Alaska DOT&PF

Statewide Design and Engineering Services
Pavement Management and Preservation Office
5800 East Tudor Road, Anchorage AK 99507-1286

Pavement Inspection Report
Klawock Airport

Airport Name	IATA	ICAO	Latitude	Longitude	Elevation (ft)
Klawock Airport	AKW	PAKW	55° 34’45.2”N	133° 4’33.6”W	79.7

Please refer all questions or for further information about this report, please contact the AKDOT&PF Pavement Management and Preservation Office as follows:

Point of Contact	Phone	Email	Date Inspected	Date Published
Mr. Andrew Pavey, Pavement Management Engineer	(907) 269 6213	andrew.pavey@alaska.gov	October 2022	June 2023

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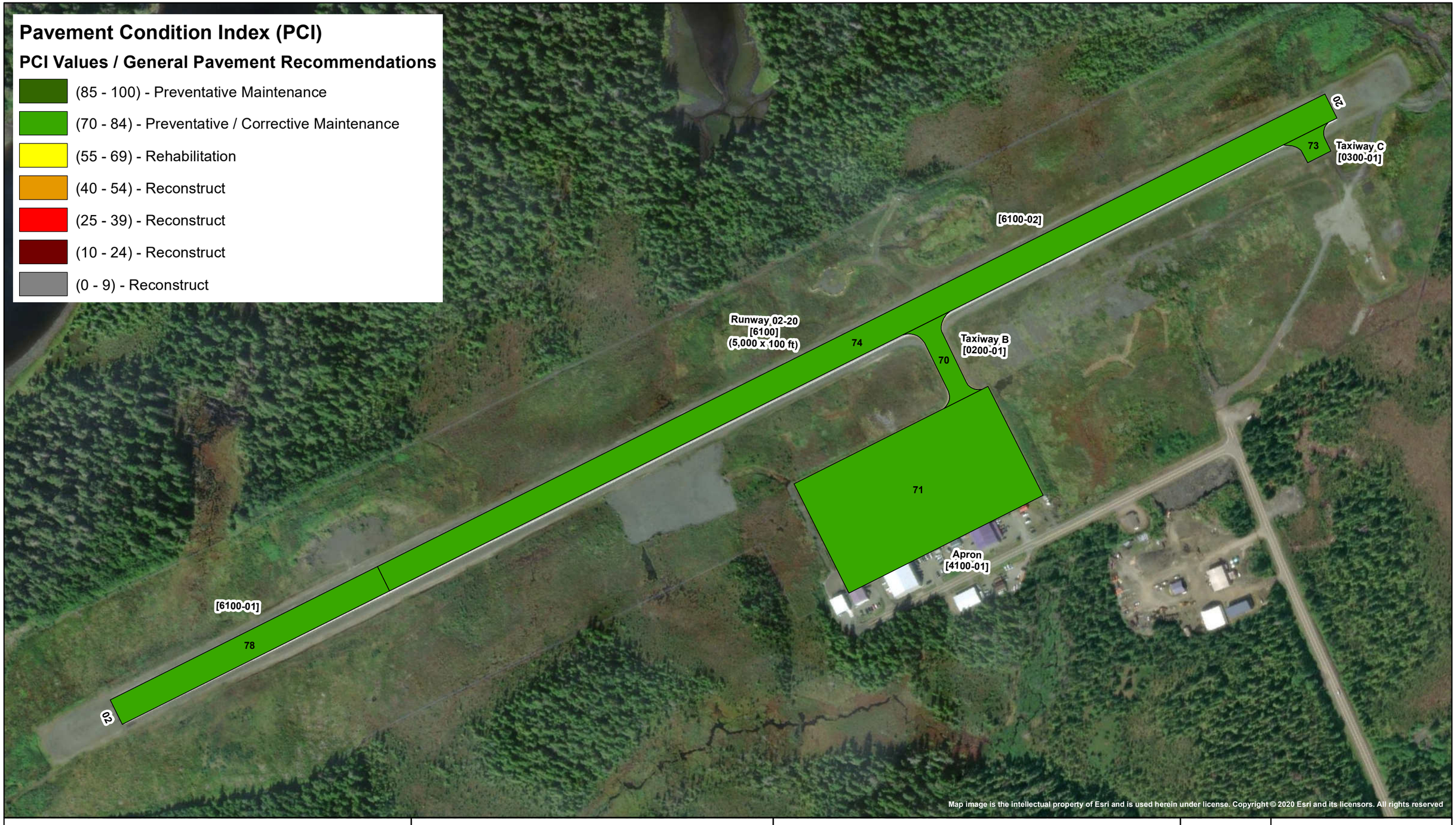
Pavement Condition Index (PCI)

PCI Values / General Pavement Recommendations

- (85 - 100) - Preventative Maintenance
- (70 - 84) - Preventative / Corrective Maintenance
- (55 - 69) - Rehabilitation
- (40 - 54) - Reconstruct
- (25 - 39) - Reconstruct
- (10 - 24) - Reconstruct
- (0 - 9) - Reconstruct



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Klawock Airport

Airport Code: AKW
Site Number: 50420.01*A

Pavement Condition Index (PCI)

Target PCI Range for Runways: 70 to 100
Target PCI Range for Taxiways and Aprons: 60 to 100

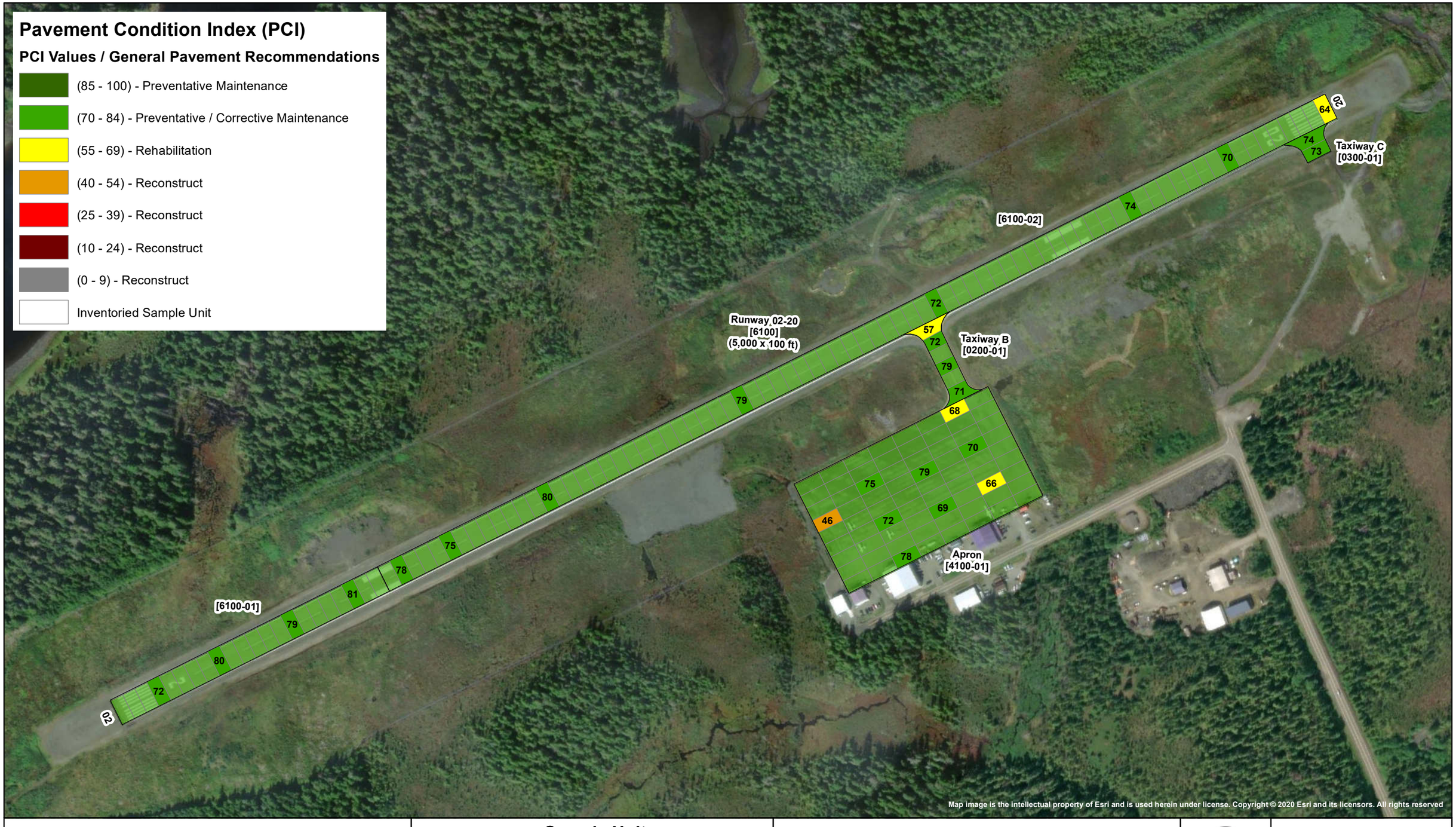
N W E S

2022 Pavement Inspection Results

0 150 300 600 900
Feet

Map Created by Duval Engineering for AK DOT&PF

Map 1 of 6



Klawock Airport

Airport Code: AKW
Site Number: 50420.01*A

Sample Unit
Pavement Condition Index (PCI)
Target PCI Range for Runways: 70 to 100
Target PCI Range for Taxiways and Aprons: 60 to 100

N W E S

2022 Pavement Inspection Results

0 150 300 600 900
Feet

Map Created by Duval Engineering for AK DOT&PF

Map 2 of 6

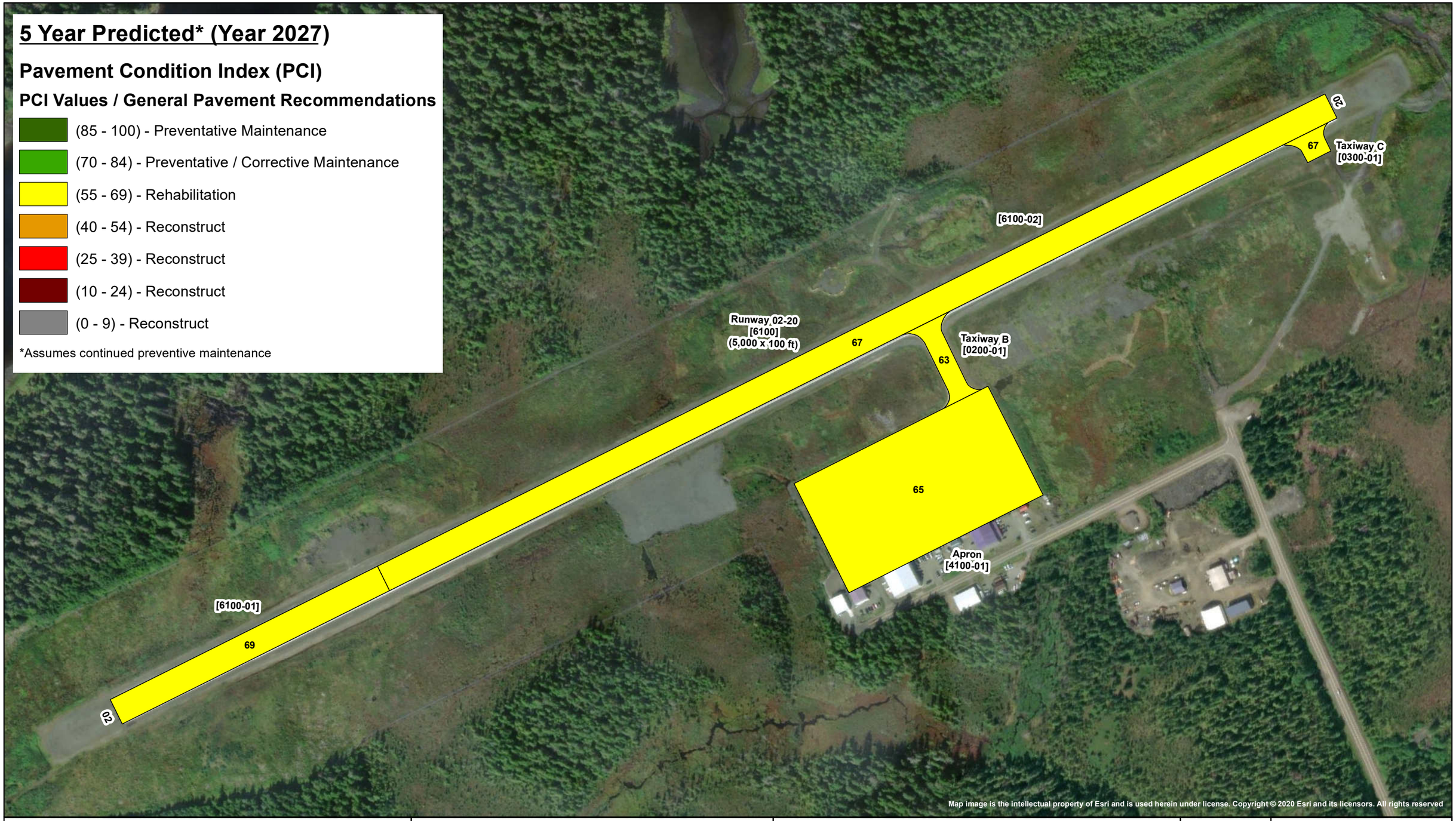
5 Year Predicted* (Year 2027)

Pavement Condition Index (PCI)

PCI Values / General Pavement Recommendations

- (85 - 100) - Preventative Maintenance
- (70 - 84) - Preventative / Corrective Maintenance
- (55 - 69) - Rehabilitation
- (40 - 54) - Reconstruct
- (25 - 39) - Reconstruct
- (10 - 24) - Reconstruct
- (0 - 9) - Reconstruct

*Assumes continued preventive maintenance



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Klawock Airport

Airport Code: AKW
Site Number: 50420.01*A

5 Year Predicted
Pavement Condition Index (PCI)

Target PCI Range for Runways: 70 to 100
Target PCI Range for Taxiways and Aprons: 60 to 100

N W E S

2022 Pavement Inspection Results

0 150 300 600 900
Feet

Map Created by Duval Engineering for AK DOT&PF

Map 3 of 6

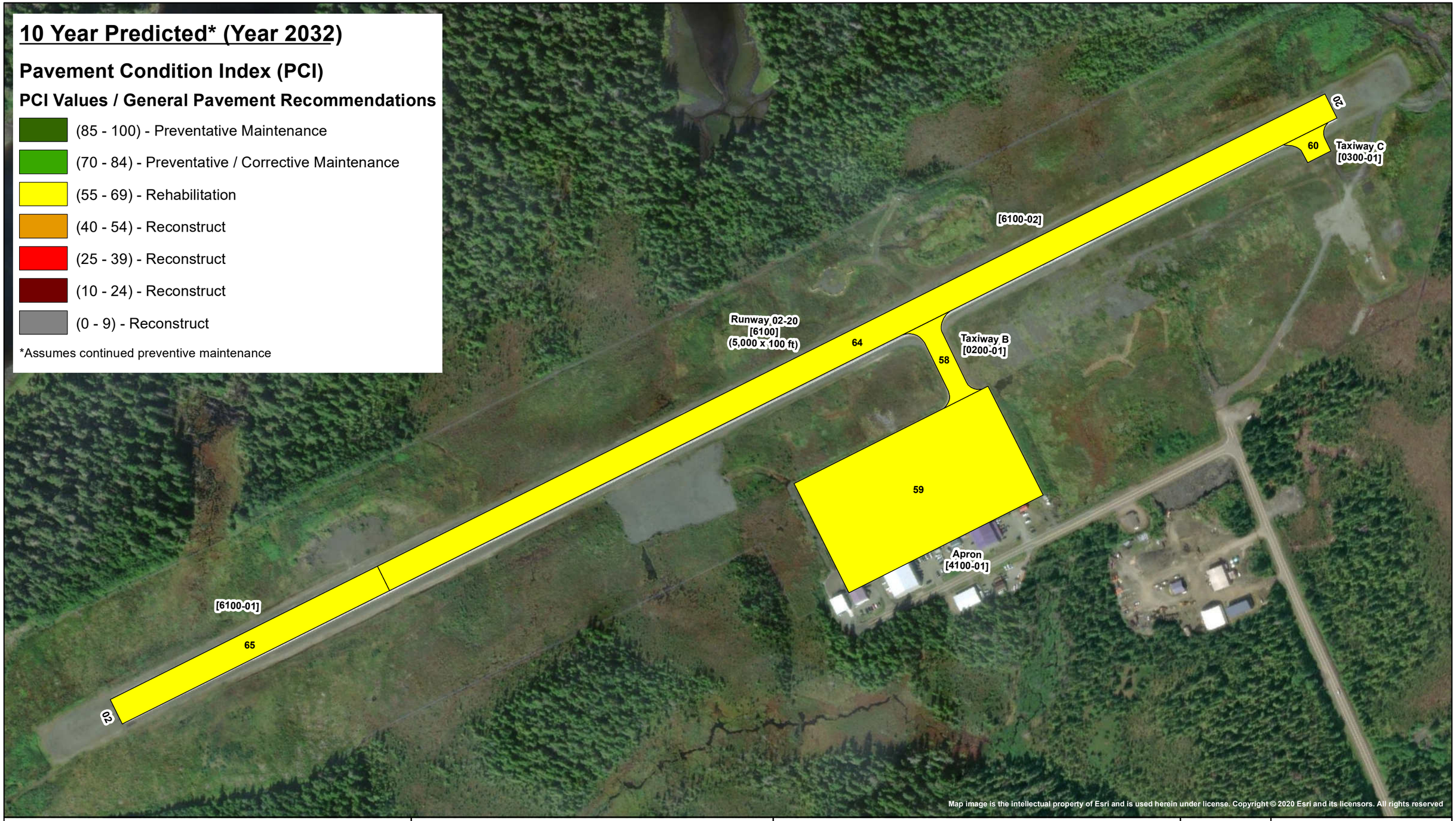
10 Year Predicted* (Year 2032)

Pavement Condition Index (PCI)

PCI Values / General Pavement Recommendations

- (85 - 100) - Preventative Maintenance
- (70 - 84) - Preventative / Corrective Maintenance
- (55 - 69) - Rehabilitation
- (40 - 54) - Reconstruct
- (25 - 39) - Reconstruct
- (10 - 24) - Reconstruct
- (0 - 9) - Reconstruct

*Assumes continued preventive maintenance



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Klawock Airport

Airport Code: AKW
Site Number: 50420.01*A

10 Year Predicted
Pavement Condition Index (PCI)

Target PCI Range for Runways: 70 to 100
Target PCI Range for Taxiways and Aprons: 60 to 100

