

Ad Hoc Street Improvement & Funding Committee

May 25, 2023 Meeting Agenda

Time & Location: 6:00 pm. At Cottage Grove City Hall, Council Chambers, 400 E. Main Street

Join the Street Improvement Funding Committee Meeting from your computer, tablet or smartphone.

<https://meet.goto.com/CottageGrove/may252023streetfundingcommittee>

You can also dial in using your phone.

Access Code: 232-268-893

United States (Toll Free): [1 866 899 4679](tel:18668994679)

United States: [+1 \(571\) 317-3116](tel:+15713173116)

1. Welcome
2. Introductions
3. Committee Purpose
4. Committee Structure
5. Election of Chair and Vice Chair
6. Staff Presentation (Dan Ingram, Emerio Engineer & Faye Stewart)
 - Description of City Street System
 - Condition of Streets
 - Paver Report
 - Investment necessary for stabilization and or improvement
 - Current City Street Funding
 - City Gas Tax
 - State Apportionment Revenue
 - Urban Aid
 - Grant Funding
 - Past and Proposed Projects
 - Grind and pave S. 6th Street and Mosby Creek
 - Repair Vintage Inn and Gateway Intersection
 - Repair Main Street, Silt Creek, and Harrison Bridges
 - Rebuild J Polk Swinging Bridge
 - Safe Routes to School Project
 - Gateway Chip Seal
 - E. Main Street and S. River Road Chip Seal
 - W. Main Street and N. River Road Chip Seal (July 2023)
 - Main Street Revitalization Project (Currently in design, construction 2024)
 - Crack Sealing, Street restriping, sign installation & replacement

7. Questions

8. Next Meeting Date

RESOLUTION NO. 2095

A RESOLUTION CREATING AN AD-HOC
STREET IMPROVEMENT AND FUNDING COMMITTEE

WHEREAS, the City of Cottage Grove has 45.66 miles of paved and 4.63 miles of gravel roads supporting residents and business within the City limits; and

WHEREAS, the City of Cottage Grove generates approximately \$350,000 in local gas tax, \$850,000 in State Highway Apportionment, and \$125,000 in Federal Urban Aid for a total of \$1,325,000 annual in street fund revenue; and

WHEREAS, the City of Cottage Grove budgets \$900,000 per year to perform street maintenance and \$425,000 for capital projects; and

WHEREAS, the City of Cottage Grove street Pavement Condition Index is 54.7 (Poor) and a \$28.9 million backlog of improvement, maintenance, and preservation projects; and

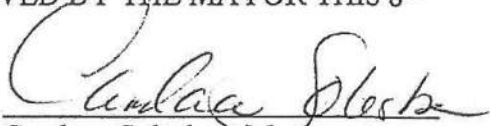
WHEREAS, the City of Cottage Grove street fund is unable to fund the investment necessary to preserve and or improve the street conditions in the City's road system.

NOW, THEREFORE, BE IT RESOLVED that the City Council supports establishing an Ad Hoc Committee to review the current street improvement need, review the available funding in the City's approved budget, review the available funding mechanisms to generate street funding, and make a recommendation to the Council by August 14, 2023; and


BE IT FURTHER RESOLVED the Ad Hoc Committee will be composed of the seven City Council members, eight city residents or property owners and one Youth Advisory Council member; and

BE IT FURTHER RESOLVED that this resolution shall take effect immediately upon adoption.

PASSED BY THE CITY COUNCIL AND APPROVED BY THE MAYOR THIS 8th
DAY OF MAY, 2023.


Candace Solesbee, Mayor
Date: May 8, 2023

ATTEST:


Richard Meyers, City Manager
Date: May 8, 2023

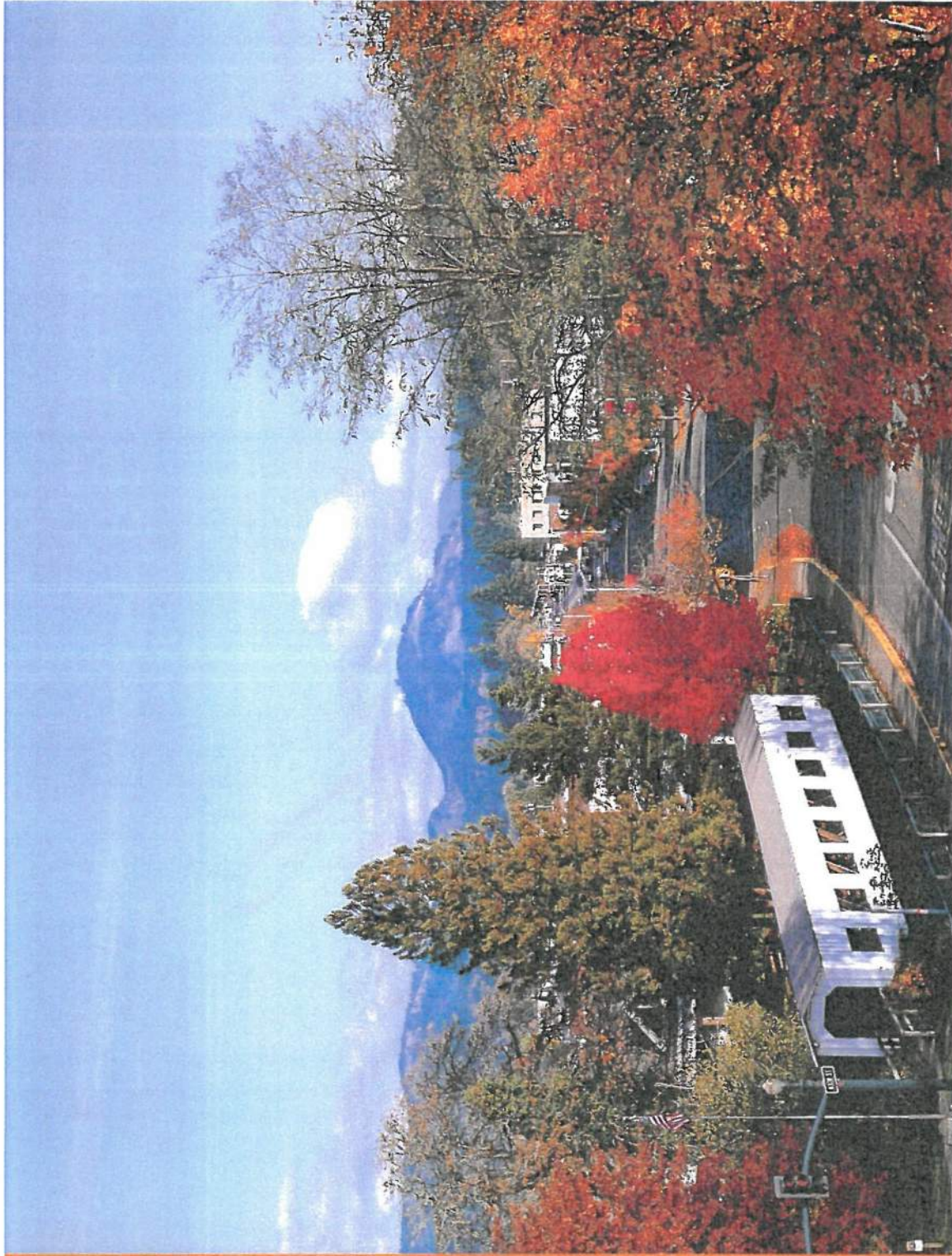
EMERIO *Design*

Presenter: Daniel B. Ingram, P.E., P.L.S.

Cottage Grove

Pavement
Management

May 25, 2023



City of Cottage Grove - Street System

Cottage Grove Street System:

Cottage Grove's street network is comprised of just under 42 centerline miles of paved streets as well as just under 2 miles of gravel roads. By surface area:

- 95.8% Asphalt Concrete Pavement (ACP)
- 1.4% Portland Cement Concrete (PCC) Pavement
- 2.8% Gravel

City of Cottage Grove - Street System

What is the value of a well-maintained street network?

- A well-maintained street network provides for safe transportation, supports commerce, provides connectivity, promotes livability, provides access, walkability etc.
- Monetarily, the reconstruction of the street network would cost an estimated \$200 million, excluding bridges and right-of-way costs.

City of Cottage Grove – Pavement Management

Benefits of a Pavement Management System:

- There is a benefit to the overall system by taking care of pavements and maintaining them in good condition.
- An ad hoc or worst first approach for identifying and timing maintenance needs is ineffective and very costly. Using pavement management avoids this mistake.
- Pavements are evaluated on a routine basis.
- Maintenance decisions are based upon consistent data.

Emerio Design & Cottage Grove

SPRING/SUMMER 2018:

City of Cottage Grove contracted with Emerio Design to provide pavement management services.

GOALS:

- Establish pavement network database.
- Break network into maintenance sections.
- Assess current pavement conditions by visual inspection, PCI rating.

SPRING/SUMMER 2022:

Emerio Design repeated PCI Rating assessment.








Pavement Condition Index (PCI)

What is the Pavement Condition Index or PCI?

The PCI is a numerical indicator that rates the condition of the pavement by visual inspection. The PCI ranges from zero to 100.

- A PCI of zero is the rating for a street that has completely failed.
- A PCI of 100 is the rating for a street which has been newly constructed or overlaid.

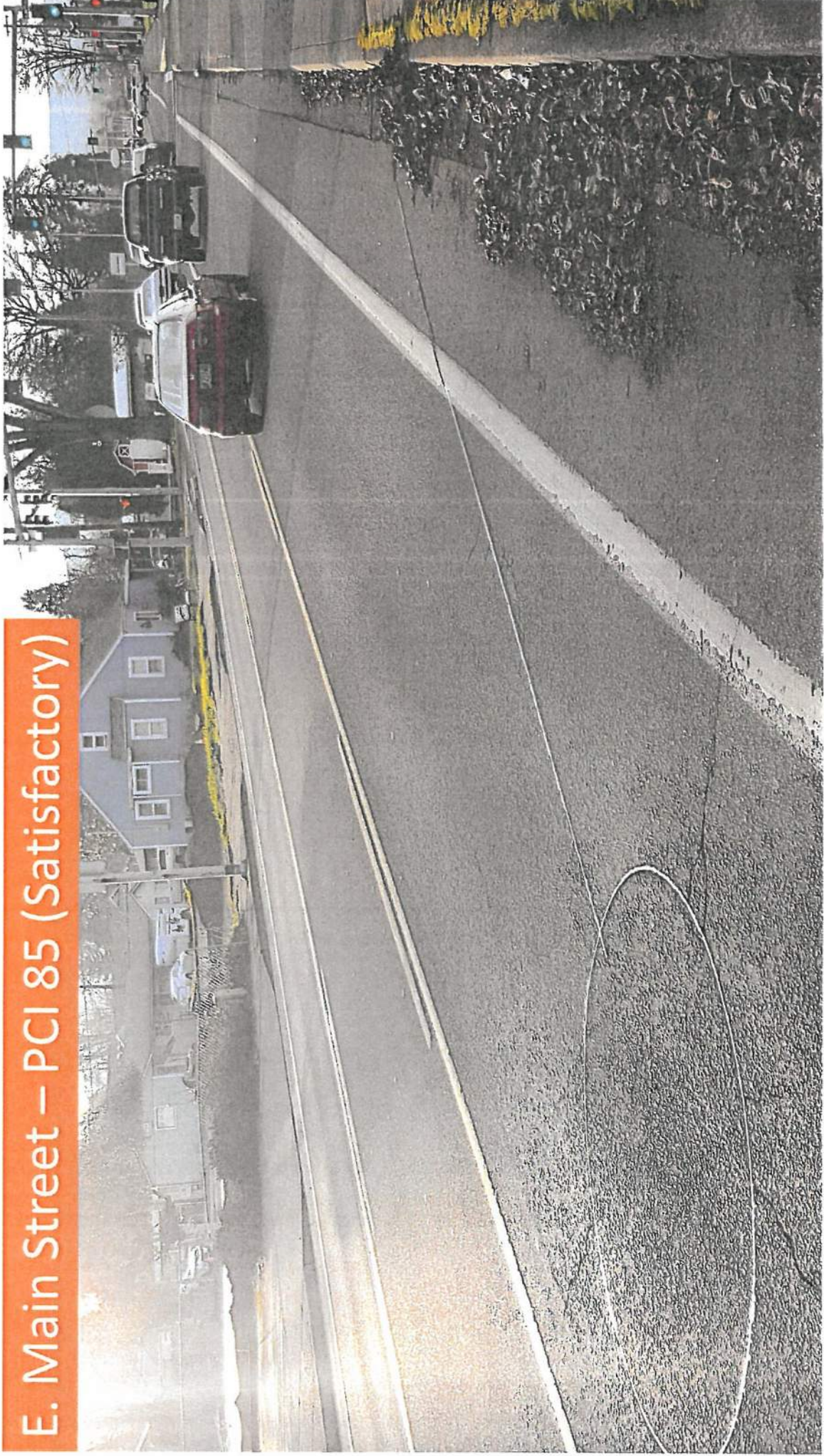
Table 3.2 – PAVEMENT CONDITION INDEX RATING SCALE

ASTM PCI Color Legend	PCI Range	PCI Rating and Definition
	86 to 100	GOOD: Pavement has minor or no distresses and should require only routine maintenance.
	71 to 85	SATISFACTORY: Pavement has scattered low-severity distresses that should require only routine maintenance.
	56 to 70	FAIR: Pavement has a combination of generally low- and medium-severity distresses. Maintenance and repair needs may range from routine to major.
	41 to 55	POOR: Pavement has low-, medium-, and high-severity distresses that probably cause some operational problems. M&R needs will be major.
	26 to 40	VERY POOR: Pavement has predominantly medium- and high-severity distresses that cause considerable maintenance and operational problems. M&R needs will be major.
	11 to 25	SERIOUS: Pavement has mainly high-severity distresses that may affect operational safety; immediate repairs are needed.
	0 to 10	FAILED: Pavement deterioration has progressed to the point that safety is a significant concern; complete reconstruction is required.



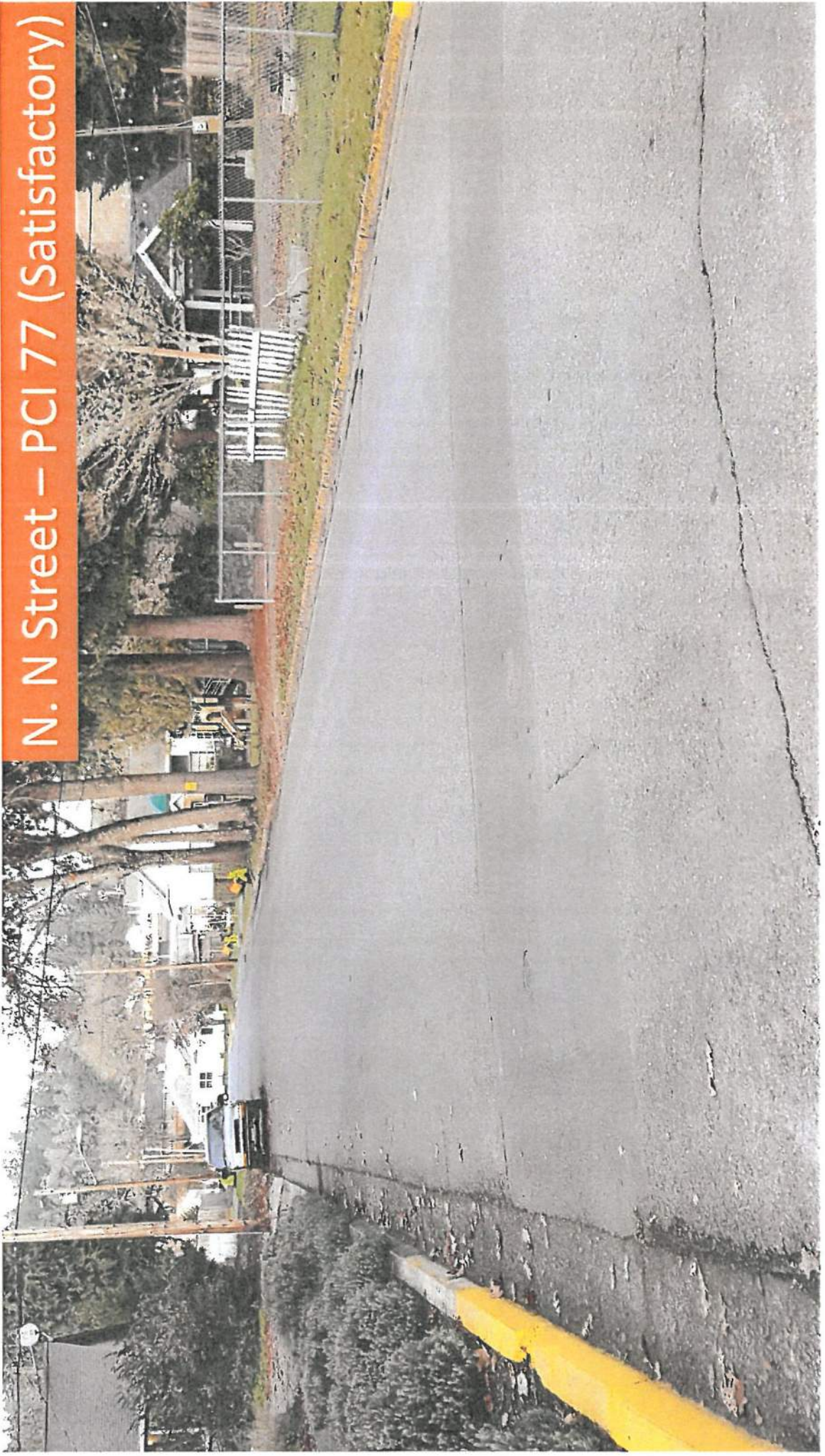
River Walk Place – PCI 93 (Good)

E. Main Street – PCI 85 (Satisfactory)





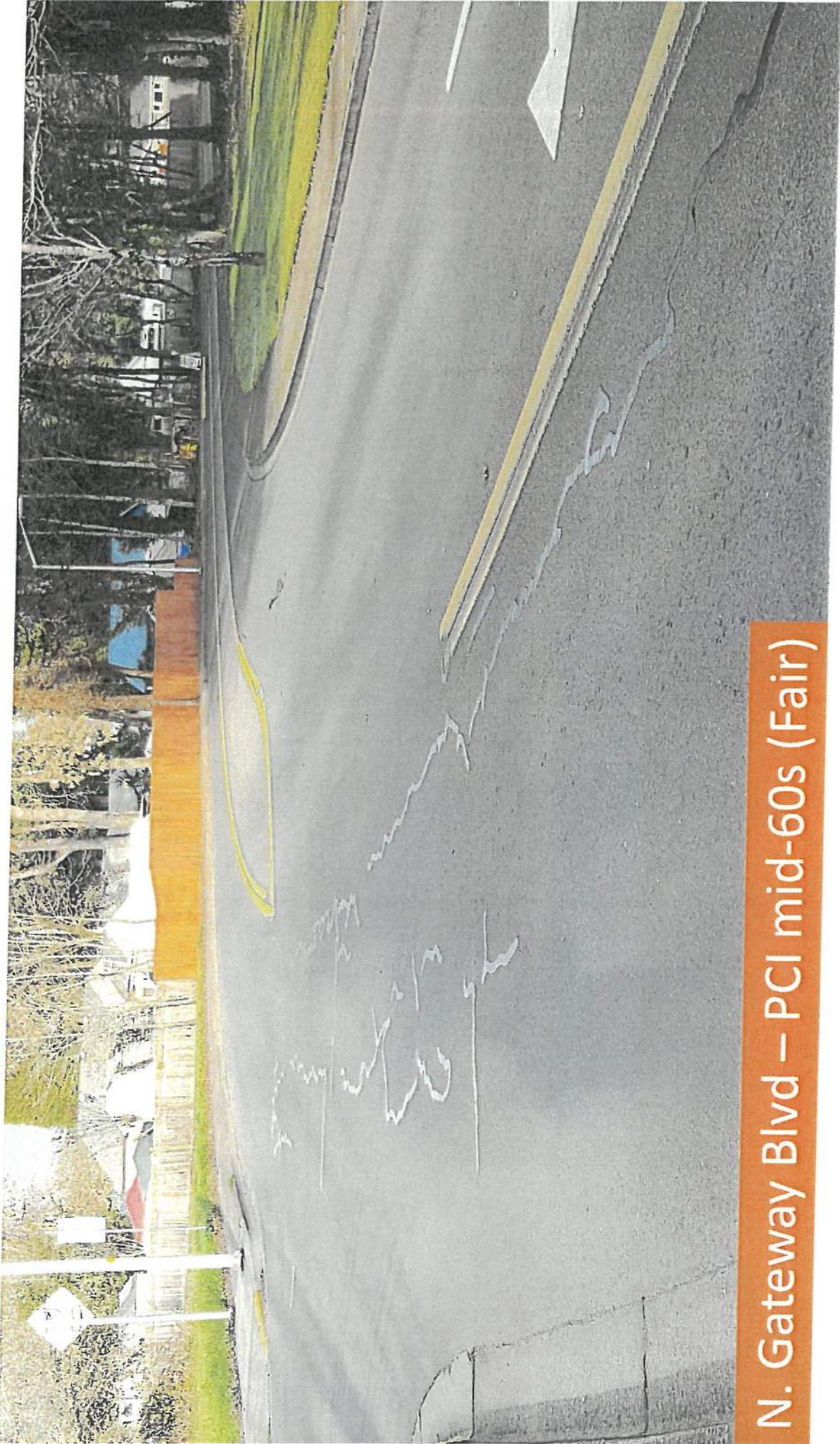
W. Main Street – PCI 82 (Satisfactory)



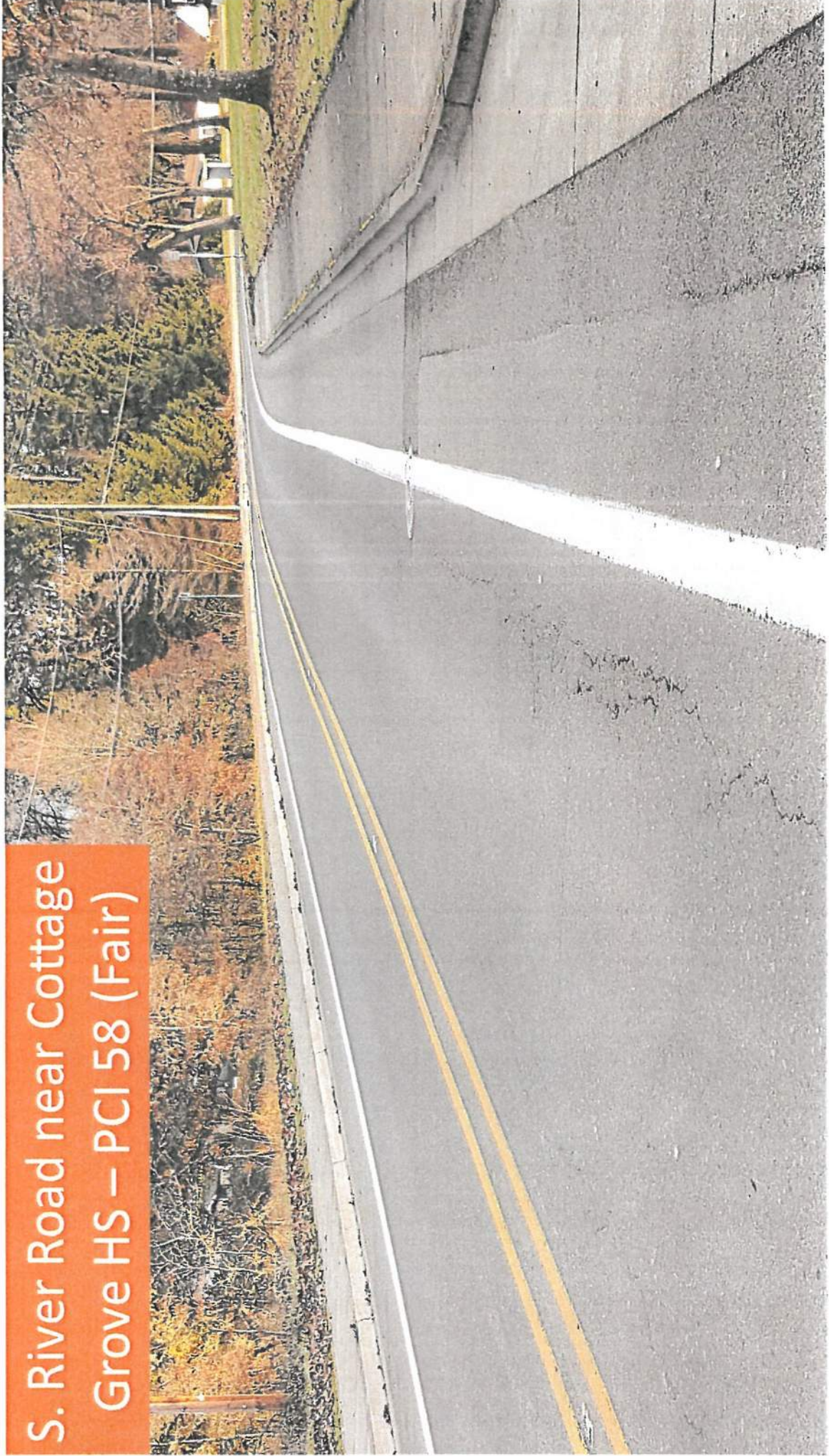
N. N Street – PCI 77 (Satisfactory)

C

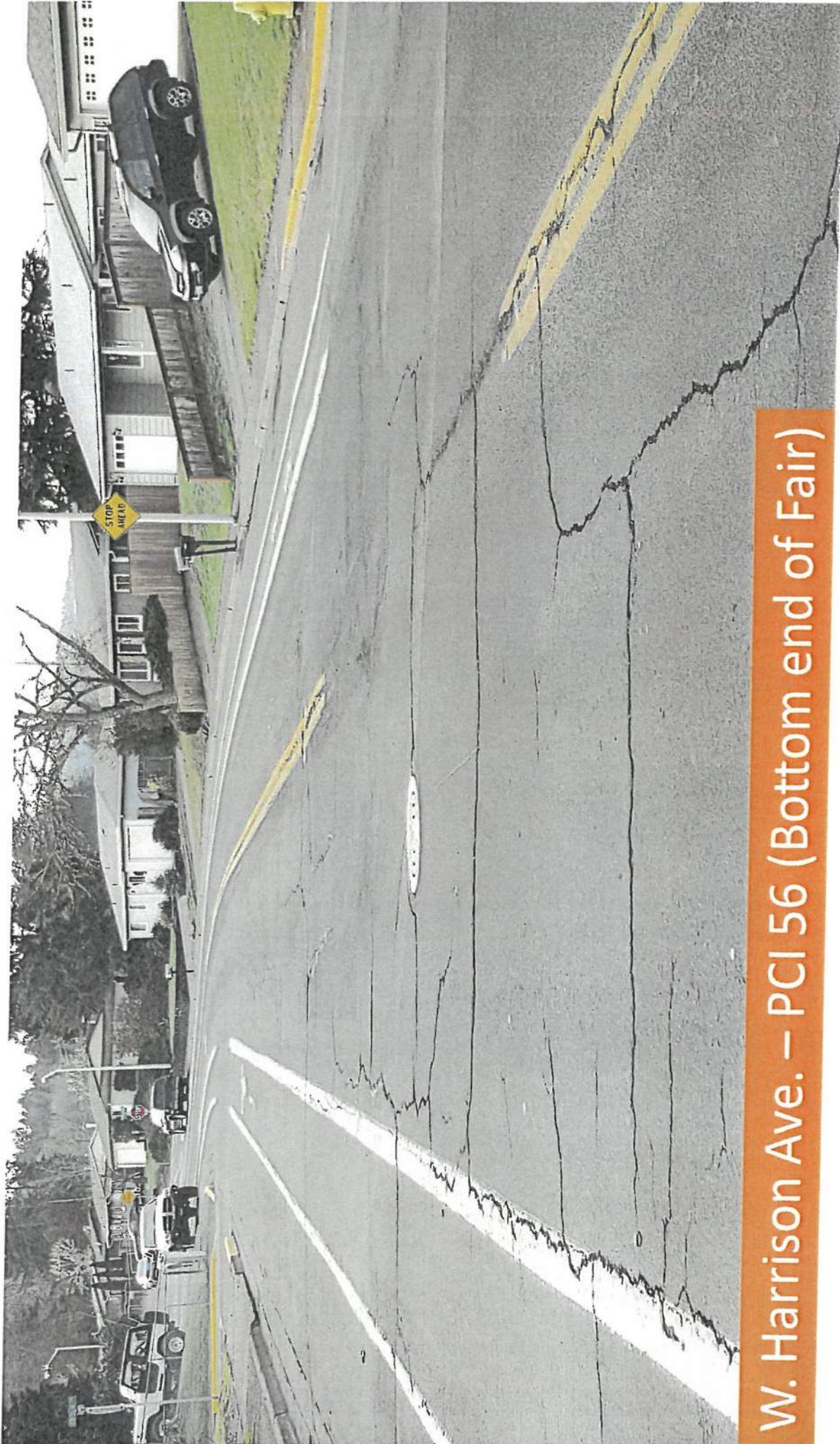
J



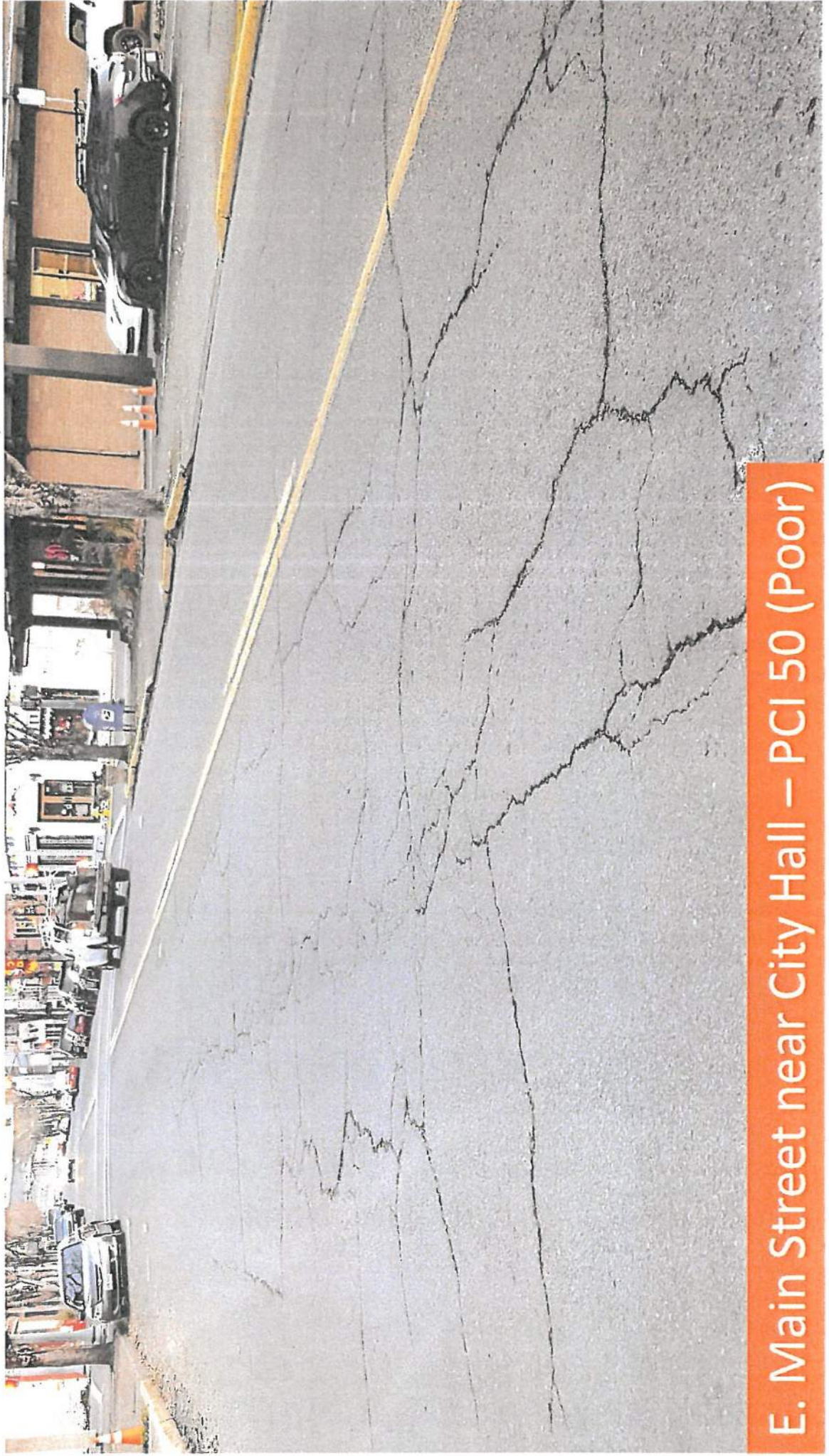
N. Gateway Blvd – PCI mid-60s (Fair)



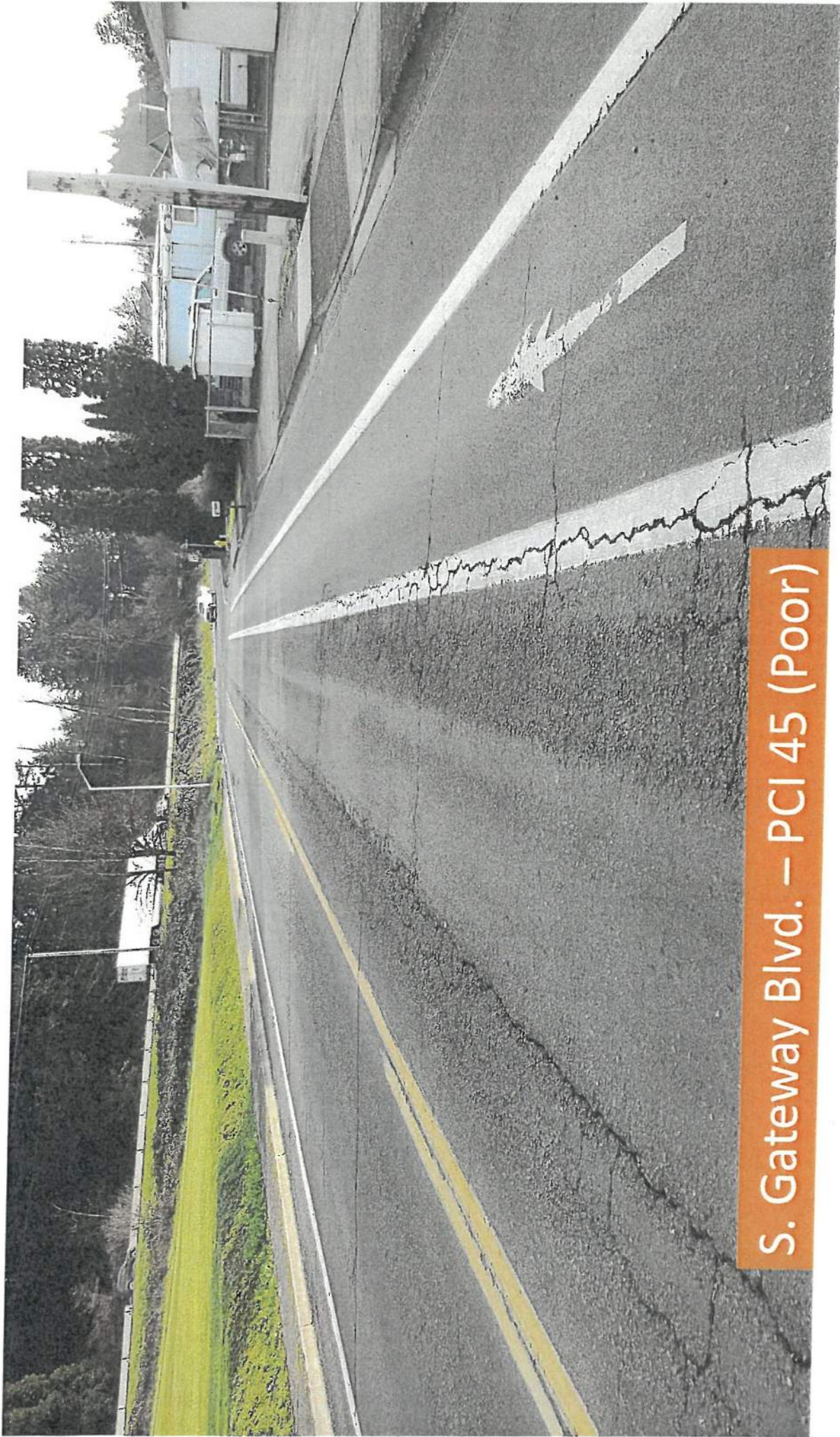
S. River Road near Cottage
Grove HS – PCI 58 (Fair)



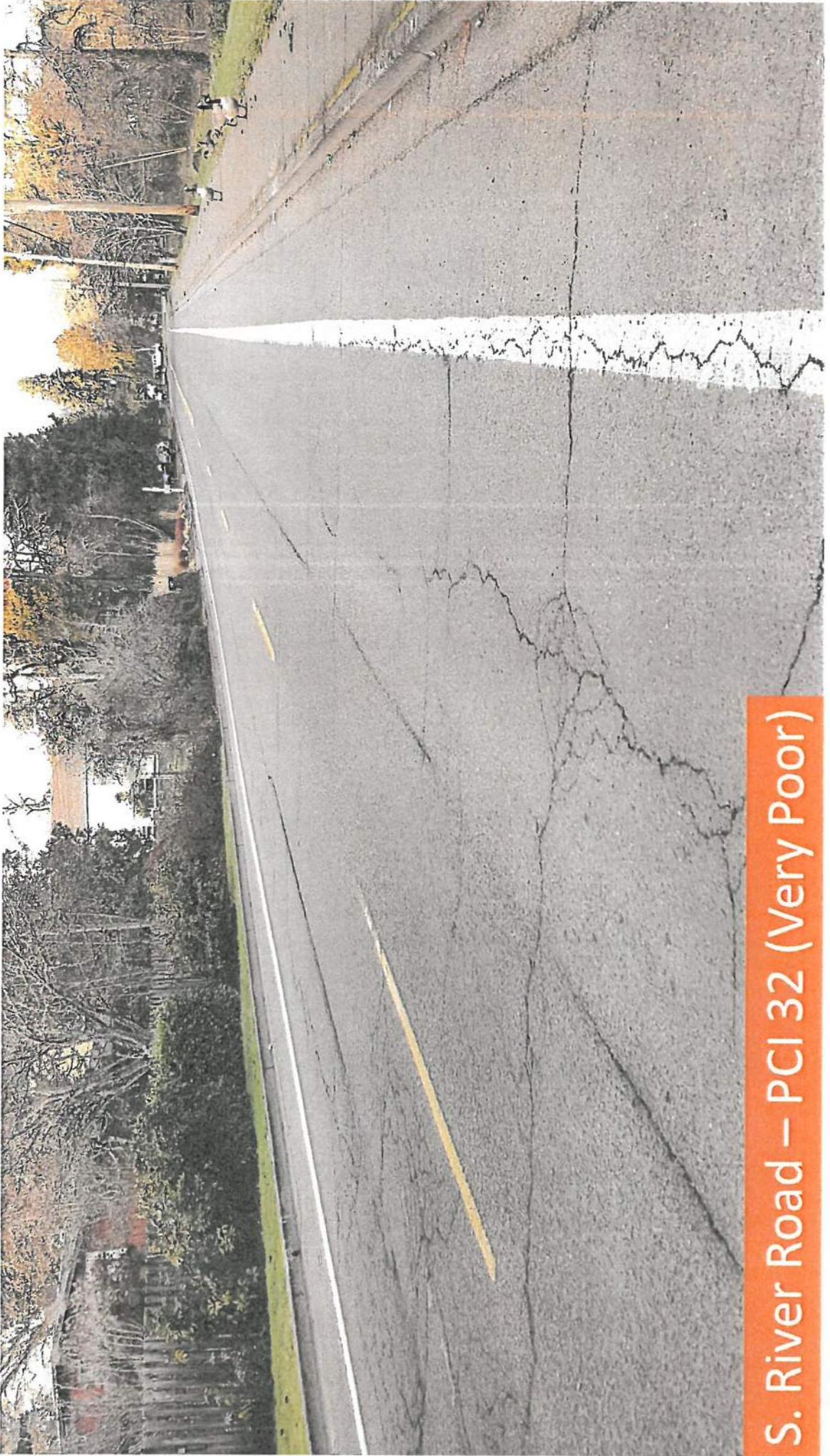
W. Harrison Ave. – PCI 56 (Bottom end of Fair)



E. Main Street near City Hall – PCI 50 (Poor)



S. Gateway Blvd. – PCI 45 (Poor)



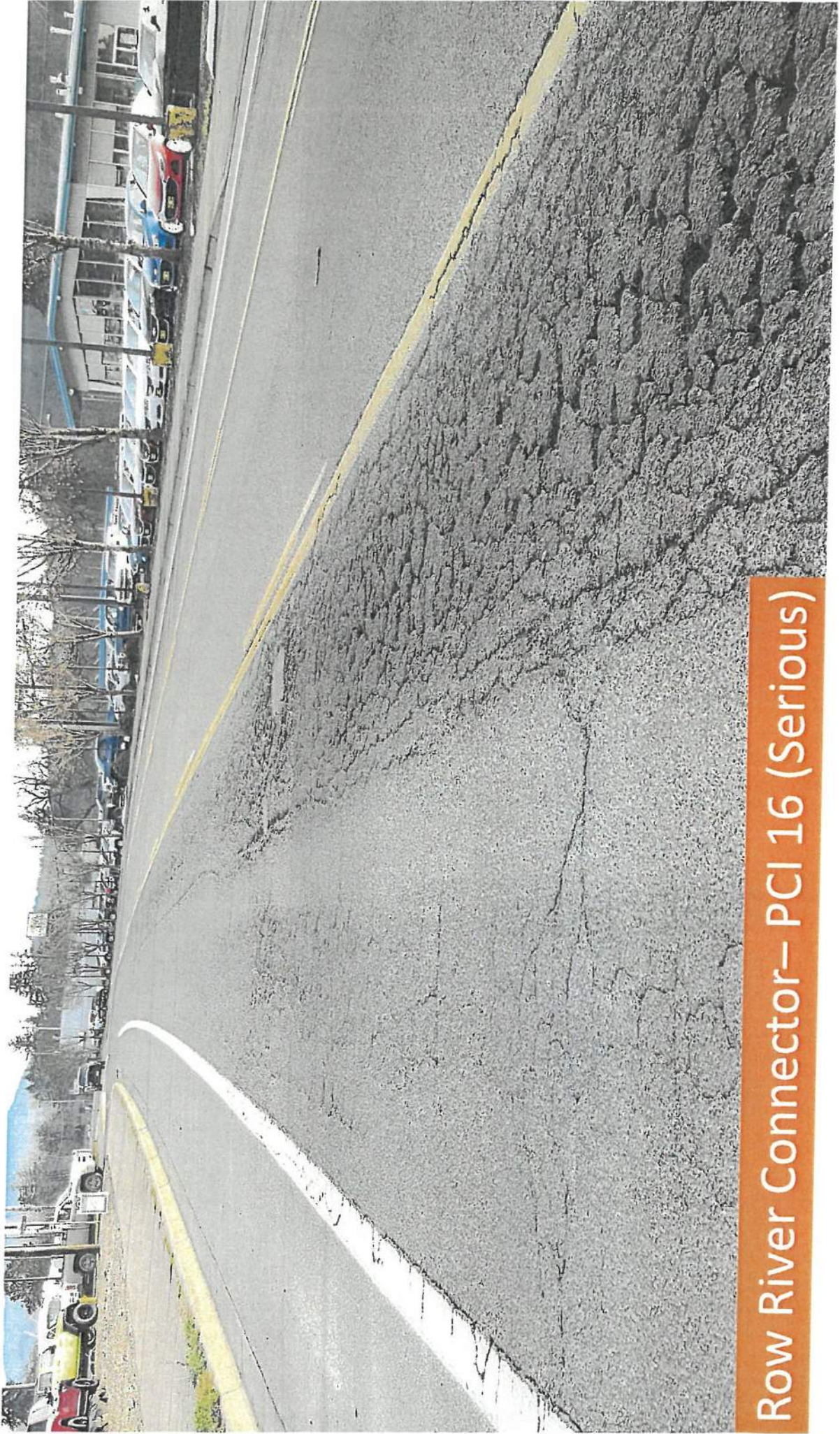
S. River Road – PCI 32 (Very Poor)



E. Whiteaker Ave. – PCI 25 (Serious)



N. 16th Street - PCI 24 (Serious)



Row River Connector— PCI 16 (Serious)



Bryant Ave. – PCI 11 (Bottom end of Serious)



S. N Street – PCI 3 (Failed)

Pavement Condition Index (PCI)

How is the Pavement Condition Index (PCI) measured?

The PCI is measured by quantifying street distresses and severities within a street section.

- Distress quantity
- Distress type
- Distress severity

Standard PCI
rating scale



100
85
70
55
40
25
10
0

\$1 for
Rehabilitation
Here

Significant Drop
in Condition

Will Cost
\$4 to \$5
Here

Small % of
Pavement Life

Time



Cottage Grove Pavement Management

Emerio Design utilized PAVER™ software and visually surveyed 42 miles of paved City streets and found the overall system PCI to be 57.6 (2018).

PCI 57.6 (2018)
Low End of Fair Condition

Repeated overall system PCI Rating Process in 2022.

PCI 54.7 (2022)

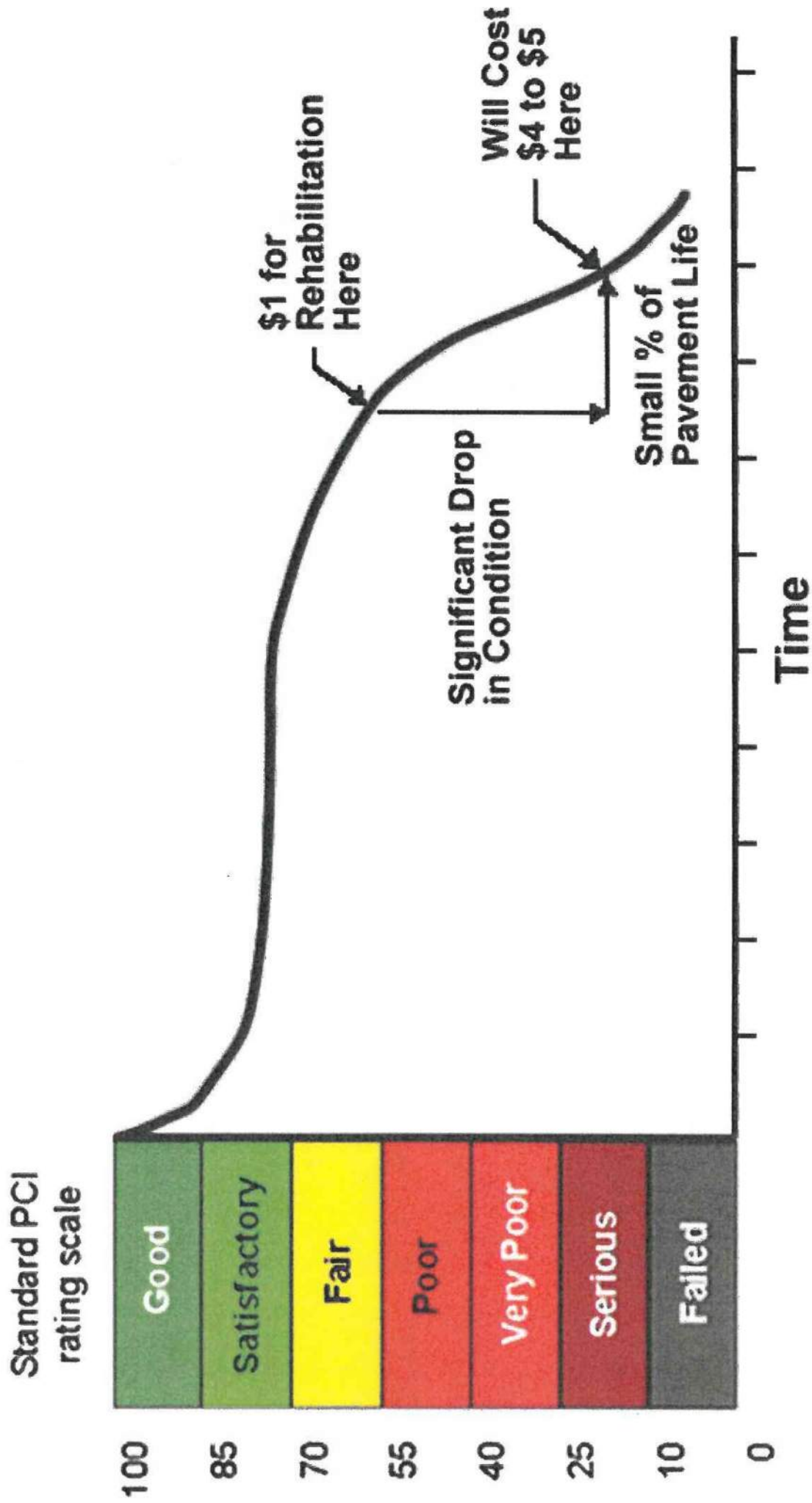


**Cottage Grove Streets
Average PCI (Fall 2018) = 58**

Further Evaluation

During the original budget needs and consequences analysis from the 2018 PCI ratings, a closer look was taken at three scenarios:

- Maintaining the then current budget (PCI of 49 in 10 years)
- Maintaining current PCI (Approximately \$2.5 million at today's construction costs)
- Achieving a PCI of 72 (Satisfactory Rating) in 20 years (Approximately \$3.5 million at today's construction costs)



Based upon the 20-year scenarios. If the overall goal of the City of Cottage Grove is to improve the network pavement condition, while gradually reducing backlog, the funding level will need to be between \$2.5 million and \$3.5 million per year.

QUESTIONS??

EMERIO *Design*

Em·er·io [ě mār ē ō] adj / Latin: "Gaining trust by providing quality service"



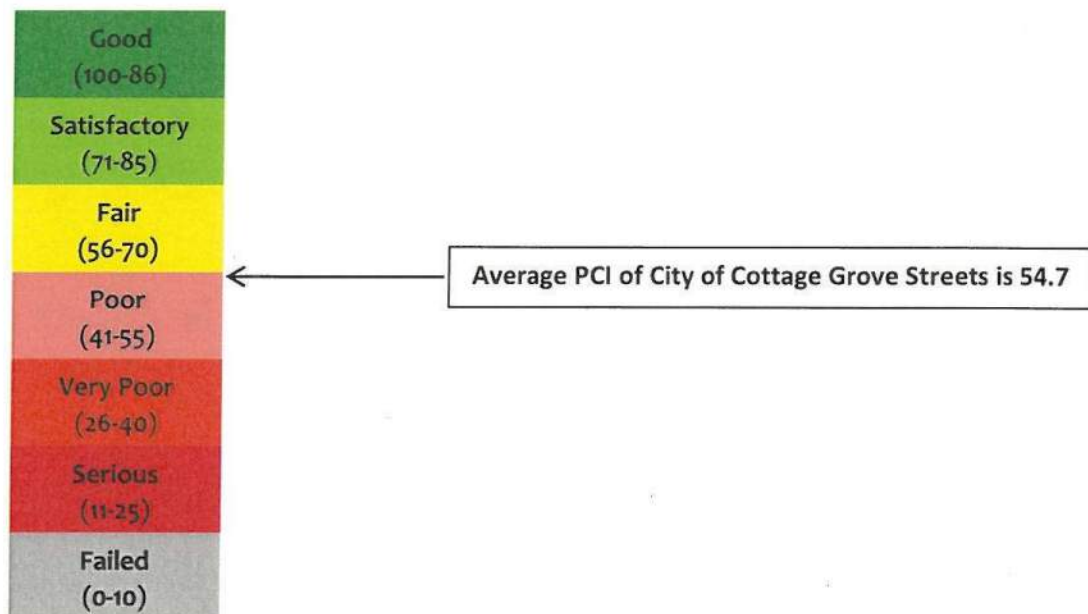
Date: June 29, 2022
Project: 2022 City of Cottage Grove Pavement Management
To: Faye Stewart, Public Works and Development Director
From: Daniel Ingram, PE, PLS, Emerio Design
Subject: 2022 Pavement Condition Index (PCI) Report

Executive Summary

The City of Cottage Grove contracted with Emerio Design in 2018 to provide pavement engineering services to develop and implement an on-going pavement management program for the City of Cottage Grove streets. The City has again contracted with Emerio Design in 2022 to provide a renewal of the PCI ratings generated by the development of the on-going pavement management program. This report provides a periodic update as to the changing condition of the City's Street system.

Pavement Condition Index (PCI) Survey Summary

During the late winter and spring of 2022, Emerio Design conducted a walking inspection of not less than 25% of the surface area of every City Street under the jurisdiction of the City of Cottage Grove. Similarly, to the 2018 inspections, the pavement condition index (PCI) rating was generated using the PAVER pavement management software (PMS). The PCI numerical scale ranges from zero to 100, where zero represents a pavement in the worst possible condition with no remaining functional life and 100 represents a pavement in the best possible condition with no defects. The PCI survey found that the overall area-weighted average PCI of the roadway pavements in the City of Cottage Grove is 54.7, falling slightly into the "Poor" category. The standard PCI rating scale given in ASTM D6433 was used, which is shown graphically below.





The 2022 PCI survey shows that the overall PCI has fallen from the 2018 overall rating of 57.6 to the updated 2022 overall rating of 54.7. This can be further broken down by Section Rank between Arterial Streets, Collector Streets, and Local Streets as follows:

- Arterial Streets have declined from an average 2018 rating of 58.7 to an average 2022 rating of 57.2.
- Collector Streets have improved from an average 2018 rating of 48.2 to an average 2022 rating of 50.0
- Local Streets have declined from an average 2018 rating of 60.0 to an average 2022 rating of 55.2.

Arterial Streets

The PCI on Arterial Streets have declined but have been partially buoyed by maintenance work efforts. A chip seal on a portion of N. Gateway Blvd helped the overall PCI, as did the City's considerable crack sealing effort which shows up most significantly on the North and South River Road streets. Additional targeted work efforts are needed to improve the overall system PCI.

Collector Streets

The PCI on Collector Streets have increased slightly primarily due to the safe routes to school's work completed on S. 4th Street and E. Taylor Ave. This work significantly boosted the PCI ratings on these previously deteriorating streets. There has also been a positive impact for those streets receiving City of Cottage Grove crack seal. Additional targeted work efforts are recommended to improve the overall system PCI.

Local Streets

The PCI on Local Streets have declined significantly. There have been some improvements on a few of the Local Streets. Fillmore Ave improved with the safe routes to school's project, as did the S. 4th Street Y, others were positively impacted by City of Cottage Grove crack sealing. However, many Local streets have shown accelerating decline as many fall below the critical PCI where deterioration starts to accelerate. I would strongly recommend that the City of Cottage Grove consider implementing an annual budget strictly to slurry seal existing Local Streets. Additional targeted work efforts are recommended to improve the overall system PCI.

Individual Street PCI Assessments

Together with this report, we are providing an Excel spreadsheet with sortable 2022 PCI report data. The data can be sorted by any of the various columns which can be useful when assessing the PCI of streets, or looking specifically at Arterials, Collectors, or Local Streets.



Recommendations

The PAVER analysis provides a basis for establishing efficient treatment requirements. The program is designed to provide tools to analyze pavement conditions and provide recommendations on the best approach to achieve the greatest benefit for the maintenance dollar.

Based upon the PCI and PAVER analysis data, the single largest factor in the deterioration climate related factors is the deterioration category providing the most impact to the overall PCI. This type of distress is associated with aging pavements. As mentioned previously, I would strongly recommend implementing a slurry seal program. Slurry sealing streets to maintain them above critical condition, can significantly slow the deterioration of the street network and provide a boost to the pavement condition to many of the aging and weather related distresses that impact older pavements. This effort is made even more critical by the ever increasing cost of rehabilitation and reconstruction work.

Additionally, while increasing efforts to maintain existing pavements above critical condition, it is also recommended that the City budget for ongoing efforts to eliminate the increasing backlog of rehabilitation and reconstruction work.

Emerio Design stands ready to assist with the City's ongoing efforts to maintain the City of Cottage Grove Street system. Please feel free to contact us at anytime to discuss how we may be of service in implementing your maintenance plans.

Also, feel free to contact me with any questions regarding this report.

Best Regards,

Daniel B. Ingram, PE, PLS | Senior Project Manager

1500 Valley River Drive, Suite 100, Eugene, OR 97401

541-521-3596 Cell | 503-746-8812 Main | www.emeriodesign.com

BranchID	SectionID	Last Recorded Const Date	Surface Type	True Area (SqFt)	Section Rank	2022 PCI	PCI Category	2018 PCI	2022 PCI Pct Climate	2022 PCI Pct Load	2022 PCI Pct Other
EMAINST	CG175	01-01-1900	AC	23,791	A	8	Failed	30	20	63	17
EMAINST	CG172	01-01-1900	AC	54,895	A	38	Very Poor	50	32	68	0
EMAINST	CG173	01-01-1900	AC	16,246	A	78	Satisfactory	79	35	0	65
EMAINST	CG174	01-01-1900	AC	101,537	A	86	Good	85	94	0	6
EWHITEAKER	CG181	06-01-1977	AC	34,973	A	17	Serious	26	43	34	23
EWHITEAKER	CG180	06-01-1977	AC	20,769	A	26	Very Poor	24	50	50	0
MOSBYCRRD	CG307	01-01-1900	AC	48,131	A	46	Poor	57	49	49	2
NGATEWAYBL	CG279	06-01-1974	AC	10,350	A	95	Good	100	100	0	0
NGATEWAYBL	CG278	06-01-1974	AC	27,868	A	46	Poor	49	23	77	0
NGATEWAYBL	CG277	06-01-1974	AC	71,878	A	77	Satisfactory	62	46	54	0
NGATEWAYBL	CG276	06-01-1974	AC	35,760	A	87	Good	68	79	0	21
NRIVERRD	CG9	01-01-1900	AC	9,043	A	85	Satisfactory	94	79	0	21
NRIVERRD	CG10	01-01-1900	AC	97,403	A	50	Poor	29	26	61	13
ROWRIVERCO	CG310	06-01-2002	AC	86,168	A	23	Serious	16	20	74	6
S6THST	CG114	01-01-1900	AC	18,592	A	75	Satisfactory	86	100	0	0
S6THST	CG112	01-01-1900	AC	68,018	A	64	Fair	74	50	11	39
S6THST	CG113	01-01-1900	AC	129,851	A	73	Satisfactory	75	96	3	1
SGATEWAYBL	CG274	06-01-1983	AC	126,153	A	35	Very Poor	56	38	62	0
SGATEWAYBL	CG275	06-01-1983	AC	26,424	A	25	Serious	45	53	45	2
SRIVERRD	CG7	01-01-1900	AC	10,366	A	74	Satisfactory	80	100	0	0
SRIVERRD	CG8	01-01-1900	AC	10,080	A	90	Good	94	100	0	0
SRIVERRD	CG6	01-01-1900	AC	130,638	A	32	Very Poor	32	32	66	2
SRIVERRD	CG5	01-01-1900	AC	53,825	A	69	Fair	58	73	27	0
SRST	CG19	01-01-1900	AC	30,737	A	30	Serious	44	31	66	3
SRST	CG20	01-01-1900	AC	108,830	A	84	Satisfactory	78	98	0	2
SRST	CG18	01-01-1900	AC	71,283	A	83	Satisfactory	75	100	0	0
WMAINST	CG62	06-01-1974	AC	116,611	A	68	Fair	82	39	48	13
WOODSONPL	CG12	01-01-1900	AC	5,540	A	87	Good	88	100	0	0
BLUESKYDR	CG25	06-01-1978	AC	24,966	C	25	Serious	30	33	53	14
ECHAMBERLA	CG197	01-01-1900	AC	19,129	C	55	Poor	58	52	29	19
ECHAMBERLA	CG198	06-01-1971	AC	2,426	C	90	Good	15	39	61	0
EHARRISONA	CG31	01-01-1900	AC	14,190	C	63	Poor	71	76	24	0
EHARRISONA	CG30	01-01-1900	AC	8,893	C	50	Poor	56	58	0	42
EHARRISONA	CG29	01-01-1900	AC	5,359	C	95	Good	99	100	0	0
EHARRISONA	CG315	01-01-1900	PCC	6,257	C	44	Poor	46	8	92	0
EHARRISONA	CG28	01-01-1900	AC	63,654	C	39	Very Poor	41	61	39	0
EMADISONAV	CG151	01-01-1900	AC	30,360	C	47	Poor	50	71	22	7
EMADISONAV	CG152	01-01-1900	AC	21,220	C	58	Fair	51	58	23	19
ETAYLORAVE	CG246	01-01-1900	AC	44,397	C	37	Very Poor	44	31	24	45
ETAYLORAVE	CG245	01-01-1900	AC	39,951	C	37	Very Poor	38	31	67	2
ETAYLORAVE	CG244	01-01-1900	AC	14,494	C	95	Good	52	100	0	0
GRANTAVE	CG225	01-01-1900	AC	22,011	C	55	Poor	55	79	11	10
HARVEYRD	CG285	01-01-1900	AC	12,442	C	28	Serious	45	27	46	27
HARVEYRD	CG284	01-01-1900	AC	39,984	C	59	Fair	53	47	39	14
LINCOLNAVE	CG238	06-01-1966	AC	6,904	C	30	Very Poor	44	41	55	4
LINCOLNAVE	CG237	06-01-1966	AC	18,717	C	52	Poor	62	90	0	10
LINCOLNAVE	CG239	06-01-1966	AC	5,854	C	20	Serious	10	28	72	0
N16THST	CG283	01-01-1900	AC	32,081	C	21	Serious	25	39	61	0
N16THST	CG282	01-01-1900	AC	77,055	C	21	Serious	23	33	54	13
NDOUGLASST	CG218	01-01-1900	AC	16,152	C	40	Very Poor	44	41	51	8
NMST	CG77	01-01-1900	AC	52,420	C	85	Satisfactory	86	97	0	3
NMST	CG76	06-01-1966	AC	20,531	C	57	Fair	57	31	48	21
OSTRANDERL	CG298	06-01-1981	AC	20,147	C	32	Very Poor	49	53	42	5
OSTRANDERL	CG299	06-01-1981	AC	34,345	C	64	Fair	35	64	14	22
OSWALDWAVE	CG297	01-01-1900	AC	10,544	C	27	Very Poor	43	41	54	5
S10THST	CG253	01-01-1900	AC	55,682	C	48	Poor	50	22	36	42
S10THST	CG252	01-01-1900	AC	84,804	C	33	Very Poor	26	28	62	10
S16THST	CG270	01-01-1900	AC	54,915	C	45	Poor	64	37	61	2
S4THST	CG107	01-01-1900	AC	15,320	C	81	Satisfactory	76	100	0	0
S4THST	CG105	01-01-1900	AC	44,876	C	95	Good	45	100	0	0
S4THST	CG106	01-01-1900	AC	31,000	C	95	Good	25	100	0	0
S6THST	CG115	01-01-1900	AC	22,724	C	39	Very Poor	40	76	24	0
S6THST	CG116	01-01-1900	AC	21,990	C	47	Poor	44	53	46	1
S8THST	CG125	01-01-1900	AC	22,039	C	89	Good	95	85	0	15
S8THST	CG127	01-01-1900	AC	15,950	C	75	Satisfactory	66	100	0	0
S8THST	CG126	01-01-1900	AC	26,792	C	85	Good	69	43	0	57
S8THST	CG128	01-01-1900	AC	40,879	C	75	Satisfactory	54	92	0	8

THORNTONRD	CG309	06-01-1977	AC	25,090	C	14	Serious	35	16	60	24
WHARRISONA	CG27	06-01-1975	AC	150,082	C	41	Very Poor	56	36	37	27
ADAMSAVE	CG161	01-01-1900	AC	17,335	L	12	Serious	34	18	82	0
ADAMSAVE	CG160	01-01-1900	AC	17,890	L	52	Poor	69	65	17	18
ADAMSAVE	CG163	01-01-1900	AC	20,492	L	43	Poor	60	69	16	15
ADAMSAVE	CG159	01-01-1900	AC	25,658	L	29	Very Poor	20	22	49	29
ADAMSAVE	CG162	01-01-1900	AC	13,933	L	70	Fair	59	31	41	28
ANTHONYAVE	CG49	06-01-1967	AC	42,272	L	40	Very Poor	57	45	25	30
ANTHONYCT	CG59	06-01-1971	AC	7,659	L	57	Fair	63	100	0	0
ARTHURAVE	CG234	01-01-1900	AC	31,395	L	67	Fair	75	69	31	0
ASHAVE	CG63	01-01-1900	AC	31,535	L	39	Very Poor	53	30	49	21
ASHAVE	CG61	01-01-1900	AC	25,188	L	65	Fair	77	73	0	27
ASHAVE	CG64	01-01-1900	AC	45,649	L	32	Very Poor	33	33	44	23
BANGLECT	CG305	06-01-1977	AC	13,649	L	59	Fair	70	65	29	6
BELMONTAVE	CG273	01-01-1900	AC	3,990	L	52	Poor	52	73	0	27
BENJAMINAV	CG228	06-01-2000	AC	16,540	L	86	Good	87	100	0	0
BENJAMINAV	CG227	06-01-2000	AC	15,342	L	95	Good	86	100	0	0
BIRCHAVE	CG65	01-01-1900	AC	20,875	L	61	Fair	69	70	0	30
BIRCHAVE	CG67	01-01-1900	AC	45,514	L	54	Poor	61	33	44	23
BIRCHAVE	CG66	01-01-1900	AC	7,864	L	42	Poor	45	49	51	0
BLAIRCT	CG51	06-01-1975	AC	8,613	L	44	Poor	52	55	45	0
BOHEMIAPL	CG38	06-01-1990	AC	13,211	L	59	Fair	61	100	0	0
BRYANTAVE	CG45	01-01-1900	AC	27,018	L	36	Very Poor	50	55	38	7
BRYANTAVE	CG48	01-01-1900	AC	8,364	L	9	Failed	11	45	55	0
BRYANTAVE	CG47	01-01-1900	AC	30,393	L	12	Serious	11	26	40	34
BRYANTAVE	CG46	01-01-1900	AC	8,845	L	43	Poor	40	67	28	5
BRYANTCT	CG52	06-01-1971	AC	6,233	L	25	Serious	34	59	41	0
CARNEGIEWA	CG2	01-01-1900	AC	42,188	L	90	Good	89	80	0	20
CAROBELLEC	CG271	01-01-1900	AC	7,263	L	45	Poor	53	28	35	37
CARVERAVE	CG43	01-01-1900	AC	15,536	L	17	Serious	19	15	83	2
CARVERPL	CG44	01-01-1900	AC	9,724	L	39	Very Poor	51	48	52	0
CERRYCT	CG134	01-01-1900	AC	8,375	L	53	Poor	46	32	47	21
CHESTNUTAV	CG68	01-01-1900	AC	40,423	L	43	Poor	51	36	47	17
CLARKAVE	CG41	01-01-1900	AC	15,440	L	44	Poor	59	79	0	21
CLARKAVE	CG40	01-01-1900	AC	11,249	L	56	Fair	63	49	23	28
CLARKAVE	CG42	01-01-1900	AC	36,779	L	36	Serious	41	13	87	0
CLEVELANDS	CG124	01-01-1900	AC	2,399	L	93	Good	84	60	0	40
COLUMBIACT	CG214	01-01-1900	AC	10,782	L	69	Fair	73	92	0	8
COOPCT	CG292	06-01-2000	AC	4,394	L	56	Fair	74	100	0	0
COOPERAVE	CG240	06-01-1968	AC	10,018	L	60	Poor	75	65	35	0
COOPERAVE	CG241	06-01-1968	AC	2,773	L	51	Poor	39	29	26	45
COTTONWOOD	CG83	06-01-2006	AC	17,097	L	88	Good	92	100	0	0
CURRYAVE	CG289	01-01-1900	AC	17,744	L	56	Fair	67	79	13	8
DAUGHERTYA	CG39	01-01-1900	AC	41,790	L	84	Satisfactory	81	100	0	0
DAVIDSONAV	CG311	01-01-1900	AC	49,859	L	72	Satisfactory	47	37	0	63
DAVISPL	CG289	01-01-1900	AC	5,754	L	60	Fair	70	100	0	0
DOGWOODAVE	CG84	06-01-2006	AC	26,643	L	93	Good	89	100	0	0
DOUGLASFIR	CG85	06-01-2006	AC	15,872	L	88	Good	90	100	0	0
DUBLINLN	CG249	01-01-1900	AC	14,892	L	45	Poor	40	49	51	0
ECHADWICKA	CG190	01-01-1900	AC	8,831	L	46	Poor	62	100	0	0
ECHADWICKA	CG189	06-01-1967	AC	8,423	L	48	Very Poor	63	73	0	27
ECHADWICKA	CG191	01-01-1900	AC	8,186	L	68	Fair	59	100	0	0
ECHAMBERLA	CG199	06-01-1977	AC	15,416	L	10	Failed	15	12	88	0
EDISONAVE	CG16	06-01-1975	AC	39,108	L	56	Fair	54	45	39	16
EGIBBSAVE	CG184	01-01-1900	AC	6,846	L	37	Serious	50	29	56	15
EGIBBSAVE	CG183	01-01-1900	AC	9,184	L	63	Fair	72	54	18	28
EGIBBSAVE	CG185	01-01-1900	AC	6,881	L	36	Very Poor	42	58	42	0
EGIBBSAVE	CG182	01-01-1900	AC	17,368	L	54	Poor	57	42	58	0
EGROVERAVE	CG188	01-01-1900	AC	17,833	L	43	Poor	82	36	48	16
EGROVERAVE	CG294	01-01-1900	AC	5,584	L	56	Fair	70	25	75	0
EGROVERAVE	CG293	01-01-1900	AC	5,874	L	67	Fair	72	33	67	0
EGROVERAVE	CG187	06-01-1967	AC	7,101	L	36	Very Poor	41	71	29	0
EJACKSONAV	CG265	01-01-1900	AC	13,667	L	41	Poor	48	37	39	24
EJEFFERSON	CG158	01-01-1900	AC	28,404	L	30	Very Poor	50	31	40	29
EJEFFERSON	CG155	06-01-1974	AC	9,793	L	38	Very Poor	57	31	31	38
EJEFFERSON	CG156	06-01-1974	AC	10,596	L	71	Satisfactory	86	100	0	0
EJEFFERSON	CG157	06-01-1974	AC	5,724	L	9	Failed	19	33	37	30
EJEFFERSON	CG322	01-01-1900	PCC	2,718	L	28	Very Poor	31	0	82	18
EJEFFERSON	CG321	01-01-1900	PCC	13,841	L	58	Fair	60	0	91	9
ELMAVE	CG86	06-01-2006	AC	31,632	L	87	Good	89	100	0	0

EMADISONAV	CG148	01-01-1900	AC	27,364	L	50	Poor	71	45	27	28
EMADISONAV	CG154	01-01-1900	AC	14,422	L	64	Fair	76	61	20	19
EMADISONAV	CG150	01-01-1900	AC	6,684	L	44	Poor	52	50	50	0
EMADISONAV	CG153	01-01-1900	AC	9,544	L	63	Fair	69	69	0	31
EMADISONAV	CG149	01-01-1900	AC	17,551	L	55	Poor	56	97	0	3
EMAINST	CG177	01-01-1900	AC	11,509	L	55	Poor	75	36	0	64
EMAINST	CG176	01-01-1900	AC	3,488	L	52	Poor	61	63	37	0
EMAINST	CG178	01-01-1900	AC	22,535	L	78	Satisfactory	77	73	0	27
EMONROEAVE	CG147	01-01-1900	AC	14,682	L	13	Serious	33	23	64	13
EMONROEAVE	CG146	01-01-1900	AC	11,343	L	24	Serious	38	48	40	12
EMONROEAVE	CG145	06-01-1992	AC	16,963	L	81	Satisfactory	87	98	0	2
EQUINCYAVE	CG141	01-01-1900	AC	23,500	L	35	Very Poor	59	42	42	16
EQUINCYAVE	CG142	01-01-1900	AC	17,518	L	52	Poor	68	54	35	11
EQUINCYAVE	CG140	01-01-1900	AC	8,484	L	47	Very Poor	56	71	29	0
EQUINCYAVE	CG138	01-01-1900	AC	15,214	L	78	Satisfactory	85	67	25	8
EQUINCYAVE	CG137	01-01-1900	AC	18,912	L	77	Satisfactory	80	64	19	17
EQUINCYAVE	CG143	06-01-1968	AC	15,862	L	61	Fair	63	77	23	0
EQUINCYAVE	CG136	01-01-1900	AC	5,168	L	9	Failed	10	21	77	2
EQUINCYAVE	CG144	01-01-1900	AC	1,290	L	55	Poor	45	47	0	53
EQUINCYAVE	CG139	01-01-1900	AC	5,796	L	11	Serious	0	51	39	10
ETAYLORAVE	CG247	06-01-1967	AC	36,664	L	55	Poor	60	40	6	54
EVANBURENA	CG266	06-01-1974	AC	25,335	L	40	Very Poor	53	24	53	23
EVANBURENA	CG267	06-01-1974	AC	6,957	L	62	Fair	71	100	0	0
EWASHINGTO	CG168	01-01-1900	AC	17,063	L	66	Fair	81	86	8	6
EWASHINGTO	CG165	01-01-1900	AC	9,943	L	83	Satisfactory	95	100	0	0
EWASHINGTO	CG170	01-01-1900	AC	22,233	L	55	Poor	67	70	30	0
EWASHINGTO	CG166	01-01-1900	AC	20,349	L	66	Fair	74	92	0	8
EWASHINGTO	CG171	01-01-1900	AC	14,709	L	55	Poor	61	100	0	0
EWASHINGTO	CG167	01-01-1900	AC	4,180	L	72	Satisfactory	77	66	34	0
EWASHINGTO	CG164	01-01-1900	AC	21,116	L	33	Very Poor	38	24	67	9
EWASHINGTO	CG169	01-01-1900	AC	8,515	L	71	Poor	75	60	0	40
EWWHITEAKER	CG179	01-01-1900	AC	36,482	L	36	Very Poor	46	54	44	2
FAIRVIEWPL	CG32	01-01-1900	AC	22,015	L	54	Poor	53	100	0	0
FAIRVIEWPL	CG33	01-01-1900	AC	19,936	L	94	Good	91	100	0	0
FILLMOREAV	CG243	01-01-1900	AC	8,869	L	41	Poor	64	32	41	27
FILLMOREAV	CG242	01-01-1900	AC	17,122	L	95	Good	49	100	0	0
GEERAVE	CG196	06-01-1974	AC	20,515	L	22	Serious	45	44	35	21
GETTYCIRCL	CG1	01-01-1900	AC	16,396	L	84	Satisfactory	92	100	0	0
GIRARDAVE	CG34	06-01-1974	AC	11,007	L	39	Serious	56	11	57	32
GIRARDAVE	CG36	06-01-1974	AC	3,230	L	92	Good	92	100	0	0
GIRARDAVE	CG35	06-01-1974	AC	8,326	L	63	Fair	63	100	0	0
GIRARDAVE	CG37	01-01-1900	AC	8,254	L	57	Fair	61	93	0	7
GRANTAVE	CG224	01-01-1900	AC	15,268	L	19	Serious	22	38	48	14
HARDINGPL	CG233	06-01-2009	AC	10,152	L	95	Good	95	100	0	0
HARRISONCT	CG17	06-01-1975	AC	10,292	L	73	Satisfactory	78	89	0	11
HARVEYLN	CG287	01-01-1900	AC	9,523	L	53	Poor	56	31	33	36
HARVEYLN	CG286	01-01-1900	AC	13,697	L	72	Satisfactory	74	100	0	0
HAYESAV	CG223	01-01-1900	AC	20,183	L	58	Fair	69	80	0	20
HOLLYAVE	CG90	06-01-1995	AC	12,358	L	74	Satisfactory	78	100	0	0
IBSENAVE	CG25	06-01-1998	AC	21,065	L	76	Satisfactory	79	90	0	10
JASONLEEAV	CG15	01-01-1900	AC	29,456	L	57	Poor	72	78	8	14
JIMWRIGHTW	CG313	06-01-1990	AC	40,373	L	44	Poor	43	67	29	4
JOHNSONAVE	CG236	01-01-1900	AC	18,682	L	76	Satisfactory	72	100	0	0
KALAPUYAWA	CG88	01-01-1900	AC	39,758	L	71	Satisfactory	75	100	0	0
KALAPUYASCT	CG89	01-01-1900	AC	9,761	L	68	Fair	71	82	18	0
KATHLEENDR	CG226	01-01-1900	AC	13,956	L	87	Good	84	52	0	48
LANDESSRD	CG306	01-01-1900	AC	23,528	L	70	Fair	69	71	21	8
LANECT	CG206	01-01-1900	AC	5,845	L	71	Satisfactory	75	63	37	0
LORDAVE	CG195	01-01-1900	AC	22,597	L	38	Very Poor	38	36	48	16
MEEKERDR	CG14	06-01-1966	AC	4,230	L	57	Very Poor	67	84	9	7
N10THST	CG200	01-01-1900	AC	49,357	L	47	Poor	53	38	36	26
N11THST	CG203	01-01-1900	AC	9,432	L	42	Poor	69	67	33	0
N11THST	CG204	01-01-1900	AC	21,492	L	39	Very Poor	43	38	60	2
N11THST	CG205	01-01-1900	AC	4,319	L	93	Good	86	56	0	44
N12THST	CG259	01-01-1900	AC	8,740	L	62	Poor	80	63	31	6
N14THST	CG264	01-01-1900	AC	18,489	L	31	Very Poor	46	22	57	21
N14THST	CG291	01-01-1900	AC	7,068	L	51	Poor	60	58	42	0
N19THST	CG280	01-01-1900	AC	10,711	L	14	Serious	19	90	0	10
N19THST	CG281	01-01-1900	AC	29,276	L	76	Serious	74	56	0	44
N20THST	CG295	01-01-1900	AC	3,657	L	60	Fair	69	14	54	32

	N22NDST	CG302	01-01-1900	AC	9,629	L	70	Fair	71	71	0	29
	N5THST	CG111	01-01-1900	AC	8,792	L	22	Serious	39	18	55	27
	N6THST	CG117	01-01-1900	AC	9,033	L	60	Fair	72	48	33	19
	N6THST	CG118	01-01-1900	AC	7,959	L	45	Poor	52	39	45	16
	N7THST	CG123	01-01-1900	AC	8,946	L	46	Poor	57	47	36	17
	N7THST	CG319	01-01-1900	PCC	7,886	L	32	Very Poor	33	1	99	0
	N8THST	CG131	01-01-1900	AC	16,904	L	38	Very Poor	59	43	42	15
	N8THST	CG133	01-01-1900	AC	1,270	L	93	Good	96	100	0	0
	N8THST	CG132	01-01-1900	AC	28,938	L	61	Fair	55	48	36	16
	NDOUGLASST	CG220	01-01-1900	AC	9,025	L	49	Very Poor	58	43	15	42
	NDOUGLASST	CG219	01-01-1900	AC	29,318	L	49	Poor	57	55	44	1
	NDOUGLASST	CG215	01-01-1900	AC	25,637	L	13	Serious	13	30	55	15
	NDOUGLASST	CG217	01-01-1900	AC	7,800	L	83	Satisfactory	81	100	0	0
	NDOUGLASST	CG216	01-01-1900	AC	11,169	L	2	Failed	0	37	24	39
	NELLISPL	CG60	01-01-1900	AC	6,698	L	50	Serious	55	60	40	0
	NEVACT	CG235	06-01-2002	AC	5,690	L	71	Satisfactory	76	100	0	0
	NGST	CG69	01-01-1900	AC	8,156	L	57	Fair	62	100	0	0
	NGST	CG70	01-01-1900	AC	5,218	L	29	Very Poor	31	50	0	50
	NHST	CG71	06-01-1972	AC	32,188	L	32	Very Poor	36	30	54	16
	NIST	CG72	01-01-1900	AC	35,992	L	42	Poor	46	46	39	15
	NJUST	CG73	06-01-1971	AC	29,583	L	31	Very Poor	34	36	45	19
	NKST	CG74	06-01-1971	AC	24,994	L	70	Fair	72	51	49	0
	NLANEST	CG212	01-01-1900	AC	5,552	L	31	Very Poor	51	59	41	0
	NLANEST	CG210	01-01-1900	AC	7,191	L	39	Very Poor	43	48	33	19
	NLANEST	CG208	01-01-1900	AC	10,023	L	35	Very Poor	39	61	0	39
	NLANEST	CG209	01-01-1900	AC	4,495	L	82	Satisfactory	84	63	0	32
	NLANEST	CG211	01-01-1900	AC	9,986	L	48	Poor	48	48	22	30
	NLST	CG75	06-01-1967	AC	25,049	L	68	Fair	73	83	0	17
	NNST	CG78	01-01-1900	AC	16,996	L	57	Fair	77	61	29	10
	NOST	CG79	01-01-1900	AC	8,295	L	63	Fair	67	66	11	23
	NOST	CG316	01-01-1900	PCC	5,878	L	48	Poor	48	4	77	19
	NOST	CG80	06-01-2006	AC	40,496	L	88	Good	84	100	0	0
	NPST	CG81	06-01-1970	AC	16,649	L	46	Poor	61	66	0	34
	NPST	CG82	06-01-2003	AC	7,800	L	95	Good	96	100	0	0
	NQST	CG87	01-01-1900	AC	3,335	L	4	Failed	12	16	56	28
	NRIVERRD	CG11	01-01-1900	AC	47,600	L	57	Fair	57	76	14	10
	OLSONPL	CG231	01-01-1900	AC	2,950	L	95	Good	90	100	0	0
	PALMERA VE	CG312	01-01-1900	AC	50,376	L	71	Satisfactory	57	80	0	20
	PARKSRD	CG300	06-01-1974	AC	10,970	L	64	Fair	72	58	36	6
	PENNOYERAV	CG193	06-01-1970	AC	27,220	L	46	Poor	63	44	34	22
	PENNOYERAV	CG194	06-01-1970	AC	15,654	L	62	Fair	65	100	0	0
	POLKAVE	CG248	01-01-1900	AC	17,349	L	9	Serious	9	17	66	17
	PRITCHETTP	CG290	01-01-1900	AC	22,293	L	58	Fair	66	70	30	0
	REDHILLSPL	CG301	06-01-2006	AC	18,810	L	88	Good	98	100	0	0
	RIVERFRONT	CG95	06-01-2008	AC	14,850	L	95	Good	86	100	0	0
	RIVERWALKP	CG93	06-01-2008	AC	14,867	L	95	Good	95	100	0	0
	RIVERWALKP	CG94	06-01-2008	AC	8,135	L	95	Good	91	100	0	0
	S10THST	CG251	01-01-1900	AC	8,754	L	94	Good	95	100	0	0
	S10THST	CG250	01-01-1900	AC	6,121	L	83	Satisfactory	83	41	0	59
	S11THST	CG254	01-01-1900	AC	11,300	L	16	Serious	22	22	60	18
	S11THST	CG256	01-01-1900	AC	32,021	L	53	Poor	51	50	38	12
	S12THST	CG258	01-01-1900	AC	31,389	L	48	Poor	54	25	50	25
	S12THST	CG257	01-01-1900	AC	8,138	L	50	Poor	42	59	35	6
	S13THST	CG261	01-01-1900	AC	12,324	L	34	Very Poor	57	54	46	0
	S13THST	CG260	01-01-1900	AC	14,032	L	60	Fair	70	100	0	0
	S14THST	CG263	01-01-1900	AC	5,197	L	16	Serious	22	26	49	25
	S14THST	CG262	01-01-1900	AC	22,928	L	74	Satisfactory	58	91	0	9
	S15THST	CG269	01-01-1900	AC	18,539	L	73	Satisfactory	82	57	19	24
	S17THST	CG272	01-01-1900	AC	34,141	L	65	Fair	62	79	0	21
	S1STST	CG91	06-01-2008	AC	25,727	L	95	Good	95	100	0	0
	S1STST	CG92	01-01-1900	AC	45,042	L	31	Very Poor	31	35	62	3
	S21STST	CG296	01-01-1900	AC	8,634	L	86	Good	81	29	0	71
	S22NDST	CG303	01-01-1900	AC	36,744	L	60	Fair	71	80	14	6
	S2NDST	CG98	06-01-2008	AC	33,914	L	96	Good	91	43	57	0
	S2NDST	CG100	06-01-1966	AC	56,158	L	49	Poor	54	61	27	12
	S2NDST	CG99	06-01-1966	AC	8,868	L	95	Good	95	100	0	0
	S3RDST	CG103	01-01-1900	AC	5,595	L	4	Failed	14	16	75	9
	S3RDST	CG101	01-01-1900	AC	45,106	L	79	Satisfactory	88	100	0	0
	S3RDST	CG102	01-01-1900	AC	11,745	L	36	Very Poor	37	36	45	19
	S4THST	CG104	01-01-1900	AC	10,802	L	58	Fair	58	67	0	33

S4THSTY	CG108	01-01-1900	AC	6,513	L	95	Good	78	100	0	0
S5THST	CG109	01-01-1900	AC	19,925	L	25	Serious	38	41	49	10
S5THST	CG110	01-01-1900	AC	12,643	L	23	Serious	28	20	70	10
S5THST	CG317	01-01-1900	PCC	33,308	L	53	Poor	56	11	51	38
S5THST	CG318	01-01-1900	PCC	8,460	L	63	Fair	65	1	76	23
S6THSTY	CG222	01-01-1900	AC	1,521	L	39	Very Poor	43	72	17	11
S7THST	CG119	01-01-1900	AC	17,713	L	48	Very Poor	70	61	32	7
S7THST	CG120	01-01-1900	AC	11,867	L	15	Failed	35	10	60	30
S7THST	CG122	01-01-1900	AC	32,693	L	53	Poor	62	60	0	40
S7THST	CG121	01-01-1900	AC	19,967	L	56	Fair	58	75	13	12
S8THST	CG130	01-01-1900	AC	11,518	L	21	Serious	34	31	53	16
S8THST	CG129	01-01-1900	AC	31,467	L	57	Fair	60	42	30	28
S8THST	CG320	01-01-1900	PCC	24,873	L	55	Poor	54	6	55	39
SC	CG21	01-01-1900	AC	12,522	L	36	Very Poor	56	47	35	18
SDOUGLASST	CG221	01-01-1900	AC	5,851	L	17	Failed	35	59	41	0
SMST	CG54	01-01-1900	AC	11,723	L	9	Failed	24	31	50	19
SMST	CG53	01-01-1900	AC	14,623	L	8	Failed	13	22	54	24
SMST	CG55	01-01-1900	AC	13,699	L	81	Satisfactory	76	56	0	44
SNST	CG56	01-01-1900	AC	11,513	L	9	Failed	3	26	63	11
SOST	CG57	01-01-1900	AC	11,525	L	16	Serious	20	38	59	3
SPST	CG58	01-01-1900	AC	10,794	L	10	Failed	12	20	77	3
SRIVERRDR	CG4	01-01-1900	AC	10,270	L	66	Fair	69	37	39	24
SRST	CG3	01-01-1900	AC	63,426	L	83	Satisfactory	85	85	0	15
SSST	CG50	01-01-1900	AC	35,157	L	38	Very Poor	59	57	39	4
STCT	CG22	01-01-1900	AC	12,006	L	68	Poor	81	95	0	5
SUST	CG23	01-01-1900	AC	8,852	L	63	Poor	75	100	0	0
SVCT	CG24	01-01-1900	AC	13,077	L	42	Poor	55	54	46	0
TAYLORPL	CG97	06-01-2008	AC	7,143	L	91	Good	91	100	0	0
THAYERAVE	CG192	06-01-1966	AC	7,527	L	40	Very Poor	44	55	0	45
THOMASPL	CG308	01-01-1900	AC	12,013	L	0	Failed	13	10	72	18
TYLERAVE	CG96	06-01-2008	AC	10,700	L	93	Good	95	100	0	0
TYLERAVE	CG268	01-01-1900	AC	29,406	L	56	Fair	57	41	44	15
VANBURENAV	CG135	01-01-1900	AC	10,034	L	79	Satisfactory	81	86	0	14
VILLAGEDR	CG314	01-01-1900	AC	29,245	L	46	Poor	53	100	0	0
VILLARDAVE	CG201	01-01-1900	AC	10,188	L	44	Poor	50	59	25	16
VILLARDAVE	CG202	01-01-1900	AC	5,955	L	48	Poor	50	55	41	4
VINCENPL	CG213	01-01-1900	AC	5,022	L	87	Good	91	100	0	0
WASHINGTON	CG304	06-01-1976	AC	6,455	L	62	Fair	76	94	0	6
WHITMANBLV	CG13	06-01-1966	AC	22,241	L	71	Satisfactory	73	83	11	6
WILSONAVE	CG229	06-01-2004	AC	18,309	L	94	Good	89	100	0	0
WILSONCT	CG230	06-01-2004	AC	22,037	L	95	Good	91	100	0	0
WITHYCOMBE	CG207	06-01-1978	AC	26,173	L	54	Satisfactory	48	43	56	1
WOODAVE	CG186	01-01-1900	AC	2,980	L	5	Failed	8	31	69	0
YOSSPL	CG232	01-01-1900	AC	5,055	L	95	Good	95	100	0	0

TOTAL AREA = 7,058,318

2022 OVERALL SYSTEM PCI = 54.7

2018 OVERALL SYSTEM PCI = 57.6

ARTERIAL STREET AREA = 1,545,763

2022 ARTERIAL STREET PCI = 57.2

2018 ARTERIAL STREET PCI = 58.7

COLLECTOR STREET AREA = 1,276,627

2022 COLLECTOR STREET PCI = 50.0

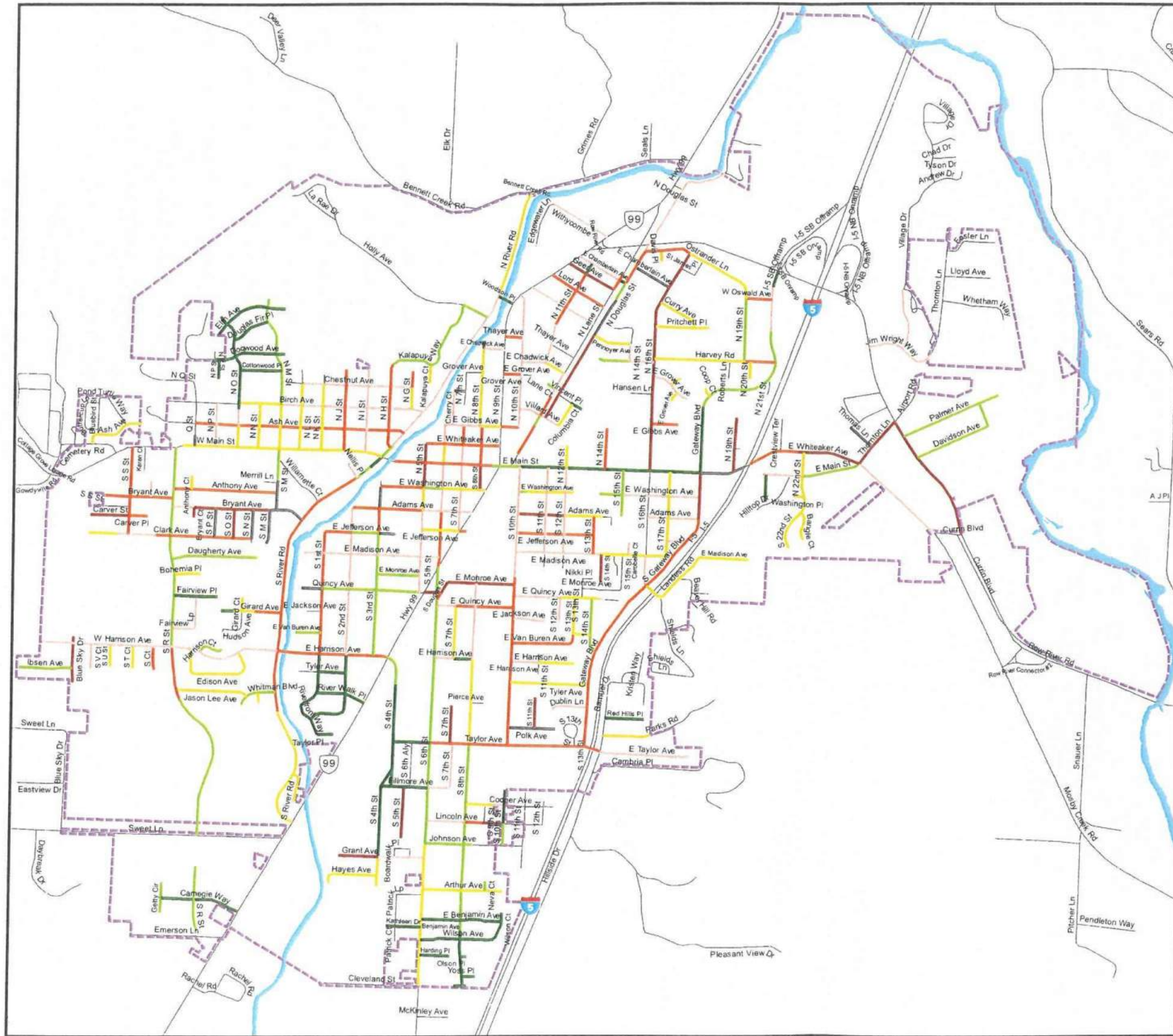
2018 COLLECTOR STREET PCI = 48.2

LOCAL STREET AREA = 4,235,928

2022 LOCAL STREET PCI = 55.2

2018 LOCAL STREET PCI = 60.0

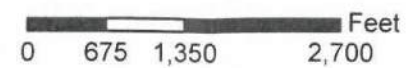
Cottage Grove Pavement Management Program Pavement Conditions



PCI Rating

- Good (86-100) - 4.70 miles
- Satisfactory (71-85) - 6.59 miles
- Fair (56-70) - 7.84 miles
- Poor (41-55) - 9.82 miles
- Very Poor (26-40) - 8.26 miles
- Serious (11-25) - 3.47 miles
- Failed (0-10) - 1.13 miles

Excluded from Condition Survey - 1.98 miles Gravel Streets
Base Map from Lane County GIS (April 2021)



Predicted 2022 Pavement Condition Index (PCI)
Calculated based upon 2021 PCI Data & Model

July 2022

Figure 1

Pavement Management Report

**City of Cottage Grove
City Streets
Pavement Management Implementation**

Prepared by

EMERIO
Design

December 3, 2019

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EXECUTIVE SUMMARY

The City of Cottage Grove has contracted with Emerio Design to provide pavement engineering services to develop and implement an on-going pavement management program for the City of Cottage Grove streets. This report summarizes and documents: 1) the current and projected pavement surface conditions; 2) the budget needs and consequence analysis; and 3) a 10-year list of network-level project recommendations.

Pavement Condition Index (PCI) Survey

During the late summer and early fall of 2018, Emerio Design conducted a walking inspection of not less than 10% of the surface area of every City street under the jurisdiction of the City of Cottage Grove. Based on the inspection data, the Pavement Condition Index (PCI) rating was generated using the PAVER pavement management software (PMS). The PCI is a numerical indicator that rates the condition of the pavement based on visual inspection. The PCI numerical scale ranges from zero to 100, where zero represents a pavement in the worst possible condition with no remaining functional life and 100 represents a pavement in the best possible condition with no defects. The PAVER analysis provides a basis for establishing efficient treatment requirements and assessing the impacts of various budget scenarios. These impacts are reflected by the change in pavement condition and monetary impact or change in backlog (unfunded maintenance and repair (M&R)) over time. The PMS also provides an efficient way to manage the pavement inventory, keep up-to-date on work history records, and monitor condition trends.

At the time of the 2018 PCI inspection, the overall area-weighted average PCI of the roadway pavements in the City of Cottage Grove was 58 or “Fair”. The standard PCI rating scale given in ASTM D6433 was used, which is shown graphically below.

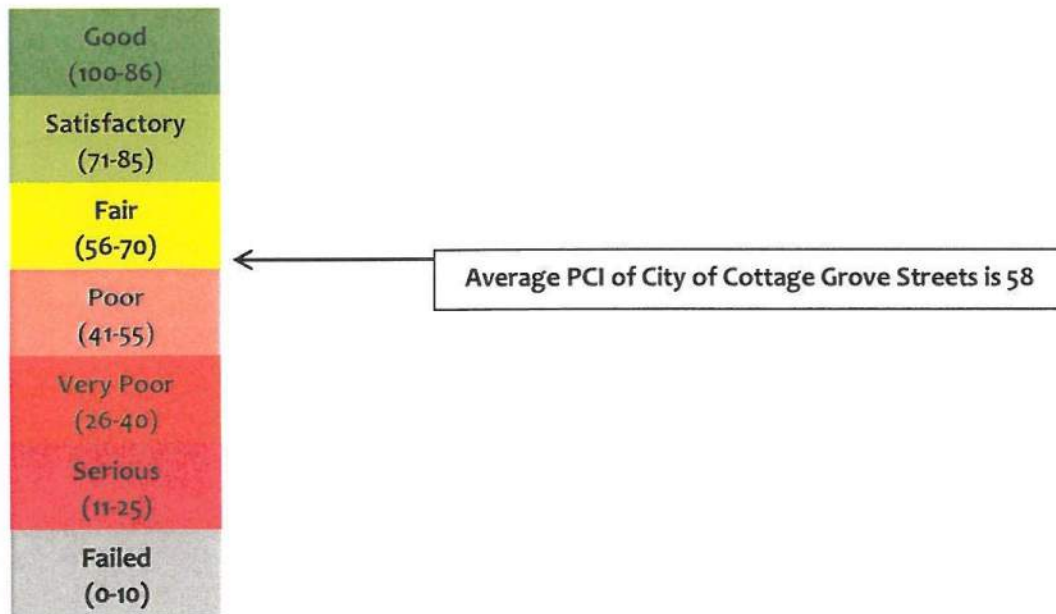


Figure 1 on the next page shows a map of the pavement conditions of the City of Cottage Grove streets.

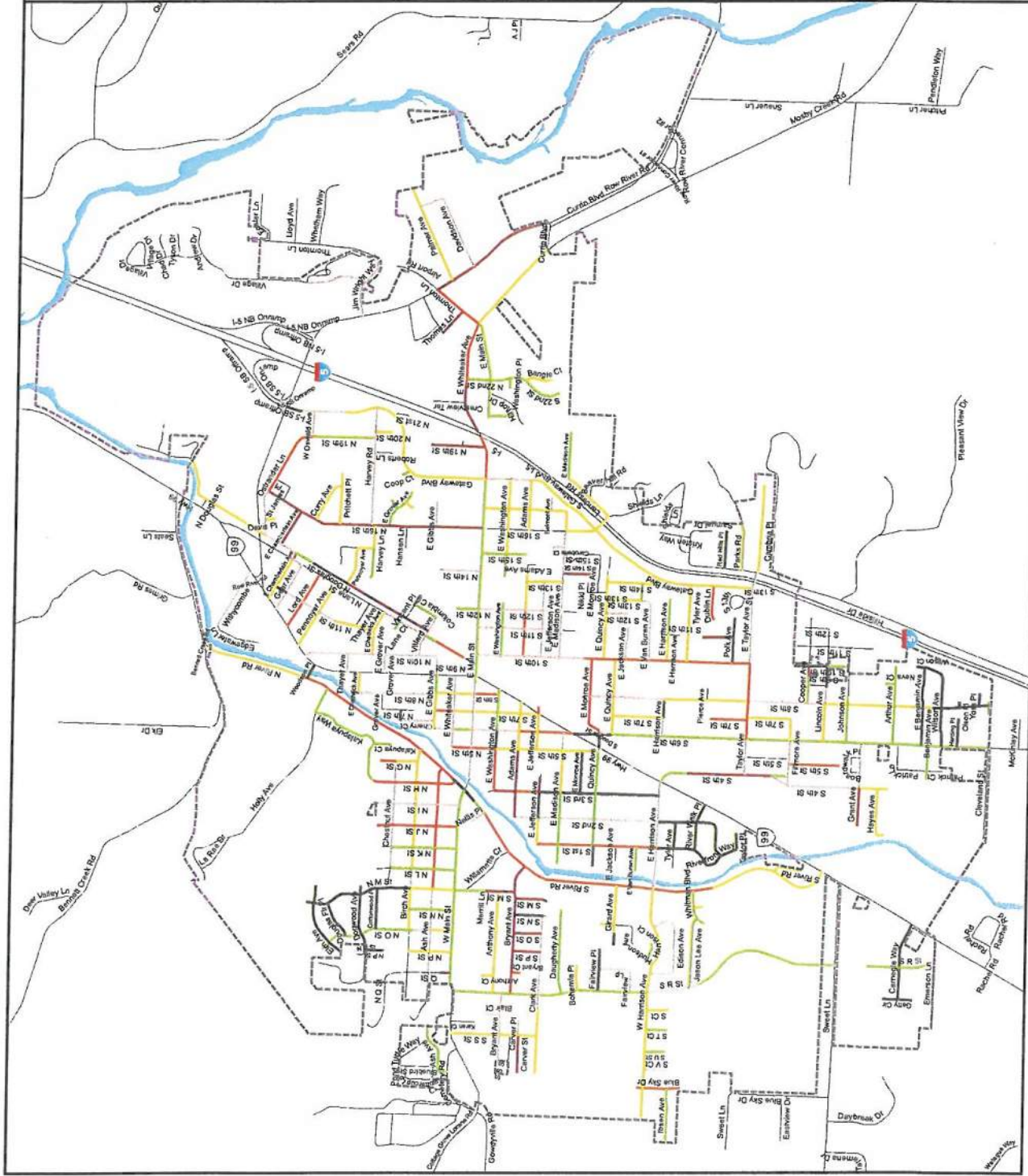
Cottage Grove Pavement Management Program

Pavement Conditions

PCI Rating

- Good (86-100) - 3.93 miles
- Satisfactory (71-85) - 8.71 miles
- Fair (56-70) - 10.72 miles
- Poor (41-55) - 9.63 miles
- Very Poor (26-40) - 5.22 miles
- Serious (11-25) - 3.11 miles
- Failed (0-10) - 0.47 miles

Excluded from Condition Survey - 1.98 miles Gravel Streets
 Base Map from Lane County GIS (April 2019)



2018 Pavement Condition Index (PCI)

Sept. 2019

Figure 1

Budgetary Needs and Consequence Analysis

Based on an estimated replacement cost, the City of Cottage Grove street network is worth more than \$109 million, and Cottage Grove currently spends approximately \$500,000 annually on contracted pavement maintenance. Additionally, Cottage Grove performs pothole patching and crack sealing work with inhouse staff. We estimate over the next 10 years, if the City of Cottage Grove maintains this funding level, the backlog of rehabilitation and reconstruction work, which is currently estimated at \$26.73 million will increase by approximately 49% to \$39.85 million. In understanding Cottage Grove has limited funding to apply to M&R, we developed a 10-year work plan that includes major M&R work (e.g., inlay, overlay, reconstruction) and global preventative work (e.g., surface treatment) based on a budget level that would eliminate the backlog. Although this funding level is likely unachievable, we feel that providing a range of project recommendations will give the City of Cottage Grove the most flexibility for future project selection and it will help facilitate the understanding of City pavement needs.

The algorithms in the PAVER software prioritize M&R work based on the current and projected PCI of the pavement. This approach typically yields sections for a particular year that are not always practical from a construction standpoint. For example, the software may identify a section for overlay in Year 1, whereas an adjoining section may be selected for overlay in Year 2. From a construction practicality standpoint, both segments would be grouped together for rehabilitation in a single year. Therefore, we reviewed the PAVER results and combined work into practical construction projects in conjunction with the objective of prioritizing projects in order to develop an approximately equal annual budget. Fiscal Year (FY) 2020 was selected as the initial year in the analysis since this is the earliest practical year rehabilitation work could be scheduled. Based on this approach, the 10-year project recommendations for City of Cottage Grove Streets are detailed in Chapter 5 and Appendix F. Our recommendations are based on network-level data and visual assessment, therefore, for each proposed rehabilitation project, we recommend that the City of Cottage Grove perform a structural project-level evaluation to refine the design details such as the overlay thickness.

In addition to developing a network-level M&R project strategy, as requested by Cottage Grove staff, five budget scenarios were analyzed based on either a specific budget requirement or pavement condition constraint. Based on the PAVER analysis for the 10-year period starting in FY 2020, the conclusions for each of the five scenarios are listed below. The current overall PCI of 58 is projected to deteriorate to a PCI of 55 in FY 2020 at the beginning of the analysis period (i.e., prior to conducting the recommended work). As mentioned above, Cottage Grove has an unfunded M&R backlog of approximately \$26.73 million. The backlog is approximated by running an unconstrained analysis. The amount of funding suggested for M&R on sections with a PCI below the critical value is considered unfunded backlog. The critical PCI is the point at which the pavement condition begins to deteriorate more quickly leading to significantly higher M&R costs. The critical PCI varies based primarily upon traffic and vehicle weight and has been set at 65 for Arterials, 60 for Collectors, and 50 for Local streets.

Scenario 1. Maintain Current Budget – The planned annual budget for the next 10 years is approximately \$5,000,000 and is designated primarily for M&R work such as patching, slurry seals, chip seals, and inlays. At a total funding level of \$5,000,000, the analysis suggests that the PCI will decrease to 49 and the total unfunded M&R will increase from \$26.73 million to \$39.85 million at the end of FY 2029, a 49% increase.

Scenario 2. Maintain Current PCI – To stabilize the overall weighted average condition of the roadway pavement system to a projected PCI of approximately 58 at the end of FY 2029, an increase in the annual

budget to \$1,400,000 is advised over a period of 10 years. At this level of investment, the total unfunded M&R is projected to increase from \$26.73 million to \$31.12 million at the end of FY 2029 or a 16% increase.

Scenario 3. Achieve Area-Weighted Network PCI of 72 – Annual budgets for network-level PCI targets vary according to the target PCI. Based on the PAVER analysis, achieving a network-level PCI value of 72 will require an annual budget of approximately \$2,875,000 over the next 10 years. The resulting funding level will reduce the unfunded M&R by 50%.

Scenario 4. Achieve Area-Weighted Network PCI of 80 – Based on the PAVER analysis, achieving a network-level PCI value of 80 will require an annual budget of approximately \$3,559,000 over the next 10 years. The resulting funding level will reduce the unfunded M&R by 80%.

Scenario 5. Eliminate Backlog in 10 Years – An annual expenditure of \$4,043,000 would eliminate the M&R backlog and all unfunded maintenance for the entire network. At this funding level, the PCI will increase from 55 at the beginning of FY 2020 to 87 at the end of the 10-year period at the beginning of FY 2030.

Figure 2 below shows the effect of the five budget scenarios on the resulting condition of the Cottage Grove street pavement system.

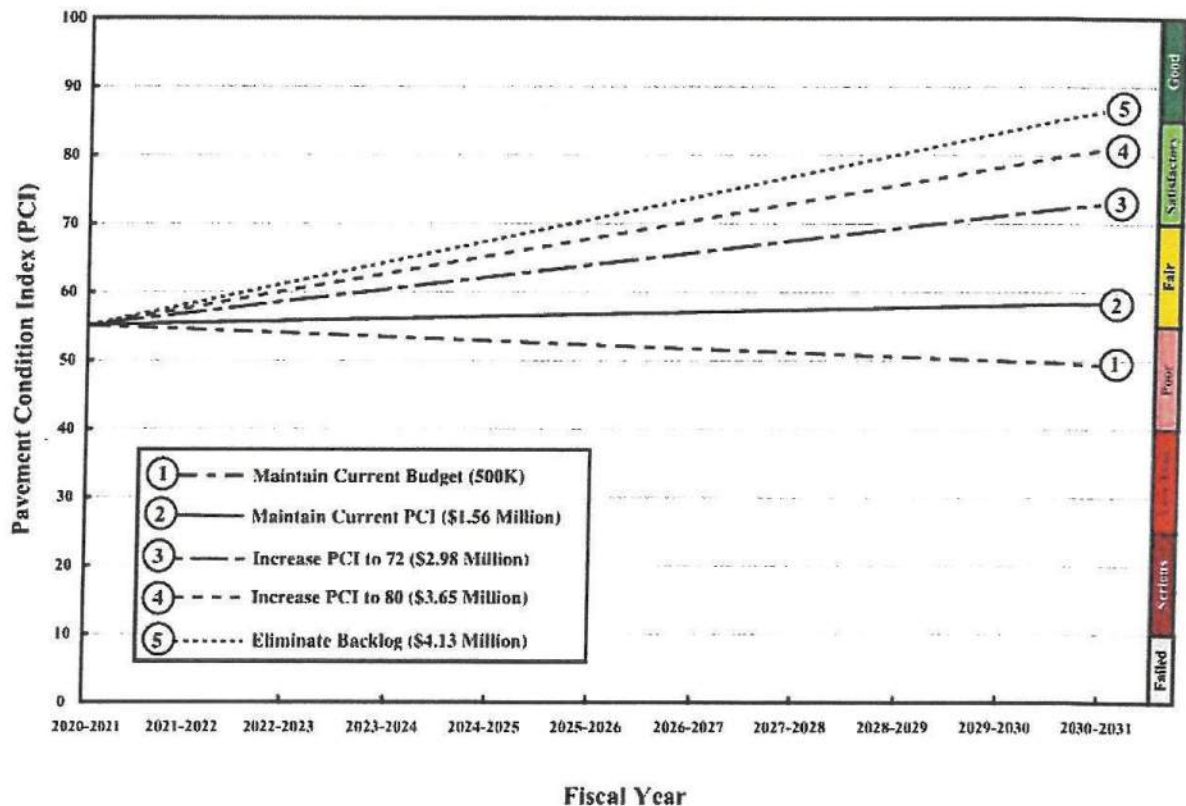


Figure 2 - EFFECT OF M&R BUDGET SCENARIOS ON PCI

Upon review of the five budget scenarios, two additional scenarios were reviewed as follows:

First, it was noted that there is a 16.4% increase in backlog at the \$1,400,000 per year funding level as seen in Scenario 2, which has the goal of maintaining the PCI level at 58. Based upon this funding level, we looked at what the effect would be if the resulting funding level of \$1,400,000 was extended for 20 years. The results indicate that the PCI would increase slightly to 61 and the unfunded backlog would be reduced by approximately 18%.

