Heron Creek Community Association

North Port, FL

PAVEMENT ASSESSMENT REPORT

DMK Associates, Inc.
405 Commercial Court
Suite E
Venice, FL 34292
941-412-1293

Revised November 2024

TABLE OF CONTENTS

TABLES

APPENDICES

I. AUTHORIZATION

DMK Associates, Incorporated (DMK) was authorized to perform core sampling and to provide a pavement assessment of the existing roads throughout the Heron Creek Community Association (HCCA); a report on the assessment including recommendations for rehabilitation and preparation of construction documents and construction services. The HCCA previously performed their own assessment of the roadways and submitted this information to DMK Associates, Inc. to review. Ardaman & Associates, a subconsultant to DMK conducted a pavement coring program consisting of twenty-four roadway cores at various locations throughout the community. The completed coring report is attached.

II. SCOPE OF SERVICES

The HCCA presented the Heron Creek Pavement Management Program report dated November 2022 to DMK for review and recommendations. Ardaman and Associates, a sub-consultant to DMK then completed the core boring program and submitted the results to DMK for review and inclusion into this report.

DMK staff visited the community to determine the conditions of the pavement, however as directed by the Client, a detailed inspection of all the roadways was not performed. DMK was directed to utilize the findings in the previously prepared Heron Creek Management Program report along with the results from the core borings to formulate an opinion of the condition of the existing roadways and to make short term and long term recommendations. It was the HCCA direction to concentrate the initial pavement work on the Southern Hills, Country Club Cove and Herons Reserve neighborhoods. Photographs and notes of the general condition and deficiencies were taken of the pavement by our staff. These are included in Appendix A of this report. This report was prepared to document the type, severity and location of the general deficiencies throughout the community and to make recommendations for repairs. DMK concludes this report with an opinion on probable future pavement repair requirements and associated costs.

III. PURPOSE AND PROCEDURES

Typically, there are several important steps in managing the maintenance and repair of the paved roadways within a community. Steps include:

1. Inventory all paved roadways within these areas utilizing a spreadsheet containing a pavement surface evaluation format.

2. Use the pavement surface evaluation format to set priorities for the most stressed pavements and identify cost effective long and short-term remedial priorities.

A pavement evaluation system involves collecting data, inspecting pavement surfaces and rating the pavement as to the type, severity and the extent the surfaces are affected by the defects. Engineers can then combine this with economic constraints to develop both short-range and long-range plans for a variety of budgets.

Since the pavement surface and sub-surface condition are crucial elements in any pavement evaluation system, engineers utilize the Pavement Rating System (PRS) to evaluate roadways. The PRS, combined with other inventory data (width, length, age, pavement type, etc.), is essential in planning future budgets and priorities.

The Pavement Rating System (PRS) uses visual inspection to evaluate pavement surface conditions. The key to a useful evaluation is identifying different types of pavement distress. Understanding the cause for current conditions is important in selecting an appropriate maintenance and rehabilitation strategy.

There are four primary categories of asphalt pavement surface deterioration:

1. Surface defects – raveling, flushing and polishing.
2. Surface deformation – rutting, rippling and settling.
3. Cracks – box, transverse, longitudinal and alligator (also known as spider) cracks.
4. Patches and potholes repairs.

The rate at which pavement deteriorates depends on environmental conditions, traffic loading conditions, original construction quality and maintenance. Poor quality materials and/or poor construction procedures can significantly reduce the life of a pavement. As a result, several pavements constructed at the same time may have significantly different service lives. Crack sealing, seal coatings and overlays will prolong the service life of many asphalt pavements.

The following table is typically utilized in evaluating the roadways within a community.

Table 1

PAVEMENT RATING SYSTEM

SURFACE RATING		VISIBLE DETERIORATION	GENERAL CONDITION/ TREATMENT MEASURES
10	91-100% Excellent (+)	None	New construction/None.
9	81-90% Excellent (-)	Very little	Pavement like new/None.
8	71-80% Very Good	No longitudinal cracks except reflection of paving joints. Occasional transverse cracks, widely spaced.	Pavement shows minor wear. Little or no maintenance required.
7	61-70% Good (+)	Very slight or no raveling, surface shows minor traffic wear. Few longitudinal crack(s) due to reflection or paving joints. Transverse cracks spaced 10' or more apart, little or slight crack raveling. No patching or very few patches that are in excellent condition.	Minor signs of aging. Maintain with routine crack filling.
6	51-60% Good (-)	Slight raveling (loss of fine asphaltic material) and traffic wear. Transverse cracks, some spaced less than 10'. Sight to moderate flushing or polishing. Occasional patching in good condition.	Shows moderate signs of aging. Sound structural condition. Could extend life with sealcoat.
5	41-50% Fair (+)	Moderate raveling (loss of fine and coarse aggregate). Longitudinal and transverse cracks show first signs of slight raveling and secondary cracks. First signs of longitudinal cracks near pavement edge. Moderate flushing or polishing. Some patching in good condition.	Surface aging. Sound structural condition. Requires sealcoat or thin non-structural overlay.
4	31-40% Fair (-)	Moderate to severe surface raveling. Longitudinal and transverse cracking with slight raveling. Longitudinal cracking in wheel path. Patching in fair condition. Slight rutting or distortions.	Significant aging and first signs of need for strengthening. Would benefit from a structural overlay.
3	21-30% Poor	Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. Some alligator cracking (less than 25% of surface). Patches in fair to poor condition. Moderate rutting or distortion. Occasional potholes.	Requires patching and repair prior to major overlay. Milling and removal of deterioration extends the life of overlay.
2	11-20% Very Poor	Alligator cracking (over 25% of surface). Severe distortions. Extensive patching in poor condition. Potholes.	Severe deterioration. Requires reconstruction with extensive base repair.
1	0-10% Failed	Severe distress with extensive loss of surface integrity.	Failed. Requires total reconstruction.

