subgrade soil is encountered. Whether to use full reconstruction in any particular case will be decided after further testing in conjunction with the final engineering. The year of implementation for reconstruction generally is also dependent on the outcome of testing.

Above PCI 60 for low traffic segments, minor maintenance may be applicable, and this is another of the strategies. If the pavement has a PCI between 60 and 85, and it has had no seal treatment within the designated cycle of years between treatments, then a slurry seal treatment is applicable. There may be instances where PCI is between 70 and 85 and yet does not demand a slurry. This would be a case where miscellaneous conditions exist that need monitoring for localized repairs, but the surface seal is intact. Failed utility cuts are an example of a common condition of this type.

Streets with high levels of reconstruction repairs are always suspect for consideration of full reconstruction. Any street of this type will be listed with a cost for reconstruction, unless asphalt rubber is part of the strategy, as it is in Rolling Hills Estates. Asphalt rubber pavements can be much thinner and thus reconstruction is avoided by thickening the overlay to compensate. However, this may not be practical on arterial streets with high levels of reconstruction needed. Some street segments have complicating considerations such as, high crowns coupled with serious surface cracking. Under normal circumstances, the pavement could be overlayed, but might be better suited to reconstruction because of the existing high crown of the street. The high crown would be aggravated by the overlay. A careful analysis of pavement thickness and stratification of layers of past overlays and deflection testing, plus the consideration of anticipated increases in traffic volumes and other considerations, must be part of a final decision to reconstruct or not in these cases.

Major Maintenance Priority

The calculation of the priority is derived partly from a ratio of benefit divided by cost for each segment. Though the Pavement Condition Index (PCI) involves a highly sophisticated algorithm, it only represents the condition of the pavement and does not include what is to be gained by performing a structural upgrade, nor the relative cost of the upgrade. The cost is important to normalize whatever benefit there may be, so that segments can be compared not just on their benefit, but relative to how much it will cost to achieve that benefit. In order to make the priority value easy to understand, it is developed based on how much benefit is gained in the next year by doing the maintenance now. This is the dollar savings outcome of not waiting for another year. When this dollar value is divided by cost, the final outcome is the annual return on the investment in the structural upgrade. For example, a benefit/cost ratio of .04 means 4% annual return, and indicates that perhaps the money could be better invested in other places with higher returns. Naturally, the highest rate of return is best and the benefit/cost priority list is sorted with the highest benefit cost ratio on top.

Then using that benefit/cost value a priority ranking number is calculated based on how much cracking exists in the travel areas of the roadway. This is important because the more cracking the more deterioration exists and the more rapid will be the slide toward structural failure.

Cost

Willdan has also enhanced the system dramatically so that the cost for each street segment can be calculated much more accurately for the present maintenance backlog and short term budgeting. By using specific stored crack quantities and the traffic loading value, an overlay thickness and reconstruction repair quantity can be calculated for each segment. Calculated quantities of cold milling and reconstruction repairs are calculated separately and added to the total and averaged to provide a unit cost per square foot. Costs of striping and utility cover adjustment to grade are added into the equation based on average costs on overlay projects. All figures include 15% contingency on the construction cost and 25% for engineering on that total. This is the process used in producing the major maintenance inventory. The great value here is that using this inventory for budgetary planning in the short term of 3 years is reliable and accurate and produces the most cost effective program of expenditures.

As mentioned in the Strategy section above, the cost is generated based on construction needed to attain a 15-year lifespan for the pavement.

Minor Maintenance

Minor maintenance generally consists of a slurry program that applies a slurry seal treatment on a basic 8 year cycle on low traffic streets. Streets that need an overlay usually are not elected for slurry even if they are outside the 8 year cycle timeframe. This covers all the local streets in the City with slurry every 8 years, unless a street was overlaid in the interim or has a priority for overlay.

The need for minor surface maintenance is established by two factors:

1. The raveling off of fine aggregate particles from the surface due to weathering.
2. Aging in general, including weathering.

The minor maintenance treatment is usually a Type I or Type II slurry, though other techniques such as a rejuvenator or fog seal can be elected. All streets designated for minor maintenance in Rolling Hills Estates are slurry projects. It should be noted that concrete (PCC) pavements are not compatible with seal coats.

Crack filling is only recommended with slurry seal project if it is implemented using a polymer modified asphalt oil product like HPMS No-Track Tack. The use of this product effectively fills the cracks, cures immediately on cooling and will not interfere with future ARHM overlays. In addition, use of a Type II or recycled asphalt pavement slurry (RAP slurry) will also prevent the HPMS No-Track Tack crack filler from showing through the seal coat. The RAP slurry uses recycled asphalt pavement as its aggregate, instead of new rock. Therefore the asphalt oil is very uniformly applied through the depth of the slurry coat, causing the black appearance to last longer than conventional slurry. Since the price for Type II or RAP slurry is about the same, the PMS just uses one maintenance cost and projection for slurry seal. The City may choose which application it prefers on a project-by-project basis.

An interesting and possibly very important note on slurry seals is that asphalt rubber pavements do not need slurry treatments, because their surface does not ravel or deteriorate in any measurable way. A properly compacted asphalt rubber pavement is highly impregnable to water, with few fines existing in the surface to ravel. The tough resilient asphalt rubber binder tightly binds the few fines that do exist in the surface. The surface binder does have some potential for degradation from sun and rain, but the anti-ageing chemicals provided by the tires used in production of asphalt rubber strongly inhibit even this action. Considering that the cracking that ultimately limits the lifespan of ARHM pavements begins at the bottom of the layer, at the interface with the cracks in the old pavements underneath, the slight degradation of the surface binder properties is not very consequential. It is not that slurries cannot be applied to asphalt rubber; they can in the same manner as for AC pavements; however it will not reap the same benefits as it will for AC pavements. Therefore, minor maintenance funds should be targeted at AC streets over rubberized asphalt, which can be done at the project level of analysis for each maintenance cycle.

Generally, the minor maintenance program prioritizes the raveled streets first based on severity. Then AC streets with the largest time since the last slurry or overlay, but that time must be greater than the minimum elected slurry seal cycle time. The streets included

based on cyclical considerations are prioritized with the longest time since the last treatment yielding a higher priority. The cycle time has been selected to be eight years. Slurries generally do not wear off for at least twelve years, but tend to discolor and gather stains within a much shorter period – which is more aesthetic in nature.

Special Structural Analysis of Portland Cement Concrete Segments

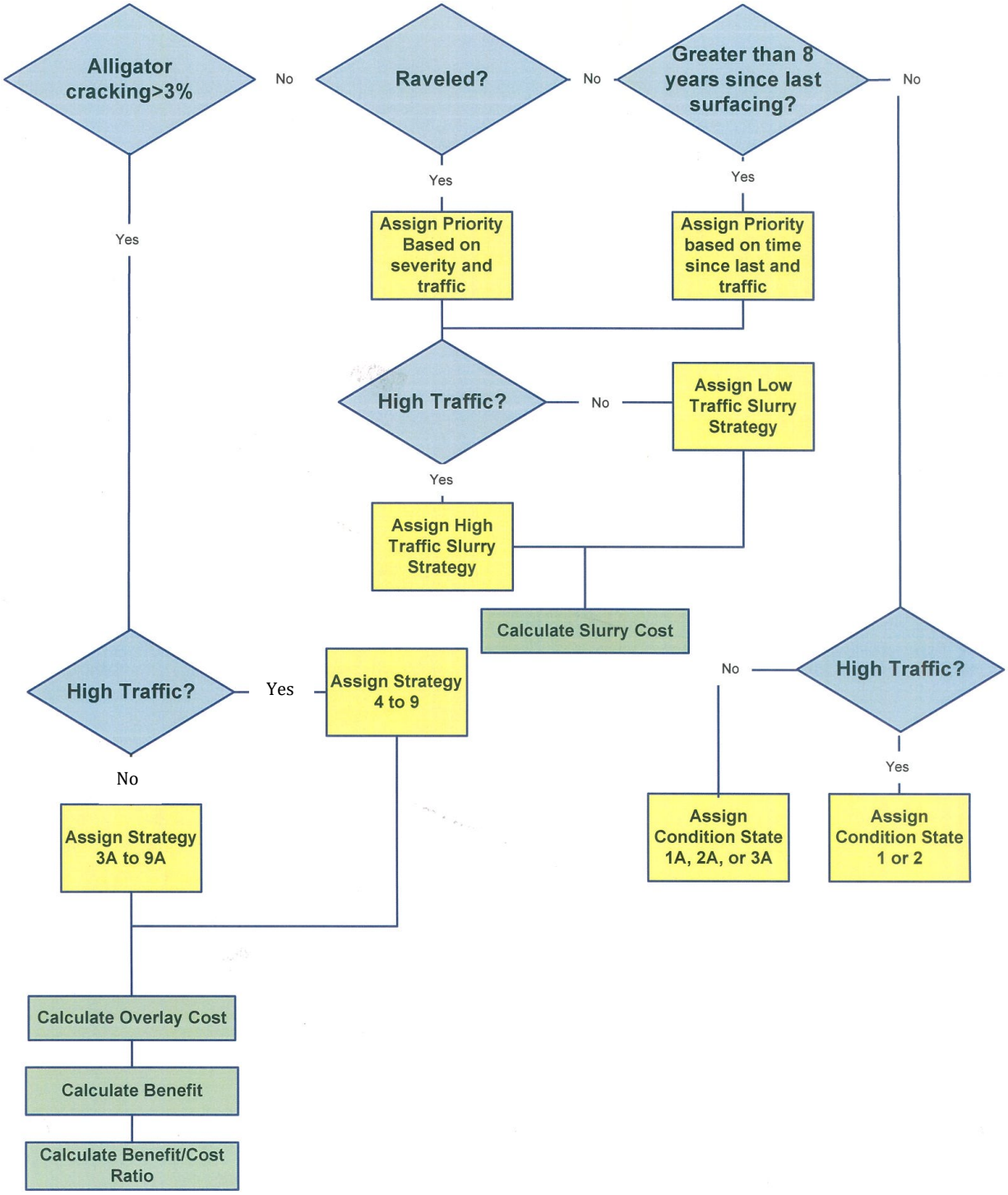
The strategies and priorities for major maintenance are directly applicable to asphalt streets. However, due to the very special nature of pavements constructed of Portland cement concrete (PCC), with or without an asphalt concrete (AC) overlay, special analyses of these cases must be performed prior to a specific recommendation. The City of Rolling Hills Estates PMS is founded on visual rating of field conditions. Problems are usually evident from visual observation and a priority is extended from the field ratings. The PCI's for PCC pavements are developed very similarly to those for AC pavements, except the conditions rated are different and naturally are processed with varying deduct evaluations.

The failure mechanisms for PCC are quite different than for AC. The joints in PCC are the primary failure mechanisms in PCC pavements. AC pavements essentially do not have joints. The positioning and sealing of joints in PCC are the critical factors affecting lifespan. If the joints are positioned properly and kept sealed, PCC pavements have very long lifespans. As a result of all this, deterioration rates are indeterminate, and therefore, the PCI should be viewed as only representative of a need for preventative maintenance. In most of the worst cases, slab repairs would be performed, though full reconstruction may be required in extreme cases. There is also the option to overlay the PCC after appropriate slab repairs, but this option is fairly costly. Overlaying PCC pavements requires interlayers plus an especially thick layer of asphalt rubber pavement to avoid the transmission of the PCC joints through the overlay. Done properly, the overlay can provide a beautiful and durable pavement with a long lifespan.

In the case of major maintenance for PCC, a cost-effective priority and its corresponding strategy do not stand as specific recommendations. An engineering evaluation should be performed whenever a PCC segment shows a PCI below 55. PCC streets with their long lifespans are high-value facilities that should be protected and locally rehabilitated rather than cyclically restructured as for AC. There are a number of possible rehabilitation strategies appropriate depending on the specialized problems in each case.

FIGURE 1

## LOGIC TREE FOR SEGMENTS



## TABLE 1

### Minor and Major Maintenance Condition States/Strategies

| MINOR MAINTENANCE CONDITION STATE | | PCI | Average Cost | STRATEGY |
|---|---|---|---|---|
| **No. 1** | No Cracking | 85-100 | $0.00/SF | No Maintenance |
| **No. 1A** | No Cracking - *Low Traffic Volume (TI<7.5)* | 80-100 | $0.00/SF | No Maintenance |
| **No. 2** | Minor Singular Cracking (Strategy 2-C: slurry recommended based on slurry cycle of 8 years) | 70-84 | $0.35/SF | Minor Maintenance |
| **No. 2A** | Minor Singular Cracking - (Strategy 2A-C: slurry recommended based on slurry cycle of 8 years) *Low Traffic Volume (TI<7.5)* | 70-79 | $0.35/SF | Minor Maintenance |
| **No. 3A** | Minimal Wheel Path Alligator Cracking Less Than 6% of Total Area – *Low Traffic Volume (TI<7.5)* | 60-69 | $0.35/SF | Repairs by City Forces; Possible Slurry Seal |

| MAJOR MAINTENANCE CONDITION STATE | | SI | Average Cost | STRATEGY |
|---|---|---|---|---|
| **No. 3** | Minimal Wheel Path Alligator Cracking Less Than Approximately 4% of Total Area | 93-96 | $2.05/SF | Minimum 1.75-inch ARHM Overlay |
| **No. 4** | Substantial Wheel Path Alligator Cracking Greater Than Approximately 4%, But Less Than Approximately 8% of Total Area | 87-92 | $2.25/SF | Minimum 1.75-inch ARHM Overlay with Base Failure Repairs, if any. |
| **No. 4A** | Substantial Wheel Path Alligator Cracking Greater Than 6%, But Less Than Approximately 12% of Total Area *Low Traffic Volume (TI<7.5)* | 75-88 | $2.05/SF | Minimum 1.5-inch ARHM Overlay with Base Failure Repairs, if any. (AC in Bulbs) |
| **No. 5** | Wheel Path Alligator Cracking Greater Than Approximately 8% of Total Area Wheel Path Base Failures Less Than 1% of Total Area | 75-86 | $2.27/SF | Minimum 1.75-inch ARHM Overlay with Minimal Base Failure Repairs |

| MAJOR MAINTENANCE CONDITION STATE | | SI | Average Cost | STRATEGY |
|---|---|---|---|---|
| **No. 5A** | Wheel Path Alligator Cracking Greater Than Approximately 12% of Total Area<br>Wheel Path Base Failures Less Than 1% of Total Area - *Low Traffic Volume (TI<7.5)* | 65-74 | $2.06/SF | Minimum 1.5-inch ARHM Overlay with Minimal Base Failure Repairs. (AC in Bulbs) |
| **No. 6** | Wheel Path Alligator Cracking Approximately 8 to 14% of Total Area<br>Wheel Path Base Failures Greater Than 1% of Total Area | 75-86 | $2.54/SF | Minimum 2-inch ARHM Overlay with Base Failure Repairs |
| **No. 6A** | Wheel Path Alligator Cracking Approximately 12 to 26% of Total Area<br>Wheel Path Base Failures Greater Than 1% of Total Area - *Low Traffic Volume (TI<7.5)* | 65-74 | $2.39/SF | Minimum 1.75-inch ARHM Overlay with Select Base Failure Repairs. (AC in Bulbs) |
| **No. 7** | Wheel Path Alligator Cracking Greater Than Approximately 26% of Total Area<br>Wheel Path Base Failures Less Than 1.5% of Total Area | 46-74 | $2.68/SF | Minimum 2-inch ARHM Overlay with Base Failure Repairs |
| **No. 7A** | Wheel Path Alligator Cracking Greater Than Approximately 36% of Total Area<br>Wheel Path Base Failures Less Than 3% of Total Area - *Low Traffic Volume (TI<7.5)* | 41-64 | $2.46/SF | Minimum 1.75-inch ARHM Overlay with Base Failure Repairs. (AC in Bulbs) |
| **No. 8** | Wheel Path Alligator Cracking Greater Than Approximately 26% of Total Area<br>Wheel Path Base Failures Greater Than 1.5% but Less than 10% of Total Area | 46-74 | $2.82/SF | Minimum 2.25-inch ARHM Overlay with Base Failure Repairs |
| **No. 8A** | Wheel Path Alligator Cracking Greater Than Approximately 36% of Total Area, or Wheel Path Base Failures Greater Than 3% but Less than 10% of Total Area - *Low Traffic Volume (TI<7.5)* | 41-64 | $2.53/SF | Minimum 2-inch ARHM Overlay with Base Failure Repairs.(AC in Bulbs) |

| MAJOR MAINTENANCE CONDITION STATE | | SI | Average Cost | STRATEGY |
|---|---|---|---|---|
| **No. 9** | Serious Overall Structural Failure: Wheel Path Base Failure Greater Than 10% of Total Area | 0-45 | $3.50-5.50/SF | Minimum 2-inch ARHM Overlay on ARAM with Select Base Failure Repairs |
| **No. 9A** | Serious Overall Structural Failure: Wheel Path Base Failure Greater Than 10% of Total Area – *Low Traffic Volume* | 0-40 | $3.50-4.50/SF | Minimum 1.75-inch ARHM Overlay on ARAM with Base Failure Repairs |
| **No. 10** | Preselected for This Strategy Regardless of Condition Due to Special Factors | N/A | $5.50-7.50/SF | Reconstruction |

## DATA UPDATE

The budget projections are considered to be relatively accurate for the first year and to a lesser extent the second and third years. Projects requiring minor or major maintenance will increase in cost-effectiveness as years go by. Updates of the PMS every 3 years will automatically shift priorities and bring all factors within good relative accuracy. Also, updated cost values must be programmed into the system on the update.

The updating of the system should include a review of the pavement condition data and incorporation of any revised data on the soil type, traffic conditions, and changes in structural section and surface treatment of each street segment.

# PART 2

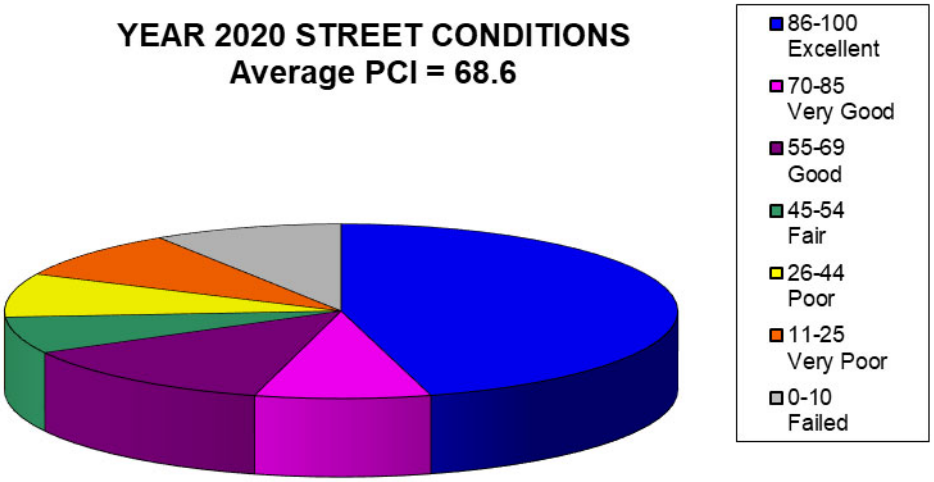
Intentionally left blank

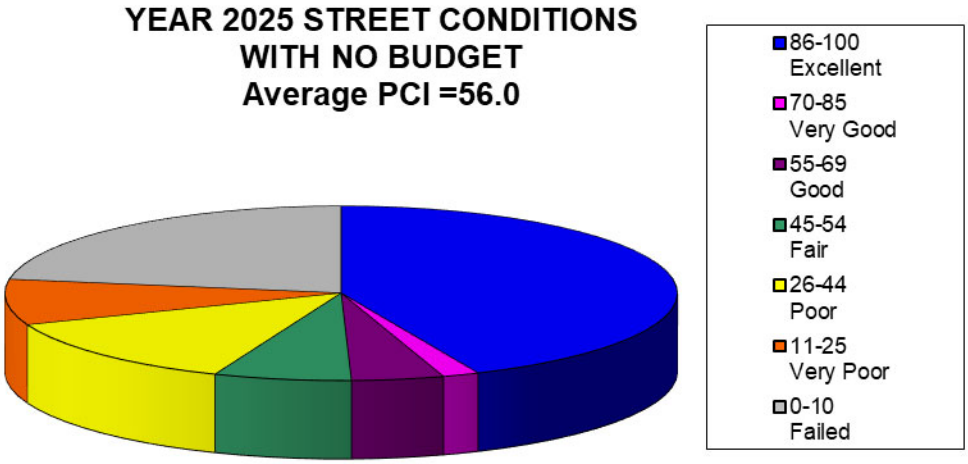
1. There are 28.4 miles of streets in the City of Rolling Hills Estates, which have been inventoried for the PMS, which comes to a total of 62.8 lane miles. The corresponding pavement area is 5,242,000 square feet of streets.

2. Based on the field survey ratings and analysis of the available data, the existing street pavement conditions on the majority of streets are characterized as being above Very Poor condition, as indicted on the first row of the table below. For comparison and to stress the importance of ongoing street maintenance work, the second row in the table is a projection of the street network condition after 5 years with no maintenance. The rows of the table are also depicted graphically in the pie charts below the table:

**PCI Ranges - Table 2**

| | 86-100 Excellent | 70-85 Very Good | 55-69 Good | 45-54 Fair | 26-44 Poor | 11-25 Very Poor | 0-10 Failed |
|---|---|---|---|---|---|---|---|
| **2020** | 45.7% | 8.4% | 12.9% | 6.8% | 8.1% | 8.9% | 9.1% |
| **2025** | 43.3% | 1.8% | 4.4% | 6.6% | 13.0% | 8.4% | 22.5% |



3. There are a large number of arterial streets which are in fair to poor condition that will need an overlay soon. There are 22.8% of arterial streets that are in need of an overlay.

4. The Major Maintenance Inventory includes 6.3 miles of local streets needing an overlay, which is 36.8% of all local streets, estimated at a cost of $2,530,000. These needs result from extensive cracking, which in nearly all cases is stable enough for a restructuring with a normal AC overlay after some localized reconstruction patching. However, a longer life span would result from implementing asphalt rubber asphalts on these streets. The asphalt rubber asphalt remains flexible for longer, extending the time prior to crack reflection.

5. Based on priorities established in the system, 52 street segments were selected for minor maintenance covering 8.5 centerline miles and at a total cost of $465,200. A few are based on raveling or minor repairs needed by City forces, however most segments are selected based on the eight-year slurry cycle. These are designated in the slurry strategy listing with a "-C" to indicate cyclical slurry recommendation. It is recommended that the City budget and implement a program for annual minor maintenance projects.

6. As discussed in more detail in the Future Projections section below, the recommended level of funding is $550,000 per year. This will bring about a continually decreasing level of unfunded major maintenance and an increasing average PCI, after an initial period of turning the tide on the backlog. Lowering the funding levels significantly will likely lead to increasing unfunded maintenance in later years.

   The future projections were optimized for targeting funds to the conditions of pavements that will provide the most cost effective approach to reducing the major maintenance backlog. The guidelines for the most cost effective approach, and the one used in projecting future performance at the stated funding levels in Future Projections section are as follows:

   - Twenty percent of the total funds for major maintenance in any given year should be applied to projects with a PCI between 0 and 10, beginning with PCI of 0 and working towards PCI of 10, until all projects of PCI 10 are complete or these funds run out.

   - Then 45% of funds plus any leftover from the 0 to 10 range should be applied to projects with a PCI between 20 and 45, beginning with PCI of 21 and working up towards PCI of 45, until funds are expended or all projects with PCI below 45 are complete.

   - The remaining 35% of funds in the year should be applied to PCI's beginning with 10 and working up from the lowest PCI above 10 first up to PCI 20 until all funds are expended.

   Projects with PCI's greater than 45 should only be funded when SI values are also very low. It will be many years before funds will be available for projects with PCI

greater than 45 and the SI is still high, and by then pavement management system updates will be performed to reevaluate these guidelines.

The balance of expenditures described in the above guidelines will yield the best results by bringing streets in very poor condition back to excellent condition, while at the same time cutting off the accelerating degradation that occurs below the critical PCI of 20.

# IMPLEMENTATION

Though the report is a powerful tool for planning and budgeting, there are always special considerations, such as aesthetics, which the PMS cannot usually incorporate fully into its prioritization method, and also utility line work which must be scheduled ahead of an overlay. The City is not bound to the recommendations of the PMS. Projects can be manually added to or deleted from the list of recommended projects during the preparation of the report or future updates, and in any year between. The system will incorporate the changes as part of the normal update process.

