



AGENDA
PLANNING COMMISSION
CITY OF PORT ORANGE

Meeting Date: Thursday, October 26, 2017

Time: 5:30 PM

Type of Meeting: Regular

Location: Council Chambers
City Hall, 1000 City Center Circle

A. CALL TO ORDER

1. Pledge of Allegiance
2. Silent Invocation
3. Roll Call

B. DISCUSSION/ACTION

4. Consideration of Minutes
5. Case No. 17-50000008
MODIFICATION TO AN APPROVED DEVELOPMENT ORDER/KING'S LANDING
PHASE 1
East side of Hensel Road, between East Hensel Drive and Hills Boulevard

A proposal by the applicant to modify the previously approved Subdivision Plat and Plans for Phase 1 of the King's Landing Subdivision to include an additional 52 single-family lots (17-one-acre lots and 35 – 20,000 square-foot lots), along with the previously approved 19 one-acre lots and tracts of land for common area and preservation of specimen trees. The applicant is also requesting a subdivision variance to allow the subdivision to be developed without extending Forest Troll Drive and Westport Drive into the proposed subdivision. The modified Subdivision Plat and Plans will consist of 71 single-family lots (36-one-acre lots and 35 – 20,000 square-foot lots) on +/- 82.2 acres.

Staff Contact: Tim Burman (386) 506-5675/tburman@port-orange.org

6. Case No. 17-50000005
SUBDIVISION REPLAT AND PLANS/WESTPORT RESERVE PHASE 3
South side of Town West Boulevard, east of Tomoka Farms Road

A proposal by the applicant to replat a portion of Tracts F and H (+/- 74.7 acres) of the Westport Reserve subdivision plat into 115 single-family lots, along with associated subdivision improvements.

Staff Contact: Gwen Perney (386) 506-5673/gperney@port-orange.org

7. Case No. 17-50000006
SUBDIVISION PLAT AND PLANS/WESTPORT RESERVE PHASE 4
North side of Town West Boulevard, east of Tomoka Farms Road

A proposal by the applicant to subdivide +/- 15.4 acres into 78 single-family lots as Phase 4 of the Westport Reserve subdivision, along with tracts of land for common area and stormwater retention.

Staff Contact: Gwen Perney (386) 506-5673/gperney@port-orange.org

C. OTHER BUSINESS

8. Commissioner Comments
9. Staff Comments

D. PUBLIC COMMENTS

E. ADJOURNMENT

ANY PERSON WHO DECIDES TO APPEAL ANY DECISION MADE BY THE **PLANNING COMMISSION** WILL NEED A RECORD OF THE PROCEEDINGS, AND FOR SUCH PURPOSE HE OR SHE MAY NEED TO ENSURE AT HIS OR HER OWN EXPENSE FOR THE TAKING AND PREPARATION OF A VERBATIM RECORD OF ALL TESTIMONY AND EVIDENCE OF THE PROCEEDINGS UPON WHICH THE APPEAL IS TO BE BASED. NOTE: IF YOU ARE A PERSON WITH A DISABILITY WHO NEEDS AN ACCOMMODATION IN ORDER TO PARTICIPATE IN THIS PROCEEDING, YOU ARE ENTITLED, AT NO COST TO YOU, TO THE PROVISION OF CERTAIN ASSISTANCE. PLEASE CONTACT THE CITY CLERK FOR THE CITY OF PORT ORANGE, 1000 CITY CENTER CIRCLE, PORT ORANGE, FLORIDA 32129, TELEPHONE NUMBER 386-506-5563, CITYCLERK@PORT-ORANGE.ORG, AS FAR IN ADVANCE AS POSSIBLE, BUT PREFERABLY WITHIN 2 WORKING DAYS OF YOUR RECEIPT OF THIS NOTICE OR 5 DAYS PRIOR TO THE MEETING DATE. IF YOU ARE HEARING OR VOICE IMPAIRED, CONTACT THE RELAY OPERATOR AT 7-1-1 or 1-800-8771. UPON REQUEST BY A QUALIFIED INDIVIDUAL WITH A DISABILITY, THIS DOCUMENT WILL BE MADE AVAILABLE IN AN ALTERNATE FORMAT. IF YOU NEED TO REQUEST THIS DOCUMENT IN AN ALTERNATE FORMAT, PLEASE CONTACT THE CITY CLERK WHOSE CONTACT INFORMATION IS PROVIDED ABOVE.

PLANNING COMMISSION MEETING MINUTES
CITY OF PORT ORANGE
1000 CITY CENTER CIRCLE
COUNCIL CHAMBERS
SEPTEMBER 28, 2017

THE REGULAR MEETING OF THE PLANNING COMMISSION of the City of Port Orange was called to order by Chairman Lance Green at 5:30 p.m.

Pledge of Allegiance

Silent Prayer

ROLL CALL: Present: Lance Green
John Junco
Newton White
Bo Bofamy
Thomas Jordan
Maria Mills-Benat

Absent: Mike Arminio

Also Present: Matthew Jones, Deputy City Attorney
Michelle Cusella, City Clerk's Office

B. DISCUSSION/ACTION

4. Consideration of Minutes

Motion to approve the August 24, 2017 Minutes as presented was made by Commissioner Junco, and Seconded by Commissioner Mills-Benat. Motion carried unanimously by roll call vote.

5. Case No. 17-60000002

ADMINISTRATIVE REZONING/3518 NOVA ROAD

A request to rezone +/- 1 acre from Multi-Family Residential (R-3M) to Community Commercial (CC).

Staff Contact: Penelope Cruz (386) 506-5671/pcruz@port-orange.org

Penelope Cruz, Principal Planner, presented an overview of the proposed rezoning.

Motion to approve was made by Commissioner Mills-Benat, and Seconded by Vice Chairman White. Motion carried unanimously by roll call vote.

6. Case No. 17- 25000003

LDC TEXT AMENDMENT/CHAPTER 14 AND 20 - RIDGEWOOD CORRIDOR
IMPROVEMENTS

Amendment to Chapters 14 and 20 of the Land Development Code (LDC) related to architectural requirements for the Port Orange Town Center and economic development incentives. The proposed amendments would implement strategies from the Ridgewood Corridor Plan to remove the architecture limitation of only the Florida Vernacular architectural style and update the economic incentive requirements to encourage redevelopment along the Ridgewood Corridor.

Staff Contact: Penelope Cruz (386) 506-5671/pcruz@port-orange.org

Ms. Cruz presented an overview of the proposed amendment.

Commissioners had questions regarding the live/works units.

Ms. Cruz stated they have had requests in the past which had to be denied, in which the business owners wanted the manager of the business to live on property instead of the actual owner.

*Motion to approve was made by Vice Chairman
White, and Seconded by Commissioner Jordan.
Motion carried unanimously by roll call vote.*

C. OTHER BUSINESS

7. Commissioner Comments –

Commissioner Junco wanted to remind citizens about Family Days over the weekend as well as applauding the City for all their efforts in debris pickup.

Chairman Green asked staff if the project for the storage unit at Williamson Boulevard and Taylor Road is still moving along.

Tim Burman, Planning Manager, advised the project is still out there, and they were working with the county to have more access points to the property.

8. Staff Comments –

Mr. Burman asked the Commissioners to consider rescheduling the December 21st meeting, to the prior week December 14, 2017 to help with holiday scheduling.

The Commissioners will check their schedules, and verify that the proposed date will work with everyone.

D. PUBLIC COMMENTS There were none.

E. ADJOURNMENT 5:51 p.m.

Chairman Lance Green



STAFF REPORT

SUBDIVISION PLAT & PLANS /KING'S LANDING & SUBDIVISION VARIANCE

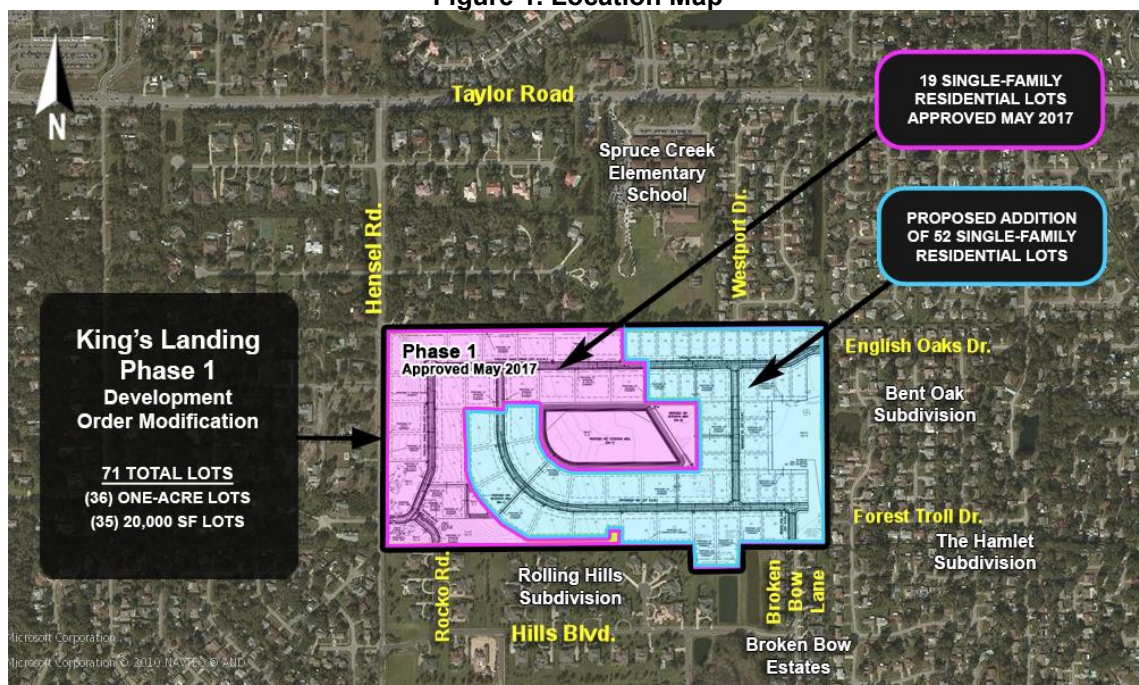
CASE NO. 17-50000008

REQUEST:	Modification to the Phase 1 King's Landing Subdivision Plat and Plans
LOCATION:	East side of Hensel Road, between East Hensel Hill Drive and Hills Boulevard (See Figure 1)
OWNER/APPLICANT:	Coventry Partners, LLC
PLANNING COMMISSION DATE:	October 26, 2017
STAFF RECOMMENDATION:	Approval
STAFF CONTACT:	Tim Burman, Planning Manager (386) 506-5675

DISCUSSION:

The applicant requests to modify the previously approved Subdivision Plat and Plans for Phase 1 of the King's Landing Subdivision to include an additional 52 single-family lots (17-one-acre lots and 35 - 20,000 square-foot lots), along with the previously approved 19 one-acre lots (May 16, 2017) and tracts of land for common area and preservation of specimen trees. The applicant has also requested a subdivision variance to allow the subdivision to be developed without extending Forest Troll Drive and Westport Drive into the proposed King's Landing subdivision. If the Subdivision modification is approved, the Subdivision Plat and Plans for Phase 1 of the King's Landing Subdivision will consist of 71 single-family lots (36-one-acre lots and 35 - 20,000 square-foot lots) on +/- 82.2 acres (Exhibit A and B).

Figure 1. Location Map



The +/- 82.2-acre subject property and 71 single-family lots (36-one-acre lots and 35 - 20,000 square-foot lots) are currently designated *Rural Residential* (RR) and *R-20 Single-Family Residential* (R-20SF) on the City's Zoning Map (Figure 2) and designated *Rural Transition* (0-2 units/acre) and *Suburban Residential* (2-4 units/acre) on the City's Future Land Use Map (Figure 3).

Figure 2. Current Zoning Map and Proposed Subdivision Layout

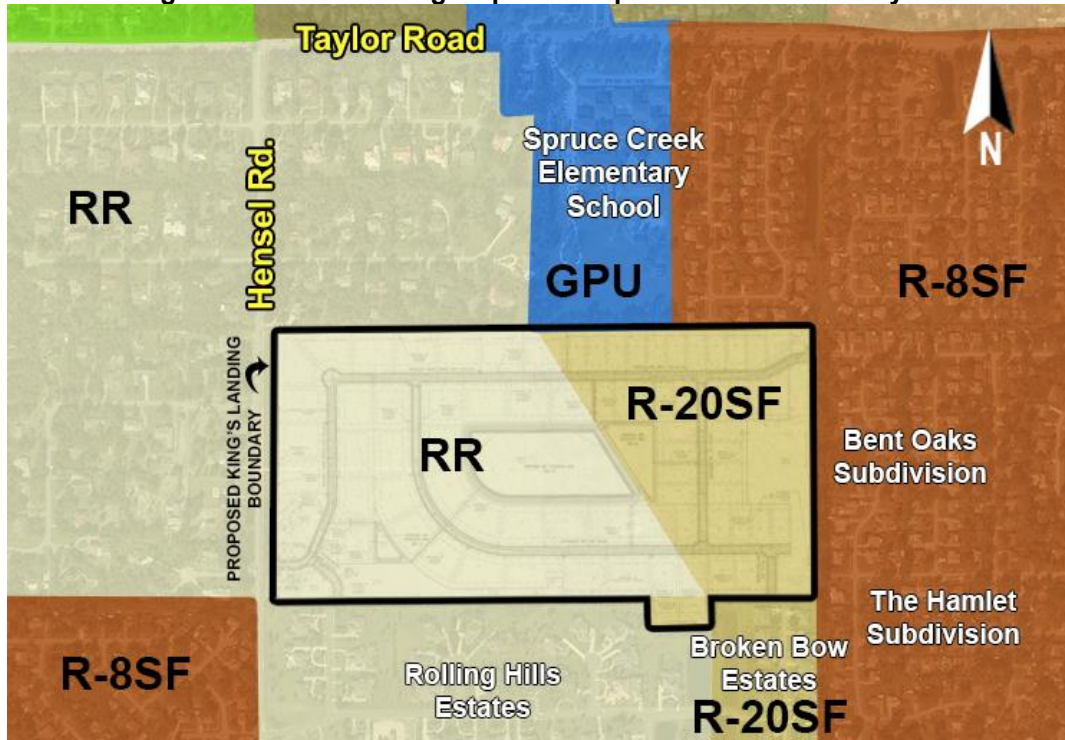
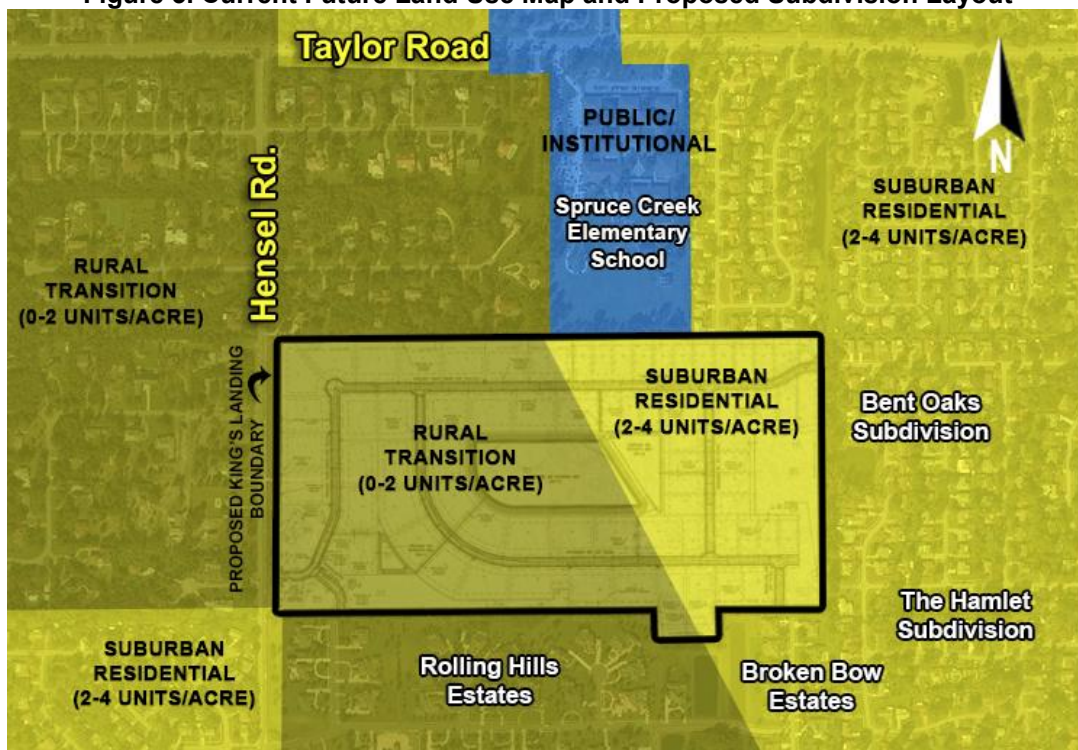


Figure 3. Current Future Land Use Map and Proposed Subdivision Layout



According to the City's Land Development Code (LDC), the plat and associated subdivision plans are to be designed according to the subdivision requirements in the LDC for stormwater, streetlights, roadways and sidewalks, utilities, easements, lot dimensions, roadway landscape buffers, and tree protection. The plat and subdivision plans (Exhibit A and B) have been designed according to the requirements of the City's LDC and the dimensional standards outlined in the RR and R-20SF zoning districts of the LDC (Table 1).

Table 1: Developmental Standards for the RR Zoning District

LOT DEVELOPMENT STANDARDS	RR ZONING DISTRICT	R-20SF ZONING DISTRICT
Minimum lot size	1 acre or 43,560 SF	20,000 SF
Minimum lot width (ft.)	100'	100'
Front setback (ft.)	40'	30'
Side setback (ft.)	15'	10'
Rear setback (ft.)	30'	25'
Maximum building coverage	20%	30%
Minimum open space	60%	60%
Maximum building height (ft.)	35'	35'
Minimum floor area (SF)	1,400 SF	1,400 SF

The following subdivision improvements will be constructed before or simultaneously with the development of the first lot:

- Access onto Hensel Road and roadway connections to Rocko Road, English Oaks Drive, and Broken Bow Lane;
- Common Areas with Tree Conservation Easements for specimen trees being saved;
- Water, sewer, and reclaimed water infrastructure;
- Public local streets (Rocko Road, English Oaks Drive, Highgarden Way, Broken Bow Lane, and Winterfell Drive) within the subdivision;
- Stormwater drainage infrastructure;
- Sidewalks and streetlights along Rocko Road, English Oaks Drive, Broken Bow Lane, Highgarden Way, and Winterfell Drive;
- 10' landscape buffer with a 6' tall PVC white fence along Hensel Road; and
- Entry signage and landscaping at the Hensel Road entrance.

CONCURRENCY REVIEW:

According to the Land Development Code (LDC), public facilities and services, such as roads, public infrastructure, schools, and recreational facilities, are to be reviewed to verify sufficient capacity exists above the adopted level-of-service (LOS) to accommodate the impacts for all proposed residential subdivision.

Public facilities and services are currently available to serve the proposed 71 single-family lots (36-one-acre lots and 35 - 20,000 square-foot lots) on +/- 82.2 acres. The following discussion summarizes the impacts the proposed 71 single-family lots will have on the public facilities and services.

Table 2 - Infrastructure Impact Assessment for 71 Lots

DEVELOPMENT VARIABLE	IMPACTS
Population ¹	160
A.M./P.M./Daily Peak Hour Trips ²	58/72/676 trips
Sanitary Sewer (gallons per day) ³	11,360 gallons
Potable Water (gallons per day) ⁴	12,780 gallons
Solid Waste (lbs. Per day) ⁵	513 lbs.
Stormwater Drainage ⁶	See Note
Recreation & Open Space ⁷ • Parkland • Ball Fields • Basketball Courts • Multipurpose Fields • Tennis Courts • Neighborhood Centers	0.30 acres 0.009 fields 0.01 courts 0.01 fields 0.01 courts 0.0003 centers

Notes:

1. **Population:** 2.25 persons per household (per 2010 Census)
2. **Transportation:** 0.81 AM peak hour trips per unit; 1.02 PM peak hour trips per unit; 9.52 daily trips per unit; Single-family (210), ITE Trip Generation Manual, 9th Edition
3. **Sanitary Sewer:** 160 gallons per day per Equivalent Residential Unit
4. **Potable Water:** 180 gallons per day per Equivalent Residential Unit
5. **Solid Waste:** 3.21 pounds per person per day
6. **Stormwater Drainage:** LOS standard = 25 year, 24-hour event. Drainage system will be designed to meet the requirements of the Land Development Code.
7. **Rec. & Open Space:**
 - Parkland: 7 acres per 1,000 persons (0.007 acres/person)
 - Ball Fields: 1 field per 5,000 persons (0.0002 ball fields/person)
 - Basketball Courts: 1 court per 4,000 persons (0.00025 basketball courts/person)
 - Multipurpose Fields: 1 field per 3,500 persons (0.0002857 multipurpose fields/person)
 - Tennis Courts: 1 court per 4,000 persons (0.00025 tennis courts/person)
 - Neighborhood Centers: 1 facility per 15,000 persons (0.0000666 neighborhood centers/person)

Water, Sewer, Reclaimed Water:

The City has available sanitary sewer and potable water capacity to accommodate the proposed 71 lots. The City's adopted level-of-service (LOS) standard for sanitary sewer is 160 gallons per day per single-family house and for potable water is 180 per day per single-family household.

The proposed 71 lots will be served by potable water, sanitary sewer, and reclaimed water. Potable water and reclaimed water lines are available along Hensel Road and connections will be at the intersection of Hensel Road and English Oaks Drive. Sanitary sewer connection will be where English Oaks Drive abuts the east boundary line of the subject

property. The developer will construct potable water, sanitary sewer, and reclaimed water lines throughout the proposed subdivision in accordance with the utility plan for this project. All lots will be provided with stub-outs for utilities.

Stormwater Drainage:

The drainage areas shown on the plans will provide the required stormwater drainage for the entire +/- 82.2-acre property. The design and size of the stormwater system complies with the stormwater requirements in the City's Land Development Code and the St. Johns River Water Management District (SJRWMD) Environmental Resource Permit (ERP) for a site that discharges stormwater to the Spruce Creek basin. The State of Florida classifies Spruce Creek as an Impaired Water Body and restricts the amount of Nitrogen and Phosphorus that can be discharged. The proposed drainage system consists of two (2) dry pre-treatment retention areas for the removal of Nitrogen and Phosphorus from the stormwater pollutant prior to going into the wet detention pond. Eventually the stormwater from the wet detention pond is discharged into a series of pipes, swales, canals, and ponds and eventually enters into Spruce Creek.

Figure 4. Stormwater Drainage



The City's adopted level-of-service standard for stormwater drainage requires that all new retention/detention facilities be able to treat and convey the runoff from the 25-year, 24-hour storm event without causing flooding or pollution of receiving water bodies. There must be no net loss of stormwater retention function as a result of development; therefore, the subdivision property must have the same ability to store and discharge water after development as it does before development occurs. In addition, the post-development runoff rates must be less than the pre-development runoff rates.

According to the project engineer, it is anticipated that the usable fill dirt removed from the ponds will be used to bring the grade of the Phase 1 site up to comply with the City and SJRWd stormwater requirements. If there is additional usable fill not needed for Phase 1 the developer will have it removed from the site.

Recreation Facilities:

The City's adopted level-of-service for recreational facilities includes acreage of parkland, and number of ball fields, basketball courts, multi-purpose fields, tennis courts, and neighborhood centers. According to the City's 2016 Concurrency Management Report, the City is not deficient in any of the recreational facilities categories and there are sufficient facilities to support the anticipated 160 people from the proposed 71 lots.

School Capacity:

The Volusia County School District determined that the adopted level of service will be met and capacity exists in the schools for the estimated students to be generated by the proposed subdivision. According to the School Concurrency letter prepared by Volusia County Schools, the proposed 71 lots could generate six (6) full time students (Exhibit C).

Transportation:

According to the King's Landing Traffic Impact Analysis (TIA) prepared by Lassiter Transportation Group, Inc., the 71 single-family homes are expected to generate 58 AM peak-hour trips, 72 PM peak-hour trips, and 676 daily trips. The TIA indicates that all roadway segments and intersections identified in the TIA study area will operate within the adopted level-of-service standards with the traffic generated from the 71-single-family home subdivision.

Consistency with the Comprehensive Plan:

The +/- 82.2-acre subject property is designated *Rural Transition* (0-2 units/acre) and *Suburban Residential* (2-4 units/acre) on the City's Future Land Use Map. As shown on Exhibit B, the majority of the +/- 82.2-acre property has a Future Land Use (FLU) designation of *Rural Transition* (0-2 units/acre).

- The 36-one-acre lots are proposed to be developed on the west side of the +/- 82.2 area property where the Future Land Use designation is *Rural Transition* (0-2 units/acre). Specifically, the Comprehensive Plan states that the *Rural Transition* category includes rural-scale or large-lot (usually 1 to 2 acres) residential development situated between Agricultural lands and areas of higher density/intensity. The residential development is limited to no more than two units per acre.
- The 35 - 20,000 square-foot lots are proposed to be developed on the east side of the +/- 82.2 area property where the Future Land Use designation is *Suburban Residential* (2-4 units/acre). Specifically, the Comprehensive Plan states that the *Suburban Residential* category includes residential development on lots one quarter-acre in size. The residential development is limited to no more than four units per acre.

The development of the proposed 71 single-family lots is consistent with the intent of the FLU designations and permitted uses in the RR and R-20SF zoning districts. The density for this phase is 0.86 residential units per acre.

SUBDIVISION VARIANCE

The applicant has requested a subdivision variance to allow this phase to be developed without extending an existing street stub-outs (Forest Troll Drive and Westport Drive) into the proposed subdivision. The variance may be granted by the City Council, upon recommendation of the Planning Commission.

The Land Development Code (LDC) requires that existing streets ending at a project boundary be continued into the adjacent proposed subdivision. In 1985, as part of Bent Oak Subdivision, Forest Troll Drive, and as part of Southport Subdivision, Westport Drive, were extended to the project boundary to provide future access points to be extended with the development of the King's Landing property.

Chapter 5, Section 8 of the LDC, lists the review criteria used to determine whether a subdivision variance request should be granted. For a subdivision variance to be approved the following criteria may be considered.

1. *Topographic or other physical conditions exist which are peculiar to the site and not a result of the actions of the applicant.*

Forest Troll Drive: The applicant is requesting to not extend the existing Forest Troll Drive stub-out into the proposed subdivision because it would have the potential of creating a non-traditional intersection between the existing Broken Bow Lane and Forest Troll Drive and the proposed Highgarden Way. It would also require the removal of a 36" historic oak tree.

Westport Drive: The applicant is requesting to not extend the existing Westport Drive stub-out into the proposed subdivision because it would have the potential of adding to the number of vehicles entering/exiting at the intersection of Taylor Road and Southport Drive. There is concern from staff that this connection could increase the number of vehicles making the left turn movement onto Taylor Road during the hours of operation for Spruce Creek Elementary and Spruce Creek High School.

2. *Literal interpretation of this code would result in unnecessary and undue hardship on the applicant.*

When a new subdivision is built, it must comply with current subdivision development requirements of the Land Development Code (LDC). The intent of requirement to extend existing street stub-outs into developing property is to provide an interconnected local road network that provides travel and access options. According to the applicant, the subject property has five roadway stub-outs from adjacent subdivisions and the proposed project extends three of the roadway stub-outs and has a main access onto Hensel Road. The applicant believes this subdivision has met the intent of the code to create an interconnected local road network.

3. *Required services are already available to proposed lots without the construction of additional improvements.*

All required public utilities and services can be provided to all proposed lots through the proposed subdivision design. In addition, not requiring the two roadway connections will not reduce any other required services for the existing subdivisions. The proposed subdivision meets minimum access requirements in the Land Development Code and connects to a collector road (Hensel Road) and three local roads (Rocko Road, English Oak Drive, and Broken Bow Lane).

4. *Levels of service can be reasonably provided through the site development plan review process or residential site plan review process for individual lots.*

The applicant will be able to provide the required services and meet the Level of Service standards for all homes in the subdivision through the proposed subdivision design.

5. *Other methods can be arranged to assure construction of improvements, eliminating the need for formal subdivision approval.*

Subdivision review is the standard approach to assure the construction of local roads within a subdivision. The applicant is not requesting a different method. The request is to not extend two existing street stub-outs, so this criterion is not applicable to this request.

6. *The granting of a variance is consistent with the overall intent of this code, and will not be injurious to the surrounding properties or detrimental to the public welfare.*

The intent of the code is to provide an interconnected local road network that provides travel and access options. The proposed subdivision meets the minimum subdivision requirements with two access points to public roads. The proposed development is efficiently accessed (Hensel Road, Central Park Road, Taylor Road, and Spruce Creek Road). According to the Fire Department, response times would not be increased by not extending Westport Drive and Forest Troll Drive because these routes are not the routes the Fire Department would use.

Based on the review criteria above, staff recommends approval of the subdivision variance to allow this phase to be developed without extending an existing street stub-out (Forest Troll Drive and Westport Drive) into the proposed subdivision.

RECOMMENDATION:

Staff recommends approval of the final plat and plans for King's Landing Subdivision.

ATTACHMENTS:

1. Exhibit A - Subdivision Plat
2. Exhibit B - Subdivision Plans
3. Exhibit C - Volusia County School Board Letter

EXHIBIT A

RECEIVED
10-3-17

CITY OF PORT ORANGE
Community Development

REVISED

KING'S LANDING

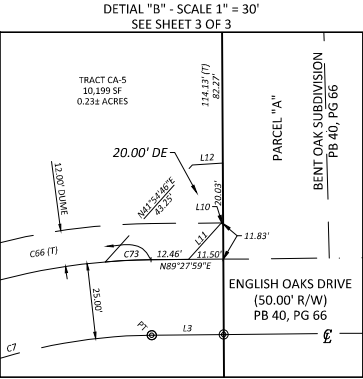
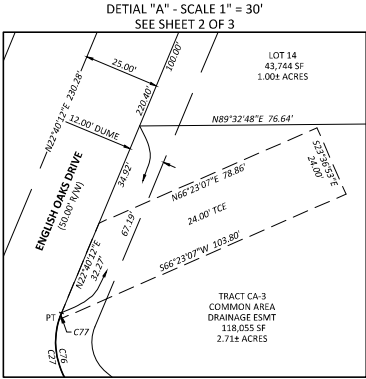
LOCATED IN THE CITY OF PORT ORANGE, SECTION 21, TOWNSHIP 16 SOUTH, RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA.

DESCRIPTION

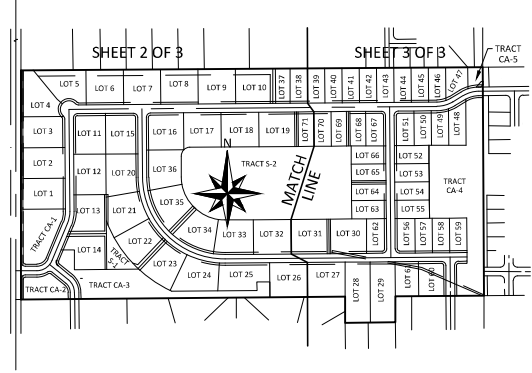
A PORTION OF SECTION 21, TOWNSHIP 16 SOUTH, RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE NORTHWEST CORNER OF LOT 27, ROLLING HILLS ESTATES PHASE 2, AS RECORDED IN PLAT BOOK 49, PAGES 102, 103 AND 104, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, RUN THENCE N00°00'52"E ALONG THE EAST RIGHT-OF-WAY LINE OF HENSEL ROAD A DISTANCE OF 1,324.97 FEET TO THE SOUTHWEST CORNER OF THE LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 2641, PAGE 3642, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, SAID POINT BEING ON THE NORTH LINE OF THE SOUTH 1/2 OF THE NORTHWEST 1/4 OF SECTION 21, TOWNSHIP 16 SOUTH, RANGE 33 EAST; THENCE N89°37'07"E ALONG SAID NORTH LINE, A DISTANCE OF 2,671.22 FEET TO THE SOUTHWEST CORNER OF LOT 33, RAINFREE SUBDIVISION, AS RECORDED IN PLAT BOOK 33, PAGE 190, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, SAID POINT BEING A POINT ON THE EAST LINE OF THE SOUTH 1/2 OF THE NORTHWEST 1/4 OF SAID SECTION 21; THENCE S00°16'25"E ALONG SAID EAST LINE, A DISTANCE OF 1,323.61 FEET TO THE SOUTHWEST CORNER OF PARCEL "B", BENT OAK SUBDIVISION, AS RECORDED IN PLAT BOOK 40, PAGE 66, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, SAID POINT BEING A POINT ON THE SOUTH LINE OF THE SOUTH 1/2 OF THE NORTHWEST 1/4 OF SAID SECTION 21; THENCE S89°33'46"W ALONG SAID SOUTH LINE A DISTANCE OF 512.21 FEET TO THE NORTHWEST CORNER OF TRACT "C", BROKEN BOW ESTATES, AS RECORDED IN PLAT BOOK 49, PAGES 126 AND 127, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE S00°08'52"W ALONG THE WEST LINE OF SAID TRACT "C" A DISTANCE OF 150.06 FEET TO THE NORTHEAST CORNER OF TRACT "C", ROLLING HILLS ESTATES PHASE 2, AS RECORDED IN PLAT BOOK 49, PAGES 102, 103 AND 104, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE S89°32'23"W ALONG THE NORTH LINE OF SAID ROLLING HILLS ESTATES PHASE 2, A DISTANCE OF 289.93 FEET TO THE NORTHWEST CORNER OF LOT 30, SAID ROLLING HILLS ESTATES PHASE 2, SAID POINT BEING A POINT ON THE EAST LINE OF LOT 12, SAID ROLLING HILLS ESTATES PHASE 2; THENCE N00°08'51"E ALONG SAID EAST LINE AND THE EAST LINE OF LOT 13, SAID ROLLING HILLS ESTATES PHASE 2, A DISTANCE OF 149.98 FEET TO THE NORTHEAST CORNER OF LOT 13, SAID ROLLING HILLS ESTATES PHASE 2, SAID POINT BEING A POINT ON SAID SOUTH LINE OF THE SOUTH 1/2 OF THE NORTHWEST 1/4 OF SECTION 21; THENCE S89°32'48"W ALONG SAID SOUTH LINE, A DISTANCE OF 1,875.76 FEET TO THE POINT OF BEGINNING.

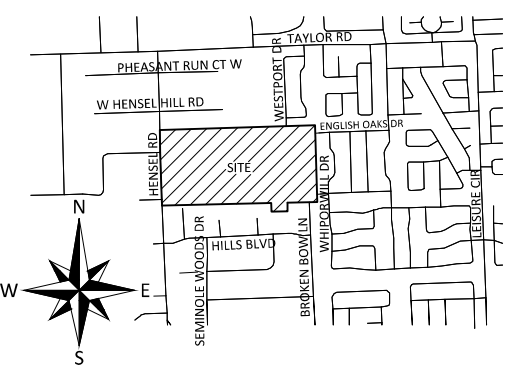
CONTAINS 3,582,585 SQUARE FEET OR 82.245 ACRES MORE OR LESS.



KEYMAP (NOT TO SCALE)



VICINITY MAP (NOT TO SCALE)



GENERAL NOTES

- GENERAL NOTES
- MONUMENTATION
 - - DENOTES A PERMANENT REFERENCE MONUMENT, A 4"x4" CONCRETE MONUMENT WITH ABRASS DISC MARKED "PRM LB 4475", UNLESS OTHERWISE NOTED.
 - - DENOTES A PERMANENT CONTROL POINT, A NAIL WITH A BRASS DISC MARKED "PRM LB4475", UNLESS OTHERWISE NOTED.
 - - DENOTES FOUND SECTION CORNER WITH A CERTIFIED CORNER RECORD MARKED AS SHOWN.
 - (R) - DENOTES A LINE RADIAL RELATIVE TO ADJACENT CURVE.
 - (NR) - DENOTES A LINE NOT RADIAL RELATIVE TO ADJACENT CURVE.
 - DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.
 - ACCURACY
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
 - BEARINGS SHOWN HERE ON ARE RELATIVE TO STATE PLANE COORDINATES FLORIDA EAST ZONE.
 - NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE IN ACCORDANCE WITH THE DEFINITION OF THE U.S SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 39.37/12=3.28083333333 EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
 - 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.
 - THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO TREE CONSERVATION, DRAINAGE, UTILITY, MAINTENANCE AND GOVERNMENT AND EMERGENCY SERVICES, GRANTED HEREON.
 - UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, RECLAIMED WATER, STORM DRAINAGE, ELECTRIC, TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
 - UTILITY EASEMENTS PROVIDED ON THIS PLAT INCLUDE 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.
 - TREE CONSERVATION EASEMENTS AS DEFINED ON THIS PLAT IS FOR THE EXPRESS PURPOSE OF THE PRESERVATION AND LONGEVITY OF THE TREES THEREIN. ACTIONS DETRIMENTAL TO TREE HEALTH AND SURVIVAL WITHIN THE BOUNDARIES OF THE EASEMENT ARE PROHIBITED WITHOUT THE EXPRESS PERMISSION OF THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT. NOTHING HEREIN SHALL, HOWEVER, BE CONSTRUED TO PREVENT NATURAL VEGETATION WITHIN THE EASEMENT AREA FROM BEING CLEARED BY HAND TO PROVIDE A NEAT, MANICURED APPEARANCE. IN ADDITION, NOTHING HEREIN SHALL BE CONSTRUED TO PREVENT THE PLACEMENT OF SOIL, IRRIGATION AND LANDSCAPE PLANTS OR TO PREVENT NORMAL LAWN MAINTENANCE SUCH AS MOWING, EDGING AND WEEDING NOT HARMFUL TO THE OBJECTIVE OF TREE PRESERVATION WITHIN THE EASEMENT AREA. ANY PROPOSED CONSTRUCTION OR OTHER USE WITHIN A CONSERVATION EASEMENT MUST BE REVIEWED AND APPROVED BY THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT.
 - BUILDING REQUIREMENTS:
 - LOTS ZONED RR (RURAL RESIDENTIAL), LOTS 1 THROUGH 36
 - MINIMUM LOT AREA: 1 ACRE
 - MINIMUM LOT WIDTH: 100.00 FEET
 - MAXIMUM BUILDING COVERAGE: 20%
 - MAXIMUM OPEN SPACE: 70%
 - LOTS ZONED R-20SF (SINGLE FAMILY RESIDENTIAL), LOTS 37 THROUGH 71
 - MINIMUM LOT AREA: 20,000 SQUARE FEET
 - MINIMUM LOT WIDTH: 100.00 FEET
 - MAXIMUM BUILDING COVERAGE: 30%
 - MAXIMUM OPEN SPACE: 60%
 - SETBACKS:
 - FRONT: 40 FEET
 - SIDE: 15 FEET
 - REAR: 30 FEET
 - LOTS ZONED R-20SF (SINGLE FAMILY RESIDENTIAL), LOTS 37 THROUGH 71
 - MINIMUM LOT AREA: 20,000 SQUARE FEET
 - MINIMUM LOT WIDTH: 100.00 FEET
 - MAXIMUM BUILDING COVERAGE: 30%
 - MAXIMUM OPEN SPACE: 60%
 - SETBACKS:
 - FRONT: 30 FEET
 - SIDE: 10 FEET
 - REAR: 25 FEET
 - THE COMMON AREAS GRANTED TO THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. BY THIS PLAT SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC.'S COVENANTS AND RESTRICTIONS. THE GRANTING OF SUCH COMMON AREAS IS NOT INTENDED TO GRANT ANY RIGHT TO THE GENERAL PUBLIC.
 - THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THE DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES; AND, SHALL HAVE THE RIGHT TO LIEN ALL OWNERS OF RECORD IN PROPERTY FOR THE COST OF SUCH MAINTENANCE, REPAIR, AND REPLACEMENT, AS DEEMED BY HE CITY TO BE NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORM WATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 40C-42.027, F.A.C. AND BE APPROVED BY THE SAINT JOHNS RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
 - COMMON AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
 - THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON AREAS.
 - THE ARTICLES OF INCORPORATION FOR THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. ARE RECORDED IN OFFICIAL RECORDS BOOK _____ PAGES _____ THROUGH _____ OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA. THE DECLARATION OF COVENANTS AND RESTRICTIONS FOR THE _____ ASSOCIATION, INC. ARE RECORDED IN OFFICIAL RECORDS BOOK _____ PAGES _____ THROUGH _____ OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
 - TRACT CA-1, CA-2, CA-3, CA-4 AND CA-5, DEPICTED HEREON AS COMMON AREA, WILL BE OWNED AND MAINTAINED BY THE KING'S LANDING HOMEOWNERS ASSOCIATION, ITS SUCCESSORS AND ASSIGNS FOR THE PURPOSE OF COMMON AREA AND IS SUBJECT TO THE TREE CONSERVATION EASEMENTS GRANTED TO THE CITY OF PORT ORANGE, FLORIDA AS RECORDED IN OFFICIAL RECORDS BOOK _____, PAGE _____ OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
 - TRACTS S-1 AND S-2 WILL BE OWNED AND MAINTAINED BY THE KING'S LANDING HOMEOWNERS ASSOCIATION, ITS SUCCESSORS AND ASSIGNS FOR THE PURPOSE OF COMMON AREA AND STORMWATER DRAINAGE.
 - THERE IS A 12.00 FOOT STANDARD UTILITY EASEMENT ALONG THE FRONT OF ALL LOTS ADJACENT TO ROAD RIGHTS-OF-WAY.

ADUGE	- ACCESS, DRAINAGE, UTILITY, GOVERNMENT AND EMERGENCY SERVICES EASEMENT	L	- ARC LENGTH	PRC	- POINT OF REVERSE CURVATURE
CCR	- CERTIFIED CORNER RECORD	LB	- LICENSED BUSINESS	PRM	- PERMANENT REFERENCE MONUMENT
CM	- CENTERLINE SYMBOL	NR	- NON-RADIAL	PSM	- PROFESSIONAL SURVEYOR AND MAPPER
DE	- DELTA / CENTRAL ANGLE	NT	- NON-TANGENT	PT	- POINT OF TANGENCY
DMAE	- DRAINAGE, MAINTENANCE AND ACCESS EASEMENT	NTS	- NOT TO SCALE	R	- RADIUS
DUME	- DRAINAGE, UTILITY AND MAINTENANCE EASEMENT	ORB	- OFFICIAL RECORDS BOOK	(R)	- RADIAL
ESMT	- EASEMENT	PC	- PLAT BOOK	R/W	- RIGHT-OF-WAY
FND	- FOUND	PG	- PAGE	SF	- SQUARE FEET
		PI	- POINT OF INTERSECTION	(T)	- TOTAL
		POB	- POINT OF BEGINNING	TCE	- TREE CONSERVATION ESMT
		POL	- POINT ON LINE	VAC	- VEHICLE ACCESS CONTROL

LEGEND



ACCURIGHT SURVEYS OF ORLANDO INC., LB 4475
2012 E. Robinson Street, Orlando, Florida 32803
www.AccurightSurveys.net
ACCU@AccurightSurveys.net
PHONE: (407) 894-6314
SHEET 1 OF 3

PLAT BOOK PAGE

KING'S LANDING DEDICATION

KNOW ALL MEN BY THESE PRESENTS, THAT COVENTRY PARTNERS, LLC, A FLORIDA LIMITED LIABILITY COMPANY BEING THE OWNER IN FEE SIMPLE OF THE LANDS SHOWN AND DESCRIBED HEREON AS THE PLAT ENTITLED KING'S LANDING, LOCATED IN THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, HEREBY DEDICATES THE SAID LANDS AND PLAT FOR THE USES AND PURPOSES HEREON EXPRESSED. ALL STREETS AND ROAD RIGHTS-OF-WAY, SHOWN OR DESCRIBED ON THE PLAT ARE, UNLESS OTHERWISE INDICATED, DEDICATED TO THE CITY OF PORT ORANGE. ALL POTABLE WATER, RECLAIMED WATER, AND SANITARY SEWER MAINS CONSTRUCTED WITHIN THE AREA ENCOMPASSED WITHIN THE PLAT ARE DEDICATED TO THE CITY OF PORT ORANGE. ALL TREE CONSERVATION, DRAINAGE, MAINTENANCE AND UTILITY EASEMENTS SHOWN OR DESCRIBED ON THE PLAT ARE, UNLESS OTHERWISE INDICATED, GRANTED TO THE CITY OF PORT ORANGE. ALL DRAINAGE EASEMENTS SHOWN OR DESCRIBED ON THE PLAT ARE ALSO, UNLESS OTHERWISE INDICATED, GRANTED TO THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC., FOR THE PURPOSES DESCRIBED IN THE GENERAL NOTES. TRACTS CA-1, CA-2, CA-3, CA-4, CA-5, S-1 AND S-2, ARE GRANTED FOR THE PURPOSES DESCRIBED IN GENERAL NOTES TO THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. FOR THE BENEFIT OF ALL OWNERS OF RECORDED, SUCCESSORS AND ASSIGNS, OF THE LAND SHOWN AND DESCRIBED HEREON.

IN WITNESS WHEREOF, THE UNDERSIGNED HAS HEREUNTO SET BY HAND ON THIS _____ DAY OF _____ A.D., 2017.

OWNER: COVENTRY PARTNERS, LLC, A FLORIDA LIMITED LIABILITY COMPANY

BY: _____
MITCHEL SABINA, MANAGER

SIGNED AND SEALED IN THE PRESENCE OF:

(PRINT NAME) _____ (SIGNATURE) _____
(PRINT NAME) _____ (SIGNATURE) _____

ACKNOWLEDGMENT
STATE OF FLORIDA COUNTY OF VOLUSIA
THIS IS TO CERTIFY, THAT ON THIS _____ DAY OF _____ A.D. 2017, BEFORE ME, PERSONALLY APPEARED MITCHEL SABINA, MANAGER, ON BEHALF OF COVENTRY PARTNERS, LLC, A FLORIDA LIMITED LIABILITY COMPANY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE, AS THE INDIVIDUAL DESCRIBED IN AND WHO EXECUTED THE FOREGOING DEDICATION AND ACKNOWLEDGED THE EXECUTION THEREOF TO BE HIS FREE AND DEED AS SUCH MANAGER THEREUNTO DULY AUTHORIZED; AND SAID DEDICATION IS THE ACT AND DEED OF SAID LIMITED PARTNERSHIP AND WHO IS PERSONALLY KNOWN TO ME OR WHO HAS PRODUCED A _____ AS IDENTIFICATION AND WHO (DID)/DID NOT TAKE AN OATH.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND SEAL ON THE ABOVE DATE.

NOTARY PUBLIC _____

COMMISSION NO.: _____

EXPIRATION: _____

CERTIFICATE OF CLERK

I HEREBY CERTIFY THAT I HAVE EXAMINED THE FOREGOING PLAT AND FOUND THAT IT COMPLIES, IN FORM, WITH ALL REQUIREMENTS STATED IN CHAPTER 177, FLORIDA STATUTES, AND THAT IT WAS FILED FOR RECORD ON _____ AT _____ A.M. / P.M.

FILE NO. _____
CLERK OF CIRCUIT COURT
VOLUSIA COUNTY, FLORIDA

REVIEW BY SURVEYOR AND MAPPER FOR THE CITY

I HEREBY CERTIFY TO THE CITY, THAT I HAVE REVIEWED THE FOREGOING PLAT FOR COMPLIANCE WITH THE REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES, AND THAT I HAVE PROVIDED BOTH THE CITY AND THE SURVEYOR AND MAPPER OF RECORD A LIST OF DEVIATIONS, IF ANY, FROM SUCH REQUIREMENTS.

(SIGNATURE) _____ DATE: _____
(PRINT NAME) _____ PSM. NO.: _____

CERTIFICATE OF SURVEYOR AND MAPPER

KNOW ALL MEN BY THESE PRESENTS, THAT THE UNDERSIGNED, BEING A LICENSED AND REGISTERED SURVEYOR AND MAPPER, DOES HEREBY CERTIFY THAT THE PLAT SHOWN AND DESCRIBED HEREON, ENTITLED KING'S LANDING, WAS PREPARED UNDER MY DIRECTION AND SUPERVISION, THAT THE PLAT COMPLIES WITH ALL OF THE SURVEY REQUIREMENTS OF CHAPTER 177, FLORIDA STATUTES, AND THAT ALL MONUMENTATION SHOWN HEREON OR REQUIRED PER CHAPTER 177, FLORIDA STATUTES, HAS BEEN PROPERLY PLACED.

Dated: _____ Signed: **James D. Bray**
Registration Number: **LB #4475**
James D. Bray, PSM 6507
Accuright Surveys of Orlando, Inc.
2012 East Robinson Street
Orlando, Florida 32803

CITY COUNCIL CERTIFICATE OF APPROVAL

THIS STATEMENT HEREBY CERTIFIES THAT THE PLAT ENTITLED KING'S LANDING WAS APPROVED BY THE PORT ORANGE CITY COUNCIL ON _____.

BY: _____ ATTEST: _____
MAYOR OF THE CITY OF PORT ORANGE CITY CLERK OF THE CITY OF PORT ORANGE

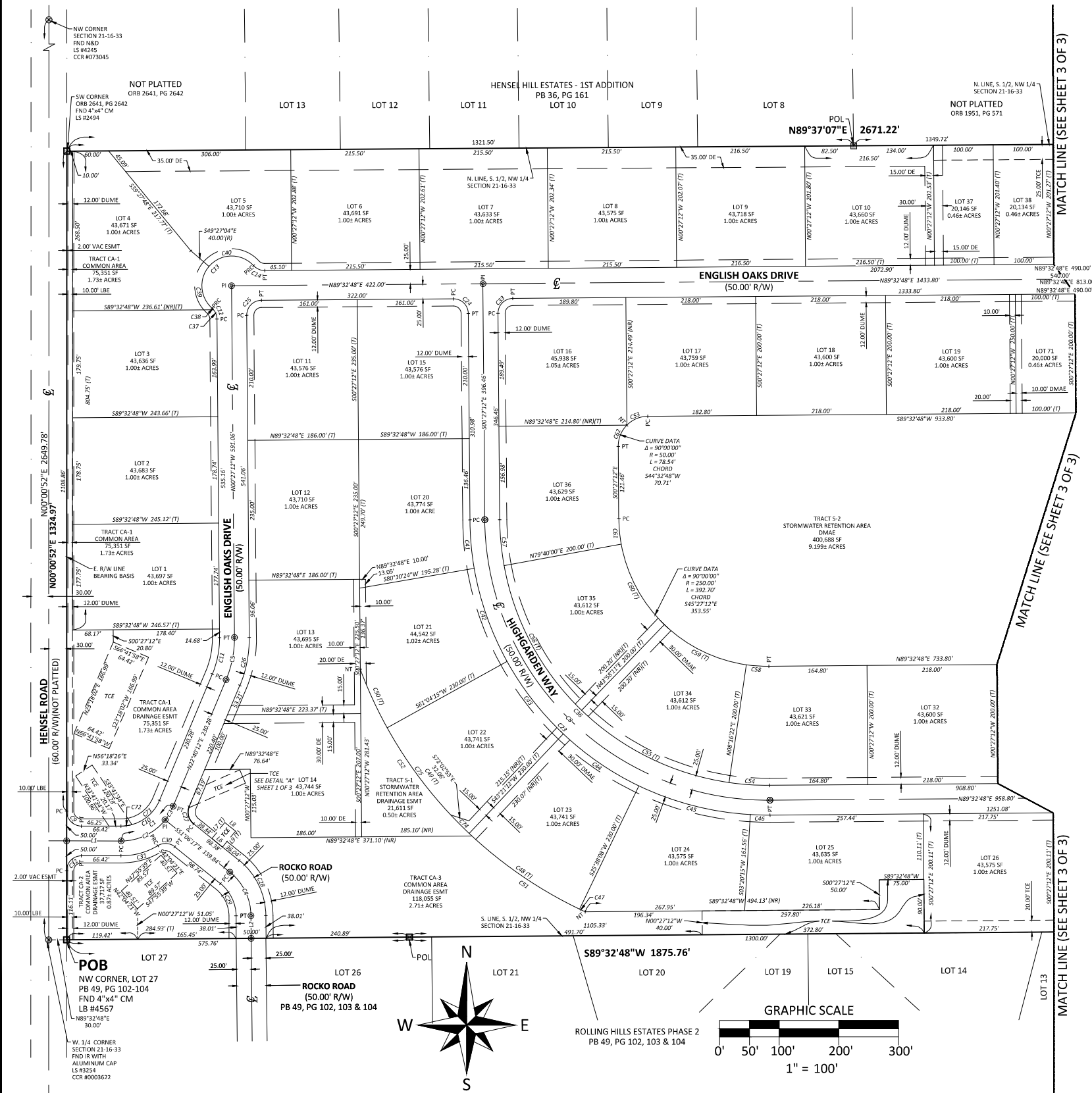
PLANNING COMMISSION CERTIFICATE OF APPROVAL

THIS STATEMENT HEREBY CERTIFIES THAT THE PLAT ENTITLED KING'S LANDING WAS APPROVED BY THE PORT ORANGE PLANNING COMMISSION ON _____.

BY: _____
CHAIRMAN OF THE PORT ORANGE PLANNING COMMISSION

KING'S LANDING

LOCATED IN THE CITY OF PORT ORANGE, SECTION 21, TOWNSHIP 16 SOUTH, RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA.



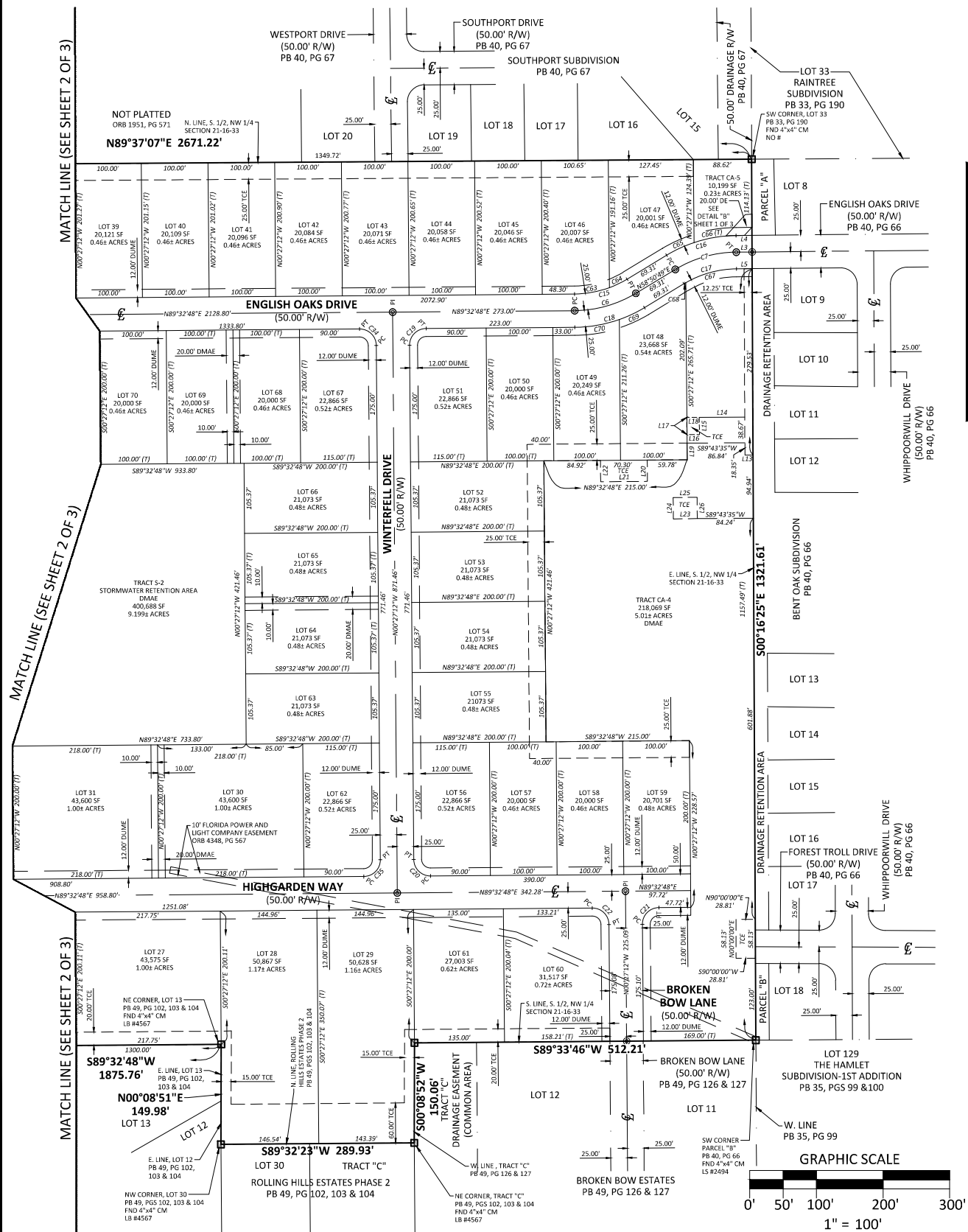
- GENERAL NOTES
1. MONUMENTATION
 - a. DENOTES A PERMANENT REFERENCE MONUMENT, A 4"X4" CONCRETE MONUMENT WITH ABRASS DISC MARKED "PRM LB 4475", UNLESS OTHERWISE NOTED.
 - b. DENOTES A PERMANENT CONTROL POINT, A NAIL WITH A BRASS DISC MARKED "PRM LB4475", UNLESS OTHERWISE NOTED.
 - c. DENOTES A LINE RADIAL, RELATIVE TO ADJACENT CURVE.
 - d. DENOTES A LINE NOT RADIAL RELATIVE TO ADJACENT CURVE.
 2. DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.
 3. ACCURACY
 - a. THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:30,000.
 - b. THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
 4. BEARINGS SHOWN HERE ON ARE RELATIVE TO STATE PLANE COORDINATES FLORIDA EAST ZONE.
 5. NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 1983 U.S. 2011 EDITION EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
 6. 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 SUPERLAINED 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.
 7. THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO TREE CONSERVATION, DRAINAGE, UTILITY, MAINTENANCE AND GOVERNMENT AND EMERGENCY SERVICES, GRANTED HEREON.
 8. UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, RECLAIMED WATER, STORM DRAINAGE, ELECTRIC, TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
 9. UTILITY EASEMENTS PROVIDED ON THIS PLAT INCLUDE 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.
 10. TREE CONSERVATION EASEMENTS AS DEFINED ON THIS PLAT IS FOR THE EXPRESS PURPOSE OF THE PRESERVATION AND LONGEVITY OF THE TREES THEREIN. ACTIONS OF NECESSITY TO THE HEALTH AND SURVIVAL WITHIN THE BOUNDARIES OF THE EASEMENT ARE PROHIBITED WITHOUT THE EXPRESS PERMISSION OF THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT. NOTHING HEREIN SHALL, HOWEVER, BE CONSTRUED TO PREVENT NATURAL VEGETATION WITHIN THE EASEMENT AREA FROM BEING CLEARED BY HAND TO PROVIDE A NEAT, MANICURED APPEARANCE. IN ADDITION, MAINTENANCE OF THE EASEMENT SHALL BE CONTINUED TO PREVENT THE PLACEMENT OF SOIL, MINERAL AND LANDSCAPE PLANTS ON TO PREVENT NORMAL LAWN MAINTENANCE SUCH AS MOWING, EDGING AND WEEDING NOT HARMFUL TO THE OBJECTIVE OF THE TREE PRESERVATION WITHIN THE EASEMENT AREA. ANY PROPOSED CONSTRUCTION ON OTHER USE WITHIN A CONSERVATION EASEMENT MUST BE REVIEWED AND APPROVED BY THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT.
 11. BUILDING REQUIREMENTS:
 - a. LOTS ZONED RR (RURAL RESIDENTIAL), LOTS 1 THROUGH 36
 - MINIMUM LOT AREA: 1 ACRE
 - MINIMUM LOT WIDTH: 100.00 FEET
 - MAXIMUM BUILDING COVERAGE: 20%
 - MAXIMUM OPEN SPACE: 70%
 - b. LOTS ZONED R-200 (SINGLE FAMILY RESIDENTIAL), LOTS 37 THROUGH 71
 - MINIMUM LOT AREA: 20,000 SQUARE FEET
 - MINIMUM LOT WIDTH: 100.00 FEET
 - MAXIMUM BUILDING COVERAGE: 30%
 - MAXIMUM OPEN SPACE: 60%
 12. SETBACKS:
 - FRONT: 10 FEET
 - REAR: 10 FEET
 - SIDE: 10 FEET
 13. THE COMMON AREAS GRANTED TO THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. BY THIS PLAT SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC.'S COVENANTS AND RESTRICTIONS. THE GRANTING OF SUCH COMMON AREAS IS NOT INTENDED TO GRANT ANY RIGHT TO THE GENERAL PUBLIC.
 14. THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE SYSTEM AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON AREAS AND DESIGNATED PASSWAY AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES, AND SHALL HAVE THE RIGHT TO LEND ALL OWNERS OF RECORD IN PROPERTY FOR THE COST OF SUCH MAINTENANCE, REPAIR OR REPLACE, AS DETERMINED BY THE CITY OF PORT ORANGE, FLORIDA. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SHALL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLES WITH SECTION 402.42(2), F.A.C. AND BE APPROVED BY THE SAINT JOHNS RIVER WATER MANAGEMENT DISTRICT.
 15. COMMON AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS. TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
 16. THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON AREAS.
 17. THE ARTICLES OF INCORPORATION FOR THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. ARE RECORDED IN OFFICIAL RECORDS BOOK _____ OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA. THE DECLARATION OF _____ PAGES THROUGH _____ OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA. THE COVENANTS AND RESTRICTIONS FOR THE _____ ASSOCIATION, INC. ARE RECORDED IN OFFICIAL RECORDS BOOK _____ OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
 18. TRACT CA-1, CA-2, CA-3, CA-4 AND CA-5, DEPICTED HEREON AS COMMON AREA, WILL BE OWNED AND MAINTAINED BY THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. SUCCESSORS AND ASSIGNS FOR THE PURPOSE OF COMMON AREA AND IS SUBJECT TO THE TREE CONSERVATION EASEMENTS GRANTED TO THE CITY OF PORT ORANGE, FLORIDA AS RECORDED IN OFFICIAL RECORDS BOOK _____ PAGE _____.
 19. TRACTS 5-1 AND 5-2 WILL BE OWNED AND MAINTAINED BY THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. SUCCESSORS AND ASSIGNS FOR THE PURPOSE OF COMMON AREA AND STORMWATER DRAINAGE.
 20. THERE IS A 12.00 FOOT STANDARD UTILITY EASEMENT ALONG THE FRONT OF ALL LOTS ADJACENT TO ROAD RIGHTS-OF-WAY.

LEGEND											
ADJUGE						PB					
- ACCESS, DRAINAGE, UTILITY, GOVERNMENT AND EMERGENCY SERVICES EASEMENT						- PLAT BOOK					
CCR						PG					
- CERTIFIED CORNER RECORD						- POINT OF CURVATURE					
- CENTERLINE SYMBOL						PC					
CONCRETE MONUMENT						POB					
A						- POINT OF BEGINNING					
- DELTA / CENTRAL ANGLE						POL					
D						- POINT ON LINE					
DRAI						PRC					
DRAI						- POINT OF REVERSE					
DRAI						CURVATURE					
DRAI						PRM					
DRAI						- PERMANENT REFERENCE					
DRAI						MONUMENT					
DRAI						PSM					
DRAI						- PROFESSIONAL SURVEYOR					
DRAI						AND MAPPER					
DRAI						PT					
DRAI						- POINT OF TANGENCY					
DRAI						R					
DRAI						- RADIUS					
DRAI						(R)					
DRAI						- RADIAL					
DRAI						R/W					
DRAI						- RIGHT-OF-WAY					
DRAI						SF					
DRAI						- SQUARE FEET					
DRAI						(T)					
DRAI						- TOTAL					
DRAI						TCE					
DRAI						- TREE CONSERVATION ESMT					
DRAI						VAC					
DRAI						- VEHICLE ACCESS CONTROL					

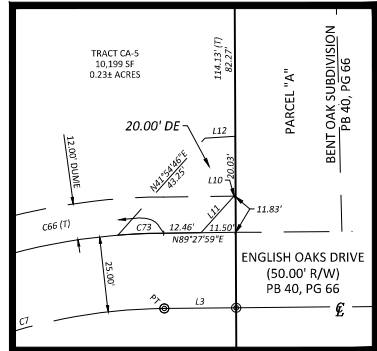
CURVE CHART											
NO.	CENTRAL ANGLE	RADIUS	ARC LENGTH	CHORD	CHORD BEARING	NO.	CENTRAL ANGLE	RADIUS	ARC LENGTH	CHORD	CHORD BEARING
C1	67°29'39"	95.00	111.61	105.14	50.00	C41	97°11'51"	50.00	84.81	N8°08'31"E	75.00
C2	51°07'06"	95.00	84.76	N64°77'17"E	81.98	C42	09°22'24"	500.00	81.80	S05°08'24"E	81.71
C3	50°38'36"	95.00	83.97	S25°46'59"E	81.26	C43	17°43'01"	500.00	154.62	S37°47'17"E	154.00
C4	23°07'24"	180.00	72.64	N11°06'30"E	72.17	C44	17°43'01"	500.00	154.62	S55°30'20"E	154.00
C5	30°13'30"	180.00	96.43	N7°11'49"E	95.30	C45	22°17'54"	500.00	191.59	S75°30'49"E	191.34
C6	30°13'30"	180.00	96.19	N74°09'24"E	95.05	C46	03°47'26"	500.00	33.08	S88°33'29"E	33.07
C7	30°13'30"	180.00	96.19	S45°27'12"E	95.05	C47	00°48'48"	780.00	10.85	N04°06'18"W	10.84
C8	30°13'30"	180.00	96.19	S45°27'12"E	95.05	C48	17°43'01"	780.00	225.74	N55°30'20"W	224.84
C9	30°13'30"	180.00	96.19	S45°27'12"E	95.05	C49	17°43'01"	780.00	225.74	N13°47'13"W	224.84
C10	30°13'30"	180.00	96.19	S45°27'12"E	95.05	C50	08°28'21"	780.00	108.00	N24°41'18"W	107.80
C11	23°07'24"	155.00	62.53	N11°06'30"E	62.13	C51	18°03'06"	780.00	229.95	N50°00'00"W	229.00
C12	14°02'22"	50.00	162.63	N44°32'48"E	99.85	C52	26°40'42"	780.00	339.91	N31°47'13"W	336.84
C13	44°12'23"	50.00	21.63	N44°32'48"E	99.85	C53	44°44'46"	50.00	39.05	N07°02'27"E	38.49
C14	30°41'59"	155.00	83.03	N74°11'49"E	82.06	C54	08°43'34"	400.00	68.53	N86°05'23"W	68.47
C15	30°41'59"	155.00	83.03	N74°11'49"E	82.06	C55	35°14'48"	400.00	280.30	N52°52'44"W	275.85
C16	30°41'59"	155.00	83.03	S74°09'24"E	81.85	C56	35°14'48"	400.00	280.30	N28°10'50"W	275.85
C17	30°41'59"	155.00	83.03	S74°09'24"E	81.85	C57	09°52'49"	400.00	77.60	N85°23'38"W	77.50
C18	30°41'59"	155.00	83.03	S74°09'24"E	81.85	C58	08°43'34"	250.00	38.07	N85°05'23"W	38.04
C19	30°41'59"	155.00	83.03	S74°09'24"E	81.85	C59	35°14'48"	250.00	155.76	N52°52'44"W	153.25
C20	30°41'59"	155.00	83.03	S74°09'24"E	81.85	C60	25°41'48"	250.00	155.76	N28°10'50"W	153.25
C21	30°41'59"	155.00	83.03	S74°09'24"E	81.85	C61	09°52'49"	250.00	43.11	N05°23'38"W	43.00
C22	30°41'59"	155.00	83.03	S74°09'24"E	81.85	C62	45°15'41"	50.00	39.49	N21°07'27"E	38.49
C23	30°41'59"	155.00	83.03	S74°09'24"E	81.85	C63	19°44'18"	155.00	53.40	N74°00'39"E	53.11
C24	30°41'59"	155.00	83.03	S74°09'24"E	81.85	C64	10°15'41"	155.00	29.60	N84°19'40"E	29.40
C25	23°07'24"	205.00	82.73	S11°06'30"W	82.17	C65	12°37'38"	205.00	45.18	N85°09'38"E	45.09
C26	23°07'24"	205.00	82.73	S11°06'30"W	82.17	C66	17°59'31"	205.00	64.37	N87°28'17"E	64.13
C27	23°07'24"	205.00	82.73	S11°06'30"W	82.17	C67	29°25'21"	155.00	79.66	S74°44'32"W	78.79
C28	50°38'36"	120.00	106.07	S25°46'59"E	102.65	C68	01°10'17"	155.00	3.17	S59°25'58"W	3.17
C29	50°38'36"	120.00	106.07	S25°46'59"E	102.65	C69	11°37'24"	205.00	41.50	S64°39'31"W	41.52
C30	50°38'36"	120.00	106.07	S25°46'59"E	102.65	C70	19°04'35"	205.00	68.25	S80°00'31"W	67.94
C31	30°56'53"	120.00	64.82	S74°32'26"W	64.03	C71	31°11'51"	70.00	63.77	S44°46'00"W	63.96
C32	30°56'53"	120.00	64.82	S74°32'26"W	64.03	C72	15°08'41"	70.00	18.50	S82°26'28"W	18.45
C33	30°56'53"	120.00	64.82	S74°32'26"W	64.03	C73	04°14'04"	305.00	15.18	S87°07'40"W	15.17
C34	30°56'53"	120.00	64.82	S74°32'26"W	64.03	C74	03°27'09"	780.00	43.99	N44°53'14"W	43.98
C35	30°56'53"	120.00	64.82	S74°32'26"W	64.03	C75	14°15'54"	780.00	181.75	S33°03'42"W	181.38
C36	30°56'53"	120.00	64.82	S74°32'26"W	64.03	C76	08°23'39"	25.00	29.84	N16°54'23"W	28.10
C37	30°56'53"	120.00	64.82	S74°32'26"W	64.03	C77	07°22'41"	25.00	2.35	N19°58'52"E	2.35
C38	30°56'53"	120.00	64.82	S74°32'26"W	64.03						
C39	30°56'53"	120.00	64.82	S74°32'26"W	64.03						
C40	30°56'53"	120.00	64.82	S74°32'26"W	64.03						

KING'S LANDING

LOCATED IN THE CITY OF PORT ORANGE, SECTION 21, TOWNSHIP 16 SOUTH, RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA.



DETAIL "A" - SCALE: 1" = 30'



PLAT BOOK	PAGE
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1. GENERAL NOTES:
 - (1) DENOTES A PERMANENT REFERENCE MONUMENT, A 4"X4" CONCRETE MONUMENT WITH ABRASS DISC MARKED "PRM LB 4475", UNLESS OTHERWISE NOTED.
 - (2) DENOTES A PERMANENT CONTROL POINT, A NAIL WITH A BRASS DISC MARKED "PRM LB4477", UNLESS OTHERWISE NOTED.
 - (3) DENOTES A LINE RAIL RELATIVE TO ADJACENT CURVE.
 - (4) DENOTES A LINE RAIL RELATIVE TO ADJACENT CURVE.
 - (5) DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.
 - (6) ACCURACY:
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:50,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
 - (7) BEARINGS SHOWN HEREON ARE RELATIVE TO STATE PLANE COORDINATES FLORIDA EAST ZONE.
 - (8) NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 3.717321-20883333 EQUATION FOR CONVERSION FROM U.S. FOOT TO METERS.
 - (9) 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 SUPERLAINED BY ANY OTHER GRAPHIC OR DIGITAL FORM OF THE PLAT. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT HAVE BEEN FILED IN THE PUBLIC RECORDS OF THE COUNTY.
 - (10) THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO TREE CONSERVATION, DRAINAGE, UTILITY, MAINTENANCE AND GOVERNMENT AND EMERGENCY SERVICES, GRANTED HEREON.
 - (11) UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, RECLAIMED WATER, STORM DRAINAGE, ELECTRIC, TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
 - (12) UTILITY EASEMENTS PROVIDED ON THIS PLAT INCLUDE 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.
 - (13) TREE CONSERVATION EASEMENTS AS DEFINED ON THIS PLAT IS FOR THE EXPRESS PURPOSE OF THE PRESERVATION AND LONGEVITY OF THE TREES THEREON. ACTIONS OF REMEDIAL TO THE HEALTH AND SURVIVAL WITHIN THE BOUNDARIES OF THE EASEMENT ARE PROHIBITED WITHOUT THE EXPRESS PERMISSION OF THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT. NOTHING HEREIN SHALL, HOWEVER, BE CONSTRUED TO PREVENT NATURAL VEGETATION WITHIN THE EASEMENT AREA FROM BEING CLEARED BY HAND TO PROVIDE A NEAT, MANICURED APPEARANCE. IN ADDITION, THE EASEMENT SHALL BE CONSIDERED TO PREVENT THE PLACEMENT OF SOIL, RUBBISH AND LANDSCAPE PLANTS ON TO PREVENT NORMAL LAWN MAINTENANCE SUCH AS MOWING, EDGING AND WEEDING NOT HARMFUL TO THE OBJECTIVE OF THE PRESERVATION WITHIN THE EASEMENT AREA. ANY PROPOSED CONSTRUCTION OR OTHER USE WITHIN A CONSERVATION EASEMENT MUST BE REVIEWED AND APPROVED BY THE CITY OF PORT ORANGE AND ANY OTHER AUTHORITY HAVING JURISDICTION OVER THE CONSERVATION EASEMENT.
 - (14) BUILDING REQUIREMENTS:
 - LOTS ZONED RR (RURAL RESIDENTIAL), LOTS 1 THROUGH 36
 - MINIMUM LOT AREA: 1.0 ACRES
 - MINIMUM LOT WIDTH: 100.00 FEET
 - MAXIMUM BUILDING COVERAGE: 20%
 - MAXIMUM OPEN SPACE: 70%
 - SETBACKS:
 - FRONT: 40 FEET
 - SIDE: 15 FEET
 - REAR: 30 FEET
 - LOTS ZONED RS (SINGLE-FAMILY RESIDENTIAL), LOTS 37 THROUGH 71
 - MINIMUM LOT AREA: 20,000 SQUARE FEET
 - MINIMUM LOT WIDTH: 100.00 FEET
 - MAXIMUM BUILDING COVERAGE: 30%
 - MAXIMUM OPEN SPACE: 70%
 - SETBACKS:
 - FRONT: 30 FEET
 - SIDE: 10 FEET
 - REAR: 25 FEET
 - (15) THE COMMON AREAS GRANTED TO THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. BY THIS PLAT SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC.'S COVENANTS AND RESTRICTIONS. THE GRANTING OF SUCH COMMON AREAS IS NOT INTENDED TO GRANT ANY RIGHT TO THE GENERAL PUBLIC.
 - (16) THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENFORCE THE COMMON AREAS AND DESIGNATED EASEMENTS AREA TO PERFORM THE MAINTENANCE, REPAIR OR REPLACE THE FACILITIES, AND SHALL HAVE THE RIGHT TO LITIGATE OWNERS OF RECORD IN PROPERTY FOR THE COST OF SUCH MAINTENANCE, REPAIR, AND REPLACEMENT, AS DETERMINED BY THE CITY OF PORT ORANGE. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SUBJECT WATER OR STORMWATER MANAGEMENT SYSTEM SHALL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLES WITH SECTION 402.42(2), F.A.C. AND BE APPROVED BY THE SAINT JOHN'S RIVER WATER MANAGEMENT DISTRICT.
 - (17) COMMON AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORMWATER GROUNDWATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
 - (18) THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON AREAS.
 - (19) THE ARTICLES OF INCORPORATION FOR THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. ARE RECORDED IN OFFICIAL RECORDS BOOK _____ OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA. THE DECLARATION OF COVENANTS AND RESTRICTIONS FOR THE _____ ASSOCIATION, INC. ARE RECORDED IN OFFICIAL RECORDS BOOK _____ THROUGH _____ OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
 - (20) TRACT CA-1, CA-2, CA-3, CA-4, CA-5, CA-6 AND CA-7, DEPICTED HEREON AS COMMON AREA, WILL BE OWNED AND MAINTAINED BY THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. SUCCESSORS AND ASSIGNS FOR THE PURPOSE OF COMMON AREA, AND IS SUBJECT TO THE TREE CONSERVATION EASEMENTS GRANTED TO THE CITY OF PORT ORANGE, FLORIDA AS RECORDED IN OFFICIAL RECORDS BOOK _____ OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
 - (21) TRACTS S-1 AND S-2 WILL BE OWNED AND MAINTAINED BY THE KING'S LANDING HOMEOWNERS ASSOCIATION, INC. SUCCESSORS AND ASSIGNS FOR THE PURPOSE OF COMMON AREA AND STORMWATER DRAINAGE.
 - (22) THERE IS A 12.00 FOOT STANDARD UTILITY EASEMENT ALONG THE FRONT OF ALL LOTS ADJACENT TO ROAD RIGHTS-OF-WAY.

LEGEND

ADJUG	- ACCESS, DRAINAGE, UTILITY, GOVERNMENT AND EMERGENCY SERVICES EASEMENT	PB	- PLAT BOOK
CCR	- CERTIFIED CORNER RECORD	PG	- POINT OF CURVATURE
CS	- CENTERLINE SYMBOL	PI	- POINT OF INTERSECTION
CON	- CONCRETE MONUMENT	POB	- POINT OF BEGINNING
A	- DELTA / CENTRAL ANGLE	POL	- POINT ON LINE
DE	- DRAINAGE ESMT	PR	- POINT OF REVERSE CURVATURE
DMAE	- DRAINAGE MAINTENANCE AND ACCESS EASEMENT	PRM	- PERMANENT REFERENCE MONUMENT
ESMT	- EASEMENT	PSM	- PROFESSIONAL SURVEYOR AND MAPPER
FND	- FOUND	PT	- POINT OF TANGENCY
LB	- LICENSED BUSINESS	R	- RADIUS
LB	- LANDSCAPE BUFFER EASEMENT	RA	- RIGHT-OF-WAY
N&D	- NAIL & DISK	SE	- SQUARE FEET
(NR)	- NON-RADIAL	(T)	- TOTAL
NTS	- NOT TO SCALE	TCE	- TREE CONSERVATION ESMT
ONB	- OFFICIAL RECORDS BOOK	VAC	- VEHICLE ACCESS CONTROL

CURVE CHART					CURVE CHART				
NO.	CENTRAL ANGLE	RADIUS	CHORD	CHORD BEARING	NO.	CENTRAL ANGLE	RADIUS	CHORD	CHORD BEARING
C1	67°20'39"	95.00	111.81	90°11'15"	C31	67°20'39"	95.00	111.81	90°11'15"
C2	51°07'09"	95.00	84.76	N64°27'17"E	C32	51°07'09"	95.00	84.76	N64°27'17"E
C3	51°07'09"	95.00	84.76	N64°27'17"E	C33	51°07'09"	95.00	84.76	N64°27'17"E
C4	50°38'36"	95.00	83.97	S25°46'59"E	C34	50°38'36"	95.00	83.97	S25°46'59"E
C5	23°07'24"	180.00	72.64	N11°06'30"E	C35	17°43'01"	500.00	154.62	S37°47'17"E
C6	19°41'39"	180.00	96.43	N7°11'49"E	C36	17°43'01"	500.00	154.62	S37°47'17"E
C7	30°37'09"	180.00	96.19	N74°09'24"E	C37	09°52'49"	500.00	33.08	S89°33'27"E
C8	09°07'00"	475.00	246.13	S45°27'12"E	C38	17°43'01"	500.00	154.62	S37°47'17"E
C9	09°07'00"	25.00	39.27	S44°59'02"E	C39	17°43'01"	500.00	154.62	S37°47'17"E
C10	07°07'39"	25.00	62.88	N50°02'02"E	C40	17°43'01"	500.00	154.62	S37°47'17"E
C11	23°07'24"	155.00	62.55	N11°06'30"E	C41	08°28'51"	730.00	108.00	N24°11'18"W
C12	14°12'22"	25.00	21.93	S44°52'42"W	C42	17°43'01"	500.00	154.62	S37°47'17"E
C13	18°07'24"	50.00	162.65	N44°32'48"E	C43	26°40'41"	730.00	339.91	N31°47'13"W
C14	14°12'22"	25.00	21.93	S44°52'42"W	C44	26°40'41"	50.00	39.05	N07°02'27"E
C15	30°41'59"	155.00	83.05	N74°11'49"E	C45	08°43'34"	450.00	68.53	N86°05'23"W
C16	09°07'00"	205.00	109.55	N74°09'24"E	C46	35°14'09"	450.00	280.89	N52°52'44"W
C17	09°07'00"	155.00	82.83	S74°09'24"E	C47	35°14'09"	450.00	280.89	N52°52'44"W
C18	30°41'59"	205.00	109.55	S74°11'49"E	C48	09°52'49"	450.00	77.60	N05°23'38"W
C19	09°07'00"	25.00	39.27	S44°52'42"W	C49	08°43'34"	250.00	38.07	N89°05'23"W
C20	09°07'00"	25.00	39.27	S45°27'12"E	C50	35°14'09"	250.00	155.76	N05°23'44"W
C21	09°07'00"	25.00	39.27	S44°52'42"W	C51	09°52'49"	250.00	155.76	N05°23'44"W
C22	09°07'00"	25.00	39.27	N45°27'12"E	C52	26°40'41"	730.00	339.91	N31°47'13"W
C23	09°07'00"	500.00	90.40	N45°27'12"E	C53	44°44'46"	50.00	29.05	N07°02'27"E
C24	09°07'00"	25.00	39.27	N45°27'12"E	C54	08°43'34"	450.00	68.53	N86°05'23"W
C25	23°07'24"	205.00	82.73	S11°06'30"E	C55	35°14'09"	450.00	280.89	N52°52'44"W
C26	23°07'24"	205.00	82.73	S11°06'30"E	C56	35°14'09"	450.00	280.89	N52°52'44"W
C27	23°07'24"	205.00	82.73	S11°06'30"E	C57	09°52'49"	450.00	77.60	N05°23'38"W
C28	50°38'36"	120.00	106.07	S25°46'59"E	C58	10°51'41"	155.00	29.60	N87°08'17"E
C29	50°38'36"	120.00	106.07	S25°46'59"E	C59	10°51'41"	155.00	29.60	N87°08'17"E
C30	50°38'36"	120.00	106.07	S25°46'59"E	C60	10°51'41"	155.00	29.60	N87°08'17"E
C31	67°20'39"	95.00	111.81	90°11'15"	C61	09°52'49"	250.00	43.11	N05°23'38"W
C32	51°07'09"	95.00	84.76	N64°27'17"E	C62	45°15'14"	50.00	39.49	N21°01'07"E
C33	51°07'09"	95.00	84.76	N64°27'17"E	C63	19°41'18"	155.00	53.40	N74°04'39"E
C34	50°38'36"	95.00	83.97	S25°46'59"E	C64	10°51'41"	155.00	29.60	N87°08'17"E
C35	23°07'24"	180.00	72.64	N11°06'30"E	C65	12°37'38"	205.00	45.18	N89°09'38"E
C36	19°41'39"	180.00	96.43	N7°11'49"E	C66	10°51'41"	155.00	29.60	N87°08'17"E
C37	30°37'09"	180.00	96.19	N74°09'24"E	C67	29°29'51"	155.00	79.66	S74°44'32"W
C38	09°07'00"	475.00	246.13	S45°27'12"E	C68	01°10'17"	155.00	3.17	S59°25'58"W
C39	09°07'00"	25.00	39.27	S44°59'02"E	C69	11°37'24"	205.00	41.59	S64°39'11"W
C40	07°07'39"	25.00	62.88	N50°02'02"E	C70	15°04'35"	205.00	68.25	S80°00'31"W
C41	23°07'24"	155.00	62.55	N11°06'30"E	C71	31°11'53"	70.00	61.77	S44°46'00"W
C42	14°12'22"	25.00	21.93	S44°52'42"W	C72	15°04'35"	70.00	18.50	S82°16'28"W
C43	18°07'24"	50.00	162.65	N44°32'48"E	C73	04°14'09"	305.00	15.18	S87°07'40"W
C44	14°12'22"	25.00	21.93	S44°52'42"W	C74	03°27'09"	730.00	43.99	N44°53'14"W
C45	30°41'59"	155.00	83.05	N74°11'49"E	C75	14°15'54"	730.00	181.75	S33°03'42"W
C46	09°07'00"	205.00	109.55	N74°09'24"E	C76	08°23'39"	25.00	29.84	N16°54'23"W
C47	09°07'00"	155.00	82.83	S74°09'24"E	C77	09°22'41"	25.00	2.35	N19°58'52"E
C48	30°41'59"	205.00	109.55	S74°11'49"E					
C49	09°07'00"	25.00	39.27	S44°52'42"W					
C50	09°07'00"	25.00	39.27	S45°27'12"E					
C51	09°07'00"	25.00	39.27	S44°52'42"W					
C52	09°07'00"	25.00	39.27	N45°27'12"E					
C53	09°07'00"	500.00	90.40	N45°27'12"E					
C54	09°07'00"	25.00	39.27	N45°27'12"E					
C55	23°07'24"	205.00	82.73	S11°06'30"E					
C56	23°07'24"	205.00	82.73	S11°06'30"E					
C57	23°07'24"	205.00	82.73	S11°06'30"E					
C58	50°38'36"	120.00	106.07	S25°46'59"E					
C59	50°38'36"	120.00	106.07	S25°46'59"E					
C60	50°38'36"	120.00	106.07	S25°46'59"E					
C61	67°20'39"	95.00	111.81	90°11'15"					
C62	51°07'09"	95.00	84.76	N64°27'17"E					
C63	51°07'09"	95.00	84.76	N64°27'17"E					
C64	50°38'36"	95.00	83.97	S25°46'59"E					
C65	23°07'24"	180.00	72.64	N11°06'30"E					
C66	19°41'39"	180.00	96.43	N7°11'49"E					
C67	30°37'09"	180.00	96.19	N74°09'24"E					
C68	09°07'00"	475.00	246.13	S45°27'12"E					
C69	09°07'00"	25.00	39.27	S44°59'02"E					
C70	07°07'39"	25.00	62.88	N50°02'02"E					
C71	23°07'24"	155.00	62.55	N11°06'30"E					
C72	14°12'22"	25.00	21.93	S44°52'42"W					
C73	18°07'24"	50.00	162.65	N44°32'48"E					
C74	14°12'22"	25.00	21.93	S44°52'42"W					
C75	30°41'59"	155.00	83.05	N74°11'49"E					
C76	09°07'00"	205.00	109.55	N74°09'24"E					
C77	09°07'00"	155.00	82.83	S74°09'24"E					
C78	30°41'59"	205.00	109.55	S74°11'49"E					
C79	09°07'00"	25.00	39.27	S44°52'42"W					
C80	09°07'00"	25.00	39.27	S45°27'12"E					
C81	09°07'00"	25.00	39.27	S44°52'42"W					
C82	09°07'00"	25.00	39.27	N45°27'12"E					
C83	09°07'00"	500.00	90.40	N45°27'12"E					
C84	09°07'00"	25.00	39.27	N45°27'12"E					
C85	23°07'24"	205.00	82.73	S11°06'30"E					
C86	23°07'24"	205.00	82.73	S11°06'30"E					
C87	23°07'24"	205.00	82.73	S11°06'30"E					
C88	50°38'36"	120.00	106.07	S25°46'59"E					
C89	50°38'36"	120.00	106.07	S25°46'59"E					
C90	50°38'36"	120.00	106.07	S25°46'59"E					
C91	67°20'39"	95.00	111.81	90°11'15"					
C92	51°07'09"	95.00	84.76	N64°27'17"E					
C93	51°07'09"	95.00	84.76	N64°27'17"E					
C94	50°38'36"	95.00	83.97	S25°46'59"E					
C95	23°07'24"	180.00	72.64	N11°06'30"E					
C96	19°41'39"	180.00	96.43	N7°11'49"E					
C97	30°37'09"	180.00	96.19	N74°09'24"E					
C98	09°07'00"	475.00	246.13	S45°27'12"E					
C99	09°07'00"	25.00	39.27	S44°59'02"E					
C100	07°07'39"	25.00	62.88	N50°02'02"E					

KING'S LANDING

CITY OF PORT ORANGE VOLUSIA COUNTY, FL

FINAL ENGINEERING PLANS

CITY PROJECT ID: 17-50000008



REVISED



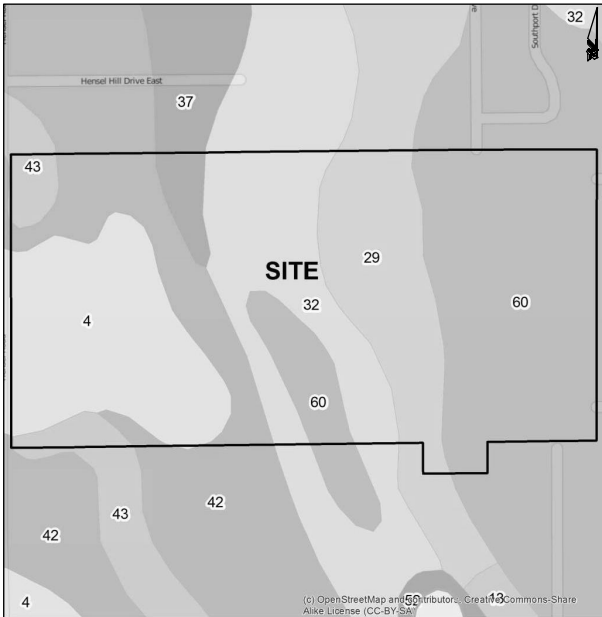
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL
PLANNING
TRANSPORTATION

DEVELOPMENT ORDER MODIFICATION TO SUBDIVISION PLAT AND PLANS TO CASE NO.: 16-50000004

OWNER/
DEVELOPER: COVENTRY PARTNERS, LLC
1474A W 84TH ST
HIALEAH, FL 33014
386-527-3943
321-747-0404 (FAX)
CONTACT: FRANK COSTA
FCOSTA@LIBERTYFLA.COM

ENGINEER/PLANNER: ZEV COHEN & ASSOC., INC.
300 INTERCHANGE BLVD
ORMOND BEACH, FL., 32174
(386) 677-2482
(386) 677-2505 (FAX)
CONTACT: RANDY M. HUDAK, P.E.
RHUDAK@ZEVCOHEN.COM

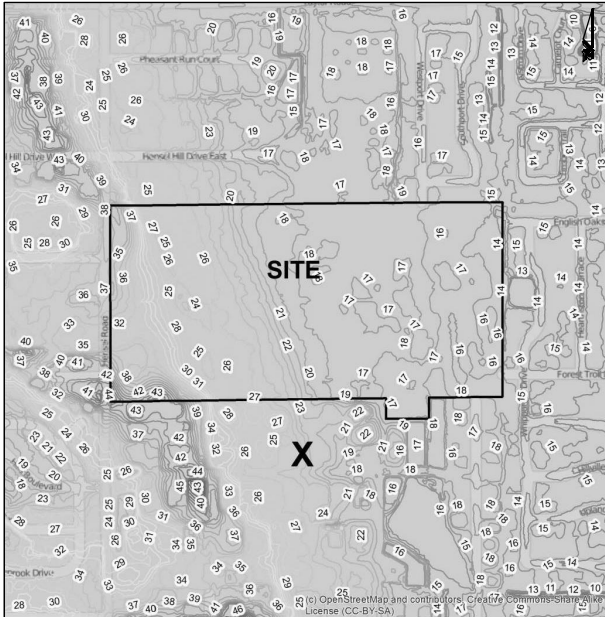
SURVEYOR: ACCURIGHT SURVEYS
2012 E. ROBINSON ST.
ORLANDO, FL 32803
(407) 894-6314
(407) 894-3777 (FAX)



SOILS MAP

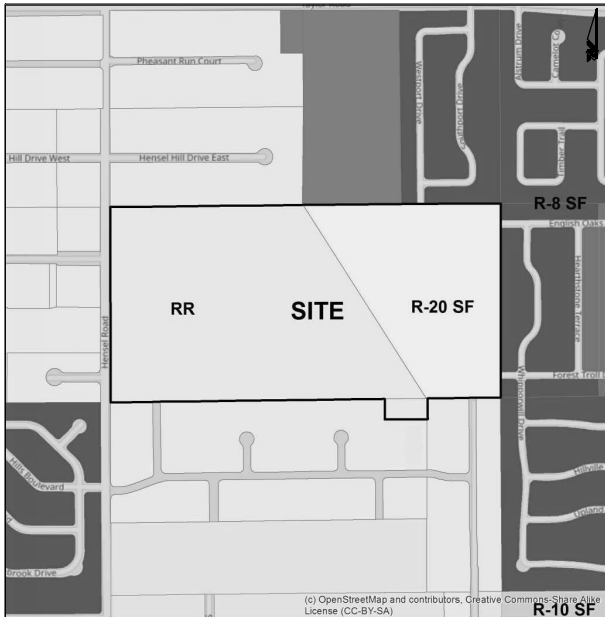
SOIL MAP NUMBER	SOIL NAME
4	ASTATULA FINE SAND
13	CASSIA FINE SAND
29	IMMOKALEE FIND SAND
32	MYAKKA FINE SAND
37	ORSINO FIND SAND; 0 TO 5% SLOPES
42	PAOLA FIND SAND; 0 TO 8% SLOPES
43	PAOLA FIND SAND; 8 TO 17% SLOPES
52	POMPANO FIND SAND
60	SMYRNA FIND SAND

HYDROLOGIC GROUP
A
C
A/D
A/D
A
A
A
A/D
A/D



FLOOD ZONE & LIDAR MAP

FLOOD MAP NUMBER 12127C0507H
EFFECTIVE ON 02/19/2014



ZONING MAP

EXISTING ZONING:	RR/R-20 SF
ADOPTED FUTURE LAND USE:	RURAL TRANSITIONAL (0-2 UNITS/ACRE) SUBURBAN RESIDENTIAL (2-4 UNITS/ACRE)
PROPOSED ZONING:	RR/R-20SF



VICINITY MAP

LEGAL DESCRIPTION

PARCEL 1
THE SOUTH 1/2 OF THE NORTHWEST 1/4 OF SECTION 21, TOWNSHIP 16 SOUTH, RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA, LESS AND EXCEPT THE WEST 30 FEET FOR HENSEL ROAD.

AND

PARCEL 2
A PORTION OF SECTION 21, TOWNSHIP 16 SOUTH, RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

FROM THE NORTHEAST CORNER OF SEMINOLE WOODS, PHASE I, AS RECORDED IN MAP BOOK 41, PAGE 106, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, RUN NORTH 00 DEGREES 21 MINUTES 48 SECONDS EAST, THEN BEARING BASIS OF THIS DESCRIPTION ALONG THE WEST BOUNDARY OF THE HAMLET SUBDIVISION, FIRST ADDITION, AS RECORDED IN MAP BOOK 35, PAGE 99 AND 100, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, A DISTANCE OF 1322.28 FEET; THENCE DEPARTING SAID LINE, RUN NORTH 89 DEGREES 49 MINUTES 46 SECONDS WEST A DISTANCE OF 512.04 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 89 DEGREES 49 MINUTES 46 SECONDS WEST, A DISTANCE OF 290.14 FEET; THENCE SOUTH 00 DEGREES 47 MINUTES 08 SECONDS WEST, A DISTANCE OF 150.00 FEET; THENCE SOUTH 89 DEGREES 49 MINUTES 46 SECONDS EAST, A DISTANCE OF 290.14 FEET; THENCE NORTH 00 DEGREES 47 MINUTES 08 SECONDS EAST, A DISTANCE OF 150.00 FEET TO THE POINT OF BEGINNING.

ALL THE ABOVE BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A PORTION OF SECTION 21, TOWNSHIP 16 SOUTH, RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE NORTHWEST CORNER OF LOT 27, ROLLING HILLS ESTATES PHASE 2, AS RECORDED IN PLAT BOOK 49, PAGES 102, 103 AND 104, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, RUN THENCE N00°00'52"E ALONG THE EAST RIGHT-OF-WAY LINE OF HENSEL ROAD A DISTANCE OF 1,324.97 FEET TO THE SOUTHWEST CORNER OF THE LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 2641,

SOUTHWEST CORNER OF THE LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 2641, PAGE 2642, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, SAID POINT BEING ON THE NORTH LINE OF THE SOUTH 1/2 OF THE NORTHWEST 1/4 OF SECTION 21, TOWNSHIP 16 SOUTH, RANGE 33 EAST; THENCE N89°37'07"E ALONG SAID NORTH LINE, A DISTANCE OF 2,671.22 FEET TO THE SOUTHWEST CORNER OF LOT 33, RAINTREE SUBDIVISION, AS RECORDED IN PLAT BOOK 33, PAGE 190, PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA, SAID POINT BEING A POINT ON THE EAST LINE OF THE SOUTH 1/2 OF THE NORTHWEST 1/4 OF SAID SECTION 21; THENCE S00°16'25"E ALONG SAID EAST LINE, A DISTANCE OF 1,321.61 FEET TO THE SOUTHWEST CORNER OF PARCEL "B", BENT OAK SUBDIVISION, AS RECORDED IN PLAT BOOK 40, PAGE 66, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, SAID POINT BEING A POINT ON THE SOUTH LINE OF THE SOUTH 1/2 OF THE NORTHWEST 1/4 OF SAID SECTION 21; THENCE S89°33'46"W ALONG SAID SOUTH LINE A DISTANCE OF 512.21 FEET TO THE NORTHWEST CORNER OF TRACT "C", BROKEN BOW ESTATES, AS RECORDED IN PLAT BOOK 49, PAGES 126 AND 127, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE S00°08'52"W ALONG THE WEST LINE OF SAID TRACT "C" A DISTANCE OF 150.06 FEET TO THE NORTHEAST CORNER OF TRACT "C"; ROLLING HILLS ESTATES PHASE 2, AS RECORDED IN PLAT BOOK 49, PAGES 102, 103 AND 104, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA; THENCE S89°32'23"W ALONG THE NORTH LINE OF SAID ROLLING HILLS ESTATES PHASE 2, A DISTANCE OF 289.93 FEET TO THE NORTHWEST CORNER OF LOT 30, SAID ROLLING HILLS ESTATES PHASE 2, SAID POINT BEING A POINT ON THE EAST LINE OF LOTS 12, SAID ROLLING HILLS ESTATES PHASE 2; THENCE N00°08'51"E ALONG SAID EAST LINE AND THE EAST LINE OF LOT 13, SAID ROLLING HILLS ESTATES PHASE 2, A DISTANCE OF 149.98 FEET TO THE NORTHEAST CORNER OF LOT 13, SAID ROLLING HILLS ESTATES PHASE 2, SAID POINT BEING A POINT ON SAID SOUTH LINE OF THE SOUTH 1/2 OF THE NORTHWEST 1/4 OF SECTION 21; THENCE S89°32'48"W ALONG SAID SOUTH LINE, A DISTANCE OF 1,875.76 FEET TO THE POINT OF BEGINNING.

CONTAINS 3,582,585 SQUARE FEET OR 82.245 ACRES MORE OR LESS.

SITE DATA TABLE

PROGRAM DATA	AREA
TOTAL AREA	82.245 ACRES
R/W AREA	8,468 ACRES
LOT AREA	53,539 ACRES
STORMWATER AREA	9,695 ACRES
NATURAL PRESERVATION AREA	12,333 ACRES*
NUMBER OF LOTS PROPOSED	71 LOTS
PARCEL NUMBERS:	6321-00-00-0071 6321-00-00-0074
SETBACKS:	
RR ZONING: LOTS 1-36	FRONT = 40 FT SIDE = 15 FT REAR = 30 FT
R-20SF ZONING: LOTS 37-71	FRONT = 30 FT SIDE = 10 FT REAR = 25 FT

* AREA INCLUDES TREE PRESERVATION AREA
ALSO INCLUDED IN LOT AREA

SHEET INDEX:

SHEET NO.	DESCRIPTION
C1	COVER SHEET
C2-C3	CONSTRUCTION NOTES
C4	OVERALL DEVELOPMENT PLAN
C5	EROSION CONTROL PLAN
C6-C11	GEOMETRY, STRIPING & SIGNAGE PLAN
C12-C17	PAVING, GRADING, DRAINAGE PLAN
C18-C23	UTILITY PLAN
C24	PLAN & PROFILE KEY MAP
C25-C32	PLAN & PROFILE
C33-C38	CONSTRUCTION DETAILS
TP1-TP7	TREE PROTECTION PLANS
LA1-LA3	LANDSCAPE PLANS
IR1-IR2	IRRIGATION PLANS



KING'S LANDING
FINAL ENGINEERING PLANS
COVER SHEET

PROJECT NO:	ZC 15082
ISSUE DATE:	8-11-17
DESIGNED BY:	RMH/MLR
DRAFTED BY:	MLR
CHECKED BY:	RMH
DRAWING FILE:	15082X-COV.DWG
XREFS:	XREFS:



SCALE:	AS SHOWN
SHEET:	C1 OF 38

POTABLE WATER CONSTRUCTION NOTES	
1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (380) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY POTABLE WATER SYSTEM CONSTRUCTION.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
2. DOWNSHAFTING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW WATER MAIN TIE IN.	
3. ALL WATER MAINS SHALL BE Laid ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
4. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180.	
5. IF SHALLOW THE CONTRACTOR RESPONSIBILITY TO ENSURE THAT TRENCH CONSTRUCTION TESTS BE PROVIDED AT POINTS 1' FOOT ABOVE THE PIPE AND AT 1' FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 100 FEET.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
6. METALLIZED PIPE LOCATION TAP SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE, OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE USED ON ALL DUCTILE IRON PIPE, AS WELL.	
7. ALL WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND. ALL SERVICES SHALL BE LOCATED TO THE TIME OF FINAL INSPECTION IN THE PRESENCE OF THE CITY INSPECTOR OR CITY PERSONNEL, AFTER THEY HAVE BEEN INSPECTED AND VERIFIED TO OPERATE PROPERLY.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
8. AT ALL WATER MAIN TIES AND CROSSINGS, VALVES SHALL BE INSTALLED ON ALL LINES EXCEPT 12" AND 16" WATER VALVES SHALL BE ADJUSTED TO FINISH GRADE, AND THE CAPS PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE.	
9. UPON FINAL ACCEPTANCE OF NEW WATER SYSTEMS, WATER VALVES SHALL BE COMPLETELY OPERATED BY PUBLIC UTILITIES PERSONNEL AT NO TIME SHALL CONTRACTOR OPERATE ANY EXISTING VALVES.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
10. ALL FIRE HYDRANTS SHALL BE CONSTRUCTED TO MAKE THEM EASILY ACCESSIBLE TO FIRE PERSONNEL IN CASE OF A FIRE. THE PRIMARY HYDRANT PORT SHOULD ALWAYS FACE THE STREET.	
11. AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF CURB OR AS APPROVED BY THE CITY.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
12. ALL WATER MAINS SHALL BE NEW AND/OR AWWA APPROVED FOR POTABLE WATER USE, AND SHALL HAVE A MINIMUM COVER OF 36 INCHES (3'0" FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4'0" FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.	
13. WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR BULK) OR D.I.P. PRESSURE CLASS 150 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
14. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO INSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF HEALTH AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY PUBLIC USE OF THE SYSTEM.	
15. IN AREAS WHERE RECLAIMED WATER IS NOT AVAILABLE THE CONTRACTOR SHALL BE REQUIRED TO SUPPLY SATISFACTORY COMPLETION OF THE PRESSURE TEST (TESTING THE WATER FROM THE POTABLE WATER LINES TO THE RECLAIMED WATER LINES FOR INTEGRATION IN THEIR PRESSURE TEST).	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
16. ALL POTABLE WATER MAINS SHALL USE A THURST RESTRAINT JOINT METHOD AND IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES, IN THE EVENT THAT PVC PIPE IS SPECIFIED, THE	

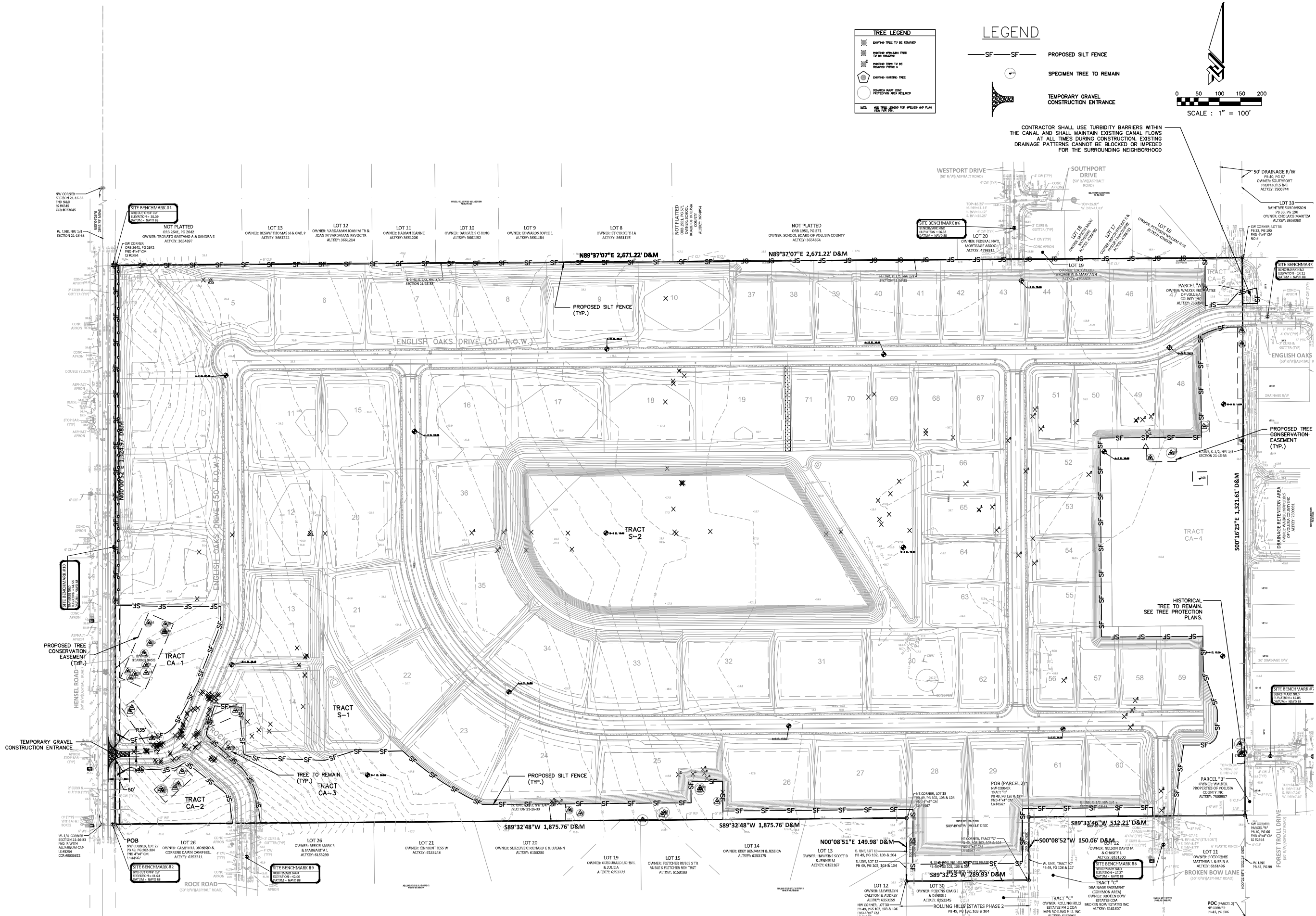
RECLAIMED WATER CONSTRUCTION NOTES	
1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (380) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY RECLAIMED WATER SYSTEM CONSTRUCTION.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
2. DOWNSHAFTING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW RECLAIMED WATER MAIN TIE IN.	
3. ALL RECLAIMED WATER MAINS SHALL BE Laid ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL. ALL RECLAIMED WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES (3'0" FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4'0" FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
4. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND A MINIMUM COMPACTION OF 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180.	
5. IF SHALLOW THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH CONSTRUCTION TESTS BE PROVIDED AT POINTS 1' FOOT ABOVE THE PIPE AND AT 1' FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 100 FEET.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
6. METALLIZED PIPE LOCATION TAP SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE, OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE PROVIDED ON ALL DIP PIPE ALSO.	
7. ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE 12" AND DOUBLE RESIDENTIAL SERVICES SHALL BE 12" SERVICES SHALL BE CTS-300 HIGH DENSITY POLYETHYLENE TUBING RATED FOR A MAXIMUM OF 200 PSI WITH SDR 35 (CTS) THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER SHALL FURNISH A CERTIFICATE OF PURITY. THE TUBING SHALL BE IDENTIFIED IN COLOR AND SHALL HAVE THE WORKING RECLAIMED WATER PERMANENTLY PRINTED ON THE OUTSIDE. THE TUBING SHALL HAVE UV PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF A.S.M. D2428, D2550, D2773, D2777, A.S.T. A-84 AND A.W.W.A. C900 AND SHALL COME WITH A LIFETIME WARRANTY, APPROVED SDR'S: 1", 1.5" AND 2" DIAMETERS.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
8. ALL RECLAIMED WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND AND ANY "U" BRANCHES FOR DOUBLE SERVICES SHALL BE 12" ABOVE GROUND LEVEL. ALL SERVICES SHALL BE LOCATED.	
9. ALL RECLAIMED WATER VALVES SHALL BE ADJUSTED TO FINISH GRADE AND THE CAPS PAINTED BLUE TO MAKE THEM PLAINLY DISTINGUISHABLE.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
10. AS STANDARD PRACTICE, RECLAIMED WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF THE CURB ON THE OPPOSITE SIDE OF THE POTABLE WATER MAINS OR AS APPROVED BY THE CITY.	
11. ALL RECLAIMED WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR BULK) OR D.I.P. PRESSURE CLASS 150 OR IMPOSSIBLE OR INAPPROPRIATE TO PROVIDE ADEQUATE COVER, DUCTILE IRON PRESSURE CLASS 350 OR CONCRETE ENCASMENT MAY BE USED AS APPROVED BY THE CITY.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
12. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED INSPECTOR PRIOR TO ATTEMPTING TO CLEAR ANY RECLAIMED WATER MAIN FOR USE. THE INSPECTOR SHALL COORDINATE WITH CITY PERSONNEL AT THE RECLAIMED WATER PLANT 2 BUSINESS DAYS PRIOR TO BEGINNING ANY PIPE. DIAMETER FLUSH OF MAINS, THE CONTRACTOR WILL CONDUCT A STANDARD WATER PRESSURE TEST, 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS	

SANITARY SEWER DESIGN NOTES CONT'D	
1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (380) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY SANITARY SEWER CONSTRUCTION.	 STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES REV. 12/08 FILE NAME S2.DOC DETAIL REF. S-1
2. DOWNSHAFTING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW SANITARY SEWER MAIN TIE IN.	
3. ALL SANITARY SEWER MAINS SHALL BE Laid ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL. ALL SANITARY SEWER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES (3'0" FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4'0" FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.	 STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES REV. 12/08 FILE NAME S2.DOC DETAIL REF. S-1
4. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND A MINIMUM COMPACTION OF 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180.	
5. IF SHALLOW THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH CONSTRUCTION TESTS BE PROVIDED AT POINTS 1' FOOT ABOVE THE PIPE AND AT 1' FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 100 FEET.	 STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES REV. 12/08 FILE NAME S2.DOC DETAIL REF. S-1
6. METALLIZED PIPE LOCATION TAP SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE, OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE PROVIDED ON ALL DIP PIPE ALSO.	
7. ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE 12" AND DOUBLE RESIDENTIAL SERVICES SHALL BE 12" SERVICES SHALL BE CTS-300 HIGH DENSITY POLYETHYLENE TUBING RATED FOR A MAXIMUM OF 200 PSI WITH SDR 35 (CTS) THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER SHALL FURNISH A CERTIFICATE OF PURITY. THE TUBING SHALL BE IDENTIFIED IN COLOR AND SHALL HAVE THE WORKING RECLAIMED WATER PERMANENTLY PRINTED ON THE OUTSIDE. THE TUBING SHALL HAVE UV PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF A.S.M. D2428, D2550, D2773, D2777, A.S.T. A-84 AND A.W.W.A. C900 AND SHALL COME WITH A LIFETIME WARRANTY, APPROVED SDR'S: 1", 1.5" AND 2" DIAMETERS.	 STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES REV. 12/08 FILE NAME S2.DOC DETAIL REF. S-1
8. ALL RECLAIMED WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND AND ANY "U" BRANCHES FOR DOUBLE SERVICES SHALL BE 12" ABOVE GROUND LEVEL. ALL SERVICES SHALL BE LOCATED.	
9. ALL RECLAIMED WATER VALVES SHALL BE ADJUSTED TO FINISH GRADE AND THE CAPS PAINTED BLUE TO MAKE THEM PLAINLY DISTINGUISHABLE.	 STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES REV. 12/08 FILE NAME S2.DOC DETAIL REF. S-1
10. AS STANDARD PRACTICE, RECLAIMED WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF THE CURB ON THE OPPOSITE SIDE OF THE POTABLE WATER MAINS OR AS APPROVED BY THE CITY.	
11. ALL RECLAIMED WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR BULK) OR D.I.P. PRESSURE CLASS 150 OR IMPOSSIBLE OR INAPPROPRIATE TO PROVIDE ADEQUATE COVER, DUCTILE IRON PRESSURE CLASS 350 OR CONCRETE ENCASMENT MAY BE USED AS APPROVED BY THE CITY.	 STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES REV. 12/08 FILE NAME S2.DOC DETAIL REF. S-1
12. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED INSPECTOR PRIOR TO ATTEMPTING TO CLEAR ANY RECLAIMED WATER MAIN FOR USE. THE INSPECTOR SHALL COORDINATE WITH CITY PERSONNEL AT THE RECLAIMED WATER PLANT 2 BUSINESS DAYS PRIOR TO BEGINNING ANY PIPE. DIAMETER FLUSH OF MAINS, THE CONTRACTOR WILL CONDUCT A STANDARD WATER PRESSURE TEST, 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS	

POTABLE WATER CONSTRUCTION NOTES (CONT'D)	
1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (380) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY POTABLE WATER SYSTEM CONSTRUCTION.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
2. DOWNSHAFTING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW WATER MAIN TIE IN.	
3. ALL WATER MAINS SHALL BE Laid ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
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5. IF SHALLOW THE CONTRACTOR RESPONSIBILITY TO ENSURE THAT TRENCH CONSTRUCTION TESTS BE PROVIDED AT POINTS 1' FOOT ABOVE THE PIPE AND AT 1' FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 100 FEET.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
6. METALLIZED PIPE LOCATION TAP SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE, OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE USED ON ALL DUCTILE IRON PIPE, AS WELL.	
7. ALL WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND. ALL SERVICES SHALL BE LOCATED TO THE TIME OF FINAL INSPECTION IN THE PRESENCE OF THE CITY INSPECTOR OR CITY PERSONNEL, AFTER THEY HAVE BEEN INSPECTED AND VERIFIED TO OPERATE PROPERLY.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
8. AT ALL WATER MAIN TIES AND CROSSINGS, VALVES SHALL BE INSTALLED ON ALL LINES EXCEPT 12" AND 16" WATER VALVES SHALL BE ADJUSTED TO FINISH GRADE, AND THE CAPS PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE.	
9. UPON FINAL ACCEPTANCE OF NEW WATER SYSTEMS, WATER VALVES SHALL BE COMPLETELY OPERATED BY PUBLIC UTILITIES PERSONNEL AT NO TIME SHALL CONTRACTOR OPERATE ANY EXISTING VALVES.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
10. ALL FIRE HYDRANTS SHALL BE CONSTRUCTED TO MAKE THEM EASILY ACCESSIBLE TO FIRE PERSONNEL IN CASE OF A FIRE. THE PRIMARY HYDRANT PORT SHOULD ALWAYS FACE THE STREET.	
11. AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF CURB OR AS APPROVED BY THE CITY.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
12. ALL WATER MAINS SHALL BE NEW AND/OR AWWA APPROVED FOR POTABLE WATER USE, AND SHALL HAVE A MINIMUM COVER OF 36 INCHES (3'0" FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4'0" FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.	
13. WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR BULK) OR D.I.P. PRESSURE CLASS 150 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY.	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
14. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO INSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF HEALTH AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY PUBLIC USE OF THE SYSTEM.	
15. IN AREAS WHERE RECLAIMED WATER IS NOT AVAILABLE THE CONTRACTOR SHALL BE REQUIRED TO SUPPLY SATISFACTORY COMPLETION OF THE PRESSURE TEST (TESTING THE WATER FROM THE POTABLE WATER LINES TO THE RECLAIMED WATER LINES FOR INTEGRATION IN THEIR PRESSURE TEST).	 STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
16. ALL POTABLE WATER MAINS SHALL USE A THURST RESTRAINT JOINT METHOD AND IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES, IN THE EVENT THAT PVC PIPE IS SPECIFIED, THE	

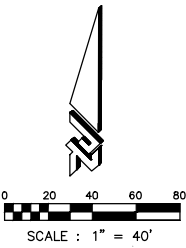
RECLAIMED WATER CONSTRUCTION NOTES (CONT'D)	
1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (380) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY RECLAIMED WATER SYSTEM CONSTRUCTION.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
2. DOWNSHAFTING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW RECLAIMED WATER MAIN TIE IN.	
3. ALL RECLAIMED WATER MAINS SHALL BE Laid ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL. ALL RECLAIMED WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES (3'0" FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4'0" FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
4. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND A MINIMUM COMPACTION OF 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180.	
5. IF SHALLOW THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH CONSTRUCTION TESTS BE PROVIDED AT POINTS 1' FOOT ABOVE THE PIPE AND AT 1' FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 100 FEET.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
6. METALLIZED PIPE LOCATION TAP SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE, OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE PROVIDED ON ALL DIP PIPE ALSO.	
7. ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE 12" AND DOUBLE RESIDENTIAL SERVICES SHALL BE 12" SERVICES SHALL BE CTS-300 HIGH DENSITY POLYETHYLENE TUBING RATED FOR A MAXIMUM OF 200 PSI WITH SDR 35 (CTS) THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER SHALL FURNISH A CERTIFICATE OF PURITY. THE TUBING SHALL BE IDENTIFIED IN COLOR AND SHALL HAVE THE WORKING RECLAIMED WATER PERMANENTLY PRINTED ON THE OUTSIDE. THE TUBING SHALL HAVE UV PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF A.S.M. D2428, D2550, D2773, D2777, A.S.T. A-84 AND A.W.W.A. C900 AND SHALL COME WITH A LIFETIME WARRANTY, APPROVED SDR'S: 1", 1.5" AND 2" DIAMETERS.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
8. ALL RECLAIMED WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND AND ANY "U" BRANCHES FOR DOUBLE SERVICES SHALL BE 12" ABOVE GROUND LEVEL. ALL SERVICES SHALL BE LOCATED.	
9. ALL RECLAIMED WATER VALVES SHALL BE ADJUSTED TO FINISH GRADE AND THE CAPS PAINTED BLUE TO MAKE THEM PLAINLY DISTINGUISHABLE.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
10. AS STANDARD PRACTICE, RECLAIMED WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF THE CURB ON THE OPPOSITE SIDE OF THE POTABLE WATER MAINS OR AS APPROVED BY THE CITY.	
11. ALL RECLAIMED WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR BULK) OR D.I.P. PRESSURE CLASS 150 OR IMPOSSIBLE OR INAPPROPRIATE TO PROVIDE ADEQUATE COVER, DUCTILE IRON PRESSURE CLASS 350 OR CONCRETE ENCASMENT MAY BE USED AS APPROVED BY THE CITY.	 STANDARD CONSTRUCTION DETAIL RECLAIMED WATER CONSTRUCTION NOTES REV. 12/08 FILE NAME W2.DOC DETAIL REF. W-2
12. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED INSPECTOR PRIOR TO ATTEMPTING TO CLEAR ANY RECLAIMED WATER MAIN FOR USE. THE INSPECTOR SHALL COORDINATE WITH CITY PERSONNEL AT THE RECLAIMED WATER PLANT 2 BUSINESS DAYS PRIOR TO BEGINNING ANY PIPE. DIAMETER FLUSH OF MAINS, THE CONTRACTOR WILL CONDUCT A STANDARD WATER PRESSURE TEST, 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS	

SANITARY SEWER CONSTRUCTION NOTES	
1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY SANITARY SEWER CONSTRUCTION.	 STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES REV. 12/08 FILE NAME S2.DOC DETAIL REF. S-2
2. DOWNSHAFTING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW SANITARY SEWER MAIN TIE IN.	
3. ALL SANITARY SEWER MAINS SHALL BE Laid ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL. ALL SANITARY SEWER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES (3'0" FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4'0" FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.	 STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES REV. 12/08 FILE NAME S2.DOC DETAIL REF. S-2
4. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND A MINIMUM COMPACTION OF 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180.	
5. IF SHALLOW THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH CONSTRUCTION TESTS BE PROVIDED AT POINTS 1' FOOT ABOVE THE PIPE AND AT 1' FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 100 FEET.	 STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES REV. 12/08 FILE NAME S2.DOC DETAIL REF. S-2
6. METALLIZED PIPE LOCATION TAP SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE, OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE PROVIDED ON ALL DIP PIPE ALSO.	
7. ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE 12" AND DOUBLE RESIDENTIAL SERVICES SHALL BE 12" SERVICES SHALL BE CTS-300 HIGH DENSITY POLYETHYLENE TUBING RATED FOR A MAXIMUM OF 200 PSI WITH SDR 35 (CTS) THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER SHALL FURNISH A CERTIFICATE OF PURITY. THE TUBING SHALL BE IDENTIFIED IN COLOR AND SHALL HAVE THE WORKING RECLAIMED WATER PERMANENTLY PRINTED ON THE OUTSIDE. THE TUBING SHALL HAVE UV PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF A.S.M. D2428, D2550, D2773, D2777, A	



LEGEND

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- 15 PROPOSED LOT NUMBER
- PROPOSED SETBACK
- 245 SPECIMEN TREE TO REMAIN
- PROPOSED FDOT CROSSWALK
- PROPOSED 2' WIDE WHITE STOP BAR
- PROPOSED 30" R-1 STOP SIGN
- PROPOSED STREET LIGHT



NW CORNER
SECTION 21-16-33
FND N&D
LS #4245
CCR #073045

SITE BENCHMARK #1
BOX CUT ON 8' CW
ELEVATION = 35.39
DATUM = NAVD 88

NOT PLATTED

ORB 2641, PG 2642

OWNER: TROVATO GAETANO A & SANDRA E

ALTKEY: 3654897

SW CORNER
ORB 2641, PG 2642
FND 4"x4" CM
LS #2494

LOT 13
OWNER: BESAW THOMAS N & GAIL P
ALTKEY: 3661222

LOT 12
OWNER: VARDAMAN JOAN M & JOAN M VARDAMAN REVOC
ALTKEY: 3661214

CONC
APRON
2' CURB &
GUTTER (TYP)

CONC
APRON

CONC
APRON

DOUBLE YELLOW

ASPHALT
APRON

REUSE

STOP BAR
(TYP)

ASPHALT
APRON

PROPOSED 10'
LANDSCAPE
BUFFER

PROPOSED 2'
VEHICLE
ACCESS
EASEMENT

PROPOSED 30'
REAR
YARD
SETBACK

PROPOSED 15'
SIDE
YARD
SETBACK

PROPOSED 40'
FRONT
YARD
SETBACK

LOT 13

OWNER: BESAW THOMAS N & GAIL P
ALTKEY: 3661222

LOT 12

OWNER: VARDAMAN JOAN M & JOAN M VARDAMAN REVOC
ALTKEY: 3661214

PROPOSED 35'
DRAINAGE
EASEMENT

PROPOSED 15'
SIDE
YARD
SETBACK

PROPOSED 15'
SIDE
YARD
SETBACK

PROPOSED 12'
DRAINAGE
& UTILITY
EASEMENT

PROPOSED 40'
FRONT
YARD
SETBACK

PROPOSED 4' WIDE
CONCRETE
SIDEWALK

PROPOSED 2' WIDE
MIAMI CURB

PROPOSED 40'
FRONT
YARD
SETBACK

PROPOSED 12'
DRAINAGE
& UTILITY
EASEMENT

PROPOSED STREET LIGHT (TYP.)

PROPOSED 12'
DRAINAGE
& UTILITY
EASEMENT

PROPOSED 12'
DRAINAGE
& UTILITY
EASEMENT

PROPOSED 4' WIDE
CONCRETE SIDEWALK (TYP.)

PROPOSED 2' WIDE
MIAMI CURB (TYP.)

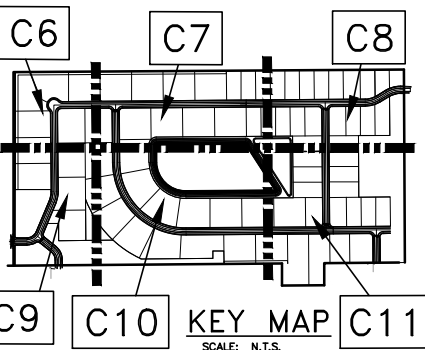
PROPOSED 30'
REAR
YARD
SETBACK

PROP
40' YA
STR
SETE

PROPC
DRA
& U
EASI

MATCH LINE - SEE SHEET C7

MATCH LINE - SEE SHEET C9

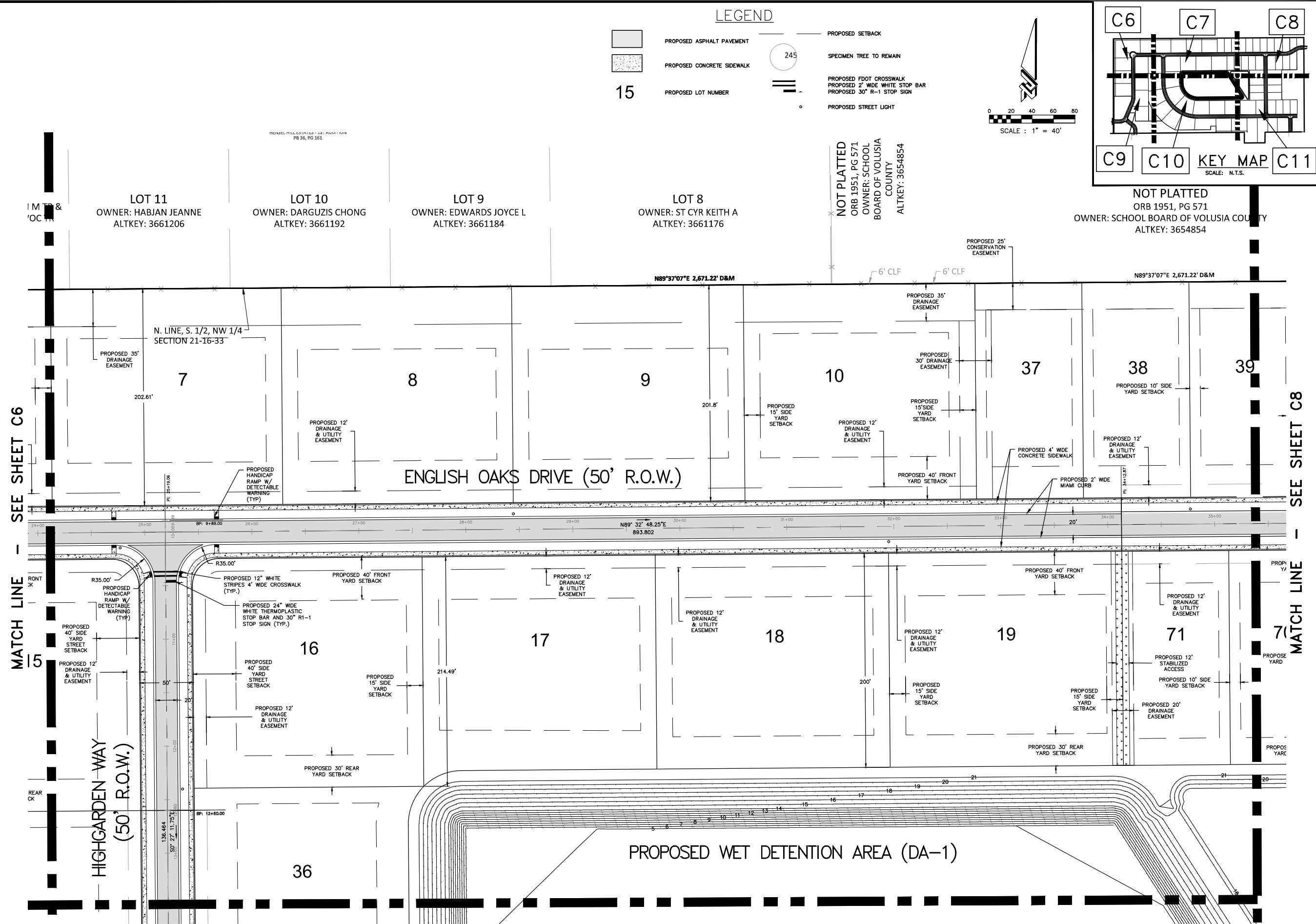


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**KING'S LANDING
FINAL ENGINEERING PLANS
GEOMETRY, STRIPING & SIGNAGE PLAN**

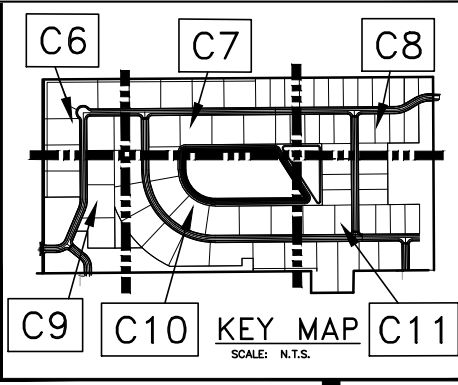
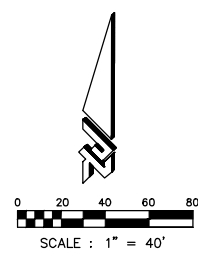
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ISSUE DATE: 8-11-17
DESIGNED BY: RMH/MLR
DRAFTED BY: MLR
CHECKED BY: RMH
DRAWING FILE: 15082X-PGD.DWG
XREFS: 15082X-BAS.DWG
XREFS: 15082X-SURV.DWG





LEGEND

	PROPOSED ASPHALT PAVEMENT		PROPOSED SETBACK
	PROPOSED CONCRETE SIDEWALK		SPECIMEN TREE TO REMAIN
	PROPOSED LOT NUMBER		PROPOSED FDOT CROSSWALK
			PROPOSED 2' WIDE WHITE STOP BAR
			PROPOSED 30' R-1 STOP SIGN
			PROPOSED STREET LIGHT



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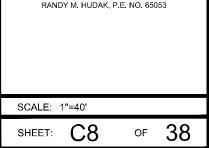
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LANDSCAPE ARCHITECTURE
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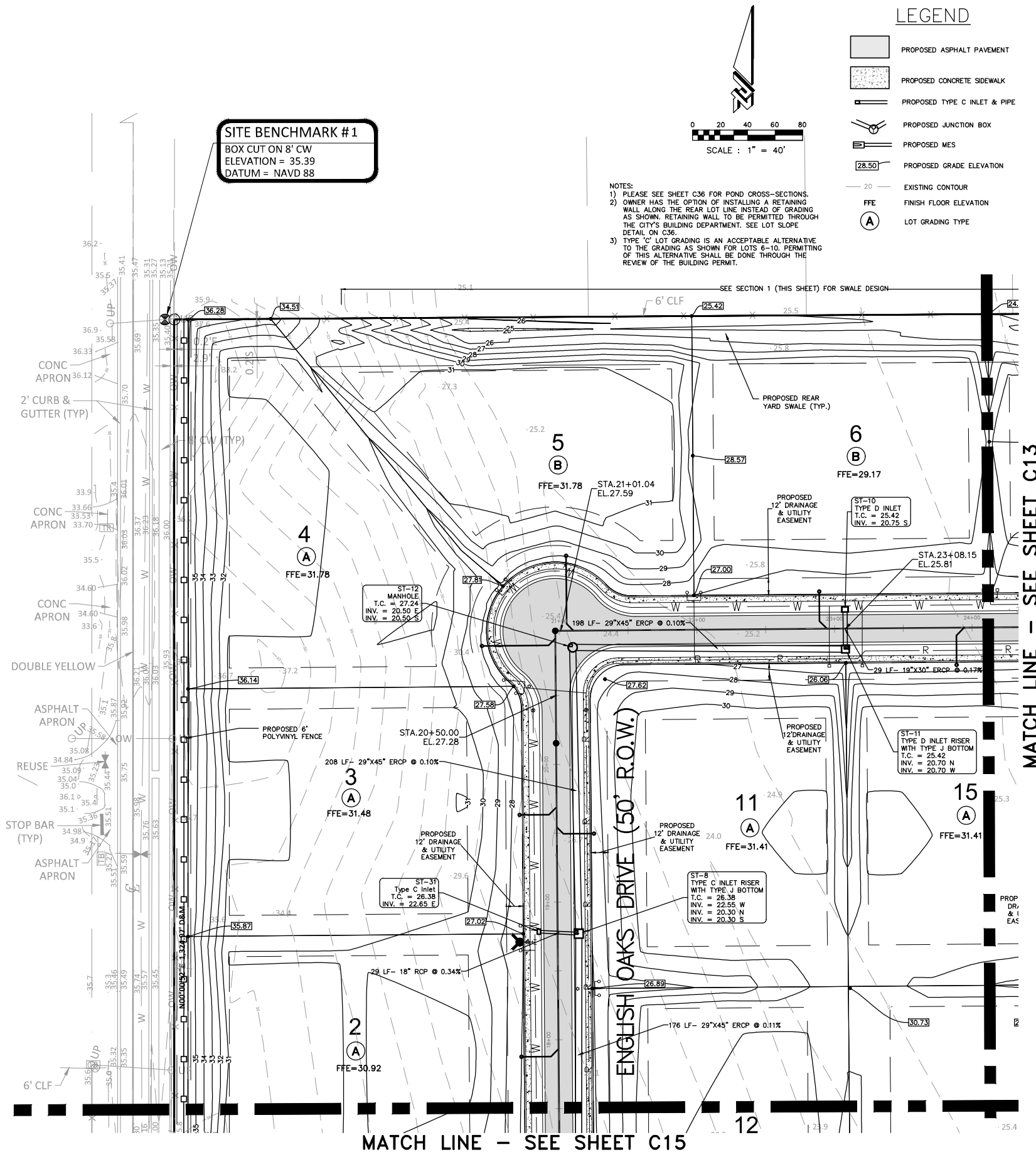
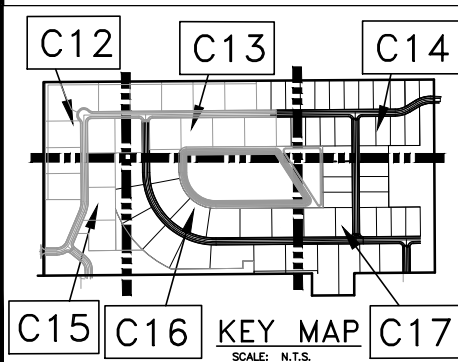
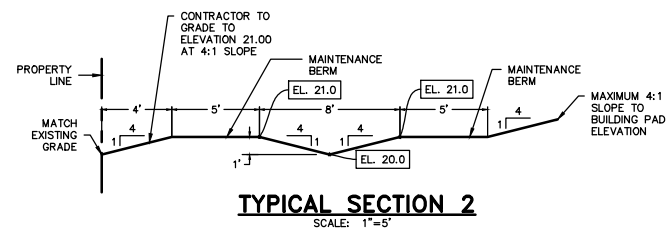
KING'S LANDING
FINAL ENGINEERING PLANS
GEOMETRY, STRIPING & SIGNAGE PLAN

PROJECT NO.: ZC 15082
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CHECKED BY: RMH
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XREFS: 15082X-BAS.DWG
XREFS: 15082X-SURV.DWG

NOT VALID WITHOUT SEAL
RANDY M. HUDAK, P.E. NO. 65553

SCALE: 1"=40'
SHEET: C7 OF 38





MATCH LINE - SEE SHEET C13

MATCH LINE - SEE SHEET C15



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**KING'S LANDING
FINAL ENGINEERING PLANS
PAVING, GRADING & DRAINAGE PLAN**

PROJECT NO: ZC 15082
ISSUE DATE: 8-11-17
DESIGNED BY: RMH/MLR
CHECKED BY: MLR
APPROVED BY: RMH
DRAWING FILE: 15082X-PGD-PH-2-3.DWG
REFS: 15082X-BAS.DWG
REFS: 15082X-SURV.DWG

SCALE: 1"=40'

SHEET: C12 OF 38

MATCH LINE - SEE SHEET C12

15
A
= 31.41

HIGHGARDEN WAY
(50' R.O.W.)

ENGLISH OAKS DRIVE (50' R.O.W.)

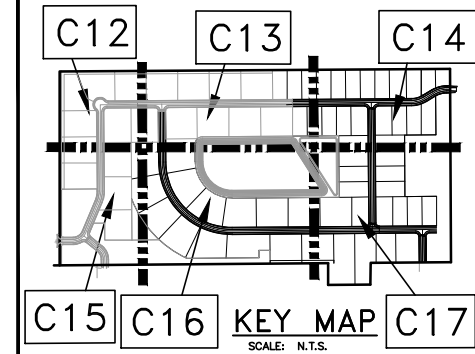
PROPOSED WET DETENTION
AREA (DA-1)

MATCH LINE - SEE SHEET C16

LEGEND

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED TYPE C INLET & PIPE
- PROPOSED JUNCTION BOX
- PROPOSED MES
- PROPOSED GRADE ELEVATION
- EXISTING CONTOUR
- FINISH FLOOR ELEVATION
- LOT GRADING TYPE

- NOTES:
- PLEASE SEE SHEET C36 FOR POND CROSS-SECTIONS.
 - OWNER HAS THE OPTION OF INSTALLING A RETAINING WALL ALONG THE REAR LOT LINE INSTEAD OF GRADING AS SHOWN. RETAINING WALL TO BE PERMITTED THROUGH THE CITY'S BUILDING DEPARTMENT. SEE LOT SLOPE DETAIL ON C36.
 - TYPE 'C' LOT GRADING IS AN ACCEPTABLE ALTERNATIVE TO THE GRADING AS SHOWN FOR LOTS 6-10. PERMITTING OF THIS ALTERNATIVE SHALL BE DONE THROUGH THE REVIEW OF THE BUILDING PERMIT.



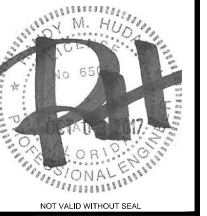
KEY MAP
SCALE: N.T.S.



