

Pavement Condition Assessment for Saddle Creek Community Services District
June 2016

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I. Introduction

Saddle Creek Community Services District owns and operates the infrastructure for the subdivision surrounding the Saddle Creek Resort and Golf Course in Copperopolis, California. Of particular interest to this report is the road network that serves the subdivision and it's residents.

There are a total of just under 8 miles of asphalt roadways within the Saddle Creek subdivision. The oldest roads in the Saddle Creek subdivision were built in 1995 with the construction of the entrance road off of Little John Road, Saddle Creek Drive and Oak Creek Drive. In 1998 the roads within the Knolls neighborhood and the Mitchell Lakes neighborhood were added, followed by the roads within the Rockridge neighborhood in 2001, the Oak Creek and Oak Meadow neighborhoods in 2004, the Glens neighborhood in 2007 and the most recent addition of the roads in the Hawkrige neighborhood in 2011.

It has now been more than 20 years since the construction of the original asphalt roads and their age is beginning to show. The purpose of this report is to examine the current condition of all of the roadways within the Saddle Creek subdivision, develop several roadway maintenance and rehabilitation strategies to address the current and future roadway maintenance needs and provide current and future budget recommendations to the Saddle Creek Community Services District Board and General Manager.

II. Executive Summary

The goal of pavement management is to devise an ongoing program of pavement preventative maintenance which maintains the roadways in the most cost-effective manner over time. If scheduled effectively these treatments can dramatically increase the quality of pavement conditions and decrease the yearly expenditures necessary to maintain those improved pavement conditions over time.

The metric that is used in pavement management is called the Pavement Condition Index. The PCI is number between 0 and 100 which attempts to capture the current condition of a roadway pavement for a specific section. A score of 100 indicates a brand new pavement that has just been constructed. Over time the forces of weathering and loading, primarily from heavier vehicles, begin to degrade all pavements. The PCI score measures the extent of this degradation as a reduction in the score from the original score of 100.

Figure 1 depicts the typical Pavement decay curve which represents the condition (PCI score) of pavements as they age. New pavements normally perform well for the first few years after they are constructed. However, as time goes on they begin to degrade. This degradation accelerates if the pavements are not provided with preventative maintenance treatments after the 5-8 years.

As the degradation continues the cost to repair the degradation, and return the pavement to a “very good” condition continues to rise. The cost to perform preventative maintenance treatments on relatively new pavements (PCI of 70 to 100) is in the range of \$2-4 per square yard. However, the cost to repair severely damaged pavements (PCI of 25 or lower) can range from \$70-100 per square yard. The old saying “you can pay me now or pay me a whole lot more later” accurately describe the result of not committing to an ongoing pavement management program that maintains the PCI at a level of 70 or above.

From discussions with current Saddle Creek Community Services District management and line employees it was learned that no significant pavement maintenance has been done over the life of the subdivision. With the exception of some very minor patching and crack sealing the pavements are essentially untouched from their original construction.

The existing average PCI value for the roads within the Saddle Creek Community Services District is calculated to be 62 as of May 2016, with 31.4% of the roadways classified in poor or very poor condition. The average PCI for all of the Saddle Creek roadways was quoted to be 78 in an August 2006 report by Jon Lynch P.E. to the District Manager of the Saddle Creek Community Services District. The drop in PCI from 78 in 2006 to 62 in 2016 is very significant and represents a very large increase in the current and future cost of maintaining the roadways in an acceptable condition. Immediate attention to addressing the pavement conditions of the roadways is now essential to reverse this continuing decline in pavement conditions.

Based on the recent inspections and analysis the current estimated cost of the unmet needs to repair all of the roadways within the Saddle Creek subdivision is approximately \$560,000 in 2016 dollars. This cost represents the amount of money needed to return all roadways within the subdivision up to a “very good” condition (PCI of 70 or above).

If nothing is done to address the ongoing deterioration of pavement conditions the average PCI for all roadways within the subdivision is projected to deteriorate from the current value of 62 to a value of 52 by the year 2021. The reduction in PCI score directly correlates to the ongoing deterioration of the pavement condition caused by weathering and continued use of the roadways by vehicles, particularly heavily loaded vehicles such as garbage trucks, propane trucks, moving vans etc.

A yearly budget of \$50,000 per year is needed to raise the average PCI of the subdivision roads from it’s current value of 62 (31.4% of pavement in poor or very poor condition) to a value of 66 by the year 2021 (19.3% of pavement in poor or very poor condition).

A yearly budget of \$100,000 per year is needed to raise the average PCI of the subdivision roads from it’s current value of 62 (31.4% of pavement in poor or very poor condition) to a value of 79 by the year 2021 (4.6% of pavement in poor or very poor condition).



Figure 1 – Pavement Decay Curve

III. Data Collection Methodology

Pavement condition data was collected over a period of three weeks in May 2016 using the Pavement Condition Index Distress Identification Manual For Flexible Pavements and the Streetsaver Pavement Management program both published by the Metropolitan Transportation Commission. The Streetsaver program is the most widely used pavement management program in California and is used to manage over 340,000 miles of roadways throughout the state.

Each street was divided up into 100 foot sections. Each roadway section was measured to confirm the width of the roadway in order to accurately calculate the total area of pavement for that section.

Each roadway section was then carefully evaluated for the following pavement distresses:

1. Alligator Cracking

Longitudinal and transverse cracks running parallel to each other. Normally caused by repeated heavy traffic loading. Measured by the square foot as Low, Medium or High severity

2. Block Cracking

Longitudinal and transverse cracks that divide a pavement into approximately rectangular pieces. Normally caused by shrinkage of pavement from heating and cooling over extended periods of time. Measured by the square foot as Low, Medium or High severity.

3. Vertical Pavement Distortions

Abrupt upward or downward displacements in the pavement surface. Normally caused by unstable pavement materials, lack of adequate roadway support or tree roots. Measured by the square foot as Low, Medium or High severity.

4. Longitudinal and Transverse Cracking

Cracks that are parallel or perpendicular to the pavement's centerline. Normally caused by shrinkage of the pavement from heating and cooling over extended periods of time or poor construction joints. Measured by the linear foot as Low, Medium or High severity.

5. Patching/Utility Cuts

An area of pavement that has been replaced or covered with new pavement material to repair the existing pavement or a cut in the pavement due to the placement or maintenance of sub-surface utilities. Measured by the square foot as Low, Medium or High severity.

6. Rutting/Depressions

Surface depressions in the wheel paths. Normally caused by weaknesses in the substructure of the road and repeated heavy loading from vehicles. Measured by the square foot as Low, Medium or High severity.

7. Raveling

The dislodging of coarse rock aggregate particles from the asphalt binder material. Normally caused by insufficient asphalt binder in the pavement or poor compaction of the pavement during construction. Measured by the square foot as Medium or High severity.

8. Weathering

The wearing away of the asphalt binder holding the rock aggregate together. Normally caused by oxidization from repeated exposure to the elements, particularly sunlight, poor compaction during construction or insufficient asphalt content. Measured by the square foot as Low, Medium or High severity.

IV. Data Analysis Methodology

All collected pavement distress data was input into the Metropolitan Transportation Commission Streetsaver program for analysis. The outputs of the Streetsaver program include the PCI calculations for each 100 foot section of roadway pavement and an associated pavement condition score (PCI).

Collector Roads vs. Local Roads

The analyzed data is summarized by type of roadway. In the case of the Saddle Creek subdivision two categories of roadway were used. Saddle Creek Drive and Oak Creek Drive were classified as collector roads. The remainder of the roadways were classified as local roads. This allows the program to place a slightly higher emphasis on collector roads in recognition that these roads normally carry greater volumes of traffic and experience a greater amount of heavy loads. Thus, they are more likely to deteriorate faster than are the local roads. This distinction is used later in the selection of roadway rehabilitation projects to place a greater importance to repairs to these roadway sections.

Summary of Current Roadway Pavement Conditions by PCI

The collector roadways average PCI was calculated to have a score of 53

The local roadways average PCI was calculated to have a score of 69

The overall average PCI for all roadways combined was calculated to have a score of 62.

Summary of Current Roadway Pavement Conditions by Category

Very Good – PCI of 70 to 100	51.7%
Good – PCI of 50 to 70	16.9%
Poor – PCI of 25 to 50	28.0%
Very Poor – PCI of 0-24	<u>3.4%</u>
Total	100.0%

V. Summary of Current Road Network System Conditions and Deferred Maintenance Backlog

Summary of Current Conditions

These results indicate that only 51.7% of the roadways within the subdivision are in Very Good condition. These are mostly the roadway constructed in the past 5-7 years. These roadway pavements are excellent candidates for preventative maintenance treatments such as crack sealing, slurry sealing and chip seals to prolong their life at a high PCI and to also prevent them from requiring more costly rehabilitation in the future if they continue to deteriorate.

16.9% of the roadways within the subdivision are within the Good category. These roadway pavements are prime candidates for pavement rehabilitation treatments such as thin overlays and site-specific dig-outs of old failed pavements. Continued deterioration of these pavements without rehabilitation in the very near future will result in greatly increased costs to eventually repair these pavements to acceptable levels.

3.4 % of the existing pavements have already fallen below a score of 50 into the Poor or Very Poor category. These pavements are now sufficiently compromised that they will require more involved and expensive pavement rehabilitation treatments such as wider area removal and replacement of pavements, thicker overlays and possibly the addition of pavement fabric in conjunction with thicker overlays to provide more support for load related distresses.

Summary of Costs to improve the condition of distressed pavement to a Very Good condition

Using the data from the Streetsaver analysis the cost of repairing the current pavement conditions and returning all of those distressed pavements to a Very Good condition is estimated to be approximately \$560,000 in 2016 dollars. This amount is based on current construction costs for pavement preventative maintenance and pavement restoration projects in Northern California. The costs include a combination of project design, bidding, construction contract, and construction management expenses.

The \$560,000 backlog is further subdivided to include \$510,000 in pavement rehabilitation costs and \$50,000 in pavement preventative maintenance costs.

VI. Budget Scenarios

Using the calculated backlog figure of \$560,000 a series of possible budget scenarios are offered for consideration. All of these budget scenarios include a yearly inflation factor of 3.0 percent. This figure is representative of the Cost of Construction index published in the Engineering News Record for Northern California over the past 20 years.

The budget scenarios also include an interest figure of 5.0%, as recommended by the Streetsaver program, to account for the cost of money over time.