For HCCA, DMK was not tasked to complete a detailed analysis of the existing roadways but to rely on the Heron Creek Pavement Management Program report dated November 2022 prepared by the HCCA Roadway Committee. However DMK did drive around the community to note general conditions. DMK's opinion is that the roads within the HCCA can be rated between 4 (Fair) and 6 (Good), with an average rating of 5 (Fair). The pavement is showing signs of wear, longitudinal cracks, loss of aggregate and some potholes. It is the opinion of DMK that replacement or rehabilitation of the existing pavements, especially in certain sections be considered and programed for costs in order to address the pavement condition before there is a total breakdown of the roadway material. Also a multi-year program should be established that will rehabilitate all the roadways.

IV. INSPECTION SUMMARY

DMK did a cursory review of a majority of the roadways within HCCA. It was noted that most of the roadways have exposed aggregate and longitudinal cracking at the centerline of the roadway. Some areas have small isolated potholes with additional longitudinal and transvers cracking. At one sanitary sewer manhole there are radial cracks parallel to the manhole indicating settlement issues.

The pavements within the HCCA were constructed at various times between 2000 to 2007. Based on preliminary design plans, the roadways were to consist of a 1½" inches of an asphalt surface course, over 6 inches of stabilized cement treated shell material and 6 inches of a stabilized sub grade. Concrete curb and gutters outline both sides of all the roadways. The pavements, with few exceptions, have had little or no maintenance since their initial construction. Based on DMK's initial discussion with the Committee members it was decided that roadway cores be taken throughout the community to be able to discern the actual composition of the roadway typical section.

In July 2024, Ardaman and Associates conducted a field exploration program consisting of performing pavement cores at a total of 24 locations. Where present, Ardaman attempted to place the cores in areas exhibiting pavement distress (e.g., cracking, etc.). The pavement cores were obtained using a 6-inch diameter diamond tipped core barrel. At each location, the asphalt and underlying base course was measured for thickness and observed for general condition. The asphalt portion (and if intact, the stabilized base portion) of the core samples were transported to their laboratory for further evaluation if requested by HCCA. Otherwise the core samples would be disposed.

In summary, the cores encountered an asphaltic concrete surface course ranging in thickness from 0.7 to 3.6 inches (average 1.7 inches) underlain by a partially cemented to cemented shell base material ranging from 5.4 inches to 8.9 inches (average 6.7 inches). The asphalt and base thicknesses at each pavement core location are summarized in Table 1 of Ardaman and Associates report. In addition, representative photographs of the cores obtained are contained in Appendix II of the Ardaman report. Based on these findings, while the average thickness of the pavement is greater than the 1.5" on the design plans the actual thickness of the asphalt material does vary considerably. This variation could be an indication of where there are more failure conditions.

DMK took photographs during the cursory review to document the common issues in the community. Photographs are included in Appendix A.

V. REHABILITATION OPTIONS

As with any rehabilitation project, there are numerous possible solutions. Each solution has their benefits and drawbacks. Below are various options than can be utilized by the HCCA for their pavement rehabilitation program. The pros and cons for each option are discussed below.

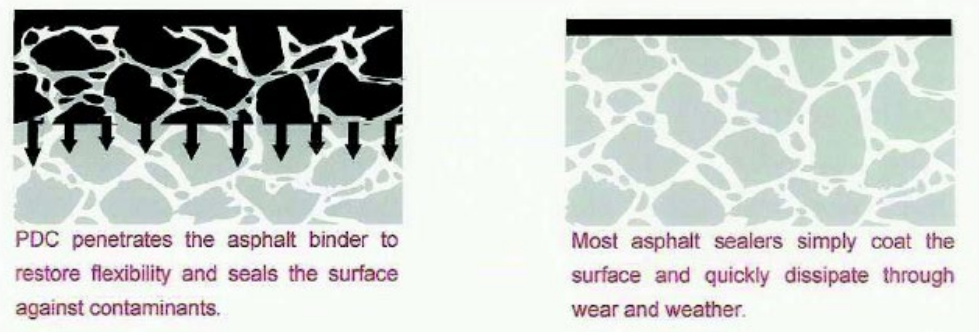
- Partial Mill and Overlay – This option would include the milling of a portion of the existing asphalt typical section (¾") and replacing it with a similar thickness of new asphalt material. This option would remove the surface material including cracks, deterioration and potholes. Upon completion, this option would provide a smooth, aesthetically pleasing surface material. The cost for this option would be considerably less than a full depth mill and overlay. However, any subsurface issues in the stabilized base material would not be readily repairable since the base material would not be exposed and most likely cracks and deterioration in the riding surface would reappear within a short period of time, likely two to three years. Localized base material areas could be further excavated and repaired for additional costs. For a ¾" mill and overlay, the cost is approximately $18.00 per square yard. This price does not include any additional base repair areas. Price quoted by Ajax Paving Industries of Florida.