Second, it was also noted that in a 10-year period the amount of funding necessary to reach a PCI of 72 evaluated in Scenario 3, is slightly more than twice the funding necessary to maintain the current PCI of 58 evaluated in Scenario 2. Scenario 3 predicts a required budget of \$2,875,000 over 10 years. This funding level results in a 61% reduction in backlog. Looking at Scenario 3 over a period of 20 years, rather than 10 years gives a different view of what the long term funding level needs to be to gradually improve the overall street condition. The results of this analysis indicated that a funding level of \$1,984,000 per year over 20 years will result in a PCI of 72 after 20 years and the unfunded backlog would be reduced by approximately 78% to \$7,600,000.

Based upon these two additional scenarios, it appears that if the overall goal for the City of Cottage Grove is to improve the system PCI while gradually reducing the M&R backlog, the funding level will need to be between \$1,400,000 and \$1,984,000 per year for a sustained period of many years. A higher funding level will result in an acceleration in meeting overall PCI goals, while a lower funding level will result in a gradual decline in the overall street condition.

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CHAPTER 1: OVERVIEW

1.1 INTRODUCTION

After a pavement is newly constructed, it will gradually deteriorate due to climatic, loading, and operational conditions. Faulty construction techniques, sub-standard materials, and/or insufficient pavement-design thickness typically accelerate the deterioration process, including loads of excessive magnitude or frequency above those for which the pavement was originally designed. Due to the wide range of variables that may affect the performance of a pavement, it is well-accepted that a pavement management program (PMP) is a cost-effective method for pavement planning and budgeting purposes. A fundamental component of any PMP is the ability to characterize the current pavement condition and track future changes to its condition. These two factors form the basis for approximating current and future prevention and rehabilitation requirements and ultimately the cost-effective allocation of capital.

Cottage Grove has worked with Emerio Design to implement a pavement management program to assist in the management of the Cottage Grove street network. The specific objectives of this project were to establish a pavement management system (PMS); conduct a visual inspection of all the paved streets under Cottage Grove jurisdiction; and upon completion of data gathering, prepare an initial report based upon desired outputs as requested by the City. The desired outputs include performing a budget needs and consequence analysis; developing a 10-year M&R program; providing a report of results and recommendations.

After the Cottage Grove street inventory was populated in a PMS database, Emerio Design conducted a visual survey of all Cottage Grove pavements during the late summer and early fall of 2018. The survey data was uploaded to PMS and the software was used to provide a rapid calculation of the PCI rating. The PCI is a numerical indicator that defines the condition of the pavement based on visual inspection. The scale ranges from zero to 100, where zero represents a pavement in the worst possible condition with no remaining functional life and 100 represents a pavement in the best possible condition with no defects.

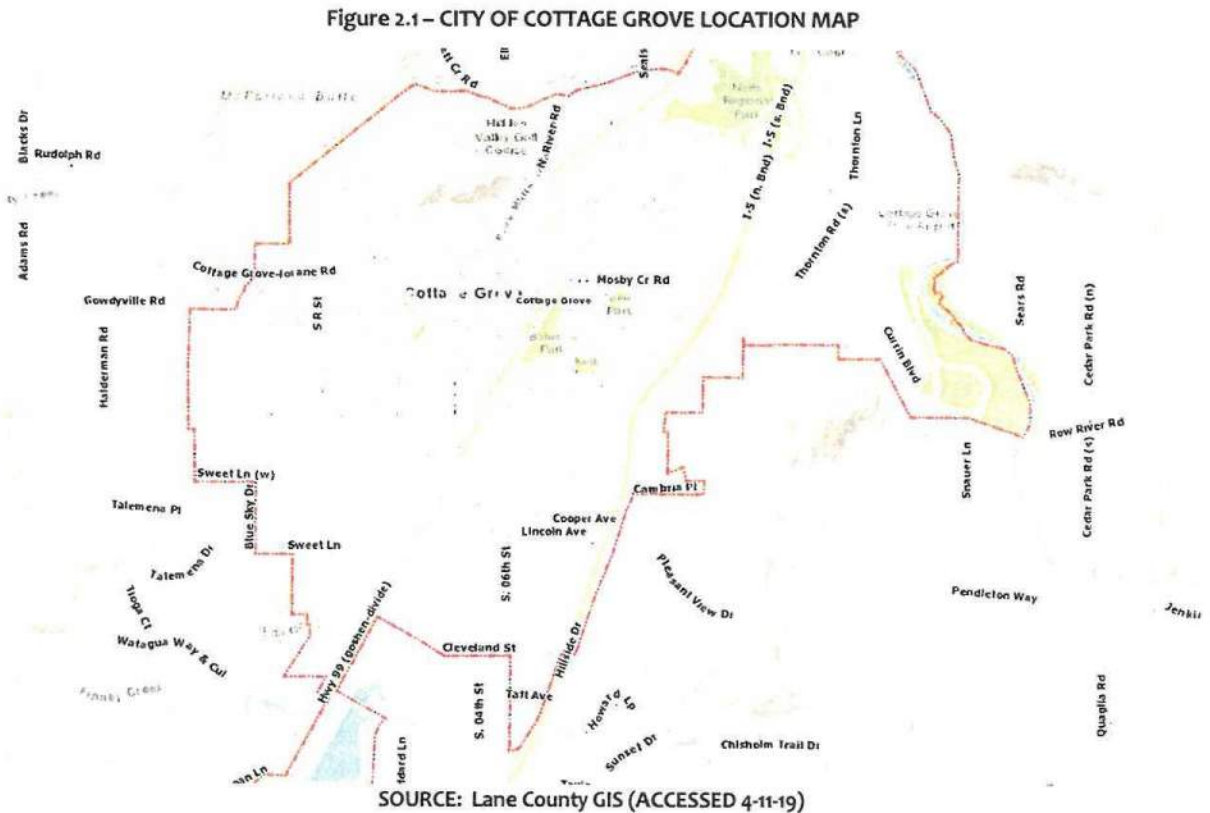
For this project, the PAVER PMS, developed by the US Army Corps of Engineering, was utilized to analyze Cottage Grove's pavement network. PAVER uses the PCI method to calculate the condition of pavements using distress data collected during the visual survey. In addition to providing a database of current PCI results, the PAVER software is also used to predict future pavement conditions and obtain the optimal schedule for the application of M&R. By utilizing a preservation-based approach instead of a worst-first methodology, a PMS such as PAVER helps reduce future pavement repair costs by recommending timely M&R. Furthermore, the data stored in the PAVER database can be exported into various formats such as spreadsheet or geographical information systems (GIS) for multifaceted viewing. A PMS provides the following benefits:

- 1) A systematic means for collecting and storing pavement information.
- 2) An objective and repeatable system for evaluating pavement conditions.
- 3) Procedures for predicting future pavement conditions.
- 4) Procedures for determining the consequences that constrained M&R budgets will have on future pavement conditions and life cycle costs.
- 5) Procedures for formulating and prioritizing M&R projects. A project normally consists of multiple pavement sections with each section having several feasible repair options.

CHAPTER 2: PAVEMENT INVENTORY

2.12 INTRODUCTION

Cottage Grove’s street network is comprised of just under 42 centerline miles of paved streets as well as just under 2 miles of gravel roads. These facilities are primarily used for passenger vehicle traffic, non-motorized modes of transportation (bicycles and pedestrians), transit buses, and delivery vehicles. The general location of the Cottage Grove street network is shown in Figure 2.1. below. The types of roadway pavements include asphalt concrete (AC), portland cement concrete (PCC), and gravel (GR). A complete list of the street inventory is provided in Appendix A.



2.2 PAVEMENT NETWORK

The current PMS network for the City of Cottage Grove has an approximate area of 7.06 million sq ft of paved roadway facilities. Emerio Design established the pavement network by dividing it into a hierarchical order of branches, sections, and sample units that facilitate inspection and maintenance planning.

2.2.1 Branches

A branch, as defined in the PAVER system and ASTM D6433, is a facility that is a readily identifiable part of a pavement system and has distinct function (e.g. roadway, parking lot). The current pavement network for the City of Cottage Grove has 171 branches that are all roadways. A list of Cottage Grove branches is tabulated in Table 2.1 below.

TABLE 2.1 – COTTAGE GROVE STREET NETWORK PAVEMENT BRANCHES

Branch ID	Branch Name	Branch Use	Number of Sections	Approximate Area (Sq Ft)
ADAMSAVE	ADAMS AVE	ROADWAY	5	95,308
ANTHONYAVE	ANTHONY AVE	ROADWAY	1	42,272
ANTHONYCT	ANTHONY CT	ROADWAY	1	7,659
ARTHURAVE	ARTHUR AVE	ROADWAY	1	31,395
ASHAVE	ASH AVE	ROADWAY	3	102,371
BANGLECT	BANGLE CT	ROADWAY	1	13,649
BELMONTAVE	BELMONT AVE	ROADWAY	1	3,990
BENJAMINAV	BENJAMIN AVE	ROADWAY	2	31,882
BIRCHAVE	BIRCH AVE	ROADWAY	3	74,254
BLAIRCT	BLAIR CT	ROADWAY	1	8,613
BLUESKYDR	BLUE SKY DRIVE	ROADWAY	1	24,966
BOHEMIAPL	BOHEMIA PI	ROADWAY	1	13,211
BRYANTAVE	BRYANT AVE	ROADWAY	4	74,620
BRYANTCT	BRYANT CT	ROADWAY	1	6,233
CARNEGIEWA	CARNEGIE WAY	ROADWAY	1	42,188
CAROBELLEC	CAROBELLE CT	ROADWAY	1	7,263
CARVERAVE	CARVER AVE	ROADWAY	1	15,536
CARVERPL	CARVER PL	ROADWAY	1	9,724
CHERRYCT	CHERRY CT	ROADWAY	1	8,375
CHESTNUTAV	CHESTNUT AVE	ROADWAY	1	40,423
CLARKAVE	CLARK AVE	ROADWAY	3	63,468
CLEVELANDS	CLEVELAND ST	ROADWAY	1	2,399
COLUMBIACT	COLUMBIA CT	ROADWAY	1	10,782
COOPCT	COOP CT	ROADWAY	1	4,394
COOPERAVE	COOPER AVE	ROADWAY	2	12,791
COTTONWOOD	COTTONWOOD PL	ROADWAY	1	17,097
CURRYAVE	CURRY AVE	ROADWAY	1	17,744
DAUGHERTYA	DAUGHERTY AVE	ROADWAY	1	41,790
DAVIDSONAV	DAVIDSON AVE	ROADWAY	1	49,859
DAVISPL	DAVIS PL	ROADWAY	1	5,754
DOGWOODAVE	DOGWOOD AVE	ROADWAY	1	28,643
DOUGLASFIR	DOUGLAS FIR PL	ROADWAY	1	15,872
DUBLINLN	DUBLIN LN	ROADWAY	1	14,892
ECHADWICKA	E. CHADWICK AVE	ROADWAY	3	25,439
ECHAMBERLA	E. CHAMBERLAIN AVE	ROADWAY	3	36,971
EDISONAVE	EDISON AVE	ROADWAY	1	39,108
EGIBBSAVE	E. GIBBS AVE	ROADWAY	4	40,279
EGROVERAVE	E. GROVER AVE	ROADWAY	4	36,393

TABLE 2.1 – COTTAGE GROVE STREET NETWORK PAVEMENT BRANCHES				
Branch ID	Branch Name	Branch Use	Number of Sections	Approximate Area (Sq Ft)
EHARRISONA	E. HARRISON AVE	ROADWAY	5	98,353
EJACKSONAV	E. JACKSON AVE	ROADWAY	1	13,667
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	6	71,076
ELMAVE	ELM AVE	ROADWAY	1	31,632
EMADISONAV	E. MADISON AVE	ROADWAY	7	127,146
EMAINST	E. MAIN ST	ROADWAY	7	234,001
EMONROEAVE	E. MONROE AVE	ROADWAY	3	42,988
EQUINCYAVE	E. QUINCY AVE	ROADWAY	9	111,745
ETAYLORAVE	E. TAYLOR AVE	ROADWAY	4	135,507
EVANBURENA	E. VANBUREN AVE	ROADWAY	2	32,292
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	8	118,108
EWHITEAKER	E. WHITEAKER AVE	ROADWAY	3	92,225
FAIRVIEWLP	FAIRVIEW LP	ROADWAY	1	22,015
FAIRVIEWPL	FAIRVIEW PL	ROADWAY	1	19,936
FILLMOREAV	FILLMORE AVE	ROADWAY	2	25,991
GEERAVE	GEER AVE	ROADWAY	1	20,515
GETTYCIRCL	GETTY CIRCLE	ROADWAY	1	16,396
GIRARDAVE	GIRARD AVE	ROADWAY	3	22,563
GIRARDCT	GIRARD CT	ROADWAY	1	8,254
GRANTAVE	GRANT AVE	ROADWAY	2	37,279
HARDINGPL	HARDING PL	ROADWAY	1	10,152
HARRISONCT	HARRISON CT	ROADWAY	1	10,292
HARVEYLN	HARVEY LN	ROADWAY	2	23,219
HARVEYRD	HARVEY RD	ROADWAY	2	52,426
HAYESAV	HAYES AVE	ROADWAY	1	20,183
HOLLYAVE	HOLLY AVE	ROADWAY	1	12,358
IBSENAVE	IBSEN AVE	ROADWAY	1	21,065
JASONLEEAV	JASON LEE AVE	ROADWAY	1	29,456
JIMWRIGHTW	JIM WRIGHT WAY	ROADWAY	1	40,373
JOHNSONAVE	JOHNSON AVE	ROADWAY	1	18,682
KALAPUYAWA	KALAPUYA WAY	ROADWAY	1	39,758
KALAPUYSCT	KALAPUYA CT	ROADWAY	1	9,761
KATHLEENDR	KATHLEEN DR	ROADWAY	1	13,956
LANDESSRD	LANDRESS RD	ROADWAY	1	23,528
LANECT	LANE CT	ROADWAY	1	5,845
LINCOLNAVE	LINCOLN AVE	ROADWAY	3	31,474
LORDAVE	LORD AVE	ROADWAY	1	22,597
MEEKERDR	MEEKER DR	ROADWAY	1	4,230

TABLE 2.1 – COTTAGE GROVE STREET NETWORK PAVEMENT BRANCHES				
Branch ID	Branch Name	Branch Use	Number of Sections	Approximate Area (Sq Ft)
MOSBYCRRD	MOSBY CR RD	ROADWAY	1	48,131
N10THST	N. 10TH ST	ROADWAY	1	49,357
N11THST	N. 11TH ST	ROADWAY	3	35,243
N12THST	N. 12TH ST	ROADWAY	1	8,740
N14THST	N. 14TH ST	ROADWAY	2	25,558
N16THST	N. 16TH ST	ROADWAY	2	109,136
N19THST	N. 19TH ST	ROADWAY	2	39,987
N20THST	N. 20TH ST	ROADWAY	1	3,657
N22NDST	N. 22ND ST	ROADWAY	1	9,629
N5THST	N. 5TH ST	ROADWAY	1	8,792
N6THST	N. 6TH ST	ROADWAY	2	16,993
N7THST	N. 7TH ST	ROADWAY	2	16,832
N8THST	N. 8TH ST	ROADWAY	3	47,163
NDOUGLASST	N. DOUGLAS ST	ROADWAY	6	102,151
NELLISPL	NELLIS PL	ROADWAY	1	6,698
NEVACT	NEVA CT	ROADWAY	1	5,890
NGATEWAYBL	N. GATEWAY BLVD	ROADWAY	4	145,856
NGST	N. G ST	ROADWAY	2	13,374
NHST	N. H ST	ROADWAY	1	32,188
NIST	N. I ST	ROADWAY	1	35,992
NJST	N. J ST	ROADWAY	1	29,583
NKST	N. K ST	ROADWAY	1	24,994
NLANEST	N. LANE ST	ROADWAY	5	37,247
NLST	N. L ST	ROADWAY	1	25,049
NMST	N. M ST	ROADWAY	2	72,951
NNST	N. N ST	ROADWAY	1	16,996
NOST	N. O ST	ROADWAY	3	54,671
NPST	N. P ST	ROADWAY	2	24,449
NQST	N. Q ST	ROADWAY	1	3,335
NRIVERRD	N. RIVER RD	ROADWAY	3	154,046
OLSONPL	OLSON PL	ROADWAY	1	2,950
OSTRANDERL	OSTRANDER LN	ROADWAY	2	54,492
OSWALDWAVE	OSWALD W. AVE	ROADWAY	1	10,544
PALMERAVE	PALMER AVE	ROADWAY	1	50,376
PARKSRD	PARKS RD	ROADWAY	1	10,970
PENNOYERAV	PENNOYER AVE	ROADWAY	2	42,874
POLKAVE	POLK AVE	ROADWAY	1	17,349
PRITCHETTP	PRITCHETT PL	ROADWAY	1	22,293

TABLE 2.1 – COTTAGE GROVE STREET NETWORK PAVEMENT BRANCHES				
Branch ID	Branch Name	Branch Use	Number of Sections	Approximate Area (Sq Ft)
REDHILLSPL	RED HILLS PL	ROADWAY	1	18,810
RIVERFRONT	RIVERFRONT WAY	ROADWAY	1	14,850
RIVERWALKP	RIVER WALK PL	ROADWAY	2	23,002
ROWRIVERCO	ROW RIVER CONNECTOR	ROADWAY	1	86,168
S10THST	S. 10TH ST	ROADWAY	4	155,361
S11THST	S. 11TH ST	ROADWAY	2	43,320
S12THST	S. 12TH ST	ROADWAY	2	39,527
S13THST	S. 13TH ST	ROADWAY	2	26,355
S14THST	S. 14TH ST	ROADWAY	2	28,124
S15THST	S. 15TH ST	ROADWAY	1	18,539
S16THST	S. 16TH ST	ROADWAY	1	54,915
S17THST	S. 17TH ST	ROADWAY	1	34,141
S1STST	S. 1ST ST	ROADWAY	2	70,769
S21STST	S. 21ST ST	ROADWAY	1	8,634
S22NDST	S. 22ND ST	ROADWAY	1	36,744
S2NDST	S. 2ND ST	ROADWAY	3	98,940
S3RDST	S. 3RD ST	ROADWAY	3	62,447
S4THST	S. 4TH ST	ROADWAY	4	101,998
S4THSTY	S. 4TH ST (Y)	ROADWAY	1	6,513
S5THST	S. 5TH ST	ROADWAY	4	74,337
S6THST	S. 6TH ST	ROADWAY	5	261,175
S6THSTY	S. 6TH ST (Y)	ROADWAY	1	1,521
S7THST	S. 7TH ST	ROADWAY	4	82,241
S8THST	S. 8TH ST	ROADWAY	7	173,519
SCT	S CT	ROADWAY	1	12,522
SDOUGLASST	S. DOUGLAS ST	ROADWAY	1	5,851
SGATEWAYBL	S. GATEWAY BLVD	ROADWAY	2	152,577
SMST	S. M ST	ROADWAY	3	40,046
SNST	S. N ST	ROADWAY	1	11,513
SOST	S. O ST	ROADWAY	1	11,525
SPST	S. P ST	ROADWAY	1	10,794
SRIVERRD	S. RIVER RD	ROADWAY	4	204,909
SRIVERRDFR	S. RIVER RD (FRONTAGE RD)	ROADWAY	1	10,270
SRST	S. R ST	ROADWAY	4	274,277
SSST	S. S ST	ROADWAY	1	35,157
STCT	S. T CT	ROADWAY	1	12,006
SUST	S. U ST	ROADWAY	1	8,852

TABLE 2.1 – COTTAGE GROVE STREET NETWORK PAVEMENT BRANCHES				
Branch ID	Branch Name	Branch Use	Number of Sections	Approximate Area (Sq Ft)
SVCT	S. V CT	ROADWAY	1	13,077
TAYLORPL	TAYLOR PL	ROADWAY	1	7,143
THAYERAVE	THAYER AVE	ROADWAY	1	7,527
THOMASPL	THOMAS PL	ROADWAY	1	12,013
THORNTONRD	THORNTON RD	ROADWAY	1	25,090
TYLERAVE	TYLER AVE	ROADWAY	2	40,106
VANBURENAV	VANBUREN AVE	ROADWAY	1	10,034
VILLAGEDR	VILLAGE DR	ROADWAY	1	29,245
VILLARDAVE	VILLARD AVE	ROADWAY	2	16,143
VINCENTPL	VINCENT PL	ROADWAY	1	5,022
WASHINGTON	WASHINGTON PL	ROADWAY	1	6,455
WHARRISONA	W. HARRISON AVE	ROADWAY	1	150,082
WHITMANBLV	WHITMAN BLVD	ROADWAY	1	22,241
WILSONAVE	WILSON AVE	ROADWAY	1	18,309
WILSONCT	WILSON CT	ROADWAY	1	22,037
WITHYCOMBE	WITHYCOMBE AVE	ROADWAY	1	26,173
WMAINST	W. MAIN ST	ROADWAY	1	116,611
WOODAVE	WOOD AVE	ROADWAY	1	2,980
WOODSONPL	WOODSON PL	ROADWAY	1	5,540
YOSSPL	YOSS PL	ROADWAY	1	5,055
		TOTALS	321	7,058,318

2.2.2 Pavement Sections and Sample Units

A pavement section, which is the smallest management unit used when considering the application and selection of M&R repairs and treatments, is defined by Section 2.1.8 of ASTM D6433 as “a contiguous pavement area having uniform construction, maintenance, usage history, and condition,”. All sections should also have the same traffic volume and load intensity. The current pavement network in Cottage Grove contains 351 sections, 321 of which are paved sections. The paved sections are tabulated in Table 1A and shown spatially in Figure 1A in Appendix A. PAVER requires that each section is assigned a rank, which designates its prioritization in receiving maintenance and repair. Based upon PAVER rankings, for the Cottage Grove pavement inventory, the highest use or priority pavements are arterials which are rank “B”, collectors are rank “C”, and low-volume residential roads are rank “E”. The current pavement rankings for all studied street sections within the City of Cottage Grove are shown in Figure 2A in Appendix A.

To facilitate the visual survey of roadway pavements, each section is further subdivided into smaller areas called sample units. Similar sizing of these units is critical, and studies have found that maintaining the size of the sample units to within 40% of the established normal distribution reduces the standard error of the average PCI values. To meet this criterion, the ASTM method recommends sample units for flexible pavements are 2,500 sq ft ($\pm 1,000$) and sample units for rigid pavements are 20 slabs (± 8). The sample unit size for PCC

pavements assumes a joint spacing no greater than 25 ft. For slabs with joints exceeding that criterion, imaginary joints greater than or equal to 25 ft are assumed.

For the City of Cottage Grove 2018 PCI survey, a minimum sampling rate of 10% of the section area was used for both AC- and PCC-surfaced roads. Sample sizes for flexible pavements in Cottage Grove were typically 100 feet in length for the width of the pavement section; typically falling within the ASTM recommended sample unit size. As an example, a street section under 1000 feet in length would have one 100 foot sample section, but a street 1100 feet in length would have two 100 foot sample sections, and so on depending on the length of the section. Gravel roads were not surveyed as a part of this project as the objective for the project is a management plan for paved streets. Sample unit locations at Cottage Grove were selected using a systematic random sampling model method. This technique is implemented by determining the number of sample units needed, placing the first sample unit randomly within the section and then spacing the remaining sample units systematically throughout the section at an equal distance apart.

2.3 PAVEMENT INVENTORY SUMMARY

As noted earlier, the roadway pavement types include AC and PCC pavements, as well as GR. Figure 2.2 on the next page shows the distribution of roadway pavement area by surface type. Approximately 95.8% of the roadways are surfaced with AC, 1.4% are PCC, and the remaining 2.8% are GR. Figure 3A in Appendix A shows the surface type spatially by section in Cottage Grove.

[The remainder of this page intentionally left blank. See Figure 2.2 on the next page.]

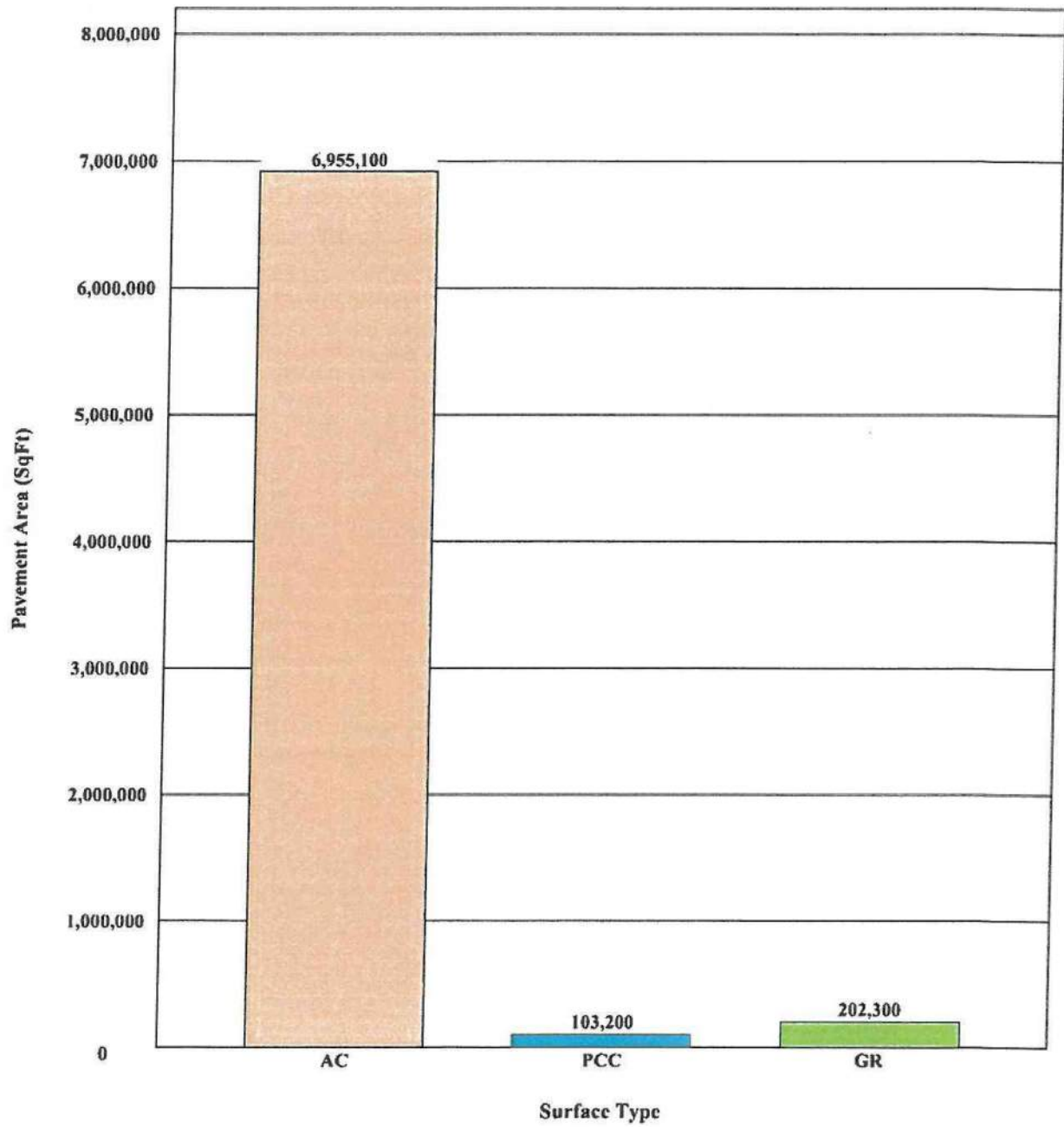


Figure 2.2 - COTTAGE GROVE PAVEMENT AREA BY SURFACE TYPE

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CHAPTER 3: PAVEMENT CONDITION INDEX SURVEY RESULTS

3.1 INTRODUCTION

Emerio Design conducted a visual PCI survey during the late summer and early fall of 2018 for all street pavements within the jurisdiction of the City of Cottage Grove.

3.2 METHODOLOGY

As previously discussed, the PCI is a measure of the pavement's functional surface condition and provides a methodology for assessing the causes of distress and whether the distress is related to a load or climatic conditions. Although the PCI is not a direct measure of structural capacity, it is suggestive of the structural needs of the pavement.

The PCI is based on the type, severity, and quantity of each distress found in an inspected sample unit. The results are displayed using a seven-category rating scale in accordance with ASTM D6433. Flexible pavement (e.g., AC) and rigid pavement (i.e., PCC) distress types are presented in Table 3.1 below; distress types with an asterisk (*) indicate that distress was observed during the 2018 PCI survey.

Table 3.1 – PAVER DISTRESS CODES FOR FLEXIBLE AND RIGID PAVEMENTS

Code	Flexible Pavement Distress Descriptions	Code	Rigid Pavement Distress Descriptions
1	Alligator Cracking*	21	Blow Up
2	Bleeding*	22	Corner Break*
3	Block Cracking *	23	Divided Slab*
4	Bumps/Sags*	24	Durability Cracking
5	Corrugation*	25	Faulting*
6	Depression*	26	Joint Seal Damage*
7	Edge Cracking*	27	Lane Shoulder Drop off
8	Joint Reflective Cracking	28	Linear Cracking*
9	Lane Shoulder Drop Off*	29	Large Patch* (>5.5 sq ft)
10	L & T Cracking*	30	Small Patch* (<5.5 sq ft)
11	Patch/Utility Cut*	31	Polished Aggregate*
12	Polished Aggregate	32	Popouts*
13	Pothole*	33	Pumping
14	Railroad Crossing*	34	Punchout
15	Rutting*	35	Railroad Crossing
16	Shoving	36	Scaling*
17	Slippage Cracking	37	Shrink Cracking*
18	Swell	38	Corner Spall*
19	Raveling*	39	Joint Spall*
20	Weathering*		

To obtain the section PCI, the PCI of each selected sample unit is extrapolated over the entire section area. Distresses found in sample units classified as “additional”, which are defined as non-representative instead of random, are not extrapolated over the entire section but are added to the extrapolated quantity.








Table 3.2 below provides a detailed description of each PCI rating category and shows the standard seven-category scale. The color scheme and PCI rating scale presented in Table 3.2 below are based on ASTM D6433 Section 2.1.5 and used throughout this report.

Section 4.1 of ASTM D6433 governing PCI surveys offers this caution:

“The PCI is a numerical indicator that rates the surface condition of the pavement. The PCI provides a measure of the present condition of the pavement based on the distress observed on the surface of the pavement, which also indicates the structural integrity and surface operational condition (localized roughness and safety). The PCI cannot measure the structural capacity; nor does it provide direct measurement of skid resistance or roughness. It provides an objective and rational basis for determining maintenance and repair needs and priorities. Continuous monitoring of the PCI is used to establish the rate of pavement deterioration, which permits early identification of major rehabilitation needs. The PCI provides feedback on pavement performance for validation or improvement of current pavement design and maintenance procedures.”

Based on the limitations of the PCI method, it is imperative that engineers and planners treat the PCI as a tool that will assist them during the M&R planning process. Any major project should always be preceded by an up-to-date, detailed, 100%, project-level inspection of the pavement in order to re-evaluate maintenance needs prior to the project design process.

Table 3.2 – PAVEMENT CONDITION INDEX RATING SCALE

ASTM PCI Color Legend	PCI Range	PCI Rating and Definition
	86 to 100	GOOD: Pavement has minor or no distresses and should require only routine maintenance.
	71 to 85	SATISFACTORY: Pavement has scattered low-severity distresses that should require only routine maintenance.
	56 to 70	FAIR: Pavement has a combination of generally low- and medium-severity distresses. Maintenance and repair needs may range from routine to major.
	41 to 55	POOR: Pavement has low-, medium-, and high-severity distresses that probably cause some operational problems. M&R needs will be major.
	26 to 40	VERY POOR: Pavement has predominantly medium- and high-severity distresses that cause considerable maintenance and operational problems. M&R needs will be major.
	11 to 25	SERIOUS: Pavement has mainly high-severity distresses that may affect operational safety; immediate repairs are needed.
	0 to 10	FAILED: Pavement deterioration has progressed to the point that safety is a significant concern; complete reconstruction is required.

3.3 DISTRESS TYPES

Distress tends to fall into one of the following cause categories:

- Load-related:** Flexible pavement distresses include alligator/fatigue cracking, corrugation, depression, polished aggregate, rutting, and slippage cracking. Rigid pavement distresses include corner breaks, longitudinal cracking, divided slabs, polished aggregate, pumping, and joint spalling.

- **Climate- and durability-related:** Flexible pavement distresses include bleeding, block cracking, joint reflection cracking, longitudinal and transverse (L&T) cracking, swelling, and raveling/weathering. Rigid pavement distresses include blow-ups, durability cracking, longitudinal cracking, popouts, pumping, scaling, shrinkage cracks, and joint and corner spalling.
- **Moisture- and drainage-related:** Flexible pavement distresses include alligator/fatigue cracking, depressions, potholes, and swelling. Rigid pavement distresses include corner breaks, divided slabs, and pumping.
- **Other factors:** Oil spillage, bleeding, patching, and concrete slab joint faulting.

As described above, a distress may be the result of more than one cause. For example, depressions may be caused by incorrect compaction during construction or by subgrade softening due to environmental factors. In addition, a distress may be initiated by one cause but may progress to a distress of higher severity by another cause. Therefore, engineering judgment is critical in analyzing the actual cause or causes of the distress.

For asphalt-surfaced pavements, 15 of the 20 distresses listed in Table 3.1 above were identified during the 2018 pavements inspection at Cottage Grove and 13 of the 19 distresses for PCC were present.

3.4 PAVEMENT CONDITION INDEX SURVEY RESULTS

As previously indicated, the evaluated Cottage Grove paved street network consists of 171 branches and 321 sections. A total of 408 sample units were visually inspected in the field. Data from the inspected sample units were input into the PAVER database and a resultant PCI for each section was computed.

The surface distresses recorded in 2018 are shown in Table 3.3 below. The percentages shown in Table 3.3 are based on the frequency of a distress type in all the flexible and rigid PAVER sections regardless of distress severity. For example, weathering was observed on 311 of the 313 inspected sections, or 99% of the total sections with a flexible surface (i.e. AC), whereas large patch / utility cut was found on 6 of the 8, or 75% of the rigid pavements.

[The remainder of this page intentionally left blank. See Table 3.3 on the next page.]

Table 3.3 - Distress Percent Distribution

ASPHALT CONCRETE		
Distress	Number of Sections	Percent of All Sections with the Same Surface Type (e.g. flexible or rigid)
ALLIGATOR CRACKING	184	59%
BLEEDING	4	1%
BLOCK CRACKING	53	17%
BUMPS / SAGS	8	3%
CORRUGATION	1	0.3%
DEPRESSION	24	8%
EDGE CRACKING	15	5%
JOINT REFLECTIVE CRACKING	0	0%
LANE / SHOULDER DROP	6	2%
LONGITUDINAL / TRANSVERSE CRACKING	269	86%
PATCH / UTILITY CUT	179	57%
POLISHED AGGREGATE	0	0%
POTHOLE	18	6%
RAILROAD CROSSING	2	1%
RAVELING	137	44%
RUTTING	10	3%
SHOVING	0	0%
SLIPPAGE CRACK	0	0%
SWELL	0	0%
WEATHERING	311	99%
PORTLAND CEMENT CONCRETE		
BLOW UP	0	0%
CORNER BREAK	5	63%
CORNER SPALLING	4	50%
DIVIDED SLAB	8	100%
DURABILITY CRACKING	0	0%
FAULTING	1	13%
JOINT SEAL DAMAGE	8	100%
JOINT SPALLING	3	38%
LANE SHOULDER DROP OFF	0	0%
LARGE PATCH / UTILITY CUT	6	75%
LINEAR CRACKING	8	100%
POLISHED AGGREGATE	0	0%
POPOUTS	0	0%
PUMPING	0	0%
PUNCH OUT	0	0%
RAILROAD CROSSING	0	0%
SCALING / CRAZING	1	13%
SHRINKAGE CRACKING	2	25%
SMALL PATCH	1	13%

Note: There are 313 Asphalt Concrete sections and 8 Portland Cement Concrete Sections

3.4.1 PCI Condition Summary

A summary of the pavement condition results by branch and section are included in Tables 1B and 2B of Appendix B, respectively. These reports include all 321 roadway pavement sections and their PCI information from their last inspection date (LID). Additionally, the pavement sections that have a PCI less than or equal to 40 and are rated very poor, serious, or failed are highlighted in red in Table 2B.

Appendix C, provided electronically, shows the detailed 2018 PCI Survey results via the PAVER Inspection Report.

The computed PCI values for all the 321 sections inspected range from a low of zero on two sections, one section of E QUINCY AVE – CG139 and one section of N DOUGLAS ST – CG216, to a high of 100 on N GATEWAY BLVD – G279. The area-weighted PCI is typically the metric of the most interest since, as the name suggests, the overall PCI is influenced by the area rather than frequency. All PCI values reported herein are based on an area-weighted average. The area-weighted average PCI for the entire Cottage Grove street network was 58, which corresponds to a PCI rating at the low end of fair condition. Figure 3.1 below show the PCI breakdown by percent area.

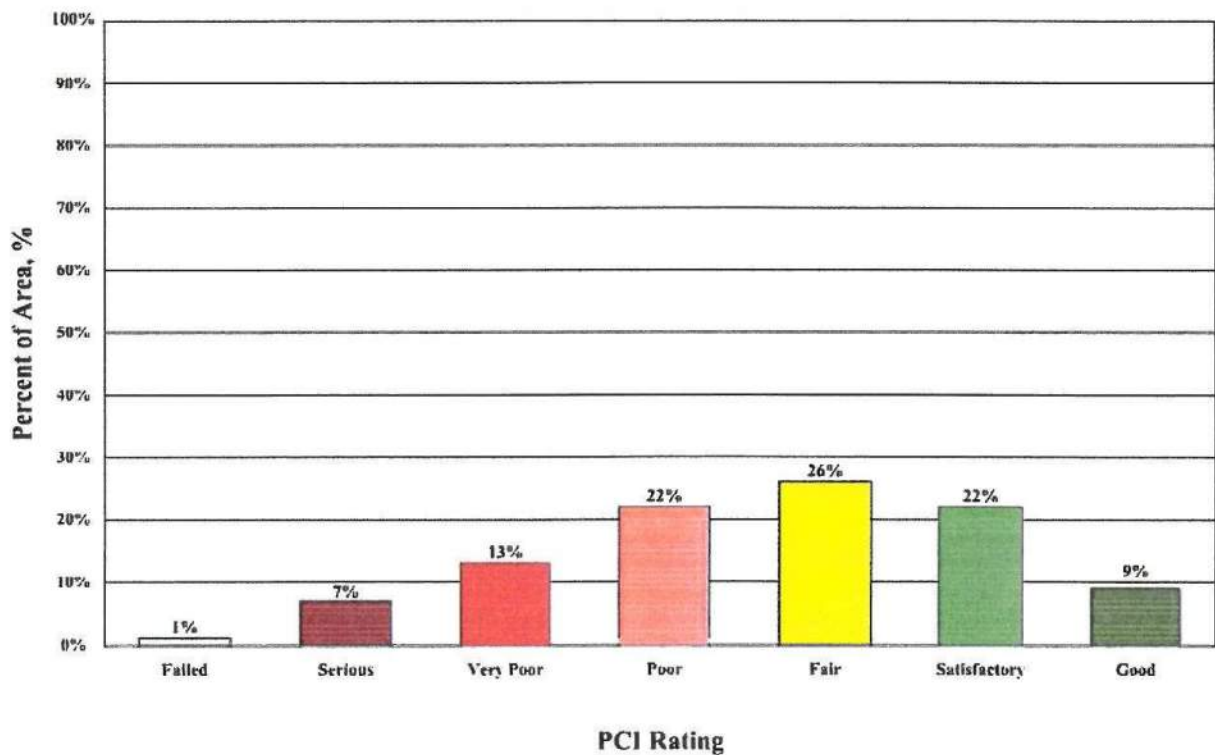


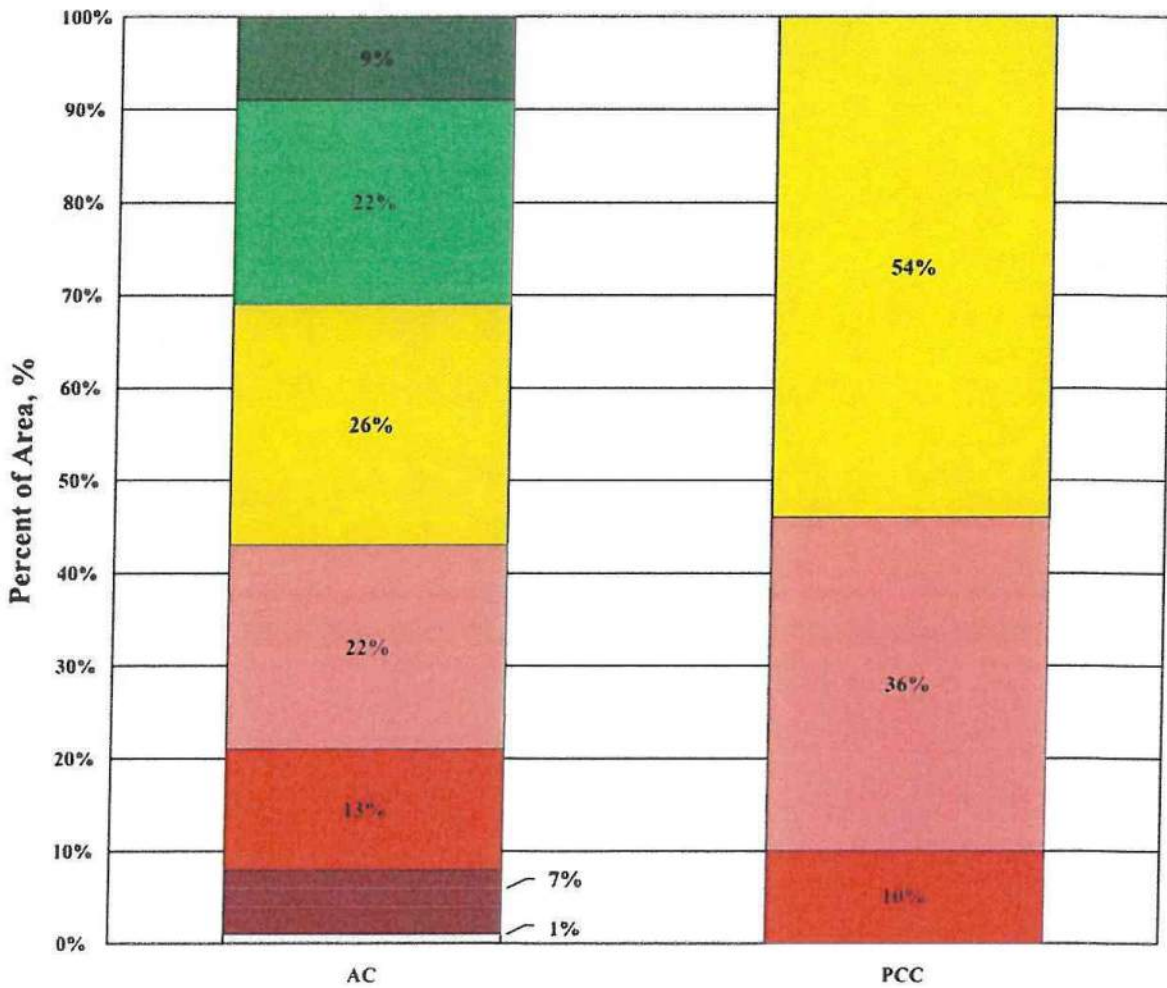
Figure 3.1 - COTTAGE GROVE CONDITION RATING BY PERCENT OF AREA

Based on paved surface type, 98.5% of the total subject area is comprised of AC pavement, which has a PCI of 58. PCC pavement makes up 1.5% of the total area and has a PCI of 53. Tabular and graphic condition

summary by pavement area and surface type at their last inspection are shown in Table 3.4 and Figure 3.2 below.

Table 3.4 – PCI VALUES BY SURFACE TYPE

Surface	Area-Weighted Average PCI	Pavement Area (Sq. Ft.)	% Area	Sections
AC	57.7	6,955,098	98.5%	313
PCC	53.3	103,221	1.5%	8
TOTAL	57.6	7,058,318	100.0%	321



PCI Rating by Surface Type

Figure 3.2 - COTTAGE GROVE NETWORK PAVEMENT CONDITION RATING BY SURFACE TYPE

3.5 SUMMARY

During the last quarter of 2018, all the streets under Cottage Grove jurisdiction were inspected as part of the PMP implementation. Overall, the inspected pavement sections are in the lower end of the fair-condition range with an area-weighted average PCI of 58. Approximately 43% of Cottage Grove Street pavements, by area, are in poor or worse condition. Pavements in fair condition account for 26% of the pavement area and they require immediate M&R to prevent it from deteriorating further and becoming costlier to maintain.

A key element to getting the most out of a PMP is regularly scheduled PCI surveys. We recommend Cottage Grove continue to schedule pavement inspections on a regular basis at no more than three to five-year intervals, depending on the level of preservation activities.

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CHAPTER 4: PAVEMENT CONDITION ANALYSIS

4.1 INTRODUCTION

In addition to assessing the current condition of a pavement, it is very important from a planning standpoint to be able to predict the future condition of a pavement with reasonable accuracy. In a PMP, this prediction is completed with the aid of a prediction model. When a PMS is initially implemented, default models are typically used to predict the future condition of a pavement. However, after PCI surveys are completed for a period of time, the historical data are then used to refine the models, so they better represent the deterioration of a particular class of pavement based on local climatic conditions, loading, material sources, construction procedures, etc. The importance of accurate prediction models is part of the reason it is essential to conduct periodic, routine surveys in order to track the rate of deterioration.

4.2 METHODOLOGY

In PAVER, the pavement deterioration curves are developed based on the “family” model procedure. A pavement “family” is defined as a group of pavements with similar deterioration characteristics. The procedure for developing the prediction models is as follows:

- Define the pavement families
- Review the data
- Conduct a data outlier analysis
- Model the data

4.3 PREDICTION MODELS

Separate condition prediction models were developed for each pavement “family” at Cottage Grove. The delineation is based on branch use, surface type, section rank, and structural design life (if applicable). Four separate models were created for the following “families” of pavements at Cottage Grove:

- 2019 Local Street AC
- 2019 Collector Street AC
- 2019 Arterial Street AC
- 2019 PCC

For each model, linear deterioration curves were generated based upon expected deterioration rates for each “family” of pavements. There was limited historical data available on the Cottage Grove area pavement sections and there were no previous PCI inspections available. An effort was made to utilize as much Cottage Grove data as could be obtained based on known history of portions of the street network. This data was utilized as much as possible and compared with typical deterioration rates in order to establish a deterioration rate for each “family” of pavements. Additional information for each of the condition-prediction models is presented in Appendix D.

As future PCI surveys are conducted and historical data about pavement deterioration are generated, a best-fit curve can be calculated using a polynomial-constrained, least-squares analysis procedure. In this process, outliers are removed, and the data is checked for accuracy and reasonableness. This process was utilized as

much as possible using available historic and PCI survey data. In the future, additional PCI inspections and construction data can be used to refine the models. The best-fit curve for each family is used in the analysis to predict the average behavior of all sections within the family to which it is assigned.

4.4 CRITICAL PCI

For each of the condition-prediction models developed, a critical PCI was also established. The critical PCI is the point at which the pavement condition begins to deteriorate more quickly over time into a poor-condition state and major M&R is triggered because the cost to apply localized M&R increases significantly. Pavement sections with PCI values above the critical value are assigned a higher priority for funding during budget analysis to prevent them from deteriorating to the point where rehabilitation is more costly. The following critical PCI values were used for Cottage Grove roadways:

- Local Street AC – 50
- Collector Street AC – 60
- Arterial Street AC – 65
- PCC – 40

4.5 PAVEMENT RANK AND USE PRIORITIZATION

Pavement sections are assigned a rank to establish their relative importance in the overall pavement network. The section rank is used to define the priority of each section during the M&R analysis. Specifically, for Cottage Grove, arterial ranked roads have the highest funding and M&R priority, followed by collector ranked roads, and then by local ranked roads. The rank of each section is displayed spatially on Figure 2A in Appendix A.

4.6 DATABASE VERIFICATION

Prior to finalizing the prediction models and running the condition analysis and M&R Work Plan module, the Database Verification Tools were used to check the PAVER database for the following errors:¹

- Verify branch data and remove duplicate section data: Ensures branch summaries correspond to section totals, only one family model is assigned to each section, and there is only one set of user-defined field data for each section.
- Verify/reset latest inspection indicators: Ensures data match last inspection date (LID).
- Check for duplicate major M&R and duplicate inspections: Eliminates duplicate major M&R (i.e., same date, same work type) and duplicate inspections (i.e., same section, same PCI).
- Verify work descriptions: Ensures all work history and work-required entries have a work-type description. Report sections and dates that have work codes no longer in the system tables.
- Verify inspection samples and cached inventory data: Ensures all sample units either have distress or are marked “inspected but no distress”. Checks and fixes cached inventory data associated with inspections.
- Report sections with missing data for PCI calculation

¹ PAVER 7.0.8 User Manual: U.S. Army Corps of Engineers, October 2017, PDF.

- Report missing system table information: Lists networks, branches, and sections missing data required to complete the System Tables.
- Change duplicate or blank use and surface names.
- Recalculate conditions for all sections: Reports invalid or incomplete distress entries. Recalculates PCI and other selected distress indices.
- Recalculate surface for all sections: Ensures the surface type (AC or PCC) for each section is correct according to the work history.

4.7 CONDITION ANALYSIS

Using the condition prediction models discussed above, the projected condition of each pavement section was estimated for a 10-year period. Based on this analysis, the PCI is projected to decrease from a current value of 58 to a value of 43 in FY 2029 if no maintenance or rehabilitation work is performed. The projected pavement condition in 10 years for each pavement sections in Cottage Grove is shown in Table 1D in Appendix D.

4.8 FUNCTIONAL REMAINING LIFE

Functional remaining life is the practical amount of time a pavement is in service before requiring rehabilitation, as estimated based solely on visual condition. This is not to be confused with structural remaining life, which requires analysis of the structural capacity of a pavement and typically requires a field exploration and testing program that includes core explorations and falling weight deflectometer (FWD) deflection tests.

Two forms of functional remaining life were calculated based on the current visual condition surveys for the Cottage Grove street pavements. The first type of functional remaining life we calculated is the time until major M&R, such as an overlay, is required. The critical PCI, as presented in Section 4.4, is the threshold used for this type of functional remaining life analysis. The second type of functional remaining life we calculated is the time until the pavement is no longer operational due to poor condition and increased safety concerns. A PCI of 30 was set as the trigger point for determining the end of the pavement's functional service life.

The two types of functional remaining life for each roadway section at Cottage Grove are summarized in Table 2D in Appendix D.

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CHAPTER 5: BUDGET ANALYSIS & M&R PROJECT RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of this analysis is to determine the M&R needs and impact of different budget scenarios on the Cottage Grove street pavement network condition over time. PAVER v7.0.10 software was utilized to conduct the budget consequence and needs analysis, and to develop network-level project recommendations for the next 10 years. Five budget scenarios were analyzed to understand the fiscal requirement and the impact each funding level has on the network PCI.

Based on the 2018 PCI survey results, Figure 5.1 below displays a breakdown of Cottage Grove’s pavement condition by percent area of area and general M&R treatment categories. Approximately 31, 57 and 12% of the area require preservation treatments, rehabilitation, and reconstruction respectively.

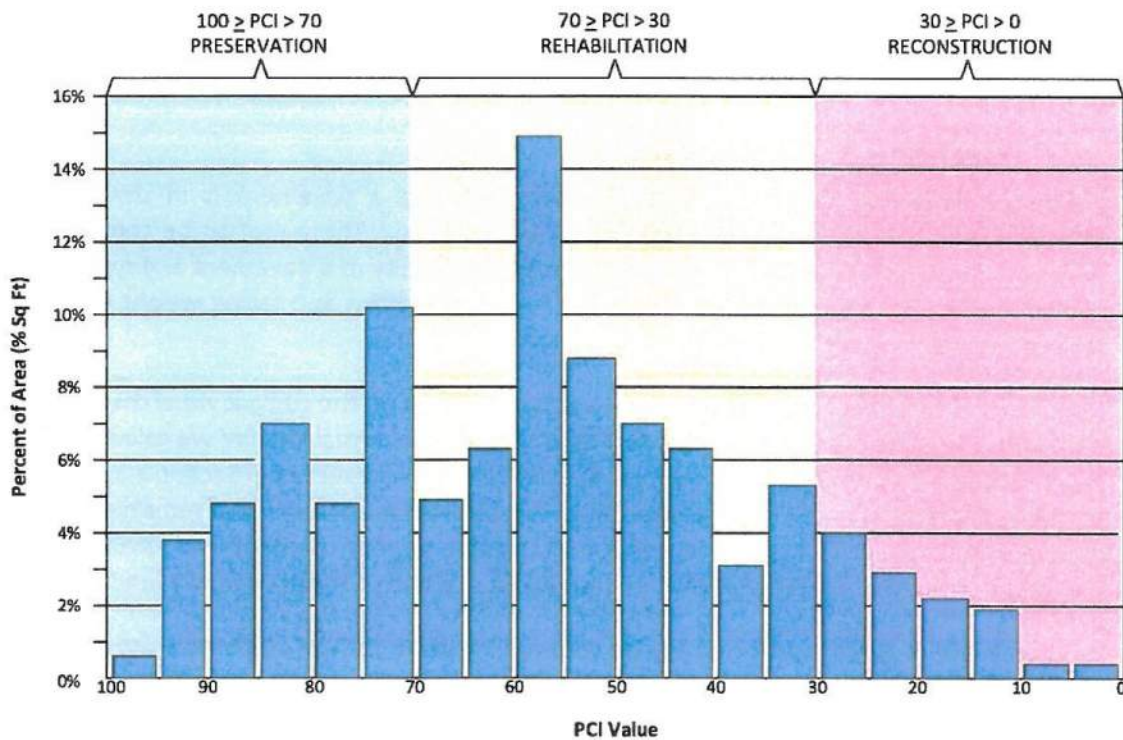


Figure 5.1 - GENERAL TREATMENT TYPE DISTRIBUTION BASED ON PCI

5.2 METHODOLOGY

The PAVER M&R Work Planning Module identifies when and where M&R is required and how much it will cost. M&R plans can be developed either by assuming an annual budget or identifying specific constraints, such as the budget required to meet a specific condition goal. Based on either, a known annual budget or a desired overall condition level, PAVER will produce a prioritized M&R project list. A critical component and first step in performing budget analysis and developing network-level project recommendations is to establish maintenance policies and unit costs for various work types.

5.3 MAINTENANCE POLICIES AND UNIT COSTS

Distress-maintenance policies are policies that determine what type of work should be applied to a specific distress type and severity. For example, a medium-severity longitudinal/transverse (L&T) crack would be repaired by crack sealing on an AC pavement. PAVER applies the following four policy types:

- Preservation
 - Localized Stopgap (Safety) M&R is applied when the pavement condition is below the critical PCI and only used to keep the pavement operational and in a safe condition.
 - Localized Preventive M&R is applied to pavements above the critical PCI to prolong the pavement life (e.g. crack sealing, patching).
 - Global Preventive M&R are treatments applied to an entire pavement section with the intent of slowing the rate of deterioration (e.g. slurry seal, chip seal).
- Rehabilitation & Reconstruction
 - Major M&R is used to address severe defects with the purpose of correcting or improving pavement structural or functional characteristics. The resulting PCI after any Major M&R application is always 100 (e.g. overlay, reconstruction).

Policies for distress types and severities are available in Appendix E.

The anticipated cost of performing M&R is based on cost tables that relate M&R work type cost to PCI. Unit costs from bid tabulations from recent projects in the area were used to develop the cost tables presented in Appendix E.

5.4 BUDGET SCENARIO ANALYSIS RESULTS

The following five budget scenarios were analyzed for a 5-year period beginning in July 2020 (FY 2020):

- Maintain Current Budget
- Maintain Current Network PCI
- Improve Network PCI to 72
- Improve Network PCI to 80
- Eliminate M&R Backlog

The results are summarized below. Additional graphical and tabular information regarding the comparison of the budgets and effects on the PCI are given in Appendix F.

The PCI of 58 from the 2018 inspection is projected to deteriorate to a PCI of 55 at the beginning of the analysis period (i.e., prior to conducting the recommended work). At the beginning of the analysis period, Cottage Grove will have an unfunded M&R backlog of approximately \$26.73 million. The backlog is approximated by running an unconstrained analysis. The amount of funding suggested for M&R on sections with a PCI below the critical value is considered unfunded backlog.

The M&R costs in the analysis are based on estimated unit prices and are presented in constant 2019 dollars, i.e., they assume no inflation over the long term.

5.4.1 Scenario 1 – Maintain Current M&R Budget

The current budget for the 10-year analysis period beginning in FY 2020 contains funding for annual maintenance such as crack sealing and patching. Cottage Grove anticipates spending approximately \$500,000 annually during the next 10 years. A summary of the results for this budget scenario are presented in Table 5.1 below.

Table 5.1 – SUMMARY OF THE CURRENT BUDGET ANALYSIS RESULTS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Over Analysis Period ¹	Unfunded M&R at End of Analysis ²	Total Cost ³	PCI at End of Analysis
1 Maintain Current Budget	55	\$5,000,000	\$39,850,000	\$44,850,000	49

Notes:

- ¹Total funding for the M&R budget scenarios.
- ²Total unfunded stopgap, preventive, global, and major M&R values.
- ³The sum of the total funded and last-year unfunded cost.

The total cost over the next 10 years, including the funded and unfunded M&R, is \$44.85 million. Figure 5.2 below displays the impact of this budget to the network PCI over time with respect to the total funded and unfunded M&R

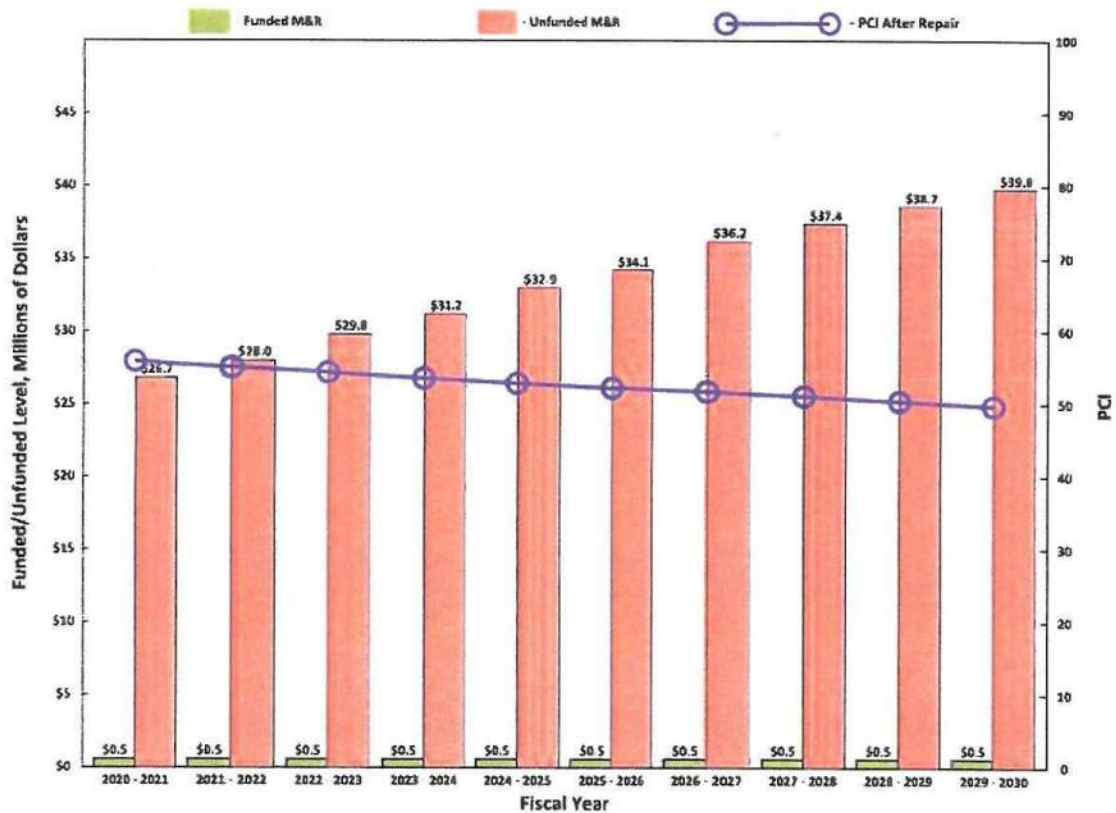


Figure 5.2 - MAINTAIN CURRENT BUDGET - ANALYSIS RESULTS

5.4.2 Scenario 2 – Maintain Current Network PCI

Funding at an average annual amount of \$1,400,000 is estimated to be sufficient to maintain the City’s pavements at their current PCI over the 10-year analysis period. A summary of this budget is shown in Table 5.2 below. If the goal is to maintain the current PCI of at least 58, the total cost over the next 10 years, including the funded and unfunded M&R, is \$44.47 million. Continued funding at this level will begin to decrease the unfunded M&R over time.

Table 5.2 – SUMMARY OF THE MAINTAIN CURRENT NETWORK PCI BUDGET SCENARIO RESULTS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Over Analysis Period ¹	Unfunded M&R at End of Analysis ²	Total Cost ³	PCI at End of Analysis
2 Maintain Current PCI	55	\$14,000,000	\$30,470,000	\$44,470,000	58

Notes:

- ¹Total funding for the M&R budget scenarios.
- ²Total unfunded stopgap, preventive, global, and major M&R values.
- ³The sum of the total funded and last-year unfunded cost.

Figure 5.3 below displays the impact of this budget to the network PCI over time with respect to the total funded and unfunded M&R.

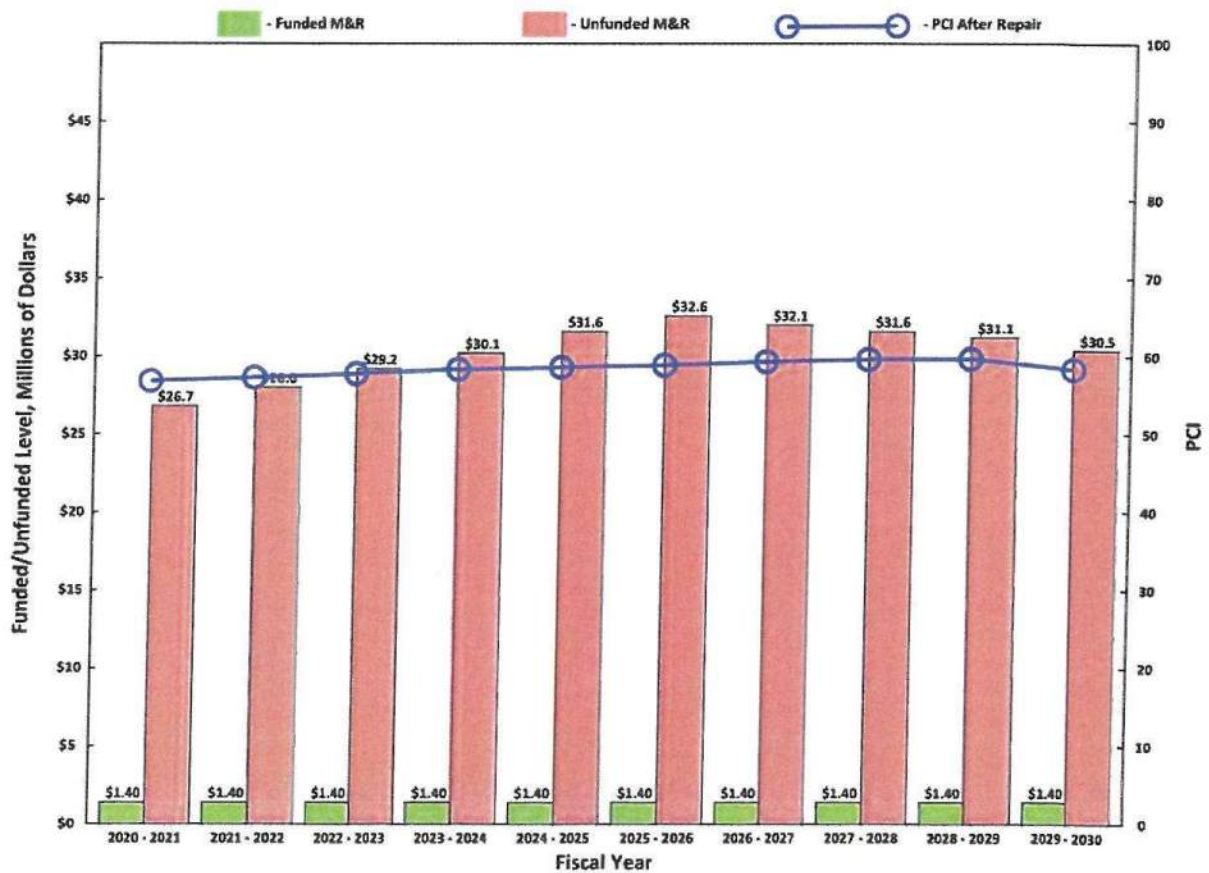


Figure 5.3 - MAINTAIN CURRENT NETWORK PCI OF 58 - ANALYSIS RESULTS

5.4.3 Scenario 3 – Increase Network PCI to 72

An annual amount of \$2,875,000 is recommended to increase the network PCI from 55 to 72 at the end of the 10-year analysis period. A summary of this budget is shown in Table 5.3 below. To facilitate this goal, the total cost over the next 10 years, including the funded and unfunded M&R is \$42.03 million, and it results in a decrease in unfunded M&R by approximately 50%.

Table 5.3 – SUMMARY OF INCREASE NETWORK PCI TO 72 BUDGET SCENARIO RESULTS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Over Analysis Period ¹	Unfunded M&R at End of Analysis ²	Total Cost ³	PCI at End of Analysis
3 Increase PCI to 72 After 10 Years	55	\$28,750,000	\$13,280,000	\$42,030,000	72

Notes:

- ¹Total funding for the M&R budget scenarios.
- ²Total unfunded stopgap, preventive, global, and major M&R values.
- ³The sum of the total funded and last-year unfunded cost.

Figure 5.4 below displays the impact of this budget to the network PCI over time with respect to the total funded and unfunded M&R.

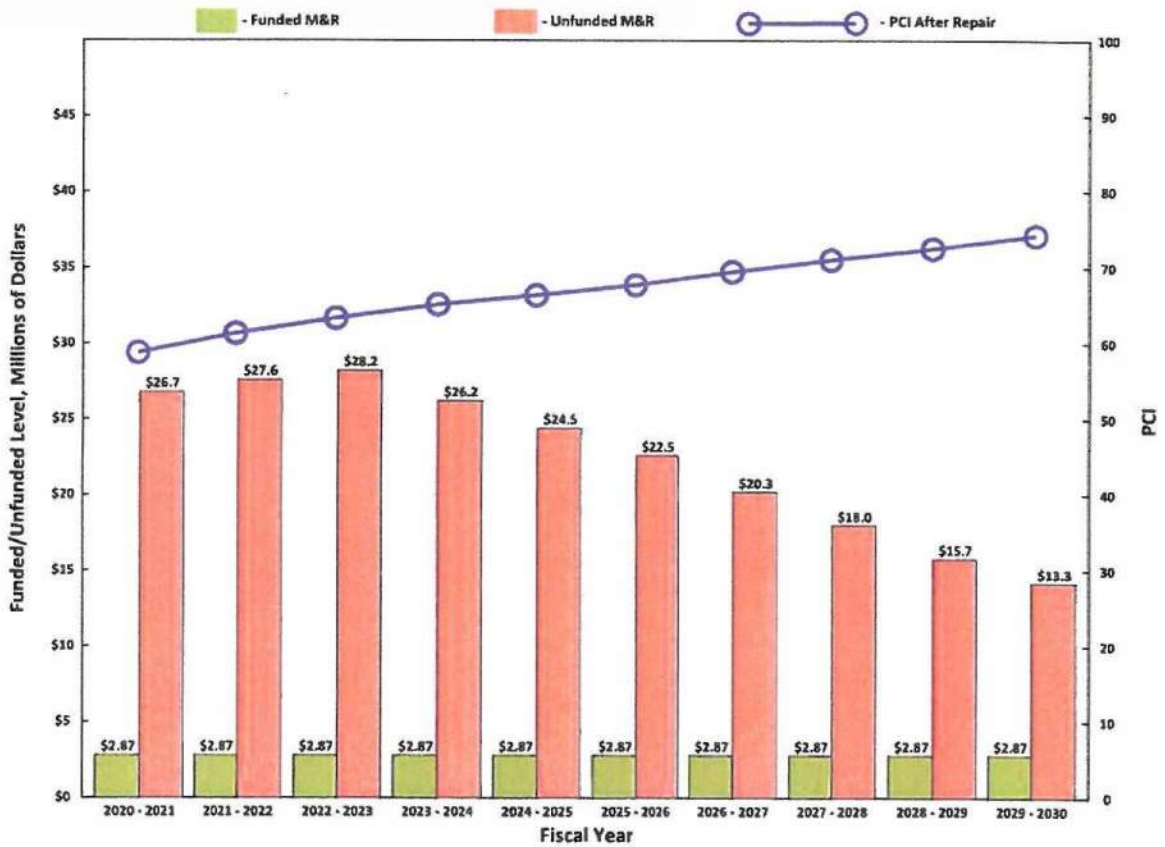


Figure 5.4 - PCI INCREASE TO 72 - ANALYSIS RESULTS

5.4.4 Scenario 4 – Increase Network PCI to 80

An annual amount of \$3,559,000 is recommended to increase the network PCI from 58 to 80 at the end of the 10-year analysis period. A summary of this budget is shown in Table 5.4 below. To facilitate this goal, the total cost over the next 10 years, including the funded and unfunded M&R is \$41.00 million, and it results in a decrease in unfunded M&R by approximately 80%.

Table 5.4 – SUMMARY OF INCREASE NETWORK PCI TO 80 BUDGET SCENARIO RESULTS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Over Analysis Period ¹	Unfunded M&R at End of Analysis ²	Total Cost ³	PCI at End of Analysis
4 Increase PCI to 80 After 10yrs	55	\$35,590,000	\$5,410,000	\$41,000,000	80

Notes:

- ¹Total funding for the M&R budget scenarios.
- ²Total unfunded stopgap, preventive, global, and major M&R values.
- ³The sum of the total funded and last-year unfunded cost.

Figure 5.5 below displays the impact of this budget to the network PCI over time with respect to the total funded and unfunded M&R.

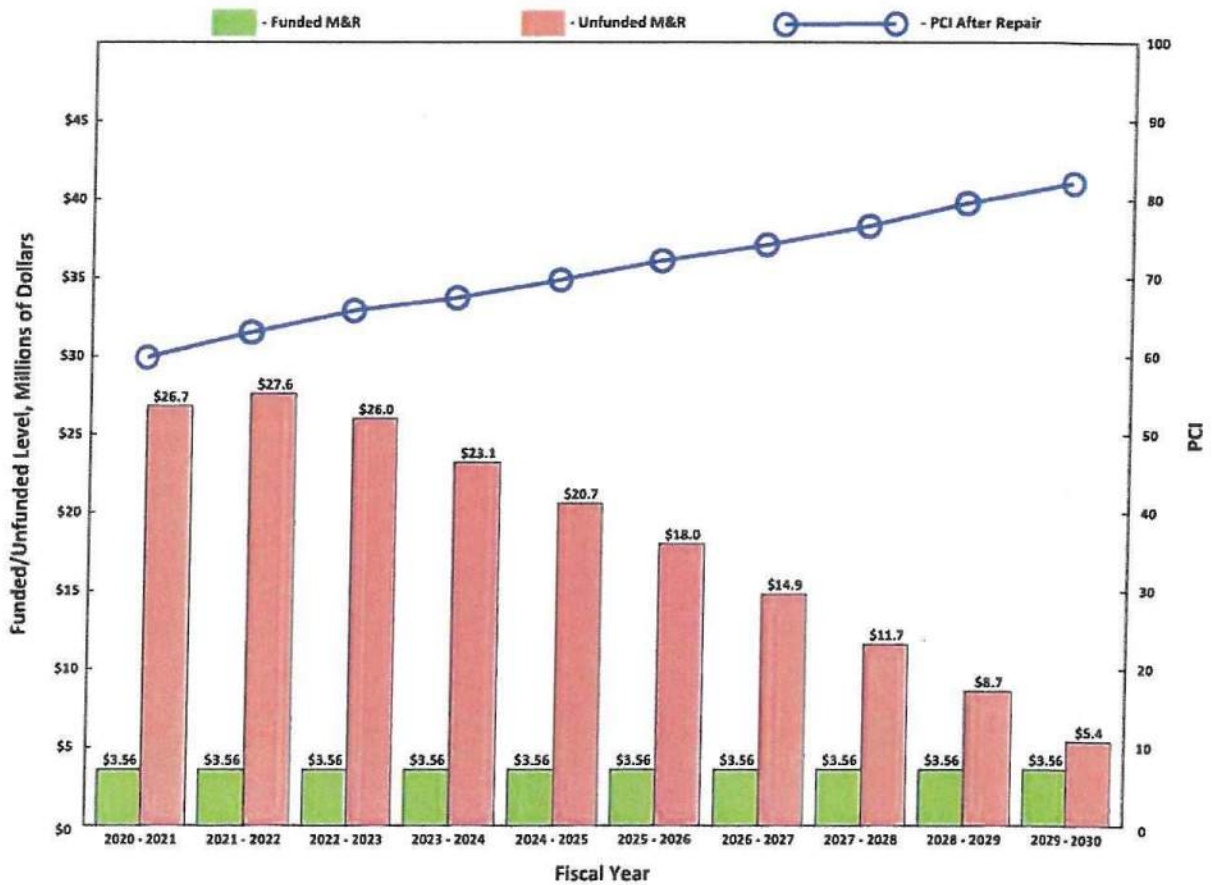


Figure 5.5 - PCI INCREASE TO 80 - ANALYSIS RESULTS

5.4.5 Scenario 5 – Eliminate M&R Backlog

M&R backlog is any major M&R work required for a pavement with a PCI below critical value (see Section 4.4). The results of the analysis found an annual budget of \$4,043,000 is needed to eliminate the unfunded M&R by FY 2030. Table 5.5 below displays a summary of the analysis.

Table 5.5 – SUMMARY OF ELIMINATE BACKLOG BUDGET SCENARIO RESULTS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Over Analysis Period ¹	Unfunded M&R at End of Analysis ²	Total Cost ³	PCI at End of Analysis
5 Eliminate Backlog	55	\$40,430,000	\$0	\$40,430,000	87

Notes:

- ¹Total funding for the M&R budget scenarios.
- ²Total unfunded stopgap, preventive, global, and major M&R values.
- ³The sum of the total funded and last-year unfunded cost.

The total cost over the 10-year analysis period, including funded and unfunded M&R, is \$40.43 million. Figure 5.6 below displays the impact of this budget to the network PCI over time with respect to the total funded and unfunded M&R.

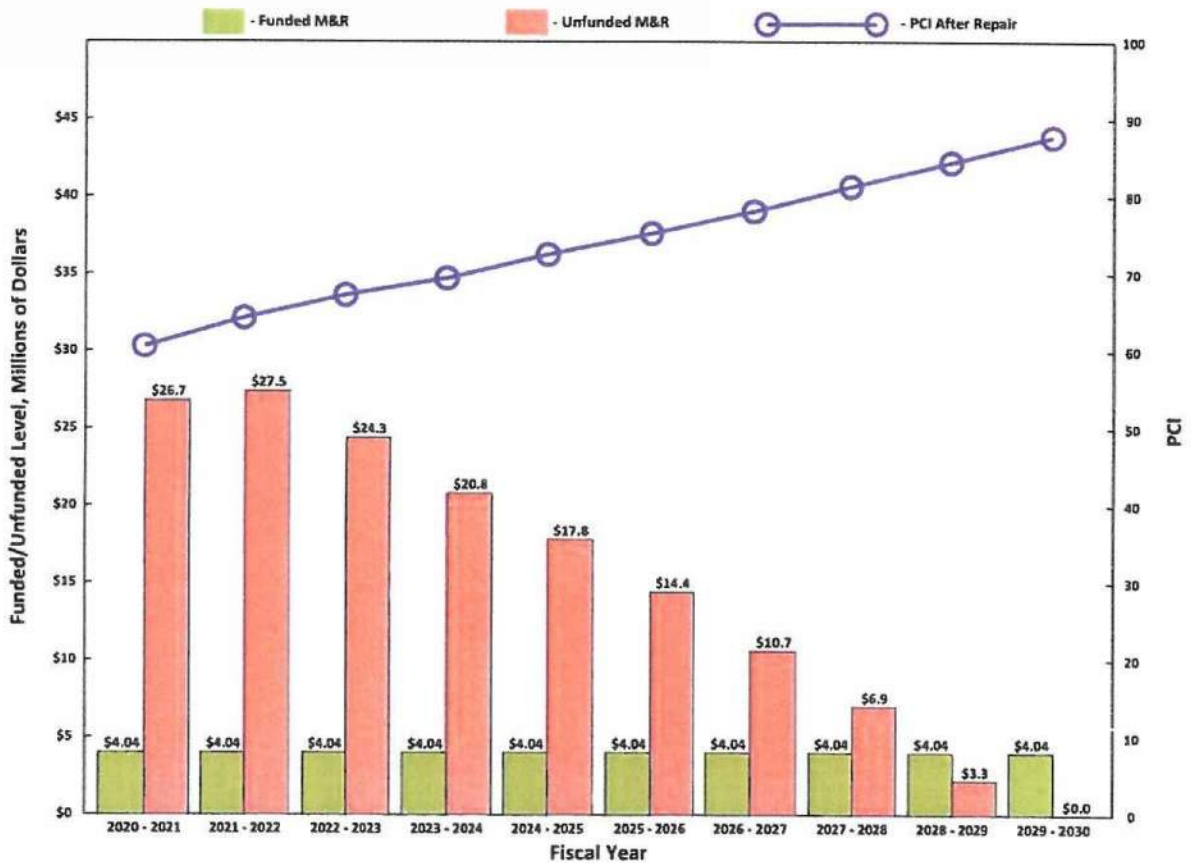


Figure 5.6 - ELIMINATE M&R BACKLOG - ANALYSIS RESULTS

5.6 RECOMMENDED MAJOR AND GLOBAL M&R PROJECTS

The PAVER Work Planning Module was used to develop Major and Global M&R projects. The analysis was based on a 10-year period beginning on July 1, 2020 (FY 2020). An eliminate backlog analysis scenario was selected to assist in generating a list of network-level projects. This budget scenario gives Cottage Grove the most flexibility by providing the largest list of projects and their preferred timing.

The sections identified in the analysis were further refined into practical projects and organized by year. The cost associated with each project recommendation is based on a general pavement structural section. Further engineering will be required to properly design and estimate the total cost before constructing each project. The Global M&R projects assume localized patching and crack sealing will be conducted prior to surface treatment application.

The complete list of recommended Major and Global M&R projects are listed in Table 2F and maps with the project locations are shown in Figures 9F and 10F in Appendix F.

5.7 SUMMARY

The overall PCI of Cottage Grove in 2018 was Satisfactory; PCI of 58. This average rating represents all the actively utilized pavements within the Cottage Grove street network.

A budget analysis was conducted based on a preservation philosophy as opposed to a worst-first methodology. The worst-first strategy is a suboptimal method because M&R work is only applied after the pavement has structural damage. Once a pavement has significant structural damage, the only repair option is reconstruction. Preservation, on the other hand, utilizes optimum timing to perform preventive treatments such as crack sealing, surface seals, and AC overlays.

Five budget scenarios were evaluated for a 5-year period beginning on July 1, 2020. A summary of the five budget scenarios is shown in Table 5.6 below.

Table 5.6 – COTTAGE GROVE STREETS - PAVEMENT BUDGET SCENARIOS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Cost Over Analysis Period ¹	Unfunded M&R Cost at End of Analysis ²	Total Cost ³	PCI at End of Analysis
1 Maintain Current Budget	55	\$5,000,000	\$39,850,000	\$44,850,000	49
2 Maintain Current Network PCI	55	\$14,000,000	\$30,470,000	\$44,470,000	58
3 Increase PCI to 72 After 10 Years	55	\$28,750,000	\$13,280,000	\$42,030,000	72
4 Increase PCI to 80 After 10 Years	55	\$35,590,000	\$5,410,000	\$41,000,000	80
5 Eliminate Backlog	55	\$40,430,000	\$0	\$40,430,000	87

Notes:

¹Total funding for the M&R budget scenarios.

²Total unfunded stopgap, preventive, global, and major M&R values.

³The sum of the total funded and last-year unfunded cost.

In addition to the budget scenario analysis, a 10-year project list was developed for Global and Major M&R. Cottage Grove should continue to perform routine PCI surveys and a budget analysis to update the PMP to maintain the roadway network in the most cost-effective manner and at the highest condition based on the available funding level.

LIMITATIONS

This report has been prepared to assist the City of Cottage Grove with pavement-related project planning. The scope is limited to the specific pavement areas described herein. The conclusions and recommendations provided in this report are based on information provided by Cottage Grove, estimated costs, and an understanding of the pavement conditions based solely on visual assessment. The M&R recommendations and project selections provided in this report, as well as their corresponding cost estimates, are based on a practical grouping of projects and an estimate of the structural requirements. It is possible recommendations based on a structural evaluation would differ materially from the recommendations given herein. Therefore, the information included in this report should be used solely for project planning purposes and it should be understood that rehabilitation costs may vary from the cost estimates given herein.

Because the condition of the Cottage Grove street pavement network is dynamic, an effective (program should be reviewed and updated on a regular basis. In addition to regularly surveying and updating of the pavement condition, completed construction activities should be tracked in the PAVER database.

Submitted for Emerio Design,

Daniel B. Ingram, PE, PLS
Sr. Project Manager

Roy Hankins, PE

This document has been submitted electronically.

**Pavement Management Report
City of Cottage Grove City Streets**

**APPENDIX A:
PAVEMENT INVENTORY REPORT AND MAPS**

Table 1A, Figure 1A, Figure 2A, and Figure 3A

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
ADAMSAVE	ADAMS AVE	ROADWAY	CG159	S. 2ND ST	S. 5TH ST	E	950	27	25,658	AC	0	0	0
ADAMSAVE	ADAMS AVE	ROADWAY	CG160	S. 5TH ST	HIGHWAY 99	E	663	27	17,890	AC	0	0	0
ADAMSAVE	ADAMS AVE	ROADWAY	CG161	S. 10TH ST	S. 12TH ST	E	642	27	17,335	AC	0	0	0
ADAMSAVE	ADAMS AVE	ROADWAY	CG162	S. 12TH ST	120 FT EAST OF S. 13TH ST	E	516	27	13,933	AC	0	0	0
ADAMSAVE	ADAMS AVE	ROADWAY	CG163	S. 16TH ST	S. GATEWAY BLVD.	E	695	29	20,492	AC	0	0	0
ANTHONYAVE	ANTHONY AVE	ROADWAY	CG49	S. R ST	S. M ST	E	1,409	30	42,272	AC	0	0	0
ANTHONYCT	ANTHONY CT	ROADWAY	CG59	ANTHONY AVE	CUL-DE-SAC	E	179	30	7,659	AC	0	0	0
ARTHURAVE	ARTHUR AVE	ROADWAY	CG234	S. 6TH ST	DEAD END E. OF NEVA CT	E	1,083	29	31,395	AC	0	0	0
ASHAVE	ASH AVE	ROADWAY	CG61	CEMETERY ROAD	HAMMER HEAD	E	820	30	25,183	AC	0	0	0
ASHAVE	ASH AVE	ROADWAY	CG63	N. O ST	N. M ST	E	1,168	27	31,535	AC	0	0	0
ASHAVE	ASH AVE	ROADWAY	CG64	N. M ST	N. RIVER RD	E	1,691	27	45,649	AC	0	0	0
BANGLECT	BANGLE CT	ROADWAY	CG305	S. 22ND ST	CUL-DE-SAC	E	391	29	13,649	AC	0	0	0
BELMONTAVE	BELMONT AVE	ROADWAY	CG273	S. 17TH ST	DEAD END	E	173	23	3,990	AC	0	0	0
BENJAMINAV	BENJAMIN AVE	ROADWAY	CG227	S. 8TH ST	S. 8TH ST	E	529	29	15,342	AC	0	0	0
BENJAMINAV	BENJAMIN AVE	ROADWAY	CG228	S. 8TH ST	WILSON CT	E	565	29	16,540	AC	0	0	0
BIRCHAVE	BIRCH AVE	ROADWAY	CG65	N. O ST	N. M ST	E	580	36	20,875	AC	0	0	0
BIRCHAVE	BIRCH AVE	ROADWAY	CG66	N. M ST	N. L ST	E	281	28	7,864	AC	0	0	0
BIRCHAVE	BIRCH AVE	ROADWAY	CG67	N. L ST	N. RIVER RD	E	1,661	27	45,514	AC	0	0	0
BLAIRCT	BLAIR CT	ROADWAY	CG51	BRYANT AVE	CUL-DE-SAC	E	214	29	8,613	AC	0	0	0
BLUESKYDR	BLUE SKY DRIVE	ROADWAY	CG25	DEAD END S. OF W. HARRISON AVE	DEAD END N. OF W. HARRISON AVE	C	624	40	24,956	AC	0	0	0
BOHEMIAPL	BOHEMIA PL	ROADWAY	CG38	S. R ST	CUL-DE-SAC	E	355	29	13,211	AC	0	0	0
BRYANTAVE	BRYANT AVE	ROADWAY	CG45	DEAD END W. OF S. S ST	S. R ST	E	916	29	27,018	AC	0	0	0
BRYANTAVE	BRYANT AVE	ROADWAY	CG46	S. R ST	BRYANT CT	E	295	30	8,845	AC	0	0	0
BRYANTAVE	BRYANT AVE	ROADWAY	CG47	BRYANT CT	S. M ST	E	1,030	29	30,393	AC	0	0	0
BRYANTAVE	BRYANT AVE	ROADWAY	CG48	S. M ST	S. RIVER RD	E	492	17	8,364	AC	0	0	0
BRYANTCT	BRYANT CT	ROADWAY	CG52	BRYANT AVE	CUL-DE-SAC	E	131	30	6,233	AC	0	0	0
CARNEGIEWAY	CARNEGIE WAY	ROADWAY	CG2	GETTY CIRCLE	HIGHWAY 99	E	1,082	39	42,188	AC	0	0	0
CAROBELLECT	CAROBELLE CT	ROADWAY	CG271	E. MADISON AVE	CUL-DE-SAC	E	165	29	7,263	AC	0	0	0
CARVERAVE	CARVER AVE	ROADWAY	CG43	S. S ST	DEAD END W. OF S. S ST	E	527	29	15,536	AC	0	0	0
CARVERPL	CARVER PL	ROADWAY	CG44	S. S ST	CUL-DE-SAC E. OF S. S ST	E	252	29	9,724	AC	0	0	0
CHERRYCT	CHERRY CT	ROADWAY	CG134	E. GIBBS	E. WOOD AVE	E	465	18	8,375	AC	0	0	0
CHESTNUTAV	CHESTNUT AVE	ROADWAY	CG68	N. L ST	N. G ST	E	1,486	27	40,423	AC	0	0	0
CLARKAVE	CLARK AVE	ROADWAY	CG40	DEAD END	150' W. OF S. S ST	E	381	29	11,249	AC	0	0	0
CLARKAVE	CLARK AVE	ROADWAY	CG41	150' W. OF S. S ST	200' W. OF S. R ST	E	523	29	15,440	AC	0	0	0
CLARKAVE	CLARK AVE	ROADWAY	CG42	200' W. OF S. R ST	S. N ST	E	1,303	28	36,779	AC	0	0	0
CLEVELANDS	CLEVELAND ST	ROADWAY	CG124	DEAD END W. OF S. 8TH ST	DEAD END E. OF S. 8TH ST	E	171	14	2,399	AC	0	0	0
COLUMBIAC	COLUMBIA CT	ROADWAY	CG214	E. VILLARD AVE	VINCENT PL	E	359	30	10,782	AC	0	0	0
COOPCT	COOP CT	ROADWAY	CG292	N. GATEWAY BLVD	DEAD END	E	119	37	4,394	AC	0	0	0
COOPERAVE	COOPER AVE	ROADWAY	CG240	S. 8TH STREET	125 FT EAST OF S. 9TH STREET	E	385	26	10,018	AC	0	0	0
COOPERAVE	COOPER AVE	ROADWAY	CG241	125 FT EAST OF S. 9TH STREET	S. 10TH ST	E	139	20	2,773	AC	0	0	0

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
COTTONWOOD	COTTONWOOD PL	ROADWAY	CG83	NORTH M STREET	NORTH O STREET	E	570	30	17,097	AC	0	0	0
CURRY AVE	CURRY AVE	ROADWAY	CG289	N. 16TH STREET	PRITCHETT PL	E	612	29	17,744	AC	0	0	0
DAUGHERTYA	DAUGHERTY AVE	ROADWAY	CG39	S. R ST	DEAD END	E	1,181	35	41,790	AC	0	0	0
DAVIDSONAV	DAVIDSON AVE	ROADWAY	CG311	ROW RIVER RD	PALMER AVE	E	1,385	36	49,859	AC	0	0	0
DAVISPL	DAVIS PL	ROADWAY	CG288	OSTRANDER LN	CUL-DE-SAC	E	152	28	5,754	AC	0	0	0
DOGWOODAVE	DOGWOOD AVE	ROADWAY	CG84	DEAD END EAST OF N. M STREET	DEAD END WEST OF N. P STREET	E	955	30	28,643	AC	0	0	0
DOUGLASFIR	DOUGLAS FIR PL	ROADWAY	CG85	NORTH M STREET	NORTH O STREET	E	529	30	15,872	AC	0	0	0
DUBLINLN	DUBLIN LN	ROADWAY	CG249	GATEWAY BLVD	CUL-DE-SAC	E	489	27	14,892	AC	0	0	0
ECHADWICKA	E. CHADWICK AVE	ROADWAY	CG189	N. 8TH ST	HIGHWAY 99 (N. 9TH ST)	E	281	30	8,423	AC	0	0	0
ECHADWICKA	E. CHADWICK AVE	ROADWAY	CG190	N. 10TH ST	N. 11TH ST	E	321	27	8,831	AC	0	0	0
ECHADWICKA	E. CHADWICK AVE	ROADWAY	CG191	N. 11TH ST	N. LANE ST	E	298	27	8,186	AC	0	0	0
ECHAMBERLA	E. CHAMBERLAIN AVE	ROADWAY	CG197	HIGHWAY 99 (N. 9TH ST)	N. LANE ST	C	638	30	19,129	AC	0	0	0
ECHAMBERLA	E. CHAMBERLAIN AVE	ROADWAY	CG198	N. LANE ST	N. DOUGLAS ST	C	97	25	2,426	AC	0	0	0
ECHAMBERLA	E. CHAMBERLAIN AVE	ROADWAY	CG199	N. DOUGLAS ST	N. DOUGLAS ST	E	532	29	15,416	AC	0	0	0
EDISONAVE	EDISON AVE	ROADWAY	CG16	W. END @ W. HARRISON AVE	N. 16TH STREET	E	1,326	29	39,108	AC	0	0	0
EGIBBSAVE	E. GIBBS AVE	ROADWAY	CG182	N. 6TH ST	N. 8TH ST	E	496	35	17,368	AC	0	0	0
EGIBBSAVE	E. GIBBS AVE	ROADWAY	CG183	N. 8TH ST	HIGHWAY 99 (N. 9TH ST)	E	255	36	9,184	AC	0	0	0
EGIBBSAVE	E. GIBBS AVE	ROADWAY	CG184	HIGHWAY 99 (N. 9TH ST)	N. 10TH ST	E	254	27	6,846	AC	0	0	0
EGIBBSAVE	E. GIBBS AVE	ROADWAY	CG185	N. 16TH STREET	DEAD END EAST OF N. 16TH ST	E	362	19	6,881	AC	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG187	HIGHWAY 99 (N. 9TH ST)	N. 10TH ST	E	254	28	7,101	AC	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG188	N. 16TH ST	DEAD END	E	594	30	17,833	AC	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG293	E. GROVER AVE	CUL-DE-SAC	E	146	30	5,874	AC	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG294	E. GROVER AVE	CUL-DE-SAC	E	136	30	5,584	AC	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG28	S. RIVER RD	HIGHWAY 99	C	1,498	46	63,654	AC	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG29	S. 7TH ST	S. 8TH ST	C	255	21	5,359	AC	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG30	S. 10TH ST	S. 11TH ST	C	371	24	8,893	AC	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG31	S. 10TH ST	DEAD END 500' E OF S. 11TH	C	498	28	14,190	AC	0	0	0
EJACKSONAV	E. JACKSON AVE	ROADWAY	CG265	S. 10TH STREET	CUL-DE-SAC	E	452	26	13,667	AC	0	0	0
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG155	S. 1ST ST	S. 2ND ST	E	363	27	9,793	AC	0	0	0
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG156	S. 2ND ST	S. 3RD ST	E	362	29	10,596	AC	0	0	0
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG157	S. 3RD ST	212 FT. EAST OF S. 3RD ST	E	212	27	5,724	AC	0	0	0
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG158	S. 10TH ST	S. 13TH ST	E	1,052	27	28,404	AC	0	0	0
ELMAVE	ELM AVE	ROADWAY	CG86	DEAD END EAST OF N. M STREET	DEAD END WEST OF N. O STREET	E	1,054	30	31,632	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG148	DEAD END W. OF S. 1ST STREET	S. 3RD STREET	E	995	27	27,364	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG149	S. 3RD ST	S. 5TH ST	E	585	30	17,551	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG150	S. 5TH ST	S. 6TH ST	E	248	27	6,684	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG151	S. 10TH ST	S. 14TH ST	C	1,168	26	30,360	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG152	S. 14TH ST	S. 16TH ST	C	598	35	21,220	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG153	S. 16TH ST	S. 17TH ST	E	269	35	9,544	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG154	S. LANDRESS RD	DEAD END	E	656	22	14,422	AC	0	0	0

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
EMAINST	E. MAIN ST	ROADWAY	CG172	CONC BR DECK AT RIVER	100' W. OF HIGHWAY 99	B	1,323	41	54,895	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG173	100' W. OF HIGHWAY 99	S. 10TH ST	B	391	41	16,246	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG174	S. 10TH ST	GATEWAY BLVD	B	2,447	41	101,537	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG175	GATEWAY BLVD	I-5 OVERPASS	B	610	40	23,791	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG176	DEAD END W OF S. 21ST ST	S. 21ST ST	E	225	15	3,488	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG177	S. 21ST ST	S. 22ND ST	E	490	23	11,509	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG178	S. 22ND ST	MOSSBY CREEK RD	E	819	27	22,535	AC	0	0	0
EMONROEAVE	E. MONROE AVE	ROADWAY	CG145	S. 3RD STREET	S. 5TH STREET	E	585	29	16,963	AC	0	0	0
EMONROEAVE	E. MONROE AVE	ROADWAY	CG146	S. DOUGLAS STREET	S. 8TH STREET	E	391	29	11,343	AC	0	0	0
EMONROEAVE	E. MONROE AVE	ROADWAY	CG147	S. 8TH STREET	S. 10TH STREET	E	524	28	14,682	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG136	DEAD END W. OF S. 1ST ST	S. 1ST ST	E	287	18	5,168	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG137	S. 1ST ST	S. 3RD ST	E	727	26	18,912	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG138	S. 3RD ST	S. 5TH ST	E	585	26	15,214	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG139	HWY 99	S. 6TH ST	E	181	32	5,796	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG140	S. 6TH ST	S. 7TH ST	E	261	32	8,484	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG141	S. 7TH ST	S. 10TH ST	E	783	30	23,500	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG142	S. 10TH ST	S. 12TH ST	E	637	27	17,518	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG143	S. 12TH ST	94 FT EAST OF S. 14TH STREET	E	529	30	15,862	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG144	S. 14TH STREET	180 FT EAST OF S. 14TH STREET	E	86	15	1,290	AC	0	0	0
ETAYLORAVE	E. TAYLOR AVE	ROADWAY	CG244	S. 4TH ST	S. 6TH ST	C	500	29	14,494	AC	0	0	0
ETAYLORAVE	E. TAYLOR AVE	ROADWAY	CG245	S. 6TH ST	S. 10TH ST	C	1,052	35	39,951	AC	0	0	0
ETAYLORAVE	E. TAYLOR AVE	ROADWAY	CG246	S. 10TH ST	HILLSIDE DR	C	1,280	36	44,397	AC	0	0	0
ETAYLORAVE	E. TAYLOR AVE	ROADWAY	CG247	HILLSIDE DR	DEAD END	E	1,222	30	36,664	AC	0	0	0
EVANBURENA	E. VAN BUREN AVE	ROADWAY	CG266	S. 10TH ST	S. 13TH ST	E	937	26	25,335	AC	0	0	0
EVANBURENA	E. VAN BUREN AVE	ROADWAY	CG267	S. 13TH ST	S. 14TH ST	E	236	29	6,957	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG164	S. 3RD ST	S. 5TH ST	E	587	36	21,116	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG165	S. 5TH ST	S. 6TH ST	E	255	39	9,943	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG166	S. 6TH ST	HIGHWAY 99	E	573	35	20,349	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG167	S. 10TH ST	110' E OF S. 10TH ST	E	110	38	4,180	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG168	110' E OF S. 10TH ST	DEAD END @ PARK 180' E. OF 12TH	E	632	27	17,063	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG169	DEAD END @ PARK 245' W. OF 15TH	S. 15TH ST	E	310	27	8,515	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG170	S. 15TH ST	S. 17TH ST	E	626	35	22,233	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG171	S. 17TH STREET	S. GATEWAY BLVD.	E	414	35	14,709	AC	0	0	0
EWHITEAKER	E. WHITEAKER AVE	ROADWAY	CG179	N. 5TH ST	HIGHWAY 99	E	1,000	36	36,482	AC	0	0	0
EWHITEAKER	E. WHITEAKER AVE	ROADWAY	CG180	I-5 OVERPASS	80' W. OF N. 22ND ST	B	692	30	20,769	AC	0	0	0
EWHITEAKER	E. WHITEAKER AVE	ROADWAY	CG181	80' W. OF N. 22ND ST	MOSSBY CR RD	B	874	40	34,973	AC	0	0	0
FAIRVIEWLP	FAIRVIEW LP	ROADWAY	CG32	S. R ST	FAIRVIEW PL	E	751	29	22,015	AC	0	0	0
FAIRVIEWPL	FAIRVIEW PL	ROADWAY	CG33	S. R ST	CUL-DE-SAC	E	589	29	19,936	AC	0	0	0
FILLMOREAV	FILLMORE AVE	ROADWAY	CG242	S. 4TH ST	S. 6TH ST	E	634	27	17,122	AC	0	0	0
FILLMOREAV	FILLMORE AVE	ROADWAY	CG243	S. 6TH ST	S. 7TH ST	E	301	29	8,869	AC	0	0	0

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
GEERAVE	GEER AVE	ROADWAY	CG196	HIGHWAY 99 (N. 9TH ST)	N. LANE ST	E	707	29	20,515	AC	0	0	0
GETTYCIRCL	GETTY CIRCLE	ROADWAY	CG1	CUL-DE-SAC 235' S OF CARNEGIE WAY	CUL-DE-SAC 235' S OF CARNEGIE WAY	E	410	40	16,396	AC	0	0	0
GIRARDAVE	GIRARD AVE	ROADWAY	CG34	S. RIVER RD	170' E. OF GIRARD CT	E	373	29	11,007	AC	0	0	0
GIRARDAVE	GIRARD AVE	ROADWAY	CG35	170' E. OF GIRARD CT	170' W. OF GIRARD CT	E	282	29	8,326	AC	0	0	0
GIRARDAVE	GIRARD AVE	ROADWAY	CG36	170' W. OF GIRARD CT	DEAD END	E	170	19	3,230	AC	0	0	0
GIRARDCT	GIRARD CT	ROADWAY	CG37	GIRARD AVE	CUL-DE-SAC	E	188	29	8,254	AC	0	0	0
GRANTAVE	GRANT AVE	ROADWAY	CG224	CUL-DE-SAC	S. 4TH ST	E	528	27	15,268	AC	0	0	0
GRANTAVE	GRANT AVE	ROADWAY	CG225	S. 4TH ST	S. 6TH ST	C	625	35	22,011	AC	0	0	0
HARDINGPL	HARDING PL	ROADWAY	CG233	S. 6TH STREET	DEAD END	E	401	25	10,152	AC	0	0	0
HARRISONCT	HARRISON CT	ROADWAY	CG17	W. HARRISON AVE	CUL-DE-SAC	E	349	24	10,292	AC	0	0	0
HARVEYLN	HARVEY LN	ROADWAY	CG286	CUL-DE-SAC	N. 14TH STREET	E	421	29	13,697	AC	0	0	0
HARVEYLN	HARVEY LN	ROADWAY	CG287	N. 14TH STREET	N. 16TH STREET	E	323	29	9,523	AC	0	0	0
HARVEYRD	HARVEY RD	ROADWAY	CG284	N. 16TH ST	N. 19TH ST	C	1,212	33	39,984	AC	0	0	0
HARVEYRD	HARVEY RD	ROADWAY	CG285	N. 19TH ST	N. GATEWAY BLVD	C	422	29	12,442	AC	0	0	0
HAYESAVE	HAYES AVE	ROADWAY	CG223	DEAD END W. OF S. 4TH ST	S. 4TH ST	E	748	27	20,183	AC	0	0	0
HOLLYAVE	HOLLY AVE	ROADWAY	CG90	N. RIVER ROAD	KALAPUYA WAY	E	374	33	12,358	AC	0	0	0
IBSENAVE	IBSEN AVE	ROADWAY	CG26	BLUE SKY DR	DEAD END	E	721	29	21,065	AC	0	0	0
JASONLEEAVE	JASON LEE AVE	ROADWAY	CG15	S. R. ST	WHITMAN BLVD	E	982	30	29,456	AC	0	0	0
JIMWRIGHTWY	JIM WRIGHT WAY	ROADWAY	CG313	ROW RIVER RD	THORNTON LN	E	961	42	40,373	AC	0	0	0
JOHNSONAVE	JOHNSON AVE	ROADWAY	CG236	S. 6TH ST	120 FT EAST OF S. 8TH ST	E	644	29	18,682	AC	0	0	0
KALAPUYAWAY	KALAPUYA WAY	ROADWAY	CG88	N. H ST	HOLLY AVE	E	1,529	26	39,758	AC	0	0	0
KALAPUYASCT	KALAPUYA CT	ROADWAY	CG89	KALAPUYA WAY	CUL-DE-SAC	E	243	25	9,761	AC	0	0	0
KATHLEENDR	KATHLEEN DR	ROADWAY	CG226	DEAD END W. OF PATRICK LIP	S. 6TH ST	E	473	29	13,956	AC	0	0	0
LANDESSRD	LANDESS RD	ROADWAY	CG306	S. GATEWAY BLVD	E. MADISON AVE	E	1,001	23	23,528	AC	0	0	0
LANECT	LANE CT.	ROADWAY	CG206	N. LANE ST	CUL-DE-SAC	E	129	27	5,845	AC	0	0	0
LINCOLNAVE	LINCOLN AVE	ROADWAY	CG238	S. 6TH ST	S. 8TH ST	C	520	36	18,717	AC	0	0	0
LINCOLNAVE	LINCOLN AVE	ROADWAY	CG237	S. 8TH ST	25' W. OF S. 9TH ST	C	230	30	6,904	AC	0	0	0
LINCOLNAVE	LINCOLN AVE	ROADWAY	CG239	25' W. OF S. 9TH ST	S. 10TH ST	C	283	20	5,854	AC	0	0	0
LORDAVE	LORD AVE	ROADWAY	CG195	HIGHWAY 99 (N. 9TH ST)	N. LANE ST	E	837	27	22,587	AC	0	0	0
MEEKERDR	MEEKER DR	ROADWAY	CG14	WHITMAN BLVD	DEAD END	E	141	30	4,230	AC	0	0	0
MOSBYCRRD	MOSBY CRRD	ROADWAY	CG307	THORNTON RD	CURRIN CONNECTOR	B	1,395	34	48,131	AC	0	0	0
N10THST	N. 10TH ST	ROADWAY	CG200	E. GIBBS AVE	HIGHWAY 99	E	1,828	27	49,357	AC	0	0	0
N11THST	N. 11TH ST	ROADWAY	CG203	E. CHADWICK AVE	275 FT NORTH OF E. THAYER AVE	E	539	17	9,432	AC	0	0	0
N11THST	N. 11TH ST	ROADWAY	CG204	275 FT NORTH OF E. THAYER AVE	E. GEER AVE	E	796	27	21,492	AC	0	0	0
N11THST	N. 11TH ST	ROADWAY	CG205	E. GEER AVE	E. CHAMBERLAIN AVE	E	160	27	4,319	AC	0	0	0
N12THST	N. 12TH ST	ROADWAY	CG259	E. MAIN ST	DEAD END	E	301	29	8,740	AC	0	0	0
N14THST	N. 14TH ST	ROADWAY	CG264	E. MAIN ST	DEAD END	E	560	33	18,489	AC	0	0	0
N14THST	N. 14TH ST	ROADWAY	CG291	HARVEY LN	PENNOYER AVE	E	236	30	7,068	AC	0	0	0
N16THST	N. 16TH ST	ROADWAY	CG282	E. MAIN STREET	130' S. OF CURRY AVE	C	2,171	35	77,055	AC	0	0	0
N16THST	N. 16TH ST	ROADWAY	CG283	130' S. OF CURRY AVE	OSTRANDER LN	C	904	35	32,081	AC	0	0	0

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
N19THST	N. 19TH ST	ROADWAY	CG280	E. MAIN ST	DEAD END	E	739	14	10,711	AC	0	0	0
N19THST	N. 19TH ST	ROADWAY	CG281	HARVEY RD	OSTRANDER LN	E	861	34	29,276	AC	0	0	0
N20THST	N. 20TH ST	ROADWAY	CG285	HARVEY RD	DEAD END	E	232	14	3,657	AC	0	0	0
N22NDST	N. 22ND ST	ROADWAY	CG302	E. MAIN ST	E. WHITEAKER AVE	E	326	29	9,629	AC	0	0	0
N5THST	N.5TH ST	ROADWAY	CG111	E. MAIN ST	E. WHITEAKER AVE	E	259	34	8,792	AC	0	0	0
N6THST	N. 6TH ST	ROADWAY	CG117	E. MAIN ST	E. WHITEAKER AVE	E	266	34	9,033	AC	0	0	0
N6THST	N. 6TH ST	ROADWAY	CG118	E. WHITEAKER AVE	E. GIBBS AVE	E	265	30	7,959	AC	0	0	0
N7THST	N. 7TH ST	ROADWAY	CG123	E. MAIN STREET	E. WHITEAKER AVE	E	263	34	8,946	AC	0	0	0
N8THST	N. 8TH ST	ROADWAY	CG131	E. MAIN STREET	E. GIBBS AVE	E	528	32	16,904	AC	0	0	0
N8THST	N. 8TH ST	ROADWAY	CG132	E. GIBBS AVE	E. CHADWICK AVE	E	1,074	27	28,988	AC	0	0	0
N8THST	N. 8TH ST	ROADWAY	CG133	E. CHADWICK AVE	DEAD END AT RESIDENCE	E	102	12	1,270	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG215	E. VILLARD AVE	PENNYOYER AVE	E	1,304	22	28,687	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG216	PENNYOYER AVE	260' S. OF E. CHAMBERLAIN AVE	E	558	20	11,169	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG217	260' S. OF E. CHAMBERLAIN AVE	E. CHAMBERLAIN AVE RXR XING	E	260	30	7,800	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG218	E. CHAMBERLAIN AVE RXR XING	OSTRANDER LANE	C	498	32	16,152	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG219	OSTRANDER LANE	WATER TREATMENT PLANT	E	1,238	24	29,318	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG220	WATER TREATMENT PLANT	GRAVEL	E	383	22	9,025	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG60	S. RIVER ROAD	DEAD END	E	226	32	6,698	AC	0	0	0
NEVACT	NELLIS PL	ROADWAY	CG235	ARTHER AVE	CUL-DE-SAC	E	133	25	5,890	AC	0	0	0
NGATEWAYBL	N. GATEWAY BLVD	ROADWAY	CG276	E. MAIN ST	ROW RIVER TRAIL CROSSING	B	894	40	35,760	AC	0	0	0
NGATEWAYBL	N. GATEWAY BLVD	ROADWAY	CG277	ROW RIVER TRAIL CROSSING	435' N. OF HARVEY RD	B	1,711	42	71,878	AC	0	0	0
NGATEWAYBL	N. GATEWAY BLVD	ROADWAY	CG278	435' N. OF HARVEY RD	225' S. OF ROW RIVER RD	B	606	46	27,868	AC	0	0	0
NGATEWAYBL	N. GATEWAY BLVD	ROADWAY	CG279	225' S. OF ROW RIVER RD	ROW RIVER RD	B	225	46	10,350	AC	0	0	0
NGST	N. G ST	ROADWAY	CG69	BIRCH AVE	CHESTNUT AVE	E	291	28	8,156	AC	0	0	0
NGST	N. G ST	ROADWAY	CG70	CHESTNUT AVE	DEAD END	E	222	23	5,218	AC	0	0	0
NHST	N. H ST	ROADWAY	CG71	N. RIVER ROAD	DEAD END	E	1,150	28	32,183	AC	0	0	0
NIST	N. I ST	ROADWAY	CG72	W. MAIN STREET	KALAPUYA WAY	E	1,135	30	35,992	AC	0	0	0
NJST	N. J ST	ROADWAY	CG73	W. MAIN STREET	DEAD END N. OF CHESTNUT AVE	E	1,104	28	29,583	AC	0	0	0
NKST	N. K ST	ROADWAY	CG74	W. MAIN STREET	CHESTNUT AVE.	E	893	28	24,994	AC	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG208	190' N. OF E. MAIN ST	155' S. OF E. VILLARD AVE.	E	456	22	10,023	AC	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG209	155' S. OF E. VILLARD AVE.	E. VILLARD AVE.	E	155	29	4,495	AC	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG210	E. VILLARD AVE.	110' S. OF LANE CT	E	300	24	7,191	AC	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG211	110' S. OF LANE CT	E. CHADWICK AVE	E	357	28	9,986	AC	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG212	E. GEER AVE	90 FT N. OF E. CHAMBERLAIN AVE	E	244	24	5,552	AC	0	0	0
NLST	N. L ST	ROADWAY	CG75	W. MAIN STREET	CHESTNUT AVE	E	895	28	25,049	AC	0	0	0
NMST	N. M ST	ROADWAY	CG76	W. MAIN STREET	BIRCH AVE	C	604	34	20,531	AC	0	0	0
NMST	N. M ST	ROADWAY	CG77	W. MAIN STREET	DEAD END N. OF ELM AVE	C	1,498	35	52,420	AC	0	0	0
NNST	N. N ST	ROADWAY	CG78	W. MAIN STREET	BIRCH AVE	E	607	28	16,996	AC	0	0	0
NOST	N. O ST	ROADWAY	CG79	W. MAIN STREET	ASH AVE	E	296	28	8,298	AC	0	0	0
NOST	N. O ST	ROADWAY	CG80	75 FT S OF BIRCH AVE	DEAD END N OF ELM AVE	E	1,350	30	40,496	AC	0	0	0

