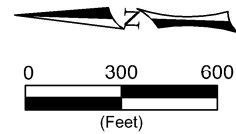
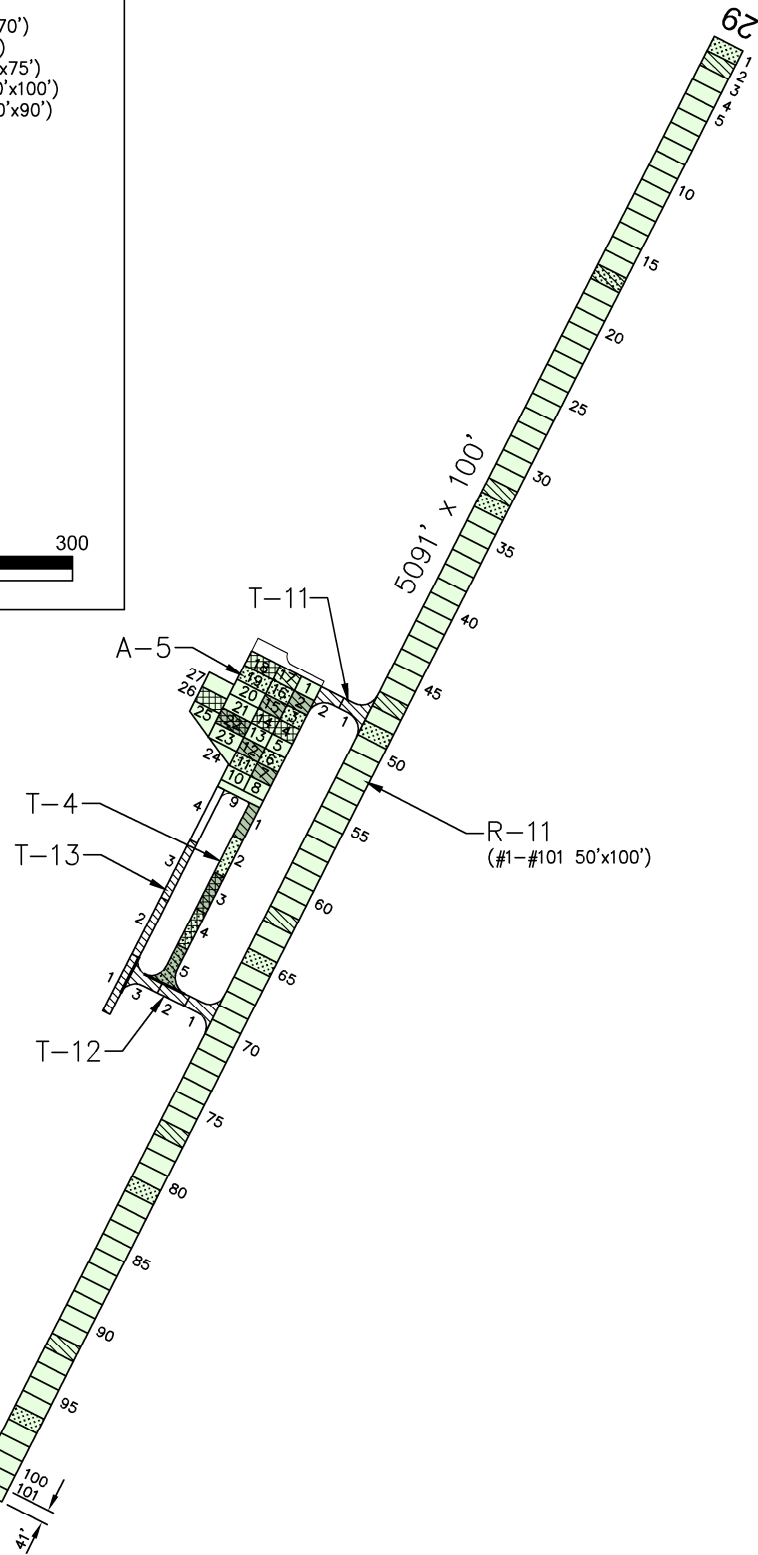
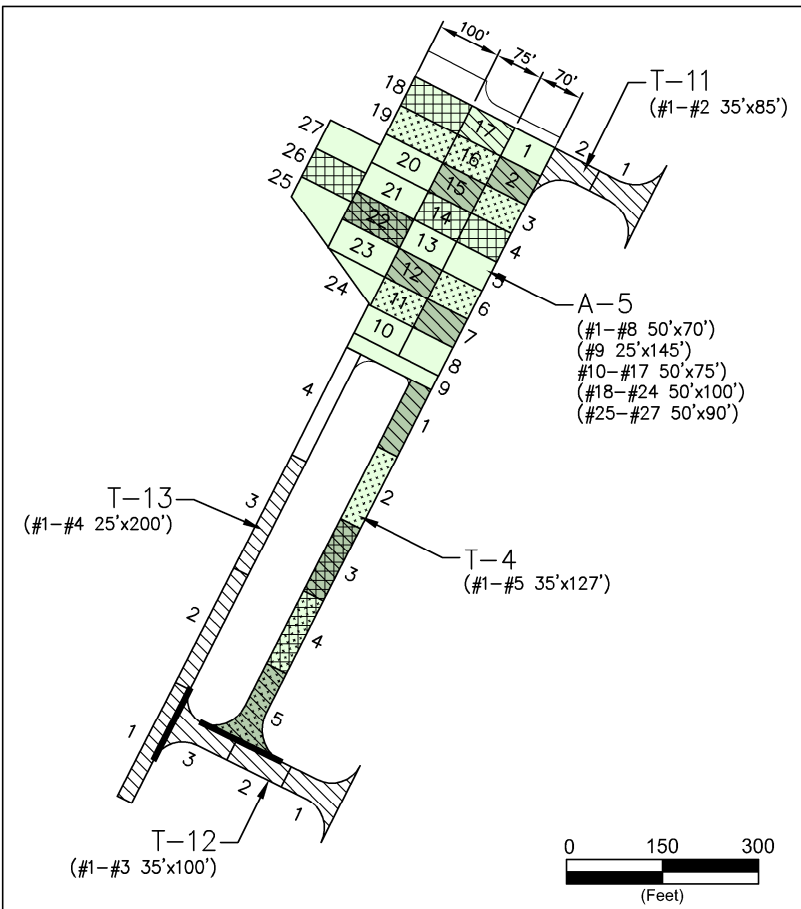


