## 2012 Athens-Ben Epps Field Pavement Management Plan

Preserving Georgia's Critical Airport Pavement Infrastructure



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## **ATHENS-BEN EPPS FIELD**

## PAVEMENT MANAGEMENT REPORT

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#### INTRODUCTION

In 2012, the Georgia Department of Transportation – Aviation Programs (the Department), selected Applied Pavement Technology, Inc. (APTech), assisted by CDM Smith, to update its statewide airport pavement management system (APMS). This study will provide airports and the State with pavement information and analytical tools to help identify pavement related needs, optimize selection of individual airport projects over a multi-year period, and evaluate the long-term impacts of project priorities.

As part of this study, pavement conditions at Athens-Ben Epps Field were assessed in 2012 using the pavement condition index (PCI) procedure. The results of that evaluation are presented within this report and can be used by the Department, the Federal Aviation Administration (FAA), and Athens-Ben Epps Field to monitor the condition of airfield pavements and to identify, prioritize, and schedule pavement maintenance and rehabilitation (M&R) actions at the airport.

During a PCI inspection, the types, severities, and amounts of distress present in a pavement are visually quantified. This information is then used to develop a composite index that represents the overall condition of the pavement in numerical terms, ranging from 0 (failed) to 100 (excellent). The PCI number is a measure of overall condition and is indicative of the level of work that will be required to maintain or repair a pavement. Further, the information provides insight into the cause of pavement deterioration, which is the first step in selecting the appropriate repair action.

Programmed into an APMS, PCI information is used to determine when preventive maintenance actions, such as crack sealing, are advisable and also identifies the most cost-effective time to perform major rehabilitation, such as an overlay. The importance of identifying not only the type of repair but also the optimal time of repair is illustrated in Figure 1. There is a point in a pavement's life cycle where the rate of deterioration increases and the financial impact of delaying repairs beyond this point can be severe.

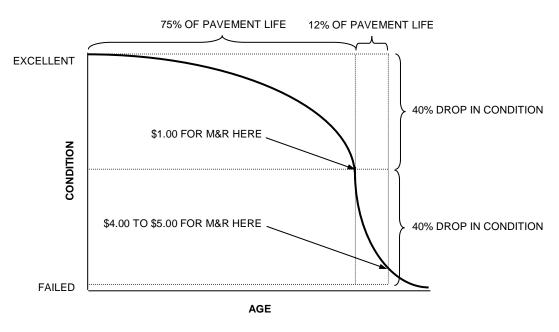


Figure 1. Pavement Condition versus Cost of Repair.

This study collected pavement history information, developed CAD maps, evaluated current pavement condition, and updated the Department's APMS. The APMS was used to prepare a 5-year pavement M&R program. Individual reports, such as this one, have been prepared for each individual airport as well as a statewide analysis report and an executive summary report in order to convey the study results.

#### **METHODOLOGY**

The study consists of three major work elements: records review and network definition; pavement condition evaluation; and the development of an M&R plan for the preservation of the pavement infrastructure. Detail of each work element is further described below.

#### Records Review and Network Definition

The first activities undertaken involved gathering historical airfield pavement data, which includes date of original construction and date of any subsequent rehabilitation; location of completed work; and the type of work undertaken.

The historical data is used to divide the pavement system into management units – branches, sections, and sample units. A branch is a single entity that serves a distinct function. For example, a runway is considered a branch because it serves a single function (allowing aircraft to take off and land). Taxiways and aprons are also separate branches.

A branch is further divided into sections. A section is considered the management unit of the APMS, and represents a pavement area where pavement maintenance or rehabilitation would be undertaken. For example, if a runway was built in 1968 and then extended and overlaid in 1984, this runway might be represented by a single section, even though there are two distinct construction periods. However, if the condition of one part of the runway was significantly different than another the branch would be divided into two sections because in that situation the runway may not be repaired as a whole in the future.

To estimate the overall condition of each pavement section, each section is subdivided into sample units. A percentage of these sample units are then evaluated during pavement inspections, and the condition information is extrapolated to predict the condition of the section as a whole.

#### **Pavement Evaluation Procedure**

Pavements were evaluated at Athens-Ben Epps Field using the PCI procedure. This procedure is described in FAA Advisory Circular (AC) 150/5380-6B, *Guidelines and Procedures for Maintenance of Airport Pavements* and American Society for Testing and Material (ASTM) Standard D5340-11, *Standard Test Method for Airport Pavement Condition Index Surveys*.

The PCI provides a numerical indication of overall pavement condition, as illustrated in Figure 2. The types and amounts of deterioration are used to calculate the PCI value of the section. The PCI ranges from 0 to 100, with 100 representing a pavement in excellent condition. It should be noted that a PCI value is based on visual signs of pavement deterioration and does not provide a measure of structural capacity.

Typical Pavement Surface <sup>1</sup>	PCI
	100
	60
	20

<sup>1</sup>Photographs shown are not specific to Athens-Ben Epps Field.

Figure 2. Visual Representation of PCI Scale.

In general terms, pavements with a PCI greater than 70 that are not exhibiting significant load-related distress will benefit from preventive maintenance actions, such as crack sealing and surface treatments. Pavements with a PCI of 40 to 70 may require major rehabilitation, such as an overlay. Often, when the PCI is less than 40, reconstruction is the only viable alternative due to the substantial damage to the pavement structure. Figure 3 illustrates how repair type varies with the PCI of a pavement section.

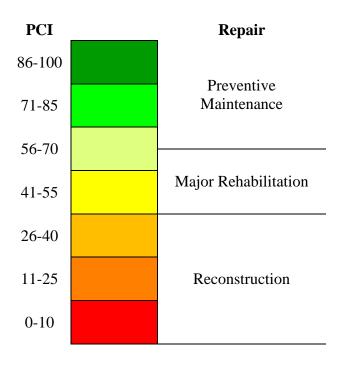


Figure 3. PCI versus Repair Type.

The types of distress identified during the PCI inspection provide insight into the cause of pavement deterioration. PCI distress types are characterized as:

- **Load-related** These distress types are defined as being caused by aircraft or vehicular traffic and may provide an indication of a structural deficiency. Examples of load-related distresses include alligator cracking on hot-mix asphalt (HMA) pavements and corner breaks on portland cement concrete (PCC) pavements,
- Climate/durability-related These distress types often signify the presence of aged and/or environment-susceptible material and include durability-related issues. Examples of climate/durability-related distresses include weathering, which is climate-related, on HMA pavements and durability cracking, which is durability-related, on PCC pavements, and
- Other Distress types that fall into this category cannot be attributed solely to load or climate/durability. Examples of this type of distress include depressions on HMA pavements and shrinkage cracking on PCC pavements.

Understanding the cause of distress helps in selecting a rehabilitation alternative that corrects the cause and thus eliminates its recurrence.

Appendix A contains tables for asphalt and PCC pavements indicating the typical types of distresses that may be identified during a PCI survey, the likely cause of each distress type, and feasible maintenance strategies for addressing each distress type.

#### **Paint Markings Evaluation Procedure**

The condition of the paint markings was evaluated for each section at Athens-Ben Epps Field. The markings were rated as "satisfactory" or "non-satisfactory" based on whether the markings were visible and the paint and reflectivity appeared intact. Following is a short description of each category:

- Not Applicable (N/A): No paint markings exist to rate.
- <u>Satisfactory (SAT):</u> Markings that are still visible and in good condition, requiring no maintenance or remarking.
- <u>Non-satisfactory:</u> Markings that require maintenance or remarking in the near future and any of the following conditions are present:
  - Paint is faded to the point where markings are not easily visible from a distance (U-FA).
  - Paint is flaking off the surface or has worn to point that portions of the painted surface no longer have paint on them (U-CH).
  - Painted areas have a large amount of superficial cracking within their limits, degrading the integrity of the painted area and reducing its visibility (U-CR).

#### **Development of Maintenance and Rehabilitation Program**

Using the information collected during the 2012 pavement inspection, an M&R program for 2013 through 2017 was developed. The MicroPAVER<sup>TM</sup> pavement management software was used to perform this analysis.

#### **Analysis Parameters**

Several parameters were defined prior to running the analysis, and are further explained below.

#### Critical PCI Values

MicroPAVER<sup>TM</sup> uses critical PCI values to determine whether preventive maintenance or major rehabilitation is the appropriate repair action. Above the critical PCI, localized (such as crack sealing) and global (such as a slurry seal) preventive maintenance activities are recommended. Below the critical PCI, major rehabilitation (such as an overlay or reconstruction) is recommended. The Department set the critical PCI values shown in Table 1.

Airport Classification	Runway	Taxiway/ T-Hangar	Apron/Helipad
General Aviation	70	60	60
Commercial Service	75	65	65

Table 1. Critical PCI Values.

#### Budget and Inflation Rate

An unlimited budget and an inflation rate of 3 percent were used during the analysis.

#### Maintenance Policies

Localized preventive maintenance policies and global preventive maintenance policies were developed for the Department. Localized maintenance policies, shown in Appendix D, identify the localized maintenance actions that the Department consider appropriate to correct different distress types when the PCI of the pavement is above the critical PCI level.

Global maintenance actions were also considered in the analysis. These are treatments that are applied over an entire section, rather than just to distressed areas. Rejuvenators were considered for pavements that are more than 5 years old with a PCI value greater than 80. Rejuvenators were only applied once during the analysis period to eligible sections.

#### **Unit Costs**

Unit costs for maintenance treatments and major rehabilitation actions are presented in Appendix D. For general aviation airports, the costs were separated by geographic regions. MicroPAVER<sup>TM</sup> estimates the cost of major rehabilitation based on the PCI of the pavement. If major rehabilitation is recommended in the program, further engineering investigation will be needed to identify the most appropriate rehabilitation action and to more accurately estimate the cost of such work.

#### Analysis Approach

The goal of the M&R program is to maintain the pavements above established critical PCI values. Major rehabilitation was recommended for pavements in the year they dropped below their critical PCI value for 2013 through 2017.

For 2013, a localized preventive maintenance plan was developed for those pavement sections that were above their critical PCI value. If major rehabilitation was triggered for a section in 2014 or 2015, then localized maintenance was not recommended for 2013. It was assumed that all low-severity cracking would need to be resealed in 2017 unless major rehabilitation was triggered on the section. No other maintenance activities, other than crack sealing, were considered for year 2017.

#### **RESULTS**

#### **Pavement Inventory**

Athens-Ben Epps Field has over 1,947,772 square feet of pavement, as shown in Figure 4. Figure 5 is a network definition map of the airport showing the pavement system broken down into management units, as described on page 3 of this report. It also shows the nomenclature used in the MicroPAVER<sup>TM</sup> pavement management database to identify the different pavement areas. Additionally, the map summarizes the construction history information compiled during the records review and identifies the areas inspected during the visual survey.

