

Plan Review Application Land Development, Volusia County, Florida

Requests may be submitted through Connect Live.

Alternatively, the completed application and required submission documents may be submitted in person or mailed to: County of Volusia, Growth & Resource Management Department, Planning & Development Services, 123 W. Indiana Avenue, Room 202, DeLand, Florida 32720

Type of Application

ODP - Overall Development Plan PPL - Preliminary Plat & Construction Plan (ODP Development Order is required to submit PPL) FPL - Final Plat (PPL Development Order is required to submit FPL) CPN - Conceptual Site Plan FSP - Final Site Plan (CPN Response Letter is required to submit FSP)
Project Information
Project Name: ORMOND BEACH TERMINAL
Tax Parcel Numbers: 420600000061, 423801140011, 423801160012
Intended Use: BULK FUEL STORAGE AND DISTRIBUTION TERMINAL
Zoning Classification: 1-2A + A-2A Future Land Use Designation: ULI
Parcel Size: 62 +/- AC
Water Utility Provider: NONE Sewer Utility Provider: NONE
Subdivision Information
Number of Lots: Number of Dwelling Units:
Project Density: Minimum Proposed Lot Area:
Minimum Proposed Lot Width:
Commercial Site Plan Information
Building Square Footage: 4600 SF +/- Existing: Proposed: 4600 SF +/-
Impervious Area Square Footage: 190,000 SF +/- Existing: 0 Proposed: 190,000 SF +/-
Number of Structures: 12 Number of Parking Spaces: 17

For staff use only [Revised 12/13/21]

RSN:

Property Owner Information

Name: ROBERT LEDOUX
Company: FLORIDA EAST COAST RAILWAY, LLC
Address: 7150 PHILIPS HWY
City: JACKSONVILLE State: FL Zip Code: 32256
Phone: 904-538-6100 Fax: E-Mail: ROBERT.LEDOUX@FECRWY.COM
Applicant Information
Name: EDWIN COTHRON
Company: BELVEDERE TERMINALS COMPANY, LLC
Address: 200 CENTRAL AVE, 4TH FLOOR
City: ST. PETERSBURG State: FL Zip Code: 33701
Phone: 727-893-8160 Fax: E-Mail: ECOTHRON@BELVEDERETERMINALS.COM
Developer Information
Name: EDWIN COTHRON
Company: BELVEDERE TERMINALS COMPANY, LLC
Address: 200 CENTRAL AVE, 4TH FLOOR
City: ST. PETERSBURG State: FL Zip Code: 33701
Phone: 727-893-8160 Fax: E-Mail: ECOTHRON@BELVEDERETERMINALS.COM
Engineering Information
Name: CHARLES POTTER, P.E.
Company: AVID GROUP, LLC
Address: 2300 CURLEW ROAD, STE 201
City: PALM HARBOR State: FL Zip Code: 34683
Phone: 727-789-9500 Fax: E-Mail: CHARLIE.POTTER@AVIDGROUP.COM

Surveyor Information

Name: RONALD BLACKWELL
Company: CLEARPOINT CONSULTING ENGINEERS, PA
Address: 6652 US HIGHWAY 98
City: HATTIESBURG State: MS Zip Code: 39402
Phone: 601-261-2609 Fax: E-Mail: RONNIE@CLEARPOINTENGINEERS.COM
Thone.
Landscape Architect Information
Name: CATHERINE MORAHAN
Company: CJM DESIGNS, LLC
Address: 3333 SAN PEDRO STREET
City: CLEARWATER State: FL Zip Code: 33759
Phone: 727-430-5038 Fax: E-Mail:

Required submission documents may be accepted in person or mailed: [One standard paper size [8.5X11]; or one architectural paper size [24-inchX36-inch]; and PDF copy on disk]

Overall Development Plan [ODP]

- Signed & sealed folded civil plans meeting the requirements of <u>Section 72-538</u>
- Non-Concurrency Affidavit, if more than one lot
- Concurrency Certification of Capacity Application, for one lot only
- Boundary survey, no more than 2 years old, signed and sealed by a Florida licensed surveyor
- Biological report, including a wetland delineation, when applicable
- Environmental Impact Assessment (EIA) if the project is within the Natural Resource Management Area (NRMA)
- Tree Survey, for all specimen and historic tress (at minimum)
- Specimen tree calculations
- Review Fee(s)

Conceptual Plan [CPN]

- Signed & sealed folded architectural plans meeting the requirements of <u>Section 72-577 (c)(1)</u>, with proposed structures, vehicle circulation & parking depicted
- Non-Concurrency Affidavit
- Review Fee(s)

Preliminary Plat [PPL]/Final Site Plan [FSP]

Cover letter addressing any outstanding ODP/CPN comments must be submitted with items below:

- Signed & sealed folded architectural plans meeting the requirements of <u>Section 72-540</u> and plat sheets in the same format required by <u>Chapter 177 Florida Statutes</u> [PPL]/<u>Section 72-577 (c)(2)</u> [FSP], including a signed & sealed boundary survey, landscape and irrigation plans and any other required items per their respective checklist
- Tree preservation plan and tree removal/replacement plan and calculations
- Concurrency Certificate of Capacity Application

- Tree Survey, as required by Environmental Permitting
- CAD files of all plat sheets [PPL]
- **Stormwater Calculations**
- Title Opinion/Declaration of Covenants and Restrictions, when applicable [PPL]
- Biological Report including wetland delineation, when applicable
- Traffic Impact Analysis, when applicable
- Review Fee(s)
- Environmental Impact Assessment (EIA) if the project is within the Natural Resource Management Area (NRMA)

Final Plat [FPL]

Cover letter addressing any outstanding ODP/PPL comments must be submitted with items below:

- Plat sheets in the same format meeting the requirements of Section 72-541 and Chapter 177 Florida Statutes.
- Title Opinion/Declaration of Covenants and Restrictions, when applicable
- Review Fee(s)

New CAD files of all plat sheets [PPL]

	you acknowledge the requirement for the completeceived in this office no later than 12:00 noon on a Edwin Cothron, Manager Belvedere Terminals Company, LLC (applicant)	
applicant Signature		Date: 1/30/23

If you are not the property owner or the designated authorized agent, you must have the owner complete the attached "Notarized Authorization of Owner".

For staff use only

RSN:

- Tree Survey, as required by Environmental Permitting
- CAD files of all plat sheets [PPL]
- Stormwater Calculations
- Title Opinion/Declaration of Covenants and Restrictions, when applicable [PPL]
- Biological Report including wetland delineation, when applicable
- Traffic Impact Analysis, when applicable
- Review Fee(s)
- Environmental Impact Assessment (EIA) if the project is within the Natural Resource Management Area (NRMA)

Final Plat [FPL]

Cover letter addressing any outstanding ODP/PPL comments must be submitted with items below:

- Plat sheets in the same format meeting the requirements of <u>Section 72-541</u> and <u>Chapter 177</u>
 Florida Statutes.
- Title Opinion/Declaration of Covenants and Restrictions, when applicable
- Review Fee(s)
- New CAD files of all plat sheets [PPL]

By signing below	r, you acknowledge the requirement for the comple	ete application submission and all
review fees to be	received in this office no later than 12:00 noon on	the applicable posted <u>submission</u>
deadline date.	Robert Ledoux, Sr VP Florida East Coast Railway, LLC (property owner)	We will be a second of the sec
Applicant Signatur	e: Robert Clager	Date: 12/1/93

If you are not the property owner or the designated authorized agent, you must have the owner complete the attached "Notarized Authorization of Owner".

For staff use only

RSN:



Land Development, Volusia County, Florida

Notarized Authorization of Owner

IWe. FLORIDA EAST COAST RAILWAY, LLC
title holder(s) of the property described as [Tax Parcel Number and/or legal description]:
42060000061, (ALT KEY: 6362092); 423801140011, (ALT KEY: 6862770); 423801160012, (ALT KEY: 6862788) SEE ATTACHED LEGAL DESCRIPTION
hereby designate and authorize AVID GROUP, LLC (ATTN: CHARLES POTTER P.E.)
act as my authorized agent for the filing of a CONCEPTUAL AND FINAL SITE PLAN application on the above- referenced property.
ROBERT LEDOUX, SR. VICE PRESIDENT Owner's Signature Owner's Printed Name Date
STATE OF FLORIDA, COUNTY OF Duvo. The foregoing instrument was acknowledged before me, an officer duly authorized in the State of Florida
to take acknowledgements, personally appeared on this date Dec. 1,2013, who is
personally known to me or who has produced Identification and who executed the foregoing instrument and did not take an oath.
Signature of Notary Public
Type or Print Name of Notary Public Commission No.: MICHELLE MANUCY Notary Public State of Florida Comm# HH399462
My Commission Expires: Expires 5/17/2027
For staff use only
RSN:



Growth and Resource Management

123 West Indiana Avenue DeLand, FL 32720

Electronic Application

23 089494 000 00 CPN

RSN 1198442

Conceptual Site Plan Dec 04, 2023

New Application

Owner's Statement

By checking this box and completing this electronic permit application, I certify that I am the owner of the real property or the agent of the owner with the authority to complete this application. I have read and understand the above statement.

Electronically acknowledged/signed by: Charles Potter, Dec 4, 2023 11:53 AM

Scope of Work: BULK FUEL STORAGE AND DISTRIBUTION TERMINAL

423801140011 & 423801160012

Property Information:

Tax Parcel Number: 420600000061

Tax Parcel Address: 874 HULL RD, ORMOND BEACH FL, 32174

Legal Description: 6-14-32 GOVT LOTS 1 & 5 S OF R/R & N OF HARMONY RD & 34 14 32 & 37 14 31 N 816 FT ON E/L & N 843.67 FT ON W/L OF W 1660.17 FT OF GEO ANDERSON GRANT S OF FEC RR & W OF TOMOKA RD EXC IRREG PARCEL BEING S 352.66 FT OF E 1393 FT & EXC TRIANG PARCEL PER OR 6177 PG 3655 MEAS 85.23 FT ON ELY/L & MEAS 72.08 FT ON WLY/L IN LOT N PLAT OF TOMOKA MB 15 PG 251 BEING A PORTION OF GEO ANDERSON GRANT PER OR 2562 PG 1382 & PER OR 5482 PG 3503 PER OR 2562 PG 1382 & PER OR 5482 PG 3503

Property Owner Information:

Name: FEC RAILROAD

Address: 7150 PHILIPS HWY, JACKSONVILLE FL 32256

Folder Name: ORMOND BEACH TERMINAL

Applicant Information:

Name: Charles Potter

Company Name: AVID Group

Address: 2300 Curlew RD, Suite 201, Palm Harbor FL, 34683



Growth and Resource Management 123 West Indiana Avenue

DeLand, FL 32720

Electronic Application

23 089494 000 00 CPN RSN 1198442

Application Information:

Application Information		Project Density	12
Project Name	ORMOND BEACH	FEMA Designation	AE
5	TERMINAL	Located in floodplain?	Yes
Date of Survey	Nov 08, 2023	Stormwater Impervious	190000
Type of Development	Commercial	Area (Sq Ft)	
External Reviews		Stormwater Impervious	0.07
Concurrency	Concurrency Review	Area (Percentage)	
Site Information		Utilities	
# Dwelling Units	0	Water Provider	Well
Total Floor Area (Sq Ft)	4600	Sewer Provider	Septic
Total Number of	12	Construction Info	
Structures		Estimated Construction	7475367
Total Number of Parking Spaces	17	Cost	
Proposed Use 1	Truck Terminal		
Units/Sq Ft 1	4600		

Owner's Electronic Submission Statement:

Under penalty of perjury, I declare that all the information contained in this application is true and correct. I agree to allow County staff to access the property for inspection and review purposes. I have read and understand the above statement.

Electronically acknowledged/signed by: Charles Potter, Dec 4, 2023 11:53 AM

Carol McFarlane

From: Carol McFarlane

Sent: Monday, December 4, 2023 5:28 PM

To: robert.ledoux@fecrwy.com; ecothron@belvedereterminals.com; charlie.potter@avidgroup.com;

ronnie@clearpointengineers.com

Cc: George Recktenwald; Suzanne Konchan; Paolo Soria; Michael Dyer; Christopher Ryan; Scott Ashley;

Benjamin Walter; Kimberly Reading; Rebekah Cottle

Subject: Ormond Beach Terminal, Row ID 1198442

Good evening,

Volusia County received your application for a conceptual site plan for a proposed fuel terminal at 874 Hull Road, near the city of Ormond Beach. The county staff cannot accept and process the conceptual site plan application at this time. On November 21, 2023, the Volusia County Council publicly directed the County Manager and the County Attorney to review and analyze potential changes to list of permitted and special exception uses in the I-2 (Heavy Industrial) zoning classification. Under the pending ordinance doctrine, the county staff cannot process the application at this time.

Additionally, the County Council directed staff to initiate a moratorium on development in the I-2 (Heavy Industrial) zoning classification. The Planning and Land Development Regulation Commission will review the pending moratorium ordinance at its December 21, 2023, meeting. It is anticipated that the County Council will review the pending ordinance at its January 4, 2024, and January 16, 2024, meetings. It is anticipated that the moratorium will be in effect until August 21, 2024.

Please let us know if you have any questions.

Thank you,

Carol McFarlane, AICP
Planning and Development Services Director
County of Volusia
123 W. Indiana Avenue, Room 202
DeLand, FL 32720
Phone (386) 736-5959, ext. 12736
www.volusia.org

*** Use www.ConnectLivePermits.org, Volusia County's online permit service center, to apply, query zoning, make payments, research permit records and so much more. Please use the ConnectLive system to upload documents relating to a particular permit, as any documents sent via email are subject to a firewall and may not reach your intended recipient. ***

All email correspondence are subject to public records laws.

COUNTY OF VOLUSIA LAND DEVELOPMENT OFFICE CONCURRENCY CERTIFICATE OF CAPACITY/INQUIRY



Mail or hand deliver the completed application to: Thomas C. Kelly Administration Center, County of Volusia, Land Development Office 123 W. Indiana Avenue, Room 202, DeLand, Florida 32720-4604

DeLand 386-736-5942, Daytona Beach 386-248-8157, New Smyrna Beach 386-423-3872 Fax 386-740-5136

TYPE OF APPLICATION
PRELIMINARY APPLICATION Zoning: PUD Rezoning Special Exception Subdivision Plan: Sketch Plan Overall Development Plan STANDARD APPLICATION Subdivision Plat: Preliminary Final Site Plan: Final
PROJECT INFORMATION
PROJECT NAME: ORMOND BEACH TERMINAL
INTENDED USE: BULK FUEL STORAGE AND DISTRIBUTION TERMINAL
ITE LAND USE CLASSIFICATION: 170 (INDUSTRIAL/UTILITIES)
TAX PARCEL NUMBER(S): 420600000061, 423801140011, 423801160012
ZONING AUTHORIZATION Required prior to submitting the Application for Plan Review - DeLand Zoning Office, Room 205
CURRENT ZONING: FUTURE LAND USE: IN ECO?
Yes/No The development is consistent with the Comprehensive Plan and is properly zoned for the intended use.
NONCONFORMING LOT LETTER REQUIRED: YES NO SUBMITTED: YES NO
PENDING OR APPROVED ZONING/PLAN AMENDMENT: YES NO CASE NUMBER:
ZONING AUTHORITY: DATE: COMMENTS:
****STAFF USE ONLY****
PROJECT NAME:
APPLICATION NUMBER: RSN:

NAME: COMPANY:	EDANIA COLL							
	EDWIN COTHRON DELVEDEDE TERMINALO COMPANY LLO							
ADDDEGG	BELVEDERE TERMINALS COMPANY, LLC							
ADDRESS:	200 CENTRAL AVE, 4TH FLOOR							
CITY:	ST. PETERSBURG STATE: Florida ZIP CODE: 33701							
PHONE: 72	27-893-8160	EXT:		FAX:] EMAIL:	ECOTHRON@BELVED	ERETERMINALS.COM
			<u>0\</u>	VNER INFO	RMATION			
NAME:	ROBERT LED	DOUX	MARKAN AND AND AND AND AND AND AND AND AND A					
COMPANY:	FLORIDA EA	ST COA	AST RAILW	AY, LLC				
ADDRESS:	7150 PHILIPS	SHWY						
CITY:	JACKSONVIL	LE		STATE:	Florida		ZIP CODE:	32256
PHONE: 904	I-538-6100	EXT:		FAX:		EMAIL:	ROBERT.LEDOUX@	FECRWY.COM
Vicinity n general p The appr Generati Will this dever	perimeter of the ropriate land us on Manual". Ca elopment be	of 1" = 2 e develo se classi all (386)	2,000' or oth pment and fication(s) i) 736-5968,	er scale app locates the l n the most r ext. 2523, i	main entrand ecent edition f you need a	ce of the o	evelopment Manag development and a nstitute of Transpo	ccess to public
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Vicinity n general p The appr Generati Will this devenue. Phase: 1st C/O in Ph Last C/O in P Total Acreage Dwelling Unit	map at a scale of perimeter of the ropriate land us on Manual". Co elopment be lase (Mo/Yr) thase (Mo/Yr) e in Phase: s/Lots in Phase	of 1" = 2 e develo se classi all (386) phase	e,000' or oth pment and fication(s) i) 736-5968, ed? ☐ Ye	er scale app locates the l n the most r ext. 2523, i	main entrandecent edition f you need a lo	ce of the o	development and a nstitute of Transpo	access to public rtation Engineer

RSN: _



Land Development, Volusia County, Florida

Notarized Authorization of Owner

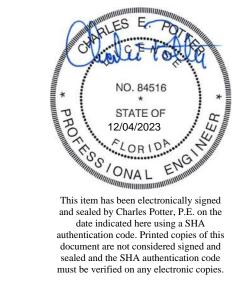
I/We, FLORIDA EAST COAST RAILWAY, LLC	l , as the sole or joint fee simple
title holder(s) of the property described as [Tax Parcel Number and/or leg	al description]:
420600000061, (ALT KEY: 6362092); 423801140011, (ALT KEY: 6423801160012, (ALT KEY: 6862788) SEE ATTACHED LEGAL DE	3862770):
hereby designate and authorize AVID GROUP, LLC (ATTN: CHARLI	ES POTTER P.E.) to
act as my authorized agent for the filing of a CONCEPTUAL A application on the above- referenced property.	ND FINAL SITE PLAN
NOOM ROBERT LEDOL Owner's Signature Owner's Printed	JX, SR. VICE PRESIDENT Name
STATE OF FLORIDA, COUNTY OF Duvo! The foregoing instrument was acknowledged before me, an officer duly au	ithorized in the State of Florida
to take acknowledgements, personally appeared on this date Dec	. 1,2013 , who is
personally known to me or who has produced ldentification and who executed the foregoing instrument and did not take	an oath.
Signature of Notary Public	nucy.
Type or Print Name of Notary	MICHELLE MANUCY Notary Public State of Florida
Commission No.:	Comm# HH399462 Expires 5/17/2027
For staff use only	RSN;

ORMOND BEACH FUEL TERMINAL ORMOND BEACH, FLORIDA

DRAWING INDEX

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BT-ORB-4003	EXISTING CONDITIONS AND DEMO PLAN
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BT-ORB-4005	OVERALL HORIZONTAL CONTROL PLAN
BT-ORB-4006	PARTIAL HORIZONTAL CONTROL PLAN 1
BT-ORB-4007	PARTIAL HORIZONTAL CONTROL PLAN 2
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DRAWING NO.	DRAWING TITLE
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—BT-ORB-4052	PARTIAL LANDSCAPE PLAN 2
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— BT-ORB-4056	PARTIAL LANDSCAPE PLAN 6
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BT_ORB_4064	LANDSCAPE NOTES
BT-0RB-4100	NPDES NOTES
BT-0RB-4101	NPDES DETAILS
BT-0RB-4102	DETAILS 1
BT-0RB-4103	DETAILS 2
BT-0RB-4406	TANK FARM GRADING & DRAINAGE SECTION VIEWS
	BELVEDERE STANDARD DRAWINGS
BT-STD-4000	CHAIN LINK SECURITY FENCE, DETAILS & PERSONNEL & SWING GATES
BT-STD-4001	CHAIN LINK SECURITY FENCE, SLIDING & EMERGENCY EGRESS GATES





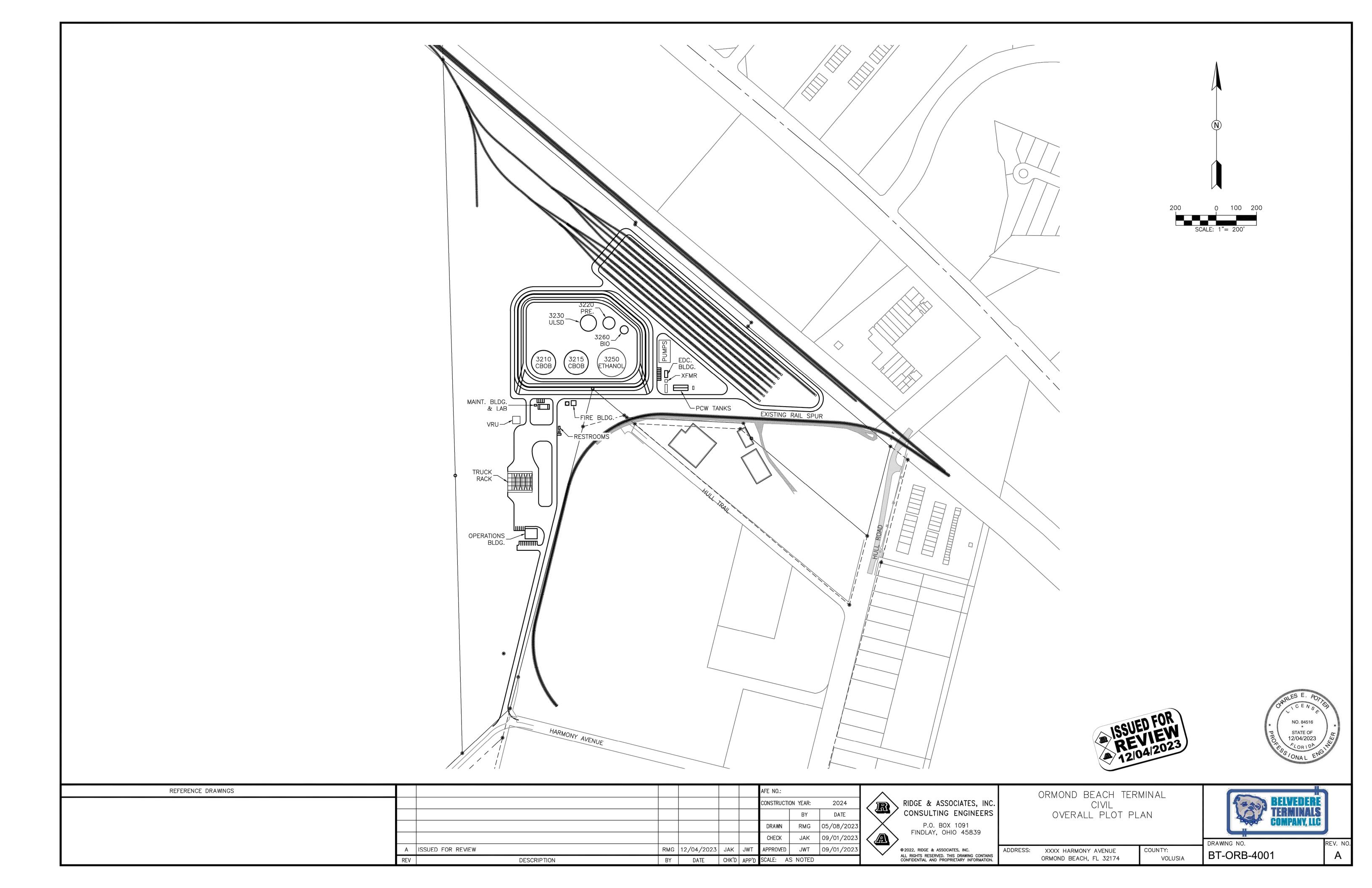
REFERENCE DRAWINGS								AFE NO.:		
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								CHECK	CEP	11/20/2023
	А	ISSUED FOR BIDS		RNC	11/20/23	CEP	_	APPROVED	_	_
	REV		DESCRIPTION	BY	DATE	CHK'D	APP'D	SCALE: AS	NOTED	



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S: XXXX HARMONY AVENUE COUNTY:
ORMOND BEACH, FLORIDA VOLUSIA

DRAWING NO.
BT-ORB-4000



GENERAL CONSTRUCTION NOTES

- 1. SEE SURVEY AND PAVING, GRADING & DRAINAGE PLAN FOR SITE SPECIFIC BENCHMARK AND ELEVATION DATUM.
- 2. LOCATIONS, DIMENSIONS AND ELEVATIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO STANDARD UTILITY ATLAS SHEETS OR OTHER INFORMATION OBTAINED AT THE TIME OF PREPARATION OF THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, DIMENSIONS, AND ELEVATION OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THE WORK AND MAKE ARRANGEMENTS FOR REQUIRED RELOCATIONS WITH THE AFFECTED UTILITY. THE CONTRACTOR SHALL COOPERATE WITH THE UTILITY DURING RELOCATION OPERATIONS
- CHAPTER 556, UNDERGROUND FACILITY DAMAGE PREVENTION SAFETY ACT OF THE FLORIDA STATUES REQUIRES THE CONTRACTOR TO NOTIFY "SUNSHINE 811" NOT LESS THAN 2 FULL BUSINESS DAYS BEFORE BEGINNING ANY EXCAVATION OR DEMOLITION THAT IS NOT BENEATH THE WATERS OF THE STATE, AND NOT LESS THAN 10 FULL BUSINESS DAYS BEFORE BEGINNING ANY EXCAVATION OR DEMOLITION THAT IS BENEATH THE WATERS OF THE STATE. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITIES NOT INCLUDED IN THE "SUNSHINE 811" PROGRAM NOT LESS THAN 2 FULL BUSINESS DAYS BEFORE BEGINNING ANY EXCAVATION OR DEMOLITION.
- THE CONSTRUCTION DRAWINGS DO NOT INCLUDE SPECIFICATION FOR CONSTRUCTION SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION SITE SAFETY, INCLUDING OSHA STANDARDS AND LOCAL REQUIREMENTS.
- THE CONTRACTOR SHALL REVIEW THE PLANS FOR CONFLICTS OR OTHER DISCREPANCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER OF ANY CONFLICTS OR DISCREPANCIES BEFORE PERFORMING ANY WORK.
- 6. ALL PROPOSED UNDERGROUND UTILITIES MUST BE IN PLACE, TESTED AND INSPECTED PRIOR TO PAVEMENT SURFACE COURSE CONSTRUCTION.
- 7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE CONDITIONS AND INSPECTION REQUIREMENTS OF ALL PERMITS ISSUED FOR THE PROJECT. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION AND SHALL SCHEDULE ALL INSPECTIONS IN ACCORDANCE WITH AGENCY REQUIREMENTS.
- 8. ALL SPECIFICATIONS AND DOCUMENTS REFERRED TO SHALL BE OF LATEST REVISIONS AND/OR LATEST EDITION.
- THE CONTRACTOR SHALL COMPLETE THE WORK IN ACCORDANCE WITH ALL APPLICABLE STATUTES, RULES, REGULATIONS AND PERMIT

BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES WITH OTHERS WHERE NECESSARY

- 10. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR ALL PRECAST AND MANUFACTURED ITEMS TO BE USED ON THE PROJECT. ALL SHOP DRAWINGS ARE TO BE REVIEWED AND APPROVED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ENGINEER.
- 11. AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, OWNER, AND APPROPRIATE PERMITTING AGENCIES OF THE CONTRACTOR'S NAME, STARTING DATE, PROJECTED SCHEDULE, AND OTHER INFORMATION AS REQUIRED.
- 12. WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED ON SITE BY OTHERS. IT WILL
- 13. SITE WORK CONCRETE SHALL BE IN ACCORDANCE TO FDOT SPECIFICATIONS UNLESS OTHERWISE NOTED.
- 14. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITIONS UNLESS SPECIFICALLY EXEMPTED BY THE PLANS.
- 15. ALL DISTURBED AREAS THAT ARE NOT TO BE SODDED, ARE TO BE SEEDED AND MULCHED IN ACCORDANCE WITH FDOT STANDARDS. THE CONTRACTOR SHALL MAINTAIN ALL GRASSED AREAS UNTIL A NOTICE OF TERMINATION (NOT) HAS BEEN SUBMITTED TO THE NPDES STORMWATER NOTICES CENTER AND THE PROJECT HAS BEEN ACCEPTED BY THE OWNER. FINAL STABILIZATION IS DEFINED AS "ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF AT LEAST 70% FOR ALL UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN ESTABLISHED OR EQUIVALENT PERMANENT STABILIZATION MEASURES HAVE BEEN EMPLOYED."
- THE CONTRACTOR SHALL LOCATE AND FLAG ALL PROPERTY CORNERS PRIOR TO FINAL ENGINEERING INSPECTION AND CERTIFICATION. THE CONTRACTOR SHALL BEAR ALL COSTS INCURRED AS A CONSEQUENCE OF LOST OR DISTURBED PROPERTY CORNERS. LOST OR DISTURBED PROPERTY CORNERS SHALL BE REESTABLISHED BY A PROFESSIONAL LAND SURVEYOR.
- 17. THE GEOTECHNICAL ENGINEER SHALL SUPPLY THE ENGINEER AND OWNER WITH A PHOTOCOPY OF ALL COMPACTION TESTS AND OTHER REQUIRED MATERIALS TESTS UNDER THIS CONTRACT. THE GEOTECHNICAL ENGINEER SHALL CERTIFY, IN WRITING, TO THE ENGINEER AND OWNER, THAT ALL TESTING REQUIREMENTS HAVE BEEN SATISFIED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL REQUIRED TESTING WITH THE GEOTECHNICAL ENGINEER. TESTING IS REQUIRED AS DICTATED BY THE CONTRACT DOCUMENTS, CONSTRUCTION PLANS, SPECIFICATIONS, AND AGENCY REQUIREMENTS. UPON COMPLETION OF THE WORK, THE GEOTECHNICAL ENGINEER SHALL SUBMIT CERTIFICATIONS TO THE ENGINEER AND OWNER THAT STATE THAT ALL REQUIREMENTS HAVE BEEN MET.
- 19. THE CONTRACTOR SHALL REVIEW ALL PROJECT GEOTECHNICAL REPORTS PRIOR TO BIDDING AND THE START OF CONSTRUCTION.
- 20. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED CONSTRUCTION DRAWINGS AND ALL PERMITS AT THE CONSTRUCTION SITE.
- 21. RIM ELEVATIONS OF PROPOSED DRAINAGE AND SANITARY SEWER MANHOLES AND ASSOCIATED STRUCTURES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH AND CONSISTENT WITH THE GRADING PLANS. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, GAS GATES AND OTHER UTILITIES TO FINISHED GRADE WITHIN LIMITS OF WORK.

SANITARY SEWER NOTES

- ALL SANITARY SEWER MAINS, FORCE MAINS AND LATERALS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER, UNLESS OTHERWISE
- 2. ALL SANITARY SEWER WORK SHALL CONFORM TO LOCAL REGULATORY STANDARDS AND SPECIFICATIONS. WHEN THE LOCAL UTILITY REQUIREMENTS ARE IN CONFLICT WITH THESE NOTES, THE LOCAL UTILITY REQUIREMENTS WILL GOVERI
- PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING NEW WORK TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING CONNECTION POINTS AND NOTIFY THE ENGINEER OF
- PVC GRAVITY SANITARY SEWER PIPES SHALL MEET THE FOLLOWING MINIMUM CRITERIA: ASTM D3034, SDR35, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURES CRITERIA FOR DEPTH, SOIL MATERIAL AND LOADING CONDITIONS. 3' - 12' DEPTH SDR-35 12' - 18' DEPTH SDR-26 > 18' DEPTH DIP
- ALL SANITARY SEWER PIPELINES SHALL BE SOLID GREEN IN COLOR.
- PVC FORCE MAINS 4" DIAMETER AND GREATER SHALL BE PRESSURE C900 CLASS 150200, SDR 1821, COLOR GREEN. FORCE MAINS LESS THAN 4" DIAMETER SHALL BE PRESSURE CLASS 200, SDR 21, COLOR GREEN. A GREEN MAGNETIC TAPE A MINIMUM OF 2" WIDE SHALL BE PLACED 1 FOOT BELOW THE PROPOSED GRADE. THE PRINTING ON THE MAGNETIC TAPE SHALL READ "FORCE
- ALL DUCTILE IRON PIPE SHALL BE PRESSURE CLASS 350 IN ACCORDANCE WITH ANSI A 21.51-91 (AWWA C151) AND THE PIPE SHALL RECEIVE EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.511 (AWWA C151).
- 8. ALL SANITARY SEWER GRAVITY MAINS OR SANITARY SEWER FORCE MAINS THAT REQUIRE DIP ARE TO BE POLYLINED OR EPOXY LINED.
- ALL SANITARY SEWER RIMS AND COVERS SHALL BE TRAFFIC RATED FOR H-20 LOADING.
- 10. THE CONTRACTOR SHALL PROVIDE CERTIFIED UTILITY RECORD DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR. THE RECORD DRAWINGS SHALL SHOW FINAL GRADES AND LOCATIONS ON ALL SANITARY SEWER MAINS, STRUCTURES AND SERVICES. ALL RESTRAINED JOINTS SHALL BE SHOWN ON THE RECORD DRAWINGS. THE CONTRACTOR SHALL PROVIDE TEN COPIES OF THE CERTIFIED RECORD DRAWINGS TO THE ENGINEER.

SANITARY SEWER TESTING AND INSPECTION REQUIREMENTS

REFERENCE DRAWINGS

- 1. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE ENGINEER. CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.
- 2. ALL GRAVITY SEWER PIPING SHALL BE VIDEOTAPED AND RESULTS FURNISHED TO THE LOCAL UTILITY AND THE ENGINEER.
- THE GRAVITY SANITARY SEWER AND ALL SERVICE LATERALS SHALL BE SUBJECT TO ADDITIONAL TESTING AS REQUIRED BY LOCAL REGULATIONS. TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SHALL BE SUBMITTED TO THE LOCAL AUTHORITIES FOR APPROVAL. COORDINATION AND NOTIFICATION OF ALL PARTIES SHALL BE THE CONTRACTOR'S
- ALL FORCE MAINS SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST IN ACCORDANCE WITH LOCAL REGULATIONS. TESTS SHALL BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE LOCAL AUTHORITIES FOR APPROVAL. COORDINATION AND NOTIFICATION OF ALL PARTIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

CLEARING AND EROSION CONTROL NOTES

- ALL TREES TO REMAIN SHALL BE PROTECTED IN ACCORDANCE WITH LOCAL REGULATIONS PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR SHALL PREPARE THE SITE AS DIRECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO STARTING ACTUAL CONSTRUCTION. COPIES OF THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND REPORT ARE AVAILABLE THROUGH THE OWNER OR THE GEOTECHNICAL ENGINEER. QUESTIONS REGARDING SITE PREPARATION REQUIREMENTS SHALL BE DIRECTED TO THE GEOTECHNICAL ENGINEER AND OWNER.
- THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THE NOTES & SPECIFICATIONS, DEMOLITION PLAN, PAVING GRADING AND DRAINAGE PLAN, NPDES NOTES AND NPDES DETAILS.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL OPERATE AND MAINTAIN EROSION AND SEDIMENT CONTROL DEVICES AND STRUCTURES IN ACCORDANCE WITH THE REGULATIONS SET FORTH IN THE SWPPP.
- THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THOSE PORTIONS OF THE SITE NECESSARY FOR CONSTRUCTION. ALL DISTURBED OPEN AREAS SHALL BE MAINTAINED IN ACCORDANCE TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
- THE TOP SOIL REMOVED DURING CLEARING AND GRUBBING SHALL BE STOCKPILED AT A SITE DESIGNATED BY THE OWNER AND SHALL BE USED FOR LANDSCAPING PURPOSES UNLESS OTHERWISE DIRECTED BY THE OWNER.
- ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS
- 8. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR REMOVAL OF EXISTING STRUCTURES.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITIES TO DISCONNECT OR REMOVE THEIR FACILITIES PRIOR TO REMOVAL OR
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A VISUAL INSPECTION OF THE SITE AND SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL UNDERGROUND AND ABOVE GROUND STRUCTURES THAT WILL NOT BE INCORPORATED WITH THE NEW FACILITIES. SHOULD ANY DISCREPANCY EXIST, THE CONTRACTOR SHALL CONTACT THE OWNER FOR CLARIFICATION PRIOR TO DEMOLITION.
- 11. PRIOR TO THE COMPLETION OF CONSTRUCTION, THE RETENTION/DETENTION AREAS SHALL BE RESHAPED, CLEARED OF SILT, MUD AND DEBRIS, AND GRASSED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS.

PAVING, GRADING AND DRAINAGE NOTES

CONSTRUCTING CONCRETE PAVEMENT OR SLABS.

- 1 ALL DELETERIOLIS SURSTANCES (LE MUCK PEAT RURIED DERRIS) SHALL RE EXCAVATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER OR OWNER. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS SHALL BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SPECIFIED BY THE GEOTECHNICAL ENGINEER OR OWNER.
- 2. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES TO BE SAVED. THE CONTRACTOR SHALL COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY GRADE CHANGE.
- 3. THE CONTRACTOR IS TO SUBMIT A PROPOSED CONCRETE JOINTING PATTERN TO THE OWNER FOR APPROVAL PRIOR TO
- 4. THE CONTRACTOR SHALL PROVIDE AN EXPANSION JOINT AT ABUTMENT OF CONCRETE AND ANY STRUCTURE.
- 5. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS OF WAY SHALL COMPLY WITH THE LATEST FDOT STANDARD PLANS AND SPECIFICATIONS. THE MARKINGS SHALL BE PAINTED UNLESS SHOWN ON THE PLANS AND/OR PERMITS TO BE THERMOPLASTIC. PARKING STALL STRIPING SHALL BE 6" WIDE PAINTED WHITE STRIPES UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- THE CONTRACTOR SHALL INSTALL EXTRA BASE MATERIAL WHEN THE DISTANCE BETWEEN THE PAVEMENT ELEVATION AND THE TOP OF THE PIPE EXCEEDS THE MINIMUM DIMENSIONS SHOWN IN FDOT DRAINAGE MANUAL APPENDIX C (COVER HEIGHT TABLES).
- INSTALLATION OF PLASTIC PIPES SHALL BE IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION BASED ON COVER,
- 8. STANDARD INDICES REFER TO THE LATEST EDITION OF FDOT "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION".
- ALL STORM SEWER PIPE (15" DIAMETER OR GREATER) SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76). PLASTIC STORM SEWER PIPE IS ALLOWED IF INDICATED AS AN ALTERNATIVE PIPE ON THE PAVING, GRADING AND DRAINAGE PLAN.
- 10. ALL STORM SEWER PIPE (12" DIAMETER OR LESS) SHALL BE ADS N-12 WT IB HDPE UNLESS OTHERWISE INDICATED IN THE DRAWINGS AND SPECIFICATIONS.
- 11. PIPE LENGTHS SHOWN ARE APPROXIMATE.

