CULBERTSON AIRPORT

Branch: 34A APRON **A-1**

Length: 271 LF **Width:** 200 LF **Area:** 47,000 SF **Last Const:** 2009 **Family:** ACAM
From: ENTIRE APRON **To:** **Surface:** AAC

Inspections

Samples Surveyed: 4 **Total Samples:** 9 **Last Inspection Date:** 8/23/2012 **PCI: 96**

Sample # 3 **Area:** 5,000 SF

Distress Description	Severity	Quantity
PATCHING	L	250 SF

Sample # 5 **Area:** 5,000 SF

Distress Description	Severity	Quantity
NONE		

Sample # 7 **Area:** 5,000 SF

Distress Description	Severity	Quantity
PATCHING	L	1 SF

Sample # 9 **Area:** 5,000 SF

Distress Description	Severity	Quantity
PATCHING	L	1 SF
RAVELING	L	25 SF

Extrapolated Distress Quantities*

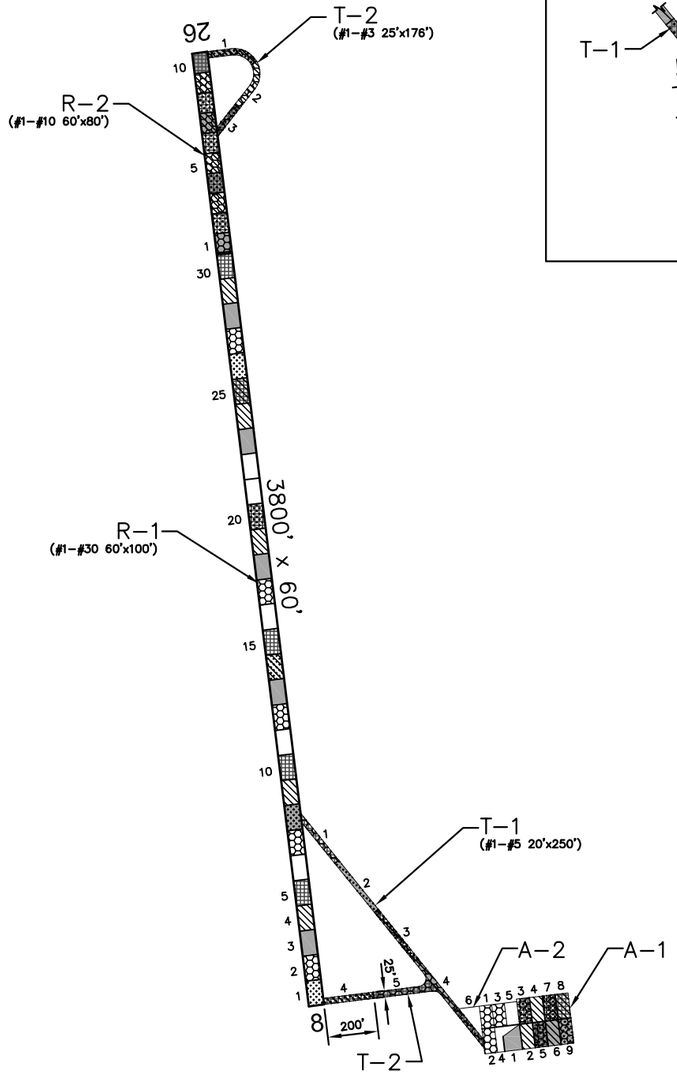
Distress Description	Severity	Quantity	Density	Deduct
PATCHING	L	592 LF	6.25%	4.11
RAVELING	L	59 LF	0.57%	1.06

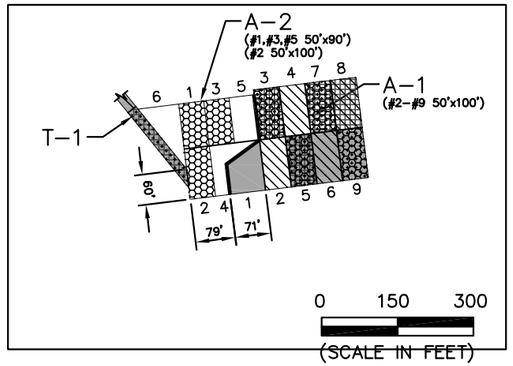
* Multiple deduct values are scaled down from their algebraic sum to keep the model consistent with experimental data.