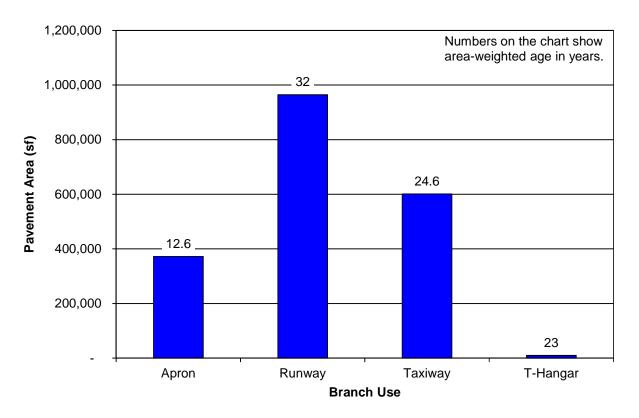
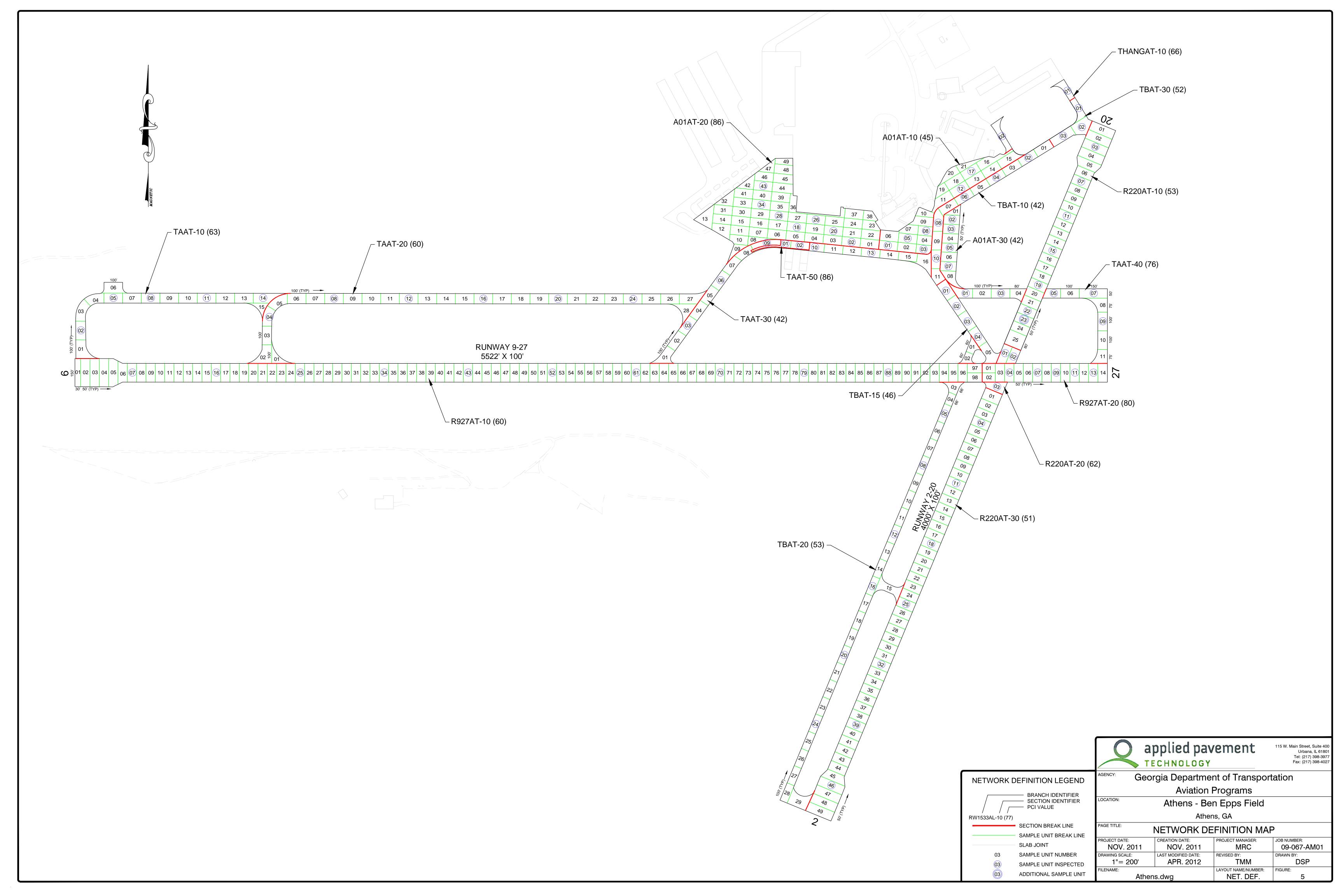


Figure 4. Pavement Inventory.



#### **Pavement Evaluation and Paint Assessment**

The inspection of Athens-Ben Epps Field was completed on March 18, 2012 using the PCI procedure described previously. The map presented in Figure 5 identifies the sample units inspected during the pavement evaluation.

#### **Inspection Comments**

Athens-Ben Epps Field was inspected on March 18, 2012. Eighteen pavement sections were defined during the inspection. Nearly the entire airfield had crack sealing and surface treatment projects performed in 2008. The majority of the low-severity cracking was sealed with smaller amounts unsealed; primarily all of the medium-severity cracking was due to unsatisfactory crack sealant with lesser amounts due to unsealed crack widths exceeding ½ inch or the development of secondary cracking.

#### Runways

#### Runway 2-20

Runway 2-20 was comprised of three sections. Section 10 had a PCI of 53. The primary distress identified in this section was medium-severity longitudinal and transverse (L&T) cracking along with smaller amounts of low-severity L&T cracking and patching. In addition, isolated areas of high-severity L&T cracking were also observed. Section 20 had a PCI value of 62. Substantial amounts of medium-severity L&T cracking were recorded along with smaller quantities of low-severity L&T cracking. Section 30 had a PCI value of 51. The main distresses identified were medium-severity block cracking and L&T cracking in addition to smaller quantities of low-severity L&T cracking. Low-severity, unsealed L&T cracking were recorded throughout sections 10 and 30.

#### Runway 9-27

Runway 9-27 consisted of two sections. Section 10 had a PCI value of 60. The primary distress identified in this section was medium-severity L&T cracking along with smaller quantities of low-severity L&T cracking and alligator cracking. Section 20 had a PCI value of 80. Low- and medium-severity L&T cracking were recorded throughout this section.

#### **Taxiways**

#### Taxiway A

Taxiway A was defined by five sections. Section 10 had a PCI value of 63. Substantial amounts of low- and medium-severity L&T cracking were recorded in this section. Section 20 had a PCI value of 60. The primary distress identified in this section was medium-severity L&T cracking. Moderate quantities of low-severity L&T cracking, low-severity patching, and medium-severity alligator cracking were also observed. Section 30 had a PCI value of 42. The main distresses identified were medium-severity block cracking and low-severity weathering along with moderate amounts of medium-severity L&T cracking, low-severity block cracking, and medium-severity weathering. Additionally, smaller quantities of medium-severity alligator cracking and low-severity patching were also observed. Section 40 had a PCI value of 76. Moderate amounts of low- and medium-severity L&T cracking were recorded throughout. Section 50 had a PCI value of 86. The only distresses identified in this section were low-severity L&T cracking and weathering.

#### Taxiway B

Taxiway B was comprised of four sections. Section 10 had a PCI value of 42. Extensive amounts of low-severity block cracking and weathering were recorded throughout. Moderate amounts of medium-severity block cracking, low- and medium-severity L&T cracking, and medium-severity weathering were also observed along with smaller quantities of medium-severity alligator cracking and patching. Section 15 had a PCI value of 46. The only distresses identified in this section were medium-severity block cracking and L&T cracking. Section 20 had a PCI value of 53. Substantial amounts of medium-severity L&T cracking were recorded along with smaller quantities of low-severity L&T cracking. Section 30 had a PCI value of 52. The primary distresses identified in this section were medium-severity block cracking and L&T cracking. In addition, smaller quantities of medium-severity alligator cracking, low-severity L&T cracking, and low-severity patching were observed.

#### **Apron**

The apron area consisted of three sections. Section 10 had a PCI value of 45. The main distresses identified were medium-severity block cracking and low-severity weathering along with smaller quantities of medium-severity L&T cracking. Section 20 received an overlay in 2008 and had a PCI value of 86. Only low-severity L&T cracking was observed. Section 30 had a PCI value of 42. Extensive amounts of medium-severity L&T cracking were identified in this section. Additionally, smaller quantities of high-severity L&T cracking and low-severity patching were also recorded.

#### T-Hangar

The T-Hangar area was comprised of one section with a PCI value of 66. The primary distresses identified in this section were low-severity L&T cracking and weathering along with smaller amounts of medium-severity L&T cracking.

#### **Overall Condition**

The 2012 area-weighted condition of Athens-Ben Epps Field is 60, with conditions ranging from 42 to 86 [on a scale of 0 (failed) to 100 (excellent)]. This compares to a 2007 PCI of 64.

Figures 6 and 7 provide graphs summarizing the overall condition of the pavements at Athens-Ben Epps Field. Figure 8 is a map that displays the condition of the pavements evaluated. Table 2 summarizes the results of the pavement evaluation and paint assessment and also presents both the 2007 and 2012 PCI values. Please note that modifications have been made to the PCI methodology since the time of the last pavement inspection in 2007, as detailed in ASTM 5340-11. These changes include the separation of the raveling and weathering distress type on asphalt-surfaced pavements into two distress types along with the addition of the alkali silica reaction (ASR) distress type on PCC pavements.

Appendix B presents photographs taken during the PCI inspection, and Appendix C contains a detailed inspection report. The detailed inspection report provides information on the quantity of the different types and severities of distresses observed during the visual survey.

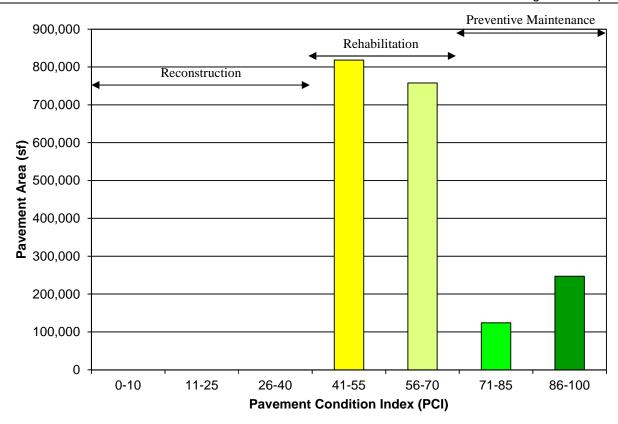


Figure 6. Condition Distribution.

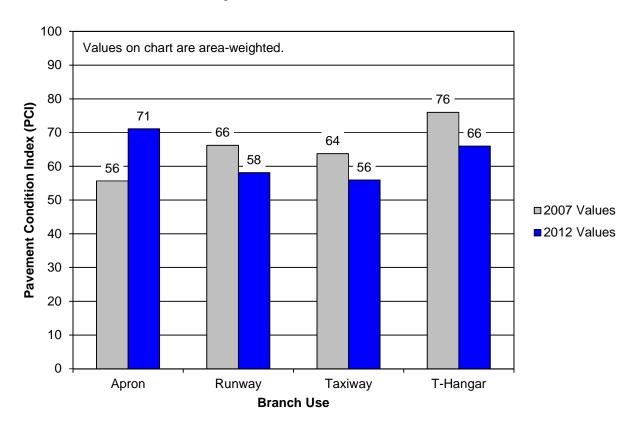
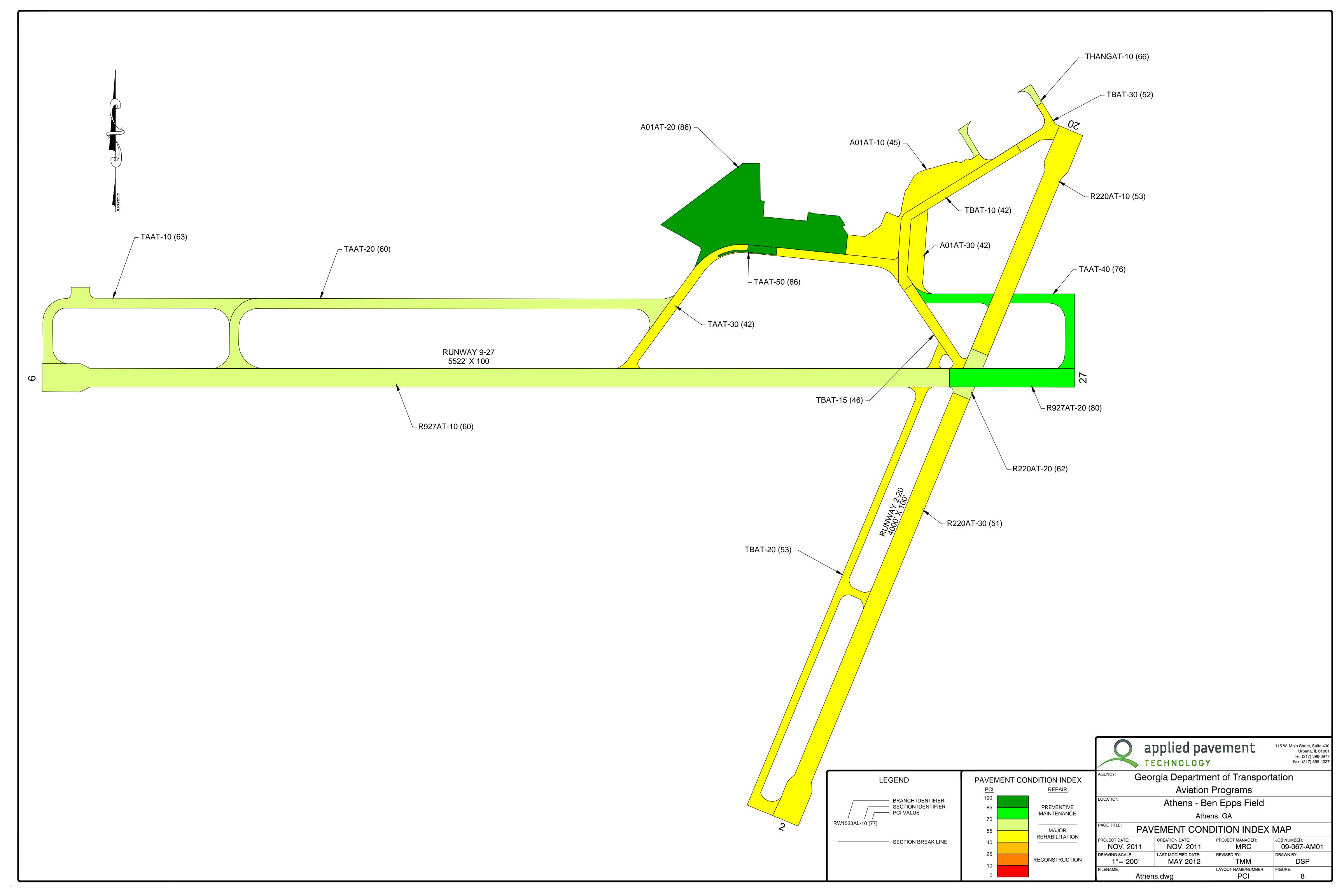


Figure 7. Condition by Use.