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
NPST	N. P ST	ROADWAY	CG81	W. MAIN STREET	DEAD END @ BIRCH AVE ROW	E	595	28	16,649	AC	0	0	0
NPST	N. P ST	ROADWAY	CG82	DOGWOOD AVE	DEAD END	E	260	30	7,800	AC	0	0	0
NQST	N. Q ST	ROADWAY	CG87	W. MAIN STREET	145' N. OF W. MAIN ST	E	145	23	3,335	AC	0	0	0
NRVERRD	N. RIVER RD	ROADWAY	CG10	CONST JOINT 215' N. OF MAIN ST	CONST JOINT 83' N. OF WOODSON PL	B	2,563	38	97,403	AC	0	0	0
NRVERRD	N. RIVER RD	ROADWAY	CG11	CONST JOINT 215' N. OF WOODSON PL	BENNETT CREEK RD	E	1,374	34	47,600	AC	0	0	0
OLSONPL	OLSON PL	ROADWAY	CG9	MAIN STREET	CONST JOINT 215' N. OF MAIN ST	E	215	42	9,043	AC	0	0	0
OSTRANDERL	OSTRANDER LN	ROADWAY	CG231	S. 8TH STREET	DEAD END	B	100	29	2,950	AC	0	0	0
OSTRANDERL	OSTRANDER LN	ROADWAY	CG298	N. DOUGLAS AVE	N. 16TH ST	C	630	32	20,147	AC	0	0	0
OSTRANDERL	OSTRANDER LN	ROADWAY	CG299	N. 16TH ST	N. 19TH ST	C	1,025	33	34,345	AC	0	0	0
OSWALDWAVE	OSWALD W. AVE	ROADWAY	CG297	N. 19TH ST	N. GATEWAY BLVD	C	351	30	10,544	AC	0	0	0
PALMERAVE	PALMER AVE	ROADWAY	CG312	ROW RIVER RD	DEAD END	E	1,399	36	50,376	AC	0	0	0
PARKSRD	PARKS RD	ROADWAY	CG300	HILLSIDE DR	DEAD END	E	645	17	10,970	AC	0	0	0
PENNOYERAV	PENNOYER AVE	ROADWAY	CG193	HIGHWAY 99 (N. 9TH ST)	CITY LIMITS - (PRIVATE DRWY)	E	990	27	27,220	AC	0	0	0
PENNOYERAV	PENNOYER AVE	ROADWAY	CG194	N. DOUGLAS STREET	N. LANE ST	E	522	30	15,654	AC	0	0	0
POLKAVE	POLK AVE	ROADWAY	CG248	S. 10TH ST	N. 14TH ST	E	643	29	17,349	AC	0	0	0
PRITCHETT	PRITCHETT PL	ROADWAY	CG290	N. 16TH STREET	DEAD END E. OF S. 11TH ST	E	717	27	22,293	AC	0	0	0
REDHILLSPL	RED HILLS PL	ROADWAY	CG301	HILLSIDE DR	CUL-DE-SAC	E	522	33	18,810	AC	0	0	0
RIVERFRONT	RIVERFRONT WAY	ROADWAY	CG85	S. 1ST STREET	CUL-DE-SAC	E	479	31	14,850	AC	0	0	0
RIVERWALKP	RIVER WALK PL	ROADWAY	CG93	S. 1ST STREET	TAYLOR PL	E	391	38	14,867	AC	0	0	0
RIVERWALKP	RIVER WALK PL	ROADWAY	CG94	S. 2ND STREET	S. 2ND STREET	E	281	29	8,135	AC	0	0	0
ROWRIVERCO	ROW RIVER CONNECTOR	ROADWAY	CG310	THORNTON RD	HWY 99	E	1,815	48	86,168	AC	0	0	0
S10THST	S. 10TH ST	ROADWAY	CG350	JOHNSON AVE	CURRIN CONNECTOR	B	291	21	6,121	AC	0	0	0
S10THST	S. 10TH ST	ROADWAY	CG251	LINCOLN AVE	LINCOLN AVE	E	481	19	8,754	AC	0	0	0
S10THST	S. 10TH ST	ROADWAY	CG252	TAYLOR AVE	DEAD END N. OF COOPER AVE	E	2,292	37	84,804	AC	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG253	100' N. OF E. MONROE AVE	100' N. OF E. MONROE AVE	C	1,505	37	55,682	AC	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG254	POLK AVE	E. MAIN STREET	C	419	27	11,300	AC	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG256	E. MADISON AVE	DEAD END N. OF POLK AVE	E	1,164	27	32,021	AC	0	0	0
S12THST	S. 12TH ST	ROADWAY	CG257	DEAD END SOUTH OF E. QUINCY	E. MAIN STREET	E	320	24	8,138	AC	0	0	0
S13THST	S. 13TH ST	ROADWAY	CG258	E. MADISON AVE	E. QUINCY AVE	E	1,163	27	31,389	AC	0	0	0
S13THST	S. 13TH ST	ROADWAY	CG260	E. VAN BUREN AVE	E. MAIN ST	E	493	29	14,032	AC	0	0	0
S14THST	S. 14TH ST	ROADWAY	CG261	E. MADISON AVE	E. ADAMS AVE	E	513	24	12,324	AC	0	0	0
S14THST	S. 14TH ST	ROADWAY	CG262	GATEWAY BLVD	E. QUINCY AVE	E	764	30	22,928	AC	0	0	0
S15THST	S. 15TH ST	ROADWAY	CG263	DEAD END S. OF E. MADISON AVE	E. QUINCY AVE	E	371	14	5,197	AC	0	0	0
S16THST	S. 16TH ST	ROADWAY	CG269	DEAD END 265' S. OF WASHINGTON	MAIN STREET	E	628	29	18,539	AC	0	0	0
S17THST	S. 17TH ST	ROADWAY	CG270	GATEWAY BLVD	E. MADISON AVE	C	1,569	35	54,915	AC	0	0	0
S18THST	S. 18TH ST	ROADWAY	CG272	E. MADISON AVE	E. MAIN ST	E	1,157	29	34,141	AC	0	0	0
S19THST	S. 19TH ST	ROADWAY	CG91	RIVERFRONT WAY	E. HARRISON AVE	E	804	32	25,727	AC	0	0	0
S21STST	S. 21ST ST	ROADWAY	CG92	E. HARRISON AVE	E. JEFFERSON AVE	E	1,668	27	45,042	AC	0	0	0
S22NDST	S. 22ND ST	ROADWAY	CG396	E. MAIN ST	DEAD END	E	367	23	8,634	AC	0	0	0
S22NDST	S. 22ND ST	ROADWAY	CG303	E. MAIN ST	DEAD END	E	1,078	35	36,744	AC	0	0	0

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
S2NDST	S. 2ND ST	ROADWAY	CG100	E. HARRISON AVE	ADAMS AVE	E	2,005	30	56,158	AC	0	0	0
S2NDST	S. 2ND ST	ROADWAY	CG98	RIVERFRONT WAY	TYLER AVE	E	997	34	33,914	AC	0	0	0
S3RDST	S. 3RD ST	ROADWAY	CG101	E. HARRISON AVE	JEFFERSON AVE	E	246	36	8,868	AC	0	0	0
S3RDST	S. 3RD ST	ROADWAY	CG102	E. HARRISON AVE	ADAMS AVE	E	1,671	27	45,108	AC	0	0	0
S3RDST	S. 3RD ST	ROADWAY	CG103	E. JEFFERSON AVE	ADAMS AVE	E	332	36	11,745	AC	0	0	0
S4THST	S. 4TH ST	ROADWAY	CG104	ADAMS AVE	E. WASHINGTON AVE	E	301	19	5,595	AC	0	0	0
S4THST	S. 4TH ST	ROADWAY	CG105	DEAD END S OF E. HAYES AVE	GRANT AVE	E	400	27	10,802	AC	0	0	0
S4THST	S. 4TH ST	ROADWAY	CG106	GRANT AVE	CONST JOINT @ S. 4TH ST ~"	C	1,247	36	44,876	AC	0	0	0
S4THST	S. 4TH ST	ROADWAY	CG107	CONST JOINT @ S. 4TH ST ~"	CONST JOINT 420 S. OF HIGHWAY 99	C	1,148	27	31,000	AC	0	0	0
S4THST	S. 4TH ST (V)	ROADWAY	CG108	CONST JOINT 420 S. OF HIGHWAY 99	HIGHWAY 99	C	420	36	15,320	AC	0	0	0
S5THST	S. 5TH ST	ROADWAY	CG109	FILLMORE AVE	S. 4TH ST	E	241	27	6,513	AC	0	0	0
S5THST	S. 5TH ST	ROADWAY	CG110	CUL-DE-SAC	FILLMORE AVE	E	701	27	19,925	AC	0	0	0
S6THST	S. 6TH ST	ROADWAY	CG112	WASHINGTON AVE	E. MAIN ST	E	342	37	12,643	AC	0	0	0
S6THST	S. 6TH ST	ROADWAY	CG113	CLEVELAND STREET	JOHNSON AVE	B	1,943	35	68,018	AC	0	0	0
S6THST	S. 6TH ST	ROADWAY	CG114	JOHNSON AVE	E. QUINCY AVE	B	3,240	41	129,851	AC	0	0	0
S6THST	S. 6TH ST	ROADWAY	CG115	E. QUINCY AVE	HWY 99	B	531	35	18,592	AC	0	0	0
S6THST	S. 6TH ST	ROADWAY	CG116	HIGHWAY 99	ADAMS AVE	C	757	30	22,724	AC	0	0	0
S6THST	S. 6TH ST (V)	ROADWAY	CG222	ADAMS AVE	E. MAIN ST	C	647	34	21,990	AC	0	0	0
S7THST	S. 7TH ST	ROADWAY	CG119	FILLMORE AVE	S. DOUGLAS ST	E	109	14	1,521	AC	0	0	0
S7THST	S. 7TH ST	ROADWAY	CG120	TAYLOR AVE	TAYLOR AVE	E	611	29	17,713	AC	0	0	0
S7THST	S. 7TH ST	ROADWAY	CG121	E. HARRISON AVE	DEAD END	E	516	23	11,867	AC	0	0	0
S7THST	S. 7TH ST	ROADWAY	CG122	HWY 99	E. QUINCY AVE	E	713	28	19,967	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG125	E. CLEVELAND STREET	E. MAIN STREET	E	914	36	32,693	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG126	139' S. OF BENJAMIN AVE	139' S. OF BENJAMIN AVE	C	760	29	22,039	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG127	250' S. OF JOHNSON AVE	250' S. OF JOHNSON AVE	C	924	29	26,792	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG128	E. LINCOLN AVE	E. LINCOLN AVE	C	550	29	15,950	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG129	E. TAYLOR AVE	E. TAYLOR AVE	C	1,069	36	40,879	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG130	HWY 99	E. HARRISON AVE	E	1,157	27	31,467	AC	0	0	0
SCT	SCT	ROADWAY	CG21	W. HARRISON AVE	E. MAIN STREET	E	339	34	11,518	AC	0	0	0
SDOUGLASST	S. DOUGLAS ST	ROADWAY	CG221	S. 6TH ST	CUL-DE-SAC	E	321	30	12,522	AC	0	0	0
SGATEWAYBL	S. GATEWAY BLVD	ROADWAY	CG274	TAYLOR AVE	E. MONROE AVE	E	217	27	5,851	AC	0	0	0
SGATEWAYBL	S. GATEWAY BLVD	ROADWAY	CG275	E. ADAMS AVE	E. ADAMS AVE	B	3,604	35	126,153	AC	0	0	0
SMST	S. M ST	ROADWAY	CG53	CUL-DE-SAC	BRYANT AVE	B	632	40	26,424	AC	0	0	0
SMST	S. M ST	ROADWAY	CG54	BRYANT AVE	30' N. OF MERRILL LN	E	448	27	14,623	AC	0	0	0
SMST	S. M ST	ROADWAY	CG55	30' N. OF MERRILL LN	W. MAIN STREET	E	403	31	11,723	AC	0	0	0
SNST	S. N ST	ROADWAY	CG56	CLARK AVE	BRYANT AVE	E	423	35	13,699	AC	0	0	0
SOST	S. O ST	ROADWAY	CG57	CLARK AVE	BRYANT AVE	E	397	29	11,513	AC	0	0	0
SPST	S. P ST	ROADWAY	CG58	CLARK AVE	BRYANT AVE	E	395	27	10,794	AC	0	0	0
SRIVERRD	S. RIVER RD	ROADWAY	CG5	HIGHWAY 99	270' S. OF WHITMAN BLVD	B	1,736	31	53,825	AC	0	0	0

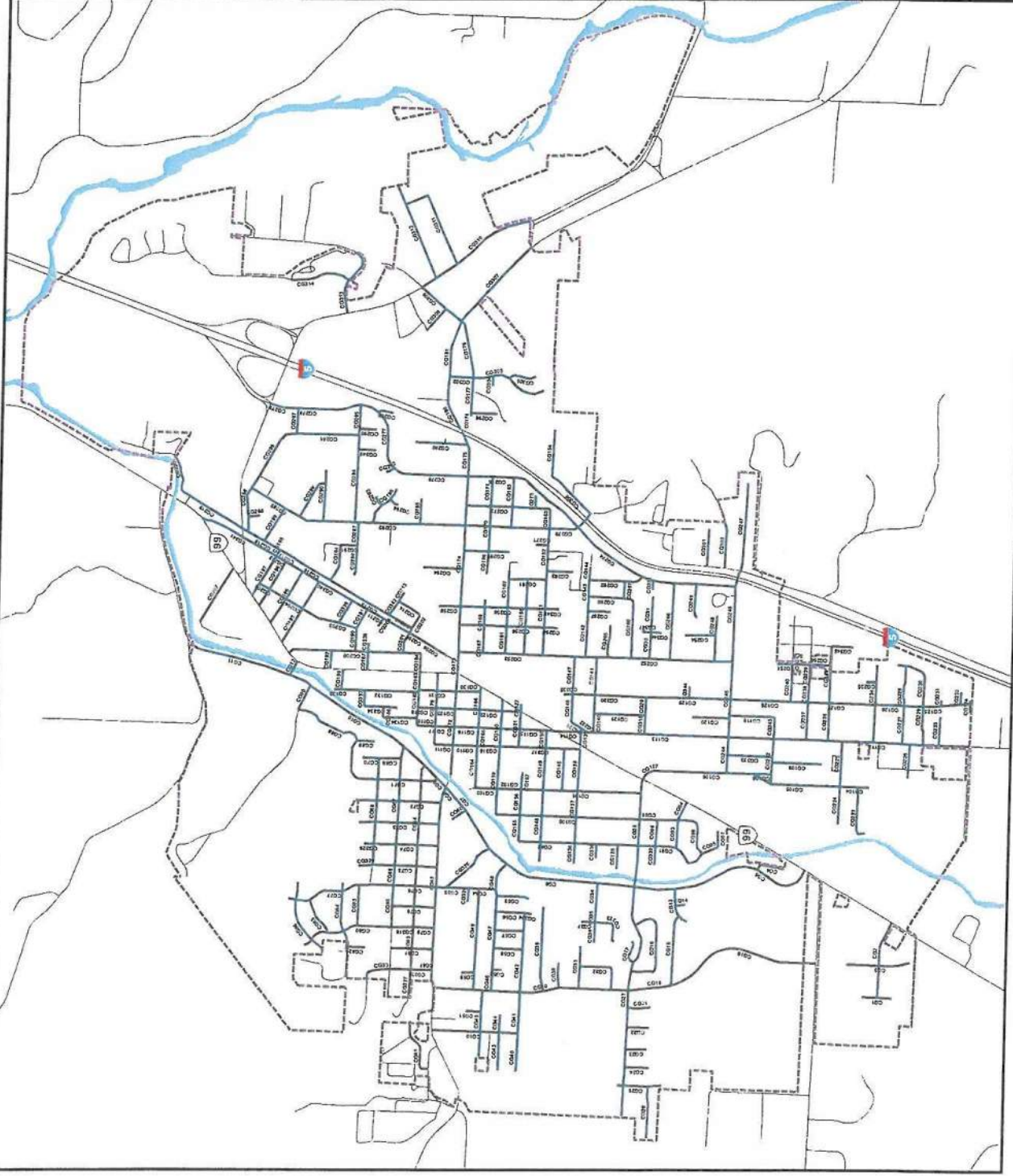
TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
SRVRRD	S. RIVER RD	ROADWAY	CG6	270' S. OF WHITMAN BLVD	NELLIS PLACE	B	3,629	36	130,638	AC	0	0	0
SRVRRD	S. RIVER RD	ROADWAY	CG7	NELLIS PLACE	CONST JOINT 210' S. OF MAIN ST	B	221	47	10,366	AC	0	0	0
SRVRRD	S. RIVER RD	ROADWAY	CG8	CONST JOINT 210 FT S. OF MAIN ST.	MAIN STREET	B	210	48	10,080	AC	0	0	0
SRVRRD	S RIVER RD (FRONTAGE RD)	ROADWAY	CG4	DEAD END	DEAD END	E	421	22	10,270	AC	0	0	0
SRST	S. R ST	ROADWAY	CG18	SWEET LN	135' S. OF JASON LEE AVE	B	2,057	40	71,283	AC	0	0	0
SRST	S. R ST	ROADWAY	CG19	135' S. OF JASON LEE AVE	W. HARRISON AVE	B	732	42	30,737	AC	0	0	0
SRST	S. R ST	ROADWAY	CG20	W. HARRISON AVE	W. MAIN STREET	B	2,721	40	108,830	AC	0	0	0
SRST	S. R ST	ROADWAY	CG3	480' S OF CARNegie WAY	460' N CARNegie WAY	B	893	71	63,426	AC	0	0	0
SSST	S. S ST	ROADWAY	CG50	CLARK AVE	W. MAIN STREET	E	1,192	29	35,157	AC	0	0	0
STCT	S. T CT	ROADWAY	CG22	W. HARRISON AVE	CUL-DE-SAC	E	312	29	12,006	AC	0	0	0
SUST	S. U ST	ROADWAY	CG23	W. HARRISON AVE	DEAD END	E	295	30	8,852	AC	0	0	0
SVCT	S. V CT	ROADWAY	CG24	W. HARRISON AVE	CUL-DE-SAC	E	339	30	10,034	AC	0	0	0
TAYLORPL	TAYLOR PL	ROADWAY	CG97	RIVERFRONT WAY	CUL-DE-SAC	E	223	32	7,143	AC	0	0	0
THAYERAVE	THAYER AVE	ROADWAY	CG192	HIGHWAY 99 (N. 9TH ST)	N. 10TH ST	E	251	30	7,527	AC	0	0	0
THOMASPL	THOMAS PL	ROADWAY	CG308	N. THORNTON RD	WALMART ACCESS RD	E	407	29	12,013	AC	0	0	0
THORNTONRD	THORNTON RD	ROADWAY	CG309	E. WHITEAKER AVE	ROW RIVER RD	C	738	34	25,090	AC	0	0	0
TYLERAVE	TYLER AVE	ROADWAY	CG268	S. 10TH ST	GATEWAY BLVD	E	1,069	27	29,406	AC	0	0	0
TYLERAVE	TYLER AVE	ROADWAY	CG96	S. 1ST STREET	S. 2ND STREET	E	365	29	10,700	AC	0	0	0
VANBURENAV	VAN BUREN AVE	ROADWAY	CG135	DEAD END W. OF S. 1ST ST	S. 1ST ST	E	340	29	10,034	AC	0	0	0
VILLAGE DR	VILLAGE DR	ROADWAY	CG314	JIM WRIGHT WAY	S. 1ST ST	E	836	35	29,245	AC	0	0	0
VILLARDAVE	VILLARD AVE	ROADWAY	CG201	N. 10TH STREET	N. DOUGLAS ST	E	370	27	10,188	AC	0	0	0
VILLARDAVE	VILLARD AVE	ROADWAY	CG202	N. DOUGLAS STREET	COLUMBIA CT	E	205	29	5,955	AC	0	0	0
VINCENPL	VINCENT PL	ROADWAY	CG213	25' W. OF COLUMBIA CT	175' E. OF COLUMBIA CT	E	173	29	5,022	AC	0	0	0
WASHINGTON	WASHINGTON PL	ROADWAY	CG304	S. 22ND ST	CUL-DE-SAC	E	146	28	5,455	AC	0	0	0
WHARRISONA	W. HARRISON AVE	ROADWAY	CG27	DEAD END	S. RIVER RD	C	3,263	46	150,082	AC	0	0	0
WHITMANBLV	WHITMAN BLVD	ROADWAY	CG13	S. RIVER RD	DEAD END	E	530	42	22,241	AC	0	0	0
WILSONAVE	WILSON AVE	ROADWAY	CG229	S. 6TH STREET	DEAD END	E	631	29	18,309	AC	0	0	0
WILSONCT	WILSON CT	ROADWAY	CG230	S. 6TH STREET	DEAD END	E	752	29	22,037	AC	0	0	0
WITHYCOMBE	WITHYCOMBE AVE	ROADWAY	CG207	92' E. OF S. 8TH ST	DEAD END	E	869	28	26,173	AC	0	0	0
WMAINST	W. MAIN ST	ROADWAY	CG62	HIGHWAY 99	EDGEWATER LANE	E	2,726	41	116,611	AC	0	0	0
WOODAVE	WOOD AVE.	ROADWAY	CG186	COUNTY JURISDICTION NEAR BRIDGE	RIVER RD	B	149	20	2,980	AC	0	0	0
WOODSONPL	WOODSON PL	ROADWAY	CG12	CHERRY CT	N. 7TH ST	E	213	26	5,540	AC	0	0	0
YOSSL	YOSS PL	ROADWAY	CG232	S. River Rd	Hwy 99	B	174	29	5,055	AC	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG315	S. 8TH STREET	DEAD END	E	261	24	6,257	PCC	15	12	35
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG321	S. 6TH ST	S. 7TH ST	C	484	28	13,841	PCC	15	14	52
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG322	S. 5TH ST	HIGHWAY 99	E	105	26	2,718	PCC	15	13	14
N7THST	N. 7TH ST	ROADWAY	CG319	Hwy 99	DEAD END EAST OF HWY 99	E	263	30	7,886	PCC	15	15	28
NOST	N. O ST	ROADWAY	CG316	E. WHITEAKER AVE	E. GIBBS AVE	E	226	26	5,878	PCC	15	13	26
S5THST	S. 5TH ST	ROADWAY	CG317	ASH AVE.	75 FT. S OF BIRCH AVE	E	1,110	30	33,308	PCC	15	15	148
S5THST	S. 5TH ST	ROADWAY	CG318	HIGHWAY 99	ADAMS AVE	E	282	30	8,460	PCC	15	15	36

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
S8THST	S. 8TH ST	ROADWAY	CG320	E. HARRISON AVE	E. MONROE AVE	E	1,036	24	24,873	PCC	15	12	124
ASHAVE	ASH AVE	ROADWAY	CG327	CITY LIMITS W. OF Q ST	Q ST	E	360	18	6,480	GR	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG337	N. 7TH ST	N. 8TH ST	E	222	24	5,337	GR	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG338	N. 10TH ST	DEAD END	E	126	16	2,018	GR	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG351	S. GATEWAY BLVD	DEAD END	E	137	18	2,475	GR	0	0	0
HUDSONAVE	HUDSON AVE	ROADWAY	CG323	W. GIRARD AVE	DEAD END	E	516	16	7,296	GR	0	0	0
JACKSONAVE	JACKSON AVE	ROADWAY	CG336	DEAD END W. OF S. 1ST ST	S. 1ST ST	E	197	26	7,800	GR	0	0	0
JOHNSONAVE	JOHNSON AVE	ROADWAY	CG343	120 FT EAST OF S. 8TH ST	S. 11TH ST	E	672	20	13,444	GR	0	0	0
MERRILLIN	MERRILL LN	ROADWAY	CG326	S. M STREET	DEAD END	E	186	12	2,504	GR	0	0	0
N7THST	N. 7TH ST	ROADWAY	CG334	DEAD END	E. GROVER AVE	E	444	26	13,858	GR	0	0	0
NKST	N. K ST	ROADWAY	CG328	CHESTNUT AVE	DEAD END TO N.	E	127	28	3,560	GR	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG340	E. CHADWICK AVE	E. GEER AVE	E	1,314	23	30,211	GR	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG341	90 FT N. OF E. CHAMBERLAIN AVE	HWY 99	E	1,088	18	19,588	GR	0	0	0
NLST	N. L ST	ROADWAY	CG329	CHESTNUT AVE	DEAD END TO N.	E	189	12	2,266	GR	0	0	0
NOST	N. O ST	ROADWAY	CG330	145 N. OF W. MAIN ST	W. ASH AVE	E	158	23	3,639	GR	0	0	0
NOST	N. O ST	ROADWAY	CG331	W. ASH AVE	DEAD END	E	674	12	8,084	GR	0	0	0
OLDMILLPL	OLD MILL PL	ROADWAY	CG342	S. M ST	S. RIVER RD	E	815	12	9,777	GR	0	0	0
PIERCEAVE	PIERCE AVE	ROADWAY	CG344	S. 8TH ST	DEAD END	E	164	20	3,700	GR	0	0	0
ROBERTSLN	ROBERTS LN	ROADWAY	CG349	HARVEY RD	DEAD END	E	228	20	2,300	GR	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG255	DEAD END S. OF E. MADISON	E. MADISON AVE	E	189	16	5,306	GR	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG345	DEAD END S. OF JOHNSON	JOHNSON AVE	E	302	16	4,825	GR	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG346	DEAD END S. OF E. HARRISON AVE	E. HARRISON AVE	E	149	22	3,282	GR	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG347	E. HARRISON AVE	DEAD END N. OF E. HARRISON	E	167	16	2,670	GR	0	0	0
S12THST	S. 12TH ST	ROADWAY	CG348	DEAD END SOUTH OF E. MADISON	E. MADISON AVE	E	196	20	3,913	GR	0	0	0
S21STST	S. 21ST ST	ROADWAY	CG350	N. GATEWAY BLVD	DEAD END	E	202	17	2,057	GR	0	0	0
S5THST	S. 5TH ST	ROADWAY	CG333	FILLMORE AVE	TAYLOR AVE	E	608	10	5,079	GR	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG335	E. MONROE AVE	DEAD END N. OF E. MONROE AVE	E	120	24	5,880	GR	0	0	0
SNST	S. N ST	ROADWAY	CG324	125 S. OF CLARK AVE	CLARK AVE	E	100	20	2,001	GR	0	0	0
THAYERAVE	THAYER AVE	ROADWAY	CG339	N. 11TH ST	N. LANE ST	E	357	23	6,923	GR	0	0	0
TYLERAVE	TYLER AVE	ROADWAY	CG332	DEAD END	S. 1ST STREET	E	264	22	5,798	GR	0	0	0
VINCENTPL	VINCENT PL	ROADWAY	CG342	N. DOUGLAS ST	25 W. OF COLUMBIA CT	E	200	30	9,120	GR	0	0	0
							TOTALS	231,191	7,260,609				

Cottage Grove Pavement Management Program Street Inventory



— Label (Section ID)

Base Map from Lane County GIS (Sept. 2019)

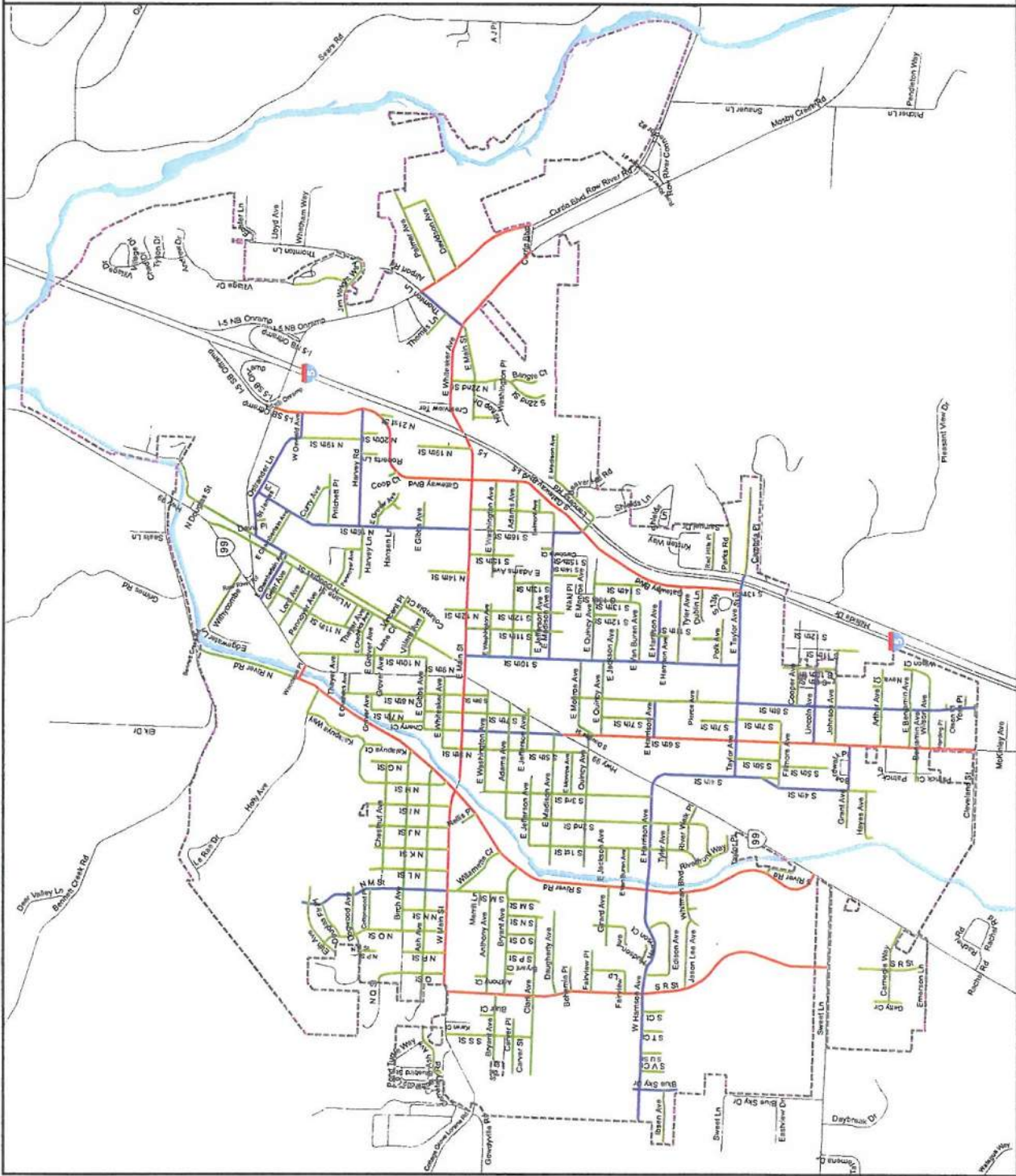


Inventory

Sept. 2019

Figure 1A

Cottage Grove Pavement Management Program Street Classification



- Arterial - Rank B *
- Collector - Rank C *
- Local - Rank E *

* Rank B, C, & E are PAVER program rank designations
Base Map from Lane County GIS (Sept. 2019)



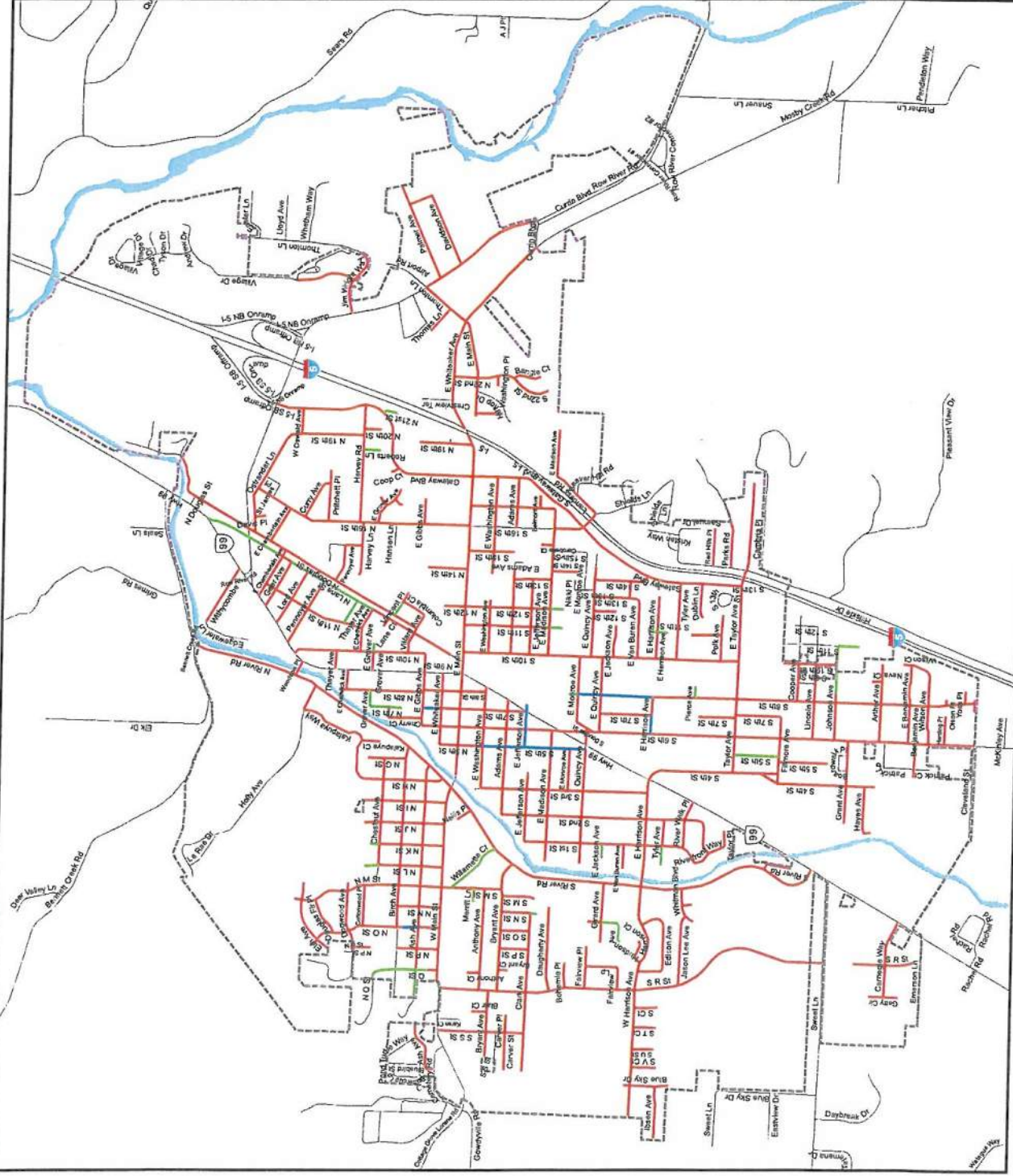
Section Rank

Cottage Grove Pavement Management Program

Surface Type

- Asphalt Concrete (AC)
- Gravel (GR)
- Portland Cement Concrete (PCC)

Base Map from Lane County GIS (Sept. 2019)



Surface Type

Sept. 2019

Figure 3A

**Pavement Management Report
City of Cottage Grove City Streets**

**APPENDIX B:
2018 SUMMARY PAVEMENT CONDITION ANALYSIS**

Table 1B and Table 2B

**Table 1B - STREET PAVEMENT MANAGEMENT IMPLEMENTATION
BRANCH CONDITION - 2018 PCI SURVEY RESULTS**

Network Name	BranchID	Branch Use	Sections	Branch Area (SqFt)	Surface Type - Current	Area-Weighted Average PCI
COTTAGE GROVE PVMT MGMT	ADAMSAVE	ROADWAY	5	95,308	AC	46
COTTAGE GROVE PVMT MGMT	ANTHONYAVE	ROADWAY	1	42,272	AC	57
COTTAGE GROVE PVMT MGMT	ANTHONYCT	ROADWAY	1	7,659	AC	63
COTTAGE GROVE PVMT MGMT	ARTHURAVE	ROADWAY	1	31,395	AC	75
COTTAGE GROVE PVMT MGMT	ASHAVE	ROADWAY	3	102,371	AC	50
COTTAGE GROVE PVMT MGMT	BANGLECT	ROADWAY	1	13,649	AC	70
COTTAGE GROVE PVMT MGMT	BELMONTAVE	ROADWAY	1	3,990	AC	52
COTTAGE GROVE PVMT MGMT	BENJAMINAV	ROADWAY	2	31,882	AC	87
COTTAGE GROVE PVMT MGMT	BIRCHAVE	ROADWAY	3	74,254	AC	62
COTTAGE GROVE PVMT MGMT	BLAIRCT	ROADWAY	1	8,613	AC	52
COTTAGE GROVE PVMT MGMT	BLUESKYDR	ROADWAY	1	24,966	AC	30
COTTAGE GROVE PVMT MGMT	BOHEMIAPL	ROADWAY	1	13,211	AC	61
COTTAGE GROVE PVMT MGMT	BRYANTAVE	ROADWAY	4	74,620	AC	29
COTTAGE GROVE PVMT MGMT	BRYANTCT	ROADWAY	1	6,233	AC	34
COTTAGE GROVE PVMT MGMT	CARNEGIEWA	ROADWAY	1	42,188	AC	89
COTTAGE GROVE PVMT MGMT	CAROBELLEC	ROADWAY	1	7,263	AC	53
COTTAGE GROVE PVMT MGMT	CARVERAVE	ROADWAY	1	15,536	AC	19
COTTAGE GROVE PVMT MGMT	CARVERPL	ROADWAY	1	9,724	AC	51
COTTAGE GROVE PVMT MGMT	CHERRYCT	ROADWAY	1	8,375	AC	46
COTTAGE GROVE PVMT MGMT	CHESTNUTAV	ROADWAY	1	40,423	AC	51
COTTAGE GROVE PVMT MGMT	CLARKAVE	ROADWAY	3	63,468	AC	49
COTTAGE GROVE PVMT MGMT	CLEVELANDS	ROADWAY	1	2,399	AC	84
COTTAGE GROVE PVMT MGMT	COLUMBIACT	ROADWAY	1	10,782	AC	73
COTTAGE GROVE PVMT MGMT	COOPCT	ROADWAY	1	4,394	AC	74
COTTAGE GROVE PVMT MGMT	COOPERAVE	ROADWAY	2	12,791	AC	67
COTTAGE GROVE PVMT MGMT	COTTONWOOD	ROADWAY	1	17,097	AC	92
COTTAGE GROVE PVMT MGMT	CURRYAVE	ROADWAY	1	17,744	AC	67
COTTAGE GROVE PVMT MGMT	DAUGHERTYA	ROADWAY	1	41,790	AC	81
COTTAGE GROVE PVMT MGMT	DAVIDSONAV	ROADWAY	1	49,859	AC	47
COTTAGE GROVE PVMT MGMT	DAVISPL	ROADWAY	1	5,754	AC	70
COTTAGE GROVE PVMT MGMT	DOGWOODAVE	ROADWAY	1	28,643	AC	89
COTTAGE GROVE PVMT MGMT	DOUGLASFIR	ROADWAY	1	15,872	AC	90
COTTAGE GROVE PVMT MGMT	DUBLINLN	ROADWAY	1	14,892	AC	40
COTTAGE GROVE PVMT MGMT	ECHADWICKA	ROADWAY	3	25,439	AC	61
COTTAGE GROVE PVMT MGMT	ECHAMBERLA	ROADWAY	3	36,971	AC	37
COTTAGE GROVE PVMT MGMT	EDISONAVE	ROADWAY	1	39,108	AC	54
COTTAGE GROVE PVMT MGMT	EGIBBSAVE	ROADWAY	4	40,279	AC	57
COTTAGE GROVE PVMT MGMT	EGROVERAVE	ROADWAY	4	36,393	AC	71
COTTAGE GROVE PVMT MGMT	EHARRISONA	ROADWAY	5	98,353	AC/PCC	50
COTTAGE GROVE PVMT MGMT	EJACKSONAV	ROADWAY	1	13,667	AC	48
COTTAGE GROVE PVMT MGMT	EJEFFERSON	ROADWAY	6	71,076	AC/PCC	55
COTTAGE GROVE PVMT MGMT	ELMAVE	ROADWAY	1	31,632	AC	89

**Table 1B - STREET PAVEMENT MANAGEMENT IMPLEMENTATION
BRANCH CONDITION - 2018 PCI SURVEY RESULTS**

Network Name	BranchID	Branch Use	Sections	Branch Area (SqFt)	Surface Type - Current	Area-Weighted Average PCI
COTTAGE GROVE PVMT MGMT	EMADISONAV	ROADWAY	7	127,146	AC	60
COTTAGE GROVE PVMT MGMT	EMAINST	ROADWAY	7	234,001	AC	69
COTTAGE GROVE PVMT MGMT	EMONROEAVE	ROADWAY	3	42,988	AC	56
COTTAGE GROVE PVMT MGMT	EQUINCYAVE	ROADWAY	9	111,745	AC	62
COTTAGE GROVE PVMT MGMT	ETAYLORAVE	ROADWAY	4	135,507	AC	47
COTTAGE GROVE PVMT MGMT	EVANBURENA	ROADWAY	2	32,292	AC	57
COTTAGE GROVE PVMT MGMT	EWASHINGTO	ROADWAY	8	118,108	AC	68
COTTAGE GROVE PVMT MGMT	EWHITEAKER	ROADWAY	3	92,225	AC	33
COTTAGE GROVE PVMT MGMT	FAIRVIEWLP	ROADWAY	1	22,015	AC	53
COTTAGE GROVE PVMT MGMT	FAIRVIEWPL	ROADWAY	1	19,936	AC	91
COTTAGE GROVE PVMT MGMT	FILLMOREAV	ROADWAY	2	25,991	AC	54
COTTAGE GROVE PVMT MGMT	GEERAVE	ROADWAY	1	20,515	AC	45
COTTAGE GROVE PVMT MGMT	GETTYCIRCL	ROADWAY	1	16,396	AC	92
COTTAGE GROVE PVMT MGMT	GIRARDAVE	ROADWAY	3	22,563	AC	64
COTTAGE GROVE PVMT MGMT	GIRARDCT	ROADWAY	1	8,254	AC	61
COTTAGE GROVE PVMT MGMT	GRANTAVE	ROADWAY	2	37,279	AC	41
COTTAGE GROVE PVMT MGMT	HARDINGPL	ROADWAY	1	10,152	AC	95
COTTAGE GROVE PVMT MGMT	HARRISONCT	ROADWAY	1	10,292	AC	78
COTTAGE GROVE PVMT MGMT	HARVEYLN	ROADWAY	2	23,219	AC	67
COTTAGE GROVE PVMT MGMT	HARVEYRD	ROADWAY	2	52,426	AC	51
COTTAGE GROVE PVMT MGMT	HAYESAV	ROADWAY	1	20,183	AC	69
COTTAGE GROVE PVMT MGMT	HOLLYAVE	ROADWAY	1	12,358	AC	78
COTTAGE GROVE PVMT MGMT	IBSENAVE	ROADWAY	1	21,065	AC	79
COTTAGE GROVE PVMT MGMT	JASONLEEAV	ROADWAY	1	29,456	AC	72
COTTAGE GROVE PVMT MGMT	JIMWRIGHTW	ROADWAY	1	40,373	AC	43
COTTAGE GROVE PVMT MGMT	JOHNSONAVE	ROADWAY	1	18,682	AC	72
COTTAGE GROVE PVMT MGMT	KALAPUYAWA	ROADWAY	1	39,758	AC	75
COTTAGE GROVE PVMT MGMT	KALAPUYSCT	ROADWAY	1	9,761	AC	71
COTTAGE GROVE PVMT MGMT	KATHLEENDR	ROADWAY	1	13,956	AC	84
COTTAGE GROVE PVMT MGMT	LANDESSRD	ROADWAY	1	23,528	AC	69
COTTAGE GROVE PVMT MGMT	LANECT	ROADWAY	1	5,845	AC	75
COTTAGE GROVE PVMT MGMT	LINCOLNAVE	ROADWAY	3	31,474	AC	48
COTTAGE GROVE PVMT MGMT	LORDAVE	ROADWAY	1	22,597	AC	38
COTTAGE GROVE PVMT MGMT	MEEKERDR	ROADWAY	1	4,230	AC	67
COTTAGE GROVE PVMT MGMT	MOSBYCRRD	ROADWAY	1	48,131	AC	57
COTTAGE GROVE PVMT MGMT	N10THST	ROADWAY	1	49,357	AC	53
COTTAGE GROVE PVMT MGMT	N11THST	ROADWAY	3	35,243	AC	55
COTTAGE GROVE PVMT MGMT	N12THST	ROADWAY	1	8,740	AC	80
COTTAGE GROVE PVMT MGMT	N14THST	ROADWAY	2	25,558	AC	50
COTTAGE GROVE PVMT MGMT	N16THST	ROADWAY	2	109,136	AC	24
COTTAGE GROVE PVMT MGMT	N19THST	ROADWAY	2	39,987	AC	59
COTTAGE GROVE PVMT MGMT	N20THST	ROADWAY	1	3,657	AC	69

**Table 1B - STREET PAVEMENT MANAGEMENT IMPLEMENTATION
BRANCH CONDITION - 2018 PCI SURVEY RESULTS**

Network Name	BranchID	Branch Use	Sections	Branch Area (SqFt)	Surface Type - Current	Area-Weighted Average PCI
COTTAGE GROVE PVMT MGMT	N22NDST	ROADWAY	1	9,629	AC	71
COTTAGE GROVE PVMT MGMT	N5THST	ROADWAY	1	8,792	AC	39
COTTAGE GROVE PVMT MGMT	N6THST	ROADWAY	2	16,993	AC	63
COTTAGE GROVE PVMT MGMT	N7THST	ROADWAY	2	16,832	AC / PCC	46
COTTAGE GROVE PVMT MGMT	N8THST	ROADWAY	3	47,163	AC	58
COTTAGE GROVE PVMT MGMT	NDOUGLASST	ROADWAY	6	102,151	AC	38
COTTAGE GROVE PVMT MGMT	NELLISPL	ROADWAY	1	6,698	AC	55
COTTAGE GROVE PVMT MGMT	NEVACT	ROADWAY	1	5,890	AC	76
COTTAGE GROVE PVMT MGMT	NGATEWAYBL	ROADWAY	4	145,856	AC	64
COTTAGE GROVE PVMT MGMT	NGST	ROADWAY	2	13,374	AC	50
COTTAGE GROVE PVMT MGMT	NHST	ROADWAY	1	32,188	AC	36
COTTAGE GROVE PVMT MGMT	NIST	ROADWAY	1	35,992	AC	46
COTTAGE GROVE PVMT MGMT	NJST	ROADWAY	1	29,583	AC	34
COTTAGE GROVE PVMT MGMT	NKST	ROADWAY	1	24,994	AC	72
COTTAGE GROVE PVMT MGMT	NLANEST	ROADWAY	5	37,247	AC	49
COTTAGE GROVE PVMT MGMT	NLST	ROADWAY	1	25,049	AC	73
COTTAGE GROVE PVMT MGMT	NMST	ROADWAY	2	72,951	AC	78
COTTAGE GROVE PVMT MGMT	NNST	ROADWAY	1	16,996	AC	77
COTTAGE GROVE PVMT MGMT	NOST	ROADWAY	3	54,671	AC / PCC	78
COTTAGE GROVE PVMT MGMT	NPST	ROADWAY	2	24,449	AC	72
COTTAGE GROVE PVMT MGMT	NQST	ROADWAY	1	3,335	AC	12
COTTAGE GROVE PVMT MGMT	NRIVERRD	ROADWAY	3	154,046	AC	41
COTTAGE GROVE PVMT MGMT	OLSONPL	ROADWAY	1	2,950	AC	90
COTTAGE GROVE PVMT MGMT	OSTRANDERL	ROADWAY	2	54,492	AC	40
COTTAGE GROVE PVMT MGMT	OSWALDWAVE	ROADWAY	1	10,544	AC	43
COTTAGE GROVE PVMT MGMT	PALMERAVE	ROADWAY	1	50,376	AC	57
COTTAGE GROVE PVMT MGMT	PARKSRD	ROADWAY	1	10,970	AC	72
COTTAGE GROVE PVMT MGMT	PENNOYERAV	ROADWAY	2	42,874	AC	64
COTTAGE GROVE PVMT MGMT	POLKAVE	ROADWAY	1	17,349	AC	9
COTTAGE GROVE PVMT MGMT	PRITCHETTP	ROADWAY	1	22,293	AC	66
COTTAGE GROVE PVMT MGMT	REDHILLSPL	ROADWAY	1	18,810	AC	98
COTTAGE GROVE PVMT MGMT	RIVERFRONT	ROADWAY	1	14,850	AC	86
COTTAGE GROVE PVMT MGMT	RIVERWALKP	ROADWAY	2	23,002	AC	94
COTTAGE GROVE PVMT MGMT	ROWRIVERCO	ROADWAY	1	86,168	AC	16
COTTAGE GROVE PVMT MGMT	S10THST	ROADWAY	4	155,361	AC	41
COTTAGE GROVE PVMT MGMT	S11THST	ROADWAY	2	43,320	AC	43
COTTAGE GROVE PVMT MGMT	S12THST	ROADWAY	2	39,527	AC	52
COTTAGE GROVE PVMT MGMT	S13THST	ROADWAY	2	26,355	AC	64
COTTAGE GROVE PVMT MGMT	S14THST	ROADWAY	2	28,124	AC	51
COTTAGE GROVE PVMT MGMT	S15THST	ROADWAY	1	18,539	AC	82
COTTAGE GROVE PVMT MGMT	S16THST	ROADWAY	1	54,915	AC	64
COTTAGE GROVE PVMT MGMT	S17THST	ROADWAY	1	34,141	AC	62

**Table 1B - STREET PAVEMENT MANAGEMENT IMPLEMENTATION
BRANCH CONDITION - 2018 PCI SURVEY RESULTS**

Network Name	BranchID	Branch Use	Sections	Branch Area (SqFt)	Surface Type - Current	Area-Weighted Average PCI
COTTAGE GROVE PVMT MGMT	S1STST	ROADWAY	2	70,769	AC	54
COTTAGE GROVE PVMT MGMT	S21STST	ROADWAY	1	8,634	AC	81
COTTAGE GROVE PVMT MGMT	S22NDST	ROADWAY	1	36,744	AC	71
COTTAGE GROVE PVMT MGMT	S2NDST	ROADWAY	3	98,940	AC	70
COTTAGE GROVE PVMT MGMT	S3RDST	ROADWAY	3	62,447	AC	72
COTTAGE GROVE PVMT MGMT	S4THST	ROADWAY	4	101,998	AC	45
COTTAGE GROVE PVMT MGMT	S4THSTY	ROADWAY	1	6,513	AC	78
COTTAGE GROVE PVMT MGMT	S5THST	ROADWAY	4	74,337	AC/PCC	47
COTTAGE GROVE PVMT MGMT	S6THST	ROADWAY	5	261,175	AC	70
COTTAGE GROVE PVMT MGMT	S6THSTY	ROADWAY	1	1,521	AC	43
COTTAGE GROVE PVMT MGMT	S7THST	ROADWAY	4	82,241	AC	59
COTTAGE GROVE PVMT MGMT	S8THST	ROADWAY	7	173,519	AC/PCC	62
COTTAGE GROVE PVMT MGMT	SCT	ROADWAY	1	12,522	AC	56
COTTAGE GROVE PVMT MGMT	SDOUGLASST	ROADWAY	1	5,851	AC	35
COTTAGE GROVE PVMT MGMT	SGATEWAYBL	ROADWAY	2	152,577	AC	54
COTTAGE GROVE PVMT MGMT	SMST	ROADWAY	3	40,046	AC	38
COTTAGE GROVE PVMT MGMT	SNST	ROADWAY	1	11,513	AC	3
COTTAGE GROVE PVMT MGMT	SOST	ROADWAY	1	11,525	AC	20
COTTAGE GROVE PVMT MGMT	SPST	ROADWAY	1	10,794	AC	12
COTTAGE GROVE PVMT MGMT	SRIVERRD	ROADWAY	4	204,909	AC	44
COTTAGE GROVE PVMT MGMT	SRIVERRDFR	ROADWAY	1	10,270	AC	69
COTTAGE GROVE PVMT MGMT	SRST	ROADWAY	4	274,277	AC	75
COTTAGE GROVE PVMT MGMT	SSST	ROADWAY	1	35,157	AC	59
COTTAGE GROVE PVMT MGMT	STCT	ROADWAY	1	12,006	AC	81
COTTAGE GROVE PVMT MGMT	SUST	ROADWAY	1	8,852	AC	75
COTTAGE GROVE PVMT MGMT	SVCT	ROADWAY	1	13,077	AC	55
COTTAGE GROVE PVMT MGMT	TAYLORPL	ROADWAY	1	7,143	AC	91
COTTAGE GROVE PVMT MGMT	THAYERAVE	ROADWAY	1	7,527	AC	44
COTTAGE GROVE PVMT MGMT	THOMASPL	ROADWAY	1	12,013	AC	13
COTTAGE GROVE PVMT MGMT	THORNTONRD	ROADWAY	1	25,090	AC	35
COTTAGE GROVE PVMT MGMT	TYLERAVE	ROADWAY	2	40,106	AC	67
COTTAGE GROVE PVMT MGMT	VANBURENAV	ROADWAY	1	10,034	AC	81
COTTAGE GROVE PVMT MGMT	VILLAGEDR	ROADWAY	1	29,245	AC	53
COTTAGE GROVE PVMT MGMT	VILLARDAVE	ROADWAY	2	16,143	AC	50
COTTAGE GROVE PVMT MGMT	VINCENTPL	ROADWAY	1	5,022	AC	91
COTTAGE GROVE PVMT MGMT	WASHINGTON	ROADWAY	1	6,455	AC	76
COTTAGE GROVE PVMT MGMT	WHARRISONA	ROADWAY	1	150,082	AC	56
COTTAGE GROVE PVMT MGMT	WHITMANBLV	ROADWAY	1	22,241	AC	73
COTTAGE GROVE PVMT MGMT	WILSONAVE	ROADWAY	1	18,309	AC	89
COTTAGE GROVE PVMT MGMT	WILSONCT	ROADWAY	1	22,037	AC	91
COTTAGE GROVE PVMT MGMT	WITHYCOMBE	ROADWAY	1	26,173	AC	48
COTTAGE GROVE PVMT MGMT	WMAINST	ROADWAY	1	116,611	AC	82

**Table 1B - STREET PAVEMENT MANAGEMENT IMPLEMENTATION
BRANCH CONDITION - 2018 PCI SURVEY RESULTS**

Network Name	BranchID	Branch Use	Sections	Branch Area (SqFt)	Surface Type - Current	Area-Weighted Average PCI
<i>COTTAGE GROVE PVMT MGMT</i>	<i>WOODAVE</i>	<i>ROADWAY</i>	<i>1</i>	<i>2,980</i>	<i>AC</i>	<i>8</i>
<i>COTTAGE GROVE PVMT MGMT</i>	<i>WOODSONPL</i>	<i>ROADWAY</i>	<i>1</i>	<i>5,540</i>	<i>AC</i>	<i>88</i>
<i>COTTAGE GROVE PVMT MGMT</i>	<i>YOSSPL</i>	<i>ROADWAY</i>	<i>1</i>	<i>5,055</i>	<i>AC</i>	<i>95</i>
TOTALS			321	7,058,318		

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	ADAMSAVE	CG162	AC	09-25-2018	59	Fair	36	31	33
COTTAGEGRV	ADAMSAVE	CG161	AC	09-25-2018	34	Very Poor	31	60	9
COTTAGEGRV	ADAMSAVE	CG159	AC	09-05-2018	20	Serious	11	75	14
COTTAGEGRV	ADAMSAVE	CG160	AC	09-05-2018	69	Fair	57	0	43
COTTAGEGRV	ADAMSAVE	CG163	AC	09-26-2018	60	Fair	59	26	15
COTTAGEGRV	ANTHONYAVE	CG49	AC	08-30-2018	57	Fair	35	36	29
COTTAGEGRV	ANTHONYCT	CG59	AC	08-30-2018	63	Fair	66	34	0
COTTAGEGRV	ARTHURAVE	CG234	AC	09-20-2018	75	Satisfactory	71	29	0
COTTAGEGRV	ASHAVE	CG61	AC	08-30-2018	77	Satisfactory	67	0	33
COTTAGEGRV	ASHAVE	CG63	AC	08-24-2018	53	Poor	38	48	14
COTTAGEGRV	ASHAVE	CG64	AC	08-24-2018	33	Very Poor	17	75	8
COTTAGEGRV	BANGLECT	CG305	AC	09-27-2018	70	Fair	43	15	42
COTTAGEGRV	BELMONTAVE	CG273	AC	09-26-2018	52	Poor	74	0	26
COTTAGEGRV	BENJAMINAV	CG227	AC	09-19-2018	86	Good	100	0	0
COTTAGEGRV	BENJAMINAV	CG228	AC	09-19-2018	87	Good	100	0	0
COTTAGEGRV	BIRCHAVE	CG67	AC	08-24-2018	61	Fair	40	48	12
COTTAGEGRV	BIRCHAVE	CG65	AC	08-24-2018	69	Fair	48	24	28
COTTAGEGRV	BIRCHAVE	CG66	AC	08-24-2018	45	Poor	42	52	6
COTTAGEGRV	BLAIRCT	CG51	AC	08-29-2018	52	Poor	55	45	0
COTTAGEGRV	BLUESKYDR	CG25	AC	08-24-2018	30	Very Poor	27	68	5
COTTAGEGRV	BOHEMIAPL	CG38	AC	08-29-2018	61	Fair	100	0	0
COTTAGEGRV	BRYANTAVE	CG45	AC	08-29-2018	50	Poor	48	52	0
COTTAGEGRV	BRYANTAVE	CG47	AC	08-29-2018	11	Serious	29	48	23
COTTAGEGRV	BRYANTAVE	CG46	AC	08-29-2018	40	Very Poor	40	60	0
COTTAGEGRV	BRYANTAVE	CG48	AC	08-29-2018	11	Serious	35	61	4
COTTAGEGRV	BRYANTCT	CG52	AC	08-29-2018	34	Very Poor	37	63	0
COTTAGEGRV	CARNEGIEWA	CG2	AC	08-23-2018	89	Good	68	0	32
COTTAGEGRV	CAROBELLEC	CG271	AC	09-25-2018	53	Poor	42	30	28
COTTAGEGRV	CARVERAVE	CG43	AC	08-30-2018	19	Serious	23	77	0
COTTAGEGRV	CARVERPL	CG44	AC	08-30-2018	51	Poor	43	43	14
COTTAGEGRV	CERRYCT	CG134	AC	09-05-2018	46	Poor	42	36	22
COTTAGEGRV	CHESTNUTAV	CG68	AC	08-24-2018	51	Poor	37	54	9
COTTAGEGRV	CLARKAVE	CG42	AC	08-29-2018	41	Poor	24	76	0
COTTAGEGRV	CLARKAVE	CG40	AC	08-29-2018	63	Fair	57	0	43
COTTAGEGRV	CLARKAVE	CG41	AC	08-29-2018	59	Fair	100	0	0
COTTAGEGRV	CLEVELANDS	CG124	AC	09-19-2018	84	Satisfactory	34	0	66
COTTAGEGRV	COLUMBIACT	CG214	AC	09-06-2018	73	Satisfactory	86	0	14
COTTAGEGRV	COOPCT	CG292	AC	09-27-2018	74	Satisfactory	67	33	0
COTTAGEGRV	COOPERAVE	CG241	AC	09-20-2018	39	Very Poor	14	46	40
COTTAGEGRV	COOPERAVE	CG240	AC	09-20-2018	75	Satisfactory	89	0	11
COTTAGEGRV	COTTONWOOD	CG83	AC	08-24-2018	92	Good	100	0	0
COTTAGEGRV	CURRYAVE	CG289	AC	09-26-2018	67	Fair	68	32	0
COTTAGEGRV	DAUGHERTYA	CG39	AC	08-29-2018	81	Satisfactory	96	0	4
COTTAGEGRV	DAVIDSONAV	CG311	AC	09-28-2018	47	Poor	24	37	39
COTTAGEGRV	DAVISPL	CG288	AC	09-26-2018	70	Fair	100	0	0
COTTAGEGRV	DOGWOODAVE	CG84	AC	08-24-2018	89	Good	100	0	0
COTTAGEGRV	DOUGLASFIR	CG85	AC	08-24-2018	90	Good	100	0	0

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	DUBLINLN	CG249	AC	09-24-2018	40	Very Poor	42	58	0
COTTAGEGRV	ECHADWICKA	CG191	AC	09-06-2018	59	Fair	100	0	0
COTTAGEGRV	ECHADWICKA	CG190	AC	09-06-2018	62	Fair	100	0	0
COTTAGEGRV	ECHADWICKA	CG189	AC	09-05-2018	63	Fair	77	0	23
COTTAGEGRV	ECHAMBERLA	CG197	AC	09-06-2018	58	Fair	49	14	37
COTTAGEGRV	ECHAMBERLA	CG198	AC	09-19-2018	15	Serious	39	24	37
COTTAGEGRV	ECHAMBERLA	CG199	AC	09-26-2018	15	Serious	21	79	0
COTTAGEGRV	EDISONAVE	CG16	AC	08-24-2018	54	Poor	47	48	5
COTTAGEGRV	EGIBBSAVE	CG185	AC	09-27-2018	42	Poor	44	45	11
COTTAGEGRV	EGIBBSAVE	CG183	AC	09-06-2018	72	Satisfactory	62	0	38
COTTAGEGRV	EGIBBSAVE	CG182	AC	09-06-2018	57	Fair	31	30	39
COTTAGEGRV	EGIBBSAVE	CG184	AC	09-06-2018	50	Poor	43	36	21
COTTAGEGRV	EGROVERAVE	CG187	AC	09-06-2018	41	Poor	75	25	0
COTTAGEGRV	EGROVERAVE	CG188	AC	09-26-2018	82	Satisfactory	85	0	15
COTTAGEGRV	EGROVERAVE	CG294	AC	09-26-2018	70	Fair	83	17	0
COTTAGEGRV	EGROVERAVE	CG293	AC	09-26-2018	72	Satisfactory	79	21	0
COTTAGEGRV	EHARRISONA	CG315	PCC	10-02-2018	46	Poor	8	92	0
COTTAGEGRV	EHARRISONA	CG29	AC	09-21-2018	99	Good	100	0	0
COTTAGEGRV	EHARRISONA	CG31	AC	09-24-2018	71	Satisfactory	100	0	0
COTTAGEGRV	EHARRISONA	CG30	AC	09-24-2018	56	Fair	52	0	48
COTTAGEGRV	EHARRISONA	CG28	AC	08-30-2018	41	Poor	49	48	3
COTTAGEGRV	EJACKSONAV	CG265	AC	09-24-2018	48	Poor	41	41	18
COTTAGEGRV	EJEFFERSON	CG158	AC	09-25-2018	50	Poor	50	23	27
COTTAGEGRV	EJEFFERSON	CG156	AC	09-05-2018	86	Good	100	0	0
COTTAGEGRV	EJEFFERSON	CG322	PCC	10-02-2018	31	Very Poor	3	79	18
COTTAGEGRV	EJEFFERSON	CG321	PCC	10-02-2018	60	Fair	8	82	10
COTTAGEGRV	EJEFFERSON	CG155	AC	09-05-2018	57	Fair	48	0	52
COTTAGEGRV	EJEFFERSON	CG157	AC	09-05-2018	19	Serious	24	36	40
COTTAGEGRV	ELMAVE	CG86	AC	08-24-2018	89	Good	100	0	0
COTTAGEGRV	EMADISONAV	CG153	AC	09-25-2018	69	Fair	87	0	13
COTTAGEGRV	EMADISONAV	CG151	AC	09-25-2018	50	Poor	72	12	16
COTTAGEGRV	EMADISONAV	CG154	AC	09-26-2018	76	Satisfactory	85	0	15
COTTAGEGRV	EMADISONAV	CG148	AC	09-05-2018	71	Satisfactory	38	0	62
COTTAGEGRV	EMADISONAV	CG149	AC	09-05-2018	56	Fair	97	0	3
COTTAGEGRV	EMADISONAV	CG152	AC	09-25-2018	51	Poor	38	25	37
COTTAGEGRV	EMADISONAV	CG150	AC	09-05-2018	52	Poor	44	56	0
COTTAGEGRV	EMAINST	CG177	AC	09-27-2018	75	Satisfactory	63	0	37
COTTAGEGRV	EMAINST	CG178	AC	09-27-2018	77	Satisfactory	92	0	8
COTTAGEGRV	EMAINST	CG176	AC	09-27-2018	61	Fair	100	0	0
COTTAGEGRV	EMAINST	CG173	AC	09-27-2018	79	Satisfactory	20	0	80
COTTAGEGRV	EMAINST	CG175	AC	09-27-2018	30	Very Poor	34	56	10
COTTAGEGRV	EMAINST	CG172	AC	09-06-2018	50	Poor	51	49	0
COTTAGEGRV	EMAINST	CG174	AC	09-27-2018	85	Satisfactory	48	52	0
COTTAGEGRV	EMONROEAVE	CG147	AC	09-21-2018	33	Very Poor	18	71	11
COTTAGEGRV	EMONROEAVE	CG146	AC	09-21-2018	38	Very Poor	68	32	0
COTTAGEGRV	EMONROEAVE	CG145	AC	09-05-2018	87	Good	97	0	3
COTTAGEGRV	EQUINCYAVE	CG138	AC	09-05-2018	85	Satisfactory	71	16	13

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	EQUINCYAVE	CG139	AC	09-21-2018	0	Failed	45	50	5
COTTAGEGRV	EQUINCYAVE	CG144	AC	09-24-2018	45	Poor	65	0	35
COTTAGEGRV	EQUINCYAVE	CG143	AC	09-24-2018	63	Fair	59	41	0
COTTAGEGRV	EQUINCYAVE	CG140	AC	09-21-2018	56	Fair	80	20	0
COTTAGEGRV	EQUINCYAVE	CG141	AC	09-21-2018	59	Fair	89	0	11
COTTAGEGRV	EQUINCYAVE	CG136	AC	08-30-2018	10	Failed	7	62	31
COTTAGEGRV	EQUINCYAVE	CG137	AC	08-30-2018	80	Satisfactory	41	37	22
COTTAGEGRV	EQUINCYAVE	CG142	AC	09-24-2018	68	Fair	82	0	18
COTTAGEGRV	ETAYLORAVE	CG247	AC	09-21-2018	60	Fair	52	11	37
COTTAGEGRV	ETAYLORAVE	CG245	AC	09-21-2018	38	Very Poor	35	64	1
COTTAGEGRV	ETAYLORAVE	CG244	AC	09-21-2018	52	Poor	41	51	8
COTTAGEGRV	ETAYLORAVE	CG246	AC	09-21-2018	44	Poor	35	35	30
COTTAGEGRV	EVANBURENA	CG267	AC	09-24-2018	71	Satisfactory	59	0	41
COTTAGEGRV	EVANBURENA	CG266	AC	09-24-2018	53	Poor	46	35	19
COTTAGEGRV	EWASHINGTO	CG168	AC	09-25-2018	81	Satisfactory	69	31	0
COTTAGEGRV	EWASHINGTO	CG166	AC	09-05-2018	74	Satisfactory	100	0	0
COTTAGEGRV	EWASHINGTO	CG171	AC	09-25-2018	61	Fair	75	25	0
COTTAGEGRV	EWASHINGTO	CG165	AC	09-05-2018	95	Good	100	0	0
COTTAGEGRV	EWASHINGTO	CG167	AC	09-25-2018	77	Satisfactory	88	12	0
COTTAGEGRV	EWASHINGTO	CG164	AC	09-05-2018	38	Very Poor	25	73	2
COTTAGEGRV	EWASHINGTO	CG170	AC	09-25-2018	67	Fair	67	33	0
COTTAGEGRV	EWASHINGTO	CG169	AC	09-25-2018	75	Satisfactory	41	0	59
COTTAGEGRV	EWHITEAKER	CG181	AC	09-27-2018	26	Very Poor	39	37	24
COTTAGEGRV	EWHITEAKER	CG180	AC	09-27-2018	24	Serious	46	42	12
COTTAGEGRV	EWHITEAKER	CG179	AC	09-06-2018	46	Poor	51	49	0
COTTAGEGRV	FAIRVIEWLP	CG32	AC	08-29-2018	53	Poor	73	27	0
COTTAGEGRV	FAIRVIEWPL	CG33	AC	08-29-2018	91	Good	100	0	0
COTTAGEGRV	FILLMOREAV	CG242	AC	09-21-2018	49	Poor	63	15	22
COTTAGEGRV	FILLMOREAV	CG243	AC	09-21-2018	64	Fair	86	0	14
COTTAGEGRV	GEERAVE	CG196	AC	09-06-2018	45	Poor	40	60	0
COTTAGEGRV	GETTYCIRCL	CG1	AC	08-20-2018	92	Good	100	0	0
COTTAGEGRV	GIRARDAVE	CG36	AC	08-29-2018	92	Good	100	0	0
COTTAGEGRV	GIRARDAVE	CG35	AC	08-29-2018	63	Fair	100	0	0
COTTAGEGRV	GIRARDAVE	CG34	AC	08-29-2018	56	Fair	97	0	3
COTTAGEGRV	GIRARDCT	CG37	AC	08-29-2018	61	Fair	100	0	0
COTTAGEGRV	GRANTAVE	CG224	AC	09-20-2018	22	Serious	21	73	6
COTTAGEGRV	GRANTAVE	CG225	AC	09-20-2018	55	Poor	79	11	10
COTTAGEGRV	HARDINGPL	CG233	AC	09-19-2018	95	Good	100	0	0
COTTAGEGRV	HARRISONCT	CG17	AC	08-24-2018	78	Satisfactory	100	0	0
COTTAGEGRV	HARVEYLN	CG287	AC	09-26-2018	56	Fair	34	24	42
COTTAGEGRV	HARVEYLN	CG286	AC	09-26-2018	74	Satisfactory	100	0	0
COTTAGEGRV	HARVEYRD	CG285	AC	09-27-2018	45	Poor	47	41	12
COTTAGEGRV	HARVEYRD	CG284	AC	09-27-2018	53	Poor	51	38	11
COTTAGEGRV	HAYESAV	CG223	AC	09-20-2018	69	Fair	73	0	27
COTTAGEGRV	HOLLYAVE	CG90	AC	08-24-2018	78	Satisfactory	100	0	0
COTTAGEGRV	IBSENAVE	CG26	AC	08-24-2018	79	Satisfactory	100	0	0
COTTAGEGRV	JASONLEEAV	CG15	AC	08-24-2018	72	Satisfactory	91	8	1

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	JIMWRIGHTW	CG313	AC	09-28-2018	43	Poor	45	55	0
COTTAGEGRV	JOHNSONAVE	CG236	AC	09-20-2018	72	Satisfactory	53	47	0
COTTAGEGRV	KALAPUYAWA	CG88	AC	08-24-2018	75	Satisfactory	100	0	0
COTTAGEGRV	KALAPUYSC	CG89	AC	08-24-2018	71	Satisfactory	100	0	0
COTTAGEGRV	KATHLEENDR	CG226	AC	09-20-2018	84	Satisfactory	100	0	0
COTTAGEGRV	LANDESSRD	CG306	AC	09-26-2018	69	Fair	74	14	12
COTTAGEGRV	LANECT	CG206	AC	09-06-2018	75	Satisfactory	62	38	0
COTTAGEGRV	LINCOLNAVE	CG239	AC	09-20-2018	10	Failed	38	58	4
COTTAGEGRV	LINCOLNAVE	CG238	AC	09-20-2018	44	Poor	74	26	0
COTTAGEGRV	LINCOLNAVE	CG237	AC	09-20-2018	62	Fair	99	0	1
COTTAGEGRV	LORDAVE	CG195	AC	09-06-2018	38	Very Poor	28	45	27
COTTAGEGRV	MEEKERDR	CG14	AC	08-24-2018	67	Fair	55	0	45
COTTAGEGRV	MOSBYCRRD	CG307	AC	09-27-2018	57	Fair	77	16	7
COTTAGEGRV	N10THST	CG200	AC	09-06-2018	53	Poor	33	40	27
COTTAGEGRV	N11THST	CG205	AC	09-06-2018	86	Good	100	0	0
COTTAGEGRV	N11THST	CG204	AC	09-06-2018	43	Poor	42	58	0
COTTAGEGRV	N11THST	CG203	AC	09-06-2018	69	Fair	100	0	0
COTTAGEGRV	N12THST	CG259	AC	09-25-2018	80	Satisfactory	89	0	11
COTTAGEGRV	N14THST	CG291	AC	09-25-2018	60	Fair	60	40	0
COTTAGEGRV	N14THST	CG264	AC	09-25-2018	46	Poor	26	53	21
COTTAGEGRV	N16THST	CG283	AC	09-26-2018	25	Serious	36	64	0
COTTAGEGRV	N16THST	CG282	AC	09-26-2018	23	Serious	36	46	18
COTTAGEGRV	N19THST	CG281	AC	09-27-2018	74	Satisfactory	88	0	12
COTTAGEGRV	N19THST	CG280	AC	09-27-2018	19	Serious	73	0	27
COTTAGEGRV	N20THST	CG295	AC	09-27-2018	69	Fair	34	13	53
COTTAGEGRV	N22NDST	CG302	AC	09-27-2018	71	Satisfactory	45	13	42
COTTAGEGRV	N5THST	CG111	AC	09-05-2018	39	Very Poor	16	63	21
COTTAGEGRV	N6THST	CG118	AC	09-05-2018	52	Poor	33	56	11
COTTAGEGRV	N6THST	CG117	AC	09-05-2018	72	Satisfactory	48	41	11
COTTAGEGRV	N7THST	CG319	PCC	10-01-2018	33	Very Poor	2	98	0
COTTAGEGRV	N7THST	CG123	AC	09-05-2018	57	Fair	47	47	6
COTTAGEGRV	N8THST	CG131	AC	09-05-2018	59	Fair	82	0	18
COTTAGEGRV	N8THST	CG132	AC	09-05-2018	55	Poor	74	13	13
COTTAGEGRV	N8THST	CG133	AC	09-05-2018	96	Good	100	0	0
COTTAGEGRV	NDOUGLASST	CG218	AC	09-19-2018	44	Poor	38	52	10
COTTAGEGRV	NDOUGLASST	CG217	AC	09-19-2018	81	Satisfactory	100	0	0
COTTAGEGRV	NDOUGLASST	CG215	AC	09-19-2018	13	Serious	27	57	16
COTTAGEGRV	NDOUGLASST	CG220	AC	09-19-2018	58	Fair	49	12	39
COTTAGEGRV	NDOUGLASST	CG216	AC	09-19-2018	0	Failed	26	37	37
COTTAGEGRV	NDOUGLASST	CG219	AC	09-19-2018	57	Fair	54	39	7
COTTAGEGRV	NELLISPL	CG60	AC	08-24-2018	55	Poor	100	0	0
COTTAGEGRV	NEVACT	CG235	AC	09-20-2018	76	Satisfactory	100	0	0
COTTAGEGRV	NGATEWAYBL	CG278	AC	09-26-2018	49	Poor	22	78	0
COTTAGEGRV	NGATEWAYBL	CG276	AC	09-26-2018	68	Fair	27	73	0
COTTAGEGRV	NGATEWAYBL	CG277	AC	09-26-2018	62	Fair	23	77	0
COTTAGEGRV	NGATEWAYBL	CG279	AC	09-26-2018	100	Good	0	0	0
COTTAGEGRV	NGST	CG69	AC	08-24-2018	62	Fair	100	0	0

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	NGST	CG70	AC	08-24-2018	31	Very Poor	36	21	43
COTTAGEGRV	NHST	CG71	AC	08-24-2018	36	Very Poor	31	60	9
COTTAGEGRV	NIST	CG72	AC	08-24-2018	46	Poor	42	40	18
COTTAGEGRV	NJST	CG73	AC	08-24-2018	34	Very Poor	33	56	11
COTTAGEGRV	NKST	CG74	AC	08-24-2018	72	Satisfactory	65	35	0
COTTAGEGRV	NLANEST	CG212	AC	09-19-2018	51	Poor	68	18	14
COTTAGEGRV	NLANEST	CG208	AC	09-06-2018	39	Very Poor	58	0	42
COTTAGEGRV	NLANEST	CG211	AC	09-06-2018	48	Poor	48	22	30
COTTAGEGRV	NLANEST	CG209	AC	09-06-2018	84	Satisfactory	67	0	33
COTTAGEGRV	NLANEST	CG210	AC	09-06-2018	43	Poor	48	31	21
COTTAGEGRV	NLST	CG75	AC	08-24-2018	73	Satisfactory	92	0	8
COTTAGEGRV	NMST	CG76	AC	08-24-2018	57	Fair	32	47	21
COTTAGEGRV	NMST	CG77	AC	08-24-2018	86	Good	100	0	0
COTTAGEGRV	NNST	CG78	AC	08-24-2018	77	Satisfactory	82	0	18
COTTAGEGRV	NOST	CG80	AC	08-24-2018	84	Satisfactory	100	0	0
COTTAGEGRV	NOST	CG79	AC	08-24-2018	67	Fair	64	10	26
COTTAGEGRV	NOST	CG316	PCC	10-02-2018	48	Poor	4	77	19
COTTAGEGRV	NPST	CG82	AC	08-24-2018	96	Good	100	0	0
COTTAGEGRV	NPST	CG81	AC	08-24-2018	61	Fair	53	27	20
COTTAGEGRV	NQST	CG87	AC	08-24-2018	12	Serious	34	56	10
COTTAGEGRV	NRIVERRD	CG10	AC	08-23-2018	29	Very Poor	25	64	11
COTTAGEGRV	NRIVERRD	CG11	AC	08-23-2018	57	Fair	65	35	0
COTTAGEGRV	NRIVERRD	CG9	AC	08-23-2018	94	Good	97	0	3
COTTAGEGRV	OLSONPL	CG231	AC	09-19-2018	90	Good	100	0	0
COTTAGEGRV	OSTRANDERL	CG299	AC	09-27-2018	35	Very Poor	47	31	22
COTTAGEGRV	OSTRANDERL	CG298	AC	09-27-2018	49	Poor	68	26	6
COTTAGEGRV	OSWALDWAVE	CG297	AC	09-27-2018	43	Poor	49	44	7
COTTAGEGRV	PALMERAVE	CG312	AC	09-28-2018	57	Fair	43	31	26
COTTAGEGRV	PARKSRD	CG300	AC	09-24-2018	72	Satisfactory	47	35	18
COTTAGEGRV	PENNOYERAV	CG194	AC	09-26-2018	65	Fair	100	0	0
COTTAGEGRV	PENNOYERAV	CG193	AC	09-06-2018	63	Fair	46	0	54
COTTAGEGRV	POLKAVE	CG248	AC	09-24-2018	9	Failed	26	63	11
COTTAGEGRV	PRITCHETTP	CG290	AC	09-26-2018	66	Fair	79	21	0
COTTAGEGRV	REDHILLSPL	CG301	AC	09-24-2018	98	Good	100	0	0
COTTAGEGRV	RIVERFRONT	CG95	AC	08-20-2018	86	Good	82	18	0
COTTAGEGRV	RIVERWALKP	CG94	AC	08-20-2018	91	Good	100	0	0
COTTAGEGRV	RIVERWALKP	CG93	AC	08-20-2018	95	Good	100	0	0
COTTAGEGRV	ROWRIVERCO	CG310	AC	09-27-2018	16	Serious	18	77	5
COTTAGEGRV	S10THST	CG250	AC	09-20-2018	83	Satisfactory	20	0	80
COTTAGEGRV	S10THST	CG252	AC	09-24-2018	26	Very Poor	17	78	5
COTTAGEGRV	S10THST	CG253	AC	09-24-2018	50	Poor	34	35	31
COTTAGEGRV	S10THST	CG251	AC	09-21-2018	95	Good	100	0	0
COTTAGEGRV	S11THST	CG256	AC	09-25-2018	51	Poor	37	31	32
COTTAGEGRV	S11THST	CG254	AC	09-24-2018	22	Serious	11	76	13
COTTAGEGRV	S12THST	CG257	AC	09-24-2018	42	Poor	50	46	4
COTTAGEGRV	S12THST	CG258	AC	09-25-2018	54	Poor	52	46	2
COTTAGEGRV	S13THST	CG260	AC	09-24-2018	70	Fair	94	6	0

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	S13THST	CG261	AC	09-25-2018	57	Fair	48	25	27
COTTAGEGRV	S14THST	CG263	AC	09-25-2018	22	Serious	22	39	39
COTTAGEGRV	S14THST	CG262	AC	09-24-2018	58	Fair	100	0	0
COTTAGEGRV	S15THST	CG269	AC	09-25-2018	82	Satisfactory	100	0	0
COTTAGEGRV	S16THST	CG270	AC	09-26-2018	64	Fair	41	50	9
COTTAGEGRV	S17THST	CG272	AC	09-26-2018	62	Fair	49	23	28
COTTAGEGRV	S1STST	CG91	AC	08-20-2018	95	Good	100	0	0
COTTAGEGRV	S1STST	CG92	AC	08-30-2018	31	Very Poor	14	66	20
COTTAGEGRV	S21STST	CG296	AC	10-01-2018	81	Satisfactory	4	0	96
COTTAGEGRV	S22NDST	CG303	AC	09-27-2018	71	Satisfactory	73	16	11
COTTAGEGRV	S2NDST	CG100	AC	09-05-2018	54	Poor	59	25	16
COTTAGEGRV	S2NDST	CG98	AC	08-20-2018	91	Good	52	0	48
COTTAGEGRV	S2NDST	CG99	AC	08-20-2018	95	Good	100	0	0
COTTAGEGRV	S3RDST	CG103	AC	09-05-2018	14	Serious	19	50	31
COTTAGEGRV	S3RDST	CG101	AC	09-05-2018	88	Good	100	0	0
COTTAGEGRV	S3RDST	CG102	AC	09-05-2018	37	Very Poor	33	23	44
COTTAGEGRV	S4THST	CG105	AC	09-20-2018	45	Poor	27	59	14
COTTAGEGRV	S4THST	CG104	AC	09-20-2018	58	Fair	67	0	33
COTTAGEGRV	S4THST	CG106	AC	09-21-2018	25	Serious	19	71	10
COTTAGEGRV	S4THST	CG107	AC	09-21-2018	76	Satisfactory	53	47	0
COTTAGEGRV	S4THSTY	CG108	AC	09-21-2018	78	Satisfactory	91	0	9
COTTAGEGRV	S5THST	CG318	PCC	10-02-2018	65	Fair	7	72	21
COTTAGEGRV	S5THST	CG109	AC	09-21-2018	38	Very Poor	32	68	0
COTTAGEGRV	S5THST	CG317	PCC	10-02-2018	56	Fair	9	48	43
COTTAGEGRV	S5THST	CG110	AC	09-05-2018	28	Very Poor	70	0	30
COTTAGEGRV	S6THST	CG116	AC	09-05-2018	44	Poor	45	55	0
COTTAGEGRV	S6THST	CG112	AC	09-21-2018	74	Satisfactory	50	48	2
COTTAGEGRV	S6THST	CG113	AC	09-21-2018	75	Satisfactory	83	3	14
COTTAGEGRV	S6THST	CG114	AC	09-21-2018	86	Good	100	0	0
COTTAGEGRV	S6THST	CG115	AC	09-05-2018	40	Very Poor	77	15	8
COTTAGEGRV	S6THSTY	CG222	AC	09-28-2018	43	Poor	59	28	13
COTTAGEGRV	S7THST	CG121	AC	09-21-2018	58	Fair	64	14	22
COTTAGEGRV	S7THST	CG122	AC	09-05-2018	62	Fair	75	0	25
COTTAGEGRV	S7THST	CG119	AC	09-21-2018	70	Fair	70	30	0
COTTAGEGRV	S7THST	CG120	AC	09-21-2018	35	Very Poor	34	55	11
COTTAGEGRV	S8THST	CG129	AC	09-20-2018	60	Fair	39	30	31
COTTAGEGRV	S8THST	CG126	AC	09-20-2018	69	Fair	36	0	64
COTTAGEGRV	S8THST	CG128	AC	09-20-2018	54	Poor	91	3	6
COTTAGEGRV	S8THST	CG127	AC	09-20-2018	66	Fair	49	51	0
COTTAGEGRV	S8THST	CG125	AC	09-20-2018	95	Good	100	0	0
COTTAGEGRV	S8THST	CG320	PCC	10-02-2018	54	Poor	13	49	38
COTTAGEGRV	S8THST	CG130	AC	09-05-2018	34	Very Poor	39	43	18
COTTAGEGRV	SCT	CG21	AC	08-24-2018	56	Fair	100	0	0
COTTAGEGRV	SDOUGLASST	CG221	AC	09-21-2018	35	Very Poor	55	45	0
COTTAGEGRV	SGATEWAYBL	CG275	AC	09-26-2018	45	Poor	45	48	7
COTTAGEGRV	SGATEWAYBL	CG274	AC	09-26-2018	56	Fair	40	52	8
COTTAGEGRV	SMST	CG54	AC	08-30-2018	24	Serious	24	51	25

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	SMST	CG53	AC	08-30-2018	13	Serious	27	56	17
COTTAGEGRV	SMST	CG55	AC	08-30-2018	76	Satisfactory	73	0	27
COTTAGEGRV	SNST	CG56	AC	08-29-2018	3	Failed	31	55	14
COTTAGEGRV	SOST	CG57	AC	08-29-2018	20	Serious	23	77	0
COTTAGEGRV	SPST	CG58	AC	08-29-2018	12	Serious	10	90	0
COTTAGEGRV	SRIVERRD	CG7	AC	08-23-2018	80	Satisfactory	100	0	0
COTTAGEGRV	SRIVERRD	CG6	AC	08-23-2018	32	Very Poor	32	66	2
COTTAGEGRV	SRIVERRD	CG5	AC	08-23-2018	58	Fair	24	61	15
COTTAGEGRV	SRIVERRD	CG8	AC	08-23-2018	94	Good	100	0	0
COTTAGEGRV	SRIVERRDFR	CG4	AC	08-30-2018	69	Fair	61	0	39
COTTAGEGRV	SRST	CG18	AC	08-24-2018	75	Satisfactory	53	47	0
COTTAGEGRV	SRST	CG3	AC	08-20-2018	85	Satisfactory	100	0	0
COTTAGEGRV	SRST	CG19	AC	08-24-2018	44	Poor	43	57	0
COTTAGEGRV	SRST	CG20	AC	08-24-2018	78	Satisfactory	34	60	6
COTTAGEGRV	SSST	CG50	AC	08-30-2018	59	Fair	59	37	4
COTTAGEGRV	STCT	CG22	AC	08-24-2018	81	Satisfactory	100	0	0
COTTAGEGRV	SUST	CG23	AC	08-24-2018	75	Satisfactory	100	0	0
COTTAGEGRV	SVCT	CG24	AC	08-24-2018	55	Poor	36	64	0
COTTAGEGRV	TAYLORPL	CG97	AC	08-20-2018	91	Good	100	0	0
COTTAGEGRV	THAYERAVE	CG192	AC	09-06-2018	44	Poor	48	0	52
COTTAGEGRV	THOMASPL	CG308	AC	09-28-2018	13	Serious	13	62	25
COTTAGEGRV	THORNTONRD	CG309	AC	09-28-2018	35	Very Poor	32	48	20
COTTAGEGRV	TYLERAVE	CG96	AC	08-20-2018	95	Good	100	0	0
COTTAGEGRV	TYLERAVE	CG268	AC	09-24-2018	57	Fair	46	26	28
COTTAGEGRV	VANBURENAV	CG135	AC	08-30-2018	81	Satisfactory	85	0	15
COTTAGEGRV	VILLAGEDR	CG314	AC	09-28-2018	53	Poor	59	41	0
COTTAGEGRV	VILLARDAVE	CG201	AC	09-06-2018	50	Poor	72	12	16
COTTAGEGRV	VILLARDAVE	CG202	AC	09-06-2018	50	Poor	52	43	5
COTTAGEGRV	VINCENTPL	CG213	AC	09-06-2018	91	Good	100	0	0
COTTAGEGRV	WASHINGTON	CG304	AC	09-27-2018	76	Satisfactory	100	0	0
COTTAGEGRV	WHARRISONA	CG27	AC	08-24-2018	56	Fair	58	35	7
COTTAGEGRV	WHITMANBLV	CG13	AC	08-24-2018	73	Satisfactory	100	0	0
COTTAGEGRV	WILSONAVE	CG229	AC	09-19-2018	89	Good	100	0	0
COTTAGEGRV	WILSONCT	CG230	AC	09-19-2018	91	Good	100	0	0
COTTAGEGRV	WITHYCOMBE	CG207	AC	09-06-2018	48	Poor	23	65	12
COTTAGEGRV	WMAINST	CG62	AC	08-30-2018	82	Satisfactory	42	58	0
COTTAGEGRV	WOODAVE	CG186	AC	09-06-2018	8	Failed	25	60	15
COTTAGEGRV	WOODSONPL	CG12	AC	08-30-2018	88	Good	100	0	0
COTTAGEGRV	YOSSPL	CG232	AC	09-19-2018	95	Good	100	0	0

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**APPENDIX C:
2018 DETAILED PAVEMENT CONDITION SURVEY**

Note – Survey provided electronically.

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**APPENDIX D:
CONDITION PREDICTION MODELS AND CONDITION ANALYSIS**

Table D1, Table D2, Figure 1D, Figure 2D, Figure 3D, and Figure 4D

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition In 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	ADAMSAVE	CG159	20	Serious	18	Serious	9	Failed
COTTAGEGRV	ADAMSAVE	CG160	69	Fair	67	Fair	58	Fair
COTTAGEGRV	ADAMSAVE	CG161	34	Very Poor	32	Very Poor	23	Serious
COTTAGEGRV	ADAMSAVE	CG162	59	Fair	57	Fair	48	Poor
COTTAGEGRV	ADAMSAVE	CG163	60	Fair	58	Fair	49	Poor
COTTAGEGRV	ANTHONYAVE	CG49	57	Fair	55	Poor	46	Poor
COTTAGEGRV	ANTHONYCT	CG59	63	Fair	61	Fair	52	Poor
COTTAGEGRV	ARTHURAVE	CG234	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	ASHAVE	CG61	77	Satisfactory	75	Satisfactory	66	Fair
COTTAGEGRV	ASHAVE	CG63	53	Poor	51	Poor	42	Poor
COTTAGEGRV	ASHAVE	CG64	33	Very Poor	31	Very Poor	22	Serious
COTTAGEGRV	BANGLECT	CG305	70	Fair	68	Fair	59	Fair
COTTAGEGRV	BELMONTAVE	CG273	52	Poor	50	Poor	41	Poor
COTTAGEGRV	BENJAMINAV	CG227	86	Good	84	Satisfactory	75	Satisfactory
COTTAGEGRV	BENJAMINAV	CG228	87	Good	85	Satisfactory	76	Satisfactory
COTTAGEGRV	BIRCHAVE	CG65	69	Fair	67	Fair	58	Fair
COTTAGEGRV	BIRCHAVE	CG66	45	Poor	43	Poor	34	Very Poor
COTTAGEGRV	BIRCHAVE	CG67	61	Fair	59	Fair	50	Poor
COTTAGEGRV	BLAIRCT	CG51	52	Poor	50	Poor	41	Poor
COTTAGEGRV	BLUESKYDR	CG25	30	Very Poor	27	Very Poor	13	Serious
COTTAGEGRV	BOHEMIAPL	CG38	61	Fair	59	Fair	50	Poor
COTTAGEGRV	BRYANTAVE	CG45	50	Poor	48	Poor	39	Very Poor
COTTAGEGRV	BRYANTAVE	CG46	40	Very Poor	38	Very Poor	29	Very Poor
COTTAGEGRV	BRYANTAVE	CG47	11	Serious	9	Failed	0	Failed
COTTAGEGRV	BRYANTAVE	CG48	11	Serious	9	Failed	0	Failed
COTTAGEGRV	BRYANTCT	CG52	34	Very Poor	32	Very Poor	23	Serious
COTTAGEGRV	CARNEGIEWA	CG2	89	Good	87	Good	78	Satisfactory
COTTAGEGRV	CAROBELLE	CG271	53	Poor	51	Poor	42	Poor
COTTAGEGRV	CARVERAVE	CG43	19	Serious	17	Serious	8	Failed
COTTAGEGRV	CARVERPL	CG44	51	Poor	49	Poor	40	Very Poor
COTTAGEGRV	CHERRYCT	CG134	46	Poor	44	Poor	35	Very Poor
COTTAGEGRV	CHESTNUTAV	CG68	51	Poor	49	Poor	40	Very Poor
COTTAGEGRV	CLARKAVE	CG40	63	Fair	61	Fair	52	Poor
COTTAGEGRV	CLARKAVE	CG41	59	Fair	57	Fair	48	Poor
COTTAGEGRV	CLARKAVE	CG42	41	Poor	39	Very Poor	30	Very Poor
COTTAGEGRV	CLEVELANDS	CG124	84	Satisfactory	82	Satisfactory	73	Satisfactory
COTTAGEGRV	COLUMBIACT	CG214	73	Satisfactory	71	Satisfactory	62	Fair
COTTAGEGRV	COOPCT	CG292	74	Satisfactory	72	Satisfactory	63	Fair
COTTAGEGRV	COOPERAVE	CG240	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	COOPERAVE	CG241	39	Very Poor	37	Very Poor	28	Very Poor
COTTAGEGRV	COTTONWOOD	CG83	92	Good	90	Good	81	Satisfactory
COTTAGEGRV	CURRYAVE	CG289	67	Fair	65	Fair	56	Fair
COTTAGEGRV	DAUGHERTYA	CG39	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	DAVIDSONAV	CG311	47	Poor	45	Poor	36	Very Poor
COTTAGEGRV	DAVISPL	CG288	70	Fair	68	Fair	59	Fair
COTTAGEGRV	DOGWOODAVE	CG84	89	Good	87	Good	78	Satisfactory

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	DOUGLASFIR	CG85	90	Good	88	Good	79	Satisfactory
COTTAGEGRV	DUBLINLN	CG249	40	Very Poor	38	Very Poor	29	Very Poor
COTTAGEGRV	ECHADWICKA	CG189	63	Fair	61	Fair	52	Poor
COTTAGEGRV	ECHADWICKA	CG190	62	Fair	60	Fair	51	Poor
COTTAGEGRV	ECHADWICKA	CG191	59	Fair	57	Fair	48	Poor
COTTAGEGRV	ECHAMBERLA	CG197	58	Fair	55	Poor	41	Poor
COTTAGEGRV	ECHAMBERLA	CG198	15	Serious	12	Serious	0	Failed
COTTAGEGRV	ECHAMBERLA	CG199	15	Serious	13	Serious	4	Failed
COTTAGEGRV	EDISONAVE	CG16	54	Poor	52	Poor	43	Poor
COTTAGEGRV	EGIBBSAVE	CG182	57	Fair	55	Poor	46	Poor
COTTAGEGRV	EGIBBSAVE	CG183	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	EGIBBSAVE	CG184	50	Poor	48	Poor	39	Very Poor
COTTAGEGRV	EGIBBSAVE	CG185	42	Poor	40	Very Poor	31	Very Poor
COTTAGEGRV	EGROVERAVE	CG187	41	Poor	39	Very Poor	30	Very Poor
COTTAGEGRV	EGROVERAVE	CG188	82	Satisfactory	80	Satisfactory	71	Satisfactory
COTTAGEGRV	EGROVERAVE	CG293	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	EGROVERAVE	CG294	70	Fair	68	Fair	59	Fair
COTTAGEGRV	EHARRISONA	CG28	41	Poor	38	Very Poor	24	Serious
COTTAGEGRV	EHARRISONA	CG29	99	Good	96	Good	82	Satisfactory
COTTAGEGRV	EHARRISONA	CG30	56	Fair	53	Poor	39	Very Poor
COTTAGEGRV	EHARRISONA	CG31	71	Satisfactory	68	Fair	54	Poor
COTTAGEGRV	EHARRISONA	CG315	46	Poor	44	Poor	33	Very Poor
COTTAGEGRV	EJACKSONAV	CG265	48	Poor	46	Poor	37	Very Poor
COTTAGEGRV	EJEFFERSON	CG155	57	Fair	55	Poor	46	Poor
COTTAGEGRV	EJEFFERSON	CG156	86	Good	84	Satisfactory	75	Satisfactory
COTTAGEGRV	EJEFFERSON	CG157	19	Serious	17	Serious	8	Failed
COTTAGEGRV	EJEFFERSON	CG158	50	Poor	48	Poor	39	Very Poor
COTTAGEGRV	EJEFFERSON	CG321	60	Fair	58	Fair	47	Poor
COTTAGEGRV	EJEFFERSON	CG322	31	Very Poor	29	Very Poor	18	Serious
COTTAGEGRV	ELMAVE	CG86	89	Good	87	Good	78	Satisfactory
COTTAGEGRV	EMADISONAV	CG148	71	Satisfactory	69	Fair	60	Fair
COTTAGEGRV	EMADISONAV	CG149	56	Fair	54	Poor	45	Poor
COTTAGEGRV	EMADISONAV	CG150	52	Poor	50	Poor	41	Poor
COTTAGEGRV	EMADISONAV	CG151	50	Poor	47	Poor	33	Very Poor
COTTAGEGRV	EMADISONAV	CG152	51	Poor	48	Poor	34	Very Poor
COTTAGEGRV	EMADISONAV	CG153	69	Fair	67	Fair	58	Fair
COTTAGEGRV	EMADISONAV	CG154	76	Satisfactory	74	Satisfactory	65	Fair
COTTAGEGRV	EMAINST	CG172	50	Poor	46	Poor	27	Very Poor
COTTAGEGRV	EMAINST	CG173	79	Satisfactory	75	Satisfactory	56	Fair
COTTAGEGRV	EMAINST	CG174	85	Satisfactory	81	Satisfactory	62	Fair
COTTAGEGRV	EMAINST	CG175	30	Very Poor	26	Very Poor	7	Failed
COTTAGEGRV	EMAINST	CG176	61	Fair	59	Fair	50	Poor
COTTAGEGRV	EMAINST	CG177	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	EMAINST	CG178	77	Satisfactory	75	Satisfactory	66	Fair
COTTAGEGRV	EMONROEAVE	CG145	87	Good	85	Satisfactory	76	Satisfactory
COTTAGEGRV	EMONROEAVE	CG146	38	Very Poor	36	Very Poor	27	Very Poor

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	EMONROEAVE	CG147	33	Very Poor	31	Very Poor	22	Serious
COTTAGEGRV	EQUINCYAVE	CG136	10	Failed	8	Failed	0	Failed
COTTAGEGRV	EQUINCYAVE	CG137	80	Satisfactory	78	Satisfactory	69	Fair
COTTAGEGRV	EQUINCYAVE	CG138	85	Satisfactory	83	Satisfactory	74	Satisfactory
COTTAGEGRV	EQUINCYAVE	CG139	0	Failed	0	Failed	0	Failed
COTTAGEGRV	EQUINCYAVE	CG140	56	Fair	54	Poor	45	Poor
COTTAGEGRV	EQUINCYAVE	CG141	59	Fair	57	Fair	48	Poor
COTTAGEGRV	EQUINCYAVE	CG142	68	Fair	66	Fair	57	Fair
COTTAGEGRV	EQUINCYAVE	CG143	63	Fair	61	Fair	52	Poor
COTTAGEGRV	EQUINCYAVE	CG144	45	Poor	43	Poor	34	Very Poor
COTTAGEGRV	ETAYLORAVE	CG244	52	Poor	49	Poor	35	Very Poor
COTTAGEGRV	ETAYLORAVE	CG245	38	Very Poor	35	Very Poor	21	Serious
COTTAGEGRV	ETAYLORAVE	CG246	44	Poor	41	Poor	27	Very Poor
COTTAGEGRV	ETAYLORAVE	CG247	60	Fair	58	Fair	49	Poor
COTTAGEGRV	EVANBURENA	CG266	53	Poor	51	Poor	42	Poor
COTTAGEGRV	EVANBURENA	CG267	71	Satisfactory	69	Fair	60	Fair
COTTAGEGRV	EWASHINGTO	CG164	38	Very Poor	36	Very Poor	27	Very Poor
COTTAGEGRV	EWASHINGTO	CG165	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	EWASHINGTO	CG166	74	Satisfactory	72	Satisfactory	63	Fair
COTTAGEGRV	EWASHINGTO	CG167	77	Satisfactory	75	Satisfactory	66	Fair
COTTAGEGRV	EWASHINGTO	CG168	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	EWASHINGTO	CG169	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	EWASHINGTO	CG170	67	Fair	65	Fair	56	Fair
COTTAGEGRV	EWASHINGTO	CG171	61	Fair	59	Fair	50	Poor
COTTAGEGRV	EWWHITEAKER	CG179	46	Poor	44	Poor	35	Very Poor
COTTAGEGRV	EWWHITEAKER	CG180	24	Serious	20	Serious	1	Failed
COTTAGEGRV	EWWHITEAKER	CG181	26	Very Poor	22	Serious	3	Failed
COTTAGEGRV	FAIRVIEWLP	CG32	53	Poor	51	Poor	42	Poor
COTTAGEGRV	FAIRVIEWPL	CG33	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	FILLMOREAV	CG242	49	Poor	47	Poor	38	Very Poor
COTTAGEGRV	FILLMOREAV	CG243	64	Fair	62	Fair	53	Poor
COTTAGEGRV	GEERAVE	CG196	45	Poor	43	Poor	34	Very Poor
COTTAGEGRV	GETTYCIRCL	CG1	92	Good	90	Good	81	Satisfactory
COTTAGEGRV	GIRARDAVE	CG34	56	Fair	54	Poor	45	Poor
COTTAGEGRV	GIRARDAVE	CG35	63	Fair	61	Fair	52	Poor
COTTAGEGRV	GIRARDAVE	CG36	92	Good	90	Good	81	Satisfactory
COTTAGEGRV	GIRARDCT	CG37	61	Fair	59	Fair	50	Poor
COTTAGEGRV	GRANTAVE	CG224	22	Serious	20	Serious	11	Serious
COTTAGEGRV	GRANTAVE	CG225	55	Poor	52	Poor	38	Very Poor
COTTAGEGRV	HARDINGPL	CG233	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	HARRISONCT	CG17	78	Satisfactory	76	Satisfactory	67	Fair
COTTAGEGRV	HARVEYLN	CG286	74	Satisfactory	72	Satisfactory	63	Fair
COTTAGEGRV	HARVEYLN	CG287	56	Fair	54	Poor	45	Poor
COTTAGEGRV	HARVEYRD	CG284	53	Poor	50	Poor	36	Very Poor
COTTAGEGRV	HARVEYRD	CG285	45	Poor	42	Poor	28	Very Poor
COTTAGEGRV	HAYESAV	CG223	69	Fair	67	Fair	58	Fair

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	HOLLYAVE	CG90	78	Satisfactory	76	Satisfactory	67	Fair
COTTAGEGRV	IBSENAVE	CG26	79	Satisfactory	77	Satisfactory	68	Fair
COTTAGEGRV	JASONLEEAV	CG15	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	JIMWRIGHTW	CG313	43	Poor	41	Poor	32	Very Poor
COTTAGEGRV	JOHNSONAVE	CG236	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	KALAPUYAWA	CG88	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	KALAPUYSCT	CG89	71	Satisfactory	69	Fair	60	Fair
COTTAGEGRV	KATHLEENDR	CG226	84	Satisfactory	82	Satisfactory	73	Satisfactory
COTTAGEGRV	LANDESSRD	CG306	69	Fair	67	Fair	58	Fair
COTTAGEGRV	LANECT	CG206	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	LINCOLNAVE	CG237	62	Fair	59	Fair	45	Poor
COTTAGEGRV	LINCOLNAVE	CG238	44	Poor	41	Poor	27	Very Poor
COTTAGEGRV	LINCOLNAVE	CG239	10	Failed	7	Failed	0	Failed
COTTAGEGRV	LORDAVE	CG195	38	Very Poor	36	Very Poor	27	Very Poor
COTTAGEGRV	MEEKERDR	CG14	67	Fair	65	Fair	56	Fair
COTTAGEGRV	MOSBYCRRD	CG307	57	Fair	53	Poor	34	Very Poor
COTTAGEGRV	N10THST	CG200	53	Poor	51	Poor	42	Poor
COTTAGEGRV	N11THST	CG203	69	Fair	67	Fair	58	Fair
COTTAGEGRV	N11THST	CG204	43	Poor	41	Poor	32	Very Poor
COTTAGEGRV	N11THST	CG205	86	Good	84	Satisfactory	75	Satisfactory
COTTAGEGRV	N12THST	CG259	80	Satisfactory	78	Satisfactory	69	Fair
COTTAGEGRV	N14THST	CG264	46	Poor	44	Poor	35	Very Poor
COTTAGEGRV	N14THST	CG291	60	Fair	58	Fair	49	Poor
COTTAGEGRV	N16THST	CG282	23	Serious	20	Serious	6	Failed
COTTAGEGRV	N16THST	CG283	25	Serious	22	Serious	8	Failed
COTTAGEGRV	N19THST	CG280	19	Serious	17	Serious	8	Failed
COTTAGEGRV	N19THST	CG281	74	Satisfactory	72	Satisfactory	63	Fair
COTTAGEGRV	N20THST	CG295	69	Fair	67	Fair	58	Fair
COTTAGEGRV	N22NDST	CG302	71	Satisfactory	69	Fair	60	Fair
COTTAGEGRV	N5THST	CG111	39	Very Poor	37	Very Poor	28	Very Poor
COTTAGEGRV	N6THST	CG117	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	N6THST	CG118	52	Poor	50	Poor	41	Poor
COTTAGEGRV	N7THST	CG123	57	Fair	55	Poor	46	Poor
COTTAGEGRV	N7THST	CG319	33	Very Poor	31	Very Poor	20	Serious
COTTAGEGRV	N8THST	CG131	59	Fair	57	Fair	48	Poor
COTTAGEGRV	N8THST	CG132	55	Poor	53	Poor	44	Poor
COTTAGEGRV	N8THST	CG133	96	Good	94	Good	85	Satisfactory
COTTAGEGRV	NDOUGLASST	CG215	13	Serious	11	Serious	2	Failed
COTTAGEGRV	NDOUGLASST	CG216	0	Failed	0	Failed	0	Failed
COTTAGEGRV	NDOUGLASST	CG217	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	NDOUGLASST	CG218	44	Poor	41	Poor	27	Very Poor
COTTAGEGRV	NDOUGLASST	CG219	57	Fair	55	Poor	46	Poor
COTTAGEGRV	NDOUGLASST	CG220	58	Fair	56	Fair	47	Poor
COTTAGEGRV	NELLISPL	CG60	55	Poor	53	Poor	44	Poor
COTTAGEGRV	NEVACT	CG235	76	Satisfactory	74	Satisfactory	65	Fair
COTTAGEGRV	NGATEWAYBL	CG276	68	Fair	64	Fair	45	Poor