Percent of Deduct Values Based on Distress Mechanism

0.0 % Load 100.0 % Climate/Durability 0.0 % Other

CULBERTSON





PAVEMENT STRENGTH SURVEY/PAVEMENT CONDITION SURVEY

PAVE. IDENT.	SOIL CLASS	SUB GRADE CLASS	SUBBASE COURSE	BASE COURSE	SURFACE COURSE	OVERLAY	PAVEMENT STRENGTH MAX. GROSS LOAD (LBS) SINGLE	DUAL	DUAL TAN.	REMARKS
RUNWAYS										
R-1	E-7	F7		8" P-208	4.5" P-401	4.5" P-403	12,500			1 3 4
R-2		CBR=5		8" P-208	4.5" P-401	4.5" P-403	12,500			2 3 4
TAXIWAYS										
T-1	E-7	F7		8" P-208	4.5" P-401	4.5" P-403	12,500			1 3 4
T-2		CBR=5		8" P-208	4.5" P-401	4.5" P-403	12,500			2 3 4
APRONS										
A-1	E-7	F7,CBR=5		8" P-208	4.5" P-401	4.5" P-401	12,500			1 3 4
A-2			6" P-152	11.5" P-208	4.5" P-403		12,500			4

REMARKS:

1. ADAP-01, 1976, OVERLAY RUNWAY, CONNECTING TAXIWAY, AND APRON.
2. AIP-002, 1993, ALL PAVEMENTS OVERLAYED, RUNWAY WIDENDED AND EXTENDED, AND NEW TAXIWAY (T-2) CONSTRUCTED. PAVEMENT STRENGTH UPDATED PER DESIGN REPORT.
3. AIP-003, 2001, CRACK SEAL, FOG SEAL, AND REMARK ALL PAVEMENTS.
4. AIP-006, 2009, MILL AND OVERLAY RUNWAY, TAXIWAYS, APRON. EXPAND APRON (A-2)

LEGEND

- 1994 SURVEY AREA (NOT SURVEYED)
- 1997 SURVEY AREA
- 2000 SURVEY AREA
- 2003 SURVEY AREA
- 2006 SURVEY AREA
- 2009 SURVEY AREA (NOT SURVEYED)
- 2012 SURVEY AREA

DATE OF PAVEMENT STRENGTH SURVEY:	SEPT. 22, 1983
EVALUATED BY:	C. NEW
DATE OF MOST RECENT PAVEMENT CONDITION SURVEY:	AUG. 23, 2012
EVALUATED BY:	M. BECKHOFF

MONTANA AVIATION SYSTEM PLAN
2012 UPDATE - PAVEMENT CONDITION INDEXES

BIG SKY FIELD

PREPARED FOR: MONTANA AERONAUTICS DIVISION 2 ORD Pl-1 PLATA C

CULBERTSON MONTANA

DATE: DEC. 2012

PREPARED BY: SE Engineering Planning Consulting

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CULBERTSON AIRPORT

Branch: 34A **APRON** **A-2**

Length: 150 LF **Width:** 180 LF **Area:** 28,085 SF **Last Const:** 2009 **Family:** ACAM
From: A-1 **To:** T-1 **Surface:** AC

Inspections

Samples Surveyed: 3 **Total Samples:** 6 **Last Inspection Date:** 8/23/2012 **PCI:** 99

Sample # 1 **Area:** 4,500 SF

Distress Description	Severity	Quantity
NONE		

Sample # 2 **Area:** 5,000 SF

Distress Description	Severity	Quantity
NONE		

Sample # 3 **Area:** 4,500 SF

Distress Description	Severity	Quantity
PATCHING	L	1 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
PATCHING	L	1 LF	5.00%	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** 100.0 **% Climate/Durability** 0.0 **% Other**

CULBERTSON AIRPORT

Branch: 34R **RUNWAY** **R-1**

Length: 3,000 LF **Width:** 60 LF **Area:** 180,000 SF **Last Const:** 2009 **Family:** ACRML
From: 0+00 RWY 7-25 **To:** 30+00 RWY 7-25 **Surface:** AC

Inspections

Samples Surveyed: 6 **Total Samples:** 30 **Last Inspection Date:** 8/23/2012 **PCI: 99**