Pavement Management Report

Table 2. Pavement Evaluation Results.

		Surface	Section		Paint	2007	2007	2007	2007	2012	% Dist	ress due to:	
Branch <sup>1</sup>	Section <sup>1</sup>	Type <sup>2</sup>	Area (sf)	LCD <sup>3</sup>	Markings <sup>4</sup>	PCI	PCI	Load <sup>5</sup>	Climate or Durability <sup>6</sup>	Distress Types <sup>7</sup>			
A O 1 A T	10	AAC	99,477	6/1/1984	SAT	60	45	0	100	Block Cracking, L&T Cracking, Weathering			
A01AT	20	AAC	239,345	3/1/2008	SAT	55	86	0	100	L&T Cracking			
	30	AC	33,401	6/1/1984	SAT	47	42	0	100	L&T Cracking, Patching			
	10	AAC	133,643	6/1/1975	SAT	63	53	0	100	L&T Cracking, Patching			
R220AT	20	AAC	14,450	6/1/1991	N/A	73	62	0	100	L&T Cracking			
	30	AAC	249,700	6/1/1975	SAT	51	51	0	100	Block Cracking, L&T Cracking			
R927AT	10	AC	499,456	6/1/1982	SAT	72	60	24	76	Alligator Cracking, L&T Cracking			
	20	AC	67,189	6/1/1991	SAT	85	80	0	100	L&T Cracking			
	10	AC	80,810	6/1/1995	SAT	71	63	0	100	L&T Cracking			
	20	AC	153,027	6/1/1995	SAT	65	60	33	67	Alligator Cracking, L&T Cracking, Patching			
TAAT	30	AC	79,236	6/1/1979	SAT	55	42	24	76	Alligator Cracking, Block Cracking, L&T Cracking, Patching, Weathering			
	40	AC	57,016	6/1/1998	SAT	89	76	0	100	L&T Cracking			
	50	AAC	7,940	6/1/2005	SAT	100	86	0	100	L&T Cracking, Weathering			
TBAT	10	AC	53,208	6/1/1979	SAT	51	42	24	76	Alligator Cracking, Block Cracking, L&T Cracking, Patching, Weathering			
	15	AC	28,712	6/1/1979	SAT	51	46	0	100	Block Cracking, L&T Cracking			
	20	AC	122,827	6/1/1979	SAT	59	53	0	100	L&T Cracking			

Pavement Management Report

Table 2. Pavement Evaluation Results (continued).

		Surface	Section	Section		Paint	2007 2	2012	% Dist	ress due to:	
Branch <sup>1</sup>	Section <sup>1</sup>	Type <sup>2</sup>	Area (sf)	LCD <sup>3</sup>	Markings <sup>4</sup>	PCI	PCI	Load <sup>5</sup>	Climate or Durability <sup>6</sup>	Distress Types <sup>7</sup>	
TBAT	30	AC	18,104	6/1/1979	SAT	51	52	23	77	Alligator Cracking, Block Cracking, L&T Cracking, Patching	
THANGAT	10	AC	10,231	6/1/1989	SAT	76	66	0	100	L&T Cracking, Weathering	

#### **NOTES:**

<sup>&</sup>lt;sup>1</sup>See Figure 5 for the location of the branch and section.

<sup>&</sup>lt;sup>2</sup>AC = asphalt cement concrete; AAC = asphalt overlay on AC; PCC = portland cement concrete; APC = asphalt overlay on PCC.

<sup>&</sup>lt;sup>3</sup>LCD = last construction date.

<sup>&</sup>lt;sup>4</sup>Paint markings condition: not applicable (N/A), satisfactory (SAT), unsatisfactory due to faded paint (U-FA), unsatisfactory due to chipping paint (U-CH), or unsatisfactory due to superficial cracking (U-CR).

<sup>&</sup>lt;sup>5</sup>Distress due to load includes distresses attributed to a structural deficiency in the pavement, such as alligator (fatigue) cracking, rutting, or shattered concrete slabs.

<sup>&</sup>lt;sup>6</sup>Distress due to climate or durability includes those distresses attributed to either the aging of the pavement and the effects of the environment (such as weathering or block cracking in AC pavements) or to a materials-related problem (such as durability cracking in a PCC pavement).

<sup>&</sup>lt;sup>7</sup>L&T Cracking = longitudinal and transverse cracking.

#### **Maintenance and Rehabilitation Program**

The 5-year M&R program developed for Athens-Ben Epps Field is described on page 6 of this report.

A summary of the M&R program is presented in Table 3. Detailed information on the localized maintenance plan for 2013 is contained in Appendix E and Appendix F. While localized preventive maintenance should be an annual undertaking at Athens-Ben Epps Field, it is not possible to accurately predict the propagation of cracking and other distresses. The airport should budget for maintenance every year and can use the 2013 maintenance plan as a baseline for that work. As the pavements age, it can be assumed that the amount of localized maintenance required will increase.

Because an unlimited budget was used in the analysis, it is probable that the pavement repair program will need to be adjusted to take into account economic and/or operational constraints. Further, the identification of the need for a major rehabilitation project does not mean that federal or state funding will be available to complete the work in the year shown. It is important to remember that regardless of the recommendations presented within this report, Athens-Ben Epps Field is responsible for repairing pavements where existing conditions pose a hazard to safe operations.

Note these recommendations are based on a broad network-level analysis and are meant to provide Athens-Ben Epps Field with an indication of the type of pavement-related work required during the next 5 years. Further engineering investigation will need to be performed to identify exactly which repair action is most appropriate and to more accurately estimate the cost of such work. In addition, the cost estimates provided were based on a statewide policy and each airport should adjust the maintenance policies and unit costs to match its own approach to pavement maintenance and to reflect local costs.

Table 3. 5-Year Program under an Unlimited Funding Analysis Scenario.

Branch <sup>1</sup>	Section	Year	Type of Repair <sup>2</sup>	<b>Estimated Cost<sup>3</sup></b>
	10	2013	Major M&R	\$631,520
A01AT	20	2013	Rejuvenator	\$52,656
AUIAI	20	2017	Preventive Maintenance	\$26,151
	30	2013	Major M&R	\$204,580
	10	2013	Major M&R	\$803,050
R220AT	20	2013	Major M&R	\$28,322
	30	2013	Major M&R	\$1,705,131
R927AT	10	2013	Major M&R	\$1,337,958
K92/A1	20	2015	Major M&R	\$139,711
	10	2013	Major M&R	\$158,388
	20	2013	Major M&R	\$373,266
	30	2013	Major M&R	\$490,918
TAAT	40	2013	Preventive Maintenance	\$3,464
	40	2017	Preventive Maintenance	\$3,771
	50	2013	Rejuvenator	\$1,747
	30	2017	Preventive Maintenance	\$487
	10	2013	Major M&R	\$329,658
TDAT	TBAT 15 20 30		Major M&R	\$186,618
IDAI			Major M&R	\$708,026
			Major M&R	\$112,946
THANGAT	10	2013	Major M&R	\$20,053

<sup>&</sup>lt;sup>1</sup>See Figure 5 for the location of the branch and section.

Localized Maintenance: crack sealing, patching, joint resealing, and so on;

Global Maintenance: surface treatments, rejuvenators, and so on.

<sup>&</sup>lt;sup>2</sup>Major Rehabilitation: overlay, mill and overlay, reconstruction, and so on;

<sup>&</sup>lt;sup>3</sup>Cost estimates based on broad, statewide policy and should be adjusted to reflect local costs.

#### GENERAL RECOMMENDATIONS

#### **Maintenance**

In addition to the specific maintenance actions presented in Appendix E and Appendix F, the following strategies are recommended to prolong pavement life:

- 1. Conduct an aggressive campaign against weed growth through timely herbicide applications. Vegetation growing in pavement cracks is very destructive and significantly increases the rate of pavement deterioration.
- 2. Implement a periodic crack sealing program. Sealing cracks is a proven method for cost-effectively keeping water and debris out of the pavement system and extending its life.
- 3. Ensure that dirt does not build up along the edges of the pavements. This can create a "bathtub" effect—reducing the ability of water to drain away from the pavement system.
- 4. Closely monitor heavy equipment movement, such as construction equipment, emergency equipment, and fueling equipment, to make sure that it is only operating on pavement designed to accommodate the heavy loads this type of equipment often applies. Failure to restrict heavy equipment to appropriate areas may result in the premature failure of airport pavements.
- 5. Other maintenance necessities include keeping all pavement markings well painted, keeping safety signage clear of debris and weeds, ensuring the continuous operation of lighting systems (bulb replacement), and the frequent removal of any debris found in any of the operating areas. In addition, failed pavement areas should be remediated as necessary.

#### Remaining in Compliance with Public Law 103-305

Public Law 103-305 states that after January 1, 1995, airport sponsors must provide assurances or certifications that an airport has implemented an effective airport pavement maintenance management system (PMMS) before the airport will be considered for funding of pavement replacement or reconstruction projects. To be in full compliance with the Federal law, the PMMS must include the following components at a minimum: pavement inventory, pavement inspections, record keeping, information retrieval, and program funding.

By undertaking this project, the Department has provided Athens-Ben Epps Field with an excellent basis for meeting the requirements of this law. The airport now has a complete pavement inventory and a detailed inspection. To remain in compliance with the law, the airport will also need to undertake monthly drive-by inspections of pavement conditions and track pavement-related maintenance activities. The next detailed inspection should occur in 2015.

The FAA AC 150/5380-6B provides further information on Public Law 103-305. Specifically, Appendix 1 of this AC outlines what needs to be included in a PMMS to satisfy FAA Grant Assurance 11. A copy of this AC can be found at the following website <a href="http://www.faa.gov/regulations\_policies/advisory\_circulars/index.cfm/go/document.information/documentID/22556">http://www.faa.gov/regulations\_policies/advisory\_circulars/index.cfm/go/document.information/documentID/22556</a>.

#### **SUMMARY**

This report documents the results of the pavement evaluation conducted at Athens-Ben Epps Field. During a visual inspection of the pavements in 2012, it was found that the overall condition of the pavement network is a PCI of 60. A 5- year pavement repair program was generated for Athens-Ben Epps Field, which revealed that approximately \$7,318,420 needs to be expended on the pavement system to maintain and/or improve its condition.

# APPENDIX A CAUSE OF DISTRESS TABLES

Pavement Management Report - Appendix A

Table A-1. Cause of Pavement Distress, Asphalt-Surfaced Pavements.

Distress Type	Probable Cause of Distress	Feasible Maintenance Strategies
Alligator Cracking	Fatigue failure of the asphalt concrete surface under repeated traffic loading.	If localized, partial- or full-depth asphalt patch. If extensive, major rehabilitation needed.
Bleeding	Excessive amounts of asphalt cement or tars in the mix and/or low air void content.	Spread heated sand, roll, and sweep. Another option is to plane excess asphalt. Or, remove and replace.
Block Cracking	Shrinkage of the asphalt concrete and daily temperature cycling; it is not load associated.	At low severity levels, crack seal and/or surface treatment. At higher severities, consider overlay.
Corrugation	Traffic action combined with an unstable pavement layer.	If localized, mill. If extensive, remove and replace.
Depression	Settlement of the foundation soil or can be "built up" during construction.	Patch.
Jet Blast	Bituminous binder has been burned or carbonized.	Patch.
Joint Reflection Cracking	Movement of the concrete slab beneath the asphalt concrete surface due to thermal and moisture changes.	At low- and medium-severities, crack seal. At higher severities, especially if extensive, consider overlay.
Longitudinal and Transverse Cracking	Cracks may be caused by 1) poorly constructed paving lane joint, 2) shrinkage of the AC surface due to low temperatures or hardening of the asphalt, or 3) reflective crack caused by cracks in an underlying PCC slab.	At low- and medium-severity levels, crack seal. At higher severities, especially if extensive, consider overlay options.
Oil Spillage	Deterioration or softening of the pavement surface caused by the spilling of oil, fuel, or other solvents.	Patch.
Patching	N/A	Replace patch if deteriorated.
Polished Aggregate	Repeated traffic applications.	Aggregate seal coat is one option. Could also groove or mill.  Overlay is another option.
Raveling	Asphalt binder may have hardened significantly, causing coarse aggregate pieces to dislodge.	Patch if isolated. At higher severity levels, consider major rehabilitation if extensive.
Rutting	Usually caused by consolidation or lateral movement of the materials due to traffic loads.	Patch medium- and high-severity levels if localized. If extensive, consider major rehabilitation.
Shoving	Where PCC pavements adjoin flexible pavements, PCC "growth" may shove the asphalt pavement.	Mill and patch as needed.
Slippage Cracking	Low strength surface mix or poor bond between the surface and next layer of pavement structure.	Partial- or full-depth patch.
Swelling	Usually caused by frost action or by swelling soil.	Patch if localized. Major rehabilitation if extensive.
Weathering	Asphalt binder and/or fine aggregate may wear away as the pavement ages and hardens.	Patch if isolated. Consider a surface treatment if extensive.