N W E S

2022 Pavement Inspection Results

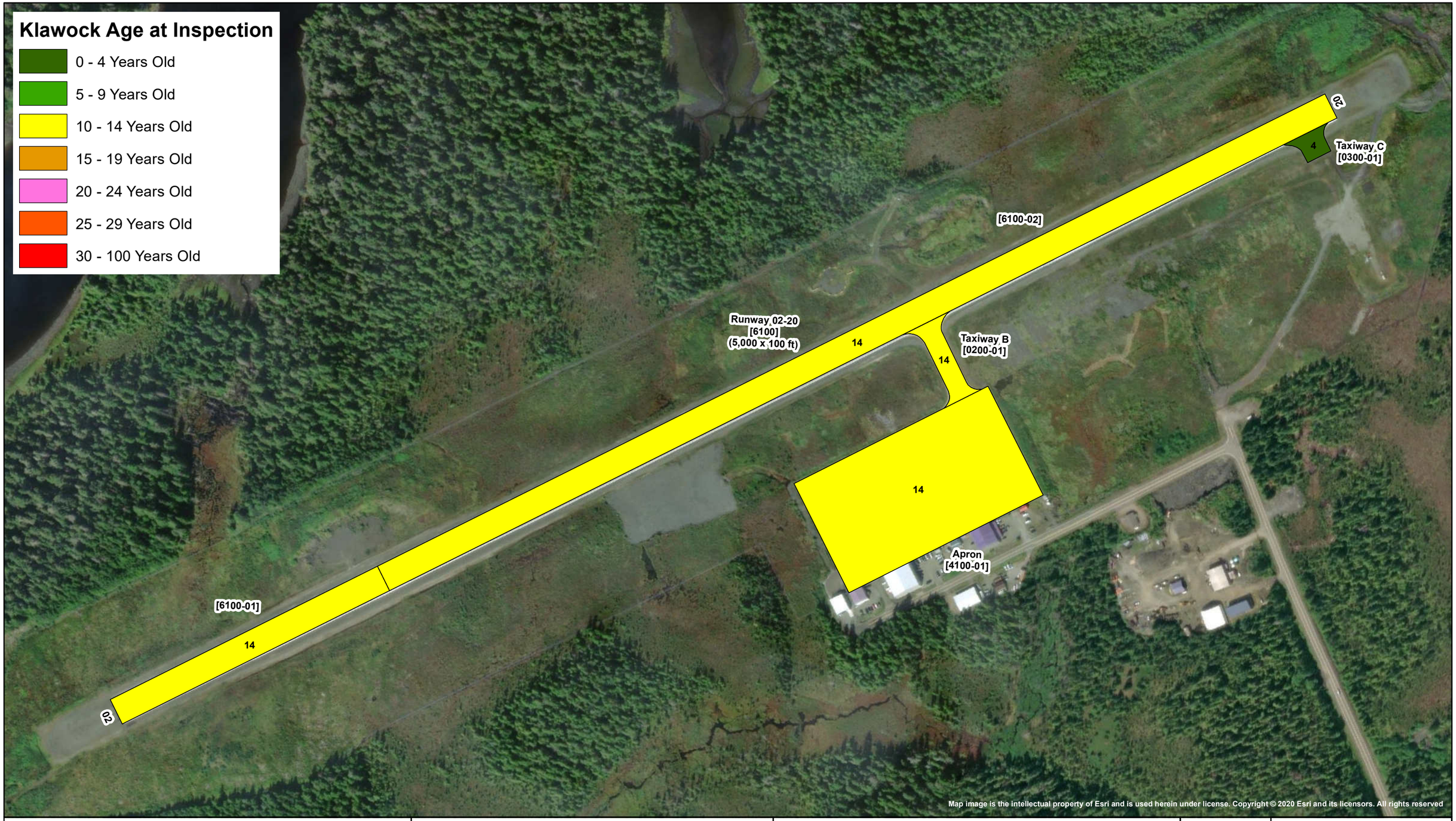
0 150 300 600 900
Feet

Map Created by Duval Engineering for AK DOT&PF

Map 4 of 6

Klawock Age at Inspection

- 0 - 4 Years Old
- 5 - 9 Years Old
- 10 - 14 Years Old
- 15 - 19 Years Old
- 20 - 24 Years Old
- 25 - 29 Years Old
- 30 - 100 Years Old