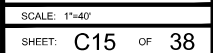
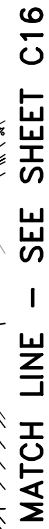
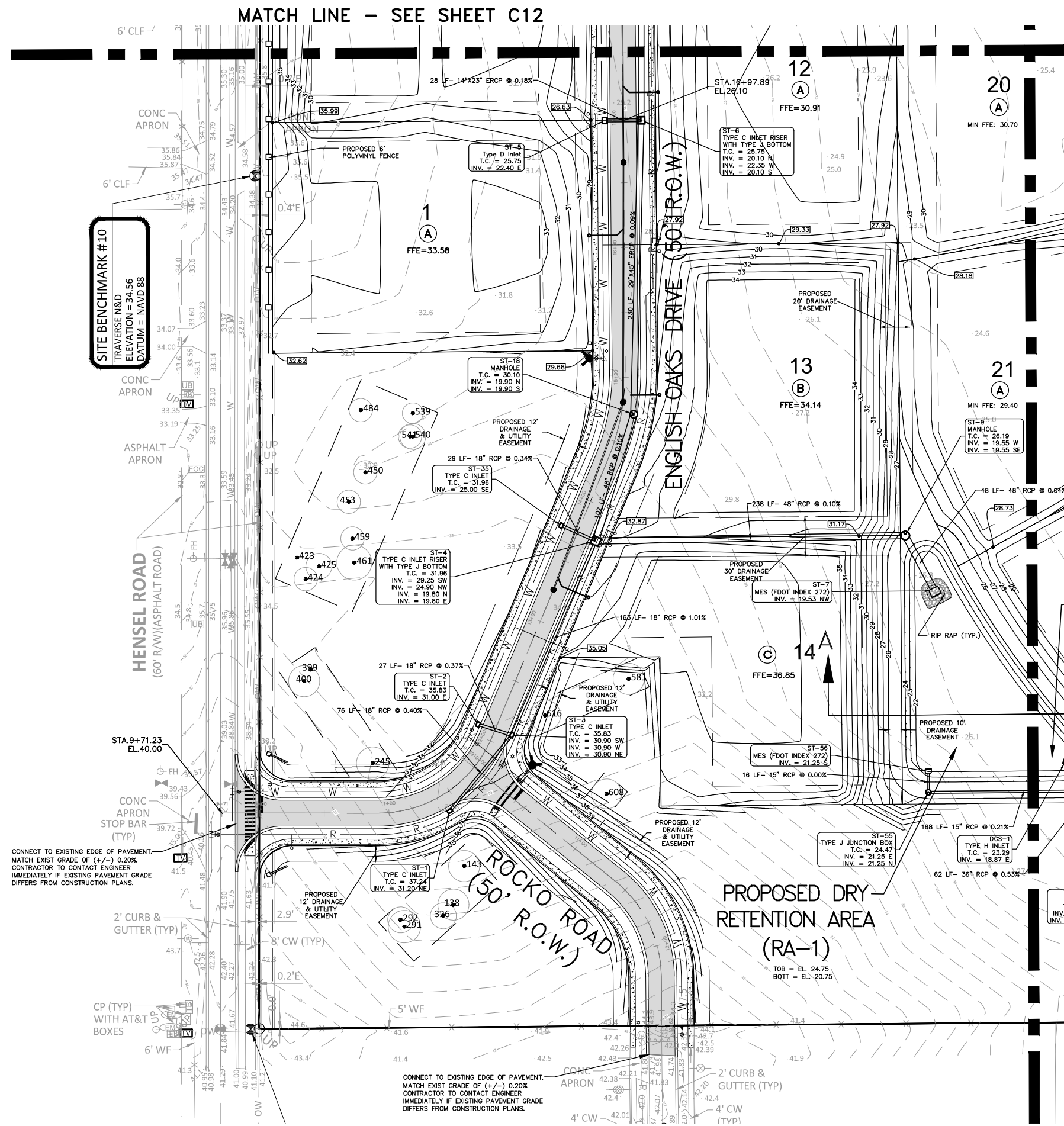
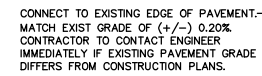
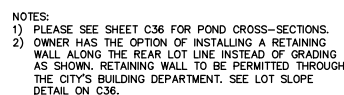
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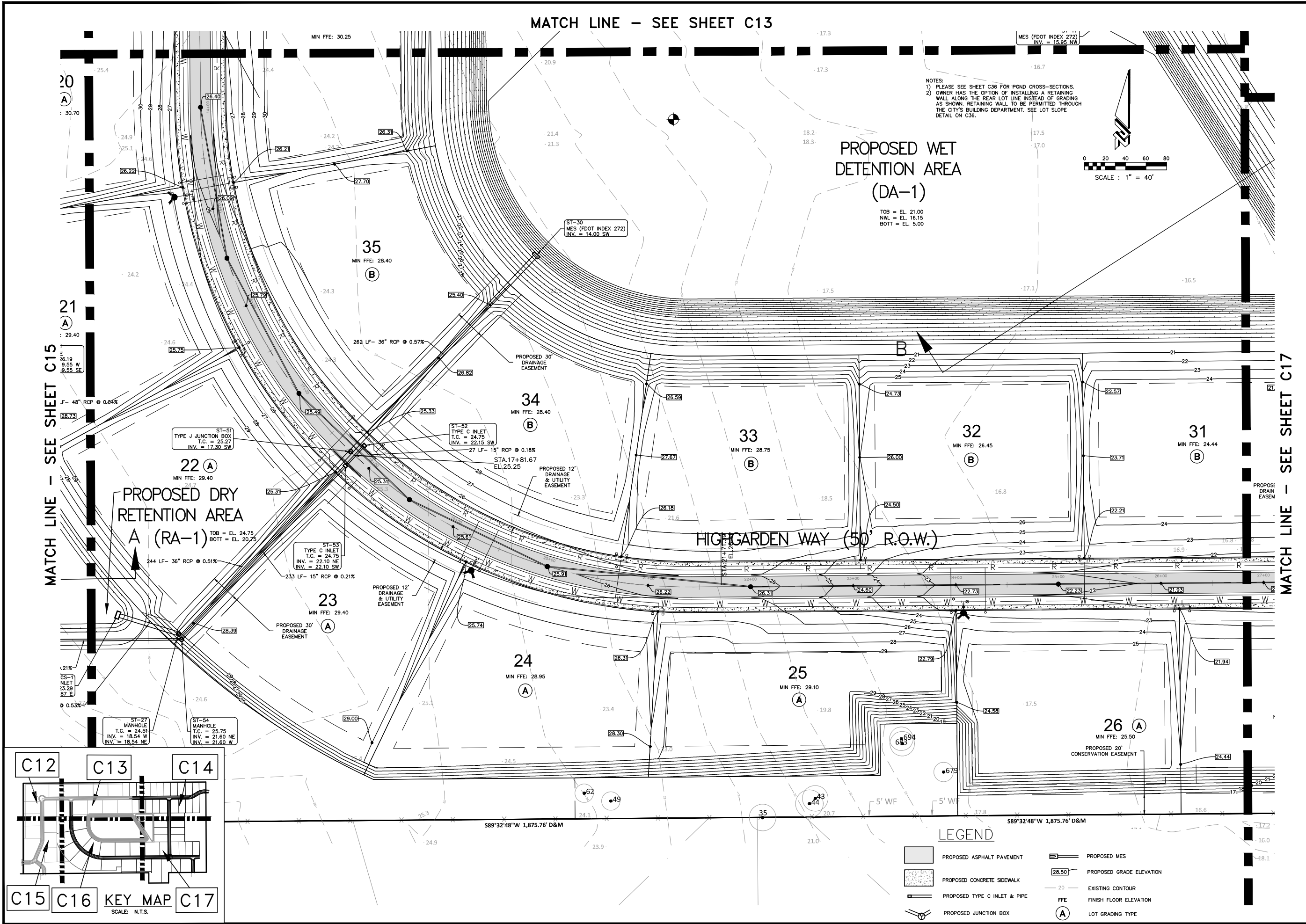
KING'S LANDING
FINAL ENGINEERING PLANS
PAVING, GRADING & DRAINAGE PLAN

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XREFS: 15082X-SURV.DWG



SCALE: 1"=40'
SHEET: C13 OF 38





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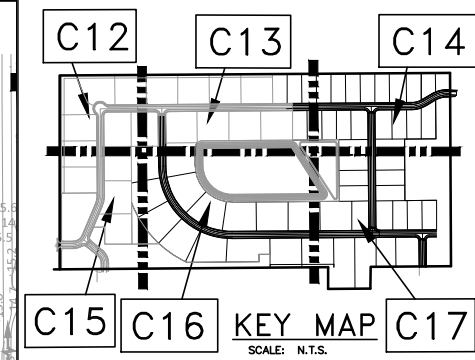
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XREFS: 15082X-BAS.DWG
XREFS: 15082X-SURV.DWG

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RANDY M. HUDAK, P.E. NO. 65053

SCALE: 1"=40'
SHEET: C16 OF 38

TRACT
CA-4



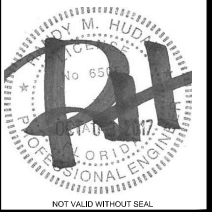
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ORLANDO BEACH, FL 32174
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[illegible]

**KING'S LANDING
FINAL ENGINEERING PLANS
PAVING, GRADING & DRAINAGE PLAN**

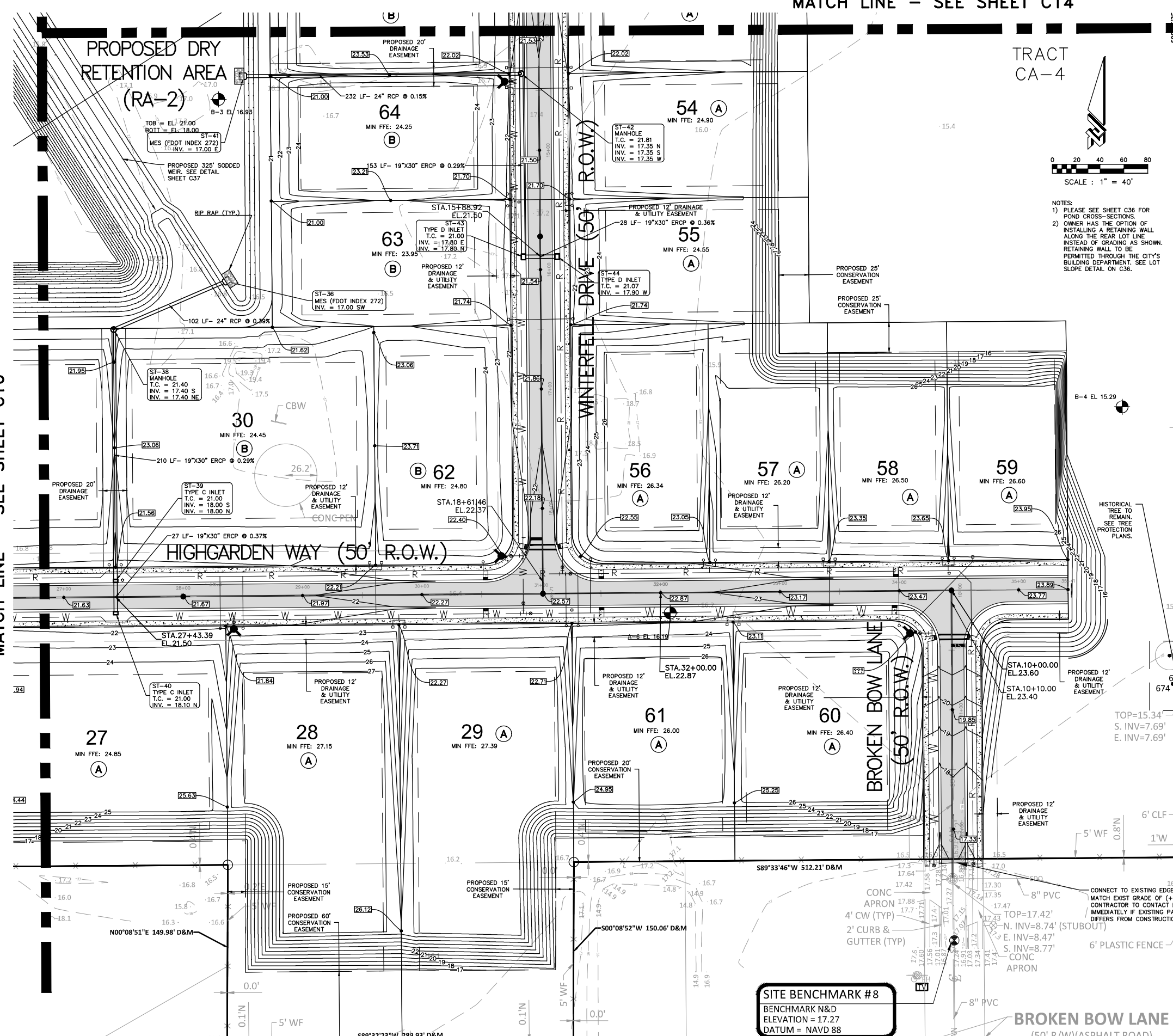
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SCALE: 1"=40'

SHEET: C17 OF 38

MATCH LINE - SEE SHEET C16



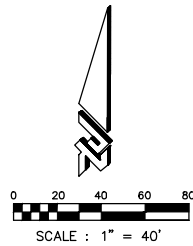
LEGEND

- | | |
|---|------------------------------|
|  | PROPOSED ASPHALT PAVEMENT |
|  | PROPOSED CONCRETE SIDEWALK |
|  | PROPOSED TYPE C INLET & PIPE |
|  | PROPOSED JUNCTION BOX |
|  | PROPOSED MES |
|  | PROPOSED GRADE ELEVATION |
|  | EXISTING CONTOUR |
|  | FINISH FLOOR ELEVATION |
|  | LOT GRADING TYPE |

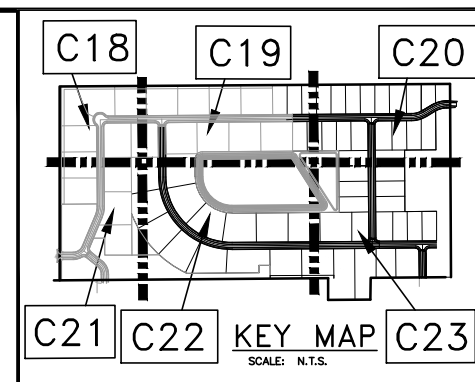
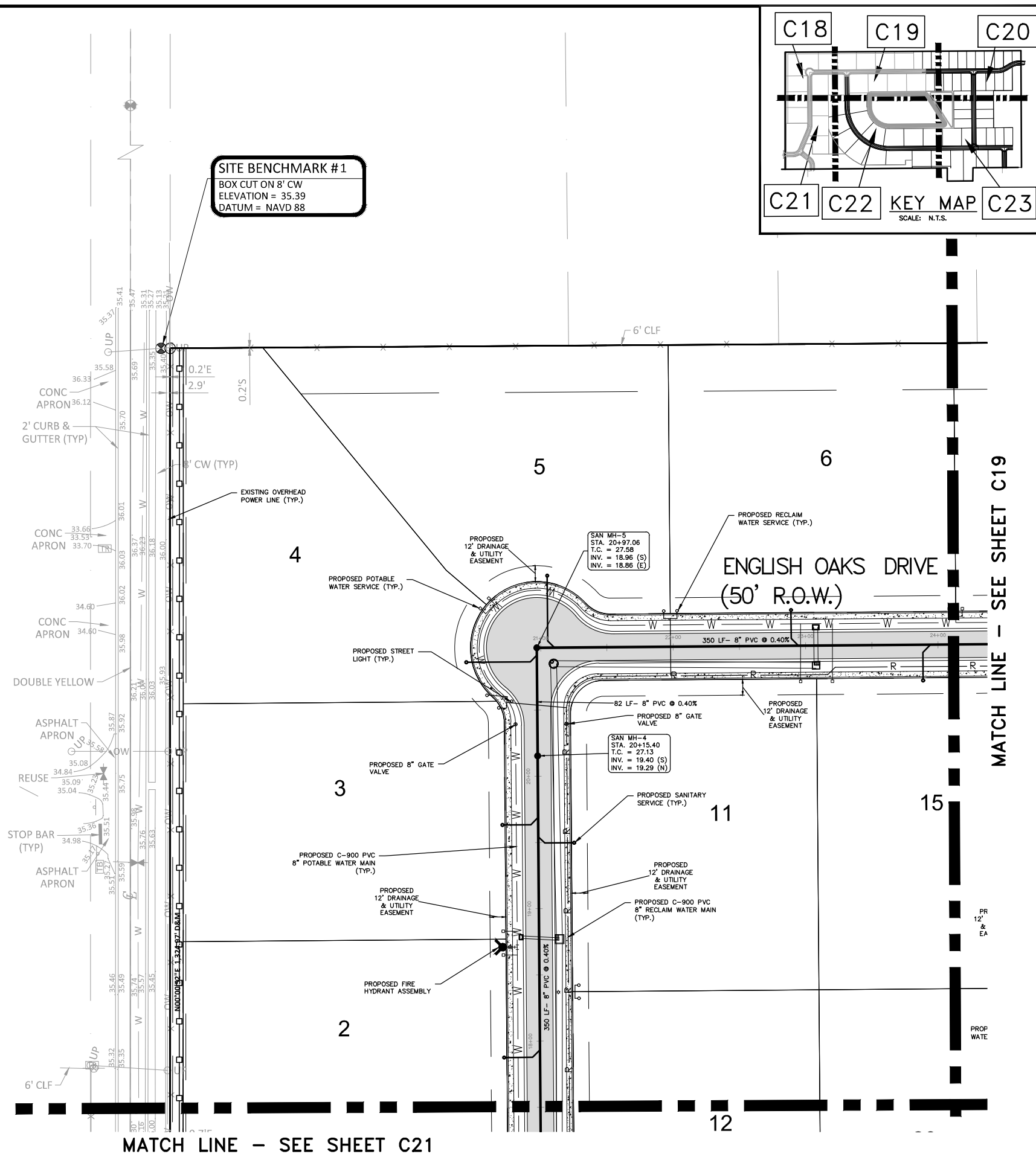
SITE BENCHMARK #7
BENCHMARK N&D
ELEVATION = 15.05
DATUM = NAVD 88

SITE BENCHMARK #8
BENCHMARK N&D
ELEVATION = 17.27
DATUM = NAVD 88

BROKEN BOW LANE
(50' R/W)(ASPHALT ROAD)



- LEGEND**
- PROPOSED ASPHALT PAVEMENT
 - PROPOSED CONCRETE SIDEWALK
 - PROPOSED FIRE HYDRANT ASSEMBLY
 - PROPOSED GATE VALVE
 - PROPOSED WATER MAIN
 - PROPOSED RECLAIM WATER MAIN



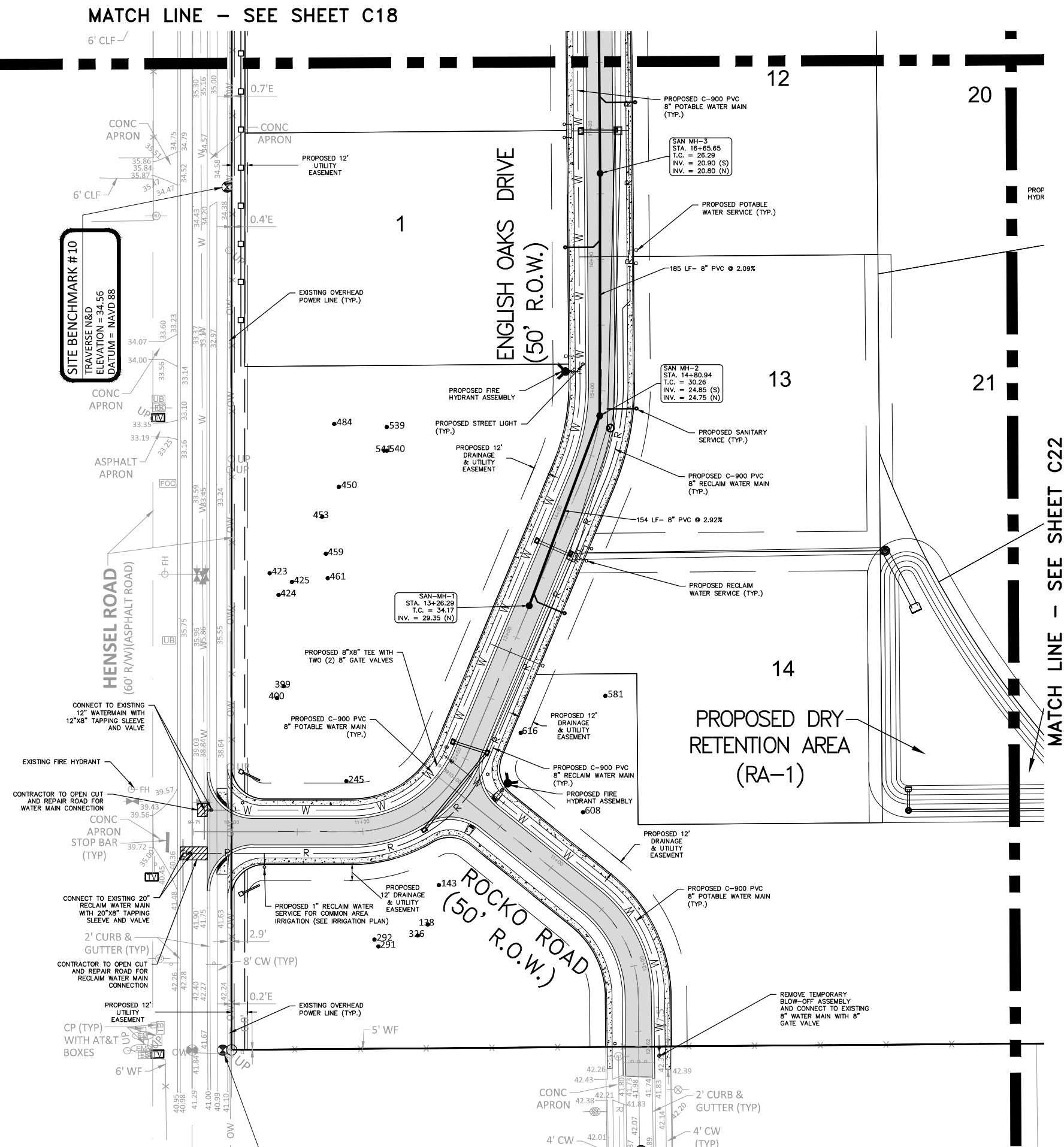
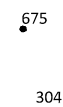
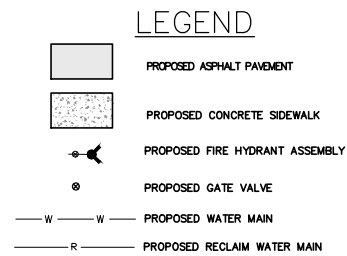
ZEV COHEN & ASSOCIATES, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL PLANNING
TRANSPORTATION
WWW.ZEVCOHEN.COM

CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL PLANNING
TRANSPORTATION

PROJECT NO.: ZC 15082
ISSUE DATE: 8-11-17
DESIGNED BY: RMH/MLR
DRAFTED BY: MLR
CHECKED BY: RMH
DRAWING FILE: 15082X-UTL-PH-2-3.DWG
XREFS: 15082X-BAS.DWG
XREFS: 15082X-SURV.DWG

NOT VALID WITHOUT SEAL
RANDY M. HUDAK, P.E. NO. 65593

SCALE: 1"=40'
SHEET: C18 OF 38



CIVIL ENGINEERING
Landscape Architecture
ENVIRONMENTAL
PLANNING
TRANSPORTATION

[illegible]

KING'S LANDING FINAL ENGINEERING PLANS

UTILITY PLAN

PORT ORANGE VOLusia COUNTY

PROJECT NO:	ZC 15082
ISSUE DATE:	8-11-17
DESIGNED BY:	RMH/MLR
CRAFTED BY:	MLR
CHECKED BY:	RMH
DRAWING FILE: 15082X-UTL-PH-2-3.DWG	
REF'S: 15082X-BAS.DWG	
REF'S: 15082X-SURF.DWG	



Randy M. Hudak, P.E. No. 65053

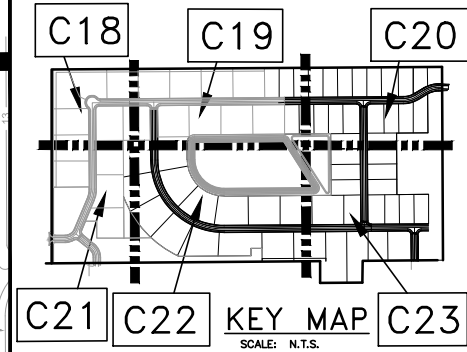
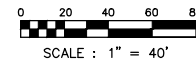
SCALE: 1"=40'

SHEET: C21 OF 38

MATCH LINE - SEE SHEET C22

MATCH LINE - SEE SHEET C20

TRACT
CA-4



LEGEND

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED FIRE HYDRANT ASSEMBLY
- PROPOSED GATE VALVE
- PROPOSED WATER MAIN
- PROPOSED RECLAIM WATER MAIN

SITE BENCHMARK #7
BENCHMARK N&D
ELEVATION = 15.05
DATUM = NAVD 88

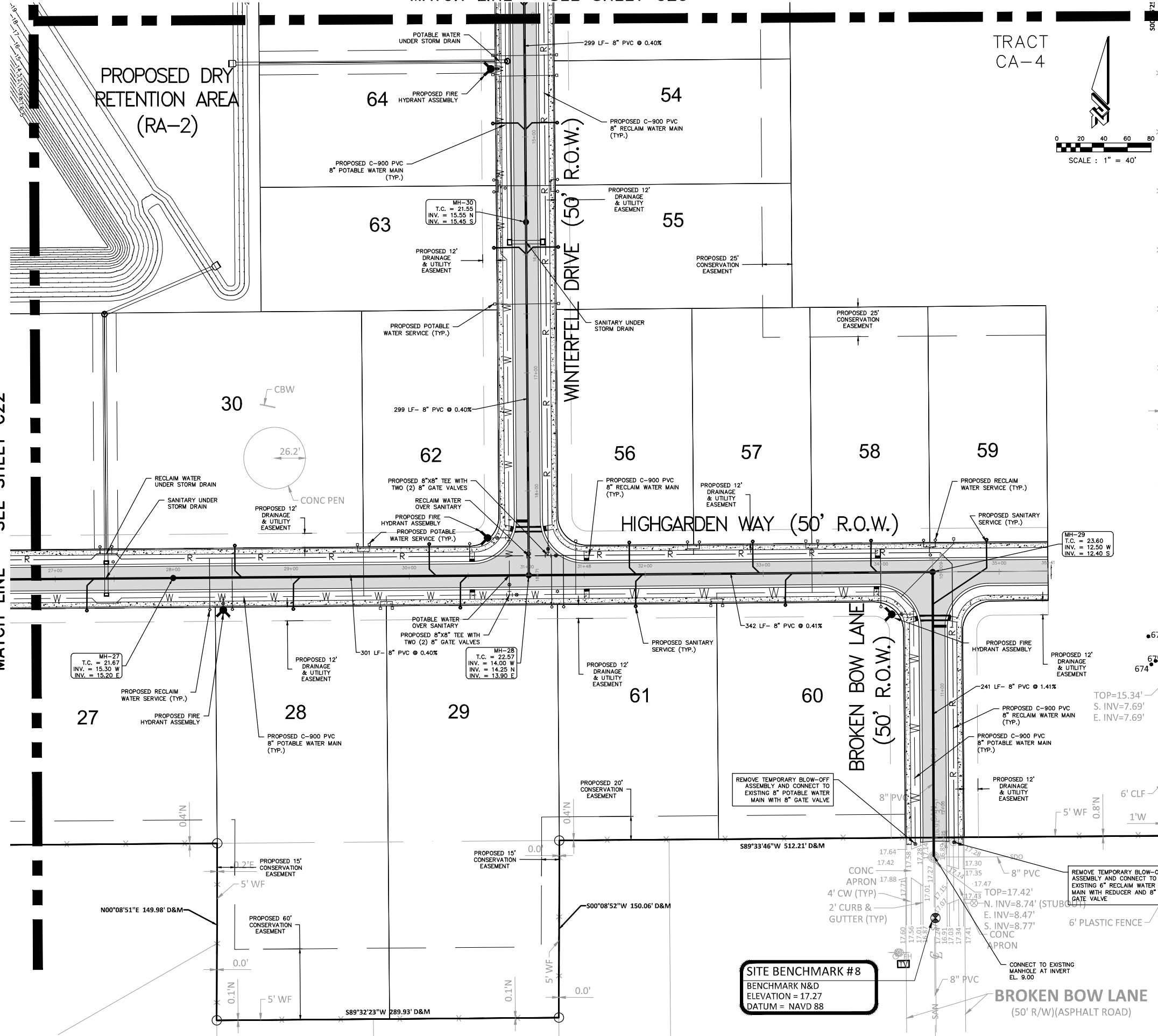
SITE BENCHMARK #8
BENCHMARK N&D
ELEVATION = 17.27
DATUM = NAVD 88

KING'S LANDING FINAL ENGINEERING PLANS UTILITY PLAN

PROJECT NO.: ZC 15082
ISSUE DATE: 8-11-17
DESIGNED BY: RMH/MLR
DRAFTED BY: MLR
CHECKED BY: RMH
DRAWING FILE: 15082X-UTL-PH-2-3-DWG
XREFS: 15082X-BAS.DWG
XREFS: 15082X-SURV.DWG



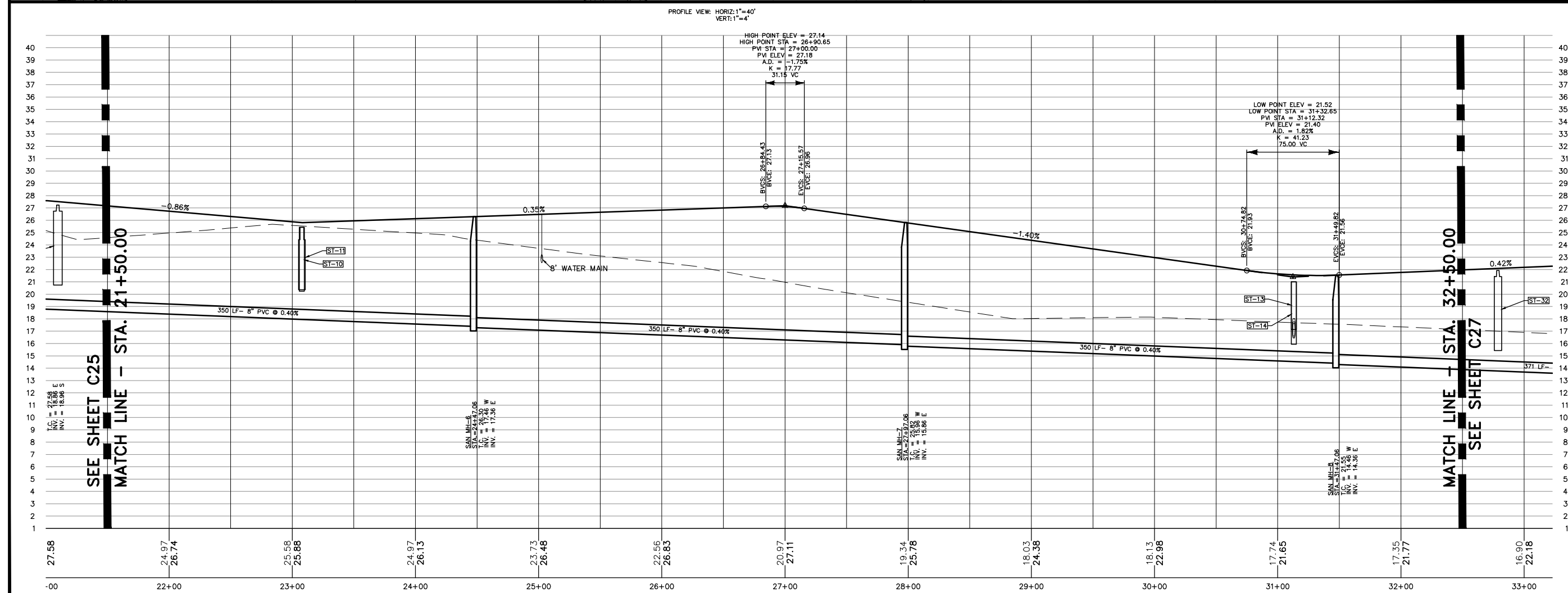
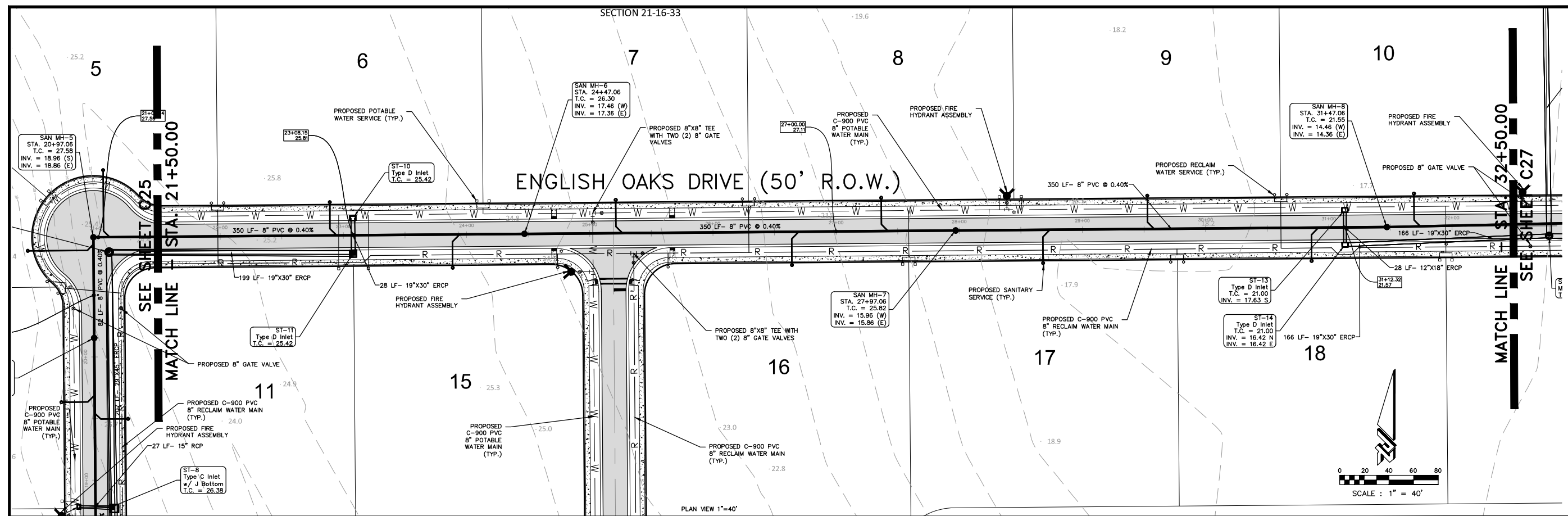
SCALE: 1"=40'
SHEET: C23 OF 38



FOREST TROLL DRIVE
(50' R/W)(ASPHALT ROAD)

WHIPPOORWILL DRIVE

BROKEN BOW LANE
(50' R/W)(ASPHALT ROAD)



ORMOND BEACH
300 INTERCHANGE BLVD., STE. C
ORMOND BEACH, FL 32174
(386) 677-2482 FAX (386) 677-2505

EDGEWATER
1840 AIRPARK ROAD
EDGEWATER, FL 32132
(386) 677-2482 FAX (386) 677-2505

EDGEWATER
1840 AIRPARK ROAD
EDGEWATER, FL 3213
(386) 677-2482 FAX (386) 677-2483

[illegible]

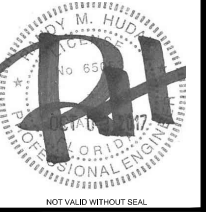
**KING'S LANDING
FINAL ENGINEERING PLANS**

**ENGLISH OAKS DRIVE (50' R.O.W.)
SEWER PLAN & PROFILE**

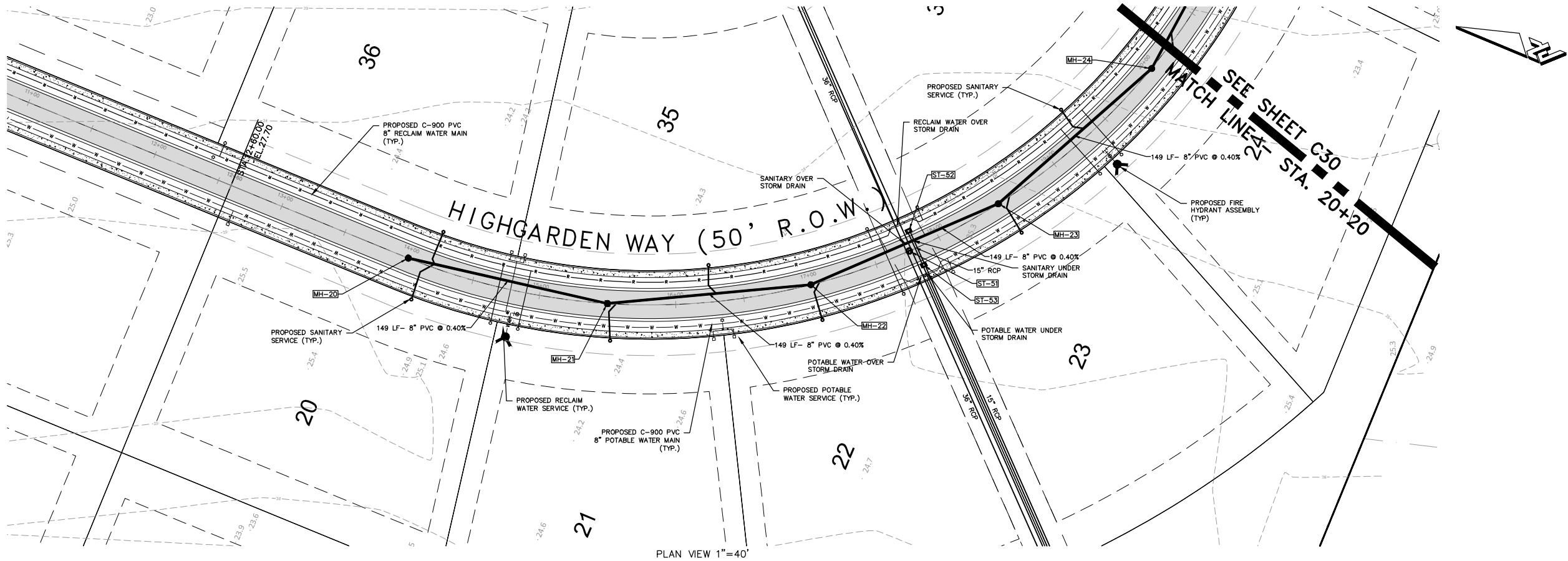
OF PORT CANAL

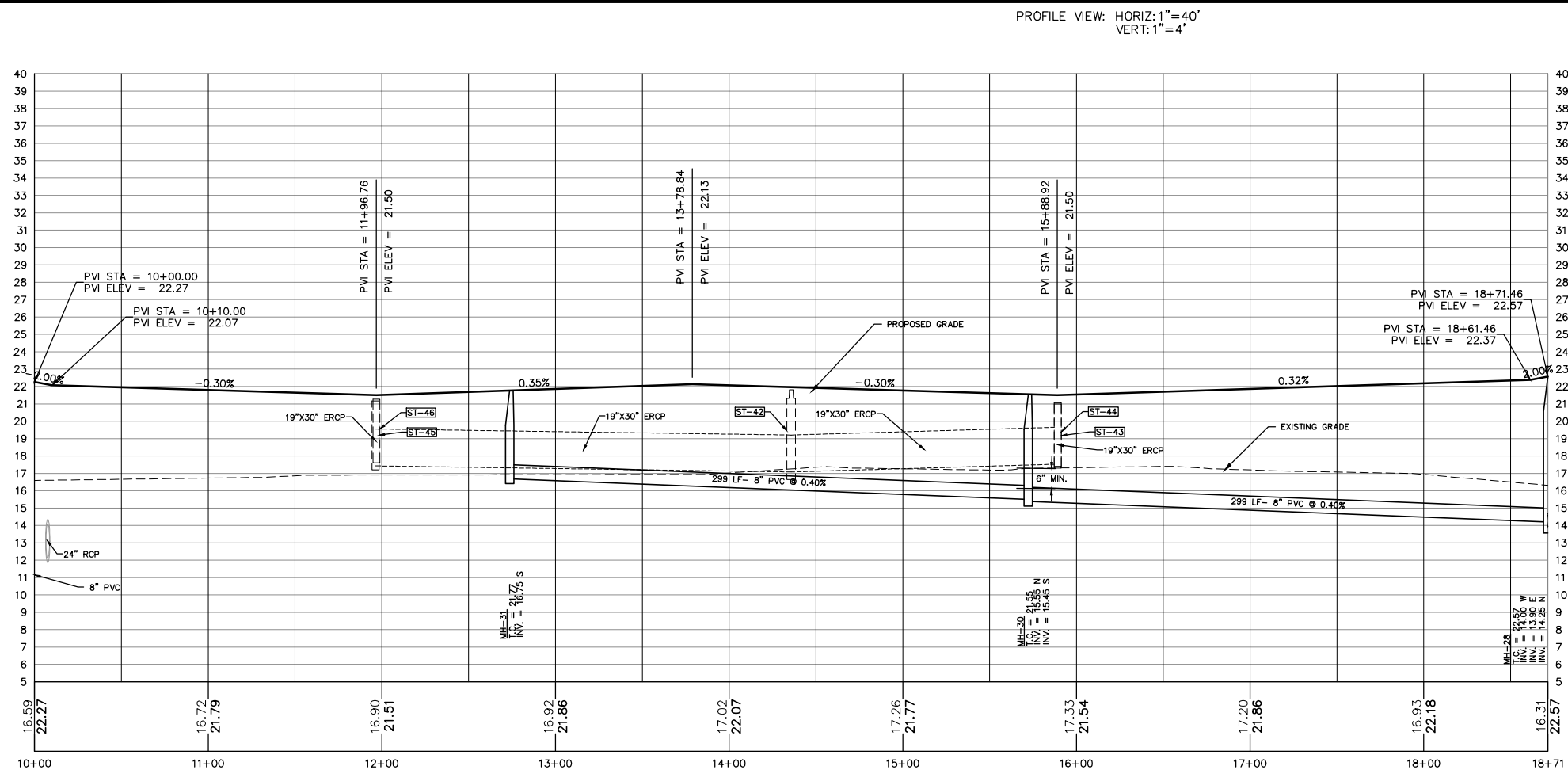
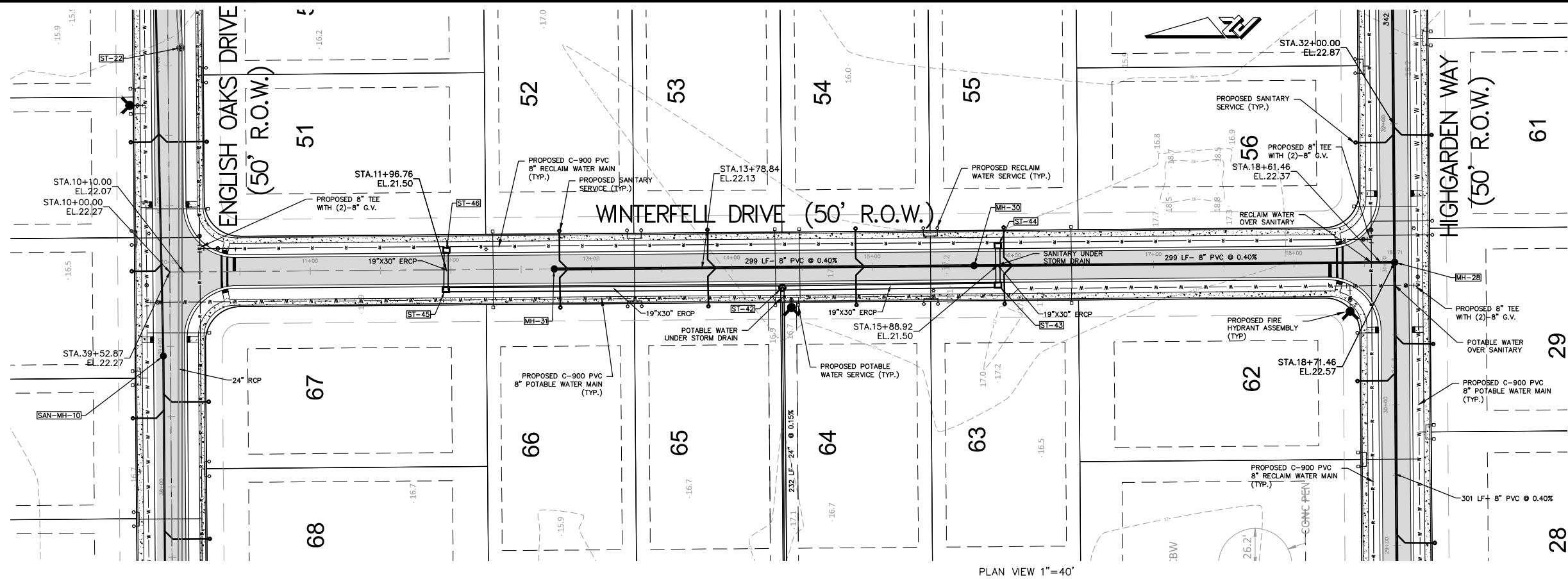
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PROJECT NO: ZC 15082
ISSUE DATE: 8-11-17
DESIGNED BY: RMH/MLR
DRAFTED BY: CM
CHECKED BY: RMH
DRAWING FILE: 15082X-PLPR.DWG XREFS: 15082X-BAS.DWG XREFS: 15082X-SURV.DWG



Randy M. Hudak, P.E. No. 65053



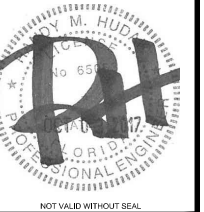


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LANDSCAPE ARCHITECTURE
ENVIRONMENTAL
PLANNING
TRANSPORTATION

[illegible]

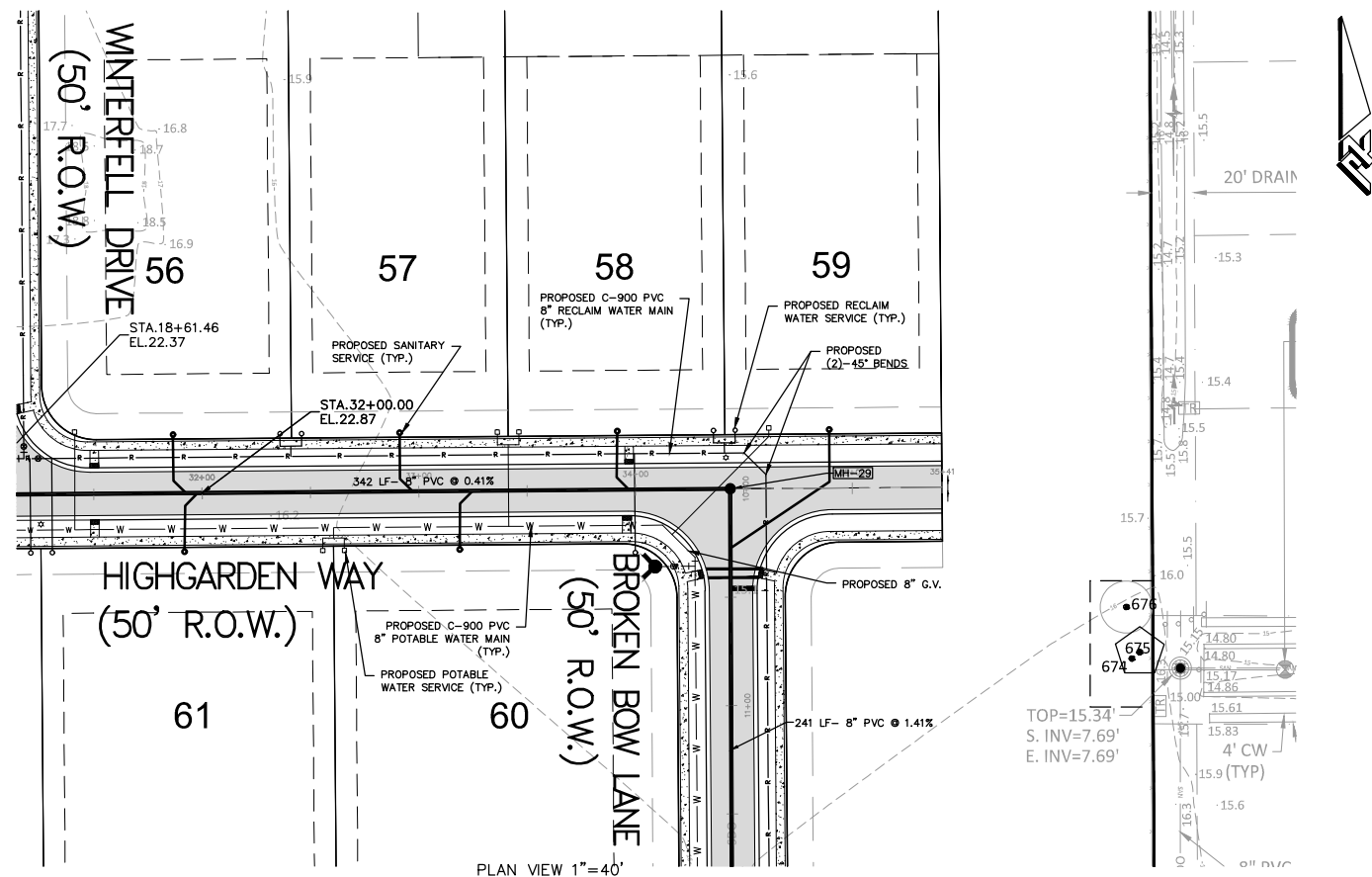
**KING'S LANDING
FINAL ENGINEERING PLANS
SEWER PLAN & PROFILE**

PROJECT NO: ZC 15082
ISSUE DATE: 8-11-17
DESIGNED BY: RMH/MLR
DRAFTED BY: MLR
CHECKED BY: RMH
DRAWING FILE: 15082X-PLPR.DWG
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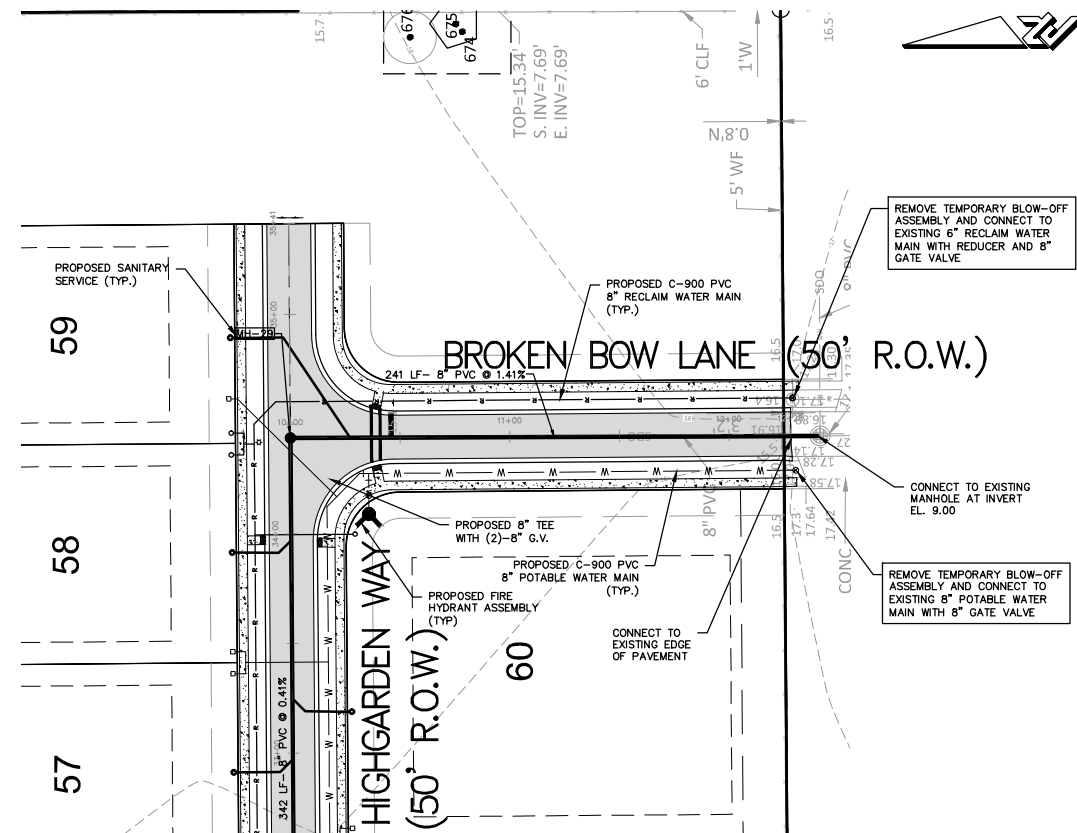
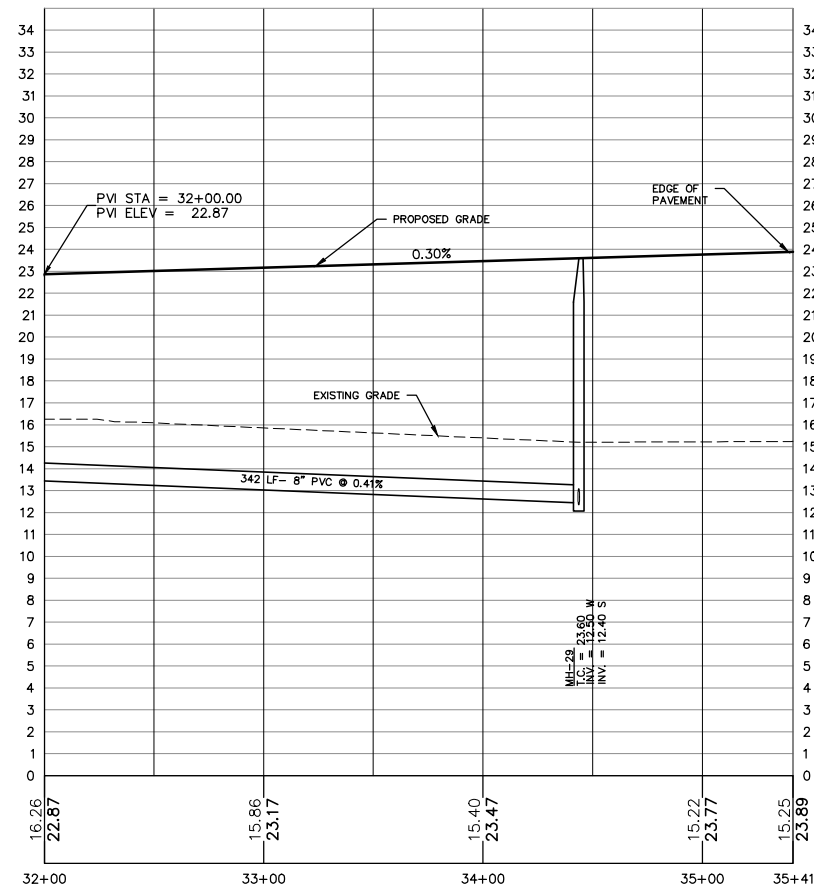


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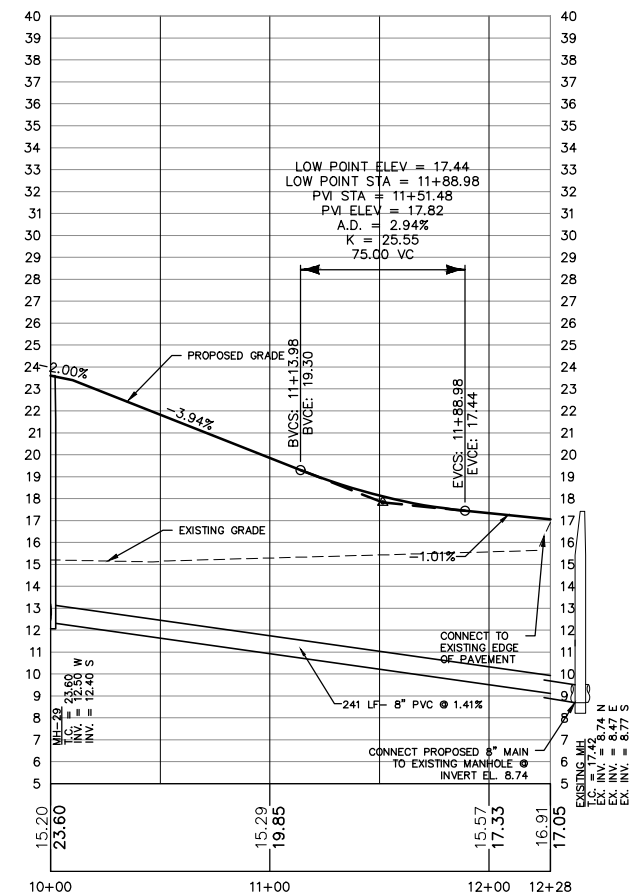
SHEET: C31 OF 38



PROFILE VIEW: HORIZ: 1"=40'
VERT: 1"=4'



PROFILE VIEW: HORIZ: 1"=40'
VERT: 1"=4'



CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL
PLANNING
TRANSPORTATION

[illegible]

**KING'S LANDING
FINAL ENGINEERING PLANS
SEWER PLAN & PROFILE**

PROJECT NO:	ZC 15082
ISSUE DATE:	8-11-17
DESIGNED BY:	RMH/MLR
DRAFTED BY:	MLR
CHECKED BY:	RMH
DRAWING FILE: 15082X-PLF	
XREF'S: 15082X-BAS.DWG	
XREF'S: 15082X-SURV.DWG	

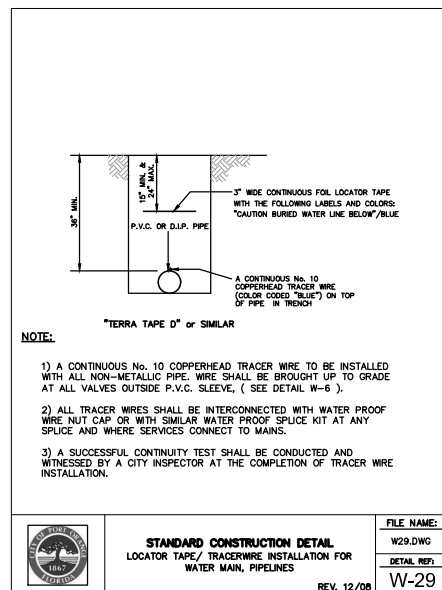
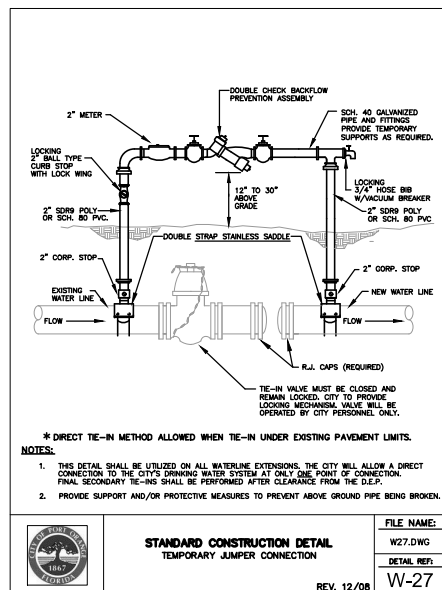
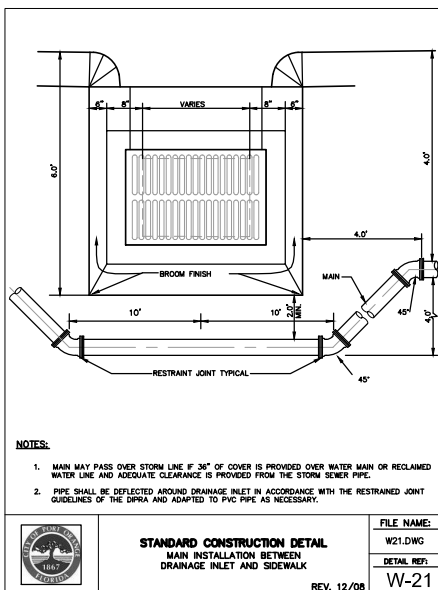
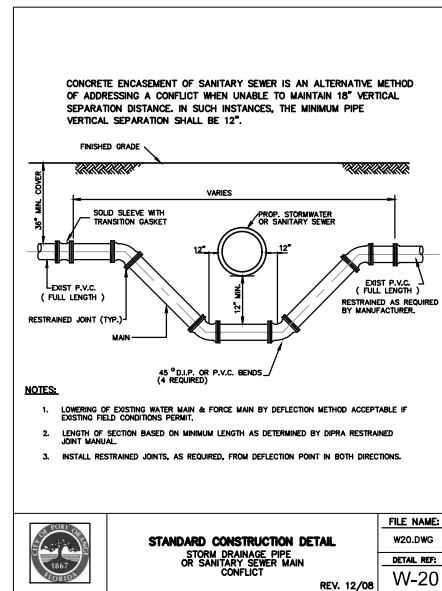
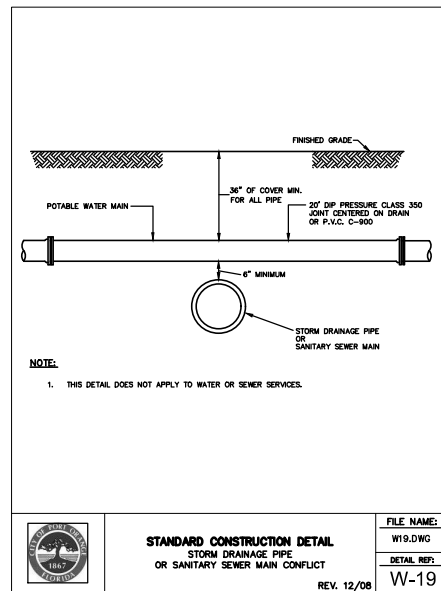
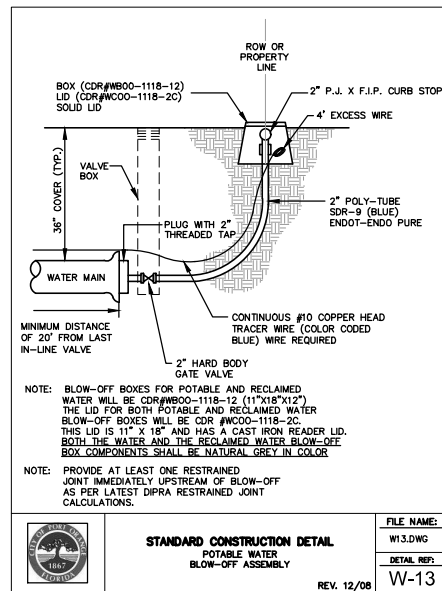
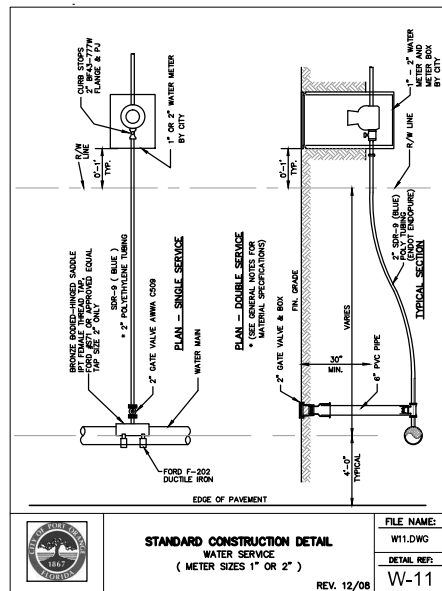
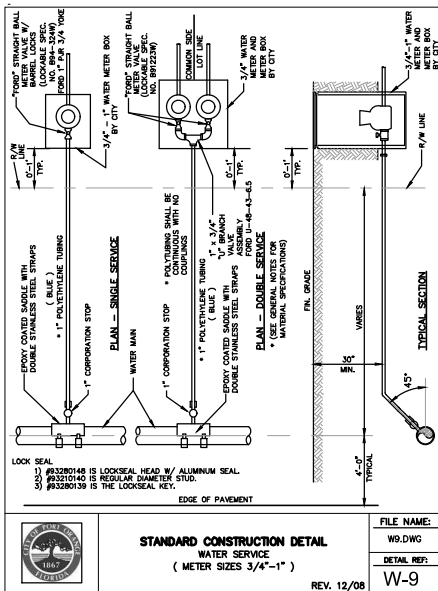
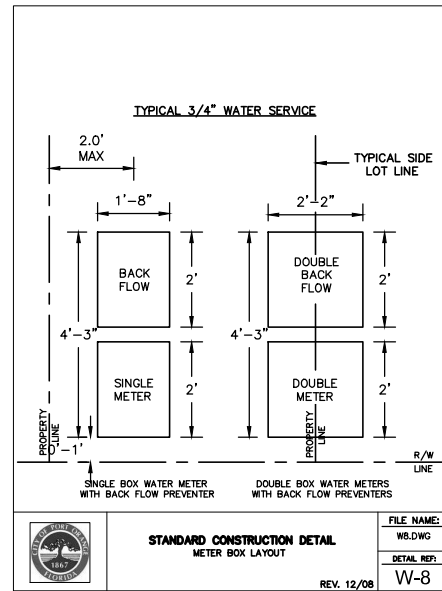
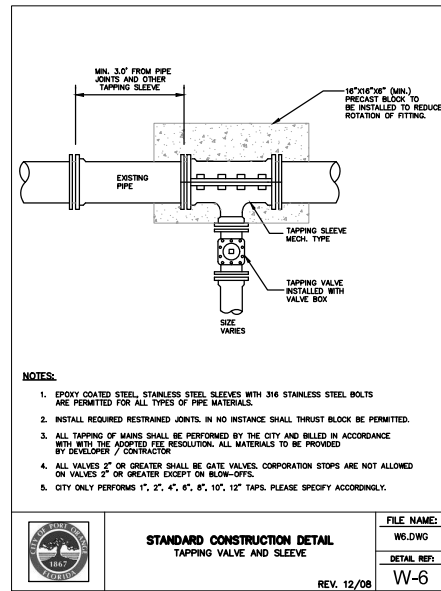
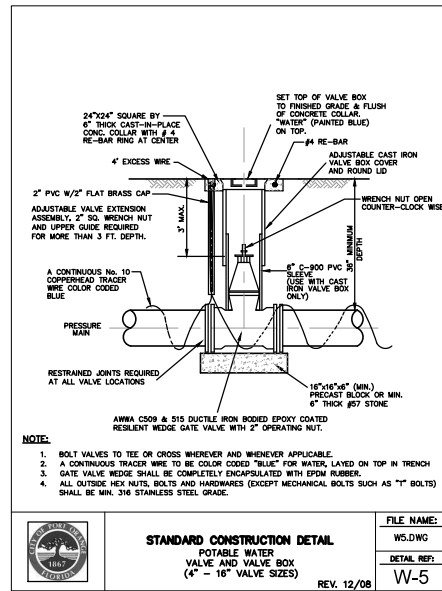
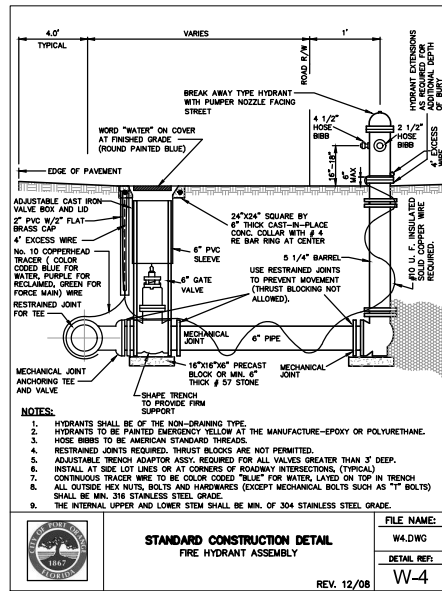
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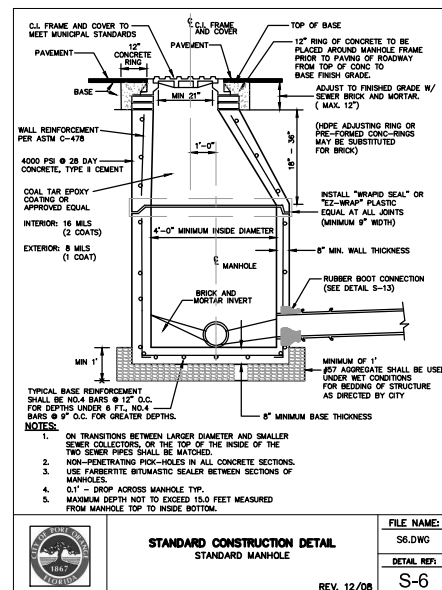
SCALE: 1"=40'

SHEET: C32 OF 38

City of Port Orange Public Utilities Department		12/08
List of Approved Products		
Potable Water		
<i>Fire Hydrant (5 N" Barrel)</i>		
MANUFACTURER	MODEL #	
Muellir	A423 SuperJunction 250	
American AVK Co.	Series #278	
American Darling	5 N" B-84-B	
Clow	Medallion #F-2545 55	
<i>Air Release Valves</i>		
MANUFACTURER	MODEL #	
Val-Matic	Series 38	
<i>Gate Valves and Tapping Valves - Resilient Seated (AWWA C509 and CS15) 24" or Smaller (Valve wedges to be complete enclosed with EPDM rubber)</i>		
MANUFACTURER	MODEL #	
American AVK Co.	Series 3, 18, 25, 45, 55, & 66	
Clow	Model 2638 and 2639	
Muellir	A-2360, A-2361, T-2360 & T-2361	
American Flow Control	Series 2500	
	STANDARD CONSTRUCTION DETAIL	
	POTABLE WATER APPROVED PRODUCTS	
	FILE NAME W3.DWG	DETAIL REF: W-3



City of Port Orange Public Utilities Department List of Approved Products		12/08
Sanitary Sewer & Force Main		
<i>Air Release Valves</i>		
MANUFACTURER	MODEL #	
A.R.I.	D-02SP (Plastic)	
<i>Gate Valves and Tapping Valves – Resilient Seated (AWWA C509 and CS15) 24" or Smaller</i>		
MANUFACTURER	MODEL #	
American AVK Co.	Series 3, 18, 25, 45, 55, & 66	
Clow	Model 2638 and 2339	
Muellir	A-2360, A-2361, T2360 & T-2361	
American Flow Control	Series 2500	
<i>Joints Restrained – PVC Only</i>		
MANUFACTURER	MODEL #	
EBBA rom Inc	Series 1500/1600 2000/2500/2800	
Star Pipe	Star-grip Series 1000/1000/1200/4000	
Sigma	One-Lock SLC PV-Lok for PVC	
Smithblair	Cam-Lock (111 & 120) & Bell-Lock (115 & 15)	
STANDARD CONSTRUCTION DETAIL SANITARY SEWER & FORCE MAIN APPROVED PRODUCTS		FILE NAME S5.DWG DETAIL REF: S-5



ORMOND BEACH, FL 32067
3000 INTERSTATE BEACH BLVD, SUITE C
ORMOND BEACH, FL 32174
(386) 677-2482 FAX (386) 677-2505

EDGEWATER, FL 32132
10000 W. US HWY 1, SUITE 100
EDGEWATER, FL 32132
(386) 677-2482 FAX (386) 677-2505

NO.	DATE	REVISIONS
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KING'S LANDING FINAL ENGINEERING PLANS **CONSTRUCTION DETAILS**

PROJECT NO: ZC 15082
ISSUE DATE: 8-11-17
DESIGNED BY: RMH/MLR
DRAFTED BY: RMC
CHECKED BY: RMH
DRAWING FILE: 15082X-DET.DWG
XREFS: 15082X-TIB.DWG
XREFS:
NOT VALID WITHOUT SEAL
RANDY M. HUDAK, P.E. NO. 65053
SCALE: N.T.S.
SHEET: C33 OF 38

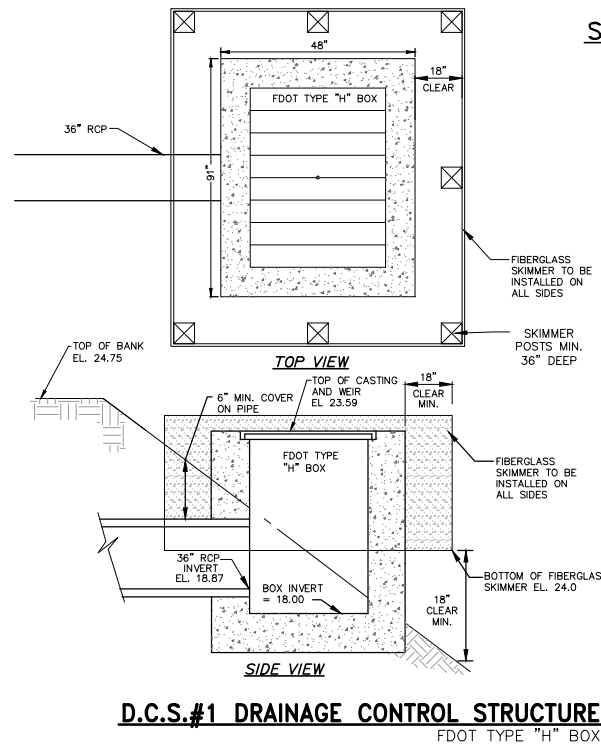
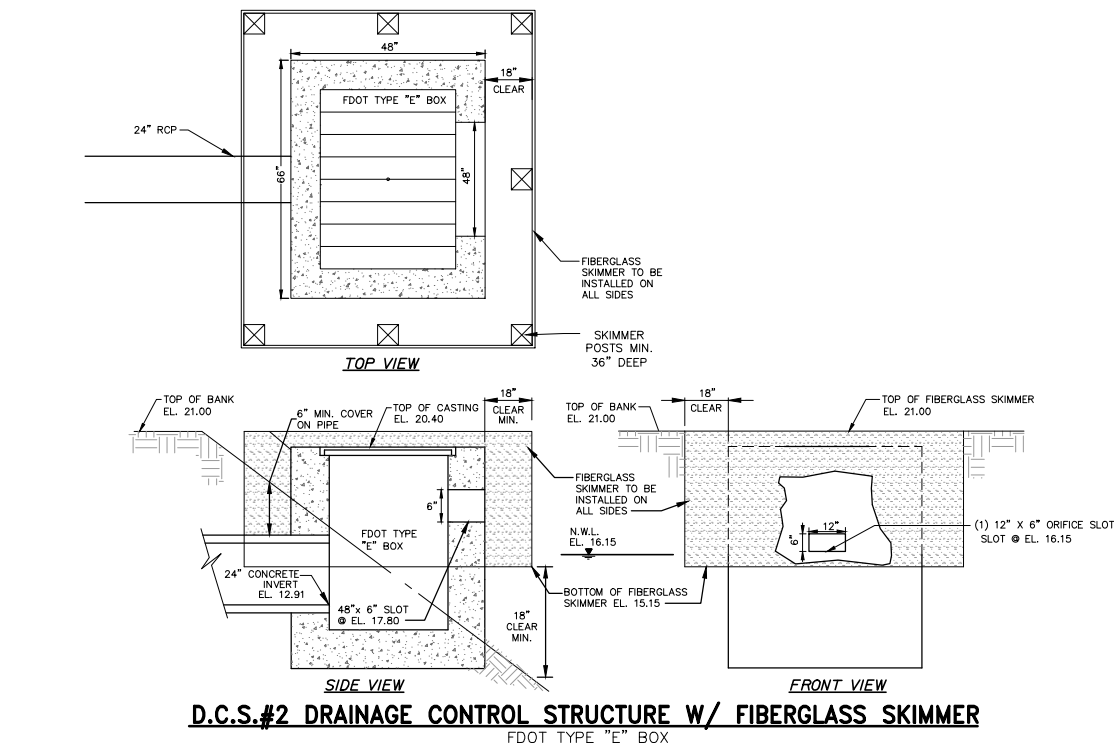
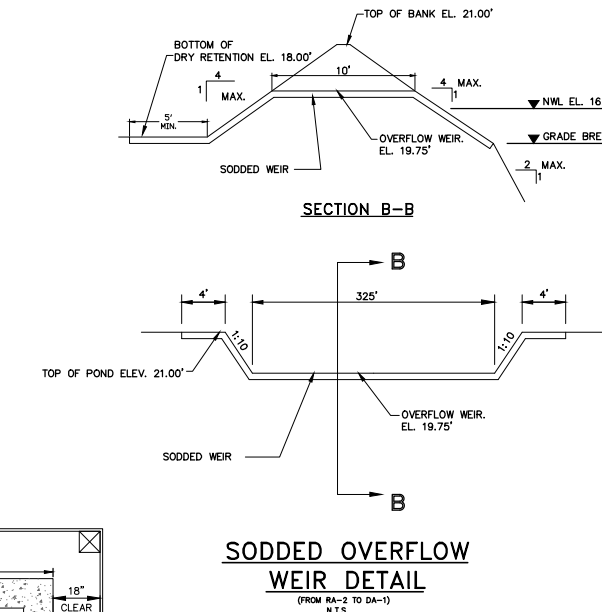
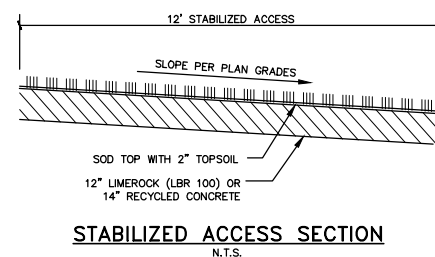
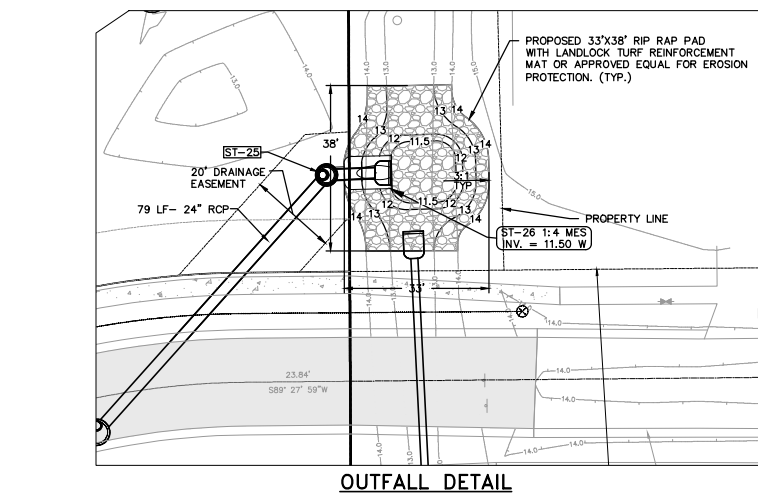
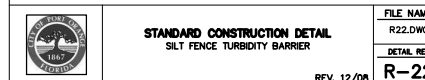
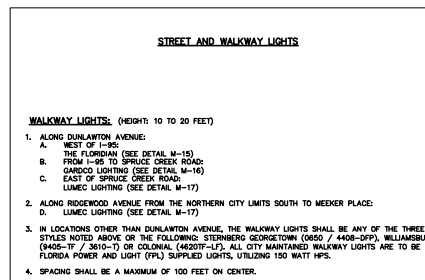
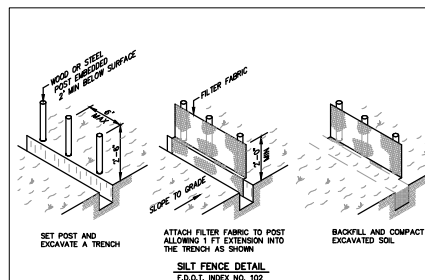
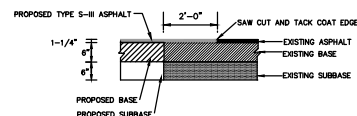
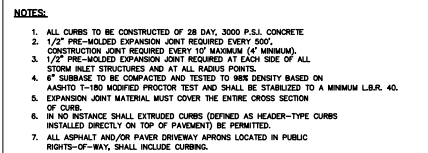
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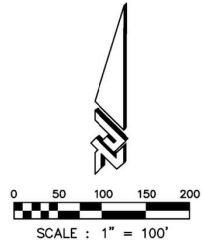
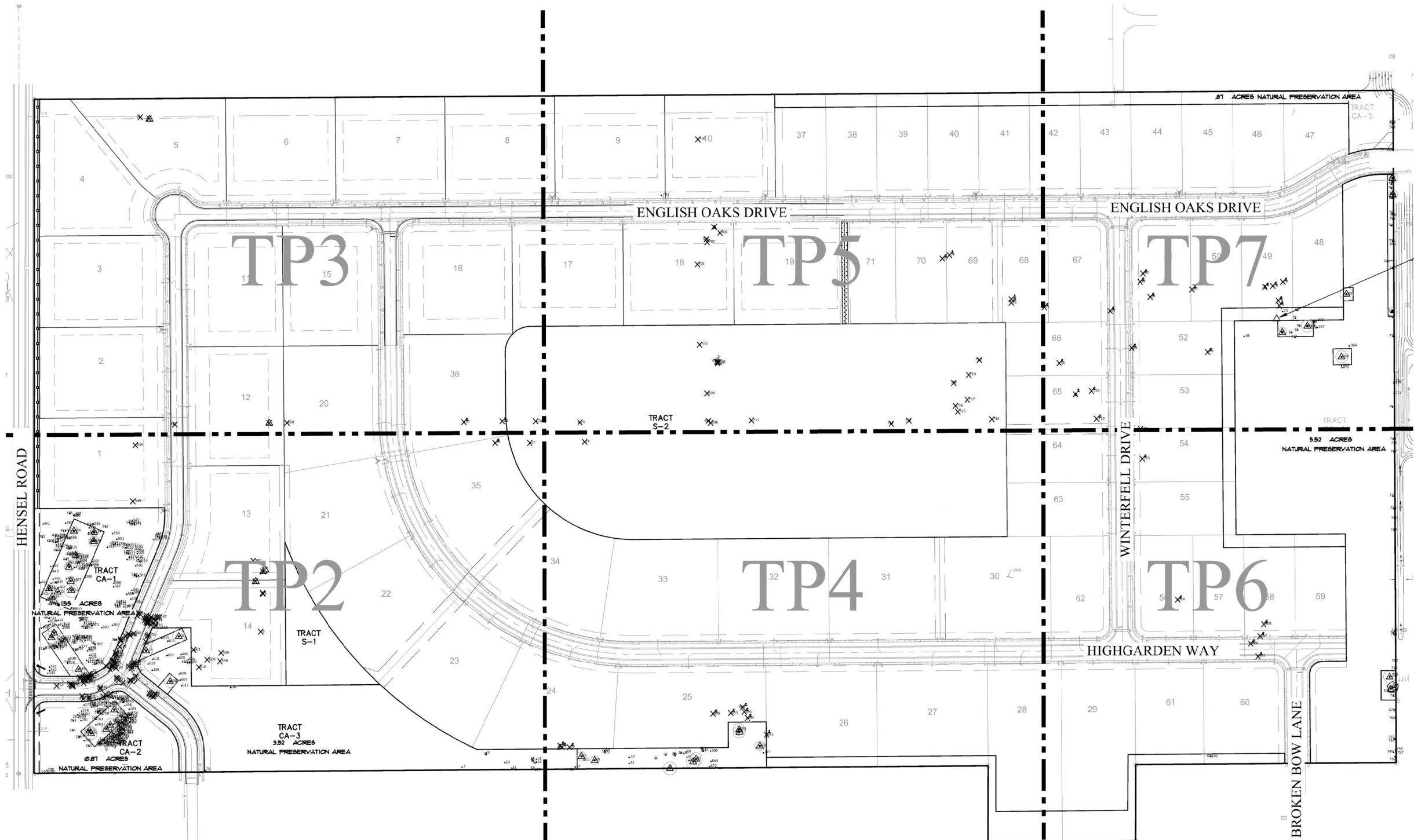
1. ALL ROADWAY DESIGN SHALL MEET THE MINIMUM REQUIREMENTS OF THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STATE AND HIGHWAYS (LATEST EDITION), AS PUBLISHED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION.
2. PAYMENT WIDTHS FOR INDUSTRIAL AND COMMERCIAL ROADS SHALL BE INCREASED BY A MINIMUM OF ONE (1) FOOT.
3. AS A RULE, INTERSECTIONS SHALL BE DESIGNED AT 90 DEGREE ANGLES. DEVIATION FROM THIS SHALL BE CONSIDERED STRICTLY ON A CASE BY CASE BASIS. INTERSECTIONS WITH AN ANGLE OTHER THAN 90 DEGREES IN WHICH SMALL INTERSECTION ANGLES ARE LESS THAN 75 DEGREES FOR INTERSECTIONS WITH TRUCKS AND TRUCKS WITH TRUCKS, LOCAL AND COLLECTOR ROADWAYS WHICH SHALL NOT BE LESS THAN 80 DEGREES. INTERSECTIONS WITH COUNTY AND STATE ROADS SHALL BE 90 DEGREES.
4. ALL INTERSECTIONS AND ACCESS POINTS SHALL HAVE ADEQUATE LINE OF SIGHT BASED ON AN 8' LEVEL OF VIEW. DESIGNER SHALL PROVIDE AND OBJECT 30' ABOVE THE LOWEST ROADWAY. FOR PURPOSES OF THIS STANDARD, THE 8' LEVEL SHALL BE MEASURED 20' BACK OF THE STOP BAR AT ENTRANCES. THE FOLLOWING STOP DISTANCES SHALL BE PROVIDED:

DESIGN SPEED (MPH)	20	25	30	35	40	45	50	55
STIGHT DISTANCE (FT)	100	250	350	450	550	650	800	950
(HALF)								

LEGEND:

C.L. INTERSECTION LONG. TRANSVERSAL





TREE LEGEND

1-24" OAK	40-2-3" OAK	80-2-6" OAK	120-2" OAK	160-2" OAK	201-7" DYNAMITE	242-3" OAK	282-8" DYNAMITE	324-2" OAK	365-2" OAK	405-3" OAK	447-3" CHINESE TALLOW	489-6" CHINESE TALLOW	531-2" OAK	573-11" OAK	615-12" OAK	657-9" CEDAR	699-8" OAK	741-4" OAK
2-24" OAK	41-1" OAK	81-1" OAK	121-4" OAK	161-2" OAK	202-4" OAK	243-3" OAK	283-4" CHINESE TALLOW	325-3" OAK	366-4" DYNAMITE	406-2" OAK	448-2" CHINESE TALLOW	490-4" CHINESE TALLOW	532-3" OAK	574-4" OAK	616-24" OAK	658-12" CEDAR	700-9" OAK	742-4" OAK
3-23" OAK	42-3" OAK	82-6" OAK	122-3" OAK	162-3" HICKORY	203-3" OAK	244-2" OAK	284-3" CHINESE TALLOW	326-3" OAK	367-14" HICKORY	407-3" OAK	449-5" DYNAMITE	491-5" DYNAMITE	533-4" DYNAMITE	575-3" OAK	617-11" HICKORY	659-9" OAK	701-9" OAK	743-4" OAK
4-9" HICKORY	43-23" OAK	83-10" OAK	123-3" OAK	163-12" HICKORY	204-2" DYNAMITE	245-28" OAK	285-3" DYNAMITE	327-2" OAK	368-22" DYNAMITE	408-2" DYNAMITE	450-18" OAK	492-3" DYNAMITE	534-3" OAK	576-3" OAK	618-11" HICKORY	660-8" DYNAMITE	702-9" OAK	744-4" OAK
5-9" HICKORY	44-27" OAK	84-19" HICKORY	124-3" OAK	164-3" DYNAMITE	205-2" OAK	246-4" OAK	286-24" CEDAR	328-3" OAK	369-4" DYNAMITE	409-4" DYNAMITE	451-10" OAK	493-4" CHINESE TALLOW	535-3" OAK	577-2" DYNAMITE	619-5" DYNAMITE	661-31" OAK	703-8" OAK	745-4" OAK
6-2-10" HICKORY	45-5" DYNAMITE	85-3" HICKORY	125-3" OAK	165-4" CHINESE TALLOW	206-2" OAK	247-12" OAK	287-8" OAK	329-3" OAK	370-3" DYNAMITE	410-4" DYNAMITE	452-12" OAK	494-4" CHINESE TALLOW	536-4" OAK	578-4" OAK	620-4" DYNAMITE	662-8" CHINESE TALLOW	704-24" CHINESE TALLOW	746-4" OAK
7-12" DYNAMITE	46-2" OAK	86-3" DYNAMITE	126-3" OAK	166-2" OAK	207-2" OAK	248-4" DYNAMITE	288-5" DYNAMITE	330-2" OAK	371-5" DYNAMITE	411-4" OAK	453-18" OAK	495-3" CHINESE TALLOW	537-12" OAK	579-5" HICKORY	621-3" DYNAMITE	663-11" OAK	705-7" OAK	747-4" OAK
8-4" OAK	47-12" CEDAR	87-9" DYNAMITE	127-2" OAK	167-2" OAK	208-2" OAK	249-12" OAK	289-8" OAK	331-2" OAK	372-12" DYNAMITE	412-4" OAK	454-13" OAK	496-3" CHINESE TALLOW	538-11" OAK	580-10" OAK	622-7" CHERRY	664-6" DYNAMITE	706-10" OAK	748-4" OAK
9-5" OAK	48-2" OAK	88-12" HICKORY	128-4" OAK	168-2-2" OAK	209-3" DYNAMITE	250-4" OAK	291-22" OAK	332-3" OAK	373-2" DYNAMITE	413-3" OAK	455-7" DYNAMITE	497-3" CHINESE TALLOW	539-10" OAK	581-24" OAK	623-7" DYNAMITE	665-3" DYNAMITE	707-11" OAK	749-4" OAK
10-1" DYNAMITE	49-2-18" OAK	89-12" HICKORY	129-4" OAK	169-4" OAK	210-11" HICKORY	251-3" OAK	292-12" OAK	333-2" OAK	374-6" DYNAMITE	414-2" OAK	456-12" OAK	498-4" CHINESE TALLOW	540-20" OAK	582-14" OAK	624-2" CHINESE TALLOW	666-2-11" CHINESE TALLOW	708-8" OAK	750-4" OAK
11-10" DYNAMITE	50-7" CHINESE TALLOW	90-3" OAK	130-4" OAK	170-3" DYNAMITE	211-6" OAK	252-3" OAK	293-11" OAK	334-2" OAK	375-2" OAK	415-2" OAK	457-14" OAK	499-4" CHINESE TALLOW	541-18" OAK	583-5" DYNAMITE	625-3" DYNAMITE	667-13" OAK	709-18" CEDAR	751-4" CAMPHOR
12-2" DYNAMITE	51-3-10" CHINESE TALLOW	91-3" OAK	131-10" HICKORY	171-3" DYNAMITE	212-6" OAK	253-2" OAK	294-8" DYNAMITE	335-2" OAK	376-3" OAK	416-4" DYNAMITE	458-12" OAK	500-5" CHINESE TALLOW	542-7" OAK	584-2-8" HICKORY	626-3" DYNAMITE	668-8" OAK	710-8" OAK	752-4" OAK
13-2" DYNAMITE	52-3" CHINESE TALLOW	92-3" OAK	132-2" OAK	172-19" CHINESE TALLOW	213-4" OAK	254-2" OAK	295-8" OAK	336-2" OAK	377-6" HICKORY	417-3" OAK	459-18" OAK	501-7" DYNAMITE	543-6" OAK	585-12" HICKORY	627-3" DYNAMITE	669-12" CHINESE TALLOW	711-8" OAK	753-5" OAK
14-2-2" DYNAMITE	53-11" OAK	93-2" OAK	133-3" OAK	173-2" DYNAMITE	214-3" DYNAMITE	255-12" OAK	296-9" OAK	337-3" OAK	378-3" OAK	418-3" OAK	460-16" OAK	502-8" OAK	544-10" OAK	586-12" OAK	628-5" DYNAMITE	670-13" OAK	712-8" CAMPHOR	754-5" OAK
15-2" DYNAMITE	54-15" CAMPHOR	94-2" OAK	134-4" OAK	174-2-4" DYNAMITE	215-6" OAK	256-3" OAK	297-6" OAK	338-3" OAK	379-4" DYNAMITE	419-2" OAK	461-27" OAK	503-4" CHINESE TALLOW	545-5" DYNAMITE	587-12" OAK	629-7" CHINA	671-8" OAK	713-12" PALM	755-5" OAK
16-4" DYNAMITE	55-11" CAMPHOR	95-2" OAK	135-5" OAK	175-3" DYNAMITE	216-2-3" DYNAMITE	257-2" DYNAMITE	298-3" CHINESE TALLOW	339-3" OAK	380-5" OAK	420-2" OAK	462-2" OAK	504-4" CHINESE TALLOW	546-4" OAK	588-8" OAK	630-2" DYNAMITE	672-3" CHINESE TALLOW	714-7" CAMPHOR	756-5" OAK
17-12" DYNAMITE	56-12" OAK	96-2" OAK	136-5" OAK	176-10" HICKORY	217-6" DYNAMITE	258-2" OAK	299-5-8" DYNAMITE	340-4" OAK	381-3" HICKORY	421-4" OAK	463-10" DYNAMITE	505-2" CHINESE TALLOW	547-4" OAK	589-12" HICKORY	631-2" DYNAMITE	673-12" CHINESE TALLOW	715-10" OAK	757-6" OAK
18-9" DYNAMITE	57-8" OAK	97-2" OAK	137-3" OAK	177-4" DYNAMITE	218-3" OAK	259-3" OAK	300-8-4" DYNAMITE	341-3" OAK	382-2" HICKORY	422-4" OAK	464-2" DYNAMITE	506-4" CHINESE TALLOW	548-6" OAK	590-3" DYNAMITE	632-3" DYNAMITE	674-18" OAK	716-9" CAMPHOR	758-6" OAK
19-12" DYNAMITE	58-10" OAK	98-3" OAK	138-24" OAK	178-2" DYNAMITE	219-4" DYNAMITE	260-2" OAK	301-6" DYNAMITE	342-2" OAK	383-2" OAK	423-20" OAK	465-3" OAK	507-3" CHINESE TALLOW	549-13" HICKORY	591-5" DYNAMITE	633-3" DYNAMITE	675-38" OAK	717-6" CAMPHOR	759-6" OAK
20-9" DYNAMITE	59-2" CHINESE TALLOW	99-3" OAK	139-4" OAK	179-4" DYNAMITE	220-5" DYNAMITE	261-4" OAK	302-2-4" DYNAMITE	343-4" OAK	384-2" OAK	424-18" OAK	466-13" OAK	508-4" OAK	550-4" OAK	592-4" DYNAMITE	634-3" DYNAMITE	676-2" OAK	718-7" CAMPHOR	760-8" OAK
21-3" OAK	60-10" CHINESE TALLOW	100-2" OAK	140-2" OAK	180-4" DYNAMITE	221-4" DYNAMITE	262-5" OAK	303-5-4" DYNAMITE	344-3" OAK	385-3" OAK	425-20" OAK	467-18" OAK	509-4" OAK	551-5" OAK	593-6" DYNAMITE	635-3" DYNAMITE	677-8" OAK	719-7" CAMPHOR	761-8" OAK
22-3" OAK	61-11" OAK	101-2" OAK	141-2" OAK	181-3" DYNAMITE	222-2" DYNAMITE	263-4" CHINESE TALLOW	304-5" CHINESE TALLOW	345-2" DYNAMITE	386-3" OAK	426-2" OAK	468-12" OAK	510-2" OAK	552-12" OAK	594-2" CHINESE TALLOW	636-3" DYNAMITE	678-14" OAK	720-10" OAK	762-8" CAMPHOR
23-9" OAK	62-18" OAK	102-2" OAK	142-4" DYNAMITE	182-6" DYNAMITE	223-3" DYNAMITE	264-2" OAK	305-28" OAK	346-2" DYNAMITE	387-2" OAK	427-2" OAK	469-12" OAK	511-3" OAK	553-10" OAK	595-4" OAK	637-5" OAK	679-19" OAK	721-INTENTIONALLY OMITTED	763-10" OAK
24-10" DYNAMITE	63-13" PALM	103-2" OAK	143-24" OAK	183-3" DYNAMITE	224-4" DYNAMITE	265-3" OAK	306-3" OAK	347-4" DYNAMITE	388-7" OAK	428-3" OAK	470-3-13" OAK	512-2" OAK	554-7" DYNAMITE	596-3" OAK	638-12" OAK	680-18" OAK	722-11" OAK	764-10" OAK
25-9" CHERRY	64-2-10" CHINESE TALLOW	104-3" OAK	144-3" OAK	184-6" DYNAMITE	225-12" OAK	266-3" OAK	307-2" OAK	348-6" DYNAMITE	389-4" OAK	429-3" OAK	471-3" DYNAMITE	513-4" OAK	555-4" DYNAMITE	597-3" OAK	639-5" OAK	681-12" OAK	723-11" OAK	765-10" OAK
26-12" CHERRY	65-9" CHINESE TALLOW	105-2" OAK	145-3" OAK	185-4" DYNAMITE	226-2" DYNAMITE	267-4" OAK	308-2" OAK	349-3-4" DYNAMITE	390-6" OAK	430-5" DYNAMITE	472-18" OAK	514-2" OAK	556-4" OAK	598-4" DYNAMITE	640-4" OAK	682-12" PALM	724-8" OAK	766-12" OAK
27-5" DYNAMITE	66-2-4" CHINESE TALLOW	106-2" OAK	146-2" OAK	186-14" HICKORY	227-3" DYNAMITE	268-2" DYNAMITE	309-2" OAK	350-5" CHINESE TALLOW	391-5" OAK	431-4" OAK	473-7" DYNAMITE	515-3" OAK	557-12" OAK	599-8" DYNAMITE	641-2" OAK	683-24" OAK	725-11" OAK	767-12" OAK
28-7" CHERRY	67-15" OAK	107-3" OAK	147-3" OAK	187-2" OAK	228-12" OAK	269-3" OAK	310-3" OAK	351-6" DYNAMITE	392-2" OAK	432-2" OAK	474-4" OAK	516-4" OAK	558-2" OAK	600-7" DYNAMITE	642-3" OAK	684-12" OAK	726-12" CHERRY	768-12" PALM
29-10" DYNAMITE	68-9" OAK	108-2" OAK	148-2" OAK	188-14" HICKORY	229-3" DYNAMITE	270-4" DYNAMITE	311-2" OAK	352-6" CHINESE TALLOW	393-3" OAK	433-3" OAK	475-5" CHINESE TALLOW	517-2" DYNAMITE	559-3" OAK	601-11" HICKORY	643-4" DYNAMITE	685-12" OAK	727-2" OAK	769-14" OAK
30-12" DYNAMITE	69-2" CHINESE TALLOW	109-2" OAK	149-3" OAK	189-2" OAK	230-5" DYNAMITE	271-13" CHINESE TALLOW	312-2" OAK	353-3-8" DYNAMITE	394-3" DYNAMITE	434-2" OAK	476-18" OAK	518-2" OAK	560-2" OAK	602-8" DYNAMITE	644-2" OAK	686-8" OAK	728-2" OAK	
31-9" DYNAMITE	70-2" CHINESE TALLOW	110-2" OAK	150-4" OAK	190-2" OAK	231-9" OAK	272-2-6" OAK	313-2" OAK	354-3" CHINESE TALLOW	395-7" DYNAMITE	435-2" OAK	477-3" CHINESE TALLOW	519-3" OAK	561-4" OAK	603-6" OAK	645-2" OAK	687-12" OAK	729-2" OAK	
32-4" OAK	71-7" OAK	111-4" OAK	151-2" OAK	191-3" OAK	232-3" OAK	273-3" DYNAMITE	314-3" OAK	355-3" CHINESE TALLOW	396-5" DYNAMITE	436-3" OAK	478-2" CHINESE TALLOW	520-3" DYNAMITE	562-3" OAK	604-12" HICKORY	646-3" OAK	688-18" OAK	730-2" OAK	
33-1" DYNAMITE	72-20" OAK	112-4" OAK	152-2" OAK	192-2" OAK	233-3" OAK	274-4" DYNAMITE	315-2" OAK	356-3" CHINESE TALLOW	397-2" DYNAMITE	437-2" OAK	479-4" CHINESE TALLOW	521-2" OAK	563-12" HICKORY	605-12" HICKORY	647-2" OAK	689-20" OAK	731-2" OAK	
34-4" DYNAMITE	73-9" OAK	113-3" OAK	153-2" OAK	193-2" OAK	234-4" OAK	275-3" DYNAMITE	316-2" OAK	357-3" DYNAMITE	398-5" OAK	438-3" CHINESE TALLOW	480-2" CHINESE TALLOW	522-2" DYNAMITE	564-12" HICKORY	606-9" OAK	648-4" OAK	690-12" PALM	732-2" OAK	
35-26" OAK	74-8" CHINESE TALLOW	114-3" OAK	154-4" OAK	194-5" OAK	235-4" OAK	276-7" CHINESE TALLOW	317-3" OAK	358-2" DYNAMITE	399-20" OAK	439-2" CHINESE TALLOW	481-7" DYNAMITE	523-3" OAK	565-5" DYNAMITE	607-11" HICKORY	649-2" DYNAMITE	691-6" CHINESE TALLOW	733-2" OAK	
36-5" OAK	75-8" DYNAMITE	115-2" OAK	155-4" OAK	195-4" OAK	236-2" OAK	277-6" CHINESE TALLOW	318-2" OAK	359-2-3" CHINESE TALLOW	400-24" OAK	440-4" DYNAMITE	482-2" OAK	524-3" OAK	566-2" OAK	608-23" OAK	650-7" CHINESE TALLOW	692-13" OAK	734-2" OAK	
37-7" OAK	76-8" OAK	116-3" OAK	156-2" OAK	196-2" DYNAMITE	237-2" OAK	278-2" CHINESE TALLOW	319-2" OAK	360-3-8" DYNAMITE	401-3" OAK	441-5" OAK	483-6" OAK	525-2" OAK	567-2" OAK	609-6" DYNAMITE	651-10" OAK	693-8" OAK	735-2" OAK	
38-9" OAK	77-18" CEDAR	117-12" OAK	157-2" OAK	197-5-18" CEDAR	238-2" OAK	279-2" CHINESE TALLOW	320-2" OAK	361-4" DYNAMITE	402-3" OAK	442-2" OAK	484-18" OAK	526-3" OAK	568-2" OAK	610-2-8" DYNAMITE	652-14" OAK	694-22" OAK	736-3" OAK	
39-7" OAK	78-8" CAMPHOR	118-4" OAK	158-2-4" OAK	198-13" HICKORY	239-2" OAK	280-2" DYNAMITE	321-2" OAK	362-4" DYNAMITE	403-5" OAK	443-12" DYNAMITE	485-6" OAK	527-4" DYNAMITE	569-2" OAK	611-4" HICKORY	653-7" DYNAMITE	695-6" OAK	737-3" OAK	
40-2-3" OAK	79-2-4" CAMPHOR	119-4" OAK	159-5" OAK	199-2" DYNAMITE	240-3" OAK	281-3" DYNAMITE	322-4" OAK	363-4" OAK	404-3" OAK	444-2-8" OAK	486-6" DYNAMITE	528-3" OAK	570-2-3" OAK	612-6" DYNAMITE	654-2" OAK	696-8" CHINESE TALLOW	738-3" OAK	
				200-2" DYNAMITE	241-3" OAK	282-2" DYNAMITE	323-4" OAK	364-3" OAK	405-3" OAK	445-12" OAK	487-6" DYNAMITE	529-3" OAK	571-7" OAK	613-13" OAK	655-2" OAK	697-8" CHINESE TALLOW	739-3" OAK	
								365-2" OAK	406-2" OAK	446-13" OAK	488-6" DYNAMITE	530-2" OAK	572-11" HICKORY	614-11" HICKORY	656-9" DYNAMITE	698-9" CHINESE TALLOW	740-3" OAK	

LEGEND

- EXISTING TREE TO BE REMOVED
- EXISTING SPECIMEN TREE TO BE REMOVED
- EXISTING HISTORIC TREE
- EXISTING SPECIMEN TREE
- PENETES ROOT ZONE PROTECTION AREA REQUIRED
- PENETES NATURAL PRESERVATION / CONSERVATION AREA TO REMAIN
- PENETES EXISTING TREE

REMOVALS NOTED FOR SPECIMEN AND HISTORIC TREES ONLY. SEE PLAN FOR ADDITIONAL REMOVALS.

NOTE: SEE TREE LEGEND FOR SPECIES AND PLAN VIEW FOR DBH.

**KINGS LANDING PHASE 2
FINAL ENGINEERING PLANS
TREE PROTECTION PLAN & DETAILS**

PROJECT NO:	15082X
ISSUE DATE:	8/31/16
DESIGNED BY:	JES
DRAFTED BY:	JES
CHECKED BY:	SB
DRAWING FILE:	15082X-TP
XREFS:	15082X-MODIFIEDTSURV
XREFS:	
NOT VALID WITHOUT SEAL	
STEPHEN R. BURNS, R.L.A. NO. 886	
SCALE:	1" = 100'
SHEET:	TP1 OF 7

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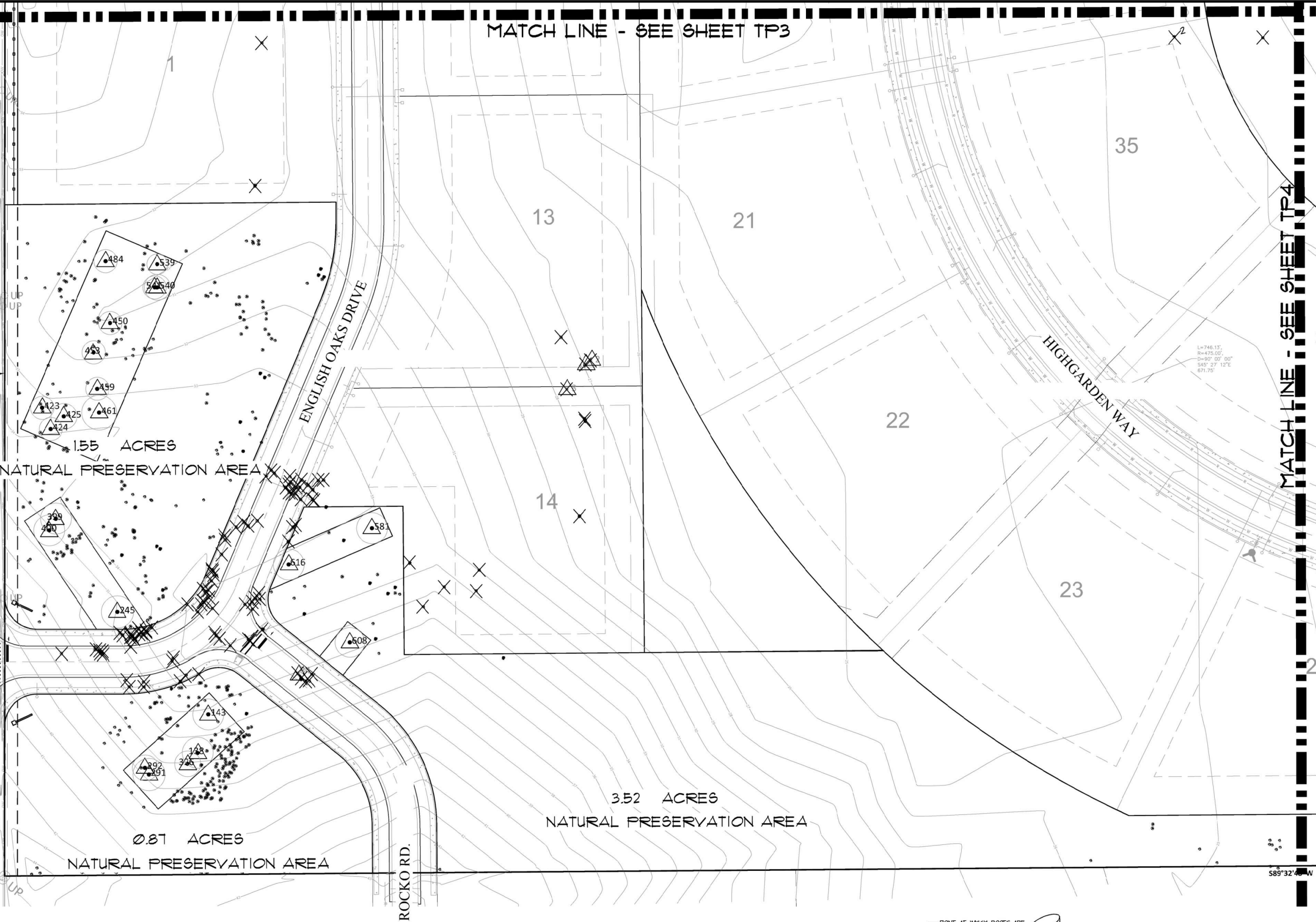
VOLUSIA COUNTY, FLORIDA
CITY OF PORT ORANGE

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(904) 797-1610 FAX (386) 677-2505

EDGEWATER
1840 AIRMARK ROAD
EDGEWATER, FL 32132
(386) 677-2482 FAX (386) 677-2505



LEGEND

- EXISTING TREE TO BE REMOVED
- EXISTING SPECIMEN TREE TO BE REMOVED
- EXISTING HISTORIC TREE
- EXISTING SPECIMEN TREE
- DENOTES ROOT ZONE PROTECTION AREA REQUIRED
- DENOTES NATURAL PRESERVATION / CONSERVATION AREA TO REMAIN
- DENOTES EXISTING TREE

NOTE: SEE TREE LEGEND FOR SPECIES AND PLAN VIEW FOR DPM.

15% NATURAL TREE PRESERVATION

TOTAL SITE AREA	82.3 ACRES
TOTAL PRESERVATION AREA REQUIRED (CALCULATION: 82.3 AC. x 15% = 12.35 ACRES)	12.35 ACRES
UNDISTURBED NATURAL PRESERVATION AREA	12.35 ACRES

MINIMUM ON SITE TREES

TOTAL LOT AREA	82.34 ACRES	REQ. TREES	PROVIDED TREES
REQUIRED NUMBER OF TREES (1/2, 5000 SF OF LOT AREA) FOR TOTAL LOT AREA - PER LDC, CHAPTER 9, ARTICLE II, SEC. 16(0)		999	
EXISTING TREES IN TREE PROTECTION AREA TO REMAIN - 50% OF THE NUMBER OF TREES REQUIRED PER LDC, CHAPTER 9, ARTICLE II, SECTION 16(0) PER LDC, CH 9, ARTICLE II, SECTION 17		466	769
MINIMUM NUMBER OF TREES TO BE PLANTED ON FLATTED LOTS PER CHAPTER 19, SECTION 19A(4)(a) - INSTALLED AT TIME OF CERTIFICATE OF OCCUPANCY (25 LOTS - R-20SF AND 3% LOTS-RR)		292	292
MINIMUM TREES PROVIDED (EXISTING AND NEW)			164

NOTE: TREES WITHIN THE NATURAL VEGETATION AREAS SHALL BE COUNTED TOWARDS ANY DEFICIT OF REQUIRED TREES ON SITE.
NOTE: EXISTING TREES TO REMAIN WITHIN 15% PRESERVATION AREA HAVE BEEN CALCULATED BASED UPON TREE SURVEY CONDUCTED AUGUST 2016.
*LOT AREA

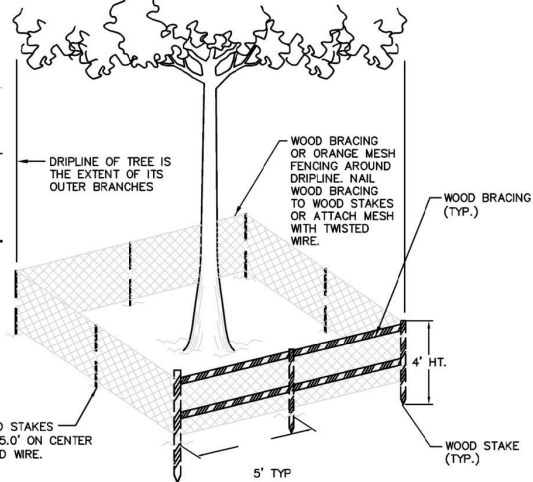
SPECIMEN TREE CALCULATIONS

NUMBER OF SPECIMEN TREES ON SITE- LDC, CH 16, II, (A)	50
TOTAL SITE AREA (ACRE)	82.3
SPECIMEN TREES PER ACRE	41
REQUIRED PERCENTAGE OF SPECIMEN TREES REQUIRED TO REMAIN ON SITE-LDC, CH 9, ARTICLE II, SECTION 16(0)	80%
SPECIMEN TREES REQUIRED TO BE PRESERVED (CALCULATION: 50 TREES x 80% = 40 TREES)	40
SPECIMEN TREES TO REMAIN ON SITE IN COMMON AREA TRACTS	40
PERCENTAGE OF SPECIMEN TREES REQ. TO REMAIN	80%

PROTECTION AREA SHALL BE EITHER 50% OF THE LOT AREA OR ONE (1) FOOT RADIUS PER INCH OF DIAMETER, WHICHEVER IS GREATER.

EXISTING SPECIMEN TREES TO BE PRESERVED	REQUIREMENTS
LESS THAN 1" DBH	50%
1" TO 4" DBH	75%
4" TO 6" DBH	80%
6" TO 10" DBH	85%
10" TO 12" DBH	90%
12" TO 14" DBH	95%
14" TO 16" DBH	100%

NOTE: NO HISTORIC TREES (LINE OAK [QUERCUS VIRGINIANA] OR BALD CYPRESS [TAXODIUM DISTICHUM]) 3" INCHES [DPM] OR GREATER ARE TO BE REMOVED

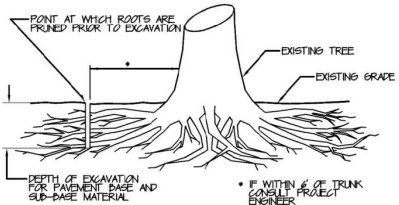


NOTE: BARBED WIRE FENCING IS NOT PERMISSIBLE

STANDARD CONSTRUCTION DETAIL
TREE PROTECTION BARRICADE

REV. 12/08

FILE NAME:
R23.DWG
DETAIL REF:
R-23



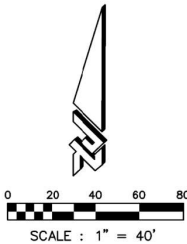
NOTES:

- CUTS ARE TO BE MADE CLEANLY WITH A SHARP ROOT PRUNING TOOL, (SUCH AS A DORSO OR VERNEER ROOT PRUNER).
- INSTALL ORANGE PLASTIC MESH TREE BARRIER WITH REBAR SUPPORTS, PROTECTING THE AREA WITHIN THE DRIPLINE (EXTENT OF OUTER BRANCHES).
- ROOT PRUNING PROCEDURE MUST BE DONE AND INSPECTED PRIOR TO ISSUANCE OF A BUILDING PERMIT OR GRADING AND FILLING PERMIT.

① **ROOT PRUNING DETAIL**

SCALE: NTS

② **TREE PROTECTION BARRICADE DETAIL**



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(386) 677-2482 FAX (386) 677-2505

NO. DATE REVISIONS

01	12/28/17	REVISED PER CITY COMMENTS SEP. 25, 2017
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BY: JES

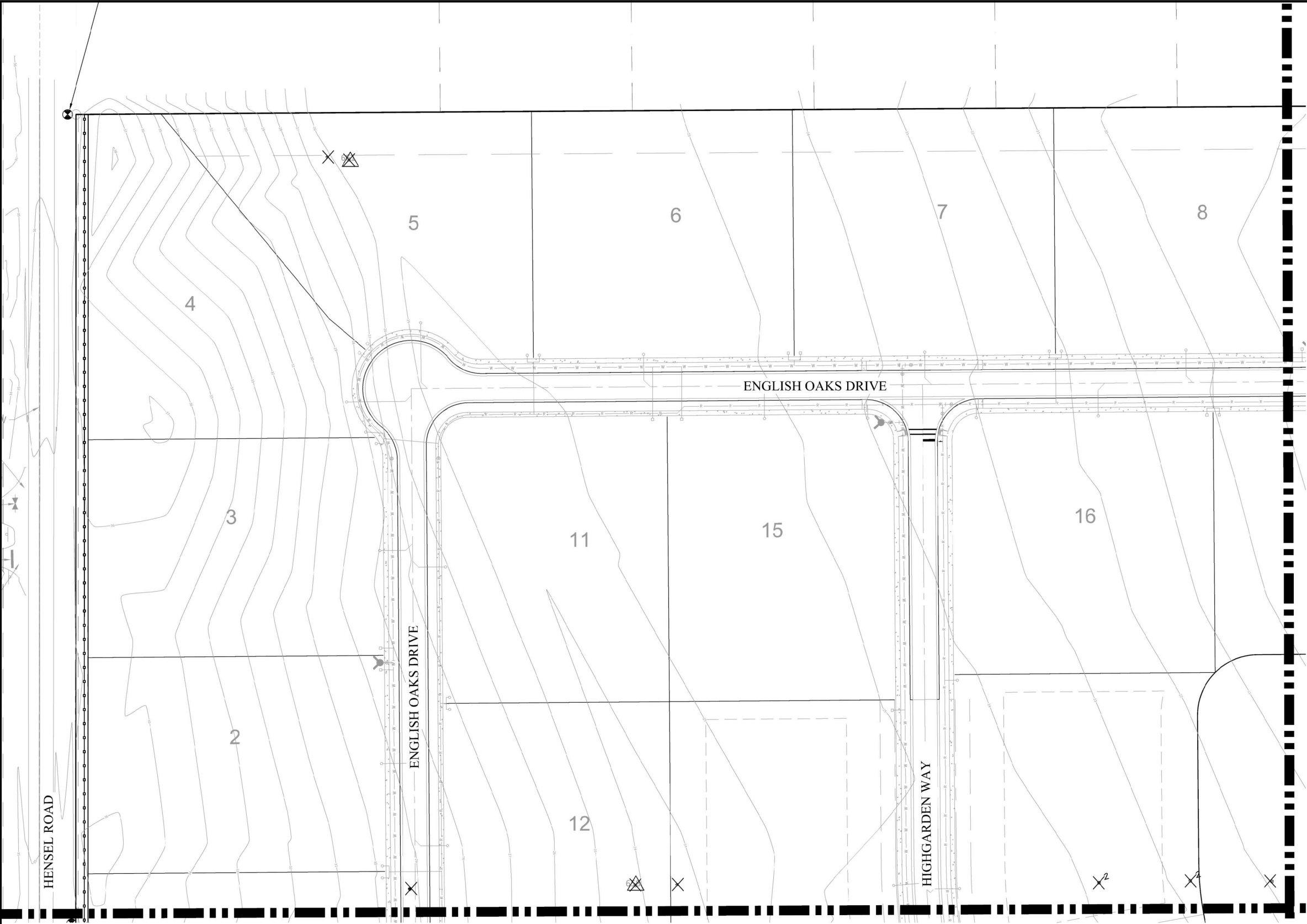
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KINGS LANDING PHASE 2
FINAL ENGINEERING PLANS
TREE PROTECTION PLAN & DETAILS

VOLUSIA COUNTY, FLORIDA
CITY OF PORT ORANGE

PROJECT NO: 15082X
ISSUE DATE: 8/31/16
DESIGNED BY: JES
DRAFTED BY: JES
CHECKED BY: SB
DRAWING FILE: 15082X-TP
XREFS: 15082X MODIFIEDTSURV
XREFS:

NOT VALID WITHOUT SEAL
STEPHEN R. BURNS, R.L.A. NO. 986
SCALE: 1" = 40'
SHEET: TP2 OF 7



LEGEND

EXISTING TREE TO BE REMOVED

EXISTING SPECIMEN TREE TO BE REMOVED

EXISTING HISTORIC TREE

EXISTING SPECIMEN TREE

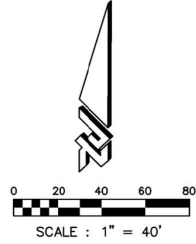
DENOTES ROOT ZONE PROTECTION AREA REQUIRED

DENOTES NATURAL PRESERVATION / CONSERVATION AREA TO REMAIN

DENOTES EXISTING TREE

NOTE:

SEE TREE LEGEND FOR SPECIES AND PLAN VIEW FOR DPH.



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EDGEWATER, FL 32132
(386) 677-2482 FAX (386) 677-2505

NO.	DATE	REVISIONS	BY
01	12/23/17	REVISED PER CITY COMMENTS SEP. 25, 2017	JES

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KINGS LANDING PHASE 2
FINAL ENGINEERING PLANS
TREE PROTECTION PLAN & DETAILS

CITY OF PORT ORANGE
VOLusia COUNTY, FLORIDA

PROJECT NO: 15082X

ISSUE DATE: 8/31/16

DESIGNED BY: JES

DRAFTED BY: JES

CHECKED BY: SB

DRAWING FILE: 15082X-TP

XREFS: 15082X MODIFIED TRSURV

XREFS:

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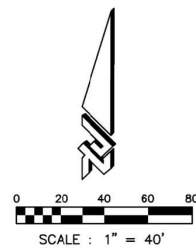
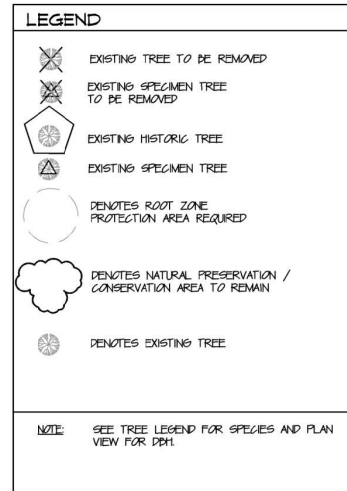
STEPHEN R. BURNS, R.L.A. NO. 986

SCALE: 1" = 40'

SHEET: TP3 OF 7

MATCH LINE - SEE SHEET 1122

MATCH LINE - SEE SHEET TP6



KINGS LANDING PHASE 2
FINAL ENGINEERING PLANS
TREE PROTECTION PLAN & DETAILS

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STEPHEN R. BURNS, R.L.A NO. 986

SCALE: 1" = 40'

SHEET: TP4 OF 7

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ORMOND BEACH, FL 32174
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32777 ATA SOUTH, STE. #102, OFFICE 4
ST. AUGUSTINE, FL 32080
(904) 797-1610 FAX (386) 677-2505

EDGEWATER
1840 AIRPARK ROAD
EDGEWATER, FL 32132
(386) 677-2452 FAX (386) 677-2505

[illegible]

KINGS LANDING PHASE 2
FINAL ENGINEERING PLANS
TREE PROTECTION PLAN & DETAILS

PROJECT NO: 15082X

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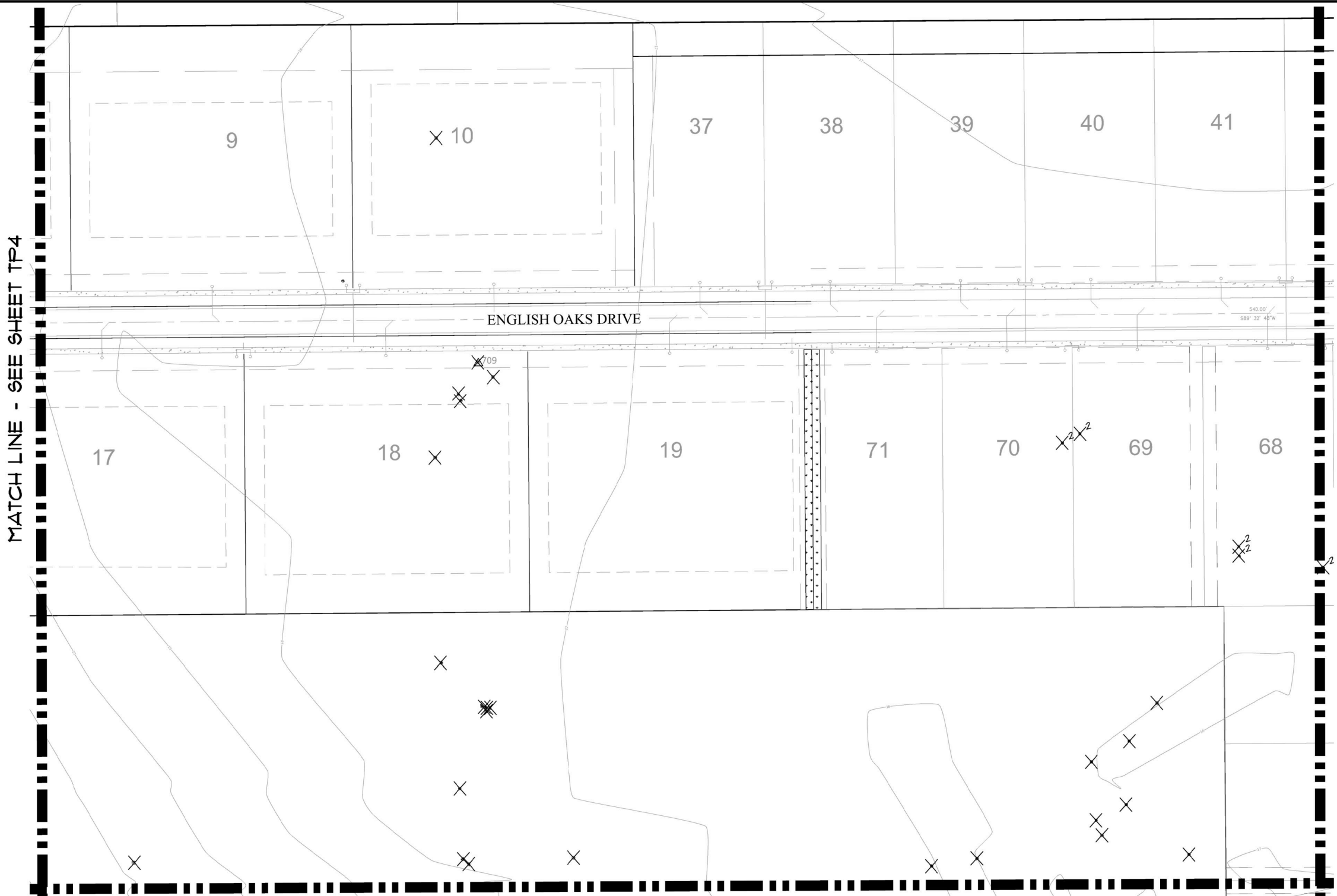
STEPHEN R. BURNS, R.L.A. NO. 986

SCALE: 1" =

SHEET: **TP4** OF 7

MATCH LINE - SEE SHEET TP4

MATCH LINE - SEE SHEET TP1



MATCH LINE - SEE SHEET TP4

LEGEND

EXISTING TREE TO BE REMOVED

EXISTING SPECIMEN TREE TO BE REMOVED

EXISTING HISTORIC TREE

EXISTING SPECIMEN TREE

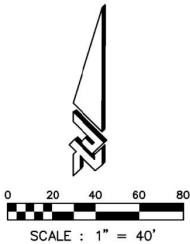
DENOTES ROOT ZONE PROTECTION AREA REQUIRED

DENOTES NATURAL PRESERVATION / CONSERVATION AREA TO REMAIN

DENOTES EXISTING TREE

NOTE:

SEE TREE LEGEND FOR SPECIES AND PLAN VIEW FOR DDH



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KINGS LANDING PHASE 2
FINAL ENGINEERING PLANS
TREE PROTECTION PLAN & DETAILS

CITY OF PORT ORANGE
VOLusia COUNTY, FLORIDA

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XREFS: 15082X MODIFIED TRSURV

XREFS:

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STEPHEN R. BURNS, R.L.A. NO. 986

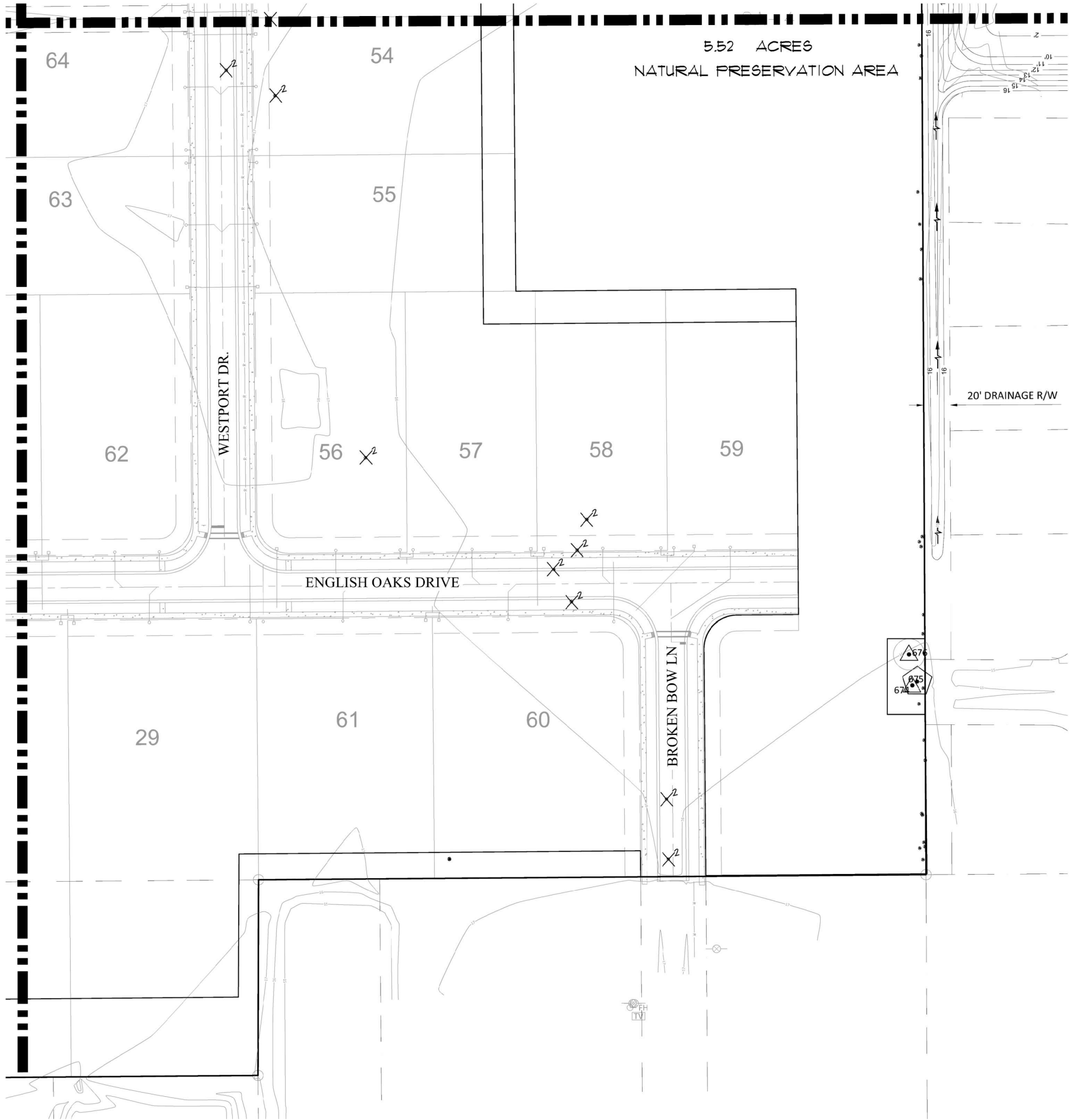
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SHEET: TP5 OF 7

MATCH LINE - SEE SHEET TP4

MATCH LINE - SEE SHEET TP1

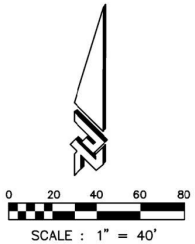
5.52 ACRES
NATURAL PRESERVATION AREA



LEGEND

- EXISTING TREE TO BE REMOVED
- EXISTING SPECIMEN TREE TO BE REMOVED
- EXISTING HISTORIC TREE
- EXISTING SPECIMEN TREE
- DENOTES ROOT ZONE PROTECTION AREA REQUIRED
- DENOTES NATURAL PRESERVATION / CONSERVATION AREA TO REMAIN
- DENOTES EXISTING TREE

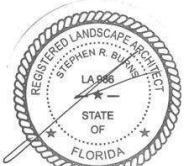
NOTE: SEE TREE LEGEND FOR SPECIES AND PLAN VIEW FOR DBH.



**KINGS LANDING PHASE 2
FINAL ENGINEERING PLANS
TREE PROTECTION PLAN & DETAILS**

CITY OF PORT ORANGE VOLusia COUNTY, FLORIDA

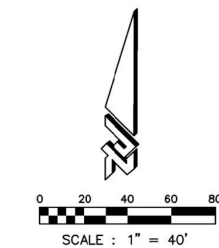
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ISSUE DATE:	8/31/16
DESIGNED BY:	JES
DRAFTED BY:	JES
CHECKED BY:	SB
DRAWING FILE:	15082X-TP
XREFS:	15082X MODIFIED TRSURV XREFS



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STEPHEN R. BURNS, R.L.A. NO. 986
SCALE: 1" = 40'
SHEET: TP6 OF 7

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(904) 797-1610 FAX (386) 677-2505
EDGEWATER
1840 AIRMARK ROAD
EDGEWATER, FL 32132
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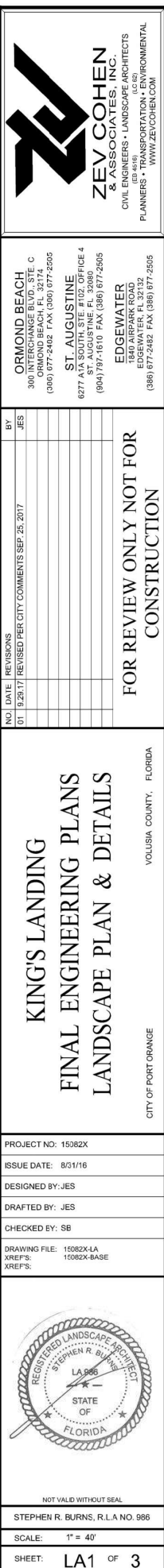


LEGEND

	EXISTING TREE TO BE REMOVED
	EXISTING SPECIMEN TREE TO BE REMOVED
	EXISTING HISTORIC TREE
	EXISTING SPECIMEN TREE
	DENOTES ROOT ZONE PROTECTION AREA REQUIRED
	DENOTES NATURAL PRESERVATION / CONSERVATION AREA TO REMAIN
	DENOTES EXISTING TREE

NOTE: SEE TREE LEGEND FOR SPECIES AND PLAN VIEW FOR DBH.

KINGS LANDING PHASE 2 FINAL ENGINEERING PLANS TREE PROTECTION PLAN & DETAILS		CITY OF PORT ORANGE VOLusia COUNTY, FLORIDA
PROJECT NO: 15082X		
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DRAWING FILE: 15082X-TP XREF'S: 15082X-MODIFIEDTRSURV XREF'S:		
		
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STEPHEN R. BURNS, R.L.A. NO. 986		
SCALE: 1" = 40'		
SHEET: TP7 OF 7		



FLORIDA #1. ALL PLANT WATER SHALL BE GRADE FLORIDA #1 OR BETTER IN QUALITY AS DESIGNATED IN THE MOST RECENT PUBLICATION OF "GRADES AND STANDARDS FOR NURSERY PLANTS", PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. SEE #11 FOR INFO.

2. EXISTING PLANTS: IF EXISTING LANDSCAPING INTERFERES WITH PROPOSED PLANTINGS SHOWN ON THE PLAN, THE EXISTING LANDSCAPING IS TO BE REMOVED IN FAVOR OF THE NEW PLANTINGS, UNLESS OTHERWISE INDICATED. IF THE EXISTING VEGETATION ON IS INTENDED TO REMAIN, THE PROPOSED LANDSCAPING SHALL BE LOCATED AS CLOSE AS POSSIBLE TO ITS INTENDED LOCATION.

3. MULCH: ALL PLANTING BEDS SHALL BE TOP DRESSED WITH 3" PINE BARK MULCH, GRADE "B" OR BETTER. ALL TREES NOT IN BEDS SHALL HAVE A 5' DIAMETER MULCH RING. ALL PALMS NOT IN BEDS SHALL HAVE 6" DIAMETER MULCH RING.

4. SOD: SOD SHALL BE ARGENTINE PAMPA UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SOD SHALL BE ROLLED CONTRACTOR TO SOD ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION RELATED ACTIVITIES. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THE SOD IS FREE OF WEEDS UPON INSTALLATION AND FOR THE DURATION OF THE 30 DAY MAINTENANCE PERIOD. SOD QUANTITY TAKEOFFS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

5. QUANTITIES: IN THE EVENT OF A VARIATION BETWEEN THE QUANTITIES SHOWN ON THE PLANT LIST AND THE ACTUAL QUANTITY OF PLANTS SHOWN ON THE PLAN, THE PLAN SHALL CONTROL.

6. UNFORESEEN CONFLICTS: CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY PORTION OF THE LANDSCAPE PLAN AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNFORESEEN OBSTRUCTIONS, GRADE DIFFERENCES, STANDING WATER, SOIL CONDITIONS OR OTHER CONFLICTS EXIST. SUCH UNFORESEEN CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE AND THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

7. SUBSTITUTIONS: NO SUBSTITUTIONS OR VARIATIONS OF ANY PLANT MATERIAL OR ITS INSTALLED LOCATION WILL BE PERMITTED WITHOUT THE PRIOR WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT.

8. CONTAINERS: IF GALLONAGE FOR PLANTS OR TREES IS SHOWN THEY SHALL BE CONTAINER GROWN AND THE SIZE SHOWN SHALL REPRESENT THE MINIMUM ALLOWABLE GALLONAGE. IN ALL CASES THE PLANT SPECIFIED SIZE SHALL GOVERN OVER THE GALLONAGE INDICATED.

9. PLANTING SOIL: CONTRACTOR SHALL VERIFY THAT SOIL CONDITIONS ARE SUITABLE TO THE PLANT SPECIES SPECIFIED. IF SOIL CONDITIONS ARE DEEMED UNSUITABLE FOR PROPER PLANT HEALTH, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT AND PROPER SUBSTITUTIONS SHALL BE SPECIFIED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. THE CONTRACTOR SHALL REMOVE THE ROCKS, CORNERS, DEBRIS FROM PLANTING BEDS. IF DEBRIS IS INTEGRATED IN THE SOIL, THE SOIL MUST BE EXCAVATED AND REPLACED WITH ACCEPTABLE SOIL ALL FILL TO BE PLACED IN LANDSCAPE AREAS MUST HAVE A pH RANGE BETWEEN 5.8 AND 7.5, BE ORGANIC IN NATURE, AND BE FREE OF ROCKS AND DEBRIS.

10. TOPSOIL: TOPSOIL MATERIAL, IF REQUIRED, SHALL BE FREE FROM ALL HARD SOLIDS, WEEDS, STONES OVER 1" IN DIAMETER, CLAY, HARD PAN, NOXIOUS PLANTS, SOD, INSECTS, OR OTHER UNDESIRABLE PLANTS, SEEDS, OR MATERIAL WHICH MAY BE HARMFUL FOR GROWTH AND SHALL BE CERTIFIED AS STERILE.

11. WEEDS: PRIOR, THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE ANY WEEDS FROM PLANTINGS AND SOD AREAS PRIOR TO THE INSTALLATION OF PROPOSED PLANT MATERIAL AND MULCH COVER. CONTRACTOR SHALL BE RESPONSIBLE TO KEEP BEDS AND SOD FREE OF WEEDS FOR THE DURATION OF THE 30 DAY MAINTENANCE PERIOD.

12. GRADING: UNLESS OTHERWISE STATED ON THESE PLANS, THE LANDSCAPE CONTRACTOR SHALL FINE GRADE ALL AREAS TO BE PLANTED AND SODDED IN ORDER TO ELIMINATE BUMPS AND DEPRESSIONS. FINE GRADING SHALL BE DEFINED AS THE FINAL 3" OF GRADE TO BE ACHIEVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND REGRAVING WASHOUT AREAS CAUSED BY EROSION UNTIL FINAL ACCEPTANCE OF THE PROJECT.

13. STAKING: ALL TREES, AND PALMS ARE TO BE STAKED ACCORDING TO THE DETAILS IN THESE PLANS. IF THE CONTRACTOR PREFERENCES TO USE OTHER STAKING METHODS THAN SHOWN IN THE DETAILS, HE OR SHE MUST SUBMIT PROPOSED STAKING DETAILS TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. THE LANDSCAPE CONTRACTOR SHALL STRAIGHTEN, REPAIR, AND/OR REPLACE ANY PLANTS DAMAGED BY FAILURE TO PROPERLY STAKE OR GUY ANY TREES ON SITE, AT THEIR OWN EXPENSE.

14. BERM LINES: CURVILINEAR LANDSCAPE BEDS ARE TO BE EDGED WITH SMOOTH FLOWING CURVES. STRAIGHT-LINE LANDSCAPE BEDS ARE TO BE EDGED IN A STRAIGHT LINE PARALLEL TO PARKING LOTS AND STRUCTURES UNLESS DESIGNED OTHERWISE.

15. FERTILIZER: ORGANIC SLOW RELEASE FERTILIZER OR EQUIVALENT SHALL BE APPLIED TO ALL TREE, SHRUB, AND GRASS/COVER PLANTING AREAS AT THE RATE OF THREE (3) TABLESPOONS PER 2 SF. OF PLANTING AREA.

16. DRAINAGE: THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT THIS WORK DOES NOT INTERRUPT EXISTING OR PROPOSED DRAINAGE PATTERNS AND SHALL NOTIFY THE OWNERS REPRESENTATIVE IMMEDIATELY SHALL A CONFLICT ARISE. CONTRACTOR IS RESPONSIBLE FOR ALL LANDSCAPE/SOD AREAS TO PROPERLY DRAIN AWAY FROM BUILDINGS/STRUCTURES.

17. SPECIFICATIONS: THE LANDSCAPE ARCHITECT SHALL BE PERMITTED THE RIGHT DURING INSTALLATION TO RECTIFY ANY AND ALL PLANT MATERIAL AND WORKMANSHIP WHICH IN HIS OR HER OPINION DOES NOT MEET THE REQUIREMENTS OF THESE SPECIFICATIONS.

18. NATURAL AREAS: NATURAL VEGETATION PRESERVATION AREAS SHALL BE CLEARED UP INCLUDING BUT NOT LIMITED TO THE REMOVAL OF ANY DEBRIS OR WEEDS AND PRUNING OF DEAD OR YELLOW BRANCHES AND PALM FRONDS. MULCH EDGE OF NATURAL AREA 5 FEET.

19. WILDLIFE NOTIFICATION: UNLESS NOTIFIED BY THE CLIENT OR CONTRACTOR, IN WRITING, LANDSCAPE ARCHITECT SHALL NOT BE HELD RESPONSIBLE FOR DAMAGES TO PROPOSED PLANT MATERIAL CAUSED BY BEER OR OTHER ANIMALS. UPON NOTIFICATION OF TEST ANIMAL EXISTENCE PROPER PLANT SUBSTITUTIONS SHALL BE PROVIDED BY THE LANDSCAPE ARCHITECT.

20. TURNOVER: CONTRACTOR SHALL CONTACT OWNERS REPRESENTATIVE FOR A TURNOVER DATE TO INCLUDE A WALK-THROUGH AND ACCEPTANCE OF WORK BY THE LANDSCAPE ARCHITECT. ANY WORK DEEMED UNACCEPTABLE SHALL BE CORRECTED IMMEDIATELY AND REINSPECTED AS SCHEDULED.

21. MAINTENANCE: CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE TO BEGIN AFTER EACH PLANT HAS BEEN INSTALLED AND SHALL CONTINUE 30 DAYS AFTER FINAL WRITTEN ACCEPTANCE BY THE OWNER. MAINTENANCE SHALL INCLUDE WATERING, PRUNING, WEEDING, MULCHING, MOVING, REPLACEMENT OF SICK OR DEAD PLANTS, AND ANY OTHER CARE NECESSARY IN ORDER TO MAINTAIN PROPER PLANT HEALTH AND SOIL MOISTURE CONTENT.

22. GUARANTEE: CONTRACTOR SHALL GUARANTEE ALL INSTALLED PLANT MATERIAL FOR ONE (1) CALENDAR YEAR STARTING FROM THE TURNOVER DATE FOR WORK FOUND ACCEPTABLE. ANY CORRECTED WORK SHALL HAVE A PROPORTIONAL EXTENSION OF WARRANTY. CROWN APPROVED: ANY SICK OR DEAD MATERIAL SHALL BE REPLACED IMMEDIATELY. THE LANDSCAPE CONTRACTOR SHALL NOT BE RESPONSIBLE TO HONOR ANY WARRANTY FOR THE LOSS OF ANY PLANT MATERIAL CAUSED BY FLOODING, FIRE, FREEZING TEMPERATURES, WINDS OVER 50 MPH, LIGHTNING, ANY OTHER NATURAL DISASTER, OR ANY LOSS/DAMAGE CAUSED BY VANDALISM OR NEGLIGENCE ON THE PART OF THE OWNER.

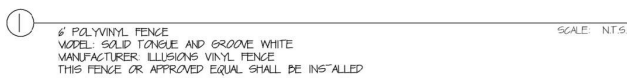
23. CALL BEFORE YOU DIG: CONTRACTOR SHALL NOTIFY SUNSHINE 811 AND HAVE UTILITIES LOCATED, PRIOR TO DIGGING, BY CALLING 811. CONTRACTOR SHALL NOT PLANT TREES WITHIN 3' OF AN UNDERGROUND UTILITY, EITHER AS LOCATED OR AS SHOWN ON THE PLAN, WITHOUT FIRST OBTAINING WRITTEN PERMISSION FROM OWNERS REPRESENTATIVE.

1. AN AUTOMATIC TIME CONTROLLED IRRIGATION SYSTEM WITH A RAIN SENSOR SHALL BE INSTALLED TO PROVIDE 100% HEAD TO HEAD COVERAGE OF ALL NEW PLANTINGS. IRRIGATION PLAN SHALL BE PROVIDED UPON SUBSTANTIAL SITE PLAN APPROVAL.

1. DIMENSIONS: ALL LAYOUT DIMENSIONS ARE TO EDGE OF PAVEMENTS UNLESS OTHERWISE NOTED.
2. LAYOUT: ALL LAYOUT DIMENSIONS SHOWN ON DETAILS ARE APPROXIMATE.
3. CONCRETE: REFER TO CIVIL DRAWINGS FOR CONCRETE DESIGN SPECIFICATIONS AS WELL AS GRABINS AND DRAINAGE INFORMATION.
4. ACCESSIBILITY: ALL CONSTRUCTION SHALL CONFORM WITH THE REQUIREMENTS FOR HANDICAP ACCESSIBILITY AS OUTLINED UNDER THE AMERICANS WITH DISABILITIES ACT GUIDELINES (ADAAG).
5. STAKING AND LAYOUT: THE CONTRACTOR SHALL STAKE AND LAYOUT ALL IMPROVEMENTS USING SURVEYING INSTRUMENTS PROVIDED BY THE CONTRACTORS RESPONSIBILITY TO COMPLETELY STAKE AND VERIFY THE ALIGNMENT BOTH VERTICAL AND HORIZONTAL AND TO INSURE PROPER POSITIONING PRIOR TO THE MANUFACTURING AND INSTALLATION OF ANY IMPROVEMENT. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IN WRITING IF ANY DISCREPANCIES ARE FOUND AND NOT PROCEED WITH THE WORK UNTIL DIRECTED.
6. EXISTING IMPROVEMENTS: THE CONTRACTOR SHALL REPAIR OR REPLACE TO AN EQUAL TO OR BETTER CONDITION ANY EXISTING IMPROVEMENTS LOCATED OUTSIDE OF THE UNITS OF WORK THAT ARE DAMAGED BY THE CONTRACTORS CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO THE OWNER.
7. EXISTING UTILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES.
8. CONSTRUCTION JOINTS: CALK ALL JOINTS BEFORE PAINTING.
9. PAIN: COLOR FOR PAINTED SURFACES SHALL BE AS INDICATED ON THESE PLANS OR SELECTED BY OWNER OR OWNERS REPRESENTATIVE. FINAL PAINT COLOR SELECTED BY OWNER OR OWNERS REPRESENTATIVE SHALL BE APPLIED AND APPROVED BY SAME PRIOR TO THE INSTALLATION OF SEAGE LETTERS.
10. TRASH: ALL CUTUPS AND SCRAPS ARE TO BE REMOVED FROM SITE DAILY.
11. INTENT: THESE DRAWINGS ARE FOR DESIGN INTENT ONLY. CONTRACTOR SHALL VERIFY THAT ALL LOCAL STRUCTURAL SPECIFICATIONS AND BUILDING CODES ARE SATISFIED.
12. SEAL DRAWINGS: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS INDICATING REQUIRED STRUCTURAL DESIGN SPECIFICATIONS TO THE OWNER THAT ARE SIGNED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.

1. BOLTS SHALL MEET THE REQUIREMENTS OF ASTM SPECIFICATION 1-307 (HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS), TYPE I AND HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM SPECIFICATION A-193 (ZINC COATING HOT DIP ON IRON AND STEEL HARDWARE). BOLTS SHALL BE SPACED EQUALLY AND SHALL NOT BE CLOSER THAN 4 BOLT DIAMETERS FROM THE EDGE OF THE LUMBER.
2. FASTENERS GALVANIZED TO MEET ASTM A 193 CLASS D ARE ACCEPTABLE FOR USE WITH TREATED LUMBER. STAINLESS STEEL FASTENERS ARE ALSO ACCEPTABLE.

1. ALL ALUMINUM MEMBERS ARE TO BE PAINTED WITH AN ELECTROSTATIC POWDER COAT. COLOR AS INDICATED ON THESE PLANS.

[illegible]

REVIEW ONLY NOT FOR CONSTRUCTION

VOLUSIA COUNTY, FLORIDA

CITY OF PORT ORANGE

KING'S LANDING
FINAL ENGINEERING PLANS
LANDSCAPE PLAN & DETAILS

PROJECT NO: 15082X

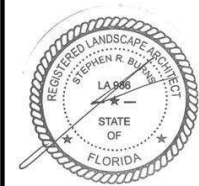
ISSUE DATE: 8/31/16

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DRAFTED BY: JES

CHECKED BY: SB

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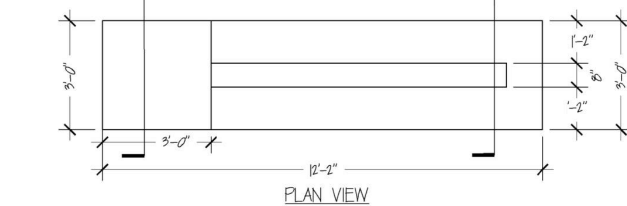
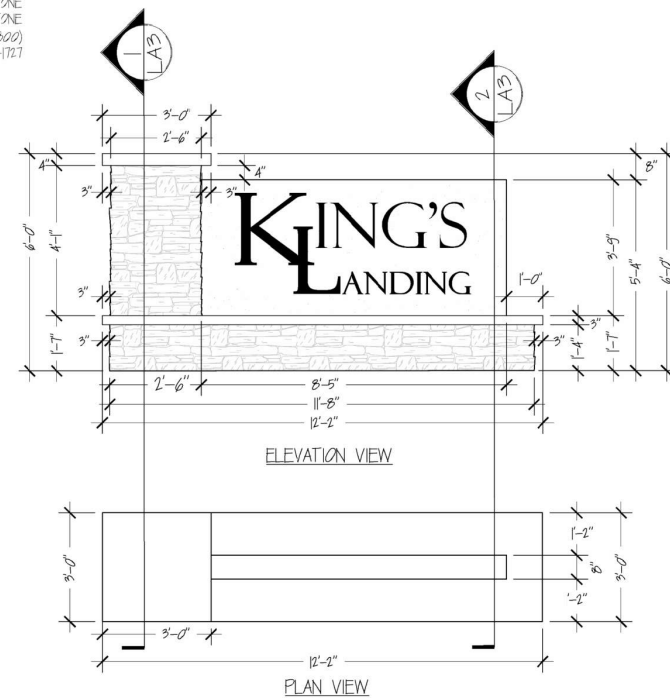
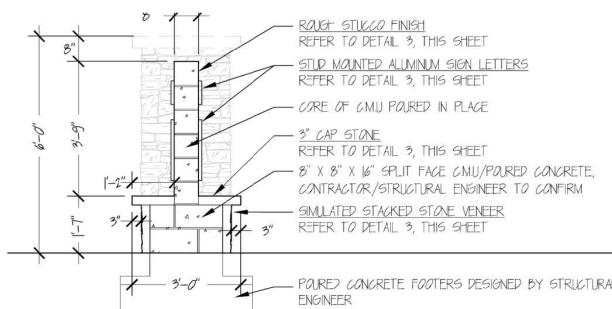
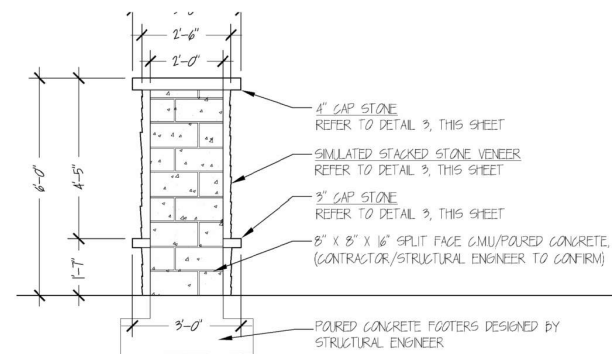


NOT VALID WITHOUT SEAL

STEPHEN R. BURNS, R.L.A NO. 986

SCALE: N.T.S

SHEET: LA2 OF 3



DESIGN INTENT DRAWINGS ONLY
CONTRACTOR TO SUBMIT SHOP
DRAWINGS FOR CONSTRUCTION PERMITS



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& ASSOCIATES, INC.**
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KING'S LANDING
FINAL ENGINEERING PLANS
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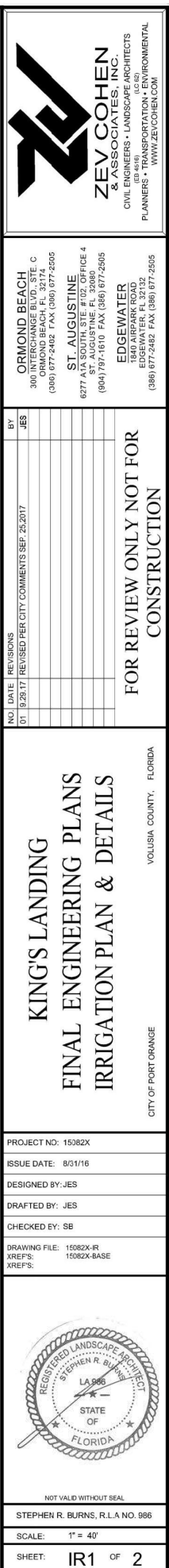
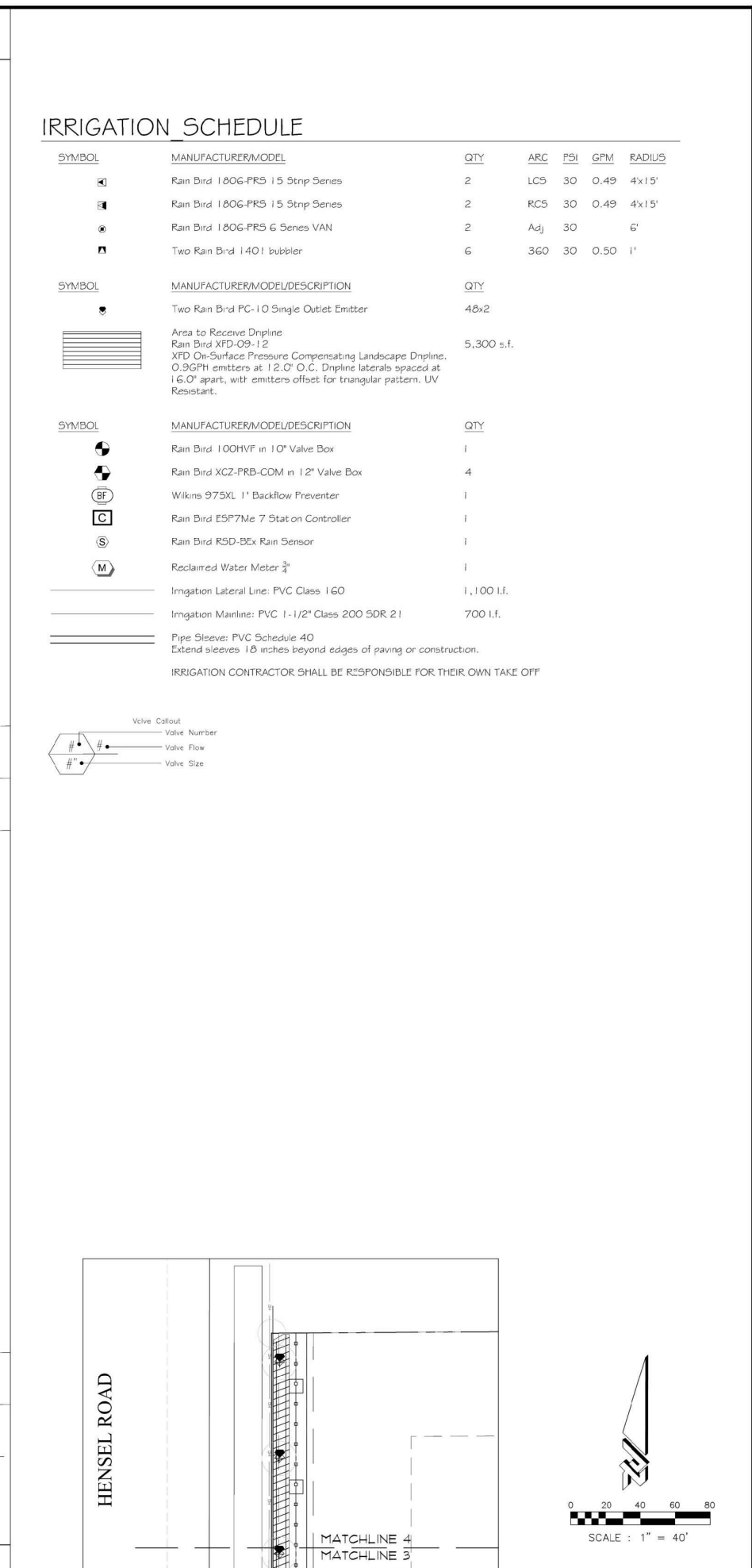
The seal is circular with a rope-like border. Inside the border, the text "REGISTERED LANDSCAPE ARCHITECT" is at the top and "STATE OF FLORIDA" is at the bottom, separated by two stars. In the center, the name "STEPHEN R. BURNS" is written in an arc, with "LA 886" below it. A diagonal line crosses the seal from the bottom left to the top right.

NOT VALID WITHOUT SEAL

STEPHEN R. BURNS, R.L.A NO. 986

SCALE: N.T.S.

SHEET: LA3 OF 3



1.0 GENERAL

- ## 2.0 PRODUCTS:

2.1 PIPE, PIPE FITTINGS, AND CONNECTIONS:

- 2.1 **PIPE, PIPE FITTINGS, AND CONNECTIONS:**
- A. Pipe shall be continuously and permanently marked with Manufacturer's name, size, schedule, type, and working pressure.
 - B. Pipe:
 - 1. Pressure Lines: as indicated on plans.
 - 2. Lateral Lines: as indicated on plans.
 - 3. Risers: sch. 80 P.V.C, gray
 - C. Fittings:
 - 1. Schedule 40 P.V.C.
 - D. Sleeving:
 - 1. Schedule 40 P.V.C.

2.2 SPRINKLER HEADS:

- A. Conform to requirements shown on Drawings as to type, radius of throw, pressure, and discharge.

2.3 AUTOMATIC SPRINKLER SYSTEM:

- 2.3 AUTOMATIC SPRINKLER SYSTEM:
- A. Control valves shall be of size and type indicated on Drawings.
 - B. Control wire shall be UL listed, color coded copper conductor direct burial size 18.
 - Use 3M-DBY waterproof wire connectors at splices and locate all splices within valve boxes.
 - Use white or gray color for common wire and other colors for all other wire.

2.4 VALVES:

- 2.4 A. Electric Valves:
1. Make and model shown on Drawings.
- B. Gate valves:
1. Bronzes construction, angle type, 150 pound class, threaded connections, with cross-type operating handle designed to receive operating key.
- C. Automatic Controller
1. Make and model shown on Drawings.
- D. Backflow Preventor:
1. Make and model shown on Drawings.

2.5 VALVE ACCESSORIES:

- 2.5 VALVE ACCESSORIES:
 - A. Valve Boxes:
 1. Ametek or Brooks rectangular heavy duty valve box with locking lid or Landscape Architect approved equal.
 2. Do not install more than one (1) valve in a single box.
 3. Valve boxes shall be large enough for easy removal or maintenance of valves.

3.0 EXECUTION:

- 3.1 PREPARATION:
- A. Protection:
1. Work of others damaged by this Section during course of its work shall be replaced or repaired by original installer at this Section's expense.

3.2 INSTALLATION:

- 3.2 INSTALLATION:
- A. Trenching and Backfilling:
1. Over-excavate trenches by two (2") inches and bring back to indicated depth by filling with fine, rock-free soil or sand.
 2. Cover pipe both top and sides with two (2") inches of material specified in paragraph above. In no case shall there be less than two (2") inches of rock-free soil or sand surrounding pipe.

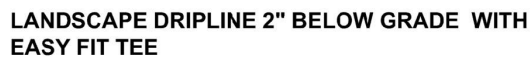
3. Do not cover pressure main, sprinkler pipe, or fittings until the Landscape Architect has inspected and approved system.
- B. Installation of Plastic Pipe:
 1. Install plastic pipe in a manner to provide for expansion and contraction as recommended by Manufacturer.
 2. Unless otherwise indicated on Drawings, install main lines with a minimum cover of eighteen (18") inches based on finish grade. Install lateral lines with a minimum cover of twelve (12") inches based on finish grade.
 3. Install pipe and wires under driveways or parking areas in specified sleeves a minimum of eighteen (18") inches below finish grade or as shown on Drawings.
 4. Locate no sprinkler head closer than twelve (12") inches from building foundation. Heads immediately adjacent to mowing strips, walks or curbs shall be one (1") inch below top of mowing strip, walk or curb and have a minimum of one (1") inch clearance between head and mowing strip, walk or curb.
 5. Drawings show arrangement of piping. Should local conditions necessitate rearrangement, obtain approval of Landscape Architect prior to proceeding with work.
 6. Cut plastic pipe square. Remove burrs at cut ends prior to installation so unobstructed flow will result.
 7. Make solvent weld joints in the following manner:
 - a. Clean mating pipe and fitting with clean, dry cloth and apply one (1) coat of P-70 primer to each.
 - b. Apply uniform coat of 711 solvent to outside of pipe.
 - c. Apply solvent to fitting in similar manner.
 - d. Reapply a light coat of solvent to pipe and quickly insert into fitting.
 - e. Give pipe or fitting a quarter turn to insure even distribution of solvent and make sure pipe is inserted to full depth of fitting socket.
 - f. Hold in position for fifteen (15) seconds minimum or long enough to secure joint.
 - g. Wipe off solvent appearing on outer shoulder of fitting.
 - h. Do not use an excessive amount of solvent thereby causing an obstruction to form on the inside of pipe.
 - i. Allow joints to set at least 24 hours before applying pressure to PVC pipe.
 8. Tape threaded connection with teflon tape.
 9. Install concrete thrust blocks wherever change of direction occurs a PVC main pressure lines unless otherwise detailed on Drawings.
- C. Control Valves and Controller:
 1. Install controller, control wires, and valves in accordance with Manufacturer's recommendations and according to applicable electrical code.
 2. Install valves in plastic boxes with reinforced heavy duty plastic covers. Locate valve box tops at finish grade.
 3. Install remote control valves in valve boxes positioned over valve so all parts of valve can be reached for service. Set cover of valve box even with finish grade.
 4. Install all valve boxes over nine (9") inches of gravel for drainage.
- D. Sprinkler Heads:
 1. Prior to the installation of sprinkler heads, open control valves and use full head of water to flush out system.
 2. Set sprinkler heads perpendicular to finish grade.
 3. Set awn sprinkler heads adjacent to existing walks, curbs, and other paved areas to grade.
- E. Dripline:
 1. Install one Rain Bird zone operation indicator (OPERIND), air relief (ARV050) and flush valve (MDFCPCAP) for each drip zone.
 2. Stake dripline every 6' with drip stake.

3.3 ADJUSTMENT AND CLEANING

- ADJUSTMENT AND CLEANING:**
- A. Adjust heads to proper grade when turf is sufficiently established to allow walking on it without appreciable harm. Such lowering or raising of heads shall be part of the original contract with no additional charge to the Owner.
 - B. Adjust sprinkler heads for proper distribution and trim to ensure spray does not fall on building.
 - C. Adjust watering time of valves to provide proper amounts of water to all plants.

3.4 DEMONSTRATION:

- DEMONSTRATION:**
A After system is installed and approved, instruct Owners Representative in complete operation and maintenance.



NOT TO SCALE



ORMOND BEACH
300 INTERCHANGE BLVD., STE.
ORMOND BEACH, FL 32171
(306) 677-2402 FAX (306) 677-2512

ST. AUGUSTINE
2777 AIA SOUTH, STE. #102 OFFICE
ST. AUGUSTINE, FL 32080
(904) 797-1610 FAX (386) 677-2512

EDGEWATER
1840 AIRPARK ROAD
EDGEWATER, FL 32132
(386) 677-2482 FAX (386) 677-2512

NO.	DATE	REVISIONS	BY
01	9/26/17	REVISED PER CITY COMMENTS SEP. 26, 2017	JES

FOR REVIEW ONLY NOT FOR CONSTRUCTION

FOR REVIEW ONLY NOT FOR
CONSTRUCTION

KING'S LANDING
FINAL ENGINEERING PLANS
IRRIGATION PLAN & DETAILS

VOLUSIA COUNTY, FLORIDA

CITY OF PORT ORANGE

PROJECT NO: 150820

ISSUE DATE: 8/31/16

DESIGNED BY: JES

DRAFTED BY: JES

CHECKED BY: SE

DRAWING FILE: 15082X-IR
XREF'S: 15082X-BASE
XREF'S:

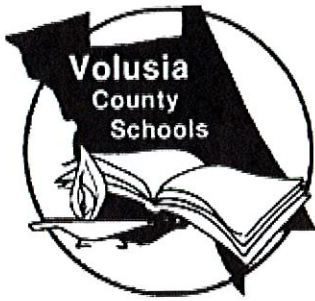


NOT VALID WITHOUT SEAL

STEPHEN R. BURNS, R.L.A NO. 986

SCALE: N.T.S.

SHEET: IR2 OF 2



James T. Russell
Superintendent of Schools

FACILITIES SERVICES

3750 Olson Drive, Daytona Beach, Florida 32124
PHONE: 386/734-7190 FAX: 386/506-5056

School Board of Volusia County

Mrs. Linda Costello, Chairman
Mrs. Ida White, Vice-Chairman
Mrs. Linda Cuthbert
Dr. John Hill
Mrs. Melody Johnson

20 October 2017

Owner:
Coventry Partners, LLC
500 Fentress Blvd.
Daytona Beach, FL 32114

Agent:
Randy Hudak, P.E.

RE: Kings Landing Phase 1 – Port Orange School Concurrency Case #16-10-21-001-R

Dear Mr. Hudak:

School district staff has reviewed the amended project information for a proposed Single family residential project known as Kings Landing (Phase 1). The complete project site of 82.2+/- acre site is located at 5931 Hensel Road in the City of Port Orange. The information provided in the application packet, the dwelling unit worksheet, and site plans indicate the development of 71 total units to be completed in three phases. Due to the timing of these phases this review will only be relevant for the first phase of nineteen (20) units.

By utilizing the School District's student generation rate (.305) per single family dwelling unit, the project could generate six (6) full time students. The table below contains the impacted school concurrency areas (CSA) and their associated capacity information.

Schools	Adopted LOS	SY1718 Enrollment	Reserved Capacity	Students Generated by Request	Change to LOS
Spruce Creek Elementary	115%	800	56	3	106.3%
Creekside Middle School	115%	1211	34	1	110%
Halifax High School CSA	120%	7397	182	2	99.6%
Other				0	

Kings Landing Phase 1 – Port Orange
20 October 2017

This projected increase in students will not impact the school enrollment beyond adopted LOS utilization rates. At this time the impacted school concurrency areas are operating at or below the adopted level of service standards; for that reason, the school district does not have an objection to the proposed site plan.

At a minimum, planning considerations should include both pedestrian and vehicular access, safety, connectivity and buffering. The site plan submitted includes sidewalks within the apartment complex but those sidewalks do not connect thus do not positively impact the bicycle/ pedestrian connectivity to the surrounding area.

Please note that the School Board has the right to adjust the attendance boundaries to balance the student enrollment populations at these area schools. Therefore, students generated from this project may not attend the current assigned schools.

If you should have additional questions or require more information, please feel free to contact me at extension 50810.

Sincerely,

Handwritten signature of Eric A. Kozielski in dark ink, with the date 20 OCT 2017 written below it.

Eric A. Kozielski
Planning & GIS Specialist

Cc: James Russell, Superintendent of Schools
Penelope Cruz, City of Port Orange
Project File



STAFF REPORT

SUBDIVISION REPLAT AND PLANS / WESTPORT RESERVE SUBDIVISION (PHASE 3)

CASE NO. 17-50000005

REQUEST: Approval of the Replat of a portion of Tracts F and H of the Westport Reserve Subdivision and Westport Reserve Phase 3 Subdivision Plans

LOCATION: South of Town West Boulevard and east of Tomoka Farms Road (Figure 1)

OWNER: Edge Cove LLC

APPLICANT: Jonathan Claber, Edge Cove LLC

STAFF RECOMMENDATION: Approval

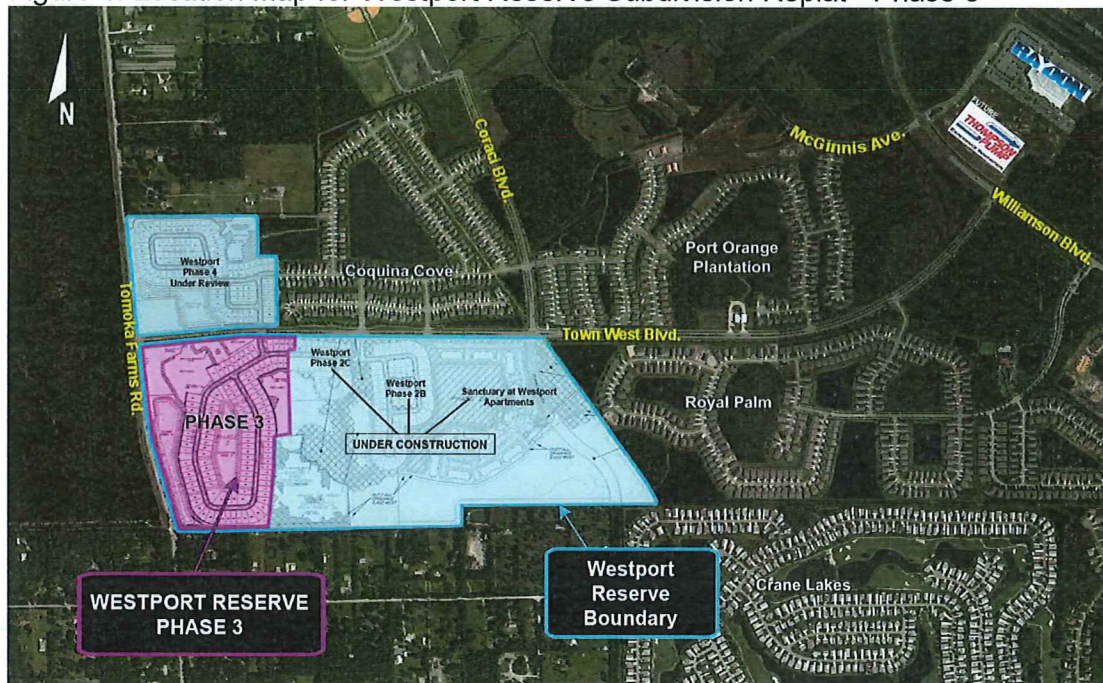
STAFF CONTACT: Gwen Perney (386) 506-5673

PLANNING COMMISSION DATE: October 26, 2017

DISCUSSION:

The applicant requests approval of the Westport Reserve Subdivision Replat of a portion of Tracts F and H. If approved, the applicant intends to replat ± 43.48 -acres of the Westport Reserve Subdivision into a 115 lot single-family subdivision and tracts for tree preservation, stormwater retention, and open space. The subject property is located south of Town West Boulevard, between the Westport Reserve, Phase 2C Subdivision and Tomoka Farms Road.