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LOADING AND SOIL MATERIAL

- 12. ALL DRAINAGE STRUCTURE FRAMES, GRATES AND COVERS WITHIN TRAFFIC AREAS SHALL BE TRAFFIC RATED FOR H-20 LOADING AND ALL GRATE INLETS SHALL BE SUPPLIED WITH STEEL ANGLE FRAMES.
- 13. THE CONTRACTOR IS TO GRASS THE RETENTION/DETENTION POND AS INDICATED ON PLANS WITHIN ONE-WEEK FOLLOWING CONSTRUCTION OF THE POND.
- 14. MATERIALS AND CONSTRUCTION METHODS FOR STREETS AND STORM DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL REGULATIONS AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST REVISION THEREOF AND SUPPLEMENTAL SPECIFICATIONS THERETO.
- THE CONTRACTOR SHALL PROVIDE CERTIFIED RECORD DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR. THE RECORD DRAWINGS SHALL SHOW FINAL GRADES, INVERTS, AND LOCATIONS OF ALL STORMWATER FACILITIES INCLUDING THE STORMWATER POND, DRAINAGE STRUCTURES, BERMS & SWALES. THE CONTRACTOR SHALL PROVIDE COPIES OF THE CERTIFIED RECORD DRAWINGS TO THE ENGINEER FOR THE PURPOSE OF CERTIFYING THE STORMWATER MANAGEMENT SYSTEM.

PAVING, GRADING & DRAINAGE TESTING & INSPECTION

DESCRIPTION

- THE STORM DRAINAGE PIPING AND FILTRATION SYSTEM SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE ENGINEER PRIOR TO THE PLACEMENT OF BACKFILL. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE AN
- THE CONTRACTOR SHALL MAINTAIN THE STORM DRAINAGE SYSTEMS UNTIL FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE REQUIRED TESTING WITH THE GEOTECHNICAL ENGINEER. TESTING IS REQUIRED IN ACCORDANCE WITH THE LOCAL JURISDICTION AND/OR FDOT STANDARDS. UPON COMPLETION OF THE WORK, THE GEOTECHNICAL ENGINEER SHALL SUBMIT CERTIFICATIONS TO THE ENGINEER AND OWNER STATING THAT ALL REOUIREMENTS HAVE BEEN MET.

WATER SYSTEM NOTES

- ALL WATER MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.
- ALL WATER SYSTEM WORK SHALL CONFORM TO LOCAL REGULATORY STANDARDS AND SPECIFICATIONS. WHEN THE LOCAL UTILITY REQUIREMENTS ARE IN CONFLICT WITH THESE NOTES, THE LOCAL UTILITY REQUIREMENTS WILL GOVERN.
- CONFLICTS BETWEEN WATER AND STORM OR SANITARY SEWER SHALL BE RESOLVED BY ADJUSTING THE WATER LINES AS REQUIRED.
- ALL DUCTILE IRON PIPE SHALL BE PRESSURE CLASS 350 IN ACCORDANCE WITH ANSI A 21.51 (AWWA C151) AND THE PIPE SHALL RECEIVE EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.51 (AWWA C151) AND SHALL BE CEMENT MORTAR LINED, STANDARD THICKNESS IN ACCORDANCE WITH ANSI A 21.4 (AWWA C104).
- ALL FITTINGS 3" OR LARGER SHALL BE MECHANICAL JOINT, DUCTILE IRON PRESSURE CLASS 350. FITTINGS SHALL CONFORM TO THE LATEST REVISION OF EITHER ANSI/AWWA C110/A21.10 OR ANSI/AWWA C153/A21.53. FITTINGS AND ACCESSORIES SHALL BE FURNISHED WITH MECHANICAL TYPE JOINTS IN ACCORDANCE WITH ANSI/AWWA C111/A21.11.
- THE CONTRACTOR SHALL INSTALL TEMPORARY BLOW-OFFS AT THE END OF WATER SERVICE LATERALS TO ASSURE ADEQUATE FLUSHING AND
- ALL PVC WATER MAINS 3" THROUGH 12" SHALL BE IN ACCORDANCE WITH AWWA C900. POTABLE WATER PIPE SHALL BE CLASS 150 AND MEET THE REQUIREMENTS OF SDR 18 IN ACCORDANCE WITH ASTM D-2241. FIRE LINE PIPE SHALL BE CLASS 200 AND MEET THE REQUIREMENTS OF
- WATER MAIN PIPING LARGER THAN 2" AND SMALLER THAN 4" SHALL BE PRESSURE CLASS 200 AND MEET THE REQUIREMENTS OF SDR 21 IN ACCORDANCE WITH ASTM D2241 UNLESS SPECIFIED OTHERWISE.
- SERVICE PIPES AND FITTINGS 2.5" AND SMALLER SHALL BE POLYETHYLENE TUBING IN ACCORDANCE WITH AWWA C901, PE4710 (PC200) CTS
- SDR9, PC200) WITH COMPRESSION FITTINGS. 10. ALL GATE VALVES 2" OR LARGER SHALL BE RESILIENT SEAT OR RESILIENT WEDGE MEETING THE REQUIREMENTS OF AWWA C509.
- 11. ALL FIRE HYDRANTS SHALL MEET THE REQUIREMENTS OF AWWA C502 AND SHALL BE APPROVED BY THE LOCAL UTILITY AND FIRE MARSHAL
- 12. MATERIALS AND CONSTRUCTION METHODS FOR WATER DISTRIBUTION SYSTEMS SHALL BE IN ACCORDANCE WITH ALL LOCAL REGULATIONS, PLANS, AND SPECIFICATIONS FOR CONSTRUCTION, LATEST REVISION THEREOF, AND SUPPLEMENTAL SPECIFICATIONS THERETO, APPROVAL AND CONSTRUCTION OF ALL POTABLE WATER SERVICE MAIN EXTENSIONS AND CONNECTIONS MUST BE COORDINATED THROUGH THE LOCAL
- THE CONTRACTOR SHALL PROVIDE CERTIFIED UTILITY RECORD DRAWINGS. SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR. THE RECORD DRAWINGS SHALL SHOW THE LOCATIONS. DIMENSIONS AND ELEVATIONS OF ALL WATER MAINS, SERVICES, MANHOLES, GRAVITY SEWER MAINS, SERVICE LATERALS, PUMP STATIONS AND FORCE MAINS. ALL RESTRAINED JOINTS SHALL BE SHOWN ON THE RECORD DRAWINGS. THE CONTRACTOR SHALL PROVIDE COPIES OF THE CERTIFIED RECORD DRAWINGS TO THE ENGINEER.

FDEP NOTES

REGULATORY AGENCY.

- ALL PIPE, PIPE FITTINGS, PIPE JOINT PACKING AND JOINTING MATERIALS, VALVES, FIRE HYDRANTS, AND METERS INSTALLED UNDER THIS PROJECT WILL CONFORM TO APPLICABLE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS
- ALL PUBLIC WATER SYSTEM COMPONENTS, EXCLUDING FIRE HYDRANTS, THAT WILL BE INSTALLED UNDER THIS PROJECT AND THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61.
- ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT 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.
- ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT WILL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUBPARAGRAPH 62-555,320(21)(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 PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE WILL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED 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 AROUND 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 LINE 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.)
- THE OPEN END OF THE AIR RELIEF PIPE FROM ALL AUTOMATIC AIR RELIEF VALVES INSTALLED UNDER THIS PROJECT WILL BE EXTENDED TO AT LEAST ONE FOOT ABOVE GRADE AND WILL BE PROVIDED WITH A SCREENED, DOWNWARD-FACING ELBOW.
- NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT WILL BE INSTALLED IN ACCORDANCE WITH APPLICABLE AWWA STANDARDS OR IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDED PROCEDURES.
- A CONTINUOUS AND UNIFORM BEDDING WILL BE PROVIDED IN TRENCHES FOR UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT; BACKETLL MATERIAL WILL BE TAMPED IN LAYERS AROUND UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT 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 MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES) FOUND IN TRENCHES WILL BE REMOVED FOR A DEPTH OF AT LEAST SIX INCHES BELOW THE BOTTOM OF UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT.
- ALL WATER MAIN TEES, BENDS, PLUGS, AND HYDRANTS INSTALLED UNDER THIS PROJECT WILL BE PROVIDED WITH THRUST BLOCKS OR RESTRAINED JOINTS TO PREVENT MOVEMENT
- NEW OR ALTERED WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL BE CONSTRUCTED OF ASBESTOS-CEMENT OR POLYVINYL CHLORIDE PIPE WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C603 OR C605. RESPECTIVELY AND ALL OTHER NEW OR ALTERED WATER MAINS INCLUDED IN THIS PROJECT WILL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C600.
- 10. NEW OR ALTERED WATER MAINS, INCLUDING FIRE 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.
- 11. NEW OR ALTERED WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS UNDER SURFACE WATER WILL HAVE A MINIMUM COVER OF TWO FEET.

WATER SYSTEM TESTING AND INSPECTION REQUIREMENTS

- ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED AND ACCEPTED BY THE ENGINEER AND LOCAL AUTHORITIES. PRESSURE TESTS SHALL BE IN ACCORDANCE WITH LOCAL WATER DEPARTMENT, FIRE DEPARTMENT & FDEP SPECIFICATIONS. CONTRACTOR SHALL NOTIFY OWNER'S ENGINEER AND WATER DEPARTMENT INSPECTORS 48 HOURS IN ADVANCE OF PERFORMING TESTS.
- CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED CHLORINATION/DISINFECTION AND BACTERIOLOGICAL SAMPLING IN ACCORDANCE TO ITEM #10 ABOVE, CONTRACTOR SHALL OBTAIN CLEARANCE OF DOMESTIC WATER SYSTEM, COPIES OF ALL BACTERIOLOGICAL TESTS (WHICH SHALL ALSO INDICATE THE CHLORINE RESIDUAL) SHALL BE SUBMITTED TO ENGINEER.

WATER CLEARANCE REQUIREMENTS

FE NO.:

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SCALE: AS NOTED

11/20/23

DATE

CHK'D APP

CONSTRUCTION YEAR:

BY

RNC

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- NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT WILL 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 VACUUM-TYPE SANITARY SEWER, STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610. F.A.C.: A HORIZONTAL DISTANCE OF AT LEAST SIX FEFT BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER (OR A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN WILL BE LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER); A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER. WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND 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"
- NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE; AND NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER. WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPELINE.
- AT UTILITY CROSSINGS, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE OR THE PIPES WILL 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.

2024

DATE

TESTING SCHEDULE GUIDE TEST TYPE TFST I D REQUIREMENT FREQUENCY ITFM **EMBANKMENT** MAXIMUM DENSITY AASHTO T180 N/A PER SOIL TYPE OPTIMUM MOISTURE ASTM D1557 FIELD DENSITY AASHTO T191, T204 95% OF MAXIMUM ONE PER 2,500 S.F. HORIZONTALLY ASTM D1556, D2937 ALTERNATING LIFTS (12 INCHES) D2922 MAXIMUM DENSITY AASHTO T180 N/A PER SOIL TYPE UTII ITY TRENCH BACKETLL OPTIMUM MOISTURE ASTM D1557 95% OF MAXIMUM ONE PER 2,500 S.F. UNDER ROADWAYS FIELD DENSITY AASHTO T191, T204 AND STRUCTURES T238 HORIZONTALLY; DENSITY ASTM D1556, D2937 **EVERY 12" VERTICALLY** D2922 AT LEAST ONE FOR EACH PIPE RUN MAXIMUM DENSITY AASHTO T180 BACKFILL OF N/A PER SOIL TYPE STRUCTURES OPTIMUM MOISTURE ASTM D1557 FIELD DENSITY AASHTO T191, T204 95% OF MAXIMUM EVERY 12" VERTICALLY ASTM D1556, D2937 D2922 SUBGRADE BEARING VALUES LBR - FLA. D.O.T. ONE PER SOIL TYPE CHECK POINT LBR AT SFF TYPICAL 500 L.F. HORIZONTALLY MAXIMUM DENSITY AASHTO T180 PAVEMENT SECTION ONE PER SOIL TYPE OPTIMUM MOISTURE ASTM D1557 AASHTO T191, T238 ONE PER 2,500 S.F. FIELD DENSITY & THICKNESS ASTM D1556, D2922 HORIZONTALLY BEARING VALUES LBR - FLA. D.O.T. ONE PER SOURCE OR AS MTL. CHANGES CHECK POINT LBR AT 500 L.F. HORIZ. MAXIMUM DENSITY AASHTO T180 SEE TYPICAL ONE PER SOURCE OPTIMUM MOISTURE ASTM D1557 PAVEMENT SECTION THICKNESS AASHTO T191, T238 ONE PER 2,500 S.F. FIELD DENSITY ASTM D1556, D2922 HORIZONTALLY GRADATION AASHTO T27, T98 ONE PER SOURCE AASHTO T90 SOIL CEMENT BASE MIX DESIGN PORTLAND CEMENT ONE PER SOIL TYPE ASSOC. SPECIFICATIONS (TO BE USED IF ONE PER SOIL TYPE DAILY MAXIMUM DENSITY AASHTO T134 SEPARATION BETWEEN SEE TYPICAL SHWT & BOTTOM OF OPTIMUM MOISTURE (STANDARD) PAVEMENT SECTION PORTLAND CEMENT ONE SET OF 3 PER SOIL COMPRESSIVE BASE IS <1.5') STRENGTH SPECIMENS ASSOC. SPECIFICATIONS ONE SET OF 3 PER SOIL TEST CORES PORTLAND CEMENT ASSOC. SPECIFICATIONS ONE PER 2,500 S.F. FIELD DENSITY & AASHTO T191, T238 THICKNESS ASTM D1556, D2922 HORIZONTAL ASPHALTIC CONCRETE MATERIALS QUALITY AASHTO T164 ASTM D2172 BITUMEN CONTENT GRADATION PER SPECIFICATIONS ONE PER DAY ASTM 02950-81 FIELD DENSITY 95% OF LAB DENSITY ONE PER 2,500 S.F. HORIZONTAL LOS ANGELES AASHTO T96-77 ABRASION ASTM C131-81 PER SPECIFICATIONS ONE PER SOURCE N/A THICKNESS PER SPECIFICATIONS ONE PER 2,500 S.F. THE CONTRACTOR SHALL NOT PAVE OVER SOIL CEMENT BASE UNTIL A 30 DAY CURING TIME HAS ELAPSED SHOULD ANY OF THE INFORMATION PROVIDED HEREIN CONFLICT WITH EITHER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER AND/OR THE GEOTECHNICAL REPORT, THEN THE AFOREMENTIONED RECOMMENDATIONS WILL SUPERSEDE THIS "TESTING SCHEDULE GUIDE







ORMOND BEACH FUEL TERMINAL GENERAL NOTES



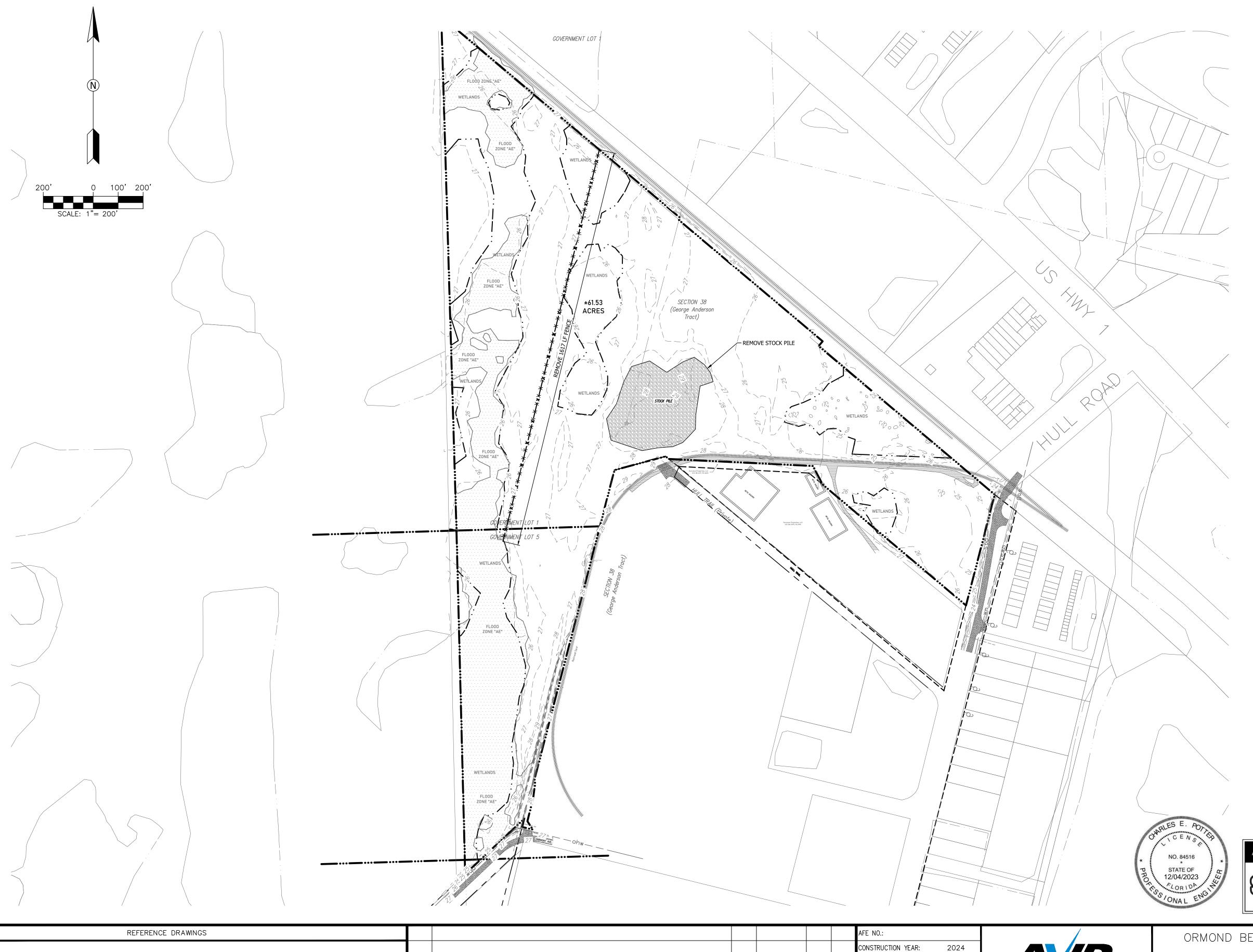
DRAWING NO. BT-ORB-4002

COUNTY: XXXX HARMONY AVENUE ORMOND BEACH, FLORIDA

11/20/202 CIVIL ENGINEERING 2300 CURLEW ROAD STE 201 11/20/202 LAND PLANNING PALM HARBOR, FLORIDA TRAFFIC 34683 TRANSPORTATION SURVEYING PHONE (727) 789-9500

GIS AVIDGROUP.COM

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A ISSUED FOR BIDS

DESCRIPTION

LEGEND

SITE BOUNDARY LINE - - CENTER LINE OF ROAD — — — RIGHT-OF-WAY LINE EXISTING EDGE OF PAVEMENT ——TB——TB——TB—— TREE BARRICADE — EF — EF — EF — ENVIRO-FENCE --SF--SF--SF--SILT FENCE —EC—EC—EC—EC—OTHER EROSION CONTROL METHODS · X·X·X·X·X·X·X·X·X·X·X·X · PROPOSED DEMOLITION EXISTING PAVEMENT TO BE REMOVED EXISTING STRUCTURE TO BE REMOVED TREE REMOVAL TYP **TYPICAL** SIDEWALK LINEAR FEET SQUARE FEET

DEMOLITION NOTES:

- 1. CONTRACTOR TO DEMOLISH AND REMOVE ALL IMPROVEMENTS WITHIN LIMITS OF DEMOLITION SHOWN UNLESS OTHERWISE NOTED.
- 2. CONTRACTOR TO ESTABLISH AND PROPERLY FLAG PROPERTY LINES PRIOR TO
- 3. THE CONTRACTOR SHALL UTILIZE SUITABLE EROSION CONTROL DURING
- DEMOLITION AND ALL PHASES OF CONSTRUCTION, SEE GENERAL NOTES AND
- 4. THE CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL DEMOLITION DEBRIS. 5. UTILITIES TO BE PLUGGED SHALL BE FILLED WITH A MINIMUM 1.0 CUBIC FT. OF
- NON SHRINK GROUT OR AS OTHERWISE APPROVED BY ENGINEER. 6. TREES SHOWN TO REMAIN SHALL MAINTAIN PROTECTIVE BARRIERS DURING
- DEMOLITION AND CONSTRUCTION. THESE BARRIERS SHALL BE IN ACCORDANCE WITH CURRENT CITY/COUNTY STANDARDS. 7. THE CONTRACTOR SHALL COORDINATE THE REMOVAL/RELOCATION OF EXISTING

UTILITIES WITH THE OWNER OF SAID UTILITY. THIS SHALL INCLUDE WATER,

- SEWER, STORM DRAIN, GAS, CABLE TV, POWER AND TELEPHONE. 8. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND WILL BE RESPONSIBLE FOR THE DAMAGE OF ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE NOT A PART OF THIS PROJECT OR ARE NOT IDENTIFIED TO BE
- REMOVED. 9. THE CONTRACTOR SHALL BARRICADE THE SITE AND CONTROL TRAFFIC PER
- CURRENT FDOT TRAFFIC CONTROL STANDARDS. 10. REMOVAL OF ASBESTOS CONTAINING MATERIALS SHALL BE IN ACCORDANCE WITH
- THE REGULATORY STANDARDS AND RECOMMENDATIONS. 11. REMOVAL OF ALL EXISTING WATER METERS, DOUBLE CHECK VALVE ASSEMBLIES,
- AND GATE VALVES TO BE COORDINATED WITH THE WATER DEPT.
- 12. CONTRACTOR TO COORDINATE REMOVAL/RELOCATION OF EXISTING POWER POLES
- AND OVERHEAD WIRES. 13. REMOVE ALL FOUNDATIONS OF BUILDINGS AND SIGN POSTS TO BE DEMOLISHED.
- 14. CONTRACTOR IS RESPONSIBLE FOR THE PROPER OFFSITE DISPOSAL OF ALL SPOIL
- MATERIALS REMOVED FROM THE PROJECT SITE. 15. ANY WELLS ENCOUNTERED ON-SITE SHALL BE CAPPED BY A LICENSED WATER WELL
- CONTRACTOR IN ACCORDANCE WITH RULE 40D-3.531(2). F.A.C." 16. ALL DISTURBED AREAS IN THE RIGHT-OF-WAY SHALL BE SODDED.

NPDES NOTES:

- 1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL PLACE SILT FABRIC FENCE AT
- THE UPSTREAM END OF ALL STORM SEWER PIPES UNTIL INLETS ARE COMPLETED. 2. WHEN THE CONSTRUCTION OF INLETS ARE COMPLETED THE CONTRACTOR SHALL
- PLACE SILT FABRIC FENCE IN PLACE AS PER DETAIL.
- 3. THE CONTRACTOR SHALL SEED AND MULCH OR SOD SWALES AND PONDS PER SECTIONS, IMMEDIATELY AFTER CONSTRUCTION IS COMPLETED AND PROMOTE QUICK REVEGETATION.
- 4. THE CONTRACTOR SHALL CHECK ALL EROSION AND SILTATION CONTROL DEVICES AFTER EACH RAINFALL AND REPAIR OR REPLACE THEM AS REQUIRED. SILT FENCES
- TO REMAIN UNTIL CITY/COUNTY ACCEPTANCE. 5. THE REQUIREMENTS LISTED ABOVE SHALL BE CONSIDERED MINIMUM
- REQUIREMENTS AND THE CONTRACTOR SHALL USE WHATEVER METHODS HE DEEMS NECESSARY TO PREVENT EROSION AND SILTATION AS MAY BE REQUIRED FOR THE
- 6. DEWATERING METHODS OF WELLPOINTING AND DIRECT BURIAL "SOCK" PIPE SHALL BE UTILIZED.
- 7. DEWATERING DISCHARGE SHALL BE DIRECTED TO A SEDIMENT SUMP PRIOR TO BEING DISCHARGED OFFSITE.

SILT FENCE NOTE:

- 1. NON-TRENCHED SILT FENCES IN AREAS WHERE EXISTING TREES ARE TO BE
- 2. SILT FENCE LOCATED ADJACENT TO BOUNDARY SHALL BE STAKED AT 1 FT. OFF
- PROPERTY LINE.



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ORMOND BEACH FUEL TERMINAL EXISTING CONDITIONS AND DEMO PLAN

XXXX HARMONY AVENUE

ORMOND BEACH, FLORIDA

DATE

CIVIL ENGINEERING 2300 CURLEW ROAD STE 201 LAND PLANNING PALM HARBOR, FLORIDA

SURVEYING PHONE (727) 789-9500

GIS AVIDGROUP, COM

TRAFFIC 34683

TRANSPORTATION

11/20/2023

11/20/2023

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CHECK

APPROVED

SCALE: AS NOTED

11/20/23 | CEP

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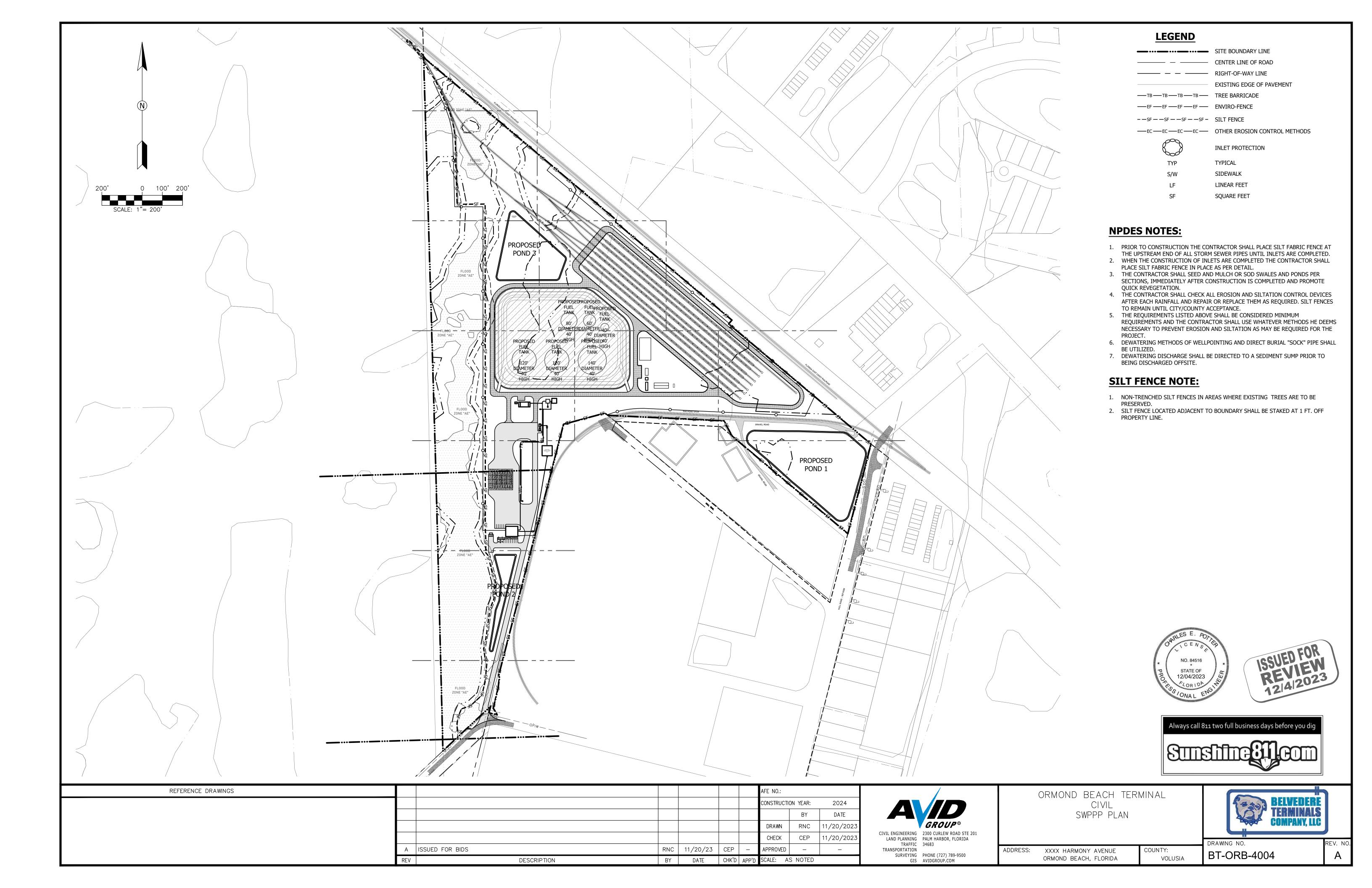
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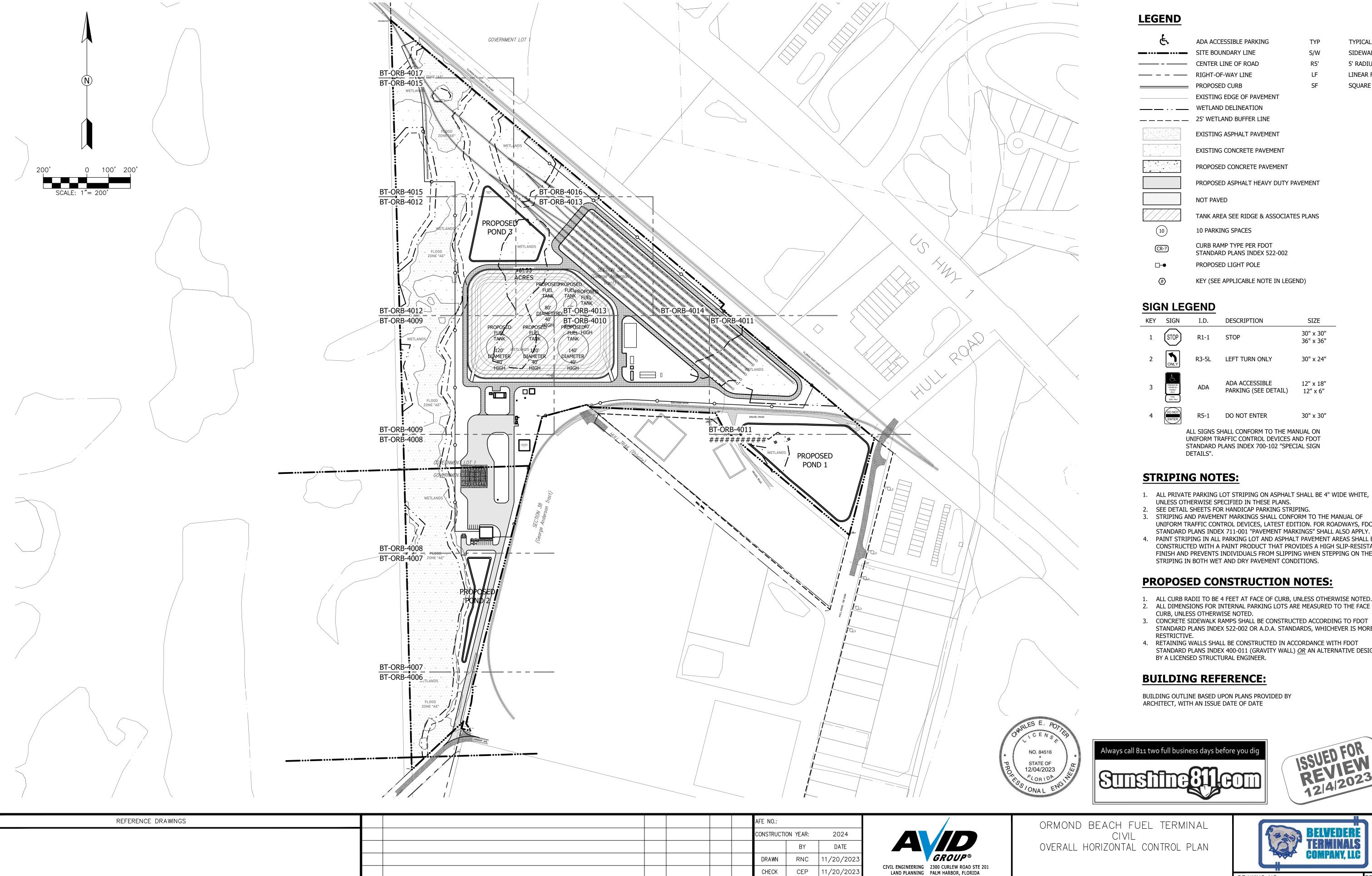
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DRAWING NO. BT-ORB-4003





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APPROVED |

SCALE: AS NOTED

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DESCRIPTION

Ę,	ADA ACCESSIBLE PARKING	TYP	TYPICAL
	SITE BOUNDARY LINE	S/W	SIDEWALK
	CENTER LINE OF ROAD	R5'	5' RADIUS
	RIGHT-OF-WAY LINE	LF	LINEAR FEET
	PROPOSED CURB	SF	SQUARE FEET
	EXISTING EDGE OF PAVEMENT		
 ··-	WETLAND DELINEATION		
	25' WETLAND BUFFER LINE		
	EXISTING ASPHALT PAVEMENT		
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	EXISTING CONCRETE PAVEMENT		
4 4 4	PROPOSED CONCRETE PAVEMENT		
	PROPOSED ASPHALT HEAVY DUTY	PAVEMENT	
	NOT PAVED		
	TANK AREA SEE RIDGE & ASSOCIA	ATES PLANS	
10	10 PARKING SPACES		

SIGN LLGLIND					
KEY	SIGN	I.D.	DESCRIPTION	SIZE	
1	STOP	R1-1	STOP	30" x 30" 36" x 36"	
2	ONLY	R3-5L	LEFT TURN ONLY	30" x 24"	
3	PARKING BY DISABLED PERMIT ONLY FINE \$220 MAX	ADA	ADA ACCESSIBLE PARKING (SEE DETAIL)	12" x 18" 12" x 6"	
4	DO NOT ENTER	R5-1	DO NOT ENTER	30" x 30"	

ALL SIGNS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND FDOT STANDARD PLANS INDEX 700-102 "SPECIAL SIGN

- 1. ALL PRIVATE PARKING LOT STRIPING ON ASPHALT SHALL BE 4" WIDE WHITE, UNLESS OTHERWISE SPECIFIED IN THESE PLANS.
- SEE DETAIL SHEETS FOR HANDICAP PARKING STRIPING.
- 3. STRIPING AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. FOR ROADWAYS, FDOT
- 4. PAINT STRIPING IN ALL PARKING LOT AND ASPHALT PAVEMENT AREAS SHALL BE CONSTRUCTED WITH A PAINT PRODUCT THAT PROVIDES A HIGH SLIP-RESISTANT FINISH AND PREVENTS INDIVIDUALS FROM SLIPPING WHEN STEPPING ON THE

PROPOSED CONSTRUCTION NOTES:

- 1. ALL CURB RADII TO BE 4 FEET AT FACE OF CURB, UNLESS OTHERWISE NOTED.
- 2. ALL DIMENSIONS FOR INTERNAL PARKING LOTS ARE MEASURED TO THE FACE OF
- 3. CONCRETE SIDEWALK RAMPS SHALL BE CONSTRUCTED ACCORDING TO FDOT
- STANDARD PLANS INDEX 522-002 OR A.D.A. STANDARDS, WHICHEVER IS MORE
- STANDARD PLANS INDEX 400-011 (GRAVITY WALL) OR AN ALTERNATIVE DESIGN



CIVIL ENGINEERING 2300 CURLEW ROAD STE 201 LAND PLANNING PALM HARBOR, FLORIDA TRAFFIC 34683 SURVEYING PHONE (727) 789-9500 GIS AVIDGROUP.COM

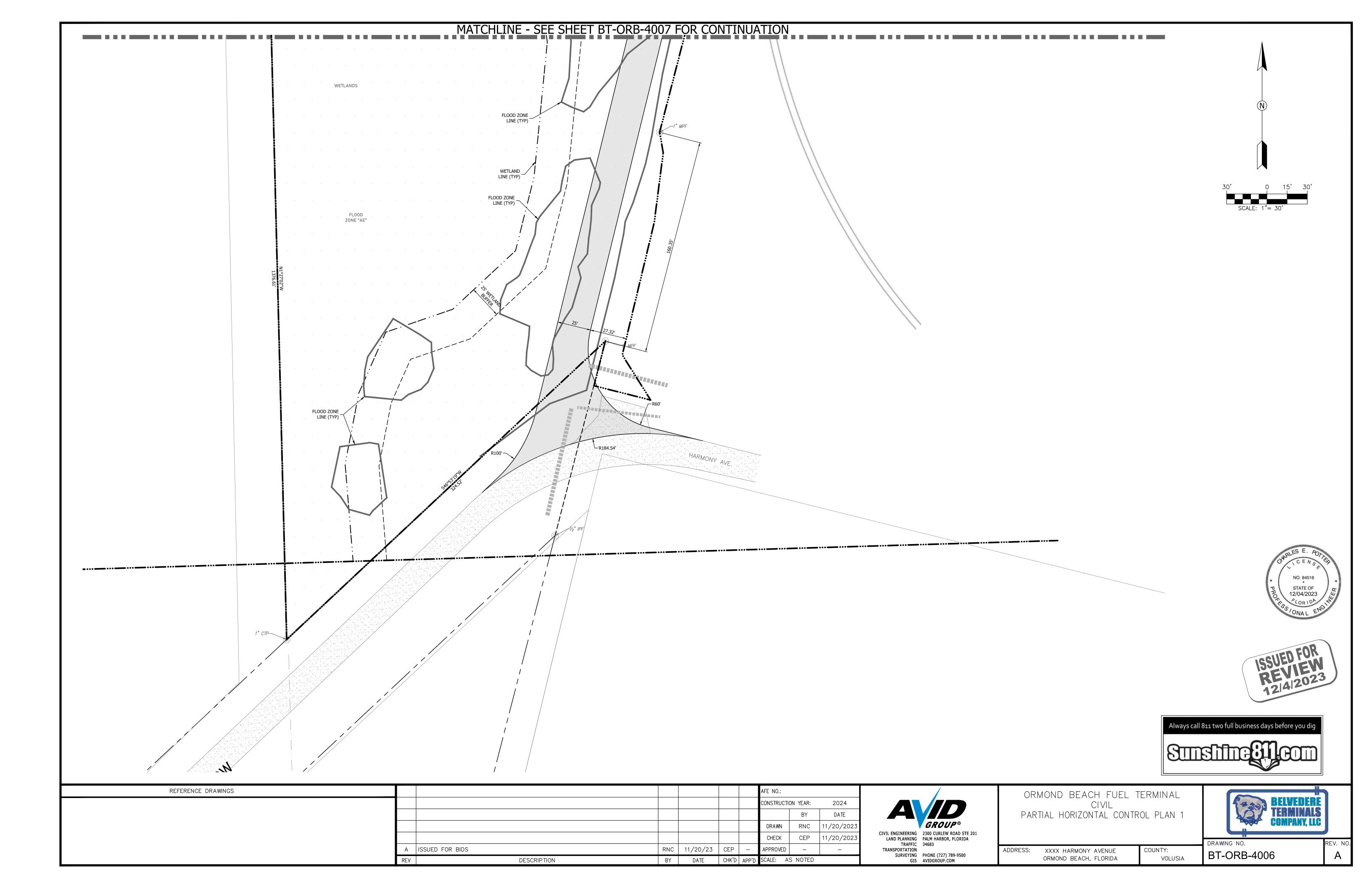
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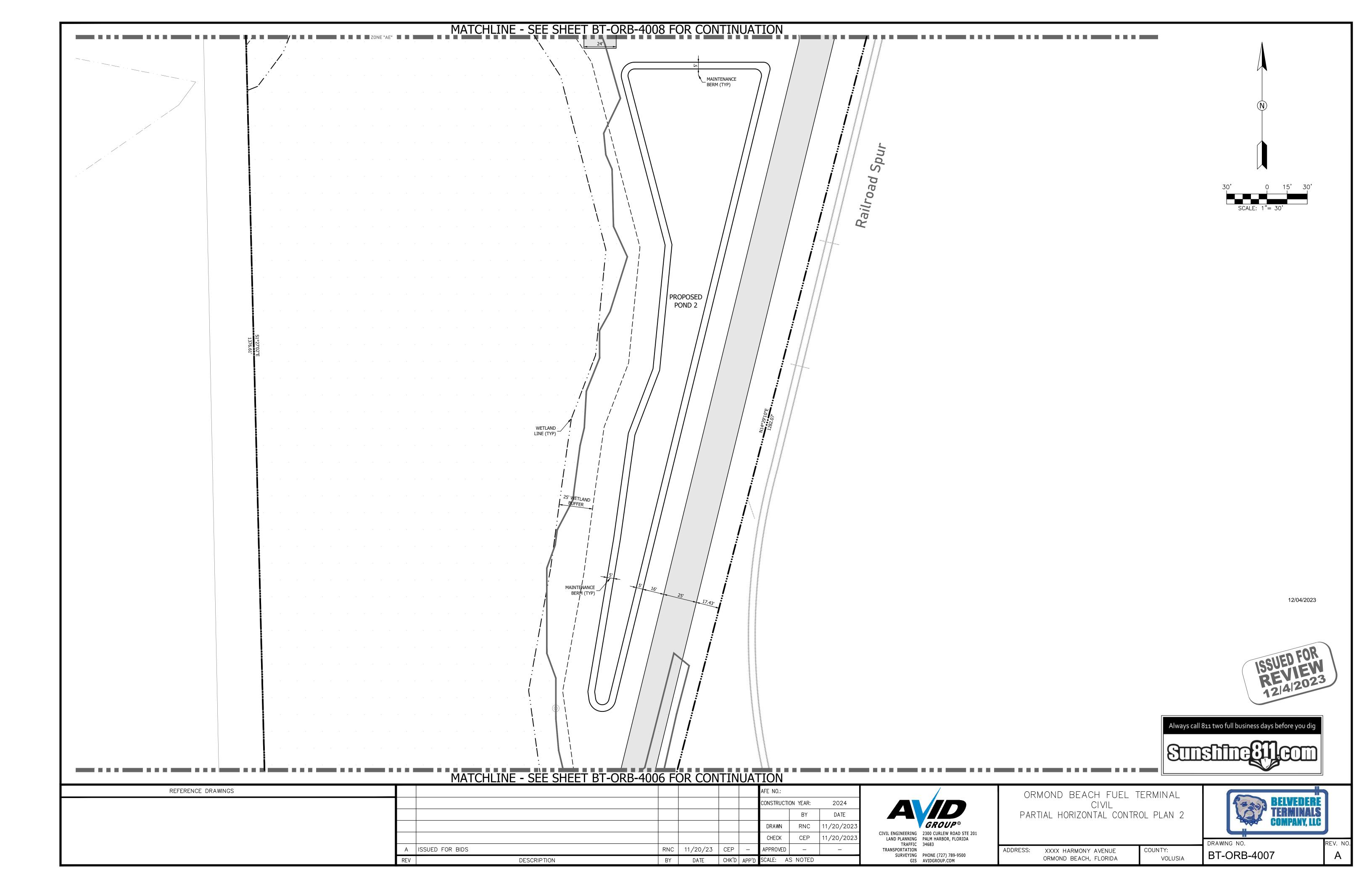
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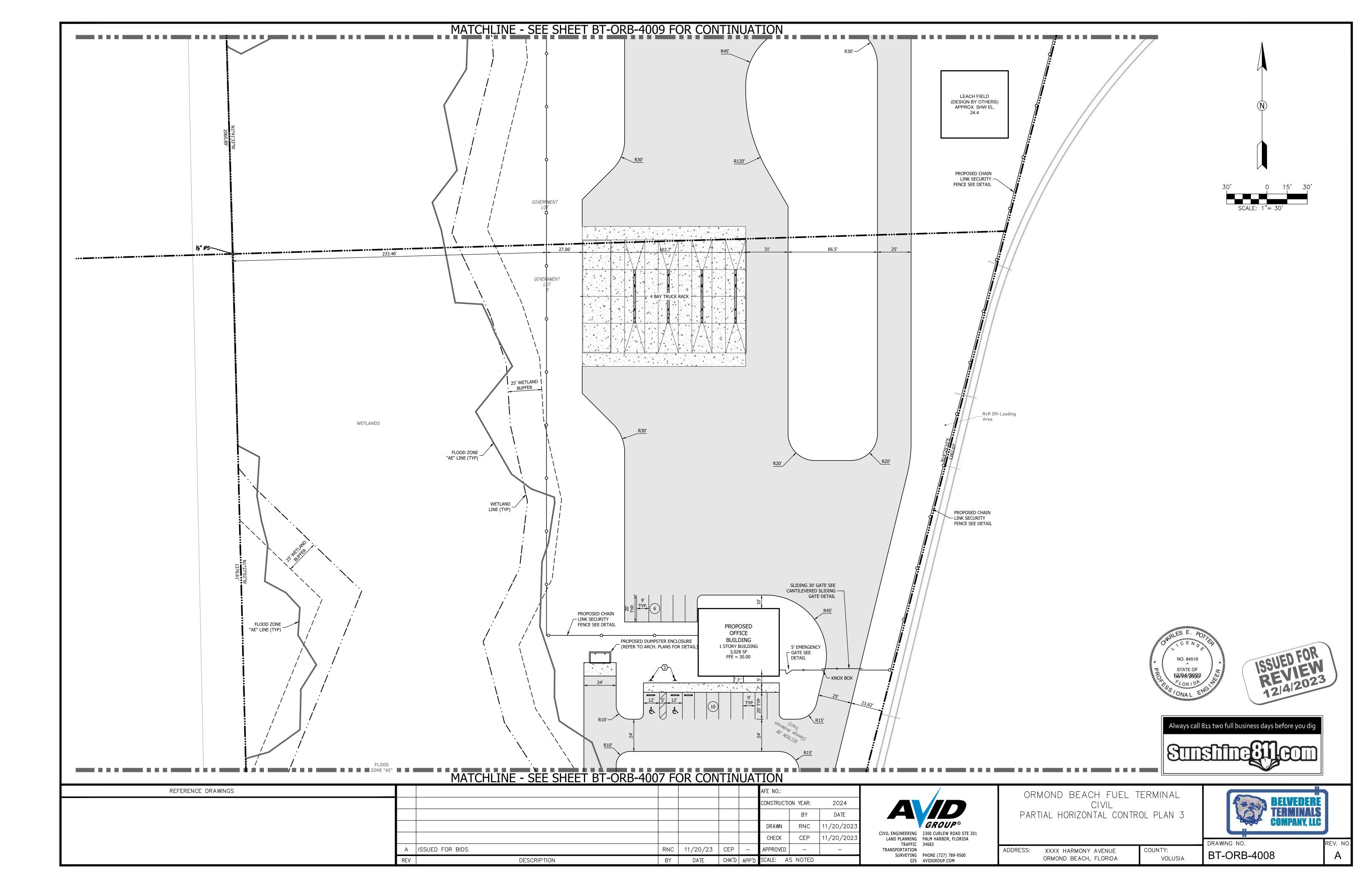


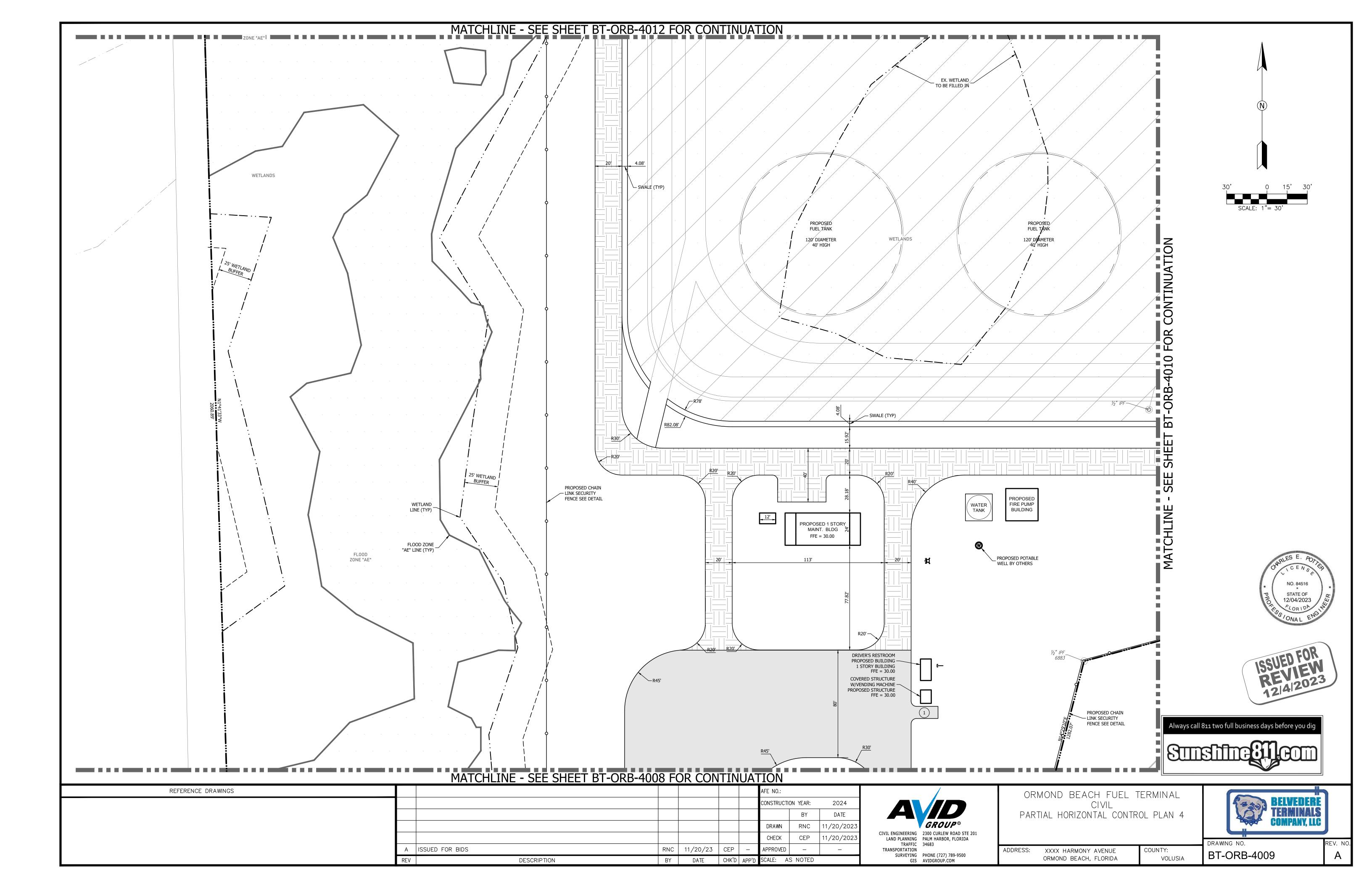
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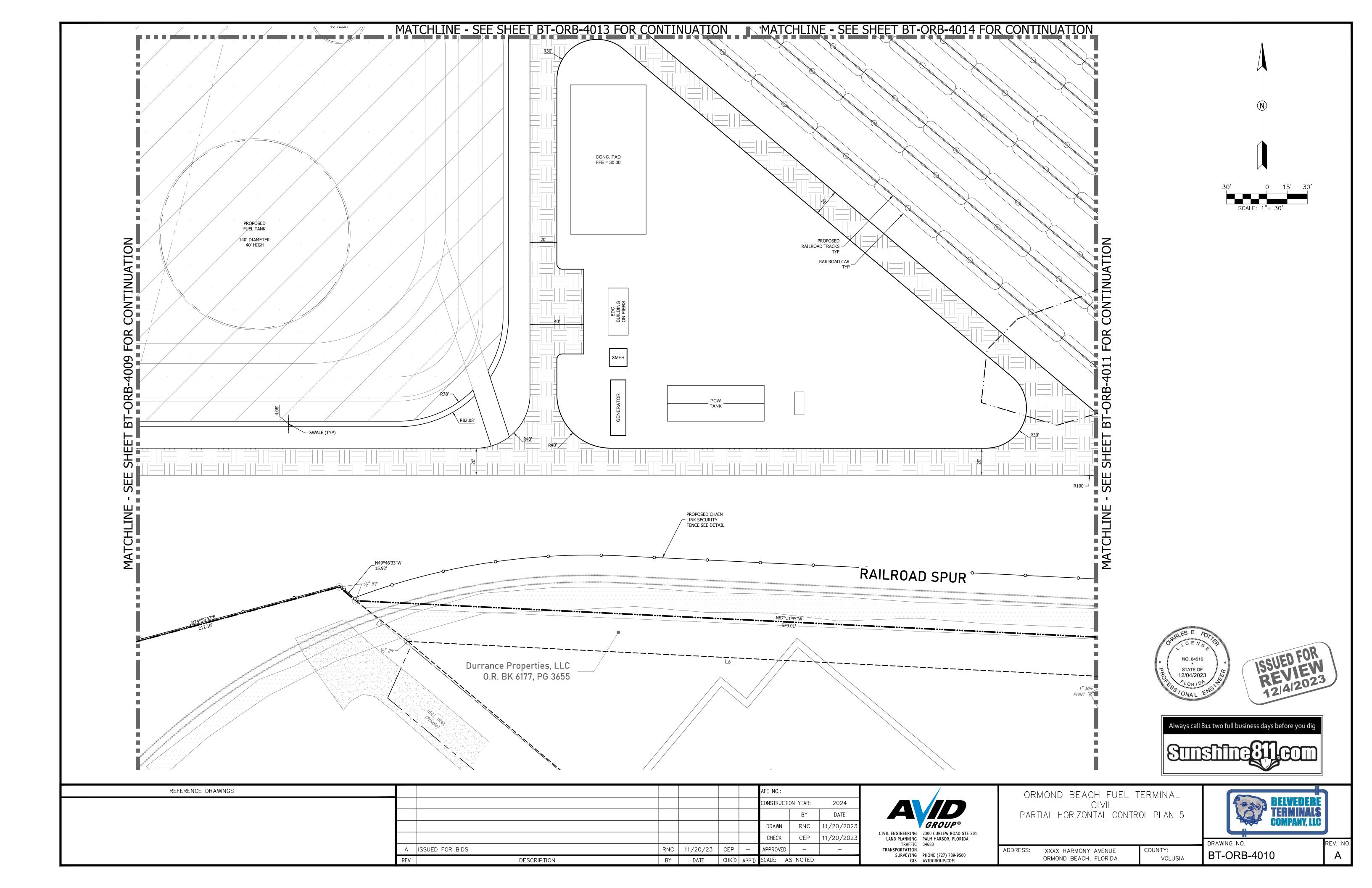
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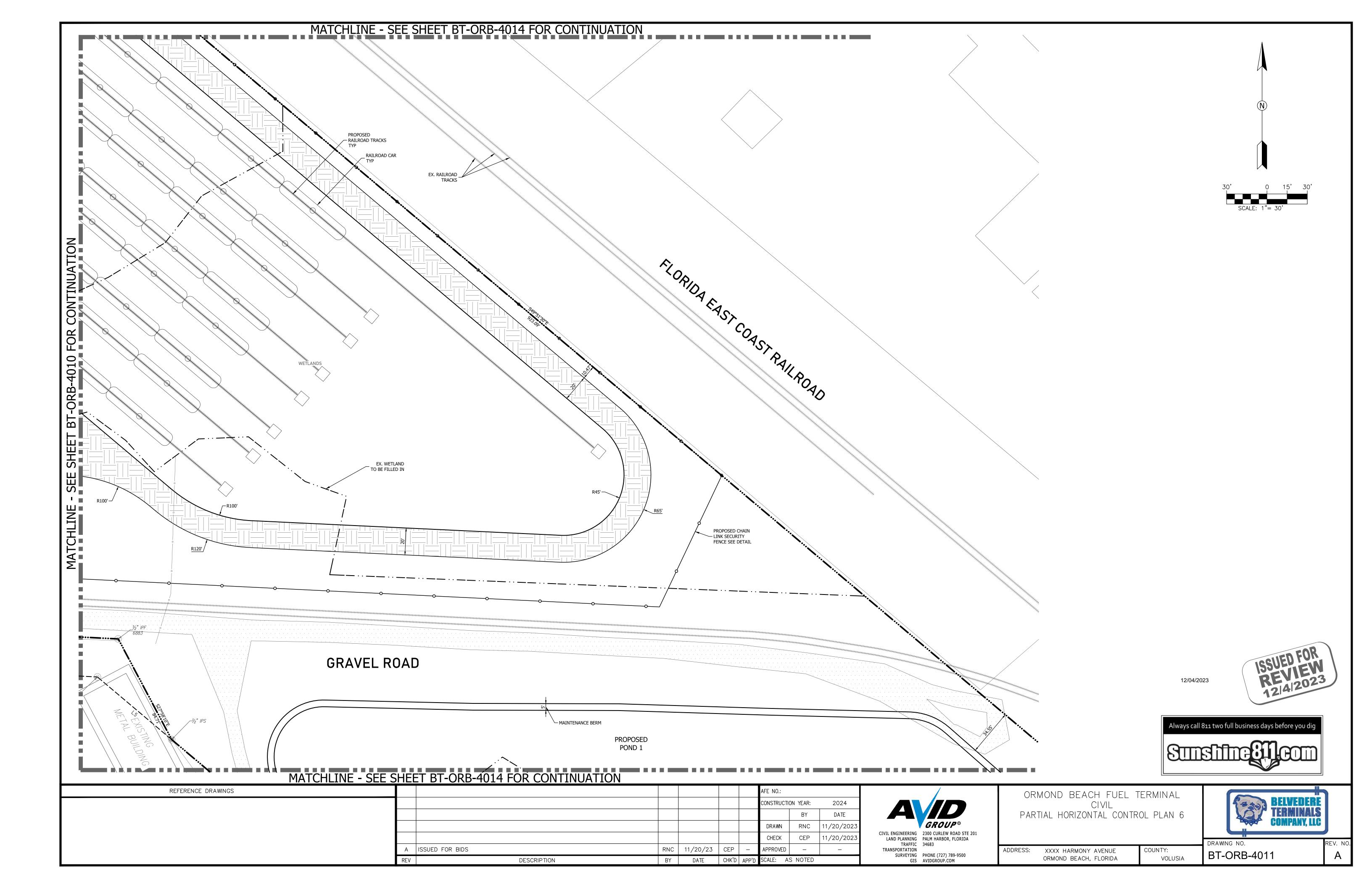


