



GUNSTER
FLORIDA'S LAW FIRM FOR BUSINESS

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October 11, 2018

VIA HAND DELIVERY

Ms. Catherine Riiska, Principal Planner
Growth Management Department
Martin County Administrative Center
2401 SE Monterey Road
Stuart, Florida 34996

**Re: Heritage Ridge PUD, Parcel C-4 Lot 2 PUD, Final Site Plan
3rd Resubmittal
Project Number: K024-003**

Dear Catherine:

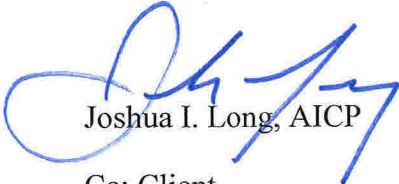
The following is a response to the October 1, 2018 staff report for Heritage Ridge PUD, Parcel C-4 Lot 2 PUD, Final Site Plan, as discussed at the October 11, 2018 Development Review Workshop meeting. One (1) original packet and a bookmarked electronic disc identical to the original packet of the following materials are provided, along with two (2) paper copies of the plans:

1. 3rd Resubmittal Cover Letter
2. Reply to staff report review comments
3. Final Site Plan
4. Demolition and Erosion Control Plan
5. Construction Plans
6. Stormwater Report
7. Geotechnical Report
8. Opinion of Probable Cost
9. Public Art (Kinetic Sculpture)

Ms. Catherine Riiska
October 11, 2018
Page 2

We believe our responses and revised documents satisfactorily address all staff concerns. Thank you for your cooperation in this matter. Should you have any questions or if I may be of further assistance, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Joshua I. Long". The signature is stylized with a large initial "J" and a long horizontal stroke.

Joshua I. Long, AICP

Cc: Client

Enclosures

FTL_ACTIVE 5204026.1

F. Determination of compliance with Comprehensive Growth Management Plan requirements - Growth Management Department

Unresolved Issues:

Item #1:

This application cannot be deemed to be in compliance with the Martin County Comprehensive Growth Management Plan (CGMP) until the issues identified in this report have been satisfactorily resolved. MARTIN COUNTY, FLA., CGMP POLICY 4.1A.1. (2016)

G. Determination of compliance with land use, site design standards, zoning, and procedural requirements - Growth Management Department

Unresolved Issues:

Item #1:

Site Plan Graphics and Data

A complete site plan is required as part of the application pursuant to Section 10.2.B.5., LDR, Martin County, Fla.

Remedy/Suggestion/Clarification:

1. Thank you for revising the site data tables to address each proposed lot as requested. However, the revision appears to have omitted the acreages previously provided. Please provide all site data in acres, in addition to the given square feet and percent of site.
Site data in acres has been provided.
2. The provided total site area on the proposed final site plan (176,572 s.f.) is inconsistent with the certified total site area on the survey (176,884 s.f.). Please verify the site area and revise the materials for consistency.
Areas have been revised for consistency throughout all plans.
3. Please revise the proposed max. building coverage from the cited 9% to 8.21% for consistency with the site data table values.
Building coverage has been revised.
4. The minimum proposed front setback is cited as 101.3 in the site data table, which is inconsistent with the 104.3' front setback dimensioned from the southwest front lot line. Please verify the minimum proposed setback and revise the appropriate value for consistency.
Minimum setback has been adjusted.
5. Advisory Comment Only - Please be advised that the minimum required setback from the centerline of SE Federal Highway is only 100', not the 150' feet cited in the data table. The applicant may propose a greater than minimum setback but is advised that development will have to be in conformance with the site plan data as approved. Staff recommends that the minimum requirement for centerline setbacks be cited within the site data to prevent any future inconsistencies should minor revisions to this setback via building permits or field construction conditions be required.
Distance has been corrected to 100 feet.

Item #2:

Elective Resubmittal Fee

An additional fee is required for the review of the elective resubmittal of documents for this development application. Please remit the \$2,282.00 elective resubmittal review fee with the resubmittal package.

MARTIN COUNTY, FLA., LDR, §10.2.D.4 (2016)

Please find enclosed fee.

