



# **PROGRAM OVERVIEW Program Background**

In 1992, the Florida Department of Transportation (FDOT) established the Statewide Airfield Pavement Management Program (SAPMP) to provide program managers, District Aviation Offices, and airport operators with a system to proactively manage airfield pavement infrastructure within the Florida airport system. The SAPMP includes Pavement Condition Index (PCI) surveys for airport facilities. Currently, the SAPMP includes 95 participating public-use airports with pavement facilities and provides its users with comprehensive data to better manage their pavement assets.

Airports participating in the Airport Improvement Program (AIP) are required by the Federal Aviation Administration (FAA) to develop and implement a pavement maintenance program to be eligible for funding per FAA Advisory Circular 150/5380-6C "Guidelines and Procedures for Maintenance of Airport Pavements" and 150/5380-7B "Airport Pavement Management Program (PMP)". In general, adherence to the FAA Advisory Circulars is mandatory for projects funded with federal grant monies through the AIP and with revenue from the Passenger Facilities Charges (PFC) Program. The AIP requires detailed assessments of airfield pavements at least once a year for a pavement management program. The frequency of the detailed inspections may be extended to every three years if the pavement is assessed according to the PCI survey procedure described in ASTM D5340-20 "Standard Test Method for Airport Pavement Condition Index Surveys". FDOT performs the SAPMP System Updates for the benefit of participating public-use and publicly owned airports through the FDOT's Aviation Office.

The results of this program for the airports within District 5 are presented in this summary and can be utilized by the District to identify, prioritize, and schedule pavement maintenance, repair, reconstruction, and major rehabilitation projects. This summary was created specifically for the use of the District Aviation Offices and differs from the FDOT SAPMP individual airport reports regarding the summarization of data presented.

# **Program Benefits**

The SAPMP enables the FDOT Aviation Office and the FDOT Districts to monitor pavement conditions at Florida airports. The SAPMP provides objective condition information needed to make informed decisions regarding the significant capital investment that the public-use airport pavement infrastructure represents. Utilizing the SAPMP will help stakeholders better understand the relative condition of their pavement facilities and when those facilities should be rehabilitated. The data collected from the SAPMP can be used for project planning for the next 10 years and will be revisited every three years as pavement conditions are updated.

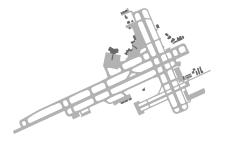
From a pavement management perspective, one of the most valuable aspects of the SAPMP is the ability to determine the optimum time for treatment resulting in cost savings by effectively prioritizing the rehabilitation of pavement assets that have, or will soon reach, a critical condition or PCI. The SAPMP supports a proactive major rehabilitation strategy that can effectively address pavement projects before the cost of these projects begin to exponentially increase.

The SAPMP addresses the requirements of maintaining an effective pavement management program for participating airports. Management of pavement assets provides insight for short- and long-term budget needs, understanding of the overall pavement condition (current and future), and knowledge of the pavement facilities that are under consideration for projects. A pavement evaluation can support the identification of maintenance, repair, and major rehabilitation needs and budgetary planning-level opinions of probable construction costs.

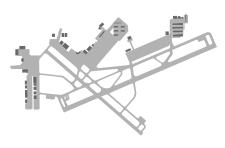
# **PAVEMENT INVENTORY OVERVIEW**

# **Airport Category**

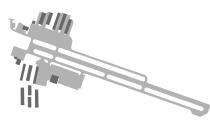
The airports within the FDOT SAPMP are classified into three categories as identified by the NPIAS: Primary/Commercial (PR), Reliever (RL), and General Aviation (GA). The summaries found within the remainder of this document are identified and summarized by these three categories, which are defined below.



**Primary/Commercial:** Primary and/or commercial service airports are publicly owned airports with scheduled air carrier service. Example, DAB – Daytona Beach International Airport.



**Reliever:** A non-primary airport designated to relieve congestion at commercial service airports and to provide more general aviation access to the overall community. Example, ORL — Orlando Executive Airport.



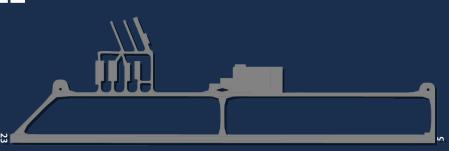
**General Aviation:** A public-use airport that does not have scheduled service or has scheduled service with less than 2,500 passenger boardings per year. Example, COI – Merritt Island Airport.

# **Airport Pavement Network Definition Terminology**

The following section defines the common terms used in the SAPMP System Update.

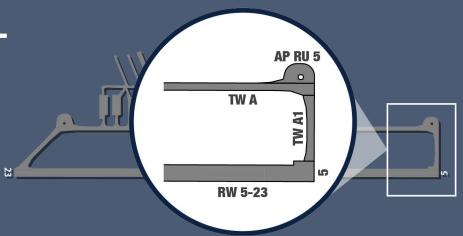
# **NETWORK LEVEL**

An individual Airport's airfield pavement facilities maintained by the Airport.



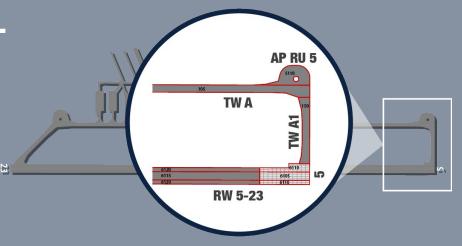
# **BRANCH LEVEL**

A logical unit of generally identifiable pavement within a network that has a distinct functional classification.



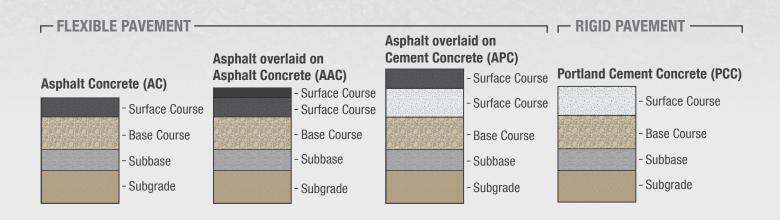
# **SECTION LEVEL**

A subdivision of a branch that has consistent characteristics throughout its length or area. These characteristics include structural composition, construction history, age, traffic type, traffic frequency, and pavement condition.



# **FDOT SAPMP Surface Types**

FDOT airfield pavements consist of two predominant pavement types: flexible (AC-surfaced) and rigid (PCC-surfaced), which are further broken down into four categories defined below. The pavement sections shown are intended to be conceptual representations and may vary from actual construction. It should be noted that a select number of airports within the program contain a fifth surface type called Whitetopping Pavement (WT). Whitetopping pavement is a non-FAA standard composite pavement comprised of relatively thin PCC overlaid on an existing AC pavement structure.



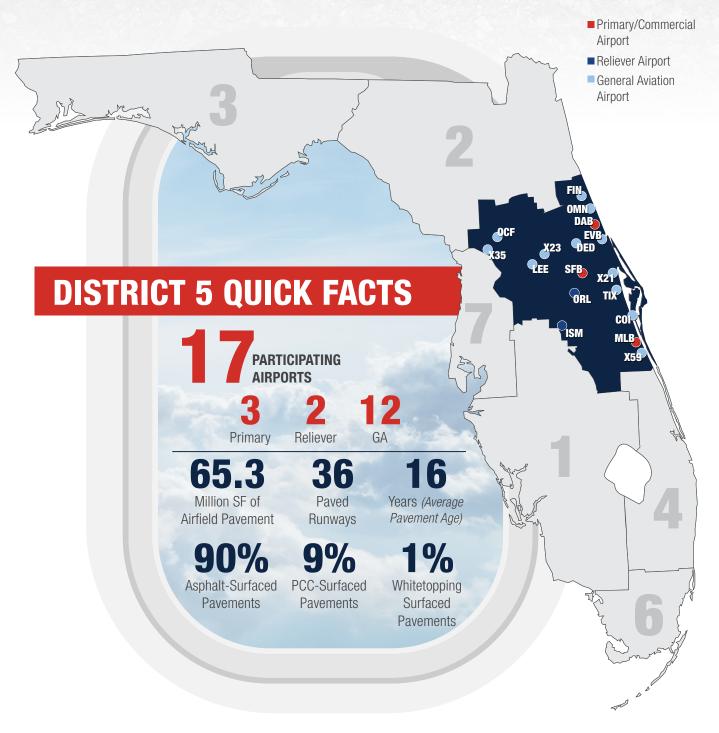
# **Pavement Age**

Pavement age is determined by the date of the last major work project performed. The estimation of pavement age is based on recent construction information requested from the airports at the start of the program. Major work such as reconstruction or rehabilitation resets a pavement's age to zero and the PCI to 100. It should be noted that surface treatments do not reset a pavement's age to zero as a reconstruction or rehabilitation project would; they are used as a measure to maintain and improve the current pavement surface and extend the life of the pavement without performing major work.

Major work such as **reconstruction** or **rehabilitation** resets a pavement's age to **zero** and the **PCI** to **100.** 

# **District 5 Inventory Summary**

District 5 is responsible for 17 of the 95 participating Primary (PR), Reliever (RL), and General Aviation (GA) airports. As part of the FDOT SAPMP System Update, all these airports underwent a comprehensive pavement inventory update based on project record documentation provided by the airports at the start of this program. These updates included pavement facility limits, surface type, and section definitions resulting from provided project limits. It should be noted that although Orlando International Airport (MCO) falls within District 5, the airport performs its own pavement evaluation separate from the FDOT SAPMP and its data is not summarized in this document.