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	NGATEWAYBL	CG277	62	Fair	58	Fair	39	Very Poor
COTTAGEGRV	NGATEWAYBL	CG278	49	Poor	45	Poor	26	Very Poor
COTTAGEGRV	NGATEWAYBL	CG279	100	Good	96	Good	77	Satisfactory
COTTAGEGRV	NGST	CG69	62	Fair	60	Fair	51	Poor
COTTAGEGRV	NGST	CG70	31	Very Poor	29	Very Poor	20	Serious
COTTAGEGRV	NHST	CG71	36	Very Poor	34	Very Poor	25	Serious
COTTAGEGRV	NIST	CG72	46	Poor	44	Poor	35	Very Poor
COTTAGEGRV	NJST	CG73	34	Very Poor	32	Very Poor	23	Serious
COTTAGEGRV	NKST	CG74	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	NLANEST	CG208	39	Very Poor	37	Very Poor	28	Very Poor
COTTAGEGRV	NLANEST	CG209	84	Satisfactory	82	Satisfactory	73	Satisfactory
COTTAGEGRV	NLANEST	CG210	43	Poor	41	Poor	32	Very Poor
COTTAGEGRV	NLANEST	CG211	48	Poor	46	Poor	37	Very Poor
COTTAGEGRV	NLANEST	CG212	51	Poor	49	Poor	40	Very Poor
COTTAGEGRV	NLST	CG75	73	Satisfactory	71	Satisfactory	62	Fair
COTTAGEGRV	NMST	CG76	57	Fair	54	Poor	40	Very Poor
COTTAGEGRV	NMST	CG77	86	Good	83	Satisfactory	69	Fair
COTTAGEGRV	NNST	CG78	77	Satisfactory	75	Satisfactory	66	Fair
COTTAGEGRV	NOST	CG316	48	Poor	46	Poor	35	Very Poor
COTTAGEGRV	NOST	CG79	67	Fair	65	Fair	56	Fair
COTTAGEGRV	NOST	CG80	84	Satisfactory	82	Satisfactory	73	Satisfactory
COTTAGEGRV	NPST	CG81	61	Fair	59	Fair	50	Poor
COTTAGEGRV	NPST	CG82	96	Good	94	Good	85	Satisfactory
COTTAGEGRV	NQST	CG87	12	Serious	10	Failed	1	Failed
COTTAGEGRV	NRIVERRD	CG10	29	Very Poor	25	Serious	6	Failed
COTTAGEGRV	NRIVERRD	CG11	57	Fair	55	Poor	46	Poor
COTTAGEGRV	NRIVERRD	CG9	94	Good	90	Good	71	Satisfactory
COTTAGEGRV	OLSONPL	CG231	90	Good	88	Good	79	Satisfactory
COTTAGEGRV	OSTRANDERL	CG298	49	Poor	46	Poor	32	Very Poor
COTTAGEGRV	OSTRANDERL	CG299	35	Very Poor	32	Very Poor	18	Serious
COTTAGEGRV	OSWALDWAVE	CG297	43	Poor	40	Very Poor	26	Very Poor
COTTAGEGRV	PALMERA VE	CG312	57	Fair	55	Poor	46	Poor
COTTAGEGRV	PARKSRD	CG300	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	PENNOYERAV	CG193	63	Fair	61	Fair	52	Poor
COTTAGEGRV	PENNOYERAV	CG194	65	Fair	63	Fair	54	Poor
COTTAGEGRV	POLKAVE	CG248	9	Failed	7	Failed	0	Failed
COTTAGEGRV	PRITCHETTP	CG290	66	Fair	64	Fair	55	Poor
COTTAGEGRV	REDHILLSPL	CG301	98	Good	96	Good	87	Good
COTTAGEGRV	RIVERFRONT	CG95	86	Good	84	Satisfactory	75	Satisfactory
COTTAGEGRV	RIVERWALKP	CG93	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	RIVERWALKP	CG94	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	ROWRIVERCO	CG310	16	Serious	12	Serious	0	Failed
COTTAGEGRV	S10THST	CG250	83	Satisfactory	81	Satisfactory	72	Satisfactory
COTTAGEGRV	S10THST	CG251	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	S10THST	CG252	26	Very Poor	23	Serious	9	Failed
COTTAGEGRV	S10THST	CG253	50	Poor	47	Poor	33	Very Poor

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	S11THST	CG254	22	Serious	20	Serious	11	Serious
COTTAGEGRV	S11THST	CG256	51	Poor	49	Poor	40	Very Poor
COTTAGEGRV	S12THST	CG257	42	Poor	40	Very Poor	31	Very Poor
COTTAGEGRV	S12THST	CG258	54	Poor	52	Poor	43	Poor
COTTAGEGRV	S13THST	CG260	70	Fair	68	Fair	59	Fair
COTTAGEGRV	S13THST	CG261	57	Fair	55	Poor	46	Poor
COTTAGEGRV	S14THST	CG262	58	Fair	56	Fair	47	Poor
COTTAGEGRV	S14THST	CG263	22	Serious	20	Serious	11	Serious
COTTAGEGRV	S15THST	CG269	82	Satisfactory	80	Satisfactory	71	Satisfactory
COTTAGEGRV	S16THST	CG270	64	Fair	61	Fair	47	Poor
COTTAGEGRV	S17THST	CG272	62	Fair	60	Fair	51	Poor
COTTAGEGRV	S1STST	CG91	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	S1STST	CG92	31	Very Poor	29	Very Poor	20	Serious
COTTAGEGRV	S21STST	CG296	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	S22NDST	CG303	71	Satisfactory	69	Fair	60	Fair
COTTAGEGRV	S2NDST	CG100	54	Poor	52	Poor	43	Poor
COTTAGEGRV	S2NDST	CG98	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	S2NDST	CG99	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	S3RDST	CG101	88	Good	86	Good	77	Satisfactory
COTTAGEGRV	S3RDST	CG102	37	Very Poor	35	Very Poor	26	Very Poor
COTTAGEGRV	S3RDST	CG103	14	Serious	12	Serious	3	Failed
COTTAGEGRV	S4THST	CG104	58	Fair	56	Fair	47	Poor
COTTAGEGRV	S4THST	CG105	45	Poor	42	Poor	28	Very Poor
COTTAGEGRV	S4THST	CG106	25	Serious	22	Serious	8	Failed
COTTAGEGRV	S4THST	CG107	76	Satisfactory	73	Satisfactory	59	Fair
COTTAGEGRV	S4THSTY	CG108	78	Satisfactory	76	Satisfactory	67	Fair
COTTAGEGRV	S5THST	CG109	38	Very Poor	36	Very Poor	27	Very Poor
COTTAGEGRV	S5THST	CG110	28	Very Poor	26	Very Poor	17	Serious
COTTAGEGRV	S5THST	CG317	56	Fair	54	Poor	43	Poor
COTTAGEGRV	S5THST	CG318	65	Fair	63	Fair	52	Poor
COTTAGEGRV	S6THST	CG112	74	Satisfactory	70	Fair	51	Poor
COTTAGEGRV	S6THST	CG113	75	Satisfactory	71	Satisfactory	52	Poor
COTTAGEGRV	S6THST	CG114	86	Good	82	Satisfactory	63	Fair
COTTAGEGRV	S6THST	CG115	40	Very Poor	37	Very Poor	23	Serious
COTTAGEGRV	S6THST	CG116	44	Poor	41	Poor	27	Very Poor
COTTAGEGRV	S6THSTY	CG222	43	Poor	41	Poor	32	Very Poor
COTTAGEGRV	S7THST	CG119	70	Fair	68	Fair	59	Fair
COTTAGEGRV	S7THST	CG120	35	Very Poor	33	Very Poor	24	Serious
COTTAGEGRV	S7THST	CG121	58	Fair	56	Fair	47	Poor
COTTAGEGRV	S7THST	CG122	62	Fair	60	Fair	51	Poor
COTTAGEGRV	S8THST	CG125	95	Good	92	Good	78	Satisfactory
COTTAGEGRV	S8THST	CG126	69	Fair	66	Fair	52	Poor
COTTAGEGRV	S8THST	CG127	66	Fair	63	Fair	49	Poor
COTTAGEGRV	S8THST	CG128	54	Poor	51	Poor	37	Very Poor
COTTAGEGRV	S8THST	CG129	60	Fair	58	Fair	49	Poor
COTTAGEGRV	S8THST	CG130	34	Very Poor	32	Very Poor	23	Serious

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	S8THST	CG320	54	Poor	52	Poor	41	Poor
COTTAGEGRV	SCT	CG21	56	Fair	54	Poor	45	Poor
COTTAGEGRV	SDOUGLASST	CG221	35	Very Poor	33	Very Poor	24	Serious
COTTAGEGRV	SGATEWAYBL	CG274	56	Fair	52	Poor	33	Very Poor
COTTAGEGRV	SGATEWAYBL	CG275	45	Poor	41	Poor	22	Serious
COTTAGEGRV	SMST	CG53	13	Serious	11	Serious	2	Failed
COTTAGEGRV	SMST	CG54	24	Serious	22	Serious	13	Serious
COTTAGEGRV	SMST	CG55	76	Satisfactory	74	Satisfactory	65	Fair
COTTAGEGRV	SNST	CG56	3	Failed	1	Failed	0	Failed
COTTAGEGRV	SOST	CG57	20	Serious	18	Serious	9	Failed
COTTAGEGRV	SPST	CG58	12	Serious	10	Failed	1	Failed
COTTAGEGRV	SRIVERRD	CG5	58	Fair	54	Poor	35	Very Poor
COTTAGEGRV	SRIVERRD	CG6	32	Very Poor	28	Very Poor	9	Failed
COTTAGEGRV	SRIVERRD	CG7	80	Satisfactory	76	Satisfactory	57	Fair
COTTAGEGRV	SRIVERRD	CG8	94	Good	90	Good	71	Satisfactory
COTTAGEGRV	SRIVERRDFR	CG4	69	Fair	67	Fair	58	Fair
COTTAGEGRV	SRST	CG18	75	Satisfactory	71	Satisfactory	52	Poor
COTTAGEGRV	SRST	CG19	44	Poor	40	Very Poor	21	Serious
COTTAGEGRV	SRST	CG20	78	Satisfactory	74	Satisfactory	55	Poor
COTTAGEGRV	SRST	CG3	85	Satisfactory	83	Satisfactory	74	Satisfactory
COTTAGEGRV	SSST	CG50	59	Fair	57	Fair	48	Poor
COTTAGEGRV	STCT	CG22	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	SUST	CG23	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	SVCT	CG24	55	Poor	53	Poor	44	Poor
COTTAGEGRV	TAYLORPL	CG97	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	THAYERAVE	CG192	44	Poor	42	Poor	33	Very Poor
COTTAGEGRV	THOMASPL	CG308	13	Serious	11	Serious	2	Failed
COTTAGEGRV	THORNTONRD	CG309	35	Very Poor	32	Very Poor	18	Serious
COTTAGEGRV	TYLERAVE	CG268	57	Fair	55	Poor	46	Poor
COTTAGEGRV	TYLERAVE	CG96	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	VANBURENAV	CG135	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	VILLAGEDR	CG314	53	Poor	51	Poor	42	Poor
COTTAGEGRV	VILLARDAVE	CG201	50	Poor	48	Poor	39	Very Poor
COTTAGEGRV	VILLARDAVE	CG202	50	Poor	48	Poor	39	Very Poor
COTTAGEGRV	VINCENTPL	CG213	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	WASHINGTON	CG304	76	Satisfactory	74	Satisfactory	65	Fair
COTTAGEGRV	WHARRISONA	CG27	56	Fair	53	Poor	39	Very Poor
COTTAGEGRV	WHITMANBLV	CG13	73	Satisfactory	71	Satisfactory	62	Fair
COTTAGEGRV	WILSONAVE	CG229	89	Good	87	Good	78	Satisfactory
COTTAGEGRV	WILSONCT	CG230	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	WITHYCOMBE	CG207	48	Poor	46	Poor	37	Very Poor
COTTAGEGRV	WMAINST	CG62	82	Satisfactory	78	Satisfactory	59	Fair
COTTAGEGRV	WOODAVE	CG186	8	Failed	6	Failed	0	Failed
COTTAGEGRV	WOODSONPL	CG12	88	Good	84	Satisfactory	65	Fair
COTTAGEGRV	YOSSPL	CG232	95	Good	93	Good	84	Satisfactory

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	ADAMSAVE	CG159	AC	20	0 - 5	50	0 - 5
COTTAGEGRV	ADAMSAVE	CG160	AC	69	16 - 20	50	> 20
COTTAGEGRV	ADAMSAVE	CG161	AC	34	0 - 5	50	0 - 5
COTTAGEGRV	ADAMSAVE	CG162	AC	59	6 - 10	50	> 20
COTTAGEGRV	ADAMSAVE	CG163	AC	60	6 - 10	50	> 20
COTTAGEGRV	ANTHONYAVE	CG49	AC	57	6 - 10	50	> 20
COTTAGEGRV	ANTHONYCT	CG59	AC	63	11 - 15	50	> 20
COTTAGEGRV	ARTHURAVE	CG234	AC	75	> 20	50	> 20
COTTAGEGRV	ASHAVE	CG61	AC	77	> 20	50	> 20
COTTAGEGRV	ASHAVE	CG63	AC	53	0 - 5	50	> 20
COTTAGEGRV	ASHAVE	CG64	AC	33	0 - 5	50	0 - 5
COTTAGEGRV	BANGLECT	CG305	AC	70	16 - 20	50	> 20
COTTAGEGRV	BELMONTAVE	CG273	AC	52	0 - 5	50	> 20
COTTAGEGRV	BENJAMINAV	CG227	AC	86	> 20	50	> 20
COTTAGEGRV	BENJAMINAV	CG228	AC	87	> 20	50	> 20
COTTAGEGRV	BIRCHAVE	CG65	AC	69	16 - 20	50	> 20
COTTAGEGRV	BIRCHAVE	CG66	AC	45	0 - 5	50	11 - 15
COTTAGEGRV	BIRCHAVE	CG67	AC	61	11 - 15	50	> 20
COTTAGEGRV	BLAIRCT	CG51	AC	52	0 - 5	50	> 20
COTTAGEGRV	BLUESKYDR	CG25	AC	30	0 - 5	60	0 - 5
COTTAGEGRV	BOHEMIAPL	CG38	AC	61	11 - 15	50	> 20
COTTAGEGRV	BRYANTAVE	CG45	AC	50	0 - 5	50	16 - 20
COTTAGEGRV	BRYANTAVE	CG46	AC	40	0 - 5	50	6 - 10
COTTAGEGRV	BRYANTAVE	CG47	AC	11	0 - 5	50	0 - 5
COTTAGEGRV	BRYANTAVE	CG48	AC	11	0 - 5	50	0 - 5
COTTAGEGRV	BRYANTCT	CG52	AC	34	0 - 5	50	0 - 5
COTTAGEGRV	CARNEGIEWA	CG2	AC	89	> 20	50	> 20
COTTAGEGRV	CAROBELLE	CG271	AC	53	0 - 5	50	> 20
COTTAGEGRV	CARVERAVE	CG43	AC	19	0 - 5	50	0 - 5
COTTAGEGRV	CARVERPL	CG44	AC	51	0 - 5	50	> 20
COTTAGEGRV	CHERRYCT	CG134	AC	46	0 - 5	50	16 - 20
COTTAGEGRV	CHESTNUTAV	CG68	AC	51	0 - 5	50	> 20
COTTAGEGRV	CLARKAVE	CG40	AC	63	11 - 15	50	> 20
COTTAGEGRV	CLARKAVE	CG41	AC	59	6 - 10	50	> 20
COTTAGEGRV	CLARKAVE	CG42	AC	41	0 - 5	50	11 - 15
COTTAGEGRV	CLEVELANDS	CG124	AC	84	> 20	50	> 20
COTTAGEGRV	COLUMBIACT	CG214	AC	73	> 20	50	> 20
COTTAGEGRV	COOPCT	CG292	AC	74	> 20	50	> 20
COTTAGEGRV	COOPERAVE	CG240	AC	75	> 20	50	> 20
COTTAGEGRV	COOPERAVE	CG241	AC	39	0 - 5	50	6 - 10
COTTAGEGRV	COTTONWOOD	CG83	AC	92	> 20	50	> 20
COTTAGEGRV	CURRYAVE	CG289	AC	67	16 - 20	50	> 20
COTTAGEGRV	DAUGHERTYA	CG39	AC	81	> 20	50	> 20
COTTAGEGRV	DAVIDSONAV	CG311	AC	47	0 - 5	50	16 - 20
COTTAGEGRV	DAVISPL	CG288	AC	70	16 - 20	50	> 20
COTTAGEGRV	DOGWOODAVE	CG84	AC	89	> 20	50	> 20
COTTAGEGRV	DOUGLASFIR	CG85	AC	90	> 20	50	> 20
COTTAGEGRV	DUBLINLN	CG249	AC	40	0 - 5	50	6 - 10
COTTAGEGRV	ECHADWICKA	CG189	AC	63	11 - 15	50	> 20

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	ECHADWICKA	CG190	AC	62	11 - 15	50	> 20
COTTAGEGRV	ECHADWICKA	CG191	AC	59	6 - 10	50	> 20
COTTAGEGRV	ECHAMBERLA	CG197	AC	58	0 - 5	60	16 - 20
COTTAGEGRV	ECHAMBERLA	CG198	AC	15	0 - 5	60	0 - 5
COTTAGEGRV	ECHAMBERLA	CG199	AC	15	0 - 5	50	0 - 5
COTTAGEGRV	EDISONAVE	CG16	AC	54	0 - 5	50	> 20
COTTAGEGRV	EGIBBSAVE	CG182	AC	57	6 - 10	50	> 20
COTTAGEGRV	EGIBBSAVE	CG183	AC	72	> 20	50	> 20
COTTAGEGRV	EGIBBSAVE	CG184	AC	50	0 - 5	50	16 - 20
COTTAGEGRV	EGIBBSAVE	CG185	AC	42	0 - 5	50	11 - 15
COTTAGEGRV	EGROVERAVE	CG187	AC	41	0 - 5	50	11 - 15
COTTAGEGRV	EGROVERAVE	CG188	AC	82	> 20	50	> 20
COTTAGEGRV	EGROVERAVE	CG293	AC	72	> 20	50	> 20
COTTAGEGRV	EGROVERAVE	CG294	AC	70	16 - 20	50	> 20
COTTAGEGRV	EHARRISONA	CG28	AC	41	0 - 5	60	6 - 10
COTTAGEGRV	EHARRISONA	CG29	AC	99	> 20	60	> 20
COTTAGEGRV	EHARRISONA	CG30	AC	56	0 - 5	60	16 - 20
COTTAGEGRV	EHARRISONA	CG31	AC	71	6 - 10	60	> 20
COTTAGEGRV	EHARRISONA	CG315	PCC	46	0 - 5	40	11 - 15
COTTAGEGRV	EJACKSONAV	CG265	AC	48	0 - 5	50	16 - 20
COTTAGEGRV	EJEFFERSON	CG155	AC	57	6 - 10	50	> 20
COTTAGEGRV	EJEFFERSON	CG156	AC	86	> 20	50	> 20
COTTAGEGRV	EJEFFERSON	CG157	AC	19	0 - 5	50	0 - 5
COTTAGEGRV	EJEFFERSON	CG158	AC	50	0 - 5	50	16 - 20
COTTAGEGRV	EJEFFERSON	CG321	PCC	60	16 - 20	40	> 20
COTTAGEGRV	EJEFFERSON	CG322	PCC	31	0 - 5	40	0 - 5
COTTAGEGRV	ELMAVE	CG86	AC	89	> 20	50	> 20
COTTAGEGRV	EMADISONAV	CG148	AC	71	> 20	50	> 20
COTTAGEGRV	EMADISONAV	CG149	AC	56	6 - 10	50	> 20
COTTAGEGRV	EMADISONAV	CG150	AC	52	0 - 5	50	> 20
COTTAGEGRV	EMADISONAV	CG151	AC	50	0 - 5	60	11 - 15
COTTAGEGRV	EMADISONAV	CG152	AC	51	0 - 5	60	11 - 15
COTTAGEGRV	EMADISONAV	CG153	AC	69	16 - 20	50	> 20
COTTAGEGRV	EMADISONAV	CG154	AC	76	> 20	50	> 20
COTTAGEGRV	EMAINST	CG172	AC	50	0 - 5	65	6 - 10
COTTAGEGRV	EMAINST	CG173	AC	79	6 - 10	65	> 20
COTTAGEGRV	EMAINST	CG174	AC	85	6 - 10	65	> 20
COTTAGEGRV	EMAINST	CG175	AC	30	0 - 5	65	0 - 5
COTTAGEGRV	EMAINST	CG176	AC	61	11 - 15	50	> 20
COTTAGEGRV	EMAINST	CG177	AC	75	> 20	50	> 20
COTTAGEGRV	EMAINST	CG178	AC	77	> 20	50	> 20
COTTAGEGRV	EMONROEAVE	CG145	AC	87	> 20	50	> 20
COTTAGEGRV	EMONROEAVE	CG146	AC	38	0 - 5	50	6 - 10
COTTAGEGRV	EMONROEAVE	CG147	AC	33	0 - 5	50	0 - 5
COTTAGEGRV	EQUINCYAVE	CG136	AC	10	0 - 5	50	0 - 5
COTTAGEGRV	EQUINCYAVE	CG137	AC	80	> 20	50	> 20
COTTAGEGRV	EQUINCYAVE	CG138	AC	85	> 20	50	> 20
COTTAGEGRV	EQUINCYAVE	CG139	AC	0	0 - 5	50	0 - 5
COTTAGEGRV	EQUINCYAVE	CG140	AC	56	6 - 10	50	> 20

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	EQUINCYAVE	CG141	AC	59	6 - 10	50	> 20
COTTAGEGRV	EQUINCYAVE	CG142	AC	68	16 - 20	50	> 20
COTTAGEGRV	EQUINCYAVE	CG143	AC	63	11 - 15	50	> 20
COTTAGEGRV	EQUINCYAVE	CG144	AC	45	0 - 5	50	11 - 15
COTTAGEGRV	ETAYLORAVE	CG244	AC	52	0 - 5	60	11 - 15
COTTAGEGRV	ETAYLORAVE	CG245	AC	38	0 - 5	60	0 - 5
COTTAGEGRV	ETAYLORAVE	CG246	AC	44	0 - 5	60	6 - 10
COTTAGEGRV	ETAYLORAVE	CG247	AC	60	6 - 10	50	> 20
COTTAGEGRV	EVANBURENA	CG266	AC	53	0 - 5	50	> 20
COTTAGEGRV	EVANBURENA	CG267	AC	71	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG164	AC	38	0 - 5	50	6 - 10
COTTAGEGRV	EWASHINGTO	CG165	AC	95	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG166	AC	74	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG167	AC	77	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG168	AC	81	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG169	AC	75	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG170	AC	67	16 - 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG171	AC	61	11 - 15	50	> 20
COTTAGEGRV	EWHITEAKER	CG179	AC	46	0 - 5	50	16 - 20
COTTAGEGRV	EWHITEAKER	CG180	AC	24	0 - 5	65	0 - 5
COTTAGEGRV	EWHITEAKER	CG181	AC	26	0 - 5	65	0 - 5
COTTAGEGRV	FAIRVIEWLP	CG32	AC	53	0 - 5	50	> 20
COTTAGEGRV	FAIRVIEWPL	CG33	AC	91	> 20	50	> 20
COTTAGEGRV	FILLMOREAV	CG242	AC	49	0 - 5	50	16 - 20
COTTAGEGRV	FILLMOREAV	CG243	AC	64	11 - 15	50	> 20
COTTAGEGRV	GEERAVE	CG196	AC	45	0 - 5	50	11 - 15
COTTAGEGRV	GETTYCIRCL	CG1	AC	92	> 20	50	> 20
COTTAGEGRV	GIRARDAVE	CG34	AC	56	6 - 10	50	> 20
COTTAGEGRV	GIRARDAVE	CG35	AC	63	11 - 15	50	> 20
COTTAGEGRV	GIRARDAVE	CG36	AC	92	> 20	50	> 20
COTTAGEGRV	GIRARDCT	CG37	AC	61	11 - 15	50	> 20
COTTAGEGRV	GRANTAVE	CG224	AC	22	0 - 5	50	0 - 5
COTTAGEGRV	GRANTAVE	CG225	AC	55	0 - 5	60	16 - 20
COTTAGEGRV	HARDINGPL	CG233	AC	95	> 20	50	> 20
COTTAGEGRV	HARRISONCT	CG17	AC	78	> 20	50	> 20
COTTAGEGRV	HARVEYLN	CG286	AC	74	> 20	50	> 20
COTTAGEGRV	HARVEYLN	CG287	AC	56	6 - 10	50	> 20
COTTAGEGRV	HARVEYRD	CG284	AC	53	0 - 5	60	11 - 15
COTTAGEGRV	HARVEYRD	CG285	AC	45	0 - 5	60	6 - 10
COTTAGEGRV	HAYESAV	CG223	AC	69	16 - 20	50	> 20
COTTAGEGRV	HOLLYAVE	CG90	AC	78	> 20	50	> 20
COTTAGEGRV	IBSENAVE	CG26	AC	79	> 20	50	> 20
COTTAGEGRV	JASONLEEAV	CG15	AC	72	> 20	50	> 20
COTTAGEGRV	JIMWRIGHTW	CG313	AC	43	0 - 5	50	11 - 15
COTTAGEGRV	JOHNSONAVE	CG236	AC	72	> 20	50	> 20
COTTAGEGRV	KALAPUYAWA	CG88	AC	75	> 20	50	> 20
COTTAGEGRV	KALAPUYSC	CG89	AC	71	> 20	50	> 20
COTTAGEGRV	KATHLEENDR	CG226	AC	84	> 20	50	> 20
COTTAGEGRV	LANDESSRD	CG306	AC	69	16 - 20	50	> 20

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	LANECT	CG206	AC	75	> 20	50	> 20
COTTAGEGRV	LINCOLNAVE	CG237	AC	62	0 - 5	60	16 - 20
COTTAGEGRV	LINCOLNAVE	CG238	AC	44	0 - 5	60	6 - 10
COTTAGEGRV	LINCOLNAVE	CG239	AC	10	0 - 5	60	0 - 5
COTTAGEGRV	LORDAVE	CG195	AC	38	0 - 5	50	6 - 10
COTTAGEGRV	MEEKERDR	CG14	AC	67	16 - 20	50	> 20
COTTAGEGRV	MOSBYCRRD	CG307	AC	57	0 - 5	65	11 - 15
COTTAGEGRV	N10THST	CG200	AC	53	0 - 5	50	> 20
COTTAGEGRV	N11THST	CG203	AC	69	16 - 20	50	> 20
COTTAGEGRV	N11THST	CG204	AC	43	0 - 5	50	11 - 15
COTTAGEGRV	N11THST	CG205	AC	86	> 20	50	> 20
COTTAGEGRV	N12THST	CG259	AC	80	> 20	50	> 20
COTTAGEGRV	N14THST	CG264	AC	46	0 - 5	50	16 - 20
COTTAGEGRV	N14THST	CG291	AC	60	6 - 10	50	> 20
COTTAGEGRV	N16THST	CG282	AC	23	0 - 5	60	0 - 5
COTTAGEGRV	N16THST	CG283	AC	25	0 - 5	60	0 - 5
COTTAGEGRV	N19THST	CG280	AC	19	0 - 5	50	0 - 5
COTTAGEGRV	N19THST	CG281	AC	74	> 20	50	> 20
COTTAGEGRV	N20THST	CG295	AC	69	16 - 20	50	> 20
COTTAGEGRV	N22NDST	CG302	AC	71	> 20	50	> 20
COTTAGEGRV	N5THST	CG111	AC	39	0 - 5	50	6 - 10
COTTAGEGRV	N6THST	CG117	AC	72	> 20	50	> 20
COTTAGEGRV	N6THST	CG118	AC	52	0 - 5	50	> 20
COTTAGEGRV	N7THST	CG123	AC	57	6 - 10	50	> 20
COTTAGEGRV	N7THST	CG319	PCC	33	0 - 5	40	0 - 5
COTTAGEGRV	N8THST	CG131	AC	59	6 - 10	50	> 20
COTTAGEGRV	N8THST	CG132	AC	55	0 - 5	50	> 20
COTTAGEGRV	N8THST	CG133	AC	96	> 20	50	> 20
COTTAGEGRV	NDOUGLASST	CG215	AC	13	0 - 5	50	0 - 5
COTTAGEGRV	NDOUGLASST	CG216	AC	0	0 - 5	50	0 - 5
COTTAGEGRV	NDOUGLASST	CG217	AC	81	> 20	50	> 20
COTTAGEGRV	NDOUGLASST	CG218	AC	44	0 - 5	60	6 - 10
COTTAGEGRV	NDOUGLASST	CG219	AC	57	6 - 10	50	> 20
COTTAGEGRV	NDOUGLASST	CG220	AC	58	6 - 10	50	> 20
COTTAGEGRV	NELLISPL	CG60	AC	55	0 - 5	50	> 20
COTTAGEGRV	NEVACT	CG235	AC	76	> 20	50	> 20
COTTAGEGRV	NGATEWAYBL	CG276	AC	68	0 - 5	65	16 - 20
COTTAGEGRV	NGATEWAYBL	CG277	AC	62	0 - 5	65	11 - 15
COTTAGEGRV	NGATEWAYBL	CG278	AC	49	0 - 5	65	6 - 10
COTTAGEGRV	NGATEWAYBL	CG279	AC	100	11 - 15	65	> 20
COTTAGEGRV	NGST	CG69	AC	62	11 - 15	50	> 20
COTTAGEGRV	NGST	CG70	AC	31	0 - 5	50	0 - 5
COTTAGEGRV	NHST	CG71	AC	36	0 - 5	50	6 - 10
COTTAGEGRV	NIST	CG72	AC	46	0 - 5	50	16 - 20
COTTAGEGRV	NJST	CG73	AC	34	0 - 5	50	0 - 5
COTTAGEGRV	NKST	CG74	AC	72	> 20	50	> 20
COTTAGEGRV	NLANEST	CG208	AC	39	0 - 5	50	6 - 10
COTTAGEGRV	NLANEST	CG209	AC	84	> 20	50	> 20
COTTAGEGRV	NLANEST	CG210	AC	43	0 - 5	50	11 - 15

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	NLANEST	CG211	AC	48	0 - 5	50	16 - 20
COTTAGEGRV	NLANEST	CG212	AC	51	0 - 5	50	> 20
COTTAGEGRV	NLST	CG75	AC	73	> 20	50	> 20
COTTAGEGRV	NMST	CG76	AC	57	0 - 5	60	16 - 20
COTTAGEGRV	NMST	CG77	AC	86	11 - 15	60	> 20
COTTAGEGRV	NNST	CG78	AC	77	> 20	50	> 20
COTTAGEGRV	NOST	CG316	PCC	48	6 - 10	40	11 - 15
COTTAGEGRV	NOST	CG79	AC	67	16 - 20	50	> 20
COTTAGEGRV	NOST	CG80	AC	84	> 20	50	> 20
COTTAGEGRV	NPST	CG81	AC	61	11 - 15	50	> 20
COTTAGEGRV	NPST	CG82	AC	96	> 20	50	> 20
COTTAGEGRV	NQST	CG87	AC	12	0 - 5	50	0 - 5
COTTAGEGRV	NRIVERRD	CG10	AC	29	0 - 5	65	0 - 5
COTTAGEGRV	NRIVERRD	CG11	AC	57	6 - 10	50	> 20
COTTAGEGRV	NRIVERRD	CG9	AC	94	11 - 15	65	> 20
COTTAGEGRV	OLSONPL	CG231	AC	90	> 20	50	> 20
COTTAGEGRV	OSTRANDERL	CG298	AC	49	0 - 5	60	11 - 15
COTTAGEGRV	OSTRANDERL	CG299	AC	35	0 - 5	60	0 - 5
COTTAGEGRV	OSWALDWAVE	CG297	AC	43	0 - 5	60	6 - 10
COTTAGEGRV	PALMERAVE	CG312	AC	57	6 - 10	50	> 20
COTTAGEGRV	PARKSRD	CG300	AC	72	> 20	50	> 20
COTTAGEGRV	PENNOYERAV	CG193	AC	63	11 - 15	50	> 20
COTTAGEGRV	PENNOYERAV	CG194	AC	65	11 - 15	50	> 20
COTTAGEGRV	POLKAVE	CG248	AC	9	0 - 5	50	0 - 5
COTTAGEGRV	PRITCHETTP	CG290	AC	66	16 - 20	50	> 20
COTTAGEGRV	REDHILLSPL	CG301	AC	98	> 20	50	> 20
COTTAGEGRV	RIVERFRONT	CG95	AC	86	> 20	50	> 20
COTTAGEGRV	RIVERWALKP	CG93	AC	95	> 20	50	> 20
COTTAGEGRV	RIVERWALKP	CG94	AC	91	> 20	50	> 20
COTTAGEGRV	ROWRIVERCO	CG310	AC	16	0 - 5	65	0 - 5
COTTAGEGRV	S10THST	CG250	AC	83	> 20	50	> 20
COTTAGEGRV	S10THST	CG251	AC	95	> 20	50	> 20
COTTAGEGRV	S10THST	CG252	AC	26	0 - 5	60	0 - 5
COTTAGEGRV	S10THST	CG253	AC	50	0 - 5	60	11 - 15
COTTAGEGRV	S11THST	CG254	AC	22	0 - 5	50	0 - 5
COTTAGEGRV	S11THST	CG256	AC	51	0 - 5	50	> 20
COTTAGEGRV	S12THST	CG257	AC	42	0 - 5	50	11 - 15
COTTAGEGRV	S12THST	CG258	AC	54	0 - 5	50	> 20
COTTAGEGRV	S13THST	CG260	AC	70	16 - 20	50	> 20
COTTAGEGRV	S13THST	CG261	AC	57	6 - 10	50	> 20
COTTAGEGRV	S14THST	CG262	AC	58	6 - 10	50	> 20
COTTAGEGRV	S14THST	CG263	AC	22	0 - 5	50	0 - 5
COTTAGEGRV	S15THST	CG269	AC	82	> 20	50	> 20
COTTAGEGRV	S16THST	CG270	AC	64	0 - 5	60	> 20
COTTAGEGRV	S17THST	CG272	AC	62	11 - 15	50	> 20
COTTAGEGRV	S1STST	CG91	AC	95	> 20	50	> 20
COTTAGEGRV	S1STST	CG92	AC	31	0 - 5	50	0 - 5
COTTAGEGRV	S21STST	CG296	AC	81	> 20	50	> 20
COTTAGEGRV	S22NDST	CG303	AC	71	> 20	50	> 20

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	S2NDST	CG100	AC	54	0 - 5	50	> 20
COTTAGEGRV	S2NDST	CG98	AC	91	> 20	50	> 20
COTTAGEGRV	S2NDST	CG99	AC	95	> 20	50	> 20
COTTAGEGRV	S3RDST	CG101	AC	88	> 20	50	> 20
COTTAGEGRV	S3RDST	CG102	AC	37	0 - 5	50	6 - 10
COTTAGEGRV	S3RDST	CG103	AC	14	0 - 5	50	0 - 5
COTTAGEGRV	S4THST	CG104	AC	58	6 - 10	50	> 20
COTTAGEGRV	S4THST	CG105	AC	45	0 - 5	60	6 - 10
COTTAGEGRV	S4THST	CG106	AC	25	0 - 5	60	0 - 5
COTTAGEGRV	S4THST	CG107	AC	76	6 - 10	60	> 20
COTTAGEGRV	S4THSTY	CG108	AC	78	> 20	50	> 20
COTTAGEGRV	S5THST	CG109	AC	38	0 - 5	50	6 - 10
COTTAGEGRV	S5THST	CG110	AC	28	0 - 5	50	0 - 5
COTTAGEGRV	S5THST	CG317	PCC	56	11 - 15	40	> 20
COTTAGEGRV	S5THST	CG318	PCC	65	> 20	40	> 20
COTTAGEGRV	S6THST	CG112	AC	74	0 - 5	65	> 20
COTTAGEGRV	S6THST	CG113	AC	75	0 - 5	65	> 20
COTTAGEGRV	S6THST	CG114	AC	86	6 - 10	65	> 20
COTTAGEGRV	S6THST	CG115	AC	40	0 - 5	60	6 - 10
COTTAGEGRV	S6THST	CG116	AC	44	0 - 5	60	6 - 10
COTTAGEGRV	S6THSTY	CG222	AC	43	0 - 5	50	11 - 15
COTTAGEGRV	S7THST	CG119	AC	70	16 - 20	50	> 20
COTTAGEGRV	S7THST	CG120	AC	35	0 - 5	50	0 - 5
COTTAGEGRV	S7THST	CG121	AC	58	6 - 10	50	> 20
COTTAGEGRV	S7THST	CG122	AC	62	11 - 15	50	> 20
COTTAGEGRV	S8THST	CG125	AC	95	16 - 20	60	> 20
COTTAGEGRV	S8THST	CG126	AC	69	6 - 10	60	> 20
COTTAGEGRV	S8THST	CG127	AC	66	0 - 5	60	> 20
COTTAGEGRV	S8THST	CG128	AC	54	0 - 5	60	11 - 15
COTTAGEGRV	S8THST	CG129	AC	60	6 - 10	50	> 20
COTTAGEGRV	S8THST	CG130	AC	34	0 - 5	50	0 - 5
COTTAGEGRV	S8THST	CG320	PCC	54	11 - 15	40	16 - 20
COTTAGEGRV	SCT	CG21	AC	56	6 - 10	50	> 20
COTTAGEGRV	SDOUGLASST	CG221	AC	35	0 - 5	50	0 - 5
COTTAGEGRV	SGATEWAYBL	CG274	AC	56	0 - 5	65	11 - 15
COTTAGEGRV	SGATEWAYBL	CG275	AC	45	0 - 5	65	6 - 10
COTTAGEGRV	SMST	CG53	AC	13	0 - 5	50	0 - 5
COTTAGEGRV	SMST	CG54	AC	24	0 - 5	50	0 - 5
COTTAGEGRV	SMST	CG55	AC	76	> 20	50	> 20
COTTAGEGRV	SNST	CG56	AC	3	0 - 5	50	0 - 5
COTTAGEGRV	SOST	CG57	AC	20	0 - 5	50	0 - 5
COTTAGEGRV	SPST	CG58	AC	12	0 - 5	50	0 - 5
COTTAGEGRV	SRIVERRD	CG5	AC	58	0 - 5	65	11 - 15
COTTAGEGRV	SRIVERRD	CG6	AC	32	0 - 5	65	0 - 5
COTTAGEGRV	SRIVERRD	CG7	AC	80	6 - 10	65	> 20
COTTAGEGRV	SRIVERRD	CG8	AC	94	11 - 15	65	> 20
COTTAGEGRV	SRIVERRDFR	CG4	AC	69	16 - 20	50	> 20
COTTAGEGRV	SRST	CG18	AC	75	0 - 5	65	> 20
COTTAGEGRV	SRST	CG19	AC	44	0 - 5	65	6 - 10

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	SRST	CG20	AC	78	6 - 10	65	> 20
COTTAGEGRV	SRST	CG3	AC	85	> 20	50	> 20
COTTAGEGRV	SSST	CG50	AC	59	6 - 10	50	> 20
COTTAGEGRV	STCT	CG22	AC	81	> 20	50	> 20
COTTAGEGRV	SUST	CG23	AC	75	> 20	50	> 20
COTTAGEGRV	SVCT	CG24	AC	55	0 - 5	50	> 20
COTTAGEGRV	TAYLORPL	CG97	AC	91	> 20	50	> 20
COTTAGEGRV	THAYERAVE	CG192	AC	44	0 - 5	50	11 - 15
COTTAGEGRV	THOMASPL	CG308	AC	13	0 - 5	50	0 - 5
COTTAGEGRV	THORNTONRD	CG309	AC	35	0 - 5	60	0 - 5
COTTAGEGRV	TYLERAVE	CG268	AC	57	6 - 10	50	> 20
COTTAGEGRV	TYLERAVE	CG96	AC	95	> 20	50	> 20
COTTAGEGRV	VANBURENAV	CG135	AC	81	> 20	50	> 20
COTTAGEGRV	VILLAGEDR	CG314	AC	53	0 - 5	50	> 20
COTTAGEGRV	VILLARDAVE	CG201	AC	50	0 - 5	50	16 - 20
COTTAGEGRV	VILLARDAVE	CG202	AC	50	0 - 5	50	16 - 20
COTTAGEGRV	VINCENTPL	CG213	AC	91	> 20	50	> 20
COTTAGEGRV	WASHINGTON	CG304	AC	76	> 20	50	> 20
COTTAGEGRV	WHARRISONA	CG27	AC	56	0 - 5	60	16 - 20
COTTAGEGRV	WHITMANBLV	CG13	AC	73	> 20	50	> 20
COTTAGEGRV	WILSONAVE	CG229	AC	89	> 20	50	> 20
COTTAGEGRV	WILSONCT	CG230	AC	91	> 20	50	> 20
COTTAGEGRV	WITCOMBE	CG207	AC	48	0 - 5	50	16 - 20
COTTAGEGRV	WMAINST	CG62	AC	82	6 - 10	65	> 20
COTTAGEGRV	WOODAVE	CG186	AC	8	0 - 5	50	0 - 5
COTTAGEGRV	WOODSONPL	CG12	AC	88	11 - 15	65	> 20
COTTAGEGRV	YOSSPL	CG232	AC	95	> 20	50	> 20

Notes: ¹ Major M&R is based on Critical PCI. ² Remaining Functional Life is based on a Trigger PCI of 30

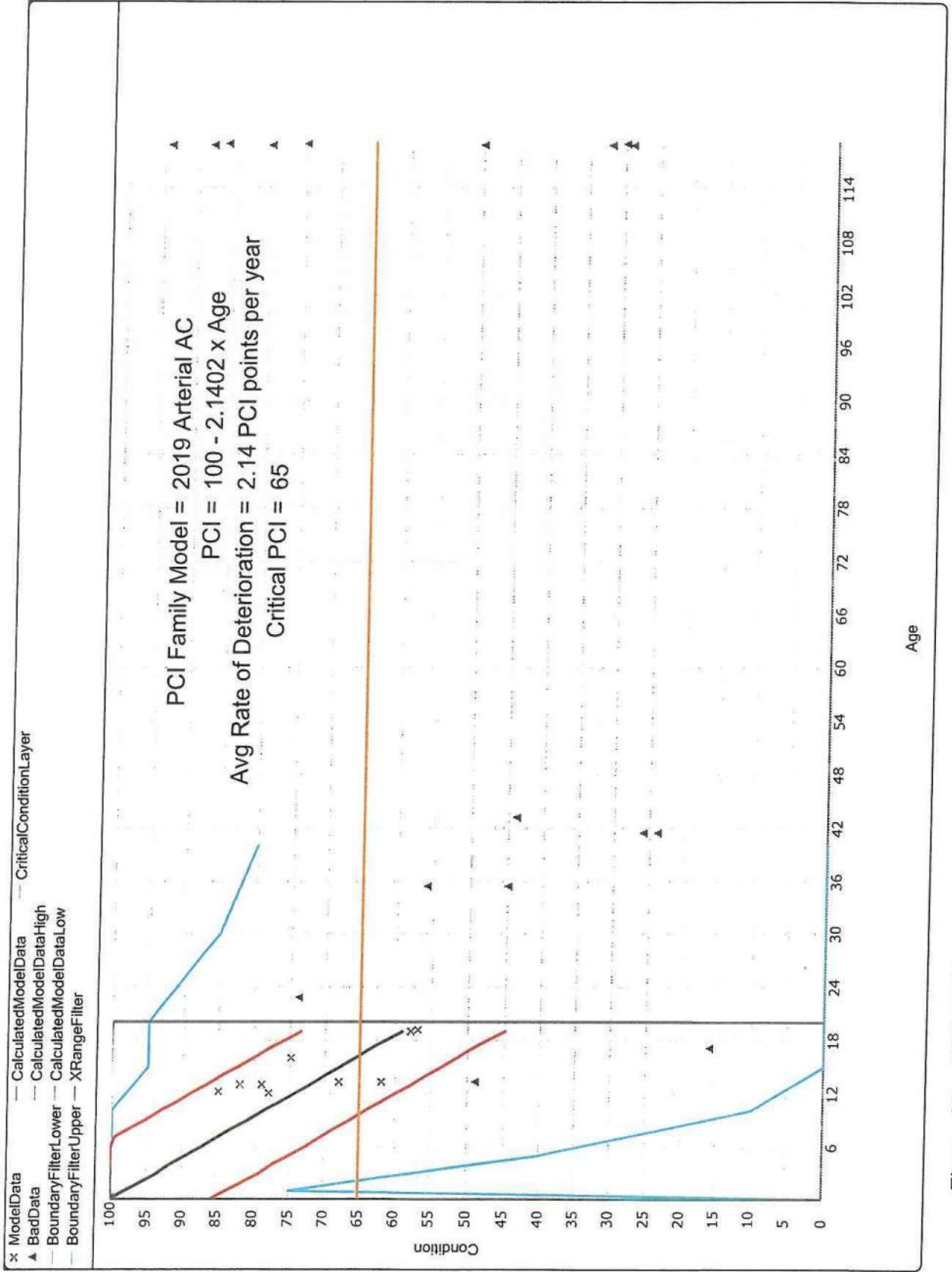


Figure 1D - ARTERIAL RANKED ASPHALT CONCRETE ROADWAY CONDITION PREDICTION MODEL

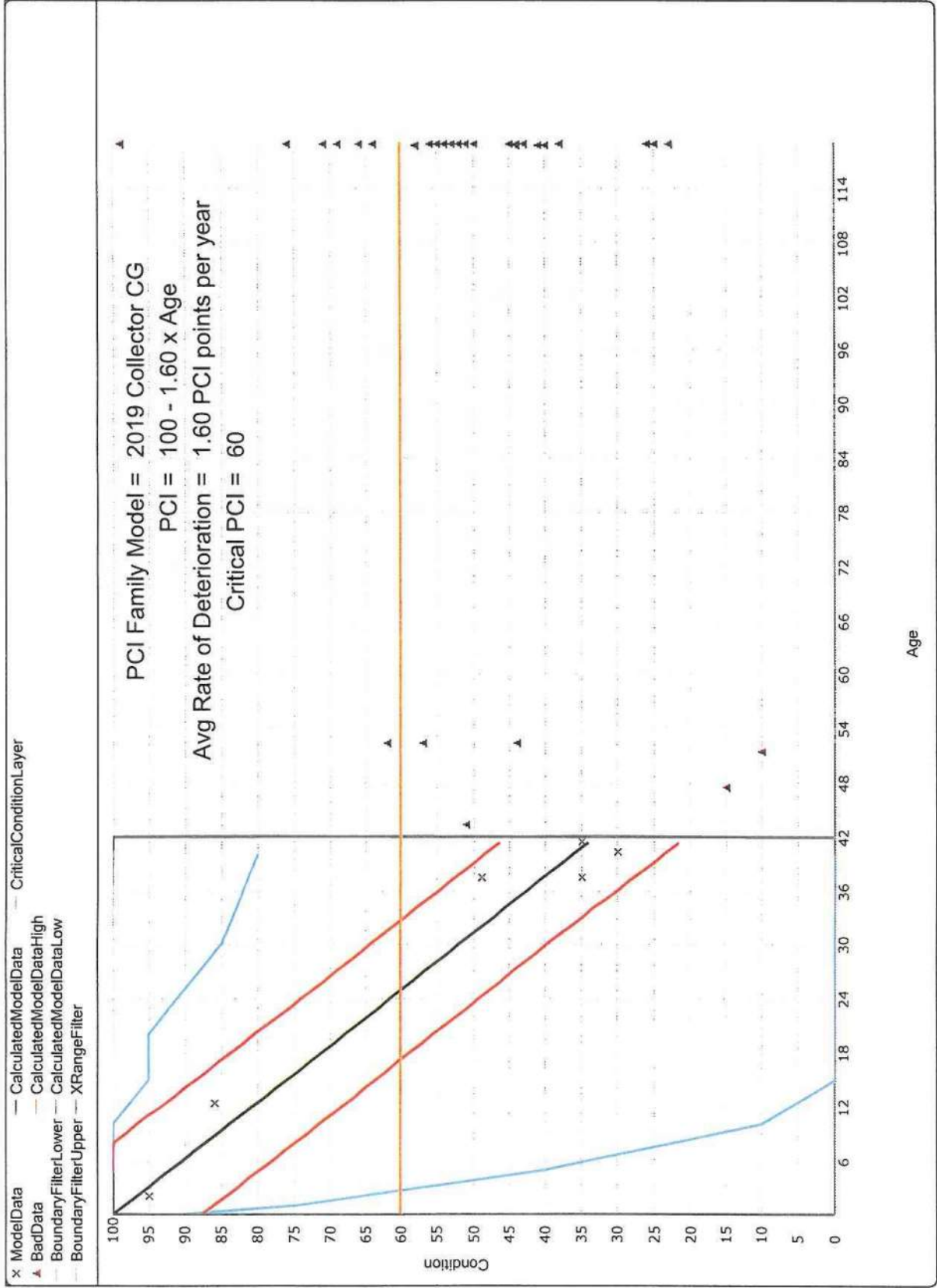


Figure 2D - COLLECTOR RANKED ASPHALT CONCRETE ROADWAY CONDITION PREDICTION MODEL

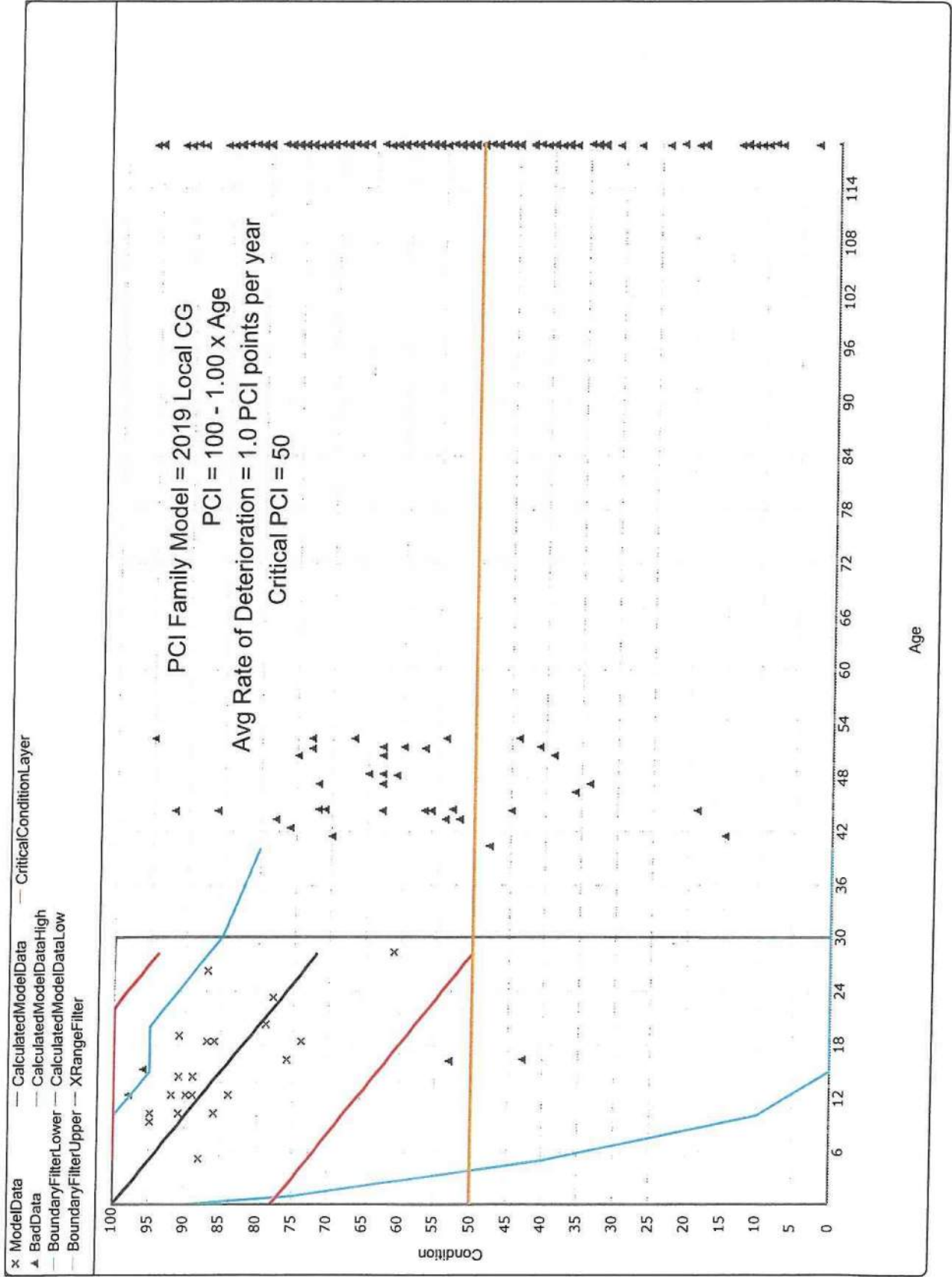


Figure 3D - LOCAL RANKED ASPHALT CONCRETE ROADWAY CONDITIONAL PREDICTION MODEL

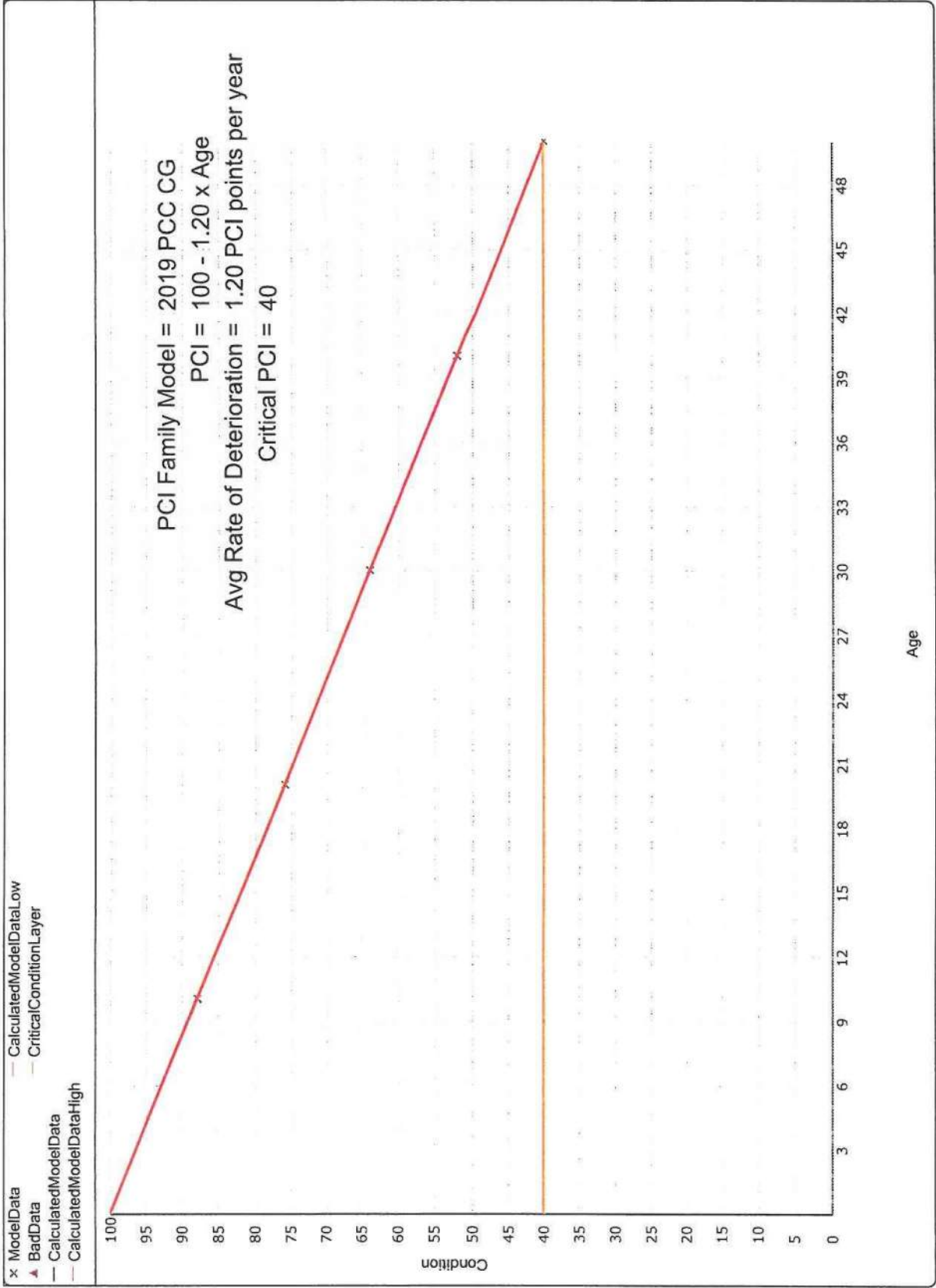


Figure 4D - PCC ROADWAY PAVEMENT CONDITIONAL PREDICTION MODEL

**Pavement Management Report
City of Cottage Grove City Streets**

**APPENDIX E:
MAINTENANCE POLICIES AND UNIT COST DATA**

Tables 1E through 11E

Table 1E - LOCALIZED STOPGAP M&R MAINTENANCE POLICY

Distress #	Distress Description	Distress Severity	Repair Description	PAVER Code	Work Unit
4	BUMPS/SAGS	High	Patching - AC Shallow	PA-AS	SqFt
5	CORRUGATION	High	Patching - AC Shallow	PA-AS	SqFt
11	PATCH/UT CUT	High	Patching - AC Shallow	PA-AS	SqFt
13	POTHOLE	Medium	Patching - AC Deep	PA-AD	SqFt
13	POTHOLE	High	Patching - AC Deep	PA-AD	SqFt
15	RUTTING	High	Patching - AC Shallow	PA-AS	SqFt
16	SHOVING	High	Patching - AC Shallow	PA-AS	SqFt
17	SLIPPAGE CR	High	Patching - AC Shallow	PA-AS	SqFt
21	BLOW UP	High	Patching - PCC Full Depth	PA-PF	SqFt
22	CORNER BREAK	High	Patching - AC Leveling	PA-AL	SqFt
23	DIVIDED SLAB	High	Patching - AC Leveling	PA-AL	SqFt
24	DURABIL. CR	High	Patching - AC Leveling	PA-AL	SqFt
29	LARGE PATCH	High	Patching - AC Leveling	PA-AL	SqFt
34	PUNCHOUT	High	Patching - AC Leveling	PA-AL	SqFt
38	CORNER SPALL	High	Patching - AC Leveling	PA-AL	SqFt
39	JOINT SPALL	High	Patching - AC Leveling	PA-AL	SqFt

Table 2E - LOCALIZED PREVENTATIVE M&R MAINTENANCE POLICY

Distress #	Distress Description	Distress Severity	Repair Description	PAVER Code	Work Unit
1	ALLIGATOR CR	Medium	Patching - AC Deep	PA-AD	SqFt
1	ALLIGATOR CR	High	Patching - AC Deep	PA-AD	SqFt
3	BLOCK CR	Medium	Crack Sealing - AC	CS-AC	Ft
4	BUMPS/SAGS	High	Patching - AC Deep	PA-AD	SqFt
4	BUMPS/SAGS	Medium	Patching - AC Shallow	PA-AS	SqFt
5	CORRUGATION	Medium	Patching - AC Shallow	PA-AS	SqFt
5	CORRUGATION	High	Patching - AC Deep	PA-AD	SqFt
6	DEPRESSION	High	Patching - AC Deep	PA-AD	SqFt
6	DEPRESSION	Medium	Patching - AC Deep	PA-AD	SqFt
7	EDGE CR	Medium	Crack Sealing - AC	CS-AC	Ft
7	EDGE CR	High	Patching - AC Shallow	PA-AS	SqFt
8	JT REF. CR	High	Patching - AC Shallow	PA-AS	SqFt
8	JT REF. CR	Medium	Crack Sealing - AC	CS-AC	Ft
10	L & T CR	High	Patching - AC Shallow	PA-AS	SqFt
10	L & T CR	Medium	Crack Sealing - AC	CS-AC	Ft
11	PATCH/UT CUT	High	Patching - AC Deep	PA-AD	SqFt
13	POTHOLE	High	Patching - AC Deep	PA-AD	SqFt
13	POTHOLE	Medium	Patching - AC Deep	PA-AD	SqFt
13	POTHOLE	Low	Patching - AC Deep	PA-AD	SqFt
15	RUTTING	Medium	Patching - AC Shallow	PA-AS	SqFt
15	RUTTING	High	Patching - AC Deep	PA-AD	SqFt
17	SLIPPAGE CR	High	Patching - AC Shallow	PA-AS	SqFt
17	SLIPPAGE CR	Medium	Patching - AC Shallow	PA-AS	SqFt
21	BLOW UP	High	Patching - PCC Full Depth	PA-PF	SqFt
21	BLOW UP	Medium	Patching - PCC Full Depth	PA-PF	SqFt
22	CORNER BREAK	High	Patching - PCC Full Depth	PA-PF	SqFt
22	CORNER BREAK	Medium	Crack Sealing - PCC	CS-PC	Ft
23	DIVIDED SLAB	Medium	Slab Replacement - PCC	SL-PC	SqFt
23	DIVIDED SLAB	High	Slab Replacement - PCC	SL-PC	SqFt
24	DURABIL. CR	Medium	Patching - PCC Full Depth	PA-PF	SqFt
24	DURABIL. CR	High	Slab Replacement - PCC	SL-PC	SqFt
28	LINEAR CR	Medium	Joint Seal - Silicon	JS-SI	Ft
28	LINEAR CR	High	Patching - PCC Partial Depth	PA-PP	SqFt
29	LARGE PATCH	High	Patching - PCC Full Depth	PA-PF	SqFt
30	SMALL PATCH	High	Patching - PCC Partial Depth	PA-PP	SqFt
34	PUNCHOUT	Medium	Patching - PCC Full Depth	PA-PF	SqFt
34	PUNCHOUT	High	Slab Replacement - PCC	SL-PC	SqFt
36	SCALING	High	Slab Replacement - PCC	SL-PC	SqFt
38	CORNER SPALL	High	Patching - PCC Partial Depth	PA-PP	SqFt
38	CORNER SPALL	Medium	Patching - PCC Partial Depth	PA-PP	SqFt
39	JOINT SPALL	High	Patching - PCC Partial Depth	PA-PP	SqFt
39	JOINT SPALL	Medium	Patching - PCC Partial Depth	PA-PP	SqFt

Table 3E - 2019 COTTAGE GROVE UNIT COST DATA

Type of M&R	Work Type	Unit Cost	Work Unit	
Arterial Ranked Streets	New Construction - AC ¹	\$14.46	SqFt	
	Overlay - AC Thin	\$3.82	SqFt	
	Full Depth Reclamation - Arterial	\$9.27	SqFt	
	Complete Reconstruction - AC ²	\$17.66	SqFt	
	Surface Reconstruction - AC ³	\$5.71	SqFt	
	Collector Ranked Streets	New Construction - AC	\$13.02	SqFt
		Overlay - AC Thin	\$3.82	SqFt
		Full Depth Reclamation - Collector	\$8.01	SqFt
		Complete Reconstruction - AC	\$16.22	SqFt
	PCC Roads	Surface Reconstruction - AC	\$5.71	SqFt
Complete Reconstruction - PCC		\$18.45	SqFt	
Overlay - AC Structural		\$10.00	SqFt	
Local Ranked Streets	New Construction - AC	\$11.17	SqFt	
	Overlay - AC Thin	\$3.66	SqFt	
	Full Depth Reclamation - Local	\$7.54	SqFt	
	Complete Reconstruction - AC	\$14.37	SqFt	
	Surface Reconstruction - AC	\$5.71	SqFt	
Global M&R	No Global M & R	\$0.00	SqFt	
	Surface Treatment - Micro Surface	\$0.35	SqFt	
	Overlay - AC Thin (Global)	\$2.84	SqFt	
	Surface Treatment - Single Bitum.	\$1.05	SqFt	
	Surface Treatment - Slurry Seal	\$0.32	SqFt	
Localized M&R	No Localized M & R	\$0.00	SqFt	
	Crack Sealing - AC	\$1.00	Ft	
	Joint Seal - Silicon	\$3.85	Ft	
	Patching - AC Deep	\$10.85	SqFt	
	Patching - AC Leveling	\$1.41	SqFt	
	Patching - AC Shallow	\$6.23	SqFt	
	Patching - PCC Full Depth	\$33.60	SqFt	
	Patching - PCC Partial Depth	\$14.00	SqFt	
Slab Replacement - PCC	\$44.80	SqFt		

Notes: ¹New construction includes work between curbs (aggregate base, paving) plus ADA ramps.

²Complete reconstruction includes estimated cost of curbs and sidewalks.

³Surface reconstruction includes removing and replacing 4 inches of AC.

Table 4E - AC LOCALIZED STOPGAP M&R COST BY CONDITION DATA

PCI	AC Localized Stopgap M&R Cost
0	\$1.33
10	\$1.00
20	\$0.71
30	\$0.47
40	\$0.24
50	\$0.12
60	\$0.04
70	\$0.00
80	\$0.00
90	\$0.00
100	\$0.00

Table 5E - PCC LOCALIZED STOPGAP M&R COST BY CONDITION DATA

PCI	AC Localized Stopgap M&R Cost
0	\$5.19
10	\$3.26
20	\$1.33
30	\$1.33
40	\$1.33
50	\$0.00
60	\$0.00
70	\$0.00
80	\$0.00
90	\$0.00
100	\$0.00

Table 6E - AC LOCALIZED PREVENTATIVE M&R COST BY CONDITION DATA

PCI	AC Localized Preventative M&R Cost
0	\$5.19
10	\$4.07
20	\$2.95
30	\$1.33
40	\$0.33
50	\$0.16
60	\$0.08
70	\$0.04
80	\$0.01
90	\$0.00
100	\$0.00

Table 7E - PCC LOCALIZED PREVENTATIVE M&R COST BY CONDITION DATA

PCI	AC Localized Preventative M&R Cost
0	\$20.00
10	\$15.00
20	\$10.00
30	\$9.08
40	\$5.19
50	\$1.33
60	\$1.33
70	\$0.00
80	\$0.00
90	\$0.00
100	\$0.00

Table 8E - ARTERIAL RANKED AC MAJOR M&R COST BY CONDITION DATA

PCI	AC Arterial - Major M&R Cost
0	\$14.46
10	\$14.46
20	\$14.46
30	\$11.50
40	\$9.27
50	\$5.71
60	\$4.50
70	\$3.82
80	\$2.00
90	\$0.00
100	\$0.00

Table 9E - COLLECTOR RANKED AC MAJOR M&R COST BY CONDITION DATA

PCI	AC Collector - Major M&R Cost
0	\$13.02
10	\$13.02
20	\$13.02
30	\$10.50
40	\$8.01
50	\$5.71
60	\$4.25
70	\$3.57
80	\$1.75
90	\$0.00
100	\$0.00

Table 10E - LOCAL RANKED AC MAJOR M&R COST BY CONDITION DATA

PCI	AC Local - Major M&R Cost
0	\$11.17
10	\$11.17
20	\$11.17
30	\$9.00
40	\$7.54
50	\$4.75
60	\$4.25
70	\$3.25
80	\$1.50
90	\$0.00
100	\$0.00

Table 11E - PCC MAJOR M&R COST BY CONDITION DATA

PCI	PCC - Major M&R Cost
0	\$18.45
10	\$18.45
20	\$18.45
30	\$18.45
40	\$10.00
50	\$10.00
60	\$10.00
70	\$0.00
80	\$0.00
90	\$0.00
100	\$0.00

**Pavement Management Report
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**APPENDIX F:
NEEDS AND CONSEQUENCE BUDGET ANALYSIS & NETWORK-LEVEL
PROJECT RECOMMENDATIONS**

Table 1F

**Table 1F - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION
DETAILED CONSEQUENCES & NEEDS BUDGET ANALYSIS RESULTS**

Maintain Current Budget - \$500,000 per Year				
Year	PCI Before Repair	Funded M&R Cost ¹	Unfunded M&R Cost	PCI After Repair
2020	55.1	\$796,501	\$26,725,301	55.8
2021	54.5	\$791,271	\$28,009,053	55.0
2022	53.7	\$795,467	\$29,791,187	54.4
2023	53.0	\$793,894	\$31,208,818	53.6
2024	52.2	\$799,985	\$32,941,071	52.8
2025	51.5	\$798,971	\$34,123,677	52.1
2026	50.8	\$799,383	\$36,174,877	51.6
2027	50.2	\$793,256	\$37,359,709	51.0
2028	49.7	\$793,991	\$38,672,953	50.4
2029	49.1	\$794,718	\$39,845,365	49.7
2030	48.4			
Total Funded:		\$7,957,437	Total Cost²	\$44,851,292

Maintain Current PCI - 10 Years - PCI 58 - \$1,400,000 per Year				
Year	PCI Before Repair	Funded M&R Cost ¹	Unfunded M&R Cost	PCI After Repair
2020	55.1	\$1,562,960	\$26,725,301	56.7
2021	55.3	\$1,555,663	\$27,969,424	57.1
2022	55.7	\$1,560,263	\$29,165,831	57.6
2023	56.3	\$1,558,660	\$30,112,831	58.2
2024	56.8	\$1,563,037	\$31,576,214	58.5
2025	57.1	\$1,560,458	\$32,569,781	58.9
2026	57.6	\$1,553,258	\$32,092,917	59.4
2027	58.1	\$1,550,884	\$31,566,888	59.5
2028	58.2	\$1,558,845	\$31,112,132	59.6
2029	58.2	\$1,545,859	\$30,470,139	59.6
2030	58.3			
Total Funded:		\$15,569,889	Total Cost²	\$44,471,360

Increase PCI to 72 After 10 Years - \$2,875,000 per Year				
Year	PCI Before Repair	Funded M&R Cost ¹	Unfunded M&R Cost	PCI After Repair
2020	55.1	\$2,980,182	\$26,725,301	58.7
2021	57.3	\$2,982,303	\$27,649,285	61.3
2022	60.0	\$2,978,527	\$28,182,412	63.2
2023	61.9	\$2,982,359	\$26,204,241	65.0
2024	63.7	\$2,977,196	\$24,493,822	66.3
2025	64.9	\$2,980,842	\$22,523,979	67.6
2026	66.2	\$2,975,501	\$20,263,221	69.4
2027	68.0	\$2,977,121	\$17,995,658	71.0
2028	69.6	\$2,980,861	\$15,747,728	72.4
2029	71.1	\$2,971,154	\$13,284,066	74.2
2030	72.8			
Total Funded:		\$29,786,048	Total Cost²	\$42,031,565

Notes: ¹The Funded M&R Cost includes Crack Sealing and Pothole patching which is performed by City of Cottage Grove Maintenance Forces.

²The sum of Funded M&R and Unfunded M&R in the last year, less the value of Crack Sealing and Potholing completed by City Forces (\$ value not shown).

Table 1F - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION
 DETAILED CONSEQUENCES & NEEDS BUDGET ANALYSIS RESULTS

Increase PCI to 80 After 10 Years - \$3,559,000 per Year

Year	PCI Before Repair	Funded M&R Cost ¹	Unfunded M&R Cost	PCI After Repair
2020	55.1	\$3,657,359	\$26,725,301	59.7
2021	58.4	\$3,656,665	\$27,658,206	62.9
2022	61.5	\$3,647,352	\$26,023,448	65.7
2023	64.4	\$3,656,082	\$23,148,780	67.4
2024	66.1	\$3,654,503	\$20,671,466	69.6
2025	68.2	\$3,654,960	\$17,960,378	72.1
2026	70.7	\$3,648,646	\$14,858,650	74.2
2027	72.9	\$3,653,386	\$11,696,182	76.7
2028	75.3	\$3,634,579	\$8,654,897	79.4
2029	78.0	\$3,649,932	\$5,412,818	82.0
2030	80.7			
Total Funded:		\$36,513,466	Total Cost²	\$41,002,418

Eliminate Backlog in 10 Years - \$4,043,000 per Year

Year	PCI Before Repair	Funded M&R Cost ¹	Unfunded M&R Cost	PCI After Repair
2020	55.1	\$4,197,303	\$26,725,301	60.5
2021	59.2	\$4,194,449	\$27,482,561	64.2
2022	62.9	\$4,193,623	\$24,296,846	67.2
2023	65.8	\$4,193,677	\$20,824,805	69.3
2024	68.0	\$4,190,607	\$17,786,710	72.4
2025	71.1	\$4,198,930	\$14,442,475	75.2
2026	73.8	\$4,182,097	\$10,676,444	78.1
2027	76.7	\$4,193,084	\$6,937,328	81.4
2028	80.0	\$4,188,816	\$3,267,162	84.6
2029	83.3	\$3,573,935	\$0	87.7
2030	86.3			
Total Funded:		\$41,306,521	Total Cost²	\$40,434,800

Notes: ¹The Funded M&R Cost includes Crack Sealing and Pothole patching which is performed by City of Cottage Grove Maintenance Forces.

²The sum of Funded M&R and Unfunded M&R in the last year, less the value of Crack Sealing and Potholing completed by City Forces (\$ value not shown).

CITY OF COTTAGE GROVE
PLANNING LEVEL COST ESTIMATE SUMMARY

STREET NAME	ESTIMATED COST SUBTOTAL	30% PLANNING LEVEL CONTINGENCY	TOTAL ESTIMATED CONSTRUCTION COST
ROW RIVER (THORNTON ROAD TO CURRIN BLVD)	\$597,145	\$179,144	\$776,289
E. WHITEAKER & E. MAIN ST (GATEWAY BLVD TO NEW PAVEMENT W. OF THORNTON)	\$583,668	\$175,100	\$758,768
N. 16TH (MAIN ST TO BIKE PATH)	\$335,190	\$100,557	\$435,747
N. 16TH (MAIN ST TO PAVEMENT JOINT NORTH OF OSTRANDER)	\$307,422	\$92,227	\$399,649
N. GATEWAY (SB FROM VINTAGE INN ENTRANCE TO TRUCK STOP)	\$160,060	\$48,018	\$208,078
W HARRISON (RIVER ROAD TO R STREET)	\$468,560	\$140,568	\$609,128
TOTALS	\$2,452,045	\$735,613	\$3,187,658

ROW RIVER (THORNTON ROAD TO CURRIN BLVD)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$50,000.00	\$50,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$15,000.00	\$15,000.00
	TEMPORARY SIGNS	SQFT	325	\$22.00	\$7,150.00
	FLAGGERS	HOUR	290	\$65.00	\$18,850.00
	TEMPORARY BARRICADES, TYPE II	EA	8	\$70.00	\$560.00
	TEMPORARY BARRICADES, TYPE III	EA	2	\$150.00	\$300.00
	TEMPORARY PLASTIC DRUMS	EA	60	\$50.00	\$3,000.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	6	\$130.00	\$780.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$5,000.00	\$5,000.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	270	\$65.00	\$17,550.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	450	\$4.00	\$1,800.00
	ADJUSTING BOXES	EA	7	\$600.00	\$4,200.00
	ADJUSTING INLETS	EA	1	\$1,500.00	\$1,500.00
	MINOR ADJUSTMENT OF MANHOLES	EA	4	\$1,400.00	\$5,600.00
	COLD PLANE PAVEMENT REMOVAL, 6 INCHES DEEP	SQYD	2825	\$6.50	\$18,362.50
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	2825	\$7.50	\$21,187.50
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	2300	\$120.00	\$276,000.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	400	\$80.00	\$32,000.00
	CONCRETE WALKS	SQFT	2400	\$25.00	\$60,000.00
	EXTRA FOR NEW CURB RAMPS	EA	15	\$1,500.00	\$22,500.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	150	\$50.00	\$7,500.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	7850	\$0.90	\$7,065.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$350.00	\$700.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	6	\$350.00	\$2,100.00
	PAVEMENT BAR, TYPE B-HS	SQFT	740	\$11.00	\$8,140.00
	TRAFFIC SIGNAL LOOPS	EA	6	\$1,500.00	\$9,000.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL =	\$597,145.00
30% CONTINGENCY =	\$179,143.50
TOTAL =	\$776,288.50

E. WHITEAKER & E. MAIN ST (GATEWAY BLVD TO NEW PAVEMENT W. OF THORNTON)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$50,000.00	\$50,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$15,000.00	\$15,000.00
	TEMPORARY SIGNS	SQFT	300	\$22.00	\$6,600.00
	FLAGGERS	HOUR	240	\$65.00	\$15,600.00
	TEMPORARY BARRICADES, TYPE II	EA	10	\$70.00	\$700.00
	TEMPORARY PLASTIC DRUMS	EA	20	\$50.00	\$1,000.00
	EROSION CONTROL	LS	1	\$500.00	\$500.00
	INLET PROTECTION, TYPE 7	EA	10	\$130.00	\$1,300.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$10,000.00	\$10,000.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$1,000.00	\$1,000.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	220	\$65.00	\$14,300.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	500	\$4.00	\$2,000.00
	GENERAL EXCAVATION	CUYD	130	\$65.00	\$8,450.00
	SUBGRADE GEOTEXTILE	SQYD	250	\$1.75	\$437.50
	ADJUSTING BOXES	EA	6	\$600.00	\$3,600.00
	ADJUSTING INLETS	EA	2	\$1,500.00	\$3,000.00
	MINOR ADJUSTMENT OF MANHOLES	EA	9	\$1,400.00	\$12,600.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	1500	\$3.75	\$5,625.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	5150	\$5.00	\$25,750.00
	COLD PLANE PAVEMENT REMOVAL, 6 INCHES DEEP	SQYD	750	\$7.00	\$5,250.00
	AGGREGATE BASE	TON	150	\$40.00	\$6,000.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	1725	\$125.00	\$215,625.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	415	\$80.00	\$33,200.00
	CONCRETE WALKS	SQFT	2100	\$25.00	\$52,500.00
	EXTRA FOR NEW CURB RAMPS	EA	12	\$1,500.00	\$18,000.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	120	\$50.00	\$6,000.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	3700	\$1.00	\$3,700.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$350.00	\$700.00
	PAVEMENT BAR, TYPE B-HS	SQFT	430	\$11.00	\$4,730.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, UPGRADES	LS	1	\$60,000.00	\$60,000.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL =	\$583,667.50
30% CONTINGENCY =	\$175,100.25
TOTAL =	\$758,767.75

N. 16TH (MAIN ST TO BIKE PATH)

PLANNING LEVEL COST ESTIMATE - RECONSTRUCTION BETWEEN CURBS

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$30,000.00	\$30,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$15,000.00	\$15,000.00
	TEMPORARY SIGNS	SQFT	300	\$22.00	\$6,600.00
	FLAGGERS	HOUR	175	\$65.00	\$11,375.00
	TEMPORARY BARRICADES, TYPE II	EA	10	\$70.00	\$700.00
	TEMPORARY BARRICADES, TYPE III	EA	4	\$150.00	\$600.00
	TEMPORARY PLASTIC DRUMS	EA	30	\$50.00	\$1,500.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	5	\$130.00	\$650.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	CONSTRUCTION SURVEY WORK	LS	1	\$4,500.00	\$4,500.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	75	\$4.00	\$300.00
	GENERAL EXCAVATION	CUYD	1400	\$55.00	\$77,000.00
	SUBGRADE GEOTEXTILE	SQYD	2800	\$1.75	\$4,900.00
	MINOR ADJUSTMENT OF MANHOLES	EA	5	\$1,400.00	\$7,000.00
	AGGREGATE BASE	TON	1750	\$30.00	\$52,500.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	950	\$125.00	\$118,750.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	350	\$0.90	\$315.00
	TRAFFIC SIGNAL LOOPS	EA	2	\$1,500.00	\$3,000.00
	HYDRANT ASSEMBLIES	EA	1	\$4,100.00	\$4,100.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL =	\$335,190.00
30% CONTINGENCY =	\$100,557.00
TOTAL =	\$435,747.00

N. 16TH (MAIN ST TO PAVEMENT JOINT NORTH OF OSTRANDER)

PLANNING LEVEL COST ESTIMATE - RECONSTRUCTION BETWEEN CURBS

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$25,000.00	\$25,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$10,000.00	\$10,000.00
	TEMPORARY SIGNS	SQFT	300	\$22.00	\$6,600.00
	FLAGGERS	HOURL	150	\$65.00	\$9,750.00
	TEMPORARY BARRICADES, TYPE II	EA	6	\$70.00	\$420.00
	TEMPORARY BARRICADES, TYPE III	EA	8	\$150.00	\$1,200.00
	TEMPORARY PLASTIC DRUMS	EA	20	\$50.00	\$1,000.00
	EROSION CONTROL	LS	1	\$500.00	\$500.00
	INLET PROTECTION, TYPE 7	EA	5	\$130.00	\$650.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$4,500.00	\$4,500.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	60	\$65.00	\$3,900.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	100	\$4.00	\$400.00
	GENERAL EXCAVATION	CUYD	1300	\$50.00	\$65,000.00
	SUBGRADE GEOTEXTILE	SQYD	3000	\$1.75	\$5,250.00
	ADJUSTING BOXES	EA	5	\$600.00	\$3,000.00
	AGGREGATE BASE	TON	1800	\$28.00	\$50,400.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	650	\$125.00	\$81,250.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	105	\$80.00	\$8,400.00
	CONCRETE CURBS, CURB AND GUTTER, MODIFIED (VALLEY GUTTER)	FOOT	30	\$100.00	\$3,000.00
	CONCRETE WALKS	SQFT	630	\$25.00	\$15,750.00
	EXTRA FOR NEW CURB RAMPS	EA	3	\$1,500.00	\$4,500.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	30	\$50.00	\$1,500.00
	PAVEMENT BAR, TYPE B-HS	SQFT	32	\$11.00	\$352.00
	HYDRANT ASSEMBLIES	EA	1	\$4,100.00	\$4,100.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL = \$307,422.00
30% CONTINGENCY = \$92,226.60
TOTAL = \$399,648.60

N. GATEWAY (SB FROM VINTAGE INN ENTRANCE TO TRUCK STOP)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$15,000.00	\$15,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$7,500.00	\$7,500.00
	TEMPORARY SIGNS	SQFT	250	\$22.00	\$5,500.00
	FLAGGERS	HOUR	80	\$65.00	\$5,200.00
	TRAFFIC CONTROL SUPERVISOR	EA	2	\$650.00	\$1,300.00
	TEMPORARY BARRICADES, TYPE II	EA	6	\$70.00	\$420.00
	TEMPORARY PLASTIC DRUMS	EA	40	\$50.00	\$2,000.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	4	\$130.00	\$520.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	130	\$4.00	\$520.00
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	1750	\$8.00	\$14,000.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	850	\$125.00	\$106,250.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	1500	\$0.90	\$1,350.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL =	\$160,060.00
30% CONTINGENCY =	\$48,018.00
TOTAL =	\$208,078.00

W HARRISON (RIVER ROAD TO R STREET)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$40,000.00	\$40,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$10,000.00	\$10,000.00
	TEMPORARY SIGNS	SQFT	530	\$22.00	\$11,660.00
	FLAGGERS	HOUR	290	\$65.00	\$18,850.00
	TEMPORARY BARRICADES, TYPE II	EA	8	\$70.00	\$560.00
	EROSION CONTROL	LS	1	\$500.00	\$500.00
	INLET PROTECTION, TYPE 7	EA	6	\$130.00	\$780.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$8,000.00	\$8,000.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	225	\$65.00	\$14,625.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	360	\$4.00	\$1,440.00
	ADJUSTING BOXES	EA	4	\$600.00	\$2,400.00
	MINOR ADJUSTMENT OF MANHOLES	EA	7	\$1,400.00	\$9,800.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	2620	\$3.75	\$9,825.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	5050	\$5.00	\$25,250.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	1500	\$125.00	\$187,500.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	340	\$80.00	\$27,200.00
	CONCRETE WALKS	SQFT	2040	\$25.00	\$51,000.00
	EXTRA FOR NEW CURB RAMPS	EA	12	\$1,500.00	\$18,000.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	120	\$50.00	\$6,000.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	8400	\$0.90	\$7,560.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$350.00	\$700.00
	PAVEMENT LEGEND, TPE B-HS: "ONLY"	EA	1	\$750.00	\$750.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	6	\$350.00	\$2,100.00
	PAVEMENT BAR, TYPE B-HS	SQFT	460	\$11.00	\$5,060.00
	LUMINAIRES, LAMPS, AND BALLASTS	LS	1	\$8,000.00	\$8,000.00
	HYDRANT ASSEMBLIES	EA	1	\$4,100.00	\$4,100.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL =	\$468,560.00
30% CONTINGENCY =	\$140,568.00
TOTAL =	\$609,128.00

2023 Cottage Grove Paving Projects Design Estimates



Scope

These projects are to restore pavement to good condition with the other components of the projects driven by meeting ADA requirements when pavement work is considered an Alteration.

Design Projects	Total Estimated Fee	
Location		Expenses
Row River	\$ 41,050	\$ 500
N. 16th South End	\$ 17,878	\$ 500
N. 16th North End	\$ 23,089	\$ 500
Gateway	\$ 15,928	\$ 500
Sub-Total	\$ 97,945	\$ 2,000
Anticipated Smaller Scope Total	\$ 99,945	
Whiteaker-Main	\$ 108,286	\$ 2,966
Harrison	\$ 79,007	\$ 1,973
Sub-Total	\$ 187,293	\$ 4,939
Anticipated Larger Scope Total	\$ 192,232	
Total	\$ 292,177	

For these design projects, our fees are based on a field assessment, and preparing, cover and basic plan sheets with typical section and construction notes, plan sheets for each individual curb ramp with 2D design or 3D design as per original assessment, along with specifications, cost estimates, and bid quantities.

Design Fee 16 plan sheets, 1 typical/summary/const, 1 cover/map sheet, 14 ADA/Int - Excluding any Detail/Std Dwg Sheets

Row River Quick Design

Total Estimated Hours 152

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Desgn1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	12	6	8		28	3,962	
Design									
Project Management and Coordination		3	16				19	3,280	
Review of plans and QA/QC		2	5	5			12	1,891	
Site visit topo, measurements, quantities			8		8		16	2,108	
Loop/Striping Plans			2	1	4		7	853	
Utility Coordination			4				4	657	
Develop Paving Plans			6	2	12		20	2,430	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	8				9	1,531	
Quantity & Cost Estimates			6	2	6		14	1,835	
Permits & Coordination W/other Agencies			8		4		12	1,711	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	3				4	710	
	total hours	10	84	16	42	0			
	Subtotal	2,170	13,801	2,034	4,166	-			

Pavement Rehabilitation Plans Total =	22,171	500
ADA Curb Ramp Design Total =	18,879	
Topo Survey Total =	-	
Boundary/ROW Survey Total =	-	
Traffic Signal Design =	-	
Row River Total =	41,050	500

Comments/Concerns

Working with ODOT on impacts at Thornton Signal.

Right of Way issues that could be associated with ADA Ramps have not been considered.

Permitting with ODOT and Lane County as Traffic Control will impact their jurisdictions.

Assumed survey will not be required. Striping layout with contractor in conjunction with construction inspection.

Topics for discussion with Cottage Grove

Design Fee 2 plan sheets, 1 typical/summary/const, 1 cover/map sheet, no ADA, maybe 3rd sheet for loops - Excluding any Detail/Std Dwg S

North 16th South End Quick Design

Total Estimated Hours 123

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Desgn1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	8	3	4		17	2,527	
Design									
Project Management and Coordination		2	15				17	2,899	
Review of plans and QA/QC		1	3	3			7	1,091	
Site visit topo, measurements, quantities			8		8		16	2,108	
Loop/Striping Plans			2	1	2		5	654	
Utility Coordination			4		4		8	1,054	
Develop Paving/Reconstruction Plans			8	2	12		22	2,759	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	6				7	1,203	
Quantity & Cost Estimates			6	2	6		14	1,835	
Permits & Coordination W/other Agencies							0	-	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	2				3	546	
	total hours	8	68	11	36	0			
	Subtotal	1,736	11,172	1,398	3,571	-			

Pavement Rehabilitation Plans Total =	17,878	500
ADA Curb Ramp Design Total =	-	
Topo Survey Total =	-	
Boundary/ROW Survey Total =	-	
Traffic Signal Design =	-	
N. 16th Street (South End) Total =	17,878	500

Comments/Concerns

Traffic impacts and duration with likely reconstruction of pavement section.

Topics for discussion with Cottage Grove

Design Fee 7 plan sheets, 1 typical/summary/const, 1 cover/map sheet, 5 ADA/Int - Excluding any Detail/Std Dwg Sheets

N. 16th North End Quick Design

Total Estimated Hours 129

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Desgn1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	8	3	4		17	2,527	
Design									
Project Management and Coordination		2	12				14	2,406	
Review of plans and QA/QC		1	5	5			11	1,674	
Site visit topo, measurements, quantities			10		10		20	2,635	
Loop/Striping Plans							0	-	
Utility Coordination			8		6		14	1,910	
Develop Paving/Reconstruction Plans			8	2	12		22	2,759	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	6				7	1,203	
Quantity & Cost Estimates			6	2	6		14	1,835	
Permits & Coordination W/other Agencies							0	-	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	2				3	546	
	total hours	8	71	12	38	0			
	Subtotal	1,736	11,665	1,525	3,770	-			

Pavement Rehabilitation Plans Total =	18,696	500
ADA Curb Ramp Design Total =	4,393	
Topo Survey Total =	-	
Boundary/ROW Survey Total =	-	
Traffic Signal Design =	-	
N. 16th Street (North End) Total =	23,089	500

Comments/Concerns

Utility issues at ADA Ramps

Right of Way issues that could be associated with ADA Ramps have not been considered.

Topics for discussion with Cottage Grove

Design Fee 2 plan sheets, 1 typical/summary/const, 1 cover/map sheet, no ADA - Excluding any Detail/Std Dwg Sheets

Gateway Quick Design

Total Estimated Hours 106

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Desgn1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	8	2	3		15	2,300	
Design									
Project Management and Coordination		3	16				19	3,280	
Review of plans and QA/QC		1	3	3			7	1,091	
Site visit topo, measurements, quantities			5		5		10	1,318	
Loop/Striping Plans							0	-	
Utility Coordination							0	-	
Develop Paving Plans			6	2	12		20	2,430	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	8				9	1,531	
Quantity & Cost Estimates			4	2	4		10	1,308	
Permits & Coordination W/other Agencies			3		1		4	592	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	4				5	874	
	total hours	9	63	9	25	0			
	Subtotal	1,953	10,351	1,144	2,480	-			

Pavement Rehabilitation Plans Total =	15,928	500
ADA Curb Ramp Design Total =	-	
Topo Survey Total =	-	
Boundary/ROW Survey Total =	-	
Traffic Signal Design =	-	
Gateway Total =	15,928	500

Comments/Concerns

Night Work and Traffic Control during Construction.

Assumed Contractor to prepare Traffic Control Plan / Engineer Review

Topics for discussion with Cottage Grove

- Coring information?

Design Fee 17 plan sheets, 1 typical/summary/const, 1 cover/map sheet, 13 ADA/Int, 2 Traffic Signal - Excluding any Detail/Std Dwg Shee

Whiteaker & Main

Total Estimated Hours 176

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Design1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	12	6	8		28	3,962	
Design									
Project Management and Coordination		4	19				23	3,990	
Review of plans and QA/QC		1	6	6			13	1,965	
Site visit topo, measurements, quantities			12		12		24	3,162	
Loop/Striping Plans (Part of Signal Plans)							0	-	
Utility Coordination			10		8		18	2,437	
Develop Paving Plans			8	2	16		26	3,156	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	8				9	1,531	
Quantity & Cost Estimates			8	2	8		18	2,362	
Permits & Coordination W/other Agencies			3		2		5	691	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	4				5	874	
	total hours	10	96	16	54	0			
	Subtotal	2,170	15,773	2,034	5,357	-			

Pavement Rehabilitation Plan Total =	25,333	500
ADA Curb Ramp Design Total =	29,109	
Topo Survey Total =	16,589	1,429
Boundary/ROW Survey Total =	12,255	1,037
Traffic Signal Design =	25,000	
Whiteaker - Main Totals =	108,286	2,966

Comments/Concerns

Possible coordination with Lane County for impacts to Mosby Creek Rd.

Utility Coordination could be more significant. There will be coordination with gas at both 19th and 22nd. Underground work at signal could trigger unknown utility issues. Current estimate only accounts for minor issues.

Traffic Signal upgrades for ADA will be extremely tight at Gateway.

Right of Way issues that could be associated with ADA Ramps and work at the Traffic Signal have not been considered.

Topics for discussion with Cottage Grove

Design Fee 22 plan sheets, 1 typical/summary/const, 1 cover/map sheet, 20 ADA/Int - Excluding any Detail/Std Dwg Sheets

Harrison

Total Estimated Hours 171

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Desgn1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	12	6	8		28	3,962	
Design									
Project Management and Coordination		3	19				22	3,773	
Review of plans and QA/QC		1	6	6			13	1,965	
Site visit topo, measurements, quantities			12		12		24	3,162	
Loop/Striping Plans							0	-	
Utility Coordination			12		8		20	2,765	
Develop Paving Plans			8	2	16		26	3,156	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	8				9	1,531	
Quantity & Cost Estimates			8	2	8		18	2,362	
Permits & Coordination W/other Agencies							0	-	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	3				4	710	
	total hours	9	94	16	52	0			
	Subtotal	1,953	15,444	2,034	5,158	-			

Pavement Rehabilitation Plans Total = 24,589 500
 ADA Curb Ramp Design Total = 37,169
 Topo Survey Total = 9,079 782
 Boundary/ROW Survey Total = 8,170 691
 Traffic Signal Design = -
 Harrison Total = 79,007 1,973

Comments/Concerns

Right of Way issues that could be associated with ADA Ramps have not been considered.

Streetlight in sidewalk at SW Corner at Edison (east end).

Utility issues at ADA Ramps

Issues with residential retaining walls, fences, etc. Obstructions in right-of-way impact ability to design/construct ADA ramps.

Topics for discussion with Cottage Grove

· Coring information?

E. WHITEAKER & E. MAIN ST (GATEWAY BLVD TO NEW PAVEMENT W. OF THORNTON)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$33,000.00	\$33,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$10,000.00	\$10,000.00
	TEMPORARY SIGNS	SQFT	300	\$15.00	\$4,500.00
	FLAGGERS	HOUR	240	\$55.00	\$13,200.00
	TEMPORARY BARRICADES, TYPE II	EA	10	\$45.00	\$450.00
	TEMPORARY BARRICADES, TYPE III	EA	0	\$21.00	\$0.00
	TEMPORARY PLASTIC DRUMS	EA	20	\$45.00	\$900.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	10	\$140.00	\$1,400.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	CONSTRUCTION SURVEY WORK	LS	1	\$5,000.00	\$5,000.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	210	\$25.00	\$5,250.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	300	\$4.50	\$1,350.00
	GENERAL EXCAVATION	CUYD	130	\$60.00	\$7,800.00
	ADJUSTING BOXES	EA	6	\$375.00	\$2,250.00
	ADJUSTING INLETS	EA	2	\$1,200.00	\$2,400.00
	MINOR ADJUSTMENT OF MANHOLES	EA	9	\$1,100.00	\$9,900.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	1500	\$4.00	\$6,000.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	5150	\$4.00	\$20,600.00
	COLD PLANE PAVEMENT REMOVAL, 6 INCHES DEEP	SQYD	750	\$4.00	\$3,000.00
	AGGREGATE BASE	TON	150	\$45.00	\$6,750.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	1725	\$70.00	\$120,750.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	300	\$55.00	\$16,500.00
	CONCRETE WALKS	SQFT	1900	\$13.25	\$25,175.00
	EXTRA FOR NEW CURB RAMPS	EA	8	\$1,420.00	\$11,360.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	80	\$32.00	\$2,560.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	3700	\$0.78	\$2,886.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$425.00	\$850.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	0	\$325.00	\$0.00
	PAVEMENT BAR, TYPE B-HS	SQFT	430	\$10.00	\$4,300.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	1	\$60,000.00	\$60,000.00
				SUBTOTAL =	\$379,131.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$113,739.30
				TOTAL =	\$492,870.30

W HARRISON (RIVER ROAD TO R STREET)
PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$25,000.00	\$25,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$7,000.00	\$7,000.00
	TEMPORARY SIGNS	SQFT	530	\$15.00	\$7,950.00
	FLAGGERS	HOUR	290	\$55.00	\$15,950.00
	TEMPORARY BARRICADES, TYPE II	EA	8	\$45.00	\$360.00
	TEMPORARY BARRICADES, TYPE III	EA	0	\$140.00	\$0.00
	TEMPORARY PLASTIC DRUMS	EA	0	\$45.00	\$0.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	6	\$100.00	\$600.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	CONSTRUCTION SURVEY WORK	LS	1	\$3,500.00	\$3,500.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	225	\$25.00	\$5,625.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	360	\$4.50	\$1,620.00
	ADJUSTING BOXES	EA	4	\$375.00	\$1,500.00
	ADJUSTING INLETS	EA	0	\$1,200.00	\$0.00
	MINOR ADJUSTMENT OF MANHOLES	EA	7	\$1,100.00	\$7,700.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	2620	\$3.50	\$9,170.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	5050	\$3.50	\$17,675.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	1500	\$68.00	\$102,000.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	340	\$55.00	\$18,700.00
	CONCRETE WALKS	SQFT	2040	\$13.15	\$26,826.00
	EXTRA FOR NEW CURB RAMPS	EA	12	\$1,375.00	\$16,500.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	120	\$32.00	\$3,840.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	8400	\$0.52	\$4,368.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$425.00	\$850.00
	PAVEMENT LEGEND, TPE B-HS: "ONLY"	EA	1	\$340.00	\$340.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	6	\$325.00	\$1,950.00
	PAVEMENT BAR, TYPE B-HS	SQFT	460	\$10.00	\$4,600.00
	LUMINAIRES, LAMPS, AND BALLASTS	LS	1	\$8,000.00	\$8,000.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
				SUBTOTAL =	\$292,624.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$87,787.20
				TOTAL =	\$380,411.20

N. GATEWAY (SB FROM VINTAGE INN ENTRANCE TO TRUCK STOP)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$10,000.00	\$10,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$4,500.00	\$4,500.00
	TEMPORARY SIGNS	SQFT	250	\$15.00	\$3,750.00
	FLAGGERS	HOUR	100	\$55.00	\$5,500.00
	TRAFFIC CONTROL SUPERVISOR	EA	2	\$500.00	\$1,000.00
	TEMPORARY BARRICADES, TYPE II	EA	6	\$45.00	\$270.00
	TEMPORARY BARRICADES, TYPE III	EA	0	\$21.00	\$0.00
	TEMPORARY PLASTIC DRUMS	EA	40	\$45.00	\$1,800.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	4	\$140.00	\$560.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	CONSTRUCTION SURVEY WORK	LS	1	\$1,500.00	\$1,500.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	55	\$28.00	\$1,540.00
	REMOVAL OF ASPHALT CONCRETE WEARING SURFACE	LS	1	\$500.00	\$500.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	160	\$4.50	\$720.00
	ADJUSTING BOXES	EA	4	\$375.00	\$1,500.00
	ADJUSTING INLETS	EA	0	\$1,200.00	\$0.00
	MINOR ADJUSTMENT OF MANHOLES	EA	0	\$1,100.00	\$0.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	130	\$20.00	\$2,600.00
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	1750	\$5.00	\$8,750.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	850	\$73.00	\$62,050.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	60	\$60.00	\$3,600.00
	CONCRETE CURBS, CURB AND GUTTER, MODIFIED (VALLEY GUTTER)	FOOT	45	\$60.00	\$2,700.00
	CONCRETE WALKS	SQFT	480	\$15.50	\$7,440.00
	EXTRA FOR NEW CURB RAMPS	EA	2	\$1,530.00	\$3,060.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	20	\$35.00	\$700.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	1500	\$1.25	\$1,875.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	0	\$425.00	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	0	\$325.00	\$0.00
	PAVEMENT BAR, TYPE B-HS	SQFT	0	\$10.00	\$0.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
				SUBTOTAL =	\$126,915.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$38,074.50
				TOTAL =	\$164,989.50

ROW RIVER (THORNTON ROAD TO CURRIN BLVD)
PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$34,000.00	\$34,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$10,000.00	\$10,000.00
	TEMPORARY SIGNS	SQFT	325	\$15.00	\$4,875.00
	FLAGGERS	HOUR	290	\$55.00	\$15,950.00
	TEMPORARY BARRICADES, TYPE II	EA	8	\$45.00	\$360.00
	TEMPORARY BARRICADES, TYPE III	EA	2	\$140.00	\$280.00
	TEMPORARY PLASTIC DRUMS	EA	60	\$45.00	\$2,700.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	6	\$140.00	\$840.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	CONSTRUCTION SURVEY WORK	LS	1	\$4,500.00	\$4,500.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	305	\$25.00	\$7,625.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	350	\$4.50	\$1,575.00
	ADJUSTING BOXES	EA	7	\$375.00	\$2,625.00
	ADJUSTING INLETS	EA	1	\$1,200.00	\$1,200.00
	MINOR ADJUSTMENT OF MANHOLES	EA	4	\$1,100.00	\$4,400.00
	COLD PLANE PAVEMENT REMOVAL, 6 INCHES DEEP	SQYD	2825	\$3.05	\$8,616.25
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	2825	\$3.50	\$9,887.50
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	2300	\$67.00	\$154,100.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	320	\$55.00	\$17,600.00
	CONCRETE WALKS	SQFT	2745	\$12.70	\$34,861.50
	EXTRA FOR NEW CURB RAMPS	EA	15	\$1,350.00	\$20,250.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	150	\$32.00	\$4,800.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	7850	\$0.54	\$4,239.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$425.00	\$850.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	6	\$325.00	\$1,950.00
	PAVEMENT BAR, TYPE B-HS	SQFT	740	\$10.00	\$7,400.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	1	\$50,000.00	\$50,000.00
				SUBTOTAL =	\$406,484.25
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$121,945.28
				TOTAL =	\$528,429.53

**RIVER ROAD (WOODSON BRIDGE TO HARRISON)
PLANNING LEVEL COST ESTIMATE - MILL & FILL**

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$69,000.00	\$69,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$21,000.00	\$21,000.00
	TEMPORARY SIGNS	SQFT	800	\$15.00	\$12,000.00
	FLAGGERS	HOUR	850	\$55.00	\$46,750.00
	TEMPORARY BARRICADES, TYPE II	EA	20	\$45.00	\$900.00
	TEMPORARY BARRICADES, TYPE III	EA	2	\$140.00	\$280.00
	TEMPORARY PLASTIC DRUMS	EA	20	\$45.00	\$900.00
	EROSION CONTROL	LS	1	\$1,000.00	\$1,000.00
	INLET PROTECTION, TYPE 7	EA	27	\$100.00	\$2,700.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$9,600.00	\$9,600.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	470	\$25.00	\$11,750.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	750	\$4.50	\$3,375.00
	ADJUSTING BOXES	EA	16	\$375.00	\$6,000.00
	ADJUSTING INLETS	EA	0	\$1,200.00	\$0.00
	MINOR ADJUSTMENT OF MANHOLES	EA	25	\$1,100.00	\$27,500.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	475	\$4.00	\$1,900.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	23400	\$3.05	\$71,370.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	5500	\$67.00	\$368,500.00
	EXTRA FOR ASPHALT APPROACHES	EA	1	\$900.00	\$900.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	710	\$55.00	\$39,050.00
	CONCRETE WALKS	SQFT	4260	\$12.10	\$51,546.00
	EXTRA FOR NEW CURB RAMPS	EA	26	\$1,300.00	\$33,800.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	260	\$32.00	\$8,320.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	22000	\$0.35	\$7,700.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	1	\$425.00	\$425.00
	PAVEMENT LEGEND, TPE B-HS: "ONLY"	EA	0	\$340.00	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	12	\$325.00	\$3,900.00
	PAVEMENT BAR, TYPE B-HS	SQFT	500	\$10.00	\$5,000.00
	LUMINAIRES, LAMPS, AND BALLASTS	LS	0	\$8,000.00	\$0.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
				SUBTOTAL =	\$806,166.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$241,849.80
				TOTAL =	\$1,048,015.80

N. 16TH (MAIN ST TO OSTRANDER)

PLANNING LEVEL COST ESTIMATE - RECONSTRUCTION BETWEEN CURBS

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$225,000.00	\$225,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$65,000.00	\$65,000.00
	TEMPORARY SIGNS	SQFT	1160	\$15.00	\$17,400.00
	FLAGGERS	HOUR	2500	\$55.00	\$137,500.00
	TEMPORARY BARRICADES, TYPE II	EA	30	\$45.00	\$1,350.00
	TEMPORARY BARRICADES, TYPE III	EA	8	\$130.00	\$1,040.00
	TEMPORARY PLASTIC DRUMS	EA	40	\$45.00	\$1,800.00
	EROSION CONTROL	LS	1	\$8,000.00	\$8,000.00
	INLET PROTECTION, TYPE 7	EA	20	\$140.00	\$2,800.00
	POLLUTION CONTROL PLAN	LS	1	\$1,000.00	\$1,000.00
	CONSTRUCTION SURVEY WORK	LS	1	\$32,000.00	\$32,000.00
	REMOVAL OF PIPES	FOOT	4865	\$30.00	\$145,950.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$15,000.00	\$15,000.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	0	\$25.00	\$0.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	1540	\$4.00	\$6,160.00
	GENERAL EXCAVATION	CUYD	5700	\$27.00	\$153,900.00
	SUBGRADE GEOTEXTILE	SQYD	12200	\$1.10	\$13,420.00
	36 INCH STORM SEWER, 10 FT DEPTH	FOOT	1804	\$200.00	\$360,800.00
	CONCRETE MANHOLES, LARGE PRECAST	EA	7	\$12,000.00	\$84,000.00
	ADJUSTING BOXES	EA	16	\$375.00	\$6,000.00
	CONNECTION TO EXISTING STRUCTURES	EA	10	\$1,200.00	\$12,000.00
	ADJUSTING INLETS	EA	0	\$1,200.00	\$0.00
	MINOR ADJUSTMENT OF MANHOLES	EA	21	\$1,100.00	\$23,100.00
	TRENCH RESURFACING (HARVEY LANE)	SQYD	250	\$100.00	\$25,000.00
	COLD PLANE PAVEMENT REMOVAL, 6 INCHES DEEP	SQYD	0	\$3.05	\$0.00
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	0	\$3.50	\$0.00
	AGGREGATE BASE	TON	8000	\$27.00	\$216,000.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	3100	\$67.00	\$207,700.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	570	\$55.00	\$31,350.00
	CONCRETE CURBS, CURB AND GUTTER MODIFIED	FOOT	50	\$60.00	\$3,000.00
	CONCRETE WALKS	SQFT	3240	\$12.50	\$40,500.00
	EXTRA FOR NEW CURB RAMPS	EA	18	\$1,325.00	\$23,850.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	180	\$32.00	\$5,760.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	350	\$2.50	\$875.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	0	\$425.00	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	0	\$325.00	\$0.00
	PAVEMENT BAR, TYPE B-HS	SQFT	240	\$11.00	\$2,640.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
	HYDRANT ASSEMBLIES	EA	7	\$4,100.00	\$28,700.00
	RECONNECTION OF EXISTING WATER SERVICES	EA	85	\$475.00	\$40,375.00
	12 INCH C900 PVC WATER PIPE, 5 FT DEPTH, W/CLASS B BACKFILL	FOOT	3075	\$175.00	\$538,125.00
				SUBTOTAL =	\$2,477,095.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$743,128.50
				TOTAL =	\$3,220,223.50

DOUGLAS (WASTE WATER PLANT TO VILLARD)
PLANNING LEVEL COST ESTIMATE - OVERLAY AND REPAIRS

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$30,000.00	\$30,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$9,000.00	\$9,000.00
	TEMPORARY SIGNS	SQFT	600	\$15.00	\$9,000.00
	FLAGGERS	HOUR	225	\$55.00	\$12,375.00
	TEMPORARY BARRICADES, TYPE II	EA	15	\$45.00	\$675.00
	TEMPORARY BARRICADES, TYPE III	EA	2	\$140.00	\$280.00
	TEMPORARY PLASTIC DRUMS	EA	0	\$45.00	\$0.00
	EROSION CONTROL	LS	1	\$1,000.00	\$1,000.00
	INLET PROTECTION, TYPE 7	EA	6	\$100.00	\$600.00
	POLLUTION CONTROL PLAN	LS	1	\$1,000.00	\$1,000.00
	CONSTRUCTION SURVEY WORK	LS	1	\$2,500.00	\$2,500.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	60	\$25.00	\$1,500.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	100	\$5.00	\$500.00
	GENERAL EXCAVATION	CUYD	265	\$50.00	\$13,250.00
	ADJUSTING BOXES	EA	3	\$375.00	\$1,125.00
	ADJUSTING INLETS	EA	2	\$1,200.00	\$2,400.00
	MINOR ADJUSTMENT OF MANHOLES	EA	9	\$1,100.00	\$9,900.00
	COLD PLANE PAVEMENT REMOVAL, 0 - 2 INCHES DEEP	SQYD	725	\$10.00	\$7,250.00
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	0	\$3.50	\$0.00
	AGGREGATE SHOULDERS	TON	350	\$45.00	\$15,750.00
	AGGREGATE BASE	TON	350	\$45.00	\$15,750.00
	LEVEL 2, 1/2 INCH ACP MIXTURE	TON	1710	\$72.00	\$123,120.00
	LEVEL 2, 1/2 INCH ACP MIXTURE IN LEVELING	TON	650	\$110.00	\$71,500.00
	4 INCH ASPHALT CONCRETE PAVEMENT REPAIR	SQYD	1025	\$25.00	\$25,625.00
	EXTRA FOR ASPHALT APPROACHES	EA	23	\$575.00	\$13,225.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	90	\$55.00	\$4,950.00
	CONCRETE WALKS	SQFT	540	\$12.70	\$6,858.00
	EXTRA FOR NEW CURB RAMPS	EA	3	\$1,530.00	\$4,590.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	30	\$32.00	\$960.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	0	\$0.54	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	0	\$425.00	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	0	\$325.00	\$0.00
	PAVEMENT BAR, TYPE B-HS	SQFT	0	\$10.00	\$0.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
				SUBTOTAL =	\$385,183.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$115,554.90
				TOTAL =	\$500,737.90

BRYANT (M STREET TO R STREET)
RECONSTRUCTION - PLANNING LEVEL COST ESTIMATE

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$83,000.00	\$83,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$24,000.00	\$24,000.00
	TEMPORARY SIGNS	SQFT	530	\$15.00	\$7,950.00
	FLAGGERS	HOUR	500	\$55.00	\$27,500.00
	TEMPORARY BARRICADES, TYPE II	EA	10	\$45.00	\$450.00
	TEMPORARY BARRICADES, TYPE III	EA	4	\$130.00	\$520.00
	TEMPORARY PLASTIC DRUMS	EA	0	\$45.00	\$0.00
	EROSION CONTROL	LS	1	\$3,000.00	\$3,000.00
	INLET PROTECTION, TYPE 7	EA	11	\$100.00	\$1,100.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$18,000.00	\$18,000.00
	REMOVAL OF PIPES	FOOT	1350	\$30.00	\$40,500.00
	REMOVAL OF WALKS AND DRIVEWAYS	SQYD	150	\$20.00	\$3,000.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$4,000.00	\$4,000.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	100	\$25.00	\$2,500.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	650	\$4.00	\$2,600.00
	GENERAL EXCAVATION	CUYD	1450	\$40.00	\$58,000.00
	SUBGRADE GEOTEXTILE	SQYD	3200	\$1.50	\$4,800.00
	18 INCH STORM SEWER, 10 FT DEPTH	FOOT	0	\$106.00	\$0.00
	ADJUSTING BOXES	EA	2	\$375.00	\$750.00
	CONNECTION TO EXISTING STRUCTURES	EA	0	\$1,250.00	\$0.00
	ADJUSTING INLETS	EA	11	\$1,200.00	\$13,200.00
	MINOR ADJUSTMENT OF MANHOLES	EA	3	\$1,100.00	\$3,300.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	1500	\$5.00	\$7,500.00
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	0	\$3.50	\$0.00
	AGGREGATE BASE	TON	2100	\$35.00	\$73,500.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	1050	\$70.00	\$73,500.00
	EXTRA FOR ASPHALT APPROACHES	EA	10	\$575.00	\$5,750.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	1750	\$50.00	\$87,500.00
	CONCRETE CURBS, CURB AND GUTTER MODIFIED	FOOT	0	\$60.00	\$0.00
	CONCRETE DRIVEWAYS	SQFT	3200	\$14.00	\$44,800.00
	CONCRETE WALKS	SQFT	7900	\$11.25	\$88,875.00
	EXTRA FOR NEW CURB RAMPS	EA	5	\$1,325.00	\$6,625.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	50	\$32.00	\$1,600.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	0	\$2.50	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	0	\$425.00	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	0	\$325.00	\$0.00
	PAVEMENT BAR, TYPE B-HS	SQFT	70	\$12.00	\$840.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
	RECONNECTION OF EXISTING WATER SERVICES	EA	27	\$475.00	\$12,825.00
	12 INCH C900 PVC WATER PIPE, 5 FT DEPTH, W/CLASS B BACKFILL	FOOT	1350	\$175.00	\$236,250.00
				SUBTOTAL =	\$938,235.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$281,470.50
				TOTAL =	\$1,219,705.50

Pavement Management Report

**City of Cottage Grove
City Streets
Pavement Management Implementation**

Prepared by

EMERIO
Design

December 3, 2019

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EXECUTIVE SUMMARY

The City of Cottage Grove has contracted with Emerio Design to provide pavement engineering services to develop and implement an on-going pavement management program for the City of Cottage Grove streets. This report summarizes and documents: 1) the current and projected pavement surface conditions; 2) the budget needs and consequence analysis; and 3) a 10-year list of network-level project recommendations.

