STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

AVIATION OFFICE

Statewide Airfield Pavement Management Program

Merritt Island Airport– COI
(General Aviation)
Titusville, Florida
(District 5)

May 2012

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EXECUTIVE SUMMARY

In 2010, the Florida Department of Transportation (FDOT) Aviation Office selected a Consultant team consisting of Kimley-Horn and Associates and their Subconsultants, AMEC and All About Pavements, Inc., to provide services in support of FDOT in the continuing evaluation and updating of the existing Statewide Airfield Pavement Management Program (SAPMP) to be completed over fiscal years 2011 and 2012.

The tasks required to achieve this objective at Merritt Island Airport included:

- Obtain recent construction history from the Airport to update the Pavement Inventory CADD drawings from the previous SAPMP update,
- Perform a visual Pavement Condition Index (PCI) survey of the airfield pavements at the Airport,
- Update the MicroPAVER database to analyze the PCI field data and determine the current condition of the airfield pavements,
- Predict the future deterioration of the pavements,
- Develop a 10-year M&R plan to address the pavement needs at Merritt Island Airport, and
- Provide the estimated costs associated with the suggested immediate and future M&R activities

During February 2012, the PCI survey was performed at Merritt Island Airport. The results of the survey indicate that, based on a numerical scale of 0 to 100, the overall area-weighted average PCI of the airfield pavements in 2012 is 72, representing a Satisfactory overall network condition.

Table I below summarizes the overall condition summary by network branch.

Table I: Condition Summary by Branch

Branch Name	Area Weighted PCI	Area Weighted PCI Range	Condition Rating	FDOT Minimum Service Level	MicroPAVER Minimum PCI	Action Required
North Apron	84	36 - 100	Satisfactory	60	65	X
Run-Up at RW 29	91	91	Good	60	65	
South Apron	30	25 - 43	Very Poor	60	65	X
Southwest Apron	95	95	Good	60	65	
Runway 11-29	80	80	Satisfactory	75	65	
Taxiway Alpha	90	90 - 92	Good	65	65	
Taxiway A-1	79	79	Satisfactory	65	65	
Taxiway A-2	90	90	Good	65	65	
Taxiway A-3	86	86	Good	65	65	
Taxiway A-4	92	92	Good	65	65	
Taxiway Bravo	89	86 - 100	Good	65	65	
Taxiway B-1	89	89	Good	65	65	
Taxiway B-2	95	95	Good	65	65	
Taxiway B-4	95	95	Good	65	65	

Tables II and III below illustrate the area-weighted PCI computed individually for each pavement use and rank, respectively.

Table II: Condition Summary by Pavement Use

Use	Average Area-Weighted PCI	Condition Rating
Runway	80	Satisfactory
Taxiway	89	Good
Apron	62	Fair
All (Weighted)	**72**	**Satisfactory**

Table III: Condition Summary by Pavement Rank

Rank*	Average Area-Weighted PCI	Condition Rating
Primary	72	Satisfactory
All (Weighted)	**72**	**Satisfactory**

*The pavement rank for the airport pavement network is listed on Table 2-3.

The immediate M&R needs, or needs that have been programmed to be completed in the first year of the 10-year M&R plan based on an unlimited budget at Merritt Island Airport, include: the North Apron and the South Apron. Distresses in these areas justify portland cement concrete restoration, asphalt pavement mill and overlay or full pavement reconstruction. The immediate needs are summarized in Table IV below.

Table IV: Immediate Major M&R Needs

Branch Name	Section ID	Surface Type	Section Area (ft^2)	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
South Apron	4110	AAC	63,200	$860,777.74	25	Reconstruction	100
South Apron	4105	AAC	97,600	$1,329,306.98	29	Reconstruction	100
South Apron	4111	AAC	13,470	$153,840.92	33	Reconstruction	100
South Apron	4115	AAC	89,396	$955,463.34	34	Reconstruction	100
North Apron	4205	AAC	24,860	$229,261.10	36	Reconstruction	100
South Apron	4106	AAC	21,455	$134,951.96	43	Mill and Overlay	100
North Apron	4203	PCC	2,202	$10,056.46	56	PCC Restoration	100
				$3,673,658.50	**37**		**100**

* Costs are adjusted for inflation.

A forecast of Major M&R needs for a 10-year period, starting from 2012, was developed using an unlimited budget. The analysis identified ongoing maintenance needs and major M&R during that interval. The results of this analysis are provided in Table V below.

Table V: 10-Year M&R Costs under Unlimited Funding Scenario

Year	Preventative	Major M&R	Total Year Cost
2012	$34,772.57	$3,673,658.50	$3,708,431.07
2013	$58,743.50	$0.00	$58,743.50
2014	$76,750.75	$0.00	$76,750.75
2015	$96,441.27	$0.00	$96,441.27
2016	$117,785.63	$0.00	$117,785.63
2017	$141,586.46	$0.00	$141,586.46
2018	$169,595.51	$0.00	$169,595.51
2019	$202,526.13	$0.00	$202,526.13
2020	$145,876.15	$828,573.95	$974,450.10
2021	$168,632.03	$0.00	$168,632.03
Total	**$1,212,710.00**	**$4,502,232.45**	**$5,714,942.45**

Note: Costs are adjusted for inflation.

The implementation of the 10-Year Major M&R Plan is expected to provide an improvement in the overall condition of the airfield pavement, where the area-weighted PCI would increase from 71 in 2012 to 80 in 2021. Appendix F lists the Major M&R for the 10-Year program. Appendix G graphically depicts the program activity.

It is important to note that although preventative and some major M&R activities would have to be conducted over several years, the area-weighted PCI value for all Merritt Island Airport pavements in 2021 may remain near 76. The airport manager should realize that what is most important is that the pavement repair work (preventative and major M&R) that has been identified for Merritt Island Airport is conducted at some point in the 10-year plan.

1. INTRODUCTION

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. There are millions of square yards of pavement for the runways, taxiways, aprons and other areas of these airports that support aircraft operations. The timely and proper maintenance and rehabilitation (M&R) of these pavements allows the airports to operate efficiently, economically and without excessive down time.

In order to support the planning, scheduling, and design of the M&R activities based on pavement evaluation and pavement management performance trends, the Florida Department of Transportation (FDOT) Aviation Office implemented the Statewide Airfield Pavement Management Program (SAPMP) in 1992.

In 2010, the FDOT Aviation Office selected a Consultant team consisting of Kimley-Horn and Associates and their Subconsultants, MACTEC Engineering and Consulting and All About Pavements, Inc., to provide services in support of FDOT in the continuing evaluation and updating of the existing SAPMP to be completed over fiscal years 2011 and 2012.

This report discusses the work performed, a summary of the findings, results, and recommendations for M&R planning associated with the update to the SAPMP. It also describes the procedures used to ensure that the appropriate engineering and scientific standards of care, quality, budget, and schedule requirements are implemented during the performance of the SAPMP.

1.1 Purpose

This Florida Airport Pavement Evaluation Report is intended to:

- Describe, briefly, the SAPMP and the roles and responsibilities of the program's participants;
- Provide background information on pavement management principles, objectives, and benefits to this airport;
- Outline the procedures used to collect, evaluate and report pavement inspection results at this airport;
- Present the findings from the pavement inspection;
- Analyze and discuss the needs for Maintenance and Rehabilitation (M&R) activities and associated costs for this airport.

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 State system, identify maintenance needs at individual airports, automate information management, and establish standards to address future needs. The 1992 SAPMP provided valuable information for establishing and performing pavement M&R.

In 1992/1993, and 1998/1999, the FDOT Aviation Office participated in the development of a proprietary software pavement management system and developed and populated a pavement management database that provided valuable information for establishing M&R policies, estimating M&R costs, and developing recommendations for performing routine pavement

maintenance. This system, AIRPAV, was implemented, and initial condition surveys were performed in 1992 and 1993. The SAPMP was updated with additional surveys in 1998 and 1999.

In 2004, the FDOT Aviation Office undertook a project to update the pavement management system software utilized for the SAPMP. This project involved a review of the AIRPAV software and other available pavement management system software. As a result of this review, MicroPAVER was selected as the software for the update project. Data from the 1998/1999 condition surveys were converted to the MicroPAVER system, and the inventory of the pavement systems and drawings of the pavements were updated to reflect maintenance, rehabilitation, and construction activities since 1998/1999. The pavements were inspected between 2006 and 2008, and an updated M&R program was developed based on the new condition of the airfield pavements. As part of the update, procedures for the inspection and collection of pavement data were developed, and a website (www.floridaairportpavement.com) was created for the input of data under secure procedures.

Currently, airports using the AIP Grant Program are required by the Federal Aviation Administration (FAA) to develop a pavement maintenance program (FAA/AC 150/5380-6B "Guidelines and Procedures for Maintenance of Airport Pavements") using trained personnel to perform a detailed inspection of airfield pavements. The inspections are required to be performed at least once a year or every 3 years if pavement inspection is characterized in the form of a Pavement Condition Index (PCI) survey (such as ASTM D 5340 "Standard Test Method for Airport Pavement Condition Index Surveys", (2004 edition)). The 2004 edition was utilized in lieu of the 2010 edition to maintain database integrity and benefit of pavement performance curves from the previous inspections.

In 2010, the FDOT Aviation Office selected a team consisting of the Consultant and their Subconsultants to provided services in support of FDOT in the continuing evaluation and updating of the existing SAPMP to be completed over fiscal years 2011 and 2012.

1.3 Organization

1.3.1 *Aviation Office Program Manager Role*

The Aviation Office Airport Engineering Manager serves as the Aviation Office Program Manager (AO-PM) monitoring the work of the Consultant. The AO-PM has review and approval authority for each program task and also manages the day-to-day details of the SAPMP and the updates.

1.3.2 *Consultant Role*

The Consultant (Kimley-Horn and Associates, Inc.) and their Subconsultants (AMEC Engineering and Consulting and All About Pavements, Inc.) provide technical and administrative assistance to the AO-PM during the execution of this program, which involves the continuing evaluation of airport pavements and updating of the SAPMP based upon procedures outlined in FAA Advisory Circular 150/5380-6B "Guidelines and Procedures for Maintenance of Airport Pavements" and ASTM D 5340 "Standard Test Method for Airport Pavement Condition Index Surveys" (2004).

1.3.3 *Airport Role*

The airports are the ultimate client for each of the field inspections and reports. Individual airports will be provided final deliverables prepared by the Consultant that have been reviewed and approved by the AO-PM. The airport should provide a current Airport Layout Plan (ALP) to the Consultant and, if they participated in the previous SAPMP update, indicate any construction activity that has been performed since the previous inspections.

1.4 Pavement Types and Pavement Management

1.4.1 *Pavement basics*

A pavement is a prepared surface designed to provide a continuous smooth ride at a certain speed and to support an estimated amount of traffic for a certain number of years. Pavements are constructed of a combination of subgrade soils, subbases, bases and surfacing. There are mainly two types of pavements;

- Flexible pavement, composed of an asphalt concrete (AC) surface, and
- Rigid pavement composed of a Portland Cement Concrete (PCC) surface.

Both pavement types use a combination of layered materials and thicknesses in order to support the traffic loads and protect the underlying natural subgrade soil. Flexible pavements (AC) dissipate the load from layer to layer until the load magnitude is small enough to be supported by the subgrade soil. In rigid pavements (PCC), the Portland Cement Concrete supports most of the load, and the base or subbase layer is mainly constructed to provide a smooth and continuous platform for the construction of the concrete surface.

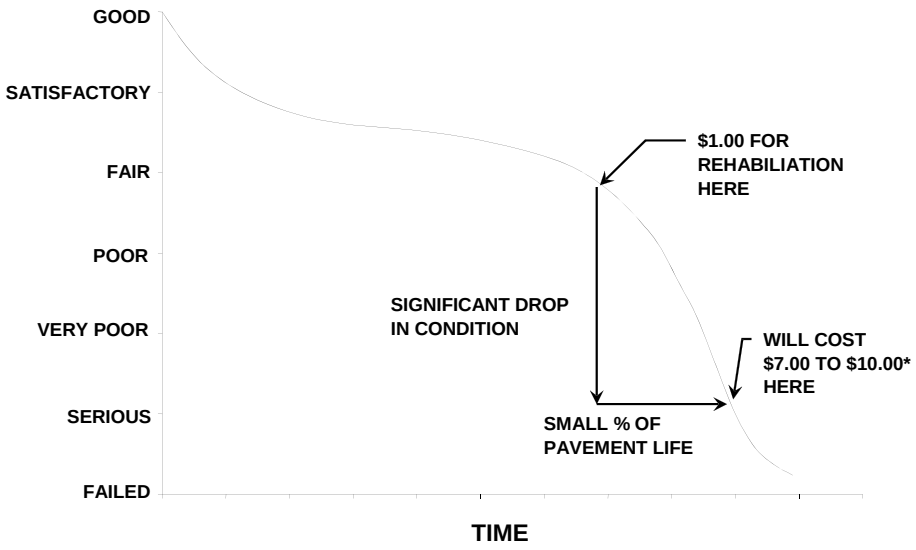
A small percentage of the airport pavements in Florida are composed of asphalt concrete surface over Portland Cement Concrete (APC). This pavement type is known as “composite” pavement.

Due to the different nature of the pavement types and their materials, flexible and rigid pavements have different distresses and failure mechanisms. Understanding the mechanics and failure modes of both pavement types will assist engineers in making adequate and long lasting repairs or rehabilitation to the pavement structures.

1.4.2 *Pavement Management System Concept*

The SAPMP utilized a Pavement Management System (PMS) to develop the M&R recommendations discussed in this report. A PMS is a tool to assist engineers, planners and managing agencies in making decisions when planning pavement M&R. The management of pavements involves scheduling pavement maintenance and rehabilitation before pavements deteriorate to a condition where reconstruction (the most expensive alternative) is the only solution. Figure 1-1 below, taken from FAA/AC 5380-7A “Airport Pavement Management Program”, illustrates how a pavement generally deteriorates and the relative cost of rehabilitation at various times throughout its life. Note that during the first 75 percent 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” condition depends on how well it is maintained. As the illustration demonstrates, the cost of maintaining the pavement above a critical condition before rapid deterioration occurs is much less compared to maintaining pavements after substantial deterioration has occurred.

Figure 1-1: Pavement Life Cycle



Source: FAA/AC 150/5380-7A "Airport Pavement Management Program"
**Modified to reflect current construction costs.*

Pavements deteriorate at an accelerated rate with increasing traffic and limited M&R resources. Planned maintenance and rehabilitation, essentially preventing pavements from reaching deteriorated conditions, helps managers/owners/agencies maximize the use of their budgets and prolong the life of the pavements. A PMS provides a tool to schedule and plan maintenance and rehabilitation based on engineering information and existing and predicted conditions of pavements.

There are several components or elements that are essential to a PMS. The first steps in the implementation of a PMS are to know and clearly identify what needs to be managed, the limits of the managing agency's responsibilities and the condition of the existing pavements. Once the cause and the extent of pavement problems are known, the appropriate maintenance and/or rehabilitation can be planned. By using local unit costs and expected yearly budgets, a multi-year M&R plan can be determined.

1.4.3 *Pavement Inspection Methodology for the SAPMP*

Pavement condition assessment is one of the primary decision variables in any airport PMS. Pavement condition assessments generally include visual surveys in accordance with ASTM D 5340, "Standard Test Method for Airport Pavement Condition Index Surveys" and structural evaluation. Pavement condition surveys assess the functional condition of the pavement surface. Typically, most problems within a pavement structure will eventually reflect to the pavement surface. The structural condition and relative support of the pavement layers can be assessed utilizing non-destructive deflection testing (NDT) as well as other in-depth engineering evaluation or sampling and testing methods.

For the Statewide Aviation Pavement Management Program update, only visual surveys were performed. Further structural and geotechnical testing should be conducted to determine the appropriate rehabilitation methods during the design process.

In preparation of the PCI surveys, the airfield pavements are divided into sample units as established in FAA AC 150/5380-6B and ASTM D 5340. Further discussion of how the airport pavements are divided and subdivided into units by construction and use can be found in Section 2 "Network Definition and Pavement Inventory" of this report.

Sample unit sizes are approximately 5000 ± 2000 square feet for AC-surfaced pavements and 20 ± 8 slabs for PCC-surfaced pavements. Prior to conducting the field inspections, the sampling plan was developed based on previous sampling and modified based on the available knowledge of Branches, Sections, use patterns, construction types and history. The sampling rate used for the FDOT Statewide Airfield Pavement Management Program is provided in Table 1-1 below.

Table 1-1: Sampling Rate for FDOT Condition Surveys

AC Pavements			PCC Pavements		
N	**n**		**N**	**n**	
	Runway	**Others**		**Runway**	**Others**
1-4	1	1	1-3	1	1
5-10	2	1	4-6	2	1
11-15	3	2	7-10	3	2
16-30	5	3	11-15	4	2
31-40	7	4	16-20	5	3
41-50	8	5	21-30	7	3
≥51	20% but ≤20	10% but ≤10	31-40	8	4
			41-50	10	5
			≥51	20% but ≤20	10% but ≤10

Where *N = total number of sample units in Section*
n = number of sample units to inspect

The sample units to inspect are determined by a systematic random sampling technique. This means that the locations are determined such that they are distributed evenly throughout the Section. In the case when nonrepresentive distresses are observed in the field, additional sample units were added.

The distress quantities and severity levels from the sample units are used to compute the PCI value for each Section. PCI values range from 0 to 100. As Figure 1-2 below indicates, MicroPAVER provides a rating scale that relates PCI to pavement condition. A PCI between 0 and 10 is considered 'Failed' pavement, and a PCI between 86 and 100 is considered 'Good' pavement, with five other conditions for PCI values between 11 and 85.

Figure 1-2: PCI Rating Scale

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

1.5 Definitions

Aviation Office - The Aviation 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 (AO-PM) has review and approval authority for each program task of the SAPMP.

Base Course - Base Course is a layer of manufactured material, usually crushed rock (aggregate) or stabilized material (asphalt or concrete or Florida Limerock), immediately beneath the surface course of a pavement, which provides support to the surface course.

Branch - A Branch designates pavements that have common usage and functionality, such as an entire runway, taxiway, or apron.

Branch ID - A short form identification for the pavement Branch. In this report, Branch includes the common designation for the item e.g. RW 18-36.

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

- GA – for general aviation or community airports;
- RL – for regional relievers or small hubs;
- PR – for primary (certified under Part 139 requirements).

Critical PCI - The PCI value considered to be the threshold for M&R decisions. 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 is a defined visible defect in pavement evidenced by cracking, vertical displacement or deterioration of material. In PCI technology, 16 distinct distress types for asphalt surfaced and 15 for Portland Cement Concrete surfaced pavements have been described and rated according to the impact their presence has on pavement condition.

Florida DOT (FDOT) - Florida Department of Transportation was represented in this project by the Office of Aviation.

Global M&R - Global M&R is defined as activities applied to entire pavement Sections with the primary objective of slowing the rate of deterioration. These activities are primary for asphalt surfaced pavements, e.g. surface treatments.

Localized M&R (Maintenance and Repair) - Localized M&R is a temporizing 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 (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.

MicroPAVER - 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 150/5380-7A.

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 Branch and 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. The Network Definition for the airport is in Appendix A along with a table of inventory data.

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 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 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 surface pavements;
- 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 pavement.

Rank - Pavement rank in MicroPAVER determines the priority to be assigned to a pavement Section when developing an M&R plan. Pavement Sections are ranked as follows according to their use:

- P – for Primary pavements, such as primary runways, primary taxiways, and primary aprons;
- S – or Secondary pavements, such as secondary runways, secondary taxiways, and secondary aprons;
- T – for Tertiary pavements such as "T" hangars and slightly used aprons.

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.