Updates should be performed triennially in Rolling Hills Estates as part of overall implementation procedures. To maintain the key goal of maximum cost effectiveness of funding, the data must be kept current. Changing pavement conditions have a major effect on costs and priorities and so need to be updated on a regular basis.

At time of preparing design plans for each street, the details of the strategies for maintenance are refined based on testing and more involved calculations with the more precise test data. Special factors also must be considered on some streets where these factors impact the roadway design. Drainage is the most common factor of this type. It can influence the design such that a street may need reconstruction instead of an overlay to change the drainage characteristics of the roadway.

The costs presented in the PMS reports include enough contingency to cover the occasional problem of this type. The costs presented also are set to encompass design, contract administration and inspection for each street. With these understandings, the prioritized major maintenance inventories can be used directly as a guide for implementing the capital improvement program for the City's network of roadways.

An annual budget of $550,000 is recommended for structural overlays. This will maintain the streets at a condition at least as good as at present, while decreasing the backlog of unfunded major maintenance needs over time. The actual outcome will reveal itself over time in later PMS updates, when appropriate minor adjustments can be made.

Two methods of implementation of major maintenance can be used. For arterial streets, of which there are many in need of overlay at present, they should be selected directly by benefit/cost ratio aside from any other special factors that may apply. For residential streets, the PCI and SI maps in the Maps Appendix reveals where streets in relative poor condition are concentrated, and can be used to form geographically localized projects.

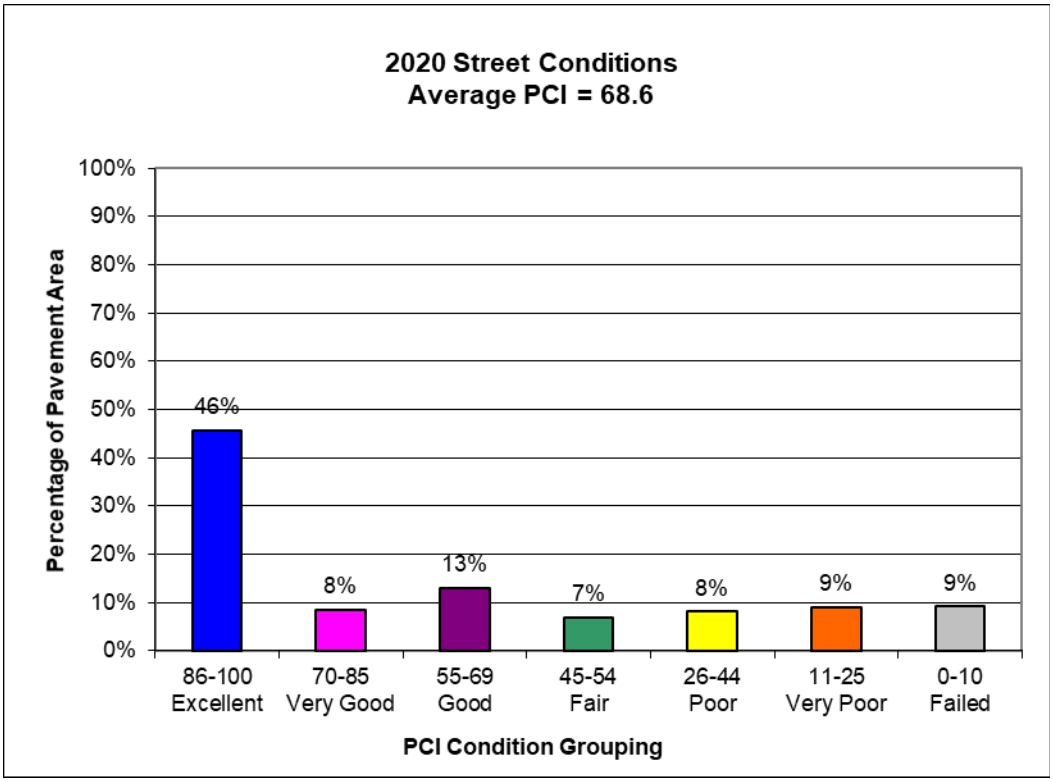
# FUTURE PROJECTIONS

To provide a meaningful perspective on pavement conditions, the program provides projections of future conditions and consequences of various budget levels towards improving the pavement network. Curves of deterioration over time were assigned to classes of streets defined by level of traffic. The curves were developed based on construction history information and the present conditions of all City streets. These curves were used to project future conditions.

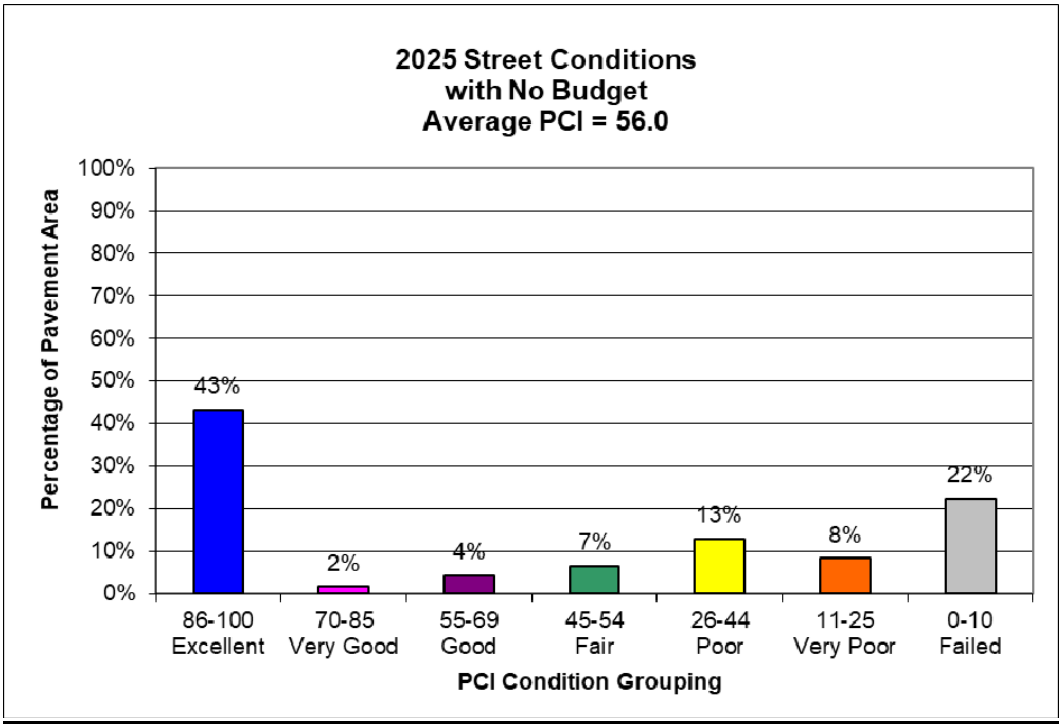
Graph 1 on the following page shows the present distribution of conditions normalized by area of pavement in each segment. (All average PCI values in this study are normalized in this way.) Graph 2 shows the projected condition of the network after 5 years, if no funding is provided. Willdan has carefully reviewed and refined the projection curves and finds these projections to be reasonable. The major change is the large amount of pavement in Poor to Very Poor condition sliding into a Failed condition. This shift is dramatic, because deterioration accelerates as pavements descend to poorer condition. More cracking leads to more susceptibility to cracking, and so cracks develop faster and in larger areas.

As shown, the overall Pavement Condition Index for the network drops from 67.8 down to 55.0 with no budget applied over the next 5 years, which is a very difficult level to recover from. A PCI of 70 is considered a good goal for an average PCI of street pavements, while an average PCI of 60 is fairly common in Southern California. The high levels of excellent condition streets indicate that very fine efforts have been underway to improve the street system in the past decade or more. This demonstrates that a very cost effective funding program, and sound design and construction management practices have been in place over the past 10 to 15 years. Most streets that are in poor condition or worse have not had a structural treatment for well over 15 years and in many cases much longer, and their last structural treatment would have been with conventional AC. Unfortunately, as the rapid decline of projected PCI indicates, most of the more severe deterioration is on arterial streets, where much more rapid progression of change happens due to high traffic levels.

There remains the difficulty that the older street surfaces in the system continually and gradually degrade overall. If this trend is allowed to continue unabated, it becomes increasingly more costly to turn the tide. Early implementation of maintenance is generally the more cost effective approach, since the cost of maintenance is much less at an earlier and better state of condition. Projections indicate that without continuing maintenance efforts aimed at restructuring existing pavements, fairly rapid deterioration can be anticipated on nearly half of the City's roadways.




**Graph 1 – Condition Distribution at Present**




**Graph 2 – Condition Distribution in 5 years – ($0 Budget)**

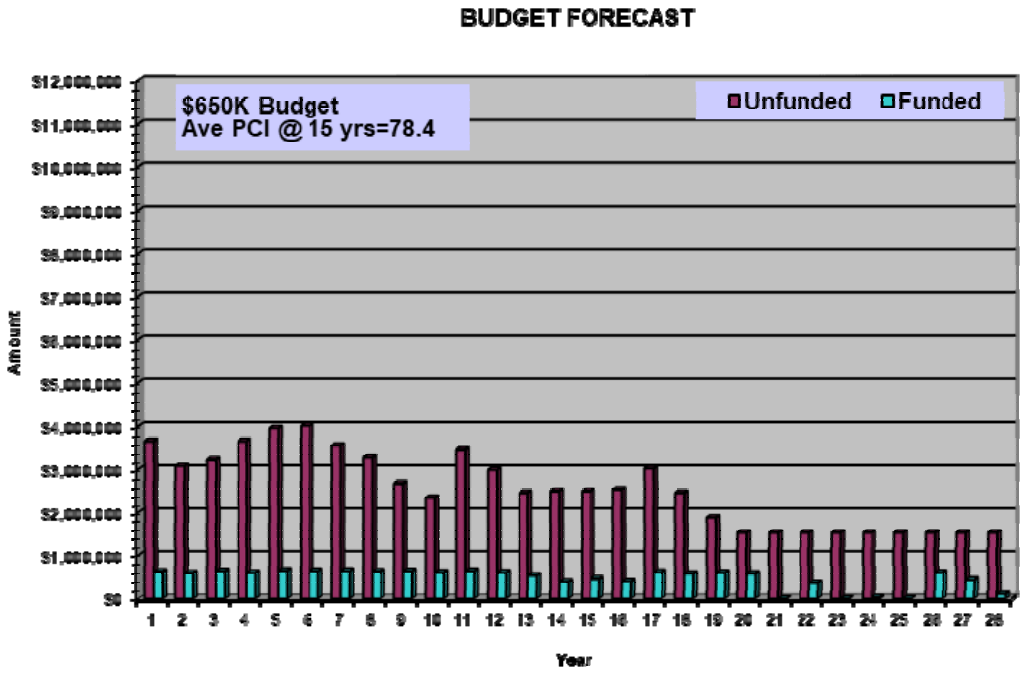
The forecasting used an inflation rate of 3% with a budget likewise increasing 3% per year. The best approach is to determine the optimum funding level and appropriate allocation of funding to apply to specific PCI ranges to provide a decreasing amount of unfunded maintenance over the long term. A budget of $650,000 can achieve this over a 20 year period, as Graph 3 indicates.

A forecast using $550,000 was used in Graph 4. This graph also shows a nice steady decline trend occurring in the initial 20 years, which is the desired outcome. The average PCI at year 15 has not suffered much either, dropping only to 73.6 (which is still an increase compared to current PCI) from the 78.4 that was projected using $650,000.

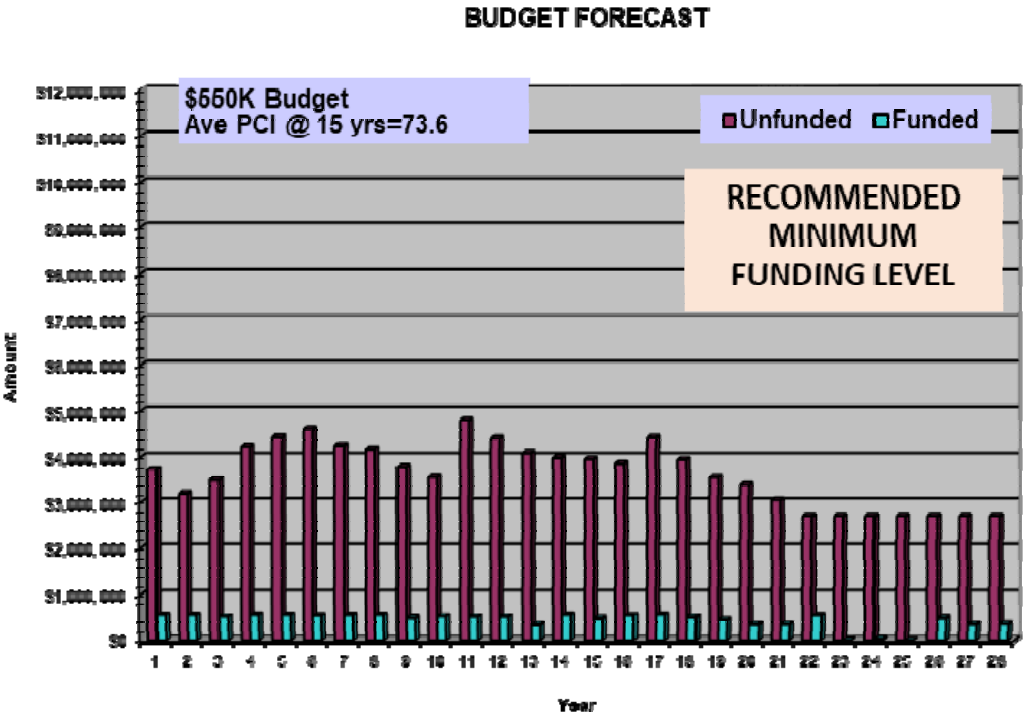
A forecast based on $450,000 per year as shown in Graph 5 is problematic in that the backlog of maintenance increases for many years, and is quite stubborn about beginning a good declining slope until so far into the future it is not relevant. Any unforeseen issues, such as years with a shortage of funds, could yield a large set back.

In summary, a **$550,000 budget** for structural overlay is recommended to provide a nice gradual catch-up on major maintenance over a 20 year period. This will also eliminate the possibility of future surprises such as increased costs or more rapid deterioration than anticipated, or a shortfall in available funding sometime in the future. This budget would allow for the City to comfortably deal with such situations.

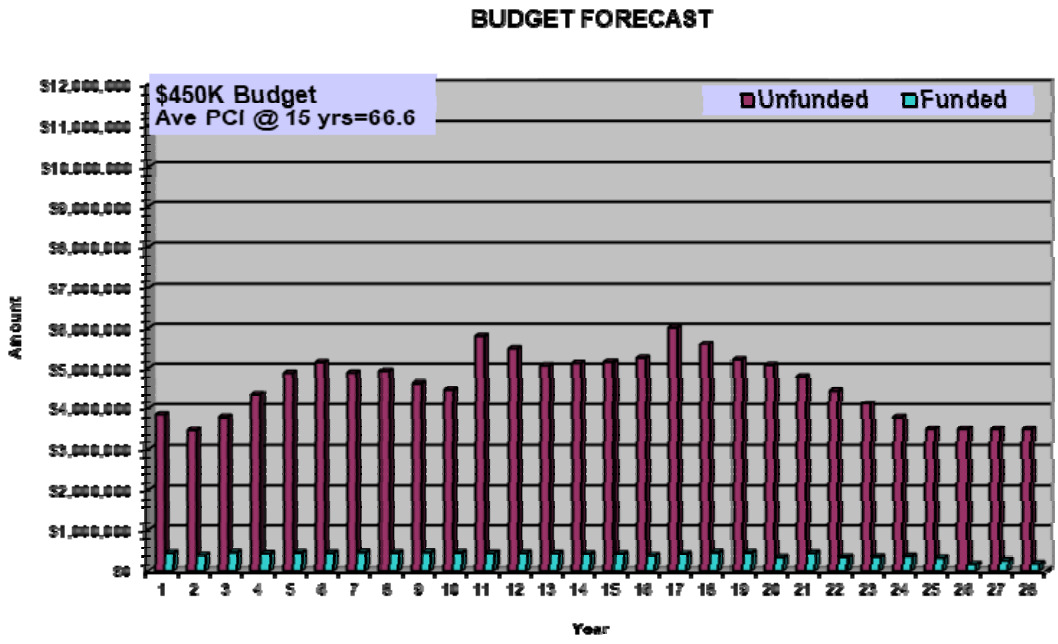
Arriving at this amount was a complex analysis incorporating a great number of factors and the large number of streets in the City. As the years pass the actual results will become apparent on future PMS updates and adjustment of budget levels may be necessary. In the meantime, the analysis naturally relies on good quality materials being installed on the overlay projects. The importance of some quality control testing cannot be understated. The new technologies available to extend pavement life spans make this even more important, because those technologies need to be properly applied to be effective.




**Graph 3**




**Graph 4**


BUDGET FORECAST
$450K Budget
Ave PCI @ 15 yrs=66.6
Unfunded
Funded
Amount
Year

**Graph 5**

# DATA RETRIEVAL

The Rolling Hills Estates PMS contains the following reports, which have been generated using the information in the database.

1. Construction History. This is a complete inventory of the City's street and alley segments history of construction, listed by Section number. It is necessary to find the segment number on the Overall List of Segments.

2. Overall List of Segments. This listing is in alphabetical order for all street and alley segments.

3. Maintenance Inventories. These are listings of all projects identified as needing maintenance. There are only lists for Major Maintenance in this report, because there were only 2 streets that qualified for a slurry seal based on system priorities. One set of these reports is listed in alphabetical order and others are provided listed in order by PCI, Priority Ranking and Benefit/Cost ratio.

4. Maps. There are a number of maps that are important to developing capital improvement programs for street maintenance. The Strategy map is the place to start. This map shows the overlay candidates based on their relative severity of structural deterioration. A local grouping of street segments with relatively high strategy number (higher number means more severe cracking) can be determined for establishing geographically based capital improvement projects. A PCI map is provided to give the overall condition rating of a street to give more background on the general condition of the streets. Also, a Section ID map has been provided which can be used along with the Overall List of Segments to geographically locate a street on the map by its Section ID.

The following information is provided to assist the user in reading and analyzing the printed reports.

## Construction History

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Branch:** | 1005 | **(BLUEMOUND)** | **Section:** | 1005 | **Surface:** | AC | | | |
| **L.C.D.:** | 05/01/2002 | **Use:** | ROADWAY | 0 W/WILLOWWOOD to | 0 E/DUNWOOD | | | | | | |
| | | **Traff Type:** | C | **Length:** | 1,670.00 | Ft | **Width:** | 26 Ft | **Area:** | 43,420 | SF |

| **Work** | **Work** | **Work** | **Thickness** | **Major M&R** |
|---|---|---|---|---|
| 05/01/2002 | Maintenanc | Overlay | 2.00 | True |
| 08/01/1991 | Maintenanc | Slurry | | |

The first line shows the Branch number, the name of the segment and the Section number. Branch is a designation for a series of connected sections. Sections are unique numbers, one for each segment. A Section is a single segment of roadway as listed as line items in all of the other reports.

Surface is the type of top surface pavement, AC, or asphalt concrete is the category for this segment as opposed to PCC, which would be a concrete surface street.

L.C.D. is the last construction date for major maintenance.

Use is always Roadway, as opposed to airport for example.

To the right of Use is the limits of the street, showing an offset North (N), South (S), East (E) or West (W) of a cross street named as part of the limit or an end of the street.

Traffic Type conforms to the following codes:

| CODE | TYPE | |
|---|---|---|
| C | LOCAL | Used by traffic from just a few surrounding streets. |
| D | LOCAL COLLECTOR | Serving as collector for a group of streets. |
| E | AREA COLLECTOR | Serving as collector or a large area. |
| F | MAJOR COLLECTOR | Serving as a collector from area collectors to arterials. |
| G | ARTERIAL | Small highways or major thoroughfares. |
| H | MAJOR ARTERIAL | Highways (freeways are beyond this class and the scope of this report). |

Length, Width and Area of the full section are shown next.

A table of work history follows with columns for:

- Date of construction;
- Whether it is the Original or a Maintenance type of Construction;
- Thickness of the structural element constructed; and
- Whether it is major maintenance and rehabilitation (M &R) or minor maintenance such as a slurry.

The example segment shows the most recent construction was an asphalt rubber hot mix overlay constructed 2.00 inches thick in 2004, with a slurry in 1991.

**OVERALL LIST OF STREETS**

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | Overlay | Bnft/$ | Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1047 | HIGHRIDGE | 0 N/CREST | 0 S/WHITLEY COL | 2250 | 51 | 2 | 7.2 | 38 | 1.75 | 0.182 | 221,505 | 6 |

Sec ID — This is the unique record number stored in the database for this segment, and is sometimes useful for reference during communications. This example will use segment number 1047 (shown above) as the example.

Name — This is the name of the street or alley.

From — This is one limit of the street contained with the segment.

To — This defines the limit of the segment at the opposite end.

Length — This is the total length of the roadway segment. The example segment has a length of 2250 feet.

Width — Width is the total width of pavement surface in the roadway. The example segment has a width of 51 feet.

TI — This is the Traffic Index for a 10-year period for the segment (ranges from 4.5 for cul-de-sacs to 10 or more for major arterial routes). This segment is a residential street with a TI of “7.2”.

PCI — This is the Pavement Condition Index for the segment (ranges from 0 to 100, 100 being excellent condition). This segment is a 38, or in a Poor category.

Overlay — This is the overlay thickness, and in this case an overlay of 1.75 inches of ARHM is indicated based on the table of Strategies, Table 1.

Ben/$ — This is the benefit cost ratio for the project, and can be viewed as the annual return on the investment in funds to provide a comparison of priority for the project relative to other projects. This segment has a very high benefit/cost of “0.182”.

Cost — Cost is the same value as described in the Major and Slurry Inventory reports, that is, the cost of the next recommended improvement, $221,505.

Strategy — This is the strategy of major maintenance, Strategy 6, as defined in Table 1 – Minor and Major Maintenance Condition States/Strategies. In this case, it corresponds to wheel path alligator cracking approximately 6 to 14% of total area; which the strategy is to overlay failure repairs by minimum of 2-inch ARHM.

**MAJOR MAINTENANCE INVENTORY - Priority Listing**

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | Overlay | Ben/$ | Cost | Cum Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1134 | SWEETGRASS | 0 W/DEERHILL | 0 E/END | 610 | 26 | 2 | 4.8 | 17 | 2.25 | 0.059 | 39,548 | 4,708,558 | 8A |

The above format is the same for the Major Maintenance Inventory listed in both alphabetical order and order of priority, except the last column is not shown on the alphabetic listing.

Sec ID, Name, From, To — The information contained in these columns is the same as that for the Overall List of Segments.

Length and Width — The length and width are the same as for the Overall List of Street Segments. The length is 610 feet and the width is 26 feet.

TI — This is the Traffic Index for a 10-year period for the segment (ranges from 4.5 for cul-de-sacs to 10 or more for major arterial routes). This segment is a residential street with a TI of "4.8".

PCI — This is the Pavement Condition Index for the segment (the same as described in the Overall List of Street Segments) and is the general guide for overlay project priority. The PCI ranges from 0 to 100 for overlay projects. The PCI for the sample segment is 17.

Overlay — This is the overlay thickness, and in this case an overlay of 2.25 inches of AC indicated based on the table of Strategies, Table 1.

Ben/$ — This is the benefit cost ratio for the project, and can be viewed as the annual return on the investment in funds to provide a comparison of priority for the project relative to other projects. This segment has a benefit/cost of "0.059".

Cost — This is the cost of construct ($39,548 for the sample segment).

Cum Cost — This provides the running total, or cumulative cost as the list is descended. This is provided on the priority listing of major maintenance to give a perspective on the cost to reduce the backlog of maintenance to a particular priority value. The cumulative total of overlay projects from the highest priority down to the priority of the sample segment is $4,708,558.

Strategy — The last column is the strategy of major or minor maintenance as defined in Table 1 – Major Maintenance: Condition States/Strategies or Table 2 - Minor Maintenance. In this case, refer to condition state from Table 1; Strategy

8A is wheel path alligator cracking greater than approximately 18% of Total Area and or wheel path base failures greater than 3% but less than 10% of Total Area. The strategy based on Table 1 would be a minimum of 2.25-inch AC Overlay with base failure repairs.

