City of Trinidad

Pavement Management Update (2016-17) – Final Report

NCE Project No. 599.03.55
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NCE
Richmond, CA
501 Canal Blvd., Suite I
Richmond, CA 94804

City of Trinidad

409 Trinity Street
Trinidad, CA 95570

599.03.55

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Pavement Management Update (2016-17)

Final Report

Submitted to:

City of Trinidad
409 Trinity Street
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Background

The Humboldt County Association of Governments (HCAOG) is the designated Regional Transportation Planning Agency (RTPA), and is responsible for developing regional transportation plans. As part of this process a Pavement Management Program (PMP) is needed to assist in determining the future transportation needs of the region.

A PMP is a tool designed to assist cities and counties with answering typical pavement network questions such as:

- What does the City's pavement network consist of? How many miles of streets are in a jurisdiction? What is the total pavement area of these public streets?
- What is the existing condition of the public street pavement network? Is this an acceptable level for the City? If not, what is an acceptable level? How much additional funding is needed to achieve an acceptable level? How much is needed to maintain the public street pavement at this level?
- How will the condition of the pavement network respond over time under existing funding levels?
- What maintenance strategies are needed to maintain or improve current pavement conditions?
- What maintenance activities or treatments have occurred in the past on any given street?
- What impact would either additional funding, or a decrease in funding, have on the condition of the overall pavement network?
- What are the maintenance priorities under different budget constraints?

Nichols Consulting Engineers, Chtd. (NCE) was selected by HCAOG to update the City's StreetSaver PMP in 2016. Field surveys were completed in February 2017 and all survey data was entered into the City's PMP. NCE also reviewed the preventive maintenance and rehabilitation decision tree and updated the costs. Then, a budget needs analysis was performed, followed by three budgetary scenarios.

Purpose

The purpose of this report is to assist decision makers in utilizing the results of the StreetSaver Pavement Management Program (PMP). Specifically, this report assesses the adequacy of ideal and projected revenues to meet the maintenance needs recommended for the City. It also maximizes the return from expenditures by:

1) Implementing a multi-year street rehabilitation and maintenance program
2) Developing a preventive maintenance program
3) Selecting the most cost effective repairs

This report examines the overall condition of the street network and highlights options for improving the current network level pavement condition index (PCI). These options are developed by conducting "what if" analyses. By varying the budget amounts available for pavement maintenance and repair, the impacts of different funding strategies on the City's streets over the next ten years were determined.

Network Description

The City of Trinidad oversees the repair and maintenance of approximately 2.8 centerline miles of pavement, or 27 pavement sections. Table 1 below summarizes the entire network by functional class.

Table 1: Network Summary Statistics for City-Maintained Sections

Functional Class	Sections	Centerline Miles	Lane Miles	% of the Entire Network (by Pavement Area)
Major Collector	6	0.7	1.5	36.1%
Minor Collector	4	0.6	1.2	19.9%
Local	17	1.5	3.1	44.0%
Total	**27**	**2.8**	**5.8**	**100%**

The network replacement cost of the City maintained sections is approximately $2.0 million. This cost is defined as the surface reconstruction of all pavement sections in the City and does not include related infrastructure assets such as sidewalks, signals, markings, signs, etc.

A listing of all sections in the network and their corresponding recently calculated PCI and attribute data is included in Appendix A.

Pavement Current Condition

The pavement condition index, or PCI, is a measurement of the pavement condition and ranges from 0 to 100. A newly constructed street will have a PCI of 100, while a failed street will have a PCI of 25 or less. **The average 2017 PCI of the City's entire street network is 75, with a remaining service life of approximately 19 years**. Note that these values are projected and area-weighted calculations from StreetSaver. The remaining service life for the network is based on the projection that if no further funding were allocated to pavements, the network will reach "Very Poor/Failed" condition in approximately 19 years.

Figure 1 below illustrates the definitions of the five pavement condition categories. Note that the StreetSaver Maintenance and Rehabilitation Decision Tree in Appendix B assigns different condition category titles from those in Figure 1.

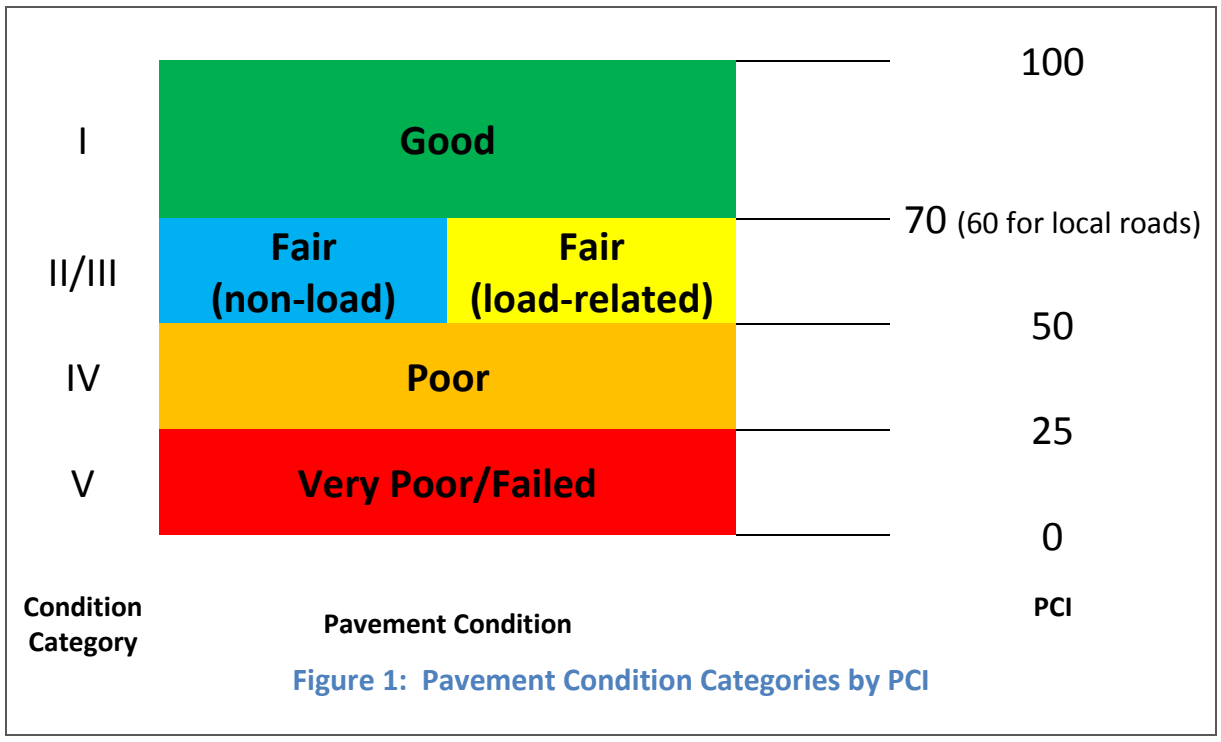


Figure 1: Pavement Condition Categories by PCI

Figure 2 includes representative photos showing streets with different PCIs.

Figure 2: Streets with Different PCIs

Table 2 below provides the pavement condition breakdown for the network by PCI ranges or condition category. About 86.9% of the entire City's streets in 2017 are in the "Good" condition category. Conversely, 2.6% of the pavement area falls in the "Poor" condition category.

Table 2: 2017 Pavement Condition Breakdowns by Area (Entire Network)

Condition Category	PCI Range	Major Collector (%)	Minor Collector (%)	Local (%)	Entire Network (%)
Good (I)	70-100	30.3%	17.3%	39.3%	86.9%
Fair (II/III)	50-69	5.8%	-	4.7%	10.5%
Poor (IV)	25-49	-	2.6%	-	2.6%
Total		**36.1%**	**19.9%**	**44.0%**	**100%**

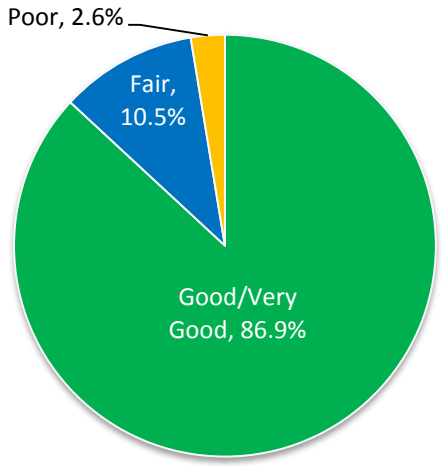


Figure 3: Pavement Condition Summary by Condition Categories (Entire Network by Area, 2017)

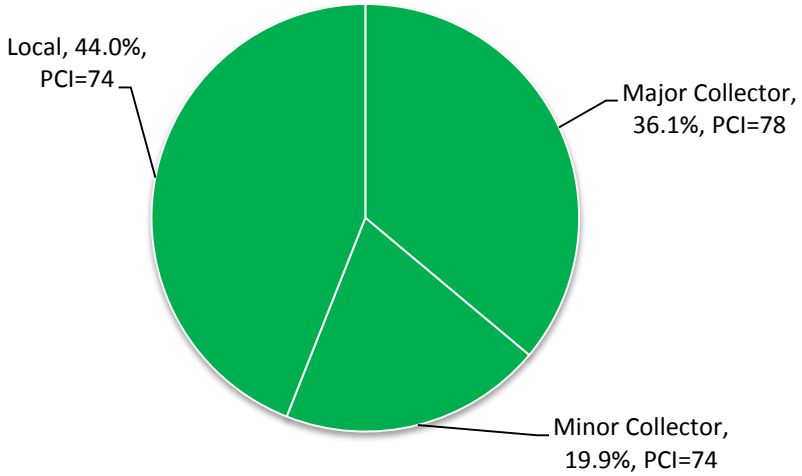


Figure 4: Pavement Condition Summary by Functional Classification (Entire Network by Area, 2017)

Maintenance and Rehabilitation

Historically, the City has utilized a program of crack sealing, base repairs, and overlays as maintenance and rehabilitation strategies. As the pavement condition deteriorates base repairs and asphalt overlays have been applied. Digouts or base repairs are typically used as a treatment by itself or as preparation prior to overlays and surface seals as necessary. These treatments are formalized in the maintenance and rehabilitation Decision Tree shown in Appendix B.

Figure 5 demonstrates that pavement maintenance follows the old colloquial saying of "pay me now, or pay me more later". History has shown that it costs much less to maintain streets in good condition than to repair streets that have failed. By allowing pavements to deteriorate, streets that once cost $2.50 per square yard ($/sy) to slurry seal may soon cost $43.00/sy to overlay or $86.00/sy to reconstruct. In other words, significant delays in repairs can cost over 35 times more.

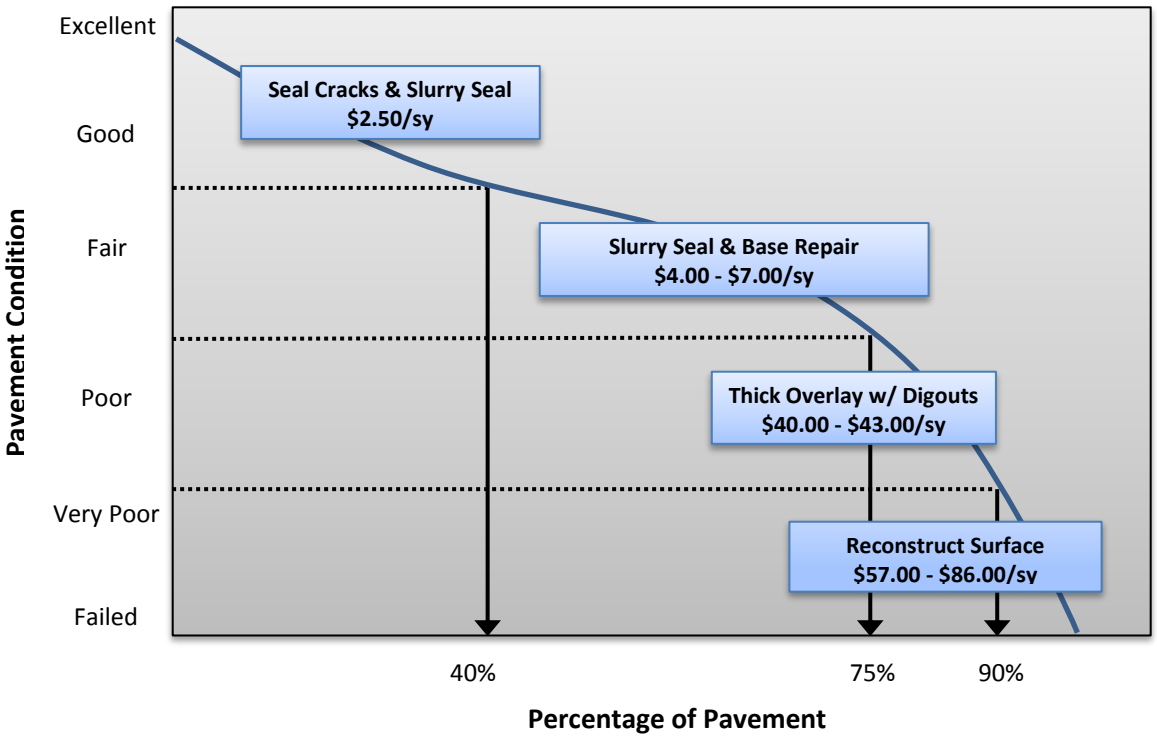


Figure 5: Costs of Maintaining Pavements over Time

Budget Needs

Based on the principle that it costs less to maintain streets in good condition than those in bad condition, the PMP strives to develop a maintenance strategy that will improve the overall condition of the network to an optimal PCI and then sustain it at that level. In addition, there is currently $104,000 of deferred maintenance. If the maintenance needs are not addressed, the quality of the street network will inevitably decline. In order to correct these deficiencies, a cost effective funding and maintenance and rehabilitation strategy must be implemented.