***H. Determination of compliance with the urban design and community redevelopment requirements
– Community Development Department***

Commercial Design

Unresolved Issues:

Item #1:

Artwork - Commercial Developments

In addition to all other requirements of this subsection 4.872.C, Land Development Regulations, Martin County, Fla. (2013), developments located at an intersection of two or more arterial or collector streets shall provide a prominent architectural feature such as, but not limited to a monument, sculpture or clock tower to emphasize their location as gateways and transition within the community.

Remedy/Suggestion/Clarification:

The proposed development is located at the intersection of a collector and an arterial street. In addition to showing on the site plan the location of architectural feature please provide a rendering, elevations drawings and a floor plan of the required artwork.

A 7' 5" kinetic art sculpture is proposed, the art will rotate with the wind, has uplighting for night time and sits upon a 4' tall pedestal. A walkway has been provided from the sidewalk to the art and two benches are provided for viewing pleasure.

Landscape

Unresolved Issues:

Item #1:

Landscape Tabular Data

Landscape plans shall include a table which lists the gross and net acreage, acreage of development and preservation areas, number of trees and tree clusters to be protected within the developed area and within perimeter areas, and square footage of vehicular use areas (Ref. Section 4.662.A.10, LDR).

Remedy/Suggestion/Clarification:

The site area on the landscape plans is still confusing; at the top it is consistent with the site plan that provides the area as 111,363 sq. ft., but right below when calculating minimum quantity of trees required it reduces the site area to 106,852 sq. ft. I believe that sufficient trees to meet the larger site area have been provided but please explain the difference.

The table has decreased protected trees to 5 trees. Please review and confirm to maximize protection of existing native trees. See also Item #3 below.

Corrections to the table and protected trees have been made.

Item #2:

Landscape Native Tree Protect & Survey

A tree survey is required to identify specific native trees required to be protected from development [Section 4.666, LDR]. Please note that trees in proposed preservation areas, palm trees and non-native species need not be identified on this survey. Existing native vegetation shall be retained to act as buffers between adjacent land uses, and to minimize nuisance dust noise and air pollution during construction. The following information shall be provided for trees in the developed area:

1. A tree survey including approximate position of protected trees, protected tree clusters, landscaping and other vegetation to be preserved or removed. Trees required to be protected include any hardwood native tree having a diameter of eight inches DBH or greater throughout the developed site. Within the perimeter area, protected trees include any native hardwood tree four (4) inches DBH or greater, or any native softwood tree including pine trees (8) inches DBH or greater. Clearly identify the specific tree species required to be protected on the survey; these trees should be flagged in the field for staff verification.
2. As a condition of the issuance of a permit for removal of a protected tree, a satisfactory plan shall be presented by the applicant for the successful replacement of trees to be removed, based on the schedule found in Section 4.666.D., LDRs. Such schedule may be offset by the tree preservation schedule, for protected trees to be retained on site, as found in Section 4.664.F., LDRs.

Why are the two Oaks in the center median of Constitution Blvd. being proposed to be removed?

These trees are not being removed, the error has been corrected on the plans.

Remedy/Suggestion/Clarification:

The tree in the northeast corner is shown as protected on all plans but is a carrotwood, these are prohibited species and must be removed from the site. Perimeter vehicular use plantings are required along this entry drive.

The prohibited tree is now recommended for removal and perimeter plantings are provided.

Item #3:

Construction Standards - Tree Protection

Please provide for the locations, construction and maintenance requirements of tree protection barricades on the appropriate pages of the landscape and construction plans [Section 4.666.B., LDR].

The following shall be included on the land-clearing page and the landscape plans:

1. Location of protected trees with tree protection barricades, where warranted. Barricades must be constructed around the critical protection zone of each tree or cluster of trees.

Remedy/Suggestion/Clarification:

The clearing plan and trees shown on the landscape plan as protected are not consistent, it appears that fewer trees are now proposed to be protected on the landscape plans. Please explain why the trees south of the cross-access drive are no longer shown on the landscape plan as protected but also are not shown as being removed; (several of the existing trees have now been identified to be earleaf acacia and must be removed but there also are several large oaks in this area); these trees are also not listed on the summary removal table. These trees are shown as protected on the clearing plan. There are also a 10 inch oak and an 8 inch oak close to tree #13 that now are not shown as protected on the landscape plans.