Sample # 2 **Area:** 6,000 SF

Distress Description	Severity	Quantity
NONE		

Sample # 7 **Area:** 6,000 SF

Distress Description	Severity	Quantity
NONE		

Sample # 12 **Area:** 6,000 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	58 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	3 LF

Sample # 17 **Area:** 6,000 SF

Distress Description	Severity	Quantity
NONE		

Sample # 22 **Area:** 6,000 SF

Distress Description	Severity	Quantity
NONE		

Sample # 27 **Area:** 6,000 SF

Distress Description	Severity	Quantity
NONE		

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	L	290 LF	0.27%	2.81
LONGITUDINAL/TRANSVERSE CRACKING	M	15 LF	0.68%	4.00

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

CULBERTSON AIRPORT

Branch: 34R RUNWAY **R-2**

Length: 800 LF **Width:** 60 LF **Area:** 48,000 SF **Last Const:** 2009 **Family:** ACRML
From: 30+00 RWY 7-25 **To:** 38+00 RWY 7-25 **Surface:** AC

Inspections

Samples Surveyed: 5 **Total Samples:** 10 **Last Inspection Date:** 8/16/2012 **PCI: 98**

Sample # 1 **Area:** 4,800 SF

Distress Description	Severity	Quantity
NONE		

Sample # 3 **Area:** 4,800 SF

Distress Description	Severity	Quantity
NONE		

Sample # 5 **Area:** 4,800 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	46 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	15 LF

Sample # 7 **Area:** 4,800 SF

Distress Description	Severity	Quantity
NONE		

Sample # 9 **Area:** 4,800 SF

Distress Description	Severity	Quantity
BLEEDING	N	1 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
BLEEDING	N	2 LF	6.78%	0.00
LONGITUDINAL/TRANSVERSE CRACKING	L	92 LF	14.05%	3.05
LONGITUDINAL/TRANSVERSE CRACKING	M	30 LF	0.02%	4.00

* 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 100.0 % Climate/Durability 0.0 % Other

CULBERTSON AIRPORT

Branch: 34T **TAXIWAY** **T-1**

Length: 1,250 LF **Width:** 20 LF **Area:** 25,000 SF **Last Const:** 2009 **Family:** ACRML
From: RUNWAY 7-25 **To:** APRON **Surface:** AC

Inspections

Samples Surveyed: 3 **Total Samples:** 5 **Last Inspection Date:** 8/23/2012 **PCI: 91**

Sample # 1 **Area:** 5,000 SF

Distress Description	Severity	Quantity
RAVELING	L	3 SF

Sample # 3 **Area:** 5,000 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	100 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	20 LF

Sample # 4 **Area:** 5,000 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	105 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	15 LF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	L	342 LF	0.76%	5.78
LONGITUDINAL/TRANSVERSE CRACKING	M	58 LF	4.67%	5.63
RAVELING	L	5 LF	4.05%	1.00

* 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 100.0 % Climate/Durability 0.0 % Other

CULBERTSON AIRPORT

Branch: 34T TAXIWAY **T-2**

Length: 1,000 LF **Width:** 25 LF **Area:** 25,000 SF **Last Const:** 2009 **Family:** ACRML
From: RUNWAY 7-25 **To:** APRON **Surface:** AC

Inspections

Samples Surveyed: 3 **Total Samples:** 5 **Last Inspection Date:** 8/23/2012 **PCI: 97**

Sample # 1 **Area:** 5,000 SF

Distress Description	Severity	Quantity
BLEEDING	N	1 SF

Sample # 3 **Area:** 5,000 SF

Distress Description	Severity	Quantity
BLEEDING	N	1 SF
RAVELING	L	10 SF

Sample # 5 **Area:** 5,000 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	47 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	3 LF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
BLEEDING	N	3 LF	3.92%	0.00
LONGITUDINAL/TRANSVERSE CRACKING	L	78 LF	3.69%	3.65
LONGITUDINAL/TRANSVERSE CRACKING	M	5 LF	15.63%	4.00
RAVELING	L	17 LF	0.01%	1.00

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

CULBERTSON AIRPORT

FIRST YEAR LOCAL: 2013 **LOCAL REPAIR COST: $271**

Section	Distress Description	Severity	Quantity	Work Description	Quantity	Cost	Policy
R-1	L & T CR	M	15 LF	Crack Sealing - AC	15 LF	$38	PREV.
R-2	L & T CR	M	30 LF	Crack Sealing - AC	30 LF	$75	PREV.
T-1	L & T CR	M	58 LF	Crack Sealing - AC	58 LF	$146	PREV.
T-2	L & T CR	M	5 LF	Crack Sealing - AC	5 LF	$13	PREV.