The first step in developing a cost effective maintenance and rehabilitation strategy is to determine the maintenance "needs" of the pavement network. Using the StreetSaver budget needs module, maintenance needs over the next ten years were estimated to be approximately $374,000 for the entire network. If the City of Trinidad follows the strategy recommended by the program, the average network PCI will increase to 81 in 2017. If, however, no maintenance is applied over the next ten years, already distressed streets will continue to deteriorate, and the network PCI will drop to 53 by 2026. The results of the budget needs analysis are summarized in Table 3 below.

Table 3: Summary Results from Needs Analysis

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
PCI Treated	81	80	81	79	77	76	77	76	76	76	-
PCI Untreated	75	73	71	69	67	64	62	59	56	53	-
Needs ($Thousands)	104	16	51	0	0	18	84	41	30	30	374

The results of the budget needs analysis represent the ideal funding strategy recommended by the StreetSaver PMP. Of the $374,000 in maintenance needs shown, approximately $178,000 (48%) is earmarked for preventive maintenance or life extending treatments and approximately $196,000 (52%) is allocated for the more costly rehabilitation and reconstruction treatments.

Budget Scenarios

Having determined the maintenance needs of the street network, the next step in developing a cost effective maintenance and rehabilitation strategy is to conduct several "what-if" analyses. Using StreetSaver's budget scenario module, the impacts of various budget "scenarios" may be evaluated. The program projects the effects of the different scenarios on pavement condition index (PCI), deferred maintenance (unfunded backlog), and average remaining service life of the network. By examining the effects on these indicators, the advantages and disadvantages of different funding levels and maintenance strategies become clear.

Scenario 1: City's Budget ($30,000 biennially + RMRA funding) – This scenario shows the impact of spending the City's biennial $30,000 budget from 2017 to 2026. Note that the City's budget includes RMRA funding[1] which is estimated to be $6,000 in FY 18/19. In this scenario, the current PCI decreases to 66 over the ten year analysis period. By 2026, the deferred maintenance will increase to $248,000.

Scenario 2: Maintain Current PCI ($395,000) – In this scenario, the goal is to maintain the current network PCI of 75 over the 10 year analysis period. The deferred maintenance will be eliminated by 2023.

Scenario 3: Eliminate Deferred Maintenance ($380,000) - In order to eliminate the deferred maintenance, the City will require $380,000 (front-loaded) over the next ten years. This scenario will allow the City to improve the network PCI to 81 in 2017 and eliminate the deferred maintenance in 2017.

Note: The deferred maintenance consists of pavement maintenance that is needed, but cannot be performed due to lack of funding. Shrinking budgets have forced many cities and counties to defer much needed pavement maintenance. By deferring maintenance, not only does the frequency of citizens' complaints about the condition of the network increase, but the cost to repair these streets rises as well. More detailed results from the budget scenarios may be found in Appendix C.

Appendix E contains maps generated from the GIS Toolbox in StreetSaver, which illustrate the results of each scenario. The maps show the color-coded condition category of each pavement section for each budget scenario. A map illustrating the present condition is also provided for comparison.

[1] Road Maintenance and Rehabilitation Account (RMRA - Streets and Highways Code Sec 2030 et sec. – also known as Senate Bill 1) includes funds from the taxes enacted by the Road Repair and Accountability Act of 2017. The first full year of funding will be FY2018-19 and the City is expected to receive $6,000.

Scenario 1: City's Budget

This scenario assumes the City funding levels of $30,000 every other year for the next ten years with RMRA funding (RMRA funding fully kicks at $6,220 in 2019). The results of this scenario indicate that the network PCI will decrease to 66 by 2026, while the percentage of the pavement network falling into the "Good" condition category will decrease to 69.1% in 2026. The deferred maintenance will increase to $248,000 by 2026. The remaining service life of the overall network will decrease to 14 years. The results of the budget scenario analysis for Scenario 1 are summarized in Table 4 and Figure 6. Appendix D provides a list of sections selected for treatment for this scenario.

Table 4: Summary Results for Scenario 1

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Budget ($ Thousands)	30	0	30+2+6	0	36+6	0	42	0	42	0	194
Deferred Maintenance ($ Thousands)	74	93	94	98	62	175	189	233	211	248	--
PCI	78	76	77	75	74	72	72	69	68	66	--
Remaining Service Life (Years)	19	18	19	18	18	17	17	16	15	14	--

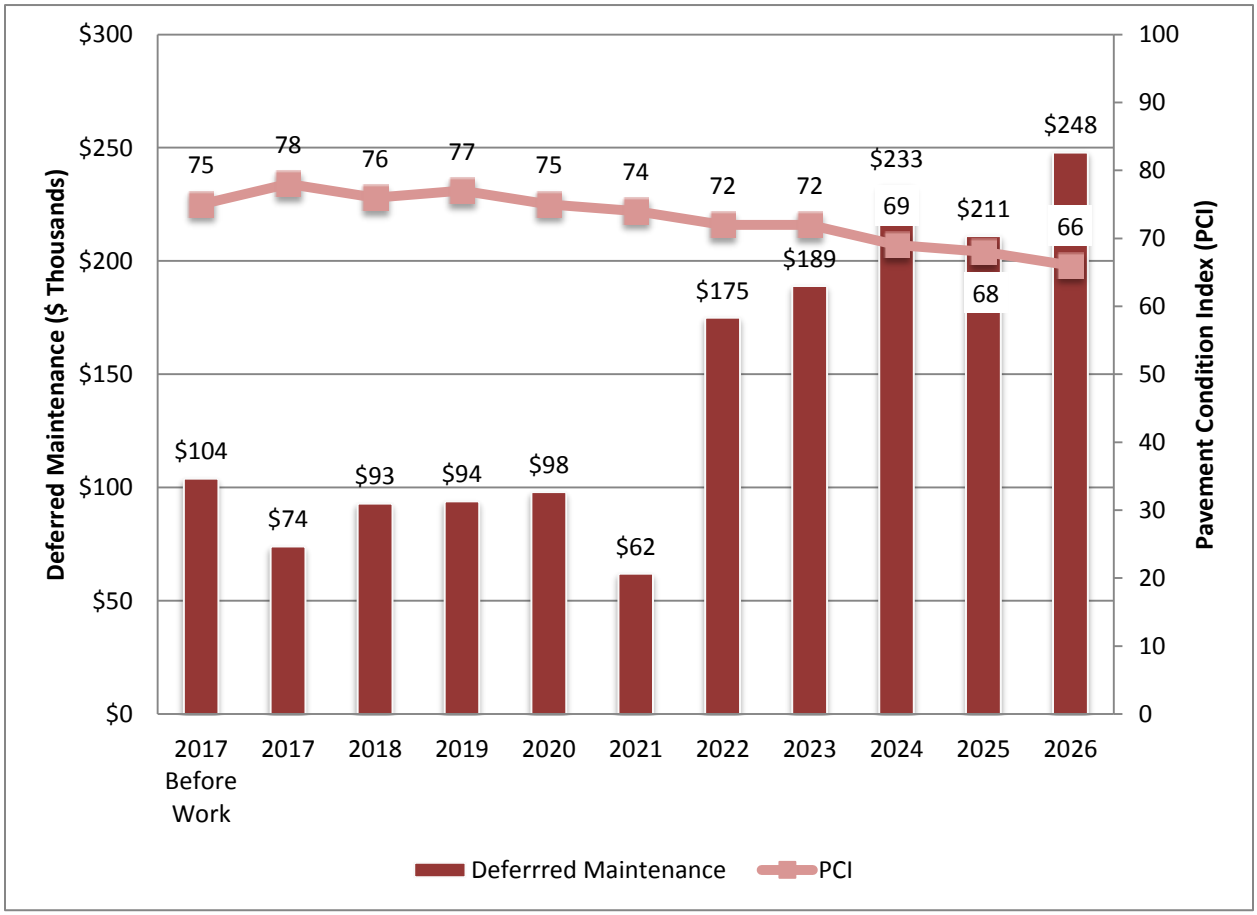


Figure 6: PCI vs Deferred Maintenance for Scenario 1

Scenario 2: Maintain Current PCI

Over the ten years, a total of $395,000 is required to maintain the current network PCI of 75. By 2026, approximately 91.4% of the network will be in "Good" condition. The deferred maintenance will be eliminated by 2023. The remaining service life of the overall network will decrease to 14. The results of the budget scenario analysis for Scenario 2 are summarized in Table 5 and Figure 7.

Table 5: Summary Results for Scenario 2

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Budget ($ Thousands)	0	26	23	33	33	128	99	17	29	7	395
Deferred Maintenance ($ Thousands)	104	98	115	92	62	47	0	21	0	0	--
PCI	75	76	75	75	74	76	77	75	75	75	--
Remaining Service Life (Years)	19	18	19	18	18	17	17	16	15	14	--

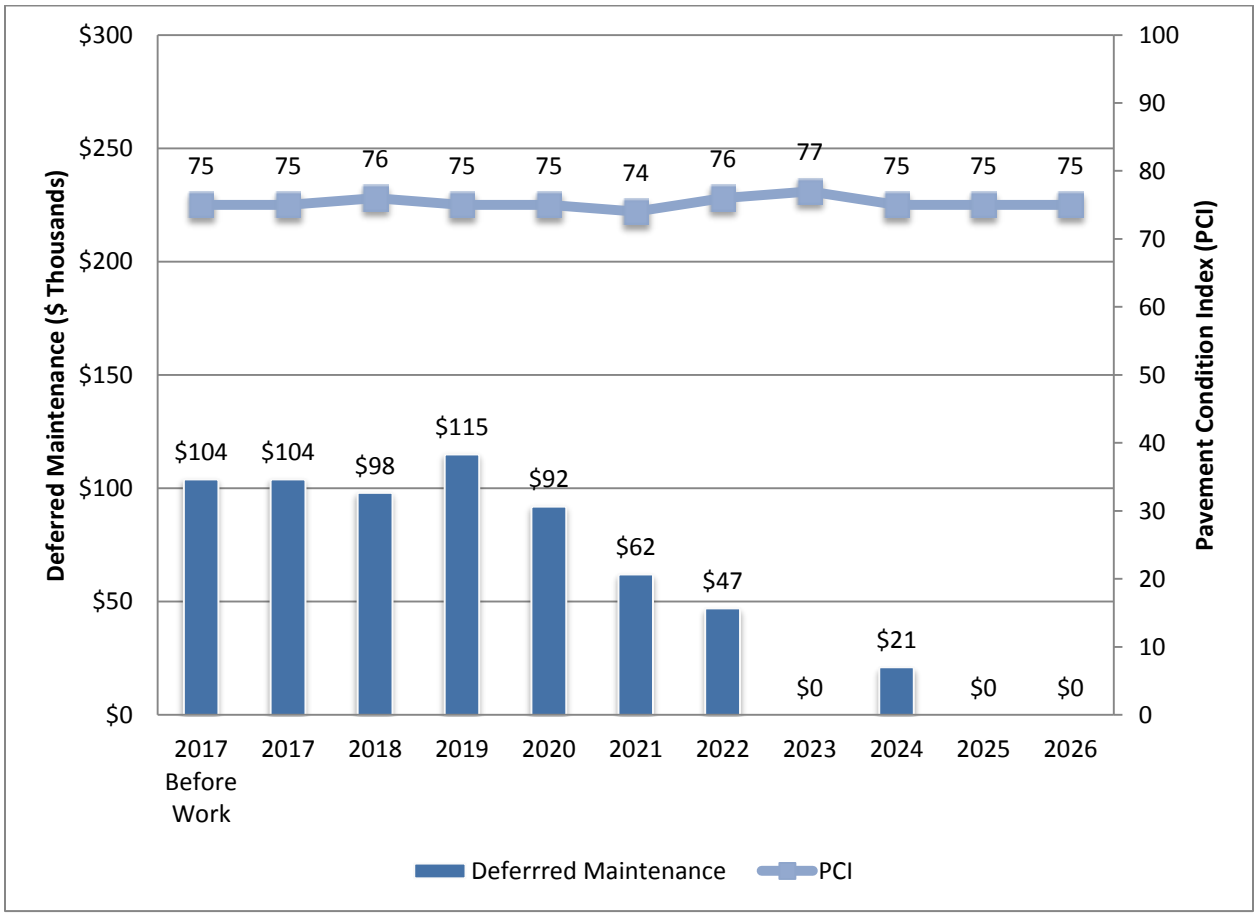


Figure 7: PCI vs Deferred Maintenance for Scenario 2

Scenario 3: Eliminate Deferred Maintenance (Front Loaded)

This scenario uses the "front loaded" approach defined by the "needs" to eliminate the deferred maintenance or unfunded backlog within the first year. The pavement needs total approximately $380,000 over the next ten years. Under this funding level, the network PCI will increase to 81 in 2017, and remain in the mid 70s. By 2026, 96.6% of the network will be in the "Good/Very Good" condition category and 3.4% will be in the "Fair" condition category. The results of Scenario 3 are summarized in Table 6 and Figure 8.