WOLF POINT



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			9" GRAVEL	14" P-208	4" P-401		38,000	50,000		4
TAXIWAYS										
T-4	E-10	F10		15" P-208	3" P-401	1.5" P-401	18,000			1,2,3,4
T-11	E-8	F8	3" SAND	14" P-208	4" P-401		38,000	50,000		4
T-12	E-10	F10		14" P-208	4" P-401		38,000	50,000		4
T-13				14" P-208	4" P-401		38,000	50,000		4
APRONS										
A-5	E-8	F8		15" P-208	3" P-401	1.5" P-401	18,000			1,2,3,4

REMARKS:

- AIP-02, 1994, REHABILITATE RUNWAY AND CONNECTING TAXIWAY; RELOCATE PARTIAL PARALLEL TAXIWAY; RECONSTRUCT APRON.
- 15" OF BASE COURSE IS 11" UNCRUSHED AND 4" CRUSHED; SOIL SEPARATION FABRIC BETWEEN SUBGRADE/BASE COURSE.
- AIP-03, 2001, CRACK SEAL, FOG SEAL, AND REMARK ALL PAVEMENTS.
- AIP-008-2010, RECONSTRUCT RUNWAY (R-11), TAXIWAYS (T-11,T-12), AND TAXILANE (T-13); OVERLAY TAXILANE (T-4) AND APRON (A-5).