Pavement Management Report - Appendix A

Table A-2. Cause of Pavement Distress, PCC Pavements.

Distress Type	Probable Cause of Distress	Feasible Maintenance Strategies
Alkali Silica Reaction (ASR)	Chemical reaction of alkalis in the portland cement with certain reactive silica minerals. ASR may be accelerated by the use of chemical pavement deicers.	At medium- and high-severity levels, slab replacement is recommended.
Blow-Up	Incompressibles in joints.	Partial- or full-depth patch. Slab replacement.
Corner Break	Load repetition combined with loss of support and curling stresses.	Seal cracks at low-severity. Full-depth patch.
Cracks	Combination of load repetition, curling stresses, and shrinkage stresses.	Seal cracks. At high-severity, may need full-depth patch or slab replacement.
Durability Cracking	Concrete's inability to withstand environmental factors such as freeze-thaw cycles.	Full-depth patch if present on small amount of slab. At higher severity levels, once it has appeared on most of slab, slab replacement.
Joint Seal Damage	Stripping of joint sealant, extrusion of joint sealant, weed growth, hardening of the filler (oxidation), loss of bond to the slab edges, or absence of sealant in joint.	Replace joint seal.
Patching (Small and Large)	N/A	Replace patches if deteriorated.
Popouts	Freeze-thaw action in combination with expansive aggregates.	Monitor.
Pumping	Poor drainage, poor joint sealant.	Seal cracks and joints. Underseal is an option if voids have developed. Establish good drainage.
Scaling	Overfinishing of concrete, deicing salts, improper construction, freeze- thaw cycles, and poor aggregate.	At low-severity levels, do nothing. At medium- and high-severity levels, partial-depth patches or slab replacement.
Settlement	Upheaval or consolidation.	At higher severity levels, leveling patch or grind to restore smooth ride.
Shattered Slab	Load repetition.	Replace slab.
Shrinkage	Setting and curing of the concrete.	Monitor.
Spalling (Joint and Corner)	Excessive stresses at the joint caused by infiltration of incompressible materials or traffic loads; weak concrete at joint combined with traffic loads.	Partial-depth patch.

## **APPENDIX B**

**PHOTOGRAPHS** 



A01AT-10. Overview.



A01AT-10. Block Cracking (Sample Unit #03).



A01AT-10. Longitudinal and Transverse Cracking (Sample Unit #12).



A01AT-10. Satisfactory Paint.



A01AT-20. Overview.



A01AT-20. Longitudinal and Transverse Cracking (Sample Unit #02).



A01AT-20. Longitudinal and Transverse Cracking (Sample Unit #20).



A01AT-20. Longitudinal and Transverse Cracking (Sample Unit #28).



A01AT-20. Satisfactory Paint.



A01AT-30. Overview.



A01AT-30. Longitudinal and Transverse Cracking (Sample Unit #02).



A01AT-30. Longitudinal and Transverse Cracking (Sample Unit #05).



A01AT-30. Patching (Sample Unit #07).



A01AT-30. Satisfactory Paint.



R220AT-10. Overview.



R220AT-10. Longitudinal and Transverse Cracking (Sample Unit #07).



R220AT-10. Longitudinal and Transverse Cracking (Sample Unit #11).



R220AT-10. Patching (Additional Sample Unit #23).



R220AT-10. Satisfactory Paint.



R220AT-20. Overview.



R220AT-20. Longitudinal and Transverse Cracking (Sample Unit #02).



R220AT-30. Overview.



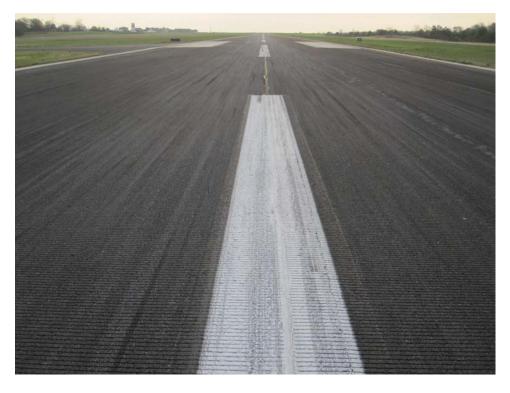
R220AT-30. Block Cracking (Sample Unit #32).



R220AT-30. Longitudinal and Transverse Cracking (Sample Unit #04).



R220AT-30. Satisfactory Paint.



R927AT-10. Overview.



R927AT-10. Alligator Cracking (Sample Unit #25).



R927AT-10. Longitudinal and Transverse Cracking (Sample Unit #16).



R927AT-10. Longitudinal and Transverse Cracking (Sample Unit #34).



R927AT-10. Satisfactory Paint.



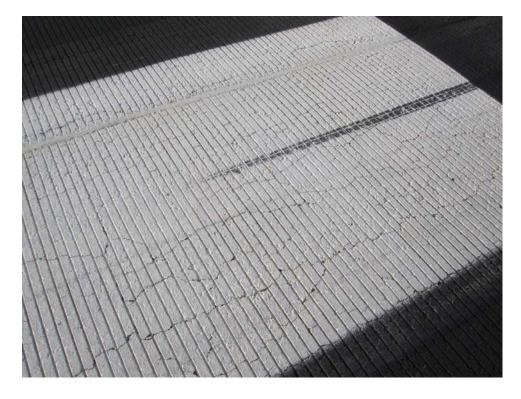
R927AT-20. Overview.



 $R927AT-20.\ Longitudinal\ and\ Transverse\ Cracking\ (Sample\ Unit\ \#07).$ 



R927AT-20. Longitudinal and Transverse Cracking (Sample Unit #13).



R927AT-20. Satisfactory Paint.



TAAT-10. Overview.



 $TAAT-10.\ Longitudinal\ and\ Transverse\ Cracking\ (Sample\ Unit\ \#05).$ 



TAAT-10. Longitudinal and Transverse Cracking (Sample Unit #14).



TAAT-10. Satisfactory Paint.



TAAT-20. Overview.



TAAT-20. Alligator Cracking (Sample Unit #24).



TAAT-20. Longitudinal and Transverse Cracking (Sample Unit #08).



TAAT-20. Patching (Sample Unit #24).



TAAT-20. Satisfactory Paint.



TAAT-30. Overview.



TAAT-30. Alligator Cracking (Sample Unit #06).



TAAT-30. Block Cracking (Sample Unit #13).



TAAT-30. Block Cracking (Sample Unit (09).



TAAT-30. Longitudinal and Transverse Cracking (Sample Unit #03).



TAAT-30. Patching (Sample Unit #06).



TAAT-30. Satisfactory Paint.



TAAT-40. Overview.



TAAT-40. Longitudinal and Transverse Cracking (Sample Unit #07).



TAAT-40. Satisfactory Paint.



TAAT-50. Overview.



TAAT-50. Longitudinal and Transverse Cracking (Sample Unit #02).



TAAT-50. Satisfactory Paint.



TBAT-10. Overview.



TBAT-10. Alligator Cracking (Sample Unit #08).



TBAT-10. Block Cracking (Sample Unit #02).



TBAT-10. Longitudinal and Transverse Cracking (Sample Unit #02).



TBAT-10. Patching (Sample Unit #06).



TBAT-10. Satisfactory Paint.



TBAT-15. Overview.



TBAT-15 Block Cracking (Sample Unit #04).



TBAT-15. Longitudinal and Transverse Cracking (Sample Unit #03).



TBAT-15. Satisfactory Paint.



TBAT-20. Overview.



TBAT-20. Longitudinal and Transverse Cracking (Sample Unit #24).



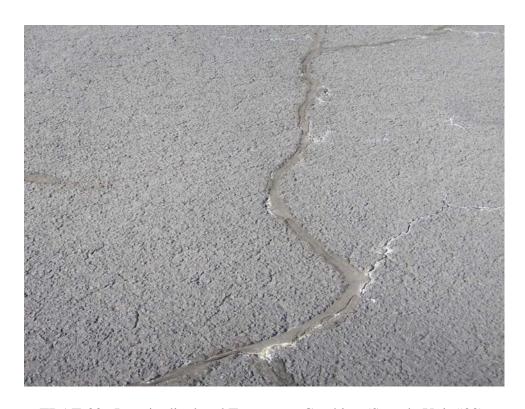
TBAT-20. Satisfactory Paint.



TBAT-30. Overview.



TBAT-30. Alligator Cracking (Sample Unit #02).



TBAT-30. Longitudinal and Transverse Cracking (Sample Unit #03).



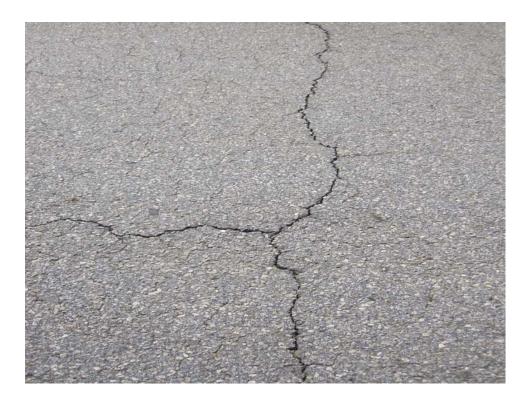
TBAT-30. Patching (Sample Unit #02).



TBAT-30. Satisfactory Paint.



THANGAT-10. Overview.



THANGAT-10. Longitudinal and Transverse Cracking (Sample Unit #02).



THANGAT-10. Satisfactory Paint.

# APPENDIX C INSPECTION REPORT

## GA 2012 FINAL

Report Generated Date: November 20, 2012

Network: ATHENS Name: ATHENS-BEN EPPS FIE	ELD				
Branch: A01AT Name: APRON 01		Use: APRON	Area: 372	2,223.00SqFt	
Section: 10 of 3 From: EAST SIDE Surface: AAC Family: GAAACAPCSNORT		To: SEE MAP	Zone: SAT	Last Const.: Category:	06/01/1984 Rank: P
Area: 99,477.00SqFt Length: 150.00Ft Shoulder: Street Type: Grade: 0.00	W Lanes: 0	7idth: 550.00Ft			
Section Comments:	Laics. 0				
Last Insp. Date: 03/18/2012 Total Samples: 21 Sur Conditions: PCI: 45 Inspection Comments:	rveyed: 6				
Sample Number: 01 Type: R	Area:	5,000.00SqFt	PCI = 42		
Sample Comments: 43 BLOCK CRACKING	М	5,000.00 SqFt	Comments:		
57 WEATHERING	L	5,000.00 SqFt	Comments:		
Sample Number: 03 Type: R Sample Comments:	Area:	3,830.00SqFt	PCI = 42		
43 BLOCK CRACKING	M	3,830.00 SqFt	Comments:		
57 WEATHERING	L	3,830.00 SqFt	Comments:		
Sample Number: 05 Type: R Sample Comments:	Area:	5,000.00SqFt	PCI = 42		
43 BLOCK CRACKING	M	5,000.00 SqFt	Comments:		
57 WEATHERING	L	5,000.00 SqFt	Comments:		
Sample Number: 08 Type: R Sample Comments:	Area:	3,911.00SqFt	PCI = 42		
43 BLOCK CRACKING	M	3,911.00 SqFt	Comments:		
57 WEATHERING	L	3,911.00 SqFt	Comments:		
Sample Number: 12 Type: A Sample Comments:	Area:	5,000.00SqFt	PCI = 55		
48 LONGITUDINAL/TRANSVERSE CRACKING	M		Comments:		
57 WEATHERING	L	5,000.00 SqFt	Comments:		
Sample Number: 17 Type: R Sample Comments:	Area:	5,000.00SqFt	PCI = 53		
48 LONGITUDINAL/TRANSVERSE CRACKING	M	680.00 Ft	Comments:		
57 WEATHERING	L	5,000.00 SqFt	Comments:		