Table 6: Summary Results for Scenario 3

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Budget ($ Thousands)	105	17	52	0	0	19	84	42	30	31	380
Deferred Maintenance ($ Thousands)	0	0	0	0	0	0	0	0	0	0	--
PCI	81	80	81	79	77	76	77	76	76	76	--
Remaining Service Life (Years)	21	21	21	20	19	18	19	19	19	19	--

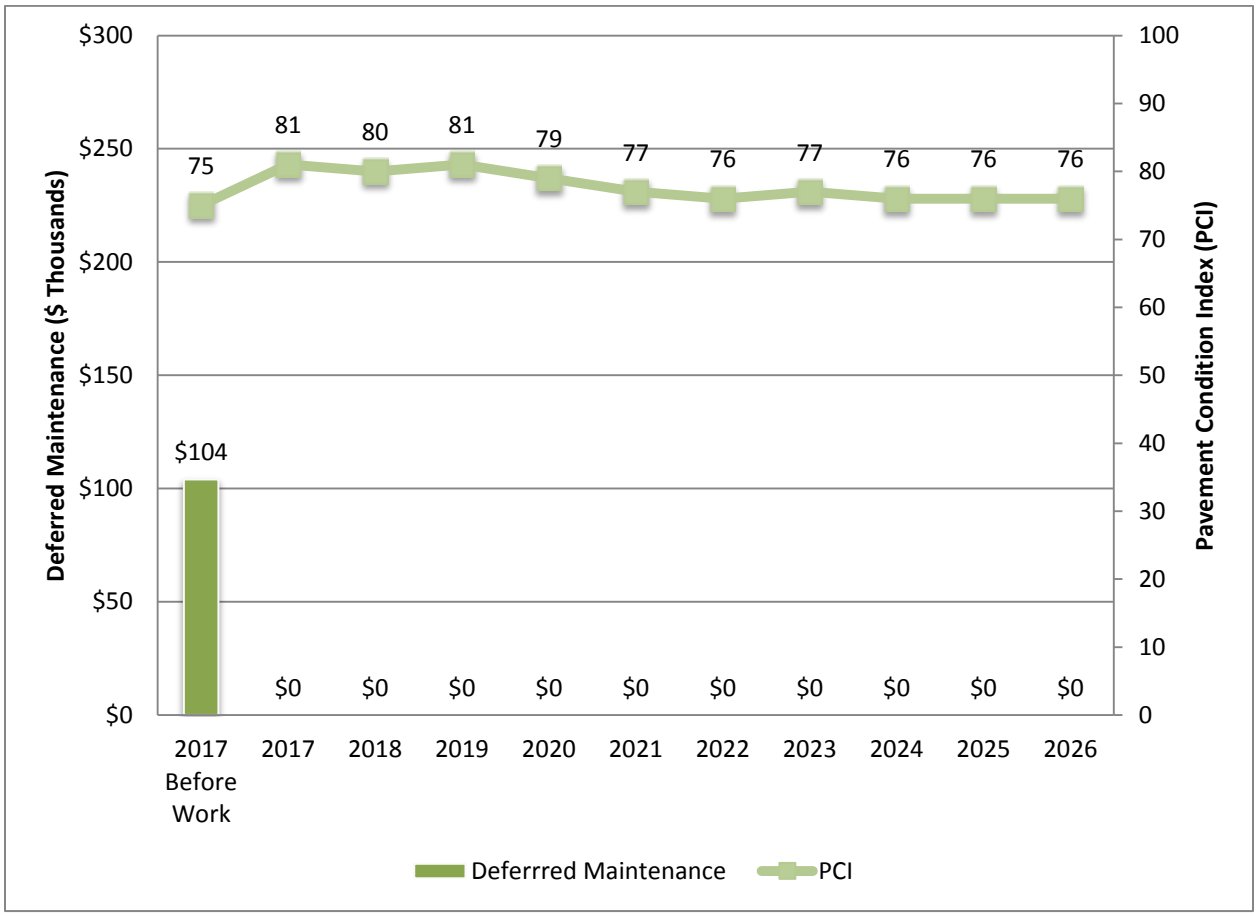


Figure 8: PCI vs Deferred Maintenance for Scenario 3

Scenario Comparisons

The following two figures graphically illustrate the annual changes in PCI and deferred maintenance for each scenario.

Figure 9 illustrates the change in PCI over time for the different budget scenarios. As noted previously, Scenario 1 (City's Budget) ultimately reaches a PCI of 66 by 2026; Scenario 2 (Maintain Current PCI) will maintain the current PCI of 75 and Scenario 3 (Unconstrained Needs) will increase the PCI to 81 in 2017, then be maintained in the mid 70s after that.

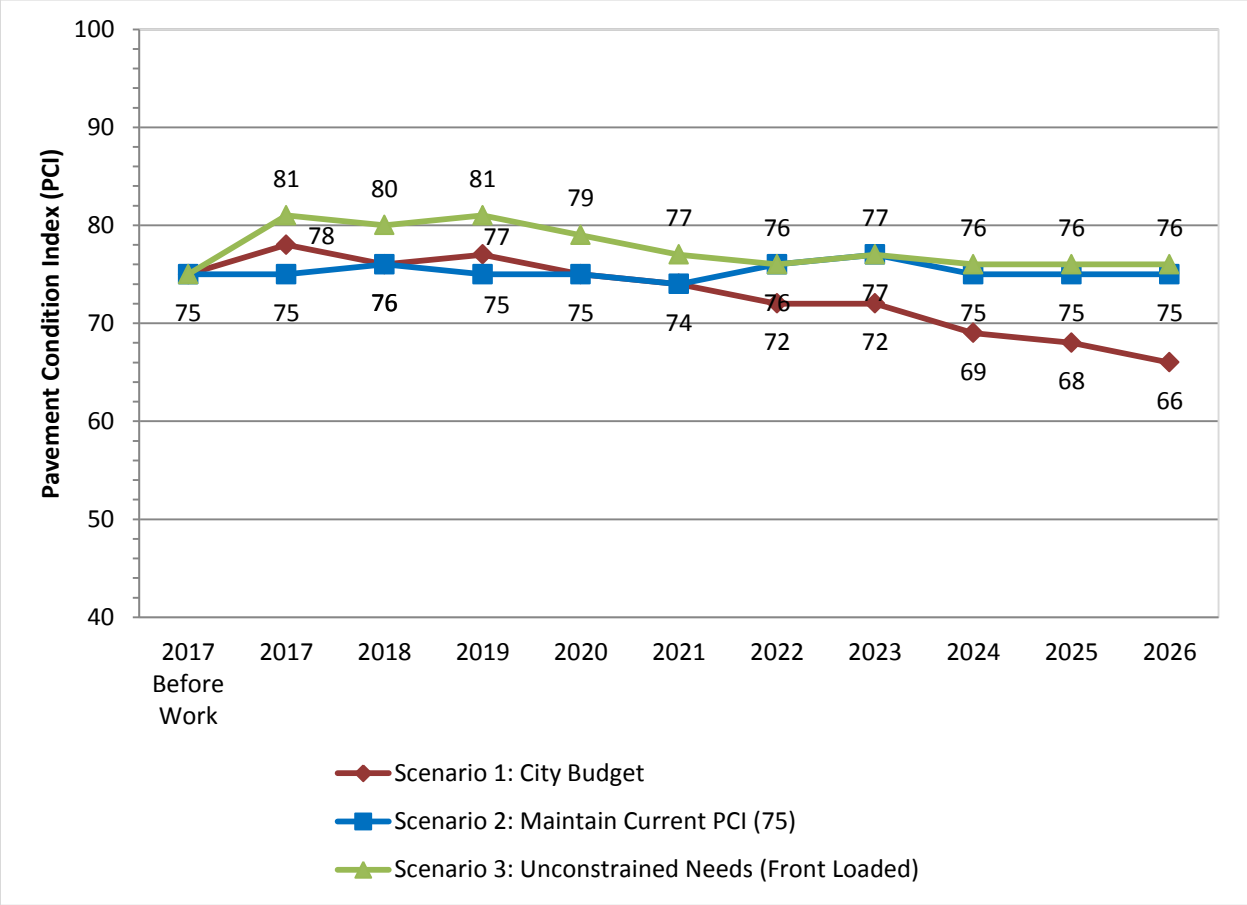


Figure 9: Annual Pavement Condition Index by Scenario

Similarly, Figure 10 illustrates the change in deferred maintenance over time for the different budget scenarios. Note that for Scenario 2 (Maintain Current PCI), the deferred maintenance will be eliminated by 2023. In Scenario 1 (City's Budget) the deferred maintenance will increase to $248,000, and Scenario 3 will eliminate the deferred maintenance within the first year.

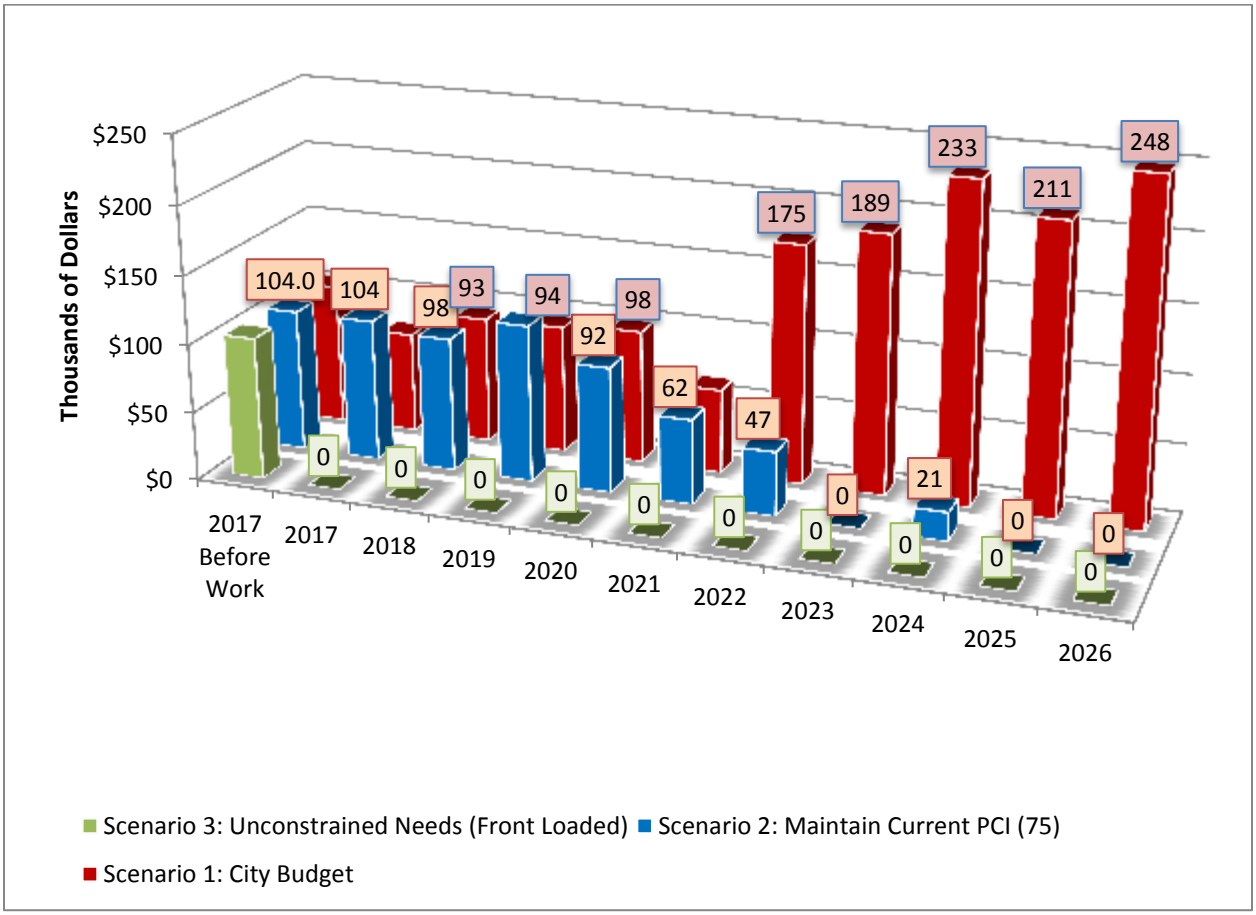
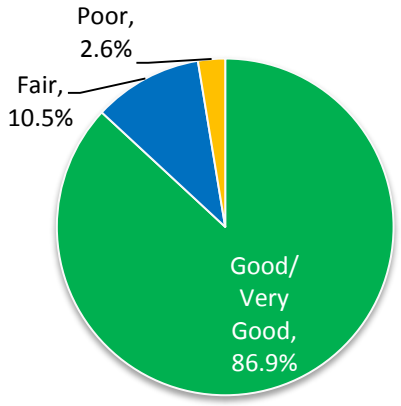
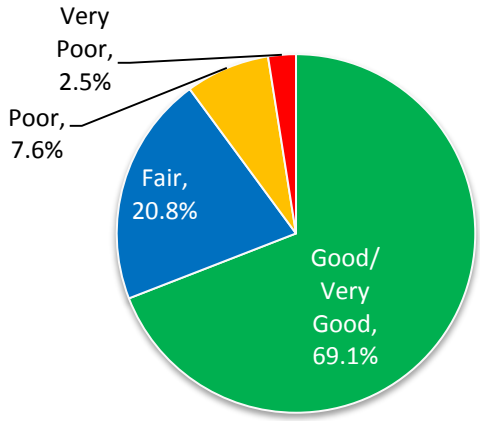