LEGEND

	2003 SURVEY AREA
	2006 SURVEY AREA
	2009 SURVEY AREA (NOT SURVEYED)
	2012 SURVEY AREA
	2015 SURVEY AREA
	MAINTAIN: PCI > 60
	TRANSITION: PCI 45 TO 60
	RECONSTRUCT: PCI < 45

DATE OF PAVEMENT STRENGTH SURVEY:	JUNE 22, 1967
EVALUATED BY:	W. MOORE
DATE OF MOST RECENT PAVEMENT CONDITION SURVEY:	SEPT. 1, 2015
EVALUATED BY:	B. BURKLAND
LOCATION:	WOLF POINT MONTANA

MONTANA AVIATION SYSTEM PLAN 2015 UPDATE - PAVEMENT CONDITION INDEXES

LYMAN CLAYTON AIRPORT (OLF)

Date:	Prepared For:	Prepared By:
DECEMBER 2015	MONTANA MDT DEPARTMENT OF TRANSPORTATION	RPA Robert Peccia & Associates, Inc.

WOLF POINT

WOLF POINT AIRPORT

9/1/2015



A-5, Overview



A-5, Surface detail with raveling/gouge



R-11, Surface detail with crack & weathering



R-11, Overview

WOLF POINT AIRPORT

9/1/2015



T-4, Overview



T-4, Surface detail with crack & raveling

WOLF POINT AIRPORT

Branch: 32A

APRON

A-5

Length: 350 LF **Width:** 300 LF **Area:** 106,363 SF **Last Const. :** 2010 **Family:** ACAM15
From: T-1 **To:** T-3&4 **Surface:** AC

Inspections

Samples Surveyed: 5 **Total Samples:** 27 **Last Inspection Date (RPA)** 9/1/2015 **PCI:** 90

Sample # 3	Distress Description WEATHERING LONGITUDINAL/TRANSVERSE CRACKING RAVELING	Severity L L L	Quantity 205 SF 50 LF 105 SF	Area: 3500 SF
Sample # 6	Distress Description RAVELING WEATHERING WEATHERING PATCHING	Severity L L H L	Quantity 125 SF 105 SF 5 SF 1 SF	Area: 3500 SF
Sample # 11	Distress Description RAVELING WEATHERING PATCHING	Severity L L L	Quantity 123 SF 113 SF 1 SF	Area: 3750 SF
Sample # 16	Distress Description WEATHERING RAVELING PATCHING	Severity L L L	Quantity 113 SF 113 SF 1 SF	Area: 3750 SF
Sample # 19	Distress Description RAVELING WEATHERING OIL SPILLAGE	Severity L L N	Quantity 110 SF 100 SF 7 SF	Area: 3750 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
RAVELING	L	3357 SF	3.16 %	5.23
LONGITUDINAL/TRANSVERSE CRACKING	L	291 LF	0.27 %	3.51
WEATHERING	H	29 SF	0.03 %	3.23
OIL SPILLAGE	N	41 SF	0.04 %	2.00
PATCHING	L	17 SF	0.02 %	2.00
WEATHERING	L	3707 SF	3.48 %	0.89

* 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** 88.0 % **Climate/Durability** 12.0 % **Other**

WOLF POINT AIRPORT

Branch: 32R

RUNWAY

R-11

Length: 5,091 LF **Width:** 100 LF **Area:** 509,100 SF **Last Const. :** 2010 **Family:** ACRH15
From: 0+00 **To:** 50+91 **Surface:** AC

Inspections

Samples Surveyed: 7 **Total Samples:** 102 **Last Inspection Date (RPA)** 9/1/2015 **PCI:** 79

Sample # 1 **Area:** 5000 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	86 LF
WEATHERING	L	100 SF
RAVELING	L	100 SF
DEPRESSION	L	50 SF