- Full Depth Mill and Overlay – This option would include the full depth milling of the existing pavement section, approximately 1½" and replacement of the same depth of new asphalt material. As previously noted, the existing typical section thickness varies, and this option would remove all the material down to and possibly into the stabilized base material. Any issues noted in the stabilized base material would be repaired down to the sub base, and the base material compacted prior to the placement of the new asphalt material and stabilized base material. This option would provide a brand-new pavement section that should remain free of defects for an extended period of time, likely twenty years with minimal maintenance. For a 1½" mill and overlay, with minor stabilized base repair, the cost is approximately $25.00 per square yard. Price quoted by Ajax Paving Industries of Florida.

- Asphalt Sealers – Asphalt sealers, or sealcoating is a process of applying a refined tar pitch or asphalt cement mixed with inert fillers, water, emulsifying agent and additive. Applied in thin coats, a pavement sealer is used to protect off-highway pavement surfaces against oil, water and ultraviolet rays. Asphalt sealers are very cost effective at $1.00 to $1.50 per square yard to help preserve the asphalt surface. However, these sealers reduce the friction between the road surface and vehicles tires and should only be used in low speed limit areas (less than 35 MPH). This material does not offer any long term benefits or preservation, typically less than one year. This option is best

if the desire is to keep a rich black appearance of the asphalt surface. Price obtained by online search.

- Asphalt Rejuvenator (Pavement Dressing Conditioner, PDC) – PDC is a rejuvenating sealer that chemically plasticizes the binder portion of the asphalt cement to provide improved rheological properties while protecting the bituminous pavement from deleterious effects of solvents, water migration and UV degradation. After curing, the UV stabilized pavement has physical characteristics similar to that of newer asphalt. PDC does not contain any water and does not decrease the friction of the asphalt surface. This option is very cost effective for extending the pavement life. However, this option is not the same as a pavement sealer mentioned above. While they may be applied in a similar way, and the initial appearance may be similar, the performance is very different. In the diagram below, the picture on the left shows how the PDC penetrates the existing pavement, whereas the picture on the right shows how most asphalt sealers simply coat the surface, similar to a layer of paint.



As such, when talking to contractors' it is imperative to understand what you are getting for the price. PDC and pavement sealers are like comparing apples to oranges. The price for PDC is $2.00 to $3.50 per square yard depending on the quantity applied at the same time. However, there is no comparison to the ultimate performance and the extension of the pavement life of the two materials. A PDC could not be applied to a pavement section that previously had an asphalt sealer applied. Price quoted by Asphalt Restoration Technology Systems, Inc.

- Tar and Chip Overlay – A tar and chip process has a gravel base coated with a layer of tar before being covered with stone chips. Used predominately in the northern states, a tar and chip overlay is a very cost effective process for extending the life of an asphalt roadway. However due to the extreme Florida heat, this process never cures completely and the tar ultimately get on the vehicles passing through it. This process is not a viable option for Florida.

VI. RECOMMENDATIONS

After DMK's cursory review of the development, review of the information from the HCCA Roadway Committee pavement report, pavement core results and review of various rehabilitation options it is DMK's opinion that the long-term solution includes various phases. In addition, a multi-year program should be established that will rehabilitate all the roadways.

The first phase would include a complete milling and replacement (1½" depth) of the most deteriorated existing pavement sections including the Southern Hills, Country Club Cove and Herons Reserve neighborhoods. Partial milling and replacement of only a portion of the existing material, while initially may appear to resolve the issues, over the long term would not. It would be expected that similar cracking and deterioration would continue. During this complete milling process, the existing stabilized base material should be inspected, repaired where needed, and compacted prior to placement of the new asphalt material.

The roadway width is typically 22' wide throughout the development. The approximate length of the three neighborhoods, taken from the HCCA Pavement Report includes Country Club Cove – 3,275', Southern Hills – 1,733' and Heron Reserve – 1,812' for a total of 6,820 linear feet. This equates to a total of 16,671 square yards. It is estimated that the construction cost for a complete mill and overlay at $25 per square yard in these three sections would total $417,000.

The next phase would be to try extending the life of the remaining pavement until a time comes when a complete mill and overlay would be required. It is DMK's opinion that an Asphalt Rejuvenator (PDC) be applied to the remaining pavement sections to extend the life of the existing pavement. This could be done at one time, or over a few years as financially approved. There are approximately 36,000' of pavement in the development. Excluding the 6,820' noted for the initial work leaves a remaining length of 29,180 linear feet. At 22' in width, equates to 71,329 square yards. Assuming this is done at one time, the cost would approximately be $2.00 per square yard, or $143,000. If the Asphalt Rejuvenator is applied in numerous sections, then the total cost would increase due to the lesser quantity being done at each time.