Section ID - A short form identification for the pavement Section that maintains the original AirPAV identification where 100 series through 3000 series Sections are taxiways, 4000 and 5000 series Sections are aprons (the 5000 series represent run-up aprons and turnarounds), and 6000 series Sections are runways.

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. The System Inventory for the airport is included in Appendix A.

Use - In MicroPAVER, Use is the term for the function of the pavement area. This is either Runway, Taxiway, or Apron for purposes of the FDOT Statewide Aviation Pavement Management System.

2. NETWORK DEFINITION AND PAVEMENT INVENTORY

Merritt Island Airport (COI) is located in Merritt Island, Florida, in Brevard County. It is owned and operated by the Titusville-Cocoa Airport Authority. The Airport is solely served by Runway 11-29, which is 75-ft wide by 3,601-ft long. The runway is served by parallel Taxiways Alpha and Bravo. Aprons are located on the northwest and southwest areas of the property. The Airport features aircraft charter services, banner towing, flight training, aircraft avionics service and aircraft maintenance and sales. It is designated a General Aviation airport and is located in District 5 of the Florida Department of Transportation.

It is important to note that the aforementioned runway data in addition to the remaining airfield pavement facilities geometric dimensions may vary slightly from the geometry used in the condition and M & R analysis based on field measurements.

Merritt Island Airport was established in the early 1940's as the Central Brevard Airport by the Brevard County Mosquito Control District. The district later deeded the Airport to the Titusville-Cocoa Airport Authority. Central Brevard Airport was later renamed Merritt Island Airport and became a public general aviation facility.

2.1 Network Definition

The pavements within the network are defined in MicroPAVER in terms of manageable units that help to organize the data into similar groups. An organizational hierarchy is used to establish these units.

2.1.1 *Branch Section Identification*

The airport pavement network is subdivided into separate Branches (runways, taxiways, or aprons) that have distinctly different uses. Branches are then further divided into Sections with similar pavement construction and performance that may share other common attributes.

Sections are manageable units used to organize the data collection and are treated individually during the rehabilitation planning stage. A pavement rank, consisting of primary, secondary, and tertiary levels, is assigned to each Section based on their level and type of use. The pavement rankings that were designated for each Section in the previous SAPMP update were again used for this update.

As discussed in Section 1.4.3 "Pavement Inspection Methodology for the SAPMP", the sections are sub-divided into sample units, which are the smallest subdivision in a pavement network, only for the purpose of conducting the pavement condition survey.

2.1.2 *System Inventory and Network Definition Update*

The System Inventory and Network Definition drawings are used to identify changes in the network since the most recent update from the 2006/2008 inspections and also to plan the field inspection activities for the 2012 survey. Prior to the field inspection process, the System Inventory drawing was updated from the previous inspection with notes indicating recent construction projects on the various Sections of pavement throughout the airfield. This System Inventory drawing is used to update the Network Definition drawing.

The Network Definition drawing shows the airport pavement outline with Branch and 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. The previous airport configuration and history was compared with the current airport configuration, and the existing network branch, section and sample unit designations were revised to match the current configuration. This drawing serves not only as a primary guide for the airfield inspectors but also as an important historical record.

Due to recent and anticipate construction history; pavement area sections may have been consolidated or created which will affect the total number of sample units to be inspected based on the ASTM 5340 criteria.

The updated System Inventory and Network Definition drawings for Merritt Island Airport are provided in Appendix A. Table 2-1 below lists the recent construction projects at the airport.

Table 2-1: Construction Since Last Inspection & Anticipated Construction Activity

Construction Year	Location	Work Type / Pavement Section
2011	North Apron	New Asphalt Pavement / New Portland Cement Concrete Pavement

2.2 Pavement Inventory

The detailed pavement inventory was updated to reflect the network definition update and field inspection results. The total number of sample units designated to be inspected at the airport is 58 sample units.

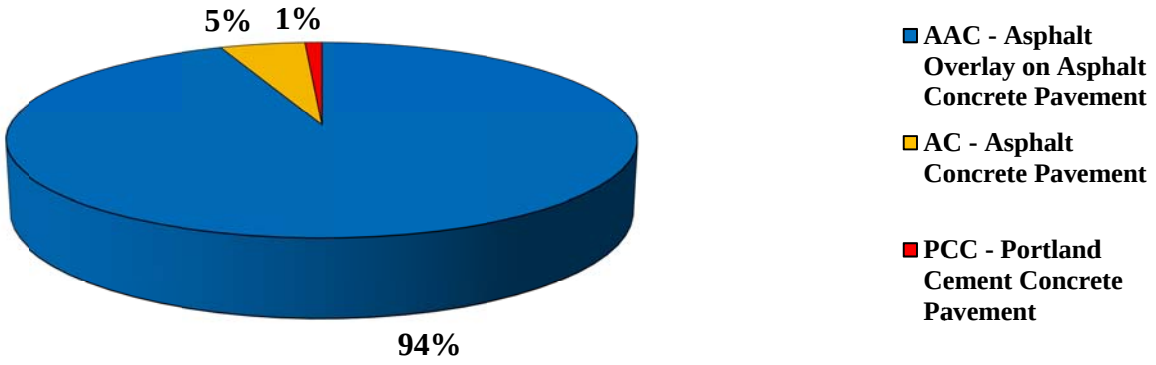
The total airfield pavement area in 2012 at Merritt Island Airport is 1,190,397 square feet. The breakdown of pavement area for each pavement use is provided in Table 2-2.

Table 2-2: Pavement Area by Pavement Use

Use	Area (ft^2)	% of Total Area
Runway	270,225	23%
Taxiway	252,811	21%
Apron	667,361	56%
All (Weighted)	**1,190,397**	**100%**

Figure 2-1 presents the breakdown of the pavement area at Merritt Island Airport by surface type.

Figure 2-1: Pavement Area by Surface Type



Details of pavement Branch and Section information including Branch name (which indicates pavement use), Branch ID, Section ID, section area, rank, surface type, last construction date, number of samples inspected, and number of samples in each Section are given in Table 2-3 below. A more detailed Pavement Inventory Table may be found in Appendix A of this report.

Table 2-3: Branch and Section Inventory

Branch Name	Branch ID	Section ID	True Area (ft^2)	Section Rank	Surface Type	Last Const. Date	Total Samples Inspected	Total Samples
North Apron	AP N	4202	3,023	P	PCC	1/1/2011	1	1
North Apron	AP N	4203	2,202	P	PCC	1/1/1990	1	1
North Apron	AP N	4205	24,860	P	AAC	1/1/2005	1	8
North Apron	AP N	4215	139,109	P	AAC	1/1/2005	4	34
North Apron	AP N	4218	48,875	P	AAC	1/1/2005	2	12
North Aspron	AP N	4220	33,609	P	AAC	1/1/2005	1	6
North Apron	AP N	4225	26,238	P	AAC	1/1/2005	1	4
North Apron	AP N	4230	42,203	P	AAC	1/1/2005	1	7
Run-Up Apron at RW 29	AP RU RW29	5105	14,226	P	AAC	1/1/2002	1	3
South Apron	AP S	4105	97,600	P	AAC	1/1/1996	3	21
South Apron	AP S	4106	21,455	P	AAC	1/1/1996	1	4
South Apron	AP S	4110	63,200	P	AAC	1/1/1996	2	14
South Apron	AP S	4111	13,470	P	AAC	1/1/1996	1	2
South Apron	AP S	4115	89,396	P	AAC	1/1/1996	3	19
SW Apron	AP SW	4305	37,682	P	AC	1/1/2003	1	7
SW Apron	AP SW	4310	10,214	P	AC	1/1/2003	1	2
Runway 11-29	RW 11-29	6105	270,225	P	AAC	1/1/2002	15	72
Taxiway Alpha	TW A	105	125,133	P	AAC	1/1/2002	5	36
Taxiway Alpha	TW A	110	9,043	P	AAC	1/1/2002	1	2
Taxiway A-1	TW A1	305	10,739	P	AAC	1/1/2002	1	2
Taxiway A-2	TW A2	405	4,513	P	AAC	1/1/2002	1	1
Taxiway A-3	TW A3	505	4,513	P	AAC	1/1/2002	1	1
Taxiway A-4	TW A4	605	5,387	P	AAC	1/1/2002	1	1
Taxiway Bravo	TW B	203	9,788	P	AC	1/1/2011	1	3
Taxiway Bravo	TW B	205	12,750	P	AAC	1/1/2005	1	4
Taxiway Bravo	TW B	210	57,150	P	AAC	1/1/2005	3	19
Taxiway B-1	TW B1	315	4,046	P	AAC	1/1/2005	1	1
Taxiway B-2	TW B2	410	4,298	P	AAC	1/1/2005	1	1
Taxiway B-4	TW B4	216	5,450	P	AAC	1/1/2005	1	2

* Note: If new construction, then survey date = last construction date and PCI is set to 100 by MicroPAVER.
*Sections not surveyed due to reasons such as re-sectioning, no escort, not accessible at the time of survey.

3. PAVEMENT CONDITION

Pavement conditions were inspected in accordance with the methods outlined in FAA AC 150/5380-6B and ASTM D 5340-04 "Standard Practice for Airport Pavement Condition Index Surveys." These procedures define distress type, severity and quantity for sampling areas within each section to determine the Pavement Condition Index (PCI).

3.1 Inspection Methodology

A PCI survey is performed by measuring the amount and severity of pavement distresses, which are caused by traffic load, climate, and other factors, observed within a sample unit. This data is imported into MicroPAVER, which calculates PCI values for the pavement sections. Tables 3-1 and 3-2 below list the pavement distress types and related causes for asphalt concrete (AC) and portland cement concrete (PCC), respectively.

Table 3-1: Pavement Distresses for Asphalt Concrete Surfaces

Code	Distress	Mechanism
41	Alligator Cracking	Load
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	Load
52	Weathering/Raveling	Climate / Load
53	Rutting	Load
54	Shoving	Pavement Growth
55	Slippage Cracking	Load / Pavement Bond
56	Swelling	Climate / Subgrade Quality
Source: U.S. Army CERL, FDOT Airfield Inspection Reference Manual		

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

Code	Distress	Mechanism
61	Blow-up	Climate
62	Corner Break	Load
63	Linear Cracking	Load
64	Durability Cracking	Climate
65	Joint Seal Damage	Climate
66	Small Patch	Pavement Repair
67	Large Patch/Utility Cut	Utility / Pavement Repair
68	Popout	Climate
69	Pumping	Load
70	Scaling/Crazing	Construction Quality
71	Faulting	Subgrade Quality
72	Shattered Slab	Load
73	Shrinkage Cracking	Construction Quality / Load
74	Joint Spalling	Load
75	Corner Spalling	Load
Source: U.S. Army CERL, FDOT Airfield Inspection Reference Manual		

Prior to conducting the inspections, Global Positioning System (GPS) coordinates were recorded using CADD at the centroid of each sample unit. The centroid is usually the geometric center of the area, but in cases where sample units are irregular in shape, this is the center of mass. These data are presented in a table on the updated Network Definition Map in Appendix A of this report.

Pavement condition inspections at Merritt Island Airport were performed in February 2012. Data was recorded in the field in accordance with FAA Advisory Circular 150/5380-6B "Guidelines and Procedures for Maintenance of Airport Pavements" and ASTM D 5340 "Standard Test Method for Airport Pavement Condition Index Surveys" (2004).

After the completion of data collection, the data was imported into MicroPAVER, and PCI values were calculated for the pavement sections.

3.2 Pavement Condition Index Results

According to the 2012 survey, the overall area-weighted PCI at Merritt Island Airport is 72, representing a Satisfactory overall network condition.

The Airport exhibited overall pavement distresses associated with loading, climate, and age. Asphalt concrete pavement distresses include: weathering and raveling, block cracking, longitudinal and transverse cracking, and patching. Portland cement concrete pavement distresses include: longitudinal, transverse, and diagonal cracking; joint seal damage; scaling, crazing, and map cracking; and shrinkage cracking.

Runway 11-29 pavements were in Satisfactory condition. Runway 11-29 exhibited pavement distresses associated with climate and age. Distresses include low severity weathering and raveling, low severity longitudinal and transverse cracking, and medium severity patching.

Pavements on Taxiways Alpha and Bravo and their connectors were in Good to Satisfactory condition. Typical distresses include low severity longitudinal and transverse cracking and low severity weathering and raveling. These are climate and age related distresses.

The North Apron is mostly in Good condition, with some pavements in Very Poor and Fair condition. Typical portland cement concrete distresses include low severity joint seal damage; low and medium severity scaling, crazing, and map cracking; low severity longitudinal, transverse, and diagonal cracking; and shrinkage cracking. Asphalt concrete distresses include low severity longitudinal and transverse cracking; low and medium severity weathering and raveling; oil spillage; low severity patching; and low severity block cracking. The westernmost sections of the North Apron were recently constructed and were not inspected.

The South Apron pavements were in Serious to Poor condition. Typical distresses include medium severity weathering and raveling, low and medium severity block cracking, and low severity longitudinal and transverse cracking. These are age and climate related distresses. The Southwest Apron pavements were in Good condition with occasional longitudinal and transverse cracking.

Appendix B contains a table and a Condition Map which depicts the PCI results by Section, and Appendix C contains a table of PCI results by Branch. Appendix I includes detailed distress data generated by MicroPAVER for each inspected sample unit.

Figure 3-1 provides the PCI distribution by rating category for Merritt Island Airport.

Figure 3-1: Network PCI Distribution by Rating Category

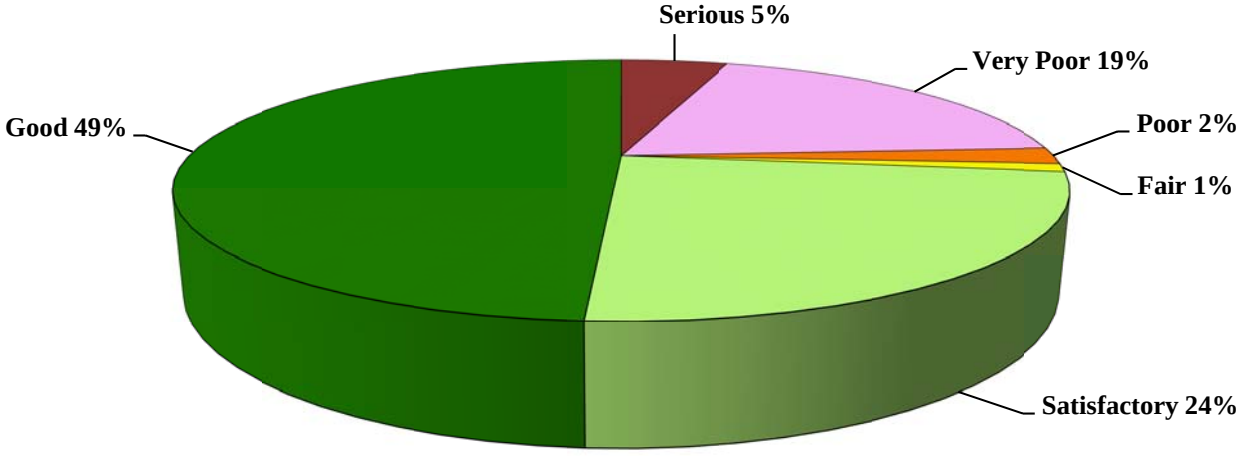


Figure 3-1a: Condition Rating Summary

Condition Rating	Total Area (ft^2)	Percent
Good	597,253	49%
Satisfactory	280,964	24%
Fair	2,202	1%
Poor	21,455	2%
Very Poor	225,326	19%
Serious	63,200	5%
Failed	0	0%

Approximately 73% of the network is in Good and Satisfactory condition while 24% of the network is in Very Poor and Serious condition. Table 3-3 illustrates the area-weighted PCI computed individually for each pavement use.

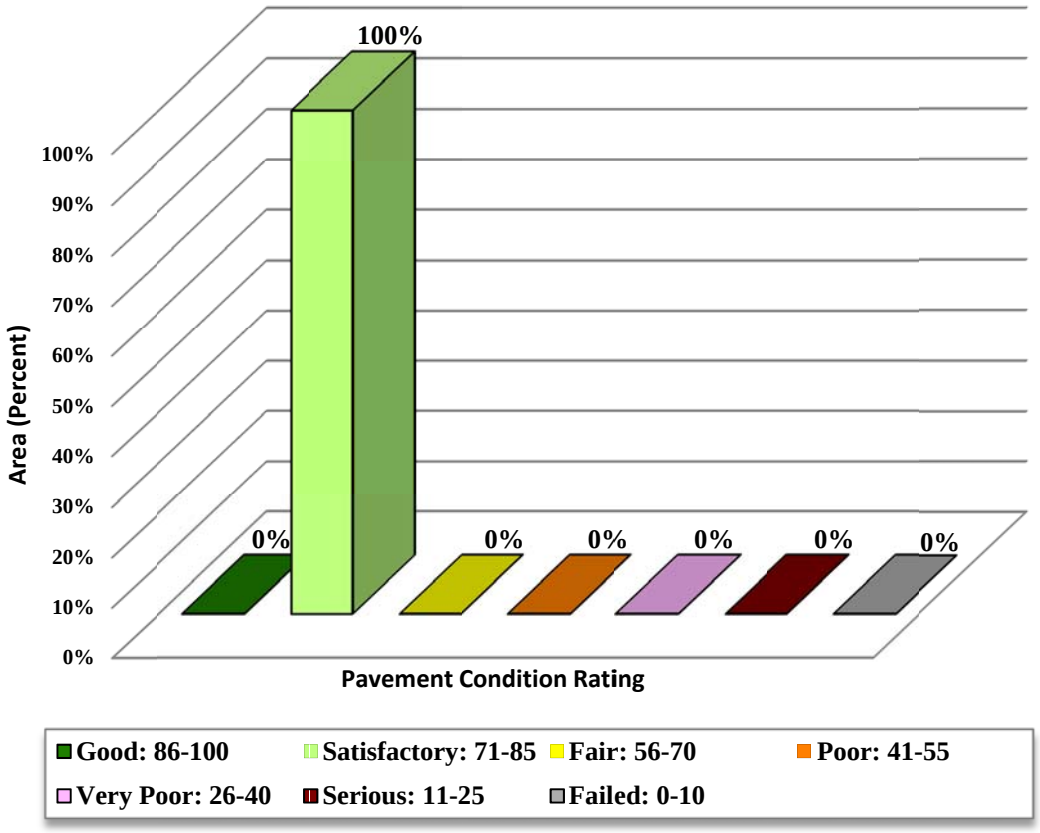
Table 3-3: Condition by Pavement Use

Use	Average Area-Weighted PCI	Condition Rating
Runway	80	Satisfactory
Taxiway	89	Good
Apron	62	Fair
All (Weighted)	**72**	**Satisfactory**

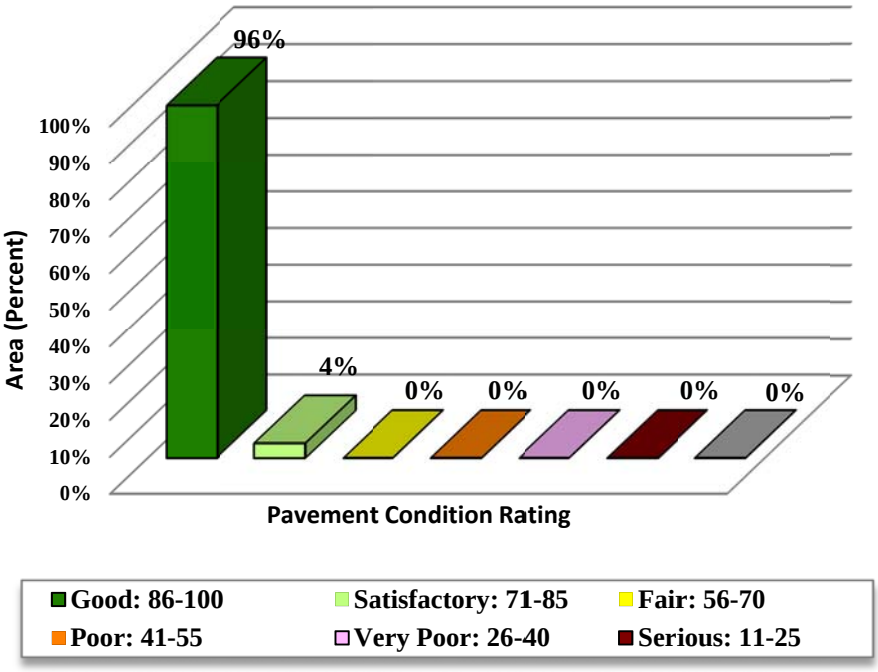
Figure 3-2 presents the breakdown of PCI by range for each pavement use.

