Planning and Development
510 North Baker Street
Mount Dora, Florida 32757
352-735-7112
Email: plandev@cityofmountdora.com

PLANNING & ZONING COMMISSION
City Hall Board Room
Wednesday, August 17, 2022, 10:00 AM

AGENDA

I. Call to Order

II. Roll Call with Determination of Quorum

III. Approval of Minutes

IV. Public participation/hearing for non-agenda items

V. New Business

A. **Request for Final Plan and Plat (Replat);** Lake Franklin Estates (Project Name); Maronda Homes (Owner); Maronda Homes (Applicant); Civil Design Solutions, LLC (Engineer). Project No. PR22-06FNLC.
   1. Swearing in of witnesses by City Attorney
   2. Ex Parte Communication regarding this item.
   3. Staff/Applicant presentation
   4. Public Input
   5. Commission deliberation and action

B. **Request for Site Plan**: Longhorn Steakhouse (Project Name); 17020 US Hwy 441 (Site Address); Wal-Mart Stores (Owner); CASTO Net Lease Properties LLC (Applicant); Kimley-Horn and Associates, Inc. (Engineer); Kimley-Horn and Associates, Inc. (Landscape Architect); ACS Cincinnati (Architect). Project No. SP22-05.
   1. Swearing in of witnesses by City Attorney
   2. Ex Parte Communication regarding this item.
   3. Staff/Applicant presentation
   4. Public Input
   5. Commission deliberation and action

C. **Local Planning Agency. Request for Small- Scale Future Land Use Map;** Vedder Holsters (Project Name); 1649 Lincoln Avenue (Site Address); Sean A Jones (Owner); Green Consulting Group, Inc. (Applicant). Project No. FLUM22-02SM.
   1. Swearing in of witnesses by City Attorney

2. Ex Parte Communication regarding this item.
3. Staff/Applicant presentation
4. Public Input
5. Commission deliberation and action

D. **Request for Final PUD;** Vedder Holsters (Project Name); 1649 Lincoln Avenue (Site Address); Sean A Jones (Owner); Green Consulting Group (Applicant); Green Consulting Group, Inc (Landscape Architect). Project No. PUD22-01FNL.
   1. Swearing in of witnesses by City Attorney
   2. Ex Parte Communication regarding this item.
   3. Staff/Applicant presentation
   4. Public Input
   5. Commission deliberation and action

E. **Request for Land Development Code Amendment (Continuance from the July 20, 2022 PZC meeting)**
   1. Staff presentation
   2. Public Input
   3. Commission deliberation and action

VI. Other Business

VII. Announcement of next scheduled meeting date

A. Regularly Scheduled Meeting : Wednesday, September 21, 2022 (10:00 am)

VIII. Adjournment

NOTICE: For purposes of Section 286.011, *Florida Statutes*, two (2) or more members of the City Council may be present at this meeting and this meeting may be considered a City Council meeting although no decision of the City Council will be made at this meeting and the City Council shall comply with the requirements of controlling State law in every respect.

NOTICE: If any person decides to appeal any decisions made at this meeting with respect to any matter considered at this meeting, such person may need a record of these proceedings. For such purpose, a person may need to ensure that a verbatim record of the proceedings is made which record includes the testimony and evidence upon which the appeal is to be based. The City shall not make or perfect such a record. Section 286.0105, *Florida Statutes*.

NOTICE: In accordance with the *Americans with Disabilities Act*, persons needing a special accommodation to participate in this proceeding should contact the Planning and Development Department no later than seven (7) days prior to the proceedings. Telephone (352) 735-7112 for assistance, if hearing impaired, telephone the Florida Relay Service numbers, (800) 955-8771 (TDD) or (800) 955-8770 (Voice) for assistance**.**

CITY OF
MOUNT DORA, FLORIDA
PLANNING AND ZONING
COMMISSION
MINUTES

July 20, 2022

Call to Order

Having been duly advertised as required by law Chairman, Harmon Massey called the regular meeting of the Planning and Zoning Commission to order at 10:00 a.m. on Wednesday, July 20, 2022.

Roll Call with Determination of Quorum

Committee Members: Harmon Massey, *Chairperson*, Rebecca Carter, *Vice-Chair*, Miles Beach, Tom Dring, Kris Haukoos, James Homich and Ryan Parent (Resigned)

Absent: Ryan Parent

City Staff and Attorney: Vince Sandersfeld, *Planning Director*; Michele Janiszewski, *Senior Planner;* Sherry Sutphen, *City Attorney*; Emily Ragusa, *Associate Planner;* Whitney Scott, *Administrative Coordinator*

Presenters: Nicole Duslak, *Create Conservatory, Inc.,*

Approval of Minutes

Ms. Haukoos motioned to approve the meeting minutes dated June 15, 2022. Mr. Dring seconded the motion and it was approved unanimously.

Public participation/hearing for non-agenda items

None

New Business

A. **Request for Rezoning;** Lake County Water Authority (Project Name); Round Lake Road and Robie Ave (Location); Lake County Water Authority (Owner); Lake County Water Authority (Applicant). Project No. Z22-02.

1. Swearing in of witnesses by City Attorney 2.
Ex Parte Communication regarding this item.
3. Staff/Applicant presentation
4. Public Input
5. Commission deliberation and action

City Attorney, Sherry Sutphen addressed the swearing in of witnesses.

No Ex Parte Communication regarding these agenda items.

Ms. Janiszewski provided a summary of the proposed application and stated that Staff recommends approval of the above-referenced request for change in zoning assignment from County R-1 and County LM (Light Manufacturing) to City Green Belt (GB) and forwards same consideration to the City Council on Tuesday, August 2, 2022 (6:00 pm).

Mr. Homich asked who the land would go to if the Water Authority were to be dissolved.

Ms. Sutphen stated that the land would then be given to the Board of County Commissioners.

Mr. Homich asked if the land could be given to City of Mount Dora. Ms. Sutphen, stated that would be a possible next step in the process.

Mr. Homich motioned to approve the Water Authority rezoning as presented. Mr. Dring seconded and it was approved with a roll call vote (6:0).

B. **Request for CUP**; CREATE Conservatory (Project Name); 4900 Lake Park Court (Location); Mason Group Investments, LLC (Owner); CREATE Conservatory, Inc.(Applicant). Project No. CUP22-03.

1. Swearing in of witnesses by City Attorney
2. Ex Parte Communication regarding this item.
3. Staff/Applicant presentation
4. Public Input
5. Commission deliberation and action

City Attorney, Sherry Sutphen addressed the swearing in of witnesses.
No Ex Parte Communication regarding these agenda items.

Ms. Janiszewski provided a summary of the proposed application and stated that Staff recommends approval of the above-referenced request to allow a private school within the C-3 Zoning District and issuance of Development Order.

Applicant Ms. Nicole Duslack and students currently enrolled, gave their personal feedback regarding the positive impact the school has had on them.

Candice Deners, shared her child's positive experience while at Create Conservatory and expressed her support of the project.

Ms. Carter motioned to approve the Conditional Use Permit as presented. Mr. Beach seconded the motion and it was approved by a roll call vote (6:0)

C. **Request for Land Development Code;** Amendment Building Height Variance

1. Staff presentation
2. Public Input
3. Commission deliberation and action

City Attorney, Sherry Sutphen addressed the swearing in of witnesses. No Ex Parte Communication regarding these agenda items.

Mr. Sandersfeld gave a summary of the proposed Land Development Code amendment and stated that Staff recommends approval of the attached ordinance and forwarded same to City Council.

Ms. Sutphen explained that ordinance is scheduled to be adopted by City Council only if the charter amendment passes but if it does not, then it will have to be taken back to City Council and amended.

Mr. Massey asked if prior City Council experience would cause a conflict of interest. Ms. Sutphen expressed there is no conflict.

Mr. Dring and Mr. Sandersfeld had a conversation regarding Land Development Code amendment advertising. Mr. Sandersfeld stated that there have been public notices published in the local newspaper.

Mr. Beach and Mr. Dring addressed clerical errors within the proposed Land Development Code.

Mr. Sandersfeld and Ms. Sutphen stated the errors will be addressed and corrected.

Mr. Homich and Mr. Sandersfeld had a conversation about the Land Development Code's effective date.

Mr. Homich and Mr. Dring recommended strengthening the Building Heights Ordinance.

Ms. Sutphen stated that a conversation with City Council would be necessary to discuss the Land Development Code being possibly amended, to make provisions specific to certain topics; specifically variance and height.

Mr. Massey stated that the item should be tabled and will be further discussed at next Planning & Zoning Commission meeting.

Mr. Homich motioned to table the Land Development Code agenda item. Ms. Haukoos seconded and it was approved by a roll call vote (6:0).

Other Business

None

Announcement of next scheduled meeting date

A. Regularly Scheduled Meeting: Wednesday, August 17, 2022 (10:00 am)

Adjournment

The meeting was adjourned at 10:53 a.m.

_____ _____

Whitney Scott,
Administrative Coordinator

Harmon Massey, *Commission Chair*

CITY OF MOUNT DORA

Planning and Development
510 N. Baker St.
Mount Dora, FL 32757
352-735-7113
Fax: 352-735-7191
E-mail: plandev@cityofmountdora.com

DATE: August 17, 2022

TO: Planning and Zoning Commission

Development Review Committee

FROM: Vince Sandersfeld, Planning Director

THROUGH: Michele Janiszewski, AICP, Senior Planner

RE: Request for Final Plan and Plat; Lake Franklin Estates Replat (6 lots); located at the northeast corner of 1st Avenue and Pinecrest Road (Site Address: 1715 E. 1st Avenue); Ted Estes, Maronda Homes (Applicant and Owner). Project No. PR 22-06 FNLC

SUMMARY OF RECOMMENDATION:

Staff recommends approval with conditions of the above-referenced request. Approval is subject to satisfactorily addressing the attached DRC Comments prior to scheduling City Council.

REFERENCES/SUPPORT:

LDC Section 4.1; LDC Section 3.4
Development Order for Variance (OR BK 5882, Page 703-706) – Reduction Lot Size/Lot Width

SITE SUMMARY:

Owner/Applicant:	Maronda Homes - Ted Estes
Engineer:	Civil Design Solutions, LLC - Y.F. Steve Young, PE
General Location:	Northeast of the intersection of Pincrest Road and 1st Avenue.
Site Address:	1715 E. 1st Street
Alternate Key No.	1133165
Zoning District:	RP
Future Land Use Category:	RP
Site Area:	53,279 SF or 1.22 +/- acres
Existing Use:	Single family dwelling unit with garage (Removed/Demolition June 2022)
Proposed Use:	6 lot residential subdivision (single-family detached dwelling)

DEVELOPMENT SUMMARY:

Development Standard	Requirement	Proposed
Density	Max. 6 d.u. / acre	4.91 d.u. / acre
Minimum Lot Size	Min. 8,500 SF	8,000*
Minimum Street Frontage	75’	60’*
Minimum lot width at Building line	75’	60’*
Building Height	Max. 35’	Max. 35’
Minimum Dwelling Size	Min. 1,200 SF Living Area	Min. 1,200 SF Living Area

**Project received a variance to these standards on January 19, 2022*.

SURROUNDING PROPERTY TABLE:

Direction	Jurisdiction	Future Land Use	Zoning District(s)	Existing Use(s)	Comments
North	City	LD	R-1A	Residential	None
South	City	HD	MHP	Mobile Home Park	Southernaire MHP
East	City	LD, RP	R-1A	Residential	None
West	City	LD, RP	R-1A, RP	Residential	None

ANALYSIS:

The subject property is 1.22 acres in size and developed with a single-family dwelling unit built in 1925. The subject property consists of nine (9) platted lots within the Lake Franklin Park Subdivision. The Florida Department of Transportation (FDOT) acquired the frontage (17 feet) of along 1st Avenue (platted lots 21, 22, 23, 24, and 25 of the Lake Franklin Park) and 10 feet along Stanley Bell Drive (lots 20 and 25). Stanley Bell Drive was re-configured as part of the US 441/SR 44 roadway improvements with a cul-de-sac. The parcel is located west of the US 441/SR 46 ramp flyover.

The property was rezoning to RP (Residential Professional) in 2010 (rezoning Ordinance No. 2008-1019, adopted June 1, 2010). The current RP zoning district permitted use allows for either single-family or duplex. On January 19, 2022, the property obtained a variance from the requirements of Section 3.4.9(5.b) and 3.4.9(5.d) of the City's Land Development Code (LDC) in order to allow for a reduction in the minimum lot width and lot size requirements within the RP Zoning District (see above Development Summary Table). The variance was approved with the following conditions:

1) Architectural design standards shall be in keeping with architectural complementary historic type styles and design of Mount Dora;
2) No vehicle ingress/egress for lot access (driveway) off 1st Avenue;
3) Proposed lot fencing facing 1st Avenue must be decorative type. No chain link or wooden fence types allowed facing 1st Avenue. PVC fencing acceptable restricted to tan exterior fence color;
4) Proposed Lot Width Variance: 60 feet for proposed lot numbers 2, 3, 4 and 5. Proposed corner lots 1 and 6 will maintain the RP zoning minimum 75 feet lot width;
5) Proposed Lot Size Variance: 8,000 square feet for proposed lot numbers 2, 3, 4 and 5. Proposed corner lots 1 and 6 will maintain the RP zoning minimum 8,500 sf lot size; and
6) Permitted uses of the proposed lots are restricted to residential single-family detached dwelling.

The current application is to reconfigure the property via a replat from 9 lots to 6 lots to accommodate single-family dwelling units. The application depicts three (3) lots fronting on Pinecrest Road and three (3) lots fronting on Stanley Bell Drive. The replat is consistent with the conditions of the variance.

ATTACHMENTS:

Vicinity Map
Halff, Inc Plat Review Check List Dated 7-25-2022
Halff, Inc.Plan Review Items Dated 8-5-2022
Application
Elevations
Replat
Construction Plan Set

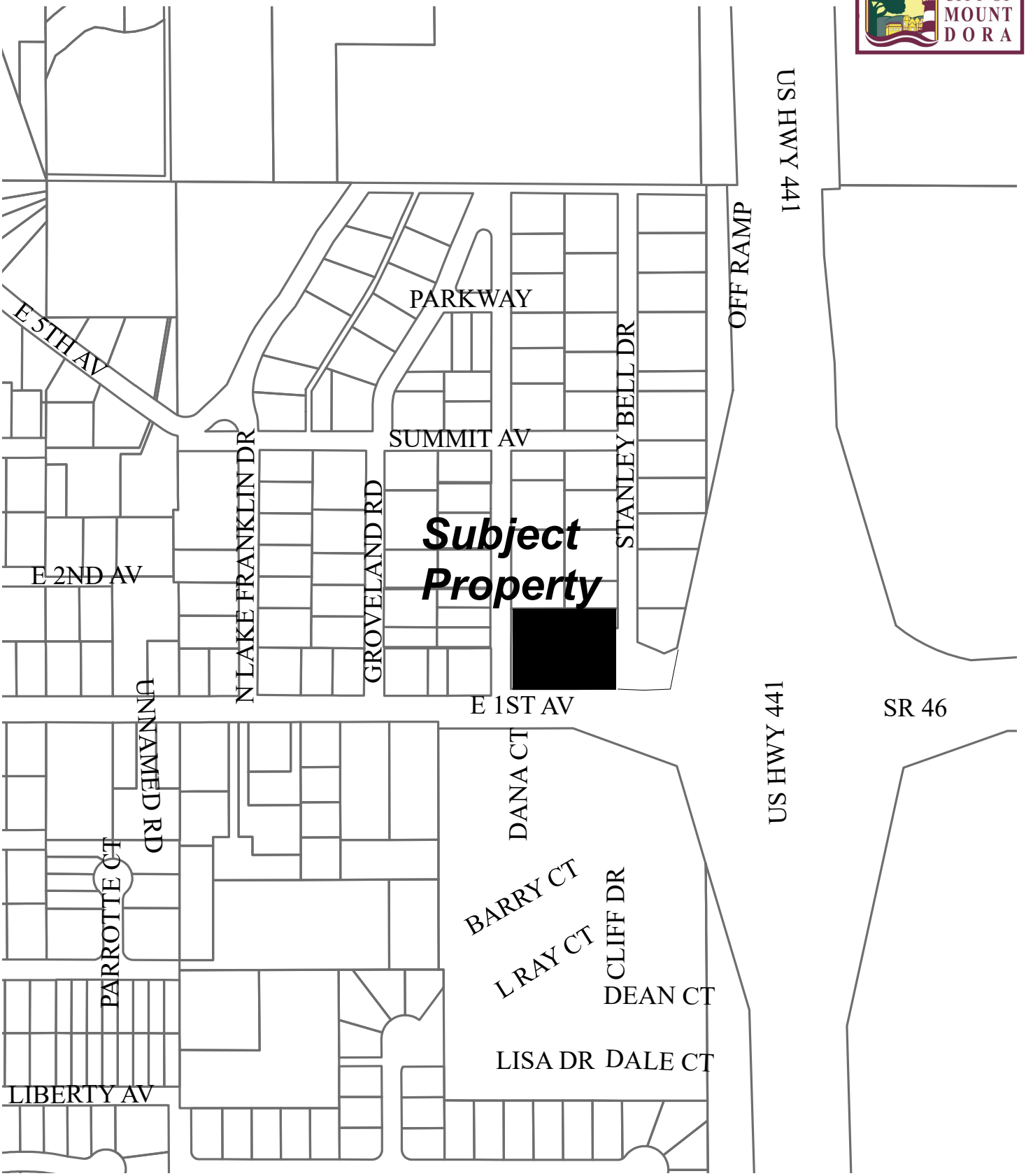
VICINITY MAP

Legend

Subject Property

N

N.T.S.



Date: 5/5/2022

Prepared by: Mount Dora Planning and Development Dept * 510 N. Baker Street, Mount Dora, FL 32757 * 352-735-7112

HALFF, INC.
902 N. Sinclair Avenue
Tavares, Florida 32778
352-343-8481-Office
352-343-8495-Fax

PLAT REVIEW CHECK LIST
with references to Florida Statute

PLAT NAME: Lake Franklin Estates – Second Review

CHECKED BY: Jennings E. Griffin, PLS#4486 **DATE:** 07-25-22

CHAPTER 177, FLORIDA STATUTES, REQUIREMENTS

Legend:
OK= Complies with chapter 177 F.S. OR City of Mount Dora Requirements
N/A=not applicable
NO=needs more information
CITY= For City use

1. ORIGINAL DRAWING BLACK PERMANENT DRAWING INK ON FILM (0.003 INCHES MINIMUM THICKNESS). *177.091 (1)*	NO	NOT ON MYLAR
2. SHEET SIZE – 24" X 36"; ½" MARGIN ON TOP, BOTTOM, & RIGHT; 3" LEFT MARGIN. *Per Lake County Code Chapter XIV Section 14.07 2.*	OK	
3. MAP BOOK_____PAGE____, UPPER RIGHT HAND CORNER, per clerk of court.	OK	
4. SHEET NO.____OF____177.091 (3)	OK	
5. INDEX SHEET IF MULTIPLE PAGES WITH MATCHLINES. *177.091. (3)*	N/A	
6. CLEARLY LABELED MATCHLINES TO SHOW WHERE SHEETS MATCH OR ADJOIN. *177.091 (3)*	N/A	
7. STATED AND GRAPHIC SCALE. *177.091 (4)*	OK	
8. SUFFICIENT SIZE LETTERING AND SCALE TO SHOW DETAIL. *177.091 (4) And Per Lake County Code Chapter XIV Section 14.07 2.*	NO	ALTHOUGH THIS IS A PLAT IN CITY OF MOUNT DORA, ALL TEXT MUST BE MINIMUM 0.10" IN HEIGHT PER LAKE COUNTY CLERK OFFICE - (COORDINATE VALUES, BUILDING SETBACK AND UTILITY EASEMENT LABELS TOO SMALL).

9. PLAT NAME ON EACH SHEET (THE SAME SIZE AND TYPE OF LETTERING, INCLUDING THE WORDS “SECTION”, “UNIT”, “REPLAT”, “AMENDED”, ETC.). *177.091 (5) & 177.051 (1)*	OK	
10. NAME OF SURVEYOR OR SURVEY BUSINESS, STREET, AND MAILING ADDRESS ON EACH SHEET. *177.091 (5)*	OK	
11. NORTH ARROW. *177.091 (6)*	OK	
12. BEARING REFERENCE TO A WELL ESTABLISHED AND MONUMENTED LINE. *177.091 (6)*	NO	LABEL APPROPRIATE LINE ON DRAWING AS “BEARING BASE”.
13. PERMANENT REFERENCE MONUMENTS AT EVERY CORNER WITH APPROPRIATE SYMBOL OR DESIGNATION (LB OR LS NUMBER PRIOR TO PLATTING. 177.091 (7)	OK	
14. PERMANENT CONTROL POINTS ON THE CENTERLINE OF R.O.W. WITH APPROPRIATE SYMBOL OR DESIGNATION (LB OR LS NUMBER) WITHIN 1 (0NE) YEAR OR BEFORE BOND EXPIRATION. *177.091 (8)*	N/A	
15. MONUMENTS AT LOT CORNERS – BEFORE THE TRANSFER OF ANY LOT OR BOND EXPIRATION. *177.091 (9)*	NO	
16. SECTION, TOWNSHIP, AND RANGE UNDER THE NAME OF THE PLAT WITH REPLATTING INFORMATION, IF ANY. *177.091 (10) & 177.091 (17)*	OK	
17. NAME OF THE CITY, TOWN, VILLAGE, COUNTY, AND STATE THAT THE LAND BEING PLATTED IS IN. *177.091 (10)*	OK	
18. CAPTION (DESCRIPTION) MUST BE SO COMPLETE THAT FROM IT, WITHOUT REFERENCE TO THE PLAT, THE STARTING POINT AND BOUNDARY CAN BE DETERMINED. *177.091 (11)*	NO	DESCRIPTION HAS DIRECTIONAL ERROR CALL ON THIRD LINE OF BODY OF DESCRIPTION “…S00°04’32”E ALONG THE SAID **WESTERLY**…” AND LAST LINE OF DESCRIPTION “…S89°46’28”W ALONG THE SAID **NORTHERLY** PARALLEL…”; TITLE REPORT DESCRIPTION MUST MATCH PLAT.
19. ADOPTION AND DEDICATION WITH NOTARY. *177.081 (2) & 177.091 (12)*	NO	PRESENCE MISSPELLED IN “SIGNED, SEALED AND DELIVERED IN THE…”.
20. CERTIFICATE OF APPROVAL AND ACCEPTANCE BY GOVERNING BODY. *177.071 & 177.091 (12)*	OK	

21. CERTIFICATE OF CLERK. *177.091 (13)*	OK	
22. SURVEYOR'S CERTIFICATE *177.091 (13)*	OK	
23. SURVEYOR'S CERTIFICATE INCLUDES "THAT THE PLAT WAS PREPARED UNDER HIS OR HER DIRECTION AND SUPERVISION AND THAT THE PLAT COMPLIES WITH ALL OF THE SURVEY REQUIREMENTS OF CHAPTER 177, PART 1, PLATTING.". *177.061*	OK	
24. PRINTED NAME OF THE SURVEYOR; LICENSE NUMBER; SURVEY BUSINESS NAME, IF ANY; LB NUMBER, IF ANY; AND ADDRESS UNDER THE SURVEYOR'S CERTIFICATE *177.061*	OK	
25. CERTIFICATE OF REVIEW BY PROFESSIONAL SURVEYOR AND MAPPER. *177.081 (1)*	OK	
26. SECTION LINES AND ¼ SECTION LINES. *177.091 (14)*	N/A	
27. POINT OF REFERENCE, IF ANY. *177.091 (14)*	OK	
28. POINT OF BEGINNING. *177.091 (14)*	NO	TITLE OPINION DESCRIPTION MUST MATCH EXACTLY THE PLAT DESCRIPTION.
29. BEARINGS AND DISTANCES AROUND BOUNDARY. *177.091 (14)*	OK	
30. STREET NAMES. *177.091 (15)*	OK	
31. R.O.W. WIDTHS. *177.091 (15)*	OK	
32. WATERWAYS. *177.091 (15)*	N/A	
33. LOCATION AND WIDTH OF PROPOSED EASEMENTS. *177.091 (16)*	OK	

34. LOCATION AND WIDTH OF EXISTING EASEMENTS IDENTIFIED IN THE TITLE OPINION. *177.091 (16)*	N/A	
35. BEARINGS AND DISTANCES FOR NON CONCENTRIC OR NON PARALLEL EASEMENTS. *177.091 (16)*	N/A	
36. IDENTIFY CONTIGUOUS PROPERTIES BY SUBDIVISION TITLE, PLAT BOOK AND PAGE OR IF UNPLATTED, SO STATE. *177.091 (17)*	OK	
37. LOT AND BLOCK NUMBERS MUST BE PROGRESSIVE. *177.091 (18)*	OK	
38. BEARINGS AND DISTANCES ON ALL TRACTS. *177.091 (19)*	N/A	
39. BEARINGS AND DISTANCES ON ALL LOTS. *177.091 (19)*	OK	ALL TEXT MUST BE MINIMUM 0.10” HEIGHT - (COORDINATE VALUES, BUILDING SETBACK AND UTILITY EASEMENT LABELS TOO SMALL).
40. BEARINGS AND DISTANCES ON ALL ROADS. *177.091 (19)*	N/A	
41. IF LOT OR BOUNDARY IRREGULAR, A WITNESS LINE MUST BE SHOWN. *177.091 (19)*	N/A	
42. CURVILINEAR LOTS – SHOW RADIUS, ARC, AND DELTA. *177.091 (20)*	N/A	
43. RADIAL LINES WILL BE SO DESIGNATED. *177.091 (20)*	N/A	
44. BEARINGS OR ANGLES ON ALL LINES. *177.091 (21)*	OK	
45. BEARINGS AND DISTANCES ON CENTERLINE STREETS. *177.091 (22)*	N/A	
46. CURVED CENTERLINES SHOW ARC, DELTA, RADIUS, CHORD, AND CHORD BEARING. *177.091 (22)*	N/A	

47. DESIGNATE PARK AND RECREATION PARCELS, IF ANY. *177.091 (23)*	N/A	
48. INTERIOR EXCEPTED PARCELS, AS DESCRIBED IN THE CAPTION, MUST BE LABELED “NOT A PART OF THIS PLAT”. *177.091 (24)*	N/A	
49. SHOW PURPOSE OF ALL AREAS DEDICATED ON THE PLAT. *177.091 (25)*	N/A	
50. TABULAR DATA MUST APPEAR ON SHEET WHICH IT APPLIES. *177.091 (26)*	OK	
51. “NOTICE: THIS PLAT, AS RECORDED IN ITS GRAPHIC FORM, IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY ANY OTHER GRAPHIC OR DIGITAL FORM OF THE PLAT. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.” *177.091 (27)*	OK	
52. EASEMENTS REFERENCED FOR CABLE TELEVISION USE. *177.091 (28)*	OK	
53. LEGEND OF ALL SYMBOLIZED ABBREVIATIONS. *177.091 (29)*	OK	
54. BOUNDARY SURVEY. *177.041 (1)*	OK	
55. CHECK ACCESS TO PUBLIC OR DEDICATED RIGHT OF WAY. *Informational*	OK	
56. TITLE OPINION. *177.041 (2)*	NO	DESCRIPTION IN TITLE REPORT MUST MATCH EXACTLY THE DESCRIPTION SHOWN ON FACE OF PLAT.

CITY OF MOUNT DORA REQUIREMENTS		
CITY OF MOUNT DORA 4.3.4 PLAT REQUIREMENTS: THE FINAL PLAT SHALL CONSTITUTE ONLY THAT PORTION OF THE APPROVED PRELIMINARY PLAT WHICH THE APPLICANT PROPOSES TO RECORD AND DEVELOP AT THE TIME; PROVIDED, HOWEVER, THAT SUCH PORTION CONFORMS TO ALL REQUIREMENTS OF THESE REGULATIONS. TWELVE (12) FOLDED COPIES OF THE FINAL PLAT SHOWING THE FOLLOWING INFORMATION SHALL BE PROVIDED: (ONLY ONE (1) COPY MUST BE SIGNED AND SEALED.)		
2a. TITLE BLOCK TO INCLUDE THE NAME OF SUBDIVISION, THE APPROPRIATE SECTION, TOWNSHIP AND RANGE, AND THE "CITY OF MOUNT DORA, LAKE COUNTY, FLORIDA".	OK	
2b. THE LEGAL DESCRIPTION OF THE AREA CONTAINED WITHIN THE PLAT WITH BEARINGS AND DISTANCES AND WITH REFERENCES TO A SUBDIVISION CORNER TIE.	NO	DESCRIPTION HAS DIRECTIONAL ERROR CALL ON THIRD LINE OF BODY OF DESCRIPTION "…S00°04'32"E ALONG THE SAID WESTERLY" AND LAST LINE OF DESCRIPTION "…S89°46'28"W ALONG THE SAID **NORTHERLY** PARALLEL…"; TITLE REPORT DESCRIPTION MUST MATCH PLAT.
2c. A VICINITY MAP, AT SCALE, SHOWING THE PROPOSED SUBDIVISION IN RELATION TO THE SURROUNDING STREETS.	OK	
2d. THE LOCATION OF ALL PERMANENT REFERENCE MARKERS (PRM's) IN CONFORMANCE WITH STATE STATUTES.	OK	
2e. A LEGEND WHICH DEFINES ALL SYMBOLS, SHOWS STATED AND GRAPHIC SCALE, AND DISPLAYS NORTH ARROW,	OK	
2f. SUFFICIENT DATA TO DETERMINE READILY, AND TO REPRODUCE ON THE GROUND, THE LOCATION, BEARING AND LENGTH OF EACH STREET RIGHT-OF-WAY LINE, BOUNDARY LINE, BLOCK LINE AND BUILDING LINE, WHETHER CURVED OR STRAIGHT, ADEQUATELY CORRELATED WITH MONUMENTS AND MARKERS.	NO	DESCRIPTION HAS DIRECTIONAL ERROR CALL ON THIRD LINE OF BODY OF DESCRIPTION "…S00°04'32"E ALONG THE SAID WESTERLY" AND LAST LINE OF DESCRIPTION "…S89°46'28"W ALONG THE SAID **NORTHERLY** PARALLEL…"; TITLE REPORT DESCRIPTION MUST MATCH PLAT.

2g. THE RIGHT-OF-WAY LINES, WIDTHS AND NAMES OF ALL STREETS AND ROADS.	OK	
2h. THE RADIUS, CENTRAL ANGLE AND ARCS OF ALL CURVED STREETS AND CURVED PROPERTY LINES.	N/A	
2i. LOT LINE DIMENSIONS AND LOT AND BLOCK NUMBERS.	OK	
2j. PROPOSED BUILDING SETBACK LINES FROM SIDE, FRONT AND BACK LOT LINES.	OK	SHOWN IN NOTE FORM.
2k. LOCATION AND WIDTH OF CANALS AND WATERWAYS.	N/A	
2l. DEDICATIONS, RESERVATIONS AND EASEMENTS, SHOWING WIDTHS AND PURPOSE, SHALL BE DELINEATED ON THE FACE OF THE PLAT AND SHALL NOT BE INCORPORATED BY REFERENCE.	N/A	
2m. THE NAMES, LOCATIONS, AND PLAT BOOK AND PAGE NUMBERS OF ABUTTING SUBDIVISIONS AND STREETS, AND THE LOCATION OF ABUTTING SUBDIVISIONS.	OK	
2n. CERTIFICATES, AS REQUIRED BY FLORIDA STATUTES, OF OWNERS SHOWING DEDICATIONS; OF SURVEYOR CONFIRMING CORRECTNESS, OF PLANNING AND ZONING COMMISSION APPROVAL; OF CITY COUNCIL APPROVAL; AND FOR CLERK OF CIRCUIT COURT RECORDING. SIGNATURES OF OWNERS MUST BE IN CONFORMANCE WITH SECTION 692.01, SECTION 689.01, SECTION 695.25 AND SECTION 695.26, FLORIDA STATUTES, AS APPLICABLE.	OK	
2o. A CERTIFICATE OF CONSENT AND APPROVAL BY MORTGAGEE ON THE PLAT OR AS A SEPARATE INSTRUMENT.	OK	

2p. A MINIMUM OF TWO HORIZONTAL CONTROL POINTS ON THE BOUNDARY OF THE PLAT WITH STATE PLANE COORDINATES (FLORIDA EAST ZONE) SHOWN ON THE PLAT FOR EACH POINT ESTABLISHED. THE ACCEPTABLE METHODS FOR ESTABLISHING THESE CONTROL POINTS SHALL BE AS FOLLOWS: 2p.1. DIRECT GLOBAL POSITIONING SYSTEM (GPS) OBSERVATION, IN ACCORDANCE WITH THIRD ORDER, CLASS II REQUIREMENTS AS SET FORTH IN *STANDARDS AND SPECIFICATIONS FOR GEODETIC CONTROL NETWORKS* FEDERAL GEODETIC CONTROL COMMITTEE, SEPTEMBER 1984. A CERTIFICATION BY THE SURVEYOR AND MAPPER IN CHARGE OF THE ESTABLISHMENT OF THESE POINTS WILL BE REQUIRED AS PART OF THE SUBMITTAL OF THE FINAL PLAT. 2p.2. SELF CLOSING (LOOPED) TRAVERSE(S), CONDUCTED BETWEEN TWO EXISTING CONTROL STATIONS OF THE LAKE COUNTY GEODETIC CONTROL NETWORK AND THE PLAT BOUNDARY, WITH A MINIMUM PRECISION OF NO LESS THAN ONE PART IN 12,000 BEFORE ADJUSTMENT. 2p.3. SELF CLOSING (LOOPED) TRAVERSE(S), CONDUCTED BETWEEN ONE EXISTING HORIZONTAL CONTROL STATION OF THE LAKE COUNTY GEODETIC CONTROL NETWORK, THE PLAT BOUNDARY, AND A LINE WHOSE AZIMUTH HAS BEEN DETERMINED BY ASTRONOMIC OBSERVATION OR GPS, WITH A MINIMUM PRECISION OF NO LESS THAN ONE PART IN 12,000 BEFORE ADJUSTMENT. ASTRONOMIC OR GPS OBSERVATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THIRD ORDER, CLASS II REQUIREMENTS SET FORTH IN *STANDARDS AND SPECIFICATIONS FOR GEODETIC CONTROL NETWORKS,* FEDERAL GEODETIC CONTROL COMMITTEE, SEPTEMBER 1984.	OK	

2p.4 HORIZONTAL CONTROL STATIONS THAT ARE USED SHALL BE SHOWN ON THE PLAT BY GRAPHICALLY IDENTIFYING THEIR LOCATION, NAME AND NUMBER. THE FINAL ADJUSTED DIRECT TIE (BEARING AND DISTANCE) SHALL BE SHOWN BETWEEN THOSE HORIZONTAL CONTROL STATIONS AND SPECIFIC POINTS ON THE PLAT BOUNDARY. IF ONLY ONE HORIZONTAL CONTROL STATION WAS LOCATED AS IN SUBSECTION c. ABOVE, A BEARING DIAGRAM SHALL BE SHOWN ON THE PLAT RELATING THE BEARING STRUCTURE SHOWN ON THE PLAT TO GRID NORTH.		

NOTES:

_____

Jennings E. Griffin, P.L.S. #4486
HALFF, Inc.

C:

VIA EMAIL DELIVERY

August 5, 2022

Vince Sandersfeld
Planning Director
510 North Baker Street
Mount Dora, FL 32757

RE: **LAKE FRANKLIN ESTATES**
Civil Construction Plan

Dear Mr. Sandersfeld,

We have completed our review of the construction plan for Lake Franklin Estates (replat of 1715 East First Avenue Lots 9-10 & 10-25) project as prepared by Civil Design Solutions. The submittal set consists of the engineering plan set and a plat sheet. The plans have been signed and sealed on July 19, 2022.

Based on our review with regards to engineering issues, we submit you the following:

Comments:

1. Sheet C1.00 – Please shade back the existing utilities. It is difficult to differentiate proposed from existing.
2. Call out 7 on the east side appears to be pointing at 90 degrees rather than wet tap on existing.
3. Water meters should be located at the corner of each of the proposed lots.
4. Please include pipe materials in the call out for proposed water/sewer services.
5. Please provide silt fence.
6. Please provide details of proposed 6' fence.
7. Please provide detailed grades on the driveway.

This concludes our review of the development plan with regards to engineering issues. Please feel free to contact our office at (352) 343-8481 should you have any questions with regards to this matter.

Sincerely,
HALFF ASSOCIATES, INC.

Bijay Upreti, P.E.
Civil Engineer
bupreti@halff.com

cc. George Marek, P.E., City of Mount Dora

CITY OF MOUNT DORA

PR22-06FNLC

Planning and Development
510 N. Baker St.
Mount Dora, FL 32757
352-735-7112
E-mail: plandev@cityofmountdora.com

FINAL PLAT / CONSTRUCTION PLAN APPLICATION

Date: 5/4/22 Project Name: RePlat - Lake Franklin Estates

1. Applicant's Name: Ted Estes
   Company's Name: Maronda Homes
   Address: 3999 W. 1st Street
   City, State & Zip: Sanford, Florida 32771
   Phone: 407-640-2525 E-mail: estest@maronda.com

2. Property Owner's Name(s): Contact: Ted Estes
   Company's Name: Maronda Homes
   Address: 3999 W. 1st Street
   City, State & Zip: Sanford, Florida 32771
   Phone: 407-640-2525 E-mail: estest@maronda.com

3. Engineer's Name: Y.F. Steve Young, PE
   Company's Name: Civil Design Solutions, LLC
   Address: 500 N. Maitland Ave., Suite 111
   City, State & Zip: Maitland, Florida 32751
   Phone: 407-636-4198 E-mail: syoung@cdsllc-fl.com

4. Surveyor's Name: Dustin W. Holloway
   Company's Name: H & H Survey Consultants, LLC
   Address: 131 W. Broadway Street, Suite 1001
   City, State & Zip: Oviedo, Florida 32765
   Phone: 407-542-4977 E-mail: dholloway@hnhsurvey.com

5. Zoning District: RP Residential Professional District

6. Future Land Use: Residential Professional/Office

7. Total Units/Lots: 6 Lots

8. Size of Property (Acres): 1.22

9. Wetland Areas (Acres): Existing: N/A Removed: _____

Remaining: _____

10. Density (Developable Area): 6 lots/1.22ac=4.92

(See LDC Definition for "Density" for developable area).

11. If this project is associated with e PUD, provide a summary report outlining each PUD condition with explanation as to how each PUD condition has been addressed with this submitted.

12. Are there any deviations from the Preliminary Plat Approval (circle)? Yes / No

If yes, list and describe: N/A

CERTIFICATION AND SIGNATURE

I CERTIFY THAT, to the best of my knowledge and belief, all information supplied with this application is accurate and I have examined and am familiar with the Land Development Code of the City of Mount Dora, Florida and Chapter 177 of the Florida Statutes and have complied with the requirements of said regulations and statute. I further understand that an incomplete application submittal may cause my application to be deferred to the next posted deadline date.

Owner/Applicant Signature

5/5/22

Date

CITY OF MOUNT DORA

Planning and Development
510 N. Baker St.
Mount Dora, FL 32757
352-735-7112
E-mail: plandev@cityofmountdora.com

AGENT AUTHORIZATION

I/we, (Property owner name(s)) MARANDA HOMES, as the owner(s) of the real property described as follows, 1715 EAST FIRST AVE 32-19-27-1300-008-00900 (Address, Parcel ID or Alternate Key Number of subject property), do hereby authorize TED ESTES to act as my/our Agent, to execute any petitions/applications or other documents necessary to affect the request for RE-PLAT (Application Type), and to appear on my/our behalf before any administrative, legislative or quasi-judicial body in the City pertaining to the application described above and to act in all respects as my/our Agent in matters pertaining to the application and City process.

Printed Name of Property Owner	Signature of Property Owner	Date
Eric Eg.		7/11/22
Printed Name of Property Owner	Signature of Property Owner	Date

State of Florida
County of Seminole

Sworn to (or affirmed) and subscribed before me by means of ☑ physical presence or ☐ online notarization, this 11 day of July, 2022, by ERIC EG. SERGI.

Personally known OR Produced Identification
Type of Identification Produced:_____

Notary Public State of Florida
Kelly J Rukavina
My Commission HH 114946
Expires 04/07/2025

Kelly Rukavina
Notary Signature

Note: All applications shall be signed by the Owner(s) of the property, or the Agent as duly authorized herein by the Owner(s).

UNAMIMOUS WRITTEN CONSENT
OF THE BOARD OF DIRECTORS
OF
MARONDA HOMES, LLC OF FLORIDA

The undersigned, constituent the entire Board of Directors of Maronda Homes, LLC of Florida (the "Company") and waiving all requirements of notice, consents to the company action specified below and adopts the following resolutions by written consent, without a meeting, pursuant to the Florida Business Corporation Act:

RESOLVED, that the following persons be and are hereby authorized, empowered, and designation to enter into agreements to buy and sell individual lots and houses to individual purchases to execute deeds to effectuate the buying or selling of individual lots, and to enter into short-term leases not to exceed two (2) years for such individual houses.

I FURTHER CERTIFY that the following person hold the following offices with the Corporation.

Scott C. Howard	President
Ronald W. Wolf	Vice President, Treasurer
Kelly A. Campbell	Secretary Assistant Secretary
Eric G. Sergi	Vice President
P. Thomas Prior	Vice President
Robert George Intille	Vice President
Leslie Anderson	Vice President
Alex J. Adams	Vice President
Peter Chun	Vice President
Peter McConaghey	Vice President
Michael Kruszynski	Vice President
Todd Fitzgerald	Vice President
Tucker Dorsey	Vice President

IN WITNESS WHEREOF, the undersigned has executed this consent effective as of the 1nd day of December 2021.

Ronald W. Wolf, Director

INSTRUMENT#: 2022016010 OR BK 5889 PG 1907 PAGES: 1 2/3/2022 2:47:58 PM
GARY J. COONEY, CLERK OF THE CIRCUIT COURT & COMPTROLLER, LAKE COUNTY, FLORIDA
REC FEES: $10.00 DEED DOC:$3164.00

Prepared by and Return to:
Steel City Title
Mary Pollard
3999 West First Street (S.R. 46)
Sanford, Florida 32771
Our File Number: SCT21-2221
$452,000.00

For official use by Clerk's office only

STATE OF Florida)
COUNTY OF Lake)
)

SPECIAL WARRANTY DEED
(Corporate Seller)

THIS INDENTURE, made this January 26 2022, between Green Wheat LLC, a Florida limited liability company, a corporation, whose mailing address is: 15012 Colley Dr, Tavares, Florida 32778, party of the first part, and Maronda Homes, LLC. of Florida, a Florida limited liability company, whose mailing address is: 3999 West First Street, Sanford, Florida 32771, party/parties of the second part,

WITNESSETH:

First party, for and in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other valuable considerations, receipt whereof is hereby acknowledged, does hereby grant, bargain, sell, aliens, remises, releases, conveys and confirms unto second party/parties, his/her/their heirs and assigns, the following described property, towit:

Lots 9, 10, 19, 20, 21, 22, 23, 24 and 25, Block 8, Lake Franklin Park, according to map or plat thereof as recorded in Plat Book 6, Page 51, of the Public Records of Lake County, Florida, less the South 17 feet of Lots 21, 22, 23, 24 and 25, and the East 10 feet of Lots 20 and 25.

Property Address:1715 E 1ST AVE, MOUNT DORA, FLORIDA 32757

Said property is not the homestead of the Grantor(s) under the laws and constitution of the State of Florida in that neither Grantor(s) nor any members of the household of Grantor(s) reside thereon.

Subject, however, to all covenants, conditions, restrictions, reservations, limitations, easements and to all applicable zoning ordinances and/and restrictions and prohibitions imposed by governmental authorities, if any.

TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD the same in fee simple forever.

AND the party of the first part hereby covenants with said party of the second part, that it is lawfully seized of said land in fee simple; that it has good right and lawful authority to sell and convey said land; that it hereby warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under the party of the first part.

IN WITNESS WHEREOF, first party has signed and sealed these present the date set forth on January 28, 2022.

Signed, sealed and delivered
in the presence of:

Witness signature
Tulsi Patel
Print witness name

Witness signature
Bryan Bowman
Print witness name

Benjamin L. Champion as managing member of Green Wheat Management LLC of Florida a Florida Limited liability company as managing member of Green Wheat LLC of Florida, a Florida limited liability company

By:
Print Name: Benjamin L. Champion
Title: Managing Member

(Corporate Seal)

State of Florida
County of Lake

The foregoing instrument was acknowledged before me by means of [✓] physical presence or [ ] online notarization, this 26 day of January 2022, by Benjamin L. Champion.

[SEAL]
Online Notary

Notary Public State of Florida
Tulsi Patel
My Commission GG 263397
Expires 09/30/2022

Signature of Notary Public
Personally Known ____ OR
Produced Identification FL DL
Type of Identification Produced

DEED - Special Warranty Deed - Corporate

Elevation A Side (Color) Atlas

MARONDA Homes

ATLANTIS

Elevation W

The Renaissance Series

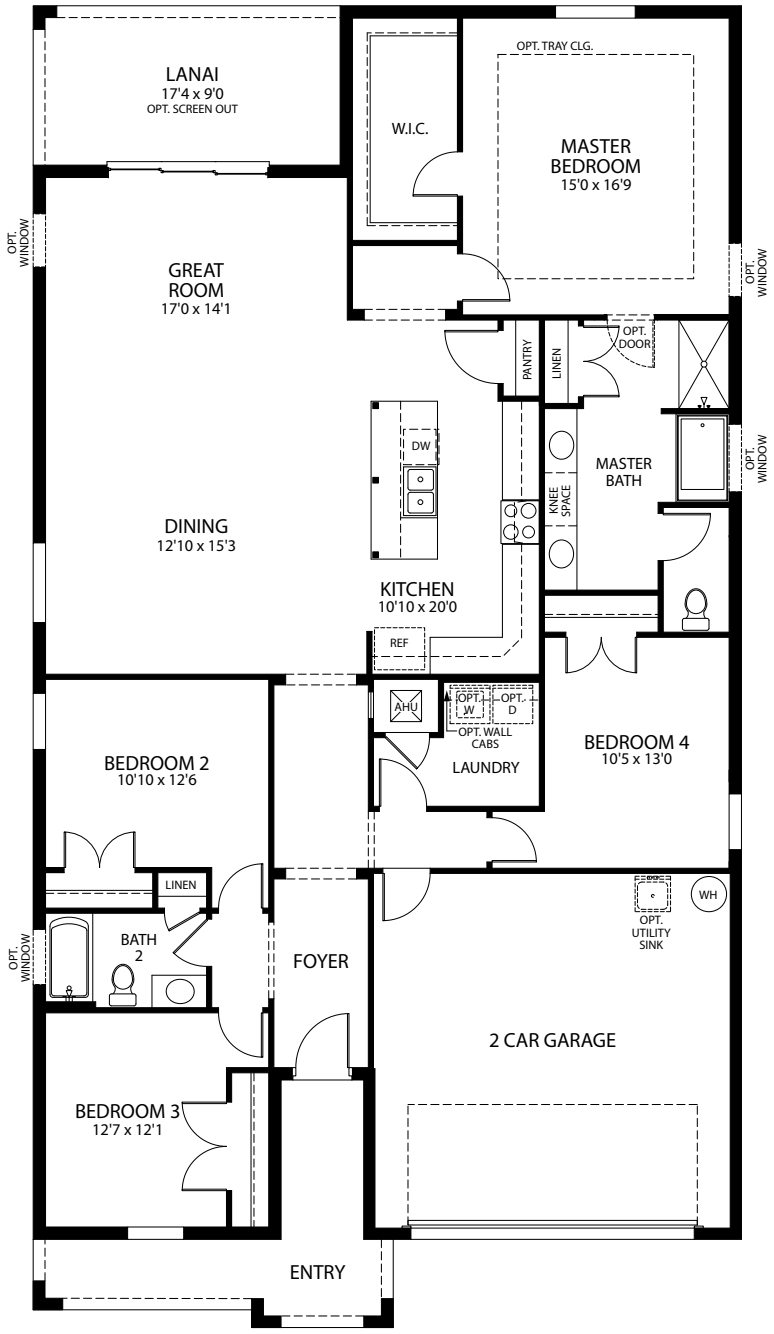
Optional Partial Stone Front

MARONDA Homes

ATLANTIS

Elevation W

The Renaissance Series



- 3 Bedrooms
- 2 Car Garage
- 2-3 Bathrooms
- 2,154 Finished Sq. Ft.

EQUAL HOUSING OPPORTUNITY

Visit marondahomes.com for more information. Ask your New Home Specialist for details about additional options to this floor plan to meet your unique lifestyle and needs. Floor plans and elevations are artist's renderings for Illustrative purposes and not part of a legal contract. Features, sizes, options, and details are approximate and will vary from the homes as built. Optional items shown are available at additional cost. Maronda Homes reserves the right to change and/or alter materials, specifications, features, dimensions and designs without prior notice or obligation. ©2021 Maronda Homes, Inc. All Rights Reserved. 12/21

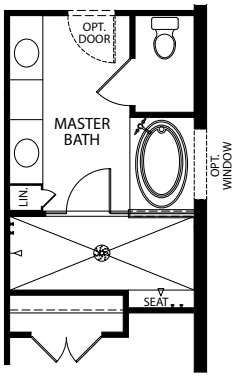
MARONDA Homes

ATLANTIS

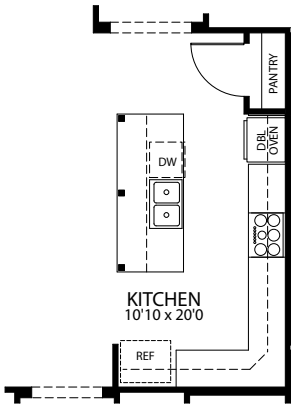
Elevation W

The Renaissance Series

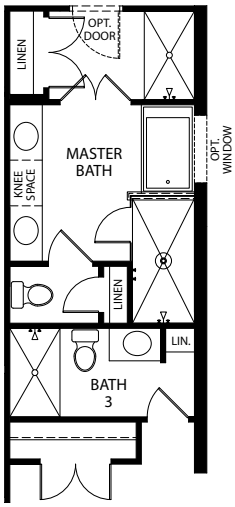
Opt. Deluxe Master Bath



Opt. Gourmet Kitchen



Opt. Deluxe Master Bath with Bath 3



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MARONDA Homes

ATLAS

Elevation V

The Renaissance Series

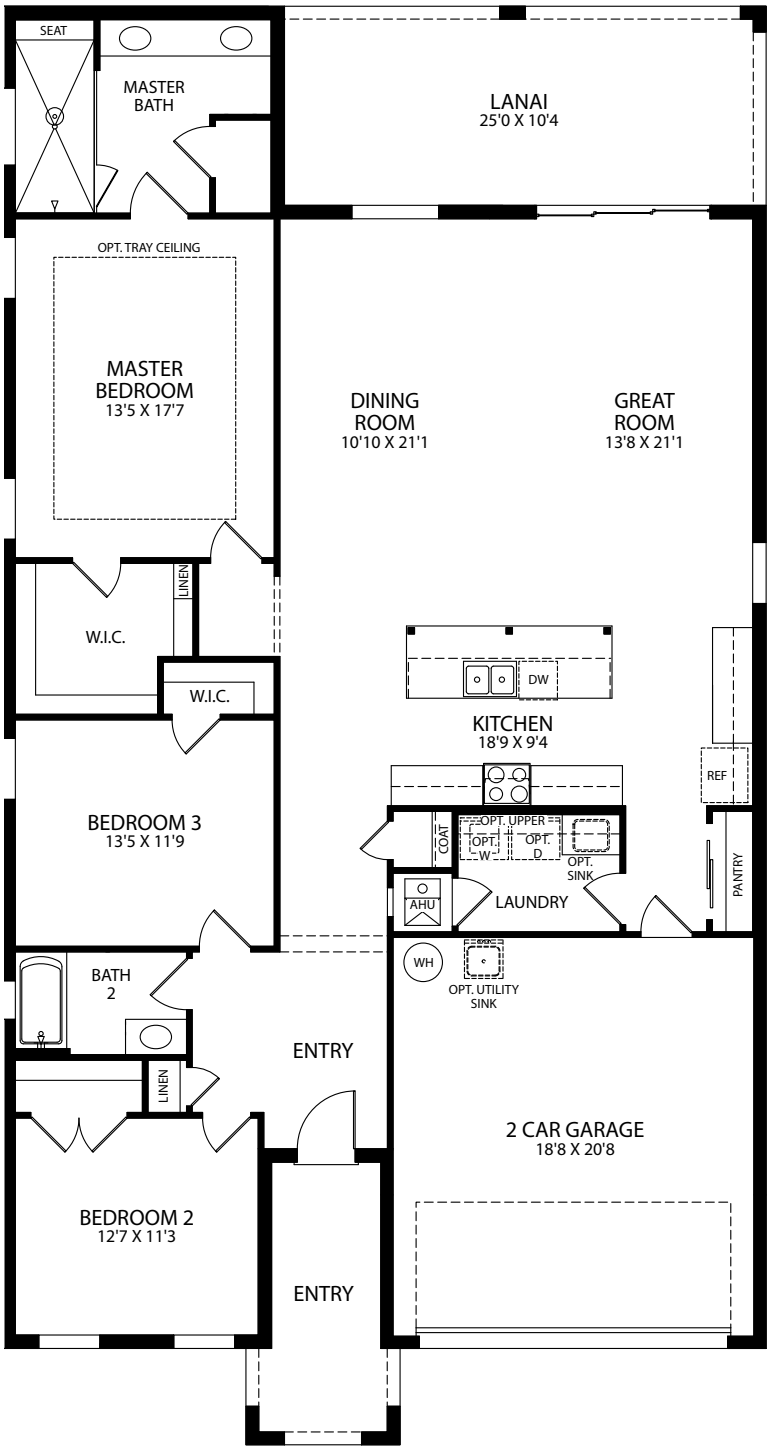
Optional Partial Stone Front

MARONDA Homes

ATLAS

Elevation V

The Renaissance Series



- 3 Bedrooms
- 2 Car Garage
- 2 Bathrooms
- 2,031 - 2,148 Finished Sq. Ft.

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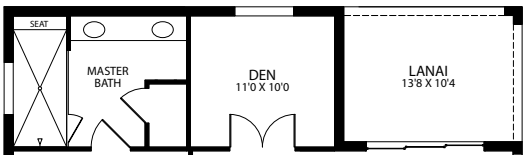
MARONDA Homes

ATLAS

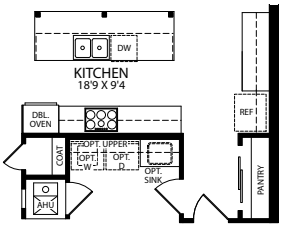
Elevation V

The Renaissance Series

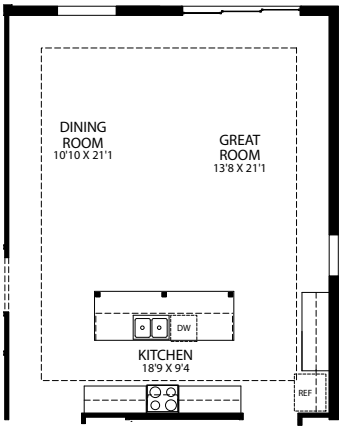
Opt. Den



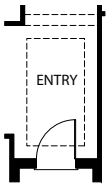
Opt. Gourmet Kitchen



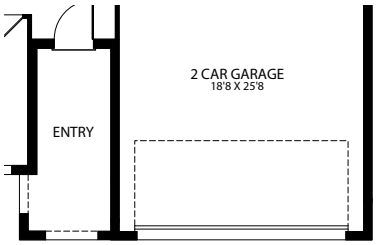
Opt. Raised Ceiling at Dining Room and Kitchen with Great Room



Opt. Raised Ceiling at Entry



Opt. 5' Garage Extension



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MARONDA Homes

ATLAS

Elevation W

The Renaissance Series

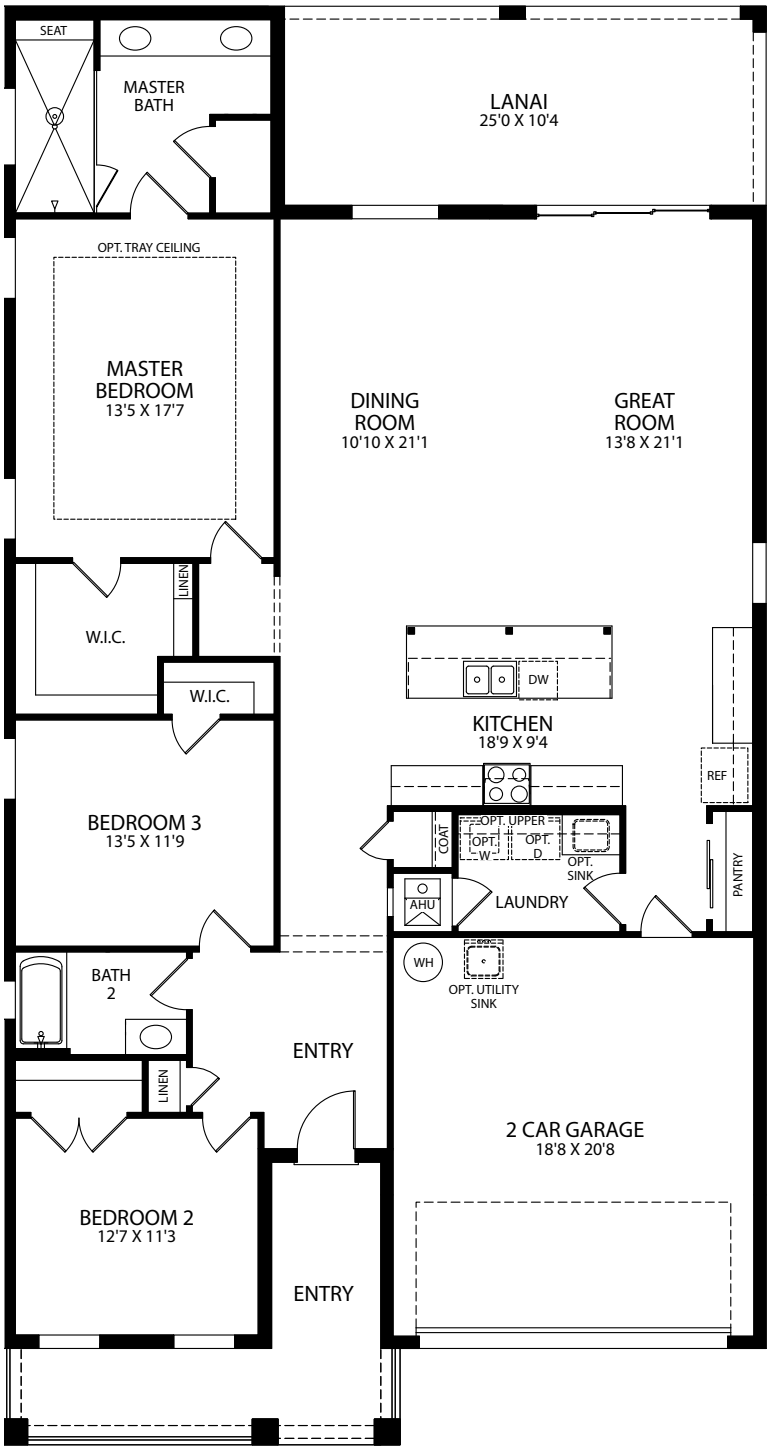
Optional Partial Stone Front

MARONDA Homes

ATLAS

Elevation W

The Renaissance Series



- 3 Bedrooms
- 2 Bathrooms
- 2 Car Garage
- 2,031 - 2,148 Finished Sq. Ft.

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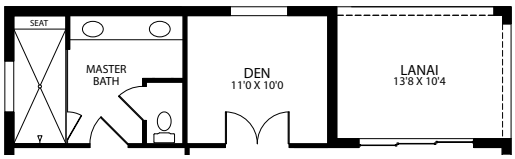
MARONDA Homes

ATLAS

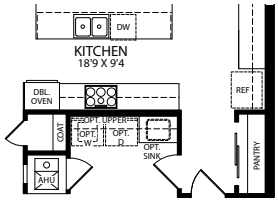
Elevation W

The Renaissance Series

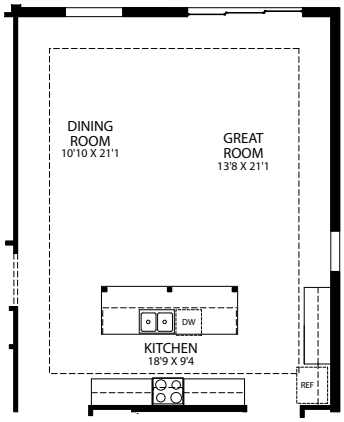
Opt. Den



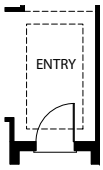
Opt. Gourmet Kitchen



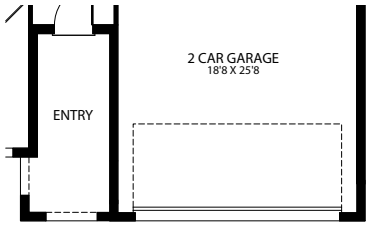
Opt. Raised Ceiling at Dining Room and Kitchen with Great Room



Opt. Raised Ceiling at Entry



Opt. 5' Garage Extension



EQUAL HOUSING OPPORTUNITY

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Elevation A Side (Color) Jupiter

MARONDA Homes

JUPITER

Elevation V

The Renaissance Series

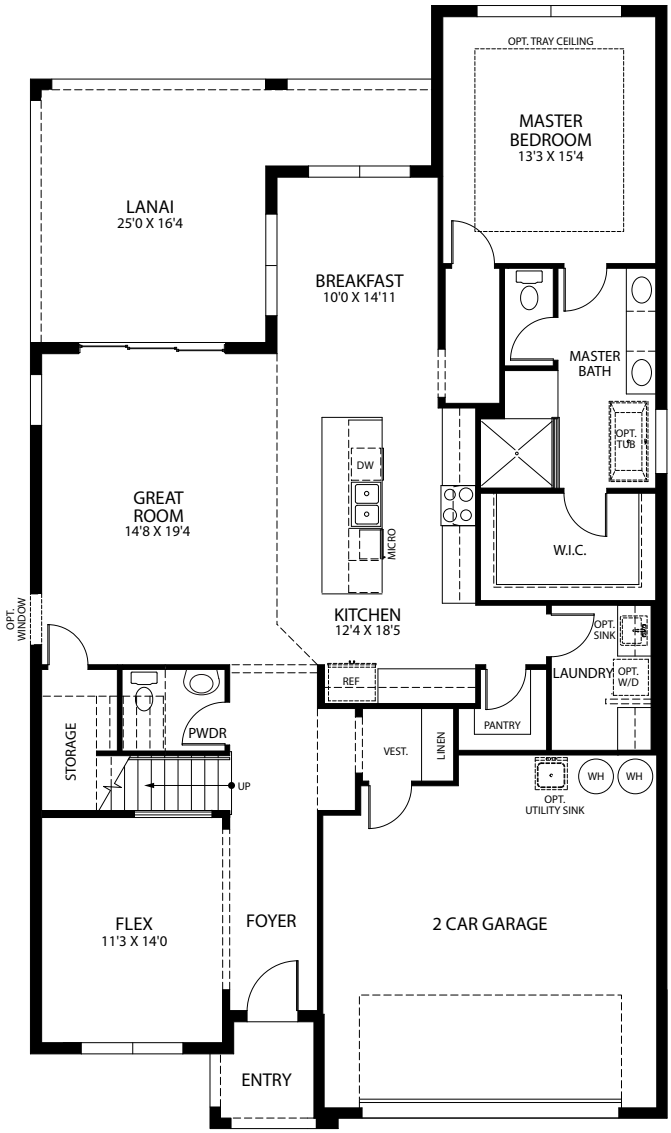
Optional Partial Stone Front

MARONDA Homes

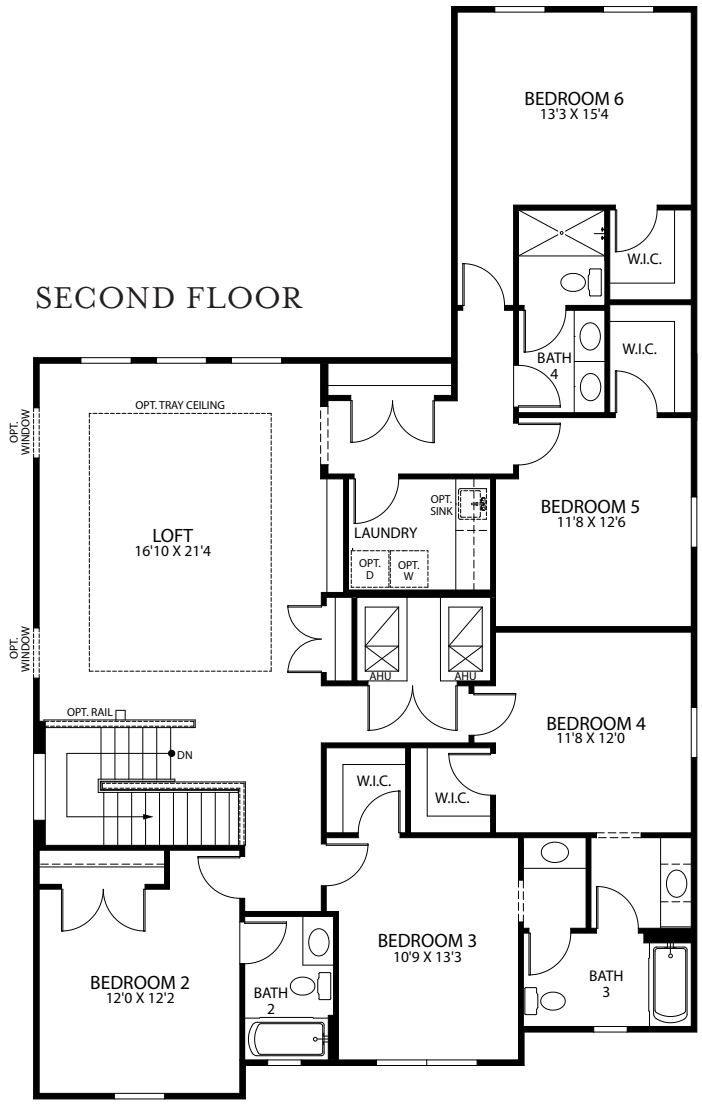
JUPITER

Elevation V

The Renaissance Series



SECOND FLOOR



- 6 Bedrooms
- 2 Car Garage
- 4.5 Bathrooms
- 3,714 Finished Sq. Ft.

EQUAL HOUSING OPPORTUNITY

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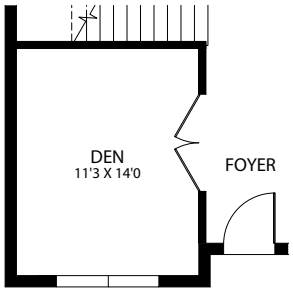
MARONDA Homes

JUPITER

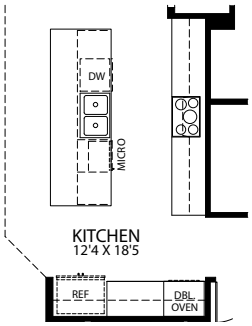
Elevation V

The Renaissance Series

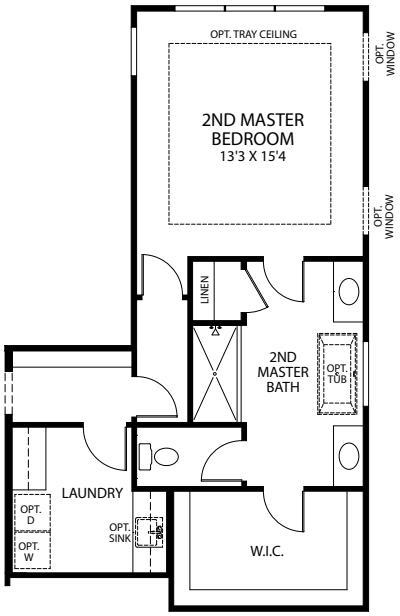
Opt. Den



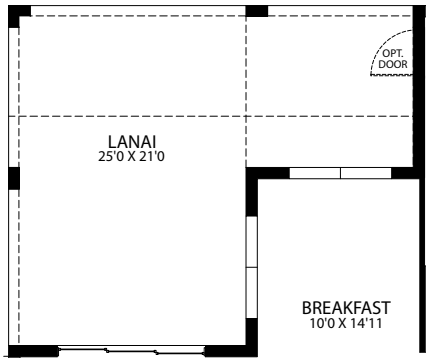
Opt. Gourmet Kitchen



Opt. 2nd Floor Master



Opt. Extended Lanai



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MARONDA Homes

JUPITER

Elevation W

The Renaissance Series

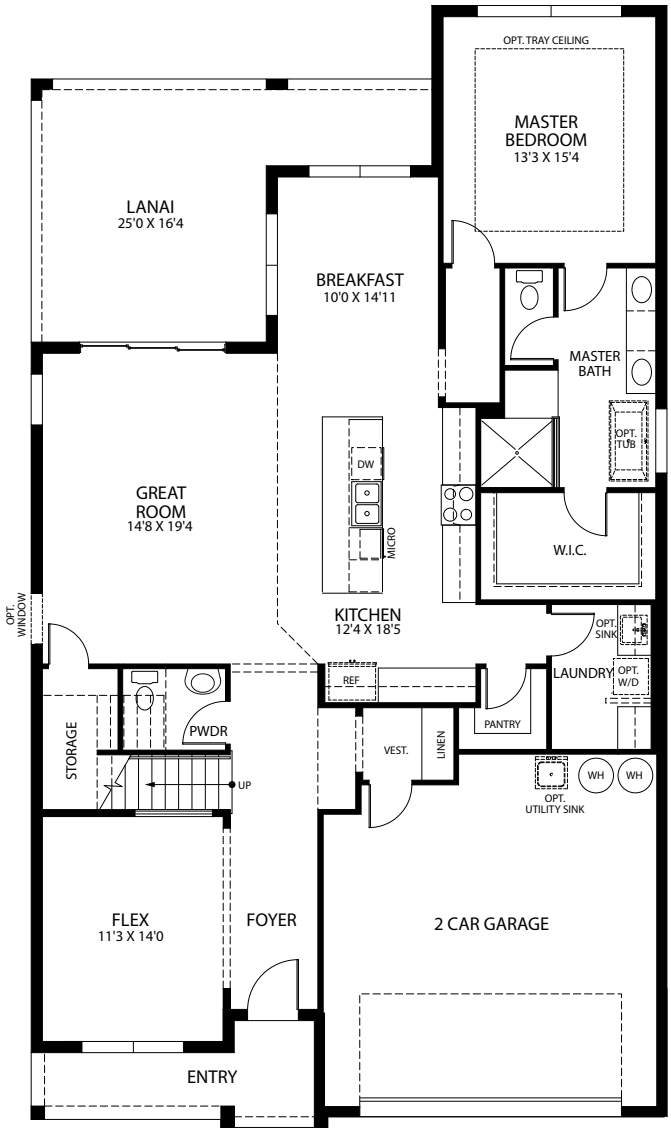
Optional Partial Stone Front

MARONDA Homes

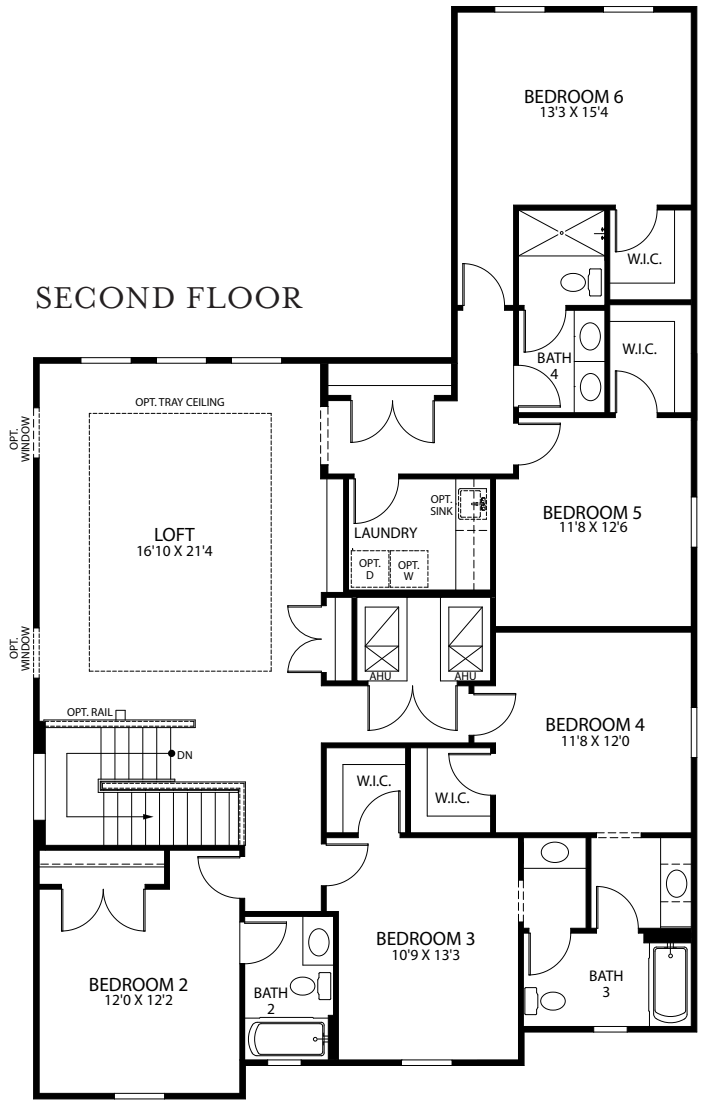
JUPITER

Elevation W

The Renaissance Series



SECOND FLOOR



- 6 Bedrooms
- 2 Car Garage
- 4.5 Bathrooms
- 3,714 Finished Sq. Ft.

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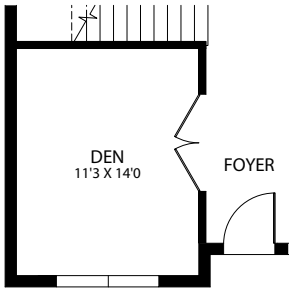
MARONDA Homes

JUPITER

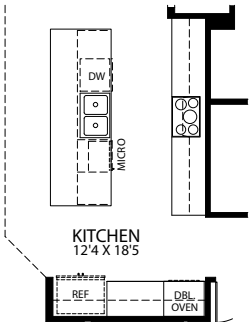
Elevation W

The Renaissance Series

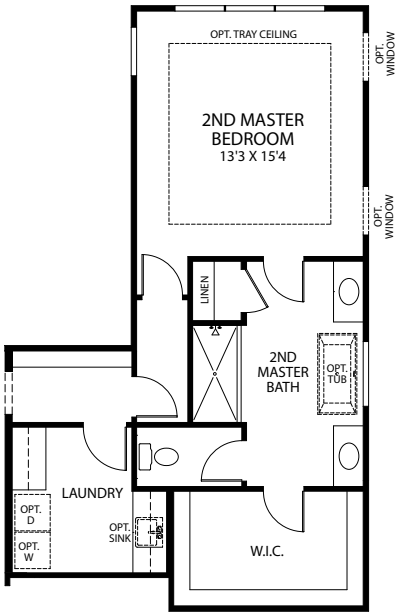
Opt. Den



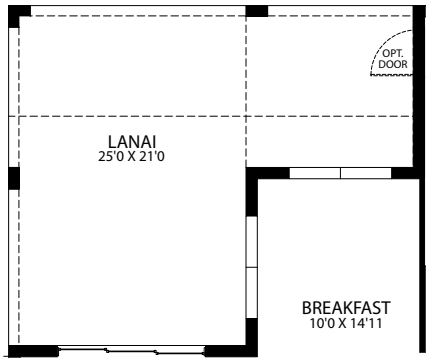
Opt. Gourmet Kitchen



Opt. 2nd Floor Master



Opt. Extended Lanai



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MARONDA Homes

ORION

Elevation V

The Renaissance Series

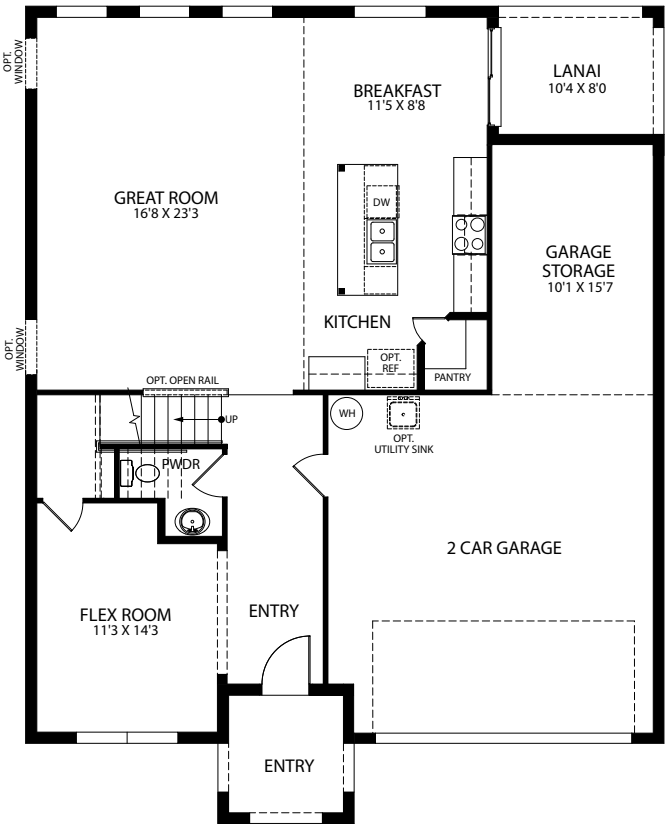
Optional Partial Stone Front

MARONDA Homes

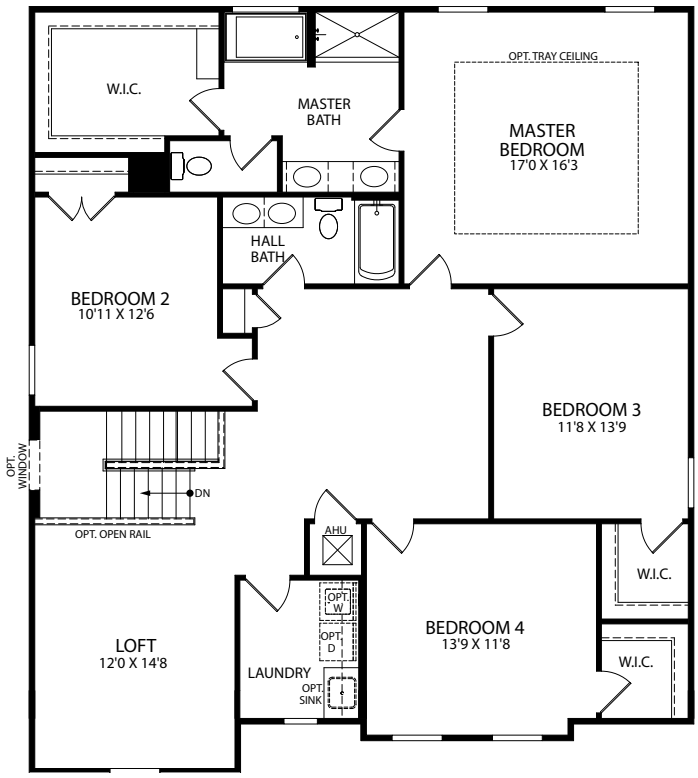
ORION

Elevation V

The Renaissance Series



SECOND FLOOR



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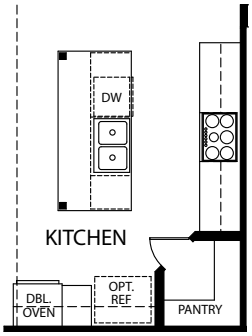
MARONDA Homes

ORION

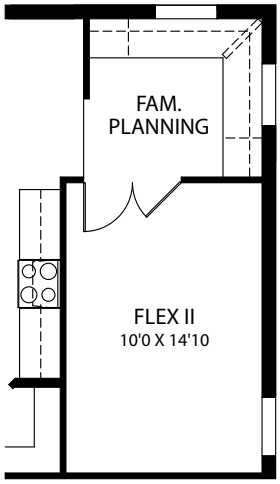
Elevation V

The Renaissance Series

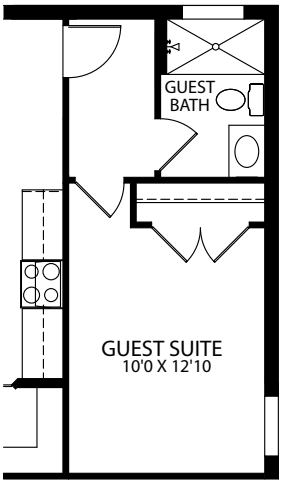
Opt. Gourmet Kitchen



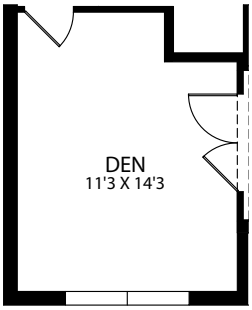
Opt. Flex II



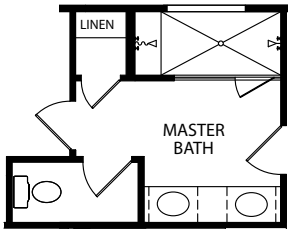
Opt. Guest Suite ILO Garage Storage



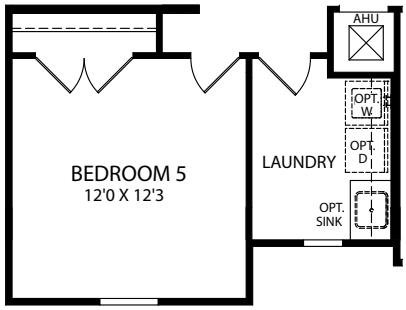
Opt. Den



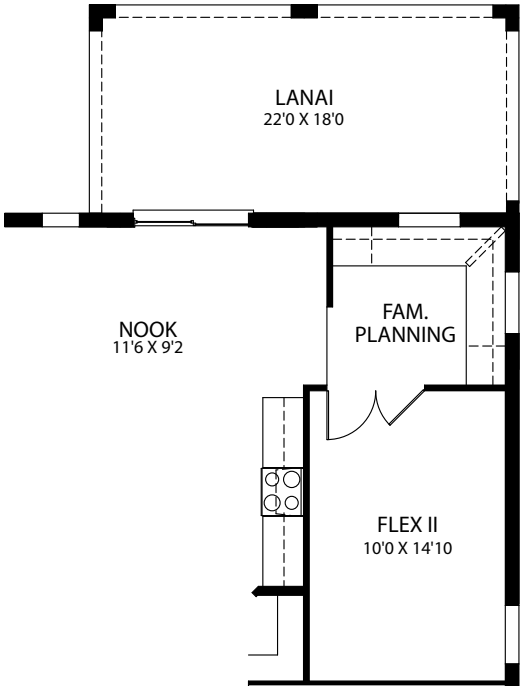
Opt. Deluxe Master Bath



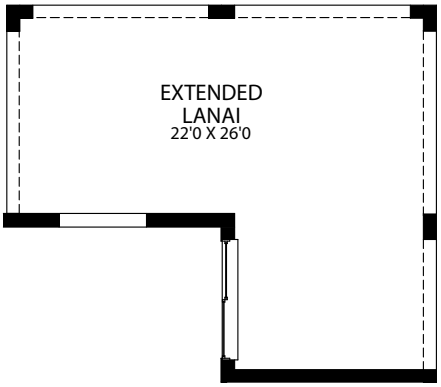
Opt. Bedroom 5 ILO Loft



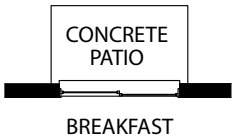
Opt. Lanai with Guest/Flex II



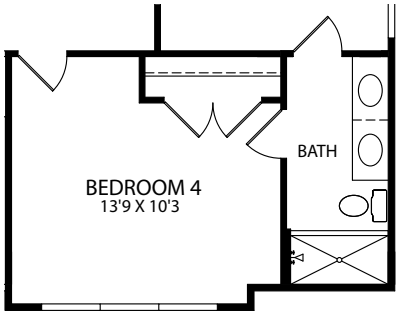
Opt. Extended Lanai



Opt. SGD at Breakfast



Opt. Full Bath at Bedroom 3 & 4 ILO W.I.C.



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MARONDA Homes

ORION

Elevation W

The Renaissance Series

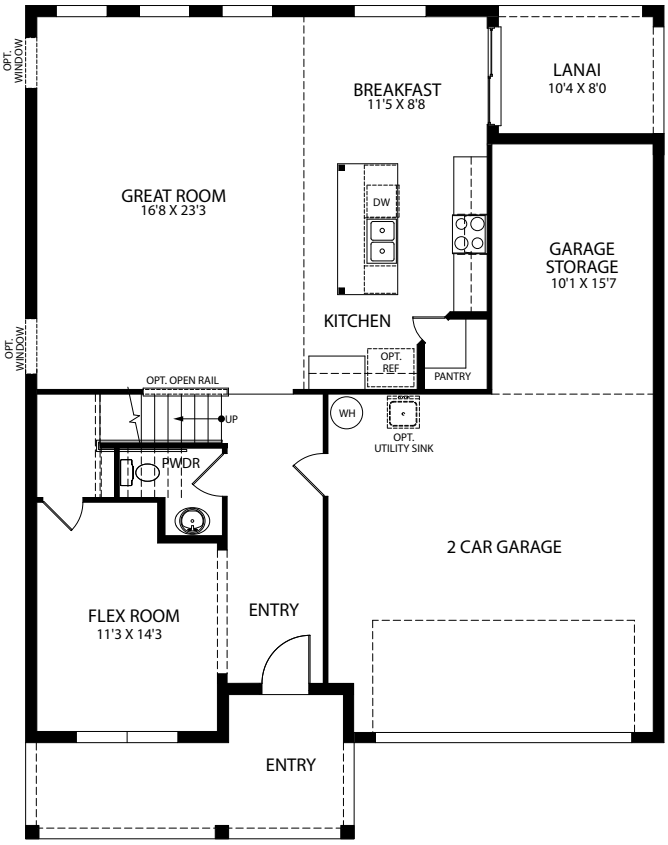
Optional Partial Stone Front

MARONDA Homes

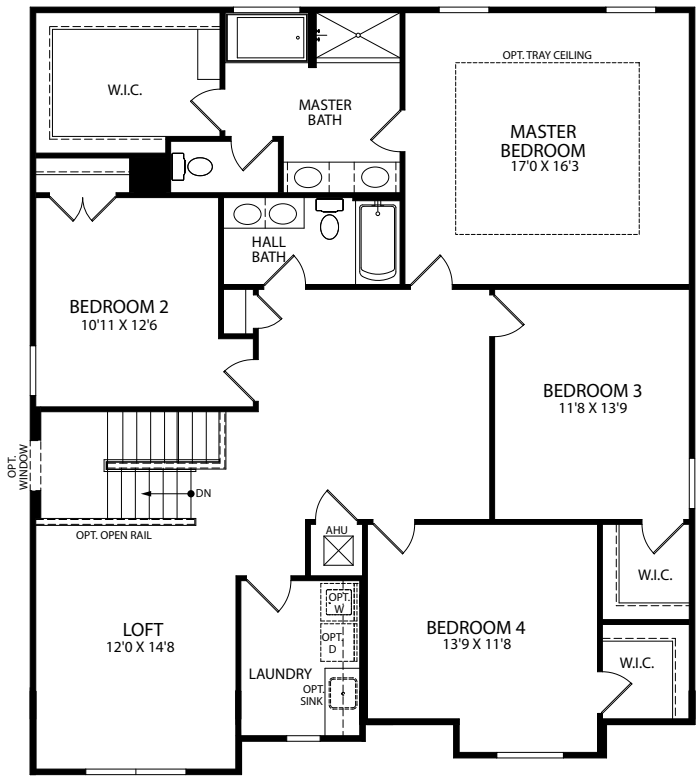
ORION

Elevation W

The Renaissance Series



SECOND FLOOR



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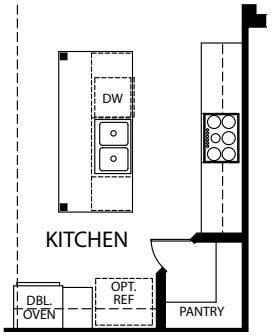
MARONDA Homes

ORION

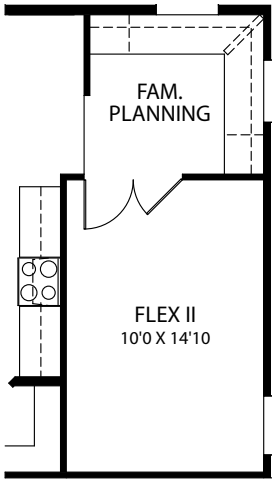
Elevation W

The Renaissance Series

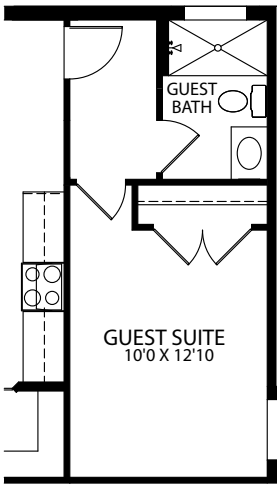
Opt. Gourmet Kitchen



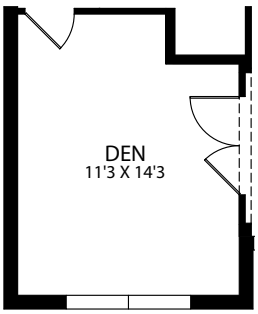
Opt. Flex II



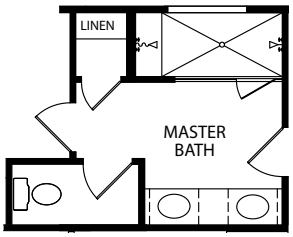
Opt. Guest Suite ILO Garage Storage



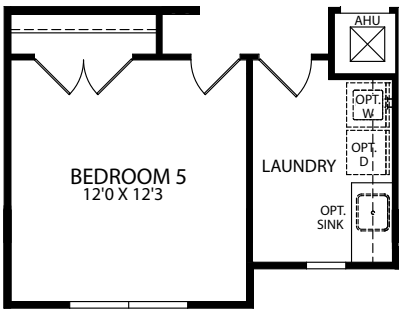
Opt. Den



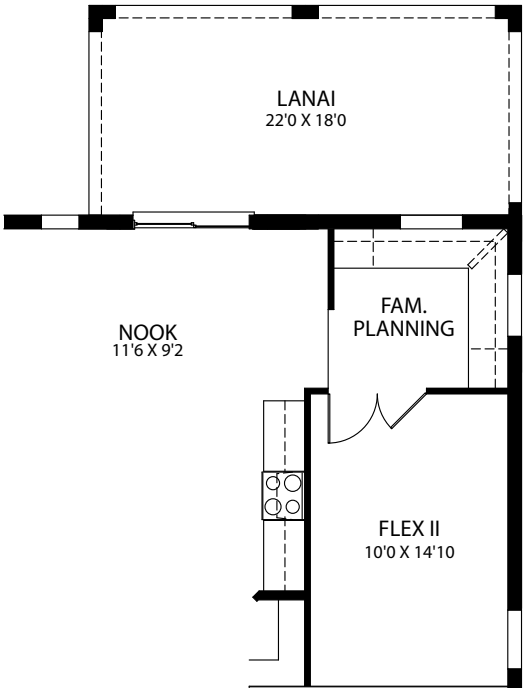
Opt. Deluxe Master Bath



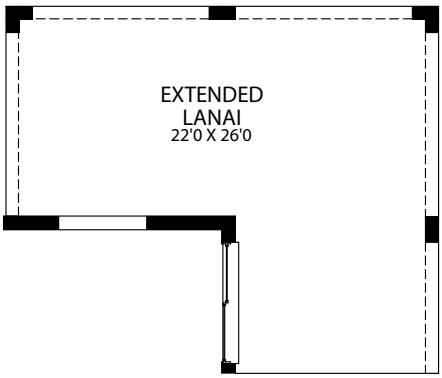
Opt. Bedroom 5 ILO Loft



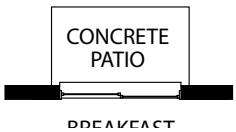
Opt. Lanai with Guest/Flex II



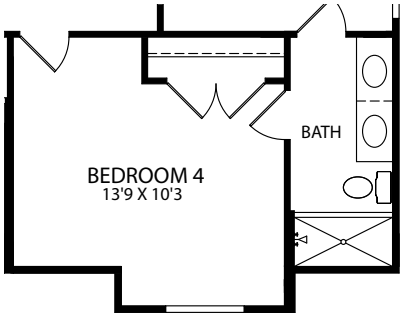
Opt. Extended Lanai



Opt. SGD at Breakfast



Opt. Full Bath at Bedroom 3 & 4 ILO W.I.C.



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GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 INCH = 30 FEET

N

W H&H SURVEY E

S

LAKE FRANKLIN ESTATES

A REPLAT OF LOTS 9, 10, 19, 20, 21, 22, 23, 24, AND 25, BLOCK 8, LAKE FRANKLIN PARK, PLAT BOOK 6, PAGE 51,
LYING IN SECTION 32, TOWNSHIP 19 SOUTH, RANGE 27 EAST, CITY OF MOUNT DORA, LAKE COUNTY, FLORIDA

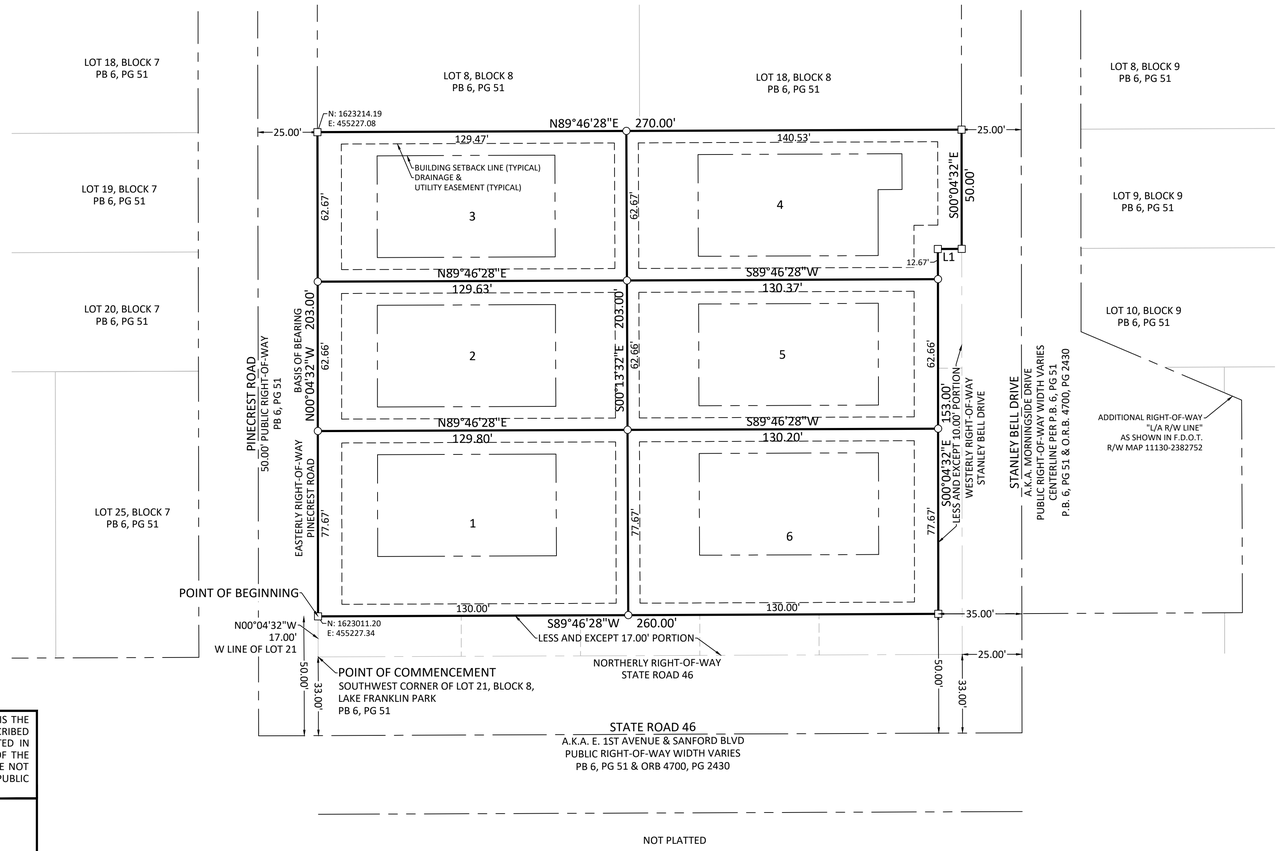
A PORTION OF THE NORTHEAST ¼ OF THE NORTHEAST ¼ OF SECTION 32, TOWNSHIP 19 SOUTH, RANGE 27 EAST, LAKE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF LOT 21, BLOCK 8, LAKE FRANKLIN PARK, AS RECORDED IN PLAT BOOK 6, PAGE 51; THENCE RUN NORTH 00°04'32" WEST ALONG THE WEST LINE OF THE SAID LOT 21, SAID LINE ALSO BEING THE EASTERLY RIGHT-OF-WAY LINE OF PINECREST ROAD (A 50.00 FOOT PUBLIC RIGHT-OF-WAY PER THE SAID LAKE FRANKLIN PARK), A DISTANCE OF 17.00 FEET TO THE POINT OF BEGINNING;

THENCE CONTINUE NORTH 00°04'32" WEST ALONG THE SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 203.00 FEET; THENCE DEPARTING THE SAID EASTERLY RIGHT-OF-WAY LINE, RUN NORTH 89°46'28" EAST, A DISTANCE OF 270.00 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF STANLEY BELL DRIVE (ALSO KNOWN AS MORNINGSIDE DRIVE, A 50.00 FOOT PUBLIC RIGHT-OF-WAY PER THE SAID LAKE FRANKLIN PARK); THENCE RUN SOUTH 00°04'32" EAST ALONG THE SAID EASTERLY RIGHT-OF-WAY, A DISTANCE OF 50.00 FEET; THENCE DEPARTING THE SAID WESTERLY RIGHT-OF-WAY, RUN SOUTH 89°46'28" WEST, A DISTANCE OF 10.00 FEET TO A POINT ON A LINE PARALLEL WITH AND 10.00 FEET WEST OF THE SAID WESTERLY RIGHT-OF-WAY LINE, THENCE RUN SOUTH 00°04'32" EAST ALONG THE SAID PARALLEL LINE, A DISTANCE OF 153.00 FEET TO A POINT ON A LINE PARALLEL WITH AND 17.00 FEET NORTH OF THE NORTHERLY RIGHT-OF-WAY LINE OF 1ST AVENUE (ALSO KNOWN AS STATE ROAD 46, A VARYING WIDTH PUBLIC RIGHT-OF-WAY PER THE SAID LAKE FRANKLIN PARK); THENCE DEPARTING THE SAID WESTERLY PARALLEL LINE, RUN SOUTH 89°46'28" WEST ALONG THE SAID SOUTHERLY PARALLEL LINE, A DISTANCE OF 260.00 FEET TO THE POINT OF BEGINNING;

CONTAINING 1.223 ACRES, MORE OR LESS, OF LAND.

VICINITY MAP
SCALE: 1" = 1,000'



NOTICE: THIS PLAT, AS RECORDED IN ITS GRAPHIC FORM, IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY ANY OTHER GRAPHIC OR DIGITAL FORM OF THE PLAT. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

LEGEND & ABBREVIATIONS

IR[C]	=	IRON ROD [& CAP]
NL[D]	=	NAIL [& DISK]
CM	=	CONCRETE MONUMENT
SEC	=	SECTION
PRM	=	PERMANENT REFERENCE MONUMENT
PCP	=	PERMANENT CONTROL POINT
PSM	=	PROFESSIONAL SURVEYOR & MAPPER
P.O.B.	=	POINT OF BEGINNING
P.O.C.	=	POINT OF COMMENCEMENT
LB	=	LICENSED BUSINESS
PB	=	PLAT BOOK
U.E.	=	UTILITY EASEMENT
TWN	=	TOWNSHIP
RNG	=	RANGE
ORB	=	OFFICIAL RECORDS BOOK
PG	=	PAGE
CCR	=	CERTIFIED CORNER RECORD
℄	=	CENTERLINE
AKA	=	ALSO KNOWN AS

○ = SET ⅝" IRC (LB 7821)
△ = SET NLD (PCP LB 7821)
□ = SET 4"x4" CM (PRM LB 7821)
● = FOUND IRC
▲ = FOUND NLD
■ = FOUND CM, 4"x4", NO I.D.