VII. HERON CREEK COMMUNITY ASSOCIATION BOARD DECISION

Following the completion of the report, Mr. Michael Benza, HCCA Pavement Committee, presented the report to the HCCA Board on Thursday November 7th, 2024. Mr. Benza presented a recommendation to the HCCA Board for the 2025 paving season based on the Heron Creek Pavement Management Program report dated November 2022.

The 2025 paving project consists of a complete mill and paving of select streets in the community and applying an asphalt rejuvenator to other streets throughout the community based on the existing condition of those streets. The mill and paving process will consist of completely removing the existing asphalt surface, doing base repairs as necessary and then placement of a 1 ½ inch layer of asphalt. The asphalt rejuvenating will consist of placing a liquid asphalt mixture on the existing surface. The 2025 program is based on a budget of $ 390,000.

The complete mill and paving operation will be completed on the following streets: Laurel Oak; Laurel Oak Court; Laurel Oak Circle; and Herons Reserve.

The application of the asphalt rejuvenator will be completed on all streets within the Heron Creek community except those streets in the following neighborhoods: Pine Meadows; Wild Pines; Ibis Strand; Quail Run; Scrub Jay; Eagle Point; and Fairway Crossing. The areas noted above will receive the asphalt rejuvenating in the subsequent paving seasons likely in the second or third year of the program.

The HCCA Board approved the 2025 paving project noted above during the Thursday November 7th, 2024 meeting. The Board also approved their consultant, DMK Associates, to begin the preparation of the contract documents for the 2025 bidding contract.

APPENDIX A
Photographs – General Condition 2024

Heron Creek Community Association
General Condition Photographs 2024

Photo No. 1

Typical Roadway Pavement Section

Photo No. 2

Exposed Aggregate in Asphalt Material

	**Photo No. 3** **Various Potholes in Cul-De-Sac**
	**Photo No. 4** **Various Potholes in Cul-De-Sac**

Photo No. 5

Various Minor Cracking

Photo No. 6

Longitudinal Cracking with Seperation

Photo No. 7

Typical Longitudinal Cracking

Photo No. 8

Radial Cracking in Cul-De-Sac

Photo No. 9

Various Longitudinal Cracks

Photo No. 10

Filled Pothole

Photo No. 11

Sewer Manhole Settlement

Photo No. 12

Isolated Potholes

APPENDIX B
HERON CREEK PAVEMENT MANAGEMENT REPORT, NOVEMBER 2022

HERON CREEK PAVEMENT MANAGEMENT PROGRAM
November 2022

I have been asked to quantify the condition of the existing pavements in the development. The purpose of the study is to establish a sound maintenance/replacement program for the future use of the HOA. My scope includes visually inspecting each road in the development, note the defects in each pavement section and establish a rating system of the pavement condition. I have established a Pavement rating system that is similar to but not equal to a Pavement Condition Rating System utilized by various State Departments of Transportation. I have modified the system to simplify the calculations

The pavements within the Heron Creek Development were constructed in the period of 2000 to 2007. They consist of a 1/1/2 inch asphalt surface course, 6 inches of stabilized cement treated shell material, 6 inches of stabilized sub grade and a concrete curb and gutter. The pavements, with few exceptions, have had little or no maintenance since their initial construction. The lack of maintenance has resulted in pavements that are in a deteriorated condition. There are many pavements with loose aggregate, cracking, pot holes and in some instances areas of total failure. The pavements with the least amount of traffic have fared the worst. These include all the cul-de-sac streets.

The pavement sections closely correspond to the boundaries of the various Home Owners Associations, i.e. Heron Reserve, Wild Pines etc. My pavement measurements are from Google Earth and are only approximate. Also the boundaries may not accurately reflect the actual boundary. The actual boundaries should be determined during the design phase and prior to construction. I estimate the total pavement length to be about 36,000 feet. Included at the end of the report is a list of each development and the measurements utilized.

Based on my modified method I have calculated the PCR for each section of pavement, shown on the table in the appendix. I have noted in each section the length of the main road and each of the cul-de-sacs. It should be noted that the PCR for most of the cul-de- sacs is usually higher that for the main road. In order to adjust for this, I have adjusted the PCR's for the sections based on the relative length of the main road and the length of the cul-de-sacs. This reduces the impact on the higher PCR of the cul-de-sacs.

The combined pavement rankings ranged from a high of 45.58 to a low of 10, out of a possible of 100, with 0 being a best ranking and 100 the worse. Even though the highest ranking is 45 % out of the possible 100, the pavement is still in very poor condition.

Included in the study are photos that reflect the condition of the pavements. These are located after Table 2.

RECOMMENDATION

Preparing a recommendation for the HOA is a challenging problem. The conditions of the pavements are so poor that I would like to recommend that they all be repaired immediately. However I realize that this is not realistic. Any program established must be based on the

fiancés available. Also, there may be extraneous circumstances that arise in the future that may impact the ranking. As with all future projections they should be considered a general direction to be followed and adjusted as necessary.