#### **DISTRICT 5 AIRPORTS**

Airport Identifier	Airport Name	SAPMP Phase	Airport Pavement Area (millions of SF)	Number of Runways
	Primary/Con	nmercial		
DAB	Daytona Beach International Airport	2	9.2	3
MLB	Melbourne Orlando International Airport	2	8.6	3
SFB	Orlando Sanford International Airport	2	11.4	4
	Reliev	er		
ISM	Kissimmee Gateway Airport	2	4.5	2
ORL	Orlando Executive Airport	2	5.9	2
	General Av	viation		
COI	Merritt Island Airport	1	1.2	1
DED	Deland Municipal Airport - Sidney H. Taylor Field	2	3.4	2
EVB	New Smyrna Beach Municipal Airport	2	2.7	3
FIN	Flagler Executive Airport	1	2.8	2
LEE	Leesburg International Airport	2	2.6	2
OCF	Ocala International Airport - Jim Taylor Field	2	3.1	2
OMN	Ormond Beach Municipal Airport	2	2.0	2
TIX	Space Coast Regional Airport	2	4.2	2
X21	Arthur Dunn Air Park	1	0.5	1
X23	Umatilla Municipal Airport	1	0.3	1
X35	Marion County Airport	1	1.3	2
X59	Valkaria Airport	1	1.7	2

#### DISTRICT 5 PAVEMENT AREA BY AIRPORT



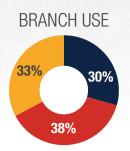
Airports by Airport Category

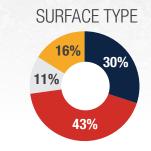
# **District 5 Inventory Summary by Airport Category**

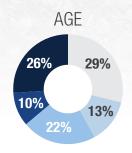
# PRIMARY AIRPORT INVENTORY

\*DAB, MLB, SFB

3 airports 29.3M SF of airfield pavement 10 paved runways 15 years (avg pavement age)







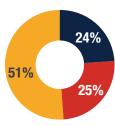
# **RELIEVER AIRPORT INVENTORY**

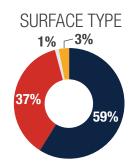
\*ISM, ORL

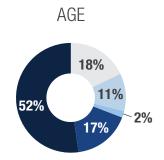
2 airports 10.4M SF of airfield pavement

4 paved runways 20 years (avg pavement age)







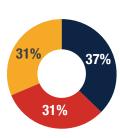


### **GENERAL AVIATION INVENTORY**

\*COI, DED, EVB, FIN, LEE, OCF, OMN, TIX, X21, X23, X35, X59

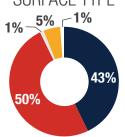
12 airports 25.7M SF of airfield pavement 22 paved runways 16 years (avg pavement age)





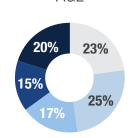
■ Runway ■ Taxiway/Taxilane ■ Apron

# SURFACE TYPE



■ AC ■ AAC □ APC □ PCC □ WT

#### **AGE**



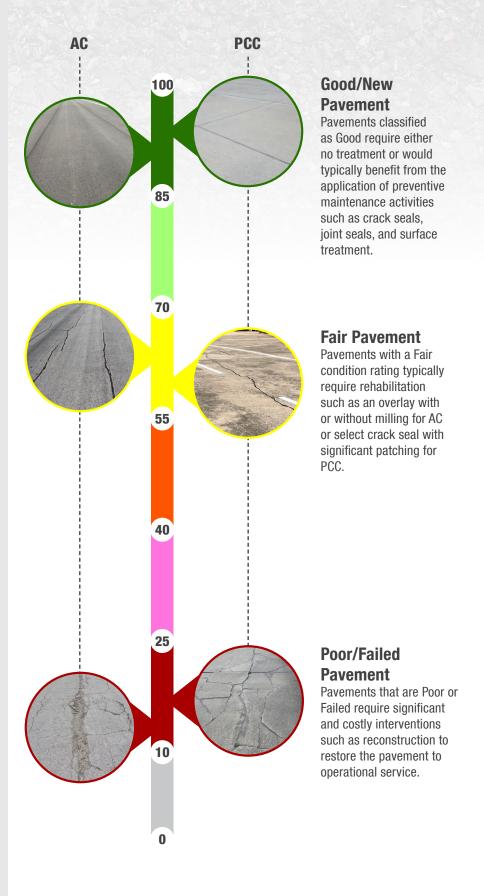
 $\square$ 0-5 years  $\square$ 6-10 years  $\square$ 11-15 years ■ 16-20 years ■ Over 20 years

# PAVEMENT CONDITION INDEX (PCI)

In adherence to the FAA Advisory Circular 150/5380-7B "Airport Pavement Management Program" and ASTM D5340- 20 "Standard Test Method for Airport Pavement Condition Index Surveys," the pavements were evaluated using the PCI Survey Method of inspection.

The PCI procedure is a visual statistical sampling of pavements for recording primary distress types (e.g. cracking and deformation), associated severities, and quantities as defined ASTM D5340-20, and is the primary method of observing and recording distress data. provides a consistent, obiective. and repeatable method to evaluate pavement condition.

The collected distress data is used to calculate an index that represents the functional pavement condition in numerical terms ranging from 0 (Failed pavement) to 100 (Good or new pavement). The adjacent figure provides a visual representation of the scale.



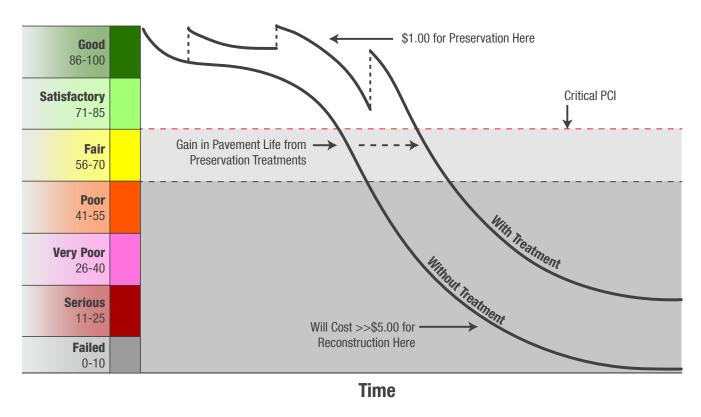
#### **Critical PCI**

Based on FAA Order 5100.38D Change 1 Airport Improvement Handbook, issued February 26, 2019, the FAA has established pavement construction based on thresholds that distinguish Rehabilitation and Reconstruction. Pavement sections between PCI values 55 and 70 will be considered for Rehabilitation and sections with PCI values less than 55 will be considered for Reconstruction at the planning-level. Accordingly, the **Critical PCI is defined at 70 for the FDOT SAPMP**. It should be noted that although a pavement reaches the threshold for rehabilitation, the pavement can still benefit from routine maintenance if no load-related distresses are present.



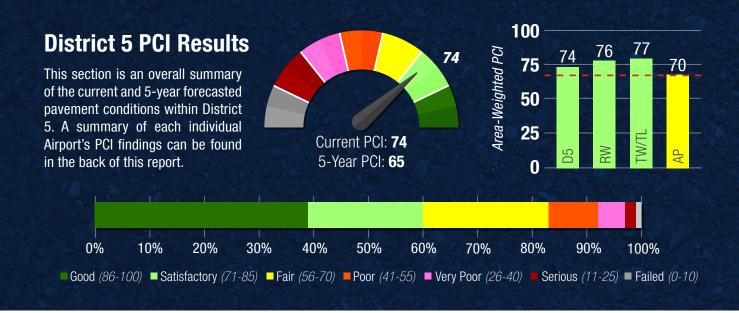
An effective pavement maintenance management program is intended to identify and estimate future maintenance, repair, rehabilitation, and reconstruction needs. When timely preservation maintenance is performed on pavements with conditions above the "critical condition", or prior to major decline in condition, significant rehabilitation and/or reconstruction may be delayed. The figure below depicts the concept of timely pavement treatments as described by the FAA AC 150/5380-7B.

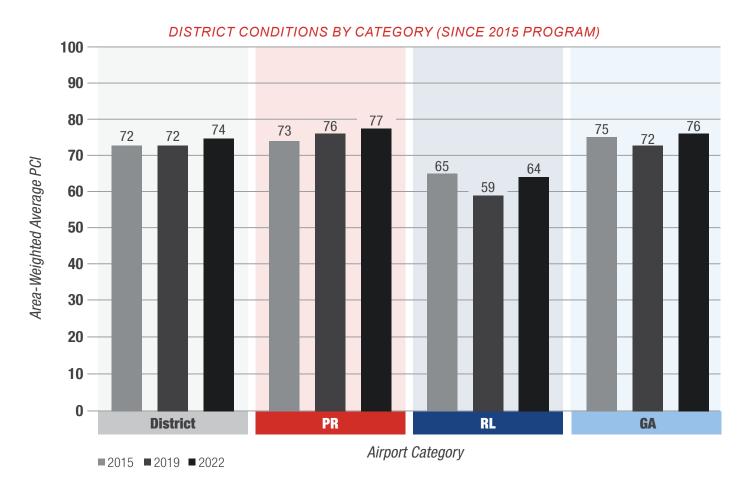
#### TYPICAL PAVEMENT CONDITION LIFE CYCLE



**FAA Eligibility Thresholds:** >70: Routine Maintenance 55-70: Rehabilitation Eligible <55: Reconstruction Eligible

<sup>\*</sup>Figure is for conceptual purposes only – unit costs are not specific to airfield pavements.





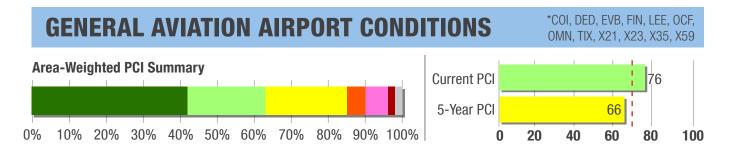
# **District 5 PCI Summary by Airport Category**

# PRIMARY AIRPORT CONDITIONS \*DAB, MLB, SFB \*DAB, ML

PCI Year	Runways	Taxiways/Taxilanes	Aprons
Current PCI	76	79	76
5-Year PCI	66	69	69

# RELIEVER AIRPORT CONDITIONS Area-Weighted PCI Summary Current PCI 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% Current PCI 5-Year PCI 55 0 20 40 60 80 100

PCI Year	Runways	Taxiways/Taxilanes	Aprons
Current PCI	68	66	61
5-Year PCI	60	60	51



PCI Year	Runways	Taxiways/Taxilanes	Aprons
Current PCI	78	78	69
5-Year PCI	68	69	61

■ Good (86-100) ■ Satisfactory (71-85) ■ Fair (56-70) ■ Poor (41-55) ■ Very Poor (26-40) ■ Serious (11-25) ■ Failed (0-10)

# **District**

36 Runways

4 Reliever 22 General Aviation



**Current Runway Conditions:** PCI = 76

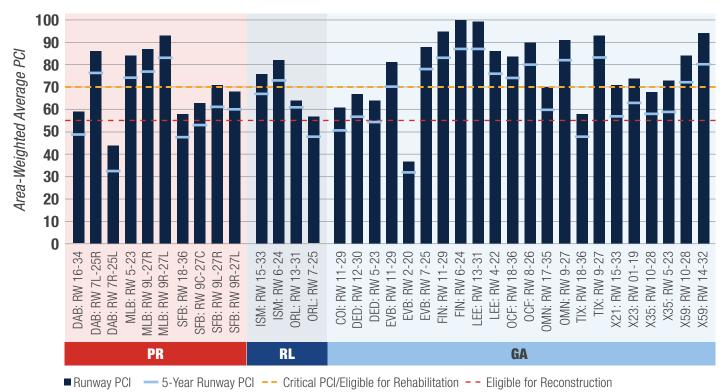
4 of 36 are at or below Critical PCI (70)