Figure 10: Annual Deferred Maintenance by Scenario

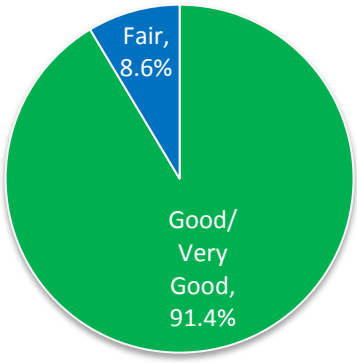
Figure 11 illustrates the pavement condition changes under various scenarios. Currently 86.9% of the network is in the "Good" condition category and 2.6% in "Poor" condition category. For Scenario 1 (City budget), it is projected that streets in "Good" condition will decrease to 69.1% by 2026. Additionally the streets in "Poor" or "Very Poor/Failed" condition will increase to 10.1% by 2026. Under Scenario 2 (Maintain Current PCI), it is projected that the streets in "Good" condition will increase from 86.9% to over 91% by 2026. In addition, the portion of the street network currently in the "Poor" condition category will be eliminated. For Scenario 3 (Unconstrained Needs-Front Loaded), almost all (96.6%) will be in the "Good"condition.



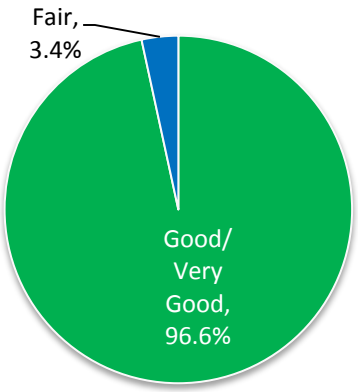
Current Condition 2017



2026 Condition (#1 City's Budget)



2026 Condition (#2 Maintain Current PCI)



2026 Condition (#3 Unconstrained Needs)

Figure 11: Pavement Condition Changes under Scenarios 1-3

Summary and Recommendations

To summarize, the City of Trinidad has a substantial investment of $2 million in their entire paved network. Overall, the City-funded network is in "Fair" condition with a 2017 network PCI of 75, which is the highest in the county. Of the 2.8 centerline miles of City-funded streets, approximately 97.4% of the streets currently fall into the "Fair" or "Good" condition categories.

The projected City budget will result in a PCI decrease to 66 over the next ten years and the deferred maintenance will reach $248,000 by 2026. Furthermore, the analyses indicate that the City needs to spend approximately $374,000 in pavement maintenance and rehabilitation to repair essentially all streets. By doing so, streets then can be maintained in good condition with on-going preventive maintenance. This will eventually save money by avoiding reaching the level of major rehabilitation (such as reconstruction).

Clearly, the most desirable scenario is to eliminate the deferred maintenance (Scenario 3). This scenario is very similar to Scenario 2, but requires less money over long term.

Recommendations

A. Pavement Budget

The recommended scenario for the City of Trinidad is presented in Scenario 3, which requires a total budget of $380,000. This plan will increase the PCI to 81 and will also increase the pavement sections that are in "Good" condition to 96.6%. In addition, the deferred maintenance will be eliminated in 2017.

B. Pavement Maintenance Strategies

The City's pavement maintenance strategies should include seals, overlays, and reconstruction. Crack sealing, one of the least expensive treatments, can keep moisture out of pavements and prevent the underlying aggregate base from premature failures. Slurry seals are also cost-effective for pavements currently in good condition.

Therefore, we recommend that the City continue with well-funded preventive maintenance program. This is necessary to at least maintain the portion of the street network that is in "Good" condition and avoid escalating the deferred maintenance even more.

C. Maintenance and Rehabilitation Decision Tree

The maintenance and rehabilitation Decision Tree and the associated unit costs should be reviewed and updated annually to reflect new construction techniques/repairs and changing costs so the budget analysis results can be reliable and accurate.

D. Next Steps

To summarize, we recommend that the City undertake the following steps:

- Implement/ maintain a preventive maintenance strategy.
- Determine other funding sources to at least maintain the current pavement condition. Examples of some funding sources are listed below:

Federal Funding Sources

- Community Development Block Grants (CDBG)
- Congestion Mitigation & Air Quality Improvement (CMAQ)
- Secure Rural Schools and Community Self-Determination Act
- Surface Transportation Block Grant Program
- Highway Safety Improvement Program (HSIP)
- HSIP High Risk Rural Roads Set-Aside (HR3)

State Funding Sources

- Active Transportation Program (ATP) which now includes the Bicycle Transportation Account (BTA) and Safe Routes to Schools (SR2S)
- State Transportation Improvement Program (STIP)
- AB 2766 (vehicle surcharge)
- Vehicle License Fees (VLF)
- CalRecycle grants
- Transportation Development Act (TDA)
- Traffic Safety Fund
- Transportation Uniform Mitigation Fee (TUMF)

Local/Regional Funding Sources

- Local sales taxes
- Development impact fees
- General funds
- Various assessment districts – lighting, maintenance, flood control, special assessments, community facility districts
- Traffic impact fees
- Traffic safety/circulation fees
- Utilities e.g., stormwater, water, wastewater enterprise funds
- Transportation mitigation fees
- Flood Control Districts
- Enterprise Funds (solid waste and water)
- Parcel/property taxes
- Vehicle registration fees
- Vehicle code fines
- Underground impact fees

- Solid waste funds
- Transient Occupancy Taxes (TOT)

APPENDIX A

Section Description Inventory

Section Description Inventory Report

This report lists a variety of section description information for each of the City's pavement sections. It lists the street and section identifiers, limits, functional class, surface type, number of lanes, lengths, widths, Inspected 2017 PCI, and area identifier.

All of the City's pavement sections are included in the report. The report is sorted alphabetically by Street Name and Section ID. The field descriptions in this report are listed below:

COLUMN	DESCRIPTION
Street ID	Street Identification - A code up to ten characters/digits to identify the street. Generally, the street name is truncated to six characters. The Street ID should be unique for each street.
Section ID	Section Identification - A code up to ten characters/digits to identify the section number. The Section ID must be unique for each section of one street.
Street Name	Street Name - The name of the street as indicated by street signs in the field.
Begin Location	Beginning limit of the section.
End Location	Ending limit of the section.
Lanes	Number of travel lanes.
Length (ft)	Length of the section in feet.
Width (ft)	Average width of the section in feet.
Surface Type (ST)	Surface Type (A = AC Pavement, O = AC Overlay of AC Pavement, C = AC Overlay of PCC Pavement, P = PCC Pavement, ST = Surface treatment over gravel base/subgrade).
Functional Class (FC)	Functional Classification (MaC = Major Collector, MiC = Minor Collector, and L=Local).
PCI Date	The last inspection date or rehabilitation date.
PCI	Average PCI for the section. The value is projected for 2017 and is based on the last calculated PCI (i.e. from inspection or maintenance data).

Section Description Inventory
Sorted by Street Name

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
T-AZAWAY	10	AZALEA WAY - T-AZAWAY	PACIFIC CT	EDWARDS ST	2	122	11	A - AC	L	7/23/2017	83
T-BERRRD	10	BERRY ROAD - T-BERRRD	TRINIDAD FRONTAGE RD	NE END	2	1085	16	A - AC	L	12/3/2016	79
T-EASTST	10	EAST STREET - T-EASTST	OCEAN AVE	VIEW AVE	2	353	21	A - AC	L	12/2/2016	83
T-EDWAST	10	EDWARDS STREET - T-EDWAST	SW END	PIER PARKING LOT	2	701	30	A - AC	MaC	12/3/2016	90
T-EDWAST	20	EDWARDS STREET - T-EDWAST	GALINDO ST	HECTOR ST	2	710	30	A - AC	MaC	12/2/2016	67
T-EDWAST	30	EDWARDS STREET - T-EDWAST	HECTOR ST	TRINITY ST	2	302	36	A - AC	MaC	12/2/2016	82
T-EDWAST	40	EDWARDS STREET - T-EDWAST	TRINITY ST	OCEAN AVE	2	316	34	A - AC	L	7/23/2017	87
T-EWINST	10	EWING STREET - T-EWINST	EDWARDS ST	N END	2	479	18	A - AC	L	12/2/2016	84
T-GALIST	10	GALINDO STREET - T-GALIST	VAN WYCKE ST	EDWARDS ST	2	289	22	A - AC	L	12/2/2016	65
T-HECTST	10	HECTOR STREET - T-HECTST	EDWARDS ST	UNDERWOOD ST	2	358	18	A - AC	L	12/2/2016	65
T-H101UP	10	HIGHWAY 101 UNDER PASS - T-H101UP	HIGHWAY 101 SB OFF RAMP	HIGHWAY 101 NB OFF RAMP	2	304	26	A - AC	MaC	12/3/2016	93
T-HIMADR	10	HIMALAYA DRIVE - T-HIMADR	BERRY RD	E END	2	640	17	A - AC	L	12/3/2016	58
T-MAINST	10	MAIN STREET - T-MAINST	TRINITY ST	HIGHWAY 101 SB OFF RAMP	2	1023	38	A - AC	MaC	12/2/2016	79
T-OCEAVE	10	OCEAN AVENUE - T-OCEAVE	EDWARDS ST	MAIN ST	2	919	21	A - AC	L	12/2/2016	78
T-PACICT	10	PACIFIC COURT - T-PACIFIC	SOUTH END	NORTH END	2	262	14	A - AC	L	7/23/2017	88
T-PARKST	10	PARKER STREET - T-PARKST	HECTOR ST	TRINITY ST	2	325	24	A - AC	L	12/2/2016	73
T-PAPODR	10	PATRICKS POINT DRIVE - T-PAPODR	MAIN ST	N CITY LIMIT	2	294	31	A - AC	MiC	12/3/2016	52
T-SCENDR	10	SCENIC DRIVE - T-SCENDR	MAIN ST	CITY LIMIT	2	930	22	A - AC	MiC	12/3/2016	84
T-SCENDR	20	SCENIC DRIVE - T-SCENDR	LANFORD RD	S CITY LIMIT	2	1563	22	A - AC	MiC	12/3/2016	76
T-STAGRD	10	STAGECOACH ROAD - T-STAGRD	MAIN ST	N CITY LIMIT	2	172	20	A - AC	L	12/2/2016	83
T-TRFRRD	10	TRINIDAD FRONTAGE ROAD - T-TRFRRD	WESTHAVEN DR	BERRY RD	2	398	31	A - AC	L	12/3/2016	63
T-TRINST	10	TRINITY STREET - T-TRINST	EDWARDS ST	MAIN ST	2	891	35	A - AC	MaC	12/2/2016	79
T-UNWDDR	10	UNDERWOOD DRIVE - T-UNWDDR	N END	HECTOR ST	2	829	14	A - AC	L	12/3/2016	76
T-VAWYST	10	VAN WYCKE STREET - T-VAWYST	EDWARDS ST	E END	2	535	16	A - AC	L	12/2/2016	69
T-VIEAVE	10	VIEW AVENUE - T-VIEAVE	EAST ST	MAIN ST	2	760	23	A - AC	L	12/2/2016	82
T-WESTST	10	WEST STREET - T-WESTST	TRINITY ST	OCEAN AVE	2	306	20	A - AC	L	12/2/2016	56
T-WESTDR	10	WESTHAVEN DRIVE - T-WESTDR	HIGHWAY 101 NB OFF RAMP	E CITY LIMIT	2	303	28	A - AC	MiC	12/3/2016	83