1. Do Nothing

This alternative assumes that there will be no effort to address the current pavement needs. The estimated 5-year cost of this scenario is obviously \$0. The calculated result of this scenario for the five year period from 2016-2020 is summarized below:

<u>Year</u>	<u>Average PCI</u>	<u>% of Roadway Sections In Poor or Very Poor condition</u>	<u>Deferred Maintenance</u>
2017	62	30.4%	\$192,921
2018	60		
2019	57		
2020	54		
2021	52	41.0%	\$495,714

2. Status Quo – PCI of 62

This alternative assumes that there will be an effort prevent the current roadway conditions from deteriorating further. However, there will not be an improvement in the average overall pavement conditions within the subdivision as a whole. The estimated 5-year cost of this scenario is \$ 154,175. The calculated result of this scenario for the five year period from 2016-2020 is summarized below:

<u>Year</u>	<u>Average PCI</u>	<u>% of Roadway Sections In Poor or Very Poor condition</u>	<u>Deferred Maintenance</u>
2017	62	30.4%	\$192,921
2018	62		
2019	62		
2020	62		
2021	62	32.2%	\$424,390

3. Budget of \$ 50,000 per year

This alternative assumes that there will be a budget of \$50,000 per year established to devote to pavement preventative maintenance and rehabilitation. The 5-year cost of this scenario is \$250,000. The calculated result of this scenario for the five year period from 2016-2020 is summarized below:

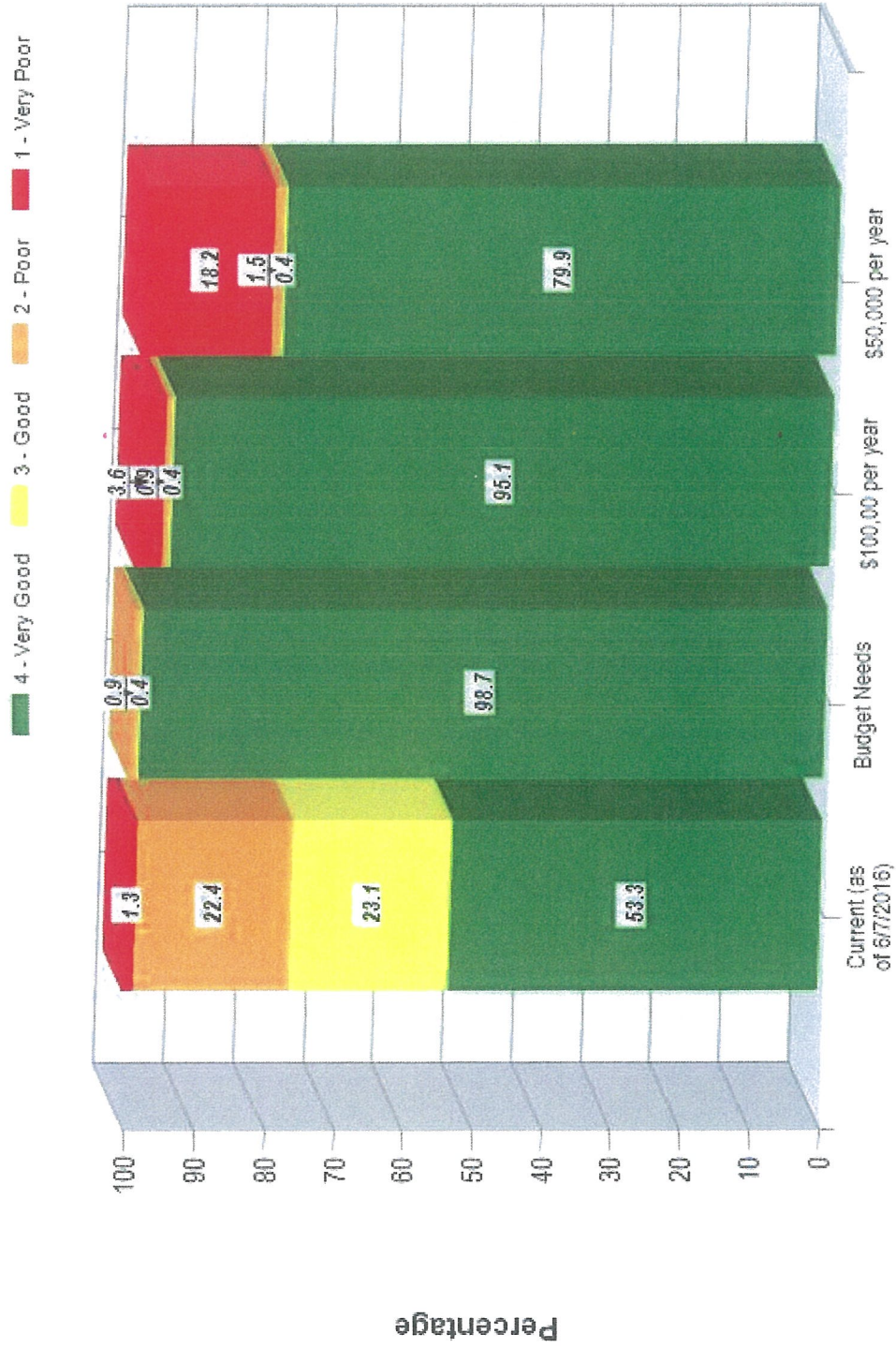
<u>Year</u>	<u>Average PCI</u>	<u>% of Roadway Sections In Poor or Very Poor condition</u>	<u>Deferred Maintenance</u>
2017	65	30.4%	\$192,921
2018	66		
2019	66		
2020	66		
2021	66	19.7%	\$353,065

4. Budget of \$100,000 per year

This alternative assumes that there will be a budget of \$100,000 per year established to devote to pavement preventative maintenance and rehabilitation. The 5-year cost of this scenario is \$500,000. The calculated result of this scenario for the five year period from 2016-2020 is summarized below:

<u>Year</u>	<u>Average PCI</u>	<u>% of Roadway Sections In Poor or Very Poor condition</u>	<u>Deferred Maintenance</u>
2017	68	31.4%	\$96,616
2018	71		
2019	74		
2020	76		
2021	79	4.6%	\$91,329

Pavement Condition Changes under Budget Scenarios



VII. Budget Recommendations

Based on the four options analyzed it is the recommendation of this report that a budget of \$100,000 per year be established. This amount will be sufficient to allow yearly improvements to the overall average pavement condition of all roadways within the subdivision. The expected increase in PCI from the current value of 62 to the projected PCI value of 79 in 2021 is significant and will bring all roadways within the subdivision up to a Very Good condition within the 5 year period.

Once the overall average condition of the subdivision roadways is improved it will be far less expensive on a yearly basis to maintain that improved condition assuming continued pavement preventative maintenance treatments are applied. In fact, it may even be possible to consider lowering the annual budget amount once the overall average condition of the roadways is above 75 as there will be less expensive pavement rehabilitation needing to be done and more inexpensive preventative maintenance.

IX Project Lists for FY 2017-2020

The projects shown below are based on a \$100,000 per year budget using the Streetsaver analysis of the best use of funding to improve the overall condition of the subdivision roadways. If the actual budget is smaller than \$100,000 per year some of these recommended projects will need to be delayed. Not all roadways in the subdivision are recommended for treatments in the first three years. This is due to many factors but primarily is driven by the cost-effectiveness of treatments to particular roadways when trying to maximize the effectiveness on the overall subdivision PCI based on the funding available. It is likely that any roadways not listed on the recommended list for 2017-2020 will be scheduled for treatments in later years.

It is also important to realize that all roadway sections on a given roadway do not require the same treatment. Some sections may need more involved rehabilitation than other sections do on the same roadway due to localized roadway distresses. For ease of construction it makes sense to combine all sections on the same roadway with the same pavement treatment. This tends to increase the cost of roadway treatments somewhat but results in a much more aesthetically pleasing project as opposed to a haphazard series of spot treatments.

Other factors which may be appropriate to consider in the selection of projects include combining similar treatments into one yearly contract. For example, if it is desirable to perform chip sealing on multiple roadways it will be much more cost-effective to combine all of the chip sealing operations into one contract in a particular year rather than do several small contracts each year.

Additional project selection criterion could include the desires of local elected representatives (political considerations) or other factors. Those considerations are beyond the scope of this report and are not included in the recommended project lists.

Recommended projects for 2017

Hawkridge Drive (Oakwood Place to Hawkridge Court) - Crack Sealing
Hawkridge Court – Crack Sealing
Quail Covey Court – Crack Sealing
Quail Creek Drive – Crack Sealing

Glen View Court – Chip Seal
Knolls Court – Chip Seal
Knolls Drive – Chip Seal
Oak Creek Drive (Saddle Creek Drive Intersection to end) – Chip Seal
Quail Meadows Lane – Chip Seal
Resort Roundabout – Chip Seal

Blue Oak Court – Thick Overlay
Copper Glen Court – Thick Overlay
Flagstone Court – Thick Overlay
Oak Creek Drive (Oakwood Place to Saddle Creek Drive) – Thick Overlay
Quail Meadows Court – Thick Overlay
Red Tail Court – Thick Overlay
Saddle Creek Drive (Gate to Resort Roundabout) – Thick Overlay
White Oak Court – Thick Overlay
Wood Duck Court – Thick Overlay

Recommended projects for 2018

Grandview Court – Chip Seal
Leaf Crest Court – Chip Seal
Mossy Woods Court – Chip Seal

Falcon Court – Thick Overlay
Greenstone Court – Thick Overlay
Hawkridge Drive (Hawkridge Court to Oak Creek Drive) – Thick Overlay
Summit Court – Thick Overlay
Summit Lane – Thick Overlay
Vista Knolls Court – Thick Overlay

Recommended projects for 2019

Falling Leaf Lane – Chip Seal
Mitchell Lake Court – Chip Seal
Mitchell Lake Lane – Chip Seal
Wildflower Court – Chip Seal

Copper Glen Terrace – Reconstruct
Rockridge Court – Reconstruct
Rockridge Lane – Reconstruct

Recommended projects for 2020

Saddle Creek Drive (Resort Roundabout to Oak Creek Drive) - Reconstruct

Note: Various other projects are scheduled for either 2020 or 2021. The original scope of work for this report included a requirement to list the projects for 2017, 2018 and 2019. However, Saddle Creek Drive is shown as it is a major project for 2020. Other projects for 2020 and 2021 were not shown in this list, but would be shown on future lists in coming years.

X

Attachments

Scenarios - Network Condition Summary

Interest: 5%

Inflation: 3%

Printed: 06/07/2016

Scenario: \$100,00 per year

Year	Budget	PM	Year	Budget	PM	Year	Budget	PM
2017	\$100,000	5%	2019	\$100,000	5%	2021	\$100,000	5%
2018	\$100,000	5%	2020	\$100,000	5%			

Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment	Treated Centerline Miles	Treated Lane Miles
2017	62	68	2.57	5.08
2018	60	71	1.23	2.42
2019	57	74	1.23	2.44
2020	54	76	0.82	1.62
2021	52	79	2.36	4.63

Percent Network Area by Functional Class and Condition Category

Condition in base year 2017, prior to applying treatments.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	7.2%	44.5%	0.0%	51.7%
II / III	0.0%	1.8%	15.1%	0.0%	16.9%
IV	0.0%	17.7%	10.3%	0.0%	28.0%
V	0.0%	1.1%	2.2%	0.0%	3.3%
Total	0.0%	27.9%	72.1%	0.0%	100.0%

Condition in year 2017 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	13.0%	55.4%	0.0%	68.4%
II / III	0.0%	0.7%	9.2%	0.0%	9.9%
IV	0.0%	13.1%	5.3%	0.0%	18.4%
V	0.0%	1.1%	2.2%	0.0%	3.3%
Total	0.0%	27.9%	72.1%	0.0%	100.0%

Condition in year 2021 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	24.3%	70.8%	0.0%	95.1%
II / III	0.0%	0.0%	0.4%	0.0%	0.4%
IV	0.0%	0.0%	0.9%	0.0%	0.9%
V	0.0%	3.6%	0.0%	0.0%	3.6%
Total	0.0%	27.9%	72.1%	0.0%	100.0%

August 11, 2006

Mr. Charles Martin
District Manager
Saddle Creek Community Services District.
1000 Saddle Creek Drive
Copperopolis, CA 95228

Subject: Pavement Evaluation for Saddle Creek Resort

Dear Mr. Martin:

Thank you for providing me this opportunity for submitting a report on the condition of the pavements in Saddle Creek Resort. As an engineer with over 40 years of experience in the field, and having worked my last 20 plus years as City Engineer for Redwood City, I am pleased to bring my experience and training to bear on this application.

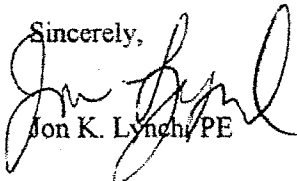
The roads at Saddle Creek generally are in very good shape, mostly because they are relatively new. However, several streets came in with ratings that are not acceptable. Included with this report is a Technical Memorandum which describes the methodology for evaluating the street pavements, along with the ratings of each of the streets within the subdivision. The report shows that Saddle Creek Drive, with a Pavement Condition Index of 52, needs an asphalt overlay. The other major streets constructed in the earlier stages of the development (Oak Creek Drive, Hawkridge Court, and accompanying side streets) are in need of a slurry seal.