LINE TABLE		
L#	BEARING	DISTANCE
L1	S89°46'28"W	10.00'

BUILDING SETBACK INFORMATION	
LOT SIDE	SETBACK DISTANCE
FRONT	25.00'
SIDE	10.00'
REAR	30.00'
SIDE ALONG RIGHT-OF-WAY	25.00'

LOT EASEMENT INFORMATION	
LOT SIDE	EASEMENT DISTANCE
FRONT	10.00'
SIDE	5.00'
REAR	5.00'
SIDE ALONG RIGHT-OF-WAY	5.00'

GENERAL NOTES:

1. BEARINGS SHOWN HEREON ARE BASED ON THE EAST RIGHT-OF-WAY LINE OF PINECREST RD AS BEING N00°04'32"W, A MEASURED BEARING.
2. ALL PLATTED UTILITY EASEMENTS SHALL PROVIDE THAT SUCH EASEMENTS SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES; PROVIDED, HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES SHALL INTERFERE WITH THE FACILITIES AND SERVICES OF AN ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. IN THE EVENT A CABLE TELEVISION COMPANY DAMAGES THE FACILITIES OF A PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE FOR THE DAMAGES. THIS SECTION SHALL NOT APPLY TO THOSE PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
3. TO THE CITY OF MOUNT DORA, FLORIDA: A PERPETUAL EASEMENT OVER, ACROSS, UPON AND BENEATH THE UTILITY EASEMENTS (UE), AS DESIGNATED HEREIN, FOR THE PURPOSE OF PROVIDING, CONVEYING, DISTRIBUTING, CARTING OR TRANSMITTING ELECTRIC, FIBER, CABLE, POTABLE WATER, RECLAIMED WATER, SANITARY SEWER AND FOR ANY OTHER PURPOSES FOR WHICH THE CITY, IN ITS SOLE DISCRETION, DEEMS APPROPRIATE AND, FOR ANY AND ALL OTHER PURPOSES FOR WHICH CITY UTILITIES ARE NOW OR MAY HEREAFTER BE USED, TOGETHER WITH THE RIGHT, PRIVILEGE AND AUTHORITY TO INSTALL, CONSTRUCT, LOCATE, LAY, OPERATE, MAINTAIN, INSPECT, ALTER, IMPROVE, AUGMENT, REMOVE, REPAIR, RELOCATE, REBUILD AND/OR REPLACE PIPES, POLES, WIRES, CABLES, MAINS, CONDUITS AND ALL OTHER EQUIPMENT AND/OR FACILITIES, IMPROVEMENTS AND/OR ACCESSORIES THAT THE CITY, IN ITS SOLE DISCRETION, DEEMS NECESSARY, DESIRABLE AND/OR APPROPRIATE IN ORDER TO ENSURE THE PROPER MAINTENANCE OF ITS UTILITY SYSTEMS AND/OR THE RIGHT OF INGRESS AND EGRESS, OVER, ACROSS AND BENEATH THE SAME.
4. THE COORDINATES PROVIDED HEREIN WERE COLLECTED USING GPS OBSERVATION IN ACCORDANCE TO CHAPTER 4.3.4(2)(P)(1), MOUNT DORA LAND DEVELOPMENT CODE.
5. INGRESS AND EGRESS FROM STATE ROAD 46 (AKA 1ST AVE) TO LOTS 1 AND 6 IS DEDICATED TO THE CITY OF MOUNT DORA, FLORIDA.

H & H SURVEY CONSULTANTS, LLC
131 W. Broadway St, Ste 1001
Oviedo, FL 32765
(407) 542-4977
www.hnhsurvey.com
Licensed Busness No. 7821

CERTIFICATE OF APPROVAL
PLANNING AND ZONING COMMISSION

REVIEWED AND APPROVED

CHAIRMAN DATE

PLAT BOOK PAGE

LAKE FRANKLIN ESTATES
DEDICATION

KNOW ALL MEN BY THESE PRESENTS, THAT MARONDA HOMES, LLC OF FLORIDA, A FLORIDA LIMITED LIABILITY COMPANY, BEING THE OWNER IN FEE SIMPLE OF THE LANDS DESCRIBED IN THE FOREGOING CAPTION TO THIS PLAT LOCATED IN THE CITY OF MOUNT DORA, FLORIDA, HEREBY DEDICATED SAID LANDS AND PLAT FOR THE USES AND PURPOSES THEREIN EXPRESSED. THE DRAINAGE & UTILITY EASEMENTS AS SHOWN HEREIN IS HEREBY DEDICATED TO THE CITY OF MOUNT DORA.

IN WITNESS THEREOF, HAVING CAUSED THESE PRESENTS TO BE SIGNED BY THE INDIVIDUAL NAMED BELOW THIS _____ DATE OF _____, 20____.

Signed, sealed and delivered in the presenese of the following two witnesses:

MARONDA HOMES, LLC OF FLORIDA
4005 MARONDA WAY
SANFORD, FL 32771

_____ By _____
Print Name: (witness) _____ SCOTT C. HOWARD
PRESIDENT

_____
Print Name: (witness) _____

STATE OF FLORIDA
COUNTY OF _____

The forgoing instrument was acknowledged before me, by means of [ ] physical presence or [ ] online notarization, this _____ day of _____, 20____, by SCOTT C. HOWARD, as PRESIDENT of MARONDA HOMES, LLC OF FLORIDA, a FLORIDA LIMITED LIABILITY COMPANY, on behalf of the LIMITED LIABILITY COMPANY, such person
[ ] is personally known to me or
[ ] has produced _____ as identification.

_____
PRINTED NAME: _____

NOTARY PUBLIC
COMMISSION NUMBER _____

MY COMMISSION EXPIRES _____

CERTIFICATE OF SURVEYOR

KNOW ALL MEN BY THESE PRESENTS, THAT THE UNDERSIGNED, BEING A REGISTERED SURVEYOR AND MAPPER, FULLY LICENSED TO PRACTICE IN THE STATE OF FLORIDA, DOES HEREBY CERTIFY THAT THIS PLAT WAS PREPARED UNDER HIS DIRECTION AND SUPERVISION, AND THAT THIS PLAT COMPLIES WITH ALL OF THE SURVEY REQUIREMENTS OF CHAPTER 177, PART I, PLATTING, FLORIDA STATUTES.

H & H SURVEY CONSULTANTS LLC
131 W. BROADWAY ST, STE 1001, OVIEDO, FL, 32765
CERTIFICATE OF AUTHORIZATION NUMBER LB7821

_____ _____
DUSTIN W. HOLLOWAY, PSM - REGISTRATION #6676 DATE

REVIEWER STATEMENT

PURSUANT TO SECTION 177.081, FLORIDA STATUTES, I HAVE REVIEWED THE PLAT FOR CONFORMITY TO CHAPTER 177, PART I, FLORIDA STATUTES, AND FIND THAT SAID PLAT COMPLIES WITH THE TECHNICAL REQUIREMENTS OF THE CHAPTER; PROVIDED, HOWEVER, THAT MY REVIEW DOES NOT INCLUDE FIELD VERIFICATION OF ANY OF THE COORDINATE POINTS OR MEASUREMENTS SHOWN ON THE PLAT.

HALFF, INC
902 N. SINCLAIR AVE, TAVARES, FL, 32778
CERTIFICATE OF AUTHORIZATION NUMBER LB8348

_____ _____
JENNINGS E. GRIFFIN, PLS - REGISTRATION #4486 DATE

CERTFICATE OF APPROVAL BY MUNICIPALITY

THIS IS TO CERTIFY, THAT THIS PLAT WAS REVIEWED IN ACCORDANCE WITH SECTION 177.081, FLORIDA STATUTES AND PRESENTED TO THE CITY COUNCIL OF MOUNT DORA, FLORIDA, AND APPROVED BY SAID CITY COUNCIL OF MOUNT DORA FOR RECORD ON THIS _____ DAY OF _____, 20____, PROVIDED THAT THIS PLAT IS RECORDED IN THE OFFICE OF THE CLERK OF THE CIRCUIT COURT OF LAKE COUNTY, FLORIDA WITHIN _____ DAYS FROM THE DATE OF APPROVAL BY SAID CITY OF MOUNT DORA, FLORIDA.

ATTEST: CITY OF MOUNT DORA

_____ _____
CITY CLERK MAYOR

_____ _____
PRINT NAME PRINT NAME

CERTIFICATE OF CLERK

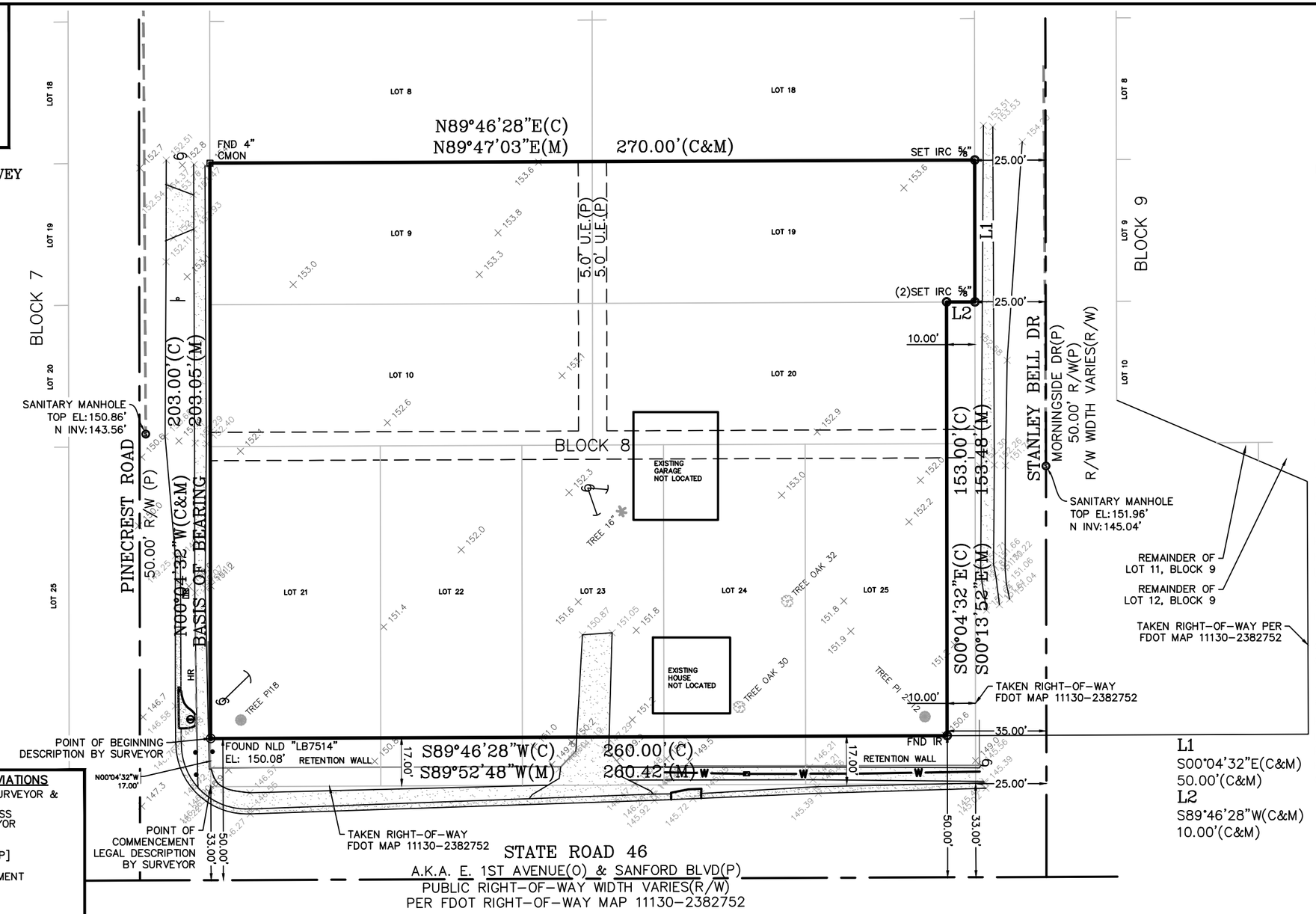
I HEREBY CERTIFY, THAT I HAVE EXAMINED THE FOREGOING PLAT AND FIND THAT IT COMPLIES IN FORM WITH ALL THE REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES AND WAS FILED FOR RECORD ON _____

AT _____, FILE No. _____

_____
CLERK OF THE CIRCUIT COURT IN AND FOR
LAKE COUNTY, FLORIDA

H&H SURVEY CONSULTANTS

BOUNDARY AND TOPOGRAPHIC SURVEY



0 20 40

1 INCH = 40 FEET

N

JOB NUMBER
21-09-007- 1ST AVE

LEGAL DESCRIPTION

LOTS 9, 10, 19, 20, 21, 22, 23, 24 AND 25, LESS THE SOUTH 17 FEET OF SAID LOTS 21, 22, 23, 24 AND 25, AND THE EAST 10 FEET OF SAID LOTS 20 AND 25, BLOCK 8, LAKE FRANKLIN PARK, AS RECORDED IN PLAT BOOK 6, PAGES 51, PUBLIC RECORDS OF LAKE COUNTY, FLORIDA.

LEGAL DESCRIPTION BY SURVEYOR

A PORTION OF THE NORTHEAST ¼ OF THE NORTHEAST ¼ OF SECTION 32, TOWNSHIP 19 SOUTH, RANGE 27 EAST, LAKE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCE AT THE SOUTHWEST CORNER OF LOT 21, BLOCK 8, LAKE FRANKLIN PARK, AS RECORDED IN PLAT BOOK 6, PAGE 51; THENCE RUN NORTH 00°04'32" WEST ALONG THE WEST LINE OF THE SAID LOT 21, SAID LINE ALSO BEING THE EASTERLY RIGHT-OF-WAY LINE OF PINECREST ROAD (A 50.00 FOOT PUBLIC RIGHT-OF-WAY PER THE SAID LAKE FRANKLIN PARK), A DISTANCE OF 17.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 00°04'32" WEST ALONG THE SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 203.00 FEET; THENCE DEPARTING THE SAID EASTERLY RIGHT-OF-WAY LINE, RUN NORTH 89°46'28" EAST, A DISTANCE OF 270.00 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF STANLEY BELL DRIVE (ALSO KNOWN AS MORNINGSIDE DRIVE, A 50.00 FOOT PUBLIC RIGHT-OF-WAY PER THE SAID LAKE FRANKLIN PARK); THENCE RUN SOUTH 00°04'32" EAST ALONG THE SAID EASTERLY RIGHT-OF-WAY, A DISTANCE OF 50.00 FEET; THENCE DEPARTING THE SAID WESTERLY RIGHT-OF-WAY, RUN SOUTH 89°46'28" WEST, A DISTANCE OF 10.00 FEET TO A POINT ON A LINE PARALLEL WITH AND 10.00 FEET WEST OF THE SAID WESTERLY RIGHT-OF-WAY LINE, THENCE RUN SOUTH 00°04'32" EAST ALONG THE SAID PARALLEL LINE, A DISTANCE OF 153.00 FEET TO A POINT ON A LINE PARALLEL WITH AND 17.00 FEET NORTH OF THE NORTHERLY RIGHT-OF-WAY LINE OF 1ST AVENUE (ALSO KNOWN AS STATE ROAD 46, A VARYING WIDTH PUBLIC RIGHT-OF-WAY PER THE SAID LAKE FRANKLIN PARK); THENCE DEPARTING THE SAID WESTERLY PARALLEL LINE, RUN SOUTH 89°46'28" WEST ALONG THE SAID SOUTHERLY PARALLEL LINE, A DISTANCE OF 260.00 FEET TO THE POINT OF BEGINNING;
CONTAINING 1.223 ACRES, MORE OR LESS, OF LAND.

L1
S00°04'32"E(C&M)
50.00'(C&M)

L2
S89°46'28"W(C&M)
10.00'(C&M)

LEGEND & ABBREVIATIONS

PSM	= PROFESSIONAL SURVEYOR & MAPPER
LB	= LICENSED BUSINESS
LS	= LICENSED SURVEYOR
FND	= FOUND
SET	= SET "LB 7821"
IR[C]	= IRON ROD [& CAP]
NL[D]	= NAIL [& DISK]
CMON	= CONCRETE MONUMENT
TYP	= TYPICAL
SW	= SIDEWALK
CONC	= CONCRETE
EP	= PAVEMENT
R/W	= RIGHT-OF-WAY
⁄	= AIR CONDITIONER (3.5'x3.5' PAD)
D.E.	= DRAINAGE EASEMENT
U.E.	= UTILITY EASEMENT
WBF	= WOOD BOARD FENCE
CLF	= CHAIN LINK FENCE
WVF	= WHITE VINYL FENCE
(P)	= PLAT
(M)	= MEASURED
ⓒ	= CLEANOUT
WM	= WATER METER
MBX	= MAILBOX
EM	= ELECTRIC METER
TR	= TELEPHONE RISER
ER	= ELECTRIC RISER
	= POWER POLE
W	= WELL
S	= SANITARY MANHOLE
	= DRAINAGE MANHOLE
ST	= SEPTIC TANK
OE	= OVERHEAD ELECTRIC CABLE
W	= WATER PIPE

SURVEYOR'S NOTES

1. BASIS OF BEARING – THE WESTERLY LINE OF LOTS 9, 10, AND 21, BLOCK 8, LAKE FRANKLIN PARK, AS RECORDED IN PLAT BOOK 6, PAGES 51, PUBLIC RECORDS OF LAKE COUNTY, FLORIDA, AS BEING S00°04'32"E AS A MEASURED.
2. DATE OF FIELD SURVEY: 2/18/2022.
3. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING SURVEYOR.
4. PROPERTY LINES SHOULD NOT BE ESTABLISHED USING FENCE OR BUILDING TIES.
5. NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO, BURIED UTILITIES, FOUNDATIONS AND FOOTERS WERE LOCATED.
6. BASED UPON MY REVIEW OF THE "FLOOD INSURANCE RATE MAP" OF CITY OF MOUNT DORA, FLORIDA, COMMUNITY PANEL NO. 12069C0367E, EFFECTIVE DATE 12/18/2012, THIS PROPERTY IS LOCATED WITHIN FLOOD ZONE "X", DEFINED AS AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.
7. NO INSTRUMENTS OF RECORD REFLECTING OWNERSHIP OR ENCUMBRANCES WERE PROVIDED, EXCEPT AS NOTED, NOR DID THIS SURVEYOR ABSTRACT THESE LANDS.
8. SURVEY FILE NUMBER: 21-09-007- 1ST AVE
9. ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), AND MORE SPECIFICALLY TO THE FLORIDA PERMANENT REFERENCE NETWORK (FPRN) CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) FLEU, SNFD, & ORL1, AND TO THE NAIL & DISK IDENTIFIED AS "LB7514" SHOWN HEREON.

BOUNDARY SURVEY CERTIFIED TO:
MARONDA HOMES

PROPERTY ADDRESS:
1715 E. 1ST AVE.
MOUNT DORA, FL 32757

LOT SIZE:
53,279 SQ. FT.

× 23.4	= GROUND ELEVATION
	= PROPOSED DRAINAGE ARROW
23.4	= PROPOSED ELEVATION
	= PROPOSED 12"X18" CORRUGATED METAL PIPE

I HEREBY CERTIFY THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, AND THAT THIS SURVEY MEETS THE STANDARDS OF PRACTICE AS REQUIRED BY CHAPTER 5J-17 FLORIDA BOARD OF LAND SURVEYORS PURSUANT TO SECTION 472.027 FLORIDA STATUTES.

This item has been electronically signed and sealed by Faun M. Hoffmeier, PSM on [Date/Time Stamp shown] using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

DUSTIN W HOLLOWAY, P.S.M. LS 6676
H&H SURVEY CONSULTANTS, LLC LB 7821

131 W Broadway, Suite 1001, Oviedo, FL 32765 www.hnhsurvey.com 407.542.4977

Civil Construction Plans for

Lake Franklin Estates

(Re-Plat of 1715 East First Avenue
Lots 9-10 & 10-25)

Prepared for

MARONDA Homes

Maronda Homes
3999 West First Street
Sanford, Florida 32771

PROJECT TEAM

APPLICANT/OWNER

Maronda Homes
3999 West First Street
Sanford, Florida 32771

CIVIL ENGINEER

Civil Design Solutions, LLC
500 N. Maitland Avenue, Suite 111
Maitland, Florida 32751
Phone: 407.636.4198

SURVEYOR

H&H Survey Consultants, LLC
131 W. Broadway Street, Suite 1001
Oviedo, Florida 32765
phone: 407.542.4977

PERMITTING AGENCIES

LOCAL MUNICIPALITY

City of Mount Dora
510 N. baker Street
Mout Dora, Florida 32757
Phone: 352.735.7100

UTILITY SERVICE PROVIDERS

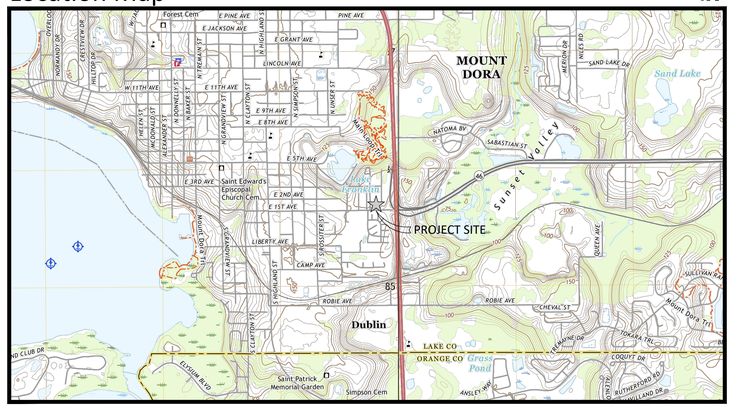
WATER & WASTEWATER

City of Mount Dora
900 North Donnelly Street
Mout Dora, Florida 32757
Phone: 352.735.7151

ELECTRIC

City of Mount Dora
900 North Donnelly Street
Mout Dora, Florida 32757
Phone: 352.735.7151

Location Map



SECTION 32 TOWNSHIP 19S RANGE 27E
LATITUDE 28°47'50.0"N LONGITUDE 81°37'37.0"W

SCALE 1":2,000'

Parcel Identification No. 32-19-27-1300-008-00900

Sheet Index			Submit					
Sheet Id.		Sheet Title	1	2	3	4	5	6
C0.00		Cover Sheet	✓	✓				
C1.00		Geometry, Grading, & Utility Plan	✓	✓				
C2.00	- C3.00	City of Mount Dora - Standard Details	✓	✓				

	Date	Description
1	5/5/2022	Submit to City of Mount Dora
2	7/19/2022	Submit to City of Mount Dora

Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.
Sunshine811.com

CALL BEFORE YOU EXCAVATE
"CALL SUNSHINE"
1-800-432-4770
TOLL FREE
FL STATUE 553.851(1979) REQUIRES
MIN. 2 DAYS AND MAX. 5 DAYS
NOTICE BEFORE YOU EXCAVATE

Key Map:

Consultant(s)/Note(s)

NO.	DATE:	DESCRIPTIONS:
		SUBMISSIONS/REVISIONS
	DATE:	04/29/2022
	VERTICAL DATUM:	NAVD 88
	JOB NO.:	MH20-001
	DESIGNED BY:	YFS
	DRAWN BY:	YFS
	CHECKED BY:	GB
	APPROVED BY:	YFS
	SCALE (FT)	NOTED/NTS

Project Name:
Lake Franklin Estates (Re-Plat of 1715 East First Avenue, Lots 9-10 & 10-25)

MARONDA Homes

Jurisdiction:
Mount Dora, Florida

Sheet Title:
Cover Sheet

Sheet No.
C0.00

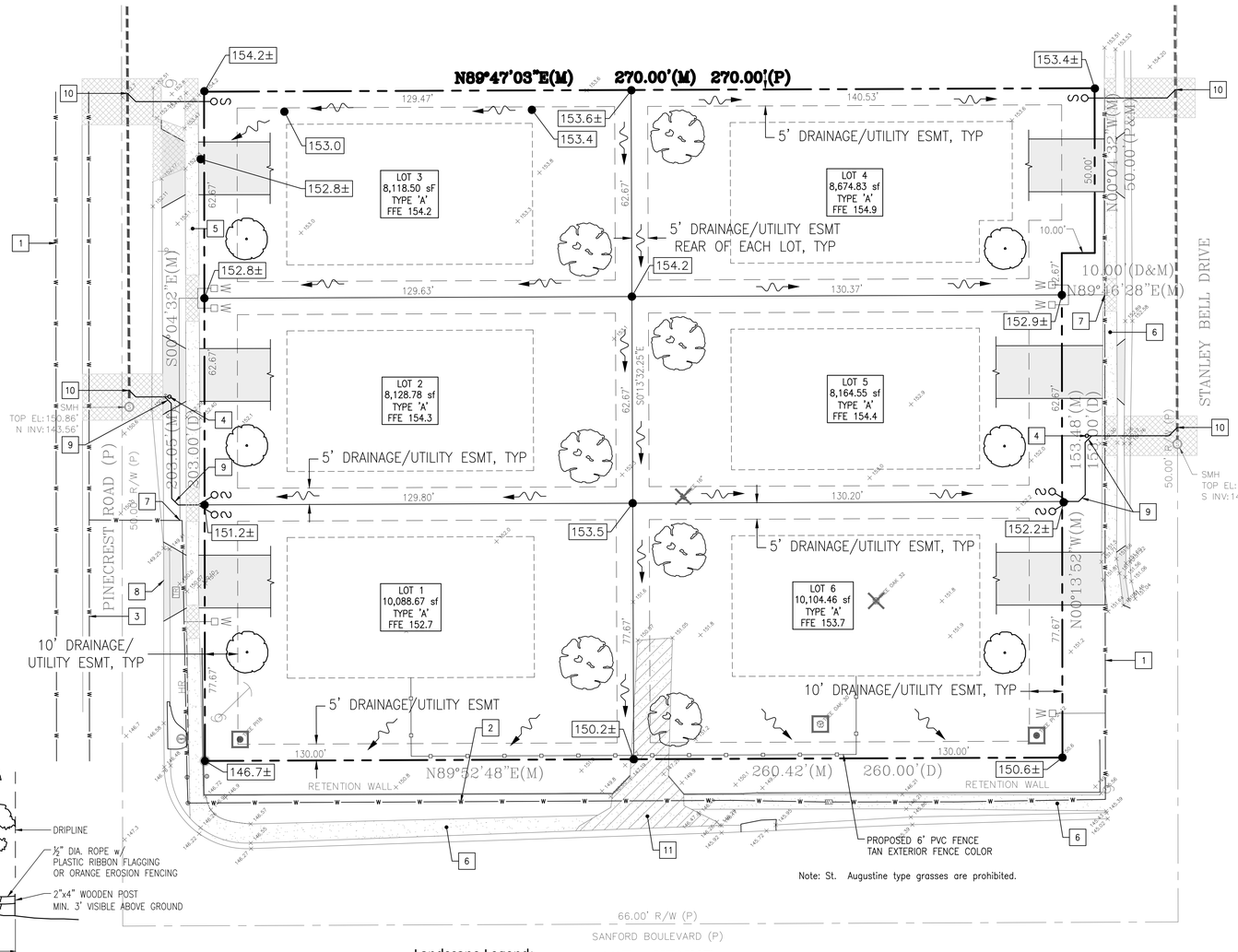
CDS CIVIL DESIGN SOLUTIONS
CIVIL ENGINEERING & LAND DEVELOPMENT SERVICES
500 N. Maitland Avenue, Suite 111
Maitland, Florida 32751
407.636.4198 www.cdsllc-fl.com
FBPE CA No. 31631

NOT FOR CONSTRUCTION UNLESS SIGNED AND SEALED

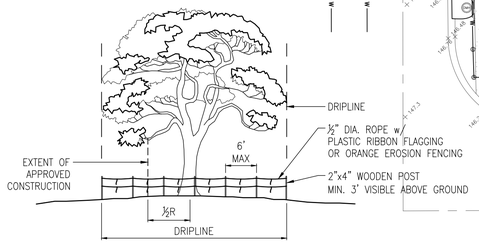
Date: 7/15/2022

This item has been electronically signed and sealed by Y.F. Steve Young, PE using a Digital Signature and date.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

P:\MH20-001 MARONDA HOMES - LOTS\EAST 1ST AVENUE 1715, LOT 9-10,19-25 - MOUNT DORA\CAD\FINAL\MH20-001 CVR



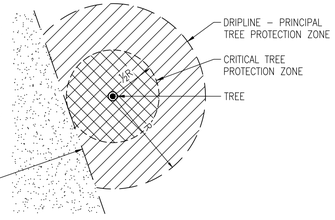
Note: St. Augustine type grasses are prohibited.



WHERE NOT SPECIFICALLY INDICATED ON THE PLANS, THE RADIUS OF THE DRIPLINE OF THE TREE(R) WILL BE CONSIDERED TO BE EQUAL TO THE DBH OF THE TRUNK FOR THE FIRST 24 INCHES OF DBH AND 50% FOR THAT PORTION LARGER.

DO NOT GRADE WITHIN THE DRIPLINE OF TREES WITH BOXBLADE. USE BACKHOE LOCATED OUTSIDE OF DRIPLINE. FINE GRADE MANUALLY.

MAXIMUM ALLOWABLE ENCROACHMENT WITHOUT REMEDIAL TREE PROTECTION EFFORTS



TREE PROTECTION DETAIL

N.T.S.

Landscape Tree Data

Total existing number of trees sized 6"–23.99"	4
Total existing number of trees sized 6"–23.99" removed	1
Total existing number of trees sized 24" or greater	2
Total existing number of trees sized 24" or greater removed	1
Total number of trees replaced at ratio 1:1 for trees removed 6"–23.99"	1
Total number of trees replaced at ratio 1:6 for trees removed 24" or greater	6
Total number of trees replaced	7

Notes

New replacement trees must be canopy type, minimum 3.5 inches caliper, FL #1 Grade or Better, and 8–10 feet in height.

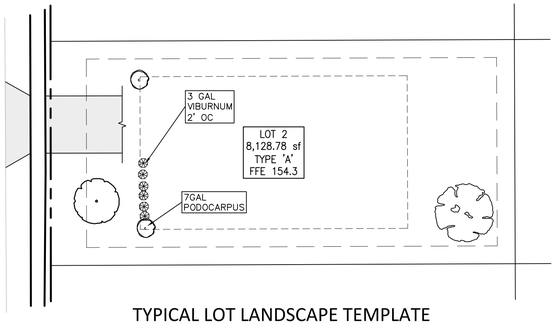
Landscape Legend:

EXISTING TREE TO BE REMOVED

EXISTING TREE TO BE PRESERVED

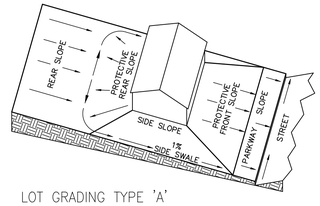
CANOPY TREE IN FRONT YARD MUST BE A MINIMUM 2" CALIPER, 8 FT IN HEIGHT, AND FLORIDA #1 GRADE OR BETTER. SAID LOT CANOPY SHALL BE PLANTED ON EACH RESIDENTIAL LOT AT A DISTANCE OF 3 FT FROM THE RIGHT–OF–WAY LINE OR ANY UTILITY EASEMENT ADJACENT TO THE RIGHT–OF–WAY, WHICHEVER IS FURTHER FROM THE CENTER LINE OF THE ROAD RIGHT–OF–WAY FOR THE LOT IN QUESTION. LDC Sec. 6.6.9.

NEW REPLACEMENT TREES MUST BE CANOPY TYPE, MINIMUM 3.5" CALIPER, FL #1 GRADE OR BETTER, AND 8–10 FT IN HEIGHT. LDC Sec. 4.3.3.2.a.

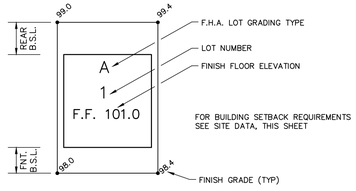


TYPICAL LOT LANDSCAPE TEMPLATE

N.T.S.



LOT GRADING TYPE 'A'
ALL DRAINAGE TO STREET

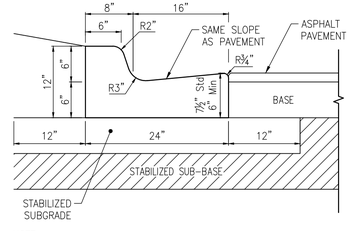


GENERAL NOTES

1. CONTRACTOR SHALL GRADE LOT PAD 8" BELOW THE FIRST FLOOR ELEVATION.

TYPICAL LOT GRADING

N.T.S.



NOTE:

WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT AND THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN ON PLANS.

TYPE 'F' CURB & GUTTER

FDOT INDEX 300 N.T.S.

Legend:

OPEN CUT EXISTING PAVEMENT & CONCRETE TO BE REMOVED (SAW CUT CONCRETE & PAVEMENT FOR CLEAN EDGE)

EXISTING DRIVEWAY TO BE REMOVED

PROPOSED DRIVEWAY/LOT ACCESS. EXACT LOCATION WILL BE PERMITTED DURING BUILDING PERMIT PHASE.

EXISTING BOUNDARY/RIGHT–OF–WAY

PROPOSED LOT LINE

BUILDING SETBACK

UTILITY EASEMENT

EXISTING WATER MAIN (SCHEMATICALLY SHOWN)

6' PVC FENCE, TAN EXTERIOR COLOR (SCHEMATICALLY SHOWN)

PROPOSED 1" WATER SINGLE SERVICE LINE w/ ¾" METER SEE DETAIL, SHEET C2.00

PROPOSED 1½" WATER DOUBLE SERVICE LINE w/ ¾" METERS SEE DETAIL, SHEET C2.00

PROPOSED 6" SANITARY SINGLE SERVICE SEE DETAIL, SHEET C2.00

PROPOSED 6" SANITARY DOUBLE SERVICE SEE DETAIL, SHEET C2.00

108 PROPOSED UNIT NUMBER

1 EXSITING 2" WATER MAIN

2 EXISTING 4" WATER MAIN

3 EXISTING 8" WATER MAIN

4 6" CLEAN–OUT SEE DETAIL, SHT C2.00

5 EXISTING 4' SIDEWALK, RECENTLY CONSTRUCTED BY FDOT

6 EXISTING 5' SIDEWALK, RECENTLY CONSTRUCTED BY FDOT

7 WET–TAP, CONTRACTOR SHALL VERIFY EXISTING WATER MAIN SIZE

8 CONCRETE CURB TO BE PERMITTED FOR REMOVAL DURING HOUSE CONSTRUCTION

9 2~45° BENDS

10 6" SADDLE WYE (WRAPPED IN FILTER FABRIC)

11 EXISTING DRIVEWAY TO BE REMOVED SIDEWALK & WALL SHALL BE EXTENDED AND R/W TO BE RESTORED WALL DESIGN SHALL BE BY OTHERS AND COORDINATED w/ FDOT

SCALE IN FEET
1" = 20'

Site Data

Project Site Area	1.22 Ac	53,279.8 sf
Parcel Identification (Alt Key)	32–19–27–1300–008–00900 (1133165)	
Zoning	RP, Residential Professional District	
Future Land Use Designation	RP, Residential Professional/Office (Not To Exceed 6 Units/Acre)	
Existing Use	Single Family Residence	
Proposed Use	6 Single Family Lots	
Zoning Performance (Mount Dora LDC, Ch 3, Sec 3.4.9)		
	Required	Provided
Max. Density	6 Units/Ac	4.91 Units/Ac
Min. Parcel Area	8,500 sf	8,000 sf (See Note 1)
Min. Parcel Width at Bldg Line	75 ft	60 ft (See Note 1)
Min. Street Frontage	75 ft	60 ft (See Note 1)
Min. Front Yard Setback	25 ft	25 ft
Min. Side Yard Setback	10 ft	10 ft
Min. Street Side Yard Setback	25 ft	25 ft
Min. Rear Yard Setback	30 ft	30 ft
Max. Building Height	35 ft	≤35 ft
Min. Dwelling Area	1,200 sf	≥1,200 ft

Notes

1. Variance Applied & Approved per P&Z Meeting (01/19/2022)

Key Map:

Consultant(s)/Note(s)

NO.	DATE:	DESCRIPTIONS:
		00 MM/DD/YY Submit to
		SUBMISSIONS/REVISIONS

DATE:	04/29/2022
VERTICAL DATUM:	NAVD 88
JOB NO.:	MH20-001
DESIGNED BY:	YFS
DRAWN BY:	YFS
CHECKED BY:	GB
APPROVED BY:	YFS
SCALE (FT)	NOTED/NTS

Project Name:

Lake Franklin Estates
(Re-Plat of
1715 East First Avenue,
Lots 9-10 & 10-25)

MARONDA Homes

Jurisdiction:
Mount Dora, Florida

Sheet Title:
Subdivision Development Plan

Sheet No.
C1.00

CDS CIVIL DESIGN SOLUTIONS
CIVIL ENGINEERING & LAND DEVELOPMENT SERVICES
500 N. Maitland Avenue, Suite 111
Maitland, Florida 32751
407.636.4198 www.cdsllc-fl.com
FBPE CA No. 31631

NOT FOR CONSTRUCTION UNLESS SIGNED AND SEALED

Y.F. STEVE YOUNG LICENSE No. 58821 STATE OF FLORIDA PROFESSIONAL ENGINEER

Date: 04/29/2022

This item has been electronically signed and sealed by Y.F. Steve Young, PE using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

P:\MH20-001 MARONDA HOMES - LOTS\EAST 1ST AVENUE 1715, LOT 9-10,19-25 - MOUNT DORA\CAD\FINAL\MH20-001 UP

7.13.3.

STANDARD REQUIREMENTS.

1.

GENERAL: THE MATERIALS OF CONSTRUCTION AND GENERAL INSTALLATION PROCEDURES, WITH THE EXCEPTION OF FIRE HYDRANTS, SHALL COMPLY WITH THE SPECIFIC APPLICABLE STANDARDS SET FORTH UNDER SECTION 7.3, "UTILITY EXCAVATION, TRENCHING AND BACKFILLING," SECTION 7.4, "BORING AND JACKING," AND SECTION 7.5, "PIPE, FITTINGS, VALVES AND APPURTENANCES," AS WELL AS "STANDARD DETAILS-WATER DISTRIBUTION SYSTEMS."

2.

FIRE HYDRANTS: HYDRANTS SHALL COMPLY WITH AWWA STANDARD C502, "FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE," AND SHALL BE EQUIPPED WITH A MINIMUM OF ONE PUMPER OUTLET NOZZLE 4½ INCHES IN DIAMETER AND TWO HOSE NOZZLES 2½ INCHES IN DIAMETER. THREADS, NOZZLE CAPS, OPERATING NUTS AND COLOR SHALL CONFORM TO CITY STANDARDS. UNITS SHALL BE TRAFFIC TYPE WITH BREAKABLE SAFETY CLIPS OR FLANGE, AND STEM WITH SAFETY COUPLING LOCATED BELOW BARREL BREAK LINE TO PRECLUDE VALVE OPENING. HYDRANTS SHALL BE DRY TOP TYPE. OUTLET NOZZLES SHALL BE ON THE SAME PLANE, WITH MINIMUM DISTANCE OF 18 INCHES FROM CENTER OF NOZZLES TO GROUND LINE. VALVE SHALL BE COMPRESSION TYPE WITH 5¼ INCHES MINIMUM OPENING UNLESS OTHERWISE REQUESTED AND SHOW INLET CONNECTION TO BE SIX INCHES MINIMUM.

A.

HYDRANTS SHALL BE INSTALLED PLUMB AND IN TRUE ALIGNMENT WITH THE CONNECTION PIPES TO THE WATER MAIN. THEY SHALL BE SECURELY BRACED AGAINST THE END OF THE TRENCH (UNDISTURBED SOIL) WITH CONCRETE THRUST BLOCKS. THE GRAVEL OR CRUSHED STONE FOR THE DRAIN SUMP, FOLLOWED BY BACKFILLING, SHALL BE CAREFULLY PLACED AND COMPACTED. INSTALLED HYDRANTS SHALL BE PAINTED RED FOR THE FINAL COAT.

B.

HYDRANT PLACEMENT IS TO BE A MINIMUM OF SIX FEET AND A MAXIMUM OF NINE FEET FROM THE CURB OR PAVED ROAD SURFACE UNLESS OTHERWISE APPROVED. THE CENTER OF THE STEAMER PORT SHALL BE 18 INCHES MINIMUM AND 24 INCHES MAXIMUM ABOVE FINAL GRADE. STEAMER PORT SHALL BE CORRECTLY POSITIONED FOR THE PROPER CONNECTION, WITH THE APPROVAL OF THE CITY (WATER AND FIRE DEPARTMENT).

3.

JOINT RESTRAINING: PRESSURE PIPING FITTINGS AND OTHER ITEMS REQUIRING RESTRAINT, SHALL BE BRACED WITH 2,500 PSI CONCRETE THRUST BLOCKS OR OTHER RESTRAINING ASSEMBLIES. SAID RESTRAINING DEVICES SHALL BE DESIGNED FOR THE MAXIMUM PRESSURE CONDITION (TESTING) AND THE SAFE BEARING LOADS FOR HORIZONTAL THRUST, IF THRUST BLOCKING IS USED.

	POTABLE WATER GENERAL NOTES	PW001-1E
		ISSUED: 2017
		REVISED: --

8.

SERVICE CONNECTIONS: CONNECTIONS TO WATER MAINS FOUR INCHES AND LARGER SHALL BE MADE BY DRILLING THE APPROPRIATE SIZE HOLE AND INSTALLATION OF SERVICE SADDLES, WITH SERVICES TO SMALLER SIZES ACCOMPLISHED BY IN-LINE FITTINGS. A FITTING WITH THE SERVICE LINE EXTENDED TO THE PROPERTY LINE OR EASEMENT LINE, PERPENDICULAR TO SAID LINE, AND TERMINATING WITH A PLUGGED CURB STOP AND METER BOX WITH STANDARD PLASTIC METER BOX WITH CAST IRON LID. CONCRETE BOXES SHALL BE USED IN HIGH TRAFFIC AREAS PENDING METER INSTALLATION. ON CURBED STREETS THE EXACT LOCATION FOR EACH INSTALLED SERVICE SHALL BE MARKED BY ETCHING OR CUTTING A "W" IN THE CONCRETE CURB AND PAINTED BLUE. WHERE NO CURB EXISTS OR IS PLANNED, LOCATIONS SHALL BE ADEQUATELY MARKED BY A ONE-HALF-INCH STEEL REBAR, THREE INCHES BELOW FINAL GRADE.

7.13.4.

TESTING.

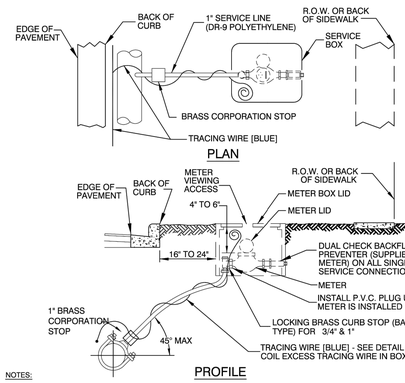
1.

THE CONTRACTOR SHALL PERFORM HYDROSTATIC TESTING OF ALL WATER DISTRIBUTION SYSTEMS, AS SET FORTH IN THE FOLLOWING AND SHALL CONDUCT SAID TESTS IN THE PRESENCE OF REPRESENTATIVES FROM THE CITY AND/OR OTHER AUTHORIZED AGENCIES, WITH 48 HOURS ADVANCE NOTICE PROVIDED, IN WRITING.

2.

PIPING AND APPURTENANCES TO BE TESTED SHALL BE WITHIN SECTIONS BETWEEN VALVES, NOT EXCEEDING 2,000 FEET UNLESS ALTERNATE METHODS HAVE RECEIVED PRIOR APPROVAL FROM THE CITY. TESTING SHALL NOT PROCEED UNTIL CONCRETE THRUST BLOCKS ARE IN PLACE AND CURED, OR OTHER RESTRAINING DEVICES INSTALLED. ALL PIPING SHALL BE THOROUGHLY CLEANED AND FLUSHED PRIOR TO TESTING TO CLEAR THE LINES OF ALL FOREIGN MATTER. WHILE THE PIPING IS BEING FILLED WITH WATER, CARE SHALL BE EXERCISED TO PERMIT THE ESCAPE OF AIR FROM EXTREMITIES OF THE TEST SECTION, WITH ADDITIONAL RELEASE COCKS PROVIDED IF REQUIRED.

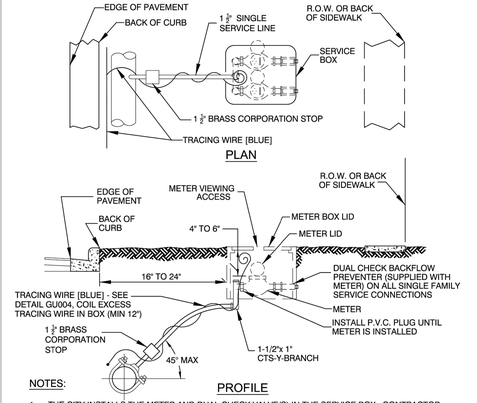
	POTABLE WATER GENERAL NOTES	PW001-1G
		ISSUED: 2017
		REVISED: --



NOTES:

1. THE CITY INSTALLS THE METER AND DUAL CHECK VALVE(S) IN THE SERVICE BOX. CONTRACTOR SPECIFIES 3/4" OR 1" SIZING FOR THE METER AND DUAL CHECK VALVES.
2. METER SHALL BE INSTALLED BETWEEN SIDEWALK AND CURB AND IN NO CASE SHALL IT BE INSTALLED IN SIDEWALK OR OTHER PAVED AREAS.
3. A DUAL CHECK BACKFLOW PREVENTER WILL BE FURNISHED WITH METER BY CITY OF MOUNT DORA ON ALL SINGLE FAMILY SERVICE CONNECTIONS. BACKFLOW PREVENTERS WILL NOT BE SUPPLIED BY THE CITY OF MOUNT DORA ON COMMERCIAL SERVICE CONNECTIONS. BACKFLOW PREVENTER REQUIREMENTS WILL VARY FOR COMMERCIAL CONNECTIONS.
4. ALL POTABLE WATER SERVICE AND PROPERTIES WITH ALTERNATIVE WATER SYSTEMS (WELL, ETC.) REQUIRE AN ABOVE GROUND BACKFLOW PROTECTION DEVICE ON THE OUTLET SIDE OF THE METER.
5. SERVICE LINES SHALL NOT BE LESS THAN METER SIZE.
6. 3/4" - 2" RESIDENTIAL WATER METERS WILL BE PROVIDED BY AND INSTALLED BY CITY OF MOUNT DORA

	POTABLE WATER-SINGLE SERVICE CONNECTION	PW004-1
		ISSUED: 2017
		REVISED: --



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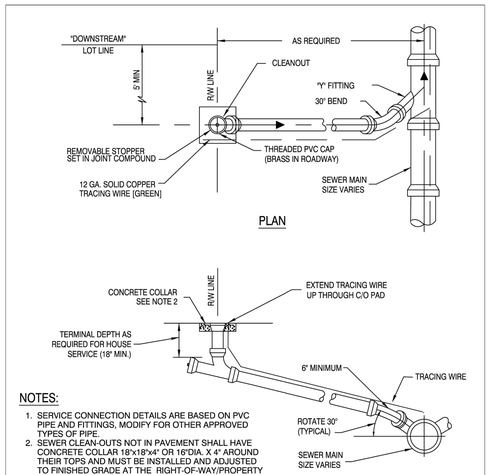
5. SERVICE LINES SHALL NOT BE LESS THAN METER SIZE.
6. 3/4" - 2" RESIDENTIAL WATER METERS WILL BE PROVIDED BY AND INSTALLED BY CITY OF MOUNT DORA

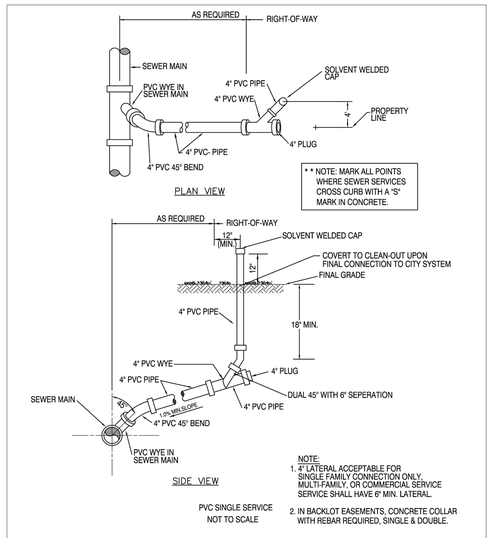
	POTABLE WATER DOUBLE SERVICE CONNECTION FOR ¾" & 1" METERS	PW005-1
		ISSUED: 2017
		REVISED: --



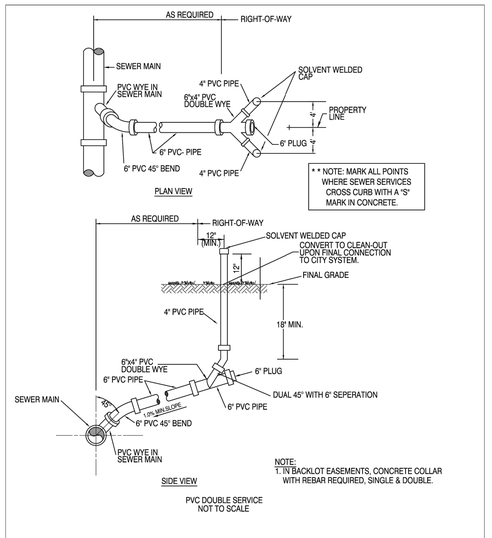
NOTES:

1. SERVICE CONNECTION DETAILS ARE BASED ON PVC PIPE AND FITTINGS, MODIFY FOR OTHER APPROVED TYPES OF PIPE.
2. SEWER CLEAN-OUTS NOT IN PAVEMENT SHALL HAVE CONCRETE COLLAR 18"x18"x4" OR 16"DIA. X 4" AROUND THEIR TOPS AND MUST BE INSTALLED AND ADJUSTED TO FINISHED GRADE AT THE RIGHT-OF-WAY/PROPERTY LINE.
3. ALL PVC TO CLAY SERVICE CONNECTIONS UNDER LOAD BEARING SURFACES SHALL USE DFW NON-SHEAR FERNCO TYPE CONNECTORS OR APPROVED EQUAL.
4. 90° FITTINGS ARE PROHIBITED. MINIUMUM 6" SPOOL BETWEEN 45° FITTINGS.
5. DOUBLE SERVICE CONNECTIONS ARE PERMITTED, MINIMUM 6" PIPE REQUIRED.
6. CLEANOUTS IN SIDEWALKS SHALL BE HOUSED IN METER BOX.

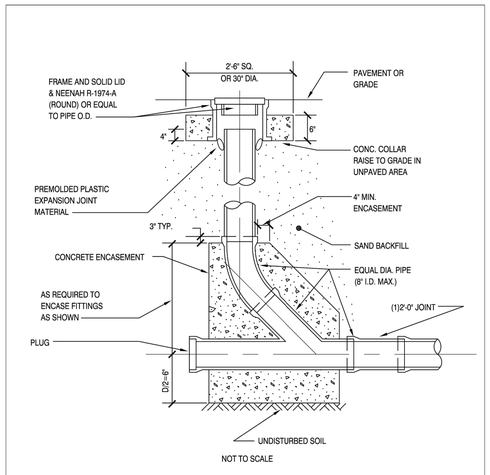
	TYPICAL SEWER CONNECTION	SS001-1
		ISSUED: 2017
		REVISED: --



	SINGLE SANITARY SEWER SERVICE	SS012-1
		ISSUED: 2017
		REVISED: --



	DOUBLE SANITARY SEWER SERVICE	SS013-1
		ISSUED: 2017
		REVISED: --



	GRAVITY CLEANOUT	SS014-1
		ISSUED: 2017
		REVISED: --

Key Map:

Consultant(s)/Note(s)

NO.	DATE:	DESCRIPTIONS:
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Project Name:

Lake Franklin Estates (Re-Plat of 1715 East First Avenue, Lots 9-10 & 10-25)

MARONDA Homes

Jurisdiction:

Mount Dora, Florida

Sheet Title:

City of Mount Dora - Utility Details

Sheet No.

C2.00

CDS CIVIL DESIGN SOLUTIONS
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FBPE CA No. 31631

NOT FOR CONSTRUCTION UNLESS SIGNED AND SEALED

Y.F. STEVE YOUNG LICENSE No. 58821 STATE OF FLORIDA PROFESSIONAL ENGINEER

Date: 04/5/2022

This item has been electronically signed and sealed by Y.F. Steve Young, PE using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

P:\MH20-001 MARONDA HOMES - LOTS\EAST 1ST AVENUE 1715, LOT 9-10,19-25 - MOUNT DORA\CAD\FINAL\MH20-001 UP

GENERAL UTILITIES CONSTRUCTION NOTES

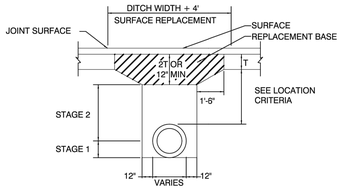
1. THE PUBLIC SERVICES DEPARTMENT MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO ANY WORK ON EXISTING CITY OF MOUNT DORA UTILITIES. THE CONTRACTOR MUST CONTACT, JOSH KRAMM, UTILITY LINE MANAGER AT HIS OFFICE (352) 735-7151 OR CELL PHONE (352) 516-3691, DISTRIBUTION SUPERVISOR - OFFICE (352) 735-7151 OR CELL PHONE (352) 460-7922, RUSSELL HOPPER, COLLECTION & LIFT STATION SUPERVISOR - OFFICE (352) 735-7151 OR CELL PHONE (352) 973-2032.
2. NO GRADING, CUTTING, OR FILLING SHALL COMMENCE UNTIL SUCH TIME AS APPROPRIATE EROSION AND SEDIMENTATION CONTROL DEVICES HAVE BEEN INSTALLED BETWEEN THE DISTURBED AREA AND WATER BODIES, WATERCOURSES OR WETLANDS.
3. CONSTRUCTION MUST BE PER THE DRC APPROVED SITE PLAN. DEVIATIONS IN ROADWAY, UTILITY OR DRAINAGE CONSTRUCTION WILL REQUIRE WRITTEN APPROVAL OF THE CITY ENGINEER OR THE DIRECTOR OF PUBLIC SERVICES. (NOTE: SIGNIFICANT CHANGES FROM THE DRC APPROVED PLAN MAY REQUIRE THE OWNER/DEVELOPER TO SUBMIT A REVISED SITE PLAN THROUGH THE DRC FOR REVIEW.)
4. CONTRACTOR SHALL PROVIDE AN EMERGENCY CONTACT NUMBER LIST FOR KEY SITE PERSONNEL.
5. ENGINEER OF RECORD REVIEWED SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ALL WATER/ SEWER/ RECLAIMED AND STORMWATER SYSTEMS TO BE DEDICATED TO THE CITY OF MOUNT DORA. TWO SETS ARE REQUIRED FOR REVIEW. ONE SET WILL BE RETURNED TO THE ENGINEER OF RECORD.
6. OFF SITE OR ROADWAY RIGHT OF WAY CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL CONDITIONS OF THE APPROVED R/W PERMIT(S). A COPY OF THE APPROVED R/W PERMIT MUST BE KEPT ON-SITE AND READILY AVAILABLE DURING ALL CONSTRUCTION ACTIVITIES WITHIN THE R/W.
7. THE PUBLIC SERVICES DEPARTMENT MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO UTILITY TESTING. THE CONTRACTOR MUST CONTACT JOSH KRAMM, UTILITY LINE MANAGER, AT HIS OFFICE (352) 735-7151 OR CELL (352) 516-3691, DISTRIBUTION SUPERVISOR - OFFICE (352) 735-7151 OR CELL PHONE (352) 460-7922, RUSSELL HOPPER, COLLECTION & LIFT STATION SUPERVISOR - OFFICE (352) 735-7151 OR CELL PHONE (352) 973-2032. HYDROSTATIC TESTING SHALL BE PER THE APPLICABLE PROVISIONS AS SET FORTH IN AWWA STANDARDS. (MINIMUM 150 PSI @ 2 HOURS - POTABLE/RECLAIMED AND MINIMUM 100 PSI @ 2 HOURS - FORCE MAINS).
8. GRAVITY SEWER PIPING TESTS SHALL BE IN ACCORDANCE WITH UNI-BELL PVC PIPE ASSOCIATION; "RECOMMENDED PRACTICES FOR LOW-PRESSURE AIR TESTING OF INSTALLED SEWER PIPE". THE CONTRACTOR WILL BE REQUIRED TO PROVIDE VIDEO INSPECTION OF THE ENTIRE LINE DEMONSTRATING SATISFACTORY WORKMANSHIP AND SHOWING POSITIVE FLOW WITHIN THE SANITARY SYSTEM. ANY DEFECTS IN WORKMANSHIP, AREAS OF STANDING WATER OR "BELLIES" SHALL BE CAUSE FOR REJECTION. ONE DVD FORMAT COPY OF THE VIDEO INSPECTION MUST BE PROVIDED TO THE PUBLIC SERVICES DEPARTMENT.
9. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE INSPECTION OF ALL STORM SYSTEM PIPES DEMONSTRATING SATISFACTORY WORKMANSHIP AND SHOWING POSITIVE FLOW WITHIN THE DRAINAGE SYSTEM. ANY DEFECTS IN WORKMANSHIP, AREAS OF STANDING WATER OR "BELLIES" SHALL BE CAUSE FOR REJECTION. ONE DVD FORMAT COPY OF THE VIDEO INSPECTION MUST BE PROVIDED TO THE PUBLIC SERVICES DEPARTMENT.
10. AFTER JUMPER CONNECTION IS REMOVED, WATER & RECLAIMED WATER SERVICES MUST BE LOCKED OUT AND KEY SUPPLIED TO CITY.
11. FOLLOWING SATISFACTORY PRESSURE TESTING, THE CONTRACTOR SHALL DISINFECT ALL SECTIONS OF THE WATER DISTRIBUTION SYSTEM, AND RECEIVE APPROVAL THEREOF FROM THE APPROPRIATE AGENCIES, PRIOR TO PLACING IN SERVICE. ADVANCE NOTICE SHALL BE PROVIDED TO THE CITY BEFORE DISINFECTING PROCEDURE START. THE DISINFECTION SHALL BE ACCOMPLISHED WITH THE APPLICABLE PROVISIONS OF AWWA STANDARD, "DISINFECTING WATER MAINS" AND ALL APPROPRIATE AGENCY APPROVALS.

STANDARD CONSTRUCTION DETAIL GENERAL NOTES	GU001-1A
	ISSUED: 2017
	REVISED: --

GENERAL UTILITIES CONSTRUCTION NOTES

12. COPIES OF SATISFACTORY BACTERIOLOGICAL TESTING AND THE FDEP "LETTER OF RELEASE REQUEST" SIGNED BY THE ENGINEER OF RECORD MUST BE SUBMITTED TO THE CITY ENGINEER FOR PROCESSING. NO POTABLE WATER LINE SHALL BE PLACED INTO SERVICE WITHOUT RECEIPT OF FDEP AUTHORIZATION.
13. FDEP CLEARANCE REQUEST MUST BE SUBMITTED THROUGH THE PUBLIC WORKS AND UTILITY DEPARTMENT.
14. EARTHWORK, PAVEMENT AND CONCRETE CONSTRUCTION NOT SPECIFICALLY ADDRESSED BY THE CITY LDC, SHALL BE THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT.
15. COPIES OF ALL MATERIALS AND COMPACTION TESTING PER THE CURRENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION MUST BE PROVIDED PRIOR TO CLOSEOUT.
16. THE PUBLIC SERVICES DEPARTMENT REQUIRES A PRE-CLOSEOUT FIELD REVIEW WITH THE CONTRACTOR /SITE DEVELOPER. THE CONTRACTOR MUST CONTACT PUBLIC SERVICES -ENGINEERING AT (352) 735-7151, TO COORDINATE. ALL ISSUES IDENTIFIED AT THE FIELD REVIEW MUST BE ADDRESSED PRIOR TO PUBLIC SERVICES FINAL CLOSE OUT APPROVAL.
17. LIFT STATION START UP WILL REQUIRE A MINIMUM OF 48 HOURS PRIOR NOTIFICATION TO THE CITY. THE CONTRACTOR MUST CONTACT JOSH KRAMM, UTILITY LINE MANAGER, AT (352) 735-7151 OR (352) 551-9263 OR RUSSELL HOPPER, COLLECTION & LIFT STATION SUPERVISOR - OFFICE (352) 735-7151 OR CELL PHONE (352) 973-2032 TO COORDINATE THE START UP INSPECTION.
18. ALL MANUALS FOR LIFT STATION CONTROL PANELS, GENERATORS, AND PUMPS WILL BE REQUIRED PRIOR TO START UP. THESE MANUALS WILL BE SUBJECT TO CITY REVIEW / APPROVAL TO INCLUDE O&M MANUALS. NO LIFT STATION WILL BE ACCEPTED UNTIL SATISFACTORY DOCUMENTATION HAS BEEN PROVIDED. ANY LIFT STATION PUMP, SIZED LARGER THAN 20 HP, SHALL BE PROVIDED WITH A REBUILD KIT CONSISTING OF BEARINGS SEALS, O-RINGS AND WEAR RINGS. ALSO, A TOOL KIT WITH BOX IS REQUIRED.
19. DEDICATION OF IMPROVEMENTS TO THE PUBLIC SHALL BE IN ACCORDANCE WITH THE CITY OF MOUNT DORA LDC 4.3.4(4)(A) - BONDS, 5.3.5(1) - BONDS, AND 7.2.4 - BONDS AND WARRANTIES. THE CITY'S LAND DEVELOPMENT CODE IS AVAILABLE ONLINE AT WWW.MUNICODE.COM FOR YOUR REFERENCE.
20. AS-BUILT DRAWINGS - PER LDC 7.13.6: OWNER / DEVELOPER SHALL PROVIDE FOUR HARD COPIES AND ONE ELECTRONIC OF THE APPROVED FINAL ENGINEERING PLANS CONFORMED TO SHOW ALL AS-BUILT CONDITIONS. AS-BUILTS MUST SHOW ACCURATE MEASUREMENTS OF WATER AND SEWER LINES AND STRUCTURES FROM FIXED KNOWN LOCATIONS WITHIN THE DEVELOPMENT. CERTIFICATION OF THE PROJECT ENGINEER ATTESTING TO THE ACCURACY OF THE DRAWINGS IF REQUIRED, CITY ACCEPTANCE OF IMPROVEMENTS AND / OR ISSUANCE OF OCCUPANCY WILL BE WITHHELD UNTIL SATISFACTORY AS-BUILTS ARE PROVIDED.

STANDARD CONSTRUCTION DETAIL GENERAL NOTES	GU001-1B
	ISSUED: 2017
	REVISED: --



REPLACEMENT OF FLEXIBLE PAVEMENT FOR PERMITTED PAVEMENT CUT

DENSITY PROCEDURES:

THE BACK FILL FOR THE FIRST AND SECOND STAGES SHALL BE PLACED IN 6" LAYERS (COMPACTED THICKNESS) AND SHALL BE COMPACTED TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. TEST REPORTS SHALL BE FURNISHED TO THE CITY.

STAGE #1

THE PERMITTEE SHALL PROVIDE ADEQUATE COMPACTED FILL BENEATH THE HAUNCHES OF THE PIPE, USING MECHANICAL TAMPS SUITABLE FOR THIS PURPOSE. THIS COMPACTION APPLIES TO THE MATERIAL PLACED BENEATH THE HAUNCHES OF THE PIPE AND ABOVE ANY BEDDING REQUIRED.

STAGE #2

THE PERMITTEE SHALL OBTAIN A WELL-COMPACTED BED AND FILL ALONG THE SIDES OF THE PIPE AND TO A POINT INDICATING THE TOP OF SUB-GRADE MATERIAL.

GENERAL NOTES:

BASE AND BACK FILL MATERIALS SHALL BE EITHER OF THE SAME TYPE AND COMPOSITION AS THE MATERIALS REMOVED, OR OF EQUAL OR GREATER STRUCTURAL ADEQUACY. MATERIALS CONTAMINATED WITH DELETERIOUS SUBSTANCES DURING EXCAVATION SHALL NOT BE USED.

REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE, (MINIMUM 12")

BASE MATERIAL SHALL BE PLACED IN TWO OR THREE LAYERS AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO THE SPECIFIED DENSITY.

ASPHALT CONCRETE PAYMENT THICKNESS SHALL EQUAL EXISTING THICKNESS BUT NOT LESS THAN TWO (2) INCHES.

SURFACE TREATED PAVEMENT JOINT SHALL BE LAPPED AND FEATHERED AND EXTENDED AT LEAST 2' PAST EACH SURFACE JOINT.

SURFACE MATERIAL WILL BE CONSISTENT WITH THE EXISTING SURFACE.

LIMESTONE, SAND-CLAY, SHELL, ETC. BASES:

6" LAYERS COMPACTED THICKNESS DENSITY REQUIREMENTS:

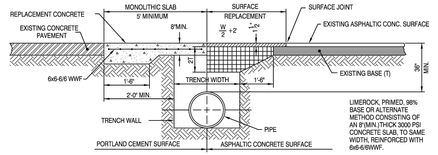
98% UNDER ROADWAY

98% OUTSIDE THE TRAVELED ROADWAY, SUCH AS INTERSECTIONS, CROSSOVERS, TURNOUTS, ETC.

95% SHOULDER PAVEMENT

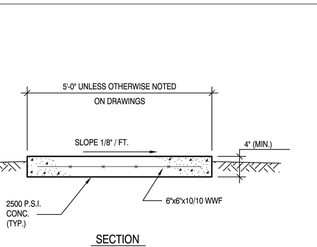
METHOD AASHTO T-180

OPEN CUT DETAIL	GU011-1
	ISSUED: 2017
	REVISED: --

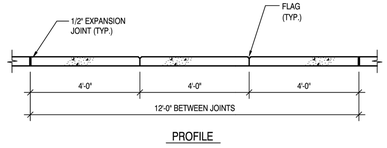


NOT TO SCALE

OPEN CUT AND REPAIR DETAIL	GU0011-2
	ISSUED: 2017
	REVISED: --



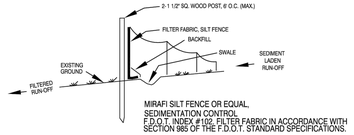
SECTION



PROFILE

NOT TO SCALE

CONCRETE WALKWAY DETAIL	GU0019-1
	ISSUED: 2017
	REVISED: --



MIRAFI SILT FENCE OR EQUAL, SEDIMENTATION CONTROL F.D.O.T. INDEX #102, FILTER FABRIC IN ACCORDANCE WITH SECTION 985 OF THE F.D.O.T. STANDARD SPECIFICATIONS.

NOTES:

1. TEMPORARY EROSION CONTROL STRUCTURE TO BE UTILIZED DURING CONSTRUCTION AT AREAS DESIGNATED BY ENGINEER OR AREAS ON-SITE WHERE UNSTABILIZED GRADES MAY CAUSE EROSION PROBLEMS. EROSION CONTROL STRUCTURE MAY BE REMOVED AFTER UPSLOPE AREA HAS BEEN STABILIZED BY SOD, OR COMPACTED AS DETERMINED BY CONTRACTOR.
2. CONSTRUCT STORMWATER SYSTEMS BEFORE ANY BUILDING OR ROAD CONSTRUCTION IS STARTED.
   a.) PROTECT SYSTEM FROM SILTING AND DEBRIS BY METHODS PROVIDED IN DETAILS.
   b.) PROTECT SWALE BOTTOM FROM SEALING BY EXCAVATING ALL SILT DEPOSITS DURING CONSTRUCTION. THIS SHALL BE DONE BEFORE SOD & SEEDING & MULCHING IS FINISHED

EROSION CONTROL STRUCTURE

NOT TO SCALE

THE FOLLOWING LIST REPRESENTS A BASIC EROSION AND SEDIMENT CONTROL PROGRAM WHICH IS TO BE IMPLEMENTED TO HELP PREVENT OFF-SITE SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROJECT.

PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT THE EARLIEST PRACTICAL TIME CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ONE OF THE FIRST CONSTRUCTION ACTIVITIES SHOULD BE THE PLACEMENT OF PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AROUND THE PERIMETER OF THE PROJECT OR THE INITIAL WORK AREA TO PROTECT THE PROJECT, ADJACENT PROPERTIES AND WATER RESOURCES.

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL THROUGHOUT THE CONSTRUCTION PHASE. TEMPORARY MEASURES SHALL NOT BE CONSTRUCTED FOR EXPEDIENCY IN LIEU OF PERMANENT MEASURES.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADEQUATELY MAINTAINED TO PERFORM THEIR INTENDED FUNCTION DURING CONSTRUCTION OF THE PROJECT.

NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

MATERIAL FROM SEDIMENT TRAPS SHALL NOT BE STOCKPILED OR DISPOSED OF IN A MANNER WHICH MAKES THEM READILY SUSCEPTIBLE TO BEING WASHED INTO ANY WATERCOURSE BY RUNOFF OR HIGH WATER.

ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIERS ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

EROSION CONTROL DETAIL	GU0020-1
	ISSUED: 2017
	REVISED: --

Key Map:

Consultant(s)/Note(s)

NO.	DATE:	DESCRIPTIONS:
00	MM/DD/YY	Submit to

SUBMISSIONS/REVISIONS

DATE:	04/29/2022
VERTICAL DATUM:	NAVD 88
JOB NO.:	MH20-001
DESIGNED BY:	YFS
DRAWN BY:	YFS
CHECKED BY:	GB
APPROVED BY:	YFS
SCALE (FT)	NOTED/NTS

Project Name:

Lake Franklin Estates (Re-Plat of 1715 East First Avenue, Lots 9-10 & 10-25)

MARONDA Homes

Jurisdiction:

Mount Dora, Florida

Sheet Title:

City of Mount Dora - Standard Details

Sheet No.

C3.00

CDS CIVIL DESIGN SOLUTIONS
CIVIL ENGINEERING & LAND DEVELOPMENT SERVICES
500 N. Maitland Avenue, Suite 111
Maitland, Florida 32751
407.636.4198 www.cdsllc-fl.com
FBPE CA No. 31631

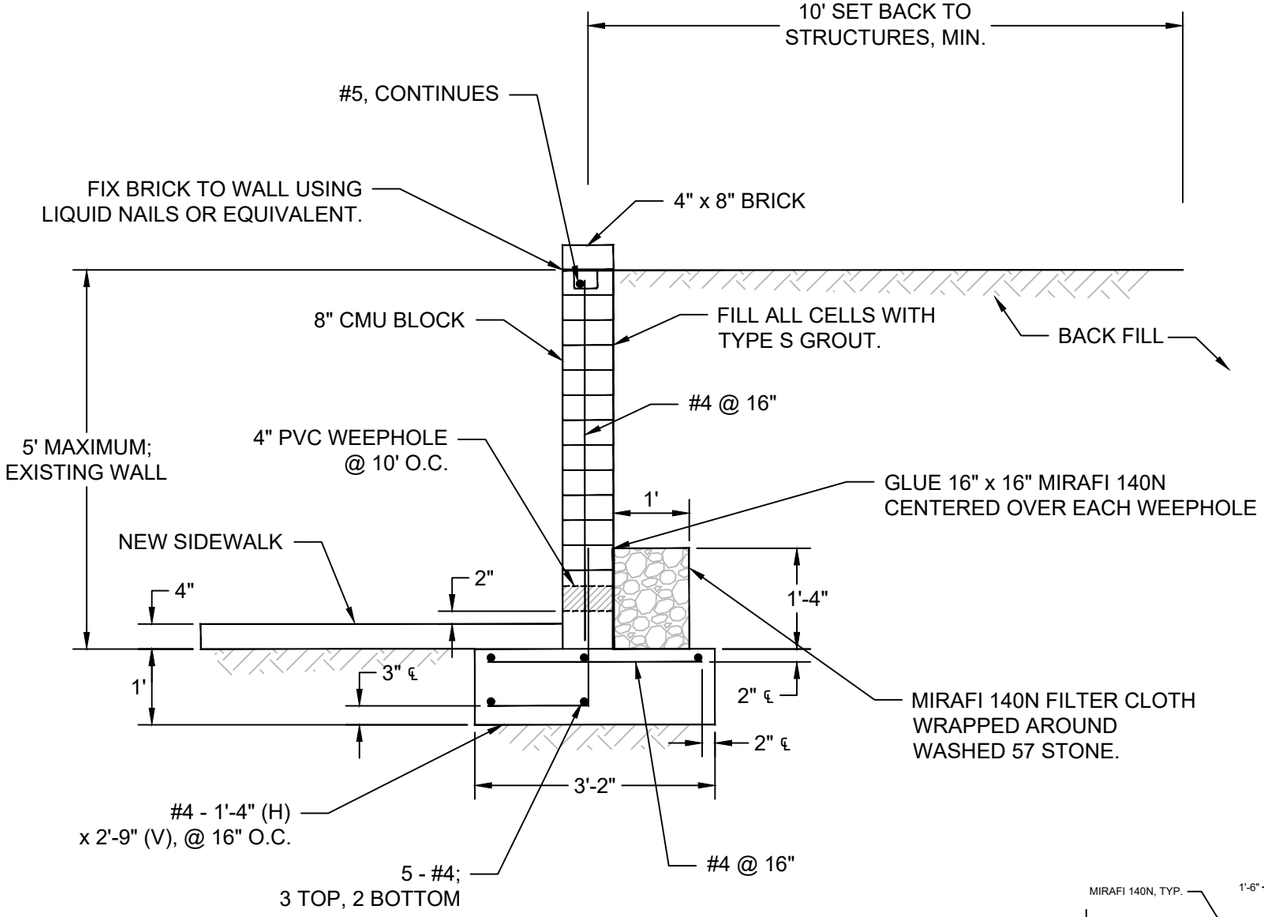
NOT FOR CONSTRUCTION UNLESS SIGNED AND SEALED

Y.F. STEVE YOUNG LICENSE No. 58821 STATE OF FLORIDA PROFESSIONAL ENGINEER

Date: 04/15/2022

This item has been electronically signed and sealed by Y.F. Steve Young, PE using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

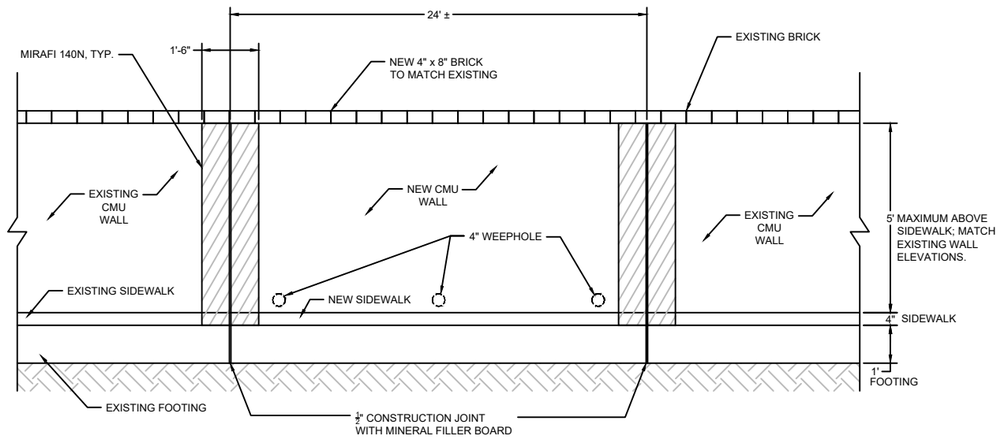
P:\MH20-001 MARONDA HOMES - LOTS\EAST 1ST AVENUE 1715, LOT 9-10,19-25 - MOUNT DORA\CAD\FINAL\MH20-001 UP



SECTION A-A
NEW WALL CROSS SECTION - 5' MAX. HEIGHT
SCALE: 1" = 2'

NOTES

1. BEARING CAPACITY = 1500 psi.
2. STEEL Fy = 60 KSI.
3. CONCRETE f'_{28} = 3000 psi.
4. COMPACTED WALL BACKFILL TO 90% MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D 1557).
5. COMPACT SOIL 12" UNDER NEW FOOTING TO 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY.
6. WALL BACKFILL SHALL CONSIST OF SAND (SP OR SM) WITH LESS THAN 10% FINES.



DETAIL A
WALL PROFILE
SCALE: 1" = 4'

NOTES
STEEL OMITTED FOR CLARITY

THIS PLAN COMPLIES WITH THE REQUIREMENTS OF 2020 FLORIDA BUILDING CODE (7TH EDITION)

22-0365-01

FOR: MARONDA HOMES

DRAWN BY:	N.F.	DATE:	7 - 6 - 2022
CHECKED BY:	K.D.	DATE:	7 - 7 - 2022
REPORT NO:		SCALE:	AS SHOWN
PROJECT NO:	0115.2200169.0000		

WALL DESIGN
1715 EAST 1ST AVENUE
MOUNT DORA, FLORIDA

SECTION A-A DETAIL

UNIVERSAL
ENGINEERING SCIENCES

PAGE NO:
FIGURE 3

CITY OF MOUNT DORA

Planning and Development
510 N. Baker St.
Mount Dora, FL 32757
352-735-7113
Fax: 352-735-7191
E-mail: plandev@cityofmountdora.com

DATE: August 17, 2022

TO: Planning and Zoning Commission

FROM: Development Review Committee
Vince Sandersfeld, Planning Director

THROUGH: Michele Janiszewski, AICP, Senior Planner

RE: Request for Site Plan; Longhorn Steakhouse; Located east of Eudora Road and south of U.S. Highway 441; 17020 US Highway 441 (Site Address); Wal-Mart Stores East, LP; CASTO Net Lease Properties, LLC c/o J. Brett Hutchens. Project No. SP22-05

SUMMARY OF RECOMMENDATION:

Staff recommends approval of the above-referenced site plan for Longhorn Steakhouse. Approval subject to engineering requirements prior to submittal of the Site Development (Improvement Permit).

Staff Note: As of printing of the report, the applicant has filed revisions to the site plan and these drawings have been forwarded to City Development Review Committee (DRC) members for verification of compliance with Land Development Code item listed on the attached.

REFERENCES/SUPPORT:

Section 5.1 LDC

SITE SUMMARY:

General Location:	South of U.S. Highway 441 and east of Eudora Road
Alternate Key No.	3777369
Zoning District:	C-3
Future Land Use Category:	Commercial
Site Area:	1.92 +/- acres
Existing Use:	Vacant Land
Proposed Use:	5,710 SF Restaurant (Longhorn Steakhouse)

DEVELOPMENT SUMMARY:

Development Standard	Requirement	Proposed
Flor Area Ratio (FAR)	Max. 0.35	0.07
Building Size	N/A	5,710 SF
Building Height	Max. 65’	
Impervious Surface Ratio (ISR)	Max. 65%	57.81%
Parking Spaces	138 spaces	127 spaces

SURROUNDING PROPERTY TABLE:

Direction	Jurisdiction	Future Land Use	Zoning District(s)	Existing Use(s)	Comments
North	ROW	N/A	N/A	Arterial Road	U.S. Highway 441
South	City	Commercial	C-3	Retail	Walmart
East	City	Commercial	C-3	Gas Station	Murphy USA
West	City	Commercial	C-3	Bank	Vacant

ANALYSIS:

The attached Site Plan shows the proposed site layout for a Longhorn Steakhouse. The Site Plan includes the proposed parking layout, drainage, and landscaping improvements. The site consists of approximately 1.92 acres and is located south of U.S. Highway 441 and east of Eudora Road. The proposal consists of a 5,710 square foot building to be used as a restaurant. This is a previously master planned commercial development platted in 1997 with Wal-Mart Supercenter as the main users with five out-parcels fronting US Highway 441. This is the remaining out-parcel to be developed.

Ten (10) foot landscape buffers will be provided along the perimeter of the property, as required by code. The Applicant is required to provide a minimum of 76 parking spaces and is proposing to provide 127 spaces (includes 5 handicap spaces).

Ingress/egress will be configured internal to the Wal-Mart through existing shared cross-access easements with connection to Eudora Road and Spring Harbor Boulevard via US 441. No new access drives are proposed or allowed off US 441. New pedestrian connection from the main store entrance to the existing sidewalks along US 441 is planned. One bicycle rack for 3 spaces (innerved U type) is planned per code.

Existing stormwater ponds were master planned with the original development for drainage management of the out-parcel. The new restaurant site will connect internally through stormwater inlets.

The site was previously altered and a few trees will be removed. The applicant has provided a tree removal and replacement plan showing the amount of trees to be removed and saved. Existing trees will be impacted (removed) by the proposed improvements and site grading. The Land Development Code requires removed trees to be replaced.

ATTACHMENTS:

Vicinity Map
DRC Comments Dated July 19, 2022
Application
Site Plan/Elevations

VICINITY MAP

Legend

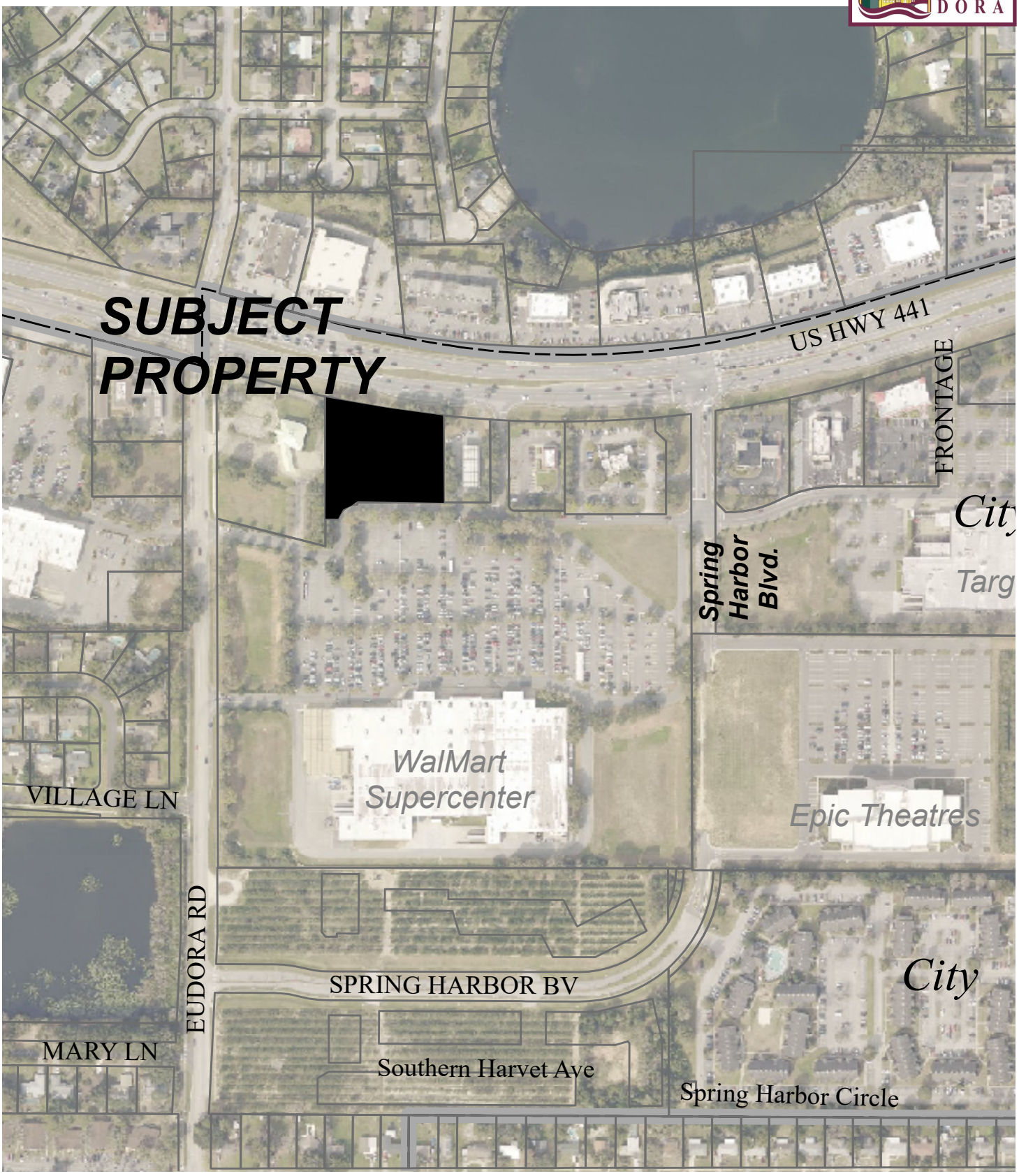
City Limits

Subject Property

N

N.T.S.

CITY OF MOUNT DORA



Date: 4/26/2022

Prepared by: Mount Dora Planning and Development Dept * 510 N. Baker Street, Mount Dora, FL 32757 * 352-735-7112

CITY OF MOUNT DORA

Planning and Development
510 N. Baker St.
Mount Dora, FL 32757
352-735-7113
plandev@cityofmountdora.com

DEVELOPMENT REVIEW COMMITTEE COMMENTS

DATE: July 19, 2022

FROM: Vince Sandersfeld, Planning Director

CONTACT: 352-735-7112 Ext.1707 or SandersfeldV@cityofmountdora.com

THROUGH: Michele Janiszewski, AICP, Senior Planner MJ

PROJECT NAME: Long Horn Steak House

REVIEW TYPE: Site Plan (SP22-05) – Third Review

Review Comments

The applicant must revise the plan sets and/or provide additional information to address the following comments.

Water & Wastewater Utilities

Comments Provided by Chris Gaw, P.E., gawc@cityofmountdora.com

1. Plan Sheet C1.1. Provide documentation of Walmart approval and acceptance of the proposed wastewater flow addition to their private system. Include documentation that this system is capable of handling the additional proposed flow. NOT ADDRESSED. CoMD is advised that Walmart plan review is pending. Provide Walmart plan review approval. **NOT ADDRESSED**. A development plan approval from Walmart is included with the current submission. However, no information regarding the Walmart wastewater utility capacity was included in the submitted approval.

2. Plan Sheet C4.1. For the sanitary and grease sanitary sewer runs, identify all proposed clean-outs (e.g. see red circles below) and provide lineal footage between them and points of connection. Provide invert elevation information for all clean-outs and provide percent slope calculation results for all sanitary runs. Provide cleanouts at the property boundary for the sanitary lines prior to the point of connection. PARTIALLY ADDRESSED. No linear footages provided for grease traps. Percent slope calculation results not provided. **PARTIALLY ADDRESSED**. Missing invert elevations along the grease trap flow path – invert in to first trap and invert out of the last trap. See Legend Item "Q."

3. Plan Sheet C4.1. No CoMD standard details included for the proposed grease traps. Include CoMD standard details S004-1 through SS004-3 as appropriate. NOT ADDRESSED. Plan Sheet 5.1 is blank with no standard details shown. These details should be included with the civil plan sheets

(Plan Sheet 5.1). CoMD standard detail is included on Plan Sheet P5.1. **PARTIALLY ADDRESSED**. Need add CoMD standard detail SS004-1 to Plan Sheet C5.2.

4. Landscape Plans. Submission includes landscape plans / planting schedule but does not include an irrigation plan. Irrigation plans are listed on Plan Sheet C1.1 as LS2.1 and LS2.2. Provide an irrigation plan sheet / schedule and include the source of irrigation water to be used, as the Utility Plan (Sheet Plan 4.1) does not indicate a source water connection. PARTIALLY ADDRESSED**.** Landscape and irrigation Plan Sheets L1.1, L1.2, L2.1, L2.2, and LS1 now included with submission. Source of irrigation water not clearly shown on Plan Sheet 2.1 (Irrigation Plan). **PARTIALLY ADDRESSED**. Irrigation source shown on Plan Sheet C4.1 (Utility Plan), but not shown on Plan Sheet L2.1 (Irrigation Plan).

5. Plan Sheet C4.1/L2.1. Plan Sheet L2.1 indicates that irrigation water will be used for site landscaping, however, the source for this water, connection type and location, and meter sizing and location are not clear. This information should also be clearly shown on Plan Sheet C4.1 and L2.1. Provide**. PARTIALLY ADDRESSED**. Irrigation source shown on Plan Sheet C4.1 (Utility Plan), but not shown on Plan Sheet L2.1 (Irrigation Plan).

Fire Department
Comments provided by Michael Smith, smithm@cityofmountdora.com

The applicant to address and revise the above-referenced plan sets and/or provide the information, as follows:

1. Fire hydrants shall be marked with an approved (Blue) reflector affixed to the roadway surface where required by the AHJ (18.5.10.1, NFPA 1 as adopted in the Florida Fire Prevention Code).
2. Where required by the AHJ, fire hydrants subject to vehicular damage shall be protected unless located within a public right of way (18.5.8 Protection, NFPA 1).
3. Fire hydrants shall be installed so that the large 4 ½ inch (steamer) port is facing the roadway it is accessed by.
4. Fire hydrants shall set back at least 5 ft from any road or curb but no more than 10 ft from any road or curb.
5. Fire hydrants shall be installed so that the operating nut of the largest port is no less than 18 in but no more than 30 in above final grade.
6. The number and type of fire hydrants and connections to other approved water supplies shall be capable of delivering the required fire flow and shall be provided at approved locations.
7. Where underground water mains and hydrants are to be provided, they shall be installed, completed, and in service prior to construction work per 8.7.2.3, NFPA 241, Safeguarding Construction, Alteration, and Demolition Operations as adopted in the Florida Fire Prevention Code.
8. All fire department connections shall have a fire lane established. Said fire lane shall extend for a distance of not less than 15ft, centerline of the FDC in both directions. The roadway shall have diagonal striping of not less than 4ft in width for the entire length of the fire lane. Said striping shall be painted yellow. Fire lanes shall be established and posted with the recognized international signage.

9. Fire department connections and fire hydrants shall not be obstructed in any manner. No less than 7.5 ft of clearance shall be maintained from the centerline of the hydrant and said clearance shall extend out to the roadway. No less than 4.0 ft of clearance shall be maintained behind the centerline of the hydrant. Vertical clearance of not less than 8 ft shall be maintained in the required clearance area.
10. All fire department connections shall have signage posted "NO PARKING, FIRE DEPARTMENT CONNECTION". Said signage shall indicate the physical address of the building served by the fire department connection.
11. All fire hydrants shall have fire lanes established. Said fire lanes shall extend for a distance not less than 7.5 ft centerline of the hydrant in both directions. The curbing or roadway shall be painted yellow for the entire width of the fire lane.
12. No parking fire lane signage shall be posted at each fire hydrant location. Fire lanes shall be established and posted with the recognized international signage. The fire inspector in the field shall mandate where fire lanes are required.
13. Clearances around the proposed fire department connection must be at least 3 feet in front of and to either side of the appliance per (18.3.4.2, NFPA 1 as adopted in the FFPC).
14. Florida Fire Prevention Code 7th Ed. NFPA 1 Section 16.3.4.3 Access Box(es). The AHJ shall have the authority to require an access box(es) to be installed in an accessible location where access to or within a structure is difficult because of security.

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CITY OF MOUNT DORA

SP22-05

City of Mount Dora
Planning and Development
510 N. Baker St.
Mount Dora, FL 32757
352-735-7112
E-mail: plandev@cityofmountdora.com

SITE PLAN APPLICATION

Date: 4/6/2022 Project Name: Longhorn Steakhouse

1. Site Address: 17020 US Hwy 441
   (Contact City Staff for New Address Assignments)

2. Applicant's Name: J Brett Hutchens
   Company's Name: CASTO Net Lease Properties LLC
   Address: 5391 Lakewood Ranch Boulevard, Suite 100
   City, State & Zip: Sarasota, FL 34240
   Phone: (941) 552-2714 E-mail: dmoyer@castoinfo.com

3. Property Owner's Name(s): Wal-Mart Stores East LP Wal Mart Property Tax Dept
   Company's Name: Wal-Mart Stores
   Address: PO Box 8050 MS 0555
   City, State & Zip: Bentonville, AR 72712
   Phone: _____ E-mail: _____

4. Engineer's Name: Kevin M. Roberson
   Company's Name: Kimley-Horn and Associates, Inc.
   Address: 445 24th Street, Suite 200
   City, State & Zip: Vero Beach, FL 32960
   Phone: (772) 794-4100 E-mail: kevin.roberson@kimley-horn.com

5. Landscape Architect's Name: Leah M. Campbell
   Company's Name: Kimley-Horn and Associates, Inc.
   Address: 445 24th Street, Suite 200
   City, State & Zip: Vero Beach, FL 32960
   Phone: (772) 794-4100 E-mail: leah.campbell@kimley-horn.com

6. Architect's Name: Jennifer Nelson
Company's Name: ACS Cincinnati
Address: 4555 Lake Forest Drive, Suite 650
City, State & Zip: Cincinnati, OH 45242
Phone: (513) 991-6200 E-mail: jnelson@acs-architects.com

7. Briefly describe the property project and proposed use(s):
Construction of a Longhorn Steakhouse on the outparcel of the Walmart property

8. Property is located on the following adjacent streets:
The northeast corner of Eudora Rd and US 441

9. Zoning District: C-3 Future Land Use Category: Commercial

10. Building Size Existing (SF): N/A Proposed (SF: 5,710 SF
Total (SF): 5,710 SF

11. Proposed Number of Seats: 184 seats

12. Size of property in Acres: 1.92 Ac Square Feet: 83,551 SF

13. Number of structures to be built on the site: One

14. Height of structures(s): 25'-4" Building Stories: One Story

15. Total square footage of impervious surface: 56,817 sf

16. The percentage of lot coverage: 65% (including pervious pavers

17. Are vested rights being requested as part of this application? Yes _____ No _____
If no, by signing this application you are waiving any future vested development rights on this property.

CERTIFICATION AND SIGNATURE

By my signature below, I certify that the information contained in this application is true and correct to the best of my knowledge at the time of the application. I acknowledge that I understand and have complied with all of the submittal requirements and procedures and that this application is a complete application submittal pursuant to the City's Land Development Code. I further understand that an incomplete application submittal may cause my application to be deferred to the next posted deadline date.

DM

Owner/Applicant Signature

4/6/22

Date

March 25, 2022

RE: Applications for Permits and Approvals

TO: Whom it May Concern

Walmart Stores Inc. ("Walmart") is in the process of developing an outparcel located at 17020 US Hwy 441, Mount Dora, Florida (the "Site").

On behalf of Walmart, I hereby authorize CASTO Net Lease Properties (the "Developer"), to act as agents of Walmart for the purpose of obtaining permits and approvals related to the development of the Site.

In such capacity, the Developer's authority is expressly limited to signing and delivering applications for permits and approvals that are related to the renovation of the Site and to advancing nominal funds on Walmart's behalf as required to file such applications. The Developer is not authorized to negotiate on Walmart's behalf or to bind or obligate Walmart in any manner whatsoever, including without limitation accruing any obligations on Walmart's behalf to pay for or construct improvements without additional authorization in writing from Walmart.

Sincerely,
WALMART STORES EAST, LP

Name: _____

Title: Senior Transaction Manager

NOTARY

County of Benton

State of Arkansas

The foregoing instrument was acknowledged before me this 25th day of March, 2017 ~~7~~ 22 by Cody Johnson of Walmart Stores East LP, who is (personally known to me) or who has produced _____,as identification and who did not take an oath.

NOTARY PUBLIC: _____

Print Name: Sara J Whitlock

My Commission Expires:

OFFICIAL SEAL
SARA J WHITLOCK
BENTON COUNTY
NOTARY PUBLIC - ARKANSAS
My Commission Expires 7/17/2030
Commission No. 12377234

Front Elevation

OLD COUNTRY LEDGE
CORONADO STONE

EXTERIOR STAIN
BY OLYMPIC,
708 WALNUT

STANDING SEAM
METAL ROOF
GALVALUME FINISH

BENJAMIN MOORE
PAINT HC-71
HASBROUCK BROWN

BENJAMIN MOORE
PAINT 063 PENNIES
FROM HEAVEN

BENJAMIN MOORE
PAINT HC-47
BROOKLINE BEIGE

BENJAMIN MOORE
PAINT 2164-20
MARSH BROWN

BENJAMIN MOORE
PAINT PM-16
COUNTRY REDWOOD

BENJAMIN MOORE
PAINT 2126-10
BLACK TAR

Right Elevation

OLD COUNTRY LEDGE
CORONADO STONE

EXTERIOR STAIN
BY OLYMPIC,
708 WALNUT

STANDING SEAM
METAL ROOF
GALVALUME FINISH

BENJAMIN MOORE
PAINT HC-71
HASBROUCK BROWN

BENJAMIN MOORE
PAINT 063 PENNIES
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BENJAMIN MOORE
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BROOKLINE BEIGE

BENJAMIN MOORE
PAINT 2164-20
MARSH BROWN

BENJAMIN MOORE
PAINT PM-16
COUNTRY REDWOOD

BENJAMIN MOORE
PAINT 2126-10
BLACK TAR

Rear Elevation

OLD COUNTRY LEDGE
CORONADO STONE

EXTERIOR STAIN
BY OLYMPIC,
708 WALNUT

STANDING SEAM
METAL ROOF
GALVALUME FINISH

BENJAMIN MOORE
PAINT HC-71
HASBROUCK BROWN

BENJAMIN MOORE
PAINT 063 PENNIES
FROM HEAVEN

BENJAMIN MOORE
PAINT HC-47
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BENJAMIN MOORE
PAINT 2164-20
MARSH BROWN

BENJAMIN MOORE
PAINT PM-16
COUNTRY REDWOOD

BENJAMIN MOORE
PAINT 2126-10
BLACK TAR

Left Elevation

OLD COUNTRY LEDGE
CORONADO STONE

EXTERIOR STAIN
BY OLYMPIC,
708 WALNUT

STANDING SEAM
METAL ROOF
GALVALUME FINISH

BENJAMIN MOORE
PAINT HC-71
HASBROUCK BROWN

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PAINT PM-16
COUNTRY REDWOOD

BENJAMIN MOORE
PAINT 2126-10
BLACK TAR

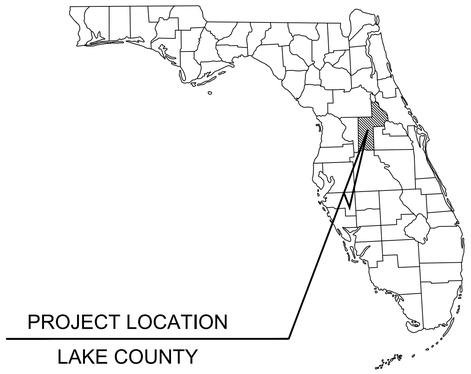
CONSTRUCTION PLANS

FOR

LONGHORN STEAKHOUSE

LOCATED AT

17020 US HWY 441
MOUNT DORA, FL 32757



PROJECT TEAM

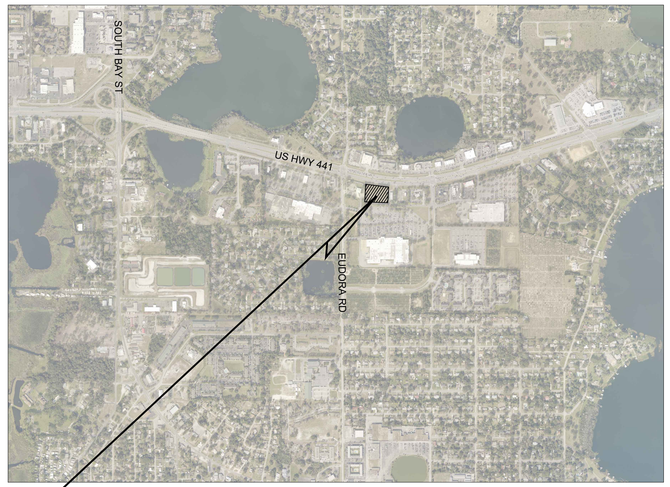
APPLICANT
CASTO SOUTHEAST REALTY SERVICES
5391 LAKEWOOD RANCH BLVD, SUITE 100
SARASOTA, FL 34240
(941) 552-2714
DMOYER@CASTOINFO.COM

ARCHITECT
JENNIFER NELSON
ACS CINCINNATI
4555 LAKE FOREST DRIVE, SUITE 650
CINCINNATI, OH 45242
(513) 991-6200
JNELSON@ACS-ARCHITECTS.COM

SURVEYOR
CPH, INC.
500 WEST FULTON STREET
SANFORD, FL 32771
(407) 322-6841

CIVIL ENGINEER
KEVIN M. ROBERSON, P.E.
KIMLEY-HORN AND ASSOCIATES, INC.
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
(772) 794-4100
KEVIN.ROBERSON@KIMLEY-HORN.COM

LANDSCAPE ARCHITECT
LEAH M. CAMPBELL, RLA
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
(772)794-4100
LEAH.CAMPBELL@KIMLEY-HORN.COM



VICINITY MAP
N.T.S.