FIFTEEN YEAR PROJECTIONS **ESTIMATED AVERAGE ANNUAL COST: $24,664**

Plan Year: 2013 — Estimated Cost: $31

Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	PCI Before	PCI After
T-1	Preventive	$31	$0	$0	$0	$31	89	89

Plan Year: 2014 — Estimated Cost: $65,024

Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	PCI Before	PCI After
A-1	Global MR + Preventive	$18	$12,103	$0	$0	$12,120	90	98
R-1	Global MR	$0	$46,350	$0	$0	$46,350	92	100
T-1	Global MR + Preventive	$116	$6,438	$0	$0	$6,554	85	93

Plan Year: 2015 — Estimated Cost: $272

Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	PCI Before	PCI After
A-2	Preventive	$44	$0	$0	$0	$44	89	89
R-2	Preventive	$121	$0	$0	$0	$121	88	88
T-1	Preventive	$24	$0	$0	$0	$24	89	89
T-2	Preventive	$83	$0	$0	$0	$83	87	87

Plan Year: 2016 — Estimated Cost: $732

Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	PCI Before	PCI After
A-1	Preventive	$10	$0	$0	$0	$10	90	90
A-2	Preventive	$147	$0	$0	$0	$147	85	85
R-2	Preventive	$290	$0	$0	$0	$290	84	85
T-1	Preventive	$115	$0	$0	$0	$115	86	86
T-2	Preventive	$169	$0	$0	$0	$169	84	84

Plan Year: 2017 — Estimated Cost: $1,776

Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	PCI Before	PCI After
A-1	Preventive	$190	$0	$0	$0	$190	86	87
A-2	Preventive	$249	$0	$0	$0	$249	82	82
R-1	Preventive	$431	$0	$0	$0	$431	88	88
R-2	Preventive	$452	$0	$0	$0	$452	82	82
T-1	Preventive	$202	$0	$0	$0	$202	83	83
T-2	Preventive	$252	$0	$0	$0	$252	81	81

Plan Year: 2018 — Estimated Cost: $3,387

Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	PCI Before	PCI After
A-1	Preventive	$368	$0	$0	$0	$368	83	83
A-2	Preventive	$423	$0	$0	$0	$423	79	79
R-1	Preventive	$1,107	$0	$0	$0	$1,107	85	85
R-2	Preventive	$752	$0	$0	$0	$752	79	79
T-1	Preventive	$285	$0	$0	$0	$285	80	80
T-2	Preventive	$452	$0	$0	$0	$452	79	79

Plan Year: 2019 — Estimated Cost: $80,872

Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	PCI Before	PCI After
A-1	Global MR + Preventive	$544	$14,030	$0	$0	$14,575	80	87
A-2	Preventive	$794	$0	$0	$0	$794	77	77
R-1	Global MR + Preventive	$1,755	$53,733	$0	$0	$55,488	82	88
R-2	Preventive	$1,277	$0	$0	$0	$1,277	77	77
T-1	Global MR + Preventive	$556	$7,463	$0	$0	$8,019	78	83
T-2	Preventive	$719	$0	$0	$0	$719	76	77

Plan Year: 2020 — Estimated Cost: $5,668

Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	PCI Before	PCI After
A-1	Preventive	$372	$0	$0	$0	$372	84	84
A-2	Preventive	$1,162	$0	$0	$0	$1,162	74	74
R-1	Preventive	$1,111	$0	$0	$0	$1,111	85	85
R-2	Preventive	$1,764	$0	$0	$0	$1,764	75	75
T-1	Preventive	$295	$0	$0	$0	$295	80	81
T-2	Preventive	$965	$0	$0	$0	$965	75	75