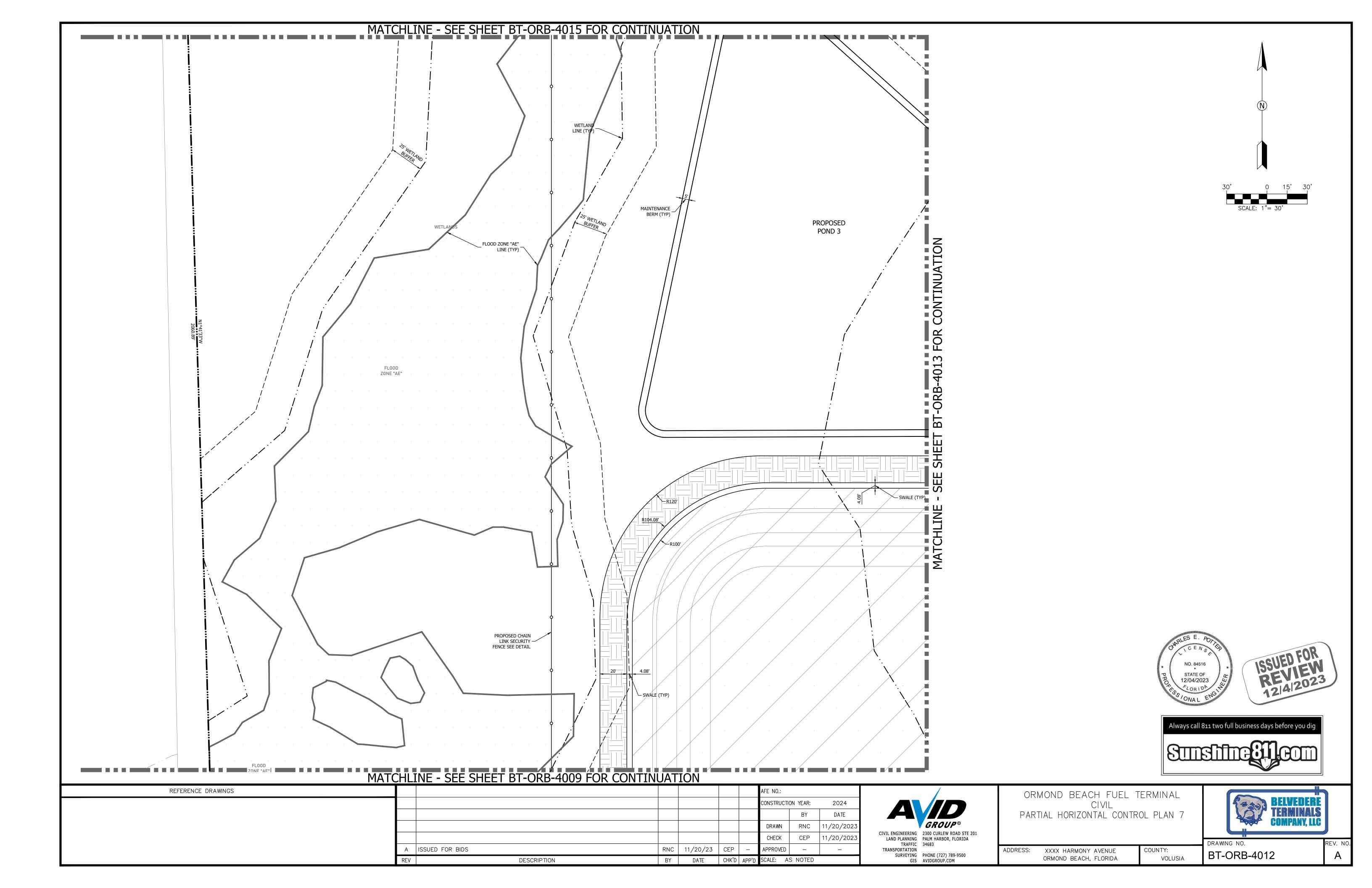


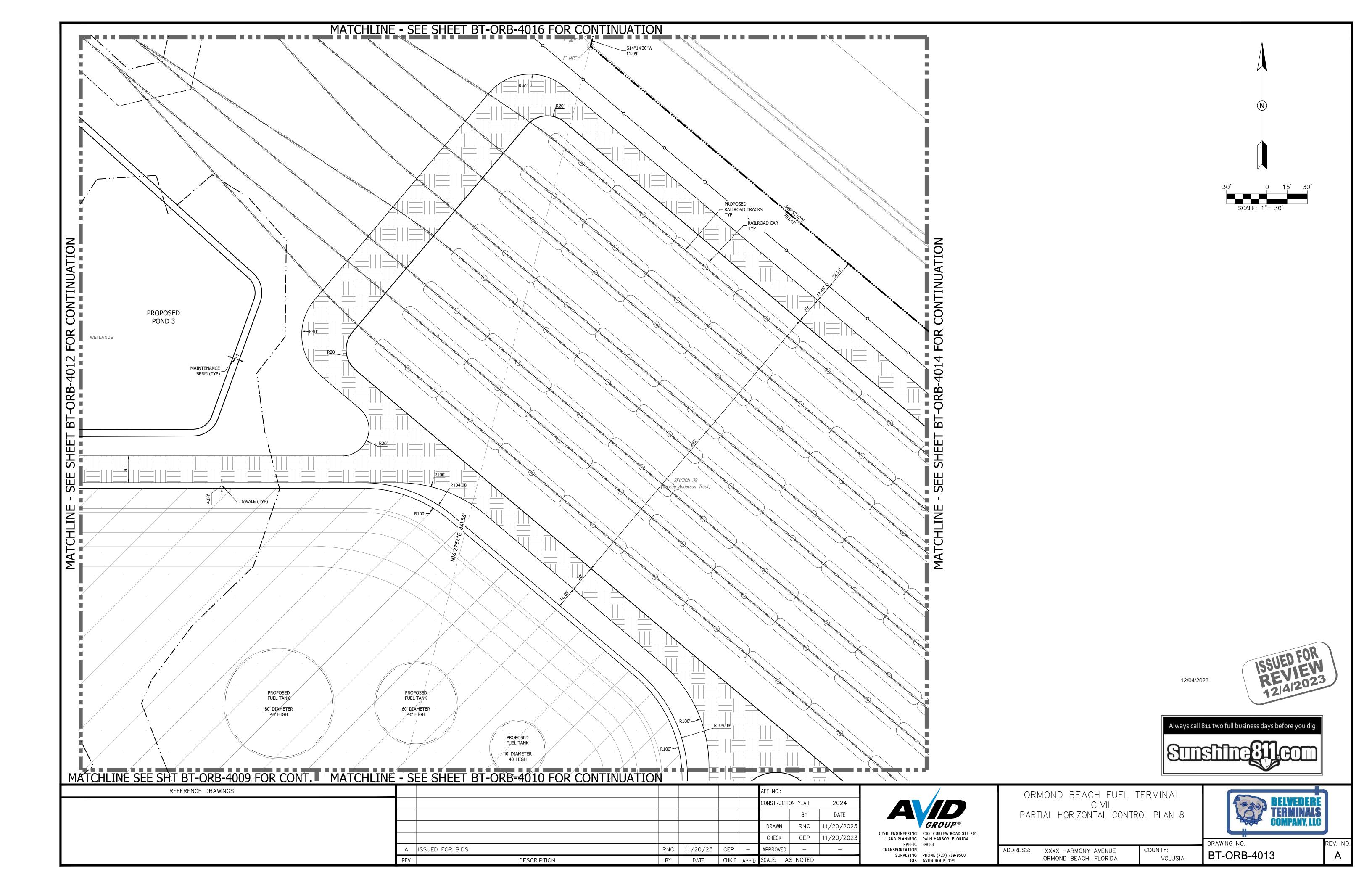


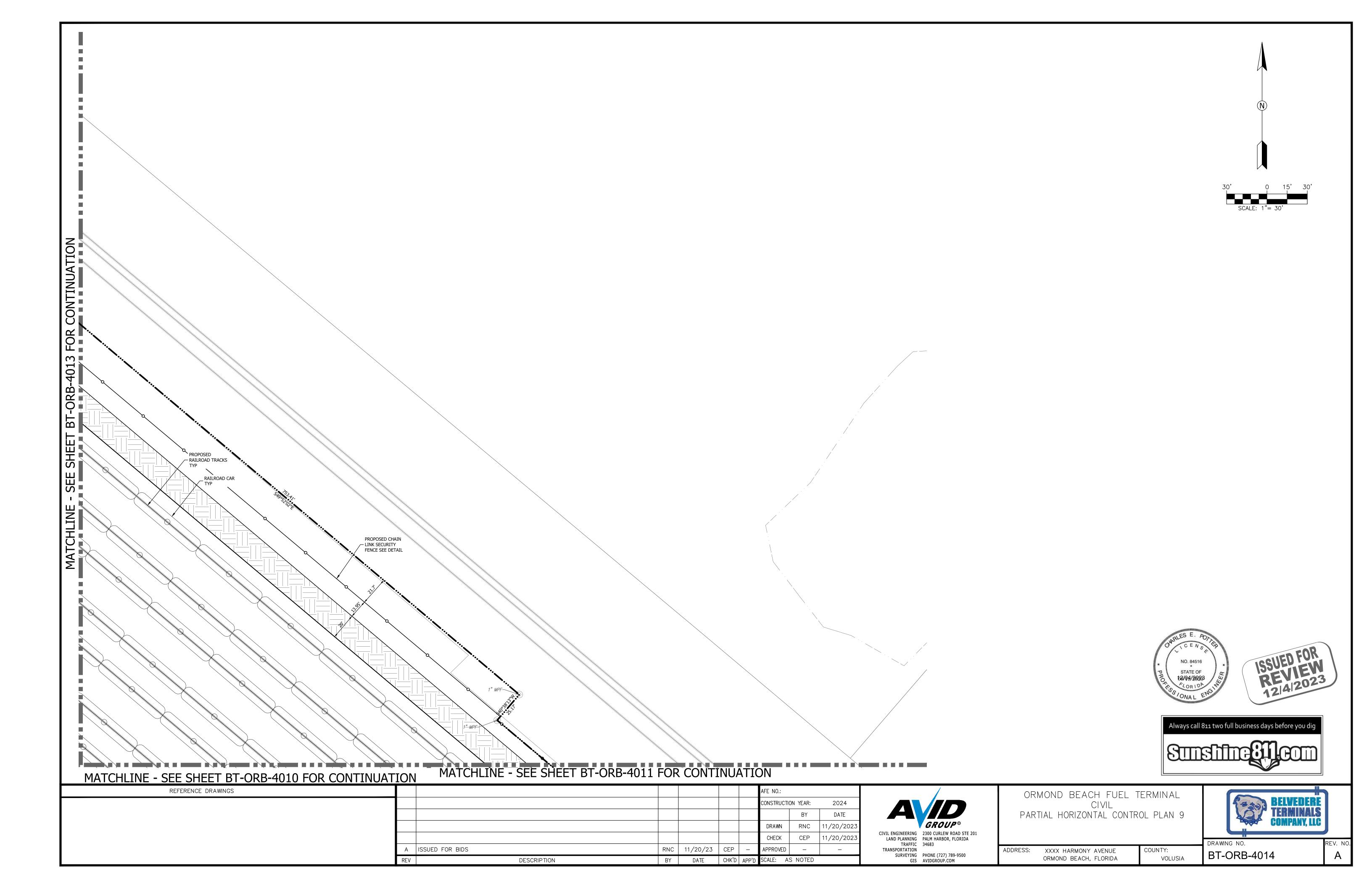


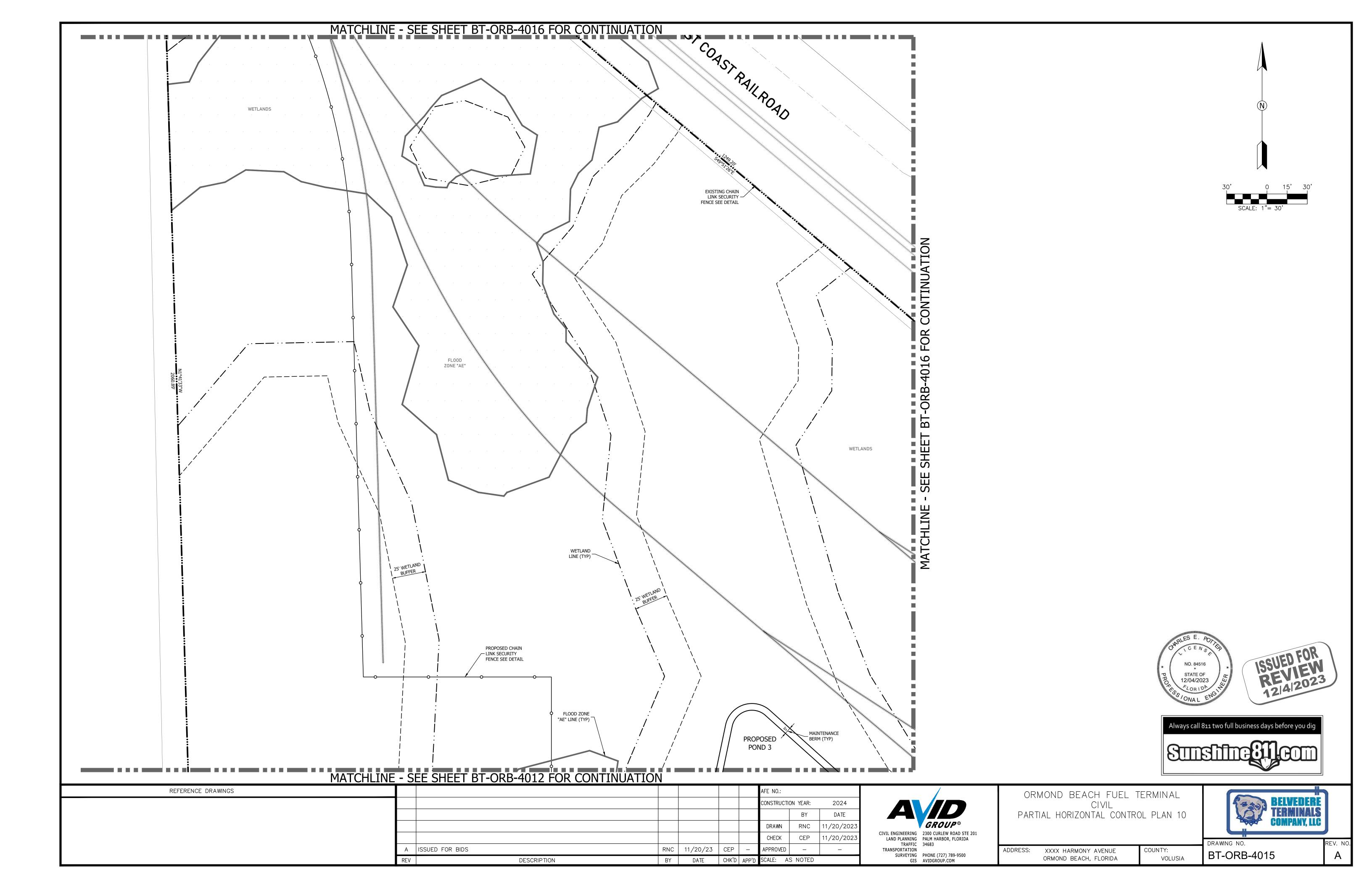


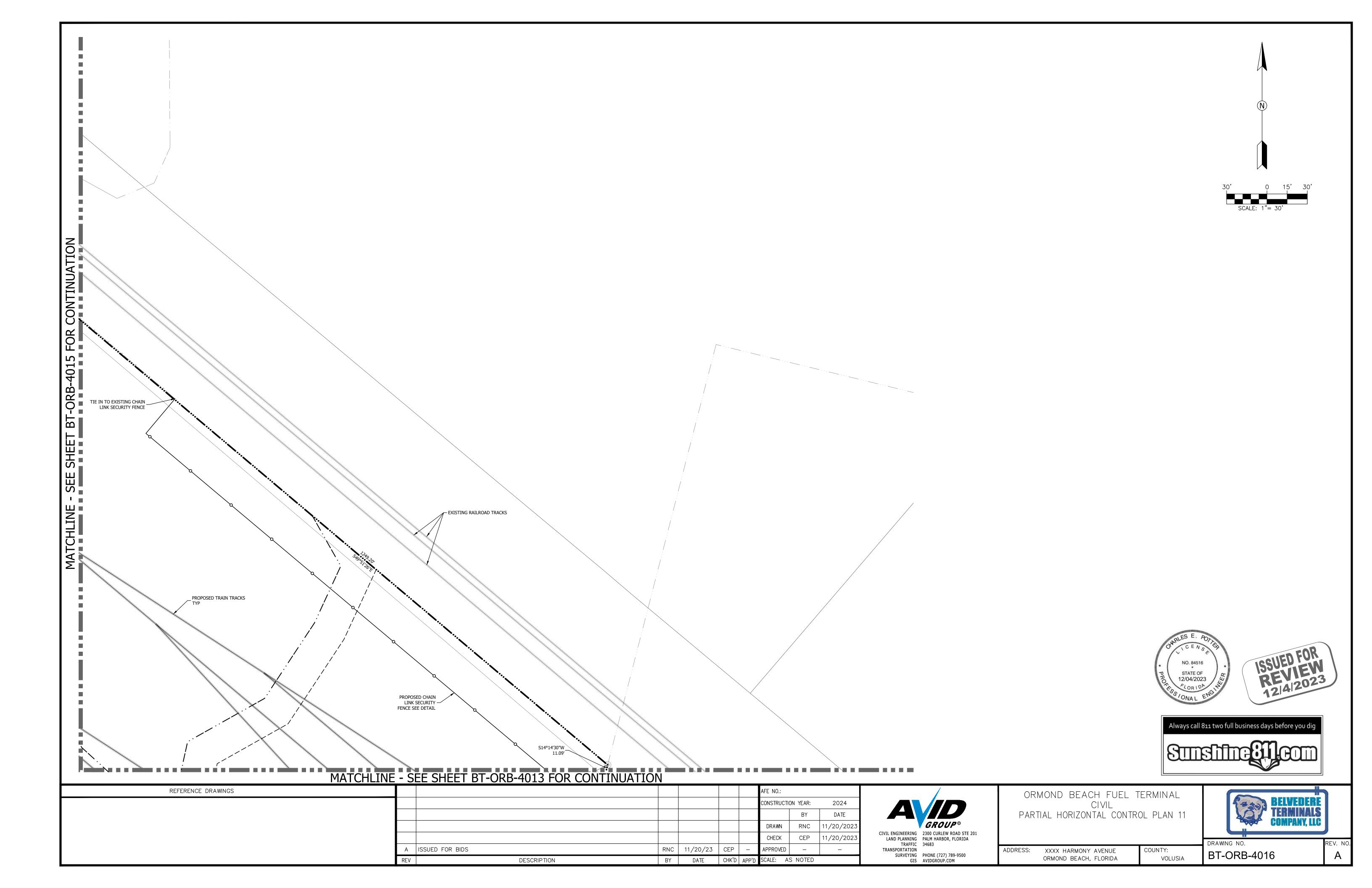


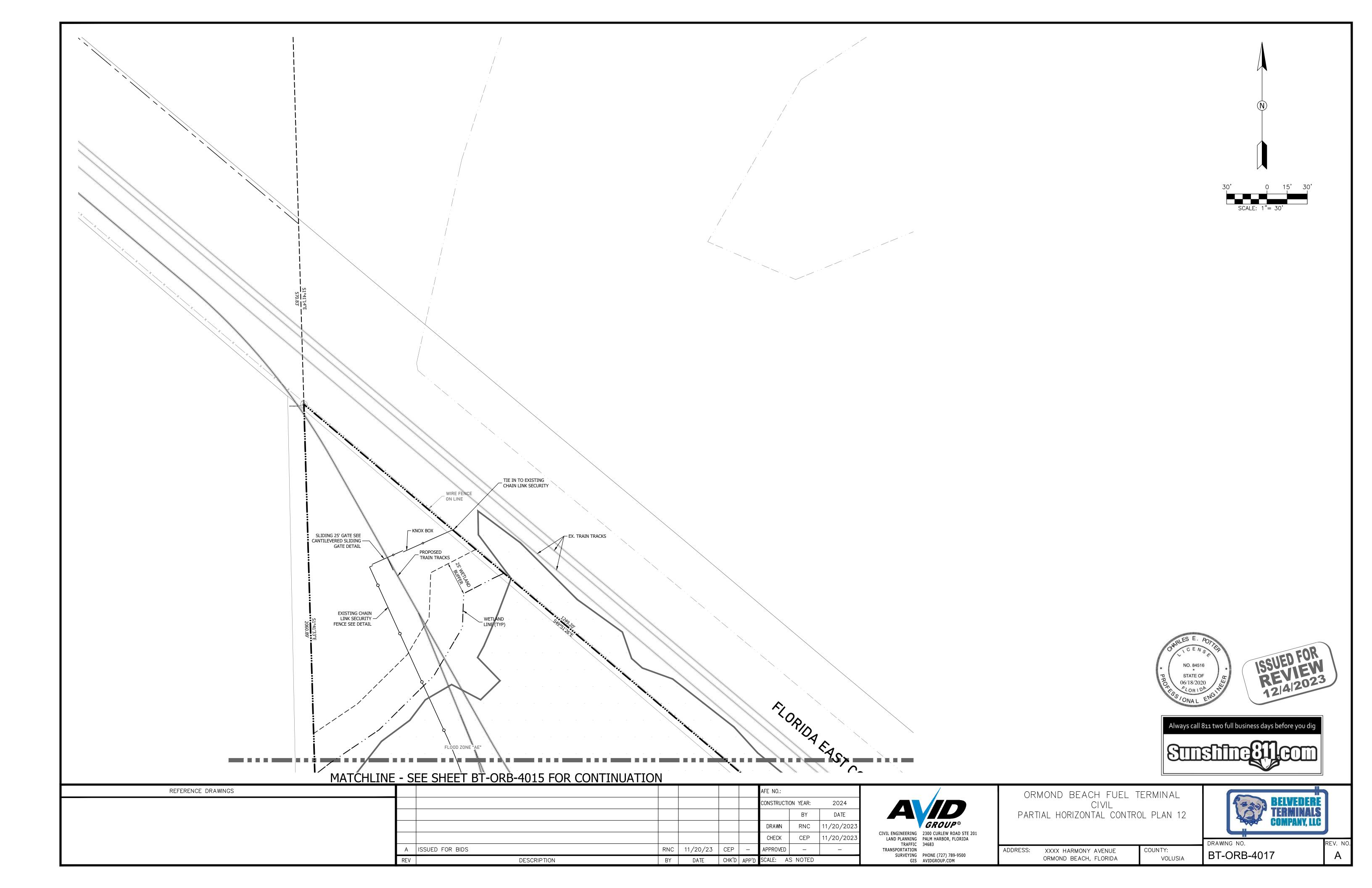


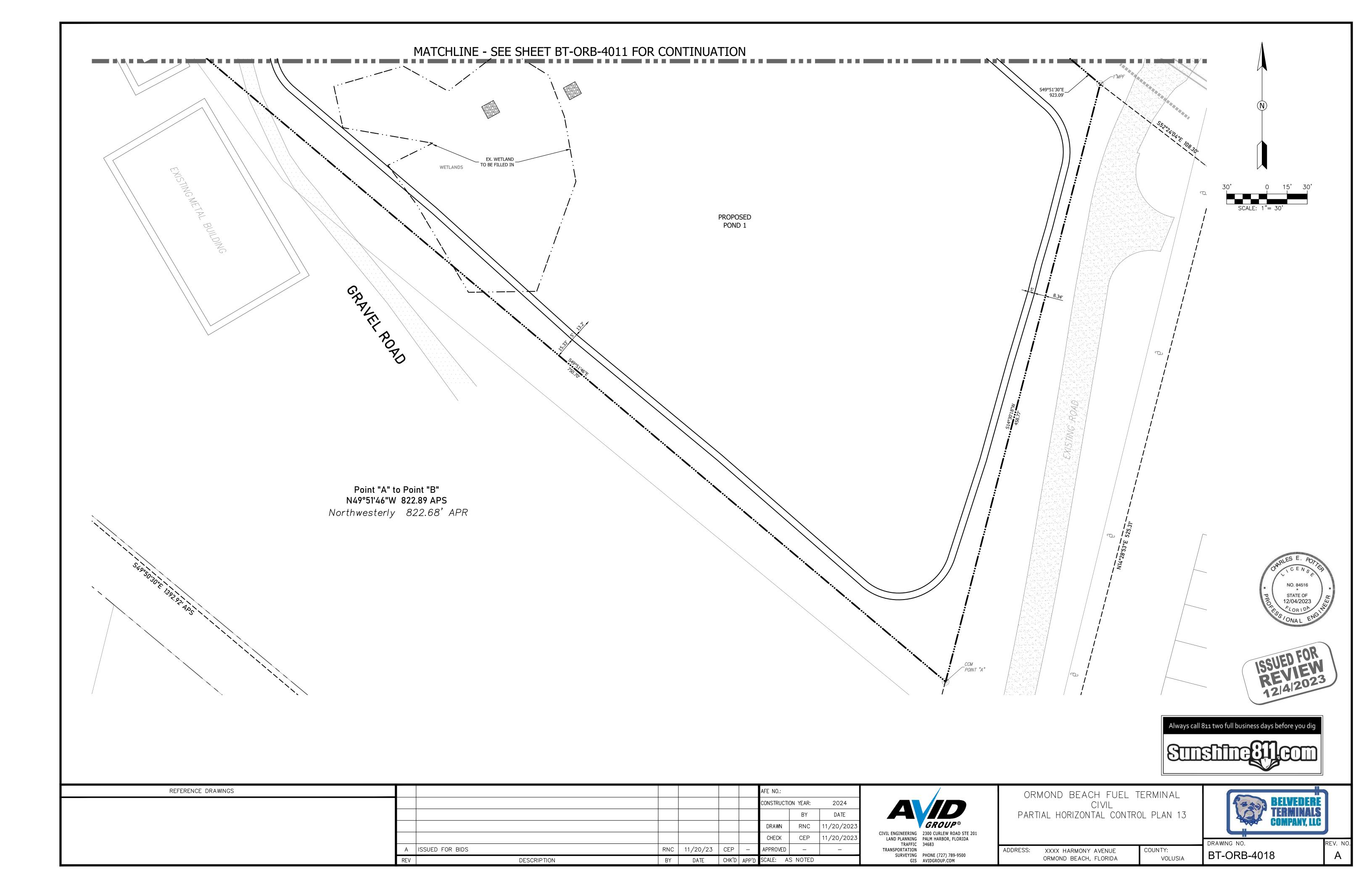


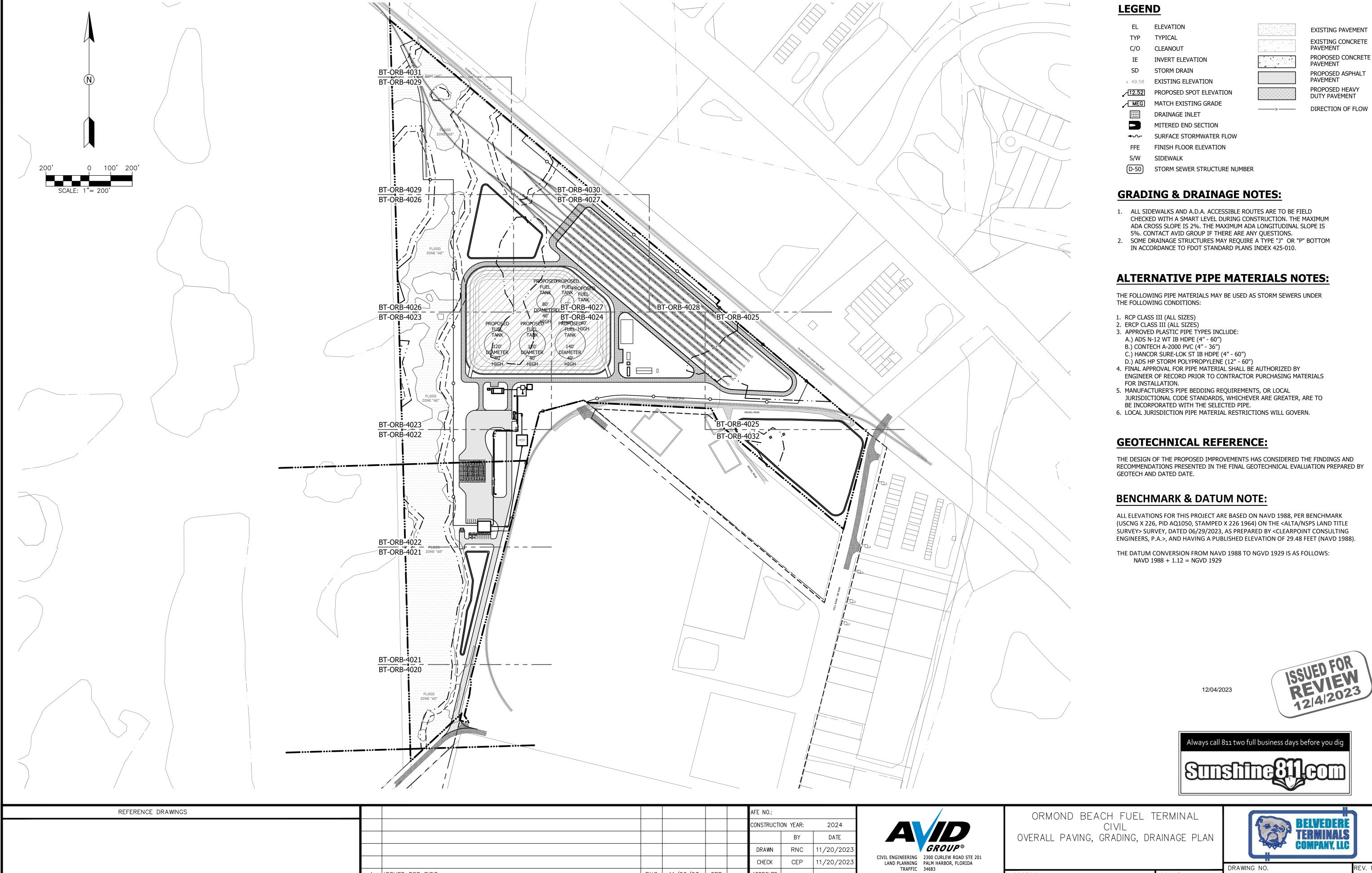












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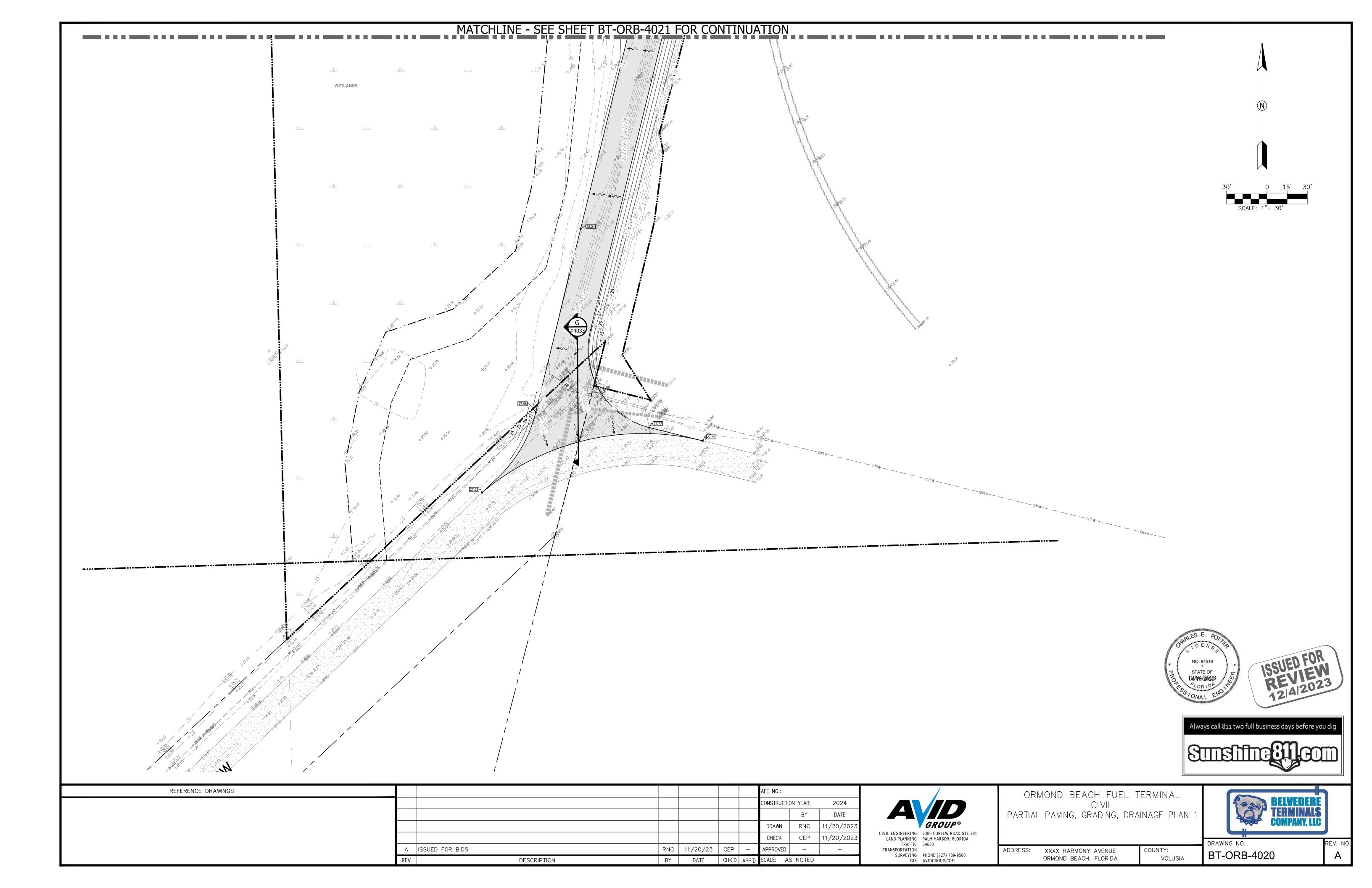
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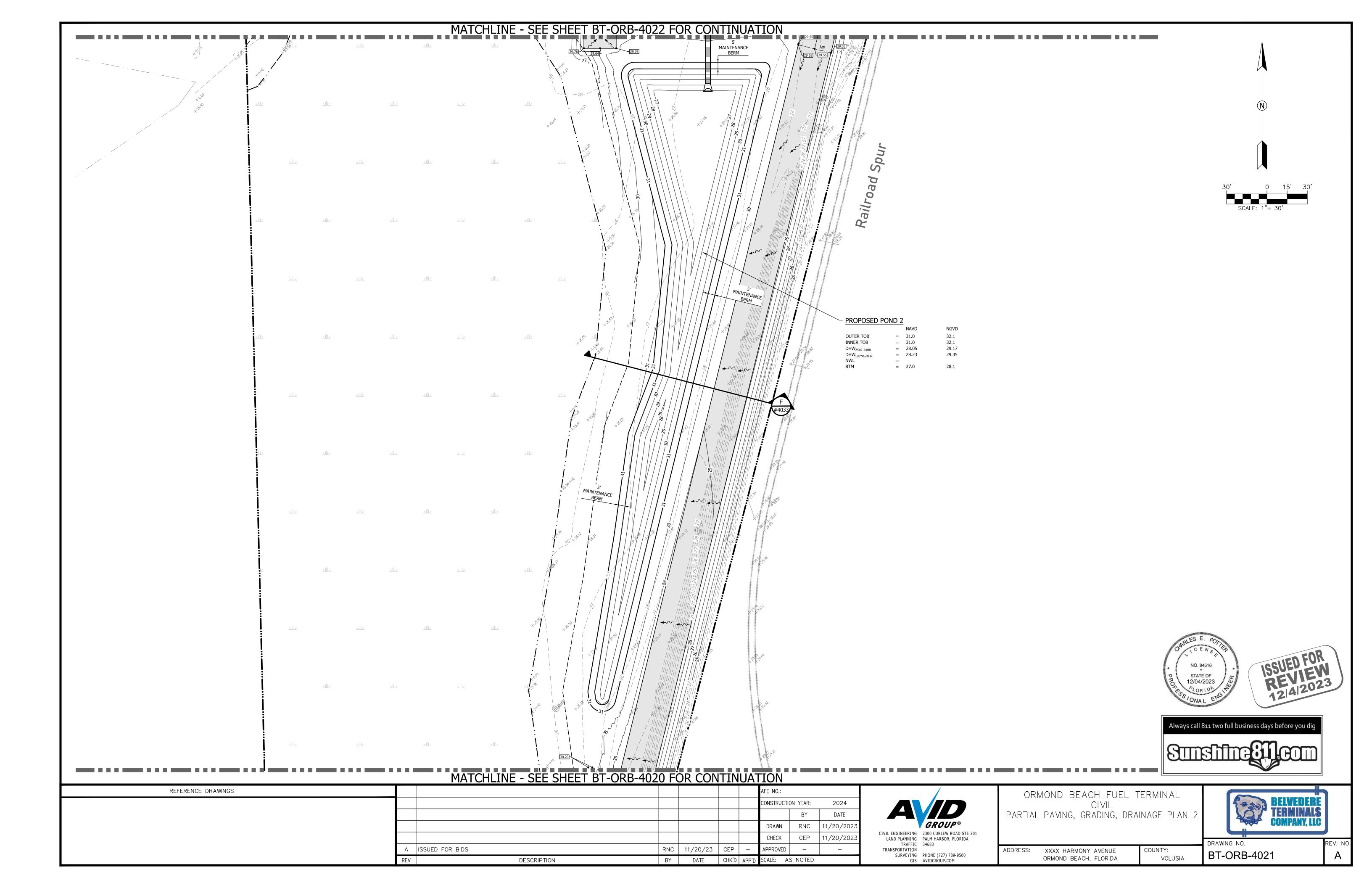
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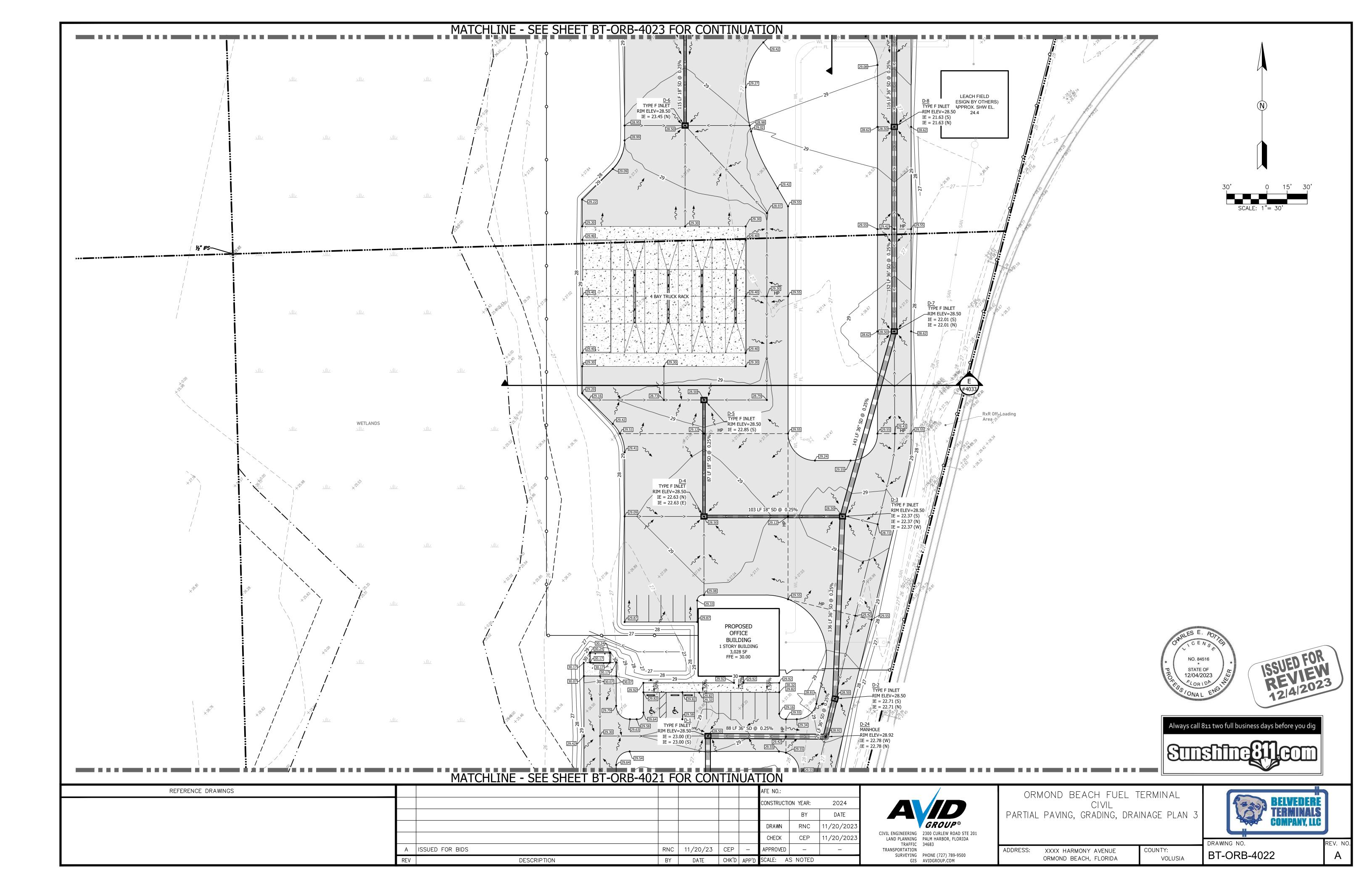
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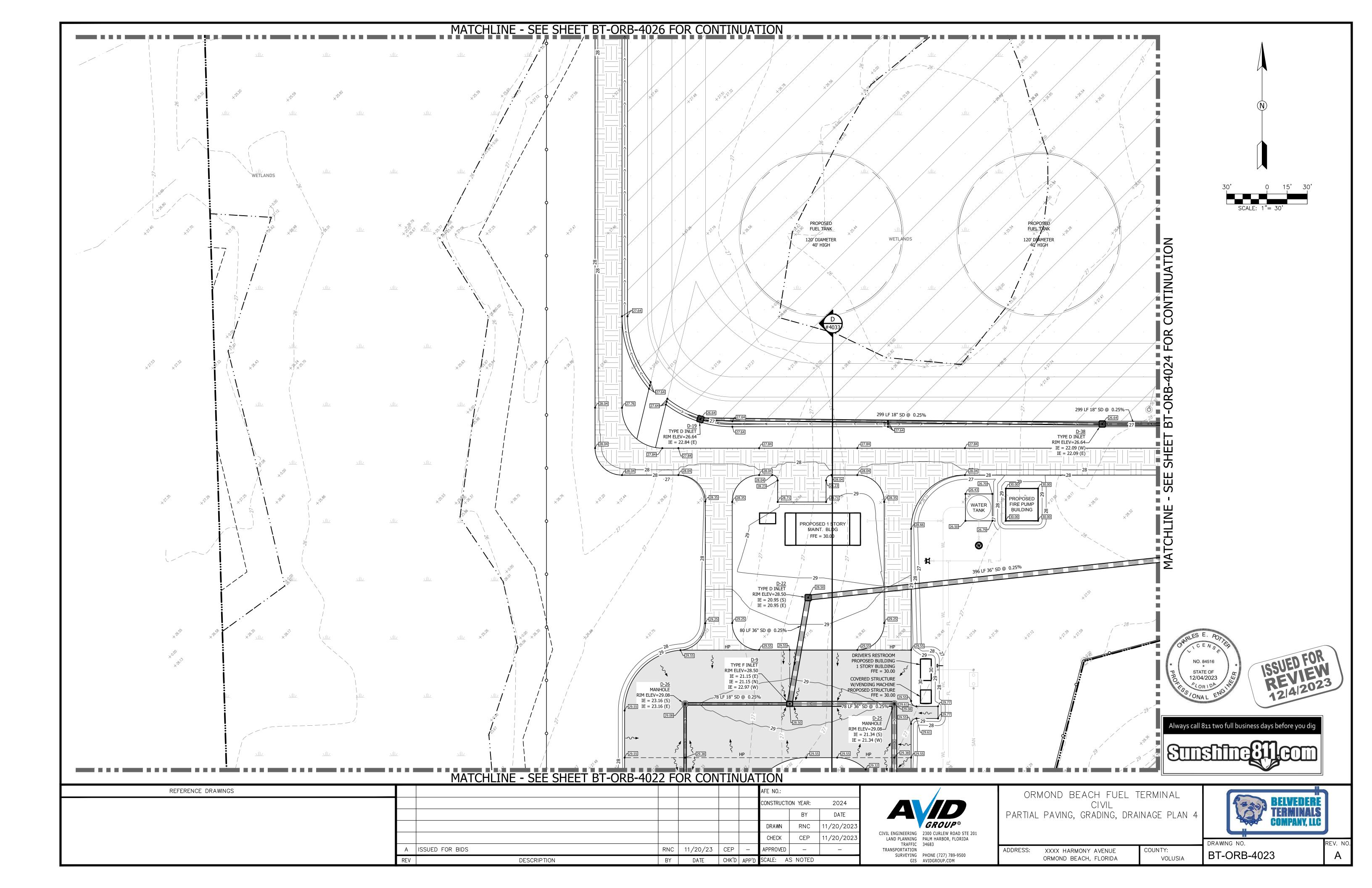
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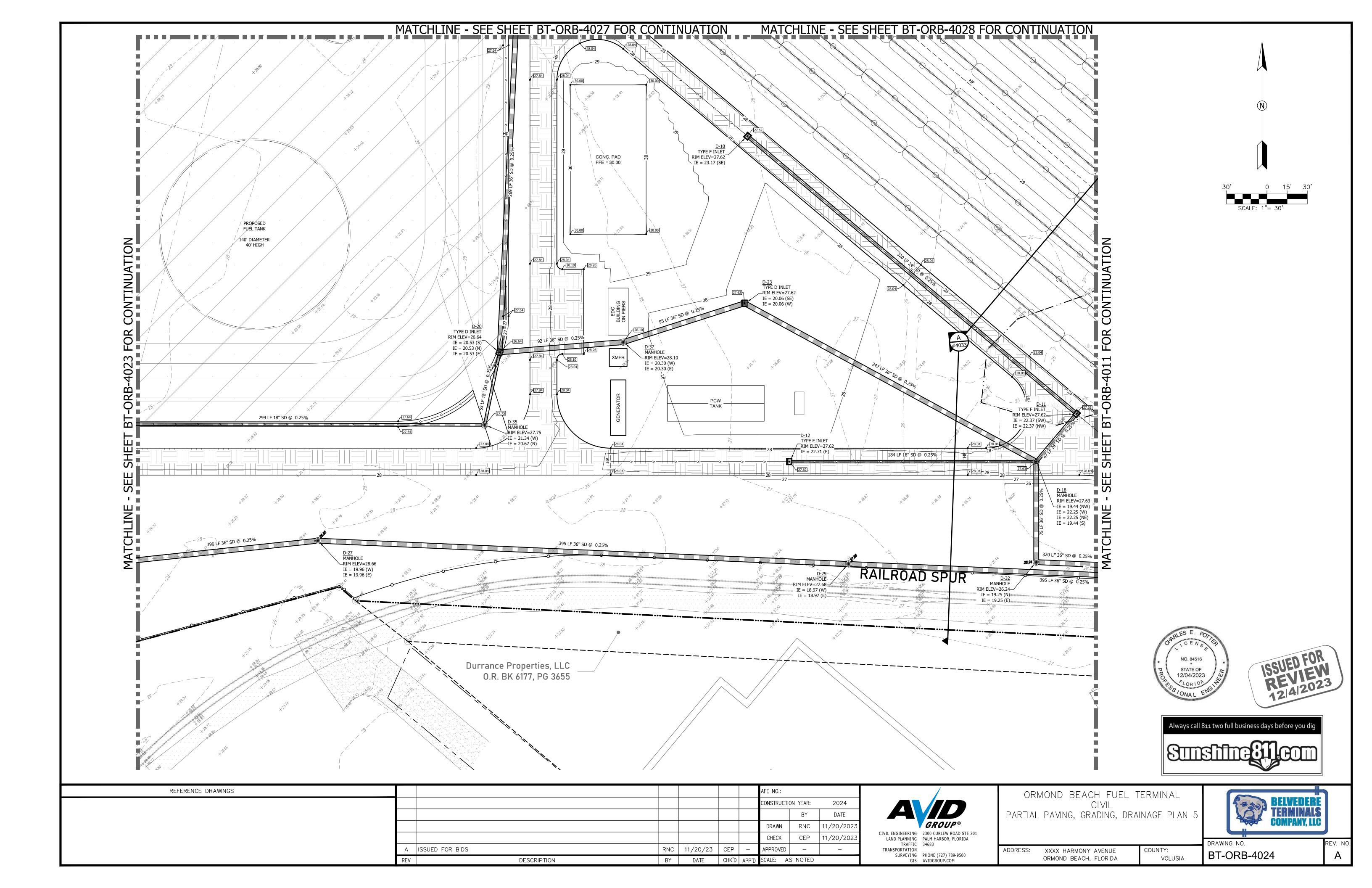
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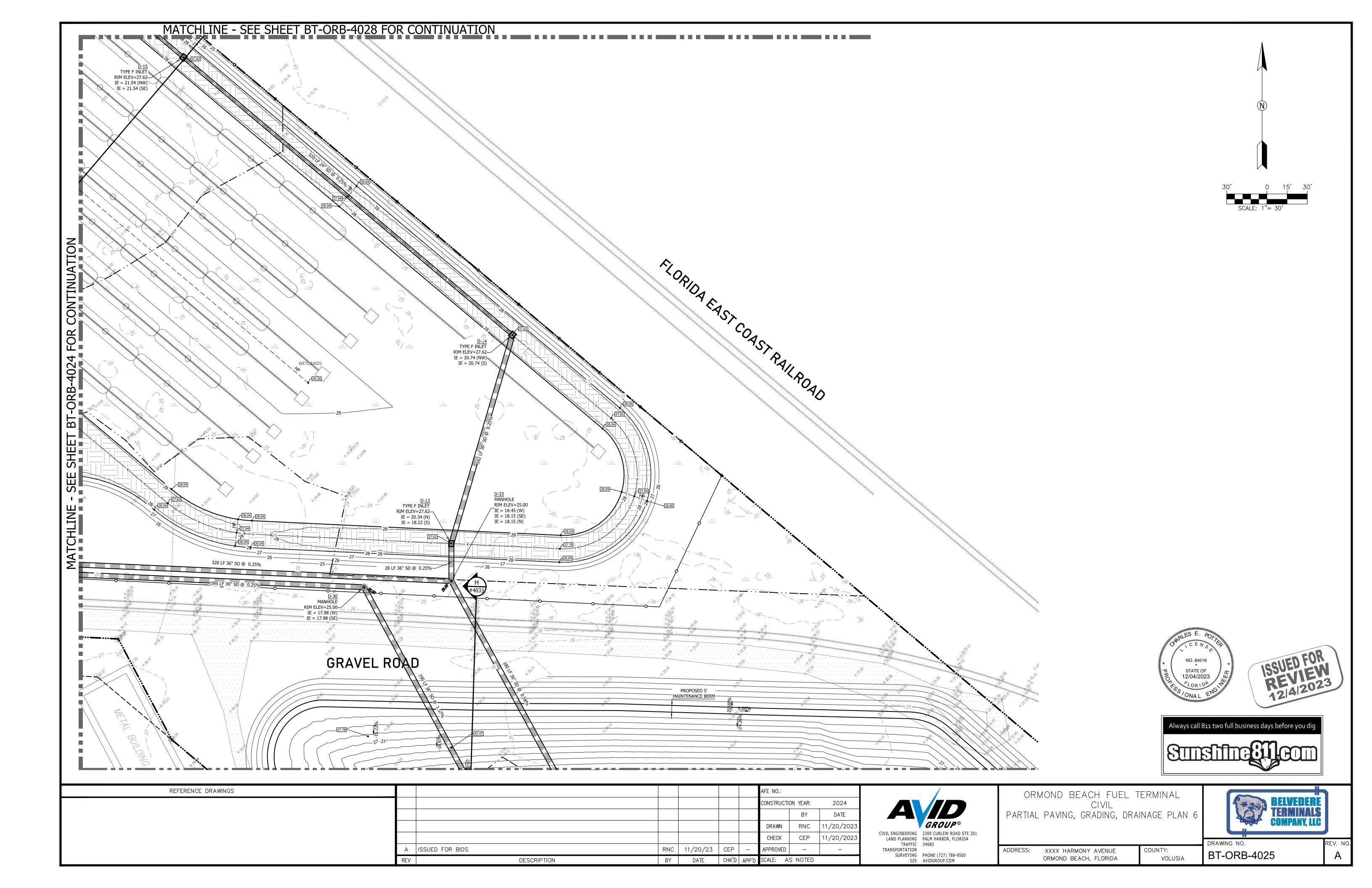