Pavement Condition Index (PCI) Survey

During the late summer and early fall of 2018, Emerio Design conducted a walking inspection of not less than 10% of the surface area of every City street under the jurisdiction of the City of Cottage Grove. Based on the inspection data, the Pavement Condition Index (PCI) rating was generated using the PAVER pavement management software (PMS). The PCI is a numerical indicator that rates the condition of the pavement based on visual inspection. The PCI numerical scale ranges from zero to 100, where zero represents a pavement in the worst possible condition with no remaining functional life and 100 represents a pavement in the best possible condition with no defects. The PAVER analysis provides a basis for establishing efficient treatment requirements and assessing the impacts of various budget scenarios. These impacts are reflected by the change in pavement condition and monetary impact or change in backlog (unfunded maintenance and repair (M&R)) over time. The PMS also provides an efficient way to manage the pavement inventory, keep up-to-date on work history records, and monitor condition trends.

At the time of the 2018 PCI inspection, the overall area-weighted average PCI of the roadway pavements in the City of Cottage Grove was 58 or “Fair”. The standard PCI rating scale given in ASTM D6433 was used, which is shown graphically below.

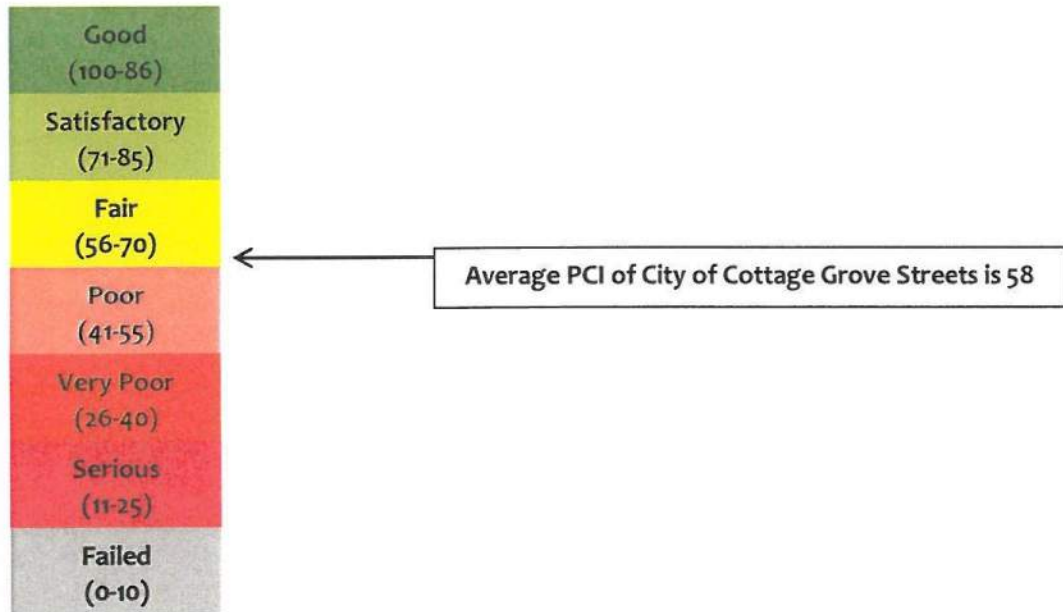


Figure 1 on the next page shows a map of the pavement conditions of the City of Cottage Grove streets.

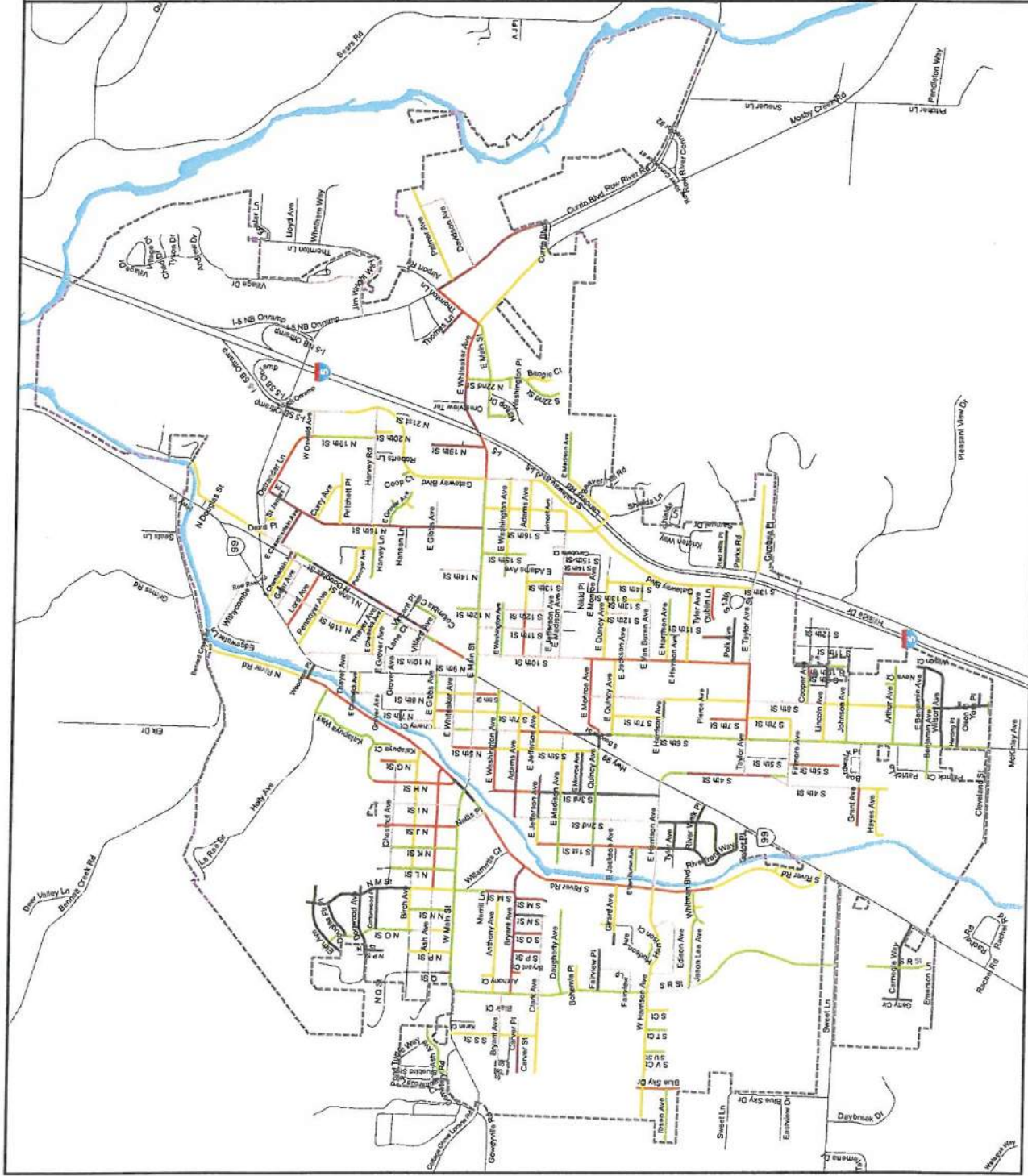
Cottage Grove Pavement Management Program

Pavement Conditions

PCI Rating

- Good (86-100) - 3.93 miles
- Satisfactory (71-85) - 8.71 miles
- Fair (56-70) - 10.72 miles
- Poor (41-55) - 9.63 miles
- Very Poor (26-40) - 5.22 miles
- Serious (11-25) - 3.11 miles
- Failed (0-10) - 0.47 miles

Excluded from Condition Survey - 1.98 miles Gravel Streets
 Base Map from Lane County GIS (April 2019)



2018 Pavement Condition Index (PCI)

Sept. 2019

Figure 1

Budgetary Needs and Consequence Analysis

Based on an estimated replacement cost, the City of Cottage Grove street network is worth more than \$109 million, and Cottage Grove currently spends approximately \$500,000 annually on contracted pavement maintenance. Additionally, Cottage Grove performs pothole patching and crack sealing work with inhouse staff. We estimate over the next 10 years, if the City of Cottage Grove maintains this funding level, the backlog of rehabilitation and reconstruction work, which is currently estimated at \$26.73 million will increase by approximately 49% to \$39.85 million. In understanding Cottage Grove has limited funding to apply to M&R, we developed a 10-year work plan that includes major M&R work (e.g., inlay, overlay, reconstruction) and global preventative work (e.g., surface treatment) based on a budget level that would eliminate the backlog. Although this funding level is likely unachievable, we feel that providing a range of project recommendations will give the City of Cottage Grove the most flexibility for future project selection and it will help facilitate the understanding of City pavement needs.

The algorithms in the PAVER software prioritize M&R work based on the current and projected PCI of the pavement. This approach typically yields sections for a particular year that are not always practical from a construction standpoint. For example, the software may identify a section for overlay in Year 1, whereas an adjoining section may be selected for overlay in Year 2. From a construction practicality standpoint, both segments would be grouped together for rehabilitation in a single year. Therefore, we reviewed the PAVER results and combined work into practical construction projects in conjunction with the objective of prioritizing projects in order to develop an approximately equal annual budget. Fiscal Year (FY) 2020 was selected as the initial year in the analysis since this is the earliest practical year rehabilitation work could be scheduled. Based on this approach, the 10-year project recommendations for City of Cottage Grove Streets are detailed in Chapter 5 and Appendix F. Our recommendations are based on network-level data and visual assessment, therefore, for each proposed rehabilitation project, we recommend that the City of Cottage Grove perform a structural project-level evaluation to refine the design details such as the overlay thickness.

In addition to developing a network-level M&R project strategy, as requested by Cottage Grove staff, five budget scenarios were analyzed based on either a specific budget requirement or pavement condition constraint. Based on the PAVER analysis for the 10-year period starting in FY 2020, the conclusions for each of the five scenarios are listed below. The current overall PCI of 58 is projected to deteriorate to a PCI of 55 in FY 2020 at the beginning of the analysis period (i.e., prior to conducting the recommended work). As mentioned above, Cottage Grove has an unfunded M&R backlog of approximately \$26.73 million. The backlog is approximated by running an unconstrained analysis. The amount of funding suggested for M&R on sections with a PCI below the critical value is considered unfunded backlog. The critical PCI is the point at which the pavement condition begins to deteriorate more quickly leading to significantly higher M&R costs. The critical PCI varies based primarily upon traffic and vehicle weight and has been set at 65 for Arterials, 60 for Collectors, and 50 for Local streets.

Scenario 1. Maintain Current Budget – The planned annual budget for the next 10 years is approximately \$5,000,000 and is designated primarily for M&R work such as patching, slurry seals, chip seals, and inlays. At a total funding level of \$5,000,000, the analysis suggests that the PCI will decrease to 49 and the total unfunded M&R will increase from \$26.73 million to \$39.85 million at the end of FY 2029, a 49% increase.

Scenario 2. Maintain Current PCI – To stabilize the overall weighted average condition of the roadway pavement system to a projected PCI of approximately 58 at the end of FY 2029, an increase in the annual

budget to \$1,400,000 is advised over a period of 10 years. At this level of investment, the total unfunded M&R is projected to increase from \$26.73 million to \$31.12 million at the end of FY 2029 or a 16% increase.

Scenario 3. Achieve Area-Weighted Network PCI of 72 – Annual budgets for network-level PCI targets vary according to the target PCI. Based on the PAVER analysis, achieving a network-level PCI value of 72 will require an annual budget of approximately \$2,875,000 over the next 10 years. The resulting funding level will reduce the unfunded M&R by 50%.

Scenario 4. Achieve Area-Weighted Network PCI of 80 – Based on the PAVER analysis, achieving a network-level PCI value of 80 will require an annual budget of approximately \$3,559,000 over the next 10 years. The resulting funding level will reduce the unfunded M&R by 80%.

Scenario 5. Eliminate Backlog in 10 Years – An annual expenditure of \$4,043,000 would eliminate the M&R backlog and all unfunded maintenance for the entire network. At this funding level, the PCI will increase from 55 at the beginning of FY 2020 to 87 at the end of the 10-year period at the beginning of FY 2030.

Figure 2 below shows the effect of the five budget scenarios on the resulting condition of the Cottage Grove street pavement system.

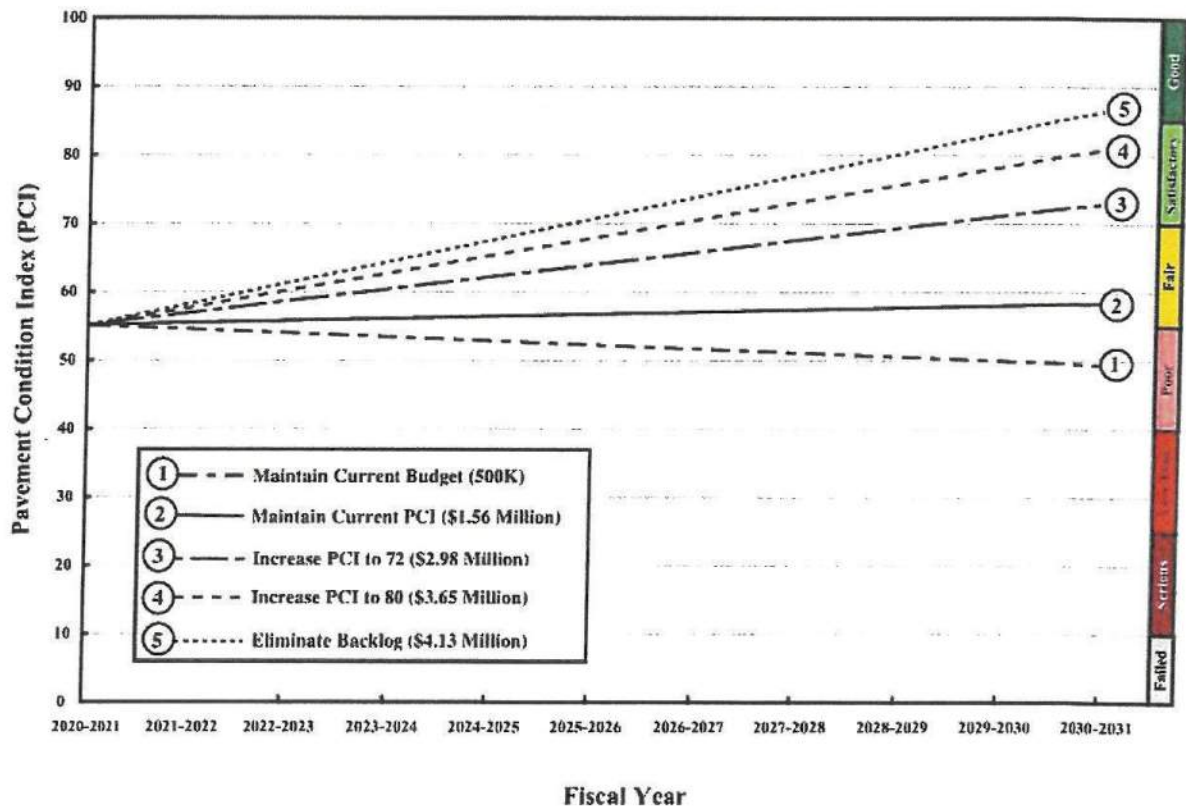


Figure 2 - EFFECT OF M&R BUDGET SCENARIOS ON PCI

Upon review of the five budget scenarios, two additional scenarios were reviewed as follows:

First, it was noted that there is a 16.4% increase in backlog at the \$1,400,000 per year funding level as seen in Scenario 2, which has the goal of maintaining the PCI level at 58. Based upon this funding level, we looked at what the effect would be if the resulting funding level of \$1,400,000 was extended for 20 years. The results indicate that the PCI would increase slightly to 61 and the unfunded backlog would be reduced by approximately 18%.

Second, it was also noted that in a 10-year period the amount of funding necessary to reach a PCI of 72 evaluated in Scenario 3, is slightly more than twice the funding necessary to maintain the current PCI of 58 evaluated in Scenario 2. Scenario 3 predicts a required budget of \$2,875,000 over 10 years. This funding level results in a 61% reduction in backlog. Looking at Scenario 3 over a period of 20 years, rather than 10 years gives a different view of what the long term funding level needs to be to gradually improve the overall street condition. The results of this analysis indicated that a funding level of \$1,984,000 per year over 20 years will result in a PCI of 72 after 20 years and the unfunded backlog would be reduced by approximately 78% to \$7,600,000.

Based upon these two additional scenarios, it appears that if the overall goal for the City of Cottage Grove is to improve the system PCI while gradually reducing the M&R backlog, the funding level will need to be between \$1,400,000 and \$1,984,000 per year for a sustained period of many years. A higher funding level will result in an acceleration in meeting overall PCI goals, while a lower funding level will result in a gradual decline in the overall street condition.

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CHAPTER 1: OVERVIEW

1.1 INTRODUCTION

After a pavement is newly constructed, it will gradually deteriorate due to climatic, loading, and operational conditions. Faulty construction techniques, sub-standard materials, and/or insufficient pavement-design thickness typically accelerate the deterioration process, including loads of excessive magnitude or frequency above those for which the pavement was originally designed. Due to the wide range of variables that may affect the performance of a pavement, it is well-accepted that a pavement management program (PMP) is a cost-effective method for pavement planning and budgeting purposes. A fundamental component of any PMP is the ability to characterize the current pavement condition and track future changes to its condition. These two factors form the basis for approximating current and future prevention and rehabilitation requirements and ultimately the cost-effective allocation of capital.

Cottage Grove has worked with Emerio Design to implement a pavement management program to assist in the management of the Cottage Grove street network. The specific objectives of this project were to establish a pavement management system (PMS); conduct a visual inspection of all the paved streets under Cottage Grove jurisdiction; and upon completion of data gathering, prepare an initial report based upon desired outputs as requested by the City. The desired outputs include performing a budget needs and consequence analysis; developing a 10-year M&R program; providing a report of results and recommendations.

After the Cottage Grove street inventory was populated in a PMS database, Emerio Design conducted a visual survey of all Cottage Grove pavements during the late summer and early fall of 2018. The survey data was uploaded to PMS and the software was used to provide a rapid calculation of the PCI rating. The PCI is a numerical indicator that defines the condition of the pavement based on visual inspection. The scale ranges from zero to 100, where zero represents a pavement in the worst possible condition with no remaining functional life and 100 represents a pavement in the best possible condition with no defects.

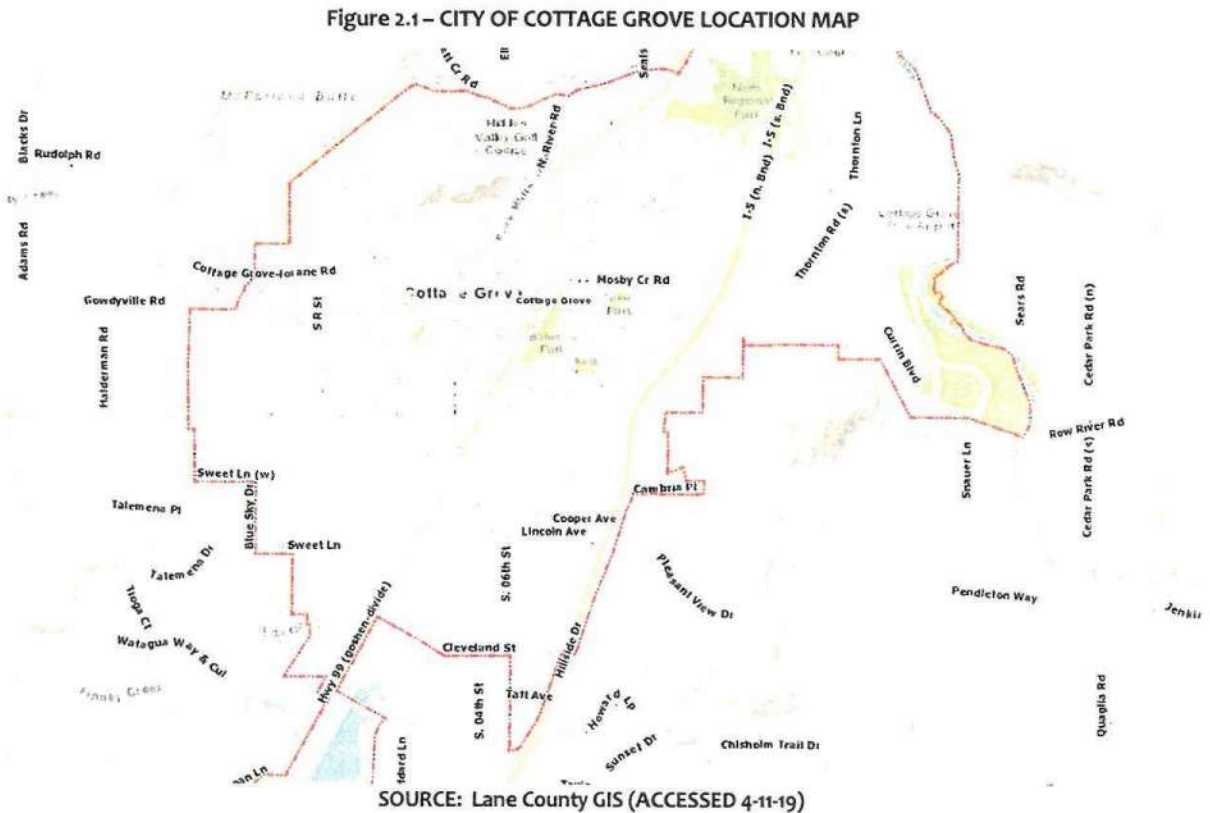
For this project, the PAVER PMS, developed by the US Army Corps of Engineering, was utilized to analyze Cottage Grove's pavement network. PAVER uses the PCI method to calculate the condition of pavements using distress data collected during the visual survey. In addition to providing a database of current PCI results, the PAVER software is also used to predict future pavement conditions and obtain the optimal schedule for the application of M&R. By utilizing a preservation-based approach instead of a worst-first methodology, a PMS such as PAVER helps reduce future pavement repair costs by recommending timely M&R. Furthermore, the data stored in the PAVER database can be exported into various formats such as spreadsheet or geographical information systems (GIS) for multifaceted viewing. A PMS provides the following benefits:

- 1) A systematic means for collecting and storing pavement information.
- 2) An objective and repeatable system for evaluating pavement conditions.
- 3) Procedures for predicting future pavement conditions.
- 4) Procedures for determining the consequences that constrained M&R budgets will have on future pavement conditions and life cycle costs.
- 5) Procedures for formulating and prioritizing M&R projects. A project normally consists of multiple pavement sections with each section having several feasible repair options.

CHAPTER 2: PAVEMENT INVENTORY

2.12 INTRODUCTION

Cottage Grove’s street network is comprised of just under 42 centerline miles of paved streets as well as just under 2 miles of gravel roads. These facilities are primarily used for passenger vehicle traffic, non-motorized modes of transportation (bicycles and pedestrians), transit buses, and delivery vehicles. The general location of the Cottage Grove street network is shown in Figure 2.1. below. The types of roadway pavements include asphalt concrete (AC), portland cement concrete (PCC), and gravel (GR). A complete list of the street inventory is provided in Appendix A.



2.2 PAVEMENT NETWORK

The current PMS network for the City of Cottage Grove has an approximate area of 7.06 million sq ft of paved roadway facilities. Emerio Design established the pavement network by dividing it into a hierarchical order of branches, sections, and sample units that facilitate inspection and maintenance planning.

2.2.1 Branches

A branch, as defined in the PAVER system and ASTM D6433, is a facility that is a readily identifiable part of a pavement system and has distinct function (e.g. roadway, parking lot). The current pavement network for the City of Cottage Grove has 171 branches that are all roadways. A list of Cottage Grove branches is tabulated in Table 2.1 below.

TABLE 2.1 – COTTAGE GROVE STREET NETWORK PAVEMENT BRANCHES

Branch ID	Branch Name	Branch Use	Number of Sections	Approximate Area (Sq Ft)
ADAMSAVE	ADAMS AVE	ROADWAY	5	95,308
ANTHONYAVE	ANTHONY AVE	ROADWAY	1	42,272
ANTHONYCT	ANTHONY CT	ROADWAY	1	7,659
ARTHURAVE	ARTHUR AVE	ROADWAY	1	31,395
ASHAVE	ASH AVE	ROADWAY	3	102,371
BANGLECT	BANGLE CT	ROADWAY	1	13,649
BELMONTAVE	BELMONT AVE	ROADWAY	1	3,990
BENJAMINAV	BENJAMIN AVE	ROADWAY	2	31,882
BIRCHAVE	BIRCH AVE	ROADWAY	3	74,254
BLAIRCT	BLAIR CT	ROADWAY	1	8,613
BLUESKYDR	BLUE SKY DRIVE	ROADWAY	1	24,966
BOHEMIAPL	BOHEMIA PI	ROADWAY	1	13,211
BRYANTAVE	BRYANT AVE	ROADWAY	4	74,620
BRYANTCT	BRYANT CT	ROADWAY	1	6,233
CARNEGIEWA	CARNEGIE WAY	ROADWAY	1	42,188
CAROBELLEC	CAROBELLE CT	ROADWAY	1	7,263
CARVERAVE	CARVER AVE	ROADWAY	1	15,536
CARVERPL	CARVER PL	ROADWAY	1	9,724
CHERRYCT	CHERRY CT	ROADWAY	1	8,375
CHESTNUTAV	CHESTNUT AVE	ROADWAY	1	40,423
CLARKAVE	CLARK AVE	ROADWAY	3	63,468
CLEVELANDS	CLEVELAND ST	ROADWAY	1	2,399
COLUMBIACT	COLUMBIA CT	ROADWAY	1	10,782
COOPCT	COOP CT	ROADWAY	1	4,394
COOPERAVE	COOPER AVE	ROADWAY	2	12,791
COTTONWOOD	COTTONWOOD PL	ROADWAY	1	17,097
CURRYAVE	CURRY AVE	ROADWAY	1	17,744
DAUGHERTYA	DAUGHERTY AVE	ROADWAY	1	41,790
DAVIDSONAV	DAVIDSON AVE	ROADWAY	1	49,859
DAVISPL	DAVIS PL	ROADWAY	1	5,754
DOGWOODAVE	DOGWOOD AVE	ROADWAY	1	28,643
DOUGLASFIR	DOUGLAS FIR PL	ROADWAY	1	15,872
DUBLINLN	DUBLIN LN	ROADWAY	1	14,892
ECHADWICKA	E. CHADWICK AVE	ROADWAY	3	25,439
ECHAMBERLA	E. CHAMBERLAIN AVE	ROADWAY	3	36,971
EDISONAVE	EDISON AVE	ROADWAY	1	39,108
EGIBBSAVE	E. GIBBS AVE	ROADWAY	4	40,279
EGROVERAVE	E. GROVER AVE	ROADWAY	4	36,393

TABLE 2.1 – COTTAGE GROVE STREET NETWORK PAVEMENT BRANCHES				
Branch ID	Branch Name	Branch Use	Number of Sections	Approximate Area (Sq Ft)
EHARRISONA	E. HARRISON AVE	ROADWAY	5	98,353
EJACKSONAV	E. JACKSON AVE	ROADWAY	1	13,667
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	6	71,076
ELMAVE	ELM AVE	ROADWAY	1	31,632
EMADISONAV	E. MADISON AVE	ROADWAY	7	127,146
EMAINST	E. MAIN ST	ROADWAY	7	234,001
EMONROEAVE	E. MONROE AVE	ROADWAY	3	42,988
EQUINCYAVE	E. QUINCY AVE	ROADWAY	9	111,745
ETAYLORAVE	E. TAYLOR AVE	ROADWAY	4	135,507
EVANBURENA	E. VANBUREN AVE	ROADWAY	2	32,292
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	8	118,108
EWHITEAKER	E. WHITEAKER AVE	ROADWAY	3	92,225
FAIRVIEWLP	FAIRVIEW LP	ROADWAY	1	22,015
FAIRVIEWPL	FAIRVIEW PL	ROADWAY	1	19,936
FILLMOREAV	FILLMORE AVE	ROADWAY	2	25,991
GEERAVE	GEER AVE	ROADWAY	1	20,515
GETTYCIRCL	GETTY CIRCLE	ROADWAY	1	16,396
GIRARDAVE	GIRARD AVE	ROADWAY	3	22,563
GIRARDCT	GIRARD CT	ROADWAY	1	8,254
GRANTAVE	GRANT AVE	ROADWAY	2	37,279
HARDINGPL	HARDING PL	ROADWAY	1	10,152
HARRISONCT	HARRISON CT	ROADWAY	1	10,292
HARVEYLN	HARVEY LN	ROADWAY	2	23,219
HARVEYRD	HARVEY RD	ROADWAY	2	52,426
HAYESAV	HAYES AVE	ROADWAY	1	20,183
HOLLYAVE	HOLLY AVE	ROADWAY	1	12,358
IBSENAVE	IBSEN AVE	ROADWAY	1	21,065
JASONLEEAV	JASON LEE AVE	ROADWAY	1	29,456
JIMWRIGHTW	JIM WRIGHT WAY	ROADWAY	1	40,373
JOHNSONAVE	JOHNSON AVE	ROADWAY	1	18,682
KALAPUYAWA	KALAPUYA WAY	ROADWAY	1	39,758
KALAPUYSCT	KALAPUYA CT	ROADWAY	1	9,761
KATHLEENDR	KATHLEEN DR	ROADWAY	1	13,956
LANDESSRD	LANDRESS RD	ROADWAY	1	23,528
LANECT	LANE CT	ROADWAY	1	5,845
LINCOLNAVE	LINCOLN AVE	ROADWAY	3	31,474
LORDAVE	LORD AVE	ROADWAY	1	22,597
MEEKERDR	MEEKER DR	ROADWAY	1	4,230

TABLE 2.1 – COTTAGE GROVE STREET NETWORK PAVEMENT BRANCHES				
Branch ID	Branch Name	Branch Use	Number of Sections	Approximate Area (Sq Ft)
MOSBYCRRD	MOSBY CR RD	ROADWAY	1	48,131
N10THST	N. 10TH ST	ROADWAY	1	49,357
N11THST	N. 11TH ST	ROADWAY	3	35,243
N12THST	N. 12TH ST	ROADWAY	1	8,740
N14THST	N. 14TH ST	ROADWAY	2	25,558
N16THST	N. 16TH ST	ROADWAY	2	109,136
N19THST	N. 19TH ST	ROADWAY	2	39,987
N20THST	N. 20TH ST	ROADWAY	1	3,657
N22NDST	N. 22ND ST	ROADWAY	1	9,629
N5THST	N. 5TH ST	ROADWAY	1	8,792
N6THST	N. 6TH ST	ROADWAY	2	16,993
N7THST	N. 7TH ST	ROADWAY	2	16,832
N8THST	N. 8TH ST	ROADWAY	3	47,163
NDOUGLASST	N. DOUGLAS ST	ROADWAY	6	102,151
NELLISPL	NELLIS PL	ROADWAY	1	6,698
NEVACT	NEVA CT	ROADWAY	1	5,890
NGATEWAYBL	N. GATEWAY BLVD	ROADWAY	4	145,856
NGST	N. G ST	ROADWAY	2	13,374
NHST	N. H ST	ROADWAY	1	32,188
NIST	N. I ST	ROADWAY	1	35,992
NJST	N. J ST	ROADWAY	1	29,583
NKST	N. K ST	ROADWAY	1	24,994
NLANEST	N. LANE ST	ROADWAY	5	37,247
NLST	N. L ST	ROADWAY	1	25,049
NMST	N. M ST	ROADWAY	2	72,951
NNST	N. N ST	ROADWAY	1	16,996
NOST	N. O ST	ROADWAY	3	54,671
NPST	N. P ST	ROADWAY	2	24,449
NQST	N. Q ST	ROADWAY	1	3,335
NRIVERRD	N. RIVER RD	ROADWAY	3	154,046
OLSONPL	OLSON PL	ROADWAY	1	2,950
OSTRANDERL	OSTRANDER LN	ROADWAY	2	54,492
OSWALDWAVE	OSWALD W. AVE	ROADWAY	1	10,544
PALMERAVE	PALMER AVE	ROADWAY	1	50,376
PARKSRD	PARKS RD	ROADWAY	1	10,970
PENNOYERAV	PENNOYER AVE	ROADWAY	2	42,874
POLKAVE	POLK AVE	ROADWAY	1	17,349
PRITCHETTP	PRITCHETT PL	ROADWAY	1	22,293

TABLE 2.1 – COTTAGE GROVE STREET NETWORK PAVEMENT BRANCHES				
Branch ID	Branch Name	Branch Use	Number of Sections	Approximate Area (Sq Ft)
REDHILLSPL	RED HILLS PL	ROADWAY	1	18,810
RIVERFRONT	RIVERFRONT WAY	ROADWAY	1	14,850
RIVERWALKP	RIVER WALK PL	ROADWAY	2	23,002
ROWRIVERCO	ROW RIVER CONNECTOR	ROADWAY	1	86,168
S10THST	S. 10TH ST	ROADWAY	4	155,361
S11THST	S. 11TH ST	ROADWAY	2	43,320
S12THST	S. 12TH ST	ROADWAY	2	39,527
S13THST	S. 13TH ST	ROADWAY	2	26,355
S14THST	S. 14TH ST	ROADWAY	2	28,124
S15THST	S. 15TH ST	ROADWAY	1	18,539
S16THST	S. 16TH ST	ROADWAY	1	54,915
S17THST	S. 17TH ST	ROADWAY	1	34,141
S1STST	S. 1ST ST	ROADWAY	2	70,769
S21STST	S. 21ST ST	ROADWAY	1	8,634
S22NDST	S. 22ND ST	ROADWAY	1	36,744
S2NDST	S. 2ND ST	ROADWAY	3	98,940
S3RDST	S. 3RD ST	ROADWAY	3	62,447
S4THST	S. 4TH ST	ROADWAY	4	101,998
S4THSTY	S. 4TH ST (Y)	ROADWAY	1	6,513
S5THST	S. 5TH ST	ROADWAY	4	74,337
S6THST	S. 6TH ST	ROADWAY	5	261,175
S6THSTY	S. 6TH ST (Y)	ROADWAY	1	1,521
S7THST	S. 7TH ST	ROADWAY	4	82,241
S8THST	S. 8TH ST	ROADWAY	7	173,519
SCT	S CT	ROADWAY	1	12,522
SDOUGLASST	S. DOUGLAS ST	ROADWAY	1	5,851
SGATEWAYBL	S. GATEWAY BLVD	ROADWAY	2	152,577
SMST	S. M ST	ROADWAY	3	40,046
SNST	S. N ST	ROADWAY	1	11,513
SOST	S. O ST	ROADWAY	1	11,525
SPST	S. P ST	ROADWAY	1	10,794
SRIVERRD	S. RIVER RD	ROADWAY	4	204,909
SRIVERRDFR	S. RIVER RD (FRONTAGE RD)	ROADWAY	1	10,270
SRST	S. R ST	ROADWAY	4	274,277
SSST	S. S ST	ROADWAY	1	35,157
STCT	S. T CT	ROADWAY	1	12,006
SUST	S. U ST	ROADWAY	1	8,852

TABLE 2.1 – COTTAGE GROVE STREET NETWORK PAVEMENT BRANCHES				
Branch ID	Branch Name	Branch Use	Number of Sections	Approximate Area (Sq Ft)
SVCT	S. V CT	ROADWAY	1	13,077
TAYLORPL	TAYLOR PL	ROADWAY	1	7,143
THAYERAVE	THAYER AVE	ROADWAY	1	7,527
THOMASPL	THOMAS PL	ROADWAY	1	12,013
THORNTONRD	THORNTON RD	ROADWAY	1	25,090
TYLERAVE	TYLER AVE	ROADWAY	2	40,106
VANBURENAV	VANBUREN AVE	ROADWAY	1	10,034
VILLAGEDR	VILLAGE DR	ROADWAY	1	29,245
VILLARDAVE	VILLARD AVE	ROADWAY	2	16,143
VINCENTPL	VINCENT PL	ROADWAY	1	5,022
WASHINGTON	WASHINGTON PL	ROADWAY	1	6,455
WHARRISONA	W. HARRISON AVE	ROADWAY	1	150,082
WHITMANBLV	WHITMAN BLVD	ROADWAY	1	22,241
WILSONAVE	WILSON AVE	ROADWAY	1	18,309
WILSONCT	WILSON CT	ROADWAY	1	22,037
WITHYCOMBE	WITHYCOMBE AVE	ROADWAY	1	26,173
WMAINST	W. MAIN ST	ROADWAY	1	116,611
WOODAVE	WOOD AVE	ROADWAY	1	2,980
WOODSONPL	WOODSON PL	ROADWAY	1	5,540
YOSSPL	YOSS PL	ROADWAY	1	5,055
		TOTALS	321	7,058,318

2.2.2 Pavement Sections and Sample Units

A pavement section, which is the smallest management unit used when considering the application and selection of M&R repairs and treatments, is defined by Section 2.1.8 of ASTM D6433 as “a contiguous pavement area having uniform construction, maintenance, usage history, and condition,”. All sections should also have the same traffic volume and load intensity. The current pavement network in Cottage Grove contains 351 sections, 321 of which are paved sections. The paved sections are tabulated in Table 1A and shown spatially in Figure 1A in Appendix A. PAVER requires that each section is assigned a rank, which designates its prioritization in receiving maintenance and repair. Based upon PAVER rankings, for the Cottage Grove pavement inventory, the highest use or priority pavements are arterials which are rank “B”, collectors are rank “C”, and low-volume residential roads are rank “E”. The current pavement rankings for all studied street sections within the City of Cottage Grove are shown in Figure 2A in Appendix A.

To facilitate the visual survey of roadway pavements, each section is further subdivided into smaller areas called sample units. Similar sizing of these units is critical, and studies have found that maintaining the size of the sample units to within 40% of the established normal distribution reduces the standard error of the average PCI values. To meet this criterion, the ASTM method recommends sample units for flexible pavements are 2,500 sq ft ($\pm 1,000$) and sample units for rigid pavements are 20 slabs (± 8). The sample unit size for PCC

pavements assumes a joint spacing no greater than 25 ft. For slabs with joints exceeding that criterion, imaginary joints greater than or equal to 25 ft are assumed.

For the City of Cottage Grove 2018 PCI survey, a minimum sampling rate of 10% of the section area was used for both AC- and PCC-surfaced roads. Sample sizes for flexible pavements in Cottage Grove were typically 100 feet in length for the width of the pavement section; typically falling within the ASTM recommended sample unit size. As an example, a street section under 1000 feet in length would have one 100 foot sample section, but a street 1100 feet in length would have two 100 foot sample sections, and so on depending on the length of the section. Gravel roads were not surveyed as a part of this project as the objective for the project is a management plan for paved streets. Sample unit locations at Cottage Grove were selected using a systematic random sampling model method. This technique is implemented by determining the number of sample units needed, placing the first sample unit randomly within the section and then spacing the remaining sample units systematically throughout the section at an equal distance apart.

2.3 PAVEMENT INVENTORY SUMMARY

As noted earlier, the roadway pavement types include AC and PCC pavements, as well as GR. Figure 2.2 on the next page shows the distribution of roadway pavement area by surface type. Approximately 95.8% of the roadways are surfaced with AC, 1.4% are PCC, and the remaining 2.8% are GR. Figure 3A in Appendix A shows the surface type spatially by section in Cottage Grove.

[The remainder of this page intentionally left blank. See Figure 2.2 on the next page.]

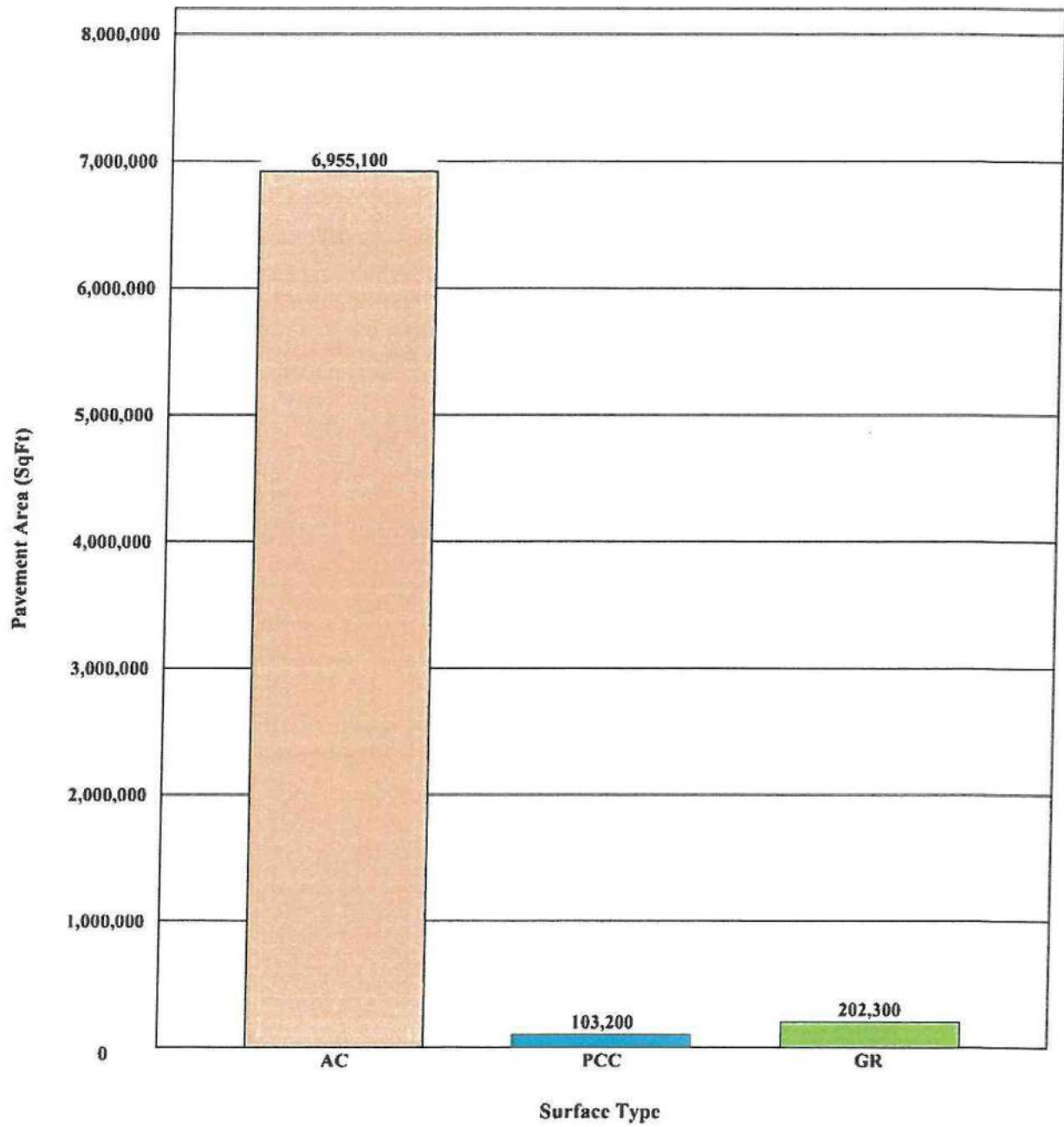


Figure 2.2 - COTTAGE GROVE PAVEMENT AREA BY SURFACE TYPE

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CHAPTER 3: PAVEMENT CONDITION INDEX SURVEY RESULTS

3.1 INTRODUCTION

Emerio Design conducted a visual PCI survey during the late summer and early fall of 2018 for all street pavements within the jurisdiction of the City of Cottage Grove.

3.2 METHODOLOGY

As previously discussed, the PCI is a measure of the pavement's functional surface condition and provides a methodology for assessing the causes of distress and whether the distress is related to a load or climatic conditions. Although the PCI is not a direct measure of structural capacity, it is suggestive of the structural needs of the pavement.

The PCI is based on the type, severity, and quantity of each distress found in an inspected sample unit. The results are displayed using a seven-category rating scale in accordance with ASTM D6433. Flexible pavement (e.g., AC) and rigid pavement (i.e., PCC) distress types are presented in Table 3.1 below; distress types with an asterisk (*) indicate that distress was observed during the 2018 PCI survey.

Table 3.1 – PAVER DISTRESS CODES FOR FLEXIBLE AND RIGID PAVEMENTS

Code	Flexible Pavement Distress Descriptions	Code	Rigid Pavement Distress Descriptions
1	Alligator Cracking*	21	Blow Up
2	Bleeding*	22	Corner Break*
3	Block Cracking *	23	Divided Slab*
4	Bumps/Sags*	24	Durability Cracking
5	Corrugation*	25	Faulting*
6	Depression*	26	Joint Seal Damage*
7	Edge Cracking*	27	Lane Shoulder Drop off
8	Joint Reflective Cracking	28	Linear Cracking*
9	Lane Shoulder Drop Off*	29	Large Patch* (>5.5 sq ft)
10	L & T Cracking*	30	Small Patch* (<5.5 sq ft)
11	Patch/Utility Cut*	31	Polished Aggregate*
12	Polished Aggregate	32	Popouts*
13	Pothole*	33	Pumping
14	Railroad Crossing*	34	Punchout
15	Rutting*	35	Railroad Crossing
16	Shoving	36	Scaling*
17	Slippage Cracking	37	Shrink Cracking*
18	Swell	38	Corner Spall*
19	Raveling*	39	Joint Spall*
20	Weathering*		

To obtain the section PCI, the PCI of each selected sample unit is extrapolated over the entire section area. Distresses found in sample units classified as “additional”, which are defined as non-representative instead of random, are not extrapolated over the entire section but are added to the extrapolated quantity.








Table 3.2 below provides a detailed description of each PCI rating category and shows the standard seven-category scale. The color scheme and PCI rating scale presented in Table 3.2 below are based on ASTM D6433 Section 2.1.5 and used throughout this report.

Section 4.1 of ASTM D6433 governing PCI surveys offers this caution:

*“The PCI is a numerical indicator that rates the surface condition of the pavement. The PCI provides a measure of the **present condition** of the pavement based on the distress observed on the surface of the pavement, which also indicates the structural integrity and surface operational condition (localized roughness and safety). The PCI **cannot** measure the structural capacity; nor does it provide direct measurement of skid resistance or roughness. It provides an objective and rational basis for determining maintenance and repair needs and priorities. Continuous monitoring of the PCI is used to establish the rate of pavement deterioration, which permits early identification of major rehabilitation needs. The PCI provides feedback on pavement performance for validation or improvement of current pavement design and maintenance procedures.”*

Based on the limitations of the PCI method, it is imperative that engineers and planners treat the PCI as a tool that will assist them during the M&R planning process. Any major project should always be preceded by an up-to-date, detailed, 100%, project-level inspection of the pavement in order to re-evaluate maintenance needs prior to the project design process.

Table 3.2 – PAVEMENT CONDITION INDEX RATING SCALE

ASTM PCI Color Legend	PCI Range	PCI Rating and Definition
	86 to 100	GOOD: Pavement has minor or no distresses and should require only routine maintenance.
	71 to 85	SATISFACTORY: Pavement has scattered low-severity distresses that should require only routine maintenance.
	56 to 70	FAIR: Pavement has a combination of generally low- and medium-severity distresses. Maintenance and repair needs may range from routine to major.
	41 to 55	POOR: Pavement has low-, medium-, and high-severity distresses that probably cause some operational problems. M&R needs will be major.
	26 to 40	VERY POOR: Pavement has predominantly medium- and high-severity distresses that cause considerable maintenance and operational problems. M&R needs will be major.
	11 to 25	SERIOUS: Pavement has mainly high-severity distresses that may affect operational safety; immediate repairs are needed.
	0 to 10	FAILED: Pavement deterioration has progressed to the point that safety is a significant concern; complete reconstruction is required.

3.3 DISTRESS TYPES

Distress tends to fall into one of the following cause categories:

- **Load-related:** Flexible pavement distresses include alligator/fatigue cracking, corrugation, depression, polished aggregate, rutting, and slippage cracking. Rigid pavement distresses include corner breaks, longitudinal cracking, divided slabs, polished aggregate, pumping, and joint spalling.

- **Climate- and durability-related:** Flexible pavement distresses include bleeding, block cracking, joint reflection cracking, longitudinal and transverse (L&T) cracking, swelling, and raveling/weathering. Rigid pavement distresses include blow-ups, durability cracking, longitudinal cracking, popouts, pumping, scaling, shrinkage cracks, and joint and corner spalling.
- **Moisture- and drainage-related:** Flexible pavement distresses include alligator/fatigue cracking, depressions, potholes, and swelling. Rigid pavement distresses include corner breaks, divided slabs, and pumping.
- **Other factors:** Oil spillage, bleeding, patching, and concrete slab joint faulting.

As described above, a distress may be the result of more than one cause. For example, depressions may be caused by incorrect compaction during construction or by subgrade softening due to environmental factors. In addition, a distress may be initiated by one cause but may progress to a distress of higher severity by another cause. Therefore, engineering judgment is critical in analyzing the actual cause or causes of the distress.

For asphalt-surfaced pavements, 15 of the 20 distresses listed in Table 3.1 above were identified during the 2018 pavements inspection at Cottage Grove and 13 of the 19 distresses for PCC were present.

3.4 PAVEMENT CONDITION INDEX SURVEY RESULTS

As previously indicated, the evaluated Cottage Grove paved street network consists of 171 branches and 321 sections. A total of 408 sample units were visually inspected in the field. Data from the inspected sample units were input into the PAVER database and a resultant PCI for each section was computed.

The surface distresses recorded in 2018 are shown in Table 3.3 below. The percentages shown in Table 3.3 are based on the frequency of a distress type in all the flexible and rigid PAVER sections regardless of distress severity. For example, weathering was observed on 311 of the 313 inspected sections, or 99% of the total sections with a flexible surface (i.e. AC), whereas large patch / utility cut was found on 6 of the 8, or 75% of the rigid pavements.

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Table 3.3 - Distress Percent Distribution

ASPHALT CONCRETE		
Distress	Number of Sections	Percent of All Sections with the Same Surface Type (e.g. flexible or rigid)
ALLIGATOR CRACKING	184	59%
BLEEDING	4	1%
BLOCK CRACKING	53	17%
BUMPS / SAGS	8	3%
CORRUGATION	1	0.3%
DEPRESSION	24	8%
EDGE CRACKING	15	5%
JOINT REFLECTIVE CRACKING	0	0%
LANE / SHOULDER DROP	6	2%
LONGITUDINAL / TRANSVERSE CRACKING	269	86%
PATCH / UTILITY CUT	179	57%
POLISHED AGGREGATE	0	0%
POTHOLE	18	6%
RAILROAD CROSSING	2	1%
RAVELING	137	44%
RUTTING	10	3%
SHOVING	0	0%
SLIPPAGE CRACK	0	0%
SWELL	0	0%
WEATHERING	311	99%
PORTLAND CEMENT CONCRETE		
BLOW UP	0	0%
CORNER BREAK	5	63%
CORNER SPALLING	4	50%
DIVIDED SLAB	8	100%
DURABILITY CRACKING	0	0%
FAULTING	1	13%
JOINT SEAL DAMAGE	8	100%
JOINT SPALLING	3	38%
LANE SHOULDER DROP OFF	0	0%
LARGE PATCH / UTILITY CUT	6	75%
LINEAR CRACKING	8	100%
POLISHED AGGREGATE	0	0%
POPOUTS	0	0%
PUMPING	0	0%
PUNCH OUT	0	0%
RAILROAD CROSSING	0	0%
SCALING / CRAZING	1	13%
SHRINKAGE CRACKING	2	25%
SMALL PATCH	1	13%

Note: There are 313 Asphalt Concrete sections and 8 Portland Cement Concrete Sections

3.4.1 PCI Condition Summary

A summary of the pavement condition results by branch and section are included in Tables 1B and 2B of Appendix B, respectively. These reports include all 321 roadway pavement sections and their PCI information from their last inspection date (LID). Additionally, the pavement sections that have a PCI less than or equal to 40 and are rated very poor, serious, or failed are highlighted in red in Table 2B.

Appendix C, provided electronically, shows the detailed 2018 PCI Survey results via the PAVER Inspection Report.

The computed PCI values for all the 321 sections inspected range from a low of zero on two sections, one section of E QUINCY AVE – CG139 and one section of N DOUGLAS ST – CG216, to a high of 100 on N GATEWAY BLVD – G279. The area-weighted PCI is typically the metric of the most interest since, as the name suggests, the overall PCI is influenced by the area rather than frequency. All PCI values reported herein are based on an area-weighted average. The area-weighted average PCI for the entire Cottage Grove street network was 58, which corresponds to a PCI rating at the low end of fair condition. Figure 3.1 below show the PCI breakdown by percent area.

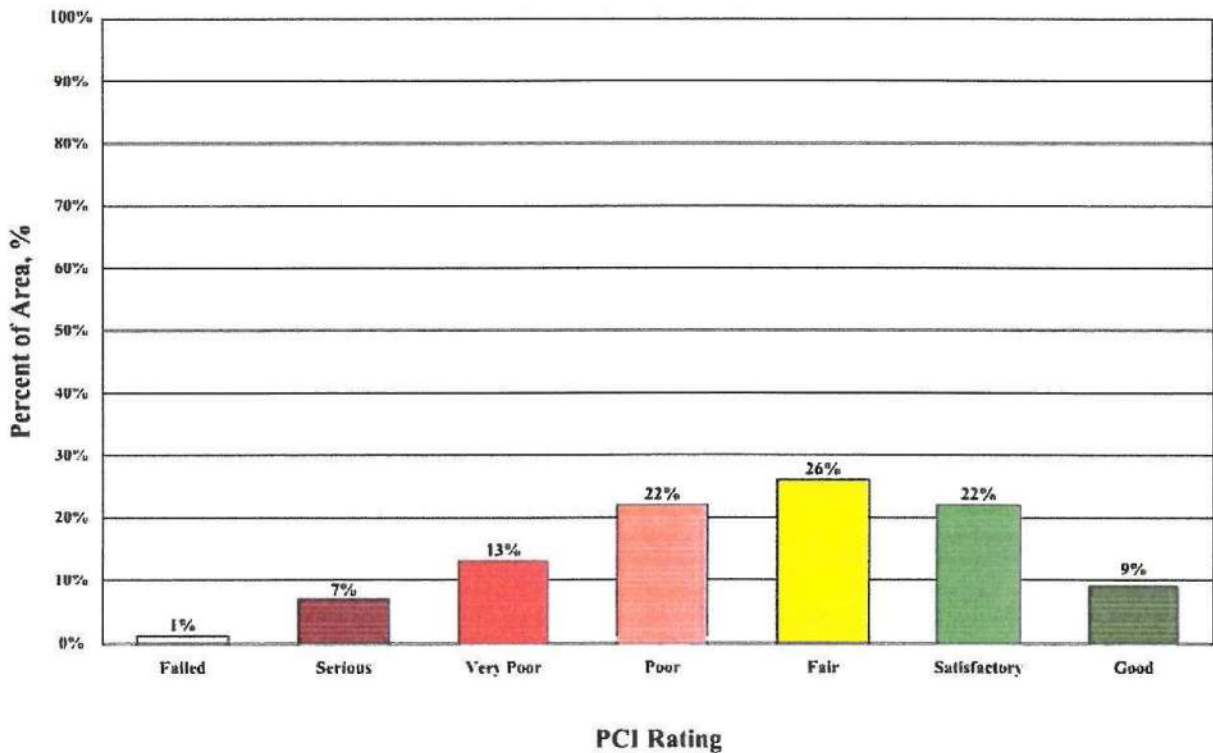


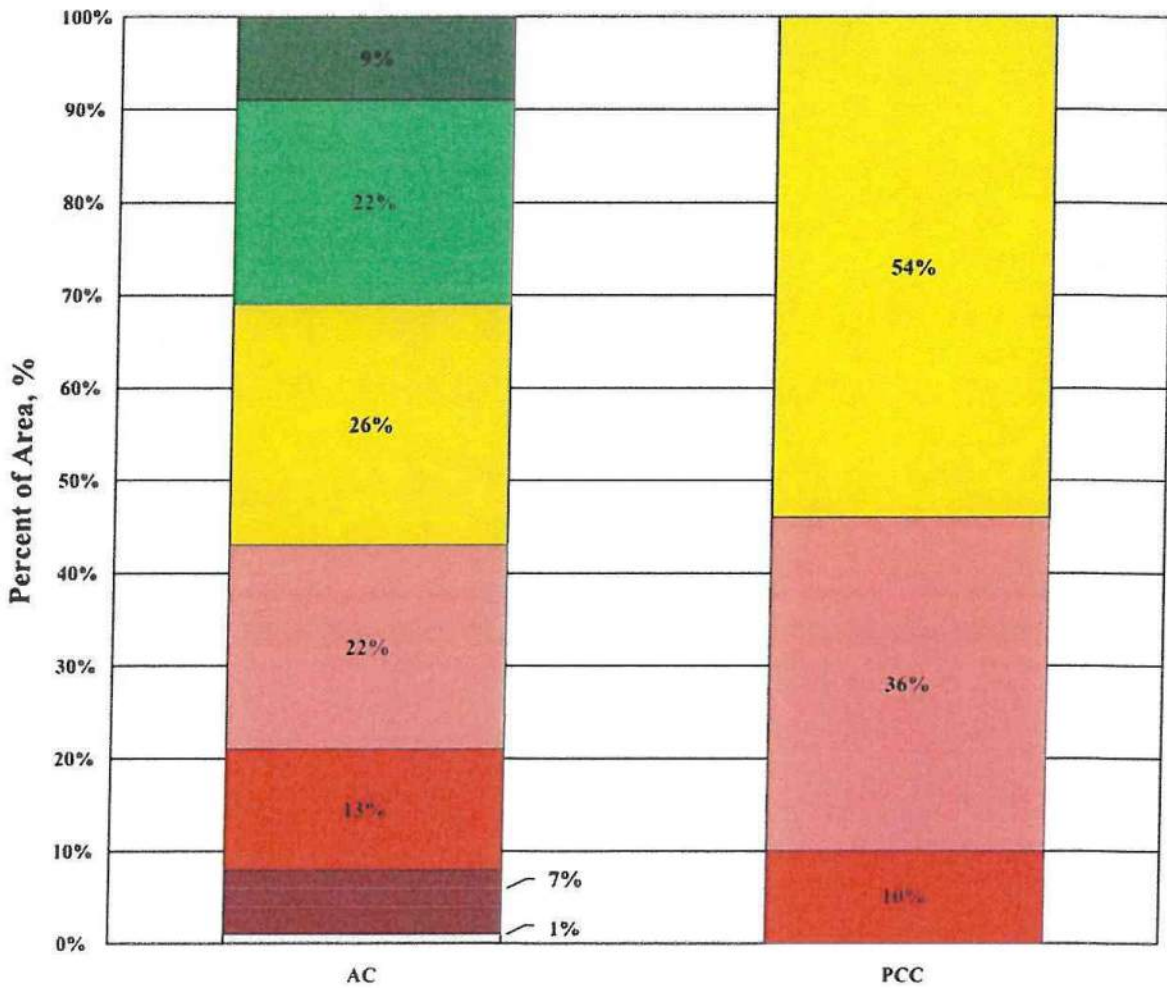
Figure 3.1 - COTTAGE GROVE CONDITION RATING BY PERCENT OF AREA

Based on paved surface type, 98.5% of the total subject area is comprised of AC pavement, which has a PCI of 58. PCC pavement makes up 1.5% of the total area and has a PCI of 53. Tabular and graphic condition

summary by pavement area and surface type at their last inspection are shown in Table 3.4 and Figure 3.2 below.

Table 3.4 – PCI VALUES BY SURFACE TYPE

Surface	Area-Weighted Average PCI	Pavement Area (Sq. Ft.)	% Area	Sections
AC	57.7	6,955,098	98.5%	313
PCC	53.3	103,221	1.5%	8
TOTAL	57.6	7,058,318	100.0%	321



PCI Rating by Surface Type

Figure 3.2 - COTTAGE GROVE NETWORK PAVEMENT CONDITION RATING BY SURFACE TYPE

3.5 SUMMARY

During the last quarter of 2018, all the streets under Cottage Grove jurisdiction were inspected as part of the PMP implementation. Overall, the inspected pavement sections are in the lower end of the fair-condition range with an area-weighted average PCI of 58. Approximately 43% of Cottage Grove Street pavements, by area, are in poor or worse condition. Pavements in fair condition account for 26% of the pavement area and they require immediate M&R to prevent it from deteriorating further and becoming costlier to maintain.

A key element to getting the most out of a PMP is regularly scheduled PCI surveys. We recommend Cottage Grove continue to schedule pavement inspections on a regular basis at no more than three to five-year intervals, depending on the level of preservation activities.

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CHAPTER 4: PAVEMENT CONDITION ANALYSIS

4.1 INTRODUCTION

In addition to assessing the current condition of a pavement, it is very important from a planning standpoint to be able to predict the future condition of a pavement with reasonable accuracy. In a PMP, this prediction is completed with the aid of a prediction model. When a PMS is initially implemented, default models are typically used to predict the future condition of a pavement. However, after PCI surveys are completed for a period of time, the historical data are then used to refine the models, so they better represent the deterioration of a particular class of pavement based on local climatic conditions, loading, material sources, construction procedures, etc. The importance of accurate prediction models is part of the reason it is essential to conduct periodic, routine surveys in order to track the rate of deterioration.

4.2 METHODOLOGY

In PAVER, the pavement deterioration curves are developed based on the “family” model procedure. A pavement “family” is defined as a group of pavements with similar deterioration characteristics. The procedure for developing the prediction models is as follows:

- Define the pavement families
- Review the data
- Conduct a data outlier analysis
- Model the data

4.3 PREDICTION MODELS

Separate condition prediction models were developed for each pavement “family” at Cottage Grove. The delineation is based on branch use, surface type, section rank, and structural design life (if applicable). Four separate models were created for the following “families” of pavements at Cottage Grove:

- 2019 Local Street AC
- 2019 Collector Street AC
- 2019 Arterial Street AC
- 2019 PCC

For each model, linear deterioration curves were generated based upon expected deterioration rates for each “family” of pavements. There was limited historical data available on the Cottage Grove area pavement sections and there were no previous PCI inspections available. An effort was made to utilize as much Cottage Grove data as could be obtained based on known history of portions of the street network. This data was utilized as much as possible and compared with typical deterioration rates in order to establish a deterioration rate for each “family” of pavements. Additional information for each of the condition-prediction models is presented in Appendix D.

As future PCI surveys are conducted and historical data about pavement deterioration are generated, a best-fit curve can be calculated using a polynomial-constrained, least-squares analysis procedure. In this process, outliers are removed, and the data is checked for accuracy and reasonableness. This process was utilized as

much as possible using available historic and PCI survey data. In the future, additional PCI inspections and construction data can be used to refine the models. The best-fit curve for each family is used in the analysis to predict the average behavior of all sections within the family to which it is assigned.

4.4 CRITICAL PCI

For each of the condition-prediction models developed, a critical PCI was also established. The critical PCI is the point at which the pavement condition begins to deteriorate more quickly over time into a poor-condition state and major M&R is triggered because the cost to apply localized M&R increases significantly. Pavement sections with PCI values above the critical value are assigned a higher priority for funding during budget analysis to prevent them from deteriorating to the point where rehabilitation is more costly. The following critical PCI values were used for Cottage Grove roadways:

- Local Street AC – 50
- Collector Street AC – 60
- Arterial Street AC – 65
- PCC – 40

4.5 PAVEMENT RANK AND USE PRIORITIZATION

Pavement sections are assigned a rank to establish their relative importance in the overall pavement network. The section rank is used to define the priority of each section during the M&R analysis. Specifically, for Cottage Grove, arterial ranked roads have the highest funding and M&R priority, followed by collector ranked roads, and then by local ranked roads. The rank of each section is displayed spatially on Figure 2A in Appendix A.

4.6 DATABASE VERIFICATION

Prior to finalizing the prediction models and running the condition analysis and M&R Work Plan module, the Database Verification Tools were used to check the PAVER database for the following errors:¹

- Verify branch data and remove duplicate section data: Ensures branch summaries correspond to section totals, only one family model is assigned to each section, and there is only one set of user-defined field data for each section.
- Verify/reset latest inspection indicators: Ensures data match last inspection date (LID).
- Check for duplicate major M&R and duplicate inspections: Eliminates duplicate major M&R (i.e., same date, same work type) and duplicate inspections (i.e., same section, same PCI).
- Verify work descriptions: Ensures all work history and work-required entries have a work-type description. Report sections and dates that have work codes no longer in the system tables.
- Verify inspection samples and cached inventory data: Ensures all sample units either have distress or are marked “inspected but no distress”. Checks and fixes cached inventory data associated with inspections.
- Report sections with missing data for PCI calculation

¹ PAVER 7.0.8 User Manual: U.S. Army Corps of Engineers, October 2017, PDF.

- Report missing system table information: Lists networks, branches, and sections missing data required to complete the System Tables.
- Change duplicate or blank use and surface names.
- Recalculate conditions for all sections: Reports invalid or incomplete distress entries. Recalculates PCI and other selected distress indices.
- Recalculate surface for all sections: Ensures the surface type (AC or PCC) for each section is correct according to the work history.

4.7 CONDITION ANALYSIS

Using the condition prediction models discussed above, the projected condition of each pavement section was estimated for a 10-year period. Based on this analysis, the PCI is projected to decrease from a current value of 58 to a value of 43 in FY 2029 if no maintenance or rehabilitation work is performed. The projected pavement condition in 10 years for each pavement sections in Cottage Grove is shown in Table 1D in Appendix D.

4.8 FUNCTIONAL REMAINING LIFE

Functional remaining life is the practical amount of time a pavement is in service before requiring rehabilitation, as estimated based solely on visual condition. This is not to be confused with structural remaining life, which requires analysis of the structural capacity of a pavement and typically requires a field exploration and testing program that includes core explorations and falling weight deflectometer (FWD) deflection tests.

Two forms of functional remaining life were calculated based on the current visual condition surveys for the Cottage Grove street pavements. The first type of functional remaining life we calculated is the time until major M&R, such as an overlay, is required. The critical PCI, as presented in Section 4.4, is the threshold used for this type of functional remaining life analysis. The second type of functional remaining life we calculated is the time until the pavement is no longer operational due to poor condition and increased safety concerns. A PCI of 30 was set as the trigger point for determining the end of the pavement's functional service life.

The two types of functional remaining life for each roadway section at Cottage Grove are summarized in Table 2D in Appendix D.

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CHAPTER 5: BUDGET ANALYSIS & M&R PROJECT RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of this analysis is to determine the M&R needs and impact of different budget scenarios on the Cottage Grove street pavement network condition over time. PAVER v7.0.10 software was utilized to conduct the budget consequence and needs analysis, and to develop network-level project recommendations for the next 10 years. Five budget scenarios were analyzed to understand the fiscal requirement and the impact each funding level has on the network PCI.

Based on the 2018 PCI survey results, Figure 5.1 below displays a breakdown of Cottage Grove’s pavement condition by percent area of area and general M&R treatment categories. Approximately 31, 57 and 12% of the area require preservation treatments, rehabilitation, and reconstruction respectively.

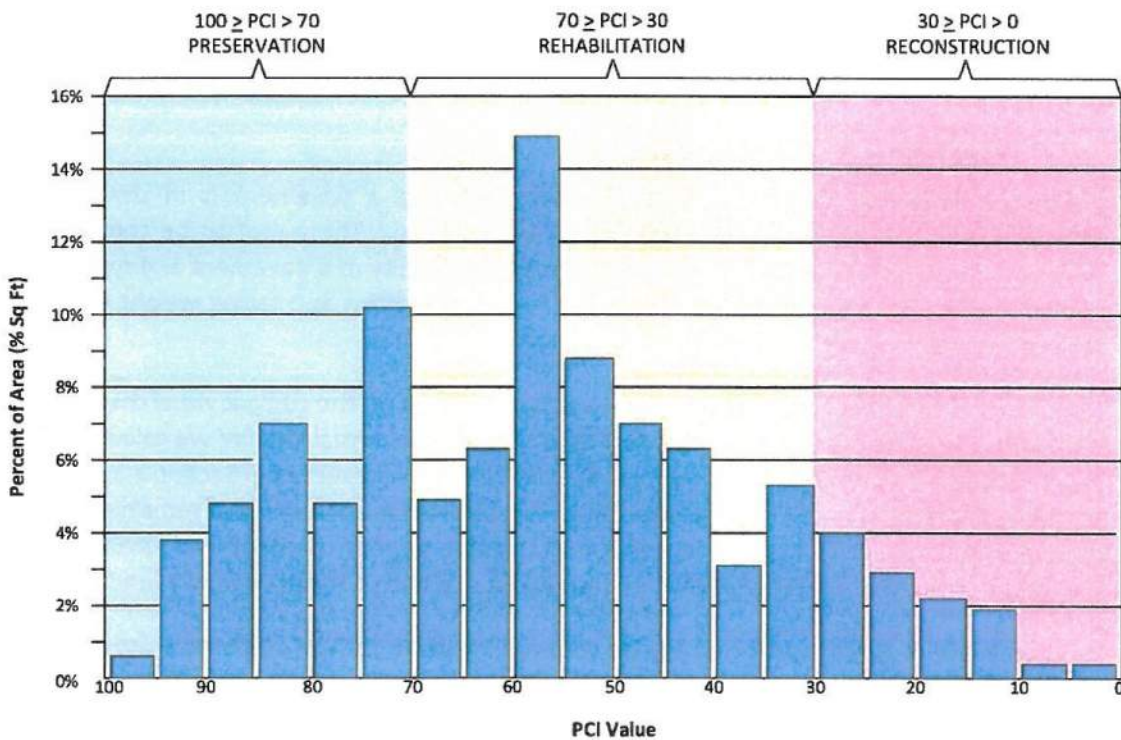


Figure 5.1 - GENERAL TREATMENT TYPE DISTRIBUTION BASED ON PCI

5.2 METHODOLOGY

The PAVER M&R Work Planning Module identifies when and where M&R is required and how much it will cost. M&R plans can be developed either by assuming an annual budget or identifying specific constraints, such as the budget required to meet a specific condition goal. Based on either, a known annual budget or a desired overall condition level, PAVER will produce a prioritized M&R project list. A critical component and first step in performing budget analysis and developing network-level project recommendations is to establish maintenance policies and unit costs for various work types.

5.3 MAINTENANCE POLICIES AND UNIT COSTS

Distress-maintenance policies are policies that determine what type of work should be applied to a specific distress type and severity. For example, a medium-severity longitudinal/transverse (L&T) crack would be repaired by crack sealing on an AC pavement. PAVER applies the following four policy types:

- Preservation
 - Localized Stopgap (Safety) M&R is applied when the pavement condition is below the critical PCI and only used to keep the pavement operational and in a safe condition.
 - Localized Preventive M&R is applied to pavements above the critical PCI to prolong the pavement life (e.g. crack sealing, patching).
 - Global Preventive M&R are treatments applied to an entire pavement section with the intent of slowing the rate of deterioration (e.g. slurry seal, chip seal).
- Rehabilitation & Reconstruction
 - Major M&R is used to address severe defects with the purpose of correcting or improving pavement structural or functional characteristics. The resulting PCI after any Major M&R application is always 100 (e.g. overlay, reconstruction).

Policies for distress types and severities are available in Appendix E.

The anticipated cost of performing M&R is based on cost tables that relate M&R work type cost to PCI. Unit costs from bid tabulations from recent projects in the area were used to develop the cost tables presented in Appendix E.

5.4 BUDGET SCENARIO ANALYSIS RESULTS

The following five budget scenarios were analyzed for a 5-year period beginning in July 2020 (FY 2020):

- Maintain Current Budget
- Maintain Current Network PCI
- Improve Network PCI to 72
- Improve Network PCI to 80
- Eliminate M&R Backlog

The results are summarized below. Additional graphical and tabular information regarding the comparison of the budgets and effects on the PCI are given in Appendix F.

The PCI of 58 from the 2018 inspection is projected to deteriorate to a PCI of 55 at the beginning of the analysis period (i.e., prior to conducting the recommended work). At the beginning of the analysis period, Cottage Grove will have an unfunded M&R backlog of approximately \$26.73 million. The backlog is approximated by running an unconstrained analysis. The amount of funding suggested for M&R on sections with a PCI below the critical value is considered unfunded backlog.

The M&R costs in the analysis are based on estimated unit prices and are presented in constant 2019 dollars, i.e., they assume no inflation over the long term.

5.4.1 Scenario 1 – Maintain Current M&R Budget

The current budget for the 10-year analysis period beginning in FY 2020 contains funding for annual maintenance such as crack sealing and patching. Cottage Grove anticipates spending approximately \$500,000 annually during the next 10 years. A summary of the results for this budget scenario are presented in Table 5.1 below.

Table 5.1 – SUMMARY OF THE CURRENT BUDGET ANALYSIS RESULTS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Over Analysis Period ¹	Unfunded M&R at End of Analysis ²	Total Cost ³	PCI at End of Analysis
1 Maintain Current Budget	55	\$5,000,000	\$39,850,000	\$44,850,000	49

Notes:

- ¹Total funding for the M&R budget scenarios.
- ²Total unfunded stopgap, preventive, global, and major M&R values.
- ³The sum of the total funded and last-year unfunded cost.

The total cost over the next 10 years, including the funded and unfunded M&R, is \$44.85 million. Figure 5.2 below displays the impact of this budget to the network PCI over time with respect to the total funded and unfunded M&R

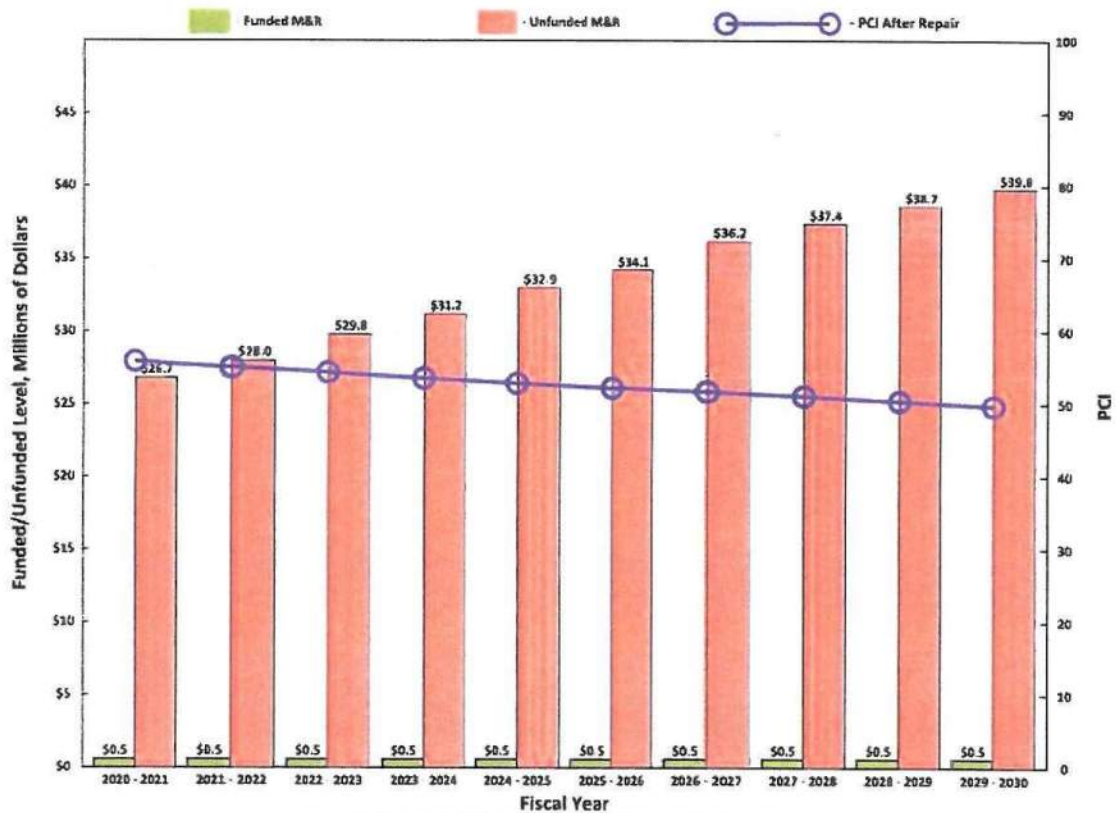


Figure 5.2 - MAINTAIN CURRENT BUDGET - ANALYSIS RESULTS

5.4.2 Scenario 2 – Maintain Current Network PCI

Funding at an average annual amount of \$1,400,000 is estimated to be sufficient to maintain the City’s pavements at their current PCI over the 10-year analysis period. A summary of this budget is shown in Table 5.2 below. If the goal is to maintain the current PCI of at least 58, the total cost over the next 10 years, including the funded and unfunded M&R, is \$44.47 million. Continued funding at this level will begin to decrease the unfunded M&R over time.

Table 5.2 – SUMMARY OF THE MAINTAIN CURRENT NETWORK PCI BUDGET SCENARIO RESULTS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Over Analysis Period ¹	Unfunded M&R at End of Analysis ²	Total Cost ³	PCI at End of Analysis
2 Maintain Current PCI	55	\$14,000,000	\$30,470,000	\$44,470,000	58

Notes:

- ¹Total funding for the M&R budget scenarios.
- ²Total unfunded stopgap, preventive, global, and major M&R values.
- ³The sum of the total funded and last-year unfunded cost.

Figure 5.3 below displays the impact of this budget to the network PCI over time with respect to the total funded and unfunded M&R.

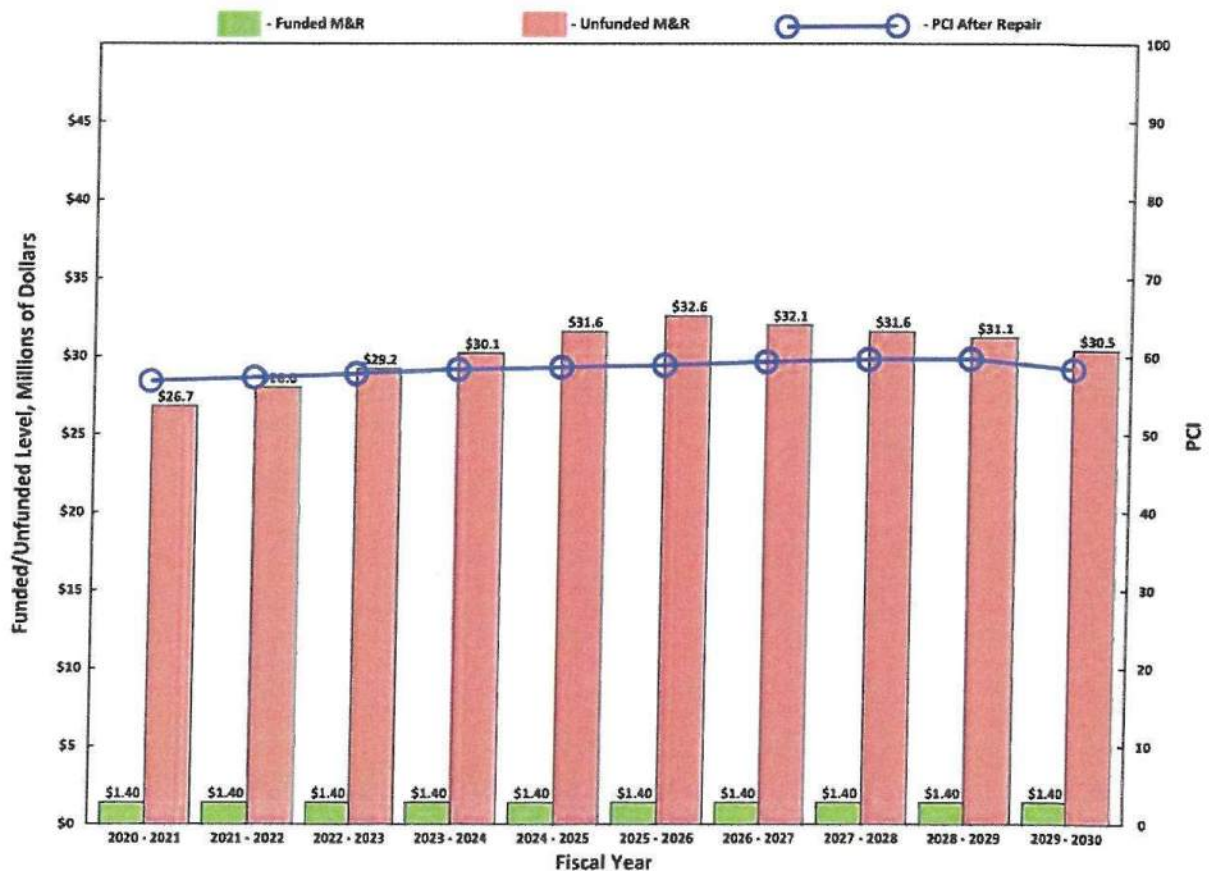


Figure 5.3 - MAINTAIN CURRENT NETWORK PCI OF 58 - ANALYSIS RESULTS

5.4.3 Scenario 3 – Increase Network PCI to 72

An annual amount of \$2,875,000 is recommended to increase the network PCI from 55 to 72 at the end of the 10-year analysis period. A summary of this budget is shown in Table 5.3 below. To facilitate this goal, the total cost over the next 10 years, including the funded and unfunded M&R is \$42.03 million, and it results in a decrease in unfunded M&R by approximately 50%.

Table 5.3 – SUMMARY OF INCREASE NETWORK PCI TO 72 BUDGET SCENARIO RESULTS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Over Analysis Period ¹	Unfunded M&R at End of Analysis ²	Total Cost ³	PCI at End of Analysis
3 Increase PCI to 72 After 10 Years	55	\$28,750,000	\$13,280,000	\$42,030,000	72

Notes:

- ¹Total funding for the M&R budget scenarios.
- ²Total unfunded stopgap, preventive, global, and major M&R values.
- ³The sum of the total funded and last-year unfunded cost.

Figure 5.4 below displays the impact of this budget to the network PCI over time with respect to the total funded and unfunded M&R.

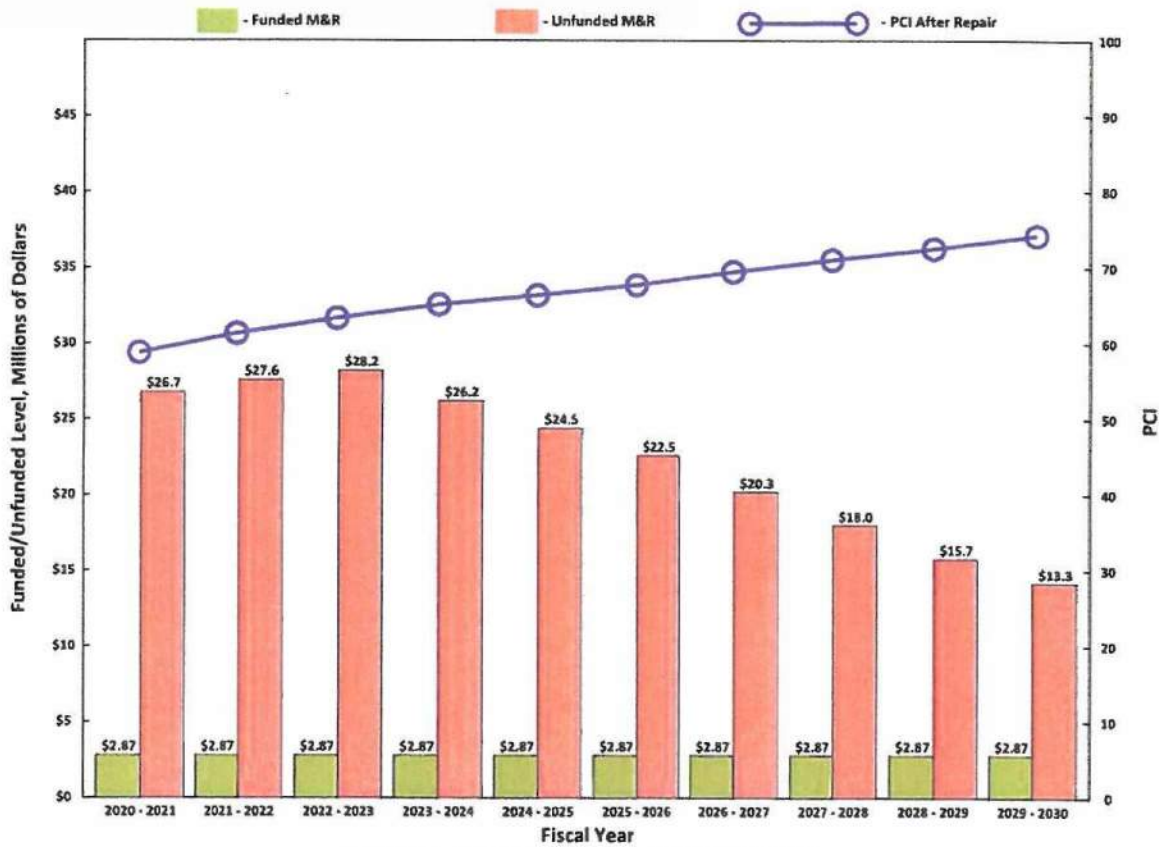


Figure 5.4 - PCI INCREASE TO 72 - ANALYSIS RESULTS

5.4.4 Scenario 4 – Increase Network PCI to 80

An annual amount of \$3,559,000 is recommended to increase the network PCI from 58 to 80 at the end of the 10-year analysis period. A summary of this budget is shown in Table 5.4 below. To facilitate this goal, the total cost over the next 10 years, including the funded and unfunded M&R is \$41.00 million, and it results in a decrease in unfunded M&R by approximately 80%.

Table 5.4 – SUMMARY OF INCREASE NETWORK PCI TO 80 BUDGET SCENARIO RESULTS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Over Analysis Period ¹	Unfunded M&R at End of Analysis ²	Total Cost ³	PCI at End of Analysis
4 Increase PCI to 80 After 10yrs	55	\$35,590,000	\$5,410,000	\$41,000,000	80

Notes:

- ¹Total funding for the M&R budget scenarios.
- ²Total unfunded stopgap, preventive, global, and major M&R values.
- ³The sum of the total funded and last-year unfunded cost.

Figure 5.5 below displays the impact of this budget to the network PCI over time with respect to the total funded and unfunded M&R.

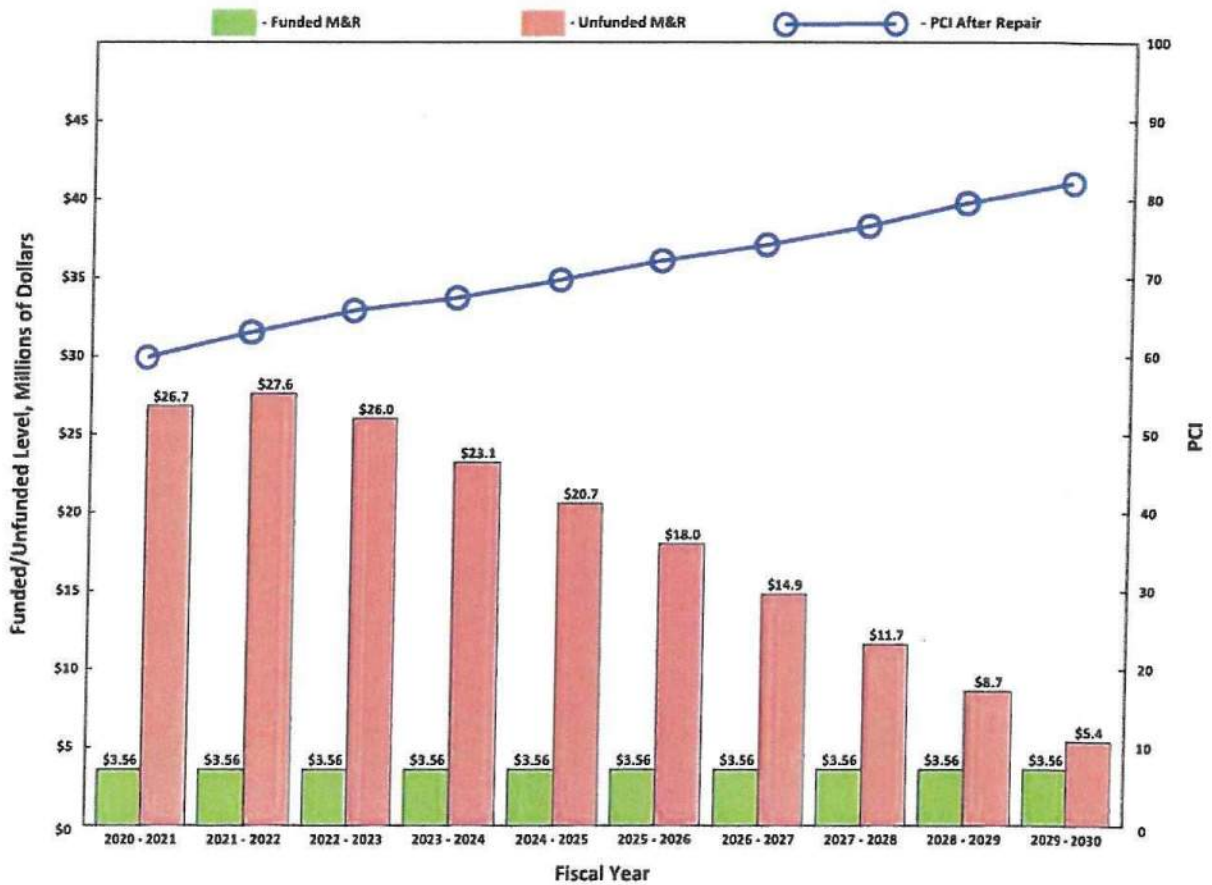


Figure 5.5 - PCI INCREASE TO 80 - ANALYSIS RESULTS

5.4.5 Scenario 5 – Eliminate M&R Backlog

M&R backlog is any major M&R work required for a pavement with a PCI below critical value (see Section 4.4). The results of the analysis found an annual budget of \$4,043,000 is needed to eliminate the unfunded M&R by FY 2030. Table 5.5 below displays a summary of the analysis.

Table 5.5 – SUMMARY OF ELIMINATE BACKLOG BUDGET SCENARIO RESULTS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Over Analysis Period ¹	Unfunded M&R at End of Analysis ²	Total Cost ³	PCI at End of Analysis
5 Eliminate Backlog	55	\$40,430,000	\$0	\$40,430,000	87

Notes:

- ¹Total funding for the M&R budget scenarios.
- ²Total unfunded stopgap, preventive, global, and major M&R values.
- ³The sum of the total funded and last-year unfunded cost.

The total cost over the 10-year analysis period, including funded and unfunded M&R, is \$40.43 million. Figure 5.6 below displays the impact of this budget to the network PCI over time with respect to the total funded and unfunded M&R.

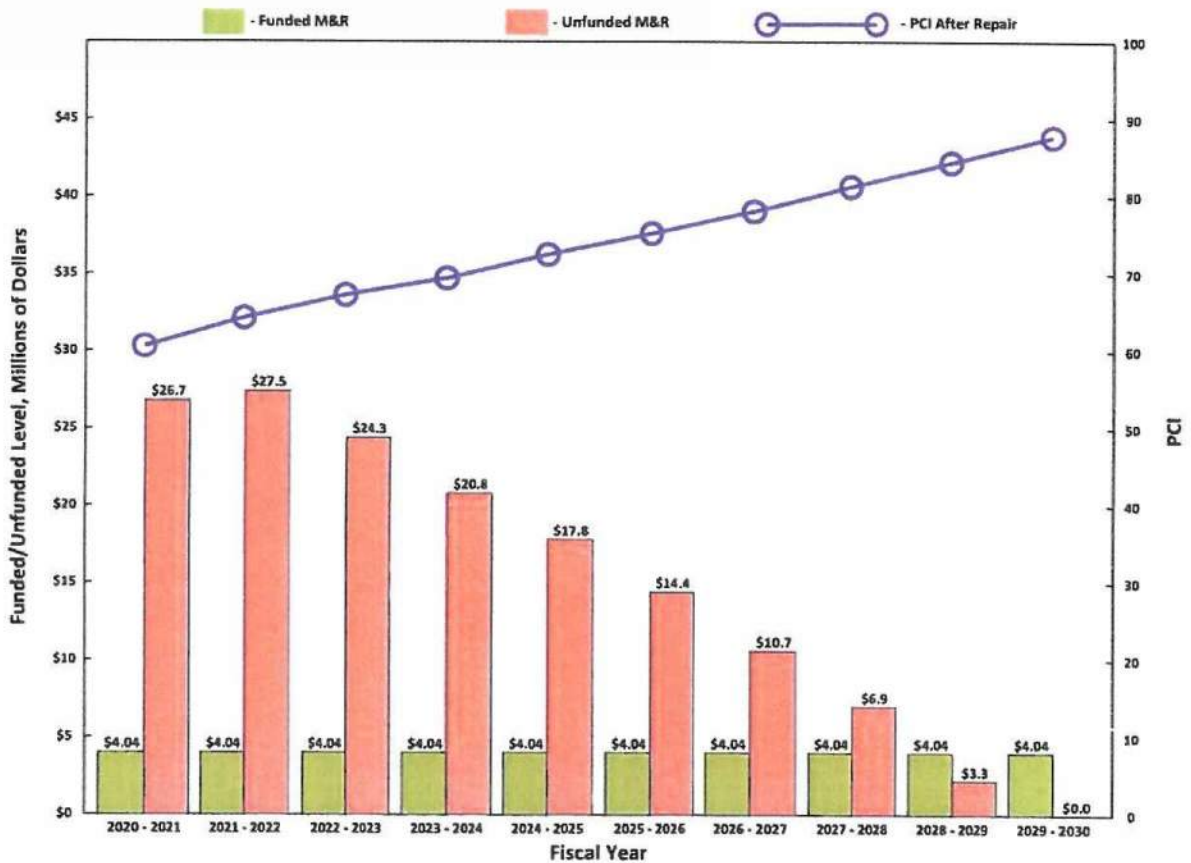


Figure 5.6 - ELIMINATE M&R BACKLOG - ANALYSIS RESULTS

5.6 RECOMMENDED MAJOR AND GLOBAL M&R PROJECTS

The PAVER Work Planning Module was used to develop Major and Global M&R projects. The analysis was based on a 10-year period beginning on July 1, 2020 (FY 2020). An eliminate backlog analysis scenario was selected to assist in generating a list of network-level projects. This budget scenario gives Cottage Grove the most flexibility by providing the largest list of projects and their preferred timing.

The sections identified in the analysis were further refined into practical projects and organized by year. The cost associated with each project recommendation is based on a general pavement structural section. Further engineering will be required to properly design and estimate the total cost before constructing each project. The Global M&R projects assume localized patching and crack sealing will be conducted prior to surface treatment application.

The complete list of recommended Major and Global M&R projects are listed in Table 2F and maps with the project locations are shown in Figures 9F and 10F in Appendix F.

5.7 SUMMARY

The overall PCI of Cottage Grove in 2018 was Satisfactory; PCI of 58. This average rating represents all the actively utilized pavements within the Cottage Grove street network.

A budget analysis was conducted based on a preservation philosophy as opposed to a worst-first methodology. The worst-first strategy is a suboptimal method because M&R work is only applied after the pavement has structural damage. Once a pavement has significant structural damage, the only repair option is reconstruction. Preservation, on the other hand, utilizes optimum timing to perform preventive treatments such as crack sealing, surface seals, and AC overlays.

Five budget scenarios were evaluated for a 5-year period beginning on July 1, 2020. A summary of the five budget scenarios is shown in Table 5.6 below.

Table 5.6 – COTTAGE GROVE STREETS - PAVEMENT BUDGET SCENARIOS

Budget Scenario	PCI at Beginning of Analysis	Funded M&R Cost Over Analysis Period ¹	Unfunded M&R Cost at End of Analysis ²	Total Cost ³	PCI at End of Analysis
1 Maintain Current Budget	55	\$5,000,000	\$39,850,000	\$44,850,000	49
2 Maintain Current Network PCI	55	\$14,000,000	\$30,470,000	\$44,470,000	58
3 Increase PCI to 72 After 10 Years	55	\$28,750,000	\$13,280,000	\$42,030,000	72
4 Increase PCI to 80 After 10 Years	55	\$35,590,000	\$5,410,000	\$41,000,000	80
5 Eliminate Backlog	55	\$40,430,000	\$0	\$40,430,000	87

Notes:

¹Total funding for the M&R budget scenarios.

²Total unfunded stopgap, preventive, global, and major M&R values.

³The sum of the total funded and last-year unfunded cost.

In addition to the budget scenario analysis, a 10-year project list was developed for Global and Major M&R. Cottage Grove should continue to perform routine PCI surveys and a budget analysis to update the PMP to maintain the roadway network in the most cost-effective manner and at the highest condition based on the available funding level.

LIMITATIONS

This report has been prepared to assist the City of Cottage Grove with pavement-related project planning. The scope is limited to the specific pavement areas described herein. The conclusions and recommendations provided in this report are based on information provided by Cottage Grove, estimated costs, and an understanding of the pavement conditions based solely on visual assessment. The M&R recommendations and project selections provided in this report, as well as their corresponding cost estimates, are based on a practical grouping of projects and an estimate of the structural requirements. It is possible recommendations based on a structural evaluation would differ materially from the recommendations given herein. Therefore, the information included in this report should be used solely for project planning purposes and it should be understood that rehabilitation costs may vary from the cost estimates given herein.

Because the condition of the Cottage Grove street pavement network is dynamic, an effective (program should be reviewed and updated on a regular basis. In addition to regularly surveying and updating of the pavement condition, completed construction activities should be tracked in the PAVER database.

Submitted for Emerio Design,

Daniel B. Ingram, PE, PLS
Sr. Project Manager

Roy Hankins, PE

This document has been submitted electronically.