There are approximately 36,000 feet of pavement, this translates to about 88,000 square yards of pavement. I estimate that the program should have a budget of at least $ 200,000 per year. For the reports purposes I have assumed a 2023 estimated cost of $ 20.00 per square yard for resurfacing. At this cost approximately 4,400 feet of pavement can be replaced annually. This program will result in all new pavements in the next 9 years.

In addition to the resurfacing I am recommending that a asphalt rejuvenator be placed on the pavements that will not be resurfaced in the next 3 years. This material will slow the continued deterioration of the pavement. I also recommend that when the newly resurfaced pavement reaches an age of 5 years that the rejuvenator is applied and every 5 years after. This material has a 2023 estimated cost of about $ 1.20 per square yard.

In Table I have shown the data regarding each Association. In Table 2 I have shown the Pavement Management Summary.

Michael Benza

TABLE 1
HERON CREEK PAVEMENT MANAGMENT

ASSOCIATION	LENGTH FEET	PCR	COMBINED PCR	RANK	RESURFACE YEAR	COST ESTIMATE	SURFACE TREATMENT YEAR	COST ESTIMATE
Country Club Cove	3275			2	2024	$160,111.00	2029	$10,087.00
Blue Heron Circle	2300	20	28.55					
Club View Ln	975	28.75						
Creeks Edge	1907			6	2027	$93,231.00	2023	$5,874.00
Royal Poinciana Way	1907	18.75	18.75					
Eagle Pointe	1161			5	2025	$56,760.00	2030	$3,575.00
Egret Ct	1161	22.5	22.5					
Enclave	856				0	$0.00	0	$0.00
Road	856	0	0					
Fairway Crossing	1775			7	2026	$86,778.00	2031	$5,467.00
Eagle Flight Way	1775	16.25	16.25					
Herons Reserve	1812			3	2025	$88,586.00	2030	$5,580.00
White Ibis	1650	27.5	27.05					
Osprey Court	162	22.5						

TABLE 1
HERON CREEK PAVEMENT MANAGMENT

ASSOCIATION	LENGTH FEET	PCR	COMBINED PCR	RANK	RESURFACE YEAR	COST ESTIMATE
Hidden Oaks	2000			9	2023	$97,777.00
Whispering Oaks	2000	15	15			
Ibis Strand	1000			14	2030	$48,888.00
White Ibis	1000	10	10			
Lakeside Greens Ct	1949			12	2031	$104,812.00
Whispering Oaks	1515	15	13.32			
Ct	108	45				
Ct	326	18.75				
Osprey Cove	2615			9	2029	$127,844.00
Whispering Oaks	2615	15	15			
Palmetto Lakes	4261			8	2028	$208,315.00
Creek Nine	2921	16.25	15.76			
Waterview Drive	795	12.5				
Lake Breeze Ct	261	20				
Winding Lake Ct	284	16.25				
Pine Meadows	1781			0	0	$0.00
Pine Shadow Lane	1500	0	0			
Ct	131	0				
Ct	150	0				

TABLE 1
HERON CREEK PAVEMENT MANAGMENT

ASSOCIATION	LENGTH FEET	PCR	COMBINED PCR	RANK	RESURFACE YEAR	COST ESTIMATE
Quail Run	3285			13	2032	$160,600.00
Creek Nine	1400	7.5	11.89			
Grand Palmetto Way	1340	13.75				
Night Wind Terrace	374	18.75				
Ct	171	18.75				
Scrub Jay Glen	2353			10	2030	$115,035.00

White ibis		2353	13.5	13.5			
Shadow Wood		1715			4	2026	$83,844.00
White ibis		1615	20	20.17			
	Ct	100	23				
Southern Hills		1733			1	2023	$84,724.00
Laural Oaks		1223	43.75	45.58			
	Ct	510	50				
Wild Pines		2430			0	0	$0.00
Pine Shadow Lane		1980	0	0			
	Lake View	450	0				

TABLE 2
HERON CREEK PAVEMENT MANAGEMENT

NEIGHBORHOOD	RANK	YEAR	CONSTRUCTION COST	SURFACE TREATMENT
Hidden Oaks	9	2023	$97,777.00	$42,295.00
Southern Hills	1	2023	$84,724.00	
Country Club Cove	2	2024	$160,111.00	
Eagle Pointe	5	2025	$56,760.00	$13,000.00
Herons Reserve	3	2025	$88,586.00	
Fairway Crossing	7	2026	$86,778.00	
Shadow Wood	4	2026	$83,844.00	
Creeks Edge	6	2027	$93,231.00	
Palmetto Lakes	8	2028	$208,315.00	$11,497.00
Osprey Cove	9	2029	$127,844.00	$10,087.00
Ibis Strand	14	2030	$48,888.00	$9,155.00
Scrub Jay Glen	10	2030	$115,035.00	
Lakeside Greens Ct	12	2031	$104,812.00	$10,749.00
Quail Run	13	2032	$160,600.00	

$1,517,305.00	$96,783.00

APPENDIX C
ARDAMAN AND ASSOCIATES
SUBSURFACE EXPLORATION PAVEMENT CORES 2024

Subsurface Exploration
Pavement Cores
Heron Creek
North Port, Sarasota County, Florida

Ardaman & Associates, Inc.

