# FLORIDA DEPARTMENT OF TRANSPORTATION

AVIATION AND SPACEPORT OFFICE





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#### **EXECUTIVE SUMMARY**

Airport airfield pavement infrastructure facilities represent a large capital investment in the Florida Airport System. Timely and appropriate maintenance and strategic rehabilitation are essential as repair costs increase significantly in proportion to deterioration. Airport pavement distresses can also contribute to the development of loose debris and decreased ride quality, which can be a safety concern for aircraft operations.

In 2012, the Florida Department of Transportation Aviation and Spaceport Office selected a Consultant team consisting of Kimley-Horn and Associates, Inc. and their Subconsultants Penuel Consulting, LLC. And Roy D. McQueen and Associates, LTD. To provide services in support to FDOT in the continuing evaluation and updating of the existing Statewide Airfield Pavement Management Program (SAPMP) to be completed over fiscal year 2013 through 2015. Pavement Condition Index surveys were performed for airfield pavement facilities for the following airports located in District 6.

- EWY, Key West International Airport
- MTH, The Florida Keys Marathon Airport
- OPF, Opa Locka Executive Airport
- TMB, Miami Executive Airport
- TNT, Dade Collier Training and Transition Airport
- X51, Homestead General Aviation Airport

Miami International Airport (MIA), which is managed by the Dade County Aviation Department, declined to participate in the FDOT SAPMP update and therefore was not included in the inspection efforts as part of this program update.

Since the previous update performed in 2012, significant updates to the ASTM D 5340 Standard Test Method for Airport Pavement Condition Index Surveys have affected the analysis of the program. These include the separation of Weathering and Raveling into two distinct flexible pavement distresses, and the addition of the Alkali-Silica Reaction distress for rigid pavement distresses. Additionally, the deterioration associated with the rigid pavement distress Scaling/Map Cracking has been modified. The change in distress classification, as described in ASTM D 5340-12, may result in small variances in the PCI values from the previous inspection analysis. The update included changes in distress deduction values that may be less than the previous analysis.



District 6's overall area-weighted Pavement Condition Index (PCI) is at a 65.76, a condition rating of "Fair". Table I: Condition Summary by Airport below represents of the results of the PCI inspection at each airport within the District. The overall area-weighted average PCI values for the participating airport facilities in District 6 ranged from 57 (Fair) to 74 (Satisfactory). Specific individual airport results are identified in the individual Airport Pavement Evaluation Reports provided to each airport. Table II: Runway Condition Summary by Airport indicates the PCI value for every runway within the District, grouped by Airport. Figure I: Runway Condition graphically depicts the percentage of the District's Runways below the FDOT Minimum PCI of 75 and Figure II: Runway Pavement Condition Comparison to FDOT Minimum PCI conveys the PCI's of the District's runway facilities in comparison to the FDOT Minimum PCI of 75.

Table I: Condition Summary by Airport

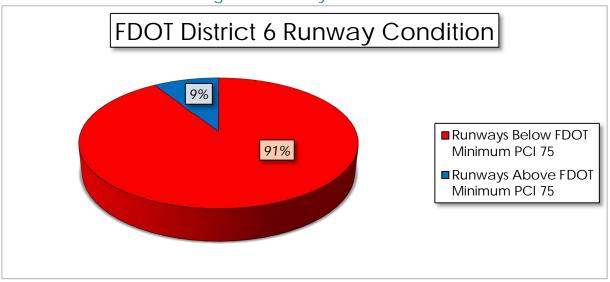
		Area-Weighted Pavement Condition Index (PCI)							
Network ID	Airport Type		Runway Taxiway			Apron		Overall Airfield	
	.515-5	PCI	PCI Rating	PCI	PCI Rating	PCI	PCI PCI Rating		PCI Rating
EYW	PR	58	FAIR	64	FAIR	52	POOR	57	FAIR
MTH	GA	61	FAIR	68	FAIR	60	FAIR	62	FAIR
OPF	RL	59	FAIR	67	FAIR	55	POOR	62	FAIR
TMB	RL	73	SATISFACTORY	75	SATISFACTORY	74	SATISFACTORY	74	SATISFACTORY
TNT	GA	59	FAIR	64	FAIR	54	POOR	62	FAIR
X51	GA	75	SATISFACTORY	65	FAIR	72	SATISFACTORY	71	SATISFACTORY
DISTRICT		64	FAIR	68	FAIR	63	FAIR	65	FAIR



Table II: Runway Condition Summary by Airport

Network ID	Airport Type	Branch ID	Branch Name	Length (Feet)	Width (Feet)	Area- Weighted PCI	PCI Rating	Below FDOT Minimum PCI of 75
EYW	PR	RW 9-27	RUNWAY 9-27	4,801	100	58	FAIR	Х
MTH	GA	RW 7-25	RUNWAY 7-25	5,008	100	61	FAIR	X
OPF	RL	RW 12-30	RUNWAY 12-30	6,800	150	53	POOR	Х
OPF	RL	RW 9R-27L	RUNWAY 9R-27L	4,309	100	69	FAIR	Х
OPF	RL	RW 9L-27R	RUNWAY 9L-27R	8,002	150	61	FAIR	Х
TMB	RL	RW 9L-27R	RUNWAY 9L-27R	5,003	150	74	SATISFACTORY	Х
TMB	RL	RW 9R-27L	RUNWAY 9R-27L	6,000	150	74	SATISFACTORY	Х
TMB	RL	RW 13-31	RUNWAY 13-31	4,001	150	73	SATISFACTORY	Х
TNT	GA	RW 9-27	RUNWAY 9-27	10,499	150	59	FAIR	Х
X51	GA	RW 18-36	RUNWAY 18-36	3,999	100	74	SATISFACTORY	Х
X51	GA	RW 10-28	RUNWAY 10-28	3,000	75	78	SATISFACTORY	

Figure I: Runway Condition





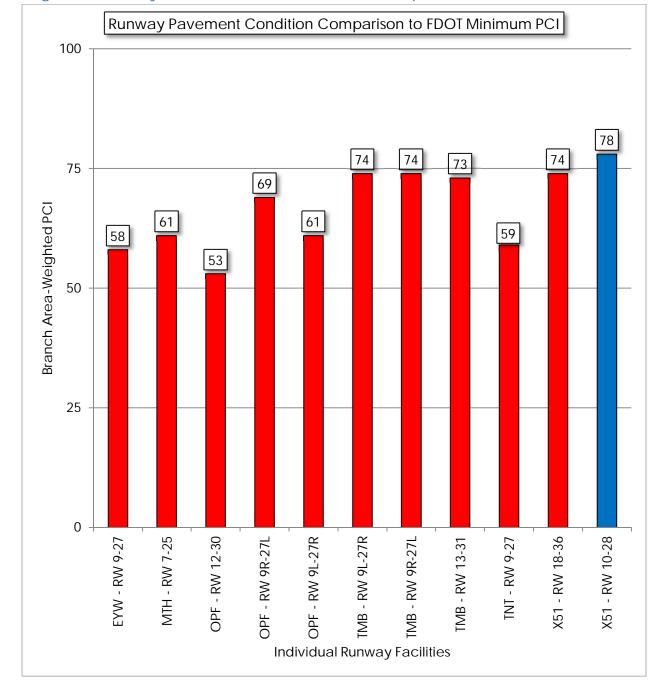


Figure II: Runway Pavement Condition Index Comparison to FDOT Minimum PCI

Pavement use has an influence on the pavement condition of each facility. For example, the amount and type of distresses observed on a primary runway can vary from a crosswind runway based on the frequency and variety of traffic loads experienced due to the aircraft fleet mix. In this example, the crosswind runway would be exposed to less aircraft operational traffic due to wind



coverage. In many cases, the crosswind runway is also shorter than the primary runway which may cause heavier aircraft traffic, larger jets, to prefer the primary runway in all but the most severe wind conditions. This would result in the primary runway experiencing a larger percentage of aircraft passes in frequency and heavy load applications. Table III: District Summary of Area Use by Airport provides a breakdown of the airport pavement areas by its facility use. Figure III: PCI by Pavement Use by Airport graphically depicts the PCI for each pavement facility use at each airport.

Table III: District Summary of Area by Use by Airport

Network	Airport	Pavement Area (Square Feet)					
ID	Туре	Runway	Taxiway	Apron	Overall		
EYW	PR	480,000	428,344	835,956	1,744,300		
MTH	GA	500,800	395,290	753,937	1,650,027		
OPF	RL	2,651,200	4,930,870	2,817,398	10,399,468		
TMB	RL	2,250,750	2,299,565	2,686,324	7,236,639		
TNT	GA	1,575,000	1,770,736	49,500	3,395,236		
X51	GA	624,825	545,319	457,876	1,628,020		
DISTRICT		8,082,575	10,370,124	7,600,991	26,053,690		



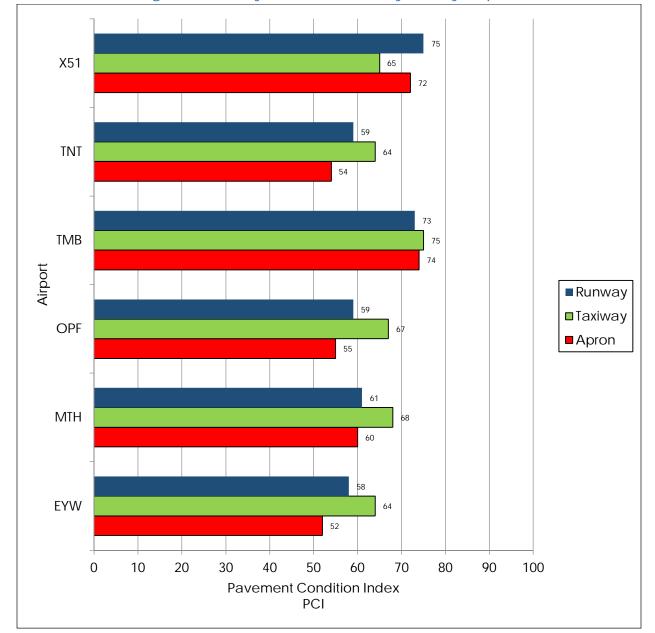


Figure III: PCI by Pavement Facility Use by Airport

Figure IV: Visual Representation of PCI Ratings and Field Conditions Flexible Asphalt Concrete Pavement and Figure V: Visual Representation of PCI Ratings and Field Conditions Rigid Portland Cement Concrete Pavement below provides a graphical reference of pavement surface characteristics associated with various ranges of PCIs and Ratings with the FDOT repair activities associated with each range.



Figure IV: Visual Representation of PCI Ratings and Field Conditions Flexible **Asphalt Concrete Pavement** 

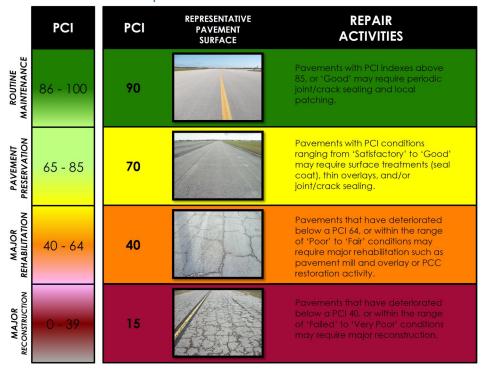
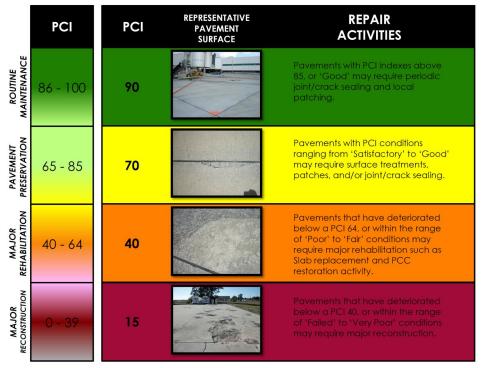


Figure V: Visual Representation of PCI Ratings and Field Conditions Rigid Portland **Cement Concrete Pavement** 





The immediate Year 1 Major Rehabilitation needs, or repair needs that have been programmed to be completed in the first year of the 10-year Major Rehabilitation plan based on an unlimited budget for each airport in the District are summarized in Table IV: Summary of Year 1 Major Rehabilitation Needs. It is recommended that each airport put a priority on these pavement facilities, defined by each Section, as the condition determined from the latest inspection have been identified to be at or below the Critical PCI of 65. Pavement Sections with PCI's at or below the Critical PCI will be at or below the recommended FDOT Minimum PCI's. Additional details, such as the identification of the specific pavement Sections below the Critical PCI or MicroPAVER Minimum PCI, are provided in each individual report and in Appendix B of this District summary report.

Weighted-Year-1 Major Network ID Airport Type Average PCI Average Rating Rehabilitation **EYW** PR 57 **FAIR** \$ 26,294,525.00 22,036,865.00 MTH GΑ 62 **FAIR** \$ OPF RL 62 FAIR \$ 116,086,617.00 **TMB SATISFACTORY** \$ 11,229,835.00 RL 74 **TNT** GA 62 **FAIR** \$ 26,494,868.22 X51 **SATISFACTORY** \$ 5,742,080.35 GΑ 71 65 **DISTRICT** 207,884,790.57 **FAIR** 

Table IV: Summary of Year 1 Major Rehabilitation Needs

The identified major rehabilitation project planning costs summarized above are further explained in each individual airport pavement evaluation report. The projects, defined at the Section Level, have been identified based on the Critical PCI (alternatively MicroPAVER Minimum PCI. The criteria establishes the recommended action based on the pavement Section's determined PCI as compared to the Critical PCI of 65. In reviewing the FDOT SAPMP pavement performance trends and analysis of pavement performance models (by Airport Type, Facility Use, and Pavement Composition) from historic records it is recommended that pavement facilities should be considered for major rehabilitation planning once at or below the Critical PCI of 65.

The FDOT has recommended minimum service level PCI for airports based on pavement facility use, airport type, and expected loading frequency. This minimum service level PCI is recommended to ensure the pavement provides a safe operational surface and efficiently uses maintenance and rehabilitation budgets. Separately, the Critical PCI is a value based on historic pavement



performance trends and costs. It is at a PCI value of 65 at which major rehabilitation is recommended over maintenance level efforts.

A forecast of major rehabilitation needs for a 10-year period was developed for each participating airport based on an assumed 'Unlimited Budget Scenario'. The analysis identified both maintenance level activities and major rehabilitation planning needs during the 10-year period based on the most recent field inspection results. Maintenance level activities, which are direct extrapolation of distress quantities and associated maintenance efforts, were developed as a means to provide a basis for airport planning should major rehabilitation work not be feasible.

Maintenance level activities refers to the repair and preservation-type activities that are applied locally to specific distress types on the pavement. These activities for the SAPMP are considered preventative and corrective in nature and are highly recommended to help improve pavement performance and extend pavement life. The SAPMP maintenance policies are based on the FAA Advisory Circular 150/5380-6C and guidance provided in the FDOT Airfield Pavement Repair Manual.

The resulting major rehabilitation needs, excluding maintenance level activities, by airport are provided in Table V: Summary of 10-Year Major Rehabilitation Costs by Airport. See Table 5-8: District 10-Year Maintenance and Preservation Needs by Airport for maintenance level activities identified for the 10-Year Program based on PCI deterioration.

Table V: Summary of 10-Year Major Rehabilitation Costs by Airport

Network ID	Airport Type	Weighted-Average PCI	Average Rating	10-Year Major Rehabilitation
EYW	PR	57	FAIR	\$ 33,730,583.21
MTH	GA	62	FAIR	\$ 28,817,884.70
OPF	RL	62	FAIR	\$ 143,442,888.34
TMB	RL	74	SATISFACTORY	\$ 102,321,247.35
TNT	GA	62	FAIR	\$ 32,200,229.33
X51	GA	71	SATISFACTORY	\$ 8,617,440.08
	DISTRICT	65	FAIR	\$ 349,130,273.01



The development of the aforementioned planning level costs are based on planning level assumptions based on the type of rehabilitation being performed and historic Florida average bid costs for each type of construction.

FDOT recognizes that although pavement mill and overlay is recommended for flexible asphalt concrete pavement within a PCI range from 40 to 74, it is conceivable that airports may not have adequate funding to perform this type of major rehabilitation. A comprehensive surface treatment as described in FAA AC 150/5370-10G Standards for Specifying Construction of Airports used as a maintenance rehabilitation activity can be used in lieu of asphalt concrete pavement mill and overlay. However, it should be understood that these measures provide only a short term extension of pavement life. While the cost of surface treatments are significantly lower than that of pavement mill and overlay, it is not intended or implied to be a full rehabilitative measure providing the same long term life as a major rehabilitation.

The objective of the major pavement rehabilitation needs analysis is to provide planning level projects within an airport's airfield pavement network. Major rehabilitation activities are recommended when a pavement section has deteriorated below the Critical PCI value from a functionality perspective. In addition, major rehabilitation is also recommended when the Section PCI is above the Critical PCI but the Section has load-related PCI distresses. This is the point when maintenance and repair level activities are not considered to be cost effective.

Major rehabilitation is identified within the SAPMP as major construction activity that would result in an improvement or "resetting" of the pavement section's PCI to a value of 100. Such activities could include; mill and hot-mix asphalt overlay and re-construction. This analysis was conducted with no constraints to budgets as a means to identify all pavement projects based on Critical PCI for a 10-year duration. It is recommended that this be used as a planning tool for future project development and prioritization. Table VI: Major Rehabilitation by Condition summarizes the planning level activities by the associated PCI values, as established by the FDOT Aviation and Spaceport Office.



Table VI: Major Rehabilitation by Condition

Catagory	Majority Activity	PCI Range	Cost/SqFt By Airport Type			
Category	Majority Activity	POI Kange	Primary	Regional Reliever	General Aviation	
Major Rehabilitation	• Mill and Overlay (AC)	40. 74	\$13.00	\$10.00	\$8.00	
	Concrete Pavement Restoration (PCC)	40 - 74	\$18.00	\$15.00	\$10.00	
	Full Depth Pavement Reconstruction	0 - 39	\$23.00	\$20.00	\$15.00	

Additional design level investigation in accordance to the FAA Advisory Circulars will be required to identify specific areas within each section that are subject to reconstruction, mill and overlay, and PCC restoration. The work and budgets identified are intended for the planning level not the design level. Areas identified as mill and overlay may in fact require select areas of reconstruction should load-based distresses observed warrant it. It is important to state that the project specific design level efforts are necessary in determining the final rehabilitative construction activity and project limits. In certain cases, adjacent or nearby Sections may not have deteriorated to a PCI level that would warrant "major rehabilitation" but are deteriorated enough to be considered for inclusion as a combined project.

Runway projects, based on pavement conditions below the FDOT recommended minimum service level PCI of 75 and have reached or are below the Critical PCI of 65, which the District should consider as immediate needs are listed as follows. These are not all the needs at each participating airport within the District and may not be the individual airport's priority, but should be considered in development of funding programs based on functional PCI.

# Key West International Airport (EYW)

- Runway 9-27 (Sections 6105 and 6110)
  - Major Rehabilitation
  - 0 \$8,640,000.00

# The Florida Keys Marathon Airport (MTH)

- Runway 7-25 (6110 and 6105)
  - Major Rehabilitation



0 \$9,014,400.00

## Opa Locka Executive Airport (OPF)

- J Runway 12-30 (6205 and 6210)
  - o Major Rehabilitation
  - o \$15,241,299.00
- J Runway 9R-27L (6410)
  - o Major Rehabilitation
  - 0 \$1,509,000.00
- J Runway 9L-27R (6105, 6115, 6120, 6130)
  - o Major Rehabilitation
  - 0 \$16,461,753.00

## Miami Executive Airport (TMB)

- J Runway 9L-27R (6104)
  - o Major Rehabilitation
  - o \$300,000.00

# Dade - Collier Training and Transition Airport (TNT)

- J Runway 9-27 (6105 and 6110)
  - o Major Rehabilitation
  - 0 \$15,749,999.25

# Homestead General Aviation Airport (X51)

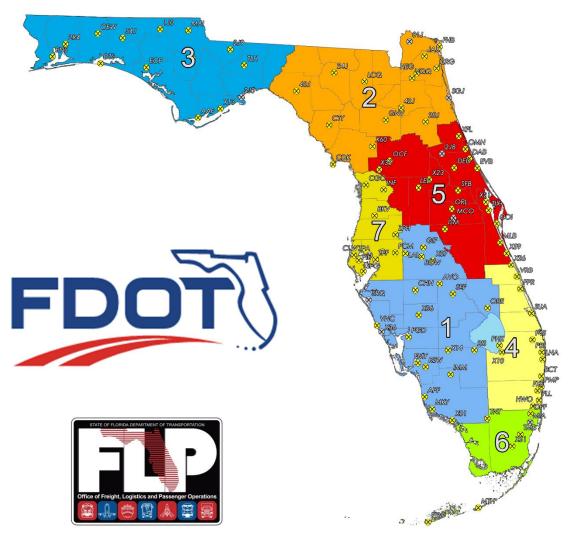
- J Runway 18-36 (6110)
  - o Major Rehabilitation
  - o \$1,999,499.91



#### 1. INTRODUCTION

#### Project Background

The State of Florida has more than 100 public airports that are vital to the Florida economy as well as the economy of the United States. The aviation system in Florida allows the State to capitalize on an increasingly global marketplace. Florida's system of commercial service and general aviation airports are important to businesses throughout the entire State. Air travel is essential to tourism, Florida's number one industry.



There are millions of square feet of pavement infrastructure that consists of runways, taxiways, aprons, ramps, and other areas of airports that are vital to the support and safety of aircraft operations. Timely pavement maintenance



repair and major rehabilitation of these pavements will support the airport in operating safely, efficiently, economically and without excessive down time.

Pavement Condition Index surveys were performed for airfield pavement facilities for the following participating airports located in District 6.

- EWY, Key West International Airport
- MTH, The Florida Keys Marathon Airport
- OPF, Opa Locka Executive Airport
- TMB, Miami Executive Airport
- TNT, Dade Collier Training and Transition Airport
- X51, Homestead General Aviation Airport

Miami International Airport (MIA), which is managed by the Dade County Aviation Department, declined to participate in the FDOT SAPMP update and therefore was not included in the inspection efforts as part of this program update.

# 1.1 Purpose of District Pavement Evaluation Report

The primary goal of the FDOT Statewide Airfield Pavement Management Program (SAPMP) Update is to assist the Florida Airport System airports to be in compliance with Public Law 103-305 Section 107 with the implementation of an effective airport pavement maintenance-management program as defined by the Federal Aviation Administration Advisory Circular 150/5380-7B Airport Pavement Management Program and provide maintenance recommendations based on Advisory Circular 150/5380-6C Guidelines and Procedures for Maintenance of Airport Pavements. The FDOT SAPMP provides individual airports with pavement condition ratings as well as recommendations for maintenance level activities and major rehabilitation planning. The overall goal is to minimize costs by performing timely pavement projects prior to deteriorating to a level at which costs increase significantly.

This document is intended to serve as a summary of the District's participating airports airfield pavement facility condition and long-term major rehabilitation needs. Furthermore, the purpose of this District Summary document is to provide:

- Information on the pavement management principles, objectives, and methods used to update the existing program;
- Provide the average results of the PCI survey and analysis at each District's participating airport.



 Provide the results of the maintenance level activities and major rehabilitation analysis identified for the immediate Year-1 needs and longterm 10-Year project needs on an airport and District-wide basis.

# 1.2 FDOT Statewide Airfield Pavement Management Program

In 1992, the FDOT implemented the SAPMP to improve the knowledge of pavement conditions at public airports in the Florida Airports System, identify maintenance and rehabilitation needs at each airport, automate pavement infrastructure information management, and establish standards to address future needs. The 1992 SAPMP implementation provided the FDOT and the participating airports valuable information for establishing and performing timely and appropriate pavement rehabilitation.

During the 1992-1993 implementation and again during the 1998-1999 updates; the SAPMP performed the development with proprietary software for pavement management system analysis. This development allowed for the creation of pavement management database file system populated with airport attributes and condition data. The pavement management database was used to establish maintenance, repair, and rehabilitation (M&R) policies, M&R budget costs, and the development of recommendations for performing routine pavement preservation maintenance. This system, known as AIRPAV, was initially developed during the 1992-1993 SAPMP implementation for the analysis of distress data. The AIRPAV system was used again in the 1998-1999 SAPMP update.

In 2004, the SAPMP update included the review of the AIRPAV software compared to other industry available non-proprietary software packages. As a result of this review, MicroPAVER was selected for implementation of the system update. MicroPAVER was developed by the U.S. Army Corps of Engineers Construction Engineering Research Laboratory for the purpose of pavement management. Data from the 1998-1999 FDOT SAPMP update, which built upon the initial 1992-1993 implementation of AIRPAV, was reviewed and converted to be compatible with the MicroPAVER system. This data conversion included all documented pavement facility, classification, type, history, geometry, PCI condition data and pertinent attributes gathered from airport feedback at the time. This information was used to develop the inventory of each participating airport's pavement facilities in a consistent format. This was the development of Airfield Pavement Network Definition Exhibits. These inventory exhibits visually depicted the branch, section, and sample units that were based upon the



pavement construction history and composition information provided by each airport.

In 2006-2008, the SAPMP was updated again with continued use of the MicroPAVER system. Based on the distress data collected, a maintenance repair and major rehabilitation planning program was developed for each airport. As part of this SAPMP update, the procedures for the inspection and the collection of the pavement distress data were documented, and an interactive website (<a href="http://www.dot.state.fl.us/aviation/pavement.shtm">http://www.dot.state.fl.us/aviation/pavement.shtm</a>) was established for input of data.

In 2010-2012, the SAPMP was updated using new GPS integrated technology to digitally collect pavement distress data. Interactive GIS map files were developed from updated Airfield Pavement Network Definition Maps to aid pavement condition inspectors in the collection of sample distress data. The data collected was utilized to develop pavement performance models to predict future pavement PCI values and make recommendations for major rehabilitation.

Currently, airports participating in the Airport Improvement Program (AIP) Grant Program are required by the Federal Aviation Administration (FAA) to develop and implement a pavement maintenance program to be eligible for funding (FAA Advisory Circular 150/5380-6C Guidelines and Procedures for Maintenance of Airport Pavements). This program requires detailed inspection of airfield pavement conditions by trained personnel. The inspections are required to be performed at least once a year or every three years, if the pavement is inspected in accordance to the PCI survey procedure (such as ASTM International D 5340 Standard Test Method for Airport Pavement Condition Index Surveys). The previous 2010-2012 SAPMP update utilized the ASTM D 5340-04 released in 2004, in lieu of the 2010/2011 edition, in order to maintain consistent database integrity and benefit of pavement performance models from previous inspections.

# 1.3 Organization

# FDOT Central Aviation and Spaceport Office Program Manager

The FDOT Central Office Airport Engineering Manager serves as the Aviation and Spaceport Office Program Manager (ASO-PM) for the SAPMP. The ASO-PM monitors the work performed by the Consultant. The ASO-PM has review and approval authority for each program task and manages the day-to-day details of the SAPMP and the pertinent updates.



The ASO-PM reports updates and milestones to the FDOT State Aviation and Spaceport Manager and Development Administrator.

#### Consultant

The Consultant, Kimley-Horn and Associates, Inc. and their team consisting of Penuel Consulting, LLC and Roy D. McQueen & Associates, LTD, provides technical and administrative assistance to the ASO-PM during the execution of the update to the SAPMP. The efforts include updating the airport pavement inventory data, performing the condition survey inspections, evaluating the airfield pavement conditions and updating the SAPMP based upon procedures outlined in the FAA Advisory Circular 150/5380-6C Guidelines and Procedures for Maintenance of Airport Pavements and ASTM D 5340.

### Airport Role

The airports are the ultimate beneficiary for each condition survey inspection performed at their respective airfields as part of the SAPMP. The individual airports will be provided final deliverables prepared by the Consultant that have been reviewed and approved by the ASO-PM. The airport should have provided a current Airport Layout Plan (ALP) to the Consultant and, if they participated in the previous SAPMP, indicate any construction activity that was performed since the previous inspections.

#### **FDOT District Offices**

The seven FDOT District Offices, specifically the Aviation Representatives, provide vital support to the SAPMP update and the ASO-PM. Each District supports the SAPMP's on-going efforts by providing representative construction trend costs and practices through the Florida Airports System. Each District Office receives copies of individual Airfield Pavement Evaluation Reports for the airport facilities located within their respective districts, as well as this summary District specific Report.

# 1.4 Introduction to Pavement Types and Pavement Management

#### **Pavement Basics**

A pavement is a prepared surface designed to provide a continuous smooth ride at all taxi, takeoff, and landing speeds and to support an estimated amount of traffic loading for a certain number of years. Pavements are composed of a combination of constructed layers of subgrade soils, subbases, base course material, and surface level courses. There are two primary types of pavements:



- Flexible Pavement, composed of bituminous asphalt concrete (AC) surface, base, and subbase layers.
- Rigid Pavement, composed of Portland Cement Concrete (PCC) surface, base, and subbase layers.

