Materials Testing
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Virtual Design Consulting

INFRASTRUCTURE CONDITION SURVEY

RIVER OAKS LANDING
HOMEOWNERS ASSOCIATION
ORANGE COUNTY, FLORIDA

UES PROJECT NO. A26139.04001.000



PREPARED FOR:
River Oaks Landing
Homeowners Association
2625 Stanmore Court
Orlando, Florida 32817

PREPARED BY:
UES Professional Solutions, LLC
3532 Maggie Boulevard
Orlando, Florida 32811

November 2, 2026

November 2, 2026

River Oaks Landing HOA
2625 Stanmore Court
Orlando, Florida 32817

Attention: Mr. Chris Straub - Treasurer of the HOA Board
board@riveroakslandinghoa.com

Reference: **Infrastructure Condition Survey**
River Oaks Landing
Orange County, Florida
UES Project No. A26139.04001.000

Dear Mr. Sutton:

UES Professional Solutions, LLC (UES) has conducted a limited evaluation of the condition of the River Oaks Landing community infrastructure and components. This project is located at Piping Rock Circle and Rouse Road in Orange County, Florida.

This report contains information resulting from our limited, visual assessment of the current conditions of the roadways, sidewalks, ponds, and drainage system exclusive to the community. Included is a discussion of remedial measures appropriate to the concerns that may be noted.

We appreciate the opportunity to have worked with you on this project and look forward to our continued working relationship. Please do not hesitate to contact us if you have any questions, or if we may be of further assistance.

Respectfully Submitted,
UES PROFESSIONAL SOLUTIONS, LLC
FBPE Registry No. 00000549

Stephen E. Linhares
Field Support Services

MANUEL IRIZARRY LICENSE No 81510 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Manuel Irizarry, P.E., M.E.C.E.
Sr. Project Engineer-Construction Services
STATE OF FLORIDA
Professional Engineer No. 81510

Attachments: Report Appendices A-1 (observations log), B-1 (observation photographs), C-1 (observation location plan)

SEL/MI/dkn

1.0 Introduction and Scope

1.1. General

In this report, we present the results of our limited evaluation of the current conditions of the roadways, sidewalks, ponds, and drainage system. We have divided this report into the following sections:

- 1.0 Introduction and Scope – Description of the project; outline of services performed.
- 2.0 Observations and Findings – Summary of conditions observed.
- 3.0 Conclusions and Recommendations – Recapitulation of noted observations; suggested courses of action
- 4.0 Limitations – Expressed limitations pertaining to the scope of this report.
- Appendices – The appendices include a tabled log of noteworthy observations of typical and adverse conditions, correlative photographs of noted observations, and an Observation Location Plan which depicts the approximate locations of noted observations within the community.

1.2. Project Description

The infrastructure of River Oaks Landing was developed approximately twenty-nine years ago. The purpose of this infrastructure condition survey is to evaluate whether the community's infrastructure is functioning as intended and for the board to establish monetary reserve amounts to pay for necessary future maintenance and replacement needs based upon the information that may be provided in this report. The evaluation of the infrastructure is based on a nonintrusive, visual 'walkthrough' assessment of the community roadways, sidewalks, ponds, and drainage system; as a basis for future maintenance and repair expenditures for the items mentioned. Our written descriptions, conclusions, and recommendations are based solely on our observations of the previously listed components and our experience with similar projects. At the completion of our field survey, we have prepared a report of our observations which includes the following information:

- Summary of the infrastructure's observed conditions
- Identification of potential problems within the community common areas and infrastructure
- Observation logs, representative photographs, and overview plan of observation locations

2.0 Observations and Findings

2.1 Community Walls and Signage

The community walls extend north and south of the main community entrance situated along the west side of Rouse Road. The walls are constructed of red brick on a continuous foundation with intermediate red brick columns. Signage walls are situated on either side (north and south) of the main entryway. Overall, the wall components were observed to be in relatively good condition. We did note a wall span that appears to be 'leaning' where it meets the north signage wall and that has been noted in previous surveys. The leaning does not appear to have worsened and no apparent changes to the condition were observed. Additional notes pertaining to the walls are areas with vegetation growth in direct contact with the wall(s); also noted in previous surveys. There are currently both isolated and long spans of shrubs in contact with the wall(s), and at least one location where thick tree limbs are in direct contact with the wall after apparent pruning had been performed.