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Klawock Airport

Airport Code: AKW
Site Number: 50420.01*A

Pavement Age at Inspection

N W E S

2022 Pavement Inspection Results

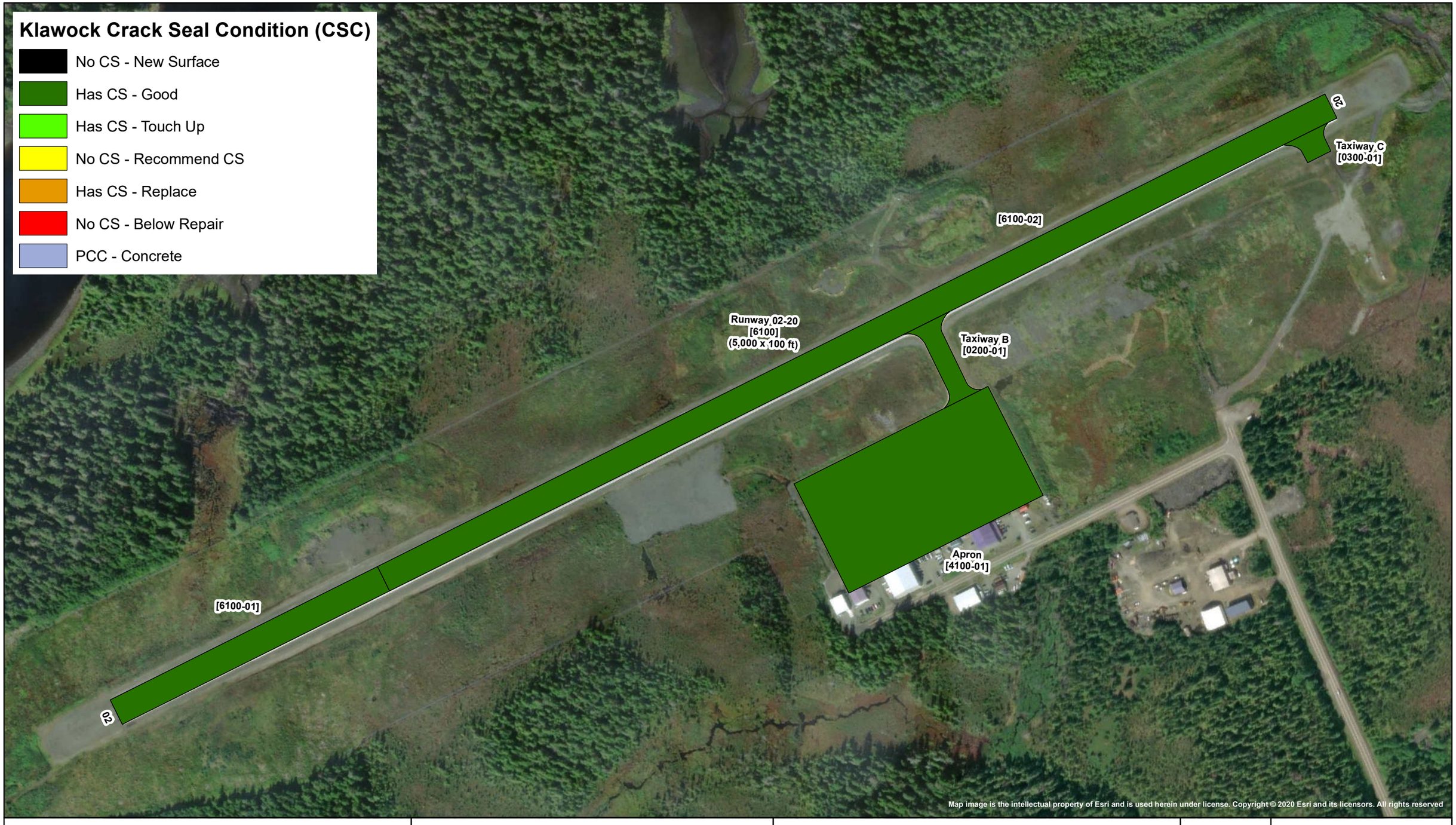
0 150 300 600 900
Feet

Map Created by Duval Engineering for AK DOT&PF

Map 5 of 6

Klawock Crack Seal Condition (CSC)

- No CS - New Surface
- Has CS - Good
- Has CS - Touch Up
- No CS - Recommend CS
- Has CS - Replace
- No CS - Below Repair
- PCC - Concrete



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Klawock Airport

Airport Code: AKW
Site Number: 50420.01*A

Pavement Crack Seal Condition (CSC)

N W E S

2022 Pavement Inspection Results

0 150 300 600 900
Feet

Map Created by Duval Engineering for AK DOT&PF

Map 6 of 6

AIRPORT PAVEMENT INSPECTION NOTES BY BRANCH

Branch ID	Branch Name	Branch Use	No. of Sections	Area (sf)	Weight Average PCI
0200	Taxiway B	Taxiway	1	26,000	70

Taxiway B was constructed in 1988 and was reconstructed in 2008. The most common distresses observed are low severity longitudinal and transverse cracking, low to medium severity raveling, and low to medium severity weathering. Our field personnel observed an increased loss of fine aggregate (weathering), which is exposing the coarse aggregate and in some areas the removal of the coarse aggregate altogether (raveling).