5-Year Runway Outlook: PCI = 66

**20** of **36** will be at or below Critical PCI (70)

#### CURRENT AND FORECASTED 5-YEAR RUNWAY PCI BY FACILITY



#### RUNWAY CONDITION SUMMARY

Category	Airport	Runway ID	Runway Length	Runway Width	Runway PCI	5 Year RW PCI
			Primary		<u> </u>	
PR	DAB	RW 16-34	6,001	150	59	49
PR	DAB	RW 7L-25R	10,500	150	86	76
PR	DAB	RW 7R-25L	3,195	100	44	33
PR	MLB	RW 5-23	3,001	75	84	74
PR	MLB	RW 9L-27R	6,000	150	87	77
PR	MLB	RW 9R-27L	10,181	150	93	83
PR	SFB	RW 18-36	6,002	150	58	48
PR	SFB	RW 9C-27C	3,578	75	63	53
PR	SFB	RW 9L-27R	11,002	150	71	61
PR	SFB	RW 9R-27L	5,839	75	68	60
			Reliever			
RL	ISM	RW 15-33	6,001	100	76	67
RL	ISM	RW 6-24	5,001	100	82	73
RL	ORL	RW 13-31	4,625	100	64	61
RL	ORL	RW 7-25	6,004	150	57	48
			<b>General Aviation</b>			
GA	COI	RW 11-29	3,601	75	61	51
GA	DED	RW 12-30	6,001	100	67	57
GA	DED	RW 5-23	4,301	75	64	54
GA	EVB	RW 11-29	4,319	75	81	70
GA	EVB	RW 2-20	4,000	100	37	32
GA	EVB	RW 7-25	5,000	75	88	78
GA	FIN	RW 11-29	5,500	100	95	83
GA	FIN	RW 6-24	5,001	100	100	87
GA	LEE	RW 13-31	6,300	100	99	87
GA	LEE	RW 4-22	4,957	100	86	76
GA	OCF	RW 18-36	7,467	150	84	74
GA	OCF	RW 8-26	3,009	50	90	80
GA	OMN	RW 17-35	3,704	100	70	60
GA	OMN	RW 9-27	4,005	75	91	82
GA	TIX	RW 18-36	7,319	150	58	48
GA	TIX	RW 9-27	5,000	100	93	83
GA	X21	RW 15-33	2,961	70	71	57
GA	X23	RW 01-19	2,500	60	74	63
GA	X35	RW 10-28	4,701	60	68	58
GA	X35	RW 5-23	5,000	100	73	59
GA	X59	RW 10-28	4,000	75	84	72
GA	X59	RW 14-32	4,000	75	94	80
FAA Eligibility T	hresholds:	□ >70: Routine Maintenand	ce <b>55-70:</b> Rehat	oilitation Eligible	<55: Reconstruc	tion Eligible

Statewide Airfield Pavement Management Program

# **SAPMP CUSTOMIZATION**

# **FAA AIP Handbook PCI Requirements**

The FDOT SAPMP will integrate the PCI thresholds for airfield pavement projects to maintain alignment with the FAA AIP and/or PFC eligibility for project planning. The critical PCI value will be defined at 70 for the FDOT SAPMP. Critical PCI values for this SAPMP System Update are shown below.

#### FAA AIP HANDBOOK PCI REQUIREMENTS FOR AIRFIELD PAVEMENT PROJECTS

Airfield Pavement Project Type	PCI Requirement
Reconstruction	PCI < 55 (Poor)
Rehabilitation	PCI < 70 (Fair)
Maintenance	N/A

### **FAA AIP Handbook Minimum Useful Life**

Below is a table of typical localized maintenance and major work project types and their minimum useful life as identified in Table 3-7 of the FAA AIP Handbook. This minimum useful life criteria is used to help determine if a project is eligible for federal funding. The useful life of the facility being rehabilitated or reconstructed must have been met in order for the project to be funded.

#### FAA AIP HANDBOOK MINIMUM USEFUL LIFE

Project Type	Useful Life
Asphalt seal coat, Slurry Seal, and Joint Sealing	3 years
Concrete Joint Replacement	7 years
Pavement Rehabilitation (not reconstruction)	10 years
Pavement Reconstruction	20 years



# **Planning-Level Localized Maintenance**

Localized maintenance differs from major rehabilitation in that localized maintenance is applied based on the distresses observed and not an averaged or forecasted PCI value. Treatments are selected based on the appropriate corrective measure for a given distress type and severity level. Localized maintenance can be applied either as a preventive measure or a safety ("stopgap") measure. The two types of localized maintenance are described below in further detail.

- » Localized Preventive Maintenance and Repair
  - Distress maintenance activities performed with the primary objective of slowing the rate of deterioration. These activities typically include crack sealing and surface treatment.
- » Localized Stopgap/Safety Maintenance and Repair
  - Defined as the localized distress repair needed to keep a pavement in a safe and operational condition. These activities
    are typically applied to high-severity distresses or distresses impacting operations.

The work quantities used to develop costs are limited to a near-term application since they were determined directly from the PCl assessment efforts. As pavements continue to deteriorate year-to-year, quantities and/or distress severities may increase, which will affect the amount and type of localized maintenance required. This analysis can be utilized as a planning tool to assist airport staff in determining an annual budget allocation for maintenance activities that will help maintain airport pavements above the critical PCl value and extend the life of the pavement.

## **Planning-Level Major Rehabilitation**

Major rehabilitation is recommended to correct or improve structural deficiencies and/or functional deterioration. Often, when pavements are subject to significant changes in the aircraft fleet mix (frequency and type), major rehabilitation is required to provide a pavement section that can meet the structural demands of traffic loading. Major rehabilitation is generally described as a pavement construction that removes and replaces the pavement surface, thus resetting the PCI value to 100 and the pavement age to 0. Typical policies include full- and partial-depth reconstruction and mill and overlay.

Major Rehabilitation needs are identified by analyzing the airport's pavement condition in relationship to critical PCI values, major rehabilitation policies, and unit costs, assuming there are no budget constraints. While this is financially impractical, it does yield the unbiased pavement needs over a defined timeframe at each airport given current and forecasted pavement conditions. A review of cost trends and cost factors have been incorporated to assist airports in planning for project budgets.

Conceptual pavement sections were developed for this program based on the minimum requirements of the FAA AC 150/5320-6G and can be found in the Individual Airport Pavement Evaluation Report. No pavement design has been performed in accordance with AC 150/5320-6G for the determined conceptual sections.



### **Localized Maintenance Needs**

This FDOT SAPMP System Update provides a planning-level estimation of Localized Maintenance and Repair costs based on the results of the latest PCI assessment performed at the airports. The localized maintenance for Primary, Reliever, and General Aviation airports are shown below.

#### PLANNING-LEVEL LOCALIZED M&R NEEDS SUMMARY

Category	Network ID	Preventive Work Cost	Stopgap Work Cost	Total
	DAB	\$493,950	\$518,120	\$1,012,070
PR	MLB	\$319,170	\$7,210	\$326,380
	SFB	\$309,450	\$282,540	\$591,990
P	R Total	\$1,122,570	\$807,870	\$1,930,440
RL	ISM	\$150,680	\$1,112,830	\$1,263,510
nL	ORL	\$69,530	\$278,210	\$347,740
F	L Total	\$220,210	\$1,391,040	\$1,611,250
	COI	\$3,750	\$25,380	\$29,130
	DED	\$131,320	\$32,550	\$163,870
	EVB	\$87,910	\$1,079,290	\$1,167,200
	FIN	\$27,020	\$322,510	\$349,530
	LEE	\$86,490	\$44,830	\$131,320
GA	OCF	\$46,270	\$5,380	\$51,650
UA	OMN	\$12,990	\$442,580	\$455,570
	TIX	\$427,230	\$7,770	\$435,000
	X21	\$17,170	\$0	\$17,170
	X23	\$24,750	\$0	\$24,750
	X35	\$1,990	\$14,310	\$16,300
	X59	\$12,160	\$499,360	\$511,520
G	A Total	\$879,050	\$2,473,960	\$3,353,010
District 5 Tota	l Localized Needs =	\$2,221,830	\$4,672,870	\$6,894,700

# **DISTRICT 5 MAJOR REHABILITATION NEEDS**

\$140.6M + \$371.6M = \$512.2M

Total 5-Year RW Major Needs Total 5-Year TW and AP Needs

In Total 5-Year Major Rehabilitation Needs



# **Major Rehabilitation Needs**

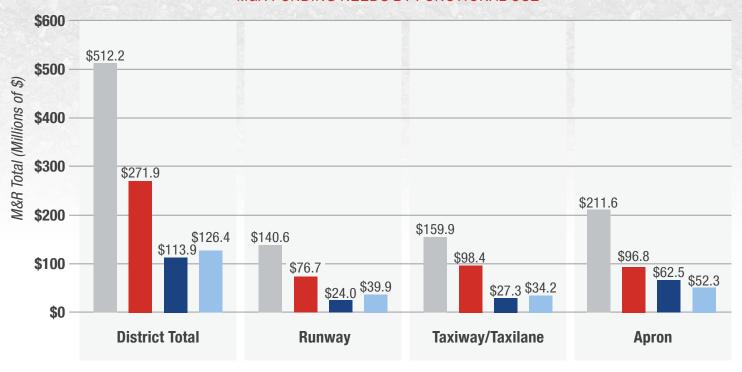
Due to the "unlimited" funding nature of the needs analysis, all present needs are addressed in the first planning year. The first planning year for each airport is the year following the airport's most recent inspection year for this program. The table below summarizes the planning-level major rehabilitation needs forecasted for a 5-year period within District 5. A summary of each individual Airport's needs at the section-level and the recommended work type can be found in the individual airport report.

#### M&R FUNDING NEEDS BY YEAR (IN MILLIONS)

Category	Network ID	Inspection Year	Year 1*	Year 2	Year 3	Year 4	Year 5	Planning Total
	DAB	2022	\$96.98	\$3.12	\$1.13	\$3.32	-	\$104.55
PR	MLB	2022	\$31.71	\$9.69	\$3.38	\$2.70	\$8.56	\$56.04
	SFB	2022	\$92.04	\$0.34	\$4.08	\$4.49	\$10.39	\$111.34
Pl	R Planning 1	<b>Total</b>	\$220.73	\$13.15	\$8.59	\$10.51	\$18.95	\$271.93
RL	ISM	2022	\$49.89	\$0.04	\$0.73	\$0.57	\$1.73	\$52.96
	ORL	2022	\$59.37	\$0.59	\$0.58	\$0.19	\$0.16	\$60.89
R	L Planning T	otal	\$109.26	\$0.63	\$1.31	\$0.76	\$1.89	\$113.85
	COI	2020	\$8.73	-	\$0.31	-	\$0.10	\$9.14
	DED	2022	\$24.28	\$0.89	\$1.85	\$2.76	\$1.23	\$31.01
	EVB	2022	\$16.07	\$0.64	\$0.19	-	-	\$16.90
	FIN	2020	\$4.19	-	-	-	-	\$4.19
	LEE	2022	\$3.04	-	-	\$1.46	\$1.24	\$5.74
GA	OCF	2022	\$7.16	-	\$0.38	\$0.04	\$0.52	\$8.10
G/1	OMN	2022	\$10.23	-	-	-	-	\$10.23
	TIX	2022	\$23.59	\$0.31	-	\$1.45	-	\$25.35
	X21	2020	\$3.09	\$0.21	-	-	\$0.03	\$3.33
	X23	2020	\$0.28	-	\$0.21	\$1.05	\$0.06	\$1.60
	X35	2020	\$4.11	\$0.30	\$3.00	-	-	\$7.41
	X59	2020	\$3.01	-	\$0.43	-	-	\$3.44
G	A Planning 1	Total Total	\$107.78	\$2.35	\$6.37	\$6.76	\$3.18	\$126.44
District 5	Major Plann	ing Needs =	\$437.77	\$16.13	\$16.27	\$18.03	\$24.02	\$512.22