2.2 Roadways

The roadways of River Oaks Landing are approximately 29 years old and appear to have been recently seal coated. Despite their age, the roadways appear to be structurally sound and in overall good condition except for the asphalt that is and has been exhibiting significant cracks and increasing frequency of crack patterns, with some older patches that appear to be failing. Additionally, and also previously noted, there is a portion of roadway edge near the mail kiosk measuring approximately 100 square feet and where the asphalt is significantly raveled, deformed, and debonding due to invasive tree roots. Unless noted specifically, there were no widespread indications of structural failure, debonding of the asphalt from the base, or indications of perched surface water or groundwater conditions that may adversely affect the pavement components.

Prominent observations made relating to the roadway conditions include, but are not limited to, *block cracking/reflective cracks*, and *raveling*. The following are brief explanations of the types of pavement distresses that commonly occur as asphalt roadways age, and such as what was observed during our evaluation:

- **Block Cracks/Reflective Cracks** are attributed to aging and drying shrinkage of the asphalt layer and/or the reflection of underlying thermal/shrinkage cracks in cementitious base materials (soil cement). Cracks in the asphalt layer can allow moisture infiltration into the pavement components and subgrade resulting in instability and failure. Once cracks have formed, they will increase in width over time as the crack walls succumb to continued drying out and raveling, and drainage scour. Due to the age of the asphalt within the community, the prevalence of these cracks continues to progress, and the block patterns are becoming increasingly smaller.

- **Raveling** is the progressive disintegration of the asphalt layer from the surface downward because of the wearing of the asphalt binder and dislodgement of aggregate particles over time. Specifically, this is loss of bond between coarse aggregate particles and the asphalt binder and occurs typically due to age. The roadways have exhibited significant raveling over time in portions of the roadways, and successive seal coating treatments seem to have slowed or at least obscured some of the detrimental effects.

2.3 Groundwater and Surface Water

We did not observe any overt indications of poor drainage, perched surface water, or groundwater conditions that may adversely affect the roadways, except where noted and regarding isolated observations. Most of the site drainage appeared to be sufficient in depositing runoff waters to roadside gutters and drainage features.

2.4 Sidewalks

While inspecting the sidewalks, we look for areas that exhibit a condition loosely classified as “stub toes” or “toe stubs”; where differential vertical movement at joints causes one section of sidewalk to be higher than the adjacent section and that create a potential trip hazard which can be a liability. This condition is generally caused by either partial settlement (over or near utilities), heaving (invasive tree roots), or fractures caused by trafficking and should be repaired promptly whenever observed. The sidewalks were observed to be in overall good condition, though we observed several areas that we recommend remediation or repairs. Remediation or repairs generally consist of removal and replacement of sidewalk panels or localized surface grinding/patching depending on the severity of the condition and grade lines of adjacent panels. In some cases, compaction of the exposed subgrade or removal of invasive tree roots is required prior to replacing removed panel sections.

2.5 Storm Drainage System

Throughout the community, gutters and storm structures were visually inspected to identify conditions that may require attention. The structures were checked for indications of leaks such as surface settlement near/around the structure or in the roadway where pipe runs may potentially exist, as well as the presence of sediment accretions/vegetative debris and windblown trash deposits in the structure bottoms. We also looked for obvious physical damage to the structures themselves. At the time of this survey, all of the structures we opened were observed to be clean of sediments or debris, and we did not observe any elevated stagnant water that may indicate downstream blockages.

We had previously noted a surface depression above a storm pipe running to the wet pond (adjacent to Lot 22). The depressional area does not appear to have changed in depth or area, but some minor channeling erosion emanating from the depression and running down slope does appear to be occurring.

We had also previously noted (3) stormwater inlet structures situated in the rear yards amongst Lots 34 through 39. These structures are inlets that tie into the roadway stormwater system that continue downstream. We were unable to locate and observe the conditions of these structures.

2.6 Community Ponds

The community storm water management consists of a “dry” pond area, a “wet” pond, and drainage swale, all situated along the west side of the community. The dry pond portion is essentially a very wide swale, which appeared to be well maintained and mowed, with no anomalous conditions observed, aside from natural tree/shrub growth encroachment. The wet pond portion is partially bound by a soil berm along its west side, with the remainder encompassed by a terraced slope constructed with 3 segmental wall tiers, and an operational fountain in the center of the pond. All pond components (structures, planned vegetation, fountain, etc.) were found to be in good overall condition. The tiered wall system primarily around the east and south sides of the retention pond has been recently improved with regrading and block work. We observed some minor windblown debris around the pond perimeter.