Figure 1. Location Map for Westport Reserve Subdivision Replat - Phase 3



The subject property is zoned "PC-A" (Planned Community Agriculture) Neighborhood District and has a Future Land Use designation of Planned Community No. 1. The PC-A Neighborhood zoning district is intended to accommodate a variety of standard suburban housing types at varying densities. Single-family, two-family, and multi-family housing are all permitted uses in this zoning district.

The subject property is located in the 1,200-acre master planned area called Planned Community-Agricultural (PC-A). In 2001/2002, the City established specific maximum unit per acre densities for the PC-A for areas designated for residential uses and intensities (square-footage) for areas designated for non-residential uses. Roadway network improvements (collector roads, intersection improvements, turn lanes, sufficient right-of-way, etc.) to support the planned development were also established.

The proposed subdivision phase is located within the Neighborhood District of the PC-A, which consists of residential uses with maximum densities from 4 units per acre to 16 units per acre. As the Neighborhood District has developed over the past ten years, the required roadway improvements (Coraci Blvd., McGinnis Blvd., Town West Blvd., Town West/Williamson intersection, and turn lanes) to support the planned residential density have been built, but the residential density developed or planned is less than originally planned in 2001/2002.

Table 1. Neighborhood District Allowed & Developed Densities

Subdivisions in Neighborhood District	Year	Number of Approved or Proposed Dwelling Units	Development Size (acres)	Developed Density DU/Acre	Max Density per Acre	Max Number of Dwelling Units Allowed
Coquina Cove Ph 1	2005	332	85	3.91	4	340
Port Orange Plantation Ph 1	2004	90	33.4	2.69	8	267
Port Orange Plantation Ph 2	2005	104	28.3	3.67	8	226
Port Orange Plantation Ph 3	2006	53	17.5	3.03	4	70
Port Orange Plantation Ph 4-Village C	2014	49	15.7	3.12	16	251
Hawks Preserve Ph 1 & 2	2016	189	81	2.33	16	1,296
Westport Reserve Subdivision (Ph 2A, 2B, 2C, and 3)	2016	567	148.7	3.81	4	594
Westport Reserve Subdivision (Ph 4)	2017	78	25.73	3.03	4	96
Total	N/A	1,462	435.35	3.36	N/A	3,140

Based on the approved densities in the Neighborhood District, the maximum number of dwelling units that could be constructed is 3,148. Staff is concurrently reviewing both Phases 3 and 4 of the Westport Reserve Subdivision, which are located on the last remaining parcels in the Neighborhood District. If these phases are approved, the total number of units in the Neighborhood District will be 1,462. This number is less than half of the maximum number of dwelling units it was planned for in the early 2000's (see Table 1).

The following subdivision improvements will be constructed before or simultaneously with the development of the first lot:

- Access onto Town West Boulevard and roadway connection into Phase 2C;
- A left-turn on Town West Boulevard into Phase 3;
- Water, sewer, and reclaimed water infrastructure;
- Stormwater drainage infrastructure;
- Public local streets within the subdivision;
- Sidewalks and streetlights along the public streets;
- 10' landscape buffer with 3' tall berm and decorative split-rail fence along Town West Boulevard; and
- 35' landscape buffer along Tomoka Farms Road.

The replat and subdivision plans have been designed according to the requirements of the City's Land Development Code (LDC) and the dimensional standards outlined in the PC-A Neighborhood District of the LDC [Exhibit "A"].

CONCURRENCY REVIEW:

Public facilities and services such as roads, public infrastructure, schools, and recreational facilities are currently available to serve the proposed 115 residential lots (Table 2). Any future phases will be separately evaluated for concurrency at the time of subdivision review. The following discussion summarizes the impacts the proposed development will have on these public facilities and services.

Table 2 - Infrastructure Impact Assessment for 115 Lots

DEVELOPMENT VARIABLE	IMPACTS
Population ¹	259
A.M./P.M./Daily Peak Hour Trips ²	86/117/1,095 trips
Sanitary Sewer (gallons per day) ³	18,400 gallons
Potable Water (gallons per day) ⁴	20,700 gallons
Solid Waste (lbs. Per day) ⁵	369 lbs.
Stormwater Drainage ⁶	See Note

DEVELOPMENT VARIABLE	IMPACTS
Recreation & Open Space ⁷	
• Parkland	1.8 acres
• Ball Fields	0.05 fields
• Basketball Courts	0.06 courts
• Multipurpose Courts	0.07 courts
• Tennis Courts	0.06 courts
• Neighborhood Centers	0.017 centers

Notes:

1. **Population:** 2.25 persons per household (per 2010 Census)
2. **Transportation:** 1.02 PM peak hour trips per unit; 9.52 daily trips per unit; Single-family (210), ITE Trip Generation Manual, 9th Edition
3. **Sanitary Sewer:** 160 gallons per day per Equivalent Residential Unit; 1/10 gallon per square foot per day of non-residential development
4. **Potable Water:** 180 gallons per day per Equivalent Residential Unit; 1/10 gallon per square foot per day of non-residential development
5. **Solid Waste:** 3.21 pounds per person per day; 10 lbs. per 1,000 square feet of non-residential development per day
6. **Stormwater Drainage:** LOS standard = 25 year, 24-hour event. Drainage system will be designed to meet the requirements of the Land Development Code.
7. **Rec. & Open Space:**
 - Parkland: 7 acres per 1,000 persons (0.007 acres/person)
 - Ball Fields: 1 field per 5,000 persons (0.0002 ball fields/person)
 - Basketball Courts: 1 court per 4,000 persons (0.00025 basketball courts/person)
 - Multipurpose Fields: 1 field per 3,500 persons (0.0002857 multipurpose fields/person)
 - Tennis Courts: 1 court per 4,000 persons (0.00025 tennis courts/person)
 - Neighborhood Centers: 1 facility per 15,000 persons (0.0000666 neighborhood centers/person)

Water, Sewer, Reclaimed Water:

The proposed phase will be served by potable water, sanitary sewer, and reclaimed water. All lots will be provided with stub-outs for utilities, and the developer will construct potable water, sanitary sewer, and reclaimed water lines in accordance with the utility plan for this project.

Staff from the Public Utilities Department have worked with the applicant to master design the utilities for this area to ensure that adequate capacity will exist.

Stormwater Drainage:

The City's adopted level-of-service standard for stormwater drainage requires that all new retention/detention facilities be able to treat and convey the runoff from the 25-year, 24-hour storm event without causing flooding or pollution of receiving waterbodies. In addition, there must be no net loss of stormwater retention function as a result of development; therefore, the subdivision property must have the same ability to store and discharge water after development as it does before development occurs.

Recreation and Open Space:

According to the City's 2016 Concurrency Management Report, the City is not deficient in any of the recreational facilities categories and there are sufficient facilities to support the additional population from this subdivision phase.

School Capacity:

The Volusia County School District determined that the adopted level of service will be met and capacity exists in the schools for the estimated students to be generated by the proposed subdivision. [Exhibit "B"]

Transportation:

According to the Westport Reserve, Phase 3 and 4, Traffic Impact Analysis (TIA) prepared by Traffic Engineering Data Solutions (TEDS), Inc., the 115 single-family homes in Phase 3 are expected to generate 109 PM peak-hour trips and 1,111 daily trips.

The TIA indicates that all intersections identified in the TIA study area that would be impacted by this development will operate within the adopted Level-of-Service standards with the traffic generated from the proposed subdivision, subject to the developer coordinating with Volusia County regarding the intersections of Williamson Boulevard at Taylor Road and Town West Boulevard at Tomoka Farms Road. The TIA also anticipates that in 2022, the 2-lane segment of Williamson Boulevard from Beville Road to Town West Boulevard could exceed capacity if the road is not widened to 4-lanes similar to the other segments of Williamson Boulevard (except Hand Avenue to LPGA) and the 2-lane segment of Taylor Road between Crane Lakes Boulevard and Summer Trees Road could exceed its capacity if not widened to 4-lanes. Because the improvements are on roadways maintained by Volusia County, the developer will be required to obtain concurrency certification from the County and may be subject to proportionate fair-share agreements and/or other mitigation strategies with the County or City. If required, proof of concurrency certification from the County will need to be provided prior to the item going before City Council.

Consistency with the Comprehensive Plan:

The subject property has a FLU designation of *Planned Community No. 1* on the City's Future Land Use Map. According to the Comprehensive Plan, the maximum gross residential density for the 148.7-acre overall PC-A area located on the south side of Town West Boulevard, between Tomoka Farms Road and Royal Palm Subdivision is four units/acre. With the addition of 115 single-family lots along with the 360 approved multi-family units and 92 approved single-family lots, the overall density for the 148.7-acre area is currently 3.81 units per acre. The development of the proposed single-family home subdivision is consistent with the intent of the FLU designation and permitted uses in the PC-A Neighborhood zoning district.

RECOMMENDATION:

Staff recommends approval of the Replat of a Portion of Tracts F and H of the Westport Reserve Subdivision and Westport Reserve Phase 3 Subdivision Plans, subject to addressing labeling and formatting comments on the subdivision replat prior to City Council.

ATTACHMENTS:

1. Exhibit A – Subdivision Plat and Plans for Phase 3
2. Exhibit B – Volusia County School Board Letter

REVISED

SHEET 1 OF 8

2. ALL LINES INTERSECTING CURVES ARE RADIAL UNLESS OTHERWISE NOTED
(R) - DENOTES A LINE RADIAL RELATIVE TO ADJACENT CURVE.
(NR) - DENOTES A LINE NOT RADIAL RELATIVE TO ADJACENT CURVE.

3. DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.



SHEET 2 OF 8

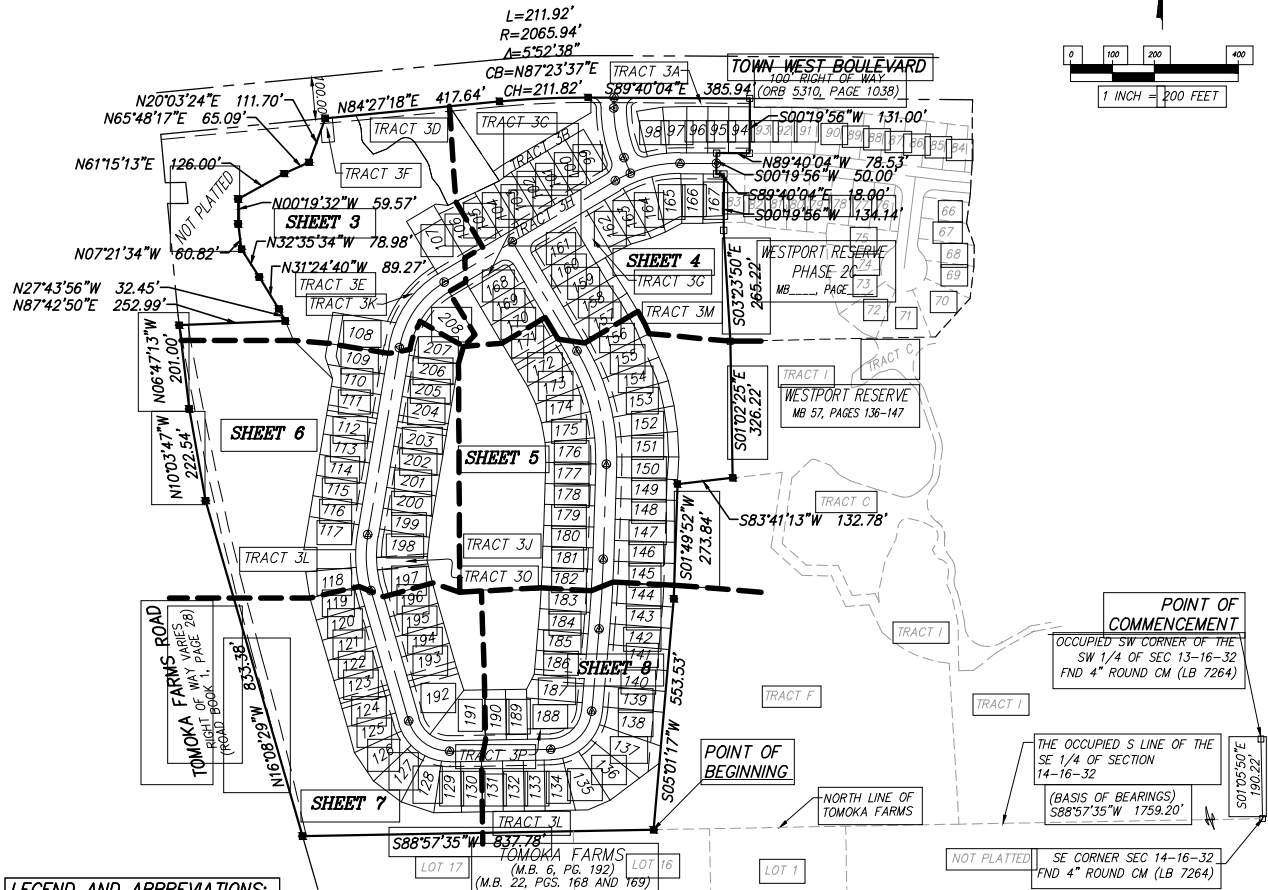
SHEET 1 - COVER SHEET, NOTES
SHEET 2 - KEY MAP/PLAT BOUNDARY,
LEGEND AND ABBREVIATIONS,
AND TRACT TABLE
SHEETS 3-8 - PLAT DETAIL SHEETS

REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

PAGE:

1. MONUMENTATION:
☐ - DENOT

- - DENOTES PERMANENT EASEMENT MONUMENT SET 4"X4" CONCRETE MONUMENT STAMPED FPM LB 8011
 ● - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED PCP LB 8011
 (R) - DENOTES A LINE RADIAL TO ADJACENT CURVE.
 (NR) - DENOTES A LINE NOT RADIAL TO ADJACENT CURVE.
 DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.
4. ACCURACY:
 - THE BOUNDARY LINE ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
5. BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.
6. NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 39.37/12=3.2808333333333 EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
7. NOTICE: THIS PLAT, AS RECORDED IN ITS GRAPHIC FORM, IS THE OFFICIAL DEFINITION 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.
8. THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THE PLAT:
 ENTIRE STREET FRONTAGES OF LOTS AND COMMON OPEN SPACE AREAS: 12.00 FEET WIDE
9. UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC, TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
10. ALL PLATTED UTILITY EASEMENTS, EXCLUSIVE OF PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY, ARE SUBJECT TO EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES; PROVIDED, HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICE 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 SUCH COMPANY'S RESPONSIBILITY TO REPAIR AND RESTORE THE SAME TO ORIGINAL CONDITION. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
11. SINGLE FAMILY RESIDENTIAL BUILDING SETBACK REQUIREMENTS:
 FRONT = 25 FEET
 REAR = 20 FEET
 SIDE = LOTS < 65' = 5 FEET
 LOTS > 65' = 7.5 FEET
 SIDE CORNER = 20 FEET
12. SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
 MINIMUM OPEN SPACE AREA = 40%
 MAXIMUM BUILDING COVERAGE = 50%
 MAXIMUM BUILDING HEIGHT = 36 FEET
13. THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR OTHERWISE IN AN AGREEMENT TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. AS AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHTS TO THE GENERAL PUBLIC.
14. THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON SHEETS 2 AND 3 OF THIS PLAT. THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS. THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON OPEN SPACE AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES, AND, SHALL HAVE THE RIGHT TO LIEV ALL PROPERTY OWNERS OF RECORD FOR THE CITY OF PORT ORANGE OF SUCH DAMAGE, REPAIR AND REPLACEMENT. IN THE EVENT OF THE TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORM WATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLETES WITH SECTION 17.022 F.A.C. AND BE APPROVED BY THE SAINT JOHNS RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
15. RETENTION AREAS AND COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
16. THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON OPEN SPACE AREAS AND IN THE RIGHTS-OF-WAY.
17. LOTS 94-208 AND TRACTS 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M AND 3N, AS SHOWN HEREON, ARE SUBJECT TO THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____ PAGE _____, et seq. OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO WHICH, AS EXHIBIT "B", ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.
18. PORTIONS OF THE LANDS SHOWN IN THIS PLAT ARE SUBJECT TO EASEMENT AND COST SHARING AGREEMENT RECORDED IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7328, PAGE 4235, et seq.
19. ALL OF THE LANDS SHOWN WITHIN THIS PLAT (EXCEPT AS OTHERWISE AMENDED BY THE EASEMENT AND COST-SHARING AGREEMENT REFERENCED IN NOTE 19) ARE SUBJECT TO DECLARATION OF EASEMENTS RECORDED IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7313, PAGE 2191, et seq.
20. LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).
21. TRACTS 3A, 3B, 3C, 3H, 3I, AND 3K AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE.
22. TRACT 3J, SHOWN HEREON AS OPEN SPACE/POND, WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., ITS SUCCESSORS AND/OR ASSIGNS. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3J IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
23. TRACT 3L AS SHOWN HEREON AS OPEN SPACE/DRAINAGE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., ITS SUCCESSORS AND/OR ASSIGNS. THE PURPOSE OF COMMON OPEN SPACE AND ACCESS EASEMENT OVER TRACT 3L, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
24. TRACT 3F AS SHOWN HEREON AS LIFT STATION IS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO, AND SHALL BE MAINTAINED BY, THE CITY OF PORT ORANGE. TRACT 3F IS SUBJECT TO A PERMANENT EASEMENT FOR LIFT STATION RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4276, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
25. TRACTS 3C, 3E AND 3M AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF OPEN SPACE AND ARE SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN BOOK _____ PAGE _____ OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
26. PROPERTY WITHIN THIS PLAT IS SUBJECT TO THE MINERAL OIL-CLAIM DEED AND ASSIGNMENT (WITH RESERVATION OF ROYALTY, BUT NOT ACCESS, TO GRANTORS) RECORDED SEPTEMBER 12, 1984 IN BOOK 2605, PAGE 1907 OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
27. PLAT IS SUBJECT TO THE POST-CLOSING AGREEMENT BY AND BETWEEN D.S.C. OF NEWARK ENTERPRISES, INC., A DELAWARE CORPORATION AND SUN PARTS DEVELOPMENT, INC., A FLORIDA LIMITED LIABILITY COMPANY AND OWNERS AND ASSOCIATES OF NW FLORIDA, INC., A FLORIDA CORPORATION AS RECORDED MAY 5, 2004 IN BOOK 5310, PAGE 1041, AS AFFECTED BY: SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 19, 2004 IN BOOK 5440, PAGE 2440, SECOND SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 2, 2005 IN BOOK 5690, PAGE 2714 AND THIRD SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED JUNE 7, 2016 IN OFFICIAL RECORDS BOOK 7262, PAGE 1239.
28. TRACTS 3A, 3C, 3D, 3E AND 3F, AS DEPICTED IN THIS PLAT, ARE SUBJECT TO AN ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4266, AS SHOWN ON SHEETS 2 & 3 OF THIS PLAT.
29. TRACT 3G, AS DEPICTED IN THIS PLAT, IS SUBJECT AN ACCESS, DRAINAGE, UTILITIES, RETENTION AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4258, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
30. MAINTENANCE OF THE ATTENUATION AND POLLUTION SWALES ON LOTS 105-109, 137-159 AND 162-167, SHALL BE GOVERNED BY THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS REFERENCED IN NOTE 13. THE DRAINAGE EASEMENTS DEDICATED ON THIS PLAT AT THE REAR OF LOTS 105-109, 137-159 AND 162-167 ARE HEREBY GRANTED TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. ("HOA") TO ENFORCE SUCH MAINTENANCE OBLIGATIONS TO THE CITY OF PORT ORANGE IN THE EVENT ANY RESPONSIBLE PARTY AND THE HOA FAIL TO MAINTAIN SUCH SWALES.
31. THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 171, 172, 192, 193, 197, 198, 203, 204, TRACT 30 AND THE 35.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 111, 123, 124, 186 AND 187 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.



AC	ADJACENT
AD	ARCH-BEARING
ADG	CERTIFIED CORNER RECORD
ADH	CHORD-DISTANCE
ADJ	CENTER-LINE
ADJ	CONCRETE MONUMENT
ADJ	DRAINAGE EASEMENT
ADJ	DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENT
ADJ	FOUND
ADJ	IDENTIFICATION
ADJ	IRON PIPE
ADJ	IRON PIPE & CAP
ADJ	IRON ROD
ADJ	IRON ROD & CAP
ADJ	ARC-LENGTH
ADJ	LICENSED BUSINESS
ADJ	MAP-BOOK
ADJ	MAIL & SIGN
ADJ	NUMBER
ADJ	NON-RADIAL
ADJ	OFFICIAL RECORDS BOOK
ADJ	OVERALL
ADJ	PLAT
ADJ	POINT OF CURVATURE
ADJ	PERMANENT CONTROL POINT
ADJ	PAGE/PAGES
ADJ	POINT OF INTERSECTION
ADJ	PROFESSIONAL LAND SURVEY
ADJ	POINT OF NON-TANGENCY
ADJ	POINT-TO-INTERSECT CURVATURE
ADJ	POINT ON A RADIAL LINE
ADJ	PERMANENT REFERENCE MONUMENT
ADJ	PROGRESSIVE SURVEYOR MAPPER
ADJ	POINT OF TANGENCY
ADJ	RADIUS
ADJ	RADIAL
ADJ	RADIUS POINT
ADJ	RIGHT-OF-WAY
ADJ	REGION-TOWNSHIP-RANGE
ADJ	TYPICAL
ADJ	UTILITY-EASEMENT
ADJ	CENTRAL ANGLE
ADJ	BREAK-LINE

TRACT TABLE		
TRACT	USE	AREA (ACRES)
3A	OPEN SPACE/BUFFER	0.22
3B	OPEN SPACE	0.26
3C	OPEN SPACE/ UNDISTURBED AREA	0.75
3D	OPEN SPACE/POND	0.86
3E	OPEN SPACE	3.86
3F	LIFT STATION	0.04
3G	OPEN SPACE	0.18
3H	OPEN SPACE	0.05
3J	OPEN SPACE/POND	4.39
3K	OPEN SPACE	0.08
3L	OPEN SPACE/DRAINAGE	7.69
3M	OPEN SPACE	2.53
3O	OPEN SPACE	0.07
3P	OPEN SPACE	0.05



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CERTIFICATE OF AUTHORIZATION NO. LB 8011

SHEET 3 OF 8

WESTPORT RESERVE PHASE 3

REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST,
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

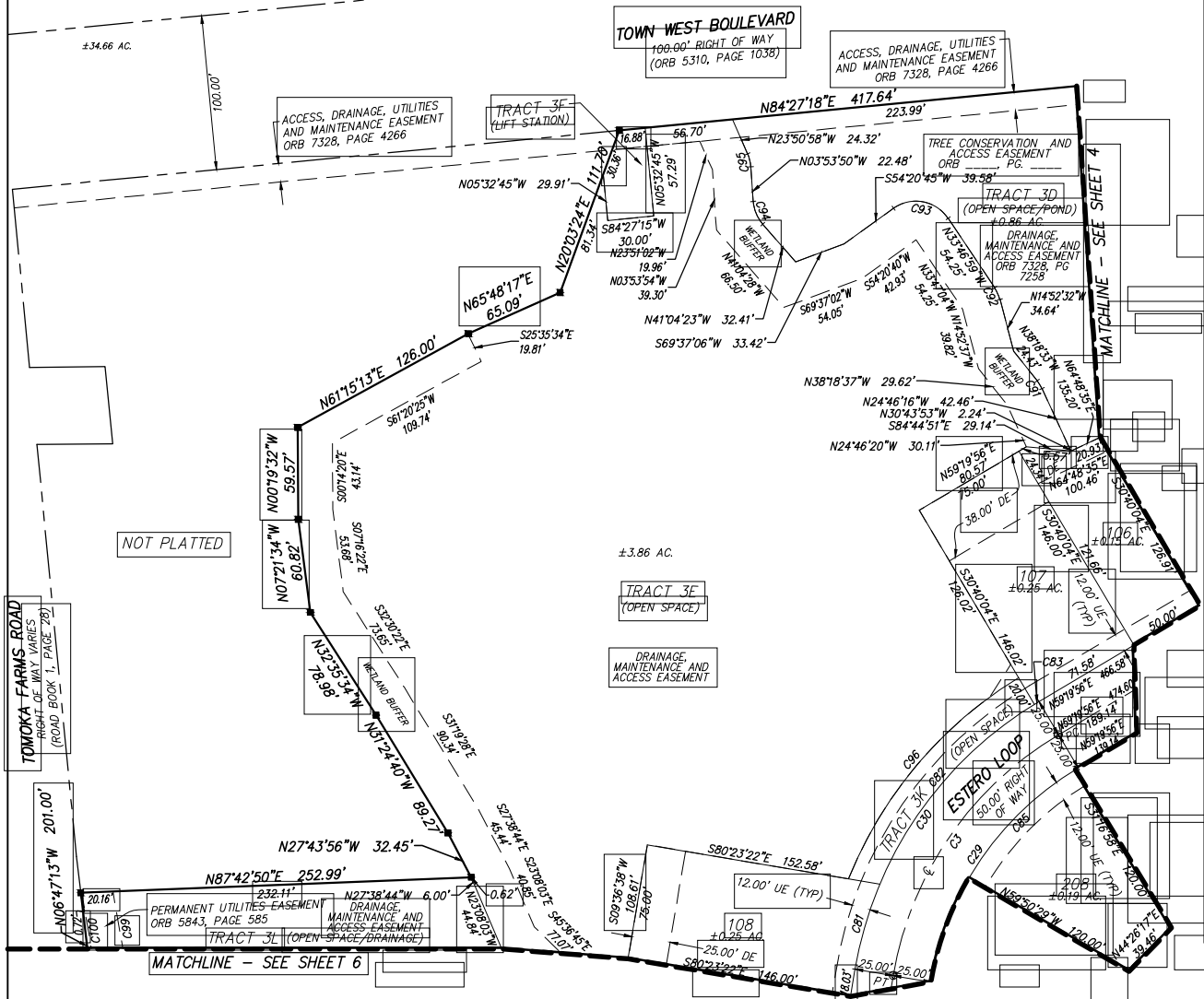
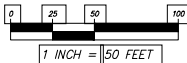
CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C99	808.65'	7532.00'	06°09'05"	808.26'	S12°31'14"E
C100	813.31'	7552.00'	06°10'14"	812.91'	S12°30'39"E

SHEET INDEX

SHEET 1 - COVER SHEET, NOTES
SHEET 2 - KEY MAP/PLAT BOUNDARY,
LEGEND AND ABBREVIATIONS,
AND TRACT TABLE
SHEETS 3-8 - PLAT DETAIL SHEETS

CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C3	195.26'	225.00'	49°43'18"	189.19'	S34°28'17"W
C29	173.56'	200.00'	49°43'18"	168.17'	S34°28'17"W
C30	216.95'	250.00'	49°43'18"	210.21'	S34°28'17"W
C81	57.48'	250.00'	13°10'24"	57.35'	S16°11'50"W
C82	156.05'	250.00'	35°45'50"	153.53'	S40°39'57"W
C83	3.42'	250.00'	00°47'04"	3.42'	S58°56'24"W
C85	99.69'	200.00'	28°33'31"	98.66'	S44°26'17"W
C91	5.91'	25.00'	13°32'17"	5.89'	N31°32'24"W
C92	8.25'	25.00'	18°54'27"	8.21'	N24°19'45"W
C93	40.09'	25.00'	91°52'16"	35.93'	N79°43'07"W
C94	16.22'	25.00'	37°10'33"	15.94'	S22°29'06"E
C95	8.71'	25.00'	19°57'08"	8.66'	N13°52'24"W
C96	173.48'	270.00'	36°48'49"	170.51'	S40°11'57"W



GENERAL NOTES:

- MONUMENTATION:
 - - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
 - - DENOTES PERMANENT REFERENCE MONUMENT SET 4"x4" CONCRETE MONUMENT STAMPED PER LB 8011
 - - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED PER LB 8011
- ACCURACY:
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
- BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.
- NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE, IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 39.37/12=3.28083333333333 EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
- 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.
- THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THE PLAT:
 - ENTIRE STREET FRONTAGES OF LOTS AND COMMON OPEN SPACE AREAS: 12.00 FEET WIDE
- UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC, TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
- ALL PLATTED UTILITY EASEMENTS, EXCLUSIVE OF PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY, SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES. 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 PURSUANT TO SECTION 177.091(28), FLORIDA STATUTES. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
- SINGLE FAMILY RESIDENTIAL BUILDING SETBACK REQUIREMENTS:
 - FRONT = 25 FEET
 - REAR = 20 FEET
 - SIDE = LOTS ≤ 65' = 5 FEET
 - LOTS > 65' = 7.5 FEET
 - SIDE CORNER = 20 FEET
- SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
 - MINIMUM OPEN SPACE AREA = 40%
 - MAXIMUM BUILDING COVERAGE = 50%
 - MAXIMUM BUILDING HEIGHT = 36 FEET
- THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.'S THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHTS TO THE GENERAL PUBLIC.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THE DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON OPEN SPACE AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES; AND, SHALL HAVE THE RIGHT TO LIEN ALL PROPERTY OWNERS OF RECORD FOR THE COST OF SUCH MAINTENANCE, REPAIR, AND REPLACEMENT, AS DEEMED BY THE CITY TO BE NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORM WATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 400-42.027, F.A.C. AND BE APPROVED BY THE SAINT JOHN'S RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
- RETENTION AREAS AND COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON OPEN SPACE AREAS AND IN THE RIGHTS-OF-WAY.
- LOTS 94-208 AND TRACTS 3A, 3B, 3C, 3D, 3E, 3G, 3H, 3I, 3J, 3K, 3L, 3M AND 3N, AS SHOWN HEREON, ARE SUBJECT TO THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____, PAGE _____, et seq., OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO WHICH, AS EXHIBIT "B", ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.
- PORTIONS OF THE LANDS SHOWN IN THIS PLAT ARE SUBJECT TO EASEMENT AND COST SHARING AGREEMENT RECORDED IN IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7328, PAGE 4233, et seq.
- ALL OF THE LANDS SHOWN WITHIN THIS PLAT (EXCEPT AS OTHERWISE AMENDED BY THE EASEMENT AND COST-SHARING AGREEMENT REFERENCED IN NOTE 18), ARE SUBJECT TO DECLARATION OF EASEMENTS RECORDED IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7313, PAGE 2181, et seq.
- LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).
- TRACTS 3A, 3B, 3C, 3H, AND 3K AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE.
- TRACT 3J, SHOWN HEREON AS OPEN SPACE/POND, WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3J IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- TRACT 3L AS SHOWN HEREON AS OPEN SPACE/DRAINAGE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND STORMWATER DRAINAGE. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3L IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/ GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- TRACT 3F AS SHOWN HEREON AS LIFT STATION IS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO, AND SHALL BE MAINTAINED BY, THE CITY OF PORT ORANGE. TRACT 3F IS SUBJECT TO A PERMANENT EASEMENT FOR LIFT STATION RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4276, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
- TRACTS 3G, 3E AND 3M AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF OPEN SPACE AND ARE SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN BOOK _____, PAGE _____ OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
- PROPERTY WITHIN THIS PLAT IS SUBJECT TO THE MINERAL OIL-CLAIM DEED AND ASSIGNMENT (WITH RESERVATION OF ROYALTY, BUT NOT ACCESS, TO GRANTORS) RECORDED SEPTEMBER 12, 1984 IN BOOK 2605, PAGE 1907 OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
- PLAT IS SUBJECT TO THE POST-CLOSING AGREEMENT BY AND BETWEEN D.S.C. OF NEWARK ENTERPRISES, INC., A DELAWARE CORPORATION (NEWARK FARM DEVELOPMENT, L.L.C., A FLORIDA LIMITED LIABILITY COMPANY AND OLSON & ASSOCIATES OF NW FLORIDA, INC., A FLORIDA CORPORATION AS RECORDED MAY 5, 2004 IN BOOK 5310, PAGE 1041, AS AFFECTED BY: SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 19, 2004 IN BOOK 5440, PAGE 2440, SECOND SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 2, 2005 IN BOOK 5690, PAGE 2714 AND THIRD SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED JUNE 7, 2016 IN OFFICIAL RECORDS BOOK 7262, PAGE 1239.
- TRACTS 3A, 3C, 3D, 3E AND 3F, AS DEPICTED IN THIS PLAT, ARE SUBJECT TO AN ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4266, AS SHOWN ON SHEETS 2, 3 AND 4 OF THIS PLAT.
- TRACT 3D, AS DEPICTED IN THIS PLAT, IS SUBJECT AN ACCESS, DRAINAGE, UTILITIES, RETENTION AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4258, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
- MAINTENANCE OF THE ATTENUATION AND POLLUTION SWALES ON LOTS 105-109, 137-159 AND 162-167, SHALL BE GOVERNED BY THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS REFERENCED IN NOTE 13. THE DRAINAGE EASEMENTS DEPICTED ON THIS PLAT AT THE REAR OF LOTS 105-109, 137-159 AND 162-167 ARE HEREBY GRANTED TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. ("HOA") TO ENFORCE SUCH MAINTENANCE OBLIGATIONS, AND TO THE CITY OF PORT ORANGE IN THE EVENT ANY RESPONSIBLE PARTY AND THE HOA FAIL TO MAINTAIN SUCH SWALES.
- THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 171, 172, 192, 193, 197, 198, 203, 204, TRACT 3D AND THE 25.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 111, 112, 123, 124, 186 AND 187 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC.

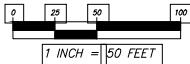


SHEET 4 OF 8

REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST,
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C36	6.75'	275.00	01°24'26"	6.75'	S60°02'09"W
C37	34.24'	25.00	78°27'47"	31.62'	S20°06'03"W
C39	34.24'	25.00	78°27'47"	31.62'	N81°26'10"W
C87	5.03'	25.00	11°32'13"	5.03'	N53°33'50"E
C88	30.47'	25.00	69°50'08"	28.62'	N12°52'39"E
C89	38.39'	25.00	87°58'56"	34.73'	N43°39'32"W
C90	0.88'	25.00	02°01'04"	0.88'	N88°39'32"W
C102	40.41'	300.00	07°43'07"	40.38'	S63°11'30"W
C103	121.90'	300.00	23°36'53"	121.06'	S78°41'30"W

SHEET INDEX	
SHEET 1 - COVER SHEET, NOTES	
SHEET 2 - KEY MAP/PLAT BOUNDARY, LEGEND AND ABBREVIATIONS, AND TRACT TABLE	
SHEETS 3-8 - PLAT DETAIL SHEETS	



PAGE:

1. **MONUMENTATION:**

- MONUMENTATION:
 □ - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
 ■ - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED 1"x4"
 ● - CONCRETE MONUMENT STAMPED PER LBL 8011
 ○ - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED PCL LBL 8011
4. ACCURACY:
 - THE BOUNDARY LINE ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
5. BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.
6. NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 39.37/12=3.2808333333333 EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
7. NOTICE: THIS PLAT, AS RECORDED, IS IN GRAPHIC FORM. THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN, AND IN NO MANNER BE SUBSTITUTED IN ANY MANNER 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.
8. THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS, AND MAINTENANCE EASEMENTS DECORATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED.
9. ENTIRE STREET FRONTS OF LOTS AND COMMON OPEN SPACE AREAS: 12.00 FEET WIDE
9. UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC, TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
10. ALL PLATTED UTILITY EASEMENTS, EXCLUSIVE OF PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY, 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 PURSUANT TO SECTION 17.091(28), FLORIDA STATUTES. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
11. SINGLE FAMILY RESIDENTIAL BUILDING SETBACK REQUIREMENTS:
 FRONT 25 FEET
 REAR = 20 FEET
 SIDE = LOTS ≤ 65' = 5 FEET
 LOTS ≥ 65' = 10 FEET
 SIDE CORNER = 20 FEET
12. SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
 MINIMUM OPEN SPACE AREA = 40%
 MINIMUM BUILDING COVERAGE = 50%
 MAXIMUM BUILDING HEIGHT = 36 FEET
13. THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.'S THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHTS TO THE GENERAL PUBLIC.
14. THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE DESIGN AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THE DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON OPEN SPACE AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR, REPLACEMENT, AND REPLACEMENT, AS DEEMED BY THE CITY TO BE NECESSARY, IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORM WATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COINCIDES WITH SECTION 17.091(28), F.S. AND BE APPROVED BY THE SAINT JOHNS RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
15. RETENTION AREAS AND COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
16. THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND PLANTING OF COMMON OPEN SPACE AREAS AND IN THE RIGHT-OF-WAY.
17. LOTS 94-208 AND TRACTS 34, 3B, 3C, 3D, 3E, 3G, 3J, 3K, 3L, 3M AND 3N, AS SHOWN HEREON, ARE SUBJECT TO THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____, PAGE _____ et seq. OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO WHICH, AS EXHIBIT "B", ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.
18. PORTIONS OF THE LANDS SHOWN IN THIS PLAT ARE SUBJECT TO EASEMENT AND COST SHARING AGREEMENT RECORDED IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7328, PAGE 4233, et seq.
19. ALL OF THE LANDS SHOWN WITHIN THIS PLAT (EXCEPT AS OTHERWISE AMENDED) BY THE EASEMENT AND COST-SHARING AGREEMENT REFERENCED IN NOTE 18), ARE SUBJECT TO DECLARATION OF EASEMENTS RECORDED IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7313, PAGE 2181, et seq.
20. LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).
21. TRACTS 34, 3B, 3G, 3J, AND 3K AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE.
22. TRACT 3J, SHOWN HEREON AS OPEN SPACE/POND, WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3J IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/GROUND WATER AS DEEMED APPROPRIATE BY THE DISCRETION OF THE CITY.
23. TRACT 3L AS SHOWN HEREON AS OPEN SPACE/DRAINAGE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND STORMWATER DRAINAGE. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3L IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
24. TRACT 3F AS SHOWN HEREON AS LIFT STATION IS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO, AND SHALL BE MAINTAINED BY, THE CITY OF PORT ORANGE. TRACT 3F IS SUBJECT TO A PERMANENT EASEMENT FOR LIFT STATION RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4276, AS SHOWN ON SHEETS 2, 3 AND 4 OF THIS PLAT.
25. TRACTS 3G, 3E, AND 3M AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF OPEN SPACE AND ARE SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN BOOK _____, PAGE _____ OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
26. PROPERTY WITHIN THIS PLAT IS SUBJECT TO THE MINERAL QUIT-CLAIM DEED AND ASSIGNMENT (WITH RESERVATION OF ROYALTY, BUT NOT ACCESS, TO GRANTORS) RECORDED SEPTEMBER 12, 1984 IN BOOK 2605, PAGE 1907 OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
27. PLAT IS SUBJECT TO THE POST-CLOSING AGREEMENT BY AND BETWEEN D.S.C. OF NEWARK ENTERPRISES, INC., A DELAWARE CORPORATION, AND MONIKA FARMS DEVELOPMENT, L.P., A FLORIDA LIMITED LIABILITY COMPANY AND QUON Y. ASSOCIATES OF NW FLORIDA, INC., A FLORIDA CORPORATION AS RECORDED MAY 5, 2004 IN BOOK 5310, PAGE 1041, AS AFFECTED BY: SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 19, 2004 IN BOOK 5440, PAGE 2440, SECOND SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 2, 2005 IN BOOK 5690, PAGE 2714 AND THIRD SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED JUNE 7, 2016 IN OFFICIAL RECORDS BOOK 7262, PAGE 1239.
28. TRACTS 34, 3C, 3D, 3E AND 3F, AS DEPICTED IN THIS PLAT, ARE SUBJECT TO AN ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4266, AS SHOWN ON SHEETS 2, 3 AND 4 OF THIS PLAT.
29. TRACT 3D, AS DEPICTED IN THIS PLAT, IS SUBJECT AN ACCESS, DRAINAGE, UTILITIES, RETENTION AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4258, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
30. MAINTENANCE OF THE ATTENUATION AND POLLUTION SWALES ON LOTS 105-109, 137-159 AND 162-167, SHALL BE GOVERNED BY THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS REFERENCED IN NOTE 13. THE DRAINAGE EASEMENTS DEPICTED ON THIS PLAT AT THE REAR OF LOTS 105-109, 137-159 AND 162-167, ARE HEREBY GRANTED TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. ("HOA") TO ENFORCE SUCH MAINTENANCE OBLIGATIONS, AND TO THE CITY OF PORT ORANGE IN THE EVENT ANY RESPONSIBLE PARTY AND THE HOA FAIL TO MAINTAIN SUCH SWALES.
31. THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 171, 172, 192, 193, 197, 198, 203, 204, TRACT 30 AND THE 25.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 111, 112, 123, 124, 186 AND 187 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.



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SHEET 5 OF 8

WESTPORT RESERVE PHASE 3

REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST,
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

MAP BOOK:

PAGE:

GENERAL NOTES:

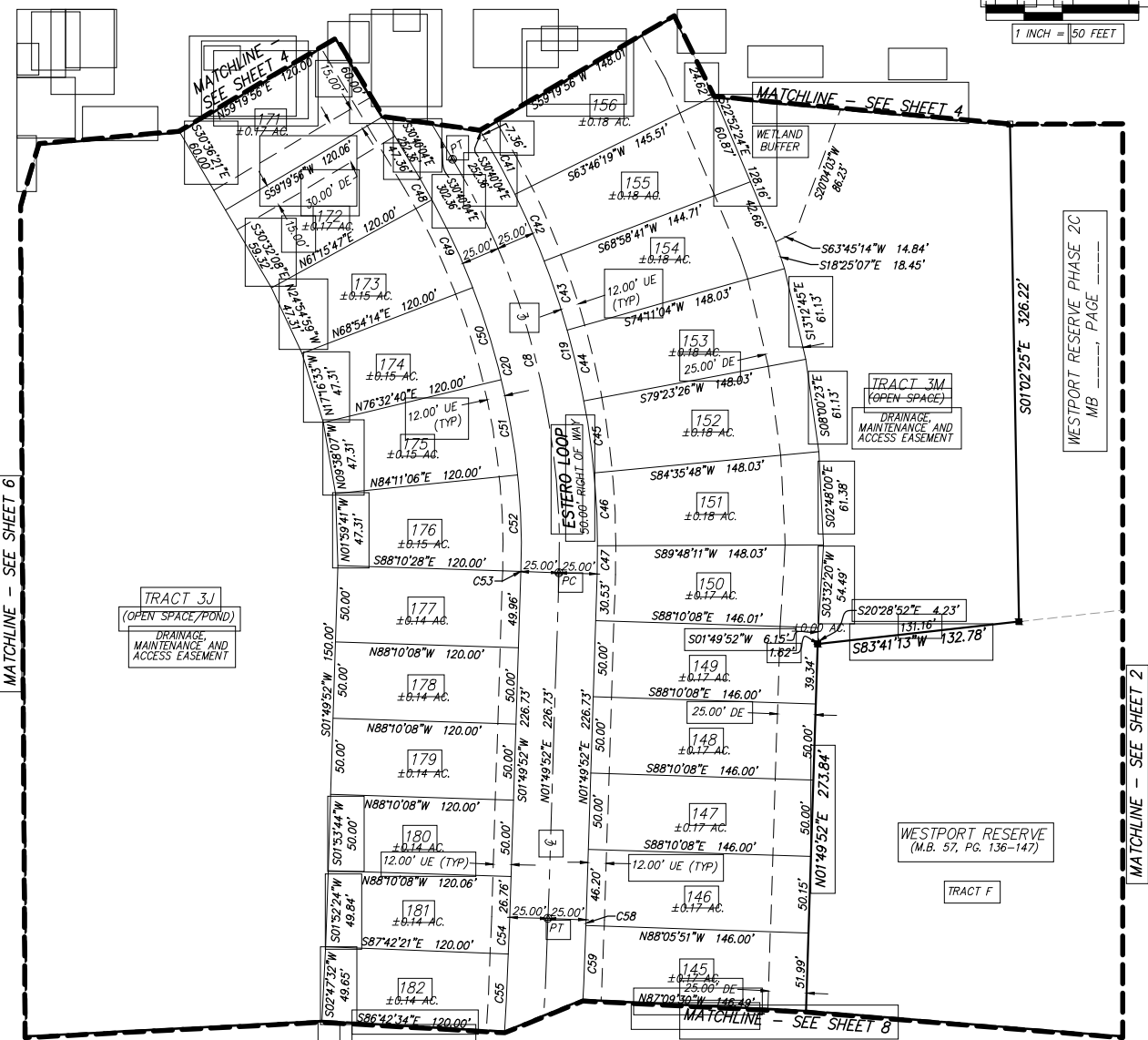
- MONUMENTATION:
 - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
 - DENOTES PERMANENT REFERENCE MONUMENT SET 4"x4" CONCRETE MONUMENT STAMPED PRM LB 8011
 - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED POP LB 8011
- ACCURACY:
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
- BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.
- NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE, IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 39.37/12=3.280833333333 EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
- 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.
- THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THE PLAT:
 - ENTIRE STREET FRONTAGES OF LOTS AND COMMON OPEN SPACE AREAS: 12.00 FEET WIDE
- UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC, TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
- ALL PLATTED UTILITY EASEMENTS, EXCLUSIVE OF PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY, SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES. 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 PURSUANT TO SECTION 177.091(28), FLORIDA STATUTES. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
- SINGLE FAMILY RESIDENTIAL BUILDING SETBACK REQUIREMENTS:
 - FRONT = 25 FEET
 - REAR = 20 FEET
 - SIDE = LOTS ≤ 65' = 5 FEET
 - LOTS > 65' = 7.5 FEET
 - SIDE CORNER = 20 FEET
- SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
 - MINIMUM OPEN SPACE AREA = 40%
 - MAXIMUM BUILDING COVERAGE = 50%
 - MAXIMUM BUILDING HEIGHT = 36 FEET
- THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.'S THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHT TO THE GENERAL PUBLIC.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THE DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON OPEN SPACE AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES; AND, SHALL HAVE THE RIGHT TO LIEN ALL PROPERTY OWNERS OF RECORD FOR THE COST OF SUCH MAINTENANCE, REPAIR, AND REPLACEMENT, AS DEEMED BY THE CITY TO BE NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORMWATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 40C-42.027, F.A.C. AND BE APPROVED BY THE SAINT JOHN'S RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
- RETENTION AREAS AND COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON OPEN SPACE AREAS AND IN THE RIGHTS-OF-WAY.
- LOTS 94-208 AND TRACTS 3A, 3B, 3C, 3D, 3E, 3G, 3H, 3I, 3J, 3K, 3L, 3M AND 3N, AS SHOWN HEREON, ARE SUBJECT TO THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____, PAGE _____, et seq., OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO WHICH, AS EXHIBIT "B", ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.
- PORTIONS OF THE LANDS SHOWN IN THIS PLAT ARE SUBJECT TO EASEMENT AND COST SHARING AGREEMENT RECORDED IN IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7328, PAGE 4233, et seq.
- ALL OF THE LANDS SHOWN WITHIN THIS PLAT (EXCEPT AS OTHERWISE AMENDED BY THE EASEMENT AND COST-SHARING AGREEMENT REFERENCED IN NOTE 18), ARE SUBJECT TO DECLARATION OF EASEMENTS RECORDED IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7313, PAGE 2181, et seq.
- LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).
- TRACTS 3A, 3B, 3C, 3D, 3E, 3G, 3H, 3I, 3J, 3K, 3L, 3M AND 3N, AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE.
- TRACT 3J, SHOWN HEREON AS OPEN SPACE/POND, WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3J IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- TRACT 3L AS SHOWN HEREON AS OPEN SPACE/DRAINAGE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND STORMWATER DRAINAGE. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3L IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/ GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- TRACT 3F AS SHOWN HEREON AS LIFT STATION IS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO, AND SHALL BE MAINTAINED BY, THE CITY OF PORT ORANGE. TRACT 3F IS SUBJECT TO A PERMANENT EASEMENT FOR LIFT STATION RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4276, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
- TRACTS 3G, 3E AND 3M AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF OPEN SPACE AND ARE SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN BOOK _____, PAGE _____ OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
- PROPERTY WITHIN THIS PLAT IS SUBJECT TO THE MINERAL OIL-CLAIM DEED AND ASSIGNMENT (WITH RESERVATION OF ROYALTY, BUT NOT ACCESS, TO GRANTORS) RECORDED SEPTEMBER 12, 1984 IN BOOK 2605, PAGE 1907 OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
- PLAT IS SUBJECT TO THE POST-CLOSING AGREEMENT BY AND BETWEEN D.S.C. OF NEWARK ENTERPRISES, INC., A DELAWARE CORPORATION, TOMOKAWA FARMS DEVELOPMENT, L.L.C. A FLORIDA LIMITED LIABILITY COMPANY AND OLSON & ASSOCIATES OF NW FLORIDA, INC., A FLORIDA CORPORATION AS RECORDED MAY 5, 2004 IN BOOK 5310, PAGE 1041, AS AFFECTED BY: SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 19, 2004 IN BOOK 5440, PAGE 2440, SECOND SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 2, 2005 IN BOOK 5690, PAGE 2714 AND THIRD SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED JUNE 7, 2016 IN OFFICIAL RECORDS BOOK 7262, PAGE 1239.
- TRACTS 3A, 3C, 3D, 3E AND 3F, AS DEPICTED IN THIS PLAT, ARE SUBJECT TO AN ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4266, AS SHOWN ON SHEETS 2, 3 AND 4 OF THIS PLAT.
- TRACT 3D, AS DEPICTED IN THIS PLAT, IS SUBJECT AN ACCESS, DRAINAGE, UTILITIES, RETENTION AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4258, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
- MAINTENANCE OF THE ATTENUATION AND POLLUTION SWALES ON LOTS 105-109, 137-159 AND 162-167, SHALL BE GOVERNED BY THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS REFERENCED IN NOTE 13. THE DRAINAGE EASEMENTS DEPICTED ON THIS PLAT AT THE REAR OF LOTS 105-109, 137-159 AND 162-167 ARE HEREBY GRANTED TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. ("HOA") TO ENFORCE SUCH MAINTENANCE OBLIGATIONS, AND TO THE CITY OF PORT ORANGE IN THE EVENT ANY RESPONSIBLE PARTY AND THE HOA FAIL TO MAINTAIN SUCH SWALES.
- THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 171, 172, 192, 193, 197, 198, 203, 204, TRACT 3D AND THE 25.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 111, 112, 123, 124, 186 AND 187 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC.

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C8	283.60'	500.00	32°29'55"	279.82'	N14°25'06"W
C19	297.78'	525.00	32°29'55"	293.81'	N14°25'06"W
C20	269.42'	475.00	32°29'55"	265.83'	N14°25'06"W
C41	40.68'	525.00	04°26'23"	40.67'	N28°26'52"W
C42	47.70'	525.00	05°12'22"	47.69'	N23°37'30"W
C43	47.70'	525.00	05°12'22"	47.69'	N18°25'07"W
C44	47.70'	525.00	05°12'22"	47.69'	N13°12'45"W
C45	47.70'	525.00	05°12'22"	47.69'	N08°00'23"W
C46	47.70'	525.00	05°12'22"	47.69'	N02°48'00"W
C47	18.58'	525.00	02°01'41"	18.58'	N00°49'01"E
C48	16.01'	475.00	01°55'51"	16.01'	N29°42'08"W

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C49	63.34'	475.00	07°38'26"	63.30'	N24°54'59"W
C50	63.34'	475.00	07°38'26"	63.30'	N17°16'33"W
C51	63.34'	475.00	07°38'26"	63.30'	N09°38'07"W
C52	63.34'	475.00	07°38'26"	63.30'	N01°59'41"E
C53	0.05'	475.00	00°00'20"	0.05'	N01°49'42"E
C54	24.05'	2975.00	00°27'47"	24.05'	N02°03'45"E
C55	51.74'	2975.00	00°59'47"	51.74'	N02°47'32"E
C58	3.77'	3025.00	00°04'17"	3.77'	N01°52'00"E
C59	49.59'	3025.00	00°56'21"	49.59'	N02°22'19"E

SHEET INDEX

SHEET 1 - COVER SHEET, NOTES
SHEET 2 - KEY MAP/PLAT BOUNDARY,
LEGEND AND ABBREVIATIONS,
AND TRACT TABLE
SHEETS 3-8 - PLAT DETAIL SHEETS





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SHEET 6 OF 8

WESTPORT RESERVE PHASE 3

REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST,
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

MAP BOOK:

PAGE:

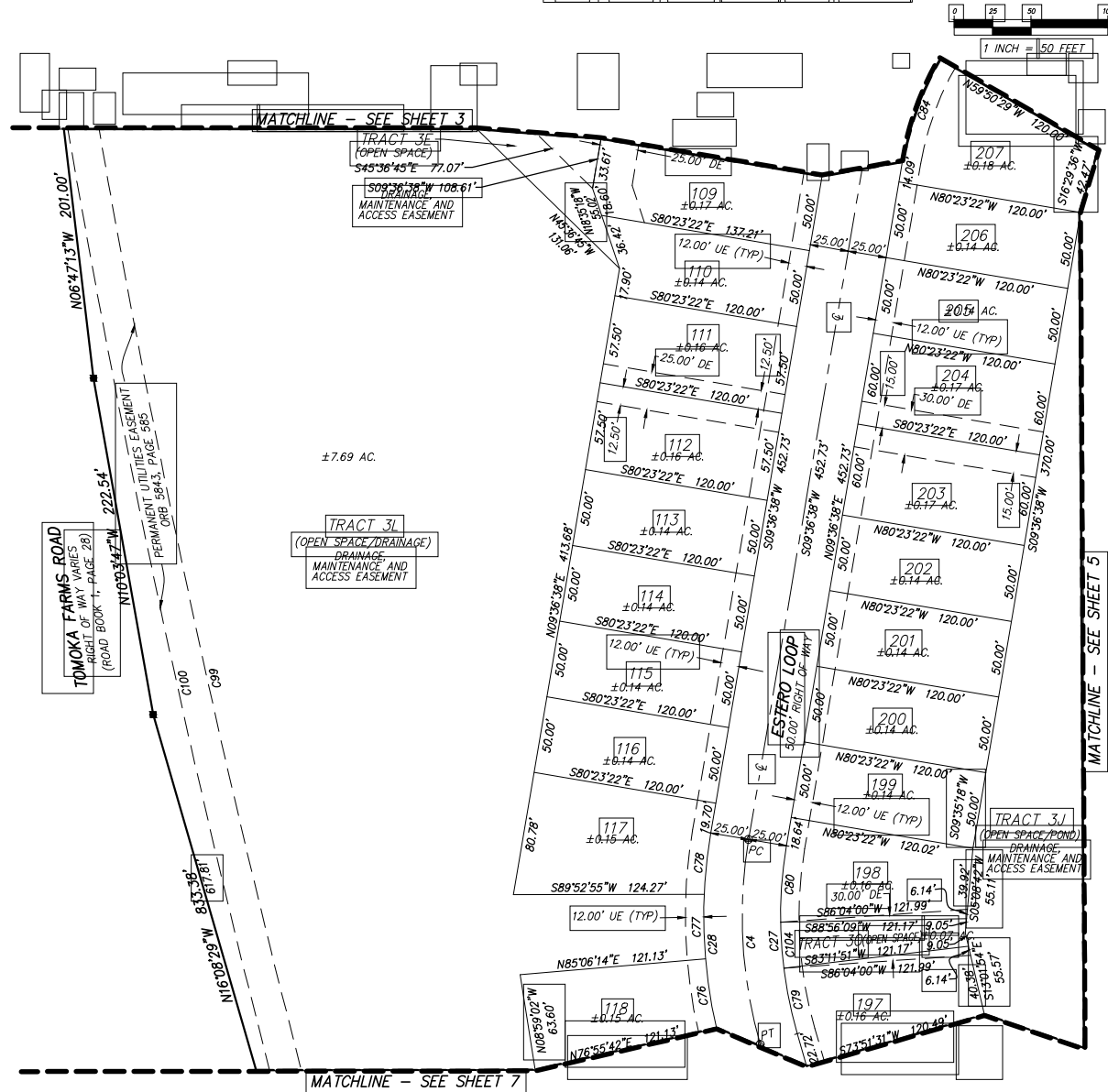
GENERAL NOTES:

- MONUMENTATION:
 - - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
 - - DENOTES PERMANENT REFERENCE MONUMENT SET 4"x4" CONCRETE MONUMENT STAMPED PRM LB 8011
 - - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED POP LB 8011
- ACCURACY:
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
- BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.
- NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE, IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 39.37/12=3.28083333333333 EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
- 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.
- THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THE PLAT:
 - ENTIRE STREET FRONTAGES OF LOTS AND COMMON OPEN SPACE AREAS: 12.00 FEET WIDE
- UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC, TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
- ALL PLATTED UTILITY EASEMENTS, EXCLUSIVE OF PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY, 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 PURSUANT TO SECTION 177.091(28), FLORIDA STATUTES. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
- SINGLE FAMILY RESIDENTIAL BUILDING SETBACK REQUIREMENTS:
 - FRONT = 25 FEET
 - REAR = 20 FEET
 - SIDE = LOTS ≤ 65' = 5 FEET
 - LOTS > 65' = 7.5 FEET
 - SIDE CORNER = 20 FEET
- SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
 - MINIMUM OPEN SPACE AREA = 40%
 - MAXIMUM BUILDING COVERAGE = 50%
 - MAXIMUM BUILDING HEIGHT = 36 FEET
- THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.'S THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHTS TO THE GENERAL PUBLIC.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THE DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON OPEN SPACE AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES; AND, SHALL HAVE THE RIGHT TO LIEN ALL PROPERTY OWNERS OF RECORD FOR THE COST OF SUCH MAINTENANCE, REPAIR, AND REPLACEMENT, AS DEEMED BY THE CITY TO BE NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORM WATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 40C-42.027, F.A.C. AND BE APPROVED BY THE SAINT JOHN'S RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
- RETENTION AREAS AND COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON OPEN SPACE AREAS AND IN THE RIGHTS-OF-WAY.
- LOTS 94-208 AND TRACTS 3A, 3B, 3C, 3D, 3E, 3G, 3H, 3I, 3J, 3K, 3L, 3M AND 3N, AS SHOWN HEREON, ARE SUBJECT TO THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____, PAGE _____, et seq., OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO WHICH, AS EXHIBIT "B", ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.
- PORTIONS OF THE LANDS SHOWN IN THIS PLAT ARE SUBJECT TO EASEMENT AND COST SHARING AGREEMENT RECORDED IN IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7328, PAGE 4233, et seq.
- ALL OF THE LANDS SHOWN WITHIN THIS PLAT (EXCEPT AS OTHERWISE AMENDED BY THE EASEMENT AND COST-SHARING AGREEMENT REFERENCED IN NOTE 18), ARE SUBJECT TO DECLARATION OF EASEMENTS RECORDED IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7313, PAGE 2181, et seq.
- LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).
- TRACTS 3A, 3B, 3C, 3H, 3I, 3J, 3K, 3L, 3M AND 3N, AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE.
- TRACT 3J, SHOWN HEREON AS OPEN SPACE/POND, WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3J IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- TRACT 3L AS SHOWN HEREON AS OPEN SPACE/DRAINAGE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND STORMWATER DRAINAGE. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3L IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/ GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- TRACT 3F AS SHOWN HEREON AS LIFT STATION IS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO, AND SHALL BE MAINTAINED BY, THE CITY OF PORT ORANGE. TRACT 3F IS SUBJECT TO A PERMANENT EASEMENT FOR LIFT STATION RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4276, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
- TRACTS 3C, 3E AND 3M AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF OPEN SPACE AND ARE SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN BOOK _____, PAGE _____ OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
- PROPERTY WITHIN THIS PLAT IS SUBJECT TO THE MINERAL OIL-CLAIM DEED AND ASSIGNMENT (WITH RESERVATION OF ROYALTY, BUT NOT ACCESS, TO GRANTORS) RECORDED SEPTEMBER 12, 1984 IN BOOK 2605, PAGE 1907 OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
- PLAT IS SUBJECT TO THE POST-CLOSING AGREEMENT BY AND BETWEEN D.S.C. OF NEWARK ENTERPRISES, INC., A DELAWARE CORPORATION, TOMOKA FARMS DEVELOPMENT, L.L.C. A FLORIDA LIMITED LIABILITY COMPANY & ASSOCIATES OF NW FLORIDA, INC., A FLORIDA CORPORATION AS RECORDED MAY 5, 2004 IN BOOK 5310, PAGE 1041, AS AFFECTED BY: SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 19, 2004 IN BOOK 5440, PAGE 2440, SECOND SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 2, 2005 IN BOOK 5690, PAGE 2714 AND THIRD SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED JUNE 7, 2016 IN OFFICIAL RECORDS BOOK 7262, PAGE 1239.
- TRACTS 3A, 3C, 3D, 3E AND 3F, AS DEPICTED IN THIS PLAT, ARE SUBJECT TO AN ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4266, AS SHOWN ON SHEETS 2, 3 AND 4 OF THIS PLAT.
- TRACT 3D, AS DEPICTED IN THIS PLAT, IS SUBJECT AN ACCESS, DRAINAGE, UTILITIES, RETENTION AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4258, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
- MAINTENANCE OF THE ATTENUATION AND POLLUTION SWALES ON LOTS 105-109, 137-159 AND 162-167, SHALL BE GOVERNED BY THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS REFERENCED IN NOTE 13. THE DRAINAGE EASEMENTS DEPICTED ON THIS PLAT AT THE REAR OF LOTS 105-109, 137-159 AND 162-167 ARE HEREBY GRANTED TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. ("HOA") TO ENFORCE SUCH MAINTENANCE OBLIGATIONS, AND TO THE CITY OF PORT ORANGE IN THE EVENT ANY RESPONSIBLE PARTY AND THE HOA FAIL TO MAINTAIN SUCH SWALES.
- THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 171, 172, 192, 193, 197, 198, 203, 204, TRACT 3D AND THE 25.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 111, 112, 113, 124, 186 AND 187 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC.

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C4	134.84'	300.00	25°45'07"	133.71'	S03°15'55"E
C27	123.60'	275.00	25°45'07"	122.56'	S03°15'55"E
C28	146.07'	325.00	25°45'07"	144.85'	S03°15'55"E
C76	46.37'	325.00	08°10'31"	46.33'	S08°59'02"E
C77	42.11'	325.00	07°25'25"	42.08'	S01°11'04"E
C78	40.18'	325.00	07°05'00"	40.15'	S06°04'08"W
C79	43.59'	275.00	09°04'52"	43.54'	S11°36'03"E
C80	50.00'	275.00	10°25'02"	49.93'	S04°24'07"W
C84	71.73'	200.00	20°32'53"	71.34'	S19°53'05"W

SHEET INDEX					
SHEET 1 - COVER SHEET, NOTES					
SHEET 2 - KEY MAP/PLAT BOUNDARY, LEGEND AND ABBREVIATIONS, AND TRACT TABLE					
SHEETS 3-8 - PLAT DETAIL SHEETS					

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C99	808.65'	7532.00	06°09'05"	808.26'	S12°31'14"E
C100	813.31'	7552.00	06°10'14"	812.91'	S12°30'39"E
C104	30.01'	275.00	06°15'13"	30.00'	S03°36'00"E





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CERTIFICATE OF AUTHORIZATION NO. LB 8011

SHEET 7 OF 8

WESTPORT RESERVE PHASE 3

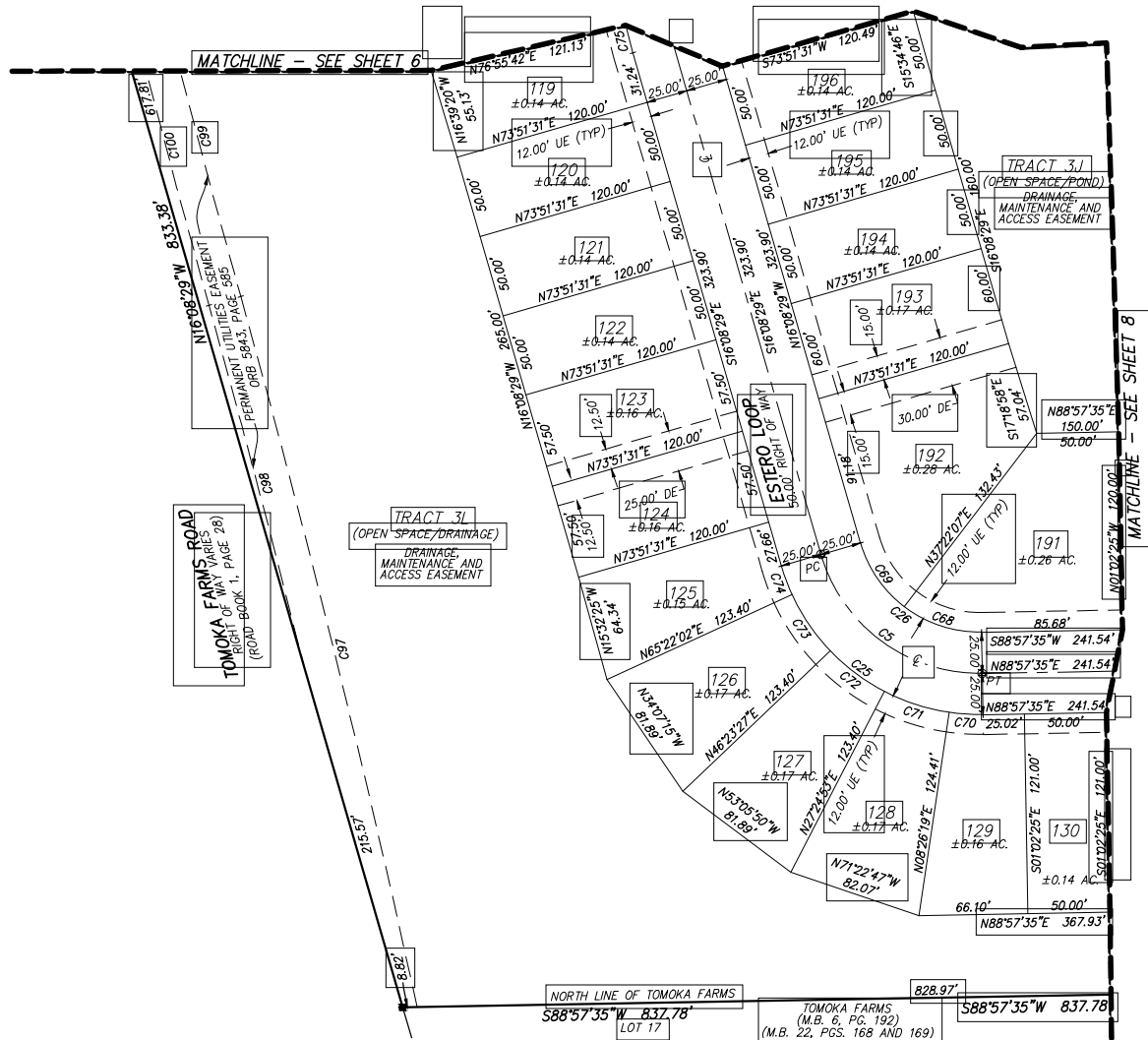
REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST,
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C5	130.72'	100.00	74°53'57"	121.61'	S53°35'27"E
C25	163.40'	125.00	74°53'57"	152.02'	S53°35'27"E
C26	98.04'	75.00	74°53'57"	91.21'	S53°35'27"E
C68	50.28'	75.00	38°24'32"	49.34'	S71°50'09"E
C69	47.77'	75.00	36°29'24"	46.96'	S34°23'11"E
C70	20.68'	125.00	09°28'44"	20.66'	S86°18'03"E
C71	41.40'	125.00	18°58'34"	41.21'	S72°04'24"E
C72	41.40'	125.00	18°58'34"	41.21'	S53°05'50"E
C73	41.40'	125.00	18°58'34"	41.21'	S34°07'15"E
C74	18.53'	125.00	08°29'29"	18.51'	S20°23'14"E

SHEET INDEX

SHEET 1 - COVER SHEET, NOTES
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LEGEND AND ABBREVIATIONS,
AND TRACT TABLE
SHEETS 3-8 - PLAT DETAIL SHEETS

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C97	444.03'	7748.00	03°17'01"	443.97'	N13°35'16"W
C98	226.04'	7728.00	01°40'33"	226.04'	N14°45'29"W
C99	808.65'	7532.00	06°09'05"	808.26'	S12°31'14"E
C100	813.31'	7552.00	06°10'14"	812.91'	S12°30'39"E



MAP BOOK:

PAGE:

GENERAL NOTES:

- MONUMENTATION:
 - - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
 - - DENOTES PERMANENT REFERENCE MONUMENT SET 4"x4" CONCRETE MONUMENT STAMPED PRM LB 8011
 - - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED POP LB 8011
- ACCURACY:
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
- BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.
- NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE, IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 39.37/12=3.28083333333 EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
- 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.
- THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THE PLAT:
 - ENTIRE STREET FRONTS OF LOTS AND COMMON OPEN SPACE AREAS: 12.00 FEET WIDE
- UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC, TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
- ALL PLATTED UTILITY EASEMENTS, EXCLUSIVE OF PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY, SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES. 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 PURSUANT TO SECTION 177.091(28), FLORIDA STATUTES. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
- SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
 - FRONT = 25 FEET
 - REAR = 20 FEET
 - SIDE = LOTS ≤ 65' = 5 FEET
 - LOTS > 65' = 7.5 FEET
 - SIDE CORNER = 20 FEET
- SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
 - MINIMUM OPEN SPACE AREA = 40%
 - MAXIMUM BUILDING COVERAGE = 50%
 - MAXIMUM BUILDING HEIGHT = 36 FEET
- THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.'S THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHTS TO THE GENERAL PUBLIC.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THE DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON OPEN SPACE AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES; AND, SHALL HAVE THE RIGHT TO LIEN ALL PROPERTY OWNERS OF RECORD FOR THE COST OF SUCH MAINTENANCE, REPAIR, AND REPLACEMENT, AS DEEMED BY THE CITY TO BE NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORMWATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 40C-42.027, F.A.C. AND BE APPROVED BY THE SAINT JOHN'S RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
- RETENTION AREAS AND COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON OPEN SPACE AREAS AND IN THE RIGHTS-OF-WAY.
- LOTS 94-208 AND TRACTS 3A, 3B, 3C, 3D, 3E, 3G, 3H, 3I, 3J, 3K, 3L, 3M AND 3N, AS SHOWN HEREON, ARE SUBJECT TO THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____, PAGE _____, et seq., OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO WHICH, AS EXHIBIT "B", ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.
- PORTIONS OF THE LANDS SHOWN IN THIS PLAT ARE SUBJECT TO EASEMENT AND COST SHARING AGREEMENT RECORDED IN IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7328, PAGE 4233, et seq.
- ALL OF THE LANDS SHOWN WITHIN THIS PLAT (EXCEPT AS OTHERWISE AMENDED BY THE EASEMENT AND COST-SHARING AGREEMENT REFERENCED IN NOTE 18), ARE SUBJECT TO DECLARATION OF EASEMENTS RECORDED IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7313, PAGE 2181, et seq.
- LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).
- TRACTS 3A, 3B, 3C, 3H, 3I, 3J, 3K, 3L, 3M AND 3N AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE.
- TRACT 3J, SHOWN HEREON AS OPEN SPACE/POND, WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3J IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- TRACT 3L AS SHOWN HEREON AS OPEN SPACE/DRAINAGE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND STORMWATER DRAINAGE. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3L IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/ GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- TRACT 3F AS SHOWN HEREON AS LIFT STATION IS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO, AND SHALL BE MAINTAINED BY, THE CITY OF PORT ORANGE. TRACT 3F IS SUBJECT TO A PERMANENT EASEMENT FOR LIFT STATION RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4276, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
- TRACTS 3C, 3E and 3M AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF OPEN SPACE AND ARE SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN BOOK _____, PAGE _____ OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
- PROPERTY WITHIN THIS PLAT IS SUBJECT TO THE MINERAL OIL-CLAIM DEED AND ASSIGNMENT (WITH RESERVATION OF ROYALTY, BUT NOT ACCESS, TO GRANTORS) RECORDED SEPTEMBER 12, 1984 IN BOOK 2605, PAGE 1907 OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
- PLAT IS SUBJECT TO THE POST-CLOSING AGREEMENT BY AND BETWEEN D.S.C. OF NEWARK ENTERPRISES, INC., A DELAWARE CORPORATION, TOMOKA FARMS DEVELOPMENT, L.L.C., A FLORIDA LIMITED LIABILITY COMPANY AND OLSON & ASSOCIATES OF NW FLORIDA, INC., A FLORIDA CORPORATION AS RECORDED MAY 5, 2004 IN BOOK 5310, PAGE 1041, AS AFFECTED BY: SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 19, 2004 IN BOOK 5440, PAGE 2440, SECOND SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 2, 2005 IN BOOK 5690, PAGE 2714 AND THIRD SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED JUNE 7, 2016 IN OFFICIAL RECORDS BOOK 7262, PAGE 1239.
- TRACTS 3A, 3C, 3D, 3E and 3F, AS SHOWN HEREON, ARE SUBJECT TO AN ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4266, AS SHOWN ON SHEETS 2, 3 AND 4 OF THIS PLAT.
- TRACT 3D, AS DEPICTED IN THIS PLAT, IS SUBJECT AN ACCESS, DRAINAGE, UTILITIES, RETENTION AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4258, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
- MAINTENANCE OF THE ATTENUATION AND POLLUTION SWALES ON LOTS 105-109, 137-159 AND 162-167, SHALL BE GOVERNED BY THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS REFERENCED IN NOTE 13. THE DRAINAGE EASEMENTS DEPICTED ON THIS PLAT AT THE REAR OF LOTS 105-109, 137-159 AND 162-167 ARE HEREBY GRANTED TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. ("HOA") TO ENFORCE SUCH MAINTENANCE OBLIGATIONS, AND TO THE CITY OF PORT ORANGE IN THE EVENT ANY RESPONSIBLE PARTY AND THE HOA FAIL TO MAINTAIN SUCH SWALES.
- THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 171, 172, 192, 193, 197, 198, 203, 204, TRACT 3D AND THE 25.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 111, 112, 123, 124, 186 AND 187 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC.



131 WEST KALEY STREET
ORLANDO, FLORIDA 32806
PHONE: 321.354.9826 FAX: 407.648.9104
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CERTIFICATE OF AUTHORIZATION NO. LB 8011

SHEET 8 OF 8

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C105	46.79'	75.00	35°44'55"	46.04'	N22°53'44"E
C106	63.08'	75.00	48°11'23"	61.24'	N64°51'53"E

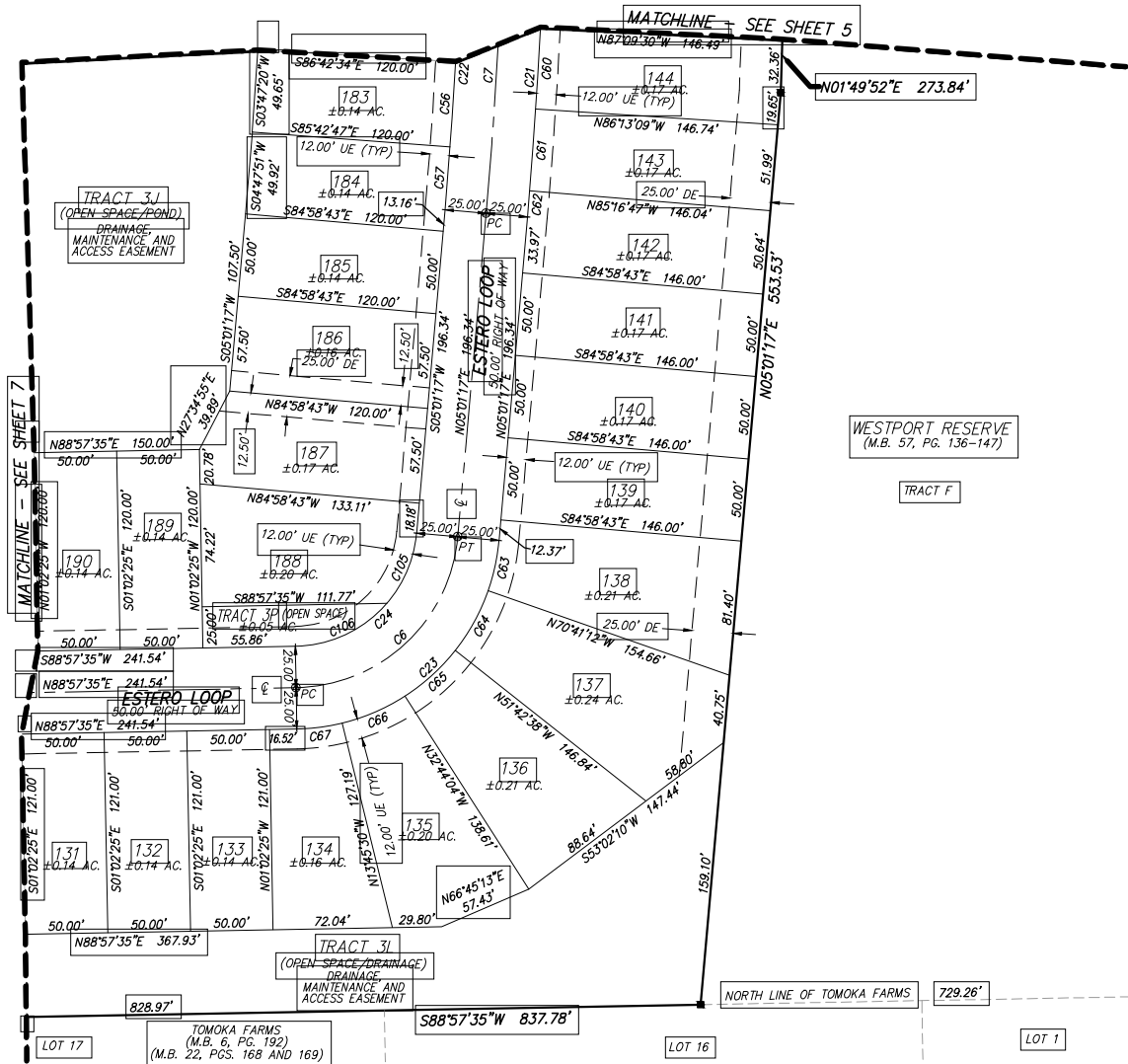
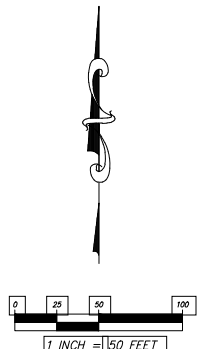
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SHEET 1 - COVER SHEET, NOTES
SHEET 2 - KEY MAP/PLAT BOUNDARY,
LEGEND AND ABBREVIATIONS,
AND TRACT TABLE
SHEETS 3-8 - PLAT DETAIL SHEETS

WESTPORT RESERVE PHASE 3

REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST,
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C6	146.50'	100.00	83°56'18"	133.75'	N46°59'26"E
C7	167.04'	3000.00	03°11'25"	167.02'	N03°25'34"E
C21	168.43'	3025.00	03°11'25"	168.41'	N03°25'34"E
C22	165.65'	2975.00	03°11'25"	165.63'	N03°25'34"E
C23	183.13'	125.00	83°56'18"	167.18'	N46°59'26"E
C24	109.88'	75.00	83°56'18"	100.31'	N46°59'26"E
C56	51.74'	2975.00	00°59'47"	51.74'	N03°47'20"E
C57	38.13'	2975.00	00°44'03"	38.12'	N04°39'15"E
C60	49.59'	3025.00	00°56'21"	49.59'	N03°18'41"E
C61	49.59'	3025.00	00°56'21"	49.59'	N04°15'02"E
C62	15.90'	3025.00	00°18'04"	15.90'	N04°52'15"E
C63	31.18'	125.00	147°7'31"	31.10'	N12°10'02"E
C64	41.40'	125.00	18°58'34"	41.21'	N28°48'05"E
C65	41.40'	125.00	18°58'34"	41.21'	N47°46'39"E
C66	41.40'	125.00	18°58'34"	41.21'	N66°45'13"E
C67	27.75'	125.00	12°43'04"	27.69'	N82°36'03"E



MAP BOOK:

PAGE:

GENERAL NOTES:

- MONUMENTATION:
 - - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
 - - DENOTES PERMANENT REFERENCE MONUMENT SET 4"x4" CONCRETE MONUMENT STAMPED PRM LB 8011
 - - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED POP LB 8011
- ALL LINES INTERSECTING CURVES ARE RADIAL UNLESS OTHERWISE NOTED
(R) - DENOTES A LINE RADIAL RELATIVE TO ADJACENT CURVE
(NR) - DENOTES A LINE NOT RADIAL RELATIVE TO ADJACENT CURVE
- DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.
- ACCURACY:
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
- BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.
- NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE, IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 39.37/12=3.28083333333333 EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
- 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.
- THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THE PLAT:
 - ENTIRE STREET FRONTAGES OF LOTS AND COMMON OPEN SPACE AREAS: 12.00 FEET WIDE
- UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC, TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
- ALL PLATTED UTILITY EASEMENTS, EXCLUSIVE OF PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY, SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES. PROVIDED, 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 PURSUANT TO SECTION 177.091(28), FLORIDA STATUTES. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
- SINGLE FAMILY RESIDENTIAL BUILDING SETBACK REQUIREMENTS:
 - FRONT = 25 FEET
 - REAR = 20 FEET
 - SIDE = LOTS ≤ 65' = 5 FEET
 - LOTS > 65' = 7.5 FEET
 - SIDE CORNER = 20 FEET
- SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
 - MINIMUM OPEN SPACE AREA = 40%
 - MAXIMUM BUILDING COVERAGE = 50%
 - MAXIMUM BUILDING HEIGHT = 36 FEET
- THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.'S THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHTS TO THE GENERAL PUBLIC.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THE DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON OPEN SPACE AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES; AND, SHALL HAVE THE RIGHT TO LIEN ALL PROPERTY OWNERS OF RECORD FOR THE COST OF SUCH MAINTENANCE, REPAIR, AND REPLACEMENT, AS DEEMED BY THE CITY TO BE NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORM WATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 40C-42.027, F.A.C. AND BE APPROVED BY THE SAINT JOHN'S RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
- RETENTION AREAS AND COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON OPEN SPACE AREAS AND IN THE RIGHTS-OF-WAY.
- LOTS 94-208 AND TRACTS 3A, 3B, 3C, 3D, 3E, 3G, 3H, 3I, 3J, 3K, 3L, 3M AND 3N, AS SHOWN HEREON, ARE SUBJECT TO THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____, PAGE _____, et seq., OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO WHICH, AS EXHIBIT "B", ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.
- PORTIONS OF THE LANDS SHOWN IN THIS PLAT ARE SUBJECT TO EASEMENT AND COST SHARING AGREEMENT RECORDED IN IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7328, PAGE 4233, et seq.
- ALL OF THE LANDS SHOWN WITHIN THIS PLAT (EXCEPT AS OTHERWISE AMENDED BY THE EASEMENT AND COST-SHARING AGREEMENT REFERENCED IN NOTE 18), ARE SUBJECT TO DECLARATION OF EASEMENTS RECORDED IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 7313, PAGE 2181, et seq.
- LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).
- TRACTS 3A, 3B, 3C, 3H, AND 3K AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE.
- TRACT 3J, SHOWN HEREON AS OPEN SPACE/POND, WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3J IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- TRACT 3L AS SHOWN HEREON AS OPEN SPACE/RAINAGE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND STORMWATER DRAINAGE. A DRAINAGE, MAINTENANCE AND ACCESS EASEMENT OVER TRACT 3L IS HEREBY GRANTED TO THE CITY OF PORT ORANGE, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER/ GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- TRACT 3F AS SHOWN HEREON AS LIFT STATION IS TO BE CONVEYED BY SEPARATE INSTRUMENT (RECORDED COINCIDENT WITH THIS PLAT) TO, AND SHALL BE MAINTAINED BY, THE CITY OF PORT ORANGE. TRACT 3F IS SUBJECT TO A PERMANENT EASEMENT FOR LIFT STATION RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4276, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
- TRACTS 3C, 3E AND 3F, AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF OPEN SPACE AND ARE SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN BOOK _____, PAGE _____ OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
- PROPERTY WITHIN THIS PLAT IS SUBJECT TO THE MINERAL OIL-CLAIM DEED AND ASSIGNMENT (WITH RESERVATION OF ROYALTY, BUT NOT ACCESS, TO GRANTORS) RECORDED SEPTEMBER 12, 1984 IN BOOK 2605, PAGE 1907 OF THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA.
- PLAT IS SUBJECT TO THE POST-CLOSING AGREEMENT BY AND BETWEEN D.S.C. OF NEWARK ENTERPRISES, INC., A DELAWARE CORPORATION, TOMOKA FARMS DEVELOPMENT, L.L.C. A FLORIDA LIMITED LIABILITY COMPANY AND OLSON & ASSOCIATES OF NW FLORIDA, INC., A FLORIDA CORPORATION AS RECORDED MAY 5, 2004 IN BOOK 5310, PAGE 1041, AS AFFECTED BY: SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 19, 2004 IN BOOK 5440, PAGE 2440, SECOND SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED NOVEMBER 2, 2005 IN BOOK 5690, PAGE 2714 AND THIRD SUPPLEMENT TO POST-CLOSING AGREEMENT RECORDED JUNE 7, 2016 IN OFFICIAL RECORDS BOOK 7262, PAGE 1239.
- TRACTS 3A, 3C, 3D, 3E AND 3F, AS DEPICTED IN THIS PLAT, ARE SUBJECT TO AN ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4266, AS SHOWN ON SHEETS 2, 3 AND 4 OF THIS PLAT.
- TRACT 3D, AS DEPICTED IN THIS PLAT, IS SUBJECT AN ACCESS, DRAINAGE, UTILITIES, RETENTION AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK 7328 PAGE 4258, AS SHOWN ON SHEETS 2 AND 3 OF THIS PLAT.
- MAINTENANCE OF THE ATTENUATION AND POLLUTION SWALES ON LOTS 105-109, 137-159 AND 162-167, SHALL BE GOVERNED BY THE THIRD AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS REFERENCED IN NOTE 13. THE DRAINAGE EASEMENTS DEPICTED ON THIS PLAT AT THE REAR OF LOTS 105-109, 137-159 AND 162-167 ARE HEREBY GRANTED TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. ("HOA") TO ENFORCE SUCH MAINTENANCE, AND TO THE CITY OF PORT ORANGE IN THE EVENT ANY RESPONSIBLE PARTY AND THE HOA FAIL TO MAINTAIN SUCH SWALES.
- THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 171, 172, 192, 193, 197, 198, 203, 204, TRACT 3D AND THE 25.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 111, 112, 123, 124, 186 AND 187 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC.

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- C05 OVERALL TREE PRESERVATION PLAN
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- C07 OVERALL SPECIMEN TREE PRESERVATION PLAN
- C08 EXISTING CONDITIONS PLAN
- C08A ERP PERMITS
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- C11 PHASE 3 SITE PLAN DATA
- C12, C13 PHASE 3 SITE PLANS
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Survey

- 1 - 7 PHASE 3 PLAT OF BOUNDARY & TOPO SURVEY

PHASE 3 LEGAL DESCRIPTION:

LEGAL DESCRIPTION:

A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57, PAGES 136-147 SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, BEING IN THE CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE OCCUPIED SOUTHWEST CORNER OF THE SOUTHWEST 1/4 OF SECTION 13, TOWNSHIP 16 SOUTH, RANGE 32 EAST; THENCE RUN S01°05'50"E A DISTANCE OF 190.22 FEET TO THE SOUTHEAST CORNER OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST; THENCE RUN S88°57'35"W ALONG THE OCCUPIED NORTHERLY LINE OF TOMOKA FARMS, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN MAP BOOK 6, PAGE 192, AND RE-RECORDED IN MAP BOOK 22, PAGES 168 AND 169, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, AND THE EASTERLY EXTENSION THEREOF, A DISTANCE OF 1029.94 FEET, FOR A POINT OF BEGINNING; THENCE S88°57'35"W, ALONG THE OCCUPIED NORTHERLY LINE OF SAID TOMOKA FARMS , A DISTANCE OF 1567.04 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF TOMOKA FARMS ROAD (RIGHT OF WAY VARIES) PER ROAD BOOK 1, PAGE 28, OF SAID PUBLIC RECORDS; THENCE N16°08'29"W, ALONG SAID EAST RIGHT OF WAY, A DISTANCE OF 833.38 FEET; THENCE N10°03'47"W, ALONG SAID EAST RIGHT OF WAY, A DISTANCE OF 222.54 FEET; THENCE N06°47'13"W, ALONG SAID EAST RIGHT OF WAY, A DISTANCE OF 201.00 FEET; THENCE N87°42'50"E, A DISTANCE OF 252.99 FEET; THENCE N27°43'56"W, A DISTANCE OF 32.45 FEET; THENCE N31°24'40"W, A DISTANCE OF 89.27 FEET; THENCE N32°35'34"W, A DISTANCE OF 78.98 FEET; THENCE N07°21'34"W, A DISTANCE OF 60.82 FEET; THENCE N00°19'32"W, A DISTANCE OF 59.57 FEET; THENCE N61°15'13"E, A DISTANCE OF 126.00 FEET; THENCE N65°48'17"E, A DISTANCE OF 65.09 FEET; THENCE N20°03'24"E, A DISTANCE OF 111.70 FEET TO A POINT ON THE SOUTH RIGHT OF WAY LINE OF TOWN WEST BOULEVARD (100' PUBLIC RIGHT OF WAY) PER OFFICIAL RECORDS BOOK 5310, PAGE 1038, OF SAID PUBLIC RECORDS; THENCE N84°27'18"E ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 417.64 FEET TO A POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY, HAVING: A RADIUS OF 2065.94 FEET, A CENTRAL ANGLE OF 05°52'38", A CHORD BEARING OF N87°23'37"E, AND A CHORD LENGTH OF 211.82 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 211.92 FEET; THENCE S89°40'04"E ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 385.94

IN MAP BOOK _____, PAGE _____ OF AFOREMENTIONED PUBLIC RECORDS; THENCE THE FOLLOWING SIX (6) COURSES AND DISTANCES ALONG SAID WEST LINE: RUN S00°19'56"W, A DISTANCE OF 131.00 FEET; THENCE N89°40'04"W, A DISTANCE OF 78.53 FEET; THENCE S00°19'56"W, A DISTANCE OF 50.00 FEET; THENCE S89°40'04"E, A DISTANCE OF 18.00 FEET; THENCE S00°19'56"W, A DISTANCE OF 134.14 FEET; THENCE S03°23'50"E, A DISTANCE OF 265.22 FEET TO A POINT ON THE WEST LINE OF TRACT I, WESTPORT RESERVE, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN MAP BOOK 57, PAGES 136-147 OF SAID PUBLIC RECORDS; THENCE DEPARTING SAID WEST LINE OF WESTPORT RESERVE PHASE 2C, S01°02'25"E ALONG THE WEST LINE OF SAID TRACT I, A DISTANCE OF 326.22 FEET TO A POINT ON THE NORTH LINE OF TRACT F OF SAID WESTPORT RESERVE; THENCE S83°41'13"W, ALONG SAID NORTH LINE, A DISTANCE OF 132.78 FEET TO A POINT ON THE WEST LINE OF SAID TRACT F; THENCE DEPARTING SAID NORTH LINE, RUN THE FOLLOWING TWO (2) COURSES AND DISTANCES ALONG SAID WEST LINE: S01°49'52"W, A DISTANCE OF 273.84 FEET; THENCE S05°01'17"W, A DISTANCE OF 553.53 FEET TO THE POINT OF BEGINNING. CONTAINING 1,893,890 SQUARE FEET OR 43.478 ACRES, MORE OR LESS.

WESTPORT RESERVE (PHASE 3)

City of Port Orange, Florida FINAL SITE ENGINEERING PLANS

July 2017

Parcel ID. Number 6214-03-00-000H

RECEIVED 9-1-17

CITY OF PORT ORANGE Community Development

REVISED

Developer / Applicant / Owner

WESTPORT RESERVE, LLC & EDGE COVE, LLC
370 CENTERPOINTE CIRCLE, SUITE 1136
ALTAMONTE SPRINGS, FLORIDA 32701
CONTACT: M. SCOTT STEARNS, P.E., LEED AP
PHONE: 407-834-9560

Civil Engineer

DEWBERRY ENGINEERS, INC.
800 NORTH MAGNOLIA AVE., SUITE 1000
ORLANDO, FLORIDA 32803
CONTACT: DANIELLE VAN DE LOO, P.E.
PHONE: (321) 354-9711

Survey-Boundary & Topographic

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Geotechnical Engineer

UNIVERSAL ENGINEERING SCIENCES
911 BEVILLE ROAD SUITE 3
SOUTH DAYTONA, FL 32119
CONTACT: BRIAN C. POHL, P.E.
PHONE: (386)756-1105

Traffic Engineer

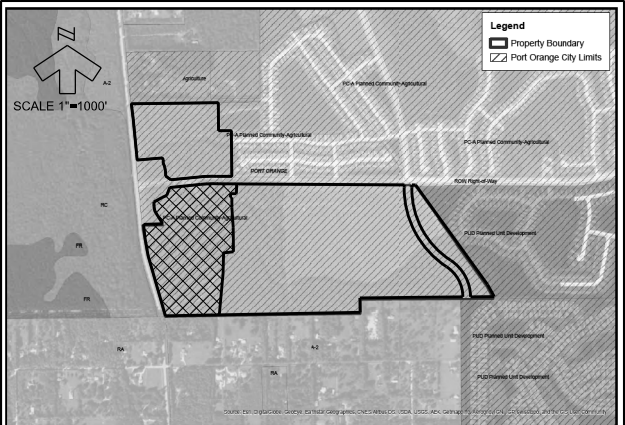
TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
80 SPRING VISTA DRIVE
DEBARY, FL 32713
CONTACT: CHRIS J. WALSH, P.E.
PHONE: (386)753-0558

Landscape Architect

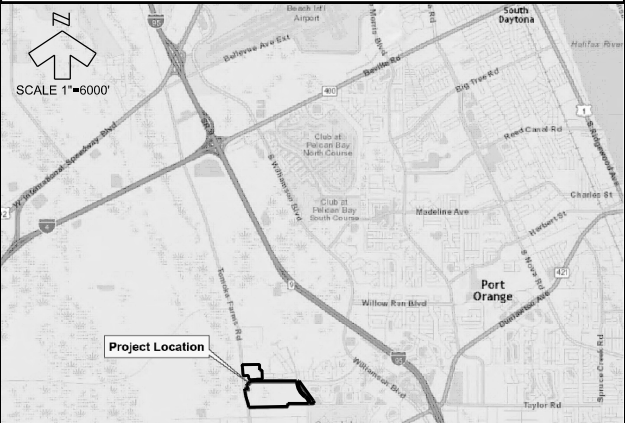
DEWBERRY ENGINEERS, INC.
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ORLANDO, FLORIDA 32803
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PHONE: (321) 354-9744

Environmental

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800 NORTH MAGNOLIA AVE., SUITE 1000
ORLANDO, FLORIDA 32803
CONTACT: JASON PERRYMAN
PHONE: (321) 354-9640



VICINITY ZONING MAP



SITE LOCATION

THIS IS TO CERTIFY THAT THE ROADWAY CONSTRUCTION PLANS AND SPECIFICATIONS AS CONTAINED HEREIN WERE DESIGNED TO APPLICABLE STANDARDS AS SET FORTH IN THE "MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS" AS PREPARED BY FLORIDA DEPARTMENT OF TRANSPORTATION.



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ORLANDO, FL 32803
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ENGINEERING BUSINESS -8794

WESTPORT RESERVE (PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

REVISIONS

No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY
2	7-21-17	KJK	REV PER QA

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

COVER SHEET

PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C01

GENERAL

- IN SUCH INFORMATION SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PROTECT THE EXISTING FEATURES FROM DAMAGE OR UNSCHEDULED INTERRUPTION OF SERVICE, SHOULD A DISCREPANCY ARISE BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, WHICH WOULD APPRECIABLY AFFECT THE EXECUTION OF THESE PLANS, THE CONTRACTOR SHALL STOP ALL CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY.
3. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND PERMIT CONDITIONS RELATING TO THE CONDUCT OF THE WORK, AS DRAWN AND SPECIFIED. IF THE CONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT VARIANCE THEREWITH, HE SHALL PROMPTLY NOTIFY THE ENGINEER, IN WRITING, AND ANY NECESSARY CHANGES SHALL BE ADJUSTED, AS PROVIDED IN THE AGREEMENT FOR CHANGES IN THE WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE BUFFERS, RETENTION AND DETENTION FACILITIES UNTIL THE PROJECT HAS BEEN ACCEPTED BY THE OWNER. ALL DISTURBED AREAS SHALL BE RETURNED TO EQUAL OR BETTER CONDITION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER AND THE ENGINEER FOR THE ACTS AND OMISSIONS OF CONTRACTOR'S EMPLOYEES AND ALL HIS SUBCONTRACTORS AND THEIR AGENTS AND EMPLOYEES AND OTHER PERSONS PERFORMING ANY OF THE WORK UNDER A CONTRACT WITH THE CONTRACTOR.
6. ALL WORK AND FURNISHED MATERIALS SHALL CONFORM WITH THE LINES, GRADES, GRADING SECTIONS, CROSS SECTIONS, DIMENSIONS, MATERIAL REQUIREMENTS AND TESTING REQUIREMENTS THAT ARE SPECIFIED IN THE CONTRACT, PLANS, DETAILS OR SPECIFICATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL NECESSARY ARRANGEMENTS WITH GOVERNMENTAL DEPARTMENTS, PUBLIC UTILITIES, PUBLIC CARRIERS, SERVICE COMPANIES, AND CORPORATIONS OWNING OR CONTROLLING ROADWAYS, RAILWAYS, WATER, SEWER, GAS, ELECTRICAL, TELEPHONE, AND TELEGRAPH FACILITIES SUCH AS PAVEMENTS, TRACKS, PIPING, WIRES, CABLES, CONDUITS, POLES, GUYS, OR OTHER SIMILAR FACILITIES, INCLUDING INCIDENTAL STRUCTURES CONNECTED THEREWITH THAT ARE ENCOUNTERED IN THE WORK IN ORDER THAT SUCH ITEMS MAY BE PROPERLY SUPPORTED, PROTECTED OR LOCATED.
8. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN ALL BARRICADES, LIGHTS, WARNING SIGNS, AND PAVEMENT MARKINGS FOR HAZARDS AND THE CONTROL OF TRAFFIC THROUGHOUT THE CONSTRUCTION ZONE IN CONFORMITY WITH THE ALL AGENCIES HAVING JURISDICTION STANDARDS TO EFFECTIVELY PREVENT ACCIDENTS AT ALL LOCATIONS WHERE CONSTRUCTION CAUSES AN OBSTRUCTION TO THE NORMAL FLOW OF TRAFFIC OR CREATES A HAZARD IN ANY WAY TO THE PUBLIC.
9. IN THE EVENT THE CONTRACTOR DISCOVERS ANY ERRORS OR OMISSIONS IN THE PLANS HE SHALL IMMEDIATELY NOTIFY THE OWNER OR OWNER'S AGENT.
10. THE CONTRACTOR SHALL COMPLY WITH ALL LEGAL LOAD RESTRICTIONS IN THE HAULING OF MATERIALS ON PUBLIC ROADS BEYOND THE LIMITS OF THE WORK. A SPECIAL PERMIT WILL NOT RELIEVE THE CONTRACTOR OF LIABILITY FOR ANY DAMAGE THAT MAY RESULT FROM THE MOVING OF MATERIALS AND EQUIPMENT.

[illegible]

17. THE CONTRACTOR SHALL COMPLY IN EVERY RESPECT WITH THE FEDERAL OCCUPATIONAL HEALTH AND SAFETY ACT OF 1970 AND ALL RULES AND REGULATIONS NOW OR HEREAFTER IN EFFECT UNDER SAID ACT, AND THE CONTRACTOR FURTHER AGREES TO COMPLY WITH

1. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE ALL REASONABLE PROTECTION TO PREVENT DAMAGE, INJURY OR LOSS TO:

- UNTIL FINAL ACCEPTANCE OF THE WORK BY OWNER, THE CONTRACTOR SHALL HAVE THE CHARGE AND CARE OF AND SHALL BEAR THE RISK OF INJURY OR DAMAGE, LOSS OR EXPENSE TO ANY PART THEREOF, OR TO ANY MATERIALS STORED ON SITE, BY THE ACTION OF THE ELEMENTS OR FROM ANY OTHER CAUSE WHETHER ARISING FROM THE EXECUTION OR NON-EXECUTION OF THE WORK. THE CONTRACTOR SHALL REBUILD, REPAIR, RESTORE AND MAKE GOOD ALL INJURIES OR DAMAGES TO ANY PORTION OF THE WORK OCCASIONED BY ANY OF THE ABOVE CAUSES BEFORE FINAL ACCEPTANCE AND SHALL BEAR THE EXPENSES THEREOF.

- CONTRACTOR SHALL EXECUTE ALL MEASURES NECESSARY TO LIMIT THE TRANSPORTATION OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT TO THE VOLUME AND AMOUNT AS THOSE THAT EXIST PRIOR TO COMMENCEMENT OF CONSTRUCTION. THIS CONDITION MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND AFTER COMPLETION OF THE PROJECT. ROUTINE MAINTENANCE ON TEMPORARY EROSION CONTROL FEATURES AT HIS EXPENSE, PROVISION MUST BE MADE TO PRESERVE THE INTEGRITY AND CAPACITY OF CHECK WEIRS, SEDIMENT BASINS, SLOPE DRAINS, GRADING PATTERNS, ETC. REQUIRED TO MEET THIS PROVISION THROUGHOUT THE LIFE OF CONSTRUCTION, CONTRACTOR SHALL PROVIDE SILT BARRIERS, MURAPI FILTERS, TEMPORARY GRASSING, ETC., AS REQUIRED TO FULLY COMPLY WITH THE EROSION CONTROL REQUIREMENTS OF THE PERMIT. A COPY OF THE APPROVED SWPPP SHALL BE KEPT ON SITE. SEDIMENT CONTROLS TAKEN AND SHALL DOCUMENT ALL CORRECTIVE MEASURES. A COPY OF THE APPROVED SWPPP SHALL BE KEPT ON SITE AT ALL TIMES FOR REVIEW BY OWNER'S REPRESENTATIVE AND BY NPDES INSPECTORS. THIS PERMIT MUST BE SUBMITTED TO ORANGE COUNTY BY THE CONTRACTOR PRIOR TO THE ISSUANCE OF PERMITS.

- THE CONTRACTOR SHALL BE EXTREMELY CAUTIOUS WHEN WORKING NEAR TREES THAT ARE TO BE SAVED, WHETHER SHOWN IN THE PLANS OR DESIGNATED IN THE FIELD.

- THE CONTRACTOR SHALL STAKE ALL IMPROVEMENTS USING THE RECORD PLAT. THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER THAT THE PLAT IS CORRECT PRIOR TO ANY CONSTRUCTION. IF A PLAT DOES NOT EXIST, CONTRACTOR IS TO VERIFY USE OF THE SURVEY FOR LAYOUT WITH ENGINEER PRIOR TO STARTING WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLETELY STAKE AND CHECK ALL IMPROVEMENTS TO INSURE CORRECT POSITIONING, BOTH HORIZONTAL AND VERTICAL, INCLUDING MINIMUM BUILDING SETBACKS PRIOR TO THE INSTALLATION OF ANY IMPROVEMENT. ANY DISCREPANCY BETWEEN PLATTED INFORMATION AND THE PLANS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY AND IN WRITING.

9. AFTER THE ROADWAY HAS BEEN CONSTRUCTED TO SUBGRADE, IT SHALL BE PROOF-ROLLED TO ASSURE THAT PROPER COMPACTION HAS BEEN ATTAINED, THE PROOF-ROLLING AND COMPACTION OPERATIONS SHALL BE INSPECTED AND TESTED BY A FLORIDA LICENSED GEOTECHNICAL ENGINEER TO ASSURE THAT THE SPECIFIED COMPACTION IS MAINTAINED AND ALL DELETERIOUS MATERIALS HAVE BEEN REMOVED.

3. PRIOR TO PERFORMING ANY WORK WITHIN ANY PUBLIC RIGHT-OF-WAY, CONTRACTOR SHALL DEVELOP AND SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE LOCAL AGENCY HAVING JURISDICTION OVER SAID ROW FOR THEIR APPROVAL. THIS PLAN MUST MEET THE MINIMUM REQUIREMENTS AS OUTLINED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION AND THE FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS.

WATER: PORT ORANGE PUBLIC UTILITIES DEPARTMENT - (386) 506-5750
RECLAIMED WATER: PORT ORANGE PUBLIC UTILITIES DEPARTMENT - (386) 506-5750
SANITARY SEWER: PORT ORANGE PUBLIC UTILITIES DEPARTMENT - (386) 506-5750
SOLID WASTE: WASTE PRO - (386) 506-5575
ELECTRIC: FLORIDA POWER & LIGHT - (386) 322-3420
TELEPHONE: AT&T - (800) 222-6936
CABLE: BRIGHT HOUSE NETWORKS - (386) 760-9950
GAS: TECO PEOPLES GAS - 1-877-832-6747
 & FLORIDA PUBLIC UTILITIES - (386) 668-9338

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING SIZE, TYPE, LOCATION, AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND NOTIFYING THE INVOLVED UTILITY PROVIDERS TO MAKE ANY NECESSARY ARRANGEMENTS FOR RELOCATION, DISRUPTION OF SERVICE, OR CLARIFICATION OF ACTIVITY REGARDING SAID UTILITY. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THESE PLANS OR FIELD LOCATED. THE RESPECTIVE UTILITY PROVIDERS SHALL RELOCATE UTILITIES THAT INTERFERE WITH THE PROPOSED CONSTRUCTION AND THE CONTRACTOR SHALL COOPERATE WITH THE UTILITY PROVIDERS DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE

Dewberry Engineers Inc.
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ENGINEERING BUSINESS -8794

SEAI

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PROJECT #	<u>PROJECT #50083136</u>
DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

PROJECT: CC 1\Final\SE Phase 3

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WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

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WESTPORT RESERVE (PHASE 3)

CITY OF PORT ORANGE, FLORIDA

FL PE # 74676
8/31/2017

SEAL

SCALE NORTH

0' 200' 400'



A north arrow pointing upwards, labeled with 'N' at the top.

REVISIONS

[illegible]

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DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
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DATUM	<u>NAVD 88</u>

TITLE

OVERALL DEVELOPMENT PLAN

PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C04

OVERALL DEVELOPMENT SITE DATA	
SITE AREA	174.48
CURRENT ZONING	PC-A
LAND USE	NEIGHBORHOOD DISTRICT PLANNED COMMUNITY
PROP. DWELLING UNITS	645
DENSITY	3.70 DU/AC
TREE PRESERVATION:	
✱ TREE SITE AREA	162.93 AC.
REQUIRED = 15% OF SITE AREA	24.44 AC. ⁽¹⁾
PROPOSED (16.94%)	27.60 AC. ⁽²⁾
⁽¹⁾ EXIST. TREE CONSERVATION EASEMENTS NOT INCLUDED	
⁽²⁾ EXCESS TREE PRESERVATION CAN BE USED TOWARD THE FUTURE CONTIGUOUS PHASE	
DWELLING UNITS PER PHASE:	
MULTI-FAMILY PHASE 2A	360
SINGLE FAMILY PHASE 2B	64
SINGLE FAMILY PHASE 2C	28
SINGLE FAMILY PHASE 3	115
SINGLE FAMILY PHASE 4	78
TOTAL	645



COMMON OPEN SPACE AREAS (SINGLE FAMILY)

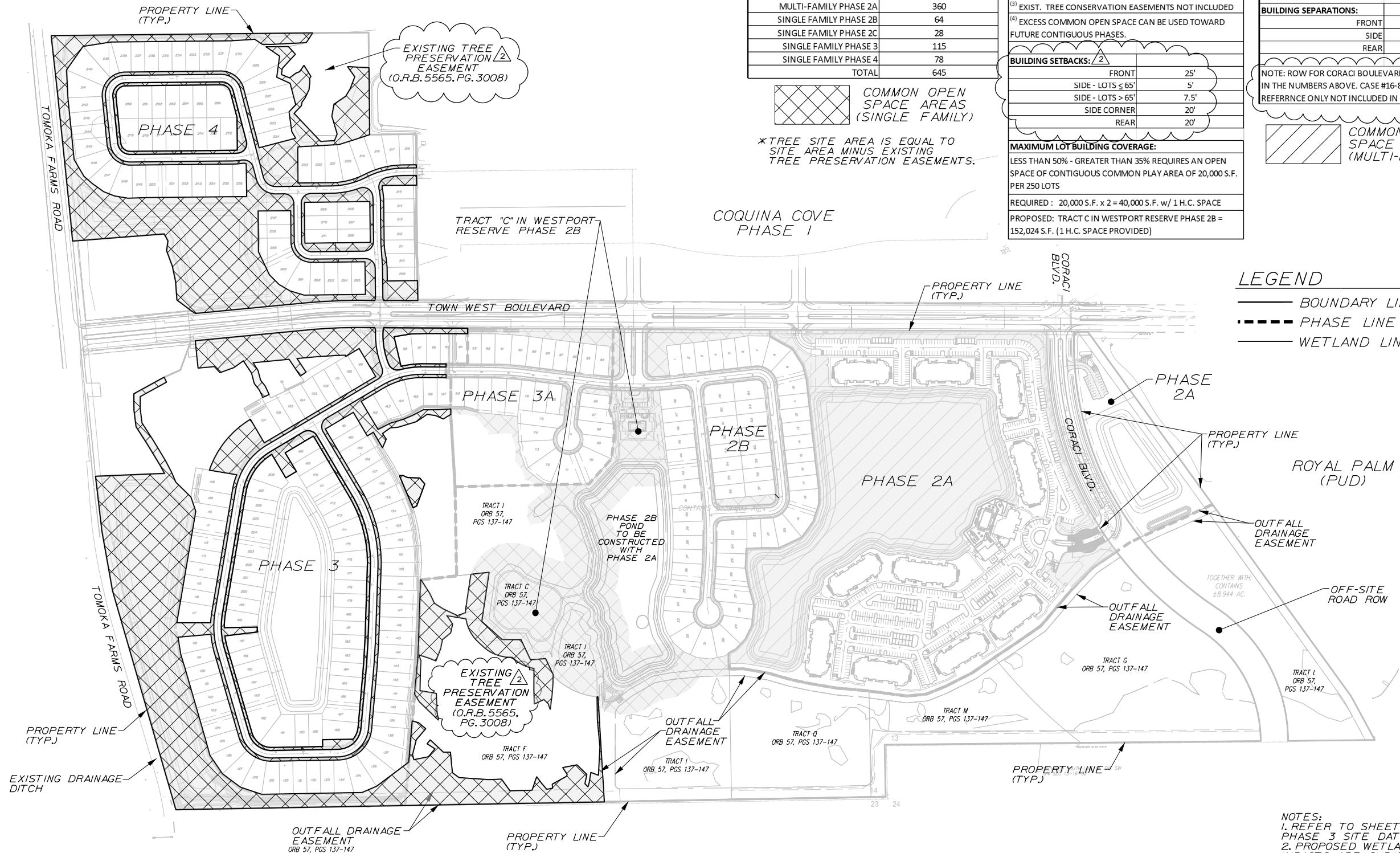
*TREE SITE AREA IS EQUAL TO
SITE AREA MINUS EXISTING
TREE PRESERVATION EASEMENTS.

SINGLE FAMILY SITE DATA	
GROSS SITE AREA	140.85 AC.
NET SITE AREA	97.39 AC. ⁽¹⁾
PROP. DWELLING UNITS	285
MAXIMUM BUILDING IMPERVIOUS COVERAGE	50%
⁽¹⁾ NET SITE AREA EQUALS GROSS SITE AREA MINUS WETLAND CONSERVATION AND UPLANDS NOT INCLUDED IN OPEN SPACE OR DEVELOPMENT. (140.85-43.46)	
OPEN SPACE REQUIRED:	
OPEN SPACE (40%)	38.96 AC. ⁽²⁾
COMMON OPEN SPACE (40%)	38.96 AC. ⁽²⁾
⁽²⁾ CALCULATED USING NET SITE AREA	
OPEN SPACE PROVIDED:	
TOTAL OPEN SPACE (56.43%)	54.96 AC. ⁽³⁾
COMMON OPEN SPACE (40.45%)	39.39 AC. ⁽⁴⁾
⁽³⁾ EXIST. TREE CONSERVATION EASEMENTS NOT INCLUDED	
⁽⁴⁾ EXCESS COMMON OPEN SPACE CAN BE USED TOWARD FUTURE CONTIGUOUS PHASES.	
BUILDING SETBACKS: 2	
FRONT	25'
SIDE - LOTS ≤ 65'	5'
SIDE - LOTS > 65'	7.5'
SIDE CORNER	20'
REAR	20'
MAXIMUM LOT BUILDING COVERAGE:	
LESS THAN 50% - GREATER THAN 35% REQUIRES AN OPEN SPACE OF CONTIGUOUS COMMON PLAY AREA OF 20,000 S.F. PER 250 LOTS	
REQUIRED : 20,000 S.F. x 2 = 40,000 S.F. w/ 1 H.C. SPACE	
PROPOSED: TRACT C IN WESTPORT RESERVE PHASE 2 = 152,024 S.F. (1 H.C. SPACE PROVIDED)	

MULTI-FAMILY SITE DATA - 2A	
SITE AREA	33.63 AC.
PROP. DWELLING UNITS	360
MAXIMUM BUILDING IMPERVIOUS COVERAGE	40%
MINIMUM LIVING AREA	750 S.F.
MAXIMUM BUILDING HEIGHT	36'
OPEN SPACE REQUIRED:	
OPEN SPACE (40%)	13.45 AC.
COMMON OPEN SPACE (1/3 OF TOTAL O.S.)	4.48 AC.
OPEN SPACE PROVIDED:	
TOTAL OPEN SPACE (61.70%)	20.93 AC. ⁽¹⁾
COMMON OPEN SPACE	13.67 AC. ⁽¹⁾
⁽¹⁾ EXCESS COMMON OPEN SPACE CAN BE USED TOWARD FUTURE CONTIGUOUS PHASES.	
BUILDING SEPARATIONS:	
FRONT	30'
SIDE	25'
REAR	25'
NOTE: ROW FOR CORACI BOULEVARD IS NOT INCLUDED IN THE NUMBERS ABOVE. CASE #16-80000001 FOR REFERENCE ONLY NOT INCLUDED IN THIS PHASING 2	
 COMMON OPEN SPACE AREAS (MULTI-FAMILY)	

LEGEND

————— BOUNDARY LINE
 - - - - - PHASE LINE
 ————— WETLAND LINE



WESTPORT RESERVE (PHASE 3)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

REVISIONS

[illegible]

PROJECT #	<u>PROJECT #50083136</u>
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APPROVED BY	<u>DMV</u>
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DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

TITLE

OVERALL
TREE
PRESERVATION
PLAN

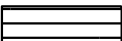
PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

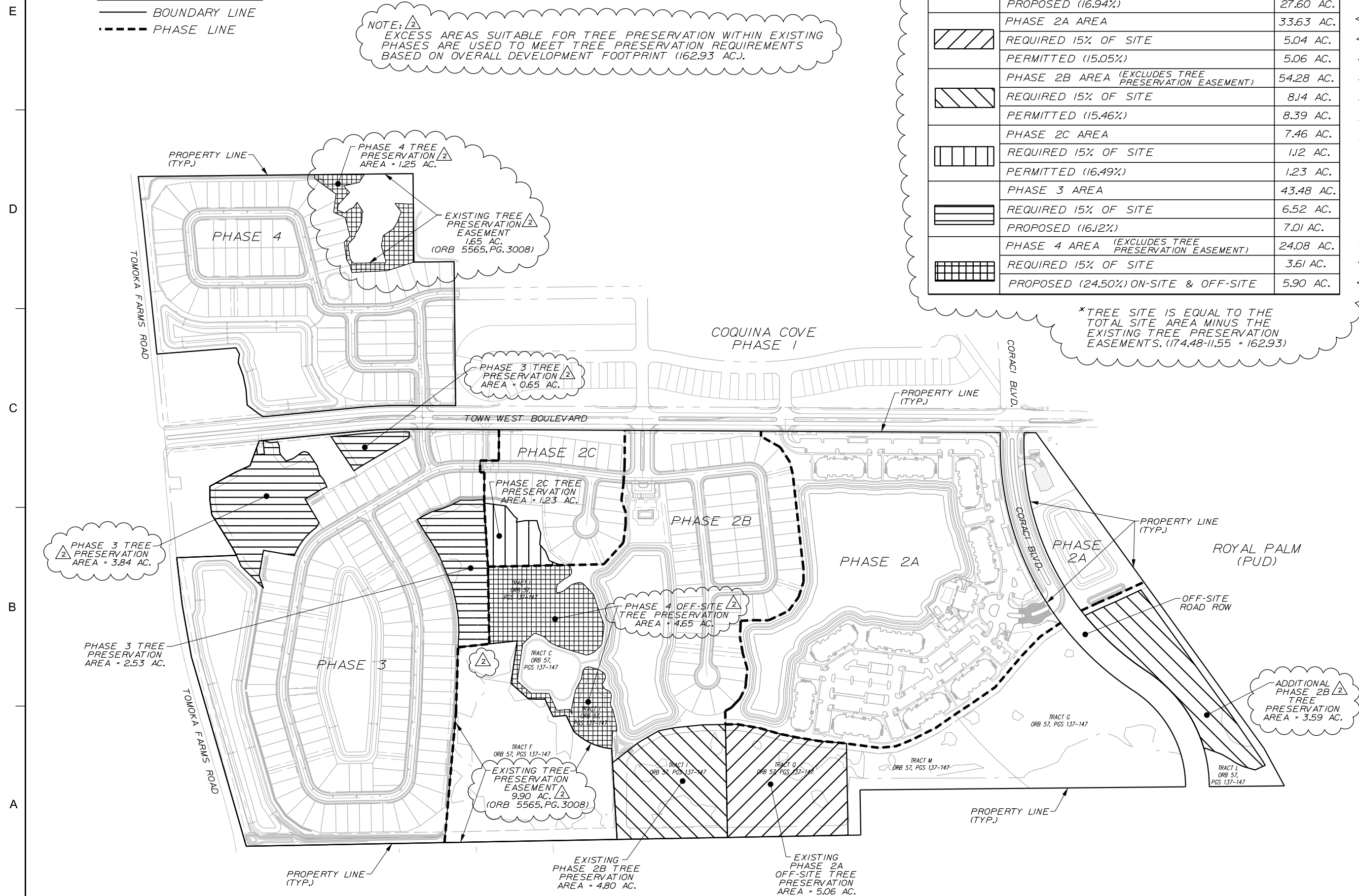
C05

— BOUNDARY LINE
 - - - - - PHASE LINE

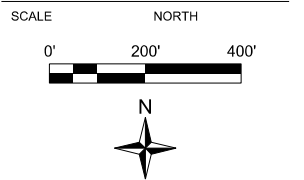
NOTE: 2
EXCESS AREAS SUITABLE FOR TREE PRESERVATION WITHIN EXISTING
PHASES ARE USED TO MEET TREE PRESERVATION REQUIREMENTS
BASED ON OVERALL DEVELOPMENT FOOTPRINT (162.93 AC.).

TREE PRESERVATION 		
	TREE SITE AREA* (EXCLUDES TREE PRESERVATION EASEMENTS)	162.93 AC.
	REQUIRED 15% OF SITE	24.44 AC.
	PROPOSED (16.94%)	27.60 AC.
	PHASE 2A AREA	33.63 AC.
	REQUIRED 15% OF SITE	5.04 AC.
	PERMITTED (15.05%)	5.06 AC.
	PHASE 2B AREA (EXCLUDES TREE PRESERVATION EASEMENT)	54.28 AC.
	REQUIRED 15% OF SITE	8.14 AC.
	PERMITTED (15.46%)	8.39 AC.
	PHASE 2C AREA	7.46 AC.
	REQUIRED 15% OF SITE	1.12 AC.
	PERMITTED (16.49%)	1.23 AC.
	PHASE 3 AREA	43.48 AC.
	REQUIRED 15% OF SITE	6.52 AC.
	PROPOSED (16.12%)	7.01 AC.
	PHASE 4 AREA (EXCLUDES TREE PRESERVATION EASEMENT)	24.08 AC.
	REQUIRED 15% OF SITE	3.61 AC.
	PROPOSED (24.50%) ON-SITE & OFF-SITE	5.90 AC.

*TREE SITE IS EQUAL TO THE
TOTAL SITE AREA MINUS THE
EXISTING TREE PRESERVATION
EASEMENTS. (174.48-11.55 = 162.93)



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REVISIONS			
	8-14-17	KJK	REV PER CITY
No.	DATE	BY	Description

PROJECT #	<u>PROJECT #50083136</u>
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TITLE

PHASE 3
TREE
PRESERVATION
PLAN

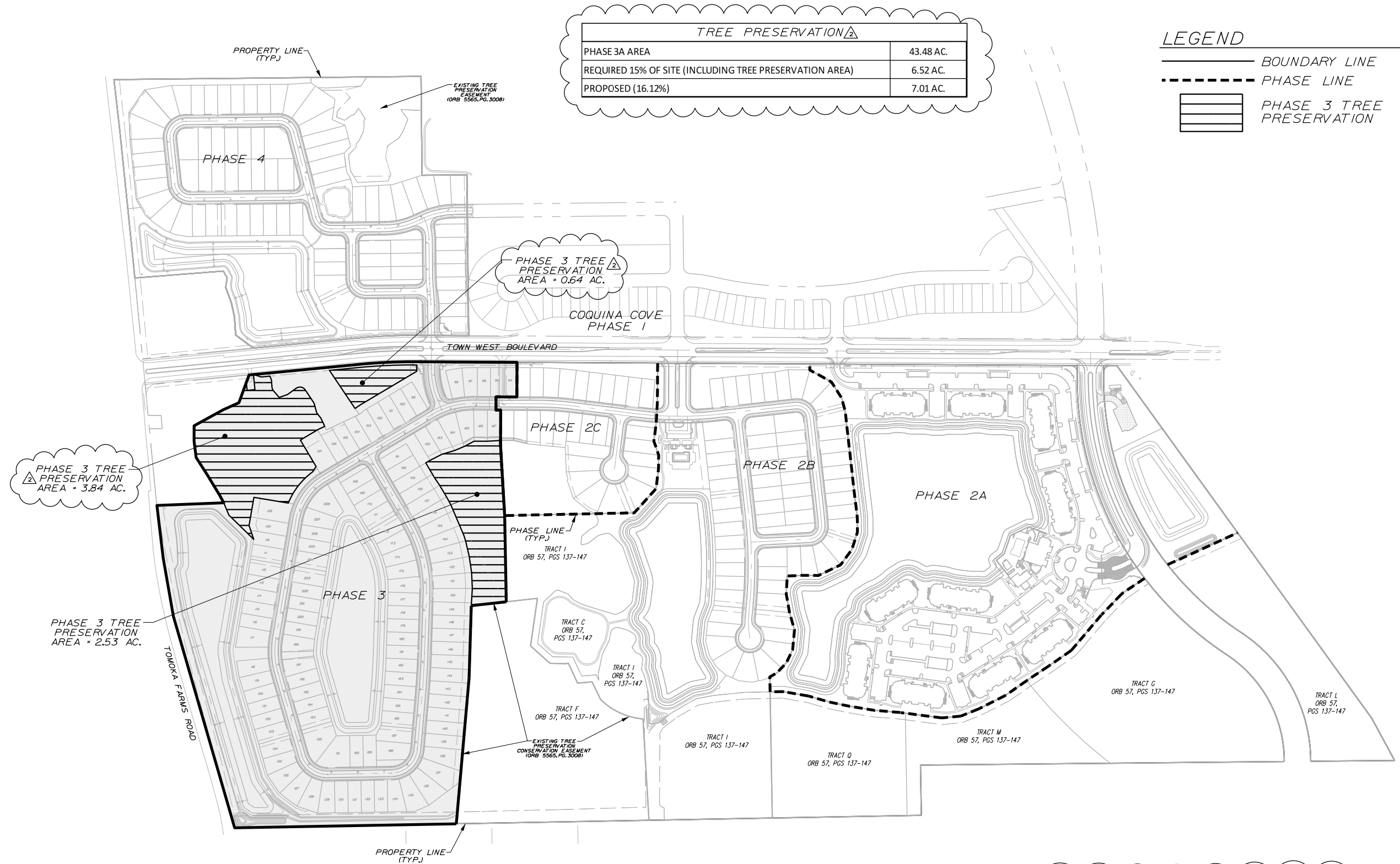
PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C06

TREE PRESERVATION <u>Δ</u>	
PHASE 3A AREA	43.48 AC.
REQUIRED 15% OF SITE (INCLUDING TREE PRESERVATION AREA)	6.52 AC.
PROPOSED (16.12%)	7.01 AC.

 BOUNDARY LINE
 PHASE LINE
 PHASE 3 TREE PRESERVATION



2	PHASE 3 TREE COUNT TABLE - 1 TREE PER 2500 SQ. FT. OF LOT	
	PHASE 3 SITE AREA	43.48 AC.
	NUMBER OF TREES REQUIRED (PER LDC 1 TREE PER 2500 SQ. FT.)	758
	PHASE 3 TREE PRESERVATION AREAS	7.01 AC.
	NUMBER OF TREES WITHIN TREE PRESERVATION AREAS (1007 TREES PER ACRE ARBORIST SAMPLE PLOT)	7059
	TREE COUNT DEFICIT	0

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D

C

B

A

- 30 SPECIMEN TREES
- 6 SPECIMEN TREES IMPACTED
- 20 SPECIMEN TREES PRESERVED UNDER PROPOSED TREE CE
- 4 SPECIMEN TREES PRESERVED UNDER EXISTING ON-SITE TREE CE

OVERALL SUBDIVISION AREA (EXCLUDES PHASE 2A)	140.86 ACRES
NUMBER OF SPECIMEN TREES	30
NUMBER OF SPECIMEN TREES PER ACRE	0.21
REQUIRED PRESERVATION	80% (24 TREES)
PROPOSED PRESERVATION	80% (24 TREES)
DEFICIT	0 TREES

SPECIMEN TREE LEGEND	
No.	SPECIMEN
1	18' CYPRESS
2	18" CYPRESS
3	18" CYPRESS
4	18" CYPRESS
5	18" OAK
6	18" OAK
7	12" BAY
8	18" CYPRESS
9	18" CYPRESS
10	18" CYPRESS
11	18" OAK
12	21" OAK
13	18" CYPRESS
14	19" CYPRESS
15	23" CYPRESS
16	20" CYPRESS
17	21" CYPRESS
18	20" LIVE OAK
19	20" OAK
20	18" CYPRESS
21	13" BAY
22	13" BAY
23	13" BAY
24	23" LIVE OAK
25	28" LAUREL OAK
26	18" LAUREL OAK
27	30" OAK
28	20" CYPRESS
29	13" BAY
30	16" BAY



LEGEND:

- SPECIMEN TREE
- PROPOSED TREE PRESERVATION AREAS TO BE PLACED UNDER PROTECTIVE CONSERVATION EASEMENT
- EXISTING TREE PRESERVATION AREAS UNDER PROTECTIVE CONSERVATION EASEMENT



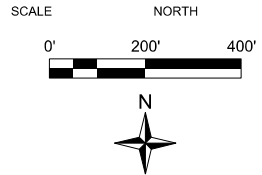
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ORLANDO, FL 32803
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ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017



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TITLE

OVERALL SPECIMEN TREE PRESERVATION PLAN

PROJECT: CC 11FinalSF Phase 3

SHEET NO.

C07

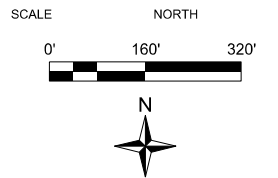
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WESTPORT RESERVE (PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle van De Loo
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8/31/2017



REVISIONS

[illegible]

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TITLE

EXISTING CONDITIONS PLAN

PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C08

NOTE:
PLEASE REFER TO TOPOGRAPHIC AND BOUNDARY SURVEY
PREPARED BY DEWBERRY UNDER SEPARATE COVER FOR
FURTHER DETAIL, LEGIBILITY AND TREE SURVEY.

4:17:00 PM J:\CC 1\Final\SF Phase 3\CC1-SF PH3&4 ExConditions.dgn

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

Danielle Van De Loo
FL PE # 74676
8/31/2017

LEGEND

DESCRIPTION	EXISTING
PROPERTY BOUNDARY	---
LOT LINES	---
WETLAND BUFFER	XXXXXX
PHASE LINE	----
BASIN LINE	----

BASIN INFORMATION

Basin	Total Area (a.c)	On-Site (a.c)	Off-Site (a.c)	Total Imperv Area (a.c)	DCIA (%)	Non DCIA CN	TC ⁴ (min)	Min. FF ² NAVD88	Min. Road ³ NAVD88
Post 1	6.36	4.36	2.00	N/A	N/A	77.3	114	N/A	N/A
Post 1A	0.80	0.25	0.55	N/A	N/A	80.4	10	N/A	N/A
Post 2	1.08	1.08	0.00	N/A	N/A	78.8	56	N/A	N/A
Post 3	0.09	0.09	0.00	N/A	N/A	85.0	10	N/A	N/A
Post 4	5.88	5.88	0.00	0.40	0%	91.9	20	N/A	N/A
Post 5	22.61	22.61	0.00	11.21	15%	88.9	20	25.44	25.44
Post 5A	2.55	2.55	0.00	0.94	6%	84.0	18	25.44	24.44
Post 5B	0.38	0.38	0.00	0.21	8%	87.4	18	25.44	24.44
Post 6N	8.92	8.92	0.00	N/A	N/A	77.9	91	N/A	N/A
Post 6S	10.70	10.70	0.00	N/A	N/A	77.6	91	N/A	N/A
Post 6	2.54	2.50	0.04	N/A	N/A	82.2	15	N/A	N/A
Post 7A	19.82	19.82	0.00	8.98	19%	89.0	20	25.18	24.18
Post 7B	1.24	1.24	0.00	0.51	6%	84.9	18	25.18	24.18
Post 8	28.80	28.80	0.20	N/A	N/A	78.0	122	N/A	N/A
Post 9	2.65	0.15	2.50	N/A	N/A	77.0	71	N/A	N/A
Post 11	35.21	35.21	0.00	14.60	32%	88.3	20	25.30	24.30
Post 12	7.98	3.93	4.05	2.99	32%	83.1	20	26.59	25.59
Post 13	20.93	20.93	0.00	9.78	14%	88.0	20	26.11	25.11
Post 14	0.93	0.86	0.07	N/A	N/A	80.9	20	N/A	N/A
Post 16	3.02	2.84	0.18	N/A	N/A	77.0	71	N/A	N/A
Post 17	0.34	0.14	0.20	N/A	N/A	77.0	20	N/A	N/A
Post 18	2.48	0.74	1.74	N/A	N/A	79.6	36	N/A	N/A

PENDING
SJRWMD#91871-9

PREVIOUSLY PERMITTED
SJRWMD # 91871-7

PREVIOUSLY PERMITTED
SJRWMD # 91871-8

TOWN WEST BLVD.

PHASE 2

PREVIOUSLY PERMITTED
SJRWMD # 91871-6
USACE # SAJ-111

PHASE 3

PHASE 4

TOMOKA FARMS RD

BASED ON SURVEYED ELEVATIONS,
SWALE WILL OVERTOP IN BOTH PRE AND
POST AND FLOW TO THE SOUTHERN
PROPERTY OWNER

SEAL

SCALE

NORTH

0' 200' 400'



REVISIONS

No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

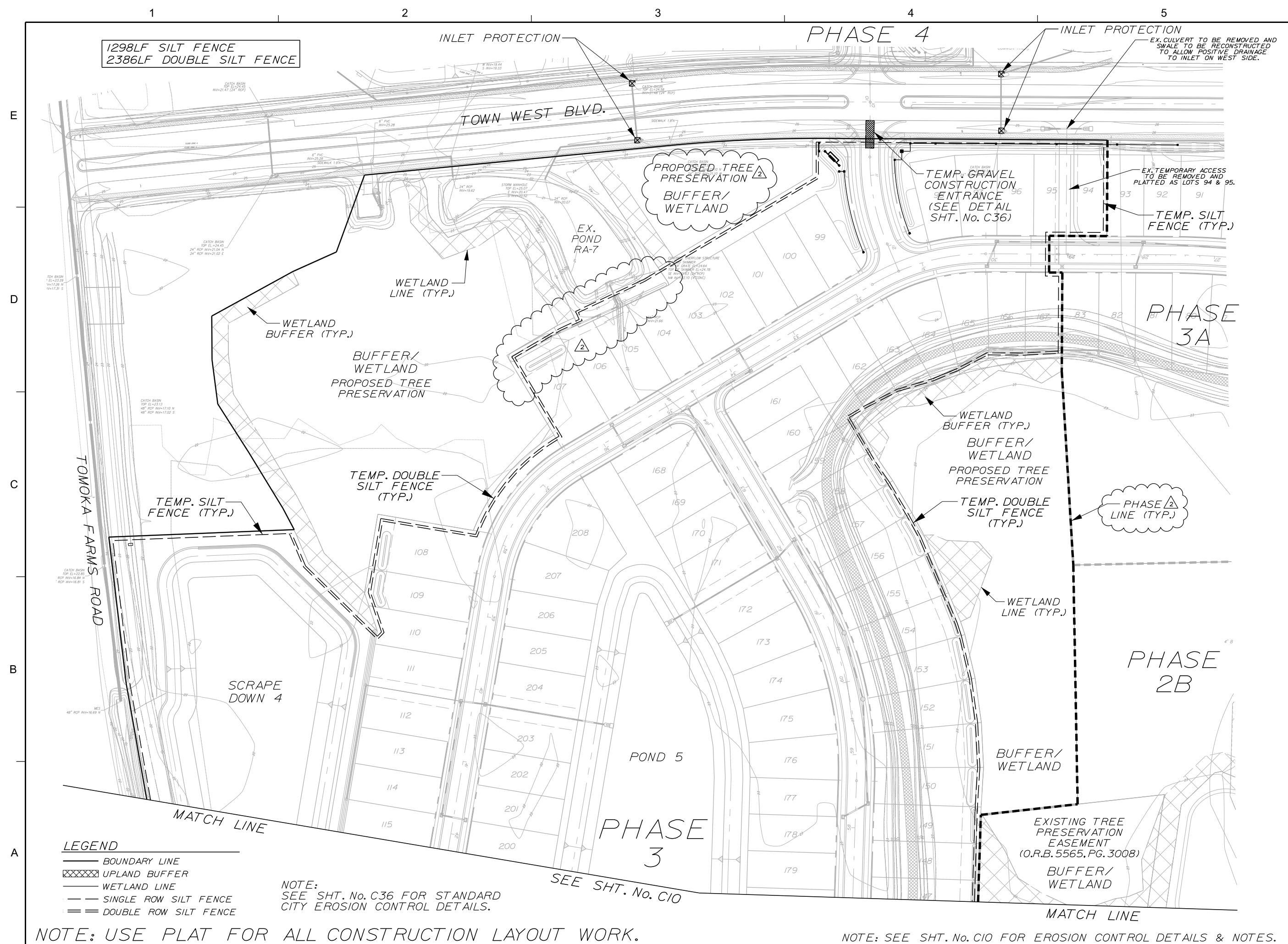
TITLE

ERP
PERMITS

PROJECT: CC 1\Final\SF Phase 3
SHEET NO.

C08A

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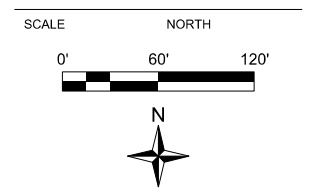


Dewberry
Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.6120
ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL
Danielle Van De Loo
FL PE # 74676
8/31/2017

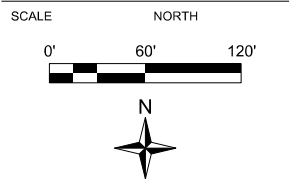


REVISIONS			
No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE
**PHASE 3
EROSION
CONTROL
PLAN**
PROJECT: CC 11FinalSF Phase 3
SHEET NO.

C09



REVISIONS			
	8-14-17	KJK	REV PER CITY
No.	DATE	BY	Description

PROJECT #	<u>PROJECT #50083136</u>
DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

TITLE

PHASE 3 EROSION CONTROL PLAN

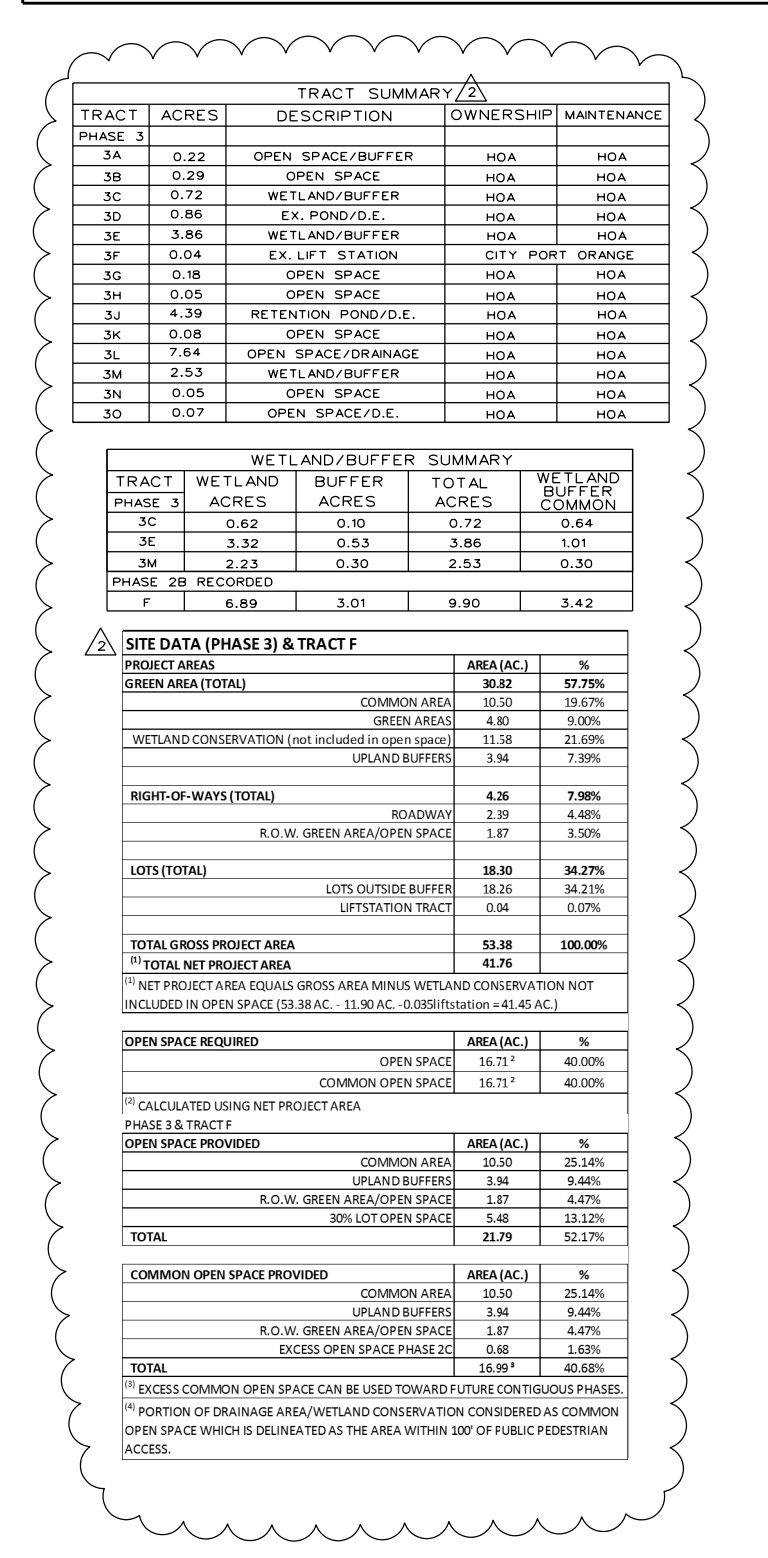
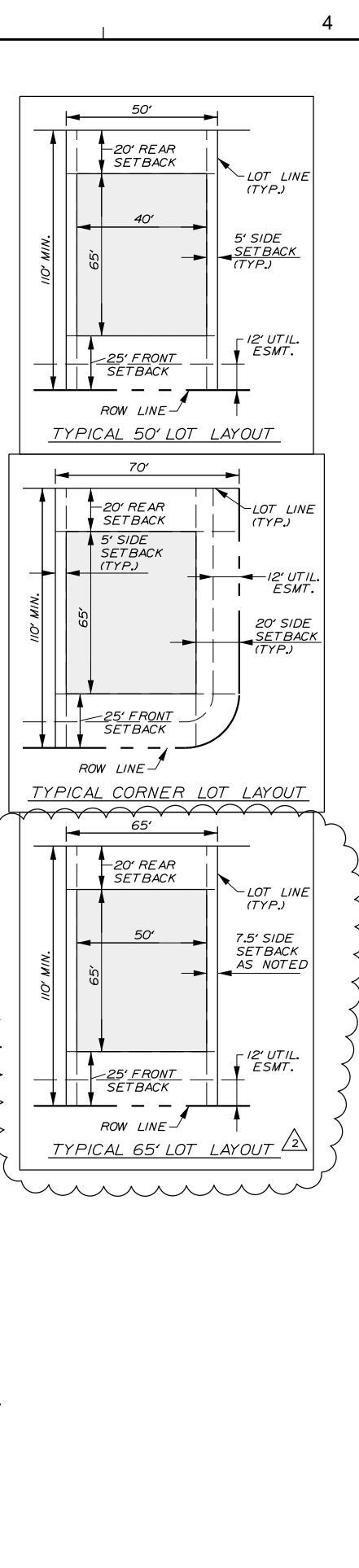
PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C10

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WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

SCALE

NORTH

0' 160' 320'



REVISIONS

	8-14-17	KJK	REV PER CITY
No.	DATE	BY	Description

PROJECT #

PROJECT #50083136

DRAWN BY

KJK

APPROVED BY

DMV

CHECKED BY

DMV

DATE

JULY 2017

DATUM

NAVD 88

TITLE

PHASE 3
SITE PLAN
DATA

PROJECT: CC 1\FinalSF Phase 3

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

C11

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

FL PE # 74676
8/31/2017

REVISIONS

[illegible]

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE
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PHASE 3 SITE PLAN

PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

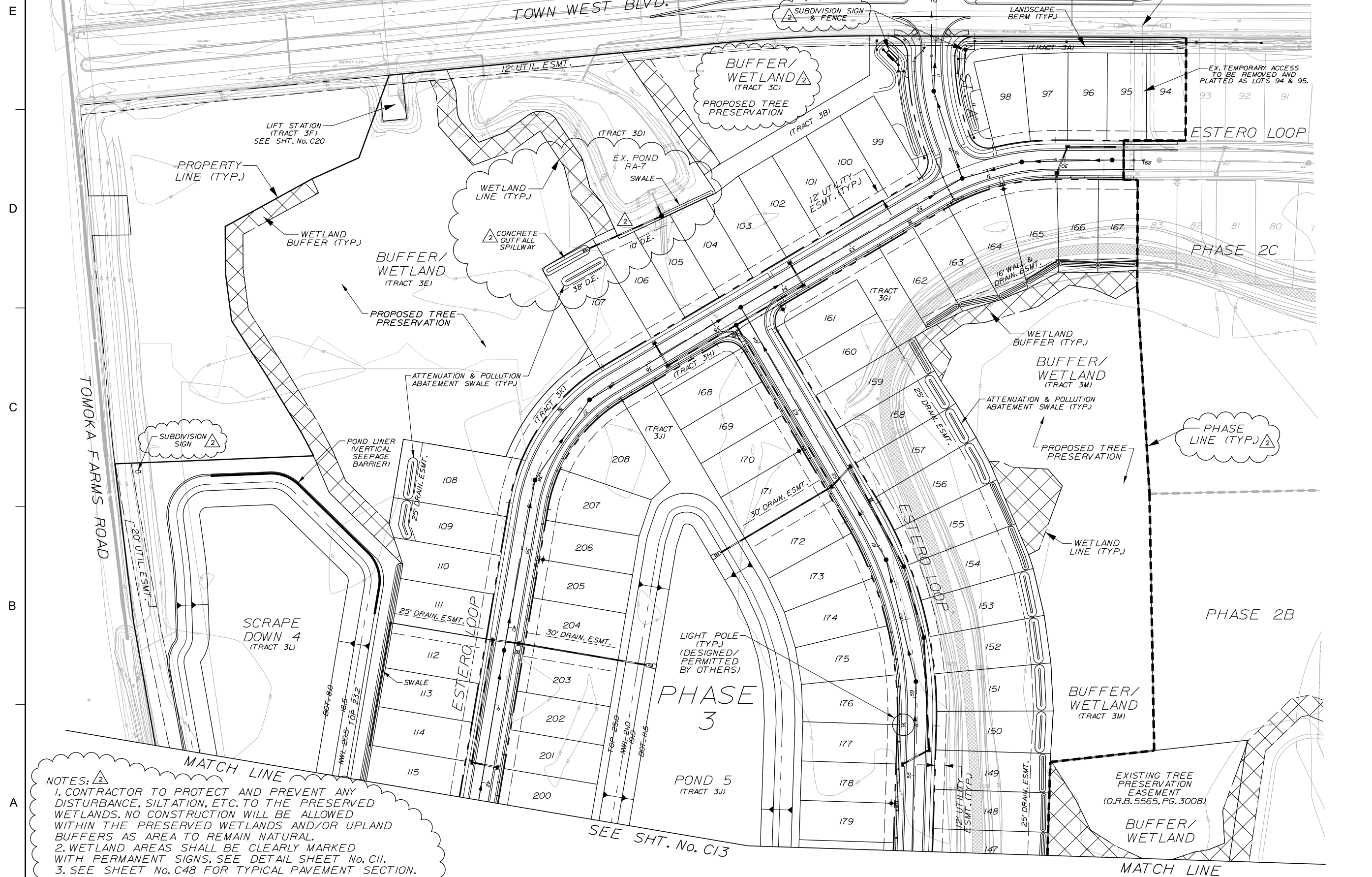
C12

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PHASE 4

NOTE: TOWN WEST BLVD. R/W LANDSCAPE
BUFFER TO BE 10' WIDE.



NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

NOTES: 2

1. CONTRACTOR TO PROTECT AND PREVENT ANY DISTURBANCE, SILTATION, ETC. TO THE PRESERVED WETLANDS. NO CONSTRUCTION WILL BE ALLOWED WITHIN THE PRESERVED WETLANDS AND/OR UPLAND BUFFERS AS AREA TO REMAIN NATURAL.
2. WETLAND AREAS SHALL BE CLEARLY MARKED WITH PERMANENT SIGNS, SEE DETAIL SHEET No. CII.
3. SEE SHEET No. C48 FOR TYPICAL PAVEMENT SECTION.
4. REFER TO LANDSCAPE/HARDSCAPE PLANS FOR DETAILS ON BERMING, SIGNAGE AND FENCING.

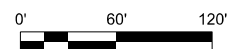
WESTPORT RESERVE (PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

SCALE NORTH



REVISIONS

[illegible]

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
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DATE	JULY 2017
DATUM	NAVD 88

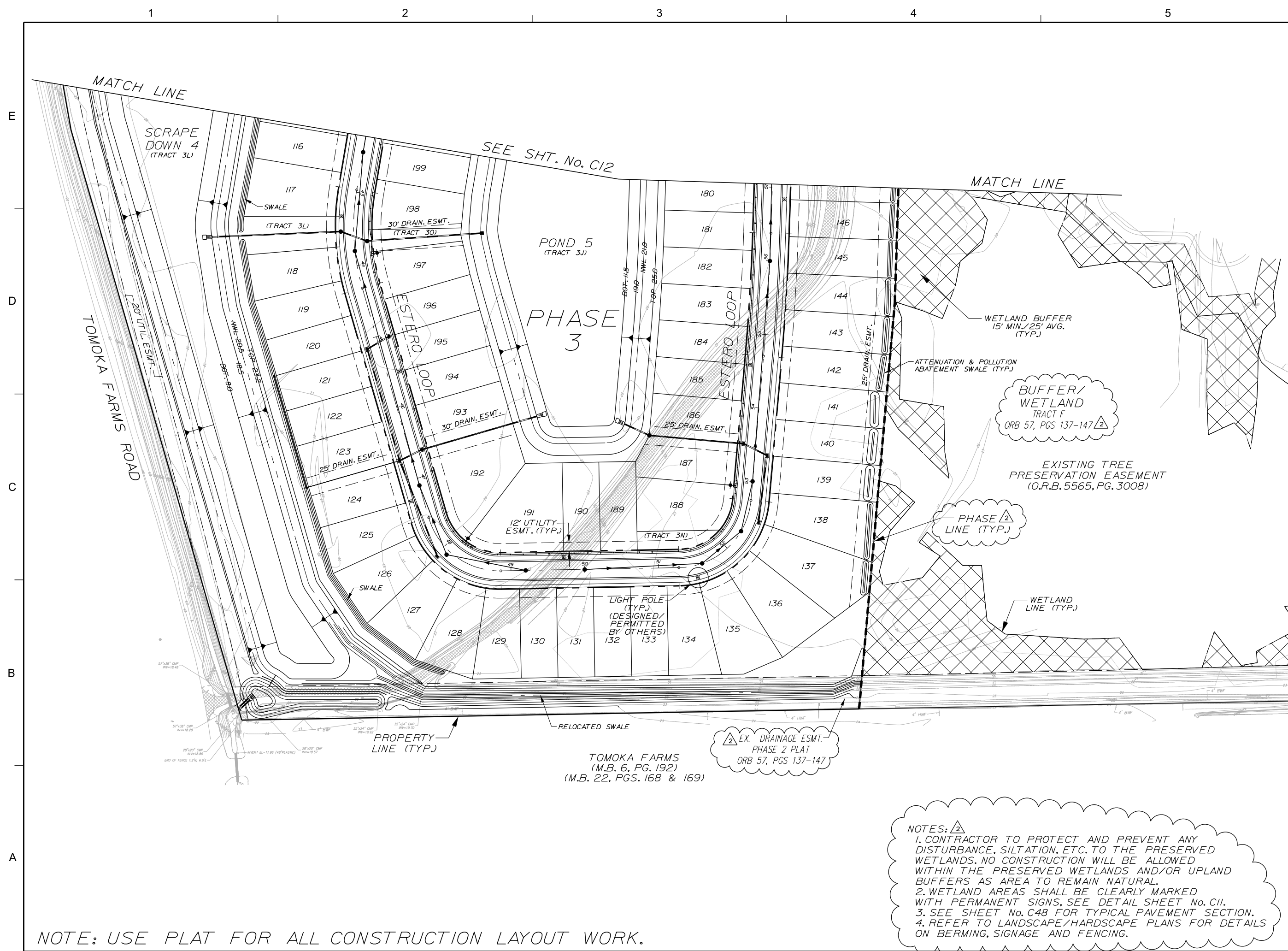
TITLE

PHASE 3 SITE PLAN

PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C13



NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

MAXIMUM LOT BUILDING COVERAGE:
LESS THAN 50% - GREATER THAN 35%
REQUIRES AN OPEN SPACE OF CONTIGUOUS
COMMON PLAY AREA OF 20,000 S.F. PER
250 LOTS
REQUIRED: 20,000 S.F. X 2 = 40,000 S.F. W/1
H.C. SPACE
PROPOSED: TRACT C IN WESTPORT RESERVE
PHASE 2B = 152,024 S.F. (1 H.C. SPACE
PROVIDED)

SEC.29 (d)(10) PLAY AREA REQUIREMENTS:
TRACT C IS PROVIDING 154,661 SQ.FT.
THUS MEETING THE REQUIREMENT FOR
THE ENTIRE DEVELOPMENT INCLUDING
PHASES 2B, 2C, 3 & 4.

COMMON OPEN SPACE
(PHASE 3)

TOMOKA FARMS ROAD

TOWN WEST BLVD.

PHASE 4

ESTERO LOOP

PHASE 2C

PHASE 2B

PHASE 3

POND 5

SEE SHT. No. C15

MATCH LINE

MATCH LINE

SCRAPE
DOWN 4

PROPERTY
LINE (TYP.)

WETLAND
BUFFER (TYP.)

WETLAND
PROPOSED TREE
PRESERVATION

WETLAND
LINE (TYP.)

PROPOSED TREE
PRESERVATION L2

WETLAND
LINE (TYP.)

WETLAND

PROPOSED TREE
PRESERVATION

WETLAND
BUFFER (TYP.)

PHASE LINE (TYP.) 2

EXISTING TREE
PRESERVATION
EASEMENT
(O.R.B. 5565, PG. 3008)

WETLAND

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.



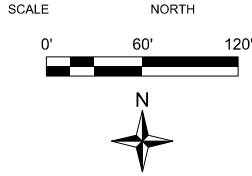
Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.5120
ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017



REVISIONS

No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE
PHASE 3
COMMON
OPEN SPACE
PLAN

PROJECT: CC 11FinalSF Phase 3
SHEET NO.