## GA 2012 FINAL

Report Generated Date: November 20, 2012

48 LONGITUDINAL/TRANSVERSE CRACKING

Report Generated Date: November 20, 2012						
Network: ATHENS Name: ATHENS-BEN EPPS FI	IELD					
Branch: A01AT Name: APRON 01			Use: APRON	Area:	372,223.00SqFt	
Section: 20 of 3 From: MAIN AP Surface: AAC Family: GAAACAPCSNOR' Area: 239,345.00SqFt Length: 200.00Ft Shoulder: Street Type: Grade: 0.00  Section Comments:	ТН	Width:	To: SEE MAP 1,200.00Ft	Zone: SA	Last Const.: AT Category:	03/01/2008 Rank: P
Last Insp. Date: 03/18/2012 Total Samples: 49 St Conditions: PCI: 86 Inspection Comments:	urveyed:	7				
Sample Number: 02 Type: R	Area:	5,00	00.00SqFt	PCI = 76		
Sample Comments: 48 LONGITUDINAL/TRANSVERSE CRACKING		L	520.00 Ft	Comment	s:	
Sample Number: 18 Type: R Sample Comments:	Area:	5,00	00.00SqFt	PCI = 89		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	163.00 Ft	Comment	s:	
Sample Number: 20 Type: R Sample Comments:	Area:	5,00	00.00SqFt	PCI = 88		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	190.00 Ft	Comment	s:	
Sample Number: 26 Type: R Sample Comments:	Area:	5,00	00.00SqFt	PCI = 87		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	210.00 Ft	Comment	s:	
Sample Number: 28 Type: R Sample Comments:	Area:	5,00	00.00SqFt	PCI = 87		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	214.00 Ft	Comment	s:	
Sample Number: 34 Type: R Sample Comments:	Area:	5,00	00.00SqFt	PCI = 84		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	280.00 Ft	Comment	s:	
Sample Number: 43 Type: R Sample Comments:	Area:	5,00	00.00SqFt	PCI = 92		
40 IONGITHIDINA (TOANGIEDGE ODAGKING		т	10E 00 E+	Commont	a ·	

105.00 Ft

Comments:

L

### GA 2012 FINAL

Report Generated Date: November 20, 2012

Network: ATHENS	Name: ATHENS-BEN EPPS F	FIELD				
Branch: A01AT	Name: APRON 01		Use: APRON	Area: 372	,,223.00SqFt	
Section: 30 Surface: AC	of 3 From: EDGE OI Family: GAACAPCSNORT		To: EDGE OF	TWB-10 Zone: SAT	Last Const.: Category:	06/01/1984 Rank: P
Area: 33,401.00SqFt Shoulder: Street T	Length: 400.00F		idth: 87.00Ft	Zone. SA1	Category.	Kaik. F
Section Comments:						
Last Insp. Date: 03/18/20 Conditions: PCI: 42 Inspection Comments:	O12 Total Samples: 8 S Type: R	Surveyed: 4  Area:	4,350.00SqFt	PCI = 38		
Sample Comments:	туре. к	Alea.	4,530.00 <b>5</b> qFt	r C1 = 36		
	TRANSVERSE CRACKING TRANSVERSE CRACKING	H M	20.00 Ft 1,330.00 Ft	Comments:		
Sample Number: 03 Sample Comments:	Type: R	Area:	4,350.00SqFt	PCI = 43		
	TRANSVERSE CRACKING	M	1,360.00 Ft	Comments:		
Sample Number: 05 Sample Comments:	Type: R	Area:	4,350.00SqFt	PCI = 44		
	TRANSVERSE CRACKING	M	1,305.00 Ft	Comments:		
Sample Number: 07 Sample Comments:	Type: R	Area:	4,350.00SqFt	PCI = 41		
	TRANSVERSE CRACKING	M L	1,220.00 Ft 50.00 SqFt	Comments:		

## GA 2012 FINAL

Report Generated Date: November 20, 2012

Network: ATHENS Name: ATHENS-BEN EPPS FIELD  Branch: R220AT Name: RUNWAY 2/20  Section: 10 of 3 From: RW 2/20 ON 20 END  Surface: AAC Family: GAAACRWYCSNORTH  Area: 133,643.00SqFt Length: 1,280.00Ft Width: 100.00Ft  Shoulder: Street Type: Grade: 0.00 Lanes: 0  Section Comments:  Last Insp. Date: 03/18/2012 Total Samples: 25 Surveyed: 7	qFt
Section: 10 of 3 From: RW 2/20 ON 20 END To: INTERSECTION W/ R9/27 Last C Surface: AAC Family: GAAACRWYCSNORTH Zone: SAT Categor Area: 133,643.00SqFt Length: 1,280.00Ft Width: 100.00Ft Shoulder: Street Type: Grade: 0.00 Lanes: 0  Section Comments:  Last Insp. Date: 03/18/2012 Total Samples: 25 Surveyed: 7	q <b>F</b> t
Surface: AAC Family: GAAACRWYCSNORTH Zone: SAT Categor Area: 133,643.00SqFt Length: 1,280.00Ft Width: 100.00Ft Shoulder: Street Type: Grade: 0.00 Lanes: 0  Section Comments:  Last Insp. Date: 03/18/2012 Total Samples: 25 Surveyed: 7	
Area: 133,643.00SqFt Length: 1,280.00Ft Width: 100.00Ft Shoulder: Street Type: Grade: 0.00 Lanes: 0 Section Comments:  Last Insp. Date: 03/18/2012 Total Samples: 25 Surveyed: 7	
Shoulder: Street Type: Grade: 0.00 Lanes: 0  Section Comments:  Last Insp. Date: 03/18/2012 Total Samples: 25 Surveyed: 7	ory: Rank: P
Section Comments:  Last Insp. Date: 03/18/2012 Total Samples: 25 Surveyed: 7	
Last Insp. Date: 03/18/2012 Total Samples: 25 Surveyed: 7	
·	
Conditions: PCI: 53 Inspection Comments:	
Sample Number: 03 Type: R Area: 7,000.00SqFt PCI = 51 Sample Comments:	
48 LONGITUDINAL/TRANSVERSE CRACKING M 1,060.00 Ft Comments:fs	
48 LONGITUDINAL/TRANSVERSE CRACKING L 116.00 Ft Comments:u	
Sample Number: 07 Type: R Area: 5,000.00SqFt PCI = 54 Sample Comments:	
48 LONGITUDINAL/TRANSVERSE CRACKING M 680.00 Ft Comments:fs	
48 LONGITUDINAL/TRANSVERSE CRACKING L 35.00 Ft Comments:u	
Sample Number: 11 Type: R Area: 5,000.00SqFt PCI = 49 Sample Comments:	
48 LONGITUDINAL/TRANSVERSE CRACKING M 695.00 Ft Comments:fs	
48 LONGITUDINAL/TRANSVERSE CRACKING H 5.00 Ft Comments:	
48 LONGITUDINAL/TRANSVERSE CRACKING L 15.00 Ft Comments:u	
Sample Number: 15 Type: R Area: 5,000.00SqFt PCI = 52 Sample Comments:	
48 LONGITUDINAL/TRANSVERSE CRACKING M 715.00 Ft Comments:fs	
48 LONGITUDINAL/TRANSVERSE CRACKING L 50.00 Ft Comments:u	
Sample Number: 19 Type: R Area: 5,000.00SqFt PCI = 54	
Sample Comments: 48 LONGITUDINAL/TRANSVERSE CRACKING L 44.00 Ft Comments:u	
48 LONGITUDINAL/TRANSVERSE CRACKING L 44.00 ft Comments:u 48 LONGITUDINAL/TRANSVERSE CRACKING M 660.00 ft Comments:fs	
TO BONGITODINAL/INANSVENDE CRACKING M 000.00 Ft COMMENTS.IS	
Sample Number: 22 Type: R Area: 5,000.00SqFt PCI = 59 Sample Comments:	
48 LONGITUDINAL/TRANSVERSE CRACKING M 555.00 Ft Comments:fs	
48 LONGITUDINAL/TRANSVERSE CRACKING L 10.00 Ft Comments:u	
Sample Number: 23 Type: A Area: 5,000.00SqFt PCI = 63 Sample Comments:	
50 PATCHING L 3,015.00 SqFt Comments:	
48 LONGITUDINAL/TRANSVERSE CRACKING M 226.00 Ft Comments:	

#### GA 2012 FINAL

Report Generated Date: November 20, 2012

48 LONGITUDINAL/TRANSVERSE CRACKING

FERSECTION	Use: RU	NWAY Area:	397,793.00SqFt	
TERSECTION				
	To: R	9/27 INTERSECTION	Last Const.:	06/01/1991
ORTH		Zone:	N/A Category:	Rank: P
	Width: 100.00F	it .		
Lanes:	0			
Area:	5,050.00SqFt	PCI = 61		
-	11.00	Ft. Comme	nts:u	
-				
Area:	4,100.00SqFt	PCI = 60		
]	L 37.00	Ft Comme	ents:u	
I	M 370.00	Ft Comme	ents:fs	
Area:	5,300.00SqFt	PCI = 64		
-	L 60.00	Et Commo		
	Lanes:  Area:  Area:  Area:	Lanes: 0  Area: 5,050.00SqFt  L 11.00  M 475.00  Area: 4,100.00SqFt  L 37.00  M 370.00  Area: 5,300.00SqFt	Lanes: 0  Area: 5,050.00SqFt PCI = 61  L 11.00 Ft Comme M 475.00 Ft Comme  Area: 4,100.00SqFt PCI = 60  L 37.00 Ft Comme M 370.00 Ft Comme  Area: 5,300.00SqFt PCI = 64	Lanes: 0  Area: 5,050.00SqFt PCI = 61  L 11.00 Ft Comments: u M 475.00 Ft Comments: fs  Area: 4,100.00SqFt PCI = 60  L 37.00 Ft Comments: u M 370.00 Ft Comments: u Comments: to PCI = 64

373.00 Ft

Comments:fs

#### GA 2012 FINAL

Report Generated Date: November 2	0, 2012								
Network: ATHENS Name: A	ATHENS-BEN EPPS FIE	LD							
Branch: R220AT Name: I	RUNWAY 2/20			Use: RU	JNWAY	Area:	397,	793.00SqFt	
Section: 30 of 3	From: EDGE OF F			То: н	END OF R			Last Const.:	06/01/1975
•	GAAACRWYCSNOF	RTH				Zone:	SAT	Category:	Rank: P
	ngth: 2,450.00Ft		Width:	100.00	Ft				
Shoulder: Street Type:	Grade: 0.00	Lanes:	0						
Section Comments:									
Last Insp. Date: 03/18/2012 Total Sa	mples: 49 Sur	veyed: 7							
Conditions: PCI: 51 Inspection Comments:									
Sample Number: 04 Typ	e: R	Area:	5.00	00.00SqFt		PCI = 53			
Sample Comments:			2,00	,		101 00			
48 LONGITUDINAL/TRANSVE	RSE CRACKING		M	785.00	Ft	Comme	nts:f	s	
48 LONGITUDINAL/TRANSVE	RSE CRACKING		L	8.00	Ft	Comme	nts:u		
Sample Number: 11 Typ Sample Comments:	e: R	Area:	5,00	00.00SqFt		PCI = 54			
48 LONGITUDINAL/TRANSVER	RSE CRACKING		M	850.00	Ft	Comme	nts:f	S	
Sample Number: 18 Typ Sample Comments:	e: R	Area:	5,00	00.00SqFt		PCI = 54			
48 LONGITUDINAL/TRANSVE	RSE CRACKING		M	550.00	Ft	Comme	nts:f	s	
43 BLOCK CRACKING			M	1,000.00	SqFt	Comme	nts:f	S	
Sample Number: 25 Typ Sample Comments:	e: R	Area:	5,00	00.00SqFt		PCI = 49			
48 LONGITUDINAL/TRANSVER	RSE CRACKING		M	830.00	Ft	Comme	nts:f	S	
48 LONGITUDINAL/TRANSVER			L	55.00	Ft	Comme	nts:u		
	e: R	Area:	5,00	00.00SqFt		PCI = 50			
Sample Comments: 48 LONGITUDINAL/TRANSVER	RSE CRACKING		М	620.00	Ft.	Comme	nts:f	S	
48 LONGITUDINAL/TRANSVE			L	41.00			nts:u	-	
43 BLOCK CRACKING			M	500.00			nts:f		
Sample Number: 39 Typ Sample Comments:	e: R	Area:	5,00	00.00SqFt		PCI = 51			
48 LONGITUDINAL/TRANSVE	RSE CRACKING		M	790.00	Ft	Comme	nts:f	S	
48 LONGITUDINAL/TRANSVER			L	24.00			nts:u		
Sample Number: 46 Typ Sample Comments:	e: R	Area:	7,00	00.00SqFt		PCI = 49			
48 LONGITUDINAL/TRANSVE	RSE CRACKING		M	975.00	Ft	Comme	nts:		
48 LONGITUDINAL/TRANSVE			L	35.00	Ft	Comme	nts:		
43 BLOCK CRACKING			M	750.00	SqFt	Comme	nts:		