3.0 Conclusions and Recommendations

3.1 Community Walls and Signage

The signage walls and screen walls are accessible from the outside only and were observed to be in relatively good condition. There were no overt indications of settlement, rotation, or distress observed, except for a 'leaning' wall panel at the north signage wall that does not appear to have worsened. The intended service life and actual useful life of the wall system is dependent upon regular maintenance, and outside influences that may contribute to subsidence, rotation, or damage and degradation. Routine maintenance performed every few years or as warranted include pressure washing, retooling of mortar joints, and sealing. Large trees and roots that may affect the wall should be limbed and/or removed. Homeowners should routinely inspect their respective portions of the walls for any visible issues or conditions and proactively address removing, pruning, or limbing trees and shrubs that may adversely affect the walls.

3.2 Roadways

Based on our current observations, and aside from any noted isolated conditions, the majority of the pavements appear to remain structurally sound regarding integrity of the sublayers, and asphalt bond to base. As in previous years, we continue to notice the degradation of the asphalt surface layer over time. Successive seal coat treatments have contributed to the preservation of the pavement components and successfully extended the service life substantially.

Asphalt pavements in Florida typically have a design service life span of around 20 years. The actual useful life expectancy is dependent upon factors that may adversely affect the pavement system such as environmental conditions, drainage, contaminants/spills, as well as measures or treatments that can extend the useful life of the pavement such as surficial coatings (seal coats) and penetrative pavement dressing conditioners (PDC rejuvenation). We have previously opined that time for resurfacing within the community was immanent in order to preserve the structural integrity of the underlying pavement components. Due to the overall condition of the asphalt surface condition, we still recommend milling and resurfacing at this time. However, the successive seal coating appears to have substantially prolonged the detrimental effects of aging and wear, and the community can realistically manage forgoing resurfacing for another couple years at the expense of aesthetics, worsening localized issues, rideability, and potential moisture intrusion and damage to the underlying pavement layers.

The roadways within River Oaks Landing are comprised of approximately 7,340 square yards of asphalt. While it is difficult to estimate the cost of future milling and resurfacing due to fluctuating fuel costs, a reasonable cost range estimate at this time is approximately $15.30 to $24.45 per square yard for both milling and resurfacing. This does not account for repairs, gate loops or restriping, etc.

We have previously recommended that when the community does perform localized repairs and resurfaces the roadways that pavement rejuvenation be utilized to maintain and protect the roadways over time to extend the service/useful life of the asphalt; in lieu of successive seal coat treatments, due to common issues such as over-application that can cause slippery conditions for both vehicular and pedestrian traffic, and rapid wear-based degradation that creates a negative aesthetic within a short period of time, and we maintain this recommendation.

A successively applied rejuvenation product can typically extend the useful life of the roadway wearing surfaces well beyond the design life by sealing and protecting the pavement from age related deterioration and fuel/oil spills, while suspending the aging process by revitalizing the asphalt's oils and improving/maintaining ductility and durability.

A pavement dressing/rejuvenation product can only be applied after the roadways have been recently resurfaced and have not had any apparent protective surface treatments applied. After the community has had the roadways resurfaced, we strongly recommend that a licensed and established PDC contractor/pavement rejuvenation expert be engaged to provide an assessment of the community roadways in order to determine when an applicable product can be effectively applied and what product options are best suited to the community. Some products have a coloring (blackening) agent that may require striping/marking removal prior to application, while others are clear-based and may not require additional considerations.

3.3 Groundwater and Surface Water

We did not observe any overt indications of perched surface or actual groundwater conditions that would likely affect the roadways (i.e. soggy yards, rippling or stained pavements, etc.), and the site drainage appeared to be sufficient in depositing runoff waters to roadside gutters and drainage features/structures.

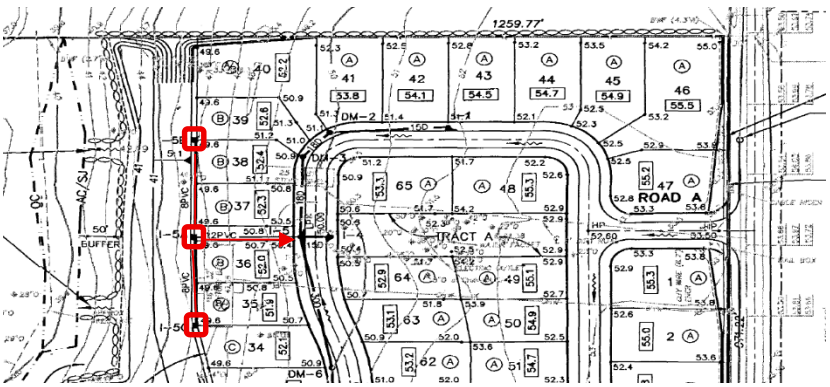
3.4 Sidewalks

The sidewalks were observed to be in overall good condition aside from noted locations. We observed a few areas that in our opinion should be immediately addressed and repaired at this time due to unevenness, breaks, and the potential for trip hazards (“stub toes”). Repairs generally consist of removal and replacement of sidewalk panels or localized surface grinding depending on the severity of the condition and grade lines of adjacent panels. We observed approximately 92 square feet of sidewalk where removal and replacement or grinding of sidewalk panels will be required throughout the community. We strongly recommend that upon removal of any concrete sidewalk panels that invasive roots be removed, and proper subgrade preparation/compaction be performed prior to concrete replacement to inhibit and prolong recurring issues.