C14

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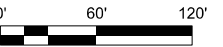
WESTPORT RESERVE
(PHASE 3)

CITY OF FORT WORTH, TEXAS

SEAL

Danielle van De Loo
FL PE # 74676
8/31/2017

SCALE NORTH



REVISIONS

	8-14-17	KJK	REV PER CITY
No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

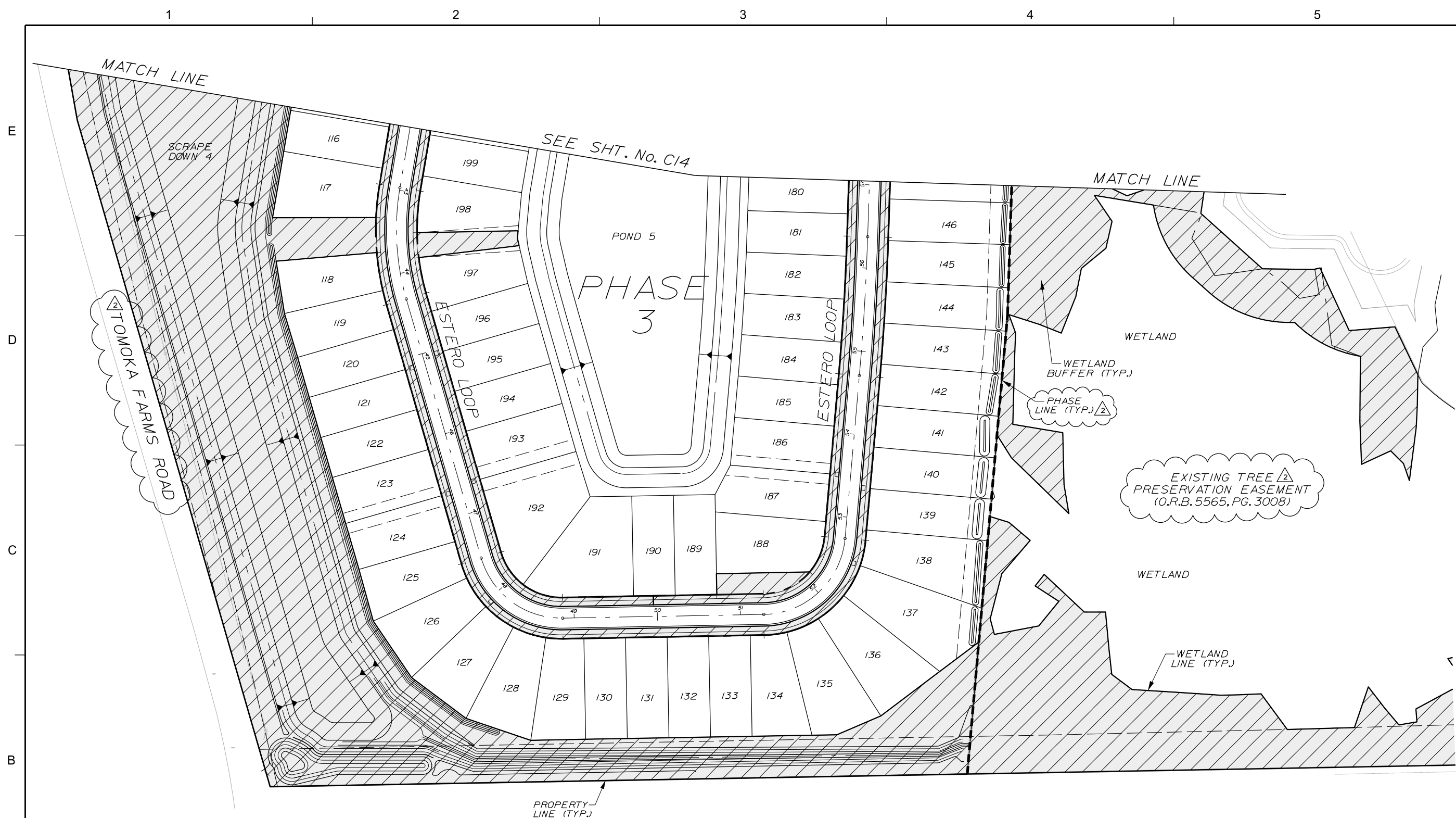
TITLE

PHASE 3
COMMON
OPEN
SPACE PLAN

PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C15



COMMON OPEN SPACE
(PHASE 3)

MAXIMUM LOT BUILDING COVERAGE:

LESS THAN 50% - GREATER THAN 35%
REQUIRES AN OPEN SPACE OF CONTIGUOUS
COMMON PLAY AREA OF 20,000 S.F. PER
250 LOTS

REQUIRED: 20,000 S.F. X 2 = 40,000 S.F. W/1
H.C. SPACE

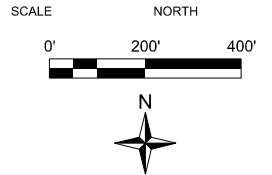
PROPOSED: TRACT C IN WESTPORT RESERVE
PHASE 2B - 152,024 S.F. (1 H.C. SPACE
PROVIDED)

SEC. 29 (d)(XIO) PLAY AREA REQUIREMENTS:
TRACT C IS PROVIDING 154,661 SQ. FT.
THUS MEETING THE REQUIREMENT FOR
THE ENTIRE DEVELOPMENT INCLUDING
PHASES 2B, 2C, 3 & 4.

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

SEAL

KEY PLAN



REVISIONS

No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

**CITY
OVERALL
WETLAND
IMPACT PLAN**

PROJECT: CC 11\FinalSF Phase 3

SHEET NO.

C16

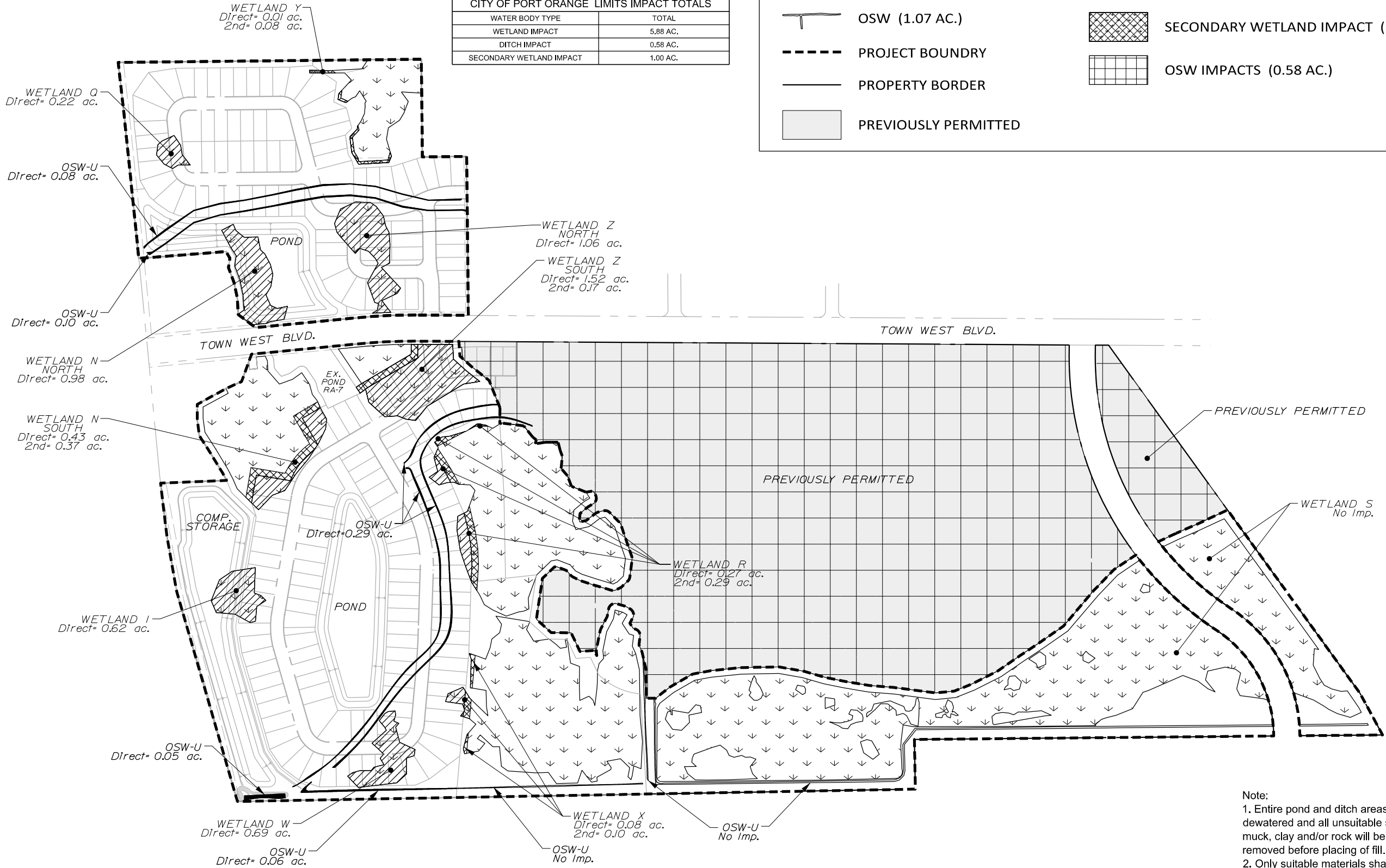
USACE ADDITIONAL IMPACTS PER PHASE 3 & 4	
WATER BODY TYPE	TOTAL
WETLAND IMPACT	0.08 AC.
DITCH IMPACT	0.11 AC.
SECONDARY WETLAND IMPACT	0.10 AC.

SJRWMD ADDITIONAL IMPACTS PER PHASE 3 & 4	
WATER BODY TYPE	TOTAL
WETLAND IMPACT	6.58 AC.
DITCH IMPACT	0.58 AC.
SECONDARY WETLAND IMPACT	0.73 AC.

CITY OF PORT ORANGE LIMITS IMPACT TOTALS	
WATER BODY TYPE	TOTAL
WETLAND IMPACT	5.88 AC.
DITCH IMPACT	0.58 AC.
SECONDARY WETLAND IMPACT	1.00 AC.

LEGEND:

- WETLANDS (43.88 AC.)
- OSW (1.07 AC.)
- PROJECT BOUNDRY
- PROPERTY BORDER
- PREVIOUSLY PERMITTED
- DIRECT WETLAND IMPACT (5.88 AC.)
- SECONDARY WETLAND IMPACT (1.00 AC.)
- OSW IMPACTS (0.58 AC.)



Note:
1. Entire pond and ditch areas will be dewatered and all unsuitable subsoil such as muck, clay and/or rock will be excavated and removed before placing of fill.
2. Only suitable materials shall be used for the fill and shall be done in layers not exceeding 12 inches in thickness and compacted to 95% max density per AASTHO T-180.
3. Any unsuitable soils such as clay, muck or any organic soils are found, all unsuitable soils shall be excavated and replaced with suitable soils.

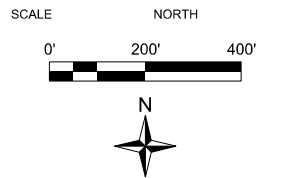
WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

KEY PLAN



REVISIONS

No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY
1	7-21-17	KJK	REV PER QA

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE
CITY OVERALL
WETLAND &
UPLAND BUFFER
MITIGATION/
PRESERVATION PLAN

PROJECT: CC 11\FinalSF Phase 3

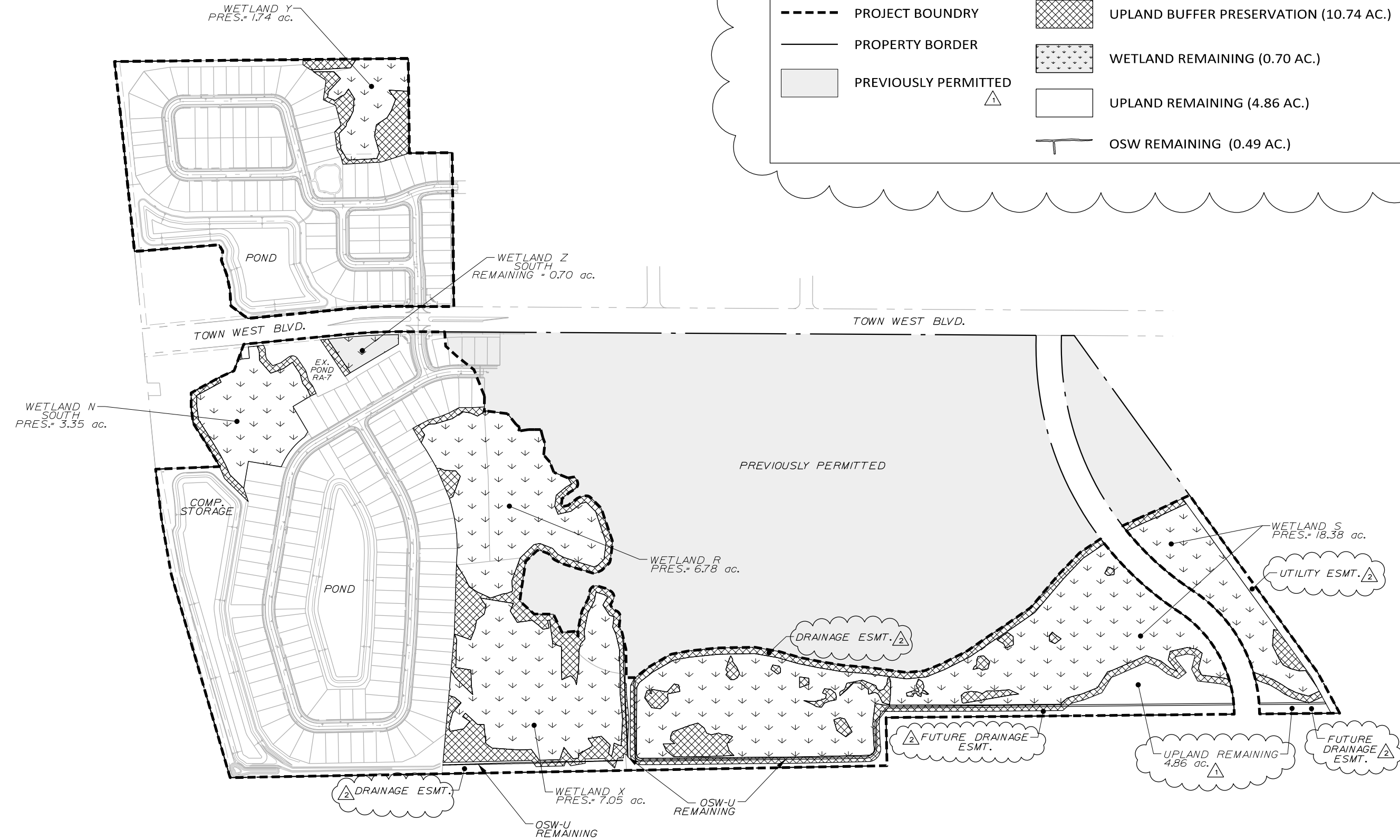
SHEET NO.

C17

LEGEND: 1

- PROJECT BOUNDRY
- PROPERTY BORDER
- PREVIOUSLY PERMITTED 1

- WETLAND PRESERVATION (37.30 AC.)
- UPLAND BUFFER PRESERVATION (10.74 AC.)
- WETLAND REMAINING (0.70 AC.)
- UPLAND REMAINING (4.86 AC.)
- OSW REMAINING (0.49 AC.)



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WESTPORT RESERVE (PHASE 3)

CITY OF PORT ORANGE, FLORIDA

1107/1210

SEAL

KEY PLAN

SCALE NORTH



REVISIONS

No.	DATE	BY	Description

PROJECT #	<u>PROJECT #50083136</u>
DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

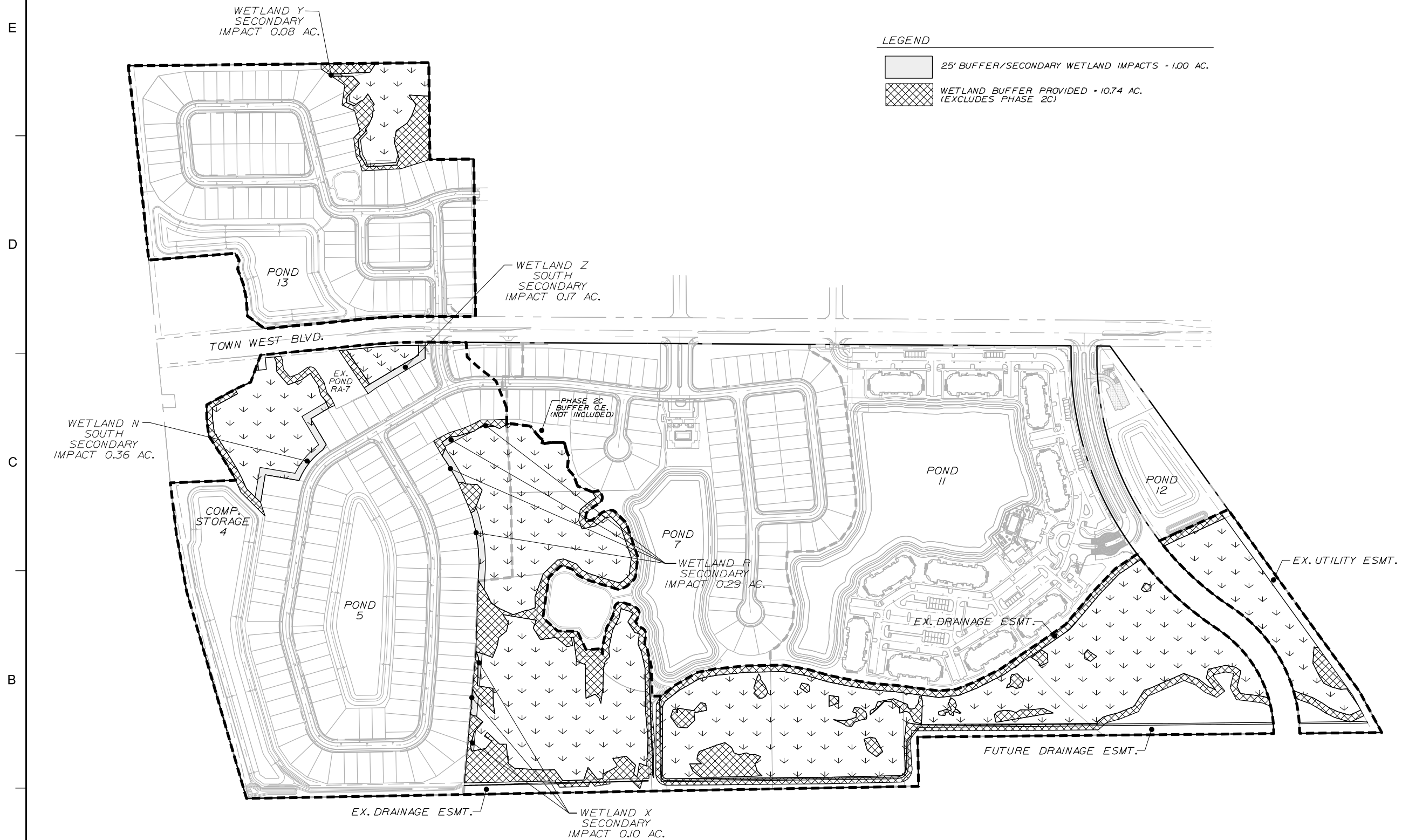
TITLE

CITY OVERALL
BUFFER
MITIGATION
PLAN

PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C17A



J:\CC 1\Final\City Exhibit\phase 3\CC1-SF PH3&4 dry Buffer Mitigation Plan.dgn 4:18:11 PM

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LEGEND

- PROPOSED CONSERVATION EASEMENT
- EXISTING CONSERVATION EASEMENT
- EXISTING DRAINAGE EASEMENT



Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.6120
ENGINEERING BUSINESS #8794

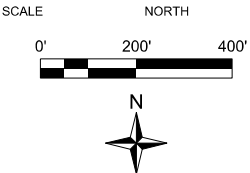
WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

8/31/2017

KEY PLAN



REVISIONS

No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY

PROJECT # PROJECT #50083136
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APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

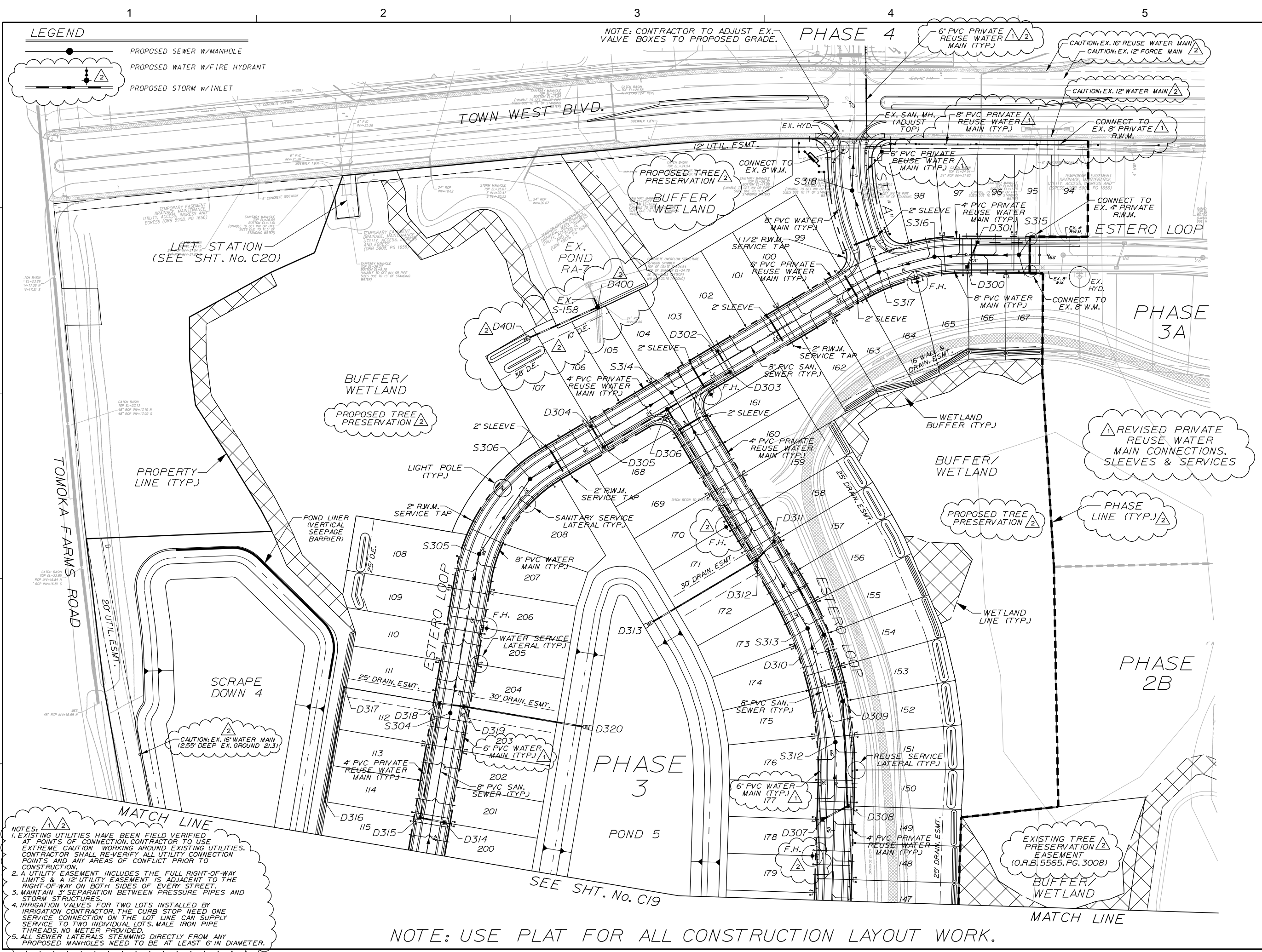
CITY OVERALL
CONSERVATION
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PROJECT: CC 11FinalSF Phase 3

SHEET NO.

C17B

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LEGEND

- PROPOSED SEWER W/MANHOLE
- PROPOSED WATER W/FIRE HYDRANT
- PROPOSED STORM w/INLET

- NOTES:**
- EXISTING UTILITIES HAVE BEEN FIELD VERIFIED AT POINTS OF CONNECTION. CONTRACTOR TO USE EXTREME CAUTION WORKING AROUND EXISTING UTILITIES. CONTRACTOR SHALL RE-VERIFY ALL UTILITY CONNECTION POINTS AND ANY AREAS OF CONFLICT PRIOR TO CONSTRUCTION.
 - A UTILITY EASEMENT INCLUDES THE FULL RIGHT-OF-WAY LIMITS & A 12' UTILITY EASEMENT IS ADJACENT TO THE RIGHT-OF-WAY ON BOTH SIDES OF EVERY STREET.
 - MAINTAIN 3' SEPARATION BETWEEN PRESSURE PIPES AND STORM STRUCTURES.
 - IRRIGATION VALVES FOR TWO LOTS INSTALLED BY IRRIGATION CONTRACTOR. THE CURB STOP NEED ONE SERVICE CONNECTION ON THE LOT LINE CAN SUPPLY SERVICE TO TWO INDIVIDUAL LOTS, MALE IRON PIPE THREADS, NO METER PROVIDED.
 - ALL SEWER LATERALS STEMMING DIRECTLY FROM ANY PROPOSED MANHOLES NEED TO BE AT LEAST 6" IN DIAMETER.

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

Dewberry Engineers Inc.
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ENGINEERING BUSINESS - 8794

WESTPORT RESERVE (PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

SCALE NORTH

0' 60' 120'

REVISIONS

No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY
2	7-21-17	KJK	REV PER QA

PROJECT # PROJECT #50083136

DRAWN BY KJK

APPROVED BY DMV

CHECKED BY DMV

DATE JULY 2017

DATUM NAVD 88

TITLE

PHASE 3 UTILITY PLAN

PROJECT: CC 11FinalSF Phase 3

SHEET NO.

C18

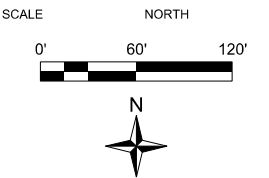
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WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017



REVISIONS

No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY
2	7-21-17	KJK	REV PER QA

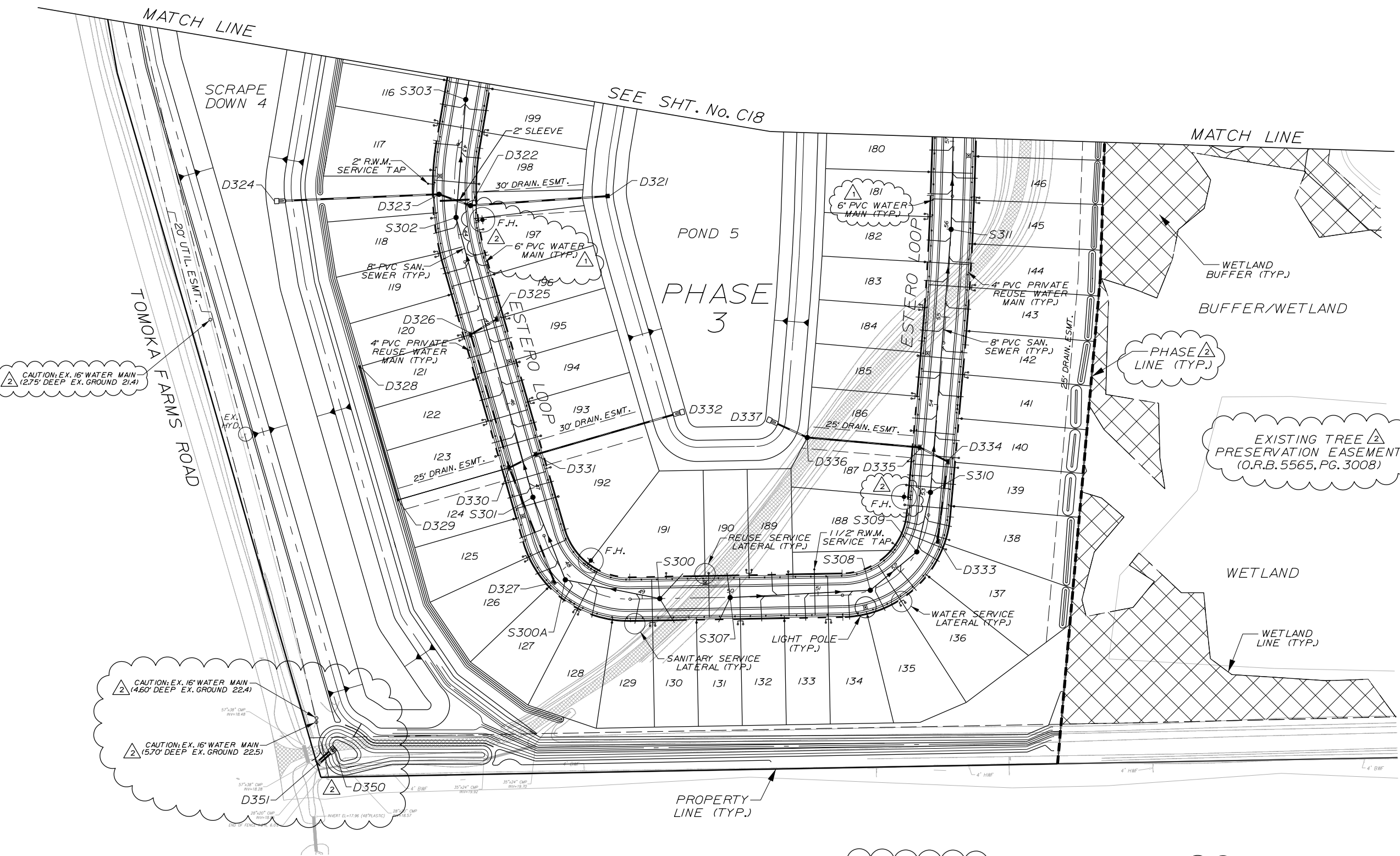
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DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

PHASE 3
UTILITY
PLAN

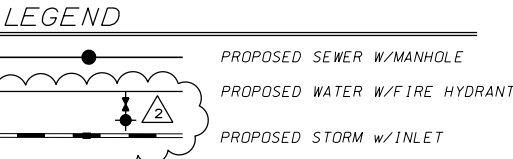
PROJECT: CC 11\FinalSF Phase 3
SHEET NO.

C19



NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

1 REVISED PRIVATE REUSE WATER MAIN CONNECTIONS, SLEEVES & SERVICES



NOTES: 1, 2
1. EXISTING UTILITIES HAVE BEEN FIELD VERIFIED AT POINTS OF CONNECTION. CONTRACTOR TO USE EXTREME CAUTION WORKING AROUND EXISTING UTILITIES. CONTRACTOR SHALL RE-VERIFY ALL UTILITY CONNECTION POINTS AND ANY AREAS OF CONFLICT PRIOR TO CONSTRUCTION.
2. A UTILITY EASEMENT INCLUDES THE FULL RIGHT-OF-WAY LIMITS & A 12' UTILITY EASEMENT IS ADJACENT TO THE RIGHT-OF-WAY ON BOTH SIDES OF EVERY STREET.
3. MAINTAIN 3' SEPARATION BETWEEN PRESSURE PIPES AND STORM STRUCTURES.
4. IRRIGATION VALVES FOR TWO LOTS INSTALLED BY IRRIGATION CONTRACTOR. THE CURB STOP NEED ONE SERVICE CONNECTION ON THE LOT LINE CAN SUPPLY SERVICE TO TWO INDIVIDUAL LOTS. MALE IRON PIPE THREADS. NO METER PROVIDED.
5. ALL SEWER LATERALS STEMMING DIRECTLY FROM ANY PROPOSED MANHOLES NEED TO BE AT LEAST 6" IN DIAMETER.

SHEET NO.

C20

POND LINER NOTES:
1. THE POND LINER DEPICTED IS AN APPROXIMATE LOCATION. CONTRACTOR IS TO REFER TO THE GEOTECHNICAL REPORT BY UNIVERSAL ENGINEERING SCIENCES FOR LINER DETAILS AND CONSTRUCTION SPECIFICATIONS.
2. GEOTECH TO APPROVE ALL MATERIALS PRIOR TO CONSTRUCTION.
3. GEOTECH TO BE ON-SITE DURING CONSTRUCTION OF POND LINER AND SHALL VERIFY INSTALLATION.

PHASE 4 (SEE SHT. No. C33 FOR WEST TOWN BLVD. TURN LANE)



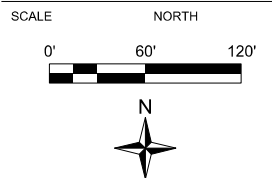
Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.5120
ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017



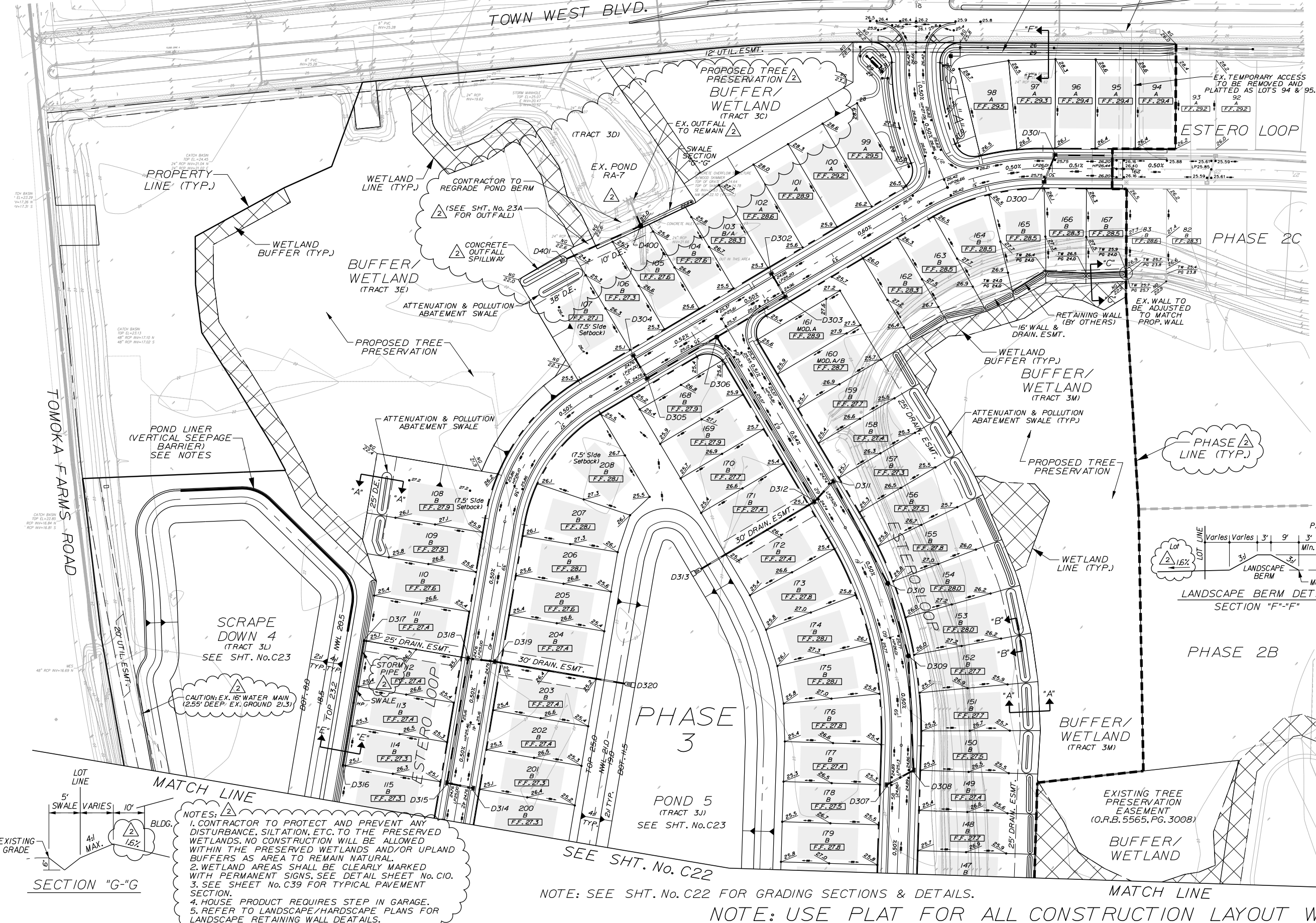
REVISIONS			
No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY

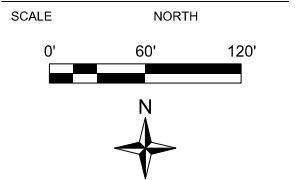
PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

PHASE 3
LOT & BLOCK
GRADING PLAN

PROJECT: CC 11\Final\SF Phase 3
SHEET NO.

C21





REVISIONS			
	8-14-17	KJK	REV PER CITY
No.	DATE	BY	Description

PROJECT #	<u>PROJECT #50083136</u>
DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

TITLE

PHASE 3 LOT & BLOCK GRADING PLAN

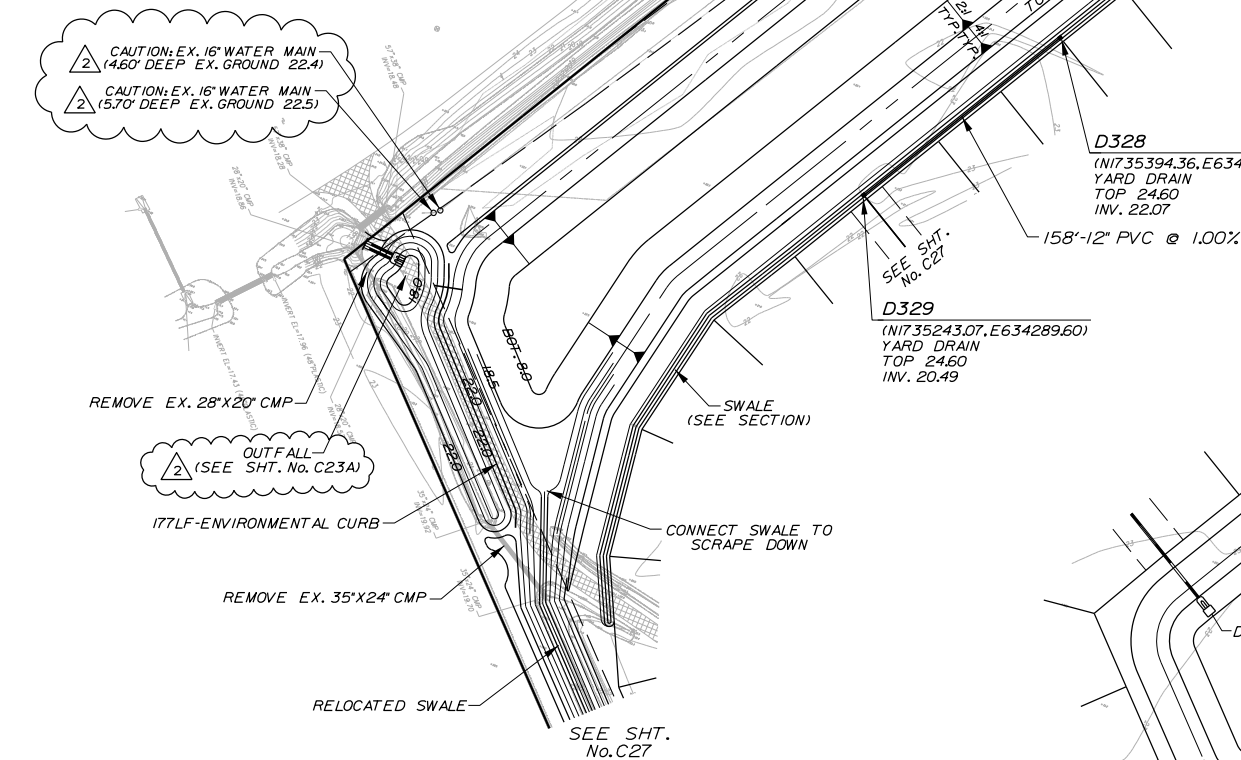
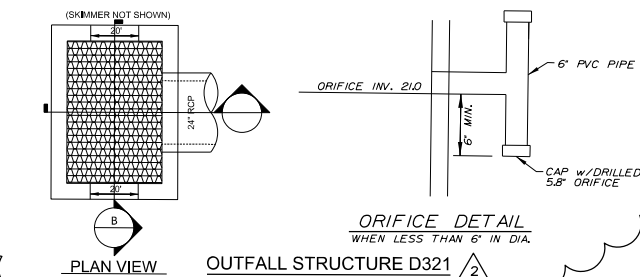
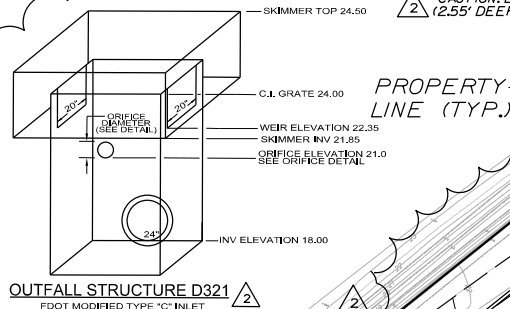
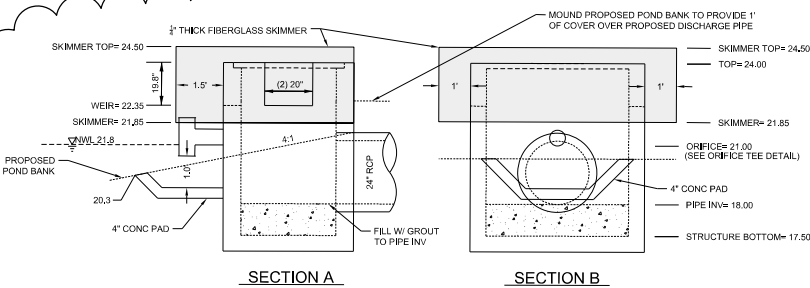
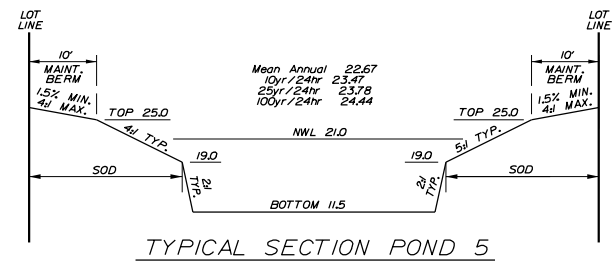
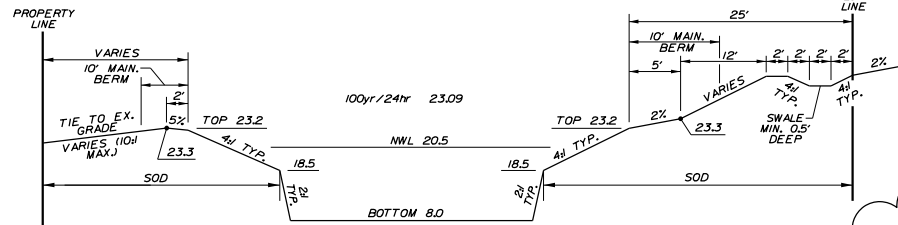
PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C22

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.



- NOTES:
1. CONTRACTOR TO PROTECT AND PREVENT ANY DISTURBANCE, SILTATION, ETC. TO THE PRESERVED WETLAND. NO CONSTRUCTION WILL BE ALLOWED WITHIN THE PRESERVED WETLAND AS AREA TO REMAIN NATURAL.
 2. WETLAND AREAS SHALL BE CLEARLY MARKED WITH PERMANENT SIGNS, SEE DETAIL SHEET No. C11.
 3. POND TOP OF BANK MINIMUM 10' OFF BACK OF LOT. ACCESS AND MAINTANANCE EASEMENT TO BE GRANTED TO CITY OF PORT ORANGE OVER POND TRACT.



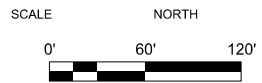
Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.6120
ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017



REVISIONS			
No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE
**PHASE 3
POND 5 &
SCRAPE DOWN 4**

PROJECT: CC 1\Final\SF Phase 3
SHEET NO.

C23

1

2

3

4

5

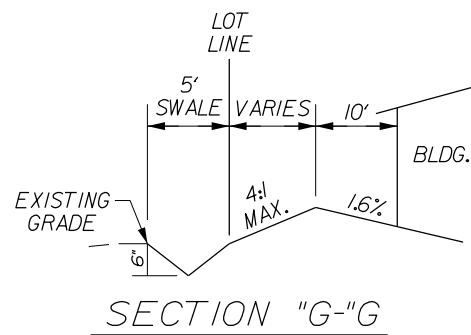
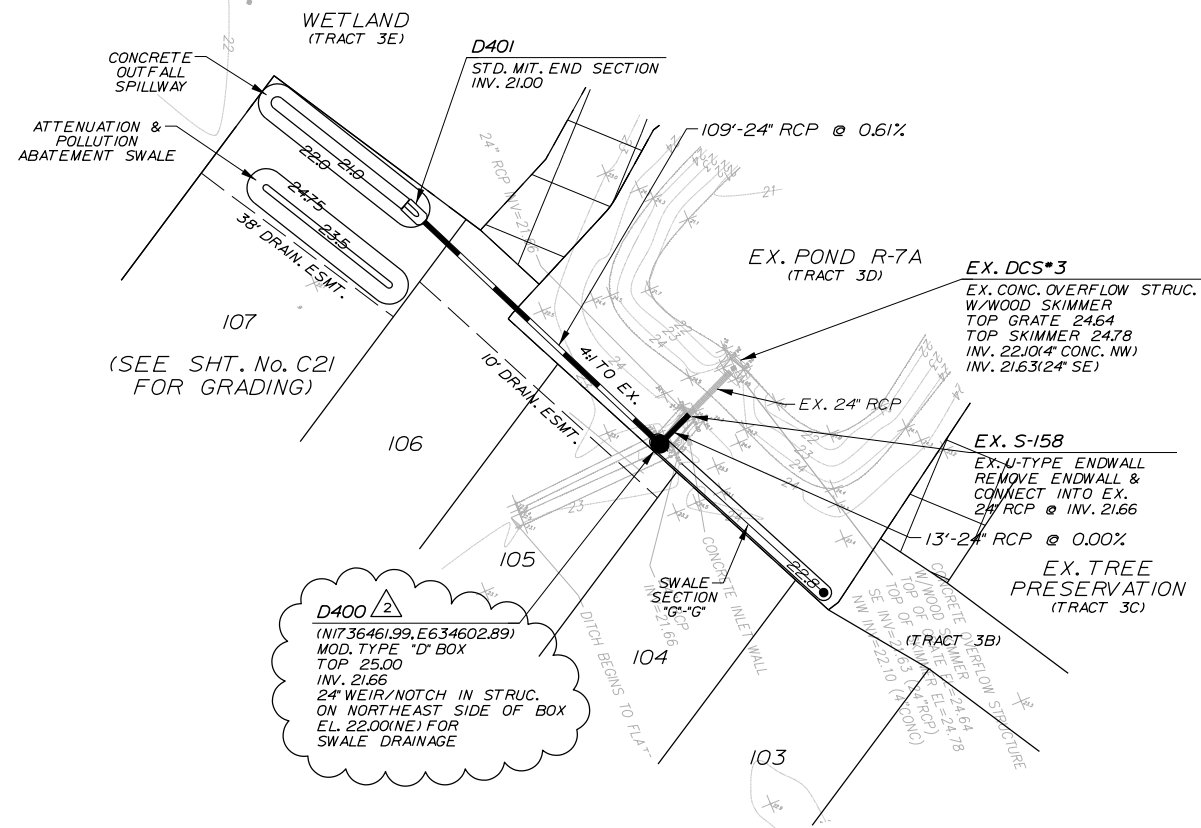
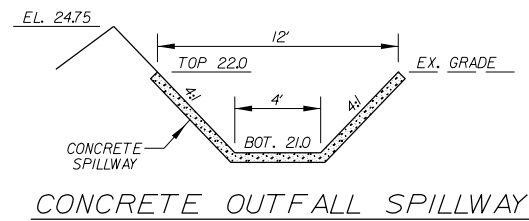
E

D

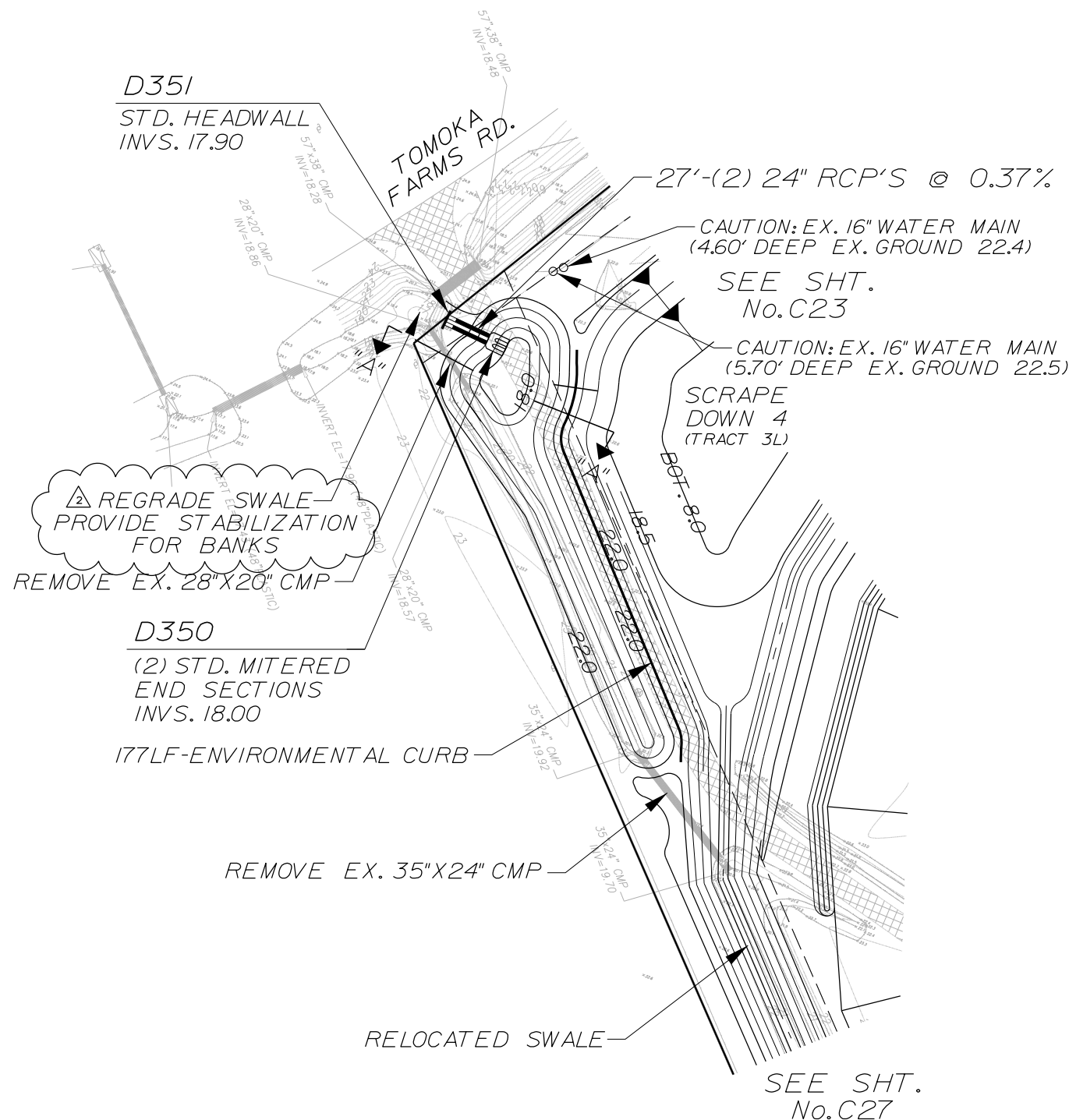
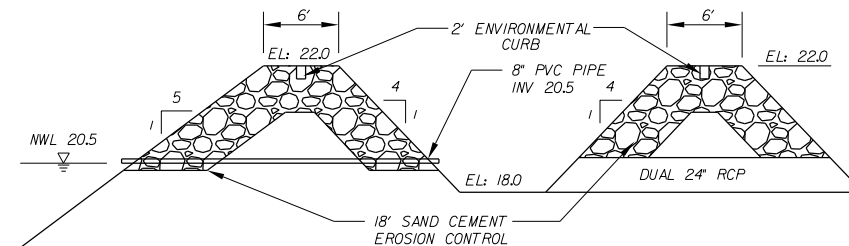
C

B

A



NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

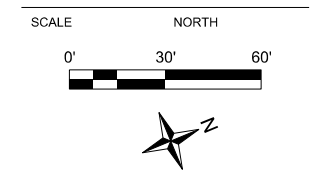


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WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL
Danielle Van De Loo
FL PE # 74676
8/31/2017



REVISIONS			
No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE
PHASE 3 DRAINAGE

PROJECT: CC 11FinalSF Phase 3
SHEET NO.

C23A

J:\ACC 11FinalSF Phase 3\CC1-SF PH3&4 PH3 Drainage-01.dgn 4:20:05 PM

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

LEGEND	EXISTING	PROPOSED
SANITARY SEWER SYSTEM		
STORM SEWER SYSTEM		
WATER SYSTEM		
FIRE HYDRANT		
DRAINAGE STRUCTURE		D3
SANITARY STRUCTURE		S4
LOT NUMBER		165
RIGHT-OF-WAY		
LIGHT POLE		

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WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

KEY PLAN

SCALE
0' 40' 80'
NORTH

PROFILE SCALE:
1"=40' HORIZ.
1"=4' VERT.

REVISIONS			
No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

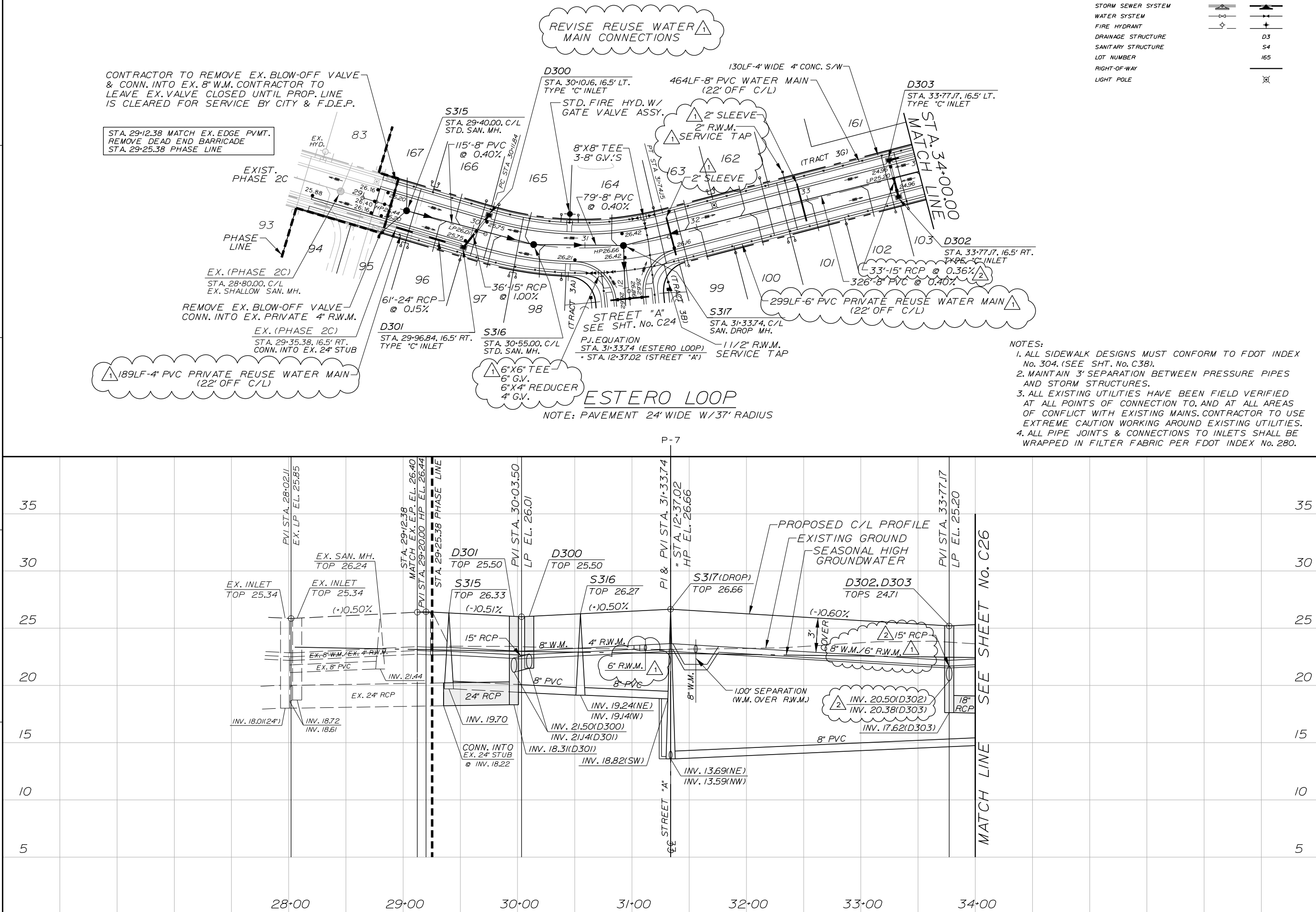
TITLE

PHASE 3
ESTERO LOOP
PLAN & PROFILE

PROJECT: CC 11FinalSF Phase 3

SHEET NO.

C25



LEGEND

DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER SYSTEM	—○—	—●—
STORM SEWER SYSTEM	—△—	—▲—
WATER SYSTEM	—◇—	—◆—
FIRE HYDRANT	—◇—	—◆—
DRAINAGE STRUCTURE		D3
SANITARY STRUCTURE		S4
LOT NUMBER		165
RIGHT-OF-WAY		—
LIGHT POLE		—○—

NOTES:

1. ALL SIDEWALK DESIGNS MUST BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CALIFORNIA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 100, AND THE LATEST EDITIONS OF THE CALIFORNIA STANDARD SPECIFICATIONS FOR HIGHWAY MATERIALS, SECTION 100.
2. MAINTAIN 3' SEPARATION BETWEEN SANITARY AND STORM STRUCTURES.
3. ALL EXISTING UTILITIES MUST BE LOCATED AND DEPTHS VERIFIED AT ALL POINTS OF CONFLICT WITH EXISTING OR PROPOSED STRUCTURES. EXTREME CAUTION WORKING IN EXISTING UTILITIES.
4. ALL PIPE JOINTS & CONNECTIONS MUST BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CALIFORNIA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 100, AND THE LATEST EDITIONS OF THE CALIFORNIA STANDARD SPECIFICATIONS FOR HIGHWAY MATERIALS, SECTION 100.

ESTERO LOOP

NOTE: PAVEMENT 24' WIDE W/37' RADIUS



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WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Daniella Van De Loo
FL PE # 74676
8/31/2017

KEY PLAN

N

SCALE

NORTH

0' 40' 80'

PROFILE SCALE:
1"=40' HORIZ.
1"=4' VERT.

REVIEWS			
	8-14-17	KJK	REV PER CITY
	7-21-17	KJK	REV PER QA
No.	DATE	BY	Description

PROJECT #	<u>PROJECT #50083136</u>
DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

TITLE

PHASE 3
ESTERO LOOP
PLAN &
PROFILE

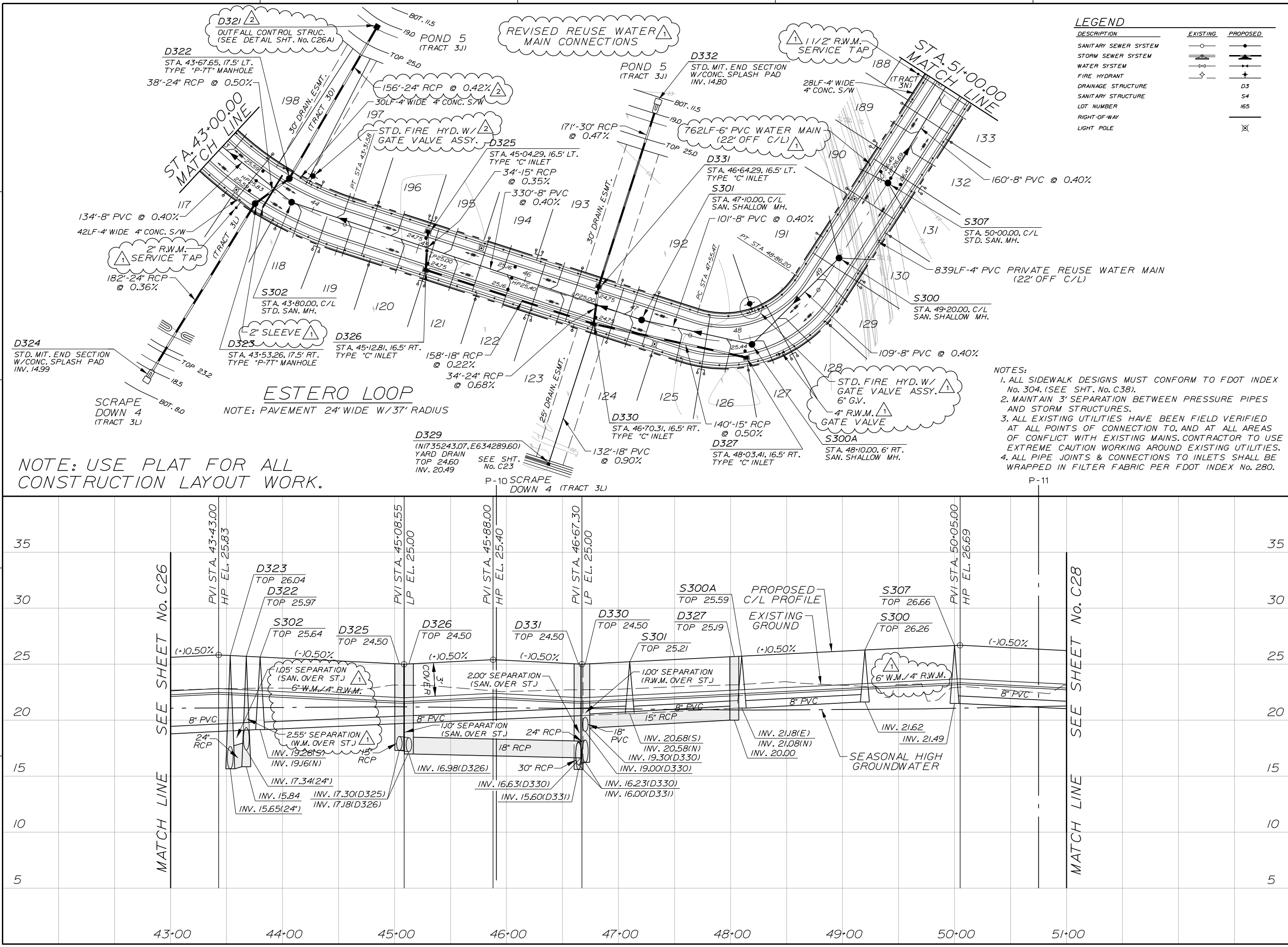
PROJECT: CC 1\FinalSF Phase 3

SHEET NO.

C26

1 2 3 4 5

E
D
C
B
A



LEGEND

DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER SYSTEM	—○—	—●—
STORM SEWER SYSTEM	—X—	—+—
WATER SYSTEM	—◇—	—*—
FIRE HYDRANT	—H—	—H—
DRAINAGE STRUCTURE	—S—	—S—
SANITARY STRUCTURE	—D—	—D—
LOT NUMBER	165	165
RIGHT-OF-WAY	—R—	—R—
LIGHT POLE	—L—	—L—

- NOTES:**
1. ALL SIDEWALK DESIGNS MUST CONFORM TO FDOT INDEX No. 304. (SEE SHT. No. C38).
 2. MAINTAIN 3' SEPARATION BETWEEN PRESSURE PIPES AND STORM STRUCTURES.
 3. ALL EXISTING UTILITIES HAVE BEEN FIELD VERIFIED AT ALL POINTS OF CONNECTION TO, AND AT ALL AREAS OF CONFLICT WITH EXISTING MAINS. CONTRACTOR TO USE EXTREME CAUTION WORKING AROUND EXISTING UTILITIES.
 4. ALL PIPE JOINTS & CONNECTIONS TO INLETS SHALL BE WRAPPED IN FILTER FABRIC PER FDOT INDEX No. 280.

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**WESTPORT RESERVE
(PHASE 3)**

CITY OF PORT ORANGE, FLORIDA

SEAL

KEY PLAN

SCALE

0' 40' 80'

NORTH

PROFILE SCALE:
1"=40' HORZ.
1"=4' VERT.

REVISIONS

No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY
2	7-21-17	KJK	REV PER QA

PROJECT # PROJECT #50083136

DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

**PHASE 3
ESTERO LOOP
PLAN &
PROFILE**

PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C27

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.



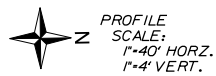
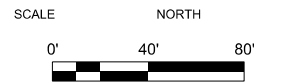
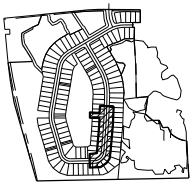
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ORLANDO, FL 32803
PHONE: 407.843.6120
ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017



PROFILE
SCALE:
1"=40' HORIZ.
1"=4' VERT.

REVISIONS

No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY
2	7-21-17	KJK	REV PER QA

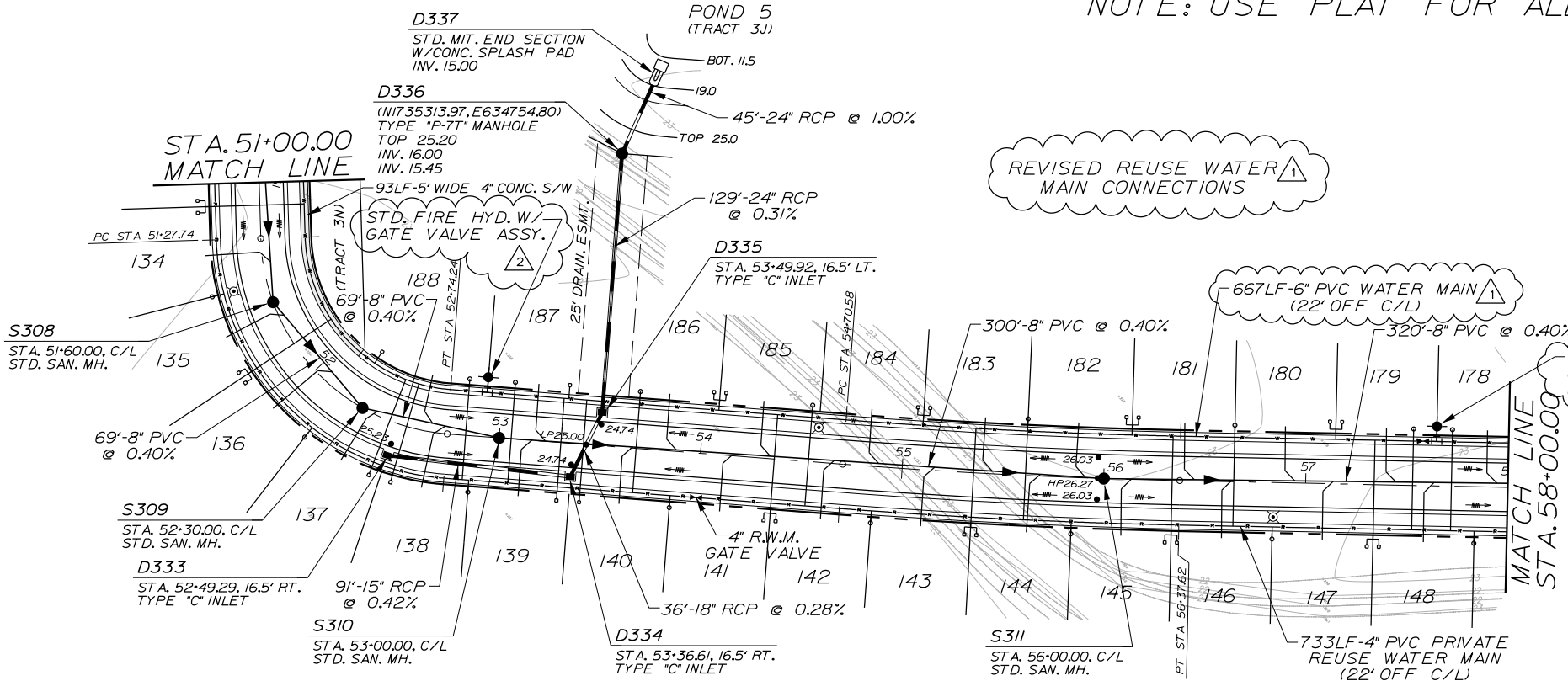
PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

PHASE 3
ESTERO LOOP
PLAN &
PROFILE

PROJECT: CC 1\FinalSF Phase 3
SHEET NO.

C28



ESTERO LOOP

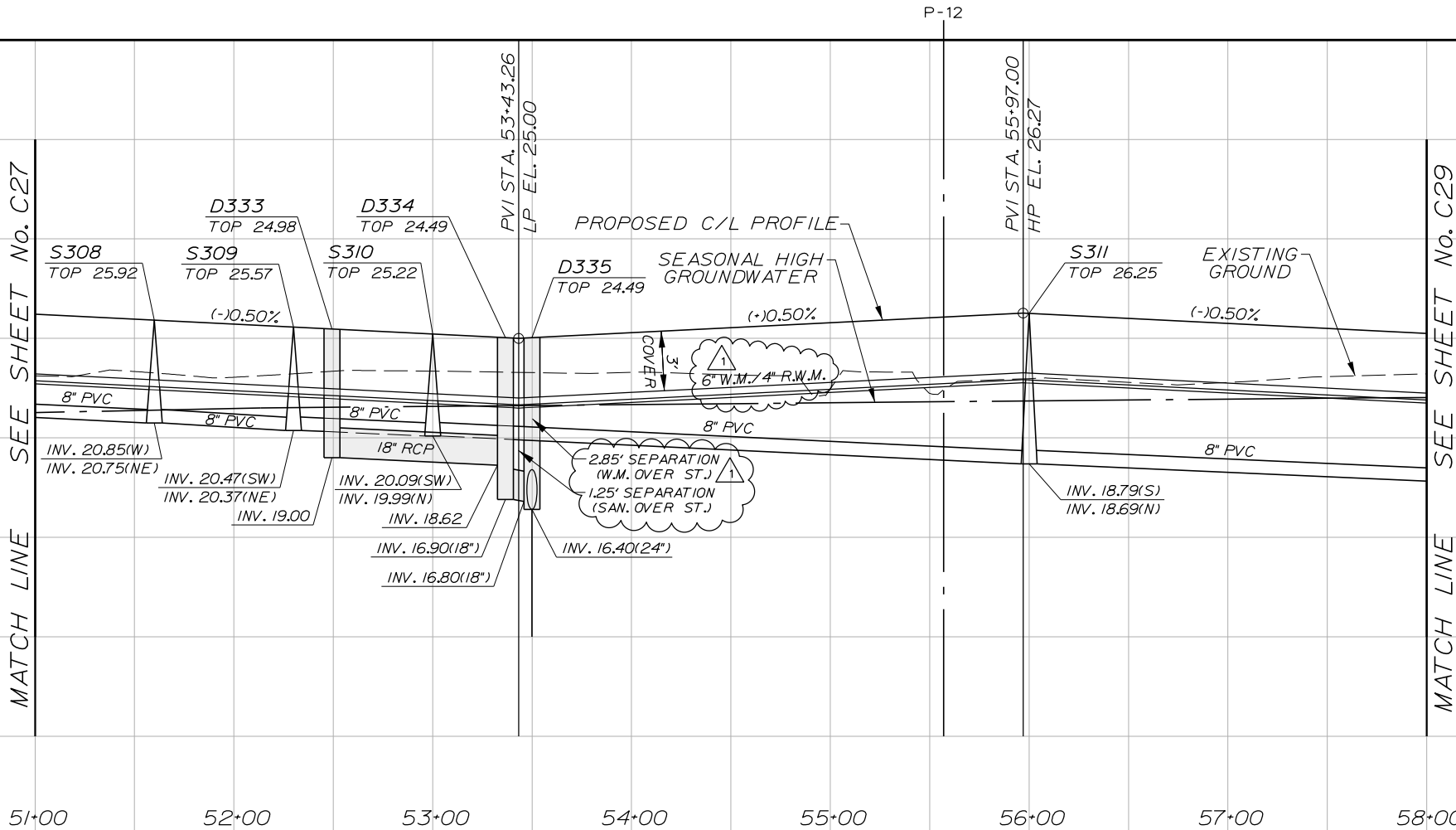
NOTE: PAVEMENT 24' WIDE W/37' RADIUS

NOTES:

1. ALL SIDEWALK DESIGNS MUST CONFORM TO FDOT INDEX No. 304. (SEE SHT. No. C38).
2. MAINTAIN 3' SEPARATION BETWEEN PRESSURE PIPES AND STORM STRUCTURES.
3. ALL EXISTING UTILITIES HAVE BEEN FIELD VERIFIED AT ALL POINTS OF CONNECTION TO, AND AT ALL AREAS OF CONFLICT WITH EXISTING MAINS. CONTRACTOR TO USE EXTREME CAUTION WORKING AROUND EXISTING UTILITIES.
4. ALL PIPE JOINTS & CONNECTIONS TO INLETS SHALL BE WRAPPED IN FILTER FABRIC PER FDOT INDEX No. 280.

MATCH LINE SEE SHEET No. C27

MATCH LINE SEE SHEET No. C29



(SEE SHT. No. C33 FOR WEST TOWN BLVD. TURN LANES)

PHASE 4

CROSSWALK W/STOP BAR &
STOP SIGN (TYP.) SEE
DETAILS THIS SHEET

TOWN WEST BLVD.

6" SOLID WHITE
ARROW (TYP.)

6" SOLID WHITE
W/MONO DIRECTIONAL
COLORLESS WHITE RPM'S (TYP.)

6" SOLID
YELLOW (TYP.)

ESTERO LOOP

NOTE:
PEDESTRIAN CROSSING
SIGNS TO BE PLACED
275' IN ADVANCE OF
SIDEWALK CROSSING
ACROSS TOWN WEST
BLVD.

REMOVE TRAFFIC
BARRICADES

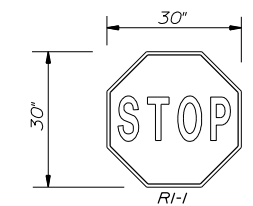
STOP BAR &
STOP SIGN (TYP.) SEE
DETAILS THIS SHEET

STRIPING NOTES:

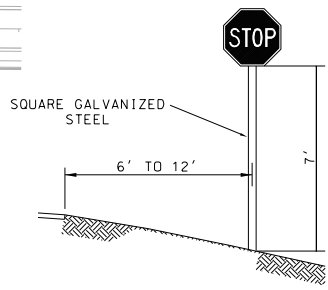
1. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC
WITH RPM'S AND WILL BE INSTALLED IN ACCORDANCE
WITH FDOT STANDARD INDEX #17346. (LATEST EDITION)

2. FOR SIGN DETAILS, REFER TO THE "STANDARD
HIGHWAY SIGNS" PUBLISHED BY THE U.S. DEPARTMENT
OF TRANSPORTATION, FEDERAL HIGHWAY
ADMINISTRATION, 2004, THE MANUAL ON UNIFORM
TRAFFIC CONTROL DEVICES (MUTCD), 2009, AND THE
FDOT DESIGN STANDARDS (LATEST EDITION).

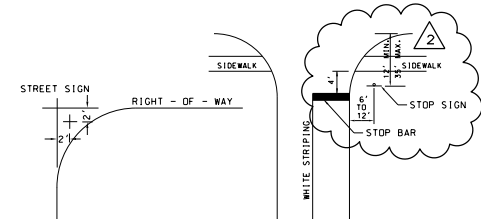
3. PAVEMENT MARKINGS SHOULD BE PLACED AS
SHOWN IN THE PLANS AND AS DESCRIBED WITHIN
THE APPROPRIATE TRAFFIC DESIGN STANDARD
INDEX (LATEST EDITION).



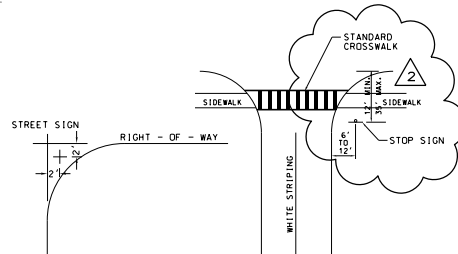
TYPICAL STOP SIGN
(UNLESS OTHERWISE SPECIFIED)



STOP SIGN DETAIL
TYPICAL TRAFFIC CONTROL SIGN



SIGNING & STRIPING DETAILS
(INTERIOR INTERSECTIONS)



SIGNING & STRIPING DETAILS
(TOWN WEST BLVD. INTERSECTION)

PHASE LINE (TYP.)

PHASE
3

MATCH LINE

SEE SHT. No. C32

MATCH LINE

NOTE:
THE DESIGN AND INSTALLATION OF ALL SIGNAGE, STRIPING AND
PAVEMENT MARKINGS MUST BE APPROVED BY PORT ORANGE
TRAFFIC ENGINEERING PRIOR TO PUBLIC USE OF ROADWAY AND
TRAFFIC IMPROVEMENTS WITHIN THE RIGHT-OF-WAY.

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.



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ORLANDO, FL 32803
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WESTPORT RESERVE
(PHASE 3)

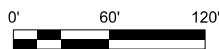
CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

SCALE

NORTH



REVISIONS

No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY

PROJECT # PROJECT #50083136

DRAWN BY KJK

APPROVED BY DMV

CHECKED BY DMV

DATE JULY 2017

DATUM NAVD 88

TITLE

PHASE 3
STRIPING
PLAN

PROJECT: CC 11/FinalSF Phase 3

SHEET NO.

C31

J:\ACC 1\FinalSF Phase 3\CC1-SF PH3.dwg PH3 Stripping-01.dgn 4/20/14 PM

WESTPORT RESERVE
(PHASE 3)

CITY OF FORT WORTH, TEXAS

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

REVISIONS

[illegible]

PROJECT #	<u>PROJECT #50083136</u>
DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

TITLE

PHASE 3 STRIPING PLAN

PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C32

STRIPING NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH RPM'S AND WILL BE INSTALLED IN ACCORDANCE WITH FDOT STANDARD INDEX #17346. (LATEST EDITION)

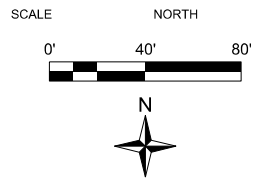
2. FOR SIGN DETAILS, REFER TO THE "STANDARD HIGHWAY SIGNS" PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, 2004, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009, AND THE FDOT DESIGN STANDARDS (LATEST EDITION).

3. PAVEMENT MARKINGS SHOULD BE PLACED AS SHOWN IN THE PLANS AND AS DESCRIBED WITHIN THE APPROPRIATE TRAFFIC DESIGN STANDARD INDEX (LATEST EDITION).

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

20:56 PM J:\CC 1\Final\SF Phase 3\CC1-SF PH3&4 PH3 Striping-02.dgn

SEAL

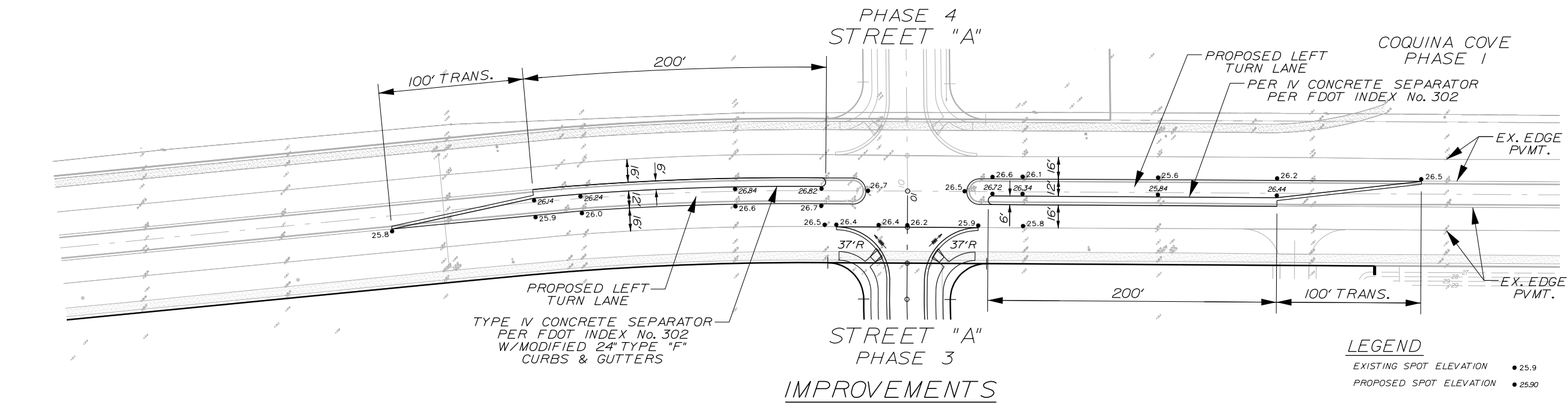


REVISIONS			
2	08-14-17	KJK	REV PER CITY
No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

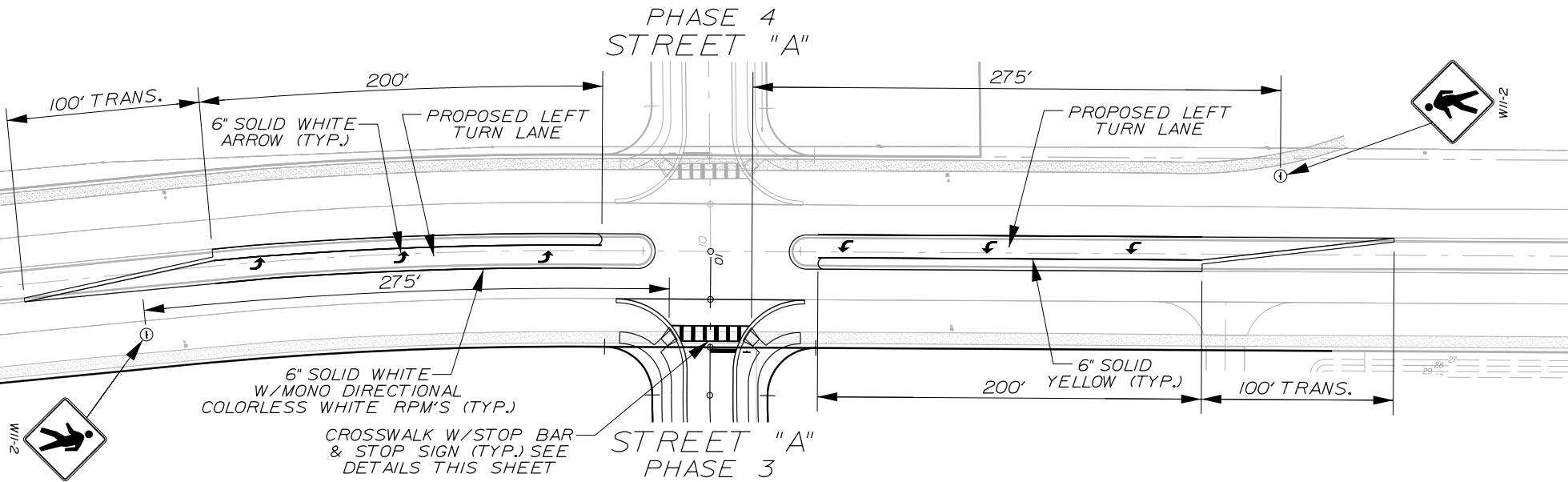
TITLE	
TOWN WEST BOULEVARD TURN LANES	
PROJECT:	CC 11FinalSF Phase 3
SHEET NO.	

C33



POSTED SPEED LIMIT = 35 M.P.H.

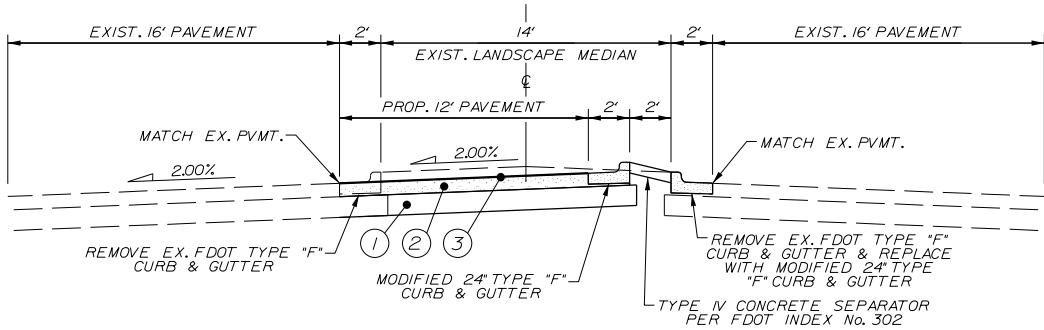
NOTES: 1. PEDESTRIAN CROSSING SIGNS TO BE PLACED 275' IN ADVANCE OF SIDEWALK CROSSING ACROSS TOWN WEST BLVD. 2. REFER TO LANDSCAPE/HARDSCAPE PLANS FOR EXISTING TREE REMOVAL AND REPLACEMENT NOTES.



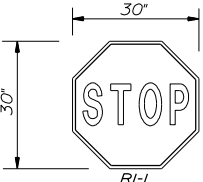
STRIPING & SIGNAGE

PAVEMENT LEGEND

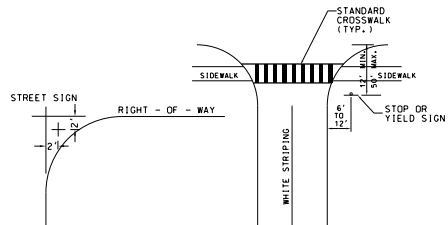
- 1 SUBGRADE/SUB-BASE: 6" SUBGRADE/SUB-BASE COMPACTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST WITH MINIMUM LBR 40.
- 2 BASE: 8" SOIL CEMENT BASE MINIMUM BEARING STRENGTH OF 350 P.S.I. SHALL BE OBTAINED WITHIN 7 DAYS AND COMPACTED TO 98% DENSITY BASED ON AASHTO T-99 STANDARD PROCTOR TEST. CONSTRUCTION METHODS SHALL CONFORM TO SECTION 270 OF STANDARD FDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
- 3 ASPHALT PAVEMENT: 1-1/2" ASPHALT BITUMINOUS CONCRETE TYPE S-III; MINIMUM MARSHALL FIELD STABILITY 1500, COMPACTED TO 98% DENSITY BASED ON NUCLEAR DENSITY TEST, "BACK SCATTER METHOD".
- ALTERNATE BASE: 6" LIMEROCK BASE (LBR 100) OR RECYCLED CONCRETE BASE (LBR 130) COMPACTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.



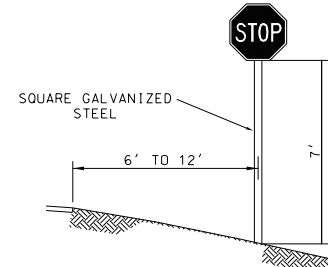
TURN LANE SECTION
TOWN WEST BLVD.



TYPICAL STOP SIGN
(UNLESS OTHERWISE SPECIFIED)



SIGNING & STRIPING DETAILS
(TOWN WEST BLVD. INTERSECTION)



STOP & STREET SIGN DETAIL
TYPICAL TRAFFIC CONTROL SIGN

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

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B

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ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

ROAD CLASSIFICATION	DESIGN SPEED (MPH)	LANE WIDTH (LW)	RIGHT OF WAY WIDTH	MIN. HORIZ. RADIUS C.L.	MIN. VERT. CURVE	MIN. LONG. GRADE (%)	MIN. INT. SPACE
LOCAL / COLLECTOR UP TO 400 VPD	15	10	50	50'	75'	0.3	150'
	20	10	50	95'	125'	0.3	200'
	25	11	50	180'	165'	0.3	250'
	20	11	50	95'	125'	0.3	200'
	25	11	50	180'	165'	0.3	250'
UP TO 1000 VPD	30	12	80	300'	200'	0.3	330'
	35	12	80	375'	225'	0.5	660'
	40	12	80	450'	275'	0.5	660'
ARTERIAL UP TO 7500 VPD	35	5 LANES (3)		375'	225'	0.5	660'
	40			450'	275'	0.5	660'
	40			450'	275'	0.5	660'

- NOTES:
- ALL ROADWAY DESIGN SHALL MEET THE MINIMUM REQUIREMENTS OF THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION, AND MAINTENANCE FOR STREETS AND HIGHWAYS (LATEST EDITION), AS PUBLISHED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION.
 - PAVEMENT WIDTHS FOR INDUSTRIAL AND COMMERCIAL ROADS SHALL BE INCREASED BY A MINIMUM OF ONE (1) FOOT.
 - AS A RULE, ALL INTERSECTIONS SHALL BE DESIGNED AT 90 DEGREE ANGLES. DEVIATION FROM THIS SHALL BE CONSIDERED STRICTLY ON A CASE BY CASE BASIS. IN THE EVENT THAT ANY DEVIATION IS PERMITTED, THEN IN NO CASE SHALL INTERSECTION ANGLES BE LESS THAN 75 DEGREES FOR INTERSECTIONS WITH ARTERIAL ROADWAYS EXCEPT ON LOCAL AND COLLECTOR ROADWAYS WHICH SHALL NOT BE LESS THAN 60 DEGREES. INTERSECTIONS WITH COUNTY AND STATE ROADS SHALL BE 90 DEGREES.
 - ALL INTERSECTIONS AND ACCESS POINTS SHALL HAVE ADEQUATE LINE OF SIGHT BASED ON AN EYE LEVEL OF 3.5' ABOVE THE GROUND AND AN OBJECT 3.0' ABOVE THE LOWEST ROADWAY. FOR PURPOSES OF THIS STANDARD, THE EYE LEVEL SHALL BE MEASURED 8' IN BACK OF THE STOP BAR AT ENTRANCES. THE FOLLOWING SIGHT DISTANCES SHALL BE PROVIDED.

LEGEND:
C.L. CENTER-LINE
INT. INTERSECTION
LONG. LONGITUDINAL

DESIGN SPEED (MPH)	20	25	30	35	40	45	50	55
SIGHT DISTANCE (FT) (MINIMUM)	200	250	300	350	400	450	500	550



STANDARD CONSTRUCTION DETAIL
ROADWAY GEOMETRY

REV. 12/08

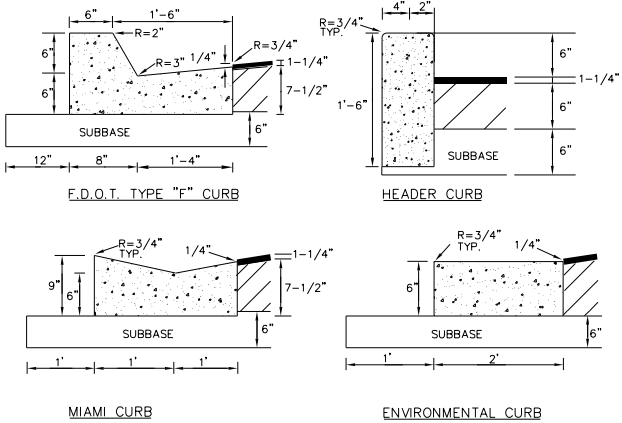
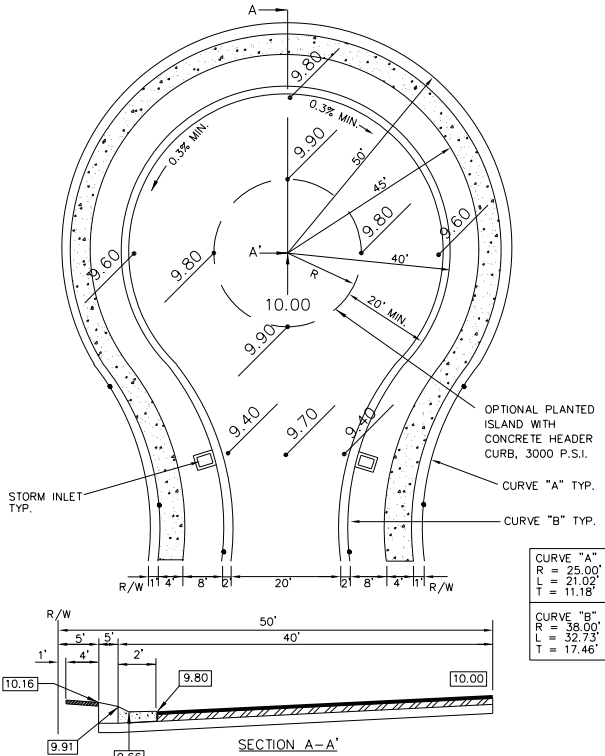
FILE NAME:
R6.DWG
DETAIL REF:
R-6



STANDARD CONSTRUCTION DETAIL
STANDARD CUL-DE-SAC DETAIL
WITH DUAL STORM INLET
"PREFERRED"

REV. 12/08

FILE NAME:
R8.DWG
DETAIL REF:
R-8



- NOTES:
- ALL CURBS TO BE CONSTRUCTED OF 28 DAY, 3000 P.S.I. CONCRETE
 - 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED EVERY 500' CONSTRUCTION JOINT REQUIRED EVERY 10' MAXIMUM (4' MINIMUM)
 - 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED AT EACH SIDE OF ALL STORM INLET STRUCTURES AND AT ALL RADIUS POINTS.
 - 6" SUBBASE TO BE COMPACTED AND TESTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST AND SHALL BE STABILIZED TO A MINIMUM L.B.R. 40.
 - EXPANSION JOINT MATERIAL MUST COVER THE ENTIRE CROSS SECTION OF CURB.
 - IN NO INSTANCE SHALL EXTRUDED CURBS (DEFINED AS HEADER-TYPE CURBS INSTALLED DIRECTLY ON TOP OF PAVEMENT) BE PERMITTED.
 - ALL ASPHALT AND/OR PAVER DRIVEWAY APRONS LOCATED IN PUBLIC RIGHTS-OF-WAY, SHALL INCLUDE CURBING.



STANDARD CONSTRUCTION DETAIL
STANDARD CURB CONSTRUCTION

REV. 12/08

FILE NAME:
R9.DWG
DETAIL REF:
R-9



STANDARD CONSTRUCTION DETAIL
ROADWAY INTERSECTION VALLEY GUTTER

REV. 12/08

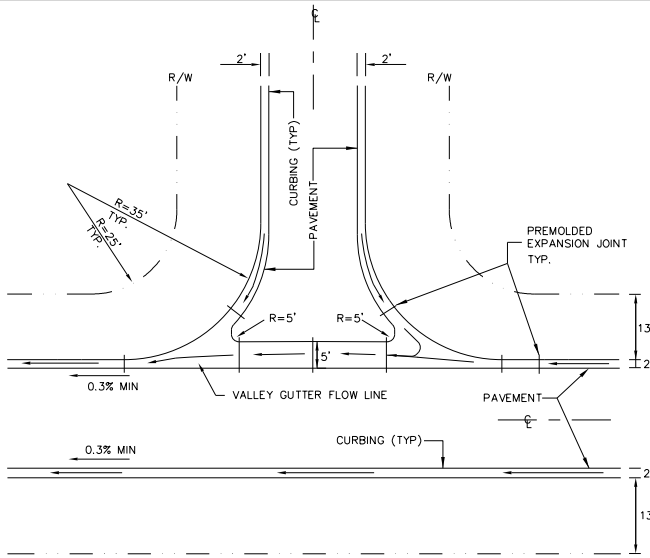
FILE NAME:
R10.DWG
DETAIL REF:
R-10



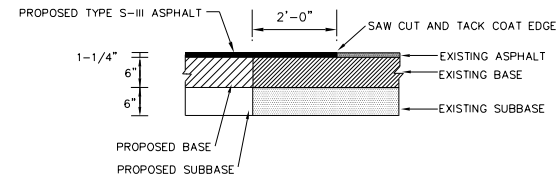
STANDARD CONSTRUCTION DETAIL
PAVEMENT BUTT JOINT

REV. 12/08

FILE NAME:
R11.DWG
DETAIL REF:
R-11



- NOTES:
- VALLEY GUTTER TO HAVE A STANDARD MINIMUM LONGITUDINAL SLOPE OF 0.30%
 - VALLEY GUTTER TO BE CONSTRUCTED OF 28 DAY, 3000 P.S.I. CONCRETE
 - 6" SUBBASE TO BE COMPACTED AND TESTED TO 98% DENSITY WITH MINIMUM L.B.R. 40 BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.
 - VALLEY GUTTERS ARE REQUIRED WHEN STORMWATER CROSSES THE INTERSECTION OF ROADWAYS AND DRIVEWAY CONNECTIONS.
 - REFER TO F.D.O.T. STANDARD INDEX No. 300



REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

CITY ROAD/
DRAINAGE
DETAILS

PROJECT: CC 1\FinalSF Phase 3

SHEET NO.

C34

E

D

C

B

A

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES ALL MATERIALS AND INSTALLATION METHODS USED FOR LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS FOR SUBDIVISIONS AND SITE PLANS SHALL BE IN CONFORMANCE WITH THE CITY, FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), AND THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS (LATEST EDITION). 1. ALL RIGHT-OF-WAY OTHER THAN ROADWAY AREAS SHALL BE GRASSED AND MULCHED OR SODDED. ALL SLOPES STEEPER THAN 6:1 SHALL REQUIRE SODDING. THE CITY RESERVES THE RIGHT TO REQUIRE SODDING IN SPECIAL AREAS WHERE EROSION IS A CONCERN. 2. THE FOLLOWING WILL BE THE STANDARD PROTECTION FOR DITCHES UNLESS DRAINAGE CALCULATIONS INDICATE OTHERWISE: <table><tr><td><u>SWALE</u></td><td><u>PROFILE GRADES</u></td><td><u>PROTECTION REQUIRED</u></td></tr><tr><td></td><td>0.2%- 1.0%</td><td>GRASSING AND MULCHING</td></tr><tr><td></td><td>1.0%- 4.0%</td><td>SODDING</td></tr><tr><td></td><td>4.0% AND GREATER</td><td>DITCH PAVING</td></tr></table> 3. THE PAVEMENT, BASE, AND SUBBASE THICKNESS PRESENTED ON DETAILS REPRESENTS THE MINIMUM REQUIREMENTS FOR LOCAL PUBLIC STREETS AND PRIVATE PARKING LOTS. THE CITY RESERVES THE RIGHT AT IT'S DISCRETION TO INCREASE THESE REQUIREMENTS FOR COLLECTOR AND ARTERIAL ROADWAYS AND PRIVATE PARKING LOTS SUBJECTED TO HEAVY VEHICULAR COMMERCIAL TRAFFIC. 4. THE DEVELOPER SHALL PROVIDE AT THEIR OWN EXPENSE A CERTIFIED SOILS ENGINEERING LABORATORY TO PERFORM ALL FIELD AND LABORATORY TESTING REQUIRED TO VERIFY THAT THE CONSTRUCTION IS IN COMPLIANCE WITH THE CITY'S MINIMUM STANDARDS. IT IS THE RESPONSIBILITY OF THE DEVELOPER TO ENSURE THAT COPIES OF ALL TEST REPORTS ARE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR PRIOR TO THE PROJECT FINAL INSPECTION IN ORDER TO ALLOW PROJECT ACCEPTANCE BY THE CITY. 5. THE LIMITS OF STABILIZED SUBBASE SHALL EXTEND TO A DEPTH OF SIX INCHES (6") BELOW THE BOTTOM OF THE BASE AND OUTWARD TO TWELVE INCHES (12") BEYOND THE CURB. 6. THE STABILIZING MATERIAL, IF REQUIRED, SHOULD BE A HIGH BEARING VALUE SOIL, SAND-CLAY, LIMEROCK, RECYCLED CONCRETE, SHELL, OR OTHER MATERIAL AS APPROVED BY THE CITY'S DESIGNATED SITE INSPECTOR AND A LICENSED SOILS ENGINEER. 7. THE SUBBASE SHALL BE STABILIZED NOT LESS THAN FORTY (40) POUNDS LIMEROCK BEARING RATIO (LBR) TO A 6" MINIMUM DEPTH. A COMPACTION OF NO LESS THAN NINETY-EIGHT (98%) PERCENT DENSITY BASED ON AASHTO T-180 SHALL BE REQUIRED. 8. FOR ROADWAYS, TESTS FOR SUBBASE BEARING CAPACITY AND COMPACTION SHALL BE DONE AT A MINIMUM OF EVERY 300 FEET AND SHALL BE STAGGERED TO THE LEFT, RIGHT, AND AT CENTER LINE OF THE ROADWAY. FOR SITE PLANS, TEST SHALL BE PERFORMED FOR EVERY 600 SQUARE YARDS OF STABILIZED AREA, OR PORTIONS THEREOF. 9. BASES FOR ALL STREETS SHALL HAVE A MINIMUM SIX INCH (6") DEPTH. SOIL CEMENT BASES SHALL HAVE A STRENGTH OF 350 POUNDS PER SQUARE INCH AT 7 DAYS COMPACTED TO 98% DENSITY PER AASHTO T-99 STANDARD PROCTOR TEST IN CONFORMANCE WITH SECTION 270 OF STANDARD F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION). RECYCLED CONCRETE OR LIMEROCK BASES SHALL BE COMPACTED TO 98% MAXIMUM DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.		<u>SWALE</u>	<u>PROFILE GRADES</u>	<u>PROTECTION REQUIRED</u>		0.2%- 1.0%	GRASSING AND MULCHING		1.0%- 4.0%	SODDING		4.0% AND GREATER	DITCH PAVING	ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.) 10. SOIL CEMENT AND RECYCLED CONCRETE MIX DESIGNS SHALL BE SUBMITTED BY A LICENSED SOILS ENGINEER TO THE CITY'S DESIGNATED SITE INSPECTOR PRIOR TO THE START OF SUBBASE PREPARATION. ALL MIX DESIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY. 11. CEMENT DELIVERY TICKETS SHALL BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR AT THE TIME OF PLACEMENT. IF THE INSPECTOR IS NOT ON SITE THROUGHOUT THE ENTIRE INSTALLATION, ACCUMULATED DELIVERY TICKETS CAN BE PROVIDED TO THE INSPECTOR BY THE CONTRACTOR ON THE FOLLOWING DAY. 12. TESTING OF THE IN-PLACE BASE SHALL BE DONE AT INTERVALS EQUIVALENT TO SUBGRADE TESTING AND SHALL CONSIST OF, AS A MINIMUM, A MOISTURE CONTENT AND COMPACTION TEST. 13. PORTLAND CEMENT CONCRETE, LIMEROCK, RECYCLED CONCRETE, OR FULL DEPTH ASPHALT PAVEMENT MAY BE USED IN PLACE OF SOIL CEMENT BASE. ALL BASE AND ROADWAY DESIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY. 14. SOIL CEMENT BASE MATERIAL CONSTRUCTION SHALL BE CONTINUOUSLY SUPERVISED BY A SOILS TESTING LABORATORY AT THE DEVELOPER'S EXPENSE. THE TESTING LABORATORY SHALL PROVIDE AN ON-SITE TECHNICIAN CERTIFIED IN THE INSTALLATION OF SOIL CEMENT WITH THE CERTIFICATION RECOGNIZED BY F.D.O.T. 15. SOIL CEMENT PAVEMENT BASES WITH THE CURE COAT APPLIED SHALL BE ALLOWED TO CURE A MINIMUM OF SEVEN (7) DAYS UNDER NO TRAFFIC PRIOR TO PLACING ANY ASPHALT SURFACE. (TEST REPORTS ARE REQUIRED TO BE DELIVERED TO THE CITY'S DESIGNATED SITE INSPECTOR PRIOR TO TRAFFIC USAGE.) 16. RECYCLED CONCRETE CAN BE USED AS AN ALTERNATIVE BASE MATERIAL PROVIDED THE MATERIAL IS A MINIMUM OF 60% CARBONATE OF CALCIUM AND MAGNESIUM. THE MATERIAL SHALL BE LIMITED TO MAXIMUM OF 3F WATER SENSITIVE CLAY MATERIAL, LIQUID LIMIT SHALL NOT EXCEED 35 AND BE NON-PLASTIC, AND THE PLASTICITY INDEX SHALL NOT EXCEED 10. THE MATERIAL SHALL NOT CONTAIN ORGANIC MATERIAL, CHERTY OR OTHER EXTREMELY HARD PIECES, LUMPS, BALLS OR POCKETS OF SAND SIZE MATERIAL OF A QUANTITY AS TO BE DETRIMENTAL TO THE PROPER BONDING, FINISHING, OR STRENGTH OF THE RECYCLED CONCRETE BASE. FOR BASE APPLICATIONS, AT LEAST 97% (BY WEIGHT) OF THE MATERIAL SHALL PASS A 1" SIEVE AND FOR SUBBASE APPLICATIONS, AT LEAST 97% (BY WEIGHT) OF THE MATERIAL SHALL PASS A 1-1/2" SIEVE. FOR BOTH APPLICATIONS, THE MATERIAL SHALL BE GRADED UNIFORMLY DOWN TO DUST AND THE MINIMUM LBR VALUES ARE TO BE NOT LESS THAN 130. COARSE AGGREGATE USED IN THE RECYCLED CONCRETE SHALL HAVE A MAXIMUM LOSS OF 45% PER LOS ANGELES ABRASION TEST. ALL MATERIALS SHALL BE WELL GRADED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN SECTION 204, F.D.O.T., STANDARD SPEC. FOR ROAD AND BRIDGE CONSTRUCTION, (LATEST EDITION). 17. RECYCLED CONCRETE OR LIMEROCK FOR BASE OR SUBBASE APPLICATIONS SHALL BE ALLOWED ON CITY ROADWAYS ONLY WHERE THE LOWEST ELEVATION OF THE ROADWAY SUBBASE IS A MINIMUM OF 6" ABOVE THE SEASONAL HIGH GROUNDWATER TABLE AS CERTIFIED BY A FLORIDA LICENSED PROFESSIONAL SOILS ENGINEER AND SUBSEQUENTLY APPROVED FOR BY THE CITY. IN AREAS NOT MEETING THESE STANDARDS A SOIL CEMENT BASE WILL BE REQUIRED. ALL CRUSHING OF RECYCLED CONCRETE SHALL BE DONE PRIOR TO THE MATERIAL BEING PLACED IN THE ROADWAY. TESTING SHALL HAVE THE SAME REQUIREMENTS AND BE PERFORMED AT THE SAME LOCATION AND INTERVALS AS REQUIRED FOR LIMEROCK.		ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.) 18. DESIGN MIXES AND PRODUCT GRADATION INFORMATION FOR ALL MATERIALS TO BE INSTALLED AS PART OF THE LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS SHALL BE SUBMITTED TO THE CITY'S DESIGNATED SITE INSPECTOR FOR ACCEPTANCE BY THE CITY. THE INFORMATION SHALL BE SUBMITTED NO LESS THAN THREE (3) WORKING DAYS PRIOR TO ANY CONSTRUCTION. SUBMITTALS SHALL INCLUDE, BUT NOT BE LIMITED TO, INFORMATION TO EVALUATE THE MATERIALS PROPOSED FOR INSTALLATION AS SUBBASE, BASE, AND PAVEMENT FOR ALL ROADWAY AND PARKING AREA SURFACES AS WELL AS SIMILAR INFORMATION FOR ALL OTHER CONCRETE SIDEWALKS, CURBING, AND COMPARABLE STRUCTURES AND APPLICATIONS. 19. ALL WEARING COURSE HOT MIX AGGREGATES SHALL BE VIRGIN MATERIAL. THE USE OF RECYCLED ASPHALT MATERIAL (RAP) IN WEARING COURSE MIXES IS NOT ALLOWED. 20. PRIOR TO PLACEMENT FLORIDA STATE CERTIFIED BATCH PLANTS MUST CERTIFY TO THE CITY'S RESIDENT PROJECT INSPECTOR THAT THE ASPHALT DELIVERED TO THE SITE IS IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. 21. EXTRACTION AND GRADATION TESTS ON ASPHALT MIXES SHALL BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR FOR EVERY 2500 SQUARE YARDS OF ASPHALT, OR PART THEREOF, TO ENSURE THAT DESIGN MIXES MEET THE CITY STANDARD SPECIFICATIONS. 22. FIELD TESTING OF THE ASPHALT PAVEMENT SHALL BE DONE AT INTERVALS EQUIVALENT TO SUBGRADE TESTING AND SHALL CONSIST OF, AS A MINIMUM, A COMPACTION TEST. ASPHALT PAVEMENT SHALL BE COMPACTED TO 98% DENSITY PER FM 1-T238 (METHOD B), NUCLEAR DENSITY TEST, "BACKSCATTER METHOD". 23. IN ADDITION TO THE FIELD DENSITY TESTS NOTED, THE CITY RESERVES THE RIGHT TO REQUIRE CORE SAMPLES OF PAVEMENT SECTIONS EXTRACTED AND TESTED BY A CERTIFIED SOILS ENGINEERING LABORATORY AT THE DEVELOPER'S EXPENSE. THE CITY'S DESIGNATED SITE INSPECTOR SHALL DESIGNATE THE LOCATIONS OF THE TEST CORE LOCATIONS. 24. THE ROADWAY CROWN SHALL HAVE A STANDARD ONE QUARTER INCH (1/4") PER FOOT SLOPE. 25. ALL ROADWAYS WITH CURB AND GUTTER SECTIONS SHALL HAVE AS A STANDARD A MINIMUM LONGITUDINAL SLOPE OF 0.30%. THE ROADWAY CENTERLINE SHALL BE CLEARLY MARKED ON THE DESIGN PLANS. AT A MINIMUM, DESIGN ROADWAY CENTERLINE ELEVATIONS SHALL BE NOTED AT ALL GRADE CHANGES AND AT 100' INTERVALS ALONG THE ROADWAY PROFILE ON BOTH THE DESIGN PLANS AND AS-BUILT DRAWINGS. 26. THE FINISHED PAVEMENT EDGE SHALL BE WITHIN ONE QUARTER INCH (1/4") ABOVE THE ADJACENT CONCRETE CURB FOR CURBS COLLECTING AND CONVEYING STORMWATER. 27. CONCRETE CURBS SHALL BE PROVIDED ON BOTH SIDES OF ALL STREETS AND ALL CONCRETE CURBS SHALL BE CONSTRUCTED WITH 3000 P.S.I. CONCRETE AT 28 DAYS.		ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.) 27. CONCRETE CURBING, SIDEWALKS, PAVEMENT AND SIMILAR CONCRETE AREAS SHALL BE SAW CUT WITHIN 4 TO 18 HOURS OF PLACEMENT. SAW CUTS SHALL BE 1/4" IN WIDTH TO A DEPTH OF 1/4 OF THE TOTAL DEPTH OF CONCRETE OR 1-1/2", WHICHEVER IS LESS. SAW CUTS SHALL BE LOCATED AT INTERVALS OF TEN FEET (10') WITH EXPANSION JOINTS AT STREET INTERSECTIONS, RADIUS POINTS, STRUCTURES, AND ALONG CURVES AT SIXTY FEET (60') INTERVALS. ALL EXPANSION JOINT MATERIAL IS REQUIRED TO BE INSTALLED THROUGH THE ENTIRE DEPTH OF THE CONCRETE CURB. FOR LINEAL SECTIONS OF CURBS, EXPANSION JOINTS SHALL BE LOCATED AT A MAXIMUM SPACING OF FIVE-HUNDRED FEET (500') AND SHALL BE 1/2" IN WIDTH. 28. AN "X" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF WATER DISTRIBUTION SYSTEM VALVE. 29. A "V" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL SEWER SERVICES. 30. A "L" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL RECLAIMED WATER SERVICES. 31. A "A" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL POTABLE WATER SERVICES. 32. THREE (3) CONCRETE CYLINDERS SHALL BE TAKEN AND TESTED (1 IN 14 DAYS AND 1 IN 28 DAYS) FOR EVERY SEVENTY-FIVE (75) CUBIC YARDS OF CONCRETE OR LESS PLACED. TEST RESULTS SHALL THEN BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR AS THEY BECOME AVAILABLE. 33. A CONCRETE SLUMP TEST SHALL BE REQUIRED WITHIN THE FIRST 30 CUBIC YARDS OF CONCRETE. THEREAFTER, SLUMP TESTS SHALL BE REQUIRED FOR EVERY THIRTY (30) CUBIC YARDS OF CONCRETE, OR FRACTION THEREOF, WITH COPIES OF THE RESULTS PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR. THE SLUMP TEST SHALL MEET THE REQUIRED MIX DESIGN ON EACH LOAD DELIVERED. 34. THE DEVELOPER SHALL PROVIDE ALL REQUIRED PAVEMENT MARKINGS ON ALL ROADWAYS PER CITY, COUNTY, AND STATE REQUIREMENTS. CENTERLINE STRIPES SHALL BE PROVIDED ON EXTENSIONS OF CITY COLLECTOR OR ARTERIAL ROADS, COUNTY ROADS, STATE HIGHWAYS, AND ALONG LOCAL STREETS IN THE VICINITY OF THEIR INTERSECTION WITH THE ABOVE MENTIONED ROADWAYS. 35. A FDOT APPROVED STOP SIGN AND A 24"-WIDE WHITE THERMOPLASTIC STOP BAR ARE REQUIRED AT ALL ROADWAY INTERSECTIONS. 36. ALL TRAFFIC CONTROL DEVICES PLACED AT INTERSECTIONS, PRIVATE STREETS, PUBLIC STREETS, COUNTY ROADS, AND STATE HIGHWAYS WITHIN THE CITY LIMITS SHALL BE INSTALLED ACCORDING TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. THE MAINTENANCE-OF-TRAFFIC (MOT) INSTALLATION AND SUBSEQUENT OPERATION SHALL BE OVERSEEN BY A CONTRACTOR CERTIFIED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION, OR EQUIVALENT CERTIFICATION RECOGNIZED BY FDOT.	
<u>SWALE</u>	<u>PROFILE GRADES</u>	<u>PROTECTION REQUIRED</u>																	
	0.2%- 1.0%	GRASSING AND MULCHING																	
	1.0%- 4.0%	SODDING																	
	4.0% AND GREATER	DITCH PAVING																	
 STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES REV. 12/08	FILE NAME: R12.DWG DETAIL REF: R-12	 STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES REV. 12/08	FILE NAME: R13.DWG DETAIL REF: R-13	 STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES REV. 12/08	FILE NAME: R14.DWG DETAIL REF: R-14	 STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES REV. 12/08	FILE NAME: R15.DWG DETAIL REF: R-15												

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.) 37. THE DEVELOPER IS RESPONSIBLE FOR PAYING FEES FOR TRAFFIC CONTROL DEVICES TO THE CITY FOR INSTALLATION. STREET SIGNS AND STOP SIGNS SHALL BE PLACED AT ALL INTERSECTIONS, INCLUDING BUT NOT LIMITED TO PRIVATE STREETS, PUBLIC STREETS, COUNTY ROADS, AND STATE HIGHWAYS WITHIN THE CITY LIMITS. 38. THE DEVELOPER IS RESPONSIBLE FOR PAYING FEES FOR ALL STREET LIGHTS PRIOR TO ACCEPTANCE OF THE PROJECT BY THE CITY. 39. FOUR FOOT (4') WIDE SIDEWALKS SHALL BE PROVIDED ON BOTH SIDES OF ALL RESIDENTIAL STREETS. (SEE DETAIL, INDEXES M-2 AND M-3) 40. BIKE PATHS SHALL BE CONSTRUCTED EIGHT FEET (8') IN WIDTH ALONG ARTERIAL HIGHWAYS AS DIRECTED BY THE CITY. (SEE DETAIL, INDEXES M-2 AND M-3) 41. <u>STANDARD TURNING RADI FOR INTERSECTIONS:</u> RESIDENTIAL STREETS WITH STATE & COUNTY ROADWAYS OR MAJOR THOROUGHFARES WITHIN THE CITY35-50 FT. ENTRANCES TO COMMERCIAL SITES OFF OF CITY STREETS35 FT. INTERSECTIONS INTERIOR IN SUBDIVISIONS35 FT. SHOULD VOLUSIA COUNTY OR THE FLORIDA DEPARTMENT OF TRANSPORTATION (F.D.O.T.) DETERMINE THAT LARGER RADII ARE WARRANTED WITHIN THEIR RIGHT-OF-WAY, THE LARGER RADII SHALL PREVAIL. 42. CONSTRUCTION METHODS AND DESIGN FOR CONCRETE PAVEMENT SHALL CONFORM TO FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. 43. ALL CONTRACTORS THAT ARE PERFORMING THE CONSTRUCTION OF LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS (INCLUDING WATER MAINS, SANITARY SEWER MAINS, RECLAIMED WATER MAINS, STORM WATER PIPES AND INLETS, ROADWAYS, AND PARKING FACILITIES) SHALL BE CERTIFIED WITH THE STATE OF FLORIDA BOARD OF PROFESSIONAL REGULATIONS (BPR) FOR THE TYPE OF WORK THAT THEY PERFORM. 44. ALL CONTRACTORS THAT ARE PERFORMING THE CONSTRUCTION WORK OF LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS SHALL BE LICENSED BY THE STATE OF FLORIDA AND REGISTERED WITH THE CITY OF PORT ORANGE. THE LICENSE AND REGISTRATION SHALL PERTAIN DIRECTLY TO THE TYPE OF WORK BEING PERFORMED. 45. EXCEPT AS PROVIDED IN THE LAND DEVELOPMENT CODE, ALL ELECTRIC, TELEPHONE, TELEVISION LINES AND SIMILAR UTILITIES ARE REQUIRED TO BE INSTALLED UNDERGROUND AT THE EXPENSE OF THE OWNER, DEVELOPER, AND BUILDER.		ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.) 46. UTILITY DEPTH: A. HIGH VOLTAGE UTILITIES SUCH AS POWER (FEEDER, SERVICE, AND DROPS) SHALL BE BURIED A MINIMUM OF 30 INCHES IN DEPTH. B. LOW VOLTAGE UTILITIES SUCH AS PHONE AND CABLE TV SHALL BE BURIED A MINIMUM OF 18 INCHES IN DEPTH FOR FEEDER AND SERVICES. SERVICE DROPS SHALL BE BURIED A MINIMUM OF 12 INCHES IN DEPTH. C. IN NO INSTANCE SHALL THE DEPTH OF COVER BE LESS THAN 30" FROM FINISHED GRADE TO THE TOP OF PIPE FOR POTABLE WATER MAINS, SANITARY SEWER MAINS, AND RECLAIMED WATER MAINS. HOWEVER, IN THE EVENT THAT THIS CONDITION CANNOT BE MET DUE TO UNANTICIPATED CONFLICTS DURING THE CONSTRUCTION PROCESS, DUCTILE IRON PRESSURE CLASS 350 OR CONCRETE ENCASEMENT MAY BE USED AS APPROVED BY THE CITY PUBLIC UTILITIES DEPARTMENT. 47. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF UNDERGROUND AND OVERHEAD PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.		TECHNICAL SPECIFICATIONS FOR SITE PLANS AND SUBDIVISIONS TESTING A. <u>MATERIALS</u> THE INSPECTION AND TESTING OF MATERIALS AND FINISHED ARTICLES TO BE INCORPORATED IN THE WORK SHALL BE MADE BY BUREAUS, LABORATORIES, OR AGENCIES APPROVED BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL SUBMIT SUCH SAMPLES, OR SUCH SPECIAL OR TEST PIECES OF MATERIALS AS THE ENGINEER OF RECORD MAY REQUIRE. THE CONTRACTOR SHALL NOT INCORPORATE ANY MATERIAL OR FINISHED ARTICLE INTO THE WORK UNTIL THE RESULTS OF THE INSPECTIONS OR TESTS ARE KNOWN AND THE CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER OF RECORD THAT THE MATERIAL OR FINISHED ARTICLE IS ACCEPTED. ALL MATERIALS MUST BE OF THE SPECIFIED QUALITY AND BE EQUAL TO THE APPROVED SAMPLE IF A SAMPLE HAS BEEN SUBMITTED. CERTIFIED COPIES OF ALL TESTS MADE SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AS WELL AS TO THE CITY'S DESIGNATED SITE INSPECTOR. THE CITY'S DESIGNATED SITE INSPECTOR MUST RECEIVE COPIES OF ALL TESTING REPORTS AND CERTIFICATES PRIOR TO THE ENGINEER OF RECORD REQUESTING A FINAL PROJECT INSPECTION FROM THE CITY. B. <u>LABORATORY CONTROL AND CERTIFICATES</u> 1. <u>SPECIFICATIONS</u> : SAMPLING, TESTING, AND LABORATORY METHODS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE AASHTO OR ASTM. WHERE AASHTO OR ASTM SPECIFICATIONS ARE USED, THE REFERENCE SHALL BE CONSTRUED TO BE THE MOST RECENT STANDARD SPECIFICATIONS OR TENTATIVE SPECIFICATIONS OF THE AASHTO OR ASTM IN FORCE ON THE DATE OF THE TEST. 2. <u>TEST & CERTIFICATES</u>. THE CONTRACTOR SHALL ENGAGE AN APPROVED TESTING LABORATORY TO PROVIDE THE FOLLOWING TESTS AND CERTIFICATIONS SIGNED BY A REGISTERED ENGINEER OF THE STATE OF FLORIDA. ALL TECHNICIANS PERFORMING THE TESTS SHALL BE STATE CERTIFIED FOR THE TESTING PERFORMED. ADDITIONAL TESTS THAT MAY BE REQUIRED BY EITHER THE ENGINEER OF RECORD OR THE CITY SHALL ALSO BE PROVIDED BY THE CONTRACTOR, AND THE FOLLOWING SHALL NOT BE TAKEN AS A COMPLETE AND EXHAUSTIVE LIST OF THE CONTRACTOR'S TESTING RESPONSIBILITIES. A. SOIL ANALYSIS FOR STRUCTURAL FILL MATERIAL PRIOR TO INSTALLATION. B. PROCTOR DENSITIES, MOISTURE CONTENT, COMPACTED FIELD DENSITIES, AND ATTERBERG LIMITS C. SOIL CEMENT MIX DESIGNS AND COMPRESSIVE STRENGTH TESTS (FOR SOIL CEMENT ROAD BASE ONLY). D. SUPERVISION OF ALL SOIL CEMENT BASE CONSTRUCTION. E. ANALYSIS OF RECYCLED CONCRETE BASE MATERIAL PRIOR TO INSTALLATION. F. ASPHALT MIX DESIGN, BITUMEN CONTENT, SIEVE ANALYSIS, HUBBARD FIELD STABILITY TESTS, NUCLEAR DENSITY TESTS (BACKSCATTER METHOD), AND ANALYSIS OF CORE SAMPLES G. CONCRETE MIX DESIGNS FOR ALL APPLICATIONS INCLUDING PAVEMENT, CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS AND DRIVEWAYS. H. COMPRESSIVE TEST CYLINDERS AND SLUMP TESTS FOR ALL APPLICATIONS OF CONCRETE, INCLUDING PAVEMENT, CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS, AND DRIVEWAYS. I. CHLORINE RESIDUAL AND BACTERIOLOGICAL TESTING OF WATER MAINS. J. PRESSURIZED LEAK TESTING OF WATER MAINS, FORCE MAINS, AND RECLAIMED WATER MAINS.		SUBDIVISION TECHNICAL SPECIFICATIONS: SODDING, SEEDING AND MULCHING A. <u>SCOPE OF WORK</u> THE WORK IN THIS SECTION CONSISTS OF FURNISHING AND COMPLETELY INSTALLING SOD, OR SEED AND MULCH OVER THE LIMITS CALLED FOR ON THE CONSTRUCTION DRAWINGS. AT A MINIMUM, ALL WORK SHALL MEET THE MINIMUM SPECIFICATIONS OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, AS OUTLINED IN SECTIONS 570 (GRASSING BY SEEDING) AND 575 (SODDING). IN ADDITION, ALL WORK SHALL MEET THE MINIMUM REQUIREMENTS OF THE CITY. B. <u>MATERIALS</u> GRASS SEED SHALL BE A MIXTURE OF: PENSACOLA BAHIA (USE 50 % SCARIFIED SEED)50% HULLED BERMUDA25% BROWN TOP MILLET25% IN THE FALL AND WINTER MONTHS, AND WITH THE APPROVAL OF THE CITY, ANNUAL RYE GRASS SHALL BE SUBSTITUTED IN EQUAL AMOUNTS FOR THE BROWN TOP MILLET. SEED SHALL BE PRE-MIXED BY A SEED COMPANY TO THE PERCENTAGES DESCRIBED ABOVE, WITH CERTIFICATION FROM THE SUPPLIER PROVIDED TO THE CITY'S DESIGNATED PROJECT LANDSCAPE INSPECTOR PRIOR TO USE. MULCH USED SHALL BE STRAW OR HAY CONSISTING OF OATS, RYE, OR WHEAT STRAW, OR OF PANGOLA, PEANUT, COASTAL BERMUDA, OR BAHIA GRASS HAY. MULCH SHALL BE FREE FROM UNDESIRABLE WEED AND OTHER UNDESIRABLE GRASS. C. <u>METHODS</u>. GRASSING SHALL BE DONE IMMEDIATELY UPON COMPLETION OF THE FINE GRADING OPERATION. HOWEVER, NO SEEDING SHALL BE DONE WHEN THE GROUND IS FROZEN OR UNDULY WET. THE RATE OF SPREAD FOR THE SEED MATERIAL SHALL BE ONE HUNDRED AND THIRTY (130) POUNDS PER ACRE. APPROXIMATELY ONE INCH (1"). LOOSE THICKNESS, OF MULCH MATERIAL SHALL BE APPLIED UNIFORMLY OVER THE SEEDED AREAS (APPROXIMATELY ONE AND ONE-HALF (1-1/2) BALES PER 1000 SQUARE FEET). THE MULCH MATERIAL SHALL BE CUT INTO THE SOIL WITH A DISC HARROW OR OTHERWISE ANCHORED DOWN. UNDER PROPER CIRCUMSTANCES, CONTRACTOR MAY REQUEST OPTION TO INSTALL HYDRO-SEEDING SUBJECT TO THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT AND THE CITY	
CITY OF PORT ORANGE 1967 FLORIDA STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES REV. 12/08	CITY OF PORT ORANGE 1967 FLORIDA STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES REV. 12/08	CITY OF PORT ORANGE 1967 FLORIDA STANDARD CONSTRUCTION DETAIL TECHNICAL SPECIFICATIONS FOR SITE PLANS AND SUBDIVISIONS TESTING REV. 12/08	CITY OF PORT ORANGE 1967 FLORIDA STANDARD CONSTRUCTION DETAIL SUBDIVISION TECHNICAL SPECIFICATIONS: SODDING, SEEDING AND MULCHING REV. 12/08				
FILE NAME: R16.DWG DETAIL REF: R-16	FILE NAME: R17.DWG DETAIL REF: R-17	FILE NAME: R18.DWG DETAIL REF: R-18	FILE NAME: R20.DWG DETAIL REF: R-20				



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WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

CITY ROAD/
DRAINAGE
DETAILS

PROJECT: CC 11\FinalSF Phase 3

SHEET NO.

C35

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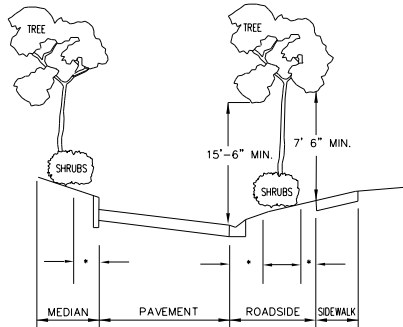
E

D

C

B

A



ROADWAY CLEAR ZONES (*)					
TYPE FACILITY	DESIGN SPEED (MPH)				
	25 & BELOW	30	35	40	45+
DISTANCE FROM EDGE OF PAVEMENT	6'	6' LOCAL 10' COLLECTOR 14' ARTERIAL	6' LOCAL 10' COLLECTOR 14' ARTERIAL	10' COLLECTOR 14' ARTERIAL	F.D.O.T. STANDARD
DISTANCE FROM SIDEWALK	1.5	1.5	1.5	1.5	F.D.O.T. STANDARD

* SEE NOTES ON SHEET R-21B *



STANDARD CONSTRUCTION DETAIL
ROADWAY AND MISCELLANEOUS LANDSCAPING
DESIGN AND CONSTRUCTION NOTES

REV. 12/08

FILE NAME:
R21A.DWG
DETAIL REF:
R-21A

ROADWAY AND MISCELLANEOUS LANDSCAPING
DESIGN AND CONSTRUCTION NOTES (CONTD.)

NOTES:

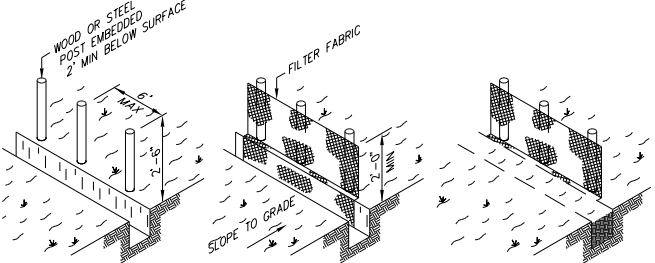
1. THE CLEAR ZONE MAY BE REDUCED ON A CASE BY CASE BASIS IF THE MINIMUM OFFSET CANNOT BE REASONABLY OBTAINED OR IF A NON-MOUNTABLE CURBE TYPE IS INSTALLED.
2. TREES IN EXCESS OF 12" CALIPER AT MATURITY AND MULTI-TRUNKED PALMS SHALL BE SET BACK TO TWICE THE MINIMUM CLEAR ZONE (2 X *).
3. WHERE PAVEMENT WIDENING IN ACCORDANCE WITH FDOT STANDARDS IS NOT PROVIDED IN HORIZONTAL CURVES, ADDITIONAL CLEAR ZONE SHALL BE PROVIDED EQUAL TO THE REQUIRED PAVEMENT WIDENING.
4. CLEAR ZONES ON CURBED ROADS SHALL BE MEASURED FROM THE FACE OF CURB OR FROM THE EDGE OF THE THROUGH LANE ON RURAL ROADS. CURBED STREETS ARE FOR HIGH BACK CURBS ONLY.
5. SHRUBS ADJACENT TO SIDEWALKS AND WITHIN INTERSECTION SIGHT TRIANGLES CANNOT EXCEED 24" ABOVE THE LOWEST ADJACENT ROADWAY GRADE. ALL OTHER SHRUBS MUST BE LESS THAN OR EQUAL TO 30 INCHES IN HEIGHT.
6. INSTALLATION OF LANDSCAPING IN PUBLIC RIGHTS-OF-WAY REQUIRES EXECUTION OF A "USE AGREEMENT" BETWEEN THE DEVELOPER AND THE CITY. FOR INSTANCES WHERE THE STREETS AND PRIVATE AND PUBLIC UTILITY EASEMENTS ARE PROVIDED, THE DEVELOPER MAY BE REQUIRED TO OBTAIN A RELEASE FROM THE FRANCHISE UTILITIES IN ORDER TO INSTALL THE LANDSCAPING IMPROVEMENTS.
7. LANDSCAPING PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF UNDERGROUND AND OVERHEAD PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.
8. SHRUBS, UNDERSTORY, TREES AND PALMS SHALL BE ALLOWED IN THE RIGHT-OF-WAY WITH EXISTING AND PROPOSED UTILITIES. SHADE TREES, ESPECIALLY THOSE WITH AGGRESSIVE ROOT SYSTEMS, WILL REQUIRE SPECIFIC CITY APPROVAL.
9. SHADE TREES MUST NOT BE PLANTED UNDER OR DIRECTLY ADJACENT TO OVERHEAD UTILITIES THAT WOULD REQUIRE EXCESSIVE PRUNING TO AVOID THE UTILITY LINES.
10. TREES WITH AGGRESSIVE ROOT SYSTEMS SHALL REQUIRE SOME FORM OF ROOT GUIDING SYSTEM TO PREVENT THE UPHEAVAL OF ADJACENT ROADWAY PAVEMENT AND/OR SIDEWALKS.



STANDARD CONSTRUCTION DETAIL
ROADWAY AND MISCELLANEOUS LANDSCAPING
DESIGN AND CONSTRUCTION NOTES

REV. 12/08

FILE NAME:
R21B.DWG
DETAIL REF:
R-21B



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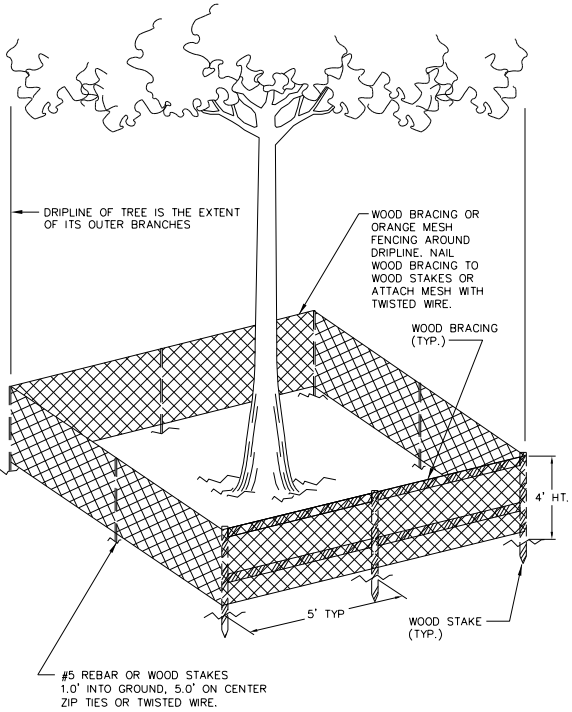
1. MATERIALS, CONSTRUCTION METHODS AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND DESIGN STANDARDS CURRENT EDITION.
2. CONTRACTOR SHALL PROVIDE SILT FENCES, SYNTHETIC JUTE BALES, WATTLES, &/OR HAVE BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED AT ALL STORMWATER DISCHARGE POINTS FOR EROSION CONTROL AND SEDIMENT CONTROL DURING CONSTRUCTION.
3. CONTRACTOR SHALL ROUGH GRADE STORM- WATER SWALES AND RETENTION AREAS PRIOR TO CONSTRUCTION OF SITE IMPROVEMENTS.
4. CONTRACTOR SHALL MEET ALL PERMIT CONDITIONS AS ESTABLISHED BY THE CITY OF PORT ORANGE AND ALL OTHER APPLICABLE AGENCIES, INCLUDING BUT NOT LIMITED TO COUNTY, FDOT, AND THE SJRWMD.
5. CONTRACTOR WILL BE ALLOWED TO USE A SMALL PIECE OF EQUIPMENT UP TO THE SIZE AND WEIGHT OF A D-3 DOZER TO CLEAR A NARROW PATH TO INSTALL THE SILT FENCE.



STANDARD CONSTRUCTION DETAIL
SILT FENCE TURBIDITY BARRIER

REV. 12/08

FILE NAME:
R22.DWG
DETAIL REF:
R-22



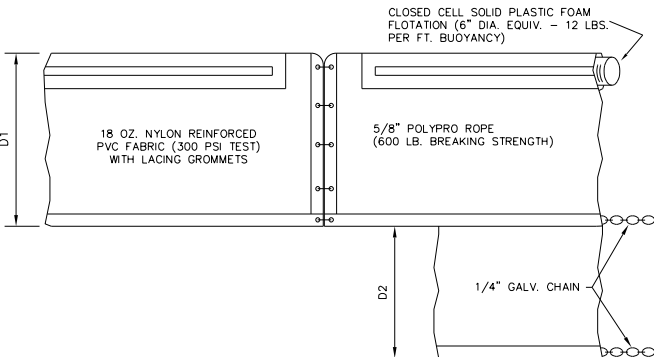
NOTE: BARBED WIRE FENCING IS NOT PERMISSIBLE



STANDARD CONSTRUCTION DETAIL
TREE PROTECTION BARRICADE

REV. 12/08

FILE NAME:
R23.DWG
DETAIL REF:
R-23



FLOATING TURBIDITY BARRIER
F.D.O.T. INDEX NO. 103

D1 - 5 FT. STD. SINGLE PANEL FOR DEPTHS 5 FT. OR LESS
D2 - 5 FT. STD. ADDITIONAL PANEL FOR DEPTHS GREATER THAN 5 FT.
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FT.
TWO PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FT.



STANDARD CONSTRUCTION DETAIL
FLOATING TURBIDITY BARRIER

REV. 12/08

FILE NAME:
R24.DWG
DETAIL REF:
R-24

CONTRACTOR REQUIREMENTS FOR SITE CLEARING,
GRADING, AND EROSION CONTROL DESIGN AND
CONSTRUCTION NOTES

THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO BE EMPLOYED WHEN WARRANTED BY EXTREME CONDITIONS AND/OR THE FAILURE OF THE CONTRACTOR TO EMPLOY THE APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES. FAILURE TO COMPLY WITH THESE PROVISIONS SHALL RESULT IN THE ISSUANCE OF A "STOP WORK ORDER".

1. NO DISTURBANCE OF PROPOSED CONSERVATION EASEMENTS, NATURAL BUFFERS, OR WATER BODIES IS PERMITTED. THE CONTRACTOR SHALL LOCATE THESE AREAS ON SITE AND BARRICADE THEM TO AVOID ANY UNAUTHORIZED CLEARING, BARRICADES, AND OTHER PROTECTIVE FENCING ARE TO BE LOCATED AT THE DRIP LINE OF EXISTING NATIVE TREES OR AT THE EDGE OF THE NATIVE UNDER-STORY HABITAT, WHICHEVER IS NEAREST TO THE CONSTRUCTION ACTIVITY.
2. SPECIMEN AND HISTORIC TREES, CONSERVATION EASEMENTS, NATURAL VEGETATION BUFFERS, AND SIMILAR AREAS MUST BE PROTECTED BY BARRICADES OR FENCING PRIOR TO CLEARING. BARRICADES ARE TO BE SET AT THE DRIPLINE OF THE TREES AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. BARBED WIRE IS NOT PERMITTED AS A PROTECTIVE BARRIER.
3. WHERE A CHANGE OF GRADE OCCURS AT THE DRIPLINE OF A SPECIMEN TREE, SILT FENCES WILL BE REQUIRED DURING CONSTRUCTION AND RETAINING WALLS MUST BE INSTALLED PRIOR TO FINAL ACCEPTANCE BY THE CITY.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL PROTECTIVE VEGETATION BARRICADES AND EROSION CONTROL STRUCTURES AND MEASURES IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK, INCLUDING PRELIMINARY GRUBBING. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, TEMPORARY CONSTRUCTION FENCES, SYNTHETIC JUTE BALES, WATTLES, &/OR HAVE BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED, SILT FENCES, AND FLOATING TURBIDITY BARRIERS. FURTHER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL EROSION CONTROL DEVICES THROUGHOUT THE DURATION OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE PERIODIC INSPECTION AND REMOVAL OF DEBRIS ABUTTING EROSION CONTROL DEVICES AS SPECIFICALLY IDENTIFIED IN CHAPTER 10, ARTICLE 1, SECTION 5 OF THE LAND DEVELOPMENT CODE.
5. PRIOR TO THE INSTALLATION OF ANY FILL MATERIALS ON SUBJECT SITE, SILT FENCES SHALL BE INSTALLED (1) ALONG SUBJECT SITE BOUNDARY AND PROPERTY LINES, (2) AT THE EDGE OF CONSERVATION EASEMENTS AND WETLANDS, (3) ADJACENT TO NATURAL LANDSCAPE BUFFERS, (4) AROUND THE PERIMETER OF EXISTING STORM WATER TREATMENT FACILITIES, AND (5) AT ANY ADDITIONAL AREAS THAT THE CITY DEEMS NECESSARY TO BE PROTECTED FROM POTENTIAL EROSION IMPACTS DURING CONSTRUCTION. THESE CONDITIONS SHALL APPLY IN ALL INSTANCES WHERE FILL MATERIAL IS BEING INSTALLED WITHIN 25 FEET OF ANY OF THE AFOREMENTIONED LOCATIONS. WHILE THESE ITEMS REPRESENT THE MINIMUM REQUIREMENTS, THE CITY RESERVES THE RIGHT TO IMPOSE ADDITIONAL PROTECTIVE MEASURES, AS DETERMINED DURING ACTUAL SITE VISITS CONDUCTED AS PART OF THE STANDARD REVIEW OF THE SITE-SPECIFIC ABC CLEARING PERMIT APPLICATION AND THROUGHOUT PROJECT CONSTRUCTION.
6. WHERE FILL MATERIAL IS INTENDED TO BE INSTALLED ADJACENT TO EXISTING VEGETATION WHICH IS INTENDED TO REMAIN NATURAL, THE CONTRACTOR MAY INSTALL SILT FENCING AS A TREE PROTECTION MEASURE. IN LIEU OF INSTALLING EITHER WOOD BRACING OR ORANGE MESH FENCING, THIS PRACTICE IS ENCOURAGED BY THE CITY. IF THE SILT FENCE FAILS TO PROVIDE ADEQUATE PROTECTION FROM IMPACT DUE TO CONSTRUCTION, THEN ADDITIONAL CONSTRUCTION FENCING OR WOOD BRACING SHALL BE REQUIRED.
7. AT A MINIMUM, THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. SUFFICIENT GRASS COVERAGE IS TO BE ESTABLISHED WITHIN TWO WEEKS.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGH SCHEDULING, TO MINIMIZE THE DISTURBANCE OF SITE AREAS THAT HAVE BEEN BROUGHT TO THEIR PROPOSED FINAL GRADE. WITHIN SEVEN (7) DAYS OF BRINGING A SUBJECT AREA TO ITS FINAL GRADE OR INACTIVITY IN CONSTRUCTION, THE CONTRACTOR SHALL INSTALL SEED AND MULCH OR SOD, AS REQUIRED.



STANDARD CONSTRUCTION DETAIL
CONTRACTOR REQUIREMENTS FOR
SITE CLEARING, GRADING, AND EROSION CONTROL
DESIGN AND CONSTRUCTION NOTES

REV. 04/10

FILE NAME:
R25.DWG
DETAIL REF:
R-25

CONTRACTOR REQUIREMENTS FOR SITE CLEARING,
GRADING, AND EROSION CONTROL DESIGN AND
CONSTRUCTION NOTES (CONTD.)

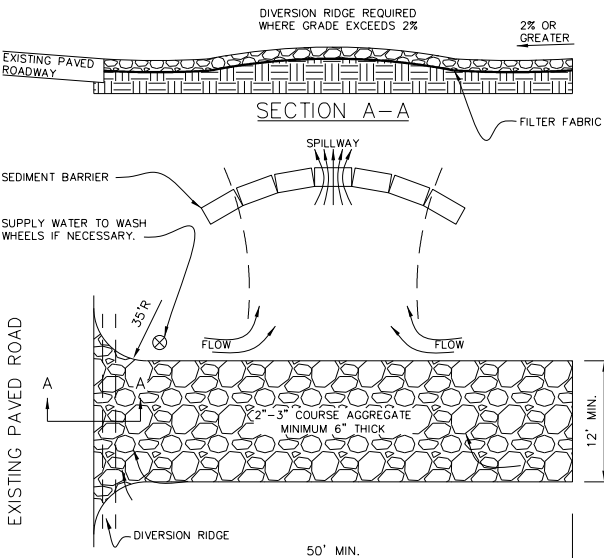
9. FOR INDIVIDUAL CONSTRUCTION PROJECTS INVOLVING MULTIPLE PHASES, (PHASING IS REQUIRED FOR SITES 30 ACRES AND LARGER) UPON COMPLETION OF EACH PHASE OF THE PROJECT, SEEDING AND MULCHING AND /OR SODDING IS TO BE PERFORMED PRIOR TO COMMENCING THE NEXT PHASE OF CONSTRUCTION.
10. ONCE AN AREA IS SEEDDED OR SODDED, IT MUST BE MAINTAINED BY THE CONTRACTOR TO ALLOW THE GRASS TO BECOME ESTABLISHED. IF THE GRASS IS NOT ESTABLISHED WITHIN TWO WEEKS THE CITY MAY REQUIRE THE CONTRACTOR TO RE-SEED OR A NON-VEGETATIVE OPTION MAY BE EMPLOYED.
11. ANY BURNING OF CLEARED MATERIALS MUST BE INSPECTED AND PERMITTED ON A DAILY BASIS. CONTACT THE FIRE MARSHALL AT 756-5401 PRIOR TO EACH DAY OF DESIRED BURNING.
12. ABSOLUTELY NO BURYING OF CLEARED MATERIALS IS PERMITTED.
13. THE REMOVAL OF ALL VEGETATION AND TOPSOIL ON THE FUTURE ROADWAY, PARKING AND BUILDING LOT AREAS IS REQUIRED TO BE COMPLETED PRIOR TO THE PLACEMENT OF FILL ON THOSE AREAS. THE TOPSOIL MAY BE TEMPORARILY STOCKPILED AND USED AS TOPSOIL OVER OVER PROPOSED GREEN AREAS SUCH AS PLANT BEDS, SODDED AREAS, AND WHERE TREES ARE TO BE INSTALLED OR RELOCATED.
14. A SIGNED, DATED, AND SEALED LETTER FROM A SOILS ENGINEER OR THE ENGINEER OF RECORD CERTIFYING THAT THE AREAS TO BE FILLED HAVE BEEN STRIPPED OF ORGANIC MATERIALS, MUST BE SUBMITTED TO THE CITY PRIOR TO FILLING.
15. FILL MATERIAL IS TO BE PLACED IN ONE FOOT LIFTS AND COMPACTED TO THE APPROPRIATE DENSITY (98% FOR PAVED AREAS AND 95% FOR BUILDING PADS AND ALL OTHER AREAS AS PER AASHTO T-180).
16. DURING SUBDIVISION DEVELOPMENT WHEN FUTURE BUILDING LOTS ARE FILLED AS PART OF THE OVERALL SUBDIVISION IMPROVEMENTS, COMPACTION TEST REPORTS MUST BE PERFORMED ON THE BUILDING LOTS AT 300 FOOT INTERVALS. THESE TESTS ARE TO BE PERFORMED IN ONE-FOOT VERTICAL INCREMENTS. THE RESULTS OF THESE TESTS ARE TO BE SUBMITTED TO THE CITY UPON COMPLETION OF THE TESTS.
17. IF ANY MUCK MATERIAL IS DISCOVERED, IT SHALL BE REQUIRED TO BE REMOVED AND REPLACED WITH A SUITABLE MATERIAL THAT IS PROPERLY BACKFILLED, COMPACTED AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
18. STOCKPILING IS NOT GENERALLY PERMITTED BY THE CITY. WHEN ALLOWED, STOCKPILES SHALL NOT EXCEED SIX FEET IN HEIGHT MEASURED FROM THE ORIGINAL GRADE. AT A MINIMUM, STOCK PILES THAT WILL REMAIN IN PLACE IN EXCESS OF TWENTY DAYS SHOULD BE SEEDDED AND MULCHED IMMEDIATELY UPON COMPLETION OF THE FINAL FILL.
19. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES. ADEQUATE WATERING METHODS SHOULD BE EMPLOYED TO ALLOW DAILY COVERAGE OF THE ENTIRE LIMITS OF ALL AREAS THAT DO NOT HAVE AN ESTABLISHED VEGETATIVE COVER. METHODS TO BE EMPLOYED INCLUDE, BUT ARE NOT LIMITED TO, WATER TRUCKS, PERMANENT IRRIGATION SYSTEMS, TEMPORARY SPRINKLER SYSTEMS OPERATED BY PUMPING UNITS CONNECTED TO WET RETENTION PONDS, WATER CANNONS, TEMPORARY IRRIGATION SYSTEMS MOUNTED ATOP STOCKPILE AREAS, AND OTHER METHODS AS DEEMED NECESSARY BY THE CITY.
20. ALL FILL MATERIALS LOCATED BENEATH STRUCTURES AND PAVEMENT SHALL CONSIST OF CLEAN GRANULAR SAND FREE FROM ORGANICS AND SIMILAR MATERIAL THAT COULD DECOMPOSE.
21. ALL FILL TO BE PLACED IN LANDSCAPED AREAS SHALL HAVE A PH RANGE BETWEEN 5.5 AND 7.5, BE ORGANIC IN NATURE, FREE OF ROCKS AND DEBRIS, OR MATCH NATIVE EXISTING SOILS.



STANDARD CONSTRUCTION DETAIL
CONTRACTOR REQUIREMENTS FOR
SITE CLEARING, GRADING, AND EROSION CONTROL
DESIGN AND CONSTRUCTION NOTES

REV. 04/10

FILE NAME:
R26.DWG
DETAIL REF:
R-26



1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OR-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. ALL MATERIALS SPILLED, DROPPED, OR TRACKED ONTO PUBLIC ROADS (INCLUDING T.G.C.E. AGGREGATE AND CONSTRUCTION MUD) SHALL BE REMOVED DAILY, OR MORE FREQUENTLY IF SO DIRECTED.
5. A SOIL TRACKING PREVENTION DEVICE (STPD) IS AN ACCEPTABLE ALTERNATIVE TO THIS DETAIL. REFERENCE FDOT INDEX 106 FOR DETAILS.



STANDARD CONSTRUCTION DETAIL
TEMPORARY GRAVEL
CONSTRUCTION ENTRANCE

REV. 12/08

FILE NAME:
R27.DWG
DETAIL REF:
R-27

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ENGINEERING BUSINESS -8794

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT#50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

CITY ROAD/
DRAINAGE
DETAILS

PROJECT: CC 1\FinalSF Phase 3

SHEET NO.