#### GA 2012 FINAL

Report Generated Date: November 20, 2012				
Network: ATHENS Name: ATHENS-BEN EPPS FIE	ELD			
Branch: R927AT Name: RUNWAY 9/27			Use: RUNWAY	Area: 566,645.00SqFt
Section: 10 of 2 From: APPROAC Surface: AC Family: GAACRWYCS	H END 9		To: INTERS	ECTION W/ R2/20 Last Const.: 06/01/1982 Zone: SAT Category: Rank: P
$Area:  \  \  499,\!456.00SqFt \qquad \qquad Length: \qquad \  \  4,\!800.00Ft$		Width:	100.00Ft	
Shoulder: Street Type: Grade: 0.00	Lanes:	0		
Section Comments:				
Last Insp. Date: 03/18/2012 Total Samples: 98 Sur Conditions: PCI: 60 Inspection Comments:	rveyed: 10	)		
Sample Number: 07 Type: R Sample Comments:	Area:	5,000.00	)SqFt	PCI = 69
48 LONGITUDINAL/TRANSVERSE CRACKING		M 2	253.00 Ft	Comments:fs
48 LONGITUDINAL/TRANSVERSE CRACKING		L 1	.10.00 Ft	Comments:u
Sample Number: 16 Type: R Sample Comments:	Area:	5,000.00	)SqFt	PCI = 65
48 LONGITUDINAL/TRANSVERSE CRACKING		M 3	362.00 Ft	Comments:fs
48 LONGITUDINAL/TRANSVERSE CRACKING		L	26.00 Ft	Comments:u
Sample Number: 25 Type: R Sample Comments:	Area:	5,000.00	)SqFt	PCI = 50
48 LONGITUDINAL/TRANSVERSE CRACKING		L 1	19.00 Ft	Comments:u
48 LONGITUDINAL/TRANSVERSE CRACKING			33.00 Ft	Comments:fs
41 ALLIGATOR CRACKING		L 1	.50.00 SqFt	Comments:
Sample Number: 34 Type: R Sample Comments:	Area:	5,000.00	)SqFt	PCI = 68
48 LONGITUDINAL/TRANSVERSE CRACKING			283.00 Ft	Comments:fs
48 LONGITUDINAL/TRANSVERSE CRACKING		L 1	.26.00 Ft	Comments:u
Sample Number: 43 Type: R Sample Comments:	Area:	5,000.00	)SqFt	PCI = 61
48 LONGITUDINAL/TRANSVERSE CRACKING		L	44.00 Ft	Comments:u
48 LONGITUDINAL/TRANSVERSE CRACKING		M 4	45.00 Ft	Comments:fs
Sample Number: 52 Type: R Sample Comments:	Area:	5,000.00	)SqFt	PCI = 62
48 LONGITUDINAL/TRANSVERSE CRACKING		L	67.00 Ft	Comments:u
48 LONGITUDINAL/TRANSVERSE CRACKING		M 4	112.00 Ft	Comments:fs
Sample Number: 61 Type: R Sample Comments:	Area:	5,000.00	)SqFt	PCI = 60
48 LONGITUDINAL/TRANSVERSE CRACKING		L	81.00 Ft	Comments:u
48 LONGITUDINAL/TRANSVERSE CRACKING		M 4	148.00 Ft	Comments:fs
Sample Number: 70 Type: R Sample Comments:	Area:	5,000.00	)SqFt	PCI = 59
48 LONGITUDINAL/TRANSVERSE CRACKING		M 4	173.00 Ft	Comments:fs
48 LONGITUDINAL/TRANSVERSE CRACKING		L	93.00 Ft	Comments:u
Sample Number: 79 Type: R Sample Comments:	Area:	5,000.00	)SqFt	PCI = 54

#### GA 2012 FINAL

48 LONGITUDINAL/TRANSVERSE CRACKING	L	83.00 Ft	Comments:u
48 LONGITUDINAL/TRANSVERSE CRACKING	M	472.00 Ft	Comments:fs
41 ALLIGATOR CRACKING	$\mathbf L$	25.00 SqFt	Comments:
Sample Number: 88 Type: R	Area:	5,000.00SqFt	PCI = 57
Sample Comments:			
48 LONGITUDINAL/TRANSVERSE CRACKING	${f L}$	47.00 Ft	Comments:u
48 LONGITUDINAL/TRANSVERSE CRACKING	M	410.00 Ft	Comments:fs
41 ALLIGATOR CRACKING	-	20.00 SaFt	Comments:

#### GA 2012 FINAL

Network: ATHENS Name: ATHENS-BEN EPPS FIR	ELD							
Branch: R927AT Name: RUNWAY 9/27			Use: RU	INWAY	Area:	566,0	545.00SqFt	
Section: 20 of 2 From: RW 2/20 IN Surface: AC Family: GAACRWYCS	NSECTION		То: н	END OF RW	Zone:	SAT	Last Const.: Category:	06/01/1991 Rank: P
Area: 67,189.00SqFt Length: 670.00Ft		Width:	100.00	Ft				
Shoulder: Street Type: Grade: 0.00	Lanes:	0						
Section Comments:								
Last Insp. Date: 03/18/2012 Total Samples: 14 Su	rveyed: 5							
Conditions: PCI : 80 Inspection Comments:								
Sample Number: 04 Type: R Sample Comments:	Area:	5,000	.00SqFt		PCI = 79			
48 LONGITUDINAL/TRANSVERSE CRACKING		L	244.00	Ft	Comme	nts:u		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	163.00	Ft	Comme	nts:s		
Sample Number: 07 Type: R Sample Comments:	Area:	5,000	.00SqFt		PCI = 81			
48 LONGITUDINAL/TRANSVERSE CRACKING		L	126.00	Ft	Comme	nts:u		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	220.00	Ft	Comme	nts:s		
Sample Number: 09 Type: R Sample Comments:	Area:	5,000	.00SqFt		PCI = 80			
48 LONGITUDINAL/TRANSVERSE CRACKING		L	280.00	Ft	Comme	nts:s		
48 LONGITUDINAL/TRANSVERSE CRACKING		M	5.00	Ft	Comme	nts:se	econdary	
Sample Number: 11 Type: R Sample Comments:	Area:	5,000	.00SqFt		PCI = 82			
48 LONGITUDINAL/TRANSVERSE CRACKING		L	250.00	Ft	Comme	nts:s		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	79.00		Comme			
Sample Number: 13 Type: R Sample Comments:	Area:	5,000	.00SqFt		PCI = 77			
48 LONGITUDINAL/TRANSVERSE CRACKING		M	89.00	Ft	Comme	nts:fs	5	
48 LONGITUDINAL/TRANSVERSE CRACKING		L	320.00	Ft	Comme	nts:s		

#### GA 2012 FINAL

Report Generated Date: November 20, 2012

48 LONGITUDINAL/TRANSVERSE CRACKING

Network: ATHENS Name: ATHENS-BEN EPP:	S FIELD							
Branch: TAAT Name: TAXIWAY A			Use: TA	XIWAY	Area:	378,	029.00SqFt	
Section: 10 of 5 From: EDGE Surface: AC Family: GAACTWYCS	OF R9/27 9 END		То: т	WA-10	Zone:	SAT	Last Const.: Category:	06/01/1995 Rank: P
Area: 80,810.00SqFt Length: 1,400.0	0Ft	Width:	40.00	Ft				
Shoulder: Street Type: Grade: 0.00	Lanes:	0						
Section Comments:								
Last Insp. Date: 03/18/2012 Total Samples: 15	Surveyed: 5							
Conditions: PCI: 63 Inspection Comments:								
Sample Number: 02 Type: R Sample Comments:	Area:	5,000	0.00SqFt		PCI = 73			
48 LONGITUDINAL/TRANSVERSE CRACKIN	G	L	32.00	Ft	Comme	nts:u		
48 LONGITUDINAL/TRANSVERSE CRACKIN	G	L	415.00		Comme	nts:s		
48 LONGITUDINAL/TRANSVERSE CRACKIN	G 	M	100.00	Ft	Comme	nts:f	S	
Sample Number: 05 Type: R Sample Comments:	Area:	5,000	0.00SqFt		PCI = 62			
48 LONGITUDINAL/TRANSVERSE CRACKIN	G	L	223.00	Ft	Comme	nts:u		
48 LONGITUDINAL/TRANSVERSE CRACKIN	G	M	412.00	Ft	Comme	nts:f	s	
Sample Number: 08 Type: R Sample Comments:	Area:	5,000	0.00SqFt		PCI = 58			
48 LONGITUDINAL/TRANSVERSE CRACKIN	G	L	171.00	Ft	Comme	nts:u		
48 LONGITUDINAL/TRANSVERSE CRACKIN	G	M	526.00	Ft	Comme	nts:f	S	
Sample Number: 11 Type: R Sample Comments:	Area:	5,000	0.00SqFt		PCI = 58			
48 LONGITUDINAL/TRANSVERSE CRACKIN	G	L	111.00	Ft	Comme	nts:u		
48 LONGITUDINAL/TRANSVERSE CRACKIN	G	M	518.00	Ft	Comme	nts:f	s	
Sample Number: 14 Type: R Sample Comments:	Area:	6,375	5.00SqFt		PCI = 63			
sample Comments: 48 LONGITUDINAL/TRANSVERSE CRACKIN	G	L	176.00	Ft	Comme	nts:u		

479.00 Ft

Comments:fs

#### GA 2012 FINAL

Report Generated Date: November 20, 2012

Report Generated Date: November 20, 2012					
Network: ATHENS Name: ATHENS-BEN EPPS FIL	ELD				
Branch: TAAT Name: TAXIWAY A		Use: TA	AXIWAY	Area: 378,029.	00SqFt
Section: 20 of 5 From: EDGE OF Surface: AC Family: GAACTWYCS	R9/27	То: 1	ΓWA-30		st Const.: 06/01/1995 ttegory: Rank: P
Area: 153,027.00SqFt Length: 2,600.00Ft	7	Width: 40.00	Ft		
Shoulder: Street Type: Grade: 0.00	Lanes: (	)			
Section Comments:					
Last Insp. Date: 03/18/2012 Total Samples: 28 Su Conditions: PCI: 60 Inspection Comments:	nrveyed: 6				
Sample Number: 04 Type: R	Area:	5,000.00SqFt		PCI = 66	
Sample Comments: 48 LONGITUDINAL/TRANSVERSE CRACKING	M	435.00	Ft	Comments:	
Sample Number: 08 Type: R Sample Comments:	Area:	5,000.00SqFt		PCI = 61	
48 LONGITUDINAL/TRANSVERSE CRACKING	I	17.00	Ft	Comments:u	
48 LONGITUDINAL/TRANSVERSE CRACKING	M	460.00	Ft	Comments:fs	
Sample Number: 12 Type: R Sample Comments:	Area:	5,000.00SqFt		PCI = 61	
48 LONGITUDINAL/TRANSVERSE CRACKING	M	465.00	Ft	Comments:fs	
48 LONGITUDINAL/TRANSVERSE CRACKING	I	13.00	Ft	Comments:u	
Sample Number: 16 Type: R Sample Comments:	Area:	5,000.00SqFt		PCI = 62	
48 LONGITUDINAL/TRANSVERSE CRACKING	I	6.00	Ft	Comments:u	
48 LONGITUDINAL/TRANSVERSE CRACKING	M	470.00	Ft	Comments:	
Sample Number: 20 Type: R Sample Comments:	Area:	5,000.00SqFt		PCI = 60	
48 LONGITUDINAL/TRANSVERSE CRACKING	M	525.00	Ft	Comments:	
48 LONGITUDINAL/TRANSVERSE CRACKING	I	3.00	Ft	Comments:u	
Sample Number: 24 Type: R Sample Comments:	Area:	5,000.00SqFt		PCI = 49	
50 PATCHING	I			Comments:	
41 ALLIGATOR CRACKING	M			Comments:	
48 LONGITUDINAL/TRANSVERSE CRACKING	M	230.00	I.C	Comments:	