Both pavement types use a combination of layered materials and thicknesses in order to support the traffic loads (both magnitude and repeated application) and protect the underlying subgrade soil. Flexible pavements dissipate applied loads from layer to layer until the load magnitude is small enough to be supported by the subgrade soil. In rigid pavements, the PCC layer supports the majority of the structural load applied, and the base or subbase layer is constructed to provide a smooth, level, and continuous platform that provides uniform support for PCC slabs.

A small percentage of airfield pavements within the Florida Airports System are composed of hybrid 'composite pavement' sections that may include both AC pavement and PCC pavement. The two known composite pavements are AC surface over PCC (APC) and PCC over AC (White Topping).

Due to the different nature of the pavement types, construction, and their materials; flexible and rigid pavements have different modes of failure and fatigue. This results in varying deterioration and distress development. Understanding the mechanics and modes of failure of the pavement types assists the engineers in making timely, adequate and consistent observations, and in recommending economical maintenance repairs and major rehabilitation to the pavement structures at each airfield.

## The Concept of an Airfield Pavement Management System

The SAPMP is a program that provides the Florida Airports System an opportunity to implement and/or maintain a proactive Airfield Pavement Management System (APMS) in a consistent manner at a regular schedule. The SAPMP Airfield Pavement Management System consists of pavement inventory, pavement construction and history, condition survey inspections, pavement performance modeling, maintenance recommendations, and major rehabilitation planning. The various elements of the APMS are used by experienced engineers to identify critical pavements, make pavement preservation or rehabilitation recommendations, and approximate pavement performance. The APMS as a whole is used by an airport's stakeholders, managing agencies, engineers, and planners as a tool in decision making for future project planning, budgeting, and scheduling of activities for its airfield pavement infrastructure.



A benefit of an active APMS is it provides an understanding of an airport's pavement performance trends for the purpose of project planning. Based on the performance trend of their pavements, an airport can schedule pavement maintenance and rehabilitation prior to when the pavement section has deteriorated to a condition that would require reconstruction. The use of pavement performance trends will help airports and the local FDOT District program managers plan maintenance level activities and major rehabilitation projects in a manner and sequence that maximizes benefit and minimizes costs. Figure 1-1: Pavement Condition Life Cycle, which is based upon the FAA Advisory Circular 150/5380-7B Airport Pavement Management Program, illustrates how pavement generally deteriorates over time and the relative cost of rehabilitation and reconstruction throughout its life.

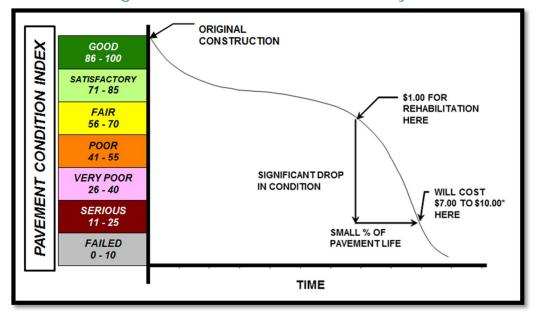


Figure 1-1: Pavement Condition Life Cycle

Source: FAA Advisory Circular 150 5380-7B Airport Pavement Management Program

Note that during approximately the first 75% of a pavement's life, it performs relatively well. After that, however, it begins to deteriorate rapidly. The number of years a pavement stays in 'Good' and 'Satisfactory' conditions depends on how well it is proactively maintained. As the Figure 1-1 demonstrates, the cost of maintaining the pavement above critical condition before rapid deterioration occurs is much less compared to maintaining pavements after substantial deterioration has occurred.

Pavements tend to deteriorate at an accelerated rate when actual traffic loading exceeds the original design assumptions and when limited resources are



available for maintenance and repair (M&R) efforts. Planned maintenance and rehabilitation, essentially preserving pavements and delaying condition deterioration, help airport managers, agencies, and engineers maximize the use of their budgets and prolong the life of their pavements. An APMS provides a tool to schedule planned maintenance and major rehabilitation efforts based on a consistent methodology of condition assessment. This consistent methodology of pavement condition assessment allows for the development of pavement performance models to help forecast future pavement conditions.

Part of the implementation of the APMS is the clear identification and inventorying of pavement infrastructure that needs to be managed specifically within the airport owner, manager, and agency responsibility. Another aspect of the APMS is development of maintenance, repair, and major rehabilitation policies that align with the expectations of pavement performance and are based on ability to fund the types of work identified. Once there is an understanding of the cause and extent of pavement distresses, appropriate maintenance and rehabilitation can be planned. By using representative construction costs based on historic bid trends; planning level budget costs can be developed on a multiyear duration.

## Airfield Pavement Inspection Methodology for the SAPMP

Pavement condition assessment requires the application of professional judgments regarding the condition of the pavement. The SAPMP airfield pavement condition survey inspections assess pavement, comparing it to a set of standards in ASTM D 5340-12 Standard Test Method for Airport Pavement Condition Index Surveys.

The pavement condition surveys assess the functional condition of the pavement surface based on surface distresses as defined by the ASTM D 5340-12. Typically, deficiencies within a pavement structure will eventually reflect to the pavement surface as distresses described within ASTM D 5340-12. The SAPMP is specifically a visual evaluation and analysis based on the ASTM D 5340-12. The structural condition and relative support of the pavement layers can be directly quantified using non-destructive deflection testing (NDT) as well as other indepth engineering evaluation or sampling and testing methods.

For the SAPMP update, only visual surveys were performed. Further structural and geotechnical testing should be conducted to determine design level rehabilitation and/or reconstruction needs should the airport proceed to the design process.

## Pavement Evaluation Report –District 6 Statewide Airfield Pavement Management Program



In preparation for the PCI survey inspections, the airfield pavements for each airport are divided into branches, sections, and sample units as established by FAA Advisory Circular 150/5380-7B and ASTM D 5340. An Airfield Pavement Network Definition Exhibit has been prepared for each participating airport that depicts the inventory system reflected in the SAPMP database system. Each network definition depicts the latest branch, section, and sample unit definition used for the PCI surveys.

The sample units to be inspected were determined through a systematic random sampling technique to provide an unbiased representation of sample units for each pavement facility. The sample unit locations had been determined in such a way that they are distributed evenly throughout each defined pavement section area. In certain cases when no representative distresses are observed in the field, additional sample units were added.

The distress quantities and severity levels from each inspected sample unit are used to compute the PCI value and rating for each Section using the ASTM D 5340-12 and MicroPAVER (also known currently as PAVER) software. Figures 1-2 and 1-3 depict graphical representations of the color ranges associated with PCI values and ranges with a photograph of airfield pavement that exhibited the conditions for both flexible and rigid pavements respectively.



REPRESENTATIVE PAVEMENT SURFACE **REPAIR** PCI PCI **ACTIVITIES** ROUTINE MAINTENANCE 85, or 'Good' may require periodic joint/crack sealing and local 86 - 100 90 PAVEMENT PRESERVATION Pavements with PCI conditions ranging from 'Satisfactory' to 'Good' may require surface treatments (seal 70 65 - 85 coat), thin overlays, and/or joint/crack sealing. MAJOR REHABILITATION Pavements that have deteriorated below a PCI 64, or within the range of 'Poor' to 'Fair' conditions may 40 40 - 64 require major rehabilitation such as pavement mill and overlay or PCC restoration activity. MAJOR RECONSTRUCTION 15

Figure 1-2: Flexible Pavement, Asphalt Concrete

Figure 1-3: Rigid Pavement, Portland Cement Concrete

1	1.90.0			
	PCI	PCI	REPRESENTATIVE PAVEMENT SURFACE	REPAIR ACTIVITIES
ROUTINE MAINTENANCE	86 - 100	90		Pavements with PCI indexes above 85, or 'Good' may require periodic joint/crack sealing and local patching.
PAVEMENT PRESERVATION	65 - 85	70		Pavements with PCI conditions ranging from 'Satisfactory' to 'Good' may require surface treatments, patches, and/or joint/crack sealing.
MAJOR REHABILITATION	40 - 64	40		Pavements that have deteriorated below a PCI 64, or within the range of 'Poor' to 'Fair' conditions may require major rehabilitation such as Slab replacement and PCC restoration activity.
MAJOR RECONSTRUCTION	0 - 39	15		Pavements that have deteriorated below a PCI 40, or within the range of 'Failed' to 'Very Poor' conditions may require major reconstruction.



#### 2. AIRFIELD PAVEMENT SYSTEM INVENTORY AND NETWORK UPDATE

# 2.1 System Inventory Update

A significant element to the development and update of the SAPMP has been to identify recent and anticipated construction activity that affects the pavement composition and performance. With cooperation from the airport personnel, the project team was able to gather airport specific information that included changes in pavement geometry, new or reconstructed pavements since the last inspection and anticipated pavement rehabilitation that would negate the findings of a visual inspection done in the short term. At the beginning of each phase for this update, FDOT SAPMP participants responded to the Aviation and Spaceport Office with project specific information on the recent and anticipated work. In addition to the construction activity, updates to pavement facility designators (i.e. re-designation, magnetic declination, and/or decommissioning) were reported. Lastly, the project team leaders performing field inspections confirm with airport staff on site previous, recent, and anticipated construction projects that may affect the airfield pavement facilities.

This information was considered in conjunction with aerial imagery provided by FDOT during the updating of pavement section areas on each airport's Airfield Pavement Network Definition Exhibit. The previous, recent, and anticipated construction activity information provided by airport staff has been graphically depicted relative to the branch, section, and sample unit definition on the Airfield Pavement System Inventory Exhibit for each participating airport. This information was also included in the MicroPAVER database updates for the SAPMP.

# 2.2 Network Definition Update

#### Branch and Section Identification

Each airport's airfield pavement network is generally subdivided into separate Branches (runways, taxiways, aprons/ramps, or others) that have distinctly different functional identifications and uses. Each Branch is further subdivided into Sections as defined by pavement location, composition, and construction history. A Section is typically understood to be a project level subdivision within a Branch feature. Sections are manageable units to organize data collection and are treated individually during the maintenance and major rehabilitation planning process. A pavement rank (primary, secondary, or tertiary) is assigned



to each Section based on its importance and type of use to airport operations. The pavement rankings designated for each section at the participating airports were defined by the previous SAPMP, unless changes were communicated by the airport. These Sections are further subdivided into condition survey sample units based on the methodology described in ASTM D 5340.

The Airfield Pavement System Inventory and Airfield Pavement Network Definition Exhibits are developed individually for each participating airport. Based on information requested of and provided by the airport, the airfield pavements are evaluated on designation updates, and recent or anticipated pavement construction activity. As mentioned previously, a Section is defined partially by its construction history of which is factored in the performance and condition of the pavement section.

Construction activities identified include maintenance and repair activity, major rehabilitation, and new airfield pavement construction. Maintenance and repair activity may include; surface treatments, crack sealing, patching, slab replacement, and others. Both maintenance and rehabilitation activities are identified at the pavement section level. This type of work may result in an increase in overall Section PCI since the last inspection. Major rehabilitation efforts may include; asphalt milling and overlay, and full depth pavement reconstruction. This type of effort will result in a resetting of the pavement section PCI value to 100 due to the nature of the work. Lastly, new airfield pavement construction are accounted for as new inventory and assigned a section PCI of 100. Typically the new pavement sections are not inspected due to its condition; however these pavements are incorporated into the SAPMP pavement database.

Due to recent and anticipated construction efforts; pavement area sections may have been consolidated or created which will affect the total number of sample units to be inspected based upon the methods described in ASTM D 5340 and from the sampling rate schedule.

## Airfield Pavement Network Definition & Geographic Information System (GIS)

As part of this SAPMP update, geographic information system (GIS), global positioning system (GPS), and digital data collection were integrated into the Pavement Inspection Methodology at each airport. Using AutoCAD Civil 3D, ArcMap, ArcPad, and FDOT Survey and Mapping Office Aerial Photography; digital navigation maps have been developed for each airport to represent the SAPMP pavement inventory attributes. These navigation maps were used with field data tablets to assist survey teams as they performed condition inspections



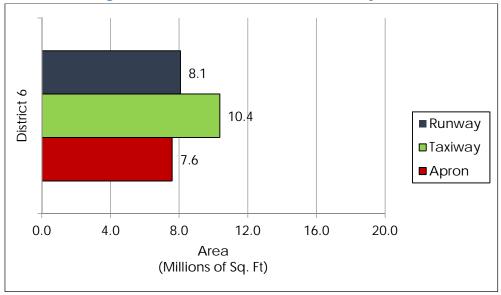
by navigating pavement infrastructure and collecting distress data. Additionally, this information was utilized to develop updates to geometry characteristics for each of the identified pavement facilities.

The updated areas for the District airports by facility Use are summarized in Table 2-1: Summary of Area by Facility Use by Airport. Separately, Figure 2-1: District Pavement Area by Use depicts the district airfield pavement areas by facility use, and Figure 2-2: Pavement Area Use by Airport provides a breakdown of airfield pavement area by facility use at each participating airport for the District.

Pavement Area (Square Feet) Network Airport Туре Runway Taxiway Apron Overall **EYW** PR 480,000 428,344 835,956 1,744,300 MTH GΑ 500,800 395,290 753,937 1,650,027 **OPF** RL 2,651,200 4,930,870 10,399,468 2,817,398 **TMB** RL 2,250,750 2,686,324 7,236,639 2,299,565 TNT GΑ 1,575,000 1,770,736 49,500 3,395,236 X51 GΑ 624,825 545,319 457,876 1,628,020 **DISTRICT** 8,082,575 10,370,124 7,600,991 26,053,690

Table 2-1: Summary of Area by Facility Use by Airport







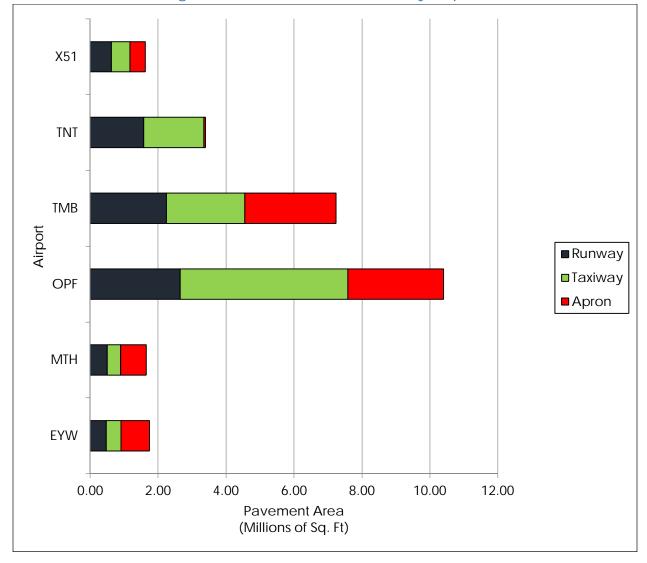


Figure 2-2: Pavement Area Use by Airport



#### AIRFIELD PAVEMENT CONDITION ANALYSIS AND EVALUATION

Airfield pavement distresses and condition were surveyed in accordance with the methods outlined in FAA Advisory Circular 150/5380-6C and ASTM D 5340-12. These procedures define distress type, severity, and quantity for sampling areas within each defined pavement section area to analyze and determine the PCI value and condition rating.

## 3.1 Updates to the ASTM D 5340

As part of this program update, the SAPMP has adopted the changes made in updates to ASTM D 5340-12 as the previous program had used the ASTM D 5340-04. These include the separation of Weathering and Raveling into two distinct flexible pavement distresses, and the addition of the Alkali-Silica Reaction distress for rigid pavement distresses. Additionally, the deterioration associated with the rigid pavement distress Scaling/Map Cracking has been modified which results in moving Map Cracking from Scaling to ASR. In the newest version of ASTM D 5340-12, there are two kinds of Shrinkage Cracking, Drying Shrinkage and Plastic Shrinkage. The difference between these two is that the depth of first one may extend through the entire depth of the slab while the thickness of the latter one normally does not extend very deep into the pavement's surface. Furthermore, the Plastic Shrinkage consists of two subcategories: Plastic shrinkage (caused by atmosphere) and Plastic shrinkage (caused by construction). Another kind of Map Cracking is listed under Plastic shrinkage that is caused by construction, as well as Crazing. This additional type of Shrinkage change in distress classification, as described in ASTM D 5340-12, may result in small variances in the PCI values from the previous inspection analysis. Increases in PCI values in pavement Sections comparison to the previous program update, that have not been subject to repairs since the last inspection, may be a result from the updates to the analysis methodology.

Below is a brief description of the changes to the distresses presented in the ASTM D 5340 methodology and a table summarizing the deduction affected.

a) Flexible Asphalt Concrete Pavement distresses for airfield pavements: The previous methodology which featured "(52) Weathering and Raveling" distress has been separated into two distresses "(52) Raveling" and "(57) Weathering". Previously, areas that were recorded as "Weathering and Raveling" were considered as one distress with a high deduction. Based on the updated methodology, in certain situations where "Weathering" only exists and does not meet the definition of "Raveling", the PCI



deduction is not as high as the former "Weathering and Raveling". Therefore, areas identified only as "(57) Weathering" based on current ASTM standards, which were previously identified as "(52) Weathering and Raveling", may be subject to an improvement in PCI. In instances where pavement PCI has increased due to this update, it is not due to an improvement in actual condition, however indicative of the adjusted distress deterioration effects.

b) Rigid Portland Cement Concrete Pavement distresses for airfield pavements: The previous methodology defined "(70) Scaling" as a distress that consisted of surface deterioration caused by construction defects, material defects, and environmental factors. The distress included Alkali-Silica Reaction, also known as ASR. The current methodology has separated Alkali-Silica Reaction as a distress identified as "(76) Alkali-Silica Reaction / ASR". As a result the previous "(70) Scaling" numerical deduction contribution to the PCI has been reduced. Previous inspections that recorded "(70) Scaling", and currently do not exhibit "(76) Alkali-Silica Reactivity / ASR" may potentially see an increase in PCI. Additionally, (73) Shrinkage Cracks has been redefined as (73) Shrinkage Cracking. Shrinkage Cracking is characterized in two forms; drying shrinkage and plastic shrinkage. Drying shrinkage occurs over time as moisture leaves the pavement, it develops when hardened pavement continues to shrink as excess water not needed for cement hydration evaporates. It forms when subsurface resistance to the shrinkage is present and may extend through the entire depth of the slab. Plastic shrinkage develops when there is rapid loss of water in the surface of recently placed pavement or can form from over finishing/overworking of the pavement during construction. These shrinkage cracks appear as a series of inter-connected hairline cracks, or pattern cracking, and are often observed throughout the majority of the slab surface. This condition is also referred to as map cracking or crazing.

Table 3-1: Distress Updates to Reflect ASTM D 5340-12 provides a summary of the changes due to the update.



Table 3-1: Distress Updates to Reflect ASTM D 5340-12

	Distress Updates to Reflect ASTM D 5340-12							
Use and Surface Type	Old 5340-04 Distress	New Distress	Deduct Curve					
	(52) Weathering & Raveling - Low	(52) Raveling - Low	No Change					
	(52) Weathering & Raveling - Medium	(52) Raveling - Medium	No Change					
AC/AAC/APC	(52) Weathering & Raveling - High	(52) Raveling - High	No Change					
Airfield	N/A	(57) Weathering - Low	New					
	N/A	(57) Weathering - Medium	New					
	N/A	(57) Weathering - High	New					
	(70) Scaling - Low	(70) Scaling - Low	New					
	(70) Scaling - Medium	(70) Scaling - Medium	New					
PCC	(70) Scaling - High	(70) Scaling - High	New					
Airfield	N/A	(76) Alkali Silica Reaction – Low	New					
	N/A	(76) Alkali Silica Reaction – Medium	New					
	N/A	(76) Alkali Silica Reaction - High	New					

# 3.2 Inspection Methodology

A pavement condition survey inspection is performed by measuring the amount and severity of defined pavement distresses observed within the boundaries of sample units. These distresses, as defined by ASTM D 5340, are generally caused by traffic fatigue loading, exposure to climate and elements, and other airfield specific factors. This data is collected by field personnel experienced in pavement condition survey inspection. Data collection is then transferred into the FDOT MicroPAVER database system. MicroPAVER (also known as PAVER) is used to calculate PCI values using the methodology described in ASTM D 5340-12. The values are calculated for each sample and extrapolated on a Section level to determine an area-weighted PCI value ranging from 0 to 100 and one of seven condition ratings. Tables 3-2 and 3-3 describe the distresses as defined by the ASTM D 5340-12 and adopted for the SAPMP procedures.



Table 3-1: Airfield Pavement Distresses for Asphalt Concrete

Code	Distress	Primary Mechanisms
41	Alligator Cracking	Load / Fatigue Failure
42	Bleeding	Construction Quality/ Mix Design
43	Block Cracking	Climate / Age
44	Corrugation	Load / Construction Quality
45	Depression	Subgrade Quality
46	Jet Blast	Aircraft
47	Joint Reflection - Cracking	Climate / Prior Pavement
48	Longitudinal/Transverse Cracking	Climate / Age
49	Oil Spillage	Aircraft / Vehicle
50	Patching	Utility / Pavement Repair
51	Polished Aggregate	Repeated Traffic Loading
52	Raveling	Climate / Load
53	Rutting	Repeated Traffic Loading
54	Shoving	PCC Pavement Growth / Movement
55	Slippage Cracking	Load / Pavement Bond
56	Swelling	Climate / Subgrade Quality
57	Weathering	Climate
Source: U.S. Army CERL, FDOT Airfield Inspection Reference Manual		



Table 3-2: Airfield Pavement Distresses for Portland Cement Concrete

Code	Distress	Primary Mechanisms				
61	Blow-up	Climate / Alkali Silica Reaction				
62	Corner Break	Load Repetition / Curling Stresses				
63	Linear Cracking	Load Repetition / Curling Stresses / Shrinkage Stresses				
64	Durability Cracking	Freeze-Thaw Cycling				
65	Joint Seal Damage	Material Deterioration / Construction Quality				
66	Small Patch	Pavement Repair				
67	Large Patch/Utility Cut	Utility / Pavement Repair				
68	Popout	Freeze-Thaw Cycling				
69	Pumping	Load Repetition / Poor Joint Sealant				
70	Scaling/Crazing	Construction Quality / Freeze- Thaw Cycling				
71	Faulting	Load Repetition / Subgrade Quality				
72	Shattered Slab	Overloading				
73	Shrinkage Cracking	Construction Quality / Load				
74	Joint Spalling	Load Repetition / Infiltration of Incompressible Material				
75	Corner Spalling	Load Repetition / Infiltration of Incompressible Material				
76	Alkali-Silica Reaction Construction Quality / Clima					
Source: U.	S. Army CERL, FDOT Airfield Inspection Referer	nce Manual				

# 3.3 Airfield Pavement Condition Index Analysis Results

The Pavement Condition Index (PCI) results based on the ASTM D 5340 have been developed by analyzing the specific distress data collection from field inspections using the U.S. Army Corps of Engineers MicroPAVER 6.5 Software (also known as PAVER). In adherence to the ASTM D 5340-12, the software package analyzes the distinct pavement distress data in both quantity and severity in calculating a PCI that ranges from 100 to 0, with corresponding condition ratings of "Good" to "Failed" respectively. Figure 3-1: Pavement Condition Index Rating Scale depicts the seven ranges of index and the associated rating used in the SAPMP.



Figure 3-1: Pavement Condition Index Rating Scale

PCI Range	Pavement Condition Rating					
86 - 100	Good					
71 - 85	Satisfactory					
56 - 70	Fair					
41 - 55	Poor					
26 - 40	Very Poor					
11 - 25	Serious					
0 - 10	Failed					

The District's overall PCI is at 65.76, which corresponds to a 'Fair' condition. Table 3-3: District Condition Summary by Airport below represents the results of the PCI inspection at each airport within the District. Specific individual airport results and evaluation discussions are documented in each individual airport pavement evaluation report.



Table 3-3: District Condition Summary by Airport

			Area-Weighted Pavement Condition Index (PCI)									
Network ID	Airport Type	Runway		Area-	Taxiway	nt Cor	Apron	(	Overall Airfield			
טו	Туре	PCI	PCI Rating	PCI	PCI Rating	PCI	<u> </u>		PCI Rating			
EYW	PR	58	FAIR	64	FAIR	52	POOR	57	FAIR			
MTH	GA	61	FAIR	68	FAIR	60	FAIR	62	FAIR			
OPF	RL	59	FAIR	67	FAIR	55	POOR	62	FAIR			
TMB	RL	73	SATISFACTORY	75	SATISFACTORY	74	SATISFACTORY	74	SATISFACTORY			
TNT	GA	59	FAIR	64	FAIR	54	POOR	62	FAIR			
X51	GA	75	SATISFACTORY	65	FAIR	72	SATISFACTORY	71	SATISFACTORY			
DISTRICT		64	FAIR	68	FAIR	63	FAIR	65	FAIR			

Pavement Facility Use has an influence on the pavement condition each facility. For example, the amount and type of distresses observed on a primary runway can vary from a maintenance apron based on frequency and variety of traffic loads experienced. Figure 3-2: PCI by Pavement Facility Use by Airport graphically depicts the PCI for each pavement facility use (Runway, Taxiway, and Apron) at each participating airport within the District.



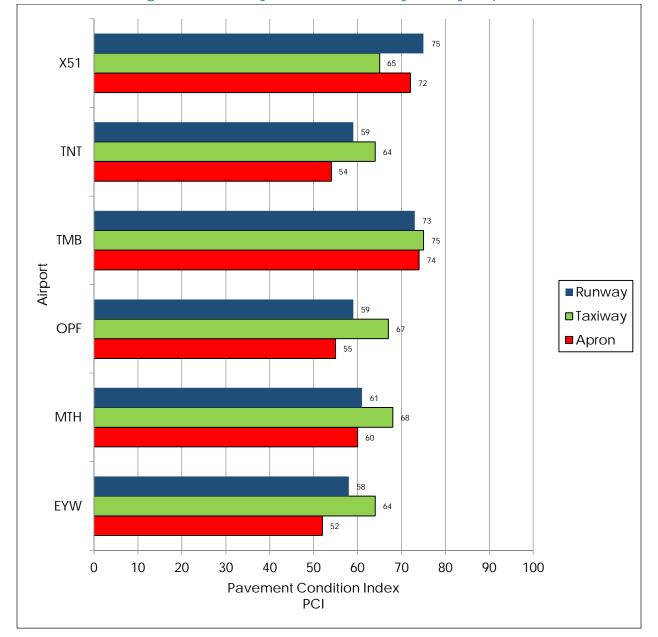


Figure 3-2: PCI by Pavement Facility Use by Airport

A summary of the District's area-weighted PCI for each pavement facility use for all airfield pavement sections throughout the participating airports are shown below in Figure 3-3: PCI by Pavement Facility Use.



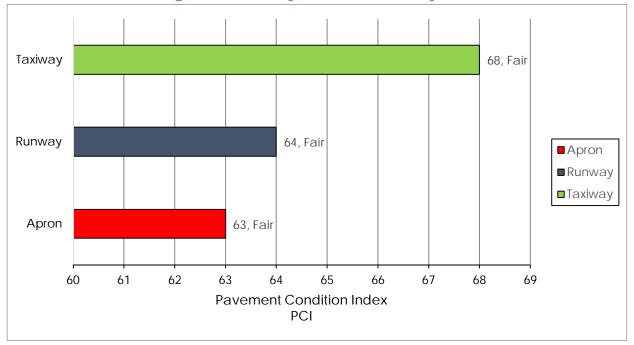


Figure 3-3: PCI by Pavement Facility Use

Pavement facility surface types considered for the SAPMP update consist of the four common types within the Florida Airport System: Portland Cement Concrete (PCC), Asphalt Concrete Overlayed on Portland Cement Concrete Pavement (APC), Asphalt Concrete Pavement (AC), and Asphalt Concrete Overlayed on Asphalt Concrete (AAC). Figure 3-4: PCI by Pavement Surface Type summarizes the PCI determined based on the various pavement types within the participating District airports. Whitetopping, a composite pavement type that consists of a thin concrete overlay on asphalt concrete pavement exists at certain airports within the Florida Airport System and are discussed at the specific individual airport pavement evaluation report document for those airports.



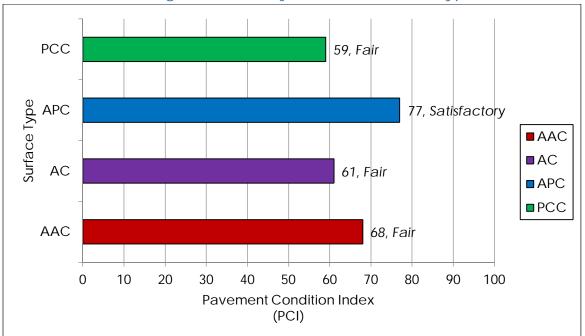


Figure 3-4: PCI by Pavement Surface Type



#### 4. PAVEMENT PERFORMANCE MODELING

# 4.1 Pavement Performance Model Concept

As part of the FDOT SAPMP update, pavement performance models are developed from the distress data collected at each participating airport facility within the Florida Airports System. This data is consolidated in a database and organized by inspection date, pavement type, age, pavement use, and airport category.