Figure 3-2: Percentage of Pavement Area within Each PCI Range by Pavement Use

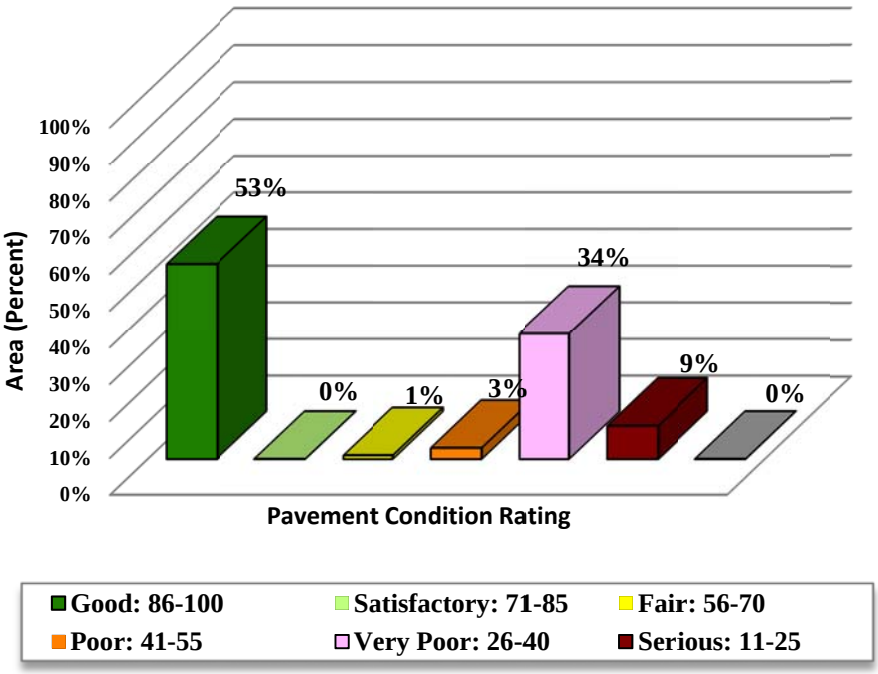
(a) Runway



(b) Taxiway



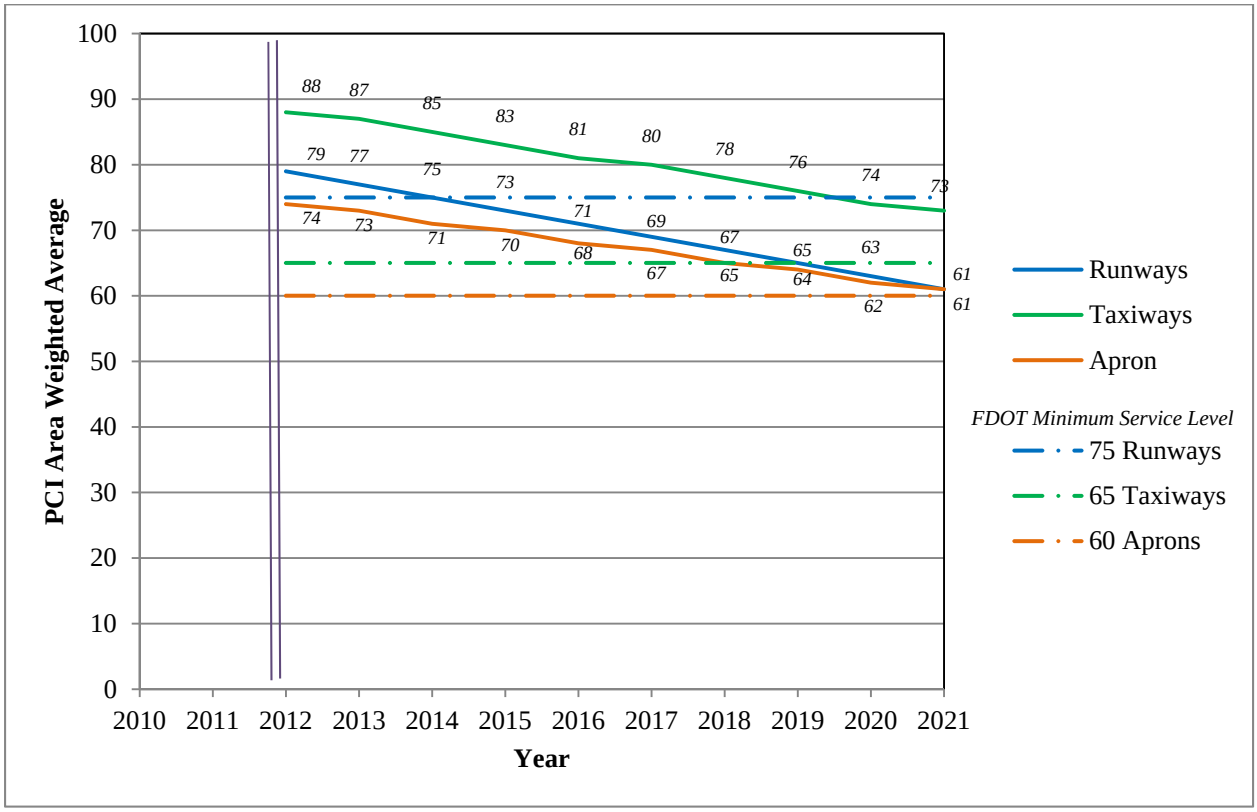
(c) Apron



4. PAVEMENT CONDITION PREDICTION

Performance prediction models or deterioration curves for PCI were used to develop a condition forecast. The performance models were developed for combinations of variables such as pavement use (runway, taxiway or apron), surface type (AC or PCC) and airport category (GA, RL, or PR). Figure 4-1 illustrates the predicted performance of pavements at Merritt Island Airport based on current condition, age since last construction and the deterioration model appropriate for the type of pavement. The figure presents the forecast for each pavement use and displays the FDOT minimum service level for General Aviation (GA) airports.

Figure 4-1: Predicted PCI by Pavement Use



Appendix D presents the tabular summary of the predicted Section PCI for each year from 2012 to 2021.

5. MAINTENANCE POLICIES AND COSTS

5.1 Policies

Maintenance and rehabilitation (M&R) policies are sets of rules used to develop repair recommendations for distresses encountered during the visual inspections.

Maintenance refers to repair-type activities that are applied to specific distress types on the pavement. These activities are preventative and/or corrective in nature and are recommended to help achieve the performance goal.

Table 5-1 provides the list of the maintenance activities used in MicroPAVER to treat specific distress types. MicroPAVER applies repairs to these distresses and adjusts the PCI based on specific rules. These repairs are used only in the first year of an analysis.

Rehabilitation is warranted when the pavement condition decreases below a critical point such that the deterioration is extensive or the rate of deterioration is so great that routine maintenance is no longer cost-efficient. This critical point is called "Critical PCI." The critical PCI levels for different pavement and branch types established in the previous SAPMP update were used in this update for the development of the M&R plan for the airport. Sections above critical PCI levels receive routine maintenances while pavements predicted to deteriorate below their respective critical PCI level during the analysis period will be identified for Major M&R. Table 5-2 gives the critical PCI levels for General Aviation Airports.

The maintenance rehabilitation policy and activity costs have been updated based on the study of readily available construction cost data at the time of this study. The costs depicted in this report are intended for planning purposes.

Table 5-1: Routine Maintenance Activities for Airfield Pavements

Surface	Distress	Severity*	Work Type	Code	Work Unit
AC	Alligator Crack	M, H	Patching - AC Deep	PA-AD	SqFt
	Bleeding	N/A	No Localized M&R	NONE	N/A
	Block Crack	M, H	Crack Sealing – AC	CS-AC	SqFt
	Corrugation	L, M, H	Patching - AC Deep	PA-AD	SqFt
	Depression	M, H	Patching - AC Deep	PA-AD	SqFt
	Jet Blast	N/A	Patching - AC Deep	PA-AD	SqFt
	Joint Ref. Crack	M, H	Crack Sealing – AC	CS-AC	Ft
	L & T Crack	M, H	Crack Sealing – AC	CS-AC	Ft
	Oil Spillage	N/A	Patching - AC Shallow	PA-AS	SqFt
	Patching	M, H	Patching - AC Deep	PA-AD	SqFt
	Polished Agg.	N/A	No Localized M&R	NONE	N/A
	Raveling / Weathering	L	Surface Sealing - Rejuvenating	SS-RE	SqFt
		M	Surface Seal - Coal Tar	SS-CT	SqFt
		H	Microsurfacing	MI-AC	SqFt
	Rutting	M, H	Patching - AC Deep	PA-AD	SqFt
	Shoving	M, H	Grinding (Localized)	GR-LL	SqFt
	Slippage Crack	N/A	Patching - AC Shallow	PA-AS	SqFt
	Swelling	M, H	Patching - AC Deep	PA-AD	SqFt
PCC	Blow-Up	L, M, H	Patching - PCC Full Depth	PA-PF	SqFt
	Corner Break	M, H	Patching - PCC Full Depth	PA-PF	SqFt
	Linear Crack	M, H	Crack Sealing – PCC	CS-PC	Ft
	Durability Crack	H	Slab Replacement – PCC	SL-PC	SqFt
		M	Patching - PCC Full Depth	PA-PF	SqFt
	Jt. Seal Damage	M, H	Joint Seal (Localized)	JS-LC	Ft
	Small Patch	M, H	Patching - PCC Partial Depth	PA-PP	SqFt
	Large Patch	M, H	Patching - PCC Full Depth	PA-PF	SqFt
	Popouts	N/A	No Localized M&R	NONE	N/A
	Pumping	N/A	No Localized M&R	NONE	N/A
	Scaling	H	Slab Replacement – PCC	SL-PC	SqFt
	Faulting	M, H	Grinding (Localized)	GR-PP	Ft
	Shattered Slab	M, H	Slab Replacement – PCC	SL-PC	SqFt
	Shrinkage Crack	N/A	No Localized M&R	NONE	N/A
	Joint Spall	M, H	Patching - PCC Partial Depth	PA-PP	SqFt
	Corner Spall	M, H	Patching - PCC Partial Depth	PA-PP	SqFt

*L = Low, M = Medium, H = High

Table 5-2: Critical PCI for General Aviation Airports

Use	Critical PCI
Runway	65
Taxiway	65
Apron	65

It should be noted that critical PCI is not the same as Minimum PCI or Minimum Condition. The Minimum PCI is a value set by the user so pavement sections are rehabilitated before they fall below the set minimum. Table 5-3 gives the targeted, or desired, Minimum PCI values for runways, taxiways, and aprons of General Aviation Airports.

Table 5-3: FDOT Minimum Service Level PCI for General Aviation Airports

Minimum PCI		
Runway	**Taxiway**	**Apron**
75	65	60

Typical Major M&R activities range from overlays to reconstruction. Based on the critical PCI values in Table 5-2 the PCI trigger range when the likely activity would be a mill and resurface was 40 to 79 and reconstruction at a PCI of 39 or lower. One important concept of pavement management systems is that it is cost effective to maintain pavements that are already in good condition rather than wait for them to get worse and require more expensive rehabilitation.

Crack sealing and full-depth patching are the M&R activities recommended to repair pavements with PCI values between 80 and 90. MicroPAVER considers these as preventative M&R with their primary objective being to slow the rate of pavement deterioration. While the trigger PCI for mill and overlay has been set to 55, MicroPAVER also assigns mill and overlay to sections with a PCI greater than 55 if they exhibit some structural distress. Table 5-4 summarizes the M&R activities for General Aviation Airports based on PCI value.

Table 5-4: M&R Activities for General Aviation Airports

	Activity	PCI Range
Maintenance	Crack Sealing and Full-Depth Patching	80 and 90
Rehabilitation	Mill and Overlay (AC) or Concrete Pavement Restoration (PCC)	40 to 79
	Reconstruction	39 and less

5.2 Unit Costs

FDOT cost databases for airports and highway pavement maintenance and rehabilitation were updated from the previous SAPMP study based on current construction cost trends in order to determine meaningful costs for the program. Table 5-5 presents the unit costs summary.

5.3 M&R Activities

FDOT recognizes that although Mill and Overlay work is recommended for asphalt pavements within a PCI range from 40 to 79, it is conceivable that airports may not have adequate funding to perform this type of rehabilitation. Microsurfacing treatment is a maintenance/rehabilitation measure that can be used in lieu of asphalt pavement mill and overlay; however it should be understood that this measure is intended for short term pavement life extension. While the cost of microsurfacing is significantly lower than that of pavement mill and overlay, it is not intended to be a full rehabilitative measure for long term benefit.

Table 5-5: Maintenance Unit Costs for FDOT

Code	Name	Cost	Unit
GR-LL	Grinding (Localized for AC)	$2.10	SqFt
PA-AL	Patching – AC Leveling	$2.30	SqFt
PA-AS	Patching – AC Shallow	$2.90	SqFt
PA-PF	Patching – PCC Full Depth	$38.11	SqFt
PA-PP	Patching – PCC Partial Depth	$19.06	SqFt
SL-PC	Slab Replacement – PCC	$39.11	SqFt
CS-PC	Crack Sealing – PCC	$4.24	Ft
UN-PC	Undersealing – PCC	$3.40	Ft
CS-AC	Crack Sealing – AC	$2.25	Ft
GR-PP	Grinding (Localized for PCC)	$22.51	Ft
JS-LC	Joint Seal (Localized)	$2.00	Ft
SH-LE	Shoulder Leveling	$2.81	Ft
JS-SI	Joint Seal – Silicon	$2.81	Ft
PA-AD	Patching – AC Deep	$4.90	SqFt
OL-AT	Overlay – AC Thin	$2.80	SqFt
SS-CT	Surface Seal – Coal Tar	$0.40	SqFt
SS-FS	Surface Seal – Fog Seal	$0.40	SqFt
SS-RE	Surface Seal – Rejuvenating	$0.40	SqFt
ST-SB	Surface Treatment – Single Bitum.	$0.30	SqFt
ST-SS	Surface Treatment – Slurry Seal	$0.55	SqFt
ST-ST	Surface Treatment – Sand Tar	$0.28	SqFt
MI-AC	Microsurfacing - AC	$0.65	SqFt

The improvement in condition due to maintenance actions applied to specific distresses is only performed when an inspection was performed recently and only in the first year of the M&R analysis. In subsequent years, MicroPAVER calculates M&R costs based on expected unit costs for pavements in a range of PCIs. That is, for low PCI, it is expected that the repair would be significant (e.g. reconstruction) and therefore very costly.

Using available unit cost data, the Major M&R Cost by Condition table was set up as shown in Table 5-6. The cost assigned to each range of PCI is based on a Transportation Cost Report provided by Office of Planning Policy of FDOT where the unit costs of reconstruction and resurfacing of airfield pavements were included. These costs were then assigned to the appropriate PCI range to arrive at a cost per square foot necessary to restore pavements at that PCI level to new condition, i.e. a PCI of 100.

Table 5-6: M&R Activities and Unit Costs by Condition for General Aviation Airports

	Activity	PCI Trigger	Cost/SqFt
Maintenance	Crack Sealing and Full-Depth Patching	90	$0.06
		80	$0.24
Rehabilitation	Mill and Overlay (AC) or Concrete Pavement Restoration (PCC)	70	$3.00
		60	$3.42
		50	$6.29
		40	$6.29
	Reconstruction	30	$13.62
		20	$13.62

A 3% inflation rate per year was applied to the unit costs during the M&R analysis.

6. PAVEMENT REHABILITATION NEEDS ANALYSIS

Maintenance and Rehabilitation (M&R) analyses were performed after the condition data were calculated and MicroPAVER was customized with the maintenance policies and cost settings described in the previous section.

The objective of the M&R analysis is to observe the effect of different fiscal scenarios on the network condition, over a period of ten years, starting from 2012. The analysis was conducted using an unlimited budget. An unlimited budget allows all M&R needs to be identified along with the associated cost regardless of priority.

Table 6-1 presents the M&R list of immediate needs for Major M&R, i.e. Year 1 of the forecast. The importance of this listing is that it points out the major activities triggered by the current condition of the pavements.

Table 6-1: Summary of Immediate Major M&R Needs Option No. 1

Branch Name	Section ID	Surface Type	Section Area (ft^2)	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
South Apron	4110	AAC	63,200	$860,777.74	25	Reconstruction	100
South Apron	4105	AAC	97,600	$1,329,306.98	29	Reconstruction	100
South Apron	4111	AAC	13,470	$153,840.92	33	Reconstruction	100
South Apron	4115	AAC	89,396	$955,463.34	34	Reconstruction	100
North Apron	4205	AAC	24,860	$229,261.10	36	Reconstruction	100
South Apron	4106	AAC	21,455	$134,951.96	43	Mill and Overlay	100
North Apron	4203	PCC	2,202	$10,056.46	56	PCC Restoration	100
				$3,673,658.50	**37**		**100**

* Costs are adjusted for inflation.

FDOT recognizes that the costs attributed to the aforementioned 'Major Activity' of performing a pavement 'Mill and Overlay' may conflict with budgetary constraints. Table 6-2 presents an alternative minor rehabilitative activity to the mid-range performing pavements. The alternative activity is performing a 'Microsurfacing/Slurry Seal' to the pavement to retard the degradation of the facility until funding is available for a 'Mill and Overlay' activity.

Table 6-2: Summary of Immediate Major M&R Needs Option No. 2

Branch Name	Section ID	Surface Type	Section Area (ft^2)	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
South Apron	4110	AAC	63,200	$860,777.74	25	Reconstruction	100
South Apron	4105	AAC	97,600	$1,329,306.98	29	Reconstruction	100
South Apron	4111	AAC	13,470	$153,840.92	33	Reconstruction	100
South Apron	4115	AAC	89,396	$955,463.34	34	Reconstruction	100
North Apron	4205	AAC	24,860	$229,261.10	36	Reconstruction	100
South Apron	4106	AAC	21,455	$13,945.75	43	Microsurfacing	100
North Apron	4203	PCC	2,202	$10,056.46	56	PCC Restoration	100
				$3,552,652.29	**37**		**100**

* Costs are adjusted for inflation.