CORPORATE HEADQUARTERS

8008 S. Orange Avenue, Orlando, Florida 32809 - Phone: (407) 855-3860 Fax: (407) 859-8121

Branch Office Locations

Florida: Bartow, Cocoa, Fort Myers, Miami, Orlando, Port St. Lucie, Sarasota, Tallahassee, Tampa, West Palm Beach
Louisiana: Baton Rouge, New Orleans, Shreveport
Texas: Houston

Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

September 13, 2024
Ardaman File No. 24-7033

DMK Associates, Inc.
421 Commercial Court, Suites C-D
Venice, Florida 34292

Attention: Mr. Jeff R. Raykos, P.E.

Subject: Subsurface Exploration
Pavement Cores
Heron Creek
North Port, Sarasota County, Florida

Dear Mr. Raykos:

As requested and authorized, we have completed a pavement coring program for the subject project. The purpose of performing this program was to obtain pavement core samples at requested locations. This data report documents our findings.

FIELD EXPLORATION PROGRAM

Pavement Coring

The field exploration program consisted of performing pavement cores at a total of 24 requested locations by you with the Heron Creek community. Where present, Ardaman attempted to place the cores in areas exhibiting pavement distress (e.g., cracking, etc.). The pavement cores were obtained using a 6-inch diameter diamond-tipped core barrel. At each location, the asphalt and underlying base course were measured for thickness and observed for general condition. The asphalt portion (and if intact, the base portion) of the core samples were transported to our laboratory for further evaluation.

Test Locations

The approximate locations of the pavement cores are schematically illustrated on aerial photographs shown in Appendix I. These locations were determined in the field by estimating distances from existing site features and should be considered accurate only to the degree implied by the method of measurement used.

PAVEMENT COMPONENT PROFILE

In summary, the cores encountered an asphaltic concrete surface course ranging in thickness from 0.7 to 3.6 inches (average 1.7 inches) underlain by a partially cemented to cemented shell

base material ranging from 5.4 inches to 8.9 inches (average 6.7 inches). The asphalt and base thicknesses at each pavement core location are summarized in Table 1. Representative photographs are contained in Appendix II.

CLOSURE

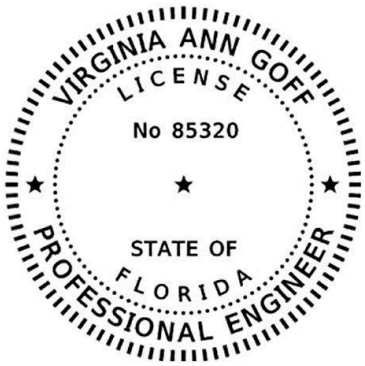
The information submitted herein are based on the data obtained from the pavement cores. This report does not reflect any variations which may occur adjacent to or between the pavement cores. The nature and extent of the variations between the pavement cores may not become evident until during construction.

This study is based on a relatively shallow exploration and is not intended to be an evaluation for sinkhole potential. This study does not include an evaluation of the environmental (ecological or hazardous/toxic material related) condition of the site and subsurface.

This data report has been prepared for the exclusive use of DMK Associates, Inc. in accordance with generally accepted geotechnical engineering practices for the purpose of the subject project. No other warranty, expressed or implied, is made.

We are pleased to be of assistance to you on this phase of the project. When we may be of further service to you or should you have any questions, please contact us.

Very truly yours,
ARDAMAN & ASSOCIATES, INC.
Florida Registry 5950



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Virginia A. Goff, P.E.
Branch Manager
Fl. License No. 85320

VG24-7033 DMK - Heron Creek Pavement Cores.docx (Geo 2024)