**Pavement Management Report
City of Cottage Grove City Streets**

**APPENDIX A:
PAVEMENT INVENTORY REPORT AND MAPS**

Table 1A, Figure 1A, Figure 2A, and Figure 3A

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
ADAMSAVE	ADAMS AVE	ROADWAY	CG159	S. 2ND ST	S. 5TH ST	E	950	27	25,658	AC	0	0	0
ADAMSAVE	ADAMS AVE	ROADWAY	CG160	S. 5TH ST	HIGHWAY 99	E	663	27	17,890	AC	0	0	0
ADAMSAVE	ADAMS AVE	ROADWAY	CG161	S. 10TH ST	S. 12TH ST	E	642	27	17,335	AC	0	0	0
ADAMSAVE	ADAMS AVE	ROADWAY	CG162	S. 12TH ST	120 FT EAST OF S. 13TH ST	E	516	27	13,933	AC	0	0	0
ADAMSAVE	ADAMS AVE	ROADWAY	CG163	S. 16TH ST	S. GATEWAY BLVD.	E	695	29	20,492	AC	0	0	0
ANTHONYAVE	ANTHONY AVE	ROADWAY	CG49	S. R ST	S. M ST	E	1,409	30	42,272	AC	0	0	0
ANTHONYCT	ANTHONY CT	ROADWAY	CG59	ANTHONY AVE	CUL-DE-SAC	E	179	30	7,659	AC	0	0	0
ARTHURAVE	ARTHUR AVE	ROADWAY	CG234	S. 6TH ST	DEAD END E. OF NEVA CT	E	1,083	29	31,395	AC	0	0	0
ASHAVE	ASH AVE	ROADWAY	CG61	CEMETERY ROAD	HAMMER HEAD	E	820	30	25,183	AC	0	0	0
ASHAVE	ASH AVE	ROADWAY	CG63	N. O ST	N. M ST	E	1,168	27	31,535	AC	0	0	0
ASHAVE	ASH AVE	ROADWAY	CG64	N. M ST	N. RIVER RD	E	1,691	27	45,649	AC	0	0	0
BANGLECT	BANGLE CT	ROADWAY	CG305	S. 22ND ST	CUL-DE-SAC	E	391	29	13,649	AC	0	0	0
BELMONTAVE	BELMONT AVE	ROADWAY	CG273	S. 17TH ST	DEAD END	E	173	23	3,990	AC	0	0	0
BENJAMINAV	BENJAMIN AVE	ROADWAY	CG227	S. 8TH ST	S. 8TH ST	E	529	29	15,342	AC	0	0	0
BENJAMINAV	BENJAMIN AVE	ROADWAY	CG228	S. 8TH ST	WILSON CT	E	565	29	16,540	AC	0	0	0
BIRCHAVE	BIRCH AVE	ROADWAY	CG65	N. O ST	N. M ST	E	580	36	20,875	AC	0	0	0
BIRCHAVE	BIRCH AVE	ROADWAY	CG66	N. M ST	N. L ST	E	281	28	7,864	AC	0	0	0
BIRCHAVE	BIRCH AVE	ROADWAY	CG67	N. L ST	N. RIVER RD	E	1,661	27	45,514	AC	0	0	0
BLAIRCT	BLAIR CT	ROADWAY	CG51	BRYANT AVE	CUL-DE-SAC	E	214	29	8,613	AC	0	0	0
BLUESKYDR	BLUE SKY DRIVE	ROADWAY	CG25	DEAD END S. OF W. HARRISON AVE	DEAD END N. OF W. HARRISON AVE	C	624	40	24,966	AC	0	0	0
BOHEMIAPL	BOHEMIA PL	ROADWAY	CG38	S. R ST	CUL-DE-SAC	E	355	29	13,211	AC	0	0	0
BRYANTAVE	BRYANT AVE	ROADWAY	CG45	DEAD END W. OF S. S ST	S. R ST	E	916	29	27,018	AC	0	0	0
BRYANTAVE	BRYANT AVE	ROADWAY	CG46	S. R ST	BRYANT CT	E	295	30	8,845	AC	0	0	0
BRYANTAVE	BRYANT AVE	ROADWAY	CG47	BRYANT CT	S. M ST	E	1,030	29	30,393	AC	0	0	0
BRYANTAVE	BRYANT AVE	ROADWAY	CG48	S. M ST	S. RIVER RD	E	492	17	8,364	AC	0	0	0
BRYANTCT	BRYANT CT	ROADWAY	CG52	BRYANT AVE	CUL-DE-SAC	E	131	30	6,233	AC	0	0	0
CARNEGIEWAY	CARNEGIE WAY	ROADWAY	CG2	GETTY CIRCLE	HIGHWAY 99	E	1,082	39	42,188	AC	0	0	0
CAROBELLECT	CAROBELLE CT	ROADWAY	CG271	E. MADISON AVE	CUL-DE-SAC	E	165	29	7,263	AC	0	0	0
CARVERAVE	CARVER AVE	ROADWAY	CG43	S. S ST	DEAD END W. OF S. S ST	E	527	29	15,536	AC	0	0	0
CARVERPL	CARVER PL	ROADWAY	CG44	S. S ST	CUL-DE-SAC E. OF S. S ST	E	252	29	9,724	AC	0	0	0
CHERRYCT	CHERRY CT	ROADWAY	CG134	E. GIBBS	E. WOOD AVE	E	465	18	8,375	AC	0	0	0
CHESTNUTAV	CHESTNUT AVE	ROADWAY	CG68	N. L ST	N. G ST	E	1,486	27	40,423	AC	0	0	0
CLARKAVE	CLARK AVE	ROADWAY	CG40	DEAD END	150' W. OF S. S ST	E	381	29	11,249	AC	0	0	0
CLARKAVE	CLARK AVE	ROADWAY	CG41	150' W. OF S. S ST	200' W. OF S. R ST	E	523	29	15,440	AC	0	0	0
CLARKAVE	CLARK AVE	ROADWAY	CG42	200' W. OF S. R ST	S. N ST	E	1,303	28	36,779	AC	0	0	0
CLEVELANDS	CLEVELAND ST	ROADWAY	CG124	DEAD END W. OF S. 8TH ST	DEAD END E. OF S. 8TH ST	E	171	14	2,399	AC	0	0	0
COLUMBIAC	COLUMBIA CT	ROADWAY	CG214	E. VILLARD AVE	VINCENT PL	E	359	30	10,782	AC	0	0	0
COOPCT	COOP CT	ROADWAY	CG292	N. GATEWAY BLVD	DEAD END	E	119	37	4,394	AC	0	0	0
COOPERAVE	COOPER AVE	ROADWAY	CG240	S. 8TH STREET	125 FT EAST OF S. 9TH STREET	E	385	26	10,018	AC	0	0	0
COOPERAVE	COOPER AVE	ROADWAY	CG241	125 FT EAST OF S. 9TH STREET	S. 10TH ST	E	139	20	2,773	AC	0	0	0

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
COTTONWOOD	COTTONWOOD PL	ROADWAY	CG83	NORTH M STREET	NORTH O STREET	E	570	30	17,097	AC	0	0	0
CURRY AVE	CURRY AVE	ROADWAY	CG289	N. 16TH STREET	PRITCHETT PL	E	612	29	17,744	AC	0	0	0
DAUGHERTYA	DAUGHERTY AVE	ROADWAY	CG39	S. R ST	DEAD END	E	1,181	35	41,790	AC	0	0	0
DAVIDSONAV	DAVIDSON AVE	ROADWAY	CG311	ROW RIVER RD	PALMER AVE	E	1,385	36	49,859	AC	0	0	0
DAVISPL	DAVIS PL	ROADWAY	CG288	OSTRANDER LN	CUL-DE-SAC	E	152	28	5,754	AC	0	0	0
DOGWOODAVE	DOGWOOD AVE	ROADWAY	CG84	DEAD END EAST OF N. M STREET	DEAD END WEST OF N. P STREET	E	955	30	28,643	AC	0	0	0
DOUGLASFIR	DOUGLAS FIR PL	ROADWAY	CG85	NORTH M STREET	NORTH O STREET	E	529	30	15,872	AC	0	0	0
DUBLINLN	DUBLIN LN	ROADWAY	CG249	GATEWAY BLVD	CUL-DE-SAC	E	489	27	14,892	AC	0	0	0
ECHADWICKA	E. CHADWICK AVE	ROADWAY	CG189	N. 8TH ST	HIGHWAY 99 (N. 9TH ST)	E	281	30	8,423	AC	0	0	0
ECHADWICKA	E. CHADWICK AVE	ROADWAY	CG190	N. 10TH ST	N. 11TH ST	E	321	27	8,831	AC	0	0	0
ECHADWICKA	E. CHADWICK AVE	ROADWAY	CG191	N. 11TH ST	N. LANE ST	E	298	27	8,186	AC	0	0	0
ECHAMBERLA	E. CHAMBERLAIN AVE	ROADWAY	CG197	HIGHWAY 99 (N. 9TH ST)	N. LANE ST	C	638	30	19,129	AC	0	0	0
ECHAMBERLA	E. CHAMBERLAIN AVE	ROADWAY	CG198	N. LANE ST	N. DOUGLAS ST	C	97	25	2,426	AC	0	0	0
ECHAMBERLA	E. CHAMBERLAIN AVE	ROADWAY	CG199	N. DOUGLAS ST	N. 16TH STREET	E	532	29	15,416	AC	0	0	0
EDISONAVE	EDISON AVE	ROADWAY	CG16	W. END @ W. HARRISON AVE	E. END @ W. HARRISON AVE	E	1,326	29	39,108	AC	0	0	0
EGIBBSAVE	E. GIBBS AVE	ROADWAY	CG182	N. 6TH ST	N. 8TH ST	E	496	35	17,368	AC	0	0	0
EGIBBSAVE	E. GIBBS AVE	ROADWAY	CG183	N. 8TH ST	HIGHWAY 99 (N. 9TH ST)	E	255	36	9,184	AC	0	0	0
EGIBBSAVE	E. GIBBS AVE	ROADWAY	CG184	HIGHWAY 99 (N. 9TH ST)	N. 10TH ST	E	254	27	6,846	AC	0	0	0
EGIBBSAVE	E. GIBBS AVE	ROADWAY	CG185	N. 16TH STREET	DEAD END EAST OF N. 16TH ST	E	362	19	6,881	AC	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG187	HIGHWAY 99 (N. 9TH ST)	N. 10TH ST	E	254	28	7,101	AC	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG188	N. 16TH ST	DEAD END	E	594	30	17,833	AC	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG293	E. GROVER AVE	CUL-DE-SAC	E	146	30	5,874	AC	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG294	E. GROVER AVE	CUL-DE-SAC	E	136	30	5,584	AC	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG28	S. RIVER RD	HIGHWAY 99	C	1,498	46	63,654	AC	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG29	S. 7TH ST	S. 8TH ST	C	255	21	5,359	AC	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG30	S. 10TH ST	S. 11TH ST	C	371	24	8,893	AC	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG31	S. 10TH ST	DEAD END 500' E OF S. 11TH	C	498	28	14,190	AC	0	0	0
EJACKSONAV	E. JACKSON AVE	ROADWAY	CG265	S. 10TH STREET	CUL-DE-SAC	E	452	26	13,667	AC	0	0	0
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG155	S. 1ST ST	S. 2ND ST	E	363	27	9,793	AC	0	0	0
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG156	S. 2ND ST	S. 3RD ST	E	362	29	10,596	AC	0	0	0
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG157	S. 3RD ST	212 FT. EAST OF S. 3RD ST	E	212	27	5,724	AC	0	0	0
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG158	S. 10TH ST	S. 13TH ST	E	1,052	27	28,404	AC	0	0	0
ELMAVE	ELM AVE	ROADWAY	CG86	DEAD END EAST OF N. M STREET	DEAD END WEST OF N. O STREET	E	1,054	30	31,632	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG148	DEAD END W. OF S. 1ST STREET	S. 3RD STREET	E	995	27	27,364	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG149	S. 3RD ST	S. 5TH ST	E	585	30	17,551	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG150	S. 5TH ST	S. 6TH ST	E	248	27	6,684	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG151	S. 10TH ST	S. 14TH ST	C	1,168	26	30,360	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG152	S. 14TH ST	S. 16TH ST	C	598	35	21,220	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG153	S. 16TH ST	S. 17TH ST	E	269	35	9,544	AC	0	0	0
EMADISONAV	E. MADISON AVE	ROADWAY	CG154	S. LANDRESS RD	DEAD END	E	656	22	14,422	AC	0	0	0

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
EMAINST	E. MAIN ST	ROADWAY	CG172	CONC BR DECK AT RIVER	100' W. OF HIGHWAY 99	B	1,323	41	54,895	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG173	100' W. OF HIGHWAY 99	S. 10TH ST	B	391	41	16,246	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG174	S. 10TH ST	GATEWAY BLVD	B	2,447	41	101,537	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG175	GATEWAY BLVD	I-5 OVERPASS	B	610	40	23,791	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG176	DEAD END W OF S. 21ST ST	S. 21ST ST	E	225	15	3,488	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG177	S. 21ST ST	S. 22ND ST	E	490	23	11,509	AC	0	0	0
EMAINST	E. MAIN ST	ROADWAY	CG178	S. 22ND ST	MOSSBY CREEK RD	E	819	27	22,535	AC	0	0	0
EMONROEAVE	E. MONROE AVE	ROADWAY	CG145	S. 3RD STREET	S. 5TH STREET	E	585	29	16,963	AC	0	0	0
EMONROEAVE	E. MONROE AVE	ROADWAY	CG146	S. DOUGLAS STREET	S. 8TH STREET	E	391	29	11,343	AC	0	0	0
EMONROEAVE	E. MONROE AVE	ROADWAY	CG147	S. 8TH STREET	S. 10TH STREET	E	524	28	14,682	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG136	DEAD END W. OF S. 1ST ST	S. 1ST ST	E	287	18	5,168	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG137	S. 1ST ST	S. 3RD ST	E	727	26	18,912	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG138	S. 3RD ST	S. 5TH ST	E	585	26	15,214	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG139	HWY 99	S. 6TH ST	E	181	32	5,796	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG140	S. 6TH ST	S. 7TH ST	E	261	32	8,484	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG141	S. 7TH ST	S. 10TH ST	E	783	30	23,500	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG142	S. 10TH ST	S. 12TH ST	E	637	27	17,518	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG143	S. 12TH ST	94 FT EAST OF S. 14TH STREET	E	529	30	15,862	AC	0	0	0
EQUINCYAVE	E. QUINCY AVE	ROADWAY	CG144	S. 14TH STREET	180 FT EAST OF S. 14TH STREET	E	86	15	1,290	AC	0	0	0
ETAYLORAVE	E. TAYLOR AVE	ROADWAY	CG244	S. 4TH ST	S. 6TH ST	C	500	29	14,494	AC	0	0	0
ETAYLORAVE	E. TAYLOR AVE	ROADWAY	CG245	S. 6TH ST	S. 10TH ST	C	1,052	35	39,951	AC	0	0	0
ETAYLORAVE	E. TAYLOR AVE	ROADWAY	CG246	S. 10TH ST	HILLSIDE DR	C	1,280	36	44,397	AC	0	0	0
ETAYLORAVE	E. TAYLOR AVE	ROADWAY	CG247	HILLSIDE DR	DEAD END	E	1,222	30	36,664	AC	0	0	0
EVANBURENA	E. VAN BUREN AVE	ROADWAY	CG266	S. 10TH ST	S. 13TH ST	E	937	26	25,335	AC	0	0	0
EVANBURENA	E. VAN BUREN AVE	ROADWAY	CG267	S. 13TH ST	S. 14TH ST	E	236	29	6,957	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG164	S. 3RD ST	S. 5TH ST	E	587	36	21,116	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG165	S. 5TH ST	S. 6TH ST	E	255	39	9,943	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG166	S. 6TH ST	HIGHWAY 99	E	573	35	20,349	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG167	S. 10TH ST	110' E OF S. 10TH ST	E	110	38	4,180	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG168	110' E OF S. 10TH ST	DEAD END @ PARK 180' E. OF 12TH	E	632	27	17,063	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG169	DEAD END @ PARK 245' W. OF 15TH	S. 15TH ST	E	310	27	8,515	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG170	S. 15TH ST	S. 17TH ST	E	626	35	22,233	AC	0	0	0
EWASHINGTO	E. WASHINGTON AVE	ROADWAY	CG171	S. 17TH STREET	S. GATEWAY BLVD.	E	414	35	14,709	AC	0	0	0
EWHITEAKER	E. WHITEAKER AVE	ROADWAY	CG179	N. 5TH ST	HIGHWAY 99	E	1,000	36	36,482	AC	0	0	0
EWHITEAKER	E. WHITEAKER AVE	ROADWAY	CG180	I-5 OVERPASS	80' W. OF N. 22ND ST	B	692	30	20,769	AC	0	0	0
EWHITEAKER	E. WHITEAKER AVE	ROADWAY	CG181	80' W. OF N. 22ND ST	MOSSBY CR RD	B	874	40	34,973	AC	0	0	0
FAIRVIEWLP	FAIRVIEW LP	ROADWAY	CG32	S. R ST	FAIRVIEW PL	E	751	29	22,015	AC	0	0	0
FAIRVIEWPL	FAIRVIEW PL	ROADWAY	CG33	S. R ST	CUL-DE-SAC	E	589	29	19,936	AC	0	0	0
FILLMOREAV	FILLMORE AVE	ROADWAY	CG242	S. 4TH ST	S. 6TH ST	E	634	27	17,122	AC	0	0	0
FILLMOREAV	FILLMORE AVE	ROADWAY	CG243	S. 6TH ST	S. 7TH ST	E	301	29	8,869	AC	0	0	0

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
GEERAVE	GEER AVE	ROADWAY	CG196	HIGHWAY 99 (N. 9TH ST)	N. LANE ST	E	707	29	20,515	AC	0	0	0
GETTYCIRCLE	GETTY CIRCLE	ROADWAY	CG1	CUL-DE-SAC 235' S OF CARNEGIE WAY	CUL-DE-SAC 235' S OF CARNEGIE WAY	E	410	40	16,396	AC	0	0	0
GIRARDAVE	GIRARD AVE	ROADWAY	CG34	S. RIVER RD	170' E. OF GIRARD CT	E	373	29	11,007	AC	0	0	0
GIRARDAVE	GIRARD AVE	ROADWAY	CG35	170' E. OF GIRARD CT	170' W. OF GIRARD CT	E	282	29	8,326	AC	0	0	0
GIRARDAVE	GIRARD AVE	ROADWAY	CG36	170' W. OF GIRARD CT	DEAD END	E	170	19	3,230	AC	0	0	0
GIRARDAVE	GIRARD AVE	ROADWAY	CG37	GIRARD AVE	CUL-DE-SAC	E	188	29	8,254	AC	0	0	0
GRANTAVE	GRANT AVE	ROADWAY	CG224	CUL-DE-SAC	S. 4TH ST	E	528	27	15,268	AC	0	0	0
GRANTAVE	GRANT AVE	ROADWAY	CG225	S. 4TH ST	S. 6TH ST	C	625	35	22,011	AC	0	0	0
HARDINGPL	HARDING PL	ROADWAY	CG233	S. 6TH STREET	DEAD END	E	401	25	10,152	AC	0	0	0
HARRISONCT	HARRISON CT	ROADWAY	CG17	W. HARRISON AVE	CUL-DE-SAC	E	349	24	10,292	AC	0	0	0
HARVEYLN	HARVEY LN	ROADWAY	CG286	CUL-DE-SAC	N. 14TH STREET	E	421	29	13,697	AC	0	0	0
HARVEYLN	HARVEY LN	ROADWAY	CG287	N. 14TH STREET	N. 16TH STREET	E	323	29	9,523	AC	0	0	0
HARVEYRD	HARVEY RD	ROADWAY	CG284	N. 16TH ST	N. 19TH ST	C	1,212	33	39,984	AC	0	0	0
HARVEYRD	HARVEY RD	ROADWAY	CG285	N. 19TH ST	N. GATEWAY BLVD	C	422	29	12,442	AC	0	0	0
HAYESAVE	HAYES AVE	ROADWAY	CG223	DEAD END W. OF S. 4TH ST	S. 4TH ST	E	748	27	20,183	AC	0	0	0
HOLLYAVE	HOLLY AVE	ROADWAY	CG90	N. RIVER ROAD	KALAPUYA WAY	E	374	33	12,358	AC	0	0	0
IBSENAVE	IBSEN AVE	ROADWAY	CG26	BLUE SKY DR	DEAD END	E	721	29	21,065	AC	0	0	0
JASONLEEAVE	JASON LEE AVE	ROADWAY	CG15	S. R. ST	WHITMAN BLVD	E	982	30	29,456	AC	0	0	0
JIMWRIGHTWAY	JIM WRIGHT WAY	ROADWAY	CG313	ROW RIVER RD	THORNTON LN	E	961	42	40,373	AC	0	0	0
JOHNSONAVE	JOHNSON AVE	ROADWAY	CG236	S. 6TH ST	120 FT EAST OF S. 8TH ST	E	644	29	18,682	AC	0	0	0
KALAPUYAWAY	KALAPUYA WAY	ROADWAY	CG88	N. H ST	HOLLY AVE	E	1,529	26	39,758	AC	0	0	0
KALAPUYASCT	KALAPUYA CT	ROADWAY	CG89	KALAPUYA WAY	CUL-DE-SAC	E	243	25	9,761	AC	0	0	0
KATHLEENDR	KATHLEEN DR	ROADWAY	CG226	DEAD END W. OF PATRICK LIP	S. 6TH ST	E	473	29	13,956	AC	0	0	0
LANDESSRD	LANDESS RD	ROADWAY	CG306	S. GATEWAY BLVD	E. MADISON AVE	E	1,001	23	23,528	AC	0	0	0
LANECT	LANE CT.	ROADWAY	CG206	N. LANE ST	CUL-DE-SAC	E	129	27	5,845	AC	0	0	0
LINCOLNAVE	LINCOLN AVE	ROADWAY	CG238	S. 6TH ST	S. 8TH ST	C	520	36	18,717	AC	0	0	0
LINCOLNAVE	LINCOLN AVE	ROADWAY	CG237	S. 8TH ST	25' W. OF S. 9TH ST	C	230	30	6,904	AC	0	0	0
LINCOLNAVE	LINCOLN AVE	ROADWAY	CG239	25' W. OF S. 9TH ST	S. 10TH ST	C	283	20	5,854	AC	0	0	0
LORDAVE	LORD AVE	ROADWAY	CG195	HIGHWAY 99 (N. 9TH ST)	N. LANE ST	E	837	27	22,587	AC	0	0	0
MEEKERDR	MEEKER DR	ROADWAY	CG14	WHITMAN BLVD	DEAD END	E	141	30	4,230	AC	0	0	0
MOSBYCRRD	MOSBY CRRD	ROADWAY	CG307	THORNTON RD	CURRIN CONNECTOR	E	1,395	34	48,131	AC	0	0	0
N10THST	N. 10TH ST	ROADWAY	CG200	E. GIBBS AVE	HIGHWAY 99	B	1,828	27	49,357	AC	0	0	0
N11THST	N. 11TH ST	ROADWAY	CG203	E. CHADWICK AVE	275 FT NORTH OF E. THAYER AVE	E	539	17	9,432	AC	0	0	0
N11THST	N. 11TH ST	ROADWAY	CG204	275 FT NORTH OF E. THAYER AVE	E. GEER AVE	E	796	27	21,492	AC	0	0	0
N11THST	N. 11TH ST	ROADWAY	CG205	E. GEER AVE	E. CHAMBERLAIN AVE	E	160	27	4,319	AC	0	0	0
N12THST	N. 12TH ST	ROADWAY	CG259	E. MAIN ST	DEAD END	E	301	29	8,740	AC	0	0	0
N14THST	N. 14TH ST	ROADWAY	CG264	E. MAIN ST	DEAD END	E	560	33	18,489	AC	0	0	0
N14THST	N. 14TH ST	ROADWAY	CG291	HARVEY LN	PENNOYER AVE	E	236	30	7,068	AC	0	0	0
N16THST	N. 16TH ST	ROADWAY	CG282	E. MAIN STREET	130' S. OF CURRY AVE	C	2,171	35	77,055	AC	0	0	0
N16THST	N. 16TH ST	ROADWAY	CG283	130' S. OF CURRY AVE	OSTRANDER LN	C	904	35	32,081	AC	0	0	0

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BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
N19THST	N. 19TH ST	ROADWAY	CG280	E. MAIN ST	DEAD END	E	739	14	10,711	AC	0	0	0
N19THST	N. 19TH ST	ROADWAY	CG281	HARVEY RD	OSTRANDER LN	E	861	34	29,276	AC	0	0	0
N20THST	N. 20TH ST	ROADWAY	CG285	HARVEY RD	DEAD END	E	232	14	3,657	AC	0	0	0
N22NDST	N. 22ND ST	ROADWAY	CG302	E. MAIN ST	E. WHITEAKER AVE	E	326	29	9,629	AC	0	0	0
N5THST	N.5TH ST	ROADWAY	CG111	E. MAIN ST	E. WHITEAKER AVE	E	259	34	8,792	AC	0	0	0
N6THST	N. 6TH ST	ROADWAY	CG117	E. MAIN ST	E. WHITEAKER AVE	E	266	34	9,033	AC	0	0	0
N6THST	N. 6TH ST	ROADWAY	CG118	E. WHITEAKER AVE	E. GIBBS AVE	E	265	30	7,959	AC	0	0	0
N7THST	N. 7TH ST	ROADWAY	CG123	E. MAIN STREET	E. WHITEAKER AVE	E	263	34	8,946	AC	0	0	0
N8THST	N. 8TH ST	ROADWAY	CG131	E. MAIN STREET	E. GIBBS AVE	E	528	32	16,904	AC	0	0	0
N8THST	N. 8TH ST	ROADWAY	CG132	E. GIBBS AVE	E. CHADWICK AVE	E	1,074	27	28,988	AC	0	0	0
N8THST	N. 8TH ST	ROADWAY	CG133	E. CHADWICK AVE	DEAD END AT RESIDENCE	E	102	12	1,270	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG215	E. VILLARD AVE	PENNYOYER AVE	E	1,304	22	28,687	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG216	PENNYOYER AVE	260' S. OF E. CHAMBERLAIN AVE	E	558	20	11,169	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG217	260' S. OF E. CHAMBERLAIN AVE	E. CHAMBERLAIN AVE RXR XING	E	260	30	7,800	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG218	E. CHAMBERLAIN AVE RXR XING	OSTRANDER LANE	C	498	32	16,152	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG219	OSTRANDER LANE	WATER TREATMENT PLANT	E	1,238	24	29,318	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG220	WATER TREATMENT PLANT	GRAVEL	E	383	22	9,025	AC	0	0	0
NDOUGLASST	N. DOUGLAS ST	ROADWAY	CG60	S. RIVER ROAD	DEAD END	E	226	32	6,698	AC	0	0	0
NEVACT	NELLIS PL	ROADWAY	CG235	ARTHER AVE	CUL-DE-SAC	E	133	25	5,890	AC	0	0	0
NGATEWAYBL	N. GATEWAY BLVD	ROADWAY	CG276	E. MAIN ST	ROW RIVER TRAIL CROSSING	B	894	40	35,760	AC	0	0	0
NGATEWAYBL	N. GATEWAY BLVD	ROADWAY	CG277	ROW RIVER TRAIL CROSSING	435' N. OF HARVEY RD	B	1,711	42	71,878	AC	0	0	0
NGATEWAYBL	N. GATEWAY BLVD	ROADWAY	CG278	435' N. OF HARVEY RD	225' S. OF ROW RIVER RD	B	606	46	27,868	AC	0	0	0
NGATEWAYBL	N. GATEWAY BLVD	ROADWAY	CG279	225' S. OF ROW RIVER RD	ROW RIVER RD	B	225	46	10,350	AC	0	0	0
NGST	N. G ST	ROADWAY	CG69	BIRCH AVE	CHESTNUT AVE	E	291	28	8,156	AC	0	0	0
NGST	N. G ST	ROADWAY	CG70	CHESTNUT AVE	DEAD END	E	222	23	5,218	AC	0	0	0
NHST	N. H ST	ROADWAY	CG71	N. RIVER ROAD	DEAD END	E	1,150	28	32,183	AC	0	0	0
NIST	N. I ST	ROADWAY	CG72	W. MAIN STREET	KALAPUYA WAY	E	1,135	30	35,992	AC	0	0	0
NJST	N. J ST	ROADWAY	CG73	W. MAIN STREET	DEAD END N. OF CHESTNUT AVE	E	1,104	28	29,583	AC	0	0	0
NKST	N. K ST	ROADWAY	CG74	W. MAIN STREET	CHESTNUT AVE.	E	893	28	24,994	AC	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG208	190' N. OF E. MAIN ST	155' S. OF E. VILLARD AVE.	E	456	22	10,023	AC	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG209	155' S. OF E. VILLARD AVE.	E. VILLARD AVE.	E	155	29	4,495	AC	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG210	E. VILLARD AVE.	110' S. OF LANE CT	E	300	24	7,191	AC	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG211	110' S. OF LANE CT	E. CHADWICK AVE	E	357	28	9,986	AC	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG212	E. GEER AVE	90 FT N. OF E. CHAMBERLAIN AVE	E	244	24	5,552	AC	0	0	0
NLST	N. L ST	ROADWAY	CG75	W. MAIN STREET	CHESTNUT AVE	E	895	28	25,049	AC	0	0	0
NMST	N. M ST	ROADWAY	CG76	W. MAIN STREET	BIRCH AVE	C	604	34	20,531	AC	0	0	0
NMST	N. M ST	ROADWAY	CG77	W. MAIN STREET	DEAD END N. OF ELM AVE	C	1,498	35	52,420	AC	0	0	0
NNST	N. N ST	ROADWAY	CG78	W. MAIN STREET	BIRCH AVE	E	607	28	16,996	AC	0	0	0
NOST	N. O ST	ROADWAY	CG79	W. MAIN STREET	ASH AVE	E	296	28	8,298	AC	0	0	0
NOST	N. O ST	ROADWAY	CG80	75 FT S OF BIRCH AVE	DEAD END N OF ELM AVE	E	1,350	30	40,496	AC	0	0	0

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
NPST	N. P ST	ROADWAY	CG81	W. MAIN STREET	DEAD END @ BIRCH AVE ROW	E	595	28	16,649	AC	0	0	0
NPST	N. P ST	ROADWAY	CG82	DOGWOOD AVE	DEAD END	E	260	30	7,800	AC	0	0	0
NQST	N. Q ST	ROADWAY	CG87	W. MAIN STREET	145' N. OF W. MAIN ST	E	145	23	3,335	AC	0	0	0
NRVERRD	N. RIVER RD	ROADWAY	CG10	CONST JOINT 215' N. OF MAIN ST	CONST JOINT 83' N. OF WOODSON PL	B	2,563	38	97,403	AC	0	0	0
NRVERRD	N. RIVER RD	ROADWAY	CG11	CONST JOINT 215' N. OF WOODSON PL	BENNETT CREEK RD	E	1,374	34	47,600	AC	0	0	0
OLSONPL	OLSON PL	ROADWAY	CG9	MAIN STREET	CONST JOINT 215' N. OF MAIN ST	E	215	42	9,043	AC	0	0	0
OSTRANDERL	OSTRANDER LN	ROADWAY	CG231	S. 8TH STREET	DEAD END	B	100	29	2,950	AC	0	0	0
OSTRANDERL	OSTRANDER LN	ROADWAY	CG298	N. DOUGLAS AVE	N. 16TH ST	C	630	32	20,147	AC	0	0	0
OSTRANDERL	OSTRANDER LN	ROADWAY	CG299	N. 16TH ST	N. 19TH ST	C	1,025	33	34,345	AC	0	0	0
OSWALDWAVE	OSWALD W. AVE	ROADWAY	CG297	N. 19TH ST	N. GATEWAY BLVD	C	351	30	10,544	AC	0	0	0
PALMERAVE	PALMER AVE	ROADWAY	CG312	ROW RIVER RD	DEAD END	E	1,399	36	50,376	AC	0	0	0
PARKSRD	PARKS RD	ROADWAY	CG300	HILLSIDE DR	DEAD END	E	645	17	10,970	AC	0	0	0
PENNOYERAV	PENNOYER AVE	ROADWAY	CG193	HIGHWAY 99 (N. 9TH ST)	CITY LIMITS - (PRIVATE DRWY)	E	990	27	27,220	AC	0	0	0
PENNOYERAV	PENNOYER AVE	ROADWAY	CG194	N. DOUGLAS STREET	N. LANE ST	E	522	30	15,654	AC	0	0	0
POLKAVE	POLK AVE	ROADWAY	CG248	S. 10TH ST	N. 14TH ST	E	643	29	17,349	AC	0	0	0
PRITCHETT	PRITCHETT PL	ROADWAY	CG290	N. 16TH STREET	DEAD END E. OF S. 11TH ST	E	717	27	22,293	AC	0	0	0
REDHILLSPL	RED HILLS PL	ROADWAY	CG301	HILLSIDE DR	CUL-DE-SAC	E	522	33	18,810	AC	0	0	0
RIVERFRONT	RIVERFRONT WAY	ROADWAY	CG85	S. 1ST STREET	CUL-DE-SAC	E	479	31	14,850	AC	0	0	0
RIVERWALKP	RIVER WALK PL	ROADWAY	CG93	S. 1ST STREET	TAYLOR PL	E	391	38	14,867	AC	0	0	0
RIVERWALKP	RIVER WALK PL	ROADWAY	CG94	S. 2ND STREET	S. 2ND STREET	E	281	29	8,135	AC	0	0	0
ROWRIVERCO	ROW RIVER CONNECTOR	ROADWAY	CG310	THORNTON RD	HWY 99	E	1,815	48	86,168	AC	0	0	0
S10THST	S. 10TH ST	ROADWAY	CG350	JOHNSON AVE	CURRIN CONNECTOR	B	291	21	6,121	AC	0	0	0
S10THST	S. 10TH ST	ROADWAY	CG251	LINCOLN AVE	LINCOLN AVE	E	481	19	8,754	AC	0	0	0
S10THST	S. 10TH ST	ROADWAY	CG252	TAYLOR AVE	DEAD END N. OF COOPER AVE	E	2,292	37	84,804	AC	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG253	100' N. OF E. MONROE AVE	100' N. OF E. MONROE AVE	C	1,505	37	55,682	AC	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG254	POLK AVE	E. MAIN STREET	C	419	27	11,300	AC	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG256	E. MADISON AVE	DEAD END N. OF POLK AVE	E	1,164	27	32,021	AC	0	0	0
S12THST	S. 12TH ST	ROADWAY	CG257	DEAD END SOUTH OF E. QUINCY	E. MAIN STREET	E	320	24	8,138	AC	0	0	0
S13THST	S. 13TH ST	ROADWAY	CG258	E. MADISON AVE	E. QUINCY AVE	E	1,163	27	31,389	AC	0	0	0
S13THST	S. 13TH ST	ROADWAY	CG260	E. VAN BUREN AVE	E. MAIN ST	E	493	29	14,032	AC	0	0	0
S14THST	S. 14TH ST	ROADWAY	CG261	E. MADISON AVE	E. ADAMS AVE	E	513	24	12,324	AC	0	0	0
S14THST	S. 14TH ST	ROADWAY	CG262	GATEWAY BLVD	E. QUINCY AVE	E	764	30	22,928	AC	0	0	0
S15THST	S. 15TH ST	ROADWAY	CG263	DEAD END S. OF E. MADISON AVE	E. QUINCY AVE	E	371	14	5,197	AC	0	0	0
S16THST	S. 16TH ST	ROADWAY	CG269	DEAD END 265' S. OF WASHINGTON	MAIN STREET	E	628	29	18,539	AC	0	0	0
S17THST	S. 17TH ST	ROADWAY	CG270	GATEWAY BLVD	E. MADISON AVE	C	1,569	35	54,915	AC	0	0	0
S18THST	S. 18TH ST	ROADWAY	CG272	E. MADISON AVE	E. MAIN ST	E	1,157	29	34,141	AC	0	0	0
S19THST	S. 19TH ST	ROADWAY	CG91	RIVERFRONT WAY	E. HARRISON AVE	E	804	32	25,727	AC	0	0	0
S21STST	S. 21ST ST	ROADWAY	CG92	E. HARRISON AVE	E. JEFFERSON AVE	E	1,668	27	45,042	AC	0	0	0
S22NDST	S. 22ND ST	ROADWAY	CG303	E. MAIN ST	DEAD END	E	367	23	8,634	AC	0	0	0
				E. MAIN ST	DEAD END	E	1,078	35	36,744	AC	0	0	0

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
S2NDST	S. 2ND ST	ROADWAY	CG100	E. HARRISON AVE	ADAMS AVE	E	2,005	30	56,158	AC	0	0	0
S2NDST	S. 2ND ST	ROADWAY	CG98	RIVERFRONT WAY	TYLER AVE	E	997	34	33,914	AC	0	0	0
S3RDST	S. 3RD ST	ROADWAY	CG101	E. HARRISON AVE	JEFFERSON AVE	E	246	36	8,868	AC	0	0	0
S3RDST	S. 3RD ST	ROADWAY	CG102	E. HARRISON AVE	ADAMS AVE	E	1,671	27	45,108	AC	0	0	0
S3RDST	S. 3RD ST	ROADWAY	CG103	E. JEFFERSON AVE	ADAMS AVE	E	332	36	11,745	AC	0	0	0
S4THST	S. 4TH ST	ROADWAY	CG104	ADAMS AVE	E. WASHINGTON AVE	E	301	19	5,595	AC	0	0	0
S4THST	S. 4TH ST	ROADWAY	CG105	DEAD END S OF E. HAYES AVE	GRANT AVE	E	400	27	10,802	AC	0	0	0
S4THST	S. 4TH ST	ROADWAY	CG106	GRANT AVE	CONST JOINT @ S. 4TH ST ~"	C	1,247	36	44,876	AC	0	0	0
S4THST	S. 4TH ST	ROADWAY	CG107	CONST JOINT @ S. 4TH ST ~"	CONST JOINT 420 S. OF HIGHWAY 99	C	1,148	27	31,000	AC	0	0	0
S4THST	S. 4TH ST (V)	ROADWAY	CG108	CONST JOINT 420 S. OF HIGHWAY 99	HIGHWAY 99	C	420	36	15,320	AC	0	0	0
S5THST	S. 5TH ST	ROADWAY	CG109	FILLMORE AVE	S. 4TH ST	E	241	27	6,513	AC	0	0	0
S5THST	S. 5TH ST	ROADWAY	CG110	CUL-DE-SAC	FILLMORE AVE	E	701	27	19,925	AC	0	0	0
S6THST	S. 6TH ST	ROADWAY	CG112	WASHINGTON AVE	E. MAIN ST	E	342	37	12,643	AC	0	0	0
S6THST	S. 6TH ST	ROADWAY	CG113	CLEVELAND STREET	JOHNSON AVE	B	1,943	35	68,018	AC	0	0	0
S6THST	S. 6TH ST	ROADWAY	CG114	JOHNSON AVE	E. QUINCY AVE	B	3,240	41	129,851	AC	0	0	0
S6THST	S. 6TH ST	ROADWAY	CG115	E. QUINCY AVE	HWY 99	B	531	35	18,592	AC	0	0	0
S6THST	S. 6TH ST	ROADWAY	CG116	HIGHWAY 99	ADAMS AVE	C	757	30	22,724	AC	0	0	0
S6THST	S. 6TH ST (V)	ROADWAY	CG222	ADAMS AVE	E. MAIN ST	C	647	34	21,990	AC	0	0	0
S7THST	S. 7TH ST	ROADWAY	CG119	FILLMORE AVE	S. DOUGLAS ST	E	109	14	1,521	AC	0	0	0
S7THST	S. 7TH ST	ROADWAY	CG120	TAYLOR AVE	TAYLOR AVE	E	611	29	17,713	AC	0	0	0
S7THST	S. 7TH ST	ROADWAY	CG121	E. HARRISON AVE	DEAD END	E	516	23	11,867	AC	0	0	0
S7THST	S. 7TH ST	ROADWAY	CG122	HWY 99	E. QUINCY AVE	E	713	28	19,967	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG125	E. CLEVELAND STREET	E. MAIN STREET	E	914	36	32,693	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG126	139' S. OF BENJAMIN AVE	139' S. OF BENJAMIN AVE	C	760	29	22,039	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG127	250' S. OF JOHNSON AVE	250' S. OF JOHNSON AVE	C	924	29	26,792	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG128	E. LINCOLN AVE	E. LINCOLN AVE	C	550	29	15,950	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG129	E. TAYLOR AVE	E. TAYLOR AVE	C	1,069	36	40,879	AC	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG130	HWY 99	E. HARRISON AVE	E	1,157	27	31,467	AC	0	0	0
SCT	SCT	ROADWAY	CG21	W. HARRISON AVE	E. MAIN STREET	E	339	34	11,518	AC	0	0	0
SDOUGLASST	S. DOUGLAS ST	ROADWAY	CG221	S. 6TH ST	CUL-DE-SAC	E	321	30	12,522	AC	0	0	0
SGATEWAYBL	S. GATEWAY BLVD	ROADWAY	CG274	TAYLOR AVE	E. MONROE AVE	E	217	27	5,851	AC	0	0	0
SGATEWAYBL	S. GATEWAY BLVD	ROADWAY	CG275	E. ADAMS AVE	E. ADAMS AVE	B	3,604	35	126,153	AC	0	0	0
SMST	S. M ST	ROADWAY	CG53	CUL-DE-SAC	BRYANT AVE	B	632	40	26,424	AC	0	0	0
SMST	S. M ST	ROADWAY	CG54	BRYANT AVE	30' N. OF MERRILL LN	E	448	27	14,623	AC	0	0	0
SMST	S. M ST	ROADWAY	CG55	30' N. OF MERRILL LN	W. MAIN STREET	E	403	31	11,723	AC	0	0	0
SNST	S. N ST	ROADWAY	CG56	CLARK AVE	BRYANT AVE	E	423	35	13,699	AC	0	0	0
SOST	S. O ST	ROADWAY	CG57	CLARK AVE	BRYANT AVE	E	397	29	11,513	AC	0	0	0
SPST	S. P ST	ROADWAY	CG58	CLARK AVE	BRYANT AVE	E	395	27	10,794	AC	0	0	0
SRIVERRD	S. RIVER RD	ROADWAY	CG5	HIGHWAY 99	270' S. OF WHITMAN BLVD	B	1,736	31	53,825	AC	0	0	0

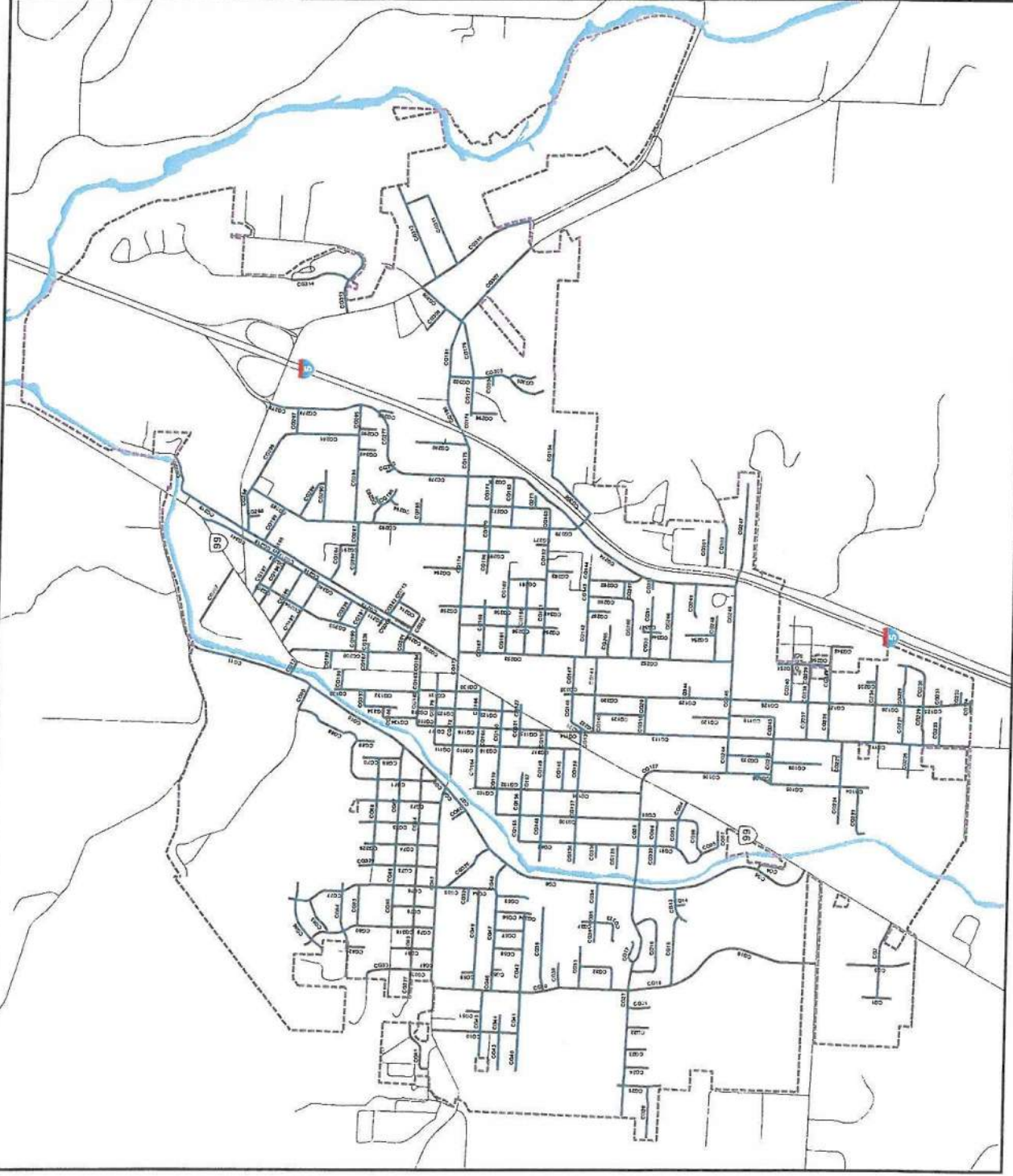
TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
SRVRRD	S. RIVER RD	ROADWAY	CG6	270' S. OF WHITMAN BLVD	NELLIS PLACE	B	3,629	36	130,638	AC	0	0	0
SRVRRD	S. RIVER RD	ROADWAY	CG7	NELLIS PLACE	CONST JOINT 210' S. OF MAIN ST	B	221	47	10,366	AC	0	0	0
SRVRRD	S. RIVER RD	ROADWAY	CG8	CONST JOINT 210 FT S. OF MAIN ST.	MAIN STREET	B	210	48	10,080	AC	0	0	0
SRVRRDFR	S RIVER RD (FRONTAGE RD)	ROADWAY	CG4	DEAD END	DEAD END	E	421	22	10,270	AC	0	0	0
SRST	S. R ST	ROADWAY	CG18	SWEET LN	135' S. OF JASON LEE AVE	B	2,057	40	71,283	AC	0	0	0
SRST	S. R ST	ROADWAY	CG19	135' S. OF JASON LEE AVE	W. HARRISON AVE	B	732	42	30,737	AC	0	0	0
SRST	S. R ST	ROADWAY	CG20	W. HARRISON AVE	W. MAIN STREET	B	2,721	40	108,830	AC	0	0	0
SRST	S. R ST	ROADWAY	CG3	480' S OF CARNEGIE WAY	460' N CARNEGIE WAY	B	893	71	63,426	AC	0	0	0
SSST	S. S ST	ROADWAY	CG50	CLARK AVE	W. MAIN STREET	E	1,192	29	35,157	AC	0	0	0
STCT	S. T CT	ROADWAY	CG22	W. HARRISON AVE	CUL-DE-SAC	E	312	29	12,006	AC	0	0	0
SUST	S. U ST	ROADWAY	CG23	W. HARRISON AVE	DEAD END	E	295	30	8,852	AC	0	0	0
SVCT	S. V CT	ROADWAY	CG24	W. HARRISON AVE	CUL-DE-SAC	E	339	30	10,034	AC	0	0	0
TAYLORPL	TAYLOR PL	ROADWAY	CG97	RIVERFRONT WAY	CUL-DE-SAC	E	223	32	7,143	AC	0	0	0
THAYERAVE	THAYER AVE	ROADWAY	CG192	HIGHWAY 99 (N. 9TH ST)	N. 10TH ST	E	251	30	7,527	AC	0	0	0
THOMASPL	THOMAS PL	ROADWAY	CG308	N. THORNTON RD	WALMART ACCESS RD	E	407	29	12,013	AC	0	0	0
THORNTONRD	THORNTON RD	ROADWAY	CG309	E. WHITEAKER AVE	ROW RIVER RD	C	738	34	25,090	AC	0	0	0
TYLERAVE	TYLER AVE	ROADWAY	CG268	S. 10TH ST	GATEWAY BLVD	E	1,069	27	29,406	AC	0	0	0
TYLERAVE	TYLER AVE	ROADWAY	CG96	S. 1ST STREET	S. 2ND STREET	E	365	29	10,700	AC	0	0	0
VANBURENAV	VAN BUREN AVE	ROADWAY	CG135	DEAD END W. OF S. 1ST ST	S. 1ST ST	E	340	29	10,034	AC	0	0	0
VILLAGEDR	VILLAGE DR	ROADWAY	CG314	JIM WRIGHT WAY	S. 1ST ST	E	836	35	29,245	AC	0	0	0
VILLARDAVE	VILLARD AVE	ROADWAY	CG201	N. 10TH STREET	N. DOUGLAS ST	E	370	27	10,188	AC	0	0	0
VILLARDAVE	VILLARD AVE	ROADWAY	CG202	N. DOUGLAS STREET	COLUMBIA CT	E	205	29	5,955	AC	0	0	0
VINCENPL	VINCENT PL	ROADWAY	CG213	25' W. OF COLUMBIA CT	175' E. OF COLUMBIA CT	E	173	29	5,022	AC	0	0	0
WASHINGTON	WASHINGTON PL	ROADWAY	CG304	S. 22ND ST	CUL-DE-SAC	E	146	28	5,455	AC	0	0	0
WHARRISONA	W. HARRISON AVE	ROADWAY	CG27	DEAD END	S. RIVER RD	C	3,263	46	150,082	AC	0	0	0
WHITMANBLV	WHITMAN BLVD	ROADWAY	CG13	S. RIVER RD	DEAD END	E	530	42	22,241	AC	0	0	0
WILSONAVE	WILSON AVE	ROADWAY	CG229	S. 6TH STREET	DEAD END	E	631	29	18,309	AC	0	0	0
WILSONCT	WILSON CT	ROADWAY	CG230	S. 6TH STREET	DEAD END	E	752	29	22,037	AC	0	0	0
WITHYCOMBE	WITHYCOMBE AVE	ROADWAY	CG207	92' E. OF S. 8TH ST	DEAD END	E	869	28	26,173	AC	0	0	0
WMAINST	W. MAIN ST	ROADWAY	CG62	HIGHWAY 99	EDGEWATER LANE	E	2,726	41	116,611	AC	0	0	0
WOODAVE	WOOD AVE.	ROADWAY	CG186	COUNTY JURISDICTION NEAR BRIDGE	RIVER RD	B	149	20	2,980	AC	0	0	0
WOODSONPL	WOODSON PL	ROADWAY	CG12	CHERRY CT	N. 7TH ST	E	213	26	5,540	AC	0	0	0
YOSSPL	YOSS PL	ROADWAY	CG232	S. River Rd	Hwy 99	B	174	29	5,055	AC	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG315	S. 8TH STREET	DEAD END	E	261	24	6,257	PCC	15	12	35
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG321	S. 6TH ST	S. 7TH ST	C	484	28	13,841	PCC	15	14	52
EJEFFERSON	E. JEFFERSON AVE	ROADWAY	CG322	S. 5TH ST	HIGHWAY 99	E	105	26	2,718	PCC	15	13	14
N7THST	N. 7TH ST	ROADWAY	CG319	Hwy 99	DEAD END EAST OF HWY 99	E	263	30	7,886	PCC	15	15	28
NOST	N. O ST	ROADWAY	CG316	E. WHITEAKER AVE	E. GIBBS AVE	E	226	26	5,878	PCC	15	13	26
S5THST	S. 5TH ST	ROADWAY	CG317	ASH AVE.	75 FT. S OF BIRCH AVE	E	1,110	30	33,308	PCC	15	15	148
S5THST	S. 5TH ST	ROADWAY	CG318	HIGHWAY 99	ADAMS AVE	E	282	30	8,460	PCC	15	15	36

TABLE 1A - COTTAGE GROVE ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION REPORT - 2018 PAVEMENT INVENTORY

BranchID	Name	Branch Use	SectionID	From	To	Rank	Length (Ft)	Width (Ft)	Area (Sq Ft)	Surface Type	Slab Length	Slab Width	Approx. No. Slabs
S8THST	S. 8TH ST	ROADWAY	CG320	E. HARRISON AVE	E. MONROE AVE	E	1,036	24	24,873	PCC	15	12	124
ASHAVE	ASH AVE	ROADWAY	CG327	CITY LIMITS W. OF Q ST	Q ST	E	360	18	6,480	GR	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG337	N. 7TH ST	N. 8TH ST	E	222	24	5,337	GR	0	0	0
EGROVERAVE	E. GROVER AVE	ROADWAY	CG338	N. 10TH ST	DEAD END	E	126	16	2,018	GR	0	0	0
EHARRISONA	E. HARRISON AVE	ROADWAY	CG351	S. GATEWAY BLVD	DEAD END	E	137	18	2,475	GR	0	0	0
HUDSONAVE	HUDSON AVE	ROADWAY	CG323	W. GIRARD AVE	DEAD END	E	516	16	7,296	GR	0	0	0
JACKSONAVE	JACKSON AVE	ROADWAY	CG336	DEAD END W. OF S. 1ST ST	S. 1ST ST	E	197	26	7,800	GR	0	0	0
JOHNSONAVE	JOHNSON AVE	ROADWAY	CG343	120 FT EAST OF S. 8TH ST	S. 11TH ST	E	672	20	13,444	GR	0	0	0
MERRILLIN	MERRILL LN	ROADWAY	CG326	S. M STREET	DEAD END	E	186	12	2,504	GR	0	0	0
N7THST	N. 7TH ST	ROADWAY	CG334	DEAD END	E. GROVER AVE	E	444	26	13,858	GR	0	0	0
NKST	N. K ST	ROADWAY	CG328	CHESTNUT AVE	DEAD END TO N.	E	127	28	3,560	GR	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG340	E. CHADWICK AVE	E. GEER AVE	E	1,314	23	30,211	GR	0	0	0
NLANEST	N. LANE ST	ROADWAY	CG341	90 FT N. OF E. CHAMBERLAIN AVE	HWY 99	E	1,088	18	19,588	GR	0	0	0
NLST	N. L ST	ROADWAY	CG329	CHESTNUT AVE	DEAD END TO N.	E	189	12	2,266	GR	0	0	0
NOST	N. O ST	ROADWAY	CG330	145 N. OF W. MAIN ST	W. ASH AVE	E	158	23	3,639	GR	0	0	0
NOST	N. O ST	ROADWAY	CG331	W. ASH AVE	DEAD END	E	674	12	8,084	GR	0	0	0
OLDMILLPL	OLD MILL PL	ROADWAY	CG342	S. M ST	S. RIVER RD	E	815	12	9,777	GR	0	0	0
PIERCEAVE	PIERCE AVE	ROADWAY	CG344	S. 8TH ST	DEAD END	E	164	20	3,700	GR	0	0	0
ROBERTSLN	ROBERTS LN	ROADWAY	CG349	HARVEY RD	DEAD END	E	228	20	2,300	GR	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG255	DEAD END S. OF E. MADISON	E. MADISON AVE	E	189	16	5,306	GR	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG345	DEAD END S. OF JOHNSON	JOHNSON AVE	E	302	16	4,825	GR	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG346	DEAD END S. OF E. HARRISON AVE	E. HARRISON AVE	E	149	22	3,282	GR	0	0	0
S11THST	S. 11TH ST	ROADWAY	CG347	E. HARRISON AVE	DEAD END N. OF E. HARRISON	E	167	16	2,670	GR	0	0	0
S12THST	S. 12TH ST	ROADWAY	CG348	DEAD END SOUTH OF E. MADISON	E. MADISON AVE	E	196	20	3,913	GR	0	0	0
S21STST	S. 21ST ST	ROADWAY	CG350	N. GATEWAY BLVD	DEAD END	E	202	17	2,057	GR	0	0	0
S5THST	S. 5TH ST	ROADWAY	CG333	FILLMORE AVE	TAYLOR AVE	E	608	10	5,079	GR	0	0	0
S8THST	S. 8TH ST	ROADWAY	CG335	E. MONROE AVE	DEAD END N. OF E. MONROE AVE	E	120	24	5,880	GR	0	0	0
SNST	S. N ST	ROADWAY	CG324	125 S. OF CLARK AVE	CLARK AVE	E	100	20	2,001	GR	0	0	0
THAYERAVE	THAYER AVE	ROADWAY	CG339	N. 11TH ST	N. LANE ST	E	357	23	6,923	GR	0	0	0
TYLERAVE	TYLER AVE	ROADWAY	CG332	DEAD END	S. 1ST STREET	E	264	22	5,798	GR	0	0	0
VINCENTPL	VINCENT PL	ROADWAY	CG342	N. DOUGLAS ST	25 W. OF COLUMBIA CT	E	200	30	9,120	GR	0	0	0
							TOTALS	231,191	7,260,609				

Cottage Grove Pavement Management Program Street Inventory



— Label (Section ID)

Base Map from Lane County GIS (Sept. 2019)



Inventory

Sept. 2019

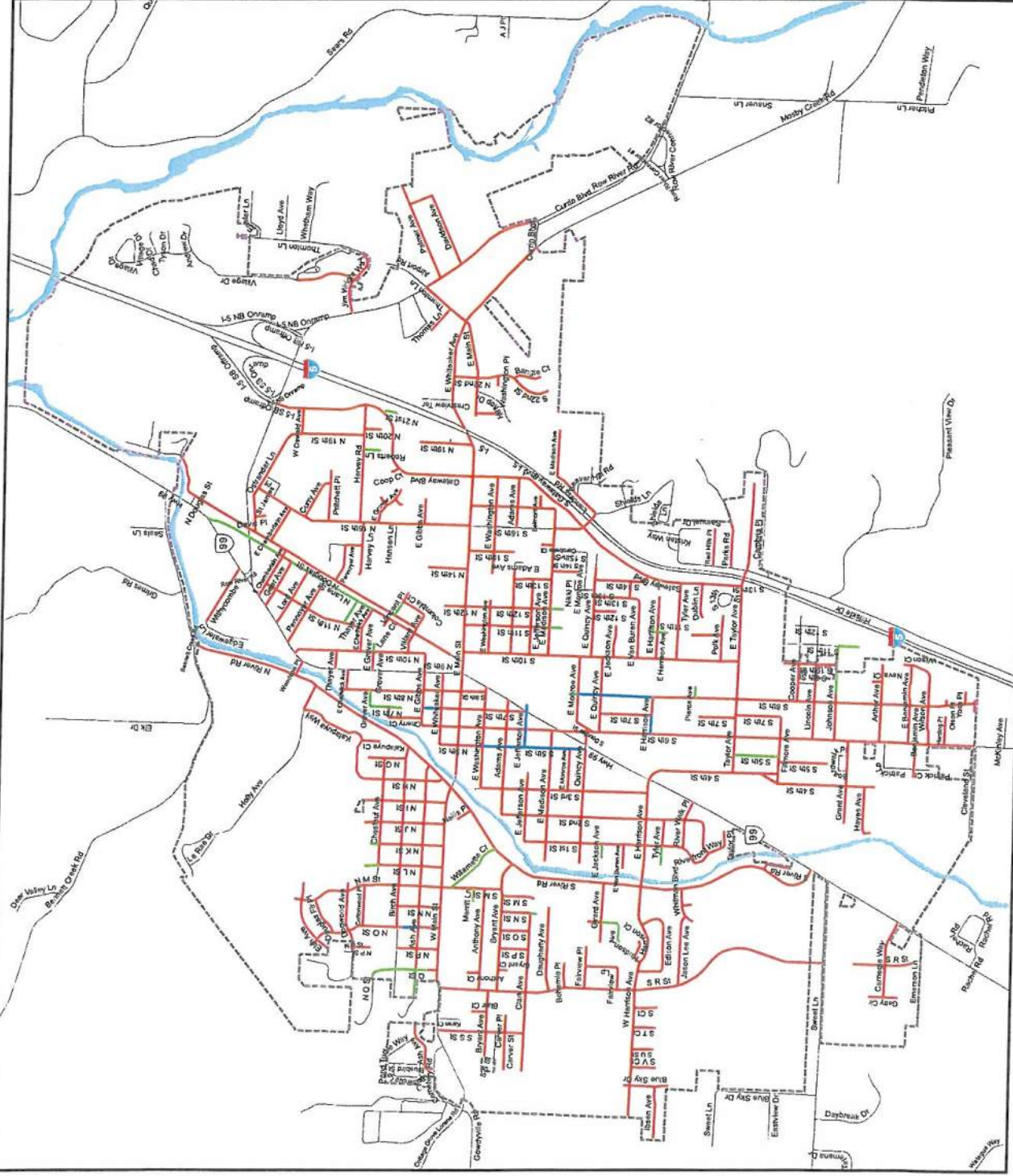
Figure 1A

Cottage Grove Pavement Management Program

Surface Type

- Asphalt Concrete (AC)
- Gravel (GR)
- Portland Cement Concrete (PCC)

Base Map from Lane County GIS (Sept. 2019)



Surface Type

Sept. 2019

Figure 3A

**Pavement Management Report
City of Cottage Grove City Streets**

**APPENDIX B:
2018 SUMMARY PAVEMENT CONDITION ANALYSIS**

Table 1B and Table 2B

**Table 1B - STREET PAVEMENT MANAGEMENT IMPLEMENTATION
BRANCH CONDITION - 2018 PCI SURVEY RESULTS**

Network Name	BranchID	Branch Use	Sections	Branch Area (SqFt)	Surface Type - Current	Area-Weighted Average PCI
COTTAGE GROVE PVMT MGMT	ADAMSAVE	ROADWAY	5	95,308	AC	46
COTTAGE GROVE PVMT MGMT	ANTHONYAVE	ROADWAY	1	42,272	AC	57
COTTAGE GROVE PVMT MGMT	ANTHONYCT	ROADWAY	1	7,659	AC	63
COTTAGE GROVE PVMT MGMT	ARTHURAVE	ROADWAY	1	31,395	AC	75
COTTAGE GROVE PVMT MGMT	ASHAVE	ROADWAY	3	102,371	AC	50
COTTAGE GROVE PVMT MGMT	BANGLECT	ROADWAY	1	13,649	AC	70
COTTAGE GROVE PVMT MGMT	BELMONTAVE	ROADWAY	1	3,990	AC	52
COTTAGE GROVE PVMT MGMT	BENJAMINAV	ROADWAY	2	31,882	AC	87
COTTAGE GROVE PVMT MGMT	BIRCHAVE	ROADWAY	3	74,254	AC	62
COTTAGE GROVE PVMT MGMT	BLAIRCT	ROADWAY	1	8,613	AC	52
COTTAGE GROVE PVMT MGMT	BLUESKYDR	ROADWAY	1	24,966	AC	30
COTTAGE GROVE PVMT MGMT	BOHEMIAPL	ROADWAY	1	13,211	AC	61
COTTAGE GROVE PVMT MGMT	BRYANTAVE	ROADWAY	4	74,620	AC	29
COTTAGE GROVE PVMT MGMT	BRYANTCT	ROADWAY	1	6,233	AC	34
COTTAGE GROVE PVMT MGMT	CARNEGIEWA	ROADWAY	1	42,188	AC	89
COTTAGE GROVE PVMT MGMT	CAROBELLEC	ROADWAY	1	7,263	AC	53
COTTAGE GROVE PVMT MGMT	CARVERAVE	ROADWAY	1	15,536	AC	19
COTTAGE GROVE PVMT MGMT	CARVERPL	ROADWAY	1	9,724	AC	51
COTTAGE GROVE PVMT MGMT	CHERRYCT	ROADWAY	1	8,375	AC	46
COTTAGE GROVE PVMT MGMT	CHESTNUTAV	ROADWAY	1	40,423	AC	51
COTTAGE GROVE PVMT MGMT	CLARKAVE	ROADWAY	3	63,468	AC	49
COTTAGE GROVE PVMT MGMT	CLEVELANDS	ROADWAY	1	2,399	AC	84
COTTAGE GROVE PVMT MGMT	COLUMBIACT	ROADWAY	1	10,782	AC	73
COTTAGE GROVE PVMT MGMT	COOPCT	ROADWAY	1	4,394	AC	74
COTTAGE GROVE PVMT MGMT	COOPERAVE	ROADWAY	2	12,791	AC	67
COTTAGE GROVE PVMT MGMT	COTTONWOOD	ROADWAY	1	17,097	AC	92
COTTAGE GROVE PVMT MGMT	CURRYAVE	ROADWAY	1	17,744	AC	67
COTTAGE GROVE PVMT MGMT	DAUGHERTYA	ROADWAY	1	41,790	AC	81
COTTAGE GROVE PVMT MGMT	DAVIDSONAV	ROADWAY	1	49,859	AC	47
COTTAGE GROVE PVMT MGMT	DAVISPL	ROADWAY	1	5,754	AC	70
COTTAGE GROVE PVMT MGMT	DOGWOODAVE	ROADWAY	1	28,643	AC	89
COTTAGE GROVE PVMT MGMT	DOUGLASFIR	ROADWAY	1	15,872	AC	90
COTTAGE GROVE PVMT MGMT	DUBLINLN	ROADWAY	1	14,892	AC	40
COTTAGE GROVE PVMT MGMT	ECHADWICKA	ROADWAY	3	25,439	AC	61
COTTAGE GROVE PVMT MGMT	ECHAMBERLA	ROADWAY	3	36,971	AC	37
COTTAGE GROVE PVMT MGMT	EDISONAVE	ROADWAY	1	39,108	AC	54
COTTAGE GROVE PVMT MGMT	EGIBBSAVE	ROADWAY	4	40,279	AC	57
COTTAGE GROVE PVMT MGMT	EGROVERAVE	ROADWAY	4	36,393	AC	71
COTTAGE GROVE PVMT MGMT	EHARRISONA	ROADWAY	5	98,353	AC/PCC	50
COTTAGE GROVE PVMT MGMT	EJACKSONAV	ROADWAY	1	13,667	AC	48
COTTAGE GROVE PVMT MGMT	EJEFFERSON	ROADWAY	6	71,076	AC/PCC	55
COTTAGE GROVE PVMT MGMT	ELMAVE	ROADWAY	1	31,632	AC	89

**Table 1B - STREET PAVEMENT MANAGEMENT IMPLEMENTATION
BRANCH CONDITION - 2018 PCI SURVEY RESULTS**

Network Name	BranchID	Branch Use	Sections	Branch Area (SqFt)	Surface Type - Current	Area-Weighted Average PCI
COTTAGE GROVE PVMT MGMT	EMADISONAV	ROADWAY	7	127,146	AC	60
COTTAGE GROVE PVMT MGMT	EMAINST	ROADWAY	7	234,001	AC	69
COTTAGE GROVE PVMT MGMT	EMONROEAVE	ROADWAY	3	42,988	AC	56
COTTAGE GROVE PVMT MGMT	EQUINCYAVE	ROADWAY	9	111,745	AC	62
COTTAGE GROVE PVMT MGMT	ETAYLORAVE	ROADWAY	4	135,507	AC	47
COTTAGE GROVE PVMT MGMT	EVANBURENA	ROADWAY	2	32,292	AC	57
COTTAGE GROVE PVMT MGMT	EWASHINGTO	ROADWAY	8	118,108	AC	68
COTTAGE GROVE PVMT MGMT	EWHITEAKER	ROADWAY	3	92,225	AC	33
COTTAGE GROVE PVMT MGMT	FAIRVIEWLP	ROADWAY	1	22,015	AC	53
COTTAGE GROVE PVMT MGMT	FAIRVIEWPL	ROADWAY	1	19,936	AC	91
COTTAGE GROVE PVMT MGMT	FILLMOREAV	ROADWAY	2	25,991	AC	54
COTTAGE GROVE PVMT MGMT	GEERAVE	ROADWAY	1	20,515	AC	45
COTTAGE GROVE PVMT MGMT	GETTYCIRCL	ROADWAY	1	16,396	AC	92
COTTAGE GROVE PVMT MGMT	GIRARDAVE	ROADWAY	3	22,563	AC	64
COTTAGE GROVE PVMT MGMT	GIRARDCT	ROADWAY	1	8,254	AC	61
COTTAGE GROVE PVMT MGMT	GRANTAVE	ROADWAY	2	37,279	AC	41
COTTAGE GROVE PVMT MGMT	HARDINGPL	ROADWAY	1	10,152	AC	95
COTTAGE GROVE PVMT MGMT	HARRISONCT	ROADWAY	1	10,292	AC	78
COTTAGE GROVE PVMT MGMT	HARVEYLN	ROADWAY	2	23,219	AC	67
COTTAGE GROVE PVMT MGMT	HARVEYRD	ROADWAY	2	52,426	AC	51
COTTAGE GROVE PVMT MGMT	HAYESAV	ROADWAY	1	20,183	AC	69
COTTAGE GROVE PVMT MGMT	HOLLYAVE	ROADWAY	1	12,358	AC	78
COTTAGE GROVE PVMT MGMT	IBSENAVE	ROADWAY	1	21,065	AC	79
COTTAGE GROVE PVMT MGMT	JASONLEEAV	ROADWAY	1	29,456	AC	72
COTTAGE GROVE PVMT MGMT	JIMWRIGHTW	ROADWAY	1	40,373	AC	43
COTTAGE GROVE PVMT MGMT	JOHNSONAVE	ROADWAY	1	18,682	AC	72
COTTAGE GROVE PVMT MGMT	KALAPUYAWA	ROADWAY	1	39,758	AC	75
COTTAGE GROVE PVMT MGMT	KALAPUYSCT	ROADWAY	1	9,761	AC	71
COTTAGE GROVE PVMT MGMT	KATHLEENDR	ROADWAY	1	13,956	AC	84
COTTAGE GROVE PVMT MGMT	LANDESSRD	ROADWAY	1	23,528	AC	69
COTTAGE GROVE PVMT MGMT	LANECT	ROADWAY	1	5,845	AC	75
COTTAGE GROVE PVMT MGMT	LINCOLNAVE	ROADWAY	3	31,474	AC	48
COTTAGE GROVE PVMT MGMT	LORDAVE	ROADWAY	1	22,597	AC	38
COTTAGE GROVE PVMT MGMT	MEEKERDR	ROADWAY	1	4,230	AC	67
COTTAGE GROVE PVMT MGMT	MOSBYCRRD	ROADWAY	1	48,131	AC	57
COTTAGE GROVE PVMT MGMT	N10THST	ROADWAY	1	49,357	AC	53
COTTAGE GROVE PVMT MGMT	N11THST	ROADWAY	3	35,243	AC	55
COTTAGE GROVE PVMT MGMT	N12THST	ROADWAY	1	8,740	AC	80
COTTAGE GROVE PVMT MGMT	N14THST	ROADWAY	2	25,558	AC	50
COTTAGE GROVE PVMT MGMT	N16THST	ROADWAY	2	109,136	AC	24
COTTAGE GROVE PVMT MGMT	N19THST	ROADWAY	2	39,987	AC	59
COTTAGE GROVE PVMT MGMT	N20THST	ROADWAY	1	3,657	AC	69

**Table 1B - STREET PAVEMENT MANAGEMENT IMPLEMENTATION
BRANCH CONDITION - 2018 PCI SURVEY RESULTS**

Network Name	BranchID	Branch Use	Sections	Branch Area (SqFt)	Surface Type - Current	Area-Weighted Average PCI
COTTAGE GROVE PVMT MGMT	N22NDST	ROADWAY	1	9,629	AC	71
COTTAGE GROVE PVMT MGMT	N5THST	ROADWAY	1	8,792	AC	39
COTTAGE GROVE PVMT MGMT	N6THST	ROADWAY	2	16,993	AC	63
COTTAGE GROVE PVMT MGMT	N7THST	ROADWAY	2	16,832	AC / PCC	46
COTTAGE GROVE PVMT MGMT	N8THST	ROADWAY	3	47,163	AC	58
COTTAGE GROVE PVMT MGMT	NDOUGLASST	ROADWAY	6	102,151	AC	38
COTTAGE GROVE PVMT MGMT	NELLISPL	ROADWAY	1	6,698	AC	55
COTTAGE GROVE PVMT MGMT	NEVACT	ROADWAY	1	5,890	AC	76
COTTAGE GROVE PVMT MGMT	NGATEWAYBL	ROADWAY	4	145,856	AC	64
COTTAGE GROVE PVMT MGMT	NGST	ROADWAY	2	13,374	AC	50
COTTAGE GROVE PVMT MGMT	NHST	ROADWAY	1	32,188	AC	36
COTTAGE GROVE PVMT MGMT	NIST	ROADWAY	1	35,992	AC	46
COTTAGE GROVE PVMT MGMT	NJST	ROADWAY	1	29,583	AC	34
COTTAGE GROVE PVMT MGMT	NKST	ROADWAY	1	24,994	AC	72
COTTAGE GROVE PVMT MGMT	NLANEST	ROADWAY	5	37,247	AC	49
COTTAGE GROVE PVMT MGMT	NLST	ROADWAY	1	25,049	AC	73
COTTAGE GROVE PVMT MGMT	NMST	ROADWAY	2	72,951	AC	78
COTTAGE GROVE PVMT MGMT	NNST	ROADWAY	1	16,996	AC	77
COTTAGE GROVE PVMT MGMT	NOST	ROADWAY	3	54,671	AC / PCC	78
COTTAGE GROVE PVMT MGMT	NPST	ROADWAY	2	24,449	AC	72
COTTAGE GROVE PVMT MGMT	NQST	ROADWAY	1	3,335	AC	12
COTTAGE GROVE PVMT MGMT	NRIVERRD	ROADWAY	3	154,046	AC	41
COTTAGE GROVE PVMT MGMT	OLSONPL	ROADWAY	1	2,950	AC	90
COTTAGE GROVE PVMT MGMT	OSTRANDERL	ROADWAY	2	54,492	AC	40
COTTAGE GROVE PVMT MGMT	OSWALDWAVE	ROADWAY	1	10,544	AC	43
COTTAGE GROVE PVMT MGMT	PALMERAVE	ROADWAY	1	50,376	AC	57
COTTAGE GROVE PVMT MGMT	PARKSRD	ROADWAY	1	10,970	AC	72
COTTAGE GROVE PVMT MGMT	PENNOYERAV	ROADWAY	2	42,874	AC	64
COTTAGE GROVE PVMT MGMT	POLKAVE	ROADWAY	1	17,349	AC	9
COTTAGE GROVE PVMT MGMT	PRITCHETTP	ROADWAY	1	22,293	AC	66
COTTAGE GROVE PVMT MGMT	REDHILLSPL	ROADWAY	1	18,810	AC	98
COTTAGE GROVE PVMT MGMT	RIVERFRONT	ROADWAY	1	14,850	AC	86
COTTAGE GROVE PVMT MGMT	RIVERWALKP	ROADWAY	2	23,002	AC	94
COTTAGE GROVE PVMT MGMT	ROWRIVERCO	ROADWAY	1	86,168	AC	16
COTTAGE GROVE PVMT MGMT	S10THST	ROADWAY	4	155,361	AC	41
COTTAGE GROVE PVMT MGMT	S11THST	ROADWAY	2	43,320	AC	43
COTTAGE GROVE PVMT MGMT	S12THST	ROADWAY	2	39,527	AC	52
COTTAGE GROVE PVMT MGMT	S13THST	ROADWAY	2	26,355	AC	64
COTTAGE GROVE PVMT MGMT	S14THST	ROADWAY	2	28,124	AC	51
COTTAGE GROVE PVMT MGMT	S15THST	ROADWAY	1	18,539	AC	82
COTTAGE GROVE PVMT MGMT	S16THST	ROADWAY	1	54,915	AC	64
COTTAGE GROVE PVMT MGMT	S17THST	ROADWAY	1	34,141	AC	62

**Table 1B - STREET PAVEMENT MANAGEMENT IMPLEMENTATION
BRANCH CONDITION - 2018 PCI SURVEY RESULTS**

Network Name	BranchID	Branch Use	Sections	Branch Area (SqFt)	Surface Type - Current	Area-Weighted Average PCI
COTTAGE GROVE PVMT MGMT	S1STST	ROADWAY	2	70,769	AC	54
COTTAGE GROVE PVMT MGMT	S21STST	ROADWAY	1	8,634	AC	81
COTTAGE GROVE PVMT MGMT	S22NDST	ROADWAY	1	36,744	AC	71
COTTAGE GROVE PVMT MGMT	S2NDST	ROADWAY	3	98,940	AC	70
COTTAGE GROVE PVMT MGMT	S3RDST	ROADWAY	3	62,447	AC	72
COTTAGE GROVE PVMT MGMT	S4THST	ROADWAY	4	101,998	AC	45
COTTAGE GROVE PVMT MGMT	S4THSTY	ROADWAY	1	6,513	AC	78
COTTAGE GROVE PVMT MGMT	S5THST	ROADWAY	4	74,337	AC/PCC	47
COTTAGE GROVE PVMT MGMT	S6THST	ROADWAY	5	261,175	AC	70
COTTAGE GROVE PVMT MGMT	S6THSTY	ROADWAY	1	1,521	AC	43
COTTAGE GROVE PVMT MGMT	S7THST	ROADWAY	4	82,241	AC	59
COTTAGE GROVE PVMT MGMT	S8THST	ROADWAY	7	173,519	AC/PCC	62
COTTAGE GROVE PVMT MGMT	SCT	ROADWAY	1	12,522	AC	56
COTTAGE GROVE PVMT MGMT	SDOUGLASST	ROADWAY	1	5,851	AC	35
COTTAGE GROVE PVMT MGMT	SGATEWAYBL	ROADWAY	2	152,577	AC	54
COTTAGE GROVE PVMT MGMT	SMST	ROADWAY	3	40,046	AC	38
COTTAGE GROVE PVMT MGMT	SNST	ROADWAY	1	11,513	AC	3
COTTAGE GROVE PVMT MGMT	SOST	ROADWAY	1	11,525	AC	20
COTTAGE GROVE PVMT MGMT	SPST	ROADWAY	1	10,794	AC	12
COTTAGE GROVE PVMT MGMT	SRIVERRD	ROADWAY	4	204,909	AC	44
COTTAGE GROVE PVMT MGMT	SRIVERRDFR	ROADWAY	1	10,270	AC	69
COTTAGE GROVE PVMT MGMT	SRST	ROADWAY	4	274,277	AC	75
COTTAGE GROVE PVMT MGMT	SSST	ROADWAY	1	35,157	AC	59
COTTAGE GROVE PVMT MGMT	STCT	ROADWAY	1	12,006	AC	81
COTTAGE GROVE PVMT MGMT	SUST	ROADWAY	1	8,852	AC	75
COTTAGE GROVE PVMT MGMT	SVCT	ROADWAY	1	13,077	AC	55
COTTAGE GROVE PVMT MGMT	TAYLORPL	ROADWAY	1	7,143	AC	91
COTTAGE GROVE PVMT MGMT	THAYERAVE	ROADWAY	1	7,527	AC	44
COTTAGE GROVE PVMT MGMT	THOMASPL	ROADWAY	1	12,013	AC	13
COTTAGE GROVE PVMT MGMT	THORNTONRD	ROADWAY	1	25,090	AC	35
COTTAGE GROVE PVMT MGMT	TYLERAVE	ROADWAY	2	40,106	AC	67
COTTAGE GROVE PVMT MGMT	VANBURENAV	ROADWAY	1	10,034	AC	81
COTTAGE GROVE PVMT MGMT	VILLAGEDR	ROADWAY	1	29,245	AC	53
COTTAGE GROVE PVMT MGMT	VILLARDAVE	ROADWAY	2	16,143	AC	50
COTTAGE GROVE PVMT MGMT	VINCENTPL	ROADWAY	1	5,022	AC	91
COTTAGE GROVE PVMT MGMT	WASHINGTON	ROADWAY	1	6,455	AC	76
COTTAGE GROVE PVMT MGMT	WHARRISONA	ROADWAY	1	150,082	AC	56
COTTAGE GROVE PVMT MGMT	WHITMANBLV	ROADWAY	1	22,241	AC	73
COTTAGE GROVE PVMT MGMT	WILSONAVE	ROADWAY	1	18,309	AC	89
COTTAGE GROVE PVMT MGMT	WILSONCT	ROADWAY	1	22,037	AC	91
COTTAGE GROVE PVMT MGMT	WITHYCOMBE	ROADWAY	1	26,173	AC	48
COTTAGE GROVE PVMT MGMT	WMAINST	ROADWAY	1	116,611	AC	82

**Table 1B - STREET PAVEMENT MANAGEMENT IMPLEMENTATION
BRANCH CONDITION - 2018 PCI SURVEY RESULTS**

Network Name	BranchID	Branch Use	Sections	Branch Area (SqFt)	Surface Type - Current	Area-Weighted Average PCI
<i>COTTAGE GROVE PVMT MGMT</i>	<i>WOODAVE</i>	<i>ROADWAY</i>	<i>1</i>	<i>2,980</i>	<i>AC</i>	<i>8</i>
<i>COTTAGE GROVE PVMT MGMT</i>	<i>WOODSONPL</i>	<i>ROADWAY</i>	<i>1</i>	<i>5,540</i>	<i>AC</i>	<i>88</i>
<i>COTTAGE GROVE PVMT MGMT</i>	<i>YOSSPL</i>	<i>ROADWAY</i>	<i>1</i>	<i>5,055</i>	<i>AC</i>	<i>95</i>
TOTALS			321	7,058,318		

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	ADAMSAVE	CG162	AC	09-25-2018	59	Fair	36	31	33
COTTAGEGRV	ADAMSAVE	CG161	AC	09-25-2018	34	Very Poor	31	60	9
COTTAGEGRV	ADAMSAVE	CG159	AC	09-05-2018	20	Serious	11	75	14
COTTAGEGRV	ADAMSAVE	CG160	AC	09-05-2018	69	Fair	57	0	43
COTTAGEGRV	ADAMSAVE	CG163	AC	09-26-2018	60	Fair	59	26	15
COTTAGEGRV	ANTHONYAVE	CG49	AC	08-30-2018	57	Fair	35	36	29
COTTAGEGRV	ANTHONYCT	CG59	AC	08-30-2018	63	Fair	66	34	0
COTTAGEGRV	ARTHURAVE	CG234	AC	09-20-2018	75	Satisfactory	71	29	0
COTTAGEGRV	ASHAVE	CG61	AC	08-30-2018	77	Satisfactory	67	0	33
COTTAGEGRV	ASHAVE	CG63	AC	08-24-2018	53	Poor	38	48	14
COTTAGEGRV	ASHAVE	CG64	AC	08-24-2018	33	Very Poor	17	75	8
COTTAGEGRV	BANGLECT	CG305	AC	09-27-2018	70	Fair	43	15	42
COTTAGEGRV	BELMONTAVE	CG273	AC	09-26-2018	52	Poor	74	0	26
COTTAGEGRV	BENJAMINAV	CG227	AC	09-19-2018	86	Good	100	0	0
COTTAGEGRV	BENJAMINAV	CG228	AC	09-19-2018	87	Good	100	0	0
COTTAGEGRV	BIRCHAVE	CG67	AC	08-24-2018	61	Fair	40	48	12
COTTAGEGRV	BIRCHAVE	CG65	AC	08-24-2018	69	Fair	48	24	28
COTTAGEGRV	BIRCHAVE	CG66	AC	08-24-2018	45	Poor	42	52	6
COTTAGEGRV	BLAIRCT	CG51	AC	08-29-2018	52	Poor	55	45	0
COTTAGEGRV	BLUESKYDR	CG25	AC	08-24-2018	30	Very Poor	27	68	5
COTTAGEGRV	BOHEMIAPL	CG38	AC	08-29-2018	61	Fair	100	0	0
COTTAGEGRV	BRYANTAVE	CG45	AC	08-29-2018	50	Poor	48	52	0
COTTAGEGRV	BRYANTAVE	CG47	AC	08-29-2018	11	Serious	29	48	23
COTTAGEGRV	BRYANTAVE	CG46	AC	08-29-2018	40	Very Poor	40	60	0
COTTAGEGRV	BRYANTAVE	CG48	AC	08-29-2018	11	Serious	35	61	4
COTTAGEGRV	BRYANTCT	CG52	AC	08-29-2018	34	Very Poor	37	63	0
COTTAGEGRV	CARNEGIEWA	CG2	AC	08-23-2018	89	Good	68	0	32
COTTAGEGRV	CAROBELLEC	CG271	AC	09-25-2018	53	Poor	42	30	28
COTTAGEGRV	CARVERAVE	CG43	AC	08-30-2018	19	Serious	23	77	0
COTTAGEGRV	CARVERPL	CG44	AC	08-30-2018	51	Poor	43	43	14
COTTAGEGRV	CERRYCT	CG134	AC	09-05-2018	46	Poor	42	36	22
COTTAGEGRV	CHESTNUTAV	CG68	AC	08-24-2018	51	Poor	37	54	9
COTTAGEGRV	CLARKAVE	CG42	AC	08-29-2018	41	Poor	24	76	0
COTTAGEGRV	CLARKAVE	CG40	AC	08-29-2018	63	Fair	57	0	43
COTTAGEGRV	CLARKAVE	CG41	AC	08-29-2018	59	Fair	100	0	0
COTTAGEGRV	CLEVELANDS	CG124	AC	09-19-2018	84	Satisfactory	34	0	66
COTTAGEGRV	COLUMBIACT	CG214	AC	09-06-2018	73	Satisfactory	86	0	14
COTTAGEGRV	COOPCT	CG292	AC	09-27-2018	74	Satisfactory	67	33	0
COTTAGEGRV	COOPERAVE	CG241	AC	09-20-2018	39	Very Poor	14	46	40
COTTAGEGRV	COOPERAVE	CG240	AC	09-20-2018	75	Satisfactory	89	0	11
COTTAGEGRV	COTTONWOOD	CG83	AC	08-24-2018	92	Good	100	0	0
COTTAGEGRV	CURRYAVE	CG289	AC	09-26-2018	67	Fair	68	32	0
COTTAGEGRV	DAUGHERTYA	CG39	AC	08-29-2018	81	Satisfactory	96	0	4
COTTAGEGRV	DAVIDSONAV	CG311	AC	09-28-2018	47	Poor	24	37	39
COTTAGEGRV	DAVISPL	CG288	AC	09-26-2018	70	Fair	100	0	0
COTTAGEGRV	DOGWOODAVE	CG84	AC	08-24-2018	89	Good	100	0	0
COTTAGEGRV	DOUGLASFIR	CG85	AC	08-24-2018	90	Good	100	0	0

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	DUBLINLN	CG249	AC	09-24-2018	40	Very Poor	42	58	0
COTTAGEGRV	ECHADWICKA	CG191	AC	09-06-2018	59	Fair	100	0	0
COTTAGEGRV	ECHADWICKA	CG190	AC	09-06-2018	62	Fair	100	0	0
COTTAGEGRV	ECHADWICKA	CG189	AC	09-05-2018	63	Fair	77	0	23
COTTAGEGRV	ECHAMBERLA	CG197	AC	09-06-2018	58	Fair	49	14	37
COTTAGEGRV	ECHAMBERLA	CG198	AC	09-19-2018	15	Serious	39	24	37
COTTAGEGRV	ECHAMBERLA	CG199	AC	09-26-2018	15	Serious	21	79	0
COTTAGEGRV	EDISONAVE	CG16	AC	08-24-2018	54	Poor	47	48	5
COTTAGEGRV	EGIBBSAVE	CG185	AC	09-27-2018	42	Poor	44	45	11
COTTAGEGRV	EGIBBSAVE	CG183	AC	09-06-2018	72	Satisfactory	62	0	38
COTTAGEGRV	EGIBBSAVE	CG182	AC	09-06-2018	57	Fair	31	30	39
COTTAGEGRV	EGIBBSAVE	CG184	AC	09-06-2018	50	Poor	43	36	21
COTTAGEGRV	EGROVERAVE	CG187	AC	09-06-2018	41	Poor	75	25	0
COTTAGEGRV	EGROVERAVE	CG188	AC	09-26-2018	82	Satisfactory	85	0	15
COTTAGEGRV	EGROVERAVE	CG294	AC	09-26-2018	70	Fair	83	17	0
COTTAGEGRV	EGROVERAVE	CG293	AC	09-26-2018	72	Satisfactory	79	21	0
COTTAGEGRV	EHARRISONA	CG315	PCC	10-02-2018	46	Poor	8	92	0
COTTAGEGRV	EHARRISONA	CG29	AC	09-21-2018	99	Good	100	0	0
COTTAGEGRV	EHARRISONA	CG31	AC	09-24-2018	71	Satisfactory	100	0	0
COTTAGEGRV	EHARRISONA	CG30	AC	09-24-2018	56	Fair	52	0	48
COTTAGEGRV	EHARRISONA	CG28	AC	08-30-2018	41	Poor	49	48	3
COTTAGEGRV	EJACKSONAV	CG265	AC	09-24-2018	48	Poor	41	41	18
COTTAGEGRV	EJEFFERSON	CG158	AC	09-25-2018	50	Poor	50	23	27
COTTAGEGRV	EJEFFERSON	CG156	AC	09-05-2018	86	Good	100	0	0
COTTAGEGRV	EJEFFERSON	CG322	PCC	10-02-2018	31	Very Poor	3	79	18
COTTAGEGRV	EJEFFERSON	CG321	PCC	10-02-2018	60	Fair	8	82	10
COTTAGEGRV	EJEFFERSON	CG155	AC	09-05-2018	57	Fair	48	0	52
COTTAGEGRV	EJEFFERSON	CG157	AC	09-05-2018	19	Serious	24	36	40
COTTAGEGRV	ELMAVE	CG86	AC	08-24-2018	89	Good	100	0	0
COTTAGEGRV	EMADISONAV	CG153	AC	09-25-2018	69	Fair	87	0	13
COTTAGEGRV	EMADISONAV	CG151	AC	09-25-2018	50	Poor	72	12	16
COTTAGEGRV	EMADISONAV	CG154	AC	09-26-2018	76	Satisfactory	85	0	15
COTTAGEGRV	EMADISONAV	CG148	AC	09-05-2018	71	Satisfactory	38	0	62
COTTAGEGRV	EMADISONAV	CG149	AC	09-05-2018	56	Fair	97	0	3
COTTAGEGRV	EMADISONAV	CG152	AC	09-25-2018	51	Poor	38	25	37
COTTAGEGRV	EMADISONAV	CG150	AC	09-05-2018	52	Poor	44	56	0
COTTAGEGRV	EMAINST	CG177	AC	09-27-2018	75	Satisfactory	63	0	37
COTTAGEGRV	EMAINST	CG178	AC	09-27-2018	77	Satisfactory	92	0	8
COTTAGEGRV	EMAINST	CG176	AC	09-27-2018	61	Fair	100	0	0
COTTAGEGRV	EMAINST	CG173	AC	09-27-2018	79	Satisfactory	20	0	80
COTTAGEGRV	EMAINST	CG175	AC	09-27-2018	30	Very Poor	34	56	10
COTTAGEGRV	EMAINST	CG172	AC	09-06-2018	50	Poor	51	49	0
COTTAGEGRV	EMAINST	CG174	AC	09-27-2018	85	Satisfactory	48	52	0
COTTAGEGRV	EMONROEAVE	CG147	AC	09-21-2018	33	Very Poor	18	71	11
COTTAGEGRV	EMONROEAVE	CG146	AC	09-21-2018	38	Very Poor	68	32	0
COTTAGEGRV	EMONROEAVE	CG145	AC	09-05-2018	87	Good	97	0	3
COTTAGEGRV	EQUINCYAVE	CG138	AC	09-05-2018	85	Satisfactory	71	16	13

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	EQUINCYAVE	CG139	AC	09-21-2018	0	Failed	45	50	5
COTTAGEGRV	EQUINCYAVE	CG144	AC	09-24-2018	45	Poor	65	0	35
COTTAGEGRV	EQUINCYAVE	CG143	AC	09-24-2018	63	Fair	59	41	0
COTTAGEGRV	EQUINCYAVE	CG140	AC	09-21-2018	56	Fair	80	20	0
COTTAGEGRV	EQUINCYAVE	CG141	AC	09-21-2018	59	Fair	89	0	11
COTTAGEGRV	EQUINCYAVE	CG136	AC	08-30-2018	10	Failed	7	62	31
COTTAGEGRV	EQUINCYAVE	CG137	AC	08-30-2018	80	Satisfactory	41	37	22
COTTAGEGRV	EQUINCYAVE	CG142	AC	09-24-2018	68	Fair	82	0	18
COTTAGEGRV	ETAYLORAVE	CG247	AC	09-21-2018	60	Fair	52	11	37
COTTAGEGRV	ETAYLORAVE	CG245	AC	09-21-2018	38	Very Poor	35	64	1
COTTAGEGRV	ETAYLORAVE	CG244	AC	09-21-2018	52	Poor	41	51	8
COTTAGEGRV	ETAYLORAVE	CG246	AC	09-21-2018	44	Poor	35	35	30
COTTAGEGRV	EVANBURENA	CG267	AC	09-24-2018	71	Satisfactory	59	0	41
COTTAGEGRV	EVANBURENA	CG266	AC	09-24-2018	53	Poor	46	35	19
COTTAGEGRV	EWASHINGTO	CG168	AC	09-25-2018	81	Satisfactory	69	31	0
COTTAGEGRV	EWASHINGTO	CG166	AC	09-05-2018	74	Satisfactory	100	0	0
COTTAGEGRV	EWASHINGTO	CG171	AC	09-25-2018	61	Fair	75	25	0
COTTAGEGRV	EWASHINGTO	CG165	AC	09-05-2018	95	Good	100	0	0
COTTAGEGRV	EWASHINGTO	CG167	AC	09-25-2018	77	Satisfactory	88	12	0
COTTAGEGRV	EWASHINGTO	CG164	AC	09-05-2018	38	Very Poor	25	73	2
COTTAGEGRV	EWASHINGTO	CG170	AC	09-25-2018	67	Fair	67	33	0
COTTAGEGRV	EWASHINGTO	CG169	AC	09-25-2018	75	Satisfactory	41	0	59
COTTAGEGRV	EWHITEAKER	CG181	AC	09-27-2018	26	Very Poor	39	37	24
COTTAGEGRV	EWHITEAKER	CG180	AC	09-27-2018	24	Serious	46	42	12
COTTAGEGRV	EWHITEAKER	CG179	AC	09-06-2018	46	Poor	51	49	0
COTTAGEGRV	FAIRVIEWLP	CG32	AC	08-29-2018	53	Poor	73	27	0
COTTAGEGRV	FAIRVIEWPL	CG33	AC	08-29-2018	91	Good	100	0	0
COTTAGEGRV	FILLMOREAV	CG242	AC	09-21-2018	49	Poor	63	15	22
COTTAGEGRV	FILLMOREAV	CG243	AC	09-21-2018	64	Fair	86	0	14
COTTAGEGRV	GEERAVE	CG196	AC	09-06-2018	45	Poor	40	60	0
COTTAGEGRV	GETTYCIRCL	CG1	AC	08-20-2018	92	Good	100	0	0
COTTAGEGRV	GIRARDAVE	CG36	AC	08-29-2018	92	Good	100	0	0
COTTAGEGRV	GIRARDAVE	CG35	AC	08-29-2018	63	Fair	100	0	0
COTTAGEGRV	GIRARDAVE	CG34	AC	08-29-2018	56	Fair	97	0	3
COTTAGEGRV	GIRARDCT	CG37	AC	08-29-2018	61	Fair	100	0	0
COTTAGEGRV	GRANTAVE	CG224	AC	09-20-2018	22	Serious	21	73	6
COTTAGEGRV	GRANTAVE	CG225	AC	09-20-2018	55	Poor	79	11	10
COTTAGEGRV	HARDINGPL	CG233	AC	09-19-2018	95	Good	100	0	0
COTTAGEGRV	HARRISONCT	CG17	AC	08-24-2018	78	Satisfactory	100	0	0
COTTAGEGRV	HARVEYLN	CG287	AC	09-26-2018	56	Fair	34	24	42
COTTAGEGRV	HARVEYLN	CG286	AC	09-26-2018	74	Satisfactory	100	0	0
COTTAGEGRV	HARVEYRD	CG285	AC	09-27-2018	45	Poor	47	41	12
COTTAGEGRV	HARVEYRD	CG284	AC	09-27-2018	53	Poor	51	38	11
COTTAGEGRV	HAYESAV	CG223	AC	09-20-2018	69	Fair	73	0	27
COTTAGEGRV	HOLLYAVE	CG90	AC	08-24-2018	78	Satisfactory	100	0	0
COTTAGEGRV	IBSENAVE	CG26	AC	08-24-2018	79	Satisfactory	100	0	0
COTTAGEGRV	JASONLEEAV	CG15	AC	08-24-2018	72	Satisfactory	91	8	1

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	JIMWRIGHTW	CG313	AC	09-28-2018	43	Poor	45	55	0
COTTAGEGRV	JOHNSONAVE	CG236	AC	09-20-2018	72	Satisfactory	53	47	0
COTTAGEGRV	KALAPUYAWA	CG88	AC	08-24-2018	75	Satisfactory	100	0	0
COTTAGEGRV	KALAPUYSC	CG89	AC	08-24-2018	71	Satisfactory	100	0	0
COTTAGEGRV	KATHLEENDR	CG226	AC	09-20-2018	84	Satisfactory	100	0	0
COTTAGEGRV	LANDESSRD	CG306	AC	09-26-2018	69	Fair	74	14	12
COTTAGEGRV	LANECT	CG206	AC	09-06-2018	75	Satisfactory	62	38	0
COTTAGEGRV	LINCOLNAVE	CG239	AC	09-20-2018	10	Failed	38	58	4
COTTAGEGRV	LINCOLNAVE	CG238	AC	09-20-2018	44	Poor	74	26	0
COTTAGEGRV	LINCOLNAVE	CG237	AC	09-20-2018	62	Fair	99	0	1
COTTAGEGRV	LORDAVE	CG195	AC	09-06-2018	38	Very Poor	28	45	27
COTTAGEGRV	MEEKERDR	CG14	AC	08-24-2018	67	Fair	55	0	45
COTTAGEGRV	MOSBYCRRD	CG307	AC	09-27-2018	57	Fair	77	16	7
COTTAGEGRV	N10THST	CG200	AC	09-06-2018	53	Poor	33	40	27
COTTAGEGRV	N11THST	CG205	AC	09-06-2018	86	Good	100	0	0
COTTAGEGRV	N11THST	CG204	AC	09-06-2018	43	Poor	42	58	0
COTTAGEGRV	N11THST	CG203	AC	09-06-2018	69	Fair	100	0	0
COTTAGEGRV	N12THST	CG259	AC	09-25-2018	80	Satisfactory	89	0	11
COTTAGEGRV	N14THST	CG291	AC	09-25-2018	60	Fair	60	40	0
COTTAGEGRV	N14THST	CG264	AC	09-25-2018	46	Poor	26	53	21
COTTAGEGRV	N16THST	CG283	AC	09-26-2018	25	Serious	36	64	0
COTTAGEGRV	N16THST	CG282	AC	09-26-2018	23	Serious	36	46	18
COTTAGEGRV	N19THST	CG281	AC	09-27-2018	74	Satisfactory	88	0	12
COTTAGEGRV	N19THST	CG280	AC	09-27-2018	19	Serious	73	0	27
COTTAGEGRV	N20THST	CG295	AC	09-27-2018	69	Fair	34	13	53
COTTAGEGRV	N22NDST	CG302	AC	09-27-2018	71	Satisfactory	45	13	42
COTTAGEGRV	N5THST	CG111	AC	09-05-2018	39	Very Poor	16	63	21
COTTAGEGRV	N6THST	CG118	AC	09-05-2018	52	Poor	33	56	11
COTTAGEGRV	N6THST	CG117	AC	09-05-2018	72	Satisfactory	48	41	11
COTTAGEGRV	N7THST	CG319	PCC	10-01-2018	33	Very Poor	2	98	0
COTTAGEGRV	N7THST	CG123	AC	09-05-2018	57	Fair	47	47	6
COTTAGEGRV	N8THST	CG131	AC	09-05-2018	59	Fair	82	0	18
COTTAGEGRV	N8THST	CG132	AC	09-05-2018	55	Poor	74	13	13
COTTAGEGRV	N8THST	CG133	AC	09-05-2018	96	Good	100	0	0
COTTAGEGRV	NDOUGLASST	CG218	AC	09-19-2018	44	Poor	38	52	10
COTTAGEGRV	NDOUGLASST	CG217	AC	09-19-2018	81	Satisfactory	100	0	0
COTTAGEGRV	NDOUGLASST	CG215	AC	09-19-2018	13	Serious	27	57	16
COTTAGEGRV	NDOUGLASST	CG220	AC	09-19-2018	58	Fair	49	12	39
COTTAGEGRV	NDOUGLASST	CG216	AC	09-19-2018	0	Failed	26	37	37
COTTAGEGRV	NDOUGLASST	CG219	AC	09-19-2018	57	Fair	54	39	7
COTTAGEGRV	NELLISPL	CG60	AC	08-24-2018	55	Poor	100	0	0
COTTAGEGRV	NEVACT	CG235	AC	09-20-2018	76	Satisfactory	100	0	0
COTTAGEGRV	NGATEWAYBL	CG278	AC	09-26-2018	49	Poor	22	78	0
COTTAGEGRV	NGATEWAYBL	CG276	AC	09-26-2018	68	Fair	27	73	0
COTTAGEGRV	NGATEWAYBL	CG277	AC	09-26-2018	62	Fair	23	77	0
COTTAGEGRV	NGATEWAYBL	CG279	AC	09-26-2018	100	Good	0	0	0
COTTAGEGRV	NGST	CG69	AC	08-24-2018	62	Fair	100	0	0

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	NGST	CG70	AC	08-24-2018	31	Very Poor	36	21	43
COTTAGEGRV	NHST	CG71	AC	08-24-2018	36	Very Poor	31	60	9
COTTAGEGRV	NIST	CG72	AC	08-24-2018	46	Poor	42	40	18
COTTAGEGRV	NJST	CG73	AC	08-24-2018	34	Very Poor	33	56	11
COTTAGEGRV	NKST	CG74	AC	08-24-2018	72	Satisfactory	65	35	0
COTTAGEGRV	NLANEST	CG212	AC	09-19-2018	51	Poor	68	18	14
COTTAGEGRV	NLANEST	CG208	AC	09-06-2018	39	Very Poor	58	0	42
COTTAGEGRV	NLANEST	CG211	AC	09-06-2018	48	Poor	48	22	30
COTTAGEGRV	NLANEST	CG209	AC	09-06-2018	84	Satisfactory	67	0	33
COTTAGEGRV	NLANEST	CG210	AC	09-06-2018	43	Poor	48	31	21
COTTAGEGRV	NLST	CG75	AC	08-24-2018	73	Satisfactory	92	0	8
COTTAGEGRV	NMST	CG76	AC	08-24-2018	57	Fair	32	47	21
COTTAGEGRV	NMST	CG77	AC	08-24-2018	86	Good	100	0	0
COTTAGEGRV	NNST	CG78	AC	08-24-2018	77	Satisfactory	82	0	18
COTTAGEGRV	NOST	CG80	AC	08-24-2018	84	Satisfactory	100	0	0
COTTAGEGRV	NOST	CG79	AC	08-24-2018	67	Fair	64	10	26
COTTAGEGRV	NOST	CG316	PCC	10-02-2018	48	Poor	4	77	19
COTTAGEGRV	NPST	CG82	AC	08-24-2018	96	Good	100	0	0
COTTAGEGRV	NPST	CG81	AC	08-24-2018	61	Fair	53	27	20
COTTAGEGRV	NQST	CG87	AC	08-24-2018	12	Serious	34	56	10
COTTAGEGRV	NRIVERRD	CG10	AC	08-23-2018	29	Very Poor	25	64	11
COTTAGEGRV	NRIVERRD	CG11	AC	08-23-2018	57	Fair	65	35	0
COTTAGEGRV	NRIVERRD	CG9	AC	08-23-2018	94	Good	97	0	3
COTTAGEGRV	OLSONPL	CG231	AC	09-19-2018	90	Good	100	0	0
COTTAGEGRV	OSTRANDERL	CG299	AC	09-27-2018	35	Very Poor	47	31	22
COTTAGEGRV	OSTRANDERL	CG298	AC	09-27-2018	49	Poor	68	26	6
COTTAGEGRV	OSWALDWAVE	CG297	AC	09-27-2018	43	Poor	49	44	7
COTTAGEGRV	PALMERAVE	CG312	AC	09-28-2018	57	Fair	43	31	26
COTTAGEGRV	PARKSRD	CG300	AC	09-24-2018	72	Satisfactory	47	35	18
COTTAGEGRV	PENNOYERAV	CG194	AC	09-26-2018	65	Fair	100	0	0
COTTAGEGRV	PENNOYERAV	CG193	AC	09-06-2018	63	Fair	46	0	54
COTTAGEGRV	POLKAVE	CG248	AC	09-24-2018	9	Failed	26	63	11
COTTAGEGRV	PRITCHETTP	CG290	AC	09-26-2018	66	Fair	79	21	0
COTTAGEGRV	REDHILLSPL	CG301	AC	09-24-2018	98	Good	100	0	0
COTTAGEGRV	RIVERFRONT	CG95	AC	08-20-2018	86	Good	82	18	0
COTTAGEGRV	RIVERWALKP	CG94	AC	08-20-2018	91	Good	100	0	0
COTTAGEGRV	RIVERWALKP	CG93	AC	08-20-2018	95	Good	100	0	0
COTTAGEGRV	ROWRIVERCO	CG310	AC	09-27-2018	16	Serious	18	77	5
COTTAGEGRV	S10THST	CG250	AC	09-20-2018	83	Satisfactory	20	0	80
COTTAGEGRV	S10THST	CG252	AC	09-24-2018	26	Very Poor	17	78	5
COTTAGEGRV	S10THST	CG253	AC	09-24-2018	50	Poor	34	35	31
COTTAGEGRV	S10THST	CG251	AC	09-21-2018	95	Good	100	0	0
COTTAGEGRV	S11THST	CG256	AC	09-25-2018	51	Poor	37	31	32
COTTAGEGRV	S11THST	CG254	AC	09-24-2018	22	Serious	11	76	13
COTTAGEGRV	S12THST	CG257	AC	09-24-2018	42	Poor	50	46	4
COTTAGEGRV	S12THST	CG258	AC	09-25-2018	54	Poor	52	46	2
COTTAGEGRV	S13THST	CG260	AC	09-24-2018	70	Fair	94	6	0

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	S13THST	CG261	AC	09-25-2018	57	Fair	48	25	27
COTTAGEGRV	S14THST	CG263	AC	09-25-2018	22	Serious	22	39	39
COTTAGEGRV	S14THST	CG262	AC	09-24-2018	58	Fair	100	0	0
COTTAGEGRV	S15THST	CG269	AC	09-25-2018	82	Satisfactory	100	0	0
COTTAGEGRV	S16THST	CG270	AC	09-26-2018	64	Fair	41	50	9
COTTAGEGRV	S17THST	CG272	AC	09-26-2018	62	Fair	49	23	28
COTTAGEGRV	S1STST	CG91	AC	08-20-2018	95	Good	100	0	0
COTTAGEGRV	S1STST	CG92	AC	08-30-2018	31	Very Poor	14	66	20
COTTAGEGRV	S21STST	CG296	AC	10-01-2018	81	Satisfactory	4	0	96
COTTAGEGRV	S22NDST	CG303	AC	09-27-2018	71	Satisfactory	73	16	11
COTTAGEGRV	S2NDST	CG100	AC	09-05-2018	54	Poor	59	25	16
COTTAGEGRV	S2NDST	CG98	AC	08-20-2018	91	Good	52	0	48
COTTAGEGRV	S2NDST	CG99	AC	08-20-2018	95	Good	100	0	0
COTTAGEGRV	S3RDST	CG103	AC	09-05-2018	14	Serious	19	50	31
COTTAGEGRV	S3RDST	CG101	AC	09-05-2018	88	Good	100	0	0
COTTAGEGRV	S3RDST	CG102	AC	09-05-2018	37	Very Poor	33	23	44
COTTAGEGRV	S4THST	CG105	AC	09-20-2018	45	Poor	27	59	14
COTTAGEGRV	S4THST	CG104	AC	09-20-2018	58	Fair	67	0	33
COTTAGEGRV	S4THST	CG106	AC	09-21-2018	25	Serious	19	71	10
COTTAGEGRV	S4THST	CG107	AC	09-21-2018	76	Satisfactory	53	47	0
COTTAGEGRV	S4THSTY	CG108	AC	09-21-2018	78	Satisfactory	91	0	9
COTTAGEGRV	S5THST	CG318	PCC	10-02-2018	65	Fair	7	72	21
COTTAGEGRV	S5THST	CG109	AC	09-21-2018	38	Very Poor	32	68	0
COTTAGEGRV	S5THST	CG317	PCC	10-02-2018	56	Fair	9	48	43
COTTAGEGRV	S5THST	CG110	AC	09-05-2018	28	Very Poor	70	0	30
COTTAGEGRV	S6THST	CG116	AC	09-05-2018	44	Poor	45	55	0
COTTAGEGRV	S6THST	CG112	AC	09-21-2018	74	Satisfactory	50	48	2
COTTAGEGRV	S6THST	CG113	AC	09-21-2018	75	Satisfactory	83	3	14
COTTAGEGRV	S6THST	CG114	AC	09-21-2018	86	Good	100	0	0
COTTAGEGRV	S6THST	CG115	AC	09-05-2018	40	Very Poor	77	15	8
COTTAGEGRV	S6THSTY	CG222	AC	09-28-2018	43	Poor	59	28	13
COTTAGEGRV	S7THST	CG121	AC	09-21-2018	58	Fair	64	14	22
COTTAGEGRV	S7THST	CG122	AC	09-05-2018	62	Fair	75	0	25
COTTAGEGRV	S7THST	CG119	AC	09-21-2018	70	Fair	70	30	0
COTTAGEGRV	S7THST	CG120	AC	09-21-2018	35	Very Poor	34	55	11
COTTAGEGRV	S8THST	CG129	AC	09-20-2018	60	Fair	39	30	31
COTTAGEGRV	S8THST	CG126	AC	09-20-2018	69	Fair	36	0	64
COTTAGEGRV	S8THST	CG128	AC	09-20-2018	54	Poor	91	3	6
COTTAGEGRV	S8THST	CG127	AC	09-20-2018	66	Fair	49	51	0
COTTAGEGRV	S8THST	CG125	AC	09-20-2018	95	Good	100	0	0
COTTAGEGRV	S8THST	CG320	PCC	10-02-2018	54	Poor	13	49	38
COTTAGEGRV	S8THST	CG130	AC	09-05-2018	34	Very Poor	39	43	18
COTTAGEGRV	SCT	CG21	AC	08-24-2018	56	Fair	100	0	0
COTTAGEGRV	SDOUGLASST	CG221	AC	09-21-2018	35	Very Poor	55	45	0
COTTAGEGRV	SGATEWAYBL	CG275	AC	09-26-2018	45	Poor	45	48	7
COTTAGEGRV	SGATEWAYBL	CG274	AC	09-26-2018	56	Fair	40	52	8
COTTAGEGRV	SMST	CG54	AC	08-30-2018	24	Serious	24	51	25

Table 2B - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - SECTION CONDITION
2018 PCI SURVEY RESULTS SUMMARY

NetworkID	BranchID	SectionID	Surface Type	Last Inspection Date	PCI	PCI Category	PCI Pct Climate	PCI Pct Load	PCI Pct Other
COTTAGEGRV	SMST	CG53	AC	08-30-2018	13	Serious	27	56	17
COTTAGEGRV	SMST	CG55	AC	08-30-2018	76	Satisfactory	73	0	27
COTTAGEGRV	SNST	CG56	AC	08-29-2018	3	Failed	31	55	14
COTTAGEGRV	SOST	CG57	AC	08-29-2018	20	Serious	23	77	0
COTTAGEGRV	SPST	CG58	AC	08-29-2018	12	Serious	10	90	0
COTTAGEGRV	SRIVERRD	CG7	AC	08-23-2018	80	Satisfactory	100	0	0
COTTAGEGRV	SRIVERRD	CG6	AC	08-23-2018	32	Very Poor	32	66	2
COTTAGEGRV	SRIVERRD	CG5	AC	08-23-2018	58	Fair	24	61	15
COTTAGEGRV	SRIVERRD	CG8	AC	08-23-2018	94	Good	100	0	0
COTTAGEGRV	SRIVERRDFR	CG4	AC	08-30-2018	69	Fair	61	0	39
COTTAGEGRV	SRST	CG18	AC	08-24-2018	75	Satisfactory	53	47	0
COTTAGEGRV	SRST	CG3	AC	08-20-2018	85	Satisfactory	100	0	0
COTTAGEGRV	SRST	CG19	AC	08-24-2018	44	Poor	43	57	0
COTTAGEGRV	SRST	CG20	AC	08-24-2018	78	Satisfactory	34	60	6
COTTAGEGRV	SSST	CG50	AC	08-30-2018	59	Fair	59	37	4
COTTAGEGRV	STCT	CG22	AC	08-24-2018	81	Satisfactory	100	0	0
COTTAGEGRV	SUST	CG23	AC	08-24-2018	75	Satisfactory	100	0	0
COTTAGEGRV	SVCT	CG24	AC	08-24-2018	55	Poor	36	64	0
COTTAGEGRV	TAYLORPL	CG97	AC	08-20-2018	91	Good	100	0	0
COTTAGEGRV	THAYERAVE	CG192	AC	09-06-2018	44	Poor	48	0	52
COTTAGEGRV	THOMASPL	CG308	AC	09-28-2018	13	Serious	13	62	25
COTTAGEGRV	THORNTONRD	CG309	AC	09-28-2018	35	Very Poor	32	48	20
COTTAGEGRV	TYLERAVE	CG96	AC	08-20-2018	95	Good	100	0	0
COTTAGEGRV	TYLERAVE	CG268	AC	09-24-2018	57	Fair	46	26	28
COTTAGEGRV	VANBURENAV	CG135	AC	08-30-2018	81	Satisfactory	85	0	15
COTTAGEGRV	VILLAGEDR	CG314	AC	09-28-2018	53	Poor	59	41	0
COTTAGEGRV	VILLARDAVE	CG201	AC	09-06-2018	50	Poor	72	12	16
COTTAGEGRV	VILLARDAVE	CG202	AC	09-06-2018	50	Poor	52	43	5
COTTAGEGRV	VINCENTPL	CG213	AC	09-06-2018	91	Good	100	0	0
COTTAGEGRV	WASHINGTON	CG304	AC	09-27-2018	76	Satisfactory	100	0	0
COTTAGEGRV	WHARRISONA	CG27	AC	08-24-2018	56	Fair	58	35	7
COTTAGEGRV	WHITMANBLV	CG13	AC	08-24-2018	73	Satisfactory	100	0	0
COTTAGEGRV	WILSONAVE	CG229	AC	09-19-2018	89	Good	100	0	0
COTTAGEGRV	WILSONCT	CG230	AC	09-19-2018	91	Good	100	0	0
COTTAGEGRV	WITHYCOMBE	CG207	AC	09-06-2018	48	Poor	23	65	12
COTTAGEGRV	WMAINST	CG62	AC	08-30-2018	82	Satisfactory	42	58	0
COTTAGEGRV	WOODAVE	CG186	AC	09-06-2018	8	Failed	25	60	15
COTTAGEGRV	WOODSONPL	CG12	AC	08-30-2018	88	Good	100	0	0
COTTAGEGRV	YOSSPL	CG232	AC	09-19-2018	95	Good	100	0	0

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**APPENDIX C:
2018 DETAILED PAVEMENT CONDITION SURVEY**

Note – Survey provided electronically.