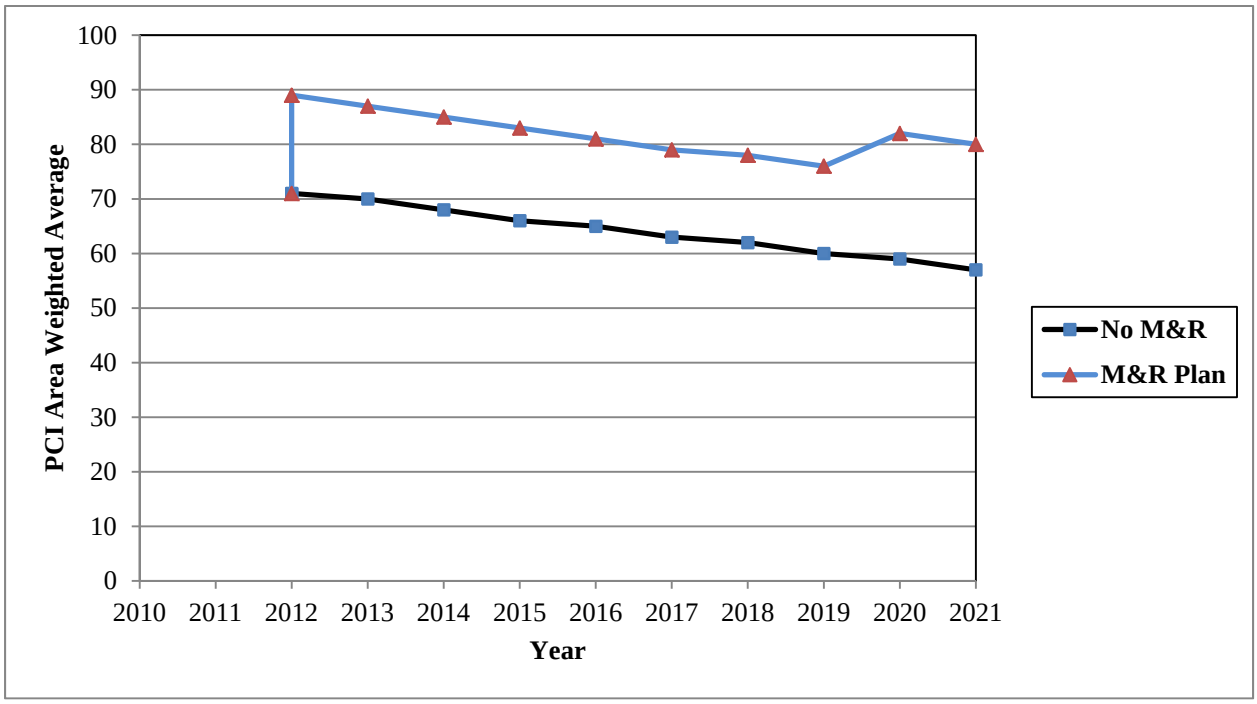
In addition to the immediate Major M&R needs, maintenance activities for pavement areas above critical PCI have been recommended by MicroPAVER for Year 1 and are shown in Table 6-3 below. The costs provided in Table 5-5 were used to calculate the costs associated with this work, which is intended to treat specific distress types. A more detailed table is provided in Appendix E.

Table 6-3: Summary of Year 1 Maintenance Activities

Branch Name	Branch ID	Section ID	Distress Description	Distress Severity	Work Description	Work Quantity	Work Unit	Unit Cost	Work Cost
North Apron	AP N	4215	WEATH/RAVEL	L	Surface Seal - Rejuvenating	855.40	SqFt	$0.40	$342.18
North Apron	AP N	4220	WEATH/RAVEL	L	Surface Seal - Rejuvenating	242.00	SqFt	$0.40	$96.80
North Apron	AP N	4225	OIL SPILLAGE	N	Patching - AC Shallow	33.70	SqFt	$2.90	$97.83
North Apron	AP N	4225	WEATH/RAVEL	L	Surface Seal - Rejuvenating	130.00	SqFt	$0.40	$51.98
North Apron	AP N	4230	OIL SPILLAGE	N	Patching - AC Shallow	268.10	SqFt	$2.90	$777.60
Run-Up Apron at RW 29	AP RU RW29	5105	WEATH/RAVEL	L	Surface Seal - Rejuvenating	656.60	SqFt	$0.40	$262.63
Runway 11-29	RW 11-29	6105	PATCHING	M	Patching - AC Deep	6,015.20	SqFt	$4.90	$29,474.35
Runway 11-29	RW 11-29	6105	WEATH/RAVEL	L	Surface Seal - Rejuvenating	7,566.20	SqFt	$0.40	$3,026.52
Taxiway Alpha	TW A	105	WEATH/RAVEL	L	Surface Seal - Rejuvenating	1,287.10	SqFt	$0.40	$514.83
Taxiway A-1	TW A1	305	WEATH/RAVEL	L	Surface Seal - Rejuvenating	247.60	SqFt	$0.40	$99.05
Taxiway A-2	TW A2	405	WEATH/RAVEL	L	Surface Seal - Rejuvenating	20.00	SqFt	$0.40	$8.00
Taxiway A-3	TW A3	505	WEATH/RAVEL	L	Surface Seal - Rejuvenating	10.00	SqFt	$0.40	$4.00
Taxiway A-4	TW A4	605	WEATH/RAVEL	L	Surface Seal - Rejuvenating	10.00	SqFt	$0.40	$4.00
Taxiway B-1	TW B1	315	WEATH/RAVEL	L	Surface Seal - Rejuvenating	32.00	SqFt	$0.40	$12.80
								Total =	$34,772.57

The 10 year forecast results are shown in Figure 6-1, illustrating the effect on pavement condition (PCI) of doing no maintenance versus having unlimited funds and performing all M&R actions based on the policies.

Figure 6-1: Budget Scenario Analysis



The following network level observations can be made from the figure above:

- The PCI will deteriorate from an average of 71 in 2012 to an average of 57 in ten years if no M&R activities are performed. Specific pavement sections may be closer to critical condition as identified by the immediate needs in Table IV. Estimated PCI ratings are presented in Appendix D.
- The PCI will remain at or above an average of 76 through the 10-year analysis period under the unlimited budget scenario. A 2021 PCI average of 80 with this scenario is 23 PCI points higher than a "No M&R" scenario. The total cost for Major M&R over this 10-year period is about $4.5 million.

7. MAINTENANCE AND REHABILITATION PLAN

The M&R analysis results include activities that likely exceed a typical annual budget level. These activities would need to be evaluated for feasibility and desirability based on the airport's future plans. In an effort to identify appropriate budget levels, the 10 year M&R analysis was evaluated to determine levels needed to address several specific areas: preventive maintenance, major activities for pavements in poor condition (Major M&R for PCIs less than Critical), and activities that would be desirable to preserve good pavement conditions where they exist (Major M&R for PCI greater than or equal to Critical).

Table 7-1 provides the summary results under the critical PCI unlimited funding scenario.

Table 7-1: M&R Costs under Unlimited Funding Scenario

Year	Preventative	Major M&R	Total Year Cost
2012	$34,772.57	$3,673,658.50	$3,708,431.07
2013	$58,743.50	$0.00	$58,743.50
2014	$76,750.75	$0.00	$76,750.75
2015	$96,441.27	$0.00	$96,441.27
2016	$117,785.63	$0.00	$117,785.63
2017	$141,586.46	$0.00	$141,586.46
2018	$169,595.51	$0.00	$169,595.51
2019	$202,526.13	$0.00	$202,526.13
2020	$145,876.15	$828,573.95	$974,450.10
2021	$168,632.03	$0.00	$168,632.03
Total	**$1,212,710.00**	**$4,502,232.45**	**$5,714,942.45**

Note: Costs are adjusted for inflation.

Approximately 82% of the total Major M&R cost is required in the first year (2012). According to the 2012 inspections, the following pavement sections were in immediate need of Major M&R Activity:

- **South Apron** – Full pavement reconstruction and asphalt pavement mill and overlay.
- **North Apron** – Full pavement reconstruction and portland cement concrete restoration.

The unlimited budget scenario provides the basis for estimating the total repair cost.

Appendix F provides details of M&R plan by year under the unlimited funding scenario, and the map of the 10-year M&R plan is provided in Appendix G. It is important to understand that the SAPMP is a network level tool and the M&R costs provided in this report are only for planning purposes.

8. VISUAL AIDS

8.1 System Inventory and Network Definition Drawings

The System Inventory and Network Definition CADD drawings, which show the airport pavement outline with Branch and Section boundaries and identify changes in the network pavement since the last inspection and the sampling plan, respectively, are included in Appendix A of this report.

8.2 Condition Map

A Condition Map that has been prepared based on data linked to the airport's shape file is included in Appendix B. The Condition Map graphically show the inventory and condition of the airport via color coding shown on the shape file. The coding provides a visual representation that illustrates the PCIs for each pavement section.

8.3 10-Year M&R Map

A 10-Year M&R Map that shows the summary of the M&R plan is attached in Appendix G.

8.4 Photographs

Selected digital photographs taken during the pavement inspection are provided in Appendix H to provide visual support to special pavement conditions or distress observed during the inspection of the airport.

9. RECOMMENDATIONS

Pavement condition inspections were performed at Merritt Island Airport, and a 10-year M&R plan was developed based on the unlimited funding scenario.

The following recommendations were made based on the 2012 condition inspection and M&R analysis results:

- **South Apron** – Full pavement reconstruction and asphalt pavement mill and overlay.
- **North Apron** – Full pavement reconstruction and portland cement concrete restoration.

Further evaluation of these features is necessary in order to develop repair plans and timing for future budgets since these needs cannot be addressed with typical annual expenditures.

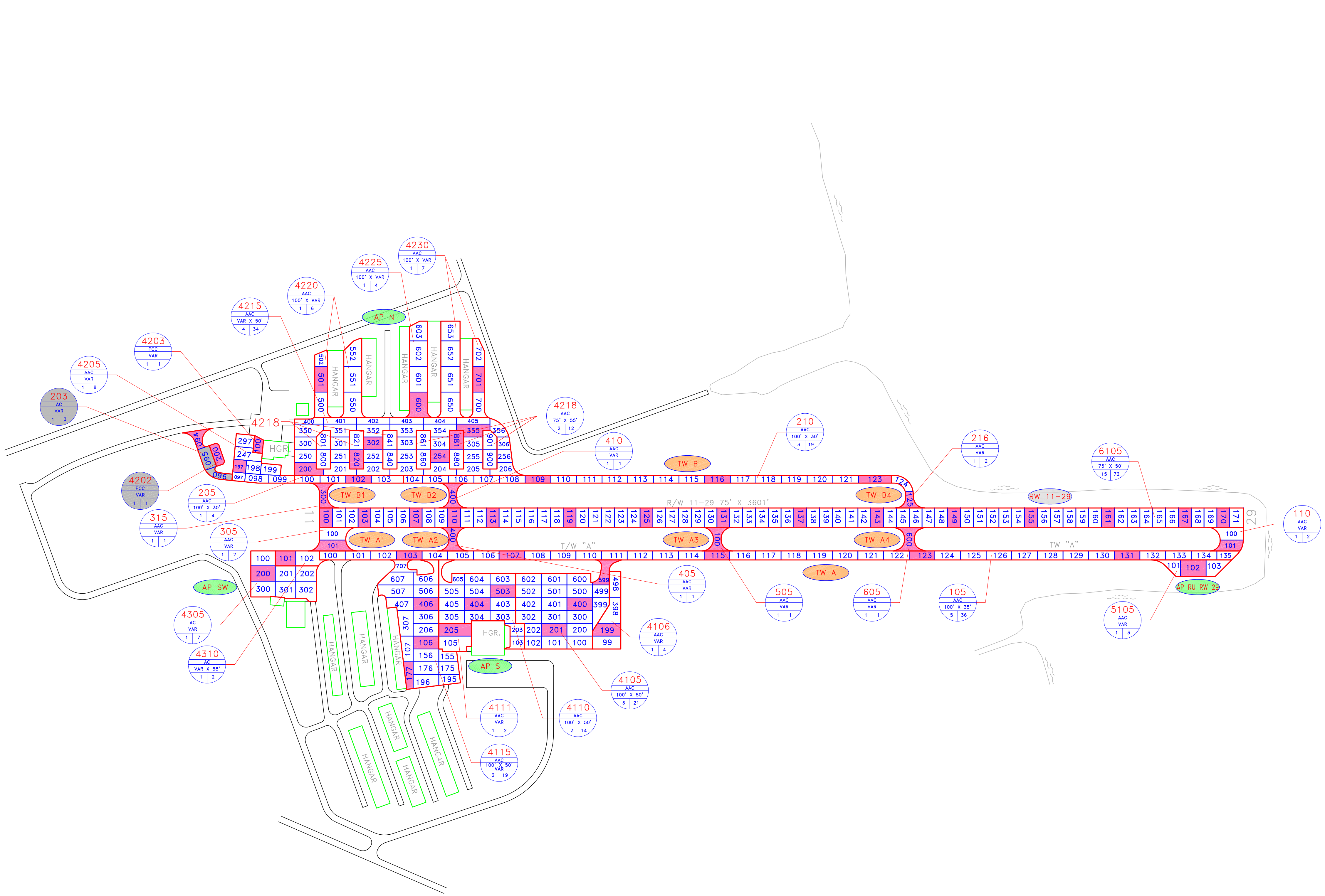
APPENDIX A

NETWORK DEFINITION MAP

SYSTEM INVENTORY MAP

PAVEMENT INVENTORY TABLE

WORK HISTORY REPORT



LEGEND

RW 13-31	TYPICAL RUNWAY BRANCH ID
TW A	TYPICAL TAXIWAY BRANCH ID
AP S	TYPICAL APRON BRANCH ID
4105 / AC / 100' x 50' / 5 | 14	SECTION NUMBER PAVEMENT TYPE TYPICAL SAMPLE UNIT INFORMATION FLEXIBLE (AC) PAVEMENT LENGTH & WIDTH RIGID (PCC) PAVEMENT NO. OF SLABS AND SLAB SIZE NUMBER OF SAMPLE UNITS IN SECTION NUMBER OF SAMPLE UNITS TO BE INSPECTED
605 / AC / 100' x 50' / 1 | 8	SECTION NOT INSPECTED DUE TO RECENT CONSTRUCTION. SEE SYSTEM INVENTORY MAP FOR CONSTRUCTION DATES.
100	INSPECTED SAMPLE UNITS. GPS COORDINATES ARE AT THE CENTROID OF THE SAMPLE UNIT.

TOTAL SAMPLES INSPECTED = 58

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:

NETWORK DEFINITION MAP

MERRITT ISLAND AIRPORT
BREVARD COUNTY, FLORIDA

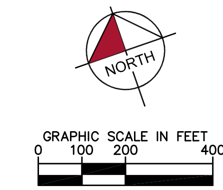
FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

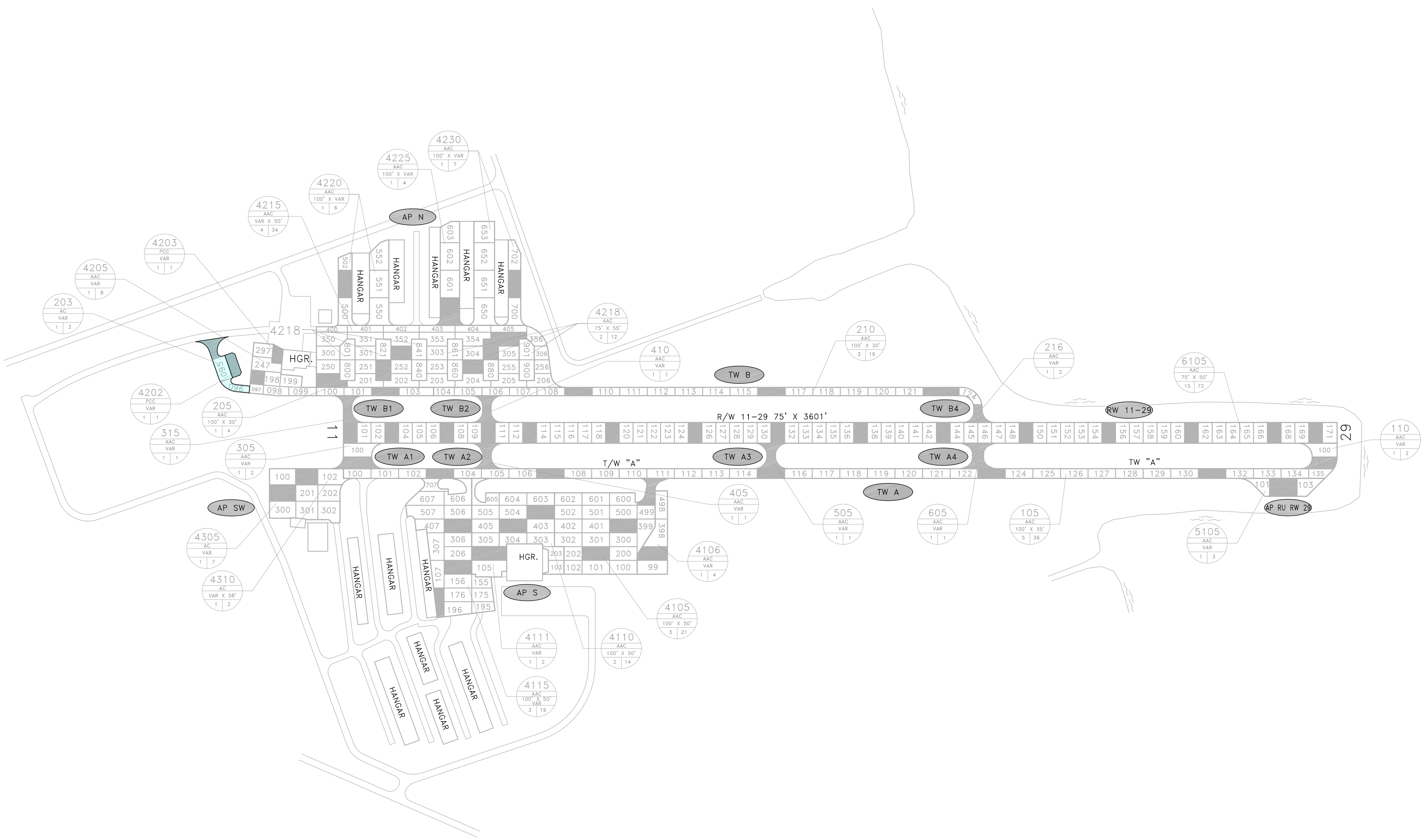
IDENTIFIER: COI

FDOT DISTRICT: 5

Sample Unit Centroid Coordinates

Branch	Section	Sample	Latitude	Longitude
RW 11-29	6105	167	28.3401631	-80.6808659
RW 11-29	6105	170	28.3400266	-80.6804259
RW 11-29	6105	131	28.3418007	-80.6861467
RW 11-29	6105	137	28.3415278	-80.6852666
RW 11-29	6105	143	28.3412549	-80.6843864
RW 11-29	6105	149	28.3409819	-80.6835063
RW 11-29	6105	155	28.3407090	-80.6826262
RW 11-29	6105	161	28.3404360	-80.6817461
RW 11-29	6105	100	28.3432107	-80.6906942
RW 11-29	6105	103	28.3430743	-80.6902541
RW 11-29	6105	107	28.3428923	-80.6896673
RW 11-29	6105	110	28.3427559	-80.6892272
RW 11-29	6105	113	28.3426194	-80.6887872
RW 11-29	6105	119	28.3423465	-80.6879070
RW 11-29	6105	125	28.3420736	-80.6870269
AP RU RW 29	5105	102	28.3396204	-80.6809722
AP SW	4310	101	28.3429417	-80.6913212
AP SW	4305	200	28.3428682	-80.6916386
AP N	4230	701	28.3440706	-80.6883918
AP N	4225	600	28.3440006	-80.6891921
AP N	4220	501	28.3446296	-80.6901947
AP N	4218	881	28.3435324	-80.6888883
AP N	4215	355	28.3435805	-80.6886551
AP N	4215	302	28.3437956	-80.6898547
AP N	4215	254	28.3434293	-80.6891433
AP N	4215	200	28.3437610	-80.6907030
AP N	4215	820	28.3436925	-80.6901097
AP N	4205	197	28.3440385	-80.6914748
AP N	4203	100	28.3441871	-80.6911817
AP S	4115	177	28.3413244	-80.6903747
AP S	4115	406	28.3419799	-80.6898970
AP S	4115	106	28.3415906	-80.6900512
AP S	4111	205	28.3416171	-80.6896668
AP S	4110	404	28.3417980	-80.6893102
AP S	4110	503	28.3418368	-80.6889654
AP S	4106	199	28.3410728	-80.6879242
AP S	4105	400	28.3414341	-80.6881367
AP S	4105	201	28.3412655	-80.6885329
AP S	4105	599	28.3416841	-80.6877103
TW A4	605	600	28.3409228	-80.6841029
TW A3	505	100	28.3416052	-80.6863032
TW B2	410	400	28.3429843	-80.6891532
TW A2	405	400	28.3425430	-80.6893280
TW B1	315	300	28.3434521	-80.6906079
TW A1	305	101	28.3428884	-80.6907362
TW B4	216	125	28.3412881	-80.6839485
TW B	210	123	28.3416515	-80.6842557
TW B	210	116	28.3422110	-80.6860599
TW B	210	109	28.3428478	-80.6881136
TW B	205	102	28.3434845	-80.6901673
TW A	110	101	28.3397208	-80.6804911
TW A	105	131	28.3399850	-80.6816777
TW A	105	123	28.3407128	-80.6840247
TW A	105	115	28.3414406	-80.6863717
TW A	105	107	28.3421683	-80.6887188
TW A	105	103	28.3425322	-80.6898923





