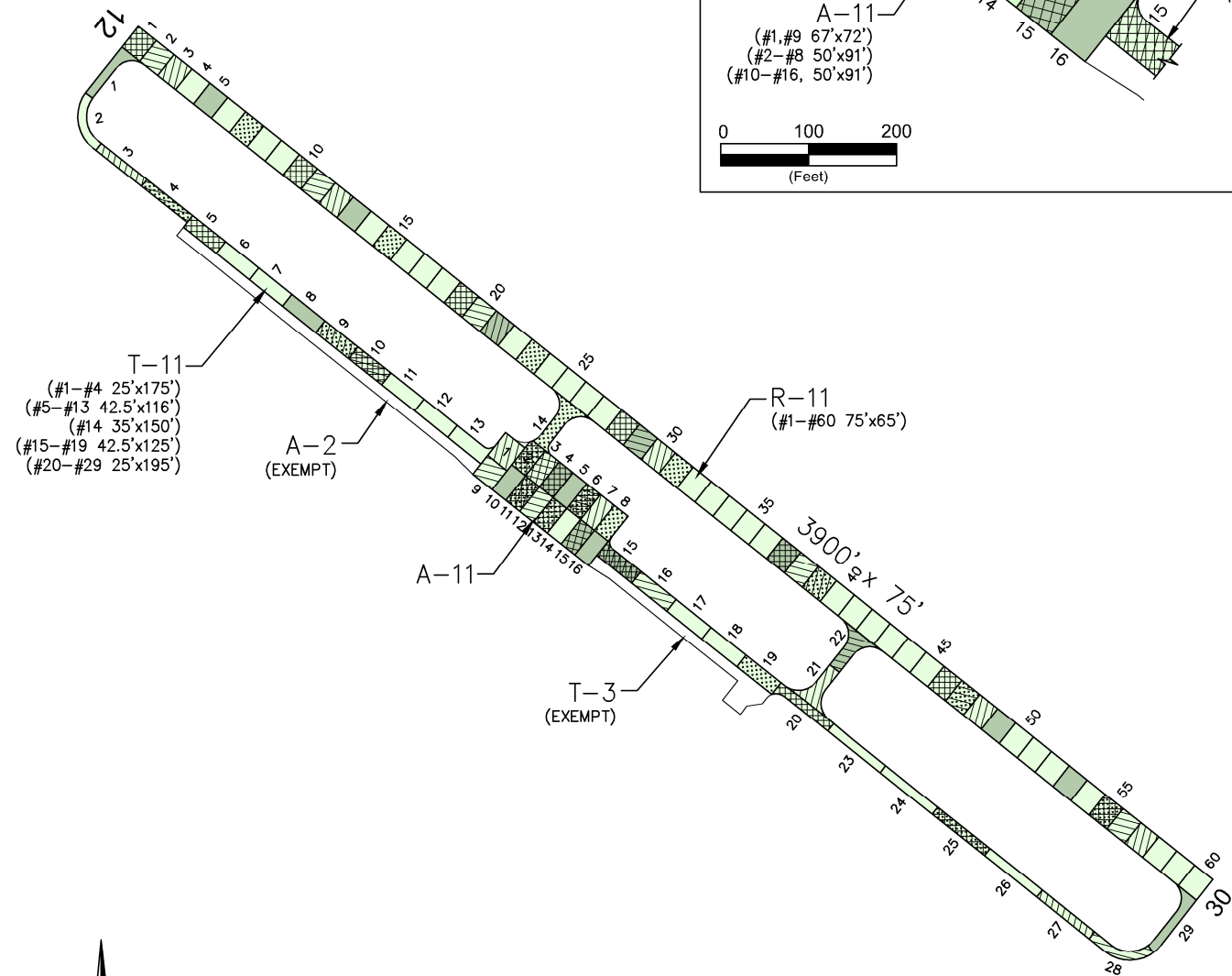
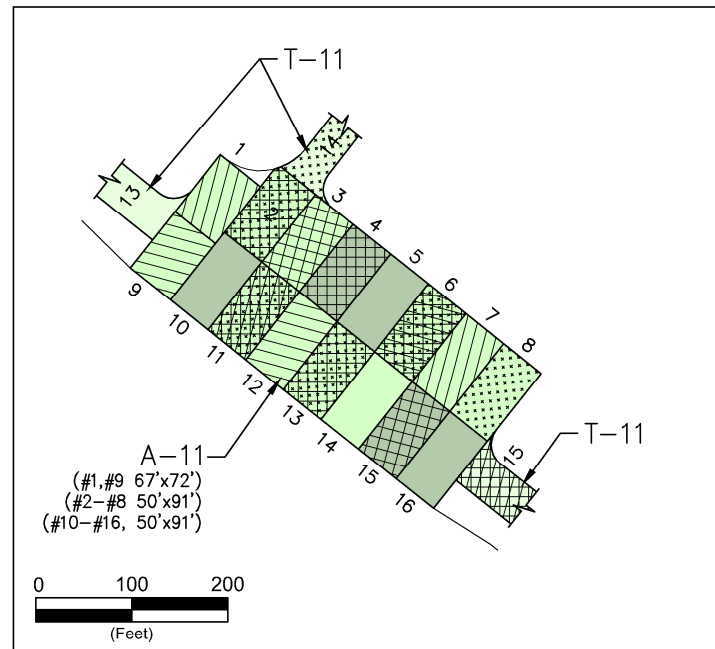


PLENTYWOOD



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-11	E-7	F7, CBR=2	11" P-152	9" P-208 WITH FABRIC	4" P-401	P-608	12,500			4,5,6
TAXIWAYS										
T-3	E-7	F7		6" AGG.	P-609		4,000			
T-11	E-7	F7, CBR=2	11" P-152	9" P-208 WITH FABRIC	4" P-401	P-608	12,500			4,5,6
APRONS										
A-2	E-7	F7		6" AGG.	P-609		4,000			
A-11	E-7	F6/7, CBR=2		8" AGG.	3" P-401	3" P-401	12,500			1,3,4,5,6

REMARKS:

- P-410 IS OPEN-GRADED EMULSIFIED SURFACE OVERLAY.
- 1. ADAP-01, 1979, RECONSTRUCT AND EXTEND RUNWAY, CONNECTING TAXIWAY, AND APRON.
- 2. AIP-01, 1985, REHABILITATED ALL PAVEMENTS.
- 3. AIP-02, 1989, P-402 OVERLAY TO R-1, R-2, T-1, A-1, AND A-3; NO STRENGTH ADDED (P-410 IN POOR CONDITION).
- 4. AIP-03, 2001, RECONSTRUCT RUNWAY 12-30 (R-11), CONSTRUCT PARALLEL TAXIWAY (T-11), AND OVERLAY APRON (A-11).
- 5. AIP-005-2009, CRACK SEAL, FOG SEAL, AND REMARK ALL PAVEMENTS [INSPECTED PRIOR TO MAINTENANCE PROJECT].
- 6. AIP-010-2015, RECONSTRUCT APRON (A-11); CRACK SEAL, SEAL COAT, AND REMARK PAVEMENTS [INSPECTED PRIOR TO PROJECT].

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: MAR. 16, 1990

EVALUATED BY: S. DALTON

DATE OF MOST RECENT PAVEMENT CONDITION SURVEY: SEPT. 1, 2015

EVALUATED BY: B. BURKLAND

LOCATION: PLENTYWOOD MONTANA

MONTANA AVIATION SYSTEM PLAN 2015 UPDATE - PAVEMENT CONDITION INDEXES

SHER-WOOD AIRPORT (PWD)

Date: DECEMBER 2015 Prepared For: Prepared By:

DECEMBER 2015



PLENTYWOOD AIRPORT

9/1/2015



R-11, Surface detail with raveling



R-11, Overview



T-11, Overview



T-11, Surface detail with a crack and weathering

PLENTYWOOD AIRPORT

9/1/2015



A-11, Surface detail with depression & staining



A-11, Overview

PLENTYWOOD AIRPORT

Branch: 36A

APRON

A-11

Length: 417 LF **Width:** 182 LF **Area:** 73,348 SF **Last Const. :** 2001 **Family:** ACAM15
From: T-1 **To:** TIEDOWNS **Surface:** AAC

Inspections

Samples Surveyed: 5 **Total Samples:** 16 **Last Inspection Date (RPA)** 9/1/2015 **PCI:** **66**