Branch ID	Branch Name	Branch Use	No. of Sections	Area (sf)	Weight Average PCI
0300	Taxiway C	Taxiway	1	10,900	73

Taxiway C was constructed in 1988. In 2018, the taxiway received a 2-inch overlay. The most common distresses observed are low to medium to high severity raveling, low severity weathering, and bleeding. The weathering and raveling are significant for a 4-year old pavement (at the time of inspection). Also noted were a considerable area of bleeding, which is caused by problems with the asphalt concrete mix properties, such as excessive asphalt binder and/or low air voids.

Branch ID	Branch Name	Branch Use	No. of Sections	Area (sf)	Weight Average PCI
4100	Apron	Apron	1	360,000	71

The aircraft parking apron was constructed in 1988 and was reconstructed in 2008. The most common distresses observed are low severity longitudinal and transverse cracking, low to medium to high severity raveling, and low to medium severity weathering. Our field personnel observed an increased loss of fine aggregate (weathering), which is exposing the coarse aggregate and in some areas the removal of the coarse aggregate altogether (raveling). Areas of mechanical damage appears to be causing the high severity raveling. Along the southwest edge of the apron, our field personnel observed a large depression which is retaining water (see photo above). Repair of this area of the parking apron is needed to correct the grade and create positive drainage off the pavement surface.

Branch ID	Branch Name	Branch Use	No. of Sections	Area (sf)	Weight Average PCI
6100	Runway 02/20	Runway	2	500,000	75




Runway 02/20 was constructed in 1988 and reconstructed in 2008. The most common distresses observed are low severity longitudinal and transverse cracking, low to medium severity raveling, and low to medium severity weathering. We observed the loss of the fine aggregate along the longitudinal construction joints which is exposing the coarse aggregate (weathering) and in some areas the removal of the coarse aggregate altogether (raveling).

BRANCH CONDITION REPORT

Branch ID	No. of Sections	Sum Section Length (Ft)	Avg Section Width (Ft)	True Area (Sq Ft)	Use	Average PCI	Standard Deviation PCI	Weighted Average PCI
0200	1	300	75	26,000	TAXIWAY	70.00	0.00	70.00
0300	1	100	100	10,900	TAXIWAY	73.00	0.00	73.00
4100	1	450	800	360,000	APRON	71.00	0.00	71.00
6100	2	5,000	100	500,000	RUNWAY	76.00	2.00	74.88

Note: the dimensions in the Branch Condition Report are derived from area calculations and may not reflect actual dimensions of individual sections. Refer to the maps for actual section dimensions.

BRANCH USE CONDITION REPORT

Use Category	No. of Sections	Total Area (Sq Ft)	Arithmetic Average PCI	Standard Deviation PCI	Weighted Average PCI
APRON	1	360,000	71.00	0.00	71.00
RUNWAY	2	500,000	76.00	2.00	74.88
TAXIWAY	2	36,900	71.50	1.50	70.89
ALL	5	896,900	73.20	2.79	73.16

SECTION CONDITION REPORT

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	True Area (Sq Ft)	Last Inspection Date	Age At Inspection	PCI
0200	0200-01	9/1/2008	AAC	TAXIWAY	A	26,000	10/22/2022	14	70
0300	0300-01	7/11/2018	AAC	TAXIWAY	P	10,900	10/22/2022	4	73
4100	4100-01	9/1/2008	AAC	APRON	P	360,000	10/22/2022	14	71
6100	6100-01	9/1/2008	AC	RUNWAY	P	110,000	10/22/2022	14	78
6100	6100-02	9/1/2008	AAC	RUNWAY	P	390,000	10/22/2022	14	74

SECTION CONDITION REPORT (SUMMARY BY AGE CATEGORY)

Age Category	Average Age at Inspection	Total Area (Sq Ft)	Number of Sections	Arithmetic Average PCI	Standard Deviation PCI	Weighted Average PCI
03-05	4	10,900	1	73.00	0.00	73.00
11-15	14	886,000	4	73.25	3.11	73.16
ALL	12	896,900	5	73.20	2.79	73.16

Work History Report

Pavement Database: Alaska

Network: Klawock Airport **Branch:** 0200 Taxiway B **Section:** 0200-01 **Surface:**AAC

L.C.D. 9/1/2008 **Use:** TAXIWAY **Rank:** A **Length:** 300.00 (Ft) **Width:** 75.00 (Ft) **True Area:** 26000.00000 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
9/1/2008	SR-AC	Surface Reconstruction - AC	0.00	2.00	☑ X	(Funded via AIP)
8/1/1988	NU-IN	New Construction - Initial	0.00	0.00	☑ X	(Funded via AIP)

Network: Klawock Airport **Branch:** 0300 Taxiway C **Section:** 0300-01 **Surface:**AAC

L.C.D. 7/11/2018 **Use:** TAXIWAY **Rank:** P **Length:** 100.00 (Ft) **Width:** 100.00 (Ft) **True Area:** 10900.00000 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
7/11/2018	OL_2	2 in overlay	0.00	2.00	☑ X	Year estimated - looked to be M&O o
6/1/1994	SR-AC	Surface Reconstruction - AC	0.00	0.00	☑ X	(Funded via AIP)
8/1/1988	NU-IN	New Construction - Initial	0.00	0.00	☑ X	(Funded via AIP)