CONSTRUCTION SINCE LAST INSPECTION & ANTICIPATED CONSTRUCTION ACTIVITY

CONSTRUCTION YEAR	LOCATION	WORK TYPE / PAVEMENT SECTION
2011	NORTH APRON	NEW ASPHALT PAVEMENT / NEW PORTLAND CEMENT CONCRETE PAVEMENT

LEGEND

- PROJECTS YEAR 2006
- PROJECTS YEAR 2007
- PROJECTS YEAR 2008
- PROJECTS YEAR 2009
- PROJECTS YEAR 2010
- PROJECTS YEAR 2011
- PROJECTS YEAR 2012
- PROJECTS YEAR 2013
- PROJECTS YEAR 2014
- PROJECTS YEAR 2015
- PROJECTS YEAR 2016
- PROJECTS YEAR 2017

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:

SYSTEM INVENTORY MAP

MERRITT ISLAND AIRPORT
BREVARD COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

IDENTIFIER **COI**

FDOT DISTRICT 5

Table A-1: Pavement Inventory

Branch Name	Branch ID	Branch Use	Section ID	Length (ft)	Width (ft)	True Area (ft^2)	Section Rank	Surface Type	Last Const. Date	Last Insp. Date	Total Samples
North Apron	AP N	APRON	4202	100	30	3,023	P	PCC	1/1/2011	1/1/2011	1
North Apron	AP N	APRON	4203	50	40	2,202	P	PCC	1/1/1990	2/7/2012	1
North Apron	AP N	APRON	4205	120	200	24,860	P	AAC	1/1/2005	2/7/2012	8
North Apron	AP N	APRON	4215	1,000	139	139,109	P	AAC	1/1/2005	2/7/2012	34
North Apron	AP N	APRON	4218	480	100	48,875	P	AAC	1/1/2005	2/7/2012	12
North Apron	AP N	APRON	4220	336	100	33,609	P	AAC	1/1/2005	2/7/2012	6
North Apron	AP N	APRON	4225	340	75	26,238	P	AAC	1/1/2005	2/7/2012	4
North Apron	AP N	APRON	4230	200	200	42,203	P	AAC	1/1/2005	2/7/2012	7
Run-Up Apron at RW 29	AP RU RW29	APRON	5105	280	50	14,226	P	AAC	1/1/2002	2/7/2012	3
South Apron	AP S	APRON	4105	450	200	97,600	P	AAC	1/1/1996	2/7/2012	21
South Apron	AP S	APRON	4106	100	200	21,455	P	AAC	1/1/1996	2/7/2012	4
South Apron	AP S	APRON	4110	310	200	63,200	P	AAC	1/1/1996	2/7/2012	14
South Apron	AP S	APRON	4111	134	100	13,470	P	AAC	1/1/1996	2/7/2012	2
South Apron	AP S	APRON	4115	450	200	89,396	P	AAC	1/1/1996	2/7/2012	19
SW Apron	AP SW	APRON	4305	376	100	37,682	P	AC	1/1/2003	2/7/2012	7
SW Apron	AP SW	APRON	4310	50	200	10,214	P	AC	1/1/2003	2/7/2012	2
Runway 11-29	RW 11-29	RUNWAY	6105	3,600	75	270,225	P	AAC	1/1/2002	2/7/2012	72
Taxiway Alpha	TW A	TAXIWAY	105	3,570	35	125,133	P	AAC	1/1/2002	2/7/2012	36
Taxiway Alpha	TW A	TAXIWAY	110	90	100	9,043	P	AAC	1/1/2002	2/7/2012	2
Taxiway A-1	TW A1	TAXIWAY	305	100	100	10,739	P	AAC	1/1/2002	2/7/2012	2
Taxiway A-2	TW A2	TAXIWAY	405	100	40	4,513	P	AAC	1/1/2002	2/7/2012	1
Taxiway A-3	TW A3	TAXIWAY	505	100	40	4,513	P	AAC	1/1/2002	2/7/2012	1

Table A-1: Pavement Inventory (Continued)

Branch Name	Branch ID	Branch Use	Section ID	Length (ft)	Width (ft)	True Area (ft^2)	Section Rank	Surface Type	Last Const. Date	Last Insp. Date	Total Samples
Taxiway A-4	TW A4	TAXIWAY	605	100	40	5,387	P	AAC	1/1/2002	2/7/2012	1
Taxiway Bravo	TW B	TAXIWAY	203	400	25	9,788	P	AC	1/1/2011	1/1/2011	3
Taxiway Bravo	TW B	TAXIWAY	205	320	40	12,750	P	AAC	1/1/2005	2/7/2012	4
Taxiway Bravo	TW B	TAXIWAY	210	1,900	30	57,150	P	AAC	1/1/2005	2/7/2012	19
Taxiway B-1	TW B1	TAXIWAY	315	100	40	4,046	P	AAC	1/1/2005	2/7/2012	1
Taxiway B-2	TW B2	TAXIWAY	410	100	40	4,298	P	AAC	1/1/2005	2/7/2012	1
Taxiway B-4	TW B4	TAXIWAY	216	150	30	5,450	P	AAC	1/1/2005	2/7/2012	2

* Note: If new construction, then survey date = last construction date and PCI is set to 100 by MicroPAVER.
*Sections not surveyed due to reasons such as re-sectioning, no escort, not accessible at the time of survey.

Network: COI **Branch**: AP N (NORTH APRON) **Section:** 4202 **Surface:** PCC
L.C.D.: 01/01/2011 **Use:** APRON **Rank** P **Length:** 100.00 Ft **Width:** 30.00 Ft **True Area:** 3,023.08 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2011	INITIAL	Initial Construction	$0	0.00	True	

Network: COI **Branch**: AP N (NORTH APRON) **Section:** 4203 **Surface:** PCC
L.C.D.: 01/01/1990 **Use:** APRON **Rank** P **Length:** 50.00 Ft **Width:** 40.00 Ft **True Area:** 2,201.50 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1990	IMPORTED	BUILT			True	ESTIMATE 1990 PCC PAVEMENT

Network: COI **Branch**: AP N (NORTH APRON) **Section:** 4205 **Surface:** AAC
L.C.D.: 01/01/2005 **Use:** APRON **Rank** P **Length:** 120.00 Ft **Width:** 200.00 Ft **True Area:** 24,860.23 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2005	MI&OV	Mill & Overlay	$0	1.50	True	
01/01/1990	IMPORTED	REPAIR			False	1990: SEALCOAT - TYPE R
01/01/1980	IMPORTED	BUILT		1.50	True	1980: 1.5" P-401 ON 6" LIME ROCK BASE ON 4" STABILIZED SUBBASE

Network: COI **Branch**: AP N (NORTH APRON) **Section:** 4215 **Surface:** AAC
L.C.D.: 01/01/2005 **Use:** APRON **Rank** P **Length:** 1,000.00 Ft **Width:** 139.00 Ft **True Area:** 139,108.59 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2005	MI&OV	Mill & Overlay	$0	1.50	True	
01/01/1990	IMPORTED	BUILT			True	1990: SEALCOAT - TYPE R
01/01/1965	IMPORTED	OVERLAY			True	ESTIMATE 1965 AC PAVEMENT
01/01/1965	IMPORTED	OVERLAY			True	SOIL: SP-SC

Network: COI **Branch**: AP N (NORTH APRON) **Section:** 4218 **Surface:** AAC
L.C.D.: 01/01/2005 **Use:** APRON **Rank** P **Length:** 480.00 Ft **Width:** 100.00 Ft **True Area:** 48,875.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2005	ML-OL	Mill and Overlay	$0	1.50	True	
01/01/1965	INITIAL	Initial Construction	$0	0.00	True	ESTIMATE 1965 AC

Network: COI **Branch**: AP N (NORTH APRON) **Section:** 4220 **Surface:** AAC
L.C.D.: 01/01/2005 **Use:** APRON **Rank** P **Length:** 336.00 Ft **Width:** 100.00 Ft **True Area:** 33,609.36 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2005	MI&OV	Mill & Overlay	$0	1.50	True	
01/01/1990	IMPORTED	REPAIR			False	1990: SEALCOAT - TYPE R
01/01/1974	IMPORTED	OVERLAY		1.50	True	1974: P-625 SEAL ON 1.5" P-401 ON 6" P-211 ON
01/01/1974	IMPORTED	OVERLAY			True	SOIL: SP-SC
01/01/1974	IMPORTED	BUILT		4.00	True	1974: 4" SUBGRADE STABILIZED WITH LIME ROCK ON 4" COMPACTED SUBGRADE

Network: COI **Branch**: AP N (NORTH APRON) **Section:** 4225 **Surface:** AAC
L.C.D.: 01/01/2005 **Use:** APRON **Rank** P **Length:** 340.00 Ft **Width:** 75.00 Ft **True Area:** 26,238.25 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2005	MI&OV	Mill & Overlay	$0	1.50	True	
01/01/1990	IMPORTED	REPAIR			False	1990: SEALCOAT - TYPE R

01/01/1975	IMPORTED	BUILT		1.50	True	1975: 1.5" P-401 ON 6" P-211 ON 4" COMP. SUBGRADE STAB. W/SHEET MATERI
01/01/1975	IMPORTED	OVERLAY			True	SOIL: SP-SC

Network: COI **Branch**: AP N (NORTH APRON) **Section:** 4230 **Surface:** AAC
L.C.D.: 01/01/2005 **Use:** APRON **Rank** P **Length:** 200.00 Ft **Width:** 200.00 Ft **True Area:** 42,202.86 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2005	MI&OV	Mill & Overlay	$0	1.50	True	
01/01/1990	IMPORTED	BUILT			True	1990: SEALCOAT - TYPE R
01/01/1980	IMPORTED	OVERLAY			True	ESTIMATE 1980 AC PAVEMENT
01/01/1980	IMPORTED	OVERLAY			True	SOIL: SP-SC

Network: COI **Branch**: AP RU RW29 (RUN-UP APRON AT RW 29) **Section:** 5105 **Surface:** AAC
L.C.D.: 01/01/2002 **Use:** APRON **Rank** P **Length:** 280.00 Ft **Width:** 50.00 Ft **True Area:** 14,226.02 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2002	ML-OL	Mill and Overlay	$0	0.00	True	
01/01/1996	IMPORTED	BUILT		2.00	True	1996 2" P401 ON 12" P211
01/01/1996	IMPORTED	OVERLAY			True	EST. CONSTRUCTION BASED ON TW

Network: COI **Branch**: AP S (SOUTH APRON) **Section:** 4105 **Surface:** AAC
L.C.D.: 01/01/1996 **Use:** APRON **Rank** P **Length:** 450.00 Ft **Width:** 200.00 Ft **True Area:** 97,599.60 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1996	IMPORTED	BUILT			True	1996 AC OVERLAY
01/01/1978	IMPORTED	OVERLAY			True	EMULSION SEAL ON 1978 AC

Network: COI **Branch**: AP S (SOUTH APRON) **Section:** 4106 **Surface:** AAC
L.C.D.: 01/01/1996 **Use:** APRON **Rank** P **Length:** 100.00 Ft **Width:** 200.00 Ft **True Area:** 21,455.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1996	IMPORTED	BUILT		2.00	True	1996 2" P401 ON 6" P211

Network: COI **Branch**: AP S (SOUTH APRON) **Section:** 4110 **Surface:** AAC
L.C.D.: 01/01/1996 **Use:** APRON **Rank** P **Length:** 310.00 Ft **Width:** 200.00 Ft **True Area:** 63,199.52 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1996	IMPORTED	BUILT			True	1996 AC OVERLAY ON
01/01/1978	IMPORTED	OVERLAY			True	EMULSION SEAL COAT ON 1978 AC PAVEMENT

Network: COI **Branch**: AP S (SOUTH APRON) **Section:** 4111 **Surface:** AAC
L.C.D.: 01/01/1996 **Use:** APRON **Rank** P **Length:** 134.00 Ft **Width:** 100.00 Ft **True Area:** 13,470.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1996	IMPORTED	OVERLAY		1.50	True	1996 1.5" P401 OVERLAY
01/01/1970	IMPORTED	BUILT		1.50	True	1970 1.5" P401 ON 6" P211

Network: COI **Branch**: AP S (SOUTH APRON) **Section:** 4115 **Surface:** AAC
L.C.D.: 01/01/1996 **Use:** APRON **Rank** P **Length:** 450.00 Ft **Width:** 200.00 Ft **True Area:** 89,395.87 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1996	IMPORTED	BUILT			True	1996 AC OVERLAY
01/01/1975	IMPORTED	OVERLAY			True	ON EMULSION SEAL ON 1975 AC PAVEMENT

Network: COI **Branch**: AP SW (SW APRON) **Section:** 4305 **Surface:** AC
L.C.D.: 01/01/2003 **Use:** APRON **Rank** P **Length:** 376.00 Ft **Width:** 100.00 Ft **True Area:** 37,682.42 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2003	CR-AC	Complete Reconstruction - AC	$0	2.00	True	2" AC/ 8" P-211/ 8" Stab Sbgrd
01/01/1970	IMPORTED	OVERLAY			True	ESTIMATE 1970 AC PAVEMENT
01/01/1970	IMPORTED	BUILT			True	EMULSION SEALCOAT ON THIS PAVEMENT

Network: COI **Branch**: AP SW (SW APRON) **Section:** 4310 **Surface:** AC
L.C.D.: 01/01/2003 **Use:** APRON **Rank** P **Length:** 50.00 Ft **Width:** 200.00 Ft **True Area:** 10,214.14 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2003	CR-AC	Complete Reconstruction - AC	$0	0.00	True	
01/01/1990	IMPORTED	BUILT			True	1990 WEDGE OVERLAY ON OLD AC PAVEMENT

Network: COI **Branch**: RW 11-29 (RUNWAY 11-29) **Section:** 6105 **Surface:** AAC
L.C.D.: 01/01/2002 **Use:** RUNWAY **Rank** P **Length:** 3,600.00 Ft **Width:** 75.00 Ft **True Area:** 270,225.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2002	OV-ME	Overlay with Asph Rubber Mei	$0	2.00	True	2" AC/ARMI
01/01/1990	IMPORTED	OVERLAY			True	SOIL: SP-SC
01/01/1990	IMPORTED	OVERLAY			True	EXISTING PAVEMENT (NO INFO)
01/01/1990	IMPORTED	OVERLAY		1.50	True	1990: MINIMUM 1.5" P-401 ON MAXIMUM .5" TYPE 2 SAND-ASPHALT SEALCOAT
01/01/1974	IMPORTED	BUILT		1.50	True	1974: 1.5" P-401 OVERLAY

Network: COI **Branch**: TW A (TAXIWAY A) **Section:** 105 **Surface:** AAC
L.C.D.: 01/01/2002 **Use:** TAXIWAY **Rank** P **Length:** 3,570.00 Ft **Width:** 35.00 Ft **True Area:** 125,133.17 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2002	OV-ME	Overlay with Asph Rubber Mei	$0	2.00	True	2" AC/ARMI
01/01/1990	IMPORTED	OVERLAY		1.50	True	1990: MINIMUM 1.5" P-401 OVERLAY ON MAXIMUM .5" TYPE 2 SAND-ASPHALT SE
01/01/1990	IMPORTED	OVERLAY			True	ON EXISTING PAVEMENT (SECTION UNKNOWN)
01/01/1990	IMPORTED	OVERLAY			True	SOIL: SP-SC
01/01/1974	IMPORTED	BUILT		1.50	True	1974: 1.5" P-401 OVERLAY

Network: COI **Branch**: TW A (TAXIWAY A) **Section:** 110 **Surface:** AAC
L.C.D.: 01/01/2002 **Use:** TAXIWAY **Rank** P **Length:** 90.00 Ft **Width:** 100.00 Ft **True Area:** 9,043.18 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2002	OV-ME	Overlay with Asph Rubber Mei	$0	2.00	True	2" AC/ARMI
01/01/1990	IMPORTED	OVERLAY		1.50	True	1990: MINIMUM 1.5" P-401 ON MAXIMUM .5" TYPE 2 SAND-ASPHALT SEAL COAT
01/01/1990	IMPORTED	OVERLAY			True	EXISTING PAVEMENT (SECTION UNKNOWN)
01/01/1990	IMPORTED	OVERLAY			True	SOIL: SP-SC
01/01/1974	IMPORTED	BUILT		1.50	True	1974: 1.5" P-401 OVERLAY

Network: COI **Branch**: TW A1 (TAXIWAY ALPHA 1) **Section:** 305 **Surface:** AAC
L.C.D.: 01/01/2002 **Use:** TAXIWAY **Rank** P **Length:** 100.00 Ft **Width:** 100.00 Ft **True Area:** 10,738.71 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2002	ML-OL	Mill and Overlay	$0	0.00	True	

01/01/1990	IMPORTED	OVERLAY			True	SOIL: SP-SC
01/01/1990	IMPORTED	OVERLAY			True	EXISTING PAVEMENT (SECTION UNKNOWN)
01/01/1990	IMPORTED	OVERLAY		1.50	True	1990: MINIMUM 1.5" P-401 ON MAXIMUM .5" TYPE 2 SAND-ASPHALT SEALCOAT
01/01/1974	IMPORTED	BUILT		1.50	True	1974 1.5" P-401 OVERLAY

Network: COI **Branch:** TW A2 (TAXIWAY ALPHA 2) **Section:** 405 **Surface:** AAC
L.C.D.: 01/01/2002 **Use:** TAXIWAY **Rank** P **Length:** 100.00 Ft **Width:** 40.00 Ft **True Area:** 4,513.27 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2002	ML-OL	Mill and Overlay	$0	0.00	True	
01/01/1990	IMPORTED	BUILT		1.50	True	1990: MINIMUM 1.5" P-401 ON MAXIMUM .5" TYPE 2 SAND-ASPHALT SEALCOAT
01/01/1990	IMPORTED	OVERLAY			True	EXISTING PAVEMENT (SECTION UNKNOWN)
01/01/1990	IMPORTED	OVERLAY			True	SOIL: SP-SC