Sample # 17 **Area:** 5000 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	123 LF
RAVELING	L	100 SF
WEATHERING	L	100 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	21 LF
DEPRESSION	L	50 SF
PATCHING	L	2 SF

Sample # 33 **Area:** 5000 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	89 LF
RAVELING	L	100 SF
WEATHERING	L	100 SF
DEPRESSION	L	15 SF
RAVELING	M	14 SF
WEATHERING	M	3 SF

Sample # 49 **Area:** 5000 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	187 LF
RAVELING	L	100 SF
WEATHERING	L	100 SF
RAVELING	M	50 SF

Sample # 65 **Area:** 5000 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	168 LF
WEATHERING	L	100 SF
RAVELING	L	75 SF

Sample # 81 **Area:** 5000 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	154 LF
WEATHERING	L	100 SF
RAVELING	L	100 SF
WEATHERING	M	17 SF
PATCHING	L	1 SF

Sample # 97 **Area:** 5000 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	151 LF
WEATHERING	L	100 SF
RAVELING	L	100 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	26 LF
RAVELING	H	2 SF
PATCHING	L	2 SF
DEPRESSION	M	2 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	L	13935 LF	2.74 %	9.36
RAVELING	H	29 SF	0.01 %	6.00
DEPRESSION	M	29 SF	0.01 %	5.20
RAVELING	M	931 SF	0.18 %	4.55
LONGITUDINAL/TRANSVERSE CRACKING	M	684 LF	0.13 %	4.17
RAVELING	L	9818 SF	1.93 %	3.90
PATCHING	L	73 SF	0.01 %	2.00
DEPRESSION	L	1673 SF	0.33 %	1.88

WOLF POINT AIRPORT

Branch: 32R

RUNWAY

R-11

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
WEATHERING	M	291 SF	0.06 %	1.20
WEATHERING	L	10182 SF	2.00 %	0.68

* 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** 82.0 % **Climate/Durability** 18.0 % **Other**

WOLF POINT AIRPORT

Branch: 32T

TAXIWAY

T-4

Length: 40 LF **Width:** 705 LF **Area:** 28,200 SF **Last Const. :** 2010 **Family:** ACRMU15
From: A-5 **To:** T-2 **Surface:** AC

Inspections

Samples Surveyed: 3 **Total Samples:** 5 **Last Inspection Date (RPA)** 9/1/2015 **PCI:** 80

Sample # 2 **Area:** 4720 SF

Distress Description	Severity	Quantity
WEATHERING	L	708 SF
RAVELING	L	94 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	20 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	17 LF

Sample # 4 **Area:** 4720 SF

Distress Description	Severity	Quantity
WEATHERING	L	708 SF
RAVELING	L	94 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	22 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	17 LF

Sample # 5 **Area:** 4720 SF

Distress Description	Severity	Quantity
WEATHERING	L	798 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	98 LF
RAVELING	L	94 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	24 LF
RAVELING	M	10 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	M	116 LF	0.41 %	7.57
LONGITUDINAL/TRANSVERSE CRACKING	L	279 LF	0.99 %	4.92
RAVELING	M	20 SF	0.07 %	4.00
RAVELING	L	562 SF	1.99 %	3.98
WEATHERING	L	4409 SF	15.64 %	2.37

* 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** 100.0 % **Climate/Durability** 0.0 % **Other**

WOLF POINT AIRPORT

FIFTEEN YEAR PROJECTIONS: ESTIMATED AVERAGE ANNUAL COST: \$83,159

PLAN YEAR: 2016 ESTIMATED COST: \$192,637 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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A-5	Prev. & Seal Coat	\$336	\$29,782			\$30,118	87	95
R-11	Prev. & Seal Coat	\$11,545	\$142,548			\$154,093	77	83
T-4	Prev. & Seal Coat	\$530	\$7,896			\$8,426	78	83

PLAN YEAR: 2017 ESTIMATED COST: \$6,416 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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R-11	Basic Prev.	\$6,143				\$6,143	80	80
T-4	Basic Prev.	\$273				\$273	81	81