#### GA 2012 FINAL

Report Generated Date: November 20, 2012						
Network: ATHENS Name: ATHENS-BEN EPPS FI	ELD					
Branch: TAAT Name: TAXIWAY A			Use: TAXIWA	AY Area: 378	3,029.00SqFt	
Section: 30 of 5 From: EDGE OF Surface: AC Family: GAACTWYCS	R9/27		To: TWB-1	0 Zone: SAT	Last Const.: Category:	06/01/1979 Rank: P
Area: 79,236.00SqFt Length: 1,775.00Ft		Widt	th: 40.00Ft			
Shoulder: Street Type: Grade: 0.00	Lanes:	0				
Section Comments:						
Last Insp. Date: 03/18/2012 Total Samples: 16 Su	ırveyed: 5	5				
Conditions: PCI: 42 Inspection Comments:						
Sample Number: 03 Type: R Sample Comments:	Area:		5,000.00SqFt	PCI = 58		
48 LONGITUDINAL/TRANSVERSE CRACKING		M	680.00 Ft	Comments:		
Sample Number: 06 Type: R Sample Comments:	Area:	,	5,000.00SqFt	PCI = 34		
41 ALLIGATOR CRACKING		M	216.00 SqF	't Comments:		
50 PATCHING		L	2,250.00 SqF			
57 WEATHERING		L	2,850.00 SqF	't Comments:		
48 LONGITUDINAL/TRANSVERSE CRACKING		M	270.00 Ft	Comments:		
Sample Number: 09 Type: R Sample Comments:	Area:		4,700.00SqFt	PCI = 28		
57 WEATHERING		M	4,700.00 SqF	't Comments:		
41 ALLIGATOR CRACKING		M	200.00 SqF	't Comments:		
43 BLOCK CRACKING		M	4,500.00 SqF	't Comments:		
Sample Number: 10 Type: R Sample Comments:	Area:	,	4,900.00SqFt	PCI = 42		
43 BLOCK CRACKING		M	4,900.00 SqF	't Comments:		
57 WEATHERING		L	4,900.00 SqF	ct Comments:		
			7 000 000 T	DCI - 40		
Sample Number: 13 Type: R Sample Comments:	Area:		5,000.00SqFt	PCI = 49		
	Area:	L	5,000.00SqFt 2,500.00 SqF		1	
Sample Comments:	Area:			't Comments:	1	

#### GA 2012 FINAL

Report Generated Date: November 20, 2012

48 LONGITUDINAL/TRANSVERSE CRACKING

Report Generated Date: November 20, 2012  Network: ATHENS Name: ATHENS-BEN EPPS FIE	ELD							
Branch: TAAT Name: TAXIWAY A			Use: TA	AXIWAY	Area:	378,0	029.00SqFt	
Section: 40 of 5 From: EDGE OF 3 Surface: AC Family: GAACTWYCS	ΓWB-10		То: 1	R9/27 @ 27 EN	_	SAT	Last Const.: Category:	06/01/1998 Rank: P
Area: 57,016.00SqFt Length: 1,250.00Ft		Width:	40.00	)Ft				
Shoulder: Street Type: Grade: 0.00	Lanes:	0						
Section Comments:								
Last Insp. Date: 03/18/2012 Total Samples: 11 Sur Conditions: PCI : 76 Inspection Comments:	rveyed: 5	5						
Sample Number: 01 Type: R	Area:	5,380	0.00SqFt	P	CI = 73			
Sample Comments: 48 LONGITUDINAL/TRANSVERSE CRACKING		L	185.00	Ft	Comme:	nts:u		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	120.00		Comme			
48 LONGITUDINAL/TRANSVERSE CRACKING		M	200.00		Comme	nts:fs	5	
Sample Number: 03 Type: R Sample Comments:	Area:	5,000	0.00SqFt	P	CI = 78			
48 LONGITUDINAL/TRANSVERSE CRACKING		M	116.00	Ft	Comme:	nts:fs	3	
48 LONGITUDINAL/TRANSVERSE CRACKING		L	120.00	Ft	Comme	nts:s		
Sample Number: 05 Type: R Sample Comments:	Area:	4,350	0.00SqFt	P	CI = 75			
48 LONGITUDINAL/TRANSVERSE CRACKING		L	31.00	Ft	Comme	nts:u		
48 LONGITUDINAL/TRANSVERSE CRACKING		M	147.00	Ft	Comme	nts:fs	3	
Sample Number: 07 Type: R Sample Comments:	Area:	7,500	0.00SqFt	P	CI = 77			
48 LONGITUDINAL/TRANSVERSE CRACKING		L	150.00	Ft	Comme	nts:s		
48 LONGITUDINAL/TRANSVERSE CRACKING		M	200.00	Ft	Comme	nts:fs	5	
Sample Number: 09 Type: R Sample Comments:	Area:	5,100	0.00SqFt	P	CI = 75			
48 LONGITUDINAL/TRANSVERSE CRACKING		L	159.00	Ft	Comme	nts:s		
48 LONGITUDINAL/TRANSVERSE CRACKING		M	159.00	Ft	Comme	nts:fs	5	

30.00 Ft Comments:u

GA 2012 FINAL

Network:	ATHENS	Name:	ATHENS-BI	EN EPPS FIEI	LD								
Branch:	TAAT	Name:	TAXIWAY A	A			Use: TA	AXIWAY	Area:	37	8,029.00SqFt		
Section: Surface:	50 AAC	of 5 Fami	From:	A01AT-20 FWYCSNOR'	ТН		То: 1	ГААТ-30	Zone:	SAT	Last Const.: Category:	06/01/20 Rank:	
Area:	7,940.00SqFt	I	ength:	155.00Ft		Width:	40.00	)Ft					
Shoulder:	Street T	ype:	Grade:	0.00	Lanes:	0							
Section Com	nments:												
•	Date: 03/18/20	)12 Total S	Samples: 2	2 Sur	veyed: 2	2							
Last Insp. I Conditions Inspection C	s: PCI : 86	)12 Total S	Samples: 2	2 Sur	veyed: 2	2							_
Conditions Inspection C Sample Nu	s: PCI: 86 Comments:		Samples: 2	. Sur	veyed: 2		815.00SqFt		PCI = 86				
Conditions Inspection C Sample Nu Sample Com	s: PCI: 86 Comments:			e Sur	•		315.00SqFt 2,250.00	SqFt	PCI = 86	ents:			
Conditions Inspection C Sample Nu Sample Com 57 WEAT	s: PCI: 86 Comments: nmber: 01 nments:	T	ype: R		•	3,8	-	_					
Conditions Inspection C Sample Nu Sample Corr 57 WEAT 48 LONG	S: PCI: 86 Comments: Imber: 01 Inments: FHERING GITUDINAL/ Imber: 02	T <sub>.</sub>	ype: R		•	3,8 L L	2,250.00	_	Comme				_
Conditions Inspection C Sample Nu Sample Corr 57 WEAT 48 LONG Sample Nu Sample Corr	S: PCI: 86 Comments: Imber: 01 Inments: FHERING GITUDINAL/ Imber: 02	T; TRANSV	ype: R ERSE CRA ype: R	CKING	Area:	3,8 L L	2,250.00	Ft Ft	Comme	ents:			

#### GA 2012 FINAL

Network: ATHENS Name: ATHENS-BEN EPPS FIE	LD						
Branch: TBAT Name: TAXIWAY B			Use: TA	XIWAY	Area: 222,85	51.00SqFt	
Section: 10 of 4 From: RW 2/20 @ Surface: AC Family: GAACTWYCS	20 END		То: 1	NTERSEC		Last Const.: Category:	06/01/197 Rank: P
Area: 53,208.00SqFt Length: 1,100.00Ft		Width	: 40.00	Ft			
Shoulder: Street Type: Grade: 0.00	Lanes:	0					
Section Comments:							
Last Insp. Date: 03/18/2012 Total Samples: 11 Sur Conditions: PCI: 42	veyed: 5						
Inspection Comments:							
Sample Number: 02 Type: R Sample Comments:	Area:	5,	000.00SqFt		PCI = 49		
43 BLOCK CRACKING		M	500.00	SqFt	Comments:		
48 LONGITUDINAL/TRANSVERSE CRACKING		M	100.00		Comments:		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	60.00		Comments:		
43 BLOCK CRACKING		L	3,250.00	-	Comments:		
57 WEATHERING		L	5,000.00	SqFt	Comments:		
Sample Number: 04 Type: R Sample Comments:	Area:	5,	000.00SqFt		PCI = 47		
57 WEATHERING		L	4,000.00		Comments:		
57 WEATHERING		M	1,000.00		Comments:		
43 BLOCK CRACKING		M	1,500.00		Comments:fs		
43 BLOCK CRACKING		L	3,500.00	SqFt	Comments:u		
Sample Number: 06 Type: R Sample Comments:	Area:	5,	000.00SqFt		PCI = 46		
50 PATCHING		M	35.00		Comments:		
57 WEATHERING		M	500.00		Comments:		
57 WEATHERING		L -	4,465.00		Comments:		
43 BLOCK CRACKING		L	3,965.00	-	Comments:u		
43 BLOCK CRACKING		M	1,000.00	SqFt	Comments:		
Sample Number: 08 Type: R Sample Comments:	Area:	5,	000.00SqFt		PCI = 37		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	179.00	Ft	Comments:u		
48 LONGITUDINAL/TRANSVERSE CRACKING		M	780.00		Comments:		
41 ALLIGATOR CRACKING		M	107.00		Comments:		
57 WEATHERING		L	5,000.00	SqFt	Comments:		
Sample Number: 10 Type: R Sample Comments:	Area:	5,	000.00SqFt		PCI = 30		
48 LONGITUDINAL/TRANSVERSE CRACKING		L	120.00	Ft	Comments:u		
48 LONGITUDINAL/TRANSVERSE CRACKING		M	635.00		Comments:		
57 WEATHERING		M	1,000.00	SqFt	Comments:		
57 WEATHERING		L	4,000.00		Comments:		
41 ALLIGATOR CRACKING		M	235.00	SqFt	Comments:		

#### GA 2012 FINAL

Report Generated Date: November 20, 2012

Network: ATHENS Name: ATHENS-BEN EPPS FIELD				
Branch: TBAT Name: TAXIWAY B		Use: TAXIWAY	Area: 222,851.00SqFt	
Section: 15 of 4 From: RUNWAY 2-20 Surface: AC Family: GAACTWYCS	AND 9-27 INTE	To: APRON 01	Last Cons Zone: SAT Category:	
Area: 28,712.00SqFt Length: 500.00Ft	Width:	50.00Ft		
Shoulder: Street Type: Grade: 0.00 I	Lanes: 0			
Section Comments:				
Last Insp. Date: 03/18/2012 Total Samples: 5 Surveyor Conditions: PCI: 46 Inspection Comments:	ed: 4			
Sample Number: 01 Type: R A	Area: 5,00	0.00SqFt	PCI = 46	
43 BLOCK CRACKING	M 4	1,000.00 SqFt	Comments:fs	
48 LONGITUDINAL/TRANSVERSE CRACKING	М	120.00 Ft	Comments:fs	
Sample Number: 02 Type: R Sample Comments:	Area: 5,00	0.00SqFt	PCI = 46	
48 LONGITUDINAL/TRANSVERSE CRACKING	M	141.00 Ft	Comments:fs	
43 BLOCK CRACKING	M 4	1,000.00 SqFt	Comments:fs	
Sample Number: 03 Type: R A	Area: 5,00	0.00SqFt	PCI = 46	
43 BLOCK CRACKING	M 4	1,000.00 SqFt	Comments:fs	
48 LONGITUDINAL/TRANSVERSE CRACKING	M	180.00 Ft	Comments:fs	
Sample Number: 04 Type: R Sample Comments:	Area: 5,00	0.00SqFt	PCI = 45	
43 BLOCK CRACKING	M 2	2,500.00 SqFt	Comments:fs	
		545.00 Ft		

#### GA 2012 FINAL

Report Generated Date: November 20, 2012

48 LONGITUDINAL/TRANSVERSE CRACKING

Report Gener	rated Date: I	November 20, 20	012								
Network: A	THENS	Name: ATH	ENS-BEN EPPS FII	ELD							
Branch: T	ЪАТ .	Name: TAXI	WAY B			Use: TA	AXIWAY	Area:	222	,851.00SqFt	
	0 AC	of 4 Family: G	From: R 9/27 INT	ERSECTIO	N	То: 1	R 2/20 2 EN	D Zone:	SAT	Last Const.: Category:	06/01/1979 Rank: P
Area: 122,	,827.00SqFt	Length:	2,775.00Ft		Wid	th: 40.00	)Ft				
Shoulder:	Street 7		Grade: 0.00	Lanes:	0						
Section Commo	ents:										
Last Insp. Dat Conditions: Inspection Com	PCI: 53	)12 Total Sample	s: 29 Su	rveyed:	6						
Sample Numb		Туре: Б		Area:		4,000.00SqFt		PCI = 54			
		TRANSVERSE	CRACKING		M	520.00	Ft	Comme	nts:f	S	
48 LONGI	TUDINAL	TRANSVERSE	CRACKING		L	45.00	Ft	Comme	nts:u		
Sample Numb		Type: R		Area:		4,000.00SqFt		PCI = 51			
48 LONGI	TUDINAL	TRANSVERSE	CRACKING		M	595.00		Comme	nts:f	S	
48 LONGI	TUDINAL	TRANSVERSE	CRACKING		L	40.00	Ft	Comme	nts:u		
Sample Numb		Туре: Б		Area:		4,000.00SqFt		PCI = 54			
		TRANSVERSE			M	520.00	Ft	Comme	nts:f	S	
48 LONGI	TUDINAL,	TRANSVERSE	CRACKING		L	42.00	Ft	Comme	nts:u		
Sample Numb		Туре: Б	1	Area:		4,000.00SqFt		PCI = 54			
48 LONGI	TUDINAL	TRANSVERSE	CRACKING		M	525.00	Ft	Comme	nts:f	S	
48 LONGI	TUDINAL,	TRANSVERSE	CRACKING		L	55.00	Ft	Comme	nts:u		
Sample Numb		Туре: Б		Area:		4,000.00SqFt		PCI = 55			
		TRANSVERSE	CRACKING		M	647.00	Ft	Comme	nts:f	s	
Sample Numb		Туре: Б		Area:		4,000.00SqFt		PCI = 52			
48 LONGI	TUDINAL	TRANSVERSE	CRACKING		M	600.00	Ft	Comme	nts:f	S	
40 - 01-0-					_	0 = 00		_			