Sample # 2 **Area:** 4550 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	215 LF
WEATHERING	L	136 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	23 LF
RAVELING	L	65 SF
RAVELING	M	55 SF

Sample # 6 **Area:** 4550 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	188 LF
WEATHERING	L	121 SF
RAVELING	M	115 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	30 LF
RAVELING	L	67 SF
PATCHING	H	9 SF
RAVELING	H	1 SF

Sample # 8 **Area:** 4550 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	99 LF
WEATHERING	L	121 SF
RAVELING	L	66 SF
RAVELING	M	55 SF
RAVELING	H	46 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	12 LF
DEPRESSION	L	37 SF
PATCHING	H	12 SF

Sample # 11 **Area:** 4550 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	142 LF
RAVELING	L	161 SF
WEATHERING	L	46 SF
RAVELING	M	45 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	6 LF

Sample # 13 **Area:** 4550 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	218 LF
WEATHERING	L	136 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	23 LF
RAVELING	L	46 SF
RAVELING	M	45 SF
OIL SPILLAGE	N	12 SF
DEPRESSION	L	5 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
PATCHING	H	68 SF	0.09 %	15.50
LONGITUDINAL/TRANSVERSE CRACKING	L	2779 LF	3.79 %	12.01
RAVELING	M	1016 SF	1.38 %	8.93
RAVELING	H	152 SF	0.21 %	7.98
LONGITUDINAL/TRANSVERSE CRACKING	M	303 LF	0.41 %	7.60
RAVELING	L	1306 SF	1.78 %	3.71
OIL SPILLAGE	N	39 SF	0.05 %	2.00
WEATHERING	L	1805 SF	2.46 %	0.75
DEPRESSION	L	135 SF	0.18 %	0.66

* 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 95.0 % Climate/Durability 5.0 % Other

PLENTYWOOD AIRPORT

Branch: 36R

RUNWAY

R-11

Length: 3,900 LF **Width:** 75 LF **Area:** 292,500 SF **Last Const. :** 2001 **Family:** ACRMU15
From: STA 12+00 **To:** STA 51+00 **Surface:** AC

Inspections

Samples Surveyed: 7 **Total Samples:** 60 **Last Inspection Date (RPA)** 9/1/2015 **PCI:** **68**

Sample # 7	<table border="0"> <tr> <th style="text-align: left;">Distress Description</th> <th style="text-align: left;">Severity</th> <th style="text-align: left;">Quantity</th> </tr> <tr> <td>LONGITUDINAL/TRANSVERSE CRACKING</td> <td>L</td> <td>272 LF</td> </tr> <tr> <td>WEATHERING</td> <td>L</td> <td>798 SF</td> </tr> <tr> <td>RAVELING</td> <td>L</td> <td>94 SF</td> </tr> <tr> <td>LONGITUDINAL/TRANSVERSE CRACKING</td> <td>M</td> <td>10 LF</td> </tr> <tr> <td>DEPRESSION</td> <td>L</td> <td>21 SF</td> </tr> </table>	Distress Description	Severity	Quantity	LONGITUDINAL/TRANSVERSE CRACKING	L	272 LF	WEATHERING	L	798 SF	RAVELING	L	94 SF	LONGITUDINAL/TRANSVERSE CRACKING	M	10 LF	DEPRESSION	L	21 SF	Area: 4745 SF						
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PATCHING	L	1 SF																								

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	L	14433 LF	4.93 %	14.63
RAVELING	M	2224 SF	0.76 %	7.12
DEPRESSION	L	2599 SF	0.89 %	5.98
LONGITUDINAL/TRANSVERSE CRACKING	M	297 LF	0.10 %	3.99
RAVELING	L	5843 SF	2.00 %	3.98

PLENTYWOOD AIRPORT

Branch: 36R

RUNWAY

R-11

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
WEATHERING	L	48715 SF	16.65 %	2.47
SWELLING	L	1640 SF	0.56 %	2.02
PATCHING	L	17 SF	0.01 %	2.00

* 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 81.0 % Climate/Durability 19.0 % Other

