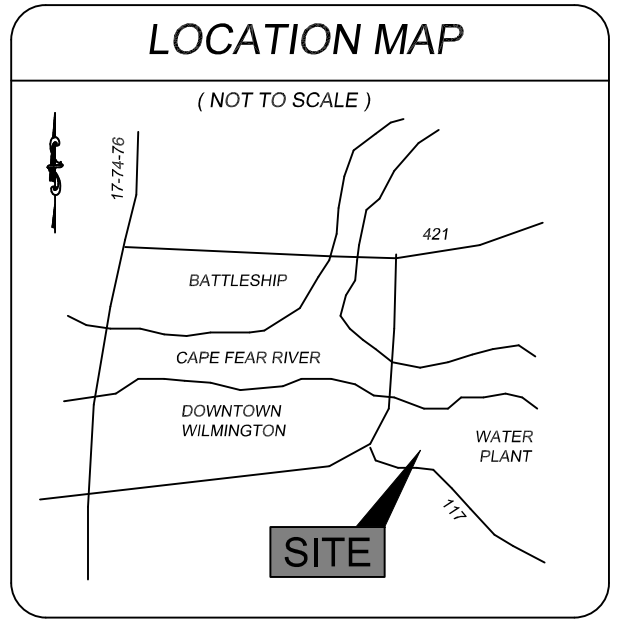


# OFF THE HOOK YACHT SALES

BOAT REPAIR BUILDING  
1701 N. 5TH AVE  
WILMINGTON, NC



LOCATED IN THE CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA  
DESCRIPTION OF WORK: GRADING, PAVING, DRAINAGE, AND UTILITIES

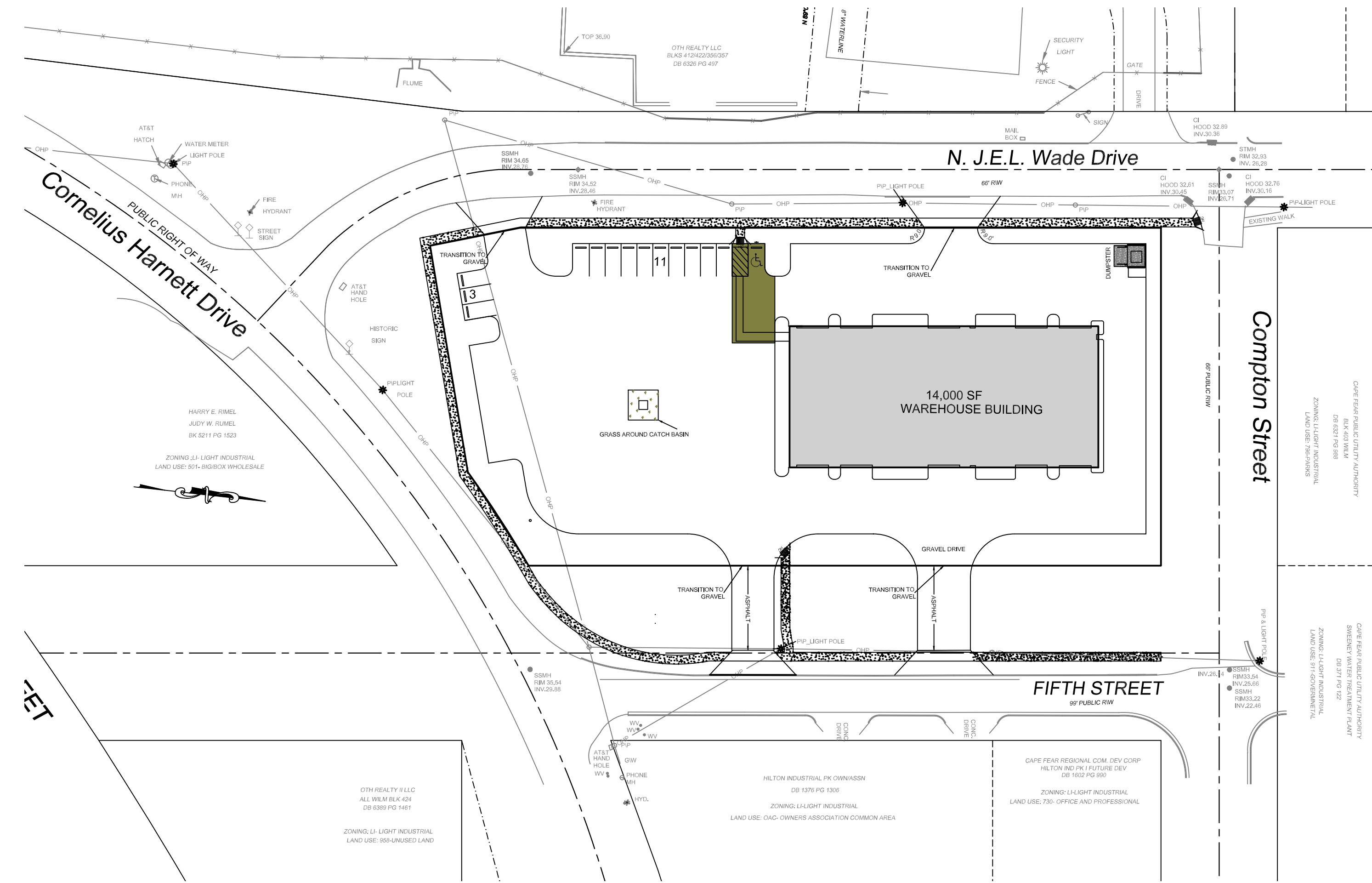
OWNER: OTH REALTY LLC  
1701 N J.E.L. WADE DR.  
WILMINGTON N.C. 28401

## LEGEND

- WV = WATER VALVE
- WM = WATER METER
- C/O = SANITARY SEWER CLEAN OUT
- INV. = INVERT
- B/O = BLOW OFF ASSEMBLY
- BFP = BACK FLOW PREVENTOR
- GW = GUY WIRE
- SWMH = STORM MANHOLE
- GT. = GREASE TRAP
- FH = FIRE HYDRANT ASSEMBLY
- I.S. = IRON SET
- CR = CURB RAMP
- = SANITARY SEWER MH
- = CURB INLET
- ⊗ = TREE TO BE PRESERVED
- ⊘ = TREE TO BE REMOVED
- W = WATER SERVICE
- ⊕ = SEWER CLEANOUT
- ⊕ = WATER VALVE
- ⊕ = SIGN LOCATION
- LP = LIGHT POLE
- — — — — PROPERTY LINE
- — — — — BUILDING SETBACK
- — — — — CENTERLINE
- — — — — EASEMENT
- — — — — COMPUTED PROPERTY LINE
- — — — — LIMITS OF DISTURBANCE/PROJECT LIMITS
- — — — — PROPOSED STORM DRAIN
- — — — — PROPOSED SANITARY SEWER
- WETLAND
- PROPOSED SIDEWALK
- HANDICAP CROSSING

STABILIZATION TIME FRAMES:	
SITE AREA DESCRIPTION	STABILIZATION
Perimeter dikes, swales, ditches and slopes	7 DAYS
High Quality Water (HQW) Zones	7 DAYS
Slopes steeper than 3:1	7 DAYS
Slopes 3:1 or flatter	14 DAYS
All other areas with slopes flatter than 4:1	14 DAYS

**NOTE WELL:**  
ANY AREAS ON-SITE WITHOUT ACTIVITY SHALL BE STABILIZED WITHIN 15 WORKING DAYS OR 21 CALENDAR DAYS AND AS ABOVE. ALL SLOPES MUST BE STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY ACTIVITY.  
DETAILS SHOWN ARE TYPICAL OF INSTALLATIONS REQUIRED BY THE TOWN AND COUNTY. THIS SHEET DOES NOT PURPORT TO SHOW ALL REQUIRED CONSTRUCTION DETAILS, BUT FURTHER SERVES AS A GUIDE. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL CITY, COUNTY AND STATE CODES AND CONSTRUCTION STANDARDS.  
No geotechnical testing has been performed on site. No warranty is made for suitability of subgrade, and undercut and any required replacement with suitable material shall be the responsibility of the contractor.



## GENERAL NOTES:

- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES AT ALL CROSSINGS PRIOR TO COMMENCING TRENCH EXCAVATION. IF ACTUAL CLEARANCES ARE LESS THAN INDICATED ON PLAN, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. ANY CONDITION DISCOVERED OR EXISTING THAT WOULD NECESSITATE A MODIFICATION OF THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
- NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NO ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
- ALL TREES WHICH ARE NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL BE PRESERVED WHEREVER POSSIBLE UNLESS OTHERWISE DIRECTED.
- CONTRACTOR SHALL ADJUST ALL MANHOLES, VALVE AND CURB BOXES TO THE FINAL GRADE UPON COMPLETION OF ALL CONSTRUCTION. ANY BOXES DAMAGED OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST AND EROSION DURING CONSTRUCTION AT HIS EXPENSE. PARKING AREAS SHALL BE WATERED TO CONTROL DUST WHEN ORDERED BY THE ENGINEER.
- NO GEOTECHNICAL TESTING HAS BEEN PERFORMED ON SITE. NO WARRANTY IS MADE FOR SUITABILITY OF SUBGRADE, AND UNDERCUT AND ANY REQUIRED REPLACEMENT WITH SUITABLE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR RESPONSIBLE FOR GEOTECHNICAL TESTING AS NECESSARY.
- EXTREME CARE SHALL BE TAKEN TO ENSURE MINIMUM SEPARATIONS AT ALL UTILITY CROSSINGS.
- CONTRACTOR TO ENSURE THAT STREET PAVEMENT IS PLACED SO AS TO DRAIN POSITIVELY TO THE ROADWAY INLETS AND CATCH BASINS.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
- THIS PLAN IS FOR SITE UTILITIES, GRADING, ROADWORK, AND DRAINAGE ONLY.
- AFFECTED NON-MUNICIPAL UTILITIES SHALL BE CONTACTED AND PROVIDED WITH PLANS AND OTHER PERTINENT INFORMATION, WHEN FEASIBLE, TO COORDINATE APPROPRIATE SCHEDULING AND PLACEMENT. AT THE MINIMUM THIS SHOULD INCLUDE AT&T AND DUKE (PROGRESS) ENERGY.
- ALL CONSTRUCTION TO CONFORM TO CITY STANDARDS AND ALL APPLICABLE STATE & LOCAL CODES.
- CONTRACTOR TO COORDINATE ANY REQUIRED TRAFFIC CONTROL WITH THE STATE AND CITY. CONTRACTOR RESPONSIBLE FOR ANY ADDITIONAL REQUIRED PERMITS.
- CARE SHALL BE TAKEN DURING FINAL GRADING TO ENSURE POSITIVE DRAINAGE TO RECEIVING STRUCTURES. ALL STORM WATER RUNOFF FROM BUILT UPON AREAS (i.e. IMPERVIOUS SURFACES AND ROOF DRAINAGE) TO BE DIRECTED TO STORM SEWER COLLECTION SYSTEM (i.e. STORM INLETS OR PIPES) BY SWALES, OVERLAND FLOW, ADDITIONAL GRADING, OR LANDSCAPING INLETS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY RELOCATIONS, REALIGNMENTS, DISCONNECTIONS OR CONNECTIONS OF EXISTING UTILITIES WITH APPLICABLE AUTHORITIES.
- CLEARING AND GRUBBING OF SITE TO INCLUDE REMOVAL OF EXISTING CURBS, ASPHALT, INLETS, AND ANY OTHER STRUCTURES INCLUDING TREES, STUMPS AND DEBRIS EXISTING ON SITE. TREES NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL REMAIN UNLESS OTHERWISE DIRECTED.
- ALL SIGNS AND PAVEMENT MARKINGS SHALL MEET NCDOT AND MUTCD STANDARDS.
- SANITARY SERVICES SMALLER THAN 8" SHALL HAVE CLEANOUTS AT INTERVALS OF NOT MORE THAN 100'. CLEANOUTS SHALL BE PROVIDED FOR SERVICE LINES AND BUILDING DRAINS THAT HAVE HORIZONTAL DIRECTION CHANGES GREATER THAN 45 DEGREES.
- SEE 2018 IPC FOR FURTHER GUIDANCE ON UTILITY SERVICE REQUIREMENTS.
- PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.

- This map is not for conveyance, recordation, or sales.
- A portion of this property is located within the 0.2% SFHA according to Flood Insurance Rate Map Community ID# 3720314500 suffix K effective date 8/28/2018
- This property is zoned CB-COMMUNITY BUSINESS, City of Wilmington.
- Water service to be CFPWA (public).
- Sewer service to be CFPWA (public).
- Topographic data furnished by Bateman Civil Survey Company.
- No Wetlands exist on site.

INDEX TO DRAWINGS	
SHEET No.	DESCRIPTION
1 OF 11	COVER SHEET
2 OF 11	GENERAL NOTES & DETAILS
3 OF 11	GENERAL NOTES & DETAILS
4 OF 11	GENERAL NOTES & DETAILS
5 OF 11	CFPWA DETAILS
6 OF 11	CFPWA DETAILS
7 OF 11	EXISTING CONDITIONS & TREE SURVEY
8 OF 11	SITE PLAN
9 OF 11	GRADING PLAN
10 OF 11	STORM PROFILES
11 OF 11	TREE SURVEY AND REMOVAL PLAN
1 OF 2	INFILTRATION CHAMBER DETAILS
2 OF 2	INFILTRATION CHAMBER DETAILS
EC-1	EROSION AND DRAINAGE
EC-2	EROSION CONTROL AND DRAINAGE
EC-3	EROSION CONTROL AND DRAINAGE
EC-4	EROSION CONTROL AND DRAINAGE
L1	LANDSCAPE PLAN

**PARKING**  
MINIMUM PARKING REQUIRED (1 PER 1000 SF OF BLDG.) 14 SPACES  
MAXIMUM PARKING ALLOWED - NO MAXIMUM STATED  
TOTAL PARKING SHOWN 14 TOTAL SPACES  
ALL PARKING AND DRIVEWAY STRIPING TO COMPLY WITH CURRENT CITY STANDARDS  
ACCESSIBLE PARKING REQUIRED: 1 PER 25  
ACCESSIBLE PARKING PROVIDED: 1  
BICYCLE PARKING REQUIRED: 5  
BICYCLE PARKING PROVIDED: 5

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

**Approved Construction Plan**

Name	Date
Planning	_____
Traffic	_____
Fire	_____

REV. NO.	REVISIONS	DATE
7	REVISED PARKING AREA	5/16/2023
6	UPDATE TO PLAN PER CFPWA COMMENTS	1/23/2022
5	ADDED EXISTING UTILITY	11-30-2022
4	UPDATED ADDRESS	10-4-2022
3	REVISED ITRC COMMENTS	4-21-2022
2	REVISED ITRC COMMENTS	4-05-2022
1	REVISED ITRC COMMENTS	2-03-2022

## PRELIMINARY PLAN

**SITE PLAN**  
**OFF THE HOOK YACHT SALES**  
**N.E. CAPE FEAR RIVER FACILITY**  
CAPE FEAR TOWNSHIP, NEW HANOVER COUNTY, NORTH CAROLINA

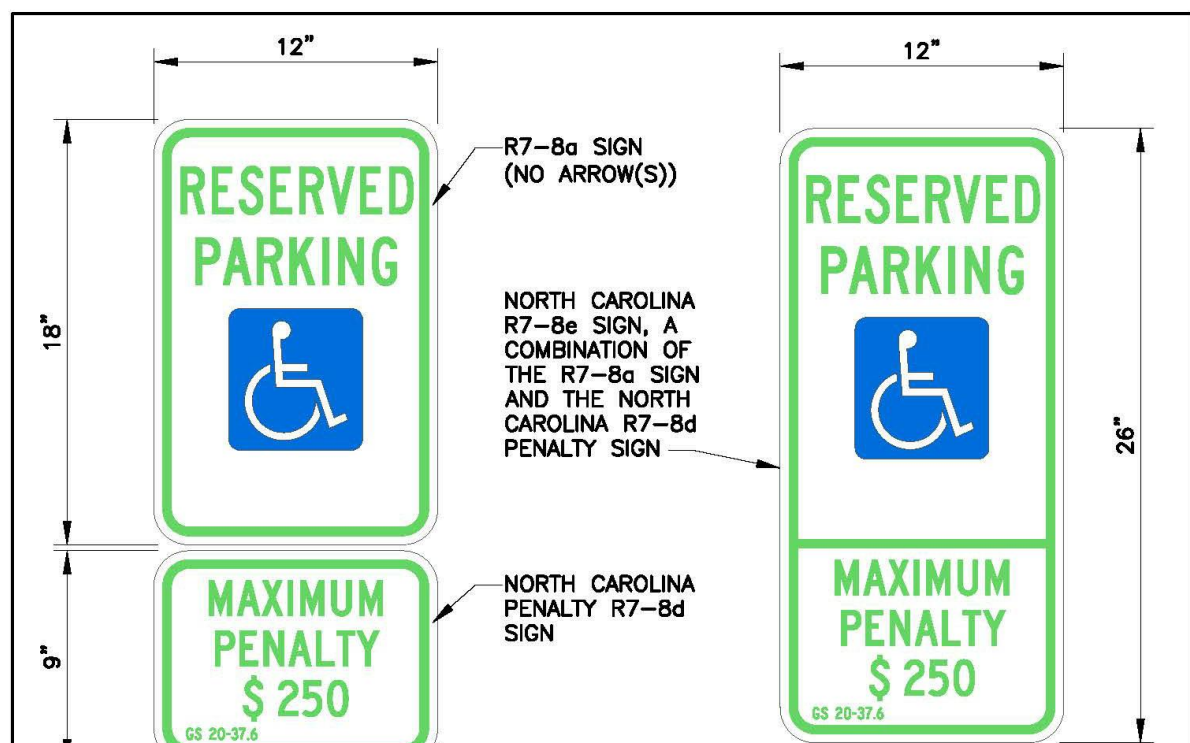
1701 N. 5TH AVE  
WILMINGTON, NC

Date: 5-5-2022  
Scale: HORIZ.: 1" = 50'  
Drawn: GW  
Checked: AHG  
Project No: 4372  
Sheet No: 1  
Of: 11

OWNER:  
OTH REALTY LLC  
1701 N J.E.L. WADE DR.  
WILMINGTON N.C. 28401

**HANOVER DESIGN SERVICES, P.A.**  
LAND SURVEYORS, ENGINEERS & LAND PLANNERS  
1123 CLARK PARKWAY  
WILMINGTON, N.C. 28403  
PHONE: 910-348-0002  
LICENSE # C-5997





R7-8a and R7-8d Signage Figure A1.1

R7-8e Signage Figure A1.2

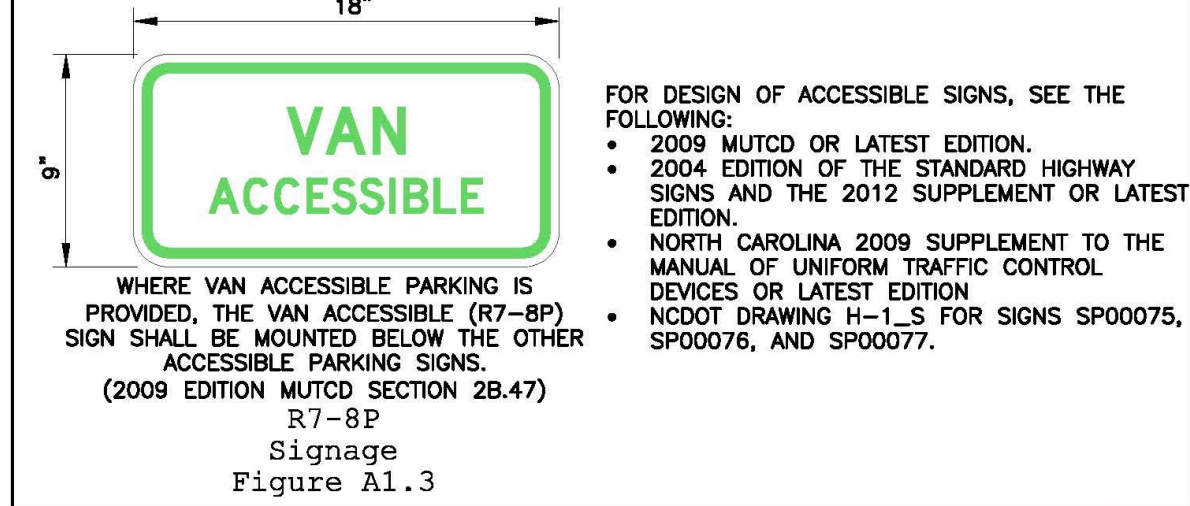
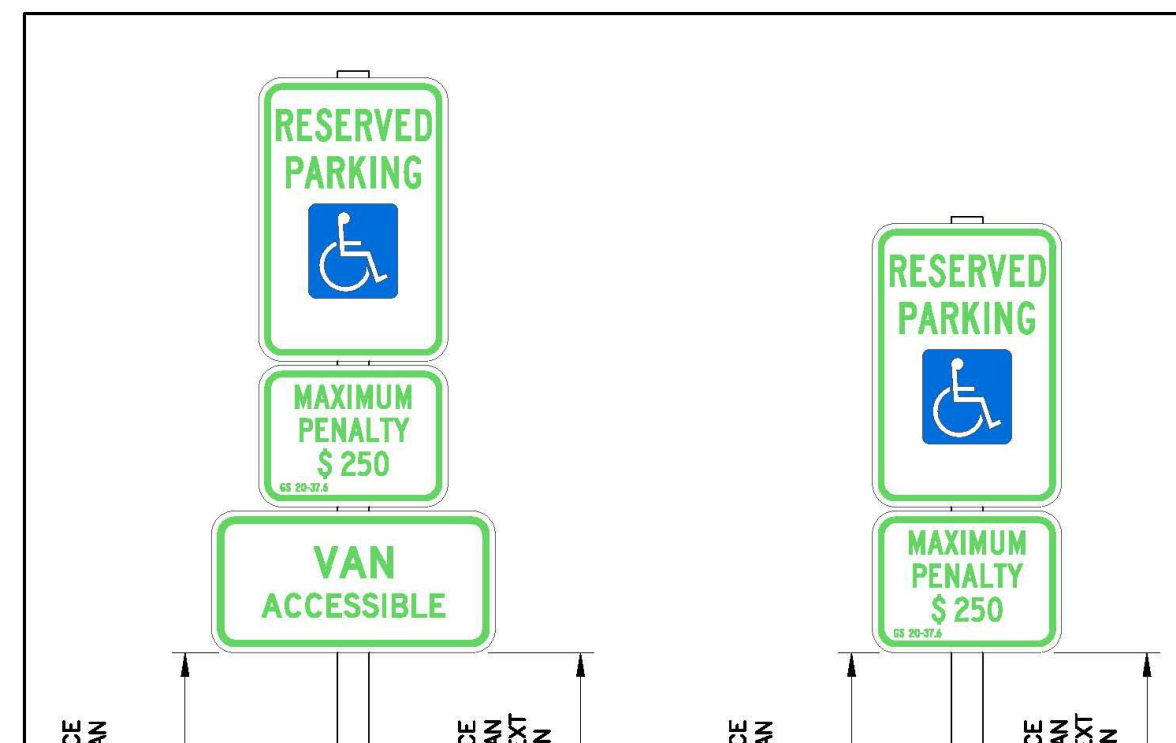


Figure A1.3

DATE: NOVEMBER 8, 2016	Revised: Accessible Parking Signs	
DRAWN BY: DALE THOMPSON	CHECKED BY: RANDALL GLAZIER	DETAIL NO. 1 287-01
SCALE: NOT TO SCALE		



Signage Height Figure A2.1

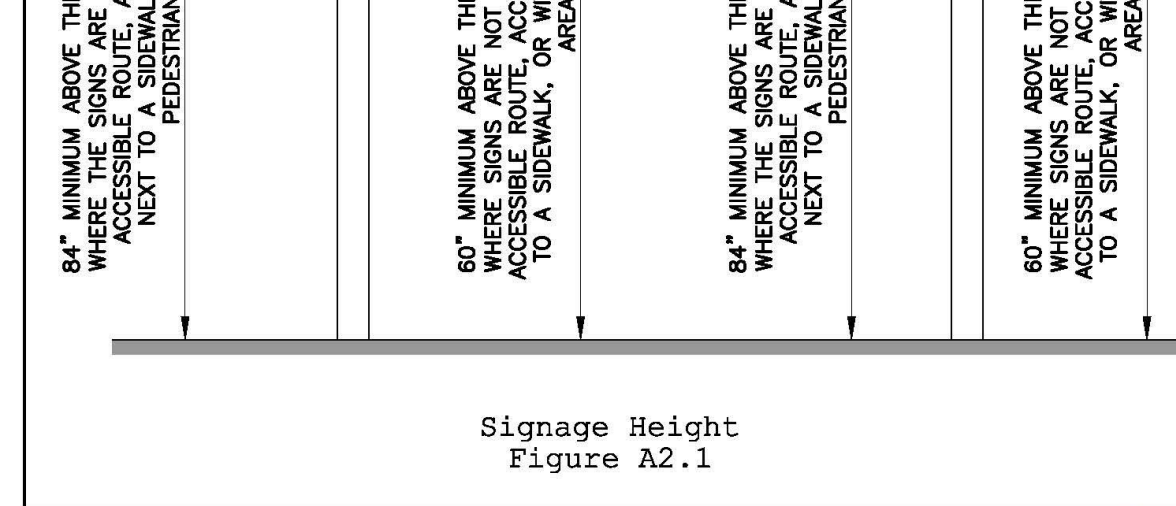
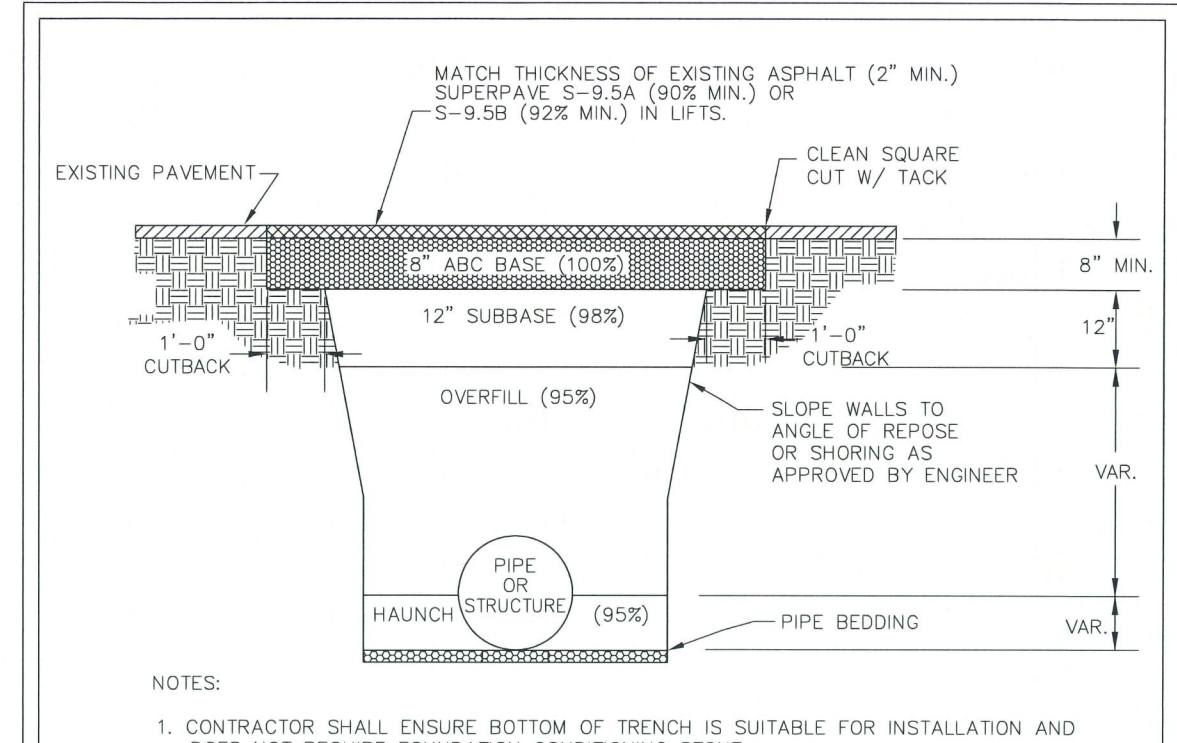


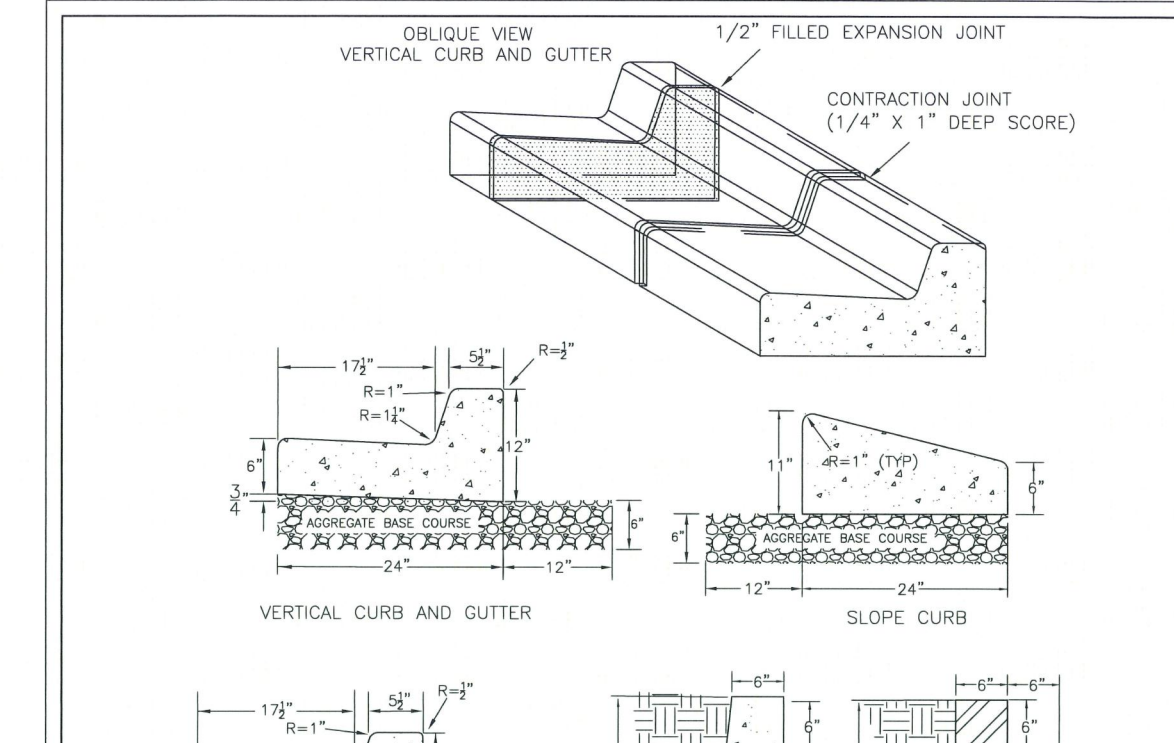
Figure A2.1

DATE: NOVEMBER 8, 2016	Revised: Accessible Parking Signs Mounting Configuration and Mounting Heights	
DRAWN BY: DALE THOMPSON	CHECKED BY: RANDALL GLAZIER	DETAIL NO. 1 287-02
SCALE: NOT TO SCALE		



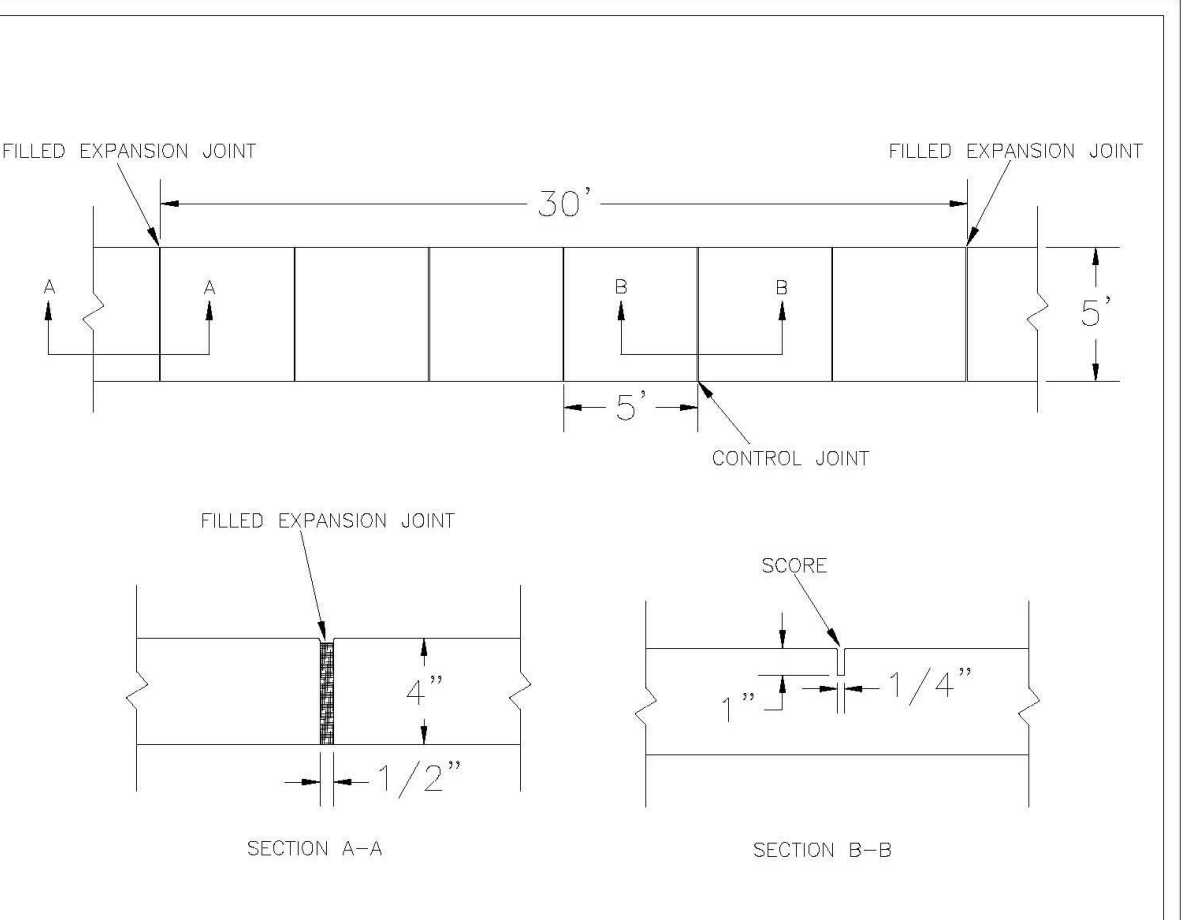
- NOTES:
- CONTRACTOR SHALL ENSURE BOTTOM OF TRENCH IS SUITABLE FOR INSTALLATION AND DOES NOT REQUIRE FOUNDATION CONDITIONING STONE.
  - FILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.
  - SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57, ABC, CRUSHED LESTONE, CLEAN SAND, FLOWABLE FILL, ETC).
  - SOIL SHALL BE INSTALLED IN 6"-8" LIFTS AND COMPACTED BY A MECHANIZED TAMPER (I.E. JUMPING JACK), HOWEVER, VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
  - ALL APPROVED CASTINGS SHALL BE SET FLUSH TO GRADE AND SUPPORTED IF APPLICABLE.
  - COMPACT MATERIALS TO MINIMUM % DENSITY SHOWN IN DIAGRAM AS DETERMINED BY THE STANDARD PROCTOR METHOD ASTM D-698-A FOR SOILS; AND ASTM D-698-C FOR ABC STONE; AND BY NUCLEAR GAUGE OR CORE SAMPLE FOR ASPHALT.
  - CUTBACKS OF ASPHALT SHALL BE PREPARED ON EDGE OF EXCAVATION OVER TOP OF UNDISTURBED SOIL.

DATE: MAY, 2013	STANDARD DETAIL	
DRAWN BY: JSR	PAVEMENT REPAIRS-UTILITY CUTS	CITY OF WILMINGTON ENGINEERING OFFICE 112 OPERATIONS CENTER DRIVE WILMINGTON, N.C. 28412 (910) 341-7807
CHECKED BY: D.E.C., P.E.		SD 1-05
SCALE: NOT TO SCALE		



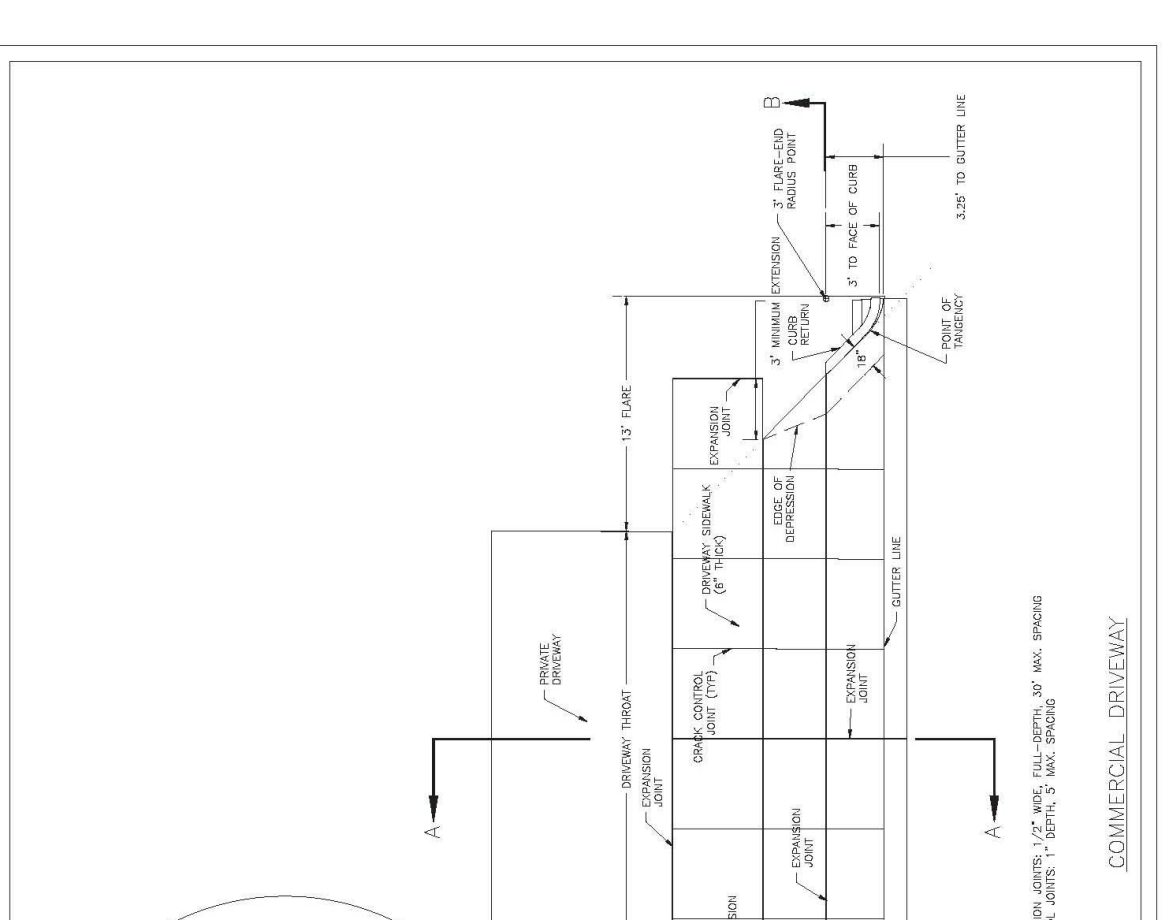
- NOTES:
- EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS
  - 50' MAX EXPANSION JOINT SPACING, 10' MAX CONTRACTION JOINT SPACING
  - MINIMUM INSTALLATION LENGTH IS 5 FT.
  - CONCRETE TO BE 3000 PSI MIN.
  - VERTICAL CURB AND GUTTER BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE

DATE: AUGUST, 2011	STANDARD DETAIL	
DRAWN: PFR/SR	CURBING	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807
CHECKED: DEC		SD 3-11
SCALE: NOT TO SCALE		



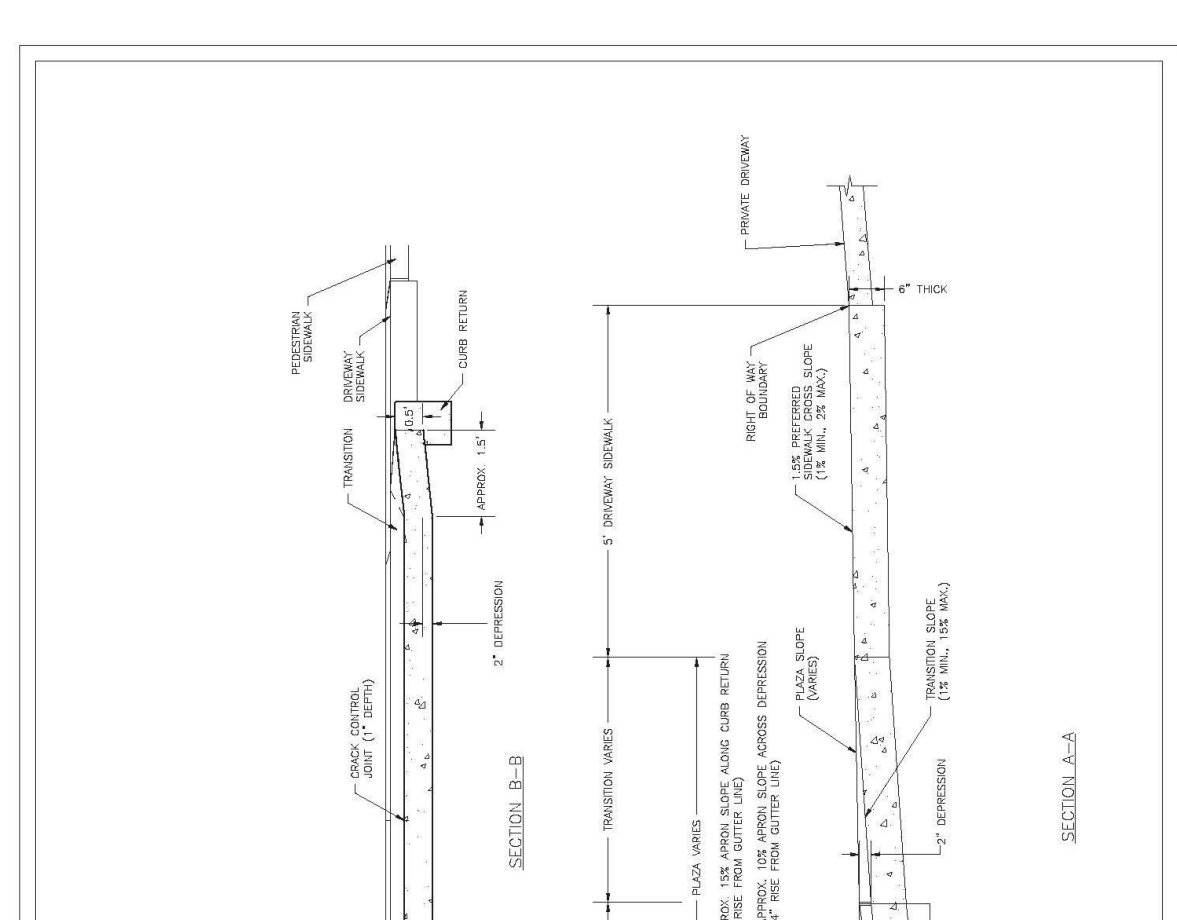
- NOTES:
- JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
  - SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
  - MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
  - CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAIN WITHIN A DRIVEWAY APRON) SHALL BE CLASS "M" - 3,000 PSI.
  - MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL.
  - 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS
  - MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
  - MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
  - MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAX CROSS SLOPE IS 2%. MAX LONGITUDINAL SLOPE IS 8.3%, 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

DATE: OCTOBER, 2010	STANDARD DETAIL	
DRAWN: PFR/SR	SIDEWALK	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807
CHECKED: DEC		SD 3-10
SCALE: NOT TO SCALE		



- NOTES:
- CONCRETE SHALL BE CLASS "M" - 3,000 PSI.
  - MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL.
  - 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS
  - MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
  - MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
  - MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAX CROSS SLOPE IS 2%. MAX LONGITUDINAL SLOPE IS 8.3%, 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

DATE: FEB. 14, 2017	STANDARD DETAIL	
DRAWN BY: JSR	COMMERCIAL DRIVEWAY PLAN (VERTICAL CURB)	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807
CHECKED BY: D.E.C., P.E.		SD 3-03.3
SCALE: NOT TO SCALE		



- NOTES:
- CONCRETE SHALL BE CLASS "M" - 3,000 PSI.
  - MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL.
  - 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS
  - MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
  - MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
  - MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAX CROSS SLOPE IS 2%. MAX LONGITUDINAL SLOPE IS 8.3%, 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

DATE: FEB. 14, 2017	STANDARD DETAIL	
DRAWN BY: JSR	COMMERCIAL DRIVEWAY SECTIONS (VERTICAL CURB)	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807
CHECKED BY: D.E.C., P.E.		SD 3-03.4
SCALE: NOT TO SCALE		

PRELIMINARY PLAN

3	REVISIONS	DATE
2	REVISIONS	4-21-2022
1	REVISIONS	4-05-2022

OWNER:	OTH REALTY, LLC 1701 N. L.L. WADE DR. WILMINGTON, N.C. 28401
Date:	5-5-2022
Scale:	HORZ: 1" = 20'
Drawn:	GW
Checked:	GW
Project No:	4372

TYPICAL DETAILS

APPROVED CONSTRUCTION PLAN

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Planning: \_\_\_\_\_

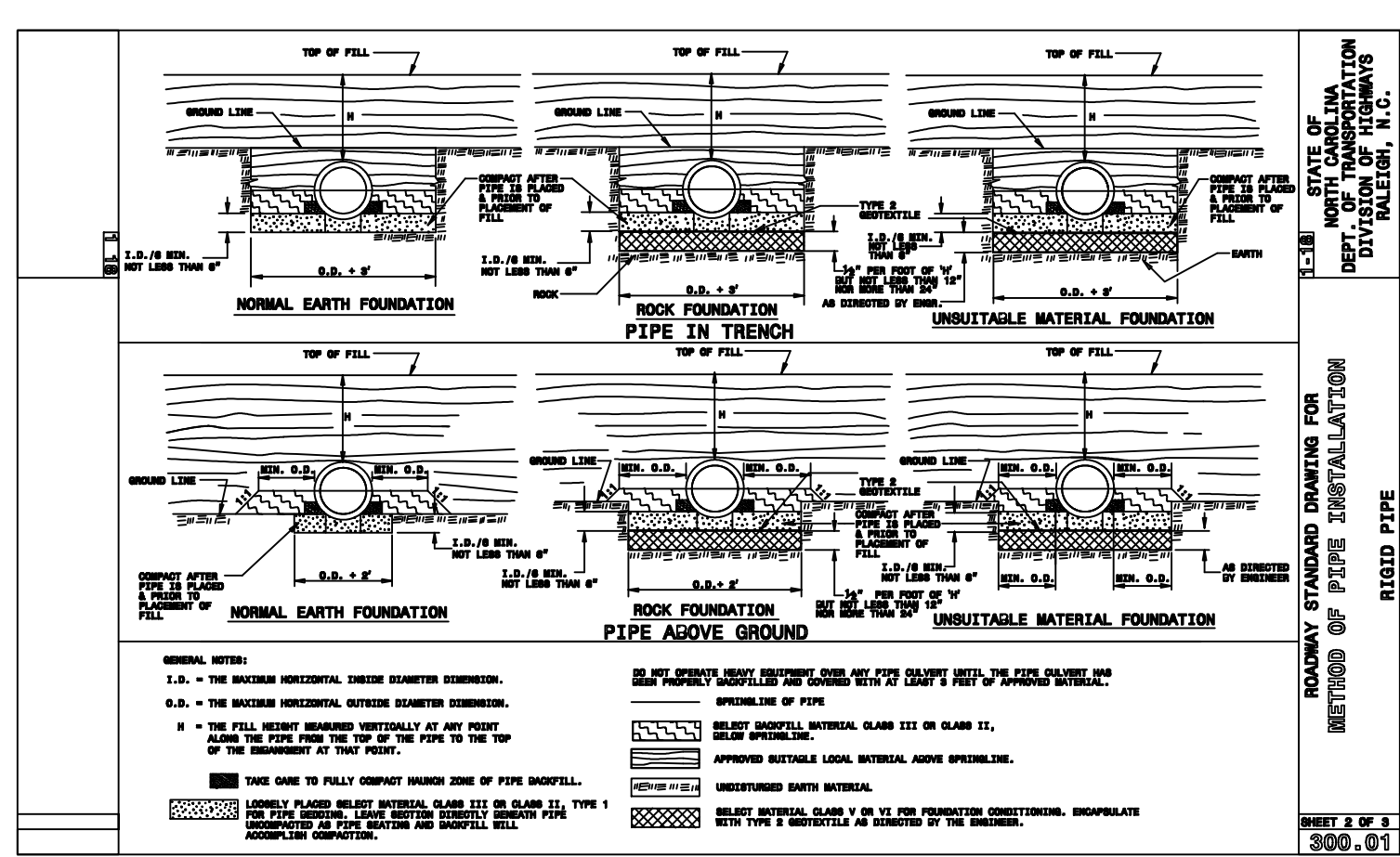
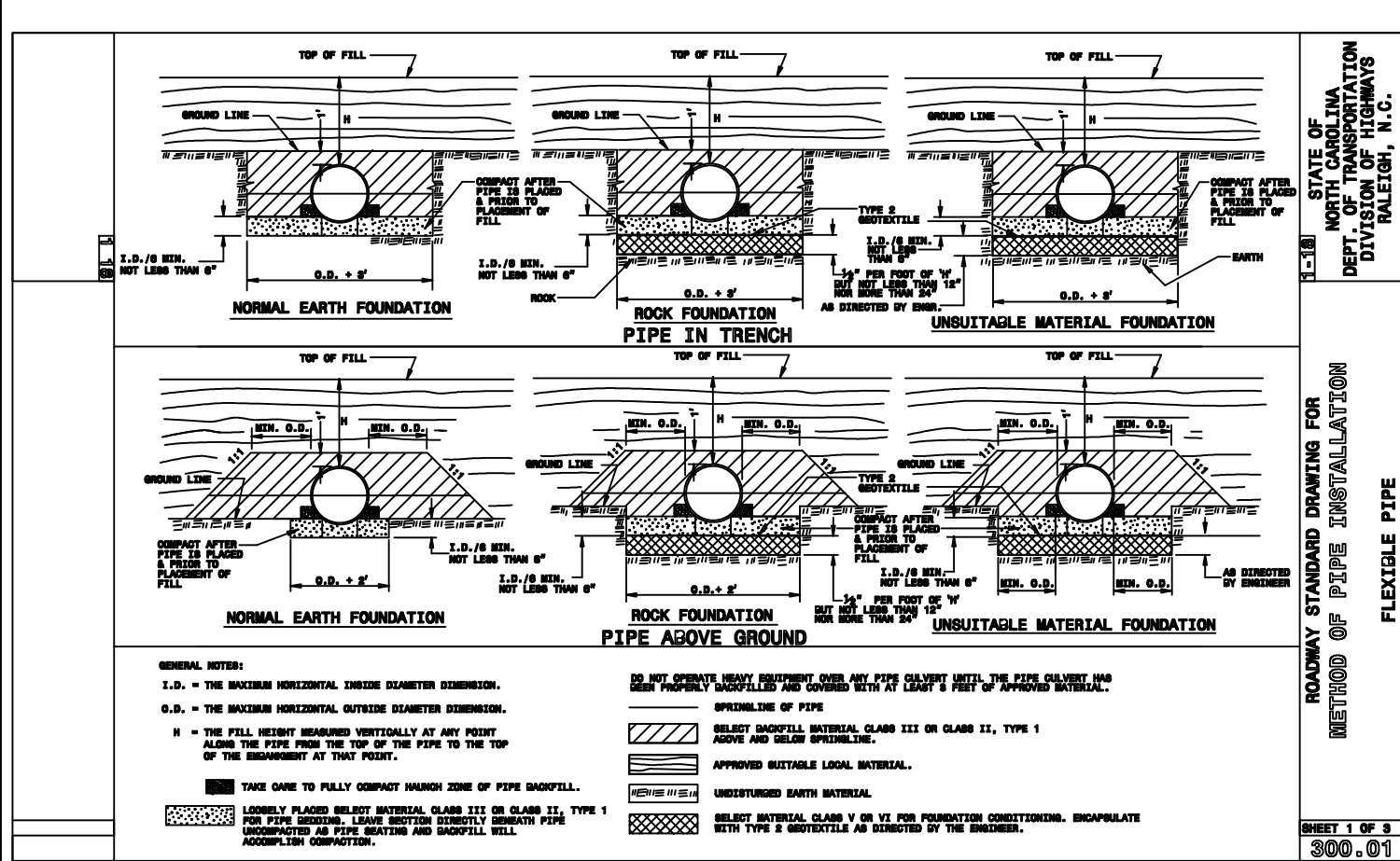
Traffic: \_\_\_\_\_

Fire: \_\_\_\_\_

Date: \_\_\_\_\_ Permit #: \_\_\_\_\_

Signed: \_\_\_\_\_

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

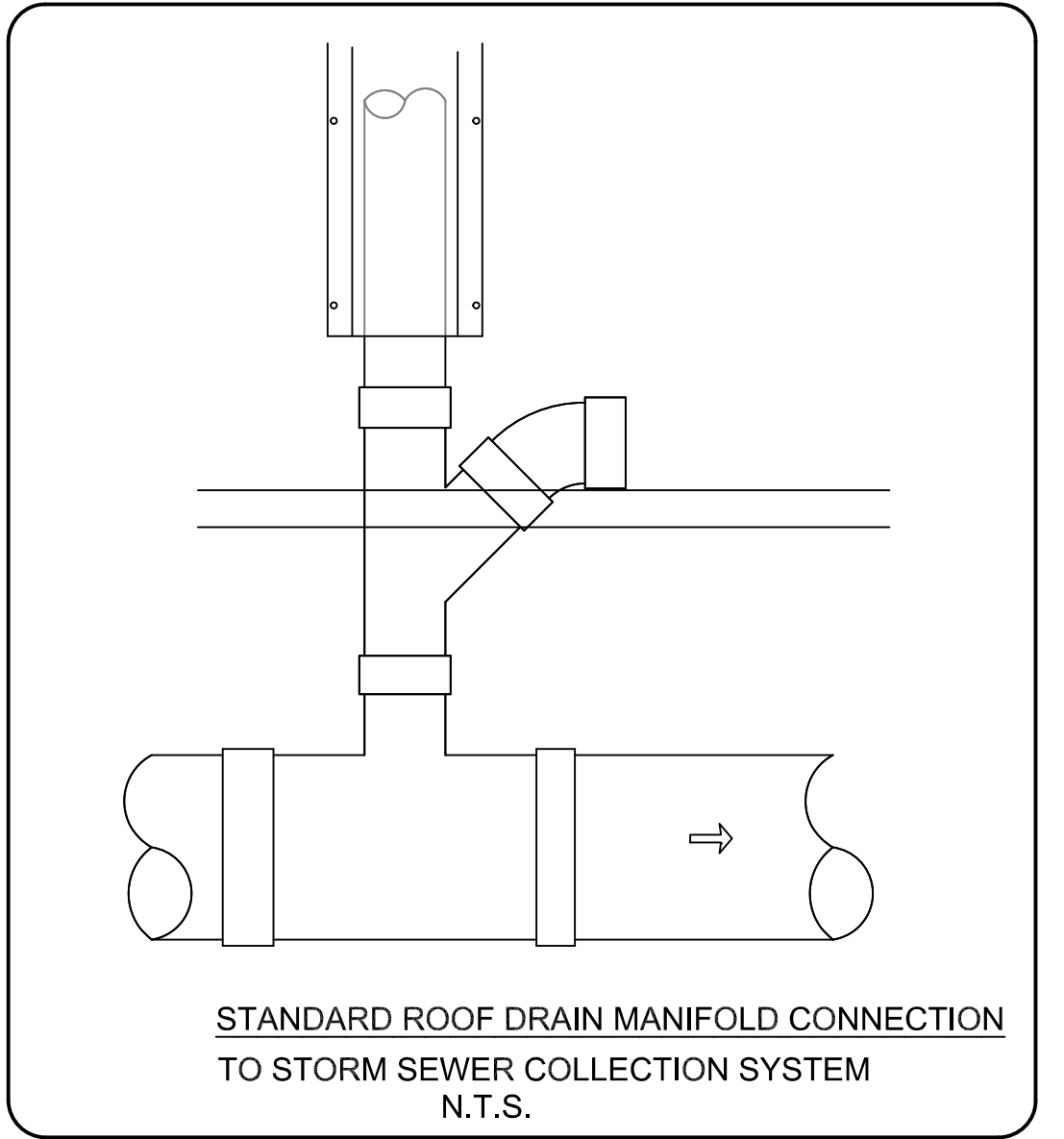
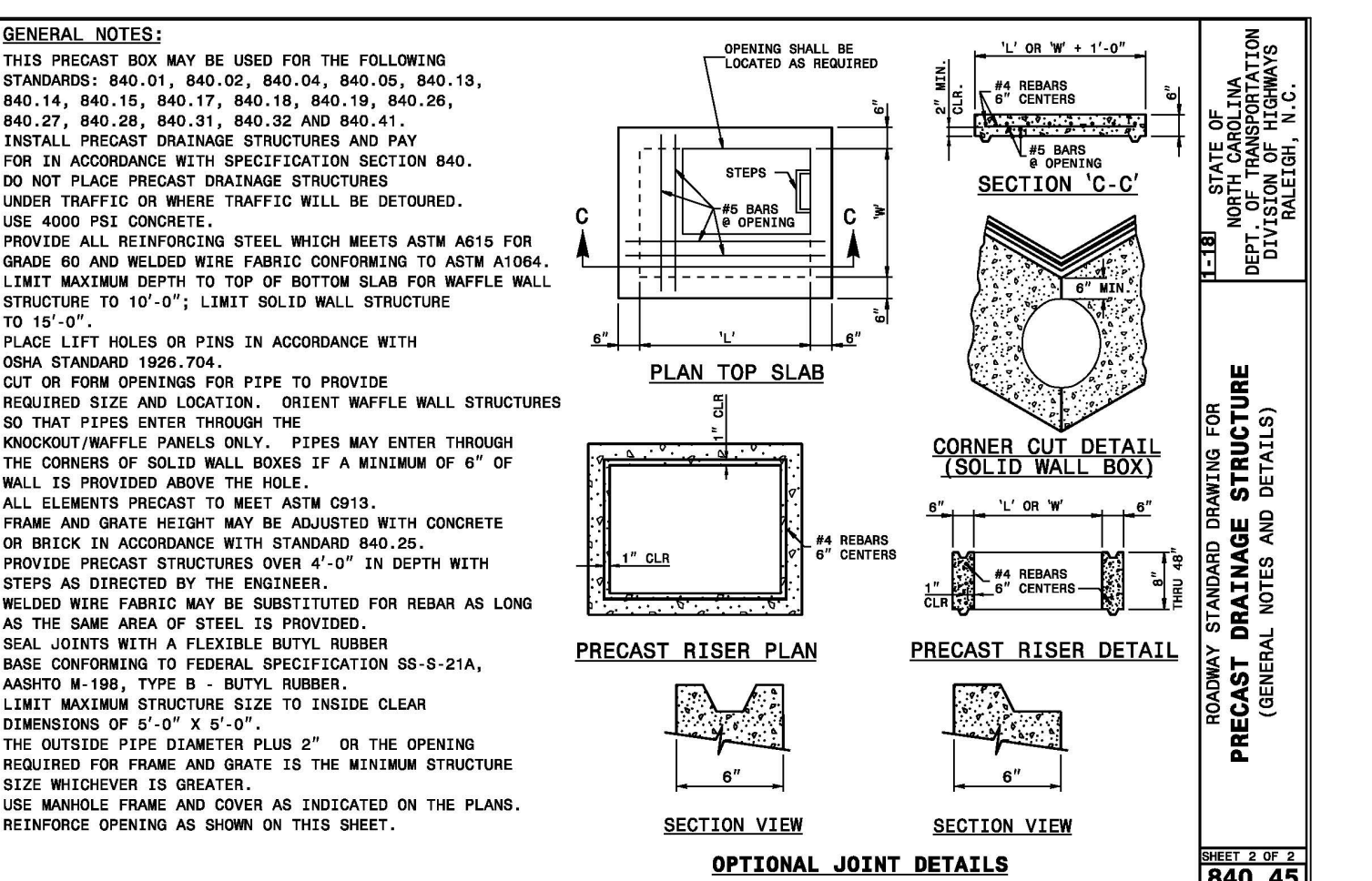
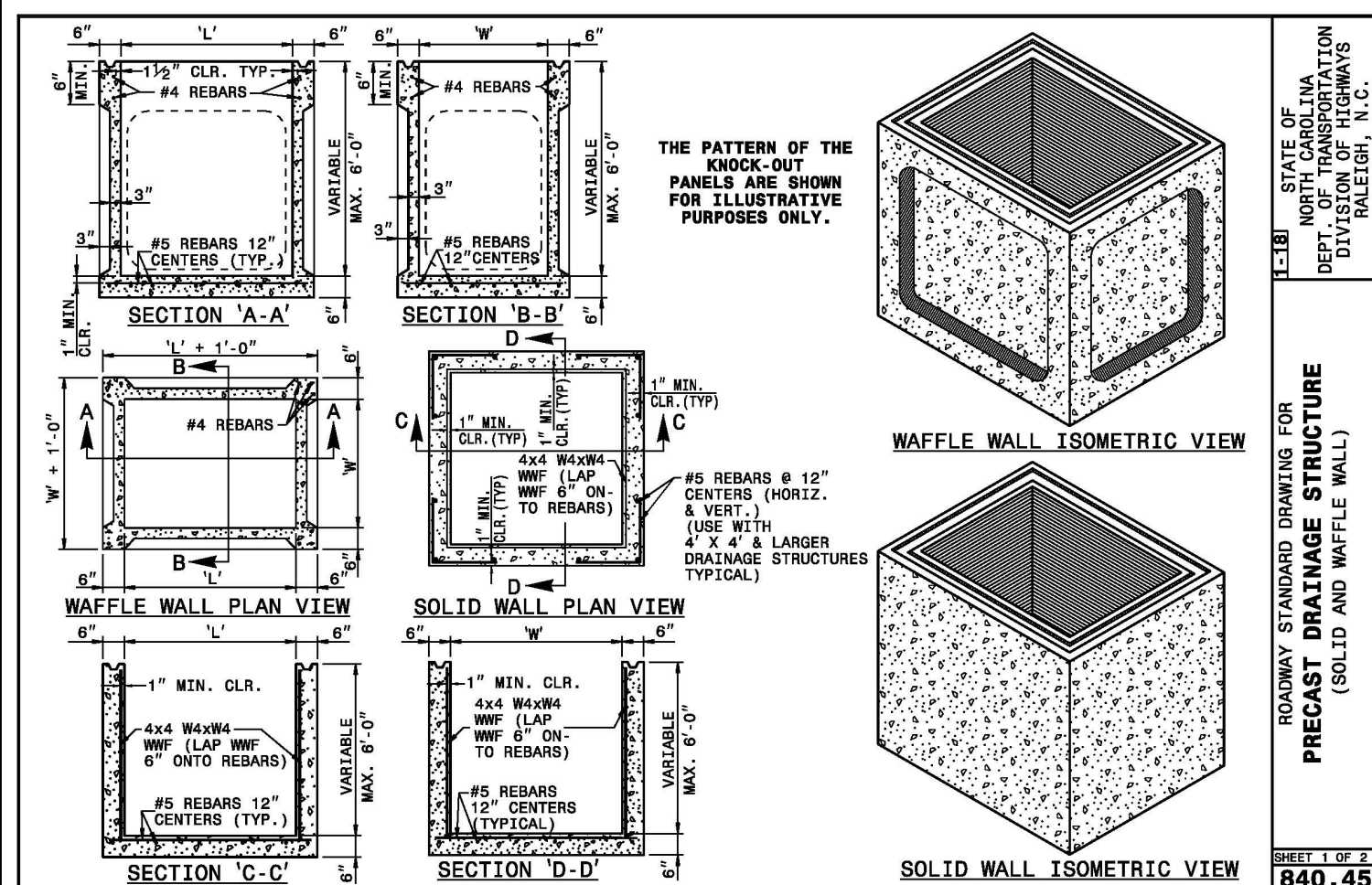
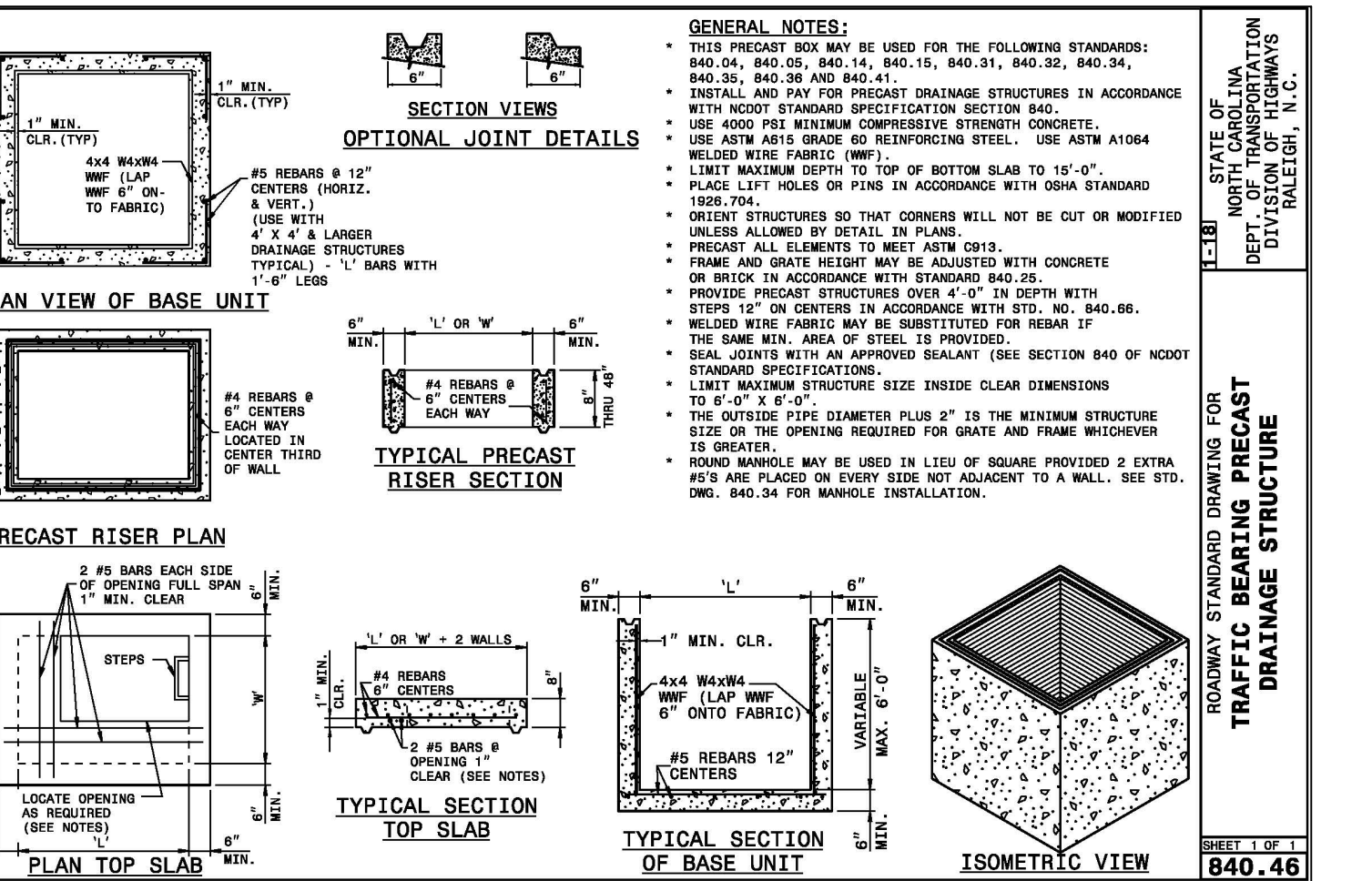
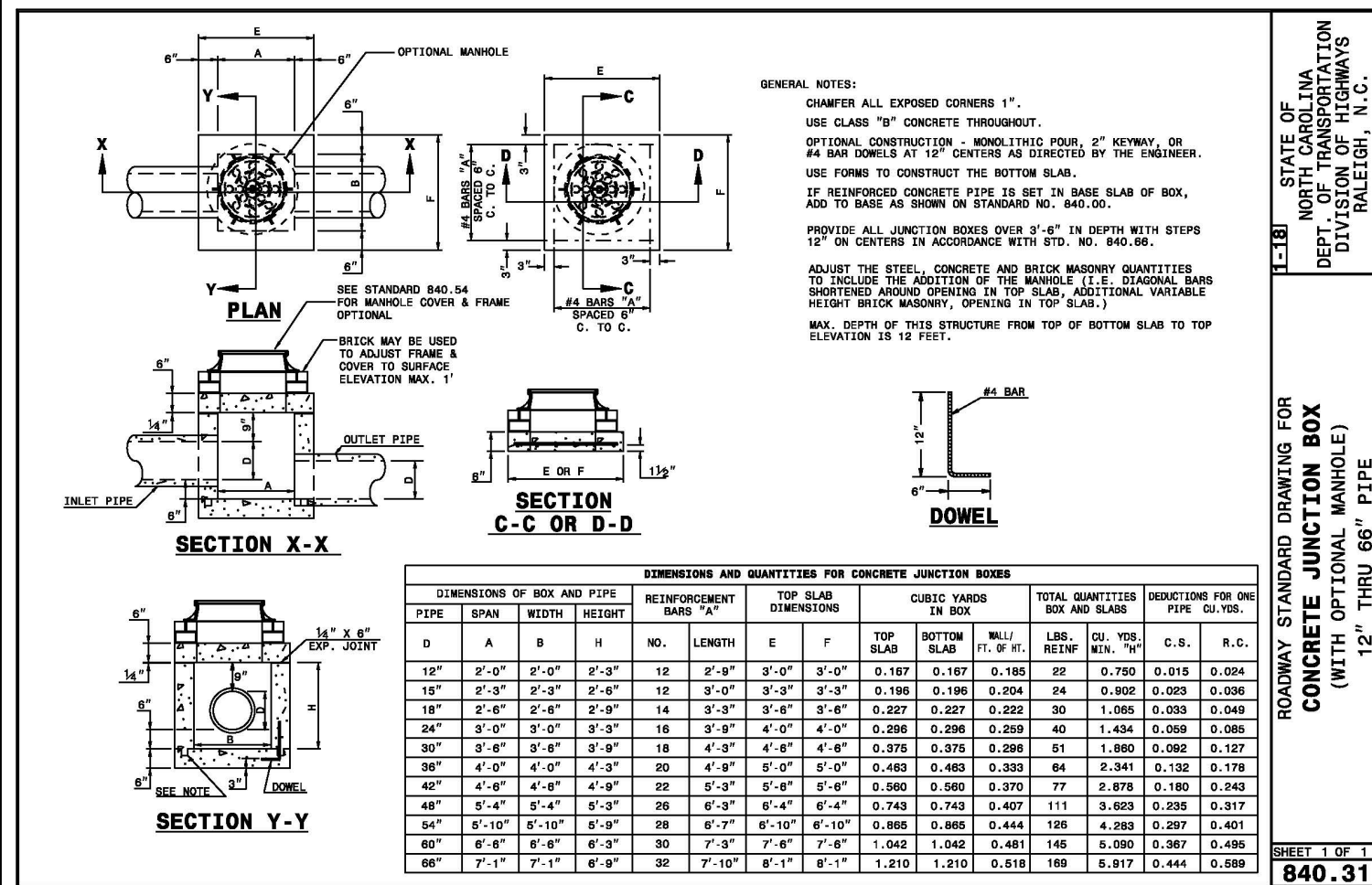
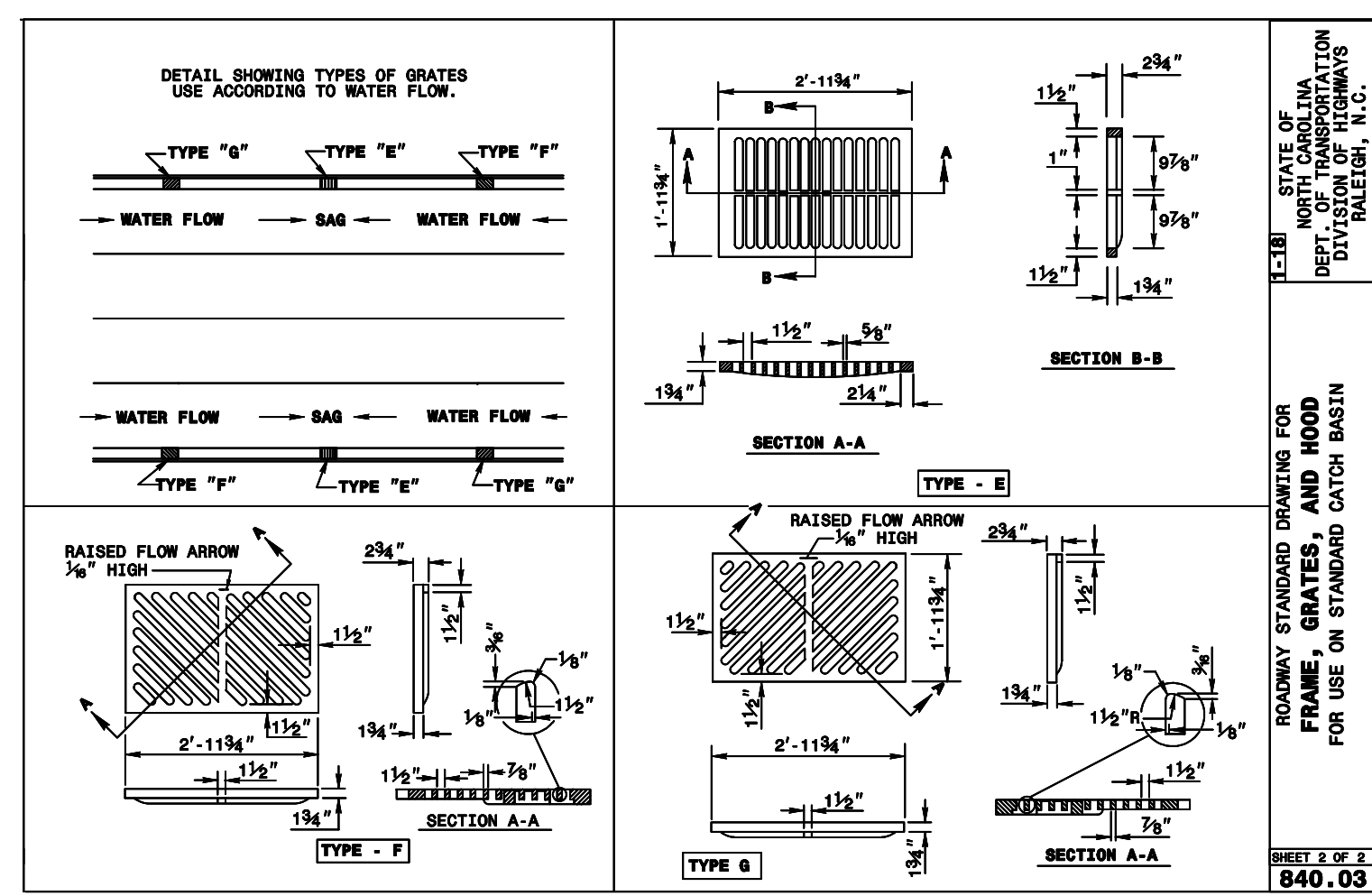
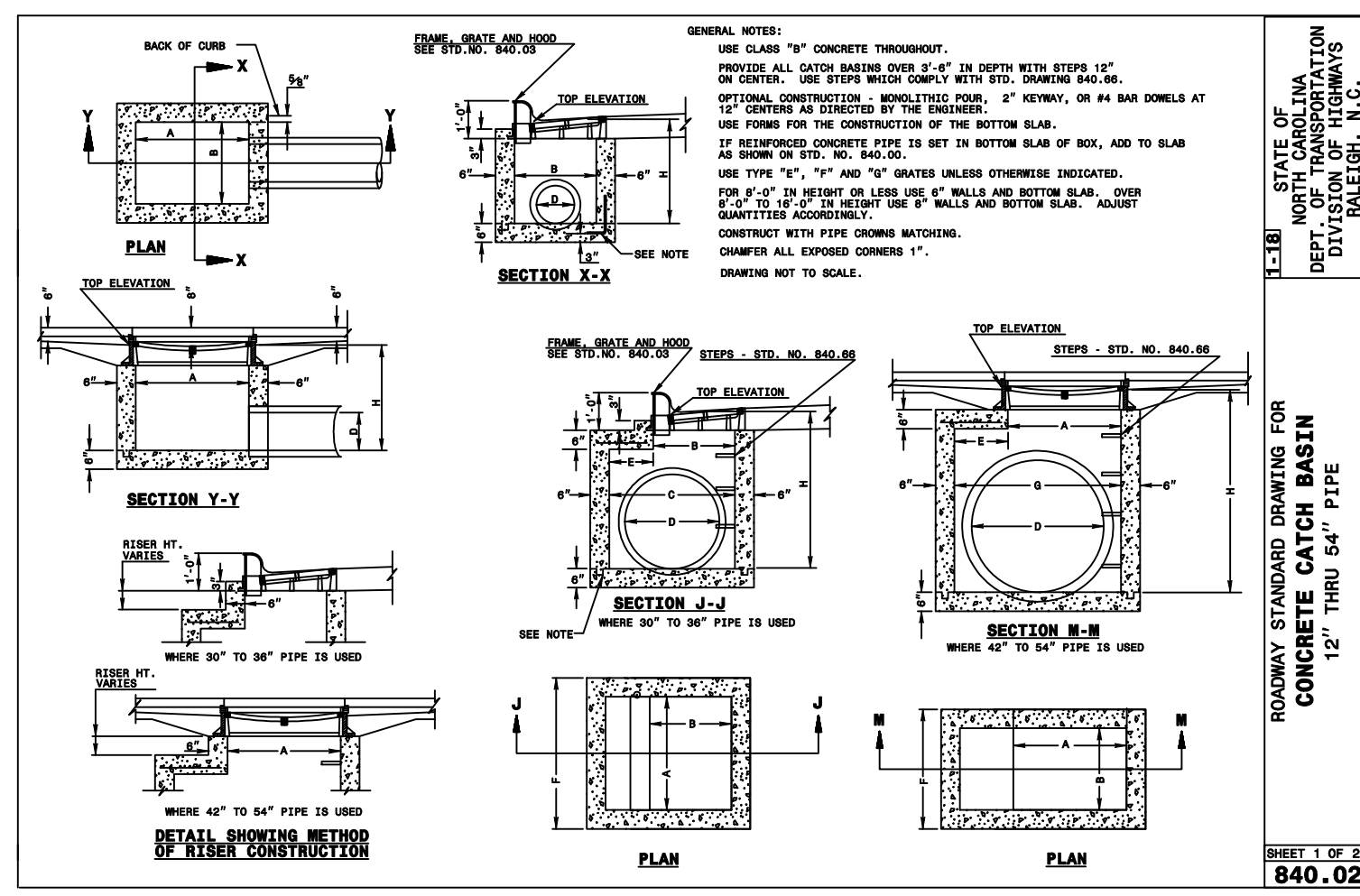
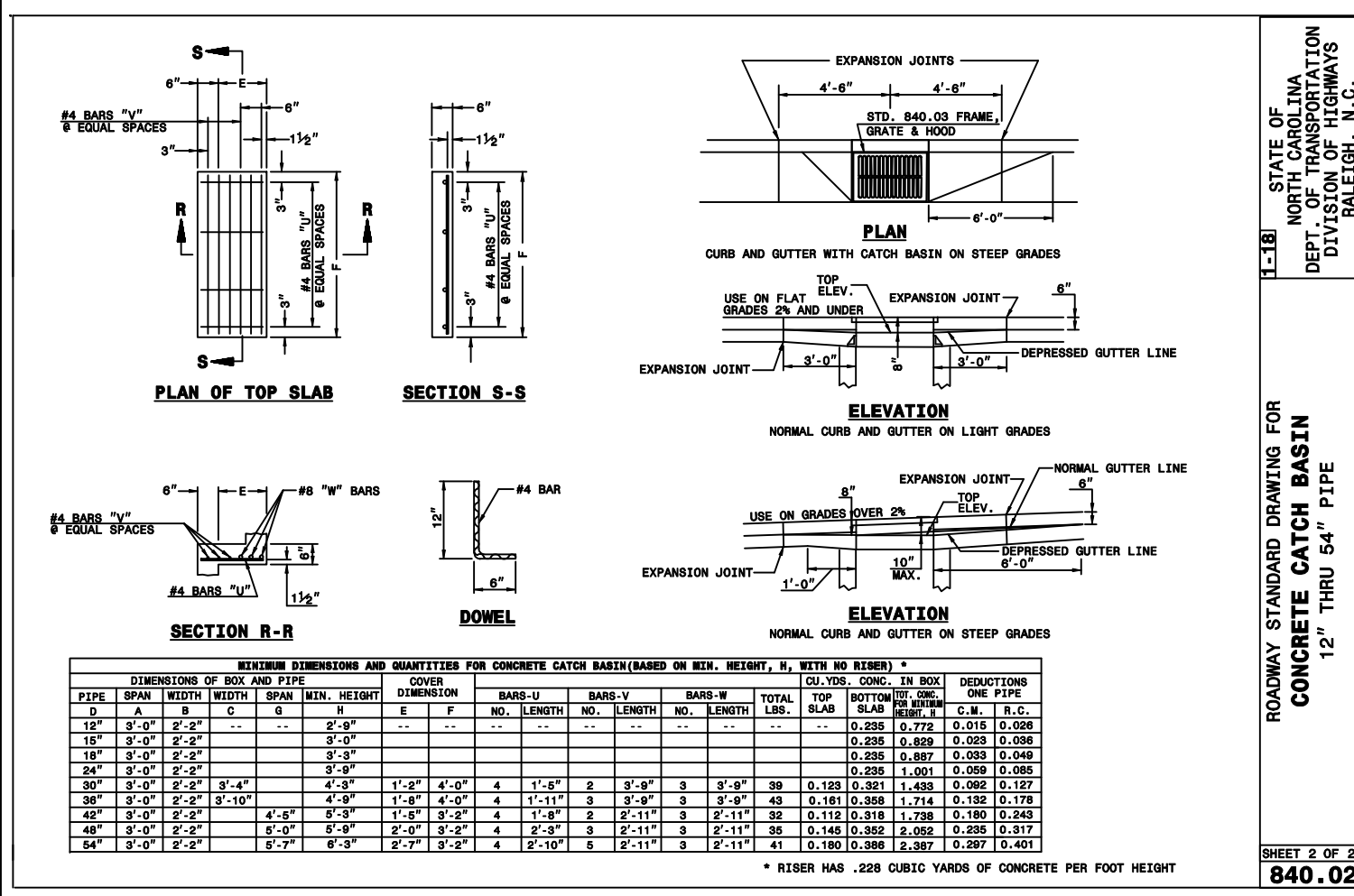


**FLEXIBLE PIPE**

Round Corrugated Steel Pipe 3.33 x 3.5, 3.50 x 3.75			
Diameter (Nominal)	Minimum cover (feet)	Maximum Height of Cover (feet)	Span (feet)
18"	12"	200	18
24"	12"	200	24
30"	12"	200	30
36"	12"	200	36
42"	12"	200	42
48"	12"	200	48
54"	12"	200	54
60"	12"	200	60
66"	12"	200	66
72"	12"	200	72
78"	12"	200	78
84"	12"	200	84
90"	12"	200	90

**RIGID PIPE**

Round Corrugated Aluminum Pipe 3.33 x 3.5, 3.50 x 3.75			
Diameter (Nominal)	Minimum cover (feet)	Maximum Height of Cover (feet)	Span (feet)
18"	12"	200	18
24"	12"	200	24
30"	12"	200	30
36"	12"	200	36
42"	12"	200	42
48"	12"	200	48
54"	12"	200	54
60"	12"	200	60
66"	12"	200	66
72"	12"	200	72
78"	12"	200	78
84"	12"	200	84
90"	12"	200	90



**REVISIONS**

NO.	DATE	REVISIONS
3	4-21-2022	REVISIONS TRC COMMENTS
2	4-05-2022	REVISIONS TRC COMMENTS
1	2-03-2022	REVISIONS TRC COMMENTS

OWNER: OTH REALTY, LLC  
 1701 N.J.E.L. WADE DR.  
 WILMINGTON N.C. 28401

DATE: 5-5-2022  
 Scale: HORIZ. 1"= 20'

Drawn: gw  
 Checked: gw  
 Project No: 4372

**TYPICAL DETAILS**

**OFF THE HOOK YACHT SALES**  
**N.E. CAPE FEAR RIVER FACILITY**  
 CAPE FEAR TOWNSHIP, NEW HANOVER COUNTY, NORTH CAROLINA

**TYPICAL DETAILS**

OWNER: OTH REALTY, LLC  
 1701 N.J.E.L. WADE DR.  
 WILMINGTON N.C. 28401

DATE: 5-5-2022  
 Scale: HORIZ. 1"= 20'

Drawn: gw  
 Checked: gw  
 Project No: 4372

**PRELIMINARY PLAN**

Sheet No: 4  
 of 11

**City of WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division

**APPROVED STORMWATER MANAGEMENT PLAN**

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

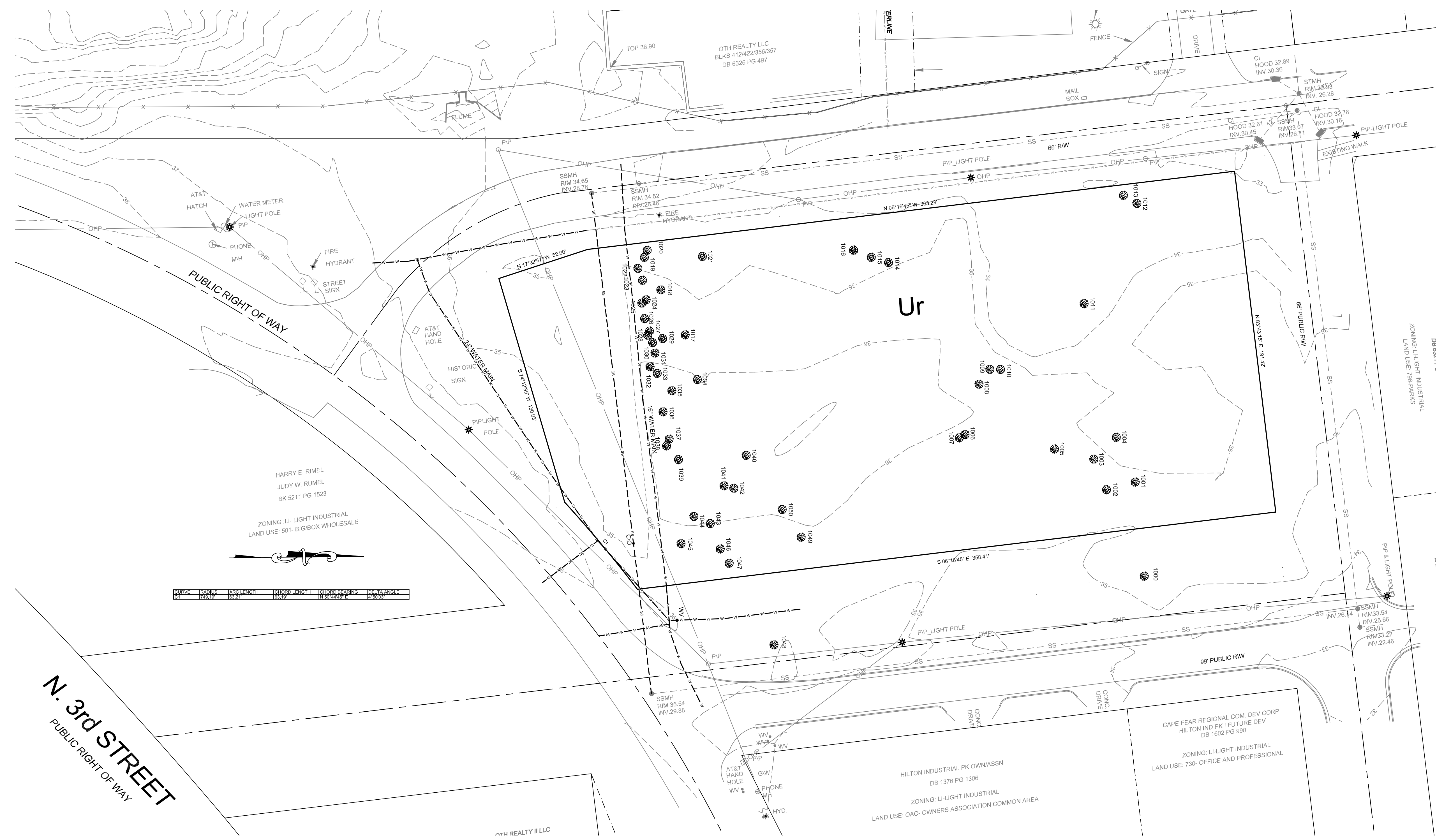
**Approved Construction Plan**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Planning: \_\_\_\_\_  
 Traffic: \_\_\_\_\_  
 Fire: \_\_\_\_\_

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

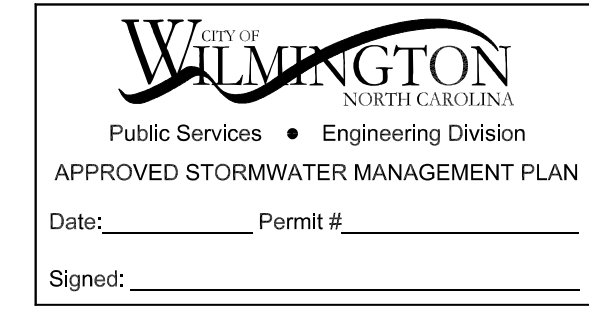
**HANOVER DESIGN SERVICES, P.A.**  
 LAND SURVEYORS, ENGINEERS & LAND PLANNERS  
 WILMINGTON, N.C. 28403  
 LICENSE # 0126702



CURVE	RAIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	748.19'	83.21'	83.19'	N 50°44'45" E	2.9069°

**N. 3rd STREET**  
 PUBLIC RIGHT OF WAY

1000.38" OAK	1036.15" OAK	1082.22.5" OAK	1121.17" GUM
1001.37" OAK	1037.14.5" OAK	1083.20.5" OAK	1122.16" HARDWOOD
1002.2" MAG	1038.14" OAK	1084.9" OAK	1123.10" HARDWOOD
1003.36" OAK	1039.20" OAK	1085.13" OAK	1124.50" HARDWOOD
1004.20.5" OAK	1040.19" OAK	1086. TRIPPLE 11" 11" 10" HARD W.	1125.9" HARDWOOD
1005.30" OAK	1041.25" OAK	1087.11" HARDWOOD	1126. TRIPPLE 8.5" HARDWOOD
1006.6" HARDWOOD	1042.20" OAK	1088.9" HARDWOOD	1127.10" HARDWOOD
1007. TWIN 9" 10" HARDWOOD	1043.21" OAK	1089.10" HARDWOOD	1128.12" HARDWOOD
1008.9.5" HARDWOOD	1044.24" OAK	1090.20" HARDWOOD	1129.15" HARDWOOD
1009.12" HARDWOOD	1045.32" OAK	1091.15" HARDWOOD	1130.15" HARDWOOD
1010.8" HARDWOOD	1046.20.5" OAK	1092.24" HARDWOOD	1131.9" HARDWOOD
1011.8.5" MAG	1047.18.5" OAK	1093. TWIN 12" 10" HARD W.	1132.9" HARDWOOD
1012.10" HARDWOOD	1048.38" OAK	1094.14" HARDWOOD	1133.13" HARDWOOD
1013. TWIN 8" 7" HARDWOOD	1049.18.5" HARDWOOD	1095.25" HARDWOOD	1134. TWIN 21" 16" HARDWOOD
1014.9" HARDWOOD	1050.14" HARDWOOD	1096.23" HARDWOOD	1135.24.5" HARDWOOD
1015.9" HARDWOOD	1051.24" OAK	1097.15" HARDWOOD	1136.22" HARDWOOD
1016.10" HARDWOOD	1052.18.5" OAK	1098.18" GUM	1137.15" HARDWOOD
1017.15" OAK	1053.10" OAK	1099.10.5" OAK	1138.15" OAK
1018.19" OAK	1054.17" OAK	1100.34.5" OAK	1140.30.5" HARDWOOD
1019.15" OAK	1055.11.5" OAK	1101.18.5" HARDWOOD	1141.9" HARDWOOD
1020.10" OAK	1056.9.5" OAK	1102.14" OAK	1142.11" HARDWOOD
1021.8.5" HARDWOOD	1057.14.5" OAK	1103.15" OAK	1143. TWIN 9.5" 8" GUM
1022.17" OAK	1058.18.5" OAK	1104. TWIN 22.5" 12.5" OAK	1144.9" HARDWOOD
1023.22" OAK	1059.16" OAK	1105.19" OAK	
1024. TWIN 14" 12" OAK	1061.27" OAK	1106.12.5" OAK	
1025.22" OAK	1062.16" OAK	1107.8.5" OAK	
1026.13.5" OAK	1063.10" HARDWOOD	1110.13.5" HARDWOOD	
1027.8.5" OAK	1064.20" OAK	1111.34" HARDWOOD	
1028.17.5" OAK	1066.19" HARDWOOD	1112.38" HARDWOOD	
1029.11.5" OAK	1075. TWIN 14" 9" OAK	1113. TWIN 9.5" 8" HARD W.	
1030.7" MAG	1076.8" OAK	1114. TRIPPLE 7.5" 11" 9" HARD W.	
1031.23" OAK	1077.15" OAK	1115.9" HARDWOOD	
1032.20.5" OAK	1078.12" OAK	1119.12.5" HARDWOOD	
1033. TWIN 12" 19.5" OAK	1079.9" OAK	1117.5" HARDWOOD	
1034.9.5" OAK	1080.8" OAK	1118.24" HARDWOOD	
1035.24" OAK	1081.20.5" OAK	1119.10" HARDWOOD	

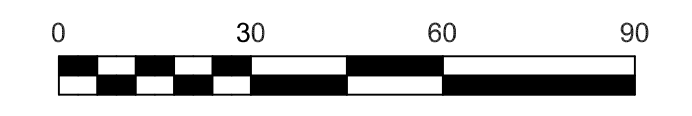


**Approved Construction Plan**

Name	Date
Planning	
Traffic	
Fire	

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



REVISIONS	TRC COMMENTS	DATE
3		4-7-2022
2		4-05-2022
1		2-03-2022

**EXISTING CONDITIONS**

**OFF THE HOOK YACHT SALES**  
**N.E. CAPE FEAR RIVER FACILITY**

OWNER: OTH REALTY LLC  
 1701 N. J. L. WADE DR.  
 WILMINGTON N.C. 28401

Date: 5-5-2022  
 Scale: HORZ: 1" = 30'  
 Drawn: gw  
 Checked: gw  
 Project No: 4372

**EXISTING CONDITIONS**

**PRELIMINARY PLAN**

Sheet No: **7**  
 of **11**

NO.	DATE	REVISIONS
5	5-16-2023	PARKING REVISION
4	10-4-2022	ACCESSIBLE PATHS DEMONSTRATED
3	4-21-2022	REVISIONS TRIC COMMENTS
2	4-05-2022	REVISIONS TRIC COMMENTS
1	2-03-2022	REVISIONS TRIC COMMENTS

**OFF THE HOOK YACHT SALES**  
**N.E. CAPE FEAR RIVER FACILITY**  
 CAPE FEAR TOWNSHIP, NEW HANOVER COUNTY, NORTH CAROLINA

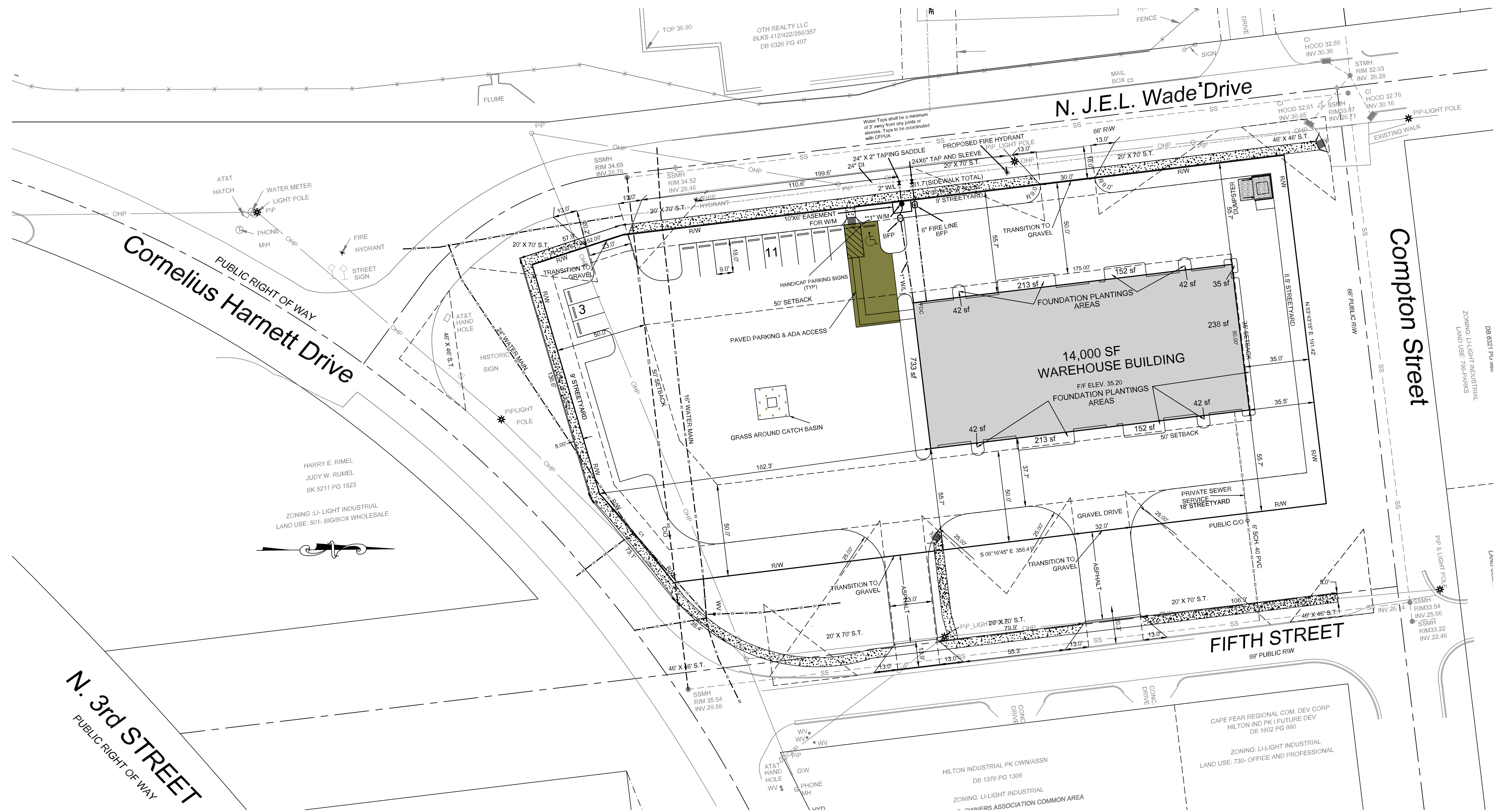
**OWNER:** OTH REALTY LLC  
 1701 N.J.E.L. WADE DR.  
 WILMINGTON, N.C. 28401

Date: 5-5-2022  
 Scale: HORZ: 1" = 30'  
 Drawn: gw  
 Checked: AHG  
 Project No: 4372

**SITE PLAN**

**PRELIMINARY PLAN**

Sheet No: **8**  
 of **11**



**FOUNDATION PLANTINGS**  
 NORTH BUILDING FACADE 80' X 21' = 1660 (SF) X .12 = 235.2 (SF)  
 SOUTH BUILDING FACADE 80' X 21' = 1660 (SF) X .12 = 235.2 (SF)  
 EAST BUILDING FACADE 1960 (SF) X .12 = 441 (SF)  
 WEST BUILDING FACADE 1960 (SF) X .12 = 441 (SF)  
 TOTAL FOUNDATION PLANTING REQUIRED = 1,352.4 (SF)  
 FOUNDATION PLANTING SHOWN = 2,096 (SF)

**SITE DATA**  
 PARCEL ID. NO. R04805-023-001-000  
 OWNER: OTH REALTY II LLC  
 1.74 ACRES TOTAL TRACT  
 ZONED LI-LIGHT INDUSTRIAL (WITHIN A SPECIAL HIGHWAY OVERLAY DISTRICT)  
 PROPOSED USE: WAREHOUSING  
 BUILDING CONSTRUCTION TYPE: TYPE II-B  
 BUILDING LOT COVERAGE 18.5%  
 PROPOSED BLDG. HEIGHT ONE STORY LESS THAN 45'  
 MINIMUM FRONT SETBACK 50'  
 MINIMUM REAR SETBACK 0' (35' ABUTTING RESIDENTIAL)  
 MINIMUM INTERIOR SIDE SETBACK 0' (20' ABUTTING RESIDENTIAL)  
 MINIMUM CORNER LOT SIDE SETBACK 50'  
 MAX. HEIGHT 35' (ADDITIONAL HEIGHT REQUIRES GRATER SETBACKS)  
 STREET YARD 18' AND 9'  
 SOIL TYPES INCLUDE U<sub>1</sub> (URBAN LAND) AND K<sub>u</sub> (URBAN LAND COMPLEX)  
 CAMA LAND TYPE (URBAN)  
 PROPOSED BLDG. SIZE 14,000 S.F.  
 PARCEL AREA 1.73 ACRES (75,528 S.F.)

**PARKING**  
 MINIMUM PARKING REQUIRED (1 PER 1,000 SF OF BLDG.) 14 SPACES  
 MAXIMUM PARKING ALLOWED (NO MAXIMUM SPECIFIED)  
 TOTAL PARKING SHOWN 14 TOTAL SPACES  
 ACCESSIBLE PARKING REQUIRED: 1 PER 25  
 ACCESSIBLE PARKING PROVIDED: 1  
 BICYCLE PARKING REQUIRED: 5  
 BICYCLE PARKING PROVIDED: 5

**IMPERVIOUS CALCULATIONS**

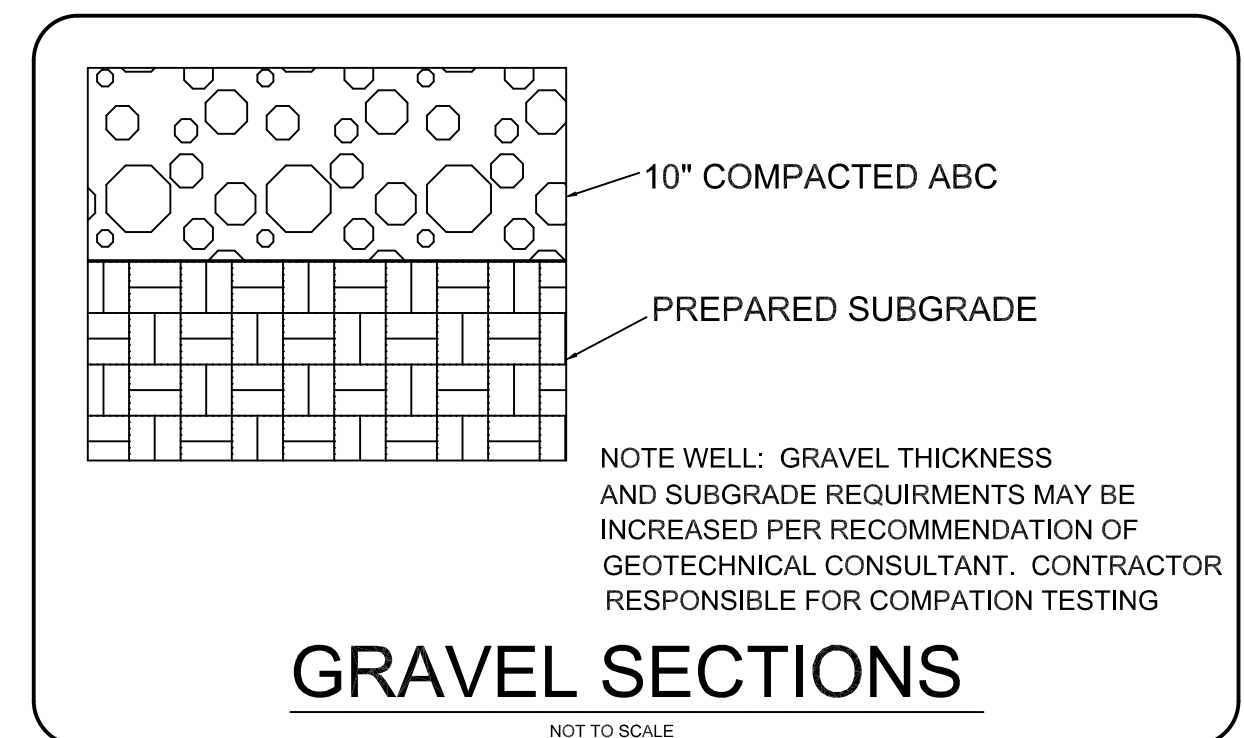
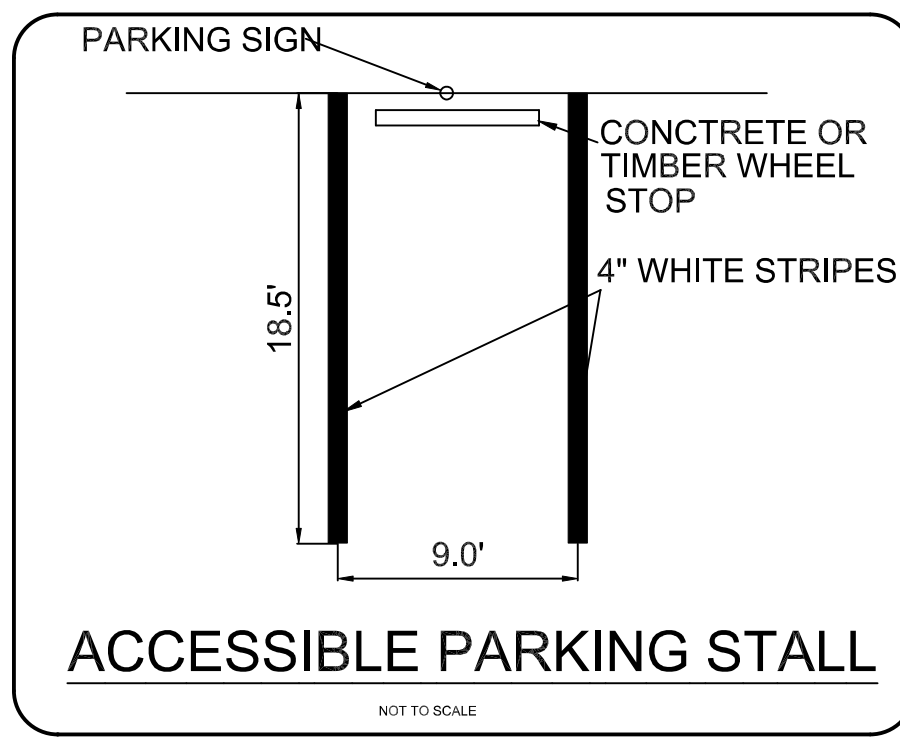
Category	Area (SF)	Percentage
BUILDING	14000	SF
PARKING AND DRIVES	46390	SF
SIDEWALKS	152	SF
FUTURE	1,852	SF
TOTAL PROPOSED IMPERVIOUS (NOW AND FUTURE)	62,394	SF

**BUILDING LOT COVERAGE**

Category	Area (SF)	Percentage
PROPOSED BLDG.	14000	SF
TOTAL TRACT AREA	75588	SF
BUILDING LOT COVERAGE	18.5%	

**TRIP GENERATION CHART**

LAND USE	ITE CODE	AM PEAK HOURS TRIPS= 23		PM PEAK HOUR TRIPS=28	
		24 HR VOLUMES	ENTER   EXIT	ENTER   EXIT	ENTER   EXIT
SPECIAL TRADE CONTRACTOR					
BOAT REPAIR					
14,000 SF PROPOSED	180	143	17   6	9   19	
CURRENT LAND USE	958				

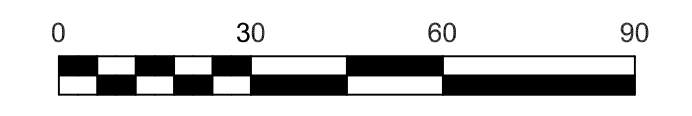


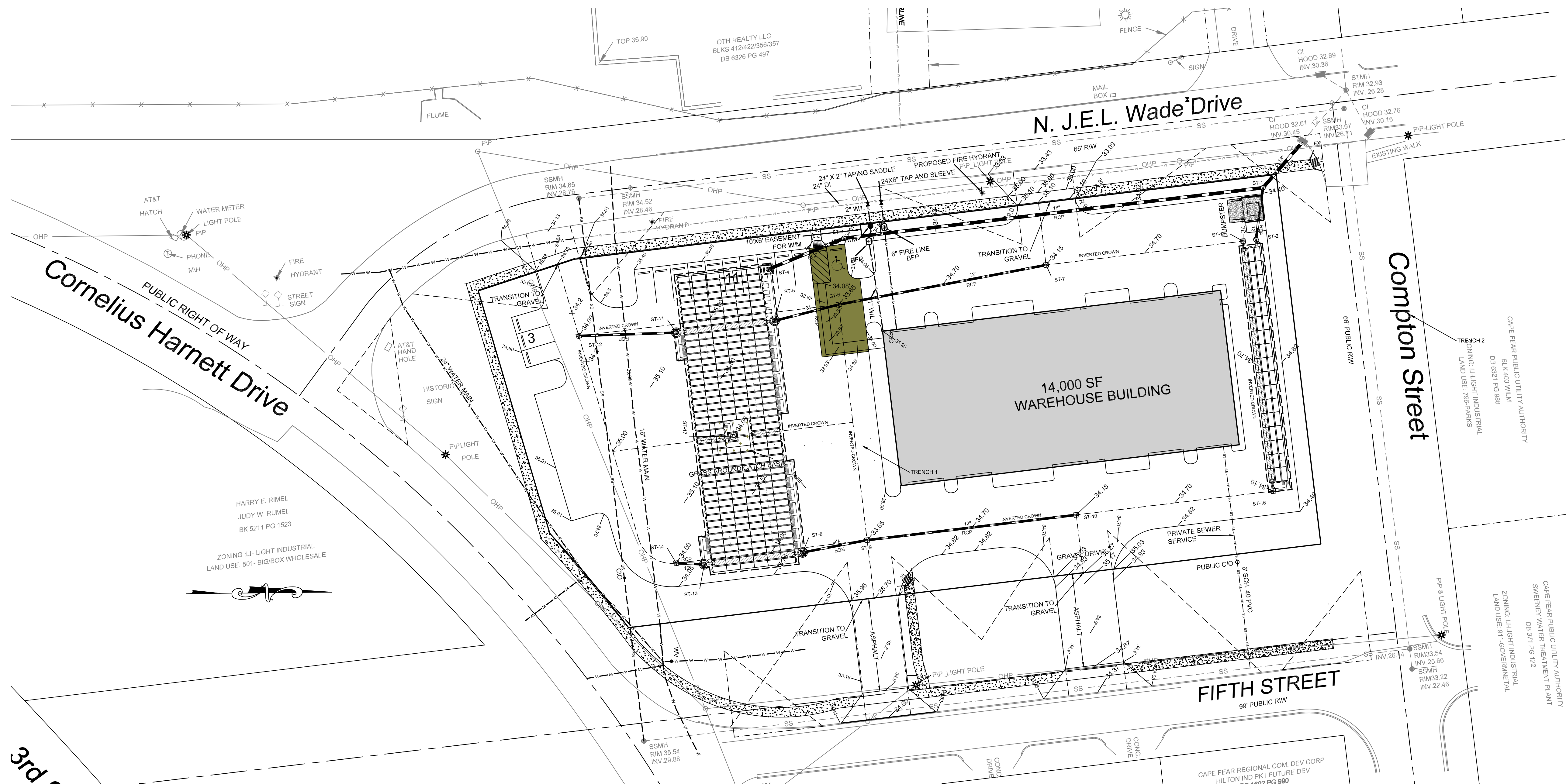
**WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

**Approved Construction Plan**

Name	Date
Planning	_____
Traffic	_____
Fire	_____

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.





**Cornelius Harnett Drive**  
 PUBLIC RIGHT OF WAY

**N. J.E.L. Wade Drive**

**Compton Street**

**FIFTH STREET**  
 99' PUBLIC R/W

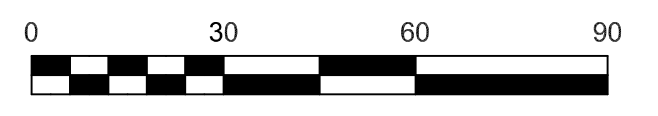
HARRY E. RIMEL  
 JUDY W. RUMEL  
 BK 5211 PG 1523  
 ZONING LI-LIGHT INDUSTRIAL  
 LAND USE: 901-BIGBOX WHOLESALE



**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

**Approved Construction Plan**  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
 Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_

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NO.	DATE	REVISIONS / TRC COMMENTS
4	5-16-2023	PARKING REVISION
3	4-21-2022	REVISIONS / TRC COMMENTS
2	4-05-2022	REVISIONS / TRC COMMENTS
1	2-09-2022	REVISIONS / TRC COMMENTS

**GRADING PLAN**  
**OFF THE HOOK YACHT SALES**  
**N.E. CAPE FEAR RIVER FACILITY**  
 CAPE FEAR PUBLIC UTILITY AUTHORITY  
 BLK 403 W/48  
 DB 6221 PG 888  
 ZONING: LI-LIGHT INDUSTRIAL  
 LAND USE: 786-PARKS

**OWNER:**  
 OTH REALTY LLC  
 1701 N. J.E.L. WADE DR.  
 WILMINGTON N.C. 28401

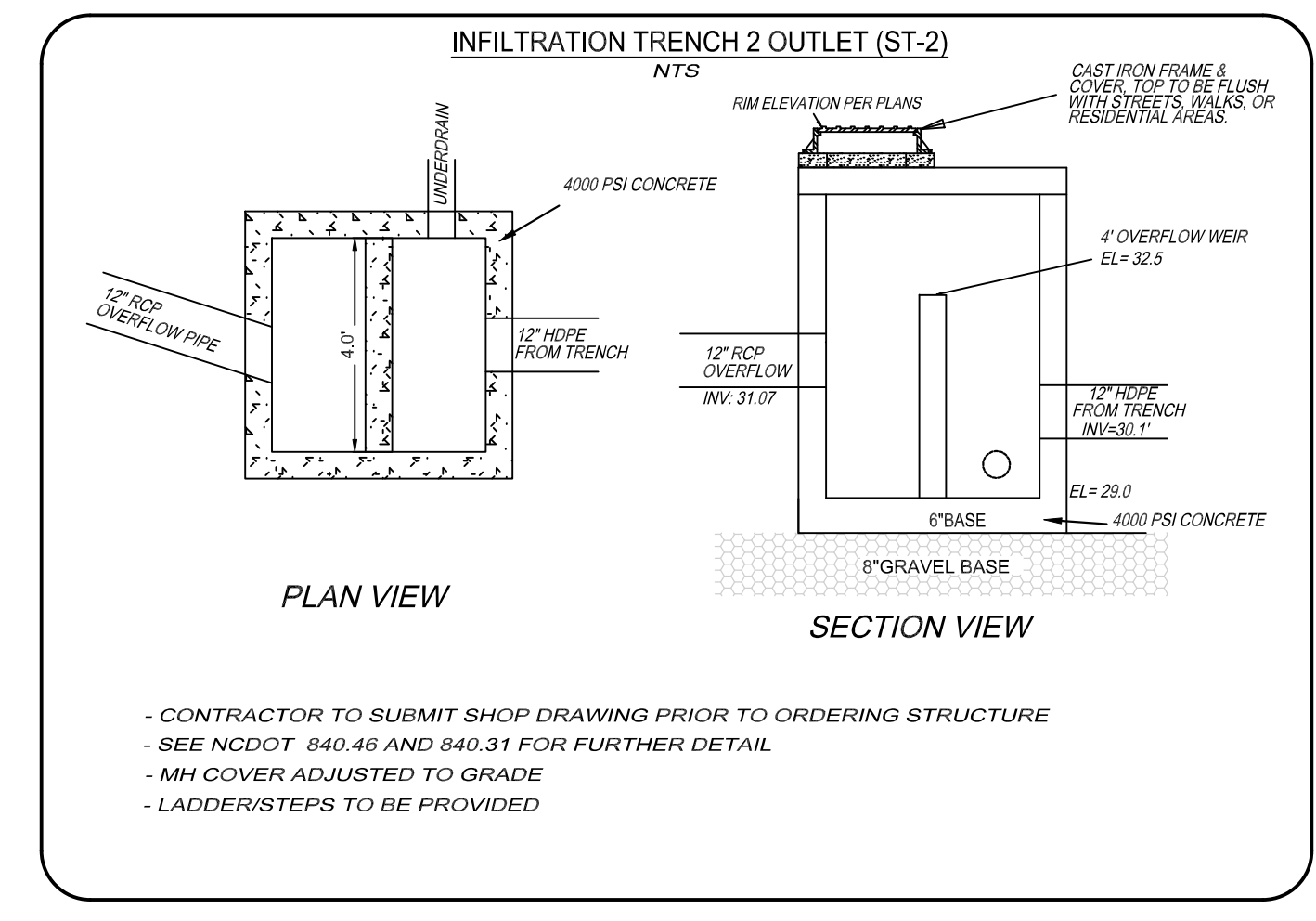
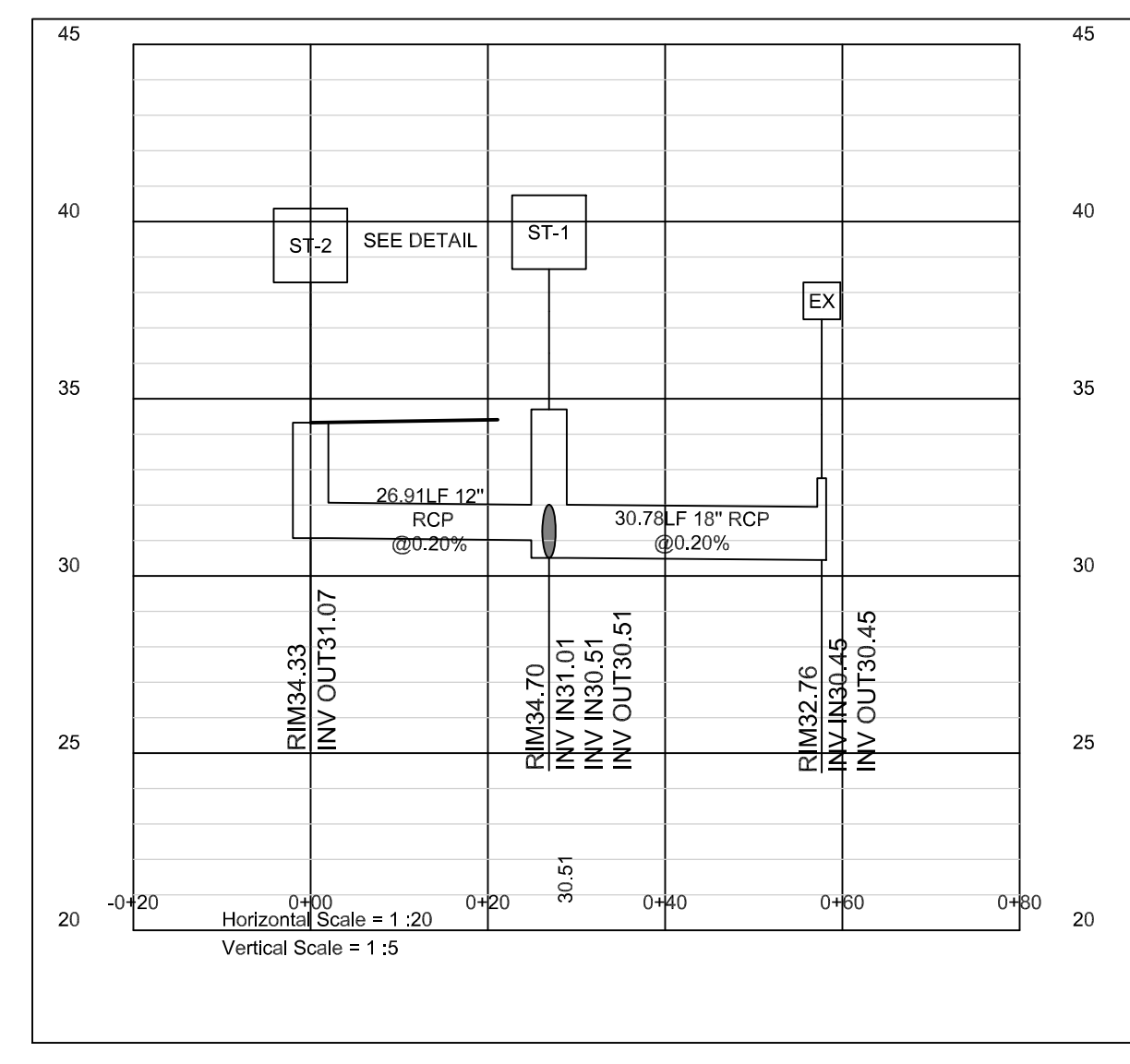
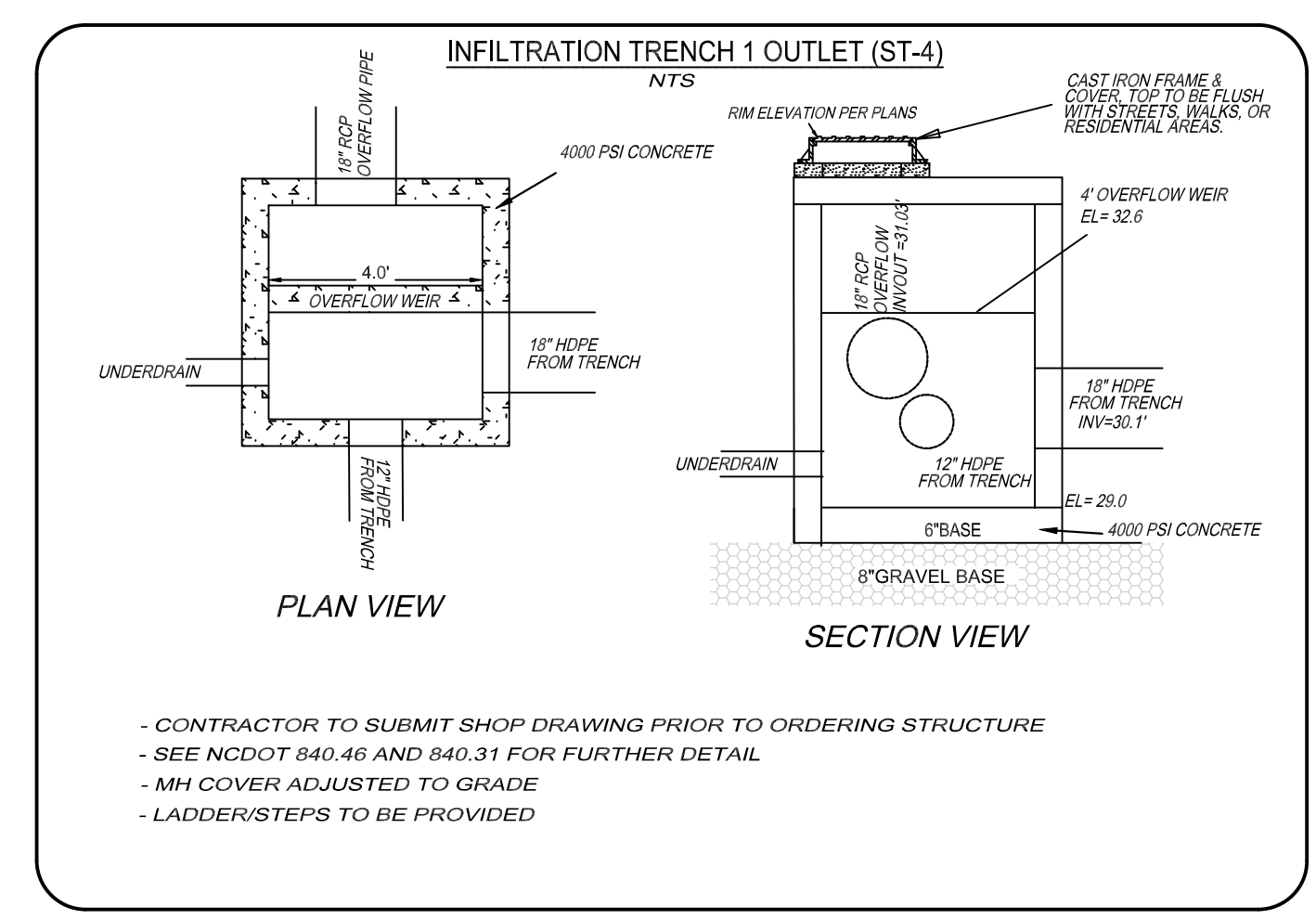
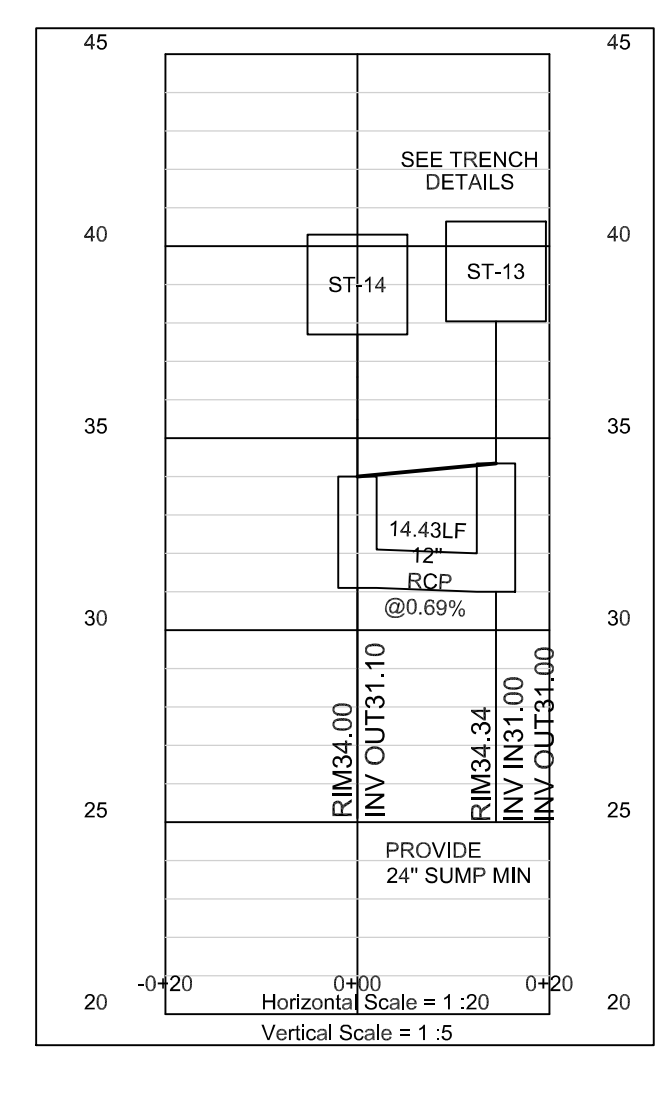
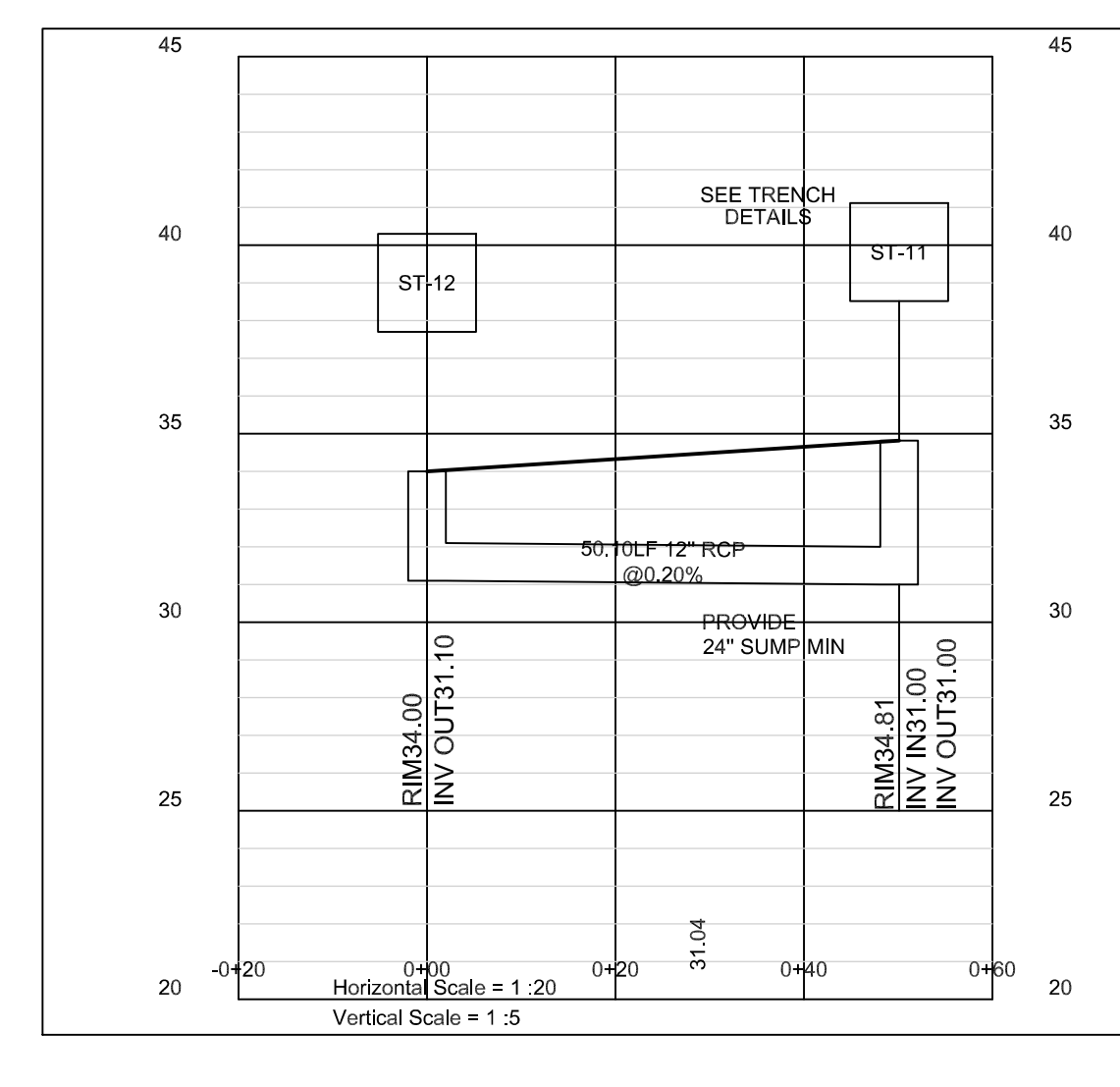
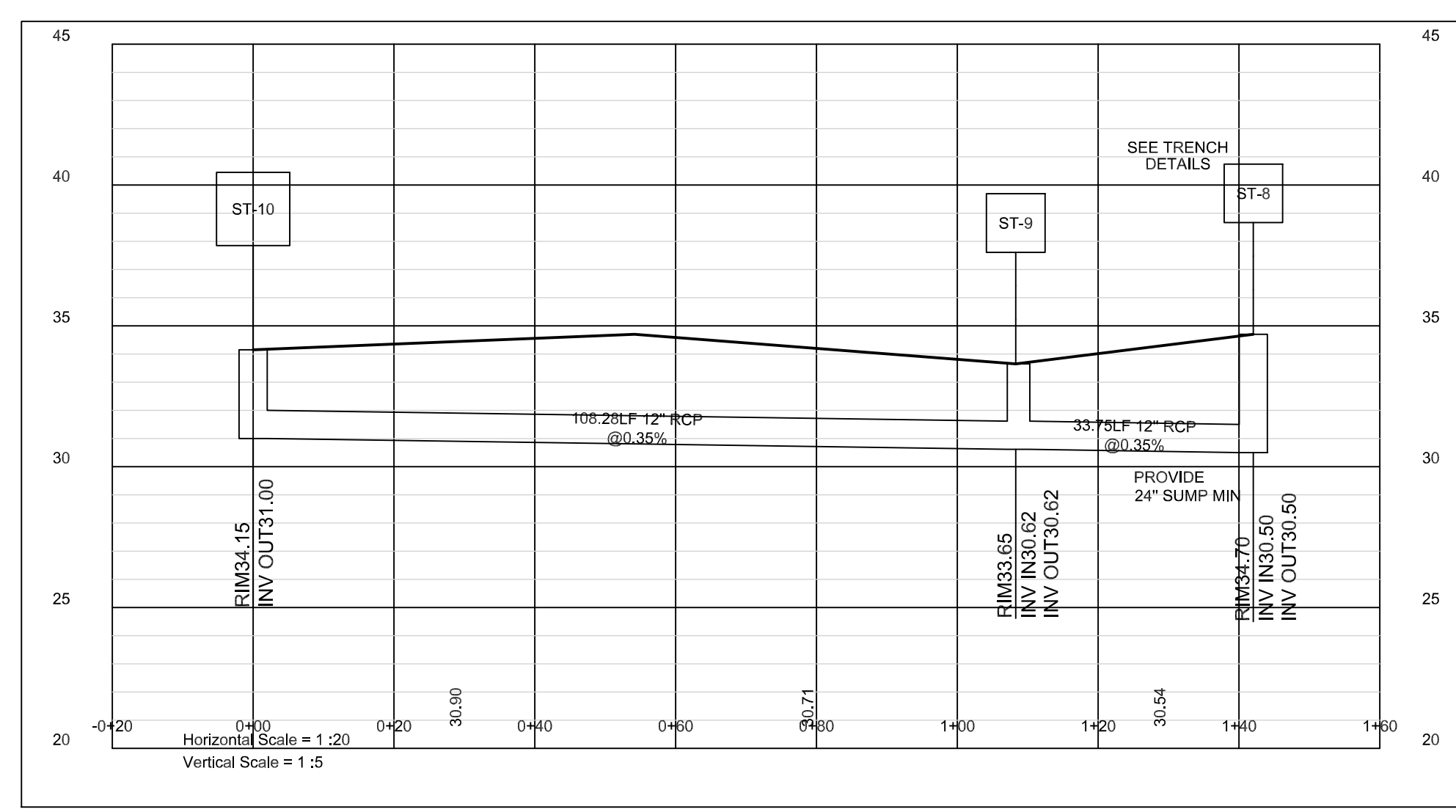
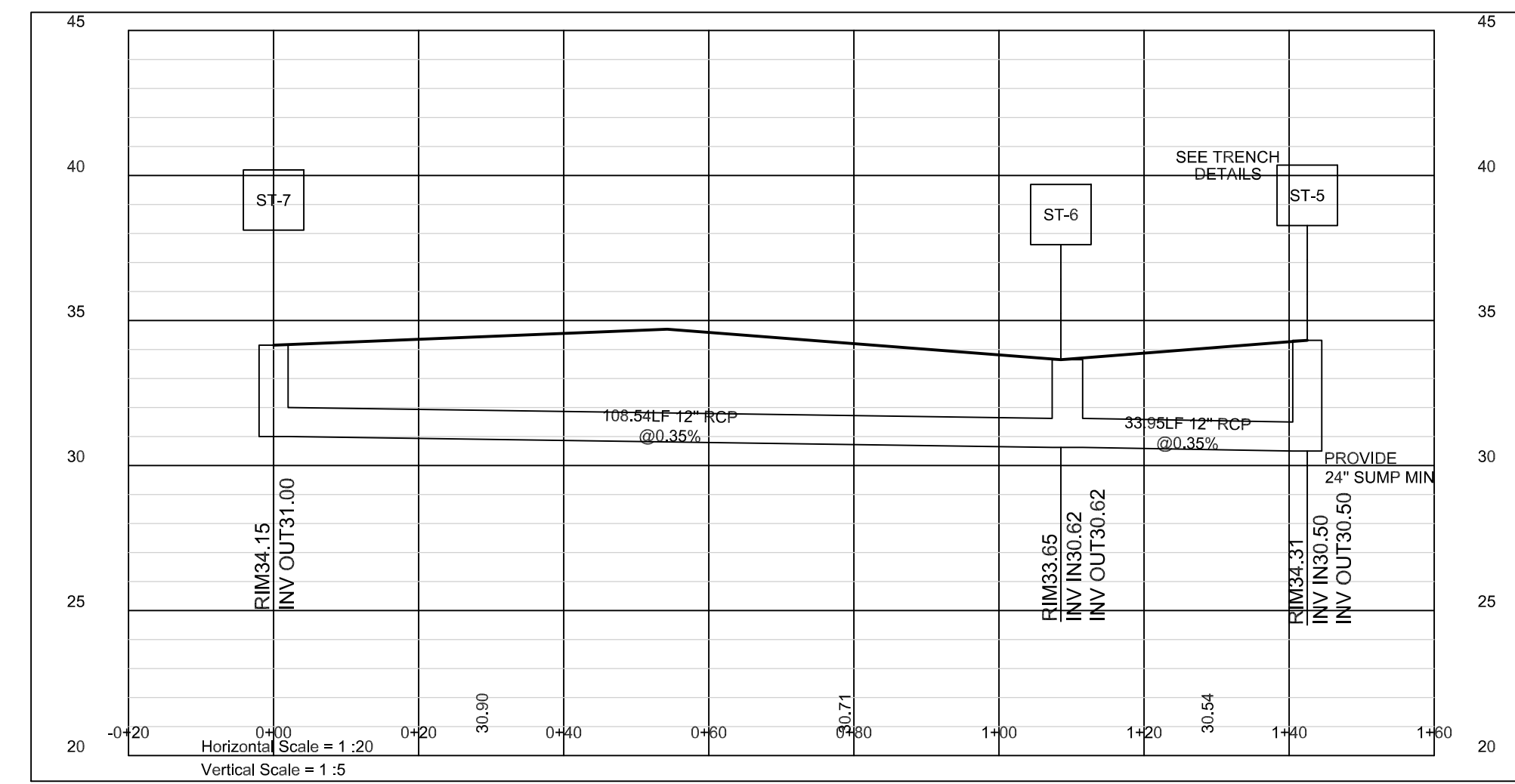
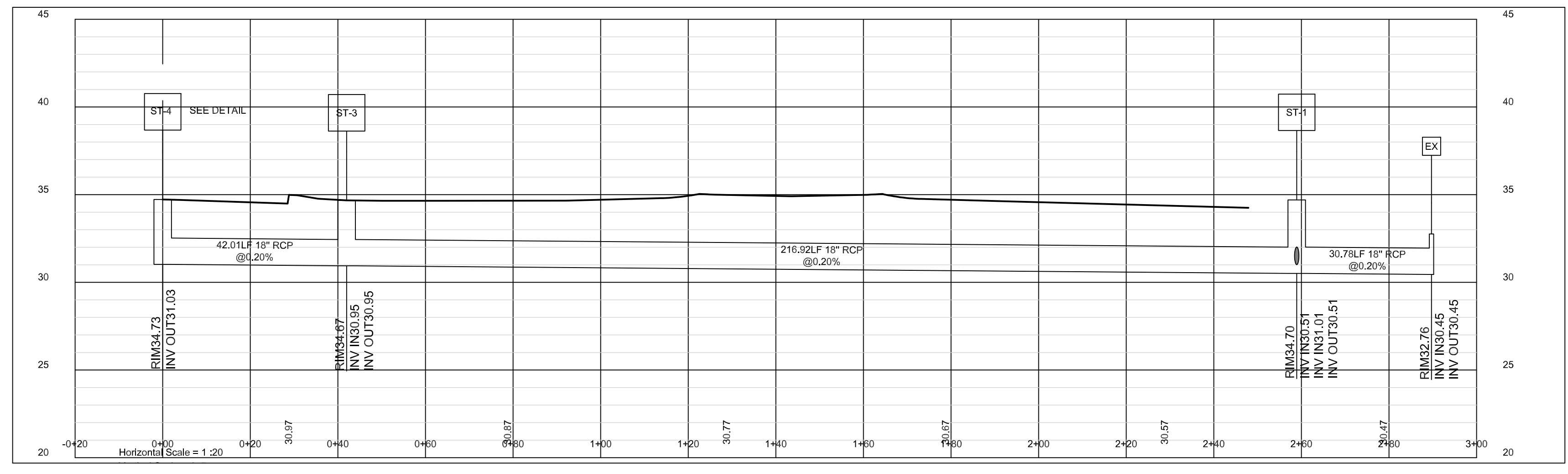
Date: 5-5-2022  
 Scale: HORZ: 1"= 30'  
 Drawn: gw  
 Checked: gw  
 Project No: 4372

**GRADING PLAN**

**PRELIMINARY PLAN**

Sheet No: **9**  
 of **11**

**HANOVER DESIGN SERVICES, P.A.**  
 LAND SURVEYORS, ENGINEERS & LAND PLANNERS  
 1000 WILMINGTON ROAD, SUITE 200  
 WILMINGTON, N.C. 28403  
 LICENSE # C-2003



REVISIONS	DATE
3	4-21-2022
2	4-05-2022
1	2-03-2022

OWNER: **OTH REALTY, LLC**  
 1701 N. J. EL. WADE DR.  
 WILMINGTON, N.C. 28401

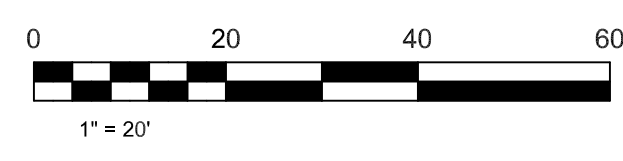
Date: 5-5-2022  
 Scale: HORZ.: 1" = 20'  
 Drawn: gw  
 Checked: gw  
 Project No: 4372

STORM PROFILES  
**OFF THE HOOK YACHT SALES**  
**N.E. CAPE FEAR RIVER FACILITY**

STORM PROFILES

Sheet No: 10  
 OR 11

**PRELIMINARY PLAN**



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_



REVISIONS	DATE
1	2-03-2022
2	4-05-2022
3	4-21-2022

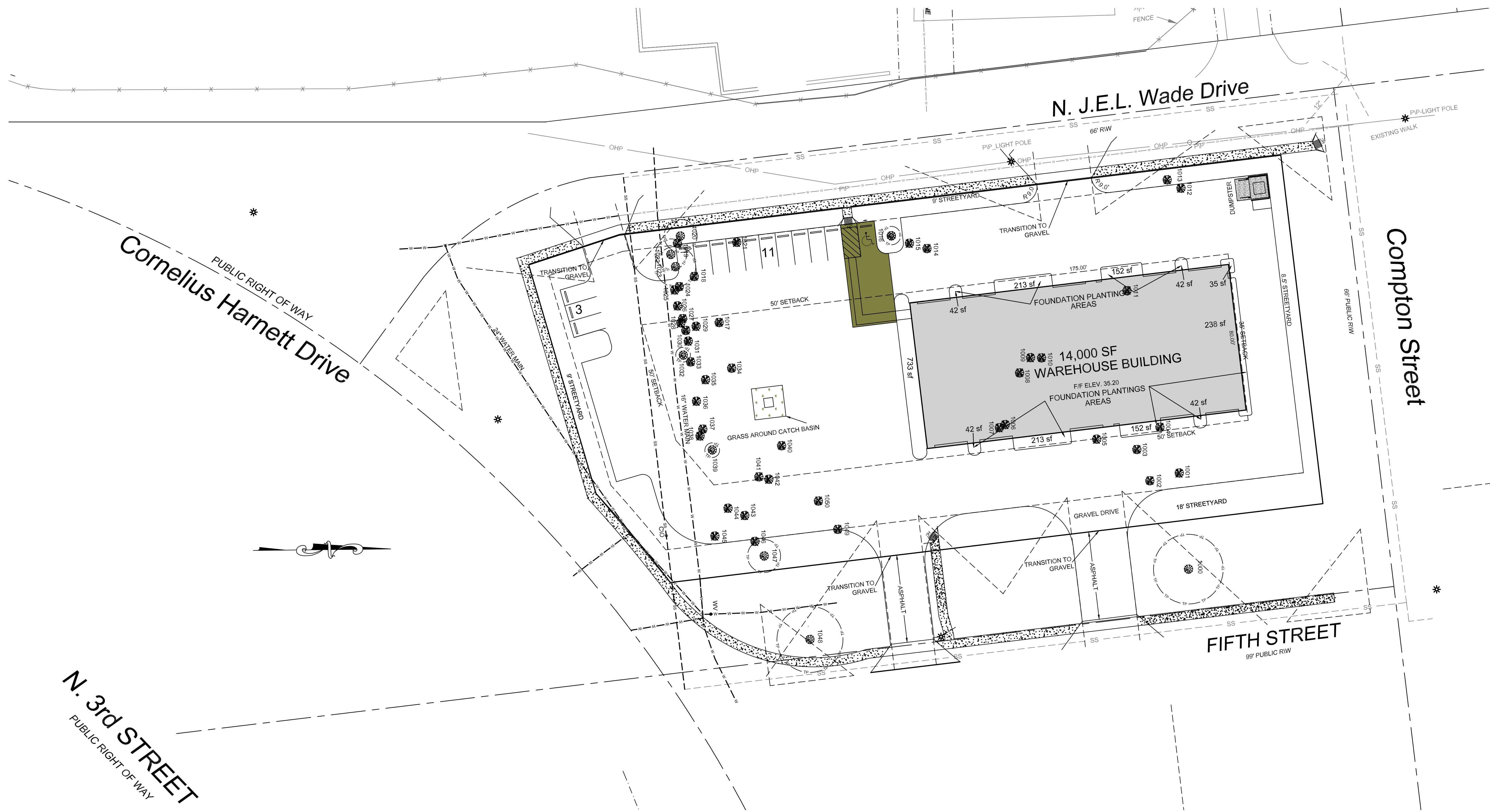
OWNER:  
**07TH REALTY, LLC**  
 0701 N.J.E.L. WADE DR.  
 WILMINGTON, N.C. 28401

Date: 5-5-2022  
 Scale: HORIZ.: 1" = 30'  
 Drawn: gw  
 Checked: gw  
 Project No: 4372

**TREE SURVEY & REMOVAL PLAN**

PRELIMINARY PLAN

Sheet No:  
**11**  
 Of:  
**11**



TREE TABLE			
1000,38" OAK	1036,15" OAK	1082,22.5" OAK	1121,17" GUM
1001,37" OAK	1037,14.5" OAK	1083,20.5" OAK	1122,16" HARDWOOD
1002,5" MAG.	1038,14" OAK	1084,9" OAK	1123,16" HARDWOOD
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1004,20.5" OAK	1040,19" OAK	1086,TRIPPLE 11" 11" 10" HARD W.	1125,9" HARDWOOD
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1014,9" HARDWOOD	1050,14" HARDWOOD	1096,23" HARDWOOD	1135,24.5" HARDWOOD
1015,9" HARDWOOD	1051,24" OAK	1097,18" HARDWOOD	1136,22" HARDWOOD
1016,10" HARDWOOD	1052,18.5" OAK	1098,19" GUM	1137,19" HARDWOOD
1017,19" OAK	1053,10" OAK	1099,10.5" OAK	1138,15" OAK
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1019,19" OAK	1055,11.5" OAK	1101,15.5" HARDWOOD	1141,9" HARDWOOD
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1032,20.5" OAK	1079,12" OAK	1116,12.5" HARDWOOD	
1033,TWIN 12" 19.5" OAK	1079,9" OAK	1117,3" HARDWOOD	
1034,9.5" OAK	1080,8" OAK	1118,24" HARDWOOD	
1035,24" OAK	1081,20.5" OAK	1119,10" HARDWOOD	

1016,10" HARDWOOD DENOTES RETAINANCE TREES  
 TREE PROTECTION FENCE

**WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

Approved Construction Plan

Name	Date
Planning	_____
Traffic	_____
Fire	_____

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



**PROJECT INFORMATION**

ENGINEERED PROJECT MANAGER:	
ASIS SALES REP:	
PROJECT NO.:	

SiteASIS<sup>™</sup>  
FOR STORMTECH  
INSTRUCTIONS,  
DOWNLOAD THE  
INSTALLATION APP

## YACHT AREA-1

### WILMINGTON, NC

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**SC-310 STORMTECH CHAMBER SPECIFICATIONS**

- CHAMBERS SHALL BE STORMTECH SC-310.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR POLYETHYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2022 (POLYETHYLENE) OR ASTM F2416-16 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBERS ROWS SHALL PROVIDE CONTINUOUS UNSTRUCTURED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE ASHOTO LIFT BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE ASHOTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2022, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE 1) INSTANTANEOUS 1" MIN. HEIGHT DESIGN TRUCK LOAD ON MINIMUM COVER D) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) ASHOTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 2.2.2 OF ASTM F2022 SHALL BE GREATER THAN OR EQUAL TO 400 LB-IN. AND 5) TO RESET CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
  - THE STRUCTURAL EVALUATION SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER.
  - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.5 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE SAFETY FACTORS SHALL BE DETERMINED BY SECTIONS 3 AND 12.12 OF THE ASHOTO LIFT BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
  - THE TEST DESIGNED CRISP MODULUS AS SPECIFIED IN ASTM F2022 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

**ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	ASHOTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEURBAE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBGRADE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEMENT STONE (0' LAYER) TO 12" (305 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBGRADE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOLID AGGREGATE MIXTURES, <math>95\%</math> FINES OR PROCESSED AGGREGATE. OR MOST PAVEMENT SUBGRADE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	BEGIN COMPACTIONS AFTER 12" (305 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 1" (25 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL-GRADED MATERIAL AND 90% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 13,000 lbs (59 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (90 kN).
B	EMBEMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT BOTTOM OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

**PLEASE NOTE:**

- THE LISTED ASHOTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (ASHOTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR IN-LIEU MATERIALS WHEN PLACED AND COMPACTED IN 1" (25 mm) MAX LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAVING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGN, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBGRADE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

**NOTES:**

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2022 (POLYETHYLENE) OR ASTM F2416-16 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2022, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 2.2.2 OF ASTM F2022 SHALL BE GREATER THAN OR EQUAL TO 400 LB-IN. AND 5) TO RESET CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

**SC-310 ISOLATOR ROW PLUS DETAIL**  
NTS

**INSPECTION & MAINTENANCE**

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT

- INSPECTION POINTS (IF PRESENT)
  - REMOVE/OPEN LID ON NYLON/PLASTIC INLINE DRAIN
  - REMOVE AND CLEAN FLEXTON FILTER IF INSTALLED
  - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - LOWERS A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- ALL ISOLATOR TUBES ROWS
  - REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS

- A PNEUMATIC CLEANING NOZZLE WITH REAR FACING SPREAD OF 40" (1.1 m) OR MORE IS PREFERRED
- APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

**NOTES**

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION, ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACUUMING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

**UNDERDRAIN DETAIL**  
NTS

**SC-310 TECHNICAL SPECIFICATION**  
NTS

**NOMINAL CHAMBER SPECIFICATIONS**

SIZE (WITH INSTALLED LENGTH)	CHAMBER STORAGE	MINIMUM INSTALLED STORAGE	WEIGHT
34.7" X 16.0" X 16.0" (884 mm X 406 mm X 2160 mm)	14.7 CUBIC FEET (0.42 m <sup>3</sup> )	31.2 CUBIC FEET (0.88 m <sup>3</sup> )	36.0 kg

\*ASSUMES 6" (152 mm) ABOVE, BELOW, AND BETWEEN CHAMBERS

**PRE-FAB STUBS AT BOTTOM OF END CAP WITH FLANG END WITH "B"**

PART #	STUB	A	B	C
SC31E100T / SC31E100TC	6" (152 mm)	9.6" (244 mm)	5.0" (127 mm)	0.5" (13 mm)
SC31E100B / SC31E100BC	6" (152 mm)	11.0" (280 mm)	3.5" (89 mm)	0.5" (13 mm)
SC31E100T / SC31E100TC	10" (254 mm)	12.2" (310 mm)	4.4" (112 mm)	0.5" (13 mm)
SC31E100B / SC31E100BC	10" (254 mm)	13.5" (343 mm)	4.4" (112 mm)	0.5" (13 mm)
SC31E100T / SC31E100TC	12" (305 mm)	13.5" (343 mm)	4.4" (112 mm)	0.5" (13 mm)
SC31E100B / SC31E100BC	12" (305 mm)	13.5" (343 mm)	4.4" (112 mm)	0.5" (13 mm)

ALL STUBS EXCEPT FOR THE SC31E100B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 858-858-8588.

<sup>2</sup>FOR THE SC31E100B THE 12" (305 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL.

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_



**PRELIMINARY PLAN**

**OFF THE HOOK YACHT SALES**  
**N.E. CAPE FEAR RIVER FACILITY**  
CAPE FEAR TOWNSHIP, NEW HANOVER COUNTY, NORTH CAROLINA

**OWNER:**  
OTH REALTY, LLC  
1701 N. JEL. WADE DR.  
WILMINGTON, N.C. 28401

Date: 5-5-2022  
Scale: NTS  
Drawn: gw  
Checked: gw  
Project No: 4372

**ADS INFILTRATION TRENCH DETAILS**

Sheet No: TD-1  
of TD-2

**HANOVER DESIGN SERVICES, P.A.**  
LANG SURVEYING, ENGINEERING & LAND PLANNERS  
1503 GILGATE PARKWAY  
WILMINGTON, N.C. 28402  
LICENSE # 12-0597

REVISIONS	DATE
4-21-2022	
4-05-2022	
2-03-2022	

REVISIONS: TRIC COMMENTS

REVISIONS: TRIC COMMENTS

REVISIONS: TRIC COMMENTS

REVISIONS	DATE
3	
2	
1	

REVISIONS: TRIC COMMENTS

REVISIONS: TRIC COMMENTS

REVISIONS: TRIC COMMENTS

REVISIONS	DATE
3	
2	
1	

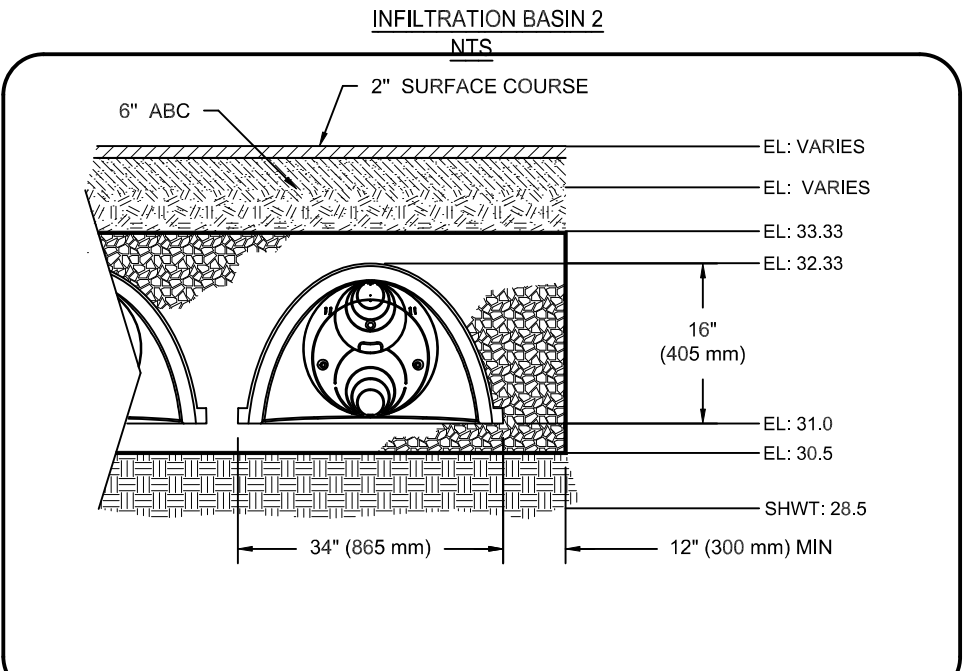
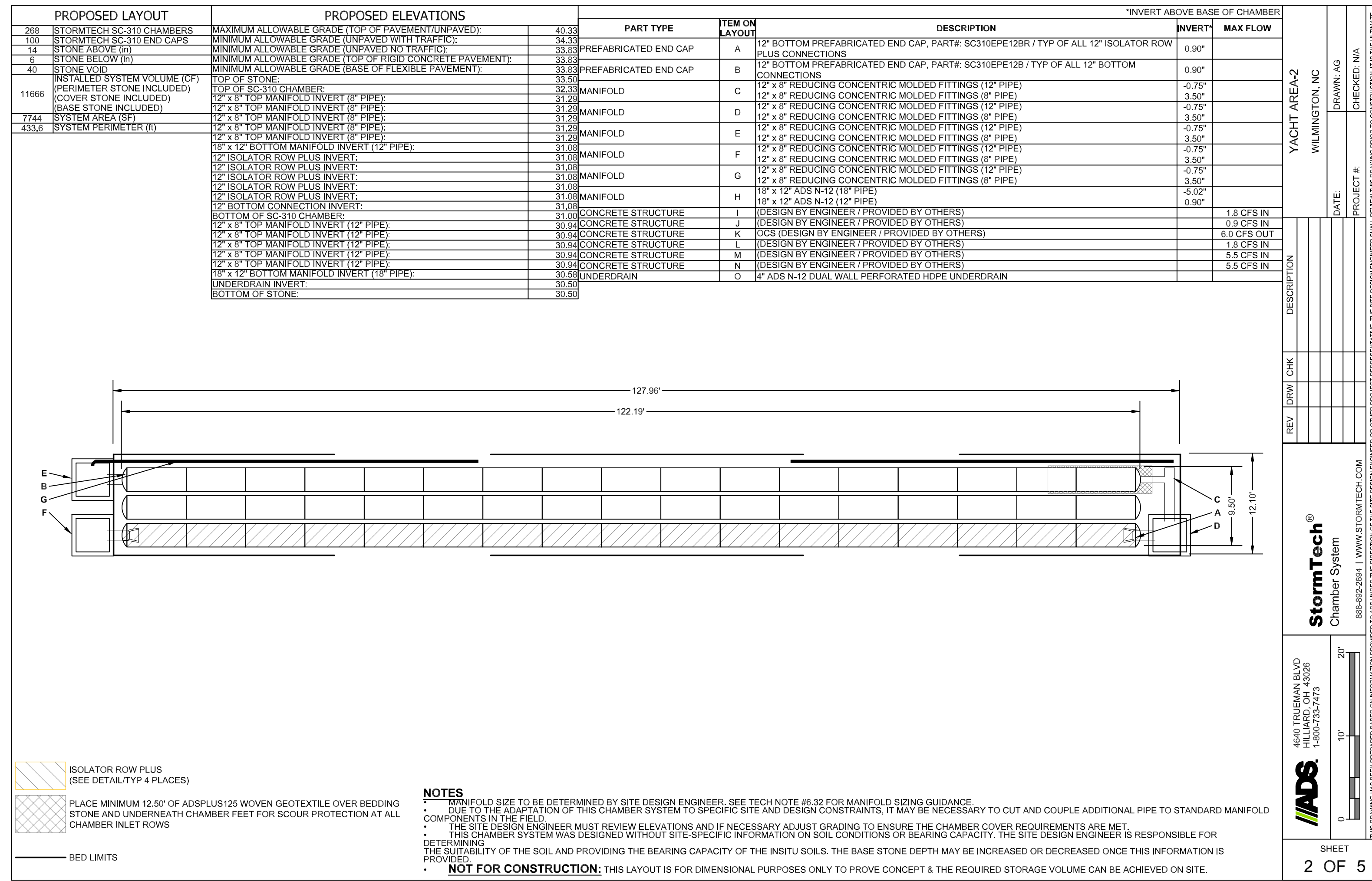
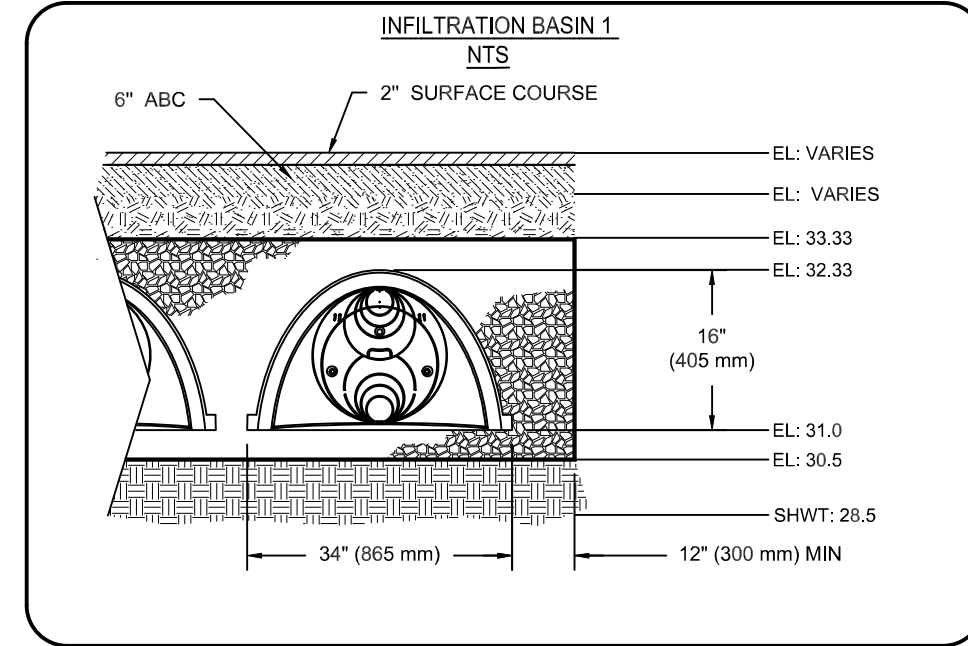
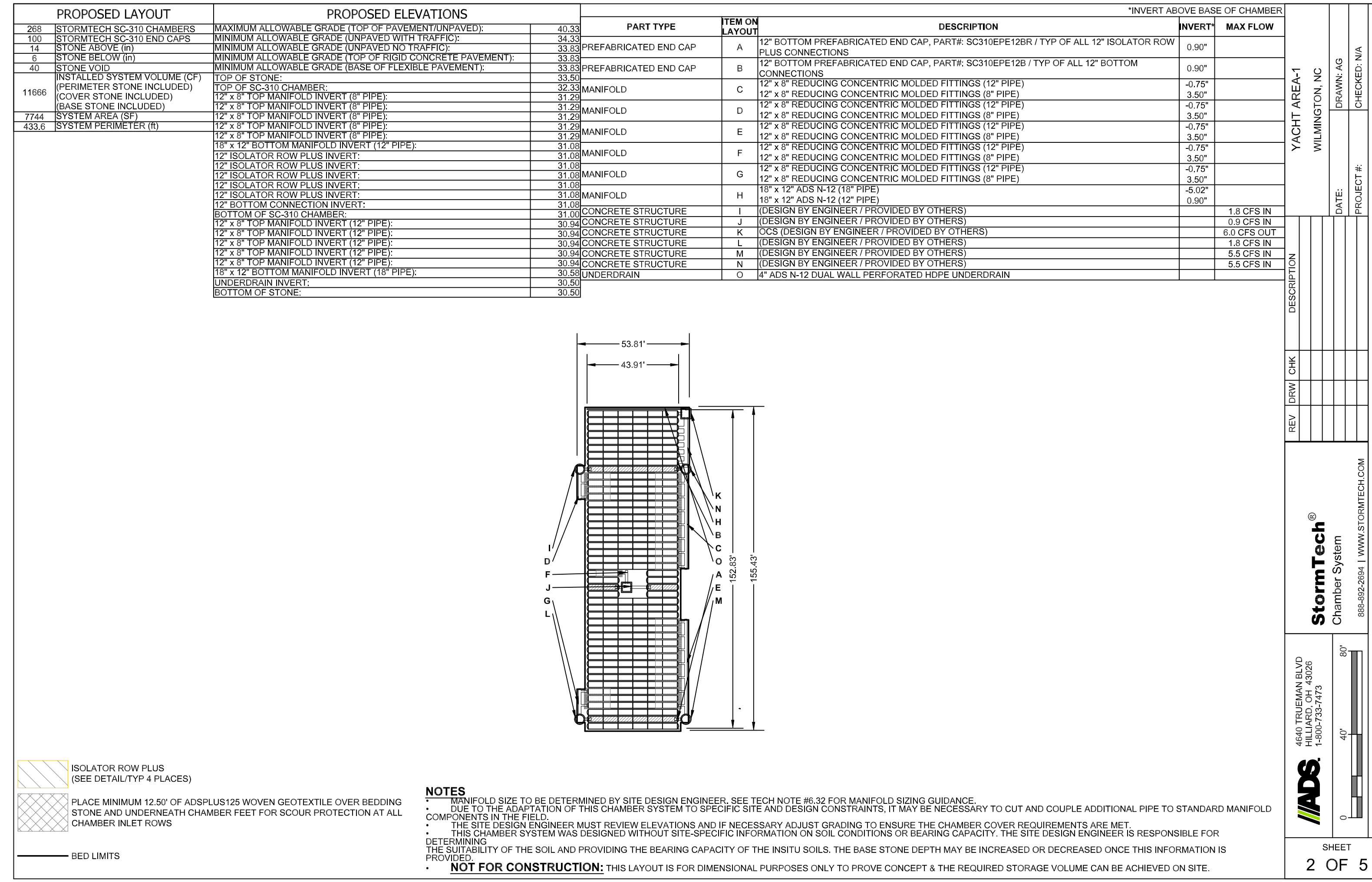
REVISIONS: TRIC COMMENTS

REVISIONS: TRIC COMMENTS

REVISIONS: TRIC COMMENTS

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# TRENCH-1



# TRENCH-2

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

City of Wilmington  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

**Approved Construction Plan**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Planning: \_\_\_\_\_  
Traffic: \_\_\_\_\_  
Fire: \_\_\_\_\_

PRELIMINARY PLAN

OFF THE HOOK YACHT SALES  
N.E. CAPE FEAR RIVER FACILITY  
WILMINGTON, N.C. 28401

OWNER: OTH REALTY LLC  
170 N. LELLY WALK DR  
WILMINGTON, N.C. 28401

Date: 5-5-2022  
Scale: AS SHOWN  
Drawn: gw  
Checked: gw  
Project No: 4372

ADS INFILTRATION TRENCH DETAILS

NO.	REVISIONS / TRC COMMENTS	DATE
3	REVISIONS / TRC COMMENTS	4-21-2022
2	REVISIONS / TRC COMMENTS	4-05-2022
1	REVISIONS / TRC COMMENTS	2-03-2022

HANOVER DESIGN SERVICES, P.A.  
LAND SURVEYORS, ENGINEERS & LAND PLANNERS  
WILMINGTON, N.C. 28403  
LICENSE # 0206

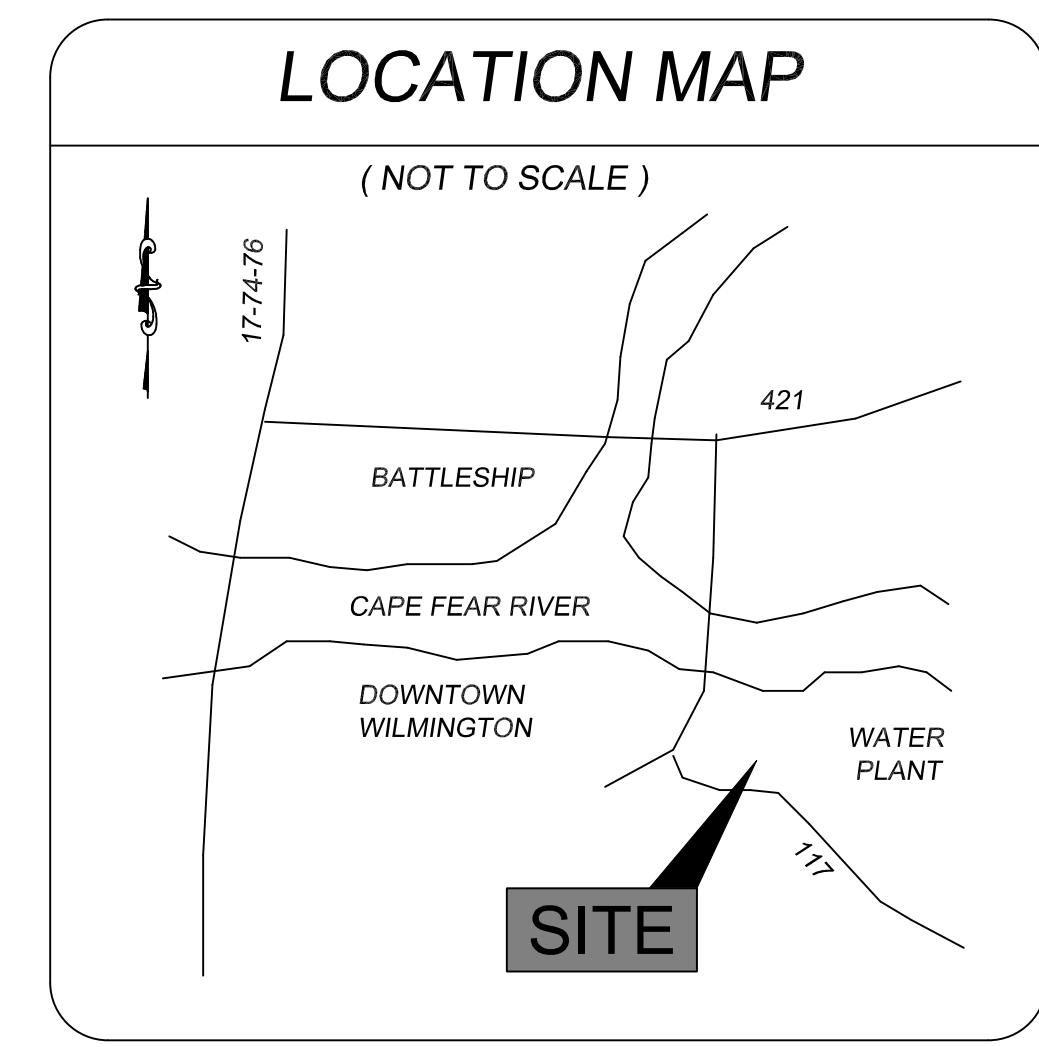
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**TD-2**  
of  
**TD-2**

# Off The Hook Yacht Sales

## N. J.E.L WADE DRIVE

# Erosion and Sediment Control

DISTURBED AREA = 2.61 ACRES



0 30 60 90  
1" = 30'

**HANOVER DESIGN SERVICES, P.A.**  
LAND SURVEYORS, ENGINEERS & LAND PLANNERS  
WILMINGTON, N.C. 28403  
LICENSE # 01-000002

### LEGEND

- WV = WATER VALVE
- WM = WATER METER
- C/O = SANITARY SEWER CLEAN OUT
- INV. = INVERT
- B/O = BLOW OFF ASSEMBLY
- BFP = BACK FLOW PREVENTOR
- GW = GUY WIRE
- SWMH = STORM MANHOLE
- GT. = GREASE TRAP
- FH = FIRE HYDRANT ASSEMBLY
- I.S. = IRON SET
- = SANITARY SEWER MH
- = CURB INLET
- = TREE
- ⊕ = CURB RAMP
- ⊞ = WATER SERVICE
- ⊙ = SEWER CLEANOUT
- ⊞ = WATER VALVE
- ⊞ = SIGN LOCATION
- HC = HANDICAP CROSSING

- PROPERTY LINE
- BUILDING SETBACK
- CENTERLINE
- EASEMENT
- COMPUTED PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORM DRAIN
- PROPOSED 6" SANITARY SEWER SERVICE
- PROPOSED FENCE

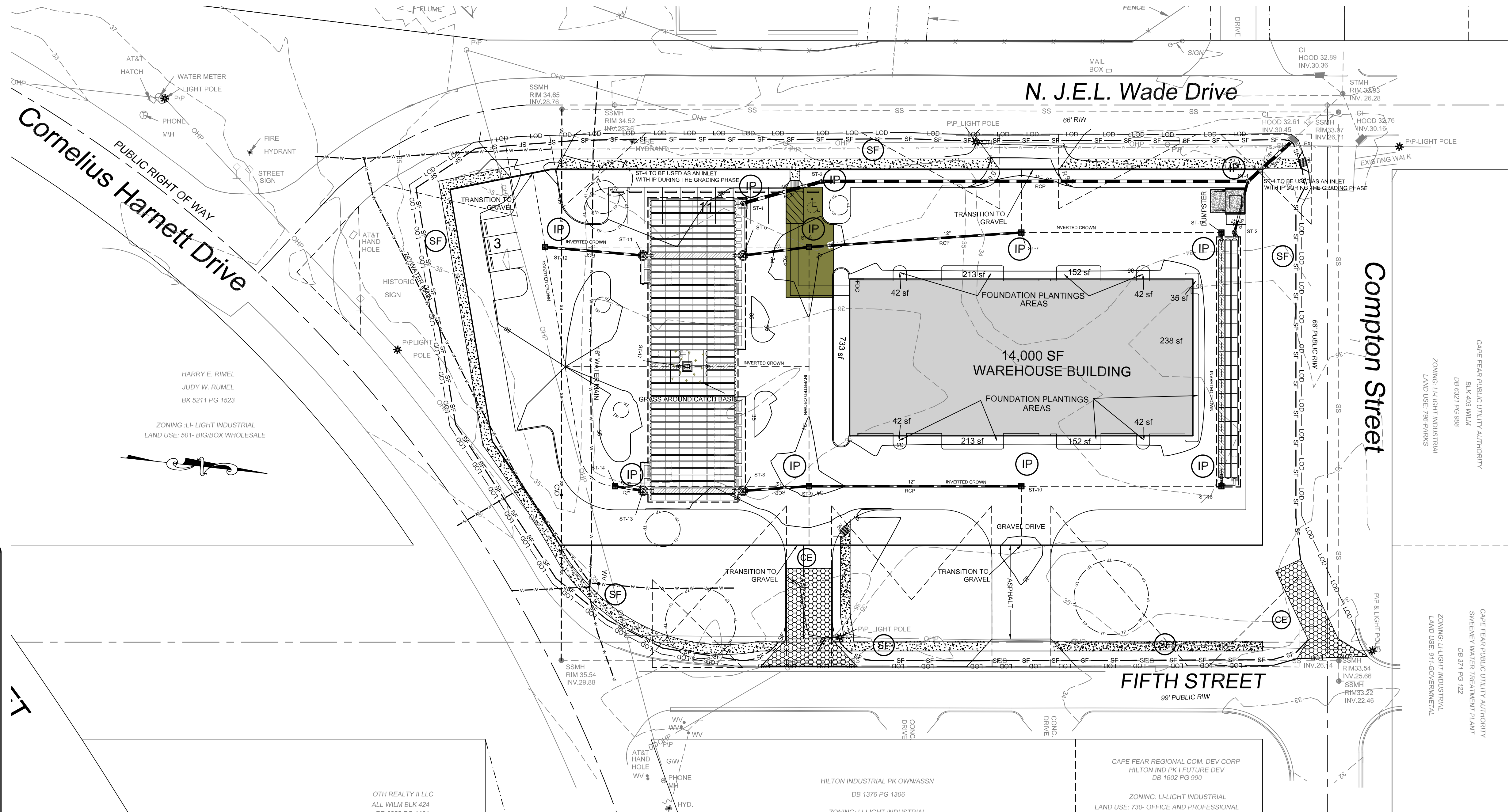
- IP INLET PROTECTION
- CE CONSTRUCTION ENTRANCE (TYPICAL)
- LOD LIMITS OF DISTURBANCE
- SF SILT FENCE (TYPICAL)
- CW CONCRETE WASHOUT
- TD TEMPORARY DIVERSION

### CONSTRUCTION SCHEDULE -

- Obtain approval of Plan and any necessary permits, and hold a pre-construction conference prior to commencing any work.
- Flag work limits and stake-out measures for preliminary grading. Install silt fencing as shown.
- Install Gravel Construction Entrance.
- The storm drain system shall be extended early in the process as possible so runoff can be directed to the inlets with inlet protection. During clearing process and prior to any major grading and grubbing, the storm drain from existing manhole 1 shall be installed to ST-3 and set at 1' below design grade, and inlet protection added. Once the remaining system is installed the inlet shall be brought to the design grade.
- Maintain Sediment fence, BIP, and Inlet protection as this will be the main source of sediment control.
- Immediately stabilize all non-construction areas.
- Construct any other sediment control Practices shown, prior to rough grading site, stockpiling topsoil as necessary.
- Establish final grades.
- All erosion and sediment control Practices are to be inspected weekly and after any rainfall, and repaired as necessary.
- Upon completion of grading, all areas are to be permanently vegetative stabilized. After site stabilization, temporary measures are to be removed. The temporary sediment basin shall be cleaned out to these design elevations.

### MAINTENANCE PLAN -

- All measures to be inspected weekly and after any rainfall event and needed repairs made immediately.
- Sediment to be removed from behind the Silt Fence when it becomes 0.5' deep. Fencing to be repaired as needed to maintain a barrier.
- Inspect inlets at least weekly and after each significant (1/2 inch or greater) rainfall event. Repair any defects. Replace stone as needed per specification.
- All seeded areas shall be fertilized, mulched, and reseeded as necessary, according to specifications provided, to maintain a suitable vegetative cover.
- Construction entrances are to be maintained in a condition to prevent mud or sediment from leaving the construction site. Periodic topdressing with 2" stone may be required. Remove all objectionable material spilled, washed, or tracked onto public roadways immediately.



HARRY E. RIMEL  
JUDY W. RUMEL  
BK 5211 PG 1523

ZONING LI-LIGHT INDUSTRIAL  
LAND USE: 501- BIG/BOX WHOLESALE

OTH REALTY II LLC  
ALL WILM BLK 424  
DR R388 PG 1461

HILTON INDUSTRIAL PK OWNIASSN  
DB 1376 PG 1306  
ZONING LI-LIGHT INDUSTRIAL

CAPE FEAR REGIONAL COM. DEV CORP  
HILTON IND PK I FUTURE DEV  
DB 1602 PG 990  
ZONING LI-LIGHT INDUSTRIAL  
LAND USE: 730- OFFICE AND PROFESSIONAL

CAPE FEAR PUBLIC UTILITY AUTHORITY  
SWEENEY WATER TREATMENT PLANT  
DB 6271 PG 888

CAPE FEAR PUBLIC UTILITY AUTHORITY  
BLK 403 WILM  
DB 6271 PG 888  
ZONING LI-LIGHT INDUSTRIAL  
LAND USE: 730-PARKS

### STABILIZATION TIME FRAMES:

SITE AREA DESCRIPTION	STABILIZATION
Perimeter dikes, swales, ditches and slopes	7 DAYS
High Quality Water (HQW) Zones	7 DAYS
Slopes steeper than 3:1	7 DAYS
Slopes 3:1 or flatter	14 DAYS
All other areas with slopes flatter than 4:1	14 DAYS

### GENERAL NOTES:

- This map is not for conveyance, recordation, or sales.
- \*\*\*NOTE WELL:  
1. EQUIPMENT CLEARANCE MINIMUM 16' FROM TRANSMISSION LINES TO BE MAINTAINED AT ALL TIMES. (REFERENCE: OSHA 1910.269)  
2. ANY TREE, OR SHRUB CAN BE PLANTED WITHIN THE RIGHT-OF-WAY AS LONG AS THE MATURE HEIGHT IS 12 FEET OR LESS. WHEN PLANTING TREES AND SHRUBS, PLEASE REMEMBER TO LEAVE SUFFICIENT SPACING TO ALLOW UTILITY MAINTENANCE VEHICLES ACCESS WITHIN THE RIGHT-OF-WAY.

NOTE WELL:  
1) CLASS IV RCP SHALL BE USED WHEN COVER IS LESS THAN 2.0' FOR STORM SEWER

NOTE WELL:  
1) CONTRACTOR TO ENSURE THAT STREET PAVEMENT & CURBING IS PLACED SO AS TO DRAIN POSITIVELY TO CURB INLETS AND DRAINAGE STRUCTURES.

NOTE WELL:  
MULTIPLE UTILITIES SHOWN GRAPHICALLY IN PROFILE. DEVIATIONS NOTED AS SHOWN. MAINTAIN 36" COVER AND USE DIP AT CROSSINGS WHEN REQUIRED. SEE COVER SHEET NOTES.

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**City of WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

**Approved Construction Plan**

Name	Date
Planning	_____
Traffic	_____
Fire	_____

SHEET No.	DESCRIPTION
EC-1 OF EC-4	EROSION CONTROL PLANS
EC-2 OF EC-4	EROSION CONTROL DETAILS
EC-3 OF EC-4	EROSION CONTROL DETAILS
EC-4 OF EC-4	EROSION CONTROL DETAILS
B-1 OF B-1	BASIN DETAILS

**OFF THE HOOK YACHT SALES**  
**N.E. CAPE FEAR RIVER FACILITY**  
CAPE FEAR TOWNSHIP, NEW HANOVER COUNTY, NORTH CAROLINA

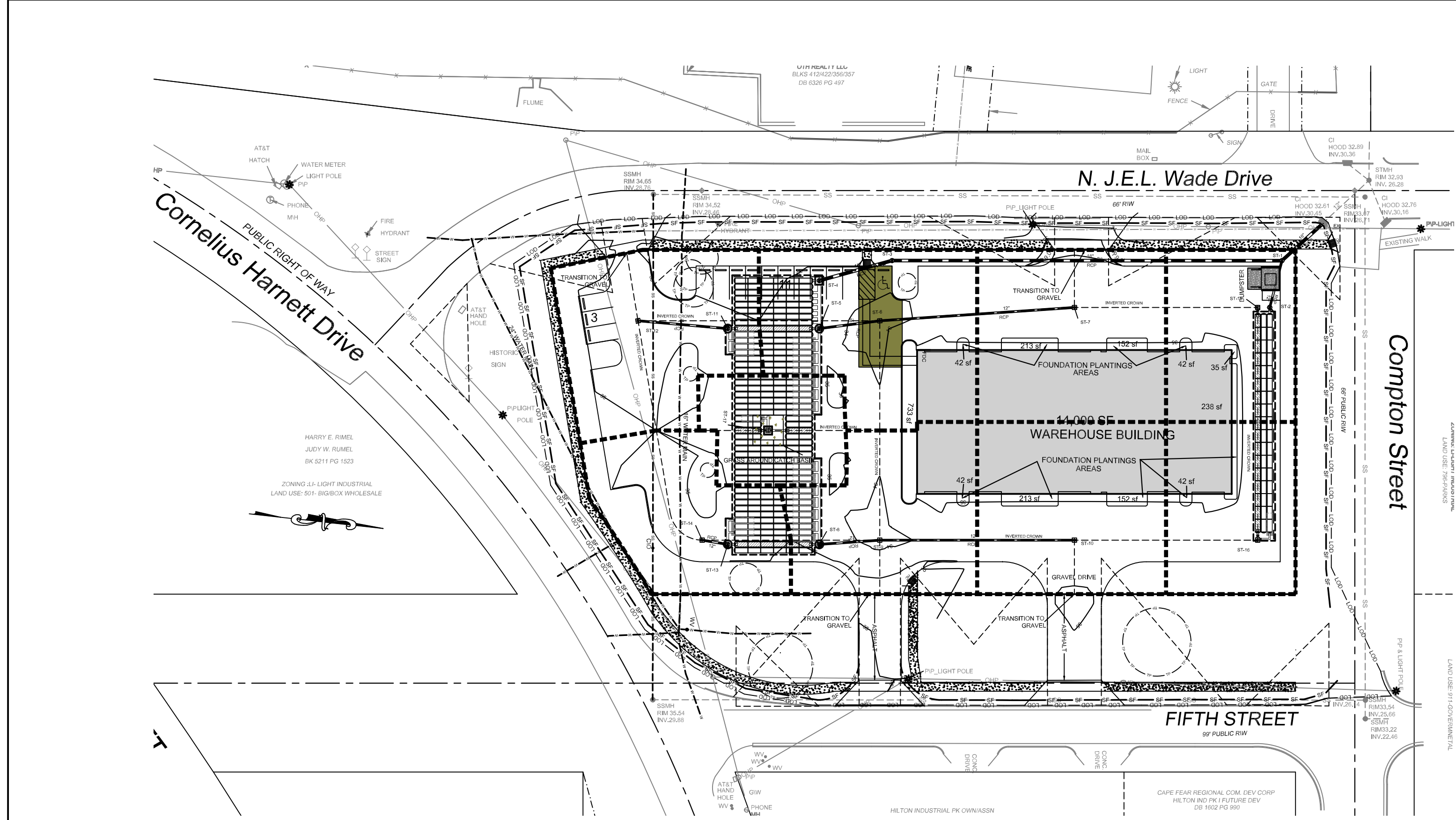
OWNER: OTH REALTY LLC  
1701 N. J.E.L. WADE DR.  
WILMINGTON N.C. 28401

Date: 5-5-2022  
Scale: HORZ.: 1" = 30'  
Drawn: gw/ahg  
Checked: ahg  
Project No: 4372

### EROSION CONTROL

PRELIMINARY PLAN

Sheet No:  
**EC-1**  
**EC-4**



#### Temporary Drains, Construction Entrance/Exit

Specification # 6.06 - Construction Specifications

- Clear the entrance and exit area of all vegetation, roots and other objectionable material and properly grade it.
- Place the gravel to the specific grade and dimensions shown on the plans and smooth it.
- Provide drainage to carry water to a sediment trap or other suitable outlet.
- Use geotextile fabric because they improve stability of the foundation in locations subject to seepage or high water table.

**Maintenance**

Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic topdressing with 2-inch stone. After each rainfall, inspect any structure used to trap sediment and clean it out as necessary. Immediate removal of objectionable materials spilled, washed, or tracked onto public roadways.

#### Hardware Cloth & Gravel Inlet Protection (Temporary)

Specification # 6.51 - Construction Specifications

As fabric, use a 18-gauge hardware cloth with 1/4 inch mesh openings, with a total height of 2 feet minimum. The sediment control device, with a height of 18 inches, should have an outside slope of 2:1.

For stiles, use steel 1 posts of 1.25 inch floor with a minimum length of 5 ft., driven 2 ft. into the ground, maximum spacing of 4 feet.

**Specifications**

- Uniformly grade a shallow depression approaching the inlet.
- Drive 5-foot steel posts 2 feet into the ground surrounding the inlet.
- Space posts evenly around the perimeter of the inlet, a maximum of 4 feet apart.
- Secure the posts with wire mesh hardware cloth. Secure the wire mesh to the steel posts at the top, middle, and bottom. Weaving a 2-foot anchoring top of the mesh under the gravel is recommended.
- Place clean gravel (NO. 57 or #3 stone) on a 2:1 slope with a height of 18 inches around the wire, and smooth to an even grade.
- Once the contributing drainage area has been stabilized, remove the accumulated sediment, and establish final grade.
- Compact the area properly and stabilize with groundwater.

**Maintenance**

Inspect the barrier after each significant rain and make repairs as needed. Remove sediment from area as necessary to provide adequate storage volume for the next rain. Take care not to damage or undercut the hardware cloth during sediment removal.

When the contributing drainage area has been adequately stabilized, remove all materials and any available sediment and dispose of them properly. Bring the disturbed area to the grade of the area list and smooth and compact it. Appropriately stabilize all bare areas around the inlet.

#### Sediment Fence (Silt Fence)

Specification 6.62 - Construction Specifications

Use a synthetic filter fabric or a pervious sheet of polypropylene, nylon, polyester, or geotextile geom, which is certified by the manufacturer or supplier as conforming to the requirements shown in Table 6.62b. Synthetic filter fabric should contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected useful construction life at a temperature range of 0 to 120 °F.

2. Ensure that posts for sediment fences are either 4-inch diameter pipe, 2-inch diameter rod, or 1.53 inch diameter steel with a minimum length of 1 ft. Make sure that steel posts have projections to facilitate fastening the fabric.

3. For reinforcement of standard strength filter fabric, use wire fence with a minimum 14 gauge and a maximum mesh spacing of 6 inches.

**Table 6.62b - Specifications for Sediment Fence Fabric**

Physical Property Requirements	Filtering Efficiency - >= 85% (mm)	Tensile Strength at Standard Strength - 30 lb/in (mm)	Extra Strength - 50 lb/in (mm)
Slurry Flow Rate - 0.3 gal/ft <sup>2</sup> /hr (mm)			

**CONSTRUCTION**

- Construct the sediment barrier of standard strength or extra strength synthetic filter fabric.
- Ensure that the height of the sediment fence does not exceed 18 inches above the ground surface. (Higher fences may impound volumes of water sufficient to cause failure of the structure.)
- Construct the filter fabric from a continuous roll out to the length of the barrier to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with overlap to the next post.
- Support standard strength filter fabric by wire mesh fastened to the up slope side of the posts using heavy duty wire staples at least 1 inch long, or 1/4 wire. Extend the wire mesh support to the bottom of the trench.
- When a wire mesh support fence is used, space posts a minimum of 8 ft apart. Support posts should be driven securely into the ground to a minimum of 18 inches.
- Extra strength filter fabric with 8 ft post spacing does not require wire mesh support fences. Staples or wire the filter fabric directly to posts.
- Excavate a trench approximately 4 inches wide and 8 inches deep along the proposed line of posts and collapse from the corner (Figure 6.62c).
- Backfill the trench with compacted soil or gravel placed over the filter fabric.
- Do not attach filter fabric to existing trees.

**Maintenance**

Inspect sediment fences at least once a week and after each rainfall. Make any required repairs immediately.

Should the fabric of a sediment fence collapse, tear, decompose or become ineffective, replace it promptly. Replace burps every 60 days.

Remove sediment deposits as necessary to provide adequate storage volume for the next rain and to reduce pressure on the fence. Take care to avoid undermining the fence during cleaning.

Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

### STORM NETWORK SUMMARY

DN STRUCTURE	UP STRUCTURE	DOWN INVERT (FT)	UP INVERT (FT)	LENGTH (FT)	SLOPE (%)	SIZE (IN)
EX	ST-1	30.51	30.78	0.20	18.0	
ST-1	ST-2	31.01	31.07	26.91	0.20	12.0
ST-1	ST-3	30.51	30.95	216.92	0.20	18.0
ST-3	ST-4	30.95	31.03	42.01	0.20	18.0
ST-5	ST-6	30.50	30.62	33.95	0.35	12.0
ST-6	ST-7	30.62	31.00	108.54	0.35	12.0
ST-8	ST-9	30.50	30.62	33.75	0.35	12.0
ST-9	ST-10	30.62	31.00	108.28	0.35	12.0
ST-11	ST-12	31.00	31.10	50.10	0.20	12.0
ST-13	ST-14	31.00	31.10	14.43	0.69	12.0

#### Table 6.11a - Seeding No. 4CP for: Well-Drained Sandy Soils to Dry Sands, Coastal Plain; Low to Medium-Care Loams

**Seeding Mixture**

Species - Centipedegrass - Rate - 10-20 lb/acre (seed) or 35 lb/acre (spig)

**Seeding Dates** - Mar. - June (Springing can be done through July where water is available for irrigation)

**Soil Amendments** - Apply lime and fertilizer according to soil test, or apply 300 lb/acre 10-10-10.

**Mulch** - Plant sprigs in furrows with a tractor-down front loader, or broadcast by hand.

**Maintenance** - Fertilize every spring; 20 lb/acre nitrogen in spring with no phosphorus. Centipedegrass cannot tolerate high pH or excess fertilizer.

#### Table 6.11b - Seeding No. 5CP for: Well-Drained Sandy Soils to Dry Sands; Low Maintenance

**Seeding Mixture**

Species Rate (lb/acre)

Common Bermudagrass	30
German Millet	10

**Soil Amendments** - Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agricultural limestone and 500 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre grain straw or equivalent cover of another suitable mulch. Anchor by tacking with asphalt, roofing, or netting with a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Table 6.11c - Seeding No. 7CP for: Grass-lined Channels; Coastal Plain

**Seeding Mixture**

Species - Common Bermudagrass - Rate - 40-80 (1/2 lb/1,000 ft<sup>2</sup>)

**Soil Amendments** - Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agricultural limestone and 500 lb/acre 10-10-10 fertilizer.

**Mulch** - Use straw, excelsior matting, or other effective erosion-inhibiting material to cover the bottom of channels and ditches. The living should extend down the highest calculated depth of flow. On channel side slopes above this height, and in ditches not requiring temporary linings, apply 4,000 lb/acre grain straw and anchor straw by staking netting over the top.

**Mulch and anchoring materials** must be allowed to wash down slopes where they are being drainage devices.

**Maintenance** - A minimum of 3 weeks is required for establishment. Inspect and repair mulch frequently. Refer to the following Agr. with 50 lb/acre nitrogen.

Refer to Appendix 8.02 for botanical names

ENTRANCE/EXIT DETAIL

N.T.S.

#### Table 6.10a - Temporary Seeding Recommendation for Late Winter and Early Spring

**Seeding Mixture**

Species - Ryegrass Annual (Seed) and Coastal Plain Ryegrass (Seed)

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Table 6.10b - Temporary Seeding Recommendations for Summer

**Seeding Mixture**

Species - Common bermudagrass

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Table 6.10c - Temporary Seeding Recommendation for Fall

**Seeding Mixture**

Species - Ryegrass

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Table 6.10d - Temporary Seeding Recommendation for Winter and Early Spring

**Seeding Mixture**

Species - Ryegrass

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Table 6.10e - Temporary Seeding Recommendation for Summer

**Seeding Mixture**

Species - Common bermudagrass

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Table 6.10f - Temporary Seeding Recommendation for Late Winter and Early Spring

**Seeding Mixture**

Species - Ryegrass

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Table 6.10g - Temporary Seeding Recommendations for Summer

**Seeding Mixture**

Species - Common bermudagrass

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Table 6.10h - Temporary Seeding Recommendation for Fall

**Seeding Mixture**

Species - Ryegrass

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Table 6.10i - Temporary Seeding Recommendation for Winter and Early Spring

**Seeding Mixture**

Species - Ryegrass

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Table 6.10j - Temporary Seeding Recommendations for Summer

**Seeding Mixture**

Species - Common bermudagrass

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Construction Road Stabilization

Specification # 6.80 - Construction Specifications

- Clear roadbed and parking areas of all vegetation, roots and other objectionable material.
- Ensure that road construction follows the natural contours of the terrain if it is possible.
- Locate parking areas on naturally flat areas if they are available. Keep grades sufficient for drainage but generally not more than 2% to 3%.
- Provide surface drainage and direct excess runoff to stable areas by using water bars or turnouts (Reference: Runoff Control Measures).
- Keep cuts and fills at 2:1 or flatter for safety and stability and to facilitate establishment of vegetation and maintenance.
- Spread a 6-inch course of "ABC" crushed stone evenly over the full width of the road and smooth to avoid depressions.
- Where seepage areas or seasonally wet areas must be crossed, install subsurface drains or geotextile fabric cloth before placing the crushed stone (Practice 6.81, Subsurface Drain).
- Vegetate all roadside ditches, cuts, fills and other disturbed areas or otherwise appropriately stabilize as soon as grading is complete (Reference: Surface Stabilization).
- Provide appropriate sediment control measures to prevent off-site sedimentation.

**Maintenance**

Inspect construction roads and parking areas periodically for condition of surface. Topdress with new gravel as needed. Check road ditches and other seeded areas for erosion and sedimentation after runoff-producing rains. Maintain all vegetation in a healthy, vigorous condition. Sediment-producing areas should be treated immediately.

#### Table 6.10k - Temporary Seeding Recommendation for Winter and Early Spring

**Seeding Mixture**

Species - Ryegrass

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

#### Table 6.10l - Temporary Seeding Recommendations for Summer

**Seeding Mixture**

Species - Common bermudagrass

**Soil Amendments** - Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**Mulch** - Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting or a mesh anchoring tool. A disk with blades set nearly straight can be used as a mesh anchoring tool.

**Maintenance** - Refer to the following Agr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a next appearance is desired, omit series and mow as often as needed.

For each open utility cut of city streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

WILMINGTON PUBLIC SERVICES

Public Services • Engineering Division

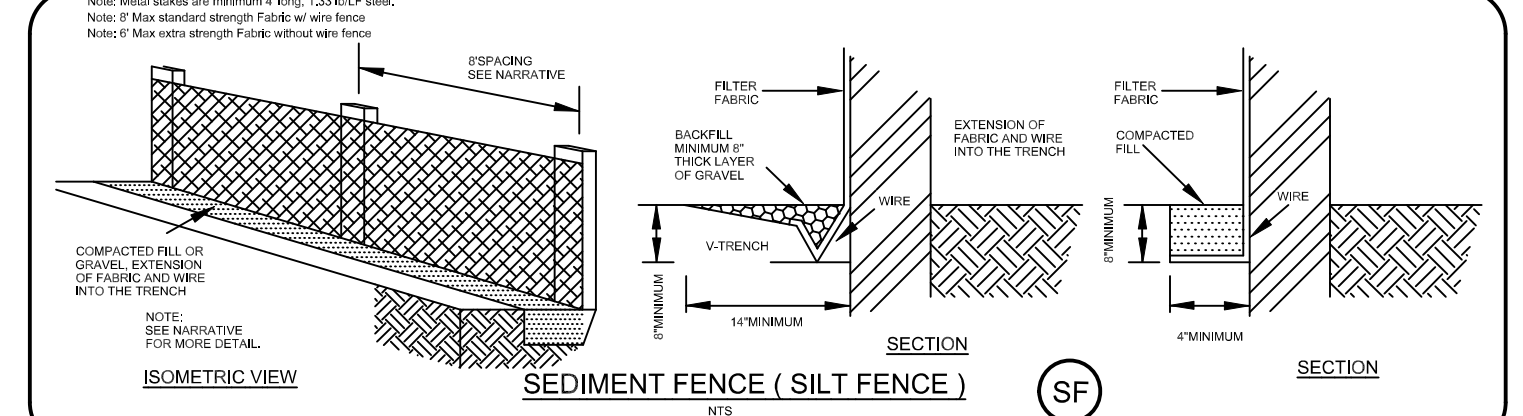
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

#### Approved Construction Plan

Name	Date
Planning	_____
Traffic	_____
Fire	_____



#### PRELIMINARY PLAN

REV. NO.	REVISIONS / TRC COMMENTS	DATE
3	REVISIONS / TRC COMMENTS	4-21-2022
2	REVISIONS / TRC COMMENTS	4-05-2022
1	REVISIONS / TRC COMMENTS	2-03-2022

Stormwater and Erosion & Sediment Control Details

## OFF THE HOOK YACHT SALES

### N.E. CAPE FEAR RIVER FACILITY

CAPE FEAR TOWNSHIP, NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: OTH REALTY LLC  
1701 N.J.E.L. WADE DR.  
WILMINGTON, N.C. 28401

HANOVER DESIGN SERVICES, P.A.  
LAND SURVEYORS, ENGINEERS & LAND PLANNERS  
1123 FLORAL PARKWAY  
WILMINGTON, N.C. 28403  
PHONE: (910) 343-8002  
LICENSE # C-5597

Date: 5-5-2022  
Scale: 1"=50'  
Drawn: AHG  
Checked: AHG  
Project No: 4372

Sheet No: EC-2 EC-4

**GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT**

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

**SECTION E: GROUND STABILIZATION**

**Required Ground Stabilization Timeframes**

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

**Note:** After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

**GROUND STABILIZATION SPECIFICATION**

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> <li>Temporary grass seed covered with straw or other mulches and tackifiers</li> <li>Hydroseeding</li> <li>Rolled erosion control products with or without temporary grass seed</li> <li>Appropriately applied straw or other mulch</li> <li>Plastic sheeting</li> </ul>	<ul style="list-style-type: none"> <li>Permanent grass seed covered with straw or other mulches and tackifiers</li> <li>Geotextile fabrics such as permanent soil reinforcement matting</li> <li>Hydroseeding</li> <li>Shrubs or other permanent plantings covered with mulch</li> <li>Uniform and evenly distributed ground cover sufficient to restrain erosion</li> <li>Structural methods such as concrete, asphalt or retaining walls</li> <li>Rolled erosion control products with grass seed</li> </ul>

**POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

**EQUIPMENT AND VEHICLE MAINTENANCE**

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

**LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

**PAINT AND OTHER LIQUID WASTE**

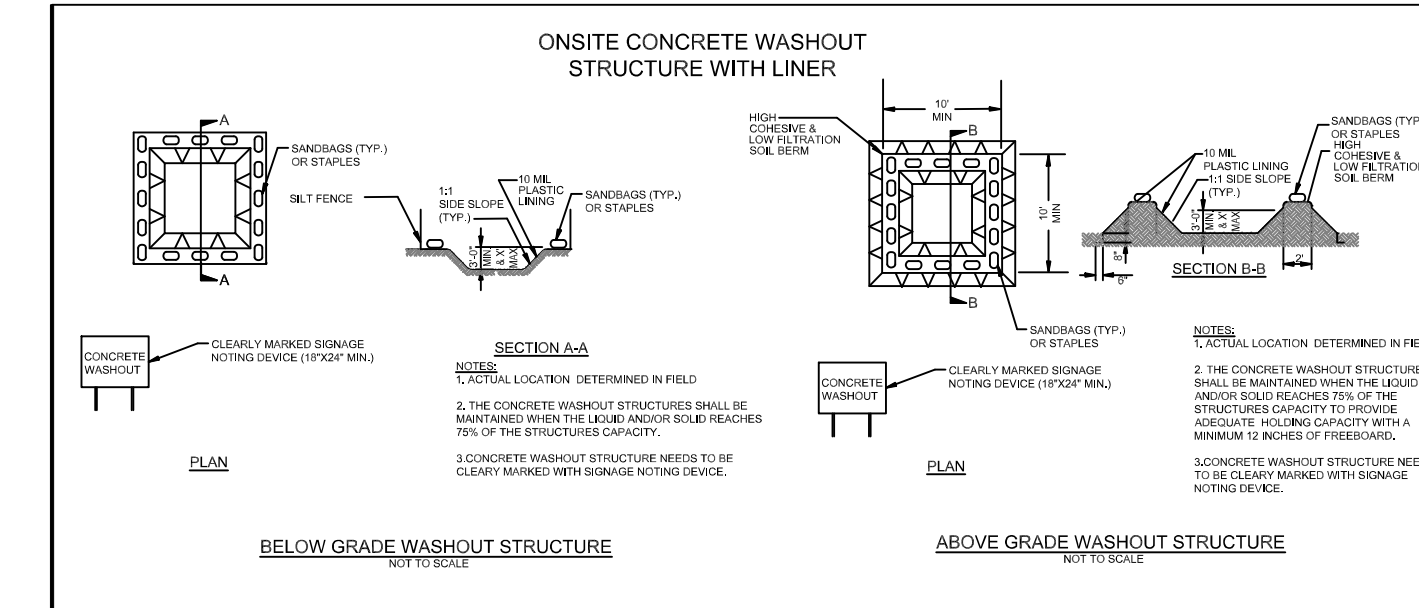
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

**PORTABLE TOILETS**

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

**EARTHEN STOCKPILE MANAGEMENT**

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



**CONCRETE WASHOUTS**

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

**HERBICIDES, PESTICIDES AND RODENTICIDES**

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

**HAZARDOUS AND TOXIC WASTE**

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

**NCG01 GROUND STABILIZATION AND MATERIALS HANDLING**

**EFFECTIVE: 04/01/19**

PRELIMINARY PLAN

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

**Approved Construction Plan**  
Name \_\_\_\_\_ Date \_\_\_\_\_  
Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_

REV. NO.	REVISIONS	DATE
3	REVISIONS \ TRC COMMENTS	4-21-2022
2	REVISIONS \ TRC COMMENTS	4-05-2022
1	REVISIONS \ TRC COMMENTS	2-03-2022

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Stormwater and Erosion & Sediment Control Details  
**OFF THE HOOK YACHT SALES**  
N.E. CAPE FEAR RIVER FACILITY  
CAPE FEAR TOWNSHIP, NEW HANOVER COUNTY, NORTH CAROLINA

OWNER:  
OTH REALTY LLC  
1701 N.J.E.L. WADE DR.  
WILMINGTON N.C. 28401

**HANOVER DESIGN SERVICES, P.A.**  
LAND SURVEYORS, ENGINEERS & LAND PLANNERS  
1123 FLORAL PARKWAY  
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PHONE: (910) 343-8002  
LICENSE # C-2597

Date: 5-5-2022  
Scale: N/A  
Drawn: AHG  
Checked: AHG  
Project No: 4372  
Sheet No: EC-3  
EC-4

**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION A: SELF-INSPECTION**

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(c) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION B: RECORDKEEPING**

**1. E&SC Plan Documentation**

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

**2. Additional Documentation to be Kept on Site**

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- (a) This General Permit as well as the Certificate of Coverage, after it is received.
- (b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

**3. Documentation to be Retained for Three Years**

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION C: REPORTING**

**1. Occurrences that Must be Reported**

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
- (b) Oil spills if:
  - They are 25 gallons or more,
  - They are less than 25 gallons but cannot be cleaned up within 24 hours,
  - They cause sheen on surface waters (regardless of volume), or
  - They are within 100 feet of surface waters (regardless of volume).
- (c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- (d) Anticipated bypasses and unanticipated bypasses.
- (e) Noncompliance with the conditions of this permit that may endanger health or the environment.

**2. Reporting Timeframes and Other Requirements**

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> <li>• <b>Within 24 hours</b>, an oral or electronic notification.</li> <li>• <b>Within 7 calendar days</b>, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.</li> <li>• If the stream is named on the <a href="#">NC 303(d) list</a> as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.</li> </ul>
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> <li>• <b>Within 24 hours</b>, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.</li> </ul>
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li>• <b>A report at least ten days before the date of the bypass, if possible.</b> The report shall include an evaluation of the anticipated quality and effect of the bypass.</li> </ul>
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li>• <b>Within 24 hours</b>, an oral or electronic notification.</li> <li>• <b>Within 7 calendar days</b>, a report that includes an evaluation of the quality and effect of the bypass.</li> </ul>
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	<ul style="list-style-type: none"> <li>• <b>Within 24 hours</b>, an oral or electronic notification.</li> <li>• <b>Within 7 calendar days</b>, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6).</li> <li>• Division staff may waive the requirement for a written report on a case-by-case basis.</li> </ul>

**DRAW-DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT**

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- (a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
- (b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
- (c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
- (d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
- (e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- (f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

**NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING**

EFFECTIVE: 04/01/19

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

REV. NO.	REVISIONS	DATE
3	REVISIONS \ TRC COMMENTS	4-21-2022
2	REVISIONS \ TRC COMMENTS	4-05-2022
1	REVISIONS \ TRC COMMENTS	2-03-2022

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PRELIMINARY PLAN

Stormwater and Erosion & Sediment Control Details  
**OFF THE HOOK YACHT SALES**  
N.E. CAPE FEAR RIVER FACILITY  
CAPE FEAR TOWNSHIP, NEW HANOVER COUNTY, NORTH CAROLINA

Date: 5-5-2022  
Scale: N/A  
Drawn: AHG  
Checked: AHG  
Project No: 4372

OWNER:  
OTH REALTY LLC  
1701 N.J.E.L. WADE DR.  
WILMINGTON N.C. 28401

**HANOVER DESIGN SERVICES, P.A.**  
LAND SURVEYORS, ENGINEERS & LAND PLANNERS  
1123 FLORAL PARKWAY  
WILMINGTON, N.C. 28403  
PHONE: (910) 343-6102  
LICENSE # C-6897

Sheet No:  
**EC-4**  
EC-4