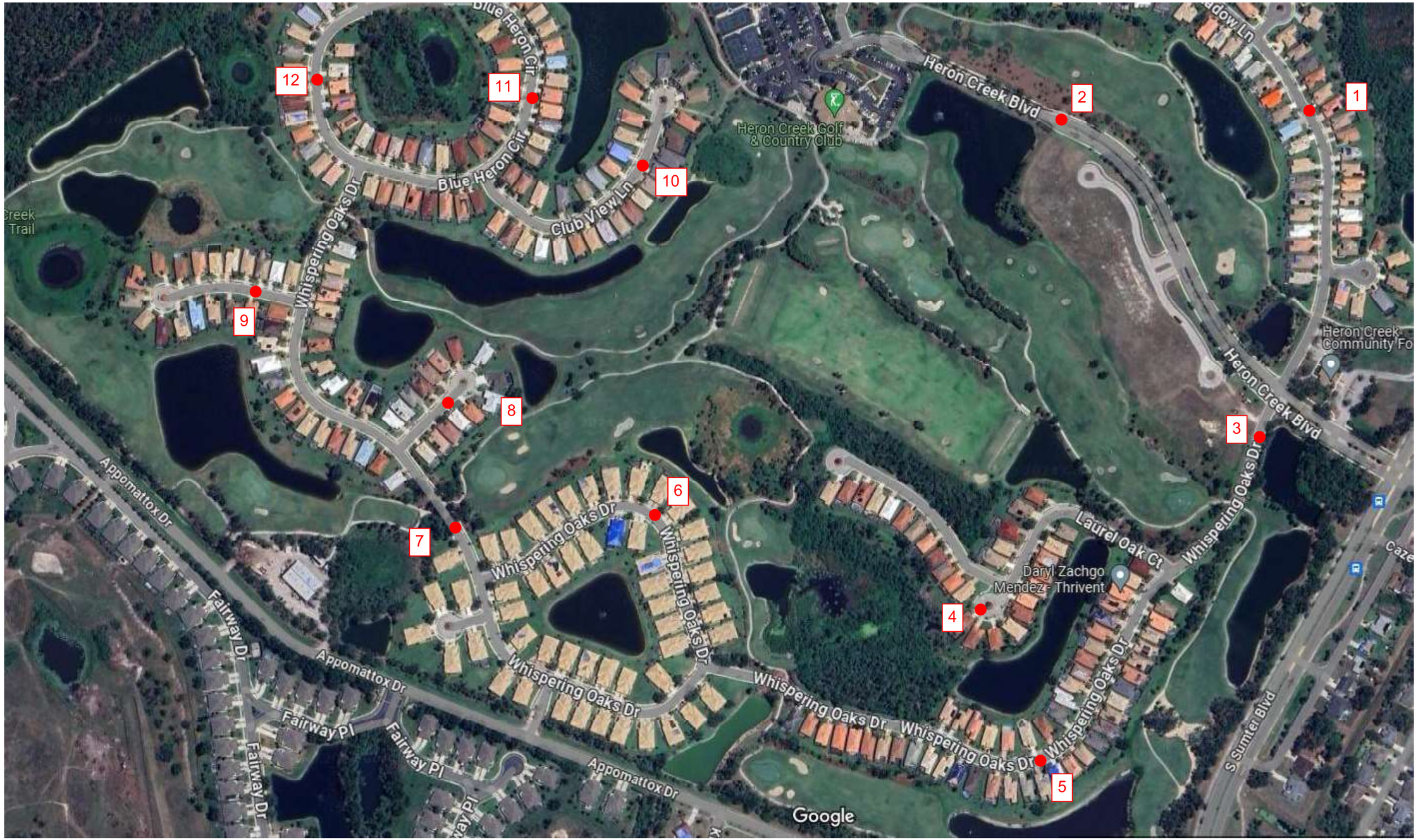
Table 1
Pavement Cores
Heron Creek
North Port, Sarasota County, Florida

Pavement Core Location	Asphalt Thickness (inches)	Base Type*	Base Thickness (inches)	Notes
1	2.2	Shell	7.8	
2	1.6	Shell	7.4	Full Depth Crack
3	2.1	Shell	6.9	
4	0.7	Shell	8.3	Full Depth Crack
5	1.4	Shell	7.1	
6	1.9	Shell	6.1	
7	2.3	Shell	6.6	2 layers of de-bonded asphalt, full dpeth cracks in both layers; bond between Asphalt and Base
8	1.6	Shell	5.7	Partial Depth Crack
9	0.7	Shell	5.9	Full Depth Crack
10	1.2	Shell	7.1	
11	2.5	Shell	7.7	Full Depth Crack
12	1.4	Shell	7.0	
13	2.8	Shell	5.7	
14	2.4	Shell	6.3	Bond between Asphalt and Base
15	1.3	Shell	6.8	Bond between Asphalt and Base
16	1.4	Shell	8.9	Bond between Asphalt and Base
17	1.0	Shell	7.0	Full Depth Crack
18	1.7	Shell	6.6	
19	1.3	Shell	7.3	
20	1.5	Shell	6.1	
21	1.2	Shell	6.4	
22	1.4	Shell	6.7	Bond between Asphalt and Base
23	1.5	Shell	5.7	Full Depth Crack
24	1.6	Shell	5.4	Full Depth Crack