The "Management Strategies" portion of this Technical Memorandum shows the cost associated with these treatments. I have also included some cost estimates for future planning purposes on the other major streets of concern. The Management Strategies Numbers 1 and 2 should be done as soon as possible, so as not to permit further deterioration of the roadways. Management Strategy No. 3 can be programmed for future treatment. By following these three strategies, the roadways will be brought up to a minimum standard which I feel is adequate for acceptance by the District. The strategies I have outlined will bring all the streets up to a Condition Index of at least 90 or better, which in laymen's terms is new or nearly new condition.

When it comes time for the slurry seal application, I would like the opportunity to provide the technical specifications for the product that we have used in Redwood City. Our product specification has proven successful over the years in restoring many of our aging streets, and these specifications are "tried and true".

I will be pleased to discuss any of the aspects of this report with you or any of the Board Members if you need me to make a presentation.

Sincerely,



Jon K. Lynch/PE

TECHNICAL MEMORANDUM

PAVEMENT EVALUATION FOR SADDLE CREEK RESORT

By: Jon K Lynch, PE.
August 9, 2006

Background

The purpose of this report is to provide the Saddle Creek Community Services District (CSD) with an evaluation of the pavement condition of the roadways within the Development for which it is responsible for maintaining. It is our understanding that the roadways have not officially been turned over to the CSD for maintenance, but that they are still under the responsibility of the master developer of the project. This report will be a "snap shot" in time as to the present condition of the pavement.

Asphalt concrete is a product that deteriorates over time because of many factors, the most important of which is the repeated application of wheel loads. Secondly, the asphalt binders in the roadway break down with time due to exposure to ultraviolet rays of the sun. The climate in Copperopolis is a bit harsher on the pavement than other areas because of the heat of the summer, and even the best pavements can break down unless a preventative maintenance program is followed. This report will summarize the results of the pavement inspection, and provide some guidelines and recommendations on what preventative maintenance is best for the condition of the pavement as observed on August 8, 2006.

Pavement Condition Index Method

The most widely accepted method of rating pavement is the Pavement Condition Index (PCI) Method. The PCI method was developed by the Construction Engineering Research Laboratory of the Corps of Engineers. The method was subsequently adopted by the Federal Aviation Administration to determine pavement condition of its airfield pavements. The PCI method is currently being used in the majority of the cities throughout the nine bay area counties, and has been adopted by the Metropolitan Transportation Commission as a management standard. It is now the most readily accepted method of rating pavements in California.

This method consists of the following three steps: dividing the roadway into sections and selecting sample units for inspection; identifying and recording pavement distress by types; computing the PCI from the survey data using the quantities of distress and the

area of the inspection units. Charts and graphs are provided to determine the loss of effectiveness for each of the many kinds of distress.

Basically, the differing pavement distresses are then given a "deduct value" based on the severity of the condition, and the deduct values are added together to come up with an adjusted value. The PCI is then calculated by subtracting from 100 the total deduct value. In other words, a new pavement would have no deduct values and would receive a PCI of 100. Older pavement would receive an appropriately lower PCI, depending on the amount and severity of the distress recorded in the inspection.

Typical distress patterns are alligator cracking, block cracking, distortions, longitudinal and transverse cracking, patching and utility cuts, rutting and depressions, and weathering and raveling. A person experienced in asphalt pavements is needed to verify the varying degrees of intensity of these conditions so that a uniform basis is used to compare one street to the next. Once the overall PCI index of the street is determined, then an evaluation can be made of its condition. The evaluation will lead to the development of an appropriate management strategy

Evaluating Pavement Life

Asphalt road surfaces have a lifetime of approximately 20 years. Attachment 1 shows the graph of the life span of a typical pavement compared to the cost of repairs. The graph shows PCI versus the life span of a typical pavement. Without maintenance, in the first 12-15 years the road quality can drop by as much as 40%. After this point the rate of deterioration dramatically increases, so that in just the next three years the quality will drop another 40%, after which the roadway will fail completely and require complete reconstruction. At this point the cost of restoring the pavement to a good condition becomes the most expensive.

The PCI will determine the rating of the pavement. Attachment 2 to this report shows a summary of the range of condition indexes, along with the rating corresponding to the index. As stated, a new pavement would have an index of 100, and a pavement with a 0 rating would indicate a totally failed pavement. Any street with a PCI of 70 or above is considered in very good condition. The best long term strategy for any agency is to keep the condition of your pavement such that the index is 80 or better.

Pavement Condition Index for Saddle Creek Subdivision

There are over 3.7 miles of streets that were rated in this program. The Attachment 3 shows the summary of the survey results of the streets in Saddle Creek. It is important to note that the newest streets (Copper Highlands, Copper Ridge, the Bungalows, and the "New Country Collection") were not rated as they are really new and therefore would not have any deduct values.

As a result of the survey performed on August 6, 2006, the overall PCI of the streets in Saddle Creek was determined to be 78, which is very good. However, the older streets which were constructed with the original development are rated lower, mainly due to age. The worst street is Saddle Creek Drive, which is rated at a PCI of 52. This street is the one which receives the most amount of traffic since it serves as the central artery of all the traffic in the development. It was found to have quite a number of low to moderate alligator cracking, many patches and utility cuts, rutting and depressions of low to moderate value, and quite a few longitudinal and transverse cracks. Also, even without the surface distress, it was apparent that the pavement was experiencing the light to moderate weathering and the beginning of raveling. This latter condition is the result of the evaporation loss of the asphalt binder in the mix due to aging.

As the aging of Saddle Creek Drive continues, the asphalt binder will wear away and the aggregate will start to pop out of the mix (more advanced cases of raveling), and the pavement will become very brittle. Repeated wheel loads will cause more alligating, rutting, possible block cracking, and eventual failure. The resulting stress will be almost impossible to repair without a total reconstruction. This pavement is at the point where a simple slurry seal coat will not suffice to protect the surface of the pavement. An overlay is recommended for this street, consisting of the placement of a reinforcing fabric over the existing surface, grinding the edge of the pavement along the gutter to provide an edge to pave, and overlaying with a minimum of 1-1/2 inches of asphalt concrete. The costs for this work are covered under the section on Pavement Management Strategies, management strategy No. 1.

The next most heavily aged section is Oak Creek Drive, between lots 98 and 26, which are the original construction limits for this street. Oak Creek Drive has a PCI of 70. It suffers from minor alligating, a large number of utility trenches and miscellaneous patches, minor longitudinal and transverse cracking, and a few ruts or depressions. This street is on the verge of getting worse, and as the graphs show, now is the time to treat this street before it deteriorates into a fair-to-poor condition and it becomes more costly to repair. However, it is recommended that the simple treatment of a Polymer Modified Asphalt Slurry Seal (PASS) will bring this section up to acceptable standards. See management strategy No. 2.

The remainder of the streets that were built 7-10 years ago (Greenstone Ct., Blue Oak Ct., White Oak Ct., Wood Duck Ct., Hawkridge Ct., and Red Tail Ct.) should receive the same slurry seal treatment. Although they have a very good to excellent structural rating, they are beginning to show the same weathering and raveling as the other streets in the same age bracket. Hawkridge Court, especially, will start to deteriorate more rapidly if not treated because of the additional traffic imposed by the newer development now taking place adjacent to that area.

The streets in the Knolls area, the newer sections of Oak Creek Drive, and the Mitchell Lake Courts are all in excellent condition, and no rehabilitation is recommended at this time. However, as these pavements reach the 8-10 year age mark, they should be scheduled for slurry seal treatment, just to keep them from raveling in the future.

Pavement Management Strategies

As a result of the condition assessment, three management strategies are recommended at this time.

- Strategy No. 1: Overlay of Saddle Creek Drive. The cost of this item consists of:
 - a. 1-1/2" AC overlay;
 - b. Wedge cutting along the edge of pavement;
 - c. Petromat reinforcing fabric over the existing roadway;
 - d. Striping.

Total Estimated Cost: \$137,300

- Strategy No. 2: Slurry Seal of Oak Creek Drive, Hawkridge Court, and side streets. The Cost of this item consists of:
 - a. Polymer-modified Asphalt Slurry Seal (PASS);
 - b. Striping.

Total Estimated Cost \$45,376

- Strategy No 3: Slurry Seal of remainder of development in 2008/2009:
 - a. PASS;
 - b. Striping.

Total Estimated Cost \$89,972

It should be noted that these are budgeting figures, and cost estimates may vary from time to time. Prices are lower in the spring and the beginning of the summer, and are going to be higher in late fall as contractors fill up their bid quotas.

Summary and Conclusions

In summary, the pavements at Saddle Creek, although generally in good to excellent condition, need to be maintained. At this point in time the maintenance costs are reasonable and can be managed with proper planning. Proper planning and budgeting is the heart of good pavement management program. However, if the planned maintenance is not done, then the roadway system deteriorates to an unacceptable condition. This

adds immensely to the cost of repair. Now is the time to perform that maintenance if the CSD expects to keep the cost of its program to a reasonable range.

The key time frame for reacting to any maintenance program is at the 7-10 year span of the pavement's life. Most of the earlier roadways in the Saddle Creek Subdivision fall into that category. As this development continues to grow, the larger amount of cars and trucks using the two major streets (Saddle Creek Drive, Hawkridge Court, and Oak Creek Drive) will increase the rate of deterioration of the pavement.

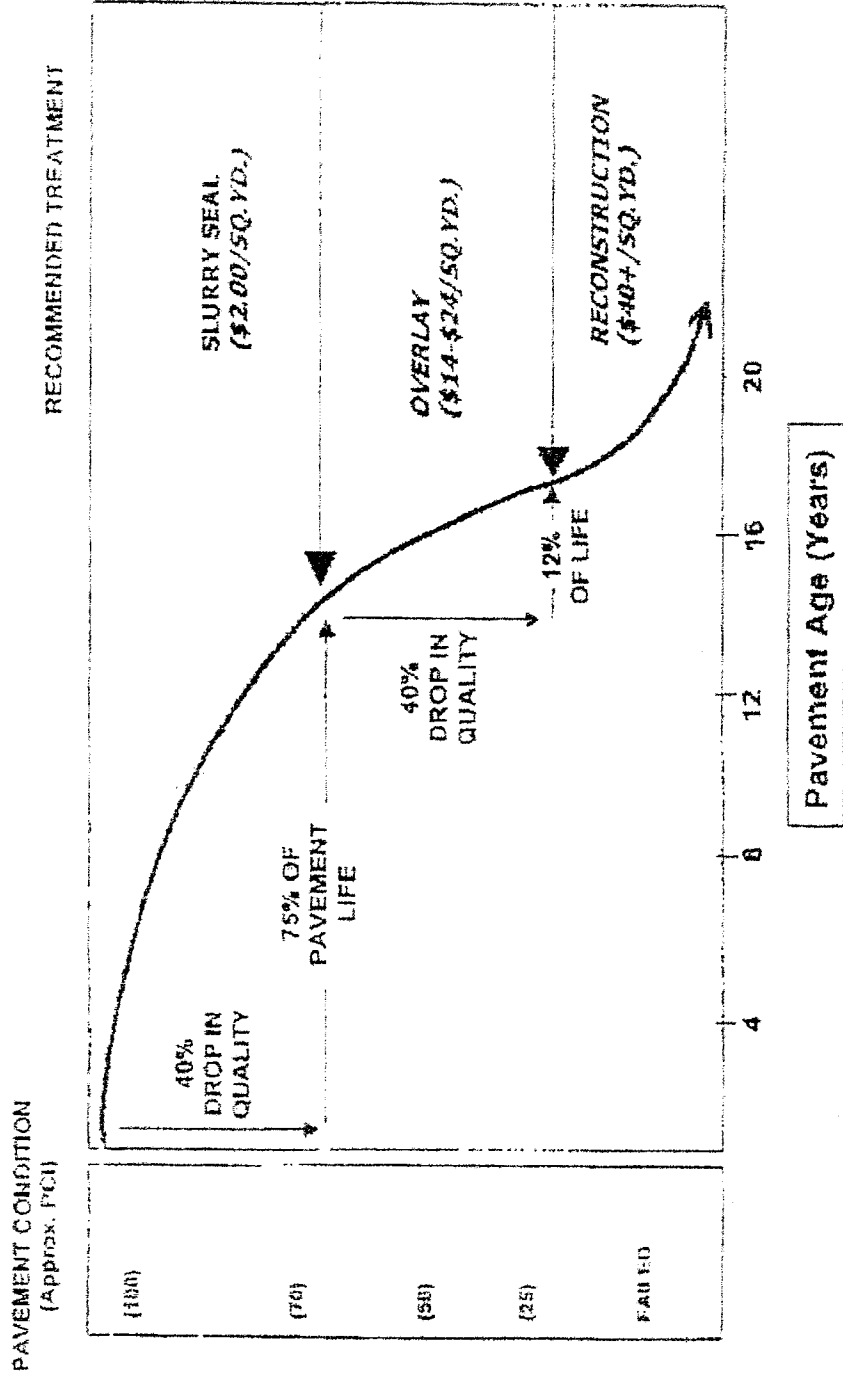
The summer months are the best time to do this kind of work, because paving is subject to limitations on the air temperature (usually air temperatures of 70 degrees and rising are the required criteria). Therefore, the decision cannot be made to put this decision off until the winter.

Finally, the best pavement management program includes periodic resurveying of the streets approximately every five years. CSD staff is also encouraged to monitor the streets throughout the year to keep an eye on problem areas and conditions that might have changed since the last PCI inspection. Included in this report is a copy of the "Pavement Condition Index, Distress Identification Manual for Asphalt and Surface Treatment Pavements", published by the Metropolitan Transportation Commission. This document may assist staff in doing this annual inspection.

ATTACHMENT 1: PAVEMENT LIFE CYCLE

STRATEGY

Pay Now...Or Much More Later



PCI Calculation - Summary

Printed: 06/07/2016

Peter Rei

Street ID	Section ID	Road Name	Begin Location	End Location	PCI Date	PCI Before	PCI After	PCI High	PCI Low	Pct Load	Pct Envr	Pct Other
BOC	010	BLUE OAK COURT	INTX OAK CREEK DRIVE	20	5/14/2016	0	54	54	54	0.00	100.00	0.00
BOC	020	BLUE OAK COURT	10	30	5/14/2016	0	34	34	34	39.29	57.15	3.56
BOC	030	BLUE OAK COURT	20	40	5/14/2016	0	52	52	52	0.00	100.00	0.00
BOC	040	BLUE OAK COURT	30	50	5/14/2016	0	52	52	52	0.00	100.00	0.00
BOC	050	BLUE OAK COURT	040	COURT	5/14/2016	0	54	54	54	0.00	100.00	0.00
BOC	COURT	BLUE OAK COURT	50	END	5/14/2016	0	52	52	52	1.09	97.83	1.09
CGC	010	COPPER GLEN COURT	INTX SADDLE CREEK LANE	20	5/14/2016	0	60	60	60	32.73	67.27	0.00
CGC	COURT	COPPER GLEN COURT	10	END	5/14/2016	0	49	49	49	25.83	60.77	13.40
CGT	010	COPPER GLEN TERRACE	INTX SADDLE CREEK LANE	20	5/14/2016	0	69	69	69	55.48	43.41	1.12
CGT	020	COPPER GLEN TERRACE	10	30	5/14/2016	0	20	20	20	0.70	98.61	0.70
CGT	030	COPPER GLEN TERRACE	20	40	5/14/2016	0	26	26	26	0.00	100.00	0.00
CGT	040	COPPER GLEN TERRACE	30	50	5/14/2016	0	20	20	20	0.42	99.16	0.42
CGT	050	COPPER GLEN TERRACE	40	COURT	5/14/2016	0	61	61	61	0.00	100.00	0.00
CGT	COURT	COPPER GLEN TERRACE	50	END	5/14/2016	0	57	57	57	6.10	87.81	6.10
ENTRYIN	005	ENTRY ROAD IN	LITTLE JOHN SOUTHBOUND INTO RESORT	SECTION 20	5/14/2016	0	54	54	54	0.00	100.00	0.00
ENTRYIN	010	ENTRY ROAD IN	LITTLE JOHN ROAD	SECTION 10	5/14/2016	0	64	64	64	0.00	100.00	0.00
ENTRYOUT	020	ENTRY ROAD IN	SECTION 10	GATE	5/14/2016	0	83	83	83	0.00	100.00	0.00
ENTRYOUT	010	ENTRY ROAD OUT	GATE	SECTION 20	5/14/2016	0	64	64	64	0.00	100.00	0.00
ENTRYOUT	020	ENTRY ROAD OUT	SECTION 10	LITTLE JOHN	5/14/2016	0	83	83	83	0.00	100.00	0.00
ENTRYOUT	030	ENTRY ROAD OUT	SECTION 10	RIGHT ONTO LITTLE JOHN	5/14/2016	0	83	83	83	0.00	100.00	0.00
FC	010	FALCON COURT	INTX HAWKRIDGE DRIVE	COURT	5/14/2016	0	54	54	54	0.00	100.00	0.00
FC	COURT	FALCON COURT	010	END	5/14/2016	0	54	54	54	0.41	99.17	0.41
FLL	010	FALLING LEAF LANE	INTX OAK CRREK DRIVE	20	5/14/2016	0	81	81	81	1.37	97.25	1.37
FLL	020	FALLING LEAF LANE	10	30	5/14/2016	0	81	81	81	0.00	100.00	0.00
FLL	030	FALLING LEAF LANE	20	40	5/14/2016	0	81	81	81	1.51	96.98	1.51
FLL	040	FALLING LEAF LANE	30	50	5/14/2016	0	81	81	81	0.00	100.00	0.00
FLL	050	FALLING LEAF LANE	40	60	5/14/2016	0	81	81	81	0.00	100.00	0.00
FLL	060	FALLING LEAF LANE	50	70	5/14/2016	0	79	79	79	3.48	93.03	3.48
FLL	070	FALLING LEAF LANE	60	80	5/14/2016	0	81	81	81	0.00	100.00	0.00
FLL	080	FALLING LEAF LANE	70	90	5/14/2016	0	81	81	81	1.68	96.65	1.68
FLL	COURT	FALLING LEAF LANE	80	END	5/14/2016	0	81	81	81	2.56	94.88	2.56
FSC	010	FLAGSTONE COURT	INTX OAK CREEK DRIVE	COURT	5/14/2016	0	68	68	68	67.52	32.48	0.00
FSC	COURT	FLAGSTONE COURT	010	END	5/14/2016	0	54	54	54	1.03	97.94	1.03

PCI Calculation - Summary

Printed: 06/07/2016

Street ID	Section ID	Road Name	Begin Location	End Location	PCI Date	PCI Before	PCI After	PCI High	PCI Low	Pct Load	Pct Envr	Pct Other
GRVC	010	GRANDVIEW COURT	INTX OAK CREEK DRIVE	COURT	5/14/2016	0	77	77	77	0.00	100.00	0.00
GRVC	COURT	GRANDVIEW COURT	010	END	5/14/2016	0	73	73	73	7.97	84.07	7.97
GSC	010	GLEN SIDE COURT	INTX SADDLE CREEK LANE	20	5/14/2016	0	81	81	81	1.41	97.18	1.41
GSC	020	GLEN SIDE COURT	10	30	5/14/2016	0	81	81	81	0.00	100.00	0.00
GSC	030	GLEN SIDE COURT	20	40	5/14/2016	0	81	81	81	1.51	96.98	1.51
GSC	040	GLEN SIDE COURT	30	50	5/14/2016	0	81	81	81	0.00	100.00	0.00
GSC	050	GLEN SIDE COURT	40	60	5/14/2016	0	81	81	81	1.51	96.98	1.51
GSC	060	GLEN SIDE COURT	50	COURT	5/14/2016	0	81	81	81	0.00	100.00	0.00
GSC	COURT	GLEN SIDE COURT	60	END	5/14/2016	0	80	80	80	0.00	100.00	0.00
GSTC	010	GREENSTONE COURT	INTX OAK CREEK DRIVE	20	5/14/2016	0	54	54	54	0.00	100.00	0.00
GSTC	020	GREENSTONE COURT	10	30	5/14/2016	0	46	46	46	15.38	69.25	15.38
GSTC	COURT	GREENSTONE COURT	020	END	5/14/2016	0	54	54	54	1.24	97.52	1.24
GVC	010	GLEN VIEW COURT	INTX SADDLE CREEK LANE	20	5/14/2016	0	59	59	59	0.84	98.32	0.84
GVC	020	GLEN VIEW COURT	10	30	5/14/2016	0	73	73	73	0.00	100.00	0.00
GVC	030	GLEN VIEW COURT	20	40	5/14/2016	0	73	73	73	0.00	100.00	0.00
GVC	040	GLEN VIEW COURT	30	50	5/14/2016	0	77	77	77	0.00	97.58	2.42
GVC	050	GLEN VIEW COURT	40	COURT	5/14/2016	0	61	61	61	1.01	97.99	1.01
GVC	COURT	GLEN VIEW COURT	50	END	5/14/2016	0	66	66	66	0.00	100.00	0.00
HRC	010	HAWKRIDGE COURT	INTX HAWKRIDGE DRIVE	020	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRC	020	HAWKRIDGE COURT	010	030	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRC	030	HAWKRIDGE COURT	020	040	5/14/2016	0	82	82	82	2.19	95.63	2.19
HRC	040	HAWKRIDGE COURT	030	COURT	5/14/2016	0	81	81	81	14.27	71.47	14.27
HRC	COURT	HAWKRIDGE COURT	040	END	5/14/2016	0	82	82	82	1.79	96.43	1.79
HRD	010	HAWKRIDGE DRIVE	END CUL-DE-SAC AT OAK WOOD PLACE	020	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	020	HAWKRIDGE DRIVE	010	030	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	030	KNOLLS COURT	020	040	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	040	HAWKRIDGE DRIVE	030	050	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	050	HAWKRIDGE DRIVE	040	060	5/14/2016	0	82	82	82	0.00	100.00	0.00
HRD	060	HAWKRIDGE DRIVE	050	070	5/14/2016	0	81	81	81	5.97	88.07	5.97
HRD	070	HAWKRIDGE DRIVE	060	080	5/14/2016	0	82	82	82	3.15	93.71	3.15
HRD	080	HAWKRIDGE DRIVE	070	090	5/14/2016	0	82	82	82	2.16	95.68	2.16
HRD	090	HAWKRIDGE DRIVE	080	100	5/14/2016	0	81	81	81	8.24	83.51	8.24
HRD	100	HAWKRIDGE DRIVE	090	110	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	110	HAWKRIDGE DRIVE	100	120	5/14/2016	0	82	82	82	2.19	95.63	2.19
HRD	120	HAWKRIDGE DRIVE	110	130	5/14/2016	0	81	81	81	6.32	87.35	6.32