The consolidation of the Florida Airports System's pavement infrastructure within the FDOT SAPMP is based on data that has been collected in a consistent method of measurement. The historic pavement condition, or performance trend, has been compiled throughout the system with data from the inception of the SAPMP. This data is processed into models that have been analyzed and developed into prediction curves based upon pavement characteristics. These characteristics include; climate, construction material, and operations. Each model has been developed based on the following criteria:

AIRPORT TYPE (Primary, Regional Reliever, or General Aviation)

>FACILITY USE (Runway, Taxiway, or Apron)

>>FACILITY SURFACE TYPE (AC, AAC, APC, or PCC)

The historic trends of pavement performance at Florida airport facilities for all performance models are consolidated within the program database. This information is utilized in the prediction of pavement performance based on the current PCI determined from the inspections that took place between 2013 and 2015. Major rehabilitation is planned based on the predicted PCI. The intent of this is for both the individual airport and the FDOT District personnel to be aware of anticipated major rehabilitation work based on condition.

Each airport's airfield pavement section condition, for a given inspection year, is one data point that was used as the basis of each performance trend using a performance model based on pavements of similar background.

# 4.2 Performance Model Update

The performance models are developed from the current update data at the aforementioned facilities combined with the historic FDOT SAPMP Florida Airports System Database. This data is consolidated in a database system using MicroPAVER (also known as PAVER) and organized by specific attributes defined



by the pavement system inventory. The pavement system inventory includes inspection data, pavement type, age, pavement use, airport category, FDOT District and pavement ranking. The pavement performance models are used to develop broad prediction models, also known as pavement condition deterioration curves or "Prediction Curves".

The consolidation of the Florida Airports System's pavement infrastructure within the FDOT SAPMP is based on data that has been systematically collected in a manner consistent with the ASTM D5340 Standard Test Method for Airport Pavement Condition Surveys. It should be noted that since the inception of the program, the ASTM D5340 has undergone updates that have modified the method of inspection based on research.

Example: Taxiways constructed from Asphalt Concrete at a Primary Airport AIRPORT TYPE (Primary, Regional Reliever, or General Aviation)

>FACILITY USE (Runway, Taxiway, or Apron)

>>FACILITY SURFACE TYPE (AC, AAC, APC, or PCC)

FDOT-SAPMP-PR-TW-AC

A most recent change was observed in ASTM D5340-10 which updated the methods of identifying and rating the following distresses" Weathering (AC), Raveling (AC), and Scaling (PCC). The historic pavement condition, or performance trend, has been compiled based on condition data collected from the inception of the SAPMP. This data is processed into performance models that have been analyzed and developed into prediction curves based upon pavement characteristics. Figure 4-1: Example Pavement Performance Model depicts an example of a performance model and data points comprised of historic construction milestones provided by the airports and inspection data in accordance with the ASTM D 5340.



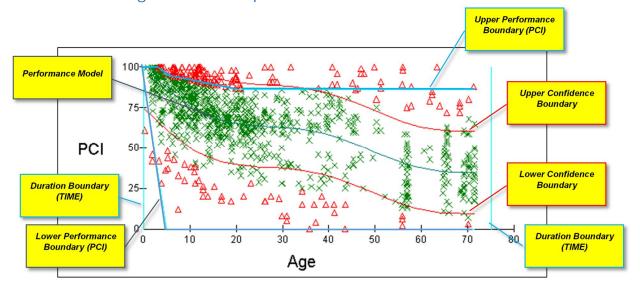


Figure 4-1: Example Pavement Performance Model

× PCI Data included in Model

△ PCI Data <u>excluded</u> in Model

# 4.3 Prediction Curve Development

The historic trends of pavement performance at Florida airport facilities for all performance models are consolidated within the program database. This information is utilized in the prediction of pavement performance based on the current PCI determined from the inspections that take place between 2013 and 2015. Major rehabilitation is planned based on the predicted PCI. The intent of this is for both the individual airport and the FDOT District personnel to be aware of recommended major rehabilitation work based on condition.

The performance models are further refined based on the engineering judgment of pavement performance and data integrity using statistical filters and boundaries. The prediction modeling process identifies and groups pavement sections of similar construction (airport type and pavement type), that are subjected to similar aircraft fleet mix traffic patterns (airport type and branch use), weather and other factors that affect pavement performance and deterioration. The historical data on pavement condition, as entered in the Work History module of the database, is used to predict the future performance of a group of pavement sections with similar attributes.

Each pavement section is assigned to a "family" or model grouping. When predictions about future performance of a pavement are desired, its family



model is used to predict future condition. The input of current age of pavement is applied on the performance model family equation.

The following factors influence the life of a pavement within the performance model; original construction type/date, maintenance, weather, and traffic. The performance model and prediction curve process is designed to allow users to blend unique knowledge about their pavements and measured local condition information to plan for project development.

There are multiple types of boundaries that can be applied to a performance mode; Statistical Boundary and Envelope Boundaries. The Envelope Boundaries filter data based on Age and PCI performance factors. Statistical Boundaries, red lines, indicate the standard deviation of data points based on the SAPMP historic records. When these types of boundaries are applied, outlying points are not considered when the predicted condition function curve is estimated. This ability within MicroPAVER allows for the filtering of suspicious data points. The data filtering procedure is used to remove obvious errors in the data using Envelope Boundaries and Statistical Boundaries. This is critical as pavements with an unusual performance can have a substantial impact on how the model, or family, performs. Table 4-1: Overall Airport Area-Weighted PCI summarizes the area-weighted average PCI for each participating airport's airfield pavement performance within the District from 2015 to 2024. The following Tables 4-2 through 4-4 summarize each airport's airfield pavement performance by pavement facility use from 2015 to 2024.

Table 4-1: Overall Airport Area-Weighted PCI

Network	Program Year Overall Airport Area-Weighted PCI									
ID	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EYW	56	54	52	49	47	44	42	39	37	34
MTH	62	61	60	59	59	58	57	56	56	55
OPF	61	59	57	56	54	52	51	49	47	46
TMB	73	72	70	68	66	64	62	61	59	57
TNT	60	60	59	58	57	56	55	54	53	52
X51	69	67	66	65	64	63	62	61	60	59
DISTRICT	64	63	61	60	58	57	55	53	52	50



Table 4-2: Airport Runway Area-Weighted PCI

Network	Program Year Overall Runway Area-Weighted PCI									
ID	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EYW	58	56	54	52	50	48	46	44	42	40
MTH	61	60	60	59	59	58	58	57	56	55
OPF	59	57	55	54	52	50	48	47	45	43
TMB	73	71	70	68	66	65	63	61	59	58
TNT	58	58	57	56	55	53	52	51	50	48
X51	72	70	68	67	65	64	62	61	60	59
DISTRICT	64	62	61	59	58	56	55	53	52	50

Table 4-3: Airport Taxiway Area-Weighted PCI

Network	Program Year Overall Taxiway Area-Weighted PCI									
ID	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EYW	63	62	60	59	58	56	55	54	52	51
MTH	68	67	66	64	64	63	62	61	60	60
OPF	66	64	63	61	60	58	57	55	54	52
TMB	74	73	71	69	68	66	65	63	61	60
TNT	63	62	61	60	59	59	58	58	57	56
X51	64	63	62	61	60	59	59	58	57	56
DISTRICT	67	66	64	63	62	60	59	58	56	55

Table 4-4: Airport Apron Area-Weighted PCI

Network	Program Year Overall Apron Area-Weighted PCI									
ID	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EYW	51	49	46	43	40	36	33	30	26	23
MTH	59	58	57	57	56	55	54	54	53	52
OPF	54	52	50	48	46	44	42	40	38	36
TMB	73	71	69	67	65	63	60	58	56	54
TNT	53	52	52	51	50	49	48	47	46	44
X51	70	69	68	67	66	65	64	63	62	62
DISTRICT	62	60	58	56	54	52	50	48	46	44



## 5. MAINTENANCE LEVEL ACTIVITIES

#### 5.1 Policies

Airfield Pavement Maintenance policies are guidance on pavement construction methods used to develop, maintain, repair, and rehabilitate pavement infrastructure based on distresses encountered during the condition surveys.

Maintenance refers to the repair and preservation-type activities that are applied locally to specific distress types on the pavement. These activities for the SAPMP are considered preventative and corrective in nature and are highly recommended to help improve pavement performance and extend pavement life. The SAPMP maintenance policies are based on the FAA Advisory Circular 150/5380-6C and guidance provided in the FDOT Airfield Pavement Repair Manual.

For the purpose of the SAPMP; the maintenance repair needs that are identified and quantified are based solely on the pavement distresses observed and recorded at the time of the inspection. Based on a specific distress type and severity observed, a particular repair work type is recommended and quantified based on the extrapolated section distresses. The repair program identified is specific to the current distresses. Future maintenance planning budgets are based on this initial determination. Tables 5-1 and 5-2 provide the list of maintenance activities incorporated into the SAPMP MicroPAVER database to treat specific distress types and severities.

Table 5-1: Recommended AC, AAC, and APC Maintenance and Repair Policy

Surface Type	Distress Code	Distress Name	Severity	Maintenance Work Type	Work Unit
	41	Alligator Cracking	L, M, H	Full Depth	Square
<u>a</u>	<u>ə</u>	Alligator Cracking	L, IVI, FI	Pavement Patch	Feet
ïe	42	Bleeding	N/A	Partial Depth	Square
) ju	APC) APC) 42	Bieeding	IN/A	Pavement Patch	Feet
S ₽	43	Block Cracking		Seal Coat	Square
alt C,	43		L	Treatment	Feet
Asphalt (C, AAC, A	43	Die ek Cre ekiner	M, H	Full Depth	Square
S S	43	Block Cracking	IVI, IT	Pavement Patch	Feet
Flexible A (AC,	4.4	Corrugation	1 1 1 1 1	Full Depth	Square
) ix	44	Corrugation	L, M, H	Pavement Patch	Feet
Ĕ	15	Donrossion	1 1 1 1	Full Depth	Square
	45	Depression	L, M, H	Pavement Patch	Feet



Surface Type	Distress Code	Distress Name	Severity	Maintenance Work Type	Work Unit
	46	Jet Blast Erosion	L, M, H	Full Depth Pavement Patch	Square Feet
	47	Joint Reflection Cracking	L	Crack Sealing	Linear Feet
	47	Joint Reflection Cracking	M, H	Full Depth Pavement Patch	Square Feet
	48	Longitudinal/Transverse Cracking	L, M, H	Crack Sealing	Linear Feet
	49	Oil Spillage	L, M	Seal Coat Treatment	Square Feet
	49	Oil Spillage	Н	Full Depth Pavement Patch	Square Feet
	50	Patch and Utility Patching	М	Full Depth Pavement Patch	Square Feet
	50	Patch and Utility Patching	Н	Full Depth Pavement Patch	Square Feet
	51	Polished Aggregate	L, M, H	Slurry Seal Coat Treatment	Square Feet
	52	Raveling	L, M	Slurry Seal Coat Treatment	Square Feet
	52	Raveling	Н	Partial Depth Pavement Patch	Square Feet
	53	Rutting	L, M, H	Full Depth Pavement Patch	Square Feet
	54	Shoving	L, M, H	Grinding / Removal	Square Feet
	55	Slippage Cracking	L, M, H	Full Depth Pavement Patch	Square Feet
	56	Swelling	M, H	Full Depth Pavement Patch	Square Feet
	57 Weathering		M, H	Seal Coat Treatment	Square Feet

Table 5-2: Recommended PCC Maintenance and Repair Policy

Surface Type	Distress Code	Distress Name	Severity	Maintenance Work Type	Work Unit
Pavement (PCC)	61	Blowup	L, M, H	Slab Replacement / Full Depth Patch	Square Feet
Rigid P	62	Corner Break	L, M, H	Partial Slab Full Depth Patch - PCC	Square Feet



Surface Type	Distress Code	Distress Name	Severity	Maintenance Work Type	Work Unit
	63	Longitudinal/Transverse/Diagonal Cracking	Н	Crack Sealing - PCC	Linear Feet
	64	Durability Cracking	M, H	Slab Replacement / Full Depth Patch	Square Feet
	65	Joint Seal Damage	L, M, H	Joint Seal Repair (Local)	Linear Feet
	66	Patching, Small	M, H	Partial Slab Full Depth Patch - PCC	Square Feet
	67	Patching, Large	M, H	Partial Slab Full Depth Patch - PCC	Square Feet
	69	Pumping	L, M, H Stabilization / Slab Jacking	Square Feet	
	70	Scaling/Map Cracking/Crazing	L, M	Micro-mill and Seal - PCC	Square Feet
	70	Scaling/Map Cracking/Crazing	Н	Slab Replacement / Full Depth Patch	Square Feet
	71	Settlement / Faulting	L	Micro-mill and Seal - PCC	Square Feet
	71	Settlement / Faulting	M, H	Slab Stabilization / Slab Jacking	Square Feet
	72	Shattered Slab	L, M, H	Slab Replacement / Full Depth Patch	Square Feet
	73	Shrinkage Cracks	N/A	Crack Sealing - PCC	Linear Feet
	74	Longitudinal/Transverse Joint Spalling	L, M, H	Partial Patch - PCC	Square Feet
	75	Corner Spalling	L, M, H	Partial Patch - PCC	Square Feet
	76	Alkali-Silica Reaction	L	Seal Coat Treatment	Square Feet



Surface Type	Distress Code	Distress Name	Severity	Maintenance Work Type	Work Unit
	76	Alkali-Silica Reaction	M	Micro-mill and Seal - PCC	Square Feet
	76	Alkali-Silica Reaction	Н	Slab Replacement / Full Depth Patch	Square Feet

Though proactive pavement maintenance and preservation is highly recommended in an APMS; it is recognized that pavement that has deteriorated below a certain PCI would benefit more from major rehabilitation rather than localized maintenance and repair work. Major rehabilitation is recommended when the pavement condition decreases below a critical point such that the deterioration is extensive or the rate of deterioration is so great that maintenance repair efforts are no longer cost-efficient. This critical point is called "Critical PCI". The critical PCI levels for different pavement and branch types were established by the FDOT and were used in this update to develop a maintenance and major rehabilitation plan for the airport. Sections that are above the "Critical PCI" levels will be recommended for maintenance, repair, and preservation treatments, assuming there are no significant load-related distresses. For those Sections below the Critical PCI, the recommended action will consist of major rehabilitation work. This approach is used for the Section's Current PCI value and the predicted PCI value for future rehabilitation.

The FDOT has recommended minimum service level PCI for airports based on pavement facility use, airport type, and expected loading frequency. This minimum service level PCI is recommended to ensure the pavement provides a safe operational surface and efficiently uses maintenance and rehabilitation budgets. Separately, the Critical PCI is a value based on historic pavement performance trends and costs. It is at a PCI value of 65 at which major rehabilitation is recommended over maintenance level efforts. Table 5-3 identifies the FDOT recommended PCI by use and the critical PCI value for the most important pavements at the airport. This is due to the condition of the pavement and the cost effectiveness of the work. A very important concept of a good pavement management system is the proactive preservation of pavements that are above Critical PCI condition. Conversely, allowing pavement to deteriorate beyond maintenance and performing "worst first" major rehabilitation may cost much more over the life of a pavement.



Table 5-3: Critical PCI and FDOT Minimum Level PCI

	FDOT Reco			
Use	Primary Airports	Regional Reliever Airports	General Aviation Airports	Critical PCI
Runway	75	75	75	65
Taxiway	70	65	65	65
Apron	65	65	60	65

Based on historic trends of pavement performance and industry standard practices in pavement maintenance and rehabilitation, the SAPMP included general guidance on construction activity based on condition PCI, as shown on Table 5-4. It is recommended that further investigation of underlying pavement conditions is performed at the design phase.

Table 5-4: Maintenance and Major Rehabilitation Activity Based on PCI

Category	Activity	PCI Range	
	Crack Sealing (AC/PCC)		
Maintenance	Partial Depth Patching (AC)	75 - 90	
Iviairiteriarice	• Full Depth Patching (AC/PCC)	75 - 90	
	Surface Treatment (AC)		
	Mill and Overlay (AC)		
Rehabilitation	<ul><li>Concrete Pavement Restoration (PCC)</li></ul>	40 - 74	
	Full Depth Pavement     Reconstruction	0 - 39	

The PCI standard scale ranges from a value of 0, typically representing a pavement in a failed condition, to a value of 100 which typically represents a pavement in new or good condition. Generally, airfield pavement sections with a PCI of 75 or higher that are not exhibiting distresses due to aircraft loading will benefit from maintenance activities such as crack sealing, patching, and surface treatments. Pavement sections with PCI values within the range of 40 to 74 may require major rehabilitation, such as a mill and overlay. Lastly, pavement sections with a PCI value of 40 or less are recommended to undergo pavement reconstruction. Generally pavement reconstruction is the only practical means of restoration due to the substantial distresses observed in the pavement structure. Since PCI values are based solely on the visual determination of



pavement distresses and deterioration, this method does not provide a direct measure of structural integrity.

# 5.2 Planning Level Unit Costs

The FDOT SAPMP developed and updated the maintenance and major rehabilitation costs based on public cost databases for airport and highway pavement construction. Additionally, cost data collected from FDOT and FAA sponsored projects in the Florida Airports System were utilized to identify construction cost trends across the state.

The maintenance, repair, and preservation activity costs have been updated and developed using readily available construction cost data at the time of this update. The costs depicted in this report for both maintenance and major rehabilitation are intended for planning purposes.

FDOT has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to FDOT at this time and represent only the standard judgment as a design professional familiar with the construction industry. FDOT cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

# 5.3 Maintenance, Repair, and Major Rehabilitation

FDOT recognizes that although pavement mill and overlay is recommended for flexible asphalt concrete pavement within a PCI range from 40 to 74, it is conceivable that airports may not have adequate funding to perform this type of major rehabilitation. A comprehensive surface treatment as described in FAA AC 150/5370-10G Standards for Specifying Construction of Airports used as a maintenance rehabilitation activity can be used in lieu of asphalt concrete pavement mill and overlay. However, it should be understood that these measures provide only a short term extension of pavement life. While the cost of surface treatments are significantly lower than that of pavement mill and overlay, it is not intended or implied to be a full rehabilitative measure for long term benefit. Table 5-5 and Table 5-6 provide budget costs associated with the work types shown in the table.



Table 5-5: Flexible Asphalt Concrete Maintenance Unit Costs

Surface Type	Maintenance Work Type	Cost	Work Unit
(1)	Full Depth Pavement Patch	\$5.00	Square Feet
Concrete APC)	Partial Depth Pavement Patch	\$3.00	Square Feet
alt Co C, AP	Seal Coat Treatment	\$0.55	Square Feet
Flexible Asphalt (AC, AAC, I	Crack Sealing		Linear Feet
lexible (A	Slurry Seal Coat Treatment	\$0.55	Square Feet
<u> </u>	Grinding / Removal	\$2.10	Square Feet

Table 5-6: Rigid Portland Cement Concrete Maintenance Unit Costs

Surface Type	Maintenance Work Type	Cost	Work Unit
	Slab Replacement / Full Depth Patch	\$45.00	Square Feet
	Partial Patch - PCC	\$19.10	Square Feet
ment	Crack Sealing - PCC	\$4.25	Linear Feet
Rigid Pavement (PCC)	Joint Seal Repair (Local)	\$3.00	Linear Feet
Rigid	Slab Stabilization / Slab Jacking	\$45.00	Square Feet
	Micro-mill and Seal - PCC	\$1.00	Square Feet
	Seal Coat Treatment	\$1.00	Square Feet

As part of the SAPMP update, the distress data observed at each airport during the inspection is extrapolated on a section basis to make maintenance recommendations. These recommendations are a direct result of the distress types, severities, and quantities observed at the time of inspection. The maintenance recommendations and planning costs are correlated with the airport's airfield pavement network's overall area weighted PCI and used to plan future maintenance costs. Future maintenance costs are planning budgets



that are not specific to a pavement section, but are estimates for the entire airfield. Table 5-7 provides budget costs associated with the rehabilitation activities.

Table 5-7: Major Rehabilitation Activities and Unit Costs by Condition

Catagony	Majority Activity	PCI Range	Cost/SqFt By Airport Type			
Category	Majority Activity	rei kange	Primary	Regional Reliever	General Aviation	
	• Mill and Overlay (AC)	40.74	\$13.00	\$10.00	\$8.00	
Major Rehabilitation	Concrete Pavement Restoration (PCC)	40 - 74	\$18.00	\$15.00	\$10.00	
	Full Depth Pavement Reconstruction	0 - 39	\$23.00	\$20.00	\$15.00	

NOTE: VALUES ARE ROUNDED FOR PLANNING PURPOSES AT THE STATEWIDE LEVEL

A cost scale has been developed based on PCI to develop planning level budgets for the airfield pavements. The cost scale is adjusted by project year based on an assumed inflation rate of 3%.

Table 5-8: District 10-Year Maintenance and Preservation Needs by Airport depicts the predicted pavement preservation needs based on the overall airport area-weighted PCI.

Table 5-8: District 10-Year Maintenance and Preservation Needs by Airport

Maintenance and Preservation (\$ in Millions)											
Network ID	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EYW	-	0.12M	0.13M	0.13M	0.17M	0.24M	0.31M	0.24M	0.31M	0.38M	0.45M
MTH	-	0.16M	0.07M	0.08M	0.13M	0.21M	0.30M	0.39M	0.45M	0.53M	0.59M
OPF	-	0.62M	0.59M	0.57M	0.37M	0.26M	0.24M	0.48M	0.70M	1.06M	1.52M
TMB	-	1.85M	1.91M	2.06M	2.21M	1.80M	1.86M	1.87M	1.31M	1.28M	0.84M
TNT	0.22M	0.24M	0.26M	0.28M	0.40M	0.50M	0.66M	0.85M	0.94M	1.07M	-
X51	0.25M	0.29M	0.33M	0.36M	0.29M	0.34M	0.40M	0.49M	0.57M	0.65M	-
DISTRICT	0.47M	3.27M	3.28M	3.48M	3.58M	3.35M	3.76M	4.33M	4.28M	4.97M	3.40M

NOTE: VALUES ARE ROUNDED FOR SUMMARY PURPOSES



#### 6. MAJOR REHABILITATION NEEDS

# 6.1 Major Rehabilitation Planning

As part of the SAPMP, major pavement rehabilitation planning is developed based on current and predicted PCI in comparison with the Critical PCI. The Critical PCI has been determined based on the historic trends of pavement condition relative to the benefit of maintenance and repair activities. Pavement sections determined to have a PCI less than that of the Critical PCI are assumed to have deteriorated to a point at which maintenance and repair level activity would provide little benefit. Depending on which Phase an airport was inspected, the program year assumed would be end of FY2013 or end of FY2015 for Phase I and Phase II, respectively.

The development of major rehabilitation projects at the planning level expressed in this District Summary and in the individual airport pavement evaluation reports were based on an 'Unlimited Budget' or unconstrained budget scenario. This scenario has been utilized in the SAPMP as a means to identify project activity based on the condition need. This information is intended to be utilized as a planning tool to support project determination and selection based on airport priority, facility use, traffic demand, budget constraints, and other factors.

The objective of the major pavement rehabilitation needs analysis is to provide planning level projects within an airport's airfield pavement network. Major rehabilitation activities are recommended when a pavement section has deteriorated below the Critical PCI value from a functionality perspective. In addition, major rehabilitation is also recommended when the Section PCI is above the Critical PCI but the Section has load-related PCI distresses. However, most major rehabilitation work is recommended when the Section PCI is below the Critical PCI, which is when maintenance and repair level activities are not considered to be cost effective.

Major rehabilitation is identified within the SAPMP as major construction activity that would result in an improvement or "resetting" of the pavement section's PCI to a value of 100. Such activities could include; mill and hot-mix asphalt overlay and re-construction. This analysis was conducted with no constraints to budgets as a means to identify all pavement projects based on Critical PCI for a 10-year duration. It is recommended that the airport use this as a planning tool for future project development and prioritization.



Airports should consider the major rehabilitation work types of mill and overlay, PCC restoration, and reconstruction planning level classifications only. Additional design level investigation in accordance to the FAA Advisory Circulars will be required to identify specific areas within each section that are subject to reconstruction, mill and overlay, and PCC restoration. The work and budgets identified are intended for the planning level not the design level. Areas identified as mill and overlay may in fact require select areas of reconstruction should load-based distresses observed warrant it. Table 6-1: Summary of District Year-1 Major Rehabilitation Needs identifies the overall planning level costs for each airport based on the total sections requiring major rehabilitation due to its PCI being below the Critical PCI of 65 or having substantial load based distresses.

Table 6-1: Summary of District Year-1 Major Rehabilitation Needs

Network ID	Airport Type	Weighted- Average PCI	Average Rating	Year-1 Major Rehabilitation
EYW	PR	57	FAIR	\$ 26,294,525.00
MTH	GA	62	FAIR	\$ 22,036,865.00
OPF	RL	62	FAIR	\$ 116,086,617.00
TMB	RL	74	SATISFACTORY	\$ 11,229,835.00
TNT	GA	62	FAIR	\$ 26,494,868.22
X51	GA	71	SATISFACTORY	\$ 5,742,080.35
	DISTRICT	65	FAIR	\$ 207,884,790.57

NOTE: VALUES ARE ROUNDED FOR SUMMARY PURPOSES AND INFLATION APPLIED AT 3% ANNUALLY

Table 6-2: Summary of District 10-Year Major Rehabilitation Needs identifies the overall planning level costs for each airport based on the total sections requiring major rehabilitation due to its PCI being below the Critical PCI of 65 as well as the pavement sections deteriorating below the Critical PCI over the 10-Year program planning period.

Table 6-2: Summary of District 10-Year Major Rehabilitation Needs

Network ID	Airport Type	Weighted-Average PCI	Average Rating	10-Year Major Rehabilitation
EYW	PR	57	FAIR	\$ 33,730,583.21
MTH	GA	62	FAIR	\$ 28,817,884.70
OPF	RL	62	FAIR	\$ 143,442,888.34
TMB	RL	74	SATISFACTORY	\$ 102,321,247.35
TNT	GA	62	FAIR	\$ 32,200,229.33
X51	GA	71	SATISFACTORY	\$ 8,617,440.08
	DISTRICT	65	FAIR	\$ 349,130,273.01

NOTE: VALUES ARE ROUNDED FOR SUMMARY PURPOSES AND INFLATION APPLIED AT 3% ANNUALLY

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Table 6-3: Summary of District 10-Year Major Rehabilitation Needs by Airport

	Major Rehabilitation (\$ in Millions)											
Network ID	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
EYW	-	26.29M	0.00M	0.00M	0.40M	0.00M	0.00M	7.04M	0.00M	0.00M	0.00M	
MTH	-	22.04M	4.69M	0.00M	0.00M	0.00M	0.97M	0.00M	1.12M	0.00M	0.00M	
OPF	-	116.09M	2.87M	2.15M	9.03M	5.58M	3.78M	0.35M	2.70M	0.88M	0.00M	
TMB	-	11.23M	4.02M	0.93M	0.60M	22.20M	3.18M	5.51M	26.93M	6.04M	21.69M	
TNT	26.49M	0.00M	0.00M	0.06M	0.07M	2.26M	0.90M	0.00M	2.42M	0.00M	-	
X51	5.74M	0.00M	0.00M	0.00M	2.88M	0.00M	0.00M	0.00M	0.00M	0.00M	-	
DISTRICT	32.24M	175.65M	11.58M	3.14M	12.97M	30.03M	8.83M	12.90M	33.17M	6.93M	21.69M	

NOTE: VALUES ARE ROUNDED FOR SUMMARY PURPOSES AND INFLATION APPLIED AT 3% ANNUALLY



#### 7. CONCLUSION

The FDOT Aviation and Spaceport Office has updated the Statewide Airfield Pavement Management Program through the pavement condition surveys performed at each participating airport and preparation of M&R planning information using guidance provided by the FAA Advisory Circular 150/5380-6C. MicroPAVER software was utilized to determine pavement conditions in accordance with ASTM D 5340-12 and develop maintenance and rehabilitation policies consistent with the FDOT Aviation and Spaceport Office policies. These policies were used to identify pavement rehabilitation projects based on the condition of the pavement over a 10-year period that are detailed in the individual airport reports and in Appendix D District 10-Year Major Rehabilitation Needs and Appendix E District Airfield Pavement 10-Year Major Rehabilitation Exhibits.

This study was focused on identifying current pavement condition and using a condition based tool to assist in the evaluation of pavement performance and identify and prioritize maintenance and rehabilitation needs and costs to maximize useful pavement life. The methods used to determine pavement condition for this program update, as with previous updates, have been performed in accordance with ASTM D 5340 (current version 5340-12). The process is intended to provide airport sponsors with guidance in planning pavement maintenance and rehabilitation projects and funding agencies with planning tools for allocation of funds.

A detailed breakdown of pavement condition for each airport is included in Appendix B District Branch and Section Condition Reports and Appendix C District Airfield Pavement Condition Index Rating Exhibits. As can be seen in this report and by comparing pavement conditions on an airport by airport basis, there is a wide variation in pavement conditions between airports. Recommended major rehabilitation recommendations for each airport are also included in Appendix D District 10-Year Major Rehabilitation Needs and Appendix E District Airfield Pavement 10-Year Major Rehabilitation Exhibits.