Section Description Inventory
Sorted by Descending PCI

Street ID	Section ID	Street Name	Begin Location	End Location	Lanes	Length (ft)	Width (ft)	Surface Type	FC	PCI Date	PCI
T-H101UP	10	HIGHWAY 101 UNDER PASS - T-H101UP	HIGHWAY 101 SB OFF RAMP	HIGHWAY 101 NB OFF RAMP	2	304	26	A - AC	MaC	12/3/2016	93
T-EDWAST	10	EDWARDS STREET - T-EDWAST	SW END	PIER PARKING LOT	2	701	30	A - AC	MaC	12/3/2016	90
T-PACICT	10	PACIFIC COURT - T-PACIFIC	SOUTH END	NORTH END	2	262	14	A - AC	L	7/23/2017	88
T-EDWAST	40	EDWARDS STREET - T-EDWAST	TRINITY ST	OCEAN AVE	2	316	34	A - AC	L	7/23/2017	87
T-EWINST	10	EWING STREET - T-EWINST	EDWARDS ST	N END	2	479	18	A - AC	L	12/2/2016	84
T-SCENDR	10	SCENIC DRIVE - T-SCENDR	MAIN ST	CITY LIMIT	2	930	22	A - AC	MiC	12/3/2016	84
T-AZAWAY	10	AZALEA WAY - T-AZAWAY	PACIFIC CT	EDWARDS ST	2	122	11	A - AC	L	7/23/2017	83
T-EASTST	10	EAST STREET - T-EASTST	OCEAN AVE	VIEW AVE	2	353	21	A - AC	L	12/2/2016	83
T-STAGRD	10	STAGECOACH ROAD - T-STAGRD	MAIN ST	N CITY LIMIT	2	172	20	A - AC	L	12/2/2016	83
T-WESTDR	10	WESTHAVEN DRIVE - T-WESTDR	HIGHWAY 101 NB OFF RAMP	E CITY LIMIT	2	303	28	A - AC	MiC	12/3/2016	83
T-EDWAST	30	EDWARDS STREET - T-EDWAST	HECTOR ST	TRINITY ST	2	302	36	A - AC	MaC	12/2/2016	82
T-VIEAVE	10	VIEW AVENUE - T-VIEAVE	EAST ST	MAIN ST	2	760	23	A - AC	L	12/2/2016	82
T-BERRRD	10	BERRY ROAD - T-BERRRD	TRINIDAD FRONTAGE RD	NE END	2	1085	16	A - AC	L	12/3/2016	79
T-MAINST	10	MAIN STREET - T-MAINST	TRINITY ST	HIGHWAY 101 SB OFF RAMP	2	1023	38	A - AC	MaC	12/2/2016	79
T-TRINST	10	TRINITY STREET - T-TRINST	EDWARDS ST	MAIN ST	2	891	35	A - AC	MaC	12/2/2016	79
T-OCEAVE	10	OCEAN AVENUE - T-OCEAVE	EDWARDS ST	MAIN ST	2	919	21	A - AC	L	12/2/2016	78
T-SCENDR	20	SCENIC DRIVE - T-SCENDR	LANFORD RD	S CITY LIMIT	2	1563	22	A - AC	MiC	12/3/2016	76
T-UNWDDR	10	UNDERWOOD DRIVE - T-UNWDDR	N END	HECTOR ST	2	829	14	A - AC	L	12/3/2016	76
T-PARKST	10	PARKER STREET - T-PARKST	HECTOR ST	TRINITY ST	2	325	24	A - AC	L	12/2/2016	73
T-VAWYST	10	VAN WYCKE STREET - T-VAWYST	EDWARDS ST	E END	2	535	16	A - AC	L	12/2/2016	69
T-EDWAST	20	EDWARDS STREET - T-EDWAST	GALINDO ST	HECTOR ST	2	710	30	A - AC	MaC	12/2/2016	67
T-GALIST	10	GALINDO STREET - T-GALIST	VAN WYCKE ST	EDWARDS ST	2	289	22	A - AC	L	12/2/2016	65
T-HECTST	10	HECTOR STREET - T-HECTST	EDWARDS ST	UNDERWOOD ST	2	358	18	A - AC	L	12/2/2016	65
T-TRFRRD	10	TRINIDAD FRONTAGE ROAD - T-TRFRRD	WESTHAVEN DR	BERRY RD	2	398	31	A - AC	L	12/3/2016	63
T-HIMADR	10	HIMALAYA DRIVE - T-HIMADR	BERRY RD	E END	2	640	17	A - AC	L	12/3/2016	58
T-WESTST	10	WEST STREET - T-WESTST	TRINITY ST	OCEAN AVE	2	306	20	A - AC	L	12/2/2016	56
T-PAPODR	10	PATRICKS POINT DRIVE - T-PAPODR	MAIN ST	N CITY LIMIT	2	294	31	A - AC	MiC	12/3/2016	52

APPENDIX B

Maintenance and Rehabilitation Decision Tree

Maintenance and Rehabilitation (M&R) Decision Tree

This report presents the current maintenance and rehabilitation decision tree that exists in the database. The decision tree forms the basis for all of the budgetary computations that are included in this volume. ***Changes to the decision tree will make the results in the budget reports invalid.*** All pavement treatment unit costs relevant to the street types in the database were updated.

The decision tree lists the treatments and costs selected for preventive maintenance and rehabilitation activities. Each line represents a specific combination of functional classification and surface type.

The preventive maintenance portion of the report is identified as Condition Category I – Very Good. All preventive maintenance treatment listings are assigned only to sections in Condition Category I where the PCI $\geq$ 70. Sections with PCI values less than 70 are assigned to treatments listed in Categories II through V.

In the preventive maintenance category (PCI $\geq$ 70), a time sequence is used to identify the appropriate treatment and cost. Each preventive maintenance treatment description consists of three parts: 1) a CRACK treatment, 2) a SURFACE treatment, and 3) a RESTORATION treatment. These three parts allow the user to specify one of three different preventive maintenance treatments depending on the prior maintenance history of the section.

1. The CRACK treatment part can be used to specify the most frequent type of preventive maintenance activity planned (typically crack seals).
2. The SURFACE treatment part can be used to specify more extensive and less frequent preventive maintenance activities, such as chip seals or slurry seals. For example, a crack seal can be specified on a 3-year cycle with a slurry seal specified after 5 years.
3. The RESTORATION part can be used to specify a surface restoration treatment (such as an overlay) to be performed after a specified number of surface treatments. For example, after a certain number of successive slurry seals, an overlay can be specified instead of another slurry seal.

Rehabilitation treatments are assigned to sections in Condition Categories II through V (PCI less than 70). Each line is defined by a specific combination of functional classification, surface type, and condition category.

COLUMN	**DESCRIPTION**
Functional Class	Functional Classification identifying the branch number.
Surface	Surface Type identifying the branch number.
Condition Category	Condition Category (I through V).
Treatment Type	First Row (Crack Treatment) indicates localized treatment (e.g. crack sealing). Second Row (Surface Treatment) indicates surface treatment (e.g. slurry sealing). Third Row (Restoration Treatment) indicates surface restoration (e.g. overlay).
Treatment	Name of treatments from the "Treatment Descriptions" report.

COLUMN	DESCRIPTION
Yrs. Between Crack Seals	First Row - number of years between successive treatment applications specified in the first row (i.e. CRACK treatment).
Yrs. Between Surface Seals	Second Row - number of years between successive treatment applications specified in the second row (i.e. SURFACE treatment).
Number of Sequential Seals	Number of times that the treatment application in the second row (i.e. SURFACE treatment) will be performed prior to performing the treatment application in the third row.

Note that the treatments assigned to each section should not be blindly followed in preparing a street maintenance program. Engineering judgment and project level analysis should be applied to ensure that the treatment is appropriate and cost effective for the section.

Decision Tree

Printed: 10/31/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Arterial	AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		7	
			Restoration Treatment	1" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$7.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$43.00			
		V - Very Poor		RECONSTRUCT SURFACE (6" AC)	$86.00			
	AC/AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		7	
			Restoration Treatment	1.5" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$7.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$43.00			
		V - Very Poor		RECONSTRUCT SURFACE (6" AC)	$86.00			
	AC/PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	3		
			Surface Treatment	SLURRY SEAL	$2.50		6	
			Restoration Treatment	DO NOTHING	$0.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$7.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$43.00			
		V - Very Poor		RECONSTRUCT SURFACE (6" AC)	$86.00			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	3		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		THICK AC OVERLAY(2.5 INCHES)	$1.92			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$14.00			

Functional Class and Surface combination not used

Decision Tree

Printed: 10/31/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Arterial	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		SINGLE CHIP SEAL	$1.11			
		III - Good, Load Related		SINGLE CHIP SEAL	$1.51			
		IV - Poor		SINGLE CHIP SEAL	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.67			

Functional Class and Surface combination not used

Decision Tree

Printed: 10/31/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Collector	AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		7	
			Restoration Treatment	1.5" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$6.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$57.00			
	AC/AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		7	
			Restoration Treatment	1.5" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$6.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$57.00			
	AC/PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	4		
			Surface Treatment	SLURRY SEAL	$2.50		7	
			Restoration Treatment	DO NOTHING	$0.00			3
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$6.00			
		IV - Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$57.00			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		THICK AC OVERLAY(2.5 INCHES)	$1.92			
		V - Very Poor		THIN AC OVERLAY(1.5 INCHES)	$7.47			

Functional Class and Surface combination not used

Decision Tree

Printed: 10/31/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Collector	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		SINGLE CHIP SEAL	$1.11			
		III - Good, Load Related		SINGLE CHIP SEAL	$1.51			
		IV - Poor		SINGLE CHIP SEAL	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.47			

Functional Class and Surface combination not used

Decision Tree

Printed: 10/31/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Residential/Local	AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		8	
			Restoration Treatment	1.5" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00		9	
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		IV - Poor		SURFACE TREATMENT (CAPE OR SLURRY)	$10.00			
		V - Very Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
	AC/AC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	SLURRY SEAL	$2.50		8	
			Restoration Treatment	1.5" AC OVERLAY	$19.00			2
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00		9	
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		IV - Poor		SURFACE TREATMENT (CAPE OR SLURRY)	$10.00			
		V - Very Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
	AC/PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	4		
			Surface Treatment	SLURRY SEAL	$2.50		8	
			Restoration Treatment	DO NOTHING	$0.00			3
		II - Good, Non-Load Related		SLURRY SEAL W/ DIGOUTS	$4.00			
		III - Good, Load Related		SLURRY SEAL W/ DIGOUTS	$5.00			
		IV - Poor		SURFACE TREATMENT (CAPE OR SLURRY)	$10.00			
		V - Very Poor		2" AC OVERLAY W/ DIGOUTS	$40.00			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	4		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		THICK AC OVERLAY(2.5 INCHES)	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.27			

Functional Class and Surface combination not used

Decision Tree

Printed: 10/31/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Residential/Local	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		SINGLE CHIP SEAL	$1.11			
		III - Good, Load Related		SINGLE CHIP SEAL	$1.51			
		IV - Poor		SINGLE CHIP SEAL	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.27			

Functional Class and Surface combination not used

Decision Tree

Printed: 10/31/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Other	AC	I - Very Good	Crack Treatment	SEAL CRACKS	$1.60	4		
			Surface Treatment	SINGLE CHIP SEAL	$1.74		8	
			Restoration Treatment	MILL AND THIN OVERLAY	$5.04			3
		II - Good, Non-Load Related		SINGLE CHIP SEAL	$1.11			
		III - Good, Load Related		THIN AC OVERLAY(1.5 INCHES)	$3.99			
		IV - Poor		THICK AC OVERLAY(2.5 INCHES)	$5.97			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$8.75			
	AC/AC	I - Very Good	Crack Treatment	SEAL CRACKS	$1.60	4		
			Surface Treatment	SINGLE CHIP SEAL	$1.74		8	
			Restoration Treatment	MILL AND THIN OVERLAY	$5.04			3
		II - Good, Non-Load Related		DOUBLE CHIP SEAL	$1.52			
		III - Good, Load Related		HEATER SCARIFY & OVERLAY	$5.95			
		IV - Poor		HEATER SCARIFY & OVERLAY	$6.14			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$8.75			
	AC/PCC	I - Very Good	Crack Treatment	SEAL CRACKS	$1.60	4		
			Surface Treatment	SINGLE CHIP SEAL	$1.74		8	
			Restoration Treatment	MILL AND THIN OVERLAY	$5.04			3
		II - Good, Non-Load Related		DOUBLE CHIP SEAL	$1.52			
		III - Good, Load Related		HEATER SCARIFY & OVERLAY	$5.95			
		IV - Poor		HEATER SCARIFY & OVERLAY	$6.14			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	$8.75			
	PCC	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		DO NOTHING	$0.00			
		III - Good, Load Related		DO NOTHING	$0.00			
		IV - Poor		THICK AC OVERLAY(2.5 INCHES)	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.27			

Functional Class and Surface combination not used

Decision Tree

Printed: 10/31/2017

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Other	ST	I - Very Good	Crack Treatment	DO NOTHING	$0.00	9		
			Surface Treatment	DO NOTHING	$0.00		99	
			Restoration Treatment	DO NOTHING	$0.00			100
		II - Good, Non-Load Related		SINGLE CHIP SEAL	$1.11			
		III - Good, Load Related		SINGLE CHIP SEAL	$1.51			
		IV - Poor		SINGLE CHIP SEAL	$1.92			
		V - Very Poor		THICK AC OVERLAY(2.5 INCHES)	$7.27			

Functional Class and Surface combination not used

APPENDIX C

Budget Needs

Projected PCI / Cost Summary

Preventative Treatment / Cost Summary

Rehabilitation Treatment / Cost Summary

Budget Needs Reports

The purpose of this module is to answer the question: ***If the City had all the money in the world, what sections should be fixed and how much will it cost?*** Based on the Maintenance & Rehabilitation (M&R) decision tree and the PCIs of the sections, the program will then select a maintenance or rehabilitation action and compute the total costs over a period of ten years. The Budget Needs represents the "ideal world" funding levels, while the Budget Scenarios reports in the next section represent the most "cost effective" prioritization possible for the actual funding levels.