<sup>\*</sup>Year 1 equates to 2021 for airports inspected in 2020 and 2023 for airports inspected in 2022

#### M&R FUNDING NEEDS BY FUNCTIONAL USE



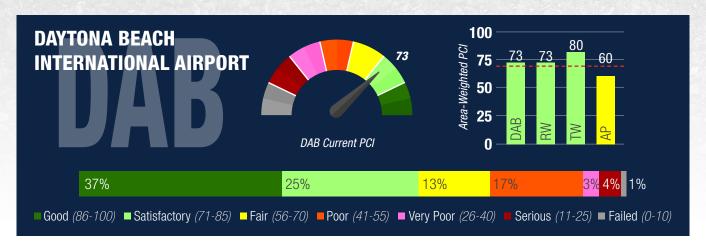
Functional Use

*Airport Category* ■ District 5 ■ Primary/Commercial ■ Reliever ■ General Aviation



# **INDIVIDUAL AIRPORT RESULTS SUMMARIES**

# **PRIMARY/COMMERCIAL AIRPORTS**

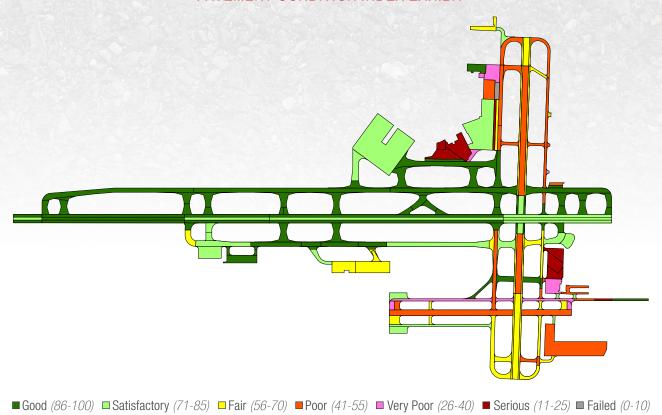


#### YEAR 1 LOCALIZED MAINTENANCE BY WORK TYPE SUMMARY

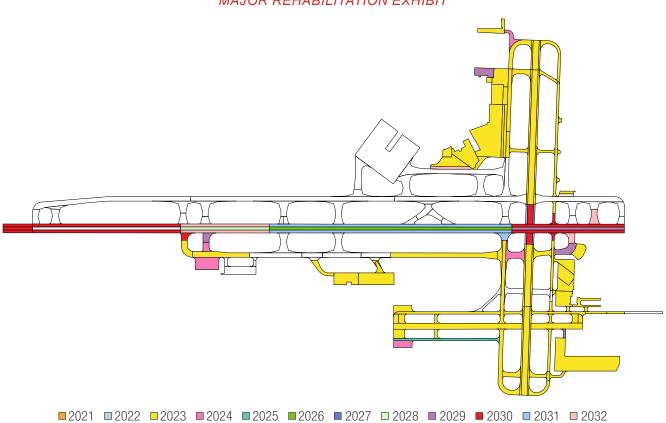
Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
	AC Crack Sealing	3,959	LF	\$15,890
Localized Preventive	Surface Seal	619,873	SF	\$465,120
Maintenance (Total = \$493,950)	<b>PCC Joint Seal</b>	2,181	LF	\$9,280
. , ,	PCC Partial-Depth Patching	22	SF	\$3,660
	AC Crack Sealing	9,658	LF	\$38,640
Localized Stopgap Maintenance (Total = \$518,120)	AC Partial-Depth Patching	36,991	SF	\$240,480
(10101 - \$010,120)	<b>AC Full-Depth Patching</b>	12,745	SF	\$239,000
	Total	<b>Localized Maintena</b>	ance Needs =	\$1,012,070

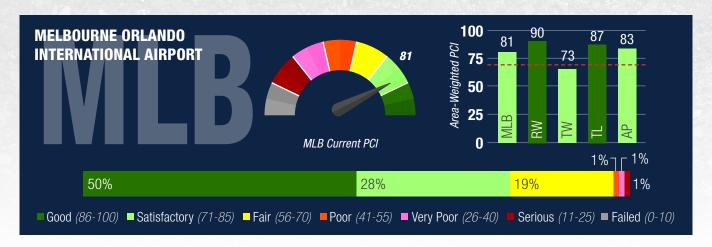
Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2023	\$22.2	\$74.8	\$97.0
2024	\$3.1	-	\$3.1
2025	\$1.1	-	\$1.1
2026	\$3.3	-	\$3.3
2028	\$1.3	-	\$1.3
2029	\$3.9	-	\$3.9
2030	\$11.8	-	\$11.8
2031	\$9.4	-	\$9.4
2032	\$5.0	-	\$5.0
	Total Maj	or Rehabilitation Needs =	<b>\$135.9</b>

#### PAVEMENT CONDITION INDEX EXHIBIT



#### MAJOR REHABILITATION EXHIBIT

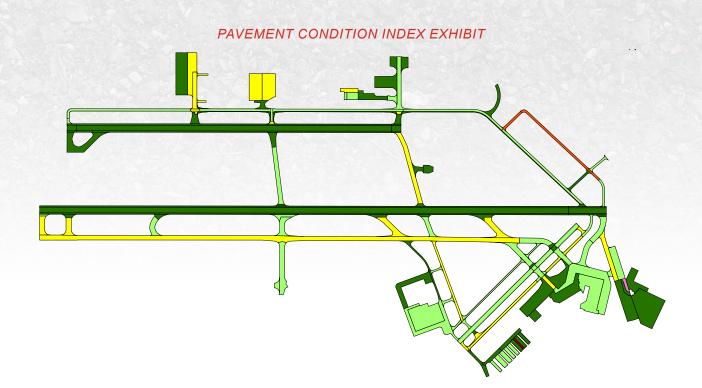




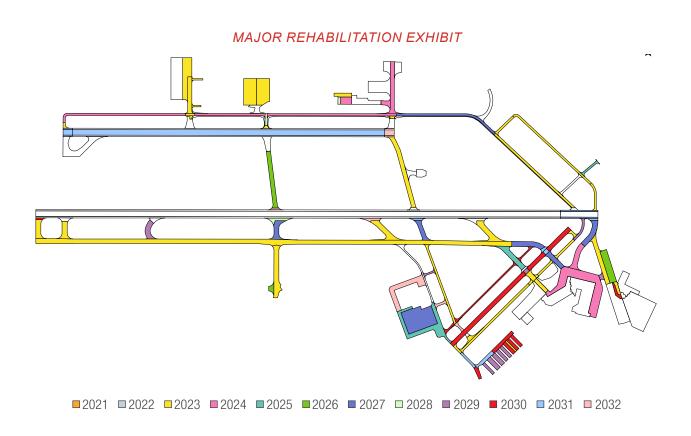
#### YEAR 1 LOCALIZED MAINTENANCE BY WORK TYPE SUMMARY

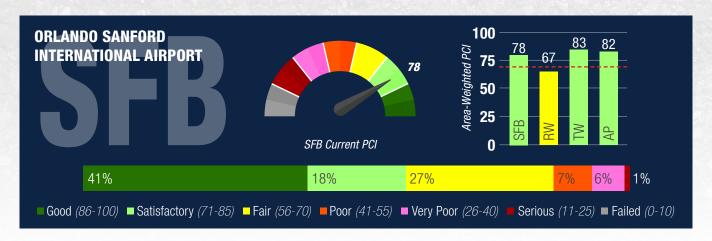
Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
	AC Crack Sealing	5,011	LF	\$20,140
Localized Preventive  Maintenance	Surface Seal	265,616	SF	\$199,510
(Total = \$319,170)	<b>PCC Joint Seal</b>	14,903	LF	\$63,350
(10tal — \$010,110)	PCC Partial-Depth Patching	213	SF	\$36,170
Land Otan and Maintenance	AC Full-Depth Patching	146	SF	\$2,760
Localized Stopgap Maintenance (Total = \$7,210)	PCC Crack Sealing	243	LF	\$1,710
$(10tal - \Phi I, 210)$	<b>PCC Joint Seal</b>	644	LF	\$2,740
	Total	<b>Localized Maintena</b>	ance Needs =	\$326,380

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2023	\$25.2	\$6.5	\$31.7
2024	\$9.7	-	\$9.7
2025	\$3.4	-	\$3.4
2026	\$2.7	-	\$2.7
2027	\$8.6	-	\$8.6
2028	\$0.6	-	\$0.6
2029	\$2.9	-	\$2.9
2030	\$7.6	-	\$7.6
2031	\$14.3	-	\$14.3
2032	\$3.5	-	\$3.5
	Total Ma	jor Rehabilitation Needs =	\$85.0



■Good (86-100) ■ Satisfactory (71-85) ■ Fair (56-70) ■ Poor (41-55) ■ Very Poor (26-40) ■ Serious (11-25) ■ Failed (0-10)



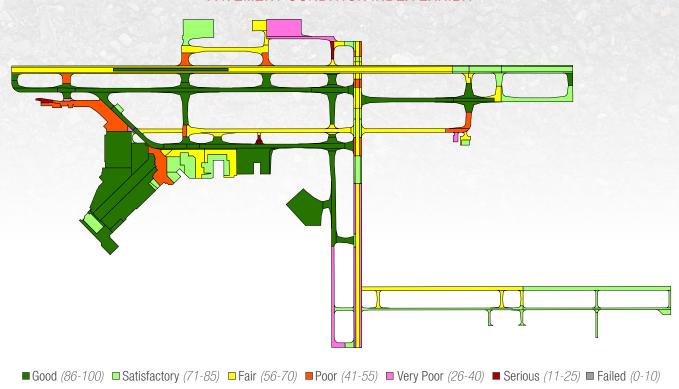


#### YEAR 1 LOCALIZED MAINTENANCE BY WORK TYPE SUMMARY

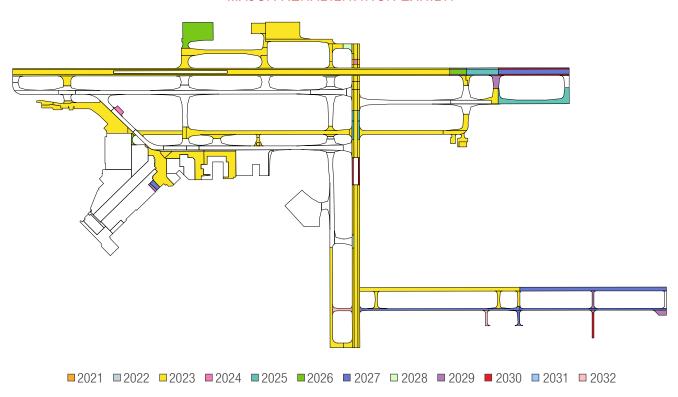
Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
	AC Crack Sealing	1,841	LF	\$7,400
Localized Preventive  Maintenance	Surface Seal	149,102	SF	\$111,970
(Total = \$309,450)	<b>PCC Joint Seal</b>	25,655	LF	\$109,050
(10101 – \$600; 100)	PCC Partial-Depth Patching	478	SF	\$81,030
	<b>AC Partial-Depth Patching</b>	72	SF	\$480
	<b>AC Full-Depth Patching</b>	9,059	SF	\$169,910
Localized Stopgap Maintenance	<b>PCC Crack Sealing</b>	470	LF	\$3,300
(Total = \$282,540)	<b>PCC Joint Seal</b>	6,381	LF	\$27,140
	<b>PCC Partial-Depth Patching</b>	239	SF	\$40,430
	PCC Full-Depth Patching	550	SF	\$41,280
	Total	<b>Localized Maintena</b>	ance Needs =	\$591,990

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2023	\$44.4	\$47.7	\$92.1
2024	\$0.3	-	\$0.3
2025	\$4.1	-	\$4.1
2026	\$4.5	-	\$4.5
2027	\$10.4	-	\$10.4
2028	\$0.5	-	\$0.5
2029	\$1.8	-	\$1.8
2030	\$2.9	-	\$2.9
2031	\$0.7	-	\$0.7
2032	\$0.8	-	\$0.8
	Total Maj	or Rehabilitation Needs =	\$118.1

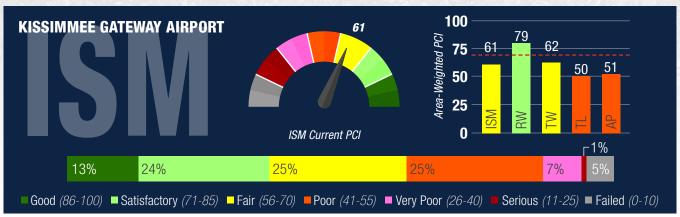
#### PAVEMENT CONDITION INDEX EXHIBIT



#### MAJOR REHABILITATION EXHIBIT



# **RELIEVER AIRPORTS**



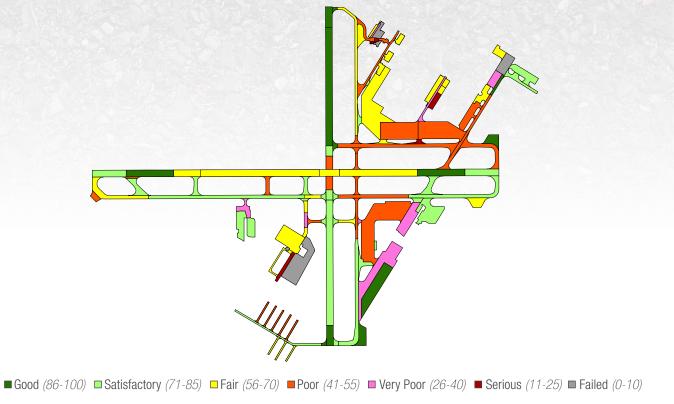
YEAR 1 LOCALIZED MAINTENANCE BY WORK TYPE SUMMARY

Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
	AC Crack Sealing	1,262	LF	\$5,080
Localized Preventive Maintenance	Surface Seal	117,842	SF	\$88,500
(Total = \$150,680)	<b>PCC Joint Seal</b>	10,198	LF	\$43,350
(10ια1 – φ100,000)	PCC Partial-Depth Patching	81	SF	\$13,750
	AC Crack Sealing	1,583	LF	\$6,340
	<b>AC Partial-Depth Patching</b>	21,342	SF	\$101,380
	<b>AC Full-Depth Patching</b>	14,885	SF	\$171,220
Localized Stopgap Maintenance	<b>PCC Crack Sealing</b>	5,725	LF	\$40,110
(Total = \$1,112,830)	<b>PCC Joint Seal</b>	28,667	LF	\$121,880
	PCC Partial-Depth Patching	985	SF	\$166,270
	<b>PCC Full-Depth Patching</b>	1,359	SF	\$88,470
	PCC Slab Replacement	8,100	SF	\$417,160
	Total	Localized Maintena	ance Needs =	\$1.263.510

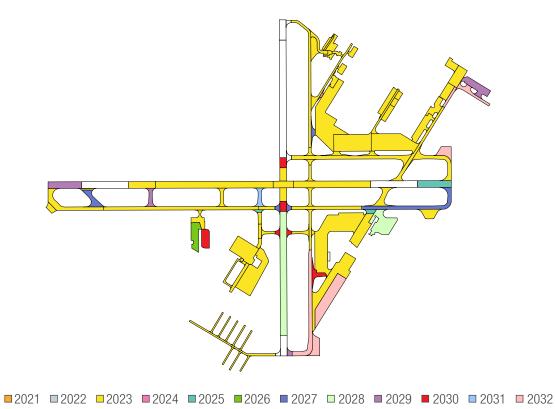
NETWORK-LEVEL MAJOR REHABILITATION NEEDS (IN MILLIONS)

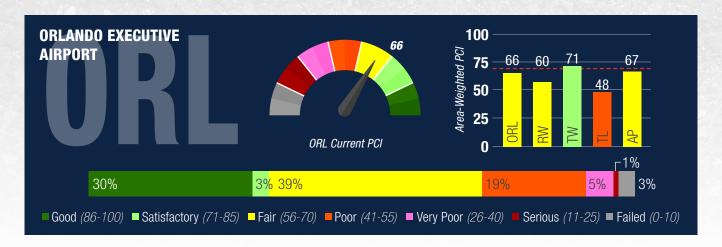
Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2023	\$14.7	\$35.2	\$49.9
2025	\$0.7	-	\$0.7
2026	\$0.6	-	\$0.6
2027	\$1.7	-	\$1.7
2028	\$3.8	-	\$3.8
2029	\$2.6	-	\$2.6
2030	\$1.4	-	\$1.4
2031	\$0.3	-	\$0.3
2032	\$5.1	-	\$5.1
	Total Maj	or Rehabilitation Needs =	\$66.1

#### PAVEMENT CONDITION INDEX EXHIBIT



#### MAJOR REHABILITATION EXHIBIT

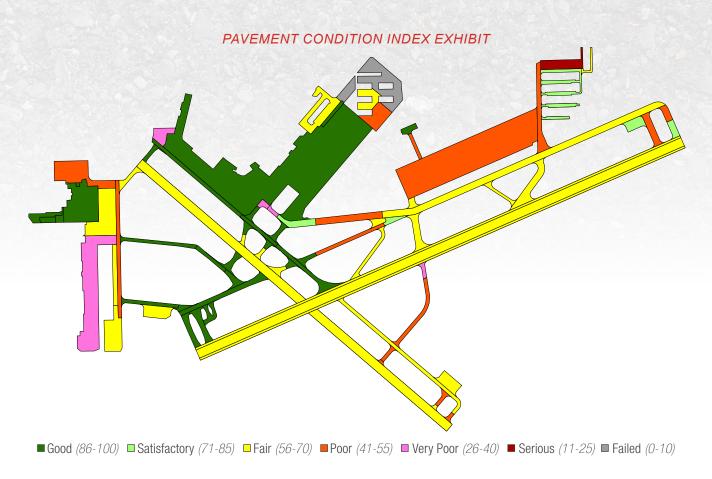


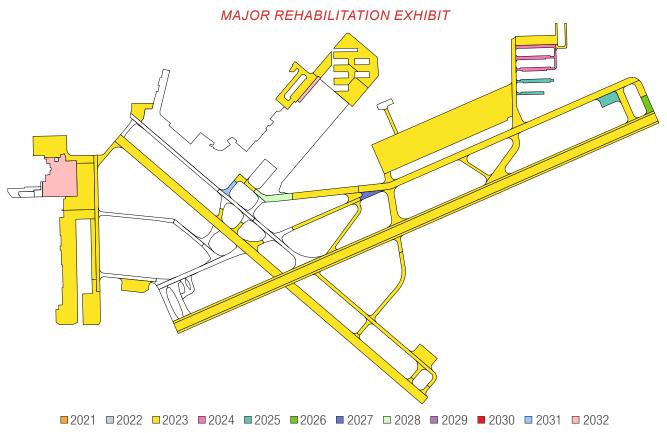


#### YEAR 1 LOCALIZED MAINTENANCE BY WORK TYPE SUMMARY

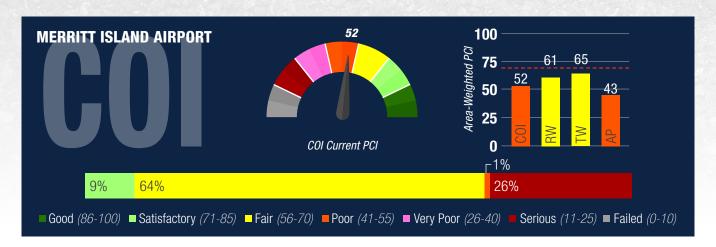
Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
Localized Preventive Maintenance (Total = \$69,530)	Surface Seal	92,649	SF	\$69,530
Leed Oter and Meister	AC Crack Sealing	42,553	LF	\$170,220
Localized Stopgap Maintenance (Total = \$278,210)	<b>AC Partial-Depth Patching</b>	20,461	SF	\$97,210
$(10tal - \psi \angle 10, \angle 10)$	AC Full-Depth Patching	937	SF	\$10,780
	Total	<b>Localized Maintena</b>	ance Needs =	\$347,740

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2023	\$18.2	\$41.1	\$59.3
2024	\$0.6	-	\$0.6
2025	\$0.6	-	\$0.6
2026	\$0.2	-	\$0.2
2027	\$0.2	-	\$0.2
2028	\$0.4	-	\$0.4
2031	\$0.2	-	\$0.2
2032	\$2.7	-	\$2.7
	Total Maj	or Rehabilitation Needs =	\$64.2





# **GENERAL AVIATION AIRPORTS**

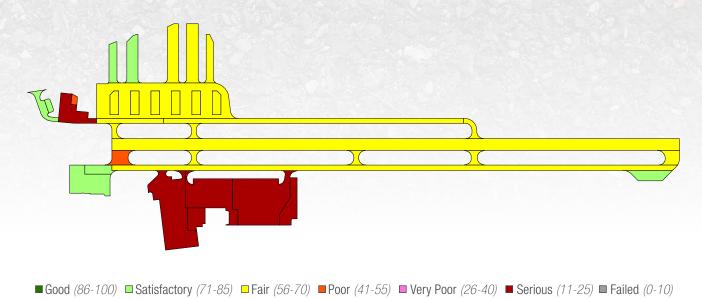


#### YEAR 1 LOCALIZED MAINTENANCE BY WORK TYPE SUMMARY

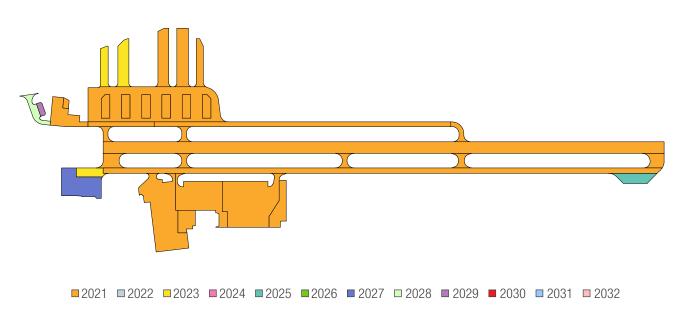
Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
Localized Preventive	Surface Seal	5,004	SF	\$2,540
Maintenance (Total = \$3,750)	<b>PCC Joint Seal</b>	370	LF	\$1,210
Localized Stopgap Maintenance	AC Crack Sealing	8,150	LF	\$24,480
(Total = \$25,380)	<b>PCC Joint Seal</b>	277	LF	\$900
		Total Localized Mainten	ance Needs =	\$29,130

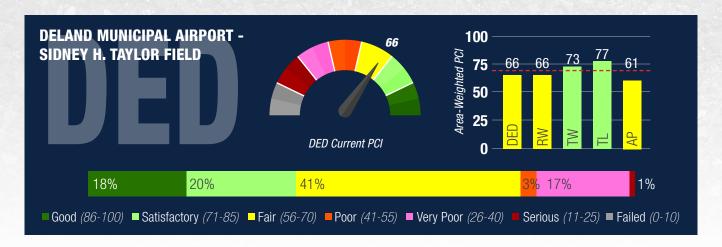
Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2021	\$5.3	\$3.4	\$8.7
2023	\$0.3	-	\$0.3
2025	\$0.1	-	\$0.1
2027	\$0.3	-	\$0.3
2028	\$0.1		\$0.1
	Total Maj	or Rehabilitation Needs =	\$9.5

#### PAVEMENT CONDITION INDEX EXHIBIT



#### MAJOR REHABILITATION EXHIBIT

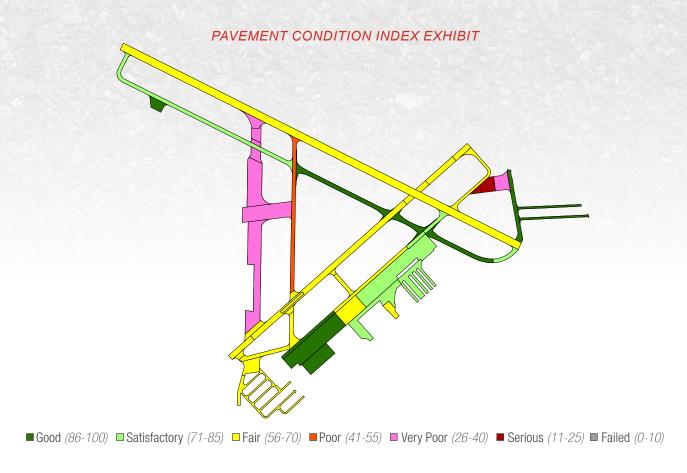


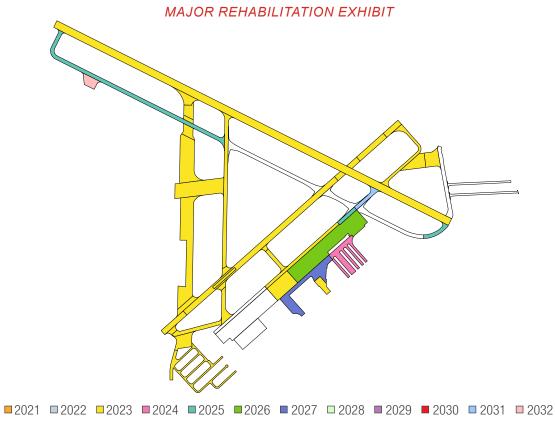


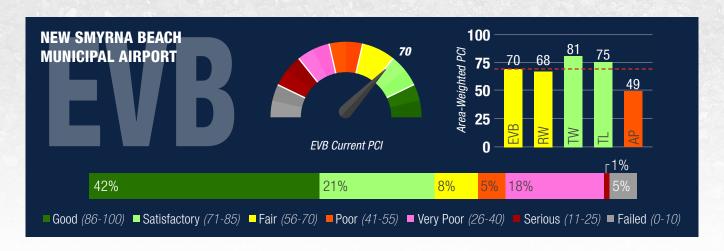
#### YEAR 1 LOCALIZED MAINTENANCE BY WORK TYPE SUMMARY

Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
Localized Preventive	AC Crack Sealing	1,738	LF	\$6,970
Maintenance (Total = \$131,320)	Surface Seal	165,740	SF	\$124,350
Localized Stopgap Maintenance	AC Partial-Depth Patching	172	SF	\$820
(Total = \$32,550)	AC Full-Depth Patching	3,172	SF	\$31,730
	Total	Localized Maintena	ance Needs =	\$163,870

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2023	\$12.5	\$11.8	\$24.3
2024	\$0.9	-	\$0.9
2025	\$1.9	-	\$1.9
2026	\$2.8	-	\$2.8
2027	\$1.2	-	\$1.2
2031	\$0.3	-	\$0.3
2032	\$0.4	-	\$0.4
	Total Maj	or Rehabilitation Needs =	\$31.8





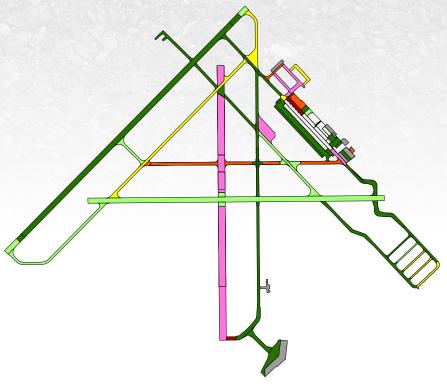


#### YEAR 1 LOCALIZED MAINTENANCE BY WORK TYPE SUMMARY

Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
	AC Crack Sealing	453	LF	\$1,830
Localized Preventive	Surface Seal	71,450	SF	\$53,660
Maintenance (Total = \$87,910)	<b>PCC Joint Seal</b>	5,434	LF	\$23,110
	PCC Partial-Depth Patching	54	SF	\$9,310
	AC Crack Sealing	373	LF	\$1,510
	AC Partial-Depth Patching	139	SF	\$660
	<b>AC Full-Depth Patching</b>	1,276	SF	\$12,760
Localized Stopgap Maintenance	PCC Crack Sealing	5,396	LF	\$37,840
(Total = \$1,079,290)	<b>PCC Joint Seal</b>	13,461	LF	\$57,240
	PCC Partial-Depth Patching	380	SF	\$64,250
	<b>PCC Full-Depth Patching</b>	1,139	SF	\$56,940
	PCC Slab Replacement	16,468	SF	\$848,090
	Total	<b>Localized Maintena</b>	ance Needs =	\$1,167,200

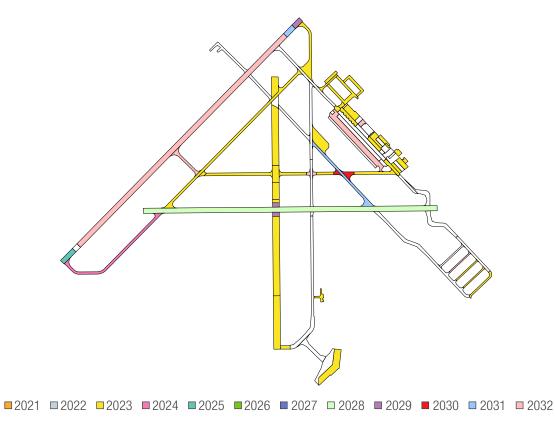
Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)		
2023	\$1.9	\$13.8	\$15.7		
2024	\$0.6	-	\$0.6		
2025	\$0.2	-	\$0.2		
2028	\$3.7	-	\$3.7		
2029	\$0.3	-	\$0.3		
2030	\$0.2	-	\$0.2		
2031	\$0.9	-	\$0.9		
2032	\$6.4	-	\$6.4		
	\$28.0				

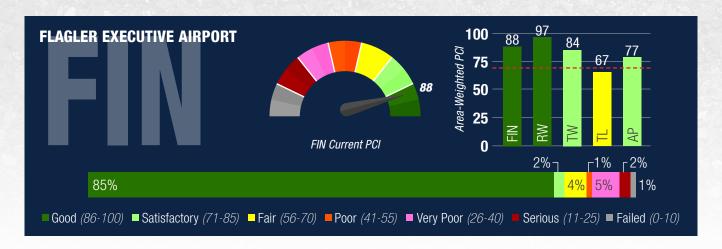
#### PAVEMENT CONDITION INDEX EXHIBIT



#### ■Good (86-100) ■ Satisfactory (71-85) ■ Fair (56-70) ■ Poor (41-55) ■ Very Poor (26-40) ■ Serious (11-25) ■ Failed (0-10)

#### MAJOR REHABILITATION EXHIBIT

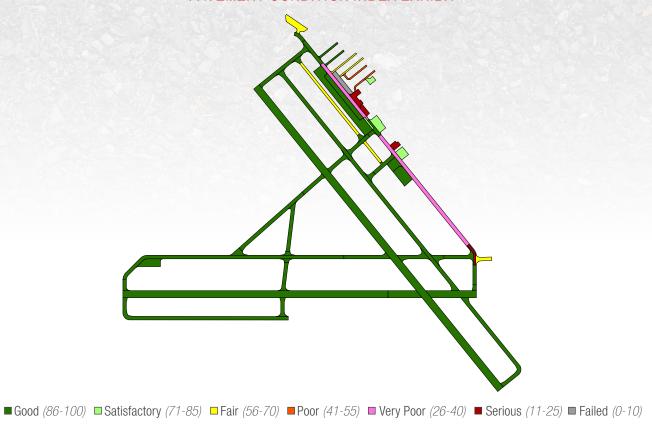


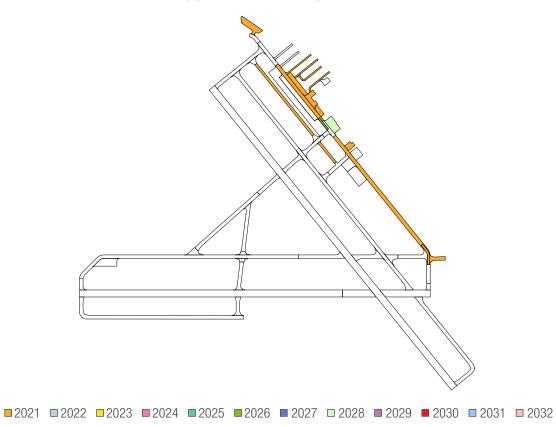


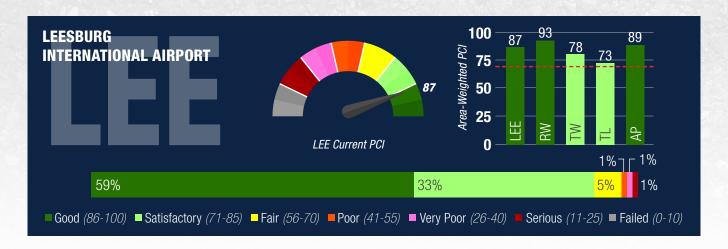
#### YEAR 1 LOCALIZED MAINTENANCE BY WORK TYPE SUMMARY

Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost	
Localized Preventive Maintenance (Total = \$27,020)	PCC Joint Seal	7,095	LF	\$23,070	
	PCC Partial-Depth Patching	31	SF	\$3,950	
Localized Stopgap Maintenance (Total = \$322,510)	<b>AC Full-Depth Patching</b>	2,604	SF	\$19,550	
	PCC Crack Sealing	2,277	LF	\$11,400	
	<b>PCC Joint Seal</b>	8,332	LF	\$27,100	
	PCC Partial-Depth Patching	34	SF	\$4,310	
	<b>PCC Full-Depth Patching</b>	479	SF	\$23,960	
	PCC Slab Replacement	6,095	SF	\$236,190	
Total Localized Maintenance Needs =					

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2021	\$1.1	\$3.1	\$4.2
2028	\$0.4	-	\$0.4
	Total Maj	\$4.6	

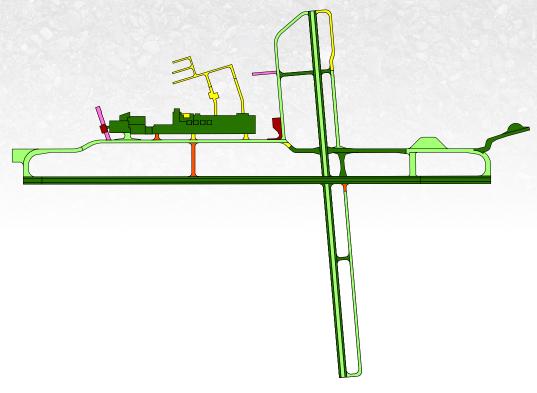






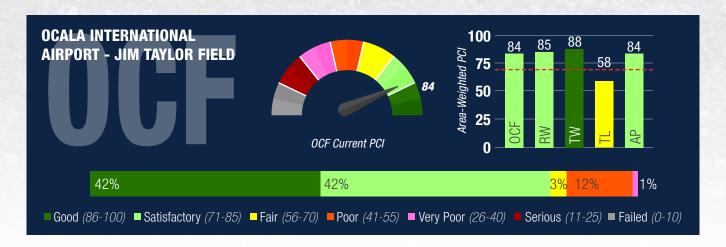
Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
	AC Crack Sealing	248	LF	\$1,000
Localized Preventive	Surface Seal	107,332	SF	\$80,580
Maintenance (Total = $\$86,490$ )	<b>PCC Joint Seal</b>	654	LF	\$2,780
	PCC Partial-Depth Patching	13	SF	\$2,130
	AC Partial-Depth Patching	386	SF	\$1,840
Localized Changes Maintenance	AC Full-Depth Patching	1,236	SF	\$12,370
Localized Stopgap Maintenance (Total = \$44,830)	<b>PCC Crack Sealing</b>	1,103	LF	\$7,730
(10tai — \$77,000)	PCC Joint Seal	3,019	LF	\$12,840
	<b>PCC Partial-Depth Patching</b>	59	SF	\$10,050
	Total	Localized Maintena	ance Needs =	\$131,320

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2023	\$1.4	\$1.8	\$3.2
2026	\$1.5	-	\$1.5
2027	\$1.2	-	\$1.2
2028	\$1.6	-	\$1.6
2029	\$0.9	-	\$0.9
2030	\$3.1	-	\$3.1
2031	\$4.8	-	\$4.8
2032	\$0.6	-	\$0.6
	Total Maj	or Rehabilitation Needs =	\$16.9



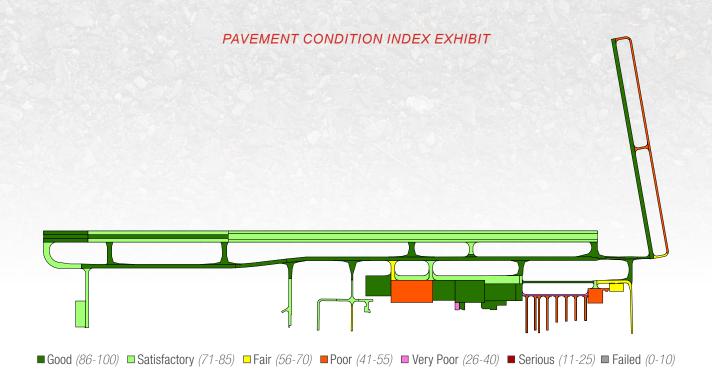
■Good (86-100) ■ Satisfactory (71-85) ■ Fair (56-70) ■ Poor (41-55) ■ Very Poor (26-40) ■ Serious (11-25) ■ Failed (0-10)

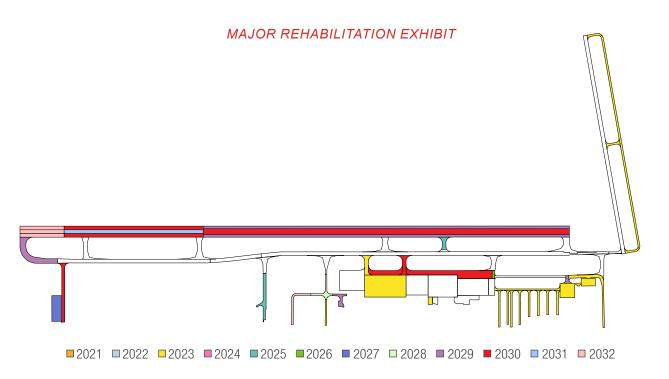


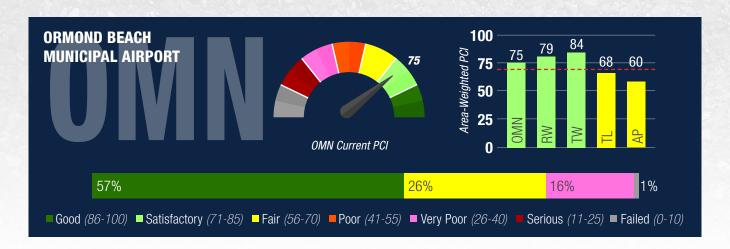


Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
Localized Preventive	AC Crack Sealing	1,888	LF	\$7,560
Maintenance (Total = \$46,270)	Surface Seal	51,493	SF	\$38,710
	<b>AC Partial-Depth Patching</b>	293	SF	\$1,400
Localized Stopgap Maintenance	AC Full-Depth Patching	183	SF	\$1,830
(Total = \$5,380)	<b>PCC Crack Sealing</b>	40	LF	\$280
	PCC Joint Seal	440	LF	\$1,870
	Total	<b>Localized Maintena</b>	nce Needs =	\$51,650

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2023	\$0.7	\$6.4	\$7.1
2025	\$0.4	-	\$0.4
2027	\$0.5	-	\$0.5
2028	\$0.2	-	\$0.2
2029	\$5.4	-	\$5.4
2030	\$9.3	-	\$9.3
2031	\$1.3	-	\$1.3
2032	\$1.5	-	\$1.5
	Total Maj	or Rehabilitation Needs =	\$25.7

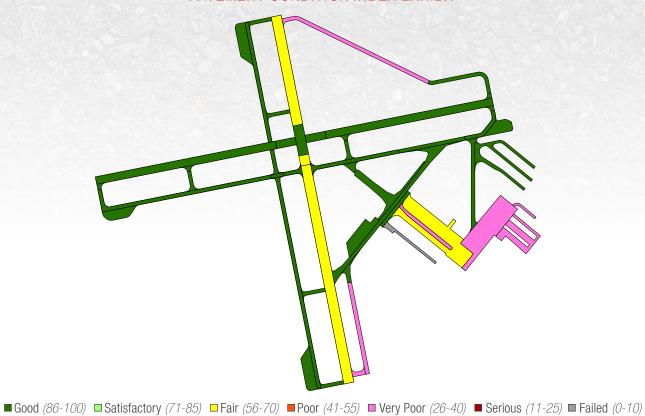


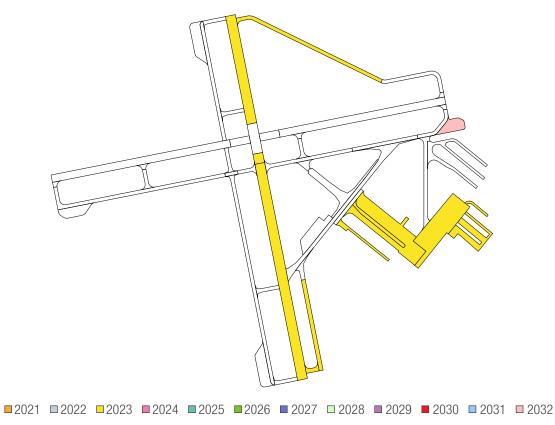


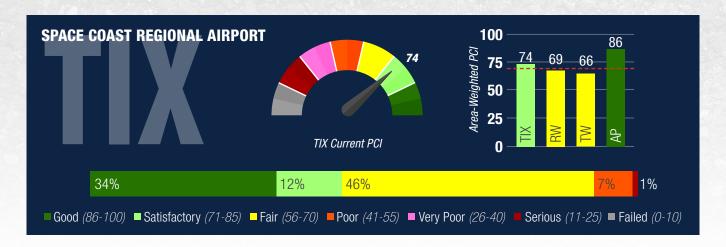


Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
Localized Preventive Maintenance (Total = \$12,990)	Surface Seal	17,206	SF	\$12,990
	AC Full-Depth Patching	9,357	SF	\$93,590
Localized Stopgap Maintenance	<b>PCC Crack Sealing</b>	882	LF	\$6,180
(Total = \$442,580)	<b>PCC Joint Seal</b>	682	LF	\$2,900
	<b>PCC Slab Replacement</b>	6,600	SF	\$339,910
	Tota	Localized Maintena	ance Needs =	\$455,570

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2023	\$4.5	\$5.7	\$10.2
2032	\$0.4	-	\$0.4
	Total Maj	\$10.6	

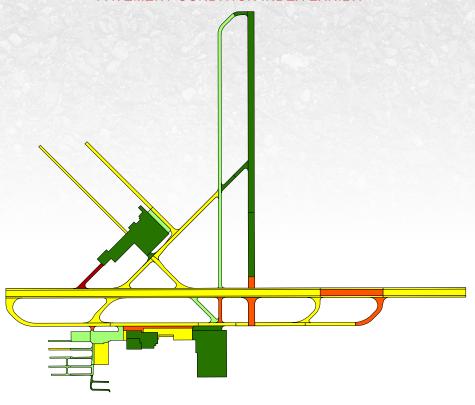




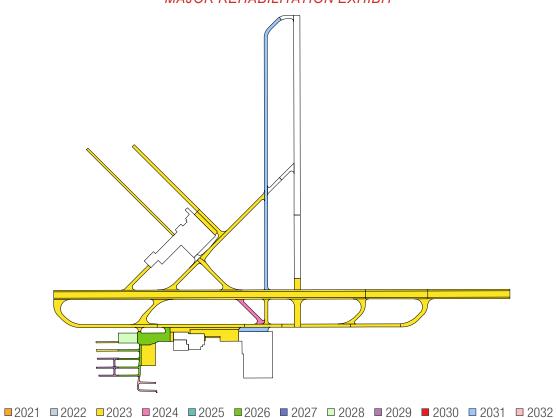


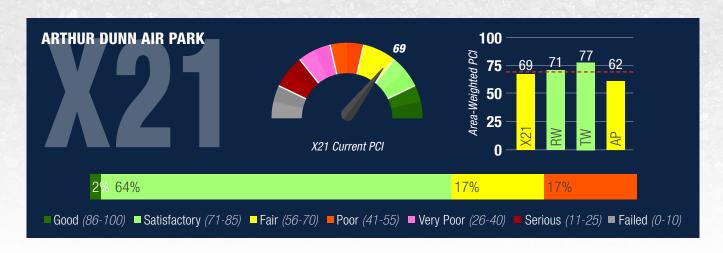
Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
	AC Crack Sealing	1,005	LF	\$4,040
Localized Preventive	Surface Seal	105,324	SF	\$79,050
Maintenance (Total = \$427,230)	<b>PCC Joint Seal</b>	78,523	LF	\$333,740
(10tal — \$ 121,200)	PCC Partial-Depth Patching	61	SF	\$10,400
Localized Stopgap Maintenance	AC Partial-Depth Patching	8	SF	\$40
(Total = \$7,770)	<b>AC Full-Depth Patching</b>	772	SF	\$7,730
	Total	<b>Localized Maintena</b>	ance Needs =	\$435,000

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2023	\$14.7	\$7.7	\$22.4
2024	\$0.3	-	\$0.3
2026	\$1.5	-	\$1.5
2028	\$0.6	-	\$0.6
2029	\$0.4	-	\$0.4
2031	\$3.4	-	\$3.4
2032	\$0.2	-	\$0.2
	Total Maj	or Rehabilitation Needs =	\$28.8



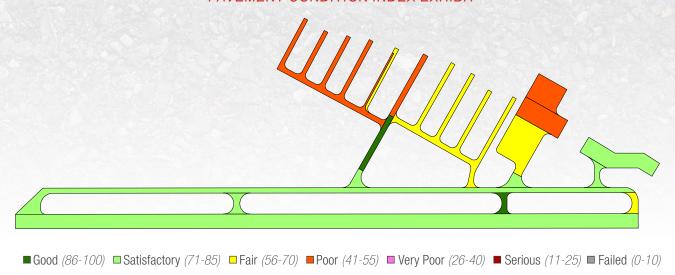
■Good (86-100) ■ Satisfactory (71-85) ■ Fair (56-70) ■ Poor (41-55) ■ Very Poor (26-40) ■ Serious (11-25) ■ Failed (0-10)

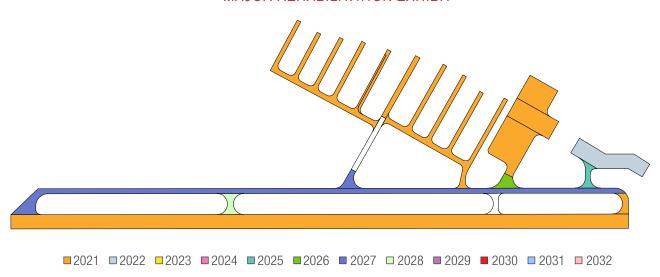


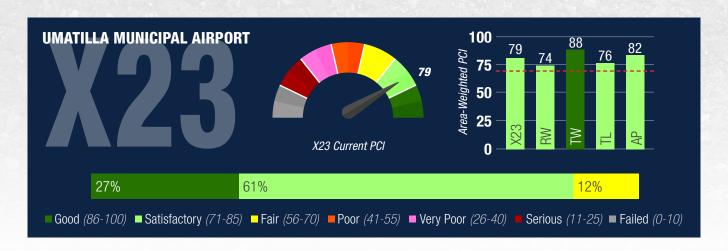


Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
Localized Preventive	AC Crack Sealing	559	LF	\$1,700
Maintenance (Total = $$17,170$ )	Surface Seal	30,861	SF	\$15,470
	Tota	l Localized Maintena	ance Needs =	\$17,170

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2021	\$2.1	\$1.0	\$3.1
2022	\$0.2	-	\$0.2
2027	\$0.6	-	\$0.6
	Total Maj	\$3.9	

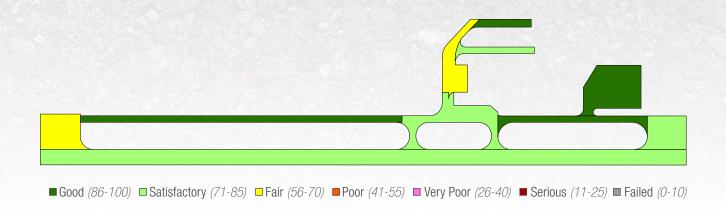


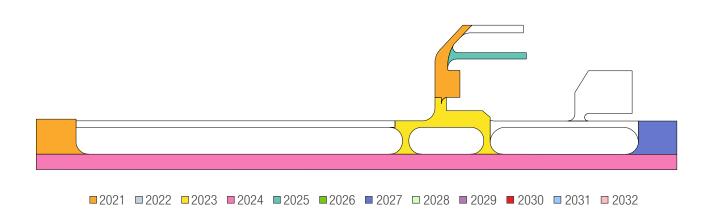


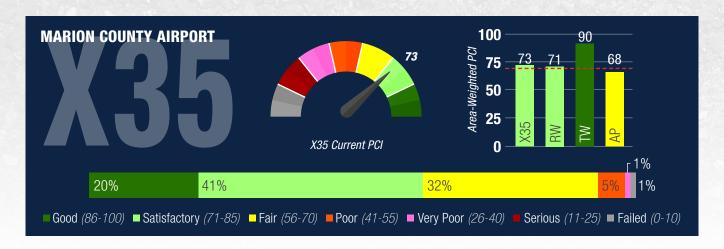


Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
Landinad Describes	AC Crack Sealing	16	LF	\$50
Localized Preventive  Maintenance (Total = \$24,750)	Surface Seal	46,768	SF	\$23,420
V(a)  =  V(a)  -  V(a)  -  V(a)  =  V(a)  +  V(a)  +	<b>AC Full-Depth Patching</b>	170	SF	\$1,280
	Tota	Localized Maintena	ance Needs =	\$24,750

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2021	\$0.3	-	\$0.3
2023	\$0.2	-	\$0.2
2024	\$1.1	-	\$1.1
2025	\$0.1	-	\$0.1
2027	\$0.1	-	\$0.1
	Total Maj	or Rehabilitation Needs =	\$1.8

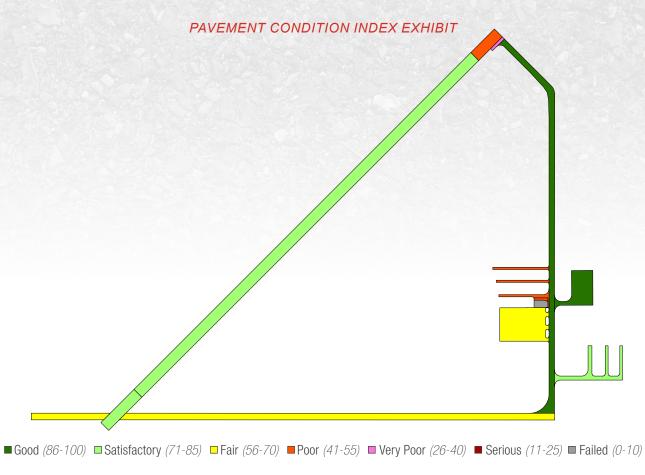


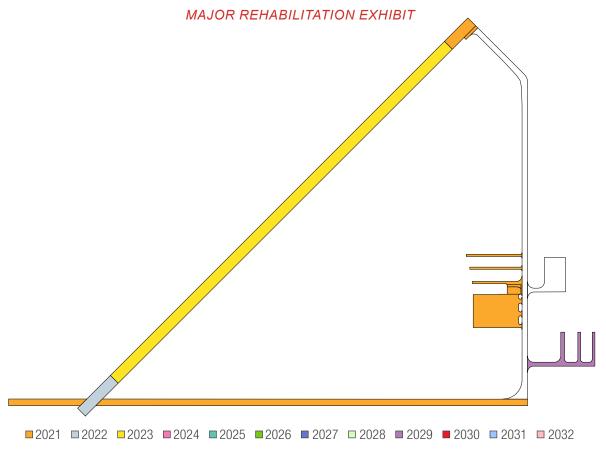


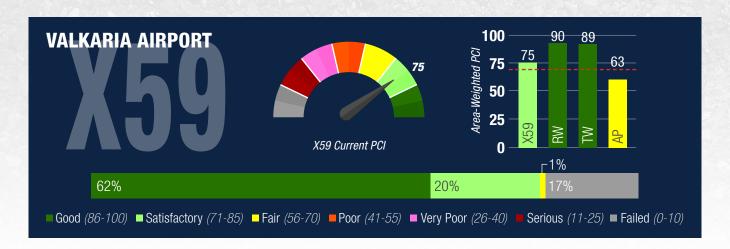


Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
Localized Preventive Maintenance (Total = \$1,990)	Surface Seal	3,940	SF	\$1,990
Localized Stopgap Maintenance (Total = \$14,310)	PCC Crack Sealing	1,289	LF	\$6,460
	<b>PCC Joint Seal</b>	1,163	LF	\$3,780
	PCC Partial-Depth Patching	8	SF	\$970
	<b>PCC Full-Depth Patching</b>	62	SF	\$3,100
Total Localized Maintenance Needs =				

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2021	\$2.8	\$1.3	\$4.1
2022	\$0.3	-	\$0.3
2023	\$3.0	-	\$3.0
2029	\$0.3	-	\$0.3
	Total Maj	\$7.7	

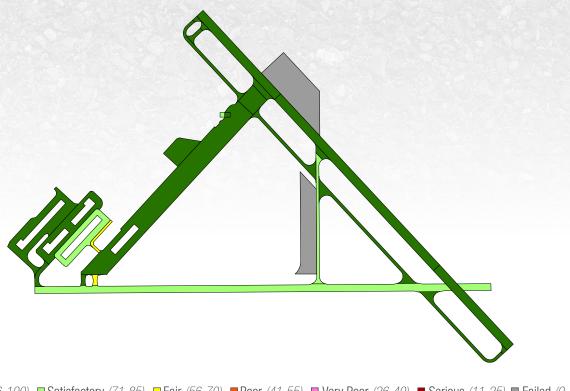






Localized Maintenance Category	Localized Work Type	Rough Estimate of Work Quantity	Work Units	Planning Material Cost
Localized Preventive Maintenance (Total = \$12,160)	Surface Seal	21,971	SF	\$11,020
	PCC Joint Seal	350	LF	\$1,140
Localized Stopgap Maintenance (Total = \$499,360)	AC Crack Sealing	68,298	LF	\$204,900
	AC Full-Depth Patching	39,260	SF	\$294,460
Total Localized Maintenance Needs =				

Program Year	Rehabilitation Cost	Reconstruction Cost	Total Cost (Millions)
2021	\$0.1	\$2.9	\$3.0
2023	\$0.4	-	\$0.4
2030	\$2.6	-	\$2.6
	Total Maj	\$6.0	



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