Network: COI **Branch:** TW A3 (TAXIWAY ALPHA 3) **Section:** 505 **Surface:** AAC
L.C.D.: 01/01/2002 **Use:** TAXIWAY **Rank** P **Length:** 100.00 Ft **Width:** 40.00 Ft **True Area:** 4,513.27 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2002	OV-ME	Overlay with Asph Rubber Mei	$0	2.00	True	2" AC/ARMI
01/01/1990	IMPORTED	OVERLAY		1.50	True	1990: MINIMUM 1.5" P-401 ON MAXIMUM .5" TYPE 2 SAND-ASPHALT SEALCOAT
01/01/1990	IMPORTED	OVERLAY			True	SOIL: SP-SC
01/01/1990	IMPORTED	OVERLAY			True	EXISTING PAVEMENT (SECTION UNKNOWN)
01/01/1974	IMPORTED	BUILT		1.50	True	1974 1.5" P-401 OVERLAY

Network: COI **Branch:** TW A4 (TAXIWAY ALPHA 4) **Section:** 605 **Surface:** AAC
L.C.D.: 01/01/2002 **Use:** TAXIWAY **Rank** P **Length:** 100.00 Ft **Width:** 40.00 Ft **True Area:** 5,387.07 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2002	OV-ME	Overlay with Asph Rubber Mei	$0	2.00	True	2" AC/ARMI
01/01/1979	IMPORTED	BUILT		1.50	True	1979: 1.5" P-401 ON 6" P-211
01/01/1979	IMPORTED	OVERLAY			True	SOIL: SP-SC

Network: COI **Branch:** TW B (TAXIWAY B) **Section:** 203 **Surface:** AC
L.C.D.: 01/01/2011 **Use:** TAXIWAY **Rank** P **Length:** 400.00 Ft **Width:** 25.00 Ft **True Area:** 9,788.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2011	INITIAL	Initial Construction	$0	0.00	True	

Network: COI **Branch:** TW B (TAXIWAY B) **Section:** 205 **Surface:** AAC
L.C.D.: 01/01/2005 **Use:** TAXIWAY **Rank** P **Length:** 320.00 Ft **Width:** 40.00 Ft **True Area:** 12,750.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2005	MI&OV	Mill & Overlay	$0	1.50	True	
01/01/1990	IMPORTED	BUILT			True	1990 SEAL COAT TYPE R (SLURRY SEAL)
01/01/1965	IMPORTED	OVERLAY			True	ESTIMATE 1965 AC PAVEMENT
01/01/1965	IMPORTED	OVERLAY			True	SOIL: SP-SC

Network: COI **Branch**: TW B (TAXIWAY B) **Section:** 210 **Surface:** AAC
L.C.D.: 01/01/2005 **Use:** TAXIWAY **Rank** P **Length:** 1,900.00 Ft **Width:** 30.00 Ft **True Area:** 57,150.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2005	MI&OV	Mill & Overlay	$0	1.50	True	
01/01/1990	IMPORTED	OVERLAY			True	1990 SEAL COAT - TYPE R
01/01/1980	IMPORTED	BUILT		1.50	True	1980: 1.5" P-401 ON 6" LIME ROCK BASE ON 4" STABILIZED SUBBASE

Network: COI **Branch**: TW B1 (TAXIWAY BRAVO 1) **Section:** 315 **Surface:** AAC
L.C.D.: 01/01/2005 **Use:** TAXIWAY **Rank** P **Length:** 100.00 Ft **Width:** 40.00 Ft **True Area:** 4,046.29 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2005	ML-OL	Mill and Overlay	$0	0.00	True	
01/01/1990	IMPORTED	OVERLAY			True	EXISTING BITUMONOUS SURFACE ON LIMEROCK
01/01/1990	IMPORTED	OVERLAY		1.50	True	1990 1.5" P401 OVERLAY ON
01/01/1990	IMPORTED	BUILT		0.50	True	1990 0.5" TYPE 2 SAND ASPHALT SEAL COAT ON

Network: COI **Branch**: TW B2 (TAXIWAY BRAVO 2) **Section:** 410 **Surface:** AAC
L.C.D.: 01/01/2005 **Use:** TAXIWAY **Rank** P **Length:** 100.00 Ft **Width:** 40.00 Ft **True Area:** 4,298.45 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2005	ML-OL	Mill and Overlay	$0	0.00	True	
01/01/1990	IMPORTED	OVERLAY			True	SOIL: SP-SC
01/01/1990	IMPORTED	OVERLAY			True	EXISTING AC PAVEMENT (SECTION UNKNOWN)
01/01/1990	IMPORTED	BUILT		1.50	True	1990: MINIMUM 1.5" P-401 ON MAXIMUM .5" TYPE 2 SAND-ASPHALT SEALCOAT

Network: COI **Branch**: TW B4 (TAXIWAY BRAVO 4) **Section:** 216 **Surface:** AAC
L.C.D.: 01/01/2005 **Use:** TAXIWAY **Rank** P **Length:** 150.00 Ft **Width:** 30.00 Ft **True Area:** 5,450.37 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/2005	MI&OV	Mill & Overlay	$0	1.50	True	
01/01/1990	IMPORTED	OVERLAY		1.50	True	1990: MINIMUM 1.5" P-401 ON MAXIMUM .5" TYPE 2 SAND-ASPHALT SEALCOAT
01/01/1990	IMPORTED	OVERLAY			True	SOIL: SP-SC
01/01/1979	IMPORTED	BUILT		1.50	True	1979: 1.5" P-401 ON 6" P-211

Summary:

Work Description	Section Count	Area Total (SqFt)	Thickness Avg (in)	Thickness STD (in)
BUILT	26	1,128,712.14	1.65	.68
Complete Reconstruction - AC	2	47,896.56	1.00	1.41
Initial Construction	3	61,686.08	.00	.00
Mill & Overlay	8	341,369.66	1.50	.00
Mill and Overlay	6	86,697.74	.25	.61
OVERLAY	40	2,155,267.12	1.50	.00
Overlay with Asph Rubber	5	414,301.69	2.00	.00
REPAIR	3	84,707.84		

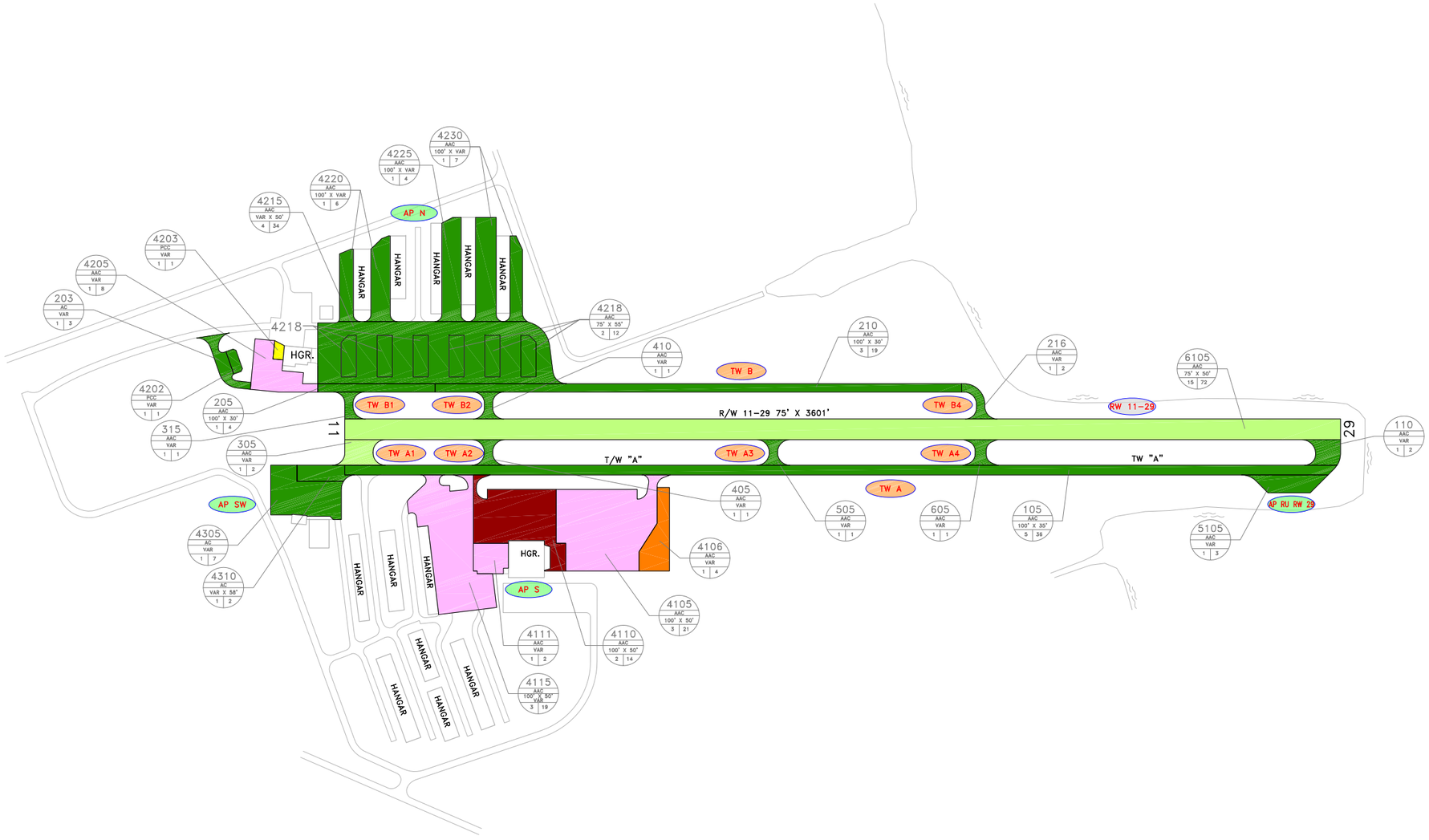
STD = Standard Deviation

APPENDIX B

2012 CONDITION MAP
PAVEMENT CONDITION INDEX TABLE

NORTH

GRAPHIC SCALE IN FEET
0 100 200 400



LEGEND

- RW 13-31 — TYPICAL RUNWAY BRANCH ID
- TW A — TYPICAL TAXIWAY BRANCH ID
- AP S — 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:

K:\SPB_Aviation\42179001\CAD\PLANSHEETS\COI\EXHIBITS\003-CO-CONDTION.dwg PLOTTED: April 23, 2012 - 8:49 AM, BY: Larson, Brent

2012 CONDITION MAP

MERRITT ISLAND AIRPORT
BREVARD COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

IDENTIFIER: COI
FDOT DISTRICT: 5

Table B-1: Pavement Condition Index

Branch Name	Branch ID	Branch Use	Section ID	True Area (ft^2)	Section Rank	Surface Type	Total Samples Inspected	Total Samples	PCI	PCI Category
North Apron	AP N	APRON	4202	3,023	P	PCC	1	1	100	Good
North Apron	AP N	APRON	4203	2,202	P	PCC	1	1	57	Fair
North Apron	AP N	APRON	4205	24,860	P	AAC	1	8	36	Very Poor
North Apron	AP N	APRON	4215	139,109	P	AAC	4	34	88	Good
North Apron	AP N	APRON	4218	48,875	P	AAC	2	12	89	Good
North Apron	AP N	APRON	4220	33,609	P	AAC	1	6	95	Good
North Apron	AP N	APRON	4225	26,238	P	AAC	1	4	89	Good
North Apron	AP N	APRON	4230	42,203	P	AAC	1	7	87	Good
Run-Up Apron at RW 29	AP RU RW29	APRON	5105	14,226	P	AAC	1	3	91	Good
South Apron	AP S	APRON	4105	97,600	P	AAC	3	21	29	Very Poor
South Apron	AP S	APRON	4106	21,455	P	AAC	1	4	43	Poor
South Apron	AP S	APRON	4110	63,200	P	AAC	2	14	25	Serious
South Apron	AP S	APRON	4111	13,470	P	AAC	1	2	33	Very Poor
South Apron	AP S	APRON	4115	89,396	P	AAC	3	19	34	Very Poor
SW Apron	AP SW	APRON	4305	37,682	P	AC	1	7	95	Good
SW Apron	AP SW	APRON	4310	10,214	P	AC	1	2	95	Good
Runway 11-29	RW 11-29	RUNWAY	6105	270,225	P	AAC	15	72	80	Satisfactory
Taxiway Alpha	TW A	TAXIWAY	105	125,133	P	AAC	5	36	90	Good
Taxiway Alpha	TW A	TAXIWAY	110	9,043	P	AAC	1	2	92	Good
Taxiway A-1	TW A1	TAXIWAY	305	10,739	P	AAC	1	2	79	Satisfactory
Taxiway A-2	TW A2	TAXIWAY	405	4,513	P	AAC	1	1	90	Good
Taxiway A-3	TW A3	TAXIWAY	505	4,513	P	AAC	1	1	86	Good

Table B-1: Pavement Condition Index (Continued)

Branch Name	Branch ID	Branch Use	Section ID	True Area (ft^2)	Section Rank	Surface Type	Total Samples Inspected	Total Samples	PCI	PCI Category
Taxiway A-4	TW A4	TAXIWAY	605	5,387	P	AAC	1	1	92	Good
Taxiway Bravo	TW B	TAXIWAY	203	9,788	P	AC	1	3	100	Good
Taxiway Bravo	TW B	TAXIWAY	205	12,750	P	AAC	1	4	86	Good
Taxiway Bravo	TW B	TAXIWAY	210	57,150	P	AAC	3	19	89	Good
Taxiway B-1	TW B1	TAXIWAY	315	4,046	P	AAC	1	1	89	Good
Taxiway B-2	TW B2	TAXIWAY	410	4,298	P	AAC	1	1	95	Good
Taxiway B-4	TW B4	TAXIWAY	216	5,450	P	AAC	1	2	95	Good

Note: If new construction, then survey date = last construction date and PCI is set to 100 by MicroPAVER.
* Sections not surveyed due to reasons such as re-sectioning, no escort, not accessible at the time of survey.

APPENDIX C

BRANCH CONDITION REPORT
SECTION CONDITION REPORT

Date: 3 /16/2012

Branch Condition Report

Pavement Database: NetworkID: COI

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
AP N (NORTH APRON)	8	2,626.00	110.50	320,118.87	APRON	80.13	20.51	84.70
AP RU RW29 (RUN-UP APRON AT RW 29)	1	280.00	50.00	14,226.02	APRON	91.00	0.00	91.00
AP S (SOUTH APRON)	5	1,444.00	180.00	285,119.99	APRON	32.80	6.01	30.92
AP SW (SW APRON)	2	426.00	150.00	47,896.56	APRON	95.00	0.00	95.00
RW 11-29 (RUNWAY 11-29)	1	3,600.00	75.00	270,225.00	RUNWAY	80.00	0.00	80.00
TW A (TAXIWAY A)	2	3,660.00	67.50	134,176.35	TAXIWAY	91.00	1.00	90.13
TW A1 (TAXIWAY ALPHA 1)	1	100.00	100.00	10,738.71	TAXIWAY	79.00	0.00	79.00
TW A2 (TAXIWAY ALPHA 2)	1	100.00	40.00	4,513.27	TAXIWAY	90.00	0.00	90.00
TW A3 (TAXIWAY ALPHA 3)	1	100.00	40.00	4,513.27	TAXIWAY	86.00	0.00	86.00
TW A4 (TAXIWAY ALPHA 4)	1	100.00	40.00	5,387.07	TAXIWAY	92.00	0.00	92.00
TW B (TAXIWAY B)	3	2,620.00	31.67	79,688.00	TAXIWAY	91.67	6.02	89.87
TW B1 (TAXIWAY BRAVO 1)	1	100.00	40.00	4,046.29	TAXIWAY	89.00	0.00	89.00
TW B2 (TAXIWAY BRAVO 2)	1	100.00	40.00	4,298.45	TAXIWAY	95.00	0.00	95.00
TW B4 (TAXIWAY BRAVO 4)	1	150.00	30.00	5,450.37	TAXIWAY	95.00	0.00	95.00

Pavement Database:

Use Category	Number of Sections	Total Area (SqFt)	Arithmetic Average PCI	Average PCI STD.	Weighted Average PCI
APRON	16	667,361.44	67.88	28.40	62.60
RUNWAY	1	270,225.00	80.00	0.00	80.00
TAXIWAY	12	252,811.78	90.25	5.10	89.71
All	29	1,190,398.22	77.55	23.96	72.31

STD = Standard Deviation

Section Condition Report

Pavement Database: *NetworkID: COI*

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	Lanes	True Area (SqFt)	Last Inspection Date	Age At Inspection	PCI
AP N (NORTH APRON)	4202	01/01/2011	PCC	APRON	P	0	3,023.08	01/01/2011	0	100.00
AP N (NORTH APRON)	4203	01/01/1990	PCC	APRON	P	0	2,201.50	02/07/2012	22	57.00
AP N (NORTH APRON)	4205	01/01/2005	AAC	APRON	P	0	24,860.23	02/07/2012	7	36.00
AP N (NORTH APRON)	4215	01/01/2005	AAC	APRON	P	0	139,108.59	02/07/2012	7	88.00
AP N (NORTH APRON)	4218	01/01/2005	AAC	APRON	P	0	48,875.00	02/07/2012	7	89.00
AP N (NORTH APRON)	4220	01/01/2005	AAC	APRON	P	0	33,609.36	02/07/2012	7	95.00
AP N (NORTH APRON)	4225	01/01/2005	AAC	APRON	P	0	26,238.25	02/07/2012	7	89.00
AP N (NORTH APRON)	4230	01/01/2005	AAC	APRON	P	0	42,202.86	02/07/2012	7	87.00
AP RU RW29 (RUN-UP APRON AT RW 29)	5105	01/01/2002	AAC	APRON	P	0	14,226.02	02/07/2012	10	91.00
AP S (SOUTH APRON)	4105	01/01/1996	AAC	APRON	P	0	97,599.60	02/07/2012	16	29.00
AP S (SOUTH APRON)	4106	01/01/1996	AAC	APRON	P	0	21,455.00	02/07/2012	16	43.00
AP S (SOUTH APRON)	4110	01/01/1996	AAC	APRON	P	0	63,199.52	02/07/2012	16	25.00
AP S (SOUTH APRON)	4111	01/01/1996	AAC	APRON	P	0	13,470.00	02/07/2012	16	33.00
AP S (SOUTH APRON)	4115	01/01/1996	AAC	APRON	P	0	89,395.87	02/07/2012	16	34.00
AP SW (SW APRON)	4305	01/01/2003	AC	APRON	P	0	37,682.42	02/07/2012	9	95.00
AP SW (SW APRON)	4310	01/01/2003	AC	APRON	P	0	10,214.14	02/07/2012	9	95.00
RW 11-29 (RUNWAY 11-29)	6105	01/01/2002	AAC	RUNWAY	P	0	270,225.00	02/07/2012	10	80.00
TW A (TAXIWAY A)	105	01/01/2002	AAC	TAXIWAY	P	0	125,133.17	02/07/2012	10	90.00
TW A (TAXIWAY A)	110	01/01/2002	AAC	TAXIWAY	P	0	9,043.18	02/07/2012	10	92.00
TW A1 (TAXIWAY ALPHA 1)	305	01/01/2002	AAC	TAXIWAY	P	0	10,738.71	02/07/2012	10	79.00
TW A2 (TAXIWAY ALPHA 2)	405	01/01/2002	AAC	TAXIWAY	P	0	4,513.27	02/07/2012	10	90.00
TW A3 (TAXIWAY ALPHA 3)	505	01/01/2002	AAC	TAXIWAY	P	0	4,513.27	02/07/2012	10	86.00
TW A4 (TAXIWAY ALPHA 4)	605	01/01/2002	AAC	TAXIWAY	P	0	5,387.07	02/07/2012	10	92.00
TW B (TAXIWAY B)	203	01/01/2011	AC	TAXIWAY	P	0	9,788.00	01/01/2011	0	100.00
TW B (TAXIWAY B)	205	01/01/2005	AAC	TAXIWAY	P	0	12,750.00	02/07/2012	7	86.00
TW B (TAXIWAY B)	210	01/01/2005	AAC	TAXIWAY	P	0	57,150.00	02/07/2012	7	89.00