PCI Calculation - Summary

Printed: 06/07/2016

Peter Rei

Street ID	Section ID	Road Name	Begin Location	End Location	PCI Date	PCI Before	PCI After	PCI High	PCI Low	Pct Load	Pct Envr	Pct Other
HRD	130	HAWKRIDGE DRIVE	120	140	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	140	HAWKRIDGE DRIVE	130	150	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	150	HAWKRIDGE DRIVE	140	160	5/14/2016	0	81	81	81	5.22	89.57	5.22
HRD	160	HAWKRIDGE DRIVE	150	170	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	170	HAWKRIDGE DRIVE	160	180	5/14/2016	0	81	81	81	7.32	85.37	7.32
HRD	180	HAWKRIDGE DRIVE	170	190	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	190	HAWKRIDGE DRIVE	180	200	5/14/2016	0	81	81	81	8.24	83.51	8.24
HRD	200	HAWKRIDGE DRIVE	190	210	5/14/2016	0	79	79	79	3.48	93.03	3.48
HRD	210	HAWKRIDGE DRIVE	200	220	5/14/2016	0	81	81	81	5.97	88.07	5.97
HRD	220	HAWKRIDGE DRIVE	210	230	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	230	HAWKRIDGE DRIVE	220	240	5/14/2016	0	79	79	79	10.20	79.61	10.20
HRD	240	HAWKRIDGE DRIVE	230	250	5/14/2016	0	82	82	82	0.00	100.00	0.00
HRD	250	HAWKRIDGE DRIVE	240	260	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	260	HAWKRIDGE DRIVE	250	270	5/14/2016	0	81	81	81	5.28	89.44	5.28
HRD	270	HAWKRIDGE DRIVE	260	280	5/14/2016	0	81	81	81	7.32	85.37	7.32
HRD	280	HAWKRIDGE DRIVE	270	290	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	290	HAWKRIDGE DRIVE	280	300	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	300	HAWKRIDGE DRIVE	290	310	5/14/2016	0	82	82	82	0.00	100.00	0.00
HRD	310	HAWKRIDGE DRIVE	300	320	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	320	HAWKRIDGE DRIVE	310	330	5/14/2016	0	81	81	81	7.08	85.84	7.08
HRD	330	HAWKRIDGE DRIVE	320	340	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	340	HAWKRIDGE DRIVE	330	350	5/14/2016	0	81	81	81	15.63	68.75	15.63
HRD	350	HAWKRIDGE DRIVE	340	360	5/14/2016	0	81	81	81	5.10	89.79	5.10
HRD	360	HAWKRIDGE DRIVE	350	370	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	370	HAWKRIDGE DRIVE	360	380	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	380	HAWKRIDGE DRIVE	370	390	5/14/2016	0	83	83	83	0.00	100.00	0.00
HRD	390	HAWKRIDGE DRIVE	380	400	5/14/2016	0	65	65	65	1.94	96.13	1.94
HRD	400	HAWKRIDGE DRIVE	390	420	5/14/2016	0	40	40	40	36.12	62.11	1.78
HRD	410	HAWKRIDGE DRIVE	400	420	5/14/2016	0	54	54	54	0.00	100.00	0.00
HRD	420	HAWKRIDGE DRIVE	410	430	5/14/2016	0	54	54	54	0.00	100.00	0.00
HRD	430	HAWKRIDGE DRIVE	420	440	5/14/2016	0	52	52	52	6.34	87.32	6.34
HRD	440	HAWKRIDGE DRIVE	430	450	5/14/2016	0	53	53	53	0.00	100.00	0.00
HRD	450	HAWKRIDGE DRIVE	440	460	5/14/2016	0	40	40	40	37.61	60.64	1.76
HRD	460	HAWKRIDGE DRIVE	450	470	5/14/2016	0	52	52	52	25.15	74.34	0.52
HRD	470	HAWKRIDGE DRIVE	460	480	5/14/2016	0	54	54	54	0.00	100.00	0.00
HRD	480	HAWKRIDGE DRIVE	470	END	5/14/2016	0	42	42	42	33.67	66.33	0.00
KC	010	KNOLLS COURT	INTX KNOLLS DRIVE	020	5/14/2016	0	67	67	67	22.71	73.51	3.78
KC	020	KNOLLS COURT	010	030	5/14/2016	0	72	72	72	22.36	77.64	0.00
KC	030	KNOLLS COURT	020	040	5/14/2016	0	68	68	68	33.49	61.34	5.17
KC	040	KNOLLS COURT	030	050	5/14/2016	0	75	75	75	10.50	79.00	10.50

PCI Calculation - Summary

Printed: 06/07/2016

Street ID	Section ID	Road Name	Begin Location	End Location	PCI Date	PCI Before	PCI After	PCI High	PCI Low	Pct Load	Pct Envr	Pct Other
KC	050	KNOLLS COURT	040	060	5/14/2016	0	78	78	78	0.00	100.00	0.00
KC	060	KNOLLS COURT	050	COURT	5/14/2016	0	78	78	78	0.00	100.00	0.00
KC	COURT	KNOLLS COURT	060	END	5/14/2016	0	60	60	60	46.53	50.36	3.12
KD	030	KNOLLS DRIVE	020/021	040	5/14/2016	0	51	51	51	7.47	85.06	7.47
KD	040	KNOLLS DRIVE	030	050	5/14/2016	0	75	75	75	0.00	100.00	0.00
KD	050	KNOLLS DRIVE	040	060	5/14/2016	0	79	79	79	13.09	73.81	13.09
KD	060	KNOLLS DRIVE	050	070	5/14/2016	0	79	79	79	11.95	76.09	11.95
KD	070	KNOLLS DRIVE	060	080	5/14/2016	0	63	63	63	46.45	53.55	0.00
KD	080	KNOLLS DRIVE	070	090	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	090	KNOLLS DRIVE	080	100	5/14/2016	0	79	79	79	0.00	100.00	0.00
KD	100	KNOLLS DRIVE	090	110	5/14/2016	0	74	74	74	10.87	78.26	10.87
KD	110	KNOLLS DRIVE	100	120	5/14/2016	0	76	76	76	11.66	76.68	11.66
KD	120	KNOLLS DRIVE	110	130	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	130	KNOLLS DRIVE	120	140	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	140	KNOLLS DRIVE	130	150	5/14/2016	0	77	77	77	12.23	75.54	12.23
KD	150	KNOLLS DRIVE	140	160	5/14/2016	0	79	79	79	9.30	81.39	9.30
KD	160	KNOLLS DRIVE	150	170	5/14/2016	0	72	72	72	16.90	66.20	16.90
KD	170	KNOLLS DRIVE	160	180	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	180	KNOLLS DRIVE	170	190	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	190	KNOLLS DRIVE	180	200	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	200	KNOLLS DRIVE	190	210	5/14/2016	0	77	77	77	12.24	75.51	12.24
KD	210	KNOLLS DRIVE	200	220	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	220	KNOLLS DRIVE	210	230	5/14/2016	0	64	64	64	18.60	62.80	18.60
KD	230	KNOLLS DRIVE	220	240	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	240	KNOLLS DRIVE	230	250	5/14/2016	0	77	77	77	12.23	75.54	12.23
KD	250	KNOLLS DRIVE	240	260	5/14/2016	0	79	79	79	0.00	100.00	0.00
KD	260	KNOLLS DRIVE	250	270	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	270	KNOLLS DRIVE	260	280	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	280	KNOLLS DRIVE	270	290	5/14/2016	0	78	78	78	15.24	69.52	15.24
KD	290	KNOLLS DRIVE	280	300	5/14/2016	0	79	79	79	12.97	74.06	12.97
KD	300	KNOLLS DRIVE	290	310	5/14/2016	0	71	71	71	15.79	68.43	15.79
KD	310	KNOLLS DRIVE	300	320	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	320	KNOLLS DRIVE	310	330	5/14/2016	0	79	79	79	13.36	73.28	13.36
KD	330	KNOLLS DRIVE	320	340	5/14/2016	0	79	79	79	8.89	82.21	8.89
KD	340	KNOLLS DRIVE	330	350	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	350	KNOLLS DRIVE	340	360	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	360	KNOLLS DRIVE	350	370	5/14/2016	0	78	78	78	12.42	75.16	12.42
KD	370	KNOLLS DRIVE	360	380	5/14/2016	0	76	76	76	10.62	78.76	10.62
KD	380	KNOLLS DRIVE	370	390	5/14/2016	0	78	78	78	0.00	100.00	0.00
KD	390	KNOLLS COURT	380	400	5/14/2016	0	81	81	81	0.00	100.00	0.00

PCI Calculation - Summary

Printed: 06/07/2016

Street ID	Section ID	Road Name	Begin Location	End Location	PCI Date	PCI Before	PCI After	PCI High	PCI Low	Pct Load	Pct Envr	Pct Other
KD	400	KNOLLS DRIVE	390	410	5/14/2016	0	81	81	81	0.00	100.00	0.00
KD	410	KNOLLS DRIVE	40	420	5/14/2016	0	76	76	76	11.66	76.68	11.66
KD	420	KNOLLS DRIVE	410	430	5/14/2016	0	78	78	78	10.97	78.05	10.97
KD	430	KNOLLS DRIVE	420	440	5/14/2016	0	75	75	75	11.39	77.23	11.39
KD	440	KNOLLS DRIVE	430	450	5/14/2016	0	77	77	77	12.32	75.36	12.32
KD	450	KNOLLS DRIVE	440	460	5/14/2016	0	78	78	78	5.51	88.98	5.51
KD	460	KNOLLS COURT	450	470	5/14/2016	0	68	68	68	35.78	59.62	4.60
KD	470	KNOLLS DRIVE	460	INTX KNOLLS DRIVE	5/14/2016	0	81	81	81	0.00	100.00	0.00
KDJN	010	KNOLLS DRIVE	INTX OAK CREEK ROAD	20	5/14/2016	0	63	63	63	35.92	63.32	0.76
KDJN	020	KNOLLS DRIVE	10	30	5/14/2016	0	74	74	74	0.00	100.00	0.00
KDOUT	011	KNOLLS DRIVE	INTX OAK CREEK DRIVE	021	5/14/2016	0	66	66	66	16.03	67.93	16.03
KDOUT	021	KNOLLS DRIVE	10	30	5/14/2016	0	77	77	77	0.00	100.00	0.00
LCC	010	LEAF CREST COURT	INTX OAK CREEK DRIVE	20	5/14/2016	0	81	81	81	0.00	100.00	0.00
LCC	020	LEAF CREST COURT	10	30	5/14/2016	0	82	82	82	0.00	100.00	0.00
LCC	030	LEAF CREST COURT	20	40	5/14/2016	0	81	81	81	5.28	89.44	5.28
LCC	040	LEAF CREST COURT	30	COURT	5/14/2016	0	83	83	83	0.00	100.00	0.00
LCC	COURT	LEAF CREST COURT	040	END	5/14/2016	0	81	81	81	4.60	90.80	4.60
MLC	010	MITCHELL LAKE COURT	INTX MITCHELL LAKE LANE	20	5/14/2016	0	76	76	76	17.60	64.79	17.60
MLC	020	MITCHELL LAKE COURT	10	30	5/14/2016	0	77	77	77	5.97	88.06	5.97
MLC	030	MITCHELL LAKE COURT	20	40	5/14/2016	0	73	73	73	0.00	100.00	0.00
MLC	040	MITCHELL LAKE COURT	30	COURT	5/14/2016	0	72	72	72	5.50	88.99	5.50
MLC	COURT	MITCHELL LAKE COURT	040	END	5/14/2016	0	73	73	73	7.33	85.34	7.33
MLR	010	MITCHELL LAKE LANE	INTX OAK CREEK ROAD	20	5/14/2016	0	72	72	72	5.52	88.96	5.52
MLR	020	MITCHELL LAKE LANE	10	30	5/14/2016	0	76	76	76	0.00	100.00	0.00
MLR	030	MITCHELL LAKE LANE	20	40	5/14/2016	0	79	79	79	0.00	100.00	0.00
MLR	040	MITCHELL LAKE LANE	30	50	5/14/2016	0	75	75	75	11.26	77.48	11.26
MLR	050	MITCHELL LAKE LANE	40	COURT	5/14/2016	0	46	46	46	55.05	44.95	0.00
MLR	COURT	MITCHELL LAKE LANE	50	END	5/14/2016	0	71	71	71	26.79	67.70	5.51
MWC	010	MOSSY WOODS COURT	INTX KNOLLS DRIVE	020	5/14/2016	0	81	81	81	0.00	100.00	0.00
MWC	020	MOSSY WOODS COURT	010	030	5/14/2016	0	77	77	77	8.15	83.71	8.15
MWC	030	MOSSY WOODS COURT	020	COURT	5/14/2016	0	72	72	72	0.00	100.00	0.00
MWC	COURT	MOSSY WOODS COURT	030	END	5/14/2016	0	79	79	79	14.94	70.12	14.94
OCD	010	OAK CREEK DRIVE	END	20	5/14/2016	0	82	82	82	0.00	100.00	0.00
OCD	020	OAK CREEK DRIVE	10	30	5/14/2016	0	82	82	82	0.00	100.00	0.00
OCD	030	OAK CREEK DRIVE	20	40	5/14/2016	0	81	81	81	3.16	93.68	3.16