# APPENDIX A

# CONSTRUCTION HISTORY

# Construction History

| Branch: | (AURORA) | | Section ID: | 1001 | Surface: | AC | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/DORADO to | To: | 0 S/END | | | | | |
| | | Length: | 390.00 | Ft | Width: | 22 Ft | Area: | 8,580 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1983 | SRSL | Slurry Seal | |

| Branch: | (AURORA) | | Section ID: | 1002 | Surface: | AC | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/DORADO to | To: | 0 E/MONTECILLO | | | | | |
| | | Length: | 1,380.00 | Ft | Width: | 33 Ft | Area: | 45,540 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1983 | SRSL | Slurry Seal | |

| Branch: | (BAYMARE) | | Section ID: | 1003 | Surface: | AC | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/END to | To: | 0 S/CLUBVIEW | | | | | |
| | | Length: | 460.00 | Ft | Width: | 31 Ft | Area: | 14,260 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2016 | CM-OL1.5 | 1.5 in Cold Mill & Overlay | |
| 03/01/1983 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (BEECHGATE) | | Section ID: | 1004 | Surface: | AC | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/BART EARLE to | To: | 0 S/N CITY LIM | | | | | |
| | | Length: | 210.00 | Ft | Width: | 36 Ft | Area: | 7,560 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/1998 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1983 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (BLUEMOUND) | | Section ID: | 1005 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/WILLOWWOOD to | To: | 0 E/DUNWOOD | | | | | |
| | | Length: | 1,670.00 | Ft | Width: | 26 Ft | Area: | 43,420 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2018 | OL-AC | Overlay-AC | 2.00 |
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1991 | SRSL | Slurry Seal | |

| Branch: | (BRANDING IRON) | | Section ID: | 1006 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 0 S/END | | | | | |
| | | Length: | 570.00 | Ft | Width: | 26 Ft | Area: | 14,820 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/1994 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (BROKEN BOW) | | Section ID: | 1007 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/SLVR EAGLE to | To: | 0 E/END | | | | | |
| | | Length: | 560.00 | Ft | Width: | 25 Ft | Area: | 14,000 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1991 | SRSL | Slurry Seal | |

| Branch: | (BUCKSKIN) | | Section ID: | 1008 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/DAPPLEGRAY to | To: | 0 S/END | | | | | |
| | | Length: | 2,260.00 | Ft | Width: | 31 Ft | Area: | 70,060 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 11/01/2003 | OL-AC | Overlay-AC | |
| 05/01/1994 | SRSL | Slurry Seal | |
| 03/01/1983 | SRSL | Slurry Seal | |

# Construction History

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | **Branch:** | **(CARRIAGE)** | | **Section ID:** | 1009 | **Surface:** | AC | | |
| | | **From:** | 0 W/SADDLE to | **To:** | 0 E/END | | | | | |
| | | | | **Length:** | 1,140.00 | Ft | **Width:** | 30 Ft | **Area:** | 34,200 SF |
| **Work Date** | **Work Code** | **Work Description** | **Thickness ( in)** | | | | | | | |
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 | | | | | | | |
| 05/01/1994 | SRSL | Slurry Seal | | | | | | | | |
| 03/01/1980 | SRSL | Slurry Seal | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | **Branch:** | **(CELESTE)** | | **Section ID:** | 1010 | **Surface:** | AC | | |
| | | **From:** | 0 W/MONTECILLO to | **To:** | 0 E/END | | | | | |
| | | | | **Length:** | 510.00 | Ft | **Width:** | 22 Ft | **Area:** | 11,220 SF |
| **Work Date** | **Work Code** | **Work Description** | **Thickness ( in)** | | | | | | | |
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 | | | | | | | |
| 03/01/1983 | SRSL | Slurry Seal | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | **Branch:** | **(CERRITO)** | | **Section ID:** | 1011 | **Surface:** | AC | | |
| | | **From:** | 0 W/END to | **To:** | 0 E/ENCANTO | | | | | |
| | | | | **Length:** | 310.00 | Ft | **Width:** | 22 Ft | **Area:** | 6,820 SF |
| **Work Date** | **Work Code** | **Work Description** | **Thickness ( in)** | | | | | | | |
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 | | | | | | | |
| 03/01/1983 | SRSL | Slurry Seal | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | **Branch:** | **(CHALMETTE)** | | **Section ID:** | 1012 | **Surface:** | AC | | |
| | | **From:** | 0 N/END to | **To:** | 0 S/SUGAR HILL | | | | | |
| | | | | **Length:** | 210.00 | Ft | **Width:** | 31 Ft | **Area:** | 6,510 SF |
| **Work Date** | **Work Code** | **Work Description** | **Thickness ( in)** | | | | | | | |
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 | | | | | | | |
| 06/01/1986 | SRSL | Slurry Seal | | | | | | | | |

# Construction History

| Branch: | (CLUBVIEW) | | Section ID: | 1013 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/P.V.DR E to | To: | 0 E/END | | | | | |
| | | Length: | 2,410.00 | Ft | Width: | 37 Ft | Area: | 89,170 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2016 | CM-OL-2 | 2 in Cold Mill & Overlay | |
| 03/01/1983 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (CONESTOGA) | | Section ID: | 1014 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/SADDLE to | To: | 0 S/P.V.DR E | | | | | |
| | | Length: | 1,520.00 | Ft | Width: | 32 Ft | Area: | 48,640 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.20 |
| 05/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (CRENSHAW) | | Section ID: | 1015 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V.DR N to | To: | 0 S/N CITY LIM | | | | | |
| | | Length: | 670.00 | Ft | Width: | 66 Ft | Area: | 44,220 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2015 | CM-OL-2 | 2 in Cold Mill & Overlay | |
| 01/01/1950 | Original | Construction | |

| Branch: | (CRENSHAW AC) | | Section ID: | 1017 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 260 W/SILVER SPUR to | To: | 240 E/SILVER SPUR | | | | | |
| | | Length: | 500.00 | Ft | Width: | 64 Ft | Area: | 32,000 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2015 | CM-OL-2 | 2 in Cold Mill & Overlay | |
| 01/01/1950 | Original | Construction | |

# Construction History

| Branch: | (CRENSHAW PC) | | Section ID: | 1018 | Surface: PCC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 260 W/SILVER SPUR to | To: | 240 E/SILVER SPUR | | | | | |
| | | Length: | 500.00 | Ft | Width: | 80 Ft | Area: | 40,000 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2015 | PA-PF | Patching - PCC Full Depth | |
| 06/01/1950 | Original | Construction | 7.00 |

| Branch: | (NORRIS CENTER) | | Section ID: | 1019 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/SILVER SPUR to | To: | 0 S/INDIAN PEAK | | | | | |
| | | Length: | 770.00 | Ft | Width: | 57 Ft | Area: | 43,890 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 10/01/2017 | OL-AC | Overlay-AC | 2.00 |
| 01/01/1950 | Original | Construction | |

| Branch: | (DAPPLEGRAY) | | Section ID: | 1020 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V.DR N to | To: | 0 S/END | | | | | |
| | | Length: | 2,970.00 | Ft | Width: | 30 Ft | Area: | 89,100 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 11/01/2003 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1993 | SRSL | Slurry Seal | |
| 03/01/1983 | SRSL | Slurry Seal | |

| Branch: | (DOBBIN) | | Section ID: | 1021 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V.DR N to | To: | 0 S/END | | | | | |
| | | Length: | 510.00 | Ft | Width: | 23 Ft | Area: | 11,730 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1991 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

# Construction History

| Branch: | (DEEP VALLEY) | | Section ID: | 1023 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/SILVER SPUR to | To: | 0 E/DRYBANK | | | | | |
| | | Length: | 2,450.00 | Ft | Width: | 36 Ft | Area: | 88,200 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 09/01/1993 | OL-AC | Overlay-AC | 2.50 |

| Branch: | (DEERHILL) | | Section ID: | 1024 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/HARBOR SIGT to | To: | 0 E/END | | | | | |
| | | Length: | 1,460.00 | Ft | Width: | 31 Ft | Area: | 45,260 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 10/01/2017 | CM-OL-2 | 2 in Cold Mill & Overlay | |
| 09/01/1993 | OL-AC | Overlay-AC | 1.50 |

| Branch: | (DORADO) | | Section ID: | 1025 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/END to | To: | 0 E/AURORA | | | | | |
| | | Length: | 760.00 | Ft | Width: | 22 Ft | Area: | 16,720 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |

| Branch: | (DRYBANK) | | Section ID: | 1026 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/DEEP VALLEY to | To: | 0 S/SILVER SPUR | | | | | |
| | | Length: | 370.00 | Ft | Width: | 40 Ft | Area: | 14,800 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/1998 | OL-AC | Overlay-AC | 2.50 |
| 03/01/1983 | SRSL | Slurry Seal | |

| Branch: | (BART EARLE) | | Section ID: | 1027 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/SILVER SPUR to | To: | 420' N/O SLVR SPUR | | | | | |
| | | Length: | 420.00 | Ft | Width: | 36 Ft | Area: | 15,120 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/1998 | OL-AC | Overlay-AC | 2.50 |
| 03/01/1983 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (DUNWOOD) | | Section ID: | 1028 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/WILLOWWOOD to | To: | 0 S/KINGSPINE | | | | | |
| | | Length: | 1,950.00 | Ft | Width: | 26 Ft | Area: | 50,700 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1991 | SRSL | Slurry Seal | |

| Branch: | (ELMDALE) | | Section ID: | 1029 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/SLVR EAGLE to | To: | 0 E/KINGSPINE | | | | | |
| | | Length: | 1,420.00 | Ft | Width: | 26 Ft | Area: | 36,920 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2018 | OL-AC | Overlay-AC | 2.00 |
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1991 | SRSL | Slurry Seal | |

| Branch: | (ENCANTO) | | Section ID: | 1030 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/DORADO to | To: | 0 S/END | | | | | |
| | | Length: | 310.00 | Ft | Width: | 22 Ft | Area: | 6,820 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1983 | SRSL | Slurry Seal | |

| Branch: | (ENCANTO) | | Section ID: | 1031 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/MONTECILLO to | To: | 0 S/DORADO | | | | | |
| | | Length: | 2,270.00 | Ft | Width: | 32 Ft | Area: | 72,640 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 03/01/1983 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

# Construction History

| Branch: | (ESTRIBO) | | Section ID: | 1032 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/CONESTOGA to | To: | 0 E/SADDLE | | | | | |
| | | Length: | 770.00 | Ft | Width: | 26 Ft | Area: | 20,020 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (FERNCREEK) | | Section ID: | 1033 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 E/END to | To: | 0 W/MASONGATE | | | | | |
| | | Length: | 510.00 | Ft | Width: | 33 Ft | Area: | 16,830 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (FERNCREEK) | | Section ID: | 1034 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/END to | To: | 0 E/MASONGATE | | | | | |
| | | Length: | 610.00 | Ft | Width: | 23 Ft | Area: | 14,030 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 06/01/1986 | SRSL | Slurry Seal | |

| Branch: | (FOXPOINT) | | Section ID: | 1035 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/END to | To: | 0 S/ROCKBLUFF | | | | | |
| | | Length: | 610.00 | Ft | Width: | 25 Ft | Area: | 15,250 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1991 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (GAUCHO) | | Section ID: | 1036 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/SADDLE to | To: | 0 E/CONESTOGA | | | | | |
| | | Length: | 970.00 | Ft | Width: | 33 Ft | Area: | 32,010 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (GOLDENSPAR) | | Section ID: | 1037 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/END to | To: | 0 S/RANCHVIEW | | | | | |
| | | Length: | 290.00 | Ft | Width: | 26 Ft | Area: | 7,540 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2005 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |

| Branch: | (GOLDENSPAR) | | Section ID: | 1038 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/RANCHVIEW to | To: | 0 S/SLVR SDL | | | | | |
| | | Length: | 400.00 | Ft | Width: | 26 Ft | Area: | 10,400 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2005 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (GOLDRING) | | Section ID: | 1039 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/SLVR LEAF to | To: | 0 S/END | | | | | |
| | | Length: | 160.00 | Ft | Width: | 28 Ft | Area: | 4,480 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2000 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |
| 08/01/1991 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (HAMPSHIRE) | | Section ID: | 1040 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/SUGAR HILL to | To: | 0 S/END | | | | | |
| | | Length: | 110.00 | Ft | Width: | 33 Ft | Area: | 3,630 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 06/01/1986 | SRSL | Slurry Seal | |

| Branch: | (HARBOR SIGHT) | | Section ID: | 1041 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/P.V.DR E to | To: | 0 E/END | | | | | |
| | | Length: | 1,720.00 | Ft | Width: | 30 Ft | Area: | 51,600 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 10/01/2017 | | 1.5" Mill - Fog Seal - 1" LC - 1.8" ARHM | |
| 09/01/1993 | OL-AC | Overlay-AC | 1.50 |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (HAWTHORNE) | | Section ID: | 1042 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 0 S/N CITY LIM | | | | | |
| | | Length: | 3,260.00 | Ft | Width: | 63 Ft | Area: | 205,380 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 10/01/2017 | | 3.5" Mill - 1.5" LC - 2" ARHM | |
| 08/01/2012 | CM-OL-2 | 2 in Cold Mill & Overlay | 2.25 |
| 06/01/2000 | OL-AC | Overlay-AC | 2.50 |
| 03/01/1990 | OL-AC | Overlay-AC | 2.00 |

| Branch: | (HAWTHORNE) | | Section ID: | 1043 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/S CITY LIM to | To: | 0 S/P.V. DR N | | | | | |
| | | Length: | 2,260.00 | Ft | Width: | 61 Ft | Area: | 137,860 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2018 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1999 | OL-AC | Overlay-AC | 2.50 |

# Construction History

| Branch: | (HAWTHORNE) | | Section ID: | 1044 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/SILVER SPUR to | To: | 0 E/W CITY LIM | | | | | |
| | | Length: | 1,160.00 | Ft | Width: | 72 Ft | Area: | 83,520 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/2012 | CM-OL-2.25 | 2.25 in Cold Mill & Overlay | 2.50 |
| 07/01/1996 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (HIDDEN VALLEY) | | Section ID: | 1045 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 0 S/END | | | | | |
| | | Length: | 1,760.00 | Ft | Width: | 29 Ft | Area: | 51,040 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2006 | OL-AC | Overlay-AC | 2.00 |

| Branch: | (HIGHRIDGE ES) | | Section ID: | 1046 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/ARMAGA SPGS to | To: | 0 S/N CITY LIM | | | | | |
| | | Length: | 990.00 | Ft | Width: | 24 Ft | Area: | 23,760 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2020 | OL-AC | Overlay-AC | 2.00 |
| 07/01/1996 | OL-AC | Overlay-AC | 3.00 |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (HIGHRIDGE) | | Section ID: | 1047 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/CREST to | To: | 0 S/WHITLEY COL | | | | | |
| | | Length: | 2,250.00 | Ft | Width: | 51 Ft | Area: | 114,750 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 07/01/1996 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1980 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (HIGHRIDGE WS) | | Section ID: | 1048 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/WHITLEY COL to | To: | 0 S/ARMAGA SPGS | | | | | |
| | | Length: | 2,380.00 | Ft | Width: | 23 Ft | Area: | 54,740 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 07/01/1996 | OL-AC | Overlay-AC | 2.00 |
| 06/01/1986 | SRSL | Slurry Seal | |

| Branch: | (HIGHRIDGE ES) | | Section ID: | 1049 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/WHITLEY COL to | To: | 0 S/ARMAGA SPGS | | | | | |
| | | Length: | 2,380.00 | Ft | Width: | 28 Ft | Area: | 66,640 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 07/01/1996 | OL-AC | Overlay-AC | 2.50 |
| 06/01/1986 | SRSL | Slurry Seal | |

| Branch: | (HIGHRIDGE WS) | | Section ID: | 1050 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/ARMAGA SPGS to | To: | 0 S/N CITY LIM | | | | | |
| | | Length: | 990.00 | Ft | Width: | 24 Ft | Area: | 23,760 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2020 | OL-AC | Overlay-AC | 2.00 |
| 07/01/1996 | OL-AC | Overlay-AC | 2.50 |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (HITCHING POST) | | Section ID: | 1051 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 0 S/P.V. DR N | | | | | |
| | | Length: | 2,170.00 | Ft | Width: | 30 Ft | Area: | 65,100 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2016 | CM-OL-1.75 | 1.75 in Cold Mill & Overlay | |
| 03/01/1983 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

# Construction History

| Branch: | (INDIAN PEAK) | | Section ID: | 1052 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 S/NORRIS CENTER to | To: | 0 S/HAWTHORNE | | | | | |
| | | Length: | 2,180.00 | Ft | Width: | 56 Ft | Area: | 122,080 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 10/01/2017 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1993 | SRSL | Slurry Seal | |
| 03/01/1983 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (INDIAN PEAK) | | Section ID: | 1053 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/S CITY LIM to | To: | 0 S/NORRIS CENTER | | | | | |
| | | Length: | 220.00 | Ft | Width: | 48 Ft | Area: | 10,560 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 10/01/2017 | OL-AC | Overlay-AC | 2.00 |
| 10/01/1995 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1993 | SRSL | Slurry Seal | |

| Branch: | (KINGSPINE) | | Section ID: | 1055 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/SLVR EAGLE to | To: | 0 E/SILVER SPUR | | | | | |
| | | Length: | 1,920.00 | Ft | Width: | 33 Ft | Area: | 63,360 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2018 | OL-AC | Overlay-AC | 2.00 |
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1991 | SRSL | Slurry Seal | |

| Branch: | (LANTANA) | | Section ID: | 1056 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/AURORA to | To: | 0 S/END | | | | | |
| | | Length: | 360.00 | Ft | Width: | 22 Ft | Area: | 7,920 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1983 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (LATIGO) | | Section ID: | 1057 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 0 S/END | | | | | |
| | | Length: | 710.00 | Ft | Width: | 31 Ft | Area: | 22,010 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2018 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1991 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (MOCCASIN) | | Section ID: | 1058 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 0 S/END | | | | | |
| | | Length: | 1,460.00 | Ft | Width: | 32 Ft | Area: | 46,720 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/1994 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (MARINA) | | Section ID: | 1059 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/END to | To: | 0 S/SILVER SPUR | | | | | |
| | | Length: | 1,060.00 | Ft | Width: | 26 Ft | Area: | 27,560 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2015 | CM-OL1.5 | 1.5 in Cold Mill & Overlay | |
| 01/01/1950 | Original | Construction | |

| Branch: | (MARLOMA) | | Section ID: | 1060 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/END to | To: | 0 E/MARINA | | | | | |
| | | Length: | 1,260.00 | Ft | Width: | 26 Ft | Area: | 32,760 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2015 | CM-OL1.5 | 1.5 in Cold Mill & Overlay | |
| 01/01/1950 | Original | Construction | |

# Construction History

| Branch: | (MASONGATE) | | Section ID: | 1061 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/FERNCREEK to | To: | 0 S/SUGAR HILL | | | | | |
| | | Length: | 210.00 | Ft | Width: | 35 Ft | Area: | 7,350 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 03/01/1980 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (MASONGATE) | | Section ID: | 1062 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 0 S/FERNCREEK | | | | | |
| | | Length: | 920.00 | Ft | Width: | 36 Ft | Area: | 33,120 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (MONTECILLO) | | Section ID: | 1063 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/AURORA to | To: | 0 S/END | | | | | |
| | | Length: | 640.00 | Ft | Width: | 22 Ft | Area: | 14,080 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 03/01/1983 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (MONTECILLO) | | Section ID: | 1064 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/ENCANTO to | To: | 0 S/AURORA | | | | | |
| | | Length: | 380.00 | Ft | Width: | 33 Ft | Area: | 12,540 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/1998 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (MONTECILLO) | | Section ID: | 1065 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR E to | To: | 0 S/VISTA REAL | | | | | |
| | | Length: | 650.00 | Ft | Width: | 50 Ft | Area: | 32,500 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1980 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (PALOMINO) | | Section ID: | 1066 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/ROLLING HLS to | To: | 0 E/PONY LANE | | | | | |
| | | Length: | 670.00 | Ft | Width: | 27 Ft | Area: | 18,090 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1993 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (PALOS VDS E) | | Section ID: | 1067 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 1000 N/CLUBVIEW to | To: | 400 N/P.V. DR N | | | | | |
| | | Length: | 2,800.00 | Ft | Width: | 37 Ft | Area: | 103,600 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 10/01/2017 | CM-OL-1.75 | 1.75 in Cold Mill & Overlay | |
| 05/01/2002 | OL-AC | Overlay-AC | 2.20 |

| Branch: | (PALOS VDS E) | | Section ID: | 1068 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 1000 N/CLUBVIEW to | To: | 0 S/N CITY LIM | | | | | |
| | | Length: | 1,860.00 | Ft | Width: | 37 Ft | Area: | 68,820 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 10/01/2017 | CM-OL-2 | 2 in Cold Mill & Overlay | |
| 11/01/1991 | OL-AC | Overlay-AC | 2.00 |

| Branch: | (PALOS VDS E) | | Section ID: | 1069 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/CONESTOGA to | To: | 550 S/P.V. DR N | | | | | |
| | | Length: | 1,800.00 | Ft | Width: | 37 Ft | Area: | 66,600 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.20 |

| Branch: | (PALOS VDS E) | | Section ID: | 1070 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 400 N/P.V. DR N | | | | | |
| | | Length: | 400.00 | Ft | Width: | 86 Ft | Area: | 34,400 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 11/01/1991 | OL-AC | Overlay-AC | 2.00 |

# Construction History

| Branch: | (PALOS VDS E) | | Section ID: | 1071 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 S/P.V. DR N to | To: | 550 S/P.V. DR N | | | | | |
| | | Length: | 550.00 | Ft | Width: | 80 Ft | Area: | 44,000 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.20 |

| Branch: | (PALOS VDS LN) | | Section ID: | 1072 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/RANCHVIEW to | To: | 0 E/SILVER SDL | | | | | |
| | | Length: | 1,020.00 | Ft | Width: | 27 Ft | Area: | 27,540 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2005 | OL-AC | Overlay-AC | 2.00 |

| Branch: | (PALOS VDS LN) | | Section ID: | 1073 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/SILVER SDL to | To: | 0 E/END | | | | | |
| | | Length: | 580.00 | Ft | Width: | 27 Ft | Area: | 15,660 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2005 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (PALOS VDS N) | | Section ID: | 1074 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/CRENSHAW to | To: | 550 W/CRENSHAW | | | | | |
| | | Length: | 550.00 | Ft | Width: | 66 Ft | Area: | 36,300 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 09/04/2013 | CM-OL-2 | 2 in Cold Mill & Overlay | 2.00 |
| 09/01/1991 | OL-AC | Overlay-AC | 6.00 |

| Branch: | (PALOS VDS N) | | Section ID: | 1075 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 550 W/CRENSHAW to | To: | 0 E/HAWTHORNE | | | | | |
| | | Length: | 1,980.00 | Ft | Width: | 40 Ft | Area: | 79,200 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 09/03/2013 | CM-OL-1 | 1 in Cold Mill & Overlay | 3.00 |
| 01/01/1950 | Original | Construction | |

# Construction History

| Branch: | (PALOS VDS N) | | Section ID: | 1076 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 250 W/DAPPLEGRAY to | To: | 1500 W/STRAWBERRY | | | | | |
| | | Length: | 2,580.00 | Ft | Width: | 43 Ft | Area: | 110,940 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2019 | OL-AC | Overlay-AC | 2.00 |
| 07/01/1997 | OL-AC | Overlay-AC | 2.50 |

| Branch: | (PALOS VDS N) | | Section ID: | 1077 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/HAWTHORNE to | To: | 0 E/SILVER SPUR | | | | | |
| | | Length: | 1,960.00 | Ft | Width: | 32 Ft | Area: | 62,720 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 09/02/2013 | CM-OL-1 | 1 in Cold Mill & Overlay | 3.00 |
| 09/01/1993 | OL-AC | Overlay-AC | 2.00 |

| Branch: | (PALOS VDS N) | | Section ID: | 1078 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/P.V. DR E to | To: | 250 W/DAPPLEGRAY | | | | | |
| | | Length: | 1,450.00 | Ft | Width: | 54 Ft | Area: | 78,300 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2016 | CM-OL-2 | 2 in Cold Mill & Overlay | |
| 07/01/1997 | OL-AC | Overlay-AC | 2.50 |

| Branch: | (PALOS VDS N) | | Section ID: | 1079 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/SILVER SPUR to | To: | 0 E/W CITY LIM | | | | | |
| | | Length: | 1,990.00 | Ft | Width: | 33 Ft | Area: | 65,670 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 09/01/2013 | CM-OL-1 | 1 in Cold Mill & Overlay | 3.00 |
| 01/01/1950 | Original | Construction | |

| Branch: | (PALOS VDS N) | | Section ID: | 1080 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 1500 W/STRAWBERRY to | To: | 0 E/ROLLING HILLS | | | | | |
| | | Length: | 1,685.00 | Ft | Width: | 30 Ft | Area: | 50,550 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2019 | OL-AC | Overlay-AC | 2.00 |
| 07/01/1997 | OL-AC | Overlay-AC | 3.00 |