PLENTYWOOD AIRPORT

FIFTEEN YEAR PROJECTIONS: ESTIMATED AVERAGE ANNUAL COST: \$235,068

PLAN YEAR: 2016			ESTIMATED COST:			\$686,867	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-11	Prev. & Seal Coat	\$7,239	\$20,537			\$27,777	65	70
R-11	Prev. & Thin AC	\$42,267	\$570,374			\$612,641	61	70
T-11	Prev. & Seal Coat	\$6,947	\$39,502			\$46,449	70	75
PLAN YEAR: 2017			ESTIMATED COST:			\$32,748	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-11	Basic Prev.	\$5,818				\$5,818	72	73
R-11	Basic Prev.	\$21,272				\$21,272	68	68
A-11	Basic Prev.	\$5,658				\$5,658	68	68
PLAN YEAR: 2018			ESTIMATED COST:			\$42,327	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-11	Basic Prev.	\$7,471				\$7,471	65	66
R-11	Basic Prev.	\$27,618				\$27,618	66	66
T-11	Basic Prev.	\$7,238				\$7,238	70	71
PLAN YEAR: 2019			ESTIMATED COST:			\$53,521	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-11	Basic Prev.	\$10,097				\$10,097	68	69
A-11	Basic Prev.	\$9,386				\$9,386	63	63
R-11	Basic Prev.	\$34,038				\$34,038	64	64
PLAN YEAR: 2020			ESTIMATED COST:			\$65,455	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-11	Basic Prev.	\$13,370				\$13,370	67	67
R-11	Basic Prev.	\$40,659				\$40,659	63	63
A-11	Basic Prev.	\$11,426				\$11,426	61	61
PLAN YEAR: 2021			ESTIMATED COST:			\$147,845	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-11	Basic Prev.	\$47,509				\$47,509	61	61
T-11	Prev. & Seal Coat	\$16,665	\$45,794			\$62,459	65	69
A-11	Prev. & Seal Coat	\$14,068	\$23,809			\$37,877	59	64
PLAN YEAR: 2022			ESTIMATED COST:			\$81,631	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-11	Basic Prev.	\$55,900				\$55,900	59	59
T-11	Basic Prev.	\$13,864				\$13,864	67	67
A-11	Basic Prev.	\$11,867				\$11,867	61	62
PLAN YEAR: 2023			ESTIMATED COST:			\$98,530	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-11	Basic Prev.	\$14,520				\$14,520	59	59
T-11	Basic Prev.	\$17,369				\$17,369	65	65
R-11	Basic Prev.	\$66,641				\$66,641	58	58
PLAN YEAR: 2024			ESTIMATED COST:			\$117,392	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-11	Basic Prev.	\$78,310				\$78,310	56	56
T-11	Basic Prev.	\$20,963				\$20,963	63	63
A-11	Basic Prev.	\$18,119				\$18,119	57	57
PLAN YEAR: 2025			ESTIMATED COST:			\$137,900	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-11	Basic Prev.	\$22,093				\$22,093	55	55
R-11	Basic Prev.	\$91,140				\$91,140	54	54
T-11	Basic Prev.	\$24,667				\$24,667	62	62
PLAN YEAR: 2026			ESTIMATED COST:			\$1,007,883	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-11	Prev. & Seal Coat	\$26,526	\$27,601			\$54,127	52	57
T-11	Prev. & Seal Coat	\$28,583	\$53,088			\$81,671	60	64
R-11	Prev. & Thin AC	\$105,549	\$766,535			\$872,085	52	62
PLAN YEAR: 2027			ESTIMATED COST:			\$110,642	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-11	Basic Prev.	\$25,817				\$25,817	62	62
R-11	Basic Prev.	\$61,889				\$61,889	60	60
A-11	Basic Prev.	\$22,936				\$22,936	55	55

PLAN YEAR: 2028			ESTIMATED COST:			\$131,731	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-11	Basic Prev.	\$74,191				\$74,191	58	58
A-11	Basic Prev.	\$27,609				\$27,609	52	53
T-11	Basic Prev.	\$29,931				\$29,931	60	60
PLAN YEAR: 2029			ESTIMATED COST:			\$667,103	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-11	Basic Prev.	\$87,498				\$87,498	56	57
A-11	Reconstruct			\$543,741		\$543,741	50	100
T-11	Basic Prev.	\$35,864				\$35,864	58	59
PLAN YEAR: 2030			ESTIMATED COST:			\$144,452	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-11	Basic Prev.	\$102,072				\$102,072	55	55
T-11	Basic Prev.	\$42,380				\$42,380	57	57