Sheet List Table

C1.1 COVER SHEET
C1.3 GENERAL NOTES
⚠ C2.1 DEMOLITION, DUST AND EROSION CONTROL PLAN
C2.2 EROSION CONTROL DETAILS
C3.1 SITE PLAN
C4.1 UTILITY PLAN
C5.1 UTILITY DETAILS
⚠ C5.2 UTILITY DETAILS
C6.1 PAVING, GRADING AND DRAINAGE PLAN
C7.1 PAVING, GRADING AND DRAINAGE DETAILS
C8.1 GEOTECHNICAL REPORT
C8.2 BORING LOGS
C9.1 PHOTOMETRIC PLAN
⚠ C9.2 LIGHTING DETAILS
CS1 DARDEN CIVIL SPECIFICATIONS
CS2 DARDEN CIVIL SPECIFICATIONS
CS3 DARDEN CIVIL SPECIFICATIONS
CS4 DARDEN CIVIL SPECIFICATIONS
CS5 DARDEN CIVIL SPECIFICATIONS
L1.1 LANDSCAPE PLAN
L1.2 LANDSCAPE DETAILS
L2.1 IRRIGATION PLAN
L2.2 IRRIGATION DETAILS
LS1 DARDEN LANDSCAPE AND IRRIGATION SPECIFICATIONS

LIST OF CONTACTS

STORMWATER
ST JOHNS RIVER WATER MANAGMENT DISTRICT
601 SOUTH LAKE DESTINY ROAD, SUITE 200
MAITLAND, FL 32751
(407) 215-1462
CONTACT: LETICIA CASTANEDA

CITY OF MOUNT DORA PUBLIC WORKS
900 NORTH DONNELLY ST
MOUNT DORA, FL 32757
CONTACT: ETHAN HAND

WATER
CITY OF MOUNT DORA PUBLIC WORKS
900 NORTH DONNELLY ST
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(352) 735-7151
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⚠⚠⚠ ISSUANCE DATE: 5/9/2022
LATEST REVISION DATE: 6/17/2022

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

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KEVIN M. ROBERSON LICENSE No. 52074 STATE OF FLORIDA PROFESSIONAL ENGINEER
7/29/2022

LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
1 SITE PLAN COMMENTS	5/27/22
2 SITE PLAN COMMENTS	6/17/22
3 SITE PLAN COMMENTS	7/29/22
Restaurant #:	5662

LONGHORN STEAKHOUSE
MOUNT DORA

PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING
COVER SHEET

C1.1

Drawing name: K:\WRB_LDEV\047916 - Darden\133_LH Mt Dora\CADD\PlanSheets\101-C1.1 COVER SHEET.dwg 101-C1.1 COVER SHEET Jul 29, 2022 10:11am by: Liz.Meeks
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Drawing name: K:\VRB_LDEV\047916 - Darden\133_LH Mt Dora\CADD\PlanSheets\103-C1.3 GENERAL NOTES.dwg 103-C1.3 GENERAL NOTES Jul 29, 2022 10:11am by: LizMeeks
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GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (LATEST EDITION) AND BECOME FAMILIAR WITH THE CONTENTS PRIOR TO COMMENCING WORK, AND, UNLESS OTHERWISE NOTED, ALL WORK SHALL CONFORM AS APPLICABLE TO THESE STANDARDS AND SPECIFICATIONS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS. CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS UNLESS OTHERWISE INDICATED, REMOVING TREES, STUMPS, ROOTS, MUCK, EXISTING PAVEMENT AND ALL OTHER DELETERIOUS MATERIAL.

3. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.

4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. AN APPROXIMATE LIST OF THE UTILITY COMPANIES WHICH THE CONTRACTOR MUST CALL BEFORE COMMENCING WORK IS PROVIDED ON THE COVER SHEET OF THESE CONSTRUCTION PLANS. THIS LIST SERVES AS A GUIDE ONLY AND IS NOT INTENDED TO LIMIT THE UTILITY COMPANIES WHICH THE CONTRACTOR MAY WISH TO NOTIFY.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS AND BONDS IF REQUIRED PRIOR TO CONSTRUCTION.

6. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.

7. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.

8. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE OWNER AND DESIGN ENGINEER OF RECORD DIRECTLY FROM THE TESTING AGENCY.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TO THE ENGINEER A CERTIFIED RECORD SURVEY SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA DEPICTING THE ACTUAL FIELD LOCATION OF ALL CONSTRUCTED IMPROVEMENTS THAT ARE REQUIRED BY THE JURISDICTIONAL AGENCIES FOR THE CERTIFICATION PROCESS. ALL SURVEY COSTS WILL BE THE CONTRACTORS RESPONSIBILITY.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.

11. ANY WELLS DISCOVERED ON SITE THAT WILL HAVE NO USE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED.

12. ANY WELL DISCOVERED DURING EARTH MOVING OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES WITHIN 24 HOURS AFTER DISCOVERY IS MADE.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER.

DEMOLITION NOTES

1. ALL MATERIAL REMOVED FROM THIS SITE BY THE CONTRACTOR SHALL BE DISPOSED OF BY THE CONTRACTOR IN A LEGAL MANNER.

2. REFER TO THE TOPOGRAPHIC SURVEY FOR ADDITIONAL DETAILS OF EXISTING STRUCTURES, ETC., LOCATED WITHIN THE PROJECT SITE. UNLESS OTHERWISE NOTED, ALL EXISTING BUILDINGS, STRUCTURES, SLABS, CONCRETE, ASPHALT, DEBRIS PILES, SIGNS, AND ALL APPURTENANCES ARE TO BE REMOVED FROM THE SITE BY THE CONTRACTOR AND PROPERLY DISPOSED OF IN A LEGAL MANNER AS PART OF THIS CONTRACT. SOME ITEMS TO BE REMOVED MAY NOT BE DEPICTED ON THE TOPOGRAPHIC SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND DETERMINE THE FULL EXTENT OF ITEMS TO BE REMOVED. IF ANY ITEMS ARE IN QUESTION, THE CONTRACTOR SHALL CONTACT THE OWNER PRIOR TO REMOVAL OF SAID ITEMS.

3. THE CONTRACTOR SHALL REFER TO THE DEMOLITION PLAN AND TREE INVENTORY PLAN FOR DEMOLITION/PRESERVATION OF EXISTING TREES. ALL TREES NOT SPECIFICALLY SHOWN TO BE PRESERVED OR RELOCATED SHALL BE REMOVED AS A PART OF THIS CONTRACT. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY DEMOLITION.

4. CONTRACTOR SHALL ADJUST GRADE OF ANY EXISTING UTILITIES TO REMAIN.

PAVING, GRADING AND DRAINAGE NOTES

1. ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN JURISDICTION'S RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH LOCAL OR COUNTY SPECIFICATIONS AND STANDARDS (LATEST EDITION) OR FDOT SPECIFICATIONS AND STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY REGULATIONS.

2. ALL UNPAVED AREAS IN EXISTING RIGHTS-OF-WAY DISTURBED BY CONSTRUCTION SHALL BE REGRADED AND SODDED.

3. TRAFFIC CONTROL ON ALL FDOT, LOCAL AND COUNTY RIGHTS-OF-WAY SHALL MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (U.S. DOT/FHA) AND THE REQUIREMENTS OF THE STATE AND ANY LOCAL AGENCY HAVING JURISDICTION. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

4. THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL A GRASS STAND IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.

5. ALL OPEN AREAS WITHIN THE PROJECT SITE SHALL BE SODDED UNLESS INDICATED OTHERWISE ON THE LANDSCAPE PLAN.

6. ALL AREAS INDICATED AS PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL PAVEMENT SECTIONS AS INDICATED ON THE DRAWINGS.

7. WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED AND REPLACED, THE CONTRACTOR SHALL SAW CUT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND REPLACE THE PAVEMENT WITH THE SAME TYPE AND DEPTH OF MATERIAL AS EXISTING OR AS INDICATED.

8. WHERE NEW PAVEMENT MEETS THE EXISTING PAVEMENT, THE CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND MATCH THE EXISTING PAVEMENT ELEVATION WITH THE PROPOSED PAVEMENT UNLESS OTHERWISE INDICATED.

9. THE CONTRACTOR SHALL INSTALL FILTER FABRIC OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE FLOWS.

10. IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE DESIGN ENGINEER PRIOR TO ANY EXCAVATION.

11. STRIP TOPSOIL AND ORGANIC MATTER FROM ALL AREAS OF THE SITE AS REQUIRED. IN SOME CASES TOPSOIL MAY BE STOCKPILED ON SITE FOR PLACEMENT WITHIN LANDSCAPED AREAS BUT ONLY AS DIRECTED BY THE OWNER.

12. FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY OR TO FDOT STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

13. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED OR SEEDED AS SPECIFIED IN THE PLANS, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED OR SEEDED AND MULCHED AS SHOWN ON THE LANDSCAPING PLAN.

14. ALL CUT OR FILL SLOPES SHALL BE 4 (HORIZONTAL) :1 (VERTICAL) OR FLATTER UNLESS OTHERWISE SHOWN.

15. THE CONTRACTOR SHALL TAKE ALL REQUIRED MEASURES TO CONTROL TURBIDITY, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF TURBIDITY BARRIERS AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO THE RECEIVING WATER BODY EXISTS DUE TO THE PROPOSED WORK. TURBIDITY BARRIERS MUST BE MAINTAINED IN EFFECTIVE CONDITION AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THEREAFTER, THE CONTRACTOR MUST REMOVE THE BARRIERS. AT NO TIME SHALL THERE BE ANY OFF-SITE DISCHARGE WHICH VIOLATES THE WATER QUALITY STANDARDS IN CHAPTER 17-302, FLORIDA ADMINISTRATIVE CODE.

16. SOD, WHERE CALLED FOR, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.

17. THE CONTRACTOR MUST REVIEW AND MAINTAIN A COPY OF THE ENVIRONMENTAL RESOURCE PERMIT COMPLETE WITH ALL CONDITIONS, ATTACHMENTS, EXHIBITS, AND PERMIT MODIFICATIONS IN GOOD CONDITION AT THE CONSTRUCTION SITE. THE COMPLETE PERMIT MUST BE AVAILABLE FOR REVIEW UPON REQUEST BY WATER MANAGEMENT DISTRICT REPRESENTATIVES.

18. THE CONTRACTOR SHALL ENSURE THAT ISLAND PLANTING AREAS AND OTHER PLANTING AREAS ARE NOT COMPACTED AND DO NOT CONTAIN ROAD BASE MATERIALS. THE CONTRACTOR SHALL ALSO EXCAVATE AND REMOVE ALL UNDESIRABLE MATERIAL FROM ALL AREAS ON THE SITE TO BE PLANTED AND PROPERLY DISPOSED OF IN A LEGAL MANNER.

19. THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS.

RECORD DRAWINGS

1. CONTRACTOR SHALL PROVIDE TO THE ENGINEER AND OWNER A MINIMUM OF 2 HARD COPIES OF A PAVING, GRADING AND DRAINAGE RECORD DRAWING AND A SEPARATE UTILITY RECORD DRAWING, AS WELL AS BOTH IN AUTOCAD 2007 OR LATER, BOTH PREPARED BY A FLORIDA REGISTERED SURVEYOR. THE RECORD DRAWINGS SHALL VERIFY ALL DESIGN INFORMATION INCLUDED ON THE DESIGN PLANS OF THE SAME NAME.

WATER AND SEWER UTILITY NOTES

1. THE CONTRACTOR SHALL CONSTRUCT GRAVITY SEWER LATERALS, MANHOLES GRAVITY SEWER LINES AND DOMESTIC WATER AND FIRE PROTECTION SYSTEM AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS, EQUIPMENT, MACHINERY, TOOLS, MEANS OF TRANSPORTATION AND LABOR NECESSARY TO COMPLETE THE WORK IN FULL AND COMPLETE ACCORDANCE WITH THE SHOWN, DESCRIBED AND REASONABLY INTENDED REQUIREMENTS OF THE CONTRACT DOCUMENTS AND JURISDICTIONAL AGENCY REQUIREMENTS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

2. ALL EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS FOR UTILITY LOCATION AND COORDINATION IN ACCORDANCE WITH THE NOTES CONTAINED IN THE GENERAL CONSTRUCTION SECTION OF THIS SHEET.

3. THE CONTRACTOR SHALL RESTORE ALL DISTURBED VEGETATION IN KIND, UNLESS SHOWN OTHERWISE.

4. DEFLECTION OF PIPE JOINTS AND CURVATURE OF PIPE SHALL NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS. SECURELY CLOSE ALL OPEN ENDS OF PIPE AND FITTINGS WITH A WATERTIGHT PLUG WHEN WORK IS NOT IN PROGRESS. THE INTERIOR OF ALL PIPES SHALL BE CLEAN AND JOINT SURFACES WIPED CLEAN AND DRY AFTER THE PIPE HAS BEEN LOWERED INTO THE TRENCH. VALVES SHALL BE PLUMB AND LOCATED ACCORDING TO THE PLANS.

5. ALL PHASES OF INSTALLATION, INCLUDING UNLOADING, TRENCHING, LAYING AND BACK FILLING, SHALL BE DONE IN A FIRST CLASS WORKMANLIKE MANNER. ALL PIPE AND FITTINGS SHALL BE CAREFULLY STORED FOLLOWING MANUFACTURER'S RECOMMENDATIONS. CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE COATING OR LINING IN ANY D.I. PIPE FITTINGS. ANY PIPE OR FITTING WHICH IS DAMAGED OR WHICH HAS FLAWS OR IMPERFECTIONS WHICH, IN THE OPINION OF THE ENGINEER OR OWNER, RENDERS IT UNFIT FOR USE, SHALL NOT BE USED. ANY PIPE NOT SATISFACTORY FOR USE SHALL BE CLEARLY MARKED AND IMMEDIATELY REMOVED FROM THE JOB SITE, AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

6. WATER FOR FIRE FIGHTING SHALL BE AVAILABLE FOR USE PRIOR TO COMBUSTIBLES BEING BROUGHT ON SITE.

7. ALL UTILITY AND STORM DRAIN TRENCHES LOCATED UNDER AREAS TO RECEIVE PAVING SHALL BE COMPLETELY BACK FILLED IN ACCORDANCE WITH THE GOVERNING JURISDICTIONAL AGENCY'S SPECIFICATIONS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

8. UNDERGROUND LINES SHALL BE SURVEYED BY A STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR PRIOR TO BACK FILLING.

9. CONTRACTOR SHALL PERFORM, AT HIS OWN EXPENSE, ANY AND ALL TESTS REQUIRED BY THE SPECIFICATIONS AND/OR ANY AGENCY HAVING JURISDICTION. THESE TESTS MAY INCLUDE, BUT MAY NOT BE LIMITED TO, INFILTRATION AND EXFILTRATION, TELEVISION INSPECTION AND A MANDREL TEST ON GRAVITY SEWER. A COPY OF THE TEST RESULTS SHALL BE PROVIDED TO THE UTILITY PROVIDER, OWNER AND JURISDICTIONAL AGENCY AS REQUIRED.

EROSION CONTROL NOTES

1. THE STORM WATER POLLUTION PREVENTION PLAN ("SWPPP") IS COMPRISED OF THIS EROSION CONTROL PLAN, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN SPECIFICATIONS OF THE SWPPP, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

2. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERIC PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

3. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

4. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER.

5. EROSION CONTROL PLAN MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.

6. THE CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERIC PERMIT.

7. CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

8. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

9. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

12. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THE PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

EROSION CONTROL NOTES (CONT.)

13. STABILIZATION PRACTICES SHOULD BE INITIATED AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS WHERE CONSTRUCTION HAS TEMPORARILY CEASED.

14. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRED IN THESE AREAS. REFER TO SECTION 981 OF THE STANDARD SPECIFICATIONS FOR SEEDING AND MAINTENANCE REQUIREMENTS.

15. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

16. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED AS SOON AS POSSIBLE.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

18. ON-SITE & OFF SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE EROSION CONTROL PLAN AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

19. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

20. DUE TO GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION.

21. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACK FILLING OF TRENCHES FOR UTILITY CONSTRUCTION.

MAINTENANCE

ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.

2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED. FOR MAINTENANCE REQUIREMENTS REFER THE STANDARD SPECIFICATIONS.

3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.

4. THE CONSTRUCTION ENTRANCE(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

6. OUTLET STRUCTURES, IF APPLICABLE, IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 55 CUBIC YARDS / ACRE.

7. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN 2 CALENDAR DAYS FOLLOWING THE INSPECTION.

TYPICAL ENGINEER OBSERVATIONS

CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS IN ADVANCE OF THE FOLLOWING ACTIVITIES:

- PRE-CONSTRUCTION MEETING
- SUBGRADE PREPARATION
- BASE INSTALLATION
- ASPHALT INSTALLATION
- UNDERGROUND PIPING AND UTILTIES INSTALLATION
- INSTALLATION OF STRUCTURES, DDCV, HYDRANTS, METERS, ETC.
- SIDEWALK INSTALLATION
- CONNECTIONS TO WATER AND SEWER MAINS
- TESTS OF UTILITIES

3RD PARTY TEST REPORTS REQ'D

TEST REPORTS REQUIRED FOR CLOSE OUT INCLUDE, BUT ARE NOT LIMITED TO:

- DENSITY TEST REPORTS
- BACTERIOLOGICAL TESTS OF WATER SYSTEM
- PRESSURE TEST OF WATER/SEWER
- LEAK TESTS ON SEWER SYSTEM AND GREASE TRAPS
- ANY OTHER TESTING REQUIRED BY THE AGENCY

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

Always call 811 two full business days before you dig to have underground utilities located and marked.

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THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN M ROBERSON 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.

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PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916133

KEVIN M. ROBERSON LICENSE No. 52074 STATE OF FLORIDA PROFESSIONAL ENGINEER
7/29/2022

LONGHORN® STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
Restaurant #:	5662

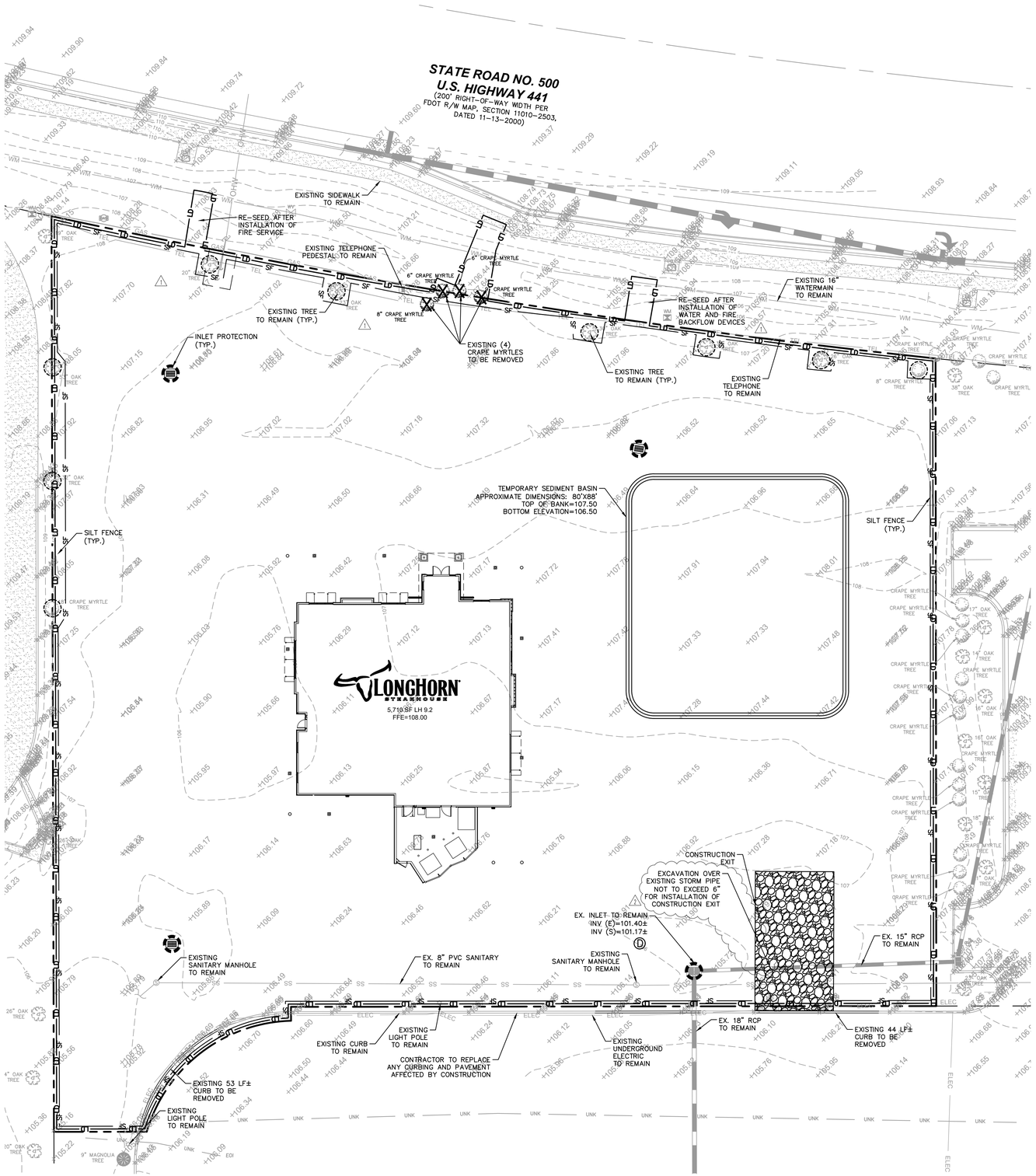
LONGHORN STEAKHOUSE
MOUNT DORA

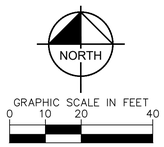
PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING
GENERAL NOTES

C1.3





LEGEND

- PROPERTY LINE
- WM — EXISTING WATERMAIN
- SS — EXISTING SANITARY SEWER
- EXISTING DRAINAGE
- LD — LD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- INLET PROTECTION
- CURB TO REMAIN
- CURB TO REMOVED
- TREE PROTECTION FENCE
- CONSTRUCTION EXIT

NOTES:

1. CONTRACTOR TO CONSIDER DEWATERING ACTIVITIES WHEN PREPARING BID DOCUMENTS FOR THIS PROJECT.
2. CONTRACTOR SHALL OBTAIN ANY NECESSARY DEWATERING PERMITS AS SITE CONDITIONS AND CONSTRUCTION ACTIVITIES REQUIRE.
3. CONTRACTOR TO USE BEST MANAGEMENT PRACTICES TO ENSURE COMPLIANCE WITH NPDES AND WATER MANAGEMENT DISTRICT REGULATIONS FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES AND DEWATERING OPERATIONS.

SITE PREPARATION SHOULD BE IN ACCORDANCE WITH GEOTECHNICAL INVESTIGATION

MITIGATION CALCULATIONS

TOTAL EXISTING NUMBER OF TREES SIZED 6"-23.99": **33 TREES**
TOTAL EXISTING NUMBER OF TREES SIZED 6"-23.99" REMOVED: **4 TREES**
TOTAL EXISTING NUMBER OF TREES SIZED 24" OR GREATER: **10 TREES**
TOTAL EXISTING NUMBER OF TREES SIZED 24" OR GREATER REMOVED: **0 TREES**
TOTAL NUMBER OF TREES REPLACED: **4 TREES**
TOTAL NUMBER OF TREES REPLACED AT RATIO 1 TREE : 1 TREE FOR TREES REMOVED 6"-23.99": **4 TREES**
TOTAL NUMBER OF TREES REPLACED AT RATIO 1 TREE: 6" DBH FOR TREES REMOVED 24" OR GREATER: **0 TREES**

TOTAL NUMBER OF TREES DEFICIENT (NOT BEING REPLACED) FOR TREE BANK CONTRIBUTION 0 TREES

THE OWNER/DEVELOPER SHALL MAKE CONTRIBUTIONS IN THE AMOUNT OF $450.00 FOR EACH TREE NOT REPLACED IN MITIGATION (0) FOR A TOTAL CONTRIBUTION OF $0.00 .

$450.00 x 0 = $0.00

DEMOLITION NOTES:

1. THE INTENT OF THE DEMOLITION PLAN IS TO DEPICT EXISTING FEATURES THAT ENCUMBER THE PROPOSED CONSTRUCTION AREA AND ARE SCHEDULED FOR REMOVAL. SOME INCIDENTAL ITEMS MAY HAVE BEEN INADVERTENTLY OMITTED FROM THE PLAN. THE CONTRACTOR IS ENCOURAGED TO THOROUGHLY INSPECT THE SITE AS WELL AS REVIEW THE PLANS AND SPECIFICATIONS PRIOR TO SUBMITTING PRICING. CONTRACTOR WILL NOT RECEIVE ADDITIONAL COMPENSATION FOR INCIDENTAL ITEMS NOT SHOWN ON THIS DEMOLITION PLAN.
2. THIS DEMOLITION PLAN IS BASED ON AVAILABLE UTILITY INFORMATION AND MAY OR MAY NOT BE ALL INCLUSIVE FOR THIS SITE. ANY UTILITIES ENCOUNTERED DURING DEMOLITION THAT ARE NOT DEPICTED/ADDRESSED ON THIS DRAWING SHOULD BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER IMMEDIATELY.
3. CONTRACTOR IS REQUIRED TO OBTAIN ALL DEMOLITION PERMITS.
4. ALL FEATURES IDENTIFIED ON THIS PLAN WHICH ARE LISTED TO BE DEMOLISHED ARE TO BE REMOVED FROM THE SITE. AFTER DEMOLITION IS COMPLETE THE SITE SHALL BE DELIVERED IN A CONDITION SUITABLE FOR DEVELOPMENT.
5. CONTRACTOR SHALL LIMIT ALL DEMOLITION ACTIVITIES TO THOSE AREAS DELINEATED ON THE CONSTRUCTION DRAWINGS UNLESS OTHERWISE DIRECTED BY THE DEVELOPER OR AS REQUIRED FOR CONSTRUCTION OF IMPROVEMENTS.
6. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING AIRBORNE DUST AND POLLUTANTS BY USING WATER SPRINKLING OR OTHER SUITABLE MEANS OF CONTROL.
7. CONTRACTOR TO USE CARE IN HANDLING DEBRIS FROM SITE TO ENSURE THE SAFETY OF THE PUBLIC. HAUL ROUTE TO BE CLOSELY MONITORED FOR DEBRIS OR MATERIALS TRACKED ONTO ADJOINING ROADWAYS, SIDEWALKS, ETC. ROADWAYS AND WALKWAYS TO BE CLEARED DAILY OR AS NECESSARY TO MAINTAIN PUBLIC SAFETY.
8. DEWATERING SHOULD BE ANTICIPATED AND INCLUDED.
9. ALL ASPHALT TO BE REMOVED SHALL BE SAW CUT ADJACENT TO REMAINING IMPROVEMENTS.
10. WHERE REMAINING, INLETS, MANHOLE COVERS, AND VALVE COVERS TO BE PROTECTED IN PAVEMENT REMOVAL AREAS. CONTRACTOR SHALL REPLACE DAMAGED STRUCTURES AT THEIR EXPENSE.
11. CONTRACTOR SHALL INSTALL A CONTINUOUS SCREENED CONSTRUCTION FENCING ALONG PROJECT BOUNDARY.
12. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. AS APPROVED BY LAKE COUNTY AND CONSTRUCTION MANAGER.
13. CONTINUOUS ACCESS SHALL BE MAINTAINED FOR SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF EXISTING FACILITIES AND CONSTRUCTION OF NEW FACILITIES. SIGNAGE SHALL BE POSTED TO DIRECT THE PUBLIC TO THE PATH OF TRAVEL.
14. EXISTING RETAIL BUILDING SHALL HAVE UNDISRUPTED ACCESS AT ALL TIMES. ALL PARKING SPACES AND DRIVE AISLES OUTSIDE OF THE LIMITS OF DISTURBANCE SHALL BE ACCESSIBLE AND SHIELDED FROM CONSTRUCTION ACTIVITIES AT ALL TIMES.

SEQUENCE OF CONSTRUCTION

UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAYDOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.

PHASE 1:
1. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (1) AND INSTALL SILT FENCE.
2. CONSTRUCT AND STABILIZE SEDIMENT BASIN AND DRAINAGE SWALES WITH APPROPRIATE OUTFALL STRUCTURES (CLEARLY ONLY THOSE AREAS NECESSARY TO INSTALL CONTROL DEVICES LISTED ABOVE).
3. INSTALL INLET PROTECTION AT EXISTING INLET(S).
4. INSTALL AND STABILIZE ANY NECESSARY HYDRAULIC CONTROL STRUCTURES (DIKES, CHECK DAMS, OUTLET TRAPS, RISER PIPE DISCHARGE POINT, ETC.)
5. PREPARE CLEARING AND GRUBBING OF THE SITE IF, APPLICABLE.

HALT ALL ACTIVITIES AND CONTACT THE CONSULTANT TO PERFORM INSPECTION AND CERTIFICATION OF BMPS. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH CONSULTANT AND ALL GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.

PHASE 2:
6. ROUGH GRADE TO ESTABLISH PROPOSED DRAINAGE PATTERNS.
7. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
8. TEMPORARILY SEED WITH PURE LIVE SEED, THROUGHOUT CONSTRUCTION, DISTURBED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE OR AS REQUIRED BY GENERIC PERMIT.

CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING ALL DEWATERING PERMITS NECESSARY FOR CONSTRUCTION

MAINTENANCE

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.

SURVEY NOTES:

1. INFORMATION ON THE PLAN BASED UPON ALTA/ASCM LAND TITLE SURVEY PREPARED BY CPH, INC., DATED SEPTEMBER 3, 2021. THIS SURVEY IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NAVD 29).

ACREAGE SUMMARY	
TOTAL PROJECT AREA	1.92 AC
ON-SITE DISTURBED AREA	1.92 AC
OFF-SITE DISTURBED AREA	0.01 AC
TOTAL DISTURBED AREA	1.93 AC
IMPERVIOUS AREA AT COMPLETION	1.24 AC
PERVIOUS / SEEDED AREA AT COMPLETION	0.68 AC

SEDIMENT BASIN SIZING CALCULATION

REQUIRED: 1.92 AC X 3600 FT²/AC = 6,912 FT²
PROVIDED: 80 FT X 1 FT X 88 FT = 7,040 FT²

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR
TEMPORARY CONSTRUCTION EXITS																
TEMPORARY CONTROL MEASURES																
SEDIMENT CONTROL BASINS																
STRIP & STOCKPILE TOPSOIL																
ROUGH GRADE																
STORM FACILITIES																
SITE CONSTRUCTION																
PERMANENT CONTROL STRUCTURES																
FOUNDATION / BUILDING CONSTRUCTION																
FINISH GRADING																
LANDSCAPING/SEED/FINAL STABILIZATION																

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VERO BEACH, FL 32960
PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916133

KEVIN ROBERSON LICENSE No. 52074 STATE OF FLORIDA PROFESSIONAL ENGINEER
7/29/2022

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN M ROBERSON 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.

LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
1 SITE PLAN COMMENTS	5/27/22
2 SITE PLAN COMMENTS	6/17/22
Restaurant #:	5662

LONGHORN STEAKHOUSE MOUNT DORA

PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING
DEMOLITION, DUST AND EROSION CONTROL PLAN

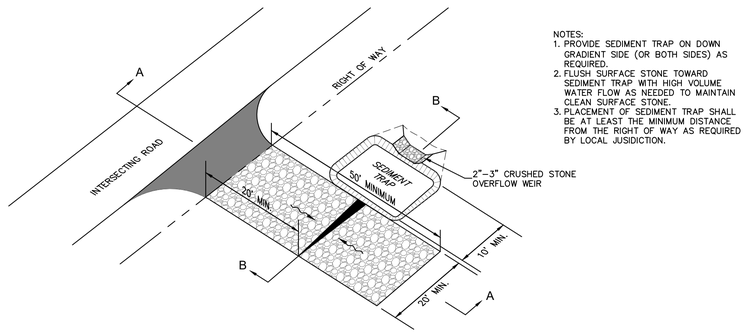
C2.1

Drawing name: K:\VRB_LDEV\047916 - Darden\133_LH Mt Dora\CADD\PlanSheets\104-C2.1 DEMOLITION AND EROSION CONTROL PLAN.dwg 104-C2.1 DEMOLITION DUST AND EROSION CONTROL PLAN Jul 29, 2022 10:11am by: Liz.Meeks
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Section 1	Project Name and location information:	LONGHORN STEAKHOUSE 17020 US HWY 441 MOUNT DORA, FL 32757
Section 2	Describe the nature of the construction activity:	CONSTRUCTION OF INFRASTRUCTURE FOR NEW RESTAURANT
Section 3	Describe the intended sequence of major soil disturbing activities:	CONSTRUCTION OF EROSION AND SEDIMENT CONTROLS, GRADING AND CONSTRUCTION OF STORM SEWER
Section 4	Total area of the site:	1.92 AC.
Section 5	Total area of the site to be disturbed:	1.92 AC.
Section 6	Existing data describing the soil or quality of any stormwater discharge from the site:	EXISTING SITE IS GENERALLY FLAT AND OVERFLOWS INTO THE WALMART PERIMETER DRIVE
Section 7	Estimate the drainage area size for each discharge point:	1.92 AC.
Section 8	Latitude and longitude of each discharge point and identify the receiving water or MS4 for each discharge point:	PROJECT LOCATION: LAT: 28°49'12.04" N LONG: 81°40'24.85" W RECEIVING WATER: OCKLAWAHA BASIN
Section 9	Give a detailed description of all controls, Best Management Practices (BMPs) and measures that will be implemented at the construction site for each activity identified in the intended sequence of major soil disturbing activities section. Provide time frames in which the controls will be implemented. NOTE: All controls shall be consistent with performance standards for erosion and sediment control and stormwater treatment set forth in s. 62-40.432, F.A.C., the applicable Stormwater or Environmental Resource Permitting requirements of the Department or a Water Management District, and the guidelines contained in the State of Florida Erosion and Sediment Control Designer and Reviewer Manual, FDOT, FDEP, and any subsequent amendments.	
	SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF THE CONSTRUCTION SITE. INLET PROTECTION SHALL BE INSTALLED ON OPEN GRATE DRAINAGE INLETS SURROUNDING CONSTRUCTION SITE.	
Section 10	Describe all temporary and permanent stabilization practices. Stabilization practices include temporary seeding, mulching, permanent seeding, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, vegetative preservations, etc.	
	THE PERIMETER SILT FENCE SHALL BE MAINTAINED AROUND THE ENTIRE PROJECT SITE UNTIL LANDSCAPE HAS BEEN INSTALLED.	
Section 11	Describe all structural controls to be implemented to divert stormwater flow from exposed soils and structural practices to store flows, retain sediment on-site or in any other way limit stormwater runoff. These controls include silt fences, earth dikes, diversions, swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, coagulating agents and temporary or permanent sediment basins.	
	SILT FENCE	
Section 12	Describe all sediment basins to be implemented for areas that will disturb 10 or more acres at one time. The sediment basins (or an equivalent alternative) should be able to provide 3,600 cubic feet of storage for each acre drained. Temporary sediment basins (or an equivalent alternative) are recommended for drainage areas under 10 acres.	
	N/A	
Section 13	Describe all permanent stormwater management controls such as, but not limited to, detention or retention systems or vegetated swales that will be installed during the construction process.	
	N/A	

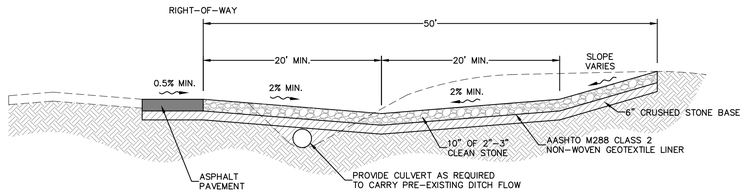
Section 14	Waste disposal, this may include construction debris, chemicals, litter, and sanitary wastes:	All construction materials and debris will be placed in a dumpster and hauled off site to a landfill or other proper disposal site. No materials will be buried on site.
Section 15	Offsite vehicle tracking from construction entrances/exits:	Off site vehicle tracking of sediments and dust generation will be minimized via a rock construction entrance, street sweeping and the use of water to keep dust down.
Section 16	The proper application rates of all fertilizers, herbicides and pesticides used at the construction site:	Florida-friendly fertilizers and pesticides will be used at a minimum and in accordance with the manufacturer's suggested application rates.
Section 17	The storage, application, generation and migration of all toxic substances:	All paints and other chemicals will be stored in a locked covered shed.
Section 18	Other:	Port-o-lets will be placed away from storm sewer systems, storm inlet(s), surface waters and wetlands. No vehicle maintenance shall be conducted on-site. A washdown area shall be designated at all times and will not be located in any area that will allow for the discharge of polluted runoff.
Section 19	Provide a detailed description of the maintenance plan for all structural and non-structural controls to assure that they remain in good and effective operating condition.	
	Contractor shall provide routine maintenance of permanent and temporary sediment and erosion control features in accordance with the technical specifications or as follows, whichever is more stringent: • Silt fence shall be inspected at least weekly. Any required repairs shall be made immediately. Sediment deposits shall be removed when they reach approximately one-half the height of the barrier. • Maintenance shall be performed on the rock entrance when any void spaces are full of sediment. • Inlet(s)/outfalls shall be inspected immediately after each rain event and any required repairs to the filter inlets, silt fence, or filter fabric shall be performed immediately. • Bare areas of the site that were previously seeded shall be reseeded per manufactures' instructions. • Mulch and sod that has been washed out shall be replaced immediately. • Maintain all other areas of the site with proper controls as necessary.	
Section 20	Inspections: Describe the inspection and inspection documentation procedures, as required by the FDEP NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities.	
	Qualified personnel will inspect all points of discharges, all disturbed areas of construction that have not been stabilized, constructed areas and locations where vehicles enter and exit the site, and all BMPs at least once every 7 calendar days and within 24 hours of the end of a rainfall event that is 0.5 inches or greater. Where sites have been finally stabilized, said inspections shall be conducted at least once every month until the Notice of Termination is filed.	
Section 21	Identify and describe all sources of non-stormwater discharges as allowed by the FDEP NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities.	
	N/A	
Section 22	All contractor(s) and subcontractor(s) identified in the SWPPP must sign the following certification:	
	"I certify under penalty of law that I understand, and shall comply with, the terms and conditions of the State of Florida Generic Permit for Stormwater Discharge from Large and Small Construction Activities and this Stormwater Pollution Prevention Plan prepared thereunder."	

Section 22	Name	Title	Company Name, Address and Phone Number	Date

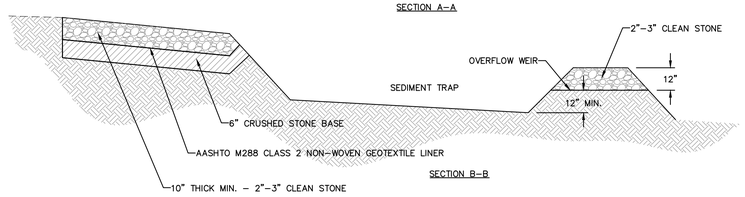


NOTES:
1. PROVIDE SEDIMENT TRAP ON DOWN GRADIENT SIDE (OR BOTH SIDES) AS REQUIRED.
2. FLUSH SURFACE STONE TOWARD SEDIMENT TRAP WITH HIGH VOLUME WATER FLOW AS NEEDED TO MAINTAIN CLEAN SURFACE STONE.
3. PLACEMENT OF SEDIMENT TRAP SHALL BE AT LEAST THE MINIMUM DISTANCE FROM THE RIGHT OF WAY AS REQUIRED BY LOCAL JUSIDICTION.

VIEW

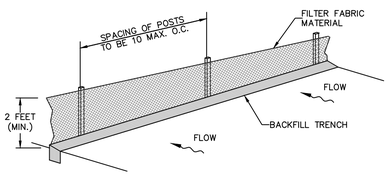


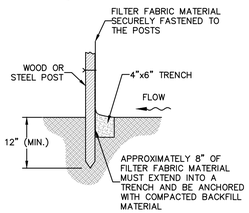
SECTION A–A

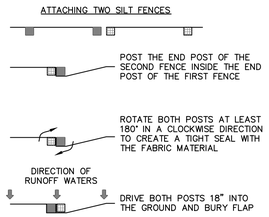


SECTION B–B

CONSTRUCTION EXIT
N.T.S

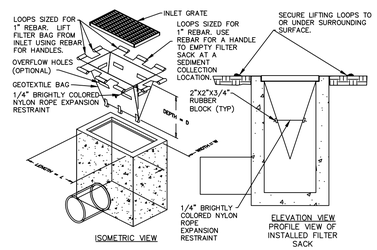






NOTES:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF–SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE INSTALLATION
N.T.S



ISOMETRIC VIEW

ELEVATION VIEW
PROFILE VIEW OF INSTALLED FILTER SACK

1. EMPTY FILTER SACK WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE WILL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
3. AN OIL ADSORBENT PAD OR PILLOW CAN BE PURCHASED WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT PER REGULATORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK WILL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK WILL BE BETWEEN 18 INCHES AND 36 INCHES.
7. THE LENGTH, "L", OF THE FILTER SACK WILL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D–4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D–4632	20 %
PUNCTURE	ASTM D–4833	120 LBS
MULLEN BURST	ASTM D–3533	190 LBS
TRAPEZOID TEAR	ASTM D–4533	120 LBS
UV RESISTANCE	ASTM D–4355	90 %
APPARENT OPENING SIZE	ASTM D–4751	40 US SIEVE
FLOW RATE	ASTM D–4491	150 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D–4491	0.55 SEC^{-1}

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D–4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D–4632	20 %
PUNCTURE	ASTM D–4833	135 LBS
MULLEN BURST	ASTM D–3533	300 LBS
TRAPEZOID TEAR	ASTM D–4533	40 LBS
UV RESISTANCE	ASTM D–4355	90 %
APPARENT OPENING SIZE	ASTM D–4751	20 US SIEVE
FLOW RATE	ASTM D–4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D–4491	1.5 SEC^{-1}

FILTER SACKS (GRATED INLETS)
DO NOT USE ON ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

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KHA PROJECT # 047916133

KEVIN L. ROBERSON LICENSE No. 52074 STATE OF FLORIDA PROFESSIONAL ENGINEER
7/29/2022

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LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
1 SITE PLAN COMMENTS	5/27/22
Restaurant #:	5662

LONGHORN STEAKHOUSE MOUNT DORA

PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING
EROSION CONTROL DETAILS

C2.2

Drawing name: K:\WRB_LDEV\047916 – Darden\133_LH Mt Dora\CADD\PlanSheets\105–C2.2 EROSION CONTROL DETAILS.dwg 105–C2.2 EROSION CONTROL DETAILS Jul 29, 2022 10:11am by: Liz.Meeks
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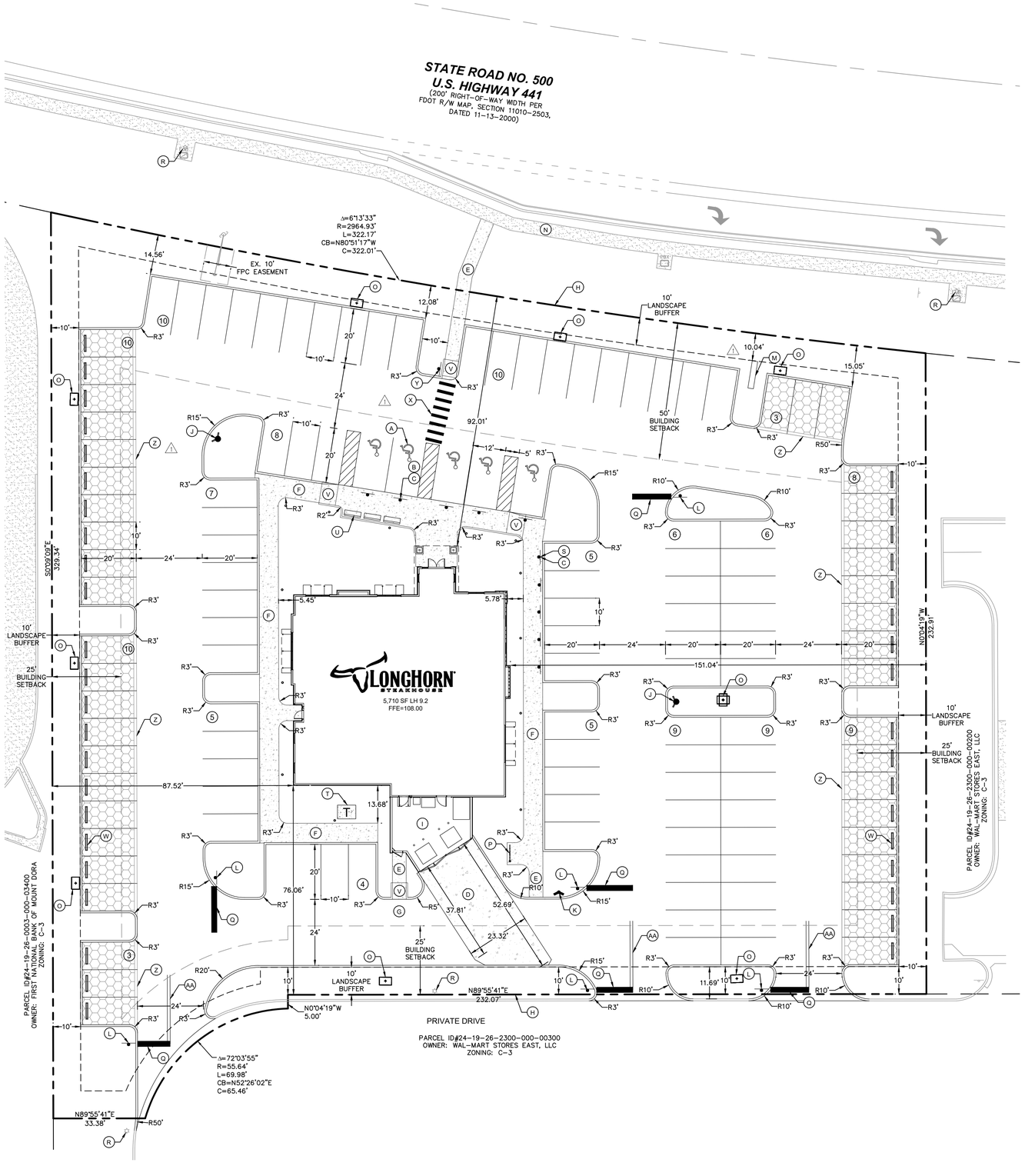

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LEGEND

- (A) ACCESSIBLE PARKING SPACE (TYP. OF 5)
- (B) ACCESSIBLE PARKING AND PENALTY SIGN (TYP. OF 5)(SEE DETAIL SHEET C7.1)
- (C) 6" CONCRETE BOLLARD SIGN BASE (TYP. OF 10) (SEE DETAIL SHEET C7.1)
- (D) THICKENED CONCRETE PAD (SEE DETAIL SHEET C7.1)
- (E) 5' WIDE CONCRETE SIDEWALK
- (F) 7' WIDE CONCRETE SIDEWALK
- (G) LOADING ZONE (DELIVERIES AND GARBAGE TRUCK PICKUPS WILL BE MADE WHEN RESTAURANT IS NOT OPEN FOR BUSINESS
- (H) PROPERTY/LEASE LINE
- (I) DUMPSTER AREA (REFER TO ARCHITECTURAL PLANS)
- (J) FIRE HYDRANT
- (K) FIRE DEPARTMENT CONNECTION
- (L) STOP SIGN (30" X 30")
- (M) MONUMENT SIGN (REFER TO SIGNAGE PLANS FOR DETAILS)
- (N) EXISTING SIDEWALK
- (O) PROPOSED LIGHT POLE (TYP.)
- (P) BIKE RACK (POWDER COATED LBR3PING 3 SPACES) (SUPPLIED BY GENERAL CONTRACTOR)
- (Q) 24" WIDE WHITE STOP BAR
- (R) EXISTING LIGHT POLE (TYP.)
- (S) TO-GO PARKING SIGN (TYP. OF 5) (REFER TO ARCH. PLANS FOR DETAIL)
- (T) TRANSFORMER
- (U) BENCH (TYP. OF 3) (SEE ARCHITECTURAL PLANS FOR DETAILS)
- (V) ACCESSIBLE RAMPS (SEE DETAIL SHEET C7.1)
- (W) WHEEL STOP (EAST AND WEST PERIMETER PARKING ONLY)
- (X) CROSSWALK PER FDOT INDEX 711-001
- (Y) YIELD TO PEDESTRIANS SIGN
- (Z) PERVIOUS PAVERS WITH HEADER CURB
- (AA) 25 LF 6" WIDE DOUBLE YELLOW STRIPES

SIGN LEGEND

- PARKING BY DISABLED PERMIT ONLY — FTP-21-06
- $ 250 FINE F.S. 316.16 — FTP-22-06
- STOP — R1-1 (30" X 30")
- HERE TO — R1-5L

SYMBOL LEGEND

- ACCESSIBLE PARKING SPACE
- (#) PARKING STALL COUNT
- CONCRETE SIDEWALK
- (D) THICKENED CONCRETE
- PROPERTY LINE
- T TRANSFORMER PAD

NOTE:

1. SEE SHEET C6.1 FOR CURBING AND PAVING INFORMATION.
2. SEE SHEET C7.1 FOR ACCESSIBILITY AND RAMP DETAILS.
3. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.

SITE DATA

PROJECT DESCRIPTION:	CONSTRUCTION OF LONGHORN STEAKHOUSE
PARCEL ID:	24-19-26-2300-000-00100
LOCATION:	SECTION 24, TOWNSHIP 19S, RANGE 26E
ADDRESS:	US HWY 441, MOUNT DORA, FL
ZONING DISTRICT:	C-3 HIGHWAY COMMERCIAL
LAND USE:	COMMERCIAL
FLOOD ZONE:	ZONE X, AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 12069C0358E, EFFECTIVE DATE DECEMBER 18,2012. NO BASE FLOOD ELEVATION

	REQUIRED	PROVIDED
⚠ MAX. BUILDING HEIGHT:	65'	27'
PROPERTY AREA:	83,551 S.F. (1.92 AC.)	
FLOOR AREA RATIO:	5,710 / 83,551 = 0.07	

SITE COVERAGE:	PROVIDED	
SITE AREA:	83,551 S.F. (1.92 AC)	100.00%
BUILDING AREA:	5,710 S.F. (0.13 AC)	6.77%
IMPERVIOUS AREA:	48,206 S.F. (1.11 AC)	57.81%
PERVIOUS AREA*:	29,635 S.F. (0.68 AC)	35.42%

* INCLUDES PERVIOUS PAVERS

BUILDING SETBACKS:	REQUIRED	PROVIDED
FRONT	50'	92.01'
REAR	25'	76.06'
SIDE	25'	87.52'

BUFFER	REQUIRED	PROVIDED
FRONT	10'	12.07'
REAR	10'	10'
SIDE	10'	10'

PARKING SUMMARY:	REQUIRED	PROVIDED
STANDARD	71	122
ACCESSIBLE	5*	5
TOTAL		127

* 5 SPACES REQUIRED BASED ON TOTAL PROVIDED PARKING PER ADA CODE

PARKING CALCULATION:
((1 SPACE/4 SEATS)X 184 SEATS) + 25 EMPLOYEE SPACES = 71 SPACES

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

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Drawing name: K:\VRB_LDEV\047916 - Darden\133_LH Mt Dora\CADD\PlanSheets\106-C3.1 SITE PLAN.dwg 106-C3.1 SITE PLAN Jul 29, 2022 10:11am by: LizMeeks

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KEVIN M. ROBERSON LICENSE No. 52074 STATE OF FLORIDA PROFESSIONAL ENGINEER
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LONGHORN STEAKHOUSE

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LONGHORN STEAKHOUSE MOUNT DORA

PROTOTYPE LH 9.2

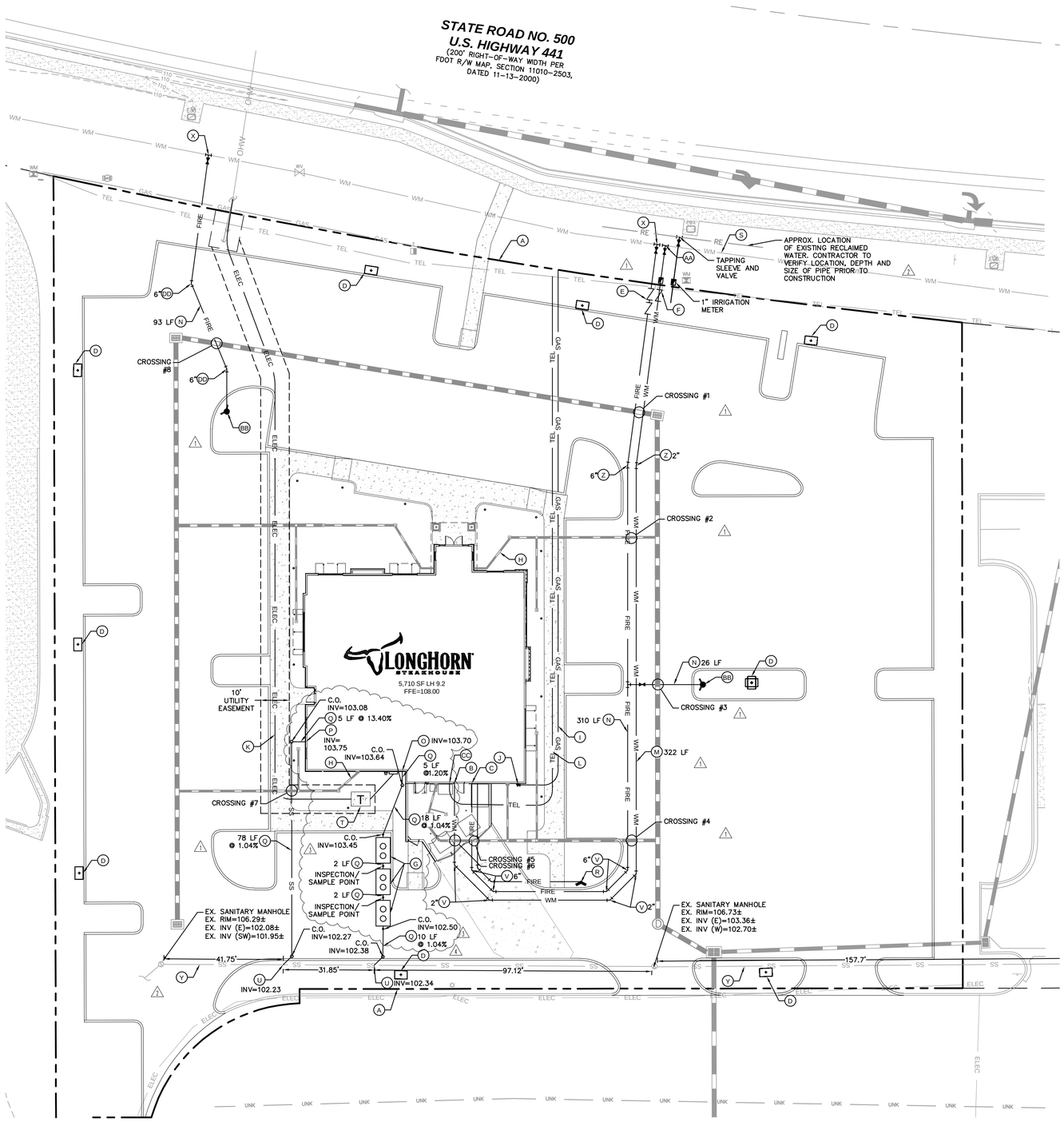
MOUNT DORA FLORIDA

DRAWING

SITE PLAN

C3.1

RECEIVED
By Vince Sandersfeld at 7:44 am, Aug 09, 2022



NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

GREASE INTERCEPTOR SCHEDULE			
GREASE INTERCEPTOR	RIM ELEV.	INVERT IN	INVERT OUT
1	107.17	103.45	103.20
2	107.05	103.10	102.85
3	106.85	102.75	102.50

NOTE:
PRIVATE FIRE SERVICE MAIN SHOWN FOR ALIGNMENT PURPOSES ONLY. FIRE SERVICE MAIN TO BE DESIGNED BY A LICENSED FIRE SERVICE DESIGNER. PRIVATE FIRE SYSTEM MAIN DESIGN INSTALLATION IS PER NFPA 24. PLUMBING CONTRACTOR MUST SECURE FIRE SERVICE PERMIT.

LEGEND

- (A) PROPERTY LINE
- (B) DOMESTIC WATER CONNECTION (REFER TO PLUMBING PLANS FOR CONTINUATION)
- (C) FIRELINE CONNECTION (REFER TO PLUMBING PLANS FOR CONTINUATION)
- (D) LIGHT POLE (TYP.)
- (E) 6" WILKINS DDCV CONNECTION ASSEMBLY
- (F) 2" WATER METER AND RPZ
- (G) GREASE INTERCEPTORS (SEE ALSO NOTE 7) (REFER TO PLUMBING PLANS FOR DETAIL AND SIZING)
- (H) ROOF DRAINAGE (SEE SHEET C6.1)
- (I) 3" GAS SERVICE (REFER TO PLUMBING PLANS - FINAL SIZE TO BE DETERMINED BY GAS COMPANY)
- (J) GAS METER (REFER TO PLUMBING PLANS FOR SIZE)
- (K) ELECTRIC SERVICE (REFER TO ELECTRICAL PLANS FOR CONTINUATION FROM TRANSFORMER TO BUILDING) (CONTRACTOR TO COORDINATE WITH PROVIDER FOR TIE-IN LOCATION)
- (L) 1 - 4" TELEPHONE SERVICE CONDUIT (CONTRACTOR TO COORDINATE WITH PROVIDER FOR TIE-IN LOCATION)
- (M) 2" I.D. DR21 PVC (200 PSI) DOMESTIC SERVICE
- (N) 6" I.D. DR14 PVC (305 PSI) FIRE SERVICE
- (O) 6" GREASE LINE CONNECTION (REFER TO PLUMBING PLANS FOR CONTINUATION)
- (P) 6" SANITARY LINE CONNECTION (REFER TO PLUMBING PLANS FOR CONTINUATION)
- (Q) 6" PVC SANITARY SERVICE @ 1.04% MIN. (TYP.)
- (R) 4" FIRE DEPARTMENT CONNECTION
- (S) EXISTING 16" PVC WATER MAIN
- (T) TRANSFORMER
- (U) SANITARY WYE CONNECTION TO EXISTING MAIN
- (V) 45° BEND (SIZE AS SHOWN)
- (W) 90° BEND (SIZE AS SHOWN)
- (X) 16"X6" TAPPING SLEEVE AND VALVE
- (Y) EX. 8" PVC SANITARY MAIN
- (Z) 11.25° BEND (SIZE AS SHOWN)
- (AA) 16"X2" TAPPING SLEEVE AND VALVE
- (BB) FIRE HYDRANT
- (CC) TELEPHONE CONNECTION (REFER TO MEP PLANS FOR CONTINUATION)
- (DD) 22.5° BEND (SIZE AS SHOWN)

FIRE DEPARTMENT NOTES:

1. FIRE HYDRANTS SHALL BE MARKED WITH AN APPROVED (BLUE) REFLECTOR AFFIXED TO THE ROADWAY SURFACE WHERE REQUIRED BY THE AHJ (18.5.10.1, NFPA 1 AS ADOPTED IN THE FLORIDA FIRE PREVENTION CODE).
2. WHERE REQUIRED BY THE AHJ, FIRE HYDRANTS SUBJECT TO VEHICULAR DAMAGE SHALL BE PROTECTED UNLESS LOCATED WITHIN A PUBLIC RIGHT OF WAY (18.5.8 PROTECTION, NFPA 1).
3. FIRE HYDRANTS SHALL BE INSTALLED SO THAT THE LARGE 4 ½ INCH (STEAMER) PORT IS FACING THE ROADWAY IT IS ACCESSED BY.
4. FIRE HYDRANTS SHALL SET BACK AT LEAST 5 FT FROM ANY ROAD OR CURB BUT NO MORE THAN 10 FT FROM ANY ROAD OR CURB.
5. FIRE HYDRANTS SHALL BE INSTALLED SO THAT THE OPERATING NUT OF THE LARGEST PORT IS NO LESS THAN 18 IN BUT NO MORE THAN 30 IN ABOVE FINAL GRADE.
6. THE NUMBER AND TYPE OF FIRE HYDRANTS AND CONNECTIONS TO OTHER APPROVED WATER SUPPLIES SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW AND SHALL BE PROVIDED AT APPROVED LOCATIONS.
7. WHERE UNDERGROUND WATER MAINS AND HYDRANTS ARE TO BE PROVIDED, THEY SHALL BE INSTALLED, COMPLETED, AND IN SERVICE PRIOR TO CONSTRUCTION WORK PER 8.7.2.3, NFPA 241, SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS AS ADOPTED IN THE FLORIDA FIRE PREVENTION CODE.
8. ALL FIRE DEPARTMENT CONNECTIONS SHALL HAVE A FIRE LANE ESTABLISHED. SAID FIRE LANE SHALL EXTEND FOR A DISTANCE OF NOT LESS THAN 15FT, CENTERLINE OF THE FDC IN BOTH DIRECTIONS. THE ROADWAY SHALL HAVE DIAGONAL STRIPING OF NOT LESS THAN 4FT IN WIDTH FOR THE ENTIRE LENGTH OF THE FIRE LANE. SAID STRIPING SHALL BE PAINTED YELLOW. FIRE LANES SHALL BE ESTABLISHED AND POSTED WITH THE RECOGNIZED INTERNATIONAL SIGNAGE.
9. FIRE DEPARTMENT CONNECTIONS AND FIRE HYDRANTS SHALL NOT BE OBSTRUCTED IN ANY MANNER. NO LESS THAN 7.5 FT OF CLEARANCE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE HYDRANT AND SAID CLEARANCE SHALL EXTEND OUT TO THE ROADWAY. NO LESS THAN 4.0 FT OF CLEARANCE SHALL BE MAINTAINED BEHIND THE CENTERLINE OF THE HYDRANT. VERTICAL CLEARANCE OF NOT LESS THAN 8 FT SHALL BE MAINTAINED IN THE REQUIRED CLEARANCE AREA.
10. ALL FIRE DEPARTMENT CONNECTIONS SHALL HAVE SIGNAGE POSTED "NO PARKING, FIRE DEPARTMENT CONNECTION". SAID SIGNAGE SHALL INDICATE THE PHYSICAL ADDRESS OF THE BUILDING SERVED BY THE FIRE DEPARTMENT CONNECTION.
11. ALL FIRE HYDRANTS SHALL HAVE FIRE LANES ESTABLISHED. SAID FIRE LANES SHALL EXTEND FOR A DISTANCE NOT LESS THAN 7.5 FT CENTERLINE OF THE HYDRANT IN BOTH DIRECTIONS. THE CURBING OR ROADWAY SHALL BE PAINTED YELLOW FOR THE ENTIRE WIDTH OF THE FIRE LANE.
12. NO PARKING FIRE LANE SIGNAGE SHALL BE POSTED AT EACH FIRE HYDRANT LOCATION. FIRE LANES SHALL BE ESTABLISHED AND POSTED WITH THE RECOGNIZED INTERNATIONAL SIGNAGE. THE FIRE INSPECTOR IN THE FIELD SHALL MANDATE WHERE FIRE LANES ARE REQUIRED.
13. CLEARANCES AROUND THE PROPOSED FIRE DEPARTMENT CONNECTION MUST BE AT LEAST 3 FEET IN FRONT OF AND TO EITHER SIDE OF THE APPLIANCE PER (18.3.4.2, NFPA 1 AS ADOPTED IN THE FFPC).
14. FLORIDA FIRE PREVENTION CODE 7TH ED. NFPA 1 SECTION 16.3.4.3 ACCESS BOX(ES). THE AHJ SHALL HAVE THE AUTHORITY TO REQUIRE AN ACCESS BOX(ES) TO BE INSTALLED IN AN ACCESSIBLE LOCATION WHERE ACCESS TO OR WITHIN A STRUCTURE IS DIFFICULT BECAUSE OF SECURITY.

CITY OF MOUNT DORA GREASE WASTE INTERCEPTOR CALCULATIONS

(D) x (MF) x (GL) x (RT) x (ST) = CAPACITY (US GALLONS)

D = NUMBER OF SEATS
MF = MEAL FACTOR; BASED ON ESTABLISHMENT TYPE AND TIME PER MEAL:

FAST FOOD / CAFETERIA	=	30M USE 2.00
RESTAURANT	=	60M USE 1.00
LEISURE DINING	=	90M USE 0.67
DINNER CLUB	=	120M USE 0.50

GL = GALLONS OF WASTE WATER PER MEAL:

WITH DISHWASHER	= 6 GALLONS
WITHOUT DISHWASHER	= 5 GALLONS
SINGLE SERVE KITCHEN	= 2 GALLONS
FOOD DISPENSER	= 1 GALLONS

RT = RETENTION TIME:

COMMERCIAL KITCHEN	= 2.5 HOURS
SINGLE SERVE KITCHEN	= 1.5 HOURS

ST = STORAGE FACTOR:

8 HOURS	= 1.0
12 HOURS	= 1.5 (ALSO SS KITCHENS)
16 HOURS	= 2.0
24 HOURS	= 3.0

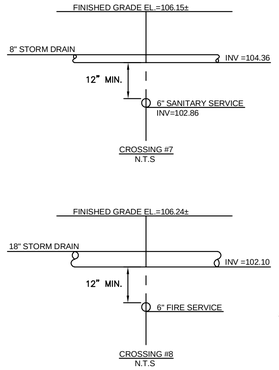
184 x 1.00 x 6 x 2.5 x 1.5 = 4140 US GALLONS REQUIRED

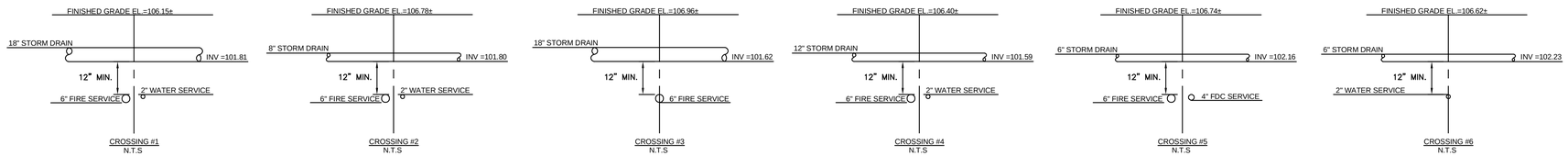
4,500 US GALLONS PROVIDED
(2) 2000 GALLON INTERCEPTORS (1) 500 GALLON POLISHING TANK

PROVIDE GREASE INTERCEPTOR(S) AS SCHEDULED.

SIZED PER CITY OF MOUNT DORA GREASE WASTE INTERCEPTOR CALCULATIONS ON DETAIL SS004-1.

1. THE CONTRACTOR SHALL PROTECT EXISTING UNDERGROUND UTILITIES AND APPURTENANCES FROM DAMAGE DURING CONSTRUCTION OPERATIONS.
2. THE LOCATION OF EXISTING UTILITIES, STORM DRAINAGE STRUCTURES AND OTHER ABOVE AND BELOW-GRADE IMPROVEMENTS ARE APPROXIMATE AS SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE AND INVERT ELEVATIONS OF SUCH PRIOR TO THE START OF CONSTRUCTION.
3. A MINIMUM OF 10' SEPARATION IS REQUIRED BETWEEN UTILITIES AND TREES UNLESS ROOT BARRIER IS INSTALLED. IF A TREE IS PLANTED WITHIN (5) FEET OF UTILITIES, IT SHALL BE MOVED AT THE OWNER/DEVELOPER EXPENSE.
4. GAS, PHONE AND ELECTRIC SERVICES SHOWN FOR INFORMATIONAL PURPOSES ONLY. DRY UTILITY COMPANIES MAY ALTER THE DESIGN LAYOUT DURING THEIR REVIEW.
5. FIRE SERVICES TO BE CONSTRUCTED USING DR14 PVC PIPE UNLESS OTHERWISE NOTED.
6. 6" SANITARY LATERALS MUST MAINTAIN A 1.04% MINIMUM SLOPE TO ENSURE PROPER FLOW.
7. GREASE INTERCEPTOR RIMS WITHIN TRAFFIC AREAS TO BE H-20 RATED OR BETTER. SEE PLUMBING PLANS FOR DETAIL.
8. FDC IS LOCATED 40.06 FEET FROM THE LONGHORN BUILDING AND 80.89 FEET FROM THE NEAREST HYDRANT.
9. THE CLOSEST BUILDING CORNER IS 71.01 FEET FROM THE NEAREST HYDRANT AND THE FURTHEST BUILDING CORNER IS 260.47 FEET FROM THE NEAREST HYDRANT.
10. CONTRACTOR SHALL ADJUST EXISTING VALVES AND OTHER APPURTENANCES TO FINAL GRADE. ALL SURFACE UTILITIES TO REMAIN SHALL HAVE TRAFFIC-RATED LIDS IN PAVEMENT AREAS.
11. CONTRACTOR TO PROVIDE AS-BUILTS AND ALL NECESSARY TESTS AND CERTIFICATION TO ENGINEER.
12. FIRE HYDRANTS SHALL BE INSTALLED AND IN SERVICE PRIOR TO COMBUSTIBLE MATERIALS BEING BROUGHT ON SITE.





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LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
1 SITE PLAN COMMENTS	5/27/22
2 SITE PLAN COMMENTS	6/17/22
3 SITE PLAN COMMENTS	7/29/22
4 ENGINEERING COMMENTS	8/9/22
Restaurant #:	5662

LONGHORN STEAKHOUSE MOUNT DORA

PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING
UTILITY PLAN

C4.1

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Drawing name: K:\RB_LDEV\047916 - Darden\133_LH Mt Dora\CADD\PlanSheets\107-C4.1 UTILITY PLAN.dwg 107-C4.1 UTILITY PLAN Aug 09, 2022 7:14am by: Liz.Meeks

Drawing name: K:\VRB_LDEV\047916 - Darden\133_LH Mt Dora\CADD\PlanSheets\108-C5.1 UTILITY DETAILS.dwg 108-C5.1 UTILITY DETAILS Jul 29, 2022 10:12am by: Liz.Meeks
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GENERAL UTILITIES CONSTRUCTION NOTES

1. THE PUBLIC SERVICES DEPARTMENT MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO ANY WORK ON EXISTING CITY OF PUBLIC SERVICES UTILITY. THE CONTRACTOR MUST CONTACT JOSH KRAMM, UTILITY LINE MANAGER AT HIS OFFICE (352) 735-7102 OR CELL PHONE (352) 516-3691, DISTRIBUTION SUPERVISOR - OFFICE (352) 735-7151 OR CELL PHONE (352) 483-7922, RUSSELL HOPPER, COLLECTION & LIFT STATION SUPERVISOR - OFFICE (352) 735-7151 OR CELL PHONE (352) 979-2032.
2. NO GRADING, CUTTING, OR FILLING SHALL COMMENCE UNTIL SUCH TIME AS APPROPRIATE EROSION AND SEDIMENTATION CONTROL DEVICES HAVE BEEN INSTALLED BETWEEN THE DISTURBED AREA AND WATER BODIES, WATERCOURSES OR WETLANDS.
3. CONSTRUCTION MUST BE PER THE DRC APPROVED SITE PLAN. DEVIATIONS IN ROADWAY, UTILITY OR DRAINAGE CONSTRUCTION WILL REQUIRE WRITTEN APPROVAL OF THE CITY ENGINEER OR THE DIRECTOR OF PUBLIC SERVICES. (NOTE: SIGNIFICANT CHANGES FROM THE DRC APPROVED PLAN MAY REQUIRE THE OWNER/DEVELOPER TO SUBMIT A REVISED SITE PLAN THROUGH THE DRC FOR REVIEW.)
4. CONTRACTOR SHALL PROVIDE AN EMERGENCY CONTACT NUMBER LIST FOR KEY SITE PERSONNEL.
5. ENGINEER OF RECORD REVIEWED SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ALL WATER/ SEWER/ RECLAIMED AND STORMWATER SYSTEMS TO BE DEDICATED TO THE CITY OF MOUNT DORA. TWO SETS ARE REQUIRED FOR REVIEW. ONE SET WILL BE RETURNED TO THE ENGINEER OF RECORD.
6. OFF SITE OR ROADWAY RIGHT OF WAY CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL CONDITIONS OF THE APPROVED R/W PERMIT(S). A COPY OF THE APPROVED PERMIT MUST BE KEPT ON-SITE AND READILY AVAILABLE DURING ALL CONSTRUCTION ACTIVITIES WITHIN THE R/W.
7. THE PUBLIC SERVICES DEPARTMENT MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO UTILITY TESTING. THE CONTRACTOR MUST CONTACT JOSH KRAMM, UTILITY LINE MANAGER, AT HIS OFFICE (352) 735-7151 OR CELL (352) 516-3691, DISTRIBUTION SUPERVISOR - OFFICE (352) 735-7151 OR CELL PHONE (352) 483-7922, RUSSELL HOPPER, COLLECTION & LIFT STATION SUPERVISOR - OFFICE (352) 735-7151 OR CELL PHONE (352) 979-2032. HYDROSTATIC TESTING SHALL BE PER THE APPLICABLE PROVISIONS AS SET FORTH IN AWWA STANDARDS. (MINIMUM 150 PSI @ 2 HOURS - POTABLE/RECLAIMED AND MINIMUM 100 PSI @ 2 HOURS - FORCE MAINS).
8. GRAVITY SEWER PIPING TESTS SHALL BE IN ACCORDANCE WITH UNI-BELL PVC PIPE ASSOCIATION; "RECOMMENDED PRACTICES FOR LOW-PRESSURE AIR TESTING OF INSTALLED SEWER PIPE". THE CONTRACTOR WILL BE REQUIRED TO PROVIDE VIDEO INSPECTION OF THE ENTIRE LINE DEMONSTRATING SATISFACTORY WORKMANSHIP AND SHOWING ACCEPTABLE RESULTS OF THE TESTING. ANY DEFECTS IN WORKMANSHIP, AREAS OF STANDING WATER OR "BELLIED" SHALL BE CAUSE FOR REJECTION. ONE DVD FORMAT COPY OF THE VIDEO INSPECTION MUST BE PROVIDED TO THE PUBLIC SERVICES DEPARTMENT.
9. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE INSPECTION OF ALL STORM SYSTEM PIPES DEMONSTRATING SATISFACTORY WORKMANSHIP AND SHOWING ACCEPTABLE RESULTS OF THE TESTING OF THE STORM SYSTEM. ANY DEFECTS IN WORKMANSHIP, AREAS OF STANDING WATER OR "BELLIED" SHALL BE CAUSE FOR REJECTION. ONE DVD FORMAT COPY OF THE VIDEO INSPECTION MUST BE PROVIDED TO THE PUBLIC SERVICES DEPARTMENT.
10. AFTER JUMPER CONNECTION IS REMOVED, WATER & RECLAIMED WATER SERVICES MUST BE LOCKED OUT AND KEY SUPPLIED TO CITY.
11. FOLLOWING SATISFACTORY PRESSURE TESTING, THE CONTRACTOR SHALL DISINFECT ALL SECTIONS OF THE WATER DISTRIBUTION SYSTEM, AND RECEIVE APPROVAL THEREOF FROM THE APPROPRIATE AGENCIES, PRIOR TO PLACING IN SERVICE. ADVANCE NOTICE SHALL BE PROVIDED TO THE CITY BEFORE DISINFECTING PROCEDURE START. THE DISINFECTION SHALL BE ACCOMPLISHED WITH THE APPLICABLE PROVISIONS OF AWWA STANDARD, "DISINFECTING WATER MAINS" AND ALL APPROPRIATE AGENCY APPROVALS.

STANDARD CONSTRUCTION DETAIL
GENERAL NOTES
GU001-1A
ISSUED: 2017
REVISED: –

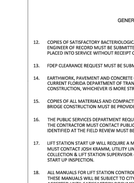
GENERAL UTILITIES CONSTRUCTION NOTES

12. COPIES OF SATISFACTORY BACTERIOLOGICAL TESTING AND THE FDEP "LETTER OF RELEASE REQUEST" SIGNED BY THE ENGINEER OF RECORD MUST BE SUBMITTED TO THE CITY ENGINEER FOR PROCESSING. NO POTABLE WATER LINE SHALL BE PLACED INTO SERVICE WITHOUT RECEIPT OF FDEP AUTHORIZATION.
13. FDEP CLEARANCE REQUEST MUST BE SUBMITTED THROUGH THE PUBLIC WORKS AND UTILITY DEPARTMENT.
14. EARTHWORK, PAVEMENT AND CONCRETE CONSTRUCTION NOT SPECIFICALLY ADDRESSED BY THE CITY LDC, SHALL BE THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT
15. COPIES OF ALL MATERIALS AND COMPACTION TESTING PER THE CURRENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION MUST BE PROVIDED PRIOR TO CLOSEOUT.
16. THE PUBLIC SERVICES DEPARTMENT REQUIRES A PRE-CLOSEOUT FIELD REVIEW WITH THE CONTRACTOR /SITE DEVELOPER. THE CONTRACTOR MUST CONTACT PUBLIC SERVICES - ENGINEERING AT (352) 735-7151, TO COORDINATE. ALL ISSUES IDENTIFIED AT THE FIELD REVIEW MUST BE ADDRESSED PRIOR TO PUBLIC SERVICES FINAL CLOSE OUT APPROVAL.
17. LIFT STATION START UP WILL REQUIRE A MINIMUM OF 48 HOURS PRIOR NOTIFICATION TO THE CITY. THE CONTRACTOR MUST CONTACT JOSH KRAMM, UTILITY LINE MANAGER, AT (352) 735-7151 OR (352) 516-3691 OR RUSSELL HOPPER, COLLECTION & LIFT STATION SUPERVISOR - OFFICE (352) 735-7151 OR CELL PHONE (352) 979-2032 TO COORDINATE THE START-UP INSPECTION.
18. ALL MANUALS FOR LIFT STATION CONTROL PANELS, GENERATORS, AND PUMPS WILL BE REQUIRED PRIOR TO START UP. THESE MANUALS WILL BE SUBJECT TO CITY REVIEW / APPROVAL TO INCLUDE O&M MANUALS. NO LIFT STATION WILL BE ACCEPTED UNTIL SATISFACTORY DOCUMENTATION HAS BEEN PROVIDED. ANY LIFT STATION PUMP, SIZED LARGER THAN 20 HP, SHALL BE PROVIDED WITH A REBUILD KIT CONSISTING OF BEARINGS SEALS, O-RINGS AND WEAR RINGS. ALSO, A TOOL KIT WITH BOX IS REQUIRED.
19. DEDICATION OF IMPROVEMENTS TO THE PUBLIC SHALL BE IN ACCORDANCE WITH THE CITY OF MOUNT DORA LDC 4.3.4(A)(A) - BONDS, 5.3.5(1) - BONDS, AND 7.2.4 - BONDS AND WARRANTIES. THE CITY'S LAND DEVELOPMENT CODE IS AVAILABLE ONLINE AT WWW.MUNICODE.COM FOR YOUR REFERENCE.
20. AS-BUILT DRAWINGS - PER LDC 7.13.6: OWNER / DEVELOPER SHALL PROVIDE FOUR HARD COPIES AND ONE ELECTRONIC OF THE APPROVED FINAL ENGINEERING PLANS CONFORMED TO SHOW ALL AS-BUILT CONDITIONS. AS-BUILTS MUST SHOW ACCURATE MEASUREMENTS OF WATER AND SEWER LINES AND STRUCTURES FROM FIXED KNOWN LOCATIONS WITHIN THE DEVELOPMENT. CERTIFICATION OF FINAL PROJECT ENGINEER ATTESTING TO THE ACCURACY OF THE DRAWINGS IF REQUIRED, CITY ACCEPTANCE OF IMPROVEMENTS AND / OR ISSUANCE OF OCCUPANCY WILL BE WITHHELD UNTIL SATISFACTORY AS-BUILTS ARE PROVIDED.

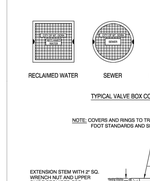
STANDARD CONSTRUCTION DETAIL
GENERAL NOTES
GU001-1B
ISSUED: 2017
REVISED: –

NOTES:

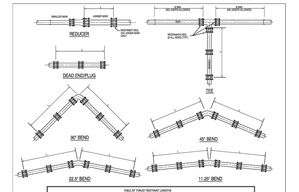
1. ARTERIAL ROADWAYS: USF RING AND COVER SERIES 170-BJ. HEAVY DUTY LOAD RATING. COVER WEIGHT 211#, TOTAL WEIGHT 372#.
2. ALL OTHER APPLICATIONS: USF RING AND COVER SERIES 170-J. HEAVY DUTY LOAD RATING. COVER WEIGHT 150#, TOTAL WEIGHT 305#.
3. CITY IDENTIFIER SHALL BE USED FOR CITY OWNED STRUCTURES ONLY. PRIVATE FACILITIES SHALL ONLY BE IDENTIFIED AS TO USE.



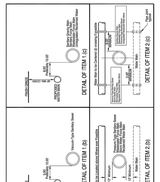
MANHOLE FRAME & COVER
GU002-1
ISSUED: 2017
REVISED: –



VALVE, VALVE BOX, AND COVER
GU005-1
ISSUED: 2017
REVISED: –



THRUST RESTRAINT DETAIL
GU0014-1
ISSUED: 2017
REVISED: –



PIPE CLEARANCE
GU0016-1
ISSUED: 2017
REVISED: –

General Water Notes

1. Water system components shall be installed in strict accordance with all local codes and regulations, cleaned, disinfected and tested to the satisfaction of the owner/engineer in accordance with the latest AWWA standards and CHAPTER 62-555 Florida Administrative code.
2. All piping shall bear the "NSF" seal for potable water.
3. Water mains shall be per conforming to AWWA C-900, DR 18 for pipe sizes 4"-12". Pipes 14" or longer shall be AWWA C-905, DR 18. All couplings, clearing compounds, solvents, lubricants, and pipe preparation for laying, shall be in accordance with the pipe manufacturers latest recommendations.
4. Depth of water lines to be 36" minimum cover from finish grade.
5. Water mains to be located 6.00' from back of curb or edge of pavement unless otherwise noted.
6. All sleeves under pavement shall extend 5' beyond the back of curb.
7. Disinfecting: following the pressure testing, the contractor shall disinfect all sections of the water distribution system. Disinfection shall be in accordance with the applicable provisions of AWWA standard D31 "Disinfecting water mains", and all appropriate agency approval.
8. All hydrostatic test shall be in accordance with AWWA C600 for ductile iron pipe and C605/NO3 for pvc pipe.
9. All water mains shall be installed, pressure and leak tested in accordance with AWWA C600, 02-555.320(2)(b)1-3 and 62-555.330, F.A.C. All installation, testing and field procedures must be provided and must conform to the applicable AWWA standards.
10. All piping materials and products including pipes, joints and packing materials, internal coatings and fittings, specials and appurtenances shall be in accordance with the corresponding AWWA standards and be conforming to NSF requirements, no max be applicable, with exceptions allowed only if documentation and assurances are provided in compliance with paragraphs 62-555.320(3) 62-555.320 (3) (b), and 62-555.320 (21) (c), F.A.C. The lead use prohibition in rule 62-555.322, F.A.C. shall also apply. Polyethylene tubing shall be per AWWA C901. Underground service lines, and valves shall be per AWWA C800.

COLOR Coding

All water main pipe, including fittings shall be color coded or marked blue as a predominate color to differentiate drinking water from reclaimed water or other water. Underground plastic pipe shall be solid wall blue pipe, shall have a co-extruded blue exterior layer, or shall have a blue stripe co-extruded on the exterior surface of the pipe. Underground ductile iron, galvanized metal or concrete pipe shall have the exterior coated blue. Pipe stripped during manufacturing of the pipe shall have continuous stripes that run parallel to the axis of the pipe, that are located at no greater than 90°intervals around the pipe, and will remain intact during and after installation of the pipe. If tape or paint is used to stripe during installation of the pipe, the tape or paint shall be applied in a continuous fix that runs parallel to the axis of the pipe and that is located along the top of the pipe. If tape is used to stripe the pipe, the tape shall be at least 3 inches wide for pipe sizes 4 inches or greater, tape or paint shall be applied in a continuous from along each side of the pipe as well as along the top of the pipe. Aboveground pipe as drinking water treatment plants shall be color coded and labeled in accordance with subsection 62-555.320(23), F.A.C., and all other aboveground pipe shall be painted blue or shall be color coated or marked like underground pipe.

Utility Construction Notes

62-555.314 Location of Public Water System Mains:

For the purpose of this section, the phrase "Water Mains" shall mean Mains, including treatment Plant process piping, conveying either raw, partially treated, or finished drinking water; Fire Hydrant leads; and service lines that are under the control of a public Water System and that have an inside diameter of three (3") inches or greater.

(1) Horizontal Separation Between Underground Water Mains and Sanitary or Storm Sewers, Wastewater or Storm water Force Mains, Reclaimed Water Pipelines, and On-site Sewage Treatment and Disposal Systems:

(a) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (3) Three Feet between the outside of the WATER MAIN and the outside of any existing or proposed storm sewer.

PIPE CLEARANCE
GU0016-2
ISSUED: 2017
REVISED: –

Utility Construction Notes (DEP) (CONTINUED)

(b) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (3) three feet, and preferably (10) Ten Feet, between the outside of the WATER Main and the outside of any existing or proposed vacuum-type sanitary sewer.

(c) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (6) Six Feet and preferably (10) Ten Feet, between the outside of the WATER Main and the outside of any existing or proposed Gravity- or Pressure-type Sanitary Sewer Wastewater Force Mains, or pipeline conveying reclaimed water not regulated under Part III of Chapter62-610 F.A.C. The minimum Horizontal Separation distance between WATER MAINS and Gravity-type Sanitary Sewers shall be reduced to (3) Three Feet where the BOTTOM of the WATER MAIN is laid at least (6) Six Inches above the Top of the Sewer.

(d) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (10) Ten Feet between the outside of the WATER MAIN and all parts of any existing or proposed "On-site Sewage Treatment and Disposal System" as defined in Section 381.0065(2), F.S. and Rule 64E-6.002, F.A.C.

(2) Vertical Separation Between Underground WATER MAINS and Sanitary or Storm Sewers, Wastewater or Storm water Force Mains, and Reclaimed Water Pipelines:

(a)New or relocated underground WATER MAINS crossing any existing or proposed gravity- or vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the WATER MAIN is at least (6) Six Inches, and preferably 12 Inches above, or at least 12 Inches below the outside of the other pipeline. However, it is preferable to lay the WATER MAIN "ABOVE" the other pipeline.

(b) New or relocated, underground WATER MAINS crossing any existing or proposed pressure-type sanitary sewer, wastewater or stormwater Force Main, or Pipeline conveying reclaimed water shall be laid so the outside of the WATER MAIN is at least (6) Six Inches ABOVE or BELOW the Outside of the other pipeline. However, it is preferable to lay the WATER MAIN above the other pipeline.

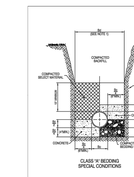
(c) At the Utility crossings described in paragraphs (a) & (b) Above, one full length of Water Main Pipe shall be centered above or below the other pipeline so the WATER MAIN joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all WATER MAIN Joints are at least (3) Three feet from all joints in Vacuum-type Sanitary Sewers, Reclaimed Water Pipelines, and On-site Sewage Treatment and Disposal Systems not regulated under Part III of Chapter62-610, F.A.C., and at least (6) Six Feet from all joints in Gravity- or Pressure- type Sanitary Sewers, Wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

(3) Separation Between WATER MAINS and Sanitary or Storm Sewer Manholes:

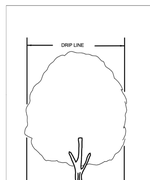
(a)No WATER Main shall pass thru, or come into contact with any part of a Sanitary Manhole.

(4) Separation Between Fire Hydrant Drains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, reclaimed Water Pipelines, and On-Site Sewage Treatment and Disposal Systems. New or relocated Fire Hydrants with underground drains shall be located so that the drains are at least (3) Three Feet from any existing or proposed storm sewer, Stormwater force main, or pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C.; at least (3) Three Feet, and preferably (10) Ten Feet, from any existing or proposed gravity- or Pressure-type Sanitary Sewer,Wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.; and at least (10) Ten Feet from any existing or proposed "on-site sewage treatment and disposal system" as defined in Section 381.0065(2), F.S. and Rule 64E-6.002, F.A.C.

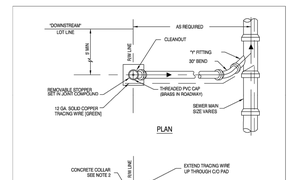
(5) Exceptions/Mitigation:
Adhere to the above Constraints and Separations in Items 1 through 4 shall be Complied to, "WITHOUT EXCEPTION". If for some reason where it is not technically feasible or Economically Sensible that Items 1 through 4 cannot be complied with, Contractor will Stop Work and Notify the Engineer of record for the appropriate solution which will be submitted to "The Department of Environmental Protection" for APPROVAL, prior to work commencement.



BEDDING DETAILS
GU0017-1
ISSUED: 2017
REVISED: –

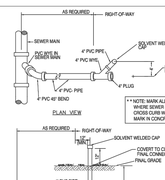


VALVE COLLAR
GU005-2
ISSUED: 2017
REVISED: –

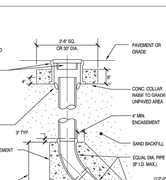


TREE PROTECTION MEASURES
GU0023-1
ISSUED: 2017
REVISED: – 2019

TYPICAL SEWER CONNECTION
SS001-1
ISSUED: 2017
REVISED: –



SINGLE SANITARY SEWER SERVICE
SS012-1
ISSUED: 2017
REVISED: –



GRAVITY CLEANOUT
SS014-1
ISSUED: 2017
REVISED: –

WATER SYSTEM CONSTRUCTION GENERAL NOTES

1. THE CITY'S PUBLIC WORKS DEPARTMENT SHALL BE NOTIFIED PRIOR TO BEGINNING ANY WATER SYSTEM CONSTRUCTION.
2. DE-WATERING SHALL BE PROVIDED TO KEEP GROUND WATER ELEVATION A MINIMUM OF 6 INCHES BELOW PROPOSED WATER MAIN.
3. ALL WATER MAINS SHALL BE INSTALLED ON A FIRM FOUNDATION FREE OF ROCK, MUCK, OR OTHER UNSUITABLE MATERIAL WHICH SHALL BE REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
4. TRENCHES SHALL BE BACK FILLED WITH MATERIAL ACCEPTABLE TO THE CITY, WITH A MINIMUM COMPACTION OF 98% (AASHTO T-180) IN PAVED AREAS AND 95% (AASHTO T-180) IN UNPAVED AREAS.
5. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 2 FEET VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET.
6. PIPE WARNING TAPE SHALL BE LOCATED 18 INCHES BELOW FINISH GRADE FOR ALL PIPE SIZE CONFIGURATIONS TAPE SHALL BE PROVIDED ON ALL PIPES.
7. ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE MINIMUM 1" AND DOUBLE RESIDENTIAL SERVICES SHALL BE MINIMUM 1-1/2". BACK FLOW PREVENTERS SHALL BE INSTALLED ON ALL SERVICES. TAPS SHALL NOT BE USED.
8. ALL WATER FENCE ENDINGS SHALL BE MARKED BY 2"x4" LUMBER (PRESSURE TREATED). ALL SERVICE SHALL EXTEND 6 INCHES BEYOND THE END OF THE 2"x4". ALL SERVICES SHALL HAVE A SERVICES MUST BE ADJUSTED TO FINAL METER BOX LOCATION BY OWNER PRIOR TO INITIAL METER INSTALLATION.
9. WATER VALVES SHALL BE PLACED AT ALL STREET INTERSECTIONS SO AS NOT TO EXCEED 800 FEET BETWEEN VALVES. ALL VALVES SHALL BE OPERATED AND PRESSURE TESTED IN THE PRESENCE OF THE CITY STAFF. AT ALL WATER TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL BRANCHES.
10. APPROVED WATER VALVE TYPES ARE THE FOLLOWING:
   A. BRASS BALL-TYPE VALVE FOR VALVES LESS THAN 2" DIAMETER.
   B. STANDARD GATE VALVES 3" AND LARGER DIAMETER, RESILIENT WEDGE GATE VALVES AWWA C-509.
   C. TAPPING VALVES WITH MECHANICAL TAPPING SLEEVE FOR SIZE ON SIZE STAINLESS STEEL.

POTABLE WATER
GENERAL NOTES
PW001-1A
ISSUED: 2017
REVISED: –

WATER SYSTEM CONSTRUCTION GENERAL NOTES

11. ALL POTABLE WATER VALVE BOXES SHALL BE ADJUSTED TO FINISH GRADE AND THE CAPS SHALL BE PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE.
12. AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF THE CURB ON THE OPPOSITE SIDE OF THE RECLAIMED WATER LINES OR AS APPROVED BY THE CITY.
13. ALL WATER MAINS SHALL BE NSF APPROVED FOR POTABLE WATER USE, AND HAVE A MINIMUM COVER OF 36 INCHES. IN SPECIAL CASES WHERE IT IS IMPOSSIBLE OR INAPPROPRIATE TO PROVIDE ADEQUATE COVER, DUCTILE IRON PIPE OR ENCASEMENT MAY BE USED AS APPROVED BY THE CITY AND FDEP.
14. ALL WATER MAINS TO BE CLEARED FOR SERVICE SHALL BE FLUSHED, DISINFECTED, PRESSURE TESTED, AND BACTERIOLOGICALLY CLEARED FOR SERVICE, IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS.
15. WATER MAINS SHALL BE PVC AWWA CLASS C-900, MINIMUM CL-150 (DR-18) PRESSURE RATED PIPE, MEETING ALL STANDARD CURRENT LINES UNLESS OTHERWISE APPROVED.
16. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEERS RESPONSIBILITY TO CERTIFY THAT THE SYSTEM HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT OF ENVIRONMENTAL PROTECTION OR THE CITY PUBLIC WORKS AND "AS-BUILTS" ARE PROVIDED TO THE CITY, PRIOR TO ANY USE OF THIS SYSTEM.
17. WATER DISTRIBUTION SYSTEM SHALL BE DESIGNED TO COMPLY WITH THE CITYS FIRE (WATER) FLOW CODE AND NFPA 291.
18. ALL WATER SERVICES SHALL BE MARKED AT THE CURB STOP END OF CURB WITH A 2"x4" PAINTED BLUE AND EXTENDING 6" ABOVE THE PAVEMENT. VALVES FOR WATER SERVICES SHALL BE MARKED WITH A "V" ON METAL TEST POST. BLOW-OFFS SHALL BE MARKED WITH A "B".
19. BLUE REFLECTORS SHALL BE PROVIDED TO ROADWAY (CENTER LINE OF ROAD) ADJACENT TO HYDRANT LOCATION.
20. WATER SERVICES SHOULD BE DOUBLE 1-1/2" SERVICES LOCATED AT SIDE LOT LINES OF EACH LOT. SINGLE 1" SERVICES MAY BE PROVIDED IN SOME INSTANCES WHERE WATER DEMAND NEED TO BE OFFSET. 1" SERVICES SHALL BE SPECIFIED. THESE SERVICES MAY BE OFFSET FROM THE LOT LINE A MAXIMUM DISTANCE OF 5.0 FEET.
21. OUT-OF-SERVICE FIRE HYDRANTS MUST BE CLEARLY MARKED (RED RING ON NOZZLE, LABELED DISK ON BONNET) AS BEING NONPOTABLE. ALL LABELS AND DISK PROVIDED BY THE CITY OR BLACK BAGGED - NOTIFY THE FIRE DEPT. THAT THE HYDRANT IS OUT OF SERVICE.
22. PRIOR TO TAKING ANY WATER LINES OUT OF SERVICE, THE CONTRACTOR SHALL NOTIFY THE CITY AND AFFECTED CUSTOMERS, IN WRITING, 48 HOURS PRIOR TO SHUTDOWN WITH CITY APPROVAL.
23. WATER SYSTEMS WILL BE PRESSURE TESTED AT 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA STANDARDS. PRIVATE WATER SYSTEMS (INCLUDING FIRE LINES) S

Drawing name: K:\VRB_LDEV\047916 - Darden\133_LH Mt Dora\CADD\PlanSheets\108-C5.1 UTILITY DETAILS.dwg 108A-C5.2 UTILITY DETAILS Jul 29, 2022 10:12am by: LizMeeks
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CITY OF MOUNT DORA, GREASE TRAP SIZING METHOD

(D) x (MF) x (GL) x (RT) x (ST) = CAPACITY IN GALLONS

D = NUMBER OF SEATS:

MF = MEAL FACTOR: BASED ON ESTABLISHMENT TYPE AND TIME PER MEAL:

FAST FOOD / CAFETERIA	= 30M	use	2.00
RESTAURANT	= 60M	use	1.00
LEISURE DINING	= 90M	use	0.67
DINNER CLUB	= 120M	use	0.50

GL = GALLONS OF WASTEWATER PER MEAL:

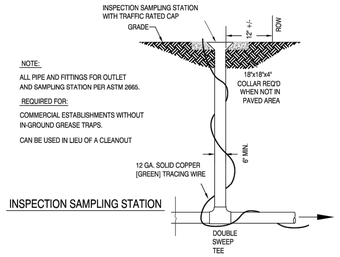
WITH DISHWASHER	=	6 GALLONS
WITHOUT DISHWASHER	=	5 GALLONS
SINGLE SERVICE KITCHEN	=	2 GALLONS
FOOD DISPENSER	=	1 GALLON

RT = RETENTION TIME:

COMMERCIAL KITCHEN	=	2.5 HOURS
SINGLE SERVICE KITCHEN	=	1.5 HOURS

ST = STORAGE FACTOR:

8 HOURS	=	1.0
12 HOURS	=	1.5 (ALSO S.S. KITCHENS)
16 HOURS	=	2.0
24 HOURS	=	3.0



NOTE:

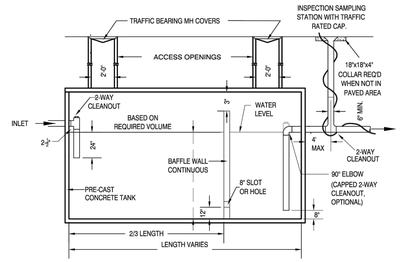
ALL PIPE AND FITTINGS FOR OUTLET AND SAMPLING STATION PER ASTM 2665.

REQUIRED FOR:

COMMERCIAL ESTABLISHMENTS WITHOUT IN-GROUND GREASE TRAPS.

CAN BE USED IN LIEU OF A CLEANOUT

INSPECTION SAMPLING STATION



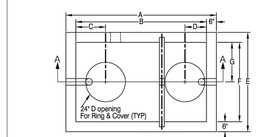
GREASE TRAP DOUBLE COMPARTMENT

(NOT TO SCALE)

NOTE: WIDTH VARIES

1. VOLUME TO BE DETERMINED BY CITY OF MT. DORA CITY ENGINEER OR DESIGNEE UPON APPLICATION BY OWNER.
2. STRUCTURAL DESIGN SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER.
3. ONLY KITCHEN WASTE SHALL BE DISCHARGED INTO THE GREASE TRAP. ALL DOMESTIC WASTE (I.E., REST-ROOMS) SHALL BE CONNECTED DOWNSTREAM OF THE GREASE TRAP.
4. ALL PIPE AND FITTINGS FOR OUTLET AND SAMPLING STATION PER ASTM 2665.
5. BUILDING FLOOR ELEVATION SHALL BE 6" HIGHER THAN MANHOLE COVERS.

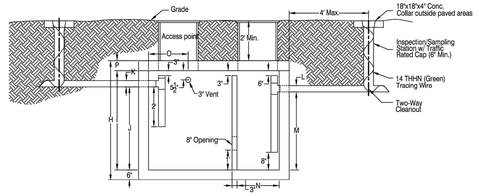
DOUBLE COMPARTMENT GREASE TRAP AND INSPECTION SAMPLING STATION	SS004-1
	ISSUED: 2017
	REVISED: –



Top View

NOTES:

1. Volume to be approved by City Engineer or designee.
2. Structural design must be performed by the manufacturer with shop drawings provided to City Engineer for approval and must provide H-20 loading per AASHTO.
3. Top of manhole must be minimum of six inches below the lowest finished floor with positive drainage away from the building.
4. The three inch vent must tie back to the building vent and must be installed per the Florida Building Code, latest edition.
5. The slope of the influent and effluent laterals must comply with the Florida Building Code, Latest Edition.
6. Only kitchen waste shall be discharged to the grease interceptor. All domestic waste shall be connected downstream of the grease interceptor.
7. All tank volumes in excess of 1600 gallons shall include a 500 gallon grease polishing tank installed between the grease interceptor and the downstream inspection sampling station. The volume of the polishing tank shall be included in the overall required volume.
8. All pipes and fittings shall comply with ASTM 2665.
9. Inspection/Sampling Station required for all grease traps (indoor) and grease interceptors (outdoor).
10. Inspection/Sampling Station can be used in lieu of a sanitary clean out if located within five feet of the building when grease traps are utilized.
11. All concrete shall be minimum fc=4500 psi and all steel shall be minimum fy=60 ksi.
12. Alternative designs must be approved by the City Engineer.