# Construction History

| Branch: | (PALOS VDS N) | | Section ID: | 1081 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/ROLLING HILLS to | To: | 0 E/CRENSHAW | | | | | |
| | | Length: | 3,495.00 | Ft | Width: | 40 Ft | Area: | 139,800 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 01/01/1950 | Original | Construction | |

| Branch: | (PALOS VDS N-North Side) | | Section ID: | 1082 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 E/P.V. DR E to | To: | 0 W/E CITY LIM | | | | | |
| | | Length: | 2,560.00 | Ft | Width: | 28 Ft | Area: | 71,680 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2020 | OL-AC | Overlay-AC | 1.50 |
| 07/01/1997 | OL-AC | Overlay-AC | 2.50 |

| Branch: | (PALOS VDS N-South Side) | | Section ID: | 1083 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 E/P.V. DR E to | To: | 0 W/E CITY LIM | | | | | |
| | | Length: | 2,560.00 | Ft | Width: | 27 Ft | Area: | 69,120 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2020 | OL-AC | Overlay-AC | 1.50 |
| 07/01/1997 | OL-AC | Overlay-AC | 2.50 |

| Branch: | (PEACOCK) | | Section ID: | 1084 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/END to | To: | 0 S/CLUBVIEW | | | | | |
| | | Length: | 610.00 | Ft | Width: | 31 Ft | Area: | 18,910 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2016 | CM-OL1.5 | 1.5 in Cold Mill & Overlay | |
| 03/01/1983 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (PINTO) | | Section ID: | 1085 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/PALOMINO to | To: | 0 S/END | | | | | |
| | | Length: | 510.00 | Ft | Width: | 27 Ft | Area: | 13,770 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1993 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

# Construction History

| Branch: | (PLEASANT HILL) | | Section ID: | 1086 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/HIDDEN VLY to | To: | 0 E/END | | | | | |
| | | Length: | 710.00 | Ft | Width: | 27 Ft | Area: | 19,170 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2006 | OL-AC | Overlay-AC | 2.00 |
| 06/01/1986 | SRSL | Slurry Seal | |

| Branch: | (PONDEROSA) | | Section ID: | 1087 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/END to | To: | 0 E/P.V. DR N | | | | | |
| | | Length: | 510.00 | Ft | Width: | 35 Ft | Area: | 17,850 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1991 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (PONY) | | Section ID: | 1088 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | END N/PALOMINO to | To: | END S/PALOMINO | | | | | |
| | | Length: | 1,420.00 | Ft | Width: | 27 Ft | Area: | 38,340 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 09/01/1993 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (PORTILLO) | | Section ID: | 1089 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/SADDLE to | To: | 0 E/END | | | | | |
| | | Length: | 260.00 | Ft | Width: | 23 Ft | Area: | 5,980 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (QUAILWOOD RD) | | Section ID: | 1090 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/E CITY LIM to | To: | 0 E/STONECREST | | | | | |
| | | Length: | 210.00 | Ft | Width: | 33 Ft | Area: | 6,930 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/1998 | OL-AC | Overlay-AC | 1.50 |
| 06/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (RANCH VIEW) | | Section ID: | 1091 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/GOLDEN SPAR to | To: | 250 N/GOLDEN SPAR | | | | | |
| | | Length: | 250.00 | Ft | Width: | 26 Ft | Area: | 6,500 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2005 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (RANCH VIEW) | | Section ID: | 1092 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 250 N/GOLDEN SPAR | | | | | |
| | | Length: | 2,220.00 | Ft | Width: | 31 Ft | Area: | 68,820 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2005 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (RANGE HORSE) | | Section ID: | 1093 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/SILVER SPUR to | To: | 0 E/END | | | | | |
| | | Length: | 510.00 | Ft | Width: | 30 Ft | Area: | 15,300 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2015 | CM-OL1.5 | 1.5 in Cold Mill & Overlay | |
| 08/01/1991 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

# Construction History

| Branch: | (RAWHIDE) | | Section ID: | 1094 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 0 S/END | | | | | |
| | | Length: | 360.00 | Ft | Width: | 26 Ft | Area: | 9,360 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/1994 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (ROANWOOD) | | Section ID: | 1095 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/END to | To: | 0 S/P.V. DR N | | | | | |
| | | Length: | 760.00 | Ft | Width: | 27 Ft | Area: | 20,520 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2000 | OL-AC | Overlay-AC | 2.20 |
| 08/01/1991 | SRSL | Slurry Seal | |

| Branch: | (ROCKBLUFF) | | Section ID: | 1096 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/END to | To: | 0 E/WILLOWWOOD | | | | | |
| | | Length: | 2,060.00 | Ft | Width: | 26 Ft | Area: | 53,560 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1991 | SRSL | Slurry Seal | |

| Branch: | (ROLLANDO) | | Section ID: | 1097 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 E/END to | To: | 0 W/MARINA | | | | | |
| | | Length: | 160.00 | Ft | Width: | 26 Ft | Area: | 4,160 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2015 | CM-OL1.5 | 1.5 in Cold Mill & Overlay | |
| 01/01/1950 | Original | Construction | |

| Branch: | (ROLLANDO) | | Section ID: | 1098 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 E/MARINA to | To: | 0 W/END | | | | | |
| | | Length: | 610.00 | Ft | Width: | 26 Ft | Area: | 15,860 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 01/01/1950 | Original | Construction | |

# Construction History

| Branch: | (ROLLING HILLS) | | Section ID: | 1099 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/PALOS VDS N to | To: | 0 S/TANGLEWOOD | | | | | |
| | | Length: | 2,860.00 | Ft | Width: | 30 Ft | Area: | 85,800 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1994 | OL-AC | Overlay-AC | 2.00 |

| Branch: | (ROLLING HILLS) | | Section ID: | 1100 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/TANGLEWOOD to | To: | 0 S/N CITY LIM | | | | | |
| | | Length: | 770.00 | Ft | Width: | 48 Ft | Area: | 36,960 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1994 | OL-AC | Overlay-AC | 2.00 |

| Branch: | (ROLLING MDW) | | Section ID: | 1101 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 S/P.V. DR N to | To: | 0 N/END | | | | | |
| | | Length: | 1,110.00 | Ft | Width: | 36 Ft | Area: | 39,960 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2015 | CM-OL-2 | 2 in Cold Mill & Overlay | |
| 08/01/1991 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (ROLLINGWOOD) | | Section ID: | 1102 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/SLVR EAGLE to | To: | 0 E/KINGSPINE | | | | | |
| | | Length: | 1,670.00 | Ft | Width: | 26 Ft | Area: | 43,420 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2018 | OL-AC | Overlay-AC | 2.00 |
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1991 | SRSL | Slurry Seal | |

| Branch: | (ROXCOVE) | | Section ID: | 1103 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/DEEP VALLEY to | To: | 0 S/SILVER SPUR | | | | | |
| | | Length: | 270.00 | Ft | Width: | 36 Ft | Area: | 9,720 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/1998 | OL-AC | Overlay-AC | 2.50 |
| 03/01/1983 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (RUSTLER) | | Section ID: | 1104 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/SILVER SPUR to | To: | 0 S/END | | | | | |
| | | Length: | 260.00 | Ft | Width: | 27 Ft | Area: | 7,020 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2015 | CM-OL-2 | 2 in Cold Mill & Overlay | |
| 08/01/1991 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (SADDLE) | | Section ID: | 1105 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/CONESTOGA to | To: | 0 S/GAUCHO | | | | | |
| | | Length: | 1,120.00 | Ft | Width: | 33 Ft | Area: | 36,960 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.20 |
| 06/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (SADDLE) | | Section ID: | 1106 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/GAUCHO to | To: | 0 S/CARRIAGE | | | | | |
| | | Length: | 350.00 | Ft | Width: | 26 Ft | Area: | 9,100 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.20 |
| 06/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (SANTA BELLA) | | Section ID: | 1107 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/END to | To: | 0 E/SHADY VISTA | | | | | |
| | | Length: | 1,820.00 | Ft | Width: | 33 Ft | Area: | 60,060 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2005 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (SCOTTWOOD) | | Section ID: | 1108 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/E CITY LIM to | To: | 0 E/HIGHRIDGE | | | | | |
| | | Length: | 410.00 | Ft | Width: | 37 Ft | Area: | 15,170 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2020 | OL-AC | Overlay-AC | 2.00 |
| 06/01/1998 | OL-AC | Overlay-AC | 1.50 |
| 06/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (SEAHURST) | | Section ID: | 1109 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/END E/SHADY to | To: | 0 E/END E/SHADY | | | | | |
| | | Length: | 620.00 | Ft | Width: | 26 Ft | Area: | 16,120 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2005 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |

| Branch: | (SHADOW) | | Section ID: | 1110 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/ROLLING HLS to | To: | 0 E/END | | | | | |
| | | Length: | 410.00 | Ft | Width: | 22 Ft | Area: | 9,020 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1993 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (SHADY VISTA) | | Section ID: | 1111 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/END to | To: | 0 S/SANTA BELLA | | | | | |
| | | Length: | 1,060.00 | Ft | Width: | 33 Ft | Area: | 34,980 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2005 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (SHADY VISTA) | | Section ID: | 1112 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/SANTA BELLA to | To: | 0 S/SILVER SDL | | | | | |
| | | Length: | 1,020.00 | Ft | Width: | 32 Ft | Area: | 32,640 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2005 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |

| Branch: | (SILVER BIT) | | Section ID: | 1113 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/END to | To: | 0 S/CLUBVIEW | | | | | |
| | | Length: | 510.00 | Ft | Width: | 31 Ft | Area: | 15,810 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2016 | CM-OL-1.75 | 1.75 in Cold Mill & Overlay | |
| 03/01/1983 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (SILVER EAGLE) | | Section ID: | 1114 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/ROCKBLUFF to | To: | 0 S/ROLLINGWOOD | | | | | |
| | | Length: | 1,320.00 | Ft | Width: | 27 Ft | Area: | 35,640 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1991 | SRSL | Slurry Seal | |

| Branch: | (SILVERLEAF) | | Section ID: | 1115 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 E/END to | To: | 0 S/ROANWOOD | | | | | |
| | | Length: | 360.00 | Ft | Width: | 27 Ft | Area: | 9,720 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2000 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |

| Branch: | (SILVER SADDLE) | | Section ID: | 1116 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 E/SHADY VISTA to | To: | 1000 W/P.V. DR N | | | | | |
| | | Length: | 950.00 | Ft | Width: | 32 Ft | Area: | 30,400 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/1994 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

# Construction History

| Branch: | (SILVER SADDLE) | | Section ID: | 1117 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 E/P.V. DR N to | To: | 1000 W/P.V. DR N | | | | | |
| | | Length: | 1,000.00 | Ft | Width: | 38 Ft | Area: | 38,000 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2005 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |
| 03/01/1983 | SRSL | Slurry Seal | |

| Branch: | (SILVER SPRING) | | Section ID: | 1118 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 E/SILVER SPG to | To: | 0 E/WILLOWWOOD | | | | | |
| | | Length: | 1,510.00 | Ft | Width: | 26 Ft | Area: | 39,260 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2000 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1983 | SRSL | Slurry Seal | |

| Branch: | (SILVER SPUR) | | Section ID: | 1119 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/CRENSHAW to | To: | 0 S/DRYBANK | | | | | |
| | | Length: | 2,610.00 | Ft | Width: | 62 Ft | Area: | 161,820 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/1988 | OL-AC | Overlay-AC | 2.50 |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (SILVER SPUR) | | Section ID: | 1120 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/HAWTHORNE to | To: | 0 S/N CITY LIM | | | | | |
| | | Length: | 240.00 | Ft | Width: | 56 Ft | Area: | 13,440 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/1988 | OL-AC | Overlay-AC | 2.50 |

| Branch: | (SILVER SPUR) | | Section ID: | 1121 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 150 N/KINGSPINE to | To: | 0 S/RUSTLER | | | | | |
| | | Length: | 2,030.00 | Ft | Width: | 32 Ft | Area: | 64,960 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2016 | ST-SS | Slurry | |
| 08/01/1999 | OL-AC | Overlay-AC | 2.50 |

# Construction History

| Branch: | (SILVER SPUR) | | Section ID: | 1122 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/RUSTLER to | To: | 0 S/P.V. DR N | | | | | |
| | | Length: | 350.00 | Ft | Width: | 55 Ft | Area: | 19,250 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2016 | ST-SS | Slurry | |
| 08/01/1999 | OL-AC | Overlay-AC | 2.50 |

| Branch: | (SILVER SPUR) | | Section ID: | 1123 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 S/S CITY LIM to | To: | 150 N/KINGSPINE | | | | | |
| | | Length: | 1,800.00 | Ft | Width: | 32 Ft | Area: | 57,600 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 10/01/2017 | | 2.75" Mill - 3" LC - 2" ARHM | |
| 09/01/1993 | OL-AC | Overlay-AC | 2.50 |

| Branch: | (BART EARLE) | | Section ID: | 1125 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 420' N/O SLVR SPUR TO | To: | 0 W/BEECHGATE | | | | | |
| | | Length: | 1,780.00 | Ft | Width: | 36 Ft | Area: | 64,080 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/1988 | OL-AC | Overlay-AC | 2.50 |
| 03/01/1983 | SRSL | Slurry Seal | |

| Branch: | (SORREL) | | Section ID: | 1126 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/END to | To: | 0 E/DAPPLEGRAY | | | | | |
| | | Length: | 910.00 | Ft | Width: | 27 Ft | Area: | 24,570 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 11/01/2003 | OL-AC | Overlay-AC | 2.00 |
| 06/01/1994 | SRSL | Slurry Seal | |
| 03/01/1983 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (SPINNING WHL) | | Section ID: | 1127 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/END to | To: | 0 E/P.V. DR E | | | | | |
| | | Length: | 310.00 | Ft | Width: | 23 Ft | Area: | 7,130 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 10/01/2017 | | 4" Mill - 2" LC - 2" ARHM | |
| 03/01/1980 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (STAGECOACH) | | Section ID: | 1128 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/MASONGATE to | To: | 0 E/END | | | | | |
| | | Length: | 310.00 | Ft | Width: | 30 Ft | Area: | 9,300 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 06/01/1986 | SRSL | Slurry Seal | |

| Branch: | (STONECREST) | | Section ID: | 1129 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/E CITY LIM to | To: | 0 S/WHITLEY COL | | | | | |
| | | Length: | 960.00 | Ft | Width: | 33 Ft | Area: | 31,680 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2020 | OL-AC | Overlay-AC | 2.00 |
| 06/01/1998 | OL-AC | Overlay-AC | 1.50 |
| 06/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (STRAWBERRY) | | Section ID: | 1130 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 0 S/END | | | | | |
| | | Length: | 1,760.00 | Ft | Width: | 32 Ft | Area: | 56,320 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 11/01/2003 | OL-AC | Overlay-AC | 2.00 |
| 05/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (SUGARHILL) | | Section ID: | 1131 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/END to | To: | 0 E/MASONGATE | | | | | |
| | | Length: | 1,670.00 | Ft | Width: | 34 Ft | Area: | 56,780 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 06/01/1986 | SRSL | Slurry Seal | |

| Branch: | (SUNDOWN) | | Section ID: | 1132 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/GAUCHO to | To: | 0 S/CARRIAGE | | | | | |
| | | Length: | 270.00 | Ft | Width: | 30 Ft | Area: | 8,100 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 06/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (SUNNYFIELD) | | Section ID: | 1133 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 N/P.V. DR N to | To: | 0 S/END | | | | | |
| | | Length: | 610.00 | Ft | Width: | 26 Ft | Area: | 15,860 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/1994 | SRSL | Slurry Seal | |
| 01/01/1950 | Original | Construction | |

| Branch: | (SWEETGRASS) | | Section ID: | 1134 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/DEERHILL to | To: | 0 E/END | | | | | |
| | | Length: | 610.00 | Ft | Width: | 26 Ft | Area: | 15,860 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 10/01/2017 | CM-OL-2 | 2 in Cold Mill & Overlay | |
| 09/01/1993 | OL-AC | Overlay-AC | 1.50 |

| Branch: | (VIA DE LA VST) | | Section ID: | 1135 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/END to | To: | 0 E/SILVER SPUR | | | | | |
| | | Length: | 360.00 | Ft | Width: | 22 Ft | Area: | 7,920 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/1998 | OL-AC | Overlay-AC | 1.50 |
| 03/01/1980 | SRSL | Slurry Seal | |

# Construction History

| Branch: | (VISTA REAL) | | Section ID: | 1136 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/MONTECILLO to | To: | 0 E/END | | | | | |
| | | Length: | 810.00 | Ft | Width: | 22 Ft | Area: | 17,820 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 08/01/1999 | OL-AC | Overlay-AC | 2.00 |
| 03/01/1983 | SRSL | Slurry Seal | |

| Branch: | (WHITLEY COLLINS) | | Section ID: | 1137 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 W/E CITY LIM to | To: | 0 E/HIGHRIDGE | | | | | |
| | | Length: | 160.00 | Ft | Width: | 40 Ft | Area: | 6,400 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 06/01/2020 | OL-AC | Overlay-AC | 2.00 |
| 06/01/1998 | OL-AC | Overlay-AC | 1.50 |
| 06/01/1994 | SRSL | Slurry Seal | |
| 03/01/1980 | SRSL | Slurry Seal | |

| Branch: | (WILLOWWOOD) | | Section ID: | 1138 | Surface: AC | | | |
|---|---|---|---|---|---|---|---|---|
| From: | 0 S/KINGSPINE to | To: | 0 E/SILVER SPUR | | | | | |
| | | Length: | 2,470.00 | Ft | Width: | 33 Ft | Area: | 81,510 SF |

| Work Date | Work Code | Work Description | Thickness ( in) |
|---|---|---|---|
| 05/01/2002 | OL-AC | Overlay-AC | 2.00 |
| 08/01/1991 | SRSL | Slurry Seal | |

# APPENDIX B

# OVERALL LIST OF SEGMENTS

## OVERALL LIST OF SEGMENTS

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Bnft/$ | Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1001 | AURORA | 0 N/DORADO | 0 S/END | 390 | 22 | 2 | 4.8 | 90 | 100 | 0.000 | 3,003 | 2A-C |
| 1002 | AURORA | 0 W/DORADO | 0 E/MONTECILLO | 1380 | 33 | 2 | 4.8 | 96 | 99 | 0.000 | 15,939 | 2A-C |
| 1027 | BART EARLE | 0 N/SILVER SPUR | 420' N/O SILVER SPUR | 420 | 36 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1125 | BART EARLE | 420' N/O SILVER SPUR | 0 W/BEECHGATE | 1780 | 36 | 2 | 6.1 | 53 | 88 | 0.017 | 130,561 | 4A |
| 1003 | BAYMARE | 0 N/END | 0 S/CLUBVIEW | 460 | 31 | 2 | 4.7 | 100 | 100 | 0.000 | 0 | 1 |
| 1004 | BEECHGATE | 0 N/BART EARLE | 0 S/N CITY LIM | 210 | 36 | 2 | 4.8 | 79 | 99 | 0.000 | 2,646 | 2A-C |
| 1005 | BLUEMOUND | 0 W/WILLOWWOOD | 0 E/DUNWOOD | 1670 | 26 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1006 | BRANDING IRON | 0 N/P.V. DR N | 0 S/END | 570 | 26 | 2 | 4.8 | 95 | 99 | 0.000 | 5,187 | 2A-C |
| 1007 | BROKEN BOW | 0 W/SLVR EAGLE | 0 E/END | 560 | 25 | 2 | 4.8 | 55 | 100 | 0.000 | 4,900 | 2A-C |
| 1008 | BUCKSKIN | 0 N/DAPPLEGRAY | 0 S/END | 2260 | 31 | 2 | 4.8 | 6 | 78 | 0.000 | 93,236 | 4A |
| 1009 | CARRIAGE | 0 W/SADDLE | 0 E/END | 1140 | 30 | 2 | 5 | 81 | 100 | 0.000 | 11,970 | 2A-C |
| 1010 | CELESTE | 0 W/MONTECILLO | 0 E/END | 510 | 22 | 2 | 4.8 | 66 | 96 | 0.000 | 3,927 | 2A-C |
| 1011 | CERRITO | 0 W/END | 0 E/ENCANTO | 310 | 22 | 2 | 4.4 | 88 | 100 | 0.000 | 2,387 | 2A-C |
| 1012 | CHALMETTE | 0 N/END | 0 S/SUGAR HILL | 210 | 31 | 2 | 4.3 | 76 | 98 | 0.000 | 2,520 | 2A |
| 1013 | CLUBVIEW | 0 W/P.V.DR E | 0 E/END | 2410 | 37 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1014 | CONESTOGA | 0 N/SADDLE | 0 S/P.V.DR E | 1520 | 32 | 2 | 5 | 54 | 79 | 0.025 | 99,930 | 4A |
| 1015 | CRENSHAW | 0 N/P.V.DR N | 0 S/N CITY LIM | 670 | 66 | 6 | 8.3 | 100 | 100 | 0.000 | 0 | 1 |
| 1017 | CRENSHAW AC | 260 W/SILVER SPUR | 240 E/SILVER SPUR | 500 | 64 | 4 | 8.2 | 100 | 100 | 0.000 | 0 | 1 |
| 1018 | CRENSHAW PC | 260 W/SILVER SPUR | 240 E/SILVER SPUR | 500 | 80 | 4 | 8.2 | 100 | 100 | 0.000 | 0 | 1 |
| 1020 | DAPPLEGRAY | 0 N/P.V.DR N | 0 S/END | 2970 | 30 | 2 | 4.8 | 15 | 100 | 0.000 | 31,185 | 2A-C |
| 1023 | DEEP VALLEY | 0 W/SILVER SPUR | 0 E/DRYBANK | 2450 | 36 | 2 | 7 | 6 | 61 | 0.094 | 179,704 | 7A |
| 1024 | DEERHILL | 0 W/HARBOR SIGT | 0 E/END | 1460 | 31 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1021 | DOBBIN | 0 N/P.V.DR N | 0 S/END | 510 | 23 | 2 | 4.8 | 55 | 87 | 0.014 | 24,802 | 4A |
| 1025 | DORADO | 0 W/END | 0 E/AURORA | 760 | 22 | 2 | 4.8 | 67 | 94 | 0.000 | 5,852 | 2A-C |
| 1026 | DRYBANK | 0 N/DEEP VALLEY | 0 S/SILVER SPUR | 370 | 40 | 4 | 6.5 | 53 | 95 | 0.000 | 5,180 | 2A-C |
| 1028 | DUNWOOD | 0 N/WILLOWWOOD | 0 S/KINGSPINE | 1950 | 26 | 2 | 4.8 | 53 | 98 | 0.000 | 17,745 | 2A-C |
| 1029 | ELMDALE | 0 W/SLVR EAGLE | 0 E/KINGSPINE | 1420 | 26 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1030 | ENCANTO | 0 N/DORADO | 0 S/END | 310 | 22 | 2 | 4.4 | 88 | 100 | 0.000 | 2,387 | 2A-C |
| 1031 | ENCANTO | 0 N/MONTECILLO | 0 S/DORADO | 2270 | 32 | 2 | 4.8 | 72 | 94 | 0.000 | 25,424 | 3A |
| 1032 | ESTRIBO | 0 W/CONESTOGA | 0 E/SADDLE | 770 | 26 | 2 | 4.8 | 58 | 98 | 0.000 | 7,007 | 2A-C |
| 1033 | FERNCREEK | 0 E/END | 0 W/MASONGATE | 510 | 33 | 2 | 4.8 | 65 | 88 | 0.000 | 5,891 | 3A |
| 1034 | FERNCREEK | 0 W/END | 0 E/MASONGATE | 610 | 23 | 2 | 4.8 | 97 | 99 | 0.000 | 4,911 | 2A-C |
| 1035 | FOXPOINT | 0 N/END | 0 S/ROCKBLUFF | 610 | 25 | 2 | 4.8 | 48 | 84 | 0.020 | 31,985 | 4A |
| 1036 | GAUCHO | 0 W/SADDLE | 0 E/CONESTOGA | 970 | 33 | 2 | 4.8 | 42 | 79 | 0.021 | 66,591 | 4A |
| 1037 | GOLDENSPAR | 0 N/END | 0 S/RANCHVIEW | 290 | 26 | 2 | 4.3 | 56 | 89 | 0.000 | 2,639 | 3A |
| 1038 | GOLDENSPAR | 0 N/RANCHVIEW | 0 S/SLVR SDL | 400 | 26 | 2 | 4.8 | 59 | 88 | 0.013 | 21,734 | 4A |
| 1039 | GOLDRING | 0 N/SLVR LEAF | 0 S/END | 160 | 28 | 2 | 4.3 | 49 | 80 | 0.013 | 9,302 | 4A |
| 1040 | HAMPSHIRE | 0 N/SUGAR HILL | 0 S/END | 110 | 33 | 2 | 4.3 | 76 | 96 | 0.000 | 1,271 | 2A-C |
| 1041 | HARBOR SIGHT | 0 W/P.V.DR E | 0 E/END | 1720 | 30 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1042 | HAWTHORNE | 0 N/P.V. DR N | 0 S/N CITY LIM | 3260 | 63 | 4 | 9.2 | 100 | 100 | 0.000 | 0 | 1 |
| 1043 | HAWTHORNE | 0 N/S CITY LIM | 0 S/P.V. DR N | 2260 | 61 | 4 | 9.2 | 100 | 100 | 0.000 | 0 | 1 |
| 1044 | HAWTHORNE | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1160 | 72 | 4 | 8.6 | 64 | 85 | 0.036 | 182,338 | 5 |
| 1045 | HIDDEN VALLEY | 0 N/P.V. DR N | 0 S/END | 1760 | 29 | 2 | 4.8 | 73 | 94 | 0.000 | 17,864 | 3A |
| 1047 | HIGHRIDGE | 0 N/CREST | 0 S/WHITLEY COL | 2250 | 51 | 2 | 6.7 | 13 | 59 | 0.046 | 235,614 | 7A |
| 1046 | HIGHRIDGE ES | 0 N/ARMAGA SPGS | 0 S/N CITY LIM | 990 | 24 | 1 | 6.7 | 100 | 100 | 0.000 | 0 | 1 |