# 7.1 Major Rehabilitation for Runways in District

Runway projects, based on pavement conditions below the FDOT recommended minimum service level PCI of 75 and have reached or are below the Critical PCI of 65, which the District should consider as immediate needs are listed below. These are not all the needs at each participating airport within the



District and may not be the individual airport's priority, but should be considered in development of funding programs based on functional PCI.

# Key West International Airport (EYW)

- J Runway 9-27 (Sections 6105 and 6110)
  - o Major Rehabilitation
  - 0 \$8,640,000.00

# The Florida Keys Marathon Airport (MTH)

- J Runway 7-25 (6110 and 6105)
  - o Major Rehabilitation
  - 0 \$9,014,400.00

## Opa Locka Executive Airport (OPF)

- J Runway 12-30 (6205 and 6210)
  - o Major Rehabilitation
  - 0 \$15,241,299.00
- J Runway 9R-27L (6410)
  - Major Rehabilitation
  - 0 \$1,509,000.00
- J Runway 9L-27R (6105, 6115, 6120, 6130)
  - o Major Rehabilitation
  - 0 \$16,461,753.00

# Miami Executive Airport (TMB)

- J Runway 9L-27R (6104)
  - Major Rehabilitation
  - o \$300,000.00

# Dade - Collier Training and Transition Airport (TNT)

J Runway 9-27 (6105 and 6110)



- o Major Rehabilitation
- 0 \$15,749,999.25

# Homestead General Aviation Airport (X51)

- J Runway 18-36 (6110)
  - o Major Rehabilitation
  - 0 \$1,999,499.91

# **APPENDIX A**

GLOSSARY OF TERMS



#### **GLOSSARY OF TERMS**

#### ASTM D 5340-12

The ASTM D 5340-12 Standard Test Method for Airport Pavement Condition Index Surveys by the ASTM International. This test method covers the determination of airport pavement condition through visual surveys of asphalt-surfaced pavements, including porous friction course, and plain or reinforced jointed Portland Cement Concrete pavements, using the Pavement Condition Index (PCI) method of quantifying pavement condition. The PCI for airport pavements was developed by the U.S. Army Corps of Engineers through the funding provided by the U.S. Air Force. It is further verified and adopted by the FAA, and the U.S. Naval Facilities Engineering Command.

# Aviation and Spaceport Office

The Florida Department of Transportation Aviation and Spaceport Office is charged with responsibility for promoting the safe development of aviation to serve the people of the State of Florida. The Aviation Office Program Manager (ASO-PM) has review and approval authority for each program task of the SAPMP.

#### Branch

A Branch (pavement branch) designates pavements that have common usage and functionality, such as an entire runway, taxiway, or apron. A pavement branch is an identifiable part of the pavement network that a single entity and has a distinct function.

# Category

The Category classifies the airport according to the type and volume of aircraft traffic, as follows:

- J GA for general aviation or community airports;
- J RL for regional relievers or small hubs;
- J PR for primary and/or commercial service airports

The airport Category has been the attribute to aid in the refinement and differentiation of airport infrastructure as it relates to aircraft fleet mix (type, frequency, and pavement requirements).

#### Critical PCI

The PCI value considered to be the threshold for M&R decisions, it is alternatively known as MicroPAVER Minimum PCI. PCI above the Critical generate economical activities expected to preserve and prolong acceptable condition. M&R for PCI values less than



Critical make sense only for reasons of safety or to maintain a pavement in operable condition. A pavement section is expected to deteriorate very quickly once it reaches the Critical PCI and the unit cost of repair increases significantly.

#### **Distress Type**

A distress type, alternatively pavement distress, is a defined visible defect in pavement evidenced by cracking, vertical displacement or deterioration of material. Distresses are external indicators of pavement deterioration caused by loading, environmental factors, or construction deficiencies, or combination thereof. Typical distresses are cracks, rutting, and weathering of the pavement surface. Specific distress types as defined by the ASTM D 5340-12 are required to obtain an accurate PCI value.

#### FAA

The Federal Aviation Administration. The FDOT Statewide Airfield Pavement Management Program is sponsored by the FAA. The program has been established and updated in accordance with FAA Advisory Circulars 150/5380-7B Airport Pavement Management Program and 150/5380-6C Guidelines and Procedures for Maintenance of Airport Pavements.

#### **FDOT**

The Florida Department of Transportation. Florida Department of Transportation was represented in this project by the Aviation and Space Port Office of the Office of Freight, Logistics and Passenger Operations.

## Localized M&R (Maintenance and Repair)

Alternatively, known as Maintenance or Preservation activities, Localized M&R is a temporary activity performed on existing pavement to extend its serviceability and/or to improve rideability. Localized M&R can be applied either as a safety (stop-gap) measure or preventive measure. Common localized maintenance methods include crack sealing, joint sealing, and patching.

# Major M&R or Major Rehabilitation (e.g. Rehabilitation)

Activities performed over the entire area of a pavement Section that are intended to restore and/or maintain serviceability. This includes asphalt overlays, milling and replacing asphalt pavement, reconstruction with asphalt, reconstruction with Portland Cement Concrete (PCC) pavements, and PCC overlays. For the purpose of the FDOT Statewide Airfield Pavement Management Program, Major M&R or Major Rehabilitation, as indicated by Mill and Overlay, PCC Restoration, and/or Reconstruction are planning level categories. It is recommended that project level investigation and design in accordance with the FAA Advisory Circulars be performed.

#### MicroPAVER (PAVER)

Alternatively known as PAVER, a commercially available software subsidized by FAA and agencies in the US Department of Defense developed to support engineered



management of pavement assets using a condition based approach. This software has the functionality such that, if properly implemented, maintained, and operated, it meets the pavement management program requirements described by the FAA in Advisory Circular 150/5380-7B.

#### Minimum Condition Level

A threshold PCI value established by FDOT to represent the targeted minimum pavement condition that is desirable in the Florida Airport System. These values were established with consideration of pavement function and airport type. For instance, runways have higher minimum condition levels than aprons, and Primary airports have higher minimum condition levels than General Aviation airports.

#### **Network Definition**

A Network Definition is a Computer-Aided Drafting & Design (CADD) drawing which shows the airport pavement outline with pavement Branch and pavement Section boundaries. This drawing also includes the PCI sample units and is used to identify those sample units to be surveyed, i.e. the sampling plan. Each Network Definition for the participating airports were developed utilizing information provided by the airport staff, field conditions, record drawings, schematics, and aerial imagery provided by the FDOT Surveying and Mapping Office. The Airfield Pavement Network Definition Exhibits are not intended for construction or design level geometry.

# Pavement Condition Index (PCI)

The Pavement Condition Index is a number which represents the condition of a pavement segment at a specific point in time. It is a numerical rating of the pavement condition that ranges from 0 to 100, with 0 being the worst possible condition and 100 being the best possible condition. It is based on visual identification and measurement of specific distress types commonly found in pavement which has been in service for a period of time. The definitions and procedures for determining the PCI are found in ASTM D 5340, published by ASTM International.

# Pavement Condition Rating (PCR)

A verbal description of pavement condition as a function of the PCI value. The SAPMP utilizes the following Pavement Condition Rating.



PCI Range	Pavement Condition Rating		
86 - 100	Good		
71 - 85	Satisfactory		
56 - 70	Fair		
41 - 55	Poor		
26 - 40	Very Poor		
11 - 25	Serious		
0 - 10	Failed		

The SAPMP considers seven (7) ranges of condition rating based on the PCI ranges shown above.

#### **Pavement Evaluation**

A systematic approach undertaken by trained and experienced personnel intended for determination of the condition, serviceability, and best corrective action for pavement. Techniques to standardize pavement evaluation include the Pavement Condition Index procedures.

## Pavement Management System (PMS)

A Pavement Management System is a broad function that uses pavement evaluation and pavement performance trends as a basis for planning, programming, financing, and maintaining a pavement system.

# Pavement Surface Type

The surface of pavement is identified as one of four types:

- AC for asphalt concrete surface pavements(Hot-Mix Asphalt, Bituminous Surface Courses);
- PCC for Portland Cement Concrete pavements;
- AAC for asphalt surface pavements that have had an asphalt overlay at some point in their construction history;
- APC for composite pavements, which consist of asphalt over Portland Cement Concrete pavement.
- PAC for composite pavements, which consist of Portland Cement Concrete over asphalt concrete pavement.
- WHT for composite whitetopping pavements, which typically consists of thin concrete overlay over asphalt concrete pavement.



# Random Sample

A sample unit of the pavement section selected for inspection by random sampling techniques, such as a random number table or systematic random procedure. For the purpose of the SAPMP, random samples were determined by previous iterations of the SAMP Update and are maintained as inspection sample units unless substantial changes to section limits have been made due to construction work.

#### Reconstruction

Reconstruction includes removal of existing pavement, preparation of subgrade, and construction of new pavement with new or recycled materials. Reconstruction is indicated when distress types evident at the surface indicate failure in the pavement structure or subgrade of a type, and to an extent, not correctable by less extensive construction.

#### Rehabilitation

Rehabilitation represents construction using existing pavement for a foundation. Rehabilitation most commonly consists of an overlay of existing pavement with a new asphalt or concrete surface. Recently, technology has expanded the options to include recycling of existing pavement and incorporating engineering fabrics or thin layers of elasticized materials to retard reflection of distress types through the new surface.

# Sample Unit

Uniformly sized portions of a Section as defined in ASTM D 5340. Sample units are a means to reduce the total amount of pavement actually surveyed using statistics to select and survey enough area to provide a representative measure of Section PCI. Sample Unit sizes are 5,000 ± 2,000 square feet for AC-surfaced pavements and 20 ± 8 slabs for PCC-surfaced pavements.

#### Section

Sections subdivide Branches into portions of similar pavement. Sections are prescribed by pavement structure, age, condition, and use. Sections are identified on the airport Network Definition. They are the smallest unit used for determining M&R requirements based on condition.

# Statewide Airfield Pavement Management Program (SAPMP)

The Statewide Airfield Pavement Management Program is a program implemented in 1992 by the Florida Department of Transportation to plan, schedule, and design the maintenance and rehabilitation activities necessary for the airfield pavement on Florida's public airports to allow the airports to operate efficiently, economically, and without excessive down time.



# System Inventory

A System Inventory is a Computer-Aided Drafting & Design (CADD) drawing which shows the airport pavement outline and identifies airfield construction activities since the last inspection.

## Use

In MicroPAVER, Use is the term for the function of the pavement area, alternatively Branch Use, Pavement Use, or Pavement Facility Use. For the SAPMP the facility use consists of the following: Runway, Taxiway, or Apron for purposes of the SAPMP program planning.

# **APPENDIX B**

- DISTRICT BRANCH CONDITION REPORT
- DISTRICT SECTION CONDITION REPORT

#### **Branch Condition Report**

1 of 11

Pavement Database: FDOT NetworkID: EYW

Sum Section Avg Section Number of PCI Weighted **True Area** Average **Branch ID** Use **Sections** Length Width Standard Average (SqFt) PCI PCI (Ft) (Ft) Deviation APE (EAST APRON) 8 4,355.00 166.25 612,865.00 **APRON** 45.88 8.58 47.07 APW (WEST APRON) 3 1,800.00 223,091.00 **APRON** 117.67 67.33 7.41 66.87 RW 9-27 (RUNWAY 9-27) 2 9,600.00 50.00 480,000.00 RUNWAY 1.50 58.95 58.50 TW A (TAXIWAY A) 4,553.00 234,411.00 **TAXIWAY** 3 50.00 65.67 7.54 67.26 TW A10 (TAXIWAY A10) 1 120.00 50.00 2,531.00 **TAXIWAY** 100.00 0.00 100.00 TW A7 (TAXIWAY A7) 120.00 36.00 1,991.00 **TAXIWAY** 100.00 100.00 1 0.00 TW A8 (TAXIWAY A8) 1 120.00 36.00 1,992.00 **TAXIWAY** 100.00 0.00 100.00 TW A9 (TAXIWAY A9) 120.00 2,531.00 **TAXIWAY** 1 50.00 100.00 0.00 100.00 TW B (TAXIWAY B) 240.00 150.00 **TAXIWAY** 1 39,917.00 63.00 0.00 63.00 TW C (TAXIWAY C) 240.00 20,166.00 **TAXIWAY** 0.00 1 50.00 68.00 68.00 TW D (TAXIWAY D) **TAXIWAY** 4 687.00 45.25 39,902.00 56.75 9.04 55.74 TW E (TAXIWAY E) 2 1,010.00 100.00 84,903.00 **TAXIWAY** 52.50 11.50 54.96

### **Branch Condition Report**

Pavement Database: FDOT NetworkID: MTH

Sum Section Avg Section PCI Number of Weighted **True Area** Average **Branch ID** Use Width **Sections** Length Standard Average (SqFt) PCI PCI (Ft) (Ft) Deviation APE (APRONE) 2 546.00 104.00 52,248.00 **APRON** 64.50 7.50 67.11 AP FLGHT C (APRON AT FLIGHT 2,079.00 341,588.00 **APRON** 5 115.20 63.00 12.51 64.83 CENTER) AP JET CTR (JET CENTER APRON 4 1,392.00 200.00 196,921.00 **APRON** 39.25 9.73 44.36 AP TERM (TERMINAL APRON) 3 125,746.00 **APRON** 63.17 1,119.00 94.00 61.00 2.83 APT-HAN (T-HANGAR APRONS) 1 1,465.00 25.00 37,434.00 **APRON** 79.00 0.00 79.00 RW 7-25 (RUNWAY 7-25) 2 10,016.00 50.00 500,800.00 **RUNWAY** 61.25 61.50 0.50 TW A (TAXIWAY A) 2 6,370.00 42.50 303,531.00 **TAXIWAY** 67.50 1.50 66.50 TW B (TAXIWAY B) 100.00 100.00 10,711.00 **TAXIWAY** 1 61.00 0.00 61.00 TW C (TAXIWAY C) 125.00 **TAXIWAY** 68.09 2 56.00 10,120.00 67.50 2.50 TW D (TAXIWAY D) 2 170.00 16,758.00 **TAXIWAY** 110.00 73.00 10.00 71.91 TW E (TAXIWAY E) **TAXIWAY** 3 1,740.00 75.00 54,170.00 77.33 5.25 80.67

#### **Branch Condition Report**

Pavement Database: FDOT NetworkID: OPF

Sum Section | Avg Section Number of PCI Weighted True Area **Branch ID** Use Average **Sections** Length Width Standard Average (SqFt) PCI PCI (Ft) (Ft) Deviation AP CENTER (CENTER APRON) 9 6,813.00 153.22 828,728.26 **APRON** 52.56 23.84 44.05 APE (EAST APRON) 6 5,782.00 203.33 774,157.24 **APRON** 64.67 26.00 70.18 AP NE (NE APRON) 1,960.00 707,659.00 **APRON** 46.00 1 400.00 46.00 0.00 AP SE (SE APRON) 41,364.13 270.00 **APRON** 150.00 50.00 0.00 50.00 1 APT-HANG (T-HANGAR APRON) 6 2,500.00 233.33 465,489.11 **APRON** 60.83 20.76 63.89 61,200.00 1,020,000.00 **RUNWAY** RW 12-30 (RUNWAY 12-30) 6 62.50 84.17 22.54 53.63 RW 9L-27R (RUNWAY 9L-27R) 10 27,000.00 50.00 1,200,300.00 **RUNWAY** 78.00 61.97 18.14 RW 9R-27L (RUNWAY 9R-27L) 2 4,309.00 100.00 430,900.00 **RUNWAY** 67.00 4.00 69.13 TAXIWAY 4,430.00 TW B (TAXIWAY B) 5 57.00 226,012.80 54.20 7.03 56.25 TW C (TAXIWAY C) **TAXIWAY** 6 2,426.00 71.67 181,160.04 84.17 22.41 70.81 TW D (TAXIWAY D) 3 1,750.00 116.67 190,073.09 **TAXIWAY** 56.33 2.62 56.93 TW E (TAXIWAY E) 4 3,575.00 58.75 256,507.00 **TAXIWAY** 61.00 4.30 59.96 TW F (TAXIWAY F) 4 1,100.00 78.75 100,524.01 **TAXIWAY** 91.75 14.29 95.16 TW G (TAXIWAY G) 10 4,950.00 85.00 427,882.21 **TAXIWAY** 71.20 15.33 70.30 TW H (TAXIWAY HOTEL) 13 14,596.00 61.54 713,693.63 **TAXIWAY** 70.62 14.32 73.83 TW J (TAXIWAY J) 6 1,960.00 77.50 184,501.62 **TAXIWAY** 66.83 15.87 67.90

# **Branch Condition Report**

Pavement Database: FDOT NetworkID: OPF

Branch ID	Number of Sections	Sum Section Length (Ft)	Avg Section Width (Ft)	True Area (SqFt)	Use	Average PCI	PCI Standard Deviation	Weighted Average PCI
TW N (TAXIWAY N)	9	8,591.00	71.11	658,153.42	TAXIWAY	86.33	15.80	84.78
TW N1 (TAXIWAY N1)	1	400.00	150.00	62,407.95	TAXIWAY	78.00	0.00	78.00
TW P (TAXIWAY P)	11	8,363.00	74.09	596,884.45	TAXIWAY	61.00	18.92	60.56
TW R (TAXIWAY R)	2	1,070.00	50.00	58,798.86	TAXIWAY	72.50	2.50	71.68
TW S (TAXIWAY S)	4	1,560.00	75.00	124,905.87	TAXIWAY	79.75	21.34	76.57
TW T (TAXIWAY T)	3	6,550.00	191.67	640,106.66	TAXIWAY	57.33	0.94	57.83
TW T1 (TAXIWAY T1)	1	450.00	100.00	45,497.10	TAXIWAY	50.00	0.00	50.00
TW V (TAXIWAY V)	1	1,100.00	50.00	55,248.59	TAXIWAY	71.00	0.00	71.00
TW Y (TAXIWAY Y)	4	4,770.00	62.50	311,369.32	TAXIWAY	55.50	6.87	50.22
TW Y1 (TAXIWAY Y1)	1	300.00	50.00	21,687.05	TAXIWAY	58.00	0.00	58.00
TW Y2 (TAXIWAY Y2)	1	300.00	100.00	41,210.63	TAXIWAY	48.00	0.00	48.00
TW Y5 (TAXIWAY Y5)	1	225.00	150.00	34,245.91	TAXIWAY	50.00	0.00	50.00

#### **Branch Condition Report**

Pavement Database: FDOT NetworkID: TMB

Sum Section | Avg Section Number of PCI Weighted True Area Average **Branch ID** Use **Sections** Length Width Standard Average (SqFt) PCI PCI (Ft) (Ft) Deviation APN (NORTH APRON) 6 5,935.00 198.33 1,116,984.76 **APRON** 70.00 17.25 76.81 AP NE (NORTHEAST APRON) 112,013.84 6 1,325.00 70.00 **APRON** 77.83 8.93 74.93 APS (SOUTH APRON) 7 6,919.05 1,412,105.41 **APRON** 72.42 166.57 60.14 12.89 AP SE (SOUTHEAST APRON) 400.00 45,220.00 **APRON** 60.00 100.00 60.00 0.00 1 RW 13-31 (RUNWAY 13-31) 2 12,006.00 62.50 600,300.00 **RUNWAY** 73.50 1.50 73.00 RW 9L-27R (RUNWAY 9L-27R) 15,006.00 62.50 750,300.00 **RUNWAY** 6 70.67 4.31 74.13 RW 9R-27L (RUNWAY 9R-27L) 8 18,003.00 62.50 900,150.00 **RUNWAY** 74.63 74.21 3.16 TW 1 (TAXIWAY 1) 200.00 1 50.00 12,842.70 **TAXIWAY** 81.00 0.00 81.00 200.00 **TAXIWAY** TW 2 (TAXIWAY 2) 1 90.00 19,697.18 77.00 0.00 77.00 TW 3 (TAXIWAY 3) 200.00 19,697.18 **TAXIWAY** 1 90.00 80.00 0.00 80.00 TW 4 (TAXIWAY 4) **TAXIWAY** 1 200.00 90.00 19,697.18 80.00 0.00 80.00 TW 5 (TAXIWAY 5) 200.00 90.00 19,697.18 **TAXIWAY** 84.00 0.00 84.00 1 TW 6 (TAXIWAY 6) 1 200.00 90.00 19,696.66 **TAXIWAY** 80.00 0.00 80.00 TW 7 (TAXIWAY 7) 200.00 90.00 18,557.11 **TAXIWAY** 79.00 0.00 79.00 1 TW A (TAXIWAY A) **TAXIWAY** 4 6,530.00 68.75 361,647.06 81.75 3.77 81.18 TW A1 (TAXIWAY A1) 1 300.00 75.00 50,474.98 **TAXIWAY** 85.00 0.00 85.00

#### **Branch Condition Report**

Pavement Database: FDOT NetworkID: TMB

Number of Sum Section | Avg Section PCI Weighted **True Area Branch ID** Use Average **Sections** Length Width Standard Average (SqFt) PCI PCI (Ft) (Ft) Deviation TW A2 (TAXIWAY A2) 300.00 75.00 50,474.98 **TAXIWAY** 85.00 0.00 85.00 1 TW A3 (TAXIWAY A3) 620.00 **TAXIWAY** 2 87.50 58,938.06 74.50 3.50 74.18 TW AP NE (TAXIWAY TO NE 1,200.00 44,690.90 **TAXIWAY** 65.00 1 35.00 65.00 0.00 APRON) TW AP SE (TAXIWAY TO SE 1,400.00 **TAXIWAY** 30.00 42,726.72 60.00 0.00 60.00 1 APRON) TW C (TAXIWAY C) 1 2,600.00 50.00 138,068.51 **TAXIWAY** 76.00 0.00 76.00 190.00 **TAXIWAY** TW C1 (TAXIWAY C1) 1 90.00 17,643.88 68.00 0.00 68.00 TW C2 (TAXIWAY C2) 190.00 17,567.42 **TAXIWAY** 66.00 1 90.00 66.00 0.00 TW CC (TAXIWAY CC) 1 125.00 50.00 7,838.05 **TAXIWAY** 70.00 0.00 70.00 TW D (TAXIWAY D) **TAXIWAY** 4 4,961.00 81.25 284,135.64 67.25 7.79 58.67 TW D1 (TAXIWAY D1) 500.00 50,474.98 **TAXIWAY** 1 100.00 66.00 0.00 66.00 TW D2 (TAXIWAY D2) 1 300.00 75.00 50,462.90 **TAXIWAY** 52.00 0.00 52.00 TW E (TAXIWAY E) 5 6,920.00 94.00 411,789.34 **TAXIWAY** 83.20 5.67 82.58 TW E1 (TAXIWAY E1) 2 598.00 100.00 59,884.07 **TAXIWAY** 82.00 6.00 80.22 TW E2 (TAXIWAY E2) 300.00 75.00 50,474.48 **TAXIWAY** 0.00 73.00 1 73.00 TW E3 (TAXIWAY E3) 300.00 75.00 41,823.46 **TAXIWAY** 71.00 0.00 71.00 1 TW E4 (TAXIWAY E4) 1 300.00 50.00 26,266.60 **TAXIWAY** 69.00 0.00 69.00

## **Branch Condition Report**

7 of 11

Pavement Database: FDOT NetworkID: TMB

Number of Sum Section Avg Section PCI Weighted **True Area** Average **Branch ID** Use Width **Sections** Length Standard Average (SqFt) PCI PCI (Ft) (Ft) Deviation TW E5 (TAXIWAY E5) 2 600.00 82.50 58,338.06 **TAXIWAY** 75.00 2.00 75.20 TW F (TAXIWAY F) 1,050.00 57,730.09 **TAXIWAY** 81.00 1 50.00 81.00 0.00 TW G (TAXIWAY G) 2 1,340.00 50.00 68,727.78 **TAXIWAY** 78.50 0.50 78.75 TW H (TAXIWAY H) 2,200.00 119,041.80 **TAXIWAY** 0.00 71.00 1 50.00 71.00 TW H1 (TAXIWAY H1) 1 90.00 50.00 4,801.55 **TAXIWAY** 78.00 0.00 78.00 TW H2 (TAXIWAY H2) 1 75.00 100.00 7,744.33 **TAXIWAY** 72.00 0.00 72.00 TW H3 (TAXIWAY H3) 1 200.00 90.00 18,456.28 **TAXIWAY** 79.00 0.00 79.00 TW H4 (TAXIWAY H4) 190.00 17,255.03 **TAXIWAY** 1 90.00 85.00 0.00 85.00 TW H5 (TAXIWAY H5) 200.00 **TAXIWAY** 0.00 82.00 1 90.00 19,697.18 82.00 TW H6 (TAXIWAY H6) 200.00 90.00 19,697.18 **TAXIWAY** 87.00 0.00 87.00 1 TW H7 (TAXIWAY H7) **TAXIWAY** 1 190.00 50.00 12,808.80 83.00 0.00 83.00

### **Branch Condition Report**

8 of 11

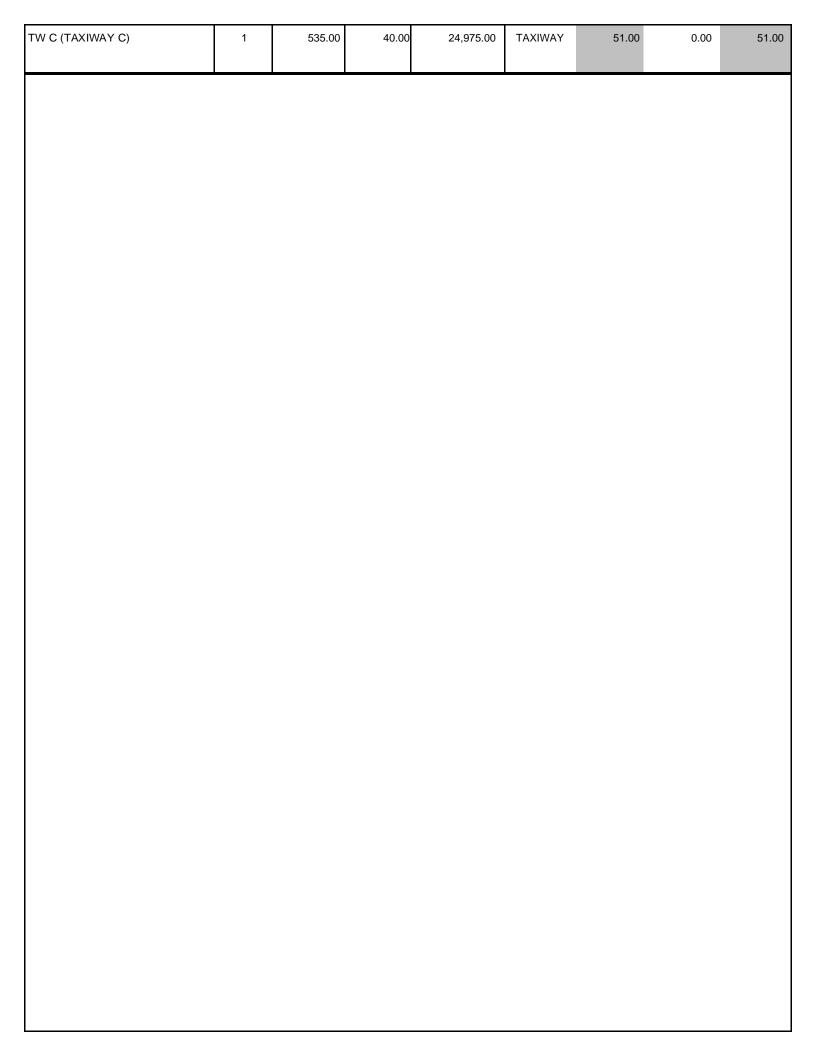
Pavement Database: FDOT NetworkID: TNT

Number of Sum Section Avg Section PCI Weighted **True Area** Average **Branch ID** Use Width **Sections** Length Standard Average (SqFt) PCI PCI (Ft) (Ft) Deviation APN (APRON NORTH) 1 660.00 75.00 49,500.00 **APRON** 54.00 0.00 54.00 RW 9-27 (RUNWAY 9-27) 2 31,500.00 1,575,000.00 **RUNWAY** 50.00 60.00 1.00 59.75 TW A (TAXIWAY A) 3 11,250.00 91.67 883,822.81 **TAXIWAY** 63.00 5.72 59.28 TW A1 (TAXIWAY A1) 3 1,230.00 82,611.32 **TAXIWAY** 40.00 50.00 63.67 22.57 TW A2 (TAXIWAY A2) 1 1,000.00 100.00 107,503.13 **TAXIWAY** 85.00 0.00 85.00 TW A3 (TAXIWAY A3) 1 800.00 150.00 187,363.33 **TAXIWAY** 82.00 0.00 82.00 TW A4 (TAXIWAY A4) 1 800.00 150.00 187,363.33 **TAXIWAY** 70.00 0.00 70.00 TW A5 (TAXIWAY A5) 1,000.00 100.00 107,503.13 **TAXIWAY** 1 73.00 0.00 73.00 82,611.32 TW A6 (TAXIWAY A6) 950.00 **TAXIWAY** 7.32 56.60 3 66.67 64.33 TW B (TAXIWAY B) 3 1,810.00 131,957.41 **TAXIWAY** 66.67 63.67 9.88 65.27