C36

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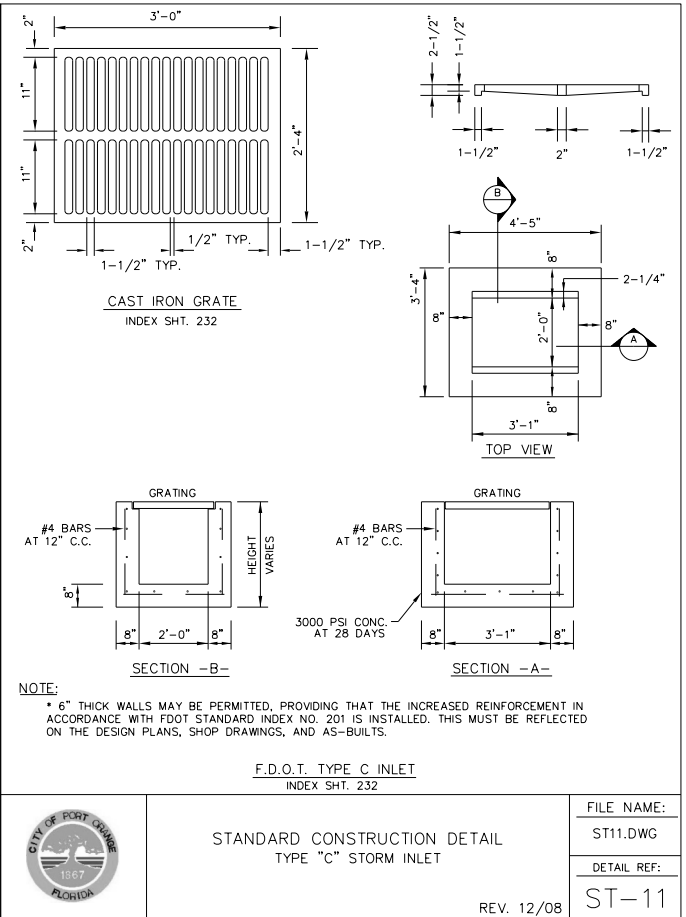
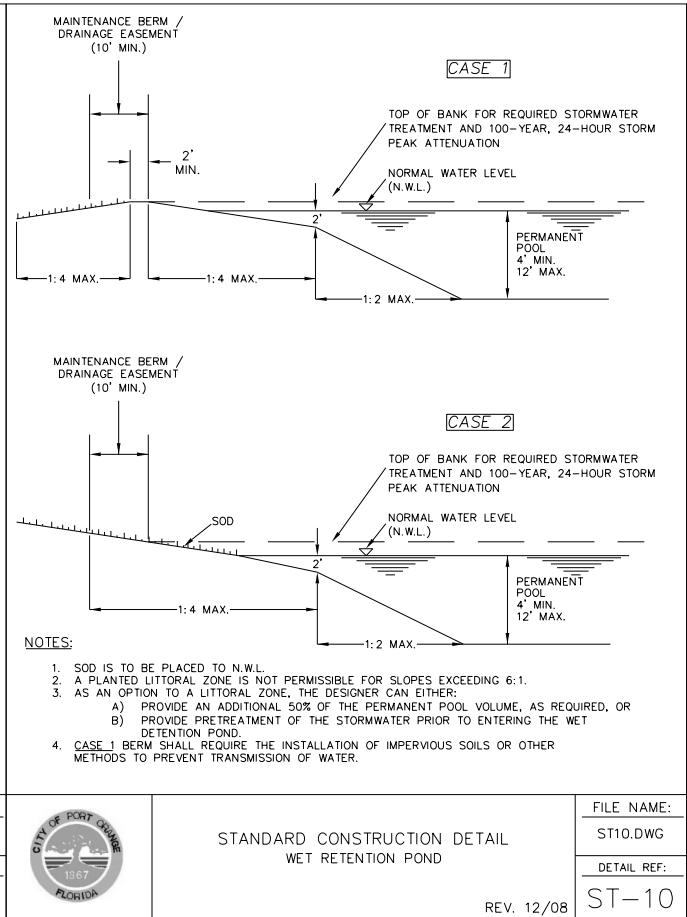
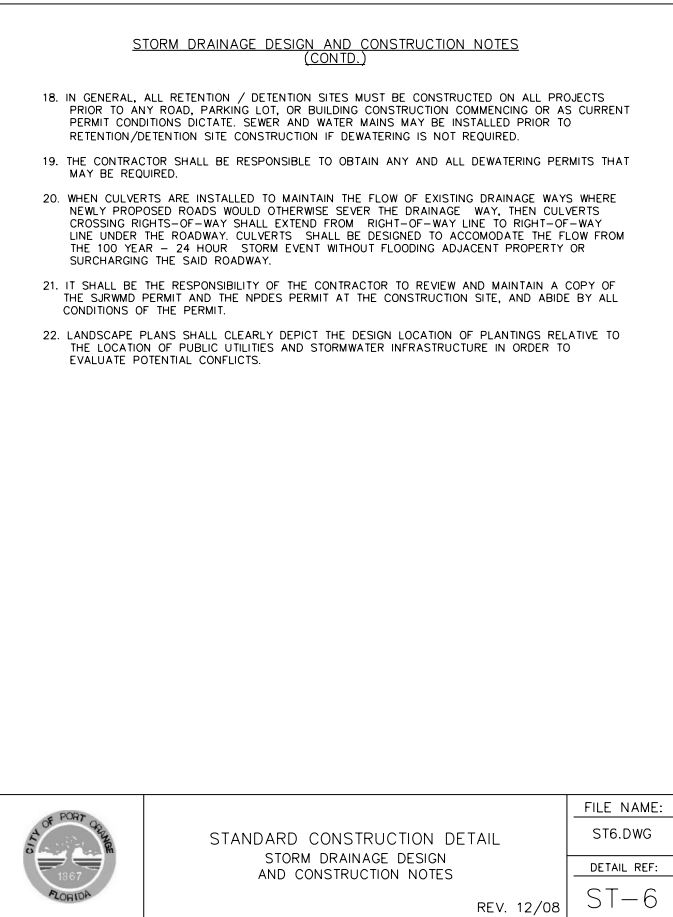
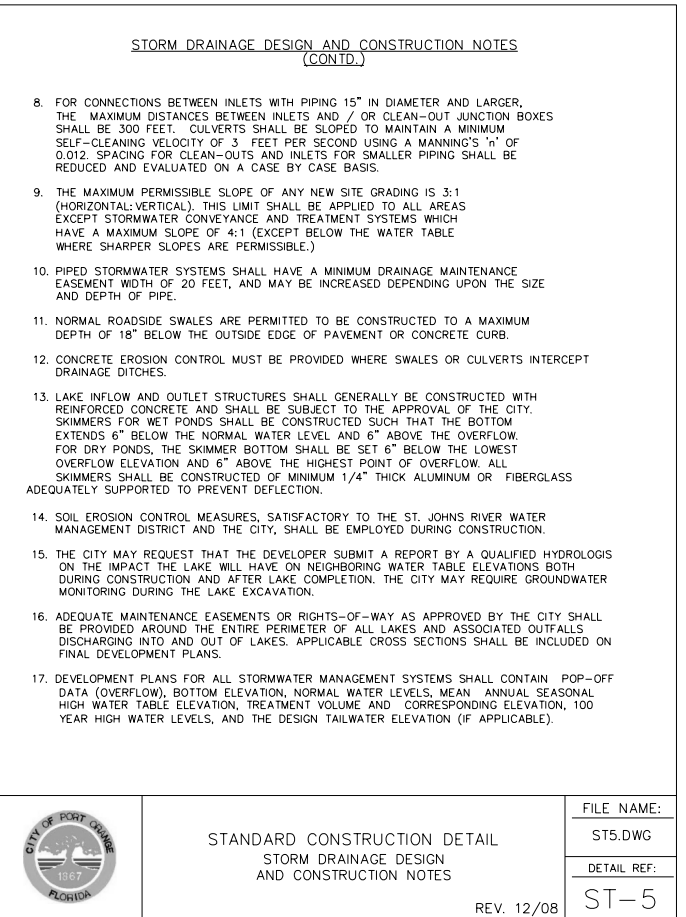
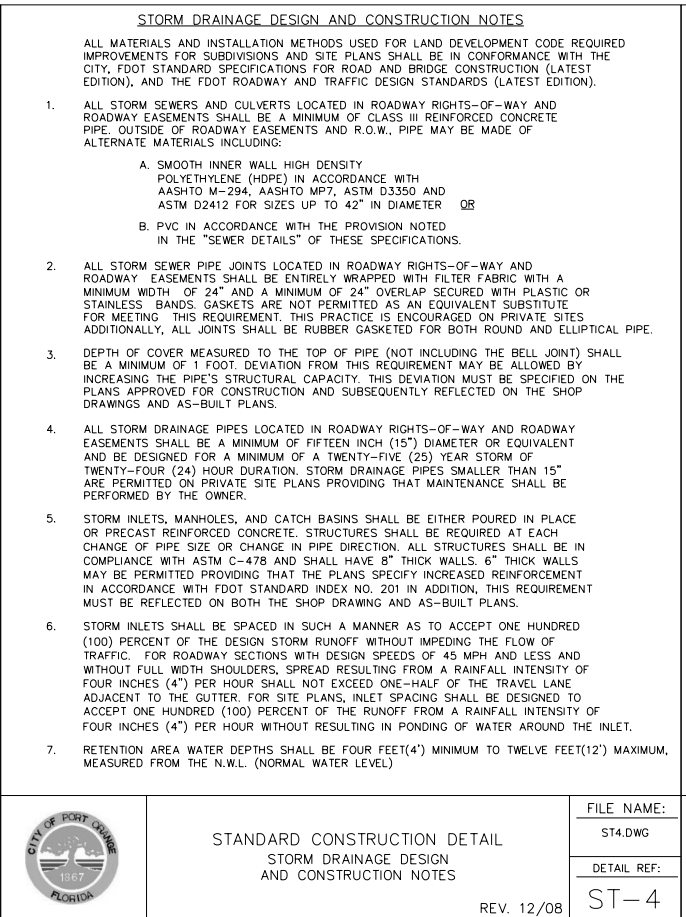
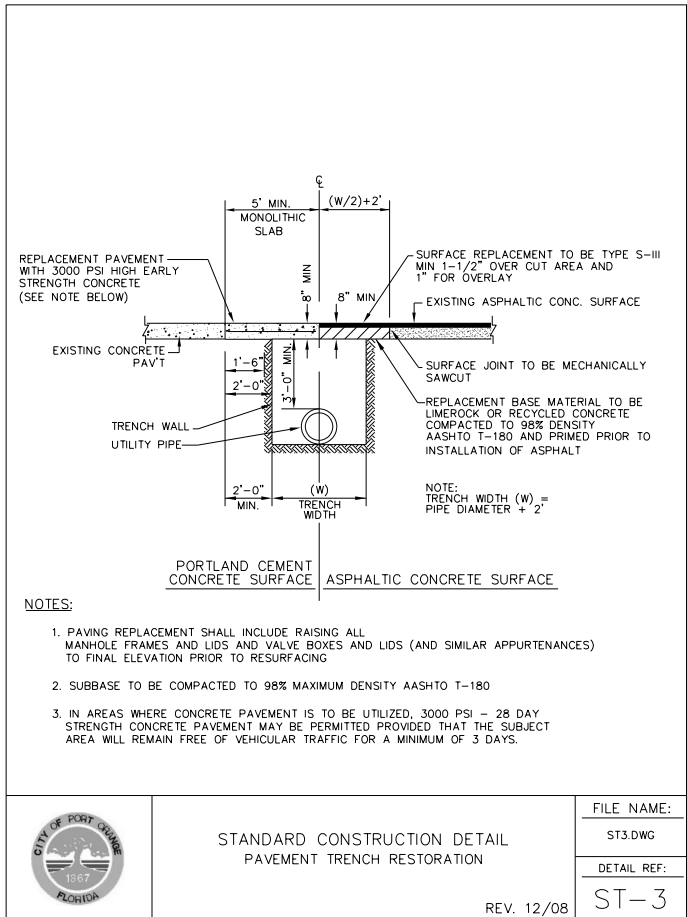
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ENGINEERING BUSINESS -8794

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

REVISIONS			
No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

CITY ROAD/
DRAINAGE
DETAILS

PROJECT: CC 11FinalSF Phase 3
SHEET NO.

C37

J:\ACC 1\FinalSF Phase 3\CC11FinalSF PH&S CityStormDetails-01.dgn 4:21:10 PM

REQUIREMENTS FOR AS-BUILT DRAWINGS (CONT'D)

IN ORDER TO ENSURE THAT NEW SUBDIVISIONS AND SITE PLANS ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS, THE FOLLOWING INFORMATION IS REQUIRED ON ALL SUBDIVISION AS-BUILT DRAWINGS.

- SANITARY SEWER MANHOLES SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. ALL RIM AND INVERT ELEVATIONS SHALL BE VERIFIED AND RECORDED. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION. DESIGN ELEVATIONS SHALL BE CROSSED OUT AND AS-BUILT INFORMATION WRITTEN NEXT TO IT.
- FOR SUBDIVISIONS, PROPOSED DESIGN FINISHED FLOOR ELEVATIONS SHALL APPEAR ON ALL SUBDIVISION LOTS ON THE APPROPRIATE PLAN AND PROFILE SHEET AS WELL AS ON THE MASTER DRAINAGE PLAN. SANITARY SEWER LINE LENGTHS, SIZES, MATERIAL, ETC., SHALL BE VERIFIED AND RECORDED. THIS INFORMATION IS TO BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
- SEWER LATERALS SHALL BE VERIFIED AND RECORDED AT THEIR CLEAN-OUT LOCATIONS. STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TOWARDS UPSTREAM MANHOLES.
- LIFT STATIONS AND FORCE MAINS SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. FORCE MAIN DEPTH AND LOCATION INCLUDING VALVES WILL BE PROVIDED AND TIED TO PERMANENT ABOVE GRADE FEATURES. DIMENSIONAL AND ELEVATION INFORMATION INDICATED ON THE APPROVED PLAN SHALL BE VERIFIED AND RECORDED. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION. BURIED ELECTRICAL SERVICE LINE SHALL BE CLEARLY DIMENSIONED, LOCATED, AND LABELED.
- CURB CUTS OR METAL TABS, USED TO MARK SEWER LATERALS, WATER SERVICES AND WATER VALVES, SHALL BE VERIFIED FOR PRESENCE AND ACCURACY OF LOCATION.
- POTABLE AND RECLAIMED WATER MAIN LINES SHALL BE DIMENSIONED OFF THE BACK OF CURB, OR EDGE OF PAVEMENT IF NO CURB IS PRESENT. WATER MAIN LINE MATERIAL, SIZE, LENGTH AND DEPTH PLACED SHALL ALSO BE NOTED. LOCATIONS OF VALVES, TEES AND CROSSES SHALL BE TIED TO (3) THREE PERMANENT ABOVE GRADE FEATURES. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
- POTABLE AND RECLAIMED WATER VALVES, TEES, BENDS, ALL SERVICES, AND FIRE HYDRANTS SHALL BE LOCATED BY TYING THEM TO SANITARY SEWER MANHOLES. SIMILARLY, FORCE MAIN VALVES, TEES, AND BENDS SHALL BE LOCATED IN THE SAME MANNER. STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TO UPSTREAM MANHOLES.
- FOR PERPENDICULAR CROSSINGS OF STORMWATER, SANITARY SEWER, POTABLE WATER, OR RECLAIMED WATER, THE AS-BUILT PLANS SHALL CLEARLY INDICATE WHICH UTILITIES ARE LOCATED OVER OR UNDER OTHER UTILITIES, AS NECESSARY.
- ANY SPECIAL FEATURES SUCH AS, CONCRETE FLUMES, LAKE BANKS, WALLS, FENCING, ETC., WHICH WERE A PART OF THE APPROVED CONSTRUCTION DRAWINGS SHOULD ALSO BE LOCATED AND DIMENSIONED.
- IF AN APPROVED SUBDIVISION PLAT OR SITE PLAN SHOWS A CONSERVATION EASEMENT, THE PROJECT SURVEYOR SHALL PROVIDE THE EXACT LOCATION OF THE SPECIMEN TREE(S) FROM THE RIGHT-OF-WAY OR PROPERTY LINES AND PROPOSED EASEMENT BOUNDARIES ON THE AS-BUILT DRAWING. THE AS-BUILT LOCATION OF THESE TREES WILL HELP VERIFY THE EFFICIENCY OF THE CONSERVATION EASEMENT PRIOR TO PLAT RECORDING OR CERTIFICATE OF OCCUPANCY.



STANDARD CONSTRUCTION DETAIL
REQUIREMENTS FOR AS-BUILTS DRAWINGS

FILE NAME:
M1.DOC

DETAIL REF:
M-1

REV. 12/08

REQUIREMENTS FOR AS-BUILT DRAWINGS (CONT'D)

IN ORDER TO ENSURE THAT NEW SUBDIVISIONS AND SITE PLANS ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS, THE FOLLOWING INFORMATION IS REQUIRED ON ALL SUBDIVISION AS-BUILT DRAWINGS.

- WHEN STORMWATER, POTABLE WATER, RECLAIMED WATER, OR SANITARY SEWER IMPROVEMENTS ARE LOCATED WITHIN AN EASEMENT, THE AS-BUILT DRAWING SHALL ACCURATELY DEPICT THE LOCATION OF THE EASEMENT ITSELF AS WELL AS THE EXACT LOCATION OF THE IMPROVEMENTS WITHIN THE EASEMENT. THIS IS REQUIRED IN ORDER TO VERIFY THAT THE IMPROVEMENTS HAVE BEEN PROPERLY LOCATED AND TO ENSURE THAT FUTURE SUBSURFACE EXCAVATION TO PERFORM REMEDIAL REPAIR CAN BE ACCOMPLISHED WITHOUT DISTURBANCE BEYOND THE EASEMENT. SUCH DOCUMENTATION AND THE ASSOCIATED PROPOSED EASEMENT DOCUMENT WITH LEGAL DESCRIPTION SHALL BE SUBMITTED FOR CITY REVIEW AND APPROVAL PRIOR TO RECORDING OF SAID EASEMENT. UPON CITY APPROVAL, THE EASEMENT SHALL BE RECORDED VIA A SEPARATE LEGAL INSTRUMENT AND SHALL NOT BE INCLUDED AS PART OF HOMEOWNER COVENANTS & RESTRICTIONS.

NOTE: 1. REFERENCES TO WATER SHALL MEAN BOTH POTABLE AND RECLAIMED WATER.



STANDARD CONSTRUCTION DETAIL
REQUIREMENTS FOR AS-BUILTS DRAWINGS

FILE NAME:
M1.DOC

DETAIL REF:
M-1

REV. 12/08

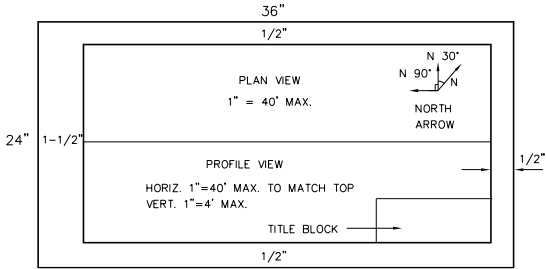
PLAN SHEET REQUIREMENTS:

- PLANS SUBMITTED TO THE COMMUNITY DEVELOPMENT DEPARTMENT FOR REVIEW INCLUDING SITE PLANS, SUBDIVISIONS, PLANNED UNIT DEVELOPMENTS, AND OTHER DEVELOPMENTS, SHALL CONSIST OF AT LEAST THE FOLLOWING ITEMS:
 - INDEX PAGE WITH AREA MAP SHOWING PROJECT LIMITS
 - PLAN AND PROFILE SHEETS, AS APPROPRIATE
 - PLAN SHEETS, AS APPROPRIATE
 - PROFILE SHEETS, AS APPROPRIATE
 - DETAIL SHEETS, AS APPROPRIATE
 - OTHER INFORMATION, AS REQUIRED BY CODE

- THEY SHALL BE DRAWN ON STANDARD 24" X 36" SHEETS. THE PLAN AND PROFILE MAY BE EITHER SINGLE OR DOUBLE AS THE INDIVIDUAL PROJECT DICTATES. EACH SHEET SHALL CONTAIN AN APPROPRIATE TITLE BLOCK SHOWING THE FOLLOWING INFORMATION:

- THE NAME OF THE PROJECT
- THE NAME, ADDRESS, AND PHONE NUMBER OF THE COMPANY PREPARING THE DRAWINGS
- THE NAME, ADDRESS, AND PHONE NUMBER OF THE ENGINEER, SURVEYOR, OR LANDSCAPE ARCHITECT AS APPROPRIATE.
- THE SHEET NUMBER
- THE DRAWING NUMBER
- THE DATE
- ANY REVISIONS AND DATE
- OTHER INFORMATION AS APPROPRIATE

- THE STANDARD SHEET SHALL BE LAID OUT AS SHOWN BELOW, WITH EACH SHEET CONTAINING A NORTH ARROW AND SCALE.

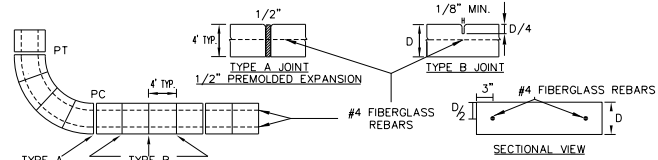


STANDARD CONSTRUCTION DETAIL
PLAN SHEET REQUIREMENTS

FILE NAME:
M2.DWG

DETAIL REF:
M-2

REV. 12/08



SIDEWALK CONSTRUCTION REQUIREMENTS

- ALL CONCRETE SIDEWALKS & BIKE PATHS IN PUBLIC RIGHT-OF-WAY, PRIVATE RIGHT-OF-WAY AND ON NON-RESIDENTIAL SITES SHALL CONTAIN FIBERGLASS REINFORCEMENT EXCEPT REPAIRS TO NON-REINFORCED EXISTING SIDEWALKS. FIBERGLASS REINFORCEMENT SHALL NOT BE REQUIRED ON PRIVATE RESIDENTIAL SIDEWALKS.
- SIDEWALKS, BIKEPATHS, RAMPS, AND DRIVEWAY APRONS SHALL BE CONSTRUCTED OF PLAIN PORTLAND CEMENT CONCRETE WITH FIBERGLASS REINFORCEMENT, HAVING A MAXIMUM SLUMP OF 3 INCHES. A MINIMUM DEVELOPED COMPRESSIVE STRENGTH OF 3000 P.S.I. IN 28 DAYS, AND A MINIMUM UNIFORM THICKNESS OF 4 INCHES WHERE INTENDED SOLELY FOR PEDESTRIAN TRAFFIC, AND 6 INCHES THICK WHERE MOTOR VEHICLES ARE LIKELY TO CROSS.
- 2-#4 CONTINUOUS FIBERGLASS BARS (6" OVERLAP REQUIRED) SHALL BE INSTALLED LONGITUDINALLY, 3" FROM THE EDGE OF ALL BIKEPATHS AND SIDEWALKS, TO CONTROL DIFFERENTIAL MOVEMENT AT JOINTS. SIDEWALKS AND BIKEPATHS SHALL BE PLACED PARALLEL TO, AND ONE FOOT WITHIN THE RIGHT-OF-WAY LINE EXCEPT THAT THE CITY MAY APPROVE DEVIATIONS TO SAVE SPECIMEN TREES PROVIDED THAT THE SIDEWALK REMAINS WITHIN THE RIGHT-OF-WAY OR AN APPROVED SIDEWALK EASEMENT ABUTTING THE RIGHT OF WAY. SIDEWALKS AND BIKE PATHS SHOULD BE LOCATED AT LEAST 4 FEET FROM THE EDGE OF THE STREET PAVEMENT UNLESS OTHERWISE APPROVED BY THE CITY.
- THE TOP OF THE CONCRETE SHALL BE AT AN ELEVATION NO LOWER THAN THE CROWN OF THE ADJACENT ROADWAY, AND NO HIGHER THAN 6 INCHES ABOVE THE CROWN UNLESS APPROVED BY THE CITY TO MAKE A MORE NATURAL TRANSITION WITH THE ADJACENT LAND.
- ISOLATION JOINTS (TYPE A JOINTS) SHALL BE PROVIDED BETWEEN EXISTING SLABS OR STRUCTURES AND FRESH CONCRETE, TO SEPARATE PEDESTRIAN SECTIONS FROM SECTIONS WHICH WILL ENCOUNTER VEHICLE TRAFFIC, TO SEPARATE FRESH PLACEMENT FROM CONCRETE WHICH HAS SET FOR MORE THAN 60 MINUTES, AND NO FARTHER APART THAN 100 FEET IN SIDEWALKS AND BIKEPATHS. JOINT MATERIAL SHALL BE PERFORMED JOINT FILLER MEETING F.D.O.T. SPECIFICATIONS.
- CONTROL JOINTS (TYPE B JOINTS) SHALL BE TOOLED INTO THE FRESH CONCRETE TO A DEPTH EQUAL TO 1/4 THE SLAB THICKNESS AND SPACED APART A DISTANCE EQUAL TO THE WIDTH OF THE SLAB OR 4 FEET WHICHEVER IS GREATER.
- THE SLAB SURFACE SHALL BE BROOM FINISHED TO BE SLIP RESISTANT, AND SHALL MATCH AS CLOSELY AS POSSIBLE THE FINISH OF EXISTING ADJACENT SLABS AND ALL EDGES SHALL BE TOOLED TO ELIMINATE SHARP CORNERS.
- THE BEARING SUBSURFACE SHALL HAVE ALL ORGANIC, LOOSE, AND DELETERIOUS MATTER REMOVED, AND THE REMAINING CLEAN SOIL SHALL BE SMOOTH, SOUND, AND SOLID. ANY FILL MATERIAL SHALL BE COMPACTED TO A MINIMUM PROCTOR FIELD DENSITY OF 95 PERCENT.
- ALL CONCRETE WORK IN THE RIGHT-OF-WAY SHALL BE INSPECTED BY THE CITY AFTER THE SUBSOIL IS PREPARED AND THE FORMS ARE SET, BUT BEFORE THE CONCRETE PLACEMENT BEGINS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE FINISHED SLAB FROM ALL DAMAGE AND VANDALISM UNTIL THE CITY ACCEPTS OR APPROVES THE SLAB, AFTER WHICH TIME THE OWNER OF THE ABUTTING LAND SHALL BE RESPONSIBLE FOR THE SLAB IN ACCORDANCE WITH THE CITY CODE. ANY SLAB SECTION DAMAGED OR VANDALIZED PRIOR TO ACCEPTANCE OR APPROVAL SHALL BE CUT OUT BETWEEN JOINTS AND REPLACED. REPAIRS ARE NOT ACCEPTABLE.
- SIDEWALKS LOCATED WITHIN THE RIGHT-OF-WAY SHALL NOT BE TINTED, STAINED, COLORED, OR COATED.
- ALL FORMS SHALL BE REMOVED PRIOR TO ACCEPTANCE OR APPROVAL AND THE DISTURBED GROUND SHALL BE BACKFILLED, REGRADED, AND SODDED SO THAT THE WEAR SURFACE OF THE CONCRETE IS REASONABLY FLUSH WITH THE ADJACENT GRADE.

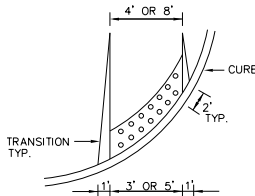
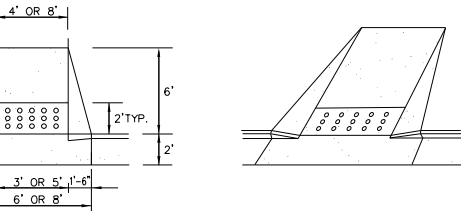


STANDARD CONSTRUCTION DETAIL
SIDEWALK CONSTRUCTION REQUIREMENTS

FILE NAME:
M3.DWG

DETAIL REF:
M-3

REV. 12/08



NOTES:

- RAMP LOCATIONS ARE TO BE COORDINATED WITH AND IN CONFORMANCE WITH CROSSWALK MARKING DETAILS SHOWN IN THE PLANS.
- CURBED RAMPS SHALL HAVE FLARED SIDES WITH A MAXIMUM SLOPE OF 12:1.
- NO CURB TRANSITION IS NEEDED FOR MIAMI CURBS.
- ALL RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT INDEX NO. 304 AND ACCESSIBILITY REQUIREMENTS IN ACCORDANCE WITH THE AMERICAN DISABILITIES ACT.
- CURB RAMPS SUBJECT TO THE DEPARTMENT OF TRANSPORTATION REGULATION CFR 37.21 SHALL HAVE A DETECTABLE WARNING.

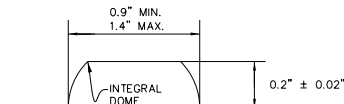
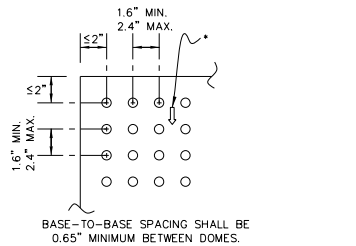


STANDARD CONSTRUCTION DETAIL
SIDEWALK AND BIKEPATH RAMP
(WITHIN RIGHT-OF-WAY)

FILE NAME:
M4.DWG

DETAIL REF:
M-4

REV. 2/13



NOTES:

- ON RAMPS THAT ARE PERPENDICULAR WITH THE CURB LINE, THE DOME PATTERN SHALL BE IN-LINE WITH THE DIRECTION OF TRAVEL. ON RAMPS INTERSECTING CURBS ON A RADIUS, THE DOME PATTERN SHALL BE IN-LINE WITH THE DIRECTION OF TRAVEL TO THE EXTENT PRACTICAL.
- CURB RAMPS SUBJECT TO THE DEPARTMENT OF TRANSPORTATION REGULATION CFR 37.21 SHALL HAVE A DETECTABLE WARNING.

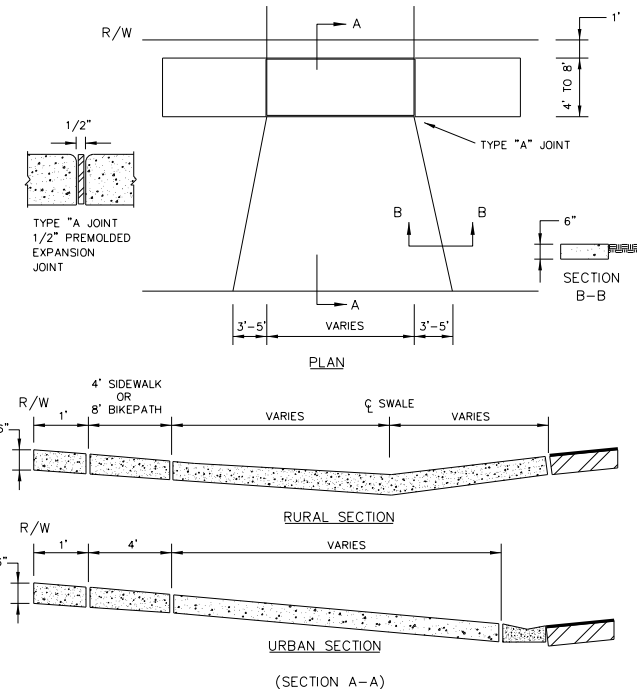


STANDARD CONSTRUCTION DETAIL
SIDEWALK AND BIKEPATH RAMP

FILE NAME:
M5.DWG

DETAIL REF:
M-5

REV. 2/13



NOTES:

- DRIVEWAY APRON BASE TO BE COMPACTED AND TESTED TO 98% DENSITY WITH MINIMUM L.B.R. 40 BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.
- CONCRETE DRIVEWAY APRON TO BE 28 DAY, 3000 P.S.I.

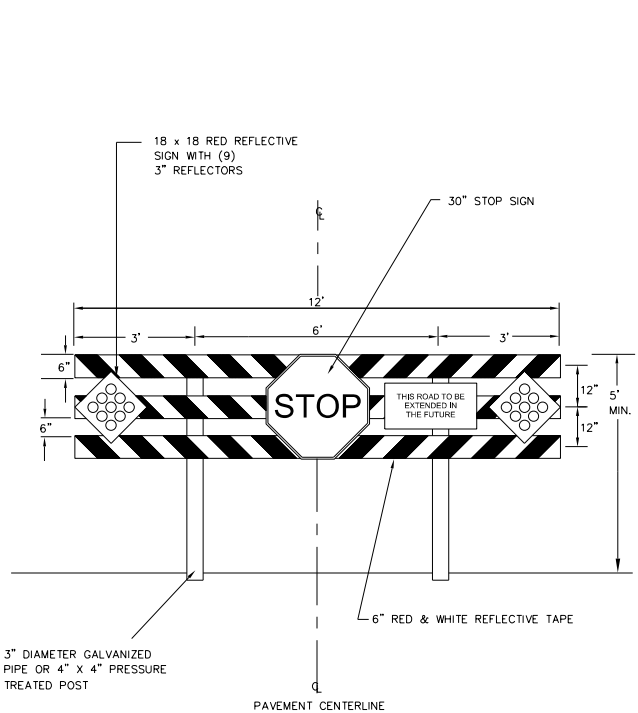


STANDARD CONSTRUCTION DETAIL
DRIVEWAY APRON

FILE NAME:
M6.DWG

DETAIL REF:
M-6

REV. 12/08



STANDARD CONSTRUCTION DETAIL
ROAD BARRICADE

FILE NAME:
M9.DWG

DETAIL REF:
M-9

REV. 12/08



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WESTPORT RESERVE
(PHASE 3)

SEAL

8/31/2017

REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

CITY ROAD/
DRAINAGE
DETAILS

PROJECT: CC 11\FinalSF Phase 3

SHEET NO.

C38

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SEAL

STREET AND WALKWAY LIGHTS

WALKWAY LIGHTS: (HEIGHT: 10 TO 20 FEET)

- ALONG DUNLAWTON AVENUE:
 - WEST OF I-95:
THE FLORIDIAN (SEE DETAIL M-15)
 - FROM I-95 TO SPRUCE CREEK ROAD:
GARDCO LIGHTING (SEE DETAIL M-16)
 - EAST OF SPRUCE CREEK ROAD:
LUMEC LIGHTING (SEE DETAIL M-17)
- ALONG RIDGEWOOD AVENUE FROM THE NORTHERN CITY LIMITS SOUTH TO MEEKER PLACE:
 - LUMEC LIGHTING (SEE DETAIL M-17)
- IN LOCATIONS OTHER THAN DUNLAWTON AVENUE, THE WALKWAY LIGHTS SHALL BE ANY OF THE THREE (3) STYLES NOTED ABOVE OR THE FOLLOWING: STERNBERG GEORGETOWN (0650 / 4408-DFF), WILLIAMSBURG (9405-TF / 3610-T) OR COLONIAL (4620TF-LF). ALL CITY MAINTAINED WALKWAY LIGHTS ARE TO BE FLORIDA POWER AND LIGHT (FPL) SUPPLIED LIGHTS, UTILIZING 150 WATT HPS.
- SPACING SHALL BE A MAXIMUM OF 100 FEET ON CENTER.

STREET LIGHTS: (HEIGHT: 20+ FEET)

- STREET LIGHTS SHALL BE GENERALLY PROVIDED AT ALL INTERSECTIONS, AND AT MAJOR ENTRY ROADS INTO THE SUBDIVISION AS DESIGNATED BY THE ADMINISTRATIVE OFFICIAL.
- ALL CITY MAINTAINED STREET LIGHTS ARE TO BE FPL SUPPLIED STREET LIGHTS.
- PRIVATELY MAINTAINED STREET LIGHTS SHALL BE:
GARDCO LIGHTING EH / 26" / 1 / 3 / 150 HPS / 240 / BRA / PC
(NOTE: POLE SHALL BE CONCRETE AVAILABLE THROUGH F.P.L. AND SPACED AT INTERVALS OF 300 TO 400 FEET.)
- ALTERNATIVE STREET LIGHTING PROPOSALS BY DEVELOPERS SHOULD BE SUBMITTED TO THE COMMUNITY DEVELOPMENT DEPT. FOR APPROVAL.



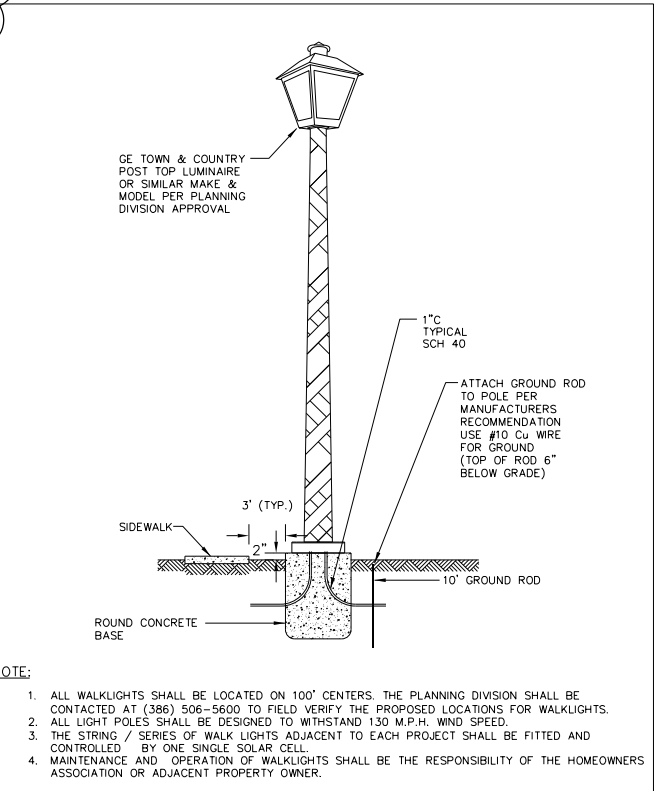
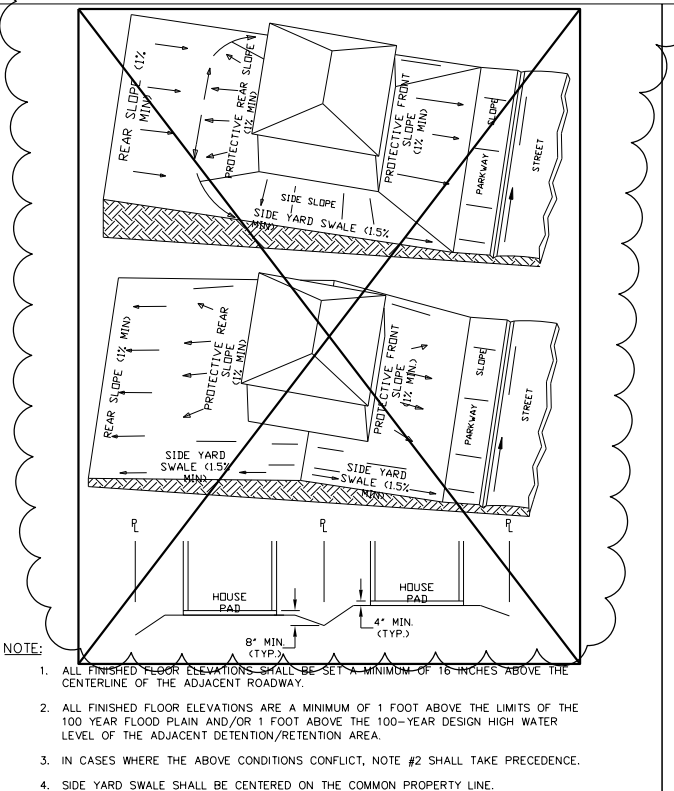
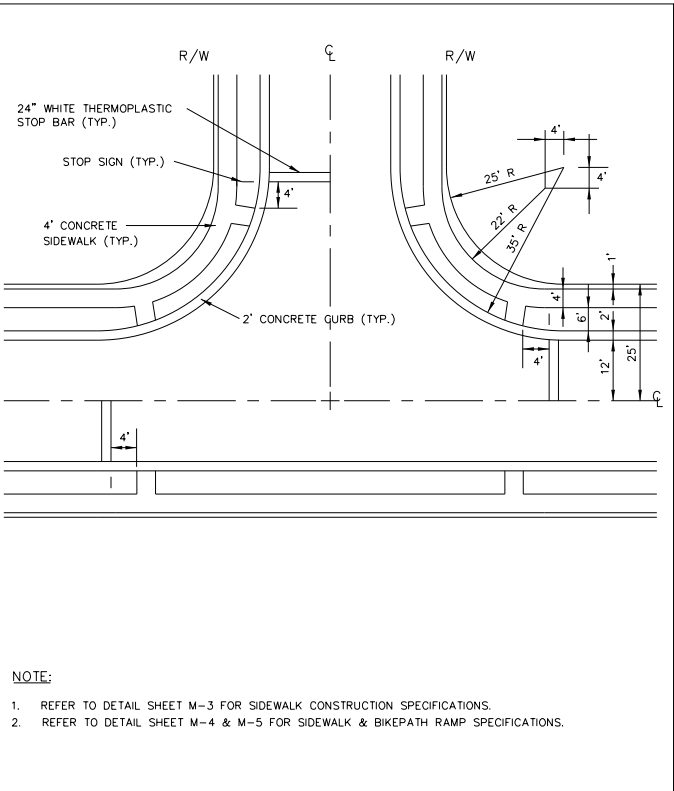
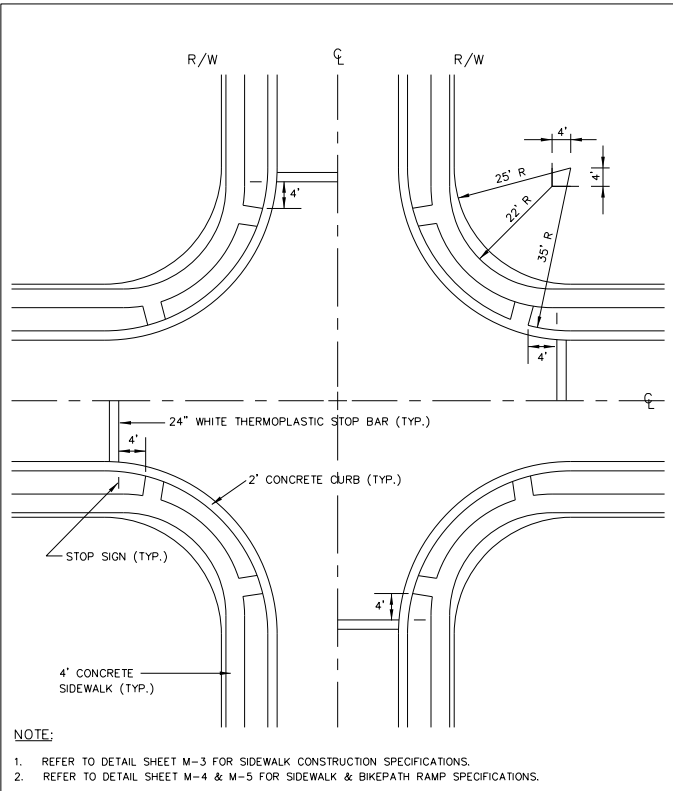
STANDARD CONSTRUCTION DETAIL
STREET AND WALKWAY LIGHTS

REV. 12/08

FILE NAME:
M14.DWG

DETAIL REF:
M-14

REFER TO SHT. No. C21 & C22 FOR LOT GRADING





STANDARD CONSTRUCTION DETAIL
SIDEWALK CONSTRUCTION AT INTERSECTIONS

REV. 12/08



STANDARD CONSTRUCTION DETAIL
SIDEWALK CONSTRUCTION AT INTERSECTIONS

REV. 12/08



STANDARD CONSTRUCTION DETAIL
RESIDENTIAL GRADING

REV. 12/08



STANDARD CONSTRUCTION DETAIL
TRADITIONAL POST TOP

REV. 2/13

REVISIONS

No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY

PROJECT # PROJECT #50083136

DRAWN BY KJK

APPROVED BY DMV

CHECKED BY DMV

DATE JULY 2017

DATUM NAVD 88

TITLE

CITY ROAD/
DRAINAGE
DETAILS

PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C39

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SANITARY SEWER DESIGN NOTES		
1. ALL GRAVITY SANITARY SEWER MAINS SHALL BE 8" DIAMETER MINIMUM. COMMERCIAL SERVICE LATERALS WITH MULTIPLE CONNECTIONS SHALL BE GREEN 6" DIA. OR LARGER. ALL SINGLE FAMILY RESIDENTIAL SERVICE LATERALS SHALL BE 4" - SINGLE SERVICES. 2. ALL GRAVITY SANITARY SEWER LINES SHALL BE GREEN PVC SDR 26, ASTM D-3034. IN PLACES WHERE A MINIMUM COVER OF 4.0' CANNOT BE MAINTAINED, AWWA C-900 OR C-905 GREEN PVC DR-25, CLASS 100 OR CONCRETE ENCASEMENT SHALL BE USED. WATER LINES, RECLAIMED LINES, AND STORM DRAINAGE CROSSINGS SHALL ALSO FOLLOW THE CONCRETE ENCASEMENT REQUIREMENT PER THESE STANDARDS AND AS PER REGULATORY REQUIREMENTS. 3. MINIMUM GRAVITY SANITARY SEWER SLOPES ARE AS FOLLOWS: 8" PIPE 0.40 % 10" PIPE 0.30 % 12" PIPE 0.22 % 4. MAXIMUM DEPTH OF SANITARY MANHOLES SHALL BE 15.0'. MAXIMUM DEPTH OF LIFT STATION WET WELLS SHALL BE 20.0'. 5. GRAVITY SANITARY SEWER LINES SHALL BE INSTALLED WHENEVER POSSIBLE UNDER PAVED AREAS WITHIN PUBLIC RIGHTS-OF-WAY. UTILITY EASEMENTS SHALL BE PROVIDED WHENEVER PUBLICLY-OWNED SEWER LINES ARE CONSTRUCTED OUTSIDE OF A PUBLIC RIGHT-OF-WAY. 6. ALL TESTING REQUIRED BY THE CITY SHALL BE PAID FOR BY THE CONTRACTOR / DEVELOPER. 7. ALL LOCAL COLLECTION SANITARY SEWER MANHOLES SHALL BE PRECAST WITH A MINIMUM INSIDE DIAMETER OF 4 FEET. 8. STANDARD MANHOLES SHALL BE LOCATED AT INTERVALS NOT EXCEEDING 350 FEET. 9. INDIVIDUAL SANITARY SERVICE ON NEW CONSTRUCTION SHALL NOT BE CONNECTED DIRECTLY INTO MANHOLES, AND MUST CONNECTED TO SEWER MAIN LINES BY USE OF WYE CONNECTIONS, UNLESS OTHERWISE APPROVED BY THE CITY. 10. FOR SINGLE FAMILY HOMES, SINGLE FOUR INCH SEWER SERVICES LATERALS SHALL BE CONSTRUCTED AT EACH LOT OR UNIT AND LOCATED ON THE DOWNSTREAM SIDE OF THE LOT CENTER LINE. THESE SERVICES SHALL BE EXTENDED 4 FEET ABOVE GROUND AT THE PROPERTY LINE WITH A PVC RISER AND PLUG BEING EASILY VISIBLE FROM THE ROAD. RUBBER SEAL FITTINGS SHALL BE USED ON ALL LINES. NO GLUED JOINTS ARE PERMITTED ON LATERALS. 11. FOR MULTI-FAMILY AND COMMERCIAL SITES, SIX INCH MINIMUM SEWER SERVICES AND CLEANOUTS SHALL BE PROVIDED AS APPROVED BY THE CITY. 12. SANITARY SEWER LIFT STATIONS AND FORCE MAINS, SIZE, MATERIAL, AND DESIGNS SHALL BE APPROVED BY THE CITY. LIFT STATIONS SHALL BE CONSTRUCTED WITH A MINIMUM WET WELL INTERIOR DIAMETER OF 6.0 FEET. FORCE MAINS SHALL BE A MINIMUM 6 INCH DIAMETER. 13. IT SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER TO PREPARE AND SUBMIT FLOTATION CALCULATIONS TO SIZE THE BASE OF THE WET WELL, AND ANY MANHOLES AS DEEMED NECESSARY BY THE CITY. 14. SANITARY SEWER DROP MANHOLES SHALL ONLY BE USED UNDER SPECIAL CONDITIONS AS APPROVED BY THE CITY. DROPS LESS THAN 2.0' SHALL NOT BE ALLOWED. 15. ALL SANITARY SEWER FORCE MAINS, INCLUDING FITTINGS, SHALL BE DIP WITH PROTECTO 401, PVC AWWA C-900, OR C-905 (COLOR "GREEN") (PRESSURE FITTINGS, PRESSURE CLASS 150 OR C-907).		
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER DESIGN NOTES	FILE NAME S1.DOC
		DETAIL REF: S-1
		REV. 12/08

SANITARY SEWER DESIGN NOTES CONT'D		
16. SANITARY SEWER MANHOLES WHICH HAVE SEWER FORCE MAINS DISCHARGING DIRECTLY INTO THEM SHALL BE FIBERGLASS OR POLY-ETHYLENE LINED OR EPOXY LINED. RETRO-FITTING OF MANHOLES WITH LINERS SHALL BE REQUIRED WHEN NEW CONNECTIONS SUCH AS THIS ARE MADE. FIBERGLASS SHALL BE A MINIMUM 1/2" THICKNESS UNLESS APPROVED OTHERWISE BY THE CITY. OTHER TYPES OF LINING METHODS AND MATERIALS MAY BE CONSIDERED ON A CASE BY CASE BASIS. UNDER SPECIAL CIRCUMSTANCES WHERE HYDROGEN SULFIDE IS A MAJOR CONCERN MANHOLES UPSTREAM AND/OR DOWNSTREAM OF THE FORCE MAIN TIE-IN OR WET WELL MAY ALSO BE REQUIRED TO HAVE LININGS INSTALLED. 17. ALL SANITARY SEWER MANHOLES SHALL HAVE ALL INTERIOR SURFACES COATED WITH THREE (3) COATS OF WHITE/GRAY OVER RED OVER BLACK EW-1 EPOXY PAINT WITH A TOTAL OF 12 MILS DRY FILM THICKNESS OR BLACK COAL-TAR EPOXY WITH A TOTAL OF 16 MILS THICKNESS. OUTSIDE SURFACE TO BE COATED WITH TWO (2) COATS OF BLACK OVER BLACK EW-1 EPOXY PAINT WITH A TOTAL OF 8 MILS OR ONE (1) COAT OF BLACK COAL-TAR EPOXY WITH A TOTAL OF 8 MILS. ALL COATS SHALL BE APPLIED AT THE FACTORY EXCEPT MINOR FIELD TOUCH UP AT JOINTS AND AT MANHOLE NECK. 18. ALL MANHOLES CONSTRUCTED IN SIDE YARDS, BACKYARDS, AND EASEMENTS OUTSIDE OF THE RIGHT-OF-WAY SHALL BE OUTFITTED WITH FIBERGLASS OR EPOXY LINERS IN COMPLIANCE WITH ASTM-3753 OR OTHER TYPES OF LINERS APPROVED BY THE CITY. IN ADDITION THE CITY MAY REQUIRE LINERS TO BE INSTALLED IN OTHER AREAS WHERE THE PUBLIC UTILITIES DEPARTMENT BELIEVES THE NEED IS JUSTIFIED SUCH AS IMMEDIATELY UPSTREAM OF FORCE MAINS CONNECTING TO GRAVITY MAINS. 19. ALL SEWER LINES WHICH ARE CONSTRUCTED OUTSIDE OF PUBLIC RIGHTS-OF-WAY WITHIN SIDE YARDS, BACKYARDS, AND OTHER POORLY ACCESSIBLE AREAS SHALL BE CONSTRUCTED OF GREEN C-900 PVC. ABSOLUTELY NO USE OF PLASTIC STYRENE FITTINGS SHALL BE ALLOWED. 20. CONTEC A-2000 PVC PIPE SHALL NOT BE ALLOWED FOR USE. 21. FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE LOCATION OF ALL FORCE MAINS, MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT, IF NO CURBING EXISTS). 22. ALL HDPE PIPE INSTALLED FOR SEWAGE FORCE MAINS SHALL BE SDR 11 WITH #10 COPPER HEAD TRACER WIRE UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC TO WHICH IT IS ATTACHED. 23. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS. 24. GREASE INTERCEPTORS ARE REQUIRED FOR ALL COMMERCIAL BUILDINGS HAVING KITCHEN, FOOD PREPARATION OR SERVING FACILITIES AND / OR MISCELLANEOUS USES. GREASE INTERCEPTORS CONSTRUCTED EXTERNAL TO BUILDINGS SHALL BE SIZED IN ACCORDANCE WITH FAC 64-E-6. CALCULATIONS TO DETERMINE SIZING REQUIREMENTS SHALL BE SUBMITTED AS PART OF BUILDING PERMITTING. AN INSPECTION MANHOLE MAY BE REQUIRED IMMEDIATELY DOWN STREAM OF THE GREASE INTERCEPTOR FOR INSPECTION PURPOSES, AS DEEMED APPROPRIATE BY THE CITY. 25. WHERE POTABLE WATER AND SANITARY SEWER MAINS CROSS WITH LESS THAN (18) INCHES OF VERTICAL CLEARANCE OR WHERE THE SEWER MAIN IS ABOVE THE WATER MAIN, THE SEWER MAIN SHALL BE ENCASED WITH CONCRETE OR ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR PRESSURE RATED PVC PIPE (MEETING THE AWWA C-900 OR C-905 SPECIFICATION) FOR A MINIMUM LENGTH OF (20) FEET, CENTERED ON THE POINT OF CROSSING. A MINIMUM HORIZONTAL SEPARATION OF (10) FEET (EDGE TO EDGE) BETWEEN POTABLE WATER MAINS AND SEWER MAINS SHALL BE MAINTAINED WHEN AT ALL POSSIBLE. WHEN THE 10-FOOT HORIZONTAL SEPARATION CANNOT BE MAINTAINED THE WATER MAIN SHALL BE		
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER DESIGN NOTES	FILE NAME S1.DOC
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SANITARY SEWER DESIGN NOTES CONT'D		
INSTALLED IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF AT LEAST 18" ABOVE THE SEWAGE MAIN. ALTERNATIVELY, THE SEWER MAIN SHALL BE ENCASED WITH CONCRETE OR ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR UPGRADED TO PRESSURE RATED PVC PIPE (MEETING AWWA C-900 OR C-905 SPECIFICATION) AND PRESSURE TESTED AT 150 PSI TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING. 26. CEMENT USED IN CONCRETE MIX FOR PRECAST STRUCTURES SHALL BE TYPE II, ACID RESISTANT AND SULFIDE RESISTANT CONCRETE. 27. MORTAR TO CONTAIN "HYDRATITE" OR APPROVED EQUAL, TO PREVENT SHRINKAGE. 28. PROFILE VIEWS SHALL BE PROVIDED FOR ALL SEWER MAINS. PROFILE VIEWS SHALL BE ON THE SAME SHEET AS THE ASSOCIATED PLAN VIEW AND SHALL INCLUDE THE FOLLOWING INFORMATION: A. SIZE, SLOPE, LENGTH AND CLASS OF PIPE B. MANHOLE RIM AND INVERT ELEVATIONS C. UTILITY CROSSINGS WITH VERTICAL SEPERATION D. SHOW PROPOSED SEWER AND EXISTING UTILITY E. EXISTING GROUND PROFILE F. MATCH LINE G. VICINITY MAP H. PROFILE VIEW STATIONS TO COINCIDE WITH PLAN VIEW STATIONS		
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SANITARY SEWER CONSTRUCTION NOTES		
1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY SANITARY SEWER CONSTRUCTION. 2. ALL GRAVITY SANITARY SEWER LINES SHALL BE GREEN PVC SDR 26, ASTM D-3034. IN PLACES WHERE A MINIMUM COVER OF 4.0' CANNOT BE MAINTAINED, AWWA C-900 OR C-905 GREEN PVC DR-25, CLASS 100 OR CONCRETE ENCASEMENT SHALL BE USED. WATER LINES, RECLAIMED LINES, AND STORM DRAINAGE CROSSINGS SHALL ALSO FOLLOW THE CONCRETE ENCASEMENT REQUIREMENT PER THESE STANDARDS AND AS PER REGULATORY REQUIREMENTS. 3. GRAVITY SANITARY SEWER LINE CONSTRUCTION SHALL BE ACCOMPLISHED BY THE USE OF A LASER INSTRUMENT UNLESS ANOTHER METHOD IS PREVIOUSLY APPROVED BY THE CITY. 4. THE CONTRACTOR SHALL AT ALL TIMES, DURING PIPE LAYING OPERATIONS DEWATER THE GROUND SUFFICIENTLY TO KEEP THE GROUNDWATER ELEVATION A MINIMUM OF 6" BELOW THE PIPE BEING LAID WITHIN THE AREA OF THE TRENCH. 5. ALL PIPES SHALL BE LAID ON A FIRM FOUNDATION. SOFT OR SPONGY BEDDING FOR PIPES IS NOT ACCEPTABLE. ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH A DRY, COMPACTED, GRANULAR MATERIAL SATISFACTORY TO THE CITY. 6. ON ALL EXCAVATION AND BACKFILLING THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING AND BRACING IN ACCORDANCE TO O.S.H.A. GUIDELINE IN ORDER TO PROVIDE FOR THE SAFETY OF WORKMEN, AS WELLAS REPRESENTATIVES OF THE CITY, THE DESIGN ENGINEER, AND THE DEVELOPER. 7. ALL TRENCHES SHALL BE BACKFILLED WITH ACCEPTABLE MATERIAL AND COMPACTED TO THE SPECIFIED MINIMUM COMPACTION (95% IN UNPAVED AREAS AND 98% IN PAVED AREAS) OF THE OPTIMUM DENSITY OF THAT MATERIAL BASED ON THE AASHTO T-180 MODIFIED PROCTOR TEST. 8. THE CONTRACTOR SHALL EMPLOY AN INDEPENDENT TESTING LABORATORY AT HIS OWN EXPENSE TO INSURE THAT COMPACTION OF ALL FILL MATERIAL IS COMPLETED PROPERLY. TESTS SHALL BE DONE ONE FOOT ABOVE THE PIPE AND THEN AT ONE FOOT VERTICAL INTERVALS UNTIL FINAL GRADE IS REACHED. TESTING SHALL BE COMPLETED AND TEST DOCUMENTS SUBMITTED TO THE CITY AT A MINIMUM FREQUENCY OF ONE SET OF TESTS BETWEEN EACH MANHOLE AND ONE ADDITIONAL SET OF TESTS AT EVERY MANHOLE. IDENTIFICATION OF TEST LOCATIONS SHALL BE CLEARLY INDICATED ON TEST REPORTS. TEST RESULTS SHALL BE FORWARDED PROMPTLY TO THE CITY'S DESIGNATED SITE INSPECTOR. 9. THE CONTRACTOR SHALL INSTALL A METALLIZED FOIL LOCATOR TAPE, OR SIMILAR DEVICE AS MAY BE APPROVED BY THE CITY FOR THE FULL LENGTH OF ALL PVC SEWAGE FORCE MAINS. THIS PIPE LOCATOR AID SHALL BE INSTALLED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS DIRECTED BY THE MANUFACTURER. TAPE SHALL BE COLOR CODED GREEN FOR SANITARY SEWER AND FORCE MAIN. A CONTINUOUS NO. 10 COPPER HEAD WIRE SHALL BE INSTALLED WITH WIRE BROUGHT UP AT ALL VALVES. 10. ALL TESTING REQUIRED BY THE CITY SHALL BE PAID FOR BY THE CONTRACTOR / DEVELOPER. 11. MANHOLE RIMS SHALL MATCH FLUSH WITH THE FINISH GRADE ELEVATION IN PAVED AREAS AND A MINIMUM OF 0.2 FEET AND MAXIMUM OF 0.5 FEET ABOVE GRADE GENERALLY IN UNPAVED AREAS. 12. THE CONTRACTOR SHALL CONSTRUCT SANITARY SEWER MANHOLES IN SUCH A WAY THAT SEWER LINES DO NOT INTERSECT SEALED JOINTS BETWEEN SECTIONS OF THE MANHOLE. 13. RUBBER BOOTS AND 316 STAINLESS STEEL BANDS SHALL BE UTILIZED IN THE CONNECTION OF THE SEWER MAIN TO THE MANHOLES (SEE STANDARD MANHOLE AND BOOT DETAILS).		
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		DETAIL REF: S-2
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SANITARY SEWER CONSTRUCTION NOTES CONT'D		
14. INDIVIDUAL SANITARY SERVICE ON NEW CONSTRUCTION SHALL NOT BE CONNECTED DIRECTLY INTO MANHOLES, AND MUST CONNECTED TO SEWER MAIN LINES BY USE OF WYE CONNECTIONS, UNLESS OTHERWISE APPROVED BY THE CITY. 15. FOR SINGLE FAMILY HOMES, SINGLE FOUR INCH SEWER SERVICES LATERALS SHALL BE CONSTRUCTED AT EACH LOT OR UNIT AND LOCATED ON THE DOWNSTREAM SIDE OF THE LOT CENTER LINE. THESE SERVICES SHALL BE EXTENDED 4 FEET ABOVE GROUND AT THE PROPERTY LINE WITH A PVC RISER AND PLUG BEING EASILY VISIBLE FROM THE ROAD. RUBBER SEAL FITTINGS SHALL BE USED ON ALL LINES. NO GLUED JOINTS ARE PERMITTED ON LATERALS. 16. ALL SANITARY SEWER MANHOLE COVERS SHALL HAVE THE WORDS "PORT ORANGE FLORIDA SANITARY SEWER" CAST INTO THEM. 17. FORCE MAIN SYSTEMS SHALL BE PRESSURE TESTED AT 100 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA STANDARDS. 18. ALL SANITARY SEWER FORCE MAINS SHALL USE A THRUST RESTRAINT JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION GUIDELINES MODIFIED TO ACCOMMODATE PVC PIPE BY FOLLOWING THE RECOMMENDED INCREASE IN RESTRAINT LENGTH CORRESPONDING TO THE INSTALLATION OF POLYETHYLENE WRAP. IN NO INSTANCE SHALL THRUST BLOCKS BE PERMITTED. 19. THE CITY MAY REQUIRE ALL NEW SANITARY SEWER GRAVITY SYSTEMS TO BE SMOKE TESTED PRIOR TO FINAL ACCEPTANCE. ALL TESTING MUST BE DONE IN THE PRESENCE OF THE CITY'S DESIGNATED SITE INSPECTOR. 20. THE CITY OF PORT ORANGE RESERVES THE RIGHT TO REQUIRE THE DEVELOPER TO PERFORM VACUUM TESTING OF ALL SANITARY MANHOLES, AIR TEST SEWER MAINS, AND REQUIRES THAT ALL SANITARY SEWER MAIN LINES BE TELEVIEWED PRIOR TO FINAL ACCEPTANCE. LATERALS SHALL BE TELEVIEWED UPON DEMAND BY THE CITY PRIOR TO FINAL ACCEPTANCE WHEN IT IS SUSPECTED THAT A PROBLEM EXISTS. 21. ALL SEWER MAINS, PRIOR TO FINAL ACCEPTANCE BY THE CITY AND PRIOR TO ANY FINAL PAVING OPERATIONS, SHALL BE TELEVIEWED AND SUBMITTED TO THE CITY USING A "PAN AND TILT CAMERA" WITH DEPTH GAUGE IN FRONT OF THE CAMERA BY A CITY APPROVED CONTRACTOR. THE CAMERA SHALL RUN FROM DOWN STREAM MANHOLE TO UP STREAM MANHOLE. CITY INSPECTOR SHALL BE NOTIFIED IN ADVANCE AND BE PRESENT DURING THE TELEVIEWING OF THE SEWER SYSTEM. THE VIDEO SHALL BE NON-STOP WITH AUDIO DESCRIBING WHAT IS BEING REVIEWED. WRITTEN VIDEO LOGS DESCRIBING THE CONDITION OF THE LINES SHALL ACCOMPANY THE VIDEO SUBMISSION TO THE CITY PRIOR TO COMMENCING ANY INSTALLATION OF ASPHALT OR CONCRETE PAVEMENT. THE CITY MAY REQUIRE ADDITIONAL VIDEO TAPING, VIDEO TAPING OF LATERALS, AND/OR INFILTRATION/EXFILTRATION TESTS IF DEFECTS ARE APPARENT OR WORKMANSHIP IS QUESTIONABLE. 22. ALL SEWER LINES WHICH ARE CONSTRUCTED OUTSIDE OF PUBLIC RIGHTS-OF-WAY WITHIN SIDE YARDS, BACKYARDS, AND OTHER POORLY ACCESSIBLE AREAS SHALL BE CONSTRUCTED OF GREEN C-900 PVC. ABSOLUTELY NO USE OF PLASTIC STYRENE FITTINGS SHALL BE ALLOWED. 23. SEWER LATERAL LOCATIONS SHALL BE MARKED ALONG THE OUTSIDE OF THE CURB WITH A SAW CUT "V", OR BY A METAL TAB SET INTO THE PAVEMENT. 24. EZ-WRAP PLASTIC, AS MANUFACTURED BY PRESS SEAL GASKET CORPORATION, SHALL BE USED ON THE OUTSIDE OF ALL MANHOLE AND WETWELL JOINTS. APPLY ONE LAYER OF 9" WRAP CENTERED ON EACH JOINT. A CITY INSPECTOR SHALL PERSONALLY INSPECT ALL JOINT SEALS PRIOR TO BACKFILLING OPERATIONS. 25. ALL PROPOSED SEWER FORCE MAINS SHALL BE FLUSHED, PRESSURE TESTED, PIGGED AND CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED		
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SANITARY SEWER CONSTRUCTION NOTES CONT'D		
SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER OR WASTEWATER TREATMENT PLANT (AS APPROPRIATE) AT LEAST 2 BUSINESS DAYS PRIOR TO BEGINNING A FULL-DIAMETER FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING (SUBJECT TO AVAILABILITY). 26. THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL FORCE MAINS IN EXCESS OF 6" IN DIAMETER AND PRIMARY TRANSMISSION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PORT ORANGE REPRESENTATIVE OR CITY INSPECTOR. 27. AS A GENERAL RULE, THE NUMBER OF JOINTS SHALL BE LIMITED WHENEVER POSSIBLE. IN SPECIAL CASES WHERE A POINT REPAIR TO AN 8" TO 12" PVC SEWER MAIN IS REQUIRED, THE PROPER RIGID WRAP AROUND SLEEVE SUCH AS A JCM-210 OVERSIZED DUCTILE IRON COUPLING OR AN APPROVED EQUAL MAY BE ALLOWED BY SPECIAL APPROVAL BY THE CITY. 28. ALL IN-LINE SANITARY SEWER FORCE MAIN VALVES SHALL BE RESILIENT SEAT (AWWA C-509 OR C-515) VALVES FEATURING AN EPOXY LINED DUCTILE IRON BODY. 29. ALL TAPPING OF PRESSURE MAINS AND CORING OF MANHOLES SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. SCHEDULING OF THESE CONNECTIONS SHALL REQUIRE A MINIMUM 2 BUSINESS DAYS NOTIFICATION DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE THE WORK DIRECTLY WITH THE PUBLIC UTILITIES DEPARTMENT. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 8:00 A.M. AND NOON ON THE APPROPRIATE DAY ESTABLISHED BY CITY. WITH RESPECT TO TIE-IN CONNECTIONS AND CORING OPERATIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. 30. ALL WORK PERFORMED ON SANITARY SEWER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY AN UNDERGROUND UTILITY CONTRACTOR, OR LICENSED GENERAL CONTRACTOR, WHO IS LICENSED IN THE STATE OF FLORIDA AND REGISTERED WITH THE CITY. 31. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY USE OF THE SYSTEM. 32. FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE LOCATION, OF ALL FORCE MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT, IF NO CURBING EXISTS). 33. ALL HDPE PIPE INSTALLED FOR SEWAGE FORCE MAINS SHALL BE SDR 11 WITH #10 COPPER HEAD TRACER WIRE UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC TO WHICH IT IS ATTACHED. 34. ALL P.V.C. PIPE SHALL BE STORED IN SUCH A WAY AS TO PREVENT WARPING, DEFLECTION, OR DEFORMATION. ANY PIPE DEEMED TO BE MISSHAPED IN ANY WAY FOR ANY REASON SHALL BE REJECTED. 35. NO USED, RE-USED, RUSTED, SECOND HAND, OR ANY MATERIAL THAT IS NOT NEW SHALL BE USED IN ANY UTILITY IMPROVEMENT PROJECTS WITHIN THE CITIES SERVICE AREA. 36. WHERE POTABLE WATER AND SANITARY SEWER MAINS CROSS WITH LESS THAN (18) INCHES OF VERTICAL CLEARANCE OR WHERE THE SEWER MAIN IS ABOVE THE WATER MAIN, THE SEWER MAIN SHALL BE ENCASED WITH CONCRETE OR ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR PRESSURE RATED PVC PIPE (MEETING THE AWWA C-900 OR C-905 SPECIFICATION) FOR A MINIMUM LENGTH OF (20) FEET, CENTERED ON THE		
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES	FILE NAME S2.DOC
		DETAIL REF: S-2
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SANITARY SEWER CONSTRUCTION NOTES CONT'D		
POINT OF CROSSING. A MINIMUM HORIZONTAL SEPARATION OF (10) FEET (EDGE TO EDGE) BETWEEN POTABLE WATER MAINS AND SEWER MAINS SHALL BE MAINTAINED WHEN AT ALL POSSIBLE. WHEN THE 10-FOOT HORIZONTAL SEPARATION CANNOT BE MAINTAINED THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF AT LEAST 18" ABOVE THE SEWAGE MAIN. ALTERNATIVELY, THE SEWER MAIN SHALL BE ENCASED WITH CONCRETE OR ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR UPGRADED TO PRESSURE RATED PVC PIPE (MEETING AWWA C-900 OR C-905 SPECIFICATION) AND PRESSURE TESTED AT 150 PSI TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.Ⓜ 37. CEMENT USED IN CONCRETE MIX FOR PRECAST STRUCTURES SHALL BE TYPE II, ACID RESISTANT AND SULFIDE RESISTANT CONCRETE. 38. MORTAR TO CONTAIN "HYDRATITE" OR APPROVED EQUAL, TO PREVENT SHRINKAGE 39. CONTRACTORS SHALL PROVIDE THICKER MANHOLE WALLS AND BASES AS REQUIRED TO PREVENT FLOTATION BASED ON HIGH GROUND WATER TABLE ELEVATIONS AS DETERMINED USING ACCEPTED ENGINEERING PRACTICES AND/OR APPROVED BY PUBLIC UTILITIES DEPT. 40. SHOP DRAWINGS FOR ALL STRUCTURES SHALL BE SUBMITTED TO AND APPROVED BY THE DESIGN ENGINEER PRIOR TO INSTALLATION WITH TWO COPIES FORWARDED BY THE DESIGN ENGINEER TO THE CITY. 41. NO BUG HOLES OR HONEYCOMB WILL BE ACCEPTED. 42. ALL SANITARY SEWER MANHOLES SHALL HAVE ALL INTERIOR SURFACES COATED WITH THREE (3) COATS OF WHITE/GRAY OVER RED OVER BLACK EW-1 EPOXY PAINT WITH A TOTAL OF 12 MILS THICKNESS OR BLACK COAL-TAR EPOXY WITH A TOTAL OF 16 MILS THICKNESS. OUTSIDE SURFACE TO BE COATED WITH TWO (2) COATS OF BLACK OVER BLACK EW-1 EPOXY PAINT WITH A TOTAL OF 8 MILS AND ONE (1) COAT OF BLACK COAL-TAR EPOXY WITH A TOTAL OF 8 MILS. ALL COATS SHALL BE APPLIED AT THE FACTORY EXCEPT MINOR FIELD TOUCH UP AT JOINTS AND AT MANHOLE NECK.		
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES	FILE NAME S2.DOC
		DETAIL REF: S-2
		REV. 12/08



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WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

CITY
SEWER
DETAILS

PROJECT: CC 11\FinalSF Phase 3

SHEET NO.

C40

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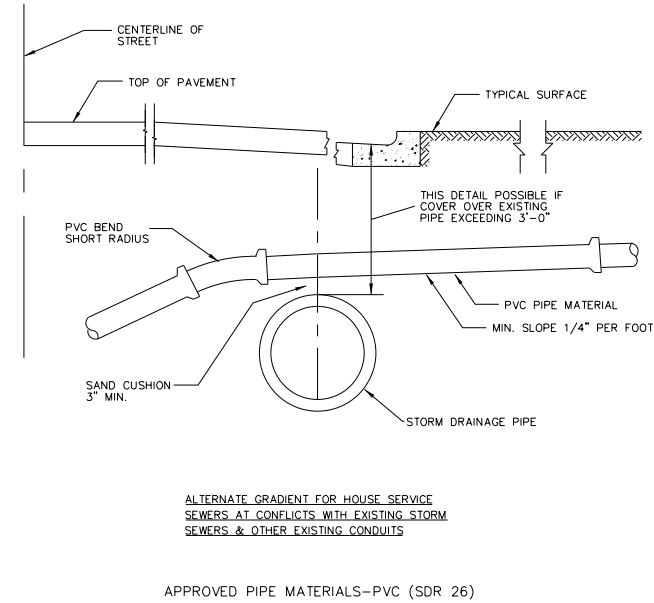
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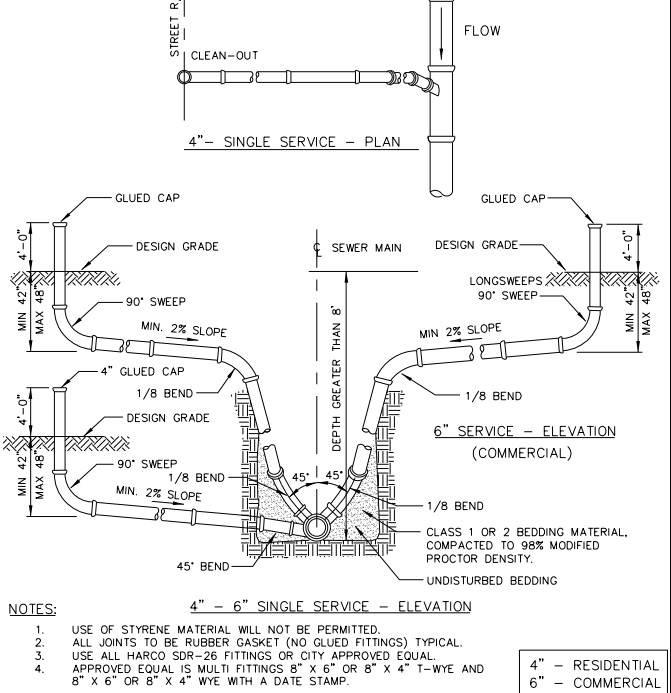
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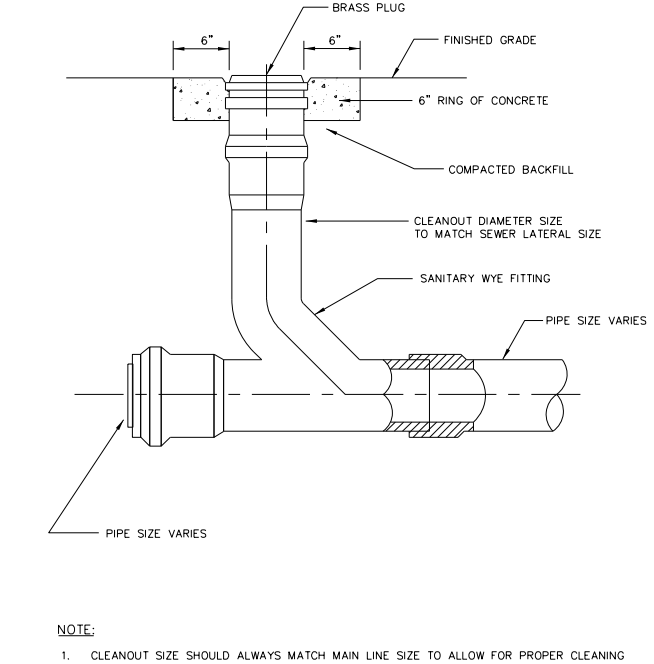
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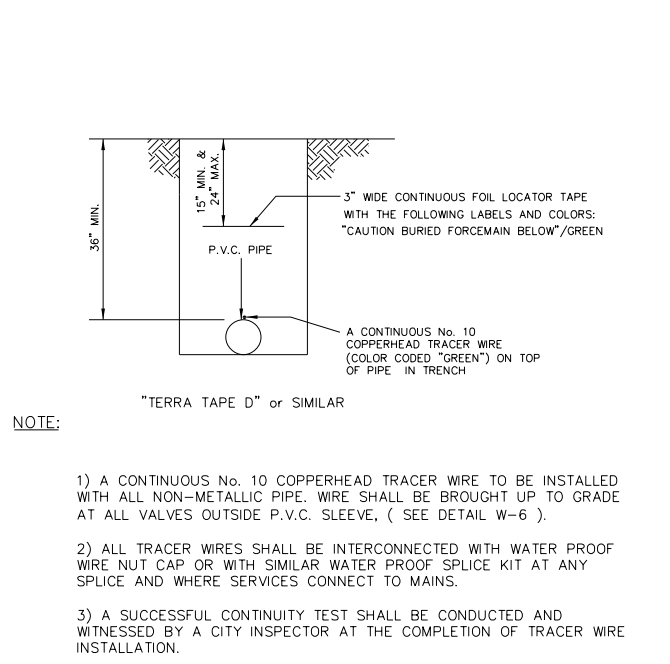
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		DETAIL REF:	S-14



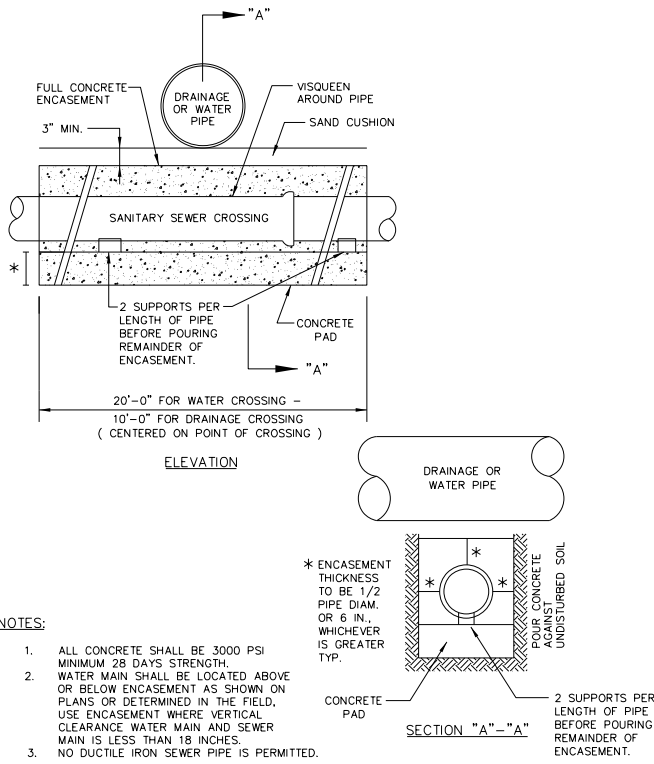
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		DETAIL REF:	S-15



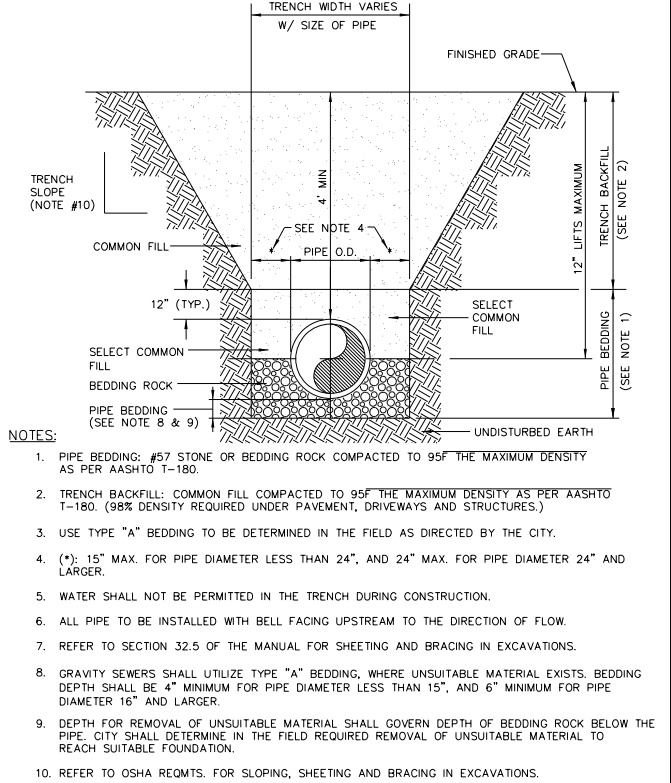
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		DETAIL REF:	S-16



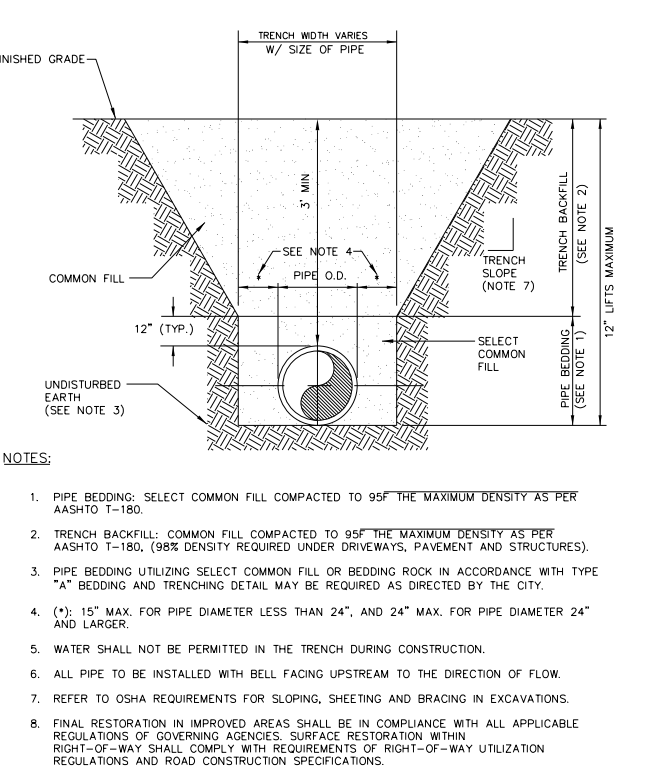
	STANDARD CONSTRUCTION DETAIL LOCATOR TAPE / TRACERWIRE INSTALLATION FOR SEWER FORCE MAIN, PIPELINES REV. 12/08	FILE NAME:	S17.DWG
		DETAIL REF:	S-17



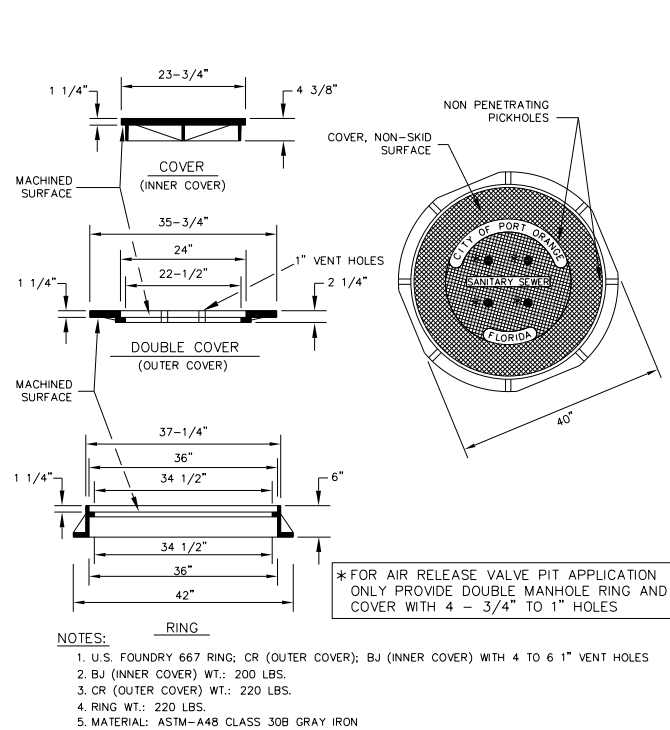
	STANDARD CONSTRUCTION DETAIL SEWER / WATER / DRAINAGE CROSSING REV. 12/08	FILE NAME:	S18.DWG
		DETAIL REF:	S-18



	STANDARD CONSTRUCTION DETAIL TYPE "A" BEDDING AND TRENCH (SPECIAL GRAVITY SEWER INSTALLATIONS) REV. 12/08	FILE NAME:	S27.DWG
		DETAIL REF:	S-27



	STANDARD CONSTRUCTION DETAIL TYPE "B" BEDDING AND TRENCH (TYPICAL FOR WATER, SEWER, FORCE MAIN, STORM DRAIN AND RECLAIMED WATER MAIN INSTALLATIONS) REV. 12/08	FILE NAME:	S28.DWG
		DETAIL REF:	S-28



	STANDARD CONSTRUCTION DETAIL SANITARY SEWER DOUBLE MANHOLE COVER REV. 12/08	FILE NAME:	S29.DWG
		DETAIL REF:	S-29

SEAL

REVISIONS			
No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE	CITY SEWER DETAILS
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PROJECT:	CC 11FinalSF Phase 3
SHEET NO.	



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WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

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A

POTABLE WATER DESIGN NOTES		
1. ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE 1", DOUBLE RESIDENTIAL SERVICES SHALL ALSO BE 1", AND COMMERCIAL SERVICES SHALL BE 1" OR 2". NO 1 1/2" SERVICES ARE ALLOWED. POLYETHYLENE TUBING SHALL BE USED, IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS: POLYETHYLENE TUBING SHALL BE CTS 3408 HIGH DENSITY TUBING, BLUE IN COLOR, AND RATED FOR A MINIMUM OF 200 P.S.I. WITH SDR OF 9 (CTS). THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER SHALL FURNISH A CERTIFICATE OF PURITY. THE TUBING SHALL HAVE UV PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF A.S.T.M. D1248, D3350, D2239, D2737, N.S.F. 14 AND A.W.W.A. C901 AND SHALL COME WITH A LIFETIME WARRANTY. ACCEPTABLE MANUFACTURERS: ENDOT ENDOPURE. 2. WATER VALVES SHALL BE PLACED AT ALL STREET INTERSECTIONS AND AT MAXIMUM SPACINGS OF 1,000.0 FEET. 3. AT ALL WATER MAIN TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL LEGS EXCEPT ONE. 4. APPROVED WATER VALVE TYPES ARE THE FOLLOWING: A. RESILIENT SEATED GATE VALVES EQUAL TO OR LESS THAN 24" DIAMETER (AWWA C-515) B. BUTTERFLY VALVES GREATER THAN 24" (AWWA C-504) C. TAPPING VALVES WITH MECHANICAL TAPPING SLEEVE 5. TYPICALLY, A MINIMUM OF ONE FIRE HYDRANT SHALL BE LOCATED AT EVERY INTERSECTION. OTHER FIRE HYDRANTS SHALL BE LOCATED SO AS TO PRODUCE A MAXIMUM 250.0 FEET AND/OR MEETING THE LATEST NFPA CODE HOSE LAY ALONG THE STREET FOR ALL RESIDENTIAL BUILDINGS. ALL BUILDINGS WITH FIRE PROTECTION SPRINKLER SYSTEM, THE FIRE DEPARTMENT CONNECTION (FDC) MUST BE WITHIN 50.0 FEET OF UNOBSTRUCTED DISTANCE TO AN APPROVED FIRE HYDRANT LOCATION BY THE FIRE MARSHALL AND OR PUBLIC UTILITIES ENGINEER. 6. AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF CURB OR AS APPROVED BY THE CITY. 7. ALL WATER MAINS SHALL BE NSF AND/OR AWWA APPROVED FOR POTABLE WATER USE, AND SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY. 8. WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR D.I.P. PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY. 9. WATER DISTRIBUTION SYSTEM SHALL BE DESIGNED TO COMPLY WITH THE CITY'S LATEST FIRE (WATER) FLOW CODE. ALL DEDICATED FIRE LINES SHALL BE INDEPENDENT OF ALL OTHER DOMESTIC WATER SERVICES. 10. MEGALUGS, BOLTLESS RESTRAINED JOINTS OR GRIPPER GASKETS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST RESTRAINT DESIGN GUIDELINES USING TORQUE WRENCHES PER MANUFACTURERS RECOMMENDATION. 11. WATER SERVICES SHALL BE NORMALLY DOUBLE 1" SERVICES LOCATED AT SIDE LOT LINES. INSTANCES WHERE SERVICES NEED TO BE OFFSET, 1" SINGLE SERVICES SHALL BE SPECIFIED. THESE SERVICES MAY BE OFFSET A MAXIMUM OF 2.0' FROM SIDE LOT LINES. 12. THE CITY REQUIRES DOUBLE WATER SERVICE INSTALLATIONS WHEREVER FEASIBLE. WHEN DESIGN CONFLICTS EXIST, SINGLE WATER SERVICES MAY BE ALLOWED. THIS MAY APPLY AT STORMWATER INLETS, FIRE HYDRANTS, FPL TRANSFORMERS, ETC. AND OTHER LOCATIONS DEEMED APPROPRIATE BY THE CITY.		
	STANDARD CONSTRUCTION DETAIL POTABLE WATER DESIGN NOTES	FILE NAME W1.DOC
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POTABLE WATER DESIGN NOTES CONT'D		
13. ALL PROPOSED POTABLE WATER MAINS SHALL BE FLUSHED, DISINFECTED, PRESSURE TESTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE WHEN APPROPRIATE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER TREATMENT PLANT AT LEAST 2 BUSINESS DAYS PRIOR TO BEGINNING FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING. 14. FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT, IF NO CURB IS USED). 15. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS. 16. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF 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. 17. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER. 18. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY 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 MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C.. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER. 19. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST 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. 20. 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 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. 21. 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 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE. 22. WITH RESPECT TO TIE-IN CONNECTIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. THE INSTALLATION OF LINE STOPPING DEVICES ON PRESSURE MAIN (POTABLE WATER AND FORCE MAIN) MAY BE REQUIRED ON ANY REQUESTED UTILITY OUTAGE AT THE DISCRETION OF PUBLIC UTILITIES DEPARTMENT TO MINIMIZE INTERRUPTION TO EXISTING UTILITY CUSTOMERS.		
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POTABLE WATER CONSTRUCTION NOTES				
	1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY POTABLE WATER SYSTEM CONSTRUCTION. 2. DEWATERING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW WATER MAIN BEING LAID. 3. ALL WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL. 4. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180. 5. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 1 FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET. 6. 3" METALLIZED PIPE LOCATION TAPE SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE USED ON ALL DUCTILE IRON PIPE, AS WELL. 7. ALL WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND. ALL SERVICES SHALL BE LOCKED AT THE TIME OF FINAL INSPECTION BY THE CONTRACTOR IN THE PRESENCE OF THE CITY INSPECTOR OR CITY PERSONNELL AFTER THEY HAVE BEEN INSPECTED AND VERIFIED TO OPERATE PROPERLY. 8. AT ALL WATER MAIN TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL LEGS EXCEPT ONE. 9. ALL WATER VALVES SHALL BE ADJUSTED TO FINISHED GRADE AND THE CAPS PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE. 10. UPON FINAL ACCEPTANCE OF NEW WATER SYSTEMS, WATER VALVES SHALL BE COMPLETELY OPENED BY PUBLIC UTILITIES PERSONNEL AT NO TIME SHALL CONTRACTOR OPERATE ANY EXISTING VALVES. 11. ALL FIRE HYDRANTS SHALL BE CONSTRUCTED TO MAKE THEM EASILY ACCESSIBLE TO FIRE PERSONNEL IN CASE OF A FIRE. THE PRIMARY HYDRANT PORT SHOULD ALWAYS FACE THE STREET. 12. AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF CURB OR AS APPROVED BY THE CITY. 13. ALL WATER MAINS SHALL BE NSF AND/OR AWWA APPROVED FOR POTABLE WATER USE, AND SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY. 14. WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR D.I.P. PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY. 15. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF HEALTH AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY PUBLIC USE OF THIS SYSTEM. 16. IN AREAS WHERE RECLAIMED WATER IS NOT AVAILABLE THE CONTRACTOR SHALL BE REQUIRED TO (UPON SATISFACTORY COMPLETION OF THE PRESSURE TEST) TRANSFER THE WATER FROM THE POTABLE WATER LINES TO THE RECLAIMED WATER LINES FOR UTILIZATION IN THEIR PRESSURE TEST. 17. ALL POTABLE WATER MAINS SHALL USE A THRUST RESTRAINT JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES. IN THE EVENT THAT PVC PIPE IS SPECIFIED, THE		FILE NAME W2.DOC DETAIL REF: W-2	
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RESTRAINT JOINT SHALL BE MODIFIED IN ACCORDANCE WITH THE RECOMMENDED ADDITIONAL RESTRAINT LENGTH REQUIRED FOR PIPE WRAPPED WITH POLYETHYLENE. 18. MEGALUGS, BOLTLESS RESTRAINED JOINTS OR GRIPPER GASKETS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST RESTRAINT DESIGN GUIDELINES USING TORQUE WRENCHES PER MANUFACTURERS RECOMMENDATION. 19. WATER SYSTEMS SHALL BE PRESSURE TESTED AT 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA STANDARDS. 20. ALL WATER SERVICES SHALL BE MARKED WITH AN "X" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT. 21. ALL WATER VALVES SHALL BE MARKED WITH AN "X" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT. BLOW-OFFS SHALL BE MARKED SIMILARLY, AS WELL. REVERSE TAPPING VALVE SHALL BE MARKED WITH AN "X" SAW CUT INTO THE CURB OR PAVEMENT WITH THE ARROW POINTING TO THE DIRECTION OF THE PRESSURE MAIN RUN. 22. ALL TAPPING OF MAINS SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. SCHEDULING OF THESE CONNECTIONS OR TAPPINGS SHALL REQUIRE A MINIMUM OF 2 BUSINESS DAYS, DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE THE WORK DIRECTLY WITH THE PUBLIC UTILITIES DEPARTMENT. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 8:00 A.M. AND NOON ON THE APPROPRIATE DAY. 23. LARGE COMMERCIAL WATER AND RECLAIMED WATER METERS GREATER THAN 3" TAKE A MINIMUM OF 6 WEEKS FOR DELIVERY AFTER FEES ARE PAID TO THE CITY. IN ADDITION ALL METERS AND VAULTS 3" AND GREATER SHALL BE INSTALLED BY THE OWNER/ DEVELOPER/ CONTRACTOR. THE FEE COLLECTED BY THE CITY IS FOR MATERIALS ONLY. ALL METERS, 2" AND LESS, SHALL BE INSTALLED BY THE CITY. 24. THE CITY REQUIRES DOUBLE WATER SERVICE INSTALLATIONS WHEREVER FEASIBLE. WHEN DESIGN CONFLICTS EXIST, SINGLE WATER SERVICES MAY BE ALLOWED. THIS MAY APPLY AT STORMWATER INLETS, FIRE HYDRANTS, FPL TRANSFORMERS, ETC. AND OTHER LOCATIONS DEEMED APPROPRIATE BY THE CITY. 25. ALL PROPOSED POTABLE WATER MAINS SHALL BE FLUSHED, DISINFECTED, PRESSURE TESTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE WHEN APPROPRIATE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER TREATMENT PLANT AT LEAST 2 BUSINESS DAYS PRIOR TO BEGINNING FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING. 26. THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL POTABLE MAINS 6" AND LARGER IN DIAMETER AND PRIMARY DISTRIBUTION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. ALL PIGS SHALL BE NEW. NO FOAM PIGS ARE ALLOWED. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PUBLIC UTILITIES REPRESENTATIVE OR A CITY UTILITY INSPECTOR. 27. WITH RESPECT TO TIE-IN CONNECTIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. THE INSTALLATION OF LINE STOPPING DEVICES ON PRESSURE MAIN (POTABLE WATER AND FORCE MAIN) MAY BE REQUIRED ON ANY REQUESTED UTILITY OUTAGE AT THE DISCRETION OF PUBLIC UTILITIES DEPARTMENT TO MINIMIZE INTERRUPTION TO EXISTING UTILITY CUSTOMERS.				FILE NAME W2.DOC DETAIL REF: W-2
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POTABLE WATER CONSTRUCTION NOTES (CONT'D)		
28. THE PHYSICAL TAKING OF EACH AND EVERY WATER SAMPLE FOR BACTERIOLOGICAL TESTING SHALL BE OBSERVED BY THE CITY'S DESIGNATED SITE INSPECTOR. THIS SHOULD NOT IMPACT THE PROJECT SINCE THE CONTRACTOR MUST ALREADY COORDINATE FLUSHING ACTIVITY WITH THE INSPECTOR. ALL SAMPLE FORMS SHALL BE COMPLETELY FILLED OUT BY THE SAMPLING COMPANY AND TESTING COMPANY IN ORDER TO BE ACCEPTED. WHEN THE PUBLIC UTILITIES OFFICE RECEIVES POTABLE WATER CLEARANCE REQUEST REQUIRING SIGNATURE THE CITY'S DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR WILL BE CONTACTED TO INDEPENDENTLY VERIFY THAT THE SYSTEM IS IN PROPERLY FUNCTIONING ORDER (i.e. ALL VALVES, HYDRANTS, AND WATER SERVICES ARE ACCESSIBLE AND OPERABLE). SIMULTANEOUSLY, THE CITY MAY ALSO TAKE A RANDOM BACTERIOLOGICAL SAMPLE WITHIN THE NEW SYSTEM TO VERIFY THAT WATER IS SAFE FOR CONSUMPTION. ONCE THE DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR HAVE VERIFIED THAT THE SYSTEM IS IN PROPER FUNCTIONING ORDER AND THAT THE BACTERIOLOGICAL SAMPLE INDICATES THE WATER IS SAFE FOR CONSUMPTION, THE PUBLIC UTILITIES OFFICE WILL THEN SIGN OFF ON THE WATER CLEARANCE REQUEST. 29. ALL WORK PERFORMED ON THE POTABLE WATER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY A STATE CERTIFIED UNDERGROUND UTILITY CONTRACTOR OR GENERAL CONTRACTOR LICENSED IN THE STATE OF FLORIDA AND REGISTERED WITH THE CITY. 30. FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT, IF NO CURB IS USED). 31. NEWLY CONSTRUCTED POTABLE WATER SYSTEM EXTENSIONS MAY NOT BE USED PRIOR TO FINAL TESTING, CLEARANCE AND ACCEPTANCE BY THE CITY OF PORT ORANGE. THIS INCLUDES CONSTRUCTION WATER REQUIRED FOR SEWER LINE CLEANING OR RELATED USES. 32. FIRE HYDRANTS MAY NOT BE INSTALLED WITHIN 20' OF ANY ELECTRICAL TRANSFORMER 33. ALL H.D.P.E. PIPE UTILIZED FOR WATER, FORCE MAIN AND/OR RECLAIMED WATER MAIN EXTENSIONS SHALL BE S.D.R. 11 WITH #10 COPPERHEAD TRACER WIRE UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC OR DIP PIPE TO WHICH IT IS ATTACHED. 34. ALL VALVES 2" AND LARGER SHALL BE STANDARD 2" RESILIENT SEATED GATE VALVES (CORP STOPS ARE NOT ACCEPTABLE). 35. ALL P.V.C. PIPE SHALL BE STORED IN SUCH A WAY AS TO PREVENT WARPING, DEFLECTION, OR ANY DEFORMATION. FITTINGS SHALL BE P.V.C. AND MANUFACTURED OF THE SAME DESIGN AS THE P.V.C. PIPE. 36. PVC FITTINGS 4-INCH THROUGH 36-INCH SHALL BE P.V.C. (OR D.I.P. WITH PROTECTO 401) INJECTION-MOLDED OR FABRICATED AS SPECIFIED, MADE OF MATERIALS MEETING OR EXCEEDING THE REQUIREMENTS OF CELL CLASS 12454-B MATERIAL AS DEFINED IN ASTM D1784. FABRICATED FITTINGS SHALL BE MANUFACTURED WITH PIPE THAT MEETS OR EXCEEDS AWWA C-905 STANDARD, AND SHALL BE FIBERGLASS REINFORCED TO A PRESSURE RATING OF 165 PSI. ALL P.V.C. OR MECHANICAL JOINT FITTINGS MUST COMPLY WITH OR EXCEED ANSI/AWWA C907, UNI-B-14 STANDARDS AS THEY APPLY TO THE APPROPRIATE SIZE RANGE AND METHOD OF MANUFACTURE. 37. NO USED, RE-USED, RUSTED, SECOND HAND, OR ANY MATERIAL THAT IS NOT NEW SHALL BE USED IN ANY UTILITY IMPROVEMENT PROJECTS WITHIN THE CITY'S SERVICE AREA. 38. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF 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. 39. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF		
	STANDARD CONSTRUCTION DETAIL POTABLE WATER CONSTRUCTION NOTES	FILE NAME W2.DOC
		DETAIL REF: W-2
		REV. 12/08

POTABLE WATER CONSTRUCTION NOTES (CONT'D)		
AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER. 40. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY 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 MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C.. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER. 41. 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 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. 42. 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 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE. 43. AT THE UTILITY CROSSINGS, 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 THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C. AND AT LEAST 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. 44. WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR D.I.P. PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY.		
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		DETAIL REF: W-2
		REV. 12/08

City of Port Orange Public Utilities Department List of Approved Products		
Potable Water	12/08	
<u>Fire Hydrant (5 1/4" Barrel)</u>		
MANUFACTURER	MODEL #	
Mueller	A423 Super Centurion 250	
American AVK Co.	Series #2780	
American Darling	5 1/4" B-84-B5	
Clow	Medallion # F-2545 SS	
<u>Air Release Valves</u>		
MANUFACTURER	MODEL #	
Val-Matic	Series 38	
<u>Gate Valves and Tapping Valves – Resilient Seated (AWWA C509 and C515) 24" or Smaller (Valve wedge to be complete encased with EPDM rubber)</u>		
MANUFACTURER	MODEL #	
American AVK Co.	Series 3, 18, 25, 45, 55, & 66	
Clow	Model 2638 and 2639	
Mueller	A-2360, A-2361, T-2360 & T-2361	
American Flow Control	Series 2500	
	STANDARD CONSTRUCTION DETAIL POTABLE WATER APPROVED PRODUCTS	FILE NAME W3.DOC
		DETAIL REF: W-3

City of Port Orange Public Utilities Department List of Approved Products		
Potable Water	12/08	
<u>Joints Restrained – DIP and PVC</u>		
MANUFACTURER	MODEL #	
EBBA Iron Inc.	Series 1100/1500/1600 2000/2500/2800	
Star Pipe	Stargrip Series 1000/1100/1200 3000/ 4000	
Sigma	One-Lock SLD; One-Lock SLC; PV-Lok for PVC	
Smith-Blair	Cam-Lock (11: & 120) ; Bell-Lock (115 & 165)	
<u>Water Service Materials</u>		
Polyethylene Tubing – (Blue with UV Protection (SDR-9) 1" & 2" only)		
MANUFACTURER	MODEL #	
Endot Endopure	Endotrace w/#10 Copperhead Tracer Wire	
Corporation Stop 1"		
MANUFACTURER	MODEL #	
Ford	F-1100-4	
Curb Stop – Straight Ball Meter Valve w/ Barrel Locks		
MANUFACTURER	MODEL #	
Ford	B-94-324W (Single Service) B-91-223W (Double Service)	
"U" Branch (1" x 3/4")		
MANUFACTURER	MODEL #	
Ford	U-48-43-6.5	
	STANDARD CONSTRUCTION DETAIL POTABLE WATER APPROVED PRODUCTS	FILE NAME W3.DOC
		DETAIL REF: W-3

REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

CITY
WATER
DETAILS

PROJECT: CC 1\FinalSF Phase 3
SHEET NO.

C43

J:\CC 1\FinalSF Phase 3\CC1-SF PHASE 3\WaterDetails-01.dgn 4:21:40 PM



Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.5120
ENGINEERING BUSINESS -8794

WESTPORT RESERVE (PHASE 3)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

TITLE

PROJECT #	<u>PROJECT #50083136</u>
DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

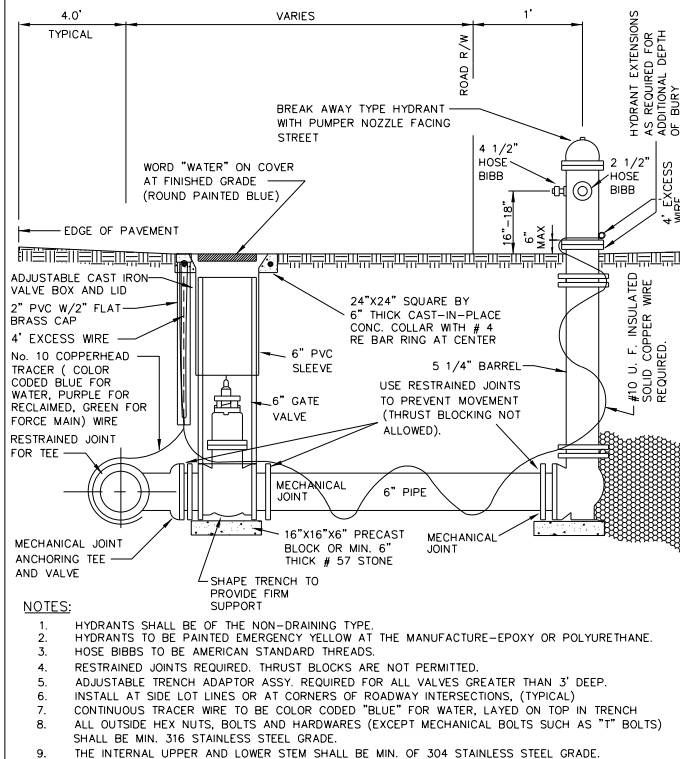
TITLE

CITY WATER DETAILS

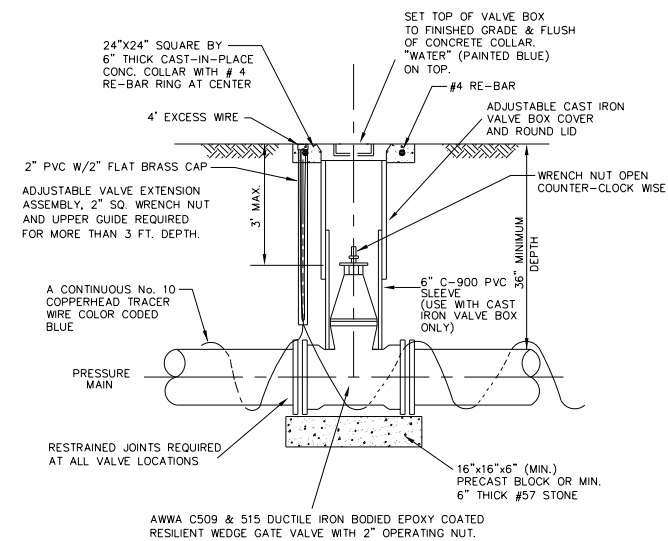
PROJECT: CC 1\Final\SF Phase 3

SHEET NO.

C44



FILE NAME
W4.DWG
DETAIL REF:
W-4

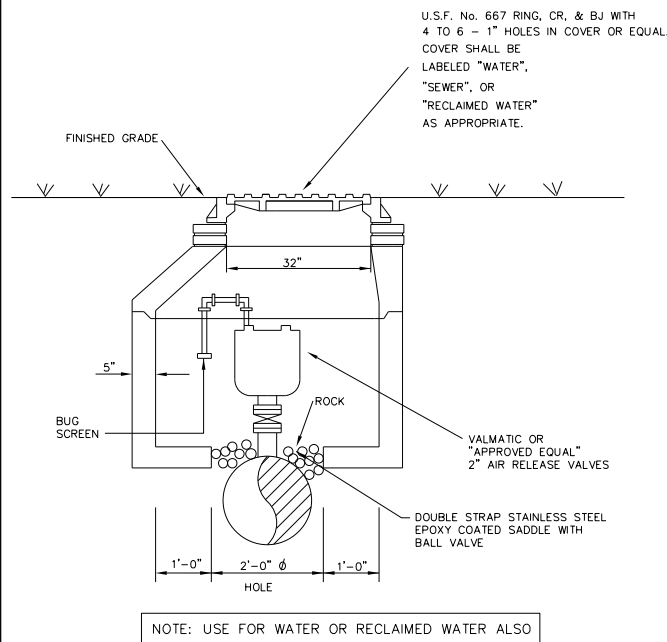


NOTE:

1. BOLT VALVES TO TEE OR CROSS WHEREVER AND WHENEVER APPLICABLE.
2. A CONTINUOUS TRACER WIRE TO BE COLOR CODED "BLUE" FOR WATER, LAYED ON TOP IN TRENCH
3. GATE VALVE WEDGE SHALL BE COMPLETELY ENCAPSULATED WITH EPDM RUBBER.
4. ALL OUTSIDE HEX NUTS, BOLTS AND HARDWARES (EXCEPT MECHANICAL BOLTS SUCH AS "T" BOLTS) SHALL BE MIN. 316 STAINLESS STEEL GRADE.

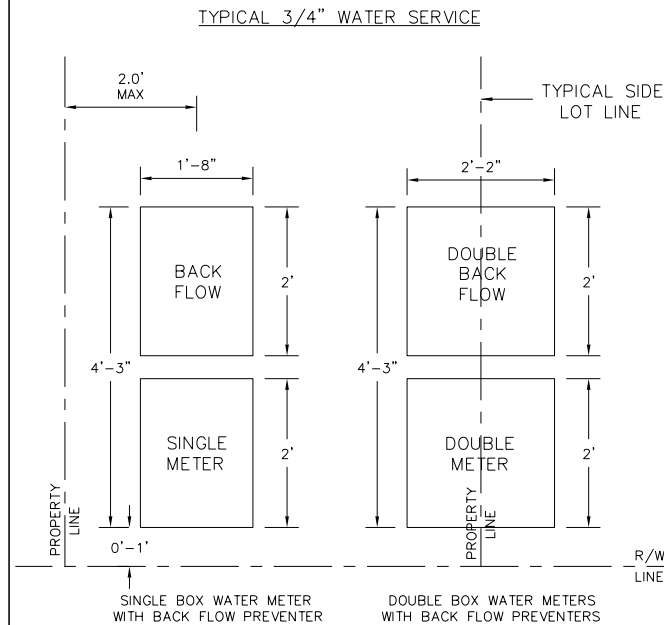
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W5.DWG

DETAIL REF:
W-5

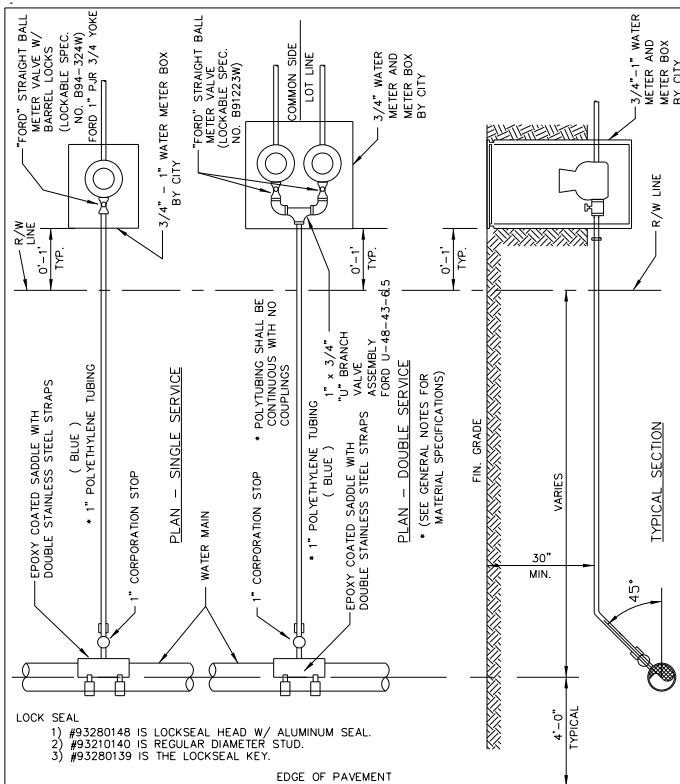


NOTE: ALL AIR RELEASE MANHOLES MUST HAVE MANHOLE COVERS THAT WILL VENT GASSES

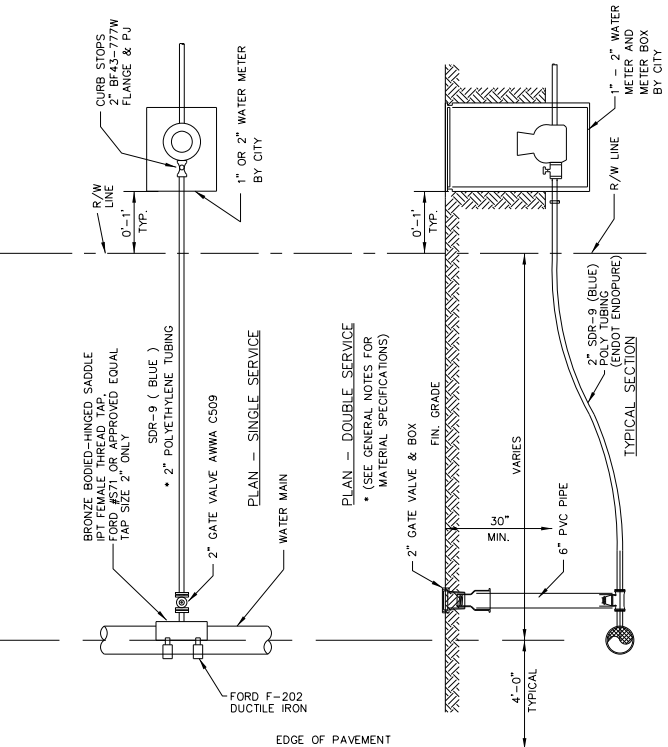
FILE NAME	W7.DWG
DETAIL REF	W-7



DETAIL	FILE NAME
	W8.DWG
REV. 12/08	DETAIL REF
	W-8

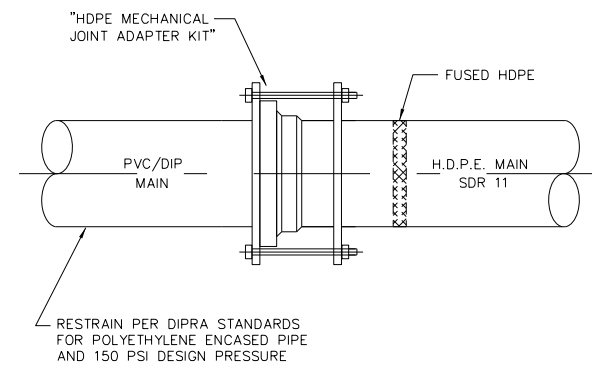


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DETAIL REF:	W-9



FILE NAME:
W11.DWG

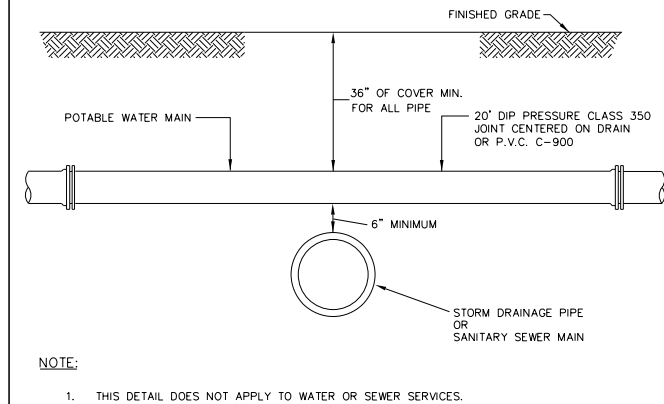
DETAIL REF:
W-11



NOTE:

1. THE MJ ADAPTER KIT CONSIST OF:
 - HDPE MJ ADAPTER WITH METAL INSERT
 - METAL GLAND
 - GASKET
 - ATTACHMENT BOLTS AND NUTS.

FILE NAME	W14.DWG
DETAIL REF	W-14



NOTE

1. THIS DETAIL DOES NOT APPLY TO WATER OR SEWER SERVICES

FILE NAME	W19.DWG
DETAIL REF:	W-19

E

D

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Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.6120
ENGINEERING BUSINESS -8794

WESTPORT RESERVE
(PHASE 3)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

CITY RECLAIMED
WATER DETAILS

PROJECT: CC 1\Final\SF Phase 3
SHEET NO.

C46

RECLAIMED WATER DESIGN NOTES

- ALL RECLAIMED WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL. ALL RECLAIMED WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.
- RECLAIMED WATER VALVES SHALL BE PLACED AT ALL STREET INTERSECTIONS AND AT MAXIMUM SPACINGS OF 1000.0 FEET.
- AT ALL RECLAIMED WATER MAIN TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL LEGS EXCEPT ONE.
- AS STANDARD PRACTICE RECLAIMED WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF THE CURB ON THE OPPOSITE SIDE OF THE POTABLE WATER LINES OR AS APPROVED BY THE CITY.
- RECLAIMED WATER SERVICES SHALL BE NORMALLY DOUBLE 1 1/2" SERVICES LOCATED AT SIDE LOT LINES ALTERNATING WITH POTABLE WATER SERVICE LOCATIONS. IN INSTANCES WHERE RECLAIM WATER SERVICES NEED TO BE OFFSET, 1" SINGLE SERVICES SHALL BE SPECIFIED. THESE SERVICES MAY BE OFFSET FROM THE LOT LINE A MAXIMUM DISTANCE OF 2.0'.
- MAXIMUM OBTAINABLE SEPARATION OF PUBLIC RECLAIMED WATER MAINS, STORMWATER MAINS, AND SANITARY SEWER MAINS SHALL BE MAINTAINED. A MINIMUM HORIZONTAL SEPARATION OF FIVE (5) FEET (CENTER TO CENTER) OR THREE (3) FEET (OUTSIDE TO OUTSIDE) SHALL BE MAINTAINED BETWEEN RECLAIMED WATER MAINS AND SEWAGE MAINS. WHERE RECLAIMED WATER AND SANITARY SEWAGE MAINS CROSS WITH LESS THAN EIGHTEEN (18) INCHES VERTICAL CLEARANCE, THE SANITARY SEWAGE MAIN SHALL BE TWENTY (20) FEET OF EITHER CONCRETE ENCASED PVC PIPE OR ENCASED IN A WATERTIGHT CARRIER PIPE, CENTERED ON THE POINT OF CROSSING.
- A 75 FOOT SETBACK DISTANCE SHALL BE PROVIDED FROM PUBLIC ACCESS REUSE WETTED AREAS TO ANY PUBLIC AND ANY PRIVATE POTABLE WATER SUPPLY WELLS.
- LOW TRAJECTORY NOZZLES ARE REQUIRED WITHIN 100 FEET OF PUBLIC EATING, DRINKING OR BATHING FACILITIES.
- FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL RECLAIMED WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT IF NO CURB EXISTS).
- ALL H.D.P.E. PIPE RECLAIMED WATER MAINS SHALL BE S.D.R.11 UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC OR DIP PIPE TO WHICH IT IS ATTACHED.
- LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.
- LARGE COMMERCIAL WATER AND RECLAIMED WATER METERS GREATER THAN 2" TAKE A MINIMUM OF 6 WEEKS FOR DELIVERY AFTER FEES ARE PAID TO THE CITY. IN ADDITION ALL METERS AND VAULTS 2" AND GREATER SHALL BE INSTALLED BY THE OWNER/ DEVELOPER/ CONTRACTOR. THE FEE COLLECTED BY THE CITY FOR MATERIALS ONLY. ALL METERS, 1 1/2" AND LESS, SHALL BE INSTALLED BY THE CITY.
- THE CITY REQUIRES DOUBLE SERVICE INSTALLATIONS WHENEVER FEASIBLE. WHEN DESIGN CONFLICTS EXIST, SINGLE SERVICES MAY BE ALLOWED. THIS MAY APPLY AT STORMWATER INLETS, FIRE HYDRANTS, FPL TRANSFORMERS, ETC. AND OTHER LOCATIONS DEEMED APPROPRIATE BY THE CITY.



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER DESIGN NOTES

FILE NAME
RW1.DOC

DETAIL REF:
RW-1

REV. 12/08

RECLAIMED WATER CONSTRUCTION NOTES

- THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY RECLAIMED WATER SYSTEM CONSTRUCTION.
- DEWATERING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW RECLAIMED WATER MAIN BEING LAID.
- ALL RECLAIMED WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL. ALL RECLAIMED WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.
- TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH AMINIMUM COMPACTION OF 98% IN PAVED AREAS AND A MINIMUM COMPACTION OF 95 % IN UNPAVED AREAS ACCORDANCE WITH AASHTO T-180.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 1 FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET.
- 3" METALLIZED PIPE LOCATION TAPE SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE PROVIDED ON ALL DIP PIPE ALSO.
- ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE 1" AND DOUBLE RESIDENTIAL SERVICES SHALL BE 1 1/2". SERVICES SHALL BE CTS 3408 HIGH DENSITY POLYETHYLENE TUBING RATED FOR A MINIMUM OF 200 PSI WITH SDR 9 (CTS). THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER SHALL FURNISH A CERTIFICATE OF PURITY. THE TUBING SHALL BE LAVENDER IN COLOR AND SHALL HAVE THE WORDS "RECLAIMED WATER" PERMANENTLY PRINTED ON THE OUTSIDE. THE TUBING SHALL HAVE U.V. PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF A.S.D.M. D1248, D3350, D2239, D2737, N.S.F.-14 AND A.W.W.A. C901 AND SHALL COME WITH A LIFETIME WARRANTY. APPROVED SIZES: 1", 1-1/2" AND 2" DIAMETERS.
- ALL RECLAIMED WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND AND ANY "U" BRANCHES FOR DOUBLE SERVICES SHALL BE 12" ABOVE GROUND LEVEL. ALL SERVICES SHALL BE LOCKED.
- ALL RECLAIMED WATER VALVES SHALL BE ADJUSTED TO FINISH GRADE AND THE CAPS SHALL BE PAINTED LAVENDER OR PURPLE TO MAKE THEM PLAINLY DISTINGUISHABLE.
- AS STANDARD PRACTICE RECLAIMED WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF THE CURB ON THE OPPOSITE SIDE OF THE POTABLE WATER LINES OR AS APPROVED BY THE CITY.
- ALL RECLAIMED WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES. IN SPECIAL CASES WHERE IT IS IMPOSSIBLE OR INAPPROPRIATE TO PROVIDE ADEQUATE COVER, DUCTILE IRON PRESSURE CLASS 350 OR CONCRETE ENCASEMENT MAY BE USED AS APPROVED BY THE CITY.
- THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED INSPECTOR PRIOR TO ATTEMPTING TO CLEAR ANY RECLAIMED WATER MAIN FOR USE. THE INSPECTOR SHALL COORDINATE WITH CITY PERSONNEL AT THE RECLAIMED WATER PLANT 2 BUSINESS DAYS PRIOR TO BEGINNING ANY FULL-DIAMETER FLUSH OF MAINS. THE CONTRACTOR WILL CONDUCT A STANDARD WATER PRESSURE TEST, 150 PSI STATIC PRESSURE FOR A PERIOD OF



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER CONSTRUCTION NOTES

FILE NAME
RW2.DOC

DETAIL REF:
RW-2

REV. 12/08

RECLAIMED WATER CONSTRUCTION NOTES (CONT'D)

- 2 HOURS PER AWWA POTABLE WATER STANDARDS. THE RECLAIMED LINES WILL THEN BE DISINFECTED WITH CHLORINE, FLUSHED CLEAR AGAIN, WITH A MINIMUM OF 1 POSITIVE CHLORINE RESIDUAL TEST RESULT PROVIDED TO THE CITY.
- THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL RECLAIMED MAINS IN EXCESS OF 6" IN DIAMETER AND PRIMARY DISTRIBUTION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. ALL PIGS SHALL BE NEW. NO FOAM PIGS ARE ALLOWED. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PUBLIC UTILITIES REPRESENTATIVE OR CITY UTILITY INSPECTOR.
- ALL RECLAIMED WATER MAINS SHALL USE A THRUST RESTRAINED JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES IN THE EVENT THAT PVC FITTINGS ARE SPECIFIED, THE RESTRAINED JOINT SHALL BE MODIFIED IN ACCORDANCE WITH THE RECOMMENDED ADDITIONAL RESTRAINED LENGTH REQUIRED FOR PIPE WRAPPED WITH POLYETHYLENE. IN NO INSTANCE SHALL THRUST BLOCKS BE PERMITTED.
- MEGALUGS, BOLTLESS RESTRAINED JOINTS, OR GRIPPER GASKETS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST JOINT RESTRAINT DESIGN GUIDELINES.
- UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO INSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE CITY OF PORT ORANGE PUBLIC UTILITIES AND "AS-BUILTS" ARE PROVIDED TO THE CITY, PRIOR TO ANY USE OF THIS SYSTEM.
- ALL RECLAIMED WATER MAINS AND SERVICE LINES SHALL BE READILY DISTINGUISHABLE BY THEIR PURPLE COLOR OR TAPE MARKINGS. DUCTILE IRON PIPE SHALL BE WRAPPED WITH PURPLE POLYETHYLENE.
- ALL RECLAIMED WATER SERVICES SHALL BE MARKED ALONG THE OUTSIDE EDGE OF CURB WITH AN "L" OR BY METAL TABS SET INTO PAVEMENT. VALVES AND BLOW-OFFS FOR RECLAIMED WATER MAINS SHALL BE MARKED BY AN "X" SET INTO THE PAVEMENT. REVERSE TAPPING VALVE SHALL BE MARKED WITH AN "X ↑" SAW CUT INTO THE CURB OR PAVEMENT WITH THE ARROW POINTING TO THE DIRECTION OF PRESSURE MAIN RUN.
- RECLAIMED WATER SERVICES SHALL BE NORMALLY DOUBLE 1 1/2" SERVICES LOCATED AT SIDE LOT LINES ALTERNATING WITH POTABLE WATER SERVICE LOCATIONS. IN INSTANCES WHERE RECLAIM WATER SERVICES NEED TO BE OFFSET, 1" SINGLE SERVICES SHALL BE SPECIFIED THESE SERVICES MAY BE OFFSET FROM THE LOT LINE A MAXIMUM DISTANCE OF 2.0'.
- MAXIMUM OBTAINABLE SEPARATION OF PUBLIC RECLAIMED WATER MAINS, STORMWATER MAINS, AND SANITARY SEWER MAINS SHALL BE MAINTAINED. A MINIMUM HORIZONTAL SEPARATION OF FIVE (5) FEET (CENTER TO CENTER) OR THREE (3) FEET (OUTSIDE TO OUTSIDE) SHALL BE MAINTAINED BETWEEN RECLAIMED WATER MAINS AND SEWAGE MAINS WHERE RECLAIMED WATER AND SANITARY SEWAGE MAINS CROSS WITH LESS THAN EIGHTEEN (18) INCHES VERTICAL CLEARANCE. THE SANITARY SEWAGE MAIN SHALL BE TWENTY (20) FEET OF EITHER CONCRETE ENCASED PVC PIPE OR ENCASED IN A WATERTIGHT CARRIER PIPE, CENTERED ON THE POINT OF CROSSING.
- ALL TAPPING OF MAINS SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. SCHEDULING OF THESE CONNECTIONS SHALL REQUIRE A MINIMUM 2 BUSINESS DAYS NOTIFICATION (MEASURED ON NORMAL WORK DAYS) DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE THE WORK DIRECTLY WITH THE PUBLIC UTILITIES DEPARTMENT. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 7:00 A.M. AND NOON ON THE APPROPRIATE



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER CONSTRUCTION NOTES

FILE NAME
RW2.DOC

DETAIL REF:
RW-2

REV. 12/08

RECLAIMED WATER CONSTRUCTION NOTES (CONT'D)

- DAY.
- WITH RESPECT TO TIE-IN CONNECTIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS.
- ALL WORK PERFORMED UPON RECLAIMED WATER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY AN UNDERGROUND UTILITY OR GENERAL CONTRACTOR LICENSED IN THE STATE OF FLORIDA AND REGISTERED WITH THE CITY.
- FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL RECLAIMED WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT IF NO CURB EXISTS).
- ALL H.D.P.E. PIPE RECLAIMED WATER MAINS SHALL BE S.D.R.11 UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC OR DIP PIPE TO WHICH IT IS ATTACHED.
- ALL P.V.C. PIPE SHALL BE STORED IN SUCH A WAY AS TO PREVENT WARPING, DEFLECTION, OR ANY DEFORMATION.
- RECLAIMED WATER HYDRANTS MAY BE REQUIRED BY THE CITY. ALL RECLAIMED HYDRANTS SHALL BE PAINTED PURPLE.
- NO USED, RE-USED, RUSTED, SECOND HAND, OR ANY MATERIAL THAT IS NOT NEW SHALL BE USED IN ANY UTILITY IMPROVEMENT PROJECTS WITHIN THE CITY'S SERVICE AREA.
- IN AREAS WHERE RECLAIMED WATER IS AVAILABLE, RECLAIMED WATER WILL BE UTILIZED IN THE PRESSURE TESTING OF NEW RECLAIMED WATER LINES.
- RECLAIMED WATER MAINS SHALL BE PVC AWWA CLASS C-900 OR C-905, CL 150 (COLOR PANTONE PURPLE) OR DIP PRESSURE CLASS 350, STANDARD CEMENT LINED UNLESS APPROVED OTHERWISE BY THE CITY.



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER CONSTRUCTION NOTES

FILE NAME
RW2.DOC

DETAIL REF:
RW-2

REV. 12/08

City of Port Orange Public Utilities Department
List of Approved Products

Reclaimed Water

12/08

Air Release Valves

MANUFACTURER	MODEL #
Val-Matic	Series 38

Gate Valves and Tapping Valves – Resilient Seated (AWWA C509 and C515) 24" or Smaller (Valve wedge to be complete enclosed with EPDM rubber)

MANUFACTURER	MODEL #
American AVK Co.	Series 3, 18, 25, 45, 55, & 66
Clow	Model 2638 and 2639
Mueller	A-2360, A-2361, T-2360 & T-2361
American Flow Control	Series 2500

Joints Restrained – DIP and PVC

MANUFACTURER	MODEL #
EBBA Iron Inc	Series 1100/1500/1600 2000/2500/2800
Star Pipe	Stargrip Series 1000/1100/1200/3000/ 4000
Sigma	One-Lock SLD & One-Lock SLC & PV-Lock for PVC
Smith-Blair	Cam-Lock (111 & 120) & Bell-Lock (115 & 165)



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER APPROVED PRODUCTS

FILE NAME
RW3.DOC

DETAIL REF:
RW-3

City of Port Orange Public Utilities Department
List of Approved Products

Reclaimed Water

12/08

Polyethylene Tubing – (Purple with UV Protection (SDR-9) 1" to 2" only)

MANUFACTURER	MODEL #
Endot Endocore RWT	Endotrace with #10 Copperhead tracer wire

Corporation Stop 1"

MANUFACTURER	MODEL #
Ford	F-1100-4

Corporation Stop 1 1/2"

MANUFACTURER	MODEL #
Ford	FB-1100-6

Curb Stop – Straight Ball Meter Valve w/ Barrel Locks

MANUFACTURER	MODEL #
Ford	B-94-324W (Single Service) B-91-223W (Double Service)
Ford	BF 43-777W (For 2" meter)

"U" Branch (1 1/2" x 3/4")

MANUFACTURER	MODEL #
Ford	U-48-63-7.5



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER APPROVED PRODUCTS

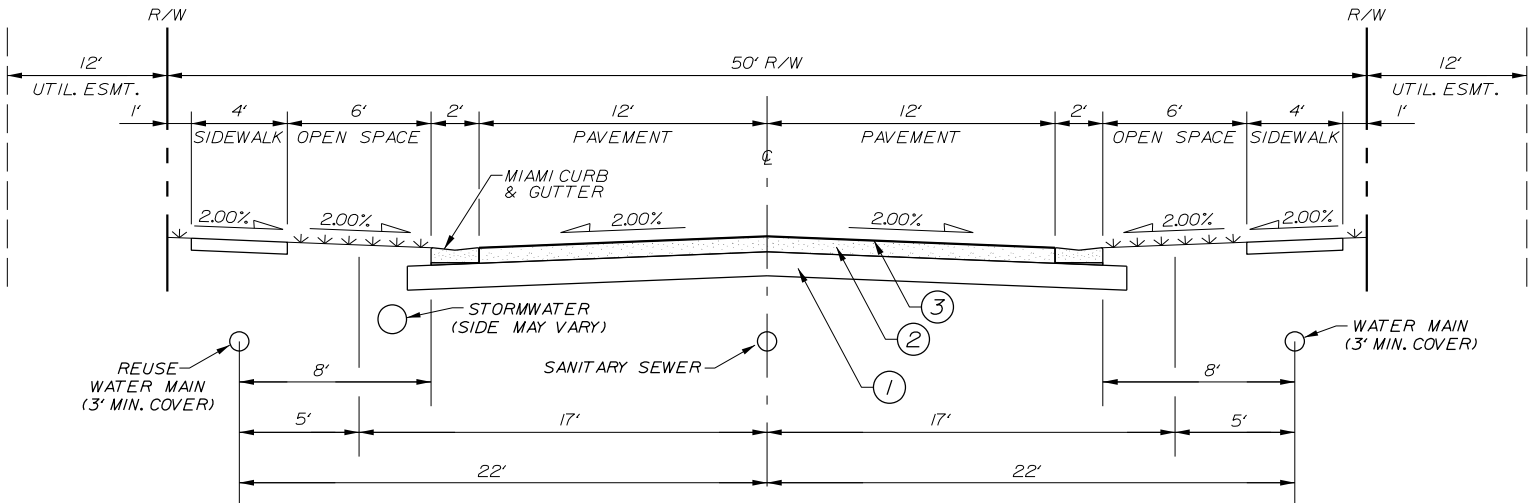
FILE NAME
RW3.DOC

DETAIL REF:
RW-3

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SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017



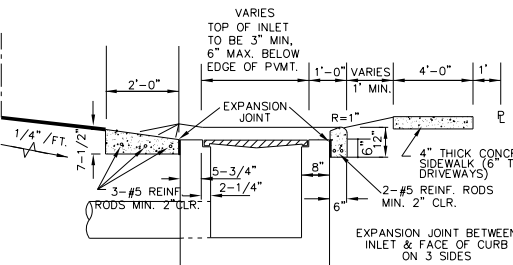
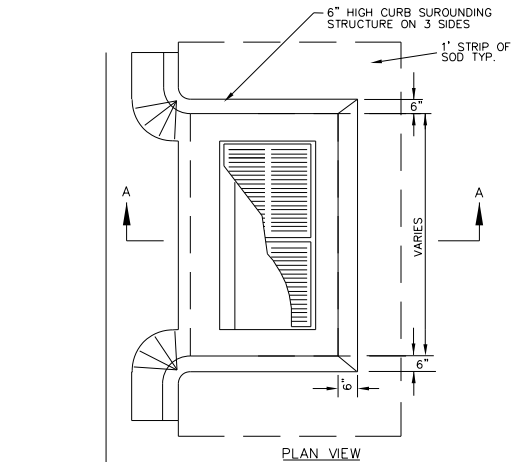
TYPICAL SECTION - 50' R/W

PAVEMENT LEGEND

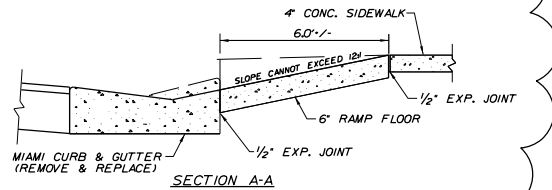
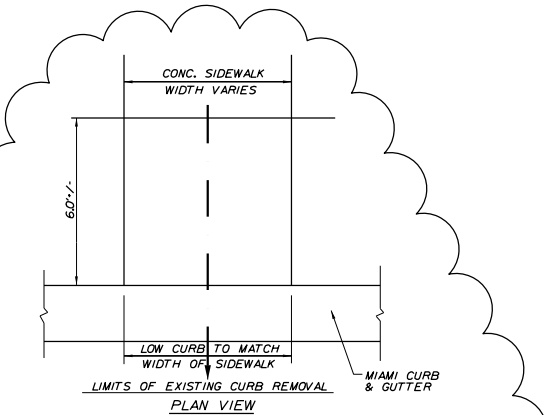
- 1. 12" SUBGRADE/SUB-BASE COMPACTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST WITH MINIMUM LBR 40.
- 2. 6" RECYCLED CONCRETE BASE (LBR 130) COMPACTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST. THE CONSTRUCTION METHODS SHALL CONFORM TO THE LATEST EDITION OF THE F.D.O.T. ROAD AND BRIDGE CONSTRUCTION SPECIFICATIONS.
- 3. 1.5" OF FLORIDA DOT ASPHALTIC CONCRETE MIX OF TYPE S-9.5 & COMPACTED TO 98% DENSITY. THE CONSTRUCTION METHODS SHALL CONFORM TO THE LATEST EDITION OF THE F.D.O.T. ROAD AND BRIDGE CONSTRUCTION SPECIFICATIONS.

ALTERNATE BASE:
6" SOIL CEMENT BASE MINIMUM BEARING STRENGTH OF 300 P.S.I. SHALL BE OBTAINED WITHIN 7 DAYS AND COMPACTED TO 98% DENSITY BASED ON AASHTO T-99 STANDARD PROCTOR TEST. CONSTRUCTION METHODS SHALL CONFORM TO SECTION 270 OF STANDARD F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.

USE OF ALTERNATE BASE MUST FIRST BE APPROVED BY THE COMMUNITY DEVELOPMENT ENGINEER.



STANDARD CONSTRUCTION DETAIL 2
STORM INLET APRON



- NOTES:
1. ENTIRE EXISTING CURB SHALL BE REMOVED & REPLACED WITHIN LIMITS SHOWN.
2. LOW CURB & TRANSITION MAY BE FORMED AT TIME OF CURB CONSTRUCTION.
3. CONSTRUCT WITH CLASS A (3000PSI) CONCRETE.

HANDICAP RAMP 2

REVISIONS

No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

TYPICAL
PAVING
SECTION

PROJECT: CC 1\FinalSF Phase 3
SHEET NO.

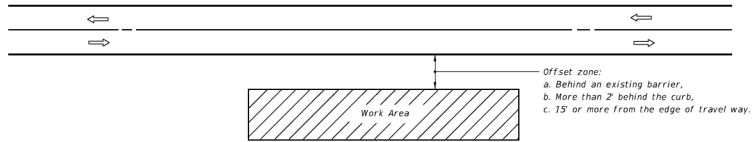
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GENERAL NOTES

1. If the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the offset zone in any one hour, traffic control will be in conformance with Index No. 602.
2. No special signing is required.
3. When a side road intersects the highway within the work area, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
4. When construction activities encroach on a sidewalk refer to Index No. 660.
5. For general TCZ requirements and additional information, refer to Index No. 600.

SYMBOLS

- Work Area
- Lane Identification + Direction of Traffic

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE BEHIND AN EXISTING BARRIER, MORE THAN 2' BEHIND THE CURB, OR 15' OR MORE FROM THE EDGE OF TRAVEL WAY.

LAST REVISION	DESCRIPTION:	FDOT	FY 2016-17 DESIGN STANDARDS	INDEX NO.	SHEET NO.
07/01/05				601	1 of 1

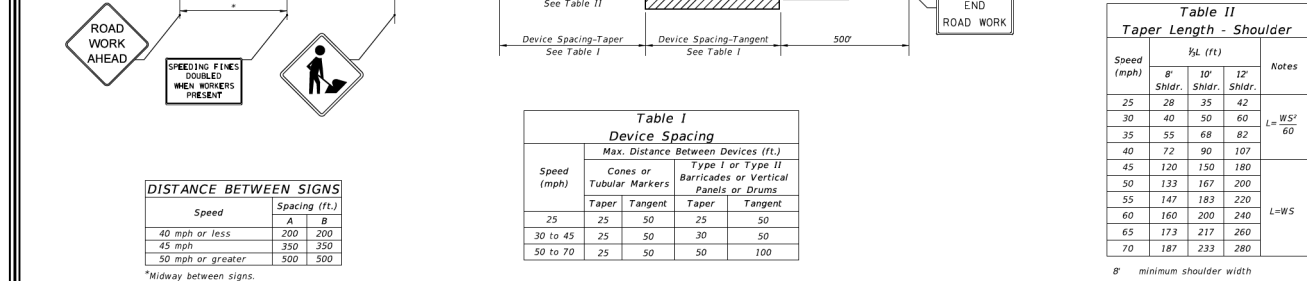


Table I Device Spacing				
Speed (mph)	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
	25	25	50	25

Table II Taper Length - Shoulder				
Speed (mph)	S/L (ft)			Notes
	8' Shldr.	10' Shldr.	12' Shldr.	
25	28	35	42	L = WS ² 60
30	40	50	60	
35	55	68	82	
40	72	90	107	
45	120	150	180	L = WS
50	133	167	200	
55	147	183	220	
60	160	200	240	
65	173	217	260	
70	187	233	280	

SYMBOLS

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Lane Identification + Direction of Traffic

GENERAL NOTES

1. When four or more work vehicles enter the through traffic lanes in a one hour period or less (excluding establishing and terminating the work area), the advanced FLAGGER sign shall be substituted for the WORKERS sign. For location of flaggers and FLAGGER signs, see Index No. 603.
2. SHOULDER WORK sign may be used as an alternate to the WORKER symbol sign only on the side where the shoulder work is being performed.
3. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
4. For general TCZ requirements and additional information, refer to Index No. 600.

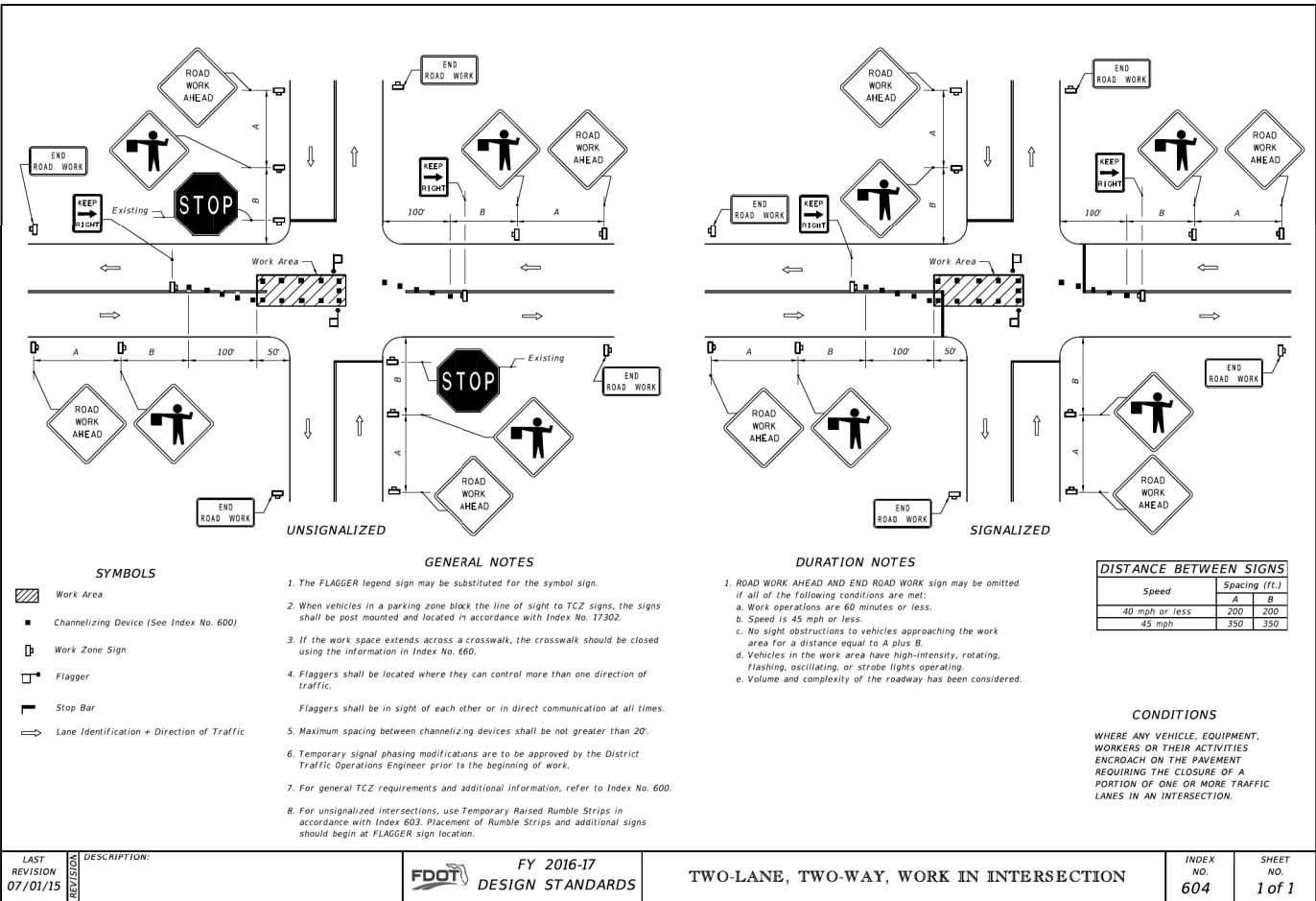
DURATION NOTES

1. Signs and channelizing devices may be omitted if all of the following conditions are met:
 - a. Work operations are 60 minutes or less.
 - b. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRUCH THE AREA CLOSER THAN 15' BUT NOT CLOSER THAN 2' TO THE EDGE OF TRAVEL WAY.

LAST REVISION	DESCRIPTION:	FDOT	FY 2016-17 DESIGN STANDARDS	INDEX NO.	SHEET NO.
07/01/15				602	1 of 1



SYMBOLS

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Flagger
- Stop Bar
- Lane Identification + Direction of Traffic

GENERAL NOTES

1. The FLAGGER legend sign may be substituted for the symbol sign.
2. When vehicles in a parking zone block the line of sight to TCZ signs, the signs shall be post mounted and located in accordance with Index No. 17302.
3. If the work space extends across a crosswalk, the crosswalk should be closed using the information in Index No. 660.
4. Flaggers shall be located where they can control more than one direction of traffic.
Flaggers shall be in sight of each other or in direct communication at all times.
5. Maximum spacing between channelizing devices shall be not greater than 20'.
6. Temporary signal phasing modifications are to be approved by the District Traffic Operations Engineer prior to the beginning of work.
7. For general TCZ requirements and additional information, refer to Index No. 600.
8. For unsignalized intersections, use Temporary Raised Rumble Strips in accordance with Index 603. Placement of Rumble Strips and additional signs should begin at FLAGGER sign location.

DURATION NOTES

1. ROAD WORK AHEAD AND END ROAD WORK sign may be omitted if all of the following conditions are met:
 - a. Work operations are 60 minutes or less.
 - b. Speed is 45 mph or less.
 - c. No sight obstructions to vehicles approaching the work area for a distance equal to A plus B.
 - d. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
 - e. Volume and complexity of the roadway has been considered.

DISTANCE BETWEEN SIGNS		
Speed	Spacing (ft.)	
	A	B
40 mph or less	200	200
45 mph	350	350

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRUCH ON THE PAVEMENT REQUIRING THE CLOSURE OF A PORTION OF ONE OR MORE TRAFFIC LANES IN AN INTERSECTION.

LAST REVISION	DESCRIPTION:	FDOT	FY 2016-17 DESIGN STANDARDS	INDEX NO.	SHEET NO.
07/01/15				604	1 of 1

SEAL

REVISIONS

No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

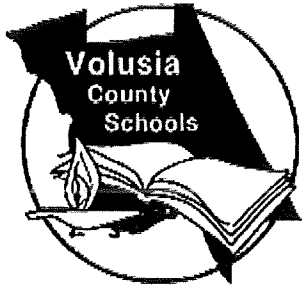
TITLE

JURISDICTIONAL
STANDARDS

PROJECT: CC 1\FinalSF Phase 3

SHEET NO.

C50



James T. Russell
Superintendent of Schools

FACILITIES SERVICES

3750 Olson Drive, Daytona Beach, Florida 32124
PHONE: 386/734-7190 FAX: 386/506-5056

School Board of Volusia County

Mrs. Melody Johnson, Chairman
Mrs. Linda Cuthbert, Vice Chairman
Mrs. Ida D. Wright
Dr. John Hill
Mr. Carl Persis

August 31, 2017

Mr. Scott Stearns
Westport Reserve LLC
370 Center Pointe Cr., Ste 1136
Altamonte Springs, FL 32701

RE: Westport Reserve Phase 3& 4 – City of Port Orange
School Capacity Case #17-08-07-001-R

Dear Mr. Stearns:

The District has reviewed your information for the residential project known as Westport Reserve, Phases 3& 4. The 69.21 +/- acre project site is located within the City of Port Orange near the intersection of Town West Blvd. and Tomoka Farms Rd. Information provided in the application packet indicates the new development activity will consist of one hundred ninety-three (193) single family dwelling units.

By factoring the Student Generation Rate (SGR) for a multi-family dwelling unit, (0.305) per unit, we find the project could generate fifty-nine (59) full time students. The table below contains the impacted school concurrency areas (CSAs) and their associated utilization information.

Table 1

Schools	Adopted LOS	SY 16/17 Enrollment	Reserved Capacity	Existing LOS	Students Generated by Request	LOS Change
Spruce Creek Elementary	115%	778	58	104%	25	107%
Silver Sands Middle School	115%	1157	52	104%	15	105%
Halifax High School CSA (Atlantic HS)	120%	7401	227	100%	18	100%
Other					1	

Westport Reserve Phase 3& 4 – City of Port Orange
August 31, 2017

This projected increase in students will not exceed the adopted LOS for the impacted schools; for this reason, the school district does not have an objection to the proposed site plan. Minimum planning considerations should include pedestrian and vehicular access, safety, connectivity, and buffering.

Please note that the School Board has the right to adjust the attendance boundaries to balance the student enrollment populations at these area schools. Therefore, students generated from this project may not attend the current assigned schools.

If you should have additional questions or require more information, please feel free to contact me at extension 50810.

Sincerely,

E. A. Kozielski
3/AUG 2017

Eric A. Kozielski
Planning & GIS Specialist

Cc: James Russell, Superintendent of Schools
Penelope Cruz, City of Port Orange
Dawn Queen, Dewberry Engineers Inc.
Project File



STAFF REPORT

WESTPORT RESERVE SUBDIVISION PLAT & PLANS (PHASE 4)

CASE NO. 17-50000006

REQUEST: Approval of the Westport Reserve Subdivision Plat and Plans for Phase 4

LOCATION: North of Town West Boulevard, east of Tomoka Farms Road (Figure 1)

OWNER: Edge Cove LLC

APPLICANT: Jonathan Claber, Edge Cove LLC

STAFF RECOMMENDATION: Approval

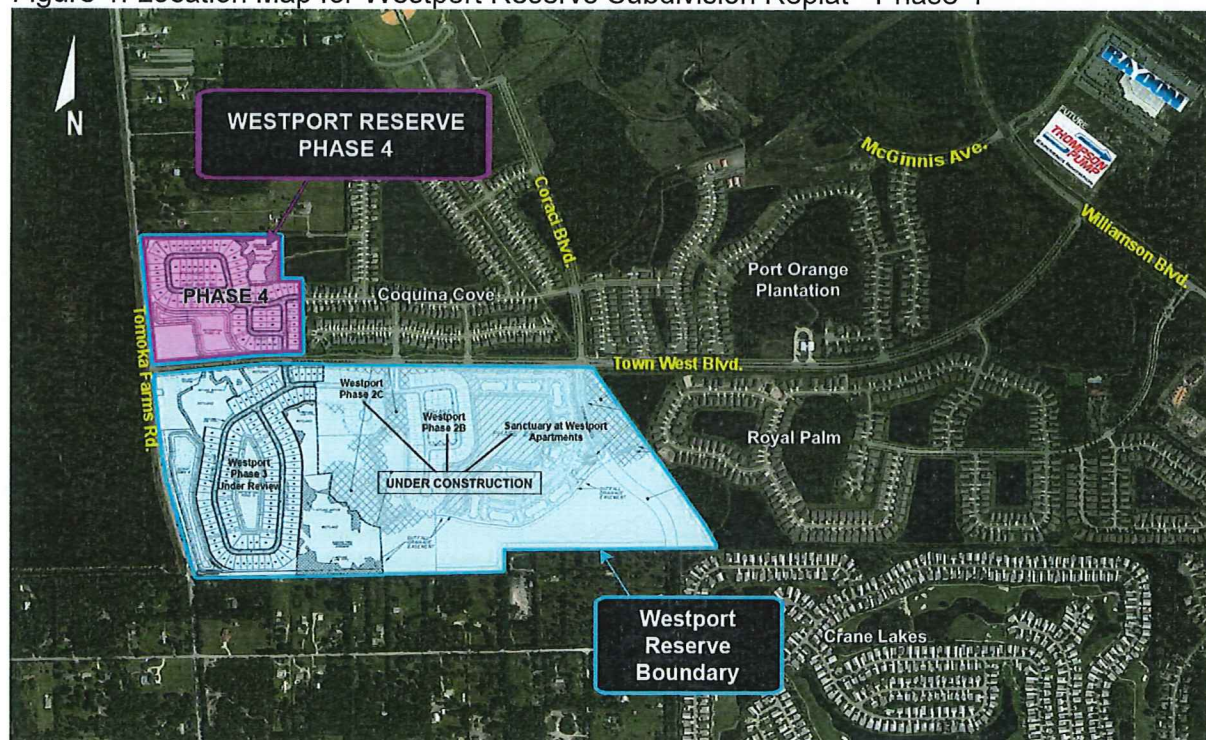
STAFF CONTACT: Gwen Perney (386) 506-5673

PLANNING COMMISSION DATE: October 26, 2017

DISCUSSION:

The applicant requests approval of the Westport Reserve Subdivision Plat and Plans for Phase 4. If approved, the applicant intends to plat a ± 25.73 -acre parcel into a 78 lot single-family subdivision and tracts for tree preservation, stormwater retention, and open space. The subject property is located north of Town West Boulevard, between the Coquina Cove Subdivision and Tomoka Farms Road.

Figure 1. Location Map for Westport Reserve Subdivision Replat - Phase 4



The subject property is zoned "PC-A" (Planned Community Agriculture) Neighborhood District and has a Future Land Use designation of Planned Community No. 1. The PC-A Neighborhood zoning district is intended to accommodate a variety of standard suburban housing types at varying densities. Single-family, two-family, and multi-family housing are all permitted uses in this zoning district.

The subject property is located in the 1,200-acre master planned area called Planned Community-Agricultural (PC-A). In 2001/2002, the City established specific maximum unit per acre densities for the PC-A for areas designated for residential uses and intensities (square-footage) for areas designated for non-residential uses. Roadway network improvements (collector roads, intersection improvements, turn lanes, sufficient right-of-way etc.) to support the planned development were also established.

The proposed subdivision phase is located within the Neighborhood District of the PC-A, which consists of residential uses with maximum densities from 4 units per acre to 16 units per acre. As the Neighborhood District has developed over the past ten years, the required roadway improvements (Coraci Blvd., McGinnis Blvd., Town West Blvd., Town West/Williamson intersection, and turn lanes) to support the planned residential density have been built, but the residential density developed or planned is less than originally planned in 2001/2002.

Table 1. Neighborhood District Allowed & Developed Densities

Subdivisions in Neighborhood District	Year	Number of Approved or Proposed Dwelling Units	Development Size (acres)	Developed Density DU/Acre	Max Density per Acre	Max Number of Dwelling Units Allowed
Coquina Cove Ph 1	2005	332	85	3.91	4	340
Port Orange Plantation Ph 1	2004	90	33.4	2.69	8	267
Port Orange Plantation Ph 2	2005	104	28.3	3.67	8	226
Port Orange Plantation Ph 3	2006	53	17.5	3.03	4	70
Port Orange Plantation Ph 4-Village C	2014	49	15.7	3.12	16	251
Hawks Preserve Ph 1 & 2	2016	189	81	2.33	16	1,296
Westport Reserve Subdivision (Ph 2A, 2B, 2C, and 3)	2016 2017	567	148.7	3.81	4	594
Westport Reserve Subdivision (Ph 4)	2017	78	25.73	3.03	4	96
Total	N/A	1,462	435.35	3.36	N/A	3,140

Based on the approved densities in the Neighborhood District, the maximum number of dwelling units that could be constructed is 3,140. Staff is concurrently reviewing both Phases 3 and 4 of the Westport Reserve Subdivision, which are located on the last remaining parcels in the Neighborhood District. If these phases are approved, the total number of units in the Neighborhood District will be 1,462. This number is less than half of the maximum number of dwelling units it was planned for in the early 2000's (see Table 1).

The plat and subdivision plans have been designed according to the requirements of the City's Land Development Code (LDC) and the dimensional standards outlined in the PC-A neighborhood-zoning district of the LDC [Exhibit "A"].

To meet the 15% tree preservation area requirement in Land Development Code (LDC) for Phase 4, the applicant has identified a 4.65-acre wooded area within Phase 2B of the Westport Reserve Subdivision that will be used to meet the 15% tree preservation area requirement for Phase 4. The LDC allows the use of off-site tree preservation within the PC-A zoning district. A separate tree conservation easement will be recorded to preserve this area and reserve it as the tree preservation area for Phase 4. Phase 2B of the Westport Reserve Subdivision was developed with 4.79 acres or 15% of designated tree preservation area. The additional acreage proposed to be preserved for Phase 4 is part of an open space area within Phase 2B and not currently designated as tree preservation area. Therefore, Phase 2B will still meet code with the transfer of 4.65 acres to serve as the tree preservation for Phase 4.

The following subdivision improvements will be constructed before or simultaneously with the development of the first lot:

- Access onto Town West Boulevard and Cove Point Road connection into Coquina Cove Subdivision;
- Water, sewer, and reclaimed water infrastructure;
- Stormwater drainage infrastructure
- Public local streets within the subdivision;
- A left turn on Town West Boulevard into Phase 4;
- Sidewalks and streetlights along the public streets;
- 10' landscape buffer with 3' tall berm and decorative split-rail fence along Town West Boulevard; and
- 35' landscape buffer along Tomoka Farms Road.

CONCURRENCY REVIEW:

Public facilities and services such as roads, public infrastructure, schools, and recreational facilities are currently available to serve the proposed 78 residential lots (Table 2). The following discussion summarizes the impacts the proposed development will have on these public facilities and services.

Table 2 - Infrastructure Impact Assessment for 78 Lots

DEVELOPMENT VARIABLE	IMPACTS
Population ¹	176
A.M./P.M./Daily Peak Hour Trips ²	59/80/743 trips

DEVELOPMENT VARIABLE	IMPACTS
Sanitary Sewer (gallons per day) ³	12,636 gallons
Potable Water (gallons per day) ⁴	14,040 gallons
Solid Waste (lbs. Per day) ⁵	250 lbs.
Stormwater Drainage ⁶	See Note
Recreation & Open Space ⁷	
• Parkland	1.2 acres
• Ball Fields	0.04 fields
• Basketball Courts	0.04 courts
• Multipurpose Courts	0.05 courts
• Tennis Courts	0.04 courts
• Neighborhood Centers	0.0117 centers

Notes:

1. **Population:** 2.25 persons per household (per 2010 Census)
2. **Transportation:** 1.02 PM peak hour trips per unit; 9.52 daily trips per unit; Single-family (210), ITE Trip Generation Manual, 9th Edition
3. **Sanitary Sewer:** 160 gallons per day per Equivalent Residential Unit; 1/10 gallon per square foot per day of non-residential development
4. **Potable Water:** 180 gallons per day per Equivalent Residential Unit; 1/10 gallon per square foot per day of non-residential development
5. **Solid Waste:** 3.21 pounds per person per day; 10 lbs. per 1,000 square feet of non-residential development per day
6. **Stormwater Drainage:** LOS standard = 25 year, 24-hour event. Drainage system will be designed to meet the requirements of the Land Development Code.
7. **Rec. & Open Space:**
 - Parkland: 7 acres per 1,000 persons (0.007 acres/person)
 - Ball Fields: 1 field per 5,000 persons (0.0002 ball fields/person)
 - Basketball Courts: 1 court per 4,000 persons (0.00025 basketball courts/person)
 - Multipurpose Fields: 1 field per 3,500 persons (0.0002857 multipurpose fields/person)
 - Tennis Courts: 1 court per 4,000 persons (0.00025 tennis courts/person)
 - Neighborhood Centers: 1 facility per 15,000 persons (0.0000666 neighborhood centers/person)

Water, Sewer, Reclaimed Water:

The proposed phase will be served by potable water, sanitary sewer, and reclaimed water. All lots will be provided with stub-outs for utilities, and the developer will construct potable water, sanitary sewer, and reclaimed water lines in accordance with the utility plan for this project. Staff from Public Utilities have worked with the applicant to design the utilities for this area to ensure adequate capacity will exist.