## OVERALL LIST OF SEGMENTS

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Bnft/$ | Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1048 | HIGHRIDGE WS | 0 N/WHITLEY COL | 0 S/ARMAGA SPGS | 2380 | 23 | 1 | 6.7 | 68 | 100 | 0.000 | 19,159 | 2A-C |
| 1049 | HIGHRIDGE ES | 0 N/WHITLEY COL | 0 S/ARMAGA SPGS | 2380 | 28 | 1 | 6.7 | 40 | 99 | 0.000 | 23,324 | 2A-C |
| 1050 | HIGHRIDGE WS | 0 N/ARMAGA SPGS | 0 S/N CITY LIM | 990 | 24 | 1 | 6.7 | 100 | 100 | 0.000 | 0 | 1 |
| 1051 | HITCHING POST | 0 N/P.V. DR N | 0 S/P.V. DR N | 2170 | 30 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1053 | INDIAN PEAK | 0 N/S CITY LIM | 0 S/NORRIS CENTER | 220 | 48 | 4 | 6.1 | 100 | 100 | 0.000 | 0 | 1 |
| 1052 | INDIAN PEAK | 0 S/NORRIS CENTER | 0 S/HAWTHORNE | 2180 | 56 | 4 | 6.1 | 100 | 100 | 0.000 | 0 | 1 |
| 1055 | KINGSPINE | 0 W/SLVR EAGLE | 0 E/SILVER SPUR | 1920 | 33 | 2 | 5 | 100 | 100 | 0.000 | 0 | 1 |
| 1056 | LANTANA | 0 N/AURORA | 0 S/END | 360 | 22 | 2 | 4.5 | 67 | 94 | 0.000 | 2,772 | 3A |
| 1057 | LATIGO | 0 N/P.V. DR N | 0 S/END | 710 | 31 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1059 | MARINA | 0 N/END | 0 S/SILVER SPUR | 1060 | 26 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1060 | MARLOMA | 0 W/END | 0 E/MARINA | 1260 | 26 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1061 | MASONGATE | 0 N/FERNCREEK | 0 S/SUGAR HILL | 210 | 35 | 2 | 4.8 | 76 | 99 | 0.000 | 2,845 | 2A |
| 1062 | MASONGATE | 0 N/P.V. DR N | 0 S/FERNCREEK | 920 | 36 | 2 | 4.8 | 50 | 87 | 0.009 | 68,490 | 4A |
| 1058 | MOCCASIN | 0 N/P.V. DR N | 0 S/END | 1460 | 32 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1063 | MONTECILLO | 0 N/AURORA | 0 S/END | 640 | 22 | 2 | 5 | 99 | 100 | 0.000 | 4,928 | 2A-C |
| 1064 | MONTECILLO | 0 N/ENCANTO | 0 S/AURORA | 380 | 33 | 2 | 5 | 71 | 93 | 0.000 | 4,828 | 3A |
| 1065 | MONTECILLO | 0 N/P.V. DR E | 0 S/VISTA REAL | 650 | 50 | 4 | 5 | 9 | 100 | 0.000 | 11,375 | 2A-C |
| 1019 | NORRIS CENTER | 0 N/SILVER SPUR | 0 S/INDIAN PEAK | 770 | 57 | 4 | 6.3 | 100 | 100 | 0.000 | 0 | 1 |
| 1066 | PALOMINO | 0 W/ROLLING HLS | 0 E/PONY LANE | 670 | 27 | 2 | 4.8 | 58 | 83 | 0.019 | 37,678 | 4A |
| 1069 | PALOS VDS E | 0 N/CONESTOGA | 550 S/P.V. DR N | 1800 | 37 | 2 | 7.1 | 0 | 35 | 0.082 | 172,503 | 8A |
| 1070 | PALOS VDS E | 0 N/P.V. DR N | 400 N/P.V. DR N | 400 | 86 | 4 | 7.1 | 20 | 86 | 0.030 | 68,490 | 4A |
| 1071 | PALOS VDS E | 0 S/P.V. DR N | 550 S/P.V. DR N | 550 | 80 | 4 | 7.1 | 46 | 100 | 0.000 | 15,400 | 2A-C |
| 1067 | PALOS VDS E | 1000 N/CLUBVIEW | 400 N/P.V. DR N | 2800 | 37 | 2 | 7.1 | 100 | 100 | 0.000 | 0 | 1 |
| 1068 | PALOS VDS E | 1000 N/CLUBVIEW | 0 S/N CITY LIM | 1860 | 37 | 2 | 8.3 | 100 | 100 | 0.000 | 0 | 1 |
| 1072 | PALOS VDS LN | 0 W/RANCHVIEW | 0 E/SILVER SDL | 1020 | 27 | 2 | 4.8 | 57 | 88 | 0.000 | 9,639 | 3A |
| 1073 | PALOS VDS LN | 0 W/SILVER SDL | 0 E/END | 580 | 27 | 2 | 4.8 | 94 | 100 | 0.000 | 5,481 | 2A-C |
| 1074 | PALOS VDS N | 0 W/CRENSHAW | 550 W/CRENSHAW | 550 | 66 | 5 | 7.5 | 100 | 100 | 0.000 | 0 | 1 |
| 1077 | PALOS VDS N | 0 W/HAWTHORNE | 0 E/SILVER SPUR | 1960 | 32 | 2 | 7.7 | 75 | 96 | 0.014 | 128,857 | 3 |
| 1078 | PALOS VDS N | 0 W/P.V. DR E | 250 W/DAPPLEGRAY | 1450 | 54 | 4 | 8.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1081 | PALOS VDS N | 0 W/ROLLING HILLS | 0 E/CRENSHAW | 3495 | 40 | 2 | 8.5 | 31 | 77 | 0.049 | 355,284 | 6 |
| 1079 | PALOS VDS N | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1990 | 33 | 2 | 7.7 | 77 | 96 | 0.013 | 134,613 | 3 |
| 1080 | PALOS VDS N | 1500 W/STRAWBERRY | 0 E/ROLLING HILLS | 1685 | 30 | 2 | 8.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1076 | PALOS VDS N | 250 W/DAPPLEGRAY | 1500 W/STRAWBERRY | 2580 | 43 | 2 | 8.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1075 | PALOS VDS N | 550 W/CRENSHAW | 0 E/HAWTHORNE | 1980 | 40 | 2 | 7.5 | 60 | 90 | 0.023 | 177,218 | 4 |
| 1082 | PALOS VDS N-NORTH SIDE | 0 E/P.V. DR E | 0 W/E CITY LIM | 2560 | 28 | 2 | 8.7 | 100 | 100 | 0.000 | 0 | 1 |
| 1083 | PALOS VDS N-SOUTH SIDE | 0 E/P.V. DR E | 0 W/E CITY LIM | 2560 | 27 | 2 | 8.7 | 100 | 100 | 0.000 | 0 | 1 |
| 1084 | PEACOCK | 0 N/END | 0 S/CLUBVIEW | 610 | 31 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1085 | PINTO | 0 N/PALOMINO | 0 S/END | 510 | 27 | 2 | 4.8 | 54 | 84 | 0.019 | 28,681 | 4A |
| 1086 | PLEASANT HILL | 0 W/HIDDEN VLY | 0 E/END | 710 | 27 | 2 | 4.8 | 67 | 95 | 0.000 | 6,710 | 2A-C |
| 1087 | PONDEROSA | 0 W/END | 0 E/P.V. DR N | 510 | 35 | 2 | 4.8 | 62 | 90 | 0.000 | 6,248 | 3A |
| 1088 | PONY | END N/PALOMINO | END S/PALOMINO | 1420 | 27 | 2 | 4.8 | 80 | 100 | 0.000 | 13,419 | 2A-C |
| 1089 | PORTILLO | 0 W/SADDLE | 0 E/END | 260 | 23 | 2 | 4.3 | 27 | 79 | 0.020 | 12,826 | 4A |
| 1090 | QUAILWOOD RD | 0 W/E CITY LIM | 0 E/STONECREST | 210 | 33 | 2 | 4.8 | 95 | 100 | 0.000 | 2,426 | 2A-C |
| 1091 | RANCH VIEW | 0 N/GOLDEN SPAR | 250 N/GOLDEN SPAR | 250 | 26 | 2 | 4.8 | 70 | 97 | 0.000 | 2,503 | 2A |
| 1092 | RANCH VIEW | 0 N/P.V. DR N | 250 N/GOLDEN SPAR | 2220 | 31 | 2 | 4.8 | 80 | 98 | 0.000 | 24,087 | 2A-C |

## OVERALL LIST OF SEGMENTS

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Bnft/$ | Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1093 | RANGE HORSE | 0 W/SILVER SPUR | 0 E/END | 510 | 30 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1094 | RAWHIDE | 0 N/P.V. DR N | 0 S/END | 360 | 26 | 2 | 4.5 | 72 | 95 | 0.000 | 3,276 | 2A-C |
| 1095 | ROANWOOD | 0 N/END | 0 S/P.V. DR N | 760 | 27 | 2 | 4.8 | 59 | 90 | 0.000 | 7,182 | 3A |
| 1096 | ROCKBLUFF | 0 W/END | 0 E/WILLOWWOOD | 2060 | 26 | 2 | 4.8 | 88 | 97 | 0.000 | 18,746 | 2A-C |
| 1097 | ROLLANDO | 0 E/END | 0 W/MARINA | 160 | 26 | 2 | 4.3 | 100 | 100 | 0.000 | 0 | 1 |
| 1098 | ROLLANDO | 0 E/MARINA | 0 W/END | 610 | 26 | 2 | 4.8 | 57 | 82 | 0.013 | 33,144 | 4A |
| 1099 | ROLLING HILLS | 0 N/PALOS VDS N | 0 S/TANGLEWOOD | 2860 | 30 | 2 | 6.9 | 24 | 96 | 0.000 | 30,030 | 2A-C |
| 1100 | ROLLING HILLS | 0 N/TANGLEWOOD | 0 S/N CITY LIM | 770 | 48 | 2 | 6.9 | 19 | 64 | 0.049 | 74,047 | 5A |
| 1101 | ROLLING MDW | 0 S/P.V. DR N | 0 N/END | 1110 | 36 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1102 | ROLLINGWOOD | 0 W/SLVR EAGLE | 0 E/KINGSPINE | 1670 | 26 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1103 | ROXCOVE | 0 N/DEEP VALLEY | 0 S/SILVER SPUR | 270 | 36 | 2 | 6.1 | 60 | 95 | 0.000 | 3,402 | 2A-C |
| 1104 | RUSTLER | 0 N/SILVER SPUR | 0 S/END | 260 | 27 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1105 | SADDLE | 0 N/CONESTOGA | 0 S/GAUCHO | 1120 | 33 | 2 | 4.8 | 43 | 77 | 0.021 | 76,888 | 4A |
| 1106 | SADDLE | 0 N/GAUCHO | 0 S/CARRIAGE | 350 | 26 | 2 | 4.8 | 45 | 82 | 0.019 | 19,295 | 4A |
| 1107 | SANTA BELLA | 0 W/END | 0 E/SHADY VISTA | 1820 | 33 | 2 | 4.8 | 61 | 87 | 0.010 | 123,113 | 4A |
| 1108 | SCOTTWOOD | 0 W/E CITY LIM | 0 E/HIGHRIDGE | 410 | 37 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1109 | SEAHURST | 0 W/END E/SHADY | 0 E/END E/SHADY | 620 | 26 | 2 | 4.5 | 68 | 94 | 0.000 | 5,642 | 2A-C |
| 1110 | SHADOW | 0 W/ROLLING HLS | 0 E/END | 410 | 22 | 2 | 4.6 | 66 | 94 | 0.000 | 3,157 | 2A-C |
| 1111 | SHADY VISTA | 0 N/END | 0 S/SANTA BELLA | 1060 | 33 | 2 | 4.8 | 68 | 93 | 0.000 | 12,243 | 3A |
| 1112 | SHADY VISTA | 0 N/SANTA BELLA | 0 S/SILVER SDL | 1020 | 32 | 2 | 4.8 | 47 | 86 | 0.010 | 67,058 | 4A |
| 1113 | SILVER BIT | 0 N/END | 0 S/CLUBVIEW | 510 | 31 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1114 | SILVER EAGLE | 0 N/ROCKBLUFF | 0 S/ROLLINGWOOD | 1320 | 27 | 2 | 4.8 | 32 | 76 | 0.026 | 75,318 | 4A |
| 1117 | SILVER SADDLE | 0 E/P.V. DR N | 1000 W/P.V. DR N | 1000 | 38 | 2 | 4.8 | 63 | 94 | 0.000 | 13,300 | 3A |
| 1116 | SILVER SADDLE | 0 E/SHADY VISTA | 1000 W/P.V. DR N | 950 | 32 | 2 | 4.8 | 65 | 91 | 0.000 | 10,640 | 3A |
| 1118 | SILVER SPRING | 0 E/SILVER SPG | 0 E/WILLOWWOOD | 1510 | 26 | 2 | 4.8 | 33 | 79 | 0.019 | 83,242 | 4A |
| 1119 | SILVER SPUR | 0 N/CRENSHAW | 0 S/DRYBANK | 2610 | 62 | 4 | 8.1 | 10 | 72 | 0.065 | 455,749 | 8 |
| 1120 | SILVER SPUR | 0 N/HAWTHORNE | 0 S/N CITY LIM | 240 | 56 | 3 | 8.1 | 90 | 100 | 0.000 | 4,704 | 2A-C |
| 1122 | SILVER SPUR | 0 N/RUSTLER | 0 S/P.V. DR N | 350 | 55 | 3 | 8 | 100 | 100 | 0.000 | 0 | 1 |
| 1123 | SILVER SPUR | 0 S/S CITY LIM | 150 N/KINGSPINE | 1800 | 32 | 2 | 8 | 100 | 100 | 0.000 | 0 | 1 |
| 1121 | SILVER SPUR | 150 N/KINGSPINE | 0 S/RUSTLER | 2030 | 32 | 2 | 8 | 100 | 100 | 0.000 | 0 | 1 |
| 1115 | SILVERLEAF | 0 E/END | 0 S/ROANWOOD | 360 | 27 | 2 | 4.5 | 31 | 81 | 0.016 | 20,245 | 4A |
| 1126 | SORREL | 0 W/END | 0 E/DAPPLEGRAY | 910 | 27 | 2 | 4.8 | 13 | 43 | 0.038 | 63,340 | 8A |
| 1127 | SPINNING WHL | 0 W/END | 0 E/P.V. DR E | 310 | 23 | 2 | 4.4 | 100 | 100 | 0.000 | 0 | 1 |
| 1128 | STAGECOACH | 0 W/MASONGATE | 0 E/END | 310 | 30 | 2 | 4.4 | 56 | 95 | 0.000 | 3,255 | 2A-C |
| 1129 | STONECREST | 0 W/E CITY LIM | 0 S/WHITLEY COL | 960 | 33 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1130 | STRAWBERRY | 0 N/P.V. DR N | 0 S/END | 1760 | 32 | 2 | 4.8 | 6 | 54 | 0.031 | 135,717 | 8A |
| 1131 | SUGARHILL | 0 W/END | 0 E/MASONGATE | 1670 | 34 | 2 | 4.8 | 44 | 83 | 0.015 | 117,872 | 4A |
| 1132 | SUNDOWN | 0 N/GAUCHO | 0 S/CARRIAGE | 270 | 30 | 2 | 4.8 | 68 | 95 | 0.000 | 2,835 | 2A-C |
| 1133 | SUNNYFIELD | 0 N/P.V. DR N | 0 S/END | 610 | 26 | 2 | 4.8 | 63 | 94 | 0.000 | 5,551 | 3A |
| 1134 | SWEETGRASS | 0 W/DEERHILL | 0 E/END | 610 | 26 | 2 | 4.8 | 100 | 100 | 0.000 | 0 | 1 |
| 1135 | VIA DE LA VST | 0 W/END | 0 E/SILVER SPUR | 360 | 22 | 2 | 4.8 | 51 | 88 | 0.015 | 16,823 | 4A |
| 1136 | VISTA REAL | 0 W/MONTECILLO | 0 E/END | 810 | 22 | 2 | 4.8 | 69 | 94 | 0.000 | 6,237 | 3A |
| 1137 | WHITLEY COLLINS | 0 W/E CITY LIM | 0 E/HIGHRIDGE | 160 | 40 | 2 | 4.8 | 43 | 85 | 0.008 | 13,148 | 4A |
| 1138 | WILLOWWOOD | 0 S/KINGSPINE | 0 E/SILVER SPUR | 2470 | 33 | 2 | 5 | 100 | 100 | 0.000 | 0 | 1 |

**APPENDIX C1** **ARTERIAL & SECONDARY MAJOR MAINTENANCE PRIORITY**

## ARTERIAL & SECONDARY MAJOR MAINTENANCE INVENTORY - Priority Listing

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Bnft/$ | Cost | Cumul Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1023 | DEEP VALLEY | 0 W/SILVER SPUR | 0 E/DRYBANK | 2450 | 36 | 2 | 7 | 6 | 61 | 0.094 | 179,704 | 179,704 | 7A |
| 1069 | PALOS VDS E | 0 N/CONESTOGA | 550 S/P.V. DR N | 1800 | 37 | 2 | 7.1 | 0 | 35 | 0.082 | 172,503 | 352,208 | 8A |
| 1119 | SILVER SPUR | 0 N/CRENSHAW | 0 S/DRYBANK | 2610 | 62 | 4 | 8.1 | 10 | 72 | 0.065 | 455,749 | 807,956 | 8 |
| 1081 | PALOS VDS N | 0 W/ROLLING HILLS | 0 E/CRENSHAW | 3495 | 40 | 2 | 8.5 | 31 | 77 | 0.049 | 355,284 | 1,163,241 | 6 |
| 1100 | ROLLING HILLS | 0 N/TANGLEWOOD | 0 S/N CITY LIM | 770 | 48 | 2 | 6.9 | 19 | 64 | 0.049 | 74,047 | 1,237,288 | 5A |
| 1047 | HIGHRIDGE | 0 N/CREST | 0 S/WHITLEY COL | 2250 | 51 | 2 | 6.7 | 13 | 59 | 0.046 | 235,614 | 1,472,902 | 7A |
| 1044 | HAWTHORNE | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1160 | 72 | 4 | 8.6 | 64 | 85 | 0.036 | 182,338 | 1,655,239 | 5 |
| 1070 | PALOS VDS E | 0 N/P.V. DR N | 400 N/P.V. DR N | 400 | 86 | 4 | 7.1 | 20 | 86 | 0.030 | 68,490 | 1,723,729 | 4A |
| 1075 | PALOS VDS N | 550 W/CRENSHAW | 0 E/HAWTHORNE | 1980 | 40 | 2 | 7.5 | 60 | 90 | 0.023 | 177,218 | 1,900,947 | 4 |
| 1077 | PALOS VDS N | 0 W/HAWTHORNE | 0 E/SILVER SPUR | 1960 | 32 | 2 | 7.7 | 75 | 96 | 0.014 | 128,857 | 2,029,804 | 3 |
| 1079 | PALOS VDS N | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1990 | 33 | 2 | 7.7 | 77 | 96 | 0.013 | 134,613 | **2,164,417** | 3 |

**APPENDIX C2**

**RESIDENTIAL MAJOR MAINTENANCE PRIORITY**

## RESIDENTIAL MAJOR MAINTENANCE INVENTORY - Priority Listing

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Ben/$ | Cost | Cumul Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1126 | SORREL | 0 W/END | 0 E/DAPPLEGRAY | 910 | 27 | 2 | 4.8 | 13 | 43 | 0.038 | 63,340 | 63,340 | 8A |
| 1130 | STRAWBERRY | 0 N/P.V. DR N | 0 S/END | 1760 | 32 | 2 | 4.8 | 6 | 54 | 0.031 | 135,717 | 199,057 | 8A |
| 1138 | WILLOWWOOD | 0 S/KINGSPINE | 0 E/SILVER SPUR | 2470 | 33 | 2 | 5 | 22 | 69 | 0.029 | 170,876 | 369,933 | 5A |
| 1114 | SILVER EAGLE | 0 N/ROCKBLUFF | 0 S/ROLLINGWOOD | 1320 | 27 | 2 | 4.8 | 32 | 76 | 0.026 | 75,318 | 445,252 | 4A |
| 1014 | CONESTOGA | 0 N/SADDLE | 0 S/P.V.DR E | 1520 | 32 | 2 | 5 | 54 | 79 | 0.025 | 99,930 | 545,181 | 4A |
| 1036 | GAUCHO | 0 W/SADDLE | 0 E/CONESTOGA | 970 | 33 | 2 | 4.8 | 42 | 79 | 0.021 | 66,591 | 611,772 | 4A |
| 1105 | SADDLE | 0 N/CONESTOGA | 0 S/GAUCHO | 1120 | 33 | 2 | 4.8 | 43 | 77 | 0.021 | 76,888 | 688,660 | 4A |
| 1035 | FOXPOINT | 0 N/END | 0 S/ROCKBLUFF | 610 | 25 | 2 | 4.8 | 48 | 84 | 0.020 | 31,985 | 720,645 | 4A |
| 1089 | PORTILLO | 0 W/SADDLE | 0 E/END | 260 | 23 | 2 | 4.3 | 27 | 79 | 0.020 | 12,826 | 733,471 | 4A |
| 1085 | PINTO | 0 N/PALOMINO | 0 S/END | 510 | 27 | 2 | 4.8 | 54 | 84 | 0.019 | 28,681 | 762,152 | 4A |
| 1106 | SADDLE | 0 N/GAUCHO | 0 S/CARRIAGE | 350 | 26 | 2 | 4.8 | 45 | 82 | 0.019 | 19,295 | 781,446 | 4A |
| 1066 | PALOMINO | 0 W/ROLLING HLS | 0 E/PONY LANE | 670 | 27 | 2 | 4.8 | 58 | 83 | 0.019 | 37,678 | 819,125 | 4A |
| 1118 | SILVER SPRING | 0 E/SILVER SPG | 0 E/WILLOWWOOD | 1510 | 26 | 2 | 4.8 | 33 | 79 | 0.019 | 83,242 | 902,367 | 4A |
| 1125 | BART EARLE | 420' N/O SILVER SPUR | 0 W/BEECHGATE | 1780 | 36 | 2 | 6.1 | 53 | 88 | 0.017 | 130,561 | 1,032,928 | 4A |
| 1115 | SILVERLEAF | 0 E/END | 0 S/ROANWOOD | 360 | 27 | 2 | 4.5 | 31 | 81 | 0.016 | 20,245 | 1,053,173 | 4A |
| 1135 | VIA DE LA VST | 0 W/END | 0 E/SILVER SPUR | 360 | 22 | 2 | 4.8 | 51 | 88 | 0.015 | 16,823 | 1,069,996 | 4A |
| 1131 | SUGARHILL | 0 W/END | 0 E/MASONGATE | 1670 | 34 | 2 | 4.8 | 44 | 83 | 0.015 | 117,872 | 1,187,868 | 4A |
| 1021 | DOBBIN | 0 N/P.V.DR N | 0 S/END | 510 | 23 | 2 | 4.8 | 55 | 87 | 0.014 | 24,802 | 1,212,670 | 4A |
| 1098 | ROLLANDO | 0 E/MARINA | 0 W/END | 610 | 26 | 2 | 4.8 | 57 | 82 | 0.013 | 33,144 | 1,245,814 | 4A |
| 1038 | GOLDENSPAR | 0 N/RANCHVIEW | 0 S/SLVR SDL | 400 | 26 | 2 | 4.8 | 59 | 88 | 0.013 | 21,734 | 1,267,548 | 4A |
| 1039 | GOLDRING | 0 N/SLVR LEAF | 0 S/END | 160 | 28 | 2 | 4.3 | 49 | 80 | 0.013 | 9,302 | 1,276,850 | 4A |
| 1112 | SHADY VISTA | 0 N/SANTA BELLA | 0 S/SILVER SDL | 1020 | 32 | 2 | 4.8 | 47 | 86 | 0.010 | 67,058 | 1,343,909 | 4A |
| 1107 | SANTA BELLA | 0 W/END | 0 E/SHADY VISTA | 1820 | 33 | 2 | 4.8 | 61 | 87 | 0.010 | 123,113 | 1,467,022 | 4A |
| 1062 | MASONGATE | 0 N/P.V. DR N | 0 S/FERNCREEK | 920 | 36 | 2 | 4.8 | 50 | 87 | 0.009 | 68,490 | 1,535,512 | 4A |
| 1008 | BUCKSKIN | 0 N/DAPPLEGRAY | 0 S/END | 2260 | 31 | 2 | 4.8 | 6 | 78 | 0.000 | 93,236 | **1,628,747** | 4A |