Section Condition Report

Pavement Database: *NetworkID: COI*

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	Lanes	True Area (SqFt)	Last Inspection Date	Age At Inspection	PCI
TW B1 (TAXIWAY BRAVO 1)	315	01/01/2005	AAC	TAXIWAY	P	0	4,046.29	02/07/2012	7	89.00
TW B2 (TAXIWAY BRAVO 2)	410	01/01/2005	AAC	TAXIWAY	P	0	4,298.45	02/07/2012	7	95.00
TW B4 (TAXIWAY BRAVO 4)	216	01/01/2005	AAC	TAXIWAY	P	0	5,450.37	02/07/2012	7	95.00

Pavement Database:

Age Category	Average Age At Inspection	Total Area (SqFt)	Number of Sections	Arithmetic Average PCI	PCI Standard Deviation	Weighted Average PCI
0-02	**0.00**	**12,811.08**	**2**	**100.00**	**0.00**	**100.00**
06-10	**8.33**	**890,265.65**	**21**	**87.05**	**12.22**	**85.20**
16-20	**16.00**	**285,119.99**	**5**	**32.80**	**6.01**	**30.92**
21-25	**22.00**	**2,201.50**	**1**	**57.00**	**0.00**	**57.00**
All	**9.55**	**1,190,398.22**	**29**	**77.55**	**23.96**	**72.31**

APPENDIX D

PAVEMENT CONDITION PREDICTION TABLE
PREDICTED PCI BY PAVEMENT USE GRAPH

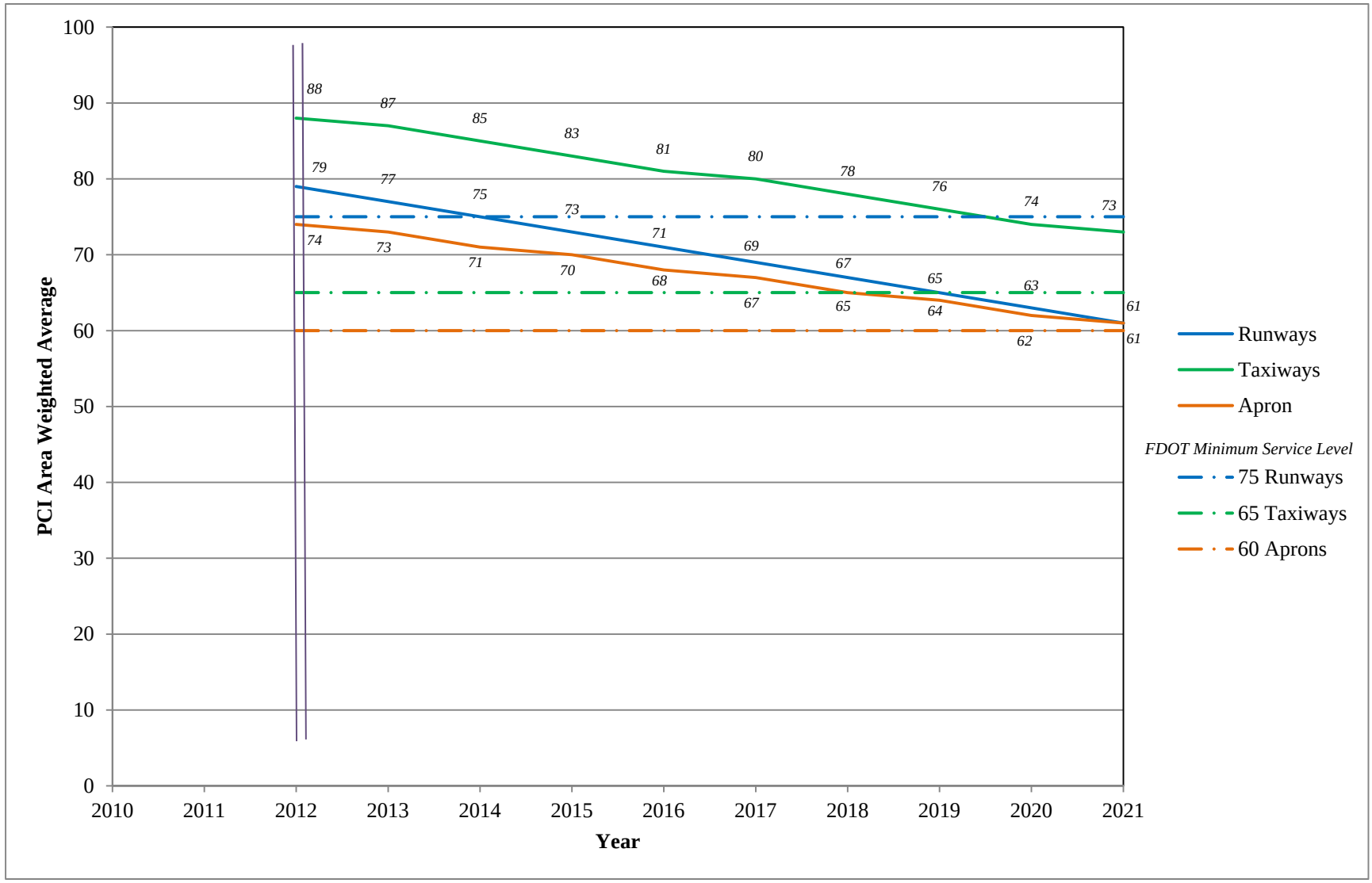
Table D-1: Pavement Condition Prediction

Branch Name	Branch ID	Section ID	Current PCI	PCI Forecast									
				2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
North Apron	AP N	4202	100	96	94	91	88	86	83	81	78	76	73
North Apron	AP N	4203	57	56	53	51	48	46	43	41	38	35	33
North Apron	AP N	4205	36	36	35	34	33	32	31	30	29	29	28
North Apron	AP N	4215	88	87	85	83	81	79	77	75	73	71	70
North Apron	AP N	4218	89	88	86	84	82	80	78	76	74	72	70
North Apron	AP N	4220	95	94	92	90	88	86	84	81	79	78	76
North Apron	AP N	4225	89	88	86	84	82	80	78	76	74	72	70
North Apron	AP N	4230	87	86	84	82	80	78	76	74	72	71	69
Run-Up Apron at RW 29	AP RU RW29	5105	91	90	88	86	84	82	80	78	76	74	72
South Apron	AP S	4105	29	29	28	27	27	26	25	25	24	24	24
South Apron	AP S	4106	43	43	41	40	39	38	37	36	35	34	33
South Apron	AP S	4110	25	25	24	24	23	23	23	22	22	22	21
South Apron	AP S	4111	33	33	32	31	30	29	29	28	27	27	26
South Apron	AP S	4115	34	34	33	32	31	30	29	29	28	27	27
SW Apron	AP SW	4305	95	94	93	92	90	89	87	86	84	83	81
SW Apron	AP SW	4310	95	94	93	92	90	89	87	86	84	83	81
Runway 11-29	RW 11-29	6105	80	79	77	75	73	71	69	68	66	64	62
Taxiway Alpha	TW A	105	90	89	88	86	84	82	81	79	77	75	74
Taxiway Alpha	TW A	110	92	91	90	88	86	84	83	81	79	77	76
Taxiway A-1	TW A1	305	79	78	77	75	73	71	70	68	66	64	63
Taxiway A-2	TW A2	405	90	89	88	86	84	82	81	79	77	75	74
Taxiway A-3	TW A3	505	86	85	84	82	80	78	77	75	73	71	70

Table D-1: Pavement Condition Prediction (Continued)

Branch Name	Branch ID	Section ID	Current PCI	PCI Forecast									
				2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Taxiway A-4	TW A4	605	92	91	90	88	86	84	83	81	79	77	76
Taxiway Bravo	TW B	203	100	97	96	94	92	91	89	87	85	84	82
Taxiway Bravo	TW B	205	86	85	84	82	80	78	77	75	73	71	70
Taxiway Bravo	TW B	210	89	88	87	85	83	81	80	78	76	74	73
Taxiway B-1	TW B1	315	89	88	87	85	83	81	80	78	76	74	73
Taxiway B-2	TW B2	410	95	94	93	91	89	87	86	84	82	80	79
Taxiway B-4	TW B4	216	95	94	93	91	89	87	86	84	82	80	79

Figure D-1: Predicted PCI by Pavement Use



APPENDIX E

YEAR 1 MAINTENANCE ACTIVITIES TABLE

Table E-1: Year 1 Maintenance Activities

Branch Name	Branch ID	Section ID	Distress Description	Distress Severity	Work Description	Work Quantity	Work Unit	Unit Cost	Work Cost
North Apron	AP N	4215	WEATH/RAVEL	L	Surface Seal - Rejuvenating	855.40	SqFt	$0.40	$342.18
North Apron	AP N	4220	WEATH/RAVEL	L	Surface Seal - Rejuvenating	242.00	SqFt	$0.40	$96.80
North Apron	AP N	4225	OIL SPILLAGE	N	Patching - AC Shallow	33.70	SqFt	$2.90	$97.83
North Apron	AP N	4225	WEATH/RAVEL	L	Surface Seal - Rejuvenating	130.00	SqFt	$0.40	$51.98
North Apron	AP N	4230	OIL SPILLAGE	N	Patching - AC Shallow	268.10	SqFt	$2.90	$777.60
Run-Up Apron at RW 29	AP RU RW29	5105	WEATH/RAVEL	L	Surface Seal - Rejuvenating	656.60	SqFt	$0.40	$262.63
Runway 11-29	RW 11-29	6105	PATCHING	M	Patching - AC Deep	6,015.20	SqFt	$4.90	$29,474.35
Runway 11-29	RW 11-29	6105	WEATH/RAVEL	L	Surface Seal - Rejuvenating	7,566.20	SqFt	$0.40	$3,026.52
Taxiway Alpha	TW A	105	WEATH/RAVEL	L	Surface Seal - Rejuvenating	1,287.10	SqFt	$0.40	$514.83
Taxiway A-1	TW A1	305	WEATH/RAVEL	L	Surface Seal - Rejuvenating	247.60	SqFt	$0.40	$99.05
Taxiway A-2	TW A2	405	WEATH/RAVEL	L	Surface Seal - Rejuvenating	20.00	SqFt	$0.40	$8.00
Taxiway A-3	TW A3	505	WEATH/RAVEL	L	Surface Seal - Rejuvenating	10.00	SqFt	$0.40	$4.00
Taxiway A-4	TW A4	605	WEATH/RAVEL	L	Surface Seal - Rejuvenating	10.00	SqFt	$0.40	$4.00
Taxiway B-1	TW B1	315	WEATH/RAVEL	L	Surface Seal - Rejuvenating	32.00	SqFt	$0.40	$12.80
								Total =	$34,772.57

APPENDIX F

MAJOR M&R PLAN BY YEAR UNDER UNLIMITED FUNDING SCENARIO TABLE

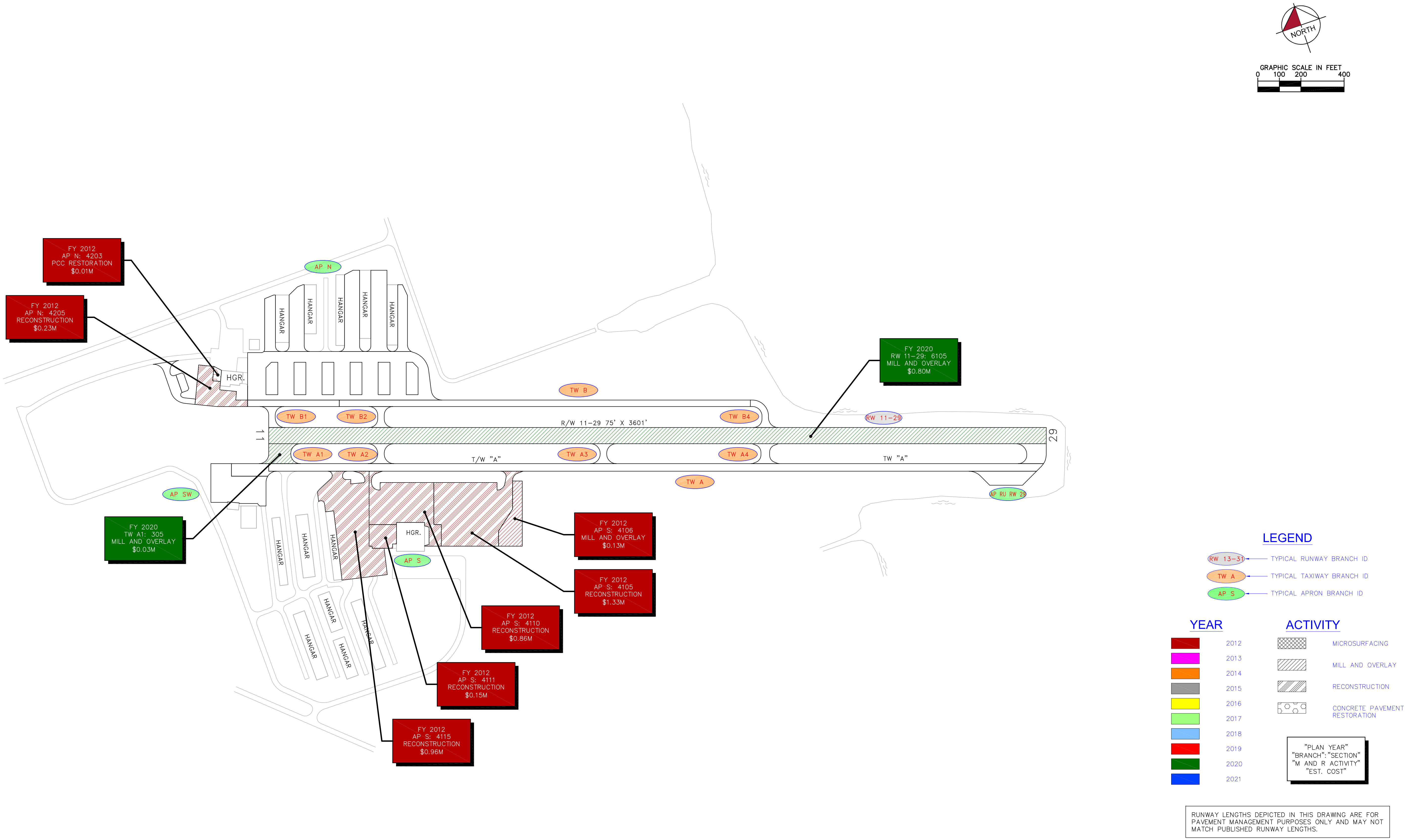
Table F-1: Major M&R Plan by Year under Unlimited Funding Scenario

Year	Branch Name	Section ID	Surface Type	Section Area (ft^2)	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2012	South Apron	4110	AAC	63,200	$860,777.74	25	Reconstruction	100
2012	South Apron	4105	AAC	97,600	$1,329,306.98	29	Reconstruction	100
2012	South Apron	4111	AAC	13,470	$153,840.92	33	Reconstruction	100
2012	South Apron	4115	AAC	89,396	$955,463.34	34	Reconstruction	100
2012	North Apron	4205	AAC	24,860	$229,261.10	36	Reconstruction	100
2012	South Apron	4106	AAC	21,455	$134,951.96	43	Mill and Overlay	100
2012	North Apron	4203	PCC	2,202	$10,056.46	56	PCC Restoration	100
2020	Runway 11-29	6105	AAC	270,225	$796,905.04	64	Mill and Overlay	100
2020	Taxiway A-1	305	AAC	10,739	$31,668.91	64	Mill and Overlay	100
				Total	**$4,502,232.45**	**43**		**100**

* Costs are adjusted for inflation.

APPENDIX G

10-YEAR M&R MAP


NORTH
GRAPHIC SCALE IN FEET
0 100 200 400
FY 2012
AP N: 4203
PCC RESTORATION
$0.01M
FY 2012
AP N: 4205
RECONSTRUCTION
$0.23M
AP N
HANGAR
HGR.
TW B
TW B1
TW B2
TW B4
RW 11-29
R/W 11-29 75' X 3601'
11
29
TW A1
TW A2
T/W "A"
TW A3
TW A4
TW "A"
TW A
AP SW
AP RU RW 29
AP S
FY 2020
RW 11-29: 6105
MILL AND OVERLAY
$0.80M
FY 2020
TW A1: 305
MILL AND OVERLAY
$0.03M
FY 2012
AP S: 4106
MILL AND OVERLAY
$0.13M
FY 2012
AP S: 4105
RECONSTRUCTION
$1.33M
FY 2012
AP S: 4110
RECONSTRUCTION
$0.86M
FY 2012
AP S: 4111
RECONSTRUCTION
$0.15M
FY 2012
AP S: 4115
RECONSTRUCTION
$0.96M
LEGEND
RW 13-31 TYPICAL RUNWAY BRANCH ID
TW A TYPICAL TAXIWAY BRANCH ID
AP S TYPICAL APRON BRANCH ID
YEAR
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
ACTIVITY
MICROSURFACING
MILL AND OVERLAY
RECONSTRUCTION
CONCRETE PAVEMENT RESTORATION
"PLAN YEAR"
"BRANCH":"SECTION"
"M AND R 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:

10-YEAR M&R MAP

MERRITT ISLAND AIRPORT
BREVARD COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

IDENTIFIER: **COI**

FDOT DISTRICT: 5

APPENDIX H

PHOTOGRAPHS

Runway 11-29, Section 6105, Sample Unit 170 – Low severity (48) Longitudinal and Transverse Cracking, low severity (52) Weathering and Raveling

Runway 11-29, Section 6105, Sample Unit 167 – Low severity (48) Longitudinal and Transverse Cracking, low severity (52) Weathering and Raveling

Runway 11-29, Section 6105, Sample Unit 149 – Low severity (48) Longitudinal and Transverse Cracking, medium severity (50) Patching

Runway 11-29, Section 6105, Sample Unit 100 – Low severity (48) Longitudinal and Transverse Cracking, low severity (52) Weathering and Raveling

North Apron, Section 4205, Sample Unit 197 – Low severity (43) Block Cracking, medium severity (52) Weathering and Raveling

North Apron, Section 4203, Sample Unit 100 – Low severity (70) Scaling, Crazing and Map Cracking; low severity (63) Longitudinal, Transverse, and Diagonal Cracking; low severity (65) Joint Seal Damage

North Apron, Section 4218, Sample Unit 820 – Low severity (50) Patching

North Apron, Section 4215, Sample Unit 355 – Low severity (48) Longitudinal and Transverse Cracking, low severity (52) Weathering and Raveling

Taxiway Bravo, Section 205, Sample Unit 102 – Low severity (48) Longitudinal and Transverse Cracking


Southwest Apron, Section 4305, Sample Unit 200 – Low severity (48) Longitudinal and Transverse Cracking

Taxiway Alpha, Section 105, Sample Unit 107 – Low severity (48) Longitudinal and Transverse Cracking

South Apron, Section 4106, Sample Unit 199 – Medium severity (52) Weathering and Raveling

South Apron, Section 4115, Sample Unit 177 – Medium Severity (43) Block Cracking, medium severity (52) Weathering and Raveling

APPENDIX I

PCI RE-INSPECTION REPORT

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP N Name: NORTH APRON Use: APRON Area: 320,118.87SqFt

---

Section: 4202 of 8 From: - To: - Last Const.: 1/1/2011
Surface: PCC Family: FDOT-GA-PCC Zone: Category: Rank: P
Area: 3,023.08SqFt Length: 100.00Ft Width: 30.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date1/1/2011 Total Samples: 0 Surveyed: 0
Conditions: PCI:100.00 |
Inspection Comments: Construction/Major M&R inspection record.