Stormwater Drainage:

The City's adopted level-of-service standard for stormwater drainage requires that all new retention/detention facilities be able to treat and convey the runoff from the 25-year, 24-hour storm event without causing flooding or pollution of receiving waterbodies. In addition, there must be no net loss of stormwater retention function as a result of development; therefore, the subdivision property must have the same ability to store and discharge water after development as it does before development occurs.

Recreation and Open Space:

According to the City's 2016 Concurrency Management Report, the City is not deficient in any of the recreational facilities categories and there are sufficient facilities to support the additional population from this subdivision phase.

School Capacity:

The Volusia County School District determined that the adopted level of service will be met and capacity exists in the schools for the estimated students to be generated by the proposed subdivision [Exhibit "B"].

Transportation:

According to the Westport Reserve, Phase 3 and 4, Traffic Impact Analysis (TIA) prepared by Traffic Engineering Data Solutions (TEDS), Inc., the 78 single-family homes in Phase 4 are expected to generate 74 PM peak-hour trips and 753 daily trips.

The TIA indicates that all intersections identified in the TIA study area that would be impacted by this development will operate within the adopted Level-of-Service standards with the traffic generated from the proposed subdivision, subject to the developer coordinating with Volusia County regarding the intersection of Williamson Boulevard at Taylor Road and Town West Boulevard at Tomoka Farms Road. The TIA also anticipates that in 2022, the 2-lane segment of Williamson Boulevard from Beville Road to Town West Boulevard could exceed capacity if the road is not widened to 4-lanes, similar to the other segments of Williamson Boulevard (except Hand Avenue to LPGA) and the 2-lane segment of Taylor Road between Crane Lakes Boulevard and Summer Trees Road could exceed its capacity if not widened to 4-lanes. Because the improvements are on roadways maintained by Volusia County, the developer will be required to obtain concurrency certification from the County and may be subject to proportionate fair-share agreements and/or other mitigation strategies with the County or City. If required, proof of concurrency certification from the County will need to be provided prior to the item going before City Council.

Consistency with the Comprehensive Plan:

The subject property has a FLU designation of *Planned Community No. 1* on the City's Future Land Use Map. According to the Comprehensive Plan, the maximum gross residential density for the 109.1-acre overall PC-A area located on the north side of Town West Boulevard, between Tomoka Farms Road and Coraci Boulevard is four units/acre. With the addition of 78 single-family lots along with the 332 approved single-family lots (Coquina Cove, Phase 1), the overall density for the 109.1-acre area is currently 3.76 units per acre. The development of the proposed single-family home subdivision is consistent with the intent of the FLU designation and permitted uses in the PC-A Neighborhood zoning district.

RECOMMENDATION:

Staff recommends approval of the Plat and Subdivision Plans for the Westport Reserve Subdivision, Phase 4, subject to addressing labeling and formatting comments on the subdivision plat and plans prior to City Council.

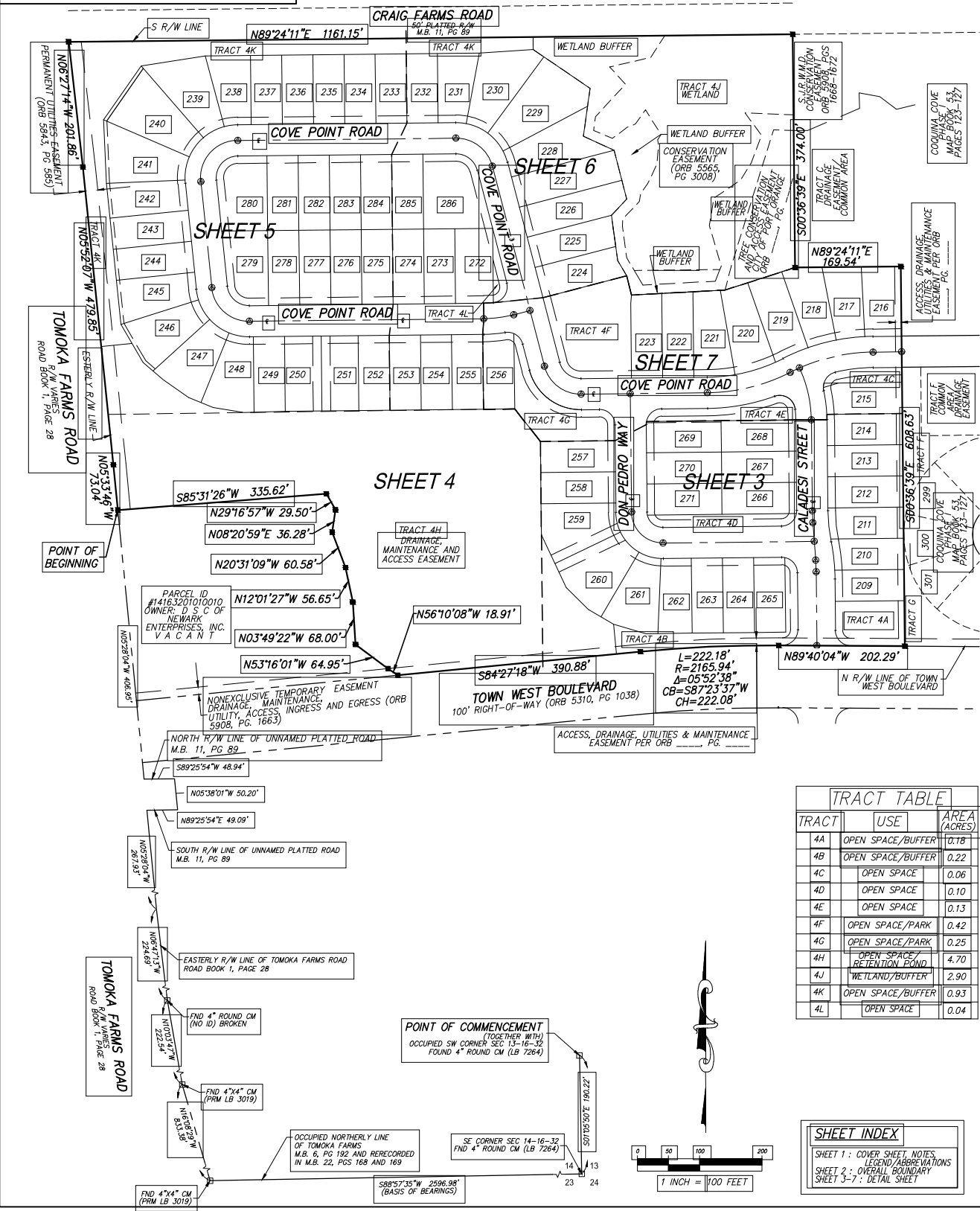
ATTACHMENTS:

1. Exhibit A – Subdivision Plat and Plans for Phase 4
2. Exhibit B – Volusia County School Board Letter

Dewberry
131 WEST KALEY STREET
ORLANDO, FLORIDA 32806
PHONE: 321.354.9826 FAX: 407.648.9104
WWW.DEWBERRY.COM
CERTIFICATE OF AUTHORIZATION NO. LB 8011

WESTPORT RESERVE PHASE 4

REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST,
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA



TRACT TABLE		
TRACT	USE	AREA (ACRES)
4A	OPEN SPACE/BUFFER	0.18
4B	OPEN SPACE/BUFFER	0.22
4C	OPEN SPACE	0.06
4D	OPEN SPACE	0.10
4E	OPEN SPACE	0.13
4F	OPEN SPACE/PARK	0.42
4G	OPEN SPACE/PARK	0.25
4H	OPEN SPACE/RETENTION POND	4.70
4J	WETLAND/BUFFER	2.90
4K	OPEN SPACE/BUFFER	0.93
4L	OPEN SPACE	0.04

SHEET INDEX	
SHEET 1	COVER SHEET, NOTES
SHEET 2	LEGEND/ABBREVIATIONS
SHEET 3-7	OVERALL BOUNDARY SHEET

- GENERAL NOTES:**
- MONUMENTATION:
 - - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
 - - DENOTES PERMANENT REFERENCE MONUMENT SET 4"x4" CONCRETE MONUMENT STAMPED PRM LB 8011
 - ⊙ - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED PCP LB 8011
 - ALL LINES INTERSECTING CURVES ARE RADIAL UNLESS OTHERWISE NOTED
(R) - DENOTES A LINE RADIAL RELATIVE TO ADJACENT CURVE.
(NR) - DENOTES A LINE NOT RADIAL RELATIVE TO ADJACENT CURVE.
 - DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.
 - ACCURACY:
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
 - BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.
 - NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 39.37/12=3.28083333333333 EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
 - 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.
 - THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THE PLAT:
 - ENTIRE STREET FRONTAGES OF LOTS AND COMMON OPEN SPACE AREAS: 12.00 FEET WIDE
 - UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
 - ALL PLATTED UTILITY EASEMENTS, EXCLUSIVE OF PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY, 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 PURSUANT TO SECTION 177.091(28), FLORIDA STATUTES SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
 - SINGLE FAMILY RESIDENTIAL BUILDING SETBACK REQUIREMENTS:
 - FRONT = 25 FEET
 - REAR = 20 FEET
 - SIDE = LOTS ≤ 65' = 5 FEET
 - LOTS > 65' = 7.5 FEET
 - SIDE CORNER = 20 FEET
 - SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
 - MINIMUM OPEN SPACE AREA = 40%
 - MAXIMUM BUILDING COVERAGE = 50%
 - MAXIMUM BUILDING HEIGHT = 36 FEET
 - THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.'S FOURTH AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHTS TO THE GENERAL PUBLIC.
 - THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THE DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON OPEN SPACE AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES; AND SHALL HAVE THE RIGHT TO LIEN ALL PROPERTY OWNERS OF RECORD FOR THE COST OF SUCH MAINTENANCE, REPAIR, AND REPLACEMENT, AS DEEMED BY THE CITY TO BE NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORM WATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 40C-42.027, F.A.C. AND BE APPROVED BY THE SAINT JOHN'S RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
 - COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
 - THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON OPEN SPACE AREAS AND IN THE RIGHTS-OF-WAY.
 - LOTS 209-286 AND TRACTS 4A, 4B, 4C, 4D, 4E, 4G, 4H, 4J AND 4K AS SHOWN HEREON, ARE SUBJECT TO THE FOURTH AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____ PAGE _____, et seq., OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO WHICH, AS EXHIBIT "B" ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.
 - THIS PLAT IS SUBJECT TO AN PERMANENT UTILITIES EASEMENT IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY FLORIDA IN BOOK 5843, PAGE 585, et seq.
 - PLAT IS SUBJECT TO ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK _____ PAGE _____, SHOWN ON SHEETS 3, 4 AND 7, AFFECTING TRACTS 4A, 4B, LOTS 209-215 AND 218.
 - THIS PLAT IS SUBJECT TO A CONSERVATION EASEMENT IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 5565, PAGE 3008, et seq.
 - LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).
 - TRACTS 4A, 4B, 4C, 4D, 4E, 4F, 4G AND 4K AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE.
 - THE ENTIRETY OF TRACTS 4C, 4E, 4G, AND 4K AS SHOWN HEREON IS SUBJECT TO A DRAINAGE EASEMENT.
 - TRACT 4H AS SHOWN HEREON AS OPEN SPACE/POND WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND DRAINAGE.
 - TRACT 4J AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND IS SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN OFFICIAL RECORDS BOOK 5565, PAGE 3008 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
 - THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 259-260 AND THE 28.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 250-251 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC.

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131 WEST KALEY STREET
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CERTIFICATE OF AUTHORIZATION NO. LB 8011

WESTPORT RESERVE PHASE 4

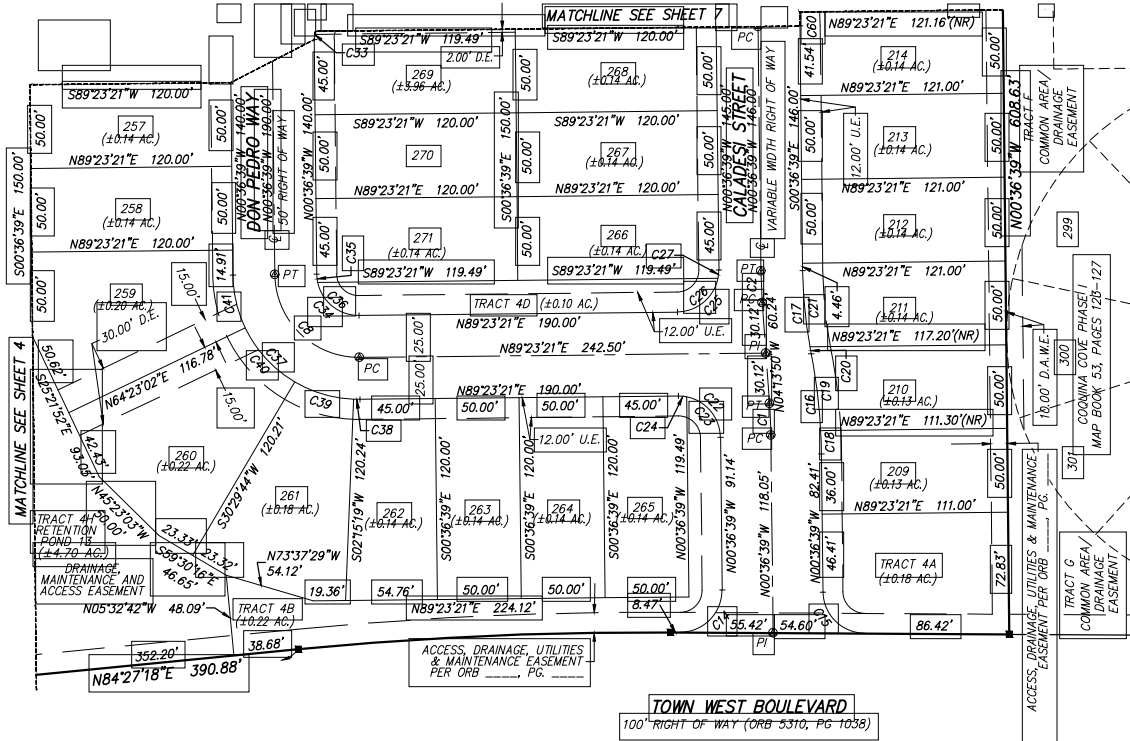
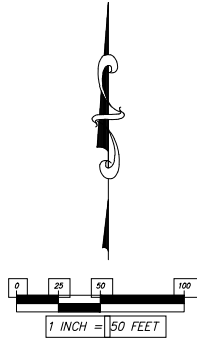
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CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

SHEET INDEX

SHEET 1 : COVER SHEET, NOTES,
LEGEND/ABBREVIATIONS
SHEET 2 : OVERALL BOUNDARY
SHEET 3-7 : DETAIL SHEET

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C1	18.95'	300.00	03°37'11"	18.95'	N02°25'14"W
C2	18.95'	300.00	03°37'11"	18.95'	N02°25'14"E
C8	78.54'	50.00	90°00'00"	70.71'	S45°36'39"E
C14	39.68'	25.00	90°56'35"	35.65'	S44°51'39"E
C15	38.86'	25.00	89°03'25"	35.06'	S45°08'21"E
C16	60.08'	330.00	10°25'55"	60.00'	S05°49'36"W
C17	50.07'	275.00	10°25'55"	50.00'	S05°49'36"E
C18	14.01'	330.00	02°25'54"	14.01'	S01°49'36"W
C19	46.08'	330.00	08°00'00"	46.04'	S07°02'34"W
C20	4.32'	275.00	00°53'57"	4.32'	S10°35'35"E
C21	45.75'	275.00	09°31'57"	45.70'	S05°22'38"E
C22	39.27'	25.00	90°00'00"	35.36'	S45°36'39"W
C23	34.24'	25.00	78°27'47"	31.62'	S39°50'32"W

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C24	5.03'	25.00	11°32'13"	5.03'	S84°50'32"W
C25	39.27'	25.00	90°00'00"	35.36'	N44°23'21"E
C26	34.24'	25.00	78°27'47"	31.62'	N50°09'28"E
C27	5.03'	25.00	11°32'13"	5.03'	N05°09'28"E
C33	5.03'	25.00	11°32'13"	5.03'	S05°09'28"W
C34	39.27'	25.00	90°00'00"	35.36'	S45°36'39"E
C35	5.03'	25.00	11°32'13"	5.03'	S06°22'46"E
C36	34.24'	25.00	78°27'47"	31.62'	S51°22'46"E
C37	117.81'	75.00	90°00'00"	106.07'	S45°36'39"E
C38	3.75'	75.00	02°51'58"	3.75'	S89°10'40"E
C39	36.97'	75.00	28°14'26"	36.59'	S73°37'29"E
C40	44.36'	75.00	33°53'18"	43.72'	S42°33'37"E
C41	32.73'	75.00	25°00'19"	32.47'	S13°06'49"E



GENERAL NOTES:

- MONUMENTATION:
 - - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
 - - DENOTES PERMANENT REFERENCE MONUMENT SET 4"x4" CONCRETE MONUMENT STAMPED PRM LB 8011
 - ⊙ - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED PCP LB 8011
- ALL LINES INTERSECTING CURVES ARE RADIAL UNLESS OTHERWISE NOTED
(R) - DENOTES A LINE RADIAL RELATIVE TO ADJACENT CURVE.
(NR) - DENOTES A LINE NOT RADIAL RELATIVE TO ADJACENT CURVE.
- DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.
- ACCURACY:
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
- BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.
- NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE $39.37/12 = 3.2808333333$ EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
- 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.
- THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THE PLAT:
 - ENTIRE STREET FRONTS OF LOTS AND COMMON OPEN SPACE AREAS: 12.00 FEET WIDE
- UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
- ALL PLATTED UTILITY EASEMENTS, EXCLUSIVE OF PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY, 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 PURSUANT TO SECTION 177.091(28), FLORIDA STATUTES. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
- SINGLE FAMILY RESIDENTIAL BUILDING SETBACK REQUIREMENTS:
 - FRONT = 25 FEET
 - REAR = 20 FEET
 - SIDE = LOTS ≤ 65' = 5 FEET
 - LOTS > 65' = 7.5 FEET
 - SIDE CORNER = 20 FEET
- SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
 - MINIMUM OPEN SPACE AREA = 40%
 - MAXIMUM BUILDING COVERAGE = 50%
 - MAXIMUM BUILDING HEIGHT = 36 FEET
- THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.'S FOURTH AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHTS TO THE GENERAL PUBLIC.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THE DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON OPEN SPACE AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES; AND SHALL HAVE THE RIGHT TO LIEN ALL PROPERTY OWNERS OF RECORD FOR THE COST OF SUCH MAINTENANCE, REPAIR, AND REPLACEMENT, AS DEEMED BY THE CITY TO BE NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORM WATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 40C-42.022, F.A.C. AND BE APPROVED BY THE SAINT JOHN'S RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
- COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON OPEN SPACE AREAS AND IN THE RIGHTS-OF-WAY.
- LOTS 209-286 AND TRACTS 4A, 4B, 4C, 4D, 4E, 4G, 4H, 4J AND 4K AS SHOWN HEREON, ARE SUBJECT TO THE FOURTH AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____ PAGE _____, et seq., OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO WHICH, AS EXHIBIT "B" ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.
- THIS PLAT IS SUBJECT TO AN PERMANENT UTILITIES EASEMENT IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 5843, PAGE 585, et seq.
- PLAT IS SUBJECT TO ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK _____ PAGE _____, SHOWN ON SHEETS 3, 4 AND 7, AFFECTING TRACTS 4A, 4B, LOTS 209-215 AND 218.
- THIS PLAT IS SUBJECT TO A CONSERVATION EASEMENT IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 5565, PAGE 3008, et seq.
- LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).
- TRACTS 4A, 4B, 4C, 4D, 4E, 4F, 4G AND 4K AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND DRAINAGE.
- THE ENTIRETY OF TRACTS 4C, 4E, 4G, AND 4K AS SHOWN HEREON IS SUBJECT TO A DRAINAGE EASEMENT.
- TRACT 4H AS SHOWN HEREON AS OPEN SPACE/POND WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND DRAINAGE.
- TRACT 4J AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND IS SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN OFFICIAL RECORDS BOOK 5565, PAGE 3008 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
- THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 259-260 AND THE 28.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 250-251 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC.

**Dewberry**

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CERTIFICATE OF AUTHORIZATION NO. LB 8011

WESTPORT RESERVE PHASE 4

REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST,
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

MAP BOOK: PAGE:

- GENERAL NOTES:
1. MONUMENTATION:
 - - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
 - - DENOTES PERMANENT REFERENCE MONUMENT SET 4"x4" CONCRETE MONUMENT STAMPED PRM LB 8011
 - ⊙ - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED PCP LB 8011

2. ALL LINES INTERSECTING CURVES ARE RADIAL UNLESS OTHERWISE NOTED
(R) - DENOTES A LINE RADIAL RELATIVE TO ADJACENT CURVE.
(NR) - DENOTES A LINE NOT RADIAL RELATIVE TO ADJACENT CURVE.

3. DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.

4. ACCURACY:
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.

5. BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.

6. NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE 39.37/12=3.28083333333 EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.

7. 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.

8. THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THE PLAT:
ENTIRE STREET FRONTAGES OF LOTS AND COMMON OPEN SPACE AREAS: 12.00 FEET WIDE

9. UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.

10. ALL PLATTED UTILITY EASEMENTS, EXCLUSIVE OF PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY, 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 PURSUANT TO SECTION 177.091(28), FLORIDA STATUTES. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.

11. SINGLE FAMILY RESIDENTIAL BUILDING SETBACK REQUIREMENTS:
FRONT = 25 FEET
REAR = 20 FEET
SIDE = LOTS ≤ 65' = 5 FEET
LOTS > 65' = 7.5 FEET
SIDE CORNER = 20 FEET

12. SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
MINIMUM OPEN SPACE AREA = 40%
MAXIMUM BUILDING COVERAGE = 50%
MAXIMUM BUILDING HEIGHT = 36 FEET

13. THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.'S FOURTH AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHTS TO THE GENERAL PUBLIC.

14. THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THE DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON OPEN SPACE AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES; AND SHALL HAVE THE RIGHT TO LIEN ALL PROPERTY OWNERS OF RECORD FOR THE COST OF SUCH MAINTENANCE, REPAIR, AND REPLACEMENT, AS DEEMED BY THE CITY TO BE NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORM WATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 40C-42.027, F.A.C. AND BE APPROVED BY THE SAINT JOHN'S RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.

15. COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.

16. THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON OPEN SPACE AREAS AND IN THE RIGHTS-OF-WAY.

17. LOTS 209-286 AND TRACTS 4A, 4B, 4C, 4D, 4E, 4G, 4H, 4J AND 4K AS SHOWN HEREON, ARE SUBJECT TO THE FOURTH AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____ PAGE _____, et seq., OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO WHICH, AS EXHIBIT "B" ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.

18. THIS PLAT IS SUBJECT TO AN PERMANENT UTILITIES EASEMENT IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 5843, PAGE 585, et seq.

19. PLAT IS SUBJECT TO ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK _____ PAGE _____, SHOWN ON SHEETS 3, 4 AND 7, AFFECTING TRACTS 4A, 4B, LOTS 209-215 AND 218.

20. THIS PLAT IS SUBJECT TO A CONSERVATION EASEMENT IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 5565, PAGE 3008, et seq.

21. LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).

22. TRACTS 4A, 4B, 4C, 4D, 4E, 4F, 4G AND 4K AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE.

23. THE ENTIRETY OF TRACTS 4C, 4E, 4G, AND 4K AS SHOWN HEREON IS SUBJECT TO A DRAINAGE EASEMENT.

24. TRACT 4H AS SHOWN HEREON AS OPEN SPACE/POND WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND DRAINAGE.

25. TRACT 4J AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND IS SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN OFFICIAL RECORDS BOOK 5565, PAGE 3008 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.

26. THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 259-260 AND THE 28.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 250-251 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC.
- | SHEET INDEX |
|--|
| SHEET 1 : COVER SHEET, NOTES, LEGEND/ABBREVIATIONS |
| SHEET 2 : OVERALL BOUNDARY |
| SHEET 3-7 : DETAIL SHEET |
-
- SHEET 4 OF 7

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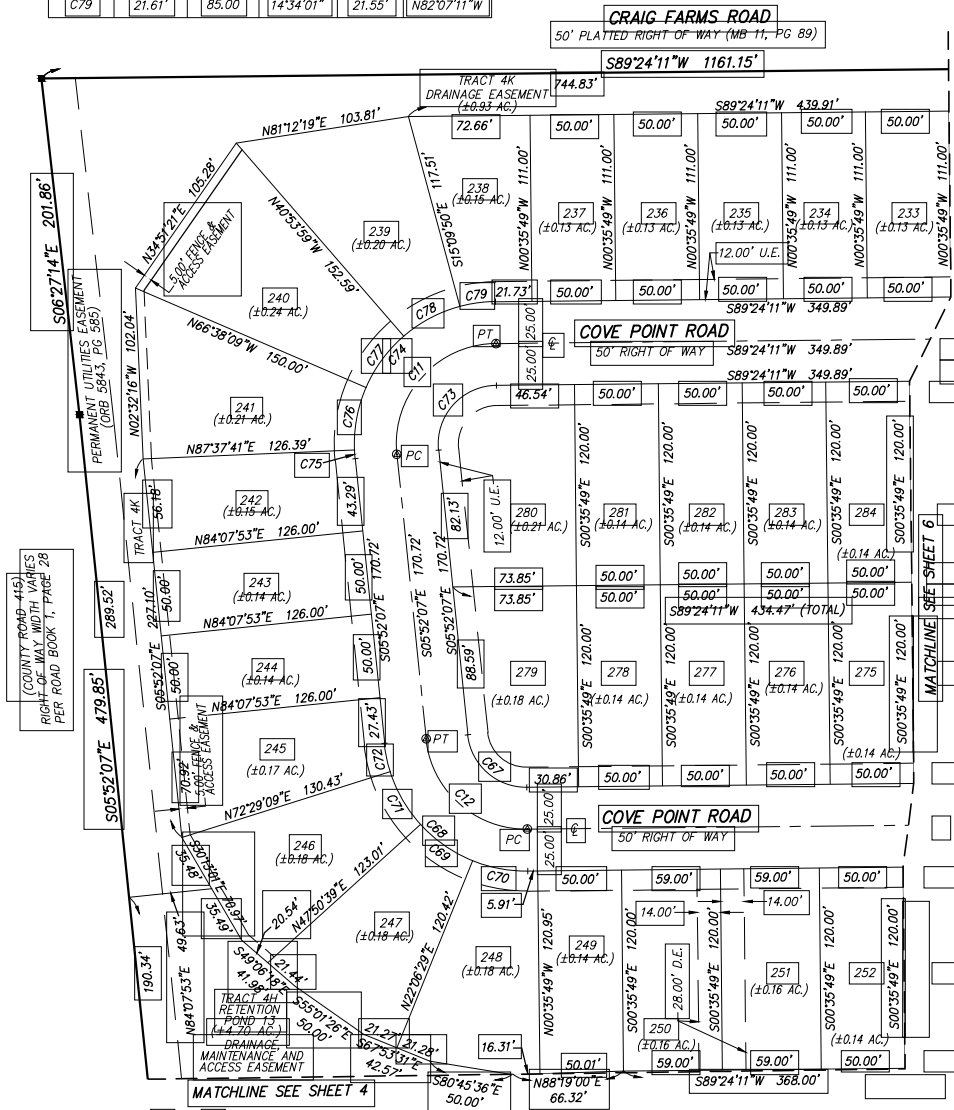
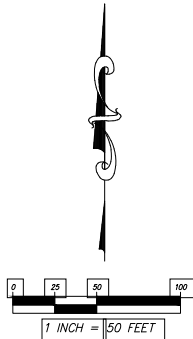
WESTPORT RESERVE PHASE 4

REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST,
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C11	99.77'	60.00	95°16'18"	88.67'	N41°46'02"W
C12	88.73'	60.00	84°43'42"	80.86'	S48°13'58"E
C67	51.76'	35.00	84°43'42"	47.17'	S48°13'58"E
C68	125.70'	85.00	84°43'42"	114.55'	S48°13'58"E
C69	38.18'	85.00	25°44'10"	37.86'	S55°01'26"E
C70	33.68'	85.00	22°42'18"	33.46'	S79°14'40"E
C71	36.56'	85.00	24°38'30"	36.28'	S29°50'06"E
C72	17.28'	85.00	11°38'44"	17.25'	S11°41'29"E
C73	58.20'	35.00	95°16'18"	51.72'	N41°46'02"W
C74	141.34'	85.00	95°16'18"	125.61'	N41°46'02"W
C75	5.19'	85.00	03°29'48"	5.19'	N04°07'13"E
C76	38.18'	85.00	25°44'10"	37.86'	N10°29'46"W
C77	38.18'	85.00	25°44'10"	37.86'	N36°13'56"W
C78	38.18'	85.00	25°44'10"	37.86'	N61°58'05"W
C79	21.61'	85.00	14°34'01"	21.55'	N82°07'11"W

SHEET INDEX

SHEET 1 : COVER SHEET, NOTES,
LEGEND, ABBREVIATIONS
SHEET 2 : OVERALL BOUNDARY
SHEET 3-7 : DETAIL SHEET



GENERAL NOTES:

- MONUMENTATION:
 - - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
 - - DENOTES PERMANENT REFERENCE MONUMENT SET 4"x4" CONCRETE MONUMENT STAMPED PRM LB 8011
 - ⊙ - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED PCP LB 8011
- ALL LINES INTERSECTING CURVES ARE RADIAL UNLESS OTHERWISE NOTED
(R) - DENOTES A LINE RADIAL RELATIVE TO ADJACENT CURVE.
(NR) - DENOTES A LINE NOT RADIAL RELATIVE TO ADJACENT CURVE.
- DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.
- ACCURACY:
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
- BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.
- NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE $39.37/12=3.2808333333$ EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
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- THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THE PLAT:
 - ENTIRE STREET FRONTAGES OF LOTS AND COMMON OPEN SPACE AREAS: 12.00 FEET WIDE
- UTILITIES INCLUDE BUT ARE NOT LIMITED TO SANITARY SEWER, POTABLE WATER, STORM DRAINAGE, ELECTRIC TELEPHONE, CABLE TELEVISION, SECURITY, NATURAL GAS, FIBER OPTIC, TELECOMMUNICATION.
- ALL PLATTED UTILITY EASEMENTS, EXCLUSIVE OF PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY, 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 PURSUANT TO SECTION 177.091(28), FLORIDA STATUTES. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
- SINGLE FAMILY RESIDENTIAL BUILDING SETBACK REQUIREMENTS:
 - FRONT = 25 FEET
 - REAR = 20 FEET
 - SIDE = LOTS ≤ 65' = 5 FEET
 - LOTS > 65' = 7.5 FEET
 - SIDE CORNER = 20 FEET
- SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:
 - MINIMUM OPEN SPACE AREA = 40%
 - MAXIMUM BUILDING COVERAGE = 50%
 - MAXIMUM BUILDING HEIGHT = 36 FEET
- THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.'S FOURTH AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHTS TO THE GENERAL PUBLIC.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC., A FLORIDA NON-PROFIT CORPORATION SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE DRAINAGE SYSTEM SERVING THE AREA WITHIN THE BOUNDARIES OF THIS PLAT, AS DEPICTED ON THE STORMWATER MANAGEMENT PLAN APPROVED FOR THE DEVELOPMENT BY THE CITY OF PORT ORANGE, FLORIDA. SHOULD THE ASSOCIATION FAIL TO PERFORM THE MAINTENANCE OF THE DRAINAGE AND STORMWATER MANAGEMENT SYSTEMS, THE CITY OF PORT ORANGE SHALL BE ENTITLED TO ENTER UPON THE COMMON OPEN SPACE AREAS AND DESIGNATED EASEMENT AREAS TO PERFORM MAINTENANCE, REPAIR OR REPLACE THE FACILITIES; AND SHALL HAVE THE RIGHT TO LIEN ALL PROPERTY OWNERS OF RECORD FOR THE COST OF SUCH MAINTENANCE, REPAIR, AND REPLACEMENT, AS DEEMED BY THE CITY TO BE NECESSARY. IN THE EVENT OF TERMINATION, DISSOLUTION, OR FINAL LIQUIDATION OF THE ASSOCIATION, THE RESPONSIBILITY FOR THE OPERATION AND MAINTENANCE OF THE SURFACE WATER OR STORM WATER MANAGEMENT SYSTEM WILL BE TRANSFERRED TO AND ACCEPTED BY AN ENTITY WHICH COMPLIES WITH SECTION 40C-42.027, F.A.C. AND BE APPROVED BY THE SAINT JOHN'S RIVER WATER MANAGEMENT DISTRICT PRIOR TO SUCH TERMINATION, DISSOLUTION, OR LIQUIDATION.
- COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUND WATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
- THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON OPEN SPACE AREAS AND IN THE RIGHTS-OF-WAY.
- LOTS 209-286 AND TRACTS 4A, 4B, 4C, 4D, 4E, 4G, 4H, 4J AND 4K AS SHOWN HEREON, ARE SUBJECT TO THE FOURTH AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____ PAGE _____, et seq., OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO WHICH, AS EXHIBIT "B", ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.
- THIS PLAT IS SUBJECT TO AN PERMANENT UTILITIES EASEMENT IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 5843, PAGE 585, et seq.
- PLAT IS SUBJECT TO ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT RECORDED IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK _____ PAGE _____, SHOWN ON SHEETS 3, 4 AND 7, AFFECTING TRACTS 4A, 4B, LOTS 209-215 AND 218.
- THIS PLAT IS SUBJECT TO A CONSERVATION EASEMENT IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 5565, PAGE 3008, et seq.
- LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).
- TRACTS 4A, 4B, 4C, 4D, 4E, 4F, 4G AND 4K AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND DRAINAGE.
- THE ENTIRETY OF TRACTS 4C, 4E, 4G, AND 4K AS SHOWN HEREON IS SUBJECT TO A DRAINAGE EASEMENT.
- TRACT 4H AS SHOWN HEREON AS OPEN SPACE/POND WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND DRAINAGE.
- TRACT 4J AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND IS SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN OFFICIAL RECORDS BOOK 5565, PAGE 3008 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
- THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 259-260 AND THE 28.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 250-251 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC.

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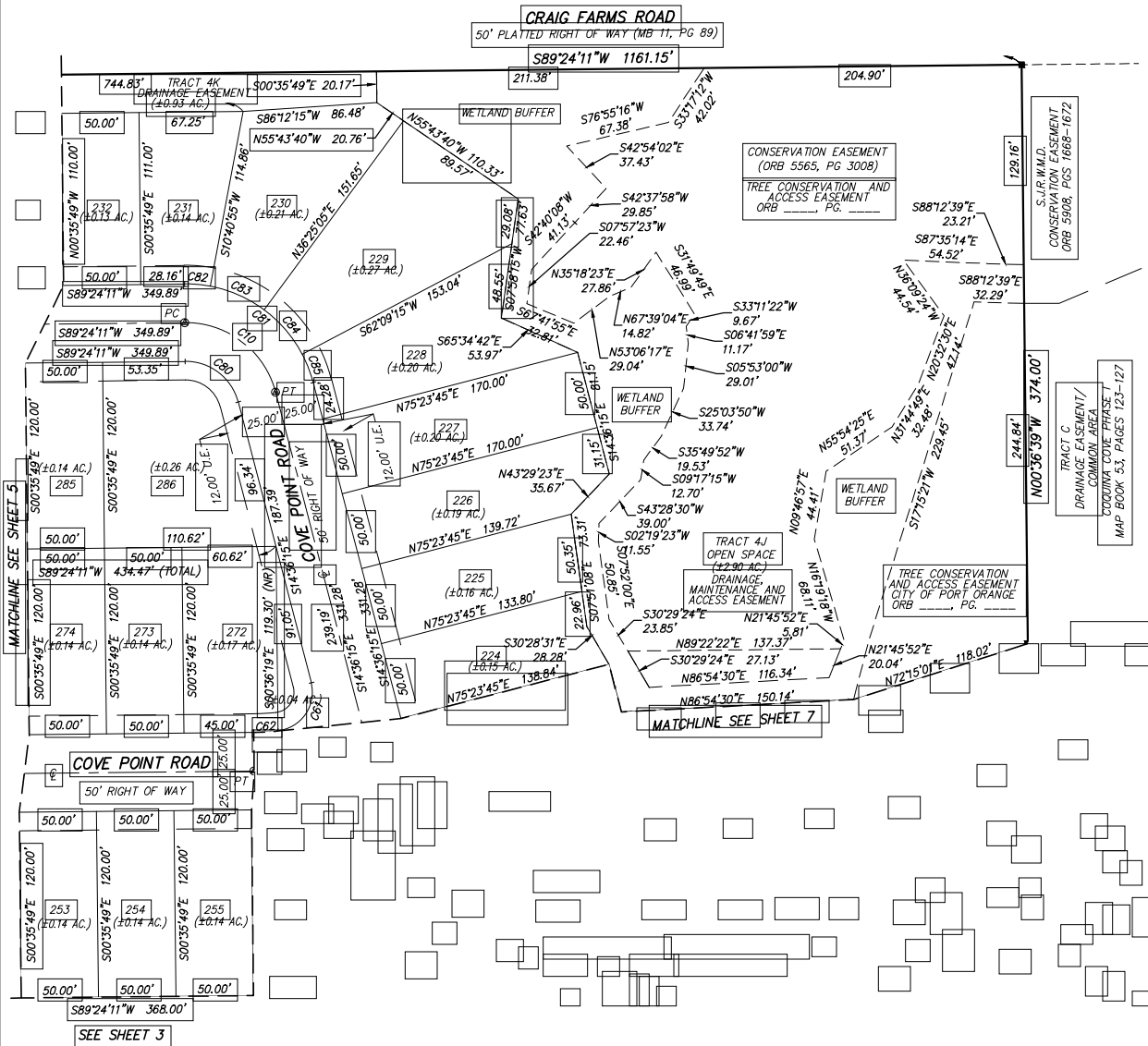
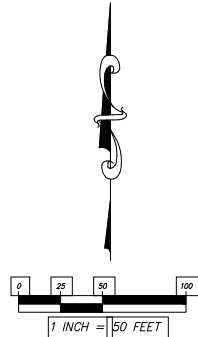
WESTPORT RESERVE PHASE 4

REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST,
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C10	79.58'	60.00	75°59'34"	73.87'	S52°36'02"W
C61	43.14'	25.00	98°52'46"	37.99'	N34°50'08"E
C62	15.66'	175.00	05°07'40"	15.66'	N86°50'21"E
C80	46.42'	35.00	75°59'34"	43.09'	S52°36'02"W
C81	112.74'	85.00	75°59'34"	104.65'	S52°36'02"W
C82	16.73'	85.00	11°16'44"	16.71'	S84°57'27"W
C83	38.18'	85.00	25°44'10"	37.86'	S66°27'00"W
C84	38.18'	85.00	25°44'10"	37.86'	S40°42'50"W
C85	19.64'	85.00	13°14'30"	19.60'	S21°13'30"W

SHEET INDEX

SHEET 1 : COVER SHEET, NOTES,
LEGEND, ABBREVIATIONS
SHEET 2 : OVERALL BOUNDARY
SHEET 3-7 : DETAIL SHEET



GENERAL NOTES:

- MONUMENTATION:
 - - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
 - - DENOTES PERMANENT REFERENCE MONUMENT SET 4"x4" CONCRETE MONUMENT STAMPED PRM LB 8011
 - ⊙ - DENOTES PERMANENT CONTROL POINT SET NAIL AND DISK STAMPED PCP LB 8011
- ALL LINES INTERSECTING CURVES ARE RADIAL UNLESS OTHERWISE NOTED
(R) - DENOTES A LINE RADIAL RELATIVE TO ADJACENT CURVE.
(NR) - DENOTES A LINE NOT RADIAL RELATIVE TO ADJACENT CURVE.
- DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.
- ACCURACY:
 - THE BOUNDARY LINEAR ERROR OF CLOSURE DOES NOT EXCEED 1:10,000.
 - THE BOUNDARY ANGULAR ERROR OF CLOSURE DOES NOT EXCEED 15 SECONDS MULTIPLIED BY THE SQUARE ROOT OF THE NUMBER OF ANGLES TURNED.
- BEARINGS SHOWN HEREON ARE ASSUMED AND BASED ON THE OCCUPIED SOUTH LINE OF THE SE 1/4 OF SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST, VOLUSIA COUNTY, FLORIDA, HAVING A BEARING OF S88°57'35"W.
- NOTE: ALL MEASUREMENTS REFER TO HORIZONTAL PLANE IN ACCORDANCE WITH THE DEFINITION OF THE U.S. SURVEY FOOT OR METER ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL MEASUREMENTS SHALL USE THE $39.37/12=3.2808333333$ EQUATION FOR CONVERSION FROM A U.S. FOOT TO METERS.
- 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.
- THIS PLAT IS SUBJECT TO ALL EASEMENTS OF RECORD AND RESERVATIONS OF EASEMENTS, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITY, ACCESS AND MAINTENANCE EASEMENTS DEDICATED OR GRANTED HEREON WHICH SHALL BE LOCATED AS FOLLOWS EXCEPT AS OTHERWISE NOTED ON THE PLAT:
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- THE COMMON OPEN SPACE AREAS TO BE CONVEYED BY SEPARATE INSTRUMENT TO THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE SUBJECT TO EASEMENTS AS SHOWN OR DESCRIBED HEREON OR GRANTED IN ACCORDANCE WITH THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.'S FOURTH AMENDED AND RESTATED DECLARATION OF COVENANTS AND RESTRICTIONS REFERENCED IN NOTE 17. THE GRANTING OF SUCH COMMON OPEN SPACE AREAS IS NOT INTENDED TO GRANT ANY RIGHTS TO THE GENERAL PUBLIC.
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MAP BOOK:

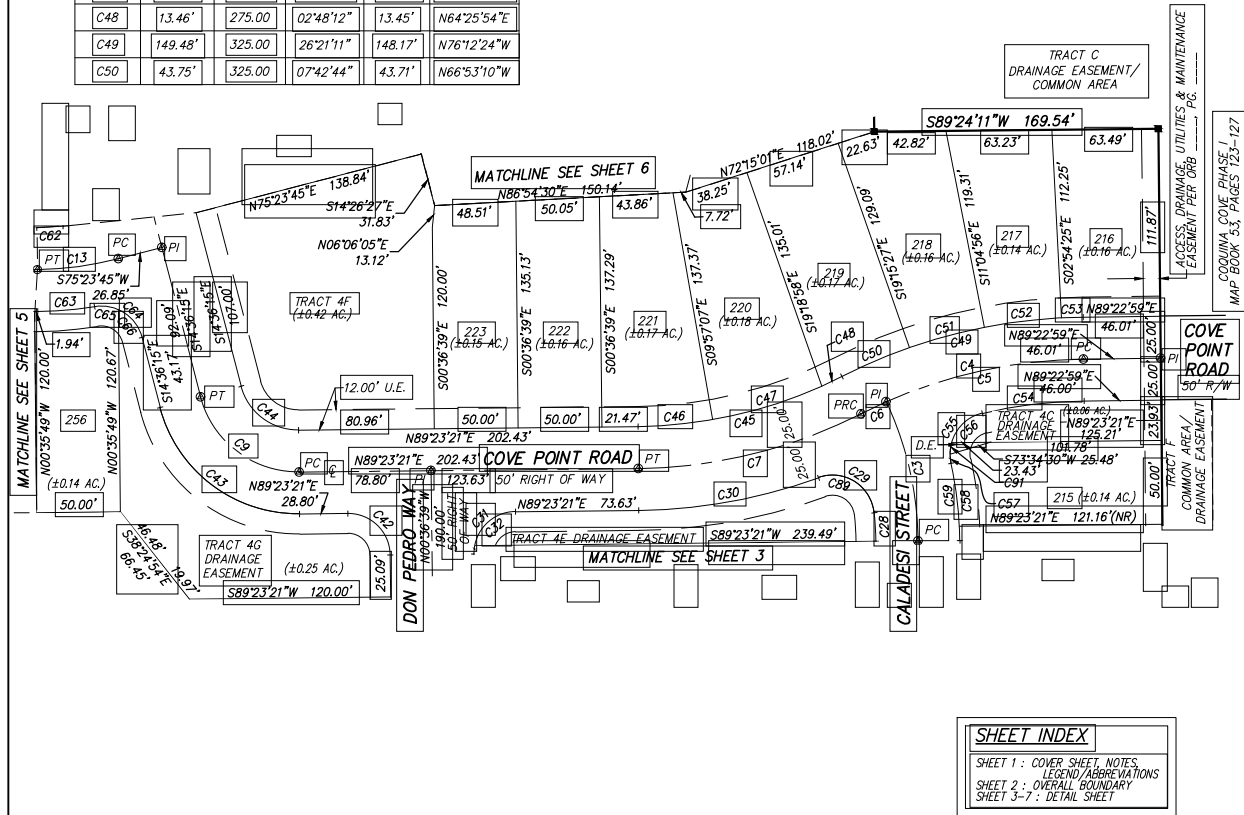
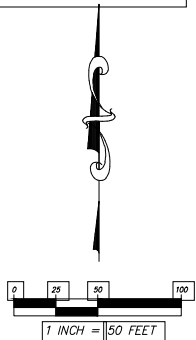
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REPLAT OF A PORTION OF TRACT H, WESTPORT RESERVE, PLAT BOOK 57,
PAGES 136-147, LYING IN SECTION 14, TOWNSHIP 16 SOUTH, RANGE 32 EAST,
CITY OF PORT ORANGE, VOLUSIA COUNTY, FLORIDA

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING
C51	46.37"	325.00	08°10'31"	46.33"	N74°49'48"W
C52	46.37"	325.00	08°10'31"	46.33"	N83°00'20"W
C53	12.99"	325.00	02°17'24"	12.99"	N88°41'17"W
C54	61.33"	275.00	12°46'43"	61.21"	N82°59'38"W
C55	38.85'	25.00	89°01'46"	35.05'	N32°05'23"W
C56	26.31'	25.00	60°18'08"	25.11'	N46°27'12"W
C57	4.43'	25.00	10°09'49"	4.43'	N07°20'35"W
C58	46.39"	225.00	11°48'51"	46.31"	S06°31°05"W
C59	37.93"	225.00	09°39'36"	37.89"	S07°35°42"W
C62	15.66'	175.00	05°07'40"	15.66'	N86°50'21"E
C63	34.14'	225.00	08°41'36"	34.11'	N85°03'23"E
C64	36.95'	25.00	84°41'10"	33.68'	S56°56'50"W
C65	14.38'	25.00	32°56'48"	14.18'	S82°49°00"W
C66	22.58'	25.00	51°44'22"	21.82'	S40°28'26"W
C90	18.03'	25.00	41°19'01"	17.64'	S26°52'41"E
C91	8.10"	25.00	18°33'48"	8.06"	S07°01'13"W



- GENERAL NOTES:** **MAP BOOK:** **PAGE:**

 1. MONUMENTATION:
 - - DENOTES PERMANENT REFERENCE MONUMENT FOUND STAMPED AS NOTED
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FRONT = 25 FEET
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 LOTS > 65' = 7.5 FEET
 SIDE CORNER = 30 FEET
 12. SINGLE FAMILY RESIDENTIAL LOT COVERAGE REQUIREMENTS:

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 MAXIMUM BUILDING COVERAGE = 50%
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 15. COMMON OPEN SPACE AREAS ARE GRANTED AS EASEMENTS TO THE CITY OF PORT ORANGE WITH RIGHTS OF ACCESS, INGRESS, AND EGRESS, TOGETHER WITH THE RIGHT TO HARVEST EXCESS STORM WATER / GROUNDWATER AS DEEMED APPROPRIATE IN THE DISCRETION OF THE CITY.
 16. THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC. SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING AND IRRIGATION IN COMMON OPEN SPACE AREAS AND IN THE RIGHTS-OF-WAY.
 17. LOTS 209-286 AND TRACTS 4A, 4B, 4C, 4D, 4E, 4G, 4H, 4J AND 4K AS SHOWN HEREON, ARE SUBJECT TO THE FOURTH AMENDED AND RESTATED DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR WESTPORT RESERVE RESIDENTIAL PROPERTIES, RECORDED IN OFFICIAL RECORDS BOOK _____ PAGE _____ et seq. OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, ATTACHED TO, AS EXHIBIT "B" ARE THE ARTICLES OF INCORPORATION OF THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.
 18. THIS PLAT IS SUBJECT TO AN PERMANENT UTILITIES EASEMENT IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 5843, PAGE 585, et seq.
 19. PLAT IS SUBJECT TO ACCESS, DRAINAGE, UTILITIES AND MAINTENANCE EASEMENT SHOWN IN OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN OFFICIAL RECORDS BOOK _____ PAGE _____, RECORDED ON SHEETS 3, 4 AND 7, AFFECTING TRACTS 4A, 4B, LOTS 209-215 AND 218.
 20. THIS PLAT IS SUBJECT TO A CONSERVATION EASEMENT IN THE OFFICIAL RECORDS OF VOLUSIA COUNTY, FLORIDA IN BOOK 5565, PAGE 3008, et seq.
 21. LOT CORNERS WILL BE SET IN ACCORDANCE WITH FLORIDA STATUTES CHAPTER 177.091 (9).
 22. TRACTS 4A, 4B, 4C, 4D, 4E, 4F, 4G AND 4K AS SHOWN HEREON AS OPEN SPACE AREAS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE.
 23. THE ENTIRETY OF TRACTS 4C, 4E, 4G, AND 4K AS SHOWN HEREON IS SUBJECT TO A DRAINAGE EASEMENT.
 24. TRACT 4H AS SHOWN HEREON AS OPEN SPACE/POND WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND DRAINAGE.
 25. TRACT 4J AS SHOWN HEREON AS OPEN SPACE WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT INC., ITS SUCCESSORS AND/OR ASSIGNS FOR THE PURPOSE OF COMMON OPEN SPACE AND IS SUBJECT TO THE CONSERVATION EASEMENT GRANTED TO THE CITY OF PORT ORANGE, FLORIDA IN OFFICIAL RECORDS BOOK 5565, PAGE 3008 OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA.
 26. THE 30.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 259-260 AND THE 28.00 FOOT DRAINAGE EASEMENT SHOWN ON LOTS 250-251 ARE HEREBY GRANTED TO AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF WESTPORT RESERVE, INC.

POTABLE WATER

1. ALL PVC WATER MAINS 2" OR LESS SHALL BE SDR21 (200 PSI) UNLESS OTHERWISE NOTED.
2. WATER MAINS SHALL COMPLY WITH AWWA STANDARDS. ALL PVC PIPE 3 TO 12 INCHES SHALL BE AWWA C900 DR18; ALL PVC PIPE 14 INCHES AND LARGER SHALL COMPLY WITH AWWA C305 DR25. ALL WATER MAINS SHALL BEAR THE NSF LOGO AND SHALL BE COLOR-CODED OR MARKED USING BLUE AS A PREDOMINANT COLOR TO DIFFERENTIATE DRINKING WATER FROM OTHER WATER LINES.
3. WHERE DUCTILE IRON PIPE IS REQUIRED FOR WATER MAINS, IT SHALL CONFORM TO ANSI/AWWA A21.51. A MINIMUM THICKNESS FOR PRESSURE CLASS 350 PER ANSI/AWWA SHALL BE SUPPLIED. DIP SIZES UP TO 12 INCHES IN DIAMETER SHALL BE PRESSURE CLASS 350. DIP SIZES 14 INCHES AND LARGER SHALL BE PRESSURE CLASS 250.
4. ALL WATER MAIN FITTINGS, VALVES, RESTRAINTS, COUPLINGS, PIPE, AND IN GENERAL, THOSE MATERIALS REQUIRED FOR INSTALLING THE WATER SUPPLY SYSTEM, SHALL COMPLY WITH THE MINIMUM MATERIAL STANDARDS, RATINGS AND CLASSIFICATIONS ESTABLISHED BY THE RESPECTIVE UTILITY PROVIDER. ALL WATER MAIN FITTINGS SHALL BE DIP FOR ALL 3" THRU 12" PVC AND DIP WATER MAINS CONFORMING TO THE REQUIREMENTS OF ANSI/AWWA C153/A21.53 AND EPOXY COATED EXTERIOR, UNLESS NOTED OTHERWISE. THESE FITTINGS SHALL INCORPORATE RESTRAINING RINGS, MEGA-LUGS OR OTHER APPROVED EQUIVALENT MECHANICAL DEVICES.
5. DUCTILE IRON PIPE AND FITTINGS SHALL HAVE A CEMENT MORTAR INTERIOR LINING CONFORMING TO THE REQUIREMENTS OF ANSI/AWWA C104/A21.4.
6. VALVES FOR POTABLE AND RAW WATER MAINS SHALL BE DUCTILE IRON (D.I.) EPOXY COATED GATE VALVES OR BUTTERFLY VALVES. SEE SPECIFICATIONS FOR DETAILS.
7. ALL POLYETHYLENE PRESSURE PIPE AND FITTINGS 4-INCH AND LARGER SHALL CONFORM TO AWWA STANDARD C906-99 (DR11) PRESSURE CLASS 160 AND ASTM STANDARD D3350, D2837 PE 3408.
8. ALL POLYETHYLENE PIPES FOR SERVICE TUBING SHALL CONFORM TO AWWA STANDARD C901 (DR9) PRESSURE CLASS 200 AND STANDARD D2737 PE 3408.
9. ALL PIPE AND POLYETHYLENE SERVICE TUBING SHALL BEAR THE NATIONAL SANITATION FOUNDATION (NSF) SEAL OF APPROVAL FOR POTABLE WATER SERVICE.
10. PVC PIPE LESS THAN 2-INCHES SHALL CONFORM TO ASTM D1785. THREADED PIPE AND FITTINGS SHALL BE SCH. 80 AND CONFORM TO ASTM D2464. UNTHREADED PIPE AND FITTINGS SHALL BE SCH. 40 WITH SOLVENT-CEMENTED JOINTS. CEMENTED JOINTS AND FITTINGS SHALL COMPLY WITH ASTM D2466 AND D2855.
11. 2", 2.5" AND 3" PVC PIPE SHALL CONFORM TO ASTM D2241. PIPE SHALL BE FURNISHED IN 20-FOOT LENGTHS. SHALL HAVE DIMENSION RATIO (DR21) AND A WATER PRESSURE RATING OF 200 PSI.
12. PIPE MEASUREMENTS SHALL BE CENTER TO CENTER OF FITTINGS OR VALVES.
13. CONTRACTOR SHALL PROVIDE TEMPORARY THRUST RESTRAINTS, BRACING, TEST PLUGS AND/OR OTHER DEVICES NECESSARY TO SUCCESSFULLY COMPLETE PRESSURE TESTING OF ALL PRESSURE PIPING SYSTEMS, ANCILLARY TO THE WORK.
14. AUTOMATIC AIR RELIEF/VACUUM AIR RELEASE VALVES FOR UNDERGROUND INSTILLATION SHALL CONFORM WITH 622-555.320(21)(B) FAC & RSWW 8.4.2.
15. ALL BURIED PIPING SPECIFIED FOR PRESSURE SERVICE SHALL BE PROVIDED WITH RESTRAINING DEVICES AT ALL DIRECTIONAL CHANGES, UNLESS NOTED OTHERWISE.
16. ALL FASTENERS SHALL BE MANUFACTURED OF NON-CORROSIVE MATERIALS.
17. LOCATIONS AND DIMENSIONS OF EXISTING RIGHTS-OF-WAY AND EASEMENTS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY ALL THE LIMITS OF RIGHTS-OF-WAY AND EASEMENTS IN ORDER TO AVOID ENCROACHMENTS.
18. THE CONTRACTOR SHALL REPAIR OR REPLACE WITH EQUAL MATERIALS IN KIND OR AS DIRECTED BY THE OWNER OR INSPECTOR ANY ITEMS DISTURBED OR DAMAGED BY THE UTILITY CONSTRUCTION OR ITS RELATED ACTIVITIES FOR ITEMS SUCH AS BUT NOT LIMITED TO, PAVING, STABILIZED EARTH, DRIVEWAYS, ETC.
19. CONTRACTOR SHALL PAINT THE HYDRANTS ACCORDING TO FIRE DEPARTMENT REQUIREMENTS.
20. WHERE APPLICABLE FIRE HYDRANTS SHALL BE INSTALLED WITHIN THE ROW.
21. PROPER BACKFLOW PREVENTION ASSEMBLIES SHALL BE PROVIDED IN ACCORDANCE WITH RULE 622-555.360, F.A.C. AND AWWA MANUAL M14, "RECOMMENDED PRACTICE FOR BACKFLOW PREVENTION AND CROSS CONNECTION CONTROL" (LATEST EDITIONS) AS INCORPORATED IN RULE 622-555-330 FAC. THE METHOD OF CONNECTION TO THE EXISTING ACTIVE MAIN SHOULD BE CHOSEN TO ENSURE THAT THE PRESSURE DOES NOT DROP BELOW 20PSI OTHERWISE A BOIL WATER NOTICE IS REQUIRED TO BE ISSUED BY THE UTILITY SUPPLYING THE WATER.
22. CONTRACTOR SHALL COORDINATE WITH AGENCY HAVING JURISDICTION AND WATER SERVICE PROVIDER TO HAVE WATER SAMPLES TAKEN AT LOCATIONS AS SPECIFIED BY THEIR MINIMUM STANDARDS AND AS OUTLINED IN THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION PERMIT FOR CONSTRUCTION OF THE WATER DISTRIBUTION SYSTEM (IF PERMIT IS REQUIRED). DOCUMENTATION OF THE MINIMUM TESTING RESULTS SUCH AS BACTERIOLOGICAL REPORTS WITH RESIDUAL CL LEVELS SHALL BE SUBMITTED TO THE ENGINEER WITHIN 4 DAYS FROM THE DAY OF SAMPLE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND VERIFY THE RESULTS AS PASSING PRIOR TO SUBMITTAL TO THE ENGINEER.
23. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED AND DISINFECTED IN ACCORDANCE WITH AWWA STANDARDS, LATEST REVISIONS. HYDROSTATIC TESTING FOR PVC MAINS SHALL BE 150 PSI FOR MINIMUM OF 2 HOURS AND MEET AWWA STANDARD C605/M23. DUCTILE IRON MAINS SHALL BE TESTED AT 150 PSI FOR 2 HOURS PER AWWA C600. ALL NEW MAINS SHALL BE DISINFECTED PER AWWA STANDARD C651. BACTERIOLOGICAL TESTS FOR 2 CONSECUTIVE DAYS SHALL BE APPROVED PRIOR TO PLACING SYSTEM INTO SERVICE.
24. ALL WATER MAINS SHALL HAVE AN "EARLY WARNING" PROTECTION TAPE INSTALLED CONTINUOUSLY ALONG THE ENTIRE LENGTH. THE PROTECTION TAPE SHALL BE INSTALLED DURING THE BACKFILLING 6 TO 12 INCHES BELOW FINISH GRADE DIRECTLY OVER THE PIPE AND BE CONTINUOUSLY MARKED WITH "CAUTION - WATER MAIN BURIED BELOW". THE TAPE SHALL HAVE AN EMBEDDED METALLIC DETECTABLE STRIP AND BE BLUE IN COLOR FOR POTABLE WATER.
25. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL EQUIPMENT AND MATERIALS FOR APPROVAL TO THE ENGINEER AND WATER SERVICE PROVIDER PRIOR TO PROCUREMENT.

WATER LINE CONSTRUCTION NOTES PER FDEP

1. ALL PIPE, PIPE FITTINGS, JOINT PACKING AND JOINTING MATERIALS, VALVES, FLEX HYDRANTS, AND METERS INSTALLED WILL CONFORM TO APPLICABLE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS.
2. ALL PUBLIC WATER SYSTEM COMPONENTS, EXCLUDING FLEX HYDRANTS, THAT WILL BE INSTALLED AND THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61 AS ADOPTED IN RULE 62-555.335, F.A.C., OR OTHER APPLICABLE STANDARDS, REGULATIONS, OR REQUIREMENTS REFERENCED IN PARAGRAPH 62-555.320 (3)(B), F.A.C.
3. ALL PIPE AND PIPE FITTINGS INSTALLED WILL CONTAIN NO MORE THAN 8.0% LEAD, AND ANY SOLDER OR FLUX USED IN THIS PROJECT WILL CONTAIN NO MORE THAN 0.2% LEAD.
4. ALL PIPE AND PIPE FITTINGS INSTALLED WILL BE COLOR-CODED OR MARKED IN ACCORDANCE WITH SUBPARAGRAPH 62-555.320 (2)(B) 3, F.A.C., USING BLUE AS A PREDOMINANT COLOR. (UNDERGROUND PLASTIC PIPE WILL BE SOLID-WALL BLUE PIPE. WILL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR WILL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE EXTERIOR SURFACE. UNDERGROUND METAL OR CONCRETE PIPE WILL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPES DURING MANUFACTURING OF THE PIPE WILL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE. THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS ALONG THE PIPE. AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT WILL BE APPLIED IN A CONTINUOUS STRIPE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE. FOR PIPE WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT WILL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVEGROUND PIPE WILL BE PAINTED BLUE OR WILL BE COLOR-CODED OR MARKED LIKE UNDERGROUND PIPE).
5. ALL FLEX HYDRANTS THAT HAVE UNPLUGGED, UNDERGROUND DRAINS WILL BE LOCATED AT LEAST THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., OR VACUUM-TYPE SANITARY SEWER; AT LEAST SIX 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 62-10, F.A.C.; AND AT LEAST TEN FEET FROM ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM".
6. NEW OR ALTERED CHAMBERS, PITS, OR MANHOLES THAT CONTAIN VALVES, BLOW-OFFS, METERS, OR OTHER SUCH WATER DISTRIBUTION SYSTEMS APPURTENANCES WILL NOT BE CONNECTED DIRECTLY TO ANY SANITARY OR STORM SEWER, AND BLOW-OFFS OR AIR RELIEF VALVES INSTALLED UNDER THIS PROJECT WILL NOT BE CONNECTED DIRECTLY TO ANY SANITARY OR STORM SEWER.
7. NEW OR ALTERED WATER MAINS WILL BE INSTALLED IN ACCORDANCE WITH APPLICABLE AWWA STANDARDS OR IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDED PROCEDURES.
8. A CONTINUOUS AND UNIFORM BEDDING WILL BE PROVIDED IN TRENCHES FOR UNDERGROUND PIPE INSTALLED: BACKFILL MATERIAL WILL BE TAMPED IN LAYERS AROUND UNDERGROUND PIPE INSTALLED AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE; AND UNSUITABLY SIZED STONES (AS DESCRIBED IN APPLICABLE AWWA STANDARDS OR MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES) FOUND IN TRENCHES WILL BE REMOVED FOR A DEPTH OF AT LEAST SIX INCHES BELOW THE BOTTOM OF UNDERGROUND PIPE.
9. ALL WATER MAIN TEES, BENDS, PLUGS, AND HYDRANTS INSTALLED WILL BE PROVIDED WITH RESTRAINED JOINTS TO PREVENT MOVEMENT.
10. WATER MAINS THAT ARE CONSTRUCTED OF ASBESTOS-CEMENT OR POLYVINYL CHLORIDE PIPE WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C603 OR C605, RESPECTIVELY, AS INCORPORATED INTO RULE 62-555.330, F.A.C., AND ALL OTHER NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C600 AS INCORPORATED INTO RULE 62-555.330 FAC.
11. WATER MAINS, INCLUDING FLEX HYDRANT LEADS AND INCLUDING SERVICE LINES THAT WILL BE UNDER THE CONTROL OF A PUBLIC WATER SYSTEM AND THAT HAVE AN INSIDE DIAMETER OF THREE INCHES OR GREATER, WILL BE DISINFECTED AND BACTERIOLOGICALLY EVALUATED IN ACCORDANCE WITH RULE 62-555.340, F.A.C.

SANITARY GRAVITY & FORCE MAINS

1. ALL PVC GRAVITY SANITARY SEWER SHALL BE SDR35, UNLESS OTHERWISE NOTED; AND ALL PVC SANITARY SEWER FORCEMAIN 4" THRU 12" SHALL BE C900/DR18, UNLESS OTHERWISE NOTED.
2. LEAKAGE TESTS FOR THE SANITARY SEWER SYSTEM SHALL MEET PROVIDER'S SPECIFICATIONS USING THE LOW PRESSURE AIR TEST METHOD, 5 PSI FOR 5 MINUTES AND SHALL NOT EXCEED 400 FEET IN LENGTH AND SHALL BE TESTED BETWEEN ADJACENT MANHOLES AND SHALL INCLUDE ALL LATERALS.
3. ALL PVC SANITARY FORCE MAINS SHALL BE COLOR-CODED OR MARKED USING GREEN AS A PREDOMINANT COLOR TO DIFFERENTIATE THE FORCE MAIN FROM OTHER UTILITY LINES.
4. MINIMUM SLOPE ALLOWED FOR SANITARY SEWER PIPE IS 0.40%.
5. PVC PIPE AND FITTINGS 4-INCHES THROUGH 15-INCHES SHALL CONFORM TO ASTM D3034, SDR35 OR 26.
6. PVC PIPE AND FITTINGS 18-INCHES THROUGH 27-INCHES SHALL CONFORM TO ASTM F679-T1, SDR35.
7. PVC PIPE AND FITTINGS SHALL BE SOLID GREEN IN COLOR.
8. DUCTILE IRON PIPE FOR GRAVITY OR NON-PRESSURE SERVICE SHALL BE DESIGNED IN ACCORDANCE WITH AND CONFORMING TO THE REQUIREMENTS OF ASTM A746 FOR INSTALLATION WITH TRENCH TYPE II, OR IN ACCORDANCE WITH ANSI/AWWA C150/A21.50 AND ANSI/AWWA C151/A21.51.
9. DUCTILE IRON FITTINGS FOR USE IN GRAVITY OR NON-PRESSURE SERVICE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C153/A21.53, COMPACT DUCTILE IRON FITTINGS.
10. DUCTILE IRON PIPE AND FITTINGS FOR GRAVITY OR NON-PRESSURE SERVICE SHALL HAVE AN INTERIOR LINING CONSISTING OF A MINIMUM 40 MILS OF A CERAMIC EPOXY COATING. REFER TO SPECIFICATIONS FOR DETAILS.
11. MATERIAL FOR GRAVITY SEWER PIPE AND FITTINGS SHALL BE AS SHOWN FOR THE FOLLOWING DEPTHS OF EXCAVATION: A. 5' TO 12' PVC, ASTM 3034/ASTM F679, SDR 35 B. LESS THAN 5' OR GREATER THAN 12': PVC, ASTM 3034, SDR 26
12. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL EQUIPMENT AND MATERIALS FOR APPROVAL BY THE ENGINEER AND SERVICE PROVIDER PRIOR TO PROCUREMENT.
13. PIPE MEASUREMENTS ON THE MAIN "TRUNK" SEWER SHALL BE FROM CENTER TO CENTER OF MANHOLES OR CLEANOUTS, UNLESS OTHERWISE NOTED.
14. PIPE MEASUREMENTS FOR SERVICE LATERALS SHALL BE FROM THE MAIN "TRUNK" SEWER TO THE PROPERTY LINE. THE DEPTH OF THE LATERAL AT THE PROPERTY LINE SHALL BE MEASURED AND RECORDED ON THE RECORD DRAWINGS.
15. FOR A SCHEDULED INTERRUPTION OF SANITARY SEWER MAIN FLOW, THE CONTRACTOR SHALL PROVIDE TO THE AGENCY HAVING JURISDICTION AND SERVICE PROVIDER FOR REVIEW A WRITTEN SCHEDULE AS TO THE METHOD AND DURATION OF FLOW INTERRUPTION.
16. DURING NORMAL SANITARY SEWER MAIN FLOW INTERRUPTION, THE CONTRACTOR SHALL PROVIDE UNINTERRUPTED BY-PASS FLOW AND SHALL PROVIDE ALL EQUIPMENT NECESSARY TO ACCOMPLISH THE SAME IN THE FORM OF, BUT NOT LIMITED TO, THE FOLLOWING: POWER, PUMPS, PIPING, APPURTENANCE VALVES AND FITTINGS AND/OR SEPTIC TANKER TRUCK PUMPING, HAULING AND DISPOSAL SERVICES.
17. CONTRACTOR SHALL PAY FOR INSPECTION OF THE GRAVITY SEWER LINE BY A TV CAMERA SYSTEM, A VHS TAPE AND REPORT SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FINAL INSPECTION BY SERVICE PROVIDER'S AUTHORIZED REPRESENTATIVE.

HAZARDOUS MATERIALS

1. HAZARDOUS MATERIAL MEANS ANY SUBSTANCE; (A) THE PRESENCE OF WHICH REQUIRES INVESTIGATION OR REMEDIATION UNDER ANY PRESENT FEDERAL, STATE OR LOCAL STATUTE, REGULATION, ORDINANCE, RULE, CODE, ORDER, ACTION, POLICY OR COMMON LAW, OR (B) WHICH IS OR BECOMES DEFINED AS A "HAZARDOUS WASTE," "HAZARDOUS SUBSTANCE," "POLLUTANT OR CONTAMINANT UNDER ANY PRESENT FEDERAL, STATE OR LOCAL STATUTE, REGULATION, RULE OR ORDINANCE OR AMENDMENTS THERETO INCLUDING, WITHOUT LIMITATION, THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (42 U.S.C. SECTIONS 9601 ET SEQ.) AND/OR THE RESOURCE CONSERVATION AND RECOVERY ACT (42 U.S.C. SECTIONS 8901 ET SEQ.), OR (C) WHICH IS TOXIC, EXPLOSIVE, CORROSIVE, FLAMMABLE, INFECTIOUS, RADIOACTIVE, CARCINOGENIC, MUTAGENIC, OR OTHERWISE HAZARDOUS AND IS REGULATED BY ANY GOVERNMENTAL AUTHORITY, AGENCY, DEPARTMENT, COMMISSION, BOARD, AGENCY OR INSTRUMENTATION OF THE UNITED STATES, THE STATE IN WHICH THE PREMISES ARE LOCATED OR ANY POLITICAL SUBDIVISION THEREOF, OR (D) THE PRESENCE OF WHICH ON THE PREMISES CAUSES OR THREATENS TO CAUSE A NUISANCE UPON THE PREMISES OR TO ADJACENT PROPERTIES OR POSSES OR THREATENS TO POSE A HAZARD TO THE HEALTH OR SAFETY OF PERSONS ON OR ABOUT THE PREMISES, OR (E) WHICH CONTAINS GASOLINE, DIESEL FUEL OR OTHER PETROLEUM HYDROCARBONS, OR (F) WHICH CONTAINS POLYCHLORINATED BIPHENYLS (PCBS), ASBESTOS, LEAD OR UREA FORMALDEHYDE FOAM INSULATION.
2. CONTRACTOR AND ITS SUBCONTRACTORS SHALL USE, HANDLE, TRANSPORT, AND DISPOSE OF ALL HAZARDOUS MATERIALS (AS DEFINED HEREIN) IN COMPLIANCE WITH ALL PRESENT FEDERAL, STATE AND LOCAL ENVIRONMENTAL, HEALTH OR SAFETY LAW, INCLUDING, BUT NOT LIMITED TO, ALL SUCH STATUTES, REGULATIONS, RULES, ORDINANCES, CODES, AND RULES OF COMMON LAW.
3. CONTRACTOR FURTHER AGREES THAT CONTRACTOR AND ITS SUBCONTRACTORS SHALL NOT CAUSE THE DISCHARGE, RELEASE OR DISPOSAL OF ANY HAZARDOUS MATERIAL CREATED BY ITS WORK ON OR ABOUT THE JOB SITE, IN THE EVENT OF ANY SPILL, RELEASE OR ANY OTHER REPORTABLE OCCURRENCE, CONTRACTOR SHALL NOTIFY THE APPROPRIATE GOVERNMENTAL AGENCY AND SHALL TAKE SUCH ACTION AS MAY BE NECESSARY TO MINIMIZE THE DELETERIOUS EFFECT OF SUCH SPILL ON PERSONS OR PROPERTY.
4. CONTRACTOR AND ITS SUBCONTRACTORS SHALL, UPON COMPLETION OF PERFORMANCE OF ALL DUTIES UNDER THIS CONTRACT, REMOVE ALL SUPPLIES, MATERIALS, AND WASTE CONTAINING ANY HAZARDOUS MATERIAL FROM THE JOB SITE, CONTRACTOR SHALL BEAR FULL FINANCIAL RESPONSIBILITY, AS BETWEEN THE PARTIES OF THIS CONTRACT, FOR THE COMPLIANCE OF CONTRACTOR AND ITS SUBCONTRACTORS WITH THE PROVISIONS AS OUTLINED HEREIN.
5. CONTRACTOR AGREES TO INDEMNIFY, DEFEND, PROTECT AND HOLD THE OWNER HARMLESS FROM AND AGAINST ANY CLAIMS INCLUDING, WITHOUT LIMITATION, ACTUAL ATTORNEYS' FEES AND ANY COSTS OF INVESTIGATION, SOILS TESTING, GOVERNMENTAL APPROVALS, REMEDIATION AND CLEANUP ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE FAILURE OF CONTRACTOR OR ITS SUBCONTRACTORS, OR THEIR AGENTS, EMPLOYEES, OFFICERS, OR REPRESENTATIVES, TO COMPLY WITH THE TERMS AS DESCRIBED HEREIN.
6. SHOULD CONTRACTOR OR ITS SUBCONTRACTORS DISCHARGE, RELEASE OR DISPOSE OF ANY HAZARDOUS MATERIAL ON OR ABOUT THE JOB SITE IN VIOLATION OF THIS PARAGRAPH, CONTRACTOR SHALL IMMEDIATELY INFORM THE OWNER IN WRITING, IN THE EVENT OF ANY SUCH SPILL OR OTHER REPORTABLE OCCURRENCE, CONTRACTOR SHALL NOTIFY THE APPROPRIATE GOVERNMENTAL AGENCY(ES) AND SHALL TAKE SUCH ACTION AS MAY BE NECESSARY TO MINIMIZE THE DELETERIOUS EFFECT OF SUCH SPILL ON PERSONS, PROPERTY OR THE ENVIRONMENT.
7. IN THE EVENT CONTRACTOR OR ITS SUBCONTRACTORS ENCOUNTER ON THE PREMISES ANY PIPELINE, UNDERGROUND STORAGE TANK OR OTHER CONTAINER, OF ANY KIND, THAT MAY CONTAIN A HAZARDOUS MATERIAL, OR ENCOUNTER MATERIAL REASONABLY BELIEVED TO BE A HAZARDOUS MATERIAL, CONTRACTOR SHALL IMMEDIATELY STOP WORK IN THE AREA AFFECTED AND REPORT THE CONDITION TO THE OWNER IN WRITING.
8. IF CONTRACTOR OR ITS SUBCONTRACTORS DO NOT COMPLY WITH THE REQUIREMENTS AS OUTLINED HEREIN, OWNER MAY, BUT IS NOT OBLIGATED TO, GIVE WRITTEN NOTICE OF VIOLATION TO CONTRACTOR, SHOULD CONTRACTOR OR ITS SUBCONTRACTORS FAIL TO COMPLY WITH THE REQUIREMENTS OF THE PARAGRAPH WITHIN TWENTY-FOUR (24) HOURS FROM THE TIME OWNER ISSUES SUCH WRITTEN NOTICE OF NONCOMPLIANCE OR WITHIN THE TIME OF AN ABATEMENT PERIOD SPECIFIED BY ANY GOVERNMENTAL AGENCY, WHICHEVER PERIOD IS SHORTER, CONTRACTOR SHALL BE IN MATERIAL DEFAULT OF THIS CONTRACT.
9. ALL AREAS USED FOR FUEL STORAGE SHALL HAVE THE PROPERTY OWNER'S PRIOR APPROVAL AND APPROPRIATE MEASURES SHALL BE TAKEN TO INSURE PROTECTION OF GROUNDWATER AND SOIL RESOURCES.

PRE-CONSTRUCTION

1. CONTRACTOR SHALL ATTEND A MANDATORY PRE-CONSTRUCTION MEETING WITH THE ENGINEER OF RECORD AND APPLICABLE STAFF OF THE LOCAL AGENCY HAVING JURISDICTION (E.G. CITY OR COUNTY) PRIOR TO ANY DISTURBANCE OF LAND, CLEARING OR DEMOLITION. CONTRACTOR MUST PROVIDE WRITTEN NOTICE OF THE PRE-CONSTRUCTION MEETING'S TIME, DATE AND LOCATION TO THE OWNER AND ENGINEER OF RECORD A MINIMUM OF 8 HOURS PRIOR TO.
2. IF ANY TESTING, INSPECTION OR APPROVAL UNDER THIS PARAGRAPH REVEAL DEFECTIVE WORK, CONTRACTOR SHALL NOT BE ALLOWED TO PROCEED WITH THE PROJECT UNTIL THE DEFECTIVE WORK IS CORRECTED. THE COSTS OF CORRECTION SHALL BE DEDUCTED FROM THE CONTRACT PRICE, BY ISSUING A CHANGE ORDER, OWNER'S COSTS ARISING OUT OF THE DEFECTIVE WORK, INCLUDING COSTS OF REPEATED PROCEDURES, COMPENSATION FOR ENGINEER'S AND DESIGN ENGINEER'S SERVICES AND OTHER RELATED COSTS.
3. SHOP DRAWINGS AND CERTIFICATIONS FOR ALL STORM DRAINAGE, WATER SYSTEM, SEWER SYSTEM, AND PAVING SYSTEM MATERIALS AND STRUCTURES ARE REQUIRED. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING THE MATERIALS REQUIRED FOR CONSTRUCTION.
4. THE CONTRACTOR SHALL PROVIDE THE ENGINEER 48-HOUR ADVANCE NOTIFICATION FOR THE FOLLOWING CONSTRUCTION AND OBSERVATION ACTIVITIES:
 - SANITARY SEWER LAMPING AND VIDEO INSPECTION
 - CONNECTIONS TO EXISTING SYSTEMS
 - STORM DRAINAGE LAMPING
 - INLET TOP POURS (REINFORCING STEEL CHECK)
 - WATER AND FORCE MAIN PRESSURE TESTS
 - BACTERIOLOGICAL SAMPLING
 - BASE OBSERVATION & SOUNDING
 - ASPHALT PLACEMENT
 - PRE-FINAL OBSERVATION
 - FINAL OBSERVATION

RECORD DRAWINGS & CERTIFICATION

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR WILL OBTAIN A COPY OF THE MINIMUM REQUIREMENTS FOR AS-BUILT RECORD DRAWING ACCEPTANCE FOR THE AGENCY HAVING JURISDICTION (SUCH AS THE CITY OR COUNTY) AND/OR UTILITY SERVICE PROVIDER. FAMILIARIZE THEMSELVES WITH THESE REQUIREMENTS, AND PRODUCE AS-BUILT RECORD DRAWINGS THAT SUBSTANTIALLY COMPLY WITH OR EXCEED THESE REQUIREMENTS, INCLUDING ANY REQUIRED ELECTRONIC DATA SUBMITTALS.
2. AS-BUILT DRAWINGS SHALL BE ACCURATELY RECORDED AND CERTIFIED BY A LICENSED LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA AND SHALL MEET THE MINIMAL TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF SURVEYORS AND MAPPERS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027 FLORIDA STATUTES.
3. THE CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE SUFFICIENT AS-BUILT INFORMATION TO CONVEY THAT THE CONSTRUCTION HAS BEEN COMPLETED WITHIN ACCEPTABLE TOLERANCES TO THE APPROVED DESIGN AND SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING:

SANITARY SEWER:

1. TOP ELEVATION OF EACH MANHOLE FRAME AND COVER.
2. INVERT OF EACH LINE ENTERING AND LEAVING EACH MANHOLE/STRUCTURE.
3. LENGTH OF EACH RUN OF MAIN BETWEEN MANHOLES (CENTER TO CENTER).
4. ACTUAL GRADE OF PIPES BETWEEN MANHOLES.
5. LOCATE ALL SERVICE WYES FROM DOWNSTREAM MANHOLE WITH DEPTH AT LOT LINE AND DISTANCE FROM THE MAIN LINE.
6. LOCATE WITH MEASUREMENTS FROM PERMANENT VISIBLE OBJECTS ALL FITTINGS/ACCESSORIES NOT VISIBLE FROM THE SURFACE (MINIMUM TWO POINT TIES).

WATER AND REUSE SYSTEM AND FORCE MAINS:

1. ACTUAL LENGTHS OF PIPE BETWEEN BRANCHES AND VALVES IN THE RUN.
2. LOCATE WITH MEASUREMENTS FROM PERMANENT VISIBLE OBJECTS ALL FITTINGS/ACCESSORIES NOT VISIBLE FROM THE SURFACE (MINIMUM TWO POINT TIES).
3. LIST THE DEPTHS OF THE LINES AT ALL VALVES, FITTINGS AND FIRE HYDRANTS.

OTHER IMPROVEMENTS:

- BUILDING(S), SIDEWALKS, PAVEMENT, CURB & GUTTER. SUBMIT CERTIFIED DRAWINGS TO THE ENGINEER TWO WEEKS PRIOR TO FINAL INSPECTION OF THE WORK TO BE CERTIFIED.

4. THE ENGINEER STRONGLY RECOMMENDS THAT THE CONTRACTOR KEEP A DAILY "AS-BUILT" SET OF DRAWINGS WHILE THE WORK BEING DONE IS VISIBLE EXPOSED ACCORDING TO THE CRITERIA OUTLINED HEREIN.
5. THE ENGINEER RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER, RETEST AND/OR PERFORM ANY ACTION NECESSARY TO ENSURE THAT THE IMPROVEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
6. FINAL "AS-BUILT" DRAWINGS FOR POTABLE WATER SHALL CLEARLY INDICATE COMPLIANCE TO MINIMUM SEPARATION DISTANCES OR REQUIRED PIPE UPGRADES, ALL WATER MAIN AND FORCE MAIN PIPE FITTINGS SHALL BE REFERENCED TO AT LEAST TWO VISIBLE REFERENCE POINTS (SWING TIES) AND THE NEAREST DISTANCE TO THE CENTERLINE OF ROAD.
7. THE CONTRACTOR'S GEOTECHNICAL ENGINEER SHALL CERTIFY ALL SITE, UTILITY, AND ROADWAY COMPACTION AND ALL UNDERDRAIN AND PAVEMENT CONSTRUCTION TO BOWYER-SINGLETON & ASSOCIATES, INC.
8. ALL PVC WATER MAINS AND PVC FORCE MAINS SHALL BE INSTALLED WITH A SOLID COPPER "LOCATING WIRE" WITH SUFFICIENT GROUNDING POINTS AT MAXIMUM 500 FEET SPACING.

 **Dewberry**

Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.243.5120
ENGINEERING BUSINESS -8794

WESTPORT RESERVE (PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

REVISIONS

No.	DATE	BY	Description

PROJECT #	<u>PROJECT #50083136</u>
DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

TITLE

GENERAL NOTES

PROJECT: CC 1\Final\SF Phase 4

SHEET NO.

C03

OVERALL DEVELOPMENT SITE DATA	
SITE AREA	174.48
CURRENT ZONING	PC-A
LAND USE	NEIGHBORHOOD DISTRICT 3 PLANNED COMMUNITY
PROP. DWELLING UNITS	645
DENSITY	3.70 DU/AC
TREE PRESERVATION:	
* TREE SITE AREA	162.93 AC.
REQUIRED = 15% OF SITE AREA	24.44 AC. ⁽¹⁾
PROPOSED (16.94%)	27.60 AC. ⁽²⁾
⁽¹⁾ EXIST. TREE CONSERVATION EASEMENTS NOT INCLUDED	
⁽²⁾ EXCESS TREE PRESERVATION CAN BE USED TOWARD THE FUTURE CONTIGUOUS PHASES	
DWELLING UNITS PER PHASE:	
MULTI-FAMILY PHASE 2A	360
SINGLE FAMILY PHASE 2B	64
SINGLE FAMILY PHASE 2C	28
SINGLE FAMILY PHASE 3	115
SINGLE FAMILY PHASE 4	78
TOTAL	645



COMMON OPEN
SPACE AREAS
(SINGLE FAMILY)

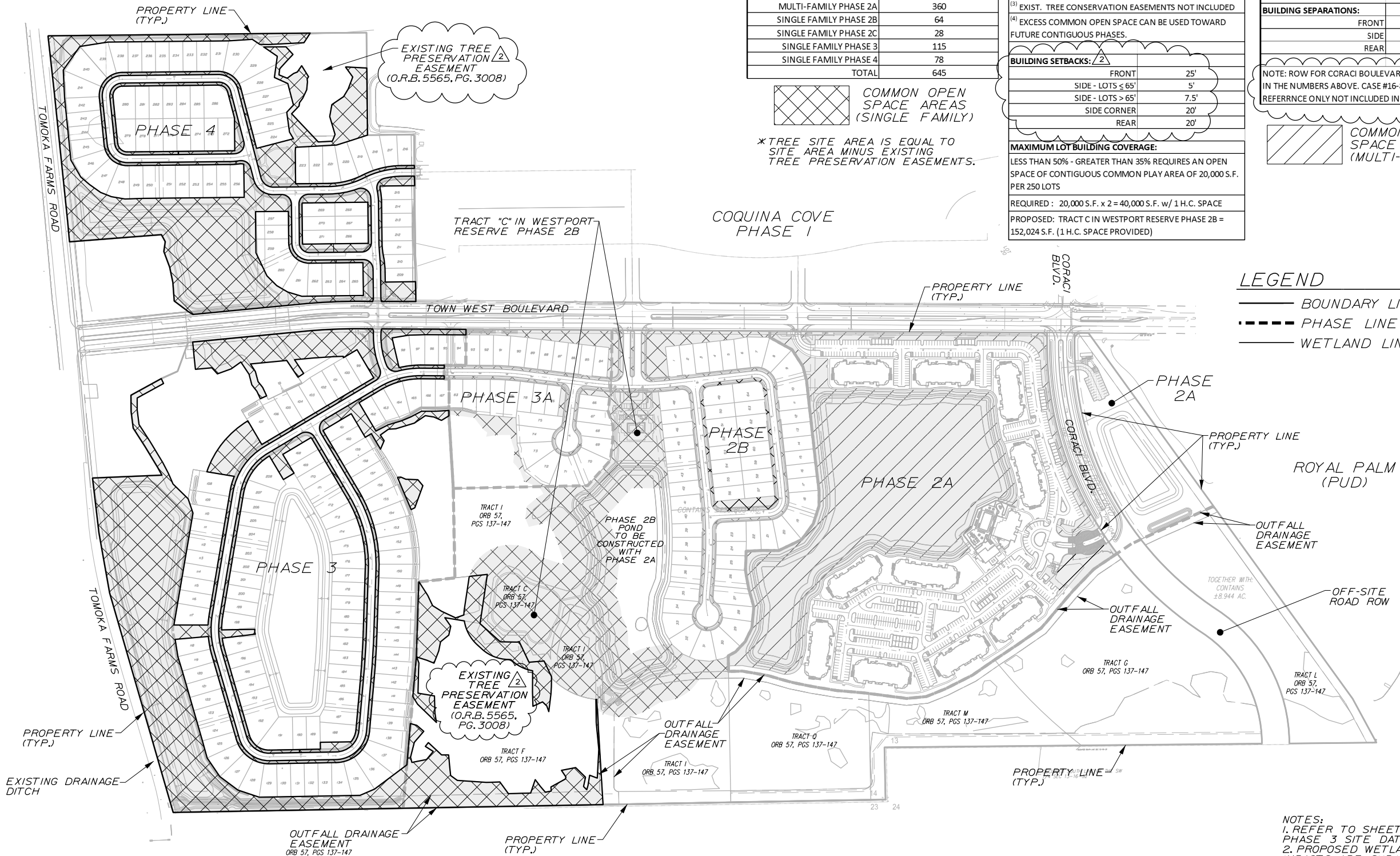
*TREE SITE AREA IS EQUAL TO
SITE AREA MINUS EXISTING
TREE PRESERVATION EASEMENTS.

SINGLE FAMILY SITE DATA	
GROSS SITE AREA	140.85 AC.
NET SITE AREA	97.39 AC. ⁽¹⁾
PROP. DWELLING UNITS	285
MAXIMUM BUILDING IMPERVIOUS COVERAGE	50%
⁽¹⁾ NET SITE AREA EQUALS GROSS SITE AREA MINUS WETLAND CONSERVATION AND UPLANDS NOT INCLUDED IN OPEN SPACE OR DEVELOPMENT. (140.85-43.46)	
OPEN SPACE REQUIRED:	
OPEN SPACE (40%)	38.96 AC. ⁽²⁾
COMMON OPEN SPACE (40%)	38.96 AC. ⁽²⁾
⁽²⁾ CALCULATED USING NET SITE AREA	
OPEN SPACE PROVIDED:	
TOTAL OPEN SPACE (56.43%)	54.96 AC. ⁽³⁾
COMMON OPEN SPACE (40.45%)	39.39 AC. ⁽⁴⁾
⁽³⁾ EXIST. TREE CONSERVATION EASEMENTS NOT INCLUDED	
⁽⁴⁾ EXCESS COMMON OPEN SPACE CAN BE USED TOWARD FUTURE CONTIGUOUS PHASES.	
BUILDING SETBACKS: 2	
FRONT	25'
SIDE - LOTS ≤ 65'	5'
SIDE - LOTS > 65'	7.5'
SIDE CORNER	20'
REAR	20'
MAXIMUM LOT BUILDING COVERAGE:	
LESS THAN 50% - GREATER THAN 35% REQUIRES AN OPEN SPACE OF CONTIGUOUS COMMON PLAY AREA OF 20,000 S.F. PER 250 LOTS	
REQUIRED : 20,000 S.F. x 2 = 40,000 S.F. w/ 1 H.C. SPACE	
PROPOSED: TRACT C IN WESTPORT RESERVE PHASE 2B = 152,024 S.F. (1 H.C. SPACE PROVIDED)	

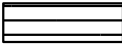
MULTI-FAMILY SITE DATA - 2A	
SITE AREA	33.63 AC.
PROP. DWELLING UNITS	360
MAXIMUM BUILDING IMPERVIOUS COVERAGE	40%
MINIMUM LIVING AREA	750 S.F.
MAXIMUM BUILDING HEIGHT	36'
OPEN SPACE REQUIRED:	
OPEN SPACE (40%)	13.45 AC.
COMMON OPEN SPACE (1/3 OF TOTAL O.S.)	4.48 AC.
OPEN SPACE PROVIDED:	
TOTAL OPEN SPACE (61.70%)	20.93 AC. ⁽¹⁾
COMMON OPEN SPACE	13.67 AC. ⁽¹⁾
⁽¹⁾ EXCESS COMMON OPEN SPACE CAN BE USED TOWARD FUTURE CONTIGUOUS PHASES.	
BUILDING SEPARATIONS:	
FRONT	30'
SIDE	25'
REAR	25'
NOTE: ROW FOR CORACI BOULEVARD IS NOT INCLUDED IN THE NUMBERS ABOVE. CASE #16-80000001 FOR REFERENCE ONLY NOT INCLUDED IN THIS PHASING 2	
COMMON OPEN SPACE AREAS (MULTI-FAMILY)	

LEGEND

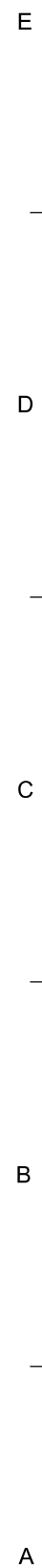
BOUNDARY LINE
PHASE LINE
WETLAND LINE



NOTES:
1. REFER TO SHEET No. C11 FOR
PHASE 3 SITE DATA.
2. PROPOSED WETLAND
IMPACTS ARE SUBJECT TO
PERMITTING APPROVAL.

TREE PRESERVATION 		
	TREE SITE AREA* (EXCLUDES TREE PRESERVATION EASEMENTS)	162.93 AC.
	REQUIRED 15% OF SITE	24.44 AC.
	PROPOSED (16.94%)	27.60 AC.
	PHASE 2A AREA	33.63 AC.
	REQUIRED 15% OF SITE	5.04 AC.
	PERMITTED (15.05%)	5.06 AC.
	PHASE 2B AREA (EXCLUDES TREE PRESERVATION EASEMENT)	54.28 AC.
	REQUIRED 15% OF SITE	8.14 AC.
	PERMITTED (15.46%)	8.39 AC.
	PHASE 2C AREA	7.46 AC.
	REQUIRED 15% OF SITE	1.12 AC.
	PERMITTED (16.49%)	1.23 AC.
	PHASE 3 AREA	43.48 AC.
	REQUIRED 15% OF SITE	6.52 AC.
	PROPOSED (16.12%)	7.01 AC.
	PHASE 4 AREA (EXCLUDES TREE PRESERVATION EASEMENT)	24.08 AC.
	REQUIRED 15% OF SITE	3.61 AC.
	PROPOSED (24.50%) ON-SITE & OFF-SITE	5.90 AC.

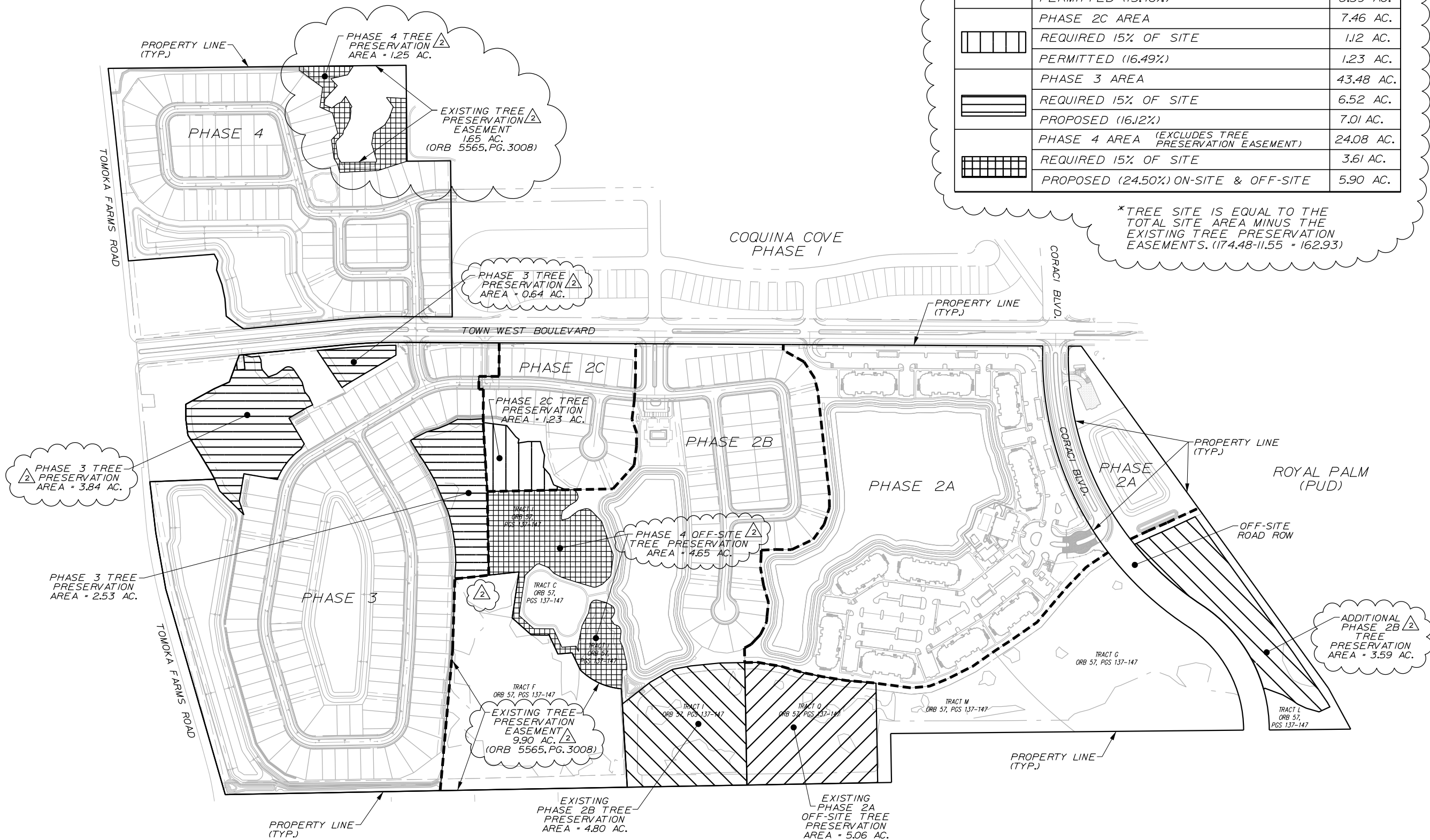
*TREE SITE IS EQUAL TO THE
TOTAL SITE AREA MINUS THE
EXISTING TREE PRESERVATION
EASEMENTS. (174.48-11.55 = 162.93)



LEGEND

——— BOUNDARY LINE
 - - - - - PHASE LINE

NOTE: 2
EXCESS AREAS SUITABLE FOR TREE PRESERVATION WITHIN EXISTING
PHASES ARE USED TO MEET TREE PRESERVATION REQUIREMENTS
BASED ON OVERALL DEVELOPMENT FOOTPRINT (162.93 AC.).



REVISIONS

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PROJECT #	<u>PROJECT #50083136</u>
DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

TITLE

OVERALL
TREE
PRESERVATION
PLAN

PROJECT: CC 1\Final\SF Phase 4

SHEET NO.

C05

E

D

C

B

A



TREE PRESERVATION ² / _A	
PHASE 4 AREA (EXCLUDES TREE PRESERVATION ESMT.)	24.08 AC.
REQUIRED 15% OF SITE	3.61 AC.
PROPOSED ONSITE (5.21%)	1.25 AC.
PROPOSED OFFSITE (19.31%)	4.65 AC.
PROPOSED TOTAL (24.52%)	5.90 AC.

NOTE:
TREE SITE IS EQUAL TO THE TOTAL PHASE 4
SITE AREA MINUS THE EXISTING TREE
PRESERVATION EASEMENT. (25.73 - 1.65 = 24.08)

LEGEND

- BOUNDARY LINE
- PHASE LINE
- PHASE 4 TREE PRESERVATION



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ENGINEERING BUSINESS - 8794

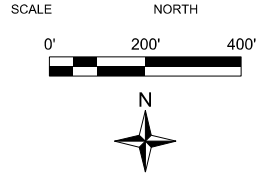
WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

KEY PLAN



REVISIONS

No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

PHASE 4
TREE
PRESERVATION
PLAN

PROJECT: CC 1\FinalSF Phase 4

SHEET NO.

C06

PHASE 4 TREE COUNT TABLE - 1 TREE PER 2500 SQ. FT. OF LOT ² / _A	
PHASE 4 SITE AREA (INCLUDING EXISTING TREE CE)	25.73 AC.
NUMBER OF TREES REQUIRED (PER LDC 1 TREE PER 2500 SQ. FT.)	448
PHASE 4 ON-SITE TREE PRESERVATION AREA	1.25 AC.
NUMBER OF TREES WITHIN ON-SITE TREE PRESERVATION AREAS (1007 TREES PER ACRE ARBORIST SAMPLE PLOT)	1259
PHASE 4 OFF-SITE TREE PRESERVATION AREA	4.65 AC.
NUMBER OF TREES WITHIN OFF-SITE TREE PRESERVATION AREAS (1007 TREES PER ACRE ARBORIST SAMPLE PLOT)	4683
TREE COUNT DEFICIT	0

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WESTPORT RESERVE
(PHASE 4)

CITY OF FORT ORANGE, FLORIDA

SEAL

FL PE # 74676
8/31/2017

REVISIONS

[illegible]

PROJECT #	<u>PROJECT #50083136</u>
DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

TITLE **OVERALL SPECIMEN TREE PRESERVATION PLAN**

PROJECT: CC 1\Final\SF Phase 4

SHEET NO.

C07

SPECIMEN TREE LEGEND	
No.	SPECIMEN
1	18' CYPRESS
2	18" CYPRESS
3	18" CYPRESS
4	18" CYPRESS
5	18" OAK
6	18" OAK
7	12" BAY
8	18' CYPRESS
9	18" CYPRESS
10	18" CYPRESS
11	18" OAK
12	21" OAK
13	18" CYPRESS
14	19" CYPRESS
15	23" CYPRESS
16	20" CYPRESS
17	21" CYPRESS
18	20" LIVE OAK
19	20" OAK
20	18" CYPRESS
21	13" BAY
22	13" BAY
23	13" BAY
24	23" LIVE OAK
25	28" LAUREL OAK
26	18" LAUREL OAK
27	30" OAK
28	20" CYPRESS
29	13" BAY
30	16" BAY

LEGEND:

 SPECIMEN TREE

 PROPOSED TREE PRESERVATION
AREAS TO BE PLACED UNDER
PROTECTIVE CONSERVATION
EASEMENT

EXISTING TREE PRESERVATION
AREAS UNDER PROTECTIVE
CONSERVATION EASEMENT

30 SPECIMEN TREES
6 SPECIMEN TREES IMPACTED
20 SPECIMEN TREES PRESERVED UNDER
PROPOSED TREE CE
4 SPECIMEN TREES PRESERVED UNDER
EXISTING ON-SITE TREE CE

OVERALL SUBDIVISION AREA (EXCLUDES PHASE 2A)	140.86 ACRES
NUMBER OF SPECIMEN TREES	30
NUMBER OF SPECIMEN TREES PER ACRE	0.21
REQUIRED PRESERVATION	80% (24 TREES)
PROPOSED PRESERVATION	80% (24 TREES)
DEFICIT	0 TREES



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WESTPORT RESERVE (PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle van De Loo
FL PE # 74676
8/31/2017

SCALE NORTH

0' 160' 320'

N

REVISIONS

	8-14-17	KJK	REV PER CITY
No.	DATE	BY	Description

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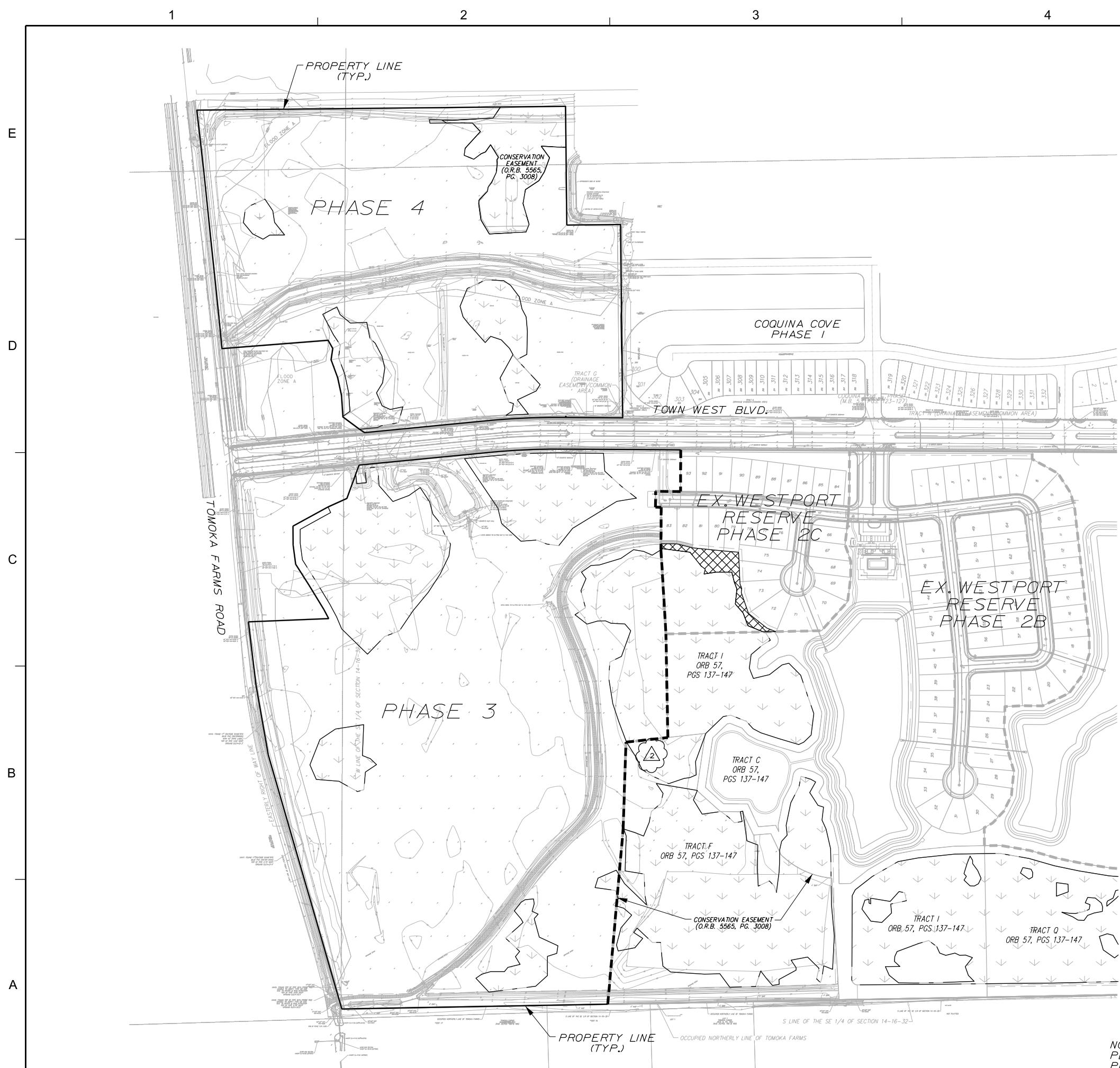
TITLE

EXISTING CONDITIONS PLAN

PROJECT: CC 1\Final\SF Phase 4

SHEET NO.

C08



NOTE:
PLEASE REFER TO TOPOGRAPHIC AND BOUNDARY SURVEY
PREPARED BY DEWBERRY UNDER SEPARATE COVER FOR
FURTHER DETAIL, LEGIBILITY AND TREE SURVEY.

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LEGEND

DESCRIPTION	EXISTING
PROPERTY BOUNDARY	_____
LOT LINES	_____
WETLAND BUFFER	_____
PHASE LINE	_____
BASIN LINE	_____

BASIN INFORMATION

Basin	Total Area (a.c)	On-Site (a.c)	Off-Site (a.c)	Total Imperv Area (a.c)	DCIA (%)	Non DCIA CN	TC ⁴ (min)	Min. FF ² NAVD88	Min. Road ³ NAVD88
Post 1	6.36	4.36	2.00	N/A	N/A	77.3	114	N/A	N/A
Post 1A	0.80	0.25	0.55	N/A	N/A	80.4	10	N/A	N/A
Post 2	1.08	1.08	0.00	N/A	N/A	78.8	56	N/A	N/A
Post 3	0.09	0.09	0.00	N/A	N/A	85.0	10	N/A	N/A
Post 4	5.88	5.88	0.00	0.40	0%	91.9	20	N/A	N/A
Post 5	22.61	22.61	0.00	11.21	15%	88.9	20	25.44	25.44
Post 5A	2.55	2.55	0.00	0.94	6%	84.0	18	25.44	24.44
Post 5B	0.38	0.38	0.00	0.21	8%	87.4	18	25.44	24.44
Post 6N	8.92	8.92	0.00	N/A	N/A	77.9	91	N/A	N/A
Post 6S	10.70	10.70	0.00	N/A	N/A	77.6	91	N/A	N/A
Post 6	2.54	2.50	0.04	N/A	N/A	82.2	15	N/A	N/A
Post 7A	19.82	19.82	0.00	8.98	19%	89.0	20	25.18	24.18
Post 7B	1.24	1.24	0.00	0.51	6%	84.9	18	25.18	24.18
Post 8	28.80	28.80	0.20	N/A	N/A	78.0	122	N/A	N/A
Post 9	2.65	0.15	2.50	N/A	N/A	77.0	71	N/A	N/A
Post 11	35.21	35.21	0.00	14.60	32%	88.3	20	25.30	24.30
Post 12	7.98	3.93	4.05	2.99	32%	83.1	20	26.59	25.59
Post 13	20.93	20.93	0.00	9.78	14%	88.0	20	26.11	25.11
Post 14	0.93	0.86	0.07	N/A	N/A	80.9	20	N/A	N/A
Post 16	3.02	2.84	0.18	N/A	N/A	77.0	71	N/A	N/A
Post 17	0.34	0.14	0.20	N/A	N/A	77.0	20	N/A	N/A
Post 18	2.48	0.74	1.74	N/A	N/A	79.6	36	N/A	N/A

PENDING
SJRWMD#91871-9

PREVIOUSLY PERMITTED
SJRWMD # 91871-7

PREVIOUSLY PERMITTED
SJRWMD # 91871-8

TOWN WEST BLVD.

PHASE 2

PREVIOUSLY PERMITTED
SJRWMD # 91871-6
USACE # SAJ-111

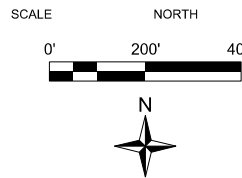
PHASE 3

PHASE 4

TOMOKA FARMS RD

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017



REVISIONS

No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
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DATE	JULY 2017
DATUM	NAVD 88

TITLE

ERP
PERMITS

PROJECT: CC 1\Final\SF Phase 4

SHEET NO.

C08A

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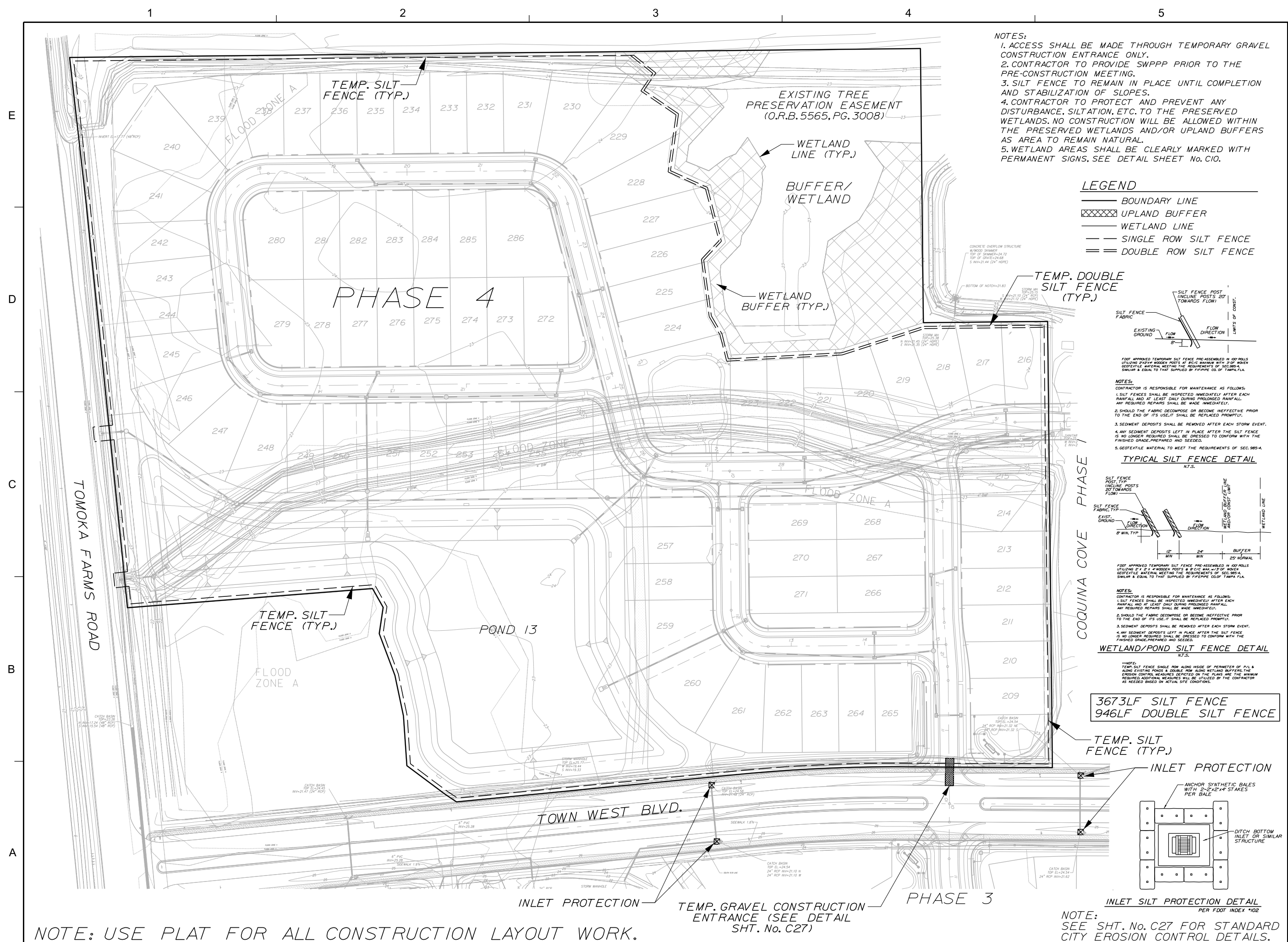
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PHASE 4 EROSION CONTROL PLAN

SHEET NO.

C09



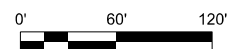
WESTPORT RESERVE (PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danille Van De Loo
FL PE # 74676
8/31/2017

SCALE NORTH



REVISIONS

[illegible]

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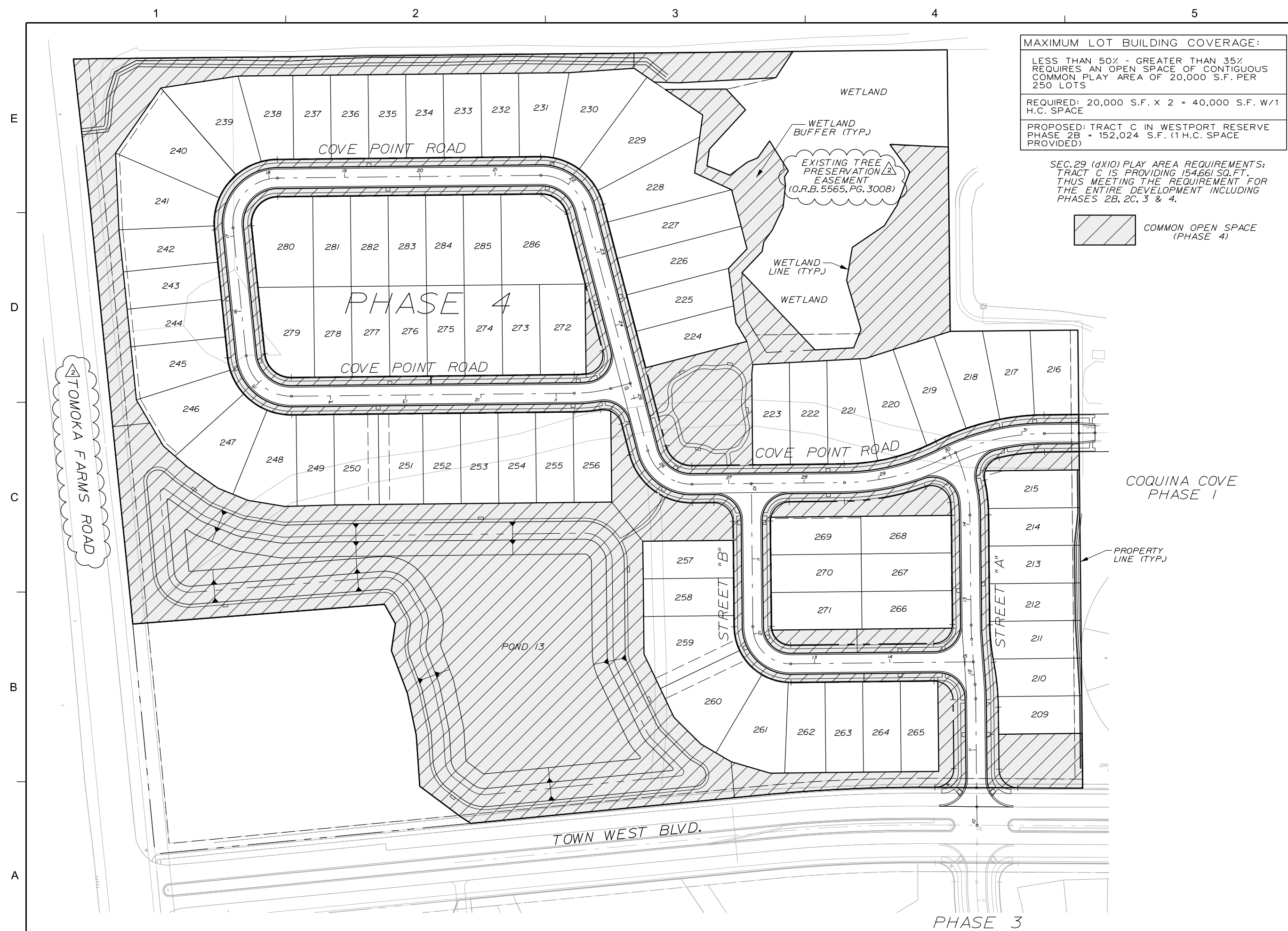
TITLE

PHASE 4
COMMON
OPEN
SPACE PLAN

PROJECT: CC 1\Final\SF Phase 4

SHEET NO.

C12

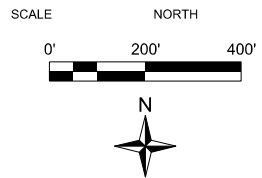


NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

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SEAL

KEY PLAN



REVISIONS

No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

CITY
OVERALL
WETLAND
IMPACT PLAN

PROJECT: CC 11FinalSF Phase 4

SHEET NO.

C13

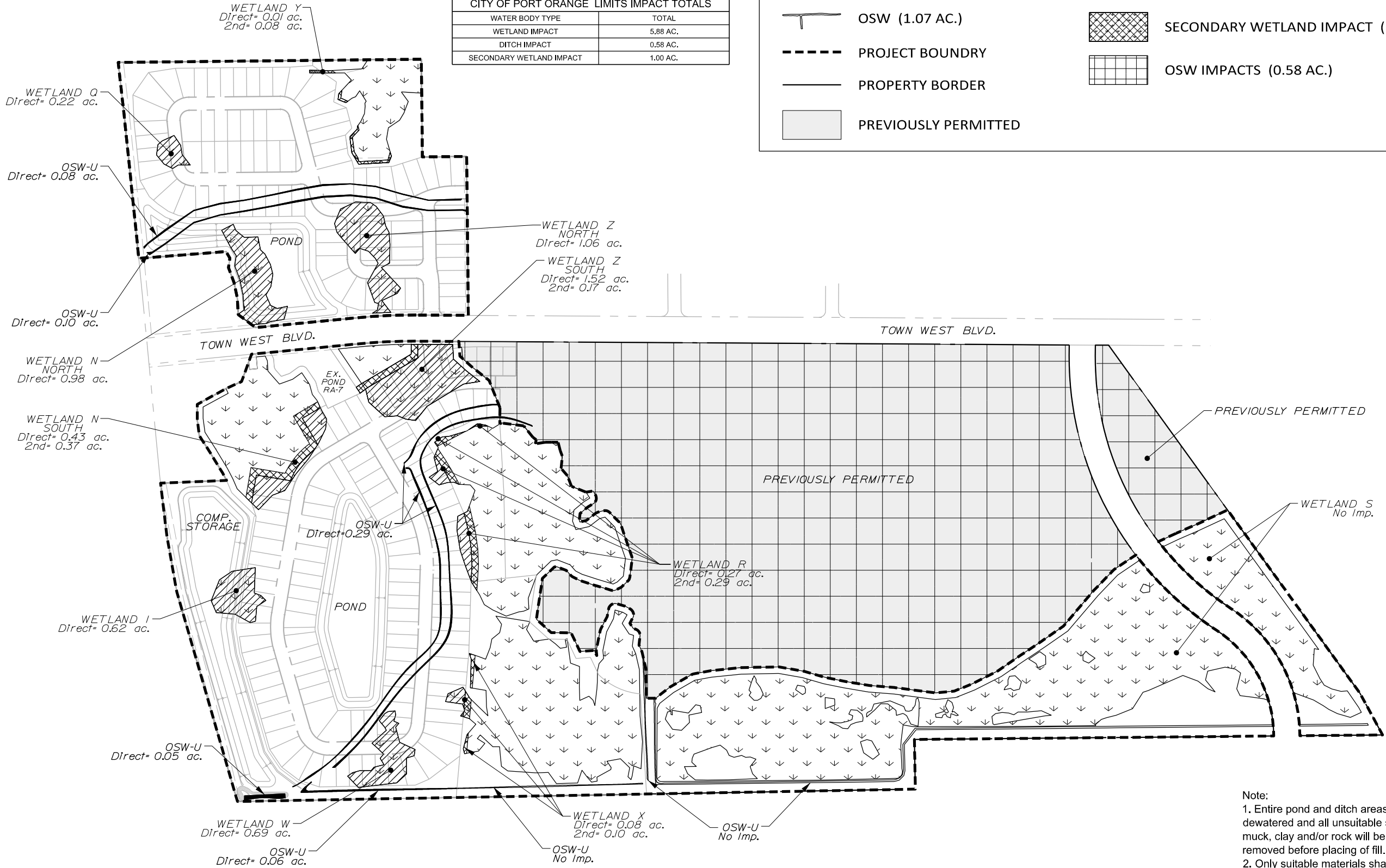
USACE ADDITIONAL IMPACTS PER PHASE 3 & 4	
WATER BODY TYPE	TOTAL
WETLAND IMPACT	0.08 AC.
DITCH IMPACT	0.11 AC.
SECONDARY WETLAND IMPACT	0.10 AC.

SJRWMD ADDITIONAL IMPACTS PER PHASE 3 & 4	
WATER BODY TYPE	TOTAL
WETLAND IMPACT	6.58 AC.
DITCH IMPACT	0.58 AC.
SECONDARY WETLAND IMPACT	0.73 AC.

CITY OF PORT ORANGE LIMITS IMPACT TOTALS	
WATER BODY TYPE	TOTAL
WETLAND IMPACT	5.88 AC.
DITCH IMPACT	0.58 AC.
SECONDARY WETLAND IMPACT	1.00 AC.

LEGEND:

- WETLANDS (43.88 AC.)
- OSW (1.07 AC.)
- PROJECT BOUNDRY
- PROPERTY BORDER
- PREVIOUSLY PERMITTED
- DIRECT WETLAND IMPACT (5.88 AC.)
- SECONDARY WETLAND IMPACT (1.00 AC.)
- OSW IMPACTS (0.58 AC.)



Note:
1. Entire pond and ditch areas will be dewatered and all unsuitable subsoil such as muck, clay and/or rock will be excavated and removed before placing of fill.
2. Only suitable materials shall be used for the fill and shall be done in layers not exceeding 12 inches in thickness and compacted to 95% max density per AASTHO T-180.
3. Any unsuitable soils such as clay, muck or any organic soils are found, all unsuitable soils shall be excavated and replaced with suitable soils.

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

8/31/2017

KEY PLAN

SCALE NORTH



REVISIONS

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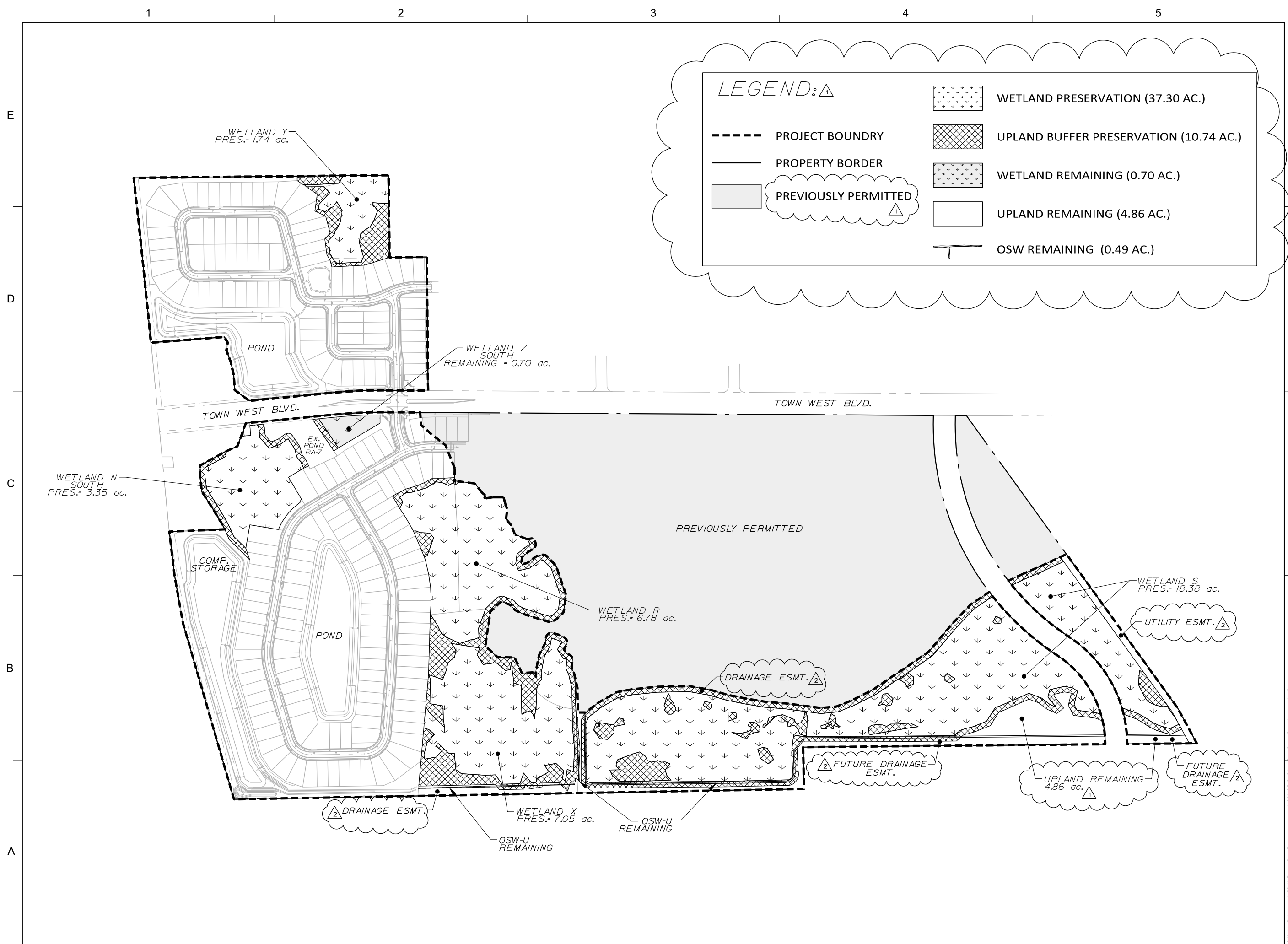
PROJECT #	<u>PROJECT #50083136</u>
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CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

TITLE CITY OVERALL
WETLAND &
UPLAND BUFFER
MITIGATION/
PRESERVATION PLAN

PROJECT: CC 1\Final\SF Phase 4

SHEET NO.

C14



WESTPORT RESERVE (PHASE 4)

CITY OF PORT ORANGE, FLORIDA

1107/1210

SEAL

KEY PLAN

SCALE NORTH



REVISIONS

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DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

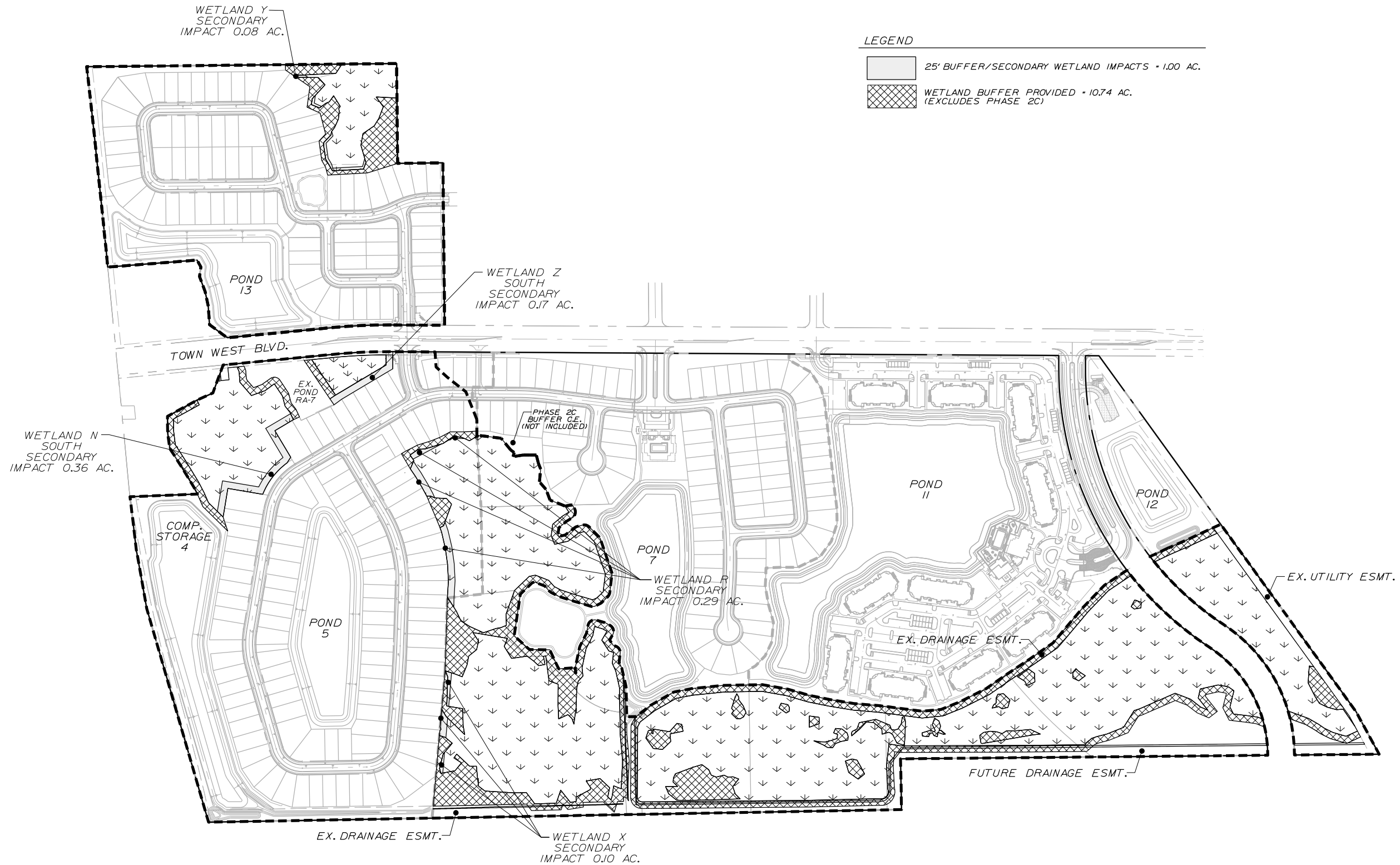
TITLE

CITY OVERALL
BUFFER
MITIGATION
PLAN

PROJECT: CC 1\Final\SF Phase 4

SHEET NO.

C14A



LEGEND

25' BUFFER/SECONDARY WETLAND IMPACTS = 1.00 AC.

 WETLAND BUFFER PROVIDED - 10.74 AC.
(EXCLUDES PHASE 2C)

J:\CC \Final\City Exhibit\phase 4\CC1-SF PH3&4 City Buffer Mitigation Plan.dgn
1:12:47 PM

1

2

3

4

5

E

D

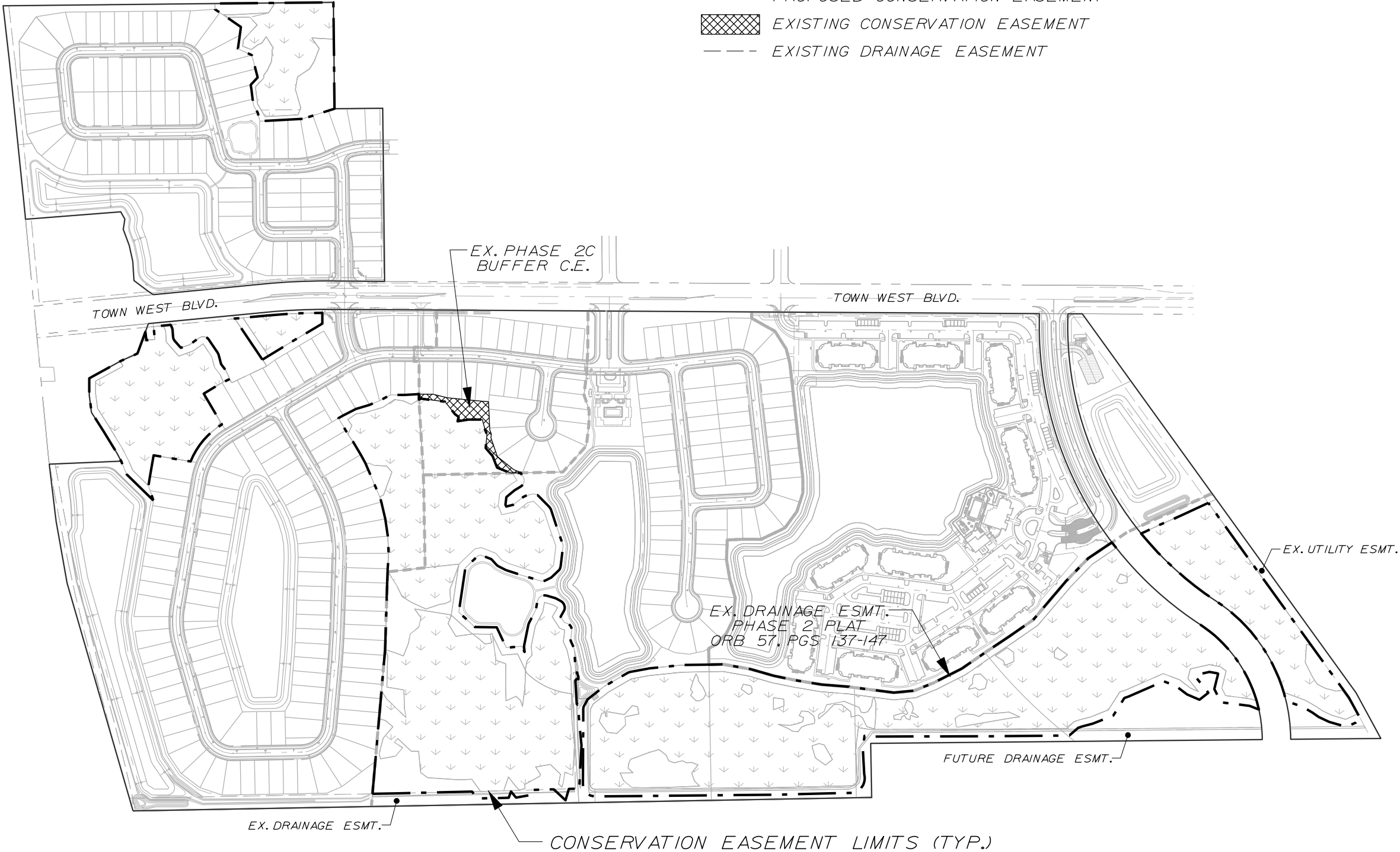
C

B

A

LEGEND

- · — PROPOSED CONSERVATION EASEMENT
- ▨ EXISTING CONSERVATION EASEMENT
- - - EXISTING DRAINAGE EASEMENT



Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.6120
ENGINEERING BUSINESS #8794

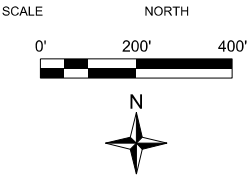
WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

8/31/2017

KEY PLAN



REVISIONS

No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

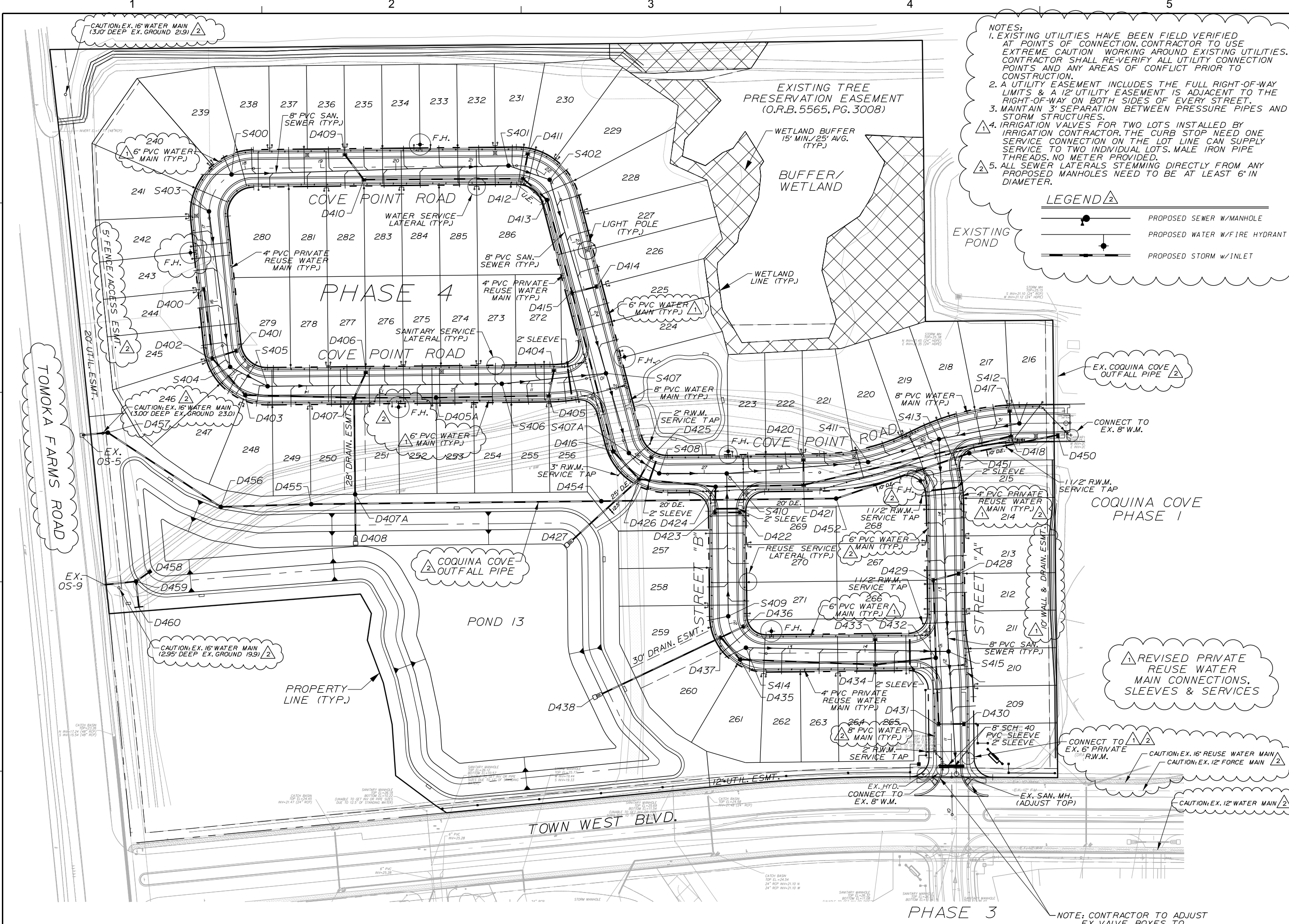
CITY OVERALL
CONSERVATION
EASEMENT PLAN

PROJECT: CC 11\FinalSF Phase 4

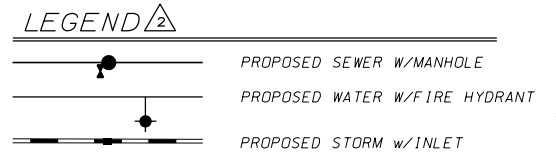
SHEET NO.

C14B

J:\ACC 11\Final City Exhibit\Drawn 4\CC1-SF PH3&4 City Conservation.dgn 1/12/17 PM



- NOTES:
- EXISTING UTILITIES HAVE BEEN FIELD VERIFIED AT POINTS OF CONNECTION. CONTRACTOR TO USE EXTREME CAUTION WORKING AROUND EXISTING UTILITIES. CONTRACTOR SHALL RE-VERIFY ALL UTILITY CONNECTION POINTS AND ANY AREAS OF CONFLICT PRIOR TO CONSTRUCTION.
 - A UTILITY EASEMENT INCLUDES THE FULL RIGHT-OF-WAY LIMITS & A 12' UTILITY EASEMENT IS ADJACENT TO THE RIGHT-OF-WAY ON BOTH SIDES OF EVERY STREET.
 - MAINTAIN 3' SEPARATION BETWEEN PRESSURE PIPES AND STORM STRUCTURES.
 - IRRIGATION VALVES FOR TWO LOTS INSTALLED BY IRRIGATION CONTRACTOR. THE CURB STOP NEED ONE SERVICE CONNECTION ON THE LOT LINE CAN SUPPLY SERVICE TO TWO INDIVIDUAL LOTS. MALE IRON PIPE THREADS. NO METER PROVIDED.
 - ALL SEWER LATERALS STEMMING DIRECTLY FROM ANY PROPOSED MANHOLES NEED TO BE AT LEAST 6" IN DIAMETER.



Dewberry

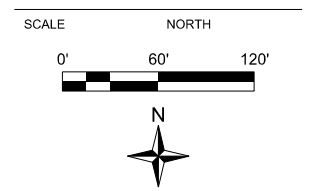
Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.5120
ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017



REVISIONS

No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY
1	7-21-17	KJK	REV PER QA

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

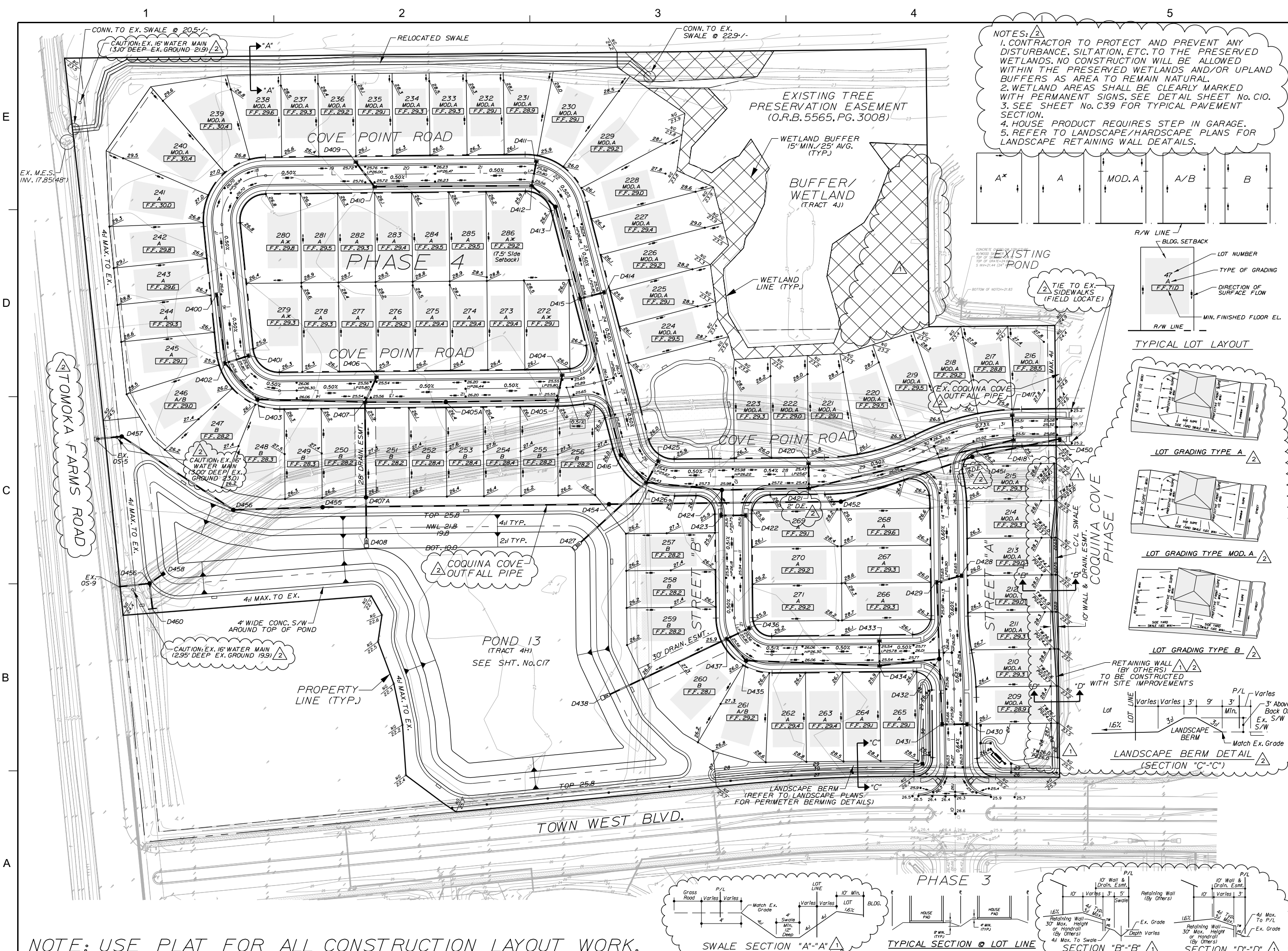
**PHASE 4
UTILITY
PLAN**

PROJECT: CC 11\FinalSF Phase 4
SHEET NO.

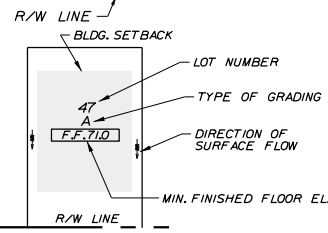
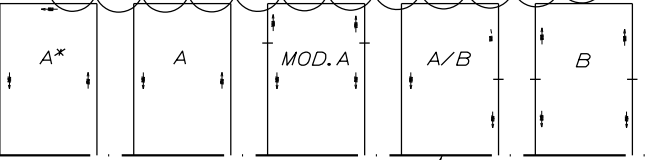
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NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

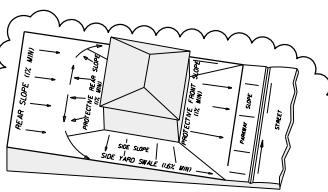
NOTE: CONTRACTOR TO ADJUST EX. VALVE BOXES TO PROPOSED GRADE.



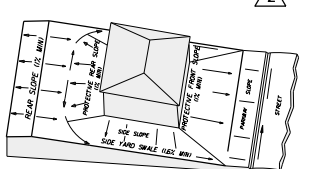
- NOTES: 1. CONTRACTOR TO PROTECT AND PREVENT ANY DISTURBANCE, SILTATION, ETC. TO THE PRESERVED WETLANDS. NO CONSTRUCTION WILL BE ALLOWED WITHIN THE PRESERVED WETLANDS AND/OR UPLAND BUFFERS AS AREA TO REMAIN NATURAL.
2. WETLAND AREAS SHALL BE CLEARLY MARKED WITH PERMANENT SIGNS, SEE DETAIL SHEET No. C10.
3. SEE SHEET No. C39 FOR TYPICAL PAVEMENT SECTION.
4. HOUSE PRODUCT REQUIRES STEP IN GARAGE.
5. REFER TO LANDSCAPE/HARDSCAPE PLANS FOR LANDSCAPE RETAINING WALL DETAILS.



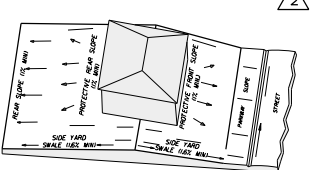
TYPICAL LOT LAYOUT



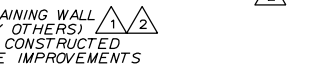
LOT GRADING TYPE A



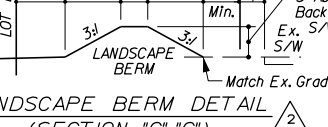
LOT GRADING TYPE MOD. A



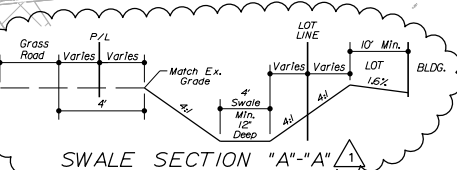
LOT GRADING TYPE B



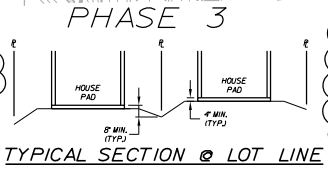
RETAINING WALL (BY OTHERS) TO BE CONSTRUCTED WITH SITE IMPROVEMENTS



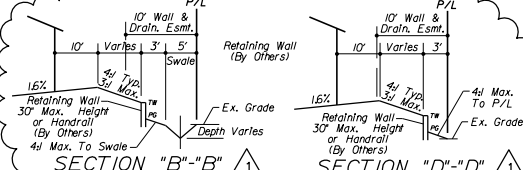
LANDSCAPE BERM DETAIL (SECTION "C-C")



SWALE SECTION "A"- "A"



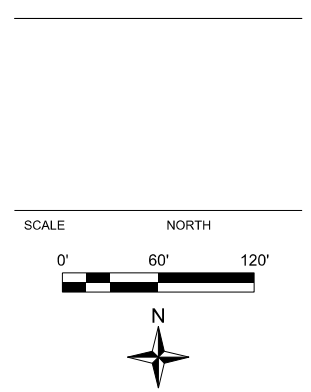
TYPICAL SECTION @ LOT LINE



SECTION "B"- "B" SECTION "D"- "D"

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800 NORTH MAGNOLIA AVE
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ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 4)
CITY OF PORT ORANGE, FLORIDA
Danielle Van De Loo
FL PE # 74676
8/31/2017



REVISIONS				
No.	DATE	BY	Description	
2	8-14-17	KJK	REV PER CITY	
1	7-21-17	KJK	REV PER QA	

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE
**PHASE 4
LOT & BLOCK
GRADING PLAN**
PROJECT: CC 11FinalSF Phase 4
SHEET NO.

C16

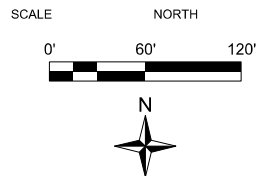
NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

Danielle Van De Loo
FL PE # 74676
8/31/2017

SEAL



REVISIONS

No.	DATE	BY	DESCRIPTION
1	8-14-17	KJK	REV PER CITY

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

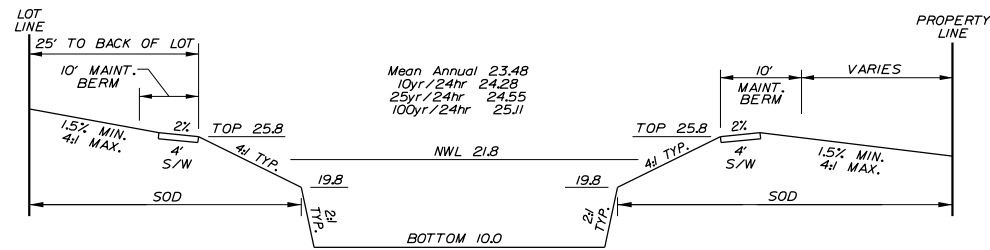
TITLE

PHASE 4
POND 13

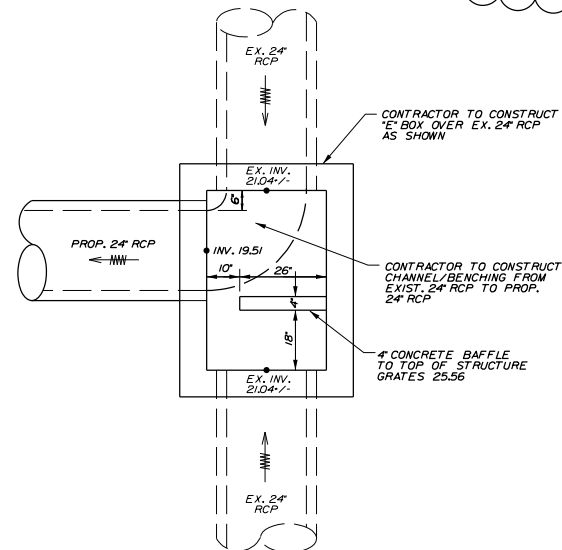
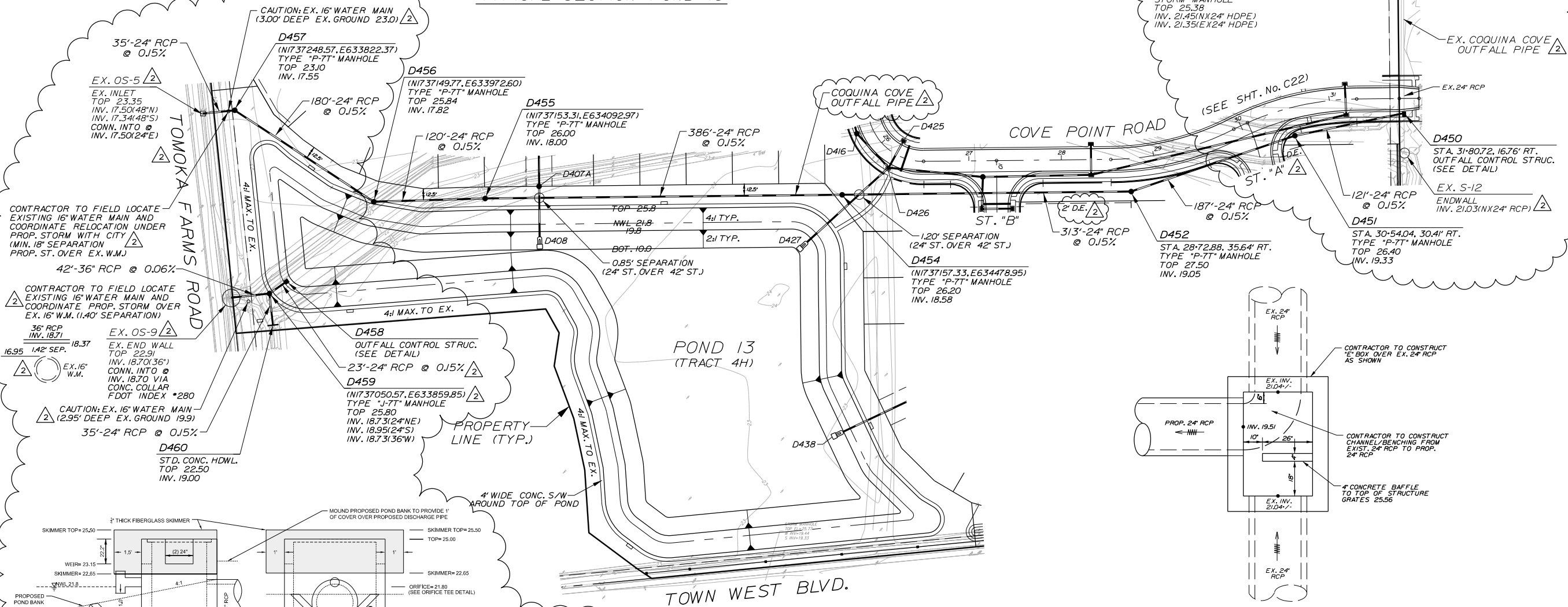
PROJECT: CC 1\FinalSF Phase 4

SHEET NO.