# APPENDIX C3

# MAJOR MAINTENANCE BENEFIT/COST

## MAJOR MAINTENANCE INVENTORY - BENEFIT/COST

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Ben/$ | Cost | Cumul Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1023 | DEEP VALLEY | 0 W/SILVER SPUR | 0 E/DRYBANK | 2450 | 36 | 2 | 7 | 6 | 61 | 0.094 | 179,704 | 179,704 | 7A |
| 1069 | PALOS VDS E | 0 N/CONESTOGA | 550 S/P.V. DR N | 1800 | 37 | 2 | 7.1 | 0 | 35 | 0.082 | 172,503 | 352,208 | 8A |
| 1119 | SILVER SPUR | 0 N/CRENSHAW | 0 S/DRYBANK | 2610 | 62 | 4 | 8.1 | 10 | 72 | 0.065 | 455,749 | 807,956 | 8 |
| 1081 | PALOS VDS N | 0 W/ROLLING HILLS | 0 E/CRENSHAW | 3495 | 40 | 2 | 8.5 | 31 | 77 | 0.049 | 355,284 | 1,163,241 | 6 |
| 1100 | ROLLING HILLS | 0 N/TANGLEWOOD | 0 S/N CITY LIM | 770 | 48 | 2 | 6.9 | 19 | 64 | 0.049 | 74,047 | 1,237,288 | 5A |
| 1047 | HIGHRIDGE | 0 N/CREST | 0 S/WHITLEY COL | 2250 | 51 | 2 | 6.7 | 13 | 59 | 0.046 | 235,614 | 1,472,902 | 7A |
| 1126 | SORREL | 0 W/END | 0 E/DAPPLEGRAY | 910 | 27 | 2 | 4.8 | 13 | 43 | 0.038 | 63,340 | 1,536,241 | 8A |
| 1044 | HAWTHORNE | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1160 | 72 | 4 | 8.6 | 64 | 85 | 0.036 | 182,338 | 1,718,579 | 5 |
| 1130 | STRAWBERRY | 0 N/P.V. DR N | 0 S/END | 1760 | 32 | 2 | 4.8 | 6 | 54 | 0.031 | 135,717 | 1,854,296 | 8A |
| 1070 | PALOS VDS E | 0 N/P.V. DR N | 400 N/P.V. DR N | 400 | 86 | 4 | 7.1 | 20 | 86 | 0.030 | 68,490 | 1,922,786 | 4A |
| 1138 | WILLOWWOOD | 0 S/KINGSPINE | 0 E/SILVER SPUR | 2470 | 33 | 2 | 5.0 | 22 | 69 | 0.029 | 170,876 | 2,093,663 | 5A |
| 1114 | SILVER EAGLE | 0 N/ROCKBLUFF | 0 S/ROLLINGWOOD | 1320 | 27 | 2 | 4.8 | 32 | 76 | 0.026 | 75,318 | 2,168,981 | 4A |
| 1014 | CONESTOGA | 0 N/SADDLE | 0 S/P.V.DR E | 1520 | 32 | 2 | 5 | 54 | 79 | 0.025 | 99,930 | 2,268,911 | 4A |
| 1075 | PALOS VDS N | 550 W/CRENSHAW | 0 E/HAWTHORNE | 1980 | 40 | 2 | 7.5 | 60 | 90 | 0.023 | 177,218 | 2,446,129 | 4 |
| 1036 | GAUCHO | 0 W/SADDLE | 0 E/CONESTOGA | 970 | 33 | 2 | 4.8 | 42 | 79 | 0.021 | 66,591 | 2,512,720 | 4A |
| 1105 | SADDLE | 0 N/CONESTOGA | 0 S/GAUCHO | 1120 | 33 | 2 | 4.8 | 43 | 77 | 0.021 | 76,888 | 2,589,608 | 4A |
| 1035 | FOXPOINT | 0 N/END | 0 S/ROCKBLUFF | 610 | 25 | 2 | 4.8 | 48 | 84 | 0.020 | 31,985 | 2,621,592 | 4A |
| 1089 | PORTILLO | 0 W/SADDLE | 0 E/END | 260 | 23 | 2 | 4.3 | 27 | 79 | 0.020 | 12,826 | 2,634,419 | 4A |
| 1085 | PINTO | 0 N/PALOMINO | 0 S/END | 510 | 27 | 2 | 4.8 | 54 | 84 | 0.019 | 28,681 | 2,663,099 | 4A |
| 1106 | SADDLE | 0 N/GAUCHO | 0 S/CARRIAGE | 350 | 26 | 2 | 4.8 | 45 | 82 | 0.019 | 19,295 | 2,682,394 | 4A |
| 1066 | PALOMINO | 0 W/ROLLING HLS | 0 E/PONY LANE | 670 | 27 | 2 | 4.8 | 58 | 83 | 0.019 | 37,678 | 2,720,072 | 4A |
| 1118 | SILVER SPRING | 0 E/SILVER SPG | 0 E/WILLOWWOOD | 1510 | 26 | 2 | 4.8 | 33 | 79 | 0.019 | 83,242 | 2,803,315 | 4A |
| 1125 | BART EARLE | 420' N/O SILVER SPUR | 0 W/BEECHGATE | 1780 | 36 | 2 | 6.1 | 53 | 88 | 0.017 | 130,561 | 2,933,876 | 4A |
| 1115 | SILVERLEAF | 0 E/END | 0 S/ROANWOOD | 360 | 27 | 2 | 4.5 | 31 | 81 | 0.016 | 20,245 | 2,954,121 | 4A |
| 1135 | VIA DE LA VST | 0 W/END | 0 E/SILVER SPUR | 360 | 22 | 2 | 4.8 | 51 | 88 | 0.015 | 16,823 | 2,970,943 | 4A |
| 1131 | SUGARHILL | 0 W/END | 0 E/MASONGATE | 1670 | 34 | 2 | 4.8 | 44 | 83 | 0.015 | 117,872 | 3,088,815 | 4A |
| 1021 | DOBBIN | 0 N/P.V.DR N | 0 S/END | 510 | 23 | 2 | 4.8 | 55 | 87 | 0.014 | 24,802 | 3,113,617 | 4A |
| 1077 | PALOS VDS N | 0 W/HAWTHORNE | 0 E/SILVER SPUR | 1960 | 32 | 2 | 7.7 | 75 | 96 | 0.014 | 128,857 | 3,242,474 | 3 |
| 1079 | PALOS VDS N | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1990 | 33 | 2 | 7.7 | 77 | 96 | 0.013 | 134,613 | 3,377,087 | 3 |
| 1098 | ROLLANDO | 0 E/MARINA | 0 W/END | 610 | 26 | 2 | 4.8 | 57 | 82 | 0.013 | 33,144 | 3,410,232 | 4A |
| 1038 | GOLDENSPAR | 0 N/RANCHVIEW | 0 S/SLVR SDL | 400 | 26 | 2 | 4.8 | 59 | 88 | 0.013 | 21,734 | 3,431,966 | 4A |
| 1039 | GOLDRING | 0 N/SLVR LEAF | 0 S/END | 160 | 28 | 2 | 4.3 | 49 | 80 | 0.013 | 9,302 | 3,441,268 | 4A |
| 1112 | SHADY VISTA | 0 N/SANTA BELLA | 0 S/SILVER SDL | 1020 | 32 | 2 | 4.8 | 47 | 86 | 0.010 | 67,058 | 3,508,326 | 4A |
| 1107 | SANTA BELLA | 0 W/END | 0 E/SHADY VISTA | 1820 | 33 | 2 | 4.8 | 61 | 87 | 0.010 | 123,113 | 3,631,439 | 4A |
| 1062 | MASONGATE | 0 N/P.V. DR N | 0 S/FERNCREEK | 920 | 36 | 2 | 4.8 | 50 | 87 | 0.009 | 68,490 | 3,699,929 | 4A |
| 1008 | BUCKSKIN | 0 N/DAPPLEGRAY | 0 S/END | 2260 | 31 | 2 | 4.8 | 6 | 78 | 0.000 | 93,236 | **3,793,165** | 4A |

## MAJOR MAINTENANCE INVENTORY - PCI

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Ben/$ | Cost | Cumul Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1069 | PALOS VDS E | 0 N/CONESTOGA | 550 S/P.V. DR N | 1800 | 37 | 2 | 7.1 | 0 | 35 | 0.082 | 172,503 | 172,503 | 8A |
| 1008 | BUCKSKIN | 0 N/DAPPLEGRAY | 0 S/END | 2260 | 31 | 2 | 4.8 | 6 | 78 | 0.000 | 93,236 | 265,739 | 4A |
| 1023 | DEEP VALLEY | 0 W/SILVER SPUR | 0 E/DRYBANK | 2450 | 36 | 2 | 7 | 6 | 61 | 0.094 | 179,704 | 445,443 | 7A |
| 1130 | STRAWBERRY | 0 N/P.V. DR N | 0 S/END | 1760 | 32 | 2 | 4.8 | 6 | 54 | 0.031 | 135,717 | 581,160 | 8A |
| 1119 | SILVER SPUR | 0 N/CRENSHAW | 0 S/DRYBANK | 2610 | 62 | 4 | 8.1 | 10 | 72 | 0.065 | 455,749 | 1,036,909 | 8 |
| 1047 | HIGHRIDGE | 0 N/CREST | 0 S/WHITLEY COL | 2250 | 51 | 2 | 6.7 | 13 | 59 | 0.046 | 235,614 | 1,272,523 | 7A |
| 1126 | SORREL | 0 W/END | 0 E/DAPPLEGRAY | 910 | 27 | 2 | 4.8 | 13 | 43 | 0.038 | 63,340 | 1,335,863 | 8A |
| 1100 | ROLLING HILLS | 0 N/TANGLEWOOD | 0 S/N CITY LIM | 770 | 48 | 2 | 6.9 | 19 | 64 | 0.049 | 74,047 | 1,409,910 | 5A |
| 1070 | PALOS VDS E | 0 N/P.V. DR N | 400 N/P.V. DR N | 400 | 86 | 4 | 7.1 | 20 | 86 | 0.030 | 68,490 | 1,478,400 | 4A |
| 1138 | WILLOWWOOD | 0 S/KINGSPINE | 0 E/SILVER SPUR | 2470 | 33 | 2 | 5 | 22 | 69 | 0.029 | 170,876 | 1,649,276 | 5A |
| 1089 | PORTILLO | 0 W/SADDLE | 0 E/END | 260 | 23 | 2 | 4.3 | 27 | 79 | 0.020 | 12,826 | 1,662,103 | 4A |
| 1081 | PALOS VDS N | 0 W/ROLLING HILLS | 0 E/CRENSHAW | 3495 | 40 | 2 | 8.5 | 31 | 77 | 0.049 | 355,284 | 2,017,387 | 6 |
| 1115 | SILVERLEAF | 0 E/END | 0 S/ROANWOOD | 360 | 27 | 2 | 4.5 | 31 | 81 | 0.016 | 20,245 | 2,037,632 | 4A |
| 1114 | SILVER EAGLE | 0 N/ROCKBLUFF | 0 S/ROLLINGWOOD | 1320 | 27 | 2 | 4.8 | 32 | 76 | 0.026 | 75,318 | 2,112,950 | 4A |
| 1118 | SILVER SPRING | 0 E/SILVER SPG | 0 E/WILLOWWOOD | 1510 | 26 | 2 | 4.8 | 33 | 79 | 0.019 | 83,242 | 2,196,193 | 4A |
| 1036 | GAUCHO | 0 W/SADDLE | 0 E/CONESTOGA | 970 | 33 | 2 | 4.8 | 42 | 79 | 0.021 | 66,591 | 2,262,783 | 4A |
| 1105 | SADDLE | 0 N/CONESTOGA | 0 S/GAUCHO | 1120 | 33 | 2 | 4.8 | 43 | 77 | 0.021 | 76,888 | 2,339,671 | 4A |
| 1131 | SUGARHILL | 0 W/END | 0 E/MASONGATE | 1670 | 34 | 2 | 4.8 | 44 | 83 | 0.015 | 117,872 | 2,457,543 | 4A |
| 1106 | SADDLE | 0 N/GAUCHO | 0 S/CARRIAGE | 350 | 26 | 2 | 4.8 | 45 | 82 | 0.019 | 19,295 | 2,476,838 | 4A |
| 1112 | SHADY VISTA | 0 N/SANTA BELLA | 0 S/SILVER SDL | 1020 | 32 | 2 | 4.8 | 47 | 86 | 0.010 | 67,058 | 2,543,896 | 4A |
| 1035 | FOXPOINT | 0 N/END | 0 S/ROCKBLUFF | 610 | 25 | 2 | 4.8 | 48 | 84 | 0.020 | 31,985 | 2,575,881 | 4A |
| 1039 | GOLDRING | 0 N/SLVR LEAF | 0 S/END | 160 | 28 | 2 | 4.3 | 49 | 80 | 0.013 | 9,302 | 2,585,183 | 4A |
| 1062 | MASONGATE | 0 N/P.V. DR N | 0 S/FERNCREEK | 920 | 36 | 2 | 4.8 | 50 | 87 | 0.009 | 68,490 | 2,653,673 | 4A |
| 1135 | VIA DE LA VST | 0 W/END | 0 E/SILVER SPUR | 360 | 22 | 2 | 4.8 | 51 | 88 | 0.015 | 16,823 | 2,670,496 | 4A |
| 1125 | BART EARLE | 420' N/O SILVER SPUR | 0 W/BEECHGATE | 1780 | 36 | 2 | 6.1 | 53 | 88 | 0.017 | 130,561 | 2,801,056 | 4A |
| 1014 | CONESTOGA | 0 N/SADDLE | 0 S/P.V.DR E | 1520 | 32 | 2 | 5 | 54 | 79 | 0.025 | 99,930 | 2,900,986 | 4A |
| 1085 | PINTO | 0 N/PALOMINO | 0 S/END | 510 | 27 | 2 | 4.8 | 54 | 84 | 0.019 | 28,681 | 2,929,667 | 4A |
| 1021 | DOBBIN | 0 N/P.V.DR N | 0 S/END | 510 | 23 | 2 | 4.8 | 55 | 87 | 0.014 | 24,802 | 2,954,469 | 4A |
| 1098 | ROLLANDO | 0 E/MARINA | 0 W/END | 610 | 26 | 2 | 4.8 | 57 | 82 | 0.013 | 33,144 | 2,987,613 | 4A |
| 1066 | PALOMINO | 0 W/ROLLING HLS | 0 E/PONY LANE | 670 | 27 | 2 | 4.8 | 58 | 83 | 0.019 | 37,678 | 3,025,292 | 4A |
| 1038 | GOLDENSPAR | 0 N/RANCHVIEW | 0 S/SLVR SDL | 400 | 26 | 2 | 4.8 | 59 | 88 | 0.013 | 21,734 | 3,047,026 | 4A |
| 1075 | PALOS VDS N | 550 W/CRENSHAW | 0 E/HAWTHORNE | 1980 | 40 | 2 | 7.5 | 60 | 90 | 0.023 | 177,218 | 3,224,244 | 4 |
| 1107 | SANTA BELLA | 0 W/END | 0 E/SHADY VISTA | 1820 | 33 | 2 | 4.8 | 61 | 87 | 0.010 | 123,113 | 3,347,357 | 4A |
| 1044 | HAWTHORNE | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1160 | 72 | 4 | 8.6 | 64 | 85 | 0.036 | 182,338 | 3,529,695 | 5 |
| 1077 | PALOS VDS N | 0 W/HAWTHORNE | 0 E/SILVER SPUR | 1960 | 32 | 2 | 7.7 | 75 | 96 | 0.014 | 128,857 | 3,658,552 | 3 |
| 1079 | PALOS VDS N | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1990 | 33 | 2 | 7.7 | 77 | 96 | 0.013 | 134,613 | **3,793,165** | 3 |

## MAJOR MAINTENANCE INVENTORY - SI

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Ben/$ | Cost | Cumul Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1069 | PALOS VDS E | 0 N/CONESTOGA | 550 S/P.V. DR N | 1800 | 37 | 2 | 7.1 | 0 | 35 | 0.082 | 172,503 | 172,503 | 8A |
| 1126 | SORREL | 0 W/END | 0 E/DAPPLEGRAY | 910 | 27 | 2 | 4.8 | 13 | 43 | 0.038 | 63,340 | 235,843 | 8A |
| 1130 | STRAWBERRY | 0 N/P.V. DR N | 0 S/END | 1760 | 32 | 2 | 4.8 | 6 | 54 | 0.031 | 135,717 | 371,560 | 8A |
| 1047 | HIGHRIDGE | 0 N/CREST | 0 S/WHITLEY COL | 2250 | 51 | 2 | 6.7 | 13 | 59 | 0.046 | 235,614 | 607,174 | 7A |
| 1023 | DEEP VALLEY | 0 W/SILVER SPUR | 0 E/DRYBANK | 2450 | 36 | 2 | 7 | 6 | 61 | 0.094 | 179,704 | 786,878 | 7A |
| 1100 | ROLLING HILLS | 0 N/TANGLEWOOD | 0 S/N CITY LIM | 770 | 48 | 2 | 6.9 | 19 | 64 | 0.049 | 74,047 | 860,925 | 5A |
| 1138 | WILLOWWOOD | 0 S/KINGSPINE | 0 E/SILVER SPUR | 2470 | 33 | 2 | 5.0 | 22 | 69 | 0.029 | 170,876 | 1,031,802 | 5A |
| 1119 | SILVER SPUR | 0 N/CRENSHAW | 0 S/DRYBANK | 2610 | 62 | 4 | 8.1 | 10 | 72 | 0.065 | 455,749 | 1,487,551 | 8 |
| 1114 | SILVER EAGLE | 0 N/ROCKBLUFF | 0 S/ROLLINGWOOD | 1320 | 27 | 2 | 4.8 | 32 | 76 | 0.026 | 75,318 | 1,562,869 | 4A |
| 1105 | SADDLE | 0 N/CONESTOGA | 0 S/GAUCHO | 1120 | 33 | 2 | 4.8 | 43 | 77 | 0.021 | 76,888 | 1,639,757 | 4A |
| 1081 | PALOS VDS N | 0 W/ROLLING HILLS | 0 E/CRENSHAW | 3495 | 40 | 2 | 8.5 | 31 | 77 | 0.049 | 355,284 | 1,995,041 | 6 |
| 1008 | BUCKSKIN | 0 N/DAPPLEGRAY | 0 S/END | 2260 | 31 | 2 | 4.8 | 6 | 78 | 0.000 | 93,236 | 2,088,277 | 4A |
| 1036 | GAUCHO | 0 W/SADDLE | 0 E/CONESTOGA | 970 | 33 | 2 | 4.8 | 42 | 79 | 0.021 | 66,591 | 2,154,867 | 4A |
| 1014 | CONESTOGA | 0 N/SADDLE | 0 S/P.V.DR E | 1520 | 32 | 2 | 5.0 | 54 | 79 | 0.025 | 99,930 | 2,254,797 | 4A |
| 1089 | PORTILLO | 0 W/SADDLE | 0 E/END | 260 | 23 | 2 | 4.3 | 27 | 79 | 0.020 | 12,826 | 2,267,624 | 4A |
| 1118 | SILVER SPRING | 0 E/SILVER SPG | 0 E/WILLOWWOOD | 1510 | 26 | 2 | 4.8 | 33 | 79 | 0.019 | 83,242 | 2,350,866 | 4A |
| 1039 | GOLDRING | 0 N/SLVR LEAF | 0 S/END | 160 | 28 | 2 | 4.3 | 49 | 80 | 0.013 | 9,302 | 2,360,168 | 4A |
| 1115 | SILVERLEAF | 0 E/END | 0 S/ROANWOOD | 360 | 27 | 2 | 4.5 | 31 | 81 | 0.016 | 20,245 | 2,380,413 | 4A |
| 1098 | ROLLANDO | 0 E/MARINA | 0 W/END | 610 | 26 | 2 | 4.8 | 57 | 82 | 0.013 | 33,144 | 2,413,558 | 4A |
| 1106 | SADDLE | 0 N/GAUCHO | 0 S/CARRIAGE | 350 | 26 | 2 | 4.8 | 45 | 82 | 0.019 | 19,295 | 2,432,852 | 4A |
| 1131 | SUGARHILL | 0 W/END | 0 E/MASONGATE | 1670 | 34 | 2 | 4.8 | 44 | 83 | 0.015 | 117,872 | 2,550,724 | 4A |
| 1066 | PALOMINO | 0 W/ROLLING HLS | 0 E/PONY LANE | 670 | 27 | 2 | 4.8 | 58 | 83 | 0.019 | 37,678 | 2,588,403 | 4A |
| 1085 | PINTO | 0 N/PALOMINO | 0 S/END | 510 | 27 | 2 | 4.8 | 54 | 84 | 0.019 | 28,681 | 2,617,083 | 4A |
| 1035 | FOXPOINT | 0 N/END | 0 S/ROCKBLUFF | 610 | 25 | 2 | 4.8 | 48 | 84 | 0.020 | 31,985 | 2,649,068 | 4A |
| 1044 | HAWTHORNE | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1160 | 72 | 4 | 8.6 | 64 | 85 | 0.036 | 182,338 | 2,831,405 | 5 |
| 1112 | SHADY VISTA | 0 N/SANTA BELLA | 0 S/SILVER SDL | 1020 | 32 | 2 | 4.8 | 47 | 86 | 0.010 | 67,058 | 2,898,464 | 4A |
| 1070 | PALOS VDS E | 0 N/P.V. DR N | 400 N/P.V. DR N | 400 | 86 | 4 | 7.1 | 20 | 86 | 0.030 | 68,490 | 2,966,954 | 4A |
| 1062 | MASONGATE | 0 N/P.V. DR N | 0 S/FERNCREEK | 920 | 36 | 2 | 4.8 | 50 | 87 | 0.009 | 68,490 | 3,035,444 | 4A |
| 1107 | SANTA BELLA | 0 W/END | 0 E/SHADY VISTA | 1820 | 33 | 2 | 4.8 | 61 | 87 | 0.010 | 123,113 | 3,158,557 | 4A |
| 1021 | DOBBIN | 0 N/P.V.DR N | 0 S/END | 510 | 23 | 2 | 4.8 | 55 | 87 | 0.014 | 24,802 | 3,183,359 | 4A |
| 1125 | BART EARLE | 420' N/O SILVER SPUR | 0 W/BEECHGATE | 1780 | 36 | 2 | 6.1 | 53 | 88 | 0.017 | 130,561 | 3,313,920 | 4A |
| 1038 | GOLDENSPAR | 0 N/RANCHVIEW | 0 S/SLVR SDL | 400 | 26 | 2 | 4.8 | 59 | 88 | 0.013 | 21,734 | 3,335,654 | 4A |
| 1135 | VIA DE LA VST | 0 W/END | 0 E/SILVER SPUR | 360 | 22 | 2 | 4.8 | 51 | 88 | 0.015 | 16,823 | 3,352,477 | 4A |
| 1075 | PALOS VDS N | 550 W/CRENSHAW | 0 E/HAWTHORNE | 1980 | 40 | 2 | 7.5 | 60 | 90 | 0.023 | 177,218 | 3,529,695 | 4 |
| 1077 | PALOS VDS N | 0 W/HAWTHORNE | 0 E/SILVER SPUR | 1960 | 32 | 2 | 7.7 | 75 | 96 | 0.014 | 128,857 | 3,658,552 | 3 |
| 1079 | PALOS VDS N | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1990 | 33 | 2 | 7.7 | 77 | 96 | 0.013 | 134,613 | **3,793,165** | 3 |