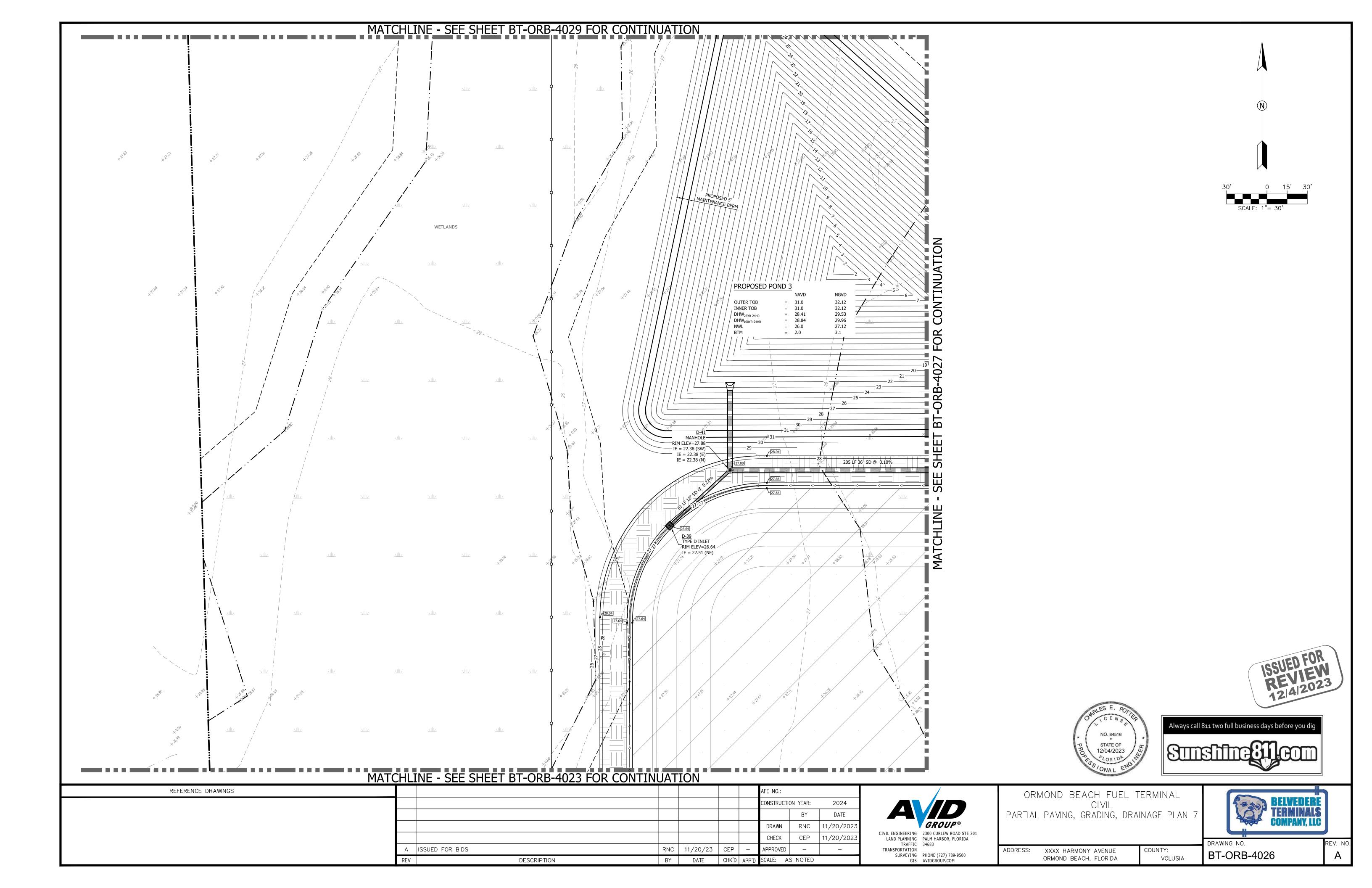


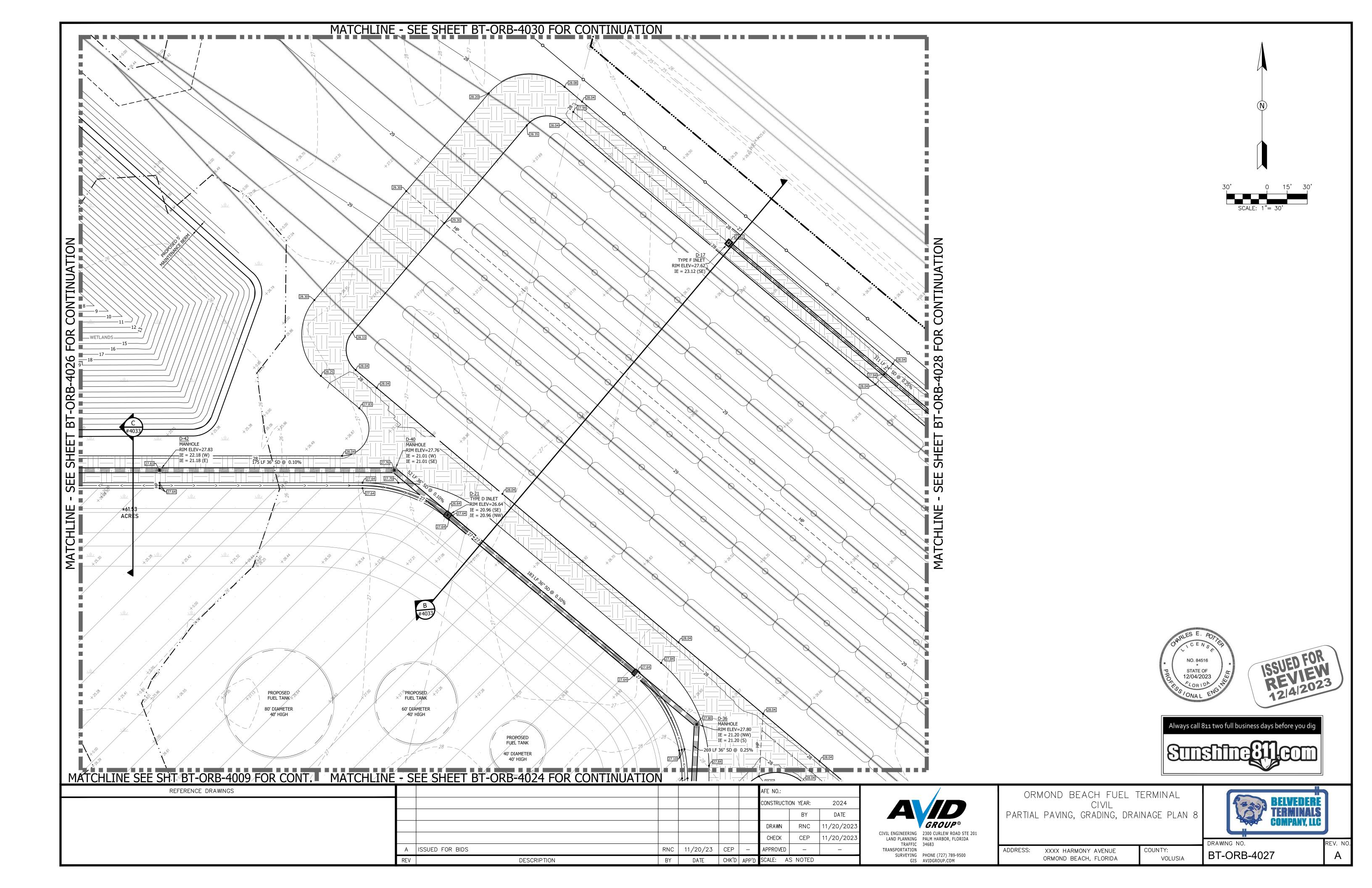


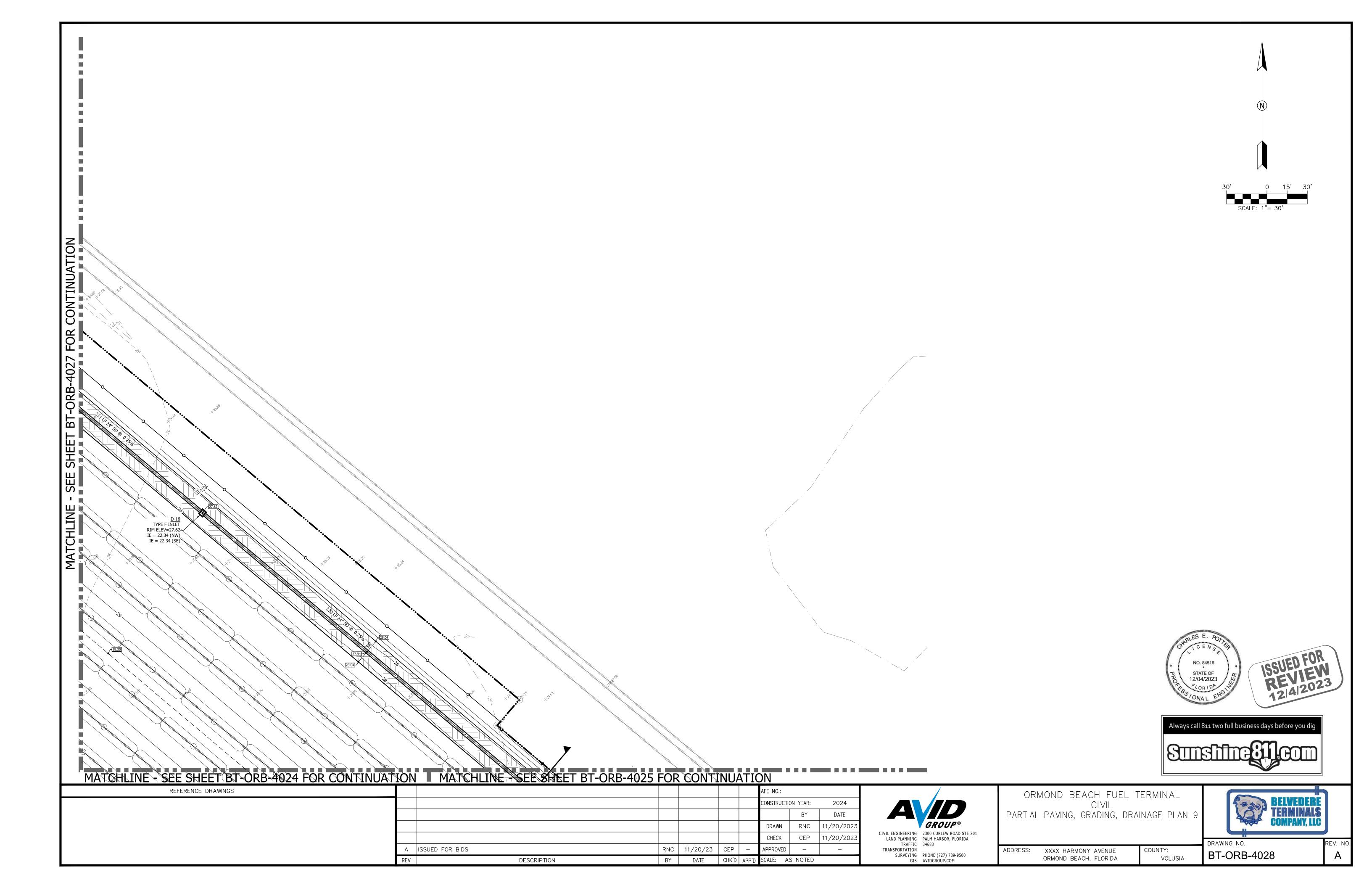


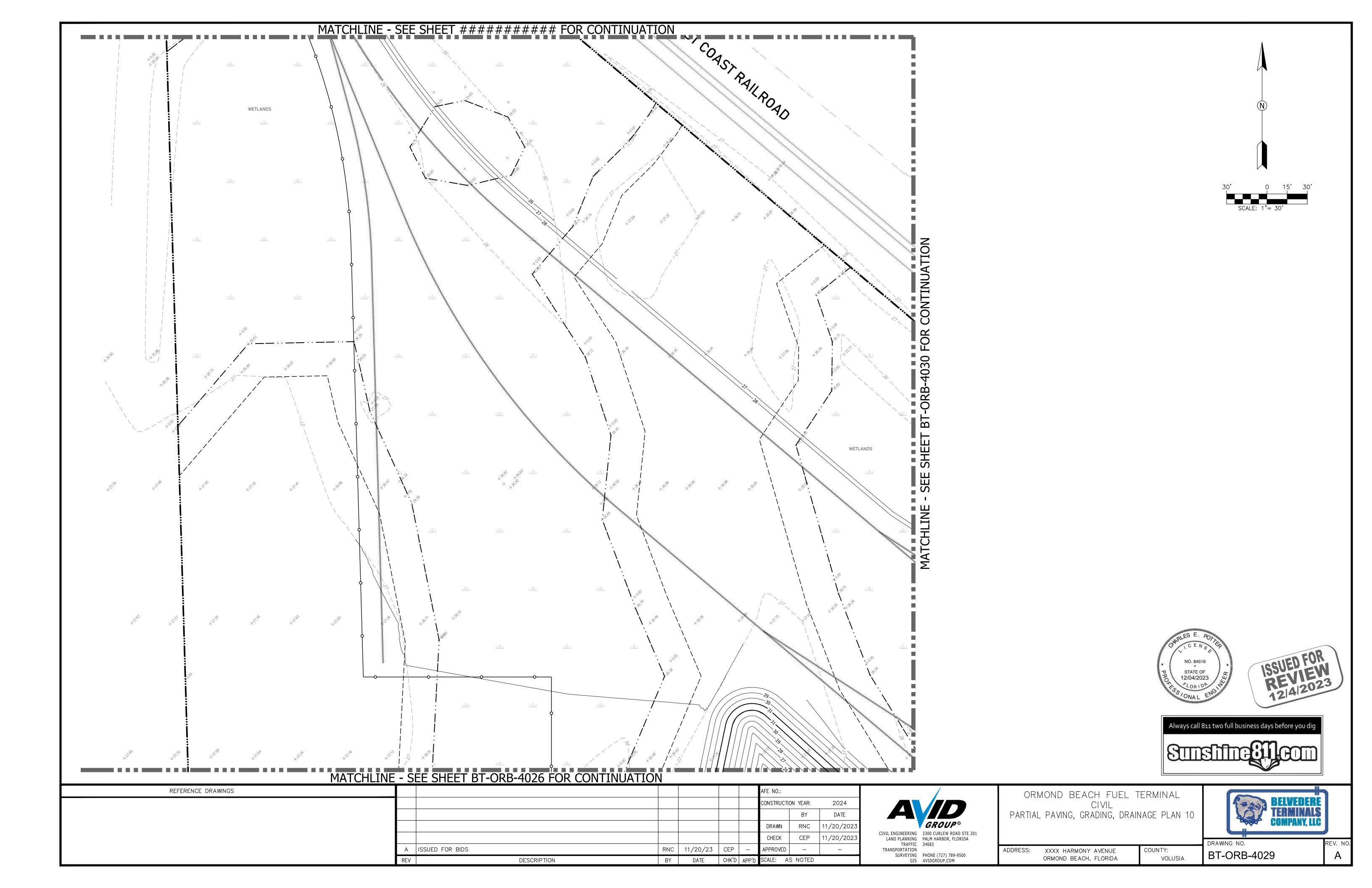


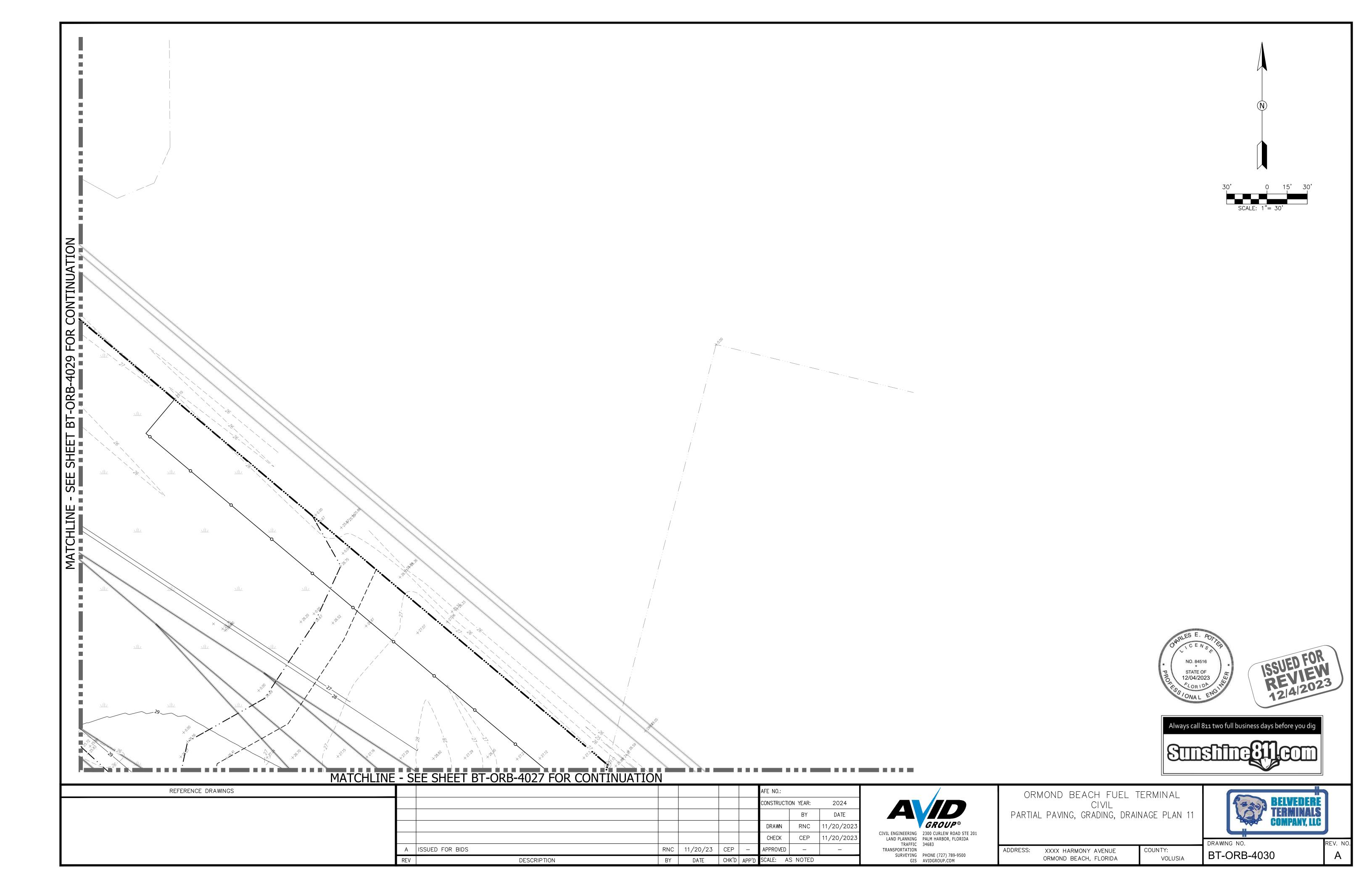


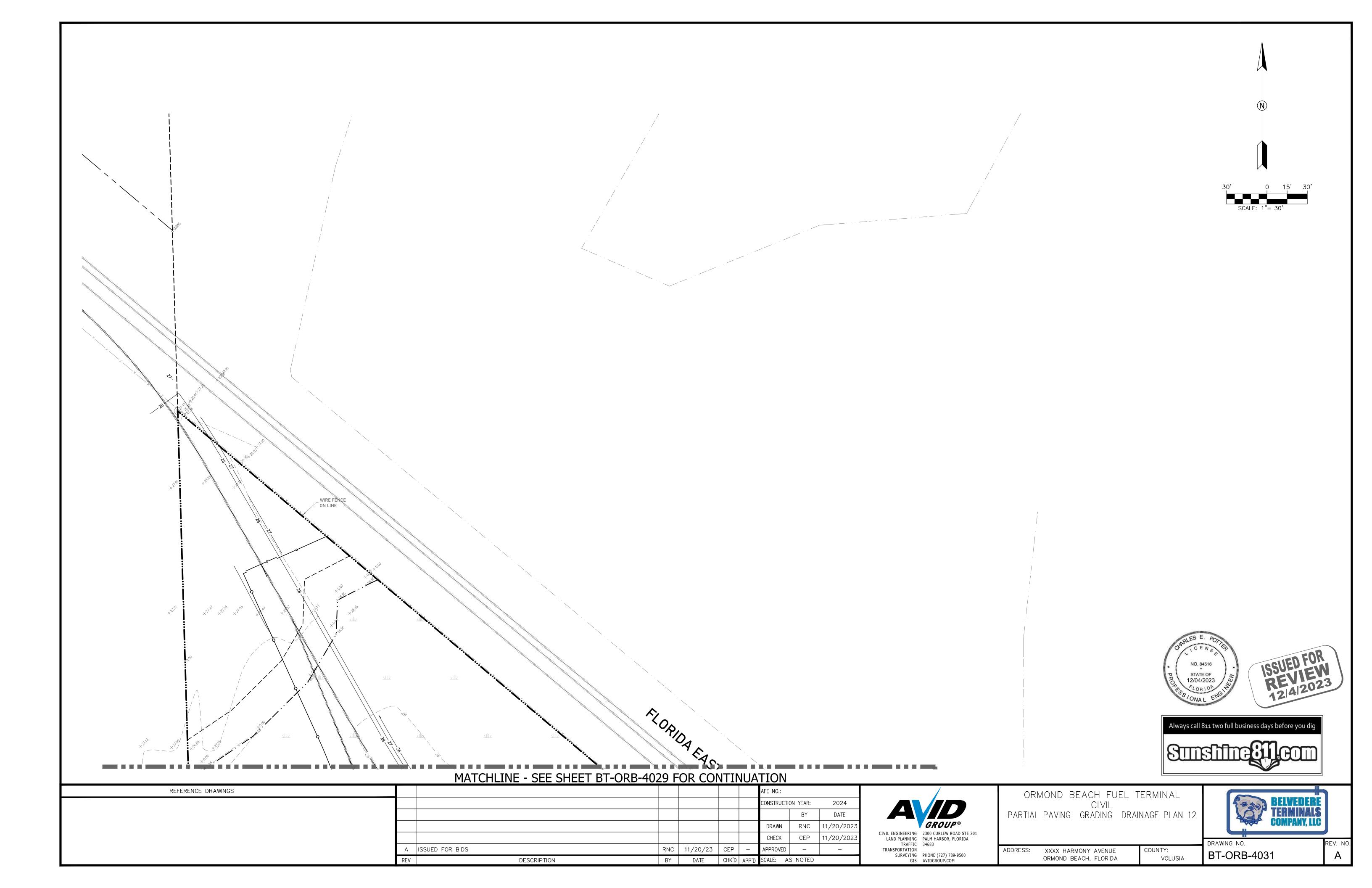


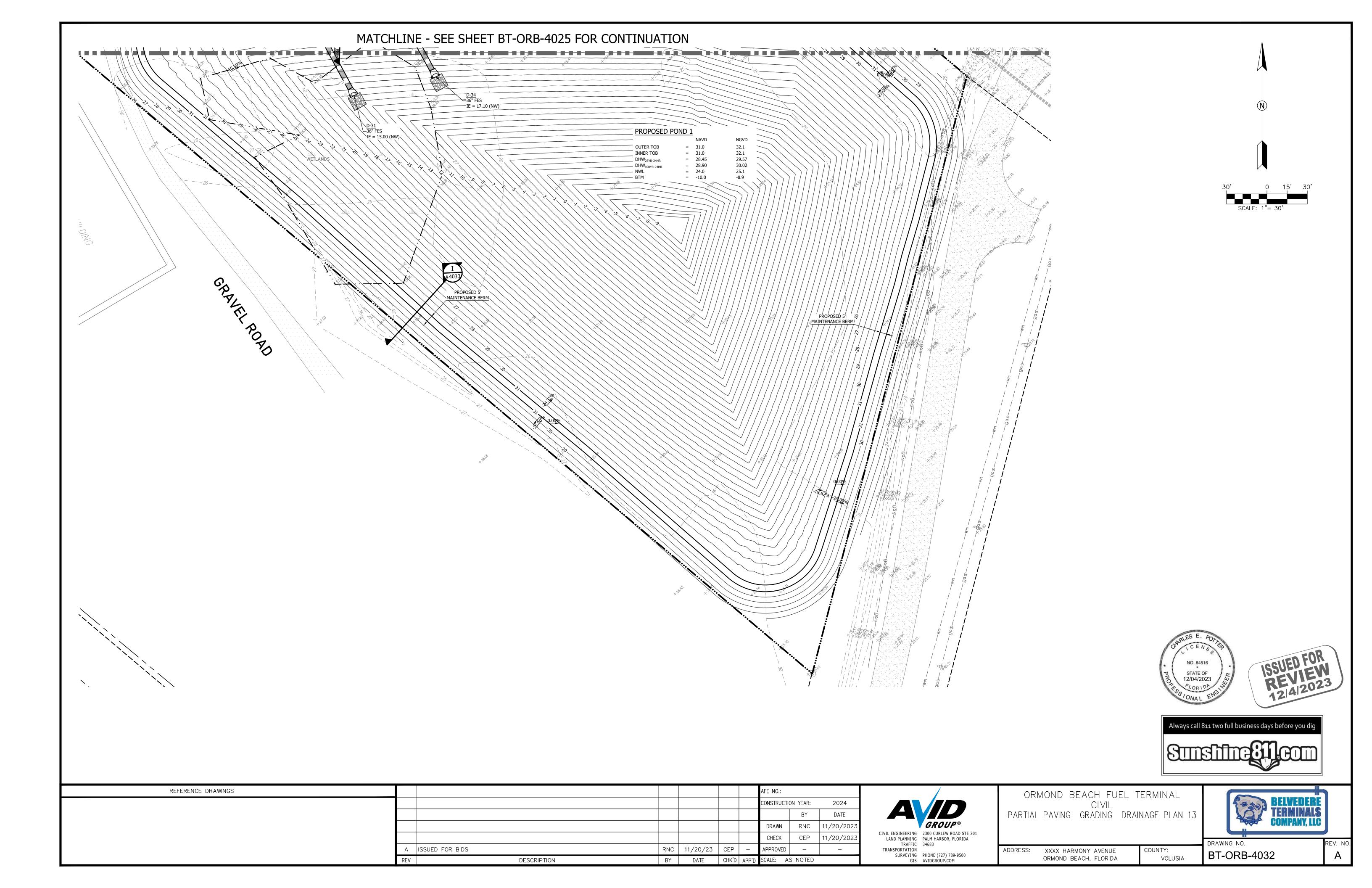


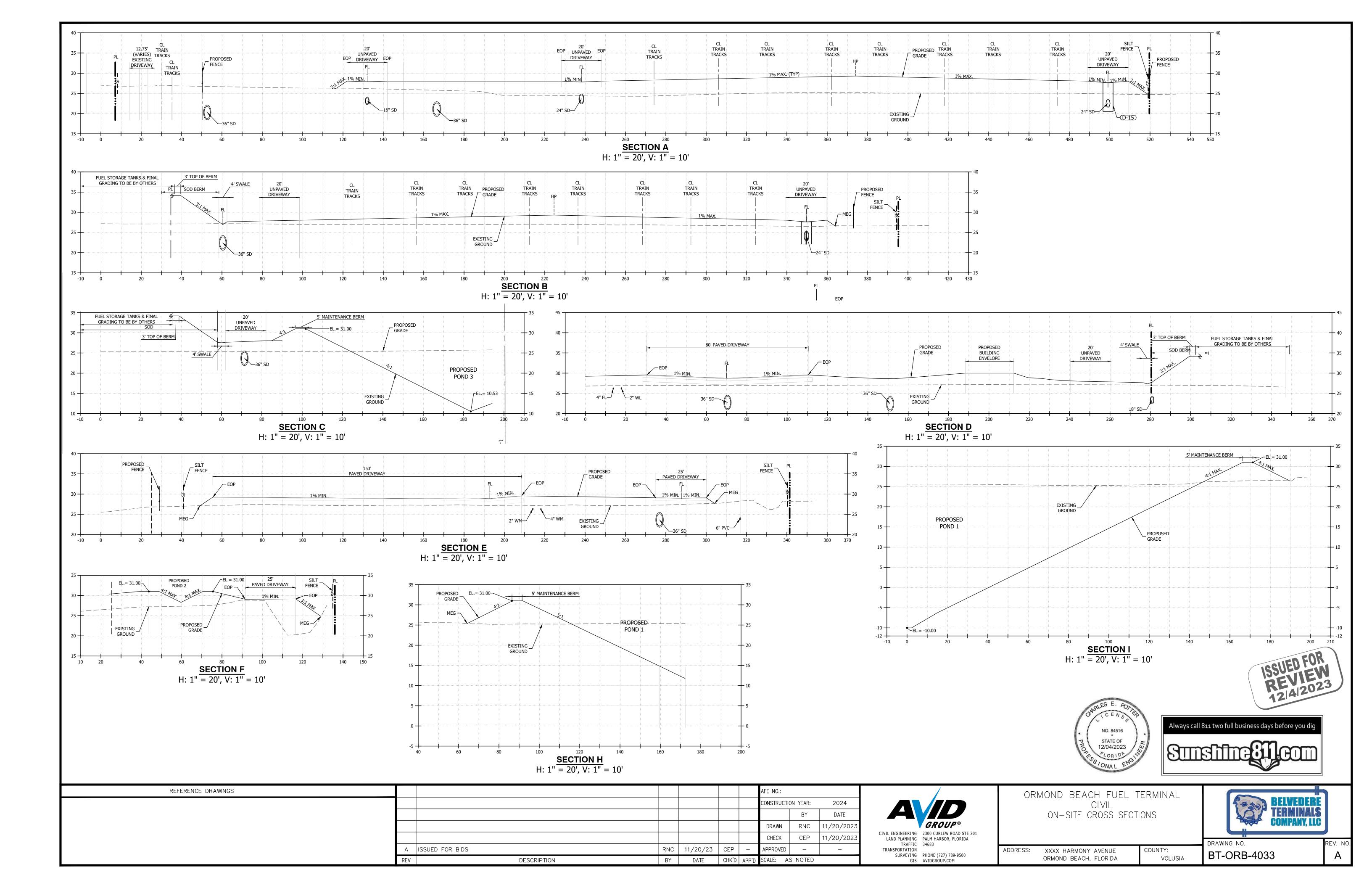


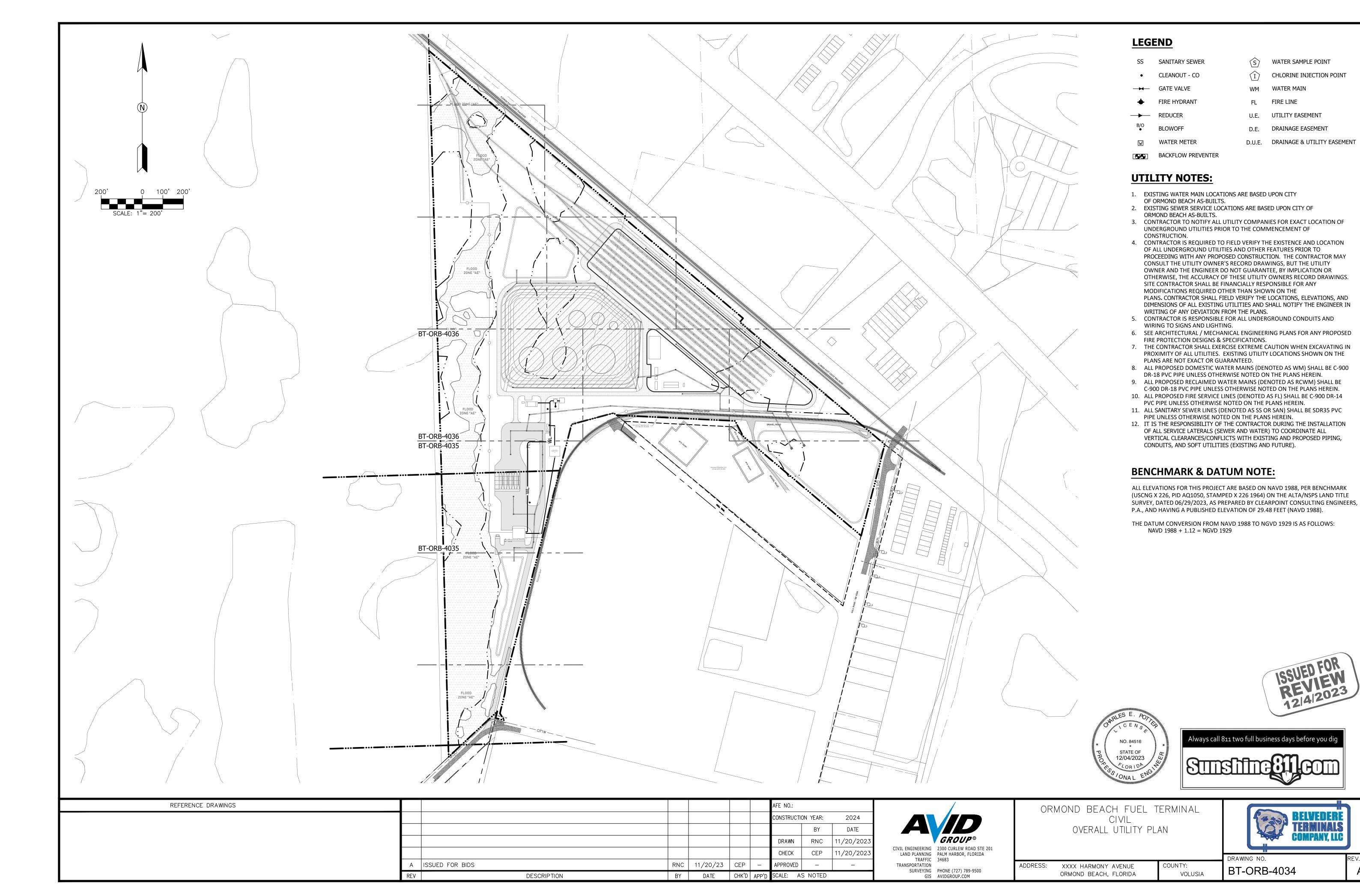


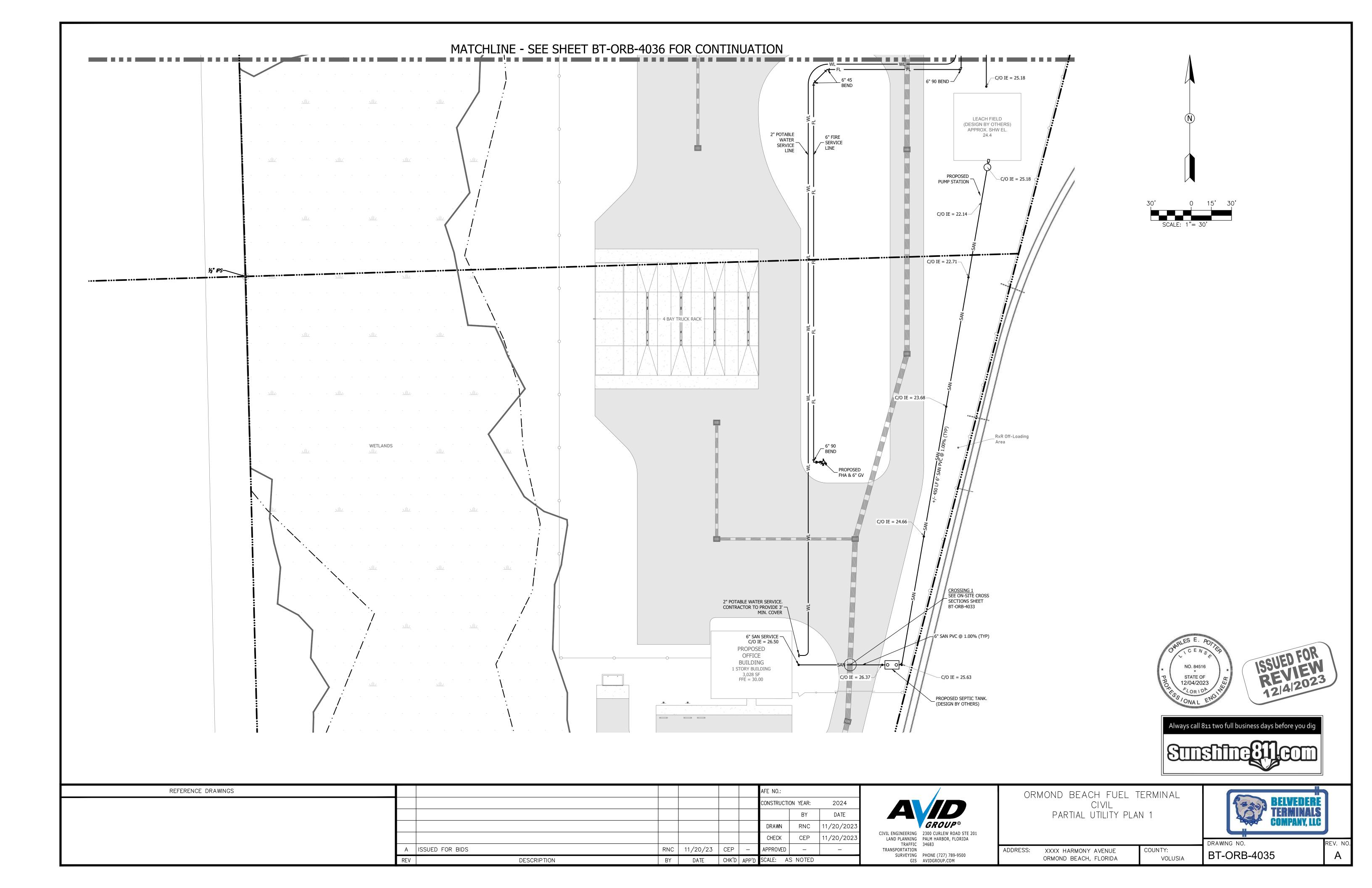


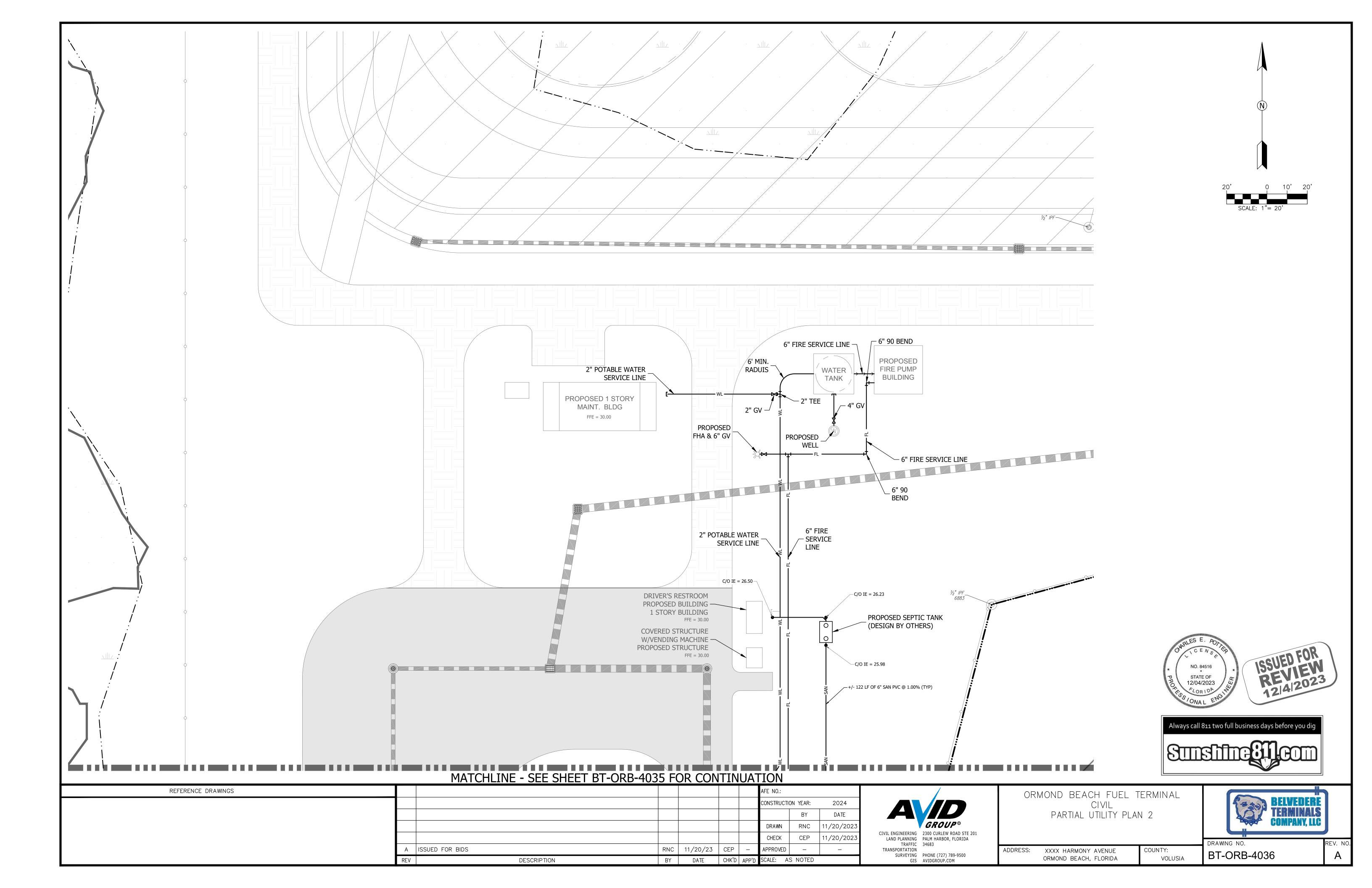












SITE DESCRIPTION:

PROJECT NAME: ORMOND BEACH TERMINAL

PROPERTY OWNER NAME AND ADDRESS: BELVEDERE TERMINALS COMPANY, LLC 200 CENTRAL AVENUE, 4th FLOOR

2.) WBID 2641 UNNAMED BRANCH

TOTAL AREA OF THE SITE: 62.0 ACRES TOTAL AREA OF THE SITE TO BE DISTURBED: 45± ACRES NAME OF RECEIVING WATER: 1.) WBID 2631 UNNAMED DITCH

NATURE OF THE CONSTRUCTION ACTIVITY:

SOIL DISTURBING ACTIVITIES WILL INCLUDE: CLEARING AND GRUBBING; INSTALLING A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER AND

SAINT PETERSBURG, FLORIDA 33701

OTHER EROSION AND SEDIMENT CONTROLS THROUGHOUT THE SITE; GRADING; CONSTRUCTING A STORM WATER POND, STORM SEWER, UTILITIES AND BUILDING FOUNDATIONS; CONSTRUCTION OF CURB AND PARKING LOT; PREPARATION FOR FINAL PLANTING AND SEEDING.

INTENDED SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:

1. INSTALL STAKED SILT FENCE AS INDICATED ON THE CONSTRUCTION PLANS.

2. EXCAVATE PONDS FOR SEDIMENT TRAPS FOR SITE RUNOFFS.

3. BEGIN BUILDING CONSTRUCTION. 4. CONSTRUCT DIVERSION SWALES AROUND PERIMETER OF SITE TO PONDS, AS NECESSARY.

5. INSTALL STORM SEWER SYSTEM AND ITS SILTATION PROTECTION, UTILITIES AND OUT FALL STRUCTURES.

6. STABILIZE PARKING LOT. 7. CONSTRUCT BASE AND ASPHALT.

8. COMPLETE FINAL SITE GRADING.

9. INSTALL PERMANENT LANDSCAPING ON SITE. REPAIR ANY WASHED OUT AREAS.

10. WHEN CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE EROSION PROTECTION DEVICES AND PLACE SOD AS NECESSAR

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

THIS STORM WATER POLLUTION PREVENTION PLAN REFLECTS THE BEST MANAGEMENT PRACTICES (BMP'S) DESIGN CRITERIA THAT ARE PRESUMED TO MEET THE PERFORMANCE STANDARDS SET FORTH IN THE WATER RESOURCE IMPLEMENTATION RULE (CHAPTER 62-40, F.A.C.).

TO ENSURE COMPLIANCE, THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST UPDATE JULY 2013.

POLLUTION REDUCTION CONTROLS

EROSION AND SEDIMENT CONTROLS

STABILIZATION PRACTICES

WIND EROSION STABILIZATION - THE CONTRACTOR SHALL DENUDE ONLY AREAS WHERE IT IS EXPECTED TO BE GRADED OR ALTERED WITHIN A REASONABLE TIME FRAME. ALL PERVIOUS AREAS OF THE SITE INCLUDED IN GRADING THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE GRADED AND PREPARED WITH A COMBINATION OF SOD AND/OR SEEDING AND MULCHING. PAD AREAS WITHIN FUTURE UNITS WHERE EARTHWORK IS COMPLETED SHALL BE COMPLETELY SEEDED AND MULCHED. AREAS WHERE CONSTRUCTION OPERATIONS WILL BE CONTINUOUS, FUGITIVE DUST SHALL BE MANAGED BY APPLYING A WATER SPRAY TO SATURATE THE SURFACE SOILS ON A DAILY BASIS (OR AS NEEDED) TO MAINTAIN MINIMAL DUST TRANSPORT. FUGITIVE DUST SHALL BE MONITORED CONTINUOUSLY AND ADDITIONAL MEASURES MAY NEED TO BE TAKEN TO CONTROL OFF SITE TRANSPORT OF UNACCEPTABLE LEVELS OF DUST.

TEMPORARY STABILIZATION - TOP OF SOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASS AND MULCH OR OTHER APPROVED MEANS, NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY, GRASS SEED SHALL BE A MIXTURE OF 20 PARTS OF BERMUDA AND 80 PARTS OF PENSACOLA BAHIA. THE SEPARATE TYPES OF SEED USED SHALL BE THOROUGHLY DRY MIXED IMMEDIATELY BEFORE SOWING. SEED WHICH HAS BECOME WET SHALL NOT BE USED. THE MULCH MATERIAL USED SHALL NORMALLY BE DRY MULCH. DRY MULCH SHALL BE STRAW OR HAY CONSISTING OF OAT, RYE OR WHEAT STRAW, OR OF PANGOLA, PEANUT, COASTAL BERMUDA OR BAHIA GRASS HAY. ONLY UNDETERIORATED MULCH WHICH CAN BE READILY CUT INTO THE SOIL. SHALL BE USED. AREAS OF THE SITE WHICH ARE TO BE PAVED WILL BE TEMPORARILY STABILIZED BY APPLYING STABILIZATION AND BASE.

PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY PERMANENTLY CEASES SHALL BE STABILIZED WITH SOD NO LATER THAN 14 DAYS AFTER LAST CONSTRUCTION ACTIVITY.

STRUCTURAL PRACTICES

EROSION PROTECTION - DURING THE CONSTRUCTION PHASES, APPROPRIATE PRACTICES INCLUDING, BUT NOT LIMITED TO SILT FENCE BARRIERS, HAY BALES AND WATERING OR OTHER METHODS NECESSARY WILL BE IMPLEMENTED TO CONTROL FUGITIVE DUST. SEDIMENT BASINS - THE STORM WATER MANAGEMENT AREAS (RETENTION AREAS) WILL SERVE AS SEDIMENT BASINS DURING THE CONSTRUCTION PERIOD. AT THE CONTRACTOR' DISCRETION, THE SEDIMENT BASINS WILL BE CONSTRUCTED TO THE DESIGN CROSS-SECTION OR A MINIMUM OF 2-FEET BELOW EXISTING GROUND TO ALLOW THE SILT TO BE COLLECTED AND REMOVED PRIOR TO COMPLETION OF THE GRADING.