#### **Branch Condition Report**

Pavement Database: FDOT NetworkID: X51

Number of Sum Section | Avg Section PCI Weighted True Area **Branch ID** Use Average **Sections** Length Width Standard Average (SqFt) PCI PCI (Ft) (Ft) Deviation APN (NORTH APRON) 425.00 200.00 85,048.00 **APRON** 74.00 0.00 74.00 1 AP NE (NE APRON) 520.00 1 180.00 105,398.00 **APRON** 86.00 0.00 86.00 AP NW (NW APRON) 2 730.00 267,430.00 **APRON** 67.31 294.00 70.50 3.50 RW 10-28 (RUNWAY 10-28) 224,925.00 **RUNWAY** 2,999.00 75.00 78.00 0.00 78.00 1 RW 18-36 (RUNWAY 18-36) 2 11,997.00 37.50 399,900.00 **RUNWAY** 74.00 16.00 74.00 TW A (TAXIWAY ALPHA) 10 4,295.00 184,505.71 **TAXIWAY** 48.50 67.00 11.52 70.87 TW A1 (TAXIWAY A1) 2 200.00 9,207.57 **TAXIWAY** 69.00 65.81 45.00 9.00 TW A2 (TAXIWAY A2) 250.00 1 40.00 11,519.91 **TAXIWAY** 59.00 0.00 59.00 200.00 **TAXIWAY** TW A3 (TAXIWAY A3) 2 45.00 9,003.71 71.50 6.50 69.14 TW AP (TAXIWAY TO APRON) **TAXIWAY** 2 195.00 40.00 14,608.00 70.00 24.00 60.80 TW B (TAXIWAY BRAVO) 2 4,088.16 50.00 205,921.00 **TAXIWAY** 63.00 0.00 63.00 TW B1 (TAXIWAY B1) 260.00 75.00 20,222.62 **TAXIWAY** 78.00 0.00 78.00 1 TW B2 (TAXIWAY B2) 1 200.00 100.00 21,223.34 **TAXIWAY** 59.00 0.00 59.00 TW B3 (TAXIWAY B3) 240.00 50.00 12,237.28 **TAXIWAY** 54.00 0.00 54.00 1 TW B4 (TAXIWAY B4) **TAXIWAY** 250.00 50.00 15,568.97 59.00 0.00 59.00 1 TW B5 (TAXIWAY B5) 2 200.00 75.00 16,325.45 **TAXIWAY** 76.00 18.00 80.30



TAXIWAY

ΑII

207

324

# **Branch Condition Report**

Pavement Database: FDOT

70.71

68.79

15.54

16.84

68.32

65.76

Use Category	Number of Sections	Total Area (SqFt)	Arithmetic Average PCI	Average PCI STD.	Weighted Average PCI
APRON	74	7,600,990.75	60.50	18.65	63.08
RUNWAY	43	8,082,575.00	73.79	14.66	64.99

10,370,123.85

26,053,689.61

#### **Section Condition Report**

Pavement Database: FDOT

NetworkID: EYW

Last Age Section ID Hee Branch ID Last Surface Rank Lanes True Area **PCI** Inspection Αt (SqFt) Date Inspection Date AP E (EAST APRON) Ρ 4105 01/01/2003 AAC **APRON** 87,201.00 03/23/2015 12 55.00 AP E (EAST APRON) 4110 01/01/2003 AAC **APRON** Ρ 17,663.00 03/23/2015 12 57.00 AP E (EAST APRON) 4115 01/01/2003 AAC **APRON** Ρ 50,253.00 03/23/2015 12 41.00 AP E (EAST APRON) AAC **APRON** 66,920.00 03/23/2015 4120 01/01/2003 0 12 30.00 AP E (EAST APRON) AAC **APRON** Ρ 4125 01/01/2003 0 48.00 94,962.00 03/23/2015 12 AP E (EAST APRON) Р 4130 01/01/2003 AAC **APRON** 0 44,897.00 03/23/2015 12 44.00 AP E (EAST APRON) **APRON** Р 189,743.00 03/23/2015 4145 01/01/2003 AAC 0 12 53.00 AP E (EAST APRON) Р 4150 01/01/2003 AC **APRON** 0 61,226.00 03/23/2015 12 39.00 AP W (WEST APRON) 4205 01/01/2003 AC **APRON** Ρ 77,458.00 03/23/2015 74.00 AP W (WEST APRON) 01/01/2003 AC **APRON** 0 82,435.00 03/23/2015 12 4210 57.00 AP W (WEST APRON) AAC **APRON** Ρ 71.00 4215 01/01/2006 0 63,198.00 03/23/2015 9 RW 9-27 (RUNWAY 9-27) **RUNWAY** Р 6105 01/01/2003 AAC 0 312,000.00 03/23/2015 12 60.00 RW 9-27 (RUNWAY 9-27) 6110 01/01/2003 AAC **RUNWAY** Ρ 0 168,000.00 03/23/2015 12 57.00 TW A (TAXIWAY A) 105 01/01/2003 AAC **TAXIWAY** Ρ 149,579.00 03/23/2015 71.00 TW A (TAXIWAY A) **TAXIWAY** Ρ 30,037.00 03/23/2015 107 01/01/2003 AAC 12 71.00 TW A (TAXIWAY A) **TAXIWAY** Ρ 110 01/11/2003 AAC 0 54,795.00 03/23/2015 12 55.00 TW A10 (TAXIWAY A10) 01/01/2014 PCC **TAXIWAY** Ρ 2,531.00 01/01/2014 100.00 165 0 0 TW A7 (TAXIWAY A7) Р PCC **TAXIWAY** 01/01/2014 0 1,991.00 01/01/2014 0 100.00 150 TW A8 (TAXIWAY A8) 155 01/01/2014 PCC **TAXIWAY** Р 0 1,992.00 01/01/2014 0 100.00 TW A9 (TAXIWAY A9) 160 01/01/2014 PCC **TAXIWAY** Ρ 0 2,531.00 01/01/2014 100.00 TW B (TAXIWAY B) 205 01/01/2003 AAC **TAXIWAY** Ρ 0 39,917.00 03/23/2015 12 63.00 TW C (TAXIWAY C) 01/01/2003 **TAXIWAY** Р 0 20,166.00 03/23/2015 68.00 305 AAC 12 TW D (TAXIWAY D) 505 01/01/2003 AAC **TAXIWAY** Ρ 0 11,124.00 03/23/2015 12 58.00 TW D (TAXIWAY D) AAC **TAXIWAY** Ρ 507 01/01/2003 7,250.00 03/23/2015 12 71.00 TW D (TAXIWAY D) **TAXIWAY** Ρ 510 01/01/2003 AAC 0 15,362.00 03/23/2015 12 50.00 TW D (TAXIWAY D) 520 01/01/2003 AAC **TAXIWAY** 0 6,166.00 03/23/2015 12 48.00

# **Section Condition Report**

Pavement Database: FDOT NetworkID: EYW

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	Lanes	True Area (SqFt)	Last Inspection Date	Age At Inspection	PCI
TW E (TAXIWAY E)	605	01/01/2003	AAC	TAXIWAY	Р	0	51,537.00	03/23/2015	12	64.00
TW E (TAXIWAY E)	610	01/01/2003	AAC	TAXIWAY	Р	0	33,366.00	03/23/2015	12	41.00

#### **Section Condition Report**

Pavement Database: FDOT

NetworkID: MTH

Last Age Section ID Use Branch ID Last Surface Rank Lanes True Area PCI Inspection Αt Const. (SqFt) Date Inspection Date AP E (APRON E) Т 4505 09/01/2007 AAC **APRON** 0 35,198.00 03/24/2015 8 72.00 AP E (APRONE) 4510 01/01/1999 AC **APRON** Τ 0 17,050.00 03/24/2015 16 57.00 AP FLGHT C (APRON AT FLIGHT 4105 01/01/1983 AC **APRON** Ρ 0 269,634.00 03/24/2015 32 65.00 AP FLGHT C (APRON AT FLIGHT 4110 01/01/1983 PCC **APRON** Ρ 0 4,020.00 03/24/2015 32 44.00 CENTER) AP FLGHT C (APRON AT FLIGHT 4115 01/01/1966 AC **APRON** Р 0 35,147.00 03/24/2015 49 59.00 CENTER) AP FLGHT C (APRON AT FLIGHT **APRON** Ρ 4120 01/01/1998 AC 0 18,521.00 03/24/2015 17 64.00 CENTER) AP FLGHT C (APRON AT FLIGHT 4125 12/25/1999 **APRON** Ρ 0 14,266.00 03/24/2015 83.00 AC 16 CENTER) AP JET CTR (JET CENTER APRON) 4305 01/01/1990 AC **APRON** Ρ 0 112,985.00 03/24/2015 25 42.00 AP JET CTR (JET CENTER APRON) 4310 01/01/1987 PCC **APRON** Ρ 0 17,801.00 03/24/2015 28 31.00 AP JET CTR (JET CENTER APRON) **APRON** P 60,631.00 03/24/2015 4315 12/25/1999 AC 16 54.00 AP JET CTR (JET CENTER APRON) **APRON** Ρ 4320 01/01/1990 AC 0 5,504.00 03/24/2015 25 30.00 AP TERM (TERMINAL APRON) **APRON** Ρ 20,012.00 03/24/2015 4205 01/01/1978 AAC 0 37 59.00 AP TERM (TERMINAL APRON) AC Ρ 4210 01/01/1999 **APRON** 0 18,371.00 03/24/2015 16 59.00 AP TERM (TERMINAL A PRON) PCC **APRON** Р 4220 01/01/1994 0 87,363.00 03/24/2015 21 65.00 AP T-HAN (T-HANGAR APRONS) 4405 12/25/1999 AC **APRON** Р 37,434.00 03/24/2015 16 79.00 RW 7-25 (RUNWAY 7-25) 6105 01/01/1985 AAC **RUNWAY** Ρ 0 375,600.00 03/24/2015 30 61.00 RW 7-25 (RUNWAY 7-25) 6110 01/01/1985 AAC **RUNWAY** 0 125,200.00 03/24/2015 62.00 30 TW A (TAXIWAY A) AAC Р 105 **TAXIWAY** 0 01/01/1998 252,877.00 03/24/2015 17 66.00 TW A (TAXIWAY A) Ρ 115 12/25/1999 AC **TAXIWAY** 0 50,654.00 03/24/2015 16 69.00 TW B (TAXIWAY B) 151 01/01/1998 AAC **TAXIWAY** Ρ 0 10,711.00 03/24/2015 17 61.00 TW C (TAXIWAY C) **TAXIWAY** Ρ 205 01/01/1998 AAC 0 6,247.00 03/24/2015 17 70.00 TW C (TAXIWAY C) 210 01/01/1998 AAC **TAXIWAY** Ρ 0 3.873.00 03/24/2015 17 65.00 **TAXIWAY** TW D (TAXIWAY D) Р 305 01/01/1983 AAC 0 9,290.00 03/24/2015 32 63.00 TW D (TAXIWAY D) Р 310 01/01/1998 AAC **TAXIWAY** 0 7,468.00 03/24/2015 17 83.00 TW E (TAXIWAY E) AAC **TAXIWAY** Ρ 5,537.00 03/24/2015 152 01/01/1998 0 17 80.00 TW E (TAXIWAY E) 155 01/01/1998 AAC **TAXIWAY** Ρ 0 5,103.00 03/24/2015 17 70.00

# **Section Condition Report**

Pavement Database: FDOT NetworkID: MTH

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	Lanes	True Area (SqFt)	Last Inspection Date	Age At Inspection	PCI
TW E (TAXIWAY E)	405	12/25/1999	AC	TAXIWAY	Р	0	43,530.00	03/24/2015	16	82.00

#### **Section Condition Report**

Pavement Database: FDOT

NetworkID: OPF

Last Age Section ID Surface Hee Branch ID Last Rank Lanes True Area **PCI** Inspection Αt Const. (SqFt) Date Inspection Date AP CENTER (CENTER APRON) Ρ 4105 01/02/2001 AAC **APRON** 0 316,721.00 02/11/2015 14 31.00 AP CENTER (CENTER APRON) 4110 01/01/1955 PCC **APRON** Ρ 207,861.00 02/11/2015 60 40.00 AP CENTER (CENTER APRON) 4112 01/01/2009 PCC **APRON** Ρ 45,995.26 02/11/2015 6 82.00 AP CENTER (CENTER APRON) 4122 01/01/2014 PCC **APRON** 0 41,758.00 01/01/2014 0 100.00 AP CENTER (CENTER APRON) PCC **APRON** Ρ 4125 01/01/1955 0 35,700.00 02/11/2015 60 25.00 AP CENTER (CENTER APRON) PCC Р 4130 01/01/1955 **APRON** 0 12,508.00 02/11/2015 60 38.00 AP CENTER (CENTER APRON) 01/01/1955 PCC **APRON** Р 51,051.00 02/11/2015 4135 0 60 37.00 AP CENTER (CENTER APRON) 4140 01/01/2001 AAC **APRON** Ρ 0 72,314.00 02/11/2015 14 65.00 AP CENTER (CENTER APRON) 4145 01/02/2001 AAC **APRON** Ρ 44,820.00 02/11/2015 55.00 AP E (EAST APRON) 4205 01/01/1986 AC **APRON** 0 49,389.00 02/11/2015 49.00 29 AP E (EAST APRON) AC **APRON** Ρ 4210 01/01/1988 0 209,759.81 02/11/2015 27 43.00 AP E (EAST APRON) 4215 01/01/2014 AC **APRON** Р 0 259,136.00 01/01/2014 0 100.00 AP E (EAST APRON) Р AC **APRON** 73,845.00 01/01/2014 4220 01/01/2014 0 0 100.00 AP E (EAST APRON) Р 4225 01/01/1986 AC APRON 0 126,677.43 02/11/2015 29 60.00 AP E (EAST APRON) 4230 01/01/1986 AC **APRON** Ρ 0 55,350.00 02/11/2015 36.00 AP NE (NE APRON) 4305 01/01/1985 AC **APRON** Р 0 707,659.00 02/11/2015 30 46.00 AP SE (SE APRON) 4405 01/01/1985 AC APRON Ρ O 41,364.13 02/11/2015 50.00 30 AP T-HANG (T-HANGAR APRON) 4505 01/01/1985 AC **APRON** Ρ 0 121,286.00 02/11/2015 30 47.00 AP T-HANG (T-HANGAR APRON) 4507 01/01/1945 AC **APRON** Ρ 0 53,955.00 02/11/2015 70 38.00 AP T-HANG (T-HANGAR APRON) 4509 01/01/2008 AAC **APRON** Ρ 0 77,185.00 02/11/2015 73.00 AP T-HANG (T-HANGAR APRON) **APRON** Р 88,298.29 02/11/2015 4510 01/01/1985 AC 60.00 AP T-HANG (T-HANGAR APRON) **APRON** Ρ 4515 01/01/1994 AAC 0 26,769.82 02/11/2015 21 47.00 AP T-HANG (T-HANGAR APRON) **APRON** Ρ 97,995.00 01/01/2014 100.00 4520 01/01/2014 AAC n 0 RW 12-30 (RUNWAY 12-30) 6205 01/01/1994 AC **RUNWAY** Р 0 643,500.00 02/11/2015 21 48.00 RW 12-30 (RUNWAY 12-30) Ρ 6210 01/01/1994 AC RUNWAY 0 321,750.00 02/11/2015 21 57.00 RW 12-30 (RUNWAY 12-30) 6215 06/29/2012 AAC **RUNWAY** Ρ 0 18,000.00 06/29/2012 100.00 RW 12-30 (RUNWAY 12-30) 6220 06/29/2012 AAC **RUNWAY** Р 9,000.00 06/29/2012 0 100.00

#### **Section Condition Report**

Pavement Database: FDOT

NetworkID: OPF

Last Age Section ID Hee Branch ID Last Surface Rank Lanes True Area **PCI** Inspection Αt (SqFt) Date Inspection Date RW 12-30 (RUNWAY 12-30) Ρ 6225 06/29/2012 AAC **RUNWAY** 0 18,500.00 06/29/2012 100.00 RW 12-30 (RUNWAY 12-30) 6230 06/29/2012 AAC **RUNWAY** Ρ 0 9,250.00 06/29/2012 0 100.00 RW 9L-27R (RUNWAY 9L-27R) 6102 05/06/2013 AAC **RUNWAY** Ρ 9,250.00 05/06/2013 100.00 RW 9L-27R (RUNWAY 9L-27R) Ρ 6105 01/01/1989 APC **RUNWAY** 0 15.750.00 02/11/2015 26 63.00 RW 9L-27R (RUNWAY 9L-27R) 6107 05/06/2013 APC **RUNWAY** Р 0 18,500.00 05/06/2013 0 100.00 RW 9L-27R (RUNWAY 9L-27R) APC Р 01/01/1989 RUNWAY 0 31,500.00 02/11/2015 6110 26 67.00 RW 9L-27R (RUNWAY 9L-27R) Ρ 6115 01/01/2009 AAC **RUNWAY** 0 350,000.00 02/11/2015 6 59.00 RW 9L-27R (RUNWAY 9L-27R) 6120 01/01/1989 AAC **RUNWAY** Ρ 0 700,000.00 02/11/2015 26 60.00 RW 9L-27R (RUNWAY 9L-27R) 6125 01/01/1989 AAC **RUNWAY** Ρ 0 15,850.00 02/11/2015 68.00 26 RW 9L-27R (RUNWAY 9L-27R) 6130 01/01/1989 APC **RUNWAY** 0 31,700.00 02/11/2015 26 63.00 RW 9L-27R (RUNWAY 9L-27R) AAC **RUNWAY** Ρ 6135 05/06/2013 0 9,250.00 05/06/2013 0 100.00 RW 9L-27R (RUNWAY 9L-27R) 6140 05/06/2013 APC **RUNWAY** Р 0 18,500.00 05/06/2013 0 100.00 RW 9R-27L (RUNWAY 9R-27L) 6405 01/02/2002 AAC **RUNWAY** Ρ 0 330,300.00 02/11/2015 13 71.00 RW 9R-27L (RUNWAY 9R-27L) Ρ 6410 01/02/2002 AAC **RUNWAY** 0 100,600.00 02/11/2015 13 63.00 TW B (TAXIWAY B) 01/01/1945 **TAXIWAY** Р 43,882.59 02/11/2015 202 AC 42.00 TW B (TAXIWAY B) **TAXIWAY** Ρ 205 01/01/1985 AC 130,078.73 02/11/2015 30 61.00 TW B (TAXIWAY B) 210 01/01/1985 AC **TAXIWAY** Ρ 0 60.00 4,748.38 02/11/2015 30 TW B (TAXIWAY B) **TAXIWAY** Ρ 215 01/01/1985 AC 0 7,653.10 02/11/2015 30 51.00 TW B (TAXIWAY B) Р AC 220 01/01/1985 **TAXIWAY** 0 39,650.00 02/11/2015 30 57.00 TW C (TAXIWAY C) 310 01/01/2014 AAC **TAXIWAY** Ρ 37,647.00 01/01/2014 100.00 TW C (TAXIWAY C) **TAXIWAY** Р 5,722.42 01/01/2014 312 01/01/2014 AAC 100.00 TW C (TAXIWAY C) **TAXIWAY** Ρ 315 01/01/2014 AAC 15,689.12 01/01/2014 0 100.00 TW C (TAXIWAY C) **TAXIWAY** Ρ 320 01/01/1988 AC 0 100,754.75 02/11/2015 27 54.00 TW C (TAXIWAY C) Ρ **TAXIWAY** 8,000.00 01/01/2013 100.00 327 01/01/2013 AC 0 0 TW C (TAXIWAY C) AC **TAXIWAY** Ρ 330 01/01/1988 0 13,346.75 02/11/2015 27 51.00 TW D (TAXIWAY D) 2015 01/01/1994 AC **TAXIWAY** Ρ 0 87,770.32 02/11/2015 60.00 TW D (TAXIWAY D) 01/01/1994 AAC **TAXIWAY** Р 30,807.52 02/11/2015 55.00

#### **Section Condition Report**

Pavement Database: FDOT

NetworkID: OPF

Last Age Section ID Surface Hee Branch ID Last Rank Lanes True Area **PCI** Inspection Αt (SqFt) Date Inspection Date TW D (TAXIWAY D) Ρ 410 01/01/1994 AAC **TAXIWAY** 0 71,495.25 02/11/2015 54.00 TW E (TAXIWAY E) 01/01/1989 **TAXIWAY** Ρ 6,115.78 02/11/2015 505 AAC 26 64.00 TW E (TAXIWAY E) 510 01/01/1967 AC **TAXIWAY** Ρ 40,471.28 02/11/2015 48 66.00 TW E (TAXIWAY E) 515 01/02/2001 AAC **TAXIWAY** Ρ 0 192.692.00 02/11/2015 14 59.00 TW E (TAXIWAY E) 520 01/01/1992 AC **TAXIWAY** Р 0 17,227.94 02/11/2015 23 55.00 TW F (TAXIWAY F) Ρ 610 01/01/2014 AAC **TAXIWAY** 0 37,289.00 01/01/2014 0 100.00 TW F (TAXIWAY F) 615 01/01/2002 AAC **TAXIWAY** Ρ 0 14,747.51 02/11/2015 13 67.00 TW F (TAXIWAY F) 630 01/01/2015 AAC **TAXIWAY** Ρ 5,620.24 01/01/2015 0 100.00 TW F (TAXIWAY F) **TAXIWAY** Ρ 635 01/01/2015 AAC 0 42,867.26 01/01/2015 0 100.00 TW G (TAXIWAY G) 710 01/01/2014 AAC **TAXIWAY** Ρ 0 37,767.00 01/01/2014 100.00 0 TW G (TAXIWAY G) 715 01/01/2014 AAC **TAXIWAY** Ρ 0 11,007.00 01/01/2014 0 100.00 TW G (TAXIWAY G) **TAXIWAY** Р 717 01/01/1975 AC 0 11,256.00 02/11/2015 40 63.00 TW G (TAXIWAY G) 720 01/01/1966 AC **TAXIWAY** Ρ 0 48,767.00 02/11/2015 49 66.00 TW G (TAXIWAY G) 722 01/01/1975 AC **TAXIWAY** Ρ 74,915.82 02/11/2015 68.00 TW G (TAXIWAY G) **TAXIWAY** Ρ 725 01/01/1994 AC 16,579.23 02/11/2015 50.00 TW G (TAXIWAY G) **TAXIWAY** Ρ 730 01/01/1994 AC 0 82,966.34 02/11/2015 21 67.00 TW G (TAXIWAY G) 01/01/1975 AC **TAXIWAY** Ρ 0 125,081.72 02/11/2015 68.00 735 40 TW G (TAXIWAY G) **TAXIWAY** Р 740 01/01/1975 AC 0 7,729.10 02/11/2015 61.00 40 TW G (TAXIWAY G) Ρ 745 01/01/2002 AAC **TAXIWAY** 0 11,813.00 02/11/2015 13 69.00 TW H (TAXIWAY HOTEL) 6305 01/01/2009 AAC **TAXIWAY** Ρ 36,541.25 02/11/2015 68.00 TW H (TAXIWAY HOTEL) **TAXIWAY** Р 41,939.21 02/11/2015 6306 01/01/1966 AC 49 48.00 TW H (TAXIWAY HOTEL) **TAXIWAY** Ρ 6315 01/01/2009 AAC 146,625.00 02/11/2015 6 76.00 TW H (TAXIWAY HOTEL) **TAXIWAY** Ρ 6320 01/01/2015 AAC 0 146,625.00 01/01/2015 0 100.00 TW H (TAXIWAY HOTEL) Ρ AAC **TAXIWAY** 6323 01/01/2009 0 23,324.31 02/11/2015 6 70.00 TW H (TAXIWAY HOTEL) **TAXIWAY** Ρ 6324 01/01/2009 AAC 0 27,651.26 02/11/2015 6 67.00 TW H (TAXIWAY HOTEL) 6325 01/01/1994 AC **TAXIWAY** Ρ 0 89,178.62 02/11/2015 21 58.00 TW H (TAXIWAY HOTEL) Ρ 6326 01/01/1994 AC **TAXIWAY** 89,178.62 02/11/2015 21 59.00

#### **Section Condition Report**

Pavement Database: FDOT

NetworkID: OPF

Last Age Section ID Surface Hee Branch ID Last Rank Lanes True Area **PCI** Inspection Αt (SqFt) Date Inspection Date TW H (TAXIWAY HOTEL) Ρ 6335 01/01/1985 AAC **TAXIWAY** 22,875.00 02/11/2015 30 66.00 TW H (TAXIWAY HOTEL) 6340 01/01/2015 AAC **TAXIWAY** Ρ 22,875.00 01/01/2015 0 100.00 TW H (TAXIWAY HOTEL) 6345 01/01/2009 AAC **TAXIWAY** Ρ 24,981.03 02/11/2015 6 73.00 TW H (TAXIWAY HOTEL) 01/01/2009 AAC **TAXIWAY** 29,637.41 02/11/2015 6346 0 6 70.00 TW H (TAXIWAY HOTEL) AAC **TAXIWAY** Ρ 6355 01/01/1989 0 26 63.00 12,261.92 02/11/2015 TW J (TAXIWAY J) **TAXIWAY** Р 1010 01/01/2014 AAC 0 37,647.00 01/01/2014 100.00 0 TW J (TAXIWAY J) Ρ 1015 01/01/1992 AC **TAXIWAY** 0 22,454.09 02/11/2015 23 71.00 TW J (TAXIWAY J) 1025 01/01/1992 AC **TAXIWAY** Ρ 0 19,915.06 02/11/2015 23 58.00 TW J (TAXIWAY J) 1030 01/01/1965 AC **TAXIWAY** Ρ 19,750.00 02/11/2015 61.00 50 TW J (TAXIWAY J) 01/01/1994 AC **TAXIWAY** 0 27,134.11 02/11/2015 1035 21 52.00 TW J (TAXIWAY J) 1040 01/01/1994 AC **TAXIWAY** Ρ 59.00 0 57,601.36 02/11/2015 21 TW N (TAXIWAY N) PCC **TAXIWAY** Р 1410 01/01/1975 0 17,554.80 02/11/2015 40 61.00 TW N (TAXIWAY N) 1412 01/01/2014 APC **TAXIWAY** Ρ 0 8,390.32 01/01/2014 0 100.00 TW N (TAXIWAY N) 1415 01/01/2014 AAC **TAXIWAY** Ρ 0 7,149.07 01/01/2014 0 100.00 TW N (TAXIWAY N) 1420 01/01/2014 AAC **TAXIWAY** Ρ 104,780.00 01/01/2014 100.00 TW N (TAXIWAY N) 1422 06/01/2001 AC **TAXIWAY** 0 213,445.00 02/11/2015 14 68.00 TW N (TAXIWAY N) 1423 01/01/2014 AAC **TAXIWAY** Ρ 0 178,575.00 01/01/2014 0 100.00 TW N (TAXIWAY N) Р 1425 01/01/2015 AAC **TAXIWAY** 0 28,200.00 01/01/2015 0 100.00 TW N (TAXIWAY N) PCC Р 1430 01/01/1975 **TAXIWAY** 0 37,642.23 02/11/2015 40 70.00 TW N (TAXIWAY N) Ρ PCC **TAXIWAY** 62,417.00 02/11/2015 1435 01/01/1975 0 40 78.00 TW N1 (TAXIWAY N1) Ρ 1405 01/01/1975 PCC **TAXIWAY** 62,407.95 02/11/2015 78.00 TW P (TAXIWAY P) **TAXIWAY** 1605 01/01/1992 AC Т 27,547.14 02/11/2015 23 68.00 TW P (TAXIWAY P) **TAXIWAY** Ρ 1615 01/01/1992 AC 0 46,477.56 02/11/2015 23 75.00 TW P (TAXIWAY P) Ρ 01/01/1992 AC **TAXIWAY** 194,846.12 02/11/2015 69.00 1620 0 23 TW P (TAXIWAY P) **TAXIWAY** Ρ 1625 01/01/2002 AAC 0 17,632.71 02/11/2015 13 65.00 TW P (TAXIWAY P) 1630 01/01/2002 AAC **TAXIWAY** Ρ 0 99,886.31 02/11/2015 13 62.00 TW P (TAXIWAY P) Ρ 1635 01/01/2014 AAC **TAXIWAY** 0 8,848.64 01/01/2014 0 100.00