Section View A-A

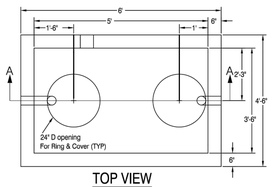
Grease Interceptor Dimensions 750 To 3,500 Gallons

Tank Size(Gal.)	A	B	C	D	E	F	G	H
750	7'-6"	6'-6"	1'-6"	1'-0"	5'-0"	4'-0"	2'-0"	6'-0"
1000	9'-0"	8'-0"	1'-6"	1'-6"	5'-0"	4'-0"	2'-0"	7'-4"
1250	9'-0"	8'-0"	1'-6"	1'-6"	5'-0"	4'-0"	2'-0"	7'-4"
1600	11'-6"	10'-6"	1'-6"	1'-6"	5'-0"	4'-0"	2'-0"	7'-4"
2000	11'-6"	10'-6"	1'-6"	1'-6"	6'-0"	5'-0"	2'-6"	7'-0"
2500	11'-6"	10'-6"	1'-6"	1'-6"	6'-0"	5'-0"	2'-6"	8'-4"
3000	13'-0"	12'-0"	1'-6"	1'-6"	7'-0"	6'-0"	3'-0"	9'-1"
3500	13'-0"	12'-0"	1'-6"	1'-6"	7'-0"	6'-0"	3'-0"	9'-1"

Grease Interceptor Dimensions 750 To 3,500 Gallons

Tank Size(Gal.)	I	J	K	L	M	N	O	P
750	5'-0"	4'-2"	0'-4"	0'-4"	3'-11"	2'-0 1/2"	2'-0"	0'-6"
1000	6'-4"	4'-5"	0'-4"	0'-4"	4'-2"	2'-10 1/2"	3'-6"	0'-6"
1250	6'-4"	5'-6"	0'-4"	0'-4"	5'-3"	2'-10 1/2"	3'-6"	0'-6"
1600	6'-0"	4'-4"	0'-4"	0'-4"	4'-1"	3'-4 1/2"	3'-6"	0'-6"
2000	6'-0"	5'-4"	0'-4"	0'-4"	5'-1"	3'-4 1/2"	3'-6"	0'-6"
2500	7'-4"	6'-7"	0'-4"	0'-4"	6'-4"	3'-4 1/2"	3'-6"	0'-6"
3000	8'-0"	5'-6 1/2"	0'-4"	0'-4"	5'-3 1/2"	3'-10 1/2"	3'-6"	0'-7"
3500	8'-0"	6'-9"	0'-4"	0'-4"	6'-6"	3'-10 1/2"	3'-6"	0'-7"

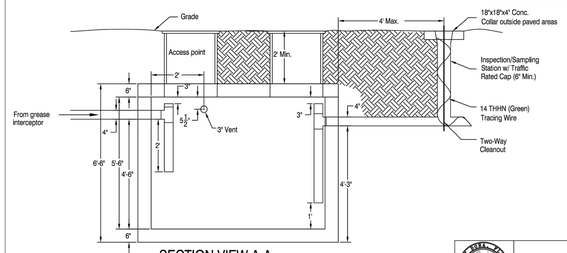
GREASE INTERCEPTOR- 750 TO 3,500 GALLONS	SS004-2A
	ISSUED: 2017
	REVISED: –



TOP VIEW

APPROVED GREASE INTERCEPTORS CONFIGURATIONS

Required Volume	Primary Interceptor	Secondary Interceptor	Third Interceptor	Polishing Tank
750	750			
1000	100			
1250	1250			
1600	1600			
1750	1250			500
2100	1600			500
2500	2000			500
3000	2500			500
3500	3000			500
4000	3500			500
4500	2000	2000		500
5500	2500	2500		500
6500	3000	3000		500
7500	3500	3500		500
8000	2500	2500	2500	500
9500	3000	3000	3000	500
11000	3500	3500	3500	500



SECTION VIEW A-A

GREASE POLISHING TANK	SS004-3
	ISSUED: 2017
	REVISED: –

ACS ARCHITECTURAL CONSTRUCTION SERVICES, INC.
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www.acs-architects.com
ARCHITECTS PROJECT #: LH2A0030

Kimley»Horn
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VERO BEACH, FL 32960
PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916133

LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
2 SITE PLAN COMMENTS	6/17/22
3 SITE PLAN COMMENTS	7/29/22
Restaurant #:	5662

LONGHORN STEAKHOUSE MOUNT DORA

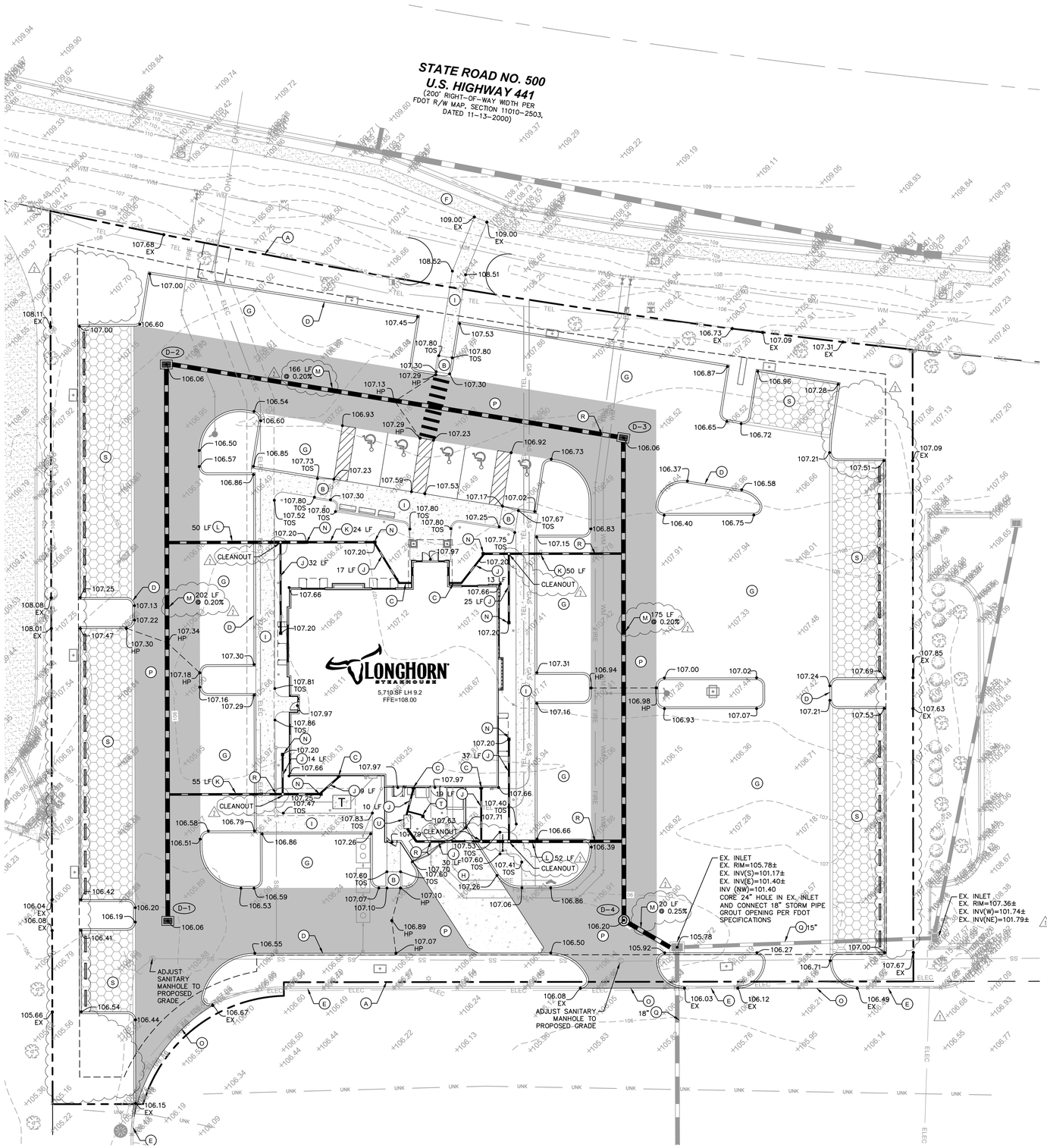
PROTOTYPE LH 9.2

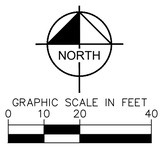
MOUNT DORA FLORIDA

DRAWING

UTILITY DETAILS

C5.2





LEGEND

- (A) PROPERTY LINE
- (B) ACCESSIBLE RAMP (SEE DETAIL SHEET C7.1)
- (C) DOWNSPOUT (REFER TO PLUMBING PLANS FOR DETAIL)
- (D) FDOT TYPE "D" CURB (SEE DETAIL SHEET C7.1)
- (E) EXISTING CURB
- (F) EXISTING SIDEWALK
- (G) STANDARD DUTY ASPHALT PAVEMENT (TYP. PARKING PAVEMENT)
- (H) HEAVY DUTY CONCRETE
- (I) STANDARD CONCRETE SIDEWALK
- (J) 6" PVC ROOF DRAIN @ 1.04% MIN.
- (K) 8" PVC ROOF DRAIN @ 1.04% MIN.
- (L) 12" STORM DRAIN (SEE NOTE 10)
- (M) 18" STORM DRAIN (SEE NOTE 10)
- (N) YARD DRAIN
- (O) TIE INTO EXISTING PAVEMENT
- (P) HEAVY DUTY ASPHALT
- (Q) EXISTING DRAINAGE PIPE (SIZE AS SHOWN)
- (R) UTILITY CROSSING (SEE SHEET C4.1)
- (S) PERVIOUS PAVERS (SEE SHEET C7.1)
- (T) DUMPSTER DRAIN
- (U) 320 GALLON GREASE INTERCEPTOR FOR DUMPSTER DRAIN (REFER TO MEP PLANS FOR DETAILS)

- XX.XX — PROPOSED GRADE
- +109.11 — EXISTING GRADES (FROM SURVEY)
- DRAINAGE FLOW DIRECTION
- H.P. — HIGH POINT
- TOC — TOP OF CURB GRADE
- TOS — TOP OF SIDEWALK GRADE
- EX — DENOTES EXISTING FEATURE
- GRADE BREAK
- (G) STANDARD DUTY ASPHALT PAVEMENT
- (H) THICKENED CONCRETE PAVEMENT
- (I) STANDARD CONCRETE SIDEWALK
- (P) HEAVY DUTY ASPHALT

NOTES:

1. CONTRACTOR TO VERIFY ALL EXISTING UTILITY RINGS AND COVERS ON SITE ARE HEAVY DUTY TRAFFIC RATED. CONTRACTOR TO REPLACE DEFICIENT RINGS AND COVERS WITH HEAVY DUTY TRAFFIC RATED RINGS AND COVERS. CONTRACTOR TO ADJUST RIM ELEVATIONS OF ANY UTILITIES THAT CHANGE IN ELEVATION DURING CONSTRUCTION. ALL EXISTING COVERS TO REMAIN SHALL BE ADJUSTED TO FINAL GRADE.
2. ALL CLEANOUT COVERS SHOULD BE RATED FOR HEAVY DUTY TRAFFIC.
3. ALL EXISTING PAVEMENT AND CONCRETE TO BE JOINED SHALL BE SAWCUT.
4. SIDEWALKS AND CROSSWALKS SHALL NOT EXCEED 2% CROSS SLOPE NOR 5% LONGITUDINALLY. GRADES IN ACCESSIBLE PARKING SPACES SHALL NOT EXCEED 2% IN ANY DIRECTION. IN CASES OF SIDEWALK LANDINGS AT BUILDING ENTRANCES, GRADES SHALL NOT EXCEED 2% IN ANY DIRECTION. ACCESSIBLE CURB RAMPS SHALL NOT EXCEED 6' IN LENGTH AND 1:12 SLOPE. LANDINGS AT CHANGES IN DIRECTION SHALL BE MINIMUM 60"x60" AND SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION.
5. SPOT ELEVATIONS ARE AT FACE OF CURB UNLESS OTHERWISE NOTED.
6. EXISTING INFORMATION HAS BEEN TAKEN FROM A SURVEY PREPARED BY CPH, INC., DATED SEPTEMBER 3, 2021. ELEVATIONS BASED ON NGVD 1929 DATUM.
7. FLOOD ZONE: X, AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 12069C0358E, EFFECTIVE DATE DECEMBER 18, 2012. NO BASE FLOOD ELEVATION.
8. ROOF DRAIN CONNECTIONS TO DRAINAGE PIPE SHALL BE AS FOLLOWS:
   A. FOR ADS N-12 CORRUGATED POLYETHYLENE DRAINAGE PIPE USE ADS DUAL WALL FABRICATED REDUCING SADDLE TEE 4"-24" DIAMETER.
   B. FOR RCP DRAINAGE PIPE MAKE CONNECTION PER FDOT INDEX 280,CONCRETE COLLAR FOR JOINING MAINLINE PIPE AND STUB PIPE DETAIL.
   C. NOTIFY CONSULTANT FOR CONNECTION METHOD TO STEEL PIPE.
9. ALL CONCRETE SHALL BE A MINIMUM OF 4,000 PSI AT 28 DAYS WITH FIBERMESH REINFORCEMENT.
10. STORM DRAIN PIPE SHALL BE AS FOLLOWS:
    A. RCP CLASS III PER ASTM C-76
    B. ALUMINIZED STEEL TYPE 2 ULTRA FLO
       48"Ø AND SMALLER SHALL BE 3/4"x3/4"x7-1/2" CORRUGATION
       16 GA WITH A MINIMUM THICKNESS OF 0.064".
       54"Ø AND LARGER SHALL BE 3/4"x3/4"x7-1/2" CORRUGATION
       14 GA WITH A MINIMUM THICKNESS OF 0.079"
    C. CORRUGATED POLYETHYLENE PIPE WITH SMOOTH INTERIOR WALL PER AASHTO M294
       JOINTS SHALL BE WATER TIGHT
    D. ANY STORM PIPE USED MUST BE APPROVED BY LOCAL AUTHORITIES. CONTRACTOR SHALL SELECT THE MOST ECONOMICAL PRODUCT.
11. ALL CONSTRUCTION SHALL CONFORM TO FDEP, LAKE COUNTY AND CITY OF MOUNT DORA STANDARDS.
12. STORM PIPE SHALL BE IN COMPLIANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.

DRAINAGE STRUCTURE SCHEDULE

D-1	TYPE 'C' INLET PER FDOT INDEX 232 RIM EL.=106.06 INV (N)=102.53	D-3	TYPE 'C' INLET PER FDOT INDEX 232 RIM EL.=106.06 INV (S)=101.80 INV (W)=101.80
D-2	TYPE 'C' INLET PER FDOT INDEX 232 RIM EL.=106.06 INV (S)=102.13 INV (E)=102.13	D-4	DRAINAGE MANHOLE RIM EL.= 106.20 INV (N)=101.45 INV (SE)=101.45

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine811.com

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REGISTRY NO. 696
KHA PROJECT # 047916133

KEVIN L. ROBERSON LICENSE No. 52074 STATE OF FLORIDA PROFESSIONAL ENGINEER
7/29/2022

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN M. ROBERSON 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.

LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
1 SITE PLAN COMMENTS	5/27/22
2 SITE PLAN COMMENTS	6/17/22
Restaurant #:	5662

LONGHORN STEAKHOUSE MOUNT DORA

PROTOTYPE LH 9.2

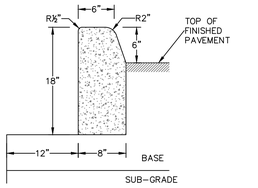
MOUNT DORA FLORIDA

DRAWING

PAVING, GRADING AND DRAINAGE PLAN

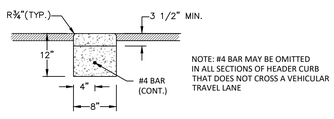
C6.1

Drawing name: K:\VRB_LDEV\047916 - Darden\133_LH Mt Dora\CADD\PlanSheets\109-C6.1 PAVING, GRADING AND DRAINAGE PLAN.dwg Jul 29, 2022 10:13am by: Liz.Meeks
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



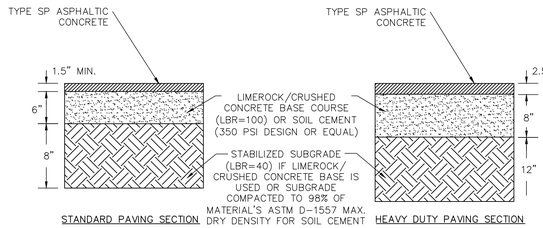
FDOT TYPE "D" CURB

scale: N.T.S. ref. C3.1, C6.1 — 1 / C7.1



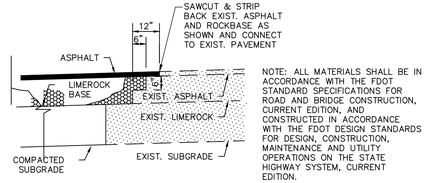
8" HEADER CURB

scale: N.T.S. ref. C3.1, C6.1 — 13 / C7.1



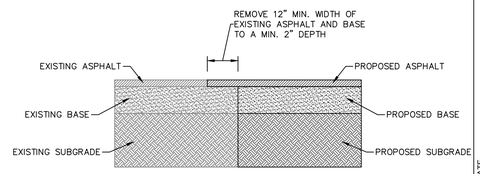
ASPHALT PAVEMENT SECTIONS

scale: N.T.S. ref. C6.1 — 2 / C7.1



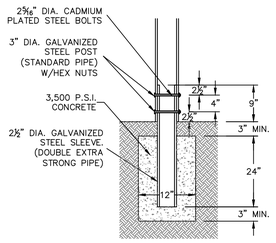
CONNECTION TO EXISTING PAVEMENT DETAILS

scale: N.T.S. ref. C6.1 — 3 / C7.1

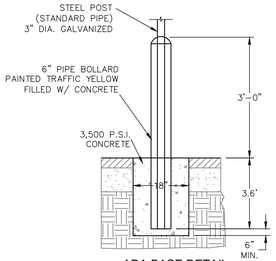


SAW CUT DETAIL

scale: N.T.S. ref. C2.1, C6.1 — 4 / C7.1



BASE DETAIL IN LAWN OR LANDSCAPED AREAS



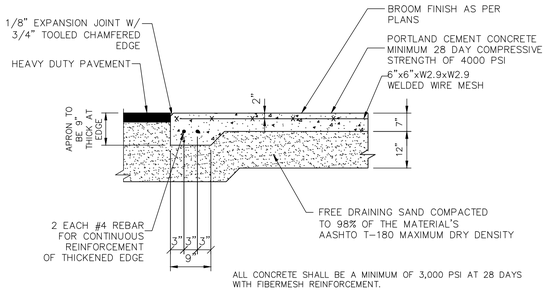
ADA BASE DETAIL IN PAVED AREAS

NOTE:

1. SIGNS IN BUILDING SIDEWALKS SHALL BE SET DIRECTLY IN THE CONCRETE AND SHALL UTILIZE 3" DIAMETER SIGN POST PER THE SPECIFICATIONS

SIGN BASE DETAIL

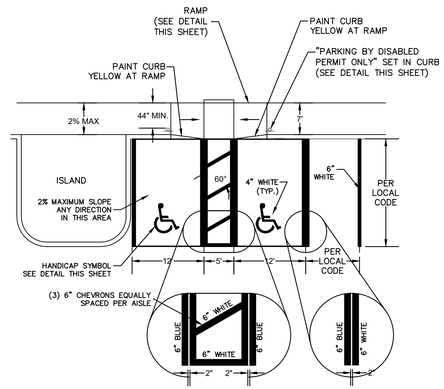
scale: N.T.S. ref. C3.1 — 5 / C7.1



ALL CONCRETE SHALL BE A MINIMUM OF 3,000 PSI AT 28 DAYS WITH FIBERMESH REINFORCEMENT.

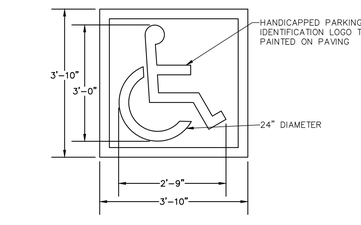
THICKENED CONCRETE PAVEMENT AT DUMPSTER PAD

scale: N.T.S. ref. C6.1 — 6 / C7.1



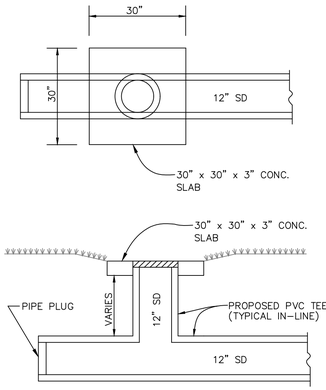
ACCESSIBLE PARKING-STRIPING DETAIL

scale: N.T.S. ref. C3.1 — 7 / C7.1



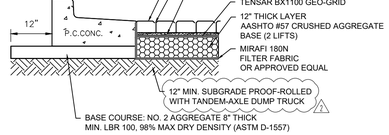
HANDICAP SYMBOL DETAIL

scale: N.T.S. ref. C3.1 — 8 / C7.1



YARD DRAIN DETAIL

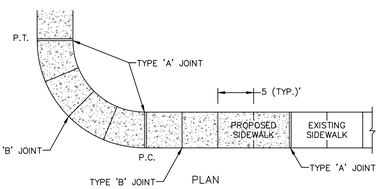
scale: N.T.S. ref. C6.1 — 12 / C7.1



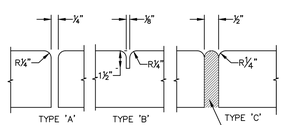
AGGREGATE SHALL BE CRUSHED CONCRETE, DOLOMITE OR GRANITE

PERMEABLE PAVER SYSTEM DETAIL

scale: N.T.S. ref. C6.1 — 14 / C7.1

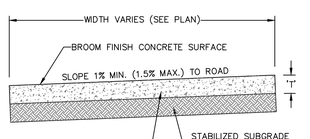


PLAN



SIDEWALK JOINTS

TABLE OF SIDEWALK JOINTS	
TYPE	LOCATION
'A'	100' MAX. SPACING, P.C./P.T. OF CURVES, JUNCTION OF EXISTING AND NEW SIDEWALKS.
'B'	5'-0" CENTER TO CENTER
'C'	WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS AND SIMILAR STRUCTURES.



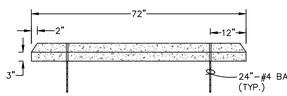
STANDARD CROSS SECTION

TABLE OF SIDEWALK THICKNESS	
LOCATION	"T"
PEDESTRIAN ONLY AREAS	5"
DRIVEWAYS AND OTHER TRAFFIC AREAS	7"

NOTE:
ALL SIDEWALK STREET CROSSINGS MUST MEET THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT (ADA) COMPLIANCE GUIDE. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.ALL CONCRETE SHALL BE A MINIMUM OF 4,000 PSI AT 28 DAYS WITH FIBERMESH REINFORCEMENT.

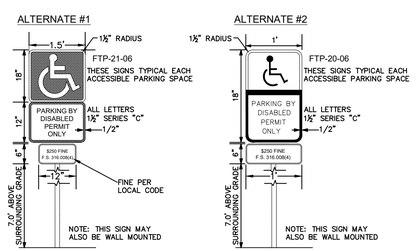
CONCRETE SIDEWALK

scale: N.T.S. ref. C6.1 — 9 / C7.1



CONCRETE WHEEL STOP

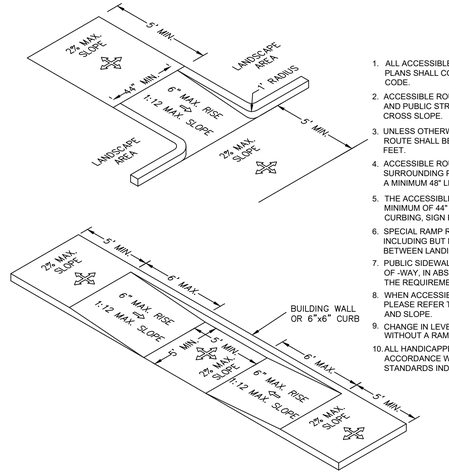
scale: N.T.S. ref. C6.1 — 13 / C7.1



NOTE: ALL SIGNS SHALL BE DESIGNED TO WITHSTAND 120 M.P.H. WIND SPEED.

ACCESSIBLE PARKING SIGN DETAIL

scale: N.T.S. ref. C3.1 — 10 / C7.1



ACCESSIBLE RAMPS

scale: N.T.S. ref. C3.1 — 11 / C7.1

1. ALL ACCESSIBLE COMPONENTS CONSTRUCTED AS PART OF THESE PLANS SHALL COMPLY WITH CHAPTER 11 OF THE FLORIDA BUILDING CODE.
2. ACCESSIBLE ROUTE TO ACCESSIBLE SPACES, BUILDING ENTRANCES, AND PUBLIC STREETS SHALL NOT EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE.
3. UNLESS OTHERWISE SHOWN ON THE PLANS, THE MINIMUM CLEAR ROUTE SHALL BE 36" WIDE WITH A 60" X 60" PASSING SPACE EVERY 200 FEET.
4. ACCESSIBLE ROUTES THROUGH PLANTERS SHALL BE LEVEL WITH THE SURROUNDING PAVEMENT OR PROVIDE CURB RAMPS AT EACH END WITH A MINIMUM 48" LEVEL LANDING IN BETWEEN.
5. THE ACCESSIBLE ROUTE IN FRONT OF PULL - IN PARKING SHALL BE A MINIMUM OF 44" WIDE AND NOT REDUCED BY VEHICLE OVERHANGS, CURBING, SIGN POSTS, OR OTHER OBSTRUCTIONS.
6. SPECIAL RAMP RULES APPLY FOR ANY RISE GREATER THAN 6" INCLUDING BUT NOT LIMITED TO RESTRICTION ON SLOPE, TOTAL RISE BETWEEN LANDINGS, AND USE OF HANDRAILS, PER F.B.C 11-4.8.
7. PUBLIC SIDEWALK CURB RAMPS CONSTRUCTED WITHIN A PUBLIC RIGHT-OF -WAY, IN ABSENCE OF LOCAL ROADWAY GUIDELINES, SHALL MEET THE REQUIREMENTS OF F.D.O.T INDEX 304.
8. WHEN ACCESSIBLE PARKING ABUTS CURB OR EDGE OF PAVEMENT, PLEASE REFER TO DETAIL FOR STRIPING COLOR, STALL DIMENSIONS AND SLOPE.
9. CHANGE IN LEVEL ALONG ACCESSIBLE ROUTE IS NOT TO EXCEED ½" WITHOUT A RAMP PER SECTION 11-4.3.8.
10. ALL HANDICAPPED PARKING SPACES SHALL BE SIGNED AND MARKED IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS INDEX 17346.

BIKE RACK DETAIL

scale: N.T.S. ref. C6.1 — 13 / C7.1

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Drawing name: K:\WRB_LDEV\047916 - Darden\133_LH Mt Dora\CADD\PlanSheets\110-C7.1 PAVING, GRADING AND DRAINAGE DETAILS.dwg 110-C7.1 PAVING GRADING AND DRAINAGE DETAILS Jul 29, 2022 10:13am by: LizMeeks

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KEVIN ROBERSON LICENSE No. 52074 STATE OF FLORIDA PROFESSIONAL ENGINEER
7/29/2022

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN M ROBERSON 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.

LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
1 SITE PLAN COMMENTS	5/27/22
2 SITE PLAN COMMENTS	6/17/2022

Restaurant #: 5662

LONGHORN STEAKHOUSE MOUNT DORA

PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING

PAVING, GRADING AND DRAINAGE DETAILS

C7.1

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Drawing name: K:\WRB_LDEV\047916 – Darden\13_LH Mt Dora\CADD\PlanSheets\111-C8.1 GEOTECHNICAL REPORT.dwg C8.1 GEOTECHNICAL REPORT Jul 29, 2022 10:13am by: LizMeeks

UNIVERSAL ENGINEERING SCIENCES

GEOTECHNICAL EXPLORATION

PROPOSED WALMART OUTPARCEL US441
LAKE COUNTY, FLORIDA

UES PROJECT NO. 0130.2100424.0000
UES REPORT NO. 1903700

PREPARED FOR:

CASTO Southeast Realty Services
5391 Lakewood Ranch Boulevard, STE 100
Sarasota, Florida 34240

Attention: Mr. Dan Moyer

PREPARED BY:

Universal Engineering Sciences
3532 Maggie Boulevard
Orlando, Florida 32811
(407) 423-0504

October 8, 2021
Revised December 9, 2021

3532 Maggie Boulevard | Orlando, Florida 32811 | p (407) 423-0504 | f (407) 423-3966 | universalengineering.com

UNIVERSAL ENGINEERING SCIENCES

Geotechnical Engineering
Construction Materials Testing & Threshold Inspection
Special Inspections
Occupational Health & Safety
Environmental
Building Information Modeling

October 8, 2021
Revised December 9, 2021

CASTO Southeast Realty Services
5391 Lakewood Ranch Boulevard, STE 100
Sarasota, Florida 34240

Attention: Mr. Dan Moyer, Vice President of Development
DMoyer@castoinfo.com

Reference: **Geotechnical Exploration**
Walmart Out Parcel – US 441
Mt. Dora, Lake County, Florida
UES Project No. 0130.2100424.0000
UES Report No. 1903700

Dear Mr. Moyer:

Universal Engineering Sciences, LLC. (UES) has completed a geotechnical exploration at the above referenced site in Lake County, Florida. The scope of our exploration was planned in conjunction with and authorized by you. This exploration was performed in accordance with UES proposal No. 1904298 dated September 2, 2021 and with generally accepted soil and foundation engineering practices. No other warranty, express or implied, is made.

The following report presents the results of our field exploration with a geotechnical engineering interpretation of those results with respect to the project characteristics as provided to us. We have included our estimates of the seasonal high groundwater level at the boring locations, and geotechnical recommendations for foundation design, pavement design, and site preparation.

We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully Submitted,
UNIVERSAL ENGINEERING SCIENCES, LLC
Certificate of Authorization No. 549

Timothy Tripett
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.
2021.10.08 09:53:51 -05'00'

Timothy D. Tripett, P.E.
Senior Geotechnical Engineer
FL P.E. Registration No. 79027

Ricardo C. Kinakilla L., Ph.D., P.E.
Geotechnical Department Manager

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1.0 PROJECT DESCRIPTION

We understand the proposed project will consist of the development of a new commercial development located at the southeast corner of US 441 and Eudora Drive, Mt. Dora, Florida. We were provided with a site plan showing the property and the proposed improvements. The site plan indicated one (1) restaurant building, approximately 5,710 SF in size, with associated paved parking/drive areas. We understand two existing stormwater ponds to the southwest of the proposed building will be regraded to accommodate the proposed development.

Preliminary structural loading information was not provided by the client at the time of this report. We have assumed the structure will have maximum column loads of 100 kips and maximum wall loads of 4 kips per foot. We anticipate that minimal (i.e. less than 3 feet of) structural fill will be necessary to achieve finished grades in the proposed building and pavement areas of the site.

No site or project facilities/improvements, other than those described herein, should be designed using the soil information presented in this report. Moreover, UES will not be responsible for the performance of any site improvement so designed and constructed.

2.0 PURPOSE

The purposes of this exploration were:

- to explore and evaluate the subsurface conditions at the site with special attention to potential problems that may impact the proposed development;
- to provide our estimates of the seasonal high groundwater level at the boring locations and
- to provide geotechnical engineering recommendations for foundation design, pavement design, and site preparation

3.0 SITE DESCRIPTION

The subject site is located within Sections 24, Township 19 South, and Range 26 East in Lake County, Florida. More specifically, the subject site is located at the southeast corner of US 441 and Eudora Drive, Mt. Dora, Florida as shown in the attached Figure A-1. At the time of drilling, the subject site consisted of an existing paved parking area.

3.1 SOIL SURVEY

There is one (1) native soil type mapped within the general area of the site according to the USDA NRCS Soil Survey of Lake County. A brief summary of the mapped surficial soil type(s) is presented in Table I on the following page. *Please note that the native soil types and their associated engineering properties have likely been altered by past development in the vicinity of the site.*

TABLE I
SUMMARY OF PUBLISHED SOIL DATA[1]

Soil Symbol	Soil Type	Hydrologic Group	Drainage Characteristics	Depth of Published Seasonal High GWT (feet)
8	Candler fine sand, 0 to 5% slopes	A	Excessively drained	>6½

[1] Data obtained from the NRCS online webpage, accessed on 10/4/2021

3.2 TOPOGRAPHY

According to information obtained from the United States Geologic Survey (USGS) "Eustis, FL" quadrangle map, the predevelopment ground surface elevation across the site area is approximately +105 feet National Geodetic Vertical Datum (NGVD). A copy of a portion of the USGS Map is included in Appendix A.

4.0 SCOPE OF SERVICES

The services conducted by UES during our geotechnical exploration were as follows:

- Drilled twelve (12) Standard Penetration Test (SPT) borings located within the proposed structure and pavement areas to depths of 10 to 20 feet below existing grades.
- Performed four (4) hand auger borings within the existing ponds to depths of 6 to 6½ feet below existing grades.
- Secured samples of representative soils encountered in the soil borings for review, laboratory analysis and classification by a Geotechnical Engineer.
- Measured the existing site groundwater levels and provide an estimate of the seasonal high groundwater level at the boring locations.
- Assessed the existing soil conditions with respect to the proposed construction.
- Prepared a report which documents the results of our exploration and analysis with geotechnical engineering recommendations.

5.0 FIELD EXPLORATION

The twelve (12) SPT borings, designated B-01 through B-06 and R-01 through R-06, as shown on the attached Boring Location Plan in Appendix B, were performed in general accordance with the procedures of ASTM D 1586 "Standard Method for Penetration Test and Split-Barrel Sampling of Soils". SPT sampling was performed continuously within the top 10 feet to detect variations in the near surface soil profile and on approximate 5 feet centers thereafter.

The SPT soil borings were performed with a track-mounted drilling rig. The borings were located using the provided site plan, measuring from existing on-site landmarks shown on an aerial photograph, and by using handheld GPS devices. No survey control was provided prior to performing our field work. Hence, the indicated test boring locations should be considered accurate to the degree of the methodologies used. The approximate boring locations are shown in Appendix B.

Ground surface elevations at the boring locations would be beneficial to help us to identify any anomalies in our measured and estimated seasonal high groundwater levels, as well as improve the usefulness the groundwater information during the civil engineering design of the site.

6.0 LABORATORY TESTING

The soil samples recovered from the test borings were returned to our laboratory and visually classified in general accordance with ASTM D 2487 "Standard Classification of Soils for Engineering Purposes" (Unified Soil Classification System). We selected representative soil samples from the borings for laboratory testing to aid in classifying the soils and to help to evaluate the general engineering characteristics of the site soils. The results of these tests are shown on the boring logs in Appendix B. A summary of the tests performed is shown in Table II:

TABLE II
LABORATORY METHODOLOGIES

Test Performed	Number Performed	Reference
Wash No. 200 Sieve Determination	6	ASTM D 1140 "Standard Test Methods for Amount of Material in Soils Finer than No. 200 (75-µm) Sieve"
Moisture Content	5	ASTM D 2216 "Laboratory Determination of Water (Moisture) Content of Soil by Mass"

7.0 SUBSURFACE CONDITIONS

7.1 GENERALIZED SOIL PROFILE

The results of our field exploration and laboratory analysis, together with pertinent information obtained from the SPT borings, such as soil profiles, penetration resistance and groundwater levels are shown on the boring logs included in Appendix B. The Key to Boring Logs, Soil Classification Chart is also included in Appendix B. The soil profiles were prepared from field logs after the recovered soil samples were examined by a Geotechnical Engineer. The stratification lines shown on the boring logs represent the approximate boundaries between soil types, and may not depict exact subsurface soil conditions. The actual soil boundaries may be more transitional than depicted. A generalized profile of the soils encountered at our boring locations is presented in Table III on the following page. For detailed soil profiles, please refer to the attached boring logs.

TABLE III
GENERALIZED SOIL PROFILE

Stratum No.	Typical Depth (feet, bls) From	To	Soil Description	Typical Range of SPT "N" Values
1	0	20	Very loose to medium dense fine sand [SP]*	2 to 24

Based on the results of the soil borings and review of the FDOT Rigid Pavement Design Manual, we recommend using the minimum design shown in Table V for concrete pavements.

TABLE V
MINIMUM CONCRETE PAVEMENT THICKNESSES

Service Level	Minimum Pavement Thickness	Maximum Control Joint Spacing	Recommended Saw Cut Depth
Light Duty	6 inches	12 feet x 12 feet	2 inches
Heavy Duty	7 inches	14 feet x 14 feet	2½ inches

We recommend using concrete with a minimum 28-day compressive strength of at least 4,000 pounds per square inch. Layout of the Saw cut control joints should form square panels, and the depth of Saw cut joints should be ⅓ of the concrete slab thickness.

We recommend allowing UES to review and comment on the final concrete pavement design, including section and joint details (type of joints, joint spacing, etc.), prior to the start of construction.

For further details on concrete pavement construction, please reference the "Guide to Jointing of Non-Reinforced Concrete Pavements" published by the Florida Concrete and Products Association, Inc., and "Building Quality Concrete Parking Areas", published by the Portland Cement Association.

Specimens to verify the compressive strength of the pavement concrete should be obtained for at least every 50 cubic yards, or at least once for each day's placement, whichever is greater.

11.0 SITE PREPARATION

We recommend normal, good practice site preparation procedures for the new construction areas. These procedures include: stripping/grubbing of the site to remove existing vegetation, roots, topsoils, organics, debris, utility lines, etc. Following stripping, the exposed subgrade soils should be proof-rolled, and all subgrade and subsequent fill/backfill soils should be properly densified.

1. Prior to placement of concrete, the subgrade soils should be prepared as recommended in the Site Preparation section of this report.
2. The surface of the subgrade soils must be smooth, and any disturbances or wheel rutting corrected prior to placement of concrete.
3. The subgrade soils must be moistened prior to placement of concrete.
4. Concrete pavement thickness should be uniform throughout, with exception to the thickened edges (curb for footing).
5. The bottom of the pavement should be separated from the seasonal high groundwater level by at least 12 inches.

Stabilized subgrade can be imported materials or a blend of on-site and imported materials. If a blend is proposed, we recommend that the contractor perform a mix design to find the optimum mix proportions.

Compaction testing of the subgrade should be performed to full depth at a frequency of at least one (1) test per 10,000 square feet.

10.2.3 Base Course

Based on the results of our exploration and our experience in the project area, limerock, soil-cement and recycled crushed concrete are suitable base course materials for this project. However, local municipality standards may prevent the use of recycled crushed concrete use as an alternative base course material. We recommend the civil engineer consult with the local municipalities prior to selecting the base course material for this project.

For a limerock base, the base course should be compacted to a minimum density of 98 percent of the Modified Proctor maximum dry density and shall exhibit a minimum LBR of 100. The limerock material should comply with the latest edition of the Florida Department of Transportation (FDOT) Road and Bridge Construction specifications.

For a soil-cement base, we recommend the contractor perform a soil-cement design with a minimum seven (7)-day strength of 300 pounds per square inch (psi) on the materials he intends to use. Place soil-cement in maximum lifts of 6 inches. The lifts should be compacted to a minimum density of 95 percent of the maximum dry density according to specifications in ASTM D-558, "Moisture Density Relations of Soil Cement Mixtures".

Place and finish the soil-cement according to Portland Cement Association requirements. Final review of the soil-cement base course should include manual "chaining" and/or "sounding" seven days after placement. Shrinkage cracks will form in the soil-cement mixture and you should expect reflection cracking on the surface courses.

Recycled Concrete Aggregate (RCA) may provide a cost-effective alternative material in lieu of limerock or soil cement base courses. Local availability, along with municipality standards, typically governs the use of crushed concrete use as an alternative base course material. The advantages of using crushed concrete as a pavement base course include its high strength (greater than limerock), resistance to environmentally related distress, and lack of reflection cracking caused by thermal expansion and contraction.

If RCA base is used, the base course material should be sourced from an FDOT approved supplier. The base should be compacted to a minimum density of 98 percent of the Modified Proctor maximum dry density and exhibit a minimum LBR of 150. The base material should comply with the latest edition of the FDOT Road and Bridge Construction Specifications.

Compaction testing of the base course should be performed to full depth at a frequency of at least one (1) test per 10,000 square feet.

10.2.4 Surface Course

For the pavements, we recommend that the surfacing consist of FDOT Superpave (SP) asphaltic concrete. The surface course should consist of FDOT SP-9.5 fine mix for light-duty areas and FDOT SP-12.5 topped with SP-9.5 fine mix for heavy duty areas. The asphalt concrete should be placed within the allowable lift thicknesses for fine Type SP mixes per the latest edition of FDOT, Standard Specifications for Road and Bridge Construction.

The asphaltic concrete should be compacted to an average field density of 93 percent of the laboratory maximum density determined from specific gravity (G_{mm}) methods, with an individual test tolerance of **+2 percent and -1.2% of the design G_{mm}**. Specific requirements for the SuperPave asphaltic concrete structural course are outlined in the latest edition of FDOT, Standard Specifications for Road and Bridge Construction.

Note: If the Designer (or Contract Documents) limits compaction to the static mode only or lifts are placed one-inch thick, then the average field density should be 92 percent, with an individual test tolerance of 91 percent and -1.2% of the design G_{mm}.

After placement and field compaction, the wearing surface should be cored to evaluate material thickness and density. Cores should be obtained at frequencies of at least one (1) core per 10,000 square feet of placed pavement, or a minimum of two (2) cores per day's production.

10.2.5 Effects of Groundwater

One of the most critical influences on the pavement performance in Central Florida is the relationship between the pavement base course and the seasonal high groundwater level. Sufficient separation will need to be maintained between the bottom of base course and the anticipated seasonal high groundwater level. We recommend that the seasonal high groundwater and the bottom of the base course be separated by at least 12 inches for RCA and soil-cement base courses, and at least 18 inches for a limerock base course.

The separation should be confirmed by reviewing the final site grading and paving plan. If the separation is not provided by grading, the installation of underdrains will be required.

10.2.6 Landscape Underdrains

All "green" and landscape areas adjacent to the pavements and sidewalks will require underdrains. The poorly draining silty/clayey sands used in the mass grading require that landscape drains be provided to protect the roadway and sidewalk areas against adverse effects from over-irrigation or excess rainfall. Poorly draining silty and clayey material causes the irrigation and rainwater to perch and migrate laterally into the pavement components, which eventually compromises the integrity of the pavement section.

10.3 CONCRETE "RIGID" PAVEMENTS

Concrete pavement is a rigid pavement that transfers much higher wheel loads to the subgrade soils than a flexible asphalt pavement; therefore, requiring less subgrade preparation. Concrete pavement is recommended in truck court areas, under the dumpster areas, and 10 feet in front of the trash enclosure, at a minimum.

We recommend using the existing surficial sands or approved structural fill densified to at least 98 percent of Modified Proctor test maximum dry density (ASTM D 1557) without additional stabilization under concrete pavement, with the following stipulations:

A more detailed description of this work is presented in this section.

1. Prior to construction, existing underground utility lines within the construction areas should be located. It should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which may lead to excessive settlement of overlying structures.
2. Perform any necessary remedial dewatering prior to any earthwork operations. Dewatering should be performed to a depth of at least **2 feet below the bottom of any excavations or compacted surface.**
3. Strip the proposed construction limits of existing vegetation, topsoil, roots, organic soils, debris and other deleterious materials within and 5 feet beyond the perimeter of the new construction areas. Expect clearing and grubbing to depths of 6 to 12 inches. We strongly recommend that the stripped/excavated surfaces be observed and proofed by representatives of UES.
4. Proof-roll the exposed subsurface soils under the observation of UES, to locate any soft areas of unsuitable soils, and to increase the density of the shallow loose fine sand soils. If deemed necessary by UES, in areas that continue to "yield", remove any deleterious materials and replace with a clean, compacted sand backfill.
5. After approval of the stripped surface, within the building areas, compact the upper **2 feet of the exposed subgrade soils** (including the 5 feet margin) to at least 95 percent of the Modified Proctor test maximum dry density (ASTM D 1557).
6. Place fill/backfill as necessary. All fill should consist of clean sand with less than 10 percent soil fines and be free of organics, debris and other deleterious materials. Fill soils containing between 5 and 10 percent fines may require strict moisture control. Place fill in maximum 12-inch loose, uniform lifts and compact each lift at least 95 percent of the Modified Proctor maximum dry density.
7. Within the pavement areas, the upper 12 inches of subgrade beneath the base course or concrete slabs (sub-base) should be stabilized and compacted to at least 98 percent of the Modified Proctor maximum dry density.
8. Test the subgrade and each lift of fill for compaction at a frequency of not less than one test per 2,500 square feet in the building areas and 10,000 square feet of pavement areas, with a minimum of 4 tests in each area.
9. Prior to the placement of reinforcing steel and concrete, verify compaction within the footing trenches to a depth of 2 feet. We recommend testing every column footing and at least one test every 100 feet of wall footing, with a minimum of 4 tests per building. Re-compaction of the foundation excavation bearing level soils, if loosened by the excavation process, can typically be achieved by making several passes with a walk-behind vibratory sled or jumping jack.

Stability of the compacted soils is essential and independent of compaction and density control. If the near surface soils or the structural fill experience "pumping" conditions, terminate all earthwork activities in that area. Pumping conditions occur when there is too much water present in the soil-water matrix. Earthwork activities are actually attempting to compact the water and not the soil. The disturbed soils should be dried in place by scarification and aeration prior to any additional earthwork activities.

Vibrations produced during vibratory compaction operations at the site may be significantly noticeable within 100 feet and may cause distress to adjacent structures if not properly regulated. Provisions should be made to monitor these vibrations so that any necessary modifications in the compaction operations can be made in the field before potential damages occur. UES can provide vibration monitoring services to help document and evaluate the effects of the surface compaction operation on existing structures. It is recommended that large vibratory rollers remain a minimum of 50 feet from existing structures. Within this zone, the use of a static roller or small hand guided plate compactors is recommended.

12.0 STORMWATER DESIGN CONSIDERATIONS

Four (4) hand auger borings were performed within the existing stormwater pond footprints. Our recommended design parameters are shown in Table VI:

TABLE VI
STORMWATER DESIGN PARAMETERS

Design Parameter	Estimated Values	
Pond ID	NW Pond	SW Pond
Relevant Boring Logs	HA-1, HA-2	HA-3, HA-4
Estimated Base of Surficial Aquifer Depth (feet, bls)	6*	6*
Estimated Filtrable Porosity of Surficial In-situ sands (percent)	25	25
Estimated Seasonal High Groundwater Level (feet, bls)	4	4
Estimated Horizontal Saturated Hydraulic Conductivity of Surficial Aquifer (feet per day)	27	28
Estimated Vertical Unsaturated Hydraulic Conductivity of Surficial Aquifer (feet per day)	18	18

*Depth to base of surficial aquifer based on the termination depth of boring

Please note that the depths presented in Table II are referenced to the existing ground surface at the time of our exploration. The hydraulic conductivity values were based on results of laboratory testing. Appropriate factors of safety should be included in the design. UES can perform the drawdown/recovery analyses once the final system configurations and treatment volumes are established, if desired.

13.0 DEWATERING AND EXCAVATION CONSIDERATIONS

Depending upon the time of year construction commences and the depth of excavation required, some dewatering may be required for the successful construction of this project. Where excavations will extend only a few feet below the groundwater table, a sump pump may be sufficient to control the groundwater table. Deeper excavations may require well points and/or rock drains to control the groundwater table. Regardless of the method(s) used, we recommend drawing down the water level at least 2 feet below the bottom of the excavation. The actual depth of dewatering should be determined by the contractor. The design and construction of the dewatering system must be performed in accordance with applicable regulatory criteria (i.e. water management district, etc.) and compliance with such criteria is the sole responsibility of the contractor.

Excavations should be sloped as necessary to prevent slope failure and to allow backfilling. As a minimum, temporary excavations below 4-foot depth should be sloped in accordance with OSHA regulations. Where lateral confinement will not permit slopes to be laid back, the excavation should be shored in accordance with OSHA requirements. During excavation, excavated material should not be stockpiled at the top of the slope within a horizontal distance equal to the excavation depth. Provisions for maintaining workman safety within excavations is the sole responsibility of the contractor.

14.0 LIMITATIONS

This report has been prepared for the exclusive use of ***CASTO Southeast Realty Services*** and other designated members of their design/construction team associated with the proposed construction for the specific project discussed in this report. No other site or project facilities should be designed using the soil information contained in this report. As such, UES will not be responsible for the performance of any other site improvement designed using the data in this report.

This report should not be relied upon for final design recommendations or professional opinions by unauthorized third parties without the expressed written consent of UES. Unauthorized third parties that rely upon the information contained herein without the expressed written consent of UES assume all risk and liability for such reliance.

The recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated on the Boring Location Plan and from other information as referenced. This report does not reflect any variations which may occur between the boring locations. The nature and extent of such variations may not become evident until the course of construction. If variations become evident, it will then be necessary for a re-evaluation of the recommendations of this report after performing on-site observations during the construction period and noting the characteristics of the variations.

Borings for a typical geotechnical report are widely spaced and generally not sufficient for reliably detecting the presence of isolated, anomalous surface or subsurface conditions, or reliably estimating unsuitable or suitable material quantities. Accordingly, UES does not recommend relying on our boring information for estimation of material quantities unless our contracted services ***specifically*** include sufficient exploration for such purpose(s) and within the report we so state that the level of exploration provided should be sufficient to detect anomalous conditions or estimate such quantities. Therefore, UES will not be responsible for any extrapolation or use of our data by others beyond the purpose(s) for which it is applicable or intended.

All users of this report are cautioned that there was no requirement for UES to attempt to locate any man-made buried objects or identify any other hazardous conditions that may exist at the site during the course of this exploration. Therefore, no attempt was made by UES to locate or identify such concerns. UES cannot be responsible for any buried man-made objects or environmental hazards which may be subsequently encountered during construction that are not discussed within the text of this report. We can provide this service if requested.

During the early stages of most construction projects, geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible problems. Geotechnical Business Council (GBC) publication, "Important Information About This Geotechnical Engineering Report" appears in Appendix, and will help explain the nature of geotechnical issues.

Further, we present documents in Appendix: Constraints and Restrictions, to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

• • • • • • • • •

Important Information about This
Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared solely for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. And no one — not even you — should apply this report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse,
- the elevation, configuration, location, orientation, or weight of the proposed structure,
- the composition of the design team, or
- project ownership.

As a general rule, always inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by the passage of time.* Conditions can change because of the forces of nature, as in an earthquake, flood, or landslide; or because of human activity, as in new construction on the site or adjacent to it. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Estimates

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should never be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, but recognize that *summary logs from the report can increase risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help reduce the risk of costly problems or claims, provide constructors the best information available to you, and make a clearly written letter of transmittal. To that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited. Encourage constructors to refer to the report in its entirety. Urge constructors that best information available to you, and make a clearly written letter of transmittal. To that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited. Encourage constructors to refer to the report in its entirety. Urge constructors that they retain professionals who are familiar with the types of conditions that are likely to be encountered on the project and who understand how this information can affect construction. You minimize the need for constructors to misinterpret the report (and misinterpret it on your behalf) when you arrange for them to attend prebid and preconstruction conferences with the geotechnical engineer and other design professionals.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "boilerplate," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. Read these provisions closely. Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a geoenvironmental study differ significantly from those used to perform a geotechnical study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations e.g., about the likelihood of encountering underground storage tanks or regulated substances. Unanticipated environmental problems have led to numerous project failures. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the specific circumstances associated with each project. *No geotechnical-engineering report, however good, will anticipate* every subsurface condition or possible variation that may affect mold development. Moreover, because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold- prevention strategies focus on keeping building surfaces dry. While your geotechnical engineer may have been hired to assist in devising mold-prevention strategies, only you can decide what role, if any, the geotechnical engineer should play in this regard. Similarly, only you can decide how much money to spend preventing the development of mold or remediating the consequences of mold infestations. In addition to compaction, the bearing soils must exhibit stability and be free of "pumping" conditions.

Rely on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confirmation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your GBC-Member geotechnical engineer for more information.

GEOTECHNICAL BUSINESS COUNCIL
8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@geoprofessional.org www.geoprofessional.org

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CONSTRAINTS & RESTRICTIONS

The intent of this document is to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices. No other warranty, express or implied or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the boring location plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify the owner and Universal Engineering, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that no such claim be allowed unless it is documented by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations stated in this report are modified by others, these conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

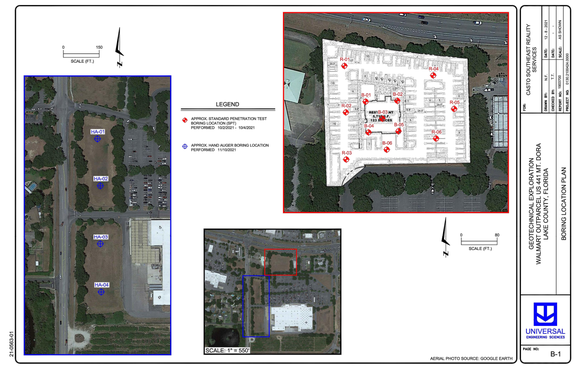
Bidders are urged to make their own soil borings test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or for any opinions, which may be drawn from the information affecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line

APPENDIX B

UNIVERSAL ENGINEERING SCIENCES



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED, NE = NOT ENCOUNTERED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.1

BORING I.D.: **B-01** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/2/21
WATER TABLE (ft): NE DATE FINISHED: 10/2/21
DATE OF READING: 10/2/2021 DRILLED BY: ORL - AGNW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	11-10-12	22			Medium dense brown fine SAND [SP]						
	6-4-4	8			– loose						
5	3-3-6	9			– orange						
	4-5-5	9									
	4-4-4	8									
10	3-3-3	6									
					– very light brown						
15	2-2-3	5									
20	4-3-5	8			BORING TERMINATED AT 20.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED, NE = NOT ENCOUNTERED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.2

BORING I.D.: **B-02** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/2/21
WATER TABLE (ft): NE DATE FINISHED: 10/2/21
DATE OF READING: 10/2/2021 DRILLED BY: ORL - AGNW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	8-7-10	17			Medium dense brown fine SAND [SP]						
	8-7-6	12			– orange						
5	4-2-2	4			– loose		4	3			
	2-2-3	5									
	2-1-1	2			– very loose						
10	1-1-2	3									
					– loose						
15	4-4-4	8									
					– medium dense, light orange						
20	8-8-6	11			BORING TERMINATED AT 20.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED, NE = NOT ENCOUNTERED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.3

BORING I.D.: **B-03** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/4/21
WATER TABLE (ft): NE DATE FINISHED: 10/4/21
DATE OF READING: 10/4/2021 DRILLED BY: ORL - AGNW/DW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	6-6-7	13			Medium dense orange brown fine SAND [SP]						
	4-5-5	10			– loose, orange						
5	3-3-3	6									
	2-2-2	4									
	2-2-3	5									
10	3-3-3	6									
					– light orange						
15	3-3-2	5									
					– light tan brown						
20	4-4-5	9			BORING TERMINATED AT 20.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED, NE = NOT ENCOUNTERED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.4

BORING I.D.: **B-04** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/4/21
WATER TABLE (ft): NE DATE FINISHED: 10/4/21
DATE OF READING: 10/4/2021 DRILLED BY: ORL - AGNW/DW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	10-11-13	24			Medium dense orange brown fine SAND [SP]						
	10-5-6	11			– orange						
5	6-3-2	5			– loose						
	3-3-3	6									
	3-2-3	5									
10	3-3-2	7									
15	3-3-3	6									
20	4-4-5	9			– light tan grey brown						
					BORING TERMINATED AT 20.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED, NE = NOT ENCOUNTERED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.5

BORING I.D.: **B-05** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/4/21
WATER TABLE (ft): NE DATE FINISHED: 10/4/21
DATE OF READING: 10/4/2021 DRILLED BY: ORL - AGNW/DW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	2-2-3	5			Orange brown fine SAND [SP]						
	2-2-2	4			– loose						
5	2-3-3	6			– orange		4	2			
10	3-3-5	8									
					– light orange						
15											
20	4-5-5	10			BORING TERMINATED AT 20.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED, NE = NOT ENCOUNTERED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.6

BORING I.D.: **B-06** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/4/21
WATER TABLE (ft): NE DATE FINISHED: 10/4/21
DATE OF READING: 10/4/2021 DRILLED BY: ORL - AGNW/DW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	6-5-6	11			Medium dense brown orange fine SAND [SP]						
	6-5-4	9			– loose, orange brown						
5	3-3-3	6			– orange						
	3-4-3	7									
	3-3-3	6									
10	4-5-4	7									
					– light orange						
15	3-3-3	6									
					– light tan brown						
20	5-4-5	9			BORING TERMINATED AT 20.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED, NE = NOT ENCOUNTERED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.7

BORING I.D.: **R-01** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/2/21
WATER TABLE (ft): NE DATE FINISHED: 10/2/21
DATE OF READING: 10/2/2021 DRILLED BY: ORL - AGNW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	4-4-4	8			Loose orange fine SAND [SP]						
	4-4-5	9									
5	3-4-3	7					4	1			
	4-4-5	9									
	5-6-6	12			– medium dense						
10	7-6-7	13									
					BORING TERMINATED AT 10.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

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PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.8

BORING I.D.: **R-02** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/2/21
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DATE OF READING: 10/2/2021 DRILLED BY: ORL - AGNW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	4-3-4	7			Loose orange brown fine SAND [SP]						
	4-4-4	8									
5	2-2-3	5					3	2			
	4-4-5	9									
	3-3-3	6									
10	3-4-3	7									
	4-4-5	9									
15											
20					BORING TERMINATED AT 10.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED, NE = NOT ENCOUNTERED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.9

BORING I.D.: **R-03** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/2/21
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DATE OF READING: 10/2/2021 DRILLED BY: ORL - AGNW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	7-10-11	21			Medium dense orange fine SAND [SP]						
	7-6-4	11			– loose						
5	3-4-5	7									
	2-2-3	5									
	3-3-3	6									
10	2-2-4	6									
15	3-3-4	7									
20	4-2-2	4			BORING TERMINATED AT 10.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.10

BORING I.D.: **R-04** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/4/21
WATER TABLE (ft): NE DATE FINISHED: 10/4/21
DATE OF READING: 10/4/2021 DRILLED BY: ORL - AGNW/DW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	5-6-8	14			Medium dense orange brown fine SAND [SP]						
	4-5-6	11			– orange						
5	2-2-2	4			– loose		4	3			
	2-2-3	5									
	2-3-3	6									
10	3-4-4	8									
15											
20					BORING TERMINATED AT 10.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED, NE = NOT ENCOUNTERED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.11

BORING I.D.: **R-05** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/2/21
WATER TABLE (ft): NE DATE FINISHED: 10/2/21
DATE OF READING: 10/2/2021 DRILLED BY: ORL - AGNW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	5-6-6	12			Medium dense brown fine SAND [SP]						
	7-10-8	18			– orange						
5	5-4-4	8			– loose						
	3-3-3	6									
	3-3-3	6									
10	3-4-3	7									
15											
20					BORING TERMINATED AT 10.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED, NE = NOT ENCOUNTERED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.12

BORING I.D.: **R-06** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 10/2/21
WATER TABLE (ft): NE DATE FINISHED: 10/2/21
DATE OF READING: 10/2/2021 DRILLED BY: ORL - AGNW
EST. SHOWT (ft): +10.0 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
	6-7-7	14			Medium dense orange brown fine SAND [SP]						
	7-6-7	13			– orange						
5	10-7-6	13			– loose						
	3-3-4	7									
	3-2-3	5									
10	4-4-4	8									
15											
20					BORING TERMINATED AT 10.0 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.13

BORING I.D.: **HA-01** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 11/1/21
WATER TABLE (ft): 4.5 DATE FINISHED: 11/1/21
DATE OF READING: 11/1/2021 DRILLED BY: LES - ORLANDO
EST. SHOWT (ft): 4.5 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
					Brown fine SAND with clay [SP-SC]						
					Orange brown fine SAND [SP]						
5			4.5				1	3			
10					Brown fine SAND with clay [SP-SC]						
					BORING TERMINATED AT 6.5 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.14

BORING I.D.: **HA-02** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 11/1/21
WATER TABLE (ft): 5.0 DATE FINISHED: 11/1/21
DATE OF READING: 11/1/2021 DRILLED BY: LES - ORLANDO
EST. SHOWT (ft): 4.5 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
					Brown fine SAND with clay [SP-SC]						
					Light orange brown fine SAND [SP]						
5			5.0				2	3			
10					Dark brown fine SAND with clay [SP-SC]						
					BORING TERMINATED AT 6.5 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.15

BORING I.D.: **HA-03** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 11/1/21
WATER TABLE (ft): 4.5 DATE FINISHED: 11/1/21
DATE OF READING: 11/1/2021 DRILLED BY: LES - ORLANDO
EST. SHOWT (ft): 4.5 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
					Brown fine SAND with clay [SP-SC]						
					Light orange brown fine SAND [SP]						
5			4.5				2	3			
10					Brown fine SAND with clay [SP-SC]						
					BORING TERMINATED AT 6.5 FEET						

UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT: GEOTECHNICAL EXPLORATION
WALMART OUTPARCEL LB #41 MT. DORA
LAKE COUNTY, FLORIDA

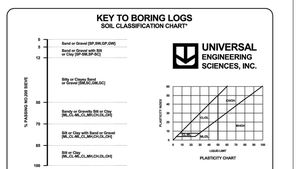
CLIENT: CASTO SOUTHEAST REALTY SERVICES
LOCATION: SEE BORING LOCATION PLAN
REMARKS: SHOWT = SEASONAL HIGH GROUNDWATER TABLE, N.S. = NOT SURVEYED

PROJECT NO.: 0130.2100424.0000
REPORT NO.: 1603750
PAGE: B-2.16

BORING I.D.: **HA-04** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:
G.S. ELEVATION (ft): N.S. DATE STARTED: 11/1/21
WATER TABLE (ft): 5.0 DATE FINISHED: 11/1/21
DATE OF READING: 11/1/2021 DRILLED BY: LES - ORLANDO
EST. SHOWT (ft): 4.5 TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER 6" INCREMENT	N BLOWS / FT	W.T.	GRAPHIC LOG	DESCRIPTION	.080 (%)	MC (%)	ATTERBERG LIMITS LL	PI	K (FT/DAY)	ORG. CONT. (%)
0											
					Brown fine SAND with clay [SP-SC]						
					Orange brown fine SAND [SP]						
5			5.0				2	3			
10					Orange brown fine SAND with clay [SP-SC]						
					BORING TERMINATED AT 6.5 FEET						

KEY TO BORING LOGS
SOIL CLASSIFICATION CHART



UNIVERSAL ENGINEERING SCIENCES, INC.

GROUP NAME AND SYMBOL

COARSE GRAINED SOILS		FINE GRAINED SOILS	HIGHLY ORGANIC SOILS
POORLY GRADED SANDS (SP)	WELL-GRADED GRAVELS (GW)	INORGANIC SILTS SLIGHT PLASTICITY (ML)	ORGANIC SILTS/CLAYS LOW PLASTICITY (OL)*
POORLY GRADED SANDS WITH SILT (SP-SM)	POORLY GRADED GRAVELS (GP)	INORGANIC SILTY CLAY LOW PLASTICITY (CL-ML)	ORGANIC SILTS/CLAY MEDIUM TO HIGH PLASTICITY (OH)*
POORLY GRADED SANDS WITH CLAY (SP-SC)	POORLY GRADED GRAVELS WITH SILT (GP-GM)	INORGANIC CLAYS LOW TO MEDIUM PLASTICITY (CL)	PEAT, HUMUS, SWAMP SOILS HIGHLY ORGANIC SOILS (PT)*
SILTY SANDS (SM)	POORLY GRADED GRAVELS WITH CLAY (GP-GC)	INORGANIC SILTS HIGH PLASTICITY (MH)	
SILTY SANDS (SC)	SILTY GRAVELS (GM)	INORGANIC CLAYS HIGH PLASTICITY (CH)	
SILTY AND CLAYEY SANDS (SC-SM)	CLAYEY GRAVELS (GC)	*HIGHLY ORGANIC SOILS MAY BE VISUALLY IDENTIFIED AS ABOVE, BUT SHOULD BE CONFIRMED BY LABORATORY TESTING.	

MANUAL CLASSIFICATION IN ACCORDANCE WITH ASTM D 2487 - UNIFIED SOIL CLASSIFICATION SYSTEM.

RELATIVE DENSITY
(SAND AND GRAVEL)
VERY LOOSE - 0 to 4 Blows/ft.
LOOSE - 5 to 10 Blows/ft.
MEDIUM DENSE - 11 to 30 Blows/ft.
DENSE - 31 to 50 Blows/ft.
VERY DENSE - More than 50 Blows/ft.

CONSISTENCY
(SILT AND CLAY)
VERY SOFT - 0 to 3 Blows/ft.
SOFT - 4 to 5 Blows/ft.
FIRM - 6 to 10 Blows/ft.
STIFF - 11 to 15 Blows/ft.
VERY STIFF - 16 to 30 Blows/ft.
HARD - more than 30 Blows/ft.

MISCELLANEOUS SYMBOLS
ENCOUNTERED WATER TABLE
STABILIZED WATER TABLE
PERCENT PASSING NO.200 SIEVE
MOISTURE CONTENT, %
SPOON ADVANCED DUE TO WEIGHT OF RODS AND/OR HAMMER

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

B-3

NOTE:
THESE BORING LOGS WERE PROVIDED BY UNIVERSAL ENGINEERING SERVICES, DECEMBER 2021 AND IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

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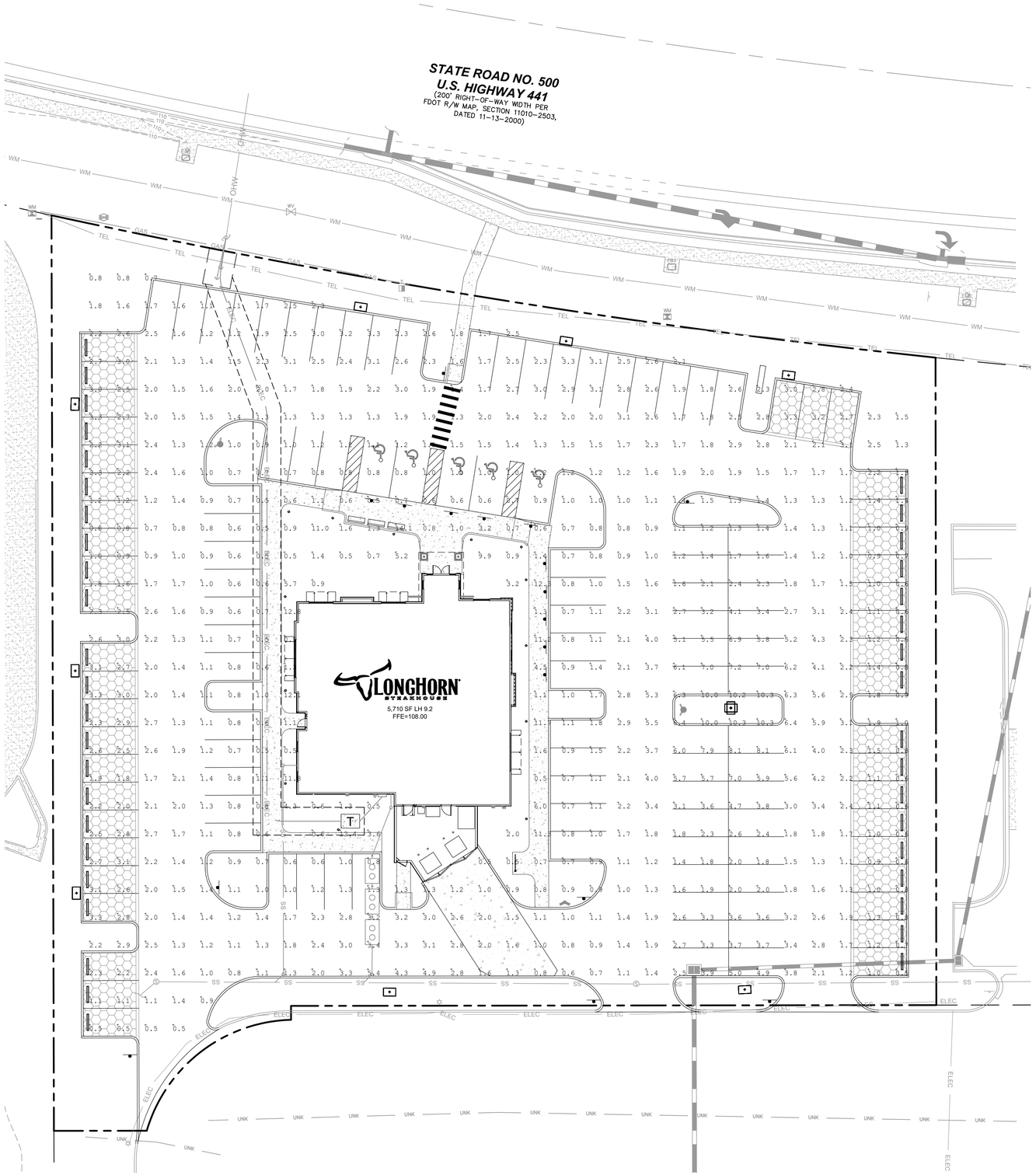
REGISTRY NO. 35106
KHA PROJECT # 047916133

LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
Restaurant #:	5662

LONGHORN STEAKHOUSE MOUN



LONGHORN STEAKHOUSE - PROPOSED PARKING LOT LIGHTING

Luminaire Schedule

Symbol	Qty	Label	Arrangement	LLF	Long. Class
	11	PWY-EDG-5M-xx-02-E-UH-xx-350-_3	Single	1.000	Short
	1	OSQ-A-XX-4ME-K-30K-ULXXXXX W__4	4 @ 90 Degrees	1.000	Short
	6	OSQ-A-XX-4ME-K-30K-ULXXXXX W_	Single	1.000	Short
	2	OSQ-A-XX-3ME-K-30K-ULXXXXX W_130W_1	Single	1.000	Short

Numeric Summary

Label	CalcType	Units	Avg	Max	Min
LONGHORN PARKING LOT	Illuminance	Fc	2.21	14.1	0.5

Drawing name: K:\VRB_LIDEV\047916 - Darden\133_LH Mt Dora\CADD\PlanSheets\113A-C9.1 PHOTOMETRIC PLAN.dwg C9.1 PHOTOMETRIC PLAN Jul 29, 2022 10:14am by: Liz.Meeks
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KHA PROJECT # 047916133

KEVIN M. ROBERSON
LICENSE
No. 52074
STATE OF FLORIDA
PROFESSIONAL ENGINEER
7/29/2022

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN M. ROBERSON 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.

LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
Restaurant #:	5662

LONGHORN STEAKHOUSE MOUNT DORA

PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING

PHOTOMETRIC PLAN

C9.1

Type ZS3HO

OSQ Series
OSQ™ LED Area/Flood Luminaire – Large

Product Description
The OSQ™ Area/Flood luminaire blends extreme optical control, advanced thermal management and modern, clean aesthetics. Built to last, the housing is rugged cast aluminum with an integral, weathertight LED driver compartment. Versatile mounting configurations offer simple installation. Its slim, low-profile design minimizes wind load requirements and blends seamlessly into the site providing even, quality illumination.
Applications: Parking lots, walkways, campuses, auto dealerships, office complexes, and internal roadways

Performance Summary
NanoOptic® Precision Delivery Grid™ optic

Assembled in the U.S.A. of U.S. and imported parts

Initial Delivered Lumens: Up to 27,103

Efficacy: Up to 139 LPW

CRI: Minimum 70 CRI

CCT: 3000K (+/- 300K), 4000K (+/- 300K), 5700K (+/- 500K)

Limited Warranty[1]: 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

[1]See http://lighting.cree.com/warranty for warranty terms

Accessories

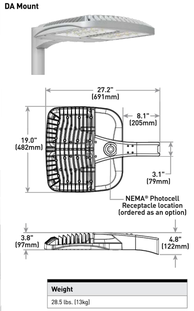
Field-Installed	
Backlight Shield OSQ-BLSLF – Front facing optics OSQ-BLSLR – Rotated optics	**Hand-Held Remote** XA-SENSREM - For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required

Ordering Information
Fully assembled luminaire is composed of two components that must be ordered separately:
Example: **Mount:** OSQ-AASV + **Luminaire:** OSQ-A-NM-2ME-T-40K-UL-SV

Mount (Luminaire must be ordered separately)*			
OSQ- DA			
OSQ-AA Adjustable Arm **OSQ-DA** Direct Arm	**Color Options:**	**SV** Silver **BK** Black	**BZ** Bronze **WH** White

* Reference EPA and pole configuration suitability data beginning on page 7

DA Mount



Weight
28.5 lbs. (13kg)

Luminaire (Mount must be ordered separately)								
OSQ	A	NM	3ME	U	40K	UL	BZ	
Product	Version	Mounting	Optic	Input Power Designator	CCT	Voltage	Color Options	Options
OSQ	A	NM No Mount	**Asymmetric** **2ME*** Type II Medium **3ME*** Type III Medium **4ME*** Type IV Medium **Symmetric** **5ME** Type V Medium **5SH** Type V Short **WSN** Wide Sign **15D** 15° Flood **25D** 25° Flood **40D** 40° Flood **60D** 60° Flood	T 166W U 215W	**30K** 3000K **40K** 4000K **57K** 5700K	**UL** Universal 120-277V **UH** Universal 347-480V	**BK** Black **BZ** Bronze **SV** Silver **WH** White	DIM **0-10V Dimming** - Control by others - Refer to Dimming spec sheet for details - Can't exceed wattage of specified input power designator F **Fuse** - When code dictates fusing, use time delay fuse - Available for U.S. applications only **PML Programmable Multi-Level, up to 40' Mounting Height** - Refer to PML spec sheet for details - Intended for downlight applications at 0° tilt **PML2 Programmable Multi-Level, 10-30' Mounting Height** - Refer to PML spec sheet for details - Intended for downlight applications at 0° tilt R **NEMA® Photocell Receptacle** - Intended for downlight applications with maximum 45° tilt - 3-pin receptacle per ANSI C136.10 - Photocell and shorting cap by others RL **Rotate Left** - LED and optic are rotated to the left - Refer to RR/RL configuration diagram on page 2 for optic directionality RR **Rotate Right** - LED and optic are rotated to the right - Refer to RR/RL configuration diagram on page 2 for optic directionality	**09/08/07/06/05/04/03/02/01 Field Adjustable Output** - Must select 09, 08, 07, 06, 05, 04, 03, 02, or 01 for 1 input power designator - Must select 09, 08, 07, 06, 05, 04, 03, 02, or 01 for U input power designator - Offers full range adjustability - Refer to pages 9-10 for power and lumen values

* Available with Backlight Shield when ordered with field-installed accessory (see table above)

Type ZS4HO

OSQ Series
OSQ™ LED Area/Flood Luminaire – Large

Product Description
The OSQ™ Area/Flood luminaire blends extreme optical control, advanced thermal management and modern, clean aesthetics. Built to last, the housing is rugged cast aluminum with an integral, weathertight LED driver compartment. Versatile mounting configurations offer simple installation. Its slim, low-profile design minimizes wind load requirements and blends seamlessly into the site providing even, quality illumination.
Applications: Parking lots, walkways, campuses, auto dealerships, office complexes, and internal roadways

Performance Summary
NanoOptic® Precision Delivery Grid™ optic

Assembled in the U.S.A. of U.S. and imported parts

Initial Delivered Lumens: Up to 27,103

Efficacy: Up to 139 LPW

CRI: Minimum 70 CRI

CCT: 3000K (+/- 300K), 4000K (+/- 300K), 5700K (+/- 500K)

Limited Warranty[1]: 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

[1]See http://lighting.cree.com/warranty for warranty terms

Accessories

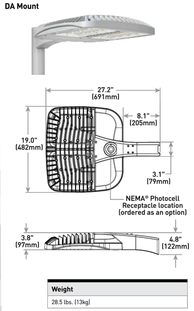
Field-Installed	
Backlight Shield OSQ-BLSLF – Front facing optics OSQ-BLSLR – Rotated optics	**Hand-Held Remote** XA-SENSREM - For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required

Ordering Information
Fully assembled luminaire is composed of two components that must be ordered separately:
Example: **Mount:** OSQ-AASV + **Luminaire:** OSQ-A-NM-2ME-T-40K-UL-SV

Mount (Luminaire must be ordered separately)*			
OSQ- DA			
OSQ-AA Adjustable Arm **OSQ-DA** Direct Arm	**Color Options:**	**SV** Silver **BK** Black	**BZ** Bronze **WH** White

* Reference EPA and pole configuration suitability data beginning on page 7

DA Mount



Weight
28.5 lbs. (13kg)

Luminaire (Mount must be ordered separately)								
OSQ	A	NM	3ME	U		UL	BZ	
Product	Version	Mounting	Optic	Input Power Designator	CCT	Voltage	Color Options	Options
OSQ	A	NM No Mount	**Asymmetric** **2ME*** Type II Medium **3ME*** Type III Medium **4ME*** Type IV Medium **Symmetric** **5ME** Type V Medium **5SH** Type V Short **WSN** Wide Sign **15D** 15° Flood **25D** 25° Flood **40D** 40° Flood **60D** 60° Flood	T 166W U 215W	**30K** 3000K **40K** 4000K **57K** 5700K	**UL** Universal 120-277V **UH** Universal 347-480V	**BK** Black **BZ** Bronze **SV** Silver **WH** White	DIM **0-10V Dimming** - Control by others - Refer to Dimming spec sheet for details - Can't exceed wattage of specified input power designator F **Fuse** - When code dictates fusing, use time delay fuse - Available for U.S. applications only **PML Programmable Multi-Level, up to 40' Mounting Height** - Refer to PML spec sheet for details - Intended for downlight applications at 0° tilt **PML2 Programmable Multi-Level, 10-30' Mounting Height** - Refer to PML spec sheet for details - Intended for downlight applications at 0° tilt R **NEMA® Photocell Receptacle** - Intended for downlight applications with maximum 45° tilt - 3-pin receptacle per ANSI C136.10 - Photocell and shorting cap by others RL **Rotate Left** - LED and optic are rotated to the left - Refer to RR/RL configuration diagram on page 2 for optic directionality RR **Rotate Right** - LED and optic are rotated to the right - Refer to RR/RL configuration diagram on page 2 for optic directionality	**09/08/07/06/05/04/03/02/01 Field Adjustable Output** - Must select 09, 08, 07, 06, 05, 04, 03, 02, or 01 for 1 input power designator - Must select 09, 08, 07, 06, 05, 04, 03, 02, or 01 for U input power designator - Offers full range adjustability - Refer to pages 9-10 for power and lumen values

* Available with Backlight Shield when ordered with field-installed accessory (see table above)

Type ZS5HO

OSQ Series
OSQ™ LED Area/Flood Luminaire – Large

Product Description
The OSQ™ Area/Flood luminaire blends extreme optical control, advanced thermal management and modern, clean aesthetics. Built to last, the housing is rugged cast aluminum with an integral, weathertight LED driver compartment. Versatile mounting configurations offer simple installation. Its slim, low-profile design minimizes wind load requirements and blends seamlessly into the site providing even, quality illumination.
Applications: Parking lots, walkways, campuses, auto dealerships, office complexes, and internal roadways

Performance Summary
NanoOptic® Precision Delivery Grid™ optic

Assembled in the U.S.A. of U.S. and imported parts

Initial Delivered Lumens: Up to 27,103

Efficacy: Up to 139 LPW

CRI: Minimum 70 CRI

CCT: 3000K (+/- 300K), 4000K (+/- 300K), 5700K (+/- 500K)

Limited Warranty[1]: 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

[1]See http://lighting.cree.com/warranty for warranty terms

Accessories

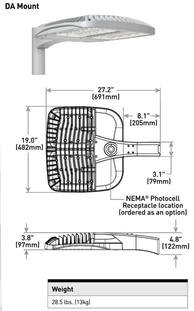
Field-Installed	
Backlight Shield OSQ-BLSLF – Front facing optics OSQ-BLSLR – Rotated optics	**Hand-Held Remote** XA-SENSREM - For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required

Ordering Information
Fully assembled luminaire is composed of two components that must be ordered separately:
Example: **Mount:** OSQ-AASV + **Luminaire:** OSQ-A-NM-2ME-T-40K-UL-SV

Mount (Luminaire must be ordered separately)*			
OSQ- DA			
OSQ-AA Adjustable Arm **OSQ-DA** Direct Arm	**Color Options:**	**SV** Silver **BK** Black	**BZ** Bronze **WH** White

* Reference EPA and pole configuration suitability data beginning on page 7

DA Mount



Weight
28.5 lbs. (13kg)

Luminaire (Mount must be ordered separately)								
OSQ	A	NM	3ME	U		UL	BZ	
Product	Version	Mounting	Optic	Input Power Designator	CCT	Voltage	Color Options	Options
OSQ	A	NM No Mount	**Asymmetric** **2ME*** Type II Medium **3ME*** Type III Medium **Symmetric** **5ME** Type V Medium **5SH** Type V Short **WSN** Wide Sign **15D** 15° Flood **25D** 25° Flood **40D** 40° Flood **60D** 60° Flood	T 166W U 215W	**30K** 3000K **40K** 4000K **57K** 5700K	**UL** Universal 120-277V **UH** Universal 347-480V	**BK** Black **BZ** Bronze **SV** Silver **WH** White	DIM **0-10V Dimming** - Control by others - Refer to Dimming spec sheet for details - Can't exceed wattage of specified input power designator F **Fuse** - When code dictates fusing, use time delay fuse - Available for U.S. applications only **PML Programmable Multi-Level, up to 40' Mounting Height** - Refer to PML spec sheet for details - Intended for downlight applications at 0° tilt **PML2 Programmable Multi-Level, 10-30' Mounting Height** - Refer to PML spec sheet for details - Intended for downlight applications at 0° tilt R **NEMA® Photocell Receptacle** - Intended for downlight applications with maximum 45° tilt - 3-pin receptacle per ANSI C136.10 - Photocell and shorting cap by others RL **Rotate Left** - LED and optic are rotated to the left - Refer to RR/RL configuration diagram on page 2 for optic directionality RR **Rotate Right** - LED and optic are rotated to the right - Refer to RR/RL configuration diagram on page 2 for optic directionality	**09/08/07/06/05/04/03/02/01 Field Adjustable Output** - Must select 09, 08, 07, 06, 05, 04, 03, 02, or 01 for 1 input power designator - Must select 09, 08, 07, 06, 05, 04, 03, 02, or 01 for U input power designator - Offers full range adjustability - Refer to pages 9-10 for power and lumen values

* Available with Backlight Shield when ordered with field-installed accessory (see table above)

Type Pole

Square Steel Poles
CL-SSP Series

CATALOG #	SIZE/GAUGE	HEIGHT
CL-SSP	4011 – 4" Square/11ga (available on 18', 20' and 25' poles) 5011 – 5" Square/11ga (available on 25' poles) 5007 – 5" Square/7ga (available on 25' and 30' poles)	18 – 18' 20 – 20' 25 – 25' 30 – 30'

MOUNTING	FINISH	SHAFT
OT – Open Top TT – Tenon Top D1 – Drilled for Single D2 – Drilled for Double at 180˚ D3 – Drilled for Double at 90˚ D5 – Drilled for Triple at 90˚ D6 – Drilled for Quad at 90˚	Polyester Powder Coat Finish BZ – Bronze SV – Silver BK – Black WH – White	• ASTM A-500 Grade B carbon steel • Minimum 46,000 P.S.I. yield strength • Drilled top includes removable cap • Tenon top includes 2-3/8" O.D. x 4.0" H x .25" Thick tenon

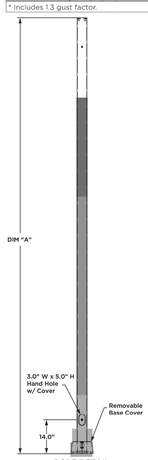
BASE PLATE	ANCHOR BOLTS	HAND HOLE
• ASTM A-36 hot rolled carbon steel • Minimum 36,000 P.S.I. yield strength • Removable Base Cover • 8.0" Square Base Plate (4" Poles) • 11.0" Square Base Plate (5" Poles) • 0.75" Thick Base Plate (11ga. Poles) • 1.0" Thick Base Plate (7ga. Poles) • ø8.5" Bolt Circle (4" Poles) • ø10.5–11.5" Bolt Circle (5" Poles) • 1.0" Bolt Holes (11ga. Poles) • 1.25" Bolt Holes (7ga. Poles) • 5.66" – 6.36" Bolt Pattern Measurement (4" poles) • 7.43" – 8.13" Bolt Pattern Measurement (5" Poles)	• F1554 Grade • Minimum 55,000 P.S.I. yield strength • Fully galvanized • 20.0" L x 0.75" Dia. J Bolts (11ga. Poles) • 40.0" L x 1.0" Dia. J Bolts (7ga. Poles) • Includes two hex nuts and two flat washers	• 3.0" x 5.0" Hand Hole w/ Cover • Located 14.0" above base

ACCESSORIES	WARRANTY
Templates CS006S05 (4"/11ga Poles) CS006S06 (5"/11ga Poles) CS006S07 (5"/7ga Poles) **Anchor Bolts** CZ066X01RO (11ga Poles) CZ066X03RO (7ga Poles)	One-year limited warranty. Certain exclusions apply. For details, visit www.cree.com/lighting/ILS.

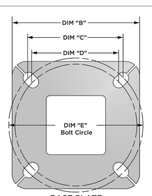
POLE DATA

Pole Selection	DIMENSIONS									EPA/WINDLOADING (sq. ft.)			
	Pole Size	Pole Gage	DIM "A" Pole Height	DIM "B" Base Plate	DIM "C" Min. Bolt Pattern	DIM "D" Max. Bolt Pattern	DIM "E" Bolt Circle	DIM "F" Anchor Bolt Diameter	DIM "G" Anchor Bolt Height	DIM "H" Anchor Bolt Width	80°	90°	100°	120°
CL-SSP-4011-18	4"	11ga.	18'	8" SQ.	5.66"	6.36"	ø8.5"	0.75"	17"	3"	11.1	9.0	7.2	5.1
CL-SSP-4011-20	4"	11ga.	20'	8" SQ.	5.66"	6.36"	ø8.5"	0.75"	17"	3"	9.9	7.3	5.8	4.2
CL-SSP-4011-25	4"	11ga.	25'	8" SQ.	5.66"	6.36"	ø8.5"	0.75"	17"	3"	4.1	3.3	2.6	1.8
CL-SSP-5011-25	5"	11ga.	25'	11" SQ.	7.43"	8.13"	ø10.5–11.5"	0.75"	17"	3"	8.5	6.9	5.6	4.0
CL-SSP-5007-25	5"	7ga.	25'	11" SQ.	7.43"	8.13"	ø10.5–11.5"	1"	37"	4"	17.5	14.2	11.4	8.1
CL-SSP-5007-30	5"	7ga.	30'	11" SQ.	7.43"	8.13"	ø10.5–11.5"	1"	37"	4"	10.6	8.6	6.9	4.9

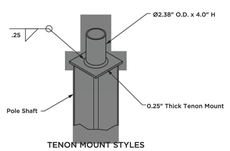
* Includes 1.3 gust factor



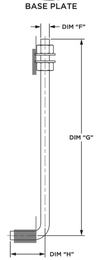
POLE DETAIL



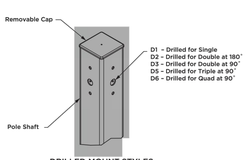
BASE PLATE



TENON MOUNT STYLES



ANCHOR BOLT



DRILLED MOUNT STYLES

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KEVIN L. ROBERSON ENGINEER
LICENSE No. 52074 STATE OF FLORIDA PROFESSIONAL
7/29/2022

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN M ROBERSON 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.

LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
1 SITE PLAN COMMENTS	5/27/22
Restaurant #:	5662

LONGHORN STEAKHOUSE
MOUNT DORA

PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING
LIGHTING DETAILS

C9.2

Drawing name: K:\VRB_LDEV\047916 – Darden\13-Lh Mt Dora\CADD\PlanSheets\113B-C9.2 LIGHTING DETAILS 113B-C9.2 LIGHTING DETAILS.dwg Jul 29, 2022 10:14am by: LizMeeks
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Drawing name: K:\VRB_LDEV\047916 - Darden\133_LH Mt Dora\CADD\PlanSheets\113-CS1 DARDEN CIVIL SPECIFICATIONS.dwg Jul 29, 2022 10:14pm by: LizMeeks
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SECTION 02210
SITE EARTHWORK

Part 1.00 General

1.01 WORK INCLUDED
A. The work specified in this Section consists of furnishing all labor, materials and equipment, and performing all operations required to complete the site preparation, earthwork and grading as shown on the Drawings and as specified herein. This work shall include, but not be limited to: site clearing and grubbing; root-raking; stripping; removal of muck and other unsuitable material; proof-rolling; earthwork for site grading, including dewatering, excavation, filling or backfilling, and compaction; supplying approved fill material; final site grading; and other related requirements.
B. The operations specified herein shall be performed within the limits indicated for site grading and other construction, as shown on the Drawings.
C. The Contractor shall provide adequate protection against construction activity for all existing structures and utilities, above the surface or underground, including trees that are to remain, and other construction activities concurrently occurring on the site.
D. Should damage occur to any structure, utility or other facility from these construction activities, repair or replacement to a condition equal to or better than the original shall be immediately made by the Contractor, at no cost to the Owner.
E. The Contractor must determine for himself the total volume of all fill materials required for the project site.
F. Definitions:
1. Open Areas: Open areas shall be those areas that do not include building sites, paved areas, and street right-of-way and parking areas.
2. Maximum Dry Density: Maximum dry soil unit weight in pounds per cubic foot at optimum moisture content of a specific material as determined by ASTM Test Designation D-1557 (Modified Proctor).
3. Optimum Moisture Content: Percentage of water in a specific soil material at maximum dry density.

1.02 RELATED WORK
A. Per local Transportation Standard Specifications for Highway and Bridge Construction, latest edition.

1.03 REFERENCE INFORMATION
A. The following pertinent geotechnical investigation report has been prepared. The Contractor shall perform his own site observations/investigations as necessary and obtain and review the contents of the referenced report to become familiar with the site subsurface soil and groundwater conditions. The requirements of the geotechnical report shall prevail where discrepancies between the geotechnical report and the specifications exist.

1.04 QUALITY ASSURANCE
A. Testing of materials to be used for fill, determination of unsuitable soil limits, density testing to adequately confirm the specified compaction, proof-rolling and strip subgrade observations shall be made by a Geotechnical Consultant approved by the Owner, at the expense of the Owner, with reports therefrom submitted to the Owner documenting that the testing and compaction requirements as outlined in this specification have been satisfied. If initial density tests fail to meet the specifications, retesting shall be performed by the Geotechnical Consultant at the expense of the Contractor. Said tests shall be performed for each lift of fill, if more than one is required for the depth of fill, and shall be taken where directed by the Engineer. Should test results be unsatisfactory, the Contractor shall recompact the lift and allow the additional tests by the Geotechnical Consultant for the area in question.
B. A sufficient time shall be allotted for the Geotechnical Consultant to perform all control tests necessary to determine that proper fill material is being used and compaction is being obtained. The Contractor shall schedule filling operations so as to permit the making of the necessary control tests for each layer prior to the placing of subsequent layers. All fill lifts and all stripped or cut subgrades (in pavement and building areas) shall be tested on a general schedule of one (1) test per 7,500 to 10,000 square feet. Building floor slab subgrade shall be tested on a general schedule of one (1) test per 2,500 square feet. More frequent testing may be required, particularly in areas with previous failing density tests.

Part 2.00 Products

2.01 MATERIALS
A. Suitable materials for fills shall be classified as A-1, A-3, A-2-4, or A-2-6 in accordance with AASHTO Designation M-145 and shall be free from vegetation, organic material, debris, trash, roots and similar deleterious material. Suitable materials for imported fills shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145 and shall consist of clean, granular soils and be free from vegetation, organic material, debris, trash, roots and similar deleterious material. Not more than 15 percent by weight of fill material shall pass the U.S. No. 200 sieve.
The use of fill materials from on-site excavations, which may contain more than 15 percent fines passing the No. 200 sieve, shall be approved in writing by the Owner provided Geotechnical Consultant before any reuse. If allowed, the location of placement and additional handling requirements for use of any material meeting the above specified requirements for suitable materials, must be documented in writing by the testing laboratory and approved by the Owner prior to placement of said material.
B. Suitable Material To Be Placed In Water: Suitable material for fills to be placed in water shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145. Not more than 15 percent by weight of fill material shall pass the U.S. No. 100 sieve.
C. Unsuitable materials are classified as A-2-5, A-2-7, A-4, A-5, A-6, A-7 and A-8 in accordance with AASHTO Designation M-145.

Part 3.00 Execution

3.01 PREPARATION
A. Clearing, Grubbing, and Stripping
1. Clearing, grubbing, and stripping shall be performed in the areas where required, including ditches, paved areas, areas to be excavated, areas where fill will be placed, and where structures will be erected. It shall include the complete removal of vegetation, including dewatering, disposal of all timbers, brush, stumps, weeds, rubbish, root-laden topsoil, and all other obstructions resting on or protruding through the surface of the existing ground. Where excavation is designated within the areas to be cleared and grubbed, all stumps, roots and deleterious material thereby exposed, protruding through the surface of the bottom of the excavation, shall be excavated to a depth of two feet minimum below the excavated surface and replaced with suitable compacted backfill. Within areas where clearing and grubbing is to be done, all stumps, roots, and other debris projecting through or appearing on the surface of the ground shall be removed to a depth of one (1) foot below the surface. Cleared, grubbed and stripped areas shall be inspected and approved by the Owner's Geotechnical Consultant prior to any subsequent excavation or filling operations.
2. Discing shall be performed within the limits of construction. Designated discing areas shall be mixed and reworked to remove unsuitable soils prior to discing operations. The designated areas shall be disced two times such that the first pass is in a direction 90 degrees opposite the second pass and discing operations shall be completed to a depth of 12-inches. Surficial soils to be removed from the disced areas shall be placed only in non-structural or embankment/berm areas approved by the Engineer-soils in disced areas to be filled shall be tested for organic or filling by the Owner's Geotechnical Consultant prior to any in, or filling. If the organic content exceeds 10 percent it shall not be to be paved, or 5 percent in building areas, the surficial disced soils shall be removed and placed in non-structural areas as indicated above.
3. Selective clearing shall be performed in areas shown on the Drawings or as required by the Owner, in order to save selected trees. The tree areas designated to be saved shall be protected from construction equipment by the Contractor in a manner as shown on the Drawings or as approved by the Engineer.
4. Areas to be excavated or filled upon shall be stripped of grass, roots, and any unsuitable material, if present, shall be completely removed. Stripped materials suitable for topsoil shall be raked to remove materials larger than 2 inches in diameter and stockpiled on-site, as directed by the Owner.
5. Timber, stumps, roots, brush, rotten wood and other refuse and unsuitable materials from clearing, grubbing, and stripping operations shall be disposed of either by burning or removal to an approved legal dump area. Burning on-site is permitted provided the Contractor obtains all necessary permits and provides copies to the Owner. Burning, if permitted, shall be done at locations and at times as directed, in a manner that will avoid all hazards such as damage to existing structures, construction progress, trees and vegetation, and interference with traffic.
Disposal by burning shall be kept under constant attendance until the fires have burned out or have been extinguished and shall be done in compliance with all State and local laws and regulations relative to the building of fires.

3.02 PERFORMANCE
A. Excavation
1. Excavation shall conform to the limits indicated on the Drawings or specified herein. This work shall include shaping and sloping and other work necessary in bringing the earthwork to the required grade, alignment and cross-section.
2. All suitable materials removed from excavation areas shall be used as far as practicable in future pavement or building areas, or in the formation of embankments, subgrades, shoulders, building sites and other places as shown on the Drawings, or as directed by the Engineer. All suitable excavated material shall be considered property of the Owner and shall not be removed from the property without permission of the Owner. Excess excavated suitable material shall be stockpiled on-site at a location approved by the Owner and Engineer.
3. Suitable on-site excavated materials containing silty, and slightly clayey to clayey fine sands shall be sufficiently dried by surface spreading and discing if necessary, or by mixing with cleaner fine sands prior to reuse/placement in fill areas, as directed by the Owner's Geotechnical Consultant.
4. Existing or remaining silty and slightly clayey to clayey fine sand materials, as determined by the Owner's Geotechnical Consultant, at or below the area of the building slab or foundations shall be removed and replaced (if necessary) to a depth of 24-inches (minimum), as directed by the Owner's Geotechnical Consultant, with suitable compacted structural materials.
5. Muck, organic, silty and clayey sediments, or other unsuitable materials encountered under fill areas, structures, pavement areas, underground utilities and/or as shown on the drawings, shall be excavated and removed as directed by the Owner's Geotechnical Consultant. Removal of unsuitable material in areas where buildings are to be constructed shall include the area under the building and extend to a minimum of ten (10) feet beyond the building limits, or as directed by the Engineer. Removal of unsuitable material in areas where pavement is to be placed shall include the area under the surfacing and extend to a minimum of five (5) feet beyond the outside edges, or as directed by the Owner's Geotechnical Consultant. At locations where underground utilities (piping, etc.) are to be installed with a top (crown) elevation above the bottom surface of any unsuitable material, removal shall be completed to a minimum width of three (3) feet outside the utility alignment.
6. Muck, organic, silty and clayey sediments, and other unsuitable material excavated under the requirements of this Section shall be disposed of off-site, unless otherwise indicated on the Drawings or as directed by the Owner, at the Contractor's expense.

B. Fills and Compaction
1. Suitable backfill or fill material shall be provided, placed and compacted where unsuitable material has been removed, and as required to perform construction and elevate the site to the finish grades, as shown on the Drawings. Materials to be used for fill shall be approved by the Owner's Geotechnical Consultant prior to their placement. If a suitable fill material source is available within the limits of the project, the Owner may allow the use thereof and shall designate the borrow site whereby the Contractor may acquire the fill. If a suitable fill material source is not available on the project site; the Contractor shall furnish the necessary additional suitable fill material to complete the work to the lines and grades indicated on the Drawings. Off-site fill sources shall be tested and approved by the Owner's Geotechnical Consultant prior to moving any material on-site.
2. Areas excavated to building and pavement subgrade elevations, and excavated areas required to be filled shall be leveled, compacted, and tested prior to placement of fill material. Compaction shall be by means of a vibrating drum roller or by other suitable methods capable of completing the work in an efficient manner. The vibratory drum roller shall have a- minimum static drum weight of 20,000 pounds and be capable of exerting a minimum impact energy of 36,000 pounds. Soft, pumping, disturbed, unsuitable or yielding soils encountered during compaction shall be brought to the attention of the Owner's Geotechnical Consultant to determine whether over-excavation and replacement, of any of these types of materials is required. A minimum of 10 overlapping passes in a criss-cross pattern shall be made with the vibratory drum roller to initially compact the subject areas. Compaction shall continue until a minimum density equivalent to 95 percent of the Maximum Modified Proctor Density is achieved in accordance with ASTM D-1557. Compaction shall be tested for a minimum depth of three (3) foot below the excavated or stripped surface in pavement areas, and a minimum of three (3) feet below building areas.
3. The backfill and fill materials shall be placed and compacted as specified hereinafter. Fills shall be constructed of approved suitable materials placed at a moisture content near optimum in successive uniform lifts of not more than twelve (12) inches in depth loose measure, and compacted by the use of a vibrating steel wheel roller as described above, or other suitable method(s). Thickness of layers may be increased (to no greater than 18 inches loose) provided the equipment and methods used are proven by field density testing to be capable of compacting thicker layers to specified densities. Layer thickness shall be decreased if equipment and methods used are proven to be incapable of compacting layers to specified densities. Where applicable, the first lift may be up to eighteen (18) inches above the groundwater table, if approved by the Owner's Geotechnical Consultant to serve as a working platform for the compaction equipment. The use of this procedure does not relieve the Contractor of the requirement to achieve the specified density for a minimum depth of 1 or 2 feet below the natural grade depending on the area.
4. Fills shall be compacted to a density of not less than 95 percent of its maximum Modified Proctor Density as determined by ASTM D-1557. The subgrade materials immediately below the building floor slab, footings, pavement bases, subbase, and base shall be re-compacted to a minimum of 98 percent of ASTM D-1557 just prior to the Darden Concept building slab, footing or pavement subbase construction. Should tests indicate unsatisfactory results, compaction procedures shall continue until subsequent tests indicate the stipulated requirements.
5. Backfill and fill material adjacent to footings or walls below grade shall be carefully compacted with a light rubber-tired roller or vibratory plate compactor to avoid damaging the footings or walls and shall be compacted to 98 percent of ASTM D-1557 around footings (and slabs), and to 95 percent of ASTM D-1557 against below grade walls. Suitable sand fills may be placed in footing excavations above the footing level, and in other areas which are expected to provide support or foundation embedment constraint (including all pipeline or utility excavations within the structure, pavement and pavement areas), shall be placed in loose lifts not exceeding 12 inches and shall be compacted to a minimum of 98 percent of the maximum modified Proctor dry density (ASTMD-1557).
6. Suitable fill material containing silty, slightly clayey to clayey fine sand materials which exhibit characteristics of high plasticity or wetness, spongy and/or unstable conditions, shall be sufficiently air-dried or adequately mixed with cleaner fine sands prior to use for fill. Placement of these materials in fill areas shall be directed by the Owner's Geotechnical Consultant, and such fill materials shall be positioned within lower lift levels of high fill areas, with a top elevation a minimum of four (4) feet below any proposed pavement surface or structure foundation or slab, unless otherwise approved by the Owner's Geotechnical Consultant.
7. Fine sands to slightly silty fine sands classified as suitable fill materials, as determined by the Owner's Geotechnical Consultant, excavated from on-site areas shall be placed in the upper levels in all fill areas.
8. The preceding specified placement and compaction shall be required within the specified areas, and to the depths described as follows:
a. Structures (foundations and slabs): Under the complete structure and to a dimension ten (10) feet outside the maximum perimeter of the structure, from the pre-compacted surface up to an elevation specifically required for placement of the structure slab or foundation.
b. Pavement: To the pavement subgrade and extending a minimum five (5) feet beyond the outside edges thereof; from the surface of approved clean in-place soil up to the bottom elevation of the base or subbase course. Soil material within 18 inches of the bottom of the subbase course, whether in situ or filled material, shall have not more than 12 percent passing the No. 200 sieve (ASTM D-1557).
c. Sidewalks: For a width three (3) feet beyond each side of the walk; from the surface of approved clean in-place soil to the finish grade.
d. Utilities (piping): For (3) feet beyond each side of the utility; from the surface of approved clean in-place soil to the finish grade.
9. In areas of fill placement requiring greater than four feet or more of structural fill (where building structures or pavement are proposed), the completed fill area shall be allowed to settle for a period of not less than 60 days prior to construction of the building foundation construction or construction of the pavement base or subbase course. Settlement plates shall be installed by the Owner's Geotechnical Consultant for monitoring purposes in higher fill areas.
10. The Contractor shall maintain the surface of the fill to prevent ponding or collection of surface runoff and subsequent saturation of compacted or uncompacted layers. When inclement weather can reasonably be expected during off-shift hours, any uncompacted layer shall be rolled to provide a surface seal. During periods of inclement weather, the Contractor shall control surface runoff in such a manner as to prevent erosion of the fill or slope surfaces.
11. Should suitable excavated material exceed the backfill and fill requirements, said excess suitable fill shall be hauled off site to a location approved by the Owner.
12. Some types of excavated unsuitable material may be adequately mixed with suitable fill material and may be used in open areas of the project if approved in writing by the Owner's Geotechnical Consultant and Engineer. Unsuitable material to be mixed shall be raked to remove all materials larger than two (2) inches in diameter prior to mixing. In no case shall such mixed material be used to fill under structures, pavements, sidewalks or utilities. The extent of mixing and suitability of the material to be mixed shall be approved by the Owner's Geotechnical Consultant and the Engineer.
13. Mixed fill material, as specified above, shall be placed in layers of not more than 12 inches in depth measured loose. When dry or as directed by the testing laboratory or Engineer, this layer shall be disced and harrowed to break up large pieces of the material. The above density requirements shall not apply to unsuitable material placed.