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Street ID	Section ID	Road Name	Begin Location	End Location	PCI Date	PCI Before	PCI After	PCI High	PCI Low	Pct Load	Pct Envr	Pct Other
OCD	040	OAK CREEK DRIVE	30	50	5/14/2016	0	81	81	81	0.00	100.00	0.00
OCD	050	OAK CREEK DRIVE	40	60	5/14/2016	0	72	72	72	5.34	89.32	5.34
OCD	060	OAK CREEK DRIVE	50	70	5/14/2016	0	81	81	81	0.00	100.00	0.00
OCD	070	OAK CREEK DRIVE	60	80	5/14/2016	0	81	81	81	1.44	97.12	1.44
OCD	080	OAK CREEK DRIVE	70	90	5/14/2016	0	78	78	78	3.42	93.16	3.42
OCD	090	OAK CREEK DRIVE	80	100	5/14/2016	0	81	81	81	0.00	100.00	0.00
OCD	100	OAK CREEK DRIVE	90	110	5/14/2016	0	79	79	79	3.59	92.81	3.59
OCD	110	OAK CREEK DRIVE	100	20	5/14/2016	0	81	81	81	0.00	100.00	0.00
OCD	120	OAK CREEK DRIVE	110	130	5/14/2016	0	79	79	79	6.85	86.29	6.85
OCD	130	OAK CREEK DRIVE	120	140	5/14/2016	0	83	83	83	0.00	100.00	0.00
OCD	140	OAK CREEK DRIVE	130	150	5/14/2016	0	79	79	79	6.85	86.29	6.85
OCD	150	OAK CREEK DRIVE	140	160	5/14/2016	0	79	79	79	8.63	82.74	8.63
OCD	160	OAK CREEK DRIVE	150	170	5/14/2016	0	83	83	83	0.00	100.00	0.00
OCD	170	OAK CREEK DRIVE	160	180	5/14/2016	0	81	81	81	5.28	89.44	5.28
OCD	180	OAK CREEK DRIVE	170	190	5/14/2016	0	83	83	83	0.00	100.00	0.00
OCD	190	OAK CREEK DRIVE	180	200	5/14/2016	0	81	81	81	4.98	90.04	4.98
OCD	200	OAK CREEK DRIVE	190	210	5/14/2016	0	81	81	81	2.05	95.89	2.05
OCD	210	OAK CREEK DRIVE	200	220	5/14/2016	0	81	81	81	6.75	86.51	6.75
OCD	220	OAK CREEK DRIVE	210	230	5/14/2016	0	58	58	58	0.00	100.00	0.00
OCD	230	OAK CREEK DRIVE	220	240	5/14/2016	0	56	56	56	1.56	96.89	1.56
OCD	240	OAK CREEK DRIVE	230	250	5/14/2016	0	26	26	26	40.07	48.00	11.94
OCD	250	OAK CREEK DRIVE	240	260	5/14/2016	0	47	47	47	11.06	77.87	11.06
OCD	260	OAK CREEK DRIVE	250	270	5/14/2016	0	32	32	32	35.62	56.37	8.01
OCD	270	OAK CREEK DRIVE	260	280	5/14/2016	0	34	34	34	38.69	61.31	0.00
OCD	280	OAK CREEK DRIVE	270	290	5/14/2016	0	54	54	54	1.00	98.00	1.00
OCD	290	OAK CREEK DRIVE	280	300	5/14/2016	0	52	52	52	2.50	94.99	2.50
OCD	300	OAK CREEK DRIVE	290	310	5/14/2016	0	54	54	54	0.00	100.00	0.00
OCD	310	OAK CREEK DRIVE	300	320	5/14/2016	0	53	53	53	1.57	96.85	1.57
OCD	320	OAK CREEK DRIVE	310	330	5/14/2016	0	53	53	53	0.00	100.00	0.00
OCD	330	OAK CREEK DRIVE	320	340	5/14/2016	0	27	27	27	48.77	48.41	2.82
OCD	340	OAK CREEK DRIVE	330	350	5/14/2016	0	52	52	52	2.56	94.88	2.56
OCD	350	OAK CREEK DRIVE	340	360	5/14/2016	0	32	32	32	39.92	59.18	0.90
OCD	360	OAK CREEK DRIVE	350	370	5/14/2016	0	53	53	53	0.00	100.00	0.00
OCD	370	OAK CREEK DRIVE	360	380	5/14/2016	0	34	34	34	37.16	60.85	1.99
OCD	380	OAK CREEK DRIVE	370	390	5/14/2016	0	30	30	30	40.24	59.76	0.00
OCD	390	OAK CREEK DRIVE	380	400	5/14/2016	0	32	32	32	39.16	59.90	0.94
OCD	400	OAK CREEK DRIVE	390	410	5/14/2016	0	33	33	33	38.73	61.27	0.00
OCD	410	OAK CREEK DRIVE	400	420	5/14/2016	0	47	47	47	25.52	74.48	0.00
OCD	420	OAK CREEK DRIVE	410	430	5/14/2016	0	24	24	24	48.37	50.88	0.75
OCD	430	OAK CREEK DRIVE	420	440	5/14/2016	0	36	36	36	46.13	53.87	0.00

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OCD	440	OAK CREEK DRIVE	430	450	5/14/2016	0	38	38	38	36.00	61.91	2.09
OCD	450	OAK CREEK DRIVE	440	460	5/14/2016	0	43	43	43	27.70	72.30	0.00
OCD	460	OAK CREEK DRIVE	450	470	5/14/2016	0	33	33	33	39.40	59.65	0.95
OCD	470	OAK CREEK DRIVE	460	480	5/14/2016	0	28	28	28	42.04	57.96	0.00
OCD	480	OAK CREEK DRIVE	470	490	5/14/2016	0	43	43	43	28.12	68.07	3.82
OCD	500	OAK CREEK DRIVE	490	510	5/14/2016	0	55	55	55	0.00	100.00	0.00
OCD	510	OAK CREEK DRIVE	500	520	5/14/2016	0	37	37	37	32.19	66.22	1.58
OCD	520	OAK CREEK DRIVE	510	530	5/14/2016	0	54	54	54	0.00	100.00	0.00
OCD	530	OAK CREEK DRIVE	520	540	5/14/2016	0	54	54	54	0.00	100.00	0.00
OCD	540	OAK CREEK DRIVE	530	550	5/14/2016	0	46	46	46	29.58	70.42	0.00
OCD	550	OAK CREEK DRIVE	540	560	5/14/2016	0	49	49	49	23.32	76.68	0.00
OCD	560	OAK CREEK DRIVE	550	570	5/14/2016	0	52	52	52	3.78	92.43	3.78
OCD	570	OAK CREEK DRIVE	560	580	5/14/2016	0	54	54	54	0.00	100.00	0.00
OCD	580	OAK CREEK DRIVE	570	590	5/14/2016	0	33	33	33	37.14	61.91	0.94
OCD	590	OAK CREEK DRIVE	580	600	5/14/2016	0	52	52	52	2.35	95.29	2.35
OCD	600	OAK CREEK DRIVE	590	610	5/14/2016	0	65	65	65	0.00	100.00	0.00
OCD	610	OAK CREEK DRIVE	600	620	5/14/2016	0	81	81	81	0.00	100.00	0.00
OCD	620	OAK CREEK DRIVE	610	630	5/14/2016	0	79	79	79	14.16	71.67	14.16
OCD	630	OAK CREEK DRIVE	620	640	5/14/2016	0	82	82	82	0.00	100.00	0.00
OCD	640	OAK CREEK DRIVE	630	650	5/14/2016	0	81	81	81	0.00	100.00	0.00
OCD	650	OAK CREEK DRIVE	640	660	5/14/2016	0	79	79	79	3.82	92.37	3.82
OCD	660	OAK CREEK DRIVE	650	670	5/14/2016	0	66	66	66	0.00	100.00	0.00
OCD	670	OAK CREEK DRIVE	660	680	5/14/2016	0	68	68	68	43.01	56.99	0.00
OCD	680	OAK CREEK DRIVE	670	690	5/14/2016	0	79	79	79	3.56	92.89	3.56
OCD	690	OAK CREEK DRIVE	680	700	5/14/2016	0	81	81	81	0.00	100.00	0.00
OCD	700	OAK CREEK DRIVE	690	710	5/14/2016	0	69	69	69	16.87	66.26	16.87
OCD	710	OAK CREEK DRIVE	700	720	5/14/2016	0	81	81	81	0.00	100.00	0.00
OCD	720	OAK CREEK DRIVE	710	END	5/14/2016	0	83	83	83	0.00	100.00	0.00
OWC	010	OAKWOOD COURT	INTX OAKWOOD PLACE	20	5/14/2016	0	83	83	83	0.00	100.00	0.00
OWC	020	OAKWOOD COURT	10	30	5/14/2016	0	83	83	83	0.00	100.00	0.00
OWC	030	OAKWOOD COURT	20	40	5/14/2016	0	83	83	83	0.00	100.00	0.00
OWC	040	OAKWOOD COURT	30	50	5/14/2016	0	82	82	82	1.32	97.35	1.32
OWC	050	OAKWOOD COURT	40	60	5/14/2016	0	83	83	83	0.00	100.00	0.00
OWC	060	OAKWOOD COURT	50	70	5/14/2016	0	83	83	83	0.00	100.00	0.00
OWC	070	OAKWOOD COURT	60	COURT	5/14/2016	0	82	82	82	0.00	100.00	0.00
OWC	COURT	OAKWOOD COURT	70	END	5/14/2016	0	83	83	83	0.00	100.00	0.00
OWP	010	OAKWOOD PLACE	INTX OAK CREEK DRIVE	20	5/14/2016	0	83	83	83	0.00	100.00	0.00
OWP	020	OAKWOOD PLACE	10	30	5/14/2016	0	81	81	81	9.13	81.73	9.13
OWP	030	OAKWOOD PLACE	20	40	5/14/2016	0	92	92	92	0.00	100.00	0.00