Network: Klawock Airport **Branch:** 4100 Apron **Section:** 4100-01 **Surface:**AAC

L.C.D. 9/1/2008 **Use:** APRON **Rank:** P **Length:** 450.00 (Ft) **Width:** 800.00 (Ft) **True Area:** 360000.0090 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
9/1/2008	SR-AC	Surface Reconstruction - AC	0.00	2.00	☑ X	(Funded via AIP)
8/1/1988	NU-IN	New Construction - Initial	0.00	0.00	☑ X	(Funded via AIP)

Network: Klawock Airport **Branch:** 6100 02/20 **Section:** 6100-01 **Surface:**AC

L.C.D. 9/1/2008 **Use:** RUNWAY **Rank:** P **Length:** 1,100.00 (Ft) **Width:** 100.00 (Ft) **True Area:** 110000.0000 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
9/1/2008	CR-AC	Complete Reconstruction - AC	0.00	4.50	☑ X	vertical realignment, (Funded via AIP)
8/1/1988	NU-IN	New Construction - Initial	0.00	0.00	☑ X	(Funded via AIP)

Network: Klawock Airport **Branch:** 6100 02/20 **Section:** 6100-02 **Surface:**AAC

L.C.D. 9/1/2008 **Use:** RUNWAY **Rank:** P **Length:** 3,900.00 (Ft) **Width:** 100.00 (Ft) **True Area:** 390000.0001 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
9/1/2008	SR-AC	Surface Reconstruction - AC	0.00	2.00	☑ X	(Funded via AIP)
8/1/1988	NU-IN	New Construction - Initial	0.00	0.00	☑ X	(Funded via AIP)

Work History Report

Pavement Database: Alaska

Summary:

Work Description	Section Count	Area Total (SqFt)	Thickness Avg (in)	Thickness STD (in)
2 in overlay	1	10,900.00	2.00	0.00
Complete Reconstruction - AC	1	110,000.00	4.50	0.00
New Construction - Initial	5	896,900.01	0.00	0.00
Surface Reconstruction - AC	4	786,900.01	1.50	0.87

PHYSICAL PROPERTY DATA

		Pavement		Base		Subbase		Subgrade	
Branch ID	Section ID	Thick (in)	Type	Thick (in)	Type	Thick (in)	Type	Type	CBR
Taxiway B 0200	0200-01	5.5	P-401	6	P-209	6	P-154	GP	35
Taxiway C 0300	0300-01	5.5	P-401	6	P-209	-	-	GP	35
Parking Apron 4100	4100-01	5.5	P-401	6	P-209	6	P-154	GP	45
Runway 02/20 6100	6100-01	5.5	P-401	6	P-209	6	P-154	GP	12
	6100-02	5.5	P-401	6	P-209	6	P-154	GP	12

AIRCRAFT FLEET MIX

No.	Aircraft	Gross Wt (lb)	% Gross Wt on Main Gear	Tire Pressure (psi)	Annual Departures	20 Yr Coverages
1	Cessna 206 Stationair	3612	95.0	52	11	46
2	S-5	5100	95.0	51	5	22
3	Piper PA-32	3400	95.0	50	2	8
4	Cessna 208B	8750	95.0	75	8	53
5	S-10	10450	95.0	52	221	1139
6	PA-31 Navajo	6536	95.0	66	99	440
7	D-15	17227	95.0	63	960	7441
8	Beech King Air B200	12590	95.0	98	4	29
9	Q100/Dash 8	34700	94.4	131	11	69

PAVEMENT CLASSIFICATION RATING

Runway	Critical Aircraft	Max Allowable Wt (lb)	Subgrade Mr (psi)	Evaluation Thickness (in)	Pass to Traffic Cycle Ratio	PCR
2-20	Q100/Dash	158692	18000	17.5	1.0	575/F/B/X/T

PCR CALCULATION NOTES

- 1% traffic growth assumed
- S-5 and S-10 refer to “generic” single gear aircraft as modeled in FAARFIELD
- D-15 refers to “generic” dual gear aircraft as modeled in FAARFIELD

REFERENCES

Year	Project No.	Document Title
2021	SFAPT00121	Geotechnical Report for Pavement Rehabilitation
2007	DTFAWR-06-A-00013, 68164	Runway, Taxiway and Apron Improvements, As-Built
1987	3-02-0154-03, 69351	Runway, Taxiway and Apron Grading and Paving, As-Built
1986	3-02-0154-02, 67502	Runway Extension and Apron, As-Built
1986	3-02-0154-02, 67502	Geotechnical Investigation Report
1982	3-02-0154-01, D-21512	Runway Extension and Apron Improvements, As-Built