CULBERTSON AIRPORT

Plan Year: 2021				Estimated Cost: $7,854			PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-1	Preventive	$559	$0	$0	$0	$559	81	81
A-2	Preventive	$1,530	$0	$0	$0	$1,530	72	72
R-1	Preventive	$1,803	$0	$0	$0	$1,803	82	82
R-2	Preventive	$2,208	$0	$0	$0	$2,208	73	74
T-1	Preventive	$563	$0	$0	$0	$563	78	78
T-2	Preventive	$1,191	$0	$0	$0	$1,191	73	73

Plan Year: 2022				Estimated Cost: $10,783			PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-1	Preventive	$1,143	$0	$0	$0	$1,143	78	78
A-2	Preventive	$1,993	$0	$0	$0	$1,993	70	70
R-1	Preventive	$2,791	$0	$0	$0	$2,791	80	80
R-2	Preventive	$2,613	$0	$0	$0	$2,613	72	72
T-1	Preventive	$848	$0	$0	$0	$848	76	76
T-2	Preventive	$1,395	$0	$0	$0	$1,395	72	72

Plan Year: 2023				Estimated Cost: $15,378			PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-1	Preventive	$1,827	$0	$0	$0	$1,827	75	75
A-2	Preventive	$2,831	$0	$0	$0	$2,831	68	68
R-1	Preventive	$5,050	$0	$0	$0	$5,050	77	77
R-2	Preventive	$2,980	$0	$0	$0	$2,980	71	71
T-1	Preventive	$1,109	$0	$0	$0	$1,109	74	74
T-2	Preventive	$1,582	$0	$0	$0	$1,582	71	71

Plan Year: 2024				Estimated Cost: $106,989			PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-1	Global MR + Preventive	$2,511	$16,265	$0	$0	$18,776	73	78
A-2	Preventive	$3,682	$0	$0	$0	$3,682	66	66
R-1	Global MR + Preventive	$7,134	$62,291	$0	$0	$69,425	75	80
R-2	Preventive	$3,317	$0	$0	$0	$3,317	70	70
T-1	Global MR + Preventive	$1,348	$8,652	$0	$0	$10,000	73	76
T-2	Preventive	$1,789	$0	$0	$0	$1,789	70	70

Plan Year: 2025				Estimated Cost: $18,780			PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-1	Preventive	$1,865	$0	$0	$0	$1,865	76	76
A-2	Preventive	$4,545	$0	$0	$0	$4,545	64	64
R-1	Preventive	$5,152	$0	$0	$0	$5,152	77	78
R-2	Preventive	$3,949	$0	$0	$0	$3,949	69	69
T-1	Preventive	$1,155	$0	$0	$0	$1,155	74	74
T-2	Preventive	$2,114	$0	$0	$0	$2,114	69	69

Plan Year: 2026				Estimated Cost: $23,787			PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-1	Preventive	$2,589	$0	$0	$0	$2,589	73	73
A-2	Preventive	$5,428	$0	$0	$0	$5,428	62	62
R-1	Preventive	$7,389	$0	$0	$0	$7,389	76	76
R-2	Preventive	$4,547	$0	$0	$0	$4,547	69	69
T-1	Preventive	$1,411	$0	$0	$0	$1,411	73	73
T-2	Preventive	$2,423	$0	$0	$0	$2,423	68	68

Plan Year: 2027				Estimated Cost: $28,622			PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-1	Preventive	$3,316	$0	$0	$0	$3,316	71	71
A-2	Preventive	$6,338	$0	$0	$0	$6,338	60	60
R-1	Preventive	$9,442	$0	$0	$0	$9,442	74	74
R-2	Preventive	$5,148	$0	$0	$0	$5,148	68	68
T-1	Preventive	$1,644	$0	$0	$0	$1,644	72	72
T-2	Preventive	$2,734	$0	$0	$0	$2,734	68	68

CULBERTSON AIRPORT

8/23/2012

A-1, Overview

A-1, Raveling from grinding

A-1, Surface detail core hole patch

A-2, Overview

CULBERTSON AIRPORT

8/23/2012

R-1, Overview

R-1, Surface detail

R-2, Bleeding

R-2, Overview

CULBERTSON AIRPORT

8/23/2012

R-2, Surface detail with cracking

T-1, Overview

T-1, Surface detail with cracking

T-2, Connector overview

CULBERTSON AIRPORT

8/23/2012

T-2, Surface detail

T-2, Turnaround overview