## MAJOR MAINTENANCE INVENTORY - Alpha

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Bnft/$ | Cost | Cumul Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1125 | BART EARLE | 420' N/O SILVER SPUR | 0 W/BEECHGATE | 1780 | 36 | 2 | 6.1 | 53 | 88 | 0.017 | 130,561 | 130,561 | 4A |
| 1008 | BUCKSKIN | 0 N/DAPPLEGRAY | 0 S/END | 2260 | 31 | 2 | 4.8 | 6 | 78 | 0.000 | 93,236 | 223,796 | 4A |
| 1014 | CONESTOGA | 0 N/SADDLE | 0 S/P.V.DR E | 1520 | 32 | 2 | 5.0 | 54 | 79 | 0.025 | 99,930 | 323,726 | 4A |
| 1023 | DEEP VALLEY | 0 W/SILVER SPUR | 0 E/DRYBANK | 2450 | 36 | 2 | 7.0 | 6 | 61 | 0.094 | 179,704 | 503,431 | 7A |
| 1021 | DOBBIN | 0 N/P.V.DR N | 0 S/END | 510 | 23 | 2 | 4.8 | 55 | 87 | 0.014 | 24,802 | 528,232 | 4A |
| 1035 | FOXPOINT | 0 N/END | 0 S/ROCKBLUFF | 610 | 25 | 2 | 4.8 | 48 | 84 | 0.020 | 31,985 | 560,217 | 4A |
| 1036 | GAUCHO | 0 W/SADDLE | 0 E/CONESTOGA | 970 | 33 | 2 | 4.8 | 42 | 79 | 0.021 | 66,591 | 626,808 | 4A |
| 1038 | GOLDENSPAR | 0 N/RANCHVIEW | 0 S/SLVR SDL | 400 | 26 | 2 | 4.8 | 59 | 88 | 0.013 | 21,734 | 648,542 | 4A |
| 1039 | GOLDRING | 0 N/SLVR LEAF | 0 S/END | 160 | 28 | 2 | 4.3 | 49 | 80 | 0.013 | 9,302 | 657,844 | 4A |
| 1044 | HAWTHORNE | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1160 | 72 | 4 | 8.6 | 64 | 85 | 0.04 | 182,338 | 840,181 | 5 |
| 1047 | HIGHRIDGE | 0 N/CREST | 0 S/WHITLEY COL | 2250 | 51 | 2 | 6.7 | 13 | 59 | 0.046 | 235,614 | 1,075,795 | 7A |
| 1062 | MASONGATE | 0 N/P.V. DR N | 0 S/FERNCREEK | 920 | 36 | 2 | 4.8 | 50 | 87 | 0.009 | 68,490 | 1,144,285 | 4A |
| 1066 | PALOMINO | 0 W/ROLLING HLS | 0 E/PONY LANE | 670 | 27 | 2 | 4.8 | 58 | 83 | 0.019 | 37,678 | 1,181,964 | 4A |
| 1069 | PALOS VDS E | 0 N/CONESTOGA | 550 S/P.V. DR N | 1800 | 37 | 2 | 7.1 | 0 | 35 | 0.082 | 172,503 | 1,354,467 | 8A |
| 1070 | PALOS VDS E | 0 N/P.V. DR N | 400 N/P.V. DR N | 400 | 86 | 4 | 7.1 | 20 | 86 | 0.030 | 68,490 | 1,422,957 | 4A |
| 1077 | PALOS VDS N | 0 W/HAWTHORNE | 0 E/SILVER SPUR | 1960 | 32 | 2 | 7.7 | 75 | 96 | 0.014 | 128,857 | 1,551,814 | 3 |
| 1081 | PALOS VDS N | 0 W/ROLLING HILLS | 0 E/CRENSHAW | 3495 | 40 | 2 | 8.5 | 31 | 77 | 0.049 | 355,284 | 1,907,098 | 6 |
| 1079 | PALOS VDS N | 0 W/SILVER SPUR | 0 E/W CITY LIM | 1990 | 33 | 2 | 7.7 | 77 | 96 | 0.013 | 134,613 | 2,041,711 | 3 |
| 1075 | PALOS VDS N | 550 W/CRENSHAW | 0 E/HAWTHORNE | 1980 | 40 | 2 | 7.5 | 60 | 90 | 0.023 | 177,218 | 2,218,929 | 4 |
| 1085 | PINTO | 0 N/PALOMINO | 0 S/END | 510 | 27 | 2 | 4.8 | 54 | 84 | 0.019 | 28,681 | 2,247,610 | 4A |
| 1089 | PORTILLO | 0 W/SADDLE | 0 E/END | 260 | 23 | 2 | 4.3 | 27 | 79 | 0.020 | 12,826 | 2,260,436 | 4A |
| 1098 | ROLLANDO | 0 E/MARINA | 0 W/END | 610 | 26 | 2 | 4.8 | 57 | 82 | 0.013 | 33,144 | 2,293,581 | 4A |
| 1100 | ROLLING HILLS | 0 N/TANGLEWOOD | 0 S/N CITY LIM | 770 | 48 | 2 | 6.9 | 19 | 64 | 0.049 | 74,047 | 2,367,628 | 5A |
| 1105 | SADDLE | 0 N/CONESTOGA | 0 S/GAUCHO | 1120 | 33 | 2 | 4.8 | 43 | 77 | 0.021 | 76,888 | 2,444,516 | 4A |
| 1106 | SADDLE | 0 N/GAUCHO | 0 S/CARRIAGE | 350 | 26 | 2 | 4.8 | 45 | 82 | 0.019 | 19,295 | 2,463,811 | 4A |
| 1107 | SANTA BELLA | 0 W/END | 0 E/SHADY VISTA | 1820 | 33 | 2 | 4.8 | 61 | 87 | 0.010 | 123,113 | 2,586,924 | 4A |
| 1112 | SHADY VISTA | 0 N/SANTA BELLA | 0 S/SILVER SDL | 1020 | 32 | 2 | 4.8 | 47 | 86 | 0.010 | 67,058 | 2,653,982 | 4A |
| 1114 | SILVER EAGLE | 0 N/ROCKBLUFF | 0 S/ROLLINGWOOD | 1320 | 27 | 2 | 4.8 | 32 | 76 | 0.026 | 75,318 | 2,729,300 | 4A |
| 1118 | SILVER SPRING | 0 E/SILVER SPG | 0 E/WILLOWWOOD | 1510 | 26 | 2 | 4.8 | 33 | 79 | 0.019 | 83,242 | 2,812,543 | 4A |
| 1119 | SILVER SPUR | 0 N/CRENSHAW | 0 S/DRYBANK | 2610 | 62 | 4 | 8.1 | 10 | 72 | 0.065 | 455,749 | 3,268,292 | 8 |
| 1115 | SILVERLEAF | 0 E/END | 0 S/ROANWOOD | 360 | 27 | 2 | 4.5 | 31 | 81 | 0.016 | 20,245 | 3,288,537 | 4A |
| 1126 | SORREL | 0 W/END | 0 E/DAPPLEGRAY | 910 | 27 | 2 | 4.8 | 13 | 43 | 0.038 | 63,340 | 3,351,876 | 8A |
| 1130 | STRAWBERRY | 0 N/P.V. DR N | 0 S/END | 1760 | 32 | 2 | 4.8 | 6 | 54 | 0.031 | 135,717 | 3,487,594 | 8A |
| 1131 | SUGARHILL | 0 W/END | 0 E/MASONGATE | 1670 | 34 | 2 | 4.8 | 44 | 83 | 0.015 | 117,872 | 3,605,466 | 4A |
| 1135 | VIA DE LA VST | 0 W/END | 0 E/SILVER SPUR | 360 | 22 | 2 | 4.8 | 51 | 88 | 0.015 | 16,823 | 3,622,288 | 4A |
| 1138 | WILLOWWOOD | 0 S/KINGSPINE | 0 E/SILVER SPUR | 2470 | 33 | 2 | 5.0 | 22 | 69 | 0.029 | 170,876 | **3,793,165** | 5A |

**APPENDIX D1**

**MINOR MAINTENANCE PRIORITY**

## MINOR MAINTENANCE INVENTORY - Priority Listing

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Priority | Cost | Cumul Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1091 | RANCH VIEW | 0 N/GOLDEN SPAR | 250 N/GOLDEN SPAR | 250 | 26 | 2 | 4.8 | 70 | 97 | 1 | 2,503 | 2,503 | 2A |
| 1064 | MONTECILLO | 0 N/ENCANTO | 0 S/AURORA | 380 | 33 | 2 | 5 | 71 | 93 | 2 | 4,828 | 7,330 | 3A |
| 1012 | CHALMETTE | 0 N/END | 0 S/SUGAR HILL | 210 | 31 | 2 | 4.3 | 76 | 97.8 | 3 | 2,520 | 9,851 | 2A |
| 1061 | MASONGATE | 0 N/FERNCREEK | 0 S/SUGAR HILL | 210 | 35 | 2 | 4.8 | 76 | 99 | 4 | 2,845 | 12,696 | 2A |
| 1065 | MONTECILLO | 0 N/P.V. DR E | 0 S/VISTA REAL | 650 | 50 | 4 | 5 | 9 | 100 | 5 | 11,375 | 24,071 | 2A-C |
| 1020 | DAPPLEGRAY | 0 N/P.V.DR N | 0 S/END | 2970 | 30 | 2 | 4.8 | 15 | 100 | 6 | 31,185 | 55,256 | 2A-C |
| 1099 | ROLLING HILLS | 0 N/PALOS VDS N | 0 S/TANGLEWOOD | 2860 | 30 | 2 | 6.9 | 24 | 96 | 7 | 30,030 | 85,286 | 2A-C |
| 1049 | HIGHRIDGE ES | 0 N/WHITLEY COL | 0 S/ARMAGA SPGS | 2380 | 28 | 1 | 6.7 | 40 | 99 | 8 | 23,324 | 108,610 | 2A-C |
| 1071 | PALOS VDS E | 0 S/P.V. DR N | 550 S/P.V. DR N | 550 | 80 | 4 | 7.1 | 46 | 100 | 9 | 15,400 | 124,010 | 2A-C |
| 1026 | DRYBANK | 0 N/DEEP VALLEY | 0 S/SILVER SPUR | 370 | 40 | 4 | 6.5 | 53 | 95 | 10 | 5,180 | 129,190 | 2A-C |
| 1028 | DUNWOOD | 0 N/WILLOWWOOD | 0 S/KINGSPINE | 1950 | 26 | 2 | 4.8 | 53 | 98 | 11 | 17,745 | 146,935 | 2A-C |
| 1007 | BROKEN BOW | 0 W/SLVR EAGLE | 0 E/END | 560 | 25 | 2 | 4.8 | 55 | 100 | 12 | 4,900 | 151,835 | 2A-C |
| 1037 | GOLDENSPAR | 0 N/END | 0 S/RANCHVIEW | 290 | 26 | 2 | 4.3 | 56 | 89 | 13 | 2,639 | 154,474 | 3A |
| 1128 | STAGECOACH | 0 W/MASONGATE | 0 E/END | 310 | 30 | 2 | 4.4 | 56 | 95 | 14 | 3,255 | 157,729 | 2A-C |
| 1072 | PALOS VDS LN | 0 W/RANCHVIEW | 0 E/SILVER SDL | 1020 | 27 | 2 | 4.8 | 57 | 88 | 15 | 9,639 | 167,368 | 3A |
| 1032 | ESTRIBO | 0 W/CONESTOGA | 0 E/SADDLE | 770 | 26 | 2 | 4.8 | 58 | 98 | 16 | 7,007 | 174,375 | 2A-C |
| 1095 | ROANWOOD | 0 N/END | 0 S/P.V. DR N | 760 | 27 | 2 | 4.8 | 59 | 90 | 17 | 7,182 | 181,557 | 3A |
| 1103 | ROXCOVE | 0 N/DEEP VALLEY | 0 S/SILVER SPUR | 270 | 36 | 2 | 6.1 | 60 | 95 | 18 | 3,402 | 184,959 | 2A-C |
| 1087 | PONDEROSA | 0 W/END | 0 E/P.V. DR N | 510 | 35 | 2 | 4.8 | 62 | 90 | 19 | 6,248 | 191,206 | 3A |
| 1117 | SILVER SADDLE | 0 E/P.V. DR N | 1000 W/P.V. DR N | 1000 | 38 | 2 | 4.8 | 63 | 94 | 20 | 13,300 | 204,506 | 3A |
| 1133 | SUNNYFIELD | 0 N/P.V. DR N | 0 S/END | 610 | 26 | 2 | 4.8 | 63 | 94 | 21 | 5,551 | 210,057 | 3A |
| 1033 | FERNCREEK | 0 E/END | 0 W/MASONGATE | 510 | 33 | 2 | 4.8 | 65 | 88 | 22 | 5,891 | 215,948 | 3A |
| 1116 | SILVER SADDLE | 0 E/SHADY VISTA | 1000 W/P.V. DR N | 950 | 32 | 2 | 4.8 | 65 | 91 | 23 | 10,640 | 226,588 | 3A |
| 1010 | CELESTE | 0 W/MONTECILLO | 0 E/END | 510 | 22 | 2 | 4.8 | 66 | 96 | 24 | 3,927 | 230,515 | 2A-C |
| 1110 | SHADOW | 0 W/ROLLING HLS | 0 E/END | 410 | 22 | 2 | 4.6 | 66 | 94 | 25 | 3,157 | 233,672 | 2A-C |
| 1025 | DORADO | 0 W/END | 0 E/AURORA | 760 | 22 | 2 | 4.8 | 67 | 94 | 26 | 5,852 | 239,524 | 2A-C |
| 1056 | LANTANA | 0 N/AURORA | 0 S/END | 360 | 22 | 2 | 4.5 | 67 | 94 | 27 | 2,772 | 242,296 | 3A |
| 1086 | PLEASANT HILL | 0 W/HIDDEN VLY | 0 E/END | 710 | 27 | 2 | 4.8 | 67 | 95 | 28 | 6,710 | 249,005 | 2A-C |
| 1048 | HIGHRIDGE WS | 0 N/WHITLEY COL | 0 S/ARMAGA SPGS | 2380 | 23 | 1 | 6.7 | 68 | 100 | 29 | 19,159 | 268,164 | 2A-C |
| 1109 | SEAHURST | 0 W/END E/SHADY | 0 E/END E/SHADY | 620 | 26 | 2 | 4.5 | 68 | 94 | 30 | 5,642 | 273,806 | 2A-C |
| 1111 | SHADY VISTA | 0 N/END | 0 S/SANTA BELLA | 1060 | 33 | 2 | 4.8 | 68 | 93 | 31 | 12,243 | 286,049 | 3A |
| 1132 | SUNDOWN | 0 N/GAUCHO | 0 S/CARRIAGE | 270 | 30 | 2 | 4.8 | 68 | 95 | 32 | 2,835 | 288,884 | 2A-C |
| 1136 | VISTA REAL | 0 W/MONTECILLO | 0 E/END | 810 | 22 | 2 | 4.8 | 69 | 94 | 33 | 6,237 | 295,121 | 3A |
| 1031 | ENCANTO | 0 N/MONTECILLO | 0 S/DORADO | 2270 | 32 | 2 | 4.8 | 72 | 94 | 34 | 25,424 | 320,545 | 3A |
| 1094 | RAWHIDE | 0 N/P.V. DR N | 0 S/END | 360 | 26 | 2 | 4.5 | 72 | 95 | 35 | 3,276 | 323,821 | 2A-C |
| 1045 | HIDDEN VALLEY | 0 N/P.V. DR N | 0 S/END | 1760 | 29 | 2 | 4.8 | 73 | 94 | 36 | 17,864 | 341,685 | 3A |
| 1040 | HAMPSHIRE | 0 N/SUGAR HILL | 0 S/END | 110 | 33 | 2 | 4.3 | 76 | 96 | 37 | 1,271 | 342,956 | 2A-C |
| 1004 | BEECHGATE | 0 N/BART EARLE | 0 S/N CITY LIM | 210 | 36 | 2 | 4.8 | 79 | 99 | 38 | 2,646 | 345,602 | 2A-C |
| 1088 | PONY | END N/PALOMINO | END S/PALOMINO | 1420 | 27 | 2 | 4.8 | 80 | 100 | 39 | 13,419 | 359,021 | 2A-C |

## MINOR MAINTENANCE INVENTORY - Priority Listing

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Priority | Cost | Cumul Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1092 | RANCH VIEW | 0 N/P.V. DR N | 250 N/GOLDEN SPAR | 2220 | 31 | 2 | 4.8 | 80 | 98 | 40 | 24,087 | 383,108 | 2A-C |
| 1009 | CARRIAGE | 0 W/SADDLE | 0 E/END | 1140 | 30 | 2 | 5 | 81 | 100 | 41 | 11,970 | 395,078 | 2A-C |
| 1011 | CERRITO | 0 W/END | 0 E/ENCANTO | 310 | 22 | 2 | 4.4 | 88 | 100 | 42 | 2,387 | 397,465 | 2A-C |
| 1030 | ENCANTO | 0 N/DORADO | 0 S/END | 310 | 22 | 2 | 4.4 | 88 | 100 | 43 | 2,387 | 399,852 | 2A-C |
| 1096 | ROCKBLUFF | 0 W/END | 0 E/WILLOWWOOD | 2060 | 26 | 2 | 4.8 | 88 | 97 | 44 | 18,746 | 418,598 | 2A-C |
| 1120 | SILVER SPUR | 0 N/HAWTHORNE | 0 S/N CITY LIM | 240 | 56 | 3 | 8.1 | 90 | 100 | 45 | 4,704 | 423,302 | 2A-C |
| 1001 | AURORA | 0 N/DORADO | 0 S/END | 390 | 22 | 2 | 4.8 | 90 | 100 | 46 | 3,003 | 426,305 | 2A-C |
| 1073 | PALOS VDS LN | 0 W/SILVER SDL | 0 E/END | 580 | 27 | 2 | 4.8 | 94 | 100 | 47 | 5,481 | 431,786 | 2A-C |
| 1006 | BRANDING IRON | 0 N/P.V. DR N | 0 S/END | 570 | 26 | 2 | 4.8 | 95 | 99 | 48 | 5,187 | 436,973 | 2A-C |
| 1090 | QUAILWOOD RD | 0 W/E CITY LIM | 0 E/STONECREST | 210 | 33 | 2 | 4.8 | 95 | 100 | 49 | 2,426 | 439,398 | 2A-C |
| 1002 | AURORA | 0 W/DORADO | 0 E/MONTECILLO | 1380 | 33 | 2 | 4.8 | 96 | 99 | 50 | 15,939 | 455,337 | 2A-C |
| 1034 | FERNCREEK | 0 W/END | 0 E/MASONGATE | 610 | 23 | 2 | 4.8 | 97 | 99 | 51 | 4,911 | 460,248 | 2A-C |
| 1063 | MONTECILLO | 0 N/AURORA | 0 S/END | 640 | 22 | 2 | 5 | 99 | 100 | 52 | 4,928 | **465,176** | 2A-C |