Trees number 21 and 22 are shown as being removed, however proposed grades in this area are very close to existing grade; it should be reviewed if they can be protected in place. The landscape plans also now propose to remove the two large banyans at the corner, and yes they are invasive trees on the list however

the prohibited list also allows for retention if they are greater than 50 feet from pavement; residents of Heritage Ridge are very fond and attached to these trees, neighborhood inquiries have already been received and uproar can be expected with proposed removal. The clearing plan shows them as protected. **Corrections have been made to the Landscape & Demolition Plan.**

M. Determination of compliance with engineering, storm water and flood management requirements - Engineering Department

Unresolved Issues:

Item #1:

Rights Of Way Improvements

1. Label the existing right-of-way line on the north side of SE Constitution Blvd on the Final Site Plan and construction plans.
ROW has been labeled.
2. Revise Detail for Right-of-Way Work and Section Detail B-B to include a Superpave asphalt course (Martin County Engineering Standard Detail R-10) on the Final Site Plan and construction plans.
Superpave asphalt course has been added and MC Detail R-10 has been referenced.
3. Revise Detail for Right-of-Way Work and Section Detail B-B to require a minimum LBR 150 for crushed concrete base (see FDOT Standard Specifications Section 911-3.1 Table 911-1) on the Final Site Plan and construction plans.
LBR has been revised.
4. Revise Section Detail B-B to match the grades of the existing swale. The proposed 4' paved shoulder should match the slope of the existing travel lane (2% typ) and the remaining width of the proposed stabilized area should match the contour of the existing swale.
Section detail has been revised to follow existing contours and elevations.
5. Revise proposed stormwater cross drain pipe sizing to provide for a minimum 15" RCP on the construction plans.
Pipe and inlets are no longer needed at the section across the site, since section now follows existing contours. Other pipe in the ROW has been changed to 15".
6. Revise Site Legend and Grading Legend to include symbol for proposed stabilized area on the Final Site Plan and construction plans.
Symbol has been added.

Item #2:

Off-Street Parking

1. Revise the striping layout for the two crosswalks being shown within the proposed parking lot to be consistent with a mid-block crosswalk on the Final Site Plan and construction plans (Martin County Standard Detail R-120B).
Striping layout for the sidewalk has been revised and MC Detail R-120B has been referenced.
2. Provide three post mounted end of road markers at the proposed paved access terminating at the north property line. Post mounted end of road markers shall be Class II Red Reflectors per FDOT Standard Plans Index 700-109.
Markers have been added.

Item #3:

Consistency With Other Plans

1. The total site area on the Construction Plans and Final Site Plan is inconsistent with the Boundary and Topographic Survey. Currently, the Boundary Survey indicates a total combined parcel area for Lots 2A and 2B to be 176,884 SF; however, the combined SF on the Site Data table on the Final Site Plan is 176,572 SF. Currently, the Site Data table shown on the Cover Sheet of the construction drawings does not include the area for lot 2B. Reconcile and revise all site data tables accordingly.

Areas have been revised for consistency.

2. Revise all references to FDOT Design Standard Index numbers 2017-18 to be consistent with the FDOT Design Standard Plans Index numbers 2018-19 throughout all plan sheets.

FDOT standard indexes numbers have been revised.

Item #4:

Stormwater Mgmt Report

A revised Stormwater Management Report was not submitted for this review. As such, a complete and thorough review of the Stormwater Management System could not be conducted by staff as part of this review. Below is a list of comments, which were previously provided to the applicant on 5/31/2018.

1. As previously requested, provide supporting documentation for the wet season water table determination. The Stormwater Management Report references a study done by a geotechnical engineer from ATC. Provide the report and boring results from the geotechnical study as supporting documentation.

The Geotechnical Report has been submitted with this submittal.

2. As previously commented, it is unclear where the data in the FDOT Critical Duration Storm Summary came from. For example, the ICPR results table (page 7) shows a maximum outflow for the 25-year 3-day storm event for Node PR. Pond to be 0.57 CFS. The FDOT Critical Duration Storm Summary lists a post runoff rate of 0.33 cfs for the 25-year 3-day storm event. For ease of review and clarification on how the stormwater system is modeled, provide the ICPR input and results data for the following storm events only: 25-year 3-day, 100-year 3-day, 10year 1-day.

The FDOT Summary table has been updated to reflect the discharge rates reported in the ICPR model for POST conditions. None of the storms shows results where POST flows exceed PRE flows. Note that the model results for FDOT differ from the model results prepared for Martin County because FDOT allows infiltration to occur during the routing of the storm.

3. As previously requested, the minimum finished floor elevation should be the maximum predicted stage of the 100-year 3-day storm event with zero discharge. Revise accordingly.

A maximum stage of EL 17.23 is predicted for a 100-year 3-day storm event with no discharge. This elevation was reported on Page #16 of the Feb 2018 Stormwater Report. It is based on stacking the entire 100-yr, 72-hr runoff in the pond and up into the parking lot with no infiltration or other discharge allowed.

4. As previously requested, provide a summary in the narrative explaining the elevations calculated for the minimum finished floor elevation, perimeter berm elevation, and pavement elevation.

Explanations have been added to the narrative for each of the referenced items:

(A) minimum finished floor elevation – must exceed EL 17.27 based on retaining all runoff from a 100-yr, 72-hr storm event with no discharge

(B) perimeter berm elevation – must exceed the highest design high water level for the agencies having jurisdiction, plus any applicable freeboard

(1) SFWMD 25-yr, 72-hr design high water (EL 15.39)

(2) Martin Co 25-yr, 72-hr design high water (EL 15.88)

(3a) FDOT 100-yr Critical Duration Storm DHW plus 1 ft freeboard around pond (EL 15.86 + 1.00 = EL 16.86)

(3b) FDOT 100-yr Critical Duration Storm DHW plus 0.5 ft freeboard around pond (EL 15.86 + 0.50 = EL 16.36)

(C) pavement elevation – must exceed Martin Co 10-yr, 24-hr DHW (EL 15.55)

5. As previously commented, a CN value of 100 cannot be used for the dry retention area as it is pervious. Revise the Summary of Ground Cover Data table accordingly.

The weighted CN value for the referenced basin has been updated to use CN = 39 for the dry pond area instead of CN=100.

We understand that Martin County has a policy (but not a written ordinance) that requires ponds to be designed to ignore the potential for infiltration to occur in a pond during the dynamic simulation of the design storms. The enclosed ICPR model has been rerun without the percolation link that allowed infiltration to occur. The model results show the receiving ditch will receive less volume from the site in a 3-yr, 24-hr storm and in a 25-yr, 72-hr storm as a result of the proposed improvements. Refer to the updated Stormwater Report.

Item #5:

Stormwater Mgmt Construction Plans

1. Demonstrate appropriate harmonization between proposed grades onsite and existing grades at the southeast property line. Label proposed slope within Section A-A where proposed improvements meet the adjacent property line. Proposed slope shall not exceed 4H:1V.

Proposed grades and slopes have been revised.

STORMWATER REPORT

FOR:

Dollar General Hobe Sound Martin County, Florida

Prepared for:



**Zaremba Group, LLC
14600 Detroit Avenue, Suite 1500
Lakewood, Ohio 44107**

Prepared by:



2300 Curlew Road, Suite 201
Palm Harbor, FL 34683

Submitted To:

Martin County

**August 2018
AVID Project No. 649-005**

**Dollar General Hobe Sound
Martin County, Florida
Gomez Grant**

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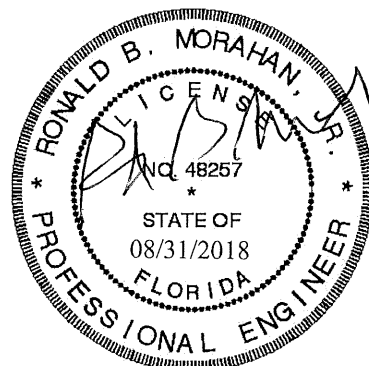
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(Design addresses FAC 40E-40, FAC 14-86, and Martin County LDR Division 9)

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Attachments

Tailwater from ERP No. 43-00971-P
Photos of Existing Condition in FDOT Right-of-Way
Operation and Maintenance Guidelines



Ronald B. Morahan, Jr., P.E.
FL Reg. No. 48257

PROPOSED DEVELOPMENT OVERVIEW:

The subject property is located at the southeast corner of the intersection of Constitution Blvd and SE Federal Hwy (US 1) in Martin County, FL in the Gomez Grant. The area of proposed construction is currently undeveloped and contains scattered trees. The topography of the site is generally flat with an approximate grade change of 1 ft +/- across the site.

DESIGN CRITERIA:

Stormwater management for this site falls under the jurisdiction of SFWMD, Martin County, and FDOT. The stormwater design criteria for the system are as follows:

- Dry retention treatment volume shall be provided for SFWMD's presumptive treatment, which is equal to 50% of the treatment volume required for wet detention treatment, or a depth of treatment adequate to provide a net improvement in nutrient discharge, whichever is greater.
- Dry retention treatment shall be provided for the required treatment volume per Martin County requirements, which is three inches of runoff across the pond's contributing impervious area.
- The retention pond must fully recover the treatment volume within 72 hours per SFWMD.
- The retention pond must recover half of the treatment volume between 24 hours and five days per Martin County.
- The retention pond must recover 90 percent of the 25-yr, 72-hr runoff volume in 12 days from cessation of the storm event per Martin County.
- The proposed discharge rate to the receiving water shall not exceed the existing rate of runoff in the 25-yr, 72-hr storm event per SFWMD and Martin County
- The proposed discharge rate to the receiving water shall not exceed the existing rate of runoff in any of the Critical Duration storm events per FDOT.
- The proposed discharge volume to the receiving water shall not exceed the existing rate of runoff in the 25-yr, 72-hr and 3-yr, 24-hr storm event per Martin County.
- Proposed peak stages in the pond shall not exceed the lowest proposed grate elevation or edge of pavement within the pond's contributing area per Martin County 10yr-24hr storm event.
- Building floors shall be at or above the 100-year base flood elevation for the site.
- Site grading must provide a minimum 6-inch freeboard where overflow would occur over paved surface (curb / driveway). Site grading must provide a minimum 1-foot freeboard where overflow would occur over grass surface (pond top-of-bank). Freeboard is measured above the 100-yr critical storm DHW per FDOT.
- The retention area shall be designed with side slopes no steeper than 4:1.
- Martin County's policy is to prohibit percolation during routing of water quantity storms.

EXISTING SITE CONDITIONS:

Existing site conditions are reflected on the enclosed topographic survey performed by AVID Group on 02/10/17. Elevations on the topographic survey are relative the North American Vertical Datum of 1988 (NAVD88). All elevations reported in this document (and the

associated construction plans) refer to NAVD88. The site is undeveloped. No wetlands or floodplain exist within the proposed construction area.

Basins:

Based on the existing topo survey, the ground elevation slopes from northwest to southeast and no offsite runoff flows through the project area. Therefore, the limit of existing basin boundary is determined where the project land areas will be graded/disturbed.

The existing site drains generally to the southeast towards the offsite FDOT Ditch #1. FDOT Ditch #1 drains generally north through the Heritage Ridge development to FDOT Ditch #2, which connects to East Fork Creek. East Fork Creek joins Manatee Creek north of Cove Road and drains to the tidal tailwater at Manatee Pocket, an estuary off the St. Lucie River.

On-Site Soils:

According to the Martin County NRCS Soil survey, the site contains Archbold sand (Soil #14) and Arents, 0 to 12 percent slopes (Soil #36). NRCS reports Soil #14 and #36 as hydrologic soil group (HSG) A. The project geotechnical engineer, ATC verified the following aquifer data in the area of the proposed pond:

Depth to seasonal high groundwater = 12 to 18 in above observed groundwater level

Depth to confining layer = 20 feet (not encountered to bottom of boring)

Avg. Vertical Hydraulic Conductivity = 13.88 ft/day (Boring B4 & B5)

Avg. Horizontal Hydraulic Conductivity = 27.75 ft/day (Boring B4 & B5)

Effective Storage Coefficient = 25%

Seasonal High-Water Level (SHW)

The average SHW for the pond was set based on the height of SHW above groundwater level in Boring B4 & B5. Per geotechnical report, the height of SHW above groundwater level is 1.25 ft. Groundwater elevation in Borings B4 & B5 are indicated at elevations of 5.6 ft and 6.6 ft, respectively. The SHWs in borings B4 & B5 are 10.65 ft and 11.65 ft, respectively. So, the average SHW for Pond is set at El. 11.15 ft NAVD.

Runoff Curve Number (CN)

The CN for the existing pervious areas is based on a land cover of "Open space" with good ground cover and HSG A. The CN for existing pervious areas is 39. The CN for impervious surface is 98. The CN for open water / pond is 100.

Time of Concentration

The time of concentration is calculated using Manning's kinematic solution as presented in USDA NRCS Technical Release 55 (TR-55).

Pre-Developed Discharge Rate:

The allowable discharge rate to the receiving water was determined by delineating the basin draining toward the FDOT ditch using the site topographic survey. The basin area, together with

the time of concentration and runoff curve number, were used to calculate the existing peak rate of runoff to the receiving water.

Nutrient Impairment

The project lies in WBID 3220 – Basin 2 of the St Lucie/Loxahatchee Group, which does not appear on FDEP's verified impaired waters list. However, the conveyance downstream of the project site drains to the St Lucie River, which is nutrient impaired. Net improvement of nutrient discharge is required.

Floodplain & Wetland:

FEMA Flood Insurance Rate Map 12085C0310G shows the property lying in Flood Zone X, Zone X-shaded and a small south portion of the site is in Zone AE. However, the floodplain will not be encroached by the proposed development. Based on the elevation above SHW and the highly permeable condition of the site, no wetlands exist on the site.

POST-DEVELOPMENT CONDITIONS:

The property is proposed to be developed as a Dollar General store. The proposed improvements include an onsite stormwater retention area that can accommodate the treatment and attenuation requirements for runoff from the proposed development.

Curve Number (CN):

The proposed runoff curve number for the development was calculated as a weighted average based on the proposed land coverage of impervious, pervious and pond areas. The same runoff curve numbers used in the existing condition analysis were used in the proposed condition analysis. See attached calculations.

Post Developed Discharge:

FDOT allows proposed discharge that does not exceed the existing rates of runoff in the Critical Duration storms. SFWMD allows proposed discharge that does not exceed the existing rate of runoff in the 25-yr, 72-hr storm. Martin County allows proposed discharge that does not exceed the existing rate of runoff in the 25-yr, 72-hr storm or the existing volume of runoff in the 3-yr, 24-hr & 25-yr, 72-hr storms.

Water Quality Treatment:

The dry retention pond will provide the required water quality treatment for the project area. The required treatment is the greatest of:

- presumptive treatment volume required by SFWMD
- volume required to create a net improvement in nutrient discharge per SFWMD
- 3" of runoff across the project's imperviousness areas per Martin County

Recovery of the water quality volume will occur within 72 hours via percolation. Recovery of the half of the water quality volume will occur between 24 hours and five days via percolation per Martin County.

For Martin County treatment recovery, the factor of safety of 6 has been applied to the actual percolation rate provided by the geotechnical engineer.

Floodplain & Wetland

The property lies in Flood Zone X and contains no wetlands. No floodplain or wetland encroachment is proposed.

Minimum Grading Elevations

The minimum finished floor elevation must exceed EL 17.27 based on retaining all runoff from a 100-yr, 72-hr storm event with no discharge.

The perimeter berm elevation must exceed the highest design high water level for the agencies having jurisdiction, plus any applicable freeboard

- (1) SFWMD 25-yr, 72-hr design high water (EL 15.39)
- (2) Martin Co 25-yr, 72-hr design high water (EL 15.88)
- (3a) FDOT 100-yr Critical Duration Storm DHW plus 1 ft freeboard around pond (EL $15.86 + 1.00 = \text{EL } 16.86$)
- (3b) FDOT 100-yr Critical Duration Storm DHW plus 0.5 ft freeboard around pond (EL $15.86 + 0.50 = \text{EL } 16.36$)

The pavement elevation must exceed the Martin Co 10-yr, 24-hr DHW (EL 15.55)

CONCLUSION:

The proposed surface water management system has been designed to meet or exceed the requirements of Martin County, SFWMD, and FDOT.



**MARTIN COUNTY ENGINEERING DEPARTMENT
ENGINEER'S OPINION OF PROBABLE COST**

PROJECT NAME: _____

PHASE/PARCEL/PLAT: _____

<u>ITEM</u>	<u>QTY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>AMOUNT</u>
EARTHWORK/SITEWORK				
a) Mobilization	<u>1</u>	LS	\$25,000.00	25,000.00
b) Clearing, grading and grubbing	<u>1.9</u>	AC	\$3,000.00	5,700.00
c) Excavation (cut)	<u>1,976</u>	CY	\$7.00	13,832.00
d) Embankment (fill)	<u>2,064</u>	CY	\$12.50	25,800.00
e) Sod and seed/mulch	<u>2,550</u>	SY	\$2.00	5,100.00
f) Concrete disposal	<u>0.0</u>	TN	\$60.00	0.00
g) Erosion control	<u>1,200</u>	LS	\$0.00	0.00
h) Fencing/railing	<u>0</u>	LS	\$0.00	0.00
i) Materials testing	<u>750</u>	LS	\$0.00	0.00
			Subtotal	75,432.00
ROADWORK				
a) Asphalt milling, 1" avg.	<u>0</u>	SY	\$1.50	0.00
b) Stabilized subgrade, roll in place	<u>3,340</u>	SY	\$3.00	10,020.00
c) Stabilized subgrade, Type B, 12" thick	<u>3,340</u>	SY	\$7.50	25,050.00
d) Paving base, optional base group 6	<u>0</u>	SY	\$12.50	0.00
e) Paving base, optional base group 9	<u>3,340</u>	SY	\$15.50	51,770.00
f) Paving base, other	<u>0</u>	SY	\$0.00	0.00
g) Asphaltic concrete, SP-9.5, 1-1/2" thick	<u>0</u>	SY	\$15.00	0.00
h) Asphaltic concrete, SP-9.5, 2 1/2" thick	<u>3,340</u>	SY	\$25.00	83,500.00
i) Asphaltic concrete, SP-9.5, 3" thick	<u>0</u>	SY	\$30.00	0.00
j) Asphalt overlay, SP-9.5 (<= 150 tons)	<u>0.0</u>	TN	\$150.00	0.00
k) Asphalt overlay, SP-9.5 (> 150 tons)	<u>0.0</u>	TN	\$120.00	0.00
l) Pervious asphalt or concrete	<u>0</u>	SY	\$60.00	0.00
m) Concrete curb & gutters	<u>300</u>	LF	\$14.25	4,275.00
q) Sidewalk, 6' wide	<u>524</u>	LF	\$25.00	13,100.00
r) Maintenance of traffic (M.O.T.)	<u>1</u>	LS	\$2,500.00	2,500.00
			Subtotal	190,215.00
DRAINAGE				
a) Inlets / Manholes (<10' depth)	<u>4</u>	EA	\$3,000.00	12,000.00
b) Inlets / Manholes (10' or > depth)	<u>0</u>	EA	\$4,000.00	0.00
c) Control structures	<u>1</u>	EA	\$6,000.00	6,000.00
d) Endwalls	<u>0</u>	CY	\$700.00	0.00
e) Rip-rap	<u>2</u>	CY	\$80.00	184.00
f) Storm culvert, 15" dia. or equiv.	<u>104</u>	LF	\$28.00	2,912.00
g) Storm culvert, 18" dia. or equiv.	<u>382</u>	LF	\$34.00	12,988.00
h) Storm culvert, 24" dia. or equiv.	<u>15</u>	LF	\$48.00	720.00
i) Storm culvert, 30" dia. or equiv.	<u>0</u>	LF	\$65.00	0.00



MARTIN COUNTY ENGINEERING DEPARTMENT ENGINEER'S OPINION OF PROBABLE COST

j) Storm culvert, 36" dia. or equiv.	<u>0</u>	LF	\$88.00	0.00
k) Storm culvert, 48" dia. Or equiv.	<u>0</u>	LF	\$125.00	0.00
l) Exfiltration trench	<u>0</u>	LF	\$100.00	0.00
			Subtotal	34,804.00

UTILITIES

a) Water main, 4"	<u>0</u>	LF	\$13.00	0.00
b) Water main, 6"	<u>96</u>	LF	\$17.50	1,680.00
c) Water main, 8"	<u>0</u>	LF	\$23.50	0.00
d) Water main, 10"	<u>0</u>	LF	\$31.25	0.00
e) Water main, 12"	<u>0</u>	LF	\$40.00	0.00
f) Water service, single	<u>1</u>	EA	\$790.00	790.00
g) Water service, double	<u>0</u>	EA	\$930.00	0.00
h) Fire hydrant assembly	<u>1</u>	EA	\$3,600.00	3,600.00
i) Sewer main, 8" gravity (<=8' depth)	<u>0</u>	LF	\$28.00	0.00
j) Sewer main, 8" gravity (<8'-12' depth)	<u>0</u>	LF	\$43.00	0.00
k) Sewer main, 8" gravity (<12'-16' depth)	<u>0</u>	LF	\$88.00	0.00
l) Sewer main, 8" gravity (<16'-20' depth)	<u>0</u>	LF	\$104.00	0.00
m) Sewer main, force, (4")	<u>305</u>	LF	\$13.50	4,117.50
n) Sewer manhole (<=8' depth)	<u>0</u>	EA	\$2,900.00	0.00
o) Sewer manhole (<8'-12' depth)	<u>0</u>	EA	\$3,850.00	0.00
p) Sewer manhole (<12'-16' depth)	<u>0</u>	EA	\$5,500.00	0.00
q) Sewer manhole (<16'-20' depth)	<u>0</u>	EA	\$8,800.00	0.00
r) Sewer lateral, single	<u>1</u>	EA	\$900.00	900.00
s) Sewer lateral, double	<u>0</u>	EA	\$1,100.00	0.00
t) Lift Station	<u>1</u>	EA	\$15,000.00	15,000.00
u) Directional drill (<= 6" dia.)	<u>73</u>	LF	\$50.00	3,650.00
v) Directional drill (8"-10" dia.)	<u>0</u>	LF	\$88.00	0.00
w) Directional drill (12" or > dia.)	<u>0</u>	LF	\$140.00	0.00
			Subtotal	\$29,737.50

TRAFFIC

a) Signage	<u>1</u>	LS	\$500.00	500.00
b) Striping	<u>1</u>	LS	\$1,500.00	1,500.00
c) Control devices (signals)	<u>0</u>	EA	\$0.00	0.00
			Subtotal	\$2,000.00

SURVEY

a) Setting P.C.P.'s	<u>0</u>	LS	\$0.00	0.00
b) Setting and replacing all P.R.M.'s	<u>1</u>	LS	\$2,000.00	2,000.00
c) Setting all lot corners	<u>1</u>	LS	\$1,500.00	1,500.00
			Subtotal	\$3,500.00



MARTIN COUNTY ENGINEERING DEPARTMENT
ENGINEER'S OPINION OF PROBABLE COST

MISCELLANEOUS

a)		0	\$0.00	0.00
b)		0	\$0.00	0.00
c)		0	\$0.00	0.00
			Subtotal	\$0.00

TOTAL ESTIMATED COST OF IMPROVEMENTS **\$335,688.50**

****Disclaimer****

- 1) Unit prices pre-entered on this spreadsheet reflect Martin County annual requirements contractors' unit prices and should not be modified without the approval of the County Engineer or his designee.

Prepared by:

Jorge Hernandez
Professional Engineer's Name

Professional Engineer's Signature / Seal

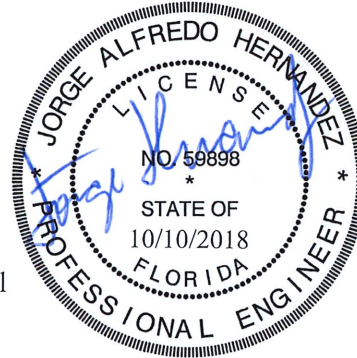
59898
P.E. No.

10/10/2018
Date

Avid Group / COA 6139
Firm's Name and Licensed Business No. (if applicable)

2300 Curlew Rd., Suite 201, Palm Harbor, FL 34683
Firm's Address

(727) 789-9500
Phone No.



County Engineer's (or designee) Acceptance