PLAN YEAR: 2018 ESTIMATED COST: \$12,663 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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R-11	Basic Prev.	\$11,797				\$11,797	77	77
T-4	Basic Prev.	\$531				\$531	78	78
A-5	Basic Prev.	\$335				\$335	87	87

PLAN YEAR: 2019 ESTIMATED COST: \$18,684 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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R-11	Basic Prev.	\$17,112				\$17,112	75	75
A-5	Basic Prev.	\$729				\$729	84	84
T-4	Basic Prev.	\$843				\$843	76	76

PLAN YEAR: 2020 ESTIMATED COST: \$24,360 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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A-5	Basic Prev.	\$1,112				\$1,112	81	81
R-11	Basic Prev.	\$22,092				\$22,092	73	73
T-4	Basic Prev.	\$1,156				\$1,156	73	74

PLAN YEAR: 2021 ESTIMATED COST: \$239,482 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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R-11	Prev. & Seal Coat	\$26,817	\$165,252			\$192,070	71	75
A-5	Prev. & Seal Coat	\$2,264	\$34,525			\$36,789	78	84
T-4	Prev. & Seal Coat	\$1,470	\$9,154			\$10,623	71	76

PLAN YEAR: 2022 ESTIMATED COST: \$25,378 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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T-4	Basic Prev.	\$1,195				\$1,195	74	74
R-11	Basic Prev.	\$23,047				\$23,047	73	73
A-5	Basic Prev.	\$1,136				\$1,136	81	81

PLAN YEAR: 2023 ESTIMATED COST: \$31,828 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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T-4	Basic Prev.	\$1,527				\$1,527	71	72
A-5	Basic Prev.	\$2,229				\$2,229	78	78
R-11	Basic Prev.	\$28,072				\$28,072	71	71

PLAN YEAR: 2024 ESTIMATED COST: \$39,545 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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A-5	Basic Prev.	\$3,708				\$3,708	76	76
R-11	Basic Prev.	\$33,858				\$33,858	70	70
T-4	Basic Prev.	\$1,979				\$1,979	69	70

PLAN YEAR: 2025 ESTIMATED COST: \$51,959 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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T-4	Basic Prev.	\$2,741				\$2,741	68	68
R-11	Basic Prev.	\$44,044				\$44,044	68	68
A-5	Basic Prev.	\$5,174				\$5,174	73	73

PLAN YEAR: 2026 ESTIMATED COST: \$306,280 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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T-4	Prev. & Seal Coat	\$3,513	\$10,612			\$14,125	66	70
R-11	Prev. & Seal Coat	\$53,914	\$191,573			\$245,487	67	70
A-5	Prev. & Seal Coat	\$6,644	\$40,024			\$46,668	71	76

PLAN YEAR: 2027 ESTIMATED COST: \$54,023 PCI

SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
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T-4	Basic Prev.	\$2,830				\$2,830	68	68
R-11	Basic Prev.	\$45,875				\$45,875	68	69
A-5	Basic Prev.	\$5,318				\$5,318	73	74

PLAN YEAR: 2028			ESTIMATED COST:			\$67,004	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-5	Basic Prev.	\$6,884				\$6,884	71	71
T-4	Basic Prev.	\$3,651				\$3,651	66	66
R-11	Basic Prev.	\$56,469				\$56,469	67	67
PLAN YEAR: 2029			ESTIMATED COST:			\$80,880	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-11	Basic Prev.	\$66,915				\$66,915	66	66
A-5	Basic Prev.	\$9,480				\$9,480	69	69
T-4	Basic Prev.	\$4,485				\$4,485	64	64
PLAN YEAR: 2030			ESTIMATED COST:			\$96,250	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-11	Basic Prev.	\$77,701				\$77,701	65	65
T-4	Basic Prev.	\$5,341				\$5,341	62	63
A-5	Basic Prev.	\$13,208				\$13,208	67	67