3.5 Storm Drainage System

The drainage conditions within the community have generally been observed to be in good condition and performing as intended. All the opened storm structures were observed to be relatively clean and free of stagnant water. We typically recommend that a specialty contractor be enlisted every few years or when deemed necessary to clean the structures and flush the system to remove any potential blockages and to promote effective storm water drainage throughout the community.

Rear yard drains/inlets should be maintained and kept clear to receive area surface water/runoff. At this time, we would advise that the yard drain systems be found, exposed, and flushed to ensure there are no blockages and to determine if proper flow and water conveyance resumes. These drains are listed as inlets, but *may* also provide relief if the storm water system becomes impeded/blocked downstream of this tie in.



3.6 Community Ponds

At the time of this survey, the ponds and associated structures appeared to be generally well maintained and functioning properly. The areas around the ponds were mostly free of windblown debris and were well maintained. Representative photographs of the pond areas are presented in Appendix B.

4.0 Limitations

The information provided herein represents a *visual* assessment of the described components within the community, which did not include any invasive (destructive) evaluation of as-built conditions of said components. While our noted observations may be considered sufficient for diagnosis of conditions that may warrant remedial measures and repairs, and as a basis for a financial analysis and funding plan to offset ongoing deterioration and maintenance aspects, this report should *not* be considered a 'Reserve Study'. A 'Reserve Study', and/or operating funds financial analysis should be provided by a qualified independent consultant such as a Professional Reserve Analyst (PRA).

Appendices

Appendix A
Observation Log ..... A – 1

Appendix B
Observation Photographs ..... B – 1

Appendix C
Observation Location Plan ..... C - 1

Appendix A

Observation Log

OBSERVATION NO.	OBSERVATION DESCRIPTION	CORRECTIVE RECOMMENDATION
1	Sidewalk stub toes – tree root heaving	Remove, cut/remove roots, replace
2	Sidewalk stub toes – tree root heaving	Remove, cut/remove roots, replace
3	Sidewalk stub toes – tree root heaving	Remove, cut/remove roots, replace
4	Sidewalk corner crack – settlement/displacement	Remove and replace
5	Roadway – previous patch is failing	Repair during resurfacing
6	Roadway – asphalt/pavement deformation, debonding, and significant raveling due to invasive tree roots	Repair during resurfacing or as warranted
7	Sidewalk stub toes – utility settlement	Remove and replace
8	Roadway – old patch repair around structure/manhole failing	Repair during resurfacing
9	Damaged fire hydrant RPM	Replace immediately
10	Wall – leaning panel at entry signage wall	Continue to monitor for repair
11	Wall – large span of shrubs against and overtopping wall	Cut back vegetation
12	Wall – large shrub against and overtopping wall	Cut back vegetation
13	Wall – tree limb in direct contact with wall (previously cut back)	Cut back vegetation
14	Sidewalk stub toes	Remove and replace
15	Pond – windblown debris and excessive soil deposits	Routine maintenance
A	Roadway – general condition in cul-de-sac, block cracking/surface wear	Resurfacing
B	Roadway – general condition, block cracking/surface wear	Resurfacing
C	Roadway – general condition, block cracking/surface wear	Resurfacing
D	Roadway – general condition, block cracking/wide and puckered cracks	Resurfacing
E	Roadway – general condition, block cracking/surface wear	Resurfacing
F	Dry pond/swale area – well maintained	n/a
G	Wet pond soil berm area – well maintained	n/a
H	Wet pond control structure – good condition	n/a
I	Wet pond area – overall good condition, fountain working	n/a