STORM WATER MANAGEMENT

STORM WATER DRAINAGE WILL BE PROVIDED BY A CURB, STORM WATER AND CATCH BASIN SYSTEM FOR THE DEVELOPED AREAS. THE AREAS NOT DEVELOPED SHALL BE GRADED TO LESS THAN 2% SLOPES AND HAVE PERMANENT SEEDING OR PLANTINGS. WHEN CONSTRUCTION IS COMPLETE THE SITE WILL DRAIN TO STORM WATER PONDS THAT WERE UTILIZED AS THE TEMPORARY SEDIMENT BASINS DURING THE CONSTRUCTION PROCESS. ANY ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASINS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSTRUCT ALL RETENTION/DETENTION AREAS IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS.

SPECIFIED OTHER CONTROLS

WASTE DISPOSAL

WASTE MATERIALS - ALL WASTE MATERIAL SHALL BE COLLECTED AND CONTAINED IN A CONTROLLED AREA PURSUANT TO STATE AND LOCAL SOLID WASTE REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS GENERATED FROM CONSTRUCTION IS TO BE REMOVED FROM THE SITE AND DISPOSED OF APPROPRIATELY. NO CONSTRUCTION MATERIALS SHALL BE BURIED ON SITE. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES SHALL BE POSTED IN THE ON SITE OFFICE TRAILER AND THE CONSTRUCTION MANAGER RESPONSIBLE FOR THE DAY TO DAY SITE OPERATIONS SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE - IF ENCOUNTERED, ALL WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY STATE AND/LOCAL REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE - ALL SANITARY WASTE SHALL BE COLLECTED FROM PORTABLE UNITS BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE AND LOCAL CODES AND REGULATIONS.

OFF SITE VEHICLE TRACKING

STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED TO HELP REDUCE OFF SITE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREETS SHALL BE CLEANED AS NEEDED TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE SITE SHALL BE COVERED WITH A TARPAULIN AT ALL TIMES.

TIMING OF CONTROL MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, STAKED SILT FENCE, STABILIZED CONSTRUCTION ENTRANCES AND SEDIMENT BASINS SHALL B CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 21 DAYS SHALL BE STABILIZED WITH A TEMPORARY GRASS AND MULCH WITHIN 14 DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY THAT AREA SHALL BE STABILIZED WITH PERMANENT SOD. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE TRAPS AND THE STAKED SILT FENCES SHALL BE REMOVED.

MAINTENANCE INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

THESE ARE THE INSPECTION AND MAINTENANCE PRACTICES THAT SHALL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROL:

- L. ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 0.5-INCHES OR GREATER BY A CONTRACTORS REPRESENTATIVE.
- 2. ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT
- 3. BUILT UP SEDIMENT SHALL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE SILT FENCE. 4. SILT FENCE SHALL BE INSPECTED REGULARLY FOR DEPTH OF SEDIMENT AND TEARS TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
- 5. THE SEDIMENT BASINS SHALL BE INSPECTED DEPTH OF SEDIMENT AND BUILD UP OF SEDIMENT SHALL BE REMOVED WHEN IT REACHES 10% OF THE DESIGN CAPACITY OR AT THE END OF THE JOB.
- 6. TEMPORARY AND PERMANENT GRASSING AND MULCHING AND SODDING SHALL BE INSPECTED FOR BARE SPOTS, WASHOUTS AND HEALTHY GROWTH 7. A MAINTENANCE INSPECTION REPORT SHALL BE MADE AFTER EACH INSPECTION BY THE CONTRACTOR AND SHALL BE KEPT IN AN ACTIVE LOG READILY AVAILABLE AT THE JOB SITE.
- 8. EITHER THE SITE SUPERINTENDENT OR HIS DESIGNEES SHALL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE, REPAIR ACTIVITIES AND COMPLETING THE INSPECTION AND MAINTENANCE REPORT.
- 9. PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES SHALL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY SHALL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ON SITE IN GOOD WORKING ORDER.

NON-STORM WATER DISCHARGE

IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

. WATER FROM WATER LINE FLUSHING.

2. PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED). 3. UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION). ALL NON-STORM WATER DISCHARGES SHALL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.

NON-STORM WATER DISCHARGE

IT IS NOT EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES SHALL OCCUR FROM THE SITE DURING THE CONSTRUCTION PFRIOD

CONCRETE FERTILIZERS DETERGENTS PETROLEUM BASED PRODUCTS AND PAINTS (ENAMEL AND LATEX) FUELS CLEANING SOLVENTS METAL STUDS GLASS

MASONRY BLOCK ROOFING SHINGLES STONE

SPILL PREVENTION

SAND

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES SHALL BE FOLLOWED ON SITE DURING THE CONSTRUCTION PROJECT. AN EFFORT SHALL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO COMPLETE THE PROJECT. ALL MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND IF POSSIBLE, UNDER A ROOF OR OTHER CONTAINED ENCLOSURE. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL MANUFACTURER'S LABELED CONTAINERS. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER. WHENEVER POSSIBLE, ALL OF THE PRODUCT SHALL BE USED BEFORE DISPOSING OF THE CONTAINER. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ON SITE.

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS. PRODUCTS SHALL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS OF PROPER DISPOSAL SHALL BE FOLLOWED.

ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDINGLY TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNT RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE SHALL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE, EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT SHALL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS. CONCRETE TRUCKS: CONTRACTOR SHALL DESIGNATE AN AREA FOR DISCHARGE OF SURPLUS CONCRETE OR DRUM WASH WATER AND SHALL INSTALL A CONTAINMENT BERM AROUND THIS AREA TO PREVENT RUNOFF TO THE REMAINDER OF THE SITE. HARD DEBRIS SHALL BE DISPOSED OF BY CONTRACTOR UPON COMPLETION OF THE PROJECT.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEAN UP SUPPLIES.

MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEAN UP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS

SHALL INCLUDE, BUT NOT BE LIMITED TO, BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC AND METAL TRASH CONTAINERS.

ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

THE SPILL SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT

SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE

THE SPILL PREVENTION PLAN SHALL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND THE CLEAN UP PROCEDURES FOR FUTURE USE. A DESCRIPTION OF THE SPILL, ITS CAUSE AND THE CLEAN UP MEASURES SHALL ALSO BE INCLUDED.

THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY TO DAY SITE OPERATIONS SHALL BE THE SPILL PREVENTION AND CLEAN UP COORDINATOR. HE OR SHE SHALL DESIGNATE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEAN UP TRAINING. THESE INDIVIDUALS SHALL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEAN UP. THE NAMES OF THE RESPONSIBLE SPILL PERSONNEL SHALL BE POSTED IN THE MATERIAL STORAGE AREA OR IN THE OFFICE TRAILER ON SITE, IF APPLICABLE.

NOTICE OF TERMINATION

A NOTICE OF TERMINATION SHALL BE SUBMITTED TO THE FDEP AFTER THE CONSTRUCTION HAS BEEN COMPLETED AND THE SITE HAS UNDERGONE FINAL STABILIZATION.

POLLUTION PREVENTION PLAN CERTIFICATION

TO THE BEST OF MY KNOWLEDGE, I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT FOR KNOWING VIOLATIONS.

NAME: OPERATOR AND/OR RESPONSIBLE AUTHORITY	TITLE:	
SIGNATURE:	DATE:	

CONTRACTOR'S CERTIFICATION

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORM WATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER."

SIGNATURE	COMPANY NAME AND ADDRESS	RESPONSIBLE FOR
SIGNATURE: NAME: TITLE: DATE:	ADDRESS: PHONE:	GENERAL CONTRACTOR
SIGNATURE: NAME: TITLE: DATE:	ADDRESS: PHONE:	TEMPORARY AND PERMANENT STABILIZATION
SIGNATURE: NAME: TITLE: DATE:	ADDRESS: PHONE:	STABILIZED CONSTRUCTION ENTRANCE, EARTH DIKES, SEDIMENT BASIN

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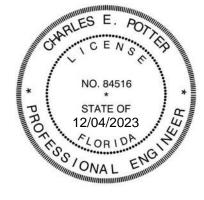
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SURVEYING PHONE (727) 789-9500

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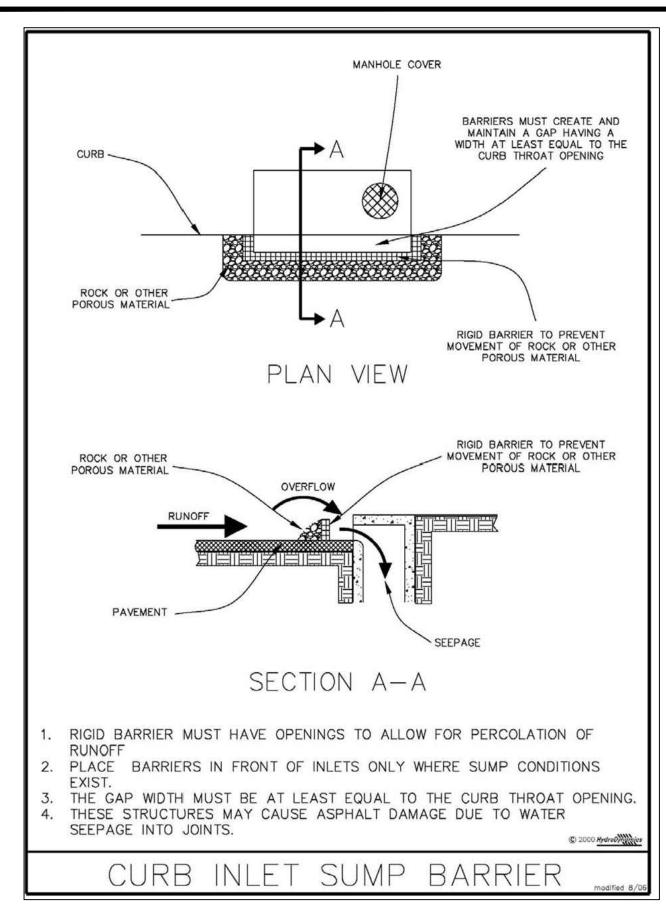
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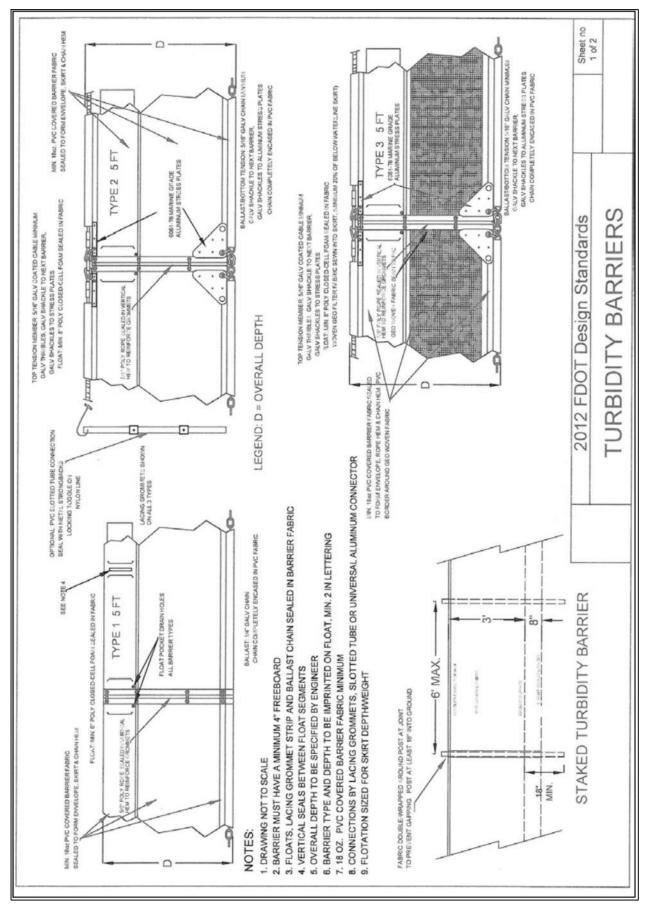
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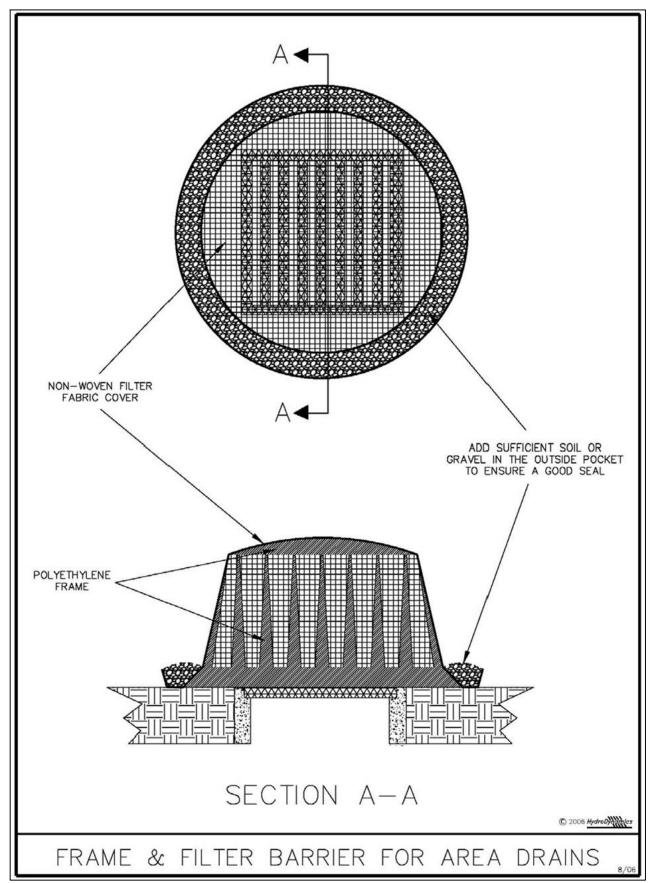


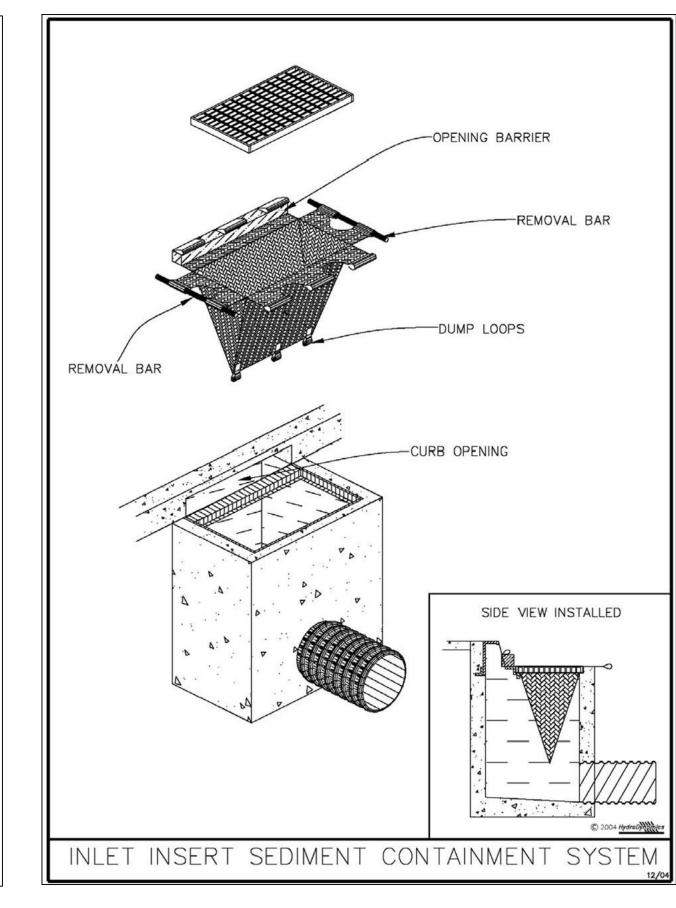
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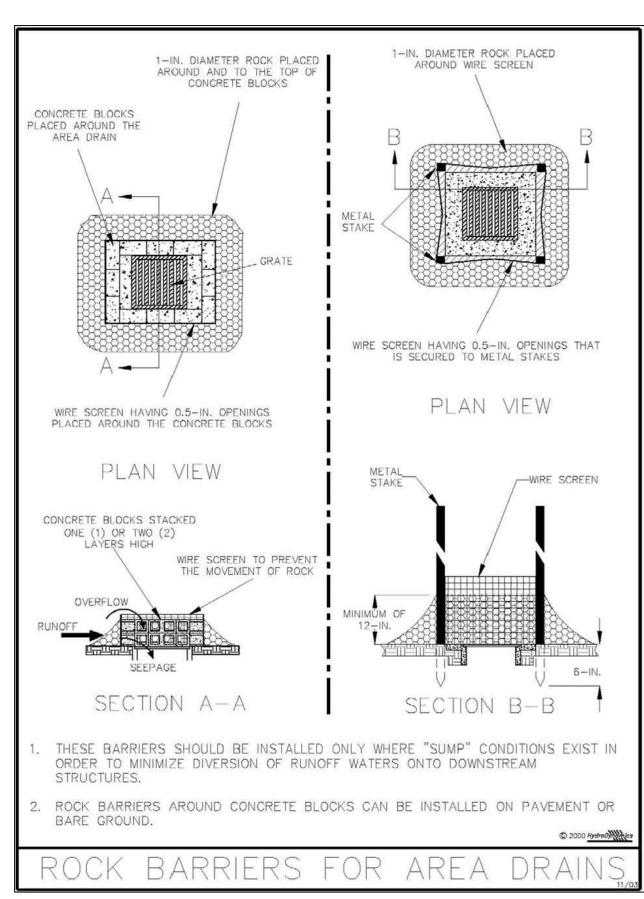
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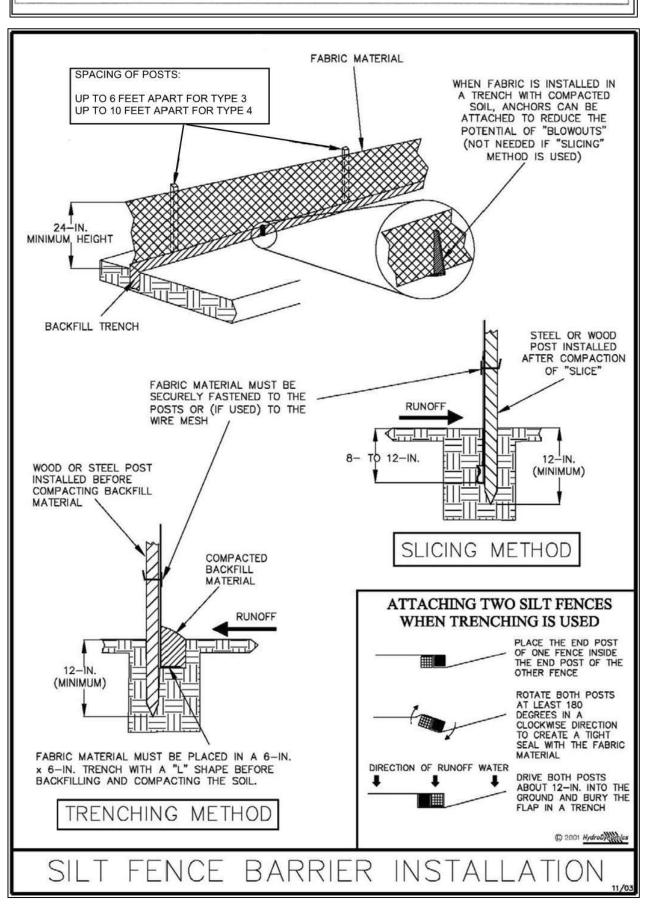


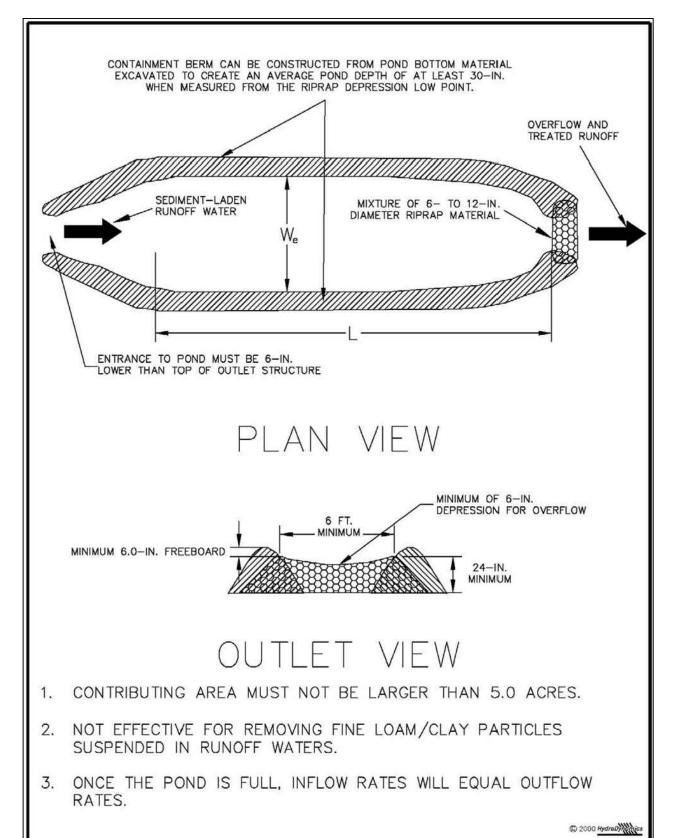


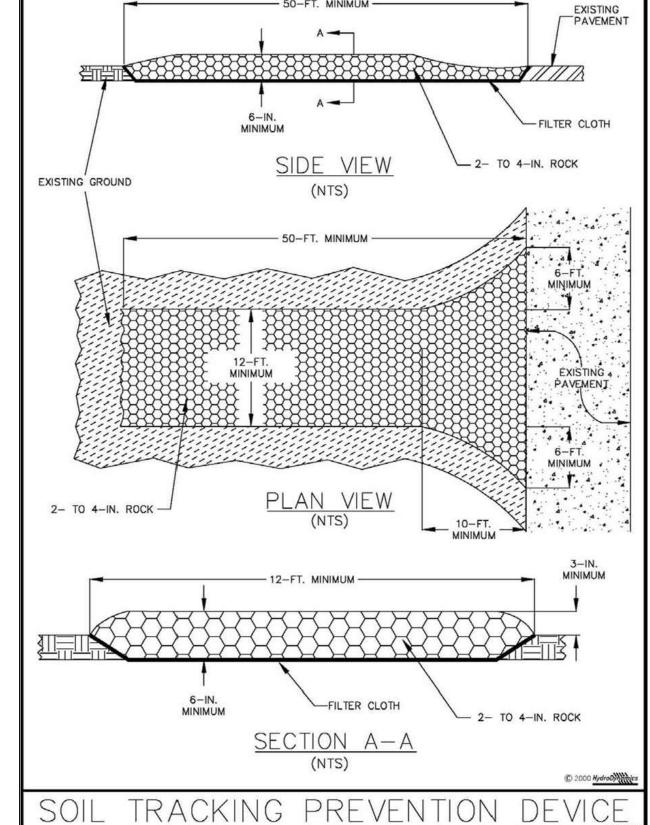




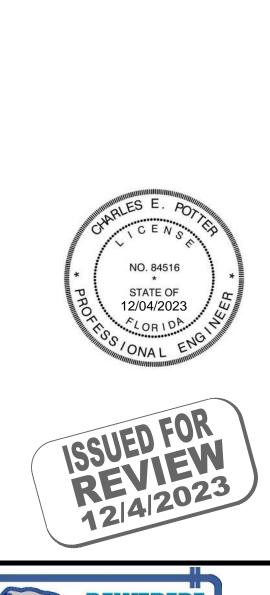




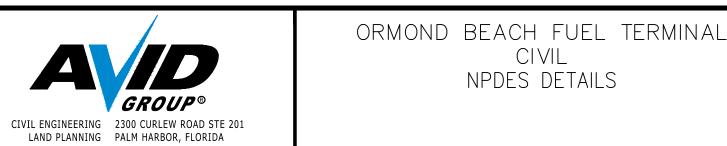




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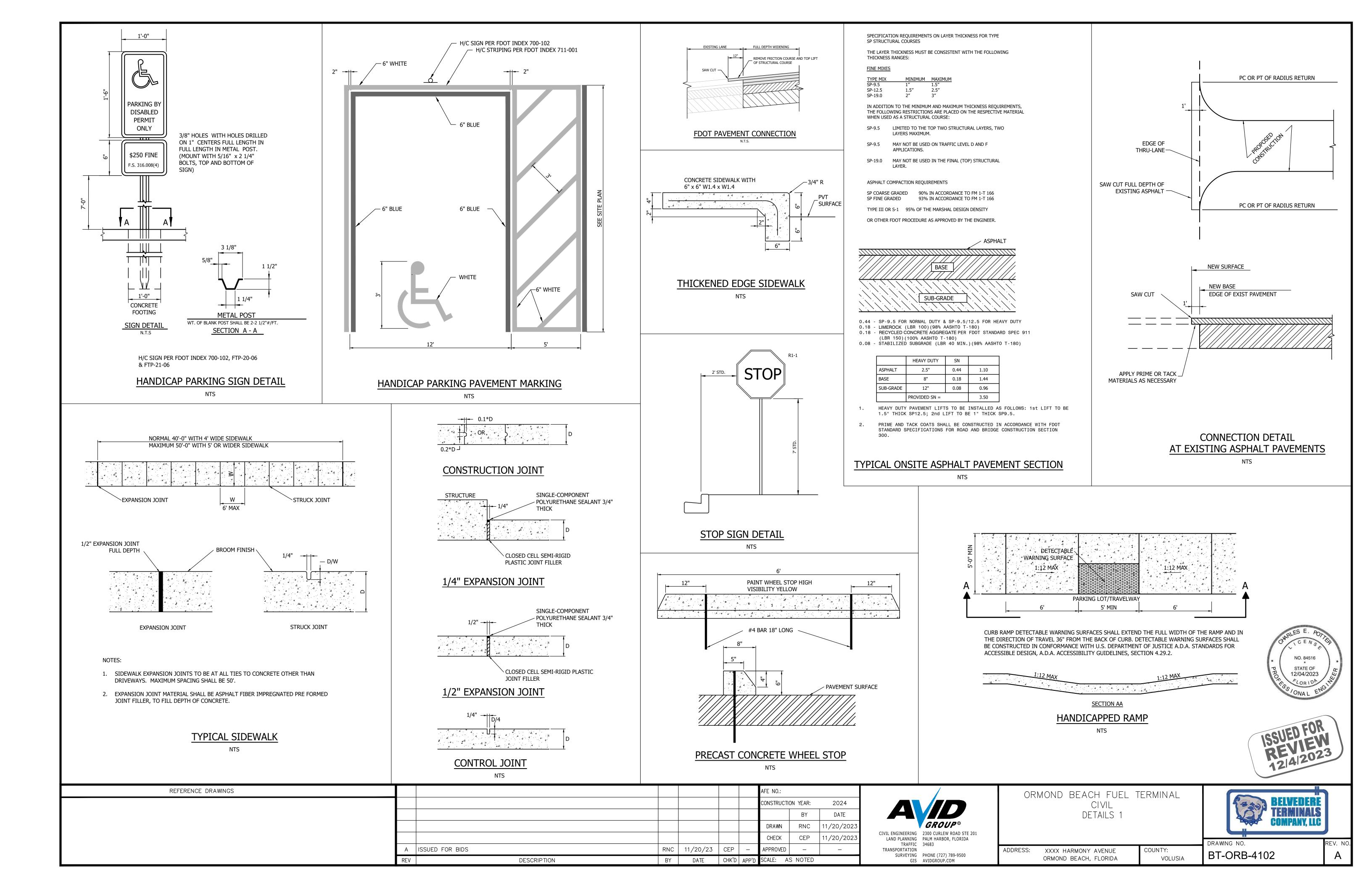


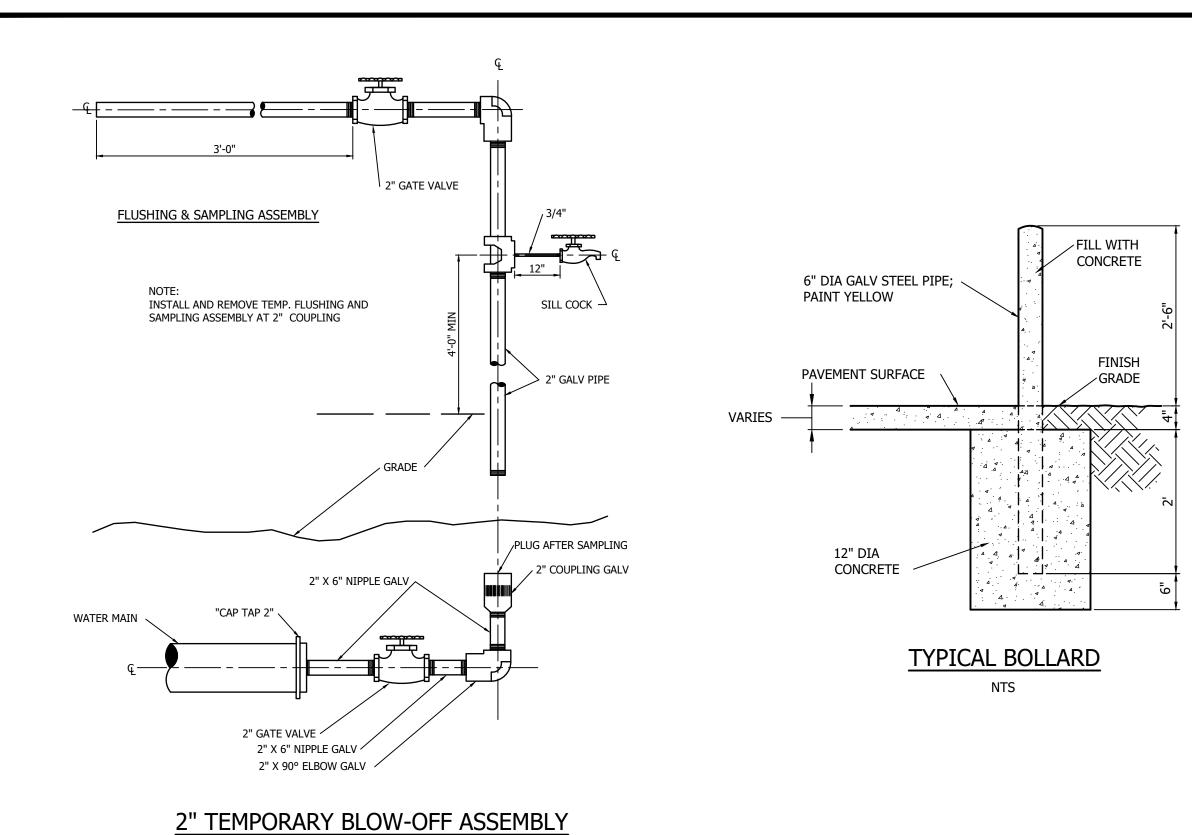
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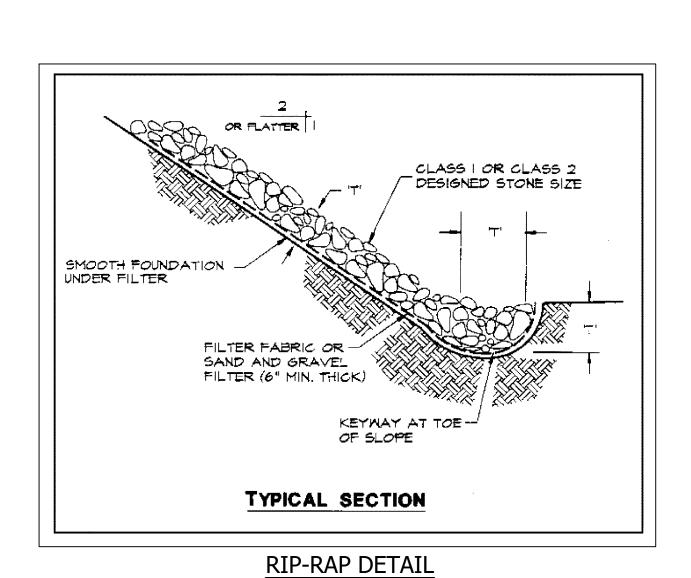
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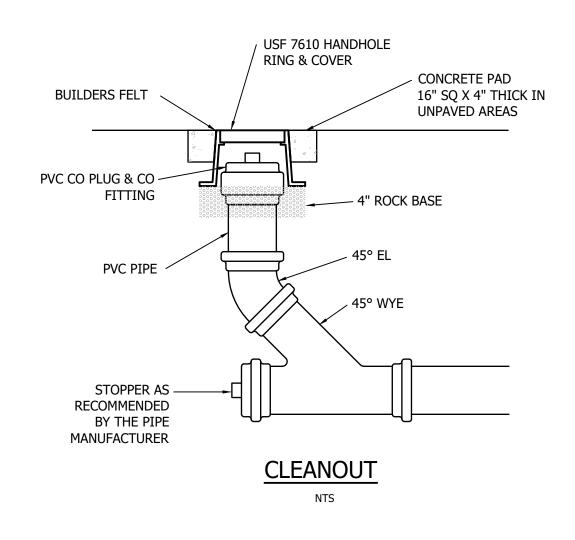
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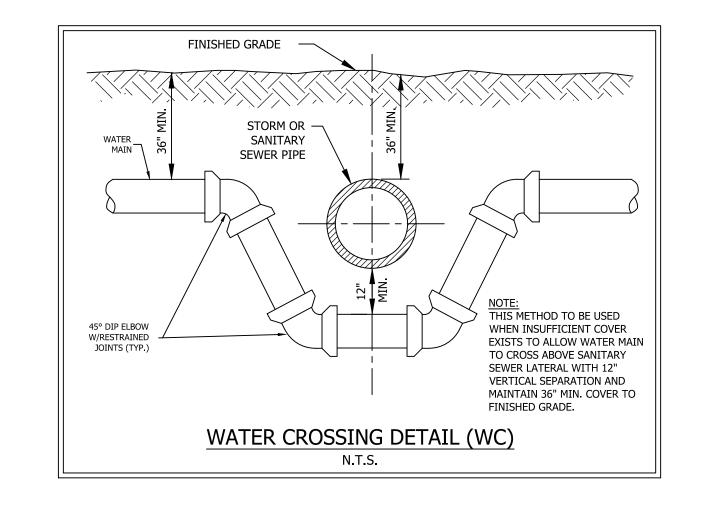






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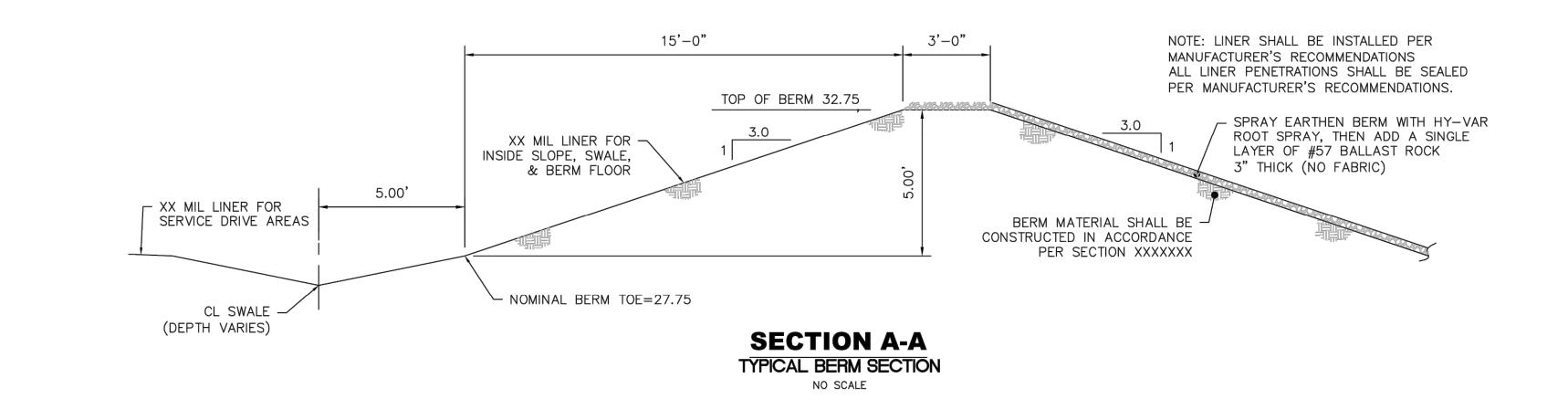
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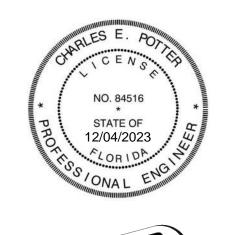


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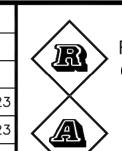
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RIDGE & ASSOCIATES, INC. CONSULTING ENGINEERS P.O. BOX 1091 FINDLAY, OHIO 45839

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ORMOND BEACH CIVIL TANK FARM GRADING & DRAINAGE SECTION VIEWS

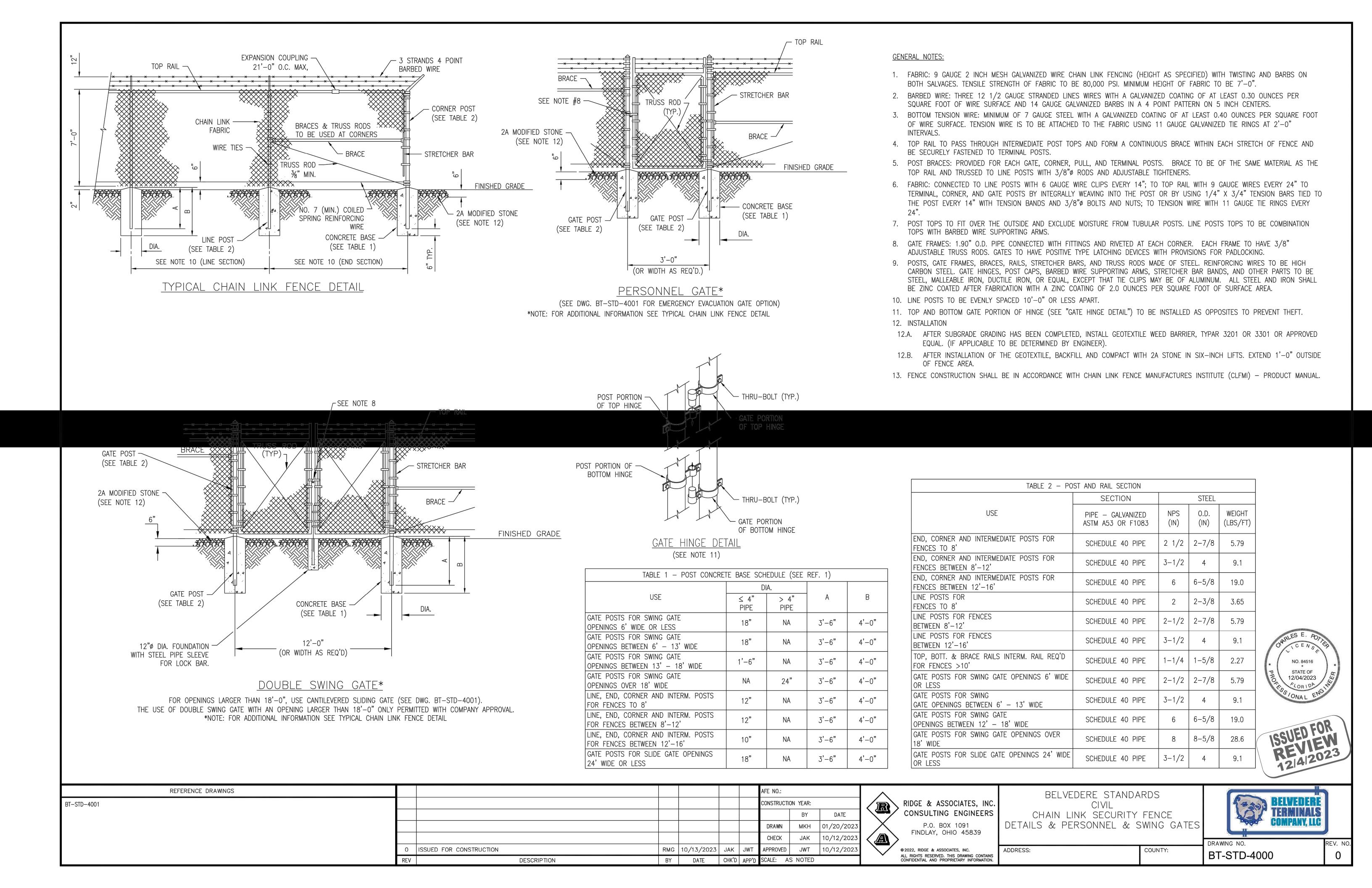
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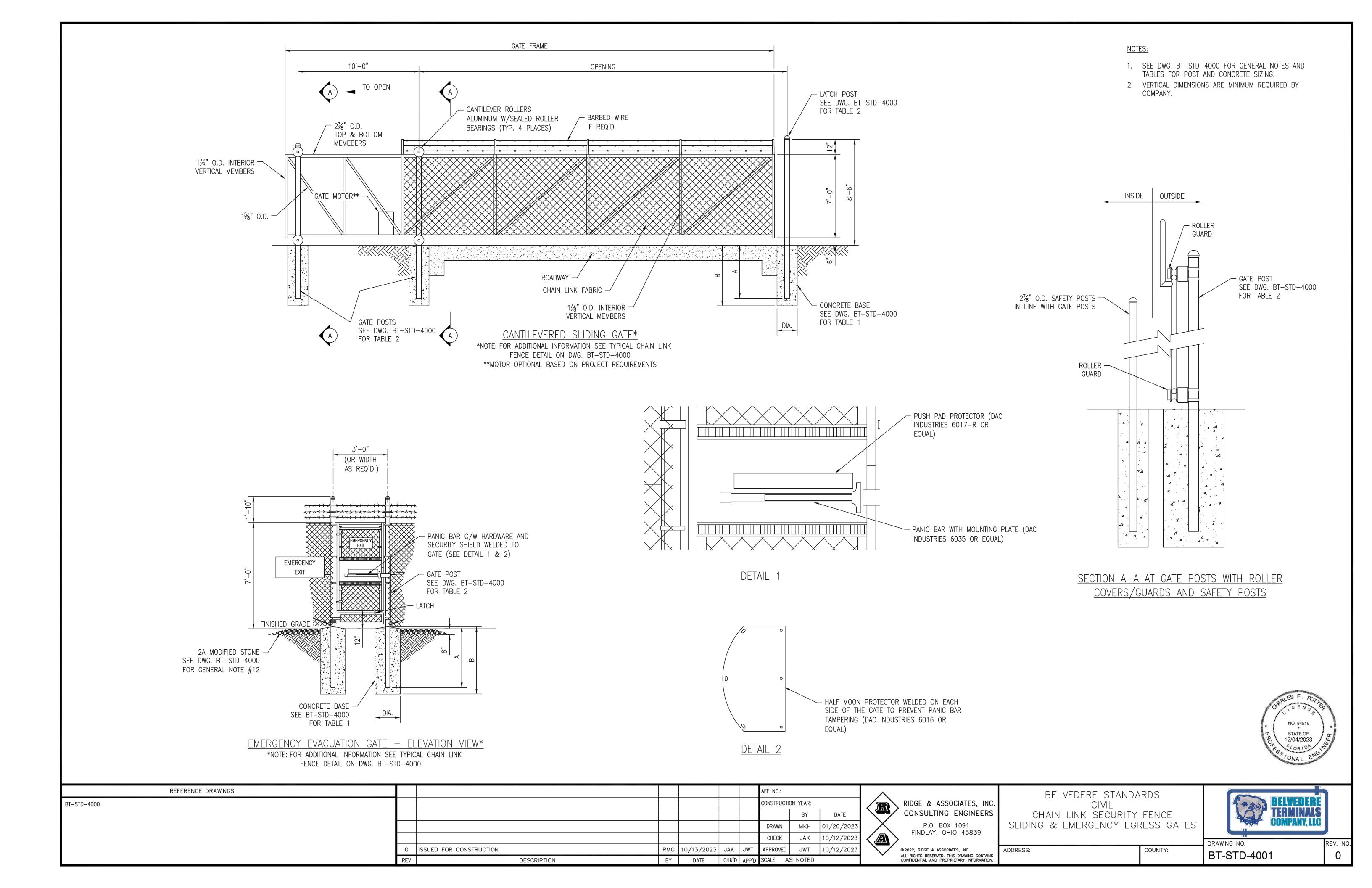
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DRAWING NO. VOLUSIA

BT-ORB-4406





STORMWATER REPORT

FOR:

Ormond Beach Terminal Volusia County, Florida

Prepared for:

Belvedere Terminals Company, LLC 200 Central Avenue, 4th Floor St. Petersburg, FL 33701

Prepared by:



Submitted To:

Volusia County

Ormond Beach Terminal Volusia County, Florida Sections 6 & 38, Township 14 South, Range 32 East

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PROPOSED DEVELOPMENT OVERVIEW:

The subject property is located in Volusia County near Ormond Beach in Sections 6 and 38, Township 14 South, Range 32 East. The site lies to the north, west and east of the Halifax Paving industrial site, to the west of Hull Road, and to the south of Florida East Coast railway (see Location Map and Aerial for details). The area of proposed construction consists of forested uplands and wetlands and an active industrial area.