C17



TYPICAL SECTION POND 13



D450 OUTFALL CONTROL
STRUCTURE
(FDOT MODIFIED TYPE "E"
CAST IN PLACE INLET)

- NOTES:
1. CONTRACTOR TO PROTECT AND PREVENT ANY DISTURBANCE, SILTATION, ETC. TO THE PRESERVED WETLAND. NO CONSTRUCTION WILL BE ALLOWED WITHIN THE PRESERVED WETLAND AS AREA TO REMAIN NATURAL.
 2. WETLAND AREAS SHALL BE CLEARLY MARKED WITH PERMANENT SIGNS, SEE DETAIL SHEET No. C10.
 3. POND TOP OF BANK MINIMUM 10' OFF BACK OF LOT. ACCESS AND MAINTANANCE EASEMENT TO BE GRANTED TO CITY OF PORT ORANGE OVER POND TRACT.
 4. BLANKET DRAINAGE & UTILITY EASEMENTS WILL BE PROVIDED OVER TRACTS 4C, 4E, 4G, 4H & 4K.

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

E

D

C

B

A

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER SYSTEM		
STORM SEWER SYSTEM		
WATER SYSTEM		
FIRE HYDRANT		
DRAINAGE STRUCTURE		
SANITARY STRUCTURE		
LOT NUMBER		
RIGHT-OF-WAY		
LIGHT POLE		

Dewberry
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PHONE: 407.843.5120
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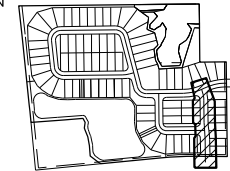
WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

KEY PLAN



SCALE

NORTH

0' 40' 80'



PROFILE
SCALE:
1"=40' HORIZ.
1"=4' VERT.

REVISIONS

No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY
1	7-21-17	KJK	REV PER QA

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE
**PHASE 4
STREET "A"
PLAN &
PROFILE**
PROJECT: CC 11FinalSF Phase 4
SHEET NO.

C18

J:\NCC 11FinalSF Phase 4\CC1-SF PH3&4 PH4 PlanProfile-01.dgn 11/3/16 PM

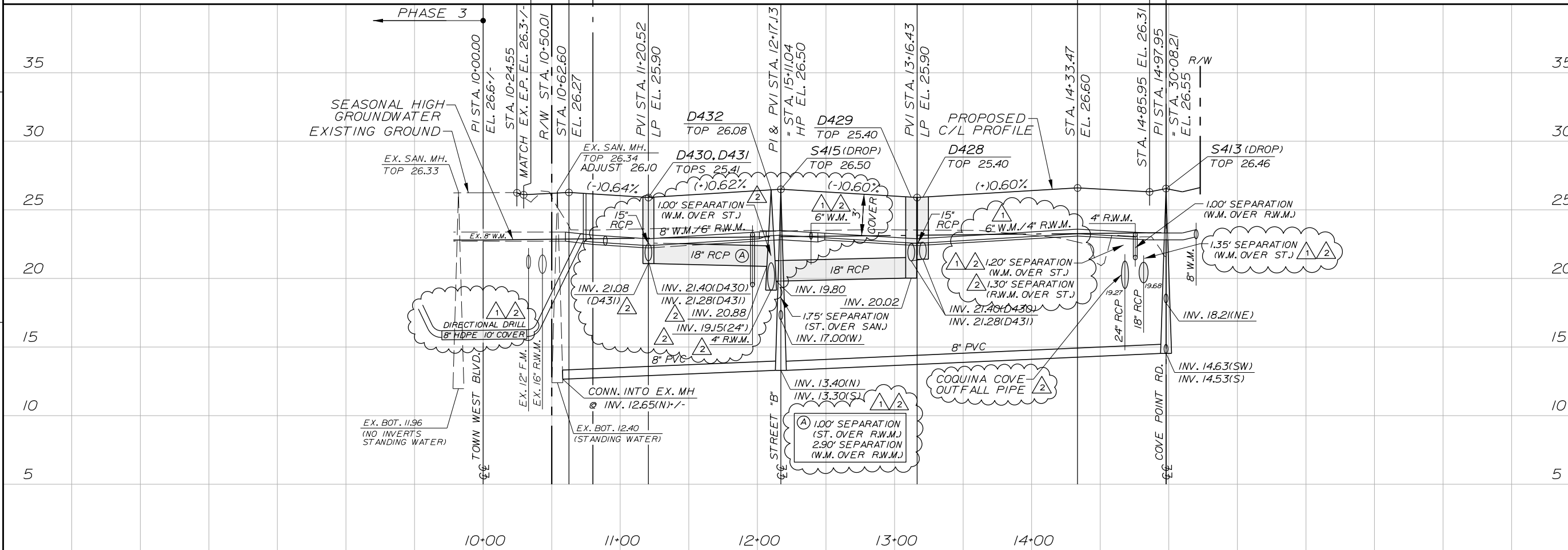
CONTRACTOR TO FIELD LOCATE & REMOVE EX. BLOW-OFF VALVE & CONN. INTO EX. 8" W.M. CONTRACTOR TO LEAVE EX. VALVE CLOSED UNTIL PROP. LINE IS CLEARED FOR SERVICE BY CITY & F.D.E.P.

NOTE: CONTRACTOR TO ADJUST EX. VALVE BOXES TO PROPOSED GRADE.

- NOTES:
1. ALL SIDEWALK DESIGNS MUST CONFORM TO FDOT INDEX No. 304. (SEE SHT. No. C29).
 2. MAINTAIN 3' SEPARATION BETWEEN PRESSURE PIPES AND STORM STRUCTURES.
 3. ALL EXISTING UTILITIES HAVE BEEN FIELD VERIFIED AT ALL POINTS OF CONNECTION TO, AND AT ALL AREAS OF CONFLICT WITH EXISTING MAINS. CONTRACTOR TO USE EXTREME CAUTION WORKING AROUND EXISTING UTILITIES.
 4. ALL PIPE JOINTS & CONNECTIONS TO INLETS SHALL BE WRAPPED IN FILTER FABRIC PER FDOT INDEX No. 280.

STREET "A"

NOTE: PAVEMENT 24' WIDE W/37' RADIUS



NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.



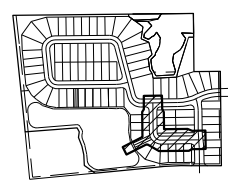
Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.5120
ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

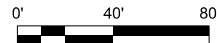
Danielle Van De Loo
FL PE # 74676
8/31/2017

SEAL



SCALE

NORTH



PROFILE
SCALE:
1"=40' HORIZ.
1"=4' VERT.

REVISIONS

No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY
2	7-21-17	KJK	REV PER QA

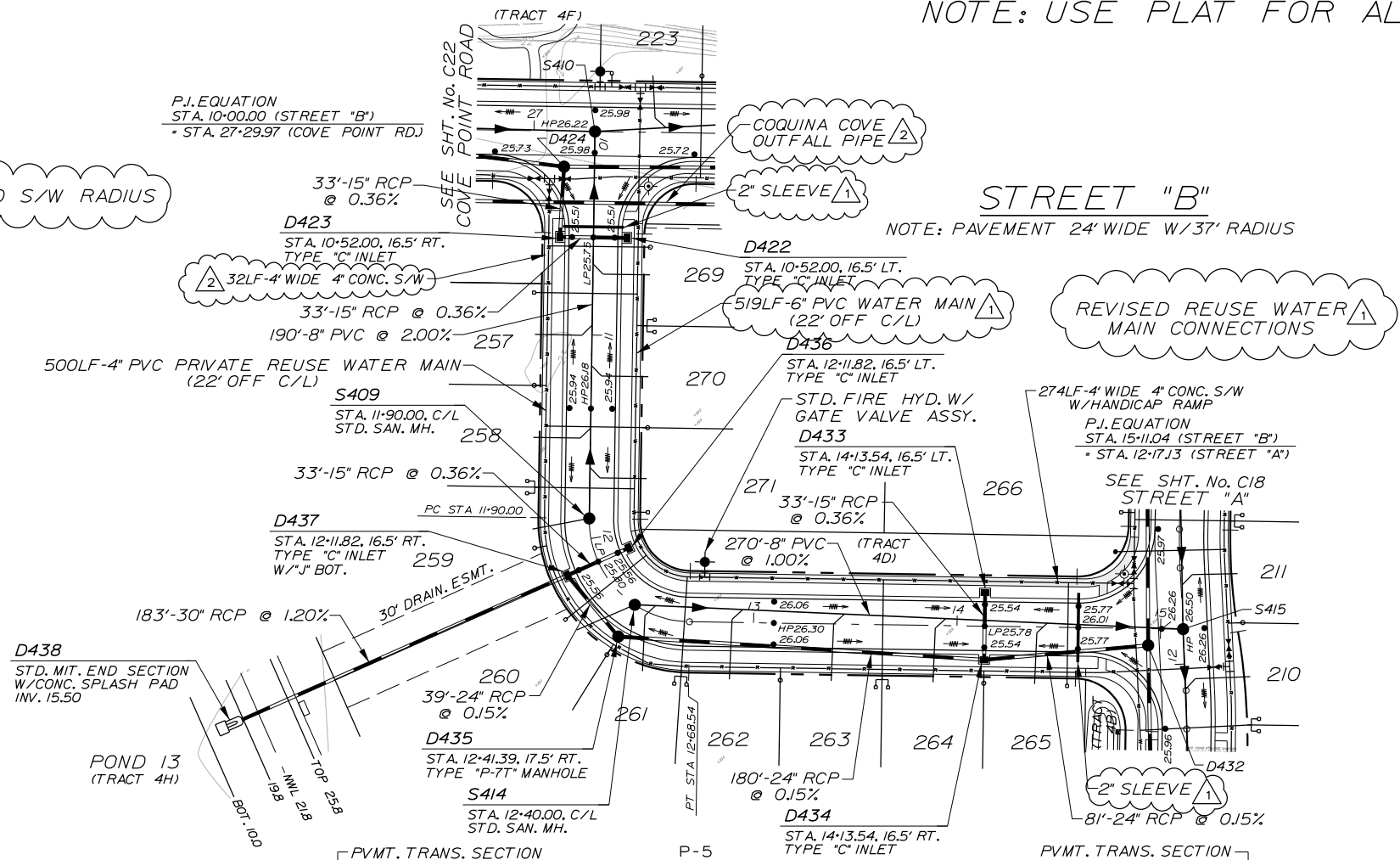
PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

PHASE 4
STREET "B"
PLAN &
PROFILE

PROJECT: CC 1\FinalSF Phase 4
SHEET NO.

C19

2 REVISED S/W RADIUS

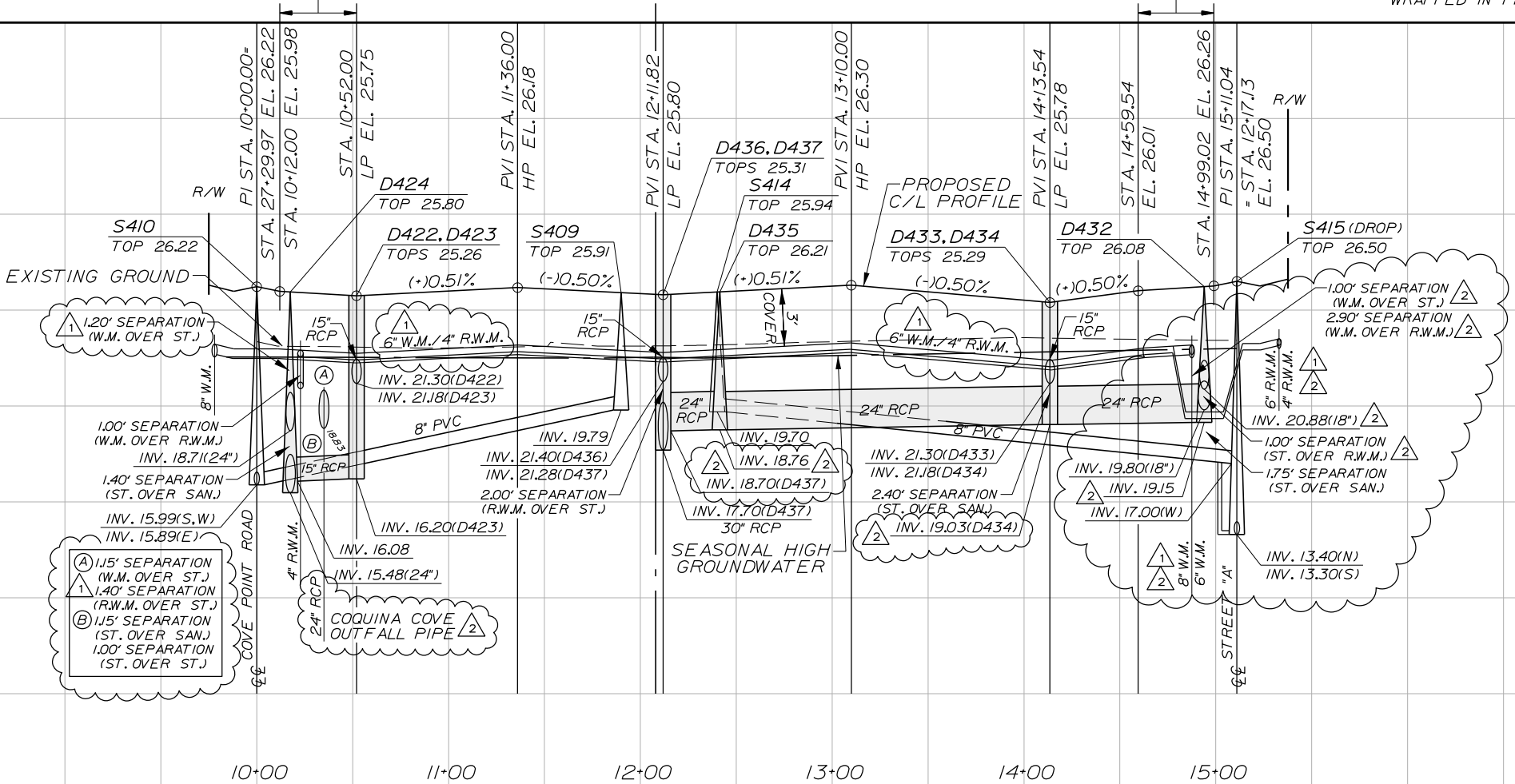


LEGEND

DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER SYSTEM	—○—	—●—
STORM SEWER SYSTEM	—△—	—▲—
WATER SYSTEM	—□—	—■—
FIRE HYDRANT	—◇—	—◆—
DRAINAGE STRUCTURE		D3
SANITARY STRUCTURE		S4
LOT NUMBER		165
RIGHT-OF-WAY		—+—
LIGHT POLE		—X—

NOTES:

1. ALL SIDEWALK DESIGNS MUST CONFORM TO FDOT INDEX No. 304. (SEE SHT. No. C29).
2. MAINTAIN 3' SEPARATION BETWEEN PRESSURE PIPES AND STORM STRUCTURES.
3. ALL EXISTING UTILITIES HAVE BEEN FIELD VERIFIED AT ALL POINTS OF CONNECTION TO, AND AT ALL AREAS OF CONFLICT WITH EXISTING MAINS. CONTRACTOR TO USE EXTREME CAUTION WORKING AROUND EXISTING UTILITIES.
4. ALL PIPE JOINTS & CONNECTIONS TO INLETS SHALL BE WRAPPED IN FILTER FABRIC PER FDOT INDEX No. 280.



NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.



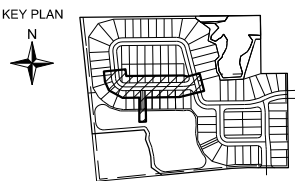
Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.5120
ENGINEERING BUSINESS -8794

WESTPORT RESERVE
(PHASE 4)

CITY OF FORT WORTH, TEXAS

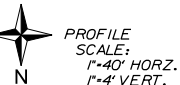
FL PE # 74676
8/31/2017

SEAL



SCALE NORTH

0' 40' 80'



REVISIONS

[illegible]

PROJECT #	<u>PROJECT #50083136</u>
DRAWN BY	<u>KJK</u>
APPROVED BY	<u>DMV</u>
CHECKED BY	<u>DMV</u>
DATE	<u>JULY 2017</u>
DATUM	<u>NAVD 88</u>

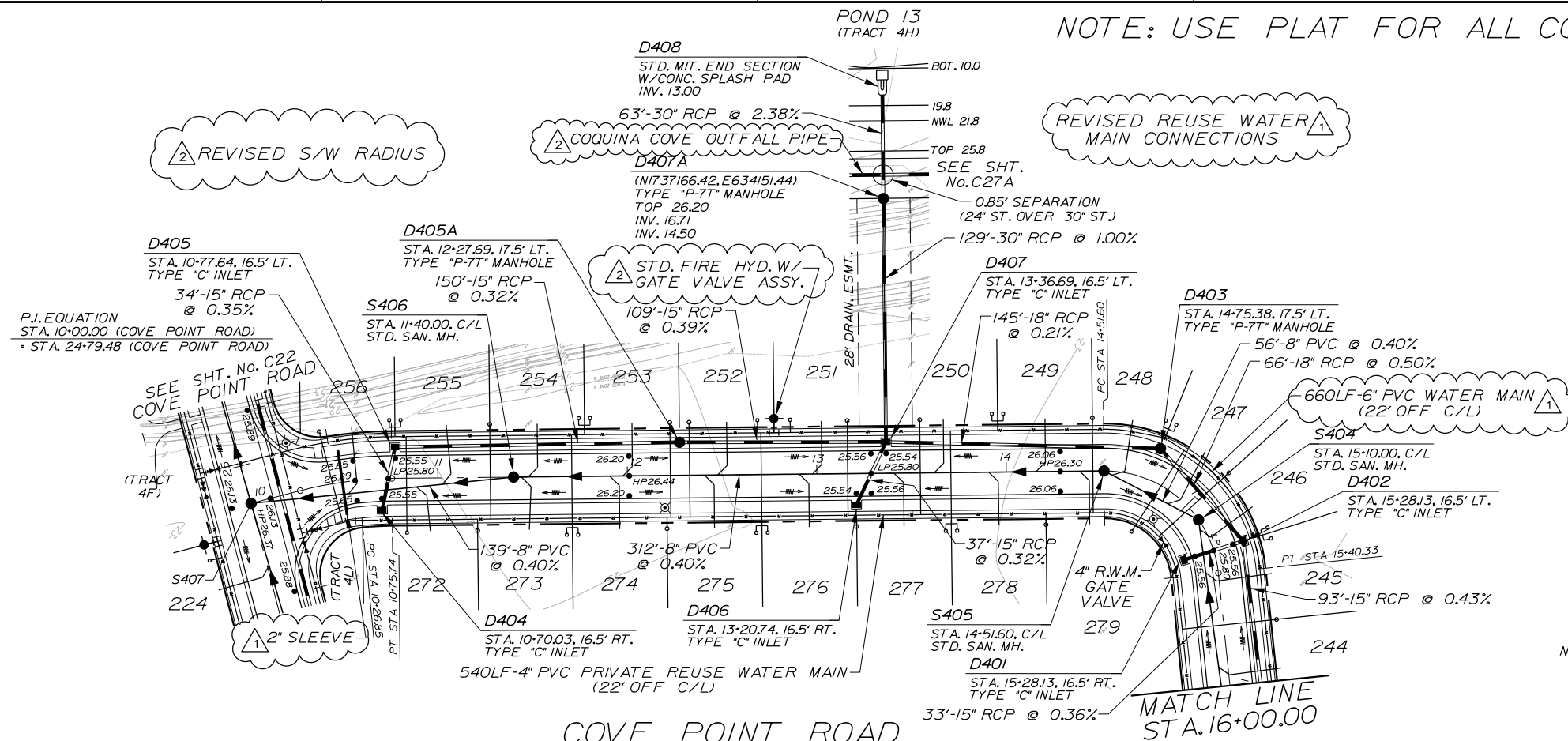
TITLE

PHASE 4
COVE POINT RD.
PLAN &
PROFILE

PROJECT: CC 1\Final\SF Phase 4

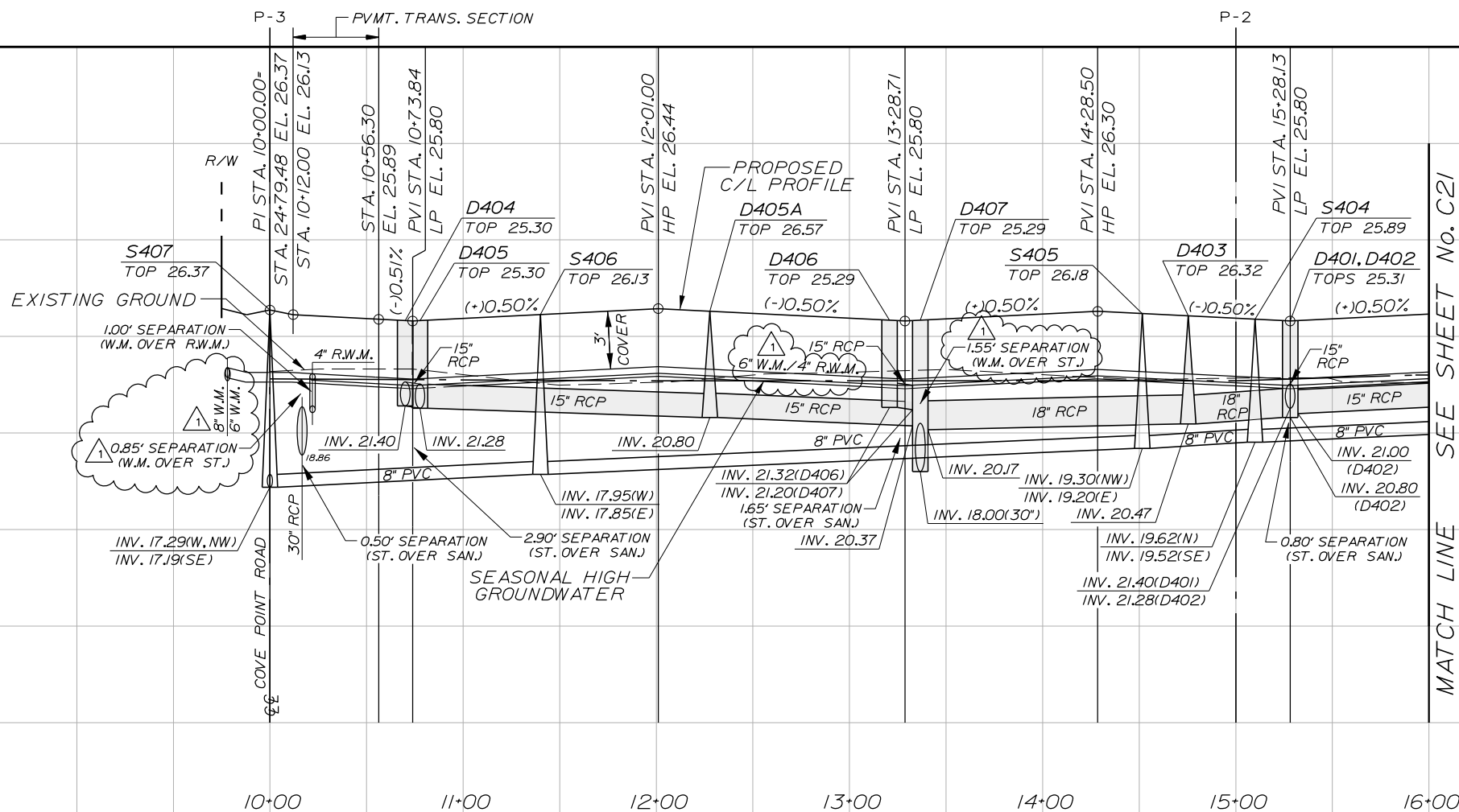
SHEET NO.

C20



NOTES:

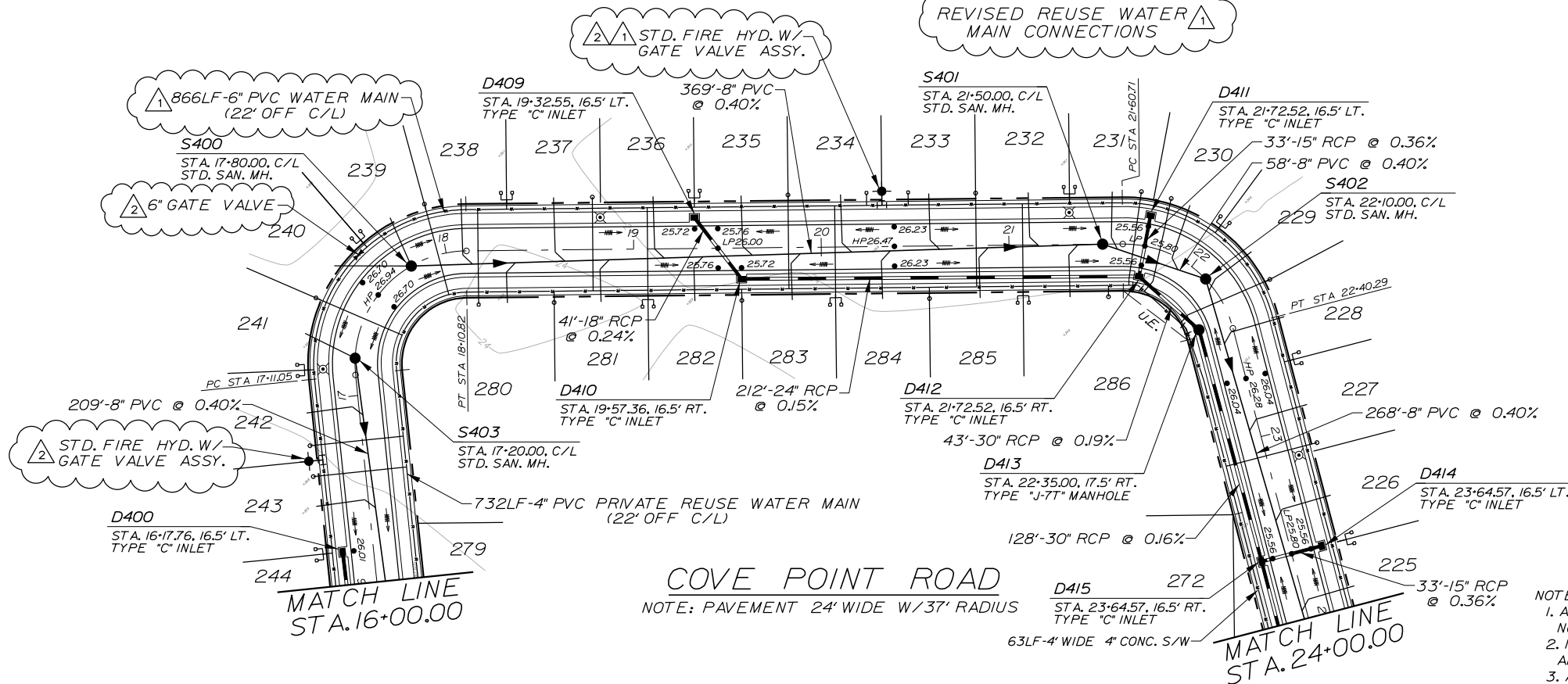
1. ALL SIDEWALK DESIGNS MUST CONFORM TO FDOT INDEX No. 304. (SEE SHT. No. C29).
2. MAINTAIN 3' SEPARATION BETWEEN PRESSURE PIPES AND STORM STRUCTURES.
3. ALL EXISTING UTILITIES HAVE BEEN FIELD VERIFIED AT ALL POINTS OF CONNECTION TO, AND AT ALL AREAS OF CONFLICT WITH EXISTING MAINS. CONTRACTOR TO USE EXTREME CAUTION WORKING AROUND EXISTING UTILITIES.
4. ALL PIPE JOINTS & CONNECTIONS TO INLETS SHALL BE WRAPPED IN FILTER FABRIC PER FDOT INDEX No. 280.



NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

REVISED REUSE WATER
MAIN CONNECTIONS

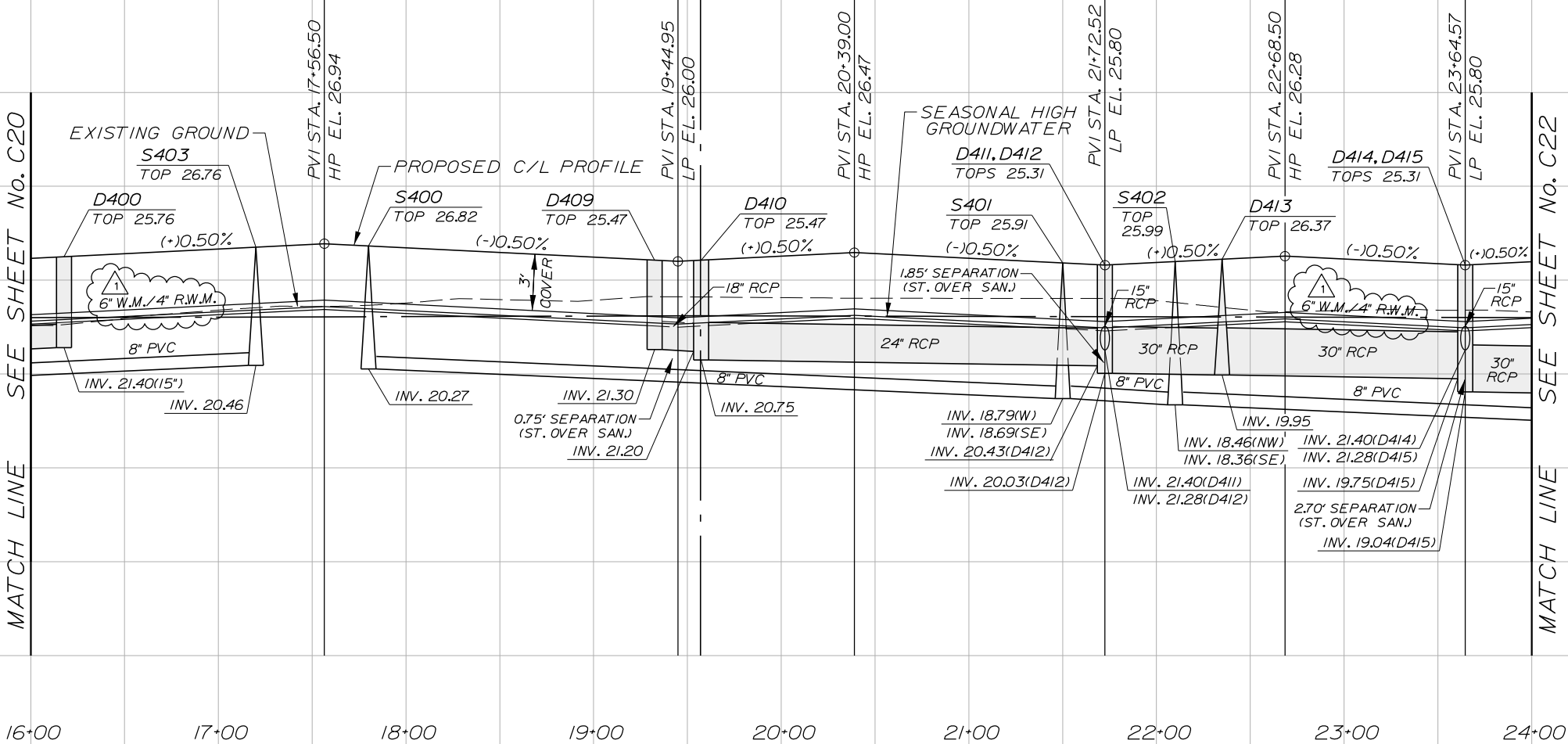
DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER SYSTEM		
STORM SEWER SYSTEM		
WATER SYSTEM		
FIRE HYDRANT		
DRAINAGE STRUCTURE		D3
SANITARY STRUCTURE		S4
LOT NUMBER		165
RIGHT-OF-WAY		
LIGHT POLE		



- NOTES:
1. ALL SIDEWALK DESIGNS MUST CONFORM TO FDOT INDEX No. 304. (SEE SHT. No. C29).
 2. MAINTAIN 3' SEPARATION BETWEEN PRESSURE PIPES AND STORM STRUCTURES.
 3. ALL EXISTING UTILITIES HAVE BEEN FIELD VERIFIED AT ALL POINTS OF CONNECTION TO, AND AT ALL AREAS OF CONFLICT WITH EXISTING MAINS. CONTRACTOR TO USE EXTREME CAUTION WORKING AROUND EXISTING UTILITIES.
 4. ALL PIPE JOINTS & CONNECTIONS TO INLETS SHALL BE WRAPPED IN FILTER FABRIC PER FDOT INDEX No. 280.

SEE SHEET No. C20

SEE SHEET No. C22



Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
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ENGINEERING BUSINESS - 8794

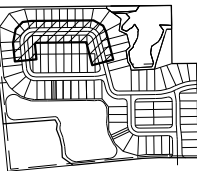
WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

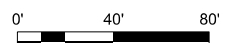
Danielle Van De Loo
FL PE # 74676
8/31/2017

KEY PLAN



SCALE

NORTH



PROFILE
SCALE:
1"=40' HORZ.
1"=4' VERT.

REVISIONS

No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY
2	7-21-17	KJK	REV PER QA

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE
**PHASE 4
COVE POINT RD.
PLAN &
PROFILE**

PROJECT: CC 1\Final\SF Phase 4
SHEET NO.

C21

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

LEGEND

DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER SYSTEM		
STORM SEWER SYSTEM		
WATER SYSTEM		
FIRE HYDRANT		
DRAINAGE STRUCTURE		
SANITARY STRUCTURE		
LOT NUMBER		
RIGHT-OF-WAY		
LIGHT POLE		

NOTES:

1. ALL SIDEWALK DESIGNS MUST CONFORM TO FDOT INDEX No. 304. (SEE SHT. No. C29).
2. MAINTAIN 3' SEPARATION BETWEEN PRESSURE PIPES AND STORM STRUCTURES.
3. ALL EXISTING UTILITIES HAVE BEEN FIELD VERIFIED AT ALL POINTS OF CONNECTION TO, AND AT ALL AREAS OF CONFLICT WITH EXISTING MAINS. CONTRACTOR TO USE EXTREME CAUTION WORKING AROUND EXISTING UTILITIES.
4. ALL PIPE JOINTS & CONNECTIONS TO INLETS SHALL BE WRAPPED IN FILTER FABRIC PER FDOT INDEX No. 280.



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ORLANDO, FL 32803
PHONE: 407.843.5120
ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL



SCALE

NORTH

0' 40' 80'



PROFILE
SCALE:
1"=40' HORIZ.
1"=4' VERT.

REVISIONS

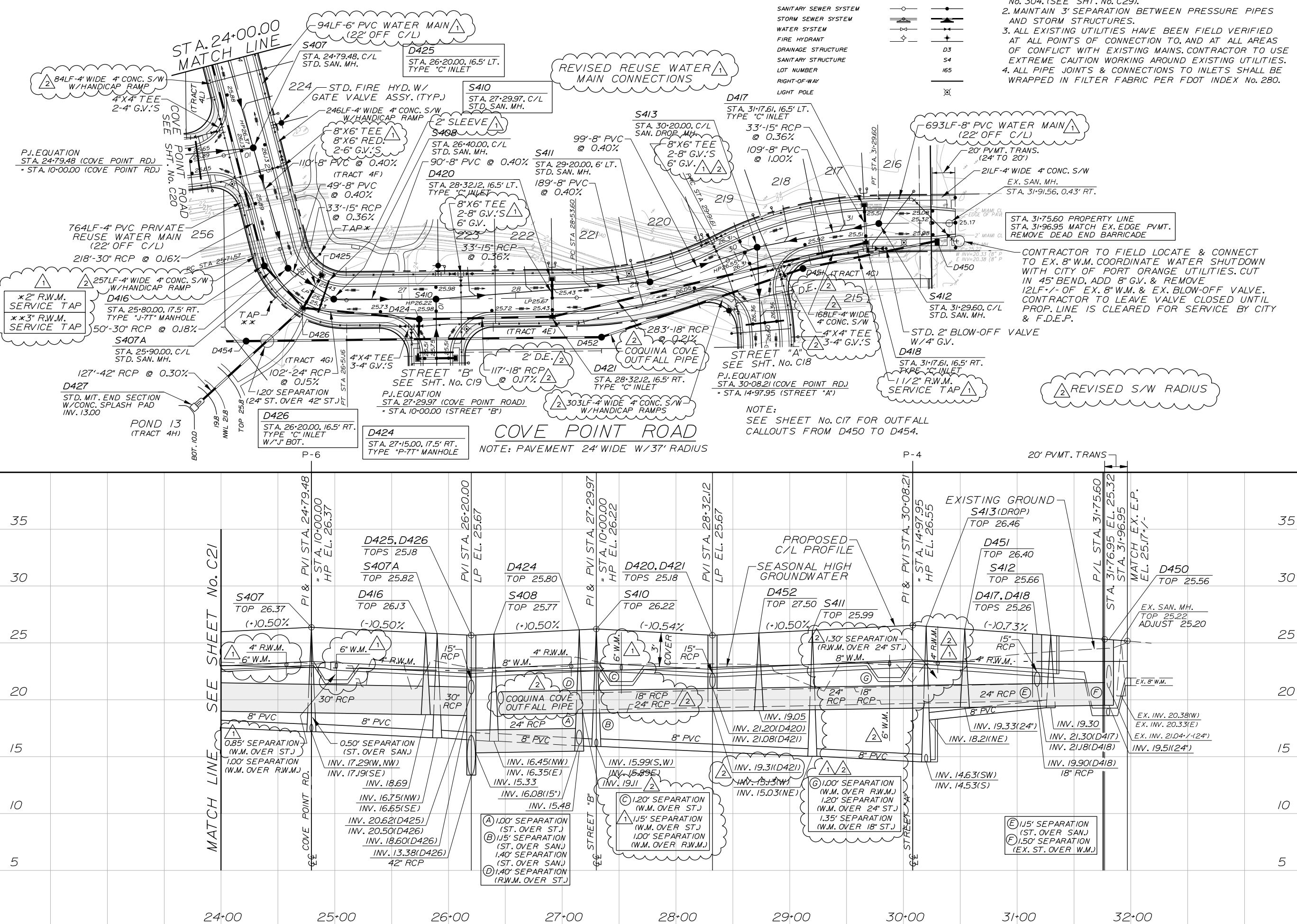
No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY
2	7-21-17	KJK	REV PER QA

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
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PHASE 4
COVE POINT RD.
PLAN &
PROFILE

PROJECT: CC 1\FinalSF Phase 4
SHEET NO.

C22



STORM DRAINAGE STRUCTURES

D400

STA. 16+17.76, 16.5' LT.
TYPE "C" INLET
TOP 25.76
INV. 21.40(15")

D401

STA. 15+28.13, 16.5' RT.
TYPE "C" INLET
TOP 25.31
INV. 21.40(15")

D402

STA. 15+28.13, 16.5' LT.
TYPE "C" INLET
TOP 25.31
INV. 21.28(15")
INV. 21.00(15")
INV. 20.80(18")

D403

STA. 14+75.38, 17.5' LT.
TYPE "P-7T" MANHOLE
TOP 26.32
INV. 20.47(18")

D404

STA. 10+70.03, 16.5' RT.
TYPE "C" INLET
TOP 25.30
INV. 21.40(15")

D405

STA. 10+77.64, 16.5' LT.
TYPE "C" INLET
TOP 25.30
INV. 21.28(15")

D405A

STA. 12+27.69, 17.5' LT.
TYPE "P-7T" MANHOLE
TOP 26.57
INV. 20.80(15")

D406

STA. 13+20.74, 16.5' RT.
TYPE "C" INLET
TOP 25.29
INV. 21.32(15")

D407

STA. 13+36.69, 16.5' LT.
TYPE "C" INLET
TOP 25.29
INV. 21.20(15")
INV. 20.37(15")
INV. 20.17(18")
INV. 18.00(30")

D407A

(N1737166.42,E634151.44)
TYPE "P-7T" MANHOLE
TOP 26.20
INV. 16.71(30")
INV. 14.50(30")

D408

STD. MIT. END SECTION
W/CONC. SPLASH PAD
INV. 13.00(30")

D409

STA. 19+32.55, 16.5' LT.
TYPE "C" INLET
TOP 25.47
INV. 21.30(18")

D410

STA. 19+57.36, 16.5' RT.
TYPE "C" INLET
TOP 25.47
INV. 21.20(18")
INV. 20.75(24")

D411

STA. 21+72.52, 16.5' LT.
TYPE "C" INLET
TOP 25.31
INV. 21.40(15")

D412

STA. 21+72.52, 16.5' RT.
TYPE "C" INLET
TOP 25.31
INV. 21.28(15")
INV. 20.43(24")
INV. 20.03(30")

D413

STA. 22+35.00, 17.5' RT.
TYPE "J-7T" MANHOLE
TOP 26.37
INV. 19.95(30")

D414

STA. 23+64.57, 16.5' LT.
TYPE "C" INLET
TOP 25.31
INV. 21.40(15")

D415

STA. 23+64.57, 16.5' RT.
TYPE "C" INLET
TOP 25.31
INV. 21.28(15")
INV. 19.75(30")
INV. 19.04(30")

D416

STA. 25+80.00, 17.5' RT.
TYPE "J-7T" MANHOLE
TOP 26.13
INV. 18.69(30")

D417

STA. 31+17.61, 16.5' LT.
TYPE "C" INLET
TOP 25.26
INV. 21.30(15")

D418

STA. 31+17.61, 16.5' RT.
TYPE "C" INLET
TOP 25.26
INV. 21.18(15")
INV. 19.90(18")

D420

STA. 28+32.12, 16.5' LT.
TYPE "C" INLET
TOP 25.18
INV. 21.20(15")

D421

STA. 28+32.12, 16.5' RT.
TYPE "C" INLET
TOP 25.18
INV. 21.08(15")
INV. 19.31(18")

D422

STA. 10+52.00, 16.5' LT.
TYPE "C" INLET
TOP 25.26
INV. 21.30(15")

D423

STA. 10+52.00, 16.5' RT.
TYPE "C" INLET
TOP 25.26
INV. 21.18(15")
INV. 16.20(15")

D424

STA. 27+15.00, 17.5' RT.
TYPE "P-7T" MANHOLE
TOP 25.80
INV. 19.11(18")
INV. 16.08(15")
INV. 15.48(24")

D425

STA. 26+20.00, 16.5' LT.
TYPE "C" INLET
TOP 25.18
INV. 20.62(15")

D426

STA. 26+20.00, 16.5' RT.
TYPE "C" INLET
W/"J" BOT.
TOP 25.18
INV. 20.50(15")
INV. 18.60(30")
INV. 15.33(24")
INV. 13.38(42")

D427

STD. MIT. END SECTION
W/CONC. SPLASH PAD
INV. 13.00(42")

D428

STA. 13+20.66, 16.5' RT.
TYPE "C" INLET
TOP 25.40
INV. 21.40(15")

D429

STA. 13+12.20, 16.5' LT.
TYPE "C" INLET
TOP 25.40
INV. 21.28(15")
INV. 20.02(18")

D430

STA. 11+20.52, 16.5' RT.
TYPE "C" INLET
TOP 25.41
INV. 21.40(15")

D431

STA. 11+20.52, 16.5' LT.
TYPE "C" INLET
TOP 25.41
INV. 21.28(15")
INV. 21.08(18")

D432

STA. 12+10.00, 17.5' LT.
TYPE "P-7T" MANHOLE
TOP 26.08
INV. 19.80(18")
INV. 20.88(18")
INV. 19.15(24")

D433

STA. 14+13.54, 16.5' LT.
TYPE "C" INLET
TOP 25.29
INV. 21.30(15")

D434

STA. 14+13.54, 16.5' RT.
TYPE "C" INLET
TOP 25.29
INV. 21.18(15")
INV. 19.03(24")

D435

STA. 12+41.39, 17.5' RT.
TYPE "P-7T" MANHOLE
TOP 26.21
INV. 18.76(24")

D436

STA. 12+11.82, 16.5' LT.
TYPE "C" INLET
TOP 25.31
INV. 21.40(15")

D437

STA. 12+11.82, 16.5' RT.
TYPE "C" INLET
W/"J" BOT.
TOP 25.31
INV. 21.28(15")
INV. 18.70(24")
INV. 17.70(30")

D438

STD. MIT. END SECTION
W/CONC. SPLASH PAD
INV. 15.50(30")

D450

STA. 31+80.72, 16.76' RT.
OUTFALL CONTROL STRUC.
TOP 25.56
INV. 21.04(EX. 24")
INV. 19.51(24")

D451

STA. 30+54.04, 30.41' RT.
TYPE "P-7T" MANHOLE
TOP 26.40
INV. 19.33

D452

STA. 28+72.88, 35.64' RT.
TYPE "P-7T" MANHOLE
TOP 27.50
INV. 19.05

D454

(N1737157.33,E634478.95)
TYPE "P-7T" MANHOLE
TOP 26.20
INV. 18.58

D455

(N1737153.31,E634092.97)
TYPE "P-7T" MANHOLE
TOP 26.00
INV. 18.00

D456

(N1737149.77,E633972.60)
TYPE "P-7T" MANHOLE
TOP 25.84
INV. 17.82

D457

(N1737248.57,E633822.37)
TYPE "P-7T" MANHOLE
TOP 23.10
INV. 17.55

EX. OS-5

EX. INLET
TOP 23.35
INV. 17.50(48"N)
INV. 17.34(48"S)
CONN. INTO @
INV. 17.50(24"E)

D458

OUTFALL CONTROL STRUC.
TOP 25.00
INV. 18.76(24")

D459

(N1737050.57,E633859.85)
TYPE "J-7T" MANHOLE
TOP 25.80
INV. 18.73(24"NE)
INV. 18.95(24"S)
INV. 18.73(36"W)

D460

STD. CONC. HDWL.
TOP 22.50
INV. 19.00(24"E)

EX. OS-9

EX. END WALL
TOP 22.91
INV. 18.70(36")
CONN. INTO @
INV. 18.70 VIA
CONC. COLLAR
FDOT INDEX #280

STORM PIPE

D400 TO D402
93'-15" RCP @ 0.43%

D401 TO D402
33'-15" RCP @ 0.36%

D402 TO D403
66'-18" RCP @ 0.50%

D403 TO D407
145'-18" RCP @ 0.21%

D404 TO D405
34'-15" RCP @ 0.35%

D405 TO D405A
150'-15" RCP @ 0.32%

D405A TO D407
109'-15" RCP @ 0.39%

D406 TO D407
37'-15" RCP @ 0.32%

D407 TO D407A
129'-30" RCP @ 1.00%

D407A TO D408
63'-30" RCP @ 2.38%

D409 TO D410
41'-18" RCP @ 0.24%

D410 TO D412
212'-24" RCP @ 0.15%

D411 TO D412
33'-15" RCP @ 0.36%

D412 TO D413
43'-30" RCP @ 0.19%

D413 TO D415
128'-30" RCP @ 0.16%

D414 TO D415
33'-15" RCP @ 0.36%

D415 TO D416
218'-30" RCP @ 0.16%

D416 TO D426
50'-30" RCP @ 0.18%

D417 TO D418
33'-15" RCP @ 0.36%

D418 TO D421
283'-18" RCP @ 0.21%

D420 TO D421
33'-15" RCP @ 0.36%

D421 TO D424
117'-18" RCP @ 0.17%

D422 TO D423
33'-15" RCP @ 0.36%

D423 TO D424
33'-15" RCP @ 0.36%

D424 TO D426
102'-24" RCP @ 0.15%

D425 TO D426
33'-15" RCP @ 0.36%

D426 TO D427
127'-42" RCP @ 0.30%

D428 TO D429
33'-15" RCP @ 0.36%

D429 TO D432
103'-18" RCP @ 0.21%

D430 TO D431
33'-15" RCP @ 0.36%

D431 TO D432
88'-18" RCP @ 0.23%

D432 TO D434
81'-24" RCP @ 0.15%

D433 TO D434
33'-15" RCP @ 0.36%

D434 TO D435
180'-24" RCP @ 0.15%

D435 TO D437
39'-24" RCP @ 0.15%

D436 TO D437
33'-15" RCP @ 0.36%

D437 TO D438
183'-30" RCP @ 1.20%

D450 TO D451
121'-24" RCP @ 0.15%

D451 TO D452
187'-24" RCP @ 0.15%

D452 TO D454
313'-24" RCP @ 0.15%

D454 TO D455
386'-24" RCP @ 0.15%

D455 TO D456
120'-24" RCP @ 0.15%

D456 TO D457
180'-24" RCP @ 0.15%

D457 TO EX. OS-5
35'-24" RCP @ 0.15%

D458 TO D459
23'-24" RCP @ 0.15%

D459 TO D460
35'-24" RCP @ 0.15%

D459 TO EX. OS-9
42'-36" RCP @ 0.06%

NOTES:
1. TABLES FOR REFERENCE ONLY. CONTRACTOR
TO REFER TO PLAN & PROFILE SHEETS FOR
STRUCTURE CONSTRUCTION DETAILS.
2. SEE SHT. No. C39 FOR DRAINAGE STRUCTURE
DETAIL.



Dewberry Engineers Inc.
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ORLANDO, FL 32803
PHONE: 407.843.6120
ENGINEERING BUSINESS - 8794

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

REVISIONS

No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

PHASE 4
DRAINAGE
STRUCTURES
TABLES

PROJECT: CC 1\FinalSF Phase 4

SHEET NO.

C23

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WESTPORT RESERVE (PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

REVISIONS

[illegible]

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

PHASE 4 STRIPING PLAN

PROJECT: CC 1\Final\SF Phase 4

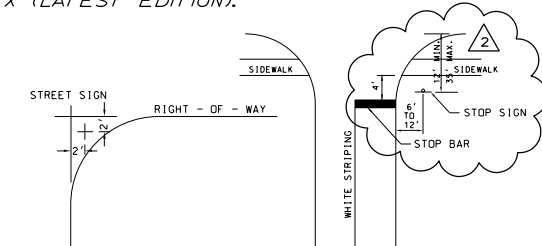
SHEET NO.

C24

1. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH RPM'S AND WILL BE INSTALLED IN ACCORDANCE WITH FDOT STANDARD INDEX #17346. (LATEST EDITION)

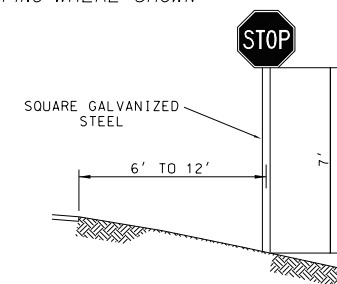
2. FOR SIGN DETAILS, REFER TO THE "STANDARD HIGHWAY SIGNS" PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, 2004, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009, AND THE FDOT DESIGN STANDARDS (LATEST EDITION).

3. PAVEMENT MARKINGS SHOULD BE PLACED AS SHOWN IN THE PLANS AND AS DESCRIBED WITHIN THE APPROPRIATE TRAFFIC DESIGN STANDARD INDEX (LATEST EDITION).



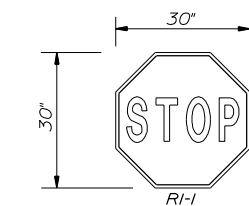
SIGNING & STRIPING DETAILS

(INTERIOR INTERSECTIONS)
STRIPING WHERE SHOWN



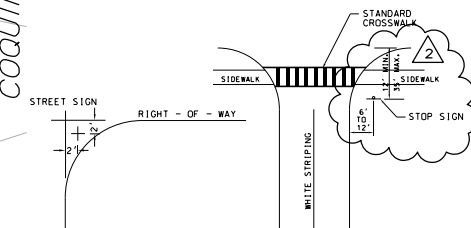
STOP SIGN DETAIL

TYPICAL TRAFFIC CONTROL SIGN



TYPICAL STOP SIGN

(UNLESS OTHERWISE SPECIFIED)



SIGNING & STRIPING DETAILS

(TOWN WEST BLVD. INTERSECTION)

PHASE 3 STOP BAR &
STOP SIGN (TYP.) SEE
DETAILS THIS SHEET

NOTE:

THE DESIGN AND INSTALLATION OF ALL SIGNAGE, STRIPING AND PAVEMENT MARKINGS MUST BE APPROVED BY PORT ORANGE TRAFFIC ENGINEERING PRIOR TO PUBLIC USE OF ROADWAY AND TRAFFIC IMPROVEMENTS WITHIN THE RIGHT-OF-WAY.

NOTE: USE PLAT FOR ALL CONSTRUCTION LAYOUT WORK.

14:16 PM J:\CC 1\Final\SF Phase 4\CC1-SF PH3&4 PH4 Stripping.dgn

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Dewberry Engineers Inc.
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WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

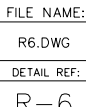
ROAD CLASSIFICATION	DESIGN SPEED (MPH)	LANE WIDTH (LW)	RIGHT OF WAY WIDTH	MIN. HORIZ. RADIUS C.L.	MIN. VERT. CURVE	MIN. LONG. GRADE (%)	MIN. INT. SPACE
LOCAL / COLLECTOR UP TO 400 VPD	15	10	50	50'	75'	0.3	150'
	20	10	50	95'	125'	0.3	200'
	25	11	50	180'	165'	0.3	250'
	20	11	50	95'	125'	0.3	200'
	25	11	50	180'	165'	0.3	250'
UP TO 1000 VPD	30	12	80	300'	200'	0.3	330'
	35	12	80	375'	225'	0.5	660'
	40	12	80	450'	275'	0.5	660'
ARTERIAL UP TO 7500 VPD	35	5 LANES (3)		375'	225'	0.5	660'
	40			450'	275'	0.5	660'
	40			450'	275'	0.5	660'

- NOTES:
- ALL ROADWAY DESIGN SHALL MEET THE MINIMUM REQUIREMENTS OF THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION, AND MAINTENANCE FOR STREETS AND HIGHWAYS (LATEST EDITION), AS PUBLISHED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION.
 - PAVEMENT WIDTHS FOR INDUSTRIAL AND COMMERCIAL ROADS SHALL BE INCREASED BY A MINIMUM OF ONE (1) FOOT.
 - AS A RULE, ALL INTERSECTIONS SHALL BE DESIGNED AT 90 DEGREE ANGLES. DEVIATION FROM THIS SHALL BE CONSIDERED STRICTLY ON A CASE BY CASE BASIS. IN THE EVENT THAT ANY DEVIATION IS PERMITTED, THEN IN NO CASE SHALL INTERSECTION ANGLES BE LESS THAN 75 DEGREES FOR INTERSECTIONS WITH ARTERIAL ROADWAYS EXCEPT ON LOCAL AND COLLECTOR ROADWAYS WHICH SHALL NOT BE LESS THAN 60 DEGREES. INTERSECTIONS WITH COUNTY AND STATE ROADS SHALL BE 90 DEGREES.
 - ALL INTERSECTIONS AND ACCESS POINTS SHALL HAVE ADEQUATE LINE OF SIGHT BASED ON AN EYE LEVEL OF 3.5' ABOVE THE GROUND AND AN OBJECT 3.0' ABOVE THE LOWEST ROADWAY. FOR PURPOSES OF THIS STANDARD, THE EYE LEVEL SHALL BE MEASURED 8' IN BACK OF THE STOP BAR AT ENTRANCES. THE FOLLOWING SIGHT DISTANCES SHALL BE PROVIDED.
- | DESIGN SPEED (MPH) | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| SIGHT DISTANCE (FT)
(MINIMUM) | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 |
- LEGEND:
C.L. CENTER-LINE
INT. INTERSECTION
LONG. LONGITUDINAL



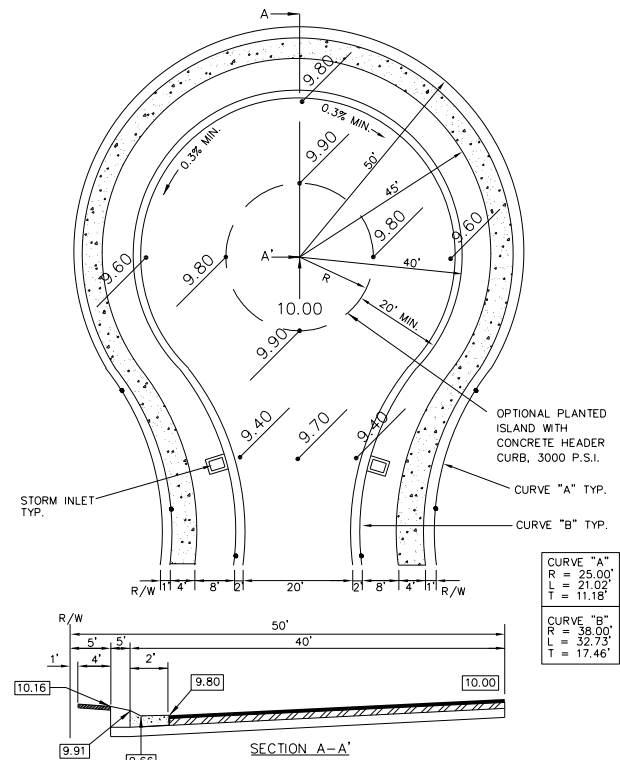
STANDARD CONSTRUCTION DETAIL
ROADWAY GEOMETRY

REV. 12/08



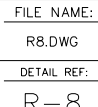
STANDARD CONSTRUCTION DETAIL
STANDARD CUL-DE-SAC DETAIL
WITH DUAL STORM INLET
"PREFERRED"

REV. 12/08



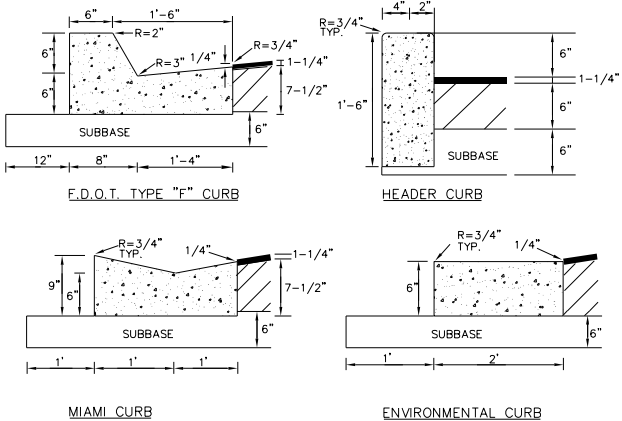
CURVE "A"	R = 25.00'
L = 21.02'	T = 11.18'
CURVE "B"	R = 38.00'
L = 32.73'	T = 17.46'

SEAL



STANDARD CONSTRUCTION DETAIL
STANDARD CUL-DE-SAC DETAIL
WITH DUAL STORM INLET
"PREFERRED"

REV. 12/08



- NOTES:
- ALL CURBS TO BE CONSTRUCTED OF 28 DAY, 3000 P.S.I. CONCRETE
 - 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED EVERY 500'
 - CONSTRUCTION JOINT REQUIRED EVERY 10' MAXIMUM (4' MINIMUM)
 - 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED AT EACH SIDE OF ALL STORM INLET STRUCTURES AND AT ALL RADIUS POINTS.
 - 6" SUBBASE TO BE COMPACTED AND TESTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST AND SHALL BE STABILIZED TO A MINIMUM L.B.R. 40.
 - EXPANSION JOINT MATERIAL MUST COVER THE ENTIRE CROSS SECTION OF CURB.
 - IN NO INSTANCE SHALL EXTRUDED CURBS (DEFINED AS HEADER-TYPE CURBS INSTALLED DIRECTLY ON TOP OF PAVEMENT) BE PERMITTED.
 - ALL ASPHALT AND/OR PAVER DRIVEWAY APRONS LOCATED IN PUBLIC RIGHTS-OF-WAY, SHALL INCLUDE CURBING.



STANDARD CONSTRUCTION DETAIL
STANDARD CURB CONSTRUCTION

REV. 12/08



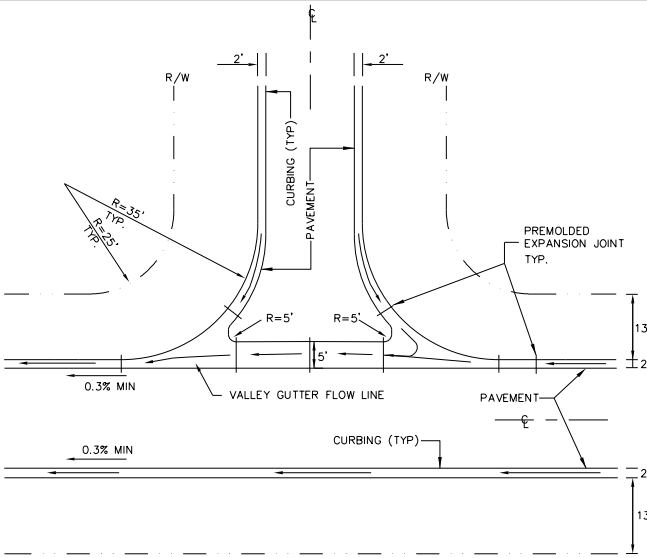
STANDARD CONSTRUCTION DETAIL
ROADWAY INTERSECTION VALLEY GUTTER

REV. 12/08

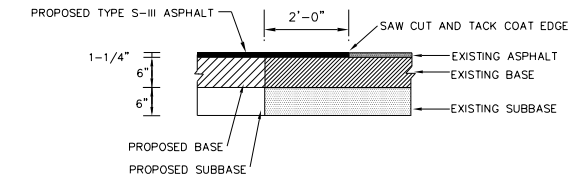


STANDARD CONSTRUCTION DETAIL
PAVEMENT BUTT JOINT

REV. 12/08



- NOTES:
- VALLEY GUTTER TO HAVE A STANDARD MINIMUM LONGITUDINAL SLOPE OF 0.30%
 - VALLEY GUTTER TO BE CONSTRUCTED OF 28 DAY, 3000 P.S.I. CONCRETE
 - 6" SUBBASE TO BE COMPACTED AND TESTED TO 98% DENSITY WITH MINIMUM L.B.R. 40 BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.
 - VALLEY GUTTERS ARE REQUIRED WHEN STORMWATER CROSSES THE INTERSECTION OF ROADWAYS AND DRIVEWAY CONNECTIONS.
 - REFER TO F.D.O.T. STANDARD INDEX No. 300



REVISIONS

No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

CITY ROAD/
DRAINAGE
DETAILS

PROJECT: CC 1\FinalSF Phase 4

SHEET NO.

C25

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D

C

B

A

<u>ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES</u>			
ALL MATERIALS AND INSTALLATION METHODS USED FOR LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS FOR SUBDIVISIONS AND SITE PLANS SHALL BE IN CONFORMANCE WITH THE CITY, FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), AND THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS (LATEST EDITION).			
1. ALL RIGHT-OF-WAY OTHER THAN ROADWAY AREAS SHALL BE GRASSED AND MULCHED OR SODDED. ALL SLOPES STEEPER THAN 6:1 SHALL REQUIRE SODDING. THE CITY RESERVES THE RIGHT TO REQUIRE SODDING IN SPECIAL AREAS WHERE EROSION IS A CONCERN.			
2. THE FOLLOWING WILL BE THE STANDARD PROTECTION FOR DITCHES UNLESS DRAINAGE CALCULATIONS INDICATE OTHERWISE:			
<u>SWALE</u>	<u>PROFILE</u>	<u>GRADES</u>	<u>PROTECTION REQUIRED</u>
	0.2%- 1.0%		GRASSING AND MULCHING
	1.0%- 4.0%		SODDING
	4.0% AND GREATER		DITCH PAVING
3. THE PAVEMENT, BASE, AND SUBBASE THICKNESS PRESENTED ON DETAILS REPRESENTS THE MINIMUM REQUIREMENTS FOR LOCAL PUBLIC STREETS AND PRIVATE PARKING LOTS. THE CITY RESERVES THE RIGHT AT IT'S DISCRETION TO INCREASE THESE REQUIREMENTS FOR COLLECTOR AND ARTERIAL ROADWAYS AND PRIVATE PARKING LOTS SUBJECTED TO HEAVY VEHICULAR COMMERCIAL TRAFFIC.			
4. THE DEVELOPER SHALL PROVIDE AT THEIR OWN EXPENSE A CERTIFIED SOILS ENGINEERING LABORATORY TO PERFORM ALL FIELD AND LABORATORY TESTING REQUIRED TO VERIFY THAT THE CONSTRUCTION IS IN COMPLIANCE WITH THE CITY'S MINIMUM STANDARDS. IT IS THE RESPONSIBILITY OF THE DEVELOPER TO ENSURE THAT COPIES OF ALL TEST REPORTS ARE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR PRIOR TO THE PROJECT FINAL INSPECTION IN ORDER TO ALLOW PROJECT ACCEPTANCE BY THE CITY.			
5. THE LIMITS OF STABILIZED SUBBASE SHALL EXTEND TO A DEPTH OF SIX INCHES (6") BELOW THE BOTTOM OF THE BASE AND OUTWARD TO TWELVE INCHES (12") BEYOND THE CURB.			
6. THE STABILIZING MATERIAL, IF REQUIRED, SHOULD BE A HIGH BEARING VALUE SOIL, SAND-CLAY, LIMEROCK, RECYCLED CONCRETE, SHELL, OR OTHER MATERIAL AS APPROVED BY THE CITY'S DESIGNATED SITE INSPECTOR AND A LICENSED SOILS ENGINEER.			
7. THE SUBBASE SHALL BE STABILIZED NOT LESS THAN FORTY (40) POUNDS LIMEROCK BEARING RATIO (LBR) TO A 6" MINIMUM DEPTH. A COMPACTION OF NO LESS THAN NINETY-EIGHT (98%) PERCENT DENSITY BASED ON AASHTO T-180 SHALL BE REQUIRED.			
8. FOR ROADWAYS, TESTS FOR SUBBASE BEARING CAPACITY AND COMPACTION SHALL BE DONE AT A MINIMUM OF EVERY 300 FEET AND SHALL BE STAGGERED TO THE LEFT, RIGHT, AND AT CENTER LINE OF THE ROADWAY. FOR SITE PLANS, TEST SHALL BE PERFORMED FOR EVERY 600 SQUARE YARDS OF STABILIZED AREA, OR PORTIONS THEREOF.			
9. BASES FOR ALL STREETS SHALL HAVE A MINIMUM SIX INCH (6") DEPTH. SOIL CEMENT BASES SHALL HAVE A STRENGTH OF 350 POUNDS PER SQUARE INCH AT 7 DAYS COMPACTED TO 98% DENSITY PER AASHTO T-99 STANDARD PROCTOR TEST IN CONFORMANCE WITH SECTION 270 OF STANDARD F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION). RECYCLED CONCRETE OR LIMEROCK BASES SHALL BE COMPACTED TO 98% MAXIMUM DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.			
	STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES		FILE NAME:
			R12.DWG
			DETAIL REF:
			R-12
		REV. 12/08	

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.) 10. SOIL CEMENT AND RECYCLED CONCRETE MIX DESIGNS SHALL BE SUBMITTED BY A LICENSED SOILS ENGINEER TO THE CITY'S DESIGNATED SITE INSPECTOR PRIOR TO THE START OF SUBBASE PREPARATION. ALL MIX DESIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY. 11. CEMENT DELIVERY TICKETS SHALL BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR AT THE TIME OF PLACEMENT. IF THE INSPECTOR IS NOT ON SITE THROUGHOUT THE ENTIRE INSTALLATION, ACCUMULATED DELIVERY TICKETS CAN BE PROVIDED TO THE INSPECTOR BY THE CONTRACTOR ON THE FOLLOWING DAY. 12. TESTING OF THE IN-PLACE BASE SHALL BE DONE AT INTERVALS EQUIVALENT TO SUBGRADE TESTING AND SHALL CONSIST OF, AS A MINIMUM, A MOISTURE CONTENT AND COMPACTION TEST. 13. PORTLAND CEMENT CONCRETE, LIMEROCK, RECYCLED CONCRETE, OR FULL DEPTH ASPHALT PAVEMENT MAY BE USED IN PLACE OF SOIL CEMENT BASE. ALL BASE AND ROADWAY DESIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY. 14. SOIL CEMENT BASE MATERIAL CONSTRUCTION SHALL BE CONTINUOUSLY SUPERVISED BY A SOILS TESTING LABORATORY AT THE DEVELOPER'S EXPENSE. THE TESTING LABORATORY SHALL PROVIDE AN ON-SITE TECHNICIAN CERTIFIED IN THE INSTALLATION OF SOIL CEMENT WITH THE CERTIFICATION RECOGNIZED BY F.D.O.T. 15. SOIL CEMENT PAVEMENT BASES WITH THE CURE COAT APPLIED SHALL BE ALLOWED TO CURE A MINIMUM OF SEVEN (7) DAYS UNDER NO TRAFFIC PRIOR TO PLACING ANY ASPHALT SURFACE. (TEST REPORTS ARE REQUIRED TO BE DELIVERED TO THE CITY'S DESIGNATED SITE INSPECTOR PRIOR TO TRAFFIC USAGE.) 16. RECYCLED CONCRETE CAN BE USED AS AN ALTERNATIVE BASE MATERIAL PROVIDED THE MATERIAL IS A MINIMUM OF 60% CARBONATE OF CALCIUM AND MAGNESIUM. THE MATERIAL SHALL BE LIMITED TO MAXIMUM OF 3" WATER SENSITIVE CLAY MATERIAL, LIQUID LIMIT SHALL NOT EXCEED 35 AND BE NON-PLASTIC, AND THE PLASTICITY INDEX SHALL NOT EXCEED 10. THE MATERIAL SHALL NOT CONTAIN ORGANIC MATERIAL, CHERTY OR OTHER EXTREMELY HARD PIECES, LUMPS, BALLS OR POCKETS OF SAND SIZE MATERIAL OF A QUANTITY AS TO BE DETRIMENTAL TO THE PROPER BONDING, FINISHING, OR STRENGTH OF THE RECYCLED CONCRETE BASE. FOR BASE APPLICATIONS, AT LEAST 97% (BY WEIGHT) OF THE MATERIAL SHALL PASS A 1" SIEVE AND FOR SUBBASE APPLICATIONS, AT LEAST 97% (BY WEIGHT) OF THE MATERIAL SHALL PASS A 1-1/2" SIEVE. FOR BOTH APPLICATIONS, THE MATERIAL SHALL BE GRADED UNIFORMLY DOWN TO DUST AND THE MINIMUM LBR VALUES ARE TO BE NOT LESS THAN 130. COARSE AGGREGATE USED IN THE RECYCLED CONCRETE SHALL HAVE A MAXIMUM LOSS OF 45% PER LOS ANGELES ABRASION TEST. ALL MATERIALS SHALL BE WELL GRADED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN SECTION 204, F.D.O.T., STANDARD SPEC. FOR ROAD AND BRIDGE CONSTRUCTION, (LATEST EDITION). 17. RECYCLED CONCRETE OR LIMEROCK FOR BASE OR SUBBASE APPLICATIONS SHALL BE ALLOWED ON CITY ROADWAYS ONLY WHERE THE LOWEST ELEVATION OF THE ROADWAY SUBBASE IS A MINIMUM OF 6" ABOVE THE SEASONAL HIGH GROUNDWATER TABLE AS CERTIFIED BY A FLORIDA LICENSED PROFESSIONAL SOILS ENGINEER AND SUBSEQUENTLY APPROVED FOR BY THE CITY. IN AREAS NOT MEETING THESE STANDARDS A SOIL CEMENT BASE WILL BE REQUIRED. ALL CRUSHING OF RECYCLED CONCRETE SHALL BE DONE PRIOR TO THE MATERIAL BEING PLACED IN THE ROADWAY. TESTING SHALL HAVE THE SAME REQUIREMENTS AND BE PERFORMED AT THE SAME LOCATION AND INTERVALS AS REQUIRED FOR LIMEROCK.		
	STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES REV. 12/08	FILE NAME: R13.DWG DETAIL REF: R-13

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.) 18. DESIGN MIXES AND PRODUCT GRADATION INFORMATION FOR ALL MATERIALS TO BE INSTALLED AS PART OF THE LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS SHALL BE SUBMITTED TO THE CITY'S DESIGNATED SITE INSPECTOR FOR ACCEPTANCE BY THE CITY. THE INFORMATION SHALL BE SUBMITTED NO LESS THAN THREE (3) WORKING DAYS PRIOR TO ANY CONSTRUCTION. SUBMITTALS SHALL INCLUDE, BUT NOT BE LIMITED TO, INFORMATION TO EVALUATE THE MATERIALS PROPOSED FOR INSTALLATION AS SUBBASE, BASE, AND PAVEMENT FOR ALL ROADWAY AND PARKING AREA SURFACES AS WELL AS SIMILAR INFORMATION FOR ALL OTHER CONCRETE SIDEWALKS, CURBING, AND COMPARABLE STRUCTURES AND APPLICATIONS. 19. ALL WEARING COURSE HOT MIX AGGREGATES SHALL BE VIRGIN MATERIAL. THE USE OF RECYCLED ASPHALT MATERIAL (RAP) IN WEARING COURSE MIXES IS NOT ALLOWED. 20. PRIOR TO PLACEMENT FLORIDA STATE CERTIFIED BATCH PLANTS MUST CERTIFY TO THE CITY'S RESIDENT PROJECT INSPECTOR THAT THE ASPHALT DELIVERED TO THE SITE IS IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. 21. EXTRACTION AND GRADATION TESTS ON ASPHALT MIXES SHALL BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR FOR EVERY 2500 SQUARE YARDS OF ASPHALT, OR PART THEREOF, TO ENSURE THAT DESIGN MIXES MEET THE CITY STANDARD 22. FIELD TESTING OF THE ASPHALT PAVEMENT SHALL BE DONE AT INTERVALS EQUIVALENT TO SUBGRADE TESTING AND SHALL CONSIST OF, AS A MINIMUM, A COMPACTION TEST. ASPHALT PAVEMENT SHALL BE COMPACTED TO 98% DENSITY PER FM 1-T238 (METHOD B), NUCLEAR DENSITY TEST, "BACKSCATTER METHOD". 23. IN ADDITION TO THE FIELD DENSITY TESTS NOTED, THE CITY RESERVES THE RIGHT TO REQUIRE CORE SAMPLES OF PAVEMENT SECTIONS EXTRACTED AND TESTED BY A CERTIFIED SOILS ENGINEERING LABORATORY AT THE DEVELOPER'S EXPENSE. THE CITY'S DESIGNATED SITE INSPECTOR SHALL DESIGNATE THE LOCATIONS OF THE TEST CORE LOCATIONS. 24. THE ROADWAY CROWN SHALL HAVE A STANDARD ONE QUARTER INCH (1/4") PER FOOT SLOPE. 25. ALL ROADWAYS WITH CURB AND GUTTER SECTIONS SHALL HAVE AS A STANDARD A MINIMUM LONGITUDINAL SLOPE OF 0.30%. THE ROADWAY CENTERLINE SHALL BE CLEARLY MARKED ON THE DESIGN PLANS. AT A MINIMUM, DESIGN ROADWAY CENTERLINE ELEVATIONS SHALL BE NOTED AT ALL GRADE CHANGES AND AT 100' INTERVALS ALONG THE ROADWAY PROFILE ON BOTH THE DESIGN PLANS AND AS-BUILT DRAWINGS. 26. THE FINISHED PAVEMENT EDGE SHALL BE WITHIN ONE QUARTER INCH (1/4") ABOVE THE ADJACENT CONCRETE CURB FOR CURBS COLLECTING AND CONVEYING STORMWATER. 27. CONCRETE CURBS SHALL BE PROVIDED ON BOTH SIDES OF ALL STREETS AND ALL CONCRETE CURBS SHALL BE CONSTRUCTED WITH 3000 P.S.I. CONCRETE AT 28 DAYS.		
	STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES REV. 12/08	FILE NAME: R14.DWG DETAIL REF: R-14

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.) 27. CONCRETE CURBING, SIDEWALKS, PAVEMENT AND SIMILAR CONCRETE AREAS SHALL BE SAW CUT WITHIN 4 TO 18 HOURS OF PLACEMENT. SAW CUTS SHALL BE 1/4" IN WIDTH TO A DEPTH OF 1/4 OF THE TOTAL DEPTH OF CONCRETE OR 1-1/2", WHICHEVER IS LESS. SAW CUTS SHALL BE LOCATED AT INTERVALS OF TEN FEET (10') WITH EXPANSION JOINTS AT STREET INTERSECTIONS, RADIUS POINTS, STRUCTURES, AND ALONG CURVES AT SIXTY FEET (60') INTERVALS. ALL EXPANSION JOINT MATERIAL IS REQUIRED TO BE INSTALLED THROUGH THE ENTIRE DEPTH OF THE CONCRETE CURB. FOR LINEAL SECTIONS OF CURBS, EXPANSION JOINTS SHALL BE LOCATED AT A MAXIMUM SPACING OF FIVE-HUNDRED FEET (500') AND SHALL BE 1/2" IN WIDTH. 28. AN "X" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF WATER DISTRIBUTION SYSTEM VALVE. 29. A "V" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL SEWER SERVICES. 30. A "L" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL RECLAIMED WATER SERVICES. 31. A "A" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL POTABLE WATER SERVICES. 32. THREE (3) CONCRETE CYLINDERS SHALL BE TAKEN AND TESTED (1 IN 14 DAYS AND 1 IN 28 DAYS) FOR EVERY SEVENTY-FIVE (75) CUBIC YARDS OF CONCRETE OR LESS PLACED. TEST RESULTS SHALL THEN BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR AS THEY BECOME AVAILABLE. 33. A CONCRETE SLUMP TEST SHALL BE REQUIRED WITHIN THE FIRST 30 CUBIC YARDS OF CONCRETE. THEREAFTER, SLUMP TESTS SHALL BE REQUIRED FOR EVERY THIRTY (30) CUBIC YARDS OF CONCRETE, OR FRACTION THEREOF, WITH COPIES OF THE RESULTS PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR. THE SLUMP TEST SHALL MEET THE REQUIRED MIX DESIGN ON EACH LOAD DELIVERED. 34. THE DEVELOPER SHALL PROVIDE ALL REQUIRED PAVEMENT MARKINGS ON ALL ROADWAYS PER CITY, COUNTY, AND STATE REQUIREMENTS. CENTERLINE STRIPES SHALL BE PROVIDED ON EXTENSIONS OF CITY COLLECTOR OR ARTERIAL ROADS, COUNTY ROADS, STATE HIGHWAYS, AND ALONG LOCAL STREETS IN THE VICINITY OF THEIR INTERSECTION WITH THE ABOVE MENTIONED ROADWAYS. 35. A FDOT APPROVED STOP SIGN AND A 24"-WIDE WHITE THERMOPLASTIC STOP BAR ARE REQUIRED AT ALL ROADWAY INTERSECTIONS. 36. ALL TRAFFIC CONTROL DEVICES PLACED AT INTERSECTIONS, PRIVATE STREETS, PUBLIC STREETS, COUNTY ROADS, AND STATE HIGHWAYS WITHIN THE CITY LIMITS SHALL BE INSTALLED ACCORDING TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. THE MAINTENANCE-OF-TRAFFIC (MOT) INSTALLATION AND SUBSEQUENT OPERATION SHALL BE OVERSEEN BY A CONTRACTOR CERTIFIED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION, OR EQUIVALENT CERTIFICATION RECOGNIZED BY FDOT.		
	STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES REV. 12/08	FILE NAME: R15.DWG DETAIL REF: R-15

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.)		
37. THE DEVELOPER IS RESPONSIBLE FOR PAYING FEES FOR TRAFFIC CONTROL DEVICES TO THE CITY FOR INSTALLATION. STREET SIGNS AND STOP SIGNS SHALL BE PLACED AT ALL INTERSECTIONS, INCLUDING BUT NOT LIMITED TO PRIVATE STREETS, PUBLIC STREETS, COUNTY ROADS, AND STATE HIGHWAYS WITHIN THE CITY LIMITS.		
38. THE DEVELOPER IS RESPONSIBLE FOR PAYING FEES FOR ALL STREET LIGHTS PRIOR TO ACCEPTANCE OF THE PROJECT BY THE CITY.		
39. FOUR FOOT (4') WIDE SIDEWALKS SHALL BE PROVIDED ON BOTH SIDES OF ALL RESIDENTIAL STREETS. (SEE DETAIL, INDEXES M-2 AND M-3)		
40. BIKE PATHS SHALL BE CONSTRUCTED EIGHT FEET (8') IN WIDTH ALONG ARTERIAL HIGHWAYS AS DIRECTED BY THE CITY. (SEE DETAIL, INDEXES M-2 AND M-3)		
41. <u>STANDARD TURNING RADII FOR INTERSECTIONS:</u>		
RESIDENTIAL STREETS WITH STATE & COUNTY ROADWAYS OR MAJOR THOROUGHFARES WITHIN THE CITY	35-50 FT.	
ENTRANCES TO COMMERCIAL SITES OFF OF CITY STREETS	35 FT.	
INTERSECTIONS INTERIOR IN SUBDIVISIONS	35 FT.	
SHOULD VOLUSIA COUNTY OR THE FLORIDA DEPARTMENT OF TRANSPORTATION (F.D.O.T.) DETERMINE THAT LARGER RADII ARE WARRANTED WITHIN THEIR RIGHT-OF-WAY, THE LARGER RADII SHALL PREVAIL.		
42. CONSTRUCTION METHODS AND DESIGN FOR CONCRETE PAVEMENT SHALL CONFORM TO FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.		
43. ALL CONTRACTORS THAT ARE PERFORMING THE CONSTRUCTION OF LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS (INCLUDING WATER MAINS, SANITARY SEWER MAINS, RECLAIMED WATER MAINS, STORM WATER PIPES AND INLETS, ROADWAYS, AND PARKING FACILITIES) SHALL BE CERTIFIED WITH THE STATE OF FLORIDA BOARD OF PROFESSIONAL REGULATIONS (BPR) FOR THE TYPE OF WORK THAT THEY PERFORM.		
44. ALL CONTRACTORS THAT ARE PERFORMING THE CONSTRUCTION WORK OF LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS SHALL BE LICENSED BY THE STATE OF FLORIDA AND REGISTERED WITH THE CITY OF PORT ORANGE. THE LICENSE AND REGISTRATION SHALL PERTAIN DIRECTLY TO THE TYPE OF WORK BEING PERFORMED.		
45. EXCEPT AS PROVIDED IN THE LAND DEVELOPMENT CODE, ALL ELECTRIC, TELEPHONE, TELEVISION LINES AND SIMILAR UTILITIES ARE REQUIRED TO BE INSTALLED UNDERGROUND AT THE EXPENSE OF THE OWNER, DEVELOPER, AND BUILDER.		
	STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES	FILE NAME:
		R16.DWG
		DETAIL REF:
		R-16
REV. 12/08		

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.) 46. UTILITY DEPTH: A. HIGH VOLTAGE UTILITIES SUCH AS POWER (FEEDER, SERVICE, AND DROPS) SHALL BE BURIED A MINIMUM OF 30 INCHES IN DEPTH. B. LOW VOLTAGE UTILITIES SUCH AS PHONE AND CABLE TV SHALL BE BURIED A MINIMUM OF 18 INCHES IN DEPTH FOR FEEDER AND SERVICES. SERVICE DROPS SHALL BE BURIED A MINIMUM OF 12 INCHES IN DEPTH. C. IN NO INSTANCE SHALL THE DEPTH OF COVER BE LESS THAN 30" FROM FINISHED GRADE TO THE TOP OF PIPE FOR POTABLE WATER MAINS, SANITARY SEWER MAINS, AND RECLAIMED WATER MAINS. HOWEVER, IN THE EVENT THAT THIS CONDITION CANNOT BE MET DUE TO UNANTICIPATED CONFLICTS DURING THE CONSTRUCTION PROCESS, DUCTILE IRON PRESSURE CLASS 350 OR CONCRETE ENCASEMENT MAY BE USED AS APPROVED BY THE CITY PUBLIC UTILITIES DEPARTMENT. 47. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF UNDERGROUND AND OVERHEAD PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.		
	STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES REV. 12/08	FILE NAME: R17.DWG DETAIL REF: R-17

TECHNICAL SPECIFICATIONS FOR SITE PLANS AND SUBDIVISIONS TESTING A. <u>MATERIALS</u> THE INSPECTION AND TESTING OF MATERIALS AND FINISHED ARTICLES TO BE INCORPORATED IN THE WORK SHALL BE MADE BY BUREAUS, LABORATORIES, OR AGENCIES APPROVED BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL SUBMIT SUCH SAMPLES, OR SUCH SPECIAL OR TEST PIECES OF MATERIALS AS THE ENGINEER OF RECORD MAY REQUIRE. THE CONTRACTOR SHALL NOT INCORPORATE ANY MATERIAL OR FINISHED ARTICLE INTO THE WORK UNTIL THE RESULTS OF THE INSPECTIONS OR TESTS ARE KNOWN AND THE CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER OF RECORD THAT THE MATERIAL OR FINISHED ARTICLE IS ACCEPTED. ALL MATERIALS MUST BE OF THE SPECIFIED QUALITY AND BE EQUAL TO THE APPROVED SAMPLE IF A SAMPLE HAS BEEN SUBMITTED. CERTIFIED COPIES OF ALL TESTS MADE SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AS WELL AS TO THE CITY'S DESIGNATED SITE INSPECTOR. THE CITY'S DESIGNATED SITE INSPECTOR MUST RECEIVE COPIES OF ALL TESTING REPORTS AND CERTIFICATES PRIOR TO THE ENGINEER OF RECORD REQUESTING A FINAL PROJECT INSPECTION FROM THE CITY. B. <u>LABORATORY CONTROL AND CERTIFICATES</u> 1. <u>SPECIFICATIONS</u> : SAMPLING, TESTING, AND LABORATORY METHODS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE AASHTO OR ASTM. WHERE AASHTO OR ASTM SPECIFICATIONS ARE USED, THE REFERENCE SHALL BE CONSTRUED TO BE THE MOST RECENT STANDARD SPECIFICATIONS OR TENTATIVE SPECIFICATIONS OF THE AASHTO OR ASTM IN FORCE ON THE DATE OF THE TEST. 2. <u>TEST & CERTIFICATES</u> . THE CONTRACTOR SHALL ENGAGE AN APPROVED TESTING LABORATORY TO PROVIDE THE FOLLOWING TESTS AND CERTIFICATIONS SIGNED BY A REGISTERED ENGINEER OF THE STATE OF FLORIDA. ALL TECHNICIANS PERFORMING THE TESTS SHALL BE STATE CERTIFIED FOR THE TESTING PERFORMED. ADDITIONAL TESTS THAT MAY BE REQUIRED BY EITHER THE ENGINEER OF RECORD OR THE CITY SHALL ALSO BE PROVIDED BY THE CONTRACTOR, AND THE FOLLOWING SHALL NOT BE TAKEN AS A COMPLETE AND EXHAUSTIVE LIST OF THE CONTRACTOR'S TESTING RESPONSIBILITIES. A. SOIL ANALYSIS FOR STRUCTURAL FILL MATERIAL PRIOR TO INSTALLATION. B. PROCTOR DENSITIES, MOISTURE CONTENT, COMPACTED FIELD DENSITIES, AND ATTERBERG LIMITS C. SOIL CEMENT MIX DESIGNS AND COMPRESSIVE STRENGTH TESTS (FOR SOIL CEMENT ROAD BASE ONLY). D. SUPERVISION OF ALL SOIL CEMENT BASE CONSTRUCTION. E. ANALYSIS OF RECYCLED CONCRETE BASE MATERIAL PRIOR TO INSTALLATION. F. ASPHALT MIX DESIGN, BITUMEN CONTENT, SIEVE ANALYSIS, HUBBARD FIELD STABILITY TESTS, NUCLEAR DENSITY TESTS (BACKSCATTER METHOD), AND ANALYSIS OF CORE SAMPLES G. CONCRETE MIX DESIGNS FOR ALL APPLICATIONS INCLUDING PAVEMENT, CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS AND DRIVEWAYS. H. COMPRESSIVE TEST CYLINDERS AND SLUMP TESTS FOR ALL APPLICATIONS OF CONCRETE, INCLUDING PAVEMENT, CAST-IN-PLACE STRUCTURES, CURBING, GUTTERS, SIDEWALKS, BIKE PATHS, APRONS, AND DRIVEWAYS. I. CHLORINE RESIDUAL AND BACTERIOLOGICAL TESTING OF WATER MAINS. J. PRESSURIZED LEAK TESTING OF WATER MAINS, FORCE MAINS, AND RECLAIMED WATER MAINS.		
	STANDARD CONSTRUCTION DETAIL TECHNICAL SPECIFICATIONS FOR SITE PLANS AND SUBDIVISIONS TESTING REV. 12/08	FILE NAME: R18.DWG DETAIL REF: R-18

SUBDIVISION TECHNICAL SPECIFICATIONS:
SODDING, SEEDING AND MULCHING

A. SCOPE OF WORK THE WORK IN THIS SECTION CONSISTS OF FURNISHING AND COMPLETELY INSTALLING SOD, OR SEED AND MULCH OVER THE LIMITS CALLED FOR ON THE CONSTRUCTION DRAWINGS. AT A MINIMUM, ALL WORK SHALL MEET THE MINIMUM SPECIFICATIONS OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, AS OUTLINED IN SECTIONS 570 (GRASSING BY SEEDING) AND 575 (SODDING). IN ADDITION, ALL WORK SHALL MEET THE MINIMUM REQUIREMENTS OF THE CITY.

B. MATERIALS GRASS SEED SHALL BE A MIXTURE OF:

PENSACOLA BAHIA	50%
(USE 50 % SCARIFIED SEED)	
HULLED BERMUDA	25%
BROWN TOP MILLET	25%

IN THE FALL AND WINTER MONTHS, AND WITH THE APPROVAL OF THE CITY, ANNUAL RYE GRASS SHALL BE SUBSTITUTED IN EQUAL AMOUNTS FOR THE BROWN TOP MILLET. SEED SHALL BE PRE-MIXED BY A SEED COMPANY TO THE PERCENTAGES DESCRIBED ABOVE, WITH CERTIFICATION FROM THE SUPPLIER PROVIDED TO THE CITY'S DESIGNATED PROJECT LANDSCAPE INSPECTOR PRIOR TO USE.

MULCH USED SHALL BE STRAW OR HAY CONSISTING OF OATS, RYE, OR WHEAT STRAW, OR OF PANOLA, PEANUT, COASTAL BERMUDA, OR BAHIA GRASS HAY. MULCH SHALL BE FREE FROM UNDESIRABLE WEED AND OTHER UNDESIRABLE GRASS.

C. METHODS. GRASSING SHALL BE DONE IMMEDIATELY UPON COMPLETION OF THE FINE GRADING OPERATION. HOWEVER, NO SEEDING SHALL BE DONE WHEN THE GROUND IS FROZEN OR UNDULY WET. THE RATE OF SPREAD FOR THE SEED MATERIAL SHALL BE ONE HUNDRED AND THIRTY (130) POUNDS PER ACRE.

APPROXIMATELY ONE INCH (1"), LOOSE THICKNESS, OF MULCH MATERIAL SHALL BE APPLIED UNIFORMLY OVER THE SEEDED AREAS (APPROXIMATELY ONE AND ONE-HALF (1-1/2) BALES PER 1000 SQUARE FEET). THE MULCH MATERIAL SHALL BE CUT INTO THE SOIL WITH A DISC HARROW OR OTHERWISE ANCHORED DOWN. UNDER PROPER CIRCUMSTANCES, CONTRACTOR MAY REQUEST OPTION TO INSTALL HYDRO-SEEDING SUBJECT TO THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT AND THE CITY

STANDARD CONSTRUCTION DETAIL

SUBDIVISION

TECHNICAL SPECIFICATIONS:
SODDING, SEEDING AND MULCHING

REV. 12/08

FILE NAME:

R20.DWG

DETAIL REF:

R-20



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ENGINEERING BUSINESS -8794

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017

REVISIONS

No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

CITY ROAD/
DRAINAGE
DETAILS

PROJECT: CC 11\FinalSF Phase 4

SHEET NO.

C26

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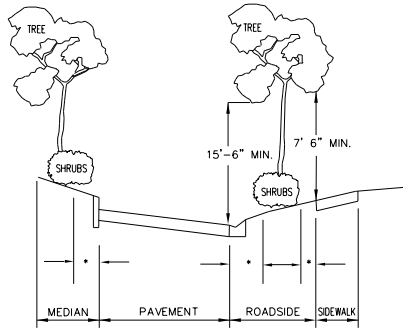
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C

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A



ROADWAY CLEAR ZONES (*)					
TYPE FACILITY	DESIGN SPEED (MPH)				
	25 & BELOW	30	35	40	45+
DISTANCE FROM EDGE OF PAVEMENT	6'	6' LOCAL 10' COLLECTOR 14' ARTERIAL	6' LOCAL 10' COLLECTOR 14' ARTERIAL	10' COLLECTOR 14' ARTERIAL	F.D.O.T. STANDARD
DISTANCE FROM SIDEWALK	1.5	1.5	1.5	1.5	F.D.O.T. STANDARD

* SEE NOTES ON SHEET R-21B *



STANDARD CONSTRUCTION DETAIL
ROADWAY AND MISCELLANEOUS LANDSCAPING
DESIGN AND CONSTRUCTION NOTES

REV. 12/08

FILE NAME:
R21A.DWG
DETAIL REF:
R-21A

ROADWAY AND MISCELLANEOUS LANDSCAPING
DESIGN AND CONSTRUCTION NOTES (CONTD.)

NOTES:

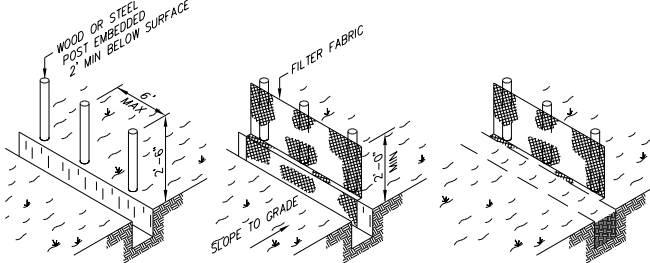
1. THE CLEAR ZONE MAY BE REDUCED ON A CASE BY CASE BASIS IF THE MINIMUM OFFSET CANNOT BE REASONABLY OBTAINED OR IF A NON-MOUNTABLE CURB TYPE IS INSTALLED.
2. TREES IN EXCESS OF 12" CALIPER AT MATURITY AND MULTI-TRUNKED PALMS SHALL BE SET BACK TO TWICE THE MINIMUM CLEAR ZONE (2 X *).
3. WHERE PAVEMENT WIDENING IN ACCORDANCE WITH FDOT STANDARDS IS NOT PROVIDED IN HORIZONTAL CURVES, ADDITIONAL CLEAR ZONE SHALL BE PROVIDED EQUAL TO THE REQUIRED PAVEMENT WIDENING.
4. CLEAR ZONES ON CURBED ROADS SHALL BE MEASURED FROM THE FACE OF CURB OR FROM THE EDGE OF THE THROUGH LANE ON RURAL ROADS. CURBED STREETS ARE FOR HIGH BACK CURBS ONLY.
5. SHRUBS ADJACENT TO SIDEWALKS AND WITHIN INTERSECTION SIGHT TRIANGLES CANNOT EXCEED 24" ABOVE THE LOWEST ADJACENT ROADWAY GRADE. ALL OTHER SHRUBS MUST BE LESS THAN OR EQUAL TO 30 INCHES IN HEIGHT.
6. INSTALLATION OF LANDSCAPING IN PUBLIC RIGHTS-OF-WAY REQUIRES EXECUTION OF A "USE AGREEMENT" BETWEEN THE DEVELOPER AND THE CITY. FOR INSTANCES WHERE THE STREETS AND PRIVATE AND PUBLIC UTILITY EASEMENTS ARE PROVIDED, THE DEVELOPER MAY BE REQUIRED TO OBTAIN A RELEASE FROM THE FRANCHISE UTILITIES IN ORDER TO INSTALL THE LANDSCAPING IMPROVEMENTS.
7. LANDSCAPING PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF UNDERGROUND AND OVERHEAD PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.
8. SHRUBS, UNDERSTORY, TREES AND PALMS SHALL BE ALLOWED IN THE RIGHT-OF-WAY WITH EXISTING AND PROPOSED UTILITIES. SHADE TREES, ESPECIALLY THOSE WITH AGGRESSIVE ROOT SYSTEMS, WILL REQUIRE SPECIFIC CITY APPROVAL.
9. SHADE TREES MUST NOT BE PLANTED UNDER OR DIRECTLY ADJACENT TO OVERHEAD UTILITIES THAT WOULD REQUIRE EXCESSIVE PRUNING TO AVOID THE UTILITY LINES.
10. TREES WITH AGGRESSIVE ROOT SYSTEMS SHALL REQUIRE SOME FORM OF ROOT GUIDING SYSTEM TO PREVENT THE UPHEAVAL OF ADJACENT ROADWAY PAVEMENT AND/OR SIDEWALKS.



STANDARD CONSTRUCTION DETAIL
ROADWAY AND MISCELLANEOUS LANDSCAPING
DESIGN AND CONSTRUCTION NOTES

REV. 12/08

FILE NAME:
R21B.DWG
DETAIL REF:
R-21B



NOTES:

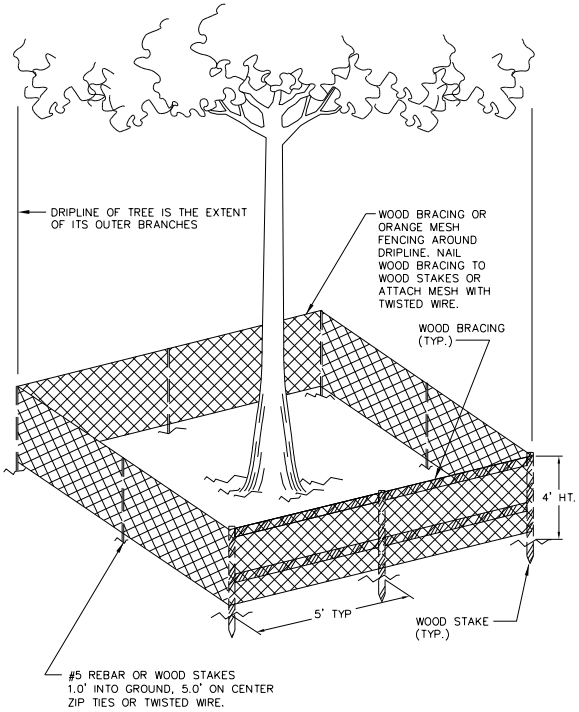
1. MATERIALS, CONSTRUCTION METHODS AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND DESIGN STANDARDS CURRENT EDITION.
2. CONTRACTOR SHALL PROVIDE SILT FENCES, SYNTHETIC JUTE BALES, WATTLES, &/OR HAVE BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED AT ALL STORMWATER DISCHARGE POINTS FOR EROSION CONTROL AND SEDIMENT CONTROL DURING CONSTRUCTION.
3. CONTRACTOR SHALL ROUGH GRADE STORM- WATER SWALES AND RETENTION AREAS PRIOR TO CONSTRUCTION OF SITE IMPROVEMENTS.
4. CONTRACTOR SHALL MEET ALL PERMIT CONDITIONS AS ESTABLISHED BY THE CITY OF PORT ORANGE AND ALL OTHER APPLICABLE AGENCIES, INCLUDING BUT NOT LIMITED TO COUNTY, FDOT, AND THE SJRWMD.
5. CONTRACTOR WILL BE ALLOWED TO USE A SMALL PIECE OF EQUIPMENT UP TO THE SIZE AND WEIGHT OF A D-3 DOZER TO CLEAR A NARROW PATH TO INSTALL THE SILT FENCE.



STANDARD CONSTRUCTION DETAIL
SILT FENCE TURBIDITY BARRIER

REV. 12/08

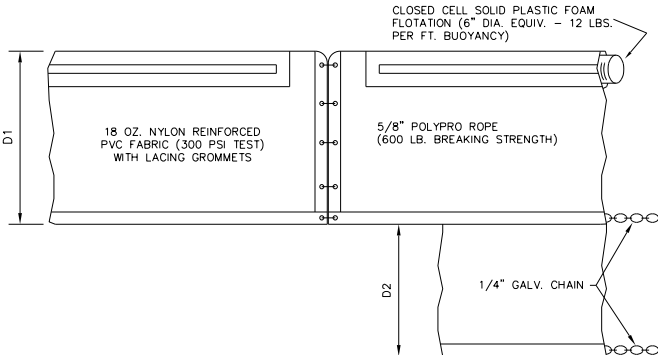
FILE NAME:
R22.DWG
DETAIL REF:
R-22



STANDARD CONSTRUCTION DETAIL
TREE PROTECTION BARRICADE

REV. 12/08

FILE NAME:
R23.DWG
DETAIL REF:
R-23



FLOATING TURBIDITY BARRIER
F.D.O.T. INDEX NO. 103

D1 - 5 FT. STD. SINGLE PANEL FOR DEPTHS 5 FT. OR LESS
D2 - 5 FT. STD. ADDITIONAL PANEL FOR DEPTHS GREATER THAN 5 FT.
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FT.
TWO PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FT.



STANDARD CONSTRUCTION DETAIL
FLOATING TURBIDITY BARRIER

REV. 12/08

FILE NAME:
R24.DWG
DETAIL REF:
R-24

CONTRACTOR REQUIREMENTS FOR SITE CLEARING,
GRADING, AND EROSION CONTROL DESIGN AND
CONSTRUCTION NOTES

THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO BE EMPLOYED WHEN WARRANTED BY EXTREME CONDITIONS AND/OR THE FAILURE OF THE CONTRACTOR TO EMPLOY THE APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES. FAILURE TO COMPLY WITH THESE PROVISIONS SHALL RESULT IN THE ISSUANCE OF A "STOP WORK ORDER".

1. NO DISTURBANCE OF PROPOSED CONSERVATION EASEMENTS, NATURAL BUFFERS, OR WATER BODIES IS PERMITTED. THE CONTRACTOR SHALL LOCATE THESE AREAS ON SITE AND BARRICADE THEM TO AVOID ANY UNAUTHORIZED BARE CLEARING, BARRICADES, AND OTHER PROTECTIVE FENCING ARE TO BE LOCATED AT THE DRIP LINE OF EXISTING NATIVE TREES OR AT THE EDGE OF THE NATIVE UNDER- STORY HABITAT, WHICHEVER IS NEAREST TO THE CONSTRUCTION ACTIVITY.
2. SPECIMEN AND HISTORIC TREES, CONSERVATION EASEMENTS, NATURAL VEGETATION BUFFERS, AND SIMILAR AREAS MUST BE PROTECTED BY BARRICADES OR FENCING PRIOR TO CLEARING. BARRICADES ARE TO BE SET AT THE DRIP LINE OF THE TREES AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. BARBED WIRE IS NOT PERMITTED AS A PROTECTIVE BARRIER.
3. WHERE A CHANGE OF GRADE OCCURS AT THE DRIP LINE OF A SPECIMEN TREE, SILT FENCES WILL BE REQUIRED DURING CONSTRUCTION AND RETAINING WALLS MUST BE INSTALLED PRIOR TO FINAL ACCEPTANCE BY THE CITY.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL PROTECTIVE VEGETATION BARRICADES AND EROSION CONTROL STRUCTURES AND MEASURES IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK, INCLUDING PRELIMINARY GRUBBING. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, TEMPORARY CONSTRUCTION FENCES, SYNTHETIC JUTE BALES, WATTLES, &/OR HAVE BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED, SILT FENCES, AND FLOATING TURBIDITY BARRIERS. FURTHER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL EROSION CONTROL DEVICES THROUGHOUT THE DURATION OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE PERIODIC INSPECTION AND REMOVAL OF DEBRIS ABUTTING EROSION CONTROL DEVICES AS SPECIFICALLY IDENTIFIED IN CHAPTER 10, ARTICLE I, SECTION 5 OF THE LAND DEVELOPMENT CODE.
5. PRIOR TO THE INSTALLATION OF ANY FILL MATERIALS ON SUBJECT SITE, SILT FENCES SHALL BE INSTALLED (1) ALONG SUBJECT SITE BOUNDARY AND PROPERTY LINES, (2) AT THE EDGE OF CONSERVATION EASEMENTS AND WETLANDS, (3) ADJACENT TO NATURAL LANDSCAPE BUFFERS, (4) AROUND THE PERIMETER OF EXISTING STORM WATER TREATMENT FACILITIES, AND (5) AT ANY ADDITIONAL AREAS THAT THE CITY DEEMS NECESSARY TO BE PROTECTED FROM POTENTIAL EROSION IMPACTS DURING CONSTRUCTION. THESE CONDITIONS SHALL APPLY IN ALL INSTANCES WHERE FILL MATERIAL IS BEING INSTALLED WITHIN 25 FEET OF ANY OF THE AFOREMENTIONED LOCATIONS. WHILE THESE ITEMS REPRESENT THE MINIMUM REQUIREMENTS, THE CITY RESERVES THE RIGHT TO IMPOSE ADDITIONAL PROTECTIVE MEASURES, AS DETERMINED DURING ACTUAL SITE VISITS CONDUCTED AS PART OF THE STANDARD REVIEW OF THE SITE-SPECIFIC ABC CLEARING PERMIT APPLICATION AND THROUGHOUT PROJECT CONSTRUCTION.
6. WHERE FILL MATERIAL IS INTENDED TO BE INSTALLED ADJACENT TO EXISTING VEGETATION WHICH IS INTENDED TO REMAIN NATURAL, THE CONTRACTOR MAY INSTALL SILT FENCING AS A TREE PROTECTION MEASURE. IN LIEU OF INSTALLING EITHER WOOD BRACING OR ORANGE MESH FENCING, THIS PRACTICE IS ENCOURAGED BY THE CITY. IF THE SILT FENCE FAILS TO PROVIDE ADEQUATE PROTECTION FROM IMPACT DUE TO CONSTRUCTION, THEN ADDITIONAL CONSTRUCTION FENCING OR WOOD BRACING SHALL BE REQUIRED.
7. AT A MINIMUM, THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. SUFFICIENT GRASS COVERAGE IS TO BE ESTABLISHED WITHIN TWO WEEKS.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGH SCHEDULING, TO MINIMIZE THE DISTURBANCE OF SITE AREAS THAT HAVE BEEN BROUGHT TO THEIR PROPOSED FINAL GRADE. WITHIN SEVEN (7) DAYS OF BRINGING A SUBJECT AREA TO ITS FINAL GRADE OR INACTIVITY IN CONSTRUCTION, THE CONTRACTOR SHALL INSTALL SEED AND MULCH OR SOD, AS REQUIRED.



STANDARD CONSTRUCTION DETAIL
CONTRACTOR REQUIREMENTS FOR
SITE CLEARING, GRADING, AND EROSION CONTROL
DESIGN AND CONSTRUCTION NOTES

REV. 04/10

FILE NAME:
R25.DWG
DETAIL REF:
R-25

CONTRACTOR REQUIREMENTS FOR SITE CLEARING,
GRADING, AND EROSION CONTROL DESIGN AND
CONSTRUCTION NOTES (CONTD.)

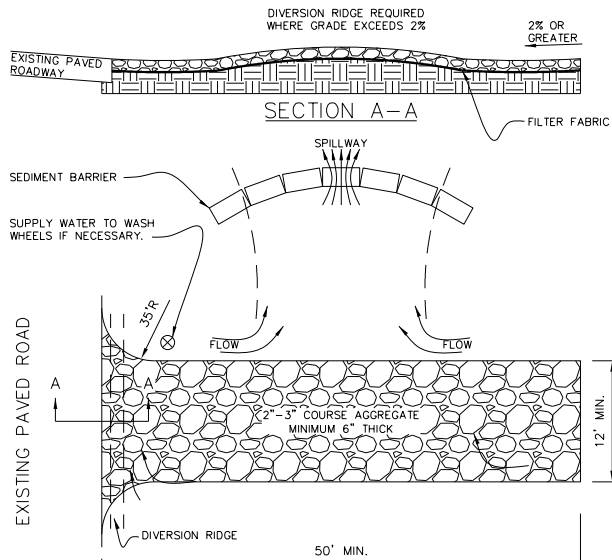
9. FOR INDIVIDUAL CONSTRUCTION PROJECTS INVOLVING MULTIPLE PHASES, (PHASING IS REQUIRED FOR SITES 30 ACRES AND LARGER) UPON COMPLETION OF EACH PHASE OF THE PROJECT, SEEDING AND MULCHING AND /OR SODDING IS TO BE PERFORMED PRIOR TO COMMENCING THE NEXT PHASE OF CONSTRUCTION.
10. ONCE AN AREA IS SEEDDED OR SODDED, IT MUST BE MAINTAINED BY THE CONTRACTOR TO ALLOW THE GRASS TO BECOME ESTABLISHED. IF THE GRASS IS NOT ESTABLISHED WITHIN TWO WEEKS THE CITY MAY REQUIRE THE CONTRACTOR TO RE-SEED OR A NON-VEGETATIVE OPTION MAY BE EMPLOYED.
11. ANY BURNING OF CLEARED MATERIALS MUST BE INSPECTED AND PERMITTED ON A DAILY BASIS. CONTACT THE FIRE MARSHALL AT 756-5401 PRIOR TO EACH DAY OF DESIRED BURNING.
12. ABSOLUTELY NO BURYING OF CLEARED MATERIALS IS PERMITTED.
13. THE REMOVAL OF ALL VEGETATION AND TOPSOIL ON THE FUTURE ROADWAY, PARKING AND BUILDING LOT AREAS IS REQUIRED TO BE COMPLETED PRIOR TO THE PLACEMENT OF FILL ON THOSE AREAS. THE TOPSOIL MAY BE TEMPORARILY STOCKPILED AND USED AS TOPSOIL OVER OVER PROPOSED GREEN AREAS SUCH AS PLANT BEDS, SODDED AREAS, AND WHERE TREES ARE TO BE INSTALLED OR RELOCATED.
14. A SIGNED, DATED, AND SEALED LETTER FROM A SOILS ENGINEER OR THE ENGINEER OF RECORD CERTIFYING THAT THE AREAS TO BE FILLED HAVE BEEN STRIPPED OF ORGANIC MATERIALS, MUST BE SUBMITTED TO THE CITY PRIOR TO FILLING.
15. FILL MATERIAL IS TO BE PLACED IN ONE FOOT LIFTS AND COMPACTED TO THE APPROPRIATE DENSITY (98% FOR PAVED AREAS AND 95% FOR BUILDING PADS AND ALL OTHER AREAS AS PER AASHTO T-180).
16. DURING SUBDIVISION DEVELOPMENT WHEN FUTURE BUILDING LOTS ARE FILLED AS PART OF THE OVERALL SUBDIVISION IMPROVEMENTS, COMPACTION TEST REPORTS MUST BE PERFORMED ON THE BUILDING LOTS AT 300 FOOT INTERVALS. THESE TESTS ARE TO BE PERFORMED IN ONE-FOOT VERTICAL INCREMENTS. THE RESULTS OF THESE TESTS ARE TO BE SUBMITTED TO THE CITY UPON COMPLETION OF THE TESTS.
17. IF ANY MUCK MATERIAL IS DISCOVERED, IT SHALL BE REQUIRED TO BE REMOVED AND REPLACED WITH A SUITABLE MATERIAL THAT IS PROPERLY BACKFILLED, COMPACTED AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
18. STOCKPILING IS NOT GENERALLY PERMITTED BY THE CITY. WHEN ALLOWED, STOCKPILES SHALL NOT EXCEED SIX FEET IN HEIGHT MEASURED FROM THE ORIGINAL GRADE. AT A MINIMUM, STOCK PILES THAT WILL REMAIN IN PLACE IN EXCESS OF TWENTY DAYS SHOULD BE SEEDDED AND MULCHED IMMEDIATELY UPON COMPLETION OF THE FINAL FILL.
19. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES. ADEQUATE WATERING METHODS SHOULD BE EMPLOYED TO ALLOW DAILY COVERAGE OF THE ENTIRE LIMITS OF ALL AREAS THAT DO NOT HAVE AN ESTABLISHED VEGETATIVE COVER. METHODS TO BE EMPLOYED INCLUDE, BUT ARE NOT LIMITED TO, WATER TRUCKS, PERMANENT IRRIGATION SYSTEMS, TEMPORARY SPRINKLER SYSTEMS OPERATED BY PUMPING UNITS CONNECTED TO WET RETENTION PONDS, WATER CANNONS, TEMPORARY IRRIGATION SYSTEMS MOUNTED ATOP STOCKPILE AREAS, AND OTHER METHODS AS DEEMED NECESSARY BY THE CITY.
20. ALL FILL MATERIALS LOCATED BENEATH STRUCTURES AND PAVEMENT SHALL CONSIST OF CLEAN GRANULAR SAND FREE FROM ORGANICS AND SIMILAR MATERIAL THAT COULD DECOMPOSE.
21. ALL FILL TO BE PLACED IN LANDSCAPED AREAS SHALL HAVE A PH RANGE BETWEEN 5.5 AND 7.5, BE ORGANIC IN NATURE, FREE OF ROCKS AND DEBRIS, OR MATCH NATIVE EXISTING SOILS.



STANDARD CONSTRUCTION DETAIL
CONTRACTOR REQUIREMENTS FOR
SITE CLEARING, GRADING, AND EROSION CONTROL
DESIGN AND CONSTRUCTION NOTES

REV. 04/10

FILE NAME:
R26.DWG
DETAIL REF:
R-26



1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OR-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. ALL MATERIALS SPILLED, DROPPED, OR TRACKED ONTO PUBLIC ROADS (INCLUDING T.G.C.E. AGGREGATE AND CONSTRUCTION MUD) SHALL BE REMOVED DAILY, OR MORE FREQUENTLY IF SO DIRECTED.
5. A SOIL TRACKING PREVENTION DEVICE (STPD) IS AN ACCEPTABLE ALTERNATIVE TO THIS DETAIL. REFERENCE FDOT INDEX 106 FOR DETAILS.



STANDARD CONSTRUCTION DETAIL
TEMPORARY GRAVEL
CONSTRUCTION ENTRANCE

REV. 12/08

FILE NAME:
R27.DWG
DETAIL REF:
R-27

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT#50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

CITY ROAD/
DRAINAGE
DETAILS

PROJECT: CC 1\FinalSF Phase 4

SHEET NO.

C27

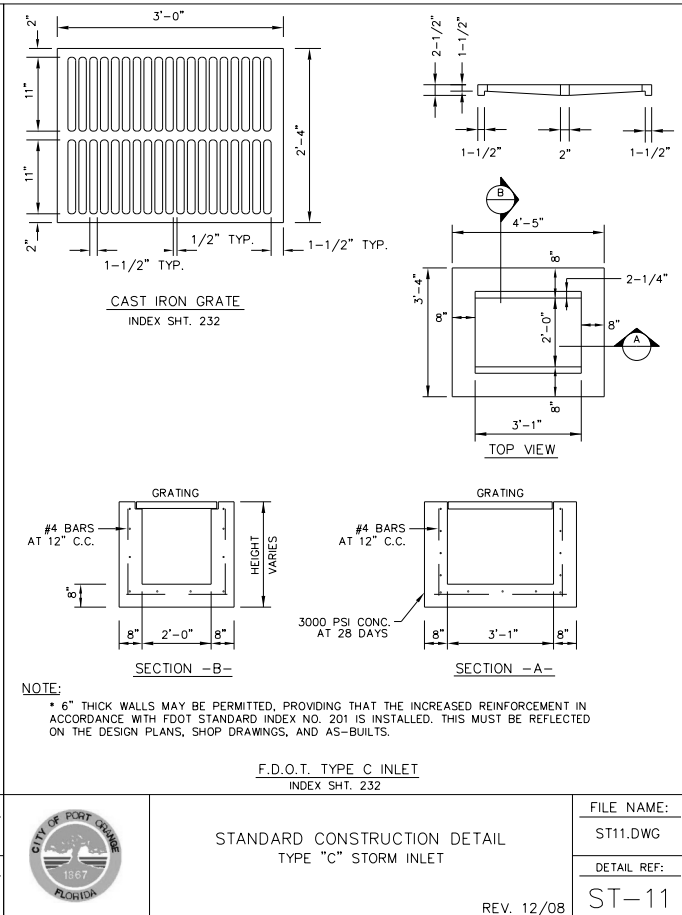
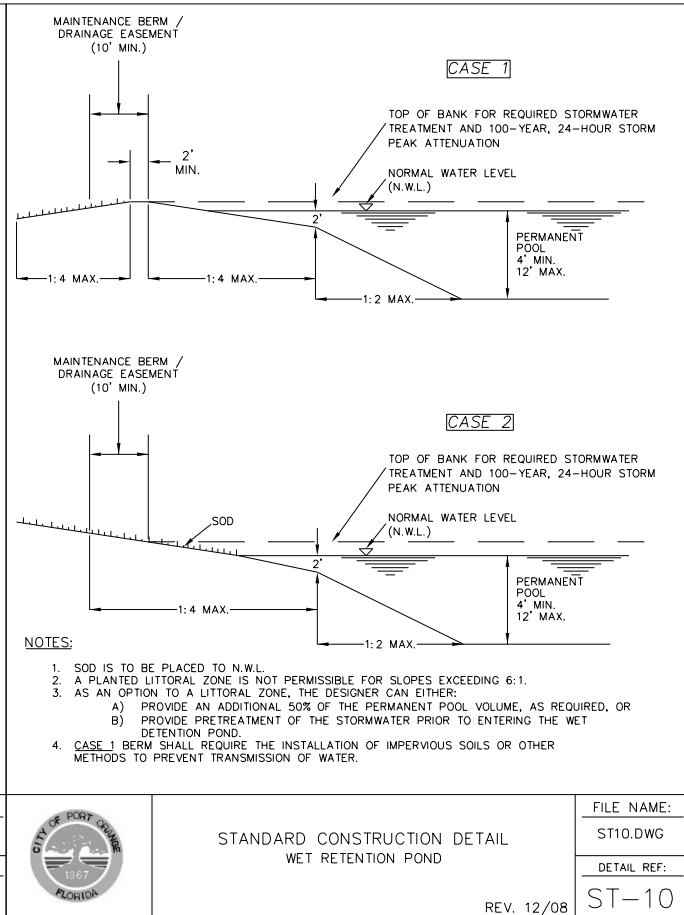
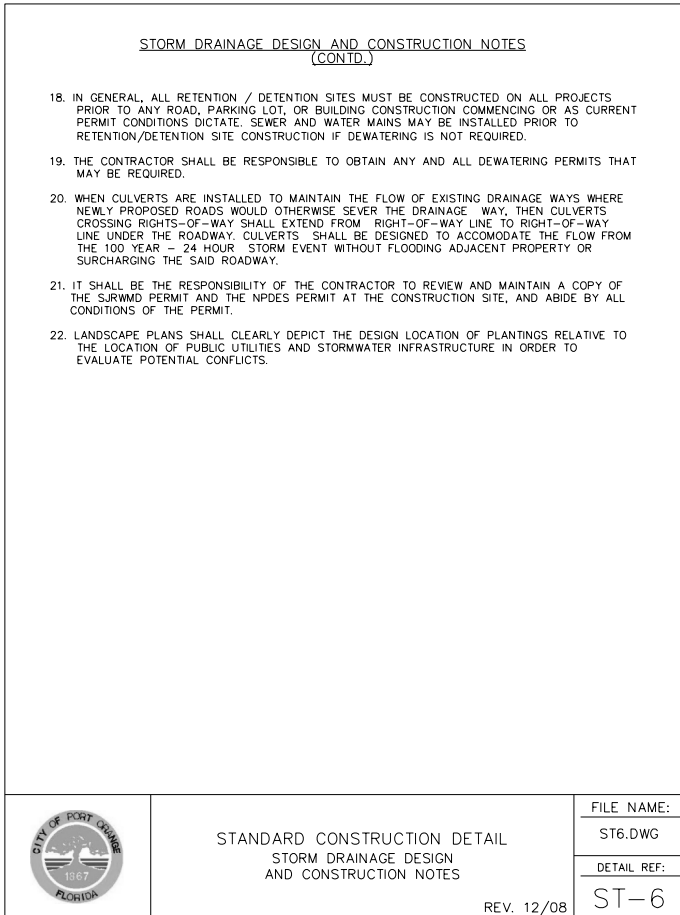
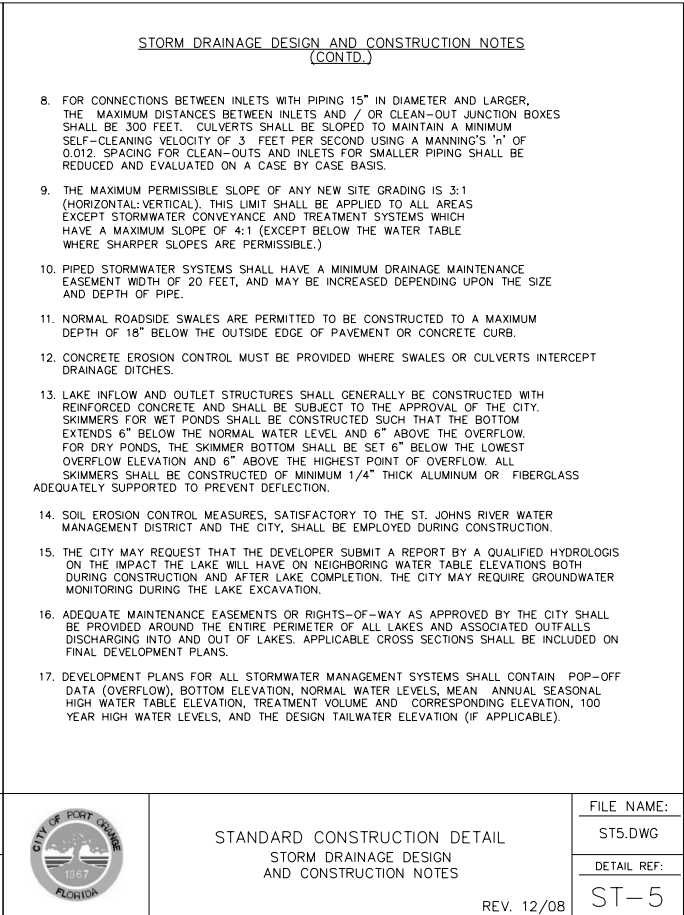
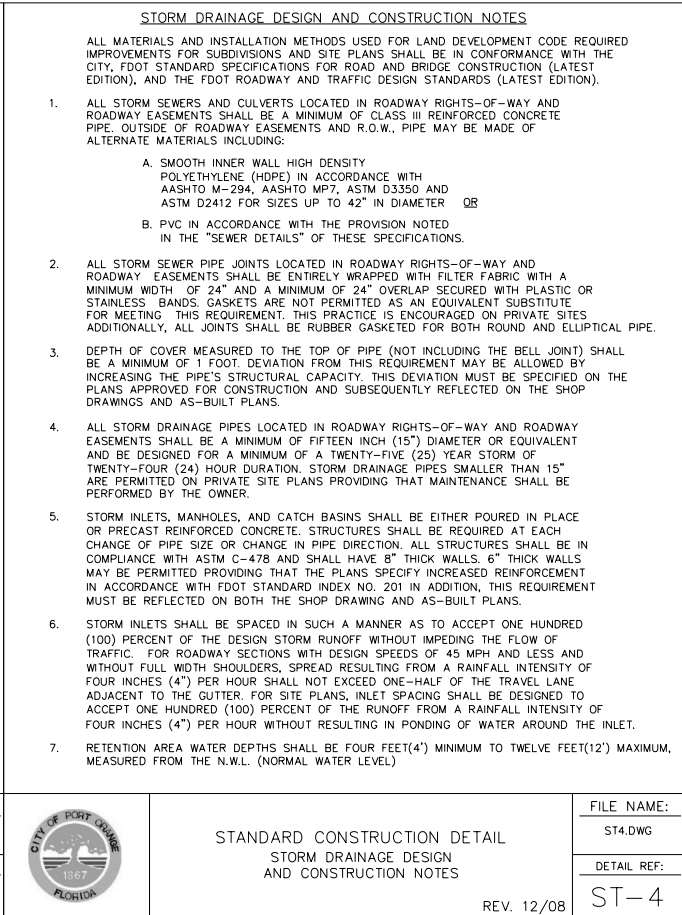
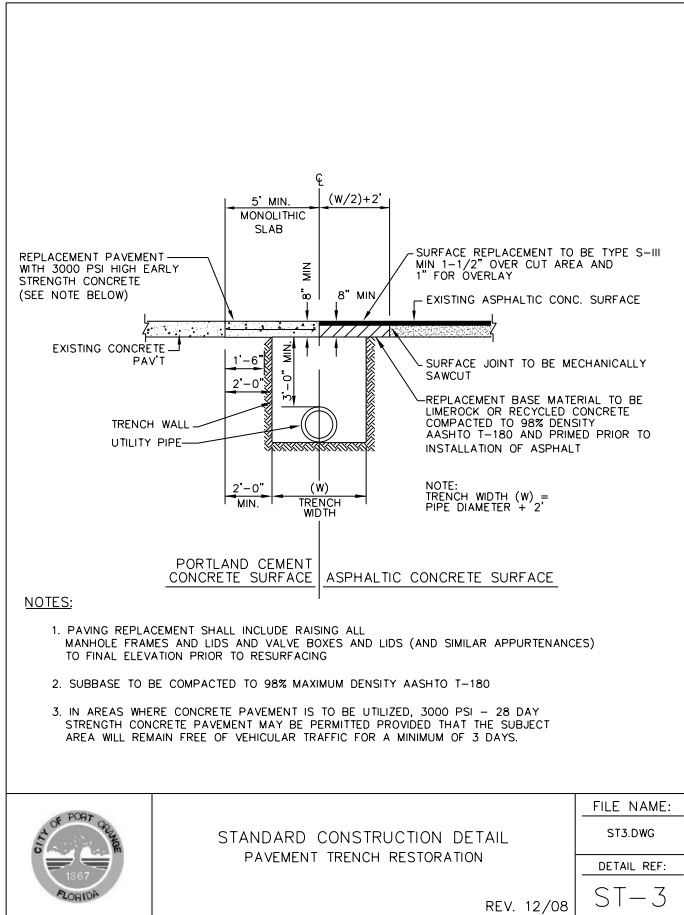
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D

C

B

A



Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.5120
ENGINEERING BUSINESS -8794

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

REVISIONS

No.	DATE	BY	Description
1	8-14-17	KJK	REV PER CITY

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

CITY ROAD/
DRAINAGE
DETAILS

PROJECT: CC 11\FinalSF Phase 4

SHEET NO.

C28

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REQUIREMENTS FOR AS-BUILT DRAWINGS (CONT'D)

IN ORDER TO ENSURE THAT NEW SUBDIVISIONS AND SITE PLANS ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS, THE FOLLOWING INFORMATION IS REQUIRED ON ALL SUBDIVISION AS-BUILT DRAWINGS.

12. SANITARY SEWER MANHOLES SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. ALL RIM AND INVERT ELEVATIONS SHALL BE VERIFIED AND RECORDED. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION. DESIGN ELEVATIONS SHALL BE CROSSED OUT AND AS-BUILT INFORMATION WRITTEN NEXT TO IT.
13. FOR SUBDIVISIONS, PROPOSED DESIGN FINISHED FLOOR ELEVATIONS SHALL APPEAR ON ALL SUBDIVISION LOTS ON THE APPROPRIATE PLAN AND PROFILE SHEET AS WELL AS ON THE MASTER DRAINAGE PLAN. SANITARY SEWER LINE LENGTHS, SIZES, MATERIAL, ETC., SHALL BE VERIFIED AND RECORDED. THIS INFORMATION IS TO BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
14. SEWER LATERALS SHALL BE VERIFIED AND RECORDED AT THEIR CLEAN-OUT LOCATIONS. STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TOWARDS UPSTREAM MANHOLES.
15. LIFT STATIONS AND FORCE MAINS SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. FORCE MAIN DEPTH AND LOCATION INCLUDING VALVES WILL BE PROVIDED AND TIED TO PERMANENT ABOVE GRADE FEATURES. DIMENSIONAL AND ELEVATION INFORMATION INDICATED ON THE APPROVED PLAN SHALL BE VERIFIED AND RECORDED. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION. BURIED ELECTRICAL SERVICE LINE SHALL BE CLEARLY DIMENSIONED, LOCATED, AND LABELED.
16. CURB CUTS OR METAL TABS, USED TO MARK SEWER LATERALS, WATER SERVICES AND WATER VALVES, SHALL BE VERIFIED FOR PRESENCE AND ACCURACY OF LOCATION.
17. POTABLE AND RECLAIMED WATER MAIN LINES SHALL BE DIMENSIONED OFF THE BACK OF CURB, OR EDGE OF PAVEMENT IF NO CURB IS PRESENT. WATER MAIN LINE MATERIAL, SIZE, LENGTH AND DEPTH PLACED SHALL ALSO BE NOTED. LOCATIONS OF VALVES, TEES AND CROSSES SHALL BE TIED TO (3) THREE PERMANENT ABOVE GRADE FEATURES. THIS INFORMATION SHALL BE CLEARLY INDICATED AS BEING AS-BUILT INFORMATION.
18. POTABLE AND RECLAIMED WATER VALVES, TEES, BENDS, ALL SERVICES, AND FIRE HYDRANTS SHALL BE LOCATED BY TYING THEM TO SANITARY SEWER MANHOLES. SIMILARLY, FORCE MAIN VALVES, TEES, AND BENDS SHALL BE LOCATED IN THE SAME MANNER. STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TO UPSTREAM MANHOLES.
19. FOR PERPENDICULAR CROSSINGS OF STORMWATER, SANITARY SEWER, POTABLE WATER, OR RECLAIMED WATER, THE AS-BUILT PLANS SHALL CLEARLY INDICATE WHICH UTILITIES ARE LOCATED OVER OR UNDER OTHER UTILITIES, AS NECESSARY.
20. ANY SPECIAL FEATURES SUCH AS, CONCRETE FLUMES, LAKE BANKS, WALLS, FENCING, ETC., WHICH WERE A PART OF THE APPROVED CONSTRUCTION DRAWINGS SHOULD ALSO BE LOCATED AND DIMENSIONED.
21. IF AN APPROVED SUBDIVISION PLAT OR SITE PLAN SHOWS A CONSERVATION EASEMENT, THE PROJECT SURVEYOR SHALL PROVIDE THE EXACT LOCATION OF THE SPECIMEN TREE(S) FROM THE RIGHT-OF-WAY OR PROPERTY LINES AND PROPOSED EASEMENT BOUNDARIES ON THE AS-BUILT DRAWING. THE AS-BUILT LOCATION OF THESE TREES WILL HELP VERIFY THE EFFICIENCY OF THE CONSERVATION EASEMENT PRIOR TO PLAT RECORDING OR CERTIFICATE OF OCCUPANCY.



STANDARD CONSTRUCTION DETAIL
REQUIREMENTS FOR AS-BUILTS DRAWINGS

FILE NAME:
M1.DOC

DETAIL REF:
M-1

REV. 12/08

REQUIREMENTS FOR AS-BUILT DRAWINGS (CONT'D)

IN ORDER TO ENSURE THAT NEW SUBDIVISIONS AND SITE PLANS ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS, THE FOLLOWING INFORMATION IS REQUIRED ON ALL SUBDIVISION AS-BUILT DRAWINGS.

22. WHEN STORMWATER, POTABLE WATER, RECLAIMED WATER, OR SANITARY SEWER IMPROVEMENTS ARE LOCATED WITHIN AN EASEMENT, THE AS-BUILT DRAWING SHALL ACCURATELY DEPICT THE LOCATION OF THE EASEMENT ITSELF AS WELL AS THE EXACT LOCATION OF THE IMPROVEMENTS WITHIN THE EASEMENT. THIS IS REQUIRED IN ORDER TO VERIFY THAT THE IMPROVEMENTS HAVE BEEN PROPERLY LOCATED AND TO ENSURE THAT FUTURE SUBSURFACE EXCAVATION TO PERFORM REMEDIAL REPAIR CAN BE ACCOMPLISHED WITHOUT DISTURBANCE BEYOND THE EASEMENT. SUCH DOCUMENTATION AND THE ASSOCIATED PROPOSED EASEMENT DOCUMENT WITH LEGAL DESCRIPTION SHALL BE SUBMITTED FOR CITY REVIEW AND APPROVAL PRIOR TO RECORDING OF SAID EASEMENT. UPON CITY APPROVAL, THE EASEMENT SHALL BE RECORDED VIA A SEPARATE LEGAL INSTRUMENT AND SHALL NOT BE INCLUDED AS PART OF HOMEOWNER COVENANTS & RESTRICTIONS.

NOTE: 1. REFERENCES TO WATER SHALL MEAN BOTH POTABLE AND RECLAIMED WATER.



STANDARD CONSTRUCTION DETAIL
REQUIREMENTS FOR AS-BUILTS DRAWINGS

FILE NAME:
M1.DOC

DETAIL REF:
M-1

REV. 12/08

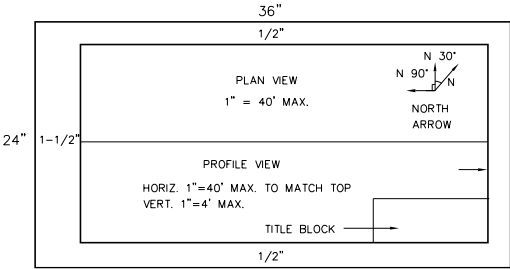
PLAN SHEET REQUIREMENTS:

1. PLANS SUBMITTED TO THE COMMUNITY DEVELOPMENT DEPARTMENT FOR REVIEW INCLUDING SITE PLANS, SUBDIVISIONS, PLANNED UNIT DEVELOPMENTS, AND OTHER DEVELOPMENTS, SHALL CONSIST OF AT LEAST THE FOLLOWING ITEMS:
- a. INDEX PAGE WITH AREA MAP SHOWING PROJECT LIMITS
- b. PLAN AND PROFILE SHEETS, AS APPROPRIATE
- c. PLAN SHEETS, AS APPROPRIATE
- d. PROFILE SHEETS, AS APPROPRIATE
- e. DETAIL SHEETS, AS APPROPRIATE
- f. OTHER INFORMATION, AS REQUIRED BY CODE

2. THEY SHALL BE DRAWN ON STANDARD 24" X 36" SHEETS. THE PLAN AND PROFILE MAY BE EITHER SINGLE OR DOUBLE AS THE INDIVIDUAL PROJECT DICTATES. EACH SHEET SHALL CONTAIN AN APPROPRIATE TITLE BLOCK SHOWING THE FOLLOWING INFORMATION:

- a. THE NAME OF THE PROJECT
- b. THE NAME, ADDRESS, AND PHONE NUMBER OF THE COMPANY PREPARING THE DRAWINGS
- c. THE NAME, ADDRESS, AND PHONE NUMBER OF THE ENGINEER, SURVEYOR, OR LANDSCAPE ARCHITECT AS APPROPRIATE.
- d. THE SHEET NUMBER
- e. THE DRAWING NUMBER
- f. THE DATE
- g. ANY REVISIONS AND DATE
- h. OTHER INFORMATION AS APPROPRIATE

3. THE STANDARD SHEET SHALL BE LAID OUT AS SHOWN BELOW, WITH EACH SHEET CONTAINING A NORTH ARROW AND SCALE.

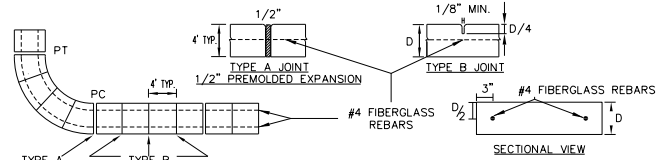


STANDARD CONSTRUCTION DETAIL
PLAN SHEET REQUIREMENTS

FILE NAME:
M2.DWG

DETAIL REF:
M-2

REV. 12/08



SIDEWALK CONSTRUCTION REQUIREMENTS

1. ALL CONCRETE SIDEWALKS & BIKE PATHS IN PUBLIC RIGHT-OF-WAY, PRIVATE RIGHT-OF-WAY AND ON NON-RESIDENTIAL SITES SHALL CONTAIN FIBERGLASS REINFORCEMENT EXCEPT REPAIRS TO NON-REINFORCED EXISTING SIDEWALKS. FIBERGLASS REINFORCEMENT SHALL NOT BE REQUIRED ON PRIVATE RESIDENTIAL SIDEWALKS.
2. SIDEWALKS, BIKEPATHS, RAMPS, AND DRIVEWAY APRONS SHALL BE CONSTRUCTED OF PLAIN PORTLAND CEMENT CONCRETE WITH FIBERGLASS REINFORCEMENT, HAVING A MAXIMUM SLUMP OF 3 INCHES. A MINIMUM DEVELOPED COMPRESSIVE STRENGTH OF 3000 P.S.I. IN 28 DAYS, AND A MINIMUM UNIFORM THICKNESS OF 4 INCHES WHERE INTENDED SOLELY FOR PEDESTRIAN TRAFFIC, AND 6 INCHES THICK WHERE MOTOR VEHICLES ARE LIKELY TO CROSS.
3. 2-#4 CONTINUOUS FIBERGLASS BARS (6" OVERLAP REQUIRED) SHALL BE INSTALLED LONGITUDINALLY, 3" FROM THE EDGE OF ALL BIKEPATHS AND SIDEWALKS, TO CONTROL DIFFERENTIAL MOVEMENT AT JOINTS.
4. SIDEWALKS AND BIKEPATHS SHALL BE PLACED PARALLEL TO, AND ONE FOOT WITHIN THE RIGHT-OF-WAY LINE EXCEPT THAT THE CITY MAY APPROVE DEVIATIONS TO SAVE SPECIMEN TREES PROVIDED THAT THE SIDEWALK REMAINS WITHIN THE RIGHT-OF-WAY OR AN APPROVED SIDEWALK EASEMENT ABUTTING THE RIGHT OF WAY. SIDEWALKS AND BIKE PATHS SHOULD BE LOCATED AT LEAST 4 FEET FROM THE EDGE OF THE STREET PAVEMENT UNLESS OTHERWISE APPROVED BY THE CITY.
5. THE TOP OF THE CONCRETE SHALL BE AT AN ELEVATION NO LOWER THAN THE CROWN OF THE ADJACENT ROADWAY, AND NO HIGHER THAN 6 INCHES ABOVE THE CROWN UNLESS APPROVED BY THE CITY TO MAKE A MORE NATURAL TRANSITION WITH THE ADJACENT LAND.
6. ISOLATION JOINTS (TYPE A JOINTS) SHALL BE PROVIDED BETWEEN EXISTING SLABS OR STRUCTURES AND FRESH CONCRETE, TO SEPARATE PEDESTRIAN SECTIONS FROM SECTIONS WHICH WILL ENCOUNTER VEHICLE TRAFFIC, TO SEPARATE FRESH PLACEMENT FROM CONCRETE WHICH HAS SET FOR MORE THAN 60 MINUTES, AND NO FARTHER APART THAN 100 FEET IN SIDEWALKS AND BIKEPATHS. JOINT MATERIAL SHALL BE PERFORMED JOINT FILLER MEETING F.D.O.T. SPECIFICATIONS.
7. CONTROL JOINTS (TYPE B JOINTS) SHALL BE TOOLED INTO THE FRESH CONCRETE TO A DEPTH EQUAL TO 1/4 THE SLAB THICKNESS AND SPACED APART A DISTANCE EQUAL TO THE WIDTH OF THE SLAB OR 4 FEET WHICHEVER IS GREATER.
8. THE SLAB SURFACE SHALL BE BROOM FINISHED TO BE SLIP RESISTANT, AND SHALL MATCH AS CLOSELY AS POSSIBLE THE FINISH OF EXISTING ADJACENT SLABS AND ALL EDGES SHALL BE TOOLED TO ELIMINATE SHARP CORNERS.
9. THE BEARING SUBSURFACE SHALL HAVE ALL ORGANIC, LOOSE, AND DELETERIOUS MATTER REMOVED, AND THE REMAINING CLEAN SOIL SHALL BE SMOOTH, SOUND, AND SOLID. ANY FILL MATERIAL SHALL BE COMPACTED TO A MINIMUM PROCTOR FIELD DENSITY OF 95 PERCENT.
10. ALL CONCRETE WORK IN THE RIGHT-OF-WAY SHALL BE INSPECTED BY THE CITY AFTER THE SUBSOIL IS PREPARED AND THE FORMS ARE SET, BUT BEFORE THE CONCRETE PLACEMENT BEGINS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE FINISHED SLAB FROM ALL DAMAGE AND VANDALISM UNTIL THE CITY ACCEPTS OR APPROVES THE SLAB, AFTER WHICH TIME THE OWNER OF THE ABUTTING LAND SHALL BE RESPONSIBLE FOR THE SLAB IN ACCORDANCE WITH THE CITY CODE. ANY SLAB SECTION DAMAGED OR VANDALIZED PRIOR TO ACCEPTANCE OR APPROVAL SHALL BE CUT OUT BETWEEN JOINTS AND REPLACED. REPAIRS ARE NOT ACCEPTABLE.
12. SIDEWALKS LOCATED WITHIN THE RIGHT-OF-WAY SHALL NOT BE TINTED, STAINED, COLORED, OR COATED.
13. ALL FORMS SHALL BE REMOVED PRIOR TO ACCEPTANCE OR APPROVAL AND THE DISTURBED GROUND SHALL BE BACKFILLED, REGRADED, AND SODDED SO THAT THE WEAR SURFACE OF THE CONCRETE IS REASONABLY FLUSH WITH THE ADJACENT GRADE.

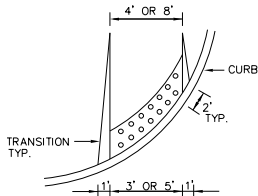
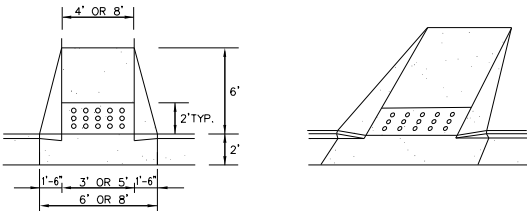


STANDARD CONSTRUCTION DETAIL
SIDEWALK CONSTRUCTION REQUIREMENTS

FILE NAME:
M3.DWG

DETAIL REF:
M-3

REV. 12/08



NOTES:

1. RAMP LOCATIONS ARE TO BE COORDINATED WITH AND IN CONFORMANCE WITH CROSSWALK MARKING DETAILS SHOWN IN THE PLANS.
2. CURBED RAMPS SHALL HAVE FLARED SIDES WITH A MAXIMUM SLOPE OF 12:1.
3. NO CURB TRANSITION IS NEEDED FOR MIAMI CURBS.
4. ALL RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT INDEX NO. 304 AND ACCESSIBILITY REQUIREMENTS IN ACCORDANCE WITH THE AMERICAN DISABILITIES ACT.
5. CURB RAMPS SUBJECT TO THE DEPARTMENT OF TRANSPORTATION REGULATION CFR 37.21 SHALL HAVE A DETECTABLE WARNING.

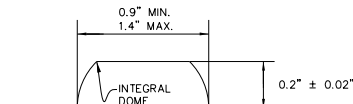
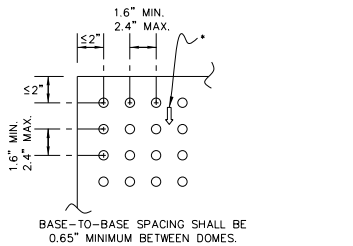


STANDARD CONSTRUCTION DETAIL
SIDEWALK AND BIKEPATH RAMP
(WITHIN RIGHT-OF-WAY)

FILE NAME:
M4.DWG

DETAIL REF:
M-4

REV. 2/13



NOTES:

1. ON RAMPS THAT ARE PERPENDICULAR WITH THE CURB LINE, THE DOME PATTERN SHALL BE IN-LINE WITH THE DIRECTION OF TRAVEL. ON RAMPS INTERSECTING CURBS ON A RADIUS, THE DOME PATTERN SHALL BE IN-LINE WITH THE DIRECTION OF TRAVEL TO THE EXTENT PRACTICAL.
2. CURB RAMPS SUBJECT TO THE DEPARTMENT OF TRANSPORTATION REGULATION CFR 37.21 SHALL HAVE A DETECTABLE WARNING.

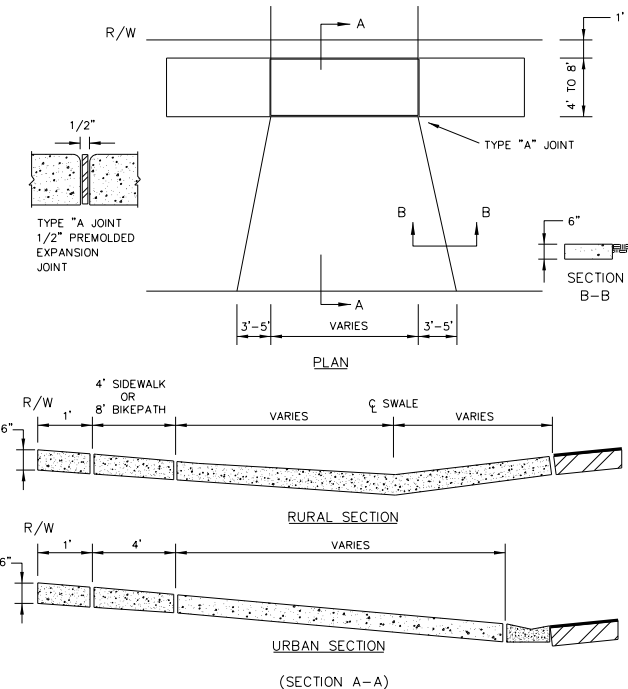


STANDARD CONSTRUCTION DETAIL
SIDEWALK AND BIKEPATH RAMP

FILE NAME:
M5.DWG

DETAIL REF:
M-5

REV. 2/13



NOTES:

1. DRIVEWAY APRON BASE TO BE COMPACTED AND TESTED TO 98% DENSITY WITH MINIMUM L.B.R. 40 BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.
2. CONCRETE DRIVEWAY APRON TO BE 28 DAY, 3000 P.S.I.

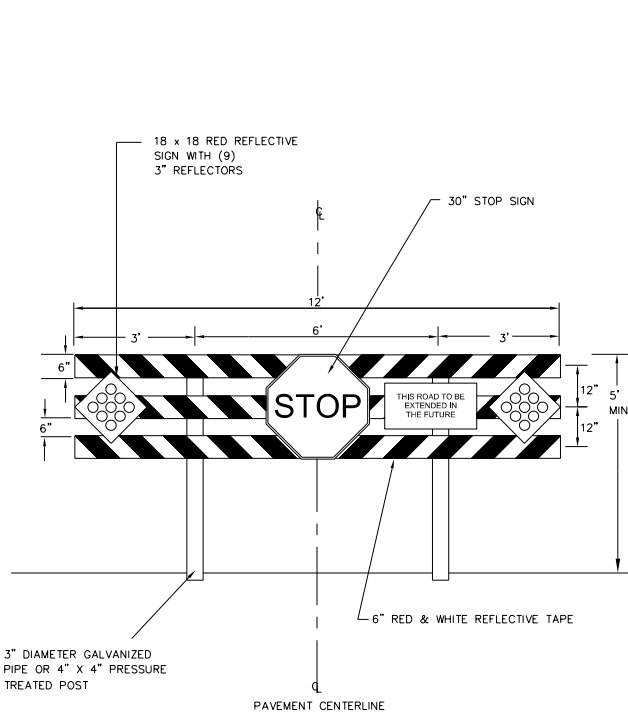


STANDARD CONSTRUCTION DETAIL
DRIVEWAY APRON

FILE NAME:
M6.DWG

DETAIL REF:
M-6

REV. 12/08



STANDARD CONSTRUCTION DETAIL
ROAD BARRICADE

FILE NAME:
M9.DWG

DETAIL REF:
M-9

REV. 12/08



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800 NORTH MAGNOLIA AVE
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ORLANDO, FL 32803
PHONE: 407.843.6120
ENGINEERING BUSINESS -8794

WESTPORT RESERVE
(PHASE 4)

SEAL

8/31/2017

REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

CITY ROAD/
DRAINAGE
DETAILS

PROJECT: CC 11\FinalSF Phase 4

SHEET NO.

C29

E

D

C

B

A

SEAL

STREET AND WALKWAY LIGHTS

WALKWAY LIGHTS: (HEIGHT: 10 TO 20 FEET)

1. ALONG DUNLAWTON AVENUE:
 - A. WEST OF I-95:
THE FLORIDIAN (SEE DETAIL M-15)
 - B. FROM I-95 TO SPRUCE CREEK ROAD:
GARCO LIGHTING (SEE DETAIL M-16)
 - C. EAST OF SPRUCE CREEK ROAD:
LUMEC LIGHTING (SEE DETAIL M-17)
2. ALONG RIDGEWOOD AVENUE FROM THE NORTHERN CITY LIMITS SOUTH TO MEEKER PLACE:
 - D. LUMEC LIGHTING (SEE DETAIL M-17)
3. IN LOCATIONS OTHER THAN DUNLAWTON AVENUE, THE WALKWAY LIGHTS SHALL BE ANY OF THE THREE (3) STYLES NOTED ABOVE OR THE FOLLOWING: STERNBERG GEORGETOWN (0650 / 4408-DFF), WILLIAMSBURG (9405-TF / 3610-T) OR COLONIAL (4620TF-LF). ALL CITY MAINTAINED WALKWAY LIGHTS ARE TO BE FLORIDA POWER AND LIGHT (FPL) SUPPLIED LIGHTS, UTILIZING 150 WATT HPS.
4. SPACING SHALL BE A MAXIMUM OF 100 FEET ON CENTER.

STREET LIGHTS: (HEIGHT: 20+ FEET)

1. STREET LIGHTS SHALL BE GENERALLY PROVIDED AT ALL INTERSECTIONS, AND AT MAJOR ENTRY ROADS INTO THE SUBDIVISION AS DESIGNATED BY THE ADMINISTRATIVE OFFICIAL.
2. ALL CITY MAINTAINED STREET LIGHTS ARE TO BE FPL SUPPLIED STREET LIGHTS.
3. PRIVATELY MAINTAINED STREET LIGHTS SHALL BE:
GARCO LIGHTING EH / 26" / 1 / 3 / 150 HPS / 240 / BRA / PC
(NOTE: POLE SHALL BE CONCRETE AVAILABLE THROUGH F.P.L. AND SPACED AT INTERVALS OF 300 TO 400 FEET.)
4. ALTERNATIVE STREET LIGHTING PROPOSALS BY DEVELOPERS SHOULD BE SUBMITTED TO THE COMMUNITY DEVELOPMENT DEPT. FOR APPROVAL.



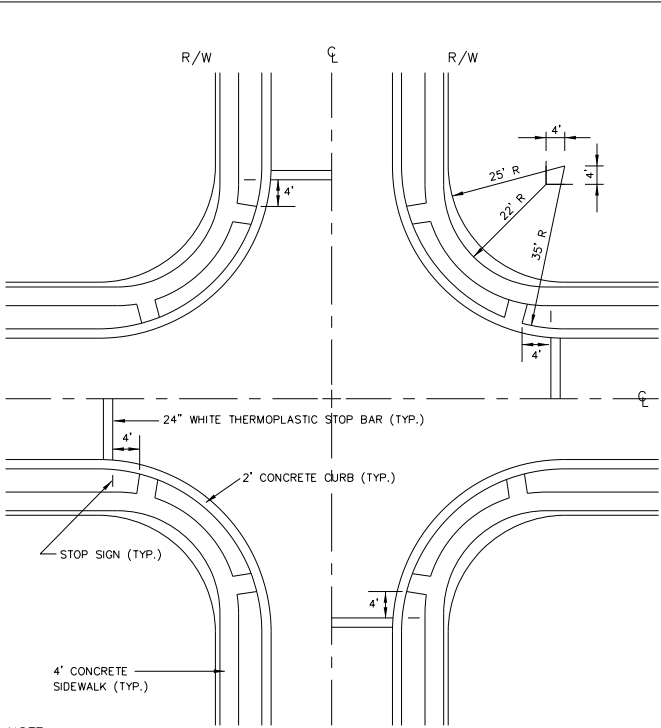
STANDARD CONSTRUCTION DETAIL
STREET AND WALKWAY LIGHTS

REV. 12/08

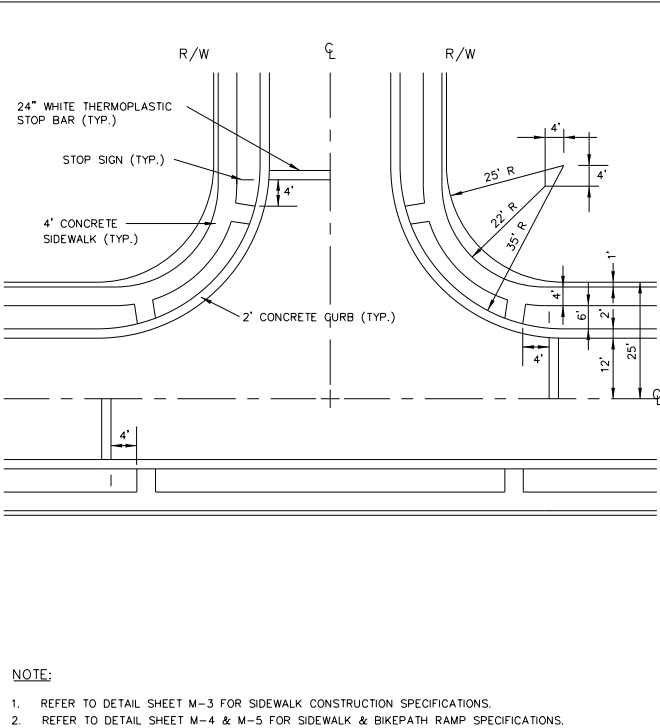
FILE NAME:
M14.DWG

DETAIL REF:
M-14

REFER TO SHT. No. C16 FOR LOT GRADING 2



- NOTE:
1. REFER TO DETAIL SHEET M-3 FOR SIDEWALK CONSTRUCTION SPECIFICATIONS.
 2. REFER TO DETAIL SHEET M-4 & M-5 FOR SIDEWALK & BIKEPATH RAMP SPECIFICATIONS.