C. Grading
1. Grading shall be performed over the total construction area, as indicated on the Drawings. This work shall include all cutting and filling necessary in order to comply with the elevations shown on the Drawings.
2. The final finish grading shall provide a surface, which is within 0.1 foot of the required elevations shown on the Drawings, unless otherwise approved by the Engineer. Finished grades shall be uniform between final contours, and shall not include abrupt changes in grade, potholes, or eroded areas. Where grading meets with the existing surface, a smooth interface shall be provided. Roundings shall be provided at the top and bottom of embankments, dikes or other breaks in grade. Around buildings and other structures, the finish grade shall slope away from walls in all directions at ¼-inch per foot minimum for at least ten (10) feet. Allowance shall be made in finish grading elevations for sodding or other surface treatment, as indicated on the Drawings.

END OF SECTION

SECTION 02220
STRUCTURE EXCAVATION AND BACKFILL

Part 1.00 General

1.01 WORK INCLUDED
A. The work specified in this Section consists of furnishing all labor, materials and equipment, and performing all operations required to complete the site preparation, earthwork and grading as shown on the Drawings and as specified herein for construction of the storm drainage, sanitary sewer, and water distribution system structures. This work shall include, but not be limited to site clearing and grubbing; stripping; dewatering; removal of muck and other unsuitable material; earthwork for grading around structures; excavation; backfilling; compaction; supplying approved fill material; final grading; and other related requirements.
B. The operations specified herein shall be performed within the limits indicated for site grading and other construction, as shown on the Drawings.
C. The Contractor shall provide adequate protection against construction activity for all existing structures and utilities, above the surface or underground, including trees that are to remain, and other construction activities concurrently occurring on the site.
D. Should damage occur to any structure, utility or other facility from these construction activities, repair or replacement to a condition equal or better than the original shall be immediately made by the Contractor, at no cost to the Owner.
E. Definitions:
1. Maximum Density: Maximum weight in pounds per cubic foot of a specific material as determined by ASTM Test Designation D-1557.
2. Optimum Moisture: Percentage of water in a specific material at maximum density.

1.02 RELATED WORK
A. Section 02210 – Site Earthwork
B. Section 02221– Trenching, Back-filling and Compaction for Utility and Drainage Systems
C. Section 2530 – Dewatering System

1.03 REFERENCE INFORMATION
A. If a geotechnical report pertaining to the site has been prepared, it may be obtained from the Engineer upon request.
B. Contractor may obtain copies of standard specifications from the City, at his own expense, for requirements of related standards.

1.04 QUALITY ASSURANCE
A. Density tests to adequately confirm the specified compaction shall be made by a testing laboratory approved by the Owner, at the expense of the Owner, with reports therefrom submitted to the Owner documenting that the compaction requirements as outlined in this specification have been satisfied. If initial density tests fail to meet the specifications, retesting shall be done at the expense of the Contractor. Said tests shall be performed for each lift of fill, if more than one is required for the depth of fill, and shall be taken where directed by the Engineer. Should test results be unsatisfactory, the Contractor shall recompact the lift and allow additional tests by the Testing Laboratory for the area in question.
B. A sufficient time shall be allotted for the testing laboratory to perform all control tests necessary to determine that proper fill material is being used and compaction is being obtained. The Contractor shall schedule backfilling operations so as to permit the making of the necessary control tests for each layer prior to the placing of subsequent layers.

Part 2.00 Products

2.01 MATERIALS
A. Suitable materials for fills shall be classified as A-1, A-3, A-2-4, or A-2-6 in accordance with AASHTO Designation M-145 and shall be free from vegetation, organic material, debris, trash, roots and similar deleterious material. Suitable materials for imported fills shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145 and shall consist of clean, granular soils and be free from vegetation, organic material, debris, trash, roots and similar deleterious material. Not more than 15 percent by weight of fill material shall pass the U.S. No. 200 sieve.
B. Suitable Material To Be Placed In Water: Suitable material for fill to be placed in water shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145. Not more than 15 percent by weight of fill material shall pass the U.S. No. 100 sieve.
C. Unsuitable materials are classified as A-2-5, A-2-7, A-4, A-5, A-6, A-7 and A-8 in accordance with AASHTO Designation M-145.

Part 3.00 Execution

3.01 PREPARATION
A. Clearing, Grubbing, and Stripping
Clearing, grubbing, and stripping shall be performed in the areas where required for the proper installation of structures at locations shown on the Drawings. It shall include the complete removal of vegetation, disposal of all timbers, brush, stumps, weeds, rubbish, topsoil, and all other obstructions resting on or protruding through the surface of the existing ground.
B. Selective clearing shall be performed in areas shown on the Drawings or as required by the Owner, in order to save plantings, shrubbery, trees, utility poles, or structures. The above items, where designated by the Owner, shall be transplanted, relocated, braced, shored, or otherwise protected and preserved.

3.02 PERFORMANCE
A. Excavation:
1. The Contractor shall perform all excavation of every description and of whatever substances encountered, to the dimensions specified on the Drawings or as directed by the Engineer.
All excavations shall be made in open cut, unless otherwise specified on the Drawings. All existing utilities such as pipes, poles and structures shall be carefully supported and protected from injury, and in case of damage, they shall be immediately replaced at the Contractor's expense.
2. Where trench widths are limited by right-of-way and/or easement widths, property line restrictions, existing adjacent improvements, or other restrictions, trench walls shall be kept vertical, and, if required to protect the safety of workmen, the general public, this or other work or structures, or excavation walls. Excavation for the structures shall be sufficient to provide adequate room for placing the structure and the face of the excavation, sheeting, or bracing, of not less than 2 feet. Materials encountered in the excavation which have a tendency to slough or flow into the excavation, shall be replaced at the Contractor's expense.
3. Excavation for the structures shall be carried to an elevation one (1) foot lower than the subgrade bottom of the structure to provide space for the select backfill material. Any unsuitable material encountered below proposed structure subgrade shall be removed and replaced as directed. Prior to placing the select backfill, the excavation shall be leveled so that it is reasonably uniform over the area to be occupied by the structure.
4. Excavation shall be carried to a sufficient depth to permit the floor of the structure where dewatering methods are such that a dry excavation bottom is exposed during the construction operations. If any water is allowed to accumulate in the excavation for structures shall be removed promptly by well point system. If any other means satisfactory to the Engineer in such a manner as to not cause injury to public health, to public or private property, or to cause any interference with the use of the surface of the streets, or cause any interference with the use of the same by the public. Pumps and engines for dewatering systems shall be operated with mufflers or other suitable means to minimize noise level to a residential area. The Contractor shall be responsible for any nuisance created due to the disposal of water from his drainage system.
5. All excess suitable material shall be stockpiled on-site at a location approved by the Owner and Engineer. Muck, organic, silty and clayey sediments, or other unsuitable material excavated under the requirements of this Section shall be disposed of offsite, unless otherwise indicated on the Drawings or as directed by the Owner, at the Contractor's expense.

B. Backfills and Compaction
1. The space between the proposed walls of the structure and the bottom of the excavation shall be backfilled with graded limerock and be level to receive the proposed structure.
2. Suitable backfill material shall be placed, placed and compacted around the structures as required to fill the excavated area up to finish grades, as shown on the Drawings. Materials to be used for fill shall be approved by the Engineer prior to their placement. If a suitable fill material source is available within the limits of the project, the Owner may allow the use thereof and shall designate the borrow site whereby the Contractor may acquire the fill. If a suitable fill material source is not available on the project site; the Contractor shall furnish the necessary additional fill material to complete the work to the lines and grades indicated on the Drawings.
3. Excavated areas below proposed structures shall be leveled, compacted and tested prior to placement of the structure and any backfill material. Compaction shall be to a minimum density equivalent to 95 percent of the Maximum Modified Proctor Density in accordance with ASTM D-1557 and as tested for a minimum depth of two (2) feet below the bottom of structure slab.
4. The backfill under and around structures shall be placed and compacted as specified hereinafter. Fills shall be constructed of suitable material placed in layers not to exceed 12 inches in depth loose measure, and compacted by the use of a vibrating steel wheel roller or backhoe mounted vibratory plate compactor, or other suitable method(s). Thickness of layers may be increased provided the equipment and methods used are proven by field density testing to be capable of compacting thicker layers to specified densities. Layer thickness shall be decreased if equipment and methods used are proven to be incapable of compacting layers to specified densities. Where applicable, the first lift may be up to eighteen (18) inches above the groundwater table, if approved by the Engineer, to serve as a working platform for the compaction equipment. The use of this procedure does not relieve the Contractor of the requirement to achieve the specified density for a minimum depth of one (1) foot below the natural grade.
5. Backfills shall be compacted to a density of not less than 95 percent of its Maximum Modified Proctor Density in accordance with ASTM D-1557. Should tests indicate unsatisfactory results, compaction procedures shall continue until subsequent tests indicate the stipulated requirements.

END OF SECTION

SECTION 02221
TRENCHING, BACKFILLING AND COMPACTION FOR UTILTY AND DRAINAGE SYSTEMS

Part 1.00 General

1.01 WORK INCLUDED
A. The work specified in this Section consists of furnishing all labor, materials and equipment, and performing all operations required to complete the site preparation, earthwork and grading as shown on the Drawings and as specified herein for construction of piping and drainage systems consisting of piping and appurtenances. This work shall include, but not be limited to: site clearing and grubbing; stripping; dewatering; trenching; bed preparation; removal of muck and other unsuitable material; earthwork for grading above and around utility and drainage system improvements; excavation; backfilling; compaction; supplying approved fill material; final site grading; and other related requirements.
B. The operations specified herein shall be performed within the limits indicated for site grading and other construction, as shown on the Drawings.
C. The Contractor shall provide adequate protection against construction activity for all existing structures and utilities, above the surface or underground, including trees that are to remain, and other construction activities concurrently occurring on the site.
D. Should damage occur to any structure, utility or other facility from these construction activities, repair or replacement to a condition equal or better than the original shall be immediately made by the Contractor, at no cost to the Owner.
E. Definitions:
1. Maximum Density: Maximum weight in pounds per cubic foot of a specific material as determined by ASTM Test Designation D-1557.
2. Optimum: Moisture: Percentage of water in a specific material at maximum density.

1.02 RELATED WORK
A. Section 02210 – Site Earthwork
B. Section 02220 – Structure Excavation and Backfill
C. Section 02530 – Dewatering System

1.03 REFERENCE, INFORMATION
A. Contractor may obtain the geotechnical report(s) pertaining to the site from the Owner.
B. Contractor may obtain a copy of standard specifications from the City, at his own expense, for requirements of related standards.

1.04 QUALITY ASSURANCE
A. Density tests to adequately confirm the specified compaction shall be made by a testing laboratory approved by the Engineer, at the expense of the Owner, with reports therefrom submitted to the Engineer documenting that the compaction requirements as outlined in this specification have been satisfied. If initial density tests fail to meet the specifications, retesting shall be done at the expense of the Contractor. Said tests shall be performed for each lift of fill, if more than one is required for the depth of fill, and shall be taken where directed by the Engineer. Should test results be unsatisfactory, the Contractor shall recompact the lift and allow additional tests by the Testing Laboratory for the area in question.
B. A sufficient time shall be allotted for the testing laboratory to perform all control tests necessary to determine that proper fill material is being used and compaction is being obtained. The Contractor shall schedule backfilling operations so as to permit the making of the necessary control tests for each layer prior to the placing of subsequent layers.

Part 2.00 Products

2.01 MATERIALS
A. Suitable materials for fills shall be classified as A-1, A-3, A-2-4, or A-2-6 in accordance, with AASHTO Designation M-145 and shall be free from vegetation, organic material, debris, trash, roots and similar deleterious material. Suitable materials for imported fills shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145 and shall consist of clean, granular soils and be free from vegetation, organic material, debris, trash, roots and similar deleterious material. Not more than 15 percent by weight of fill material shall pass the U.S. No. 200 sieve.
B. Suitable Material To Be Placed In Water: Suitable material for fill to be placed in water shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145. Not more than 15 percent by weight of fill material shall pass the U.S. No. 100 sieve.
C. Unsuitable materials are classified as A-2-5, A-2-7, A-4, A-5, A-6, A-7 and A-8 in accordance with AASHTO Designation M-145.
D. Granular Backfill Material: Material for backfill below precast structures shall be conform to state DOT specifications.

Part 3.00 Execution

3.01 PREPARATION
A. Clearing, Grubbing, and Stripping
Clearing, grubbing, and stripping shall be performed in the areas where required for proper installation of all piping and appurtenances at locations shown on the Drawings. It shall include the complete removal of vegetation, disposal of all timbers, brush, stumps, weeds, rubbish, topsoil, and all other obstructions resting on or protruding through the surface of the existing ground.
B. Selective clearing shall be performed in areas shown on the Drawings or as required by the Owner, in order to save plantings, shrubbery, trees, utility poles, or structures. The above items, where designated by the Owner, shall be transplanted, relocated, braced, shored, or otherwise protected and preserved.

3.02 PERFORMANCE
A. Excavation:
1. The Contractor shall perform all excavation of every description and of whatever substances encountered, to the dimensions specified on the Drawings or as directed by the Engineer.
All excavations shall be made in open cut, unless otherwise specified on the Drawings. All existing utilities such as pipes, poles and structures shall be carefully supported and protected from injury, and in case of damage, they shall be immediately replaced at the Contractor's expense.
2. Where trench widths are limited by right-of-way and/or easement widths, property line restrictions, existing adjacent improvements, or other restrictions, trench walls shall be kept vertical, and, if required to protect the safety of workmen, the general public, this or other work or structures, or excavation walls. Excavation for the structures shall be sufficient to provide adequate room for placing the structure and the face of the excavation, sheeting, or bracing, of not less than 2 feet. Materials encountered in the excavation which have a tendency to slough or flow into the excavation, shall be replaced at the Contractor's expense.
3. Excavation for the structures shall be carried to an elevation one (1) foot lower than the subgrade bottom of the structure to provide space for the select backfill material. Any unsuitable material encountered below proposed structure subgrade shall be removed and replaced as directed. Prior to placing the select backfill, the excavation shall be leveled so that it is reasonably uniform over the area to be occupied by the structure.
4. Excavation shall be carried to a sufficient depth to permit the floor of the structure where dewatering methods are such that a dry excavation bottom is exposed during the construction operations. If any water is allowed to accumulate in the excavation for structures shall be removed promptly by well point system. If any other means satisfactory to the Engineer in such a manner as to not cause injury to public health, to public or private property, or to cause any interference with the use of the surface of the streets, or cause any interference with the use of the same by the public. Pumps and engines for dewatering systems shall be operated with mufflers or other suitable means to minimize noise level to a residential area. The Contractor shall be responsible for any nuisance created due to the disposal of water from his drainage system.
5. All excess suitable material shall be stockpiled on-site at a location approved by the Owner and Engineer. Muck, organic, silty and clayey sediments, or other unsuitable material excavated under the requirements of this Section shall be disposed of offsite, unless otherwise indicated on the Drawings or as directed by the Owner, at the Contractor's expense.

B. Backfills and Compaction
1. The space between the proposed walls of the structure and the bottom of the excavation shall be backfilled with graded limerock and be level to receive the proposed structure.
2. Suitable backfill material shall be placed, placed and compacted around the structures as required to fill the excavated area up to finish grades, as shown on the Drawings. Materials to be used for fill shall be approved by the Engineer prior to their placement. If a suitable fill material source is available within the limits of the project, the Owner may allow the use thereof and shall designate the borrow site whereby the Contractor may acquire the fill. If a suitable fill material source is not available on the project site; the Contractor shall furnish the necessary additional fill material to complete the work to the lines and grades indicated on the Drawings.
3. Excavated areas below proposed structures shall be leveled, compacted and tested prior to placement of the structure and any backfill material. Compaction shall be to a minimum density equivalent to 95 percent of the Maximum Modified Proctor Density in accordance with ASTM D-1557 and as tested for a minimum depth of two (2) feet below the bottom of structure slab.
4. The backfill under and around structures shall be placed and compacted as specified hereinafter. Fills shall be constructed of suitable material placed in layers not to exceed 12 inches in depth loose measure, and compacted by the use of a vibrating steel wheel roller or other suitable method(s). Thickness of layers may be increased provided the equipment and methods used are proven by field density testing to be capable of compacting thicker layers to specified densities. Layer thickness shall be decreased if equipment and methods used are proven to be incapable of compacting layers to specified densities. Where applicable, the first lift may be up to eighteen (18) inches above the groundwater table, if approved by the Engineer, to serve as a working platform for the compaction equipment. The use of this procedure does not relieve the Contractor of the requirement to achieve the specified density for a minimum depth of one (1) foot below the natural grade.

B. Removal of Water:
1. It is a basic requirement of these specifications that excavations shall be free from water before pipe or structures are installed.
2. The Contractor shall provide all necessary pumps, underdrains, well-point systems, and other means for removing water from trenches and other parts of the work. The Contractor shall continue dewatering operations until the backfill has progressed to a sufficient depth over the pipe to prevent flotation or movement of the pipe in the trench and so that it is above the natural water table.
3. Water from the trenches and excavation shall be disposed of in such a manner as will not cause injury to public health, to public or private property,, to the work completed or in progress, to the surface of the streets, or cause any interference with the use of the same by the public. The Contractor shall submit his proposed methods of handling trench water and locations at which the water will be disposed of to the Engineer for approval and shall receive approval before starting the excavation. The Contractor shall obtain and pay for all additional required permits from state or local agencies for dewatering activities.
4. Ladders or steps shall be provided for and used by workmen to enter and leave trenches.
5. Pipe trenches for utility lines shall be excavated to a width within the limits of the top of the pipe and the trench bottom so as to provide a clearance on each side of the pipe barrel, measured to the face of the excavation or sheeting, if used, of 8 inches to 12 inches. Where the pipe size exceeds 12 inches, the clearance shall be from 12 inches to 18 inches. All pipe trenches shall be excavated to a level 8 inches below the outside bottom of the proposed pipe barrel.
6. Excavation for appurtenances shall be sufficient to provide a clearance between their outer surfaces and the face of the excavation or sheeting.
7. Materials removed from the trenches shall be stored and disposed of in such a manner that they will not interfere unduly with traffic on public streets and sidewalks and they shall not be placed on private property. In congested areas, such materials shall be stored adjacent to the trench or used immediately as backfill, shall be removed to places of storage, as approved by the Engineer.
8. All materials suitable for use as backfill shall be hauled to and used in areas where not enough suitable material is available from the excavation.
9. All excess suitable or unsuitable material shall be disposed of as directed by the Engineer. Material disposed of within the limits of the project shall be finish graded upon completion of the work. Material to be removed from the project shall be hauled away and disposed of at the Contractor's expense.
10. Trench Stabilization: No claim for extras, or additional payment will be considered for cost incurred in the stabilization of trench bottoms which are rendered soft or unstable as a result of construction methods, such as improper or inadequate sheeting, dewatering or other causes. In no event shall pipe be installed when such conditions exist and the Contractor shall correct such conditions so as to provide proper bedding or foundations for the proposed installations at no additional cost to the Owner.

3.03 COMPACTION AND DENSITIES
A. Methods of control and testing of backfill construction to be employed in this work are:
1. Maximum density of the material in trenches shall be determined by ASTMD-1557.
B. Laboratory and field density tests which, in the opinion of the Engineer, are necessary to establish compliance with the compaction requirements of these specifications, will be conducted at the Owner's expense. Tests will be made at depths and locations selected by the Engineer.
C. Trench backfill that does not comply with the specified densities, as indicated by such tests, shall be reworked and recompacted until the required compaction is secured, at no additional cost to the Owner. The costs for retesting such work shall be paid for by the Contractor.

END OF SECTION

SECTION 02232
GRANULAR SUBBASE MATERIAL

Part 1.00 General

1.01 WORK INCLUDED
A. The work specified in this Section consists of the construction of a base course composed of granular subbase material. It shall be constructed upon the prepared subgrade in accordance with these specifications and in conformity with the lines, grades, notes and typical cross-sections shown on the Drawings.

1.02 QUALITY ASSURANCE
A. Laboratory analysis shall be complete, and the material accepted by the Engineer prior to placement.

Part 2.00 Products

2.01 MATERIALS
A. Description: All granular subbase material shall comply with state DOT specifications.
B. Gradation: At least 97 percent (by weight) of the material shall pass a 3-1/2 inch sieve and the material shall be graded uniformly down to dust. The fine material shall consist entirely of dust of fracture.
C. Quality:
1. The granular subbase material shall be uniform in quality and shall not contain cherty or other extremely hard pieces or lumps, balls or pockets of sand or clay size material in sufficient quantity as to be detrimental to prevent proper bonding, finishing or strength of the granular-subbase material base. Granular subbase material shall be nonplastic, and the plasticity index shall not exceed 5.

Part 3.00 Execution

3.01 PERFORMANCE
A. Transporting Granular Subbase Material: The granular subbase material shall be transported to the point where it is to be used, over rock previously placed if practicable, and dumped on the end of the preceding spread. No hauling over the subgrade or dumping on the subgrade shall be done.
B. Spreading Granular Subbase Material:
1. The granular subbase material shall be spread uniformly, and all segregated areas of fine or coarse rock shall be removed and replaced with well-grade rock.
2. When the specified compacted thickness of the base is greater than 6 inches, the base shall be constructed in two courses. The thickness of the first course shall be approximately one-half the total thickness of the finished base, or enough additional to bear the weight of the construction equipment without disturbing the subgrade.
C. Compacting and Finishing Base:
1. General:
a. For single course base, after spreading is completed, the entire surface shall be scarified and then shaped so as to produce the required grade and cross-section after compaction.
b. For double course base, the first course shall be cleaned of foreign material, bloded and brought to a surface cross-section approximately parallel to that of the finished base. Prior to the spreading of any material for the upper course, the density tests for the lower course shall be made and the Engineer shall have determined that the required compaction has been obtained. After the spreading of the material for the second course is

Part 2.00 Products

2.01 MATERIALS

A. General: The particular type of stabilizing material to be used shall be in accordance with Paragraph 2.01.E hereinafter and shall meet the following requirements:

B. Use of Materials from Existing Base:
1. When the utilization of materials from an existing base is called for, the Engineer will direct the locations, placing and distribution of such materials, and this work shall be done prior to the spreading of any additional commercial or local materials. Removal of any section of existing base will not be required until the need for it in maintaining traffic is fulfilled.
2. The utilization of materials from an existing base may be called for in combination with the designated type of stabilizing.

C. Commercial Materials:
1. General: Materials that are designated as Commercial Materials that are to be used for stabilizing may be either commercial limerock, limerock overburden or crushed shell, or state DOT specified.
2. Limerock: For limerock and limerock overburden, the percentage of carbonates of calcium and magnesium shall be at least 70, and the plasticity index shall not exceed 10. The gradation of both commercial limerock and limerock overburden shall be such that 97 percent of these materials will pass a 1-inch sieve.
3. Crushed Shell: Crushed shell for this use shall be mollusk shell (i.e., oysters, mussels, clams, cemented coquina, etc.). Steamed shell will not be permitted. This shell shall meet the following requirements:
   a. At least 97 percent by weight of the total material shall pass a 3-1/2 inch screen and at least 50 percent by weight of the total material shall be retained on the No. 4 sieve.
   b. Not more than 20 percent by weight of the total material shall pass the No. 200 sieve. The determination of the percentage passing the No. 200 sieve shall be made by washing the material over the sieve.
   c. In the event that the shell meets the above requirements without crushing, crushing will not be required.

D. Local Material:
1. General: Local materials used for stabilizing may be high-bearing-value soils of sand-clay material. The material passing the 40-mesh sieve shall have a liquid limit not greater than 30 and a plasticity index not greater than 6.
2. Blending: No blending of materials to meet these requirements will be permitted unless authorized by the Engineer. When blending is permitted, the blended material shall be tested and approved before being spread on the roadway or parking area.

E. Type B Stabilization:
1. The type of materials, Commercial or Local, shall be at the Contractor's option.
2. No separate payment for stabilizing materials will be made.
3. Under this method, it shall be the Contractor's responsibility that the finished subgrade section meets the bearing value requirements, regardless of the quantity of stabilizing materials necessary to be added. Also under this method, full payment will be made for any areas where the existing sub-grade materials meet the design bearing value requirements without the addition of stabilizing additives, as well as areas where the Contractor may elect to place select high-bearing materials from other sources, within the limits of the stabilizing.
4. After the subgrade grading operations have been substantially completed, the Contractor shall make his own determination as to the quantity (if any) of stabilizing material, of the type selected by him, necessary for compliance with the bearing value requirements. The Contractor shall notify the Engineer of the approximate quantity to be added, and the spreading and mixing in of such quantity of materials shall meet the approval of the Engineer as to uniformity and effectiveness.

Part 3.00 Execution

3.01 PREPARATION

A. General:
1. Prior to the beginning of stabilizing operations, the area to be stabilized shall have been constructed to an elevation such that upon completion of stabilizing operations the completed stabilized subgrade will conform to the lines, grades and cross-section shown in the plans. Prior to the spreading of any additive stabilizing material, the surface of the subgrade shall be brought to a plane approximately parallel to the plane of the proposed finished surface.
2. The subgrade to be stabilized may be processed in one course, unless the equipment and methods being used do not provide the required uniformity, particle size limitations, compaction and other desired results, in which case, the Engineer will direct that the processing be done in more than one course.

3.02 APPLICATION

A. Stabilizing Material:
1. When additive stabilizing materials are required, the designated quantity shall be spread uniformly over the area to be stabilized.
2. When materials from an existing base are to be utilized in the stabilizing ,at a particular location, all of such materials shall be placed and spread prior to the addition of other stabilizing additives.
3. Commercial stabilizing material shall be spread by the use of mechanical material spreaders except that where use of such equipment is not practicable other means of spreading may be used, but only upon written approval by the Engineer of the proposed alternate method.

B. Mixing:
1. The mixing shall be done with rotary tillers, or other suitable equipment. The area to be stabilized shall be thoroughly mixed throughout the entire depth and width of the stabilizing limits.
2. The mixing operations, as specified, will be required regardless of whether the existing soil, or any select soils placed within the limits of the stabilized sections, have the required bearing value without the addition of stabilizing materials.

C. Maximum Particle Size of Mixed Materials: At the completion of mixing, all particles of material within the limits of the area to be stabilized shall pass a 3-1/2 inch ring. Any particles not meeting this requirement shall be removed from the stabilized area or shall be broken down so as to meet this requirement.

D. Compaction: After the mixing operations have been completed and requirements for bearing value, uniformity and particle size have been satisfied, the stabilized area shall be compacted, in accordance with Paragraph 3.03.B hereinafter. The materials shall be compacted at a moisture content permitting the specified compaction. If the moisture content of the material is lower than that required to develop the specified density, either water shall be added or the material shall be permitted to dry until the proper moisture content for the specified compaction is reached.

E. Finish Grading: The completed stabilized subgrade shall be shaped to conform with the finished lines, grades and cross-section indicated in the Drawings. The subgrade shall be checked by the use of elevation stakes, or other means approved by the Engineer.

F. Requirements for Condition of Completed Subgrade:
1. After the stabilizing and compacting operations have been completed, the subgrade shall be firm and substantially unyielding, to the extent that it will support construction equipment and will have the bearing value required by the Drawings.
2. All soft and yielding material, and any other portions of the subgrade that will not compact readily, shall be removed and replaced with suitable material and the whole subgrade brought to line and grade, with proper allowance for subsequent compaction.

G. Maintenance Of Completed Subgrade: After the subgrade has been completed as specified above, the Contractor shall maintain it free from ruts, depressions and any damage resulting from the hauling or handling of materials, equipment, tools, etc. it shall be the Contractor's responsibility to maintain the required density until the subsequent base or pavement is in place. Such responsibility shall include any repairs, replacement, etc., of curb and gutter, sidewalk, etc., which might become necessary in order to recompact the subgrade in the event of underwash or other damage occurring to the previously compacted subgrade. Any such work required for recompaction shall be at the Contractor's expense. Ditches and drains shall be constructed and maintained along the completed subgrade section to provide adequate drainage.

3.03 FIELD QUALITY CONTROL

A. Bearing Value Requirements:
1. General: Bearing value samples will be obtained and tested by the Engineer at completion of satisfactory mixing of the stabilized area. For any area where the bearing value obtained is deficient from the value indicated in the Drawings, in excess of the tolerances established herein, additional stabilizing material shall be spread and mixed in accordance with 3.02.B.1 & 2. This reprocessing shall be done for the full width of the roadway being stabilized and longitudinally for a distance of 50 feet beyond the limits of the area in which the bearing value is deficient. The Contractor shall make his own determination of the quantity of additional stabilizing material to be used in reprocessing.

B. Density Requirements:
1. General: Within the entire limits of the width and depth of the areas to be stabilized, a minimum density acceptable at any location will be 98 percent of the maximum density as determined by AASHTO T-180, Test Method D.

C. Testing: Tests for the subgrade bearing capacity and compaction shall be located no more than 300 feet apart and shall be staggered to the left, right, and on the centerline of roadways, and at a frequency of one test per 1,100 square yards of stabilized area in parking areas, at locations to be determined by the Engineer.

END OF SECTION

SECTION 02276
TEMPORARY EROSION AND SEDIMENTATION CONTROL

Part 1.00 General

1.01 WORK INCLUDED

A. The work specified in this Section consists of designing, providing, maintaining and removing temporary erosion and sedimentation controls as necessary.

B. Temporary erosion controls include, but are not limited to, grassing, mulching, seeding, watering and reseeding on-site surfaces and spoil and borrow area surfaces, and providing interceptor ditches at ends of berms, installing staked silt barriers or floating silt barriers at those locations which will ensure that erosion and pollution during construction will be prevented in accordance with state DOT Standard Specifications for Road and Bridge Construction.

C. Contractor is responsible for providing effective temporary erosion and sedimentation control measures during construction or until final controls become effective, so as to ensure that sedimentation and/or turbidity problems are not created in the receiving water bodies. The Contractor shall be responsible for the correction of any erosion, shoaling, or water quality problems that result from the construction or operation of the surface water management system.

D. Sufficient precautions shall be taken during construction to minimize the runoff of polluting substances such as silt, clay, fuels, oils, bitumens, calcium chloride, or other polluting materials harmful to humans, fish, or other life, into the supplies and surface waters of the State. Control measures must be adequate to assure that turbidity in the receiving water will not be increased in the receiving water more than 25 nephelometric turbidity units (NTU). Special precautions shall be taken in the use of construction equipment to prevent operations that promote erosion.

E. Temporary sedimentation controls include, but are not limited to, silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the Owner.

F. Temporary erosion and sediment control measures shall include effective means to maintain water quality prior to discharge from project site.

1.02 RELATED WORK

A. Section 02210– Site Earthwork
B. Section 02932 – Seeding and Mulching
C. Section 02934 – Sodding

1.03 SUBMITTALS

A. The Contractor shall be required to submit to state and local agencies (with copy to the Owner and Engineer) for review and approval the program for temporary erosion and sediment control to be implemented by the Contractor prior to commencing construction. All additional permits required by the agencies shall be obtained and paid for by the Contractor.

B. The approval by the state and local agencies of the Contractor's program in no way relieves the Contractor from the responsibility to meet all applicable rules, regulations, and permitting conditions.

Part 2.00 Products

2.01 EROSION CONTROL

A. Materials to control erosion and sedimentation shall comply with Section 104 of FDOT Standard Specifications for Road and Bridge Construction and FDOT Roadway and Traffic Design Standards, Index No. 103.

2.02 SEDIMENTATION CONTROL

A. Install and maintain silt dams, traps, barriers, and other appurtenances as necessary. Hay bales, which deteriorate, and filter stone which dislodges, shall be replaced.

Part 3.00 Execution

3.01 PREPARATION

A. Minimum procedures for grassing are:
1. Scarify slopes to a depth of not less than six inches and remove large clods, rock, stumps, roots larger than ½-inch in diameter, and debris.
2. Sow seed within twenty-four (24) hours after the ground is scarified with either mechanical seed drills or rotary band seeders.
3. Apply mulch loosely and to a thickness of between ½–inch and 1–1/2 inches.
4. Apply netting over mulched areas on sloped surfaces.
5. Roll and water seeded areas in a manner that will encourage sprouting of seeds and growing of grass. Reseed areas which exhibit unsatisfactory growth. Backfill and seed eroded areas.

B. Floating Silt Barriers:
1. This work shall consist of installing, maintaining and removal of floating silt barriers to confine turbidity that may occur as the result of dredging, filling, dewatering, or other construction activities in Waters of the State or any part of the existing on-site lakes, ponds, or storm-water management systems.
2. The type of barrier used, the deployment and maintenance of the barrier shall be such as to minimize dispersion of turbid waters and will not cause an increase in the existing permitted turbidity from the construction site into the receiving waters.

3.02 PERFORMANCE

A. Should any of the temporary erosion and sedimentation control measures employed by the Contractor fail to produce results which comply with the requirements of this specification, the Contractor shall immediately take whatever steps necessary to correct the deficiency.

END OF SECTION

SECTION 02285
TERMITE CONTROL

Part 1.00 General

1.01 SECTION INCLUDES

A. Soil poisoning treatment.
B. Warranty

1.02 INTENT

A. To guard against termites and other common ground insects detrimental to wood construction. Materials mentioned in Part 2.00 of this Specification are suggested for use but shall not be used if disallowed by governing laws and/or ordinances.

1.03 QUALITY ASSURANCE

A. Applicator:
Company specializing in soil treatment for termite control with five years documented experience.
B. Materials:
Provide certification that toxicants conform to requirements.

1.04 REGULATORY AGENCY REQUIREMENTS

A. Conform to governmental authority requirements for application licensing and authority to use toxicant chemicals.

1.05 SUBMITTALS

A. Product Data:
Submit per SUBMITTALS Section; Indicate toxicants to be used, composition by percentage, dilution schedule, and intended application rate. Owner's acceptance is required prior to shipment.
B. Manufacturer's Installation Instructions: Submit per SUBMITTALS Section.

1.06 GUARANTEE

A. Bonded Guarantee which covers against invasion or propagation of subterranean termites, damage to building or building contents caused by termites; repairs to building or building contents so caused, for a period of five years after substantial completion; subject to annual renewal thereafter.

Part 2.00 Products

2.01 TOXICANT CHEMICAL(S)

A. Termidor, BASF – apply per manufacturer's recommendations.

2.02 MIXES

A. Dilute toxicant chemical to a percent solution specified by manufacturer.

Part 3.00 Execution

3.01 DELIVERY

A. Deliver materials in original unopened manufacturer's packaging with labels and seals identifying content.

3.02 INSPECTION

A. Verify exposed soil surfaces are unfrozen, sufficiently dry to absorb toxicant, ready to receive treatment. Beginning of application means acceptance means acceptance of soil conditions.

3.03 APPLICATION

A. Safety:
Apply materials in accord with recommended safety precautions for materials used.
B. Toxicant Chemicals:
Apply toxicant immediately prior to installation of vapor barrier under slab-on-grade or finish grading outside foundation walls. Apply extra treatment to structure penetrations, pipe, ducts, and other soil penetrations. Apply as a coarse spray to ensure uniform distribution. Coordinate soil treatment at foundation perimeter with finish grading and landscaping work to avoid disturbance of treated soil.

3.04 CLEAN–UP

A. Upon completion of work of this Section, remove related debris from premises.

END OF SECTION

SECTION 02507
PRIME AND TACK COATS

Part 1.00 General

1.01 WORK INCLUDED

A. The work specified in this Section consists of an application of bituminous material on previously prepared bases and on existing pavement surfaces in accordance with these specifications and in conformity with the lines, grades, dimensions and notes shown on the Drawings.

Part 2.00 Products

2.01 MATERIALS

A . Prime Coat: Unless otherwise indicated, the material used for the prime coat shall be cutback Asphalt Grade RC–70 or RC–250 and shall conform to the requirements specified in AASHTO Designation M–81. Unless otherwise indicated, the use of either RC–70 or RC–250 shall be at the Contractor's option.

B. Tack Coat: The material used for the tack coat shall be emulsified asphalt, Grade RS–2 and shall conform to the requirements specified in AASHTO Designation M–140.

2.02 EQUIPMENT

A. The pressure distributor used for placing the tack or prime coat shall be equipped with pneumatic tires having sufficient width of rubber in contact with the road surface to avoid breaking the bond of or forming a rut in the surface. The distance between the centers of openings of the outside nozzles of the spray bar shall be equal to the width of the application required, within an allowable variation of 2 inches. The outside nozzle at each end of the spray bar shall have an area of opening of not less than 25 percent, nor more than 75 percent in excess of the other nozzles which shall have uniform openings. When the application covers less than the full width, the normal opening of the end nozzle at the junction line may remain the same as those of the interior nozzles.

Part 3.00 Execution

3.01 PREPARATION

A. Before applying any bituminous material, all loose material, dust, dirt, and foreign matter, which might prevent proper bond with the existing surface, shall be removed. Particular care shall be taken to clean the outer edges of the strip to be treated in order to ensure that the prime or tack coat will adhere.

B. When the prime or tack coat is applied adjacent to curb and gutter, or any other concrete surface (except where the joint is covered with a bituminous wearing course), such concrete surfaces shall be protected by heavy paper or other protective material which will prevent the prime or tack coat is being applied. Any bituminous material deposited on such concrete surfaces shall be removed immediately.

3.02 WEATHER LIMITATIONS

A. No bituminous material shall be applied when the air temperature is less than 50F in the shade, or when the weather conditions or the condition of the existing surface is unsuitable. In no case shall bituminous material be applied while rain is falling or when there is water on the surface to be covered.

3.03 APPLICATION OF PRIME COAT

A. After the base has been finished; the full width of surface shall be swept with a power broom supplemented with hand brooms and mechanical blowers prior to the application of the prime coat. Care shall be taken to remove all loose dust, dirt and objectionable matter. If deemed necessary, the base shall be lightly sprinkled with water immediately in advance of the prime coat. The prime coat shall be applied to the full width of the base.

B. The temperature of the prime material shall be such as to ensure uniform distribution. The material shall be applied with a pressure distributor as specified under 2.02.A. Areas inaccessible to the mechanical distributor shall be treated thoroughly and uniformly without any excess to form pools or to flow off the base. For limerock base, the rate of application shall not be less than 0.10 gallons per square yard; for shell base, the rate of application shall not be less than 0.15 gallons per square yard; for soil cement base, the rate of application shall not be less than 0.15 gallons per square yard.

C. If the roadway is to be opened for use following the application of the prime material, a light uniform application of clean sand shall be applied and rolled. The sand shall be nonplastic, shall be free from silt and rock particles and shall not contain any sticks, vegetation, grass, roots or organic matter. After the sand covering has been applied, the surface may be opened to traffic.

3.04 APPLICATION OF TACK COAT

A. In general, a tack coat will not be used on primed bases except in areas which have become excessively dirty and cannot be cleaned or where the prime has cured and lost all of its bonding effect.

B. No tack coat shall be applied until the finished base or leveling course has been cleaned and is free from sand, dust or other objectionable material.

C. The tack coat shall be applied with a pressure distributor as specified above. It shall be heated to a suitable consistency and applied in a thin uniform layer at the rate between 0.02 gallons and 0.08 gallons per square yard.

D. The tack coat shall be applied sufficiently in advance of the laying of the wearing surface to permit drying, but shall not be applied so far in advance or over such an area as to lose its adhesiveness as a result of being covered with dust or other foreign material. Suitable precautions shall be taken by the Contractor to protect the surface while the tack coat is drying and until the wearing surface is applied.

END OF SECTION

SECTION 02512
ASPHALTIC CONCRETE PAVING

Part 1.00 General

1.01 SCOPE OF WORK

A. The work specified in this Section consists of the construction of asphaltic concrete surface courses composed of a mixture of aggregates, mineral filler and asphalt cement properly laid upon a prepared base, or a newly constructed binder course, in accordance with these specifications and all requirements of State Department of Transportation Standard Specifications (latest edition) and in conformity with the lines, grades, thickness and typical cross section shown on the Drawings. Contractor shall furnish Types I, S–I or S–III asphaltic concrete as specified by the Drawings. Asphaltic concrete pavement around drain inlets and catch basins shall conform to the following provisions, except placing material may be by hand methods.

1.02 RELATED WORK

A. Section 02210 – Site Earthwork
B. Section 02234 – Soil Cement Base
C. Section 02240 – Stabilized Subgrade
D. Work and materials will conform to requirements of the state for transportation Standard Specifications for Road and Bridge Construction (latest edition) except that the use of recycled or milled asphalt will not be permitted. In case of conflict between these specifications and State Department of Transportation Standard Specifications for Road and Bridge Construction (latest edition), the more stringent specification shall govern.

1.03 QUALITY ASSURANCE

A. Laboratory materials by a Certified Testing Laboratory on all materials shall be completed and the materials accepted by the Engineer prior to placement.
B. The Contractor shall submit manufacturer's Certificate of Compliance for approval on asphalting materials.
C. The Contractor shall submit a statement of source of materials and design mix formula for approval prior to processing at the asphalt plant.

Part 2.00 Products

2.01 MATERIALS

A. Bituminous Material: Asphalt cement, Viscosity Grade AC–20, shall conform to the requirements of State Standard Specifications for Road and Bridge Construction (latest edition).
B. Coarse Aggregate:
1. The coarse aggregate shall be composed of clean, durable limerock. When subjected to the Los Angeles Abrasion Test, (AASHTO T–96), the loss shall not exceed 45 percent.
2. Extraneous Substances: All coarse aggregate shall be washed and free from disintegrated pieces, salt, alkali, vegetable matter and adherent coating.
   a. The weight of extraneous substances shall not exceed the following percentages:

	Percent
Coal and Lignite	1.00
Clay Lumps	0.05
Cinders and Clinkers	0.05
Soft Fragments	10.00
Free Shells	1.00
Sticks (Wet)	0.03
Material Passing No. 200 Sieve	1.75

   b. In addition, the sum of the percentages of all materials listed above shall not exceed 10 percent. Coarse aggregate containing any appreciable amount of phosphate shall not be used.
3. Stone: Pre–cenozoic limestone shall not be used as crushed–stone aggregates, either coarse or fine, for wearing courses of asphaltic concrete surface courses. This specifically includes materials from the Ketona Dolomite (Cambrian), Newala Limestone (Lower Ordovician), Bangor Limestone (Mississippian), and other formations of similar composition and origin occurring in central and northern Alabama and Georgia.
4. Slag: Slag shall be clean, tough and durable. It may be either air–cooled blast–furnace slag or phosphate slag. It shall be reasonably uniform in density and quality, and free from deleterious substances other than as permitted above. It shall contain not more than 1.5 percent of sulfur. The dry–rodded weight shall be not less than 70 pounds per cubic foot. The loss, when the slag is subjected to the Los Angeles Abrasion Test, shall not exceed 45 percent.
C. Fine Aggregate:
1. Fine aggregate concrete shall consist of natural sand, stone screenings, slag screenings or a combination thereof, composed of clean, tough, angular grains, free from clay, loam or other foreign matter. Stone or slag screenings shall be produced from materials complying with the abrasion requirements for coarse aggregate specified above.
2. Any screenings used in the combination of aggregate shall contain not more than 15 percent of material passing the No.200 sieve and shall be washed if necessary to meet this requirement.
3. The natural sand portion of the fine aggregate other than screenings shall be siliceous containing not more than 10 percent of material passing the No. 200 sieve.
4. The fine aggregate, when tested by means of laboratory sieves, shall meet the following requirements:

Passing Sieve	Retained On Sieve	Percent By Weight
No. 4		90 - 100
No. 4	No. 10	0 - 15
No. 10	No. 40	15 - 50
No. 40	No. 80	25 - 60
No. 80	No. 200	8 - 40
No. 200		0 - 10

5. Fine aggregate containing more than 1.00 percent of phosphate shall not be used.

D. Mineral Filler:
1. Mineral filler shall consist of limerock dust, Portland cement, slag dust, hydrated lime or other inert mineral matter approved by the Engineer and conforming to the following gradation requirements:
   Total Passing No. 30 Sieve ..... 100 Percent
   Total Passing No. 80 Sieve ..... 95 Percent (Min.)
   Total Passing No. 200 Sieve ..... 65 Percent (Min.)
2. The mineral filler shall be thoroughly dry and free from lumps consisting of aggregations of fine particles. Ground phosphate will not be allowed as a mineral filler.

2.02 GENERAL COMPOS–ON OF MIXTURE

A. The bituminous mixture shall be composed of a combination of aggregate (coarse, fine, or mixtures), mineral filler, if required, and bituminous material. The several aggregate fractions shall be sized, uniformly graded and combined in such proportions that the resulting mixture will meet the grading and physical properties of the approved job mix formula
B. In all cases, the job mix formula shall be within the design ranges specified in the following table:

Sieve Size	Gradation Design Range: Percent by Weight Passing		
	Type S-I	Type S-III	Type I
3/4 inch	100		
1/2 inch	88-100	100	100
3/8 inch	75-85	88-100	88-100
No. 4	47-75	60-80	54-85
No. 10	31-53	40-70	35-50
No. 40	19-35	20-45	16-41
No. 80	7-21	10-30	7-28
No. 200	2-7	2-7	4-8

C. Asphalt cement (Bitumen) shall consist of 4–1/2 to 9 percent by weight of the total mix as determined by job mix formula. For highly absorptive aggregates, the upper limit may be raised.
D. Where hand placing and finishing is permitted for small and irregular areas, such as turnouts, crossovers, acceleration and deceleration lanes, etc., the portion of the Grade No. 16 coarse aggregate retained on a No. 4 sieve may be omitted from the mixture and the percent by weight of the coarse aggregate passing the No. 4 sieve and retained on the No. 10 sieve shall be within the range specified for the total coarse aggregate in the mix.
E. Proportions of Silica Sand and Local Materials: Not more than 25 percent by weight of the total aggregate used shall be silica sand or local materials. The silica sand shall conform to all requirements of specifications and the local materials shall meet the requirements of state DOT Standard Specifications for Road and Bridge Construction (latest edition).

2.03 FORMULA FOR JOB MIX

A. The general composition limits prescribed above are master ranges of tolerances to govern mixtures made from any materials meeting the specifications, and they are not necessarily suitable for all cases. A closer control appropriate to the job materials will be required for the specific project in accordance with the job mix formula.
B No work shall be started until the Engineer has approved the job mix formula.
C. Materials that will be used to make up the approved job mix should be stockpiled in sufficient quantity to meet the demands for the entire project in progress. If this is not practicable, care must be taken to ensure adequate quality control of the materials used in each job mix. Should the source of supply for the materials used in the job mix be changed, or should the materials from the source vary appreciably from the materials used in the job mix formula, the job mix formula must be altered accordingly.
D. Combined dry aggregate gradation of the hot bins shall be within the following limits of the job mix formula:

Sieve Size	Tolerance Percent: One Test	Two Tests	Three Tests
3/4 inch	5.0	3.5	2.9
1/2 inch	5.0	3.5	2.9
3/8 inch	5.0	3.5	2.9
No. 4	5.0	3.5	2.9
No. 10	5.0	3.5	2.9
No. 40	4.0	2.8	2.3
No. 80	3.0	2.1	1.7
No. 200	2.0	1.4	1.2

E. After the job mix formula is established, each mix for the project shall meet the approved formula within the following tolerances:

Characteristic	Tolerance
Asphalt Content (Extraction)	± 0.70%
Asphalt Content (Printout)	± 0.30%
Passing No. 10 Sieve	± 6.50%
Passing No. 200 Sieve	± 3.00%

F. In no case shall a job mix that is within the tolerances stated above be such that it falls out of the master range.
G. Samples of the mixture in use will be taken as many times daily as is necessary in the opinion of the Engineer. The mixtures shall be maintained uniformly throughout the project within the above tolerances.
H. Job materials found to have characteristics requiring a content of bituminous material less than is indicated in the formula prescribed above, will be rejected or adjusted in the project within the above tolerances. Asphaltic mixture under the terms of the formula. Where job materials otherwise meeting specifications will require, on account of highly absorptive or other special characteristics, to produce an acceptable balanced mix only if the bituminous material content is increased over The amount specified, the mixture may be accepted provided that the job mix shall be adjusted to require the use of such additional bituminous material content.
I. The asphaltic content shall be such for the material used that when the mixture is tested, in accordance with ASTIVI Designation D 1559, the stability shall be at a maximum with an optimum asphalt cement content. Physical properties of the mixture shall be as shown in the following table:

Mix Type	Minimum Marshall Stability lbs	Flow (0.01 in.)	Minimum VMA (%)	Air Voids (%)
S-I	1500	8-14	14	3-5
S-III	1000	8-18	15	3-7
I	1000	8-14	14	3-5

Part 3.00 Execution

3.01 PREPARATION OF ASPHALTIC CEMENT

A. The asphalt cement shall be delivered to the asphalt plant at a temperature not to exceed 350F and shall be maintained within a range of 250F to 350F in advance of mixing operations. Heating within these limits shall be constant and wide fluctuations of temperature during a day's production will not be permitted.

3.02 PREPARATION OF AGGREGATES

A. Stockpiling coarse aggregate shall be done in such a manner so the aggregate will not segregate.
B. All aggregates to be blended or proportioned shall be placed in separate bins at the cold hopper and proportioned by means of calibrated gates or other approved devices. When two or more aggregates are blended, the use of two or more bins shall be employed for the blending of such material.
C. The aggregates shall be heated and dried at the paving plant before entering the mixer. The temperature of the aggregates shall be so controlled that the temperature of the completed mixture at the plant will fall within the permissible range allowed by these Specifications. Any dried aggregated contaminated with fuel oil shall be wasted.

3.03 PREPARATION OF MIXTURE.

A. Batch Mixing
1. The dried aggregate, prepared as described herein before and combined in batches to meet the job mix formula by weighing each separate bin size, shall be conveyed to the empty mixer.
2. The hot asphalt cement, accurately measured, shall then be introduced, and the mixing continued until the mixture is thoroughly uniform and homogeneous. The total mixing time in no case shall be less than 35 seconds. Each batch must be kept separate throughout the weighing and mixing operations.
B. Continuous Mixing: The dried aggregate, prepared as described herein before and proportioned to meet the job mix formula by volumetric measurement, shall be introduced into the mixer. The hot asphalt cement shall be introduced into the mixer in synchronization with the feeding of aggregate. The quantity shall be measured by volume. Mixing shall be sufficient to produce a thoroughly uniform and homogeneous mixture.
C. General: The ingredients of the mix shall be heated and combined in such a manner as to produce a mixture which shall beat a temperature, when discharged from the pugmill or surge bin, between the limits of 230F and 310F.

3.04 TRANSPORTATION OF MIXTURE

A. The mixture shall be transported in tight vehicles previously cleaned of all foreign material and, if necessary, each load shall be covered with a waterproof canvas cover of sufficient dimensions to protect it from weather conditions. The inside surface of the truck bodies may be thinly coated with soapy water, or a mixture of water with not more than five percent of lubricating oil, but no excess of either shall be used. After the truck bodies are coated and before any mixture is placed therein, they shall be raised so that all excess water will drain out. Kerosene, gasoline or similar products shall not be used to prevent adhesion.

3.05 LIMITATIONS FOR SPREADING

A. The mixture shall be spread only when the surface is properly prepared and is intact, firm, cured and dry. No mixture shall be spread when the air temperature is less than 40F, or when the spreading cannot be finished and compacted during daylight hours. The temperature of the mix at the time of spreading shall not be less than 230F.

3.06 PLACING MIXTURE

A. Upon arrival, the mixture shall be dumped into an approved mechanical spreader and immediately spread and struck off to the full width required and to such appropriate loose depth for each successive course that when the work is completed the required thickness or weight of mixture per square yard will be secured. An excess amount of mixture shall be carried ahead of the screed at all times. Hand raking shall be done behind the machine as required.
B. In limited areas, where, on account of irregularities or unavoidable obstacles, the use of mechanical spreading and finishing equipment is impracticable, the mixture may be spread by hand, when authorized by the Engineer.
C. The mixture shall be laid only when the surface to be covered is dry and only when weather conditions are suitable. All defective areas in the foundation shall be replaced in advance of laying the mixture.
D. All structures which will be in actual contact with the asphaltic mixture, including the vertical faces of existing pavements, shall be painted with a uniform coating of asphalt material to provide a closely bonded, watertight joint.
E. When necessary, due to the traffic requirements, the mixture shall be laid in strips in such manner as to provide for a passage of traffic. When the road is closed to traffic, the mixture may be laid the full width of pavement, by machines traveling in echelon.
F. Before rolling is started, the surface shall be checked, any inequalities adjusted, and the drippings, fat sandy accumulations from the screed, and fat spots from any source, shall be removed and replaced with satisfactory material.

3.07 COMPACTING MIXTURE

A. After the spreading, the mixture shall be rolled when it has set sufficiently or come to the proper condition to be rolled, and when the rolling does not cause undue displacement.
B. Rolling shall begin at the center and progress toward the outside, paralleling the centerline of the roadway, uniformly lapping at least one–half of the width of the roller.
C. The motion of the roller shall' at all times be slow enough to avoid displacement of the mixture, and any displacement that occurs shall be corrected by the use of rakes and fresh mixture where required. The rolling shall include transverse, longitudinal, diagonal and, where practicable, crescent rolling, as may be necessary to obtain the specified density.
D. The seal rolling with steel–wheeled rollers weighing from 5 tons to 12 tons shall follow as close behind the spreader as is possible without picking up, displacing, or blistering the material. Rolling with the self–propelled pneumatic–tired rollers shall follow as soon as possible and as close behind the seal rolling as the heat of the mixture will permit. This rolling shall be done such that the self–propelled traffic roller shall cover every area of the surface with at least six passes. This final rolling shall be done before the pavement temperature is lower than 140F, and shall be continued until all roller marks or tire marks are eliminated. Self–propelled, pneumatic–tired rollers shall be used for the rolling of patching and leveling courses. At the option of the Contractor, a steel–wheeled roller may be used to supplement the self–propelled pneumatic–tired rollers, but not more than one steel–wheeled roller may be used in conjunction with the necessary number of self–propelled pneumatic–tired rollers. After final compaction, the finished pavement shall at no point have a density less than 95 percent of the laboratory compacted density. Rolling with the self–propelled pneumatic–tired roller shall proceed at a speed from 6 to 10 miles per hour and the rate of rolling shall not exceed 3,000 square yards per hour per roller. A sufficient number of self–propelled pneumatic–tired rollers shall be used so that the rolling of the surface for the required number of passes within this maximum rolling rate shall not delay any other phase of the placing operation, nor result in excessive cooling of the mixture before the rolling is complete. In the event that the rolling is not properly maintained to schedule as outlined above, the laying operation shall be discontinued until the rolling operations have caught up to the spreader(s).
E. In all places inaccessible to a roller, such as adjacent to curbs, headers, gutters, bridges, manholes, etc., the required compaction shall be secured with tamps. Depressions which may develop before the completion of the rolling shall be remedied by loosening the mixture laid and adding new material to bring the surface to a true surface.
F. Should any depressions remain after final compaction has been obtained the mixture shall be removed sufficiently and new material added to form a true and even surface.
G. The mixture, after compaction, shall be of the thickness shown on the Drawings. The surface, after compaction, at no place shall show an excess of asphalt, and any area showing such excess, or other defect, shall be cut out and replaced with fresh mixture and immediately compacted to conform with the surrounding area. Any mixture which becomes loose or broken, mixed or contaminated with dirt or any other foreign material during the wearing course shall be removed and replaced with fresh mixture which shall be immediately compacted to conform with the surrounding area.
H. Gasoline or oil from rollers shall not be allowed to deposit on the pavement and any pavement damaged by such deposits shall be removed and replaced.
I. Any mixture remaining unbonded after rolling shall be removed and replaced.

3.08 JOINTS

A. Transverse Joints: At the end of each day's work, or whenever the laying is to be discontinued for such length of time as to allow the mixture to become chilled, transverse joint shall be formed either by laying a board, equal in thickness to the compacted thickness of the pavement, across the width of strip being spread and rolling the mixture against the board, or by using paper or sand, provided in either case the asphalt is cut back to well bonded material of the required thickness before placing additional asphalt.
B. Longitudinal Joints: Where only a portion of the width of pavement is to be laid and opened to traffic, longitudinal joints shall be formed rolling the exposed edge of the strip first laid. When the adjacent strip is constructed, the edge of the mixture in place shall be trimmed back so as to expose an unsealed or granular vertical surface. When the strip first laid is closed to traffic, the edge shall not be sealed, but shall be left vertical and the adjacent strip placed against it without trimming.
C. General: The exposed edge of the transverse joints, trimmed or formed as provided above, shall be painted with a thin coat of hot asphalt cement just prior to the laying of fresh surface course mixture adjacent. The fresh mixture shall be raked against the joint and rolled.

3.09 FIELD QUALITY CONTROL

A. Surface Requirements:
1. For the purpose of testing the finished surface, a 15–foot straightedge and a standard template cut to the true cross section of the road shall at all times be available on the work site. The Contractor shall provide or designate some employee whose duty is to handle the straightedge and template in checking all rolled surfaces, and he shall work with the Engineer.
2. The finished surface shall be such that it will not vary more than 1/4 inch from the template cut to the cross section of the road, not more than 3/16 inch from the 15foot straightedge applied parallel to the center line of the pavement. Any irregularity of the surface exceeding the above limits shall be corrected. Depressions that may develop after the initial rolling shall be remedied by loosening or removing the mixture and adding new material to bring the areas to a true surface. No skin patching shall be done. Such portions of the completed pavement that are defective in surface composition or in composition, or that do not comply with all other requirements of these specifications, shall be taken up and replaced with suitable mixture, properly laid in accordance with these specifications and at the expense of the Contractor.

B. Removing and Replacing: If correction is made by removing and replacing the pavement, the removal must be for the full depth of the course and extend at least 50 feet on either side of the defective area, for the full width of the paving lane.
C. Overlaying: If correction is made by overlaying, the overlay shall cover the length of the defective area and taper uniformly to a featheredge thickness at a minimum distance of 50 feet on either side of the defective area. The overlay shall extend full width of the roadway. Care shall be taken to maintain the specified cross slope. The mix used for the overlay may be adjusted as necessary for this purpose by the Engineer. Overlaying will not be permitted, when the finished pavement surface is a friction course or abuts concrete curbs.
D. Other Methods: For courses which will not be the final pavement surface, correction of minor straightedge deficiencies by methods other than specified above may be approved by the Engineer.
E. Thickness Requirements: The thickness of the compacted asphaltic concrete surface course shall be determined by coring and shall be no less than that shown on the Drawings. Any surface course found to be less than the thickness shown on the Drawings by greater than ¼–inch shall be removed and replaced.
F. Protection of Pavement: After the completion of the pavement, no vehicular traffic of any kind shall be permitted on the pavement until it has set sufficiently to prevent rutting or other distortion.

3.10 TESTING AND REPORTS

A. Testing for performance in accordance with these Specifications will be paid for by the Owner. The frequency of testing shall be a minimum of that specified below and at the locations as directed by the Engineer. However, any retesting necessary in areas not initially meeting these Specifications shall be paid for by the Contractor.
B. Prior to the start of the placing of the asphaltic concrete, the job mix formula prepared by a certified material–testing laboratory shall be submitted to and be approved by the Engineer. All job mix design formulas design shall be current within the last 12 months.
C. During construction of the asphaltic concrete wearing surface, the following tests must be completed and reports submitted to the Engineer before acceptance can be given:
1. Extraction stability and gradation of combined aggregate –1 test per day. Bitumen content,

Drawing name: K:\VRB_LDEV\047916 - Darden\133-LH Mt Dora\CADD\PlanSheets\113-CS3 DARDEN CIVIL SPECIFICATIONS Jul 29, 2022 10:14am by: LizMeeks
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

2. Transverse Contraction Joints: Transverse contraction joints shall be constructed at ten-foot intervals and shall consist of planes of weakness created by sawing the surface of the hardened concrete. The cut shall be perpendicular to the surface of the pavement, and shall extend to a depth of six inches below the top of the curb and one and one-half inches below the gutter.
   a. It shall be the Contractor's responsibility to see that the sawing equipment does not damage the curb and to saw the transverse contraction joints as soon as the curb, and curb and gutter has hardened to the degree that tearing and raveling are not excessive and before uncontrolled shrinkage cracking begins. If, at any time, uncontrolled cracking occurs, the Contractor will be required to modify his methods.
3. Transverse Expansion Joints: One-half inch expansion joints shall be formed by placing preformed joint filler at the ends of each radius return, around all structures, and at intervals not exceeding 500 feet.
4. Cleaning and Sealing Joints: Joints in gutters which are to be sealed, shall be filled with joint sealing material before the roadway is opened to traffic and as soon after completion of the curing period as is feasible. Just prior to sealing, each joint shall be thoroughly cleaned of all foreign material (including any membrane curing compound) and the joint faces shall be clean and surface-dry when the sealer is applied.
   a. The sealing material shall be applied to each joint to conform to the details shown on the Drawings and in accordance with the manufacturer's recommendation. The pouring shall be done in such manner that the material will not be spilled on the exposed surfaces of the concrete. Any excess material on the surface of the concrete gutter shall be removed immediately and the gutter surface cleaned.
   b. All cracks occurring in the gutter prior to its acceptance shall be cleaned out and sealed as specified above, except that the cracks and fractures shall be completely filled with joint sealer and any excess filler material cut down level with the gutter surface.

G. Curing:
1. After the finishing operations have been completed and as soon as the concrete has hardened sufficiently that marring of the surface will not occur, the entire surface and the edges of the newly placed concrete shall be covered and cured with membrane curing compound.
2. Curing compound shall be uniformly applied to the surfaces to be cured, in a single coat, continuous film, at the rate of one gallon to not more than 200 square feet, by a mechanical sprayer.
3. Curing compound shall not be applied during periods of rainfall. Curing compound shall not be applied to the inside faces of joints to be sealed. Should the film become damaged from any cause within the required curing period, the damaged portions shall be repaired immediately with additional compound. Upon removal of side forms the sides of the slabs exposed shall immediately be coated to provide a curing treatment equal to that provided for the surface.

H. Form Removal: After the concrete has sufficiently set a minimum of 12 hours, the Contractor shall remove the forms and shall backfill the space on each side. The earth shall be compacted and graded in a satisfactory manner without damage to the concrete work. Honeycombs shall be filled with sand cement mortar. Plastering will not be allowed on the face of the walk or curbs. Rejected work shall be removed and replaced at the expense of the Contractor.

END OF SECTION

SECTION 02530
DEWATERING SYSTEM

Part 1.00 General

1.01 SCOPE OF WORK
A. In general, the work specified in this Section consists of supplying labor, materials and performing all work necessary to lower and control the groundwater levels and hydrostatic pressure, to permit excavations and construction specified under this Contract to be performed in the dry.

1.02 EXAMINATION OF THE SITE AND REFERENCE DOCUMENTS
A. The Contractor shall take all the steps that he considers necessary to familiarize himself with the site conditions, the ground conditions and the groundwater conditions.
B. The Contractor shall obtain permits as required by local, state, or other agencies having jurisdiction over the dewatering activities.
C. The Contractor shall obtain the geotechnical report(s) pertaining to the site from the Owner.

Part 2.00 Products

Not used

Part 3.00 Execution

3.01 METHOD
A. The Contractor may use any dewatering method he deems feasible so long as it results in working in the dry and below the bottom of the excavation.
B. The Contractor shall install the permanent site underdrain system during the early stages of construction to aid in controlling the groundwater during construction.
C. The Contractor shall conform and meet all conditions, obtain necessary permits and requirements of the regulatory agencies that have jurisdiction.
D. The exhaust system of gasoline and diesel engines for dewatering pumps shall be equipped with mufflers, subject to the approval of the Engineer, said mufflers so designed as to provide maximum noise suppression. In the event the Engineer considers the muffling of gasoline or diesel driven pumps unsatisfactory, the Contractor shall be required to use electrically driven dewatering pumps. If a portable generator is used, the exhaust gas system of said generator shall also be properly muffled and subject to the approval of the Engineer.

3.02 DEWATERING REQUIREMENTS
A. It is the intent of these specifications that an adequate dewatering system be installed in advance and controlled in order to permit excavation, construction, grading and the placement of fill materials, all to be performed under dry conditions. The dewatering system shall be adequate to pre-drain the water-bearing strata above and below the bottom of the excavation.
B. The contractor shall be solely responsible for the arrangement, location and depths of the dewatering system necessary to accomplish the work described under this section of the specifications. The dewatering shall be accomplished in a manner that will reduce the hydrostatic head below any excavation to the extent that the water level in the construction area are a minimum of two (2) feet below the prevailing excavation surface and any surface to be compacted; will prevent the loss of fines, seepage, boils, quick conditions, or softening of the foundation strata; will maintain stability of the sides and bottom of the excavation; and will result in all construction operations being performed in the dry.
C. The Contractor shall promptly dispose of all water removed from the excavations in such a manner as will not endanger public health, damage public or private property, or affect adversely any portion of the work under construction or completed by him or any other Contractor. Contractor shall obtain written permission from the Owner for any property, involved before digging ditches or constructing watercourses for the removal of water.
D. The disposal of water from the dewatering system shall be coordinated with applicable portions of Section 02276 entitled Temporary Erosion and Sedimentation Control and the requirements of all regulatory agencies having jurisdiction.
E. If the dewatering requirements are not satisfied due to inadequacy or failure of the dewatering system, then loosening of the foundation strata, or instability of the slopes, or damage to the foundations or structures may occur. The supply of all labor and materials, and the performance of all work necessary to carry out additional work for reinstatement of the structures of foundation soil resulting from such inadequacy or failure shall be undertaken by the Contractor subject to the approval of the Engineer, and at no additional expense to the Owner.

END OF SECTION

SECTION 02577
PAVEMENT MARKING

Part 1.00 General

1.01 WORK INCLUDED
A. The work included in this Section consists of furnishing all labor, materials, transportation, equipment and incidentals necessary to provide painted reflectorized traffic stripes, including edge stripes and traffic guides as shown on the Drawings and specified herein.

1.02 SUBMITTAL
A. Certification of testing laboratory as to compliance with State DOT Standard Specifications for Highway and Bridge Construction (latest edition).

Part 2.00 Products

2.01 MATERIALS
A. Traffic paint shall conform to the State DOT Standard Specifications for Highway and Bridge Construction (latest edition).
B. Thermoplastic traffic stripes and markings shall conform with the State DOT Standard Specifications for Highway and Bridge Construction (latest edition).
C. Glass spheres for reflective paint shall conform with the State DOT Standard Specifications for Highway and Bridge Construction (latest edition).

Part 3.00 Execution

3.01 APPLICATION
A. Equipment used, alignment, application and protection shall be in accordance with the State DOT Standard Specifications for Highway and Bridge Construction (latest edition).

END OF SECTION

SECTION 02640
VALVES AND APPURTENANCES

Part 1.00 General

1.01 SCOPE OF WORK
A. Furnish and install all valves and appurtenances as shown on the Drawings and as specified herein.
B. The equipment shall include, but not be limited to, the following:
   1. Gate valves
   2. Ball valves for PVC pipe
   3. Check valves
   4. Plug valves
   5. Air and vacuum valves
   6. Fire hydrants
   7. Corporation stops
   8. Expansion joints 9. Unions
   10. Compression couplings
   11. Hose bibbs
   12. Hydraulic cushioned check valves
   13. Pressure gauges

1.02 DESCRIPTION OF SYSTEMS
A. All of the equipment and materials specified herein are intended to be standard for use in controlling the flow of water, sewage, sludge, chemicals, etc., depending on the applications.
B. All materials and manufacturers of said materials shall meet the requirements of the utility agency that will maintain this system. Contractor shall obtain a copy of the requirements from the agency.

1.03 QUALIFICATIONS
A. All of the types of valves and appurtenances shall be a product of well-established reputable firms who are fully experienced and qualified in the manufacture of the particular equipment to be furnished. The equipment shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with these specifications as applicable.
B. All materials and manufacturers of said materials shall meet the requirements of the utility agency that will maintain this system. Contractor shall obtain a copy of the requirements from the agency.

1.04 SUBMITTALS
A. Submit to the Engineer within 30 days after execution of the contract a list of materials to be furnished, the names of the suppliers and the date of delivery of materials to the site.
B. Complete shop drawings of all valves and appurtenances shall be submitted to the Engineer for approval.

1.05 TOOLS
A. Special tools required for normal operation and maintenance shall be supplied with the equipment.

Part 2.00 Products

2.01 MATERIALS AND EQUIPMENT
A. General:
   1. All valves and appurtenances shall be of the size shown on the Drawings, and whenever possible, all equipment of the same type shall be from one manufacturer.
   2. All valves and appurtenances shall have the name of the maker and the working pressure for which they are designed cast in raised letters upon some appropriate part of the body.

2.02 GATE VALVES
A. Gate valves for water shall meet the requirements of AWWA C509. Valves shall be rated for 150 psi working pressure and a minimum 300-psi test pressure. Valves shall be iron body, bronze-mounted, resilient seal double disc, parallel set, and non-rising stem type fitted with O-Ring seals. The operating nuts shall be 2 inches square. All valves shall open counter clockwise. Stuffing boxes shall be the O-Rings type. Gate valves shall be mechanical joint, ANSI/AWWA C111/A21.11, or flange joint, ANSI B16.1 Class 125, as shown on the Drawings or specified.
B. All buried valves shall be fitted with cast iron three-piece adjustable valve boxes. The barrel shall be two-piece, screw type, having a 5-1/4 inch shaft. The upper section shall be complete with cast iron cover. Covers shall have "WATER" for water valves and "RECLAIM" for reclaim valves cast into the top. Valve boxes shall be provided with a concrete base as shown on the Drawings. Four tee-handled valve wrenches of suitable length shall be furnished to operate all valves within valve boxes.
C. Exposed valves shall be equipped with handwheels or chainwheels as shown on the Drawings. Handwheels shall be of ample size and shall have an ARROW and the word "OPEN" cast thereon to indicate the direction of opening.
D. Valves 12 inches or larger shall be provided with bevel or spur gears depending on the position of the valve as indicated on the Drawings. The gears shall be housed in a grease case of the extended yoke type to permit repacking the stuffing box of the valve without disassembly. Valves 16 inches or larger designed to be horizontally shall be equipped with rollers to carry the weight of the wedge throughout its travel.
E. Valve wrenches and extension stems shall be provided by the manufacturer.

2.03 BALL VALVES FOR PVC PIPE
A. Ball valves for PVC pipe shall be of PVC Type 1 with union, socket, threaded or flanged ends as required. Ball valves shall be full port, full flow, all plastic construction, 150 psi rated with Teflon seat seals and T-handle.
B. All valves shall be mounted in such a position that valve position indicators are plainly visible when standing on the floor.

2.04 CHECK VALVES
A. Check valves for cast iron and ductile iron pipe shall be swing type and shall meet the material requirements of AWWA Specification C500. The valves shall be iron body, bronze mounted, single disc, 150 psi working water pressure, nonshock, and hydrostatically tested at 300 psi. Ends shall be 125 pound ANSI B16.1 flanges or 125 pound ANSI B2.1 threaded fittings depending upon location.
B. When there is no flow through the line, the disc shall hang lightly against its seat in practically a vertical position. When open, the disc shall swing clear of the waterway.
C. Check valves shall have bronze seat and body rings, stainless steel hinge pins and bronze nuts on the bolts of bolted covers.
D. Valves shall be so constructed that disc arid body seat may easily be removed and replaced without removing the valve from the line. Valves shall be fitted with an extended hinge arm with outside lever and spring or weight.
E. Check valves for small diameter PVC pipe shall be of PVC Type 1, Series 80 with union, socket, threaded or flanged ends as required.

2.05 PLUG VALVES
A. Plug valves for sewer piping shall be non-lubricated eccentric plug type with semi-steel bodies, resilient faced plugs, and welded nickel seats. Port areas shall be at least 80 percent of full pipe area. Valves shall be capable of drip-tight shutoff at pressure differentials up to the full rating of the valve with pressure in either direction. All exposed nuts, bolts, springs, and washers shall be zinc plated, except exposed hardware for submerged valves shall be stainless steel. Valve bodies shall be furnished with 125/150-pound ANSI standard flanged ends, or mechanical joints, as shown on the Drawings.
B. All valves 20 inches or larger shall be equipped with gear actuators. All gearing shall be enclosed, suitable for running in oil, with seals provided on all shafts to prevent entry of dirt and water into the actuator. All shaft bearings shall be furnished with permanently lubricated bronze bearing bushings. Actuator shall clearly indicate valve position and an adjustable stop shall be provided. Construction of actuator housing shall be semi-steel. Plug valves installed such that actuators are 6 feet or more above the floor, shall be provided with chainwheels and chains.
C. Where shown on the drawings, plug valves shall be installed with extended shafts and actuators. Actuators for extended shafts shall be mounted on floor stands where indicated on the Drawings or shall have removable handwheels where floor stands are not indicated. Six-inch sleeves shall be provided for extended shafts in all floors, and covers shall be provided where necessary. Shafts shall be of adequate strength to operate the valve, and shall be 304 stainless steel where submerged and carbon steel elsewhere. Floor stands shall be equipped with valve position indicators and a lock for handwheel.
D. All buried valves shall be furnished with three-piece cast iron adjustable valve boxes. The barrel shall be two-piece, screw type, having a 5-1/4 inch shaft. The upper section shall be complete with cast iron cover. Covers shall have "SEWER" cast into the top. Valve boxes shall be provided with concrete base as shown on the Drawings
E. All plug valves shall be installed so that the direction of flow through the valve is in accordance with the manufacturer's recommendations.

2.06 AIR RELEASE VALVES – AIR AND VACUUM VALVES AND COMBINATION
A. The air release valves and air and vacuum release valves shall be suitable for sewage or water, rated for a minimum 150 psi working pressure, and shall have a cast iron body and cover, stainless steel float and trim, and Buna-N seat. The fittings shall be threaded. Valves shall be furnished with backwash accessories. Valves shall meet AWWA C-507. Valves used in potable water service shall be certified to NSF/ANSI 61 Drinking Water System Components. Valve body and cover shall be constructed of ASTM A126 Class B cast iron for working water pressure up to 300 psi.
B. Check assembly air and vacuum release valves shall be able to allow air or gas to escape during the liquid filling process and to permit air to enter when the system is drained, partially drained or flow is stopped, causing the system pressure to drop below atmospheric pressure. The valves shall be of the large orifice, floating ball type. The body shall be of flanged iron, cast iron construction with integral case seat and ball retaining rails. The ball shall be a hollow steel sphere with a smooth covering of nitril rubber. The valve shall be suitable for 150 psi working pressure and a temperature of 185 degrees F. Flanged ends shall be integral with body casting, flat faced and drilled to ANSI B16.1, Class 125 cast iron standard.

2.07 FIRE HYDRANTS
A. Fire hydrants shall be 5-1/4 inch minimum valve opening and shall comply with the current AWWA Standard Specification C502-05 with the hydrants for water works service. Each hydrant shall have 6-inch mechanical joint ends with strapping lugs and shall open by turning counterclockwise. Fire hydrants shall be of ample length for 3-1/2 foot depth of bury, and be furnished with a safety flange and compression type main valve. It shall be provided with two 2-1/2 inch hose nozzles and one 4-1/2 inch pumper nozzle, all having National Standard hose threads. Bronze nozzles shall have caps attached by chains. Operating nuts shall be AWWA Standard (pentagonal, measuring 1-/2 inch point to flat). Fire hydrants shall be equipped with self-oiling bonnet and "O-Ring" packing. Fire hydrants shall be painted in accordance with the specifications in a color to correspond to the present standard of the city having jurisdiction.
   1.Hydrants shall be installed plumb and in true alignment with the connection pipes to the water mains. They shall be securely braced against the end of the trench (undisturbed soil) with concrete thrust blocks. The gravel or crushed stone for the drain sump, followed by backfilling, shall be carefully placed and compacted. Installed hydrants shall be painted lime-yellow (Dupont 7744D or equivalent) for the final coat. Hydrant placement shall not be at a distance greater than 18 feet from a paved stabilized area, which can withstand the weight of a Class A pumper. The center of the street port shall be 18 inches above final grade. Steamer port shall be correctly positioned for the proper connections as defined by the authority having jurisdiction. Hydrant valve shall be permanently connected to the water main tee with "All Thread" rod locking retainer glands.

2.08 CORPORATION STOPS AND CURB STOPS
A. Corporation stops and curb stops shall be all brass and bronze suitable for 150 psi operating pressure, equipped with connections compatible with the connecting service pipe type, threaded in accordance with AWWA C800-05, and shall be of sizes required and/or noted on the Drawings.

2.09 EXPANSION JOINTS
A. Joints shall be of the arch type with the number of arches dependent on movement, as shown on Drawings. They shall be constructed of multiple plies of woven fabric, impregnated with viton and reinforced with welded steel rings imbedded in the body. They shall have flanges integral with the body of fabric-reinforced rubber, with ANSI 125 pound drilling, and a Hypalon coating applied at the factory for protection from ozone-and weathering. Each end flange shall be backed up with 3/8" thick galvanized steel retaining rings. Joints shall be installed in accordance with the manufacturer's recommendations.
B. Control units (restraining rods) shall be installed if adequate anchoring is not practical, in accordance with the manufacturer's standard installation instructions. Rods and plates, bolts, and rubber grommets should be used to isolate the rods from the plates.

2.10 COMPRESSION COUPLINGS
A. Compression couplings and compression fittings for piping 2 inches in diameter and smaller shall be suitable for 4-5A applications for 150 psi rated fittings. Coupling bodies shall be seamless steel, and fitting bodies shall be malleable iron. Retainer rings shall be carbon steel. Fitting and coupling shall be constructed of brass. When pipe movement out of the coupling or fitting might occur, proper anchorage of the pipe must be provided.
B. Cast couplings shall be furnished for pipe 2 inches in diameter, with middle rings constructed of cast iron and follower rings made from high-grade malleable iron. The gaskets shall be completely confined and held firmly in position during tightening for full sealing compression all around the pipe. Couplings shall be rated for 150 psi working pressure.

2.11 UNIONS
A. Unions shall be 150 psi rated constructed of zinc-coated malleable iron. Unions on water piping 2-1/2 inches in diameter and larger shall be furnished with 125-pound ANSI standard flanged ends. Gaskets for flanged unions shall be of the best quality fiber, plastic or leather. Unions shall not be concealed in walls, ceilings, or partitions.

2.12 HOSE BIBBS
A. Hose bibbs shall be bronze body with renewable composition disc, screw-in bonnet and threaded inlet. Potable water hose bibbs shall be 3/4 inch or 1 inch with vacuum breaker as noted on the Drawings.

2.13 HYDRAULIC CUSHIONED CHECK VALVES
A. Hydraulic controlled closing check valves shall meet AWWAC-508 and shall be constructed with a heavy cast iron body with a seated steel disc having a captive seating face, a non-corrosive shaft for attachment of counterweight arm and lever, and a completely non-corrosive hydraulic cushioning chamber. It shall be designed for installation on the pump discharge to absolutely prevent the return of flow back through to the pump, and shall close at a controlled rate to prevent destructive hydraulic surging. The hydraulic cushioning chamber shall be attached.to the side of the valve body externally and two-constructed as a horizontal cylinder containing a chamber that will permit the valve to be operated without any metering action. The cushioning shall be by oil stored in an oil reservoir attached by piping, and fittings to the cushion chamber. Adjustable valves are required to provide an adjustable closing speed to meet the service requirements.

2.14 PRESSURE GAUGES
A. Pressure gauges shall be direct mounted, cast aluminum case, with a 4-1/2 inch diameter dial and furnished with a clear glass crystal window, 1/4-inch shut-off valve, and a bronze pressure snubber. Provide diaphragm seals between shut-off valve and pressure gauge on all lines. All gauges shall be weatherproofed. The face dial shall be white finished aluminum with jet-black graduations and figures. The face dial shall indicate the units of pressure being measured (e.g., feet, inches, etc.) or be dual scale.

Part 3.00 Execution

3.01 INSTALLATION
A. All valves and appurtenances shall be installed in the locations shown, true to alignment and rigidly supported.
B. Fire hydrants shall be set at the locations designated by the Engineer and bedded on a firm foundation. Each hydrant shall be set in true vertical alignment and position, a concrete thrust block shall be placed between the back of the hydrant inlet and undisturbed soil at the end of the trench. Minimum bearing area shall be as shown on the Drawings. Felt roofing paper shall be placed around the hydrant elbow before placing concrete. If directed, the hydrant shall be tied to the pipe with suitable rods or clamps, either galvanized, painted, or otherwise rustproof treated. Concrete used for backing shall not be leaner than 1 part cement, 2-1/2 parts sand, and 5-1/2 parts stone. Hydrant paint shall be touched up as required after installation.
C. Prior to installation of cast couplings, the pipe ends shall be cleaned thoroughly for a distance of 8 inches. Use pipe manufacturer pipe lubricant that does not support bacterial growth and is non-toxic, water soluble, imparts neither taste or odor to the conveyed water and is ANS/NSF 61 approved as a gasket lubricant. A follower and gasket, in that order, shall be slipped over each pipe to a distance of about 6 inches from the end, and the middle ring shall be placed on the already laid pipe end until it is properly centered over the joint. The other pipe end shall be inserted into the middle ring and brought to proper position in relation to the pipe already laid. The gaskets and followers shall then be pressed evenly and firmly in the middle ring flares. After the bolts have been inserted and all nuts have been made up finger-tight, diametrically opposite nuts shall be progressively and uniformly tightened all around the joint, preferably by use of a torque wrench of the appropriate site and torque for the bolts.

3.02 SHOP PAINTING
A. Ferrous surfaces of valves and appurtenances shall receive a coating of rust-inhibitive primer. All pipe connection openings shall be capped to prevent the entry of foreign matter prior to installation.

3.03 FIELD PAINTING
A. All metal valves and appurtenances specified herein and exposed to view will be painted as part of the work.

3.04 FIELD TESTING
A. After installation, all valves and appurtenances shall be tested at least 1 hour at the working pressure corresponding to the class of pipe, unless a different test pressure is specified. If any joint item proves to be defective, it shall be repaired or replaced to the satisfaction of the Engineer.

END OF SECTION

SECTION 02660
WATER DISTRIBUTION SYSTEM

Part 1.00 General

1.01 WORK INCLUDED
A. The work included under this Section consists of furnishing all material, equipment, transportation, tools and labor to install water mains, valves, fittings, specials, and other appurtenances, as shown on the Drawings or specified herein, including flushing, testing and sterilizing for a complete job ready to operate.

1.02 RELATED WORK
A. Section 02210 – Site Earthwork
B. Section 02221– Trenching, Backfilling and Compaction for Utility Systems
C. Section 02530 – Dewatering System
D. Section 02640 – Valves and Appurtenances
E. Section 03000 – Concrete

1.03 QUALITY ASSURANCE
A. Design Requirements:
   1. PVC water mains 4 inches and larger in diameter shall be constructed with cast or ductile iron fittings.
   2. PVC pipe shall not be used for water mains larger than 12 inches in diameter.
   3. Water mains 4 inches to 12 inches in diameter shall be PVC or ductile iron as shown on the Drawings.
   4. Water mains larger than 12 inches in diameter shall be ductile iron, unless otherwise noted on the Drawings.
B. Storage: All pipe shall be stored on level ground, preferably turf or sand, free of sharp objects which could damage the pipe. Stacking of pipe shall be limited to a height that will not cause excessive deformation of the bottom layers of pipe. Where necessary, due to ground conditions, the pipe shall be stored on wooden sleepers, spaced suitably and of such width as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.
C. Pipe Inspection: The Contractor shall obtain from the pipe manufacturers a certificate of inspection to the effect that the pipe and fittings supplied have been inspected at the plant and that they meet the requirements of these Specifications. All pipe will be inspected upon delivery and that which does not conform to the requirements of these Specifications shall be rejected and must be immediately removed from the site by the Contractor.
D. All materials and manufacturers of said materials shall meet the requirements of the utility agency that will own and maintain this system. Contractor shall obtain a copy of the requirements form the agency.

1.04 SUBMITTALS
A. Shop Drawings: In general, six (6) copies of the following shop drawings shall be submitted to the Engineer for approval prior to construction:
   1. Mill test certificates and certified test reports on the pipe and fittings.
   2. Details of restrained and flexible joints
   3.Hydrants
   4. Meter vaults and boxes
   5. Valves and valve boxes
   6. Service connection assemblies
   7. Joint lubricant
   8. Restrained Joints

Part 2.00 Products

2.01 MATERIALS
A. Ductile Iron Pipe and Fittings:
   1. Ductile iron pipe and ductile iron pipe shall conform to the requirements of ANSI Standard A21.51/ C151. A minimum of Class 50 pipe shall be supplied.
   2. Fittings:
      a. All ductile iron fittings shall be mechanical joint or single gasket push-on type with a minimum pressure rating of 350 psi and shall conform to the requirements of ANSI/AWWA A21.53/C153.
      b. Mechanical joint and/or single gasket push-on type fittings shall be cement lined, seal coated and outside coated as specified above for ductile iron pipe.
   3. Joints: Mechanical joints consisting of bell, socket, gland, gasket, bolts and nuts shall conform to ANSI/AWWA A21.11/C111. Bolts shall be high strength, annealed cast iron or low alloy steel, T-head type having hexagonal nuts. Bolts and nuts shall be machined true and nuts shall be tapped at right angles to a smooth bearing surface. Single seal gasket push on type joints shall conform to the requirements of ANSI A21.11. Flanged joints shall conform to ANSI Standard B16.1-125 LB.
   4. Restrained Joints: Restrained joints may be of the types fabricated by the various manufacturers, upon approval by the Engineer of details submitted by the Contractor. Restrained joints that require field welding will not be acceptable. The thickness of the pipe barrel remaining at grooves cut for restraint shall not be less than that required for the pressure class thickness. Joints using set screws will not be acceptable. Restrained joints shall be furnished for 24 inches and longer pipe of exchange in the direction of the water main.
   5. Gaskets: Gaskets shall be of vulcanized crude rubber or polyvinyl chloride plastisol. Gaskets shall have plain tips unless otherwise specified. Gaskets shall meet ANSI/AWWA C111/A21.11.
B. Polyvinyl Chloride Pipe (PVC):
   1. Pipe:
      a. PVC Pipe (4 inches to 12 inches in diameter) shall be manufactured from polyvinyl chloride resin conforming to ASTM Designation D1784. Pipe of this material shall conform to AWWA C900. The pipe shall bear the National Sanitation Foundation (NSF) seal for potable water pipe. Pipe shall have a minimum dimension ratio number of 18 and shall be supplied-in standard lengths of 20 feet.
      b. PVC Pipe (14 inches to 36 inches in diameter) shall be manufactured from polyvinyl chloride resin conforming to ASTM Designation D1784. Pipe of this material shall conform to AWWA C905. The pipe shall bear the National Sanitation Foundation (NSF) seal for potable water pipe. Pipe shall have a dimension ratio number of 25 and a pressure class rating of 165. Pressure class 235 shall meet DR18 and shall be supplied in standard lengths of 20 feet.
   2. Joints:
      a. All joints for PVC pipe 2 inches and larger shall be push-on type-joints. Joints shall conform to the requirements of ASTM Designation D 3139 and gaskets shall conform to ASTM F 477.
      b. Joints in PVC pipe smaller than 2 inches shall be solvent welded in accordance with the recommendations of the pipe manufacturer.
C. Prestressed Concrete Pipe (PCP): Pipe, fittings and specials shall conform to AWWA Standard C301, "Prestressed Concrete Pressure Pipe, Steel Cylinder Type, for Water and other Liquids." Fittings and specials shall be Type "B". The pipe interior shall receive a bituminous seal coat as specified in AWWA C104, unless other special protective linings are specified. Gaskets shall be of a material compatible with the pipe and specific service requirements. Pipe design shall be in accordance with AWWA C301, for the maximum operational internal pressure and external loading. The Contractor shall submit said design calculations from the manufacturer to the Engineer.
D. Copper Pipe: Copper pipe or tubing for underground installation shall be Type K and conform to the requirements of ASTM Designation B 251. Fittings shall be brass with approved compression or flare type connections.
E. Galvanized Steel Pipe:
   1. Pipe Material: Galvanized steel pipe shall be Schedule 40 and conform to the requirements of ASTM Designation A 120.
   2. Fittings: Fittings for galvanized steel pipe shall be galvanized malleable iron pipe, 150 pound, Type U, conforming to Federal Specification WW-P-521.
   3. Joints: Joints shall be standard screw thread type.
F. Polyethylene Tubing: Polyethylene tubing for service lines shall be municipal service copper tube sized and approved for potable water use by the National Sanitation Foundation. Tubing shall bear the NSF seal and conform to the requirements of AWWA C901/ASTM D 2737, and shall have a minimum pressure class of 160 with DR 9. Polyethylene materials shall be PE 3406 and shall conform, to ASTM D 3350.
G. Polyethylene Pressure Pipe: Polyethylene pressure pipe for service lines shall be iron pipe sized and approved for potable water use by the National Sanitation Foundation. Pipe shall bear the NSF seal and conform to the requirements of AWWA C901/ASTM D 2239, and shall have a minimum pressure class of 160 with IDR 7. Polyethylene materials shall be PE 3406 and shall conform to ASTM D 3350.

Part 3.00 Execution

3.01 PREPARATION
A. Clearing: The Contractor shall perform all necessary clearing operations for the installation of the water pipe and appurtenances as specified in Section 02221-Trenching, Backfilling and Compaction for Utility Systems.
B. Cleanliness: The interior of the pipes shall be thoroughly cleaned of all foreign matter before being lowered into the trench and shall be kept clean during laying operations by means of plugs approved by the Engineer.

3.02 PERFORMANCE
A. The Contractor shall perform all necessary operations, such as excavation, dewatering, foundation preparation, pipe bedding, backfilling, backfill compaction, etc., for the proper installation of the water pipe as specified in Section 02221– Trenching, Backfilling and Compaction for Utility Systems.
B. Method in Excavation: Water shall not be allowed in the trenches while the pipes are being laid and/or tested. The Contractor shall not open more trench than the available pumping facilities are able to dewater. The Contractor shall assume responsibility for disposing of all water so as not to injure or interfere with the normal drainage of the territory, and so as to not cause damage to existing structures. In no case shall the pipelines being installed be used as drains for such water, and the ends of the pipe shall be kept properly and adequately blocked during construction by the use of stoppers approved by the Engineer. All necessary precautions shall be taken to prevent the entrance of mud, sand, or other obstructing matter into the pipelines.
C. Clean up: During the progress of work, the Contractor shall clean up the work area as each section of pipe is completed and tested. Upon completion of the work, all trash, debris and excess material must be hauled away and disposed of to the satisfaction of the Engineer. The completed work shall be cleared and graded to a condition at least equal to that existing before the start of construction.

3.03 INSTALLATION
A. Pipe:
   1. Gradient: Lines shall be laid straight and to grade, as indicated on the Drawings, with a minimum of 36 inches of cover or deeper if required by local frost depth, maintained with respect to finish grade.
   2. Pipe Joint Deflection: Whenever it is desirable to deflect pipe, the amount of deflection shall not exceed the maximum limits as shown in AWWA Standard C600 for ductile iron pipe and the maximum limits as established by the manufacturer of PVC pipe.
   3. Rejects: Any pipe found defective shall be immediately removed and replaced with sound pipe at the Contractor's expense.
   4. Anchors: Concrete thrust blocks shall be placed at all bends, tees, plugs and other fittings to provide lateral support, except when restrained joints are shown. Thrust blocks shall conform to the details shown on the Drawings and shall be of Class C concrete.
B. Ductile Iron Pipe Joints:
   1. Mechanical Joints: All types of mechanical joint pipes shall be laid and jointed in full conformance with manufacturer's recommendations, which shall be submitted to the Engineer for review and approval before work is begun.
   2. Push-On Joints: Push-on joints shall be made in strict, complete compliance with the manufacturer's recommendations. Lubricant, if required, shall be an inert, odorless, water-soluble compound incapable of harboring, supporting, or culturing bacterial life. Lubricant is as specified by ANSI/NSF61.
C. Concrete Encasement:
   1. Concrete encasement shall be constructed in accordance with details shown on the Drawings and shall be constructed of Class C concrete.
   2. The points of beginning and ending of pipe encasement shall be not more than 6 inches from a pipe joint to protect the pipe from cracking due to uneven settlement of its foundation or the effects of superimposed live loads.
D. Service Connections:
   1. Service connections of the size and type called for on the Drawings shall be provided per local utility standards.
   2. Connections to water mains 4 inches and larger shall be made by drilling the appropriate size holes and installing service saddles. Service to smaller pipe sizes shall be accomplished by in-line fittings.
   3. On curbed streets, the exact location for each service connection shall be marked by etching or cutting a "W" in the concrete curb. Where no curb exists or is planned, locations shall be marked by a method approved by the Engineer.
E. Roadway Crossing:
   1. Roadway crossings which require jacking and boring, as identified on the Drawings, shall use steel casing and jacking procedures conforming to the requirements of the State Department of Transportation having jurisdiction as outlined in Utility Accommodation Policy and any supplements thereto. Right-of-way property and surface conditions shall be restored at least equal to their original condition.
   2. The Contractor shall maintain traffic on the roadway and shall keep all workmen and equipment clear of the pavement during the work. All safety regulations of the Department of Transportation shall be complied with.
   3. The top of the casing shall maintain a minimum 30-inch clearance under the roadway surface. Plastic skids for sliding the carrier pipe through the casing shall be spaced per the manufacturer's recommendations and the skids shall be permanently bonded to the carrier pipe. After the carrier pipe has been tested for leakage the ends shall be blocked with an 8-inch wall of brick masonry with a weep hole installed near the bottom of each wall. A vent shall be installed as indicated on the Drawings.
F. Connection to Existing System:
   1. All connections to existing mains shall be made after complete disinfection of the proposed system and shall be made under the direction of the owners of the existing system. Valves separating the mains being installed from existing mains shall be operated by or under the direction of said owner's representative. The cost of the work in making the connections shall be paid for by the Contractor.
   2. In the event any existing users will be without water while a connection is being made, the Contractor shall notify them when the water will be turned off and when he estimates service will be resumed. In some instances, these connections may have to be made at night. No user shall be without water service for more than two hours or as allowed by the local water utility.

3.04 FIELD QUALITY CONTROL
A. General: Written notice shall be given to the Engineer and to the agency that will operate the system, if different from the owner, a minimum of 48 hours (excluding weekends) prior to any test for acceptance being run. A representative of the Engineer shall be present during all tests for acceptance. The Contractor should determine that the section to be tested for acceptance will pass the required tests prior to giving the above notice to the Engineer. If any section fails to pass the tests for acceptance, the Contractor shall make all repairs needed for the section to pass and retest the section including notifications as above. Contractor shall bear all costs incurred by the Owner and/or the Engineer for the retests and repairs to the main and appurtenances as required.
B. Flushing: All water mains shall be flushed to remove all sand and other foreign matter. Flushing shall be terminated at the direction of the Engineer. The Contractor shall dispose of the flushing water without causing a nuisance or property damage.
C. Hydrostatic Tests:
   1. All components of the water distribution system, including fittings, hydrants, connections and valves of the water distribution system shall remain uncovered until tested and accepted; provided, however, that pipe trenches under traveled streets or roads or in unstable soil conditions may be backfilled with the permission of the Engineer. No testing shall be done until all concrete thrust blocking is in place and set. In testing, the part of the system under test shall be filled with water and subjected to a sustained pressure of 150 pounds per square inch. The piping shall be tested in sections between valves, thereby testing each valve for secure closure. While the piping is being filled with water, care shall be exercised to permit the escape of air from extremities of the test section with additional release cocks provided if required. The basic provisions of Section 13, AWWA C-600 for ductile iron pipe and AWWA C-605 and Manual Number M-23 for PVC pipe, where applicable, shall apply.
   2. Test pressure shall be maintained for a period of at least 2 hours and until all sections under test have been checked for evidence of leakage. Rate of loss shall not exceed that specified hereinafter.
   3. The Contractor shall provide all labor, equipment and materials and shall conduct all testing required, under the direction of the Engineer. No separate payment will be made for this work and the cost for this work shall be included in the unit price quoted in the proposal for the applicable item of work. Test shall be conducted in the presence of representatives from the City, Owner and Project Engineer, with 48 hours advance notice provided.
   4. Water for testing and flushing shall be potable water provided by the Contractor from a source approved by the Engineer.
D. Allowable Limits For Leakage:
   1. The hydrostatic pressure tests shall be performed as herein above specified and no installation, or section thereof, will be acceptable until the leakage is less than the number of gallons per hour as determined by the formulas:

      For PVC
      L = ND x (P) ½
      7400

      L = allowable leakage in gallons per hour
      N = number of joints in the section tested
      D = nominal diameter of the pipe in inches
      P = average test pressure maintained during the leakage test in pounds per square inch gauge

      For DIP
      L = SD x (P) ½
      133,200

      L = allowable leakage in gallons per hour
      S = length of tested pipe in feet
      D = nominal diameter of the pipe in inches

      specified. The quantity used shall be measured by pumping from a calibrated container.
E. Correction of Work: Where leakage exceeds the allowable limit, as specified herein before, the defective pipe or joints shall be located and repaired. If the defective portions cannot be located, the Contractor shall remove and reconstruct as much of the work as is necessary in order to conform to the specified limits. Any visible leaks or any defective pipe or joint shall be repaired or replaced as directed by the Engineer even though the total leakage is within the specified allowable limits. No additional payment will be made for the correction of defective work or for damage to other parts of

c. All pipes shall be laid with bells or grooves uphill. As the pipes are laid throughout the work, they must be thoroughly cleaned and protected from dirt and water. No length of pipe shall be laid until the two preceding lengths have been thoroughly embedded in place so as to prevent any movement or disturbance of the finished joint. No walking on or working over the pipes after they are laid, except as may be necessary in tamping earth and refilling, will be permitted until they are covered to a depth of one foot. Fill placed around the pipe shall be deposited on both sides simultaneously to approximately the same elevation and uniformly compacted. Whenever the pipe laying is discontinued, as at night, the unfinished end is to be securely protected from displacement due to caving of the banks or from other injury and a suitable stopper is to be inserted therein.

2. Laying Corrugated Pipe:
   a. All corrugated pipe shall be carefully laid, true to the line and grade shown on the Drawings. The pipe gasket and coupling band shall be. centered over the joint with the coupling bank bolts securely tightened without cutting the gasket.
   b. Fill placed around the pipe shall be deposited on both sides simultaneously to, approximately the same elevation and uniformly compacted. Whenever the pipe laying is discontinued, as at night, the unfinished end is to be securely protected from displacement due to caving of the banks or from other injury and a suitable stopper is to be inserted therein.
3. Drainage Structures:
   a. Concrete inlets or other structures shall be constructed in conformity with the Drawings. Forms shall be designed and constructed so that they may be removed without injury to the concrete and shall be left in place for at least 24 hours after concrete is poured. Concrete shall be thoroughly tamped and shall be cured for at least 5 days after removal of forms. Honeycomb places shall be thoroughly cleaned, saturated with water and pointed up with mortar.
   b. Precast inlets or other structures may be used in lieu of cast-in-place structures. Grates are to be set in place in mortar to the proper line and grade.

3.03 TESTING STRUCTURES

A. Leakage: The watertightness of manholes and inlets (except for bottomless types) may be tested, at the Engineer's option, at the time the structure is completed and backfilled. The test procedure is as follows:
   1. Fill the structures with water to an elevation 1 foot below the start of the cone section with a minimum depth of 4 feet and a maximum depth of 20 feet.
   2. Plug all inlets and outlets with approved stoppers or plugs.
   3. Record the water surface drop during a 15-minute period. The maximum allowable drop in water surface is 1/2 inch for each 15-minute period. If the leakage exceeds this rate, the Contractor shall repair or replace the structure so as to provide a structure which will meet the required watertightness standards.

END OF SECTION

SECTION 02730
SANITARY SEWAGE SYSTEM

Part 1.00 General

1.01 WORK INCLUDED
A. The work included in this Section consists of furnishing all labor, equipment and materials necessary for the construction of gravity sanitary sewer lines, manholes, laterals, sewer connections and appurtenances as shown on the Drawings and specified herein.

1.02 RELATED WORK
A. Section 02210 – Site Earthwork.
B. Section 02220 – Structure Excavation and Backfill.
C. Section 02221 – Trenching, Backfilling and Compacting.
D. Section 02530 – Dewatering System.
E. Section 03000 – Concrete (Site Work).

1.03 QUALITY ASSURANCE
A. Details and shop drawings of the manholes, proposed to be furnished for this work, are submitted to and approved by the Engineer prior to the manufacture of the units. Manholes which are not manufactured in strict compliance with the approved shop drawings and these specifications will be rejected.
B. The Contractor shall furnish shop drawings on all pipe, fittings and other appurtenances to show conformity with plans and specifications.
C. Tests: Certified records of the tests made by the manufacturer, or by a reliable commercial laboratory, or both, shall be submitted with each shipment of pipe. All pipe will be inspected upon delivery and that which does not conform to the requirements of these specifications shall be rejected and must be immediately removed by the Contractor. The Contractor shall furnish and provide samples of pipe for the performance of such additional tests, as the Owner may deem necessary.
D. Each length of pipe shall bear the name or trademark of the manufacturer, the location of the manufacturing plant, and the class or strength classification of the pipe. The marking shall be clearly visible on the pipe barrel. Pipe, which is not marked, clearly is subject to rejection. All rejected pipe shall be promptly removed from the project site by the Contractor.
E. For precast manhole structures, the date of manufacture and the name or trademark of the manufacturer shall be clearly marked on each precast section.
F. All materials and manufacturers of said materials shall meet the requirements of the Utility purveyor and approved by the Engineer. Contractor shall obtain a copy of the requirements from the agency.

1.04 SUBMITTALS
A. Shop Drawings:
   1. Shop drawings shall be submitted to the Engineer for approval prior to construction. Where applicable, the following information shall be submitted:
      a. Precast manholes.
      b. Manufacturer's certification of conformance to ASTM requirements for precast structures.
      c. Manhole frames, covers and other castings.
      d. Manufacturer's certification of conformance to ASTM requirements for castings.
      e. Pipe joint and fittings.
      f. Mill Test Certificates on ductile iron pipe.
      g. Certified test records for polyvinyl chloride pipe.
      h. Pipe adapters.
B. Record Information: The Contractor shall submit to the Engineer the stations and left or right offsets of all services (terminal ends) as measured from the nearest downstream manhole along the centerline of the sewer, along with the elevations of the manhole covers and inverts of all pipes in the manholes.

Part 2.00 Products

2.01 MATERIALS
A. Pipe used in gravity sewer construction shall be polyvinyl chloride pipe (PVC) or ductile iron pipe (DIP).
B. Polyvinyl Chloride Pipe (PVC):
   1. PVC pipe and fittings for gravity sewer lines shall be manufactured from polyvinyl chloride resin conforming to ASTM Designation D-1784.
   2. PVC pipe and fittings, 4-inches to 15-inches in diameter, shall conform to the requirements of ASTM Designation D-3034, and shall have a Standard Dimension Ratio (SDR) of not more than thirty-five (35). PVC pipe and fittings, 18-inches to 27 inches in diameter, shall conform to the requirements of ASTM Designation F-679, and shall have a Standard Dimension Ratio (SDR) of not more than thirty-five (35).
   3. All PVC pipe shall bear the NSF-DW seal. The minimum standard length of pipe shall be 13 feet.
   4. PVC pipe joints shall be integral bell elastomeric gasket joints manufactured in accordance with ASTM D-3212 and ASTM F-477. Rubber sealing rings shall be factory installed.
   5. Minimum pipe stiffness (F/ΔY) at 5 percent deflection shall be 46 psi for all sizes tested in accordance with ASTM Method of Test D-2412.
   6. Polyvinyl chloride pipe shall be stored on level ground, preferably turf or sand, free of sharp objects which could damage the pipe. Stacking of the polyvinyl chloride pipe shall be limited to a height that will not cause excessive deformation of the bottom layers of pipes. Where necessary, due to ground conditions, the pipe shall be stored on wooden sleepers, spaced suitably and of such width as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.
   7. All PVC pipe, fittings, and specials shall be manufactured by J-M Manufacturing Company, CertainTeed or approved equal.
C. Ductile Iron Pipe:
   1. Ductile iron pipe shall conform to the requirements of ANSI/AWWA A21.51/C151, with a class thickness in conformance with the requirements of ANSI/AWWA A21.50/C150. The pipe shall be furnished in minimum standard lengths of 18 feet.
   2. Fittings shall conform to ANSI Standard A21.10,150 psi minimum pressure rating. Fittings shall have the same lining as adjacent piping.
   3. Joints shall be mechanical type or "push-on" type conforming to ANSI Standard A21.11.
   4. Coatings and Linings: Interior and exterior of ductile iron pipe shall be polyethylene lined. The lining shall extend from the plain end of the pipe to the gasket set of the bell socket. Not less than five (5) percent of the pipe shall be checked from dry mil thickness, with compliance certification submitted to the Engineer.
      a. Bituminous exterior coating, when polyethylene lining is not required, shall have a dry thickness coating a minimum of 20 mils (0.02 inches) and shall be Koppers Bitumastic 300-M, or approved equal.
      b. Polyethylene interior lining shall comply with AWWA C116 and shall be compounded with enough carbon black during manufacture to resist ultraviolet rays during above ground storage. The polyethylene lining shall be fused to the interior of the pipe by heat, forming a tightly bonded lining, with minimum 40 mils dry thickness. The polyethylene lining system shall be "Polybond", as manufactured by the American Cast Iron Pipe Co., or approved equal.

D. Casing Pipe: Casing pipe shall be steel pipe that conforms to the requirements of ASTM Designation A-139 Grade B and have a yield strength of 35,000 psi. Joints for steel casing shall be single-butt weld and shall conform to AWWA Standard C-206. Casing pipe wall thickness for roadway crossings shall not be less than that listed in the following schedule:

Nominal Outside Diameter (inches)	*Nominal Thickness (inches)
18 or less	0.250
20	0.281
24	0.344
26	0.375
28 or 30	0.406

E. Pipe Adapters:
   1. Donut pipe adapters shall be manufactured from virgin polyvinyl chloride (PVC) or polyurethane adaptable to similar or dissimilar pipes of the same or different sizes. Donuts shall be as manufactured by Femco Joint Sealer Company, Dickey Company or approved equal.
   2. Flexible couplings shall be manufactured from virgin polyvinyl chloride (PVC) or polyurethane adaptable to similar or dissimilar pipes of the same or different sizes. The flexible coupling shall be as manufactured by Femco Joint Sealer Company, Can-Tex or approved equal and supplied with No. 304 stainless steel bands.
   3. Connection of gravity sewer lines to precast manholes and wetwells shall be made by using a watertight resilient connector conforming to the requirements of ASTM Designation C-923.
F. Pipe Fittings: Unless otherwise specified, wye branches shall be provided in the gravity sewer main for service lateral connections. Wyes shall be 6 inches inside diameter, unless otherwise indicated on the Drawings. All fittings shall be of the same material as the pipe. Plugs for stub-outs shall be of the same material as the pipe and gasketed with the same gasket material as the pipe joint. The plug shall be secured to withstand system test pressures.
G. Concrete and Reinforcing Steel: Concrete and reinforcing steel shall conform to the requirements of Section 03000 – Concrete (Site Work). Concrete classes for the various purposes shall be as follows:
   1. Manhole bottoms, Class A
   2. Precast manholes, Class B (minimum)
   3. Pipe and riser encasement, Class C
   4. Protective slabs, Class C
H. Castings: Gray iron castings for manhole frames, covers and other items shall conform to the ASTM Designation A-48, Class 30. Castings shall be true to pattern in form and dimensions and free of pouring faults and other defects in positions which would impair their strength or otherwise make them unfit for the service intended. The seating surfaces between frames and covers shall be machined to fit true. No plugging or filling will be allowed. Lifting or "pick" holes shall be provided, but shall not penetrate the cover. Locking systems shall conform to those shown or indicated on the Drawings. The words SANITARY SEWER shall be cast in all manhole covers. All manhole frames and covers shall be traffic bearing to meet AASHTO H-20 loadings. Frames shall, be suitable for the future addition of a cast iron ring for upward adjustment of the top elevation.
I. Brick: Brick for manhole construction shall be dense, hard burned, shale or clay brick conforming toASTM Designation C-216, Grade SW, Size 3 1/2 inch (W) x 8 inches (L) X 21/4 inch (H).
J. Cement Mortar: Cement mortar for manhole construction shall comply with ASTM Designation C-270, Type M, except that the cement shall be Portland Type I or II only. No mortars that have stood for more than one hour shall be used.
K. Coal Tar Epoxy: Coal tar epoxy shall be Koppers Bitumastic No. 300M, Tremec TremaTar No. 46-413 or approved equal.
L. Joint Sealer: Joint sealer material for precast manhole structures shall be cold adhesive preformedflexible plastic gaskets conforming with FOOT Standard Specifications for Road and Bridge Construction (latest edition), Section 942-2. The joint sealer material shall be "Ram-Nek, as manufactured by, K.T. Snyder Co., Inc., or approved equal.
M. Non-Shrink Mortar: Non-shrink mortar for filling annular spaces between precast manhole walls and pipe coupling adapters shall be Embeco No. 167 Mortar or approved equal.

Part 3.00 Execution

3.01 PREPARATION
A. Bedding:
   1. Pipe Cradle: Upon satisfactory installation of the pipe bedding, as specified in Section 02221– Trenching, Backfilling and Compacting for Utility and Drainage Systems, a continuous trough for the pipe barrel shall be formed. Recesses for the pipe bells or couplings shall be excavated by hand digging. When the pipe is laid in the prepared trench, true to line and grade, the pipe barrel shall receive continuous uniform support and no pressure shall be exerted on the pipe joints from the trench bottom.
   2. Cleanliness: the interior of all pipe shall be thoroughly cleaned of all foreign material before being lowered in the trench and shall be kept clean during laying operations by means of plugs, or other approved methods. During suspensions of work for any reason at any time, a suitable stopper shall be placed in the end of the pipe laid to prevent mud or other foreign material from entering the pipe.

3.02 INSTALLATION
A. Pipe
   1. Pipe laying shall proceed upgrade with spigot ends pointing in the direction of flow. Before pipe is joined, gaskets shall be cleaned of all dirt and stones and other foreign material. The spigot ends of the pipe and/or pipe gaskets shall be lubricated lightly with a lubricant as specified by the pipe manufacturer and approved by the Engineer. Sufficient pressure shall be applied to the pipe so as to properly seat the socket into the bell of the pipe. All pipe shall be laid straight, true to the lines and grades shown on the Drawings. Variance in alignment shall not exceed, at any point along the length of the pipe, shall not be greater than 1/32 of an inch per inch of pipe diameter and not to exceed 1/2 inch, provided that any such variation does not result in a level or reverse sloping invert.
   2. Any pipe which is disturbed or found to be defective after laying shall be taken up and relaid or replaced at the Contractor's expense.
   3. Polyvinyl Chloride Pipe:
      a. Transportation: Care shall be taken during transportation of the pipe that it is not cut, kinked or otherwise damaged.
      b. Handling Pipe Lengths: Ropes, fabric or rubber protected slings and straps shall be used when handling pipes. Chains, cables or hooks inserted into the pipe ends shall not be used. Two slings spread apart shall be used for lifting each length of pipe. Pipe or fittings shall not be dropped onto rocky or unprepared ground.
      c. Handling Pipeline: The handling of the joined pipeline shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects. Sections of the pipes with deep cuts and gouges shall be removed.
      d. Lowering Pipe Into Trench: Care shall be exercised when lowering pipe into the trench to prevent damage to or twisting of the pipe.
      e. Special Precautions: Polyvinyl chloride pipe connected to heavy fittings, manholes and rigid structures shall be supported in such a manner that no subsequent relative movement between the pipe and the joint with the rigid structures is possible.
B. Service Connections:
   1. Service connections, of the size and type called for on the Drawings, shall be provided in accordance with the details therefore as shown or indicated on the Drawings.
   2. Sewer pipe shall be extended to the street right-of-way line and plugged with an approved removable plastic plug (unless otherwise indicated on the Drawings). All connections and changes of direction shall be made using standard fittings designed for the purpose.
   3. In order to provide and insure economic service connections where septic tanks are to be abandoned and the house or building is thereafter connected to the new collection system, the Contractor shall, with the Engineer or his representative, locate and determine the elevation of the septic tank influent line or house sewer before locating or installing the wye or other fitting in the street sewer. The Engineer or his representative shall approve all such wye or other fitting locations after giving due consideration to lengths, obstructions and such other conditions affecting the location.
   4. On curbed streets, the exact location for each service connection shall be marked by etching or cutting an "S" in the concrete curb. Where no curb exists or is planned, locations shall be marked by a method approved by the Engineer.
C. Concrete Encasement:
   1. Class C concrete encasement shall be constructed so as to provide a minimum of 6 inches of concrete on all sides of the sewer pipe. Encasement shall be constructed where:
      a. The sewer or service pipe shall have less than 30 inches of cover between the top of the pipe and the final top of pavement or ground line.
      b. The PVC sewer or service pipe crosses over, or at a depth which provides less than 18 inches clear distance between pipes when crossing under water mains. Encasement shall extend a minimum of 10 feet on each side of the point of crossing.
      c. The lateral separation of the PVC sewer pipe and potable water piping is less than 10 feet.
      *The installation of pressure-tight joint ductile iron pipe for the same dimensions may be substituted for the concrete encasement.
      d. The Engineer shall order the line encased.
   2. If, through failure to provide suitable trench sheeting, or other causes, the maximum width for trench excavations, as specified elsewhere in these specifications, is exceeded, the Contractor shall construct concrete encasement around the pipe for the length of the excessive excavation. No payment will be made for the concrete encasement required due to excessive trench widths.
   3. The points of beginning and end of sewer or service pipe encasement shall not be more than 18 inches from a pipe joint to protect the pipe from cracking due to uneven settlement of its foundation or the effects of superimposed live loads.

D. Manholes/Concrete Structures:
   1. Structures shall be leak-tight and constructed of precast units conforming to the requirements of. ASTM Designation C-478 with reinforcement of Grade 40 bars and the following modifications thereto:
      a. The minimum shell thickness shall be 8 inches.
      b. Concrete to be used in precast manholes shall be Type II.
      c. Lift rings shall be provided for handling precast structure sections. Only non-penetrating lift holes shall be permitted. Such holes shall be filled with non\expndtwO shrink grout after installation of the structure sections.
      d. The design of the structure shall include a precast base' of not less than 8 inches in thickness poured monolithically with the bottom section of the structure walls.
      e. All openings and joints shall be sealed watertight with rubber gaskets meeting ASTM C-443.
      f. The structure bend, top and base sections shall have tongue and groove joints.
      g. Precast structure tops, if used, shall terminate at such elevations as will permit concrete grade rings set in bitumastic sealer under the structure frame to make allowance for future street grade adjustments.
      h. Drop connections, where required on precast structures, shall be manufactured with the structure elements at the casting yard. The manufacturer shall submit for approval the method of drop construction.
   2. The interior and exterior walls shall be coasted with two applications of .coal tar epoxy applied in accordancewith the coating manufacturer. Interior surfaces shall be coated with a minimum dry mil thickness of 16 mils, and exterior surfaces shall be coated with a minimum dry mil thickness of 9 mils.
   3. Shallow structures may subsitut an eight-inch precast reinforced slab on the top in lieu of the cone section. Slabs shall be laid in a full bed of mortar and pointed to form a dense joint.
   4. Structure top slabs or cone sections shall be set between 3 inches and 12 inches below bottom of structure cover frame. Where shown on the Drawings the Contractor shall provide a minimum of 3 inches to accommodate future grade changes without disturbing structure. Where distance between bottom of structure cover frame and top of cone is greater than 18 inches, riser units shall be used to bring top of cone to within limits specified. Precast leveling rings for setting cast iron frames over structures shall be a minimum of 2 inches thick and have one No. 2 continuous reinforcing steel bar. Leveling rings shall not be used for more than 18 inches of vertical adjustment.
   5. Structure openings shall be fully bonded in mortar with adjustment brick courses placed between the frame and structure. The top of structure castings located in pavement, shoulder areas, and sidewalks shall be set flush with grade. Top of structure castings located outside these areas shall be set 2 inches above grade unless otherwise shown on the Drawings.
   6. Precast structures that are installed in conjunction with PVC pipe shall utilize approved coupling adapters. The concrete wall, as specified herein before and indicated on the Drawings.
   7. The invert channels shall be smooth and accurately shaped to a semicircular bottom conforming to the inside of the adjacent sewer section. Steep slopes outside the invert channels shall be avoided. Changes in size and grade shall be made gradually and evenly. Changes in the direction of the sewer or entering branch shall be a smooth curve with radius as long as practicable. Invert channels shall also be formed for pipe stub-outs.
   8. All annular spaces between structure or wetwell walls and pipe coupling adapters shall be sealed with Embeco No. 167 Mortar or approved equal, nonshrink mortar, applied and cured in strict conformance with the manufacturer's recommendations so there will be no leakage around the pipe. The mortar shall be finished smooth and flush with the adjoining interior and exterior structure or wetwell wall surfaces.
E. Connections to Existing Structures and Sewers:
   1. Various sewer lines shall be connected to existing manholes and structures. Provisions have been made in some of the existing structures for future connections and may require only the removal of a plug and the connection of the proposed line, while other connections will require cutting into the existing structure. The Contractor shall exercise care in cutting into the existing structure and any damage done to the structure shall be repaired as required by the Engineer and at the Contractor's expense. Drop connections to existing manholes shall be installed as detailed on the Drawings for new construction.
   2. The drop connection for existing manhole shall be constructed of SDR 35 polyvinyl chloride (PVC) pipe. Anchor straps shall be not less than 3/16 inch by 1 1/2 inches and constructed of ANSI 304 stainless steel. Wall anchor bolts shall not be less than 5/8 inch and constructed of corrosion resistant metal.
   3. Flows through existing lines shall be maintained during construction with existing structures.
   4. The invert elevations of the existing structure shall be reshaped to accommodate the existing line and proposed line as specified herein before for manhole constructions.
F. Roadway Crossings
   1. New gravity sewer lines to be installed under existing roadways shall be installed in a casing to be bored and jacked under the roadway or pipe open-cut as shown on the plans. The steel casing and jacking procedures shall conform to the requirements of the specifications and the local and state authority and any agreements.
   2. The Contractor shall maintain traffic on the roadway and shall keep all workmen and equipment clear of the pavement during work. All safety regulations of the Department of Transportation shall be complied with.
   3. The top of the casing shall maintain a minimum 30-inch clearance under the roadway surface. Wood skids for sliding the carrier pipe through the casing shall be pressure treated with creosote and the skids shall be permanently bonded to the carrier pipe. After the carrier pipe has been tested for leakage the ends shall be blocked with an 8-inch wall of brick masonry with a weep hole installed near bottom of each wall. A vent shall be installed as indicated on the Drawings. The carrier pipe of the crossing shall be ductile iron.
   4. If installed by open-cut, the line shall be bedded and backfilled as shown on the plans. Existing pavement and base shall be replaced with the new pavement better than or equal to existing. Contractor is responsible for repairing any settlement. No extra compensation will be made for repairs.
G. Additional Work: Additional items of construction such as cleanouts, terminal lamp holes, special manholes or other appurtenances for the complete installation of the system shall conform to specific details on the Drawings and shall be constructed of first-class materials conforming to the applicable portions of these specifications.

3.03 FIELD QUALITY CONTROL
A. Tests, Inspections and Acceptance of Materials and Workmanship:
   1. Workmanship: it is imperative that all sewers and appurtenances be built practically watertight and that the Contractor employs rigidity to the specifications for materials and workmanship. Upon completion, the sewers, or sections thereof, will be tested and inspected and if leakage is above the allowable limits specified, the sewer will be rejected.
   2. Inspection:
      a. On completion of each block or section of sewer, or such other times as the Engineer may direct, the block or section of sewer shall be cleaned, tested and inspected. The Contractor shall furnish the men, on examination from either end, a full circle of light between manholes.
      b. Each manhole or other appurtenance to the system shall be of the specified size and form, be watertight, neatly and substantially constructed, with the top set permanently to the position and grade indicated on the Drawings. All repairs shown necessary by the inspection shall be made at the Contractor's expense, broken or cracked pipe replaced; all deposits removed and the sewer left true to line and grade, entirely clean and ready for use.
      c. Written notice shall be given to the Engineer and to the agency that will operate the system, if different from the Owner, a minimum of 48 hours (excluding weekends) prior to any test for acceptance being run. A representative of the Engineer shall be present during all tests for acceptance. The Contractor should determine that the sections to be tested for acceptance will pass the required tests prior to giving the above notice to the Engineer. If any section fails to pass the tests for acceptance, the Contractor shall make all repairs needed for the section to pass and retest the section including notification as above. The Contractor will bear all costs incurred by the Owner and/or the Engineer for the retests.
      d. All newly constructed manholes shall be cleaned of any accumulation of silt, debris, or foreign matter of any kind, and shall be free from such accumulations at the time of final inspection.
   3. Closed Circuit Television Inspection:
      a. Each sewer line 21 inches in diameter and smaller shall be inspected between manholes by a closed circuit television camera especially designed for and adapted for this purpose. The Contractor shall employ a reputable testing agency for this inspection, which shall be subject to the Engineer's approval. The type of equipment employed shall be sufficient to give adequate detail on the reviewing screen as may be determined by the Engineer. The Engineer will provide a representative to be present to view the screen when the inspection is in progress. The Contractor shall provide suitable methods of measuring and locating defects found in the lines and shall enter such data in a log. Lines found defective shall be corrected as directed by the Engineer and the repaired lines shall be reinspected with the television camera until found acceptable.
      b. The Contractor shall provide all labor, equipment and materials and shall conduct the closed circuit television inspection as required. No separate payment will be made for this work and the cost thereof shall be included in the unit prices listed in the proposal.
      c. Inspection of sewer lines over 21 inches in diameter will be made by the Engineer and the Contractor shall assist the Engineer in making these inspections, if necessary. Service connections need not be inspected by the television camera method.

B. Limits of Infiltration, Exfiltration and Testing:
   1. The allowable limits of infiltration, exfiltration or leakage for the entire system or any portion thereof, including house service lines, shall not exceed a rate of 0.1 gallon per foot of pipe per 24 hours for all sizes of pipe throughout the system. The allowable limits of infiltration or exfiltration of manholes shall not exceed a rate of four gallons pr manhole pr 24 hours.
   2. Infiltration, if taken between any two adjacent manholes, shall not exceed 0.1 gallon per 24 hours per foot of pipe for all sizes and all locations. This testing of lines between adjacent manholes will not be required except to localize the position of a leak in a portion of the system that exceeds the allowable leakage limit, or as directed by the Engineer.
   3. Any part or all of the system may be tested for infiltration or exfiltration, as directed by the Engineer. Prior to testing for infiltration, the system shall be pumped out so that normal infiltration conditions exist at the time of testing. The amounts of infiltration or exfiltration shall be determined by pumping into or out of calibrated drums, or by other approved methods.
   4. The exfiltration test will be conducted by filling the portion of the system being tested with water to a level which will provide: a minimum head on a service lateral connected to the test portion of 2 feet; or in the event there are no service laterals in the test portion, a minimum difference in elevation of 5 feet between the crown of the highest portion of the sewer and the test level.
   5. Tests shall be conducted on portions of the system not 'exceeding three manhole runs or more than 1,000 feet of main sewer, or as otherwise directed by the Engineer. Tests shall be run continuously for three hours. Where infiltration or exfiltration exceeds the allowable limits also specified herein, the defective pipe, joints, or other faulty construction shall be located and repaired by the Contractor. If the defective portions cannot be located, the Contractor shall remove and reconstruct as much of the work as is necessary in order to conform to the specified allowable limits. Testing shall be performed on the next succeeding section and shall be started after 2,000 feet of pipe are laid.
   6. The Contractor shall provide all labor, equipment and materials and shall conduct all testing required, under the direction of the Engineer. No separate payment will be made for this work and the cost for this work shall be included in the unit price quoted in the proposal for the applicable item of work.
C. Specifications for Sanitary Sewer Main Low Pressure Air Test Revised March 2006
   a. Scope
      This specification governs the testing of sanitary sewer mains by the low pressure air test (time pressure drop method).
   b. General Requirements
      1. Sanitary sewer mains less than 18 inch diameter shall be low-pressure air tested for leaks upon the completion of the backfill and compaction operations. Sanitary sewer mains over 8 inch and greater than 18 inch diameter will be tested for leaks per test method referenced/specified by RWU.
      2. The sanitary sewer mains must passed the manhole vacuum testing process and all sanitary sewer services must be complete with each capped 10 ft. minimum length of service and ready to the low-pressure air test.
      3. The low-pressure air test method shall be in accordance with ASTM F1417–92 (Reapproved 2005), except as specified otherwise herein.
      4. The Contractor shall remove all debris, soil and rocks from the sanitary sewer mains and manholes prior to the low-pressure air test by a cleaning ball, high velocity jet, cleaning mandrel or other means.
      5. The Contractor shall furnish all equipment and labor required, including manometer, pressure gauges, mandrels, air compressor, pump, pressure-regulator valve, 9 psi pressure-relief valve, control valves, pressure gauges and second timer or stop watch. The test pressure gauge shall be a maximum range of 0 to 15 pounds per square inch (psi) and the pressure gauge figure intervals shall be a maximum of 0.25 psi increments.
      6. The required low-pressure air test time shall be based upon the total length and diameter of sanitary sewer main from manhole to manhole (sewer service lines are not included). The minimum low-pressure air test period is 7 minutes and 34 seconds.
      7. The low-pressure air test shall be performed by the Contractor and witnessed by the Engineer and the RWU personnel. The Engineer shall furnish low-pressure air test reports of sanitary sewer mains to the Contractor and RWU.
   c. Safety Precautions
      1. The low-pressure air test may be dangerous to personnel if, through lack of understanding or carelessness, a line is over pressurized or plugs/caps are installed or restrained improperly. The axial force on a plug in the end of a pipeline being pressurized for a test is over 2000 pounds. Restraint systems must be designed to handle these forces with adequate safety factor.
      2. No one shall be allowed in the manholes or near a capped pipe during testing. All gauges, piping manifolds and control valves shall be located above ground.
      3. When sanitary sewer mains are tested, it is mandatory that all caps and plugs be braced as an added safety factor.
      4. Do not over pressurize the sanitary sewer main. Do not exceed 9.0 psi.
   d. Test Procedures
      1. After cleaning the interior surface of the sanitary sewer main, the Contractor shall place and install test pneumatic plugs in the sanitary sewer main pipe at both connecting manholes. One of the plugs must have an air hose, or other provision for connecting a hose to a portable air control source.
      2. Connect the air hose to the inlet tap and the portable air control source. The air equipment shall consist of necessary valves and pressure gauges to control an oil-free air source and the rate at which airflow into the test section.
      3. Add air slowly to the test section until the pressure inside the sewer pipe reaches 4.0 psi. After the pressure of 4.0 psi is obtained, regulate the air supply so that the pressure is maintained between 3.5 psi to 4.0 psi for at least two minutes to stabilize air/ground temperature conditions.
      4. Close the air supply valve; release the pressure in the pipe test section to 3.5 psi and the test period is started. Observe the time required for the pressure to drop from 3.5 psi to 2.5 psi. The minimum test time/period is determined from the following 1.0 psi pressure drop table.
      5. All pneumatic plugs shall be removed from both connecting manholes after the test.
   e. Failure of Low-Pressure Air Test
      Any sanitary sewer main/services that fails the low-pressure air test must be repaired. Upon completion of the repairs and the backfill/compaction operation, the sanitary sewer main shall be retested as described in the above test procedures. The Engineer must witness the sewer main repair and backfill operation. The cost of the repair and backfill is incidental to the cost of the project.
   f. Acceptance
      The sanitary sewer main shall have passed the low-pressure air test if the pipe test section does not drop below 2.5 psi during the specified test period.

MINIMUM SPECIFIED TIME REQUIRED FOR A 1.0 PSI PRESSURE DROP FOR SIZES AND LENGTH OF PIPE INDICATED FOR Q=0.0015

Specification Time for Length (L) Shown, Minutes:Seconds

Pipe Dia. (In.)	Minimum Time (Minutes)	Length For Minimum Time (Feet)	Length For Longer Length (Sec.)	100 Ft.	150 Ft.	200 Ft.	250 Ft.	300 Ft.	350 Ft.	400 Ft.	450 Ft.
8	7:34	298	1.520 L	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418 L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342 L	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
16	15:10	149	6.282 L	15:10	15:42	20:56	26:10	31:25	36:39	41:53	47:07
18	17:00	133	7.692 L	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41

   g. Records
      The Contractor shall maintain records of the low-pressure air test and submit the records to the Engineer. The records shall include the following:
      1. Project name and location.
      2. Date of test.
      3. Name of Contractor's representative witnessing the test.
      4. Name of Engineer's representative witnessing the test.
      5. Sewer main identification.
      6. Pipe size.
      7. Pipe length.
      8. Pipe type.
      9. Time pressure drop started.
      10. Time pressure drop ended.
      11. Test pressure.
      12. Pressure drop.
      13. Test results.
      14. Signature of Contractor's representative.
      15. Signature of Engineer's representative.
   h. Precision and Bias
      No justifiable statement can be made either on the precision or bias of this procedure, since the testsuit merely states whether there is conformance to the criteria for the success specified.

END OF SECTION

SECTION 02751
UTILITY IDENTIFICATION AND MARKINGS

Part 1.00 General

1.01 SCOPE OF WORK
A. The work included in this Section consists of furnishing and installing identification electronic marker balls, tape over the centerline of buried potable water lines, sanitary force mains, and sanitary gravity sewers as shown on the Drawings and specified herein.

1.02 SUBMITTALS
A. Submit manufacturer's descriptive literature, illustrations, specifications and other pertinent data.

Part 2.00 Products

2.01 PRESSURE PIPE IDENTIFICATION
A. During the backfilling operation, the contractor shall place a pipe located tale one (1) foot directly above and parallel to the pipe run with the printed side up for visual identification. The taps shall be Lineguard as manufactured by Lineguard, Inc. Wheaton, IL consisting of a 2-inch minimum width plastic and metallized foil for detection by pipeline locating equipment. Tape shall be coded as follows:

PIPE	COLOR	PRINTING
Potable Water	Blue	"Caution Buried Water Line Below"
Reuse Water	Purple	"Reclaimed Water Buried Below"
Force Main	Brown	"Caution Buried Force Main Below"

In order to preclude possible domestic water tapping, all underground sanitary sewage force mains shall be marked with a continuous painted yellow stripe, 2-inch minimum width located within the top 90 degrees (90°) of the pipe. Reuse water mains will be painted with a 2-inch wide medium green stripe within the top 90 degrees (90°) of the pipe.

2.02 OTHER REQUIREMENTS
A. Water Service
   Water services will be marked with a 2-inch PVC pipe placed vertically in ground with the top 2 feet painted blue located behind the service.
B. Sewer Lateral
   The terminal end of the lateral will have a 2-inch by 4-inch wood stake or a 2-inch PVC pipe placed at its invert and extending a minimum of 2 feet above finished grade with the top 2 feet painted green.
C. Valve Boxes and Meter Boxes
   Covers are to be marked with permanently affixed, minimum 1-1/2-inch letters to identify as follows:
   "WATER" – Potable Water
   "N.P.W." – Reuse Water
   "SEWER" – Sanitary Force Main

END OF SECTION

SECTION 02847
TRAFFIC SIGNALS

Part 1.00 General

1.01 SCOPE OF WORK
A. The work included IN this Section consists of furnishing and erecting traffic signs as shown on the Drawings.

1.02 QUALITY ASSURANCE
A. The Contractor shall furnish manufacturer's certification that all signs furnished conform to these specifications and shall replace or repair, without additional cost to the Owner, all signs that fail to meet this requirement.

1.03 SUBMITTALS
A. Contractor shall submit the Manufacturer's certification that the signs furnished conform to these specifications.

Part 2.00 Products

2.01 GENERAL
A. Traffic regulating signs conforming to the colors, dimensions and requirements of the Manual on Uniform Traffic Control Devices for Streets and Highways and IDOT Standard Highway Signs Manual and displaying the lettering and symbols shown on the Drawings shall be furnished and installed at the locations and in the manner indicated and herein specified.
B. If not indicated on the Drawings, the Contractor shall provide the standard size sign as shown in the Standard Highway Signs Manual.

2.02 MATERIALS
A. Materials for traffic signs and the construction thereof shall be in accordance with State DOT Standard Specifications for Highway and bridge Construction (latest edition).

2.03 FABRICATION OF SIGNS
A. Preparation of sign blanks and fabrication of reflectorized sign faces shall conform to the applicable requirements of State DOT Standard Specifications for Highway and bridge Construction (latest edition).

Part 3.00 Execution

3.01 ERECTION OF SIGNS AND SIGN SUPPORTS
A. Signs and sign supports shall be erected in accordance with the details shown on the Drawings and shall be set plumb unless otherwise indicated. All structural support members shall conform to the dimensions indicated.

END OF SECTION

SECTION 03000
CONCRETE (SITE WORK)

Part 1.00 General

1.01 SCOPE OF WORK
A. The work included in this Section consists of furnishing all materials, forms, transportation and equipment, and performing all necessary labor to do all the plain and reinforced concrete work shown on the Drawings, or incidental to the proper execution of the work, or as herein specified.
B. Composition: Concrete shall be composed of cement, fine aggregate, coarse aggregate, and water, so proportioned and mixed as to produce a plastic workable mixture in accordance with all requirements under this Section suitable to the specific conditions of placement.

1.02 SUBMITTALS
A. All materials specified shall be certified by the producer or manufacturer that the furnished material meets the specific requirements of the specifications.

Part 2.00 Products

2.01 MATERIALS
A. Cement:
   1. Cement: Cement for all concrete shall be domestic Portland cement that conforms to the requirements of ASTM Designation C-150, Type I, Type II, unless noted otherwise on the structural drawings, or Type III cement, for high early strength concrete, shall be used only for special locations and only with the sewer manholes, wet wells and pump stations.
   2. Only one brand of cement shall be used in any individual structure unless approved by the engineer. Cement which has become damaged, partially set, lumpy or caked shall not be used. Bags containing the contents of the sack or container which contains such cement will be rejected for use. No salvaged or reclaimed cement shall be used.
B. Fine Aggregate: Fine aggregate shall conform to the requirements of ASTM C-33.
C. Coarse Aggregate: Coarse aggregate shall conform to the reqmts. of ASTM C-33.
D. Water: Water shall be taken from a potable water supply and shall be fresh, clean and free of oil, acid, alkali, organic matter, and other deleterious substances.
E. Admixtures: No admixtures shall be used except by specific approval of the Engineer. When approved admixtures shall met the

b. Wire ties will not be permitted. All forms shall be so constructed that they can be removed without hammering or prying against the concrete. Unless otherwise indicated, suitable moldings shall be placed to bevel or round exposed edges at expansion joints or at any other corners that are to remain. Beams below grade shall have forms at both sides.

Part 3.00 Execution

3.01 PREPARATION
A Concrete Mixing:
1. Equipment: The concrete shall be ready-mixed and the equipment shall conform to the applicable requirements of ASTM Designation C-94.
2. Measurement: Equipment necessary to positively determine and control the actual amounts of all materials entering the concrete shall be provided by the Contractor or the concrete manufacturer. All materials shall be measured by weight, except that water may be measured by volume. A bag of cement weighs 94 pounds.

3.02 INSTALLATION
A. Forms:
1. Construction:
a. Forms shall be built true to line and grade, and shall be mortar tight and sufficiently rigid to prevent displacement or sagging between supports. The Contractor shall give particular attention to the adequacy of supports and shoring. The surfaces of forms used or permanently exposed surfaces shall be smooth and free from irregularities, dents, sags, or holes. Forms or surfaces to receive stucco finish shall be suitable for is application. Bolts and rods used for internal ties shall be so arranged that, when the forms are removed, all metal is at least 1 – 1/2 inch from any concrete surface. Form ties shall be removed immediately after removal of forms, and holes shall be thoroughly plugged with grout within 24 hours after form removal and kept damp for 4 days to prevent shrinking.
b. Wire ties will not be permitted. All forms shall be so constructed that they can be removed without hammering or prying against the concrete. Unless otherwise indicated, suitable moldings shall be placed to bevel or round exposed edges at expansion joints or at any other corners that are to remain. Beams below grade shall have forms at both sides.
2. Coating: Prior to the placing of steel reinforcement or concrete, forms for exposed surfaces shall be coated with a non-staining paraffin base oil or mineral oil. Forms for unexposed surfaces may be thoroughly wetted in lieu of oiling, immediately before the placing of concrete.
3. Removal: Forms and/or form supports shall not be removed from any concrete until it has obtained sufficient strength to support itself and any live loads it may be subjected to.
B. Reinforcing Steel: When placed in the forms, reinforcement shall be clean and free of all rust, scale, dust, dirt, paint, oil or other foreign material and shall be accurately and securely positioned in the forms as shown on the Drawings before the placing of concrete. Reinforcing steel shall be wired or otherwise fastened at intersections and shall be supported by concrete or metal supports, spacers or hangers. Bar supports, where adjacent to the ground, shall be set on precast concrete pads compressed into the reinforcing steel at intersections by welding methods.
1. Splicing of reinforcement shall be held to a minimum and shall be placed at points of minimum stress. Bars shall be lapped splices a minimum of 36 bar diameters unless otherwise shown on the Drawings or directed by the Engineer, and shall be rigidly wired or clamped.
2. Wire fabric shall be straightened before placing and shall overlap one full space of mesh at ends and edges and shall be securely fastened. Fabric shall be supported so as to occupy its proper location in the concrete as shown on the Drawings. Fabric shall not cross any expansion joints.
C. Embedded Items: In addition to steel reinforcement, pipes, inserts and other metal objects as shown, specified or ordered shall be built into, set in, or attached to, the concrete. All necessary precautions shall be taken to prevent these objects from being displaced, broken or deformed. Before concrete is placed, care shall be taken to determine that all embedded parts are firmly and securely fastened in place as indicated. They shall be thoroughly clean and free from paint or other coating, rust, scale, oil, or any foreign matter. No wood shall be embedded in concrete. The concrete shall be packed tightly around pipes and other metal work to prevent leakage and to secure perfect adhesion. Drains shall be adequately protected from intrusion of concrete.
D. Concrete:
1. General: Reinforcement shall be secured in position, inspected and approved before placing concrete. Runways for transporting concrete shall not rest on reinforcing steel. Concrete not placed within 90 minutes from the time mixing is started will be rejected and shall be removed from the job by the Contractor. Concrete shall be deposited as nearly as practicable in final position. Concrete shall not be allowed to drop freely more than six feet. All concrete shall be placed in daylight and (excepting seal concrete) shall be placed in the dry unless otherwise authorized by the Engineer.
2. Slab Placed on Subgrade: Slab concrete placed on earth or fill subgrade shall be separated from direct contact with the subgrade by 6 mil polyethylene film or other approved material, unless noted otherwise on structural drawings. Sidewalks and walkways will not require a separation sheet. Polyethylene film shall be lapped 4 inches on sides and12 inches on ends.
3. Compaction: Concrete shall be compacted by internal vibrating equipment, supplemented by hand rodding and tamping as required. Vibrators shall in no case be used to move the concrete laterally inside the forms. Internal vibrators shall be used to maintain a speed of at least 5000 impulses per minute when submerged in concrete. (at least one spare vibrator, in working condition, shall be maintained at the site during concrete placing operations.) Duration of vibration shall be limited to the time necessary to produce satisfactory consolidation without causing segregation. Vibrator shall be moved constantly and placed in each specific spot only once.
4. Bonding: Before depositing new concrete on or against concrete that has set, the surfaces of the set concrete shall be thoroughly cleaned so as to expose the coarse aggregate and be free of coatings, foreign matter and loose particles. The cleaned surfaces shall be dampened, but not saturated, and then thoroughly covered with a coat of cement grout of similar proportions to the mortar in the concrete. The grout shall be as thick as possible on vertical surfaces and at least ½ inch thick on horizontal surfaces. The fresh concrete shall be placed before the grout has attained its initial set.
5. Protection: Rainwater shall not be allowed to increase the ratio of mixing water, nor to damage the surface finish. Concrete shall be protected from disfigurement, damage, vibration, internal fractures and construction overloads.
E. Curing:
1. All concrete, including gunite, shall be water cured by covering with a double thickness of clean burlap, cotton mats, or other approved material kept thoroughly saturated with water. The forms shall be kept wet until removed and upon removal, the curing specified herein shall be started immediately. Concrete shall be cured for a period of 7 days for normal Portland cement or 4 days for high early strength cement. Concrete poured in the dry shall not be submerged until it has attained sufficient strength to adequately sustain the stress involved, nor shall it be subjected to flowing water across its surface until it has cured 4 days. Curing of gunite shall be started as soon as possible without damaging surface and not later than 2 hours after placing.
2. In lieu of wet burlap or cotton mats as specified above, concrete slabs may be covered with wet sand and kept moist for the specified curing period. The initial curing period of not less than 24 hours shall consist of the wet burlap or cotton mat method, then the wet sand method may be utilized until the end of the curing period.
3. Concrete surfaces which will not be coated, painted, plastered, stuccoed, covered with tile or floor covering or requiring a bonding surface may be cured by means of a membrane curing compound in lieu of the wet cure method. The curing compound shall be applied immediately after a satisfactory surface finish has been completed or forms have been removed. The rate of application of membrane curing compound shall be at least one gallon to every 200 square feet of exposed surface to be cured. The membrane curing compound and impervious covering shall be continuous and without defects and shall retain the required moisture in the concrete. Membrane curing compound that becomes damaged by rain, foot traffic or other conditions within 5 days of application shall be reapplied.
F. Finishes:
1. As soon as forms can safely be removed, all irregular projections shall be chipped off flush with the concrete surfaces. All voids produced by spacers or any honeycombing shall be pointed up with grout and troweled flush with the concrete surface immediately after removal of forms and water cured to prevent shrinkage. Honeycombing shall be cut out to expose a sound concrete surface prior to pointing. The use of mortar pointing or patching shall be confined to the repair of small defects in relatively green concrete. Where in the opinion of the Engineer substantial repairs are required, the defective concrete shall be cut out to sound concrete and repaired with gunite or the concrete shall be removed and reconstructed as directed.
2. Floor slabs shall be brought to a true and even finish by power or hand floating in a manner that will not bring excess fines to the surface. The consistency of the concrete shall be such that water does not accumulate at the surface. Unless otherwise shown on the Drawings, the surface shall be floated with a wood float and shall be steel troweled to a smooth finish. Troweling shall be the minimum to obtain a smooth, dense surface and shall not be done until the mortar has hardened sufficiently to prevent excess fine material from being worked into the surface. If so directed, the surface shall be brushed lightly with a push broom so as to produce a non-slip surface.
3. Concrete surfaces that are not exposed in the completed work will require no special finish other than such pointing up and rubbing as is necessary to leave them smooth and impervious.
4. Other surfaces which will be exposed in the completed work shall be finished by being rubbed smooth and dense, without pits, irregularities, blow holes or bubbles.
G. Grout:
1. Grout for pointing and patching shall consist of cement and fine aggregate mixed in the proportions used in the concrete and a minimum amount of water to produce a workable grout.
2. Material for grouting manhole or drainage inlet openings, column base places, anchor bolts, reinforcing bars, pipe sleeves and pump base plates shall be of non-shrink type and shall be mixed and placed as recommended by the manufacturer. Machinery set on grout pads shall not be operated until the grout has cured for at least 24 hours.

3.03 FIELD QUALITY CONTROL
A. General: The quality of the concrete as to conformance to the specifications is the entire responsibility of the Contractor until it is accepted in place in the structure and verified by the final cylinder tests made by the laboratory. Arrangements for field testing shall be made by the Contractor with the laboratory as selected by the Owner.
B. Compressive Tests: Standard laboratory compressive test cylinders will be obtained by the laboratory when concrete is discharged from the mixer at the site of the work. A set of 6 cylinders will be obtained for each 60 cubic yards or fraction thereof placed each day, for each type of concrete. The cylinders will be cured under laboratory condition and will be tested in two groups of three at 7 and 28 days of age, respectively.
C. Slump Tests: The laboratory of the Owner or their representative will make slump tests of Class A and Class B concrete as it is discharged from the mixer at the site of the work. Slump tests may be made on any batch and failure to meet specified slump requirements will be sufficient cause for rejection of that batch.
D. Reports: Proper reports of all tests performed by the laboratory will be prepared by the laboratory and submitted promptly to the Engineer and Owner. Such reports shall be properly labeled so as to identify the portions of the project into which the materials have been placed.

END OF SECTION

SECTION 03100
CONCRETE FORMWORK

Part 1.00 General

1.01 SCOPE OF WORK
A. Furnish labor, materials, services, equipment and appliances required for concrete formwork indicated on the Drawings and specified herein.

1.02 REFERENCE STANDARDS
A. Material Standards:
American Society for Testing Materials (ASTM)
B. Concrete Standards:
American Concrete Institute (ACI)

Part 2.00 Products

2.01 MANUFACTURER
A. The Drawings were prepared and this Specification written on the basis of using the products of specific manufacturers. Such is intended to establish minimum quality standards, not to limit competitive bidding. Products with equal or superior characteristics by other manufacturers are acceptable under conditions of the Specifications.

2.02 FORM MATERIALS
A. Wood:
No. 2, or better, southern pine dressed lumber, white pine or Douglas fir, non-stress grades.
B. Plywood:
DFPA Plyform, Exterior B-B, edge sealed.
C. Plastic Fiber:
Special forms of molded fiber, if required.
D. Cardboard:
Beam void forms "VOIDCO" or equal, as required under pier supported grade beams.
E. Metal:
Commercial standard, or as noted on drawings.

2.03 FORM ACCESSORIES
A. Gateway, Superior or equal, catalog items selected for minimum 350 psf form loadings.

2.04 FORM OIL
A. Non-staining mineral oil of viscosity 250/100 F.

Part 3.00 Execution

3.01 FORM CONSTRUCTION
A. General:
Design, construct and maintain forms so as to insure that after removal, finished concrete members will have true surfaces, be free of waves or bulges, and conform accurately to indicated shapes, dimensions, lines and positions of concrete members shown. Place, align and fit forms in successive units to ensure smooth continuous completed surfaces free from form marks and irregularities. Provide temporary openings in forms as required to facilitate cleanings and inspection. Forms shall be readily removable without impact, shock or damage to concrete. Clean form surfaces before each use.
B. Deflection and Leakage:
Space walers, ties, bracing, etc. to prevent form deflection. Construct form joints sufficiently tight to prevent leakage of grout and cement paste during placing.
C. Exposed Surfaces:
Give special care to formwork, ties, bracing, etc. for retaining walls or other surfaces to be left exposed to permanent view. Waves, bulges, form marks, staining, joint marks or irregularities will not be acceptable.

3.02 CURING CONCRETE WITHIN FORMS
A. If surfaces are to be cured within forms, accomplish by keeping forms continuously wet. If forms are removed before end of curing period, continue curing as specified in CAST-IN-PLACE CONCRETE.

3.03 REMOVAL OF FORMS
A. Timing:
Remove forms after concrete has adequately hardened; not earlier than two days after concrete is placed.
B. Method:
Remove forms as a hand operation, take care to avoid damage to finished concrete and/or reinforcing passing through forms being removed.

3.04 CLEAN-UP
A. Upon completion of work of this Section, remove related debris from the premises.

END OF SECTION

SECTION 03300
CAST-IN-PLACE CONCRETE

Part 1.00 General

1.01 SCOPE OF WORK
A. Furnish labor, materials, services, equipment and appliances required for Cast-in-Place concrete work indicated on the Drawings and specified herein.

1.02 INTENT
A. Concrete shall be ready-mixed, or transit mixed, obtained from a plant; ASTM C94. Use job-mixed concrete only where and if authorized by Owner.

1.03 MILL TESTS
A. Submit certified copies of reports to Owner, if requested.

1.04 REFERENCE STANDARDS

A. American Society for Testing Materials (ASTM)
B. American Concrete Institute (ACI)
C. Federal Specifications (FS)

1.05 SUBMITTALS
A. Shop Drawings:
Submit drawings of reinforcement for acceptance prior to start of fabrication. List reinforcing and accessories quantities, sizes, bends, dimensions and notes required for fabrication and placement. Draw placing plans, elevations, details and sequence of placement. Member marks on shop drawings; same as on structural drawings.
B. Testing Laboratory Reports:
Submit three copies to Owner.

Part 2.00 Products

2.01 MANUFACTURER
A. The Drawings were prepared and this Specification written on the basis of using the products of specific manufactures. Such is intended to establish minimum quality standards, not to limit competitive bidding. Products with equal or superior characteristics by other manufacturers are acceptable under conditions of the Specifications.

2.02 BASIC MATERIALS
A. Concrete:
1. Portland Cement
ASTM C150, Type I, unless noted otherwise on structural drawings.
2. Aggregates
a. Fine Aggregates:
Washed sand; ASTM C33
b. Coarse Aggregates:
Crushed stone; ASTM C33
i. Members to 8 inches in section – Table II, Size 67.
ii. All other concrete – Table II, Size 467.
3. Water
Local tap water.
B. Reinforced Steel:
1. Bars
ASTM A615, grade 60 or as shown on the Drawings.
2. Wire Fabric
ASTM A185.

2.03 MISCELLANEOUS MATERIALS
A. Accessories:
ACI – 315, galvanized, chairs, stools, spacers, etc.
B. Expansion Joints:
3/4 inch diameter plain steel bars with sawn ends and expansion caps.
C. Underslab Vapor Barrier:
"Visqueen"; plastic sheeting, 6 mils thick, unless noted otherwise on structural drawings.
D. Floor Finishing:
1. Floor Leveling Compound Floor Leveling Compound
"DEX-O-TEX"; Crossfield Products Corporation, Compton, California.
2. Floor Sealing Compound
"Master Seal SL"; Master builders, Cleveland, Ohio.
NOTE: Concrete floors to receive adhesively applied finishes or grouted finishes are not to be sealed.
E. Curing:
1. Curing Compound
Master Builders Technologies, "Masterkure 200W" water based wax emulsion concrete curing compound.
2. Plastic Sheet Curing Membrane
"VISQUEEN"; 6 mils thick, with joint sealing tapes.
3. Burlap for Moist Curing
Standard grade burlap; FS CCC-C-467.

2.04 CONCRETE MIX DESIGN
A. Contractor employs and pays for services of an Owner-acceptable independent testing laboratory to determine concrete mix design based on compressive strengths of concrete shown on the structural Drawings. For design mix tests use aggregate, cement additive where specified, and water to be actually used in mixing concrete.

Part 3.00 Execution

3.01 DELIVERY AND TIME LIMITS
A. Concrete not placed within maximum time intervals, after adding mixing water, shall be rejected and removed.

Temperature, Mix or Air	Maximum Time Interval
Up to 75 Degrees F	90 min
75 to 89 Degrees F	60 min
Over 90 Degrees F	45 min.

3.02 VAPOR BARRIER INSTALLATION
A. Install in accord with manufacturer's instructions over prepared granular or non-expansive fill; seams lapped 6 inches minimum.

3.03 PLACING REINFORCING
A. General:
Place accurately and securely saddle-tie at intersection with 16 gage black, annealed wire. Support bars rigidly in place with chairs or spacers permitted by ACI-315. Inches of concrete protection at reinforcement shall be in accord with "ACI Building Code", unless shown otherwise on Drawings.
B. Shop Drawings and Splicing:
Place bars and wire fabric in accord with accepted shop drawings and schedules on structural Drawings. Splice wire fabric by lappins both directions not less than distance between wires, and tying two transverse wires. Splice bars as shown on Drawings.
C. Inspection Before Coverings:
Owner's acceptance of inserts and reinforcing in place is required before concrete is placed; do not conceal until inspected and authorized to proceed. Prior to Owner's inspection, remove water, clean, tighten forms, close openings and coat forms with form oil.

3.04 PLACING CONCRETE
A. General:
Deposit concrete as nearly as practical to final position to avoid segregation due to re-handling or flowing. Deposit concrete at rate that it stays plastic and flows readily into spaces between inserts and reinforcing and completely fills forms. Temperature of concrete at time of placing; between 50 and 90 Degrees F.
B. Discharge and Layering:
Control concrete discharge so that concrete may be effectively placed in horizontal layers not more than 8 inches thick. Stacking or piling concrete in one place and then removing it any appreciable distance into position with hoes, rakes, shovels, and/or compactors is prohibited.

C. Tremies and Chutes:
Use tremies and chutes when placing concrete in piers, high narrow retaining walls, etc., so that concrete will not vertical drop more than 3 feet.
D. Compacting:
Compact each layer of concrete using SPUD-type mechanical internal vibrators, supplemented with hand tampers. Maintain vibrator speed of not less than 5000 cycles while submerged in concrete. Maintain at least one spare vibrator at hand.
E. Bonding:
Before depositing fresh concrete on previously placed concrete which has partially or fully hardened, scrape surfaces of hardened concrete, hammer, or wire-brush while hosing with water under pressure, until large aggregate is exposed and scraping, laitance and dust removed. Tighten forms, wet concrete surfaces, slush with neat cement grout, and deposit new concrete before grout attains initial set. Slushing grout; not less than 1/8 inch in thickness.
F. Jointing:
Locate and make construction joints in accord with the Drawings. Construction joints will not be permitted at other locations without Owner's acceptance.
G. Anchor Bolts:
Set anchor bolts, furnished by and/or for the work of other trades, in freshly placed concrete. Set bolts plumb and true and in accord with accepted shop drawings and the Drawings.

3.05 FINISHING CONCRETE
A. Smooth Finish Slabs:
1. Tamping
While placing concrete, tamp to force coarse aggregate away from surface. Screed with straight edges to bring surface to finish level required.
2. Floating
Wood float to true plane with no coarse aggregate showing while concrete is still green but sufficiently hard to bear a man's weight without imprint. Float level or slope to drains as required. Use sufficient pressure while floating to bring moisture to surface.
3. Troweling
Steel trowel not less than two passes. Begin with power trowel as soon as little or no cement sticks to blades. Do not dust with dry cement or aggregate to absorb moisture or to stiffen mix. Hand steel trowel third pass to remove slight imperfections and produce smooth impervious face. Continue hand troweling until ringing sound is heard as trowel burnishes surface.
4. Tolerance
Slabs to receive applied finishes, special finishes, or to be sealed shall be level with tolerance of 1/8 inch in 10 feet, when tested with 10 foot straight edge at 3 foot intervals in both directions.
B. Depressed Slabs:
Finish depressed slabs, if shown on the Drawings, to receive waterproofing, topping, fill or mortar beds for tile, etc., as for smooth finish slabs but only through wood floating.
C. Surfaces Other Than Slabs:
1. Exposed Vertical Surfaces
Fill bolt and tie rod holes with same mix as placed concrete, except without course aggregate. Fill holes passing through concrete members from inside face. Stone rub to uniform finish.
2. Patching and Repairs
Remove honeycomb voids, cracks, and irregularities. Where repair is required, cut back defects not less than 1/2 inch with square edges, brush out, drench with water and fill with same mix as placed concrete, except without coarse aggregate. When cut-outs have been filled, trowel surface smooth, remove excess grout. After set, grind slightly to uniform color and appearance using neat Portland Cement applied with a power grinder wheel.
3. Topping and Fills
Screed, float and finish same as slabs.

3.06 CURING CONCRETE
A. Requirements:
Cure concrete not less than 7 days by protecting it against moisture loss, rapid temperature change, mechanical injury, and injury from weather, rain, or flowing water. Contractor's choice:
1. Compound
Apply in accord with manufacturer's instructions. Protect compound-formed membrane on slabs with 1 inch of sand. Compound must be completely removed once concrete has achieved specified set. Remove per manufacturer's written instructions with a mechanical scrubber and water soluble stripper.
2. Plastic Sheet
Cover surface with membrane, edges lapped 4 inches or more and sealed with tape.
3. Moisture
Keep surfaces continuously wet or moist during curing period, by covering surfaces with wet sand, wet burlap, or moist curing mats.
4. Surface Within Forms
Keep forms continuously wet. If forms are removed before end of curing period, continue for full curing period as for unformed surfaces.

3.07 SEALING CONCRETE
A. Where shown on the Drawings, apply to slab in accord with manufacturer's instructions. Apply during later stages of construction.

FOR INFORMATIONAL PURPOSES ONLY

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LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
Restaurant #:	5662

LONGHORN STEAKHOUSE
MOUNT DORA

PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING
DARDEN CIVIL SPECIFICATIONS

CS5

Drawing name: K:\VRB_LDEV\047916 – Darden\133_LH Mt Dora\CADD\PlanSheets\113-CS1 DARDEN CIVIL SPECIFICATIONS.dwg 117-CS5 DARDEN CIVIL SPECIFICATIONS Jul 29, 2022 10:14am by: LizMeeks
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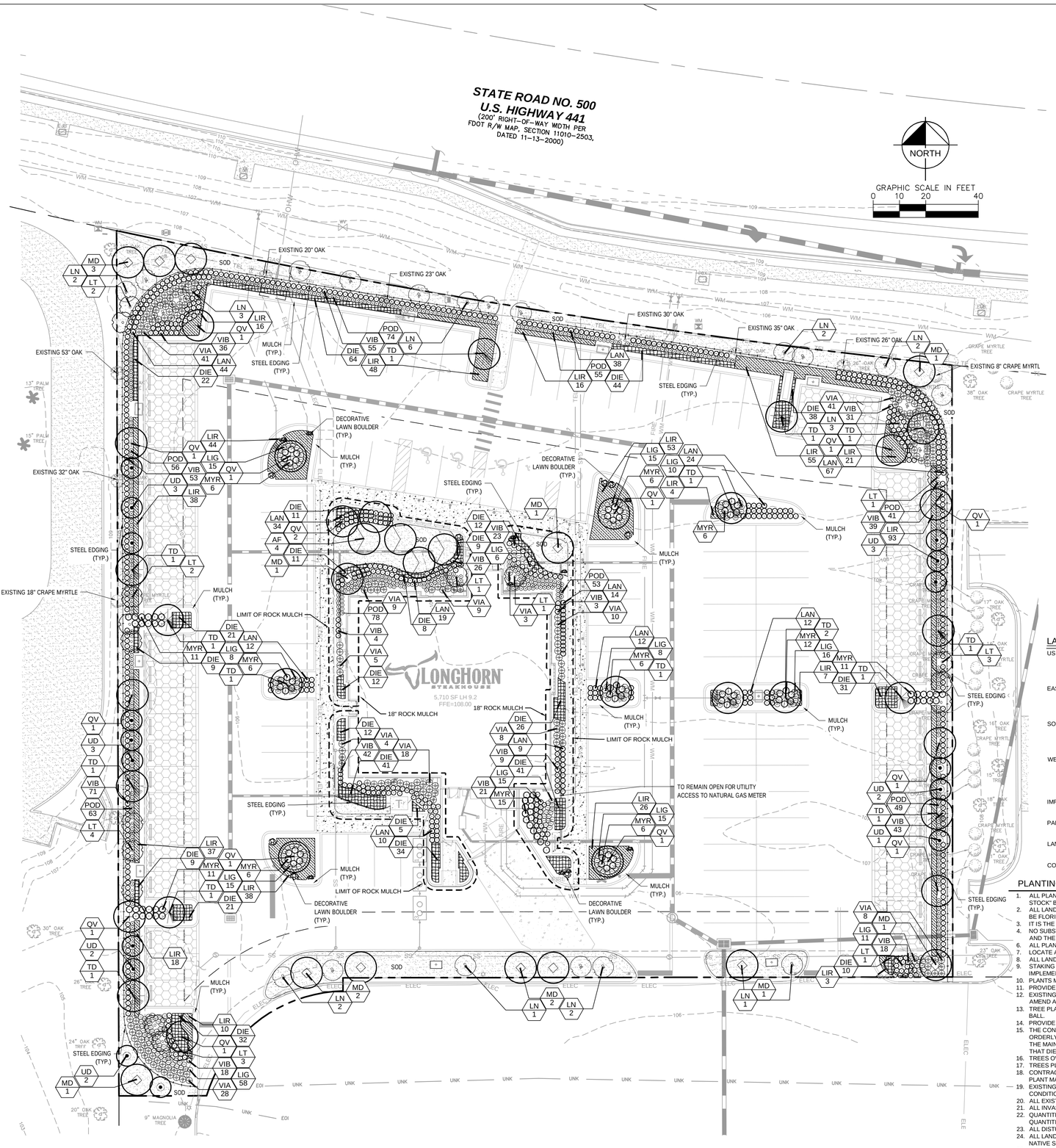

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	SPECIFICATIONS	REMARKS
	AF	4	Acer rubrum `Florida Flame` / Florida Flame Red Maple	3.5" cal, 12` ht, 4-5` spr	Straight, Single leader, Full
	MD	13	Magnolia grandiflora `D.D. Blanchard` TM / Southern Magnolia	2" cal, 8` ht, 4` spr	Straight, Central Leader, Full
	QV	15	Quercus virginiana / Southern Live Oak	2" cal, 8` ht, 4` spr	Straight, Single Leader, Full
	TD	16	Taxodium distichum / Bald Cypress	2" cal, 8` ht, 4` spr	Straight, Single Leader, Full

UNDERSTORY TREES	CODE	QTY	BOTANICAL / COMMON NAME	SPECIFICATIONS	REMARKS
	LN	24	Lagerstroemia indica `Natchez` / Natchez Crape Myrtle	2.5" cal, 6` ht, 4` spr	3 Cane, 1" min dia
	LT	18	Lagerstroemia indica `Tuscarora` / Tuscarora Crape Myrtle	2.5" cal, 6` ht, 4` spr	3 Cane
	UD	16	Ulmus parvifolia `Drake` / Drake Elm	2" cal, 8` ht, 4` spr	Straight, Single leader, Full

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	SPECIFICATIONS	REMARKS
	LAN	295	Lantana X 'New Gold / New Gold Lantana	18" ht, 18" spr, 24" oc	3 gal. Full
	LIG	192	Ligustrum japonicum / Ligustrum	24" ht, 20" spr, 24 oc	3 gal. Full
	MYR	102	Myrica cerifera / Wax Myrtle	30" ht, 24" spr, 30" oc	7 gal, Full
	POD	469	Podocarpus macrophyllus / Podocarpus	30" ht, 18" spr, 18"oc	7 gal, Full
	VIA	184	Viburnum odoratissimum 'Awabuki' / Awabuki Viburnum	30" ht, 24" spr, 30" oc	7 gal. Full
	VIB	491	Viburnum odoratissimum / Walter`s Viburnum	18" ht, 18" spr, 24" oc	3 gal., Full

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	SPECIFICATIONS	REMARKS
	DIE	523	Dietes vegeta / African Iris	1 gal, 18"ht, 18"spr, 18"oc	Full
	LIR	527	Liriope muscari `Emerald Goddess` / Emarld Godess Liriope	1 gal, 18"ht, 18"spr, 24"oc	Full

MISC.	CODE	QTY	BOTANICAL / COMMON NAME	SPECIFICATIONS	REMARKS
	SOD	TBD	Paspalum notatum / Bahia	Sold sod, rolled tight with sand filled joints, 100% weed, disease, and pest free	
	STEEL	TBD	Steel Edging	3/16", Black	
	ROCK	TBD	Rock Mulch	4"-6" size in front of building, 2"-3" on sides	
	BOLD	TBD	Decorative Lawn Boulder	Weathered and angular, see detail	
	MULCH	TBD	Fleximulch	Shredded Fleximulch, 2" depth	

NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF A DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.

NOTE: PLANTS ARE SPECIFIED BY HEIGHT AND SPREAD, NOT CONTAINER SIZE. ALL PLANTINGS ARE EXPECTED TO MEET ALL SPECIFICATIONS PROVIDED.

LANDSCAPE REQUIREMENTS

	REQUIRED	PROVIDED	
US HWY 441 (TYPE 'a' BUFFER):			TYPE 'a' BUFFER:
314.992 LF / 100 = 3.14992			FOR EVERY 100 LF OF FRONTAGE:
CANOPY TREES: 3 X 3.14 = 9.4 TREES	10 TREES	10 TREES	3 CANOPY TREES
UNDERSTORY TREES: 5 X 3.14 = 15.7 TREES	16 TREES	16 TREES	5 UNDERSTORY TREES
CONTINUOUS PARKING LOT SHRUB PLANTING	YES	YES	CONTINUOUS PARKING LOT SHRUB PLANTING
EAST PERIMETER (TYPE 'a' BUFFER):			
232.913 LF / 100= 2.32913			IF LESS THAN 200 PARKING SPACES, 10% OF GROSS SQUARE FOOTAGE OF PAVED PARKING LOT
CANOPY TREES: 3 X 2.32913 = 6.9 TREES	7 TREES	7 TREES	AND ENTRANCEWAY SHALL BE DEVOTED TO LANDSCAPING
UNDERSTORY TREES: 5 X 2.32913 = 11.6 TREES	12 TREES	12 TREES	
CONTINUOUS PARKING LOT SHRUB PLANTING	YES	YES	ONE CANOPY TREE PER LANDSCAPE BREAK (LANDSCAPE ISLAND)
SOUTH PERIMETER (TYPE 'a' BUFFER):			
216.586 LF / 100= 2.16586			NO MORE THAN 65% OF SITE SHALL BE DEDICATED TO IMPERVIOUS SURFACE
CANOPY TREES: 3 X 2.16586 = 6.49 TREES	7 TREES	7 TREES	
UNDERSTORY TREES: 5 X 2.16586 = 10.8 TREES	11 TREES	11 TREES	NO TREE SPECIES SHALL COMPRISE MORE THAN 33-1/3% OF ALL TREES PROVIDED
CONTINUOUS PARKING LOT SHRUB PLANTING	YES	YES	
WEST PERIMETER (TYPE 'a' BUFFER):			
329.337 LF / 100 = 3.29337			
CANOPY TREES: 3 X 3.29337 = 9.88 TREES	10 TREES	10 TREES	
UNDERSTORY TREES: 5 X 3.29337 = 16.46 TREES	17 TREES	17 TREES	
CONTINUOUS PARKING LOT SHRUB PLANTING	YES	YES	
IMPERVIOUS SURFACE AREA			
83,551.37 SF X 65% = 54,308.39 SF	54,308 MAX SF	51,256SF	
PARKING LOT LANDSCAPE AREA			
51,256 SF X 10% = 5,125.6 SF	5,125.6 SF	15,424 SF	
LANDSCAPE BREAK REQUIREMENTS:			
LANDSCAPE BREAKS = 17 TREES	17 TREES	17 TREES	
COMMERCIAL FACADE REQUIREMENTS:			
ACCENT TREES = 2 UNDERSTORY TREES	2 TREES	2TREES	

PLANTING NOTES

1. ALL PLANT MATERIAL SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES AND SHALL MEET ALL STANDARDS AS STATED IN THE LATEST EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
2. ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES, AND SHALL BE FLORIDA NO. 1 OR BETTER AS GIVEN IN "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE OWNER'S REPRESENTATIVE OF ANY CONDITION FOUND ON SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THESE PLANS.
4. NO SUBSTITUTIONS IN PLANT MATERIALS SHALL BE MADE WITHOUT WRITTEN AUTHORIZATION FROM OWNER OR LANDSCAPE ARCHITECT. IN THE EVENT OF DISCREPANCIES BETWEEN THE DRAWING AND THE PLANT LIST, THE DRAWING SHALL PREVAIL.
6. ALL PLANT MATERIAL IN SHOCK HAS TO BE REPLACED PRIOR TO A CO.
7. LOCATE ALL UTILITIES PRIOR TO ANY DIGGING OPERATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO EXISTING UTILITIES INCURRED BY HIS WORK.
8. ALL LANDSCAPED AREAS SHALL BE FULLY IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM.
9. STAKING AND GUYING ALTERNATIVES: METHODS INDICATED IN DRAWING DETAILS ARE PREFERRED. CONTRACTOR MAY SUGGEST ALTERNATE METHODS, ASSUMING FULL RESPONSIBILITY FOR THEIR IMPLEMENTATION. CONTRACTOR SHALL REPLACE, PLANT, OR UPRIGHT ANY TREES BLOWN OVER OR DAMAGED DUE TO INADEQUATE STAKING AT NO ADDITIONAL COST TO THE OWNER.
10. PLANTS MASSED IN BEDS SHALL BE ARRANGED USING TRIANGULAR SPACING.
11. PROVIDE A METAL EDGE BETWEEN ALL PLANTING BEDS AND LAWN AREAS.
12. EXISTING SOIL SHALL BE REASONABLY FREE OF STONE, LUMPS OF CLAY, ROOTS AND OTHER FOREIGN MATTER. ACIDITY TO BE BETWEEN 5.0 AND 7.0 pH. CONTRACTOR TO VERIFY SOIL ACIDITY AND AMEND AS NECESSARY TO BRING SOIL WITHIN RANGE.
13. TREE PLANTING PITS SHALL BE BACKFILLED WITH TOP SOIL, AND CLEARED OF ALL ROCKS, LUMPS OF CLAY AND OTHER FOREIGN MATERIAL. PLACE 1" OF COMPOST AND 3" OF MULCH ON TOP OF ROOT BALL.
14. PROVIDE GRASS SEEDING OR LAY SOD FOR PROPOSED LAWN AREAS TO ALL EDGES OF PAVEMENT AND/ OR LIMITS OF DISTURBANCE OUTSIDE R.O.W. OR PROPOSED LANDSCAPE EASEMENT.
15. THE CONTRACTOR, SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPING FOR 90 DAYS AFTER FINAL ACCEPTANCE. ALL REQUIRED LANDSCAPING SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THE WORK SHALL INCLUDE, BUT NOT TO BE LIMITED TO, MOWING, EDGING, PRUNING, FERTILIZING, WATERING, WEEDING, AND OTHER SUCH ACTIVITIES COMMON TO THE MAINTENANCE OF LANDSCAPING. ALL PLANT MATERIALS SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR. PLANT MATERIAL THAT DIES SHALL BE REPLACED WITH THE PLANT MATERIAL OF SIMILAR SIZE AND VARIETY.
16. TREES OVERHANGING WALKS AND PARKING AREAS SHALL HAVE A CLEAR TRUNK HEIGHT OF 7 FEET FROM FINISH SURFACE GRADE.
17. TREES PLANTED ON SLOPES SHALL BE PLACED IN PLANTING PITS OF ADEQUATE DEPTH SUCH THAT THE SOIL STAIN AT THE BASE OF THE TRUNK MATCHES THAT OF THE AVERAGE GRADE OR SLOPE.
18. CONTRACTOR SHALL WARRANTY PLANT MATERIAL TO REMAIN ALIVE AND HEALTHY FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE. WARRANTY SHALL NOT INCLUDE DAMAGE FOR LOSS OF PLANT MATERIAL DUE TO NATURAL CAUSES, ACTS OF VANDALISM OR NEGLIGENCE ON THE PART OF THE OWNER.
19. EXISTING LANDSCAPE THAT IS DAMAGED, NOT SCHEDULED FOR REMOVAL, SHALL BE REPLACED TO EXISTING CONDITION.
20. ALL EXISTING TREES TO BE PRUNED/ CLEANED-UP BY A CERTIFIED ARBORIST.
21. ALL INVASIVE / EXOTIC SPECIES ONSITE TO BE REMOVED.
22. QUANTITIES ARE APPROXIMATE AND ARE PROVIDED ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES AND PROVIDING SUFFICIENT QUANTITIES OF MATERIAL FOR COVERAGE BASED ON THE AREAS TO BE COVERED AND PLANT SPACING CALLED FOR.
23. ALL DISTURBED AREAS ON SITE NOT CALLED TO BE SODDED, SHALL BE REESTABLISHED WITH SEED OR HYDROMULCH.
24. ALL LANDSCAPE BED AREAS TO BE PREPARED USING LANDSCAPER'S BLEND BY SOIL BUILDING SOLUTIONS OR APPROVED EQUAL. CONTRACTOR TO MIX 4" LAYER OF SBS LANDSCAPER'S BLEND WITH NATIVE SOIL AND TILL TO A DEPTH OF 8". FINISHED GRADES OF PLANTING BEDS TO BE 2" BELOW FINISHED GRADE OF ADJACENT PAVING OR AS SHOWN ON GRADING PLAN.
25. AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO MAINTAIN ALL LANDSCAPE AREAS. OVER SPRAY ON STREETS AND WALKS IS PROHIBITED.
26. ALL BED AREAS TO BE MULCHED WITH SHREDDED HARDWOOD MULCH AT 3" MIN., DEPTH. (FLORA MULCH OR APPROVED EQUAL.)
27. NOTIFY LANDSCAPE ARCHITECT 772-794-4100 SHOULD AVAILABILITY ISSUE(S) ARISE.
28. MINIMUM 5 FOOT TREE SETBACK FROM ALL UTILITIES & 7.5' CLEARANCE AROUND FIRE HYDRANTS & FDC'S FROM LANDSCAPING.

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THIS PLAN HAS BEEN DIGITALLY SIGNED AND SEALED BY JONATHAN R. CAMPBELL, PLA ON THE DATE ADJACENT TO THE SEAL.

REGISTERED LANDSCAPE ARCHITECT
JONATHAN RICHARD CAMPBELL
LA6667137
STATE OF FLORIDA
7/26/2022

LONGHORN STEAKHOUSE

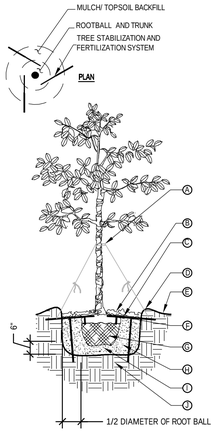
Issue Date:	5/9/2022
REVISION INFORMATION	
1 SITE PLAN COMMENTS	5/27/22
2 SITE PLAN COMMENTS	6/17/22
Restaurant #:	5662
PROTOTYPE	LH 9.2
MOUNT DORA	FLORIDA

LONGHORN STEAKHOUSE MOUNT DORA

DRAWING

LANDSCAPE PLAN

L1.1



Ⓐ TREE WRAP

Ⓑ 4"-6" DIAMETER RIVER ROCK (INSIDE THE BUILDING PAD) OR 3" MINIMUM OF HARDWOOD BARK MULCH OR AS SPECIFIED (IN OUTLYING PLANT BEDS).

Ⓒ STAKE SIZE SHALL BE ONE SIZE HIGHER THAN REQUIRED FOR SIZE OF TREE. REFER TO SITEWORK SPECIFICATIONS FOR APPROVED MATERIALS AND INSTALLATION REQUIREMENTS.

Ⓓ 3" HIGH SOIL BERM TO HOLD WATER

Ⓔ FINISHED GRADE (SEE GRADING PLAN)

Ⓕ TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE

Ⓖ B & B OR CONTAINERIZED (SEE SPECIFICATIONS FOR ROOT BALL REQUIREMENTS).

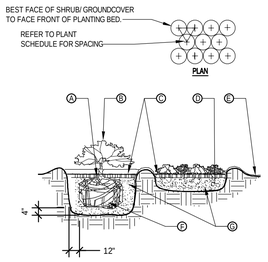
Ⓗ PREPARED PLANTING SOIL AS SPECIFIED.

Ⓘ ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOTBALLS SMALLER THAN 24" IN DIA. MAY SIT ON COMPACTED EARTH.

Ⓙ UNDISTURBED SUBSOIL

1. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
2. REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH).
3. SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.
4. PRUNE TREE AS DIRECTED BY LANDSCAPE ARCHITECTOR OWNER.
5. BRANCHING HEIGHT TO ANSI STANDARDS.

1 TREE WRAP
N.T.S.



Ⓐ TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.

Ⓑ WHEN USED IN MASSES- PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT.

Ⓒ 4"-6" DIAMETER RIVER ROCK (INSIDE THE BUILDING PAD) OR 3" MINIMUM OF HARDWOOD BARK MULCH OR AS SPECIFIED (IN OUTLYING PLANT BEDS).

Ⓓ EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.

Ⓔ 4" MINIMUM OF TOPSOIL TO BRING TO FINISHED GRADE (SEE GRADING PLAN).

Ⓕ PREPARED PLANTING SOIL AS SPECIFIED. NOTE: WHEN GROUND- COVERS AND SHRUBS USED IN MASSES ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.

Ⓖ SCARIFY ROOTBALL SIDES AND BOTTOM.

2 SHRUB AND GROUNDCOVER PLANTING
N.T.S.

Ⓐ ROCK MULCH SHALL BE 4"-6" DIAMETER RIVER ROCK AT THE FRONT OF THE BUILDING AND 2"-3" DIAMETER RIVER ROCK AT THE SIDES AND REAR

Ⓑ ROCK IS FLUSH WITH THE WALK ELEVATION AS SHOWN

Ⓒ SIDEWALK AS PER CIVIL SPECIFICATION

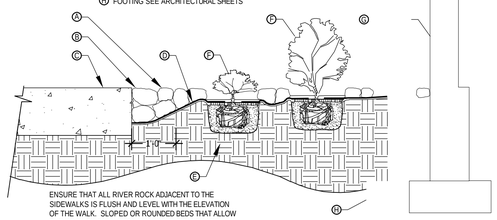
Ⓓ WEED BARRIER

Ⓔ PREPARED SOIL AS PER SPECIFICATION

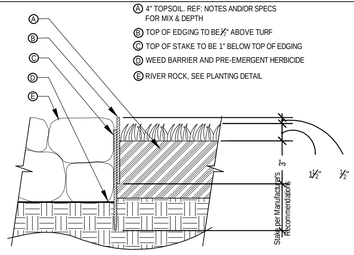
Ⓕ TYPICAL SHRUB

Ⓖ BUILDING WALL

Ⓗ FOOTING SEE ARCHITECTURAL SHEETS



3 ROCK MULCH INSTALLATION
N.T.S.



Ⓐ 4" TOPSOIL. REF: NOTES AND/OR SPECS FOR MIX & DEPTH

Ⓑ TOP OF EDGING TO BE ½" ABOVE TURF

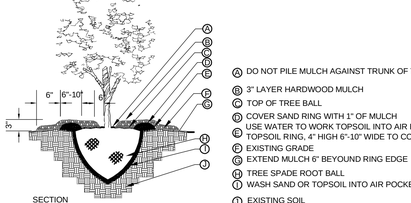
Ⓒ TOP OF STAKE TO BE 1" BELOW TOP OF EDGING

Ⓓ WEED BARRIER AND PRE-EMERGENT HERBICIDE

Ⓔ RIVER ROCK, SEE PLANTING DETAIL

1. BED EDGE SHALL BE 5" BLACK COMMERCIAL ALUMINUM OR STEEL EDGING WITH 12" SPIKES AT 3' ON CENTER MAXIMUM.
2. INSTALL EDGING ONLY IN AREAS TO SEPARATE RIVER ROCK FROM MULCH OR TURF, EDGING SHALL NOT BE INSTALLED ADJACENT TO SIDEWALKS
3. WHERE EDGING TERMINATES AT A SIDEWALK, BEVEL OR RECESS ENDS TO PREVENT TRIP HAZARDS.

4 METAL EDGING
N.T.S.



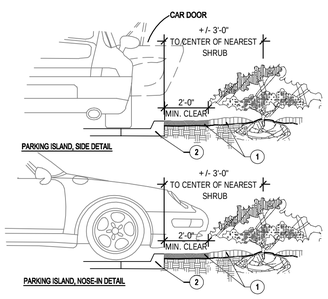
Ⓐ BOULDER TO BE SET ⅓ BELOW GRADE.

Ⓑ

Ⓒ LAWN

ROCK TO APPEAR THAT IT HAS SETTLED OVER TIME INTO THE LANDSCAPE. BOULDERS TO APPEAR MORE WEATHERED AND ANGULAR IN APPEARANCE, RATHER THAN ROUNDED OR FLAT, AND SHALL BE FREE OF SHARP EDGES.

5 DECORATIVE LAWN BOULDER
N.T.S.



1. INSTALL CONTINUOUS ROCK MULCH BED ADJACENT TO PARKING SPACES AS SHOWN.

6 PARKING SPACE/CURB PLANTING
N.T.S.

Ⓐ DO NOT PILE MULCH AGAINST TRUNK OF TREE

Ⓑ 3" LAYER HARDWOOD MULCH

Ⓒ TOP OF TREE BALL

Ⓓ COVER SAND RING WITH 1" OF MULCH

Ⓔ USE WATER TO WORK TOPSOIL INTO AIR POCKET AND INSTALL TOPSOIL RING, 4" HIGH 6"-10" WIDE TO CONTINUE TO FILL AIR POCKET.

Ⓕ EXISTING GRADE

Ⓖ EXTEND MULCH 6" BEYOUND RING EDGE

Ⓗ TREE SPADE ROOT BALL

Ⓘ WASH SAND OR TOPSOIL INTO AIR POCKETS

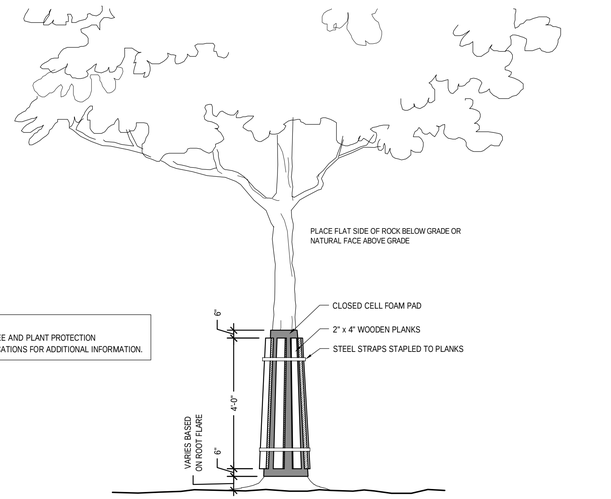
Ⓙ EXISTING SOIL

Ⓚ TREE TRUNK

Ⓛ TOP OF ROOT BALL

Ⓜ AIR POCKET BETWEEN TREE BALL AND EXISTING SOIL

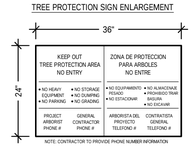
7 PLANTING DETAIL FOR 90" MATCHLINE DUG TREES (14")
N.T.S.

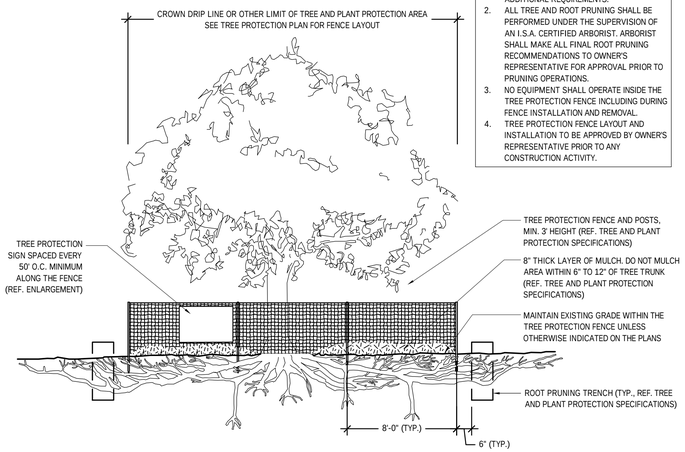


NOTES:
1. REF. TREE AND PLANT PROTECTION SPECIFICATIONS FOR ADDITIONAL INFORMATION.

8 TREE PROTECTION
N.T.S.

TREE PROTECTION SIGN ENLARGEMENT





NOTES:
1. SEE TREE AND PLANT PROTECTION SPECIFICATIONS FOR WATERING AND OTHER ADDITIONAL REQUIREMENTS.
2. ALL TREE AND ROOT PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF AN I.S.A. CERTIFIED ARBORIST. ARBORIST SHALL MAKE ALL FINAL ROOT PRUNING RECOMMENDATIONS TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO PRUNING OPERATIONS.
3. NO EQUIPMENT SHALL OPERATE INSIDE THE TREE PROTECTION FENCE INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
4. TREE PROTECTION FENCE LAYOUT AND INSTALLATION TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO ANY CONSTRUCTION ACTIVITY.

9 TYPICAL TREE PROTECTION FENCING
N.T.S.

THIS PLAN HAS BEEN DIGITALLY SIGNED AND SEALED BY JONATHAN R. CAMPBELL. PLA ON THE DATE ADJACENT TO THE SEAL.

AIA ARCHITECTURAL CONSTRUCTION SERVICES, INC.
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ARCHITECTS PROJECT # LH040000

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REGISTRY NO. 696
KHA PROJECT # 047916133

REGISTERED LANDSCAPE ARCHITECT
JONATHAN RICHARD CAMPBELL
LA6667137
STATE OF FLORIDA
7/26/2022

LONGHORN STEAKHOUSE

Issue Date:	5/9/2022
REVISION INFORMATION	
1 SITE PLAN COMMENTS	5/27/22
2 SITE PLAN COMMENTS	6/17/22
Restaurant #:	5662

LONGHORN STEAKHOUSE
MOUNT DORA

PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING
LANDSCAPE DETAILS

L1.2

Drawing name: K:\FRL_LA\047916 - Darden\047916133 - Long Horn Mount Dora\DESIGN\01 Permit-Code\Planstreet\151-L1.2 LANDSCAPE DETAILS.dwg 151-L1.2 LANDSCAPE DETAILS Jul 26, 2022 2:33pm by: Ben.Greiner
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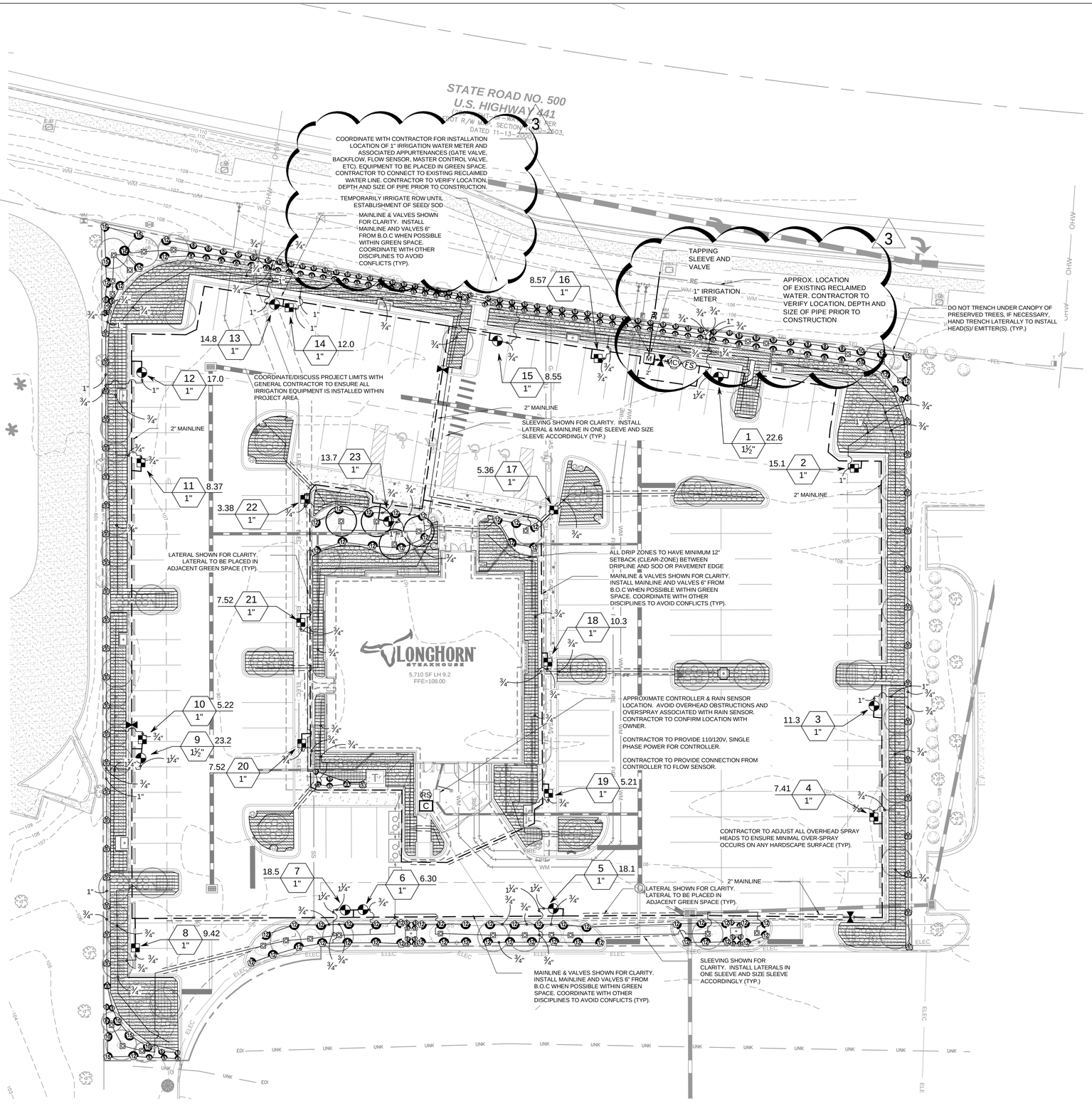

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
Q T H TT TQ F	TORO 570Z-4P-COM-E 5 SERIES TURF SPRAY, 4" POP-UP, WITH A ZERO FLUSH SEAL. WITH CHECK-O-MATIC CHECK VALVE, AND EFFLUENT PURPLE CAP FOR NON-POTABLE WATER USE. 1/2" FEMALE-THREADED INLET. IDEAL FOR SMALL TO MEDIUM LANDSCAPE AREAS.	105
Q T H TT TQ F	TORO 570Z-4P-COM-E 8 SERIES TURF SPRAY, 4" POP-UP, WITH A ZERO FLUSH SEAL. WITH CHECK-O-MATIC CHECK VALVE, AND EFFLUENT PURPLE CAP FOR NON-POTABLE WATER USE. 1/2" FEMALE-THREADED INLET. IDEAL FOR SMALL TO MEDIUM LANDSCAPE AREAS.	30
Q T H TT TQ F	TORO 570Z-4P-COM-E 10 SERIES TURF SPRAY, 4" POP-UP, WITH A ZERO FLUSH SEAL. WITH CHECK-O-MATIC CHECK VALVE, AND EFFLUENT PURPLE CAP FOR NON-POTABLE WATER USE. 1/2" FEMALE-THREADED INLET. IDEAL FOR SMALL TO MEDIUM LANDSCAPE AREAS.	5
Q T H TT TQ F	TORO 570Z-4P-COM-E 12 SERIES TURF SPRAY, 4" POP-UP, WITH A ZERO FLUSH SEAL. WITH CHECK-O-MATIC CHECK VALVE, AND EFFLUENT PURPLE CAP FOR NON-POTABLE WATER USE. 1/2" FEMALE-THREADED INLET. IDEAL FOR SMALL TO MEDIUM LANDSCAPE AREAS.	64
Q T H TT TQ F	TORO 570Z-4P-COM-E 15 SERIES TURF SPRAY, 4" POP-UP, WITH A ZERO FLUSH SEAL. WITH CHECK-O-MATIC CHECK VALVE, AND EFFLUENT PURPLE CAP FOR NON-POTABLE WATER USE. 1/2" FEMALE-THREADED INLET. IDEAL FOR SMALL TO MEDIUM LANDSCAPE AREAS.	7
2SST 4EST 4CST 4SST 4S-SST 8SST	TORO 570Z-4P-COM-E TURF STRIP SPRAY TURF SPRAY, 4" POP-UP, WITH A ZERO FLUSH SEAL. WITH CHECK-O-MATIC CHECK VALVE, AND EFFLUENT PURPLE CAP FOR NON-POTABLE WATER USE. 1/2" FEMALE-THREADED INLET. IDEAL FOR SMALL TO MEDIUM LANDSCAPE AREAS.	41
25 50 10 20	TORO 570Z-4-COM-FB-PC .25 PRESSURE-COMPENSATING FLOOD BUBBLER NOZZLE ON 570Z 4" POP-UP, WITH CHECK VALVE. 0.25 GPM, 0.5 GPM, 1.0 GPM, AND 2.0 GPM.	37

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	TORO DZK-700 LOW FLOW DRIP CONTROL VALVE KIT. WITH 1" IRRITROL 700 ULTRAFLOW INLINE VALVE, TORO Y-FILTER, PRESSURE REGULATOR AND FITTINGS. .10 GPM-30 GPM. REGULATED PRESSURE AT 40PSI	13
	AREA TO RECEIVE DRIPLINE TORO PCB-212-NP DRIP-IN PRESSURE COMPENSATING LANDSCAPE DRIPLINE. 0.53 GPH EMITTERS AT 12" O.C. DRIPLINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. PURPLE DRIP LINE.	11,559 L.F.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	TORO 220-26-0 BRASS 1", 1-1/4", 1-1/2", 2", 2-1/2", AND 3" ELECTRIC REMOTE CONTROL VALVE. WITH SPIKE GUARD SOLENOID. 1"-2" HAVE IN-LINE GLOBE BODY STYLE, AND 2-1/2" - 3" ARE ANGLE VALVE BODY STYLES.	10
	GATE VALVE	4
MCV	TORO 220-26-0 1" BRASS 1" MASTER VALVE. WITH SPIKE GUARD SOLENOID. 1"-2" HAVE IN-LINE GLOBE BODY STYLE	1
C	TORO TMC-424E-ID-F WITH (05) TSM-4 24-STATION OUTDOOR CONTROLLER. 4-BASE STATION MODEL WITH FIVE 4-STATION EXPANSION MODULES. HIGH-SURGE, FLOW-SENSING.	1
RS	TORO TRS WIRED RAIN SENSOR. MOUNT AS NOTED OR APPROVED, USE CONTROLLER POWER OR OPTIONAL TRANSFORMER. ADJUST RAIN SHUTOFF INDEX. NORMALLY-OPEN OR NORMALLY-CLOSED. COMPATIBLE WITH MOST CONTROLLERS.	1
FS	TORO TFS 1" PLASTIC TEE SIZES. EFFECTIVE FLOW MONITORING, EVEN IN FLOWS LESS THAN 5 GPM. COMPATIBLE WITH TORO AND COMPETITIVE CONTROLLERS. IMPELLER-BASED, PVC DESIGN.	1
M	WATER METER 1"	1
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21	4,532 L.F.
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21	1,768 L.F.
	PIPE SLEEVE: PVC SCHEDULE 40 TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION.	442.6 L.F.

Valve Callout
Valve Number
Valve Flow
Valve Size

THIS IRRIGATION PLAN IS DESIGNED TO THE FOLLOWING STATS: 65 PSI AND 37.5 GPM. IF WATER PRESSURE DOES NOT MEET DESIGN SPECIFICATIONS A BOOSTER PUMP WILL BE REQUIRED AT COST OF CONTRACTOR. CONTACT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION IF SYSTEM HAS +/- 5 PSI THAN DESIGN PRESSURE.

ABOVE QUANTITIES PROVIDED FOR CONVENIENCE ONLY. CONTRACTOR TO CONFIRM ALL QUANTITIES PRIOR TO BIDDING.

REFERENCE MAXIMUM LATERAL DRIPLINE CHART TO DETERMINE MINIMUM NUMBER OF POINTS OF CONNECTION PER DRIP LINE ZONE.

WHERE LAYOUT FLEXIBILITY EXISTS CENTER FEED LAYOUTS MUST BE USED. THIS ALLOWS FOR EVEN FLOW OF WATER THROUGH THE ZONE.

ZONES LOWER THAN THE CAPACITY OF THE FLOW SENSOR ARE TO BE WIRED IN THE CONTROLLER WITH ANOTHER ZONE SO THAT THE FLOW SENSOR READS BOTH ZONES AS ONE ZONE IN ORDER TO MEET THE FLOW SENSOR'S LOWEST GPM REQUIREMENT. DRIP ZONES REQUIRED TO REMAIN PIPED AS SEPARATE ZONES.

NOTE: IRRIGATION SOURCE UTILIZES RECLAIMED WATER. ALL IRRIGATION COMPONENTS INCLUDING, BUT NOT LIMITED TO, SERVICE LINES, VALVES, AND OTHER APPURTENANCES, SHALL BE COLORED PURPLE (PANTONE 512, OR APPROVED EQUAL).

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PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916133

REGISTERED LANDSCAPE ARCHITECT
JONATHAN RICHARD CAMPBELL
LA#6667137
STATE OF FLORIDA
7/26/2022

THIS PLAN HAS BEEN DIGITALLY SIGNED AND SEALED BY JONATHAN R. CAMPBELL, PLA ON THE DATE ADJACENT TO THE SEAL.