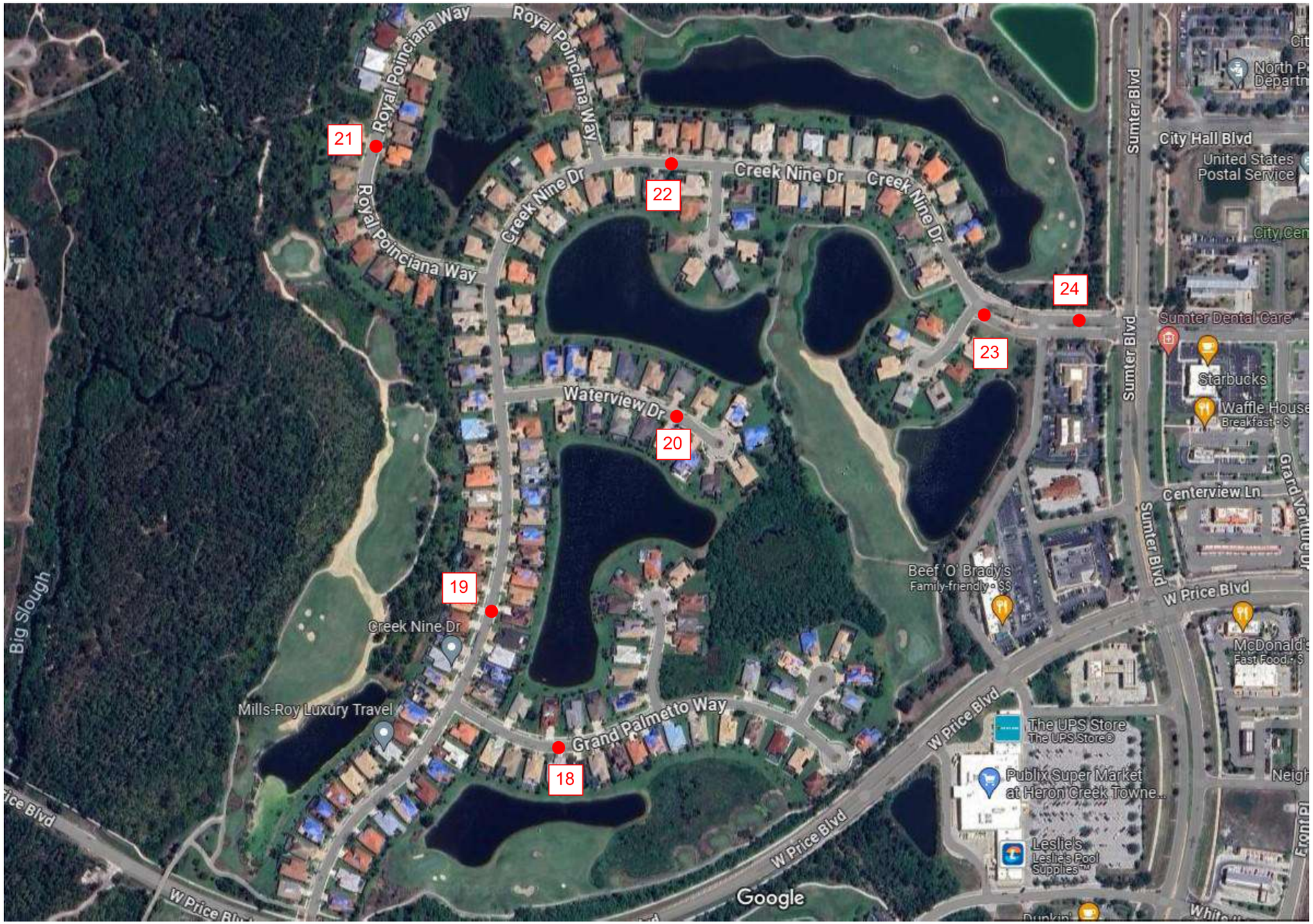
*Shell base was observed in partially cemented to cemented state

APPENDIX I

Pavement Core Locations


12
11
10
9
8
7
6
5
4
3
2
1
Blue Heron Cir
Blue Heron Cir
Club View Ln
Whispering Oaks Dr
Heron Creek Golf & Country Club
Heron Creek Blvd
Heron Creek Community Fo
Heron Creek Blvd
Appomattox Dr
Fairway Dr
Fairway Pl
Fairway Pl
Fairway Dr
Appomattox Dr
Whispering Oaks Dr
Whispering Oaks Dr
Whispering Oaks Dr
Whispering Oaks Dr
Whispering Oaks Dr
Whispering Oaks Dr
Laurel Oak Ct
Daryl Zachgo Mendez - Thrivent
S Sumter Blvd
Google


Butler Park Kids Playground
Big Slough
Big Slough
16
Eagles Flight Way
Eagles Flight Way
White Ibis Dr
17
White Ibis Dr
White Ibis Dr
Egret Ct
S Sumter Blvd
White Ibis Dr
White Ibis Dr
15
White Ibis Dr
White Ibis Dr
13
Lakeview Ln
White Ibis Dr
14
Janice Mowen - Thrivent
Pine Shadow Ln
S Sumter Blvd
Blue Heron
Google


Royal Poinciana Way
Royal Poinciana Way
Royal Poinciana Way
Creek Nine Dr
Creek Nine Dr
Creek Nine Dr
Waterview Dr
Grand Palmetto Way
Creek Nine Dr
Sumter Blvd
Sumter Blvd
Sumter Blvd
City Hall Blvd
United States Postal Service
Sumter Dental Care
Starbucks
Waffle House
Breakfast • $
Centerview Ln
Beef 'O' Brady's
Family-friendly • $$
W Price Blvd
W Price Blvd
W Price Blvd
McDonald's
Fast Food • $
The UPS Store
Publix Super Market at Heron Creek Towne...
Leslie's
Leslie's Pool Supplies
Mills-Roy Luxury Travel
Big Slough
21
22
24
23
20
19
18
Google

APPENDIX II

Pavement Core Photographic Log


PC-01


PC-02


PC-03


PC-04


PC-05


PC-06


PC-07


PC-08


PC-09


PC-10


PC-11


PC-12


PC-13


PC-14


PC-15


PC-16


PC-17


PC-18


PC-19


PC-20


PC-21


PC-22


PC-23


PC-24