#### **Section Condition Report**

Pavement Database: FDOT

NetworkID: OPF

Last Age Branch ID Section ID Surface Use Lanes Last Rank True Area PCI Inspection Αt Const. (SqFt) Date Inspection Date TW P (TAXIWAY P) **TAXIWAY** Ρ 17,061.81 02/11/2015 1640 01/01/1988 AC 27 49.00 TW P (TAXIWAY P) 1645 01/01/2007 AAC **TAXIWAY** Ρ 103,782.29 02/11/2015 8 52.00 TW P (TAXIWAY P) 1650 01/01/1945 AC **TAXIWAY** Ρ 0 15,814.22 02/11/2015 61.00 TW P (TAXIWAY P) 01/01/1985 AC **TAXIWAY** Ρ 21,542.04 02/11/2015 1655 0 30 51.00 TW P (TAXIWAY P) AC **TAXIWAY** Ρ 1660 01/01/1945 0 43,445.61 02/11/2015 70 19.00 TW R (TAXIWAY R) **TAXIWAY** Р 1805 01/01/2002 AAC 19,740.05 02/11/2015 75.00 0 13 TW R (TAXIWAY R) Ρ 1810 01/01/2002 AAC **TAXIWAY** 0 39,058.81 02/11/2015 13 70.00 TW S (TAXIWAY S) 1905 01/01/1994 AC **TAXIWAY** Ρ 24,572.18 02/11/2015 21 69.00 TW S (TAXIWAY S) **TAXIWAY** Ρ 43,292.04 02/11/2015 1920 01/01/1994 AAC 21 50.00 TW S (TAXIWAY S) **TAXIWAY** Ρ 1930 01/01/2015 AAC 0 26,927.55 01/01/2015 0 100.00 TW S (TAXIWAY S) Ρ 30,114.10 01/01/2015 1935 01/01/2015 AAC **TAXIWAY** 0 100.00 0 TW T (TAXIWAY T) Ρ 2005 01/01/1994 AC **TAXIWAY** 0 477,685.32 02/11/2015 21 58.00 TW T (TAXIWAY T) 2010 01/01/1994 AC **TAXIWAY** Ρ 0 106,821.58 02/11/2015 21 58.00 TW T (TAXIWAY T) 2025 01/01/1994 AC **TAXIWAY** Ρ 55,599.76 02/11/2015 56.00 TW T1 (TAXIWAY T1) **TAXIWAY** Ρ 2020 01/01/1994 AC 0 45.497.10 02/11/2015 21 50.00 TW V (TAXIWAY V) **TAXIWAY** Ρ 2505 01/01/1994 AC 0 55,248.59 02/11/2015 21 71.00 TW Y (TAXIWAY Y) 2605 01/01/1966 AC **TAXIWAY** Ρ 27,057.52 02/11/2015 0 49 59.00 TW Y (TAXIWAY Y) 2610 01/01/1966 AC **TAXIWAY** Ρ 0 157,255.54 02/11/2015 49 48.00 TW Y (TAXIWAY Y) 2615 01/01/1994 AAC **TAXIWAY** Ρ 0 9,286.50 02/11/2015 21 65.00 TW Y (TAXIWAY Y) **TAXIWAY** Ρ 2620 01/01/1994 AC 117,769.76 02/11/2015 21 50.00 TW Y1 (TAXIWAY Y1) 1050 01/01/1966 AC **TAXIWAY** Ρ 58.00 0 21,687.05 02/11/2015 49 TW Y2 (TAXIWAY Y2) **TAXIWAY** Р 48.00 1060 01/01/1966 AC 0 41,210.63 02/11/2015 49 TW Y5 (TAXIWAY Y5) 2630 01/01/1994 AC **TAXIWAY** Ρ 0 34,245.91 02/11/2015 21 50.00

#### **Section Condition Report**

Pavement Database: FDOT Net

NetworkID: TMB

Last Age Section ID Hee Branch ID Last Surface Rank Lanes True Area **PCI** Inspection Αt Const. (SqFt) Date Inspection Date AP N (NORTH APRON) Ρ 4205 01/01/2006 AAC **APRON** 0 840,000.00 03/02/2015 81.00 AP N (NORTH APRON) 4215 01/01/2006 AAC **APRON** Ρ 60,000.00 03/02/2015 9 74.00 AP N (NORTH APRON) 4220 01/01/1994 AAC **APRON** Ρ 0 109,500.00 03/02/2015 21 59.00 AP N (NORTH APRON) AC **APRON** 0 69,490.00 03/02/2015 4225 12/25/1999 16 58.00 AP N (NORTH APRON) **APRON** Ρ 4230 12/25/1999 AC 0 48.00 18,794.76 03/02/2015 16 AP N (NORTH APRON) Р 4235 01/01/2014 AC **APRON** 0 19,200.00 01/01/2014 0 100.00 AP NE (NORTHEAST APRON) Ρ 4305 12/25/1999 PCC **APRON** 0 9,600.00 03/02/2015 16 91.00 AP NE (NORTHEAST APRON) 4310 12/25/1999 AC **APRON** Ρ 0 19,797.46 03/02/2015 16 68.00 AP NE (NORTHEAST APRON) 4315 12/25/1999 **APRON** Ρ 21,176.35 03/02/2015 68.00 AC 16 AP NE (NORTHEAST APRON) 4320 12/25/1999 PCC **APRON** 0 9,216.00 03/02/2015 16 88.00 AP NE (NORTHEAST APRON) **APRON** Ρ 4325 12/25/1999 AC 0 49,524.03 03/02/2015 75.00 16 AP NE (NORTHEAST APRON) 4330 12/25/1999 PCC **APRON** Р 0 2,700.00 03/02/2015 16 77.00 AP S (SOUTH APRON) 4105 01/01/1998 AC **APRON** Ρ 0 192,000.00 03/02/2015 17 66.00 AP S (SOUTH APRON) 4110 01/01/1998 AAC **APRON** Ρ 0 258,843.00 03/02/2015 17 72.00 AP S (SOUTH APRON) 4115 01/01/1998 AAC **APRON** Ρ 0 832,515.06 03/02/2015 77.00 AP S (SOUTH APRON) 4125 12/25/1999 AC **APRON** Т 0 35,370.73 03/02/2015 16 61.00 AP S (SOUTH APRON) 4130 12/25/1999 AC **APRON** Ρ 0 19,714.38 03/02/2015 16 35.00 AP S (SOUTH APRON) Р 4135 12/25/1999 AC **APRON** 0 29,788.29 03/02/2015 16 58.00 AP S (SOUTH APRON) **APRON** P 4140 12/25/1999 AC 0 43,873.95 03/02/2015 16 52.00 AP SE (SOUTHEAST APRON) 4410 12/25/1999 AC **APRON** Ρ 0 45,220.00 03/02/2015 16 60.00 RW 13-31 (RUNWAY 13-31) 01/01/2004 **RUNWAY** Р 400,200.00 03/02/2015 6205 AAC 11 72.00 RW 13-31 (RUNWAY 13-31) **RUNWAY** Ρ 6210 01/01/2004 AAC 0 200,100.00 03/02/2015 11 75.00 RW 9L-27R (RUNWAY 9L-27R) 6104 AC **RUNWAY** Ρ 20,000.00 03/02/2015 01/01/1997 0 18 64.00 RW 9L-27R (RUNWAY 9L-27R) Ρ 6105 01/01/1965 AC **RUNWAY** 0 460,000.00 03/02/2015 50 73.00 RW 9L-27R (RUNWAY 9L-27R) 6109 01/01/1997 AC RUNWAY Ρ 0 10,000.00 03/02/2015 18 70.00 RW 9L-27R (RUNWAY 9L-27R) 6110 01/01/1965 AC **RUNWAY** Ρ 0 230,000.00 03/02/2015 78.00 50 RW 9L-27R (RUNWAY 9L-27R) 10,100.00 03/02/2015 6126 01/01/1997 AC **RUNWAY** Р 18 68.00

#### **Section Condition Report**

Pavement Database: FDOT N

NetworkID: TMB

Last Age Section ID Hee Branch ID Last Surface Rank Lanes True Area PCI Inspection Αt Const. (SqFt) Date Inspection Date RW 9L-27R (RUNWAY 9L-27R) **RUNWAY** Ρ 6131 01/01/1997 AC 0 20,200.00 03/02/2015 18 71.00 RW 9R-27L (RUNWAY 9R-27L) 6302 01/01/2011 **RUNWAY** Ρ 100,000.00 03/02/2015 AC 4 73.00 RW 9R-27L (RUNWAY 9R-27L) 6304 01/01/2011 AAC **RUNWAY** Ρ 20,000.00 03/02/2015 73.00 RW 9R-27L (RUNWAY 9R-27L) 6305 01/01/1997 AAC **RUNWAY** Ρ 0 460.000.00 03/02/2015 18 72.00 RW 9R-27L (RUNWAY 9R-27L) 6306 01/01/1997 AC **RUNWAY** Ρ 0 20,100.00 03/02/2015 18 72.00 RW 9R-27L (RUNWAY 9R-27L) Р 81.00 6307 01/01/2011 AC RUNWAY 50,000.00 03/02/2015 0 4 RW 9R-27L (RUNWAY 9R-27L) Ρ 6309 01/01/2011 AAC **RUNWAY** 0 10,000.00 03/02/2015 4 76.00 RW 9R-27L (RUNWAY 9R-27L) 6310 01/01/1997 AAC **RUNWAY** Ρ 0 230,000.00 03/02/2015 18 78.00 RW 9R-27L (RUNWAY 9R-27L) 6311 01/01/1997 AC **RUNWAY** Ρ 10,050.00 03/02/2015 72.00 TW 1 (TAXIWAY 1) **TAXIWAY** Ρ 270 01/01/2006 AAC 0 12.842.70 03/02/2015 9 81.00 TW 2 (TAXIWAY 2) 260 01/01/2006 AAC **TAXIWAY** Ρ 0 19.697.18 03/02/2015 9 77.00 TW 3 (TAXIWAY 3) **TAXIWAY** Р 250 01/01/2006 AAC 0 19,697.18 03/02/2015 9 80.00 TW 4 (TAXIWAY 4) 240 01/01/2006 AAC **TAXIWAY** Ρ 19,697.18 03/02/2015 9 80.00 TW 5 (TAXIWAY 5) 01/01/2006 AAC **TAXIWAY** Ρ 0 19,697.18 03/02/2015 9 230 84.00 TW 6 (TAXIWAY 6) 01/01/2006 AAC **TAXIWAY** Ρ 0 19,696.66 03/02/2015 9 220 80.00 TW 7 (TAXIWAY 7) Р 18,557.11 03/02/2015 210 01/01/2005 AAC **TAXIWAY** 0 10 79.00 TW A (TAXIWAY A) Ρ 105 01/01/2005 AAC **TAXIWAY** 0 279,575.51 03/02/2015 10 81.00 TW A (TAXIWAY A) AAC **TAXIWAY** Ρ 18,500.00 03/02/2015 108 01/01/2005 10 80.00 TW A (TAXIWAY A) **TAXIWAY** Ρ 110 01/01/1965 AC 0 36,179.51 03/02/2015 50 78.00 TW A (TAXIWAY A) 27,392.04 03/02/2015 AC **TAXIWAY** Ρ 12/25/1999 0 88.00 111 16 TW A1 (TAXIWAY A1) Р **TAXIWAY** 50,474.98 03/02/2015 115 01/01/1965 AC 0 50 85.00 TW A2 (TAXIWAY A2) 120 01/01/1965 AC **TAXIWAY** Ρ 0 50,474.98 03/02/2015 50 85.00 TW A3 (TAXIWAY A3) 12/25/1999 **TAXIWAY** Ρ 26,792.04 03/02/2015 124 AC 16 78.00 TW A3 (TAXIWAY A3) Ρ 32,146.02 03/02/2015 125 01/01/1965 AC **TAXIWAY** 0 50 71.00 TW AP NE (TAXIWAY TO NE APRON) 44,690.90 03/02/2015 1005 AC **TAXIWAY** Ρ 0 12/25/1999 16 65.00

#### **Section Condition Report**

Pavement Database: FDOT

NetworkID: TMB

Last Age Section ID Surface Hee Branch ID Last Rank Lanes True Area PCI Inspection At Const. (SqFt) Date Inspection Date TW AP SE (TAXIWAY TO SE APRON) Ρ 1105 12/25/1999 AC **TAXIWAY** 42,726.72 03/02/2015 60.00 TW C (TAXIWAY C) 910 01/01/1998 AC **TAXIWAY** Р 138,068.51 03/02/2015 17 76.00 TW C1 (TAXIWAY C1) 310 01/01/1997 AAC **TAXIWAY** Ρ 0 17.643.88 03/02/2015 68.00 18 TW C2 (TAXIWAY C2) 320 01/01/1997 AC TAXIMAY Р Λ 17,567.42 03/02/2015 18 66.00 TW CC (TAXIWAY CC) 905 01/01/1998 AC **TAXIWAY** Ρ 0 7,838.05 03/02/2015 17 70.00 TW D (TAXIWAY D) 405 01/01/1965 AC **TAXIWAY** Ρ 210,897.78 03/02/2015 54.00 TW D (TAXIWAY D) 01/01/1965 AC **TAXIWAY** Ρ 36,141.84 03/02/2015 410 74.00 TW D (TAXIWAY D) **TAXIWAY** Ρ 411 12/25/1999 AC 27,092.04 03/02/2015 16 70.00 TW D (TAXIWAY D) 412 12/25/1999 AC **TAXIWAY** Ρ 10,003.98 03/02/2015 71.00 n 16 TW D1 (TAXIWAY D1) 415 01/01/1965 AC **TAXIWAY** Ρ 0 50,474.98 03/02/2015 50 66.00 TW D2 (TAXIWAY D2) 420 01/01/1965 AC **TAXIWAY** Ρ 50,462.90 03/02/2015 50 52.00 TW E (TAXIWAY E) **TAXIWAY** Ρ 503 01/01/2011 AC 0 56,118.63 03/02/2015 93.00 TW E (TAXIWAY E) 505 01/01/2007 AAC **TAXIWAY** Ρ 0 237,686.00 03/02/2015 8 81.00 TW E (TAXIWAY E) **TAXIWAY** Ρ 30,930.07 03/02/2015 01/01/2007 AAC 0 8 76.00 507 TW E (TAXIWAY E) Р AAC **TAXIWAY** 510 01/01/2007 0 32,963.00 03/02/2015 8 85.00 TW E (TAXIWAY E) 01/01/2011 AC **TAXIWAY** Р 0 54,091.64 03/02/2015 4 81.00 513 TW E1 (TAXIWAY E1) Ρ 515 01/01/2012 AAC **TAXIWAY** 0 21,049.02 03/02/2015 3 88.00 TW E1 (TAXIWAY E1) AC **TAXIWAY** Ρ 516 12/25/1999 38,835.05 03/02/2015 16 76.00 TW E2 (TAXIWAY E2) 520 01/01/2007 AAC **TAXIWAY** Ρ 0 50,474.48 03/02/2015 8 73.00 TW E3 (TAXIWAY E3) 525 **TAXIWAY** Ρ 01/01/2007 AAC 0 41,823.46 03/02/2015 8 71.00 TW E4 (TAXIWAY E4) Ρ 527 01/01/1996 AC **TAXIWAY** 0 26,266.60 03/02/2015 19 69.00 TW E5 (TAXIWAY E5) 529 12/25/1999 AC **TAXIWAY** Ρ 26,192.04 03/02/2015 73.00 16 TW E5 (TAXIWAY E5) 530 01/01/1999 AAC **TAXIWAY** Ρ 32,146.02 03/02/2015 16 77.00 TW F (TAXIWAY F) 01/01/1998 AAC **TAXIWAY** Ρ 0 57,730.09 03/02/2015 81.00 605 17 TW G (TAXIWAY G) Ρ **TAXIWAY** 0 51,621.67 03/02/2015 9 705 01/01/2006 AAC 79.00

TW H7 (TAXIWAY H7)

370

01/01/2007

AAC

#### **Section Condition Report**

Ρ

0

12,808.80 03/02/2015

**TAXIWAY** 

Pavement Database: FDOT NetworkID: TMB

Last Age Use Branch ID Section ID Last Surface Rank Lanes True Area PCI Αt Inspection Const. (SqFt) Date Inspection Date TW G (TAXIWAY G) Ρ 710 AC **TAXIWAY** 0 17,106.11 03/02/2015 01/01/1997 78.00 TW H (TAXIWAY H) 815 01/01/2007 AAC **TAXIWAY** Ρ 119,041.80 03/02/2015 8 71.00 TW H1 (TAXIWAY H1) 805 01/01/1998 AC **TAXIWAY** Ρ 0 4,801.55 03/02/2015 17 78.00 TW H2 (TAXIWAY H2) 810 01/01/1998 AC **TAXIWAY** Р 0 7,744.33 03/02/2015 17 72.00 TW H3 (TAXIWAY H3) **TAXIWAY** Ρ 330 01/01/2007 AAC 0 18,456.28 03/02/2015 8 79.00 TW H4 (TAXIWAY H4) 340 01/01/2007 AAC **TAXIWAY** Ρ 17,255.03 03/02/2015 8 85.00 TW H5 (TAXIWAY H5) 350 01/01/2007 AAC **TAXIWAY** Ρ 0 19,697.18 03/02/2015 8 82.00 TW H6 (TAXIWAY H6) Ρ 01/01/2007 AAC **TAXIWAY** 0 19,697.18 03/02/2015 8 360 87.00

13 of 17

8

83.00

#### **Section Condition Report**

Pavement Database: FDOT

NetworkID: TNT

14 of 17

Last Age **Branch ID** Section ID Surface Use Rank Lanes Last True Area PCI Inspection Αt Const. (SqFt) Date Inspection Date AP N (APRON NORTH) Ρ **APRON** 4105 01/01/1991 AAC 0 49,500.00 09/30/2013 22 54.00 RW 9-27 (RUNWAY 9-27) 6105 01/01/1995 AAC **RUNWAY** Ρ 588,000.00 09/30/2013 0 18 61.00 RW 9-27 (RUNWAY 9-27) 6110 01/01/1995 AAC **RUNWAY** Ρ 0 987,000.00 09/30/2013 18 59.00 TW A (TAXIWAY A) 01/01/1991 **TAXIWAY** Ρ 0 733,373.41 09/30/2013 58.00 105 AAC 22 TW A (TAXIWAY A) **TAXIWAY** Р 01/01/1991 AAC 0 75,224.70 09/30/2013 22 60.00 110 TW A (TAXIWAY A) Ρ 180 01/01/1991 AAC **TAXIWAY** 0 75,224.70 09/30/2013 22 71.00 TW A1 (TAXIWAY A1) 120 01/01/1968 AC **TAXIWAY** Ρ 68,780.00 09/30/2013 32.00 45 TW A1 (TAXIWAY A1) 01/01/1991 AAC **TAXIWAY** Ρ 6,394.00 09/30/2013 123 22 76.00 TW A1 (TAXIWAY A1) Ρ 126 01/01/1991 AAC **TAXIWAY** 0 7,437.32 09/30/2013 22 83.00 TW A2 (TAXIWAY A2) Р 01/01/1991 AAC **TAXIWAY** 107,503.13 09/30/2013 22 85.00 130 0 TW A3 (TAXIWAY A3) Ρ 22 01/01/1991 AAC **TAXIWAY** 0 187,363.33 09/30/2013 140 82.00 TW A4 (TAXIWAY A4) 150 01/01/1991 AAC **TAXIWAY** Ρ 187,363.33 09/30/2013 22 70.00 TW A5 (TAXIWAY A5) 160 01/01/1991 AAC **TAXIWAY** Ρ 0 107,503.13 09/30/2013 22 73.00 TW A6 (TAXIWAY A6) AC **TAXIWAY** Ρ 68,780.00 09/30/2013 170 01/01/1968 0 45 54.00 TW A6 (TAXIWAY A6) Р 01/01/1991 AAC **TAXIWAY** 0 6,394.00 09/30/2013 173 22 69.00 TW A6 (TAXIWAY A6) 176 01/01/1991 AAC **TAXIWAY** Ρ 0 7,437.32 09/30/2013 22 70.00 TW B (TAXIWAY B) Ρ 205 01/01/1991 AAC **TAXIWAY** 0 83,610.00 09/30/2013 22 73.00 TW B (TAXIWAY B) 01/01/1991 AAC **TAXIWAY** Ρ 0 5,119.00 09/30/2013 210 22 68.00 TW B (TAXIWAY B) **TAXIWAY** 43,228.41 09/30/2013 215 01/01/1991 AAC 0 22 50.00

#### **Section Condition Report**

Pavement Database: FDOT NetworkID: X51

Last Age Section ID Surface Hee Branch ID Last Rank Lanes True Area **PCI** Inspection At (SqFt) Date Inspection Date AP N (NORTH APRON) Ρ 4205 01/01/1962 AC **APRON** 0 85,048.00 10/02/2013 51 74.00 AP NE (NE APRON) 4305 01/01/2005 **APRON** Р 105,398.00 10/02/2013 86.00 AC 8 AP NW (NW APRON) 4105 01/01/1967 AC **APRON** Ρ 0 255,472.00 10/02/2013 46 67.00 AP NW (NW APRON) **APRON** Ρ 4110 01/01/2005 AC 0 11,958.00 10/02/2013 8 74.00 RW 10-28 (RUNWAY 10-28) Р 224,925.00 10/02/2013 6205 01/01/1962 AC **RUNWAY** 0 51 78.00 RW 18-36 (RUNWAY 18-36) Ρ 6105 01/01/1993 AAC **RUNWAY** 0 199,950.00 10/02/2013 20 90.00 RW 18-36 (RUNWAY 18-36) 6110 01/01/1967 AC **RUNWAY** Ρ 199,950.00 10/02/2013 46 58.00 TW A (TAXIWAY ALPHA) **TAXIWAY** Ρ 160 01/01/1967 AC 0 14,699.01 10/02/2013 46 59.00 TW A (TAXIWAY ALPHA) 205 01/01/1967 AC **TAXIWAY** Ρ O 13,738.03 10/02/2013 59.00 46 TW A (TAXIWAY ALPHA) **TAXIWAY** Р 210 01/01/1994 AAC n 5,600.00 10/02/2013 19 89.00 TW A (TAXIWAY ALPHA) Ρ 215 01/01/1962 AC **TAXIWAY** 0 112,400.00 10/02/2013 51 73.00 TW A (TAXIWAY ALPHA) 220 01/01/1994 AAC **TAXIWAY** Ρ 0 14,799.10 10/02/2013 19 87.00 TW A (TAXIWAY ALPHA) 260 01/01/1967 AC **TAXIWAY** Ρ 0 5,369.14 10/02/2013 59.00 TW A (TAXIWAY ALPHA) 270 01/01/1967 AC **TAXIWAY** Ρ 0 5,369.14 10/02/2013 46 59.00 TW A (TAXIWAY ALPHA) 280 01/01/1962 AC **TAXIWAY** Ρ 0 4,273.01 10/02/2013 51 65.00 TW A (TAXIWAY ALPHA) **TAXIWAY** Ρ 290 01/01/1962 AC 0 4,069.14 10/02/2013 51 65.00 TW A (TAXIWAY ALPHA) AC **TAXIWAY** Р 295 01/01/1970 0 4,189.14 10/02/2013 43 55.00 TW A1 (TAXIWAY A1) 230 01/01/1962 AC **TAXIWAY** Ρ 0 6,236.50 10/02/2013 60.00 TW A1 (TAXIWAY A1) 235 01/01/1994 AAC **TAXIWAY** Ρ 0 2,971.07 10/02/2013 19 78.00 TW A2 (TAXIWAY A2) 240 01/01/1962 AC **TAXIWAY** Ρ 0 11,519.91 10/02/2013 51 59.00 TW A3 (TAXIWAY A3) 01/01/1962 AC **TAXIWAY** 0 6,134.57 10/02/2013 250 51 65.00 TW A3 (TAXIWAY A3) **TAXIWAY** Р 255 01/01/1994 AAC 0 2,869.14 10/02/2013 19 78.00 TW AP (TAXIWAY TO APRON) 300 01/01/2005 AC **TAXIWAY** Р 0 4,504.00 10/02/2013 8 94.00 TW AP (TAXIWAY TO APRON) 305 01/01/1994 AAC **TAXIWAY** Ρ 0 10,104.00 10/02/2013 19 46.00 TW B (TAXIWAY BRAVO) **TAXIWAY** Ρ 105 01/01/1967 AC 0 192,408.00 10/02/2013 46 63.00 TW B (TAXIWAY BRAVO) 180 01/01/1967 AC **TAXIWAY** 0 13,513.00 10/02/2013 46 63.00

# **Section Condition Report**

Pavement Database: FDOT NetworkID: X51

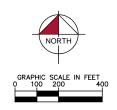
Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	Lanes	True Area (SqFt)	Last Inspection Date	Age At Inspection	PCI
TW B1 (TAXIWAY B1)	110	01/01/1994	AAC	TAXIWAY	Р	0	20,222.62	10/02/2013	19	78.00
TW B2 (TAXIWAY B2)	120	01/01/1967	AC	TAXIWAY	Р	0	21,223.34	10/02/2013	46	59.00
TW B3 (TAXIWAY B3)	130	01/01/1967	AC	TAXIWAY	Р	0	12,237.28	10/02/2013	46	54.00
TW B4 (TAXIWAY B4)	140	01/01/1967	AC	TAXIWAY	Р	0	15,568.97	10/02/2013	46	59.00
TW B5 (TAXIWAY B5)	150	01/01/1967	AC	TAXIWAY	Р	0	6,210.97	10/02/2013	46	58.00
TW B5 (TAXIWAY B5)	155	01/01/2009	AAC	TAXIWAY	Р	0	10,114.48	10/02/2013	4	94.00
TW C (TAXIWAY C)	400	01/01/1957	AC	TAXIWAY	Р	0	24,975.00	10/02/2013	56	51.00

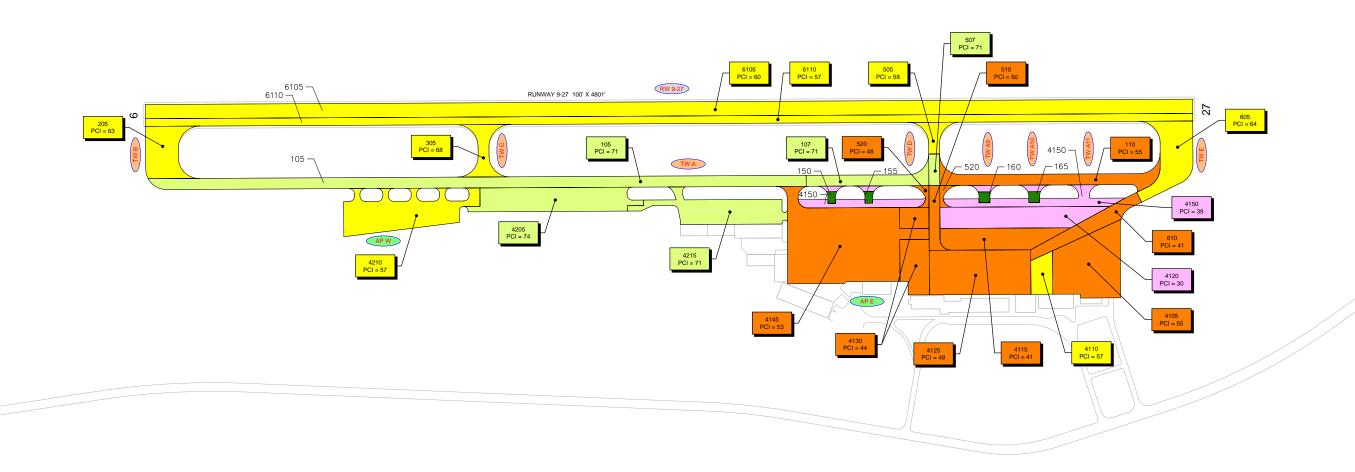
Pavement Database: FDOT

Age Category	Average Age At Inspection	Total Area (SqFt)	Number of Sections	Arithmeti c Average PCI	PCI Standard Deviation	Weighted Average PCI
0-02	0.00	1,412,969.72	37	100.00	0.00	100.00
03-05	3.88	321,373.77	8	82.38	8.45	80.82
06-10	7.97	3,066,394.46	38	76.74	7.84	75.59
11-15	12.42	3,746,127.39	38	59.00	12.07	59.78
16-20	17.02	5,392,500.31	66	70.38	10.98	68.85
21-25	21.74	4,841,245.62	47	61.21	11.22	59.69
26-30	28.33	3,089,272.92	27	55.30	9.41	54.27
31-35	32.00	282,944.00	3	57.33	11.59	64.64
36-40	39.67	419,016.62	9	67.33	7.11	70.17
over 40	51.18	3,481,844.79	51	58.37	14.02	61.66
AII	20.92	26,053,689.61	324	68.79	16.87	65.76

# APPENDIX C

DISTRICT AIRFIELD PAVEMENT CONDITION INDEX
 RATING EXHIBITS





TAXIWAYS

RW 13-31 - TYPICAL RUNWAY BRANCH ID

**LEGEND** 

- TYPICAL TAXIWAY BRANCH ID - TYPICAL APRON BRANCH ID

PCI 86-100 GOOD

PCI 71-85 SATISFACTORY

PCI 56-70 FAIR PCI 41-55 POOR

PCI 26-40 VERY POOR PCI 11-25 SERIOUS

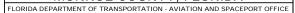
PCI 0-10 FAILED

RUNWAY LENGTHS DEPICTED IN THIS DRAWING ARE FOR PAVEMENT MANAGEMENT PURPOSES ONLY AND MAY NOT MATCH PUBLISHED RUNWAY LENGTHS.

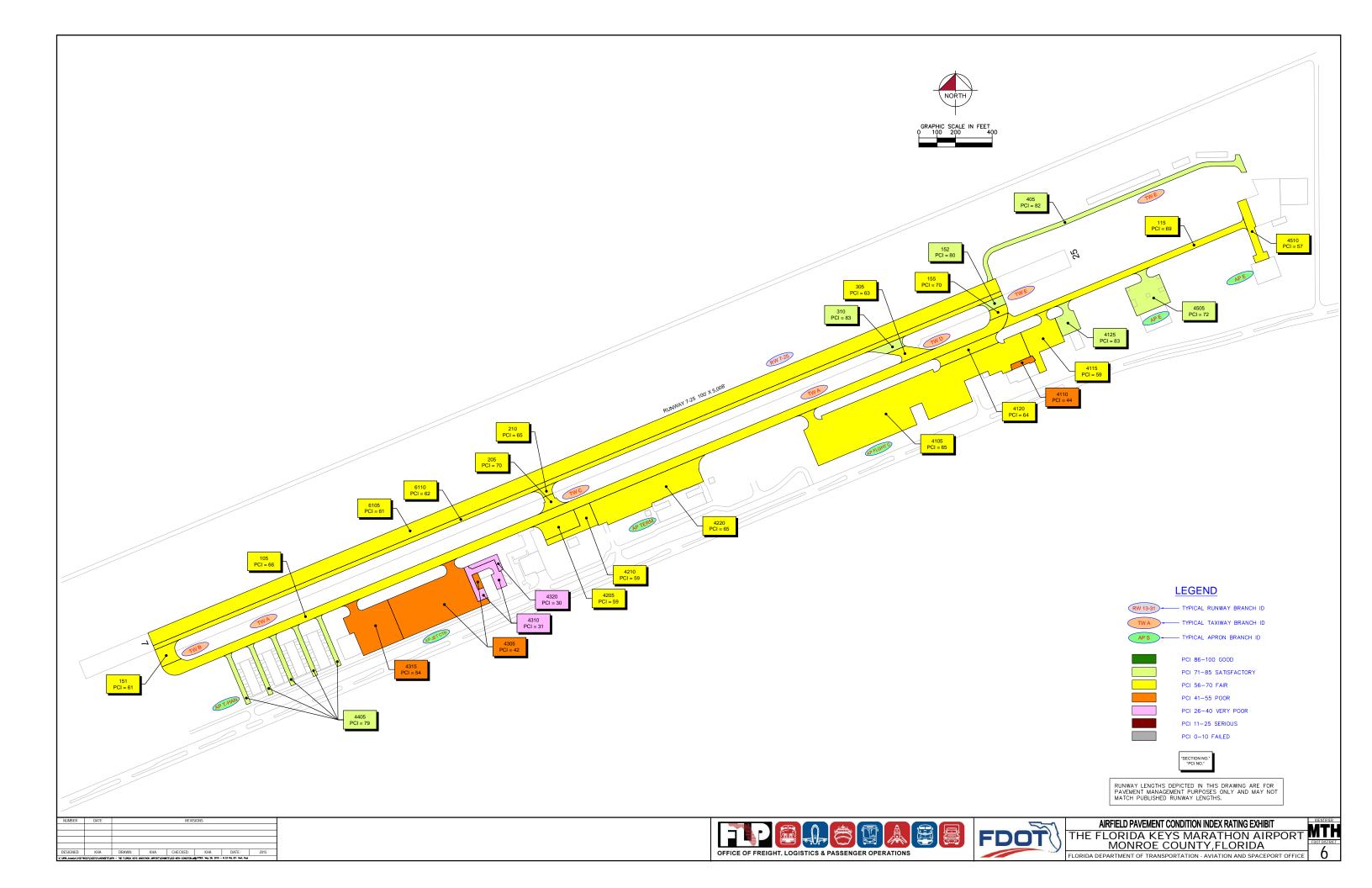


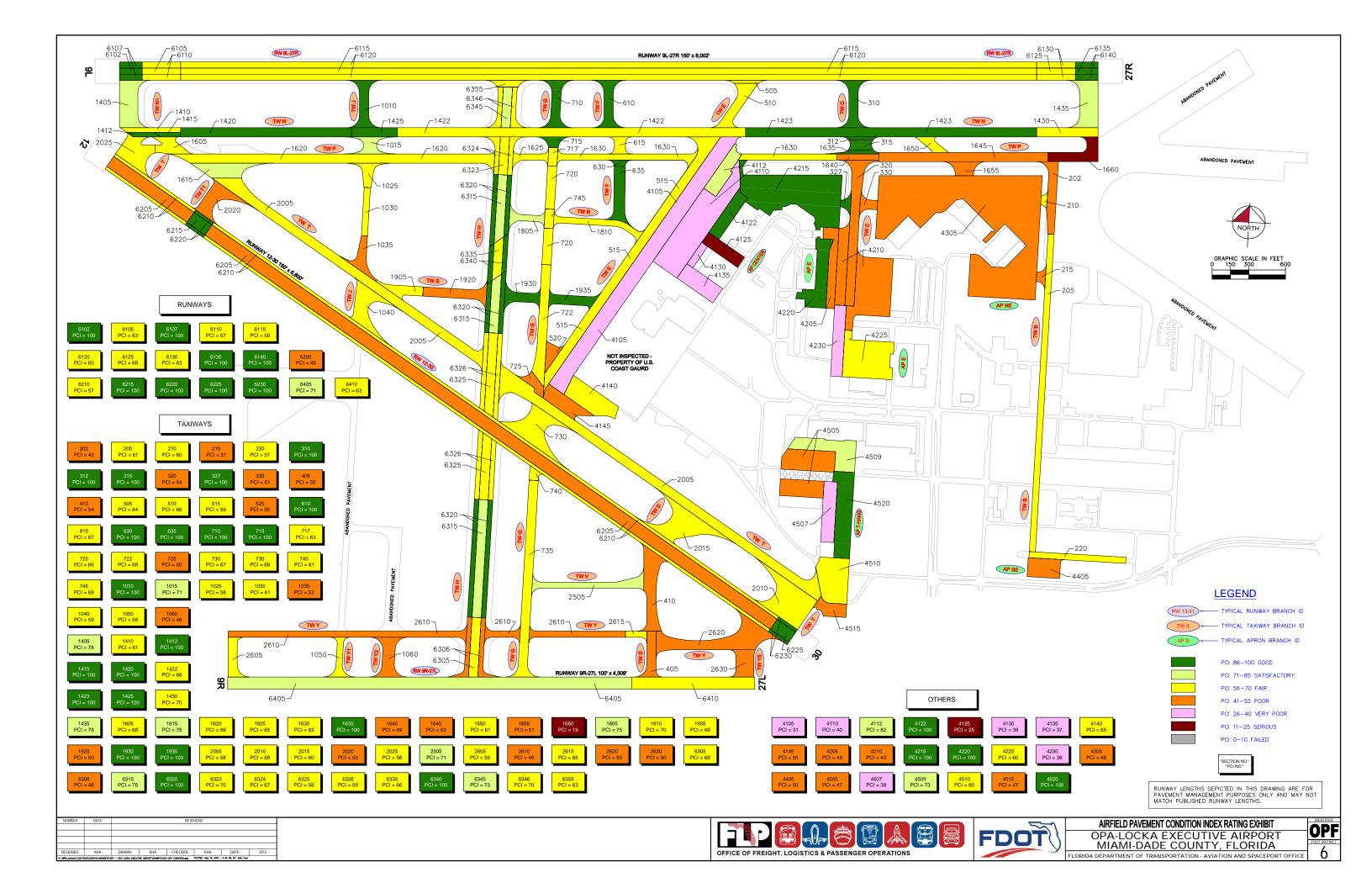


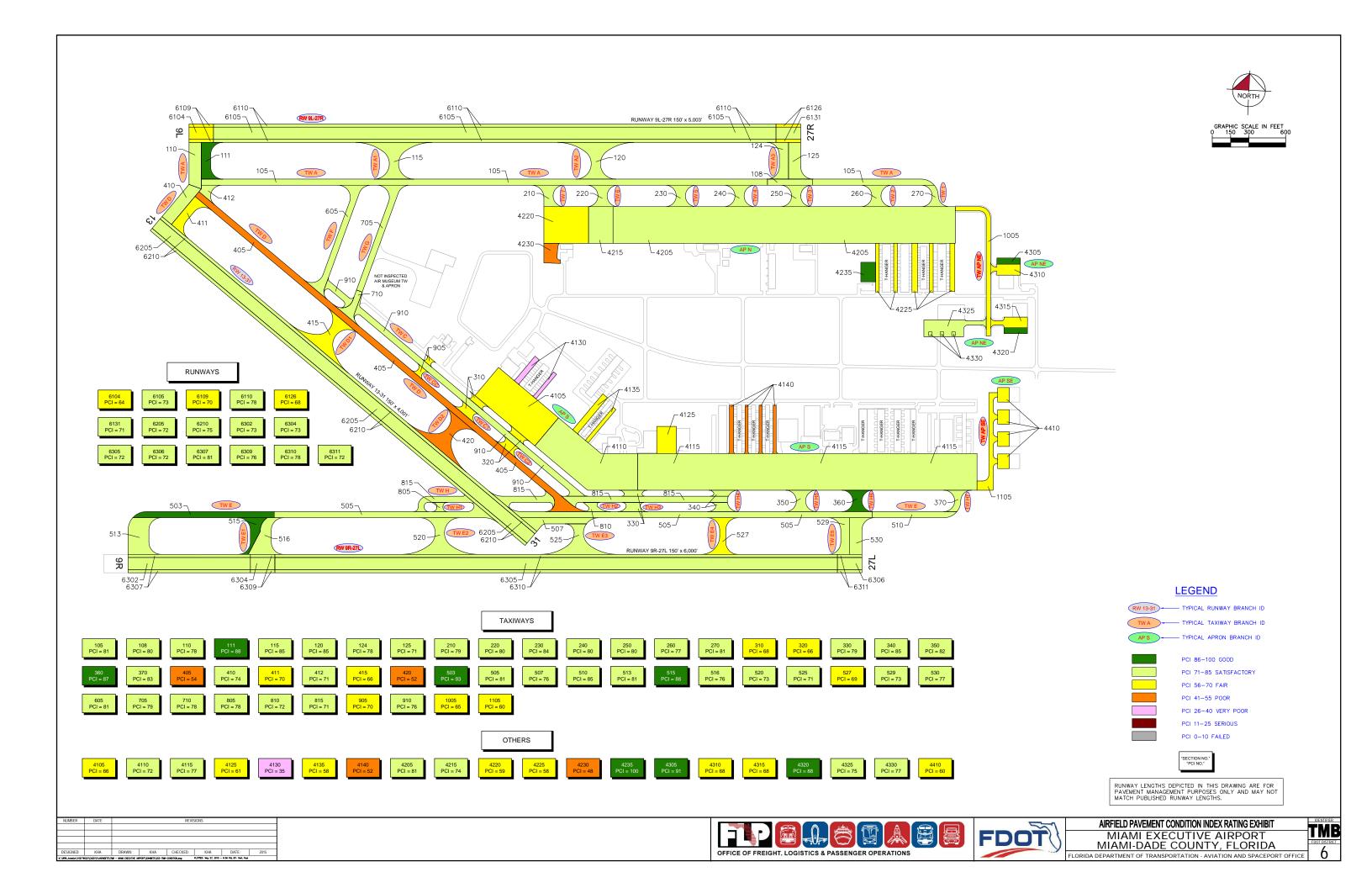


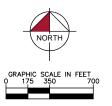


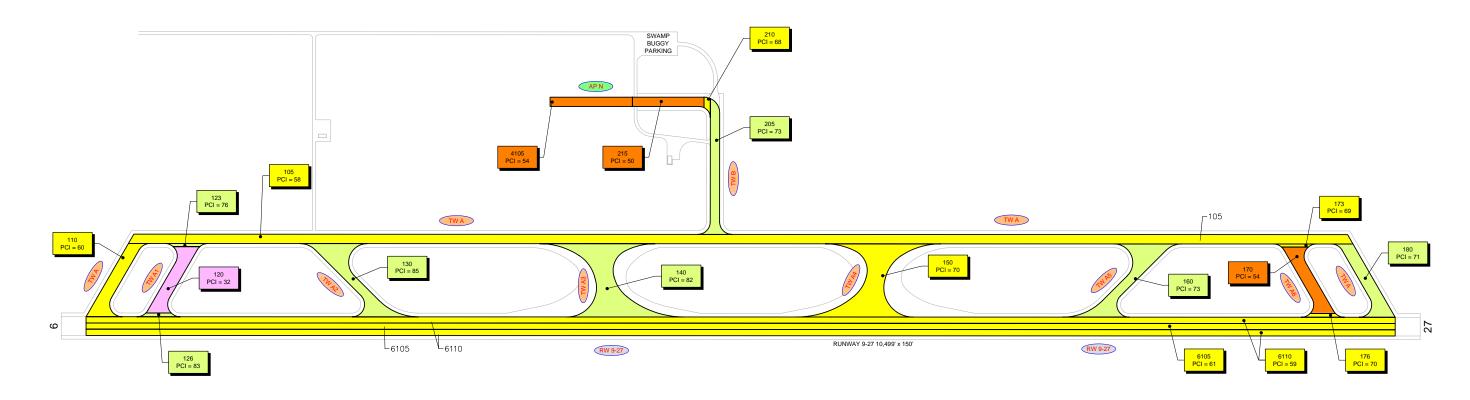












#### **LEGEND**

RW 13-31 - TYPICAL RUNWAY BRANCH ID - TYPICAL TAXIWAY BRANCH ID

- TYPICAL APRON BRANCH ID

PCI 86-100 GOOD PCI 71-85 SATISFACTORY PCI 56-70 FAIR

PCI 41-55 POOR

PCI 26-40 VERY POOR PCI 11-25 SERIOUS

PCI 0-10 FAILED

RUNWAY LENGTHS DEPICTED IN THIS DRAWING ARE FOR PAVEMENT MANAGEMENT PURPOSES ONLY AND MAY NOT MATCH PUBLISHED RUNWAY LENGTHS.

NUMBER	DATE		REVISIONS				
DESIGNED:	KHA	DRAWN:	KHA	CHECKED:	KHA	DATE:	2013
II:\MPR_Aviation\143	179022\CADD\PLANSHEETS\T	NT - DADE-COLLIER TRAIN	ING AND TRANSTION ARE	ORT\EXHBITS\003-TNT-O	<b>PROTESTION</b> 15, 2015 -	8:45 AM, BY: Barus, Art	

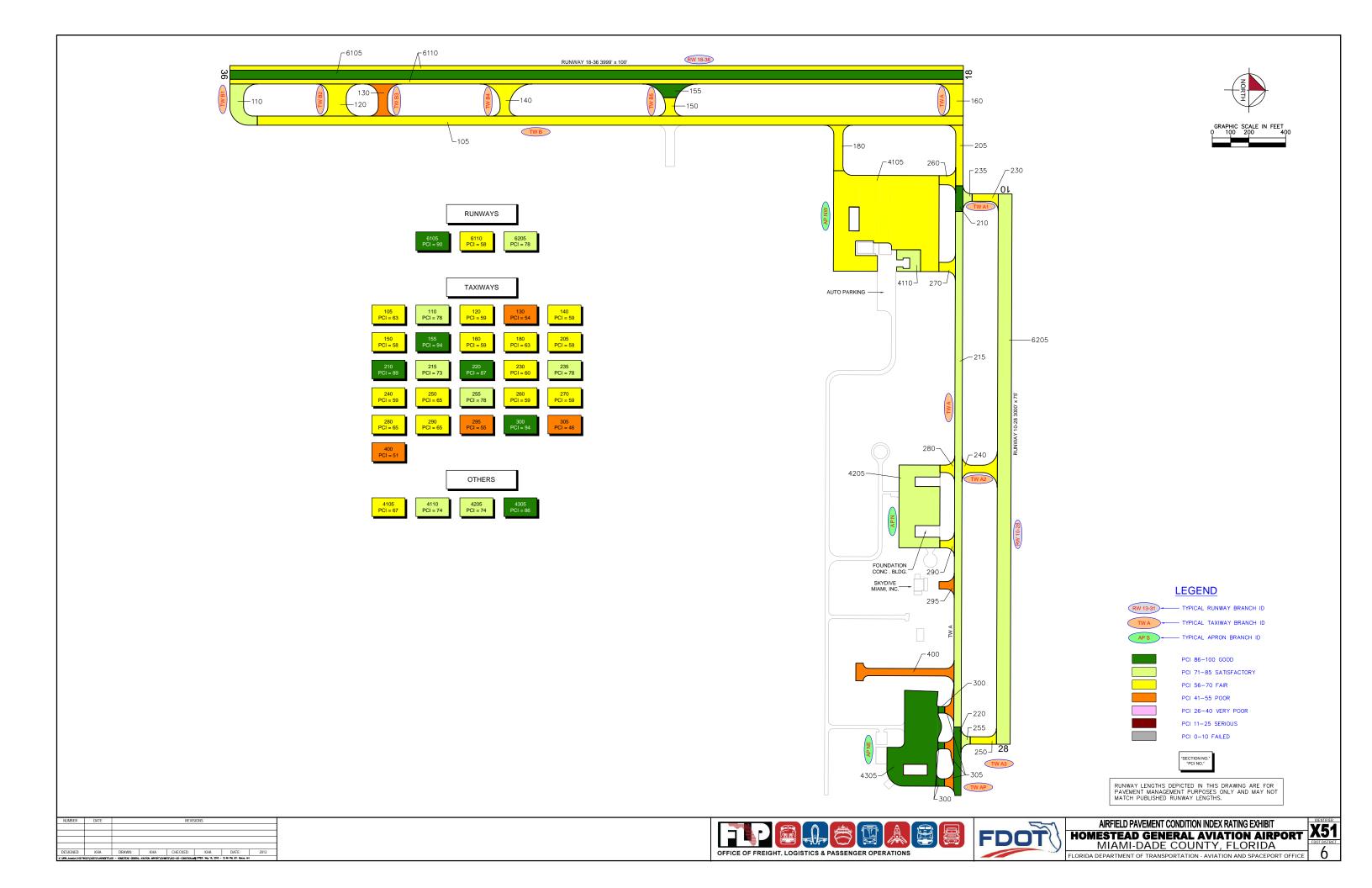












# **APPENDIX D**

DISTRICT 10-YEAR MAJOR REHABILITATION NEEDS



#### EYW - 10-YEAR MAJOR REHABILITATION NEEDS

Year	Branch ID	Section ID	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2015	AP E	4105	\$ 1,569,618.00	55	Mill and Overlay	100
2015	AP E	4110	\$ 317,934.00	57	Mill and Overlay	100
2015	AP E	4115	\$ 1,148,281.00	40	Reconstruction	100
2015	AP E	4120	\$ 1,539,160.00	29	Reconstruction	100
2015	AP E	4125	\$ 1,829,918.00	47	Mill and Overlay	100
2015	AP E	4130	\$ 957,204.00	43	Mill and Overlay	100
2015	AP E	4145	\$ 3,415,374.00	53	Mill and Overlay	100
2015	AP E	4150	\$ 1,408,198.00	39	Reconstruction	100
2015	AP W	4210	\$ 1,483,830.00	57	Mill and Overlay	100
2015	RW 9-27	6105	\$ 5,616,000.00	60	Mill and Overlay	100
2015	RW 9-27	6110	\$ 3,024,000.00	57	Mill and Overlay	100
2015	TW A	110	\$ 986,310.00	55	Mill and Overlay	100
2015	TW B	205	\$ 718,506.00	63	Mill and Overlay	100
2015	TW D	505	\$ 200,232.00	58	Mill and Overlay	100
2015	TW D	510	\$ 279,742.00	50	Mill and Overlay	100
2015	TW D	520	\$ 118,480.00	48	Mill and Overlay	100
2015	TW E	605	\$ 927,666.00	64	Mill and Overlay	100
2015	TW E	610	\$ 754,072.00	41	Reconstruction	100
2018	TW C	305	\$ 396,647.00	65	Mill and Overlay	100
2021	AP W	4205	\$ 1,664,800.00	64	Mill and Overlay	100
2021	AP W	4215	\$ 1,358,311.00	65	Mill and Overlay	100
2021	TW A	105	\$ 3,214,893.00	65	Mill and Overlay	100
2021	TW A	107	\$ 645,584.00	65	Mill and Overlay	100
2021	TW D	507	\$ 155,824.00	65	Mill and Overlay	100
		Total =	\$33,730,584.00			

<sup>\*</sup> Costs are adjusted for inflation at 3%



#### MTH – 10-YEAR MAJOR REHABILITATION NEEDS

Year	Branch ID	Section ID	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2015	AP E	4510	\$ 306,900.00	57	Mill and Overlay	100
2015	AP FLGHT C	4105	\$ 4,853,412.00	65	Mill and Overlay	100
2015	AP FLGHT C	4110	\$ 84,842.00	44	PCC Restoration	100
2015	AP FLGHT C	4115	\$ 632,646.00	59	Mill and Overlay	100
2015	AP FLGHT C	4120	\$ 333,378.00	64	Mill and Overlay	100
2015	AP JET CTR	4305	\$ 2,490,754.00	42	Mill and Overlay	100
2015	AP JET CTR	4310	\$ 409,423.00	31	Reconstruction	100
2015	AP JET CTR	4315	\$ 1,091,358.00	54	Mill and Overlay	100
2015	AP JET CTR	4320	\$ 126,592.00	30	Reconstruction	100
2015	AP TERM	4205	\$ 360,216.00	59	Mill and Overlay	100
2015	AP TERM	4210	\$ 330,678.00	59	Mill and Overlay	100
2015	AP TERM	4220	\$ 1,572,534.00	65	PCC Restoration	100
2015	RW 7-25	6105	\$ 6,760,800.00	61	Mill and Overlay	100
2015	RW 7-25	6110	\$ 2,253,600.00	62	Mill and Overlay	100
2015	TW B	151	\$ 192,798.00	61	Mill and Overlay	100
2015	TW C	210	\$ 69,714.00	65	Mill and Overlay	100
2015	TW D	305	\$ 167,220.00	63	Mill and Overlay	100
2016	TW A	105	\$ 4,688,340.00	65	Mill and Overlay	100
2020	AP E	4505	\$ 734,474.00	65	Mill and Overlay	100
2020	TW C	205	\$ 130,356.00	65	Mill and Overlay	100
2020	TW E	155	\$ 106,484.00	65	Mill and Overlay	100
2022	TW A	115	\$ 1,121,365.00	65	Mill and Overlay	100
		Total =	\$28,817,884.00			

<sup>\*</sup> Costs are adjusted for inflation at 3%



### OPF – 10-YEAR MAJOR REHABILITATION NEEDS

Year	Branch ID	Section ID	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2015	AP CENTER	4105	\$ 6,334,420.00	30	Reconstruction	100
2015	AP CENTER	4110	\$ 4,157,220.00	40	Reconstruction	100
2015	AP CENTER	4125	\$ 714,000.00	25	Reconstruction	100
2015	AP CENTER	4130	\$ 250,160.00	38	Reconstruction	100
2015	AP CENTER	4135	\$ 1,021,020.00	37	Reconstruction	100
2015	AP CENTER	4140	\$ 1,084,710.00	64	Mill and Overlay	100
2015	AP CENTER	4145	\$ 672,300.00	54	Mill and Overlay	100
2015	AP E	4205	\$ 779,853.00	48	Mill and Overlay	100
2015	AP E	4210	\$ 3,941,387.00	42	Mill and Overlay	100
2015	AP E	4225	\$ 1,900,162.00	59	Mill and Overlay	100
2015	AP E	4230	\$ 1,107,000.00	35	Reconstruction	100
2015	AP NE	4305	\$ 12,235,430.00	45	Mill and Overlay	100
2015	AP SE	4405	\$ 632,458.00	49	Mill and Overlay	100
2015	AP T-HANG	4505	\$ 2,036,392.00	46	Mill and Overlay	100
2015	AP T-HANG	4507	\$ 1,079,100.00	37	Reconstruction	100
2015	AP T-HANG	4510	\$ 1,324,475.00	59	Mill and Overlay	100
2015	AP T-HANG	4515	\$ 450,402.00	46	Mill and Overlay	100
2015	RW 12-30	6205	\$ 10,415,048.00	48	Mill and Overlay	100
2015	RW 12-30	6210	\$ 4,826,251.00	57	Mill and Overlay	100
2015	RW 9L-27R	6105	\$ 236,250.00	62	Mill and Overlay	100
2015	RW 9L-27R	6115	\$ 5,250,001.00	58	Mill and Overlay	100
2015	RW 9L-27R	6120	\$ 10,500,002.00	59	Mill and Overlay	100
2015	RW 9L-27R	6130	\$ 475,500.00	62	Mill and Overlay	100
2015	RW 9R-27L	6410	\$ 1,509,000.00	62	Mill and Overlay	100
2015	TW B	202	\$ 842,765.00	42	Mill and Overlay	100
2015	TW B	205	\$ 1,951,181.00	61	Mill and Overlay	100
2015	TW B	210	\$ 71,226.00	60	Mill and Overlay	100
2015	TW B	215	\$ 114,797.00	51	Mill and Overlay	100
2015	TW B	220	\$ 594,750.00	57	Mill and Overlay	100
2015	TW C	320	\$ 1,511,322.00	54	Mill and Overlay	100
2015	TW C	330	\$ 200,201.00	51	Mill and Overlay	100
2015	TW D	2015	\$ 1,316,555.00	60	Mill and Overlay	100
2015	TW D	405	\$ 462,113.00	54	Mill and Overlay	100



Year	Branch ID	Section ID	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2015	TW D	410	\$ 1,072,429.00	53	Mill and Overlay	100
2015	TW E	505	\$ 91,737.00	63	Mill and Overlay	100
2015	TW E	515	\$ 2,890,381.00	58	Mill and Overlay	100
2015	TW E	520	\$ 258,419.00	55	Mill and Overlay	100
2015	TW G	717	\$ 168,840.00	63	Mill and Overlay	100
2015	TW G	725	\$ 252,087.00	50	Mill and Overlay	100
2015	TW G	740	\$ 115,937.00	61	Mill and Overlay	100
2015	TW H	6306	\$ 679,625.00	48	Mill and Overlay	100
2015	TW H	6325	\$ 1,337,680.00	58	Mill and Overlay	100
2015	TW H	6326	\$ 1,337,680.00	59	Mill and Overlay	100
2015	TW H	6355	\$ 183,929.00	62	Mill and Overlay	100
2015	TW J	1025	\$ 298,726.00	58	Mill and Overlay	100
2015	TW J	1030	\$ 296,250.00	61	Mill and Overlay	100
2015	TW J	1035	\$ 407,012.00	52	Mill and Overlay	100
2015	TW J	1040	\$ 864,021.00	59	Mill and Overlay	100
2015	TW N	1410	\$ 263,322.00	61	PCC Restoration	100
2015	TW N	1422	\$ 3,201,676.00	68	Mill and Overlay	100
2015	TW P	1625	\$ 264,491.00	64	Mill and Overlay	100
2015	TW P	1630	\$ 1,498,295.00	61	Mill and Overlay	100
2015	TW P	1640	\$ 267,956.00	49	Mill and Overlay	100
2015	TW P	1645	\$ 1,556,735.00	51	Mill and Overlay	100
2015	TW P	1650	\$ 237,213.00	61	Mill and Overlay	100
2015	TW P	1655	\$ 323,131.00	51	Mill and Overlay	100
2015	TW P	1660	\$ 868,912.00	19	Mill and Overlay	100
2015	TW S	1920	\$ 661,286.00	49	Mill and Overlay	100
2015	TW T	2005	\$ 7,165,281.00	58	Mill and Overlay	100
2015	TW T	2010	\$ 1,602,324.00	58	Mill and Overlay	100
2015	TW T	2025	\$ 833,997.00	56	Mill and Overlay	100
2015	TW T1	2020	\$ 691,784.00	50	Mill and Overlay	100
2015	TW Y	2605	\$ 405,863.00	59	Mill and Overlay	100
2015	TW Y	2610	\$ 2,548,326.00	48	Mill and Overlay	100
2015	TW Y	2615	\$ 139,298.00	64	Mill and Overlay	100
2015	TW Y	2620	\$ 1,790,690.00	50	Mill and Overlay	100
2015	TW Y1	1050	\$ 325,306.00	58	Mill and Overlay	100
2015	TW Y2	1060	\$ 667,818.00	48	Mill and Overlay	100