- NOTE:
1. REFER TO DETAIL SHEET M-3 FOR SIDEWALK CONSTRUCTION SPECIFICATIONS.
 2. REFER TO DETAIL SHEET M-4 & M-5 FOR SIDEWALK & BIKEPATH RAMP SPECIFICATIONS.



STANDARD CONSTRUCTION DETAIL
SIDEWALK CONSTRUCTION AT INTERSECTIONS

REV. 12/08



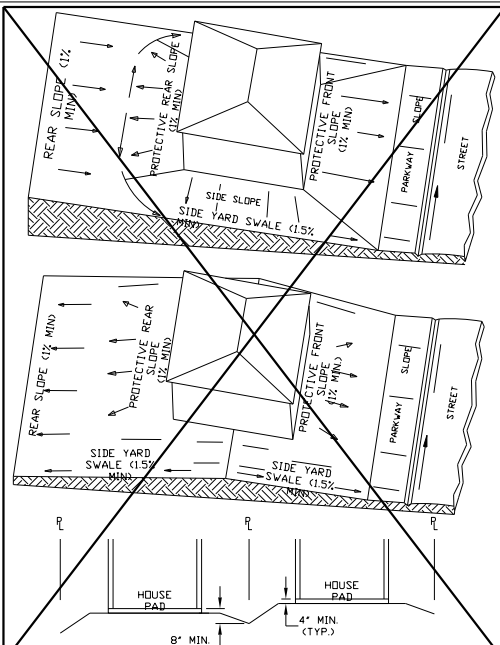
STANDARD CONSTRUCTION DETAIL
SIDEWALK CONSTRUCTION AT INTERSECTIONS

REV. 12/08



STANDARD CONSTRUCTION DETAIL
RESIDENTIAL GRADING

REV. 12/08

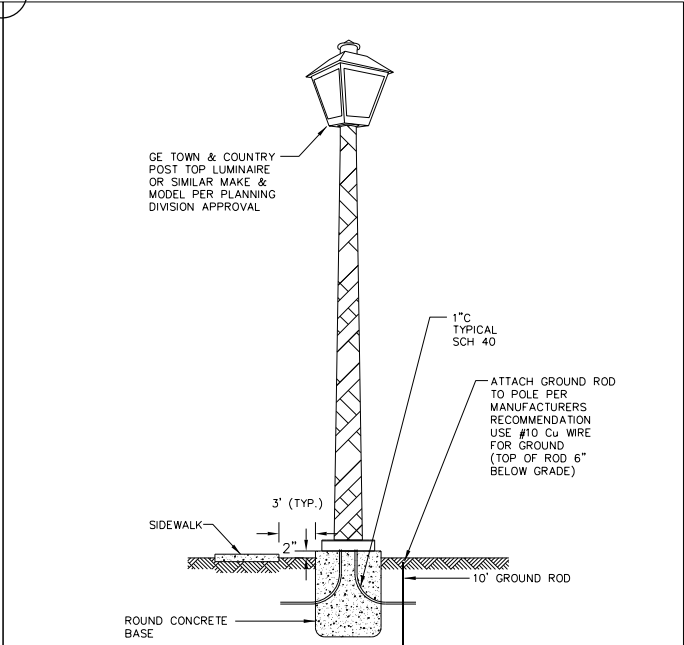


- NOTE:
1. ALL FINISHED FLOOR ELEVATIONS SHALL BE SET A MINIMUM OF 16 INCHES ABOVE THE CENTERLINE OF THE ADJACENT ROADWAY.
 2. ALL FINISHED FLOOR ELEVATIONS ARE A MINIMUM OF 1 FOOT ABOVE THE LIMITS OF THE 100 YEAR FLOOD PLAIN AND/OR 1 FOOT ABOVE THE 100-YEAR DESIGN HIGH WATER LEVEL OF THE ADJACENT DETENTION/RETENTION AREA.
 3. IN CASES WHERE THE ABOVE CONDITIONS CONFLICT, NOTE #2 SHALL TAKE PRECEDENCE.
 4. SIDE YARD SWALE SHALL BE CENTERED ON THE COMMON PROPERTY LINE.



STANDARD CONSTRUCTION DETAIL
RESIDENTIAL GRADING

REV. 12/08



- NOTE:
1. ALL WALKLIGHTS SHALL BE LOCATED ON 100' CENTERS. THE PLANNING DIVISION SHALL BE CONTACTED AT (386) 506-5600 TO FIELD VERIFY THE PROPOSED LOCATIONS FOR WALKLIGHTS.
 2. ALL LIGHT POLES SHALL BE DESIGNED TO WITHSTAND 130 M.P.H. WIND SPEED.
 3. THE STRING / SERIES OF WALK LIGHTS ADJACENT TO EACH PROJECT SHALL BE FITTED AND CONTROLLED BY ONE SINGLE SOLAR CELL.
 4. MAINTENANCE AND OPERATION OF WALKLIGHTS SHALL BE THE RESPONSIBILITY OF THE HOMEOWNERS ASSOCIATION OR ADJACENT PROPERTY OWNER.



STANDARD CONSTRUCTION DETAIL
TRADITIONAL POST TOP

REV. 2/13

REVISIONS			
No.	DATE	BY	Description
2	8-14-17	KJK	REV PER CITY

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE
**CITY ROAD/
DRAINAGE
DETAILS**

PROJECT: CC 1\FinalSF Phase 4
SHEET NO.

C30

E

D

C

B

A

SANITARY SEWER DESIGN NOTES		
1. ALL GRAVITY SANITARY SEWER MAINS SHALL BE 8" DIAMETER MINIMUM. COMMERCIAL SERVICE LATERALS WITH MULTIPLE CONNECTIONS SHALL BE GREEN 6" DIA. OR LARGER. ALL SINGLE FAMILY RESIDENTIAL SERVICE LATERALS SHALL BE 4" - SINGLE SERVICES. 2. ALL GRAVITY SANITARY SEWER LINES SHALL BE GREEN PVC SDR 26, ASTM D-3034. IN PLACES WHERE A MINIMUM COVER OF 4.0' CANNOT BE MAINTAINED, AWWA C-900 OR C-905 GREEN PVC DR-25, CLASS 100 OR CONCRETE ENCASEMENT SHALL BE USED. WATER LINES, RECLAIMED LINES, AND STORM DRAINAGE CROSSINGS SHALL ALSO FOLLOW THE CONCRETE ENCASEMENT REQUIREMENT PER THESE STANDARDS AND AS PER REGULATORY REQUIREMENTS. 3. MINIMUM GRAVITY SANITARY SEWER SLOPES ARE AS FOLLOWS: 8" PIPE 0.40 % 10" PIPE 0.30 % 12" PIPE 0.22 % 4. MAXIMUM DEPTH OF SANITARY MANHOLES SHALL BE 15.0'. MAXIMUM DEPTH OF LIFT STATION WET WELLS SHALL BE 20.0'. 5. GRAVITY SANITARY SEWER LINES SHALL BE INSTALLED WHENEVER POSSIBLE UNDER PAVED AREAS WITHIN PUBLIC RIGHTS-OF-WAY. UTILITY EASEMENTS SHALL BE PROVIDED WHENEVER PUBLICLY-OWNED SEWER LINES ARE CONSTRUCTED OUTSIDE OF A PUBLIC RIGHT-OF-WAY. 6. ALL TESTING REQUIRED BY THE CITY SHALL BE PAID FOR BY THE CONTRACTOR / DEVELOPER. 7. ALL LOCAL COLLECTION SANITARY SEWER MANHOLES SHALL BE PRECAST WITH A MINIMUM INSIDE DIAMETER OF 4 FEET. 8. STANDARD MANHOLES SHALL BE LOCATED AT INTERVALS NOT EXCEEDING 350 FEET. 9. INDIVIDUAL SANITARY SERVICE ON NEW CONSTRUCTION SHALL NOT BE CONNECTED DIRECTLY INTO MANHOLES, AND MUST CONNECTED TO SEWER MAIN LINES BY USE OF WYE CONNECTIONS, UNLESS OTHERWISE APPROVED BY THE CITY. 10. FOR SINGLE FAMILY HOMES, SINGLE FOUR INCH SEWER SERVICES LATERALS SHALL BE CONSTRUCTED AT EACH LOT OR UNIT AND LOCATED ON THE DOWNSTREAM SIDE OF THE LOT CENTER LINE. THESE SERVICES SHALL BE EXTENDED 4 FEET ABOVE GROUND AT THE PROPERTY LINE WITH A PVC RISER AND PLUG BEING EASILY VISIBLE FROM THE ROAD. RUBBER SEAL FITTINGS SHALL BE USED ON ALL LINES. NO GLUED JOINTS ARE PERMITTED ON LATERALS. 11. FOR MULTI-FAMILY AND COMMERCIAL SITES, SIX INCH MINIMUM SEWER SERVICES AND CLEANOUTS SHALL BE PROVIDED AS APPROVED BY THE CITY. 12. SANITARY SEWER LIFT STATIONS AND FORCE MAINS, SIZE, MATERIAL, AND DESIGNS SHALL BE APPROVED BY THE CITY. LIFT STATIONS SHALL BE CONSTRUCTED WITH A MINIMUM WET WELL INTERIOR DIAMETER OF 6.0 FEET. FORCE MAINS SHALL BE A MINIMUM 6 INCH DIAMETER. 13. IT SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER TO PREPARE AND SUBMIT FLOTATION CALCULATIONS TO SIZE THE BASE OF THE WET WELL, AND ANY MANHOLES AS DEEMED NECESSARY BY THE CITY. 14. SANITARY SEWER DROP MANHOLES SHALL ONLY BE USED UNDER SPECIAL CONDITIONS AS APPROVED BY THE CITY. DROPS LESS THAN 2.0' SHALL NOT BE ALLOWED. 15. ALL SANITARY SEWER FORCE MAINS, INCLUDING FITTINGS, SHALL BE DIP WITH PROTECTO 401, PVC AWWA C-900, OR C-905 (COLOR "GREEN") (PRESSURE FITTINGS, PRESSURE CLASS 150 OR C-907).		
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER DESIGN NOTES	FILE NAME S1.DOC
		DETAIL REF: S-1
		REV. 12/08

SANITARY SEWER DESIGN NOTES CONT'D		
16. SANITARY SEWER MANHOLES WHICH HAVE SEWER FORCE MAINS DISCHARGING DIRECTLY INTO THEM SHALL BE FIBERGLASS OR POLY-ETHYLENE LINED OR EPOXY LINED. RETRO-FITTING OF MANHOLES WITH LINERS SHALL BE REQUIRED WHEN NEW CONNECTIONS SUCH AS THIS ARE MADE. FIBERGLASS SHALL BE A MINIMUM 1/2" THICKNESS UNLESS APPROVED OTHERWISE BY THE CITY. OTHER TYPES OF LINING METHODS AND MATERIALS MAY BE CONSIDERED ON A CASE BY CASE BASIS. UNDER SPECIAL CIRCUMSTANCES WHERE HYDROGEN SULFIDE IS A MAJOR CONCERN MANHOLES UPSTREAM AND/OR DOWNSTREAM OF THE FORCE MAIN TIE-IN OR WET WELL MAY ALSO BE REQUIRED TO HAVE LININGS INSTALLED. 17. ALL SANITARY SEWER MANHOLES SHALL HAVE ALL INTERIOR SURFACES COATED WITH THREE (3) COATS OF WHITE/GRAY OVER RED OVER BLACK EW-1 EPOXY PAINT WITH A TOTAL OF 12 MILS DRY FILM THICKNESS OR BLACK COAL-TAR EPOXY WITH A TOTAL OF 16 MILS THICKNESS. OUTSIDE SURFACE TO BE COATED WITH TWO (2) COATS OF BLACK OVER BLACK EW-1 EPOXY PAINT WITH A TOTAL OF 8 MILS OR ONE (1) COAT OF BLACK COAL-TAR EPOXY WITH A TOTAL OF 8 MILS. ALL COATS SHALL BE APPLIED AT THE FACTORY EXCEPT MINOR FIELD TOUCH UP AT JOINTS AND AT MANHOLE NECK. 18. ALL MANHOLES CONSTRUCTED IN SIDE YARDS, BACKYARDS, AND EASEMENTS OUTSIDE OF THE RIGHT-OF-WAY SHALL BE OUTFITTED WITH FIBERGLASS OR EPOXY LINERS IN COMPLIANCE WITH ASTM-3753 OR OTHER TYPES OF LINERS APPROVED BY THE CITY. IN ADDITION THE CITY MAY REQUIRE LINERS TO BE INSTALLED IN OTHER AREAS WHERE THE PUBLIC UTILITIES DEPARTMENT BELIEVES THE NEED IS JUSTIFIED SUCH AS IMMEDIATELY UPSTREAM OF FORCE MAINS CONNECTING TO GRAVITY MAINS. 19. ALL SEWER LINES WHICH ARE CONSTRUCTED OUTSIDE OF PUBLIC RIGHTS-OF-WAY WITHIN SIDE YARDS, BACKYARDS, AND OTHER POORLY ACCESSIBLE AREAS SHALL BE CONSTRUCTED OF GREEN C-900 PVC. ABSOLUTELY NO USE OF PLASTIC STYRENE FITTINGS SHALL BE ALLOWED. 20. CONTEC A-2000 PVC PIPE SHALL NOT BE ALLOWED FOR USE. 21. FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE LOCATION OF ALL FORCE MAINS, MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT, IF NO CURBING EXISTS). 22. ALL HDPE PIPE INSTALLED FOR SEWAGE FORCE MAINS SHALL BE SDR 11 WITH #10 COPPER HEAD TRACER WIRE UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC TO WHICH IT IS ATTACHED. 23. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS. 24. GREASE INTERCEPTORS ARE REQUIRED FOR ALL COMMERCIAL BUILDINGS HAVING KITCHEN, FOOD PREPARATION OR SERVING FACILITIES AND / OR MISCELLANEOUS USES. GREASE INTERCEPTORS CONSTRUCTED EXTERNAL TO BUILDINGS SHALL BE SIZED IN ACCORDANCE WITH FAC 64-E-6. CALCULATIONS TO DETERMINE SIZING REQUIREMENTS SHALL BE SUBMITTED AS PART OF BUILDING PERMITTING. AN INSPECTION MANHOLE MAY BE REQUIRED IMMEDIATELY DOWN STREAM OF THE GREASE INTERCEPTOR FOR INSPECTION PURPOSES, AS DEEMED APPROPRIATE BY THE CITY. 25. WHERE POTABLE WATER AND SANITARY SEWER MAINS CROSS WITH LESS THAN (18) INCHES OF VERTICAL CLEARANCE OR WHERE THE SEWER MAIN IS ABOVE THE WATER MAIN, THE SEWER MAIN SHALL BE ENCASED WITH CONCRETE OR ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR PRESSURE RATED PVC PIPE (MEETING THE AWWA C-900 OR C-905 SPECIFICATION) FOR A MINIMUM LENGTH OF (20) FEET, CENTERED ON THE POINT OF CROSSING. A MINIMUM HORIZONTAL SEPARATION OF (10) FEET (EDGE TO EDGE) BETWEEN POTABLE WATER MAINS AND SEWER MAINS SHALL BE MAINTAINED WHEN AT ALL POSSIBLE. WHEN THE 10-FOOT HORIZONTAL SEPARATION CANNOT BE MAINTAINED THE WATER MAIN SHALL BE		
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER DESIGN NOTES	FILE NAME S1.DOC
		DETAIL REF: S-1
		REV. 12/08

SANITARY SEWER DESIGN NOTES CONT'D		
INSTALLED IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF AT LEAST 18" ABOVE THE SEWAGE MAIN. ALTERNATIVELY, THE SEWER MAIN SHALL BE ENCASED WITH CONCRETE OR ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR UPGRADED TO PRESSURE RATED PVC PIPE (MEETING AWWA C-900 OR C-905 SPECIFICATION) AND PRESSURE TESTED AT 150 PSI TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING. 26. CEMENT USED IN CONCRETE MIX FOR PRECAST STRUCTURES SHALL BE TYPE II, ACID RESISTANT AND SULFIDE RESISTANT CONCRETE. 27. MORTAR TO CONTAIN "HYDRATITE" OR APPROVED EQUAL, TO PREVENT SHRINKAGE. 28. PROFILE VIEWS SHALL BE PROVIDED FOR ALL SEWER MAINS. PROFILE VIEWS SHALL BE ON THE SAME SHEET AS THE ASSOCIATED PLAN VIEW AND SHALL INCLUDE THE FOLLOWING INFORMATION: A. SIZE, SLOPE, LENGTH AND CLASS OF PIPE B. MANHOLE RIM AND INVERT ELEVATIONS C. UTILITY CROSSINGS WITH VERTICAL SEPERATION D. SHOW PROPOSED SEWER AND EXISTING UTILITY E. EXISTING GROUND PROFILE F. MATCH LINE G. VICINITY MAP H. PROFILE VIEW STATIONS TO COINCIDE WITH PLAN VIEW STATIONS		
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER DESIGN NOTES	FILE NAME S1.DOC
		DETAIL REF: S-1
		REV. 12/08

SANITARY SEWER CONSTRUCTION NOTES		
1. THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY SANITARY SEWER CONSTRUCTION. 2. ALL GRAVITY SANITARY SEWER LINES SHALL BE GREEN PVC SDR 26, ASTM D-3034. IN PLACES WHERE A MINIMUM COVER OF 4.0' CANNOT BE MAINTAINED, AWWA C-900 OR C-905 GREEN PVC DR-25, CLASS 100 OR CONCRETE ENCASEMENT SHALL BE USED. WATER LINES, RECLAIMED LINES, AND STORM DRAINAGE CROSSINGS SHALL ALSO FOLLOW THE CONCRETE ENCASEMENT REQUIREMENT PER THESE STANDARDS AND AS PER REGULATORY REQUIREMENTS. 3. GRAVITY SANITARY SEWER LINE CONSTRUCTION SHALL BE ACCOMPLISHED BY THE USE OF A LASER INSTRUMENT UNLESS ANOTHER METHOD IS PREVIOUSLY APPROVED BY THE CITY. 4. THE CONTRACTOR SHALL AT ALL TIMES, DURING PIPE LAYING OPERATIONS DEWATER THE GROUND SUFFICIENTLY TO KEEP THE GROUNDWATER ELEVATION A MINIMUM OF 6" BELOW THE PIPE BEING LAID WITHIN THE AREA OF THE TRENCH. 5. ALL PIPES SHALL BE LAID ON A FIRM FOUNDATION. SOFT OR SPONGY BEDDING FOR PIPES IS NOT ACCEPTABLE. ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH A DRY, COMPACTED, GRANULAR MATERIAL SATISFACTORY TO THE CITY. 6. ON ALL EXCAVATION AND BACKFILLING THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING AND BRACING IN ACCORDANCE TO O.S.H.A. GUIDELINE IN ORDER TO PROVIDE FOR THE SAFETY OF WORKMEN, AS WELLAS REPRESENTATIVES OF THE CITY, THE DESIGN ENGINEER, AND THE DEVELOPER. 7. ALL TRENCHES SHALL BE BACKFILLED WITH ACCEPTABLE MATERIAL AND COMPACTED TO THE SPECIFIED MINIMUM COMPACTION (95% IN UNPAVED AREAS AND 98% IN PAVED AREAS) OF THE OPTIMUM DENSITY OF THAT MATERIAL BASED ON THE AASHTO T-180 MODIFIED PROCTOR TEST. 8. THE CONTRACTOR SHALL EMPLOY AN INDEPENDENT TESTING LABORATORY AT HIS OWN EXPENSE TO INSURE THAT COMPACTION OF ALL FILL MATERIAL IS COMPLETED PROPERLY. TESTS SHALL BE DONE ONE FOOT ABOVE THE PIPE AND THEN AT ONE FOOT VERTICAL INTERVALS UNTIL FINAL GRADE IS REACHED. TESTING SHALL BE COMPLETED AND TEST DOCUMENTS SUBMITTED TO THE CITY AT A MINIMUM FREQUENCY OF ONE SET OF TESTS BETWEEN EACH MANHOLE AND ONE ADDITIONAL SET OF TESTS AT EVERY MANHOLE. IDENTIFICATION OF TEST LOCATIONS SHALL BE CLEARLY INDICATED ON TEST REPORTS. TEST RESULTS SHALL BE FORWARDED PROMPTLY TO THE CITY'S DESIGNATED SITE INSPECTOR. 9. THE CONTRACTOR SHALL INSTALL A METALLIZED FOIL LOCATOR TAPE, OR SIMILAR DEVICE AS MAY BE APPROVED BY THE CITY FOR THE FULL LENGTH OF ALL PVC SEWAGE FORCE MAINS. THIS PIPE LOCATOR AID SHALL BE INSTALLED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS DIRECTED BY THE MANUFACTURER. TAPE SHALL BE COLOR CODED GREEN FOR SANITARY SEWER AND FORCE MAIN. A CONTINUOUS NO. 10 COPPER HEAD WIRE SHALL BE INSTALLED WITH WIRE BROUGHT UP AT ALL VALVES. 10. ALL TESTING REQUIRED BY THE CITY SHALL BE PAID FOR BY THE CONTRACTOR / DEVELOPER. 11. MANHOLE RIMS SHALL MATCH FLUSH WITH THE FINISH GRADE ELEVATION IN PAVED AREAS AND A MINIMUM OF 0.2 FEET AND MAXIMUM OF 0.5 FEET ABOVE GRADE GENERALLY IN UNPAVED AREAS. 12. THE CONTRACTOR SHALL CONSTRUCT SANITARY SEWER MANHOLES IN SUCH A WAY THAT SEWER LINES DO NOT INTERSECT SEALED JOINTS BETWEEN SECTIONS OF THE MANHOLE. 13. RUBBER BOOTS AND 316 STAINLESS STEEL BANDS SHALL BE UTILIZED IN THE CONNECTION OF THE SEWER MAIN TO THE MANHOLES (SEE STANDARD MANHOLE AND BOOT DETAILS).		
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES	FILE NAME S2.DOC
		DETAIL REF: S-2
		REV. 12/08

SANITARY SEWER CONSTRUCTION NOTES CONT'D		
14. INDIVIDUAL SANITARY SERVICE ON NEW CONSTRUCTION SHALL NOT BE CONNECTED DIRECTLY INTO MANHOLES, AND MUST CONNECTED TO SEWER MAIN LINES BY USE OF WYE CONNECTIONS, UNLESS OTHERWISE APPROVED BY THE CITY. 15. FOR SINGLE FAMILY HOMES, SINGLE FOUR INCH SEWER SERVICES LATERALS SHALL BE CONSTRUCTED AT EACH LOT OR UNIT AND LOCATED ON THE DOWNSTREAM SIDE OF THE LOT CENTER LINE. THESE SERVICES SHALL BE EXTENDED 4 FEET ABOVE GROUND AT THE PROPERTY LINE WITH A PVC RISER AND PLUG BEING EASILY VISIBLE FROM THE ROAD. RUBBER SEAL FITTINGS SHALL BE USED ON ALL LINES. NO GLUED JOINTS ARE PERMITTED ON LATERALS. 16. ALL SANITARY SEWER MANHOLE COVERS SHALL HAVE THE WORDS "PORT ORANGE FLORIDA SANITARY SEWER" CAST INTO THEM. 17. FORCE MAIN SYSTEMS SHALL BE PRESSURE TESTED AT 100 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA STANDARDS. 18. ALL SANITARY SEWER FORCE MAINS SHALL USE A THRUST RESTRAINT JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION GUIDELINES MODIFIED TO ACCOMMODATE PVC PIPE BY FOLLOWING THE RECOMMENDED INCREASE IN RESTRAINT LENGTH CORRESPONDING TO THE INSTALLATION OF POLYETHYLENE WRAP. IN NO INSTANCE SHALL THRUST BLOCKS BE PERMITTED. 19. THE CITY MAY REQUIRE ALL NEW SANITARY SEWER GRAVITY SYSTEMS TO BE SMOKE TESTED PRIOR TO FINAL ACCEPTANCE. ALL TESTING MUST BE DONE IN THE PRESENCE OF THE CITY'S DESIGNATED SITE INSPECTOR. 20. THE CITY OF PORT ORANGE RESERVES THE RIGHT TO REQUIRE THE DEVELOPER TO PERFORM VACUUM TESTING OF ALL SANITARY MANHOLES, AIR TEST SEWER MAINS, AND REQUIRES THAT ALL SANITARY SEWER MAIN LINES BE TELEVIEWED PRIOR TO FINAL ACCEPTANCE. LATERALS SHALL BE TELEVIEWED UPON DEMAND BY THE CITY PRIOR TO FINAL ACCEPTANCE WHEN IT IS SUSPECTED THAT A PROBLEM EXISTS. 21. ALL SEWER MAINS, PRIOR TO FINAL ACCEPTANCE BY THE CITY AND PRIOR TO ANY FINAL PAVING OPERATIONS, SHALL BE TELEVIEWED AND SUBMITTED TO THE CITY USING A "PAN AND TILT CAMERA" WITH DEPTH GAUGE IN FRONT OF THE CAMERA BY A CITY APPROVED CONTRACTOR. THE CAMERA SHALL RUN FROM DOWN STREAM MANHOLE TO UP STREAM MANHOLE. CITY INSPECTOR SHALL BE NOTIFIED IN ADVANCE AND BE PRESENT DURING THE TELEVIEWING OF THE SEWER SYSTEM. THE VIDEO SHALL BE NON-STOP WITH AUDIO DESCRIBING WHAT IS BEING REVIEWED. WRITTEN VIDEO LOGS DESCRIBING THE CONDITION OF THE LINES SHALL ACCOMPANY THE VIDEO SUBMISSION TO THE CITY PRIOR TO COMMENCING ANY INSTALLATION OF ASPHALT OR CONCRETE PAVEMENT. THE CITY MAY REQUIRE ADDITIONAL VIDEO TAPING, VIDEO TAPING OF LATERALS, AND/OR INFILTRATION/EXFILTRATION TESTS IF DEFECTS ARE APPARENT OR WORKMANSHIP IS QUESTIONABLE. 22. ALL SEWER LINES WHICH ARE CONSTRUCTED OUTSIDE OF PUBLIC RIGHTS-OF-WAY WITHIN SIDE YARDS, BACKYARDS, AND OTHER POORLY ACCESSIBLE AREAS SHALL BE CONSTRUCTED OF GREEN C-900 PVC. ABSOLUTELY NO USE OF PLASTIC STYRENE FITTINGS SHALL BE ALLOWED. 23. SEWER LATERAL LOCATIONS SHALL BE MARKED ALONG THE OUTSIDE OF THE CURB WITH A SAW CUT "V", OR BY A METAL TAB SET INTO THE PAVEMENT. 24. EZ-WRAP PLASTIC, AS MANUFACTURED BY PRESS SEAL GASKET CORPORATION, SHALL BE USED ON THE OUTSIDE OF ALL MANHOLE AND WETWELL JOINTS. APPLY ONE LAYER OF 9" WRAP CENTERED ON EACH JOINT. A CITY INSPECTOR SHALL PERSONALLY INSPECT ALL JOINT SEALS PRIOR TO BACKFILLING OPERATIONS. 25. ALL PROPOSED SEWER FORCE MAINS SHALL BE FLUSHED, PRESSURE TESTED, PIGGED AND CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED		
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES	FILE NAME S2.DOC
		DETAIL REF: S-2
		REV. 12/08

SANITARY SEWER CONSTRUCTION NOTES CONT'D		
SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER OR WASTEWATER TREATMENT PLANT (AS APPROPRIATE) AT LEAST 2 BUSINESS DAYS PRIOR TO BEGINNING A FULL-DIAMETER FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING (SUBJECT TO AVAILABILITY). 26. THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL FORCE MAINS IN EXCESS OF 6" IN DIAMETER AND PRIMARY TRANSMISSION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PORT ORANGE REPRESENTATIVE OR CITY INSPECTOR. 27. AS A GENERAL RULE, THE NUMBER OF JOINTS SHALL BE LIMITED WHENEVER POSSIBLE. IN SPECIAL CASES WHERE A POINT REPAIR TO AN 8" TO 12" PVC SEWER MAIN IS REQUIRED, THE PROPER RIGID WRAP AROUND SLEEVE SUCH AS A JCM-210 OVERSIZED DUCTILE IRON COUPLING OR AN APPROVED EQUAL MAY BE ALLOWED BY SPECIAL APPROVAL BY THE CITY. 28. ALL IN-LINE SANITARY SEWER FORCE MAIN VALVES SHALL BE RESILIENT SEAT (AWWA C-509 OR C-515) VALVES FEATURING AN EPOXY LINED DUCTILE IRON BODY. 29. ALL TAPPING OF PRESSURE MAINS AND CORING OF MANHOLES SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. SCHEDULING OF THESE CONNECTIONS SHALL REQUIRE A MINIMUM 2 BUSINESS DAYS NOTIFICATION DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE THE WORK DIRECTLY WITH THE PUBLIC UTILITIES DEPARTMENT. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 8:00 A.M. AND NOON ON THE APPROPRIATE DAY ESTABLISHED BY CITY. WITH RESPECT TO TIE-IN CONNECTIONS AND CORING OPERATIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. 30. ALL WORK PERFORMED ON SANITARY SEWER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY AN UNDERGROUND UTILITY CONTRACTOR, OR LICENSED GENERAL CONTRACTOR, WHO IS LICENSED IN THE STATE OF FLORIDA AND REGISTERED WITH THE CITY. 31. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY USE OF THE SYSTEM. 32. FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE LOCATION, OF ALL FORCE MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT, IF NO CURBING EXISTS). 33. ALL HDPE PIPE INSTALLED FOR SEWAGE FORCE MAINS SHALL BE SDR 11 WITH #10 COPPER HEAD TRACER WIRE UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC TO WHICH IT IS ATTACHED. 34. ALL P.V.C. PIPE SHALL BE STORED IN SUCH A WAY AS TO PREVENT WARPING, DEFLECTION, OR DEFORMATION. ANY PIPE DEEMED TO BE MISSHAPED IN ANY WAY FOR ANY REASON SHALL BE REJECTED. 35. NO USED, RE-USED, RUSTED, SECOND HAND, OR ANY MATERIAL THAT IS NOT NEW SHALL BE USED IN ANY UTILITY IMPROVEMENT PROJECTS WITHIN THE CITIES SERVICE AREA. 36. WHERE POTABLE WATER AND SANITARY SEWER MAINS CROSS WITH LESS THAN (18) INCHES OF VERTICAL CLEARANCE OR WHERE THE SEWER MAIN IS ABOVE THE WATER MAIN, THE SEWER MAIN SHALL BE ENCASED WITH CONCRETE OR ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR PRESSURE RATED PVC PIPE (MEETING THE AWWA C-900 OR C-905 SPECIFICATION) FOR A MINIMUM LENGTH OF (20) FEET, CENTERED ON THE		
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES	FILE NAME S2.DOC
		DETAIL REF: S-2
		REV. 12/08

SANITARY SEWER CONSTRUCTION NOTES CONT'D		
POINT OF CROSSING. A MINIMUM HORIZONTAL SEPARATION OF (10) FEET (EDGE TO EDGE) BETWEEN POTABLE WATER MAINS AND SEWER MAINS SHALL BE MAINTAINED WHEN AT ALL POSSIBLE. WHEN THE 10-FOOT HORIZONTAL SEPARATION CANNOT BE MAINTAINED THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF AT LEAST 18" ABOVE THE SEWAGE MAIN. ALTERNATIVELY, THE SEWER MAIN SHALL BE ENCASED WITH CONCRETE OR ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR UPGRADED TO PRESSURE RATED PVC PIPE (MEETING AWWA C-900 OR C-905 SPECIFICATION) AND PRESSURE TESTED AT 150 PSI TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.Ⓜ		
37. CEMENT USED IN CONCRETE MIX FOR PRECAST STRUCTURES SHALL BE TYPE II, ACID RESISTANT AND SULFIDE RESISTANT CONCRETE. 38. MORTAR TO CONTAIN "HYDRATITE" OR APPROVED EQUAL, TO PREVENT SHRINKAGE 39. CONTRACTORS SHALL PROVIDE THICKER MANHOLE WALLS AND BASES AS REQUIRED TO PREVENT FLOTATION BASED ON HIGH GROUND WATER TABLE ELEVATIONS AS DETERMINED USING ACCEPTED ENGINEERING PRACTICES AND/OR APPROVED BY PUBLIC UTILITIES DEPT. 40. SHOP DRAWINGS FOR ALL STRUCTURES SHALL BE SUBMITTED TO AND APPROVED BY THE DESIGN ENGINEER PRIOR TO INSTALLATION WITH TWO COPIES FORWARDED BY THE DESIGN ENGINEER TO THE CITY. 41. NO BUG HOLES OR HONEYCOMB WILL BE ACCEPTED. 42. ALL SANITARY SEWER MANHOLES SHALL HAVE ALL INTERIOR SURFACES COATED WITH THREE (3) COATS OF WHITE/GRAY OVER RED OVER BLACK EW-1 EPOXY PAINT WITH A TOTAL OF 12 MILS THICKNESS OR BLACK COAL-TAR EPOXY WITH A TOTAL OF 16 MILS THICKNESS. OUTSIDE SURFACE TO BE COATED WITH TWO (2) COATS OF BLACK OVER BLACK EW-1 EPOXY PAINT WITH A TOTAL OF 8 MILS AND ONE (1) COAT OF BLACK COAL-TAR EPOXY WITH A TOTAL OF 8 MILS. ALL COATS SHALL BE APPLIED AT THE FACTORY EXCEPT MINOR FIELD TOUCH UP AT JOINTS AND AT MANHOLE NECK.		
	STANDARD CONSTRUCTION DETAIL SANITARY SEWER CONSTRUCTION NOTES	FILE NAME S2.DOC
		DETAIL REF: S-2
		REV. 12/08



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WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

REVISIONS

No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

CITY
SEWER
DETAILS

PROJECT: CC 11\FinalSF Phase 4

SHEET NO.

C31

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C

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A

City of Port Orange Public Utilities Department

List of Approved Products

Sanitary Sewer & Force Main

12/08

Air Release Valves

MANUFACTURER	MODEL #
A.R.I.	D-025P (Plastic)

Gate Valves and Tapping Valves – Resilient Seated (AWWA C509 and C515) 24" or Smaller

MANUFACTURER	MODEL #
American AVK Co.	Series 3, 18, 25, 45, 55, & 66
Clow	Model 2638 and 2639
Mueller	A-2360, A-2361, T-2360 & T-2361
American Flow Control	Series 2500

Joints Restrained – PVC Only

MANUFACTURER	MODEL #
EBBA Iron Inc	Series 1500/1600 2000/2500/2800
Star Pipe	Stargrip Series 1000/1100/1200/4000
Sigma	One-Lock SLC PV-Lok for PVC
Smith-Blair	Cam-Lock (111 & 120) & Bell-Lock (115 & 165)

STANDARD CONSTRUCTION DETAIL
SANITARY SEWER & FORCE MAIN
APPROVED PRODUCTS

FILE NAME:
S5.DOC

DETAIL REF:
S-5

City of Port Orange Public Utilities Department

List of Approved Products

Sanitary Sewer & Force Main

12/08

Force Main Fittings – PVC and DIP Class 350 (with Protecto 401 Ceramic Epoxy)

MANUFACTURER	MODEL #
Harco	
Multi-Fittings	
Plastic Trends	
Head	
Tyler/Union (Lined with Protecto 401 Ceramic Epoxy)	

Manhole and Lift Station Wet Well Rehabilitation Liner

MANUFACTURER	MODEL #
Raven 405	
½" Minimum Thick Fiberglass Liner (cylinder)	

STANDARD CONSTRUCTION DETAIL
SANITARY SEWER & FORCE MAIN
APPROVED PRODUCTS

FILE NAME:
S5.DOC

DETAIL REF:
S-5

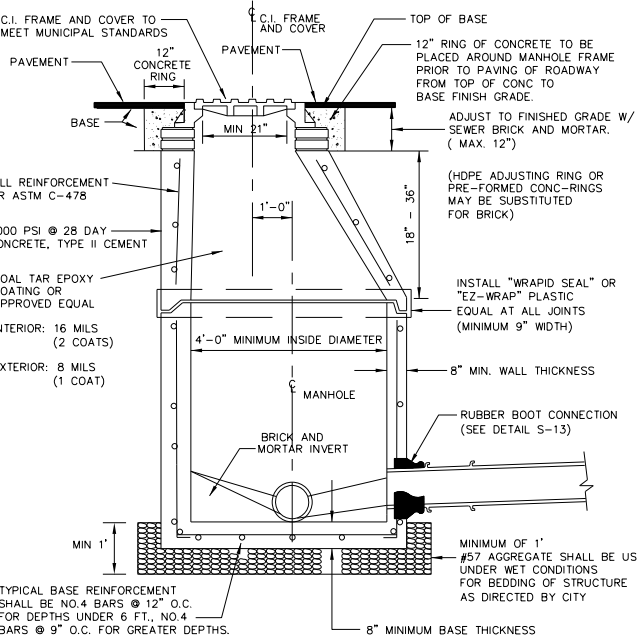


Diagram showing a cross-section of a manhole with various layers: C.I. frame and cover, 12" concrete ring, 12" ring of concrete to be placed around manhole frame, pavement, base, wall reinforcement, 4000 PSI concrete, coal tar epoxy coating, interior/exterior mils, manhole, brick and mortar invert, rubber boot connection, and aggregate base.

FILE NAME:
S6.DWG

DETAIL REF:
S-6

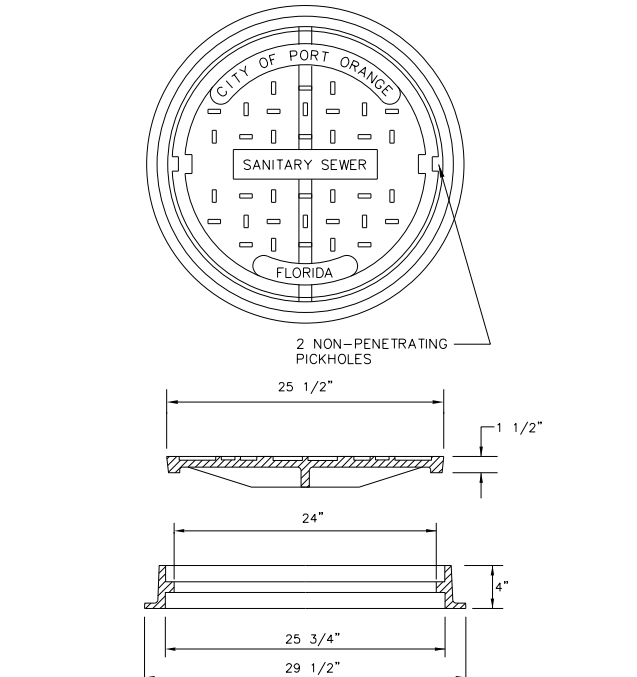


Diagram showing a top view and side view of a sanitary sewer cover. The top view shows a circular cover with a 25 1/2" diameter and a 24" diameter opening. The side view shows a 4" high cover with a 25 3/4" diameter base.

FILE NAME:
S7.DWG

DETAIL REF:
S-7

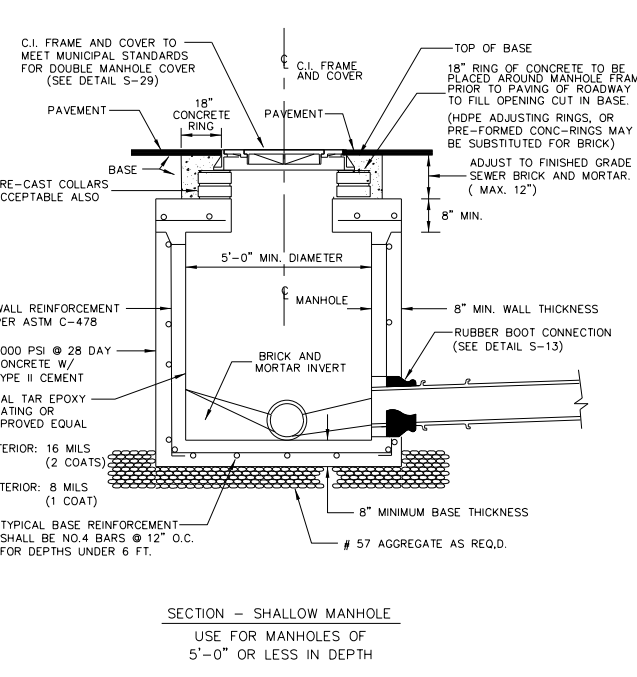


Diagram showing a cross-section of a shallow manhole with various layers: C.I. frame and cover, 18" concrete ring, 18" ring of concrete to be placed around manhole frame, pavement, base, wall reinforcement, 4000 PSI concrete, coal tar epoxy coating, interior/exterior mils, manhole, brick and mortar invert, rubber boot connection, and aggregate base.

FILE NAME:
S8.DWG

DETAIL REF:
S-8

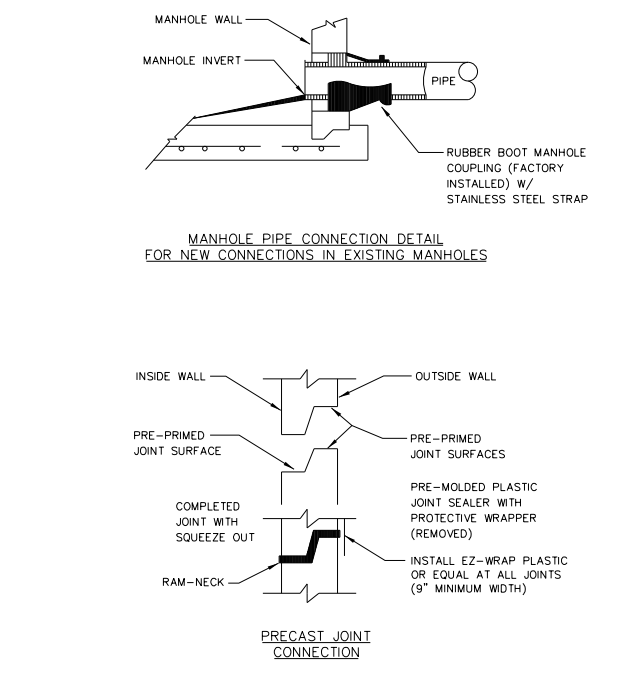


Diagram showing a cross-section of a manhole pipe connection with various layers: manhole wall, manhole invert, pipe, rubber boot manhole coupling, pre-primed joint surfaces, pre-molded plastic joint sealer, and ram-neck.

FILE NAME:
S13.DWG

DETAIL REF:
S-13

SEAL

REVISIONS

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DETAILS

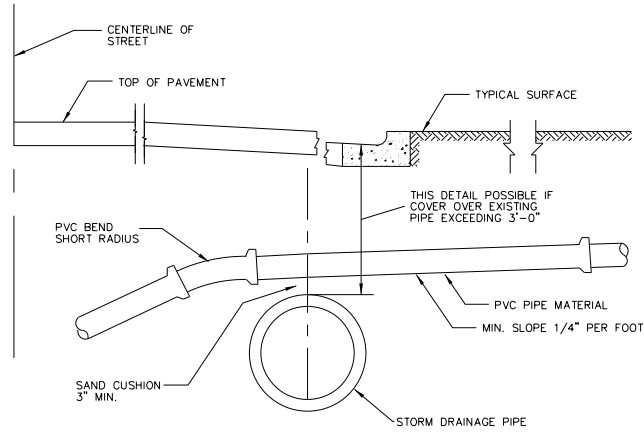
PROJECT: CC 11FinalSF Phase 4

SHEET NO.

C32

E

D



ALTERNATE GRADIENT FOR HOUSE SERVICE
SEWERS AT CONFLICTS WITH EXISTING STORM
SEWERS & OTHER EXISTING CONDUITS

APPROVED PIPE MATERIALS-PVC (SDR 26)



STANDARD CONSTRUCTION DETAIL
STORM DRAINAGE CROSSING / SANITARY LATERAL PIPE
CROSSING

REV. 12/08

FILE NAME:
S14.DWG
DETAIL REF:
S-14



STANDARD CONSTRUCTION DETAIL
SEWER LATERAL

REV. 12/08

NOTES:
1. USE OF STYRENE MATERIAL WILL NOT BE PERMITTED.
2. ALL JOINTS TO BE RUBBER GASKET (NO GLUED FITTINGS) TYPICAL.
3. USE ALL HARCO SDR-26 FITTINGS OR CITY APPROVED EQUAL.
4. APPROVED EQUAL IS MULTI FITTINGS 8" X 6" OR 8" X 4" T-WYE AND 8" X 6" OR 8" X 4" WYE WITH A DATE STAMP.

4" - RESIDENTIAL
6" - COMMERCIAL

FILE NAME:
S15.DWG
DETAIL REF:
S-15



STANDARD CONSTRUCTION DETAIL
CLEANOUT

REV. 12/08

NOTE:
1. CLEANOUT SIZE SHOULD ALWAYS MATCH MAIN LINE SIZE TO ALLOW FOR PROPER CLEANING

FILE NAME:
S16.DWG
DETAIL REF:
S-16



STANDARD CONSTRUCTION DETAIL
LOCATOR TAPE/ TRACERWIRE INSTALLATION FOR
SEWER FORCE MAIN, PIPELINES

REV. 12/08

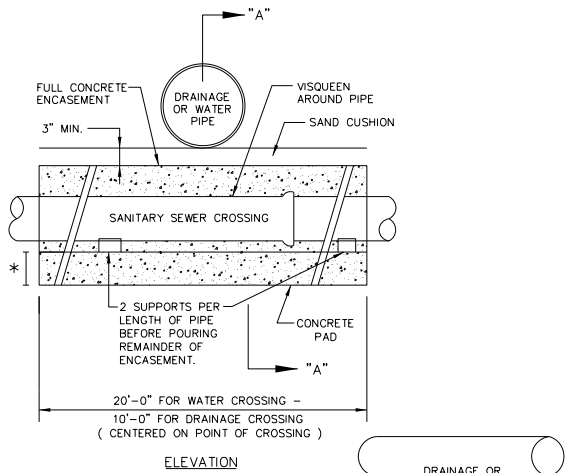
NOTE:
1) A CONTINUOUS No. 10 COPPERHEAD TRACER WIRE TO BE INSTALLED WITH ALL NON-METALLIC PIPE. WIRE SHALL BE BROUGHT UP TO GRADE AT ALL VALVES OUTSIDE P.V.C. SLEEVE. (SEE DETAIL W-6).
2) ALL TRACER WIRES SHALL BE INTERCONNECTED WITH WATER PROOF WIRE NUT CAP OR WITH SIMILAR WATER PROOF SPLICE KIT AT ANY SPLICE AND WHERE SERVICES CONNECT TO MAINS.
3) A SUCCESSFUL CONTINUITY TEST SHALL BE CONDUCTED AND WITNESSED BY A CITY INSPECTOR AT THE COMPLETION OF TRACER WIRE INSTALLATION.

FILE NAME:
S17.DWG
DETAIL REF:
S-17

C

B

A



NOTES:
1. ALL CONCRETE SHALL BE 3000 PSI MINIMUM 28 DAYS STRENGTH.
2. WATER MAIN SHALL BE LOCATED ABOVE OR BELOW ENCASEMENT AS SHOWN ON PLANS OR DETERMINED IN THE FIELD. USE ENCASEMENT WHERE VERTICAL CLEARANCE WATER MAIN AND SEWER MAIN IS LESS THAN 18 INCHES.
3. NO DUCTILE IRON SEWER PIPE IS PERMITTED.

ELEVATION

20'-0" FOR WATER CROSSING -
10'-0" FOR DRAINAGE CROSSING
(CENTERED ON POINT OF CROSSING)

2 SUPPORTS PER LENGTH OF PIPE BEFORE POURING REMAINDER OF ENCASEMENT.

CONCRETE PAD

ENCASEMENT THICKNESS TO BE 1/2 PIPE DIAM. OR 6 IN., WHICHEVER IS GREATER TYP.

POUR CONCRETE UNDISTURBED SOIL

2 SUPPORTS PER LENGTH OF PIPE BEFORE POURING REMAINDER OF ENCASEMENT.

CONCRETE PAD

SECTION "A" - "A"



STANDARD CONSTRUCTION DETAIL
SEWER / WATER / DRAINAGE CROSSING

REV. 12/08

FILE NAME:
S18.DWG
DETAIL REF:
S-18



STANDARD CONSTRUCTION DETAIL
TYPE "A" BEDDING AND TRENCH
(SPECIAL GRAVITY SEWER INSTALLATIONS)

REV. 12/08

NOTES:
1. PIPE BEDDING: #57 STONE OR BEDDING ROCK COMPACTED TO 95% THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% THE MAXIMUM DENSITY AS PER AASHTO T-180. (98% DENSITY REQUIRED UNDER PAVEMENT, DRIVEWAYS AND STRUCTURES.)
3. USE TYPE "A" BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CITY.
4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
7. REFER TO SECTION 32.5 OF THE MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
8. GRAVITY SEWERS SHALL UTILIZE TYPE "A" BEDDING, WHERE UNSUITABLE MATERIAL EXISTS. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER LESS THAN 15", AND 6" MINIMUM FOR PIPE DIAMETER 16" AND LARGER.
9. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. CITY SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.
10. REFER TO OSHA REQMTS. FOR SLOPING, SHEETING AND BRACING IN EXCAVATIONS.

FILE NAME:
S27.DWG
DETAIL REF:
S-27



STANDARD CONSTRUCTION DETAIL
TYPE "B" BEDDING AND TRENCH
(TYPICAL FOR WATER, SEWER, FORCE MAIN, STORM DRAIN AND RECLAIMED WATER MAIN INSTALLATIONS)

REV. 12/08

NOTES:
1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% THE MAXIMUM DENSITY AS PER AASHTO T-180. (98% DENSITY REQUIRED UNDER DRIVEWAYS, PAVEMENT AND STRUCTURES.)
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE "A" BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE CITY.
4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
7. REFER TO OSHA REQUIREMENTS FOR SLOPING, SHEETING AND BRACING IN EXCAVATIONS.
8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

FILE NAME:
S28.DWG
DETAIL REF:
S-28



STANDARD CONSTRUCTION DETAIL
SANITARY SEWER DOUBLE MANHOLE COVER

REV. 12/08

NOTES:
1. U.S. FOUNDRY 667 RING; OR (OUTER COVER); BJ (INNER COVER) WITH 4 TO 6 1" VENT HOLES
2. BJ (INNER COVER) WT.: 200 LBS.
3. CR (OUTER COVER) WT.: 220 LBS.
4. RING WT.: 220 LBS.
5. MATERIAL: ASTM-A48 CLASS 30B GRAY IRON

*FOR AIR RELEASE VALVE PIT APPLICATION
ONLY PROVIDE DOUBLE MANHOLE RING AND
COVER WITH 4 - 3/4" TO 1" HOLES

REVISIONS			
No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE
**CITY
SEWER
DETAILS**

PROJECT: CC 11FinalSF Phase 4
SHEET NO.

C33

POTABLE WATER DESIGN NOTES

- ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE 1", DOUBLE RESIDENTIAL SERVICES SHALL ALSO BE 1", AND COMMERCIAL SERVICES SHALL BE 1" OR 2". NO 1 1/2" SERVICES ARE ALLOWED. POLYETHYLENE TUBING SHALL BE USED, IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS: POLYETHYLENE TUBING SHALL BE CTS 3408 HIGH DENSITY TUBING, BLUE IN COLOR, AND RATED FOR A MINIMUM OF 200 P.S.I. WITH SDR OF 9 (CTS). THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER SHALL FURNISH A CERTIFICATE OF PURITY. THE TUBING SHALL HAVE UV PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF A.S.T.M. D1248, D3350, D2239, D2737, N.S.F. 14 AND A.W.W.A. C-901 AND SHALL COME WITH A LIFETIME WARRANTY. ACCEPTABLE MANUFACTURERS: ENDOT ENDOPURE.
- WATER VALVES SHALL BE PLACED AT ALL STREET INTERSECTIONS AND AT MAXIMUM SPACINGS OF 1,000.0 FEET.
- AT ALL WATER MAIN TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL LEGS EXCEPT ONE.
- APPROVED WATER VALVE TYPES ARE THE FOLLOWING:
 - RESILIENT SEATED GATE VALVES EQUAL TO OR LESS THAN 24" DIAMETER (AWWA C-515)
 - BUTTERFLY VALVES GREATER THAN 24" (AWWA C-504)
 - TAPPING VALVES WITH MECHANICAL TAPPING SLEEVE
- TYPICALLY, A MINIMUM OF ONE FIRE HYDRANT SHALL BE LOCATED AT EVERY INTERSECTION. OTHER FIRE HYDRANTS SHALL BE LOCATED SO AS TO PRODUCE A MAXIMUM 250.0 FEET AND/OR MEETING THE LATEST NFPA CODE HOSE LAY ALONG THE STREET FOR ALL RESIDENTIAL BUILDINGS. ALL BUILDINGS WITH FIRE PROTECTION SPRINKLER SYSTEM, THE FIRE DEPARTMENT CONNECTION (FDC) MUST BE WITHIN 50.0 FEET OF UNOBSTRUCTED DISTANCE TO AN APPROVED FIRE HYDRANT LOCATION BY THE FIRE MARSHALL AND OR PUBLIC UTILITIES ENGINEER.
- AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF CURB OR AS APPROVED BY THE CITY.
- ALL WATER MAINS SHALL BE NSF AND/OR AWWA APPROVED FOR POTABLE WATER USE, AND SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.
- WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR D.I.P. PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY.
- WATER DISTRIBUTION SYSTEM SHALL BE DESIGNED TO COMPLY WITH THE CITY'S LATEST FIRE (WATER) FLOW CODE. ALL DEDICATED FIRE LINES SHALL BE INDEPENDENT OF ALL OTHER DOMESTIC WATER SERVICES.
- MEGALUGS, BOLTLESS RESTRAINED JOINTS OR GRIPPER GASKETS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST RESTRAINT DESIGN GUIDELINES USING TORQUE WRENCHES PER MANUFACTURERS RECOMMENDATION.
- WATER SERVICES SHALL BE NORMALLY DOUBLE 1" SERVICES LOCATED AT SIDE LOT LINES. INSTANCES WHERE SERVICES NEED TO BE OFFSET, 1" SINGLE SERVICES SHALL BE SPECIFIED. THESE SERVICES MAY BE OFFSET A MAXIMUM OF 2.0' FROM SIDE LOT LINES.
- THE CITY REQUIRES DOUBLE WATER SERVICE INSTALLATIONS WHEREVER FEASIBLE. WHEN DESIGN CONFLICTS EXIST, SINGLE WATER SERVICES MAY BE ALLOWED. THIS MAY APPLY AT STORMWATER INLETS, FIRE HYDRANTS, FPL TRANSFORMERS, ETC. AND OTHER LOCATIONS DEEMED APPROPRIATE BY THE CITY.

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POTABLE WATER DESIGN NOTES CONT'D

- ALL PROPOSED POTABLE WATER MAINS SHALL BE FLUSHED, DISINFECTED, PRESSURE TESTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE WHEN APPROPRIATE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER TREATMENT PLANT AT LEAST 2 BUSINESS DAYS PRIOR TO BEGINNING FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING.
- FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT, IF NO CURB IS USED).
- LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF 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.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY 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 MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C.. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST 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 381.006(2), F.S., AND RULE 64E-6.002, F.A.C.
- 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 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.
- 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 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- WITH RESPECT TO TIE-IN CONNECTIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. THE INSTALLATION OF LINE STOPPING DEVICES ON PRESSURE MAIN (POTABLE WATER AND FORCE MAIN) MAY BE REQUIRED ON ANY REQUESTED UTILITY OUTAGE AT THE DISCRETION OF PUBLIC UTILITIES DEPARTMENT TO MINIMIZE INTERRUPTION TO EXISTING UTILITY CUSTOMERS.

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POTABLE WATER CONSTRUCTION NOTES

- THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY POTABLE WATER SYSTEM CONSTRUCTION.
- DEWATERING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW WATER MAIN BEING LAID.
- ALL WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
- TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 1 FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET.
- 3" METALLIZED PIPE LOCATION TAPE SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE USED ON ALL DUCTILE IRON PIPE, AS WELL.
- ALL WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND. ALL SERVICES SHALL BE LOCKED AT THE TIME OF FINAL INSPECTION BY THE CONTRACTOR IN THE PRESENCE OF THE CITY INSPECTOR OR CITY PERSONNEL AFTER THEY HAVE BEEN INSPECTED AND VERIFIED TO OPERATE PROPERLY.
- AT ALL WATER MAIN TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL LEGS EXCEPT ONE.
- ALL WATER VALVES SHALL BE ADJUSTED TO FINISHED GRADE AND THE CAPS PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE.
- UPON FINAL ACCEPTANCE OF NEW WATER SYSTEMS, WATER VALVES SHALL BE COMPLETELY OPENED BY PUBLIC UTILITIES PERSONNEL AT NO TIME SHALL CONTRACTOR OPERATE ANY EXISTING VALVES.
- ALL FIRE HYDRANTS SHALL BE CONSTRUCTED TO MAKE THEM EASILY ACCESSIBLE TO FIRE PERSONNEL IN CASE OF A FIRE. THE PRIMARY HYDRANT PORT SHOULD ALWAYS FACE THE STREET.
- AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF CURB OR AS APPROVED BY THE CITY.
- ALL WATER MAINS SHALL BE NSF AND/OR AWWA APPROVED FOR POTABLE WATER USE, AND SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.
- WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR D.I.P. PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY.
- UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF HEALTH AND AS-BUILTS ARE PROVIDED TO THE CITY PRIOR TO ANY PUBLIC USE OF THIS SYSTEM.
- IN AREAS WHERE RECLAIMED WATER IS NOT AVAILABLE THE CONTRACTOR SHALL BE REQUIRED TO (UPON SATISFACTORY COMPLETION OF THE PRESSURE TEST) TRANSFER THE WATER FROM THE POTABLE WATER LINES TO THE RECLAIMED WATER LINES FOR UTILIZATION IN THEIR PRESSURE TEST.
- ALL POTABLE WATER MAINS SHALL USE A THRUST RESTRAINT JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES. IN THE EVENT THAT PVC PIPE IS SPECIFIED, THE

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POTABLE WATER CONSTRUCTION NOTES (CONT'D)

- RESTRAINT JOINT SHALL BE MODIFIED IN ACCORDANCE WITH THE RECOMMENDED ADDITIONAL RESTRAINT LENGTH REQUIRED FOR PIPE WRAPPED WITH POLYETHYLENE.
- MEGALUGS, BOLTLESS RESTRAINED JOINTS OR GRIPPER GASKETS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST RESTRAINT DESIGN GUIDELINES USING TORQUE WRENCHES PER MANUFACTURERS RECOMMENDATION.
 - WATER SYSTEMS SHALL BE PRESSURE TESTED AT 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA STANDARDS.
 - ALL WATER SERVICES SHALL BE MARKED WITH AN "A" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT.
 - ALL WATER VALVES SHALL BE MARKED WITH AN "X" SAW CUT INTO THE CURB OR BY METAL TABS SET INTO THE PAVEMENT. BLOW-OFFS SHALL BE MARKED SIMILARLY, AS WELL. REVERSE TAPPING VALVE SHALL BE MARKED WITH AN "X" SAW CUT INTO THE CURB OR PAVEMENT WITH THE ARROW POINTING TO THE DIRECTION OF THE PRESSURE MAIN RUN.
 - ALL TAPPING OF MAINS SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. SCHEDULING OF THESE CONNECTIONS OR TAPPINGS SHALL REQUIRE A MINIMUM OF 2 BUSINESS DAYS, DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE THE WORK DIRECTLY WITH THE PUBLIC UTILITIES DEPARTMENT. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 8:00 A.M. AND NOON ON THE APPROPRIATE DAY.
 - LARGE COMMERCIAL WATER AND RECLAIMED WATER METERS GREATER THAN 3" TAKE A MINIMUM OF 6 WEEKS FOR DELIVERY AFTER FEES ARE PAID TO THE CITY. IN ADDITION ALL METERS AND VAULTS 3" AND GREATER SHALL BE INSTALLED BY THE OWNER/ DEVELOPER/ CONTRACTOR. THE FEE COLLECTED BY THE CITY IS FOR MATERIALS ONLY. ALL METERS, 2" AND LESS, SHALL BE INSTALLED BY THE CITY.
 - THE CITY REQUIRES DOUBLE WATER SERVICE INSTALLATIONS WHEREVER FEASIBLE. WHEN DESIGN CONFLICTS EXIST, SINGLE WATER SERVICES MAY BE ALLOWED. THIS MAY APPLY AT STORMWATER INLETS, FIRE HYDRANTS, FPL TRANSFORMERS, ETC. AND OTHER LOCATIONS DEEMED APPROPRIATE BY THE CITY.
 - ALL PROPOSED POTABLE WATER MAINS SHALL BE FLUSHED, DISINFECTED, PRESSURE TESTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE WHEN APPROPRIATE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE WITH CITY PERSONNEL AT THE WATER TREATMENT PLANT AT LEAST 2 BUSINESS DAYS PRIOR TO BEGINNING FLUSH OF THE MAINS AND PRIOR TO THE COMMENCEMENT OF PRESSURE TESTING.
 - THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL POTABLE MAINS 6" AND LARGER IN DIAMETER AND PRIMARY DISTRIBUTION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. ALL PIGS SHALL BE NEW. NO FOAM PIGS ARE ALLOWED. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PUBLIC UTILITIES REPRESENTATIVE OR A CITY UTILITY INSPECTOR.
 - WITH RESPECT TO TIE-IN CONNECTIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW (MIDNIGHT TO 6:00 A.M.) IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS. THE INSTALLATION OF LINE STOPPING DEVICES ON PRESSURE MAIN (POTABLE WATER AND FORCE MAIN) MAY BE REQUIRED ON ANY REQUESTED UTILITY OUTAGE AT THE DISCRETION OF PUBLIC UTILITIES DEPARTMENT TO MINIMIZE INTERRUPTION TO EXISTING UTILITY CUSTOMERS.

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POTABLE WATER CONSTRUCTION NOTES (CONT'D)

- THE PHYSICAL TAKING OF EACH AND EVERY WATER SAMPLE FOR BACTERIOLOGICAL TESTING SHALL BE OBSERVED BY THE CITY'S DESIGNATED SITE INSPECTOR. THIS SHOULD NOT IMPACT THE PROJECT SINCE THE CONTRACTOR MUST ALREADY COORDINATE FLUSHING ACTIVITY WITH THE INSPECTOR. ALL SAMPLE FORMS SHALL BE COMPLETELY FILLED OUT BY THE SAMPLING COMPANY AND TESTING COMPANY IN ORDER TO BE ACCEPTED. WHEN THE PUBLIC UTILITIES OFFICE RECEIVES POTABLE WATER CLEARANCE REQUEST REQUIRING SIGNATURE THE CITY'S DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR WILL BE CONTACTED TO INDEPENDENTLY VERIFY THAT THE SYSTEM IS IN PROPERLY FUNCTIONING ORDER (i.e. ALL VALVES, HYDRANTS, AND WATER SERVICES ARE ACCESSIBLE AND OPERABLE). SIMULTANEOUSLY, THE CITY MAY ALSO TAKE A RANDOM BACTERIOLOGICAL SAMPLE WITHIN THE NEW SYSTEM TO VERIFY THAT WATER IS SAFE FOR CONSUMPTION. ONCE THE DISTRIBUTION SUPERVISOR AND/OR DESIGNATED SITE INSPECTOR HAVE VERIFIED THAT THE SYSTEM IS IN PROPER FUNCTIONING ORDER AND THAT THE BACTERIOLOGICAL SAMPLE INDICATES THE WATER IS SAFE FOR CONSUMPTION, THE PUBLIC UTILITIES OFFICE WILL THEN SIGN OFF ON THE WATER CLEARANCE REQUEST.
- ALL WORK PERFORMED ON THE POTABLE WATER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY A STATE CERTIFIED UNDERGROUND UTILITY CONTRACTOR OR GENERAL CONTRACTOR LICENSED IN THE STATE OF FLORIDA AND REGISTERED WITH THE CITY.
- FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT, IF NO CURB IS USED).
- NEWLY CONSTRUCTED POTABLE WATER SYSTEM EXTENSIONS MAY NOT BE USED PRIOR TO FINAL TESTING, CLEARANCE AND ACCEPTANCE BY THE CITY OF PORT ORANGE. THIS INCLUDES CONSTRUCTION WATER REQUIRED FOR SEWER LINE CLEANING OR RELATED USES.
- FIRE HYDRANTS MAY NOT BE INSTALLED WITHIN 20' OF ANY ELECTRICAL TRANSFORMER
- ALL H.D.P.E. PIPE UTILIZED FOR WATER, FORCE MAIN AND/OR RECLAIMED WATER MAIN EXTENSIONS SHALL BE S.D.R. 11 WITH #10 COPPERHEAD TRACER WIRE UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC OR DIP PIPE TO WHICH IT IS ATTACHED.
- ALL VALVES 2" AND LARGER SHALL BE STANDARD 2" RESILIENT SEATED GATE VALVES (CORP STOPS ARE NOT ACCEPTABLE).
- ALL P.V.C. PIPE SHALL BE STORED IN SUCH A WAY AS TO PREVENT WARPING, DEFLECTION, OR ANY DEFORMATION. FITTINGS SHALL BE P.V.C. AND MANUFACTURED OF THE SAME DESIGN AS THE P.V.C. PIPE.
- PVC FITTINGS 4-INCH THROUGH 36-INCH SHALL BE P.V.C. (OR D.I.P. WITH PROTECTO 401) INJECTION-MOLDED OR FABRICATED AS SPECIFIED, MADE OF MATERIALS MEETING OR EXCEEDING THE REQUIREMENTS OF CELL CLASS 12454-B MATERIAL AS DEFINED IN ASTM D1784. FABRICATED FITTINGS SHALL BE MANUFACTURED WITH PIPE THAT MEETS OR EXCEEDS AWWA C-905 STANDARD, AND SHALL BE FIBERGLASS REINFORCED TO A PRESSURE RATING OF 165 PSI. ALL P.V.C. OR MECHANICAL JOINT FITTINGS MUST COMPLY WITH OR EXCEED ANSI/AWWA C907, UNI-B-14 STANDARDS AS THEY APPLY TO THE APPROPRIATE SIZE RANGE AND METHOD OF MANUFACTURE.
- NO USED, RE-USED, RUSTED, SECOND HAND, OR ANY MATERIAL THAT IS NOT NEW SHALL BE USED IN ANY UTILITY IMPROVEMENT PROJECTS WITHIN THE CITY'S SERVICE AREA.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF 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.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF

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POTABLE WATER CONSTRUCTION NOTES (CONT'D)

- AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
- NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY 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 MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C.. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
 - 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 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.
 - 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 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
 - AT THE UTILITY CROSSINGS, 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 THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C. AND AT LEAST 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.
 - WATER MAINS SHALL BE C-900 PVC OR C-905 CL 150 (COLOR"BLUE") OR D.I.P. PRESSURE CLASS 350 STANDARD CEMENT LINED UNLESS OTHERWISE APPROVED BY THE CITY.

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City of Port Orange Public Utilities Department
List of Approved Products

Potable Water 12/08

Fire Hydrant (5 1/2" Barrel)

MANUFACTURER	MODEL #
Mueller	A423 Super Centurion 250
American AVK Co.	Series #2780
American Darling	5 1/2" B-84-B5
Clow	Medallion # F-2545 SS

Air Release Valves

MANUFACTURER	MODEL #
Val-Matic	Series 38

Gate Valves and Tapping Valves – Resilient Seated (AWWA C509 and C515) 24" or Smaller (Valve wedge to be complete encased with EPDM rubber)

MANUFACTURER	MODEL #
American AVK Co.	Series 3, 18, 25, 45, 55, & 66
Clow	Model 2638 and 2639
Mueller	A-2360, A-2361, T-2360 & T-2361
American Flow Control	Series 2500

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City of Port Orange Public Utilities Department
List of Approved Products

Potable Water 12/08

Joints Restrained – DIP and PVC

MANUFACTURER	MODEL #
EBBA Iron Inc.	Series 1100/1500/1600 2000/2500/2800
Star Pipe	Stargrip Series 1000/1100/1200 3000/ 4000
Sigma	One-Lock SLD; One-Lock SLC; PV-Lok for PVC
Smith-Blair	Cam-Lock (11: & 120) ; Bell-Lock (115 & 165)

Water Service Materials

Polyethylene Tubing – (Blue with UV Protection (SDR-9) 1" & 2" only)

MANUFACTURER	MODEL #
Endot Endopure	Endotrace w/#10 Copperhead Tracer Wire

Corporation Stop 1"

MANUFACTURER	MODEL #
Ford	F-1100-4

Curb Stop – Straight Ball Meter Valve w/ Barrel Locks

MANUFACTURER	MODEL #
Ford	B-94-324W (Single Service) B-91-223W (Double Service)

"U" Branch (1" x 3/4")

MANUFACTURER	MODEL #
Ford	U-48-43-6.5

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REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

CITY
WATER
DETAILS

PROJECT: CC 1\FinalSF Phase 4
SHEET NO.

C34

SEAL

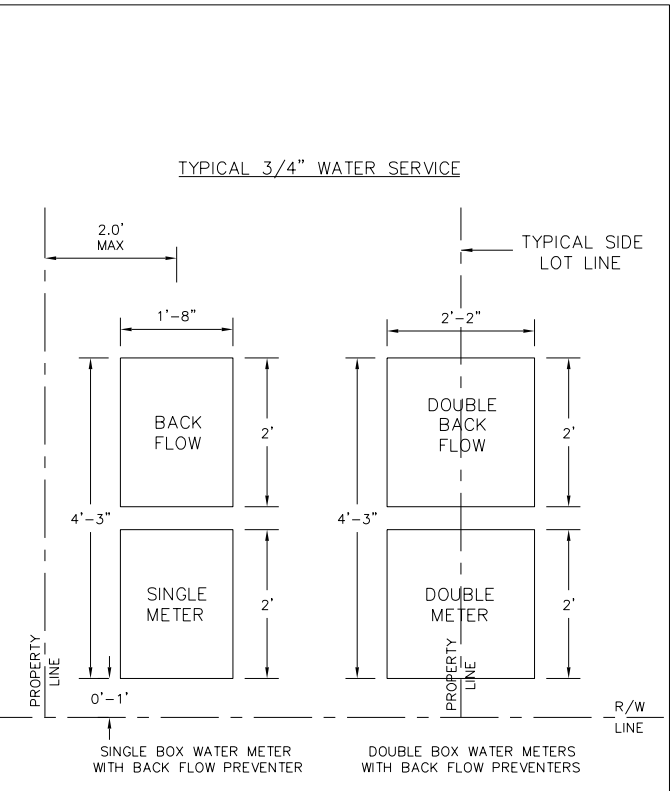
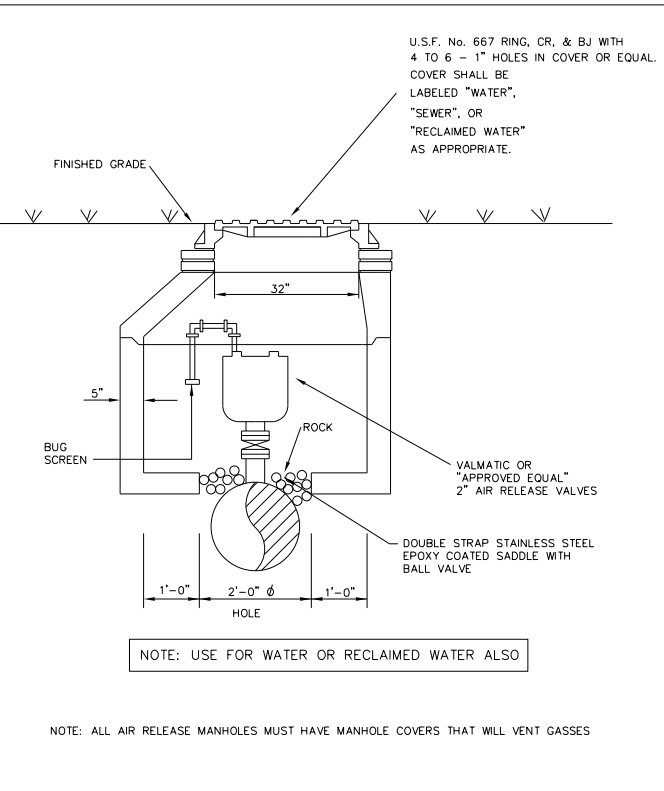
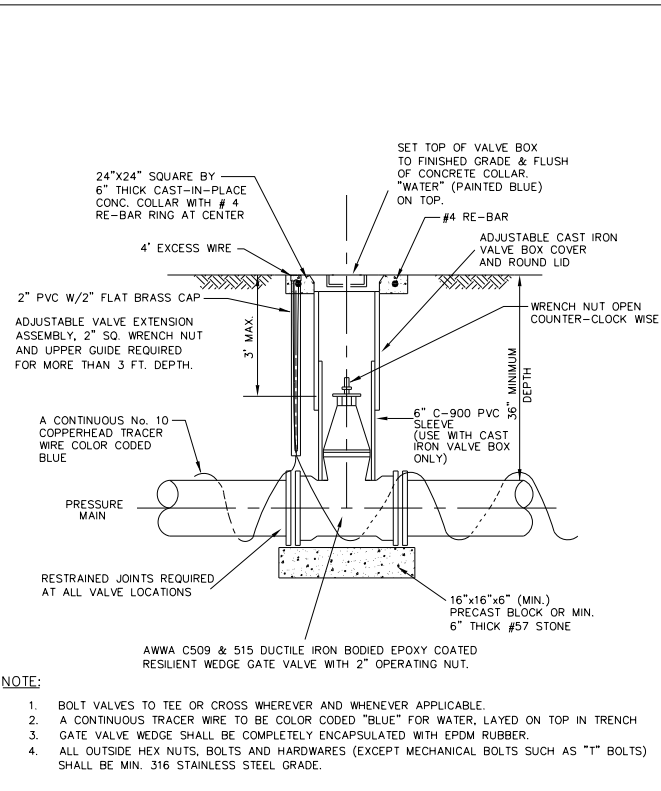
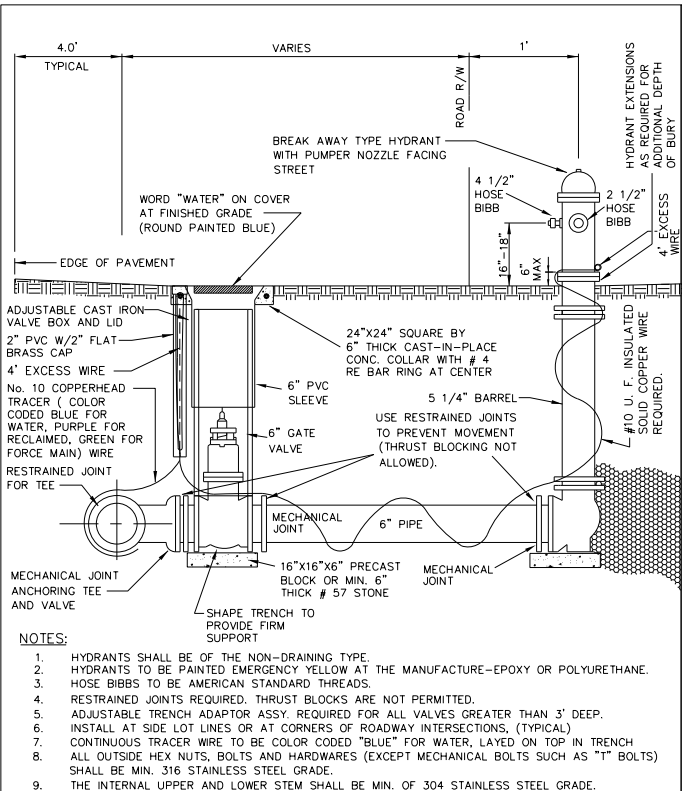
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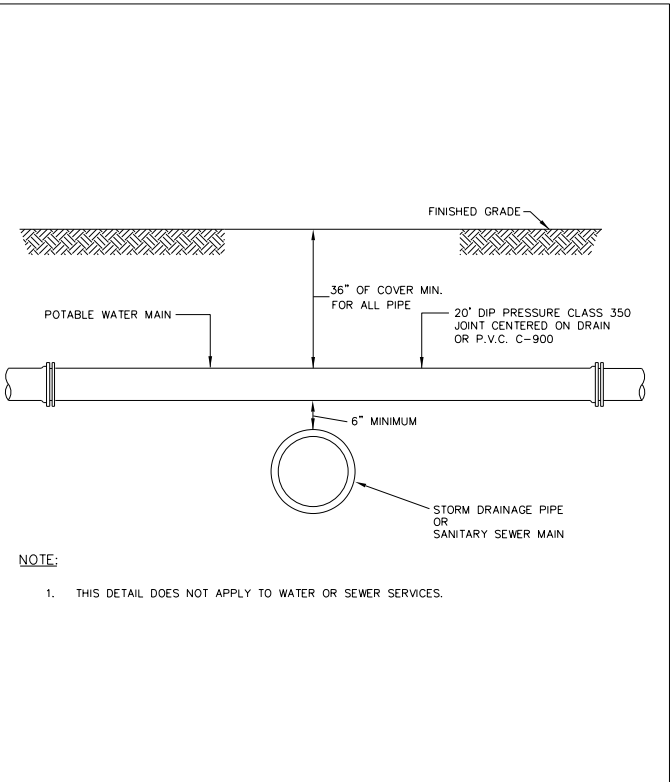
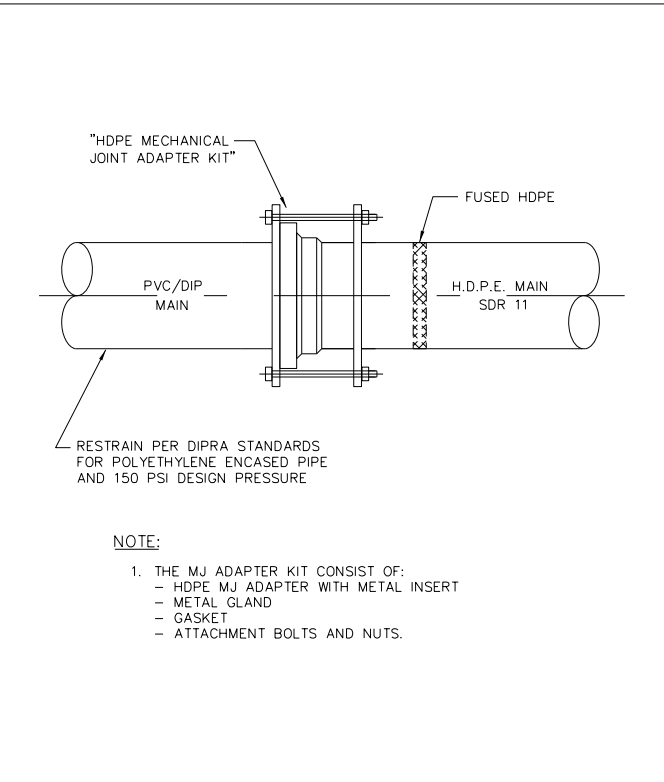
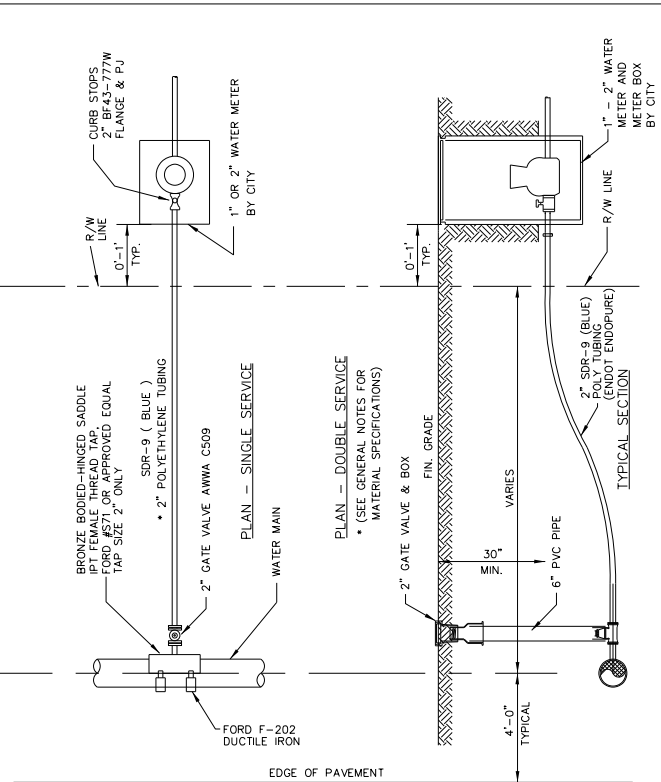
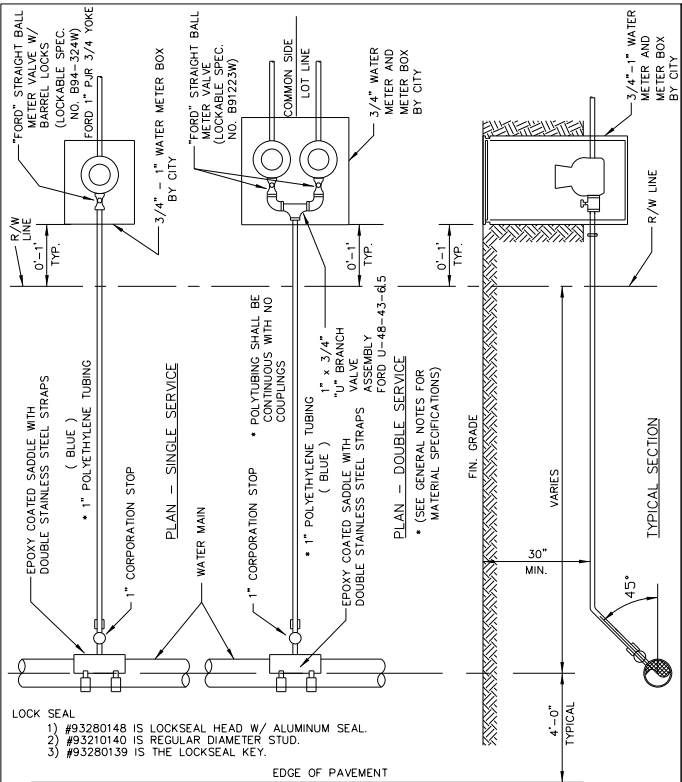


	STANDARD CONSTRUCTION DETAIL FIRE HYDRANT ASSEMBLY	REV. 12/08	FILE NAME:	W4.DWG
			DETAIL REF:	W-4

	STANDARD CONSTRUCTION DETAIL POTABLE WATER VALVE AND VALVE BOX (4" - 16" VALVE SIZES)	REV. 12/08	FILE NAME:	W5.DWG
			DETAIL REF:	W-5

	STANDARD CONSTRUCTION DETAIL AIR RELEASE VALVE PIT	REV. 12/08	FILE NAME:	W7.DWG
			DETAIL REF:	W-7

	STANDARD CONSTRUCTION DETAIL METER BOX LAYOUT	REV. 12/08	FILE NAME:	W8.DWG
			DETAIL REF:	W-8



	STANDARD CONSTRUCTION DETAIL WATER SERVICE (METER SIZES 3/4" - 1")	REV. 12/08	FILE NAME:	W9.DWG
			DETAIL REF:	W-9

	STANDARD CONSTRUCTION DETAIL WATER SERVICE (METER SIZES 1" OR 2")	REV. 12/08	FILE NAME:	W11.DWG
			DETAIL REF:	W-11

	STANDARD CONSTRUCTION DETAIL P.V.C. TO H.D.P.E. RESTRAINED JOINT	REV. 12/08	FILE NAME:	W14.DWG
			DETAIL REF:	W-14

	STANDARD CONSTRUCTION DETAIL STORM DRAINAGE PIPE OR SANITARY SEWER MAIN CONFLICT	REV. 12/08	FILE NAME:	W19.DWG
			DETAIL REF:	W-19

REVISIONS			
No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE	CITY WATER DETAILS
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PROJECT:	CC 11/FinalSF Phase 4
SHEET NO.	

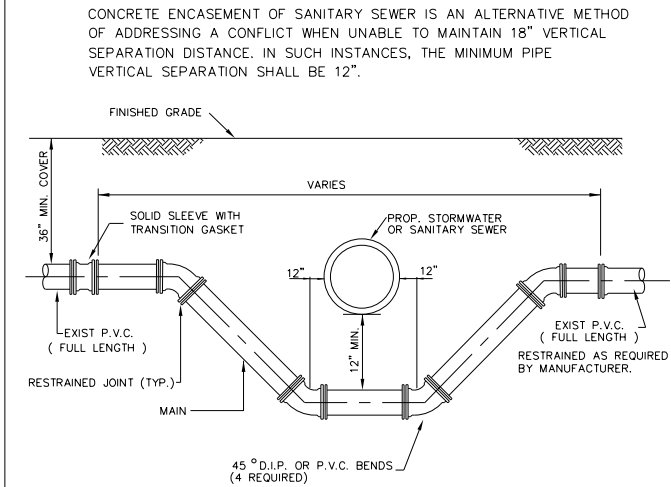
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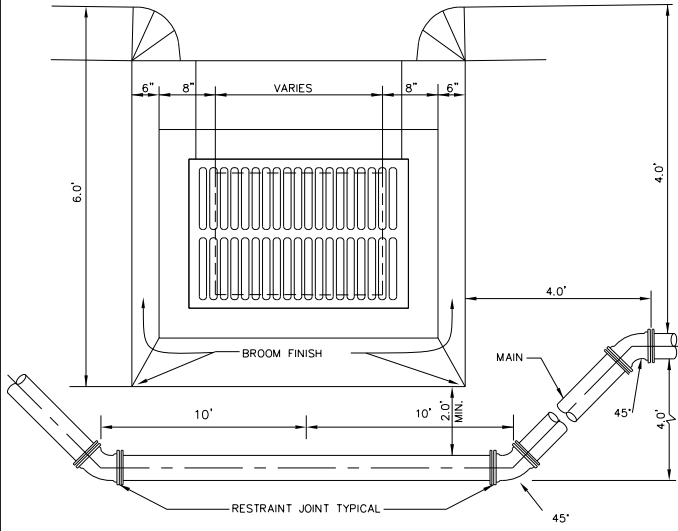
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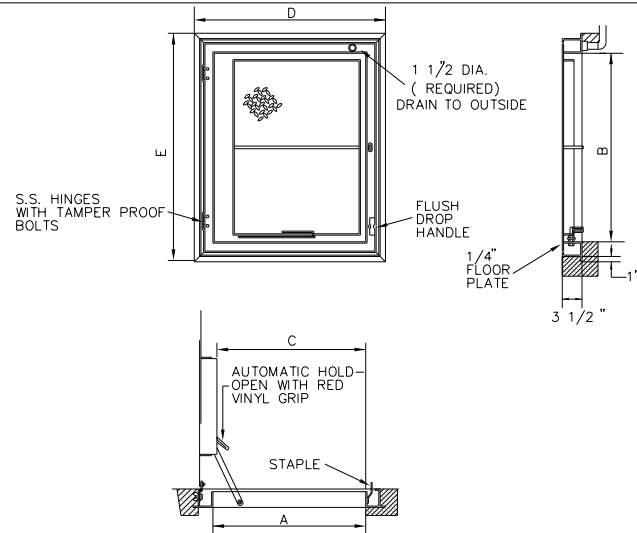
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- NOTES:
1. LOWERING OF EXISTING WATER MAIN & FORCE MAIN BY DEFLECTION METHOD ACCEPTABLE IF EXISTING FIELD CONDITIONS PERMIT.
 2. LENGTH OF SECTION BASED ON MINIMUM LENGTH AS DETERMINED BY DIPRA RESTRAINED JOINT MANUAL.
 3. INSTALL RESTRAINED JOINTS, AS REQUIRED, FROM DEFLECTION POINT IN BOTH DIRECTIONS.

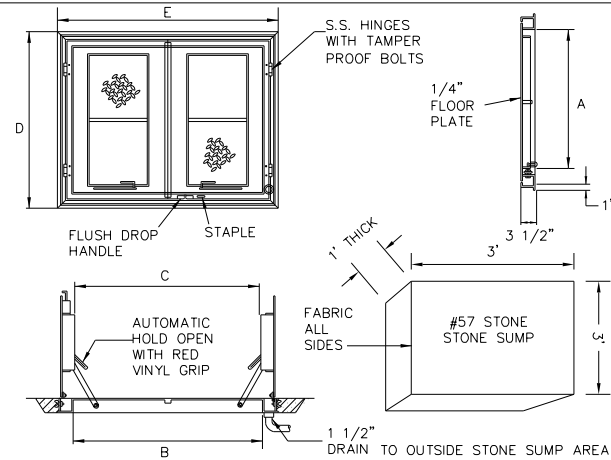


- NOTES:
1. MAIN MAY PASS OVER STORM LINE IF 36" OF COVER IS PROVIDED OVER WATER MAIN OR RECLAIMED WATER LINE AND ADEQUATE CLEARANCE IS PROVIDED FROM THE STORM SEWER PIPE.
 2. PIPE SHALL BE DEFLECTED AROUND DRAINAGE INLET IN ACCORDANCE WITH THE RESTRAINED JOINT GUIDELINES OF THE DIPRA AND ADAPTED TO PVC PIPE AS NECESSARY.



300 P.S.F. LOADING									
TYPE	MAT'L THK	SIZE		ACTUAL OPEN.		OVERALL SIZE		WEIGHT	LBS.
		A	B	A	C	D	E		
TPS	1/4	24	24	24	24	32	32	60	
TPS	1/4	24	30	24	30	32	38	70	
TPS	1/4	24	36	23	36	32	44	75	
TPS	1/4	30	30	29	30	38	38	80	
TPS	1/4	30	36	29	36	38	44	90	
TPS	1/4	30	48	29	48	38	56	105	
TPS	1/4	36	36	34	36	44	44	100	
TPS	1/4	36	48	34	48	44	56	120	
TPS	1/4	42	42	40	42	50	50	125	

- NOTES:
1. HATCH MATERIAL SHALL BE ALUMINUM WITH STAINLESS STEEL BOLTS, NUTS AND HINGES, LOAD RATING OF 300 LBS. PER SQ. FOOT WITH A SELF DRAINING HATCH.
 2. THE ACCESS DOOR SHALL BE TYPE TPS AS MANUFACTURED BY U.S. FOUNDRY AND MANUFACTURING CORP., MIAMI, FLORIDA.



300 P.S.F. LOADING									
TYPE	MAT'L THK	SIZE		ACTUAL OPENING		OVERALL SIZE		WEIGHT	LBS.
		A	B	A	C	D	E		
TPD	1/4	30	48	30	47	38	56	110	
TPD	1/4	30	54	30	53	38	62	120	
TPD	1/4	36	48	36	46	44	44	125	
TPD	1/4	36	60	36	57	44	68	145	
TPD	1/4	42	48	42	45	50	56	140	
TPD	1/4	48	48	48	44	56	56	155	
TPD	1/4	48	54	48	50	56	62	165	
TPD	1/4	48	72	48	66	56	80	210	
TPD	1/4	60	60	60	56	68	68	220	

- NOTES:
1. HATCH MATERIAL SHALL BE ALUMINUM WITH STAINLESS STEEL BOLTS, NUTS AND HINGES, LOAD RATING OF 300 LBS. PER SQ. FOOT WITH A SELF DRAINING HATCH.
 2. THE ACCESS DOOR SHALL BE TYPE TPS AS MANUFACTURED BY U.S. FOUNDRY AND MANUFACTURING CORP., MIAMI, FLORIDA.



STANDARD CONSTRUCTION DETAIL
STORM DRAINAGE PIPE
OR SANITARY SEWER MAIN
CONFLICT

REV. 12/08

FILE NAME:
W20.DWG
DETAIL REF:
W-20



STANDARD CONSTRUCTION DETAIL
MAIN INSTALLATION BETWEEN
DRAINAGE INLET AND SIDEWALK

REV. 12/08

FILE NAME:
W21.DWG
DETAIL REF:
W-21



STANDARD CONSTRUCTION DETAIL
TROUGH FRAME PEDESTRIAN LOADING
ACCESS SINGLE DOOR

REV. 12/08

FILE NAME:
W24.DWG
DETAIL REF:
W-24

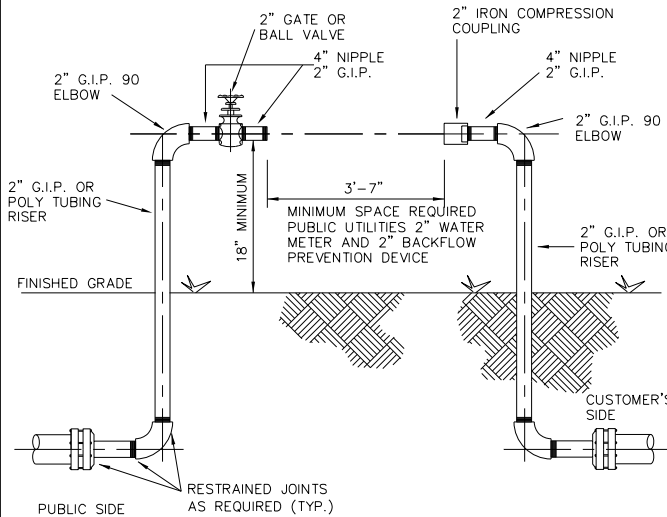


STANDARD CONSTRUCTION DETAIL
TROUGH FRAME PEDESTRIAN LOADING
ACCESS DOUBLE DOOR

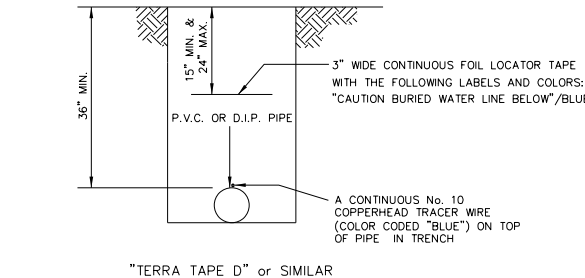
REV. 12/08

FILE NAME:
W25.DWG
DETAIL REF:
W-25

U.S. FOUNDRY MODEL NO.	BILCO MODEL NO.	SINGLE LEAF	DOUBLE LEAF	ALUMINUM	TROUGH
TPS 24X24 W/OP	J-1AL	*	*	*	*
TPS 30X30 W/OP	J-2AL	*	*	*	*
TPS 30X36 W/OP	J-3AL	*	*	*	*
TPS 36X36 W/OP	J-4AL	*	*	*	*
TPS 42X42 W/OP	J-5AL	*	*	*	*
TPD 48X48 W/OP	JD-2AL	*	*	*	*
TPD 48X72 W/OP	JD-3AL	*	*	*	*
TPD 60X60 W/OP	JD-4AL	*	*	*	*



- NOTE:
1. PROVIDE SUPPORT OR PROTECTIVE POSTS.



- NOTE:
- 1) A CONTINUOUS No. 10 COPPERHEAD TRACER WIRE TO BE INSTALLED WITH ALL NON-METALLIC PIPE. WIRE SHALL BE BROUGHT UP TO GRADE AT ALL VALVES OUTSIDE P.V.C. SLEEVE, (SEE DETAIL W-6).
 - 2) ALL TRACER WIRES SHALL BE INTERCONNECTED WITH WATER PROOF WIRE NUT CAP OR WITH SIMILAR WATER PROOF SPLICE KIT AT ANY SPLICE AND WHERE SERVICES CONNECT TO MAINS.
 - 3) A SUCCESSFUL CONTINUITY TEST SHALL BE CONDUCTED AND WITNESSED BY A CITY INSPECTOR AT THE COMPLETION OF TRACER WIRE INSTALLATION.



STANDARD CONSTRUCTION DETAIL
ACCESS DOOR
CROSS REFERENCE CHART

REV. 12/08

FILE NAME:
W26.DWG
DETAIL REF:
W-26



STANDARD CONSTRUCTION DETAIL
CONTRACTORS' INSTALLATION REQUIREMENTS
FOR A 2" TEMPORARY METER

REV. 12/08

FILE NAME:
W28.DWG
DETAIL REF:
W-28



STANDARD CONSTRUCTION DETAIL
LOCATOR TAPE/ TRACERWIRE INSTALLATION FOR
WATER MAIN, PIPELINES

REV. 12/08

FILE NAME:
W29.DWG
DETAIL REF:
W-29



Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.6120
ENGINEERING BUSINESS -8794

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

CITY
WATER
DETAILS

PROJECT: CC 11FinalSF Phase 4

SHEET NO.

C36

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4

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Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.6120
ENGINEERING BUSINESS -8794

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE

CITY RECLAIMED
WATER DETAILS

PROJECT: CC 1\Final\SF Phase 4
SHEET NO.

C37

RECLAIMED WATER DESIGN NOTES

- ALL RECLAIMED WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL. ALL RECLAIMED WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.
- RECLAIMED WATER VALVES SHALL BE PLACED AT ALL STREET INTERSECTIONS AND AT MAXIMUM SPACINGS OF 1000.0 FEET.
- AT ALL RECLAIMED WATER MAIN TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL LEGS EXCEPT ONE.
- AS STANDARD PRACTICE RECLAIMED WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF THE CURB ON THE OPPOSITE SIDE OF THE POTABLE WATER LINES OR AS APPROVED BY THE CITY.
- RECLAIMED WATER SERVICES SHALL BE NORMALLY DOUBLE 1 1/2" SERVICES LOCATED AT SIDE LOT LINES ALTERNATING WITH POTABLE WATER SERVICE LOCATIONS. IN INSTANCES WHERE RECLAIM WATER SERVICES NEED TO BE OFFSET, 1" SINGLE SERVICES SHALL BE SPECIFIED. THESE SERVICES MAY BE OFFSET FROM THE LOT LINE A MAXIMUM DISTANCE OF 2.0'.
- MAXIMUM OBTAINABLE SEPARATION OF PUBLIC RECLAIMED WATER MAINS, STORMWATER MAINS, AND SANITARY SEWER MAINS SHALL BE MAINTAINED. A MINIMUM HORIZONTAL SEPARATION OF FIVE (5) FEET (CENTER TO CENTER) OR THREE (3) FEET (OUTSIDE TO OUTSIDE) SHALL BE MAINTAINED BETWEEN RECLAIMED WATER MAINS AND SEWAGE MAINS. WHERE RECLAIMED WATER AND SANITARY SEWAGE MAINS CROSS WITH LESS THAN EIGHTEEN (18) INCHES VERTICAL CLEARANCE, THE SANITARY SEWAGE MAIN SHALL BE TWENTY (20) FEET OF EITHER CONCRETE ENCASED PVC PIPE OR ENCASED IN A WATERTIGHT CARRIER PIPE, CENTERED ON THE POINT OF CROSSING.
- A 75 FOOT SETBACK DISTANCE SHALL BE PROVIDED FROM PUBLIC ACCESS REUSE WETTED AREAS TO ANY PUBLIC AND ANY PRIVATE POTABLE WATER SUPPLY WELLS.
- LOW TRAJECTORY NOZZLES ARE REQUIRED WITHIN 100 FEET OF PUBLIC EATING, DRINKING OR BATHING FACILITIES.
- FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL RECLAIMED WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT IF NO CURB EXISTS).
- ALL H.D.P.E. PIPE RECLAIMED WATER MAINS SHALL BE S.D.R.11 UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC OR DIP PIPE TO WHICH IT IS ATTACHED.
- LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMWATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFLICTS.
- LARGE COMMERCIAL WATER AND RECLAIMED WATER METERS GREATER THAN 2" TAKE A MINIMUM OF 6 WEEKS FOR DELIVERY AFTER FEES ARE PAID TO THE CITY. IN ADDITION ALL METERS AND VAULTS 2" AND GREATER SHALL BE INSTALLED BY THE OWNER/ DEVELOPER/ CONTRACTOR. THE FEE COLLECTED BY THE CITY FOR MATERIALS ONLY. ALL METERS, 1 1/2" AND LESS, SHALL BE INSTALLED BY THE CITY.
- THE CITY REQUIRES DOUBLE SERVICE INSTALLATIONS WHENEVER FEASIBLE. WHEN DESIGN CONFLICTS EXIST, SINGLE SERVICES MAY BE ALLOWED. THIS MAY APPLY AT STORMWATER INLETS, FIRE HYDRANTS, FPL TRANSFORMERS, ETC. AND OTHER LOCATIONS DEEMED APPROPRIATE BY THE CITY.



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER DESIGN NOTES

FILE NAME
RW1.DOC

DETAIL REF:
RW-1

REV. 12/08

RECLAIMED WATER CONSTRUCTION NOTES

- THE CITY'S PUBLIC UTILITIES DEPARTMENT (386) 506-5750 SHALL BE GIVEN A MINIMUM OF 2 BUSINESS DAYS ADVANCE NOTICE (NOT INCLUDING HOLIDAYS OR WEEKENDS) PRIOR TO BEGINNING ANY RECLAIMED WATER SYSTEM CONSTRUCTION.
- DEWATERING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW RECLAIMED WATER MAIN BEING LAID.
- ALL RECLAIMED WATER MAINS SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL. ALL RECLAIMED WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES (3.0 FEET) AND A MAXIMUM DEPTH OF 48 INCHES (4.0 FEET) FROM FINAL GRADE EXCEPT AT LOCATIONS OF UTILITY CROSSINGS OR WITH SPECIAL APPROVAL WHEN IT IS DETERMINED TO BE IN THE BEST INTEREST OF THE CITY.
- TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY WITH AMINIMUM COMPACTION OF 98% IN PAVED AREAS AND A MINIMUM COMPACTION OF 95 % IN UNPAVED AREAS ACCORDANCE WITH AASHTO T-180.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 1 FOOT VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET.
- 3" METALLIZED PIPE LOCATION TAPE SHALL BE LOCATED BETWEEN 15" AND 24" BELOW FINISHED GRADE OR AS SPECIFIED BY MANUFACTURER FOR ALL PVC LINES. MARKER TAPE SHALL BE PROVIDED ON ALL DIP PIPE ALSO.
- ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE 1" AND DOUBLE RESIDENTIAL SERVICES SHALL BE 1 1/2". SERVICES SHALL BE CTS 3408 HIGH DENSITY POLYETHYLENE TUBING RATED FOR A MINIMUM OF 200 PSI WITH SDR 9 (CTS). THE TUBING SHALL HAVE A VIRGIN HIGH DENSITY POLYETHYLENE CENTER FOR WHICH THE MANUFACTURER SHALL FURNISH A CERTIFICATE OF PURITY. THE TUBING SHALL BE LAVENDER IN COLOR AND SHALL HAVE THE WORDS "RECLAIMED WATER" PERMANENTLY PRINTED ON THE OUTSIDE. THE TUBING SHALL HAVE U.V. PROTECTION AND SHALL NOT BE AFFECTED BY DIRECT SUNLIGHT. THE TUBING SHALL COMPLY WITH OR EXCEED THE APPLICABLE STANDARDS OF A.S.D.M. D1248, D3350, D2239, D2737, N.S.F.-14 AND A.W.W.A. C901 AND SHALL COME WITH A LIFETIME WARRANTY. APPROVED SIZES: 1", 1-1/2" AND 2" DIAMETERS.
- ALL RECLAIMED WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND AND ANY "U" BRANCHES FOR DOUBLE SERVICES SHALL BE 12" ABOVE GROUND LEVEL. ALL SERVICES SHALL BE LOCKED.
- ALL RECLAIMED WATER VALVES SHALL BE ADJUSTED TO FINISH GRADE AND THE CAPS SHALL BE PAINTED LAVENDER OR PURPLE TO MAKE THEM PLAINLY DISTINGUISHABLE.
- AS STANDARD PRACTICE RECLAIMED WATER MAINS SHALL BE INSTALLED 4 FEET OFF THE BACK OF THE CURB ON THE OPPOSITE SIDE OF THE POTABLE WATER LINES OR AS APPROVED BY THE CITY.
- ALL RECLAIMED WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES. IN SPECIAL CASES WHERE IT IS IMPOSSIBLE OR INAPPROPRIATE TO PROVIDE ADEQUATE COVER, DUCTILE IRON PRESSURE CLASS 350 OR CONCRETE ENCASEMENT MAY BE USED AS APPROVED BY THE CITY.
- THE CONTRACTOR SHALL NOTIFY THE CITY'S DESIGNATED INSPECTOR PRIOR TO ATTEMPTING TO CLEAR ANY RECLAIMED WATER MAIN FOR USE. THE INSPECTOR SHALL COORDINATE WITH CITY PERSONNEL AT THE RECLAIMED WATER PLANT 2 BUSINESS DAYS PRIOR TO BEGINNING ANY FULL-DIAMETER FLUSH OF MAINS. THE CONTRACTOR WILL CONDUCT A STANDARD WATER PRESSURE TEST, 150 PSI STATIC PRESSURE FOR A PERIOD OF



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER CONSTRUCTION NOTES

FILE NAME
RW2.DOC

DETAIL REF:
RW-2

REV. 12/08

RECLAIMED WATER CONSTRUCTION NOTES (CONT'D)

- 2 HOURS PER AWWA POTABLE WATER STANDARDS. THE RECLAIMED LINES WILL THEN BE DISINFECTED WITH CHLORINE, FLUSHED CLEAR AGAIN, WITH A MINIMUM OF 1 POSITIVE CHLORINE RESIDUAL TEST RESULT PROVIDED TO THE CITY.
- THE CONTRACTOR SHALL BE REQUIRED TO PIG ALL RECLAIMED MAINS IN EXCESS OF 6" IN DIAMETER AND PRIMARY DISTRIBUTION MAINS LOCATED ON COLLECTOR AND ARTERIAL ROADWAYS. ALL PIGS SHALL BE NEW. NO FOAM PIGS ARE ALLOWED. LAUNCHING AND EXTRACTION POINTS SHALL BE DETERMINED BY THE CONTRACTOR. ALL PIGGING OPERATIONS SHALL BE WITNESSED BY A PUBLIC UTILITIES REPRESENTATIVE OR CITY UTILITY INSPECTOR.
- ALL RECLAIMED WATER MAINS SHALL USE A THRUST RESTRAINED JOINT METHOD IN COMPLIANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES IN THE EVENT THAT PVC FITTINGS ARE SPECIFIED, THE RESTRAINED JOINT SHALL BE MODIFIED IN ACCORDANCE WITH THE RECOMMENDED ADDITIONAL RESTRAINED LENGTH REQUIRED FOR PIPE WRAPPED WITH POLYETHYLENE. IN NO INSTANCE SHALL THRUST BLOCKS BE PERMITTED.
- MEGALUGS, BOLTLESS RESTRAINED JOINTS, OR GRIPPER GASKETS SHALL BE USED ON ALL RESTRAINED JOINT INSTALLATIONS. MINIMUM DEPTH OF BURY ON PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST JOINT RESTRAINT DESIGN GUIDELINES.
- UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO INSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE CITY OF PORT ORANGE PUBLIC UTILITIES AND "AS-BUILTS" ARE PROVIDED TO THE CITY, PRIOR TO ANY USE OF THIS SYSTEM.
- ALL RECLAIMED WATER MAINS AND SERVICE LINES SHALL BE READILY DISTINGUISHABLE BY THEIR PURPLE COLOR OR TAPE MARKINGS. DUCTILE IRON PIPE SHALL BE WRAPPED WITH PURPLE POLYETHYLENE.
- ALL RECLAIMED WATER SERVICES SHALL BE MARKED ALONG THE OUTSIDE EDGE OF CURB WITH AN "L" OR BY METAL TABS SET INTO PAVEMENT. VALVES AND BLOW-OFFS FOR RECLAIMED WATER MAINS SHALL BE MARKED BY AN "X" SET INTO THE PAVEMENT. REVERSE TAPPING VALVE SHALL BE MARKED WITH AN "X ↑" SAW CUT INTO THE CURB OR PAVEMENT WITH THE ARROW POINTING TO THE DIRECTION OF PRESSURE MAIN RUN.
- RECLAIMED WATER SERVICES SHALL BE NORMALLY DOUBLE 1 1/2" SERVICES LOCATED AT SIDE LOT LINES ALTERNATING WITH POTABLE WATER SERVICE LOCATIONS. IN INSTANCES WHERE RECLAIM WATER SERVICES NEED TO BE OFFSET, 1" SINGLE SERVICES SHALL BE SPECIFIED THESE SERVICES MAY BE OFFSET FROM THE LOT LINE A MAXIMUM DISTANCE OF 2.0'.
- MAXIMUM OBTAINABLE SEPARATION OF PUBLIC RECLAIMED WATER MAINS, STORMWATER MAINS, AND SANITARY SEWER MAINS SHALL BE MAINTAINED. A MINIMUM HORIZONTAL SEPARATION OF FIVE (5) FEET (CENTER TO CENTER) OR THREE (3) FEET (OUTSIDE TO OUTSIDE) SHALL BE MAINTAINED BETWEEN RECLAIMED WATER MAINS AND SEWAGE MAINS WHERE RECLAIMED WATER AND SANITARY SEWAGE MAINS CROSS WITH LESS THAN EIGHTEEN (18) INCHES VERTICAL CLEARANCE. THE SANITARY SEWAGE MAIN SHALL BE TWENTY (20) FEET OF EITHER CONCRETE ENCASED PVC PIPE OR ENCASED IN A WATERTIGHT CARRIER PIPE, CENTERED ON THE POINT OF CROSSING.
- ALL TAPPING OF MAINS SHALL BE PERFORMED BY THE CITY AND BILLED IN ACCORDANCE WITH THE ADOPTED FEE RESOLUTION. SCHEDULING OF THESE CONNECTIONS SHALL REQUIRE A MINIMUM 2 BUSINESS DAYS NOTIFICATION (MEASURED ON NORMAL WORK DAYS) DIRECTED TO THE CITY'S DESIGNATED SITE INSPECTOR WHO SHALL COORDINATE THE WORK DIRECTLY WITH THE PUBLIC UTILITIES DEPARTMENT. SUBSEQUENTLY, THE CONNECTION SHALL BE SCHEDULED TO COMMENCE BETWEEN 7:00 A.M. AND NOON ON THE APPROPRIATE



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER CONSTRUCTION NOTES

FILE NAME
RW2.DOC

DETAIL REF:
RW-2

REV. 12/08

RECLAIMED WATER CONSTRUCTION NOTES (CONT'D)

- DAY.
- WITH RESPECT TO TIE-IN CONNECTIONS, THE CITY RESERVES THE RIGHT TO REQUIRE CONNECTIONS TO BE PERFORMED DURING PERIODS OF LOW FLOW IN ORDER TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS.
- ALL WORK PERFORMED UPON RECLAIMED WATER FACILITIES OWNED OR PROPOSED TO BE OWNED BY THE CITY SHALL BE CONSTRUCTED BY AN UNDERGROUND UTILITY OR GENERAL CONTRACTOR LICENSED IN THE STATE OF FLORIDA AND REGISTERED WITH THE CITY.
- FOR CONSTRUCTION PURPOSES, THE PLANS SHALL DIMENSION THE PROPOSED LOCATIONS OF ALL RECLAIMED WATER MAINS MEASURED FROM THE BACK OF CURB (OR EDGE OF PAVEMENT IF NO CURB EXISTS).
- ALL H.D.P.E. PIPE RECLAIMED WATER MAINS SHALL BE S.D.R.11 UNLESS SPECIFICALLY NOTED OTHERWISE. THE HDPE PIPE SHALL BE SIZED TO MATCH THE EXTERNAL DIAMETER OF THE PVC OR DIP PIPE TO WHICH IT IS ATTACHED.
- ALL P.V.C. PIPE SHALL BE STORED IN SUCH A WAY AS TO PREVENT WARPING, DEFLECTION, OR ANY DEFORMATION.
- RECLAIMED WATER HYDRANTS MAY BE REQUIRED BY THE CITY. ALL RECLAIMED HYDRANTS SHALL BE PAINTED PURPLE.
- NO USED, RE-USED, RUSTED, SECOND HAND, OR ANY MATERIAL THAT IS NOT NEW SHALL BE USED IN ANY UTILITY IMPROVEMENT PROJECTS WITHIN THE CITY'S SERVICE AREA.
- IN AREAS WHERE RECLAIMED WATER IS AVAILABLE, RECLAIMED WATER WILL BE UTILIZED IN THE PRESSURE TESTING OF NEW RECLAIMED WATER LINES.
- RECLAIMED WATER MAINS SHALL BE PVC AWWA CLASS C-900 OR C-905, CL 150 (COLOR PANTONE PURPLE) OR DIP PRESSURE CLASS 350, STANDARD CEMENT LINED UNLESS APPROVED OTHERWISE BY THE CITY.



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER CONSTRUCTION NOTES

FILE NAME
RW2.DOC

DETAIL REF:
RW-2

REV. 12/08

City of Port Orange Public Utilities Department
List of Approved Products

Reclaimed Water

12/08

Air Release Valves

MANUFACTURER	MODEL #
Val-Matic	Series 38

Gate Valves and Tapping Valves – Resilient Seated (AWWA C509 and C515) 24" or Smaller (Valve wedge to be complete enclosed with EPDM rubber)

MANUFACTURER	MODEL #
American AVK Co.	Series 3, 18, 25, 45, 55, & 66
Clow	Model 2638 and 2639
Mueller	A-2360, A-2361, T-2360 & T-2361
American Flow Control	Series 2500

Joints Restrained – DIP and PVC

MANUFACTURER	MODEL #
EBBA Iron Inc	Series 1100/1500/1600 2000/2500/2800
Star Pipe	Stargrip Series 1000/1100/1200/3000/ 4000
Sigma	One-Lock SLD & One-Lock SLC & PV-Lock for PVC
Smith-Blair	Cam-Lock (111 & 120) & Bell-Lock (115 & 165)



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER APPROVED PRODUCTS

FILE NAME
RW3.DOC

DETAIL REF:
RW-3

City of Port Orange Public Utilities Department
List of Approved Products

Reclaimed Water

12/08

Polyethylene Tubing – (Purple with UV Protection (SDR-9) 1" to 2" only)

MANUFACTURER	MODEL #
Endot Endocore RWT	Endotrace with #10 Copperhead tracer wire

Corporation Stop 1"

MANUFACTURER	MODEL #
Ford	F-1100-4

Corporation Stop 1 1/2"

MANUFACTURER	MODEL #
Ford	FB-1100-6

Curb Stop – Straight Ball Meter Valve w/ Barrel Locks

MANUFACTURER	MODEL #
Ford	B-94-324W (Single Service) B-91-223W (Double Service)
Ford	BF 43-777W (For 2" meter)

"U" Branch (1 1/2" x 3/4")

MANUFACTURER	MODEL #
Ford	U-48-63-7.5



STANDARD CONSTRUCTION DETAIL
RECLAIMED WATER APPROVED PRODUCTS

FILE NAME
RW3.DOC

DETAIL REF:
RW-3

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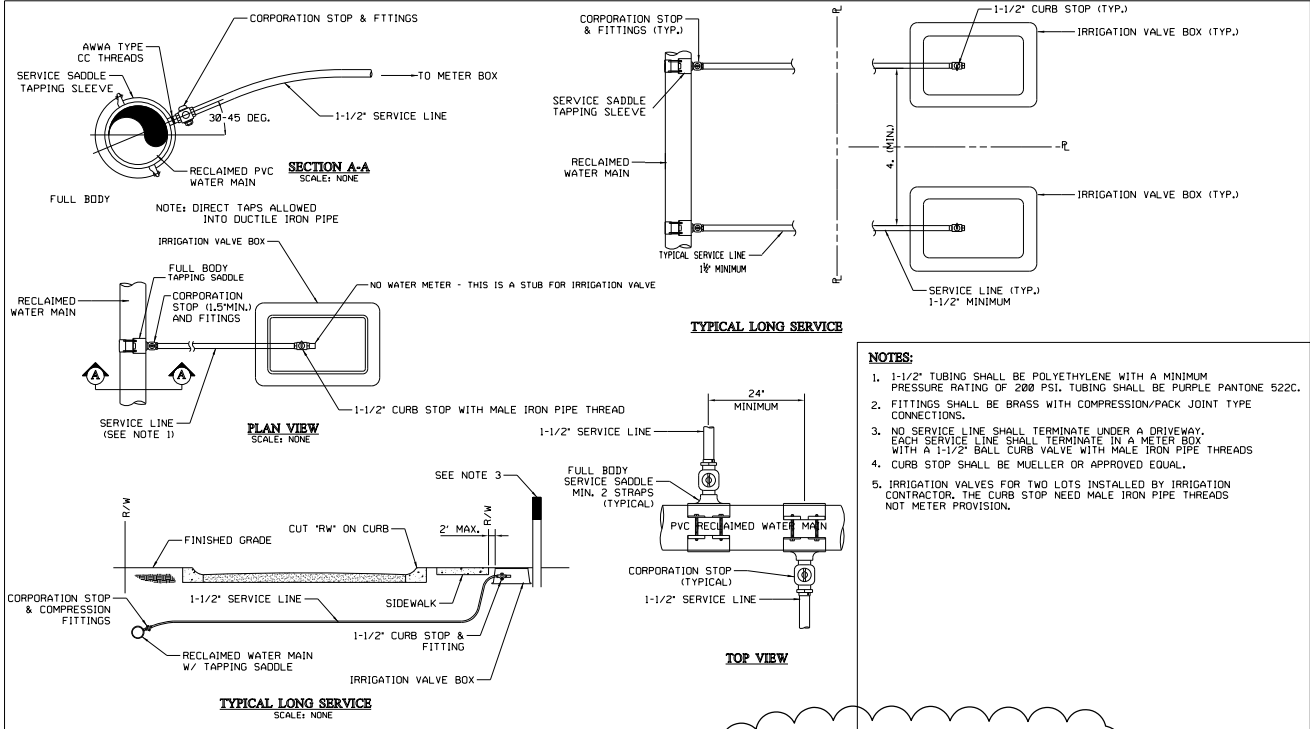
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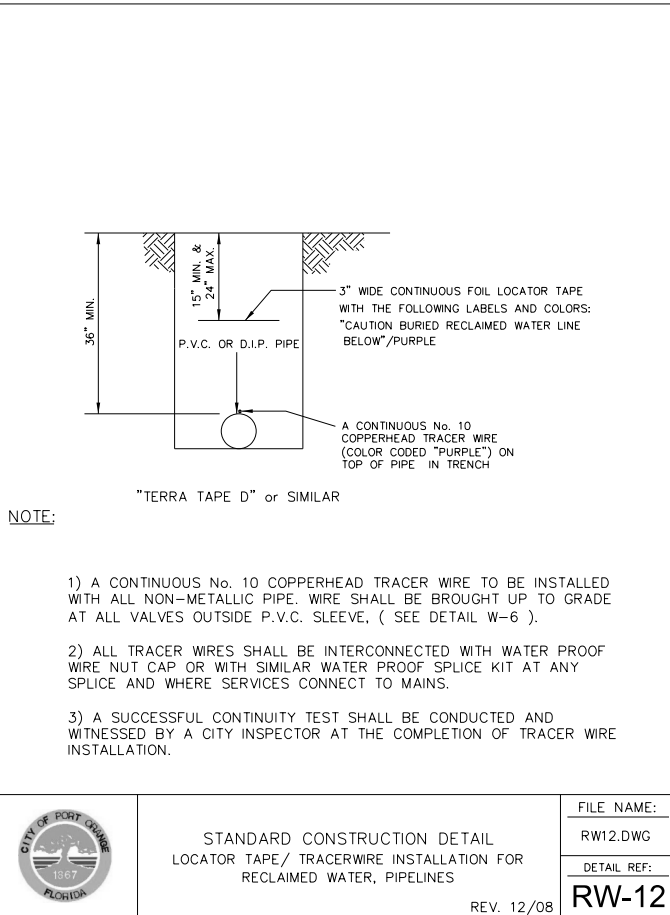
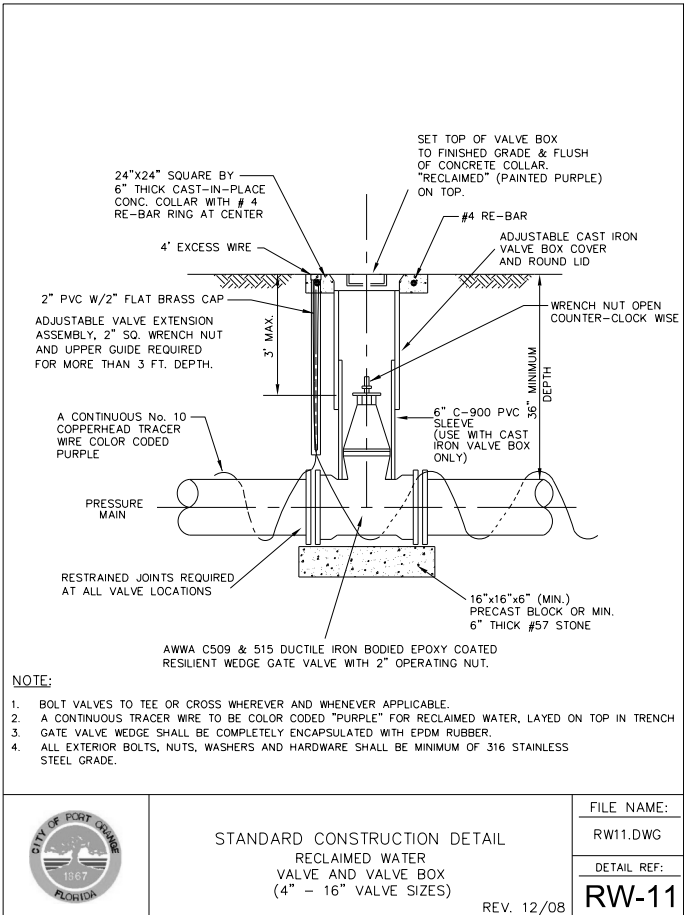
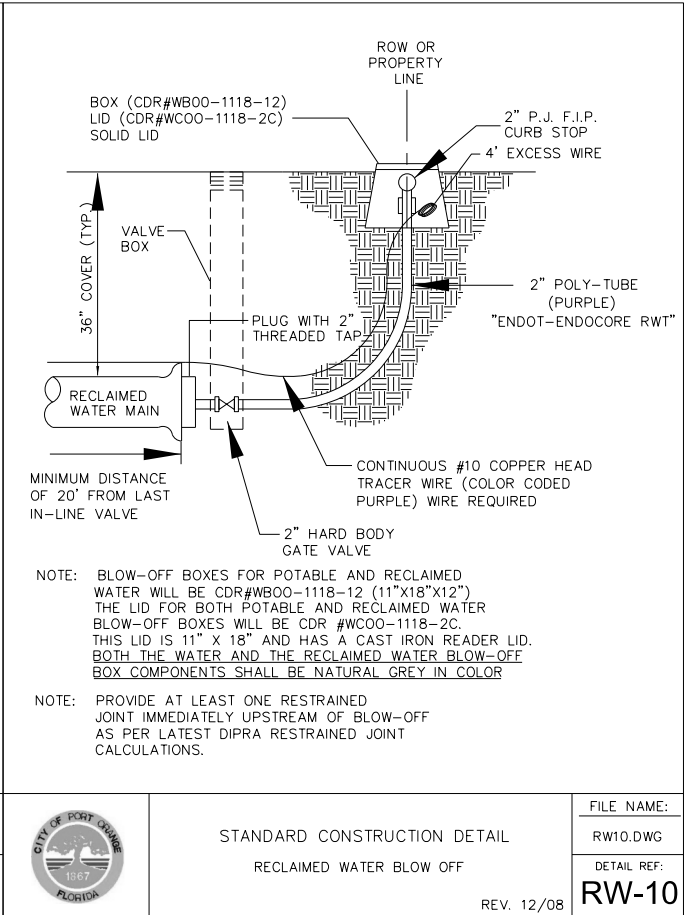
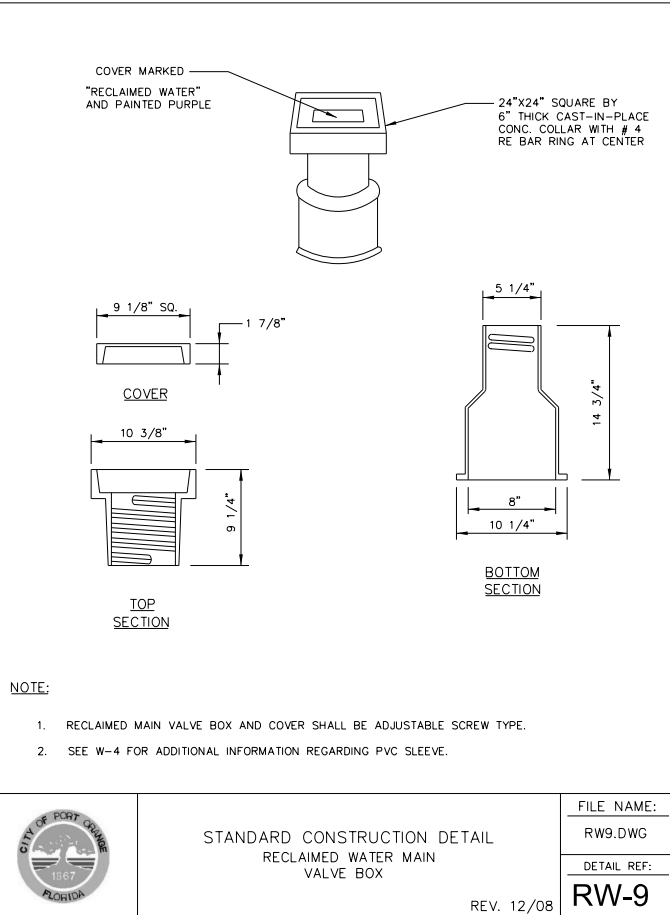
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B

A



1 RESIDENTIAL SERVICE CONNECTION



SEAL

REVISIONS

No.	DATE	BY	Description
1	7-21-17	KJK	REV PER QA

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TITLE

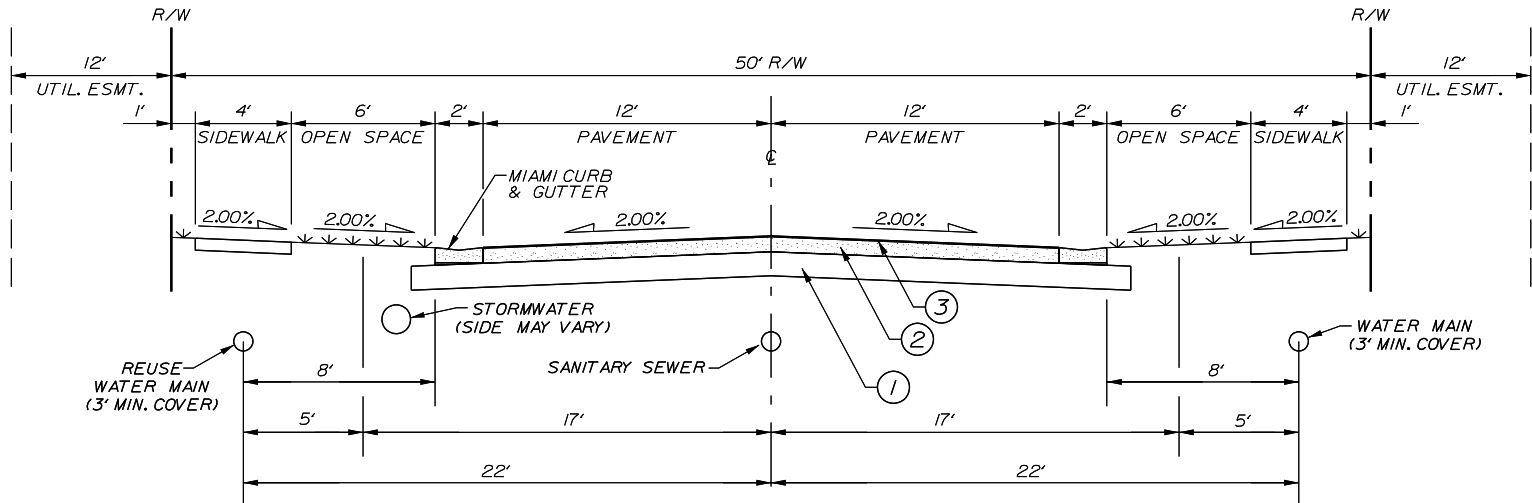
CITY RECLAIMED
WATER DETAILS

PROJECT: CC 11FinalSF Phase 4

SHEET NO.

SEAL

Danielle Van De Loo
FL PE # 74676
8/31/2017



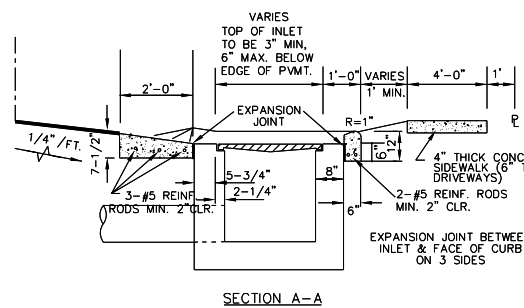
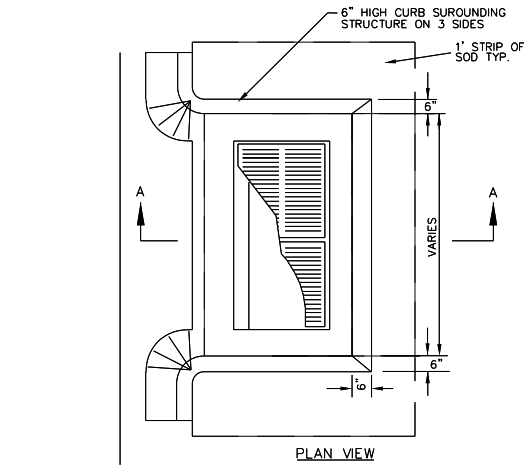
TYPICAL SECTION - 50' R/W

PAVEMENT LEGEND

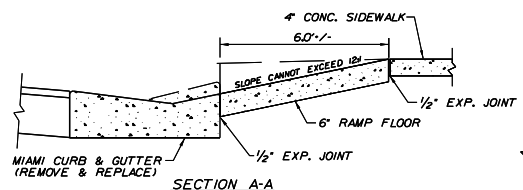
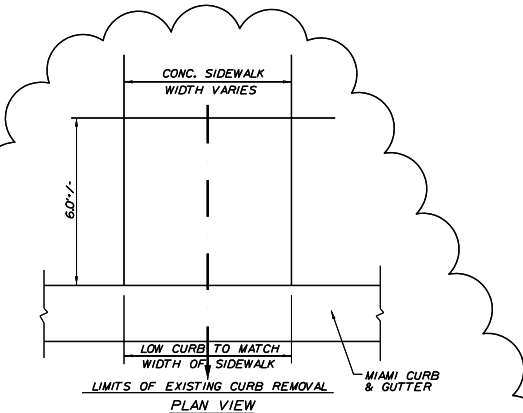
- 1. 12" SUBGRADE/SUB-BASE COMPACTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST WITH MINIMUM LBR 40.
- 2. 6" RECYCLED CONCRETE BASE (LBR 130) COMPACTED TO 98% DENSITY BASED ON AASHTO T-180 MODIFIED PROCTOR TEST. THE CONSTRUCTION METHODS SHALL CONFORM TO THE LATEST EDITION OF THE F.D.O.T. ROAD AND BRIDGE CONSTRUCTION SPECIFICATIONS.
- 3. 1.5" OF FLORIDA DOT ASPHALTIC CONCRETE MIX OF TYPE S-9.5 & COMPACTED TO 98% DENSITY. THE CONSTRUCTION METHODS SHALL CONFORM TO THE LATEST EDITION OF THE F.D.O.T. ROAD AND BRIDGE CONSTRUCTION SPECIFICATIONS.

ALTERNATE BASE:
6" SOIL CEMENT BASE MINIMUM BEARING STRENGTH OF 300 P.S.I. SHALL BE OBTAINED WITHIN 7 DAYS AND COMPACTED TO 98% DENSITY BASED ON AASHTO T-99 STANDARD PROCTOR TEST. CONSTRUCTION METHODS SHALL CONFORM TO SECTION 270 OF STANDARD F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.

USE OF ALTERNATE BASE MUST FIRST BE APPROVED BY THE COMMUNITY DEVELOPMENT ENGINEER.



STANDARD CONSTRUCTION DETAIL 2
STORM INLET APRON



- NOTES:
1. ENTIRE EXISTING CURB SHALL BE REMOVED & REPLACED WITHIN LIMITS SHOWN.
2. LOW CURB & TRANSITION MAY BE FORMED AT TIME OF CURB CONSTRUCTION.
3. CONSTRUCT WITH CLASS A (3000PSI) CONCRETE.

HANDICAP RAMP 2

REVISIONS				
No.	DATE	BY	DESCRIPTION	
2	8-14-17	KJK	REV PER CITY	

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

TYPICAL
PAVING
SECTION

PROJECT: CC 1\FinalSF Phase 4
SHEET NO.



UNIVERSAL
ENGINEERING SCIENCES

GEOTECHNICAL EXPLORATION
COQUINA COVE
VOLUSIA COUNTY, FLORIDA

UES PROJECT NO. 0430.1500159.0000
UES REPORT NO. 131484

January 12, 2016
Revised, March 1, 2016

PREPARED FOR:

Edge Cove, LLC
370 Center Pointe Circle, Suite 1136
Altamonte Springs, Florida 32701

PREPARED BY:

Universal Engineering Sciences
911 Beville Road, Ste 3
South Daytona, Florida 32174
(386)756-1105

CONSULTANTS:

Geotechnical Engineering • Environmental Engineering • Construction
Materials Testing Threshold Inspection • Private Provider Inspection •
Geophysical Studies

OFFICES Daytona Beach, FL • Fort Myers, FL • Gainesville, FL • Jacksonville, FL • Leesburg, FL • Miami, FL • Norcross, GA • Ocala, FL • Orange City, Orlando, FL
Palm Coast, FL • Panama City, FL • Pensacola, FL • Rockledge, FL • Sarasota, FL • St. Augustine, FL • Tampa, FL • West Palm Beach, FL

Coquina Cove
Volusia County, Florida

UES Project No. 0430.1500159.0001
UES Report No. 131484-R

12.0 SUITABILITY OF EXCAVATED MATERIAL FOR USE AS FILL

The borings were performed, in part, to provide an indication of the suitability of excavated soils from the proposed borrow areas for use as structural fill soil. Based on the results of the borings the fine sand (SP), the fine sand with silt (SP-SM), fine sand with clay (SP-SC), and shell with fine sand as encountered at the boring locations, is suitable for use as structural fill soil. The sandy clay (CH), clayey (SC) and silty fine sand with clay (SM) as encountered are not considered suitable for use as fill due to their fines content and plasticity characteristics making it difficult to place and compact. Because the fine sand with silt (SP-SM) and fine sand with clay (SP-SC) significantly retains moisture, strict moisture control may be required during placement and compaction operations to avoid moisture related instability. The clayey fine sand (SC), sandy clay (CH) and silty fine sand (SM) as encountered in the boring locations can be used for road base stabilization material. However this is not recommended in areas where the road base elevation is in close proximity to the groundwater table.

It should be anticipated the soils in the proposed pond areas that are below the groundwater level will have moisture contents in excess of the Modified Proctor optimum moisture content and will require stockpiling or spreading to bring the moisture content within +/- 2 percent of the soil's optimum moisture content corresponding to the required degree of compaction.

The contractor should anticipate very loose soils if excavations exceed 11 to 12 feet below the existing grade.

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 sock 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 method(s) of dewatering should be determined by the contractor. The design and discharge 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.



Coquina Cove
Volusia County, Florida

UES Project No. 0430.1500159.0001
UES Report No. 131484-R

Differential settlement results from differences in applied bearing pressures and the variations in the compressibility characteristics of the subsurface soils. Based on the subsurface conditions as determined by our borings, it is anticipated that differential settlements will be within tolerable limits.

9.3 SITE PREPARATION FOR SHALLOW FOUNDATIONS

We recommend the following site preparation procedures for the structure areas:

- Prior to construction, the location of existing underground utility lines within the construction area should be established. Provisions should then be made to relocate interfering utilities to appropriate locations. It should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which may subsequently lead to excessive settlement of the overlying structures.
- Strip the proposed construction limits of all grass, roots, topsoil, and other deleterious materials within and 5 feet beyond the perimeter of the proposed structure. Expect initial clearing and grubbing to depths of approximately one to two feet.
- Based on the ground water levels and anticipated fill, dewatering for foundation excavation and compaction may be required. We recommend implementing temporary groundwater control measures if the groundwater is within two feet of the required depth of excavation at the time of construction. Dewatering measures should be the responsibility of the contractor. We recommend the groundwater control measures remain in-place until compaction of the existing soils is completed and backfilling has reached a height of 2 feet above the groundwater level at the time of construction. The site should be graded to direct surface water runoff from the construction area.
- Compact the exposed surface using tracked dozer or vibratory equipment. We recommend that vibratory equipment be operated in static mode within 100 feet of any existing structures. The upper one foot of soils below the exposed surface within the building area should be improved to achieve a minimum compaction requirement of 95% of the Modified Proctor Test (ASTM D-1557). We recommend the compacted soils exhibit moisture content within +/- 2 percent of the soils optimum moisture content as determined by the Modified Proctor Test (ASTM D-1557). Should the soils experience pumping and soil strength loss during the compaction operations, compaction work should be immediately terminated and (1) the disturbed soils removed and backfilled with dry structural fill soils which are then compacted, or (2) the excess moisture content within the disturbed soils allowed to dissipate before recompacting.
- Test the compacted surface for compliance at a minimum of one location per 2,500 square feet within the building area, or at a minimum of four locations per building area.
- Place fill material, as required within building pad/lot areas. The fill should consist of "clean," fine sand with less than 5 percent soil fines. You may use fill materials with soil fines between 5 percent and 10 percent, but strict moisture control may be required. Place fill in uniform 8 to 12-inch loose lifts and compact each lift to a minimum density of 95 percent of the Modified Proctor maximum dry density. We recommend the compacted soils exhibit moisture content within +/- 2 percent of the soils optimum moisture content



Coquina Cove
Volusia County, Florida

UES Project No. 0430.1500159.0001
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14.0 CONSTRUCTION RELATED SERVICES

We recommend the owner retain Universal to provide inspection services during the site preparation procedures for confirmation of the adequacy of the earthwork operations. Field tests and observations include verification of foundation and pavement subgrades by monitoring earthwork operations and performing quality assurance tests of the placement of compacted structural fill and pavement courses.

The geotechnical engineering design does not end with the advertisement of the construction documents. The design is an on-going process throughout construction. Because of our familiarity with the site conditions and the intent of the engineering design, we are most qualified to address site problems or construction changes, which may arise during construction, in a timely and cost-effective manner.

15.0 LIMITATIONS

This report has been prepared for the exclusive use of Jones Homes, USA 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 Universal Engineering Sciences. Unauthorized third parties that rely upon the information contained herein without the expressed written consent of Universal Engineering Sciences, Inc. 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 Universal to attempt to locate any man-made buried objects or identify any other potentially hazardous conditions that



Coquina Cove
Volusia County, Florida

UES Project No. 0430.1500159.0001
UES Report No. 131484-R

as determined by the Modified Proctor Test (ASTM D-1557). If light compaction equipment is used, we recommend the lift thickness be reduced to 8 inch thick lifts.

- Perform compliance tests within the backfill and fill soils at a minimum of one location per 2,500 square feet per lift (minimum four locations per building area).
- Compact and test footing cuts for compaction to a depth of one foot below bearing level. We recommend that you test one out of every four (25 percent) column footings and perform one test per every 50 linear feet of wall footing. Compaction operations in confined areas, such as footing excavations, can best be performed with a lightweight vibratory sled or other hand-held compaction equipment.

10.0 PAVEMENT RECOMMENDATIONS

10.1 ASSUMPTIONS

We have assumed that the proposed roadways will consist of a flexible pavement section with typical residential traffic. At the time of this exploration, specific traffic loading information was not provided to us. Our recommendations for design of the roadway are listed in the following sections.

10.2 ASPHALTIC PAVEMENTS

10.2.1 Layer Components

Because traffic loadings are commonly unavailable, we have generalized our pavement design into two groups. The group descriptions and the recommended component thicknesses are presented in Table III below.

Traffic Group	Layer Component (inches)		
	Surface Course	Base Course	Stabilized Subgrade
Roadway-Light Duty	1.5"	6"	12"
Roadway-Heavy Duty	2.0"	8"	12"

10.2.2 Stabilized Subgrade

We recommend that the stabilized subgrade materials immediately beneath the base course exhibit a minimum Limerock Bearing Ratio (LBR) of 40. The stabilized subgrade should be compacted to at least 98 percent of the Modified Proctor maximum dry density (AASHTO T-180) value.

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.



UNIVERSAL
ENGINEERING SCIENCES
Consultants Inc: Geotechnical Engineering • Environmental Sciences
Geophysical Services • Construction Materials Testing • Threshold Inspection
Building Inspection • Plan Review • Building Code Administration

July 15, 2016

City of Port Orange
Attn: Larry Roberts
1000 City Center Circle
Port Orange, FL 32129

Mr. Roberts:

I understand that with respect to the Standard Construction Detail for roadways, a required 6 inch Sub-base meeting LBR 40 requirement, underlain by 12 inch Subgrade meeting LBR 40 requirement (both inherently the same thing), further overlain by 6 inches of Base material is required. In my opinion, a 12 inch Subgrade/Sub-base should be utilized. Subgrade/Sub-base typically is sandy soils blended with silts/clays to increase the section to LBR 40. In areas where high water tables are present, the 18 inch section may potentially become saturated as it may encroach closer to groundwater (low sites in Port Orange water will perch subsequent to significant rainfall activity, especially Westport), and due to the percents fines passing a No. 200 sieve generally being well over 10 percent fines in a blended LBR 40 mix could potentially result in pumping conditions. A sandy zone between water level and Subgrade and Base is conducive in allowing pore pressures to dissipate.

We always recommend the 12 inch Subgrade/Sub-base, as in conjunction with FDOT, County and other municipalities. We are currently performing the testing services for I-95 which utilizes the 12 inch Subgrade/Sub-base (LBR 40) section. This road has much higher traffic loadings.

We request a 12 inch Subgrade/Sub-base in combination with a 6 inch base and 1.5 inch asphalt section for the Westport Phase 2B.

Respectfully submitted,
UNIVERSAL ENGINEERING SCIENCES, INC.

Brian C. Pohl, P.E.
Professional Engineer No. 60216
Branch Manager

BCP:rbp

911 Beville Road, Suite 3 • South Daytona, Florida 32119 • (386) 756-1105 • Fax (386) 760-4067
www.UniversalEngineering.com



Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE
SUITE 1000
ORLANDO, FL 32803
PHONE: 407.843.6120
ENGINEERING BUSINESS -8794

WESTPORT RESERVE
(PHASE 4)

CITY OF PORT ORANGE, FLORIDA

8/31/2017

SEAL

REVISIONS

No.	DATE	BY	Description

PROJECT # PROJECT #50083136
DRAWN BY KJK
APPROVED BY DMV
CHECKED BY DMV
DATE JULY 2017
DATUM NAVD 88

TITLE
GEOTECHNICAL
REPORT BY
UNIVERSAL
ENGINEERING
SCIENCES, INC.

PROJECT: CC 1\FinalSF Phase 4

SHEET NO.

C40

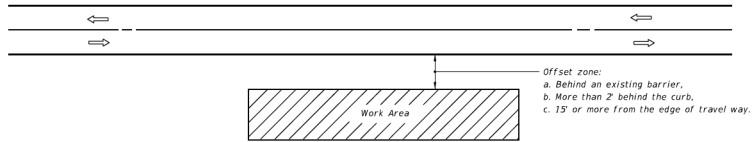
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GENERAL NOTES

1. If the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the offset zone in any one hour, traffic control will be in conformance with Index No. 602.
2. No special signing is required.
3. When a side road intersects the highway within the work area, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
4. When construction activities encroach on a sidewalk refer to Index No. 660.
5. For general TCZ requirements and additional information, refer to Index No. 600.

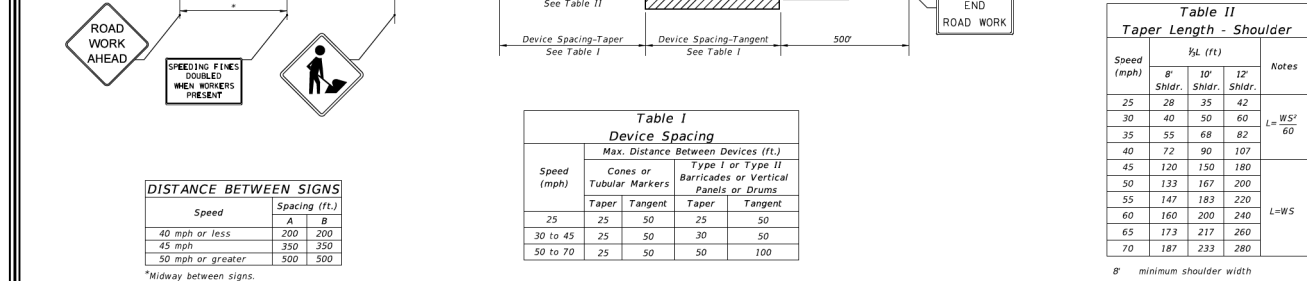
SYMBOLS

- Work Area
- Lane Identification + Direction of Traffic

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE BEHIND AN EXISTING BARRIER, MORE THAN 2' BEHIND THE CURB, OR 15' OR MORE FROM THE EDGE OF TRAVEL WAY.

LAST REVISION	DESCRIPTION:	INDEX NO.	SHEET NO.
07/01/05	FDOT FY 2016-17 DESIGN STANDARDS	601	1 of 1



SYMBOLS

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Lane Identification + Direction of Traffic

GENERAL NOTES

1. When four or more work vehicles enter the through traffic lanes in a one hour period or less (excluding establishing and terminating the work area), the advanced FLAGGER sign shall be substituted for the WORKERS sign. For location of flaggers and FLAGGER signs, see Index No. 603.
2. SHOULDER WORK sign may be used as an alternate to the WORKER symbol sign only on the side where the shoulder work is being performed.
3. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
4. For general TCZ requirements and additional information, refer to Index No. 600.

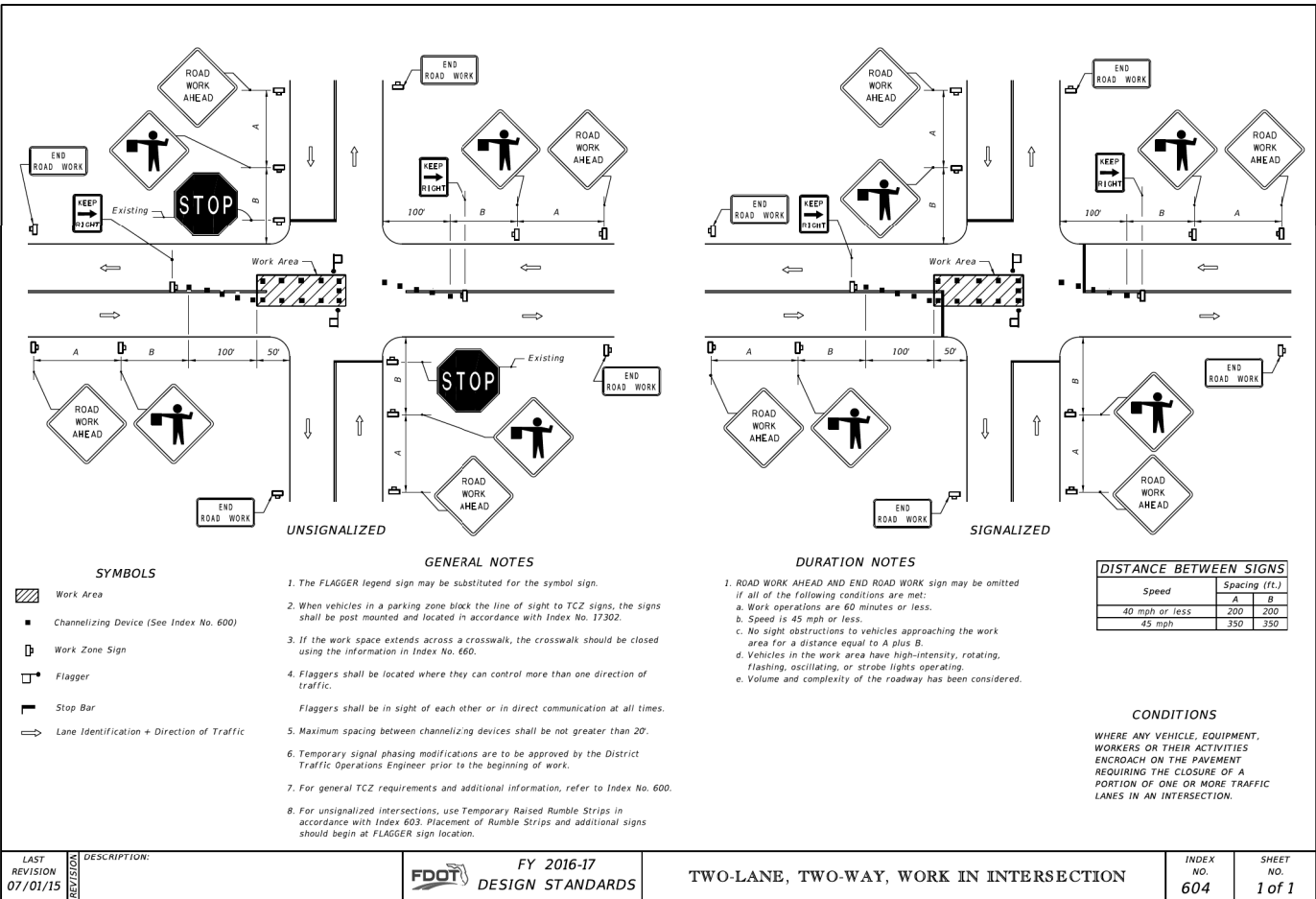
DURATION NOTES

1. Signs and channelizing devices may be omitted if all of the following conditions are met:
 - a. Work operations are 60 minutes or less.
 - b. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRACH THE AREA CLOSER THAN 15' BUT NOT CLOSER THAN 2' TO THE EDGE OF TRAVEL WAY.

LAST REVISION	DESCRIPTION:	INDEX NO.	SHEET NO.
07/01/15	FDOT FY 2016-17 DESIGN STANDARDS	602	1 of 1



SYMBOLS

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Flagger
- Stop Bar
- Lane Identification + Direction of Traffic

GENERAL NOTES

1. The FLAGGER legend sign may be substituted for the symbol sign.
2. When vehicles in a parking zone block the line of sight to TCZ signs, the signs shall be post mounted and located in accordance with Index No. 17302.
3. If the work space extends across a crosswalk, the crosswalk should be closed using the information in Index No. 660.
4. Flaggers shall be located where they can control more than one direction of traffic.
Flaggers shall be in sight of each other or in direct communication at all times.
5. Maximum spacing between channelizing devices shall be not greater than 20'.
6. Temporary signal phasing modifications are to be approved by the District Traffic Operations Engineer prior to the beginning of work.
7. For general TCZ requirements and additional information, refer to Index No. 600.
8. For unsignalized intersections, use Temporary Raised Rumble Strips in accordance with Index 603. Placement of Rumble Strips and additional signs should begin at FLAGGER sign location.

DURATION NOTES

1. ROAD WORK AHEAD AND END ROAD WORK sign may be omitted if all of the following conditions are met:
 - a. Work operations are 60 minutes or less.
 - b. Speed is 45 mph or less.
 - c. No sight obstructions to vehicles approaching the work area for a distance equal to A plus B.
 - d. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
 - e. Volume and complexity of the roadway has been considered.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRACH ON THE PAVEMENT REQUIRING THE CLOSURE OF A PORTION OF ONE OR MORE TRAFFIC LANES IN AN INTERSECTION.

LAST REVISION	DESCRIPTION:	INDEX NO.	SHEET NO.
07/01/15	FDOT FY 2016-17 DESIGN STANDARDS	604	1 of 1

SEAL

REVISIONS

No.	DATE	BY	Description

PROJECT #	PROJECT #50083136
DRAWN BY	KJK
APPROVED BY	DMV
CHECKED BY	DMV
DATE	JULY 2017
DATUM	NAVD 88

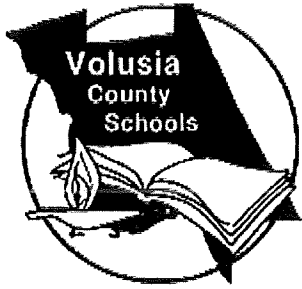
TITLE

JURISDICTIONAL
STANDARDS

PROJECT: CC 1\FinalSF Phase 4

SHEET NO.

C41



James T. Russell
Superintendent of Schools

FACILITIES SERVICES

3750 Olson Drive, Daytona Beach, Florida 32124
PHONE: 386/734-7190 FAX: 386/506-5056

School Board of Volusia County

Mrs. Melody Johnson, Chairman
Mrs. Linda Cuthbert, Vice Chairman
Mrs. Ida D. Wright
Dr. John Hill
Mr. Carl Persis

August 31, 2017

Mr. Scott Stearns
Westport Reserve LLC
370 Center Pointe Cr., Ste 1136
Altamonte Springs, FL 32701

RE: Westport Reserve Phase 3& 4 – City of Port Orange
School Capacity Case #17-08-07-001-R

Dear Mr. Stearns:

The District has reviewed your information for the residential project known as Westport Reserve, Phases 3& 4. The 69.21 +/- acre project site is located within the City of Port Orange near the intersection of Town West Blvd. and Tomoka Farms Rd. Information provided in the application packet indicates the new development activity will consist of one hundred ninety-three (193) single family dwelling units.

By factoring the Student Generation Rate (SGR) for a multi-family dwelling unit, (0.305) per unit, we find the project could generate fifty-nine (59) full time students. The table below contains the impacted school concurrency areas (CSAs) and their associated utilization information.

Table 1

Schools	Adopted LOS	SY 16/17 Enrollment	Reserved Capacity	Existing LOS	Students Generated by Request	LOS Change
Spruce Creek Elementary	115%	778	58	104%	25	107%
Silver Sands Middle School	115%	1157	52	104%	15	105%
Halifax High School CSA (Atlantic HS)	120%	7401	227	100%	18	100%
Other					1	

Westport Reserve Phase 3& 4 – City of Port Orange
August 31, 2017

This projected increase in students will not exceed the adopted LOS for the impacted schools; for this reason, the school district does not have an objection to the proposed site plan. Minimum planning considerations should include pedestrian and vehicular access, safety, connectivity, and buffering.

Please note that the School Board has the right to adjust the attendance boundaries to balance the student enrollment populations at these area schools. Therefore, students generated from this project may not attend the current assigned schools.

If you should have additional questions or require more information, please feel free to contact me at extension 50810.

Sincerely,

E. A. Kozielski
3/AUG 2017

Eric A. Kozielski
Planning & GIS Specialist

Cc: James Russell, Superintendent of Schools
Penelope Cruz, City of Port Orange
Dawn Queen, Dewberry Engineers Inc.
Project File