LONGHORN STEAKHOUSE

Issue Date: 5/9/2022

REVISION INFORMATION

1	5/27/22
SITE PLAN COMMENTS	
2	6/17/22
SITE PLAN COMMENTS	
3	7/26/22
SITE PLAN COMMENTS	

Restaurant #: 5662

LONGHORN STEAKHOUSE MOUNT DORA

PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING

IRRIGATION PLAN

L2.1

Drawing name: K:\FRI_LA\047916 - Darden\047916133 - Long Horn Mount Dora\DESIGN\01 Permit-Code\Plansheet\152-L2.1 IRRIGATION PLAN.dwg 152-L2.1 IRRIGATION PLAN Jul 26, 2022 2:33pm by: Ben.Greiner
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IRRIGATION NOTES

1. IRRIGATION CONTRACTOR SHALL TEST EXISTING STATIC PRESSURE ON SITE PRIOR TO CONSTRUCTION. SHOULD EXISTING SITE PRESSURE BE BELOW 65 PSI, CONTRACTOR SHALL CONTACT THE IRRIGATION DESIGNER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. COORDINATE IRRIGATION INSTALLATION WITH PLANTING PLAN AND SITE CONDITIONS TO PROVIDE COMPLETE 100% COVERAGE WITH MINIMUM OVERSPRAY. THE IRRIGATION CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER.
3. ALL CONSTRUCTION SHALL CONFORM TO CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THAT ALL IRRIGATION EQUIPMENT MEETS GOVERNMENT REGULATIONS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS OR APPROVALS PRIOR TO COMMENCEMENT OF OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR.
4. LATERAL PIPE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 12 INCHES. MAINLINE PIPE AND WIRES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 18 INCHES.
5. ELECTRICAL POWER SHALL BE PROVIDED WITHIN 5 FEET OF CONTROLLER LOCATION BY GENERAL CONTRACTOR. IRRIGATION CONTRACTOR TO PROVIDE FINAL HARD WIRE TO CONTROLLER.
6. 24 VOLT VALVE WIRE SHALL BE A MINIMUM OF 14 GAUGE, U.L. APPROVED FOR DIRECT BURIAL, SINGLE CONDUCTOR "IRRIGATION WIRE", CONTRACTOR TO CONFIRM WIRE SIZE PRIOR TO INSTALLATION. WIRE SPLICES SHALL BE ENCASED IN A WATERPROOF WIRE CONNECTOR UL APPROVED AND FILLED WITH SILICONE.
7. IRRIGATION VALVES AND VALVE BOXES SHALL BE LOCATED IN LANDSCAPE BEDS OR GROUNDCOVER AREAS WHENEVER POSSIBLE. ALL REMOTE VALVE BOXES SHALL BE SET FLUSH WITH FINISHED GRADE AND CONTAIN ONE CUBIC FOOT OF CLEAN GRAVEL BENEATH VALVE. LABEL REMOTE BOXES WITH ONE-INCH ALPHA NUMERIC NOTATION CORRESPONDING TO THE APPLICABLE ALPHA CONTROLLER AND NUMERIC STATION. USE 10" ROUND VALVE BOXES FOR ELECTRIC VALVES AND QUICK COUPLING VALVES. USE 15" X 9.5" RECTANGULAR BOX FOR DRIP VALVES UNLESS NOTED OTHERWISE. DOUBLE CHECK ASSEMBLY SHALL BE BOXED ACCORDING TO LOCAL CODES.
8. USE PVC SWING JOINT ASSEMBLIES TO CONNECT ALL SPRAY AND ROTOR HEADS.
9. CONTRACTOR IS TO CONTACT APPROPRIATE AUTHORITIES AND LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, EQUIPMENT QUANTITIES, AND UTILITY LOCATIONS PRIOR TO BEGINNING WORK.
10. SLEEVES SHALL BE INSTALLED BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED. SLEEVE MATERIAL SHALL BE PVC, SCHD. 40. CONTRACTOR SHALL EXTEND SLEEVES 18 INCHES BEYOND EDGE OF ALL PAVEMENT. ELECTRICAL WIRES FOR IRRIGATION VALVES AND IRRIGATION LINES ARE TO BE PLACED IN SEPARATE SLEEVES. SEE SLEEVING DETAIL. ALL PRESSURE MAINLINES UNDER ASPHALT PAVEMENT SHALL BE PLACED WITHIN SLEEVES AS NOTED.
11. DRIP LINE SHALL BE PLACED A MINIMUM OF 2" UNDER MULCH.
12. IRRIGATION CONTRACTOR SHALL ADJUST SPRAY NOZZLES FOR "HEAD-TO-HEAD" COVERAGE AND ADJUST FOR MINIMUM OVERSPRAY ONTO PAVEMENT. NO OVERSPRAY IS PERMITTED ONTO STREETS OR SIDEWALKS.
13. IRRIGATION CONTRACTOR SHALL SUPPLY AND CONSTRUCT IRRIGATION SYSTEM WITH ALL MATERIALS AND PER MANUFACTURER SPECIFICATIONS SHOWN ON THIS PLAN. IF CONTRACTOR PREFERS MATERIALS THAT DIFFER FROM THE THIS PLAN, THEY SHALL BE APPROVED BY THE IRRIGATION DESIGNER PRIOR TO CONSTRUCTION.
14. VERIFY CONTROLLER AND RAIN SENSOR LOCATION AND MAINLINE POINT OF CONNECTION AT PROJECT SITE WITH OWNER.
15. EXISTING TREES TO REMAIN ARE TO BE PROTECTED FROM DAMAGE. DO NOT TRENCH OR EXCAVATE WITHIN THE CRITICAL ROOT ZONE OF ANY TREE.
16. IRRIGATION LATERAL LINES, MAIN LINES AND EQUIPMENT MAY BE SHOWN OUTSIDE PROPERTY LINES ON THIS PLAN, ALL IRRIGATION LINES AND EQUIPMENT ARE TO BE WITHIN AND INSTALLED WITHIN THE LIMITS OF THE PROPERTY LINE.
17. SUPPLY LINE AND METER TO BE PROVIDED BY GENERAL CONTRACTOR. BACKFLOW PREVENTER TO BE PROVIDED BY IRRIGATION CONTRACTOR. IRRIGATION CONTRACTOR'S POINT OF CONNECTION TO BEGIN AFTER THE IRRIGATION WATER METER.
18. IRRIGATION CONTRACTOR SHALL REVIEW WINTERIZATION PROCEDURES FOR IRRIGATION SYSTEM WITH OWNERS REPRESENTATIVE.
19. ALL PLANT MATERIAL IN TREE HOLDING AREAS SHALL BE MANUALLY WATERED/IRRIGATED TO KEEP MOIST UNTIL PLANTED.
20. MAINLINE, VALVES, AND WIRING ARE SHOWN ON DRAWINGS FOR CLARITY, SHOULD BE LOCATED IN ACCESSIBLE GREEN SPACE. CONTRACTOR TO COORDINATE WITH ALL DISCIPLINES TO AVOID CONFLICTS WITH UTILITIES/ STRUCTURES, ETC.
21. INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON THE SITE.
22. SET SPRAY HEADS 4" FROM BACK OF CURB OR 24" IF PAVEMENT HAS NO CURB.
23. CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT. "AS-BUILT" DRAWINGS TO BE COLOR CODED BY ZONE ON 8.5" X 11", LAMINATED, AND PLACED IN CONTROLLER.
24. ALL DRIP ZONES SHALL BE INSTALLED WITH A SELF-FLUSHING DISC FILTER, OR APPROVED EQUAL.
25. INSTALL ALL IRRIGATION COMPONENTS AS PER MANUFACTURERS REQUIREMENTS.
26. IRRIGATION HEADS AND COMPONENTS SHALL BE LOCATED A MINIMUM OF 24" FROM ALL BUILDINGS TO AVOID ADVERSE PERFORMANCE OF FOUNDATIONS AND SLABS.
27. NO LATERALS LESS THAN 3/4" DIAMETER.

TORO-IRRIGATION DIVISION
5825 JASMINE STREET
RIVERSIDE, CA 92504
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PHONE: (951) 785-3152
FAX: (951) 359-1870
www.toro.com

LEGEND

1. FINISH GRADE.
2. DEPTH OF TUBING PER SPECIFICATIONS (SEE TORO PUBLICATION #ALT111)
3. DEPTH OF PVC SUPPLY MANIFOLD PER SPECIFICATIONS.
4. TORO LOC-EZE TEE (FITT3).
5. TORO DL2000 DRIPLINE LATERAL (RGP-XXX-XX).
6. TORO BLUE STRIPE POLY TUBING (EHD1645-XXX), LENGTH AS NECESSARY.
7. TORO LOC-EZE X 1/2" MTP ADAPTER (FAM3).
8. PVC TEE (Sx5xT) WITH 1/2" FPT OUTLET.
9. PVC SUPPLY MANIFOLD FROM DRIP ZONE KIT.

ISOMETRIC
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com#rb
REFERENCE NUMBER 065-088.

DL2000®
MANIFOLD CENTER FEED

065-044

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www.toro.com

PVC MAIN LINE LENGTH AS REQUIRED
PVC ELBOW
PVC MAIN LINE LENGTH AS REQUIRED
PVC TEE OR ELBOW (TYP.)
PVC MAIN LINE (TYP.) SEE SPECS. FOR DEPTH
PVC MALE ADAPTER (TYP.)
PVC LATERAL LINE SEE SPECS. FOR DEPTH
CONTINUOUS BRICK SUPPORTS
GRAVEL (1 CU. FT.)

SECTION/ELEVATION
NOT TO SCALE

SELECT DESIRED OPTION
1"
1-1/2"

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. SEE PLANS, LEGEND AND SPECIFICATIONS FOR ADDITIONAL INSTALLATION NOTES.
4. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com#rb
REFERENCE NUMBER 065-044.

VALVES: P-220 SERIES
1" & 1-1/2" PLASTIC VALVE, ELECTRIC

065-048

TORO-IRRIGATION DIVISION
5825 JASMINE STREET
RIVERSIDE, CA 92504
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PVC MAIN LINE LENGTH AS REQUIRED
PVC TEE OR ELBOW (TYP.)
GRAVEL (1 CU. FT.)
PVC LATERAL LINE SEE SPECS. FOR DEPTH
VALVE BOX EXTENSION
CONTINUOUS BRICK SUPPORT
TORO CLOSE REMOTE CONTROL VALVE WITH FLOW CONTROL MODEL NO. 220-26-04, 220-26-05, 220-26-06 OR 220-26-08 (SEE SPECS.)

SECTION/ELEVATION
NOT TO SCALE

SELECT DESIRED OPTION
1"
1-1/4"
1-1/2"

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com#rb
REFERENCE NUMBER 065-048.

VALVES: 220 SERIES
1", 1-1/4", 1-1/2" & 2" BRASS VALVE, ELECTRIC

065-252

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3. 3/4" FIELD OUTPUT WIRES
SECURE TO WALL WITH APPROPRIATE PIPE CLAMPS
4. 1/2" CONDUIT FOR SENSOR WIRES
SECURE TO WALL WITH APPROPRIATE PIPE CLAMPS
5. 1/2" CONDUIT REMOTE RECEIVER WIRES
6. FINISHED GRADE

45° - 64"
SEE SPECS.

FRONT SECTION/ELEVATION
NOT TO SCALE

RIGHT-SIDE SECTION/ELEVATION
NOT TO SCALE

NOTES:
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2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com#rb
REFERENCE NUMBER 065-252.

TMC-424 SERIES
EXTERIOR WALL MOUNT CONTROLLER (PLASTIC)

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LEGEND

1. FINISH GRADE.
2. DEPTH OF TUBING PER SPECIFICATIONS (SEE TORO PUBLICATION #ALT111).
3. DEPTH OF PVC SUPPLY MANIFOLD PER SPECIFICATIONS.
4. PVC CROSS (Sx5xSx5).
5. TORO DL2000 COMPRESSION ADAPTER (CA-710).
6. PVC TEE (Sx5xS).
7. TORO DL2000 DRIPLINE LATERAL (RGP-XXX-XX).
8. PVC SUB-MANIFOLD.
9. PVC TEE (Sx5xS).
10. PVC SUPPLY MANIFOLD FROM DRIP ZONE KIT.

ISOMETRIC
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com#rb
REFERENCE NUMBER 065-188c.

DL2000®
SUB-MANIFOLD CENTER FEED

065-188c

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LEGEND

1. FINISH GRADE.
2. TORO DL2000 DRIPLINE LATERAL (RGP-XXX-XX).
3. TORO LOC-EZE TEE (FITT3).
4. TORO BLUE STRIPE POLY TUBING (EHD1645-XXX).
5. TORO LOC-EZE X 1/2" MPT ADAPTER (FAM3).
6. PVC TEE (Sx5xT) WITH 1/2" FPT OUTLET.
7. NATIVE SOIL BACKFILL PER SPECIFICATIONS.
8. DEPTH OF TUBING PER SPECIFICATIONS (SEE TORO PUBLICATION #ALT111).
9. DEPTH OF PVC SUPPLY LINE PER SPECIFICATIONS.

SECTION/ELEVATION
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com#rb
REFERENCE NUMBER 065-188e.

DL2000®
MANIFOLD-TEE CONNECTION

065-188e

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NOTE:
INSTALL SPRINKLER AT FINISHED GRADE

SECTION/ELEVATION
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com#rb
REFERENCE NUMBER 065-013a.

570Z PRX SERIES
6 INCH POP-UP, XX SPRINKLER (SWING JOINT)

065-013a

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PVC LATERAL LINE FROM DRIP ZONE KIT.
PVC SUPPLY MANIFOLD.
PVC TEE (Sx5xS).
PVC ELL (Sx5).
TORO LOC-EZE ELL (FEE3).
TORO LOC-EZE TEE (FITT3).
TORO BLUE STRIPE POLY TUBING (EHD1645-XXX) AT SUPPLY AND FLUSH END OF EACH ISLAND.
8. TORO LOC-EZE TEE X 1/2" SLIP ADAPTER (FITV3).
TORO DL3000 ARV/VACUUM RELIEF VALVE (YD-500-34) PLUMBED TO TUBING AT HIGH POINT.
TORO DL2000 DRIPLINE LATERAL (RGP-XXX-XX).
TORO DL3000 AUTOMATIC FLUSH VALVE (FCH-H-RPT) PLUMBED TO TUBING AT LOW POINT.
TORO DL2000 OPERATION INDICATOR (DL-MP8). OPTIONAL.
13. ISLAND PERIMETER.
14. PERIMETER LATERALS 2" TO 4" FROM EDGE.

NOTE:
THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE SHALL NOT EXCEED THE MAXIMUM RUN LENGTH. SEE TORO SUBSURFACE IRRIGATION DESIGN GUIDE (FORM #ALT111).

PLAN
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com#rb
REFERENCE NUMBER 065-188m.

DL2000®
ISLAND LAYOUT A

065-188m

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LEGEND

1. FINISH GRADE.
2. NATIVE SOIL BACKFILL PER SPECIFICATIONS.
3. TORO DL2000 DRIPLINE (RGP-XXX-XX).
4. TORO DL2000 OPERATION INDICATOR (DL-MP8). USE ONE PER ZONE AND LOCATED AT FLUSH END OF ZONE.
5. 2"-3" ABOVE FINISH GRADE.
6. DEPTH OF TUBING PER SPECIFICATIONS (SEE TORO PUBLICATION #ALT111).

SECTION/ELEVATION
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com#rb
REFERENCE NUMBER 065-188g.

DL2000®
OPERATION INDICATOR

065-188g

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LEGEND

1. FINISH GRADE.
2. TORO DL2000 INLINE CHECK VALVE (JV3500-S2).
3. TORO DL2000 COMPRESSION ADAPTER (CA-710).
4. TORO DL2000 DRIPLINE (RGP-XXX-XX).
5. DEPTH OF TUBING PER SPECIFICATIONS (SEE TORO PUBLICATION #ALT111).

SECTION/ELEVATION
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com#rb
REFERENCE NUMBER 065-188j.

DL2000®
IN-LINE CHECK VALVE

065-188j

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1. Climate Logic™ weather sensor mounted outdoors on flat surface using screws.
2. Climate Logic™ weather sensor mounted on a rain gutter using QuickClip™ guttermount.
3. Climate Logic™ receiver module mounted indoors near the compatible controller. Mount with screws at eye level or if in a secure area, mount on hook & loop type strips for downcutting and hardwired programming utilizing the slack in the cord.
4. Single connection cord plugged into controllers remote port.
5. Imtrol automatic sprinkler controller (interior wall mount with external transformer).
6. Finish Surface of interior space where controller is located.
7. External plug-in transformer (provided with controller).
8. PVC schedule 40 control wire conduit (size as required).
9. PVC (orange) #8 (connecting low voltage control wires to the electric valves).

NOTE: All electrical work must conform to local codes. Refer to product literature for additional installation requirements.

CLIMATE LOGIC™
weather-sensing system connected to indoor controller

As Required

This drawing is provided for reference only. Individual project requirements and local codes may require changes. Toro Company assumes no responsibility for products that are not Toro/Hunter brand.

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SECTION/ELEVATION
NOT TO SCALE

MIN. FLOW RATE - 0.25 GPM
MAX. FLOW RATE - 3.5 GPM

LEGEND

1. FINISH GRADE.
2. CONTROL WIRED WITH 3# SERVICE COIL AND WATER PROOF WIRE CONNECTIONS, GRY OR EQUAL.
3. RECTANGULAR PLASTIC VALVE BOX. HEAT BRAND STATION NUMBER ON LID IN 2" HIGH CHARACTERS.
4. PVC MAINLINE PER SPECIFICATIONS (LENGTH AS REQUIRED).
5. SCH 40 PVC LL (S40).
6. NATIVE SOIL PER SPECIFICATIONS.
7. CONTROL WIRES TO CONTROLLER.
8. PVC MAINLINE FITTING.
9. TORO TPVT100 INLINE VALVE (*).
10. TORO 150 MUSH Y FILTER (*).
11. TORO 25 PSI LOW FLOW PRESSURE REGULATOR (*).
12. SCH 40 PVC MALE ADAPTER.
13. SCH 40 PVC BALL VALVE (*).
14. SCH 80 PVC CLOSE NIPPLE (*).
15. PEA GRAVEL SUMP, MINIMUM 6" DEEP.
16. BRICK SUPPORTS (4 COMMON BRICKS REQUIRED).
17. LATERAL LINE TO DRIP SYSTEM.
(*) PARTS IN DRIP ZONE KIT.

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com#rb
REFERENCE NUMBER 065-190c.

TORO DRIP ZONE KIT
DZK-TPV-1-LF

065-190c

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Kimley»Horn
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916133

THIS PLAN HAS BEEN DIGITALLY SIGNED AND SEALED BY JONATHAN R. CAMPBELL, PLA ON THE DATE ADJACENT TO THE SEAL.

REGISTERED LANDSCAPE ARCHITECT
JONATHAN RICHARD CAMPBELL
STATE OF FLORIDA
LA#6667137
7/26/2022

LONGHORN STEAKHOUSE ©

Issue Date:	5/9/2022
REVISION INFORMATION	
1 SITE PLAN COMMENTS	5/27/22
2 SITE PLAN COMMENTS	6/17/22
Restaurant #:	5662

LONGHORN STEAKHOUSE MOUNT DORA

PROTOTYPE LH 9.2

MOUNT DORA FLORIDA

DRAWING

IRRIGATION DETAILS

L2.2

Drawing name: K:\FRI_LA\047916 - Darden\047916133 - Long Horn Mount Dora\DESIGN\01 Permit-Code\Plansheet\153-L2.2 IRRIGATION DETAILS.dwg 153-L2.2 IRRIGATION DETAILS Jul 26, 2022 2:33pm by: Ben.Greiner
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Drawing name: K:\FRI_LA\047916 - Darden\047916133 - Long Horn Mount Dora\DESIGN\01 Permit-Code\Plansheet\154-LS1 DARDEN LANDSCAPE AND IRRIGATION SPECIFICATIONS.dwg 154-LS1 DARDEN LANDSCAPE AND IRRIGATION SPECIFICATIONS Jul 26, 2022 2:34pm by: Ben.Grein
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SECTION 02700
IRRIGATION SYSTEM

Part 1.00 General

1.01 SCOPE OF WORK
A. This Section shall govern the furnishing of all labor, materials and equipment for a complete operating system for lawn irrigation as specified herein and shown on the applicable drawings.

1.02 SUBMITTALS
A. Material List: Submit list of all materials for irrigation system.
B. Maintenance Items: Provide the following:
1. Two sets of sprinkler wrenches for adjusting, cleaning or disassembling each type of sprinkler.
2. Two service manuals for all equipment installed. Manuals shall be loose leaf and show drawings or exploded views of equipment and catalog numbers and current prices.
3. Operating instructions for all equipment installed.
4. One set of quick coupling keys to operate the quick coupling valves.
C. Project Record Documents: Correct daily to indicate changes from Contract Documents.
1. Horizontally at 90 degree angles, dimension the location of the following items from two permanent points of reference; i.e. curb junctures, light standards, building corners, survey hub points, or coordinates with a tolerance of 12 inch maximum.
a. Sprinkler main lines routing.
b. Connections to the existing water supply lines.
c. Sprinkler control valves.
d. Gate valves.
e. Electrical control wire path diagrammatically.
2. Vertical dimensions shall be given for mains when site conditions require installation deeper than 24 inches.

1.03 PRODUCT HANDLING
A. Exercise care in handling, loading, unloading and storing irrigation system materials to avoid damage. Store under cover.

1.04 PRODUCT CONDITIONS
A. The Contractor shall make all temporary repairs as necessary to keep the irrigation system in operating condition. This exercise shall not affect the requirements to be performed under the Contract Documents.
B. Coordinate work with that of other trades, all underground improvements, the location and planting of specimen trees and all other planting. Location of all planting requiring excavations 24 inch in diameter and larger shall be verified with Owner prior to installation of main lines.

1.05 INSPECTION
A. Verify dimensions and grades at job site.

Part 2.00 Products

2.01 MATERIALS
A. Plastic pipe: Extruded from 100% Virgin Polyvinyl Chloride (PVC).
1. Plastic pipe installed on pressure side of valves: (PVC) ASTM D1785, Schedule 40, or (PVC) ASTM D2241 Class 200.
2. Plastic pipe installed on non-pressure side of valves: (PVC) ASTM D2241 Class 160.
B. Plastic fittings: (PVC) ASTM D1785, Type 2, IPS, Schedule 40, NSF.
C. Solvent & Cleaner: As recommended by pipe manufacturer.
D. Automatic Controller: Toro TMC 424, High Surge Expansion Modules
E. Weather Sensor: Irritrol Climate Logic Sensor CL-Wireless
F. Remote Control Valves: Toro P220 Series Plastic Valves
G. Sprinkler Heads: Sprays – Toro 570Z-XP PRX; Rotors – Toro T5PCK
H. Sprinkler Nozzles: Toro Precision Spray Nozzles
I. Drip: Toro Drip In PC Brown Dripline; Toro Drip Zone Valve Kit
J. Wire: Copper, UL approved direct burial wire. Minimum of 14 gauge or as specified on the drawings.
K. Remote Control Valve Boxes: Brooks #3 or Ametek VP-10. Box lids shall be marked 'R.C.V.'.
1. Valve boxes for gate valves 3' and smaller: Ametek.
2. Gate valve boxes shall be marked 'irrigation' or 'Water'.
L. Conduit for Control Wires (if shown on drawings): (PVC) ASTM D1785, Schedule 40 in locations as indicated.
M. Miscellaneous Materials: As hereinafter specified and as necessary to complete this work and as shown on Drawings.

Part 3.00 Execution

3.01 EXCAVATION AND BACKFILLING
A. Trenching – General:
1. Dig trenches straight.
2. Provide continuous support of the pipe by the bottom of trench. Lay pipe to even grade. Bottom of trench shall be free from rocks or other sharp edge objects.
3. Trenching shall follow layout indicated.
4. Minimum cover: Pressure lines: 24 inches.
Non-Pressure Lines: 12 inches.
5. All lines shall have a 6' minimum clearance from each other and from lines of other crafts. Do not install lines directly over another line.
6. Maintain 1' minimum between lines which cross at angles of 45 degrees to 90 degrees.
7. Exercise care in excavating, trenching and working near existing utilities.
B. Backfilling:
1. Compact to dry density equal to adjacent undisturbed soils.
2. Conform to adjacent grades without dips, sunken areas, humps or other irregularities.
3. Initial backfill on plastic lines shall be pulverized native soil no larger than 2" in diameter and free of foreign matter.
4. Restore grades and repair damage where settling occurs.
C. Routing of Piping:
1. Pressure and non-pressure piping lines are routed diagrammatically on Drawings.
2. Coordinate specimen trees and shrubs with routing of lines. Planting shall take precedence over sprinkler and piping location. Report any major deviation from routing indicated to landscape architect or owner prior to line installation.
3. Install lines in such manner as to conform with drawings without offsetting the various assemblies from the pressure supply line.

3.02 INSTALLATION
A. Water Supply: Refer to drawings.
B. Quick coupling valves: Installed at intervals so that not more than 150 feet of hose will be required to reach any plant or tree (if a pressurized main system is being used).
C. Assemblies:
1. No multiple assemblies shall be installed on pressure lines.
2. Provide each assembly with its own outlet.
D. Cathodic Protection: Provide in the piping systems where required by installing insulating couplings, flanges or unions between copper or brass pipe or tubing and steel or cast iron pipe.
E. Plastic Pipe: Install plastic pipe in accord with manufacturer's recommendations. Install sprinkler head on plastic pipe as indicated.
1. All welded joints shall be cleaned with manufacturer's cleaner prior to applying solvent.
a. Welded joints shall be given at least 15 minutes set-up curing time before moving or handling.
b. Pipe shall be partially center loaded to prevent arching and shifting under pressure.
c. No water shall be permitted in pipe until a period of at least four hours has elapsed for solvent weld setting or curing or as required by solvent manufacturer.
2. Backfilling shall be done when pipe is not in expanded condition due to heat.
Cooling of pipe can be accomplished by operating the system for a short time before backfill, or by backfilling in the early part of the morning before the heat of the day.
3. Curing: When the temperature is above 80 F. soluble weld joints shall be given at least 24 hours curing time before water is introduced under pressure.
F. Automatic Controller:
1. Contractor shall be responsible for making control wire and electric power connections to the automatic controller.
G. Remote Control Valves:
1. Install at sufficient depth to provide not more than 6" nor less than 4" cover from the top of the valve to finish grade.
2. Install valves in a plumb position with 24" minimum clearance from other equipment for proper maintenance.
3. All valves shall be installed in appropriate sized valve boxes with cover.
H. Wire Connections: All underground wire connections to electric remote control valves shall be made by using waterproof wire connectors as manufactured by King Technology Inc.
I. Gate Valves:
1. Line size and install where indicated and sufficient clearance from other materials for proper maintenance.
2. Equip valves, sizes 3" and smaller, with standard operating wheel for operation. Valve bonnet packing shall be checked and tightened before backfill. All valves shall be 150 psi rated.
3. All valves shall be installed in appropriate sized valve boxes with cover.
J. Sprinkler Heads:
1. Install in a plumb position at intervals not to exceed the maximum spacings indicated.
2. Heads in lawn or turf areas where grass has not been established shall be installed on temporary risers extending at least 2" above grades.
3. Where heads are installed along walks, roads, etc., they shall be permanently positioned.
K. Thrust Blocks: Install thrust blocks on all main irrigation lines 4" or larger at all changes of direction, as detailed in manufacturer's recommendations on pipe installation or as shown on the drawings.
L. Flushing of System:
1. Flush main and lateral systems to clean out all debris and sediment prior to installation of heads.
2. This does not relieve requirements of future adjustments of system or reflushing system.

3.03 ELECTRICAL
A. Be responsible for making wire connections from remote control valves to controllers. All wiring shall be in accord with applicable codes.

3.04 PRESSSURE TEST
A. Test all pressure lines under hydrostatic pressure of 100 lbs. per square inch and all non-pressure lines shall be tested under the existing static pressure and both be proven watertight.
B. Pressure shall be sustained in the lines for not less than four hours. If leaks develop, the joints shall be replaced and the test repeated until the entire system is proven watertight.
C. Perform tests prior to backfill.

3.05 LOWERING OF HEADS
A. All sprinklers installed in lawn areas unless otherwise noted shall be lowered to finish grade within ten days following notification by the owner.
B. At the time of lowering heads, completely check and adjust the entire system and make any repairs that are necessary to complete this work.

3.06 ADJUST AND CLEAN
A. Installations and Operations: Make such adjustments and repairs as requested as necessary for acceptance at no additional cost to the owner.

3.07 COMPLETE AND ACCEPTANCE
A. Completion of work shall mean the full and exact compliance and conformity with provisions expressed or implied in the drawings and specifications.
B. All work under this contract shall not be finally accepted until expiration of the guarantee period.
C. The irrigation contractor shall demonstrate and fully acquaint the owner and/or owner's representative with the entire system, proving that all remote control valves are properly balanced, that all heads are properly adjusted for radius and arc of coverage, and that the system is workable, clean and efficient. This shall be a requirement for acceptance of the work.
D. Contractor shall upon receipt for final payment, give owner a set on CD of as-built irrigation system with all valves, tees and heads indicated as installed.

3.08 GUARANTEE AND REPLACEMENT
A. The irrigation contractor shall furnish warranties in writing certifying that the quality and workmanship of all materials and installation furnished is in accordance with these specifications and in accordance with original manufacturer's warranties. Irrigation contractor shall further see to the fulfillment of all manufacturer's warranties. Irrigation contractor shall warrant the installation workmanship for a period of one (1) year from date of completion or acceptance of the job, or any accepted portion of the job.
B. Should the irrigation contractor be notified that all work or replacements are warranteed under these conditions, he shall provide the required service and/or replacements promptly within three (3) days.

END OF SECTION

SECTION 02800
LANDSCAPE

Part 1.00 General

1.01 SCOPE OF WORK
A. This section covers furnishing and installing all landscape plants and nonplant materials covered by the drawings and these specifications. The work shall include materials, labor, equipment and services as described herein and indicated on the drawings. Also, the work shall include the maintenance of all plants and planting areas until acceptance by the Owner, and the fulfillment of all guarantee provisions as herein specified.

1.02 PLANTING LAYOUT
A. Before beginning work, the contractor shall investigate and verify, in the field, the existence and location of all underground utility and irrigation piping, and take precautions to prevent their disturbance. It shall be the responsibility of the contractor to obtain all such information as it is made available. Plans and specifications, however, may be obtained from the owner.
B. The contractor shall locate all general reference points, take precautions to prevent their disturbance, perform the layout work, be responsible for all lines, elevations and measurements of work executed under the contract, exercise proper precaution to verify figures on drawings before laying out work and be responsible for any error resulting from failure to exercise such precaution. The contractor shall make field measurements for his own work and be responsible for its accuracy.
C. Discrepancies between conditions existing on the site and conditions indicated on the drawings shall be called to the attention of the owner before or at the time plant locations are staked out.
D. In the event of a variation between the plant list and the actual number of plants shown on the plans, the plans shall control.

1.03 HORTICULTURAL STANDARDS
A. Unless otherwise noted, plant material, including collected materials, shall be grade No. 1 or better as outlined under Grades and Standards for Nursery Plants, and shall also conform to American Standard for Nursery Stock, ANSI (American National Standards Institute, Inc.) Z60.1–1996 as approved by the American Association of Nurserymen.
B. All plant names shall conform to the names given in Standardized Plant Names, 1942 Edition, prepared by the American Joint Committee on Horticultural Nomenclature. Names of varieties not included therein shall conform generally with names accepted in the nursery trade. All plant materials shall be true to botanical, common and variety names. Botanical name shall have precedence over common name.
C. The landscape architect shall have the right, at any stage of the operations, to reject any and all work and materials which, in his opinion, do not meet with the requirements of these specifications. Such rejected material shall be removed from the site and acceptable material substituted in its place.

1.04 CERTIFICATES OF INSPECTION
A. All plant material shall be inspected by the Department of Agriculture, as required by state law. Plants of a grade less than that specified in the article titled HORTICULTURE STANDARDS will not be accepted.

Part 2.00 Non-Plant Materials

2.01 SOIL BACKFILL
A. Soil for backfilling planting areas and plant pits shall be the existing surface soil, free from subsoil, objectionable weeds, litter, sods, stiff clay, stones, stumps, roots, trash, toxic substances, mortar, cement or any other material which may be harmful to plant growth or hinder planting operations. Poorly drained soil shall not be used.
B. Soil amendments shall be added to the soil in the amount and manner prescribed by soil analysis. Obtain a pH of 5.5 to 6.5. Results from soil analysis and a list of the prescribed amendments shall be presented to the owner and verified by the landscape architect prior to being incorporated into the soil.
C. If additional soil is required; it shall be furnished by the contractor and shall be a natural, friable soil representative of productive, well-drained soils in the vicinity. It shall be obtained from well drained areas which have never been stripped before and shall be free of admixture of subsoil and foreign matter, stones, toxic substances and any material or substance that may be harmful to plant growth.
D. The contractor shall provide the following information on imported topsoil:
1. Specific location from which topsoil will be (or was) stripped.
2. Present owner of that property.
3. Approximate amount of topsoil available.
4. Test results showing topsoil composition and analysis.
E. Soil test shall be performed by a qualified soils laboratory, in accordance with "Methods of Soils Analysis – Agronomy '9' as published by the American Society of Agronomy and shall be performed at the Contractor's expenses.
F. Planting soil backfill for raised architectural planters, if applicable, shall consist of 40% potting soil, 40% coarse washed builders sand and 20% horticultural perlite.
G. Areas designated to be planted with flowering annuals, if applicable, shall be excavated to a depth of 8? and backfilled with a mixture consisting of 40% peat, 40% D.O.T. (coarse) sand, 10% pine bark (decomposed) and 10% cypress chips.
H. Planting soil backfill for tree wells, if applicable, shall be 2/3 approved topsoil and 1/3 coarse washed builder's sand.

2.02 FERTILIZER
A. Commercial fertilizer shall be 14–14–14 formulation of Osmocote brand, 3–4 month release of which 60% of the nitrogen is in urea–formaldehyde form and shall conform to the applicable state fertilizer laws. Fertilizer shall be uniform in composition, dry and free flowing.

2.03 DOLOMITIC LIMESTONE
A. Dolomitic limestone shall be a natural limestone, designated for agricultural use, shall contain not less than 85 % of total carbonates, and shall be ground so that 50% will pass a 100 mesh sieve and 50% will pass a 20 mesh sieve.

2.04 PRE–EMERGENCE WEED CONTROL
A. Weed control shall be Ronstar 2G as manufactured by Rhodia, Inc., Monmouth Junction, New Jersey 08852 or Princap (Simazine) as manufactured by Gelgy Agricultural Chemicals, Ardsley, New York 10502, or an approved equal.

2.05 WATER
A. Water will be available for use on site during the landscape installation at no cost to the contractor. Care shall be exercised to assure that water is kept free of harmful chemicals, acids, alkalis, or any substance, which might be harmful to plant growth.

2.06 ANTIDESICCANT
A. Antidesiccant shall be an emulsion type; film–forming agent designed to permit transpiration, but retard excessive loss of moisture from plants, such as Dowax by Dow Chemical Co., or Wilt–Pruf by Nursery Specialty Products, Inc., or an acceptable equal. The antidesiccant shall be delivered in the manufacturer's fully identified containers and shall be mixed in accordance with manufacturer's instructions.

2.07 BORICIDE
A. Boricide shall be Lindane as manufactured by Platt, or an approved equal.

2.08 MULCH
A. All mulch around building pad shall be stone, 3" deep. See plan for size, color and limits of stone mulch. Install a weed barrier under stone, and submit a stone sample to owner.

2.09 GUYING AND STAKING MATERIAL
A. Stakes for supporting trees shall be as detailed on the drawings. Wire for fastening trees to duckbill and turnbuckle shall be galvanized aircraft grade guying cable as specified in the detail. Wires in contact with trees shall be encased in two–ply reinforced garden hose. Material for wrapping tree trunks shall be burlap, heavy crepe paper, or other acceptable material in strips 6 to 10 inches wide.

2.10 DRAINAGE GRAVEL
A. Where indicated on the drawings, or where soil conditions deem it necessary, the contractor shall install gravel subdrains beneath trees and/or planting areas to aid in soil drainage and percolation. The subdrain shall be constructed as detailed on the drawings, or as directed by the landscape architect. Drainage gravel shall consist of washed, clean gravel 3/4 inch to 2 inches in size.

2.11 SOIL SEPARATION MATS
A. Soil separation mats, if indicated on the drawings, shall be Bidim (gray felt) as manufactured by Monsanto Co., 800 North Lindbergh Road, St. Louis, MO 63166 or approved equal. Mats shall be installed as indicated on the drawings, and edges overlapped a minimum of 4 inches. Care shall be taken to prevent tearing or excessive crushing during the installation process.

Part 3.00 Plant Material

3.01 QUALITY OF PLANT MATERIAL
A. During inspection, as set forth hereinafter, all plant material will be judged, and rejections shall be based upon these standards. All plants shall comply with federal and state law requiring inspection for plant diseases and infestations. Inspection certificates required by law shall be made available to the owner or owner's representative at his/her request.
B. In determining the quality of plant material, the following elements will be valued:
1. Root condition.
2. Plant size (above ground).
3. Insect and disease free condition.
4. General appearance (color, shape, pruning).
A deficiency in one or more of these areas will be sufficient reason to reject selectively or by lot.
C. The landscape architect shall have the right, at any stage of the operations, to reject any and all work and materials which, in his opinion, do not meet with the requirements of these specifications. Such rejected material shall be removed from the site and acceptable material substituted in its place.

3.02 SIZE AND MEASUREMENTS
A. Plants shall be measured when branches are in their normal position. Heights and spread dimensions specified refer to the main body of the plant and not to extreme branch tip to tip. The measurements specified are the minimum size acceptable and where pruning is required, these are measurements after pruning. When sizes are indicated as a range, the plant shall have the proper proportion as outlined in Department of Agriculture, Grades and Standards for Nursery Plants Part 1 and 11. Caliper of trees shall be taken 36 inches above the ground level and shall be the determining measurement for trees.
B. Plants, which have been headed back to conform to the size specified, will not be acceptable. Plants larger than specified may be used if approved by the owner; however, the use of such plants shall not increase the contract price.

3.03 LABEL
A. Plant materials shall have durable, legible labels stating, in weather resistant ink, the correct botanical and common names and size as indicated in the Plant List. Upon delivery of sufficient representative samples of each delivered shipment, shall have labels securely attached in a fashion that will not interfere with normal plant growth. Plant materials which have (or will have) a seasonal bloom shall be tagged with labels indicating the specific variety of that species' botanical and common name.

3.04 BALLED , BURLAPPED, WIRE BALLED, BURLAPPED PLANTS
A. All ball shapes shall be of sufficient diameter and length to encompass the fibrous and feeding root system necessary for full recovery of the plant after planting. All balls shall be firm, shall not be broken or cracked and shall be wrapped and securely tied with heavy twine or wire. All trees shall be root pruned a minimum of 6 weeks before delivery. When the tree is root pruned, the tree crown shall be selectively thinned to reduce the volume of the crown. This shall consist of thinning and shaping only. Care shall be taken to assure that the plant form will not be distorted and will remain typical of the species growth characteristics.
B. Plants designated B B or WB B in the Plant List shall be adequately balled with firm, natural balls of soil in sizes at least equal to those set forth in ANSI Z60.1–1986. Balls shall be firmly wrapped with jute burlap or equivalent cloth capable of rotting in the round. No balled plant shall be planted if the ball has been unwarranted or broken either before or during the process of planting. Trees grown in grow bags shall not be acceptable. Synthetic strings, straps, and burlap material shall be properly removed from the root ball. Synthetic burlap is to be totally removed from the root ball.

3.05 COLLECTED PLANTS
A. All plant material (except Wax Myrtles and Sabal Palms) shall be nursery grown. Collected plants shall have been grown under climatic conditions similar to those in the locality of the project. All collected plants shall meet the requirements as specified and shall meet all specified grades and standards, unless otherwise qualified in the Plant List or these specifications. Root balls shall be increased in size one third greater than nursery grown plants.

3.06 CONTAINERIZED PLANTS
A. All container grown plants shall be well rooted and established in the container in which they are delivered to the site. The plants shall have been in that container sufficiently long for the fibrous roots to hold the soil together when the plant is removed from the container. Plants designated to be container grown may be furnished with ball and burlap provided they conform to the size and quality required and that the requirements for balled and burlapped plants are met. Container grown plants found to be root–bound during planting will not be acceptable. Containerized trees have a tendency to dry out quickly. The contractor shall be responsible for hand watering the trees at time of delivery through the time of final acceptance at a rate consistent with the nursery watering schedule to assure that the tree does not go into shock.

3.07 SPECIMEN PLANTS
A. After receiving the Notice to Proceed, the contractor shall locate all plants specified as specimen. The contractor shall notify the owner so they may agree on a time to mutually inspect the selected plants. The owner will inspect and tag those plants, which are acceptable for use. Expenses incurred by the owner for any subsequent inspection of specimen plants, at any time, in addition to the mutually agreed time shall be the responsibility of the contractor.

3.08 PALMS (If required)
A. Palms, except cabbage palms and unless otherwise indicated, shall be burlapped. Buds of palms shall be tied and supported in an upright position in accordance with the guidelines of Department of Agriculture, Grades and Standards for Nursery Plants, Part 11, Palms and Trees.
B. Special care shall be applied to the handling and planting of palms. Unless otherwise indicated, palms shall have heavy straight trunks with full heads. Sabal palm root balls shall be dug with a minimum of 3' diameter ball 3' deep. The head shall be tied and supported during transport with a 2x4 tied parallel to the trunk extending up to the foliage. Avoid excessive pressure on the petioles when tying the head. Canary Island Date palm heads shall be tied using a 4x4 wood pole.

3.09 SUBSTITUTIONS
A. The use of materials differing in kind, quality or size from those specified will be allowed only after the owner is convinced that all means of obtaining the specified materials have been exhausted.
B. Where it is indicated that the contractor may furnish or use a substitute that is equal to the material or equipment specified and if the contractor is to furnish or use a proposed substitute, he shall, after the award of the contract, make written application to the owner for acceptance of such a substitute. The substituted product or method shall be equal or superior in all respects to the specified product or method, shall perform adequately the duties imposed by the general design, shall be compatible with all other elements of the job, and shall be sufficient to complete the job. The substitution shall not add cost to the contract. Should it be necessary to accept a substitute of a quality less than specified, the unit price shall be used to adjust the contract price downward accordingly. No substitution shall be ordered or installed without the written permission of the owner and governing municipality.

Part 4.00 Delivery, Storage and Handling

4.01 PLANT MATERIAL
A. The contractor shall exercise care in handling, loading and unloading, storage and transporting all plant material and allied materials to prevent damage. The contractor shall assume full responsibility for protection and safekeeping of products stored on the job.
B. The contractor shall dig and prepare B B and WB B plant material for shipment in a manner that will not damage roots, branches, shape and future development after planting.
C. Trees indicated on the plans as WB B and those where size, soil conditions and distance of transport to the site would warrant, shall be wireballed. Bottom wired baskets manufactured specifically for use in tree handling may be used.
D. The contractor shall handle all plants so that roots and branches are protected at all times from drying out, heating and from other injury. All plants shall be handled by the ball or container.
E. Before moving plants from the nursery or storage area to the site; they shall be thoroughly sprayed with a solution of antidesiccant. Antidesiccant shall be applied to all collected pines, oaks and myrtles. Two weeks after planting or as specified by the product manufacturer; the material shall be sprayed again with the antidesiccant. The antidesiccant shall be applied using power spray to provide an adequate film over trunks, branches, stems, twigs and foliage.
F. When transporting plants to and at the site, the contractor shall make provisions to protect plants from wind damage by avoiding high–speed highways, transporting in enclosed or partially enclosed vehicles, or covering the plants with burlap or other suitable material. Plants severely damaged by wind will be rejected.
G. Any plant with signs of insects, their eggs or larvae or disease will be rejected and shall be removed from the project site.
H. Only the nursery stock intended for planting on a particular day shall be delivered and stored on the site during the day unless otherwise acceptable to the owner. All plants shall be stored in one location as designated by the owner, protected from wind and kept moist. The roots of all plants that cannot be planted immediately in soil shall be covered with mulch and other suitable material. No plants shall be taken from the temporary storage area for planting on the project until after the tree pits or holes for the plants in the section to be planted have been properly excavated and prepared ready to receive the trees and shrubs.
I. Trees moved by winch or crane shall be thoroughly protected from chain marks, girdling or other bark slippage by means of burlap, wood battens or other acceptable method.

4.02 NONPLANT MATERIAL
A. Fertilizer shall be delivered to the site in original, unopened containers bearing manufacturer's guaranteed chemical analysis, name, trade name, trademark and conformance to state law. In lieu of containers and provided that it is to be applied at the time of delivery, fertilizer may be furnished in bulk and a certificate indicating the above information shall accompany each delivery.
B. Pesticide and herbicide materials shall be delivered to the site in the original, unopened containers. Containers shall bear the label that identifies the Environmental Protection Agency registration number and the manufacturer's registered uses will be rejected.
C. Storage of materials shall be in the area designated for use by the owner. All materials shall be kept in dry storage and away from contaminants.

Part 5.00 Installation

5.01 PREPARATION BEFORE PLANTING
A. The contractor shall verify that all final grades have been established prior to beginning planting operations. If sufficient representative samples of each delivered shipment, shall have labels securely attached in a fashion that will not interfere with normal plant growth. Plant materials which have (or will have) a seasonal bloom shall be tagged with labels indicating the specific variety of that species' botanical and common name.
B. Should undesirable existing vegetation be present on the site at the time of installation, the contractor shall prepare the site for planting by use of chemicals, when used as recommended by the manufacturer, and/or mechanical means acceptable to the owner. Care shall be exercised to avoid any misuse of chemicals, which would create detrimental residual conditions. Care must also be used not to alter final grades, which have been established or cause damage to previously established turf areas.

5.02 SITE PREPARATION
A. If so called for by the owner, all plant locations and the areas of all planting beds shall be staked out on the ground, for approval by the owner, before planting operations begin. The contractor shall stake the location of the center of each tree and paint the outline of each shrub and groundcover bed. The stakes shall be oriented in a vertical manner so that they can be viewed and read from one direction. The contractor shall give the owner notice at least 3 days prior to the inspection stated herein.
B. The contractor shall verify the location of underground utilities, and irrigation heads and valves, and provide markers or other suitable protection, where necessary, to prevent damage.

5.03 EVCAVATION OF PLANTING AREAS
A. No tree or shrub pit shall be dug or prepared until their location is acceptable to the owner. Reasonable care shall be exercised to have pits dug and soil prepared prior to moving plants to respective locations for planting to ensure that they will not be unnecessarily exposed to drying elements or to physical damage.
B. Circular pits with vertical sides shall be excavated for all plants. The depth of all planting pits shall be enough to accommodate the ball or roots and the prepared soil in the bottom of the pit. Diameter of pits for trees shall be at least 1 foot greater than the diameter of the ball.
C. Plant beds and pits shall be tested for proper drainage by filling with water twice succession. Conditions permitting the retention of more than 6 inches of water in 1 hour shall be brought to the attention of the owner. A written proposal and cost estimate for correction of such conditions shall be submitted to the owner for acceptance, before proceeding with the work.
D. All tree pits curbed planting islands, tree wells, or in areas, in which the soil has been compacted to an undesirable density, shall be excavated to a depth at least two feet greater than the measured depth and diameter of the ball. The minimum depth and diameter of excavation shall be four feet. Soil backfill in areas of densely compacted soil must meet specification 201–C unsuitable soil to an approved location.
E. In shrub and groundcover beds where soils have been compacted to a density, which is detrimental to plant growth, the contractor shall loosen soils to a depth of 18" minimum to allow root penetration beyond the planting pit.
F. If acceptable for use, existing topsoil in shrub and groundcover beds shall be treated with the specified soil amendments, at rates determined by soil tests. Amendments shall be incorporated into the soil to a depth of 12 inches. Where soil is not acceptable as determined by soil tests, the soil in the entire area shall be removed to a depth of 8 inches and replaced with the specified planting soil.

5.04 PLANTING
A. All plants, except as otherwise specified, shall be centered in their pits, faced for best effect and set plumb for backfilling.
B. Burlap on B&B and WB&B plants shall be removed from top one third of the ball. Burlap shall not be removed from under balls. If the ball is cracked or broken before or during planting process, the plant shall not be removed from the site. All synthetic strings, straps, and wire cages shall be removed from the top of third of the root ball. Synthetic burlap shall be removed completely.
C. Plants shall be removed from cans by cutting two sides of a container with an acceptable can cutter. Sides shall not be cut with a spade. Sides of knockout cans shall not be cut. Plastic containers with slanted sides shall not require cutting. Plants shall be removed from the container carefully, without injury or damage to the plant and root system.
D. Bottom of plant boxes shall be removed before planting. Sides of the box shall be removed, without damage to the root ball, after positioning the plant and partially backfilling around it. The contractor shall hand water–containerized trees from the time of delivery until the time of the final acceptance at a rate consistent with the nursery conditions from which the trees were obtained. Trees, which go into shock due to insufficient water, may be rejected.
E. Plants shall be set in the center of the pits and shall be plumb and straight and at such a level that after settlement the root crown will be level with the surrounding grade.
F. Plant holes shall be backfilled with the specified planting mixture placed in layers around the roots or ball. Each layer shall be carefully tamped in place in manner to avoid injury to the roots or ball or disturbing the position of the plant. When approximately two thirds of the plant hole has been backfilled, the hole shall be filled with water and the soil allowed to settle around the roots. Balled and burlapped plants shall have the burlap cut away or folded back from the top of the ball before applying water. After the water has been absorbed, the plant hole shall be filled and tamped lightly to grade. Any subsequent settlement shall be brought to grade.
G. Immediately after each tree pit is backfilled, a shallow basin slightly larger than the pit shall be formed with a ridge of topsoil to facilitate watering. This soil saucer shall be formed in a circle and tamped around each tree so that the saucer will retain water. Where curbing occurs around plant pits, the saucer shall be omitted.
H. The contractor shall include adding a water retentive additive Terra–Sorb AG for all shrubs, groundcovers, annuals and trees at the manufacturers suggested rates.
DFPA Plyform, Exterior B–B, edge sealed.
1. Plastic Fiber:
Special forms of molded fiber, if required.
2. Cardboard:
Beam void forms "VOIDCO" or equal, as required under pier supported grade beams.
3. Metal:
Commercial standard, or as noted on drawings.

5.05 FERTILIZING
A. Each tree and shrub shall be fertilized by placing the manufacturer's recommended amount around the base of the ball before backfilling.

5.06 STAKING, GUYING AND WRAPPING
A. Staking or guying and wrapping of trees shall be done immediately after they are planted. Each plant shall stand plumb after staking or guying has been completed. It shall be the Contractor's responsibility to ensure that all trees are plumb and secure after planting. Staking of trees of a 10 foot height or less shall be at the discretion of the Owner. All other trees shall be staked.
B. Immediately after planting, trees shall be staked and guyed for support. "Duck–bill" earth anchors as indicated shall be placed at sides of each tree, and shall be driven into undisturbed ground to a depth deep enough to sufficiently secure the tree. Care shall be taken when driving anchors to avoid damaging the tree roots. Except as otherwise indicated or directed, the tree shall be fastened to each anchor as indicated on the plans. The wires shall be encased in hose at the tree to prevent direct contact with the bark and shall be placed around the trunk in a single loop. Wires shall be tightened and kept taut by twisting the turnbuckle. A brightly colored flagging tape approximately 12" in length shall be securely tied to each guy wire immediately above the turnbuckles.
C. If planted while void of foliage, the trucks of all deciduous trees shall be wrapped spirally from bottom to top, and shall be securely tied with cord at top and bottom and at 2 foot intervals along the trunk. The wrapping shall overlap and entirely cover the trunk from the ground to the height of the second branches and shall be neat and snug. Overlap of wrapping material shall be approximately 2 inches. Trees shall be inspected for injury to trunks, evidence of insect infestation and improper pruning before wrapping.

5.07 MULCHING
A. Immediately after planting operations are completed, all tree and shrub saucers, and shrub and groundcover beds outside of the building pad shall be covered with a 2 to 2 ½ inch layer of shredded cypress bark. Limits of the mulch shall be as indicated on the drawings.

5.08 PRUNING
A. Each tree and shrub shall be pruned in accordance with standard horticultural practice to preserve the natural character of the plant and in the manner fitting its use in the landscape design. Pruning shall be done with clean, sharp tools and as indicated on the drawings.
B. Approximately one third of the growth of large deciduous trees (those with 2 inch caliper or larger) shall be pruned by removal of superfluous branches. Main leaders of trees shall not be cut back. Branches shall be thinned out and not merely cut back. Long side branches may be shortened. Shrubbery with extremely heavy tops shall have one fourth to one third of the weaker growth removed by thinning.

5.09 CLEANUP
A. During the course of planting, excess and waste materials shall be continuously and promptly removed daily, lawns kept clear, and all reasonable precautions taken to avoid damage to existing structures, plants and grass. After completion of the work, the entire site shall be cleared of excess soils, waste material, debris and all objects that may hinder maintenance and affect the visual appearance of the site.
The Contractor shall clean all roads and walks of dirt film and soil clods. The Contractor shall also pressure clean and broom sweep all asphalt pavement prior to the final lift of asphalt to be laid.

5.10 DISTURBED AREAS
A. All areas outside of the limits of work that are disturbed by the Contractor's construction activities shall be repaired and replanted to its original condition.

Part 6.00 Guarantees

6.01 GUARANTEED PROVING PERIOD
A. There shall be a guarantee period of 1 year for trees and specimen material and 1 year for shrubs. This guarantee period shall start at the final acceptance date. Contractor shall replace any and all plant material, which die during this guarantee proving period. Replacement of plants necessary during the guarantee period shall be the responsibility of the Contractor, except for possible replacements of plants resulting from removal, vandalism, acts of neglect on the part of others, or acts of God. All replacement material shall have the same guarantee time (1 year from installation of replacement for trees and specimen material and 1 year for shrubs).
B. Planting maintenance shall include all necessary watering, cultivation, weeding, pruning and spraying, wrapping and mulching, straightening of plants which lean or sag and which develop more than a normal amount of settlement such adjustments to include excavating around and leveling or raising the ball when so directed and all other incidental work necessary for proper maintenance as directed by the Owner until substantial completion and written release.
C. Transplanted material (if applicable) shall not be guaranteed, however, good horticultural practices should be used before, during and after the material is transplanted. Good horticultural practices should include but not be limited to, all necessary watering and spraying, wrapping and mulching, fertilizing, moving, maintaining the same orientation and grade level from the original location, and all other incidental work necessary for proper transplanting.

6.02 FINAL INSPECTION AND ACCEPTANCE
A. The Contractor shall notify the Owner in writing when the work has been completed in accordance with this Contract and request an inspection. The Owner will make the inspection of the work and report findings as to acceptability and completeness. Any work remaining to be done shall be subject to reinspection before final acceptance. The Contractor will be notified in writing by the Owner of the final acceptance of the work.

6.03 CONTRACTOR'S RESPONSIBILITY AFTER ACCEPTANCE
A. The Owner may elect to assume maintenance of all work, at the time of acceptance, or may elect to contract for maintenance by others for a specified period. Should maintenance after final acceptance be the responsibility of those other than the Contractor, the Contractor shall monitor all work for which he is responsible by guarantee, to assure that maintenance being performed will not jeopardize the condition and quality of the work and materials guaranteed by the Contractor. Any inadequate or damaging maintenance practices shall be reported immediately in writing to the Owner so that appropriate measures may be taken to correct the condition. Failure to so notify the Owner will invalidate any later claim of negligence or malpractice in maintenance.

6.04 ACCEPTANCE AND REPLACEMENT OF PLANT MATERIAL
A. At the expiration of the proving period, an inspection of the plantings will be made by the Owner. Only those plants that are alive and normally healthy will be accepted. Unaccepted material shall be removed and replaced by the Contractor at his own expense, during the next planting season. Material and method of replacement planting shall be the same as specified for the original planting unless otherwise directed. The Contractor shall continue to make replacements until a plant shows vigorous and healthy growth for a period of 1 year from the date of acceptance by the Owner. All such replacements will be inspected for acceptance at the end of the proving period for the new.

6.05 REQUIRED MAINTENANCE
A. Landscape contractor shall be responsible for the maintenance and upkeep for 90 days past the final inspection. At that point contact the general manager of the store and determine if the landscape contractor will remain on. If yes, contractor will be responsible for the maintenance and warrantee of all landscaping for one full year. If no, the landscape contractor is to walk the site with the general manager, manager, the facilities manager and the new landscaper and they shall agree that all planting is in good shape prior to the new landscaper taking over.

END OF SECTION

FOR INFORMATIONAL PURPOSES ONLY

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THIS PLAN HAS BEEN DIGITALLY SIGNED AND SEALED BY JONATHAN R. CAMPBELL, PLA ON THE DATE ADJACENT TO THE SEAL.

REGISTERED LANDSCAPE ARCHITECT
JONATHAN RICHARD CAMPBELL
LA#667137
STATE OF FLORIDA

Planning and Development
510 N. Baker St.
Mount Dora, FL 32757
352-735-7113
plandev@cityofmountdora.com

DATE: August 17, 2022

TO: Planning and Zoning Commission

FROM: Development Review Committee
Vince Sandersfeld, Planning Director

THROUGH: Michele Janiszewski, AICP, Senior Planner

RE: Future Land Use Map Amendment; Amend the Future Land Use Map on 4.92+/- acres from High Density Residential to Industrial; Located north side of Lincoln Avenue and west of U.S. Highway 441 (site address: 1649 E. Lincoln Avenue); Green Consulting Group, Inc. (Applicant); Sean A. Jones (Owner).
Project No. FLUM22-02.

SUMMARY OF RECOMMENDATION:

Staff recommends approval of the small-scale application to amend the Future Land Use Map on 4.92+/- acres from High Density Residential to Industrial.

REFERENCES/SUPPORT:

Policy 4.g, FLUE, Mount Dora Comprehensive Plan 2045
Chapter 163 Florida Statutes

SITE SUMMARY:

Request Type:	Small-Scale Future Land Use Map Amendment
Owner(s):	Sean A. Jones
Applicant:	Green Consulting Group, Inc., Timothy W. Green
Address:	1649 Lincoln Avenue
General Location:	Located north side of Lincoln Avenue Street and west of U.S. Highway 441
Alternate Key No.:	1447097
JPA:	Yes, City of Mount Dora & Lake County Joint Planning Agreement
Zoning District:	Multi-Family Residential (R-3). Max. Units: 88
Proposed Zoning District:	Planned Unit Development (PUD)
Land Use Category:	High Density Residential (18 du/ac)
Proposed Land Use Category:	Industrial. Floor Area Max. 0.70 (or maximum 150,020 sf)
Overlays:	Northeast CRA
Site Area:	4.92 +/- acres
Existing Use:	Single family residence and detached garage
Proposed Use:	15,000 SF Office space and 30,000 SF of manufacturing space for light industrial uses.

DEVELOPMENT STANDARDS:

Development Standard	RH (Existing)	IND (Proposed)
Maximum Floor Area Ratio (FAR)	Not Specified	Max. 0.70
Density	12 – 18 d.u. / acre	Not Permitted
Max. Impervious Surface Ratio (ISR)	65%	65%
Min. Open Space	Min. 35%	Min. 35%

SURROUNDING PROPERTY TABLE:

Direction	Jurisdiction	Future Land Use	Zoning District(s)	Existing Use(s)	Comments
North	City	Medium Density	R-2	Residential	Mount Dora Heights Subdivision
South	City	Recreation	GB	Recreation	Lincoln Ave Recreation Center
East	City	Commercial & Industrial	C-3 & WP-1	Light Industrial	Hallmark Nameplate
West	City	High Density	R-3	Residential	City Walk Villas

ANALYSIS (LAND USE REPORT):

The applicant is requesting an amendment to the City's Future Land Use Map. The proposed amendment will change approximately 4.92 acres High Density Residential to Industrial. The proposal is for future development of the Vedder Holsters office, manufacturing, and warehouse. The proposed land use category for Industrial is compatible with the surrounding uses. This site is located east of the Hallmark Nameplate manufacturing facility which provides graphic overlays printed on circuit boards and other services. The Hallmark Nameplate is a high-tech industry. The proposed site is less than 700 feet west of U.S. Highway 441 (Principal Arterial roadway). Lincoln Avenue is designated a Local Urban roadway on the adopted Functional Classification Map (*Transportations Mobility Element of the Mount Dora Comprehensive Plan 2045*). Lincoln Avenue is part of Route 3 Circulator of the LakeXpress transit service. The location of the proposed Industrial land use will provide workforce employment opportunities.

The proposal for the Vedder Holsters was presented to the Northeast CRA Advisory Committee at the regularly scheduled meeting held on August 10, 2022 (MLK Center). The project details and site configuration were presented as an informational and advisory item.

The uses and site standards are being processed in a companion Final PUD Master Plan. The PUD Master Plan will provide specific uses, ingress/egress, building placement/orientation, building size limitations, and site buffering restrictions. All activates will be indoors with loading/unloading bays positions away from nearby residential.

Future Land Use Industrial Policy Definitions: *Industrial: This category is intended for light manufacturing, warehousing and storage associated with a business or industrial use, wholesaling, distribution, office and other related activities. Educational facilities shall not be allowed in this district. Industrial parks with good internal circulation and attractive appearance from adjacent roads are encouraged. Maximum impervious surface ratio is 0.65. Maximum FAR is 0.70.*

The property can be developed with up to 88 dwelling units. The Applicant is proposing a PUD with 30,000 SF of Light Manufacturing and 15,000 of Office Space. Based on this information, the proposed uses should result in a net decrease in average daily trips (summary table below).

Existing Conditions				
Land Use	Code	Units	Trip Generation	ADT
Multi Family	221	88	4.64	408
			Total ADT with Existing	408
Proposed PUD				
Land Use	Code	Units	Trip Generation	ADT
Light Manufacturing	110	30 KSF	3.78(KSF)	113
General Office	710	15 KSF	11.01(KSF)	165
			Total ADT with Proposed Development Plan	278
KSF = Kilo Square Feet *ADT = Average Daily Trips*				

PUBLIC IMPACTS AND CAPACITY ANALYSIS:

Housing: The proposed Future Land Use change to Industrial with a PUD zoning will slightly decrease the amount of land available for residential uses. There are no significate housing and population impacts with the proposed future land use map amendment. The proposed is for non-residential development.

Project Residential Housing/Population Calculations:
18 dwelling units x 4.92 acres = 88 units
Population: 88 units x 2.37 persons per household = 209 persons

Traffic: Based on the existing entitlements, the proposed uses will result in a decrease in the average daily trips (ADT). The surrounding roadway network should have sufficient capacity to accommodate background growth and project traffic in the future condition. Further review and evaluation will be completed upon the submittal of a development application.

Wastewater: Infrastructure Element Policy 1.d: Average Daily Flow: Flow requirements from commercial, industrial, institutional, or other special development areas shall be established from existing records or by estimated projections using the best available data; however, in no case shall a rate of less than 2,000 gallons per acre per day be used, unless specifically approved otherwise.

Potable Water: The minimum design for water distribution systems shall provide for at least 100 percent of the combined maximum day-demand rate and required fire flow for said rate, with special provisions for peak flows in excess thereof. The allowable minimum service pressure under said

	design condition shall not be less than 20 pounds per square inch. Normal flow demands for design shall be calculated on the basis of full ultimate development as known, or projected. Fire flows in commercial, institutional, industrial areas and apartment or multiunit complexes, shall provide a minimum of 1,500 gpm at a 20 psi residual pressure. The proposed change and will not negatively impact capacity.
Reclaim Water:	Conversation Element requires participation in the City reuse for irrigation purposes. Goal 2, Policy 1.c.(1) of the Infrastructure Element requires water conservation practices by utilizing the City reclaimed system available at this location.
Solid Waste:	City's standard is 7.1 pounds per capita per day (LOS disposal).
Stormwater:	Protect water resources in Mount Dora. Control of erosion, sedimentation and flooding are mandatory. Limit post-improvement stormwater discharge to pre-improvement rates based on the 25-year, 96-hour storm. Building first floor elevations must be flood-free for the 100-year, 96-hour storm. Comply with Land Development Code Chapter 6.2 drainage standards.
Habitat:	Based on aerial photos the site appear to be heavily wooded; a tree removal and replacement plan along with a mitigation plan will be required at time of site plan approval.
Environmental:	The survey provided did not provide any wetland delineation and Lake County GIS shows no indication of wetland or flood zone on the property.

Notifications:
JPA Notice to Lake County: July 6, 2022
Legal Notice PZC and Notice to City Council: August 5, 2022
Notice to Surrounding Owners: August 5, 2022
Non-Legal with Map Ad City Council: September 9, 2022
Ordinance Enactment Legal Ad: September 9, 2022

Public Hearing Schedule:
DRC: July 27, 2022
PZC: August 17, 2022
City Council Reading and Adoption: September 20, 2022

ATTACHMENTS:
Vicinity Map
Future Land Use Map Amendment
FLU Composite Map
Zoning Map
Application

Vicinity Map

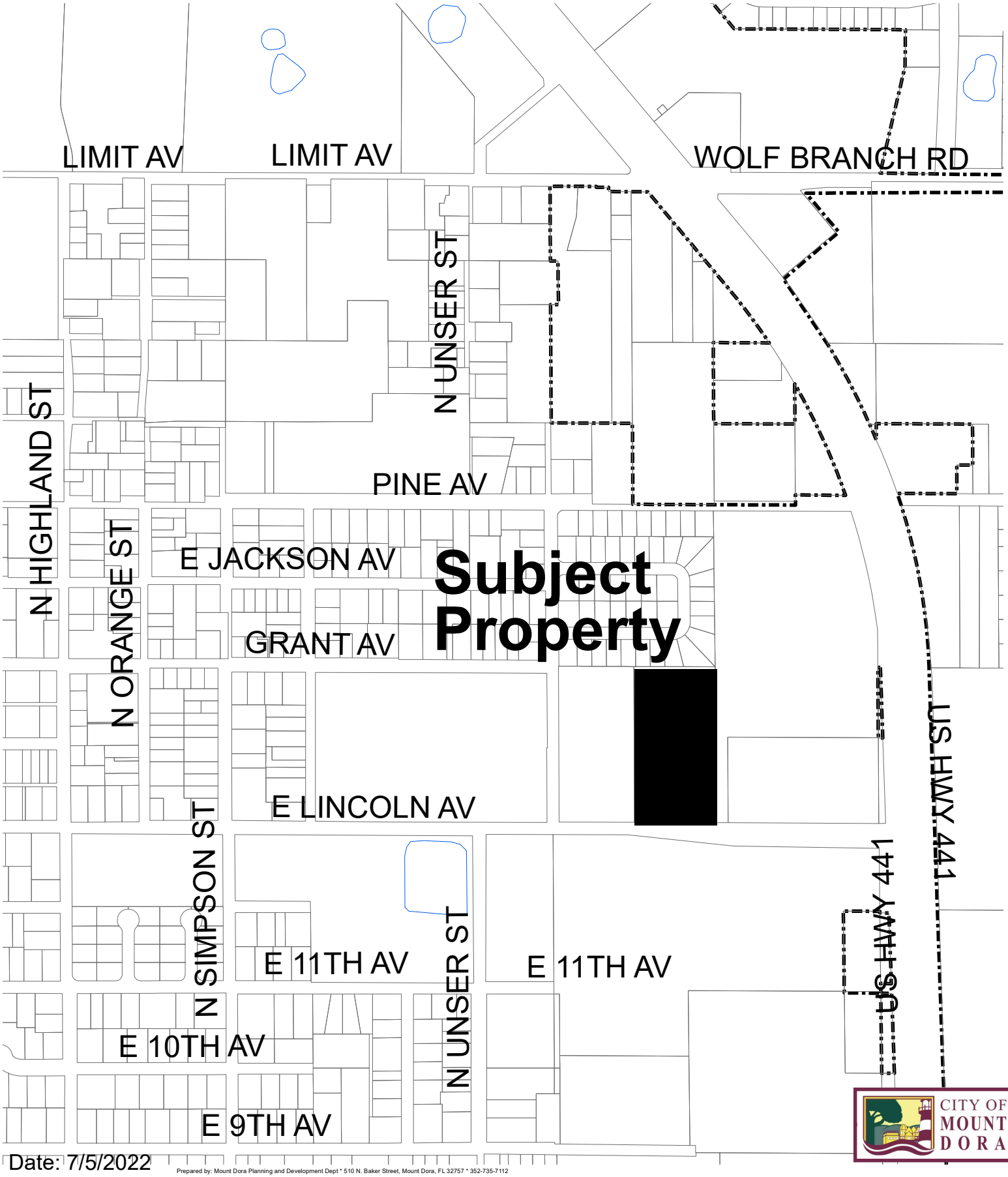
Legend

City Limits

Subject Property

N

N.T.S.



Date: 7/5/2022

Prepared by: Mount Dora Planning and Development Dept * 510 N. Baker Street, Mount Dora, FL 32757 * 352-735-7112

CITY OF MOUNT DORA

City of Mount Dora
Future Land Use Map

Planning Time Frame: 2045

FLUM Amendment - Owner Sean A. Jones
Developer Vedder Holsters

Exhibit "A"
Ordinance No. 2022-13

CITY OF MOUNT DORA

N

Map II-2a

Small-Scale FLUM Amendment

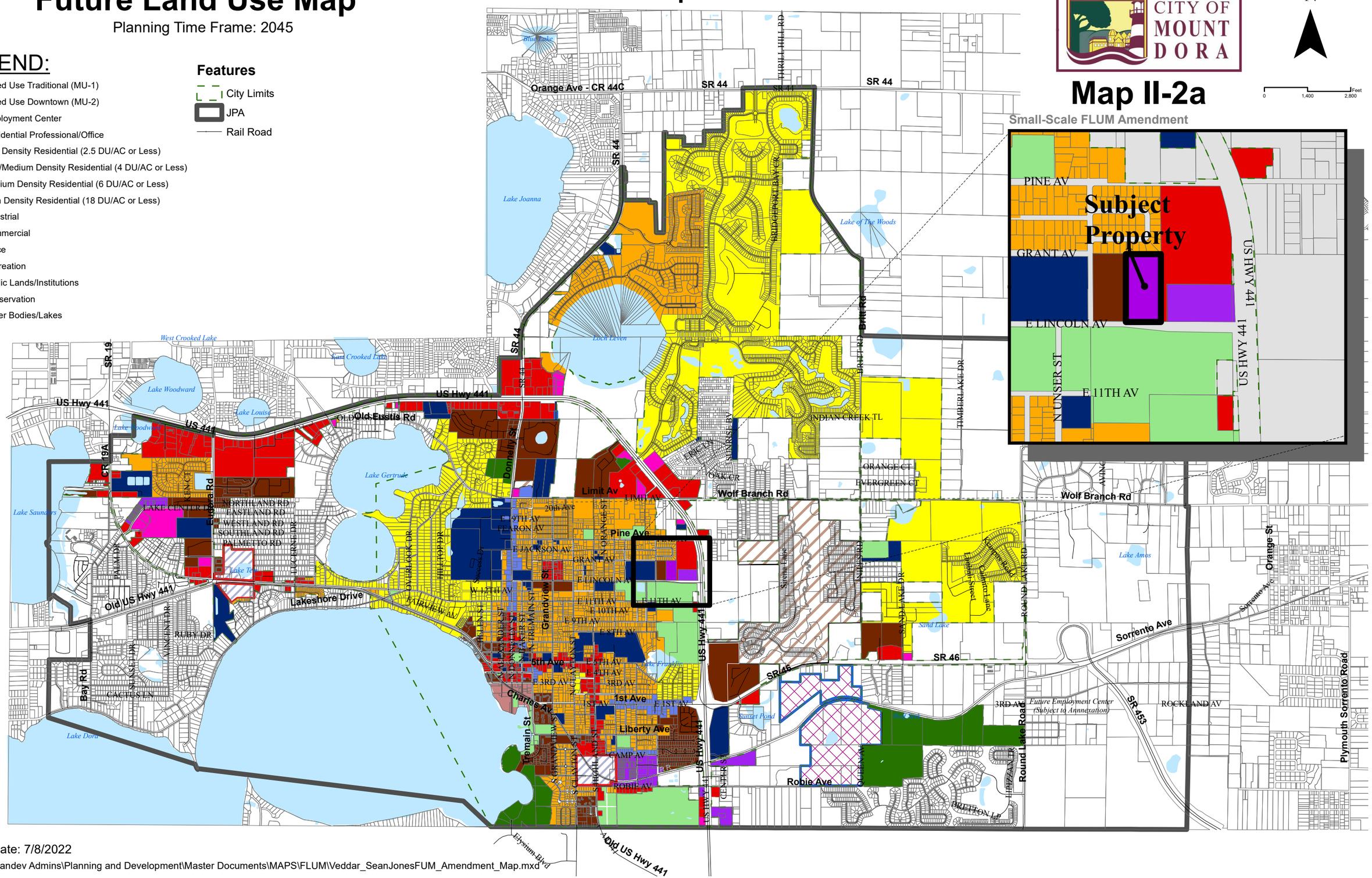
Feet
0 1,400 2,800

LEGEND:

- Mixed Use Traditional (MU-1)
- Mixed Use Downtown (MU-2)
- Employment Center
- Residential Professional/Office
- Low Density Residential (2.5 DU/AC or Less)
- Low/Medium Density Residential (4 DU/AC or Less)
- Medium Density Residential (6 DU/AC or Less)
- High Density Residential (18 DU/AC or Less)
- Industrial
- Commercial
- Office
- Recreation
- Public Lands/Institutions
- Conservation
- Water Bodies/Lakes

Features

- City Limits
- JPA
- Rail Road



Prepared by: Mount Dora Planning and Development Dept.
510 North Baker Street
Mount Dora, Fl 32727
352-735-7112

Print Date: 7/8/2022

Path: U:\Plandev Admins\Planning and Development\Master Documents\MAPS\FLUM\Veddar_SeanJonesFUM_Amendment_Map.mxd

Sean A. Jones
Future Land Use Area Map
(Composite City & Lake County)

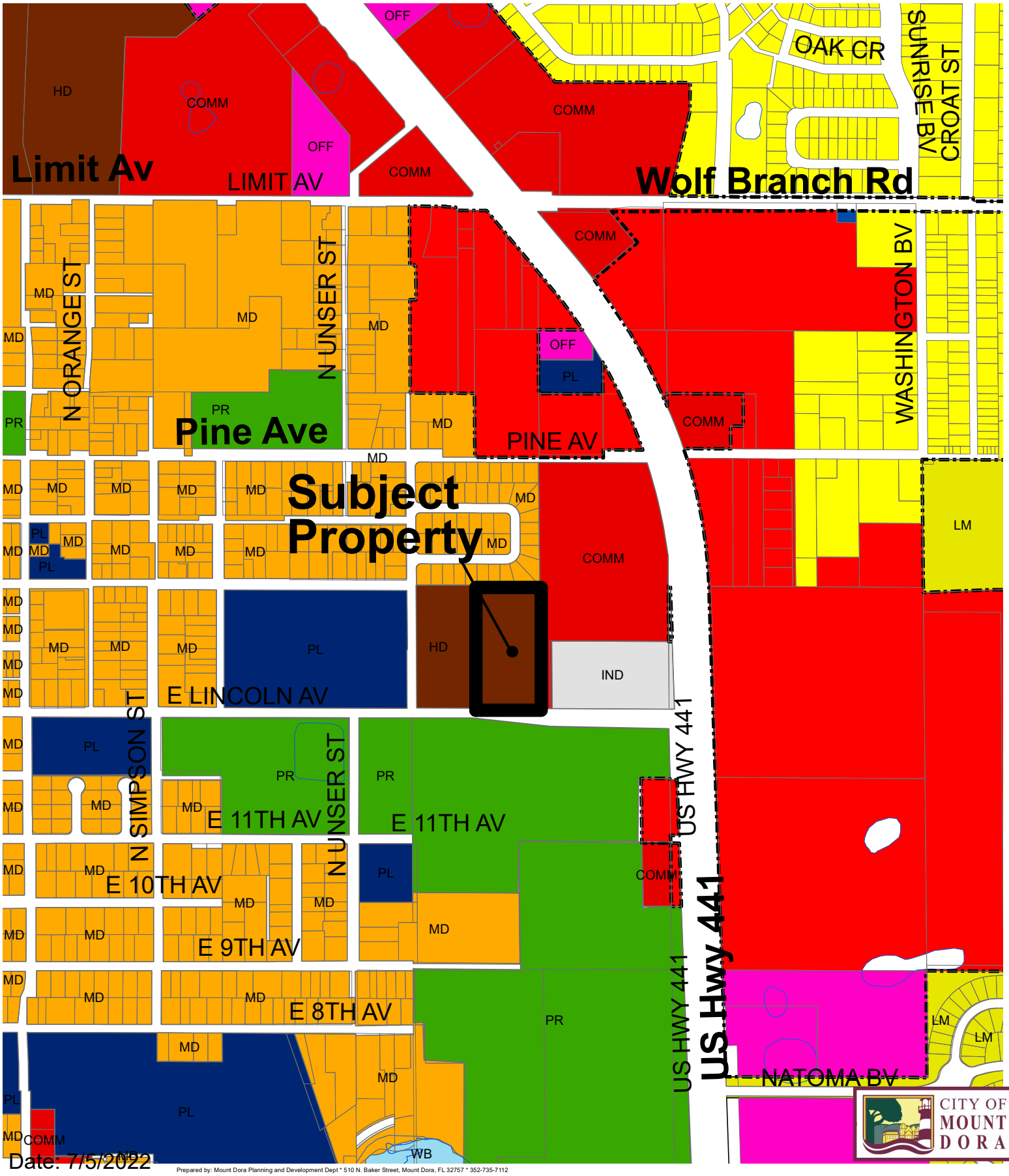
Legend

City Limits

Subject Property

N

N.T.S.



Date: 7/5/2022

Prepared by: Mount Dora Planning and Development Dept * 510 N. Baker Street, Mount Dora, FL 32757 * 352-735-7112

CITY OF MOUNT DORA

CITY OF MOUNT DORA

City of Mount Dora
Planning and Development
510 N. Baker St.
Mount Dora, FL 32757
352-735-7112
E-mail: plandev@cityofmountdora.com

FLUM22-02SM

FUTURE LAND USE MAP AMENDMENT SMALL-SCALE (10 ACRES OR LESS) APPLICATION

Date : 07/05/2022 Project Name: Vedder Holsters

1. Applicant's Name: Timothy W Green
   Company's Name: Green Consulting Group, Inc.
   Address: 4070 United Avenue
   City, State & Zip: Mount Dora, FL 32757
   Phone: (352) 357-9241 E-mail: tgreen@greenconsultinggroup.com

2. Owner's Name: Sean A Jones
   Company's Name: N/A
   Address: 1649 Lincoln Avenue
   City, State & Zip: Mount Dora, Florida 32757
   Phone: _____ E-mail: _____

3. The property generally located and list adjacent streets: East of Wardell Street, North of Lincoln Avenue, West of US Hwy 441

4. The address(s) of the property: 1649 Lincoln Avenue, Mount Dora, FL 32757

5. Size of property in Acres: 4.92 Square Feet: 213,879.60

6. Current Zoning District: R-3 (Multi-Family Residential)

7. Requested Zoning District: PUD
   (Separate application required for change in zoning district)

8. Future Land Use Category : High Density Residential

9. Requested Future Land Use Category: Industrial

10. Present use and structures on the property (list number of residential dwelling units):
Single Family Residential, 1 dwelling

11. Building Size Existing: 1752 sq. ft. Proposed: 45,000 sq. ft.

12. Surrounding Future Land Use, Zoning, and Existing Use by City/County (fill-in table):

Direction	City/County	FLU	Zoning	Existing Use(s)
North	City	Medium Density	R-2	Single-Family Residential
South	City	Recreation	GB	Park
East	City	Commerical	C-3	Vacant
West	City	High Density	R-3	High Density Residential

(districts/categories may be abbreviated)

13. Present use and structures on the property (list number of residential dwelling units):
Single Family Residential, 1 dwelling

14. Proposed use of property: Industrial

15. List the specific Comprehensive Plan Policy that allows proposed use:
Future Land Use Objective (4) (g) (7)

16. State the reason for this request:
To align the Land Use with the proposed use.

17. Describe changed condition justifying the amendment:
Need for Employment in the NE CRA and to allow for the retention and growth of a local business.

18. Describe whether and how the proposed amendment is consistent with the City of Mount Dora's Comprehensive Plan:
The amendment will allow for Light Manufacturing with the PUD.

19. Describe the extent to which the proposed amendment is compatible with existing land uses:
The site is next to Commercial with Industrial to the east.

20. Describe the extent to which the proposed amendment affects the capacities of public facilities and services: _____

The services are available to the site. An improvement will be part of any site plan approvals.

21. Describe the extent of environmental impacts on the resources of proposed amendment:

The site is not Native habitat and contains a signle family residence. Much of the wooded area on the north will be preserved.

22. Describe the extent to which the proposed amendment will result in an orderly and logical development pattern: _____

The site is adjacent to Commercial Land and Industrial is to the east.

CERTIFICATION AND SIGNATURE

AFFIDAVIT

I, Timothy W Green, being first duly sworn, depose and say that I apply for the request contained herein, and that all answers, information, sketches, data and other supplementary matter attached to or included herewith as part of this application, are accurate and true to the best on my knowledge and belief.

Signature of Applicant

Timothy W Green
Print or Type Name

STATE OF FLORIDA
COUNTY OF LAKE
CITY OF MOUNT DORA

The foregoing instrument was acknowledged before me this 5th day of July 2022 by Timothy W Green who is personally known to me or who has produced _____ as identification and who did ____ or did not ✓ take an oath.

SEAL:

AUTUMN L. MCKENZIE VINCENT
MY COMMISSION # GG 262664
EXPIRES: September 26, 2022
Bonded Thru Notary Public Underwriters

Notary Public

Autumn McKenzie Vincent
Print or Type Name

AGENT LETTER

TO: City of Mount Dora Planning & Development Department

This will serve as written authorization for Timothy W Green & Green Consulting Group, Inc. to act as agent for the purpose of submitting and processing of Rezoning and Small Scale Comprehensive Plan Amendment Applications for 1649 Lincoln Avenue in Mount Dora, Florida.

Signed:

Sean A. Jones
Sean A Jones

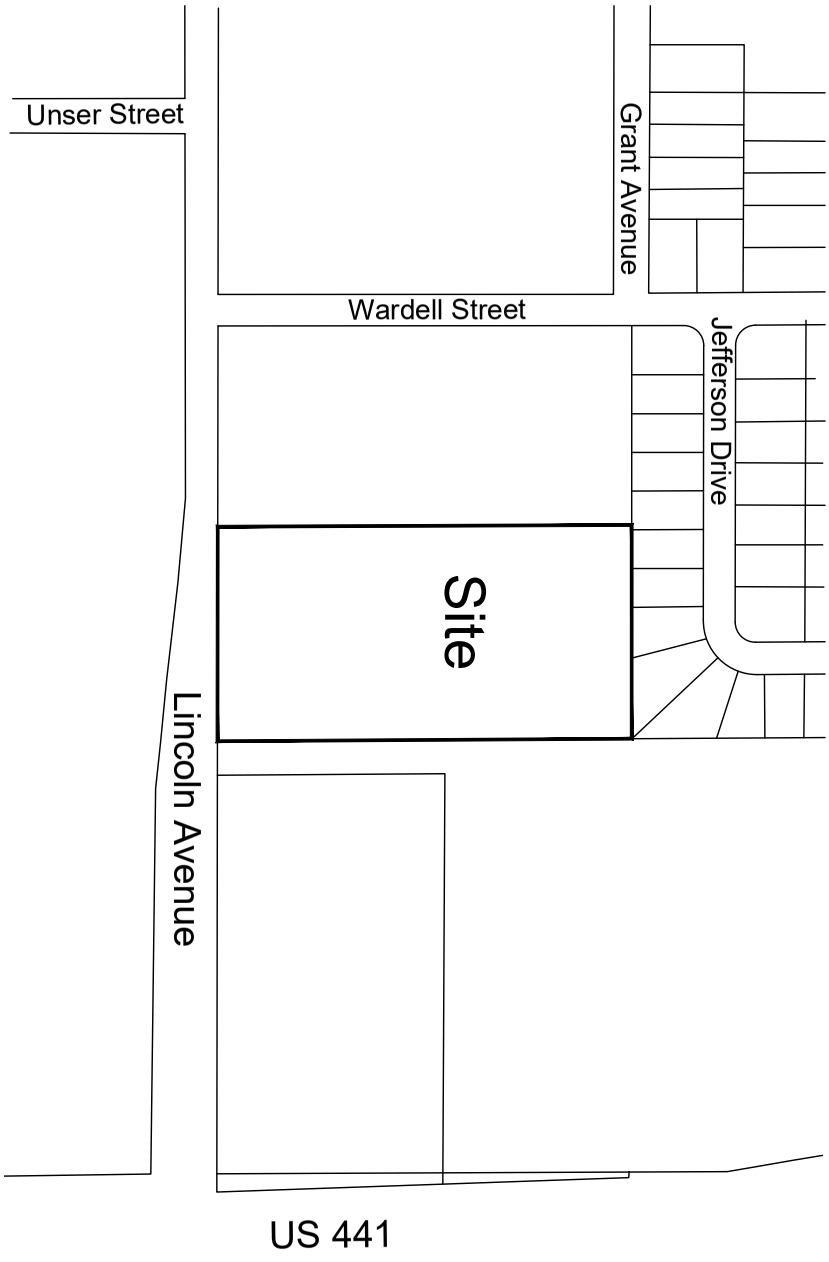
Date: June 28, 2022

NOTARY PUBLIC
STATE OF MICHIGAN

Before me, the undersigned authority, personally appeared Sean A Jones who acknowledges that he is appointing Timothy W Green to act as his agent for the purpose of submitting for Rezoning and Small Scale Comprehensive Plan Amendment Applications for the above referenced property and that he did X or did not ____ take an oath. Sean A Jones is known to me ____ or produced identification (type) Michigan drivers licnse on this 28 day of June, 2022.

Rachel A. Doxsie
Notary Public – State of Michigan

RACHEL A. DOXSIE
Notary Public, State of Michigan
County of Macomb
My Commission Expires Aug. 09, 2025
Acting in the County of Macomb



Location Map

Vedder Holsters

Mount Dora, Florida

Drawing Number: 1629 Map
Originated From: GIS
Date: July 5, 2022
Scale: NTS
Drawn By: TWG
Layout: 24"x36"

NORTH

Green Consulting Group, Inc.
Landscape Architecture ■ Land Planning ■ Development Assistance
4070 United Avenue, Mount Dora, Florida 32757
352-357-9241 ■ Fax 352-357-9278 ■ LC26000288

Zoning and FLU Map

Vedder Holsters

Mount Dora, Florida

Drawing Number: 1629.mxp
Originated From: GIS
Date: July 5, 2022
Scale: 1" = 50'
Drawn By: TWG
Layout: 24"x36"

PROJECT

Green Consulting Group, Inc.
Landscape Architecture ■ Land Planning ■ Development Assistance
4070 United Avenue, Mount Dora, Florida 32757
352-357-9241 ■ Fax 352-357-9278 ■ LC26000288

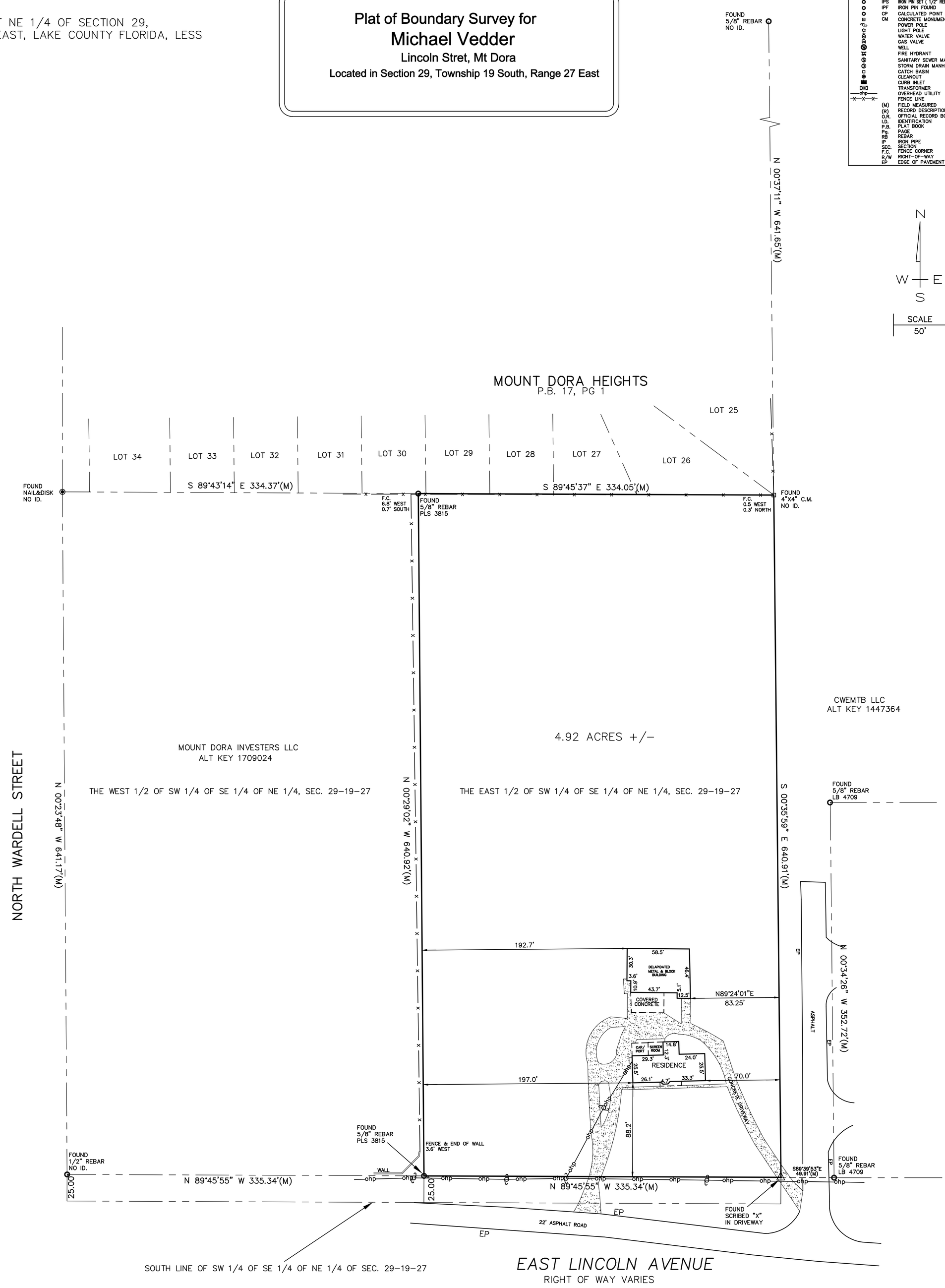
DESCRIPTION

E 1/2 OF SW 1/4 OF SE 1/4 OF NE 1/4 OF SECTION 29, TOWNSHIP 19 SOUTH, RANGE 27 EAST, LAKE COUNTY FLORIDA, LESS THE SOUTH 25 FEET THEREOF.

Plat of Boundary Survey for
Michael Vedder
Lincoln Stret, Mt Dora
Located in Section 29, Township 19 South, Range 27 East

LEGEND:

○	IPS	IRON PIN SET (1/2" REBAR W/ CAP)
○	IPF	IRON PIN FOUND
○	CP	CALCULATED POINT ONLY
▣	CM	CONCRETE MONUMENT
		POWER POLE
		LIGHT POLE
		WATER VALVE
		GAS VALVE
		WELL
		FIRE HYDRANT
		SANITARY SEWER MANHOLE
		STORM DRAIN MANHOLE
		CATCH BASIN
		CLEANOUT
		CURB INLET
		TRANSFORMER
ohp		OVERHEAD UTILITY
-x-x-x-		FENCE LINE
	(M)	FIELD MEASURED
	(R)	RECORD DESCRIPTION OR PLAT
	O.R.	OFFICIAL RECORD BOOK
	I.D.	IDENTIFICATION
	P.B.	PLAT BOOK
	Pg.	PAGE
	RB	REBAR
	IP	IRON PIPE
	SEC.	SECTION
	F.C.	FENCE CORNER
	R/W	RIGHT-OF-WAY
	EP	EDGE OF PAVEMENT



SURVEYOR'S NOTES

1) Bearings based on Florida grid East zone (Lengemann Network).

2) Subject to easements and restrictions of Record.

3) All of the above captioned property lies within F.I.R.M. Zone "X" according to F.I.R.M. panel No. 12069C 0367 E, dated December 18, 2012.

4) This Survey is based on the Description provided, Plat information, Found Monumentation and other data acquired by this firm.

5) Foundations, Underground Structures, and Underground Improvements, if any, not located by this firm.

6) Fences were located ONLY where dimensioned and may not run straight; ownership of fences, if any, unknown. °00'00" EW along the **** line of Lot.

CERTIFIED TO:

Michael Vedder
Treasure coast Title & Settlement of Vero LLC
Westcor Land Title Insurance Company

I hereby certify that this survey was made under my responsible charge and meets the minimum technical standards as set forth by the Board of Professional Land Surveyors in Chapter 61G17-6 Florida Administrative Code. Pursuant to Section 472.027 Florida Statutes.

Fulton V. Clinkscales, Jr., Surveyor #4986

Not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.

FULTON V. CLINKSCALES, JR. CERTIFICATE No. 4986 STATE OF FLORIDA REGISTERED LAND SURVEYOR

No.	REVISIONS	Date
1	xxxxx xxxx	xx/xx/xx

FREELAND - CLINKSCALES + ASSOCIATES, INC. of NC
*Engineers * Land Surveyors*
201 2nd AVE. EAST
HENDERSONVILLE, N.C. 28792
1220 HUFFSTETLER DRIVE, UNIT 201
EUSTIS, FL. 32726
(352) 609-2830
SURVEYQOUTEFCA@GMAIL.COM
LB 7064

REF. PLAT BOOK	xx/xx
REF. O.R. BOOK	4835/2359
ALT. KEY#	1447097
PARTY CHIEF	SCL
DRAWN	SCL
DATE	JUNE 29, 2022
DWG.NO.	F42116

INSTRUMENT#: 2016096804 OR BK 4835 PG 2359 PAGES: 1 9/16/2016 1:48:12 PM
NEIL KELLY, LAKE COUNTY CLERK OF THE CIRCUIT COURT
REC FEES: $10.00 DEED DOC:$0.70

Return to:
Sean A. Jones
620 Charlesina Dr.
Rochester, MI 48306

RETURN

Prepaired by:
Sean A. Jones
620 Charlesina Dr.
Rocester, MI 48306
Parcel Appraisal Parcel Identification numbers: 29-19-0001000030 401

This Quit Claim Deed, *Executed the* 7th *day of* July 2016 *Date*, *by* Robert Jones, *first party, to* Sean A. Jones, a married man *whose post office address is* 620 Charlesina Dr. Rochester, MI 48306, *second party.*

(Wherever used herein the terms "first party" and "second party" include all the parties to this instrument and the heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporations, wherever the context so admits or requires.)

Witnesseth, *That the first party, for and in consideration of the sum of* $ 10.00, *in hand paid by the said second party, the receipt whereof is hereby acknowledged, does hereby remise, release, and quit claim unto the second party forever, all the right, title, interest, claim and demand which the said first party has in and to the following described lot, piece or parcel of land, situate, lying and being in the County of* LAKE, *State of* FLORIDA, *to-wit:*

E 1/2 of SW 1/4 of SE 1/4 of NE 1/4, Sec. 29, Tp. 19 S, R 29 E. Less the South 25 feet.

To Have and to Hold *The same together with all and singular the appurtenances thereunto belonging or in anywise appertaining, and all the estate, right, title, interest, lien, equity and claim whatsoever of the said first party, either in law or equity to the only proper use, benefit and behoof of the said second party forever.*

In Witness Whereof, *the said first party has signed and sealed these presents the day and year first above written.*

Signed, sealed and delivered in the presence of:

Witness Signature (as to first Grantor): Felicia D. Nix
Printed Name: Felicia D. Nix
Witness Signature (as to first Grantor): Charles R. Nix
Printed Name: Charles R. Nix

Grantor Signature: Robert Jones L.S.
Printed Name: Robert Jones
Post Office Address: 1649 Lincoln Ave. Mount Dora, Florida 32757

Witness Signature (as to Co-Grantor, if any)
Printed Name
Witness Signature (as to Co-Grantor, if any)
Printed Name

Co-Grantor Signature, (if any) L.S.
Printed Name
Post Office Address

STATE OF Florida)
COUNTY OF Orange)

I hereby Certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared Felicia D. Nix; Charles R. Nix; Robert Jones known to me to be the person described in and who executed the foregoing instrument, who acknowledged before me that executed the same, and an oath was not taken. (Check one:) ☐ Said person(s) is/are personally known to me. ☒ Said person(s) provided the following type of identification: FL DL (last 4: 0940)

NOTARY RUBBER STAMP SEAL

LINDA R. HALL
Notary Public - State of Florida
My Comm. Expires Mar 12, 2018
Commission # FF 100667
Bonded Through National Notary Assn.

Witness my hand and official seal in the County and State last aforesaid this 7th day of July 2016 *Date*

Notary Signature: Linda R. Hall
Printed Name: Linda R. Hall

Form Designed by Landmark Title Forms & Printing Co., Inc., 1994

Property Record Card

General Information

Name:	JONES SEAN A AND LINDA SCOTT ESTATE	**Alternate Key:**	1447097
Mailing Address:	1649 LINCOLN AVE MOUNT DORA, FL 32757 *Update Mailing Address*	**Parcel Number:**	29-19-27-0001-000-03401
		Millage Group and City:	0MD2 Mount Dora
		2021 Total Certified Millage Rate:	18.7017
		Trash/Recycling/Water/Info:	*My Public Services Map*
Property Location:	1649 LINCOLN AVE MOUNT DORA FL, 32757 *Update Property Location*	**Property Name:**	-- *Submit Property Name*
		School Information:	*School Locator & Bus Stop Map* *School Boundary Maps*
Property Description:	E 1/2 OF SW 1/4 OF SE 1/4 OF NE 1/4--LESS S 25 FT-- ORB 644 PG 13 ORB 2449 PG 1313 ORB 2483 PG 2184 ORB 4835 PG 2359		

NOTE: This property description is a condensed/abbreviated version of the original description as recorded on deeds or other legal instruments in the public records of the Lake County Clerk of Court. It may not include the Public Land Survey System's Section, Township, Range information or the county in which the property is located. It is intended to represent the land boundary only and does not include easements or other interests of record. This description should not be used for purposes of conveying property title. The Property Appraiser assumes no responsibility for the consequences of inappropriate uses or interpretations of the property description.

Land Data

Line	Land Use	Frontage	Depth	Notes	No. Units	Type	Class Value	Land Value
1	SINGLE FAMILY (0100)	0	0		4.630	Acre	$0.00	$57,875.00

Click here for Zoning Info **FEMA Flood Map**

Residential Building(s)

Building 1

Residential	Building Value: $143,967.00

Summary

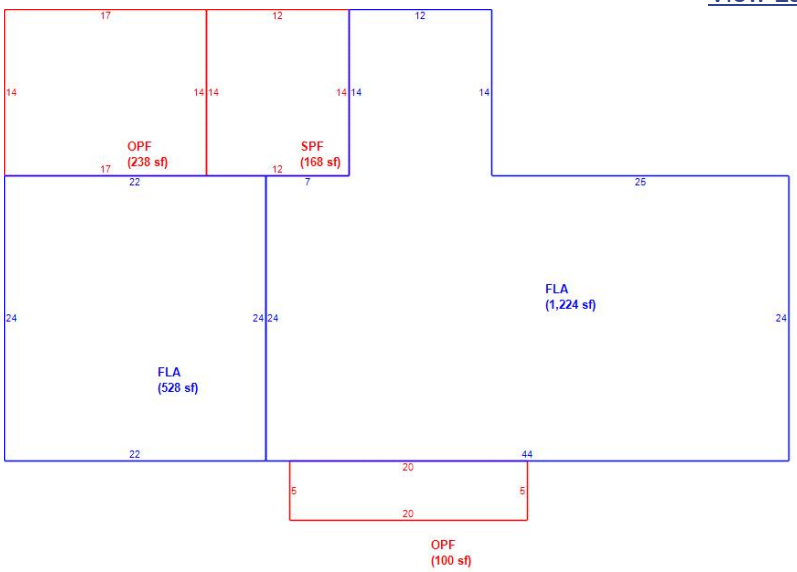
Year Built: 1979	Total Living Area: 1752	Central A/C: Yes	Attached Garage: No
Bedrooms: 3	Full Bathrooms: 2	Half Bathrooms: 0	Fireplaces: 1

Incorrect Bedroom, Bath, or other information?

Section(s)

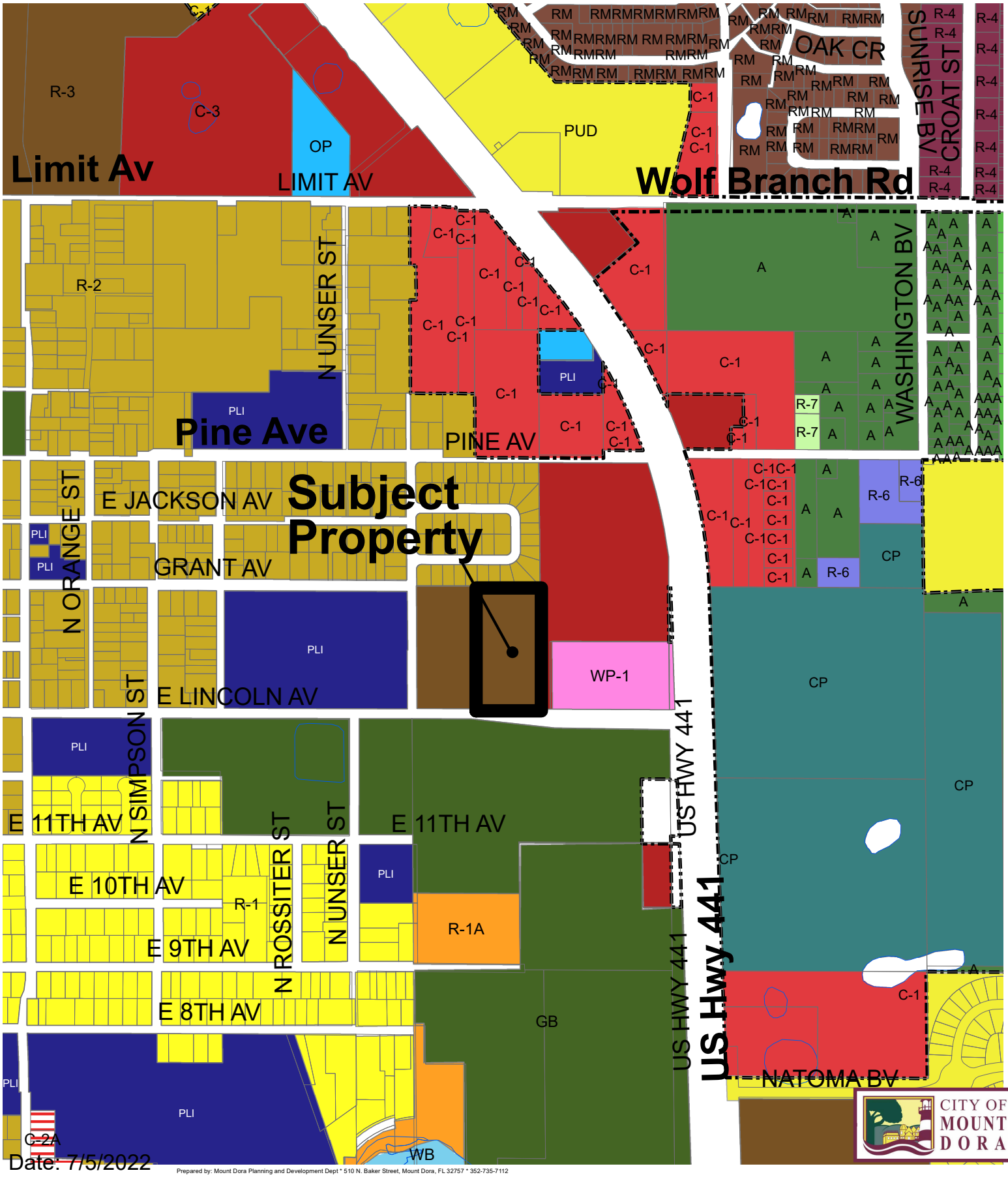
Section Type	Ext. Wall Type	No. Stories	Floor Area
FINISHED LIVING AREA (FLA)	Stucco/Brick (03)	1.00	1752
OPEN PORCH FINISHED (OPF)		1.00	338
SCREEN PORCH FINISHED (SPF)		1.00	168

View Larger / Print / Save



NOTE: Information on this Property Record Card is compiled and used by the Lake County Property Appraiser for the sole purpose of ad valorem property tax assessment administration in accordance with the Florida Constitution, Statutes, and Administrative Code. The Lake County Property Appraiser makes no representations or warranties regarding the completeness and accuracy of the data herein, its use or interpretation, the fee or beneficial/equitable title ownership or encumbrances of the property, and assumes no liability associated with its use or misuse. See the posted Site Notice.

Copyright © 2014 Lake County Property Appraiser. All rights reserved.
Property data last updated on March 21, 2022.
Site Notice


Legend
City Limits
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Sean A. Jones
Zoning Area Map
(Composite City & Lake County)
N
N.T.S.
Limit Av
LIMIT AV
Wolf Branch Rd
OAK CR
SUNRISE BV
CROAT ST
WASHINGTON BV
Pine Ave
PINE AV
N UNSER ST
N ORANGE ST
E JACKSON AV
GRANT AV
Subject Property
E LINCOLN AV
N SIMPSON ST
E 11TH AV
E 10TH AV
E 9TH AV
E 8TH AV
N ROSSITER ST
US HWY 441
US Hwy 441
NATOMA BV
R-1
R-1A
R-2
R-3
R-4
R-6
R-7
C-1
C-2A
C-3
CP
GB
IC-1
OP
PLI
PUD
RM
WB
WP-1
A
Date: 7/5/2022
Prepared by: Mount Dora Planning and Development Dept * 510 N. Baker Street, Mount Dora, FL 32757 * 352-735-7112
CITY OF MOUNT DORA

Planning and Development
510 N. Baker St.
Mount Dora, FL 32757
352-735-7113
plandev@cityofmountdora.com

DATE: August 17, 2022

TO: Planning and Zoning Commission

FROM: Development Review Committee
Vince Sandersfeld, Planning Director

THROUGH: Michele Janiszewski, AICP, Senior Planner

RE: Request for Change in Zoning for Final PUD Master Plan Vedder Holsters; 4.92+/- acres from R-3 to Planned Unit Development (PUD); Located north side of Lincoln Avenue and west of U.S. Highway 441 (site address: 1649 E. Lincoln Avenue); Green Consulting Group, Inc. (Applicant); Sean A. Jones (Owner). Project No. PUD22-02

SUMMARY OF RECOMMENDATION:

Staff recommends approval of the above-referenced request Final PUD for Vedder Holsters and forward same for consideration by the City Council.

REFERENCES/SUPPORT:

LDR Section 3.4.5
FLUM Ordinance No. 2022-13 (in process)

SITE SUMMARY:

Owners	Sean A. Jones
Applicant	Green Consulting Group, Inc., Timothy W. Green
Address	1649 Lincoln Avenue
General Location:	Located north of Lincoln Avenue and west of U.S. Highway 441 (and east of Wardell Street)
Alternate Key Nos.	1447097
Zoning District:	Multi-Family Residential (R-3)
Proposed Zoning District:	Planned Unit Development (PUD)
Land Use Category:	High Density Residential (R-3)
Proposed Land Use Category:	Industrial
Overlays:	Northeast CRA
Site Area:	4.92+/- acres
Existing Use:	Single family residence and detached garage
Proposed Use:	15,000 SF Office space and 30,000 SF for manufacturing/ warehousing of light industrial uses.

DEVELOPMENT STANDARDS:

Development Standard	R-3 (Existing)	PUD (Proposed)
Maximum Floor Area Ratio (FAR)	Not Specified	Max. 0.35
Density	12-18 d.u./acre	Not Applicable
Max. Building Height	35’	35’
Max. Impervious Surface Ratio (ISR)	65%	65%
Min. Open Space	35%	35%
Min. Building Setbacks	N/A	Front: 25 ft Side (East): 25 ft Side (West): 50 ft Rear: 50 ft

SURROUNDING PROPERTY TABLE:

Direction	Jurisdiction	Future Land Use	Zoning District(s)	Existing Use(s)	Comments
North	City	Medium Density	R-2	Residential	Mount Dora Heights Subdivision
South	City	Recreation	GB	Recreation	Lincoln Ave Recreation Center
East	City	Commercial & Industrial	C-3 & WP-1	Light Industrial	Hallmark Nameplate
West	City	High Density	R-3	Residential	City Walk Villas

ANALYSIS:

The subject property is 4.92 acres in size and developed with a single-family dwelling unit with a detached garage. The Applicant is requesting to rezone the property to Planned Unit Development or PUD to allow the property to be developed with a 15,000 square foot office and 30,000 square feet for warehousing and light industrial uses.

The property is currently zoned R-3 and is part of the High Density Residential land use category. Neither the zoning district nor the land use category allow office and light industrial uses. As such, the Applicant simultaneously submitted applications to rezone the property to PUD and amend the future land use map for the subject property from High Density Residential to Industrial. Both applications will be presented to City Council for consideration at the same meeting. If both applications are approved, the applicant may proceed with submitting a site plan application for review and approval by the Development Review Staff and the Planning and Zoning Commission.

The PUD master plan proposed a two-phase development with parking, landscaping buffers, and water retention area on the northern portion on the property. The first phase proposed 15,000 SF of office space and 15,000 SF for manufacturing/warehousing with 101 parking spaces. The second phase proposed an additional 15,000 SF for manufacturing/warehousing with an additional 20 parking spaces.

The proposed development will be subject to LDC Section 6.13 entitled 'Commercial Architectural and Site Design Requirements. The buffering treatments will include a 6 feet high wall with landscaping along the northern property line (adjacent to single-family uses) and constructed during Phase 2. The other property lines include standard landscaping buffering treatments (see buffer table on the Conceptual Landscape Plan Sheet of the Final PUD Master Plan).

STANDARDS FOR REVIEW:

Pursuant to LDC Section 3.3.4, the City shall consider the following criteria in reviewing applications for a rezoning:

1. The need and justification for the change:
   The applicant is seeking to rezone the property to Planned Unit Development to allow the property to be developed with Light Industrial uses. The Applicant has submitted an application to amend the Future Land Use Map from High Density Residential to Industrial on the subject property. The property's current zoning district is R-3 which does not allow the property to be developed with light industrial nor warehousing uses. Rezoning the subject property will make it consistent with the proposed future land use category and proposed use.

   The effect of the change, if any, on the particular property and on surrounding property:
   The subject property is surrounded by multiple uses including high density multi-family dwelling units; low density single-family detached dwellings; Public Park; and a light manufacturing business (Hallmark Nameplate Inc.). The proposed use is consistent with the existing business the east and the multi-family residential development will serve as a buffer between the Mount Dora Middle School and abutting residential uses. The northern portion of the subject property is heavily wooded and will be developed as a stormwater pond to serve as an additional buffer between the proposed use and the existing single-family dwelling unit subdivision.

2. The amount of undeveloped land having the same classifications as that requested in the general area and throughout the city:
   The proposed change is allow the subject property to be developed with light manufacturing uses. Light Manufacturing is only permitted within the Workplace zoning districts (WP-1 and WP-2). In lieu of seeking a Workplace zoning district, the Applicant is seeking a PUD in order to specially define the proposed use and development standards to ensure there are not adverse impacts on the surrounding properties.

3. The availability and provision of adequate services and facilities:
   Services and facilities are currently available to this property. A thorough capacity analysis of services and facilities will be conducted when a site plan application to submitted.

4. The impact on the natural environment:
   There are no anticipated, adverse impacts on the natural environment as a result of this rezoning. A portion of this property is currently developed with single-family dwelling and a detached garage.

5. Other Criteria as may be applicable:
   Staff did not identify any additional, pertinent information regarding this application.

Notifications:
JPA Notice to Lake County: July 6, 2022
Legal Notice PZC and Notice to City Council: August 5, 2022
Notice to Surrounding Owners: August 5, 2022
Non-Legal with Map Ad City Council 1st Reading: September 9, 2022
Ordinance Enactment Legal Ad: October 7, 2022
Non-Legal with Map Ad City Council Adoption: October 7, 2022

Public Hearing Schedule:
DRC: July 27, 2022
PZC: August 17, 2022
City Council 1st Reading: September 20, 2022
City Council 2nd Reading/Adoption: October 20, 2022

ATTACHMENTS:
Vicinity Map
Zoning Map
Proposed Final PUD Master Plan Vedder Holsters
Application

Vicinity Map

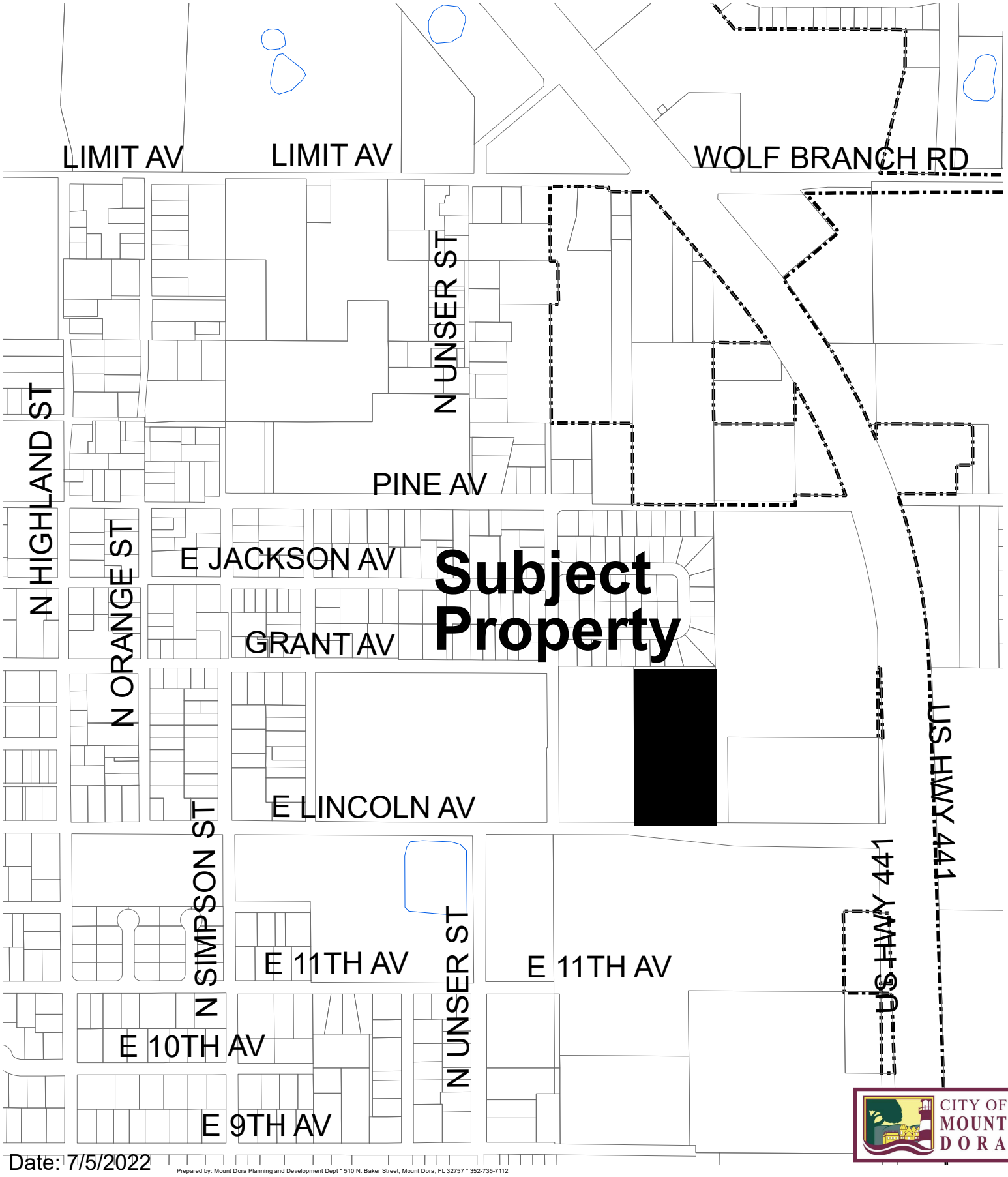
Legend

City Limits

Subject Property

N

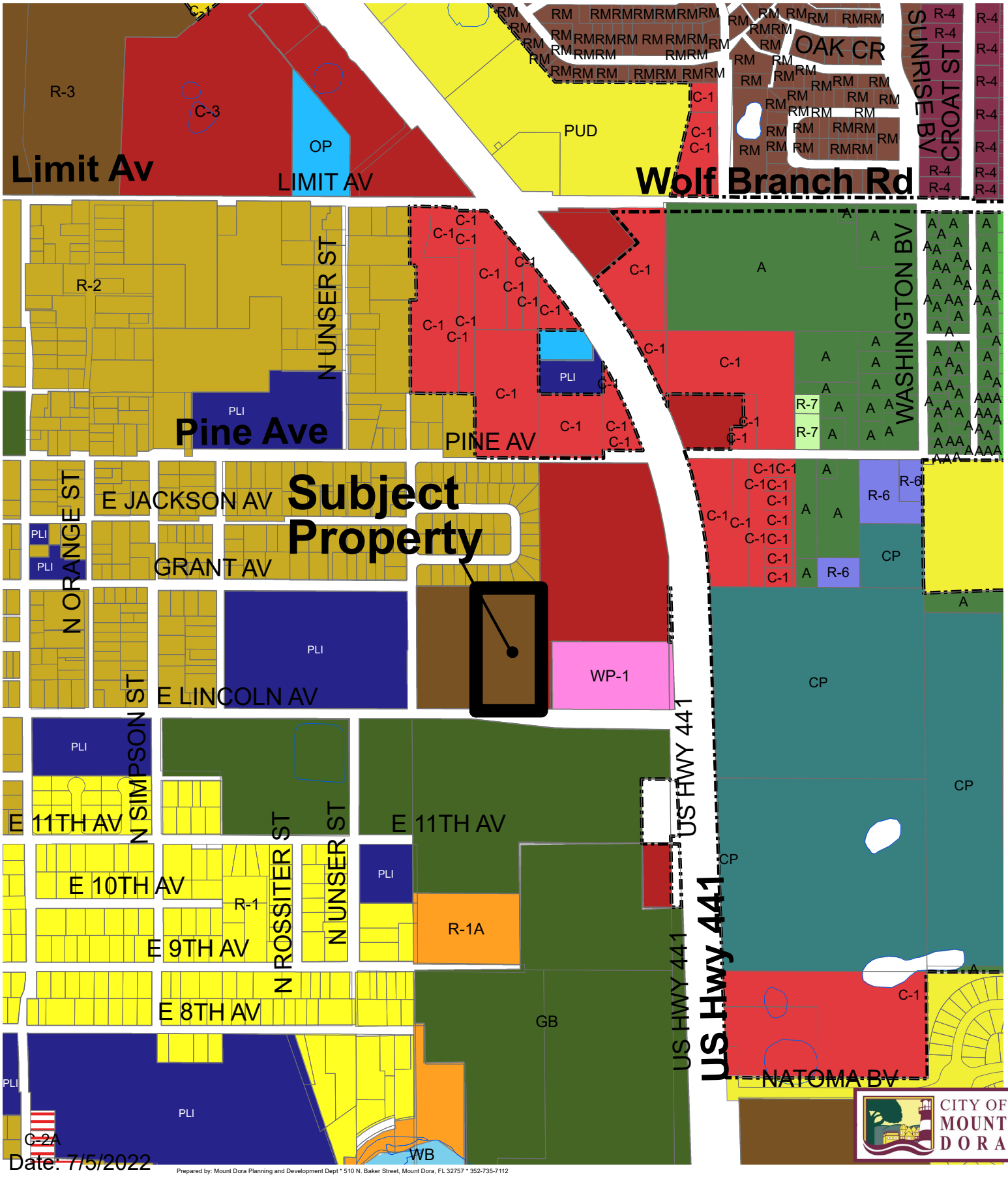
N.T.S.

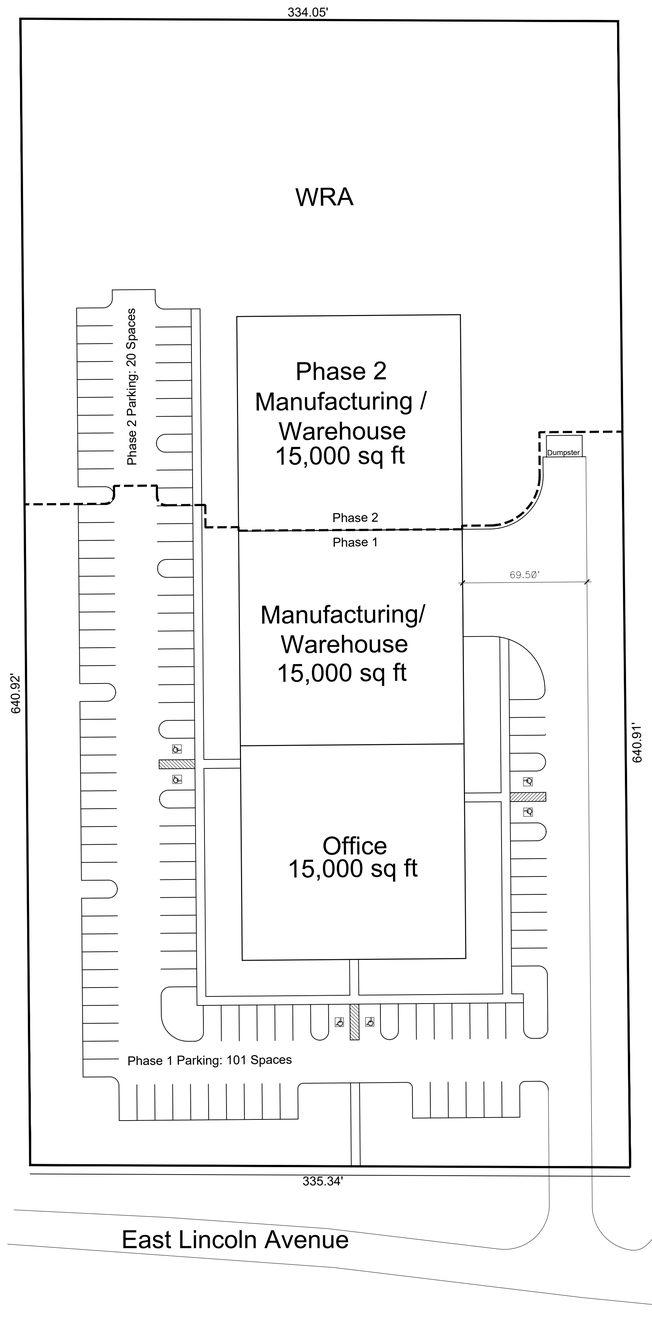


Date: 7/5/2022

Prepared by: Mount Dora Planning and Development Dept * 510 N. Baker Street, Mount Dora, FL 32757 * 352-735-7112

CITY OF MOUNT DORA


Legend
City Limits
Subject Property
Sean A. Jones
Zoning Area Map
(Composite City & Lake County)
N
N.T.S.
Limit Av
LIMIT AV
Wolf Branch Rd
OAK CR
SUNRISE BV
CROAT ST
WASHINGTON BV
Pine Ave
PINE AV
N UNSER ST
N ORANGE ST
E JACKSON AV
GRANT AV
Subject Property
E LINCOLN AV
N SIMPSON ST
E 11TH AV
E 10TH AV
E 9TH AV
E 8TH AV
N ROSSITER ST
US HWY 441
US Hwy 441
NATOMA BV
R-1
R-1A
R-2
R-3
R-4
R-6
R-7
C-1
C-2A
C-3
CP
GB
IC-1
OP
PLI
PUD
RM
WB
WP-1
A
Date: 7/5/2022
Prepared by: Mount Dora Planning and Development Dept * 510 N. Baker Street, Mount Dora, FL 32757 * 352-735-7112
CITY OF MOUNT DORA



OWNER
Sean A Jones
1649 Lincoln Avenue
Mount Dora, FL 32757

DEVELOPER
Vedder Holsters
1186 Camp Avenue
Mount Dora, FL 32757
(352) 729-6749

NOTES:
Phase 1:
Office: 15,000 Sq. Ft.
Manufacturing / Warehousing: 15,000 Sq. Ft.
Phase 2:
Manufacturing / Warehousing: 15,000 Sq. Ft.

TOTAL SITE:
Total PUD: 4.92 AC (214,492.59 Sq. Ft.)
Phase 1: 2.85 AC (124,053.97 Sq. Ft.)
Phase 2: 2.08 AC (90,438.62 Sq. Ft.)

EXISTING FUTURE LAND USE: High Density Residential

PROPOSED USES: Office / Manufacturing / Warehousing

EXISTING ZONING: R-3

RESIDENTIAL: N/A

DENSITY: N/A

MAXIMUM FLOOR AREA RATIO: 0.35 (75,072.41 Square Feet)
PROPOSED FLOOR AREA RATIO: 0.21 (45,000.00 Square Feet)
Phase 1: 0.14 (30,000 Sq. Ft.)
Office: 0.07 (15,000 Sq. Ft.)
Manufacturing: 0.07 (15,000 Sq. Ft.)
Phase 2: 0.07 (15,000 Sq. Ft.)
Manufacturing: 0.07 (15,000 Sq. Ft.)

IMPERVIOUS SURFACE AREA ALLOWED: 0.65
Total PUD: 4.92 AC x 0.65 = 3.20 AC (139,304.88 Sq. Ft.)
Phase 1: 2.85 AC x 0.65 = 2.50 AC (80,694.90 Sq. Ft.)
Phase 2: 2.08 AC x 0.65 = 1.35 AC (58,893.12 Sq. Ft.)

IMPERVIOUS SURFACE AREA PROPOSED: 0.48
Total PUD: 2.36 AC (102,778.49 Sq. Ft.) / 4.92 AC = 0.48
Phase 1: 1.85 AC (80,567.02 Sq. Ft.) / 4.92 AC = 0.38
Phase 2: 0.51 AC (22,400.73 Sq. Ft.) / 4.92 AC = 0.10

MAXIMUM BUILDING HEIGHT: 35'

BUILDING MINUMUM SETBACKS
North: 50'
East: 25'
South: 25'
West: 50'

ARCHITECTURAL:
Subject to LDC Section 6.13 Commercial Architectural and Site Design Requirements

TYPE OF PLANNED UNIT DEVELOPMENT:
Phase 1:
Office: 15,000 Sq. Ft.
Manufacturing / Warehousing: 15,000 Sq. Ft.
Phase 2:
Manufacturing / Warehousing: 15,000 Sq. Ft.

LIGHTING:
To be designed with Dark Sky Principles with Philips Lumec RTA40 - Pole with S29 - Luminaires

WETLANDS:
Total PUD: 0 AC

DEVELOPABLE AREA (less undevelopable area):
Total PUD: 4.92 AC

THE EXISTING SITE CONTAINS
Single Family Home

REQUIRED OPEN SPACE: 0.35
Total PUD: 4.92 AC x 0.35 = 1.72 AC (75,072.41 Sq. Ft.)
Phase 1: 2.85 AC x 0.35 = 1.00 AC (43,418.89 Sq. Ft.)
Phase 2: 2.08 AC x 0.35 = 0.73 AC (31,653.52 Sq. Ft.)

PROPOSED OPEN SPACE: 0.52
Total PUD: 2.56 AC (111,714.10 Sq. Ft.) / 4.92 AC = 0.52
Phase 1: 1.00 AC (43,486.95 Sq. Ft.) / 4.92 AC = 0.20
Phase 2: 1.56 AC (68,037.89 Sq. Ft.) / 4.92 AC = 0.32

DEVELOPMENT REVIEW
All site development and review procedures shall follow the city's minimum standards and procedures unless otherwise contained in the PUD.

UTILITIES
Water/sewer/re-use will be provided by the City of Mount Dora and constructed by the Owner to standards as contained in the Land Development Regulations.

TREE REPLACEMENT
Will follow the requirements of the Land Development Regulations.

CANOPY TREES
All replacement canopy trees will be 3.5" caliper and 15' in height.
All remaining canopy trees will be 2.5" caliper and 8' in height.

TRAFFIC
Traffic impacts will be mitigated as outlined in the Land Development Regulations.
The Final PUD shall be conditioned with further off-site improvements evaluated during each phase site plan.

FIRE PREVENTION
All buildings will be in full compliance with the 6th edition of Florida Fire Prevention Code. Fire protection system mains on private property shall meet the requirements and shall be installed per NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances* and/or NFPA 13, *Standard for the Installation of Sprinkler Systems* as adopted in the Florida Fire Prevention Code.

SIGNAGE
PUD Signage is to follow Zoning District regulations for C-3 Zoning.

ALL BUILDINGS AREAS ARE CONCEPTUAL AND SUBJECT TO FINAL ARCHITECTURAL DESIGN

REQUIRED PARKING
Phase 1: 80
Office: 1 Space per 300 Sq. Ft. = 50 Spaces
Manufacturing: 1 Space per 500 Sq. Ft. = 30 Spaces
Phase 2: 30
Manufacturing: 1 Space per 500 Sq. Ft. = 30 Spaces
Total PUD: 110 Spaces
All parking (required and excess parking) within the PUD will be paved.

PROPOSED PARKING
Total PUD: 121 Spaces
Phase 1: 101 Spaces
Phase 2: 20 Spaces

LANDSCAPE BUFFERS:

Buffer 1: Type (b)	15' Width	3 Canopy / 10 Understory / Continuous Hedge
Buffer 2: Type (a)	10' Width	3 Canopy / 5 Understory / Continuous Hedge
Buffer 3: Type B	30' Width	4 Canopy / 5 Understory / Continuous Hedge
Buffer 4: Type C	40' Width	4 Canopy / 6 Understory / 6' Wall & Continuous Hedge
Buffer 5: Type B	30' Width	4 Canopy / 5 Understory / Continuous Hedge
Buffer 6: Type B	30' Width	4 Canopy / 5 Understory / Continuous Hedge

All Plantings are to be Florida #1 or Better.

Green Consulting Group, Inc.
Landscape Architecture ■ Land Planning ■ Development Assistance
4070 United Avenue, Mount Dora, Florida 32757
352-357-9241 ■ Fax 352-357-9278 ■ LA0000847

NORTH

Drawing Number: 1629-05
Originated From: 1629-04
Date: July 26, 2022
Scale: 1" = 40'
Drawn By: JMA
Layout: 24"x36"

Final PUD Master Plan

Vedder Holsters

Mount Dora, Florida

PUD22-01 FNL

CITY OF MOUNT DORA

City of Mount Dora
Planning and Development
510 N. Baker St.
Mount Dora, FL 32757
352-735-7112
Fax: 352-735-7191
E-mail: plandev@cityofmountdora.com

FINAL PLANNED UNIT DEVELOPMENT (PUD) APPLICATION

Date: 07/05/2022 Project Name: Vedder Holsters

1. Applicant's Name: Timothy W Green
   Company's Name: Green Consulting Group
   Address: 4070 United Avenue
   City, State & Zip: Mount Dora, FL 32757
   Phone: (352) 357-9241 E-mail: tgreen@greenconsultinggroup.com

2. Property Owner's Name(s): Sean A Jones
   Company's Name: N/A
   Address: 1649 Lincoln Avenue
   City, State & Zip: Mount Dora, FL 32757
   Phone: C/O 352-357-9241 E-mail: C/O tgreen@greenconsultinggroup.com

3. Engineer's Name: Not Known
   Company's Name:
   Address:
   City, State & Zip:
   Phone: E-mail:

4. Landscape Architect: Timothy W Green
   Company's Name: Green Consulting Group, Inc
   Address: 4070 United Avenue
   City, State & Zip: Mount Dora, FL 32757
   Phone: (352) 357-9241 E-mail: tgreen@greenconsultinggroup.com

5. The property generally located and list adjacent streets: East of Wardell Street, North of Lincoln Avenue, West of US Hwy 441

6. Size of property in Acres: 4.92 Square Feet: 213,879.60

7. Zoning District: R-3 Future Land Use Category: High Density Residential

8. Number of Structures and/or units to be built: One

9. Is the proposed use(s) permissible in requested district? Yes, with requested amendment

10. Provide description of the proposed use: Manufacturing / Office

11. Provide phase breakdown and description of phases: Phase One: 15,000 SF Office / 15,000 SF Manufacturing, Phase Two: 15,000 SF Manufacturing

12. State the reason for this request (attach written summary if additional space is needed): To expand an existing manufacturing business within the City of Mount Dora

13. Has an application been filed within the last 12 months (describe, if yes)? No

CERTIFICATION AND SIGNATURE

By my signature below, I certify that the information contained in this application is true and correct to the best of my knowledge at the time of the application. I acknowledge that I understand and have complied with all of the submittal requirements and procedures and that this application is a complete application submittal pursuant to the City's Land Development Code. I further understand that an incomplete application submittal may cause my application to be deferred to the next posted deadline date.

Owner/Applicant Signature

7/5/22
Date

AGENT LETTER

TO: City of Mount Dora Planning & Development Department

This will serve as written authorization for Timothy W Green & Green Consulting Group, Inc. to act as agent for the purpose of submitting and processing of Rezoning and Small Scale Comprehensive Plan Amendment Applications for 1649 Lincoln Avenue in Mount Dora, Florida.

Signed:

Sean A. Jones
Sean A Jones

Date: June 28, 2022

NOTARY PUBLIC
STATE OF MICHIGAN

Before me, the undersigned authority, personally appeared Sean A Jones who acknowledges that he is appointing Timothy W Green to act as his agent for the purpose of submitting for Rezoning and Small Scale Comprehensive Plan Amendment Applications for the above referenced property and that he did X or did not ____ take an oath. Sean A Jones is known to me ____ or produced identification (type) Michigan drivers licnse on this 28 day of June, 2022.

Rachel A. Doxsie
Notary Public – State of Michigan

RACHEL A. DOXSIE
Notary Public, State of Michigan
County of Macomb
My Commission Expires Aug. 09, 2025
Acting in the County of Macomb

Vedder Holsters PUD

Justification

The need and justification for the change;

The proposed PUD allows with the companion Comprehensive Plan Amendment to the development of the 4.92 acres site as an office and light manufacturing facility. The Land Use and Zoning is being requested to accommodate the relocation and expansion an existing company within the City of Mount Dora.

The PUD will encourage the retention of an existing workforce and allow for the expansion of an existing employer within the City of Mount Dora.

The roads, drainage systems, utilities and public services will all be upgraded as necessary to accommodate the new development as per the Comprehensive Plan and Land Development Regulations.

The proposed Vedder Holsters PUD offers the following advantages and restrictions that the existing R-3 Zoning on the site would not necessarily require or provide.

Additional Employment Opportunities

Uses
- R-3 Multifamily Residential / PUD Office and Manufacturing

Setbacks
- Front: R-3 = 35’ / PUD = 50’
- Side: R-3 = 35’ / PUD = 50’
- Rear: R-3 = 35’ / PUD = 50’

Dwellings:
- R-3 = dwellings 600 sq ft / PUD none
- Number of Dwellings: R-3 = up to 88 / PUD = 0

Landscape and Buffers
- Buffer 1: R-3 = 15’ / PUD = 25’
- Buffer 2: R-3 = 10’ / PUD = 15’
- Buffer 3: R-3 = 10’ / PUD = 15’
- Buffer 4: R-3 = 10’ / PUD = 40’
- Buffer 5: R-3 = 30’ / PUD = 30’
- Buffer 6: R-3 = 30’ / PUD = 30’

Minimum Lot Size
- R-3 = None / PUD = 4.92 acres

Lot width
- R-3 = NA / PUD = 334 ft

Lighting
- Enhanced lamp posts
- Dark Sky lighting

Impervious Surface Maximum
- High Density Residential = 0.65 (75,072 sq ft) / PUD = 0.48 (

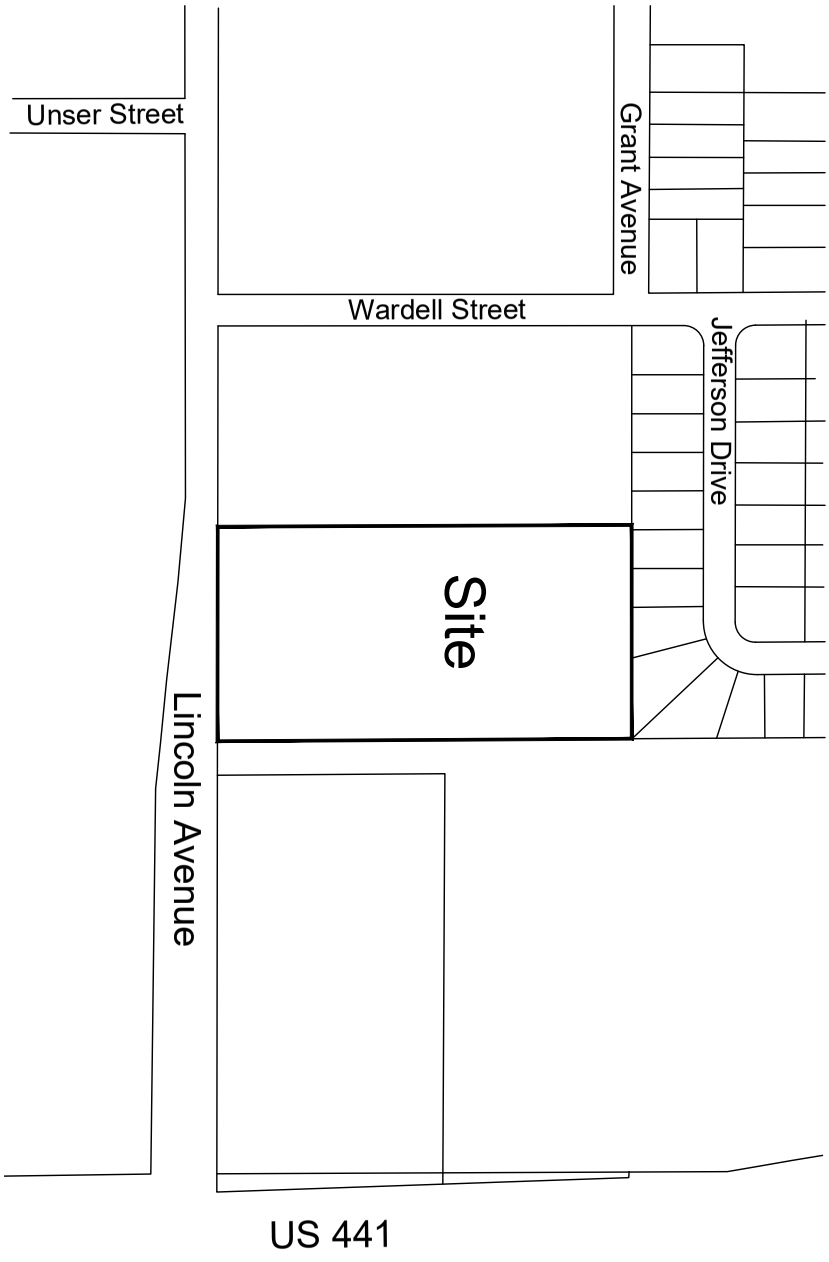
Preservation of natural features
- 25’ buffer on the north adjacent to the existing Single Family homes.

The relationship of the proposed amendment to the purposes of the city's comprehensive plan, with appropriate consideration as to whether the proposed change will further the purposes of this code and the plan;

The Future Land Use Element

“Industrial: This category is intended for light manufacturing, warehousing and storage associated with a business or industrial use, wholesaling, distribution, office and other related activities. Educational facilities shall not be allowed in this district. Industrial parks with good internal circulation and attractive appearance from adjacent roads are encouraged. Maximum impervious surface ratio is 0.65. Maximum FAR is 0.7.”

The site is to be used for corporate offices and light manufacturing within a closed building. The is located on Lincoln Avenue just west of a signalize intersection on US 441 and is one half of a mile north of the SR 46 and US 441 interchange with 6 lane access to SR 453 and the SR 429 Wekiva Parkway.



Location Map

Vedder Holsters

Mount Dora, Florida

Drawing Number: 1629 Map
Originated From: GIS
Date: July 5, 2022
Scale: NTS
Drawn By: TWG
Layout: 24"x36"

NORTH

Green Consulting Group, Inc.
Landscape Architecture ■ Land Planning ■ Development Assistance
4070 United Avenue, Mount Dora, Florida 32757
352-357-9241 ■ Fax 352-357-9278 ■ LC26000288

Zoning and FLU Map

Vedder Holsters

Mount Dora, Florida

Drawing Number: 1629.mxp
Originated From: GIS
Date: July 5, 2022
Scale: 1" = 50'
Drawn By: TWG
Layout: 24"x36"

PROJECT

Green Consulting Group, Inc.
Landscape Architecture ■ Land Planning ■ Development Assistance
4070 United Avenue, Mount Dora, Florida 32757
352-357-9241 ■ Fax 352-357-9278 ■ LC26000288

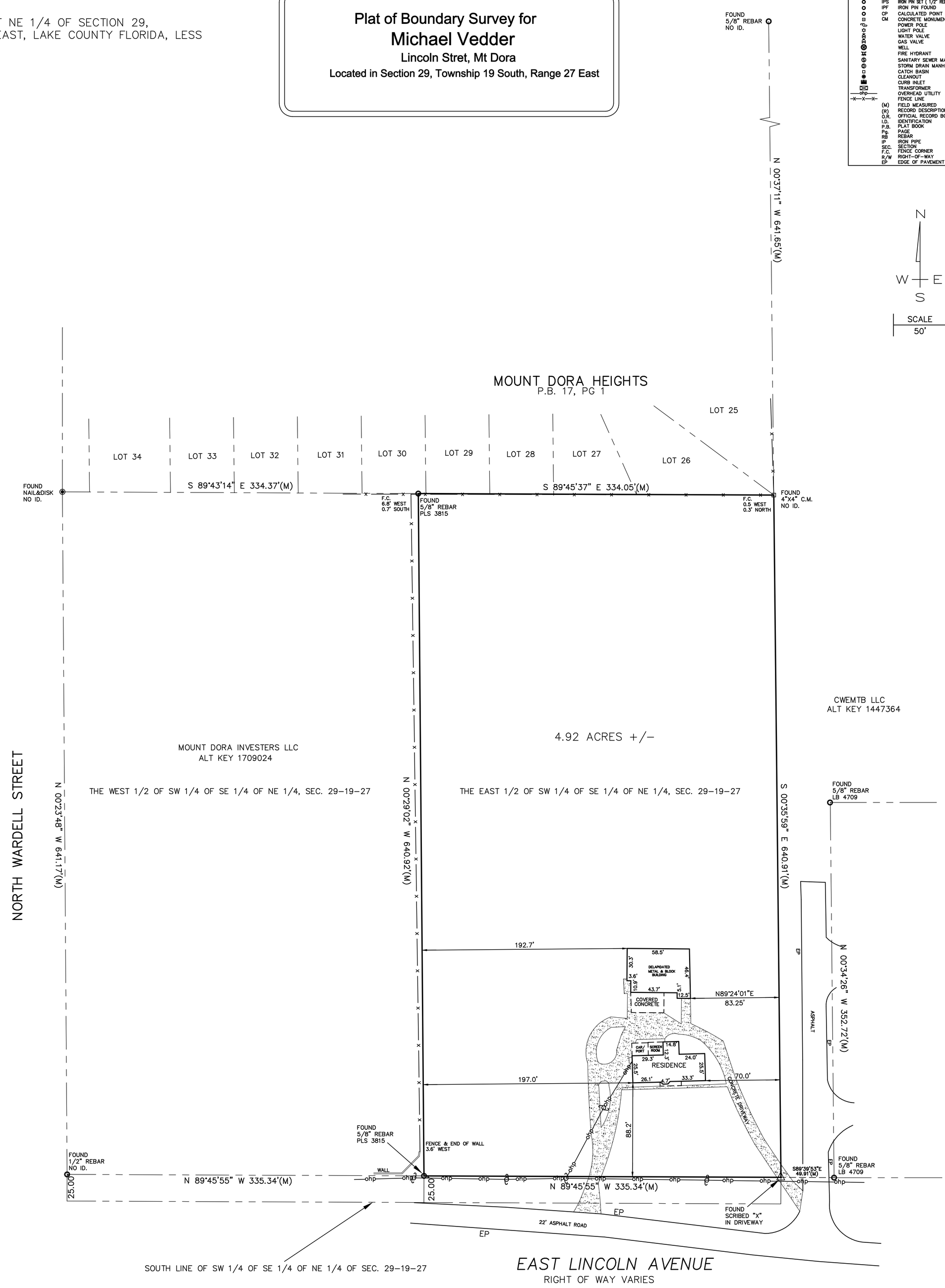
DESCRIPTION

E 1/2 OF SW 1/4 OF SE 1/4 OF NE 1/4 OF SECTION 29, TOWNSHIP 19 SOUTH, RANGE 27 EAST, LAKE COUNTY FLORIDA, LESS THE SOUTH 25 FEET THEREOF.

Plat of Boundary Survey for
Michael Vedder
Lincoln Stret, Mt Dora
Located in Section 29, Township 19 South, Range 27 East

LEGEND:

○	IPS	IRON PIN SET (1/2" REBAR W/ CAP)
○	IPF	IRON PIN FOUND
○	CP	CALCULATED POINT ONLY
▣	CM	CONCRETE MONUMENT
		POWER POLE
		LIGHT POLE
		WATER VALVE
		GAS VALVE
		WELL
		FIRE HYDRANT
		SANITARY SEWER MANHOLE
		STORM DRAIN MANHOLE
		CATCH BASIN
		CLEANOUT
		CURB INLET
		TRANSFORMER
ohp		OVERHEAD UTILITY
-x-x-x-		FENCE LINE
	(M)	FIELD MEASURED
	(R)	RECORD DESCRIPTION OR PLAT
	O.R.	OFFICIAL RECORD BOOK
	I.D.	IDENTIFICATION
	P.B.	PLAT BOOK
	Pg.	PAGE
	RB	REBAR
	IP	IRON PIPE
	SEC.	SECTION
	F.C.	FENCE CORNER
	R/W	RIGHT-OF-WAY
	EP	EDGE OF PAVEMENT



SURVEYOR'S NOTES

1) Bearings based on Florida grid East zone (Lengemann Network).

2) Subject to easements and restrictions of Record.

3) All of the above captioned property lies within F.I.R.M. Zone "X" according to F.I.R.M. panel No. 12069C 0367 E, dated December 18, 2012.

4) This Survey is based on the Description provided, Plat information, Found Monumentation and other data acquired by this firm.

5) Foundations, Underground Structures, and Underground Improvements, if any, not located by this firm.

6) Fences were located ONLY where dimensioned and may not run straight; ownership of fences, if any, unknown. °00'00" EW along the **** line of Lot.

CERTIFIED TO:

Michael Vedder
Treasure coast Title & Settlement of Vero LLC
Westcor Land Title Insurance Company

I hereby certify that this survey was made under my responsible charge and meets the minimum technical standards as set forth by the Board of Professional Land Surveyors in Chapter 61G17-6 Florida Administrative Code. Pursuant to Section 472.027 Florida Statutes.

Fulton V. Clinkscales, Jr., Surveyor #4986

Not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.

FULTON V. CLINKSCALES, JR. CERTIFICATE No. 4986 STATE OF FLORIDA REGISTERED LAND SURVEYOR

No.	REVISIONS	Date
1	xxxxx xxxx	xx/xx/xx

FREELAND - CLINKSCALES + ASSOCIATES, INC. of NC
*Engineers * Land Surveyors*
201 2nd AVE. EAST
HENDERSONVILLE, N.C. 28792
1220 HUFFSTETLER DRIVE, UNIT 201
EUSTIS, FL. 32726
(352) 609-2830
SURVEYQOUTEFCA@GMAIL.COM
LB 7064

REF. PLAT BOOK	xx/xx
REF. O.R. BOOK	4835/2359
ALT. KEY#	1447097
PARTY CHIEF	SCL
DRAWN	SCL
DATE	JUNE 29, 2022
DWG.NO.	F42116

Property Record Card

General Information

Name:	JONES SEAN A AND LINDA SCOTT ESTATE	**Alternate Key:**	1447097
Mailing Address:	1649 LINCOLN AVE MOUNT DORA, FL 32757 *Update Mailing Address*	**Parcel Number:**	29-19-27-0001-000-03401
		Millage Group and City:	0MD2 Mount Dora
		2021 Total Certified Millage Rate:	18.7017
		Trash/Recycling/Water/Info:	*My Public Services Map*
Property Location:	1649 LINCOLN AVE MOUNT DORA FL, 32757 *Update Property Location*	**Property Name:**	-- *Submit Property Name*
		School Information:	*School Locator & Bus Stop Map* *School Boundary Maps*
Property Description:	E 1/2 OF SW 1/4 OF SE 1/4 OF NE 1/4--LESS S 25 FT-- ORB 644 PG 13 ORB 2449 PG 1313 ORB 2483 PG 2184 ORB 4835 PG 2359		

NOTE: This property description is a condensed/abbreviated version of the original description as recorded on deeds or other legal instruments in the public records of the Lake County Clerk of Court. It may not include the Public Land Survey System's Section, Township, Range information or the county in which the property is located. It is intended to represent the land boundary only and does not include easements or other interests of record. This description should not be used for purposes of conveying property title. The Property Appraiser assumes no responsibility for the consequences of inappropriate uses or interpretations of the property description.

Land Data

Line	Land Use	Frontage	Depth	Notes	No. Units	Type	Class Value	Land Value
1	SINGLE FAMILY (0100)	0	0		4.630	Acre	$0.00	$57,875.00

Click here for Zoning Info **FEMA Flood Map**

Residential Building(s)

Building 1

Residential	Building Value: $143,967.00

Summary

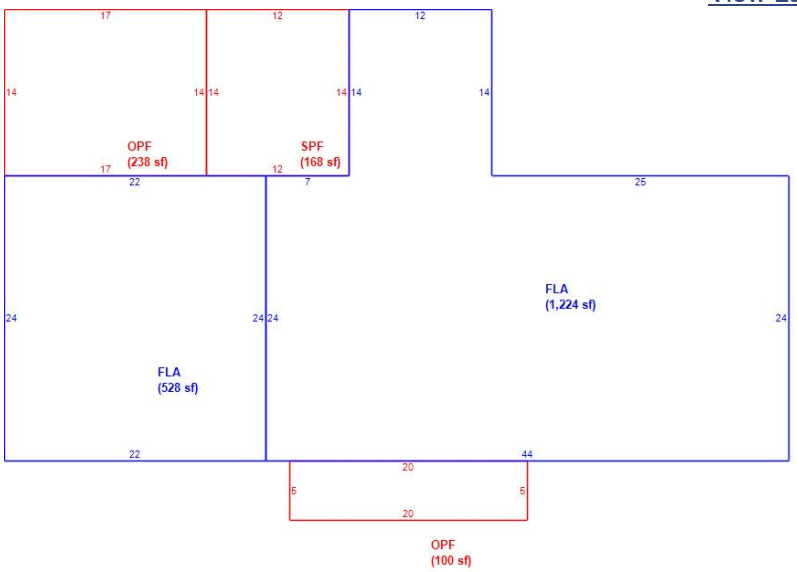
Year Built: 1979	Total Living Area: 1752	Central A/C: Yes	Attached Garage: No
Bedrooms: 3	Full Bathrooms: 2	Half Bathrooms: 0	Fireplaces: 1

Incorrect Bedroom, Bath, or other information?

Section(s)

Section Type	Ext. Wall Type	No. Stories	Floor Area
FINISHED LIVING AREA (FLA)	Stucco/Brick (03)	1.00	1752
OPEN PORCH FINISHED (OPF)		1.00	338
SCREEN PORCH FINISHED (SPF)		1.00	168

View Larger / Print / Save



NOTE: Information on this Property Record Card is compiled and used by the Lake County Property Appraiser for the sole purpose of ad valorem property tax assessment administration in accordance with the Florida Constitution, Statutes, and Administrative Code. The Lake County Property Appraiser makes no representations or warranties regarding the completeness and accuracy of the data herein, its use or interpretation, the fee or beneficial/equitable title ownership or encumbrances of the property, and assumes no liability associated with its use or misuse. See the posted Site Notice.

Copyright © 2014 Lake County Property Appraiser. All rights reserved.
Property data last updated on March 21, 2022.
Site Notice

INSTRUMENT#: 2016096804 OR BK 4835 PG 2359 PAGES: 1 9/16/2016 1:48:12 PM
NEIL KELLY, LAKE COUNTY CLERK OF THE CIRCUIT COURT
REC FEES: $10.00 DEED DOC:$0.70

Return to:
Sean A. Jones
620 Charlesina Dr.
Rochester, MI 48306

RETURN

Prepaired by:
Sean A. Jones
620 Charlesina Dr.
Rocester, MI 48306
Parcel Appraisal Parcel Identification numbers: 29-19-0001000030 401

This Quit Claim Deed, *Executed the* 7th *day of* July 2016 *Date*, *by* Robert Jones, *first party, to* Sean A. Jones, a married man *whose post office address is* 620 Charlesina Dr. Rochester, MI 48306, *second party.*

(Wherever used herein the terms "first party" and "second party" include all the parties to this instrument and the heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporations, wherever the context so admits or requires.)

Witnesseth, *That the first party, for and in consideration of the sum of* $ 10.00, *in hand paid by the said second party, the receipt whereof is hereby acknowledged, does hereby remise, release, and quit claim unto the second party forever, all the right, title, interest, claim and demand which the said first party has in and to the following described lot, piece or parcel of land, situate, lying and being in the County of* LAKE, *State of* FLORIDA, *to-wit:*

E 1/2 of SW 1/4 of SE 1/4 of NE 1/4, Sec. 29, Tp. 19 S, R 29 E. Less the South 25 feet.

To Have and to Hold *The same together with all and singular the appurtenances thereunto belonging or in anywise appertaining, and all the estate, right, title, interest, lien, equity and claim whatsoever of the said first party, either in law or equity to the only proper use, benefit and behoof of the said second party forever.*

In Witness Whereof, *the said first party has signed and sealed these presents the day and year first above written.*

Signed, sealed and delivered in the presence of:

Witness Signature (as to first Grantor): Felicia D. Nix
Printed Name: Felicia D. Nix
Witness Signature (as to first Grantor): Charles R. Nix
Printed Name: Charles R. Nix

Grantor Signature: Robert Jones L.S.
Printed Name: Robert Jones
Post Office Address: 1649 Lincoln Ave. Mount Dora, Florida 32757

Witness Signature (as to Co-Grantor, if any)
Printed Name
Witness Signature (as to Co-Grantor, if any)
Printed Name

Co-Grantor Signature, (if any) L.S.
Printed Name
Post Office Address

STATE OF Florida)
COUNTY OF Orange)

I hereby Certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared Felicia D. Nix; Charles R. Nix; Robert Jones known to me to be the person described in and who executed the foregoing instrument, who acknowledged before me that executed the same, and an oath was not taken. (Check one:) ☐ Said person(s) is/are personally known to me. ☒ Said person(s) provided the following type of identification: FL DL (last 4: 0940)

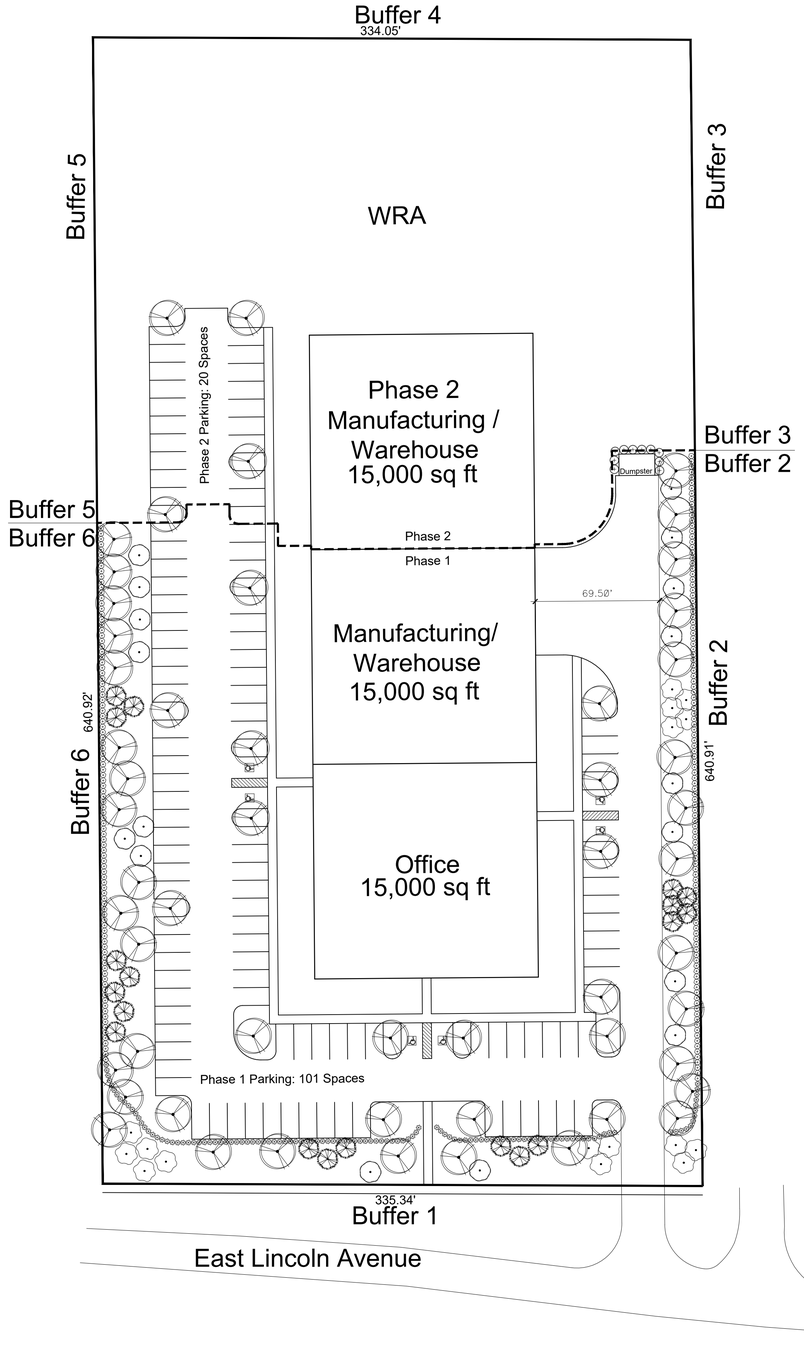
NOTARY RUBBER STAMP SEAL

LINDA R. HALL
Notary Public - State of Florida
My Comm. Expires Mar 12, 2018
Commission # FF 100667
Bonded Through National Notary Assn.

Witness my hand and official seal in the County and State last aforesaid this 7th day of July 2016 *Date*

Notary Signature: Linda R. Hall
Printed Name: Linda R. Hall

Form Designed by Landmark Title Forms & Printing Co., Inc., 1994



PLANT SCHEDULE

CANOPY TREES	QTY	COMMON NAME	BOTANICAL NAME	CONT	CAL	SIZE	SPACING	REMARKS
	67	Live Oak	Quercus virginiana	-	2"Cal	8`+	As Shown	Native
UNDERSTORY TREES	**QTY**	**COMMON NAME**	**BOTANICAL NAME**	**CONT**	**CAL**	**SIZE**	**SPACING**	**REMARKS**
	42	Dahoon Holly	Ilex cassine	-	1.5"Cal	6`+	As Shown	Native
	27	Crape Myrtle	Lagerstroemia indica	-	1.5"Cal	6`+	As Shown	Non Native
	11	Little Gem Dwarf Southern Magnolia	Magnolia grandiflora 'Little Gem'	-	1.5"Cal	6`+	As Shown	Native
SHRUBS	**QTY**	**COMMON NAME**	**BOTANICAL NAME**	**CONT**	**HEIGHT**	**WIDTH**	**SPACING**	**REMARKS**
	10	Podocarpus	Podocarpus macrophyllus	5 gal	36"	24"	As Shown	Non Native
	114	Walter's Viburnum	Viburnum obovatum	3 gal	24"	18"	As Shown	Native
	381	Sandankwa Viburnum	Viburnum suspensum	3 gal	24"	18"	As Shown	Non Native

Landscape Buffer	Landscape Buffer Requirement			Width		Canopy Trees				Understory Trees					Shrubs
				Required	Provided	Required	Required	Existing	Provided	Required	Required	Required	Existing	Provided	Required
	Boundary Buffer	Buffer Type	Lineal Feet			3 per 100 Lineal Feet	4 per 100 Lineal Feet		2'' Caliper Minimum	5 per 100 Lineal Feet	5 per 100 Lineal Feet*	6 per 100 Lineal Feet		1.5'' Caliper Minimum	Hedge Planted 36" on Center
	1	b	335.34'	15'	25'	11			11		17			17	Continuous Hedge
	2	a	411.40'	10'	20'	13			13	21				21	Continuous Hedge
	3	B	229.51'	30'	30'		10	TBD	TBD	12			TBD	TBD	Continuous Hedge
	4	C	334.05'	40'	40'		14	TBD	TBD			21	TBD	TBD	6' Wall & Continuous Hedge
	5	B	271.56'	30'	30'		11	TBD	TBD	14		17	TBD	TBD	Continuous Hedge
	6	B	369.36'	30'	30'		15		15	19				19	Continuous Hedge

LANDSCAPE NOTES

CALIPER IS MEASURED SIX (6) INCHES ABOVE THE GROUND
SHRUBS TO BE 3' WITHIN 12 MONTHS.
HEDGES TO FORM CONTINUOUS BUFFER UPON PLANTING.
ALL PLANTS ARE TO BE FLORIDA #1 OR BETTER.
ALL PLANTS ARE FLORIDA FRIENDLY.
AN AUTOMATIC IRRIGATION SYSTEM WILL BE PROVIDED FOR ALL LANDSCAPED AREAS, INCLUDING A RAIN SENSOR SHUTOFF DEVICE.
ALL LAWN AREAS TO BE BAHIA SOD.
ALL ISLANDS ARE TO BE PLANTED WITH 100% SHRUBS / GROUND COVERS
BUFFERS 3 & 5 WILL UTILIZE EXISTING VEGETATION FOR PHASE 1. NEW VEGETATION TO MEET THE STANDARDS SHOWN WILL BE INSTALLED WITH PHASE 2.

Green Consulting Group, Inc.
Landscape Architecture ■ Land Planning ■ Development Assistance
4070 United Avenue, Mount Dora, Florida 32757
352-357-9241 ■ Fax 352-357-9278 ■ LA0000847

NORTH

Drawing Number: 1629-05
Originated From: 1629-04
Date: July 26, 2022
Scale: 1" = 40'
Drawn By: JMA
Layout: 24"x36"

Conceptual Landscape Plan

Vedder Holsters

Mount Dora, Florida

CITY OF MOUNT DORA

Planning and Development
510 N. Baker St.
Mount Dora, FL 32757
352-735-7113
Fax: 352-735-7191
E-mail: plandev@cityofmountdora.com

DATE: August 17, 2022

TO: Planning and Zoning Commission

FROM: Development Review Committee
Vince Sandersfeld, Planning Director

SUBJECT: Land Development Code Amendment Pertaining to Variance for Building Height
Continuance from the July 20, 2022 PZC Meeting

Recommendation:
Staff recommends approval of the attached ordinance and forwarded same to City Council.

Discussion:

During the presentation and summary of the proposed LDC Amendment the members present discussed the effective date of the ordinance and whether it was tied into the proposed Charter Amendment election in November, 2022, related to building height restrictions. There was discussion regarding the Building Height Committee recommendations. Attached is a complete summary of this Building Height Committee motions.

As directed by the City Council following action for a proposed Charter Amendment to limit building height in certain areas attached is a proposal to amendment the City's Land Development Code to provide enhanced variance criteria. A copy of the Charter Amendment Ordinance No. 2022-08 is attached for reference. The framework of the Charter Amendment language was taken from a citizen's group petition.

On September 21, 2021, City Council adopted Resolution No. 2021-115, which created the Building Height Advisory Committee. On March 4, 2022, the Building Height Advisory Committee provided several recommendations to City Council; enclosed is a summary of the recommendations prepared by the Committee dated March 17, 2022.

One of the recommendation, in addition to consideration of a Charter Amendment, was an amendment to the City's Land Development Code to create additional variance criteria for properties within the Building Height Impact District.

The proposed Charter Amendment language allows for variances of five (5) feet building height for buildings within the Historic Preservation Review Boundary and buildings within 100 feet of Lake Dora shoreline. As such, the Building Height Committee recommended establishing new criterion for variance requests pertaining to building height. Enclosed in a draft LDC amendment to implement the proposed criterion for variance requests pertaining to building height. The proposed criteria for a variance request pertaining to building height is more restrictive than the existing criteria for variance requests.

The Building Height Committee also recommended removing the 55 foot height allowance for parking garages in specific zoning districts. The height for parking garages was amendment by Ordinance No. 2020-20 enacted on April 4, 2021. The Building Height Committee reasoned that the height of parking garages should be consistent with the height limitations of the underlying zoning district. The draft LDC Amendment removes the 55 feet for parking garages. If adopted, parking garages in the downtown area would be limited height to 35 feet and further reduced to 25 feet along the Lake Dora shoreline.

Notices:
Courtesy Legal Advertisement Notice of PZC Hearing: July 8, 2022

Attachment:
Building Height Motions Verbatim Dated March 17, 2022
Draft LDC Ordinance No. 2022-10
Ordinance No. 2022-08 (Charter) adopted on June 7, 2022 (Informational)
Building Height Impact District Map
Summary of Key Revisions dated March 17, 2022

https://ci.mount-dora.fl.us/1417/Agendas-Minutes-Live-Meetings

James Homich – Motion to put the petition on the next ballot uhm there have been…*interrupted by chair for clarification* Chair – to recommend to council that it…*Homich finishes sentence* right to be put on the next ballot with and the reason for the motion is that two of the major things we've talked about are contained in that petition, 35ft limit and referendum enforcing that 35ft limit its already, the works been done and you know so I say let the citizens decide and that's democracy

John Tucker - This is not about letting the citizens decide what we are voting on, this is about whether or not we want council to set it up and do it, they're going to do what they want to do in my opinion uh this is about whether or not we are in support of your motion to move it up there or not, not about whether or not the citizens deserve the right to vote on it, that will be up to council and that side of the room over there uh when council meets but uh your motion as I understand it is to send it up to council for if we endorse it, is that correct

James Homich – recommend that they put the petition on the ballot

Tom Dring – but to be clarify, we are not endorsing the charter language, we are simply recommending that it go to the ballot

Multiple members – yes

Further discussion & clarification

James Homich – yes
Andrea Lother – yes
Nick Girone - yes
Tom Pauls – no
Greg Beliveau - no
Tom Dring – yes
Frank Kirwin - yes
Kate Ondrasik – no
Harris Turner – no
John Tucker – no
Lynn Tipton – no
Motion fails 5-6

1st motion
Jessica read allowed the motion made by Kate Ondrasik - – For the City to craft its own ordinance with the Charter Amendment not only limited on building heights but also including a process & procedure within the code for variances.
Greg Beliveau - seconded
Kate Ondrasik – Yes
Frank Kirwin – yes
Harris Turner – yes
John Tucker – yes
Lynn Tipton – yes
James Homich – no

Andrea Lother – no
Nick Girone - yes
Tom Pauls – yes
Greg Beliveau - yes
Tom Dring – yes
Motion passes

2nd Motion
The Land Development Code regulations and amendments in #7 and #4 (Pauls - amendment to #4 would allow for a variance for properties within the building height impact district within 100ft of lake dora, to go to 30ft from 25ft to by right, 30ft maximum allowed by variance and no more but at least the variance would allow 25ft to 30ft.
Kate Ondrasik - seconded with "reasonable return on investment because of topography for reasons of consistency and for reason of protection of personal property rights.
Greg Beliveau - seconded
Kate Ondrasik – yes
Frank Kirwin – no
Harris Turner – yes
John Tucker – yes
Lynn Tipton – yes
James Homich – no
Andrea Lother – no
Nick Girone - yes
Tom Pauls – yes
Greg Beliveau - yes
Tom Dring – yes
Motion passes

3rd Motion
To conduct survey within business owners/property owners within the building height impact district
Kate Ondrasik – yes
Greg Beliveau - seconded
Kate Ondrasik – yes
Frank Kirwin – yes
Harris Turner – yes
John Tucker – yes
Lynn Tipton – yes
James Homich – yes
Andrea Lother – no
Nick Girone - yes
Tom Pauls – yes
Greg Beliveau - yes
Tom Dring – yes
Motion passes

Sherry Sutphen – You all have now from what I can hear voted to place, have City Council adopt an ordinance to place the limitation in the charter with the uhm provision that there be a Land Development Code variance requirements for the uhm for a variance if permitted with those

requirements with what Mr. Pauls's summary gave to you all and I am assuming that you are wanting to use that summary for what you would propose to the City Council as the Land Development Code regulation that you would like to see

John Tucker – Yes ma'am.

Sherry Sutphen – There was a section in there that said to change this Land Development Code section, you have to go to a referendum of the voters. I think you all intended that for if it wasn't going to be in the charter the original limitation now that the original limitation is in the charter, do you still want that protection to change any of those procedures
Multiple members – not necessary

Lynn Tipton – it's great she caught that, so how do we undo that procedurally

James Homich – no, no, no its not in the charter until its voted on by the residents so if it gets voted down then the ordinance would still be in effect and the ordinance would still have the referendum requirements. So they are not mutually exclusive as Mrs. Sutphen is claiming, they are

Sherry Sutphen – No no no Mrs. Sutphen wasn't claiming that, Mrs. Sutphen was asking what the board wanted.

James Homich – the board voted on the motions as passed what our recommendations are, I don't think at this point we don't much more to discuss. Motioned to sunset the committee.

Further discussion ensued for clarification on the motion to sunset the committee or move forward with the other motion for forwarding to City Council.

Tom Pauls – If the language in the Land Development Code gives the option uhm or the requirement if you will then any amendments to it go to charter that should the original charter fail then this Land Development Code would still have some protection in it because of that so the question really arises is that protection language needed if the Land Development Code without it goes forward to the City Council and they take a charter amendment that's adjusted to accommodate the Land Development Code and run that before the voters

Sherry Sutphen – yes that's correct and if it passes then is that provision still the desire of this committee to stay in and I actually [inaudible] with you, I hadn't even thought that it would fail so I wasn't thinking of it from that perspective I was thinking of it under the assumption that it passed. So to Mr. Homich point, you could keep it in if it were to fail but my question is related to if it passes do you want the protection to stay in also.

Tom Pauls – would it do any harm

James Homich - it would be moot

Sherry Sutphen – it doesn't matter to me from a legal standpoint, I am just asking

James Homich - if the charter amendment passes that puts in all the restrictions that clause becomes moot it becomes irrelevant and it becomes meaningless

Tom Dring – And the charter amendment you're referring to is the City Council charter amendment James Homich – either charter amendment, the charter amendment we voted on that said council is to put all this stuff into it, if that passes then its implemented if it doesn't pass then the Land Development Code as we voted on Land Development Code would then would also be adopted and so one makes the other one moot but that's what we voted on and approved.

Sherry Sutphen – with all due respect there was no vote related to exactly what you would put in because we haven't done that yet because we didn't do that legal review. However it wouldn't make it moot because of the fact that if, the way that those Land Development Regulations are created if someone wanted to change that variance criteria the way its drafted as proposed under Mr. Paul's presentation it would need that variance criteria would have to go to a vote of the people, City Council couldn't just change it under an ordinance.

Tom Pauls- bottom line is again the City Council will make a decision on what this final product is gonna look like and they can make a decision as to whether or not they want to modify that particular section to keep it in or keep it out conditioned upon X, Y, or Z so I don't have a problem with keeping it in and having it move forward in that fashion.

Tom Dring – …to clarify back on the vote on the original petition going to vote and this committee view on that I wanted to clarify that Mr. Homich's motion did not pass that simply means that this committee is being silent on that matter right, as opposed too.

John Tucker - right, that's how I understood it that we are simply being silent, we aren't making a decision one way or another

ORDINANCE NO: 2022-10 (DRAFT)

AN ORDINANCE OF THE CITY OF MOUNT DORA, FLORIDA, PERTAINING TO REVISIONS TO THE CITY OF MOUNT DORA LAND DEVELOPMENT CODE; PROVIDING FOR LEGISLATIVE FINDINGS AND INTENT; PROVIDING FOR AMENDMENTS TO CITY OF MOUNT DORA LAND DEVELOPMENT CODE, CHAPTER II, GENERAL, CHAPTER III ZONING REGULATIONS, AND CHAPTER VIII, DEFINITIONS; PROVIDING FOR THE IMPLEMENTATION OF ADMINISTRATIVE ACTIONS; PROVIDING FOR CODIFICATION AND SCRIVENER'S ERRORS; PROVIDING A SAVINGS CLAUSE; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Florida Statutes, Chapter 166, confers upon a local government, the authority to adopt regulations designed to promote the public health, safety and general welfare of its citizens; and

WHEREAS, pursuant to its home rule powers, the City of Mount Dora may regulate land use matters and design standards within the City limits through the adoption of Land Development regulations; and

WHEREAS, from time to time the City of Mount Dora provides updates and amendments to its Land Development regulations; and

WHEREAS, on September 21 2021, the City adopted Resolution No. 2021-115, which created the Building Height Advisory Committee and on March 17, 2022, following absolute dedication and clear focus to the task at hand, the City of Mount Dora Building Height Advisory Committee recommended various building height regulations to the City Council; and

WHEREAS, based on the report and recommendations of the Building Heights Advisory Committee, on June 7, 2022, the City of Mount Dora adopted Ordinance No. 2022-08, which calls for a proposed amendment to the City's Charter, limiting building height in certain areas with special provisions for variance capabilities, not to exceed 5 additional feet, to be placed on the ballot for consideration by the voters in the City of Mount Dora; and

WHEREAS, in the event the Charter Amendment passes after a vote of the electorate, the City of Mount Dora has determined that certain amendments to its Land Development Code will be necessary, and will advance a legitimate public purpose and promote and protect the health, safety and welfare of the citizens of the City of Mount Dora.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY OF MOUNT DORA, FLORIDA, AS FOLLOWS:

SECTION 1. LEGISLATIVE FINDINGS AND INTENT. The City of Mount Dora has complied with all requirements and procedures of the Florida law in processing this Ordinance. The above recitals are hereby adopted.

SECTION 2. AMENDMENTS TO CITY OF MOUNT DORA LAND DEVELOPMENT CODE, CHAPTER II, GENERAL, CHAPTER III ZONING REGULATIONS, AND CHAPTER VIII, DEFINITIONS. The City of Mount Dora Land Development Code, is hereby revised and amended as follows:

Note: Underlined words constitute additions to existing text, ~~strikethrough~~ constitutes deletions from existing text and asterisks (***) indicate omitted parts which are intended to remain unchanged.

CHAPTER II. – GENERAL

Section 2.5. - Planning and zoning commission.

****

Section 2.5.1 Powers and Duties

****

6. *Variances.* For lands located inside the boundary of the '*Building Height Impact District*', as defined by sub-section 3.5.6.2, applicants shall adhere to the special variance provisions and public hearing procedures. All other variance types, shall meet the provisions of Section 2.5 of this code. The planning and zoning commission shall hear and decide requests for variances from the terms of the zoning regulations where, owing to special conditions, a literal enforcement of the provisions will result in unnecessary and undue hardship upon, and personal to, the applicant therefor, and not surrounding properties. In order to authorize a variance, the commission must find:

***

c. That granting the variance requested will not confer on the applicant any special privilege that is denied ~~by the chapter~~ to other lands, buildings or structures in the same zoning district;

d. That literal interpretation of the provisions would deprive the applicant of rights commonly enjoyed by other properties in the same zoning district under the terms of the chapter and would result in ~~work [incur]~~ unnecessary and undue hardship on the applicant;

***

In granting any variance within their authority, the commission may prescribe appropriate conditions and safeguards, the violation of which shall be deemed a violation of this code. The commission may also prescribe a reasonable time limit within which the action for which the variance was requested shall be begun, completed or both.

***

CHAPTER III. - ZONING REGULATIONS

****

3.4. - Establishment of zoning districts.

****

3.4.5. *PUD Planned Unit Development District:*

****

4. *Site development standards.* Unless modified as provided for herein, the standards of conventional zoning districts and the design standards of this code shall apply. Revised standards may be approved for a PUD project to encourage creative development when the development proposal demonstrates increased protection of natural resources, improved living environment or increased efficiency of service delivery.

***

g. Special restrictions for a proposed PUD's located within the Building Height Impact District: Property located within the Building Height Impact District, as defined in sub-section 3.5.6.2, is subject to the building height limitation of the Building Height Impact District. No PUD may exceed the height restrictions of sub-section 3.5.6.2 of this code. Building and/or structure height maximum shall be 35 feet and within 100 feet of the normal high water control level of Lake Dora, shall be at a maximum of 25 feet within the Building Height Impact District.

3.4.7 *C-2 Downtown Commercial District.*

***

5. *Site development standards:*

***

b. Maximum building heights: 35 feet, and

~~i. Within~~ within 100 feet of the normal high water control level of Lake Dora: 25 feet.

~~ii. Parking garage maximum height: 55 feet and 25 feet within 100 feet of Lake Dora.~~

***

3.4.7-A C-2-A Peripheral Commercial District.

***

5. *Site development standards:*

***

b. Building height maximum: 35 feet and 25 feet within 100 feet of the normal high water control level of Lake Dora.

~~i. Exception: Buildings within 100 feet of Lake Dora shall be at a maximum of 25 feet.~~

~~ii. Parking garage maximum height: 55 feet and 25 feet within 100 feet of Lake Dora.~~

***

3.4.13. *PLI Public Lands and Institutions District.*

***

5. *Site development standards:*

***

b. Maximum building height: 35 feet, and
~~Parking garage maximum height: 55 feet and~~ 25 feet within 100 feet of the normal high water control level of Lake Dora.

***

3.4.16. *MU-1 Mixed Use Traditional and MU-2 Mixed Use Downtown Districts*:

***

7. *Site development standards:* The following requirements shall be observed in all mixed-use developments, except where the requirement is more specifically attributed to horizontal mixed use, or vertical mixed use, as the case may be.

***.

c. *Maximum height* shall be restricted by district as follows:

***

(2) *MU-2:* Building height is limited to 35 feet and cannot exceed 25 feet in height for ~~building~~ buildings that are located within 100 feet of Lake Dora or in any other location in the MU-2 district where surrounding scenic views of Lake Dora cannot be maintained. ~~Parking garage maximum height 55 feet.~~

***

3.5. - Supplemental regulations.

***

3.5.6. *Height.*

1. Building and structure heights for lands located outside the Building Height Impact District may not exceed 35 feet for all zoning districts, except 60 feet within the MU-1 district, 65 feet within the C-3 district, and 100 feet within the WBI-E and WBI-G districts; ~~and maximum 55 height for parking garages within the C-2, C2A~~, and ~~PLI and MU-2 zoning districts~~. Chimneys, water, fire, telecommunication, radio and television towers, church spires, cooling towers, elevator bulkheads, smokestacks, and similar structures, and their necessary mechanical appurtenances may exceed 35 feet, subject to the restrictions herein, and any height limitations placed on such structures by the Federal Aviation Administration. No building, parking garage, or other structure shall exceed 25 feet if such building or structure is to be located within one hundred (100) feet of the normal high water control level of Lake Dora, or in any other location where surrounding scenic views of Lake Dora would be destroyed. Flagpoles may not exceed 45 feet in height in all zoning districts.

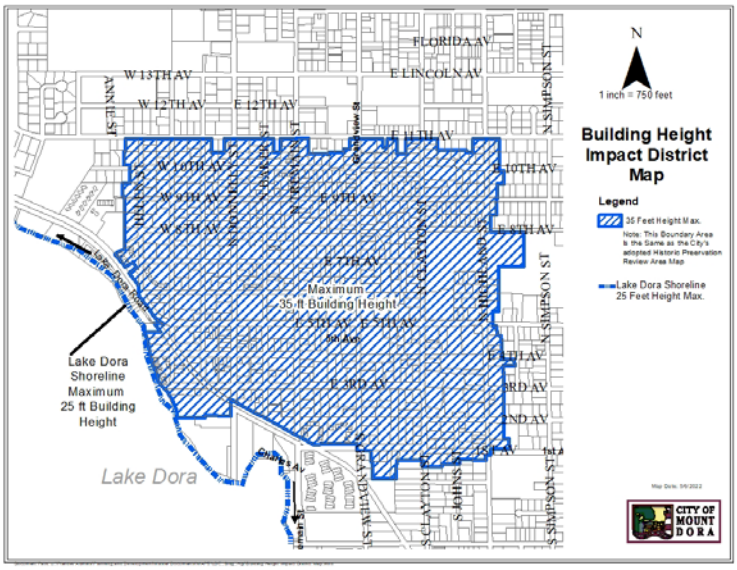
2. Building Height Impact District

   a. The purpose and intent of this section is to help safeguard the cultural heritage, architectural uniqueness and general historic character of the City of Mount Dora, among other objectives as enacted. It accomplishes these purposes by establishing regulatory provisions that regulate unacceptable building and structural heights within the special area designated as the '*Building Height Impact District*' within the map depiction geographically shown below. Further, the purpose of this sub-section is to promote the preservation and appreciation of properties within this district, to contribute to the overall economic health of the downtown area, to reduce adverse environmental impacts, to help ensure that future development and improvements remain consistent with the prevailing architectural character of the designated area and to help protect stable neighborhoods located within and in the vicinity of the *Building Height Impact District*.

   The Building Height Impact District is pursuant to the provisions of the City of Mount Dora Charter, Article VII, Building Heights, Section 32, Limitations, Exceptions, Variances.

   b. Any proposed text or map changes to Section 3.5.6.2 as it relates to the height of buildings and structures within the Building Height Impact District shall not be considered until it has been placed on a clearly worded ballot and decided by a majority vote (meaning at least one more vote over the minimum majority vote) of Mount Dora electorate.

Building Height Impact District Map



c. *Height regulations affecting areas and lands within the Building Height Impact District (see map) specific for two distinct areas along with other provisions are as follows:*

i. The allowable height of buildings and structures located within the City's Historic Preservation Review Area as depicted in the City of Mount Dora Comprehensive Plan 2045, Future Land Use Map Series, Map II-2e, shall not exceed 35 feet; excluding but not limited to chimneys, water, fire, telecommunication, radio and television towers, church spires, cooling towers, elevator bulkheads, smokestacks, and similar structures, and any related necessary mechanical appurtenances. In no such case shall such appurtenance as described herein exceed five (5) feet in height, yielding a maximum building height of 40 feet.

ii. No building or other structure shall exceed 25 feet if such building or structure is to be located within 100 feet of the normal high water control level of Lake Dora. Addition provisions include other location that would visually block 75% or more of surrounding panoramic view of Lake Dora. The maximum height as described herein excludes but not limited to chimneys, water, fire, telecommunication, radio and television towers, church spires, cooling towers, elevator bulkheads, smokestacks, and similar structures, and any related necessary mechanical appurtenances. In no such case shall such appurtenance as described herein exceed five (5) feet in height, yielding a maximum building height of 35 feet.

iii. All building and structures shall adhere to applicable regulatory provisions as required by the Federal Aviation Administration.

iv. Flagpoles may not exceed 45 feet in height.

d. *Variances Building Height Requirements within the 'Building Height Impact District'*. The Planning and Zoning Commission shall provide and forward a recommendation to the City Council for final action.

Following deliberation and public hearings of the proposed height variance request, the Planning and Zoning Commission and City Council shall find that the applicant has provided demonstrable substantial competent evidence that they have met each of the requirements cited below and the failure to meet any one of these items shall result in the Planning and Zoning Commission recommending denial and the City Council shall disapprove the variance application. Variance for such request shall provide an application and related fees of this code. City Council's action for approval shall be by a supermajority vote (meaning at least one more vote over the minimum majority vote). These requirements and variance criteria are as follows:

i. No building or structure shall exceed 40 feet in height located within the City's Historic Preservation Review Area as depicted in the City of Mount Dora Comprehensive Plan 2045, Future Land Use Map Series, Map II-2e, except that no building or structure shall exceed 30 feet in height within the 100 feet of the normal high water control level;
ii. That special conditions and circumstances exist which are peculiar to the land, structure or building involved and which are not applicable to other lands, structures or buildings within otherwise similarly situated properties;
iii. That the special conditions and circumstances have not resulted from and do not result from the actions of the applicant;
iv. That granting the variance requested will not confer on the applicant any special privilege that is denied to other lands, buildings or structures in the same zoning district;
v. That literal interpretation of the provisions would deprive the applicant of rights commonly enjoyed by other similarly situated properties under the terms of the chapter and would effect an unnecessary and undue hardship on the applicant to the extent that the absence of the requested variance would essentially constitute a taking of the property;
vi. That the variance, if granted, would result in the minimum necessary impact in order to make possible the reasonable use of the land, building or structure;
vii. That the grant of the variance will be in harmony with the general intent and purpose of this code and the comprehensive plan, will not in any way be detrimental to the subject property, the surrounding neighborhood or the public health, safety or welfare. The Planning and Zoning Commission may recommend and City Council may prescribe appropriate conditions to further protect the public, health, safety and welfare;
viii. Shall provide enhanced architectural standards, elements, features and other design standards; and
ix. Additional building floors, improvements, or vertical expansions to existing structures are not allowed.

e. The following public hearing requirements for building or structural height variance applications within the 'Building Height Impact District' shall be as follows:

i. The Planning and Zoning Commission shall hold at least one public hearing with proper public notice of this sub-section and shall provide their recommendation for either approval, approval with conditions, or denial to the City Council for consideration and final action.

ii. Following receipt of the planning and zoning commission recommendation, the city council shall hold a public hearing with proper public notice before taking final action on the variance application under review.

iii. In the city council public hearing where final action is taken, any approval or approval with condition shall be achieved with at least a supermajority vote (at least one more vote beyond a simple majority) of voting members of council present during these proceedings.

f. Public Notice for Publication and Posting Requirements:

i. The City shall be required publish notice of a public hearing noticed on a variance application to be prepared and published in a newspaper having general circulation in the City within 10 days of scheduled Planning and Zoning Commission or City Council public hearings. Notice shall be published in the non-legal (i.e display advertisement) section of the newspaper. Ad size shall be minimum two columns wide.

ii. Owners of real property within 300 feet of the land subject to an application shall be mailed via United States Postal Service a notice of the variance request; and the owner names and addresses used to mail required notice to owners of neighboring property shall be those shown on the current ad valorem tax rolls of Lake County.

iii. Public Notice Requirements (Posted Sign or Signs): The City shall be required to post notice of a minimum size 8-1/2 inches by 17 inches poster size on the land subject to the application for variance, at a location adjacent to each abutting street that is clearly visible to traffic along the street. If no part of the subject land abuts a street, then the notice shall be posted in the right-of-way of the nearest street, and in a manner consistent with the intent of the provisions of this code.

iv. Posted notice shall be in a manner established by the Planning Director.

v. The content of required public notice shall, at a minimum include the following: Identify the application; describe the nature and scope of the proposed variance request or action; and identify the date, time, and location of the public hearing(s) being noticed.

***

CHAPTER VIII. - DEFINITIONS

The following definitions shall apply throughout this code. Words not specifically defined or otherwise explained within this code shall be as defined in a standard dictionary or as understood by the development review coordinator. Definitions specifically related to signage shall be found within Chapter VI, Design Standards, Section 6.7, Signs.

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Variance: As it relates to the Land Development Code ~~used in connection with the provisions of this act dealing with zoning~~, a variance is a relaxation ~~of the terms~~ of ~~the~~ zoning ordinance dimensional requirements ~~and~~ where such variance will not be contrary to the public interest and where, owing to conditions peculiar to the property and not the result of the actions of the applicant, a literal enforcement of the ordinance would result in unnecessary and undue hardship. As used herein ~~in this act~~, a variance is authorized only for ~~height,~~ area, dimensions, and size of buildings, structures or size of yards and open spaces. Establishment or expansion of a use otherwise prohibited shall not be allowed by variance, nor shall a variance be granted because of the presence of nonconformities in the zoning district or classification or adjoining zoning districts or classifications. The provisions of the zoning regulations carry the presumption of correctness and variances shall not be the instrument used to dilute this fundamental tenant of land use regulation.

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SECTION 3. IMPLEMENTATION OF ADMINISTRATIVE ACTIONS. The City Manager is hereby authorized and directed to take such actions as deemed necessary and appropriate in order to implement the provisions of this Ordinance. The City Manager may, as deemed appropriate, necessary and convenient, delegate the powers of implementation as herein set forth to such City employees as deemed prudent.

SECTION 4. CODIFICATION AND SCRIVENER'S ERRORS.

A. The revisions to City of Mount Dora Land Development Code, as set forth in Section 2 above, shall be codified in the City of Mount Dora Code of Ordinances.

B. The sections, divisions and provisions of this Ordinance may be renumbered or re-lettered as deemed appropriate by the codifier of the City of Mount Dora Land Development.

C. Typographical errors and other matters of a similar nature that do not affect the intent of this Ordinance, as determined by the City Clerk and City Attorney, may be corrected with the endorsement of the City Manager, or designee, without the need for a public hearing.

SECTION 5. SAVINGS CLAUSE. All prior actions of the City pertaining to the amendments to the City of Mount Dora Land Development Code as set forth herein, as well as any and all other applicable matters, are hereby ratified and affirmed consistent with the provisions of this Ordinance.

INFORMATIONAL

ORDINANCE NO. 2022-08

AN ORDINANCE OF THE CITY OF MOUNT DORA, FLORIDA PERTAINING TO A CHARTER AMENDMENT FOR THE 2022 BALLOT; PROVIDING FOR LEGISLATIVE FINDINGS AND INTENT; PROVIDING FOR THE IMPLEMENTATION OF ADMISTRATIVE ACTIONS; PROVIDING PROPOSED CHARTER AMENDMENT WITH TITLE AND BALLOT QUESTION; PROVIDING FOR SCRIVENER'S ERRORS; PROVIDING A SAVINGS CLAUSE; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE AND CODIFICATION.

WHEREAS, Florida Statutes, Section 166.031, provides that the governing body of a municipality may, by ordinance, submit to the electors of said municipality, proposed amendments to its charter; and

WHEREAS, pursuant to the City of Mount Dora Charter, the City Council shall cause the Charter to be reviewed, no less than once every five years; however, may cause amendment to the same at any time deemed appropriate; and

WHEREAS, on September 21 2021, the City adopted Resolution No. 2021-115, which created the Building Height Advisory Committee; and

WHEREAS, on April 5, 2022, following absolute dedication and clear focus to the task at hand, the City of Mount Dora Building Height Advisory Committee delivered its report and recommendations to City Council; and

WHEREAS, based on the report and recommendations of the Building Heights Advisory Committee, the City of Mount Dora has determined that it is appropriate to propose revisions to the City's Charter; and

WHEREAS, the City of Mount Dora has determined that it is in the best interest of its citizens to submit the Charter amendment proposed herein to the registered voters of Mount Dora at the general election to be held on November 8, 2022.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MOUNT DORA, FLORIDA, AS FOLLOWS:

SECTION 1. LEGISLATIVE FINDINGS AND INTENT.

The City of Mount Dora has complied with all requirements and procedures of the Florida law in processing this Ordinance. The above recitals are hereby adopted.

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SECTION 2. IMPLEMENTING ADMINISTRATIVE ACTIONS.

A. The City Manager is hereby authorized and directed to take such actions as deemed necessary and appropriate in order to implement the provisions of this Ordinance. The City Manager may, as deemed appropriate, necessary and convenient, delegate the powers of implementation as herein set forth to such City employees as deemed prudent.

B. The City Clerk, as the Filing Officer for the City, is hereby directed to coordinate with the Lake County Supervisor of Elections, as necessary, to ensure that all advertising, translation and notice requirements are met to conduct the referendum election called for in Section 3 hereof.

SECTION 3. PROPOSED CHARTER AMENDMENTS WITH TITLE AND BALLOT QUESTION.

The amendment to the City of Mount Dora Charter as set forth hereafter shall be proposed to the registered voters of Mount Dora by way of the title and ballot question specified at the general election to be held on November 8, 2022. Underlined words constitute additions.

ARTICLE VII. BUILDING HEIGHTS

Section 32. – Limitations, Exceptions, Variances

a. *Building Height Impact District.* The Building Height Impact District as used herein shall mean the City's Historic Preservation Review Area and the lands within 100 feet of the normal high-water control level of Lake Dora, as depicted in the City of Mount Dora Comprehensive Plan 2045, Future Land Use Map Series, Map II-2e, as of the effective date of this Article,

b. As of the effective date of this Article, no building or other structure shall be constructed, erected, situated or located, in the Building Height Impact District, which exceeds thirty-five (35) feet in height, excluding structural appurtenances as set forth in the City of Mount Dora Land Development Code and measured pursuant to the Definitions established by the City of Mount Dora Land Development Code.

c. As of the effective date of this Article, no building or other structure shall be constructed, erected, situated or located, within one hundred (100) feet of the normal high water control level of Lake Dora, which exceeds twenty-five (25) feet in height, excluding structural appurtenances as set forth in the City of Mount Dora Land Development Code and measured pursuant to the Definitions established by the City of Mount Dora Land Development Code.

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d. Any legally non-conforming building or structure, existing as of the effective date of this Article, shall be exempt from the provisions of this Article and in the event of destruction of any such legally non-conforming building or structure, in whole or in part, said legally non-conforming building or structure may be rebuilt to a height not exceeding the height of the same at the time of destruction, subject to all applicable City codes, rules and regulations which are in effect at the time of such reconstruction.

e. A Building Height Impact District Variance of up to five (5) additional feet may be pursued from the building height limitations set forth herein by way of the process set forth in the City of Mount Dora Land Development Code. The Building Height Impact District Variance process as set forth in the City of Mount Dora Land Development Code on the effective date of this Article may only be revised if the proposed revision is submitted to the electors during a general election and approved by majority vote.

TITLE:
Establishing City of Mount Dora Charter, Article VII, Building Heights, Section 32, Limitations, Exceptions, Variances.

QUESTION:
Vote YES for an Amendment to the City Charter which limits building heights to 35 feet in the Building Height Impact District, and to 25 feet within 100 feet of the high-water control level of Lake Dora, excluding certain structural appurtenances and providing exceptions for existing legally non-conforming structures and variance capabilities, not to exceed 5 additional feet or vote NO if you do not want a City Charter Amendment which limits building heights.

YES ___
NO ___

SECTION 4. SCRIVENER'S ERRORS.
Typographical errors and other matters of a similar nature that do not affect the intent of this Ordinance, as determined by the City Clerk and City Attorney, may be corrected with the endorsement of the City Manager, or designee, without the need for a public hearing.

SECTION 5. SAVINGS CLAUSE.
All prior actions of the City pertaining to amending the City Charter, as set forth herein, are hereby ratified and affirmed consistent with the provisions of this Ordinance.

SECTION 6. CONFLICTS.
All ordinances or part of ordinances in conflict with this Ordinance are hereby repealed; provided, however, that any code or ordinance that provides for an alternative process to effectuate the general purposes of this Ordinance shall not be deemed a conflicting code or ordinance.

SECTION 7. SEVERABILITY.
If any section, sentence, phrase, word, or portion of this Ordinance is determined to be invalid, unlawful or unconstitutional, said determination shall not be held to invalidate or impair

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the validity, force or effect of any other section, sentence, phrase, word, or portion of this Ordinance not otherwise determined to be invalid, unlawful, or unconstitutional.

SECTION 8. EFFECTIVE DATE AND CODIFICATION.

A. This Ordinance shall become effective immediately upon enactment by the City Council and recordation in the Public Records of Lake County, Florida.

B. The Charter amendment proposed in Section 3 of this Ordinance shall become effective if a majority of the electors, voting in the general election on November 8, 2022, vote in favor of such amendment. Thereafter, the approved amendment shall be codified into the City of Mount Dora Code of Ordinances and be renumbered or re-lettered as deemed appropriate by the codifier. The City Clerk shall file the revised Charter with the Department of State.

FIRST READING: **May 17, 2022**

SECOND READING: **June 7, 2022**

PASSED AND ADOPTED this 7th day of June, 2022.

CRISSY STILE
MAYOR, City of Mount Dora, Florida

ATTEST:

JESSICA BURNHAM
CITY CLERK

For the use and reliance of the City of Mount Dora only. Approved as to form and legality.

Sherry G. Sutphen
City Attorney

SECTION 6. **CONFLICTS.** All ordinances or part of ordinances in conflict with this Ordinance are hereby repealed; provided, however, that any code or ordinance that provides for an alternative process to effectuate the general purposes of this Ordinance shall not be deemed a conflicting code or ordinance.

SECTION 7. **SEVERABILITY.** If any section, sentence, phrase, word, or portion of this Ordinance is determined to be invalid, unlawful or unconstitutional, said determination shall not be held to invalidate or impair the validity, force or effect of any other section, sentence, phrase, word, or portion of this Ordinance not otherwise determined to be invalid, unlawful, or unconstitutional.

SECTION 8. **EFFECTIVE DATE.** This Ordinance shall become effective if a majority of the electors, voting in the general election on November 8, 2022, vote in favor of such amendment enacted by Ordinance No. 2022-08 on June 7, 2022. Thereafter, the approved amendment shall be codified into the City of Mount Dora Land Development Code and be renumbered or re-lettered as deemed appropriate by the codifier.

PASSED AND ADOPTED this ____ day of ____, 2022.

F**IRST READING:** **_____**

SECOND READING: **_____**

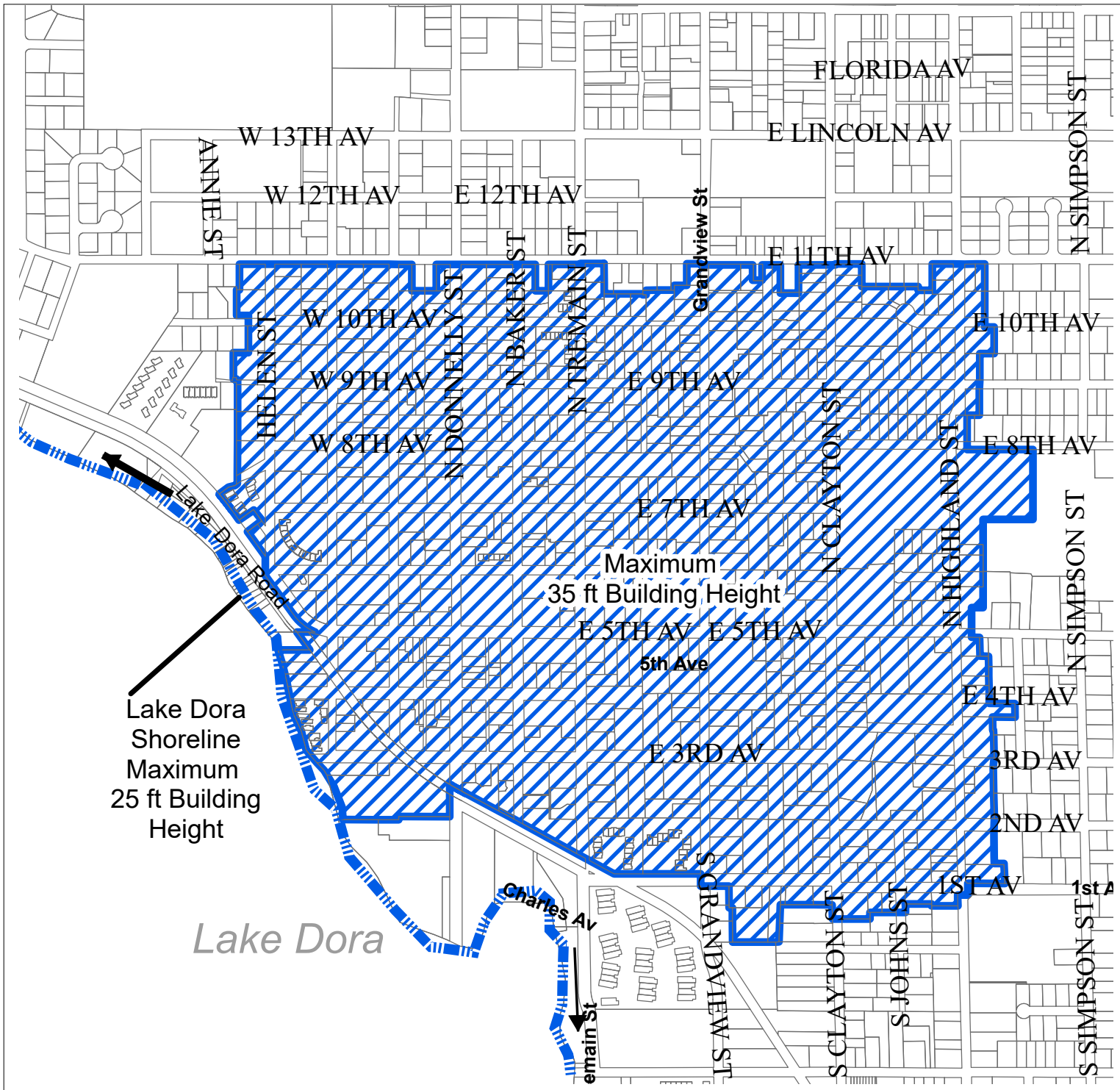
_____
CRISSY STILE
MAYOR of the City of Mount Dora, Florida

ATTEST:

_____
Jessica Burnham
City Clerk

For the use and reliance of City of Mount Dora only.
Approved as to form and legality.

_____
Sherry G. Sutphen
City Attorney



Document Path: U:\Plandev Admins\Planning and Development\Master Documents\MAPS\LDC_Bldg_Hgt\Building Height Impact District Map.mxd

DRAFT .V3 - March 17, 2022

Summary of Key Revisions
To the Mount Dora Land Development Code

As recommended by the
Mount Dora Building Height Advisory Committee

The goal of this recommended Land Development Code text amendment is to establish clear and effective zoning variance provisions designed to limit the maximum height of buildings and structures within the historic downtown area of Mount Dora.

Key Revisions:

1. Create a new 'Building Height Impact District' map

2. Provide a meaningful 'Purpose and Intent' statement to establish a solid foundation upon which the new variance provisions are based.

3. The 'by right' maximum height of a building, structure (including parking garages), and appurtenance located within the Building Height Impact District is 35 feet, except this maximum height is 25 feet within 100' along Lake Dora.

4. The tests for variance applications within the District have been strengthened considerably. All variance applications shall be prohibited for any kind of building, structure or appurtenance exceeding a height of 40 feet within the District or a height of 30 feet within 100 feet along Lake Dora.

5. The revised variance test clarifies the disqualification of self-imposed circumstances and augments the requirement to satisfy any claim of undue hardship.

6. Each and every one of the nine variance tests must be fully met or the application shall be recommended for denial by the Planning and Zoning Commission and shall be denied by the City Council.

7. Even if all variance tests are met completely, the application must be approved by a supermajority vote of City Council, irrespective of the number of voting members, or it shall fail and be denied.

8. Any proposed text or map changes to Section 3.5.6.2 or Section 3.4 as it relates to the height of buildings, structures, or appurtenances within the Building Height Impact District shall not be considered until it has been placed on a clearly worded ballot and decided by a majority vote of Mount Dora electorate.

9. The existing Land Development Code provisions that allow any parking garage heights up to 55 feet within the District have been eliminated. This provision affects all properties located in the District including, but not limited to, the following zoning classifications:
    a. PUD Planned Unit Development
    b. C-2 Downtown Commercial
    c. C-2A Peripheral Commercial
    d. PLI Public Lands and Institutions
    e. MU-2 Mixed Use Downtown

10. While certain zoning classifications are located both inside and outside the Building Height Impact District, the recommended LDC revisions ensure regulatory consistency as may be applied to such properties.

11. Public notification requirements including newspaper publications, postal mailings and posted signs are more clearly described.

12. Provides additional clarity regarding the definition of 'variance' and adds text emphasizing a key tenant of adopted zoning regulations – the presumption of correctness.

13. No substantive changes have been made to the Land Development Code regarding variance provisions affecting properties located outside the Building Height Impact District.