A budget needs analysis has been performed. The summary results from the analysis are shown below. An interest rate of 3% and an inflation factor of 3% were used to project the costs for the next ten years. This report shows the total five-year budget that would be required to meet the City's standards as exemplified in the M&R decision tree.

As indicated in the report, with a budget of $374,000 over the next ten years the PCI of the street network will improve from the current level of 75 to 81. If no treatments are programmed, the weighted average PCI is projected to deteriorate from 75 to 53 by 2026.

Budget Needs reports included in this volume are listed below:

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

Needs - Projected PCI/Cost Summary

This report summarizes and projects the City's network PCI values over a ten-year period, both with and without treatments applied. These costs are based on those in the M&R decision tree. It also projects the costs over a ten-year period.

COLUMN	DESCRIPTION
Year	Year in the analysis period.
PCI Treated	Projected network average PCI with all needed treatments applied.
PCI Untreated	Projected network average PCI without any treatments applied.
PM Cost	Total preventive maintenance treatment cost.
Rehab Cost	Total rehabilitation treatment cost.
Cost	The budget required for each year in the analysis period to meet the City's standard as shown on the M&R decision tree.
Total Cost	Total budget required over a ten-year period.

Needs - Projected PCI/Cost Summary

Inflation Rate = 3.00 % Printed: 10/31/2017

Year	PCI Treated	PCI Untreated	PM Cost	Rehab Cost	Cost
2017	81	75	$40,972	$63,472	$104,444
2018	80	73	$10,541	$5,649	$16,190
2019	81	71	$12,166	$39,386	$51,552
2020	79	69	$0	$0	$0
2021	77	67	$0	$0	$0
2022	76	64	$11,415	$7,008	$18,423
2023	77	62	$56,315	$27,373	$83,688
2024	76	59	$3,114	$38,296	$41,410
2025	76	56	$29,554	$0	$29,554
2026	76	53	$13,752	$16,297	$30,049

% PM	PM Total Cost	Rehab Total Cost	Total Cost
47.38%	$177,829	$197,481	$375,310

Needs - Preventive Maintenance Treatment/Cost Summary

This report summarizes each preventive maintenance treatment type, quantity of pavement affected, and total costs over the ten-year period. It also summarizes the total quantities and costs over the next ten years.

COLUMN	DESCRIPTION
Treatment	Type of preventive maintenance treatments needed.
Year	Year in the analysis period (i.e. 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, and 2026).
Area Treated	Quantities in linear feet (Seal Cracks) or square yard (Slurry Seal).
Cost	Maintenance treatment cost.

Needs - Preventive Maintenance Treatment/Cost Summary

Inflation Rate = 3.00 % Printed: 10/31/2017

Treatment	Year	Area Treated		Cost
1.5" AC OVERLAY	2023	2,366.67	sq.yd.	$53,693
	Total	2,366.67		$53,693
SLURRY SEAL	2017	16,387.33	sq.yd.	$40,972
	2018	4,092.89	sq.yd.	$10,541
	2019	4,586.33	sq.yd.	$12,166
	2022	3,938	sq.yd.	$11,415
	2023	878.22	sq.yd.	$2,622
	2024	1,012.67	sq.yd.	$3,114
	2025	9,331.22	sq.yd.	$29,554
	2026	4,215.56	sq.yd.	$13,752
	Total	44,442.22		$124,136
	Total Quantity	46,808.89		$177,829

Needs - Rehabilitation Treatment/Cost Summary

This report summarizes each rehabilitation treatment type, quantity of pavement affected, and total costs over the ten-year period. It also summarizes the total quantities and costs over the next ten years.

COLUMN	DESCRIPTION
Treatment	Type of rehabilitation treatments needed.
Year	Year in the analysis period (i.e. 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, and 2026).
Area Treated	Quantities in square yard.
Cost	Rehabilitation treatment cost.

Needs - Rehabilitation
Treatment/Cost Summary

Inflation Rate = 3.00 % Printed: 10/31/2017

Treatment	Year		Area Treated		Cost
2" AC OVERLAY W/ DIGOUTS	2017		1,012.67	sq.yd.	$40,507
		Total	1,012.67	sq.yd.	$40,507
SLURRY SEAL W/ DIGOUTS	2017		4,255.56	sq.yd.	$22,965
	2018		1,370.89	sq.yd.	$5,649
	2019		6,187.33	sq.yd.	$39,386
	2022		1,208.89	sq.yd.	$7,008
	2023		3,820.67	sq.yd.	$27,373
	2024		7,784.33	sq.yd.	$38,296
	2026		1,422.44	sq.yd.	$7,424
		Total	26,050.11	sq.yd.	$148,101
SURFACE TREATMENT (CAPE OR SLURRY)	2026		680	sq.yd.	$8,873
		Total	680	sq.yd.	$8,873

Total Cost $197,481

Scenarios 1 - 3

Scenario 1: City's Budget
($30,000 biennially over ten years)
Cost Summary Report
Network Condition Summary Report

Scenarios - Cost Summary

Interest: 3.00% Inflation: 3.00% Printed: 10/31/2017

Scenario: Trinidad - City Budget

Year	PM	Budget	Rehabilitation		Preventative Maintenance	Surplus PM	Deferred		Stop Gap
2017	40%	$30,000	II	$2,720	Non-Project $21,229	$0	$74,448	Funded	$0
			III	$6,045				Unmet	$510
			IV	$0	Project $0				
			V	$0					
			Total	$8,765					
			Project	$0					
2018	40%	$0	II	$0	Non-Project $0	$0	$92,869	Funded	$0
			III	$0				Unmet	$184
			IV	$0	Project $0				
			V	$0					
			Total	$0					
			Project	$0					
2019	40%	$38,294	II	$5,818	Non-Project $32,192	$0	$94,134	Funded	$0
			III	$0				Unmet	$527
			IV	$0	Project $0				
			V	$0					
			Total	$5,818					
			Project	$0					
2020	40%	$0	II	$0	Non-Project $0	$0	$98,132	Funded	$0
			III	$0				Unmet	$102
			IV	$0	Project $0				
			V	$0					
			Total	$0					
			Project	$0					
2021	20%	$42,440	II	$3,224	Non-Project $10,479	$0	$61,573	Funded	$0
			III	$25,802				Unmet	$0
			IV	$0	Project $0				
			V	$0					
			Total	$29,026					
			Project	$0					
2022	20%	$0	II	$0	Non-Project $0	$0	$175,123	Funded	$0
			III	$0				Unmet	$966
			IV	$0	Project $0				
			V	$0					
			Total	$0					
			Project	$0					

Year	PM	Budget	Rehabilitation		Preventative Maintenance	Surplus PM	Deferred		Stop Gap
2023	15%	$42,440	II $0	Non-Project	$7,403	$0	$188,935	Funded	$0
			III $34,591					Unmet	$0
			IV $0	Project	$0				
			V $0						
			Total $34,591						
			Project $0						
2024	20%	$0	II $0	Non-Project	$0	$0	$232,898	Funded	$0
			III $0					Unmet	$1,245
			IV $0	Project	$0				
			V $0						
			Total $0						
			Project $0						
2025	40%	$42,440	II $21,887	Non-Project	$7,401	$9,575	$210,599	Funded	$0
			III $0					Unmet	$0
			IV $0	Project	$0				
			V $0						
			Total $21,887						
			Project $0						
2026	2%	$0	II $0	Non-Project	$0	$0	$248,116	Funded	$0
			III $0					Unmet	$662
			IV $0	Project	$0				
			V $0						
			Total $0						
			Project $0						

Summary

Functional Class	Rehabilitation	Prev. Maint.	Funded Stop Gap	Unmet Stop Gap
Collector	$75,062	$41,220	$0	$3,430
Residential/Local	$25,025	$37,484	$0	$765
Grand Total:	$100,087	$78,704	$0	$4,195

Scenarios - Network Condition Summary

Interest: 3% Inflation: 3% Printed: 10/31/2017

Scenario: Trinidad - City Budget

Year	Budget	PM	Year	Budget	PM	Year	Budget	PM
2017	$30,000	40%	2021	$42,440	20%	2025	$42,440	40%
2018	$0	40%	2022	$0	20%	2026	$0	2%
2019	$38,294	40%	2023	$42,440	15%			
2020	$0	40%	2024	$0	20%			

Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment	Treated Centerline Miles	Treated Lane Miles
2017	75	78	0.60	1.19
2018	73	76	0	0
2019	71	77	1.12	2.24
2020	69	75	0	0
2021	67	74	0.67	1.33
2022	64	72	0	0
2023	62	72	0.58	1.17
2024	59	69	0	0
2025	56	68	0.33	0.65
2026	53	66	0	0

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%	47.7%	39.2%	0.0%	86.9%
II / III	0.0%	5.9%	4.7%	0.0%	10.5%
IV	0.0%	2.5%	0.0%	0.0%	2.5%
Total	0.0%	56.1%	43.9%	0.0%	100.0%

Condition in year 2017 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	47.7%	43.9%	0.0%	91.6%
II / III	0.0%	5.9%	0.0%	0.0%	5.9%
IV	0.0%	2.5%	0.0%	0.0%	2.5%
Total	0.0%	56.1%	43.9%	0.0%	100.0%

Condition in year 2026 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	33.8%	35.3%	0.0%	69.1%
II / III	0.0%	13.9%	6.9%	0.0%	20.8%
IV	0.0%	5.9%	1.7%	0.0%	7.6%
V	0.0%	2.5%	0.0%	0.0%	2.5%
Total	0.0%	56.1%	43.9%	0.0%	100.0%

Scenario 2: Maintain Current PCI
($395,000 over ten years)
Cost Summary Report
Network Condition Summary Report

Target-Driven Scenarios - Cost Summary

Interest: 3% Inflation: 3% Printed: 10/31/2017

Scenario: Trinidad - Maintain Current PCI (75)

Objective: Minimum Network Average PCI Target: Overall 75

Year	Rehabilitation		Preventive Maintenance		Total Cost	Deferred
2017	II	$0	Non-Project	$0	$0	$104,439
	III	$0	Project	$0		
	IV	$0				
	V	**$0**				
	Total	**$0**				
	Project	$0				
2018	II	$0	Non-Project	$25,585	$25,585	$98,177
	III	$0	Project	$0		
	IV	$0				
	V	**$0**				
	Total	**$0**				
	Project	$0				
2019	II	$0	Non-Project	$22,554	$22,554	$115,056
	III	$0	Project	$0		
	IV	$0				
	V	**$0**				
	Total	**$0**				
	Project	$0				
2020	II	$12,211	Non-Project	$14,227	$33,043	$92,260
	III	$6,605	Project	$0		
	IV	$0				
	V	**$0**				
	Total	**$18,816**				
	Project	$0				
2021	II	$0	Non-Project	$0	$33,456	$61,573
	III	$25,802	Project	$0		
	IV	$7,654				
	V	**$0**				
	Total	**$33,456**				
	Project	$0				
2022	II	$0	Non-Project	$11,415	$128,168	$46,958
	III	$7,008	Project	$0		
	IV	$109,745				
	V	**$0**				
	Total	**$116,753**				
	Project	$0				

Year	Rehabilitation		Preventive Maintenance		Total Cost	Deferred
2023	II	$0	Non-Project	$2,622	$98,919	$0
	III	$27,373	Project	$0		
	IV	$0				
	V	$68,924				
	Total	$96,297				
	Project	$0				
2024	II	$17,047	Non-Project	$0	$17,047	$21,249
	III	$0	Project	$0		
	IV	$0				
	V	$0				
	Total	$17,047				
	Project	$0				
2025	II	$21,887	Non-Project	$6,812	$28,699	$0
	III	$0	Project	$0		
	IV	$0				
	V	$0				
	Total	$21,887				
	Project	$0				
2026	II	$0	Non-Project	$7,416	$7,416	$0
	III	$0	Project	$0		
	IV	$0				
	V	$0				
	Total	$0				
	Project	$0				

Summary

Functional Class	Rehabilitation	Prev. Maint.		
Collector	$270,778	$55,238		
Residential/Local	$33,478	$35,393		
Total:	$304,256	$90,631	Grand Total:	$394,887

Target-Driven Scenarios
Network Condition Summary

Interest: 3% Inflation: 3% Printed: 10/31/2017

Scenario: Trinidad - Maintain Current PCI (75)

Objective: Minimum Network Average PCI Target: Overall 75

Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment
2017	75	75
2018	73	76
2019	71	75
2020	69	75
2021	67	74
2022	64	76
2023	62	77
2024	59	75
2025	56	75
2026	53	75

Percent Network Area by Functional Classification and Condition Class

Condition in base year 2017, prior to applying treatments.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	47.7%	39.2%	0.0%	86.9%
II / III	0.0%	5.9%	4.7%	0.0%	10.5%
IV	0.0%	2.5%	0.0%	0.0%	2.5%
Total	0.0%	56.1%	43.9%	0.0%	100.0%

Condition in year 2017 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	47.7%	39.2%	0.0%	86.9%
II / III	0.0%	5.9%	4.7%	0.0%	10.5%
IV	0.0%	2.5%	0.0%	0.0%	2.5%
Total	0.0%	56.1%	43.9%	0.0%	100.0%

Condition in year 2026 after schedulable treatments applied.