**APPENDIX D2**

**MINOR MAINTENANCE PRIORITY ALPHA**

## MINOR MAINTENANCE INVENTORY - Alpha

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Priority | Cost | Cumul Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1001 | AURORA | 0 N/DORADO | 0 S/END | 390 | 22 | 2 | 4.8 | 90 | 100 | 46 | 3,003 | 3,003 | 2A-C |
| 1002 | AURORA | 0 W/DORADO | 0 E/MONTECILLO | 1380 | 33 | 2 | 4.8 | 96 | 99 | 50 | 15,939 | 18,942 | 2A-C |
| 1004 | BEECHGATE | 0 N/BART EARLE | 0 S/N CITY LIM | 210 | 36 | 2 | 4.8 | 79 | 99 | 38 | 2,646 | 21,588 | 2A-C |
| 1006 | BRANDING IRON | 0 N/P.V. DR N | 0 S/END | 570 | 26 | 2 | 4.8 | 95 | 99 | 48 | 5,187 | 26,775 | 2A-C |
| 1007 | BROKEN BOW | 0 W/SLVR EAGLE | 0 E/END | 560 | 25 | 2 | 4.8 | 55 | 100 | 12 | 4,900 | 31,675 | 2A-C |
| 1009 | CARRIAGE | 0 W/SADDLE | 0 E/END | 1140 | 30 | 2 | 5 | 81 | 100 | 41 | 11,970 | 43,645 | 2A-C |
| 1010 | CELESTE | 0 W/MONTECILLO | 0 E/END | 510 | 22 | 2 | 4.8 | 66 | 96 | 24 | 3,927 | 47,572 | 2A-C |
| 1011 | CERRITO | 0 W/END | 0 E/ENCANTO | 310 | 22 | 2 | 4.4 | 88 | 100 | 42 | 2,387 | 49,959 | 2A-C |
| 1012 | CHALMETTE | 0 N/END | 0 S/SUGAR HILL | 210 | 31 | 2 | 4.3 | 76 | 98 | 3 | 2,520 | 52,479 | 2A |
| 1020 | DAPPLEGRAY | 0 N/P.V.DR N | 0 S/END | 2970 | 30 | 2 | 4.8 | 15 | 100 | 6 | 31,185 | 83,664 | 2A-C |
| 1025 | DORADO | 0 W/END | 0 E/AURORA | 760 | 22 | 2 | 4.8 | 67 | 94 | 26 | 5,852 | 89,516 | 2A-C |
| 1026 | DRYBANK | 0 N/DEEP VALLEY | 0 S/SILVER SPUR | 370 | 40 | 4 | 6.5 | 53 | 95 | 10 | 5,180 | 94,696 | 2A-C |
| 1028 | DUNWOOD | 0 N/WILLOWWOOD | 0 S/KINGSPINE | 1950 | 26 | 2 | 4.8 | 53 | 98 | 11 | 17,745 | 112,441 | 2A-C |
| 1030 | ENCANTO | 0 N/DORADO | 0 S/END | 310 | 22 | 2 | 4.4 | 88 | 100 | 43 | 2,387 | 114,828 | 2A-C |
| 1031 | ENCANTO | 0 N/MONTECILLO | 0 S/DORADO | 2270 | 32 | 2 | 4.8 | 72 | 94 | 34 | 25,424 | 140,252 | 3A |
| 1032 | ESTRIBO | 0 W/CONESTOGA | 0 E/SADDLE | 770 | 26 | 2 | 4.8 | 58 | 98 | 16 | 7,007 | 147,259 | 2A-C |
| 1033 | FERNCREEK | 0 E/END | 0 W/MASONGATE | 510 | 33 | 2 | 4.8 | 65 | 88 | 22 | 5,891 | 153,150 | 3A |
| 1034 | FERNCREEK | 0 W/END | 0 E/MASONGATE | 610 | 23 | 2 | 4.8 | 97 | 99 | 51 | 4,911 | 158,060 | 2A-C |
| 1037 | GOLDENSPAR | 0 N/END | 0 S/RANCHVIEW | 290 | 26 | 2 | 4.3 | 56 | 89 | 13 | 2,639 | 160,699 | 3A |
| 1040 | HAMPSHIRE | 0 N/SUGAR HILL | 0 S/END | 110 | 33 | 2 | 4.3 | 76 | 96 | 37 | 1,271 | 161,970 | 2A-C |
| 1045 | HIDDEN VALLEY | 0 N/P.V. DR N | 0 S/END | 1760 | 29 | 2 | 4.8 | 73 | 93.8 | 36 | 17,864 | 179,834 | 3A |
| 1048 | HIGHRIDGE WS | 0 N/WHITLEY COL | 0 S/ARMAGA SPGS | 2380 | 23 | 1 | 6.7 | 68 | 100 | 29 | 19,159 | 198,993 | 2A-C |
| 1049 | HIGHRIDGE ES | 0 N/WHITLEY COL | 0 S/ARMAGA SPGS | 2380 | 28 | 1 | 6.7 | 40 | 99 | 8 | 23,324 | 222,317 | 2A-C |
| 1056 | LANTANA | 0 N/AURORA | 0 S/END | 360 | 22 | 2 | 4.5 | 67 | 93.8 | 27 | 2,772 | 225,089 | 3A |
| 1061 | MASONGATE | 0 N/FERNCREEK | 0 S/SUGAR HILL | 210 | 35 | 2 | 4.8 | 76 | 99 | 4 | 2,845 | 227,934 | 2A |
| 1063 | MONTECILLO | 0 N/AURORA | 0 S/END | 640 | 22 | 2 | 5 | 99 | 100 | 52 | 4,928 | 232,862 | 2A-C |
| 1064 | MONTECILLO | 0 N/ENCANTO | 0 S/AURORA | 380 | 33 | 2 | 5 | 71 | 93.2 | 2 | 4,828 | 237,690 | 3A |
| 1065 | MONTECILLO | 0 N/P.V. DR E | 0 S/VISTA REAL | 650 | 50 | 4 | 5 | 9 | 100 | 5 | 11,375 | 249,065 | 2A-C |
| 1071 | PALOS VDS E | 0 S/P.V. DR N | 550 S/P.V. DR N | 550 | 80 | 4 | 7.1 | 46 | 100 | 9 | 15,400 | 264,465 | 2A-C |
| 1072 | PALOS VDS LN | 0 W/RANCHVIEW | 0 E/SILVER SDL | 1020 | 27 | 2 | 4.8 | 57 | 88 | 15 | 9,639 | 274,104 | 3A |
| 1073 | PALOS VDS LN | 0 W/SILVER SDL | 0 E/END | 580 | 27 | 2 | 4.8 | 94 | 100 | 47 | 5,481 | 279,585 | 2A-C |
| 1086 | PLEASANT HILL | 0 W/HIDDEN VLY | 0 E/END | 710 | 27 | 2 | 4.8 | 67 | 95 | 28 | 6,710 | 286,294 | 2A-C |
| 1087 | PONDEROSA | 0 W/END | 0 E/P.V. DR N | 510 | 35 | 2 | 4.8 | 62 | 90.3 | 19 | 6,248 | 292,542 | 3A |
| 1088 | PONY | END N/PALOMINO | END S/PALOMINO | 1420 | 27 | 2 | 4.8 | 80 | 100 | 39 | 13,419 | 305,961 | 2A-C |
| 1090 | QUAILWOOD RD | 0 W/E CITY LIM | 0 E/STONECREST | 210 | 33 | 2 | 4.8 | 95 | 100 | 49 | 2,426 | 308,386 | 2A-C |
| 1091 | RANCH VIEW | 0 N/GOLDEN SPAR | 250 N/GOLDEN SPAR | 250 | 26 | 2 | 4.8 | 70 | 97.2 | 1 | 2,503 | 310,889 | 2A |
| 1092 | RANCH VIEW | 0 N/P.V. DR N | 250 N/GOLDEN SPAR | 2220 | 31 | 2 | 4.8 | 80 | 98 | 40 | 24,087 | 334,976 | 2A-C |
| 1094 | RAWHIDE | 0 N/P.V. DR N | 0 S/END | 360 | 26 | 2 | 4.5 | 72 | 95 | 35 | 3,276 | 338,252 | 2A-C |
| 1095 | ROANWOOD | 0 N/END | 0 S/P.V. DR N | 760 | 27 | 2 | 4.8 | 59 | 90 | 17 | 7,182 | 345,434 | 3A |

## MINOR MAINTENANCE INVENTORY - Alpha

| Sec ID | Name | From | To | Length | Width | Lanes | TI | PCI | SI | Priority | Cost | Cumul Cost | Strategy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1096 | ROCKBLUFF | 0 W/END | 0 E/WILLOWWOOD | 2060 | 26 | 2 | 4.8 | 88 | 97 | 44 | 18,746 | 364,180 | 2A-C |
| 1099 | ROLLING HILLS | 0 N/PALOS VDS N | 0 S/TANGLEWOOD | 2860 | 30 | 2 | 6.9 | 24 | 96 | 7 | 30,030 | 394,210 | 2A-C |
| 1103 | ROXCOVE | 0 N/DEEP VALLEY | 0 S/SILVER SPUR | 270 | 36 | 2 | 6.1 | 60 | 95 | 18 | 3,402 | 397,612 | 2A-C |
| 1109 | SEAHURST | 0 W/END E/SHADY | 0 E/END E/SHADY | 620 | 26 | 2 | 4.5 | 68 | 94 | 30 | 5,642 | 403,254 | 2A-C |
| 1110 | SHADOW | 0 W/ROLLING HLS | 0 E/END | 410 | 22 | 2 | 4.6 | 66 | 94 | 25 | 3,157 | 406,411 | 2A-C |
| 1111 | SHADY VISTA | 0 N/END | 0 S/SANTA BELLA | 1060 | 33 | 2 | 4.8 | 68 | 93 | 31 | 12,243 | 418,654 | 3A |
| 1117 | SILVER SADDLE | 0 E/P.V. DR N | 1000 W/P.V. DR N | 1000 | 38 | 2 | 4.8 | 63 | 94 | 20 | 13,300 | 431,954 | 3A |
| 1116 | SILVER SADDLE | 0 E/SHADY VISTA | 1000 W/P.V. DR N | 950 | 32 | 2 | 4.8 | 65 | 91 | 23 | 10,640 | 442,594 | 3A |
| 1120 | SILVER SPUR | 0 N/HAWTHORNE | 0 S/N CITY LIM | 240 | 56 | 3 | 8.1 | 90 | 100 | 45 | 4,704 | 447,298 | 2A-C |
| 1128 | STAGECOACH | 0 W/MASONGATE | 0 E/END | 310 | 30 | 2 | 4.4 | 56 | 95 | 14 | 3,255 | 450,553 | 2A-C |
| 1132 | SUNDOWN | 0 N/GAUCHO | 0 S/CARRIAGE | 270 | 30 | 2 | 4.8 | 68 | 94.8 | 32 | 2,835 | 453,388 | 2A-C |
| 1133 | SUNNYFIELD | 0 N/P.V. DR N | 0 S/END | 610 | 26 | 2 | 4.8 | 63 | 93.9 | 21 | 5,551 | 458,939 | 3A |
| 1136 | VISTA REAL | 0 W/MONTECILLO | 0 E/END | 810 | 22 | 2 | 4.8 | 69 | 94 | 33 | 6,237 | **465,176** | 3A |

# APPENDIX E

# MAPS

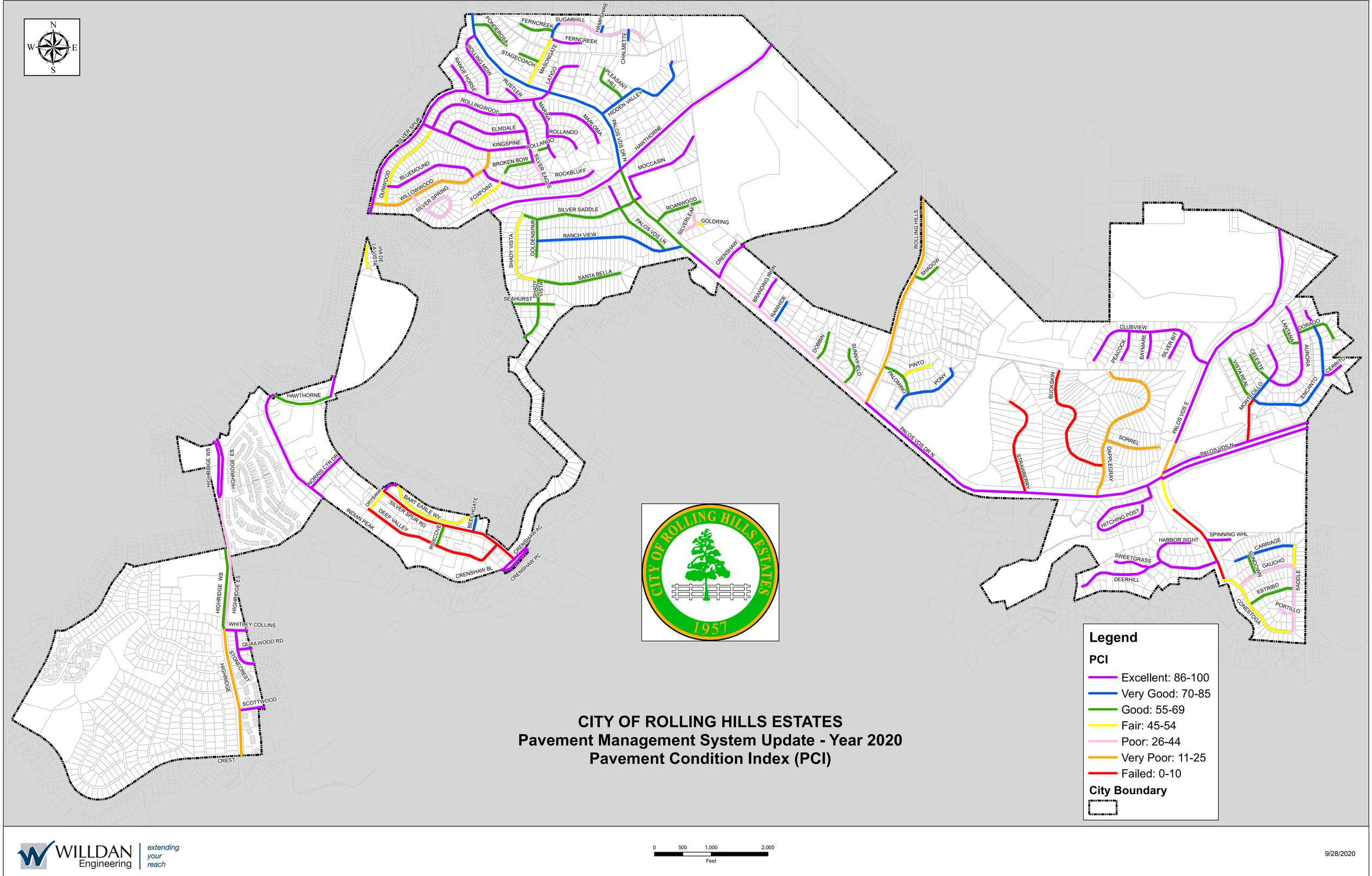
# CITY OF ROLLING HILLS ESTATES
## Pavement Management System Update - Year 2020
## Pavement Section ID's

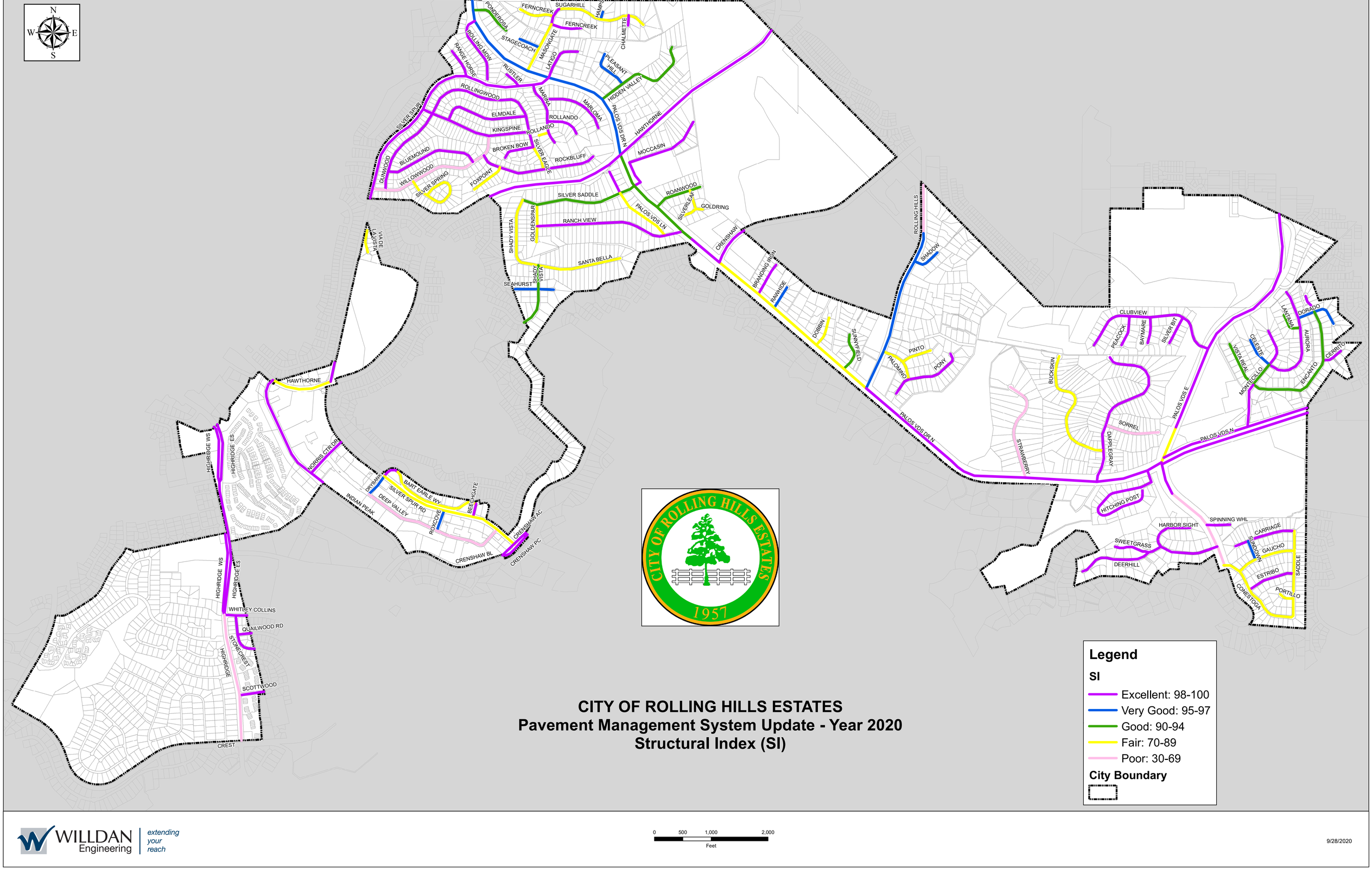
WILLDAN Engineering | extending your reach

0 500 1,000 2,000
Feet

September 14, 2020

U:\110007 - RHE 2020 PMS Update\700-Design\706-GIS_MapFiles\RHE - PMS2020 - SectionIDs.mxd


N
W
E
S
POWDEROSA
FERNCREEK
SUGARHILL
HAMPSHIRE
FERNCREEK
CHALMETTE
STAGECOACH
MASONGATE
LATIGO
PLEASANT HILL
ROLLING MDW
RANGE HORSE
RUSTLER
HIDDEN VALLEY
ROLLINGWOOD
MARINA
MARLOMA
PALOS VDS DR N
SILVER SPUR
ELMDALE
ROLLANDO
HAWTHORNE
KINGSPINE
ROLLANDO
DUNWOOD
BLUEMOUND
BROKEN BOW
SILVER EAGLE
ROCKBLUFF
MOCCASIN
WILLOWWOOD
SILVER SPRING
FOXPOINT
ROANWOOD
SILVER SADDLE
SILVERLEAF
GOLDRING
PALOS VDS LN
GOLDENSPAR
SHADY VISTA
RANCH VIEW
CRENSHAW
VIA DE LA VISTA
SANTA BELLA
BEARDING PROW
SEAHURST
SHADY VISTA
RAWHIDE
DOBBINI
SUNNYFIELD
ROLLING HILLS
SHADOW
PINTO
PALOMINO
PONY
CLUBVIEW
PEACOCK
BAYMARE
SILVER BIT
LANTANA
DORADO
AURORA
CELESTE
VISTA REAL
CERRITO
MONTECILLO
ENCANTO
BUCKSKIN
PALOS VDS E
SORREL
DAPPLEGRAY
STRAWBERRY
PALOS VDS DR N
PALOS VDS N
HITCHING POST
HARBOR SIGHT
SPINNING WHL
CARRIAGE
WINDOW
GAUCHO
SWEETGRASS
DEERHILL
ESTRIBO
SADDLE
PORTILLO
CONESTOGA
HAWTHORNE
HIGHRIDGE WS
HIGHRIDGE ES
MORRIS CTR DR
DRYBRANCH
BART EARLE WY
SILVER SPUR RD
DEEP VALLEY
INDIAN PEAK
ROXCOVE
BEECHGATE
CRENSHAW AC
CRENSHAW BL
CRENSHAW PC
HIGHRIDGE WS
HIGHRIDGE ES
WHITLEY COLLINS
QUAILWOOD RD
STONECREST
HIGHRIDGE
SCOTTWOOD
CREST
CITY OF ROLLING HILLS ESTATES
1957
Legend
PCI
Excellent: 86-100
Very Good: 70-85
Good: 55-69
Fair: 45-54
Poor: 26-44
Very Poor: 11-25
Failed: 0-10
City Boundary
CITY OF ROLLING HILLS ESTATES
Pavement Management System Update - Year 2020
Pavement Condition Index (PCI)
WILLDAN Engineering
extending your reach
0
500
1,000
2,000
Feet
9/28/2020
U:\110007 - RHE 2020 PMS Update\700-Design\706-GIS_MapFiles\RHE - PMS2020 - PCI.mxd




# CITY OF ROLLING HILLS ESTATES
## Pavement Management System Update - Year 2020
## Structural Index (SI)

**Legend**

**SI**

- Excellent: 98-100
- Very Good: 95-97
- Good: 90-94
- Fair: 70-89
- Poor: 30-69

**City Boundary**

WILLDAN Engineering | extending your reach

0 500 1,000 2,000
Feet

9/28/2020

U:\110007 - RHE 2020 PMS Update\700-Design\706-GIS_MapFiles\RHE - PMS2020 - SI.mxd

# CITY OF ROLLING HILLS ESTATES
## Pavement Management System Update - Year 2020
## Major Maintenance Strategies

**Legend**

**Strategies**

- 3: Minimum 1.75" ARHM Overlay
- 4: Minimum 1.75" ARHM Overlay with Base Failure Repairs, if any.
- 4A: Minimum 1.5" ARHM Overlay with Base Failure Repairs, if any (AC in Bulbs)
- 5: Minimum 1.75" ARHM Overlay with Minimal Base Failure Repairs
- 5A: Minimum 1.5" ARHM Overlay with Minimal Base Failure Repairs (AC in Bulbs)
- 6: Minimum 2" ARHM Overlay with Base Failure Repairs
- 6A: Minimum 1.75" ARHM Overlay with Select Base Failure Repairs (AC in Bulbs)
- 7A: Minumum 1.75" ARHM Overlay with Base Failure Repairs (AC in Bulbs)
- 8: Minimum 2.25" ARHM Overlay with Base Failure Repairs
- 8A: Minimum 2" ARHM Overlay with Base Failure Repairs (AC in Bulbs)

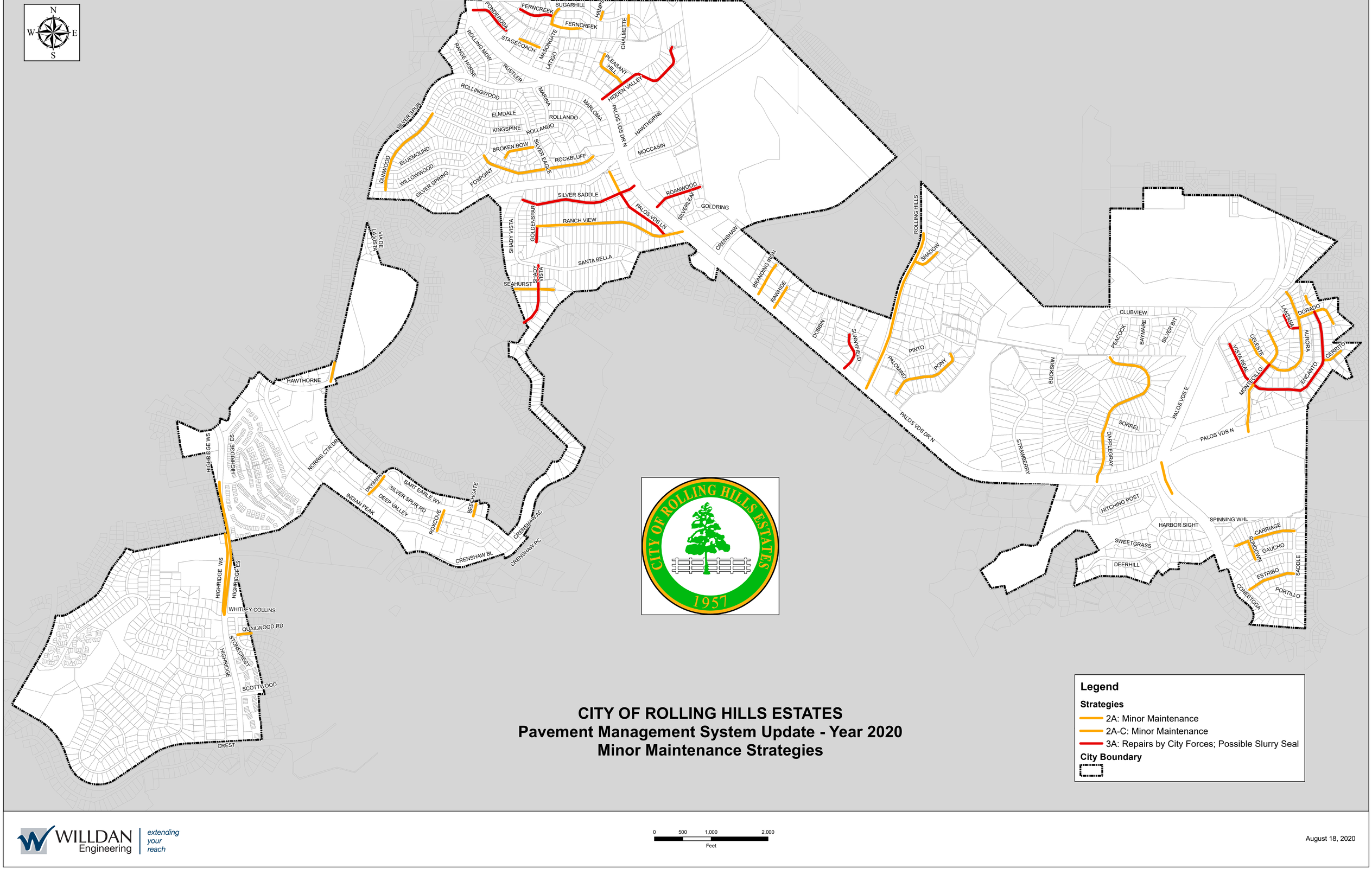
**City Boundary**

WILLDAN Engineering | extending your reach

0 500 1,000 2,000 Feet

9/28/2020

U:\110007 - RHE 2020 PMS Update\700-Design\706-GIS_MapFiles\RHE - PMS2020 - Major Maintenance Strategies.mxd




# CITY OF ROLLING HILLS ESTATES
## Pavement Management System Update - Year 2020
## Minor Maintenance Strategies

**Legend**

**Strategies**

- 2A: Minor Maintenance
- 2A-C: Minor Maintenance
- 3A: Repairs by City Forces; Possible Slurry Seal

**City Boundary**

WILLDAN Engineering | extending your reach

0 500 1,000 2,000
Feet

August 18, 2020

U:\110007 - RHE 2020 PMS Update\700-Design\706-GIS_MapFiles\RHE - PMS2020 - Minor Maintenance Strategies.mxd

374 Poli Street, Suite 101
Ventura, California 93001-2605
T 805.653.6597 | F 805.754.2067
www.willdan.com

WILLDAN