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**APPENDIX D:
CONDITION PREDICTION MODELS AND CONDITION ANALYSIS**

Table D1, Table D2, Figure 1D, Figure 2D, Figure 3D, and Figure 4D

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition In 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	ADAMSAVE	CG159	20	Serious	18	Serious	9	Failed
COTTAGEGRV	ADAMSAVE	CG160	69	Fair	67	Fair	58	Fair
COTTAGEGRV	ADAMSAVE	CG161	34	Very Poor	32	Very Poor	23	Serious
COTTAGEGRV	ADAMSAVE	CG162	59	Fair	57	Fair	48	Poor
COTTAGEGRV	ADAMSAVE	CG163	60	Fair	58	Fair	49	Poor
COTTAGEGRV	ANTHONYAVE	CG49	57	Fair	55	Poor	46	Poor
COTTAGEGRV	ANTHONYCT	CG59	63	Fair	61	Fair	52	Poor
COTTAGEGRV	ARTHURAVE	CG234	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	ASHAVE	CG61	77	Satisfactory	75	Satisfactory	66	Fair
COTTAGEGRV	ASHAVE	CG63	53	Poor	51	Poor	42	Poor
COTTAGEGRV	ASHAVE	CG64	33	Very Poor	31	Very Poor	22	Serious
COTTAGEGRV	BANGLECT	CG305	70	Fair	68	Fair	59	Fair
COTTAGEGRV	BELMONTAVE	CG273	52	Poor	50	Poor	41	Poor
COTTAGEGRV	BENJAMINAV	CG227	86	Good	84	Satisfactory	75	Satisfactory
COTTAGEGRV	BENJAMINAV	CG228	87	Good	85	Satisfactory	76	Satisfactory
COTTAGEGRV	BIRCHAVE	CG65	69	Fair	67	Fair	58	Fair
COTTAGEGRV	BIRCHAVE	CG66	45	Poor	43	Poor	34	Very Poor
COTTAGEGRV	BIRCHAVE	CG67	61	Fair	59	Fair	50	Poor
COTTAGEGRV	BLAIRCT	CG51	52	Poor	50	Poor	41	Poor
COTTAGEGRV	BLUESKYDR	CG25	30	Very Poor	27	Very Poor	13	Serious
COTTAGEGRV	BOHEMIAPL	CG38	61	Fair	59	Fair	50	Poor
COTTAGEGRV	BRYANTAVE	CG45	50	Poor	48	Poor	39	Very Poor
COTTAGEGRV	BRYANTAVE	CG46	40	Very Poor	38	Very Poor	29	Very Poor
COTTAGEGRV	BRYANTAVE	CG47	11	Serious	9	Failed	0	Failed
COTTAGEGRV	BRYANTAVE	CG48	11	Serious	9	Failed	0	Failed
COTTAGEGRV	BRYANTCT	CG52	34	Very Poor	32	Very Poor	23	Serious
COTTAGEGRV	CARNEGIEWA	CG2	89	Good	87	Good	78	Satisfactory
COTTAGEGRV	CAROBELLEC	CG271	53	Poor	51	Poor	42	Poor
COTTAGEGRV	CARVERAVE	CG43	19	Serious	17	Serious	8	Failed
COTTAGEGRV	CARVERPL	CG44	51	Poor	49	Poor	40	Very Poor
COTTAGEGRV	CHERRYCT	CG134	46	Poor	44	Poor	35	Very Poor
COTTAGEGRV	CHESTNUTAV	CG68	51	Poor	49	Poor	40	Very Poor
COTTAGEGRV	CLARKAVE	CG40	63	Fair	61	Fair	52	Poor
COTTAGEGRV	CLARKAVE	CG41	59	Fair	57	Fair	48	Poor
COTTAGEGRV	CLARKAVE	CG42	41	Poor	39	Very Poor	30	Very Poor
COTTAGEGRV	CLEVELANDS	CG124	84	Satisfactory	82	Satisfactory	73	Satisfactory
COTTAGEGRV	COLUMBIACT	CG214	73	Satisfactory	71	Satisfactory	62	Fair
COTTAGEGRV	COOPCT	CG292	74	Satisfactory	72	Satisfactory	63	Fair
COTTAGEGRV	COOPERAVE	CG240	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	COOPERAVE	CG241	39	Very Poor	37	Very Poor	28	Very Poor
COTTAGEGRV	COTTONWOOD	CG83	92	Good	90	Good	81	Satisfactory
COTTAGEGRV	CURRYAVE	CG289	67	Fair	65	Fair	56	Fair
COTTAGEGRV	DAUGHERTYA	CG39	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	DAVIDSONAV	CG311	47	Poor	45	Poor	36	Very Poor
COTTAGEGRV	DAVISPL	CG288	70	Fair	68	Fair	59	Fair
COTTAGEGRV	DOGWOODAVE	CG84	89	Good	87	Good	78	Satisfactory

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	DOUGLASFIR	CG85	90	Good	88	Good	79	Satisfactory
COTTAGEGRV	DUBLINLN	CG249	40	Very Poor	38	Very Poor	29	Very Poor
COTTAGEGRV	ECHADWICKA	CG189	63	Fair	61	Fair	52	Poor
COTTAGEGRV	ECHADWICKA	CG190	62	Fair	60	Fair	51	Poor
COTTAGEGRV	ECHADWICKA	CG191	59	Fair	57	Fair	48	Poor
COTTAGEGRV	ECHAMBERLA	CG197	58	Fair	55	Poor	41	Poor
COTTAGEGRV	ECHAMBERLA	CG198	15	Serious	12	Serious	0	Failed
COTTAGEGRV	ECHAMBERLA	CG199	15	Serious	13	Serious	4	Failed
COTTAGEGRV	EDISONAVE	CG16	54	Poor	52	Poor	43	Poor
COTTAGEGRV	EGIBBSAVE	CG182	57	Fair	55	Poor	46	Poor
COTTAGEGRV	EGIBBSAVE	CG183	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	EGIBBSAVE	CG184	50	Poor	48	Poor	39	Very Poor
COTTAGEGRV	EGIBBSAVE	CG185	42	Poor	40	Very Poor	31	Very Poor
COTTAGEGRV	EGROVERAVE	CG187	41	Poor	39	Very Poor	30	Very Poor
COTTAGEGRV	EGROVERAVE	CG188	82	Satisfactory	80	Satisfactory	71	Satisfactory
COTTAGEGRV	EGROVERAVE	CG293	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	EGROVERAVE	CG294	70	Fair	68	Fair	59	Fair
COTTAGEGRV	EHARRISONA	CG28	41	Poor	38	Very Poor	24	Serious
COTTAGEGRV	EHARRISONA	CG29	99	Good	96	Good	82	Satisfactory
COTTAGEGRV	EHARRISONA	CG30	56	Fair	53	Poor	39	Very Poor
COTTAGEGRV	EHARRISONA	CG31	71	Satisfactory	68	Fair	54	Poor
COTTAGEGRV	EHARRISONA	CG315	46	Poor	44	Poor	33	Very Poor
COTTAGEGRV	EJACKSONAV	CG265	48	Poor	46	Poor	37	Very Poor
COTTAGEGRV	EJEFFERSON	CG155	57	Fair	55	Poor	46	Poor
COTTAGEGRV	EJEFFERSON	CG156	86	Good	84	Satisfactory	75	Satisfactory
COTTAGEGRV	EJEFFERSON	CG157	19	Serious	17	Serious	8	Failed
COTTAGEGRV	EJEFFERSON	CG158	50	Poor	48	Poor	39	Very Poor
COTTAGEGRV	EJEFFERSON	CG321	60	Fair	58	Fair	47	Poor
COTTAGEGRV	EJEFFERSON	CG322	31	Very Poor	29	Very Poor	18	Serious
COTTAGEGRV	ELMAVE	CG86	89	Good	87	Good	78	Satisfactory
COTTAGEGRV	EMADISONAV	CG148	71	Satisfactory	69	Fair	60	Fair
COTTAGEGRV	EMADISONAV	CG149	56	Fair	54	Poor	45	Poor
COTTAGEGRV	EMADISONAV	CG150	52	Poor	50	Poor	41	Poor
COTTAGEGRV	EMADISONAV	CG151	50	Poor	47	Poor	33	Very Poor
COTTAGEGRV	EMADISONAV	CG152	51	Poor	48	Poor	34	Very Poor
COTTAGEGRV	EMADISONAV	CG153	69	Fair	67	Fair	58	Fair
COTTAGEGRV	EMADISONAV	CG154	76	Satisfactory	74	Satisfactory	65	Fair
COTTAGEGRV	EMAINST	CG172	50	Poor	46	Poor	27	Very Poor
COTTAGEGRV	EMAINST	CG173	79	Satisfactory	75	Satisfactory	56	Fair
COTTAGEGRV	EMAINST	CG174	85	Satisfactory	81	Satisfactory	62	Fair
COTTAGEGRV	EMAINST	CG175	30	Very Poor	26	Very Poor	7	Failed
COTTAGEGRV	EMAINST	CG176	61	Fair	59	Fair	50	Poor
COTTAGEGRV	EMAINST	CG177	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	EMAINST	CG178	77	Satisfactory	75	Satisfactory	66	Fair
COTTAGEGRV	EMONROEAVE	CG145	87	Good	85	Satisfactory	76	Satisfactory
COTTAGEGRV	EMONROEAVE	CG146	38	Very Poor	36	Very Poor	27	Very Poor

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	EMONROEAVE	CG147	33	Very Poor	31	Very Poor	22	Serious
COTTAGEGRV	EQUINCYAVE	CG136	10	Failed	8	Failed	0	Failed
COTTAGEGRV	EQUINCYAVE	CG137	80	Satisfactory	78	Satisfactory	69	Fair
COTTAGEGRV	EQUINCYAVE	CG138	85	Satisfactory	83	Satisfactory	74	Satisfactory
COTTAGEGRV	EQUINCYAVE	CG139	0	Failed	0	Failed	0	Failed
COTTAGEGRV	EQUINCYAVE	CG140	56	Fair	54	Poor	45	Poor
COTTAGEGRV	EQUINCYAVE	CG141	59	Fair	57	Fair	48	Poor
COTTAGEGRV	EQUINCYAVE	CG142	68	Fair	66	Fair	57	Fair
COTTAGEGRV	EQUINCYAVE	CG143	63	Fair	61	Fair	52	Poor
COTTAGEGRV	EQUINCYAVE	CG144	45	Poor	43	Poor	34	Very Poor
COTTAGEGRV	ETAYLORAVE	CG244	52	Poor	49	Poor	35	Very Poor
COTTAGEGRV	ETAYLORAVE	CG245	38	Very Poor	35	Very Poor	21	Serious
COTTAGEGRV	ETAYLORAVE	CG246	44	Poor	41	Poor	27	Very Poor
COTTAGEGRV	ETAYLORAVE	CG247	60	Fair	58	Fair	49	Poor
COTTAGEGRV	EVANBURENA	CG266	53	Poor	51	Poor	42	Poor
COTTAGEGRV	EVANBURENA	CG267	71	Satisfactory	69	Fair	60	Fair
COTTAGEGRV	EWASHINGTO	CG164	38	Very Poor	36	Very Poor	27	Very Poor
COTTAGEGRV	EWASHINGTO	CG165	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	EWASHINGTO	CG166	74	Satisfactory	72	Satisfactory	63	Fair
COTTAGEGRV	EWASHINGTO	CG167	77	Satisfactory	75	Satisfactory	66	Fair
COTTAGEGRV	EWASHINGTO	CG168	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	EWASHINGTO	CG169	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	EWASHINGTO	CG170	67	Fair	65	Fair	56	Fair
COTTAGEGRV	EWASHINGTO	CG171	61	Fair	59	Fair	50	Poor
COTTAGEGRV	EWWHITEAKER	CG179	46	Poor	44	Poor	35	Very Poor
COTTAGEGRV	EWWHITEAKER	CG180	24	Serious	20	Serious	1	Failed
COTTAGEGRV	EWWHITEAKER	CG181	26	Very Poor	22	Serious	3	Failed
COTTAGEGRV	FAIRVIEWLP	CG32	53	Poor	51	Poor	42	Poor
COTTAGEGRV	FAIRVIEWPL	CG33	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	FILLMOREAV	CG242	49	Poor	47	Poor	38	Very Poor
COTTAGEGRV	FILLMOREAV	CG243	64	Fair	62	Fair	53	Poor
COTTAGEGRV	GEERAVE	CG196	45	Poor	43	Poor	34	Very Poor
COTTAGEGRV	GETTYCIRCL	CG1	92	Good	90	Good	81	Satisfactory
COTTAGEGRV	GIRARDAVE	CG34	56	Fair	54	Poor	45	Poor
COTTAGEGRV	GIRARDAVE	CG35	63	Fair	61	Fair	52	Poor
COTTAGEGRV	GIRARDAVE	CG36	92	Good	90	Good	81	Satisfactory
COTTAGEGRV	GIRARDCT	CG37	61	Fair	59	Fair	50	Poor
COTTAGEGRV	GRANTAVE	CG224	22	Serious	20	Serious	11	Serious
COTTAGEGRV	GRANTAVE	CG225	55	Poor	52	Poor	38	Very Poor
COTTAGEGRV	HARDINGPL	CG233	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	HARRISONCT	CG17	78	Satisfactory	76	Satisfactory	67	Fair
COTTAGEGRV	HARVEYLN	CG286	74	Satisfactory	72	Satisfactory	63	Fair
COTTAGEGRV	HARVEYLN	CG287	56	Fair	54	Poor	45	Poor
COTTAGEGRV	HARVEYRD	CG284	53	Poor	50	Poor	36	Very Poor
COTTAGEGRV	HARVEYRD	CG285	45	Poor	42	Poor	28	Very Poor
COTTAGEGRV	HAYESAV	CG223	69	Fair	67	Fair	58	Fair

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	HOLLYAVE	CG90	78	Satisfactory	76	Satisfactory	67	Fair
COTTAGEGRV	IBSENAVE	CG26	79	Satisfactory	77	Satisfactory	68	Fair
COTTAGEGRV	JASONLEEAV	CG15	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	JIMWRIGHTW	CG313	43	Poor	41	Poor	32	Very Poor
COTTAGEGRV	JOHNSONAVE	CG236	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	KALAPUYAWA	CG88	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	KALAPUYSCT	CG89	71	Satisfactory	69	Fair	60	Fair
COTTAGEGRV	KATHLEENDR	CG226	84	Satisfactory	82	Satisfactory	73	Satisfactory
COTTAGEGRV	LANDESSRD	CG306	69	Fair	67	Fair	58	Fair
COTTAGEGRV	LANECT	CG206	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	LINCOLNAVE	CG237	62	Fair	59	Fair	45	Poor
COTTAGEGRV	LINCOLNAVE	CG238	44	Poor	41	Poor	27	Very Poor
COTTAGEGRV	LINCOLNAVE	CG239	10	Failed	7	Failed	0	Failed
COTTAGEGRV	LORDAVE	CG195	38	Very Poor	36	Very Poor	27	Very Poor
COTTAGEGRV	MEEKERDR	CG14	67	Fair	65	Fair	56	Fair
COTTAGEGRV	MOSBYCRRD	CG307	57	Fair	53	Poor	34	Very Poor
COTTAGEGRV	N10THST	CG200	53	Poor	51	Poor	42	Poor
COTTAGEGRV	N11THST	CG203	69	Fair	67	Fair	58	Fair
COTTAGEGRV	N11THST	CG204	43	Poor	41	Poor	32	Very Poor
COTTAGEGRV	N11THST	CG205	86	Good	84	Satisfactory	75	Satisfactory
COTTAGEGRV	N12THST	CG259	80	Satisfactory	78	Satisfactory	69	Fair
COTTAGEGRV	N14THST	CG264	46	Poor	44	Poor	35	Very Poor
COTTAGEGRV	N14THST	CG291	60	Fair	58	Fair	49	Poor
COTTAGEGRV	N16THST	CG282	23	Serious	20	Serious	6	Failed
COTTAGEGRV	N16THST	CG283	25	Serious	22	Serious	8	Failed
COTTAGEGRV	N19THST	CG280	19	Serious	17	Serious	8	Failed
COTTAGEGRV	N19THST	CG281	74	Satisfactory	72	Satisfactory	63	Fair
COTTAGEGRV	N20THST	CG295	69	Fair	67	Fair	58	Fair
COTTAGEGRV	N22NDST	CG302	71	Satisfactory	69	Fair	60	Fair
COTTAGEGRV	N5THST	CG111	39	Very Poor	37	Very Poor	28	Very Poor
COTTAGEGRV	N6THST	CG117	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	N6THST	CG118	52	Poor	50	Poor	41	Poor
COTTAGEGRV	N7THST	CG123	57	Fair	55	Poor	46	Poor
COTTAGEGRV	N7THST	CG319	33	Very Poor	31	Very Poor	20	Serious
COTTAGEGRV	N8THST	CG131	59	Fair	57	Fair	48	Poor
COTTAGEGRV	N8THST	CG132	55	Poor	53	Poor	44	Poor
COTTAGEGRV	N8THST	CG133	96	Good	94	Good	85	Satisfactory
COTTAGEGRV	NDOUGLASST	CG215	13	Serious	11	Serious	2	Failed
COTTAGEGRV	NDOUGLASST	CG216	0	Failed	0	Failed	0	Failed
COTTAGEGRV	NDOUGLASST	CG217	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	NDOUGLASST	CG218	44	Poor	41	Poor	27	Very Poor
COTTAGEGRV	NDOUGLASST	CG219	57	Fair	55	Poor	46	Poor
COTTAGEGRV	NDOUGLASST	CG220	58	Fair	56	Fair	47	Poor
COTTAGEGRV	NELLISPL	CG60	55	Poor	53	Poor	44	Poor
COTTAGEGRV	NEVACT	CG235	76	Satisfactory	74	Satisfactory	65	Fair
COTTAGEGRV	NGATEWAYBL	CG276	68	Fair	64	Fair	45	Poor

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	NGATEWAYBL	CG277	62	Fair	58	Fair	39	Very Poor
COTTAGEGRV	NGATEWAYBL	CG278	49	Poor	45	Poor	26	Very Poor
COTTAGEGRV	NGATEWAYBL	CG279	100	Good	96	Good	77	Satisfactory
COTTAGEGRV	NGST	CG69	62	Fair	60	Fair	51	Poor
COTTAGEGRV	NGST	CG70	31	Very Poor	29	Very Poor	20	Serious
COTTAGEGRV	NHST	CG71	36	Very Poor	34	Very Poor	25	Serious
COTTAGEGRV	NIST	CG72	46	Poor	44	Poor	35	Very Poor
COTTAGEGRV	NJST	CG73	34	Very Poor	32	Very Poor	23	Serious
COTTAGEGRV	NKST	CG74	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	NLANEST	CG208	39	Very Poor	37	Very Poor	28	Very Poor
COTTAGEGRV	NLANEST	CG209	84	Satisfactory	82	Satisfactory	73	Satisfactory
COTTAGEGRV	NLANEST	CG210	43	Poor	41	Poor	32	Very Poor
COTTAGEGRV	NLANEST	CG211	48	Poor	46	Poor	37	Very Poor
COTTAGEGRV	NLANEST	CG212	51	Poor	49	Poor	40	Very Poor
COTTAGEGRV	NLST	CG75	73	Satisfactory	71	Satisfactory	62	Fair
COTTAGEGRV	NMST	CG76	57	Fair	54	Poor	40	Very Poor
COTTAGEGRV	NMST	CG77	86	Good	83	Satisfactory	69	Fair
COTTAGEGRV	NNST	CG78	77	Satisfactory	75	Satisfactory	66	Fair
COTTAGEGRV	NOST	CG316	48	Poor	46	Poor	35	Very Poor
COTTAGEGRV	NOST	CG79	67	Fair	65	Fair	56	Fair
COTTAGEGRV	NOST	CG80	84	Satisfactory	82	Satisfactory	73	Satisfactory
COTTAGEGRV	NPST	CG81	61	Fair	59	Fair	50	Poor
COTTAGEGRV	NPST	CG82	96	Good	94	Good	85	Satisfactory
COTTAGEGRV	NQST	CG87	12	Serious	10	Failed	1	Failed
COTTAGEGRV	NRIVERRD	CG10	29	Very Poor	25	Serious	6	Failed
COTTAGEGRV	NRIVERRD	CG11	57	Fair	55	Poor	46	Poor
COTTAGEGRV	NRIVERRD	CG9	94	Good	90	Good	71	Satisfactory
COTTAGEGRV	OLSONPL	CG231	90	Good	88	Good	79	Satisfactory
COTTAGEGRV	OSTRANDERL	CG298	49	Poor	46	Poor	32	Very Poor
COTTAGEGRV	OSTRANDERL	CG299	35	Very Poor	32	Very Poor	18	Serious
COTTAGEGRV	OSWALDWAVE	CG297	43	Poor	40	Very Poor	26	Very Poor
COTTAGEGRV	PALMERA VE	CG312	57	Fair	55	Poor	46	Poor
COTTAGEGRV	PARKSRD	CG300	72	Satisfactory	70	Fair	61	Fair
COTTAGEGRV	PENNOYERAV	CG193	63	Fair	61	Fair	52	Poor
COTTAGEGRV	PENNOYERAV	CG194	65	Fair	63	Fair	54	Poor
COTTAGEGRV	POLKAVE	CG248	9	Failed	7	Failed	0	Failed
COTTAGEGRV	PRITCHETTP	CG290	66	Fair	64	Fair	55	Poor
COTTAGEGRV	REDHILLSPL	CG301	98	Good	96	Good	87	Good
COTTAGEGRV	RIVERFRONT	CG95	86	Good	84	Satisfactory	75	Satisfactory
COTTAGEGRV	RIVERWALKP	CG93	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	RIVERWALKP	CG94	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	ROWRIVERCO	CG310	16	Serious	12	Serious	0	Failed
COTTAGEGRV	S10THST	CG250	83	Satisfactory	81	Satisfactory	72	Satisfactory
COTTAGEGRV	S10THST	CG251	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	S10THST	CG252	26	Very Poor	23	Serious	9	Failed
COTTAGEGRV	S10THST	CG253	50	Poor	47	Poor	33	Very Poor

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	S11THST	CG254	22	Serious	20	Serious	11	Serious
COTTAGEGRV	S11THST	CG256	51	Poor	49	Poor	40	Very Poor
COTTAGEGRV	S12THST	CG257	42	Poor	40	Very Poor	31	Very Poor
COTTAGEGRV	S12THST	CG258	54	Poor	52	Poor	43	Poor
COTTAGEGRV	S13THST	CG260	70	Fair	68	Fair	59	Fair
COTTAGEGRV	S13THST	CG261	57	Fair	55	Poor	46	Poor
COTTAGEGRV	S14THST	CG262	58	Fair	56	Fair	47	Poor
COTTAGEGRV	S14THST	CG263	22	Serious	20	Serious	11	Serious
COTTAGEGRV	S15THST	CG269	82	Satisfactory	80	Satisfactory	71	Satisfactory
COTTAGEGRV	S16THST	CG270	64	Fair	61	Fair	47	Poor
COTTAGEGRV	S17THST	CG272	62	Fair	60	Fair	51	Poor
COTTAGEGRV	S1STST	CG91	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	S1STST	CG92	31	Very Poor	29	Very Poor	20	Serious
COTTAGEGRV	S21STST	CG296	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	S22NDST	CG303	71	Satisfactory	69	Fair	60	Fair
COTTAGEGRV	S2NDST	CG100	54	Poor	52	Poor	43	Poor
COTTAGEGRV	S2NDST	CG98	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	S2NDST	CG99	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	S3RDST	CG101	88	Good	86	Good	77	Satisfactory
COTTAGEGRV	S3RDST	CG102	37	Very Poor	35	Very Poor	26	Very Poor
COTTAGEGRV	S3RDST	CG103	14	Serious	12	Serious	3	Failed
COTTAGEGRV	S4THST	CG104	58	Fair	56	Fair	47	Poor
COTTAGEGRV	S4THST	CG105	45	Poor	42	Poor	28	Very Poor
COTTAGEGRV	S4THST	CG106	25	Serious	22	Serious	8	Failed
COTTAGEGRV	S4THST	CG107	76	Satisfactory	73	Satisfactory	59	Fair
COTTAGEGRV	S4THSTY	CG108	78	Satisfactory	76	Satisfactory	67	Fair
COTTAGEGRV	S5THST	CG109	38	Very Poor	36	Very Poor	27	Very Poor
COTTAGEGRV	S5THST	CG110	28	Very Poor	26	Very Poor	17	Serious
COTTAGEGRV	S5THST	CG317	56	Fair	54	Poor	43	Poor
COTTAGEGRV	S5THST	CG318	65	Fair	63	Fair	52	Poor
COTTAGEGRV	S6THST	CG112	74	Satisfactory	70	Fair	51	Poor
COTTAGEGRV	S6THST	CG113	75	Satisfactory	71	Satisfactory	52	Poor
COTTAGEGRV	S6THST	CG114	86	Good	82	Satisfactory	63	Fair
COTTAGEGRV	S6THST	CG115	40	Very Poor	37	Very Poor	23	Serious
COTTAGEGRV	S6THST	CG116	44	Poor	41	Poor	27	Very Poor
COTTAGEGRV	S6THSTY	CG222	43	Poor	41	Poor	32	Very Poor
COTTAGEGRV	S7THST	CG119	70	Fair	68	Fair	59	Fair
COTTAGEGRV	S7THST	CG120	35	Very Poor	33	Very Poor	24	Serious
COTTAGEGRV	S7THST	CG121	58	Fair	56	Fair	47	Poor
COTTAGEGRV	S7THST	CG122	62	Fair	60	Fair	51	Poor
COTTAGEGRV	S8THST	CG125	95	Good	92	Good	78	Satisfactory
COTTAGEGRV	S8THST	CG126	69	Fair	66	Fair	52	Poor
COTTAGEGRV	S8THST	CG127	66	Fair	63	Fair	49	Poor
COTTAGEGRV	S8THST	CG128	54	Poor	51	Poor	37	Very Poor
COTTAGEGRV	S8THST	CG129	60	Fair	58	Fair	49	Poor
COTTAGEGRV	S8THST	CG130	34	Very Poor	32	Very Poor	23	Serious

Table 1D - PREDICTED PAVEMENT CONDITION WITH NO M&R WORK - CONDITION ANALYSIS

NetworkID	BranchID	Section ID	Current PCI 2018	Current Condition 2018	PCI in 2020	Condition in 2020	PCI in 2029	Condition in 2029
COTTAGEGRV	S8THST	CG320	54	Poor	52	Poor	41	Poor
COTTAGEGRV	SCT	CG21	56	Fair	54	Poor	45	Poor
COTTAGEGRV	SDOUGLASST	CG221	35	Very Poor	33	Very Poor	24	Serious
COTTAGEGRV	SGATEWAYBL	CG274	56	Fair	52	Poor	33	Very Poor
COTTAGEGRV	SGATEWAYBL	CG275	45	Poor	41	Poor	22	Serious
COTTAGEGRV	SMST	CG53	13	Serious	11	Serious	2	Failed
COTTAGEGRV	SMST	CG54	24	Serious	22	Serious	13	Serious
COTTAGEGRV	SMST	CG55	76	Satisfactory	74	Satisfactory	65	Fair
COTTAGEGRV	SNST	CG56	3	Failed	1	Failed	0	Failed
COTTAGEGRV	SOST	CG57	20	Serious	18	Serious	9	Failed
COTTAGEGRV	SPST	CG58	12	Serious	10	Failed	1	Failed
COTTAGEGRV	SRIVERRD	CG5	58	Fair	54	Poor	35	Very Poor
COTTAGEGRV	SRIVERRD	CG6	32	Very Poor	28	Very Poor	9	Failed
COTTAGEGRV	SRIVERRD	CG7	80	Satisfactory	76	Satisfactory	57	Fair
COTTAGEGRV	SRIVERRD	CG8	94	Good	90	Good	71	Satisfactory
COTTAGEGRV	SRIVERRDFR	CG4	69	Fair	67	Fair	58	Fair
COTTAGEGRV	SRST	CG18	75	Satisfactory	71	Satisfactory	52	Poor
COTTAGEGRV	SRST	CG19	44	Poor	40	Very Poor	21	Serious
COTTAGEGRV	SRST	CG20	78	Satisfactory	74	Satisfactory	55	Poor
COTTAGEGRV	SRST	CG3	85	Satisfactory	83	Satisfactory	74	Satisfactory
COTTAGEGRV	SSST	CG50	59	Fair	57	Fair	48	Poor
COTTAGEGRV	STCT	CG22	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	SUST	CG23	75	Satisfactory	73	Satisfactory	64	Fair
COTTAGEGRV	SVCT	CG24	55	Poor	53	Poor	44	Poor
COTTAGEGRV	TAYLORPL	CG97	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	THAYERAVE	CG192	44	Poor	42	Poor	33	Very Poor
COTTAGEGRV	THOMASPL	CG308	13	Serious	11	Serious	2	Failed
COTTAGEGRV	THORNTONRD	CG309	35	Very Poor	32	Very Poor	18	Serious
COTTAGEGRV	TYLERAVE	CG268	57	Fair	55	Poor	46	Poor
COTTAGEGRV	TYLERAVE	CG96	95	Good	93	Good	84	Satisfactory
COTTAGEGRV	VANBURENAV	CG135	81	Satisfactory	79	Satisfactory	70	Fair
COTTAGEGRV	VILLAGEDR	CG314	53	Poor	51	Poor	42	Poor
COTTAGEGRV	VILLARDAVE	CG201	50	Poor	48	Poor	39	Very Poor
COTTAGEGRV	VILLARDAVE	CG202	50	Poor	48	Poor	39	Very Poor
COTTAGEGRV	VINCENTPL	CG213	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	WASHINGTON	CG304	76	Satisfactory	74	Satisfactory	65	Fair
COTTAGEGRV	WHARRISONA	CG27	56	Fair	53	Poor	39	Very Poor
COTTAGEGRV	WHITMANBLV	CG13	73	Satisfactory	71	Satisfactory	62	Fair
COTTAGEGRV	WILSONAVE	CG229	89	Good	87	Good	78	Satisfactory
COTTAGEGRV	WILSONCT	CG230	91	Good	89	Good	80	Satisfactory
COTTAGEGRV	WITHYCOMBE	CG207	48	Poor	46	Poor	37	Very Poor
COTTAGEGRV	WMAINST	CG62	82	Satisfactory	78	Satisfactory	59	Fair
COTTAGEGRV	WOODAVE	CG186	8	Failed	6	Failed	0	Failed
COTTAGEGRV	WOODSONPL	CG12	88	Good	84	Satisfactory	65	Fair
COTTAGEGRV	YOSSPL	CG232	95	Good	93	Good	84	Satisfactory

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	ADAMSAVE	CG159	AC	20	0 - 5	50	0 - 5
COTTAGEGRV	ADAMSAVE	CG160	AC	69	16 - 20	50	> 20
COTTAGEGRV	ADAMSAVE	CG161	AC	34	0 - 5	50	0 - 5
COTTAGEGRV	ADAMSAVE	CG162	AC	59	6 - 10	50	> 20
COTTAGEGRV	ADAMSAVE	CG163	AC	60	6 - 10	50	> 20
COTTAGEGRV	ANTHONYAVE	CG49	AC	57	6 - 10	50	> 20
COTTAGEGRV	ANTHONYCT	CG59	AC	63	11 - 15	50	> 20
COTTAGEGRV	ARTHURAVE	CG234	AC	75	> 20	50	> 20
COTTAGEGRV	ASHAVE	CG61	AC	77	> 20	50	> 20
COTTAGEGRV	ASHAVE	CG63	AC	53	0 - 5	50	> 20
COTTAGEGRV	ASHAVE	CG64	AC	33	0 - 5	50	0 - 5
COTTAGEGRV	BANGLECT	CG305	AC	70	16 - 20	50	> 20
COTTAGEGRV	BELMONTAVE	CG273	AC	52	0 - 5	50	> 20
COTTAGEGRV	BENJAMINAV	CG227	AC	86	> 20	50	> 20
COTTAGEGRV	BENJAMINAV	CG228	AC	87	> 20	50	> 20
COTTAGEGRV	BIRCHAVE	CG65	AC	69	16 - 20	50	> 20
COTTAGEGRV	BIRCHAVE	CG66	AC	45	0 - 5	50	11 - 15
COTTAGEGRV	BIRCHAVE	CG67	AC	61	11 - 15	50	> 20
COTTAGEGRV	BLAIRCT	CG51	AC	52	0 - 5	50	> 20
COTTAGEGRV	BLUESKYDR	CG25	AC	30	0 - 5	60	0 - 5
COTTAGEGRV	BOHEMIAPL	CG38	AC	61	11 - 15	50	> 20
COTTAGEGRV	BRYANTAVE	CG45	AC	50	0 - 5	50	16 - 20
COTTAGEGRV	BRYANTAVE	CG46	AC	40	0 - 5	50	6 - 10
COTTAGEGRV	BRYANTAVE	CG47	AC	11	0 - 5	50	0 - 5
COTTAGEGRV	BRYANTAVE	CG48	AC	11	0 - 5	50	0 - 5
COTTAGEGRV	BRYANTCT	CG52	AC	34	0 - 5	50	0 - 5
COTTAGEGRV	CARNEGIEWA	CG2	AC	89	> 20	50	> 20
COTTAGEGRV	CAROBELLE	CG271	AC	53	0 - 5	50	> 20
COTTAGEGRV	CARVERAVE	CG43	AC	19	0 - 5	50	0 - 5
COTTAGEGRV	CARVERPL	CG44	AC	51	0 - 5	50	> 20
COTTAGEGRV	CHERRYCT	CG134	AC	46	0 - 5	50	16 - 20
COTTAGEGRV	CHESTNUTAV	CG68	AC	51	0 - 5	50	> 20
COTTAGEGRV	CLARKAVE	CG40	AC	63	11 - 15	50	> 20
COTTAGEGRV	CLARKAVE	CG41	AC	59	6 - 10	50	> 20
COTTAGEGRV	CLARKAVE	CG42	AC	41	0 - 5	50	11 - 15
COTTAGEGRV	CLEVELANDS	CG124	AC	84	> 20	50	> 20
COTTAGEGRV	COLUMBIACT	CG214	AC	73	> 20	50	> 20
COTTAGEGRV	COOPCT	CG292	AC	74	> 20	50	> 20
COTTAGEGRV	COOPERAVE	CG240	AC	75	> 20	50	> 20
COTTAGEGRV	COOPERAVE	CG241	AC	39	0 - 5	50	6 - 10
COTTAGEGRV	COTTONWOOD	CG83	AC	92	> 20	50	> 20
COTTAGEGRV	CURRYAVE	CG289	AC	67	16 - 20	50	> 20
COTTAGEGRV	DAUGHERTYA	CG39	AC	81	> 20	50	> 20
COTTAGEGRV	DAVIDSONAV	CG311	AC	47	0 - 5	50	16 - 20
COTTAGEGRV	DAVISPL	CG288	AC	70	16 - 20	50	> 20
COTTAGEGRV	DOGWOODAVE	CG84	AC	89	> 20	50	> 20
COTTAGEGRV	DOUGLASFIR	CG85	AC	90	> 20	50	> 20
COTTAGEGRV	DUBLINLN	CG249	AC	40	0 - 5	50	6 - 10
COTTAGEGRV	ECHADWICKA	CG189	AC	63	11 - 15	50	> 20

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	ECHADWICKA	CG190	AC	62	11 - 15	50	> 20
COTTAGEGRV	ECHADWICKA	CG191	AC	59	6 - 10	50	> 20
COTTAGEGRV	ECHAMBERLA	CG197	AC	58	0 - 5	60	16 - 20
COTTAGEGRV	ECHAMBERLA	CG198	AC	15	0 - 5	60	0 - 5
COTTAGEGRV	ECHAMBERLA	CG199	AC	15	0 - 5	50	0 - 5
COTTAGEGRV	EDISONAVE	CG16	AC	54	0 - 5	50	> 20
COTTAGEGRV	EGIBBSAVE	CG182	AC	57	6 - 10	50	> 20
COTTAGEGRV	EGIBBSAVE	CG183	AC	72	> 20	50	> 20
COTTAGEGRV	EGIBBSAVE	CG184	AC	50	0 - 5	50	16 - 20
COTTAGEGRV	EGIBBSAVE	CG185	AC	42	0 - 5	50	11 - 15
COTTAGEGRV	EGROVERAVE	CG187	AC	41	0 - 5	50	11 - 15
COTTAGEGRV	EGROVERAVE	CG188	AC	82	> 20	50	> 20
COTTAGEGRV	EGROVERAVE	CG293	AC	72	> 20	50	> 20
COTTAGEGRV	EGROVERAVE	CG294	AC	70	16 - 20	50	> 20
COTTAGEGRV	EHARRISONA	CG28	AC	41	0 - 5	60	6 - 10
COTTAGEGRV	EHARRISONA	CG29	AC	99	> 20	60	> 20
COTTAGEGRV	EHARRISONA	CG30	AC	56	0 - 5	60	16 - 20
COTTAGEGRV	EHARRISONA	CG31	AC	71	6 - 10	60	> 20
COTTAGEGRV	EHARRISONA	CG315	PCC	46	0 - 5	40	11 - 15
COTTAGEGRV	EJACKSONAV	CG265	AC	48	0 - 5	50	16 - 20
COTTAGEGRV	EJEFFERSON	CG155	AC	57	6 - 10	50	> 20
COTTAGEGRV	EJEFFERSON	CG156	AC	86	> 20	50	> 20
COTTAGEGRV	EJEFFERSON	CG157	AC	19	0 - 5	50	0 - 5
COTTAGEGRV	EJEFFERSON	CG158	AC	50	0 - 5	50	16 - 20
COTTAGEGRV	EJEFFERSON	CG321	PCC	60	16 - 20	40	> 20
COTTAGEGRV	EJEFFERSON	CG322	PCC	31	0 - 5	40	0 - 5
COTTAGEGRV	ELMAVE	CG86	AC	89	> 20	50	> 20
COTTAGEGRV	EMADISONAV	CG148	AC	71	> 20	50	> 20
COTTAGEGRV	EMADISONAV	CG149	AC	56	6 - 10	50	> 20
COTTAGEGRV	EMADISONAV	CG150	AC	52	0 - 5	50	> 20
COTTAGEGRV	EMADISONAV	CG151	AC	50	0 - 5	60	11 - 15
COTTAGEGRV	EMADISONAV	CG152	AC	51	0 - 5	60	11 - 15
COTTAGEGRV	EMADISONAV	CG153	AC	69	16 - 20	50	> 20
COTTAGEGRV	EMADISONAV	CG154	AC	76	> 20	50	> 20
COTTAGEGRV	EMAINST	CG172	AC	50	0 - 5	65	6 - 10
COTTAGEGRV	EMAINST	CG173	AC	79	6 - 10	65	> 20
COTTAGEGRV	EMAINST	CG174	AC	85	6 - 10	65	> 20
COTTAGEGRV	EMAINST	CG175	AC	30	0 - 5	65	0 - 5
COTTAGEGRV	EMAINST	CG176	AC	61	11 - 15	50	> 20
COTTAGEGRV	EMAINST	CG177	AC	75	> 20	50	> 20
COTTAGEGRV	EMAINST	CG178	AC	77	> 20	50	> 20
COTTAGEGRV	EMONROEAVE	CG145	AC	87	> 20	50	> 20
COTTAGEGRV	EMONROEAVE	CG146	AC	38	0 - 5	50	6 - 10
COTTAGEGRV	EMONROEAVE	CG147	AC	33	0 - 5	50	0 - 5
COTTAGEGRV	EQUINCYAVE	CG136	AC	10	0 - 5	50	0 - 5
COTTAGEGRV	EQUINCYAVE	CG137	AC	80	> 20	50	> 20
COTTAGEGRV	EQUINCYAVE	CG138	AC	85	> 20	50	> 20
COTTAGEGRV	EQUINCYAVE	CG139	AC	0	0 - 5	50	0 - 5
COTTAGEGRV	EQUINCYAVE	CG140	AC	56	6 - 10	50	> 20

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	EQUINCYAVE	CG141	AC	59	6 - 10	50	> 20
COTTAGEGRV	EQUINCYAVE	CG142	AC	68	16 - 20	50	> 20
COTTAGEGRV	EQUINCYAVE	CG143	AC	63	11 - 15	50	> 20
COTTAGEGRV	EQUINCYAVE	CG144	AC	45	0 - 5	50	11 - 15
COTTAGEGRV	ETAYLORAVE	CG244	AC	52	0 - 5	60	11 - 15
COTTAGEGRV	ETAYLORAVE	CG245	AC	38	0 - 5	60	0 - 5
COTTAGEGRV	ETAYLORAVE	CG246	AC	44	0 - 5	60	6 - 10
COTTAGEGRV	ETAYLORAVE	CG247	AC	60	6 - 10	50	> 20
COTTAGEGRV	EVANBURENA	CG266	AC	53	0 - 5	50	> 20
COTTAGEGRV	EVANBURENA	CG267	AC	71	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG164	AC	38	0 - 5	50	6 - 10
COTTAGEGRV	EWASHINGTO	CG165	AC	95	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG166	AC	74	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG167	AC	77	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG168	AC	81	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG169	AC	75	> 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG170	AC	67	16 - 20	50	> 20
COTTAGEGRV	EWASHINGTO	CG171	AC	61	11 - 15	50	> 20
COTTAGEGRV	EWHITEAKER	CG179	AC	46	0 - 5	50	16 - 20
COTTAGEGRV	EWHITEAKER	CG180	AC	24	0 - 5	65	0 - 5
COTTAGEGRV	EWHITEAKER	CG181	AC	26	0 - 5	65	0 - 5
COTTAGEGRV	FAIRVIEWLP	CG32	AC	53	0 - 5	50	> 20
COTTAGEGRV	FAIRVIEWPL	CG33	AC	91	> 20	50	> 20
COTTAGEGRV	FILLMOREAV	CG242	AC	49	0 - 5	50	16 - 20
COTTAGEGRV	FILLMOREAV	CG243	AC	64	11 - 15	50	> 20
COTTAGEGRV	GEERAVE	CG196	AC	45	0 - 5	50	11 - 15
COTTAGEGRV	GETTYCIRCL	CG1	AC	92	> 20	50	> 20
COTTAGEGRV	GIRARDAVE	CG34	AC	56	6 - 10	50	> 20
COTTAGEGRV	GIRARDAVE	CG35	AC	63	11 - 15	50	> 20
COTTAGEGRV	GIRARDAVE	CG36	AC	92	> 20	50	> 20
COTTAGEGRV	GIRARDCT	CG37	AC	61	11 - 15	50	> 20
COTTAGEGRV	GRANTAVE	CG224	AC	22	0 - 5	50	0 - 5
COTTAGEGRV	GRANTAVE	CG225	AC	55	0 - 5	60	16 - 20
COTTAGEGRV	HARDINGPL	CG233	AC	95	> 20	50	> 20
COTTAGEGRV	HARRISONCT	CG17	AC	78	> 20	50	> 20
COTTAGEGRV	HARVEYLN	CG286	AC	74	> 20	50	> 20
COTTAGEGRV	HARVEYLN	CG287	AC	56	6 - 10	50	> 20
COTTAGEGRV	HARVEYRD	CG284	AC	53	0 - 5	60	11 - 15
COTTAGEGRV	HARVEYRD	CG285	AC	45	0 - 5	60	6 - 10
COTTAGEGRV	HAYESAV	CG223	AC	69	16 - 20	50	> 20
COTTAGEGRV	HOLLYAVE	CG90	AC	78	> 20	50	> 20
COTTAGEGRV	IBSENAVE	CG26	AC	79	> 20	50	> 20
COTTAGEGRV	JASONLEEAV	CG15	AC	72	> 20	50	> 20
COTTAGEGRV	JIMWRIGHTW	CG313	AC	43	0 - 5	50	11 - 15
COTTAGEGRV	JOHNSONAVE	CG236	AC	72	> 20	50	> 20
COTTAGEGRV	KALAPUYAWA	CG88	AC	75	> 20	50	> 20
COTTAGEGRV	KALAPUYSCT	CG89	AC	71	> 20	50	> 20
COTTAGEGRV	KATHLEENDR	CG226	AC	84	> 20	50	> 20
COTTAGEGRV	LANDESSRD	CG306	AC	69	16 - 20	50	> 20

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	LANECT	CG206	AC	75	> 20	50	> 20
COTTAGEGRV	LINCOLNAVE	CG237	AC	62	0 - 5	60	16 - 20
COTTAGEGRV	LINCOLNAVE	CG238	AC	44	0 - 5	60	6 - 10
COTTAGEGRV	LINCOLNAVE	CG239	AC	10	0 - 5	60	0 - 5
COTTAGEGRV	LORDAVE	CG195	AC	38	0 - 5	50	6 - 10
COTTAGEGRV	MEEKERDR	CG14	AC	67	16 - 20	50	> 20
COTTAGEGRV	MOSBYCRRD	CG307	AC	57	0 - 5	65	11 - 15
COTTAGEGRV	N10THST	CG200	AC	53	0 - 5	50	> 20
COTTAGEGRV	N11THST	CG203	AC	69	16 - 20	50	> 20
COTTAGEGRV	N11THST	CG204	AC	43	0 - 5	50	11 - 15
COTTAGEGRV	N11THST	CG205	AC	86	> 20	50	> 20
COTTAGEGRV	N12THST	CG259	AC	80	> 20	50	> 20
COTTAGEGRV	N14THST	CG264	AC	46	0 - 5	50	16 - 20
COTTAGEGRV	N14THST	CG291	AC	60	6 - 10	50	> 20
COTTAGEGRV	N16THST	CG282	AC	23	0 - 5	60	0 - 5
COTTAGEGRV	N16THST	CG283	AC	25	0 - 5	60	0 - 5
COTTAGEGRV	N19THST	CG280	AC	19	0 - 5	50	0 - 5
COTTAGEGRV	N19THST	CG281	AC	74	> 20	50	> 20
COTTAGEGRV	N20THST	CG295	AC	69	16 - 20	50	> 20
COTTAGEGRV	N22NDST	CG302	AC	71	> 20	50	> 20
COTTAGEGRV	N5THST	CG111	AC	39	0 - 5	50	6 - 10
COTTAGEGRV	N6THST	CG117	AC	72	> 20	50	> 20
COTTAGEGRV	N6THST	CG118	AC	52	0 - 5	50	> 20
COTTAGEGRV	N7THST	CG123	AC	57	6 - 10	50	> 20
COTTAGEGRV	N7THST	CG319	PCC	33	0 - 5	40	0 - 5
COTTAGEGRV	N8THST	CG131	AC	59	6 - 10	50	> 20
COTTAGEGRV	N8THST	CG132	AC	55	0 - 5	50	> 20
COTTAGEGRV	N8THST	CG133	AC	96	> 20	50	> 20
COTTAGEGRV	NDOUGLASST	CG215	AC	13	0 - 5	50	0 - 5
COTTAGEGRV	NDOUGLASST	CG216	AC	0	0 - 5	50	0 - 5
COTTAGEGRV	NDOUGLASST	CG217	AC	81	> 20	50	> 20
COTTAGEGRV	NDOUGLASST	CG218	AC	44	0 - 5	60	6 - 10
COTTAGEGRV	NDOUGLASST	CG219	AC	57	6 - 10	50	> 20
COTTAGEGRV	NDOUGLASST	CG220	AC	58	6 - 10	50	> 20
COTTAGEGRV	NELLISPL	CG60	AC	55	0 - 5	50	> 20
COTTAGEGRV	NEVACT	CG235	AC	76	> 20	50	> 20
COTTAGEGRV	NGATEWAYBL	CG276	AC	68	0 - 5	65	16 - 20
COTTAGEGRV	NGATEWAYBL	CG277	AC	62	0 - 5	65	11 - 15
COTTAGEGRV	NGATEWAYBL	CG278	AC	49	0 - 5	65	6 - 10
COTTAGEGRV	NGATEWAYBL	CG279	AC	100	11 - 15	65	> 20
COTTAGEGRV	NGST	CG69	AC	62	11 - 15	50	> 20
COTTAGEGRV	NGST	CG70	AC	31	0 - 5	50	0 - 5
COTTAGEGRV	NHST	CG71	AC	36	0 - 5	50	6 - 10
COTTAGEGRV	NIST	CG72	AC	46	0 - 5	50	16 - 20
COTTAGEGRV	NJST	CG73	AC	34	0 - 5	50	0 - 5
COTTAGEGRV	NKST	CG74	AC	72	> 20	50	> 20
COTTAGEGRV	NLANEST	CG208	AC	39	0 - 5	50	6 - 10
COTTAGEGRV	NLANEST	CG209	AC	84	> 20	50	> 20
COTTAGEGRV	NLANEST	CG210	AC	43	0 - 5	50	11 - 15

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	NLANEST	CG211	AC	48	0 - 5	50	16 - 20
COTTAGEGRV	NLANEST	CG212	AC	51	0 - 5	50	> 20
COTTAGEGRV	NLST	CG75	AC	73	> 20	50	> 20
COTTAGEGRV	NMST	CG76	AC	57	0 - 5	60	16 - 20
COTTAGEGRV	NMST	CG77	AC	86	11 - 15	60	> 20
COTTAGEGRV	NNST	CG78	AC	77	> 20	50	> 20
COTTAGEGRV	NOST	CG316	PCC	48	6 - 10	40	11 - 15
COTTAGEGRV	NOST	CG79	AC	67	16 - 20	50	> 20
COTTAGEGRV	NOST	CG80	AC	84	> 20	50	> 20
COTTAGEGRV	NPST	CG81	AC	61	11 - 15	50	> 20
COTTAGEGRV	NPST	CG82	AC	96	> 20	50	> 20
COTTAGEGRV	NQST	CG87	AC	12	0 - 5	50	0 - 5
COTTAGEGRV	NRIVERRD	CG10	AC	29	0 - 5	65	0 - 5
COTTAGEGRV	NRIVERRD	CG11	AC	57	6 - 10	50	> 20
COTTAGEGRV	NRIVERRD	CG9	AC	94	11 - 15	65	> 20
COTTAGEGRV	OLSONPL	CG231	AC	90	> 20	50	> 20
COTTAGEGRV	OSTRANDERL	CG298	AC	49	0 - 5	60	11 - 15
COTTAGEGRV	OSTRANDERL	CG299	AC	35	0 - 5	60	0 - 5
COTTAGEGRV	OSWALDWAVE	CG297	AC	43	0 - 5	60	6 - 10
COTTAGEGRV	PALMERAVE	CG312	AC	57	6 - 10	50	> 20
COTTAGEGRV	PARKSRD	CG300	AC	72	> 20	50	> 20
COTTAGEGRV	PENNOYERAV	CG193	AC	63	11 - 15	50	> 20
COTTAGEGRV	PENNOYERAV	CG194	AC	65	11 - 15	50	> 20
COTTAGEGRV	POLKAVE	CG248	AC	9	0 - 5	50	0 - 5
COTTAGEGRV	PRITCHETTP	CG290	AC	66	16 - 20	50	> 20
COTTAGEGRV	REDHILLSPL	CG301	AC	98	> 20	50	> 20
COTTAGEGRV	RIVERFRONT	CG95	AC	86	> 20	50	> 20
COTTAGEGRV	RIVERWALKP	CG93	AC	95	> 20	50	> 20
COTTAGEGRV	RIVERWALKP	CG94	AC	91	> 20	50	> 20
COTTAGEGRV	ROWRIVERCO	CG310	AC	16	0 - 5	65	0 - 5
COTTAGEGRV	S10THST	CG250	AC	83	> 20	50	> 20
COTTAGEGRV	S10THST	CG251	AC	95	> 20	50	> 20
COTTAGEGRV	S10THST	CG252	AC	26	0 - 5	60	0 - 5
COTTAGEGRV	S10THST	CG253	AC	50	0 - 5	60	11 - 15
COTTAGEGRV	S11THST	CG254	AC	22	0 - 5	50	0 - 5
COTTAGEGRV	S11THST	CG256	AC	51	0 - 5	50	> 20
COTTAGEGRV	S12THST	CG257	AC	42	0 - 5	50	11 - 15
COTTAGEGRV	S12THST	CG258	AC	54	0 - 5	50	> 20
COTTAGEGRV	S13THST	CG260	AC	70	16 - 20	50	> 20
COTTAGEGRV	S13THST	CG261	AC	57	6 - 10	50	> 20
COTTAGEGRV	S14THST	CG262	AC	58	6 - 10	50	> 20
COTTAGEGRV	S14THST	CG263	AC	22	0 - 5	50	0 - 5
COTTAGEGRV	S15THST	CG269	AC	82	> 20	50	> 20
COTTAGEGRV	S16THST	CG270	AC	64	0 - 5	60	> 20
COTTAGEGRV	S17THST	CG272	AC	62	11 - 15	50	> 20
COTTAGEGRV	S1STST	CG91	AC	95	> 20	50	> 20
COTTAGEGRV	S1STST	CG92	AC	31	0 - 5	50	0 - 5
COTTAGEGRV	S21STST	CG296	AC	81	> 20	50	> 20
COTTAGEGRV	S22NDST	CG303	AC	71	> 20	50	> 20

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	S2NDST	CG100	AC	54	0 - 5	50	> 20
COTTAGEGRV	S2NDST	CG98	AC	91	> 20	50	> 20
COTTAGEGRV	S2NDST	CG99	AC	95	> 20	50	> 20
COTTAGEGRV	S3RDST	CG101	AC	88	> 20	50	> 20
COTTAGEGRV	S3RDST	CG102	AC	37	0 - 5	50	6 - 10
COTTAGEGRV	S3RDST	CG103	AC	14	0 - 5	50	0 - 5
COTTAGEGRV	S4THST	CG104	AC	58	6 - 10	50	> 20
COTTAGEGRV	S4THST	CG105	AC	45	0 - 5	60	6 - 10
COTTAGEGRV	S4THST	CG106	AC	25	0 - 5	60	0 - 5
COTTAGEGRV	S4THST	CG107	AC	76	6 - 10	60	> 20
COTTAGEGRV	S4THSTY	CG108	AC	78	> 20	50	> 20
COTTAGEGRV	S5THST	CG109	AC	38	0 - 5	50	6 - 10
COTTAGEGRV	S5THST	CG110	AC	28	0 - 5	50	0 - 5
COTTAGEGRV	S5THST	CG317	PCC	56	11 - 15	40	> 20
COTTAGEGRV	S5THST	CG318	PCC	65	> 20	40	> 20
COTTAGEGRV	S6THST	CG112	AC	74	0 - 5	65	> 20
COTTAGEGRV	S6THST	CG113	AC	75	0 - 5	65	> 20
COTTAGEGRV	S6THST	CG114	AC	86	6 - 10	65	> 20
COTTAGEGRV	S6THST	CG115	AC	40	0 - 5	60	6 - 10
COTTAGEGRV	S6THST	CG116	AC	44	0 - 5	60	6 - 10
COTTAGEGRV	S6THSTY	CG222	AC	43	0 - 5	50	11 - 15
COTTAGEGRV	S7THST	CG119	AC	70	16 - 20	50	> 20
COTTAGEGRV	S7THST	CG120	AC	35	0 - 5	50	0 - 5
COTTAGEGRV	S7THST	CG121	AC	58	6 - 10	50	> 20
COTTAGEGRV	S7THST	CG122	AC	62	11 - 15	50	> 20
COTTAGEGRV	S8THST	CG125	AC	95	16 - 20	60	> 20
COTTAGEGRV	S8THST	CG126	AC	69	6 - 10	60	> 20
COTTAGEGRV	S8THST	CG127	AC	66	0 - 5	60	> 20
COTTAGEGRV	S8THST	CG128	AC	54	0 - 5	60	11 - 15
COTTAGEGRV	S8THST	CG129	AC	60	6 - 10	50	> 20
COTTAGEGRV	S8THST	CG130	AC	34	0 - 5	50	0 - 5
COTTAGEGRV	S8THST	CG320	PCC	54	11 - 15	40	16 - 20
COTTAGEGRV	SCT	CG21	AC	56	6 - 10	50	> 20
COTTAGEGRV	SDOUGLASST	CG221	AC	35	0 - 5	50	0 - 5
COTTAGEGRV	SGATEWAYBL	CG274	AC	56	0 - 5	65	11 - 15
COTTAGEGRV	SGATEWAYBL	CG275	AC	45	0 - 5	65	6 - 10
COTTAGEGRV	SMST	CG53	AC	13	0 - 5	50	0 - 5
COTTAGEGRV	SMST	CG54	AC	24	0 - 5	50	0 - 5
COTTAGEGRV	SMST	CG55	AC	76	> 20	50	> 20
COTTAGEGRV	SNST	CG56	AC	3	0 - 5	50	0 - 5
COTTAGEGRV	SOST	CG57	AC	20	0 - 5	50	0 - 5
COTTAGEGRV	SPST	CG58	AC	12	0 - 5	50	0 - 5
COTTAGEGRV	SRIVERRD	CG5	AC	58	0 - 5	65	11 - 15
COTTAGEGRV	SRIVERRD	CG6	AC	32	0 - 5	65	0 - 5
COTTAGEGRV	SRIVERRD	CG7	AC	80	6 - 10	65	> 20
COTTAGEGRV	SRIVERRD	CG8	AC	94	11 - 15	65	> 20
COTTAGEGRV	SRIVERRDFR	CG4	AC	69	16 - 20	50	> 20
COTTAGEGRV	SRST	CG18	AC	75	0 - 5	65	> 20
COTTAGEGRV	SRST	CG19	AC	44	0 - 5	65	6 - 10

Table 2D - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION - FUNCTIONAL REMAINING LIFE

Network ID	Branch ID	Section ID	Surface	Current PCI	Years to Major M&R ¹	Major M&R Trigger PCI	Years to End of Functional Service Life ²
COTTAGEGRV	SRST	CG20	AC	78	6 - 10	65	> 20
COTTAGEGRV	SRST	CG3	AC	85	> 20	50	> 20
COTTAGEGRV	SSST	CG50	AC	59	6 - 10	50	> 20
COTTAGEGRV	STCT	CG22	AC	81	> 20	50	> 20
COTTAGEGRV	SUST	CG23	AC	75	> 20	50	> 20
COTTAGEGRV	SVCT	CG24	AC	55	0 - 5	50	> 20
COTTAGEGRV	TAYLORPL	CG97	AC	91	> 20	50	> 20
COTTAGEGRV	THAYERAVE	CG192	AC	44	0 - 5	50	11 - 15
COTTAGEGRV	THOMASPL	CG308	AC	13	0 - 5	50	0 - 5
COTTAGEGRV	THORNTONRD	CG309	AC	35	0 - 5	60	0 - 5
COTTAGEGRV	TYLERAVE	CG268	AC	57	6 - 10	50	> 20
COTTAGEGRV	TYLERAVE	CG96	AC	95	> 20	50	> 20
COTTAGEGRV	VANBURENAV	CG135	AC	81	> 20	50	> 20
COTTAGEGRV	VILLAGEDR	CG314	AC	53	0 - 5	50	> 20
COTTAGEGRV	VILLARDAVE	CG201	AC	50	0 - 5	50	16 - 20
COTTAGEGRV	VILLARDAVE	CG202	AC	50	0 - 5	50	16 - 20
COTTAGEGRV	VINCENTPL	CG213	AC	91	> 20	50	> 20
COTTAGEGRV	WASHINGTON	CG304	AC	76	> 20	50	> 20
COTTAGEGRV	WHARRISONA	CG27	AC	56	0 - 5	60	16 - 20
COTTAGEGRV	WHITMANBLV	CG13	AC	73	> 20	50	> 20
COTTAGEGRV	WILSONAVE	CG229	AC	89	> 20	50	> 20
COTTAGEGRV	WILSONCT	CG230	AC	91	> 20	50	> 20
COTTAGEGRV	WITCOMBE	CG207	AC	48	0 - 5	50	16 - 20
COTTAGEGRV	WMAINST	CG62	AC	82	6 - 10	65	> 20
COTTAGEGRV	WOODAVE	CG186	AC	8	0 - 5	50	0 - 5
COTTAGEGRV	WOODSONPL	CG12	AC	88	11 - 15	65	> 20
COTTAGEGRV	YOSSPL	CG232	AC	95	> 20	50	> 20

Notes: ¹ Major M&R is based on Critical PCI. ² Remaining Functional Life is based on a Trigger PCI of 30

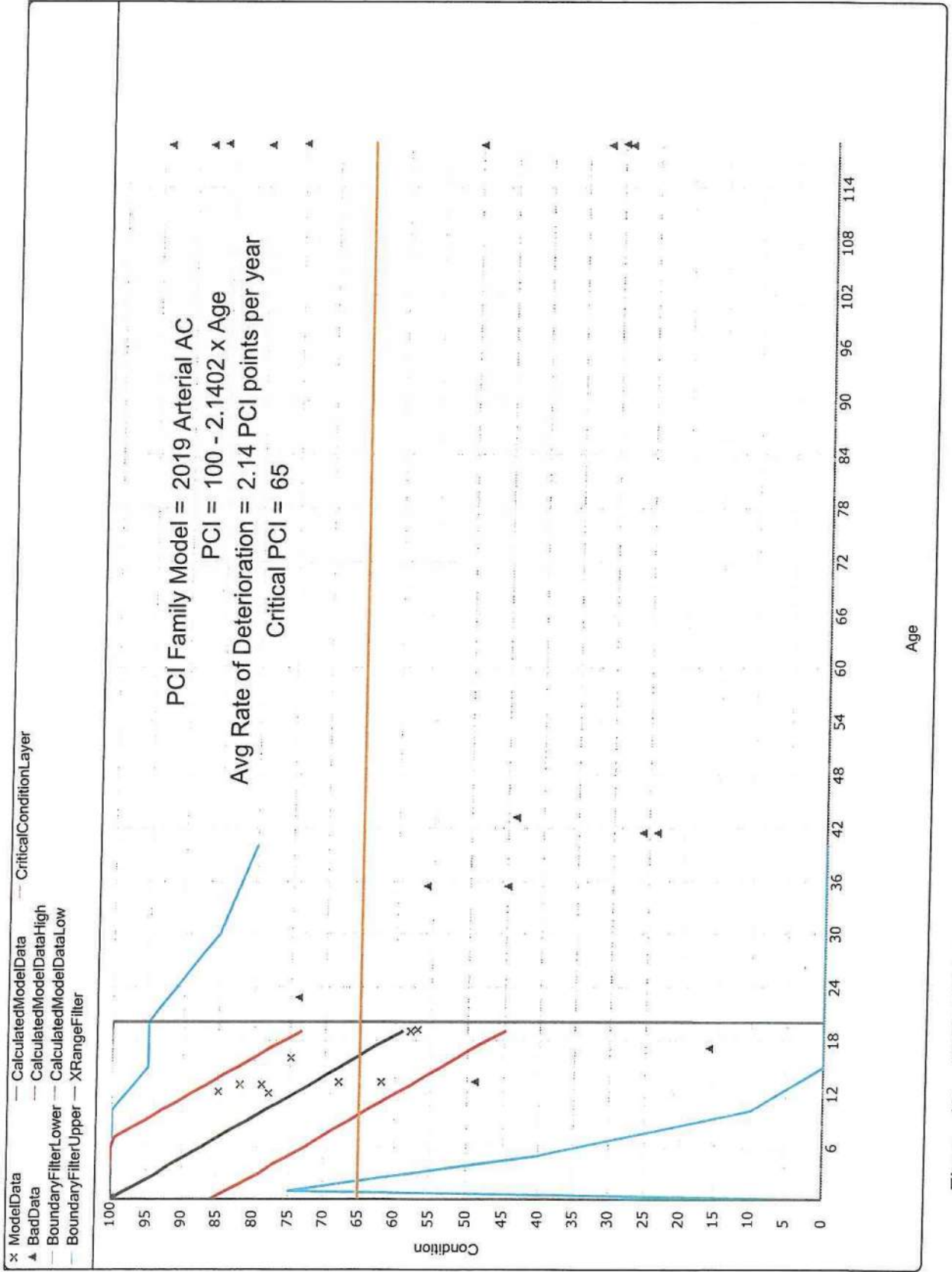


Figure 1D - ARTERIAL RANKED ASPHALT CONCRETE ROADWAY CONDITION PREDICTION MODEL

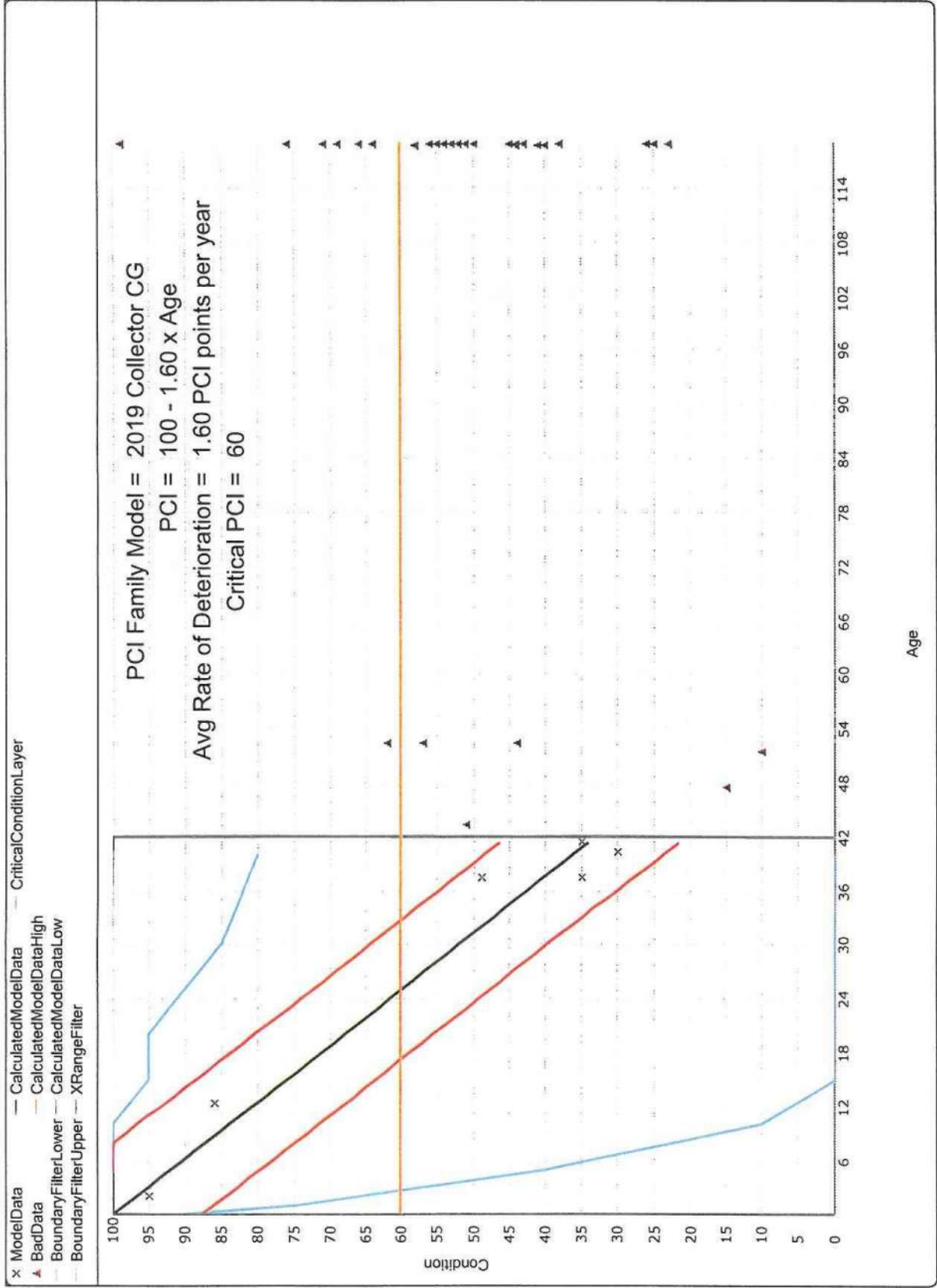


Figure 2D - COLLECTOR RANKED ASPHALT CONCRETE ROADWAY CONDITION PREDICTION MODEL

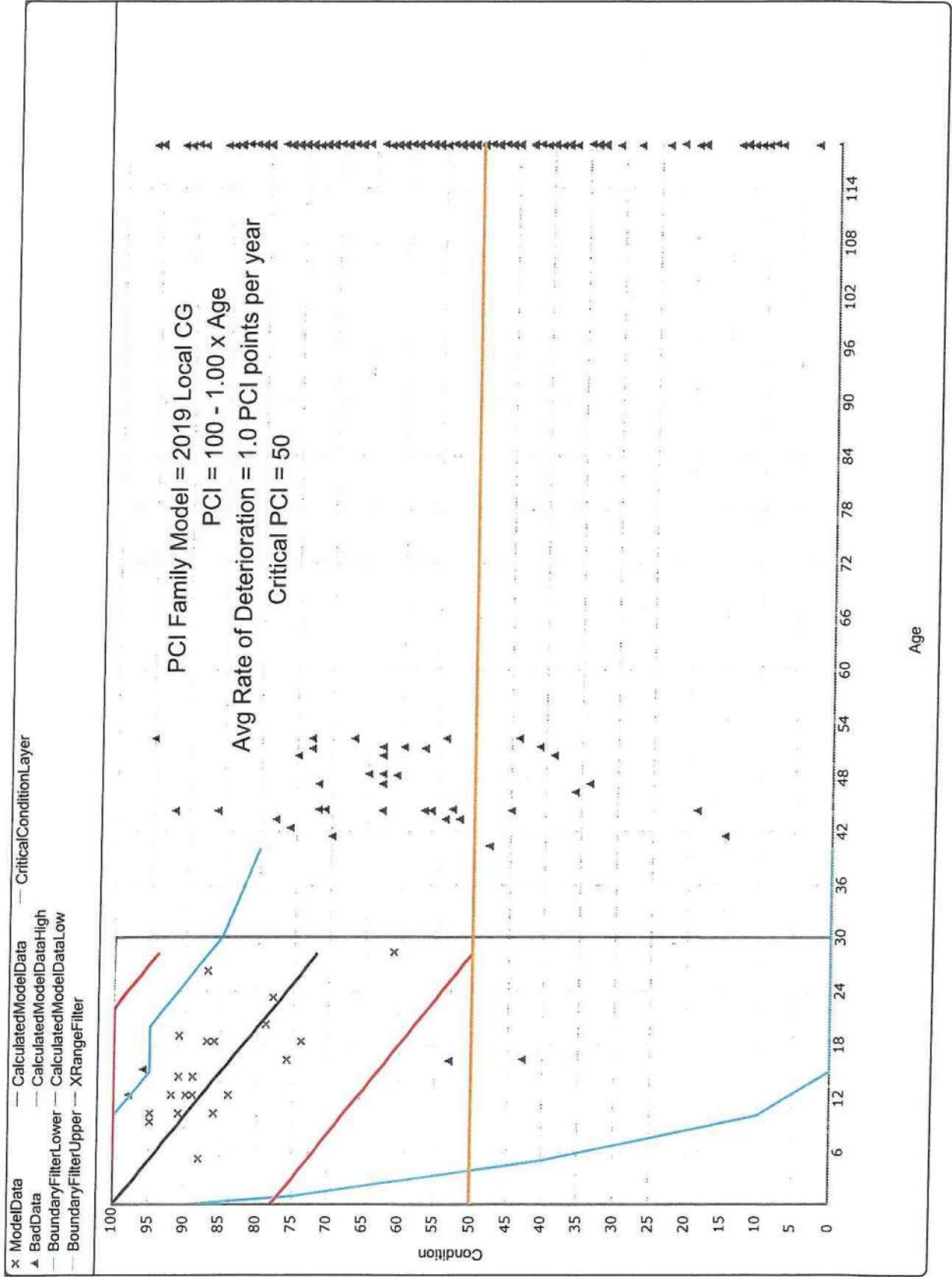


Figure 3D - LOCAL RANKED ASPHALT CONCRETE ROADWAY CONDITIONAL PREDICTION MODEL

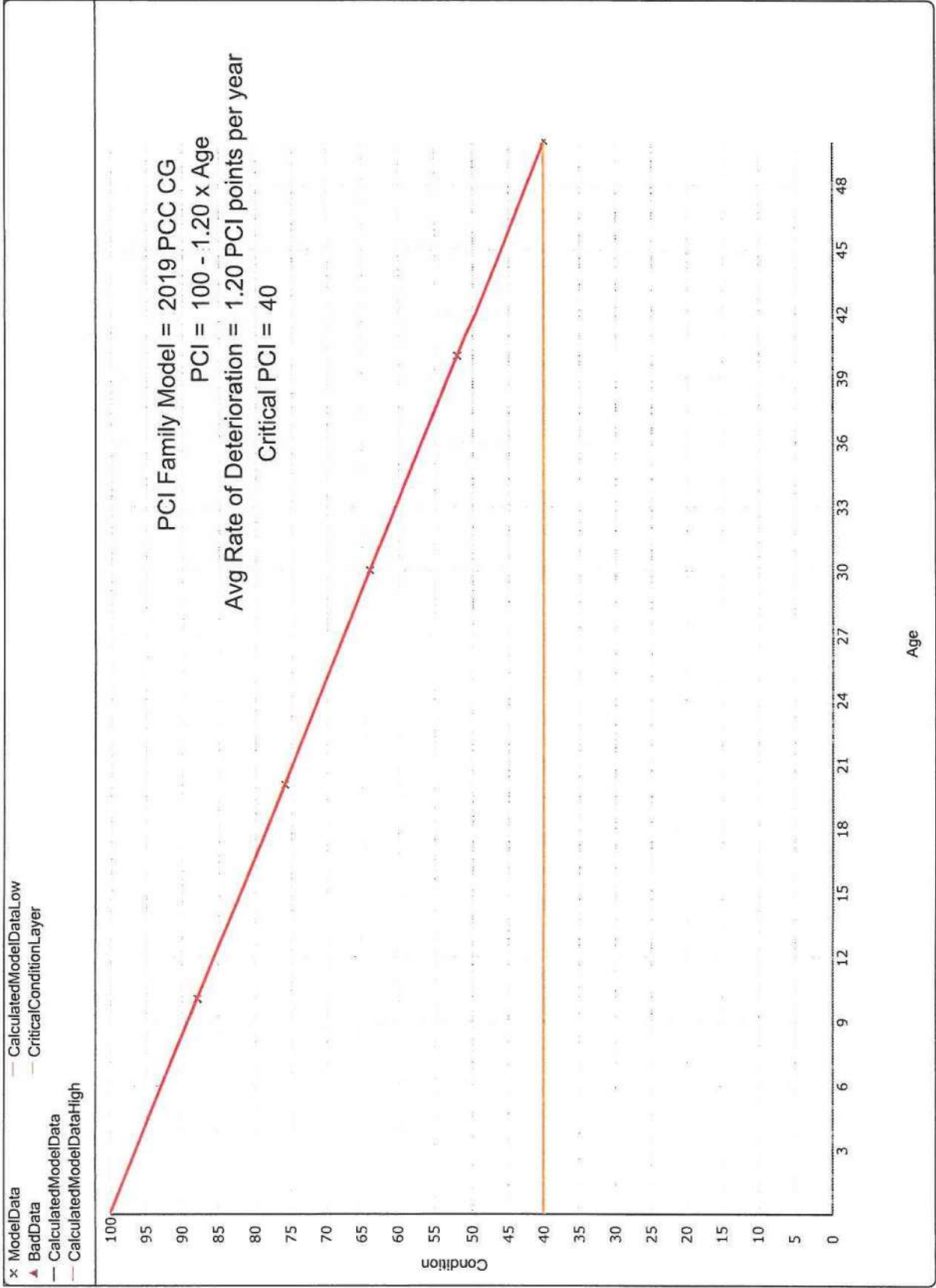


Figure 4D - PCC ROADWAY PAVEMENT CONDITIONAL PREDICTION MODEL

**Pavement Management Report
City of Cottage Grove City Streets**

**APPENDIX E:
MAINTENANCE POLICIES AND UNIT COST DATA**

Tables 1E through 11E

Table 1E - LOCALIZED STOPGAP M&R MAINTENANCE POLICY

Distress #	Distress Description	Distress Severity	Repair Description	PAVER Code	Work Unit
4	BUMPS/SAGS	High	Patching - AC Shallow	PA-AS	SqFt
5	CORRUGATION	High	Patching - AC Shallow	PA-AS	SqFt
11	PATCH/UT CUT	High	Patching - AC Shallow	PA-AS	SqFt
13	POTHOLE	Medium	Patching - AC Deep	PA-AD	SqFt
13	POTHOLE	High	Patching - AC Deep	PA-AD	SqFt
15	RUTTING	High	Patching - AC Shallow	PA-AS	SqFt
16	SHOVING	High	Patching - AC Shallow	PA-AS	SqFt
17	SLIPPAGE CR	High	Patching - AC Shallow	PA-AS	SqFt
21	BLOW UP	High	Patching - PCC Full Depth	PA-PF	SqFt
22	CORNER BREAK	High	Patching - AC Leveling	PA-AL	SqFt
23	DIVIDED SLAB	High	Patching - AC Leveling	PA-AL	SqFt
24	DURABIL. CR	High	Patching - AC Leveling	PA-AL	SqFt
29	LARGE PATCH	High	Patching - AC Leveling	PA-AL	SqFt
34	PUNCHOUT	High	Patching - AC Leveling	PA-AL	SqFt
38	CORNER SPALL	High	Patching - AC Leveling	PA-AL	SqFt
39	JOINT SPALL	High	Patching - AC Leveling	PA-AL	SqFt

Table 2E - LOCALIZED PREVENTATIVE M&R MAINTENANCE POLICY

Distress #	Distress Description	Distress Severity	Repair Description	PAVER Code	Work Unit
1	ALLIGATOR CR	Medium	Patching - AC Deep	PA-AD	SqFt
1	ALLIGATOR CR	High	Patching - AC Deep	PA-AD	SqFt
3	BLOCK CR	Medium	Crack Sealing - AC	CS-AC	Ft
4	BUMPS/SAGS	High	Patching - AC Deep	PA-AD	SqFt
4	BUMPS/SAGS	Medium	Patching - AC Shallow	PA-AS	SqFt
5	CORRUGATION	Medium	Patching - AC Shallow	PA-AS	SqFt
5	CORRUGATION	High	Patching - AC Deep	PA-AD	SqFt
6	DEPRESSION	High	Patching - AC Deep	PA-AD	SqFt
6	DEPRESSION	Medium	Patching - AC Deep	PA-AD	SqFt
7	EDGE CR	Medium	Crack Sealing - AC	CS-AC	Ft
7	EDGE CR	High	Patching - AC Shallow	PA-AS	SqFt
8	JT REF. CR	High	Patching - AC Shallow	PA-AS	SqFt
8	JT REF. CR	Medium	Crack Sealing - AC	CS-AC	Ft
10	L & T CR	High	Patching - AC Shallow	PA-AS	SqFt
10	L & T CR	Medium	Crack Sealing - AC	CS-AC	Ft
11	PATCH/UT CUT	High	Patching - AC Deep	PA-AD	SqFt
13	POTHOLE	High	Patching - AC Deep	PA-AD	SqFt
13	POTHOLE	Medium	Patching - AC Deep	PA-AD	SqFt
13	POTHOLE	Low	Patching - AC Deep	PA-AD	SqFt
15	RUTTING	Medium	Patching - AC Shallow	PA-AS	SqFt
15	RUTTING	High	Patching - AC Deep	PA-AD	SqFt
17	SLIPPAGE CR	High	Patching - AC Shallow	PA-AS	SqFt
17	SLIPPAGE CR	Medium	Patching - AC Shallow	PA-AS	SqFt
21	BLOW UP	High	Patching - PCC Full Depth	PA-PF	SqFt
21	BLOW UP	Medium	Patching - PCC Full Depth	PA-PF	SqFt
22	CORNER BREAK	High	Patching - PCC Full Depth	PA-PF	SqFt
22	CORNER BREAK	Medium	Crack Sealing - PCC	CS-PC	Ft
23	DIVIDED SLAB	Medium	Slab Replacement - PCC	SL-PC	SqFt
23	DIVIDED SLAB	High	Slab Replacement - PCC	SL-PC	SqFt
24	DURABIL. CR	Medium	Patching - PCC Full Depth	PA-PF	SqFt
24	DURABIL. CR	High	Slab Replacement - PCC	SL-PC	SqFt
28	LINEAR CR	Medium	Joint Seal - Silicon	JS-SI	Ft
28	LINEAR CR	High	Patching - PCC Partial Depth	PA-PP	SqFt
29	LARGE PATCH	High	Patching - PCC Full Depth	PA-PF	SqFt
30	SMALL PATCH	High	Patching - PCC Partial Depth	PA-PP	SqFt
34	PUNCHOUT	Medium	Patching - PCC Full Depth	PA-PF	SqFt
34	PUNCHOUT	High	Slab Replacement - PCC	SL-PC	SqFt
36	SCALING	High	Slab Replacement - PCC	SL-PC	SqFt
38	CORNER SPALL	High	Patching - PCC Partial Depth	PA-PP	SqFt
38	CORNER SPALL	Medium	Patching - PCC Partial Depth	PA-PP	SqFt
39	JOINT SPALL	High	Patching - PCC Partial Depth	PA-PP	SqFt
39	JOINT SPALL	Medium	Patching - PCC Partial Depth	PA-PP	SqFt

Table 3E - 2019 COTTAGE GROVE UNIT COST DATA

Type of M&R	Work Type	Unit Cost	Work Unit	
Arterial Ranked Streets	New Construction - AC ¹	\$14.46	SqFt	
	Overlay - AC Thin	\$3.82	SqFt	
	Full Depth Reclamation - Arterial	\$9.27	SqFt	
	Complete Reconstruction - AC ²	\$17.66	SqFt	
	Surface Reconstruction - AC ³	\$5.71	SqFt	
	Collector Ranked Streets	New Construction - AC	\$13.02	SqFt
		Overlay - AC Thin	\$3.82	SqFt
		Full Depth Reclamation - Collector	\$8.01	SqFt
		Complete Reconstruction - AC	\$16.22	SqFt
	PCC Roads	Surface Reconstruction - AC	\$5.71	SqFt
Complete Reconstruction - PCC		\$18.45	SqFt	
Overlay - AC Structural		\$10.00	SqFt	
Local Ranked Streets	New Construction - AC	\$11.17	SqFt	
	Overlay - AC Thin	\$3.66	SqFt	
	Full Depth Reclamation - Local	\$7.54	SqFt	
	Complete Reconstruction - AC	\$14.37	SqFt	
	Surface Reconstruction - AC	\$5.71	SqFt	
Global M&R	No Global M & R	\$0.00	SqFt	
	Surface Treatment - Micro Surface	\$0.35	SqFt	
	Overlay - AC Thin (Global)	\$2.84	SqFt	
	Surface Treatment - Single Bitum.	\$1.05	SqFt	
Localized M&R	Surface Treatment - Slurry Seal	\$0.32	SqFt	
	No Localized M & R	\$0.00	SqFt	
	Crack Sealing - AC	\$1.00	Ft	
	Joint Seal - Silicon	\$3.85	Ft	
	Patching - AC Deep	\$10.85	SqFt	
	Patching - AC Leveling	\$1.41	SqFt	
	Patching - AC Shallow	\$6.23	SqFt	
	Patching - PCC Full Depth	\$33.60	SqFt	
	Patching - PCC Partial Depth	\$14.00	SqFt	
Slab Replacement - PCC	\$44.80	SqFt		

Notes: ¹New construction includes work between curbs (aggregate base, paving) plus ADA ramps.

²Complete reconstruction includes estimated cost of curbs and sidewalks.

³Surface reconstruction includes removing and replacing 4 inches of AC.

Table 4E - AC LOCALIZED STOPGAP M&R COST BY CONDITION DATA

PCI	AC Localized Stopgap M&R Cost
0	\$1.33
10	\$1.00
20	\$0.71
30	\$0.47
40	\$0.24
50	\$0.12
60	\$0.04
70	\$0.00
80	\$0.00
90	\$0.00
100	\$0.00

Table 5E - PCC LOCALIZED STOPGAP M&R COST BY CONDITION DATA

PCI	AC Localized Stopgap M&R Cost
0	\$5.19
10	\$3.26
20	\$1.33
30	\$1.33
40	\$1.33
50	\$0.00
60	\$0.00
70	\$0.00
80	\$0.00
90	\$0.00
100	\$0.00

Table 6E - AC LOCALIZED PREVENTATIVE M&R COST BY CONDITION DATA

PCI	AC Localized Preventative M&R Cost
0	\$5.19
10	\$4.07
20	\$2.95
30	\$1.33
40	\$0.33
50	\$0.16
60	\$0.08
70	\$0.04
80	\$0.01
90	\$0.00
100	\$0.00

Table 7E - PCC LOCALIZED PREVENTATIVE M&R COST BY CONDITION DATA

PCI	AC Localized Preventative M&R Cost
0	\$20.00
10	\$15.00
20	\$10.00
30	\$9.08
40	\$5.19
50	\$1.33
60	\$1.33
70	\$0.00
80	\$0.00
90	\$0.00
100	\$0.00

Table 8E - ARTERIAL RANKED AC MAJOR M&R COST BY CONDITION DATA

PCI	AC Arterial - Major M&R Cost
0	\$14.46
10	\$14.46
20	\$14.46
30	\$11.50
40	\$9.27
50	\$5.71
60	\$4.50
70	\$3.82
80	\$2.00
90	\$0.00
100	\$0.00

Table 9E - COLLECTOR RANKED AC MAJOR M&R COST BY CONDITION DATA

PCI	AC Collector - Major M&R Cost
0	\$13.02
10	\$13.02
20	\$13.02
30	\$10.50
40	\$8.01
50	\$5.71
60	\$4.25
70	\$3.57
80	\$1.75
90	\$0.00
100	\$0.00

Table 10E - LOCAL RANKED AC MAJOR M&R COST BY CONDITION DATA

PCI	AC Local - Major M&R Cost
0	\$11.17
10	\$11.17
20	\$11.17
30	\$9.00
40	\$7.54
50	\$4.75
60	\$4.25
70	\$3.25
80	\$1.50
90	\$0.00
100	\$0.00

Table 11E - PCC MAJOR M&R COST BY CONDITION DATA

PCI	PCC - Major M&R Cost
0	\$18.45
10	\$18.45
20	\$18.45
30	\$18.45
40	\$10.00
50	\$10.00
60	\$10.00
70	\$0.00
80	\$0.00
90	\$0.00
100	\$0.00

**Pavement Management Report
City of Cottage Grove City Streets**

**APPENDIX F:
NEEDS AND CONSEQUENCE BUDGET ANALYSIS & NETWORK-LEVEL
PROJECT RECOMMENDATIONS**

Table 1F

**Table 1F - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION
DETAILED CONSEQUENCES & NEEDS BUDGET ANALYSIS RESULTS**

Maintain Current Budget - \$500,000 per Year				
Year	PCI Before Repair	Funded M&R Cost ¹	Unfunded M&R Cost	PCI After Repair
2020	55.1	\$796,501	\$26,725,301	55.8
2021	54.5	\$791,271	\$28,009,053	55.0
2022	53.7	\$795,467	\$29,791,187	54.4
2023	53.0	\$793,894	\$31,208,818	53.6
2024	52.2	\$799,985	\$32,941,071	52.8
2025	51.5	\$798,971	\$34,123,677	52.1
2026	50.8	\$799,383	\$36,174,877	51.6
2027	50.2	\$793,256	\$37,359,709	51.0
2028	49.7	\$793,991	\$38,672,953	50.4
2029	49.1	\$794,718	\$39,845,365	49.7
2030	48.4			
Total Funded:		\$7,957,437	Total Cost²	\$44,851,292

Maintain Current PCI - 10 Years - PCI 58 - \$1,400,000 per Year				
Year	PCI Before Repair	Funded M&R Cost ¹	Unfunded M&R Cost	PCI After Repair
2020	55.1	\$1,562,960	\$26,725,301	56.7
2021	55.3	\$1,555,663	\$27,969,424	57.1
2022	55.7	\$1,560,263	\$29,165,831	57.6
2023	56.3	\$1,558,660	\$30,112,831	58.2
2024	56.8	\$1,563,037	\$31,576,214	58.5
2025	57.1	\$1,560,458	\$32,569,781	58.9
2026	57.6	\$1,553,258	\$32,092,917	59.4
2027	58.1	\$1,550,884	\$31,566,888	59.5
2028	58.2	\$1,558,845	\$31,112,132	59.6
2029	58.2	\$1,545,859	\$30,470,139	59.6
2030	58.3			
Total Funded:		\$15,569,889	Total Cost²	\$44,471,360

Increase PCI to 72 After 10 Years - \$2,875,000 per Year				
Year	PCI Before Repair	Funded M&R Cost ¹	Unfunded M&R Cost	PCI After Repair
2020	55.1	\$2,980,182	\$26,725,301	58.7
2021	57.3	\$2,982,303	\$27,649,285	61.3
2022	60.0	\$2,978,527	\$28,182,412	63.2
2023	61.9	\$2,982,359	\$26,204,241	65.0
2024	63.7	\$2,977,196	\$24,493,822	66.3
2025	64.9	\$2,980,842	\$22,523,979	67.6
2026	66.2	\$2,975,501	\$20,263,221	69.4
2027	68.0	\$2,977,121	\$17,995,658	71.0
2028	69.6	\$2,980,861	\$15,747,728	72.4
2029	71.1	\$2,971,154	\$13,284,066	74.2
2030	72.8			
Total Funded:		\$29,786,048	Total Cost²	\$42,031,565

Notes: ¹The Funded M&R Cost includes Crack Sealing and Pothole patching which is performed by City of Cottage Grove Maintenance Forces.

²The sum of Funded M&R and Unfunded M&R in the last year, less the value of Crack Sealing and Potholing completed by City Forces (\$ value not shown).

Table 1F - ROADWAY PAVEMENT MANAGEMENT IMPLEMENTATION
 DETAILED CONSEQUENCES & NEEDS BUDGET ANALYSIS RESULTS

Increase PCI to 80 After 10 Years - \$3,559,000 per Year

Year	PCI Before Repair	Funded M&R Cost ¹	Unfunded M&R Cost	PCI After Repair
2020	55.1	\$3,657,359	\$26,725,301	59.7
2021	58.4	\$3,656,665	\$27,658,206	62.9
2022	61.5	\$3,647,352	\$26,023,448	65.7
2023	64.4	\$3,656,082	\$23,148,780	67.4
2024	66.1	\$3,654,503	\$20,671,466	69.6
2025	68.2	\$3,654,960	\$17,960,378	72.1
2026	70.7	\$3,648,646	\$14,858,650	74.2
2027	72.9	\$3,653,386	\$11,696,182	76.7
2028	75.3	\$3,634,579	\$8,654,897	79.4
2029	78.0	\$3,649,932	\$5,412,818	82.0
2030	80.7			
Total Funded:		\$36,513,466	Total Cost²	\$41,002,418

Eliminate Backlog in 10 Years - \$4,043,000 per Year

Year	PCI Before Repair	Funded M&R Cost ¹	Unfunded M&R Cost	PCI After Repair
2020	55.1	\$4,197,303	\$26,725,301	60.5
2021	59.2	\$4,194,449	\$27,482,561	64.2
2022	62.9	\$4,193,623	\$24,296,846	67.2
2023	65.8	\$4,193,677	\$20,824,805	69.3
2024	68.0	\$4,190,607	\$17,786,710	72.4
2025	71.1	\$4,198,930	\$14,442,475	75.2
2026	73.8	\$4,182,097	\$10,676,444	78.1
2027	76.7	\$4,193,084	\$6,937,328	81.4
2028	80.0	\$4,188,816	\$3,267,162	84.6
2029	83.3	\$3,573,935	\$0	87.7
2030	86.3			
Total Funded:		\$41,306,521	Total Cost²	\$40,434,800

Notes: ¹The Funded M&R Cost includes Crack Sealing and Pothole patching which is performed by City of Cottage Grove Maintenance Forces.

²The sum of Funded M&R and Unfunded M&R in the last year, less the value of Crack Sealing and Potholing completed by City Forces (\$ value not shown).

CITY OF COTTAGE GROVE
PLANNING LEVEL COST ESTIMATE SUMMARY

STREET NAME	ESTIMATED COST SUBTOTAL	30% PLANNING LEVEL CONTINGENCY	TOTAL ESTIMATED CONSTRUCTION COST
ROW RIVER (THORNTON ROAD TO CURRIN BLVD)	\$597,145	\$179,144	\$776,289
E. WHITEAKER & E. MAIN ST (GATEWAY BLVD TO NEW PAVEMENT W. OF THORNTON)	\$583,668	\$175,100	\$758,768
N. 16TH (MAIN ST TO BIKE PATH)	\$335,190	\$100,557	\$435,747
N. 16TH (MAIN ST TO PAVEMENT JOINT NORTH OF OSTRANDER)	\$307,422	\$92,227	\$399,649
N. GATEWAY (SB FROM VINTAGE INN ENTRANCE TO TRUCK STOP)	\$160,060	\$48,018	\$208,078
W HARRISON (RIVER ROAD TO R STREET)	\$468,560	\$140,568	\$609,128
TOTALS	\$2,452,045	\$735,613	\$3,187,658

ROW RIVER (THORNTON ROAD TO CURRIN BLVD)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$50,000.00	\$50,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$15,000.00	\$15,000.00
	TEMPORARY SIGNS	SQFT	325	\$22.00	\$7,150.00
	FLAGGERS	HOUR	290	\$65.00	\$18,850.00
	TEMPORARY BARRICADES, TYPE II	EA	8	\$70.00	\$560.00
	TEMPORARY BARRICADES, TYPE III	EA	2	\$150.00	\$300.00
	TEMPORARY PLASTIC DRUMS	EA	60	\$50.00	\$3,000.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	6	\$130.00	\$780.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$5,000.00	\$5,000.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	270	\$65.00	\$17,550.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	450	\$4.00	\$1,800.00
	ADJUSTING BOXES	EA	7	\$600.00	\$4,200.00
	ADJUSTING INLETS	EA	1	\$1,500.00	\$1,500.00
	MINOR ADJUSTMENT OF MANHOLES	EA	4	\$1,400.00	\$5,600.00
	COLD PLANE PAVEMENT REMOVAL, 6 INCHES DEEP	SQYD	2825	\$6.50	\$18,362.50
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	2825	\$7.50	\$21,187.50
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	2300	\$120.00	\$276,000.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	400	\$80.00	\$32,000.00
	CONCRETE WALKS	SQFT	2400	\$25.00	\$60,000.00
	EXTRA FOR NEW CURB RAMPS	EA	15	\$1,500.00	\$22,500.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	150	\$50.00	\$7,500.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	7850	\$0.90	\$7,065.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$350.00	\$700.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	6	\$350.00	\$2,100.00
	PAVEMENT BAR, TYPE B-HS	SQFT	740	\$11.00	\$8,140.00
	TRAFFIC SIGNAL LOOPS	EA	6	\$1,500.00	\$9,000.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL =	\$597,145.00
30% CONTINGENCY =	\$179,143.50
TOTAL =	\$776,288.50

E. WHITEAKER & E. MAIN ST (GATEWAY BLVD TO NEW PAVEMENT W. OF THORNTON)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$50,000.00	\$50,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$15,000.00	\$15,000.00
	TEMPORARY SIGNS	SQFT	300	\$22.00	\$6,600.00
	FLAGGERS	HOUR	240	\$65.00	\$15,600.00
	TEMPORARY BARRICADES, TYPE II	EA	10	\$70.00	\$700.00
	TEMPORARY PLASTIC DRUMS	EA	20	\$50.00	\$1,000.00
	EROSION CONTROL	LS	1	\$500.00	\$500.00
	INLET PROTECTION, TYPE 7	EA	10	\$130.00	\$1,300.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$10,000.00	\$10,000.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$1,000.00	\$1,000.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	220	\$65.00	\$14,300.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	500	\$4.00	\$2,000.00
	GENERAL EXCAVATION	CUYD	130	\$65.00	\$8,450.00
	SUBGRADE GEOTEXTILE	SQYD	250	\$1.75	\$437.50
	ADJUSTING BOXES	EA	6	\$600.00	\$3,600.00
	ADJUSTING INLETS	EA	2	\$1,500.00	\$3,000.00
	MINOR ADJUSTMENT OF MANHOLES	EA	9	\$1,400.00	\$12,600.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	1500	\$3.75	\$5,625.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	5150	\$5.00	\$25,750.00
	COLD PLANE PAVEMENT REMOVAL, 6 INCHES DEEP	SQYD	750	\$7.00	\$5,250.00
	AGGREGATE BASE	TON	150	\$40.00	\$6,000.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	1725	\$125.00	\$215,625.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	415	\$80.00	\$33,200.00
	CONCRETE WALKS	SQFT	2100	\$25.00	\$52,500.00
	EXTRA FOR NEW CURB RAMPS	EA	12	\$1,500.00	\$18,000.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	120	\$50.00	\$6,000.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	3700	\$1.00	\$3,700.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$350.00	\$700.00
	PAVEMENT BAR, TYPE B-HS	SQFT	430	\$11.00	\$4,730.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, UPGRADES	LS	1	\$60,000.00	\$60,000.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL =	\$583,667.50
30% CONTINGENCY =	\$175,100.25
TOTAL =	\$758,767.75

N. 16TH (MAIN ST TO BIKE PATH)

PLANNING LEVEL COST ESTIMATE - RECONSTRUCTION BETWEEN CURBS

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$30,000.00	\$30,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$15,000.00	\$15,000.00
	TEMPORARY SIGNS	SQFT	300	\$22.00	\$6,600.00
	FLAGGERS	HOUR	175	\$65.00	\$11,375.00
	TEMPORARY BARRICADES, TYPE II	EA	10	\$70.00	\$700.00
	TEMPORARY BARRICADES, TYPE III	EA	4	\$150.00	\$600.00
	TEMPORARY PLASTIC DRUMS	EA	30	\$50.00	\$1,500.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	5	\$130.00	\$650.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	CONSTRUCTION SURVEY WORK	LS	1	\$4,500.00	\$4,500.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	75	\$4.00	\$300.00
	GENERAL EXCAVATION	CUYD	1400	\$55.00	\$77,000.00
	SUBGRADE GEOTEXTILE	SQYD	2800	\$1.75	\$4,900.00
	MINOR ADJUSTMENT OF MANHOLES	EA	5	\$1,400.00	\$7,000.00
	AGGREGATE BASE	TON	1750	\$30.00	\$52,500.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	950	\$125.00	\$118,750.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	350	\$0.90	\$315.00
	TRAFFIC SIGNAL LOOPS	EA	2	\$1,500.00	\$3,000.00
	HYDRANT ASSEMBLIES	EA	1	\$4,100.00	\$4,100.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL =	\$335,190.00
30% CONTINGENCY =	\$100,557.00
TOTAL =	\$435,747.00

N. 16TH (MAIN ST TO PAVEMENT JOINT NORTH OF OSTRANDER)

PLANNING LEVEL COST ESTIMATE - RECONSTRUCTION BETWEEN CURBS

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$25,000.00	\$25,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$10,000.00	\$10,000.00
	TEMPORARY SIGNS	SQFT	300	\$22.00	\$6,600.00
	FLAGGERS	HOURL	150	\$65.00	\$9,750.00
	TEMPORARY BARRICADES, TYPE II	EA	6	\$70.00	\$420.00
	TEMPORARY BARRICADES, TYPE III	EA	8	\$150.00	\$1,200.00
	TEMPORARY PLASTIC DRUMS	EA	20	\$50.00	\$1,000.00
	EROSION CONTROL	LS	1	\$500.00	\$500.00
	INLET PROTECTION, TYPE 7	EA	5	\$130.00	\$650.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$4,500.00	\$4,500.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	60	\$65.00	\$3,900.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	100	\$4.00	\$400.00
	GENERAL EXCAVATION	CUYD	1300	\$50.00	\$65,000.00
	SUBGRADE GEOTEXTILE	SQYD	3000	\$1.75	\$5,250.00
	ADJUSTING BOXES	EA	5	\$600.00	\$3,000.00
	AGGREGATE BASE	TON	1800	\$28.00	\$50,400.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	650	\$125.00	\$81,250.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	105	\$80.00	\$8,400.00
	CONCRETE CURBS, CURB AND GUTTER, MODIFIED (VALLEY GUTTER)	FOOT	30	\$100.00	\$3,000.00
	CONCRETE WALKS	SQFT	630	\$25.00	\$15,750.00
	EXTRA FOR NEW CURB RAMPS	EA	3	\$1,500.00	\$4,500.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	30	\$50.00	\$1,500.00
	PAVEMENT BAR, TYPE B-HS	SQFT	32	\$11.00	\$352.00
	HYDRANT ASSEMBLIES	EA	1	\$4,100.00	\$4,100.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL = \$307,422.00
30% CONTINGENCY = \$92,226.60
TOTAL = \$399,648.60

N. GATEWAY (SB FROM VINTAGE INN ENTRANCE TO TRUCK STOP)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$15,000.00	\$15,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$7,500.00	\$7,500.00
	TEMPORARY SIGNS	SQFT	250	\$22.00	\$5,500.00
	FLAGGERS	HOUR	80	\$65.00	\$5,200.00
	TRAFFIC CONTROL SUPERVISOR	EA	2	\$650.00	\$1,300.00
	TEMPORARY BARRICADES, TYPE II	EA	6	\$70.00	\$420.00
	TEMPORARY PLASTIC DRUMS	EA	40	\$50.00	\$2,000.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	4	\$130.00	\$520.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	130	\$4.00	\$520.00
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	1750	\$8.00	\$14,000.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	850	\$125.00	\$106,250.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	1500	\$0.90	\$1,350.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL =	\$160,060.00
30% CONTINGENCY =	\$48,018.00
TOTAL =	\$208,078.00

W HARRISON (RIVER ROAD TO R STREET)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$40,000.00	\$40,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$10,000.00	\$10,000.00
	TEMPORARY SIGNS	SQFT	530	\$22.00	\$11,660.00
	FLAGGERS	HOUR	290	\$65.00	\$18,850.00
	TEMPORARY BARRICADES, TYPE II	EA	8	\$70.00	\$560.00
	EROSION CONTROL	LS	1	\$500.00	\$500.00
	INLET PROTECTION, TYPE 7	EA	6	\$130.00	\$780.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$8,000.00	\$8,000.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	225	\$65.00	\$14,625.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	360	\$4.00	\$1,440.00
	ADJUSTING BOXES	EA	4	\$600.00	\$2,400.00
	MINOR ADJUSTMENT OF MANHOLES	EA	7	\$1,400.00	\$9,800.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	2620	\$3.75	\$9,825.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	5050	\$5.00	\$25,250.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	1500	\$125.00	\$187,500.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	340	\$80.00	\$27,200.00
	CONCRETE WALKS	SQFT	2040	\$25.00	\$51,000.00
	EXTRA FOR NEW CURB RAMPS	EA	12	\$1,500.00	\$18,000.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	120	\$50.00	\$6,000.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	8400	\$0.90	\$7,560.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$350.00	\$700.00
	PAVEMENT LEGEND, TPE B-HS: "ONLY"	EA	1	\$750.00	\$750.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	6	\$350.00	\$2,100.00
	PAVEMENT BAR, TYPE B-HS	SQFT	460	\$11.00	\$5,060.00
	LUMINAIRES, LAMPS, AND BALLASTS	LS	1	\$8,000.00	\$8,000.00
	HYDRANT ASSEMBLIES	EA	1	\$4,100.00	\$4,100.00

PLANNING LEVEL ESTIMATE, 30% CONTINGENCY

SUBTOTAL =	\$468,560.00
30% CONTINGENCY =	\$140,568.00
TOTAL =	\$609,128.00

2023 Cottage Grove Paving Projects Design Estimates



Scope

These projects are to restore pavement to good condition with the other components of the projects driven by meeting ADA requirements when pavement work is considered an Alteration.

Design Projects	Total Estimated Fee	
Location		Expenses
Row River	\$ 41,050	\$ 500
N. 16th South End	\$ 17,878	\$ 500
N. 16th North End	\$ 23,089	\$ 500
Gateway	\$ 15,928	\$ 500
Sub-Total	\$ 97,945	\$ 2,000
Anticipated Smaller Scope Total	\$ 99,945	
Whiteaker-Main	\$ 108,286	\$ 2,966
Harrison	\$ 79,007	\$ 1,973
Sub-Total	\$ 187,293	\$ 4,939
Anticipated Larger Scope Total	\$ 192,232	
Total	\$ 292,177	

For these design projects, our fees are based on a field assessment, and preparing, cover and basic plan sheets with typical section and construction notes, plan sheets for each individual curb ramp with 2D design or 3D design as per original assessment, along with specifications, cost estimates, and bid quantities.

Design Fee 16 plan sheets, 1 typical/summary/const, 1 cover/map sheet, 14 ADA/Int - Excluding any Detail/Std Dwg Sheets

Row River Quick Design

Total Estimated Hours 152

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Desgn1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	12	6	8		28	3,962	
Design									
Project Management and Coordination		3	16				19	3,280	
Review of plans and QA/QC		2	5	5			12	1,891	
Site visit topo, measurements, quantities			8		8		16	2,108	
Loop/Striping Plans			2	1	4		7	853	
Utility Coordination			4				4	657	
Develop Paving Plans			6	2	12		20	2,430	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	8				9	1,531	
Quantity & Cost Estimates			6	2	6		14	1,835	
Permits & Coordination W/other Agencies			8		4		12	1,711	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	3				4	710	
	total hours	10	84	16	42	0			
	Subtotal	2,170	13,801	2,034	4,166	-			

Pavement Rehabilitation Plans Total =	22,171	500
ADA Curb Ramp Design Total =	18,879	
Topo Survey Total =	-	
Boundary/ROW Survey Total =	-	
Traffic Signal Design =	-	
Row River Total =	41,050	500

Comments/Concerns

Working with ODOT on impacts at Thornton Signal.

Right of Way issues that could be associated with ADA Ramps have not been considered.

Permitting with ODOT and Lane County as Traffic Control will impact their jurisdictions.

Assumed survey will not be required. Striping layout with contractor in conjunction with construction inspection.

Topics for discussion with Cottage Grove

Design Fee 2 plan sheets, 1 typical/summary/const, 1 cover/map sheet, no ADA, maybe 3rd sheet for loops - Excluding any Detail/Std Dwg S

North 16th South End Quick Design

Total Estimated Hours 123

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Desgn1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	8	3	4		17	2,527	
Design									
Project Management and Coordination		2	15				17	2,899	
Review of plans and QA/QC		1	3	3			7	1,091	
Site visit topo, measurements, quantities			8		8		16	2,108	
Loop/Striping Plans			2	1	2		5	654	
Utility Coordination			4		4		8	1,054	
Develop Paving/Reconstruction Plans			8	2	12		22	2,759	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	6				7	1,203	
Quantity & Cost Estimates			6	2	6		14	1,835	
Permits & Coordination W/other Agencies							0	-	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	2				3	546	
	total hours	8	68	11	36	0			
	Subtotal	1,736	11,172	1,398	3,571	-			

Pavement Rehabilitation Plans Total = 17,878 500
 ADA Curb Ramp Design Total = -
 Topo Survey Total = -
 Boundary/ROW Survey Total = -
 Traffic Signal Design = -
 N. 16th Street (South End) Total = 17,878 500

Comments/Concerns

Traffic impacts and duration with likely reconstruction of pavement section.

Topics for discussion with Cottage Grove

Design Fee 7 plan sheets, 1 typical/summary/const, 1 cover/map sheet, 5 ADA/Int - Excluding any Detail/Std Dwg Sheets

N. 16th North End Quick Design

Total Estimated Hours 129

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Desgn1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	8	3	4		17	2,527	
Design									
Project Management and Coordination		2	12				14	2,406	
Review of plans and QA/QC		1	5	5			11	1,674	
Site visit topo, measurements, quantities			10		10		20	2,635	
Loop/Striping Plans							0	-	
Utility Coordination			8		6		14	1,910	
Develop Paving/Reconstruction Plans			8	2	12		22	2,759	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	6				7	1,203	
Quantity & Cost Estimates			6	2	6		14	1,835	
Permits & Coordination W/other Agencies							0	-	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	2				3	546	
	total hours	8	71	12	38	0			
	Subtotal	1,736	11,665	1,525	3,770	-			

Pavement Rehabilitation Plans Total =	18,696	500
ADA Curb Ramp Design Total =	4,393	
Topo Survey Total =	-	
Boundary/ROW Survey Total =	-	
Traffic Signal Design =	-	
N. 16th Street (North End) Total =	23,089	500

Comments/Concerns

Utility issues at ADA Ramps

Right of Way issues that could be associated with ADA Ramps have not been considered.

Topics for discussion with Cottage Grove

Design Fee 2 plan sheets, 1 typical/summary/const, 1 cover/map sheet, no ADA - Excluding any Detail/Std Dwg Sheets

Gateway Quick Design

Total Estimated Hours 106

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Desgn1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	8	2	3		15	2,300	
Design									
Project Management and Coordination		3	16				19	3,280	
Review of plans and QA/QC		1	3	3			7	1,091	
Site visit topo, measurements, quantities			5		5		10	1,318	
Loop/Striping Plans							0	-	
Utility Coordination							0	-	
Develop Paving Plans			6	2	12		20	2,430	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	8				9	1,531	
Quantity & Cost Estimates			4	2	4		10	1,308	
Permits & Coordination W/other Agencies			3		1		4	592	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	4				5	874	
	total hours	9	63	9	25	0			
	Subtotal	1,953	10,351	1,144	2,480	-			

Pavement Rehabilitation Plans Total =	15,928	500
ADA Curb Ramp Design Total =	-	
Topo Survey Total =	-	
Boundary/ROW Survey Total =	-	
Traffic Signal Design =	-	
Gateway Total =	15,928	500

Comments/Concerns

Night Work and Traffic Control during Construction.

Assumed Contractor to prepare Traffic Control Plan / Engineer Review

Topics for discussion with Cottage Grove

- Coring information?

Design Fee 17 plan sheets, 1 typical/summary/const, 1 cover/map sheet, 13 ADA/Int, 2 Traffic Signal - Excluding any Detail/Std Dwg Shee

Whiteaker & Main

Total Estimated Hours 176

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Design1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	12	6	8		28	3,962	
Design									
Project Management and Coordination		4	19				23	3,990	
Review of plans and QA/QC		1	6	6			13	1,965	
Site visit topo, measurements, quantities			12		12		24	3,162	
Loop/Striping Plans (Part of Signal Plans)							0	-	
Utility Coordination			10		8		18	2,437	
Develop Paving Plans			8	2	16		26	3,156	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	8				9	1,531	
Quantity & Cost Estimates			8	2	8		18	2,362	
Permits & Coordination W/other Agencies			3		2		5	691	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	4				5	874	
	total hours	10	96	16	54	0			
	Subtotal	2,170	15,773	2,034	5,357	-			

Pavement Rehabilitation Plan Total =	25,333	500
ADA Curb Ramp Design Total =	29,109	
Topo Survey Total =	16,589	1,429
Boundary/ROW Survey Total =	12,255	1,037
Traffic Signal Design =	25,000	
Whiteaker - Main Totals =	108,286	2,966

Comments/Concerns

Possible coordination with Lane County for impacts to Mosby Creek Rd.

Utility Coordination could be more significant. There will be coordination with gas at both 19th and 22nd. Underground work at signal could trigger unknown utility issues. Current estimate only accounts for minor issues.

Traffic Signal upgrades for ADA will be extremely tight at Gateway.

Right of Way issues that could be associated with ADA Ramps and work at the Traffic Signal have not been considered.

Topics for discussion with Cottage Grove

Design Fee 22 plan sheets, 1 typical/summary/const, 1 cover/map sheet, 20 ADA/Int - Excluding any Detail/Std Dwg Sheets

Harrison

Total Estimated Hours 171

Tasks

Meetings, site visit for measurements, limited topo, and necessary information to calculate quantities; review of utilities, utility coordination, loop replacement, MH adjustments, valve adjustments, ADA topo, establish quantities, write specs in coordination with City of Cottage Grove standards, prepare plans, QA/QC, cost estimate, utility coordination, final bid docs, bid & RFI support.

	Role	PM Roy	Sr PE1 Dan	Sr Desgn1 Adam	Cadd Tech 2 Kyle	Surv. 1man Survey	Hours	Labor Costs	Expenses
Kickoff Meeting									
Kickoff/Onsite/Project Meetings		2	12	6	8		28	3,962	
Design									
Project Management and Coordination		3	19				22	3,773	
Review of plans and QA/QC		1	6	6			13	1,965	
Site visit topo, measurements, quantities			12		12		24	3,162	
Loop/Striping Plans							0	-	
Utility Coordination			12		8		20	2,765	
Develop Paving Plans			8	2	16		26	3,156	
Stakeholder Input and Review prior to Finalizing for Submittal									
Develop Specifications		1	8				9	1,531	
Quantity & Cost Estimates			8	2	8		18	2,362	
Permits & Coordination W/other Agencies							0	-	
Construction Support Services									
Final bid documents		1	6				7	1,203	
Bid support and RFI support		1	3				4	710	
	total hours	9	94	16	52	0			
	Subtotal	1,953	15,444	2,034	5,158	-			

Pavement Rehabilitation Plans Total =	24,589	500
ADA Curb Ramp Design Total =	37,169	
Topo Survey Total =	9,079	782
Boundary/ROW Survey Total =	8,170	691
Traffic Signal Design =	-	
Harrison Total =	79,007	1,973

Comments/Concerns

Right of Way issues that could be associated with ADA Ramps have not been considered.

Streetlight in sidewalk at SW Corner at Edison (east end).

Utility issues at ADA Ramps

Issues with residential retaining walls, fences, etc. Obstructions in right-of-way impact ability to design/construct ADA ramps.

Topics for discussion with Cottage Grove

· Coring information?

E. WHITEAKER & E. MAIN ST (GATEWAY BLVD TO NEW PAVEMENT W. OF THORNTON)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$33,000.00	\$33,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$10,000.00	\$10,000.00
	TEMPORARY SIGNS	SQFT	300	\$15.00	\$4,500.00
	FLAGGERS	HOUR	240	\$55.00	\$13,200.00
	TEMPORARY BARRICADES, TYPE II	EA	10	\$45.00	\$450.00
	TEMPORARY BARRICADES, TYPE III	EA	0	\$21.00	\$0.00
	TEMPORARY PLASTIC DRUMS	EA	20	\$45.00	\$900.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	10	\$140.00	\$1,400.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	CONSTRUCTION SURVEY WORK	LS	1	\$5,000.00	\$5,000.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	210	\$25.00	\$5,250.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	300	\$4.50	\$1,350.00
	GENERAL EXCAVATION	CUYD	130	\$60.00	\$7,800.00
	ADJUSTING BOXES	EA	6	\$375.00	\$2,250.00
	ADJUSTING INLETS	EA	2	\$1,200.00	\$2,400.00
	MINOR ADJUSTMENT OF MANHOLES	EA	9	\$1,100.00	\$9,900.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	1500	\$4.00	\$6,000.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	5150	\$4.00	\$20,600.00
	COLD PLANE PAVEMENT REMOVAL, 6 INCHES DEEP	SQYD	750	\$4.00	\$3,000.00
	AGGREGATE BASE	TON	150	\$45.00	\$6,750.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	1725	\$70.00	\$120,750.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	300	\$55.00	\$16,500.00
	CONCRETE WALKS	SQFT	1900	\$13.25	\$25,175.00
	EXTRA FOR NEW CURB RAMPS	EA	8	\$1,420.00	\$11,360.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	80	\$32.00	\$2,560.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	3700	\$0.78	\$2,886.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$425.00	\$850.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	0	\$325.00	\$0.00
	PAVEMENT BAR, TYPE B-HS	SQFT	430	\$10.00	\$4,300.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	1	\$60,000.00	\$60,000.00
				SUBTOTAL =	\$379,131.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$113,739.30
				TOTAL =	\$492,870.30

W HARRISON (RIVER ROAD TO R STREET)
PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$25,000.00	\$25,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$7,000.00	\$7,000.00
	TEMPORARY SIGNS	SQFT	530	\$15.00	\$7,950.00
	FLAGGERS	HOUR	290	\$55.00	\$15,950.00
	TEMPORARY BARRICADES, TYPE II	EA	8	\$45.00	\$360.00
	TEMPORARY BARRICADES, TYPE III	EA	0	\$140.00	\$0.00
	TEMPORARY PLASTIC DRUMS	EA	0	\$45.00	\$0.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	6	\$100.00	\$600.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	CONSTRUCTION SURVEY WORK	LS	1	\$3,500.00	\$3,500.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	225	\$25.00	\$5,625.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	360	\$4.50	\$1,620.00
	ADJUSTING BOXES	EA	4	\$375.00	\$1,500.00
	ADJUSTING INLETS	EA	0	\$1,200.00	\$0.00
	MINOR ADJUSTMENT OF MANHOLES	EA	7	\$1,100.00	\$7,700.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	2620	\$3.50	\$9,170.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	5050	\$3.50	\$17,675.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	1500	\$68.00	\$102,000.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	340	\$55.00	\$18,700.00
	CONCRETE WALKS	SQFT	2040	\$13.15	\$26,826.00
	EXTRA FOR NEW CURB RAMPS	EA	12	\$1,375.00	\$16,500.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	120	\$32.00	\$3,840.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	8400	\$0.52	\$4,368.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$425.00	\$850.00
	PAVEMENT LEGEND, TPE B-HS: "ONLY"	EA	1	\$340.00	\$340.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	6	\$325.00	\$1,950.00
	PAVEMENT BAR, TYPE B-HS	SQFT	460	\$10.00	\$4,600.00
	LUMINAIRES, LAMPS, AND BALLASTS	LS	1	\$8,000.00	\$8,000.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
				SUBTOTAL =	\$292,624.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$87,787.20
				TOTAL =	\$380,411.20

N. GATEWAY (SB FROM VINTAGE INN ENTRANCE TO TRUCK STOP)

PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$10,000.00	\$10,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$4,500.00	\$4,500.00
	TEMPORARY SIGNS	SQFT	250	\$15.00	\$3,750.00
	FLAGGERS	HOUR	100	\$55.00	\$5,500.00
	TRAFFIC CONTROL SUPERVISOR	EA	2	\$500.00	\$1,000.00
	TEMPORARY BARRICADES, TYPE II	EA	6	\$45.00	\$270.00
	TEMPORARY BARRICADES, TYPE III	EA	0	\$21.00	\$0.00
	TEMPORARY PLASTIC DRUMS	EA	40	\$45.00	\$1,800.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	4	\$140.00	\$560.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	CONSTRUCTION SURVEY WORK	LS	1	\$1,500.00	\$1,500.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	55	\$28.00	\$1,540.00
	REMOVAL OF ASPHALT CONCRETE WEARING SURFACE	LS	1	\$500.00	\$500.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	160	\$4.50	\$720.00
	ADJUSTING BOXES	EA	4	\$375.00	\$1,500.00
	ADJUSTING INLETS	EA	0	\$1,200.00	\$0.00
	MINOR ADJUSTMENT OF MANHOLES	EA	0	\$1,100.00	\$0.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	130	\$20.00	\$2,600.00
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	1750	\$5.00	\$8,750.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	850	\$73.00	\$62,050.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	60	\$60.00	\$3,600.00
	CONCRETE CURBS, CURB AND GUTTER, MODIFIED (VALLEY GUTTER)	FOOT	45	\$60.00	\$2,700.00
	CONCRETE WALKS	SQFT	480	\$15.50	\$7,440.00
	EXTRA FOR NEW CURB RAMPS	EA	2	\$1,530.00	\$3,060.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	20	\$35.00	\$700.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	1500	\$1.25	\$1,875.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	0	\$425.00	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	0	\$325.00	\$0.00
	PAVEMENT BAR, TYPE B-HS	SQFT	0	\$10.00	\$0.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
				SUBTOTAL =	\$126,915.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$38,074.50
				TOTAL =	\$164,989.50

ROW RIVER (THORNTON ROAD TO CURRIN BLVD)
PLANNING LEVEL COST ESTIMATE - MILL & FILL

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$34,000.00	\$34,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$10,000.00	\$10,000.00
	TEMPORARY SIGNS	SQFT	325	\$15.00	\$4,875.00
	FLAGGERS	HOUR	290	\$55.00	\$15,950.00
	TEMPORARY BARRICADES, TYPE II	EA	8	\$45.00	\$360.00
	TEMPORARY BARRICADES, TYPE III	EA	2	\$140.00	\$280.00
	TEMPORARY PLASTIC DRUMS	EA	60	\$45.00	\$2,700.00
	EROSION CONTROL	LS	1	\$300.00	\$300.00
	INLET PROTECTION, TYPE 7	EA	6	\$140.00	\$840.00
	POLLUTION CONTROL PLAN	LS	1	\$200.00	\$200.00
	CONSTRUCTION SURVEY WORK	LS	1	\$4,500.00	\$4,500.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	305	\$25.00	\$7,625.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	350	\$4.50	\$1,575.00
	ADJUSTING BOXES	EA	7	\$375.00	\$2,625.00
	ADJUSTING INLETS	EA	1	\$1,200.00	\$1,200.00
	MINOR ADJUSTMENT OF MANHOLES	EA	4	\$1,100.00	\$4,400.00
	COLD PLANE PAVEMENT REMOVAL, 6 INCHES DEEP	SQYD	2825	\$3.05	\$8,616.25
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	2825	\$3.50	\$9,887.50
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	2300	\$67.00	\$154,100.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	320	\$55.00	\$17,600.00
	CONCRETE WALKS	SQFT	2745	\$12.70	\$34,861.50
	EXTRA FOR NEW CURB RAMPS	EA	15	\$1,350.00	\$20,250.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	150	\$32.00	\$4,800.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	7850	\$0.54	\$4,239.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	2	\$425.00	\$850.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	6	\$325.00	\$1,950.00
	PAVEMENT BAR, TYPE B-HS	SQFT	740	\$10.00	\$7,400.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	1	\$50,000.00	\$50,000.00
				SUBTOTAL =	\$406,484.25
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$121,945.28
				TOTAL =	\$528,429.53

**RIVER ROAD (WOODSON BRIDGE TO HARRISON)
PLANNING LEVEL COST ESTIMATE - MILL & FILL**

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$69,000.00	\$69,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$21,000.00	\$21,000.00
	TEMPORARY SIGNS	SQFT	800	\$15.00	\$12,000.00
	FLAGGERS	HOUR	850	\$55.00	\$46,750.00
	TEMPORARY BARRICADES, TYPE II	EA	20	\$45.00	\$900.00
	TEMPORARY BARRICADES, TYPE III	EA	2	\$140.00	\$280.00
	TEMPORARY PLASTIC DRUMS	EA	20	\$45.00	\$900.00
	EROSION CONTROL	LS	1	\$1,000.00	\$1,000.00
	INLET PROTECTION, TYPE 7	EA	27	\$100.00	\$2,700.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$9,600.00	\$9,600.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	470	\$25.00	\$11,750.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	750	\$4.50	\$3,375.00
	ADJUSTING BOXES	EA	16	\$375.00	\$6,000.00
	ADJUSTING INLETS	EA	0	\$1,200.00	\$0.00
	MINOR ADJUSTMENT OF MANHOLES	EA	25	\$1,100.00	\$27,500.00
	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	475	\$4.00	\$1,900.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	23400	\$3.05	\$71,370.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	5500	\$67.00	\$368,500.00
	EXTRA FOR ASPHALT APPROACHES	EA	1	\$900.00	\$900.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	710	\$55.00	\$39,050.00
	CONCRETE WALKS	SQFT	4260	\$12.10	\$51,546.00
	EXTRA FOR NEW CURB RAMPS	EA	26	\$1,300.00	\$33,800.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	260	\$32.00	\$8,320.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	22000	\$0.35	\$7,700.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	1	\$425.00	\$425.00
	PAVEMENT LEGEND, TPE B-HS: "ONLY"	EA	0	\$340.00	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	12	\$325.00	\$3,900.00
	PAVEMENT BAR, TYPE B-HS	SQFT	500	\$10.00	\$5,000.00
	LUMINAIRES, LAMPS, AND BALLASTS	LS	0	\$8,000.00	\$0.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
				SUBTOTAL =	\$806,166.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$241,849.80
				TOTAL =	\$1,048,015.80

N. 16TH (MAIN ST TO OSTRANDER)

PLANNING LEVEL COST ESTIMATE - RECONSTRUCTION BETWEEN CURBS

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$225,000.00	\$225,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$65,000.00	\$65,000.00
	TEMPORARY SIGNS	SQFT	1160	\$15.00	\$17,400.00
	FLAGGERS	HOUR	2500	\$55.00	\$137,500.00
	TEMPORARY BARRICADES, TYPE II	EA	30	\$45.00	\$1,350.00
	TEMPORARY BARRICADES, TYPE III	EA	8	\$130.00	\$1,040.00
	TEMPORARY PLASTIC DRUMS	EA	40	\$45.00	\$1,800.00
	EROSION CONTROL	LS	1	\$8,000.00	\$8,000.00
	INLET PROTECTION, TYPE 7	EA	20	\$140.00	\$2,800.00
	POLLUTION CONTROL PLAN	LS	1	\$1,000.00	\$1,000.00
	CONSTRUCTION SURVEY WORK	LS	1	\$32,000.00	\$32,000.00
	REMOVAL OF PIPES	FOOT	4865	\$30.00	\$145,950.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$15,000.00	\$15,000.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	0	\$25.00	\$0.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	1540	\$4.00	\$6,160.00
	GENERAL EXCAVATION	CUYD	5700	\$27.00	\$153,900.00
	SUBGRADE GEOTEXTILE	SQYD	12200	\$1.10	\$13,420.00
	36 INCH STORM SEWER, 10 FT DEPTH	FOOT	1804	\$200.00	\$360,800.00
	CONCRETE MANHOLES, LARGE PRECAST	EA	7	\$12,000.00	\$84,000.00
	ADJUSTING BOXES	EA	16	\$375.00	\$6,000.00
	CONNECTION TO EXISTING STRUCTURES	EA	10	\$1,200.00	\$12,000.00
	ADJUSTING INLETS	EA	0	\$1,200.00	\$0.00
	MINOR ADJUSTMENT OF MANHOLES	EA	21	\$1,100.00	\$23,100.00
	TRENCH RESURFACING (HARVEY LANE)	SQYD	250	\$100.00	\$25,000.00
	COLD PLANE PAVEMENT REMOVAL, 6 INCHES DEEP	SQYD	0	\$3.05	\$0.00
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	0	\$3.50	\$0.00
	AGGREGATE BASE	TON	8000	\$27.00	\$216,000.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	3100	\$67.00	\$207,700.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	570	\$55.00	\$31,350.00
	CONCRETE CURBS, CURB AND GUTTER MODIFIED	FOOT	50	\$60.00	\$3,000.00
	CONCRETE WALKS	SQFT	3240	\$12.50	\$40,500.00
	EXTRA FOR NEW CURB RAMPS	EA	18	\$1,325.00	\$23,850.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	180	\$32.00	\$5,760.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	350	\$2.50	\$875.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	0	\$425.00	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	0	\$325.00	\$0.00
	PAVEMENT BAR, TYPE B-HS	SQFT	240	\$11.00	\$2,640.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
	HYDRANT ASSEMBLIES	EA	7	\$4,100.00	\$28,700.00
	RECONNECTION OF EXISTING WATER SERVICES	EA	85	\$475.00	\$40,375.00
	12 INCH C900 PVC WATER PIPE, 5 FT DEPTH, W/CLASS B BACKFILL	FOOT	3075	\$175.00	\$538,125.00
				SUBTOTAL =	\$2,477,095.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$743,128.50
				TOTAL =	\$3,220,223.50

DOUGLAS (WASTE WATER PLANT TO VILLARD)
PLANNING LEVEL COST ESTIMATE - OVERLAY AND REPAIRS

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$30,000.00	\$30,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$9,000.00	\$9,000.00
	TEMPORARY SIGNS	SQFT	600	\$15.00	\$9,000.00
	FLAGGERS	HOUR	225	\$55.00	\$12,375.00
	TEMPORARY BARRICADES, TYPE II	EA	15	\$45.00	\$675.00
	TEMPORARY BARRICADES, TYPE III	EA	2	\$140.00	\$280.00
	TEMPORARY PLASTIC DRUMS	EA	0	\$45.00	\$0.00
	EROSION CONTROL	LS	1	\$1,000.00	\$1,000.00
	INLET PROTECTION, TYPE 7	EA	6	\$100.00	\$600.00
	POLLUTION CONTROL PLAN	LS	1	\$1,000.00	\$1,000.00
	CONSTRUCTION SURVEY WORK	LS	1	\$2,500.00	\$2,500.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$500.00	\$500.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	60	\$25.00	\$1,500.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	100	\$5.00	\$500.00
	GENERAL EXCAVATION	CUYD	265	\$50.00	\$13,250.00
	ADJUSTING BOXES	EA	3	\$375.00	\$1,125.00
	ADJUSTING INLETS	EA	2	\$1,200.00	\$2,400.00
	MINOR ADJUSTMENT OF MANHOLES	EA	9	\$1,100.00	\$9,900.00
	COLD PLANE PAVEMENT REMOVAL, 0 - 2 INCHES DEEP	SQYD	725	\$10.00	\$7,250.00
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	0	\$3.50	\$0.00
	AGGREGATE SHOULDERS	TON	350	\$45.00	\$15,750.00
	AGGREGATE BASE	TON	350	\$45.00	\$15,750.00
	LEVEL 2, 1/2 INCH ACP MIXTURE	TON	1710	\$72.00	\$123,120.00
	LEVEL 2, 1/2 INCH ACP MIXTURE IN LEVELING	TON	650	\$110.00	\$71,500.00
	4 INCH ASPHALT CONCRETE PAVEMENT REPAIR	SQYD	1025	\$25.00	\$25,625.00
	EXTRA FOR ASPHALT APPROACHES	EA	23	\$575.00	\$13,225.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	90	\$55.00	\$4,950.00
	CONCRETE WALKS	SQFT	540	\$12.70	\$6,858.00
	EXTRA FOR NEW CURB RAMPS	EA	3	\$1,530.00	\$4,590.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	30	\$32.00	\$960.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	0	\$0.54	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	0	\$425.00	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	0	\$325.00	\$0.00
	PAVEMENT BAR, TYPE B-HS	SQFT	0	\$10.00	\$0.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
				SUBTOTAL =	\$385,183.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$115,554.90
				TOTAL =	\$500,737.90

BRYANT (M STREET TO R STREET)
RECONSTRUCTION - PLANNING LEVEL COST ESTIMATE

ITEM NO	ITEM	UNIT	QUANTITY	UNIT PRICE	COST
	MOBILIZATIONS	LS	1	\$83,000.00	\$83,000.00
	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	1	\$24,000.00	\$24,000.00
	TEMPORARY SIGNS	SQFT	530	\$15.00	\$7,950.00
	FLAGGERS	HOUR	500	\$55.00	\$27,500.00
	TEMPORARY BARRICADES, TYPE II	EA	10	\$45.00	\$450.00
	TEMPORARY BARRICADES, TYPE III	EA	4	\$130.00	\$520.00
	TEMPORARY PLASTIC DRUMS	EA	0	\$45.00	\$0.00
	EROSION CONTROL	LS	1	\$3,000.00	\$3,000.00
	INLET PROTECTION, TYPE 7	EA	11	\$100.00	\$1,100.00
	POLLUTION CONTROL PLAN	LS	1	\$500.00	\$500.00
	CONSTRUCTION SURVEY WORK	LS	1	\$18,000.00	\$18,000.00
	REMOVAL OF PIPES	FOOT	1350	\$30.00	\$40,500.00
	REMOVAL OF WALKS AND DRIVEWAYS	SQYD	150	\$20.00	\$3,000.00
	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	\$4,000.00	\$4,000.00
	REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	100	\$25.00	\$2,500.00
	ASPHALT PAVEMENT SAW CUTTING	FOOT	650	\$4.00	\$2,600.00
	GENERAL EXCAVATION	CUYD	1450	\$40.00	\$58,000.00
	SUBGRADE GEOTEXTILE	SQYD	3200	\$1.50	\$4,800.00
	18 INCH STORM SEWER, 10 FT DEPTH	FOOT	0	\$106.00	\$0.00
	ADJUSTING BOXES	EA	2	\$375.00	\$750.00
	CONNECTION TO EXISTING STRUCTURES	EA	0	\$1,250.00	\$0.00
	ADJUSTING INLETS	EA	11	\$1,200.00	\$13,200.00
	MINOR ADJUSTMENT OF MANHOLES	EA	3	\$1,100.00	\$3,300.00
	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	1500	\$5.00	\$7,500.00
	COLD PLANE PAVEMENT REMOVAL, 8 INCHES DEEP	SQYD	0	\$3.50	\$0.00
	AGGREGATE BASE	TON	2100	\$35.00	\$73,500.00
	LEVEL 3, 1/2 INCH ACP MIXTURE	TON	1050	\$70.00	\$73,500.00
	EXTRA FOR ASPHALT APPROACHES	EA	10	\$575.00	\$5,750.00
	CONCRETE CURBS, CURB AND GUTTER	FOOT	1750	\$50.00	\$87,500.00
	CONCRETE CURBS, CURB AND GUTTER MODIFIED	FOOT	0	\$60.00	\$0.00
	CONCRETE DRIVEWAYS	SQFT	3200	\$14.00	\$44,800.00
	CONCRETE WALKS	SQFT	7900	\$11.25	\$88,875.00
	EXTRA FOR NEW CURB RAMPS	EA	5	\$1,325.00	\$6,625.00
	TRUNCATED DOMES ON NEW SURFACES	SQFT	50	\$32.00	\$1,600.00
	LONGITUDINAL PAVEMENT MARKINGS - PAINT	FOOT	0	\$2.50	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; ARROWS	EA	0	\$425.00	\$0.00
	PAVEMENT LEGEND, TYPE B-HS; BICYCLE STENCIL	EA	0	\$325.00	\$0.00
	PAVEMENT BAR, TYPE B-HS	SQFT	70	\$12.00	\$840.00
	TRAFFIC SIGNAL, PED PUSH BUTTON RELOCATIONS, LOOPS	LS	0	\$50,000.00	\$0.00
	RECONNECTION OF EXISTING WATER SERVICES	EA	27	\$475.00	\$12,825.00
	12 INCH C900 PVC WATER PIPE, 5 FT DEPTH, W/CLASS B BACKFILL	FOOT	1350	\$175.00	\$236,250.00
				SUBTOTAL =	\$938,235.00
	PLANNING LEVEL ESTIMATE, 30% CONTINGENCY			30% CONTINGENCY =	\$281,470.50
				TOTAL =	\$1,219,705.50

City of Cottage Grove Fiscal Year 2023-24 Budget

STREET FUND: Revenue 004-000

2020-21 ACTUAL	2021-22 ACTUAL	2022-23 BUDGET	DESCRIPTION	2023-24 PROPOSED	2023-24 APPROVED	2023-24 ADOPTED
53,601	208,979	255,000	41010 CARRYOVER	525,000		
377,392	344,716	375,000	42030 LOCAL GAS TAX	350,000		
747,032	835,257	840,000	51020 STATE HIGHWAY APPORTIONMENT	850,000		
113,225	124,255	125,000	51100 FEDERAL AID - URBAN	145,000		
397	0	2,500,000	51120 FEDERAL GRANTS	-		
1,272,143	0	0	51130 STATE AND LOCAL GRANTS	-	0	0
2,132,796	959,512	3,465,000	TOTAL INTERGOVERNMENTAL	995,000	0	0
22	1,710	250	53200 INTEREST INCOME	2,000		
1,267	0	0	54050 AUCTION PROCEEDS			
248,880	20,924	1,000	54060 MISCELLANEOUS REVENUE	1,000		
1,250	1,250	1,250	54065-001 PROJECT ASSESSMNT-SUNRISE	500		
0	0	0	54070 INSURANCE PROCEEDS	-		
50,455	51,000	40,000	55030 TRANSFER FROM STORM DRAIN FUND	-		
0	0	400,000	55037 TRANSFER FROM GENERAL FUND	-		
301,851	73,174	442,250	TOTAL MISCELLANEOUS	1,500	0	0
2,865,662	1,588,091	4,537,500	TOTAL REVENUE	1,873,500	0	0

STREET MAINTENANCE

FUND/DEPARTMENT #: 004-410

OVERVIEW

Street Maintenance is a function of the Public Works Department and ensures safe and efficient traffic movements for various modes of transportation within the system. Duties include basic operations to maintain and repair pavement surface, street amenities and traffic control devices, vegetation control, and snow and debris removal. Street Maintenance is funded through the Street Fund which accounts for revenues dedicated specifically to street purposes.

DEPARTMENT OPERATIONAL OBJECTIVES

- Provide sanding, snow and debris removal during inclement weather to provide safe passage.
- Maintain street ride ability by filling potholes and investigating and repairing minor road surface damage.
- Maintain traffic control devices, including regulatory, warning, and directional signs, traffic signal operation, and traffic markings (crosswalks, centerlines of roadways, bike lanes, etc.)
- Maintain right-of-way visibility by trimming trees and controlling vegetation.
- Fund street light operation costs.
- Use the pavement condition and improvement plan to improve City street surface conditions.

GOALS AND FOCUS - FISCAL YEAR 2023-24

- Continue City-wide leaf and tree branch pickup program.
- Work with land owners to bring street trees and vegetation into compliance with City Code.
- Respond to public safety needs such as sanding, snow removal, de-icing application, and surface maintenance.
- Replace and upgrade street signs.
- Fund traffic signal and street light maintenance contracts.
- Crosswalk and street painting.
- Pothole repairs.
- Chip seal W. Main Street from River Road to R Street.
- Chip seal N. River Road from W. Main Street to Woodson Place.
- Excavate and repave failed areas of street travel lanes throughout the City.

PRIMARY ACCOMPLISHMENTS – FISCAL YEAR 2022-23

- Completed Chip Seal of E. Main Street from Gateway to 10th Street.
- Completed Chip Seal of S. River Road from W. Main Street to Harrison Ave.
- Cut vegetation in Alley ways, 174 Interchange, BLM Row River Trail, and along City Streets.
- Crack Sealed approximately 20,000 lineal feet of cracks in streets throughout the City.
- Repainted parking spaces and disabled parking spaces in all City parking lots, and street curbs.
- Repaired G Street damaged by large Redwood Tree at G and Chestnut.

SPECIAL REVENUE – STREET MAINTENANCE

SIGNIFICANT BUDGET CHANGES FROM FISCAL YEAR 2022-23

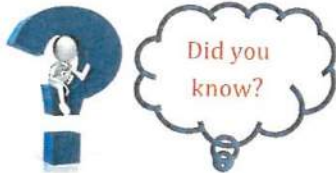
➤ Significant increases in contracted services and materials.

PERSONNEL

POSITION	GROUP	SALARY RANGE	2022 FTE	2023 FTE	2024 FTE
Public Works & Dev Director	Exempt	\$101,959-\$130,120	0.10	0.10	0.1
Fleet & Facilities Manager	Exempt	\$75,688-\$96,592	0.22	0.22	0.22
Utilities Maintenance Supervisor	Exempt	\$75,688-\$96,592	0.22	0.22	0.22
Utility Maintenance Worker 1,2 & 3	Laborers	\$46,973-\$71,555	3.18	3.18	3.18
Administrative Aide	General	\$54,848-\$70,006	0.07	0.07	0.07
Temporary Worker	Exempt	\$14.20-\$14.20/hr	0.00	0.27	0.27
TOTAL FULL-TIME EQUIVALENT			3.79	4.06	4.06

PERFORMANCE MEASUREMENTS

Strategy	Measure	Actual 2019-20	Actual 2020-21	Actual 2021-22	Estimate 2022-23
Keep street right-of-way unobstructed	Cubic yards of leaf debris collected	1425	1600	2010	2000
	Cubic yards of tree branch debris collected	1560	1480	234	1400
Provide safe transportation system	Number of service requests	140	150	145	175
	Number of signs upgraded	30	32	32	30
	Number of new signs installed	10	20	105	50
	Pothole Spotter notifications	15	52	34	50



Street System Facts:

- 50.29 miles of public streets (45.66 miles paved, 4.63 miles graveled or natural)
- 14 traffic signals (7 City, 7 ODOT)
- 509 street lights
- 1,405 traffic signs
- 572 street name signs
- 4.6 miles of improved on-street bike lanes
- 5.7 miles of off-street bike trails
- 6 blinking light crosswalks

SPECIAL REVENUE – STREET MAINTENANCE



G Street & Chestnut Ave. Street, Curb, & Sidewalk Repair



Grading gravel parking lot at N. 12th Street

City of Cottage Grove Fiscal Year 2023-24 Budget

STREET FUND: Street Maintenance 004-410

2020-21 ACTUAL	2021-22 ACTUAL	2022-23 BUDGET	DESCRIPTION	FTE	2023-24 PROPOSED	2023-24 APPROVED	2023-24 ADOPTED
PERSONNEL SERVICES							
11,445	11,903	12,695	60299 PUBLIC WORKS/DEVEL. DIR.	0.10	13,100		
3,200	3,338	3,570	60410 ADMINISTRATIVE AIDE	0.07	4,100		
17,075	18,651	20,645	60440 UTILITIES MAINT. SUPERVISOR	0.22	21,260		
17,447	19,053	20,645	60450 FLEET & FACILITIES MANAGER	0.22	21,260		
161,592	169,565	185,925	60480 UTILITY MAINTENANCE WORKERS	3.18	196,800		
0	0	7,775	61000 TEMPORARY WORKER	0.27	8,500		
1,237	1,362	2,000	61100 OVERTIME		2,000		
2,540	2,883	2,570	62010 WORKERS' COMPENSATION		2,500		
212	224	3,020	62020 UNEMPLOYMENT		3,105		
15,917	16,837	21,730	62030 FICA		22,365		
92	80	100	63010 LIFE INSURANCE		100		
39,314	56,337	62,550	63020 RETIREMENT		80,660		
857	673	1,055	63030 DISABILITY INSURANCE		1,055		
66,876	70,063	74,325	63040 HEALTH INSURANCE		82,600		
589	659	790	63050 DEFERRED COMPENSATION		2,280		
0	0	505	63060 PAID FAM. MED. LEAVE INS.		1,060		
338,392	371,628	419,900	TOTAL PERSONNEL SERVICES	4.06	462,745	0	0
MATERIALS AND SERVICES							
19,801	36,788	30,000	71000 CONTRACTUAL SERVICES		35,000		
0	0	1,000	71210 CLOTHING		1,500		
20,099	13,552	20,000	71500 ELECTRICITY		20,000		
66,043	61,049	95,000	71510 STREET LIGHTING		80,000		
5,241	5,059	3,880	71520 TELEPHONE/MOBILE DEVICES		4,000		
2,689	3,110	3,000	71530 NATURAL GAS		3,500		
3,152	15,623	24,000	71540 FUEL & LUBRICANTS		20,000		
949	2,288	1,000	71700 BUILDING MAINT. & REPAIR		1,500		
6,525	11,462	7,500	71710 EQUIPMENT MAINT. & REPAIR		8,000		
3,912	5,696	5,000	71720 VEHICLE MAINT. & REPAIR		5,000		
15,379	9,371	15,000	71770 SIGN & SIGNAL MAINTENANCE		15,000		
3,355	0	20,000	71780 STREET MAINTENANCE		20,000		
2,949	4,351	5,000	72100 MINOR EQUIPMENT & TOOLS		5,000		
308	11,903	5,000	72120 EQUIPMENT RENTAL & LEASE		5,000		
2,953	8,965	5,000	72310 TRAFFIC MARKINGS SUPPLIES		5,000		
4,091	2,209	3,000	72510 SAFETY EQUIPMENT		3,000		
901	316	900	72600 CLEANING SUPPLIES		900		
5,825	4,575	5,000	73000 SOIL-SAND-GRAVEL		5,000		
633	306	2,500	73010 ASPHALT & CONCRETE		2,500		
6,749	3,979	5,000	73600 MISCELLANEOUS SUPPLIES		5,000		
171,555	200,603	256,780	TOTAL MATERIALS AND SERVICES		244,900	0	0
509,947	572,231	676,680	TOTAL EXPENDITURES		707,645	0	0

STREET SWEEPING

FUND/DEPARTMENT #: 004-412

OVERVIEW

Street Sweeping is a function of the Public Works Department using Street Funds to provide street cleaning for all public streets, thereby reducing the amount of debris entering the City's storm drainage system.

DEPARTMENT OPERATIONAL OBJECTIVES

- Remove the maximum amount of debris from public streets and prevent debris from entering the storm drainage system.
- Provide cleanup after community activities such as parades and other on-street activities that are attended by large numbers of people.
- Collect and dispose of road-killed animals from the public street right-of-way.
- Provide clean-up assistance with the leaf and tree branch pickup programs.
- Keep improved bike paths clean of debris.

GOALS AND FOCUS - FISCAL YEAR 2023-24

- The Storm Drain Utility Fund will continue to contribute 20% of the street sweeping operational costs. This reflects the proportion of benefit the street sweeping provides to the storm drainage system.
- Extend street sweeping services to all recently constructed public streets.
- Provide additional leaf pickup on all recently constructed and annexed streets.
- Continue to provide a street sweeping program on existing improved city streets including disposal of road-killed animals.
- Continue to provide sweeping after special community events such as parades.

PRIMARY ACCOMPLISHMENTS – FISCAL YEAR 2022-23

- Swept over 5447 miles of streets in Cottage Grove.
- Removed debris following wind and rainstorms.
- Removed dirt and rock debris for roads supporting construction throughout the City.

SIGNIFICANT BUDGET CHANGES FROM FISCAL YEAR 2022-23

- Significant increases in labor, electrical, fuel, and natural gas expenses.

PERSONNEL

POSITION	GROUP	SALARY RANGE	2021 FTE	2022 FTE	2023 FTE
Fleet & Facilities Manager	Exempt	\$75,688-\$96,592	0.05	0.05	0.05
Utilities Maintenance Worker	Exempt	\$46,793-\$71,555	0.60	0.60	0.60
TOTAL FULL-TIME EQUIVALENT			0.65	0.65	0.65

SPECIAL REVENUE – STREET SWEEPING

PERFORMANCE MEASUREMENTS

<i>Strategy</i>	<i>Measure</i>	Actual 2020-21	Actual 2021-22	YTD 2022-23
<i>Removal of Yard Debris</i>	<i>Tons of Yard Debris collected by the Street Sweeper</i>	310	300	320
<i>Miles of Street Swept</i>		7,500	8,300	5,447



Cottage Grove's 2015 Swartz Street Sweeper

City of Cottage Grove Fiscal Year 2023-24 Budget

STREET FUND: Street Sweeping 004-412

2020-21 ACTUAL	2021-22 ACTUAL	2022-23 BUDGET	DESCRIPTION	2023-24 FTE PROPOSED	2023-24 APPROVED	2023-24 ADOPTED
PERSONNEL SERVICES						
3,965	4,330	4,700	60450 FLEET & FACILITIES MANAGER	0.05	4,850	
33,166	35,194	39,360	60480 UTILITY MAINTENANCE WORKER	0.60	42,350	
17	7	300	61100 OVERTIME		300	
475	542	500	62010 WORKERS' COMPENSATION		570	
37	40	530	62020 UNEMPLOYMENT		570	
2,736	2,914	3,830	62030 FICA		4,090	
16	14	40	63010 LIFE INSURANCE		20	
7,508	10,460	11,645	63020 RETIREMENT		14,800	
159	129	160	63030 DISABILITY INSURANCE		120	
16,476	16,655	18,025	63040 HEALTH INSURANCE		16,650	
55	64	100	63050 DEFERRED COMPENSATION		525	
0	0	70	63060 PAID FAM. MED. LEAVE INS.		195	
64,608	70,348	79,260	TOTAL PERSONNEL SERVICES	0.65	85,040	0 0
MATERIALS AND SERVICES						
27	27	1,000	71520 TELEPHONE/MOBILE DEVICES		500	
3,269	2,897	19,000	71540 FUEL & LUBRICANTS		15,000	
105	84	2,000	71550 LANDFILL FEES		3,000	
1,356	3,896	5,000	71710 EQUIP. MAINT. & REPAIR		10,000	
47	33	100	73600 MISCELLANEOUS SUPPLIES		100	
4,804	6,937	27,100	TOTAL MATERIALS AND SERVICES		28,600	0 0
69,412	77,286	106,360	TOTAL EXPENDITURES		113,640	0 0

STREET CAPITAL IMPROVEMENTS/PURCHASES

FUND/DEPARTMENT #: 004-414

OVERVIEW

The Street Major Improvements/Capital Purchases budget accumulates financial reserves to perform major street improvement projects, perform contracted professional services, and purchase capital equipment items for the City's street system. Oregon cities receive monies from the Oregon Department of Transportation for maintenance and/or reconstruction of Federal Aid designated streets.

DEPARTMENT OPERATIONAL OBJECTIVES

- Provide funding for work equipment used by the City's Public Works crew in the maintenance of the street system.
- Complete engineering design and construction of major street projects as well as small miscellaneous projects within the street system.
- Provide funding for the grading and rocking of City alleys and gravel roads.

FOCUS AND GOALS - FISCAL YEAR 2023-24

- Spot repair alligator pavement failures in travel lanes throughout the City.
- Chip Seal W. Main Street from River Road to R Street & N. River Road from Main Street to Woodson Place.
- Crack Seal W Main Street.
- Restripe crosswalks, railroad crossings, parking lots, and no parking areas.
- Support the Main Street Revitalization Grant.
- Support the City Ad Hoc Street Improvement Funding Committee.
- Apply dust abatement to all gravel City streets.

PRIMARY ACCOMPLISHMENTS – FISCAL YEAR 2022-23

- Chip Sealed E. Main Street from Gateway to 10th Street & S. River Road from Main Street to Harrison Avenue.
- Completed resurfacing of alleys between W. Main Street and Ash Street.
- Funding for Crack Sealing approximately 400,000 lineal feet of street cracks.
- Applied dust abatement to all gravel City Streets.
- Purchased a used Asphalt Zipper from Lane County.
- Updated prices on 6 City Street repair projects.



Street & sidewalk repair



Dust abatement



Chip sealing

City of Cottage Grove Fiscal Year 2023-24 Budget

STREET FUND: Street Improvement-Capital Purchases 004-414

2020-21 ACTUAL	2021-22 ACTUAL	2022-23 BUDGET	DESCRIPTION	2023-24 PROPOSED	2023-24 APPROVED	2023-24 ADOPTED
			MATERIALS AND SERVICES			
0	31,927	25,000	71000 CONTRACTUAL SERVICES	10,000		
0	8,143	17,500	79910 ENGINEERING SERVICE FEES	5,000		
0	40,070	42,500	TOTAL MATERIALS AND SERVICES	15,000	0	0
			CAPITAL OUTLAY			
1,849,666	201,834	2,950,000	83000 BUILDINGS AND IMPROVEMENTS	252,500		
0	0	400,000	83000-001 BLDGS AND IMPROV - ARPA	0		
0	44,653	10,000	84000 MOTOR VEHICLES	5,000		
0	0	40,000	84010 WORK EQUIPMENT	5,000		
1,849,666	246,487	3,400,000	TOTAL CAPITAL OUTLAY	262,500	0	0
1,849,666	286,557	3,442,500	TOTAL EXPENDITURES	277,500	0	0

STREET INTERNAL SUPPORT DEPARTMENT

FUND/DEPARTMENT #: 004-495

OVERVIEW

The purpose of the Street Internal Support Department budget is to account for expenditures that are common to all Street Fund activities. Those expenditures include costs for audit, insurance, administrative charges, postage, education, professional organization costs, medical tests, operational engineering support, and other general expenses.

DEPARTMENT OPERATIONAL OBJECTIVES

- Training is provided for full-time employees that conduct the activities on the street infrastructure.
- Provides funding for mailing costs.
- Pays allotment for administrative and general engineering services as well any outstanding debt service.

FOCUS AND GOALS - FISCAL YEAR 2023-24

- To continue to support the activities of the Street Maintenance, Street Sweeping, and Street Major Improvements/Capital Purchases functions.

City of Cottage Grove Fiscal Year 2023-24 Budget

STREET FUND: Internal Support Department 004-495

2020-21 ACTUAL	2021-22 ACTUAL	2023-24 BUDGET	DESCRIPTION	2023-24 PROPOSED	2023-24 APPROVED	2023-24 ADOPTED
MATERIALS & SERVICES						
1,118	30	1,000	70030 ADVERTISING	1,000		
3,836	4,492	4,720	70100 AUDIT EXPENSE	4,960		
21,765	21,102	24,920	70400 INSURANCE & BONDS	26,175		
595	595	500	71012 EMAIL & WEB SERVICES	500		
0	0	4,250	71570 COMPUTER SOFTWARE/SUPPORT	4,250		
7	0	100	71600 POSTAGE	100		
2,281	1,051	500	72000 COMPUTER HARDWARE & SUPPLIES	2,000		
112	138	250	72010 OFFICE SUPPLIES	500		
85	286	100	72030 BOOKS, MAPS & PERIODICALS	100		
0	0	700	72055 SAFETY & APPRECIATION AWARDS	1,000		
57	0	500	72100 MINOR EQUIPMENT-TOOLS	500		
87	34	750	74100 PROFESSIONAL ASSOCIATION DUES	750		
3,066	152	2,500	74200 EDUCATION & REGISTRATION FEES	5,000		
0	0	500	74210 TRAVEL & SUBSISTENCE	500		
1,397	930	1,200	74300 EMPLOYEE MEDICAL EXAMS & TESTS	1,200		
69,155	69,285	69,760	79900 ADMINISTRATIVE FEE	68,585		
20,000	20,000	20,000	79910 ENGINEERING SERVICE FEES	0		
123,561	118,094	132,250	TOTAL MATERIALS & SERVICES	117,120	0	0
TRANSFERS						
10,000	20,000	20,000	90211 TRANSFER TO BICYCLE PATH FUND	20,000		
30,491	10,291	10,740	90217 TRANSFER TO DEBT SERVICE	11,110		
			xxxxx TRANSFER TO EDA FUND - MAIN ST	400,000		
40,491	30,291	30,740	TOTAL TRANSFERS	431,110	0	0
0	0	148,970	99000 CONTINGENCY	226,485		
0	0	0	99012 RESERVE FOR FUTURE EXPENDITURE			
272,585	503,633	0	99020 ENDING BALANCE			
272,585	503,633	148,970	TOTAL CONTINGENCY/ENDING BAL.	226,485	0	0
436,636	652,018	311,960	TOTAL EXPENDITURES	774,715	0	0
2,865,662	1,588,091	4,537,500	TOTAL STREET FUND EXPENDITURES	1,873,500	0	0

City of Cottage Grove Fiscal Year 2022-23 Budget

STREET FUND: Revenue 004-000

2019-20 ACTUAL	2020-21 ACTUAL	2021-22 BUDGET	DESCRIPTION	2022-23 PROPOSED	2022-23 APPROVED	2022-23 ADOPTED
113,390	53,601	63,880	41010 CARRYOVER	255,000	255,000	255,000
378,689	377,392	375,000	42030 LOCAL GAS TAX	375,000	375,000	375,000
682,669	747,032	769,400	51020 STATE HIGHWAY APPORTIONMENT	840,000	840,000	840,000
759,846	113,225	115,000	51100 FEDERAL AID - URBAN	125,000	125,000	125,000
52,121	397	0	51120 FEDERAL GRANTS	2,500,000	2,500,000	2,500,000
123,792	1,272,143	0	51130 STATE AND LOCAL GRANTS	0	0	0
1,618,428	2,132,796	884,400	TOTAL INTERGOVERNMENTAL	3,465,000	3,465,000	3,465,000
1,564	22	0	53200 INTEREST INCOME	250	250	250
0	1,267	0	54050 AUCTION PROCEEDS	0	0	0
2,710	248,880	1,000	54060 MISCELLANEOUS REVENUE	1,000	1,000	1,000
1,750	1,250	2,500	54065-001 PROJECT ASSESSMNT-SUNRISE	1,250	1,250	1,250
5,833	0	0	54070 INSURANCE PROCEEDS	0	0	0
0	50,455	51,000	55030 TRANSFER FROM STORM DRAIN FUND	40,000	40,000	40,000
0	0	0	55037 TRANSFER FROM GENERAL FUND	400,000	400,000	400,000
10,292	301,851	54,500	TOTAL MISCELLANEOUS	442,250	442,250	442,250
2,122,364	2,865,662	1,377,780	TOTAL REVENUE	4,537,500	4,537,500	4,537,500

STREET MAINTENANCE

FUND/DEPARTMENT #: 004-410

OVERVIEW

Street Maintenance is a function of the Public Works Department and ensures safe and efficient traffic movements for various modes of transportation within the system. Duties include basic operations to maintain and repair pavement surface, street amenities and traffic control devices, vegetation control, and snow and debris removal. Street Maintenance is funded through the Street Fund which accounts for revenues dedicated specifically to street purposes.

DEPARTMENT OPERATIONAL OBJECTIVES

- Provide sanding, snow and debris removal during inclement weather to provide safe passage.
- Maintain street ride ability by filling potholes and investigating and repairing minor road surface damage.
- Maintain traffic control devices, including regulatory, warning, and directional signs, traffic signal operation, and traffic markings (crosswalks, centerlines of roadways, bike lanes, etc.)
- Maintain right-of-way visibility by trimming trees and controlling vegetation.
- Fund street light operation costs.
- Use the pavement condition and improvement plan to improve City street surface conditions.

GOALS AND FOCUS - FISCAL YEAR 2022-23

- Continue City-wide leaf and tree branch pickup program.
- Work with land owners to bring street trees and vegetation into compliance with City Code.
- Respond to public safety needs such as sanding, snow removal, de-icing application, and surface maintenance.
- Replace and upgrade street signs.
- Fund traffic signal and street light maintenance contracts.
- Crosswalk and street painting.
- Pothole repairs.
- Chip seal E. Main Street from Hwy 99 to Gateway.
- Chip seal S. River Road from W. Main Street to Harrison Ave.
- Excavate and repave failed areas of street travel lanes throughout the City.

PRIMARY ACCOMPLISHMENTS – FISCAL YEAR 2021-22

- Completed Chip Seal of Gateway from Harvey to E. Main Street.
- Cut vegetation in Alley ways, 174 Interchange, BLM Row River Trail, and along City Streets.
- Crack Sealed approximately 400,000 lineal feet of cracks in streets throughout the City.
- Repainted parking spaces and disabled parking spaces in all City parking lots, and street curbs.
- Graded and rocked alleys between W. Main and Ash Street.
- Trim City street trees.

SPECIAL REVENUE – STREET MAINTENANCE

SIGNIFICANT BUDGET CHANGES FROM FISCAL YEAR 2021-22

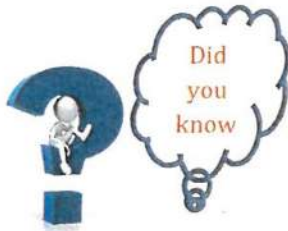
➤ Significant increases in labor, electrical, fuel, and natural gas expenses.

PERSONNEL

POSITION	GROUP	SALARY RANGE	2021 FTE	2022 FTE	2023 FTE
Public Works & Dev Director	Exempt	\$99,048-\$126,408	0.10	0.10	0.10
Fleet & Facilities Manager	Exempt	\$73,524-\$93,828	0.22	0.22	0.22
Utilities Maintenance Supervisor	Exempt	\$73,524-\$93,828	0.22	0.22	0.22
Utility Maintenance Worker 1,2 & 3	Laborers	\$44,940-\$68,472	2.96	3.18	3.18
Administrative Aide	General	\$39,468-\$50,376	0.07	0.07	0.07
Temporary Worker	Exempt	\$13.50/hr	0.00	0.00	0.27
TOTAL FULL-TIME EQUIVALENT			3.57	3.79	4.06

PERFORMANCE MEASUREMENTS

Strategy	Measure	Actual 2018-19	Actual 2019-20	Actual 2020-21	Estimate 2021-22
Keep street right-of-way unobstructed	Cubic yards of leaf debris collected	1560	1425	1600	1600
	Cubic yards of tree branch debris collected	30000	1560	1480	1400
Provide safe transportation system	Number of service requests	139	140	150	145
	Number of signs upgraded	37	30	32	30
	Number of new signs installed	18	10	20	15
	Pothole Spotter notifications	7	15	52	45



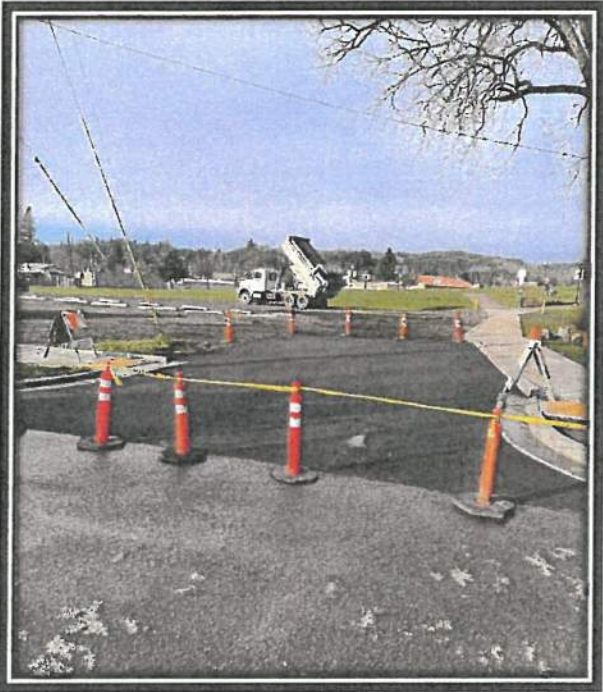
Street System Facts:

- 50.29 miles of public streets (45.66 miles paved, 4.63 miles graveled or natural)
- 14 traffic signals (7 City, 7 ODOT)
- 509 street lights
- 1,405 traffic signs
- 572 street name signs
- 4.6 miles of improved on-street bike lanes
- 5.7 miles of off-street bike trails
- 5 blinking light crosswalks

SPECIAL REVENUE – STREET MAINTENANCE



Sink hole on Gibbs caused by a rotten stump



Paving Monroe parking lot entrance to Bohemia Park

City of Cottage Grove Fiscal Year 2022-23 Budget

STREET FUND: Street Maintenance 004-410

2019-20 ACTUAL	2020-21 ACTUAL	2021-22 BUDGET	DESCRIPTION	2022-23 FTE PROPOSED	2022-23 APPROVED	2022-23 ADOPTED
PERSONNEL SERVICES						
10,744	11,445	11,875	60299 PUBLIC WORKS/DEVEL. DIR.	0.10	12,695	12,695
3,120	3,200	3,350	60410 ADMINISTRATIVE AIDE	0.07	3,570	3,570
15,933	17,075	18,520	60440 UTILITIES MAINT. SUPERVISOR	0.22	20,645	20,645
14,991	17,447	18,915	60450 FLEET & FACILITIES MANAGER	0.22	20,645	20,645
144,172	161,592	169,285	60480 UTILITY MAINTENANCE WORKERS	3.18	185,925	185,925
12,882	0	0	61000 TEMPORARY WORKER	0.27	7,775	7,775
1,057	1,237	2,000	61100 OVERTIME		2,000	2,000
5,894	2,540	5,515	62010 WORKERS' COMPENSATION		2,570	2,570
204	212	450	62020 UNEMPLOYMENT		3,020	3,020
15,252	15,917	19,200	62030 FICA		21,730	21,730
83	92	100	63010 LIFE INSURANCE		100	100
34,598	39,314	57,020	63020 RETIREMENT		62,550	62,550
767	857	1,070	63030 DISABILITY INSURANCE		1,055	1,055
60,163	66,876	74,350	63040 HEALTH INSURANCE		74,325	74,325
531	589	600	63050 DEFERRED COMPENSATION		790	790
0	0	0	63060 PAID FAM. MED. LEAVE INS.		505	505
320,391	338,392	382,250	TOTAL PERSONNEL SERVICES	4.06	419,900	419,900
MATERIALS AND SERVICES						
20,678	19,801	30,000	71000 CONTRACTUAL SERVICES		30,000	30,000
0	0	0	71210 CLOTHING		1,000	1,000
15,763	20,099	18,000	71500 ELECTRICITY		20,000	20,000
84,952	66,043	85,000	71510 STREET LIGHTING		95,000	95,000
5,637	5,241	6,000	71520 TELEPHONE/MOBILE DEVICES		3,880	3,880
2,565	2,689	2,000	71530 NATURAL GAS		3,000	3,000
6,960	3,152	6,000	71540 FUEL & LUBRICANTS		8,500	24,000
0	0	250	71560 COMMUNICATIONS SERVICE		0	0
1,187	949	2,000	71700 BUILDING MAINT. & REPAIR		1,000	1,000
9,871	6,525	10,000	71710 EQUIPMENT MAINT. & REPAIR		7,500	7,500
6,034	3,912	5,000	71720 VEHICLE MAINT. & REPAIR		5,000	5,000
31,152	15,379	15,000	71770 SIGN & SIGNAL MAINTENANCE		15,000	15,000
12,343	3,355	7,500	71780 STREET MAINTENANCE		20,000	20,000
6,804	2,949	5,000	72100 MINOR EQUIPMENT & TOOLS		5,000	5,000
7,825	308	10,000	72120 EQUIPMENT RENTAL & LEASE		5,000	5,000
0	2,953	5,000	72310 TRAFFIC MARKINGS SUPPLIES		5,000	5,000
3,791	4,091	2,500	72510 SAFETY EQUIPMENT		3,000	3,000
1,797	901	900	72600 CLEANING SUPPLIES		900	900
2,633	5,825	3,000	73000 SOIL-SAND-GRAVEL		5,000	5,000
22,253	633	1,500	73010 ASPHALT & CONCRETE		2,500	2,500
7,496	6,749	5,000	73600 MISCELLANEOUS SUPPLIES		5,000	5,000
249,741	171,555	219,650	TOTAL MATERIALS AND SERVICES		241,280	256,780
570,132	509,947	601,900	TOTAL EXPENDITURES		661,180	676,680

STREET SWEEPING

FUND/DEPARTMENT #: 004-412

OVERVIEW

Street Sweeping is a function of the Public Works Department using Street Funds to provide street cleaning for all public streets, thereby reducing the amount of debris entering the City's storm drainage system.

DEPARTMENT OPERATIONAL OBJECTIVES

- Remove the maximum amount of debris from public streets and prevent debris from entering the storm drainage system.
- Provide cleanup after community activities such as parades and other on-street activities that are attended by large numbers of people.
- Collect and dispose of road-killed animals from the public street right-of-way.
- Provide clean-up assistance with the leaf and tree branch pickup programs.
- Keep improved bike paths clean of debris.

GOALS AND FOCUS - FISCAL YEAR 2022-23

- The Storm Drain Utility Fund will continue to contribute 75% of the street sweeping operational costs. This reflects the proportion of benefit the street sweeping provides to the storm drainage system.
- Extend street sweeping services to all recently constructed public streets.
- Provide additional leaf pickup on all recently constructed and annexed streets.
- Continue to provide a street sweeping program on existing improved city streets including disposal of road-killed animals.
- Continue to provide sweeping after special community events such as parades.

PRIMARY ACCOMPLISHMENTS – FISCAL YEAR 2021-22

- Swept over 8,300 miles of streets in Cottage Grove.
- Removed debris following wind and rainstorms.
- Removed dirt and rock debris for roads supporting construction throughout the City.

SIGNIFICANT BUDGET CHANGES FROM FISCAL YEAR 2021-22

- Significant increases in labor, electrical, fuel, and natural gas expenses.

PERSONNEL

POSITION	GROUP	SALARY RANGE	2021 FTE	2022 FTE	2023 FTE
Fleet & Facilities Manager	Exempt	\$73,524-\$93,828	0.05	0.05	0.05
Utilities Maintenance Worker	Exempt	\$44,940-\$68,472	0.60	0.60	0.60
TOTAL FULL-TIME EQUIVALENT			0.65	0.65	0.65

SPECIAL REVENUE – STREET SWEEPING

PERFORMANCE MEASUREMENTS

<i>Strategy</i>	<i>Measure</i>	Actual 2019-20	Actual 2020-21	Estimate 2021-22	Estimate 2022-23
<i>Removal of Yard Debris</i>	<i>Tons of Yard Debris collected by the Street Sweeper</i>	300	310	300	300



Cottage Grove's 2015 Swartz Street Sweeper

City of Cottage Grove Fiscal Year 2022-23 Budget

STREET FUND: Street Sweeping 004-412

2019-20 ACTUAL	2020-21 ACTUAL	2021-22 BUDGET	DESCRIPTION	2022-23 FTE	2022-23 PROPOSED	2022-23 APPROVED	2022-23 ADOPTED
PERSONNEL SERVICES							
3,407	3,965	4,300	60450 FLEET & FACILITIES MANAGER	0.05	4,700	4,700	4,700
30,037	33,166	35,210	60480 UTILITY MAINTENANCE WORKER	0.60	39,360	39,360	39,360
231	17	300	61100 OVERTIME		300	300	300
878	475	1,040	62010 WORKERS' COMPENSATION		500	500	500
34	37	100	62020 UNEMPLOYMENT		530	530	530
2,475	2,736	3,420	62030 FICA		3,830	3,830	3,830
15	16	40	63010 LIFE INSURANCE		40	40	40
6,368	7,508	10,450	63020 RETIREMENT		11,645	11,645	11,645
143	159	120	63030 DISABILITY INSURANCE		160	160	160
15,816	16,476	18,025	63040 HEALTH INSURANCE		18,025	18,025	18,025
46	55	70	63050 DEFERRED COMPENSATION		100	100	100
0	0	0	63060 PAID FAM. MED. LEAVE INS.		70	70	70
59,450	64,608	73,075	TOTAL PERSONNEL SERVICES	0.65	79,260	79,260	79,260
MATERIALS AND SERVICES							
26	27	25	71520 TELEPHONE/MOBILE DEVICES		1,000	1,000	1,000
11,567	3,269	3,000	71540 FUEL & LUBRICANTS		4,000	4,000	19,000
197	105	1,250	71550 LANDFILL FEES		2,000	2,000	2,000
14,076	1,356	5,000	71710 EQUIP. MAINT. & REPAIR		5,000	5,000	5,000
0	47	25	73600 MISCELLANEOUS SUPPLIES		100	100	100
25,866	4,804	9,300	TOTAL MATERIALS AND SERVICES		12,100	12,100	27,100
85,315	69,412	82,375	TOTAL EXPENDITURES		91,360	91,360	106,360

STREET CAPITAL IMPROVEMENTS/PURCHASES

FUND/DEPARTMENT #: 004-414

OVERVIEW

The Street Major Improvements/Capital Purchases budget accumulates financial reserves to perform major street improvement projects, perform contracted professional services, and purchase capital equipment items for the City's street system. Oregon cities receive monies from the Oregon Department of Transportation for maintenance and/or reconstruction of Federal Aid designated streets.

DEPARTMENT OPERATIONAL OBJECTIVES

- Provide funding for work equipment used by the City's Public Works crew in the maintenance of the street system.
- Complete engineering design and construction of major street projects as well as small miscellaneous projects within the street system.
- Provide funding for the grading and rocking of City alleys and gravel roads.

FOCUS AND GOALS - FISCAL YEAR 2022-23

- Spot repair alligator pavement failures in travel lanes throughout the City.
- Chip Seal E Main Street from Hwy. 99 to Gateway.
- Support the Main Street Revitalization Grant an ARPA project.
- Purchase a roller compactor.

PRIMARY ACCOMPLISHMENTS – FISCAL YEAR 2021-22

- Chip Sealed Gateway Blvd. from Harvey Rd. & E. Main Street.
- Completed resurfacing of alleys between W. Main Street and Ash Street.
- Funding for Crack Sealing approximately 400,000 lineal feet of street cracks.
- Applied dust abatement on Lane, Hudson, Grover, and 7th Streets.
- Purchased a CAT Track Skid Steer Loader.
- Updated the Cottage Grove Pavement Conditions Report.



Crack sealing North River Road

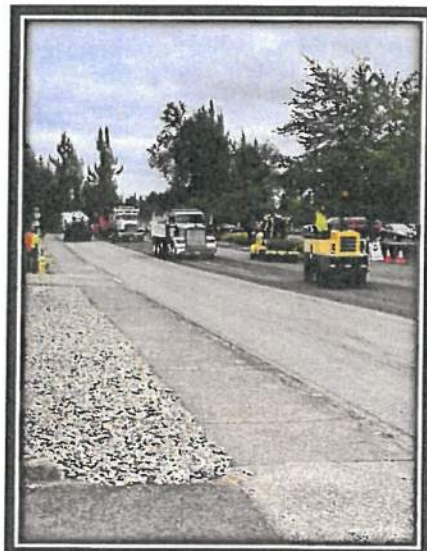
SPECIAL REVENUE – STREET CAPITAL IMPROVEMENTS/PURCHASES



Dust abatement application on Lane Street



Chip Sealing Gateway Blvd.



Rolling Chip Seal of Gateway Blvd.

City of Cottage Grove Fiscal Year 2022-23 Budget

STREET FUND: Street Improvement-Capital Purchases 004-414

2019-20 ACTUAL	2020-21 ACTUAL	2021-22 BUDGET	DESCRIPTION	2022-23 PROPOSED	2022-23 APPROVED	2022-23 ADOPTED
			MATERIALS AND SERVICES			
37,378	0	10,000	71000 CONTRACTUAL SERVICES	25,000	25,000	25,000
59,871	0	2,000	79910 ENGINEERING SERVICE FEES	17,500	17,500	17,500
97,249	0	12,000	TOTAL MATERIALS AND SERVICES	42,500	42,500	42,500
			CAPITAL OUTLAY			
1,075,600	1,849,666	320,470	83000 BUILDINGS AND IMPROVEMENTS	2,950,000	2,950,000	2,950,000
0	0	0	83000-001 BLDGS AND IMPROV - ARPA	400,000	400,000	400,000
13,150	0	50,000	84000 MOTOR VEHICLES	10,000	10,000	10,000
0	0	0	84010 WORK EQUIPMENT	40,000	40,000	40,000
1,088,750	1,849,666	370,470	TOTAL CAPITAL OUTLAY	3,400,000	3,400,000	3,400,000
1,185,999	1,849,666	382,470	TOTAL EXPENDITURES	3,442,500	3,442,500	3,442,500

STREET INTERNAL SUPPORT DEPARTMENT

FUND/DEPARTMENT #: 004-495

OVERVIEW

The purpose of the Street Internal Support Department budget is to account for expenditures that are common to all Street Fund activities. Those expenditures include costs for audit, insurance, administrative charges, postage, education, professional organization costs, medical tests, operational engineering support, and other general expenses.

DEPARTMENT OPERATIONAL OBJECTIVES

- Training is provided for full-time employees that conduct the activities on the street infrastructure.
- Provides funding for mailing costs.
- Pays allotment for administrative and general engineering services as well any outstanding debt service.

FOCUS AND GOALS - FISCAL YEAR 2022-23

- To continue to support the activities of the Street Maintenance, Street Sweeping, and Street Major Improvements/Capital Purchases functions.

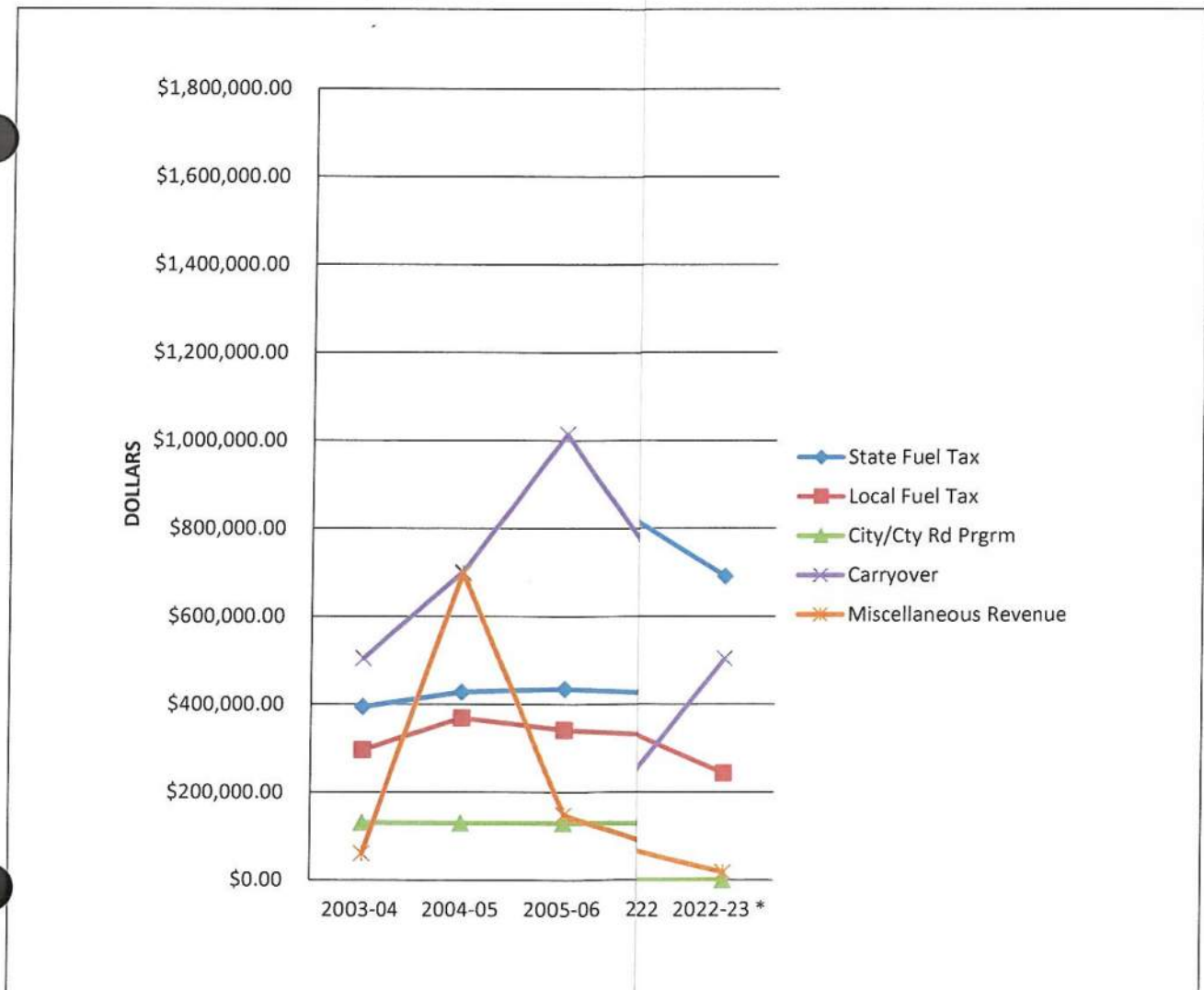
City of Cottage Grove Fiscal Year 2022-23 Budget

STREET FUND: Internal Support Department 004-495

2019-20 ACTUAL	2020-21 ACTUAL	2021-22 BUDGET	DESCRIPTION	2022-23 PROPOSED	2022-23 APPROVED	2022-23 ADOPTED
MATERIALS & SERVICES						
538	1,118	500	70030 ADVERTISING	1,000	1,000	1,000
1,000	3,836	4,675	70100 AUDIT EXPENSE	4,720	4,720	4,720
21,603	21,765	24,920	70400 INSURANCE & BONDS	24,920	24,920	24,920
476	595	500	71012 EMAIL & WEB SERVICES	500	500	500
0	0	0	71570 COMPUTER SOFTWARE/SUPPORT	4,250	4,250	4,250
34	7	100	71600 POSTAGE	100	100	100
2,175	2,281	1,000	72000 COMPUTER HARDWARE & SUPPLIES	500	500	500
110	112	250	72010 OFFICE SUPPLIES	250	250	250
79	85	100	72030 BOOKS, MAPS & PERIODICALS	100	100	100
0	0	0	72055 SAFETY & APPRECIATION AWARDS	700	700	700
625	57	500	72100 MINOR EQUIPMENT-TOOLS	500	500	500
1,171	87	750	74100 PROFESSIONAL ASSOCIATION DUES	750	750	750
1,529	3,066	2,500	74200 EDUCATION & REGISTRATION FEES	2,500	2,500	2,500
165	0	500	74210 TRAVEL & SUBSISTENCE	500	500	500
713	1,397	1,000	74300 EMPLOYEE MEDICAL EXAMS & TESTS	1,200	1,200	1,200
68,985	69,155	69,285	79900 ADMINISTRATIVE FEE	69,760	69,760	69,760
20,000	20,000	20,000	79910 ENGINEERING SERVICE FEES	20,000	20,000	20,000
119,204	123,561	126,580	TOTAL MATERIALS & SERVICES	132,250	132,250	132,250
TRANSFERS						
57,300	10,000	20,000	90211 TRANSFER TO BICYCLE PATH FUND	20,000	20,000	20,000
50,813	30,491	74,180	90217 TRANSFER TO DEBT SERVICE	10,740	10,740	10,740
108,113	40,491	94,180	TOTAL TRANSFERS	30,740	30,740	30,740
0	0	90,275	99000 CONTINGENCY	179,470	179,470	148,970
0	0	0	99012 RESERVE FOR FUTURE EXPENDITURE	0	0	0
53,601	272,585	0	99020 ENDING BALANCE	0	0	0
53,601	272,585	90,275	TOTAL CONTINGENCY/ENDING BAL.	179,470	179,470	148,970
280,917	436,636	311,035	TOTAL EXPENDITURES	342,460	342,460	311,960
2,122,364	2,865,662	1,377,780	TOTAL STREET FUND EXPENDITURES	4,537,500	4,537,500	4,537,500

Fiscal Year State Fuel Tax Local Fuel Tax City/Cty Rd

Fiscal Year	State Fuel Tax	Local Fuel Tax	City/Cty Rd
2003-04	\$394,302.00	\$295,834.00	\$130,3
2004-05	\$427,572.00	\$367,906.00	\$129,1
2005-06	\$434,421.00	\$340,979.00	\$128,6
2006-07	\$423,213.00	\$326,942.00	\$128,5
2007-08	\$400,137.00	\$327,698.00	
2008-09	\$358,244.00	\$319,128.00	
2009-10	\$389,280.00	\$340,204.00	
2010-11	\$462,328.00	\$353,988.00	
2011-12	\$524,395.00	\$344,222.00	
2012-13	\$528,389.00	\$343,817.00	
2013-14	\$553,156.00	\$353,461.26	
2014-15	\$561,283.05	\$336,873.38	
2015-16	\$577,470.69	\$412,475.56	
2016-17	\$585,388.12	\$424,795.10	
2017-18	\$632,658.99	\$405,418.79	
2018-19	\$723,280.07	\$417,125.94	
2019-20	\$682,669.14	\$378,689.22	
2020-21	\$747,031.78	\$377,391.57	
2021-22	\$835,256.86	\$344,715.51	
2022-23 *	\$690,936.97	\$242,743.66	



* Revenue received through 5/23/23

Past and Proposed Street Funded Projects

- Grind and pave S. 6th Street and Mosby Creek
 - \$427,365.36 (9/8/2017)
- Repair Vintage Inn and Gateway Intersection
 - \$365,128.39 Total Cost, \$159,294.80 Street Fund (9/21/2018)
- Repair Main Street, Silt Creek, and Harrison Bridges
 - \$534,179.42 (2/14/2019)
- Rebuild J Polk Swinging Bridge
 - \$803,354.00 (2/1/2019)
- Safe Routes to School Project
 - \$2,095,166.61 (Total Street Cost from 5/2020 to 11/2021)
 - \$1,272,143 Grant Amount (\$823,023.61 Street Fund)
- Gateway Chip Seal
 - \$99,950.00 (7/13/2021)
- E. Main Street and S. River Road Chip Seal
 - \$225,500.00 (5/4/2022)
- W. Main Street and N. River Road Chip Seal
 - \$220,000.00 Estimate (July 2023)
- Main Street Revitalization Project (Currently in design, construction 2024)
 - \$6,250,000 Grant Award and Match (\$5,000,000 & \$1,250,000)
- Crack Sealing, Street restriping, sign installation & replacement
 - \$50,000 yearly
- Rail Road Crossings, 6th Street, Villard and Chamberlin
 - \$24,650.00 9/4/2018 (6th Street Crossing)
 - \$25,740.00 5/4/2019 (Villard & Chamberlin)
 - \$16,444.54 Polycorp. Rail product for all 3 crossings

MEMORANDUM

TO: Mayor and City Council

FROM: Faye Stewart, Public Works & Development Director

SUBJECT: CITY STREETS WORKSESSION

DATE: March 2, 2022

Background

The City has approximately 42.26 miles of paved and 1.98 miles of gravel streets. In 2018 the Public Works & Development Department contracted with Emerio Design to perform a pavement condition index survey of the City streets and enter it into the City's PAVER (pavement management software) program. On December 9, 2019 the City Council received the Pavement Management Report for the City Streets. At that time the average Pavement Condition Index (PCI) for the City streets was 58 and in the lower section of the Fair category (56-70). The report also stated the amount of unfunded maintenance and repair costs of the current transportation system is \$26.73 million today and projected to be \$31.12 million in 2029.

To maintain the current PCI the City would need to invest \$1.4 million per year for the next 10 years. To improve the PCI to 72 (satisfactory) the City would need to invest \$2.875 million per year for the next ten years. Finally, to improve the PCI to 80 (upper end of satisfactory) an investment of \$3.6 million per year for 10 years is needed. Emerio is currently surveying the pavement condition for all City streets and will be updating the Pavement Management Report by July 1, 2022.

On a regular basis City staff receive concerns from Cottage Grove residents regarding the current condition of the City's streets. Concerns are sent to the Pot Hole Spotter on the City website, staff are emailed, concerns are shared to the City Manager on his regular KNND Beeper show, staff receive phone calls, and finally concerns are expressed face to face while out and about in the City. The complaints are for many of the streets throughout town, not for one specific street. In 2018 Emerio surveyed all the City streets by segments. There are a total of 321 road segments of which, 42% of the segments were in poor, very poor, or serious condition.

The Adopted 2021-2022 City of Cottage Grove Budget estimated \$1,377,780 in revenue for the Street Fund;

- \$375,000 Local Gas Tax
- \$769,400 State Highway Apportionment
- \$115,000 Federal Urban Aid
- \$1,000 Miscellaneous Revenue
- \$2,500 Project Assessment Sunrise Ridge Development

- \$51,000 Transfer from Storm Drain Fund

Adopted Expenses;

- \$382,250 Personnel Services (3.79 FTE)
- \$219,650 Materials and Services
 - \$85,000 Street Lighting
 - \$15,000 Sign and Signal Repair (ODOT Street Light Signals)
 - \$30,000 Contractual Services
 - \$10,000 Equipment Rental (Crack Sealer)
- \$82,375 Street Sweeper Costs
- Total Operating Expenses: \$684,275

In 2021-2022 there is approximately \$600,000 allocated for capital improvements:

- \$50,000 for Equipment
- \$100,000 to Chip Seal N. Gateway
- \$100,000 for Street dig out and patching
- \$50,000 for Crack Sealing
- \$115,000 to Chip Seal River Road from Harrison Bridge to W. Main Street
- \$185,000 to apply towards street repaving in 2022-23

Actual Operating Expenses:

<u>Year</u>	<u>Actual</u>	<u>Budgeted</u>	<u>FTE</u>
• 2014	\$535,922	\$606,940	3.00
• 2015	\$516,897	\$618,690	3.18
• 2016	\$512,423	\$657,490	3.18
• 2017	\$528,619	\$647,955	3.35
• 2018	\$548,250	\$688,715	3.33
• 2019	\$581,909	\$718,265	3.33
• 2020	\$655,447	\$738,875	4.10
• 2021	\$579,359	\$648,146	3.57 (75% sweeper costs Storm Drain Fund)

Capital Projects Completed:

<u>Year</u>	<u>Project</u>
• 2017-18	Repaved South 6 th Street from Hwy 99 to Johnson Street and Mosby Creek Road from Thornton to City Limits. Installed Pedestrian crossing across Row River Road near Wal-Mart. Gateway Boulevard repair at KFC and Vintage Inn. Total spent \$906,798 (75,000 ODOT Grant).
• 2018-19	Main Street, Silk Creek and Harrison Avenue Bridge repairs. Rebuilt the railroad crossing on south 6th Street. Total spent \$1,102,675.
• 2019-20	Completed construction of the J. Polk Currin Swinging Bridge. Rebuilt the railroad crossings at Villard and Chamberlain Streets. Crack Sealed 100,000 lineal feet of cracks in streets. Total spent \$1,172,849 (\$200,000 Oregon State Parks Grant Plus local donations).

- 2020-21 Safe Routes to School project. Total spent \$1,849,666 (\$1,272,145 Safe Routes to School Grant).
- 2021-22 Chip Sealed North Gateway from Harvey Road to East Main Street. Crack Sealed 400,000 lineal feet of cracks in streets.

Currently after expenses the City has approximately \$600,000 per year to allocate for capital improvements and street maintenance. This is well short of the \$1.4 million need to maintain the current street condition index. The City has been successful in securing grant funding for projects such as, the lighted crosswalk on Row River Road, 4th Street Safe Routes to School project, and the J. Polk Currin Swinging Bridge. The City has applied for a \$5 million grant from the Economic Development Administration to rebuild East Main Street from 8th Street to the Main Street Bridge at River Road. Notice of the grant outcome should come in late May or early June. Staff is continually looking at grant opportunities to improve City streets. Securing grants help make street improvements, but don't address the total investment needed to improve the City Streets.

The following are estimates prepared by Emerio Designs for streets in Cottage Grove that need to be repaved.

ROW RIVER (THORNTON ROAD TO CURRIN BLVD) – Estimated Base Construction Cost \$406,000 – with Contingency \$528,000

General Scope/Assumptions:

- Based upon field observations, assumed 8 inch mill & fill westbound travel lane (loaded log truck traffic)
- Assumed 6 inch mill & fill eastbound travel lane (unloaded log truck traffic).
- Mill & fill in each directions was assumed to be 14 feet wide including one foot on either side of travel lane.
- Shoulders & center turn lane is largely in good condition. So this appears to be the least cost option to return the travel lanes to good condition.
- Upgrade ADA including signal at Thornton.

Comments:

- It would be helpful to have coring data which may already exist (research needed).
- Includes 15 ADA ramps including work to become ADA compliant at Thornton intersection.
- ADA work is expensive estimated at about \$145,000, or 35% of the project cost.
- It appears that the roadway is badly in need of attention from Thornton to the Walmart access (ODOT Section, would they participate if work extended?)
- Possible alternative would be to consider full depth reclamation, additional research would be needed to develop this alternative, and I think in this case it would likely be more costly.

E. WHITEAKER & E. MAIN ST (GATEWAY BLVD TO NEW PAVEMENT WEST OF THORNTON) - Estimated Base Construction Cost \$379,000 – with Contingency \$493,000

General Scope/Assumptions:

- Based upon field observations, assumed most of project to be a 4" mill & fill project.
- Area around I-5 overpass assumed 2" mill & fill as pavement here is in better condition than that on either side.
- Assumed 6 inch mill & fill or ACP repair over 10% of the area to repair the worst areas.
- Assumed reconstruction of approximately 75 feet of half street on E. Main from centerline north at N. 19th Street. This is to correct grade issue on E. Main Street in order to correct issue in travel lane.
- Reconstruct N. 19th approach to match E. Main Street grade correction.
- Upgrade ADA, including at signal at Gateway.

Comments:

- It would be helpful to have coring data
- ADA work is expensive estimated at about \$130,000, or 34% of the project cost.

N. 16TH (MAIN ST TO OSTRANDER) - Estimated Base Construction Cost \$2,477,000 – with Contingency \$3,220,000

General Scope/Assumptions:

- Reconstruct street with 4 inches of ACP over 12 inches of base rock with subgrade fabric.
- Upsize existing 6 inch waterline to 12 inch waterline from Main Street to Ostrander – approximately 3075 feet.
- Replace fire hydrants with waterline upgrade.
- Replace 18 inch storm sewer with 36 inch storm sewer from Main Street to Harvey Lane – approximately 1484 feet.
- Replace 320 feet of storm sewer in Harvey Lane to the west of Main Street with 36 inch storm sewer – approximately 320 feet.
- Replace storm manholes with large precast storm manholes within storm sewer replacement runs.
- Stop short of Main Street with full reconstruction to avoid construction at Main Street twice. Avoiding ADA trigger at intersection.
- Upgrade ADA to the north of Main Street.

Comments:

- Street PCI was about 24 in 2018. Street is in very poor condition. General construction traffic will likely destroy street the rest of the way, so this street will need to be reconstructed.
- Existing curbs are generally okay which allows reconstruction utilizing existing curb grades as control reducing necessary survey.
- Utility coordination will need to be a part of this project.
- ADA is a lesser percentage of this project, particularly by holding south of E. Main Street.
- An extra benefit of replacing Fire hydrants is that ADA conflicts can be eliminated with proper placement.
- Downstream investigation of storm sewer should be included in scope of design work.

N. GATEWAY (SB FROM VINTAGE INN ENTRANCE TO TRUCK STOP) - Estimated Base Construction Cost \$127,000 – with Contingency \$165,000

General Scope/Assumptions:

- Based upon field observations, assumed project to be a 8" mill & fill project.
- 2" mill & fill at south end tie-in.
- Upgrade ADA @ Oswald West.

Comments:

- It would be helpful to obtain typical section information or coring data. Evaluation of current base and pavement section.
- Due to constructability and traffic this project should be constructed at night.
- Due to physical constraints and truck traffic, the traffic control plan will be an important step on this project. Whether by design team or by Contractor prepared plan.

DOUGLAS (WASTE WATER PLANT TO VILLARD) - Estimated Base Construction Cost \$385,000 – with Contingency \$501,000

General Scope/Assumptions:

- Based upon field observations, the majority of this street is assumed to require an overlay.
- Pavement repairs have been assumed in the worst of the badly alligatored areas.
- Pre-level is assumed over most of the street surface.
- There is an approximately 360 foot section located south of Pennoyer that has been assumed will require reconstruction. Assumed 4 inches of ACP over 8 inches of aggregate base.
- Assumed Cold Plane Pavement Removal 0-2 inches along curb line in curb section.
- Assumed aggregate shoulders in non-curb sections.
- ADA limited to curb section. Reconstruction of 3 ADA ramps.

Comments:

- There is a drainage issue at one location south of Pennoyer which should be addressed to convey water from the east side of the street to the west side.
- Recommend brief street closure to complete short reconstruction section as quickly as possible.

RIVER ROAD (WOODSON BRIDGE TO HARRISON) - Estimated Base Construction Cost \$806,000 – with Contingency \$1,048,000

General Scope/Assumptions:

- 4 inch mill & fill between curbs with the exception of the bridge crossing which will be a nominal 2" mill & fill.
- Assumed no mill & fill required within vicinity of Main Street due to previous work and current pavement condition. This will also eliminate a major cost to the project which would require addressing ADA issues at the Main Street and River Road intersection (This work would probably be best included with the next upgrade to Main Street).
- Upgrade ADA within mill & fill pavement areas will require upgrading approximately 26 ADA ramps.

Comments:

- It would be helpful to obtain typical section information or coring data for evaluation of current base and pavement section.
- Need to verify depth of ACP on bridge located within project limits, to assure damage will not occur from milling operation.
- ADA work is estimated at about \$155,000, or 19% of the project cost. This would be far greater if Main Street at River Road ADA was to be included.

W. HARRISON – (RIVER ROAD TO R STREET) - Estimated Base Construction Cost \$293,000 – with Contingency \$380,000

General Scope/Assumptions:

- 4 inch mill & fill travel lanes and 2 inch mill & fill shoulders.
- Assumed project will extend through the R Street intersection.
- Assumed ADA to be upgraded from west of River Road thru and including upgrades at R Street.
- Assumed luminaire at Edison Ave to be relocated as a part of the project to accommodate ADA.

Comments:

- It would be helpful to obtain typical section information or coring data for evaluation of current base and pavement section.
- Obstructions vs ADA designs? There are water meters, inlets, fire hydrant, fence, landscape blocks, signs, water valves, and a luminaire pole. Many issues facing ADA design.
- Approximately 12 ADA ramps are estimated at about \$82,000, or 28% of the project cost.

BRYANT (M STREET TO R STREET) - Estimated Base Construction Cost \$938,000 – with Contingency \$1,220,000

General Scope/Assumptions:

- 4 inch mill & fill within existing concrete curbed section of street immediately east of R Street.
- Reconstruct street with 4 inches of ACP over 12 inches of base rock with subgrade fabric.
- Upsize existing waterline to 12 inch waterline from M Street to R Street – approximately 1350 feet.
- Assume construction of curb and gutter from existing concrete curbed section to M Street.
- Assume construction of 6 foot wide sidewalk from existing sidewalk section to M Street.
- Assume concrete driveway approaches with either concrete or AC connections depending upon existing.
- Upgrade ADA.

Comments:

- It would be helpful to obtain typical section information or coring data for evaluation of current base and pavement section.

- Street PCI within proposed reconstruction section was 11 in 2018. Street is in failed condition.
- Existing AC curbs within reconstruction section have exceeded their useful life.
- Utility coordination will need to be a part of this project.
- ADA is a relatively small percentage of the overall project.

The following are funding mechanisms that could raise revenue for street improvements;

- Gas Tax (Cottage Grove Municipal Code Chapter 5.26):
 - Current City tax is \$.03 per gallon. An increase requires a City wide vote. Most cities have a \$.03 tax. Portland is \$.10, Coburg is \$.06, and Eugene is \$.05 the rest are \$.03 or less.
 - Revenue generated decreases over time as vehicles become more efficient and as people shift to electric cars.
 - Travelers and people living outside the city limits contribute to the tax when fuel is purchased within the City limits.
 - Highway Trust Fund Revenues for 2021-2022 is estimated to be \$77.91 per capita (our population of 10,792 is used for the calculation). It is estimated to decrease in 2022-2023 to \$76.42 per capita and \$76.11 per capita in 2023-2024. The State Highway Trust Fund revenue increases as the City population increases. Last year the population increased by 637 people increasing the revenue by \$49,629.00
- Transportation Utility Fee:
 - The Transportation Utility Fee (TUF) is a fee added to the current utility billing dedicated to transportation improvements and maintenance. TUFs are calculated in two ways; a flat fee per month or a fee based on trip generation methodology. The trip generation method is the same method the City uses to calculate Transportation System Development Fees on new development. Approximately 20 Oregon cities have TUFs. The majority of the TUFs are ongoing. Two have sunset clauses.
 - The fee is added to the utility bill. Currently there are 3,921 accounts. The revenue generated will increase as new utility accounts are added. Currently water, wastewater, and storm drain have a minimum charge of \$90.19 per month without a TUF. The average residential billing using 6,000 gallons of water per month is approximately \$100.00.
- Property Tax:
 - Voters approve a bond measure for transportation projects. General Obligation Bonds are sold to fund the projects with property tax revenue servicing the debt. Eugene and Springfield have been successful in passing voter-approved general obligation bond measures for street improvement projects. In general, approved measures last 3 to 5 years and require a vote to renew. Successful measures have included specific improvement projects, annual reports to voters, and a citizen oversight committee.
 - Property tax values can increase up to 3% per year based on property tax assessments by the County Assessor. The amount paid is based on each property's value. Less value less paid or more value more paid.
- Local Improvement District (LID):

- Requires voter approval of a defined geographical area or zone of benefit. Does not fund ongoing maintenance, only funds capital improvements. Citizens representing 33% or more of the LID can terminate the LID and overturn planned projects. Must have strong support for LID.
- Urban Renewal District:
 - Is used to improve and redevelop “blighted areas”. Urban renewal district (URD) programs use “tax-increment financing. District boundaries are formed and projects are identified for the purpose of increasing property values. The increased property values from new development are frozen and used to fund bonds that generate revenue for the URD projects. Districts are limited in size, cannot be entire City, and must meet the definition of a blighted area.
- Bonding:
 - The City can sell Revenue Bonds to fund street improvements. To generate \$10 million for improvements it would require \$650,000 per year for bond repayment at 2.1% interest. Staff is anticipating interest cost to rise in the short term.
- Infrastructure Funding Companies:
 - There are Companies that specialize in helping cities make street improvements. Services include design, build, and finance. They have access to private funds at interest rates close to current bond rates. They contract with firms to design and construct the improvements. The companies charge a 4-5% administration fee to manage the design build. The amount of money financed is based on the city’s ability to service the debt. They also use the city streets as collateral for the loan.

Potential Revenue Scenarios for the Different Funding Mechanisms:

- Gas Tax (Projections for the first year but expected to decrease each year):
 - \$.01 increase would generate approximately \$120,000 to \$135,000 per year.
 - \$.03 increase would generate approximately \$350,000 to \$400,000 per year.
 - \$.05 increase would generate approximately \$600,000 to \$675,000 per year.
- Transportation Utility Fee:
 - \$5.00 fee per month added to the utility billing would generate \$235,260.00 per year.
 - \$10.00 fee per month added to the utility billing would generate \$470,520.00 per year.
- Property Tax:
 - \$.50 per thousand would generate approximately \$628,720 per year (includes 5% uncollectible). The increase for a \$350,000 home would be \$175.00 per year or \$14.60 per month.
 - \$1.00 per thousand would generate approximately \$1,257,438 per year (includes 5% uncollectible). The increase for a \$350,000 home would be \$350.00 per year or \$29.20 per month.

Additional Challenges that Impact Project Costs:

- Materials:
 - Currently pricing is unstable and quotes are good for short time frames.
 - Availability is limited as demand is higher than available products.
 - Oil and fuel costs have increased 100% over the last 2 years.
- Increases in labor costs:
 - There is a shortage of available workers and companies are having a difficult time getting fully staffed.
 - Cost of living increases have driven labor costs up.
- Available contractors:
 - With the increase in funding available for Federal and State projects there is more available work than contractors can take on.
- ADA requirements:
 - Laws require ADA upgrades to be made for reconstructing or repaving streets. Crack sealing, slurry sealing, and chip sealing doesn't require the ADA upgrades at this time.
 - City code requires the property owner to pay for sidewalk and driveway upgrades when required. Most if not all streets needing repaving or reconstruction will require sidewalk and driveway upgrades for properties abutting the project.

Attachments:

- December 3, 2019 Cottage Grove Pavement Management Report
- Cottage Grove Municipal Code 5.26 Motor Vehicle Fuel Dealer's Business License
- 2003-2022 Monthly Cottage Grove Local Gas Tax Revenue
- 2003-2022 Monthly Cottage Grove State Gas Tax Revenue
- Cottage Grove Road Reconstruction Estimates Emerio March 2022
- LOC's Model Motor Fuel Tax Ordinance April 2020
- LOC TUF Solutions for Local Street Funding January 2008
- Lane County Technical Memorandum Road Funding Outlook and Options
- City of Veneta 2015 Work Session Pavement Preservation Funding Plan
- City of Coburg Street Funding Recommendations 2019
- City of Springfield Street Funding Bonding Measure Information and Annual Report
- City of Eugene Funding Pavement Preservation Information
- City of Cottage Grove Utility Billing Accounts
- 2022 LOC State Shared Revenue for the Highway Trust Fund
- American transportation Partners; Design, Build, and Financing Information
- PFIC Cottage Grove Proposal for Design, Build and Finance Street Repairs

Recommendation:

No recommendation at this time as this information is for Council to consider regarding possible ways to fund street improvements.

Cost

No cost at this time.

Richard Meyers, City Manager

Faye Stewart, Public Works &
Development Director



March 7, 2022

Cottage Grove City Council

Work Session on Road Repair, Maintenance, and Funding

Background: The Status of the Streets

- The City has approximately 42.26 miles of paved and 1.98 miles of gravel streets.
- On December 9, 2019 the City Council received the Pavement Management Report for the City Streets.
- At that time the average Pavement Condition Index (PCI) for the City streets was 58 and in the lower section of the Fair category (56-70).
- The report also stated the amount of unfunded maintenance and repair costs of the current transportation system is \$26.73 million today and projected to be \$31.12 million in 2029.

Background: Word on the Street

- On a regular basis City staff receive concerns from Cottage Grove residents regarding the current condition of the City's streets. Concerns are sent to the Pot Hole Spotter on the City website, staff are emailed, concerns are shared to the City Manager on his regular KNND Beeper show, staff receive phone calls, and finally concerns are expressed face to face while out and about in the City. The complaints are for many of the streets throughout town, not for one specific street. In 2018 Emerio surveyed all the City streets by segments and found that 42% of the segments were in poor, very poor, or serious condition.

Background: Maintaining the Streets

- The Pavement Management Report included the following information:
 - To maintain the current PCI the City would need to invest \$1.4 million per year for the next 10 years. To improve the PCI to 72 (satisfactory) the City would need to invest \$2.875 million per year for the next ten years. Finally, to improve the PCI to 80 (upper end of satisfactory) an investment of \$3.6 million per year for 10 years is needed.
- Emerio is currently surveying the pavement condition for all City streets and will be updating the Pavement Management Report by July 1, 2022.
- In 2003 the projected cost for addressing the City's poor, very poor, and severe condition roads was \$2.5 Million.

Background: 2021-2022 Street Fund

The Adopted 2021-2022 City of Cottage Grove Budget estimated \$1,377,780 in revenue for the Street Fund;

- \$375,000 Local Gas Tax
- \$769,400 State Highway Apportionment
- \$115,000 Federal Urban Aid
- \$1,000 Miscellaneous Revenue
- \$2,500 Project Assessment Sunrise Ridge Development
- \$51,000 Transfer from Storm Drain Fund

Adopted Expenses;

- \$382,250 Personnel Services (3.79 FTE)
- \$219,650 Materials and Services
 - \$85,000 Street Lighting
 - \$15,000 Sign and Signal Repair (ODOT Street Light Signals)
 - \$30,000 Contractual Services
 - \$10,000 Equipment Rental (Crack Sealer)
- \$82,375 Street Sweeper Costs
- Total Operating Expenses: \$684,275



Background: 2021-2022 Allocated Funds for Capital Improvements

- In 2021-2022 there is approximately \$600,000 allocated for capital improvements:
- \$50,000 for Equipment
- \$100,000 to Chip Seal N. Gateway
- \$100,000 for Street dig out and patching
- \$50,000 for Crack Sealing
- \$115,000 to Chip Seal River Road from Harrison Bridge to W. Main Street
- \$185,000 to apply towards street repaving in 2022-23
- \$450,000 with be budgeted in 2022-23 and 2023-24 for the Main Street Rebuild as part of the required 20% match if we are successful in being awarded the EDA Grant



Background: Actual Operating Expenses 2014-2021

- Actual Operating Expenses:

<u>Year</u>	<u>Actual</u>
2014	\$535,922
2015	\$516,897
2016	\$512,423
2017	\$528,619
2018	\$548,250
2019	\$581,909
2020	\$655,447
2021	\$579,359

Budgeted

\$606,940
\$618,690
\$657,490
\$647,955
\$688,715
\$718,265
\$738,875
\$648,146

FTE

3.00
3.18
3.18
3.35
3.33
3.33
4.10

3.57 (75% sweeper costs Storm Drain Fund)



Background: Capital Projects 2017-2021

<u>Year</u>	<u>Project</u>
2017-18	Repaved South 6 th Street from Hwy 99 to Johnson Street and Mosby Creek Road from Thornton to City Limits. Installed Pedestrian crossing across Row River Road near Wal-Mart. Gateway Boulevard repair at KFC and Vintage Inn. Total spent \$906,798 (75,000 ODOT Grant).
2018-19	Main Street, Silk Creek and Harrison Avenue Bridge repairs. Rebuilt the railroad crossing on south 6 th Street. Total spent \$1,102,675.
2019-20	Completed construction of the J. Polk Currin Swinging Bridge. Rebuilt the railroad crossings at Villard and Chamberlain Streets. Crack Sealed 100,000 lineal feet of cracks in streets. Total spent \$1,172,849 (\$200,000 Oregon State Parks Grant Plus local donations).
2020-21	Safe Routes to School project. Total spent \$1,849,666 (\$1,272,145 Safe Routes to School Grant).
2021-22	Chip Sealed North Gateway from Harvey Road to East Main Street. Crack Sealed 400,000 lineal feet of cracks in streets.



\$3,660,190 from Street Fund
\$1,547,145 from Grants

Projects: Repair, Maintenance, and Repaving

- ROW RIVER (THORNTON ROAD TO CURRIN BLVD) – Estimated Base Construction Cost \$406,000 – with Contingency \$528,000
- E. WHITEAKER & E. MAIN ST (GATEWAY BLVD TO NEW PAVEMENT WEST OF THORNTON) - Estimated Base Construction Cost \$379,000 – with Contingency \$493,000
- N. 16TH (MAIN ST TO OSTRANDER) - Estimated Base Construction Cost \$2,477,000 – with Contingency \$3,220,000
- N. GATEWAY (SB FROM VINTAGE INN ENTRANCE TO TRUCK STOP) - Estimated Base Construction Cost \$127,000 – with Contingency \$165,000
- DOUGLAS (WASTE WATER PLANT TO VILLARD) - Estimated Base Construction Cost \$385,000 – with Contingency \$501,000
- RIVER ROAD (WOODSON BRIDGE TO HARRISON) - Estimated Base Construction Cost \$806,000 – with Contingency \$1,048,000
- BRYANT (M STREET TO R STREET) - Estimated Base Construction Cost \$938,000 – with Contingency \$1,220,000
- W. HARRISON – (RIVER ROAD TO R STREET) - Estimated Base Construction Cost \$293,000 – with Contingency \$380,000

Total for all projects (with Contingency): \$7,555,000

- \$6,296,950 Street Fund; \$1,258,050 Other Utility Funds
- 2-3 Years to Perform the Projects
- Upon Completion of projects the PCI rating is estimated to go from 58 to low 60's

Wallet: New Funding Options to Consider

Gas Tax (Cottage Grove Municipal Code Chapter 5.26):

- Current City tax is \$.03 per gallon. An increase requires a City wide vote. Most cities have a \$.03 tax. Portland is \$.10, Coburg is \$.06, and Eugene is \$.05 the rest are \$.03 or less.
- Revenue generated decreases over time as vehicles become more efficient and as people shift to electric cars.
- Travelers and people living outside the city limits contribute to the tax when fuel is purchased within the City limits.
- Highway Trust Fund Revenues for 2021-2022 is estimated to be \$77.91 per capita (our population of 10,792 is used for the calculation). It is estimated to decrease in 2022-2023 to \$76.42 per capita and \$76.11 per capita in 2023-2024. The State Highway Trust Fund revenue increases as the City population increases. Last year the population increased by 637 people increasing the revenue by \$49,629.00

Revenue Scenario:

Gas Tax (Projections for the first year but expected to decrease each year):

- \$.01 increase would generate approximately \$120,000 to \$135,000 per year.
- \$.03 increase would generate approximately \$350,000 to \$400,000 per year.
- \$.05 increase would generate approximately \$600,000 to \$675,000 per year.

Wallet: New Funding Options to Consider

Transportation Utility Fee:

- The Transportation Utility Fee (TUF) is a fee added to the current utility billing dedicated to transportation improvements and maintenance. TUFs are calculated in two ways; a flat fee per month or a fee based on trip generation methodology. The trip generation method is the same method the City uses to calculate Transportation System Development Fees on new development. Approximately 20 Oregon cities have TUFs. The majority of the TUFs are ongoing. Two have sunset clauses.
- The fee is added to the utility bill. Currently there are 3,921 accounts. The revenue generated will increase as new utility accounts are added. Currently water, wastewater, and storm drain have a minimum charge of \$90.19 per month without a TUF. The average residential billing using 6,000 gallons of water per month is approximately \$100.00.

Revenue Scenario:

- \$5.00 fee per month added to the utility billing would generate \$235,260.00 per year.
- \$10.00 fee per month added to the utility billing would generate \$470,520.00 per year.

Wallet: New Funding Options to Consider

Property Tax:

- Voters approve a bond measure for transportation projects. General Obligation Bonds are sold to fund the projects with property tax revenue servicing the debt. Eugene and Springfield have been successful in passing voter-approved general obligation bond measures for street improvement projects. In general, approved measures last 3 to 5 years and require a vote to renew. Successful measures have included specific improvement projects, annual reports to voters, and a citizen oversight committee.
- Property tax values can increase up to 3% per year based on property tax assessments by the County Assessor. The amount paid is based on each property's value. Less value less paid or more value more paid.

Revenue Scenario:

- \$.50 per thousand would generate approximately \$628,720 per year (includes 5% uncollectible). The increase for a \$350,000 home would be \$175.00 per year or \$14.60 per month.
- \$1.00 per thousand would generate approximately \$1,257,438 per year (includes 5% uncollectible). The increase for a \$350,000 home would be \$350.00 per year or \$29.20 per month.

Wallet: New Funding Options to Consider

Local Improvement District (LID):

- Requires voter approval of a defined geographical area or zone of benefit. Does not fund ongoing maintenance, only funds capital improvements. Citizens representing 33% or more of the LID can terminate the LID and overturn planned projects. Must have strong support for LID.

Wallet: New Funding Options to Consider

Urban Renewal District:

- Is used to improve and redevelop “blighted areas”. Urban renewal district (URD) programs use “tax-increment financing. District boundaries are formed and projects are identified for the purpose of increasing property values. The increased property values from new development are frozen and used to fund bonds that generate revenue for the URD projects. Districts are limited in size, cannot be entire City, and must meet the definition of a blighted area.

Wallet: New Funding Options to Consider

Bonding:

- The City can sell Revenue Bonds to fund street improvements. To generate \$10 million for improvements it would require \$650,000 per year for bond repayment at 2.1% interest. Staff is anticipating interest cost to rise in the short term

Wallet: New Funding Options to Consider

Infrastructure Funding Companies:

- There are Companies that specialize in helping cities make street improvements. Services include design, build, and finance. They have access to private funds at interest rates close to current bond rates. They contract with firms to design and construct the improvements. The companies charge a 4-5% administration fee to manage the design build. The amount of money financed is based on the city's ability to service the debt. They also use the city streets as collateral for the loan.

Wallet: Challenges that Impact Project Costs



Materials:

- Currently pricing is unstable and quotes are good for short time frames.
- Availability is limited as demand is higher than available products.
- Oil and fuel costs have increased 100% over the last 2 years.

Increases in labor costs:

- There is a shortage of available workers and companies are having a difficult time getting fully staffed.
- Cost of living increases have driven labor costs up.

Available contractors:

- With the increase in funding available for Federal and State projects there is more available work than contractors can take on.

ADA requirements:

- Laws require ADA upgrades to be made for reconstructing or repaving streets. Crack sealing, slurry sealing, and chip sealing doesn't require the ADA upgrades at this time.
- City code requires the property owner to pay for sidewalk and driveway upgrades when required. Most if not all streets needing repaving or reconstruction will require sidewalk and driveway upgrades for properties abutting the project.

Wallet: Doing Nothing Still has a Cost

- American roads cost car owners \$500 a year on average
 - Theresa Macheimer, The Hill, November 5, 2019

“Bad roads can really hurt. Tires, axles and shock absorbers take a beating from damaged roads, costing the average American car owner more than \$500 each year in repairs.”

*City roads will continue to deteriorate as current spending does not address current need.

MEMORANDUM

TO: Mayor and City Council

FROM: Faye Stewart, Public Works & Development Director

SUBJECT: CITY STREET PROJECTS & FUNDING STATUS

DATE: April 4, 2023

Background

On March 7, 2022 the City Council held a work session regarding City Streets. At that time information was shared regarding the condition of the City streets, and the estimated costs to maintain and improve them. In 2019 the Pavement Condition Index (PCI) was 58 which is in the lower section on the Fair category. At that time the estimated costs to improve the City streets to the Good category of 71 or better was \$26.73 million. On July 18, 2022 the City street conditions were reviewed and showed the PCI to be 54.7. The road PCI declined 3.3 points during the 3 year period.

At the work session prices to rebuild 8 street segments in the City were included. Six of the street segments were re-estimated in late March and showed an average price increase of 65% from the previous costs one year ago. This past year the cost of concrete and asphalt have doubled. The total cost for the 6 street segments; Row River from Thornton to Currin Blvd, E. Whiteaker from Gateway to Thornton, N 16th Street from Main to the Row River Trail, N 16th Street from Curry to Ostrander, N Gateway south bound lane from the Vintage Inn to the Truck Stop, and W. Harrison from River Road to R Street. The estimated total cost to rebuild the 6 segments including design costs is \$3,479,835 (see attached).

Staff has also received a quote to chip seal W. Main Street from River Road to R Street and a combined scrub and chip seal of N River Road from Main Street to Woodson Bridge. The quote for that work is \$236,944.00. Staff is planning on releasing a joint RFP with Creswell for this work in late May or early June with the work being completed in July. The cost to chip seal the streets is approximately 10% of the cost to rebuild them. Chip sealing will extend the life of the pavement and improve the street driving surface over the present condition. S. River Road was scrub sealed in 2022. It did improve the street driving surface and has extended the pavement life.

Street Fund Status

Staff has been tracking the revenues for the City street fund. Both the City gas tax of \$.03 per gallon and the State Highway Apportionment gas tax revenue are projected to be below the current year estimates. The City gas tax was projected to be \$375,000 and is now estimated to raise \$320,000 for the 2022-2023 budget year. The actual revenue is projected to be 15% less than budgeted. The State Highway Apportionment was budgeted at \$840,000 but appears to be coming in at 5% less than budgeted for an estimated \$40,000 less revenue for the 2022-2023

budget. Presently the current budget has enough revenue in the fund to meet the \$1,250,000 EDA match requirement for the Main Street Revitalization Project. There is no additional street funding in the current approved budget available for street reconstruction projects.

In the proposed 2023-2024 budget the projected revenue not including the EDA Main Street grant is \$1,275,000. The estimated operating expenses are \$930,000 leaving approximately \$345,000 for preservation and capital road improvements. There is no way possible for the current street revenues to meet the street improvement needs throughout the City.

Current Street Funding Options

The following are funding mechanisms that could raise revenue for street improvements;

- Gas Tax (Cottage Grove Municipal Code Chapter 5.26):
 - Current City tax is \$.03 per gallon. An increase requires a City wide vote. Most cities have a \$.03 tax. Portland is \$.10, Coburg is \$.06, and Eugene is \$.05 the rest are \$.03 or less.
 - Revenue generated decreases over time as vehicles become more efficient and as people shift to electric vehicles.
 - Electric vehicles are typically heavier than the similar combustion engine version.
 - Misses collection revenue from electric vehicles.
 - Travelers and people living outside the city limits contribute to the tax when fuel is purchased within the City limits.
 - State Highway Apportionment Fund Revenues for 2021-2022 was estimated to be \$77.91 per capita (our population of 10,792 is used for the calculation). It is estimated to decrease in 2022-2023 to \$76.42 per capita and \$76.11 per capita in 2023-2024. The State Highway Apportionment Fund revenue increases as the City population increases. Last year the population increased by 637 people increasing the projected revenue by \$49,629.00
- Transportation Utility Fee:
 - The Transportation Utility Fee (TUF) is a fee added to the current utility billing dedicated to transportation improvements and maintenance. TUFs are calculated in two ways; a flat fee per month or a fee based on trip generation methodology. The trip generation method is the same method the City uses to calculate Transportation System Development Fees on new development. Approximately 20 Oregon cities have TUFs. The majority of the TUFs are ongoing. Two have sunset clauses.
 - The fee is added to the utility bill. Currently there are 3,970 accounts. The revenue generated will increase as new utility accounts are added. Currently water, wastewater, and storm drain have a minimum charge of \$90.19 per month without a TUF. The average residential billing using 6,000 gallons of water per month is approximately \$100.00.
- Property Tax:
 - Voters can approve a bond measure for transportation projects. General Obligation Bonds are sold to fund the projects with property tax revenue

servicing the debt. Eugene and Springfield have been successful in passing voter-approved general obligation bond measures for street improvement projects. In general, approved measures last 3 to 5 years and require a vote to renew. It creates a capital improvement levy to pay for the debt.

Successful measures have included specific improvement projects, annual reports to voters, and a citizen oversight committee.

- Property tax values can increase up to 3% per year based on property tax assessments by the County Assessor. The amount paid is based on each property's value. Less value less paid or more value more paid.
- Local Improvement District (LID):
 - Under Cottage Grove Municipal Code Chapter 7.04 LIDs requires more than 67% support of the property owners in the defined geographical area or zone of benefit. Does not fund ongoing maintenance, only funds capital improvements. Citizens representing 33% or more of the LID can terminate the LID and overturn planned projects. Must have strong support for LID. LIDs are not Special Service Districts, they are specific to neighborhoods.
- Urban Renewal District:
 - Is used to improve and redevelop "blighted areas". Urban renewal district (URD) programs use "tax-increment financing. District boundaries are formed and projects are identified for the purpose of increasing property values. The increased property values from new development are frozen and used to fund bonds that generate revenue for the URD projects. Districts are limited in size, cannot be entire City, and must meet the definition of a blighted area.
- Bonding:
 - The City can sell Revenue Bonds to fund street improvements. To generate \$10 million for improvements it would require \$650,000 per year for bond repayment at 2.1% interest. Staff is anticipating interest cost to rise in the short term.
- Infrastructure Funding Companies:
 - There are Companies that specialize in helping cities make street improvements. Services include design, build, and finance. They have access to private funds at interest rates close to current bond rates. They contract with firms to design and construct the improvements. The companies charge a 4-5% administration fee to manage the design build. The amount of money financed is based on the city's ability to service the debt. They also use the city streets as collateral for the loan.
- Local Sales/Income Tax
 - Local sales/income taxes can be on specific items or services.
 - Can be enacted by action of the City Council.
 - No State sales tax. Voted down by citizens several times.
- Per Day Road Use Fee, Electronic Tolling System
 - This is a revenue system used in many states and is currently being explored by ODOT to fund road and bridge improvements in the Portland area.
 - Could generate revenue from all vehicles using the City roads (local, surrounding area, and travelers).

- City General Fund
 - The General Fund property tax revenue is budgeted at \$5.3 million for 2022-23.
 - Would need to reduce or cut costs in the General Fund to generate about \$1,200,000 to transfer to the Street Fund.

Potential Revenue Scenarios for the Different Funding Mechanisms:

- Gas Tax (Projections for the first year but expected to decrease each year):
 - \$.01 increase would generate approximately \$100,000 per year.
 - \$.03 increase would generate approximately \$320,000 per year.
 - \$.05 increase would generate approximately \$500,000 per year.
- Transportation Utility Fee:
 - \$5.00 fee per month added to the utility billing would generate \$238,200.00 per year.
 - \$10.00 fee per month added to the utility billing would generate \$476,400.00 per year.
- Property Tax:
 - \$.50 per thousand would generate approximately \$628,720 per year (includes 5% uncollectible). The increase for a \$350,000 home would be \$175.00 per year or \$14.60 per month.
- Per Day Road Use Fee:
 - \$.10 per day with 37,500 vehicles could generate \$3,750 per day, 112,500 per month, and \$1,350,000 per year. More evaluation is needed to verify # of vehicles and revenue produced. This assumes 25,000 voting residents in the City and surrounding area and 1.5 vehicles per adult. There would be additional revenue generated by tourist and commercial use. Annual costs per vehicle would be \$36.50 per year.

Additional Challenges that Impact Project Costs:

- Materials:
 - Currently pricing is unstable and quotes are good for short time frames.
 - Availability is limited as demand is higher than available products.
 - Oil and fuel costs have increased 100% over the last 2 years.
- Increases in labor costs:
 - There is a shortage of available workers and companies are having a difficult time getting fully staffed.
 - Cost of living increases have driven labor costs up.
- Available contractors:
 - With the increase in funding available for Federal and State projects there is more available work than contractors can take on.
- ADA requirements:
 - Laws require ADA upgrades to be made for reconstructing or repaving streets. Crack sealing, slurry sealing, and chip sealing doesn't require the ADA upgrades at this time.

- City code requires the property owner to pay for sidewalk and driveway upgrades when required. Most if not all streets needing repaving or reconstruction will require sidewalk and driveway upgrades for properties abutting the project.

Generating additional revenue to address the crumbling City streets is a huge and very complicated problem that to date hasn't been addressed. Each year that goes by the costs to make improvements increase as available revenue diminishes compounding the problem. The number of pothole spotter submissions continue to increase along with shared concerns of the poor street conditions by users.

This year's cold and wet weather have taken a toll on the City streets increasing the deterioration of the street conditions. Everyone, Council, Staff, and Citizens feel we are well past time to address the funding issue. Finding and implementing a solution must happen sooner than later. Several of the City streets are on the verge of turning back to gravel with more becoming closer each year.

Recommendation:

Staff is recommending the City Council form an Ad Hoc Committee to study the funding needs and options for additional street funding. It is recommended that each member of the City Council along with 7 Cottage Grove Citizens (one appointed by each Council member) for a total of 14 members. Youth Advisory Council members have expressed interest in participating. It is recommended that the Ad Hoc Committee have a recommendation to the City Council by August 14, 2023. Some of the proposed revenue options require a vote. This would allow the Council to put something on the November 2023 election in necessary.

Cost

No cost at this time.

Richard Meyers, City Manager

Faye Stewart, Public Works &
Development Director

Attachments:

- Cottage Grove Street Projects List and Expenditures from 2017-2023
- City of Bend to implement transportation utility fee, The Bulletin Mar 29, 2023