Appendix B

Observation Photographs



OBSERVATION 1



OBSERVATION 2



OBSERVATION 3



OBSERVATION 4



OBSERVATION 5



OBSERVATION 6

Observation Photographs



OBSERVATION 7



OBSERVATION 8



OBSERVATION 9



OBSERVATION 10



OBSERVATION 11



OBSERVATION 12

Observation Photographs



OBSERVATION 13



OBSERVATION 14



OBSERVATION 15



OBSERVATION A



OBSERVATION B

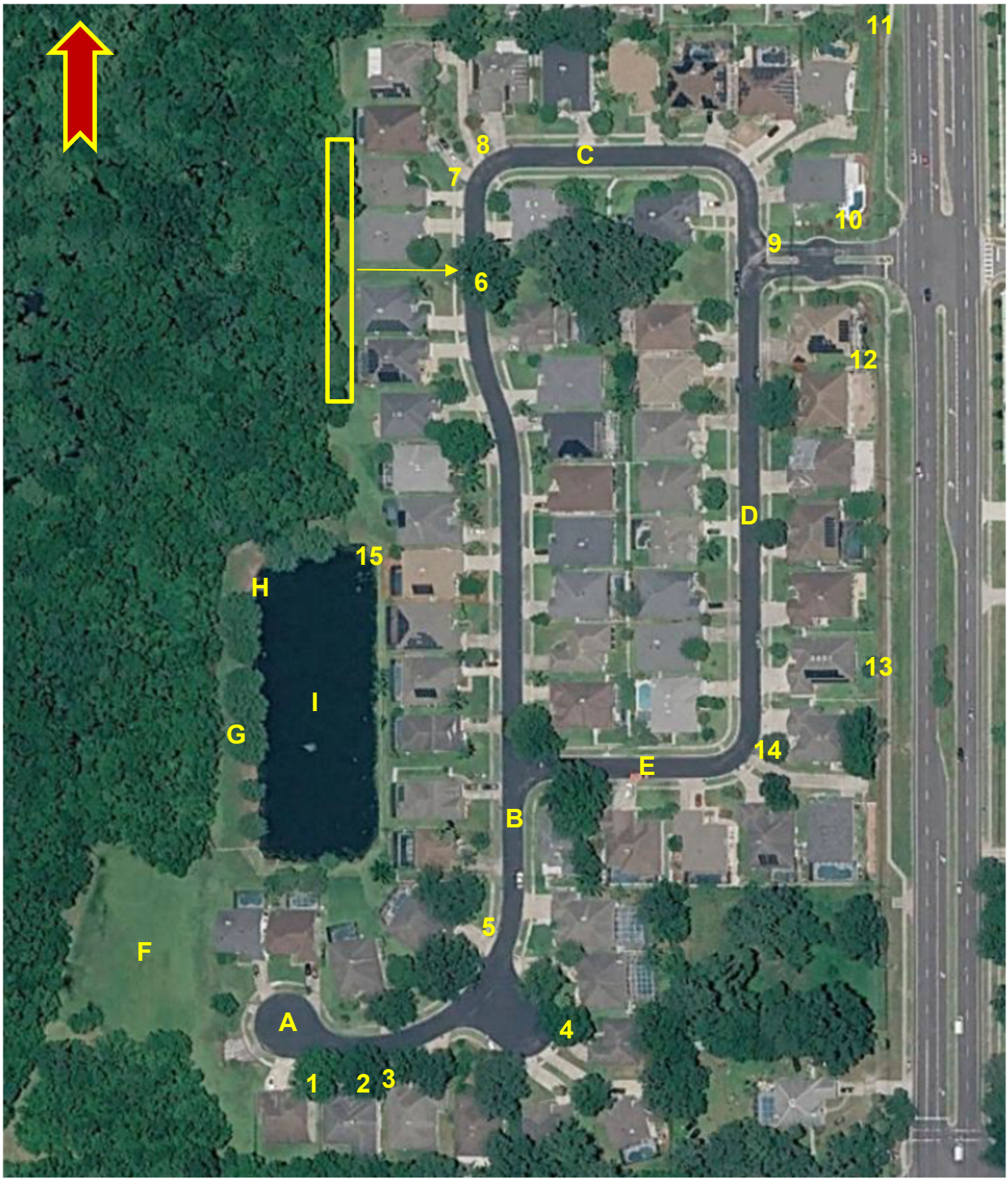


OBSERVATION C

Observation Photographs

	
OBSERVATION D	OBSERVATION E
	
OBSERVATION F	OBSERVATION G
	
OBSERVATION H	OBSERVATION I

Appendix C



UES

Infrastructure Condition Survey
River Oaks Landing
Orange County, Florida

Observation Location Plan

DRAWN BY: SEL	DATE: 11/2/2026	REVIEWED BY:	DATE:
SCALE: NTS	PROJECT NO. A26139.04001.000	REPORT NO.	PAGE NO. C-1