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OWP	040	OAKWOOD PLACE	30	50	5/14/2016	0	79	79	79	4.62	90.75	4.62
OWP	050	OAKWOOD PLACE	40	60	5/14/2016	0	83	83	83	0.00	100.00	0.00
OWP	060	OAKWOOD PLACE	50	70	5/14/2016	0	79	79	79	4.34	91.32	4.34
OWP	070	OAKWOOD PLACE	60	COURT	5/14/2016	0	73	73	73	0.00	100.00	0.00
OWP	COURT	OAKWOOD PLACE	70	END/BEGIN HAWKRIDGE ROAD	5/14/2016	0	79	79	79	6.07	87.87	6.07
PC	010	PEBBLE COURT	INTX ROCKRIDGE LANE	COURT	5/14/2016	0	91	91	91	0.00	100.00	0.00
PC	COURT	PEBBLE COURT	10	END	5/14/2016	0	79	79	79	5.49	89.02	5.49
QCC	010	QUAIL COVEY COURT	INTX QUAIL CREEK DRIVE	COURT	5/14/2016	0	82	82	82	2.27	95.47	2.27
QCC	COURT	QUAIL COVEY COURT	010	END	5/14/2016	0	82	82	82	1.79	96.43	1.79
QCD	010	QUAIL CREEK DRIVE	INTX HAWKRIDGE DRIVE	020	5/14/2016	0	82	82	82	0.00	100.00	0.00
QCD	020	QUAIL CREEK DRIVE	010	030	5/14/2016	0	83	83	83	0.00	100.00	0.00
QCD	030	QUAIL CREEK DRIVE	020	040	5/14/2016	0	81	81	81	0.00	100.00	0.00
QCD	040	QUAIL CREEK DRIVE	030	050	5/14/2016	0	82	82	82	2.19	95.63	2.19
QCD	050	QUAIL CREEK DRIVE	040	060	5/14/2016	0	82	82	82	2.19	95.63	2.19
QCD	060	QUAIL CREEK DRIVE	050	070	5/14/2016	0	81	81	81	8.24	83.51	8.24
QCD	070	QUAIL CREEK DRIVE	060	080	5/14/2016	0	83	83	83	0.00	100.00	0.00
QCD	080	QUAIL CREEK DRIVE	070	090	5/14/2016	0	83	83	83	0.00	100.00	0.00
QCD	090	QUAIL CREEK DRIVE	080	100	5/14/2016	0	81	81	81	5.28	89.44	5.28
QCD	100	QUAIL CREEK DRIVE	090	110	5/14/2016	0	83	83	83	0.00	100.00	0.00
QCD	110	QUAIL CREEK DRIVE	100	120	5/14/2016	0	82	82	82	2.19	95.63	2.19
QCD	120	QUAIL CREEK DRIVE	110	130	5/14/2016	0	83	83	83	0.00	100.00	0.00
QCD	130	QUAIL CREEK DRIVE	120	140	5/14/2016	0	83	83	83	0.00	100.00	0.00
QCD	140	QUAIL CREEK DRIVE	130	150	5/14/2016	0	83	83	83	0.00	100.00	0.00
QCD	150	QUAIL CREEK DRIVE	140	160	5/14/2016	0	81	81	81	5.28	89.44	5.28
QCD	160	QUAIL CREEK DRIVE	150	170	5/14/2016	0	83	83	83	0.00	100.00	0.00
QCD	170	QUAIL CREEK DRIVE	160	180	5/14/2016	0	81	81	81	5.28	89.44	5.28
QCD	180	QUAIL CREEK DRIVE	170	END	5/14/2016	0	81	81	81	8.24	83.51	8.24
QMC	010	QUAIL MEADOWS COURT	INTX ROCKRIDGE LANE	20	5/14/2016	0	52	52	52	4.41	91.17	4.41
QMC	020	QUAIL MEADOWS COURT	10	30	5/14/2016	0	54	54	54	0.00	100.00	0.00
QMC	030	QUAIL MEADOWS COURT	20	40	5/14/2016	0	54	54	54	3.89	92.22	3.89
QMC	40	QUAIL MEADOWS COURT	30	COURT	5/14/2016	0	54	54	54	0.00	100.00	0.00
QMC	COURT	QUAIL MEADOWS COURT	40	END	5/14/2016	0	52	52	52	5.17	89.65	5.17
QML	010	QUAIL MEADOWS LANE	INTX ROCKRIDGE LANE	20	5/14/2016	0	81	81	81	0.00	100.00	0.00
QML	020	QUAIL MEADOWS LANE	10	30	5/14/2016	0	79	79	79	4.11	91.78	4.11
QML	030	QUAIL MEADOWS LANE	20	40	5/14/2016	0	81	81	81	0.00	100.00	0.00
QML	040	QUAIL MEADOWS LANE	30	50	5/14/2016	0	73	73	73	4.53	90.94	4.53

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QML	050	QUAIL MEADOWS LANE	40	60	5/14/2016	0	79	79	79	0.00	100.00	0.00
QML	060	QUAIL MEADOWS LANE	50	COURT1	5/14/2016	0	79	79	79	1.10	97.79	1.10
QML	COURT1	QUAIL MEADOWS LANE	60	MIDDLE	5/14/2016	0	64	64	64	1.80	96.40	1.80
QML	COURT2	QUAIL MEADOWS LANE	MIDDLE	END	5/14/2016	0	67	67	67	8.14	83.71	8.14
QML	MIDDLE	QUAIL MEADOWS LANE	COURT1	COURT2	5/14/2016	0	83	83	83	0.00	100.00	0.00
RR	010	RESORT ROUNDABOUT	INTX SADDLECREEK DRIVE	020	5/14/2016	0	81	81	81	0.00	100.00	0.00
RR	020	RESORT ROUNDABOUT	010	030	5/14/2016	0	75	75	75	0.00	100.00	0.00
RR	030	RESORT ROUNDABOUT	020	040	5/14/2016	0	75	75	75	0.00	100.00	0.00
RR	040	RESORT ROUNDABOUT	030	INTX SADDLECREEK DRIVE	5/14/2016	0	81	81	81	13.60	72.81	13.60
RR	EB10	RESORT ROUNDABOUT	ROUNDABOUT	SADDLECREEK DRIVE	5/14/2016	0	67	67	67	49.30	50.70	0.00
RR	NB10	RESORT ROUNDABOUT	PARKING LOT	ROUNDABOUT	5/14/2016	0	75	75	75	0.00	100.00	0.00
RR	SB10	RESORT ROUNDABOUT	ROUNDABOUT	PARKING LOT	5/14/2016	0	81	81	81	0.00	100.00	0.00
RR	WB10	RESORT ROUNDABOUT	ROUNDABOUT	SADDLECREEK DRIVE	5/14/2016	0	81	81	81	0.00	100.00	0.00
RRC	010	ROCKRIDGE COURT	INTX ROCKRIDGE LANE	COURT	5/14/2016	0	24	24	24	1.22	97.56	1.22
RRC	COURT	ROCKRIDGE COURT	10	END	5/14/2016	0	28	28	28	0.00	100.00	0.00
RRL	010	ROCKRIDGE LANE	INTX SADDLE CREEK DRIVE	20	5/14/2016	0	81	81	81	0.00	100.00	0.00
RRL	020	ROCKRIDGE LANE	10	30	5/14/2016	0	35	35	35	43.86	53.65	2.48
RRL	030	ROCKRIDGE LANE	20	40	5/14/2016	0	61	61	61	26.88	73.12	0.00
RRL	040	ROCKRIDGE LANE	30	50	5/14/2016	0	50	50	50	1.54	96.92	1.54
RRL	050	ROCKRIDGE LANE	40	60	5/14/2016	0	52	52	52	0.00	100.00	0.00
RRL	060	ROCKRIDGE LANE	50	70	5/14/2016	0	52	52	52	0.00	100.00	0.00
RRL	070	ROCKRIDGE LANE	60	80	5/14/2016	0	36	36	36	47.51	49.81	2.69
RRL	080	ROCKRIDGE LANE	70	90	5/14/2016	0	40	40	40	39.55	60.45	0.00
RRL	090	ROCKRIDGE LANE	80	100	5/14/2016	0	67	67	67	41.40	43.56	15.04
RRL	100	ROCKRIDGE LANE	90	110	5/14/2016	0	26	26	26	21.55	78.45	0.00
RRL	110	ROCKRIDGE LANE	100	120	5/14/2016	0	50	50	50	24.27	75.73	0.00
RRL	120	ROCKRIDGE LANE	110	130	5/14/2016	0	52	52	52	2.01	95.98	2.01
RRL	130	ROCKRIDGE LANE	120	140	5/14/2016	0	54	54	54	0.00	100.00	0.00
RRL	140	ROCKRIDGE LANE	130	150	5/14/2016	0	52	52	52	17.73	80.99	1.28
RRL	150	ROCKRIDGE LANE	140	160	5/14/2016	0	52	52	52	1.83	96.34	1.83
RRL	160	ROCKRIDGE LANE	150	170	5/14/2016	0	54	54	54	0.00	100.00	0.00
RRL	170	ROCKRIDGE LANE	160	180	5/14/2016	0	54	54	54	1.44	97.11	1.44
RRL	180	ROCKRIDGE LANE	170	190	5/14/2016	0	52	52	52	1.88	96.24	1.88
RRL	190	ROCKRIDGE LANE	180	200	5/14/2016	0	34	34	34	0.99	98.02	0.99

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RRL	200	ROCKRIDGE LANE	190	210	5/14/2016	0	19	19	19	21.77	75.20	3.03
RRL	210	ROCKRIDGE LANE	200	220	5/14/2016	0	31	31	31	15.79	79.53	4.68
RRL	220	ROCKRIDGE LANE	210	230	5/14/2016	0	35	35	35	0.76	98.49	0.76
RRL	230	ROCKRIDGE LANE	220	240	5/14/2016	0	24	24	24	3.63	92.73	3.63
RRL	240	ROCKRIDGE LANE	230	250	5/14/2016	0	28	28	28	0.90	98.20	0.90
RRL	250	ROCKRIDGE LANE	240	260	5/14/2016	0	26	26	26	0.00	100.00	0.00
RRL	260	ROCKRIDGE LANE	250	270	5/14/2016	0	32	32	32	5.09	89.82	5.09
RRL	270	ROCKRIDGE LANE	260	280	5/14/2016	0	30	30	30	2.70	94.59	2.70
RRL	280	ROCKRIDGE LANE	270	END	5/14/2016	0	54	54	54	0.00	100.00	0.00
RTC	010	RED TAIL COURT	INTX HAWKRIDGE DRIVE	COURT	5/14/2016	0	54	54	54	0.00	100.00	0.00
RTC	COURT	RED TAIL COURT	010	END	5/14/2016	0	52	52	52	0.00	100.00	0.00
SC	10	SUMMIT COURT	INTX SUMMIT LANE	20	5/14/2016	0	54	54	54	0.00	100.00	0.00
SC	20	SUMMIT COURT	10	30	5/14/2016	0	52	52	52	2.16	95.69	2.16
SC	30	SUMMIT COURT	20	COURT	5/14/2016	0	54	54	54	0.00	100.00	0.00
SC	COURT	SUMMIT COURT	30	END	5/14/2016	0	54	54	54	2.53	94.94	2.53
SCD	070	SADDLE CREEK DRIVE	060	080	5/14/2016	0	41	41	41	44.24	55.39	0.37
SCD	080	SADDLE CREEK DRIVE	70	90	5/14/2016	0	27	27	27	54.56	44.01	1.43
SCD	090	SADDLE CREEK DRIVE	80	100	5/14/2016	0	12	12	12	28.29	71.71	0.00
SCD	100	SADDLE CREEK DRIVE	90	110	5/14/2016	0	33	33	33	47.18	51.95	0.87
SCD	110	SADDLE CREEK DRIVE	100	120	5/14/2016	0	40	40	40	31.29	65.02	3.69
SCD	120	SADDLE CREEK DRIVE	110	130	5/14/2016	0	36	36	36	35.33	64.67	0.00
SCD	130	SADDLE CREEK DRIVE	120	140	5/14/2016	0	12	12	12	62.41	37.59	0.00
SCD	140	SADDLE CREEK DRIVE	130	150	5/14/2016	0	3	3	3	50.55	49.45	0.00
SCD	150	SADDLE CREEK DRIVE	140	160	5/14/2016	0	3	3	3	38.56	61.44	0.00
SCD	160	SADDLE CREEK DRIVE	150	ROUNDABOUT	5/14/2016	0	3	3	3	47.13	52.53	0.34
SCD	180	SADDLE CREEK DRIVE	ROUNDABOUT	190	5/14/2016	0	17	17	17	60.66	26.98	12.36
SCD	190	SADDLE CREEK DRIVE	180	200	5/14/2016	0	26	26	26	20.02	79.98	0.00
SCD	200	SADDLE CREEK DRIVE	190	210	5/14/2016	0	25	25	25	62.19	37.81	0.00
SCD	210	SADDLE CREEK DRIVE	200	220	5/14/2016	0	38	38	38	39.34	60.66	0.00
SCD	220	SADDLE CREEK DRIVE	210	230	5/14/2016	0	44	44	44	34.54	65.46	0.00
SCD	230	SADDLE CREEK DRIVE	220	240	5/14/2016	0	50	50	50	3.77	92.46	3.77
SCD	240	SADDLE CREEK DRIVE	230	250	5/14/2016	0	52	52	52	7.16	85.68	7.16
SCD	250	SADDLE CREEK DRIVE	240	260	5/14/2016	0	6	6	6	31.39	63.62	4.99
SCD	260	SADDLE CREEK DRIVE	250	270	5/14/2016	0	54	54	54	0.00	100.00	0.00
SCD	270	SADDLE CREEK DRIVE	260	280	5/14/2016	0	34	34	34	6.74	86.52	6.74
SCD	280	SADDLE CREEK DRIVE	270	290	5/14/2016	0	38	38	38	33.25	60.29	6.46
SCD	290	SADDLE CREEK DRIVE	280	300	5/14/2016	0	54	54	54	1.31	97.38	1.31
SCD	300	SADDLE CREEK DRIVE	290	310	5/14/2016	0	41	41	41	12.25	75.49	12.25
SCD	310	SADDLE CREEK DRIVE	300	320	5/14/2016	0	53	53	53	0.00	100.00	0.00