The proposed development under this application includes construction of a fuel storage facility and a distribution terminal, along with the infrastructure to support it, including surface water management facilities.

DESIGN CRITERIA:

Stormwater management for this site falls under the jurisdiction of Florida Department of Environmental Protection (FDEP) and Volusia County. It is assumed that FDEP will apply the criteria of the local water management district, St Johns River Water Management District. The stormwater design criteria for the system are as follows:

- Wet detention treatment volume shall be provided for the first one inch of runoff across the pond's contributing area or 2.5 inches across the impervious area.
- The detention pond must recover one-half of the required treatment volume between 24 and 30 hours following a storm event. No more than one-half of the treatment volume shall be discharged within the first 24 hours.
- The proposed discharge rate to the receiving water shall not exceed the existing rate of discharge in the 25-yr, 24-hr storm event per FDEP and Volusia County.
- Building floors shall be at or above the 100-year flood elevation for the site, or a minimum one foot above the FEMA-defined 100-year base flood elevation, whichever is higher.
- A minimum of six inches of freeboard must be provided above the 25yr-24hr DHW per Volusia County.
- The detention areas shall be designed with side slopes no steeper than 4:1.

EXISTING SITE CONDITIONS:

Existing site conditions are reflected on the enclosed topographic survey performed by Clearpoint Consulting Engineers, P.A. Elevations on the topographic survey are relative the North American Vertical Datum of 1988 (NAVD88). All elevations reported in this document (and the associated construction plans) refer to NAVD88.

Basins:

Based on the topographic survey, portions of the existing site drain to the east, north and south.

- EX. BASIN 1 drains into the existing Wetland W-4 located on the east side of the property.
- EX. BASIN 2A drains into the existing Wetlands W-2 and W-3 located in the central part of the site. It appears wetlands W-2 and W-3 are hydrologically connected and eventually discharge to Wetland W-1 along the west side of the property.
- <u>EX. BASIN 2B</u> drains directly into existing Wetland W-1 located along the west side of the property.

On-Site Soils:

According to the Volusia County NRCS Soil survey, the site contains soils as follow:

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
29	Immokalee sand	B/D	10.4	18.2%
30	Immokalee sand, depressional	B/D	15.9	27.8%
32	Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes	A/D	24.7	43.0%
33	Myakka fine sand, frequently ponded, 0 to 1 percent slopes	A/D	0.2	0.3%
34	Myakka-St. Johns complex	A/D	6.2	10.8%

NRCS reports these soils as hydrologic soil group (HSG) A/D and B/D. Due to the absence of any existing drainage features that may tend to draw down the water table within the project site, the on-site soils are assumed to be in hydrologic soil group D.

Runoff Curve Number (CN)

The CN for the existing pervious areas is based on a land cover of "Open space" with good ground cover and HSG D as identified in SCS TR-55. The CN for existing pervious areas is 80. The CN for impervious surface is 98. The CN for open water/pond is 100.

Time of Concentration (Tc)

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

Pre-Developed Discharge Rate:

The allowable discharge rates to receiving nodes EX. OFFSITE W, and EX. HULL AVE were determined by delineating the basins on the site, estimating the times of concentration, estimating the CN, verifying the applicable rainfall depth, and applying the NRCS Type II Florida-modified rainfall distributions. The ICPR v3.10 software was used to simulate the hydrology & hydraulics of the stormwater runoff.

Nutrient Impairment

The project lies in WBID 2641-Unnamed Branch and WBID 2631-Unnamed Ditch, which do not appear on FDEP's verified nutrient-impaired waters list. Net improvement of nutrient discharge is not required.

Floodplain:

FEMA Flood Insurance Rate Map 12127C0203K shows parts of the project site lying in Flood Zone AE (EL 26). Compensation for encroachments into the existing floodplain is required.

Wetlands:

Wetlands and surface have been identified and delineated within the project site. All wetlands and surface waters are shown on the project survey and construction plans.

POST-DEVELOPMENT CONDITIONS:

The property is proposed to be developed as a fuel distribution terminal. The proposed improvements include onsite stormwater detention ponds that can accommodate the treatment, attenuation and floodplain requirements for runoff from the proposed development.

Curve Number (CN):

The proposed runoff curve numbers for the development were calculated as a weighted average based on the proposed land coverage of impervious, pervious and pond areas. The same runoff curve numbers for pervious, impervious, and water surface that were used in the Existing Condition analysis were also used in the Proposed Condition analysis. See attached calculations.

Basins:

The proposed development area will be divided into three basins:

- <u>PR. BASIN 1A</u> will drain into pond PR. POND 1 located on the east side of the property. PR. POND 1 will outfall into Hull Road.
- <u>PR. BASIN 1B</u> will drain into pond PR. POND 3 located on the north side of the property. PR. POND 3 will outfall into Wetland W-1 on the west side of the property.
- <u>PR. BASIN 2</u> will drain into pond PR. POND 2 located on the south side of the property. PR. POND 2 will outfall into Wetland W-1 on the west side of the property.

Water Quality Treatment:

The detention ponds must recover one-half of the required treatment volume between 24 and 30 hours following a storm event. No more than one-half of the treatment volume shall be discharged within the first 24 hours, unless the orifice needs to be smaller than 3-inch diameter to comply with the required timing. The Ormond Beach Terminal project will have one drawdown orifice. It will be larger than 3 inch diameter, and will outfall into the Hull Rd swale.

Post Developed Discharge Rate:

The proposed impervious development areas will drain to the proposed wet detention ponds, then discharge to the existing swale along Hull Road and into existing Wetland W-1 located on the west side of the property. The storm routing simulations verify that the Proposed 25-yr, 24-hr flow rates into the receiving waters will not exceed the Existing 25-yr, 24-hr rates of flow to those receiving waters.

Wetland:

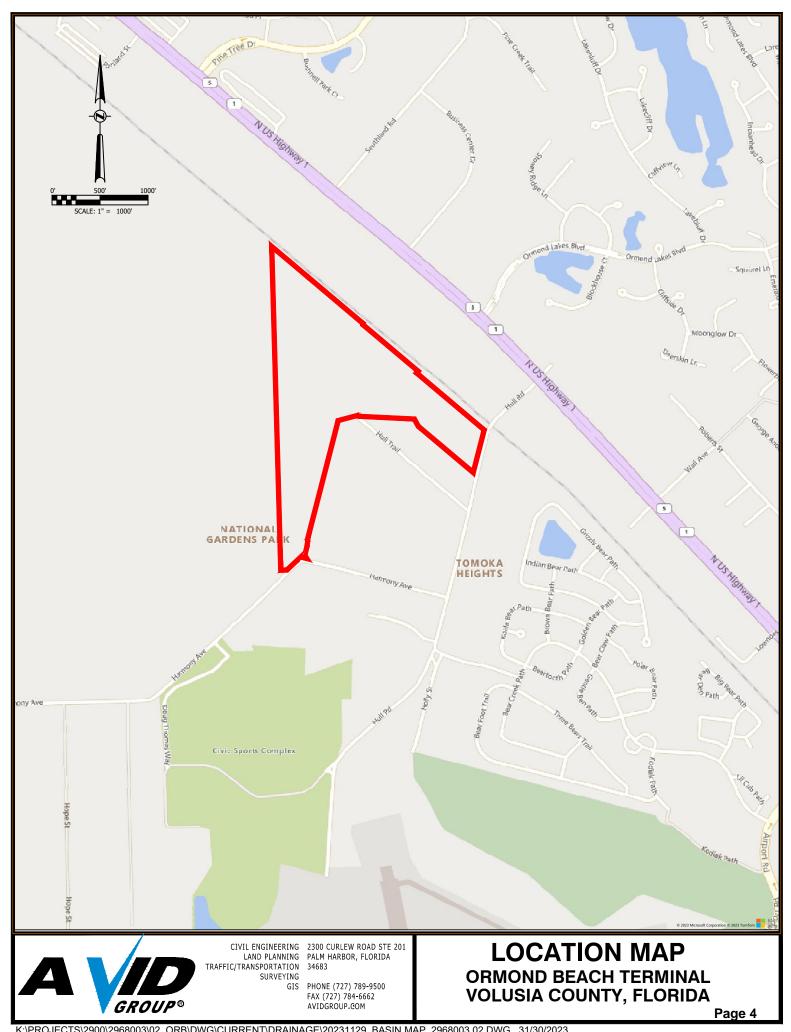
As depicted on the enclosed survey, wetlands were delineated on-site by the project environmental scientist – Atlantic Ecological Services, LLC. Mitigation for impacts is required.

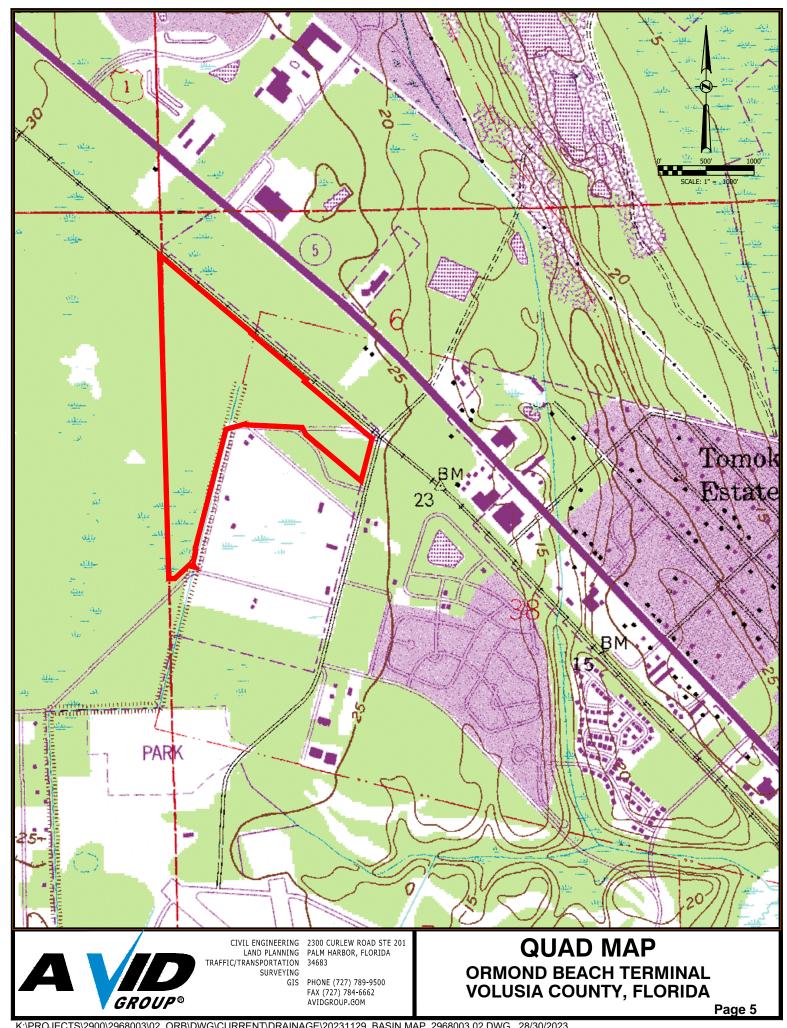
Floodplain

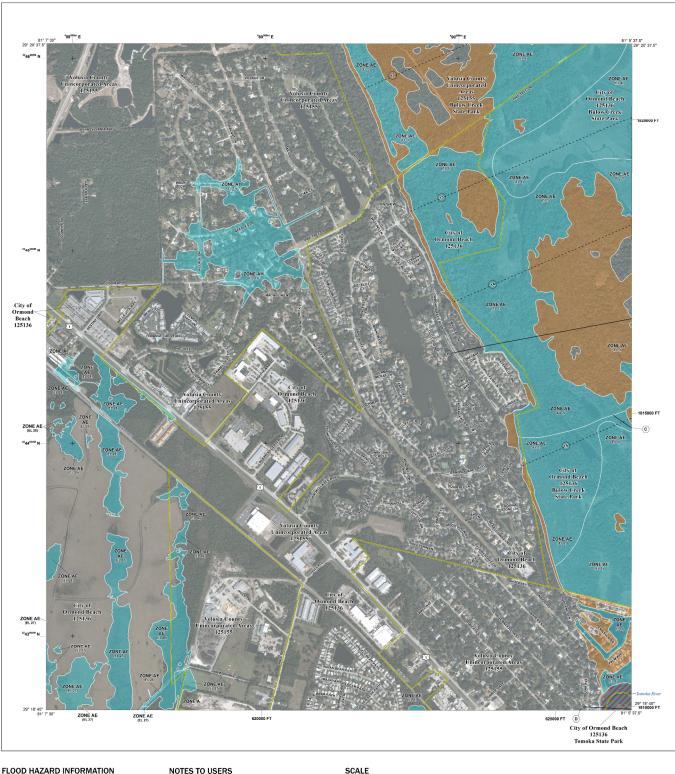
A portion of the existing floodplain volume on the site will be encroached by the proposed development. A cup-for-cup floodplain compensation analysis is required.

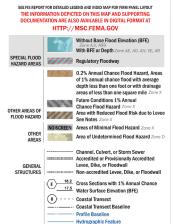
CONCLUSION:

The proposed surface water management system has been designed to meet or exceed the requirements of Volusia County and FDEP.





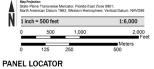




Base Flood Elevation Line (BFE) Limit of Study
 Jurisdiction Boundar

NOTES TO USERS

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above. For community and countywide map dates refer to the Flood insurance Study report for this jurisdiction. To determine if bood insurance is available in this community, contact your insurance agent or call the National Flood insurance Program at 1 = 000 - 503 - 5020.



0063 0202 *0206 0200 0184 0204 0192 0211 0212 0216 0193 0194 0218 0214

NATIONAL FLOOD INSURANCE PROGRAM

VOLUSIA COUNTY, FLORIDA PANEL 203 OF 930



anel	Contains:	
COMN	IUNITY	N
ORMO	O BEACH, CITY OF	1

National Flood Insurance Program

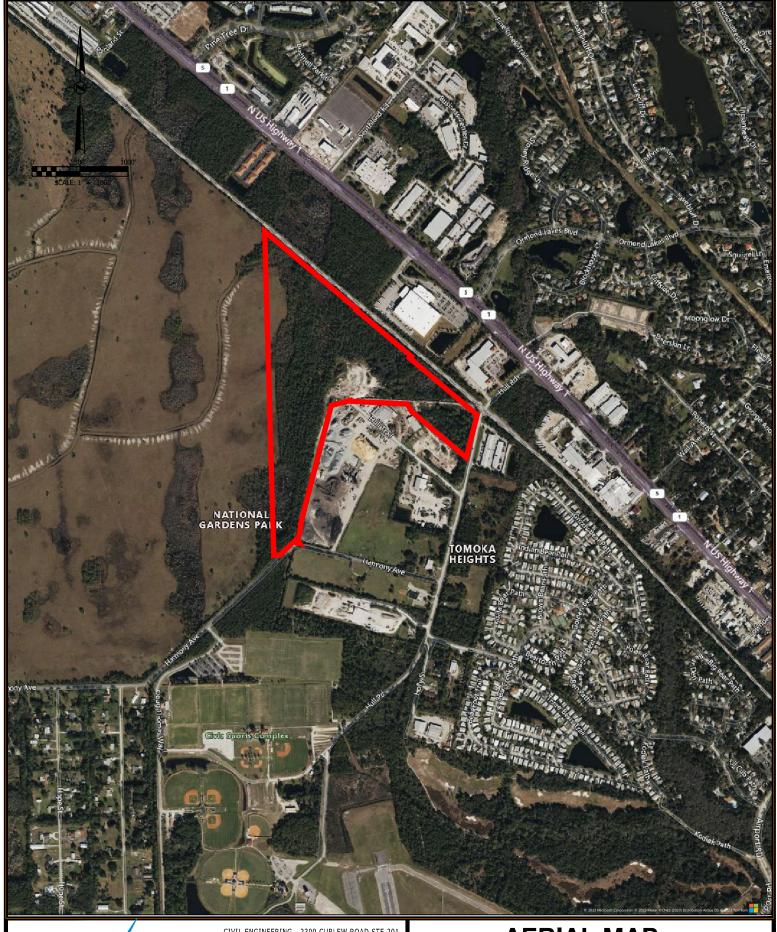
E FEMA

VERSION NUMBER 2.3.3.2 12127 **Page** 6 MAP REVISED September 29, 2017



Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
29	Immokalee sand	B/D	10.4	18.2%
30	Immokalee sand, depressional	B/D	15.9	27.8%
32	Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes	A/D	24.7	43.0%
33	Myakka fine sand, frequently ponded, 0 to 1 percent slopes	A/D	0.2	0.3%
34	Myakka-St. Johns complex	A/D	6.2	10.8%
Totals for Area of Inter	rest	1	57.3	100.0%





CIVIL ENGINEERING 2300 CURLEW ROAD STE 201
LAND PLANNING PALM HARBOR, FLORIDA
34683
SURVEYING
GIS PHONE (727) 789-9500

PHONE (727) 789-9500 FAX (727) 784-6662 AVIDGROUP.COM

AERIAL MAP ORMOND BEACH TERMINAL VOLUSIA COUNTY, FLORIDA

Page 9



PROJECT NAME: ORMOND BEACH TERMINAL 30-Nov-23

PROJECT #: 2968003.02 05:13 PM

FILE NAME: K:\Projects\2900\2968003\02_ORB\DOC\Drainage\[20230626_SITEDATA_2968003.02.XLS]SITEDATA

SUMMARY OF GROUND COVER DATA

CONDITION	IMPERVIOUS AREA (ac)	PERVIOUS AREA (ac)	OPEN WATER AREA (ac)	WETLAND AREA (ac)	TOTAL AREA (ac)	WEIGHTED RUNOFF COEFFICIENT	WEIGHTED CN
RUNOFF COEFFICIENT	0.95	0.2	1	0.7			
CN	98	80	100	90			
EX. BASIN 1	0.00	17.34	0.00	2.90	20.24	0.27	81.4
EX. BASIN 2A	0.00	10.95	0.00	3.78	14.73	0.33	82.6
EX. BASIN 2B	0.00	9.58	0.00	0.00	9.58	0.20	80.0
PR. BASIN 1A	15.45	6.62	2.44	0.00	24.51	0.75	93.3
PR. BASIN 1B	11.11	4.76	1.30	0.00	17.17	0.75	93.2
PR. BASIN 2	0.54	2.19	0.13	0.00	2.87	0.38	84.3



ORMOND BEACH TERMINAL AVID PROJECT NO. 2968-003.02

DATE: 1.12.06

TIME OF CONCENTRATION CALCULATION

<u>Pre</u>	<u>devel</u>	oped	Time of	Concentration

		EX.	EX.	EX.		
Overland Flow		BASIN 1	BASIN 2A	BASIN 2B		
Roughness Coefficient	n=	0.24	0.24	0.24		Manning's n (Table 3-1 TR-55 Method)
Flow Length	L=	100	100	100	ft	
2-yr Rainfall	I=	4.5	4.5	4.5	in	
High Elev		27.0	28.6	27.6	ft	
Low Elev		26.0	27.5	27.0	ft	
Land Slope	s=	0.010	0.011	0.006	ft/ft	
Travel Time	$T_1 =$	15.9	15.1	19.6	min	$T_1 = .007 *(nL)0.8 / (P0.5* S0.4)$
Shallow Concentrated Flow						
Flow Length	L=	135	128	321	ft	
High Elev		26.0	27.5	27.0	ft	
Low Elev		25.0	26.6	26.3	ft	
Watercourse Slope	s=	0.007	0.007	0.002	ft/ft	
Velocity	v=	1.4	1.4	0.8	ft/s	Unpaved (Figure 3-1 TR-55 Method)
Travel Time	$T_1 =$	1.6	1.5	7.0	min	$T_2 = L/60 * v$
Main Channel Flow						
Cross Sectional Area	A=	0	0	0	ft^2	
Wetted Perimeter	P=	0.00	0.00	0.00	ft	
Hydraulic Radius	R=	0.00	0.00	0.00	ft	
Channel Slope	s=	0	0	0	ft/ft	
Roughness Coefficient	n=	0	0	0		Manning's n
Computed Velocity	v=	0.000	0.000	0.000	ft/s	Manning's Equation $(V=1.49*(r^2/3)*(s^1/2)/n)$
Flow Length	L=	0	0	0	ft	
Travel Time	$T_3 =$	0.0	0.0	0.0	min	$T_3=L/v$
Time of Concentration	_					
$T_{c} = T_{1} + T_{2} +$	T ₃ =	17.5	16.7	26.6	min	10 MINUTE MINIMUM

NOTE:

From SCS Lag Equation from TR-55 Method.

PROJECT: ORMOND BEACH TERMINAL 04-Dec-23
PROJECT #: 2968003.02 09:53 AM

FILE NAME: K:\Projects\2900\2968003\02_ORB\DOC\Drainage\[20230626_SITEDATA_2968003.

Stage - Storage Calculations

EX. WETLAND 4

Elevation	Area	Area	Incremental Volume	Cumulative Volume
(ft NAVD)	(sq ft)	(acres)	(ac-ft)	(ac-ft)
24.00	2151	0.049		0.000
25.00	51299	1.178	0.614	0.614
26.00	138814	3.187	2.182	2.796
27.00	410338	9.420	6.303	9.099

EX. WETLAND 2&3

Elevation	Area	Area	Incremental Volume	Cumulative Volume
(ft NAVD)	(sq ft)	(acres)	(ac-ft)	(ac-ft)
26.00	80618	1.851		0.000
27.00	313969	7.208	4.529	4.529

PR. POND 1

Elevation	Area	Area	Incremental Volume	Cumulative Volume	Cum. Vol. of Pond 1 & 3
(ft NAVD)	(sq ft)	(acres)	(ac-ft)	(ac-ft)	(ac-ft)
17.00	81219	1.865	0.000	0.000	
22.00	94872	2.178	10.106	10.106	
24.00	106366	2.442	4.620	14.726	0.000
25.00	112264	2.577	2.510	17.236	2.510
26.00	118263	2.715	2.646	19.882	5.156
27.00	124362	2.855	2.785	22.667	9.286
28.00	130562	2.997	2.926	25.593	13.654
29.00	136863	3.142	3.070	28.662	18.262
30.00	143264	3.289	3.215	31.878	23.116
31.00	149765	3.438	3.364	35.241	28.220

CONTRIBUTING AREA	(ac)	44.55	27.10
DEPTH OF	(in)	1.00	2.50
TREATMENT	(111)	1.00	2.50
WATER			
QUALITY	(ac-ft)	3.712	5.646
VOLUME	(cu-ft)	161709	245928
WATER			
QUALITY	(ft)		26.12
ELEVATION			
1/2 WATER			
QUALITY	(ac-ft)		2.823
VOLUME	(cu-ft)		122964

PR. POND 2

Elevation	Area	Area	Incremental Volume	Cumulative Volume
(ft NAVD)	(sq ft)	(acres)	(ac-ft)	(ac-ft)
27.00	5826	0.134	0.000	0.000
28.00	9499	0.218	0.176	0.176
29.00	13608	0.312	0.265	0.441
30.00	17874	0.410	0.361	0.803
31.00	22244	0.511	0.460	1.263

PR. POND 3

Elevation	Area	Area	Incremental Volume	Cumulative Volume
(ft NAVD)	(sq ft)	(acres)	(ac-ft)	(ac-ft)
26.00	56578	1.299		0.000
27.00	60675	1.393	1.346	1.346
28.00	64874	1.489	1.441	2.787
29.00	69173	1.588	1.539	4.326
30.00	73572	1.689	1.638	5.964
31.00	78072	1.792	1.741	7.705

PROJECT: ORMOND BEACH TERMINAL

PROJECT #: 2968003

FILE NAME: K:\Projects\2900\2968003\02_ORB\DOC\Drainage\[20230626_SITEDATA_2968

Calculation of Permanent Pool

]	in.	31.5	Wet Season Rainfall Depth (R) =
	days	153	Length of Wet Season (WS) =
additional 50%	days	21	Residence Time (RT) =
	in./ft	12	Conversion Factor (CF) =

Drainage Area to Pond (DA) = 44.55 ac

Runoff Coefficient (C) = 0.73

Average Flow Rate (FR) = 6.66 ac-in/day

Perm. Pool Volume Required (PPVR) = 11.65 ac-ft

Perm Pool Volume Provided (PPVP) = 14.73 ac-ft

Mean Depth Calculation

PROPOSED

Equations:
$$PPV = \frac{(DA)(C)(R)(RT)}{(WS)(CF)} MD = \frac{PPV}{A_P}$$

Average Flow Rate (FR) = (DA)*(C)*(R)/(WS)

```
Name: PR. POND 1
                              Base Flow(cfs): 0.000
                                                              Init Stage(ft): 26.120
    Group: BASE
                                                              Warn Stage(ft): 0.000
     Type: Stage/Area
     Stage(ft)
                     Area(ac)
        24.000
                        2.4420
        25.000
                        2.5770
        26.000
                        2.7150
        27.000
                        2.8550
        28.000
                       2.9970
        29.000
                        3.1420
        30.000
                        3.2890
        31.000
                        3.4380
     Name: PR. POND 3
                              Base Flow(cfs): 0.000
                                                              Init Stage(ft): 26.120
    Group: BASE
                                                              Warn Stage(ft): 0.000
     Type: Stage/Area
     Stage(ft)
                     Area(ac)
        26.000
        27.000
                        1.3930
        28.000
        29.000
                        1.5880
        30.000
                       1.6890
        31.000
                       1.7920
        Name: CS-1
                                  From Node: PR. POND 1
                                                              Length(ft): 50.00
       Group: BASE
                                    To Node: PR. HULL ROAD
                                                                     Count: 3
              UPSTREAM
                             DOWNSTREAM
                                                         Friction Equation: Automatic
                                                        Solution Algorithm: Automatic
    Geometry: Circular
                             Circular
     Span(in): 24.00
                             24.00
                                                                     Flow: Both
    Rise(in): 24.00
                              24.00
                                                        Entrance Loss Coef: 0.500
   Invert(ft): 24.000
                              23.500
                                                         Exit Loss Coef: 1.000
  Manning's N: 0.012000
                              0.012000
                                                          Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000
                             0.000
                                                          Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000
                             0.000
Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall
Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall
*** Weir 1 of 2 for Drop Structure CS-1 ***
                                                                                 TABLE
                 Count: 1
                                                Bottom Clip(in): 0.000
                   Type: Vertical: Mavis
                                                   Top Clip(in): 0.000
              Geometry: Circular
                                                 Weir Disc Coef: 3.200
                                              Orifice Disc Coef: 0.600
               Span(in): 7.00
                                                     Invert(ft): 24.000
                                               Control Elev(ft): 24.000
              Rise(in): 7.00
*** Weir 2 of 2 for Drop Structure CS-1 ***
                                                                                 TABLE
                                              Bottom Clip(in): 0.000
                   Type: Vertical: Mavis
                                                   Top Clip(in): 0.000
                  Flow: Both
                                                 Weir Disc Coef: 3.200
              Flow: Both Weir Disc Coef: 3.200
Geometry: Rectangular Orifice Disc Coef: 0.600
               Span(in): 122.00
                                                     Invert(ft): 27.280
                                             Control Elev(ft): 27.280
              Rise(in): 999.00
```

Bot Clip(in): 0.000

 Name:
 PIPE 2
 From Node:
 PR. POND 1
 Length(ft):
 2000.00

 Group:
 BASE
 To Node:
 PR. POND 3
 Count:
 1

Friction Equation: Automatic UPSTREAM DOWNSTREAM Solution Algorithm: Automatic Geometry: Circular Span(in): 36.00 Circular Flow: Both 36.00 Entrance Loss Coef: 0.50 Rise(in): 36.00 36.00 Exit Loss Coef: 1.00 Invert(ft): 20.000 25.000 Bend Loss Coef: 0.00 Manning's N: 0.012000 0.012000 Outlet Ctrl Spec: Use dc or tw Top Clip(in): 0.000 0.000 Inlet Ctrl Spec: Use dc

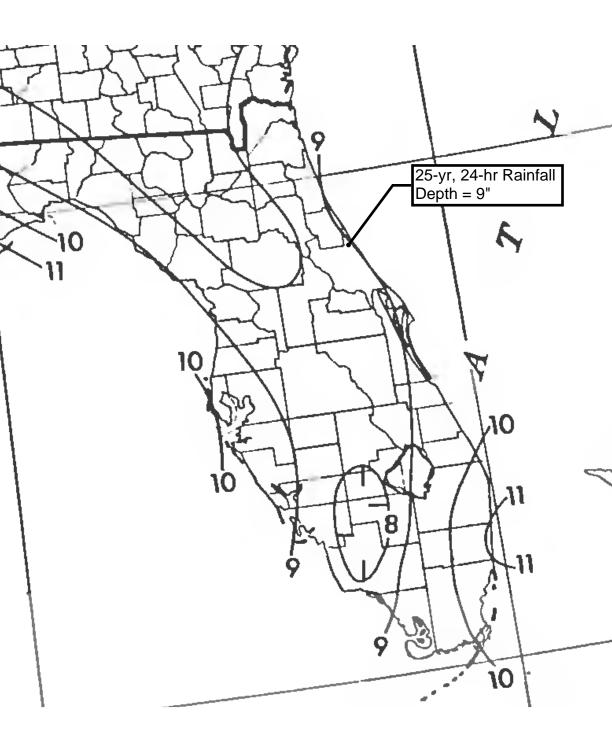
Stabilizer Option: None

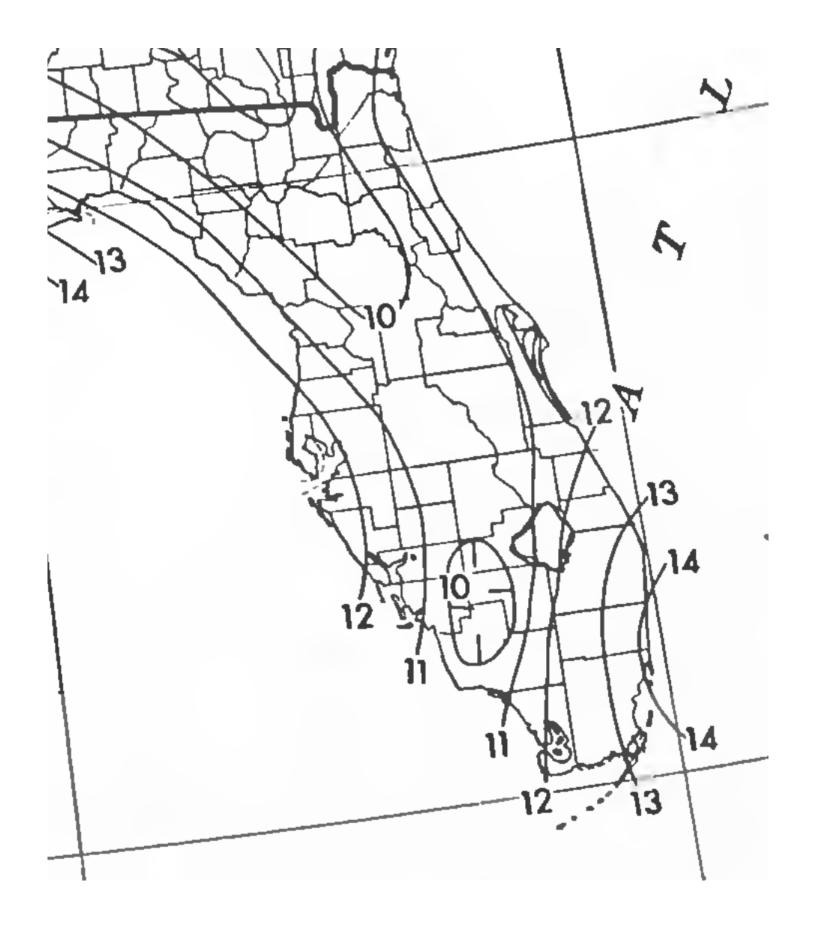
Upstream FHWA Inlet Edge Description: Circular Concrete: Square edge w/ headwall

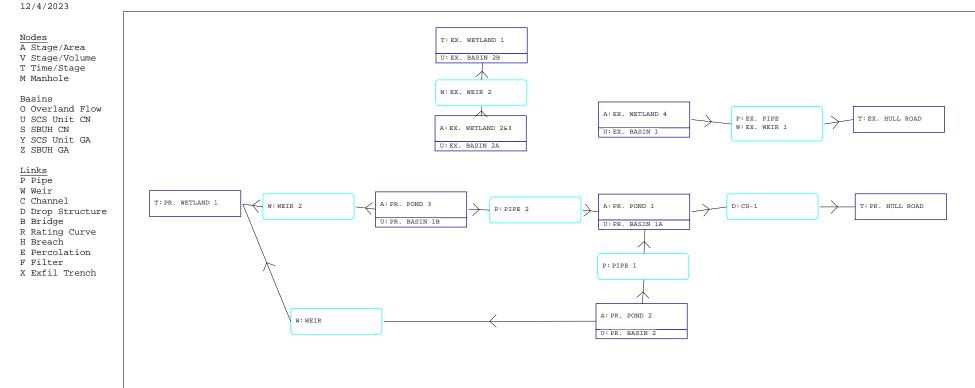
0.000

Downstream FHWA Inlet Edge Description: Circular Concrete: Square edge w/ headwall

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af	
TREAT	PR. POND 1	BASE	0.00	26.12	0.00	119835	0.00	1.71	0.0	0.0	
TREAT	PR. POND 1	BASE	1.00	26.08	0.00	119607	0.00	1.14	0.0	0.1	
TREAT	PR. POND 1	BASE	2.00	26.05	0.00	119394	0.00	1.13	0.0	0.2	
TREAT	PR. POND 1	BASE	3.02	26.01	0.00	119179	0.00	1.12	0.0	0.3	
TREAT	PR. POND 1	BASE	4.00	25.98	0.00	118949	0.00	1.76	0.0	0.4	
TREAT	PR. POND 1	BASE	5.00	25.93	0.00	118648	0.00	1.78	0.0	0.6	
TREAT	PR. POND 1	BASE	6.00	25.88	0.00	118350	0.00	1.72	0.0	0.7	
TREAT	PR. POND 1	BASE	7.00	25.83	0.00	118055	0.00	1.67	0.0	0.9	
TREAT	PR. POND 1	BASE	8.00	25.79	0.00	117762	0.00	1.62	0.0	1.0	
TREAT	PR. POND 1	BASE	9.00	25.74	0.00	117471	0.00	1.50	0.0	1.1	
TREAT	PR. POND 1	BASE	10.00	25.70	0.00	117183	0.00	1.50	0.0	1.2	
TREAT	PR. POND 1	BASE	11.00	25.65	0.00	116897	0.00	1.46	0.0	1.4	
TREAT	PR. POND 1	BASE	12.00	25.61	0.00	116613	0.00	1.44	0.0	1.5	
TREAT	PR. POND 1	BASE	13.00	25.56	0.00	116331	0.00	1.41	0.0	1.6	
TREAT	PR. POND 1	BASE	14.00	25.52	0.00	116052	0.00	1.39	0.0	1.7	
TREAT	PR. POND 1	BASE	15.00	25.48	0.00	115774	0.00	1.37	0.0	1.8	
TREAT	PR. POND 1	BASE	16.00	25.43	0.00	115499	0.00	1.35	0.0	1.9	
TREAT	PR. POND 1	BASE	17.00	25.39	0.00	115227	0.00	1.32	0.0	2.1	
TREAT	PR. POND 1	BASE	18.00	25.35	0.00	114958	0.00	1.29	0.0	2.2	
TREAT	PR. POND 1	BASE	19.00	25.31	0.00	114691	0.00	1.27	0.0	2.3	
TREAT	PR. POND 1	BASE	20.00	25.27	0.00	114428	0.00	1.24	0.0	2.4	
TREAT	PR. POND 1	BASE	21.00	25.23	0.00	114166	0.00	1.22	0.0	2.5	
TREAT	PR. POND 1	BASE	22.00	25.19	0.00	113907	0.00	1.19	0.0	2.6	
TREAT	PR. POND 1	BASE	23.00	25.16	0.00	113649	0.00	1.17	0.0	2.7	
TREAT	PR. POND 1	BASE	24.00	25.12	0.00	113395	0.00	1.15	0.0	2.8	
TREAT	PR. POND 1	BASE	25.00	25.08	0.00	113144	0.00	1.13	0.0	2.9	
TREAT	PR. POND 1	BASE	26.00	25.05	0.00	112898	0.00	1.10	0.0	3.0	
TREAT	PR. POND 1	BASE	27.00	25.01	0.00	112659	0.00	1.08	0.0	3.0	
TREAT	PR. POND 1	BASE	28.00	24.98	0.00	112428	0.00	1.06	0.0	3.1	
TREAT	PR. POND 1	BASE	29.00	24.95	0.00	112208	0.00	1.04	0.0	3.2	
TREAT	PR. POND 1	BASE	30.00	24.91	0.00	111996	0.00	1.01	0.0	3.3	
TREAT	PR. POND 1	BASE	31.00	24.88	0.00	111776	0.00	0.99	0.0	3.4	
TREAT	PR. POND 1	BASE	32.00	24.85	0.00	111565	0.00	0.96	0.0	3.5	
TREAT	PR. POND 1	BASE	33.00	24.82	0.00	111364	0.00	0.93	0.0	3.5	
TREAT	PR. POND 1	BASE	34.00	24.79	0.00	111172	0.00	0.91	0.0	3.6	
TREAT	PR. POND 1	BASE	35.00	24.76	0.00	110990	0.00	0.88	0.0	3.7	
TREAT	PR. POND 1	BASE	36.00	24.73	0.00	110815	0.00	0.85	0.0	3.8	
TREAT	PR. POND 1	BASE	37.00	24.70	0.00	110648	0.00	0.83	0.0	3.8	
TREAT	PR. POND 1	BASE	38.00	24.68	0.00	110490	0.00	0.77	0.0	3.9	
TREAT	PR. POND 1	BASE	39.00	24.65	0.00	110344	0.00	0.72	0.0	4.0	
TREAT	PR. POND 1	BASE	40.00	24.63	0.00	110208	0.00	0.67	0.0	4.0	
TREAT	PR. POND 1	BASE	40.01	24.63	0.00	110208	0.00	0.67	0.0	4.0	







______ ______ Node: EX. WETLAND 4 Name: EX. BASIN 1 Status: Onsite Type: SCS Unit Hydrograph CN Group: BASE Peaking Factor: 484.0 Unit Hydrograph: Uh484 Storm Duration(hrs): 0.00
Time of Conc(min): 17.50
Time Shift(hrs): 0.00 Rainfall File: Rainfall Amount(in): 0.000 Area(ac): 20.240 Curve Number: 81.40 Max Allowable Q(cfs): 999999.000 DCIA(%): 0.00 Name: EX. BASIN 2A Node: EX. WETLAND 2&3 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN Group: BASE Peaking Factor: 484.0 Unit Hydrograph: Uh484 Storm Duration(hrs): 0.00 Time of Conc(min): 16.70 Time Shift(hrs): 0.00 Area(ac): 14.730 rve Number: 82.60 DCIA(%): 0 00 Rainfall File: Rainfall Amount(in): 0.000 Curve Number: 82.60 Max Allowable Q(cfs): 999999.000 Name: EX. BASIN 2B Node: EX. WETLAND 1 Status: Onsite Group: BASE Type: SCS Unit Hydrograph CN Group: BASE Unit Hydrograph: Uh484 Peaking Factor: 484.0 Storm Duration(hrs): 0.00 Time of Conc(min): 26.60 Time Shift(hrs): 0.00 Rainfall File: Amount(in): 0.000 Area(ac): 9.580 urve Number: 80.00 DCIA(%): 0.00 Rainfall Amount(in): 0.000 Curve Number: 80.00 Max Allowable Q(cfs): 999999.000 Status: Onsite Name: PR. BASIN 1A Node: PR. POND 1 Group: BASE Type: SCS Unit Hydrograph CN Group: BASE Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 24.510 Time Shift(hrs): 0.00
Curve Number: 93.30 Max Allowable Q(cfs): 999999.000 DCIA(%): 0.00 Name: PR. BASIN 1B Node: PR. POND 3 Status: Onsite Group: BASE Type: SCS Unit Hydrograph CN Unit Hydrograph: Uh484 Peaking Factor: 484.0 Rainfall File: Storm Duration(hrs): 0.00 Rainfall Amount(in): 0.000 Time of Conc(min): 10.00 Area(ac): 17.170 Time Shift(hrs): 0.00 Max Allowable Q(cfs): 999999.000 Curve Number: 93.20 DCIA(%): 0.00 Name: PR. BASIN 2 Node: PR. POND 2 Group: BASE Type: SCS Unit Hydrograph CN Status: Onsite Peaking Factor: 484.0 Unit Hydrograph: Uh484 Rainfall File:
Rainfall Amount(in): 0.000 Storm Duration(hrs): 0.00 Time of Conc(min): 10.00 Time Shift(hrs): 0.00 Area(ac): 2.870 Max Allowable Q(cfs): 999999.000 Curve Number: 84.30 DCIA(%): 0.00

Name: EX. HULL ROA Group: BASE Type: Time/Stage	D	Base Flow(cfs): 0.000	<pre>Init Stage(ft): 25.000 Warn Stage(ft): 0.000</pre>
Time(hrs) St			
0.00	24.000 24.000		
Name: EX. WETLAND Group: BASE Type: Time/Stage	1	Base Flow(cfs): 0.000	Init Stage(ft): 26.000 Warn Stage(ft): 0.000
JMED AT FEMA 100YR BF			
		Base Flow(cfs): 0.000	Init Stage(ft): 26.000 Warn Stage(ft): 0.000
Stage(ft) A			
26.000	1.8510 7.2080		
		Base Flow(cfs): 0.000	Init Stage(ft): 24.000 Warn Stage(ft): 0.000
Stage(ft) A			
24.000 25.000 26.000	0.0490 1.1780 3.1870 9.4200		
Name: PR. HULL ROA Group: BASE Type: Time/Stage		Base Flow(cfs): 0.000	Init Stage(ft): 24.000 Warn Stage(ft): 0.000
Time(hrs) St			
	24.000 24.000		
Name: PR. POND 1 Group: BASE Type: Stage/Area		Base Flow(cfs): 0.000	Init Stage(ft): 24.000 Warn Stage(ft): 0.000
Stage(ft) A	rea(ac)		
24.000 25.000 26.000 27.000 28.000 29.000	2.4420 2.5770 2.7150 2.8550 2.9970 3.1420 3.2890 3.4380		
Name: PR. POND 2 Group: BASE		Base Flow(cfs): 0.000	Init Stage(ft): 27.000 Warn Stage(ft): 0.000

Interconnected Channel and Pond Routing Model (ICPR) ©2002 Streamline Technologies, Inc.

Type: Stage/Area

Area(ac)	Stage(ft)
0.1340	27.000
0.2180	28.000
0.3120	29.000
0.4100	30.000
0.5110	31.000

Name: PR. POND 3 Base Flow(cfs): 0.000 Init Stage(ft): 26.000 Group: BASE Warn Stage(ft): 0.000

Type: Stage/Area

Stage(ft)	Area(ac)
26.000 27.000 28.000 29.000 30.000	1.2990 1.3930 1.4890 1.5880 1.6890
31.000	1.7920

Name: PR. WETLAND 1 Base Flow(cfs): 0.000 Init Stage(ft): 26.000 Group: BASE Warn Stage(ft): 0.000 Type: Time/Stage

ASSUMED AT FEMA 100YR BFE

Time(hrs)	Stage(ft)
0.00	26.000
24.00	26.000

Name: EX. WEIR 2 Group: BASE Encroachment: No

CROSS SECTION DATA IS FROM ON SITE TOPO

Manning's N	Elevation(ft)	Station(ft)
2.600000	27.460	0.000
2.600000	26.640 27 100	107.000

______ ______

Name: EX. PIPE From Node: EX. WETLAND 4 Length(ft): 13.00 Group: BASE To Node: EX. HULL ROAD Count: 1

Friction Equation: Automatic UPSTREAM DOWNSTREAM
Geometry: Circular Circular
Span(in): 16.00 16.00 Solution Algorithm: Automatic Flow: Both Span(in): 16.00 Entrance Loss Coef: 0.50 Exit Loss Coef: 1.00 Bend Loss Coef: 0.00 Outlet Ctrl Spec: Use dc or tw Inlet Ctrl Spec: Use dc Stabilizer Option: None

Upstream FHWA Inlet Edge Description: Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description: Circular Concrete: Square edge w/ headwall

PIPE DATA IS FROM ON SITE TOPO

Length(ft): 2040.00 Name: PIPE 1 From Node: PR. POND 2

Group: BASE To Node: PR. POND 1 Count: 1

Friction Equation: Automatic UPSTREAM DOWNSTREAM Solution Algorithm: Automatic Flow: Both Geometry: Circular Circular Entrance Loss Coef: 0.50 Span(in): 36.00 36.00 Rise(in): 36.00 36.00 Exit Loss Coef: 1.00 Invert(ft): 20.000 Bend Loss Coef: 0.00 25.000 Manning's N: 0.012000 Outlet Ctrl Spec: Use dc or tw 0.012000 Top Clip(in): 0.000 0.000 Inlet Ctrl Spec: Use dc Bot Clip(in): 0.000 Stabilizer Option: None Upstream FHWA Inlet Edge Description: Circular Concrete: Square edge w/ headwall Downstream FHWA Inlet Edge Description: Circular Concrete: Square edge w/ headwall
 Name:
 PIPE 2
 From Node:
 PR. POND 3
 Length(ft):
 2000.00

 Group:
 BASE
 To Node:
 PR. POND 1
 Count:
 1
 Group: BASE Friction Equation: Automatic UPSTREAM DOWNSTREAM Solution Algorithm: Automatic Geometry: Circular Circular 36.00 Circular Flow: Both Entrance Loss Coef: 0.50 Exit Loss Coef: 1.00 Bend Loss Coef: 0.00 Rise(in): 36.00 36.00 Invert(ft): 20.000 25.000 Manning's N: 0.012000 0.012000 Outlet Ctrl Spec: Use dc or tw Top Clip(in): 0.000 0.000 Inlet Ctrl Spec: Use dc Bot Clip(in): 0.000 0.000 Stabilizer Option: None Upstream FHWA Inlet Edge Description: Circular Concrete: Square edge w/ headwall Downstream FHWA Inlet Edge Description: Circular Concrete: Square edge w/ headwall ______ ______ From Node: PR. POND 1 Length(ft): 50.00 Name: CS-1 To Node: PR. HULL ROAD Group: BASE Count: 3 UPSTREAM DOWNSTREAM Friction Equation: Automatic Circular Geometry: Circular Solution Algorithm: Automatic Span(in): 24.00 24.00 Flow: Both Rise(in): 24.00 24.00 Entrance Loss Coef: 0.500 Invert(ft): 24.000 23.500 Exit Loss Coef: 1.000 0.012000 Manning's N: 0.012000 Outlet Ctrl Spec: Use dc or tw Top Clip(in): 0.000 Bot Clip(in): 0.000 0.000 Inlet Ctrl Spec: Use dc 0.000 Solution Incs: 10 Upstream FHWA Inlet Edge Description: Circular Concrete: Square edge w/ headwall Downstream FHWA Inlet Edge Description: Circular Concrete: Square edge w/ headwall *** Weir 1 of 2 for Drop Structure CS-1 *** TABLE Bottom Clip(in): 0.000 Top Clip(in): 0.000 Weir Disc Coef: 3.200 Count: 1 Type: Vertical: Mavis Flow: Both Geometry: Circular Orifice Disc Coef: 0.600 Span(in): 7.00 Invert(ft): 24.000 Rise(in): 7.00 Control Elev(ft): 24.000 *** Weir 2 of 2 for Drop Structure CS-1 *** TABLE Bottom Clip(in): 0.000 Count: 1 Type: Vertical: Mavis Top Clip(in): 0.000 Flow: Both Geometry: Rectangular Weir Disc Coef: 3.200 Orifice Disc Coef: 0.600

```
Span(in): 122.00
                                            Invert(ft): 27.000
            Rise(in): 999.00
                                       Control Elev(ft): 27.000
______
       Name: EX. WEIR 1
                            From Node: EX. WETLAND 4
      Group: BASE
                            To Node: EX. HULL ROAD
       Flow: Both
                               Count: 1
                          Geometry: Rectangular
       Type: Vertical: Mavis
                Span(in): 3324.00
                Rise(in): 999.00
              Invert(ft): 26.000
     Control Elevation(ft): 26.000
                                      TABLE
          Bottom Clip(in): 0.000
             Top Clip(in): 0.000
       Weir Discharge Coef: 3.200
    Orifice Discharge Coef: 0.600
      Name: EX. WEIR 2 From Node: EX. WETLAND 2&3
Group: BASE To Node: EX. WETLAND 1
Flow: Both Count: 1
      Group: BASE
       Flow: Both
                                Count: 1
       Type: Vertical: Fread Geometry: Irregular
                   XSec: EX. WEIR 2
              Invert(ft): 26.640
     Control Elevation(ft): 26.640
    Struct Opening Dim(ft): 9999.00
                                      TABLE
          Bottom Clip(ft): 0.000
            Top Clip(ft): 0.000
       Weir Discharge Coef: 2.600
    Orifice Discharge Coef: 0.600
      Name: WEIR From Node: PR. POND 2
Group: BASE To Node: PR. WETLANI
                            To Node: PR. WETLAND 1
                               Count: 1
       Flow: Both
       Type: Vertical: Mavis
                            Geometry: Rectangular
                Span(in): 172.00
                Rise(in): 999.00
              Invert(ft): 27.500
     Control Elevation(ft): 27.500
                                      TABLE
          Bottom Clip(in): 0.000
             Top Clip(in): 0.000
       Weir Discharge Coef: 3.200
    Orifice Discharge Coef: 0.600
       Name: WEIR 2 From Node: PR. POND 3
                            To Node: PR. WETLAND 1
      Group: BASE
       Flow: Both
                               Count: 1
       Type: Vertical: Mavis Geometry: Rectangular
                Span(in): 85.00
                Rise(in): 999.00
              Invert(ft): 27.000
     Control Elevation(ft): 27.000
                                      TABLE
          Bottom Clip(in): 0.000
             Top Clip(in): 0.000
       Weir Discharge Coef: 3.200
    Orifice Discharge Coef: 0.600
______
--- Hydrology Simulations -----
______
       Name: 100yr 24hr
```

```
Filename: K:\Projects\2900\2968003\02_ORB\Speciality Programs\100yr 24hr.R32
     Override Defaults: Yes
   Storm Duration(hrs): 24.00
        Rainfall File: Flmod
   Rainfall Amount(in): 11.00
         Print Inc(min)
Time(hrs)
30 000
            5.00
      Name: 25YR-24HR
    Filename: K:\Projects\2900\2968003\02_ORB\Speciality Programs\25YR-24HR.R32
     Override Defaults: Yes
   Storm Duration(hrs): 24.00
        Rainfall File: Flmod
   Rainfall Amount(in): 9.00
Time(hrs)
             Print Inc(min)
30 000
            5 00
______
______
       Name: 100yr 24hr
                             Hydrology Sim: 100yr 24hr
    Filename: K:\Projects\2900\2968003\02_ORB\Speciality Programs\100yr 24hr.I32
                                         Patch: No
     Execute: Yes
 Alternative: No
      Max Delta Z(ft): 1.00
                                        Delta Z Factor: 0 00500
   Time Step Optimizer: 10.000
      Start Time(hrs): 0.000
                                          End Time(hrs): 24.00
    Min Calc Time(sec): 0.5000
                                    Max Calc Time(sec): 60.0000
      Boundary Stages:
                                         Boundary Flows:
Time(hrs)
            Print Inc(min)
999.000
            15.000
Group
            Run
BASE
            Yes
       Name: 25YR-24HR
                            Hydrology Sim: 25YR-24HR
    Filename: K:\Projects\2900\2968003\02_ORB\Speciality Programs\25YR-24HR.I32
    Execute: Yes
                     Restart: No
                                         Patch: No
 Alternative: No
      Max Delta Z(ft): 1.00
                                        Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
      Start Time(hrs): 0.000
                                          End Time(hrs): 24.00
    Min Calc Time(sec): 0.5000
                                    Max Calc Time(sec): 60.0000
      Boundary Stages:
                                         Boundary Flows:
           Print Inc(min)
Time(hrs)
            15.000
999.000
            Run
Group
BASE
      Name: TREAT
                            Hydrology Sim:
    Filename: K:\Projects\2900\2968003\02_ORB\Speciality Programs\TREAT.I32
    Execute: No
                      Restart: No
                                         Patch: No
 Alternative: No
      Max Delta Z(ft): 1.00
                                         Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
```

ORMOND BEACH TERMINAL PRE-POST MODEL 12/4/2023

Start Time(hrs): 0.000 Min Calc Time(sec): 0.5000 Boundary Stages: End Time(hrs): 40.00
Max Calc Time(sec): 60.0000
Boundary Flows:

Time(hrs) Print Inc(min)

999.000 60.000

Group Run
----BASE Yes

Name: Group:	EX. BASIN 1 BASE	EX. BASIN 2A BASE	EX. BASIN 2B BASE	PR. BASIN 1A BASE	PR. BASIN 1B BASE
Simulation:		100yr 24hr	100yr 24hr	100yr 24hr	100yr 24hr
	EX. WETLAND 4	EX. WETLAND 2&3		PR. POND 1	PR. POND 3
Type:		SCS	SCS	SCS	SCS
Unit Hydrograph: Peaking Factor:		Uh484 484.0	Uh484 484.0	Uh484 484.0	Uh484 484.0
Spec Time Inc(min):		2.23	3.55	1.33	1.33
Comp Time Inc(min):		2.23	3.55	1.33	1.33
Rain File:		Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	11.000	11.000	11.000	11.000	11.000
Duration(hrs):		24.00	24.00	24.00	24.00
Status: TC(min):		Onsite 16.70	Onsite 26.60	Onsite 10.00	Onsite 10.00
Time Shift(hrs):		0.00	0.00	0.00	0.00
Area(ac):		14.730	9.580	24.510	17.170
Vol of Unit Hyd(in):		1.000	1.000	1.000	1.000
Curve Num:		82.600	80.000	93.300	93.200
DCIA(%):		0.000	0.000	0.000	0.000
Time Max(hrs):		12.06	12.18	12.02	12.02
Flow Max(cfs): Runoff Volume(in):		99.21 8.807	53.79 8.469	194.72 10.169	136.35 10.157
Runoff Volume(ft3):		470930	294525	904769	633046
Nama :	PR. BASIN 2	EV DACIN 1	EX. BASIN 2A	EX. BASIN 2B	PR. BASIN 1A
Group:		EX. BASIN 1 BASE	BASE	BASE	BASE
Simulation:		25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR
	PR. POND 2	EX. WETLAND 4	EX. WETLAND 2&3	EX. WETLAND 1	PR. POND 1
Type:		SCS	SCS	SCS	SCS
Unit Hydrograph:		Uh484	Uh484	Uh484	Uh484
Peaking Factor: Spec Time Inc(min):		484.0 2.33	484.0 2.23	484.0 3.55	484.0 1.33
Comp Time Inc(min):		2.33	2.23	3.55	1.33
Rain File:		Flmod	Flmod	Flmod	Flmod
Rain Amount(in):		9.000	9.000	9.000	9.000
Duration(hrs):		24.00	24.00	24.00	24.00
Status:		Onsite	Onsite	Onsite	Onsite
TC(min): Time Shift(hrs):		17.50 0.00	16.70 0.00	26.60 0.00	10.00
Area(ac):		20.240	14.730	9.580	24.510
Vol of Unit Hyd(in):		1.001	1.000	1.000	1.000
Curve Num:	84.300	81.400	82.600	80.000	93.300
DCIA(%):		0.000	0.000	0.000	0.000
Time Max(hrs):		12.06	12.06	12.18	12.02
Flow Max(cfs): Runoff Volume(in):		104.35 6.731	78.46 6.876	42.14 6.559	158.41 8.181
Runoff Volume(ft3):		494513	367658	228103	727891
N 1	DD DAGIN 1D	PR. BASIN 2			
Group:	PR. BASIN 1B	BASE			
Simulation:		25YR-24HR			
Node:	PR. POND 3	PR. POND 2			
Type:		SCS			
Unit Hydrograph:		Uh484			
Peaking Factor: Spec Time Inc(min):		484.0 1.33			
Comp Time Inc(min):		1.33			
Rain File:		Flmod			
Rain Amount(in):		9.000			
Duration(hrs):		24.00			
Status:		Onsite			
TC(min): Time Shift(hrs):		10.00			
Area(ac):		2.870			
Vol of Unit Hyd(in):		1.000			
Curve Num:		84.300			
DCIA(%):		0.000			
Time Max(hrs):		12.02			
Flow Max(cfs): Runoff Volume(in):		17.19 7.086			
Runoff Volume(ft3):		73826			

			Max Time	Max	Warning N	Max Delta	Max Surf	Max Time	Max	Max Time	Max
Name	Group	Simulation	Stage	Stage	Stage	Stage	Area	Inflow	Inflow	Outflow	Outflow
			hrs	ft	ft	ft	ft2	hrs	cfs	hrs	cfs
EX. HULL ROAD	BASE	100yr 24hr	0.00	24.00	0.00	-1.0000	1	12.20	107.04	0.00	0.00
EX. WETLAND 1	BASE	100yr 24hr	0.00	26.00	0.00	0.0000	0	12.25	93.84	0.00	0.00
EX. WETLAND 2&3	BASE	100yr 24hr	12.38	27.08	0.00	0.0012	332184	12.08	97.91	12.38	47.68
EX. WETLAND 4	BASE	100yr 24hr	12.20	26.23	0.00	-0.0050	200740	12.08	131.88	12.20	107.04
PR. HULL ROAD	BASE	100yr 24hr	0.00	24.00	0.00	0.0000	0	12.32	70.68	0.00	0.00
PR. POND 1	BASE	100yr 24hr	12.32	28.77	0.00	0.0049	135685	12.00	198.06	12.32	70.68
PR. POND 2	BASE	100yr 24hr	12.11	28.19	0.00	0.0050	10441	12.00	21.50	12.06	17.57
PR. POND 3	BASE	100yr 24hr	12.21	28.99	0.00	0.0050	69295	12.00	136.30	12.18	71.88
PR. WETLAND 1	BASE	100yr 24hr	0.00	26.00	0.00	0.0000	0	12.15	88.81	0.00	0.00
EX. HULL ROAD	BASE	25YR-24HR	0.00	24.00	0.00	-1.0000	1	12.29	68.09	0.00	0.00
EX. WETLAND 1	BASE	25YR-24HR	0.00	26.00	0.00	0.0000	0	12.28	58.15	0.00	0.00
EX. WETLAND 2&3	BASE	25YR-24HR	12.50	26.98	0.00	0.0013	310462	12.08	77.49	12.50	26.24
EX. WETLAND 4	BASE	25YR-24HR	12.29	26.16	0.00	-0.0050	182774	12.08	103.91	12.29	68.09
PR. HULL ROAD	BASE	25YR-24HR	0.00	24.00	0.00	0.0000	0	12.38	48.04	0.00	0.00
PR. POND 1	BASE	25YR-24HR	12.38	28.26	0.00	0.0049	132525	12.00	174.12	12.38	48.04
PR. POND 2	BASE	25YR-24HR	12.24	27.99	0.00	0.0050	9595	12.00	17.11	12.04	11.67
PR. POND 3	BASE	25YR-24HR	12.26	28.52	0.00	0.0050	67264	12.00	110.79	12.22	51.20
PR. WETLAND 1	BASE	25YR-24HR	0.00	26.00	0.00	0.0000	0	12.25	58.06	0.00	0.00



AVID Group
2300 Curlew Road, Suite 201
Palm Harbor, FL 34683
http://www.avidgroup.com
Ph (727) 789-9500

ORMOND BEACH TERMINAL

Civil Site Improvements

Ormond Beach, Florida

Engineer's Opinion of Probable Construction Costs **December 4, 2023**

DESCRIPTION	QUANTITY UNIT UNIT COST	LNO	L S	cost	TOTAL COST	COST
GENERAL						
Survey and Layout	1	ST	\$	100,000,001	\$	100,000.00
Contractor Conditions	1	ST	\$	75,000.00	\$	75,000.00
NPDES Compliance	1	ST	\$	25,000.00	↔	25,000.00
Certified As Built Drawings	_	ST	\$	50,000.00	\$	50,000.00
				Subtotal=	\$	250,000.00
CLEARING AND DEMOLITION						
Clearing and Grubbing	37	AC	\$	7,500.00	&	277,500.00
Stripping - 6"	30,056	ζ	\$	7.50	છ	225,420.00

				Subtotal=	\$	502,920.00
EROSION CONTROL						
Silt Fence	5,011	LF	↔	8.00	ઝ	40,088.00
Ditch Protection	_	EA	\$	5,000.00	\$	5,000.00
Construction Entrance and Maintenance	2	EA	↔	11,550.00	↔	23,100.00
			0,	Subtotal=	\$	68,188.00
EARTH WORK						
Proof Rolling	180,338	SY	₩	0.50	↔	90,169.00
Rough Grading	180,338	λS	\$	1.50	↔	270,507.00
Import & Place Fill	66,274	CY	\$	22.00	&	1,458,022.50
Fine Grading	180,338	λS	\$	2.00	↔	360,676.00
Bahia Sod	76,995	SY	\$	1.50	↔	115,492.50

			1S	Subtotal=	\$	3,541,320.50
CONCRETE						
4" Thick Sidewalk and Misc Concrete	518	SF	ક્ક	10.00	s	5,180.00
			Sı	Subtotal=	\$	5,180.00
ON-SITE PAVING						
1.5" HD Asphalt (SP-12.5) (1st Lift)	15,726	SΥ	₩	17.00	↔	267,342.00
1" HD Asphalt (SP-9.5) (2nd Lift)	15,726	SY	₩	15.00	↔	235,890.00
10" Limerock Base Material	15,838	SY	₩	12.00	\$	190,056.00
12" Stabilized Subgrade	15,838	SY	₩	10.00	\$	158,380.00
Stabalized Tank and Rail Roads	11,188	SY	s	10.00	\$	111,880.00
Striping & Signage	_	ST	\$ 3(30,000.00	\$	30,000.00
			Sı	Subtotal=	\$	993,548.00

DESCRIPTION	QUANTITY	HNS	E S	UNIT COST	TOTA	TOTAL COST
STORM SYSTEM						
36" RCP	1,190	Н	မာ	175.00	မှ	208,250.00
30" RCP	55	L L	છ	130.00	ઝ	7,150.00
24" RCP	230	느	क	95.00	↔	21,850.00
18" RCP	974	ㅂ	မှ	65.00	↔	63,310.00
36" FES	~	EA	υ	6,500.00	↔	6,500.00
Type F Inlet	7	EA	8	9,000.00	မာ	63,000.00
Type D Inlet	8	EA	8	8,000.00	↔	64,000.00
Control Structure	_	EA	↔	17,000.00	မှ	17,000.00
				Subtotal=	\$	451,060.00
SEWER SYSTEM						
Lift Station Package	1	ST	s	70,000.00	↔	70,000.00
4" PVC	436	느	es	35.00	₩	15,260.00
4" C/O Ass'y	4	EA	69	1,000.00	↔	4,000.00
4" PVC FM	1,800	4	69	50.00	မာ	90,000,06
8"x 4" Tapping Saddle & Valve	1	EA	မာ	6,472.50	ક	6,472.50
Locate Tape	~	ST	8	750.00	↔	750.00
Air Testing	436	LF	υ	00.9	\$	2,616.00
TV Testing	436	느	မာ	10.00	↔	4,360.00
				Subtotal=	G	193,458.50
WATER SYSTEM						
Backflow Conc. Pads	_	EA	မာ	5,000.00	8	5,000.00
8" PVC DR18	1,800	느	s	75.00	s	135,000.00
2" PVC DR18	1,800	느	မာ	30.00	v	54,000.00
1" Water Service To Lift station	48	Щ	69	25.00	8	1,200.00
2" RPZ Ass'v (Domestic Water)		ΕĄ	69	6.500.00	8	6,500.00
Blow Off Ass'v		EA	မ	3.500.00	မှ	3,500.00
Locate Wire	_	LS.	· 65	2,500.00	₩	2,500.00
Locate Tape		S	69	2.500.00	မာ	2.500.00
Backflow Certification	2	EA	69	1,000,00	8	2,000.00
Chlorination and Pressure Test	1,800		€9	20.00	မ	36,000.00
				Subtotal=	s	248,200.00
FIRE SYSTEM			ક્ક	ļ		
8" DDCVA	_	EA	€	25,000.00	s	25,000.00
8" DR 14 Pipe	528	LF	છ	75.00	\$	39,600.00
Fire Hydrant Assembly	က	EA	क	7,500.00	↔	22,500.00
Backflow Certification	~	EA	ક્ક	1,000.00	↔	1,000.00
Locate Tape	Y	LS	क	2,500.00	↔	2,500.00
Pressure Tape	528	느	ક્ર	20.00	क	10,560.00
		Η		Subtotal=	\$	101,160.00
HARMONY	AVE & HULL RD)					
1.5" HD Asphalt (SP-12.5) (1st Lift)	13,500	SY	\$	17.00	\$	229,500.00
1" HD Asphalt (SP-9.5) (2nd Lift)	13,500	SY	υ	15.00	8	202,500.00
10" Limerock Base Materail	13,500	λS	&	12.00	8	162,000.00
12" Stabilized Subgrade	13,500	SY	\$	10.00	⇔	135,000.00
Ditch Grading		rs	φ,	50,000.00	φ.	30,000.00
Striping & Signage		LS	es es	150,000.00	ы	75,000.00
				Subtotal=	\$	834,000.00
MISCELLANEOUS ITEMS						

DESCRIPTION	QUANTITY	L S	EN D	UNIT COST	TOTAL COST	<u> -</u>
Landscaping	1	ST	↔	275,000.00	\$ 275	275,000.00
Fencing	9,082	LF	\$	25.00	\$ 227	227,050.00
				Subtotal=	\$ 502	502,050.00

Grand Total \$ 7,475,367.00

NOTE:

Please be advised that the figure expressed above merely represents the engineer's opinion as to the probable construction cost. This is not a bid and no warranty as to the accuracy of this figures is either expressed or implied.

Charles E. Potter, P.E.

License No. 84516

01/28/2005 02:45 PM Doc stamps 706.70 (Transfer Amt \$ 100999) Instrument# 2005-023560 Book: 5482

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THIS INSTRUMENT PREPARED BY
AND RECORD AND RETURN TO:
James A. Hoener, Esq.
Flagler Development Company
10151 Deerwood Park Blvd.

Building 100, Suite 330 Jacksonville, Florida 32256

Folio No.:

4206-00-00-0060

4238-01-14-0010

SPECIAL WARRANTY DEED

THIS INDENTURE is made this 29^{44} day of January, 2005, by FLAGLER DEVELOPMENT COMPANY, a Florida corporation, f/k/a Gran Central Corporation, an address of which is 10151 Deerwood Park Boulevard, Building 100, Suite 330, Jacksonville, Florida 32256 ("Grantor"), to and in favor of FLORIDA EAST COAST RAILWAY, L.L.C., a Florida limited liability company, an address of which is One Malaga Street, St. Augustine, Florida 32084 ("Grantee"), and whose federal taxpayer identification number is

WITNESSETH THAT:

Grantor, for and in consideration of the sum of Ten and No/100 U.S. Dollars (\$10.00), lawful money of the United States of America, to it in hand paid by the Grantee, at or before the ensealing and delivery of these presents, the receipt of which is hereby acknowledged, has granted, bargained, sold, alienated, remised, released, conveyed and confirmed and by these presents does grant, bargain, sell, alien, remise, release, convey and confirm unto the Grantee and its successors and assignees forever, the following parcel of land, situate, lying and being in the County of Volusia, State of Florida, and more particularly described as follows:

SEE **EXHIBIT A** ATTACHED HERETO AND MADE A PART HEREOF (the "Land").

SUBJECT, HOWEVER, TO THE FOLLOWING:

- 1. Real property taxes, assessments and special district levies for 2005 and subsequent years.
 - 2. Zoning and other regulatory laws and ordinances affecting the Land.
 - 3. Easements, reservations, restrictions, rights of way, and other matters of record.

TOGETHER with all and singular the tenements, hereditaments and appurtenances thereunto belonging or in any way appertaining.

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n ally

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

AND the Grantor hereby covenants with said Grantee that it is lawfully seized of the Land hereby conveyed in fee simple; that it has good right and lawful authority to sell and convey said Land; and that it hereby specially warrants the title to said Land and will defend the same against the lawful claims of any persons claiming by, through or under the said Grantor.

IN WITNESS WHEREOF, Grantor has caused these presents to be signed in its name by its proper officers, and its corporate seal to be affixed, the day and year first above written.

FLAGLER DEVELOPMENT COMPANY, a Florida corporation

Witness
SUSAN C. McMILLAN
Printed Name of Witness
Witness
K. Christine Wilmoth
Printed Name of Witness

) ss.:

STATE OF FLORIDA

The foregoing Special Warranty Deed was acknowledged before me this 2 day of January, 2005, by G. John Carey, as President of FLAGLER DEVELOPMENT COMPANY, a Florida corporation, on behalf of the corporation, who is personally known to me.

G. John Carey President

Signature of Notary Public

K. Christine Wilmoth

Printed Name of Notary Public

K. Christine Wilmoth Commission # DD260852 Expires Oct. 23, 2007 Bonded Thru Allande Bonding Co., Inc.

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Diane M. Matousek
Volusia County. Clerk of Court

Exhibit A Legal Description

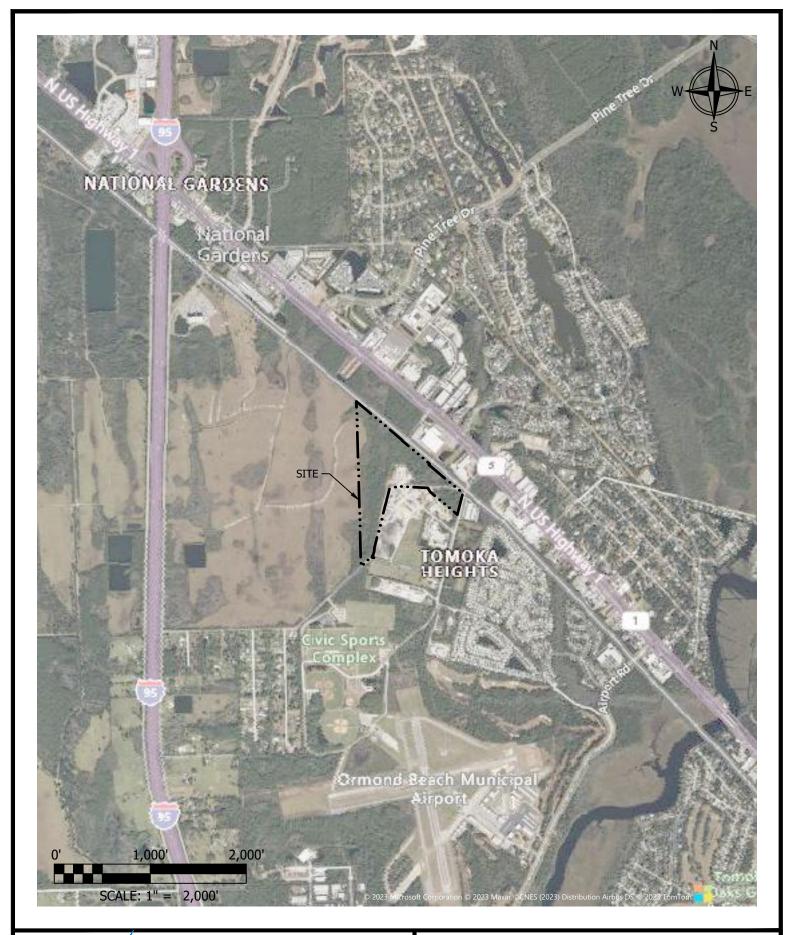
METES AND BOUNDS DESCRIPTION

A tract of land being a portion of Section 6, Township 14 South, Range 32 East and a portion of the George Anderson Grant, Volusia County, Florida being more particularly described as follows:

Commence at the Northwest corner of Government Lot 1 of Section 6, Township 14 South, Range 32 East; thence South 01'41'42" East along the West line of said Lot 1 for a distance of 578.54 feet to the Southerly Right of Way of the Florida East Coast Railroad and the POINT OF BEGINNING; thence South 49'51'24" East, along said Southerly Right of Way for a distance of 1249.14 feet; thence South 14'29'03" West, a distance of 11.10 feet; thence South 49°51'24" East, a distance of 753.31 feet; thence South 40°08'36" West, a distance of 25.00 feet; thence South 49°51'24" East, a distance of 922.79 feet to the intersection of the occupied Westerly right of way of Hull Road (also known as Airport Road) and the Southerly Right of Way of the Florida East Coast Railroad; thence South 14"29"58" West, along said Westerly Right of Way of Hull Road for a distance of 458.93 feet; thence North 49'51'24" West, departing said Westerly Right of Way a distance of 822.68 feet; thence North 87'06'04" West, a distance of 524.87 feet; thence North 49°51'24" West, a distance of 270.84 feet to the West line of the George Anderson Grant; thence South 14'29'03" West along said West line for a distance of 1,637.87 feet to the Northerly right of way of Harmony Avenue; thence South 46.53'07" West along said Northerly right of way for a distance of 324.28 feet to the Westerly line of said Section 6; thence North 01.27'11" West along the West line of the Southwest 1/4 of said Section 6 for a distance of 1376.53 feet to the West 1/4 corner of said Section 6; thence North 01'41'42" West continuing along said West line of Section 6 for a distance of 2060.78 feet to the Point of Beginning.

Containing 2695834 square feet or 61.888 acres, more or less.

(Description generated at the time of this survey)





CIVIL ENGINEERING 2300 CURLEW ROAD STE 201
LAND PLANNING PALM HARBOR, FLORIDA
TRAFFIC/TRANSPORTATION 34683
SURVEYING

PHONE (727) 789-9500 AVIDGROUP.COM

VICINITY MAP ORMOND BEACH TERMINAL ORMOND BEACH, FL **AVID NO. 2968003.02**