35.00 Ft

Comments:u

#### GA 2012 FINAL

Network: ATHENS Name: ATHENS-BEN EPPS FIE	LD		
Branch: TBAT Name: TAXIWAY B		Use: TAXIWAY	Area: 222,851.00SqFt
Section: 30 of 4 From: RUNWAY	20 APPROACH	То: тват-10	Last Const.: 06/01/19
Surface: AC Family: GAACTWYCS	****	1.1	Zone: SAT Category: Rank:
Area: 18,104.00SqFt Length: 300.00Ft	Wid	lth: 50.00Ft	
Shoulder: Street Type: Grade: 0.00	Lanes: 0		
Section Comments:			
Last Insp. Date: 03/18/2012 Total Samples: 3 Sur Conditions: PCI: 52 Inspection Comments:	veyed: 3		
Sample Number: 01 Type: R Sample Comments:	Area:	4,484.00SqFt	PCI = 57
50 PATCHING	L	50.00 SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	M	390.00 Ft	Comments:fs & w
48 LONGITUDINAL/TRANSVERSE CRACKING	L	85.00 Ft	Comments:u
	Area:	6,947.00SqFt	PCI = 50
Sample Comments:	Area:	6,947.00SqFt 41.00 SqFt	PCI = 50 Comments:
Sample Comments: 50 PATCHING 41 ALLIGATOR CRACKING	L M	41.00 SqFt 72.00 SqFt	Comments:
Sample Comments: 50 PATCHING 41 ALLIGATOR CRACKING 48 LONGITUDINAL/TRANSVERSE CRACKING	L M L	41.00 SqFt 72.00 SqFt 164.00 Ft	Comments: Comments:
Sample Comments: 50 PATCHING 41 ALLIGATOR CRACKING	L M	41.00 SqFt 72.00 SqFt	Comments:
Sample Comments: 50 PATCHING 41 ALLIGATOR CRACKING 48 LONGITUDINAL/TRANSVERSE CRACKING	L M L	41.00 SqFt 72.00 SqFt 164.00 Ft	Comments: Comments:
Sample Comments: 50 PATCHING 41 ALLIGATOR CRACKING 48 LONGITUDINAL/TRANSVERSE CRACKING 48 LONGITUDINAL/TRANSVERSE CRACKING  Sample Number: 03 Type: R  Sample Comments:	L M L M	41.00 SqFt 72.00 SqFt 164.00 Ft 675.00 Ft 6,673.00SqFt 415.00 Ft	Comments: Comments:u Comments:fs
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#### GA 2012 FINAL

Report Generated Date: November 20, 2012

Network:	ATHENS	Name:	ATHENS-E	BEN EPPS FIEI	LD							
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## **APPENDIX D**

# MAINTENANCE POLICIES AND UNIT COSTS

Table D-1. Localized Maintenance Policy, Asphalt-Surfaced Pavements.

Distress Type	Severity Level	Maintenance Action
	Low	Monitor
Alligator Cracking	Medium	AC Patching
	High	AC Patching
Bleeding	N/A	Monitor
	Low	Monitor
Block Cracking	Medium	Crack Sealing – AC
-	High	Crack Sealing – AC
	Low	Monitor
Corrugation	Medium	AC Patching
_	High	AC Patching
	Low	Monitor
Depression	Medium	AC Patching
	High	AC Patching
Jet Blast	N/A	AC Patching
	Low	Monitor
Joint Reflection Cracking	Medium	Crack Sealing – AC
	High	Crack Sealing – AC
	Low	Monitor
Longitudinal and Transverse	Medium	Crack Sealing – AC
Cracking	High	Crack Sealing – AC
Oil/Fuel Damage	N/A	AC Patching
	Low	Monitor
Patching	Medium	Monitor
Č	High	AC Patching
Polished Aggregate	N/A	Monitor
	Low	Monitor
Raveling	Medium	AC Patching
, e	High	AC Patching
	Low	Monitor
Rutting	Medium	AC Patching
$\mathcal{E}$	High	AC Patching
	Low	Monitor
Shoving	Medium	AC Patching
	High	AC Patching
Slippage Cracking	N/A	AC Patching
11 0 0	Low	Monitor
Swelling	Medium	AC Patching
5	High	AC Patching
	Low	Monitor
Weathering	Medium	Monitor
	High	AC Patching

Table D-2. Localized Maintenance Policy, PCC Pavements.

Distress Type	Severity Level	Maintenance Action
	Low	Monitor
Alkali Silica Reaction (ASR)	Medium	Slab Replacement
	High	Slab Replacement
	Low	Slab Replacement
Blow-Up	Medium	Slab Replacement
	High	Slab Replacement
	Low	Crack Sealing – PCC
Corner Break	Medium	PCC Full Depth Patch
	High	PCC Full Depth Patch
	Low	Crack Sealing – PCC
LTD Cracking	Medium	Crack Sealing – PCC
	High	Crack Sealing – PCC
	Low	Monitor
Durability Cracking	Medium	Slab Replacement
	High	Slab Replacement
	Low	Monitor
Joint Seal Damage	Medium	Joint Sealing – PCC
	High	Joint Sealing – PCC
	Low	Monitor
Patching (Large and Small)	Medium	PCC Full Depth Patch
	High	PCC Full Depth Patch
Popouts	N/A	Monitor
Pumping	N/A	Monitor
	Low	Monitor
Scaling	Medium	Slab Replacement
	High	Slab Replacement
	Low	Monitor
Faulting	Medium	Monitor
	High	PCC Partial Depth Patch
	Low	Crack Sealing – PCC
Shattered Slab	Medium	Slab Replacement
	High	Slab Replacement
Shrinkage	N/A	Monitor
	Low	Monitor
Spalling (Joint and Corner)	Medium	PCC Partial Depth Patch
	High	PCC Partial Depth Patch

Table D-3. 2012 Unit Costs for Localized Maintenance Actions, General Aviation Airports.

Maintenance Action		<b>Unit Cost</b>	
Maintenance Action	Metro	North	South
AC Patching	\$3.19/sf	\$3.18/sf	\$3.28/sf
Crack Sealing – AC	\$2.02/lf	\$2.02/lf	\$1.95/lf
Crack Sealing – PCC	\$2.71/lf	\$2.71/lf	\$2.71/lf
Joint Sealing – PCC	\$2.71/lf	\$2.71/lf	\$2.71/lf
PCC Partial Depth Patch	\$12.84/sf	\$12.84/sf	\$12.84/sf
PCC Full Depth Patch	\$43.32/sf	\$43.32/sf	\$43.32/sf
Slab Replacement	\$43.32/sf	\$43.32/sf	\$43.32/sf

Table D-4. 2012 Unit Costs for Localized Maintenance Actions, Air Carrier Airports.

Maintenance Action	<b>Unit Cost</b>
AC Patching	\$3.47/sf
Crack Sealing – AC	\$6.25/lf
Crack Sealing – PCC	\$2.71/lf
Joint Sealing – PCC	\$2.71/lf
PCC Partial Depth Patch	\$12.84/sf
PCC Full Depth Patch	\$43.32/sf
Slab Replacement	\$43.32/sf

Table D-5. 2012 Unit Costs for Global Maintenance Actions, General Aviation Airports.

Maintananaa Aatian		<b>Unit Cost</b>	
Maintenance Action	Metro	North	South
Single Surface Treatment	\$0.26/sf	\$0.12/sf	\$0.19/sf
Pavement Rejuvenator	\$0.22/sf	\$0.22/sf	\$0.22/sf

Table D-6. 2012 Unit Costs for Global Maintenance Actions, Air Carrier Airports.

Maintenance Action	<b>Unit Cost</b>
Single Surface Treatment	\$0.43/sf
Pavement Rejuvenator	\$0.22/sf

Table D-7. 2012 Major Rehabilitation Unit Costs Based on PCI Ranges for Asphalt-Surfaced Pavements.

Type of				PCI I	Range			
Airport <sup>1</sup>	0 – 29	30 – 39	40 – 49	50 – 59	60 – 69	70 – 79	80 – 89	> 89
G.A., Metro	\$6.09/sf	\$6.09/sf	\$6.85/sf	\$1.96/sf	\$1.96/sf	\$1.96/sf	\$1.96/sf	\$1.96/sf
G.A., North	\$5.14/sf	\$5.14/sf	\$5.38/sf	\$1.71/sf	\$1.71/sf	\$1.71/sf	\$1.71/sf	\$1.71/sf
G.A., South	\$5.00/sf	\$5.00/sf	\$5.42/sf	\$1.87/sf	\$1.87/sf	\$1.87/sf	\$1.87/sf	\$1.87/sf
Air Carrier	\$6.52/sf	\$6.52/sf	\$2.62/sf	\$2.62/sf	\$2.62/sf	\$2.62/sf	\$2.62/sf	\$2.62/sf

<sup>&</sup>lt;sup>1</sup>G.A. = General Aviation

Table D-8. 2012 Major Rehabilitation Unit Costs Based on PCI Ranges for PCC-Surfaced Pavements.

Type of		PCI Range										
Airport <sup>1</sup>	0 - 29	30 – 39	40 – 49	50 – 59	60 – 69	70 – 79	80 – 89	> 89				
G.A., Metro	\$9.50/sf	\$9.50/sf	\$1.96/sf	\$1.96/sf	\$1.96/sf	\$1.96/sf	\$1.96/sf	\$1.96/sf				
G.A., North	\$9.87/sf	\$9.87/sf	\$1.71/sf	\$1.71/sf	\$1.71/sf	\$1.71/sf	\$1.71/sf	\$1.71/sf				
G.A., South	\$9.71/sf	\$9.71/sf	\$1.87/sf	\$1.87/sf	\$1.87/sf	\$1.87/sf	\$1.87/sf	\$1.87/sf				
Air Carrier	\$9.68/sf	\$9.68/sf	\$2.62/sf	\$2.62/sf	\$2.62/sf	\$2.62/sf	\$2.62/sf	\$2.62/sf				

<sup>&</sup>lt;sup>1</sup>G.A. = General Aviation

## **APPENDIX E**

## YEAR 2013 MAINTENANCE PLAN ORGANIZED BY SECTION

Pavement Management Report - Appendix E

Table E-1. 2013 Maintenance Plan Organized by Section.

В	Branch <sup>1</sup>	Section <sup>1</sup>	Distress Type <sup>2</sup>	Severity	Maintenance Action	Maintenance Quantity	Maintenance Unit	Unit Cost	Estimated Cost
,	TAAT	40	L&T Cracking	Medium	Crack Sealing - AC	1,715	Ft	\$2.02	\$3,464

<sup>&</sup>lt;sup>1</sup>See Figure 5 for the location of the branch and section.

<sup>&</sup>lt;sup>2</sup>L&T Cracking = longitudinal and transverse cracking.

## **APPENDIX F**

## YEAR 2013 MAINTENANCE PLAN ORGANIZED BY REPAIR TYPE

Pavement Management Report - Appendix F

Table F-1. 2013 Maintenance Plan Organized by Repair Type.

Branch <sup>1</sup>	Section <sup>1</sup>	Distress Type <sup>2</sup>	Severity	Maintenance Action	Maintenance Quantity	Maintenance Unit	Unit Cost	Estimated Cost
TAAT	40	L&T Cracking	Medium	Crack Sealing - AC	1,715	Ft	\$2.02	\$3,464

<sup>&</sup>lt;sup>1</sup>See Figure 5 for the location of the branch and section.

<sup>&</sup>lt;sup>2</sup>L&T Cracking = longitudinal and transverse cracking.



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Prepared by:



