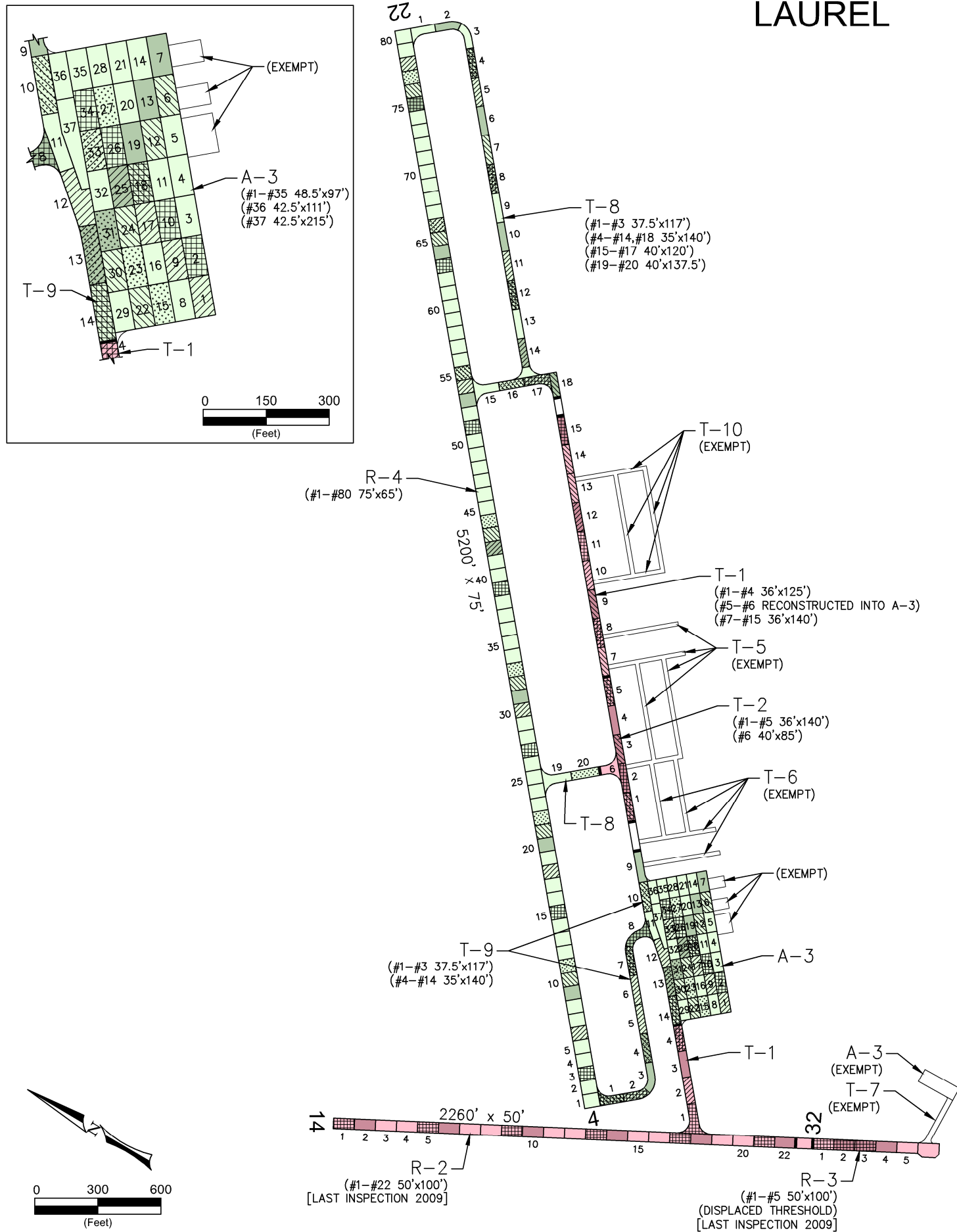


LAUREL



PAVEMENT STRENGTH SURVEY/PAVEMENT CONDITION SURVEY

PAVE. IDENT.	SOIL CLASS	SUB GRADE CLASS	SUBBASE COURSE	BASE COURSE	SURFACE COURSE	OVERLAY	PAVEMENT STRENGTH			REMARKS
							MAX. GROSS LOAD (LBS)			
							SINGLE	DUAL	DUAL TAN.	
RUNWAYS										
R-2	E-7	F7, CBR=6.5			6" ROAD MIX		3,000			
R-3			UNKNOWN							
R-4		CBR=4	FABRIC	12" P-208	4" P-401	P-609	12,500			6,9,10
TAXIWAYS										
T-1		F7, CBR=6.5		6.5" P-208	2" P-401	P-609	12,500			5,8,9,10
T-2		F7, CBR=6.5		6" P-208		P-609	14,000			4,5,8,9,10
T-8		CBR=4	FABRIC	12" P-208	4" P-401	P-609	12,500			6,9,10
T-9		CBR=4	FABRIC	12" P-208	4" P-401	P-609	12,500			7,9,10
APRONS										
A-3		CBR=4	FABRIC	12" P-208	4" P-401	P-609	6,000			7,9,10

REMARKS:

RUNWAY 3/21 POOR CONDITION, RUNWAY 13/31 FAIR CONDITION

1. FAAP, 1967
2. ADAP-01, 1980
3. ADAP-02, 1981
4. AIP-01, 1983
5. AIP-02, 1988
6. AIP-06, 2000, CONSTRUCT RUNWAY 4/22; CONSTRUCT TAXIWAY A "EAST" (T-8).
7. AIP-07, 2001, CONSTRUCT TAXIWAY A "WEST" (T-9); EXPAND APRON (A-3).
8. AIP-08, 2002, RECONSTRUCT TAXILANES (T-5, T-6); CONSTRUCT TAXILANES (T-10); CRACK SEAL, FOG SEAL, AND REMARK TAXIWAYS (T-1, T-2).
9. AIP-012-2007, CRACK SEAL AND REMARK PAVEMENTS.
10. AIP-013-2012, CRACK SEAL, FOG SEAL, AND REMARK PAVEMENTS.

LEGEND ■ 2003 SURVEY AREA ■ 2006 SURVEY AREA ■ 2009 SURVEY AREA ■ 2012 SURVEY AREA ■ 2015 SURVEY AREA ■ MAINTAIN: PCI > 60 ■ TRANSITION: PCI 45 TO 60 ■ RECONSTRUCT: PCI < 45	DATE OF PAVEMENT STRENGTH SURVEY:	SEPT. 8, 1988	MONTANA AVIATION SYSTEM PLAN 2015 UPDATE - PAVEMENT CONDITION INDEXES LAUREL MUNICIPAL AIRPORT (6S8)	
	EVALUATED BY:	J. STYBA		
	DATE OF MOST RECENT PAVEMENT CONDITION SURVEY:	SEPT. 14, 2015	Date: DECEMBER 2015	Prepared For: MONTANA DEPARTMENT OF TRANSPORTATION
	EVALUATED BY:	D. SCHANDEL	Prepared By: RPA Robert Peccia & Associates, Inc.	
LOCATION:	LAUREL MONTANA			

LAUREL

LAUREL AIRPORT

9/14/2015



A-3, Overview



A-3, Surface detail



R-4, Surface detail with cracking



R-4, Overview

LAUREL AIRPORT

9/14/2015



T-8, Overview



T-8, Surface detail with crack and striping



T-9, Surface detail with failed sealant



T-9, Overview

LAUREL AIRPORT

Branch: 27A

APRON

A-3

Length: 680 LF **Width:** 243 LF **Area:** 171,360 SF **Last Const. :** 2001 **Family:** ACAM15
From: T-1 & T-9 **To:** HANGARS **Surface:** AC

Inspections

Samples Surveyed: 5 **Total Samples:** 37 **Last Inspection Date (RPA)** 9/14/2015 **PCI:** 67

Sample # 15 **Area:** 4705 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	299 LF
WEATHERING	L	235 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	50 LF
RAVELING	L	94 SF
RAVELING	H	5 SF

Sample # 23 **Area:** 4705 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	402 LF
WEATHERING	L	235 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	52 LF
RAVELING	L	94 SF

Sample # 27 **Area:** 4705 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	352 LF
WEATHERING	L	235 SF
RAVELING	L	94 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	6 LF
PATCHING	L	4 SF
DEPRESSION	H	1 SF

Sample # 31 **Area:** 4705 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	252 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	81 LF
WEATHERING	L	235 SF
RAVELING	L	94 SF
DEPRESSION	L	11 SF
RAVELING	H	2 SF

Sample # 33 **Area:** 4705 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	467 LF
WEATHERING	L	235 SF
RAVELING	L	94 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	4 LF
DEPRESSION	L	7 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	L	12908 LF	7.53 %	19.57
DEPRESSION	H	7 SF	0.00 %	12.00
LONGITUDINAL/TRANSVERSE CRACKING	M	1406 LF	0.82 %	10.29
RAVELING	H	51 SF	0.03 %	6.00
RAVELING	L	3424 SF	2.00 %	3.98
PATCHING	L	29 SF	0.02 %	2.00
WEATHERING	L	8559 SF	4.99 %	1.09
DEPRESSION	L	131 SF	0.08 %	0.30

* Multiple deduct values are scaled down from their algebraic sum to keep the model consistent with experimental data.

Percent of Deduct Values Based on Distress Mechanism

0.0 % Load 78.0 % Climate/Durability 22.0 % Other

LAUREL AIRPORT

Branch: 27R1

RUNWAY

R-4

Length: 5,200 LF **Width:** 75 LF **Area:** 390,000 SF **Last Const. :** 2000 **Family:** ACRMU15
From: STA 10+00 **To:** STA 62+00 **Surface:** AC

Inspections

Samples Surveyed: 7 **Total Samples:** 80 **Last Inspection Date (RPA)** 9/14/2015 **PCI:** 61

Sample # 11 **Area:** 4875 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	136 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	84 LF
WEATHERING	L	245 SF
RAVELING	L	98 SF
DEPRESSION	L	10 SF
DEPRESSION	M	8 SF
DEPRESSION	H	5 SF

Sample # 22 **Area:** 4875 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	168 LF
WEATHERING	L	245 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	52 LF
RAVELING	L	98 SF
LONGITUDINAL/TRANSVERSE CRACKING	H	25 LF
DEPRESSION	L	8 SF
DEPRESSION	M	5 SF
DEPRESSION	H	3 SF
RAVELING	H	2 SF

Sample # 33 **Area:** 4875 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	104 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	94 LF
WEATHERING	L	245 SF
LONGITUDINAL/TRANSVERSE CRACKING	H	58 LF
RAVELING	L	98 SF
DEPRESSION	M	13 SF
DEPRESSION	L	10 SF

Sample # 44 **Area:** 4875 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	134 LF
WEATHERING	L	245 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	55 LF
LONGITUDINAL/TRANSVERSE CRACKING	H	36 LF
RAVELING	L	98 SF
DEPRESSION	L	18 SF
DEPRESSION	M	12 SF

Sample # 55 **Area:** 4875 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	198 LF
WEATHERING	L	245 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	43 LF
RAVELING	L	98 SF
LONGITUDINAL/TRANSVERSE CRACKING	H	22 LF
DEPRESSION	L	21 SF
DEPRESSION	M	10 SF
RAVELING	H	6 SF
DEPRESSION	H	6 SF

Sample # 66 **Area:** 4875 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	185 LF
WEATHERING	L	245 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	44 LF
RAVELING	L	98 SF
LONGITUDINAL/TRANSVERSE CRACKING	H	22 LF
DEPRESSION	L	10 SF
DEPRESSION	M	8 SF
DEPRESSION	H	4 SF

LAUREL AIRPORT

Branch: 27R1

RUNWAY

R-4

Sample # 77

Area: 4875 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	304 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	92 LF
WEATHERING	L	245 SF
RAVELING	L	98 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	H	1863 LF	0.48 %	14.17
LONGITUDINAL/TRANSVERSE CRACKING	M	5303 LF	1.36 %	12.96
DEPRESSION	H	206 SF	0.05 %	12.00
LONGITUDINAL/TRANSVERSE CRACKING	L	14046 LF	3.60 %	11.56
RAVELING	H	91 SF	0.02 %	6.00
DEPRESSION	M	640 SF	0.16 %	5.67
RAVELING	L	7840 SF	2.01 %	4.00
WEATHERING	L	19600 SF	5.03 %	1.09
DEPRESSION	L	880 SF	0.23 %	0.99

* Multiple deduct values are scaled down from their algebraic sum to keep the model consistent with experimental data.

Percent of Deduct Values Based on Distress Mechanism

0.0 % **Load**

73.0 % **Climate/Durability**

27.0 % **Other**

LAUREL AIRPORT**FIFTEEN YEAR PROJECTIONS: ESTIMATED AVERAGE ANNUAL COST: \$423,159**

PLAN YEAR: 2016			ESTIMATED COST:			\$291,170	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-3	Prev. & Seal Coat	\$16,776	\$47,981			\$64,757	65	70
T-8	Prev. & Seal Coat	\$5,607	\$27,594			\$33,201	69	74
T-9	Prev. & Seal Coat	\$4,453	\$18,777			\$23,229	68	73
R-4	Prev. & Seal Coat	\$60,783	\$109,200			\$169,983	60	63
PLAN YEAR: 2017			ESTIMATED COST:			\$75,261	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-8	Basic Prev.	\$4,445				\$4,445	72	72
T-9	Basic Prev.	\$3,307				\$3,307	71	71
A-3	Basic Prev.	\$13,079				\$13,079	68	68
R-4	Basic Prev.	\$54,430				\$54,430	61	62
PLAN YEAR: 2018			ESTIMATED COST:			\$90,967	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-8	Basic Prev.	\$5,719				\$5,719	70	70
T-9	Basic Prev.	\$4,574				\$4,574	69	69
R-4	Basic Prev.	\$63,366				\$63,366	60	60
A-3	Basic Prev.	\$17,308				\$17,308	65	66
PLAN YEAR: 2019			ESTIMATED COST:			\$111,697	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-4	Basic Prev.	\$75,878				\$75,878	58	58
T-8	Basic Prev.	\$7,959				\$7,959	68	68
A-3	Basic Prev.	\$21,778				\$21,778	63	64
T-9	Basic Prev.	\$6,082				\$6,082	67	67
PLAN YEAR: 2020			ESTIMATED COST:			\$133,908	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-3	Basic Prev.	\$26,540				\$26,540	61	61
T-9	Basic Prev.	\$7,608				\$7,608	65	65
R-4	Basic Prev.	\$89,544				\$89,544	56	57
T-8	Basic Prev.	\$10,216				\$10,216	66	66
PLAN YEAR: 2021			ESTIMATED COST:			\$394,696	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-9	Prev. & Seal Coat	\$9,174	\$21,767			\$30,941	63	67
T-8	Prev. & Seal Coat	\$12,509	\$31,989			\$44,499	64	68
R-4	Prev. & Seal Coat	\$104,441	\$126,593			\$231,033	55	58
A-3	Prev. & Seal Coat	\$32,600	\$55,623			\$88,223	59	64
PLAN YEAR: 2022			ESTIMATED COST:			\$139,627	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-4	Basic Prev.	\$93,531				\$93,531	57	57
A-3	Basic Prev.	\$27,561				\$27,561	62	62
T-9	Basic Prev.	\$7,920				\$7,920	65	65
T-8	Basic Prev.	\$10,615				\$10,615	66	66
PLAN YEAR: 2023			ESTIMATED COST:			\$165,517	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-9	Basic Prev.	\$9,575				\$9,575	63	63
A-3	Basic Prev.	\$33,669				\$33,669	59	59
T-8	Basic Prev.	\$13,054				\$13,054	64	64
R-4	Basic Prev.	\$109,219				\$109,219	55	55
PLAN YEAR: 2024			ESTIMATED COST:			\$195,647	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-8	Basic Prev.	\$15,568				\$15,568	63	63
A-3	Basic Prev.	\$42,070				\$42,070	57	57
R-4	Basic Prev.	\$126,719				\$126,719	53	53
T-9	Basic Prev.	\$11,290				\$11,290	62	62
PLAN YEAR: 2025			ESTIMATED COST:			\$228,991	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-4	Basic Prev.	\$146,401				\$146,401	51	51
T-9	Basic Prev.	\$13,072				\$13,072	60	60
T-8	Basic Prev.	\$18,170				\$18,170	61	61
A-3	Basic Prev.	\$51,348				\$51,348	55	55

PLAN YEAR: 2026		ESTIMATED COST:				\$2,962,558	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-8	Prev. & Seal Coat	\$21,417	\$37,084			\$58,501	59	63
R-4	Reconstruct			\$2,736,996		\$2,736,996	49	100
A-3	Prev. & Seal Coat	\$61,662	\$64,482			\$126,145	52	58
T-9	Prev. & Seal Coat	\$15,681	\$25,234			\$40,916	58	62
PLAN YEAR: 2027		ESTIMATED COST:				\$85,998	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-3	Basic Prev.	\$53,265				\$53,265	55	55
T-9	Basic Prev.	\$13,702				\$13,702	60	60
T-8	Basic Prev.	\$19,031				\$19,031	61	61
PLAN YEAR: 2028		ESTIMATED COST:				\$102,876	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-8	Basic Prev.	\$22,362				\$22,362	59	59
T-9	Basic Prev.	\$16,379				\$16,379	59	59
A-3	Basic Prev.	\$64,135				\$64,135	52	53
PLAN YEAR: 2029		ESTIMATED COST:				\$1,312,621	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-3	Reconstruct			\$1,266,545		\$1,266,545	50	100
T-9	Basic Prev.	\$19,396				\$19,396	57	57
T-8	Basic Prev.	\$26,680				\$26,680	58	58
PLAN YEAR: 2030		ESTIMATED COST:				\$55,855	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-4	Basic Prev.	\$1,836				\$1,836	87	87
T-9	Basic Prev.	\$22,671				\$22,671	55	55
T-8	Basic Prev.	\$31,348				\$31,348	56	56