Condition Class	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	56.1%	35.3%	0.0%	91.4%
II / III	0.0%	0.0%	8.6%	0.0%	8.6%
Total	0.0%	56.1%	43.9%	0.0%	100.0%

Scenario 3: Eliminate Deferred Maintenance- Front Loaded ($380,000 over ten years)

Cost Summary Report

Network Condition Summary Report

Scenarios - Cost Summary

Interest: 3.00% Inflation: 3.00% Printed: 10/31/2017

Scenario: Trinidad - Needs (Unconstrained)

Year	PM	Budget	Rehabilitation		Preventative Maintenance	Surplus PM	Deferred		Stop Gap
2017	$40,973	$105,000	II	$2,720	Non-Project	$40,972	$1	$0	Funded	$0
			III	$20,245					Unmet	$0
			IV	$40,507	Project	$0				
			V	$0						
			Total	$63,472						
			Project	$0						
2018	$10,542	$17,000	II	$5,649	Non-Project	$10,541	$1	$0	Funded	$0
			III	$0					Unmet	$0
			IV	$0	Project	$0				
			V	$0						
			Total	$5,649						
			Project	$0						
2019	$12,167	$52,000	II	$0	Non-Project	$12,166	$1	$0	Funded	$0
			III	$39,386					Unmet	$0
			IV	$0	Project	$0				
			V	$0						
			Total	$39,386						
			Project	$0						
2020	$0	$0	II	$0	Non-Project	$0	$0	$0	Funded	$0
			III	$0					Unmet	$0
			IV	$0	Project	$0				
			V	$0						
			Total	$0						
			Project	$0						
2021	$0	$0	II	$0	Non-Project	$0	$0	$0	Funded	$0
			III	$0					Unmet	$0
			IV	$0	Project	$0				
			V	$0						
			Total	$0						
			Project	$0						
2022	$11,416	$19,000	II	$0	Non-Project	$11,415	$1	$0	Funded	$0
			III	$7,008					Unmet	$0
			IV	$0	Project	$0				
			V	$0						
			Total	$7,008						
			Project	$0						

Year	PM	Budget	Rehabilitation		Preventative Maintenance	Surplus PM	Deferred		Stop Gap
2023	$56,316	$84,000	II $0	Non-Project	$56,315	$1	$0	Funded	$0
			III $27,373					Unmet	$0
			IV $0	Project	$0				
			V $0						
			Total $27,373						
			Project $0						
2024	$3,115	$42,000	II $38,296	Non-Project	$3,114	$1	$0	Funded	$0
			III $0					Unmet	$0
			IV $0	Project	$0				
			V $0						
			Total $38,296						
			Project $0						
2025	$29,555	$30,000	II $0	Non-Project	$29,554	$1	$0	Funded	$0
			III $0					Unmet	$0
			IV $0	Project	$0				
			V $0						
			Total $0						
			Project $0						
2026	$13,753	$31,000	II $7,424	Non-Project	$13,752	$1	$0	Funded	$0
			III $0					Unmet	$0
			IV $8,873	Project	$0				
			V $0						
			Total $16,297						
			Project $0						

Summary

Functional Class	Rehabilitation	Prev. Maint.	Funded Stop Gap	Unmet Stop Gap
Collector	$159,762	$111,461	$0	$0
Residential/Local	$37,719	$66,368	$0	$0
Grand Total:	$197,481	$177,829	$0	$0

Scenarios - Network Condition Summary

Interest: 3% Inflation: 3% Printed: 10/31/2017

Scenario: Trinidad - Needs (Unconstrained)

Year	Budget	PM	Year	Budget	PM	Year	Budget	PM
2017	$105,000	$40,973	2021	$0	$0	2025	$30,000	$29,555
2018	$17,000	$10,542	2022	$19,000	$11,416	2026	$31,000	$13,753
2019	$52,000	$12,167	2023	$84,000	$56,316			
2020	$0	$0	2024	$42,000	$3,115			

Projected Network Average PCI by year

Year	Never Treated	With Selected Treatment	Treated Centerline Miles	Treated Lane Miles
2017	75	81	1.55	3.11
2018	73	80	0.33	0.67
2019	71	81	0.82	1.64
2020	69	79	0	0
2021	67	77	0	0
2022	64	76	0.36	0.73
2023	62	77	0.49	0.98
2024	59	76	0.42	0.84
2025	56	76	0.81	1.63
2026	53	76	0.50	1.00

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%	47.7%	39.2%	0.0%	86.9%
II / III	0.0%	5.9%	4.7%	0.0%	10.5%
IV	0.0%	2.5%	0.0%	0.0%	2.5%
Total	0.0%	56.1%	43.9%	0.0%	100.0%

Condition in year 2017 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	56.1%	43.9%	0.0%	100.0%
Total	0.0%	56.1%	43.9%	0.0%	100.0%

Condition in year 2026 after schedulable treatments applied.

Condition	Arterial	Collector	Res/Loc	Other	Total
I	0.0%	56.1%	40.5%	0.0%	96.6%
II / III	0.0%	0.0%	3.4%	0.0%	3.4%
Total	0.0%	56.1%	43.9%	0.0%	100.0%

APPENDIX D

Sections Selected for Treatment:
City's Budget (Scenario1)

Scenarios - Sections Selected for Treatment

Interest: 3.00% Inflation: 3.00% Printed: 10/31/2017

Scenario: Trinidad - City Budget

Year	Budget	PM	Year	Budget	PM	Year	Budget	PM
2017	$30,000	40%	2021	$42,440	20%	2025	$42,440	40%
2018	$0	40%	2022	$0	20%	2026	$0	2%
2019	$38,294	40%	2023	$42,440	15%			
2020	$0	40%	2024	$0	20%			

Year: 2017

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surf Type	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
HIMALAYA DRIVE	BERRY RD	E END	T-HIMADR	010	640	17	10,880	L	AC	56	56	68	$6,045	19,249	SLURRY SEAL W/ DIGOUTS
WEST STREET	TRINITY ST	OCEAN AVE	T-WESTST	010	306	20	6,120	L	AC	54	54	66	$2,720	23,711	SLURRY SEAL W/ DIGOUTS
											Treatment Total		$8,765		
GALINDO STREET	VAN WYCKE ST	EDWARDS ST	T-GALIST	010	289	22	6,358	L	AC	63	63	73	$1,767	40,651	SLURRY SEAL
MAIN STREET	TRINITY ST	HIGHWAY 101 SB OFF RAMP	T-MAINST	010	1,023	38	38,874	MaC	AC	76	77	85	$10,799	46,858	SLURRY SEAL
TRINITY STREET	EDWARDS ST	MAIN ST	T-TRINST	010	891	35	31,185	MaC	AC	76	77	85	$8,663	46,858	SLURRY SEAL
											Treatment Total		$21,229		
				Year 2017 Area Total			93,417				Year 2017 Total		$29,994		

Year: 2019

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surf Type	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
TRINIDAD FRONTAGE ROAD	WESTHAVEN DR	BERRY RD	T-TRFRRD	010	398	31	12,338	L	AC	61	57	69	$5,818	22,898	SLURRY SEAL W/ DIGOUTS
											Treatment Total		$5,818		
AZALEA WAY	PACIFIC CT	EDWARDS ST	T-AZAWAY	010	122	11	1,342	L	AC	82	79	87	$396	37,541	SLURRY SEAL
BERRY ROAD	TRINIDAD FRONTAGE RD	NE END	T-BERRRD	010	1,085	16	17,360	L	AC	77	74	83	$5,116	40,092	SLURRY SEAL
EDWARDS STREET	HECTOR ST	TRINITY ST	T-EDWAST	030	302	36	10,872	MaC	AC	80	76	84	$3,204	43,521	SLURRY SEAL
OCEAN AVENUE	EDWARDS ST	MAIN ST	T-OCEAVE	010	919	21	19,299	L	AC	76	73	82	$5,688	40,223	SLURRY SEAL
PARKER STREET	HECTOR ST	TRINITY ST	T-PARKST	010	325	24	7,800	L	AC	71	68	77	$2,299	39,668	SLURRY SEAL
SCENIC DRIVE	MAIN ST	CITY LIMIT	T-SCENDR	010	930	22	20,460	MiC	AC	82	78	86	$6,030	44,586	SLURRY SEAL
STAGECOACH ROAD	MAIN ST	N CITY LIMIT	T-STAGRD	010	172	20	3,440	L	AC	81	78	86	$1,014	38,346	SLURRY SEAL
UNDERWOOD DRIVE	N END	HECTOR ST	T-UNWDDR	010	829	14	11,606	L	AC	74	71	80	$3,421	40,212	SLURRY SEAL
VAN WYCKE STREET	EDWARDS ST	E END	T-VAWYST	010	535	16	8,560	L	AC	67	64	74	$2,523	38,490	SLURRY SEAL

** - Treatment from Project Selection

Scenarios Criteria: Area ID = T - Trinidad

Scenarios - Sections Selected for Treatment

Interest: 3.00% Inflation: 3.00% Printed: 10/31/2017

Scenario: Trinidad - City Budget

Year: 2019

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surf Type	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
WESTHAVEN DRIVE	HIGHWAY 101 NB OFF RAMP	E CITY LIMIT	T-WESTDR	010	303	28	8,484	MiC	AC	81	77	85	$2,501	43,985	SLURRY SEAL
											Treatment Total		$32,192		
				Year 2021 Area Total			121,561				Year 2021 Total		$38,010		

Year: 2021

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surf Type	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
HECTOR STREET	EDWARDS ST	UNDERWOOD ST	T-HECTST	010	358	18	6,444	L	AC	63	56	67	$3,224	21,300	SLURRY SEAL W/ DIGOUTS
SCENIC DRIVE	LANFORD RD	S CITY LIMIT	T-SCENDR	020	1,563	22	34,386	MiC	AC	73	63	73	$25,802	13,771	SLURRY SEAL W/ DIGOUTS
											Treatment Total		$29,026		
EAST STREET	OCEAN AVE	VIEW AVE	T-EASTST	010	353	21	7,413	L	AC	81	75	83	$2,318	37,604	SLURRY SEAL
EWING STREET	EDWARDS ST	N END	T-EWINST	010	479	18	8,622	L	AC	82	76	84	$2,696	37,323	SLURRY SEAL
VIEW AVENUE	EAST ST	MAIN ST	T-VIEAVE	010	760	23	17,480	L	AC	80	74	83	$5,465	37,790	SLURRY SEAL
											Treatment Total		$10,479		
				Year 2021 Area Total			74,345				Year 2021 Total		$39,505		

Year: 2023

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surf Type	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
HIMALAYA DRIVE	BERRY RD	E END	T-HIMADR	010	640	17	10,880	L	AC	56	57	68	$7,218	16,161	SLURRY SEAL W/ DIGOUTS
SCENIC DRIVE	LANFORD RD	S CITY LIMIT	T-SCENDR	020	1,563	22	34,386	MiC	AC	73	68	77	$27,373	14,186	SLURRY SEAL W/ DIGOUTS
											Treatment Total		$34,591		
EDWARDS STREET	TRINITY ST	OCEAN AVE	T-EDWAST	040	316	34	10,744	L	AC	86	77	85	$3,564	34,862	SLURRY SEAL
HIGHWAY 101 UNDER PASS	HIGHWAY 101 SB OFF RAMP	HIGHWAY 101 NB OFF RAMP	T-H101UP	010	304	26	7,904	MaC	AC	91	79	87	$2,622	39,911	SLURRY SEAL
PACIFIC COURT	SOUTH END	NORTH END	T-PACICT	010	262	14	3,668	L	AC	87	78	86	$1,217	34,403	SLURRY SEAL
											Treatment Total		$7,403		
				Year 2023 Area Total			67,582				Year 2023 Total		$41,994		

Scenarios - Sections Selected for Treatment

Interest: 3.00% Inflation: 3.00% Printed: 10/31/2017

Scenario: Trinidad - City Budget

Year: 2025

Road Name	Begin Location	End Location	Street ID	Section ID	Length	Width	Area	FC	Surf Type	Current PCI	Treatment PCI Before	Treatment PCI After	Cost	Rating	Treatment
MAIN STREET	TRINITY ST	HIGHWAY 101 SB OFF RAMP	T-MAINST	010	1,023	38	38,874	MaC	AC	76	66	76	$21,887	19,388	SLURRY SEAL W/ DIGOUTS
											Treatment Total		$21,887		
EDWARDS STREET	SW END	PIER PARKING LOT	T-EDWAST	010	701	30	21,030	MaC	AC	88	71	80	$7,401	33,783	SLURRY SEAL
											Treatment Total		$7,401		
				Year 2025 Area Total			59,904				Year 2025 Total		$29,288		
				Total Section Area:			416,809				Grand Total		$178,791		

APPENDIX E

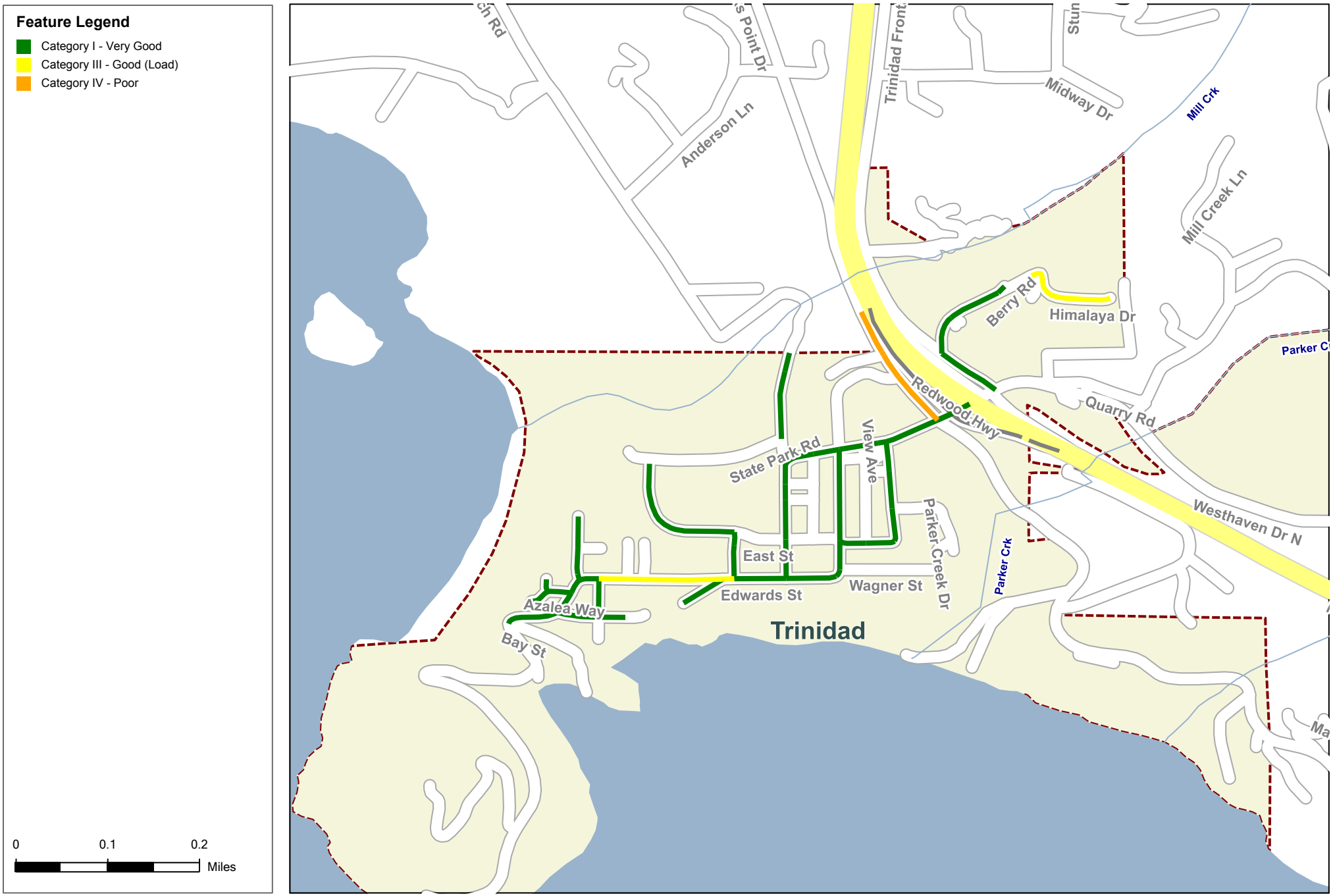
PCI Maps

PCI Map
Current Pavement Conditions
(2017)

HCAOG

Current PCI Condition

Printed: 11/7/2017

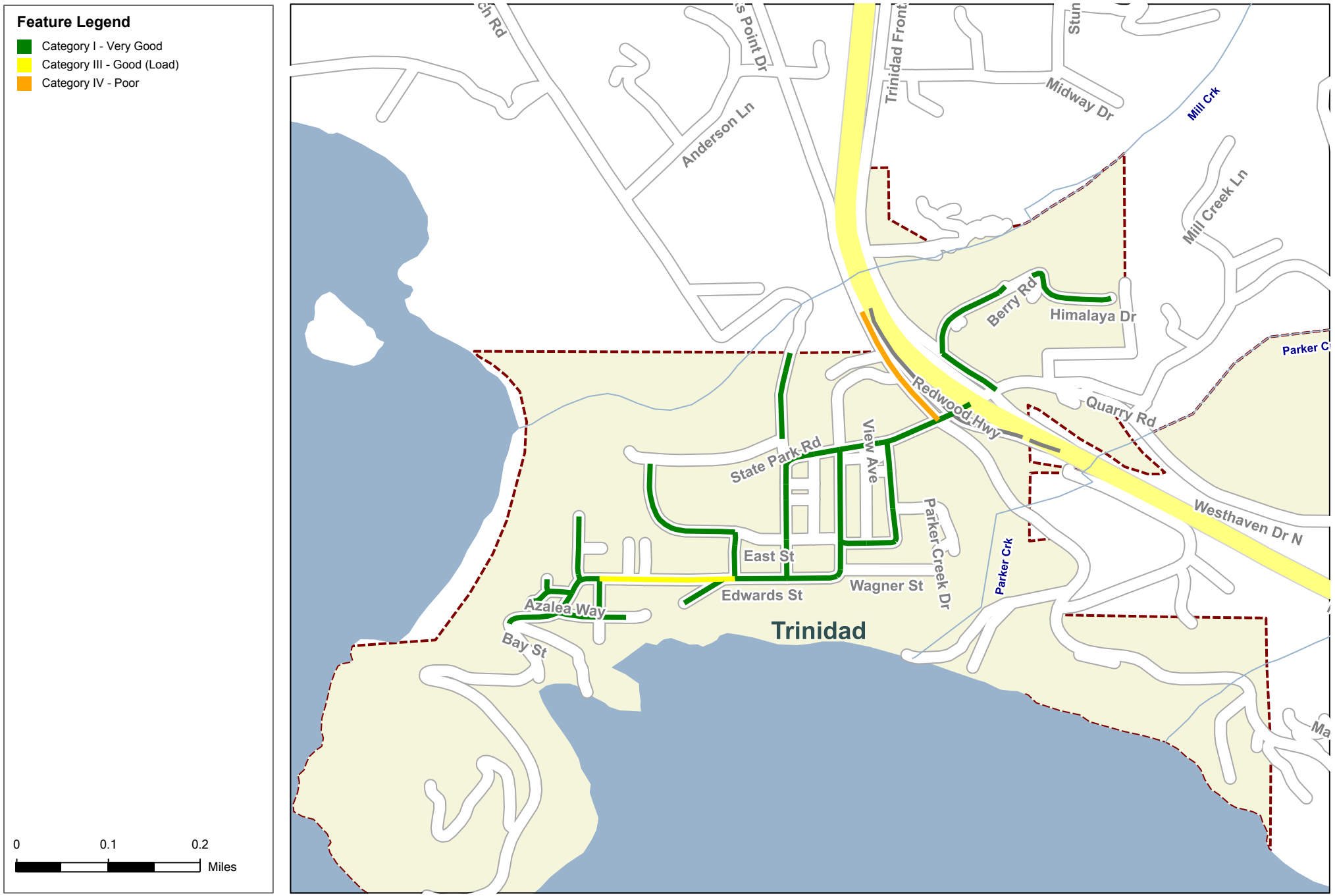


PCI Map
Scenario 1: City Budget
(2026)

HCAOG

Scenario PCI Condition

Trinidad - City Budget - 2017 Project Period - Total Rehab: $8,765 - Printed: 11/7/2017

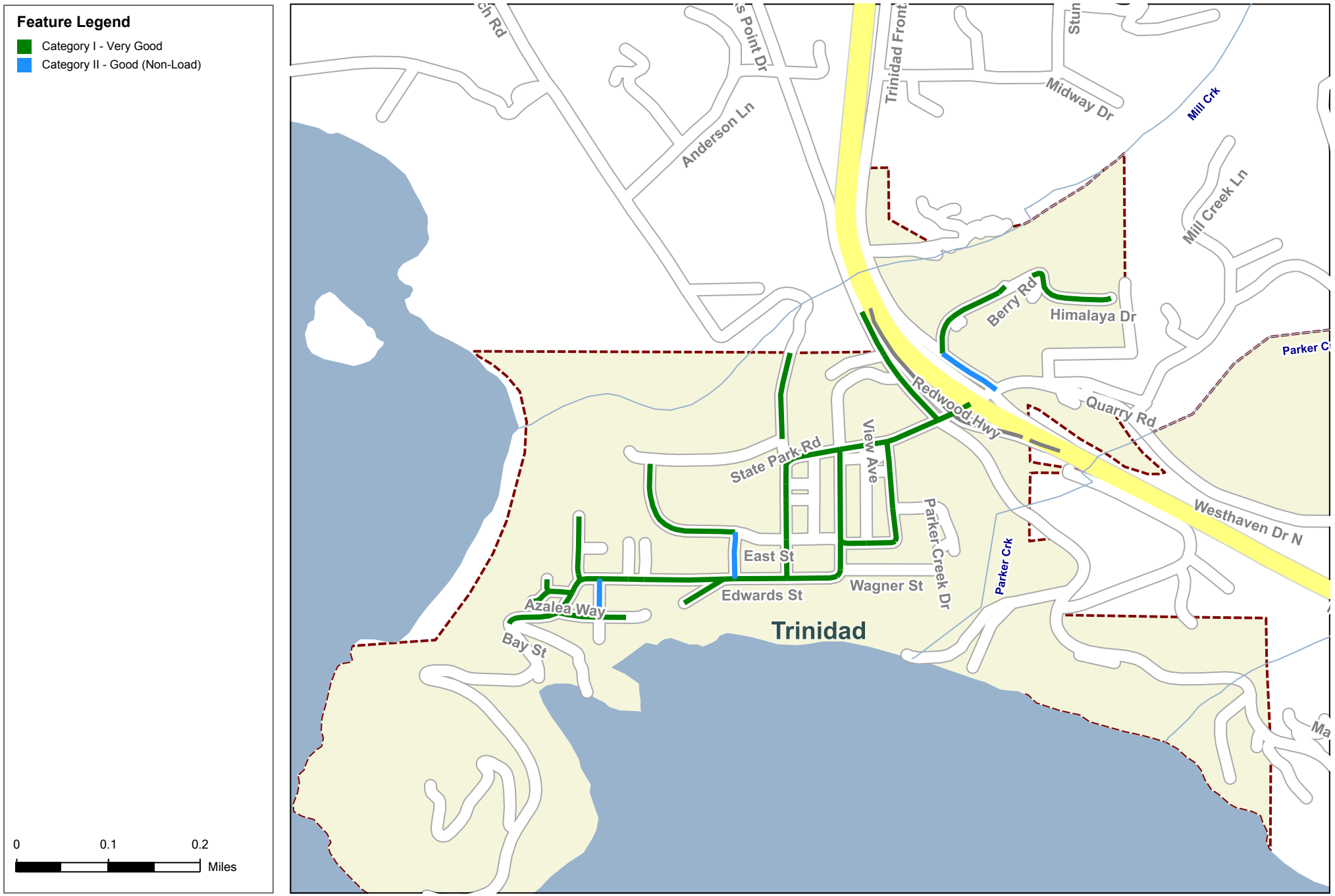


PCI GIS Map
Scenario 2: Maintain Current PCI
(2026)

HCAOG

Target-Driven Scenario PCI Condition

Trinidad - Maintain Current PCI (75) - 2026 Project Period - Total Rehab: $0 - Printed: 11/7/2017



PCI GIS Map
Scenario 3: Eliminate Deferred Maintenance - Front Loaded (2026)

HCAOG

Scenario PCI Condition

Trinidad - Needs (Unconstrained) - 2026 Project Period - Total Rehab: $16,297 - Printed: 11/7/2017

Feature Legend

- Category I - Very Good
- Category II - Good (Non-Load)

0 0.1 0.2 Miles