PCI Calculation - Summary

Peter Rei

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Street ID	Section ID	Road Name	Begin Location	End Location	PCI Date	PCI Before	PCI After	PCI High	PCI Low	Pct Load	Pct Envr	Pct Other
SCD	320	SADDLE CREEK DRIVE	310	330	5/14/2016	0	9	9	9	63.63	27.75	8.62
SCD	330	SADDLE CREEK DRIVE	320	340	5/14/2016	0	8	8	8	67.08	30.00	2.93
SCD	340	SADDLE CREEK DRIVE	330	350	5/14/2016	0	13	13	13	62.92	37.08	0.00
SCD	350	SADDLE CREEK DRIVE	340	360	5/14/2016	0	45	45	45	28.62	60.24	11.14
SCD	360	SADDLE CREEK DRIVE	350	370	5/14/2016	0	52	52	52	0.00	100.00	0.00
SCD	370	SADDLE CREEK DRIVE	360	380	5/14/2016	0	52	52	52	2.22	95.55	2.22
SCD	380	SADDLE CREEK DRIVE	370	390	5/14/2016	0	35	35	35	44.72	53.86	1.41
SCD	390	SADDLE CREEK DRIVE	380	400	5/14/2016	0	50	50	50	14.32	84.64	1.04
SCD	395	SADDLE CREEK DRIVE	390	400	5/14/2016	0	54	54	54	5.89	88.23	5.89
SCD	400	SADDLE CREEK DRIVE	390	410	5/14/2016	0	52	52	52	7.08	85.84	7.08
SCD	410	SADDLE CREEK DRIVE	400	420	5/14/2016	0	54	54	54	0.00	100.00	0.00
SCD	420	SADDLE CREEK DRIVE	410	430	5/14/2016	0	47	47	47	33.20	62.97	3.83
SCD	430	SADDLE CREEK DRIVE	420	INTX OAK CREEK ROAD	5/14/2016	0	52	52	52	2.05	95.91	2.05
SCDIN	010	SADDLE CREEK DRIVE	GATE	SECTION 20	5/14/2016	0	52	52	52	4.18	91.63	4.18
SCDIN	020	SADDLE CREEK DRIVE	SECTION 10	SECTION 30	5/14/2016	0	54	54	54	0.00	100.00	0.00
SCDIN	030	SADDLE CREEK DRIVE	SECTION 20	SECTION 35	5/14/2016	0	47	47	47	4.91	76.93	18.16
SCDIN	035	SADDLE CREEK DRIVE	APPX 260 FEET FROM GATE	APPX 330 FEET FROM GATE	5/14/2016	0	56	56	56	0.00	100.00	0.00
SCDIN	040	SADDLE CREEK DRIVE	SECTION 35	SECTION 50	5/14/2016	0	53	53	53	0.00	100.00	0.00
SCDIN	050	SADDLE CREEK DRIVE	SECTION 40	SECTION 60	5/14/2016	0	56	56	56	0.00	100.00	0.00
SCDIN	060	SADDLE CREEK DRIVE	SECTION 50	INTX SADDLE CREEK LANE	5/14/2016	0	2	2	2	42.93	39.20	17.87
SCDIN	065	SADDLE CREEK DRIVE	SECTION 60	SECTION 70	5/14/2016	0	27	27	27	39.51	60.09	0.40
SCDOUT	011	SADDLE CREEK DRIVE	GATE	SECTION 21	5/14/2016	0	56	56	56	0.00	100.00	0.00
SCDOUT	021	SADDLE CREEK DRIVE	SECTION 11	SECTION 31	5/14/2016	0	50	50	50	23.43	76.57	0.00
SCDOUT	031	SADDLE CREEK DRIVE	SECTION 21	SECTION 35	5/14/2016	0	13	13	13	13.45	73.11	13.45
SCDOUT	041	SADDLE CREEK DRIVE	SECTION 35	SECTION 51	5/14/2016	0	54	54	54	0.00	100.00	0.00
SCDOUT	051	SADDLE CREEK DRIVE	SECTION 41	SECTION 61	5/14/2016	0	52	52	52	0.00	100.00	0.00
SCDOUT	061	SADDLE CREEK DRIVE	SECTION 51	INTX SADDLE CREEK LANE	5/14/2016	0	52	52	52	0.00	100.00	0.00
SCL	010	SADDLE CREEK LANE	SADDLE CREEK DRIVE	20	5/14/2016	0	33	33	33	52.07	47.93	0.00
SCL	020	SADDLE CREEK LANE	10	30	5/14/2016	0	59	59	59	38.97	61.03	0.00
SCL	030	SADDLE CREEK LANE	20	40	5/14/2016	0	73	73	73	36.81	63.19	0.00
SCL	040	SADDLE CREEK LANE	30	50	5/14/2016	0	81	81	81	1.05	97.90	1.05
SCL	050	SADDLE CREEK LANE	40	60	5/14/2016	0	69	69	69	49.01	50.99	0.00
SCL	060	SADDLE CREEK LANE	50	70	5/14/2016	0	72	72	72	46.80	52.24	0.96
SCL	070	SADDLE CREEK LANE	60	80	5/14/2016	0	72	72	72	0.00	100.00	0.00
SCL	080	SADDLE CREEK LANE	70	90	5/14/2016	0	71	71	71	48.01	51.99	0.00
SCL	090	SADDLE CREEK LANE	80	100	5/14/2016	0	81	81	81	0.00	100.00	0.00
SCL	100	SADDLE CREEK LANE	90	110	5/14/2016	0	77	77	77	25.80	67.95	6.25

PCI Calculation - Summary

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Street ID	Section ID	Road Name	Begin Location	End Location	PCI Date	PCI Before	PCI After	PCI High	PCI Low	Pct Load	Pct Envr	Pct Other
SCL	110	SADDLE CREEK LANE	100	120	5/14/2016	0	69	69	69	0.00	100.00	0.00
SCL	120	SADDLE CREEK LANE	110	130	5/14/2016	0	70	70	70	0.00	100.00	0.00
SCL	130	SADDLE CREEK LANE	120	140	5/14/2016	0	83	83	83	0.00	100.00	0.00
SCL	140	SADDLE CREEK LANE	130	COURT	5/14/2016	0	81	81	81	0.00	100.00	0.00
SCL	COURT	SADDLE CREEK LANE	140	END	5/14/2016	0	79	79	79	0.00	87.05	12.95
SL	010	SUMMIT LANE	INTX ROCKRIDGE LANE	20	5/14/2016	0	54	54	54	1.62	96.76	1.62
SL	020	SUMMIT LANE	10	30	5/14/2016	0	48	48	48	31.92	66.08	0.00
SL	030	SUMMIT LANE	20	40	5/14/2016	0	52	52	52	25.35	74.65	0.00
SL	040	SUMMIT LANE	30	50	5/14/2016	0	50	50	50	25.59	73.01	1.39
SL	050	SUMMIT LANE	40	60	5/14/2016	0	54	54	54	1.48	97.04	1.48
SL	060	SUMMIT LANE	50	70	5/14/2016	0	52	52	52	3.79	92.42	3.79
SL	070	SUMMIT LANE	60	80	5/14/2016	0	54	54	54	0.00	100.00	0.00
SL	080	SUMMIT LANE	70	90	5/14/2016	0	54	54	54	0.00	100.00	0.00
SL	090	SUMMIT LANE	80	100	5/14/2016	0	54	54	54	1.43	97.14	1.43
SL	100	SUMMIT LANE	90	COURT	5/14/2016	0	54	54	54	0.00	100.00	0.00
SL	COURT	SUMMIT LANE	100	END	5/14/2016	0	55	55	55	0.00	100.00	0.00
VKC	010	VOSTA KNOLLS COURT	INTX KNOLLS DRIVE	020	5/14/2016	0	76	76	76	7.61	84.78	7.61
VKC	020	VOSTA KNOLLS COURT	101	030	5/14/2016	0	78	78	78	0.00	100.00	0.00
VKC	030	VOSTA KNOLLS COURT	020	040	5/14/2016	0	74	74	74	10.98	78.04	10.98
VKC	040	VOSTA KNOLLS COURT	030	050	5/14/2016	0	76	76	76	0.00	100.00	0.00
VKC	050	VOSTA KNOLLS COURT	040	060	5/14/2016	0	73	73	73	14.68	70.64	14.68
VKC	060	VOSTA KNOLLS COURT	050	070	5/14/2016	0	79	79	79	0.00	100.00	0.00
VKC	070	VOSTA KNOLLS COURT	060	080	5/14/2016	0	77	77	77	0.00	100.00	0.00
VKC	080	VOSTA KNOLLS COURT	070	090	5/14/2016	0	77	77	77	11.47	77.06	11.47
VKC	COURT	VOSTA KNOLLS COURT	090	END	5/14/2016	0	72	72	72	53.40	33.27	13.33
WDC	010	WOOD DUCK COURT	INTX OAK CREEK DRIVE	COURT	5/14/2016	0	52	52	52	0.00	100.00	0.00
WDC	COURT	WOOD DUCK COURT	10	END	5/14/2016	0	50	50	50	1.05	97.90	1.05
WFC	010	WILDFLOWER COURT	INTX KNOLLS DRIVE	020	5/14/2016	0	65	65	65	39.85	60.15	0.00
WFC	020	WILDFLOWER COURT	010	030	5/14/2016	0	74	74	74	39.91	60.09	0.00
WFC	030	WILDFLOWER COURT	020	COURT	5/14/2016	0	79	79	79	0.00	100.00	0.00
WFC	COURT	WILDFLOWER COURT	030	END	5/14/2016	0	72	72	72	14.67	85.33	0.00
WOC	010	WHITE OAK COURT	INTX BLUE OAK COURT	COURT	5/14/2016	0	41	41	41	29.89	70.11	0.00
WOC	COURT	WHITE OAK COURT	10	END	5/14/2016	0	48	48	48	13.58	85.56	0.87