Year	Branch ID	Section ID	1	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2015	TW Y5	2630	\$	520,709.00	50	Mill and Overlay	100
2016	RW 9L-27R	6110	\$	486,675.00	65	Mill and Overlay	100
2016	TW E	510	\$	625,281.00	64	Mill and Overlay	100
2016	TW F	615	\$	227,849.00	65	Mill and Overlay	100
2016	TW G	720	\$	753,450.00	64	Mill and Overlay	100
2016	TW H	6324	\$	427,212.00	65	Mill and Overlay	100
2016	TW H	6335	\$	353,419.00	64	Mill and Overlay	100
2017	RW 9L-27R	6125	\$	252,229.00	64	Mill and Overlay	100
2017	TW G	730	\$	1,320,285.00	64	Mill and Overlay	100
2017	TW H	6305	\$	581,499.00	64	Mill and Overlay	100
2018	TW G	722	\$	1,227,938.00	64	Mill and Overlay	100
2018	TW G	735	\$	2,050,203.00	64	Mill and Overlay	100
2018	TW G	745	\$	193,626.00	64	Mill and Overlay	100
2018	TW H	6323	\$	382,307.00	65	Mill and Overlay	100
2018	TW H	6346	\$	485,784.00	65	Mill and Overlay	100
2018	TW P	1605	\$	451,523.00	64	Mill and Overlay	100
2018	TW P	1620	\$	3,193,705.00	65	Mill and Overlay	100
2018	TW R	1810	\$	640,209.00	65	Mill and Overlay	100
2018	TW S	1905	\$	402,760.00	65	Mill and Overlay	100
2019	RW 9R-27L	6405	\$	5,576,335.00	64	Mill and Overlay	100
2020	AP T-HANG	4509	\$	1,342,179.00	63	Mill and Overlay	100
2020	TW H	6345	\$	434,398.00	65	Mill and Overlay	100
2020	TW J	1015	\$	390,457.00	64	Mill and Overlay	100
2020	TW N	1430	\$	654,565.00	64	PCC Restoration	100
2020	TW V	2505	\$	960,724.00	64	Mill and Overlay	100
2021	TW R	1805	\$	353,560.00	65	Mill and Overlay	100
2022	TW H	6315	\$	2,704,954.00	64	Mill and Overlay	100
2023	TW P	1615	\$	883,146.00	65	Mill and Overlay	100
		Total =	\$ 1	43,442,889.00			

<sup>\*</sup> Costs are adjusted for inflation at 3%



### TMB – 10-YEAR MAJOR REHABILITATION NEEDS

Year	Branch ID	Section ID	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2015	AP N	4220	\$ 1,642,500.00	58	Mill and Overlay	100
2015	AP N	4225	\$ 1,042,350.00	58	Mill and Overlay	100
2015	AP N	4230	\$ 305,227.00	48	Mill and Overlay	100
2015	AP S	4125	\$ 530,561.00	61	Mill and Overlay	100
2015	AP S	4130	\$ 394,288.00	35	Reconstruction	100
2015	AP S	4135	\$ 446,824.00	58	Mill and Overlay	100
2015	AP S	4140	\$ 658,109.00	52	Mill and Overlay	100
2015	AP SE	4410	\$ 678,300.00	60	Mill and Overlay	100
2015	RW 9L-27R	6104	\$ 300,000.00	64	Mill and Overlay	100
2015	TW AP NE	1005	\$ 670,364.00	65	Mill and Overlay	100
2015	TW AP SE	1105	\$ 640,901.00	60	Mill and Overlay	100
2015	TW D	405	\$ 3,163,467.00	54	Mill and Overlay	100
2015	TW D2	420	\$ 756,944.00	52	Mill and Overlay	100
2016	AP S	4105	\$ 2,966,401.00	64	Mill and Overlay	100
2016	TW C2	320	\$ 271,417.00	64	Mill and Overlay	100
2016	TW D1	415	\$ 779,839.00	64	Mill and Overlay	100
2017	AP NE	4310	\$ 315,047.00	64	Mill and Overlay	100
2017	AP NE	4315	\$ 336,990.00	64	Mill and Overlay	100
2017	TW C1	310	\$ 280,776.00	64	Mill and Overlay	100
2018	RW 9L-27R	6126	\$ 165,548.00	64	Mill and Overlay	100
2018	TW E4	527	\$ 430,533.00	65	Mill and Overlay	100
2019	AP S	4110	\$ 4,369,952.00	64	Mill and Overlay	100
2019	RW 13-31	6205	\$ 6,756,431.00	65	Mill and Overlay	100
2019	RW 9R-27L	6305	\$ 7,766,013.00	65	Mill and Overlay	100
2019	TW CC	905	\$ 132,327.00	65	Mill and Overlay	100
2019	TW D	411	\$ 457,385.00	65	Mill and Overlay	100
2019	TW E3	525	\$ 706,090.00	64	Mill and Overlay	100
2019	TW H	815	\$ 2,009,739.00	64	Mill and Overlay	100
2020	AP N	4215	\$ 1,043,347.00	64	Mill and Overlay	100
2020	RW 9L-27R	6109	\$ 173,891.00	64	Mill and Overlay	100
2020	RW 9R-27L	6304	\$ 347,782.00	64	Mill and Overlay	100
2020	TW A3	125	\$ 558,991.00	64	Mill and Overlay	100
2020	TW D	412	\$ 173,960.00	64	Mill and Overlay	100



Year	Branch ID	Section ID	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2020	TW E2	520	\$ 877,707.00	65	Mill and Overlay	100
2021	AP NE	4325	\$ 887,014.00	65	Mill and Overlay	100
2021	RW 13-31	6210	\$ 3,583,949.00	64	Mill and Overlay	100
2021	RW 9L-27R	6131	\$ 361,798.00	64	Mill and Overlay	100
2021	RW 9R-27L	6306	\$ 360,007.00	65	Mill and Overlay	100
2021	RW 9R-27L	6311	\$ 180,003.00	65	Mill and Overlay	100
2021	TW H2	810	\$ 138,707.00	64	Mill and Overlay	100
2022	AP S	4115	\$ 15,358,331.00	64	Mill and Overlay	100
2022	RW 9L-27R	6105	\$ 8,486,132.00	65	Mill and Overlay	100
2022	RW 9R-27L	6302	\$ 1,844,811.00	65	Mill and Overlay	100
2022	RW 9R-27L	6309	\$ 184,481.00	63	Mill and Overlay	100
2022	TW E	507	\$ 570,601.00	64	Mill and Overlay	100
2022	TW E5	529	\$ 483,194.00	64	Mill and Overlay	100
2023	RW 9R-27L	6310	\$ 4,370,358.00	64	Mill and Overlay	100
2023	TW 2	260	\$ 374,277.00	64	Mill and Overlay	100
2023	TW D	410	\$ 686,751.00	64	Mill and Overlay	100
2023	TW E5	530	\$ 610,824.00	64	Mill and Overlay	100
2024	AP N	4205	\$ 16,440,146.00	64	Mill and Overlay	100
2024	AP NE	4330	\$ 52,843.00	64	PCC Restoration	100
2024	TW 7	210	\$ 363,192.00	64	Mill and Overlay	100
2024	TW C	910	\$ 2,702,222.00	65	Mill and Overlay	100
2024	TW E1	516	\$ 760,064.00	65	Mill and Overlay	100
2024	TW G	705	\$ 1,010,319.00	64	Mill and Overlay	100
2024	TW H3	330	\$ 361,219.00	64	Mill and Overlay	100
		Total =	\$ 102,321,244.00			

<sup>\*</sup> Costs are adjusted for inflation at 3%



### TNT – 10-YEAR MAJOR REHABILITATION NEEDS

Year	Branch Name	Section ID	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2014	RW 9-27	6110	\$ 9,869,999.53	59	Mill and Overlay	100
2014	RW 9-27	6105	\$ 5,879,999.72	61	Mill and Overlay	100
2014	AP N	4105	\$ 494,999.98	54	Mill and Overlay	100
2014	TW B	215	\$ 444,388.06	49	Mill and Overlay	100
2014	TW A6	170	\$ 687,799.97	54	Mill and Overlay	100
2014	TW A1	120	\$ 1,031,700.24	32	Reconstruction	100
2014	TW A	110	\$ 752,246.96	60	Mill and Overlay	100
2014	TW A	105	\$ 7,333,733.76	58	Mill and Overlay	100
2017	TW B	210	\$ 55,936.69	65	Mill and Overlay	100
2018	TW A6	173	\$ 71,965.03	65	Mill and Overlay	100
2019	TW A6	176	\$ 86,218.92	65	Mill and Overlay	100
2019	TW A4	150	\$ 2,172,054.41	65	Mill and Overlay	100
2020	TW A	180	\$ 898,222.22	65	Mill and Overlay	100
2022	TW B	205	\$ 1,059,146.42	65	Mill and Overlay	100
2022	TW A5	160	\$ 1,361,817.42	65	Mill and Overlay	100
		Total =	\$32,200,229.33			_

<sup>\*</sup> Costs are adjusted for inflation at 3%



### X51– 10-YEAR MAJOR REHABILITATION NEEDS

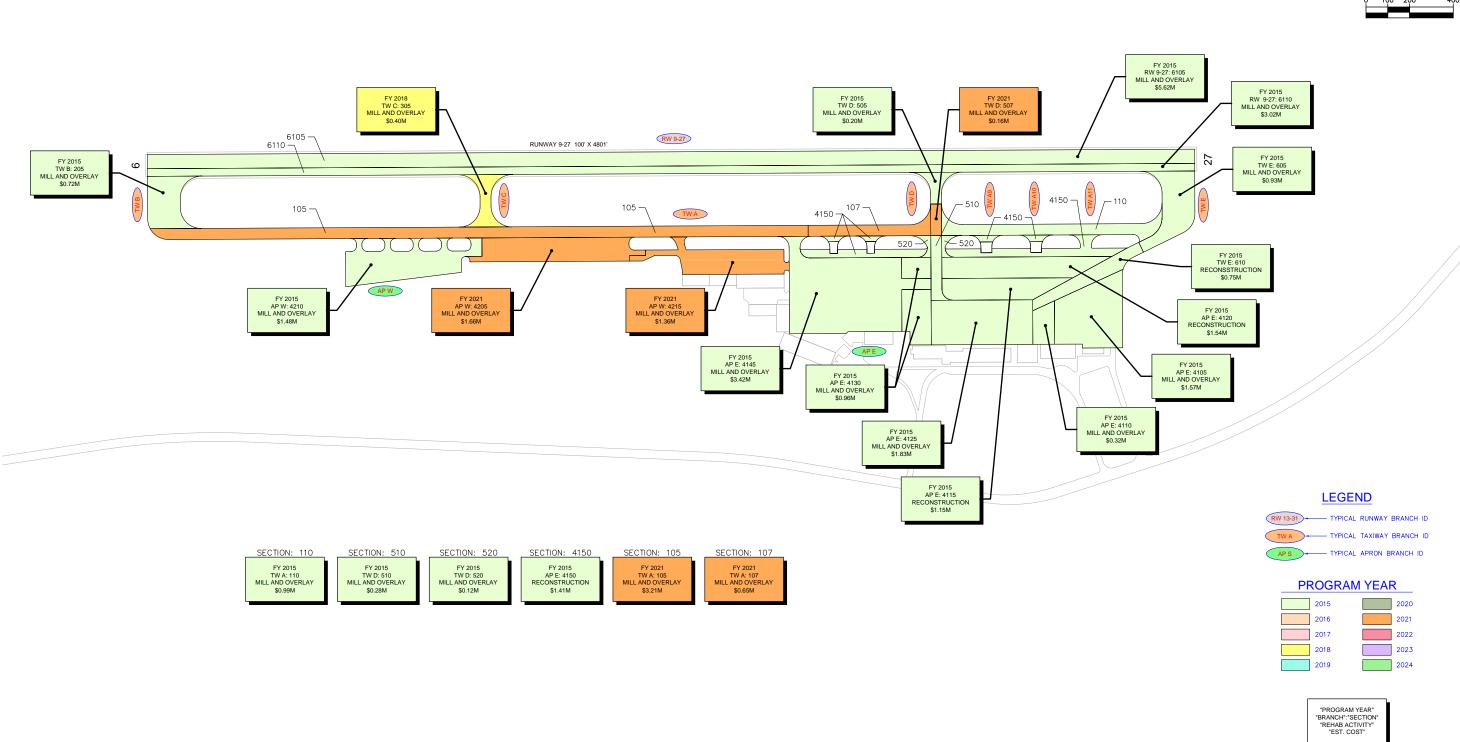
Year	Branch ID	Section ID	Major M&F Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2014	RW 18-36	6110	\$ 1,999,499.	91 58	Mill and Overlay	100
2014	TW C	400	\$ 249,749.	99 51	Mill and Overlay	100
2014	TW AP	305	\$ 125,239.	11 45	Mill and Overlay	100
2014	TW A	295	\$ 41,891.	40 55	Mill and Overlay	100
2014	TW A	290	\$ 40,691.	40 65	Mill and Overlay	100
2014	TW A	280	\$ 42,730.	10 65	Mill and Overlay	100
2014	TW A	270	\$ 53,691.	40 59	Mill and Overlay	100
2014	TW A	260	\$ 53,691.	40 59	Mill and Overlay	100
2014	TW A3	250	\$ 61,345.	70 65	Mill and Overlay	100
2014	TW A2	240	\$ 115,199.	09 59	Mill and Overlay	100
2014	TW A1	230	\$ 62,365.	00 60	Mill and Overlay	100
2014	TW A	205	\$ 137,380.	29 59	Mill and Overlay	100
2014	TW B	180	\$ 135,129.	99 63	Mill and Overlay	100
2014	TW A	160	\$ 146,990.	09 59	Mill and Overlay	100
2014	TW B5	150	\$ 62,109.	70 58	Mill and Overlay	100
2014	TW B4	140	\$ 155,689.	69 59	Mill and Overlay	100
2014	TW B3	130	\$ 122,372.	79 54	Mill and Overlay	100
2014	TW B2	120	\$ 212,233.	39 59	Mill and Overlay	100
2014	TW B	105	\$ 1,924,079.	91 63	Mill and Overlay	100
2018	AP NW	4105	\$ 2,875,359.	73 64	Mill and Overlay	100
		Total =	\$ 8,617,440.	08		

<sup>\*</sup> Costs are adjusted for inflation at 3%

# **APPENDIX E**

DISTRICT AIRFIELD PAVEMENT 10-YEAR MAJOR
 REHABILITATION EXHIBITS





RUNWAY LENGTHS DEPICTED IN THIS DRAWING ARE FOR PAVEMENT MANAGEMENT PURPOSES ONLY AND MAY NOT MATCH PUBLISHED RUNWAY LENGTHS.

DESIGNED: KHA DRAWN: KHA CHECKED:	KHA DATE:	2015





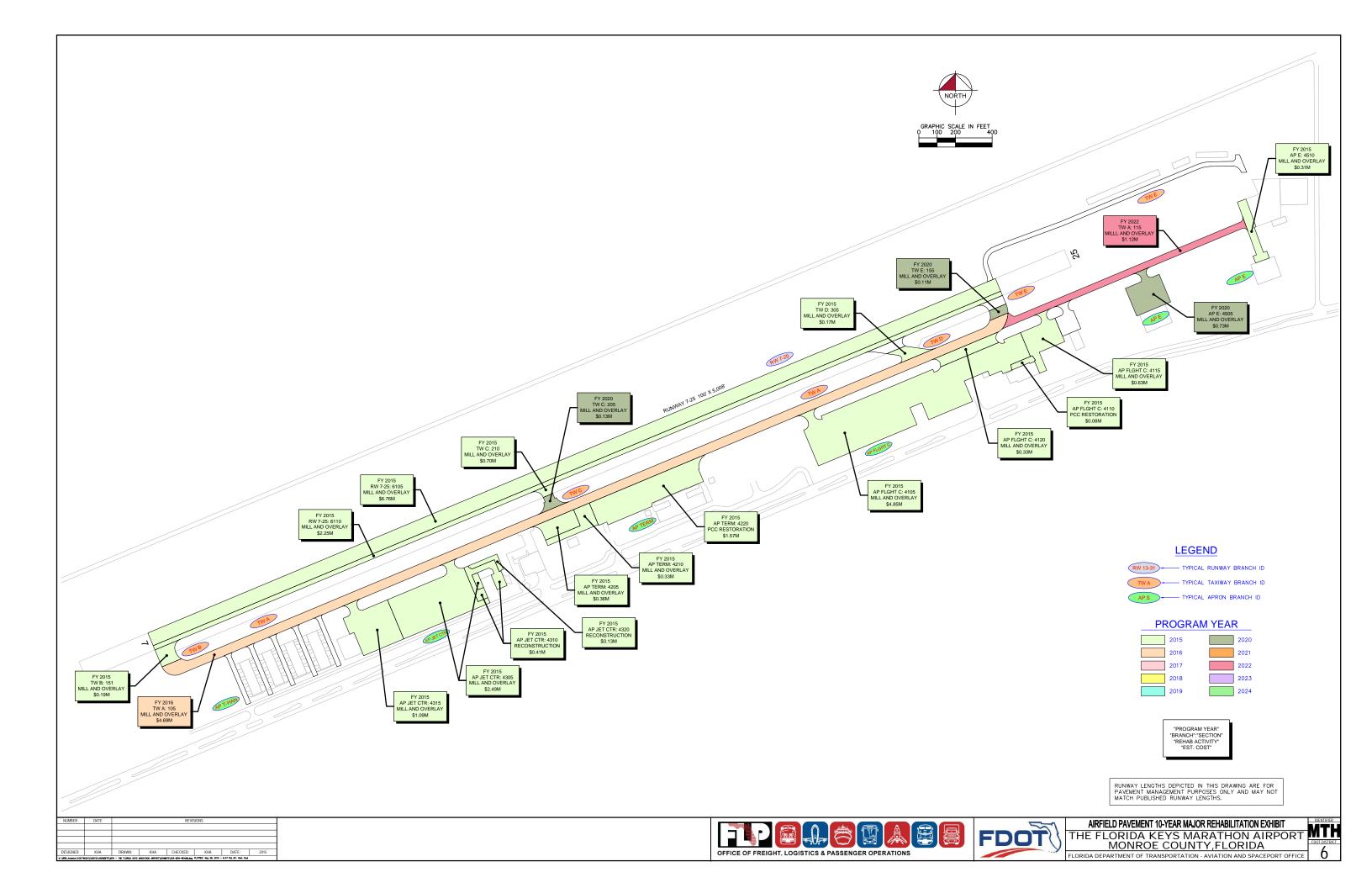
AIRFIELD PAVEMENT 10-YEAR MAJOR REHABILITATION EXHIBIT

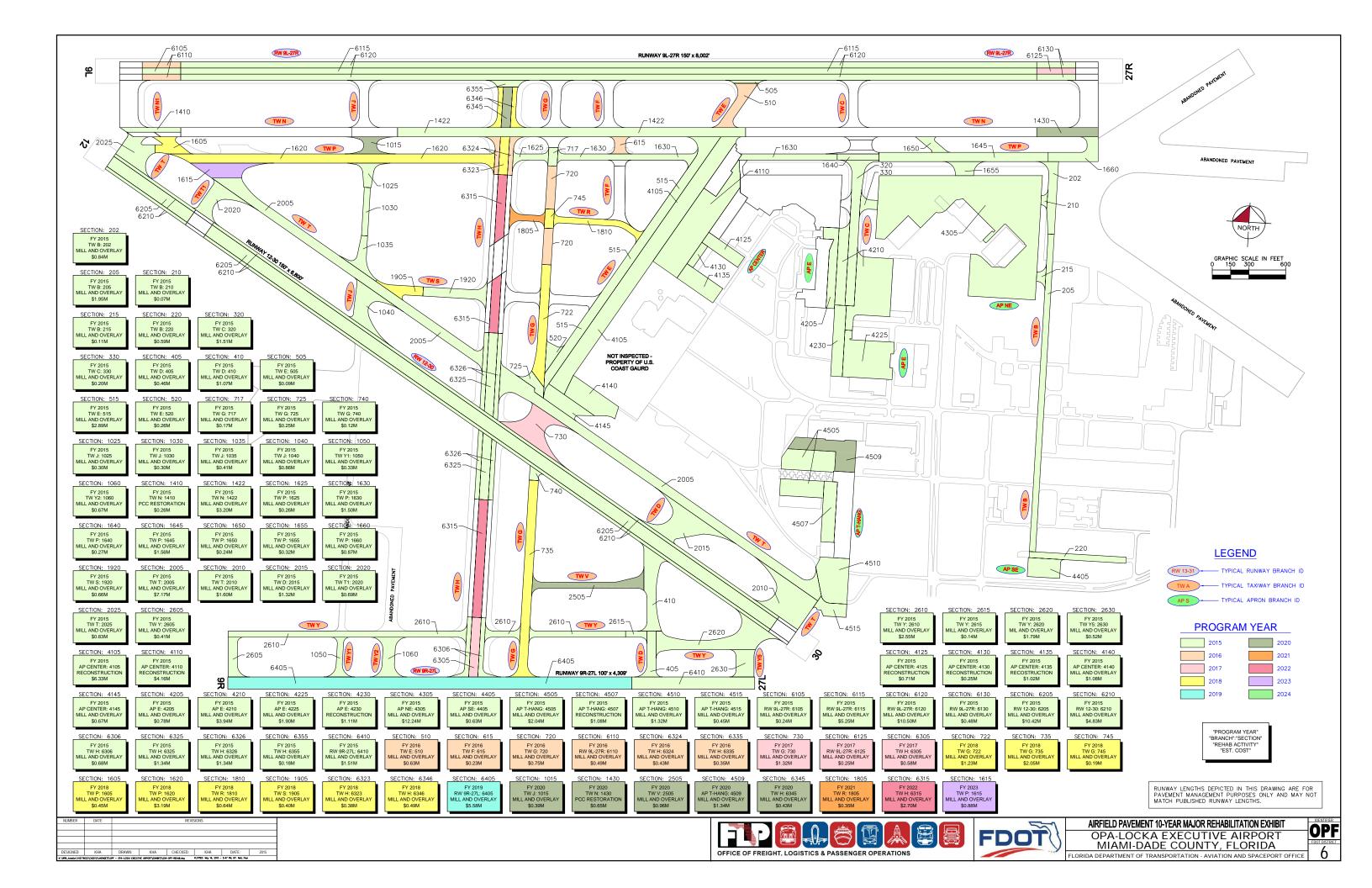
KEY WEST INTERNATIONAL AIRPORT

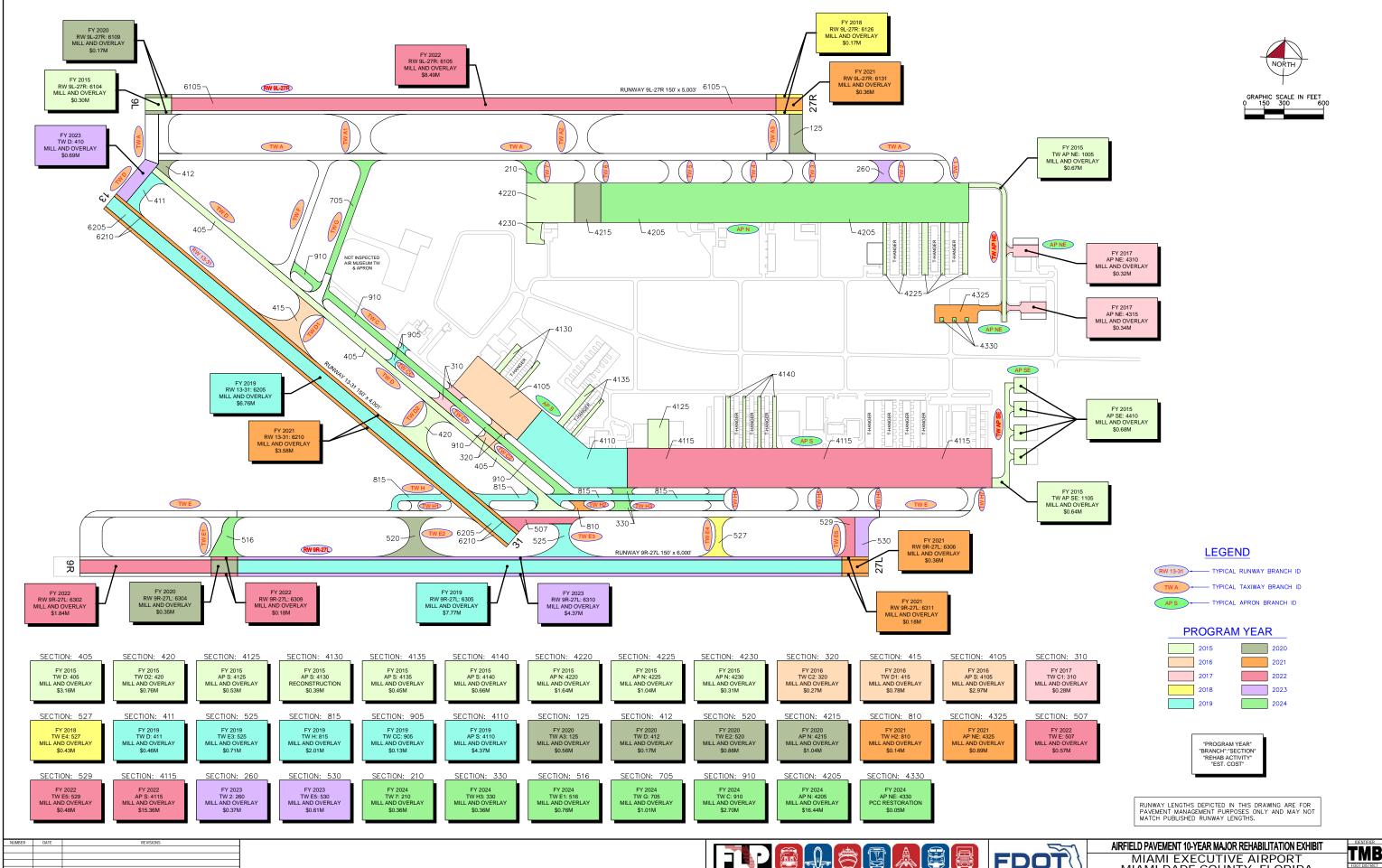
MONROE COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION AND SPACEPORT OFFICE







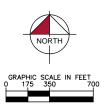


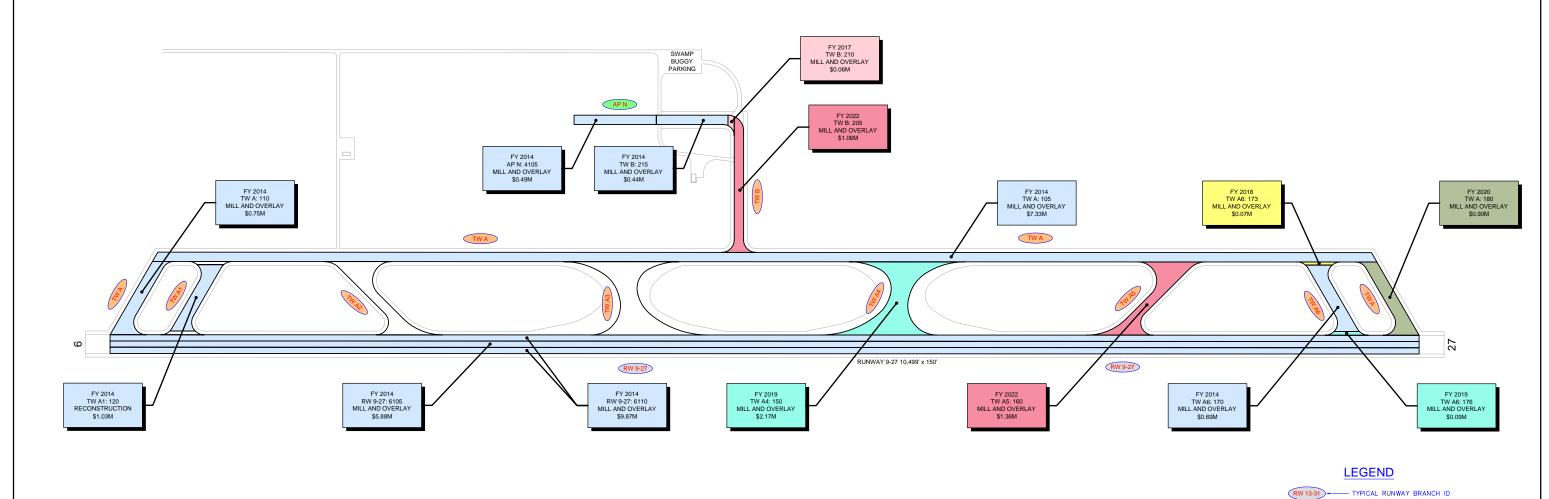
OFFICE OF FREIGHT, LOGISTICS & PASSENGER OPERATIONS



MIAMI-DADE COUNTY, FLORIDA FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION AND SPACEPORT OFFICE







## TWA TYPICAL TAXIWAY BRANCH ID

TYPICAL APRON BRANCH ID

PROGRAM YEAR

#### 

"PROGRAM YEAR"
"BRANCH":"SECTION"
"REHAB ACTIVITY"
"EST. COST"

RUNWAY LENGTHS DEPICTED IN THIS DRAWING ARE FOR PAVEMENT MANAGEMENT PURPOSES ONLY AND MAY NOT MATCH PUBLISHED RUNWAY LENGTHS.

NUMBER	DATE	REVISIONS					
DESIGNED:	KHA	DRAWN:	KHA	CHECKED:	KHA	DATE:	2013
IC \WPR_Aviation\140	N:\WFB_ANGLIN\\12179023\(CADO\PLANGEETS\TNIT - DAGE_COLLER TRANSIS AND TRANSITION AMPORT\DOMBITS\(GOA-TNIT-REPARKER) May 15, 2015 - 8.49 AM, 81t Benns, Art						

OFFICE OF FREIGHT, LOGISTICS & PASSENGER OPERATIONS	