Sample Number: Type: Area: 0.00
<NO SAMPLE RECORDS>

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP N Name: NORTH APRON Use: APRON Area: 320,118.87SqFt

Section: 4203 of 8 From: - To: - Last Const.: 1/1/1990
Surface: PCC Family: FDOT-GA-PCC Zone: Category: Rank: P
Area: 2,201.50SqFt Length: 50.00Ft Width: 40.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 1 Surveyed: 1
Conditions: PCI:57.00 |
Inspection Comments:

Sample Number: 100 Type: R Area: 15.00Slabs PCI = 57
Sample Comments:

65 JOINT SEAL DAMAGE	L	15.00 Slabs	Comments:
70 SCALING/CRAZING	L	12.00 Slabs	Comments:
63 LINEAR CRACKING	L	7.00 Slabs	Comments:
70 SCALING/CRAZING	M	2.00 Slabs	Comments:
73 SHRINKAGE CRACKING	N	8.00 Slabs	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP N Name: NORTH APRON Use: APRON Area: 320,118.87SqFt

Section: 4205 of 8 From: - To: - Last Const.: 1/1/2005
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 24,860.23SqFt Length: 120.00Ft Width: 200.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 8 Surveyed: 1
Conditions: PCI:36.00 |
Inspection Comments:

Sample Number: 197 Type: R Area: 2,500.00SqFt PCI = 36
Sample Comments:

43 BLOCK CRACKING	L	2,499.98 SqFt	Comments:
52 WEATHERING/RAVELING	M	2,499.98 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP N Name: NORTH APRON Use: APRON Area: 320,118.87SqFt

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Section: 4215 of 8 From: - To: - Last Const.: 1/1/2005
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 139,108.59SqFt Length: 1,000.00Ft Width: 139.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 34 Surveyed: 4
Conditions: PCI:88.00 |
Inspection Comments:

Sample Number: 200 Type: R Area: 4,937.50SqFt PCI = 86
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	105.03 Ft	Comments:
50 PATCHING	L	204.00 SqFt	Comments:

Sample Number: 254 Type: R Area: 3,750.00SqFt PCI = 100
Sample Comments:
<NO DISTRESSES>

Sample Number: 302 Type: R Area: 3,750.00SqFt PCI = 94
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	59.02 Ft	Comments:

Sample Number: 355 Type: R Area: 5,125.00SqFt PCI = 76
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	406.10 Ft	Comments:
52 WEATHERING/RAVELING	L	108.00 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP N Name: NORTH APRON Use: APRON Area: 320,118.87SqFt

Section: 4218 of 8 From: - To: - Last Const.: 1/1/2005
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 48,875.00SqFt Length: 480.00Ft Width: 100.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 12 Surveyed: 2
Conditions: PCI:89.00 |
Inspection Comments:

Sample Number: 820 Type: R Area: 4,125.00SqFt PCI = 82
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	181.05 Ft	Comments:
50 PATCHING	L	54.00 SqFt	Comments:

Sample Number: 881 Type: R Area: 4,125.00SqFt PCI = 96
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	24.01 Ft	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP N Name: NORTH APRON Use: APRON Area: 320,118.87SqFt

Section: 4220 of 8 From: - To: - Last Const.: 1/1/2005
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 33,609.36SqFt Length: 336.00Ft Width: 100.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 6 Surveyed: 1
Conditions: PCI:95.00 |
Inspection Comments:

Sample Number: 501 Type: R Area: 5,000.00SqFt PCI = 95
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	4.00 Ft	Comments:
52 WEATHERING/RAVELING	L	36.00 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP N Name: NORTH APRON Use: APRON Area: 320,118.87SqFt

Section: 4225 of 8 From: - To: - Last Const.: 1/1/2005
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 26,238.25SqFt Length: 340.00Ft Width: 75.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 4 Surveyed: 1
Conditions: PCI:89.00 |
Inspection Comments:

Sample Number: 600 Type: R Area: 7,268.25SqFt PCI = 89
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	135.03 Ft	Comments:
52 WEATHERING/RAVELING	L	36.00 SqFt	Comments:
49 OIL SPILLAGE	N	4.00 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP N Name: NORTH APRON Use: APRON Area: 320,118.87SqFt

Section: 4230 of 8 From: - To: - Last Const.: 1/1/2005
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 42,202.86SqFt Length: 200.00Ft Width: 200.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 7 Surveyed: 1
Conditions: PCI:87.00 |
Inspection Comments:

Sample Number: 701 Type: R Area: 4,500.00SqFt PCI = 87
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	128.03 Ft	Comments:
49 OIL SPILLAGE	N	22.00 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP RU RW29 Name: RUN-UP APRON AT RW 29 Use: APRON Area: 14,226.02SqFt

Section: 5105 of 1 From: - To: - Last Const.: 1/1/2002
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 14,226.02SqFt Length: 280.00Ft Width: 50.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 3 Surveyed: 1
Conditions: PCI:91.00 |
Inspection Comments:

Sample Number: 102 Type: R Area: 6,500.00SqFt PCI = 91
Sample Comments:

52 WEATHERING/RAVELING	L	300.00 SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	9.00 Ft	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP S Name: SOUTH APRON Use: APRON Area: 285,119.99SqFt

Section: 4105 of 5 From: - To: - Last Const.: 1/1/1996
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 97,599.60SqFt Length: 450.00Ft Width: 200.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 21 Surveyed: 3
Conditions: PCI:29.00 |
Inspection Comments:

Sample Number: 201 Type: R Area: 5,000.00SqFt PCI = 25
Sample Comments:

52 WEATHERING/RAVELING	M	4,999.96 SqFt	Comments:
43 BLOCK CRACKING	M	4,999.96 SqFt	Comments:

Sample Number: 400 Type: R Area: 5,000.00SqFt PCI = 25
Sample Comments:

52 WEATHERING/RAVELING	M	4,999.96 SqFt	Comments:
43 BLOCK CRACKING	M	4,999.96 SqFt	Comments:

Sample Number: 599 Type: R Area: 4,458.80SqFt PCI = 38
Sample Comments:

43 BLOCK CRACKING	L	1,114.99 SqFt	Comments:
52 WEATHERING/RAVELING	M	4,458.76 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP S Name: SOUTH APRON Use: APRON Area: 285,119.99SqFt

Section: 4106 of 5 From: - To: - Last Const.: 1/1/1996
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 21,455.00SqFt Length: 100.00Ft Width: 200.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 4 Surveyed: 1
Conditions: PCI:43.00 |
Inspection Comments:

Sample Number: 199 Type: R Area: 5,213.24SqFt PCI = 43
Sample Comments:

52 WEATHERING/RAVELING	M	5,213.20 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP S Name: SOUTH APRON Use: APRON Area: 285,119.99SqFt

Section: 4110 of 5 From: - To: - Last Const.: 1/1/1996
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 63,199.52SqFt Length: 310.00Ft Width: 200.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 14 Surveyed: 2
Conditions: PCI:25.00 |
Inspection Comments:

Sample Number: 404 Type: R Area: 5,000.00SqFt PCI = 25
Sample Comments:

43 BLOCK CRACKING	M	4,999.96 SqFt	Comments:
52 WEATHERING/RAVELING	M	4,999.96 SqFt	Comments:

Sample Number: 503 Type: R Area: 5,000.00SqFt PCI = 25
Sample Comments:

43 BLOCK CRACKING	M	4,999.96 SqFt	Comments:
52 WEATHERING/RAVELING	M	4,999.96 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP S Name: SOUTH APRON Use: APRON Area: 285,119.99SqFt

Section: 4111 of 5 From: - To: - Last Const.: 1/1/1996
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 13,470.00SqFt Length: 134.00Ft Width: 100.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 2 Surveyed: 1
Conditions: PCI:33.00 |
Inspection Comments:

Sample Number: 205 Type: R Area: 6,350.00SqFt PCI = 33
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	96.02 Ft	Comments:
43 BLOCK CRACKING	L	200.00 SqFt	Comments:
52 WEATHERING/RAVELING	M	6,349.95 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP S Name: SOUTH APRON Use: APRON Area: 285,119.99SqFt

Section: 4115 of 5 From: - To: - Last Const.: 1/1/1996
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 89,395.87SqFt Length: 450.00Ft Width: 200.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 19 Surveyed: 3
Conditions: PCI:34.00 |
Inspection Comments:

Sample Number: 106 Type: R Area: 5,000.00SqFt PCI = 36
Sample Comments:

43 BLOCK CRACKING	L	4,999.96 SqFt	Comments:
52 WEATHERING/RAVELING	M	4,999.96 SqFt	Comments:

Sample Number: 177 Type: R Area: 3,361.74SqFt PCI = 25
Sample Comments:

43 BLOCK CRACKING	M	3,361.71 SqFt	Comments:
52 WEATHERING/RAVELING	M	3,361.71 SqFt	Comments:

Sample Number: 406 Type: R Area: 5,000.00SqFt PCI = 36
Sample Comments:

43 BLOCK CRACKING	L	4,999.96 SqFt	Comments:
52 WEATHERING/RAVELING	M	4,999.96 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP SW Name: SW APRON Use: APRON Area: 47,896.56SqFt

Section: 4305 of 2 From: - To: - Last Const.: 1/1/2003
Surface: AC Family: FDOT-GA-AP-AC Zone: Category: Rank: P
Area: 37,682.42SqFt Length: 376.00Ft Width: 100.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 7 Surveyed: 1
Conditions: PCI:95.00 |
Inspection Comments:

Sample Number: 200 Type: R Area: 5,700.00SqFt PCI = 95
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	44.01 Ft	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: AP SW Name: SW APRON Use: APRON Area: 47,896.56SqFt

Section: 4310 of 2 From: - To: - Last Const.: 1/1/2003
Surface: AC Family: FDOT-GA-AP-AC Zone: Category: Rank: P
Area: 10,214.14SqFt Length: 50.00Ft Width: 200.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 2 Surveyed: 1
Conditions: PCI:95.00 |
Inspection Comments:

Sample Number: 101 Type: R Area: 4,640.00SqFt PCI = 95
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	57.01 Ft	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: RW 11-29 Name: RUNWAY 11-29 Use: RUNWAY Area: 270,225.00SqFt

Section: 6105 of 1 From: - To: - Last Const.: 1/1/2002
Surface: AAC Family: FDOT-GA-RW-AAC Zone: Category: Rank: P
Area: 270,225.00SqFt Length: 3,600.00Ft Width: 75.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 72 Surveyed: 15
Conditions: PCI:80.00 |
Inspection Comments:

Sample Number: 100 Type: R Area: 3,750.00SqFt PCI = 88
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 77.02 Ft Comments:
52 WEATHERING/RAVELING L 75.00 SqFt Comments:

Sample Number: 103 Type: R Area: 3,750.00SqFt PCI = 88
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 135.03 Ft Comments:

Sample Number: 107 Type: R Area: 3,750.00SqFt PCI = 78
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 243.06 Ft Comments:
52 WEATHERING/RAVELING L 100.00 SqFt Comments:

Sample Number: 110 Type: R Area: 3,750.00SqFt PCI = 75
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 303.08 Ft Comments:
52 WEATHERING/RAVELING L 200.00 SqFt Comments:

Sample Number: 113 Type: R Area: 3,750.00SqFt PCI = 87
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 152.04 Ft Comments:

Sample Number: 119 Type: R Area: 3,750.00SqFt PCI = 78
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 224.06 Ft Comments:
52 WEATHERING/RAVELING L 200.00 SqFt Comments:

Sample Number: 125 Type: R Area: 3,750.00SqFt PCI = 81
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 174.04 Ft Comments:
52 WEATHERING/RAVELING L 100.00 SqFt Comments:

Sample Number: 131 Type: R Area: 3,750.00SqFt PCI = 86
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 182.05 Ft Comments:

Sample Number: 137 Type: R Area: 3,750.00SqFt PCI = 84
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 205.05 Ft Comments:

Sample Number: 143 Type: R Area: 3,750.00SqFt PCI = 87
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 162.04 Ft Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Sample Number: 149 Type: R Area: 3,750.00SqFt PCI = 49
Sample Comments:

50 PATCHING	M	1,187.99 SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	81.02 Ft	Comments:

Sample Number: 155 Type: R Area: 3,750.00SqFt PCI = 78
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	229.06 Ft	Comments:
52 WEATHERING/RAVELING	L	100.00 SqFt	Comments:

Sample Number: 161 Type: R Area: 3,750.00SqFt PCI = 79
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	208.05 Ft	Comments:
52 WEATHERING/RAVELING	L	200.00 SqFt	Comments:

Sample Number: 167 Type: R Area: 3,750.00SqFt PCI = 81
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	172.04 Ft	Comments:
52 WEATHERING/RAVELING	L	400.00 SqFt	Comments:

Sample Number: 170 Type: R Area: 3,750.00SqFt PCI = 81
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	178.05 Ft	Comments:
52 WEATHERING/RAVELING	L	200.00 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW A Name: TAXIWAY A Use: TAXIWAY Area: 134,176.35SqFt

Section: 105 of 2 From: - To: - Last Const.: 1/1/2002
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 125,133.17SqFt Length: 3,570.00Ft Width: 35.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 36 Surveyed: 5
Conditions: PCI:90.00 |
Inspection Comments:

Sample Number: 103 Type: R Area: 3,500.00SqFt PCI = 92
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	78.02 Ft	Comments:

Sample Number: 107 Type: R Area: 3,500.00SqFt PCI = 85
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	110.03 Ft	Comments:
52 WEATHERING/RAVELING	L	150.00 SqFt	Comments:

Sample Number: 115 Type: R Area: 3,500.00SqFt PCI = 85
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	148.04 Ft	Comments:
52 WEATHERING/RAVELING	L	20.00 SqFt	Comments:

Sample Number: 123 Type: R Area: 3,500.00SqFt PCI = 91
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	73.02 Ft	Comments:
52 WEATHERING/RAVELING	L	10.00 SqFt	Comments:

Sample Number: 131 Type: R Area: 3,500.00SqFt PCI = 95
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	27.01 Ft	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW A Name: TAXIWAY A Use: TAXIWAY Area: 134,176.35SqFt

Section: 110 of 2 From: - To: - Last Const.: 1/1/2002
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 9,043.18SqFt Length: 90.00Ft Width: 100.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 2 Surveyed: 1
Conditions: PCI:92.00 |
Inspection Comments:

Sample Number: 101 Type: R Area: 4,006.67SqFt PCI = 92
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	91.02 Ft	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW A1 Name: TAXIWAY ALPHA 1 Use: TAXIWAY Area: 10,738.71SqFt

Section: 305 of 1 From: - To: - Last Const.: 1/1/2002
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 10,738.71SqFt Length: 100.00Ft Width: 100.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 2 Surveyed: 1
Conditions: PCI:79.00 |
Inspection Comments:

Sample Number: 101 Type: R Area: 5,204.02SqFt PCI = 79
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	300.08 Ft	Comments:	
52 WEATHERING/RAVELING	L	20.00 SqFt	Comments:	
52 WEATHERING/RAVELING	L	100.00 SqFt	Comments:	

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW A2 Name: TAXIWAY ALPHA 2 Use: TAXIWAY Area: 4,513.27SqFt

Section: 405 of 1 From: - To: - Last Const.: 1/1/2002
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 4,513.27SqFt Length: 100.00Ft Width: 40.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 1 Surveyed: 1
Conditions: PCI:90.00 |
Inspection Comments:

Sample Number: 400 Type: R Area: 4,513.27SqFt PCI = 90
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	104.03 Ft	Comments:
52 WEATHERING/RAVELING	L	20.00 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW A3 Name: TAXIWAY ALPHA 3 Use: TAXIWAY Area: 4,513.27SqFt

Section: 505 of 1 From: - To: - Last Const.: 1/1/2002
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 4,513.27SqFt Length: 100.00Ft Width: 40.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 1 Surveyed: 1
Conditions: PCI:86.00 |
Inspection Comments:

Sample Number: 100 Type: R Area: 4,513.27SqFt PCI = 86
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	180.05 Ft	Comments:
52 WEATHERING/RAVELING	L	10.00 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW A4 Name: TAXIWAY ALPHA 4 Use: TAXIWAY Area: 5,387.07SqFt

Section: 605 of 1 From: - To: - Last Const.: 1/1/2002
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 5,387.07SqFt Length: 100.00Ft Width: 40.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 1 Surveyed: 1
Conditions: PCI:92.00 |
Inspection Comments:

Sample Number: 600 Type: R Area: 5,387.07SqFt PCI = 92
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	95.02 Ft	Comments:
52 WEATHERING/RAVELING	L	10.00 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW B Name: TAXIWAY B Use: TAXIWAY Area: 79,688.00SqFt

Section: 203 of 3 From: - To: - Last Const.: 1/1/2011
Surface: AC Family: FDOT-GA-TW-AC Zone: Category: Rank: P
Area: 9,788.00SqFt Length: 400.00Ft Width: 25.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date1/1/2011 Total Samples: 0 Surveyed: 0
Conditions: PCI:100.00 |
Inspection Comments: Construction/Major M&R inspection record.

Sample Number: Type: Area: 0.00
<NO SAMPLE RECORDS>

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW B Name: TAXIWAY B Use: TAXIWAY Area: 79,688.00SqFt

Section: 205 of 3 From: - To: - Last Const.: 1/1/2005
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 12,750.00SqFt Length: 320.00Ft Width: 40.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 4 Surveyed: 1
Conditions: PCI:86.00 |
Inspection Comments:

Sample Number: 102 Type: R Area: 3,000.00SqFt PCI = 86
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	133.03 Ft	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW B Name: TAXIWAY B Use: TAXIWAY Area: 79,688.00SqFt

Section: 210 of 3 From: - To: - Last Const.: 1/1/2005
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 57,150.00SqFt Length: 1,900.00Ft Width: 30.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 19 Surveyed: 3
Conditions: PCI:89.00 |
Inspection Comments:

Sample Number: 109 Type: R Area: 3,000.00SqFt PCI = 79
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 254.07 Ft Comments:

Sample Number: 116 Type: R Area: 3,000.00SqFt PCI = 90
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 89.02 Ft Comments:

Sample Number: 123 Type: R Area: 3,900.00SqFt PCI = 95
Sample Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING L 42.01 Ft Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW B1 Name: TAXIWAY BRAVO 1 Use: TAXIWAY Area: 4,046.29SqFt

Section: 315 of 1 From: - To: - Last Const.: 1/1/2005
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 4,046.29SqFt Length: 100.00Ft Width: 40.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 1 Surveyed: 1
Conditions: PCI:89.00 |
Inspection Comments:

Sample Number: 300 Type: R Area: 4,046.29SqFt PCI = 89
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	95.02 Ft	Comments:
52 WEATHERING/RAVELING	L	32.00 SqFt	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW B2 Name: TAXIWAY BRAVO 2 Use: TAXIWAY Area: 4,298.45SqFt

Section: 410 of 1 From: - To: - Last Const.: 1/1/2005
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 4,298.45SqFt Length: 100.00Ft Width: 40.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 1 Surveyed: 1
Conditions: PCI:95.00 |
Inspection Comments:

Sample Number: 400 Type: R Area: 4,298.45SqFt PCI = 95
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	38.01 Ft	Comments:

Re-inspection Report

FDOT_COMB
Report Generated Date: 3/16/2012
Site Name:

Network: COI Name: MERRITT ISLAND

Branch: TW B4 Name: TAXIWAY BRAVO 4 Use: TAXIWAY Area: 5,450.37SqFt

Section: 216 of 1 From: - To: - Last Const.: 1/1/2005
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 5,450.37SqFt Length: 150.00Ft Width: 30.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date2/7/2012 Total Samples: 2 Surveyed: 1
Conditions: PCI:95.00 |
Inspection Comments:

Sample Number: 125 Type: R Area: 2,730.63SqFt PCI = 95
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	21.01 Ft	Comments: