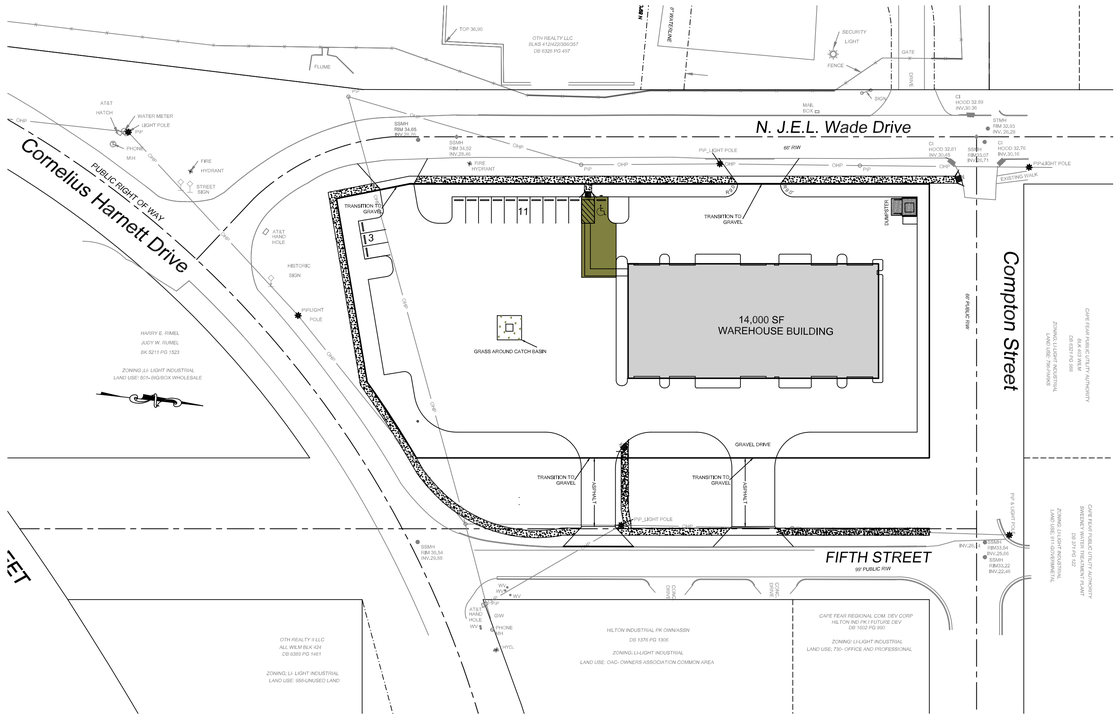
OFF THE HOOK YACHT SALES

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
- FIH = FIRE HYDRANT ASSEMBLY
- I.S. = IRON SET
- (CR) = CURB RAMP
- = SANITARY SEWER MH
- = CURB INLET
- = TREE TO BE PERSERVED
- = 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
- HC = 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 RATHER 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.

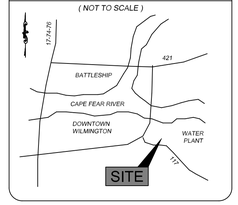
INDEX TO DRAWINGS

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

0 50 100 150
1" = 50'

REV. NO.	REVISIONS	DATE
7	REVISED PARKING AREA	5/16/2023
6	UPDATE TO PLAN PER CFPUA 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

LOCATION MAP
(NOT TO SCALE)



GENERAL NOTES:

1. 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.
2. NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NC ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
3. ALL TREES WHICH ARE NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL BE PRESERVED WHEREVER POSSIBLE UNLESS OTHERWISE DIRECTED.
4. 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.
5. 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.
6. 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.
7. EXTREME CARE SHALL BE TAKEN TO ENSURE MINIMUM SEPARATIONS AT ALL UTILITY CROSSINGS.
8. CONTRACTOR TO ENSURE THAT STREET PAVEMENT IS PLACED SO AS TO DRAIN POSITIVELY TO THE ROADWAY INLETS AND CATCH BASINS.
9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
10. THIS PLAN IS FOR SITE UTILITIES, GRADING, ROADWORK, AND DRAINAGE ONLY.
11. 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.
12. ALL CONSTRUCTION TO CONFORM TO CITY STANDARDS AND ALL APPLICABLE STATE & LOCAL CODES.
13. CONTRACTOR TO COORDINATE ANY REQUIRED TRAFFIC CONTROL WITH THE STATE AND CITY. CONTRACTOR RESPONSIBLE FOR ANY ADDITIONAL REQUIRED PERMITS.
14. 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 PONDS) BY SWALES, OVERLAND FLOW, ADDITIONAL GRADING, OR LANDSCAPING INLETS.
16. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY RELOCATIONS, REALIGNMENTS, DISCONNECTIONS OR CONNECTIONS OF EXISTING UTILITIES WITH APPLICABLE AUTHORITIES.
17. CLEARING AND GRUBBING OF SITE TO INCLUDE REMOVAL OF EXISTING CURB, 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.
18. ALL SIGNS AND PAVEMENT MARKINGS SHALL MEET NCDOT AND MUTCD STANDARDS
19. SANITARY SERVICES SMALLER THAN 8" SHALL HAVE CLEANOUTS AT INTERVALS OF NOT MORE THAN 100'. CLEANOUTS SHALL BE PROVIDE FOR SERVICE LINES AND BUILDING DRAINS THAT HAVE HORIZONTAL DIRECTION CHANGES GREATER THAN 45 DEGREES.
20. SEE 2018 IPC FOR FURTHER GUIDANCE ON UTILITY SERVICE REQUIRMENTS.
21. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WOKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITED WITHIN THE TREE PROTECTION FENCING.

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

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

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-0597

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

CITY STANDARD NOTES:

1. PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.

2. ANY TREES AND / OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING, GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.

3. NO EQUIPMENT IS ALLOWED ON SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING IS INSTALLED AND APPROVED. PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AND CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION METHODS.

TRAFFIC ENGINEERING

4. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY, MUTCD, AND/OR NCDOT STANDARDS.

5. ONCE STREETS ARE OPEN TO TRAFFIC, CONTACT TRAFFIC ENGINEERING TO REQUEST INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.

6. TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.

7. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN.

8. CONTACT 811 PRIOR TO ANY EXCAVATION. CALL TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.

9. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING PRIOR TO ACTUAL STRIPING.

10. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE OWNER IN ACCORDANCE WITH MUTCD STANDARDS.

11. STOP SIGNS AND STREET SIGNS TO REMAIN IN PLACE DURING CONSTRUCTION.

12. TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS.

13. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. IN CERTAIN CASES ENTIRE RESURFACING OF THE OPEN CUT AREA MAY BE REQUIRED.

14. ANY BROKEN OR MISSING SIDEWALK,DRIVEWAY PANELS OR CURBING SHALL BE REPLACED WHETHER DAMAGED DAMAGED DURING CONSTRUCTION OR DAMAGE WAS EXISTING.

15. PRIOR TO ENTERING ANY AGREEMENT REGARDING THE SALE OF A HOUSE OR LOT IN A SUBDIVISION, THE BUYER MUST RECEIVE A STREET DISCLOSURE STATEMENT

16. ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SITE LINES FROM 30" TO 10'

17. CONTACT THE CITY AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS. PROPOSED APPROXIMATE LOCATIONS SHOWN ON PLANS.

18. STREET LIGHTS SHALL BE DEP ENCLOSED CUTOFF (COBRA TYPE), HIGH PRESSURE SODIUM VAPOR (HPSV) OR DESIGNATED LED EQUIVALENT FIXTURE INSTALLED WITHIN THE RECOMMENDED RANGE OF MOUNTING HEIGHTS FOR THE SPECIFIC FIXTURE. THE STANDARD STREET LIGHT SHALL BE INSTALLED ON A FIBERGLASS POLE. SEE CITY TECHNICAL STANDARDS FOR FURTHER DETAIL.

GENERAL UTILITY NOTES

19. WATER AND SEWER SERVICE SHALL MEET CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) DETAILS AND SPECIFICATIONS.

20. PROJECT SHALL COMPLY WITH CAPE FEAR PUBLIC UTILITY AUTHORITY CROSS CONNECTION CONTROL REQUIREMENTS. WATER METERS CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 343-3910 FOR INFORMATION.

21. IF THE CONTRACTOR DESIRES CFPUA WATER FOR CONSTRUCTION HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.

22. ANY IRRIGATION SYSTEM SUPPLIED BY CFPUA WATER SHALL COMPLY WITH CFPUA CROSS CONNECTION CONTROL REGULATIONS. CALL 343-3910 FOR INFORMATION.

23. ANY IRRIGATION SYSTEM SHALL BE EQUIPPED WITH A RAIN AND FREEZER SENSOR.

24. ANY BACKFLOW PREVENTION DEVICES REQUIRED BY CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCCCHR OR ASSE.

25. CONTRACTOR TO FIELD VERIFY EXISTING WATER AND SEWER SERVICE LOCATIONS, SIZES AND MATERIALS PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED OF ANY CONFLICTS.

26. CONTRACTOR SHALL MAINTAIN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.

27. UNDERGROUND FIRE LINES MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-341-0696.

28. CONTACT THE NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 PRIOR TO ANY DIGGING, CLEARING OR GRADING.

29. ANY PVC MAINS ARE TO BE MARKED WITH NO.10 INSULATED COPPER WIRE INSTALLED THE ENTIRE LENGTH AND ATTACHED TO THE PIPE AND STRIPPED TO BARE WIRE AND SECURED TO ALL VALVES AND FITTINGS, ACCESSIBLE IN ALL VALVE AND METER BOXES. ALL WATER MAINS SHALL MAINTAIN A MINIMUM OF 3' OF COVER.

ADDITIONAL NOTES:

1. THIS MAP IS PRELIMINARY, NOT INTENDED FOR RECORDATION, SALES, OR CONVEYANCE.
2. ALL DISTANCES AS SHOWN ARE HORIZONTAL.
3. SEWER PROVIDED BY CFPUA
4. WATER PROVIDED BY CFPUA
5. SITE WILL MEET ALL ZONING REQUIREMENTS.
6. REGULATED TREES ON SITE TO BE PRESERVED AS SHOWN.
7. STRIPING AND LANES TO CITY STANDARDS (THERMOPLASTIC).
8. NO VEHICULAR ACCESS TO SITE EXCEPT AS SHOWN.
9. ALL UTILITIES UNDERGROUND.
10. LANDSCAPING AND LIGHTING PLAN BY OTHERS.
11. CONTRACTOR TO COORDINATE STAGING OF CONSTRUCTION ACTIVITIES WITH THE OWNER AND ARCHITECT TO FACILITATE ONGOING ADJOINING BUSINESS ACTIVITIES.
12. CONTRACTOR TO COORDINATE REMOVAL AND RELOCATION OF LIGHTING AND OTHER NON-MUNICIPAL UTILITIES SUCH AS ELECTRICAL AND TELEPHONE CONNECTIONS WITH THE AFFECTED AGENCIES AND THE OWNER AND ARCHITECT.
13. ALL SERVICES TO BE INSTALLED IN ACCORDANCE WITH CITY and CFPUA TECHNICAL STANDARDS.

ADDITIONAL ADA NOTES:

1. REFER TO 2018 NCDOT ROADWAY STANDARD DRAWINGS NUMBER 848.05 - 848.06 FOR RAMP DESIGN AND DETAILS.
2. ALL RAMPS RAMPS, HANDICAP PARKING, AND ACCESSIBLE ROUTES SHALL COMPLY WITH THE LATEST ADA GUIDELINES
3. RUNNING SLOPES ALONG AN ACCESSIBLE ROUTE EXCEEDING $\frac{1}{50}$ SHALL BE CONSIDERED A RAMP
4. 8.33% (12:1) MAX RAMP SLOPE
5. MAXIMUM CROSS SLOPE ALLOWED ALONG ACCESSIBLE ROUTES: 2.00%
6. ALL CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
7. CONTRACTOR TO ENSURE SLOPES IN HANDICAP PARKING STALLS AND ACCESS ISLES DO NOT TO EXCEED 2% IN ANY DIRECTION.

ADDITIONAL NOTES CONT.:

14. This property is not located within a special flood hazard area according to Flood Insurance Rate Map Community Panel #37203126J, effective date April 3, 2006.

15. Handicap Ramps shall be provided at all intersections.

16. 15 suitable trees per acre are to be preserved or planted in accordance with City of Wilmington standards.

17. Refuse collection by dumpster and private hauler.

18. Reflectors shall Be Installed As Per City And NCDOT Standards.

19. Per the requirements of the stormwater permit, the following shall occur prior to issuance of a certificate of occupancy or operation of the permitted facility.
 * As-built drawings for all stormwater management facilities shall be submitted to the city of Wilmington engineering division.
 * An engineer's certification shall also be submitted, along with all supporting documentation that specifies, under seal that the as-built stormwater measures, controls and devices are in compliance with the approved stormwater management plans.
 * A final inspection by city of Wilmington engineering personnel.

20. All required easement maps shall be reviewed by city staff and recorded prior to issuance of a certificate of occupancy.

UTILITY NOTES

SEWER AND WATER TO BE PUBLIC AND PROVIDED BY CFPUA. SPECIFIC LOCATION, SIZING, AND DETAILS WILL BE PROVIDED ON THE CONSTRUCTION PLANS AND ARE TO BE APPROVED BY CFPUA AND CITY ENGINEERS.

1. CFPUA STANDARD DETAIL SHEETS FOR SEWER AND WATER TAPS TO BE INCLUDED AS A PART OF THIS PLAN, ATTACHED.

2. 48-HOUR NOTICE AND 3 COMPLETE SETS OF PLANS REQUIRED FOR PRE-CONSTRUCTION MEETING BY CONTRACTOR.

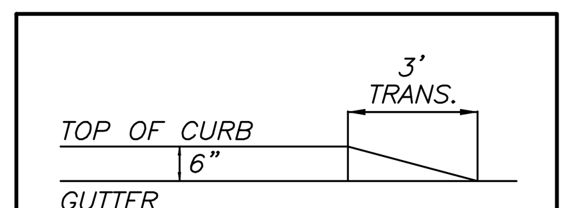
3. NCDOT ENCROACHMENT REQUIRED FOR ANY WORK IN PUBLIC R/W.

4. ALL FEES TO BE PAID PRIOR TO PRE-CONSTRUCTION MEETING.

CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:

1. SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
2. WATER AND SEWER SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SEWER SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN THE END OF LINE MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
3. ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
4. MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
5. NO FLEXIBLE COUPLINGS SHALL BE USED.
6. ALL STAINLESS STEEL FASTENERS SHALL BE 316.
7. CLEANOUTS SHALL BE LOCATED A MINIMUM OF 12 FEET FROM
8. ALL PROPERTY CORNERS. WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNER.

ADDITIONAL NOTES:
CFPUA PERMIT REQUIRED FOR ANY UTILITY SERVICES WORK.
CONTRACTOR RESPONSIBLE FOR PERMIT AND COORDINATION WITH CFPUA.
ALL SERVICES TO BE INSTALLED IN ACCORDANCE WITH
CITY and CFPUA TECHNICAL STANDARDS.



CURB TRANSITION DETAIL
PROFILE (nts.)

ADDITIONAL UTILITY/GRADING NOTES

1. 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 PONDS) BY SWALES, OVERLAND FLOW, ADDITIONAL GRADING, OR LANDSCAPING INLETS.

2. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY RELOCATIONS, REALIGNMENTS, DISCONNECTIONS OR CONNECTIONS OF EXISTING UTILITIES WITH APPLICABLE AUTHORITIES.

3. CLEARING AND GRUBBING OF SITE TO INCLUDE REMOVAL OF EXISTING CURB, 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.

4. MINIMUM SEPARATION SHALL BE MAINTAINED AS FOLLOWS:
 a. HORIZONTAL CLEARANCE OF 10 FEET BETWEEN SANITARY SEWER AND WATER MAINS.
 b. HORIZONTAL CLEARANCE OF 10 FEET BETWEEN STORM SEWER AND WATER MAINS.
 c. WHERE VERTICAL CLEARANCE IS LESS THAN 18" BETWEEN SANITARY SEWER AND WATER OR WHERE SEWER LINE CROSSES ABOVE WATER MAIN, BOTH PIPES SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING.
 d. WHERE VERTICAL CLEARANCE IS LESS THAN 24" BETWEEN SANITARY SEWER AND STORM DRAIN, SANITARY SEWER SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING.
 e. WHERE VERTICAL CLEARANCE IS LESS THAN 18" BETWEEN WATER MAIN AND STORM DRAIN, WATER MAIN SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING.

4. SEE DETAIL SHEETS FOR TYPICAL UTILITIES HOOKUPS.

5. ALL STREETS ARE PROPOSED TO BE PUBLIC (BUILT TO CITY OF WILMINGTON STANDARDS/ N.C.D.O.T. PAVEMENT AND SUBGRADE STANDARDS).

6. ALL SANITARY SEWER MAINS TO BE 8" UNLESS OTHERWISE INDICATED.

7. ALL WATER MAINS TO BE 8" UNLESS OTHERWISE INDICATED.

8. TWO VALVES ARE REQUIRED AT "T" INTERSECTIONS AND ONE VALVE ON THE WATER LINE TO FIRE HYDRANTS.

9. A BLOW-OFF VALVE IS REQUIRED AT THE TERMINUS OF ALL "DEAD END" WATER LINES.

10. SANITARY SEWER, STORM, WATER, AND OTHER PERTINENT DETAILS/SPECIFICATIONS TO BE PROVIDED WITH CONSTRUCTION PLANS AND SHALL MEET OR EXCEED CITY AND CFPUA DESIGN STANDARDS

ADDITIONAL FIRE DEPARTMENT NOTES:

- HYDRANTS MUST BE WITHIN 150' OF THE FDC
- THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT
- LANDSCAPING MAY NOT BLOCK ANY FDC OR HYDRANT WITH A 3' CLEAR SPACE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC
- CONTRACTOR TO MAINTAIN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES DURING CONSTRUCTION
- HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB
- NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO BUILDING CONSTRUCTION
-ADDITIONAL FIRE PROTECTION AND/OR ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
- CONTRACTOR SHALL SUBMIT A RADIO SIGNAL STRENGTH STUDY FOR ALL COMMERCIAL BUILDINGS THAT DEMONSTRATES THAT EXISTING EMERGENCY RESPONDER RADIO SIGNAL LEVELS MEET THE REQUIREMENTS OF SECTION 510 OF THE 2018 NC FIRE CODE.
-ALL ISOLATION VALVES WITHIN THE “HOT BOX” AND BETWEEN THE “HOT BOX” AND THE RISER ROOM, MUST BE ELECTRICALLY SUPERVISED. (IF SPRINKLER SYSTEM PRESENT

ADA NOTES

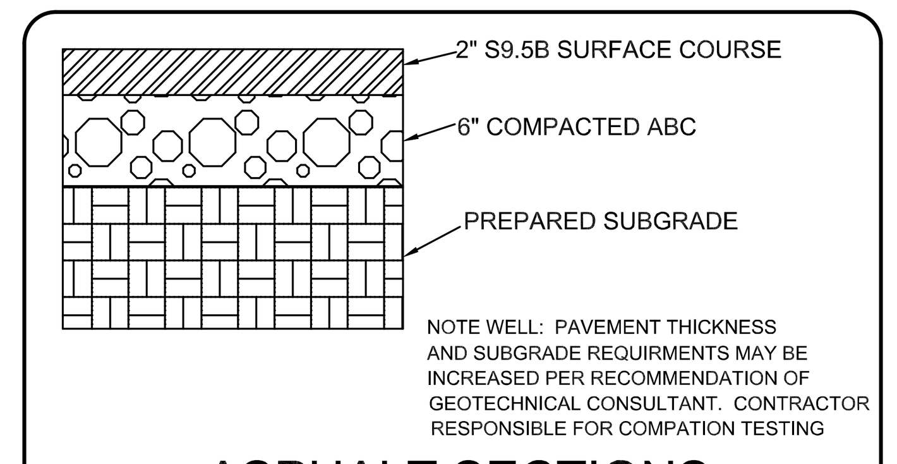
I. LOCATION OF WHEELCHAIR RAMPS:

1. IN ACCORDANCE WITH THE RATIFIED HOUSE BILL 1296, ALL STREET CURBS IN NORTH CAROLINA BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY HANDICAPPED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTER AND SIDEWALKS ARE PROVIDED AND AT OTHER MAJOR POINTS OF PEDESTRIAN FLOW.
2. WHEELCHAIR RAMPS SHOULD BE LOCATED AS INDICATED IN DETAIL DRAWINGS, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.

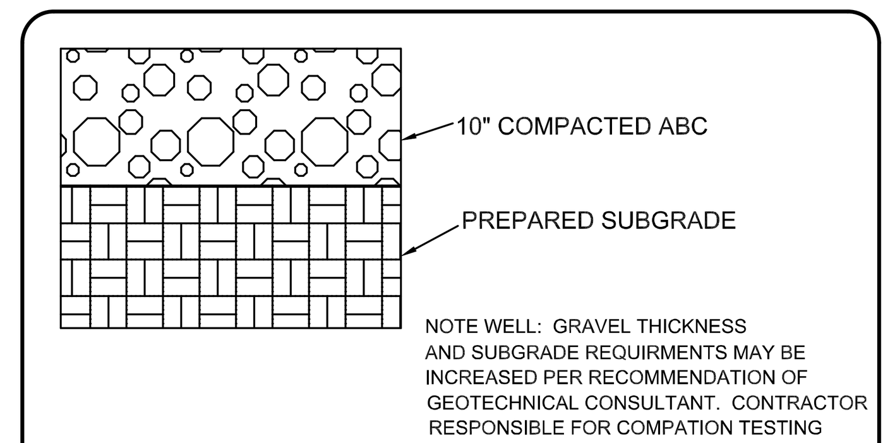
II. CONSTRUCTION NOTES:

1. NO SLOPE SHALL EXCEED 1"=1" (12:1) ON THE RAMP OR SIDEWALK.
2. IN NO CASE SHALL THE WIDTH OF WHEELCHAIR RAMPS BE LESS THAN 40" (3'-4"). WIDTHS MAY EXCEED 40" IF NECESSARY.
3. USE CLASS "A" CONCRETE WITH THE SURFACE HAVING A ROUGH, NON-SKID TYPE FINISH.
4. 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE CONCRETE WHEELCHAIR RAMP JOINS ANY RIGID PAVEMENT OR STRUCTURE.
5. CONSTRUCTION METHODS SHALL CONFORM WITH THOSE OF THE GOVERNING BODY WHICH HAS JURISDICTION OF THE PARTICULAR STREET.

1. THE INSIDE PEDESTRIAN CROSSWALK LINES SHALL BE ESTABLISHED BY BISECTING THE INTERSECTION RADI WHERE MARKED (SEE NOTE 6).
2. THE WHEELCHAIR RAMP SHALL BE LOCATED SO THAT THE BEGINNING OF THE WHEEL CHAIR RAMP WILL BE TWO FEET FROM THE INSIDE PEDESTRIAN CROSSWALK LINE.
3. THE WIDTH OF THE PEDESTRIAN CROSSWALK SHALL BE 10 FEET UNLESS A GREATER WIDTH IS REQUIRED TO ACCOMMODATE THE PEDESTRIAN
4. STOP BARS SHALL BE USED WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN, OR OTHER LEGAL REQUIREMENTS.
5. PARKING SHALL BE ELIMINATED A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.
6. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION. THIS IS AVAILABLE FROM THE SUPERINTENDENT OF DOCUMENTS, U.S GOVERNMENT



ASPHALT SECTIONS
NOT TO SCALE



GRAVEL SECTIONS
NOT TO SCALE

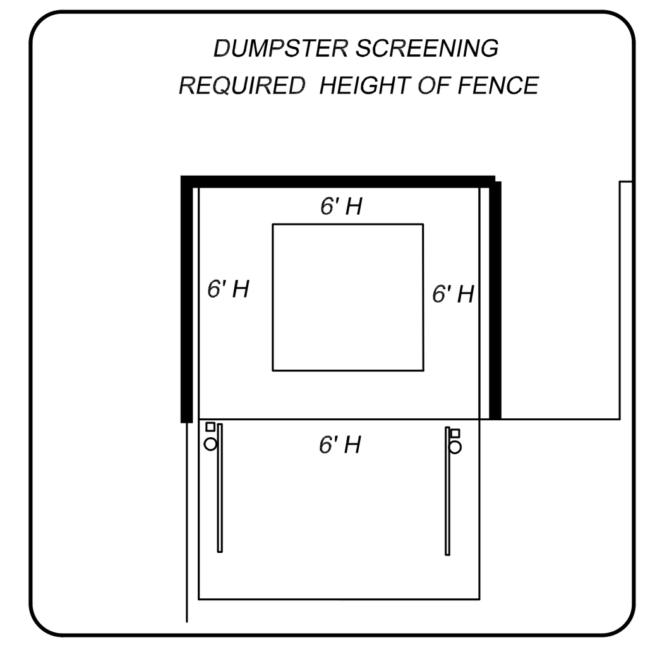
CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date:__________ Permit #__________
Signed: ________________

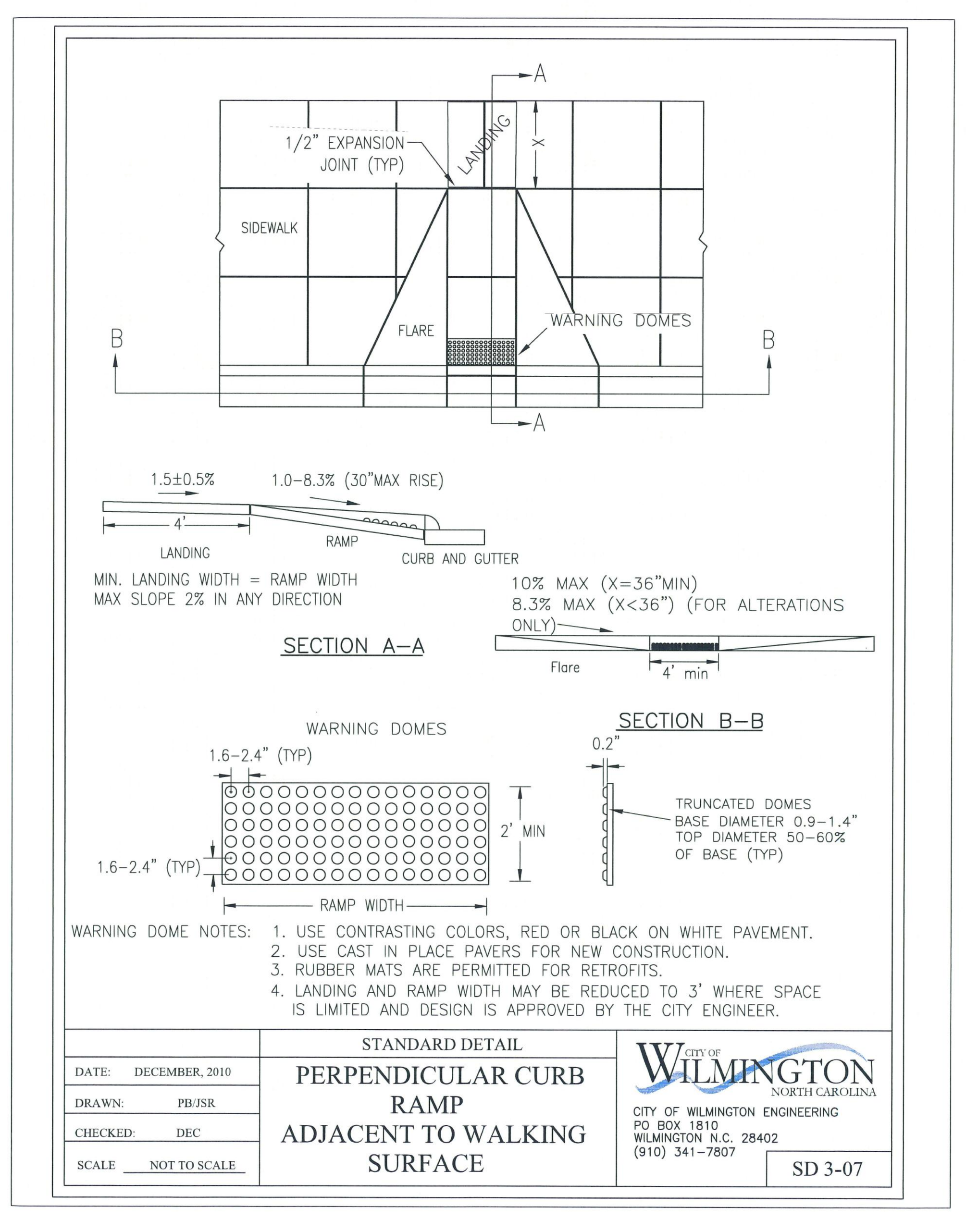
Approved Construction Plan	Name	Date
Planning		
Traffic		
Fire		

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

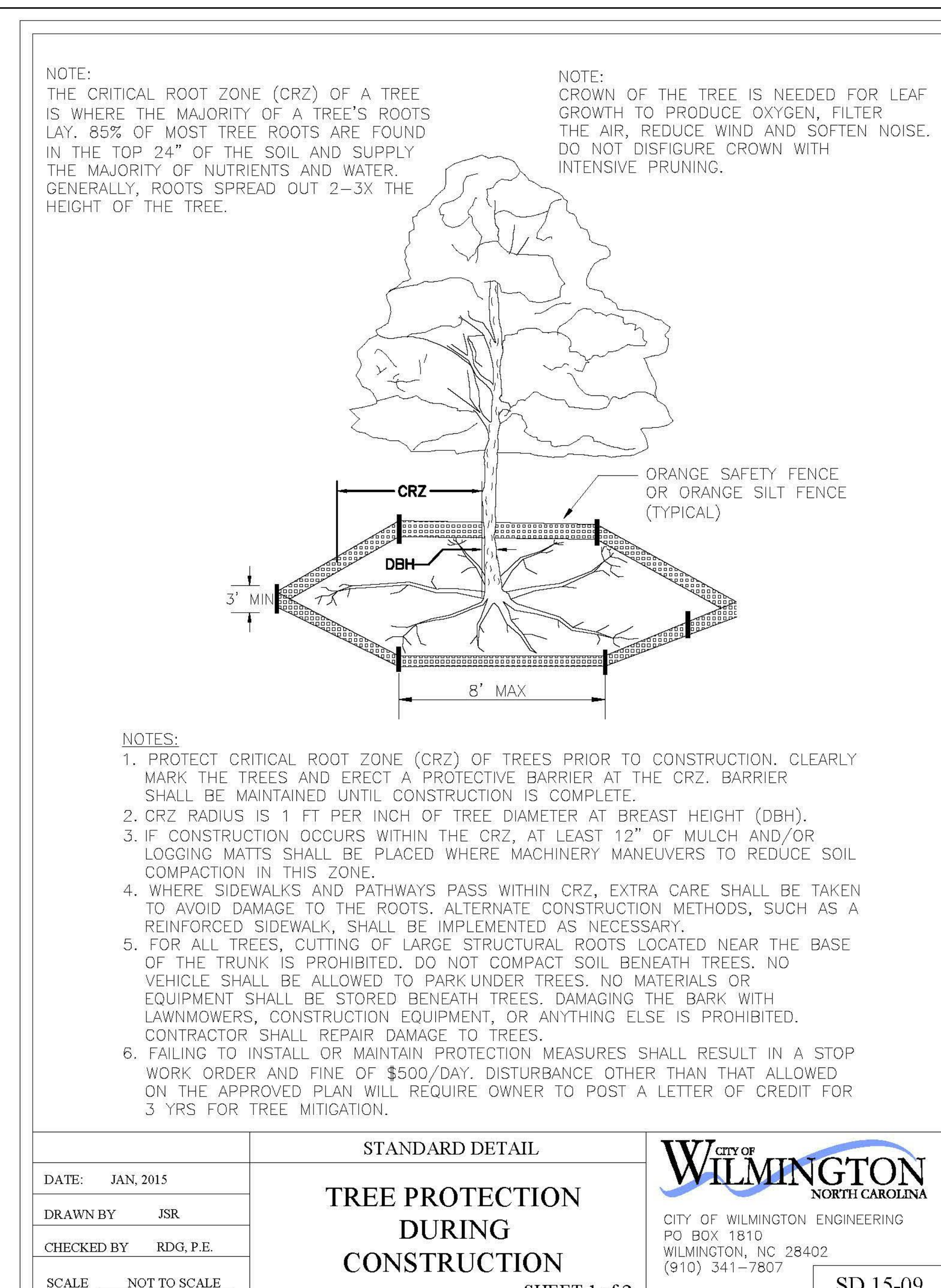
ADDITIONAL STORM WATER NOTES:

1. ALL STORM WATER RUNOFF FROM BUILT UPON AREAS (I.E. IMPERVIOUS SURFACES AND ROOF DRAINAGE) TO BE DIRECTED TO THE STORM SEWER COLLECTION SYSTEM (I.E. STORM INLETS OR PONDS) BY SWALES, OVERLAND FLOW, ADDITIONAL GRADING OR LANDSCAPE INLETS.
2. CONTRACTOR TO ENSURE THAT STREET PAVEMENT AND CURBING IS PLACED TO DRAIN POSITIVELY TO CURB INLETS AND DRAINAGE STRUCTURES.
3. FOR STORM PIPE MATERIAL AND INSTALLATION SEE DETAILS AND NCDOT STANDARD DRAWINGS 300.1 SHEETS 1-3
4. ROOF DRAINS SHALL BE SIZED ACCORDING TO THE 2018 INTERNATIONAAL PLUMBING CODE AND ALL AND SHALL CONFORM TO ANY LOCAL REQUIREMENTS
5. ANY ROOF DRAIN LOCATIONS SHOWN HERE ARE APPROXIMATE AND MAY BE FIELD ADJUSTED AS LONG AS THE MINIMUM REQUIRED SLOPE IS MAINTAINED.

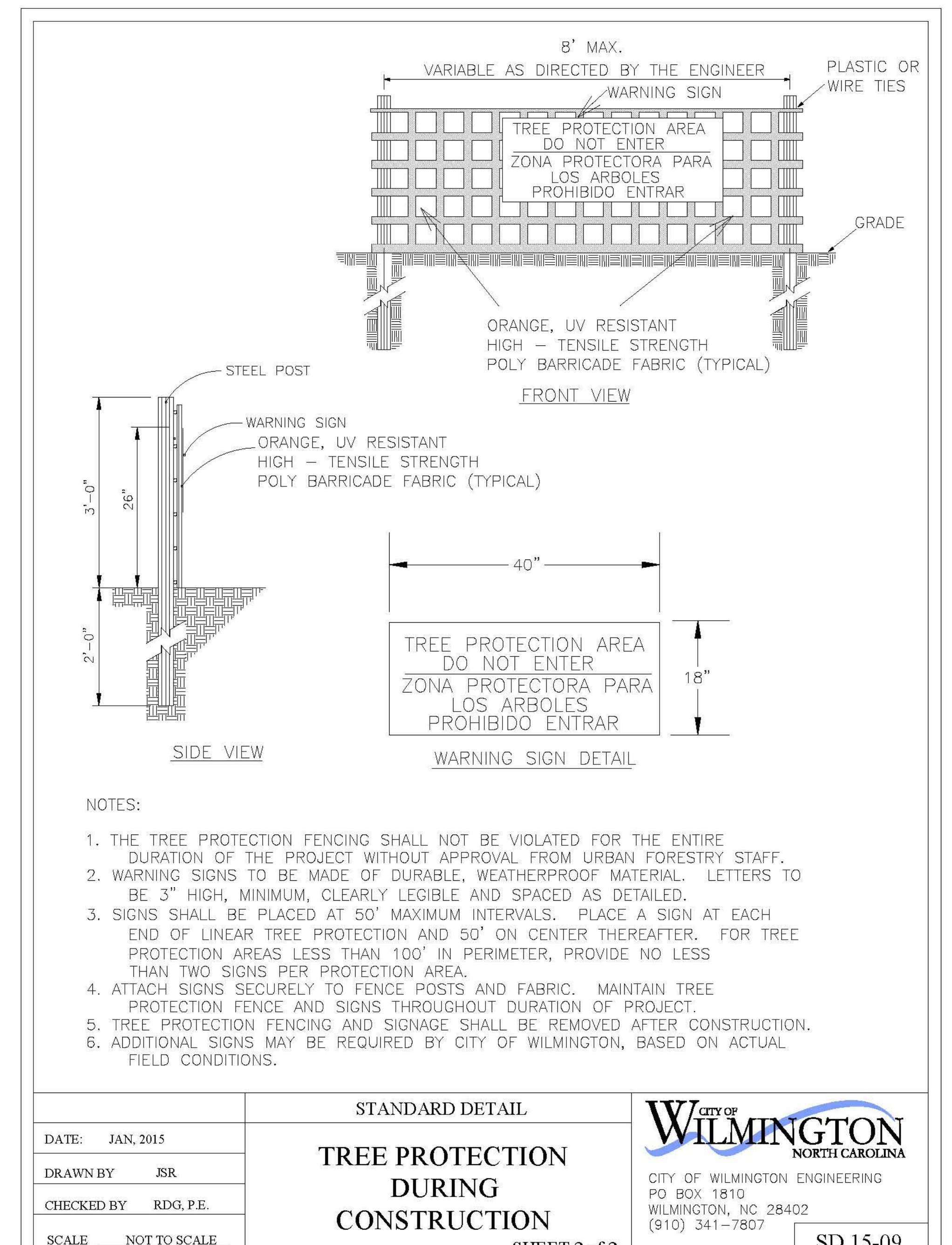




1/2" EXPANSION JOINT (TYP)
LANDING
SIDEWALK
FLARE
WARNING DOMES
A
B
1.5±0.5%
1.0–8.3% (30"MAX RISE)
RAMP
LANDING
CURB AND GUTTER
MIN. LANDING WIDTH = RAMP WIDTH
MAX SLOPE 2% IN ANY DIRECTION
SECTION A–A
10% MAX (X=36"MIN)
8.3% MAX (X<36") (FOR ALTERATIONS ONLY)
Flare
4' min
SECTION B–B
WARNING DOMES
1.6–2.4" (TYP)
0.2"
2' MIN
TRUNCATED DOMES BASE DIAMETER 0.9–1.4" TOP DIAMETER 50–60% OF BASE (TYP)
RAMP WIDTH
WARNING DOME NOTES: 1. USE CONTRASTING COLORS, RED OR BLACK ON WHITE PAVEMENT.
2. USE CAST IN PLACE PAVERS FOR NEW CONSTRUCTION.
3. RUBBER MATS ARE PERMITTED FOR RETROFITS.
4. LANDING AND RAMP WIDTH MAY BE REDUCED TO 3' WHERE SPACE IS LIMITED AND DESIGN IS APPROVED BY THE CITY ENGINEER.
STANDARD DETAIL
DATE: DECEMBER, 2010
DRAWN: PB/JSR
CHECKED: DEC
SCALE: NOT TO SCALE
PERPENDICULAR CURB RAMP ADJACENT TO WALKING SURFACE
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON N.C. 28402
(910) 341-7807
SD 3-07



NOTE:
THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2–3X THE HEIGHT OF THE TREE.
NOTE:
CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFIGURE CROWN WITH INTENSIVE PRUNING.
CRZ
DBH
3' MIN
ORANGE SAFETY FENCE OR ORANGE SILT FENCE (TYPICAL)
8' MAX
NOTES:
1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATTS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
4. WHERE SIDEWALKS AND PARKING PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
5. FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF $500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.
STANDARD DETAIL
DATE: JAN. 2015
DRAWN BY JSR
CHECKED BY RDG, P.E.
SCALE NOT TO SCALE
TREE PROTECTION DURING CONSTRUCTION
SHEET 1 of 2
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 15-09



8' MAX.
VARIABLE AS DIRECTED BY THE ENGINEER
WARNING SIGN
PLASTIC OR WIRE TIES
TREE PROTECTION AREA
DO NOT ENTER
ZONA PROTECTORA PARA
LOS ARBOLES
PROHIBIDO ENTRAR
GRADE
ORANGE, UV RESISTANT HIGH – TENSILE STRENGTH POLY BARRICADE FABRIC (TYPICAL)
FRONT VIEW
STEEL POST
WARNING SIGN
ORANGE, UV RESISTANT HIGH – TENSILE STRENGTH POLY BARRICADE FABRIC (TYPICAL)
SIDE VIEW
40"
18"
WARNING SIGN DETAIL
NOTES:
1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.
STANDARD DETAIL
DATE: JAN. 2015
DRAWN BY JSR
CHECKED BY RDG, P.E.
SCALE NOT TO SCALE
TREE PROTECTION DURING CONSTRUCTION
SHEET 2 of 2
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 15-09

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

PRELIMINARY PLAN

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
LICENSE # C-0597

	REVISIONS	DATE
3	REVISION TRC COMMENTS	4-21-2022
2	REVISION TRC COMMENTS	4-05-2022
1	REVISION TRC COMMENTS	02-03-2022

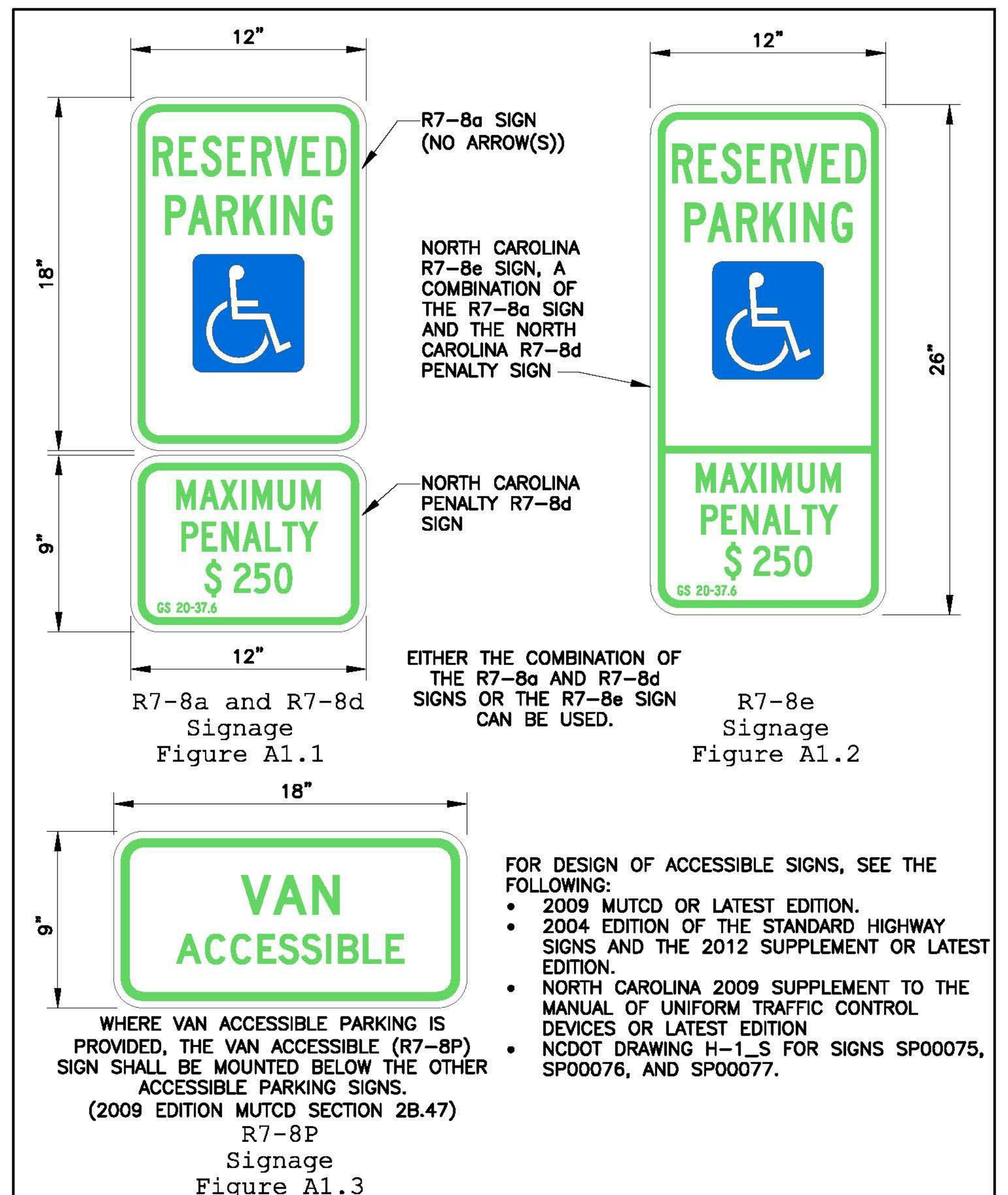
TYPICAL DETAILS
OFF THE HOOK YACHT SALES
N.E. CAPE FEAR RIVER FACILITY
CAPE FEAR TOWNSHIP, NEW HANOVER COUNTY, NORTH CAROLINA

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

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

TYPICAL DETAILS

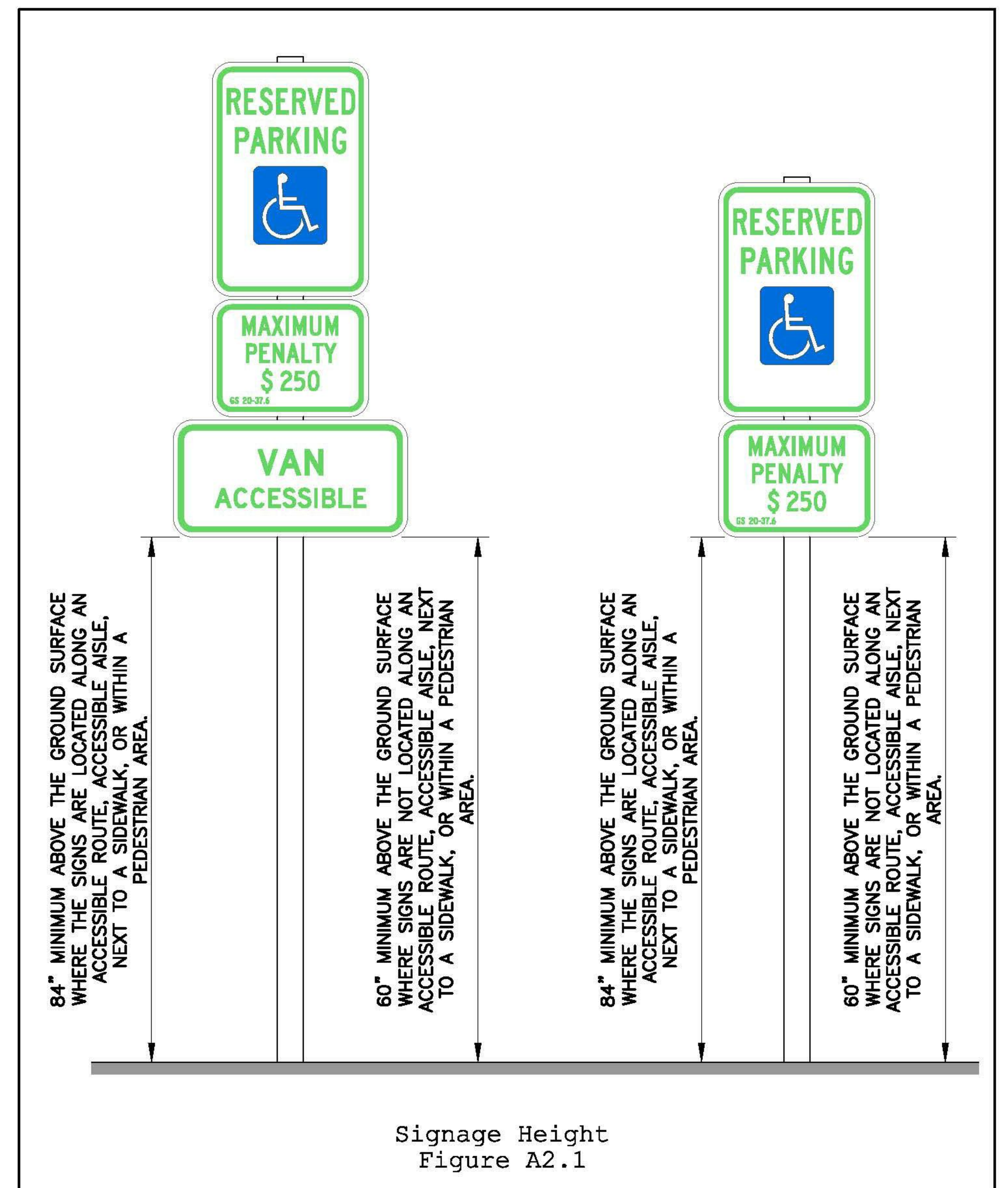
Sheet No: 2 of 11



DATE: NOVEMBER 8, 2016 | REVISED: - | DRAWN BY: DALE THOMPSON | CHECKED BY: RANDALL GLAZIER | SCALE: NOT TO SCALE

Accessible Parking Signs

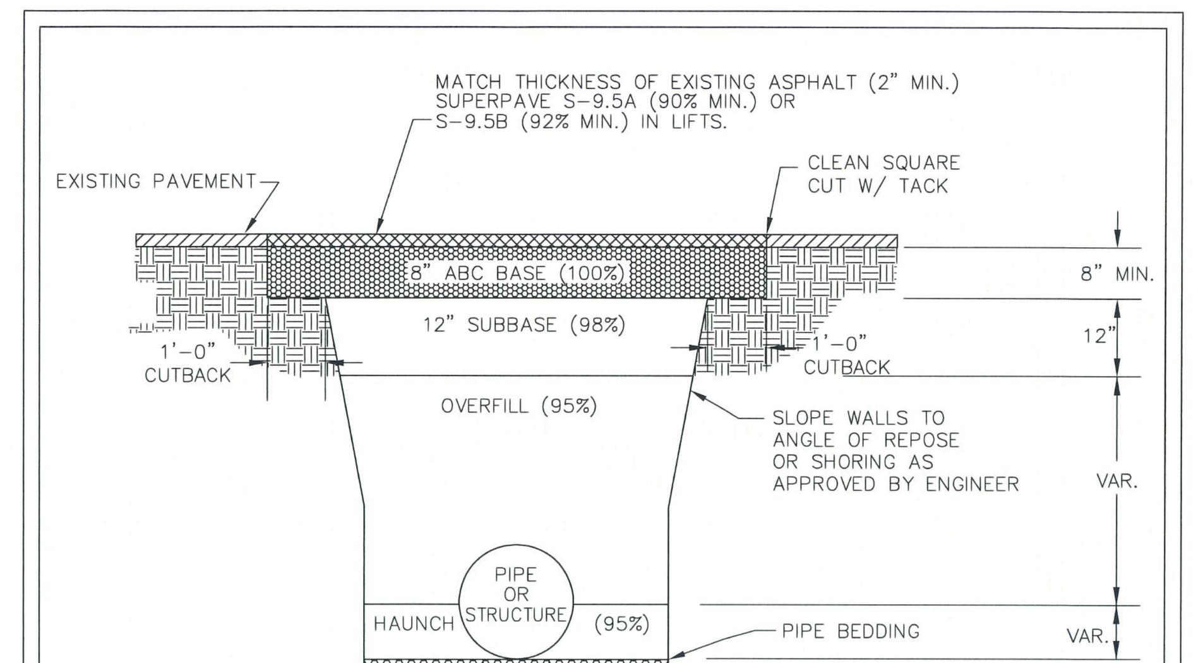
WILMINGTON TRAFFIC ENGINEERING — DETAIL NO.: TE7-01



DATE: NOVEMBER 8, 2016 | REVISED: - | DRAWN BY: DALE THOMPSON | CHECKED BY: RANDALL GLAZIER | SCALE: NOT TO SCALE

Accessible Parking Signs Mounting Configuration and Mounting Heights

WILMINGTON TRAFFIC ENGINEERING — DETAIL NO.: TE7-02



NOTES:

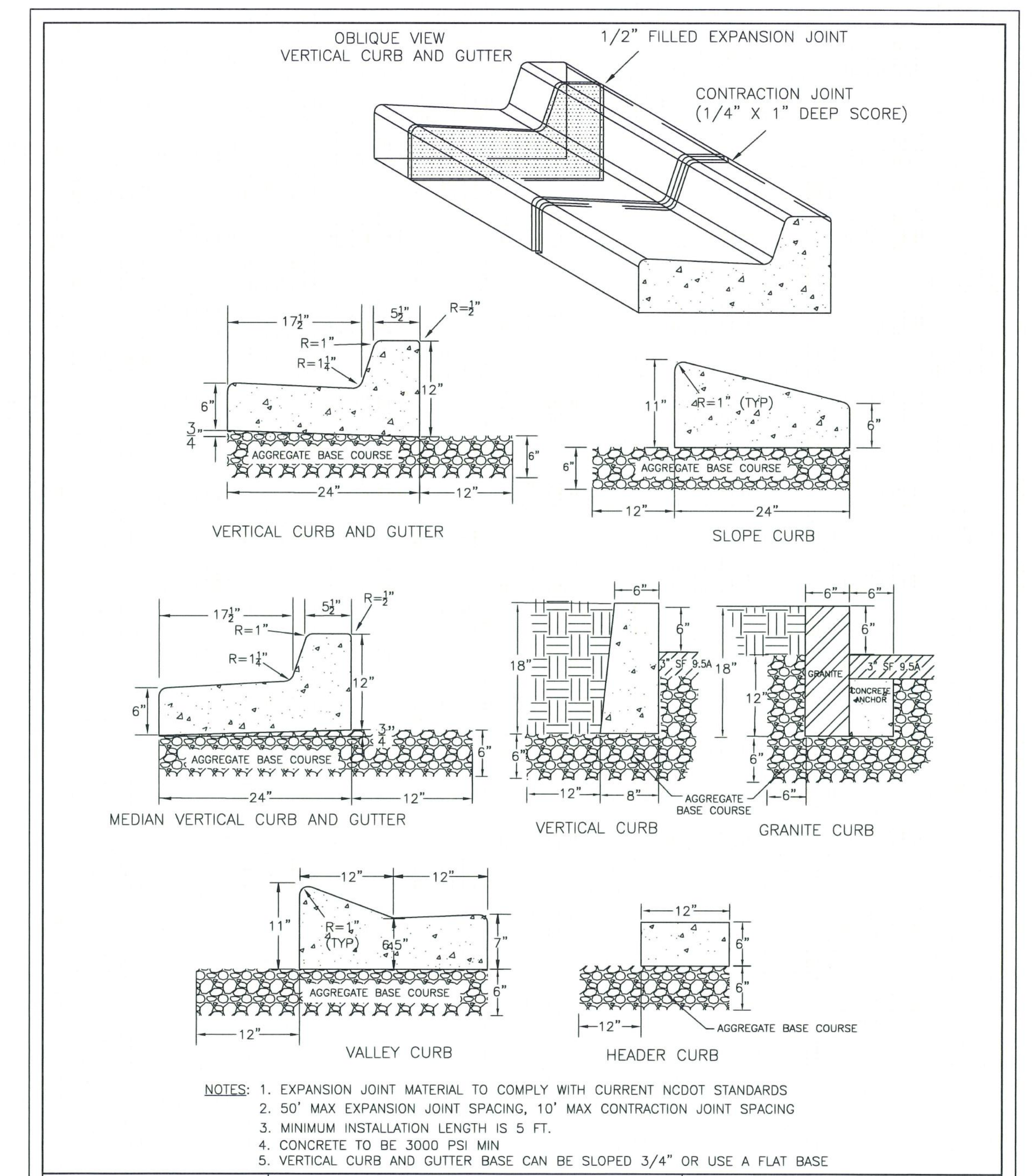
1. CONTRACTOR SHALL ENSURE BOTTOM OF TRENCH IS SUITABLE FOR INSTALLATION AND DOES NOT REQUIRE FOUNDATION CONDITIONING STONE.
2. FILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.
3. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC).
5. 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.
6. ALL APPROVED CASTINGS SHALL BE SET FLUSH TO GRADE AND SUPPORTED IF APPLICABLE.
7. 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.
8. CUTBACKS OF ASPHALT SHALL BE PREPARED ON EDGE OF EXCAVATION OVER TOP OF UNDISTURBED SOIL.

DATE: MAY, 2013 | DRAWN BY: JSR | CHECKED BY: D.E.C., P.E. | SCALE: NOT TO SCALE

STANDARD DETAIL

PAVEMENT REPAIRS-UTILITY CUTS

CITY OF WILMINGTON, NORTH CAROLINA — CITY OF WILMINGTON ENGINEERING OFFICE, 212 OPERATIONS CENTER DRIVE, WILMINGTON N.C. 28412, (910) 341-7807 — SD 1-05



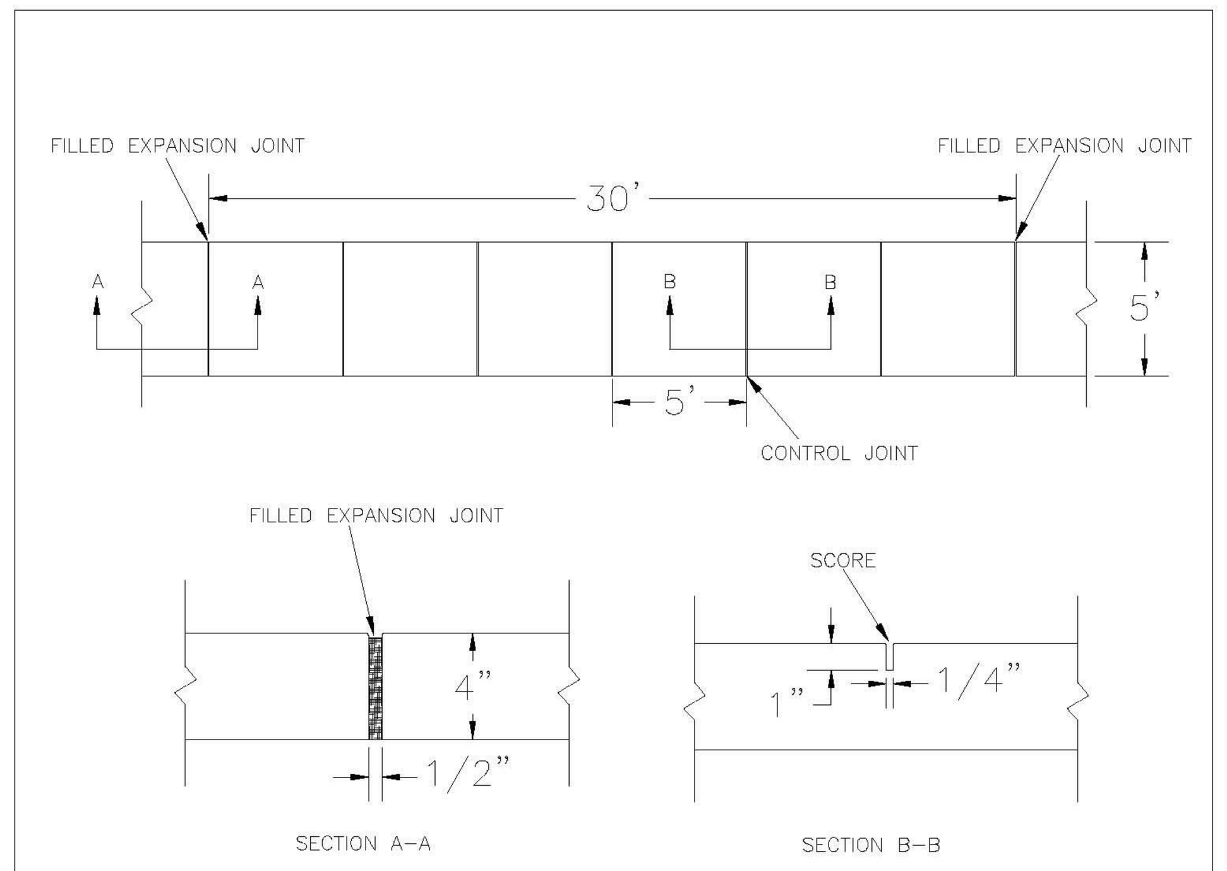
NOTES:
1. EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS
2. 50' MAX EXPANSION JOINT SPACING, 10' MAX CONTRACTION JOINT SPACING
3. MINIMUM INSTALLATION LENGTH IS 5 FT.
4. CONCRETE TO BE 3000 PSI MIN
5. VERTICAL CURB AND GUTTER BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE

DATE: AUGUST, 2011 | DRAWN: PB/JSR | CHECKED: DEC | SCALE: NOT TO SCALE

STANDARD DETAIL

CURBING

CITY OF WILMINGTON, NORTH CAROLINA — CITY OF WILMINGTON ENGINEERING, PO BOX 1810, WILMINGTON N.C. 28402, (910) 341-7807 — SD 3-11



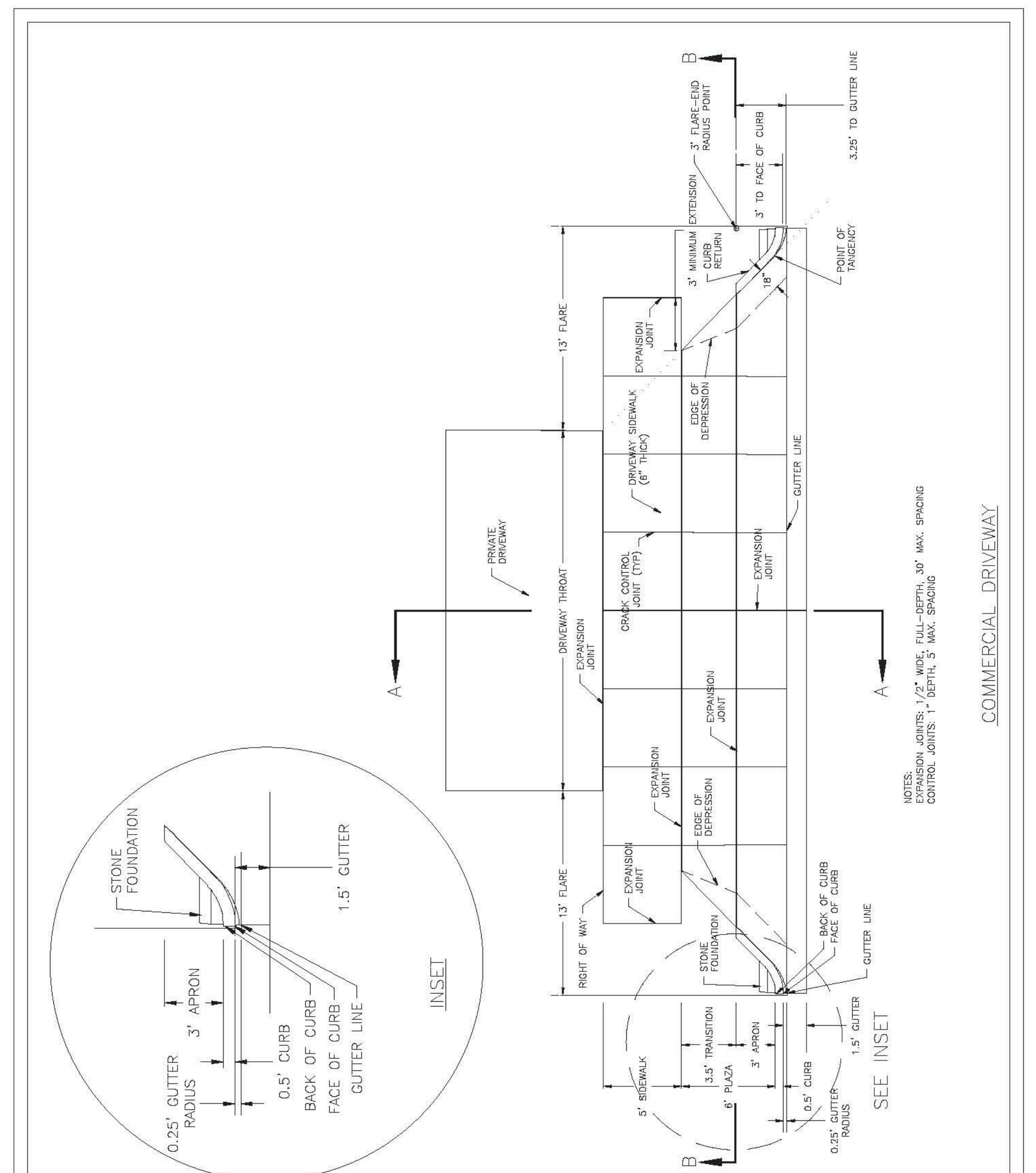
NOTES:
1. JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
3. MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
4. CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAIN WITHIN A DRIVEWAY APRON) SHALL BE CLASS "A" - 3,000 PSI.
5. MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL
6. 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS
7. MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
8. MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
9. 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 | DRAWN: PB/JSR | CHECKED: DEC | SCALE: NOT TO SCALE

STANDARD DETAIL

SIDEWALK

CITY OF WILMINGTON, NORTH CAROLINA — CITY OF WILMINGTON ENGINEERING, PO BOX 1810, WILMINGTON N.C. 28402, (910) 341-7807 — SD 3-10

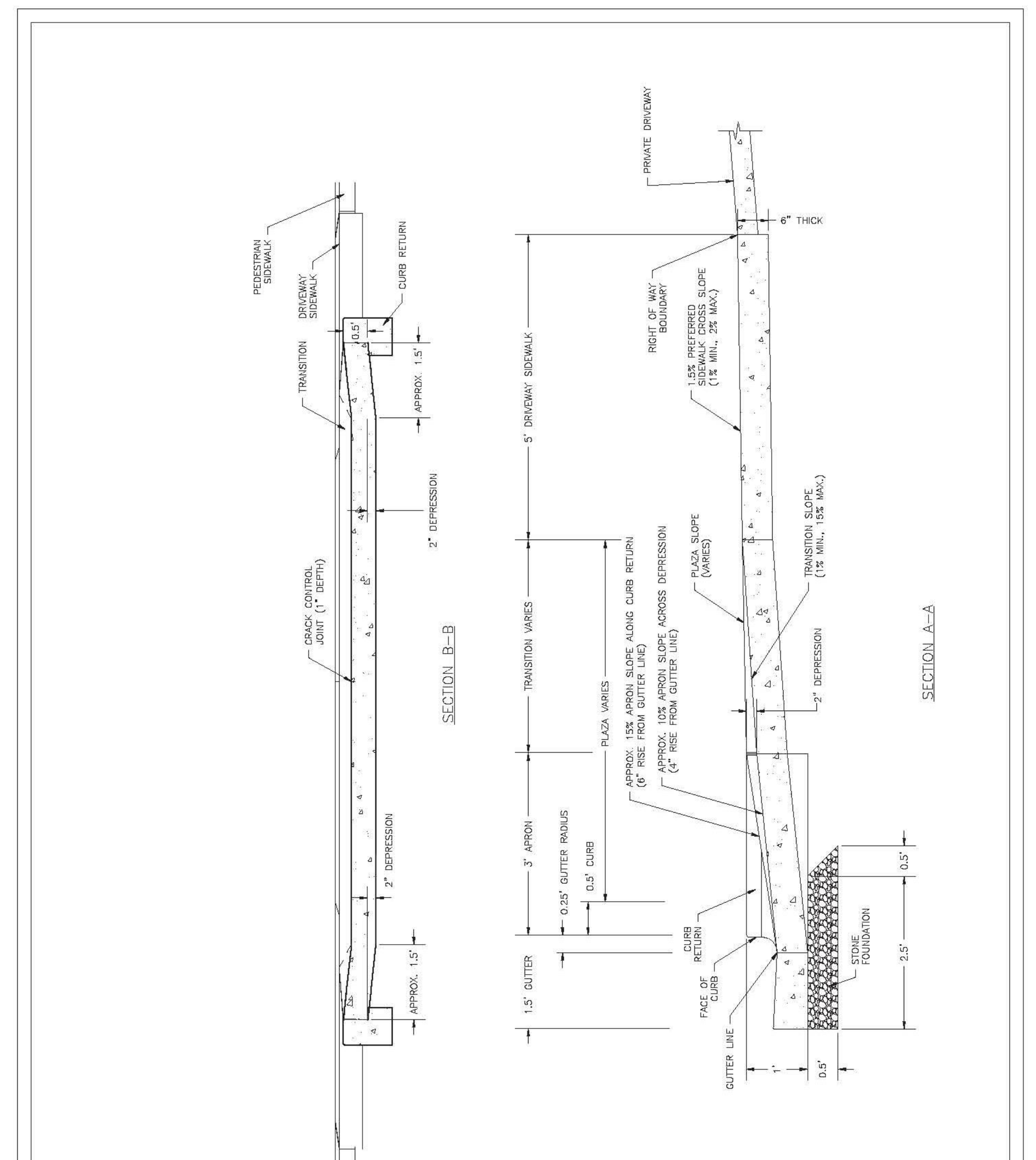


DATE: FEB. 14, 2017 | DRAWN BY: JSR | CHECKED BY: D.E.C., P.E. | SCALE: NOT TO SCALE

STANDARD DETAIL

COMMERCIAL DRIVEWAY PLAN (VERTICAL CURB) 1 of 2

CITY OF WILMINGTON, NORTH CAROLINA — CITY OF WILMINGTON ENGINEERING, PO BOX 1810, WILMINGTON N.C. 28402, (910) 341-7807 — SD 3-03.3



DATE: FEB. 14, 2017 | DRAWN BY: JSR | CHECKED BY: D.E.C., P.E. | SCALE: NOT TO SCALE

STANDARD DETAIL

COMMERCIAL DRIVEWAY SECTIONS (VERTICAL CURB) 2 of 2

CITY OF WILMINGTON, NORTH CAROLINA — CITY OF WILMINGTON ENGINEERING, PO BOX 1810, WILMINGTON N.C. 28402, (910) 341-7807 — SD 3-03.4

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

PRELIMINARY PLAN

TYPICAL DETAILS

OFF THE HOOK YACHT SALES

N.E. CAPE FEAR RIVER FACILITY

CAPE FEAR TOWNSHIP, NEW HANOVER COUNTY, NORTH CAROLINA

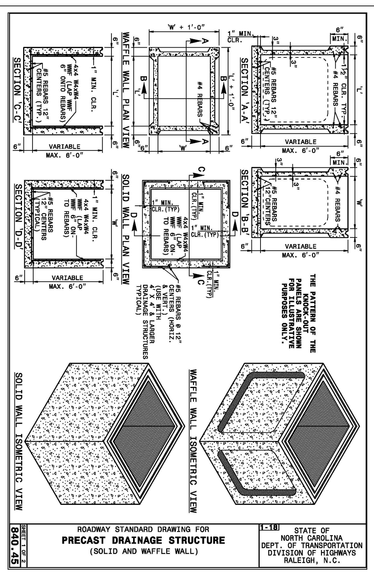
OWNER: OTH REALTY LLC, 1701 N J.E.L. WADE DR., WILMINGTON N.C. 28401

3	REVISIONS \ TRC COMMENTS	4-21-2022
2	REVISIONS \ TRC COMMENTS	4-05-2022
1	REVISIONS \ TRC COMMENTS	2-03-2022
	REVISIONS	DATE

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
LICENSE # C-0597

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

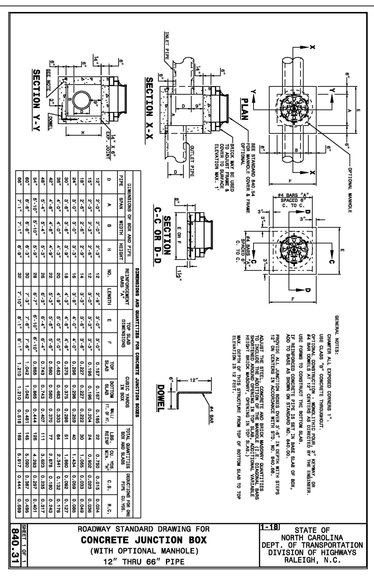
TYPICAL DETAILS



ROADWAY STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE
(SOLID AND WAFFLE WALL)

1-18 | STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

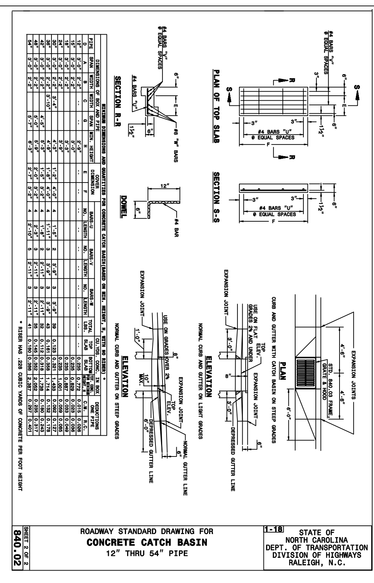
SHEET 1 OF 1 | 840.45



ROADWAY STANDARD DRAWING FOR
CONCRETE JUNCTION BOX
(WITH OPTIONAL MANHOLE)
12" THRU 66" PIPE

1-18 | STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

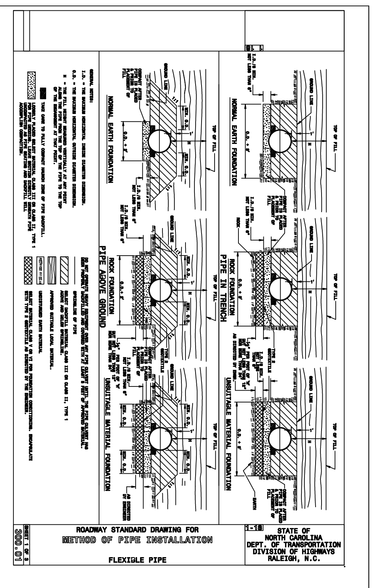
SHEET 1 OF 1 | 840.31



ROADWAY STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE

1-18 | STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

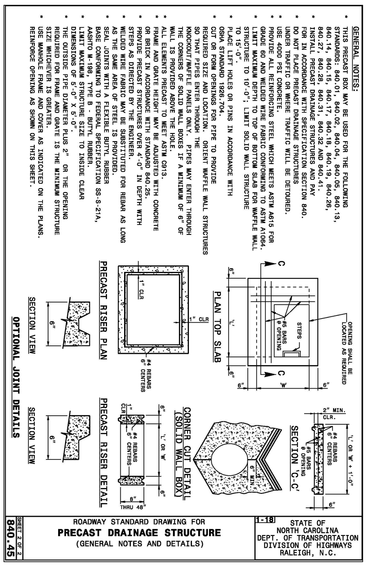
SHEET 1 OF 1 | 840.02



ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
FLEXIGLE PIPE

1-18 | STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

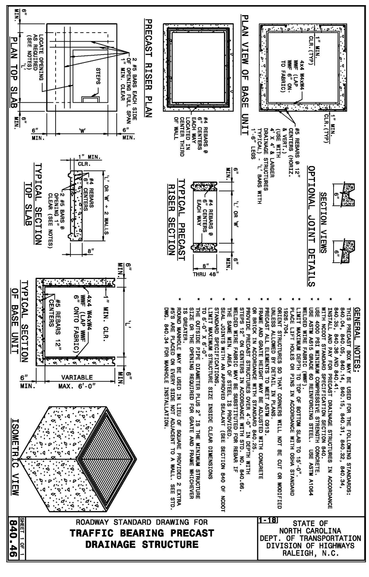
SHEET 1 OF 1 | 300.01



ROADWAY STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE
(GENERAL NOTES AND DETAILS)

1-18 | STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

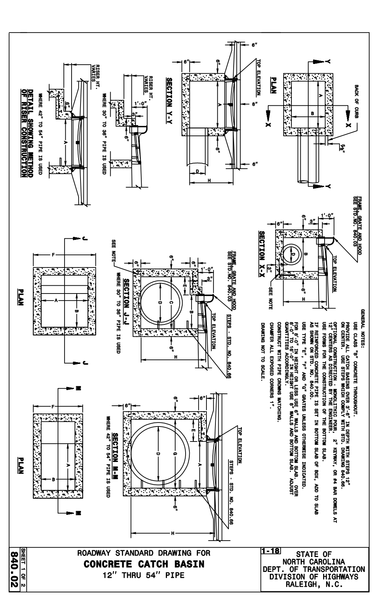
SHEET 2 OF 2 | 840.45



ROADWAY STANDARD DRAWING FOR
TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

1-18 | STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

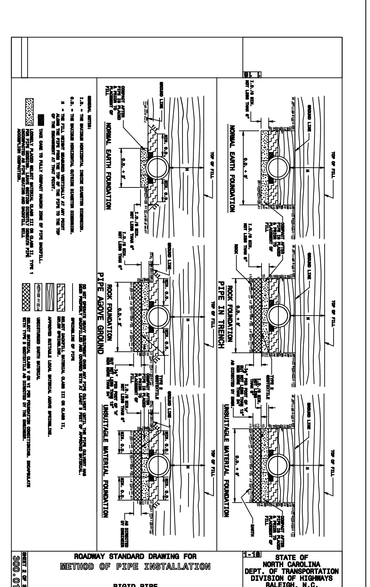
SHEET 1 OF 1 | 840.46



ROADWAY STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE

1-18 | STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

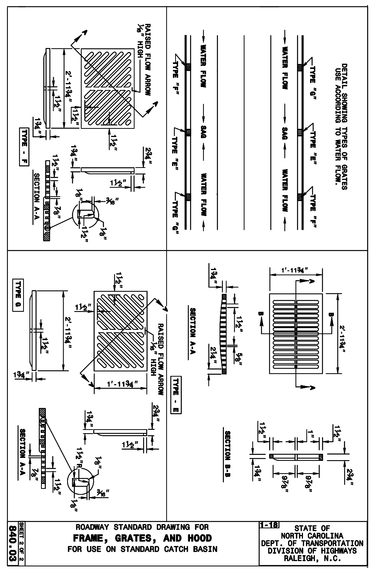
SHEET 1 OF 1 | 840.02



ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

1-18 | STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

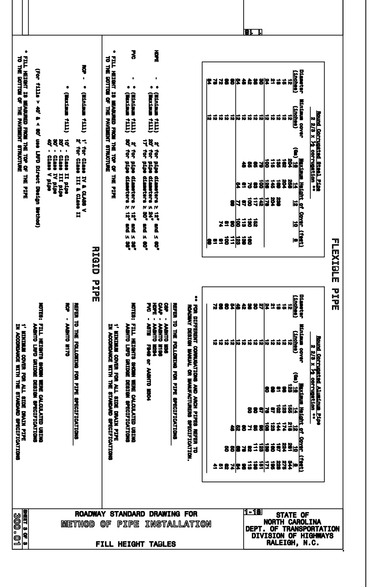
SHEET 2 OF 2 | 300.01



ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN

1-18 | STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

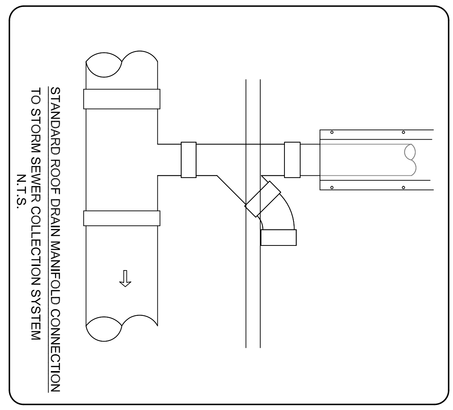
SHEET 1 OF 1 | 840.03



ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
FILL HEIGHT TAGLES

1-18 | STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

SHEET 2 OF 2 | 300.01



STANDARD ROOF DRAIN MANIFOLD CONNECTION TO STORM SEWER COLLECTION SYSTEM
N.T.S.

PRELIMINARY PLAN

TYPICAL 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

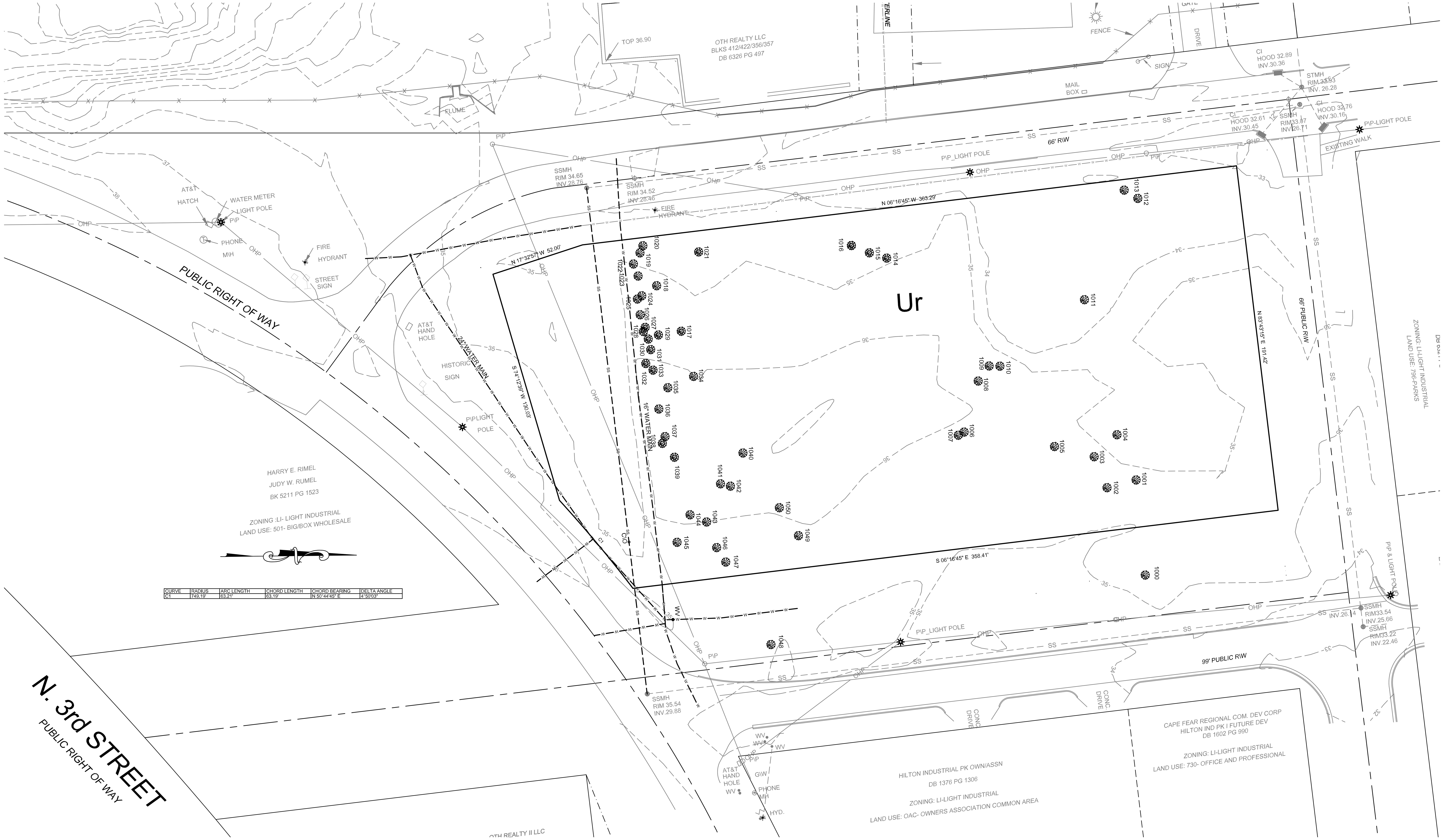
3	REVISIONS \ TRC COMMENTS	4-21-2022
2	REVISIONS \ TRC COMMENTS	4-05-2022
1	REVISIONS \ TRC COMMENTS	2-03-2022
	REVISIONS	DATE

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

Sheet No. 4 OF 11

TYPICAL DETAILS

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-0102
LICENSE # C-0597



CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	749.19'	63.21'	63.19'	N 50°44'45" E	4°50'03"

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
1002,6" MAG	1038,14" OAK	1084,9" OAK	1123,16" 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
1006,8" 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
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1013,TWIN 8" 7" HARDWOOD	1049,18.5" HARDWOOD	1095,26" 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	1097,18" HARDWOOD	1136,22" HARDWOOD
1016,10" HARDWOOD	1052,18.5" OAK	1098,18" GUM	1137,19" HARDWOOD
1017,19" 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
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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	
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1027,8.5" OAK	1064,20" OAK	1111,34" HARDWOOD	
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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.

0 30 60 90

PRELIMINARY PLAN

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
LICENSE # C-0597

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

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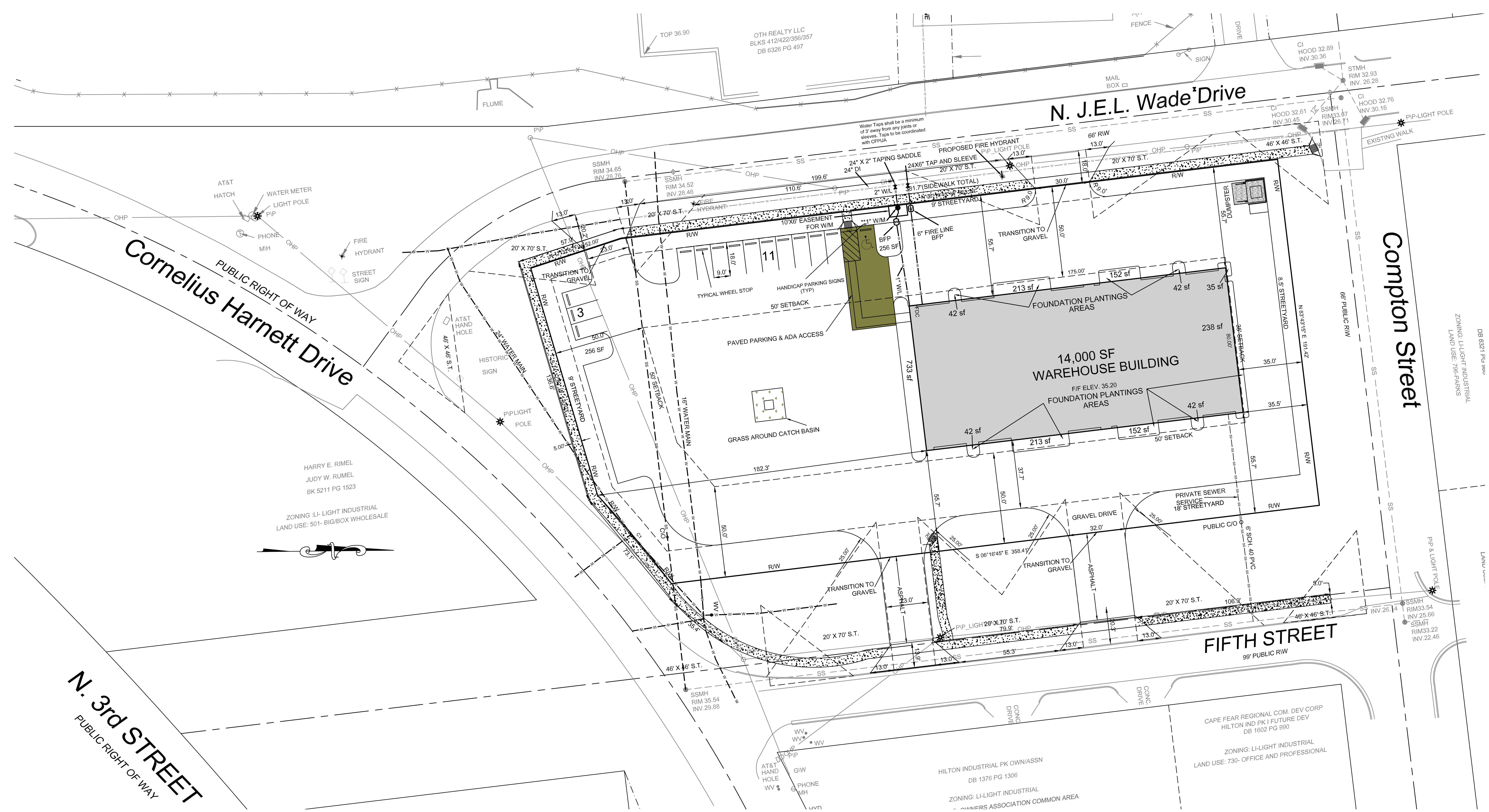
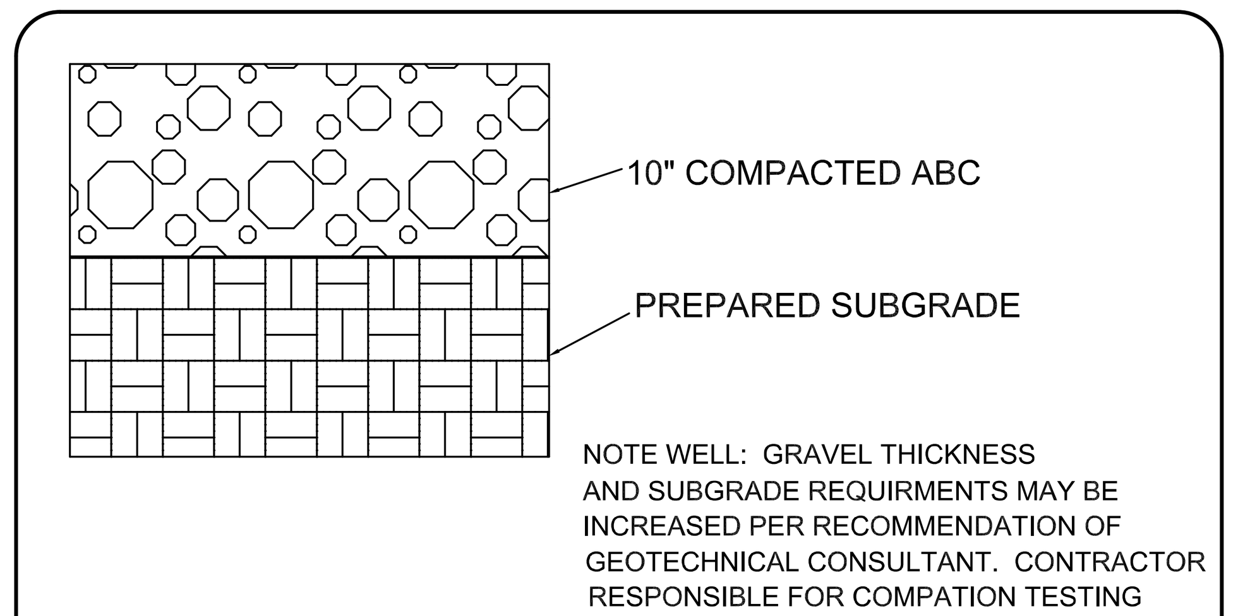
Date: *5-5-2022*
Scale: *HORZ.: 1"= 30'*
Drawn: *gw*
Checked: *gw*
Project No: *4372*

EXISTING CONDITIONS

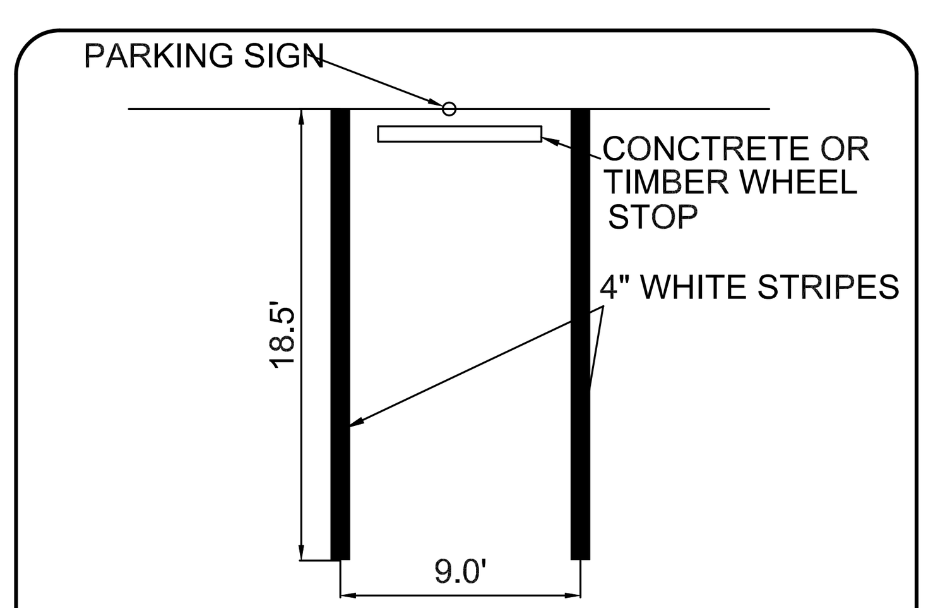
Sheet No: 7
Of: 11





GRAVEL SECTIONS

NOT TO SCALE

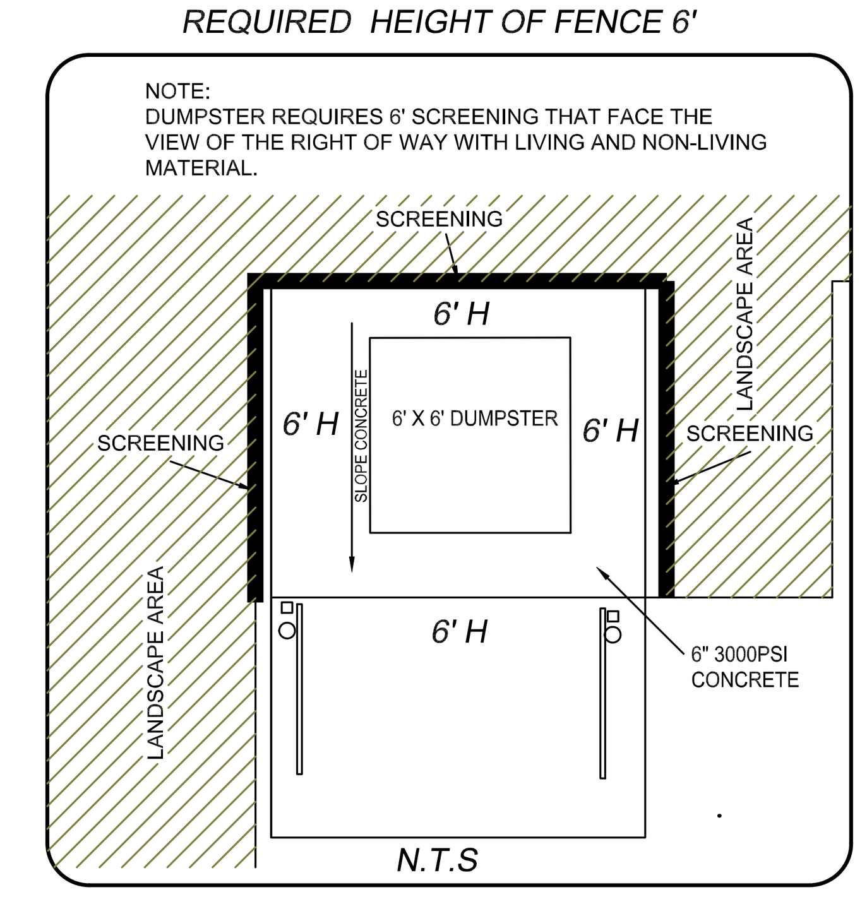


ACCESSIBLE PARKING STALL

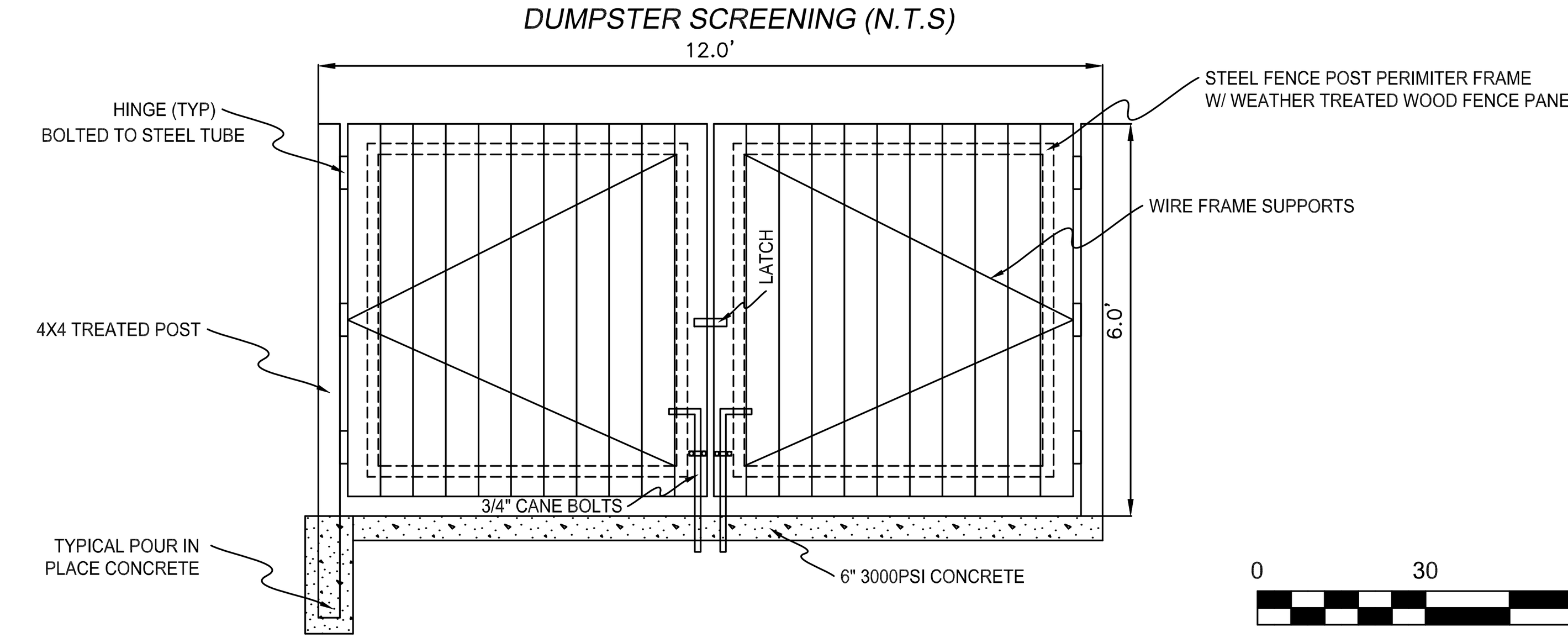
NOT TO SCALE

DUMPSTER PAD

REQUIRED HEIGHT OF FENCE 6'



DUMPSTER SCREENING (N.T.S)



0 30 60 90

FOUNDATION PLANTINGS

NORTH BUILDING FACADE 80'X 21'=1960 (SF) X .12= 235.2 (SF)
SOUTH BUILDING FACADE 80'X 21'=1960 (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 = 2,098 (SF)

* See Building Plans.

** See Detail for 4-2" reduction. Adequate space between services shall be provided so all services are perpendicular to the main.

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 FRON 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)
STREETYARD 18' AND 9'
SOIL TYPES INCLUDE Ur (URBAN LAND) AND Ku (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		
BUILDING	14000	SF
PARKING AND DRIVES	47256	SF
SIDEWALKS	142	SF
FUTURE	996	SF
TOTAL PROPOSED IMPERVIOUS(NOW AND FUTURE)	62,394	SF

BUILDING LOT COVERAGE		
PROPOSED BLDG.	14000	SF
TOTAL TRACT AREA	75588	SF
BUILDING LOT COVERAGE	18.5%	

TRIP GENERATION CHART			AM PEAK HOURS TRIPS= 23	PM PEAK HOUR TRIPS=28
LAND USE	ITE CODE	24 HR VOLUMES	ENTER |EXIT	ENTER |EXIT
SECIAL TRADE CONTRACTOR BOAT REPAIR 14,0000 SF PROPOSED	180			
		143	17 | 6	9 | 19
CURRENT LAND USE	958			

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LICENSE # C-0597

	REVISIONS	DATE
5	PARKING REVISION	5-16-2023
4	ACCESSIBLE PATHS DEMINSIONED	10-4-2022
3	REVISIONS \ TRC COMMENTS	4-21-2022
2	REVISIONS \ TRC COMMENTS	4-05-2022
1	REVISIONS \ TRC COMMENTS	2-03-2022

SITE 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 J.E.L. WADE DR.
WILMINGTON N.C. 28401

Date: 5-5-2022
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Drawn: gw
Checked: AHG
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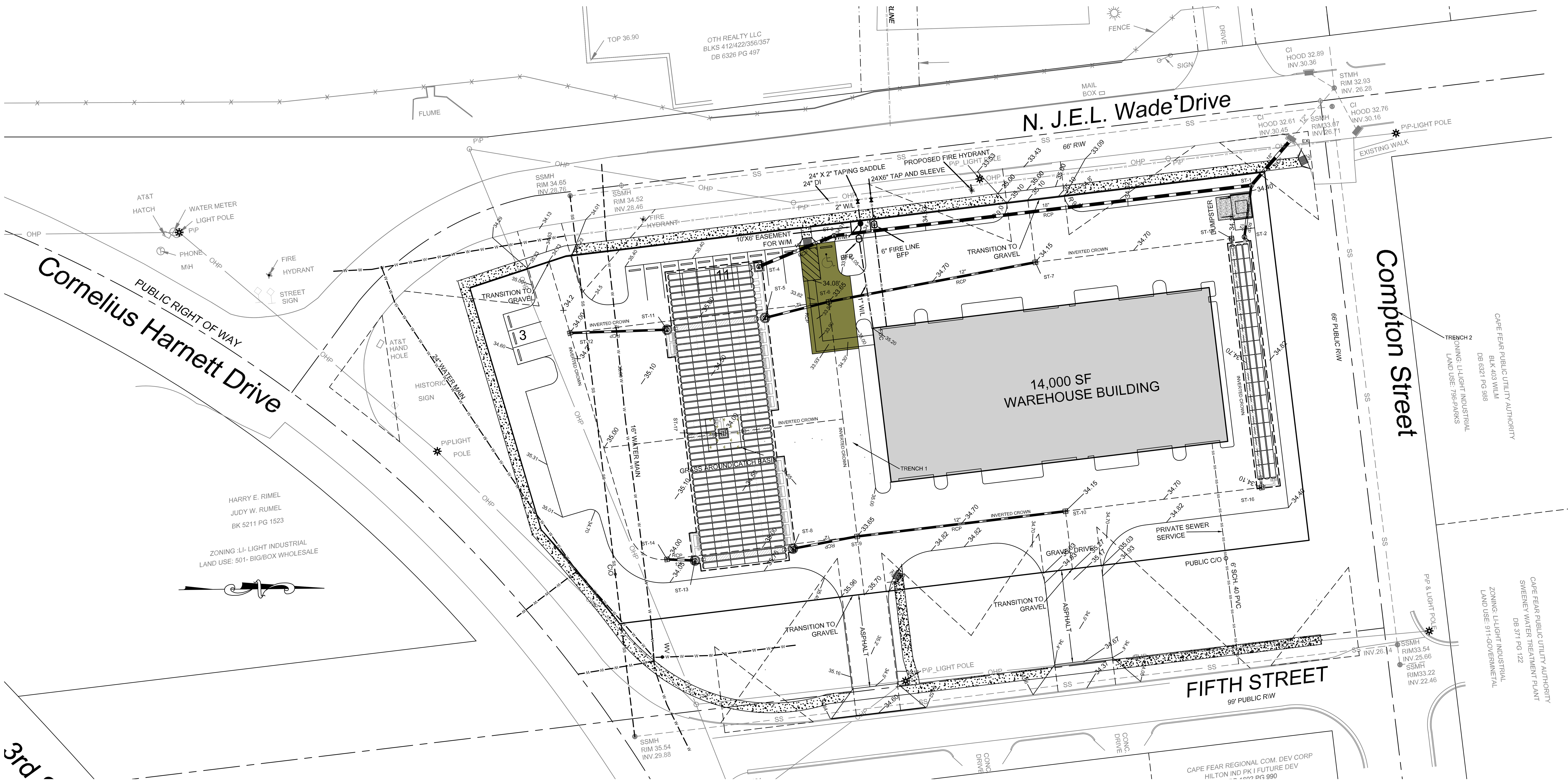
SITE PLAN

PRELIMINARY PLAN



0 30 60 90

PRELIMINARY PLAN

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS

	REVISIONS	DATE
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GRADING PLAN
OFF THE HOOK YACHT SALES
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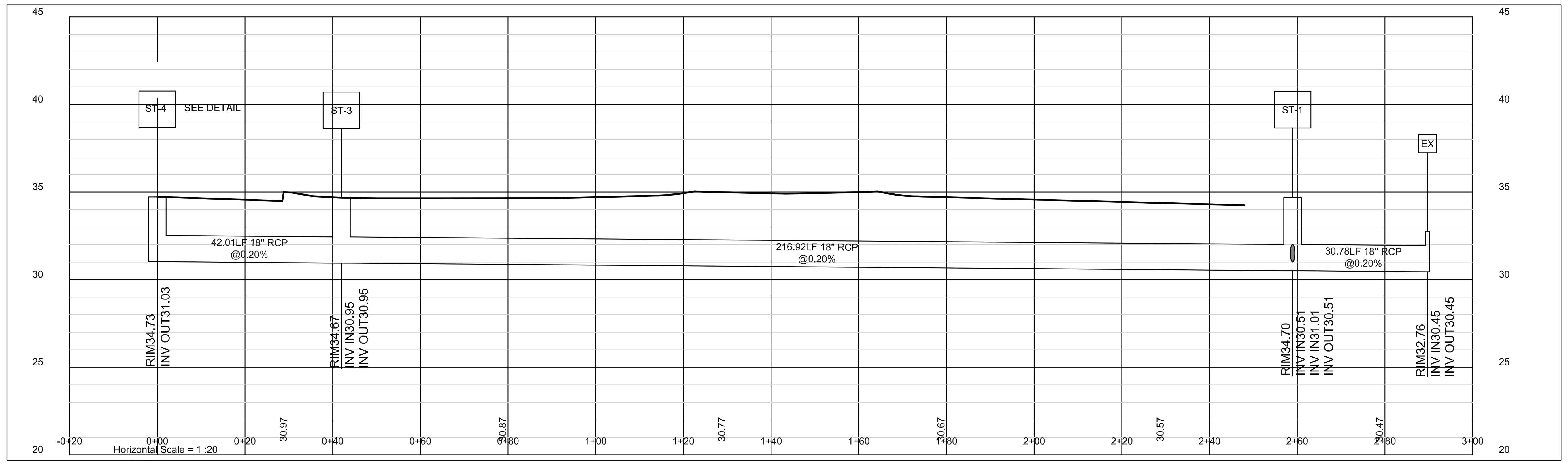
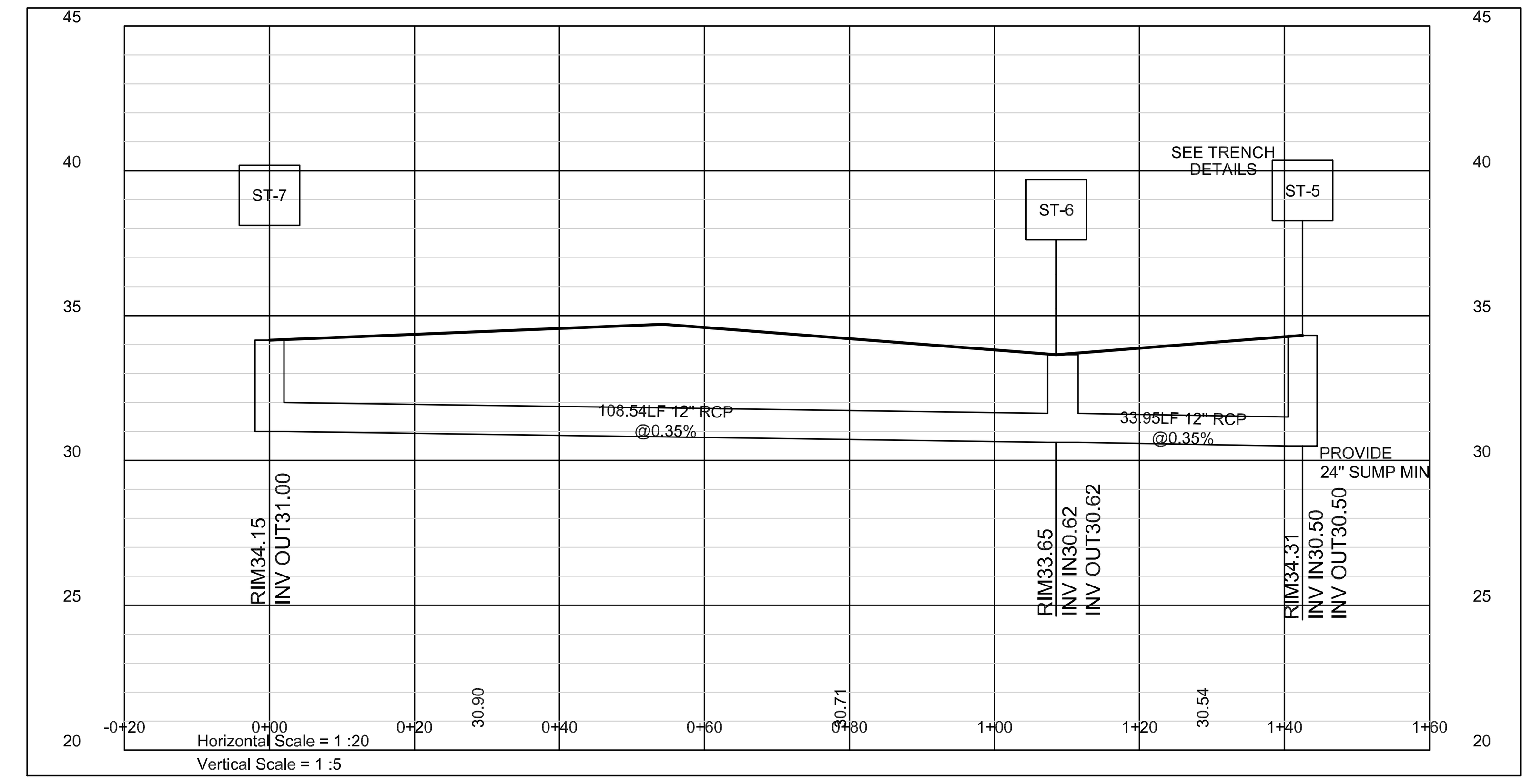
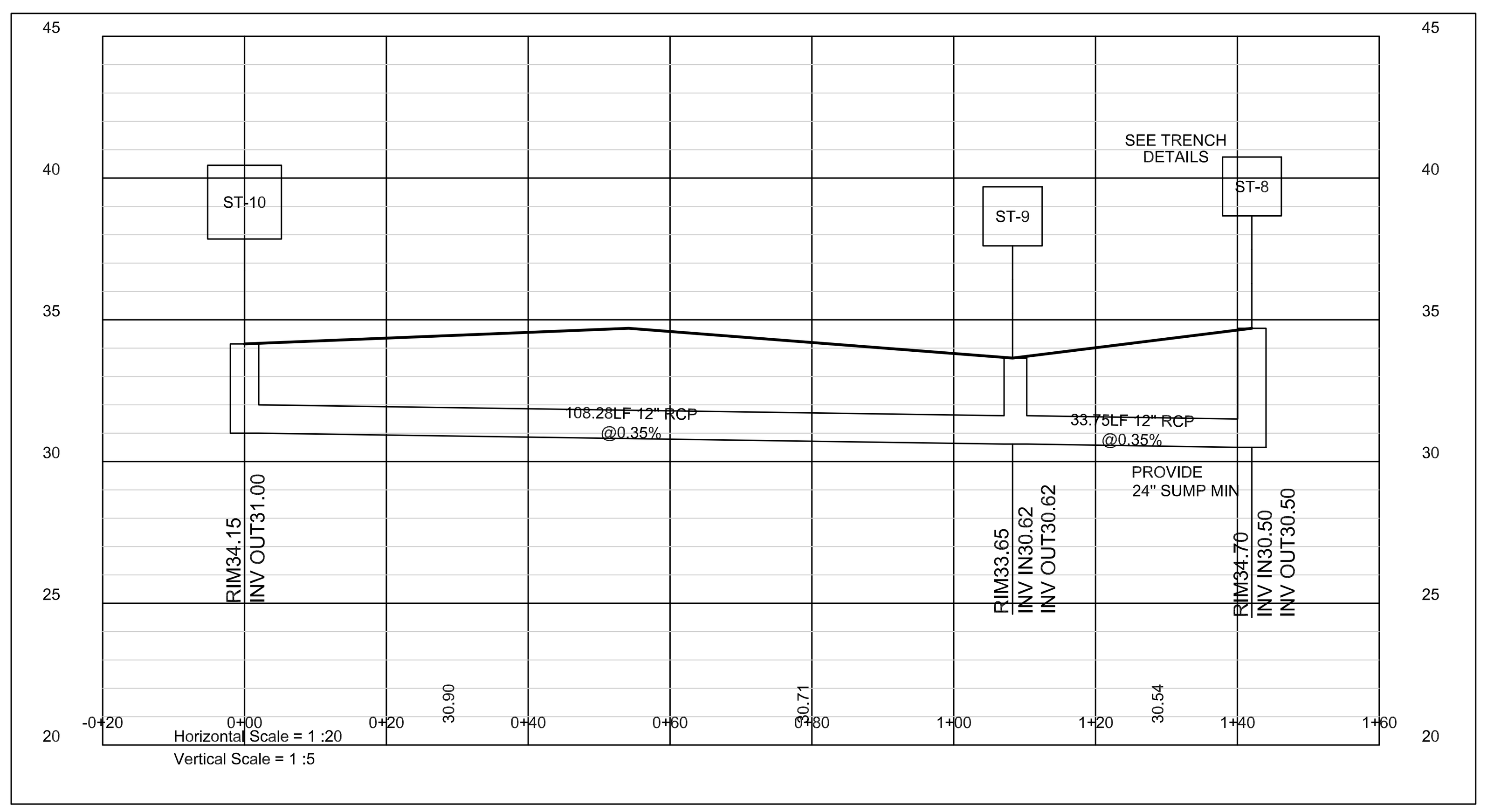
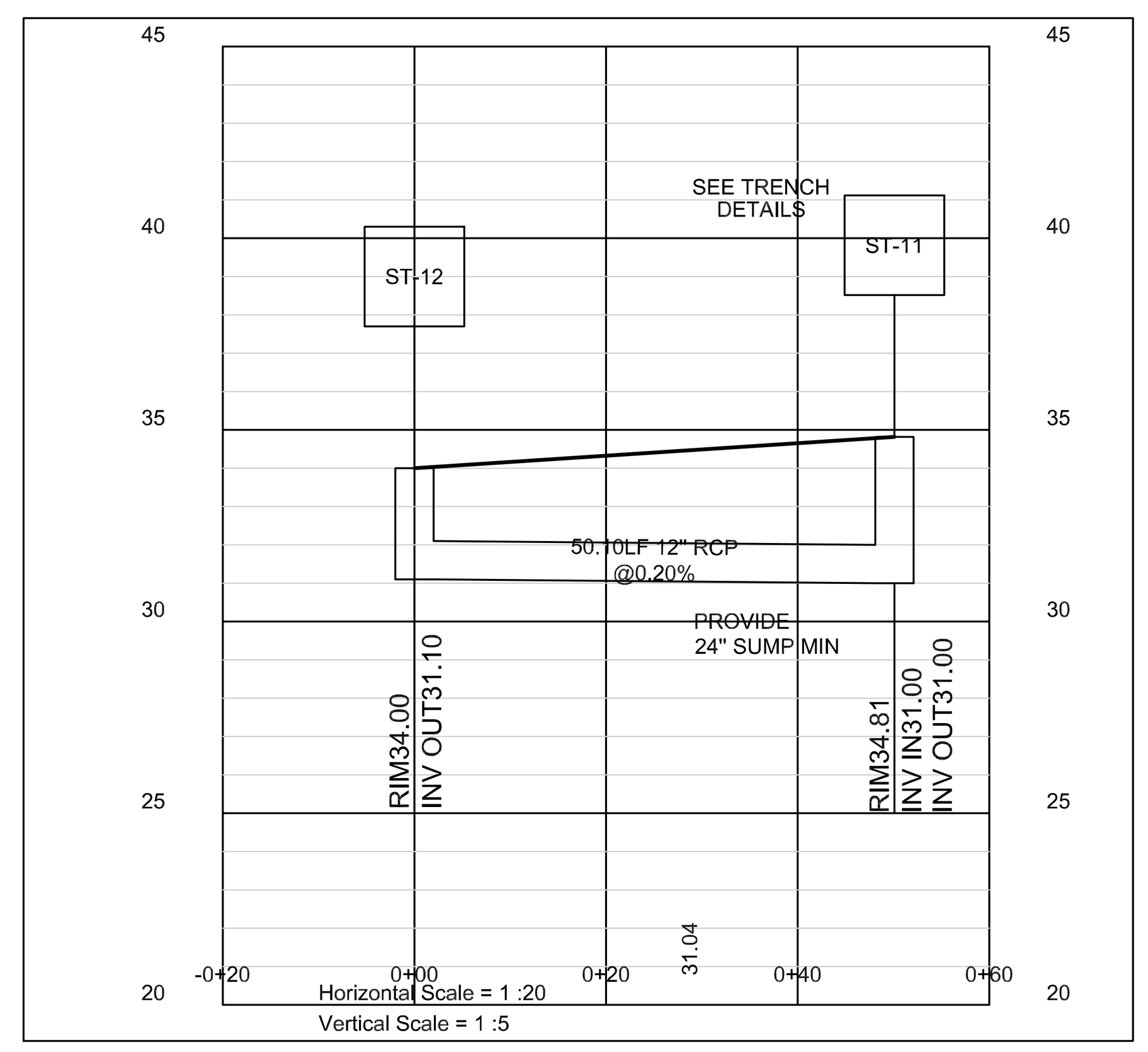
GRADING PLAN

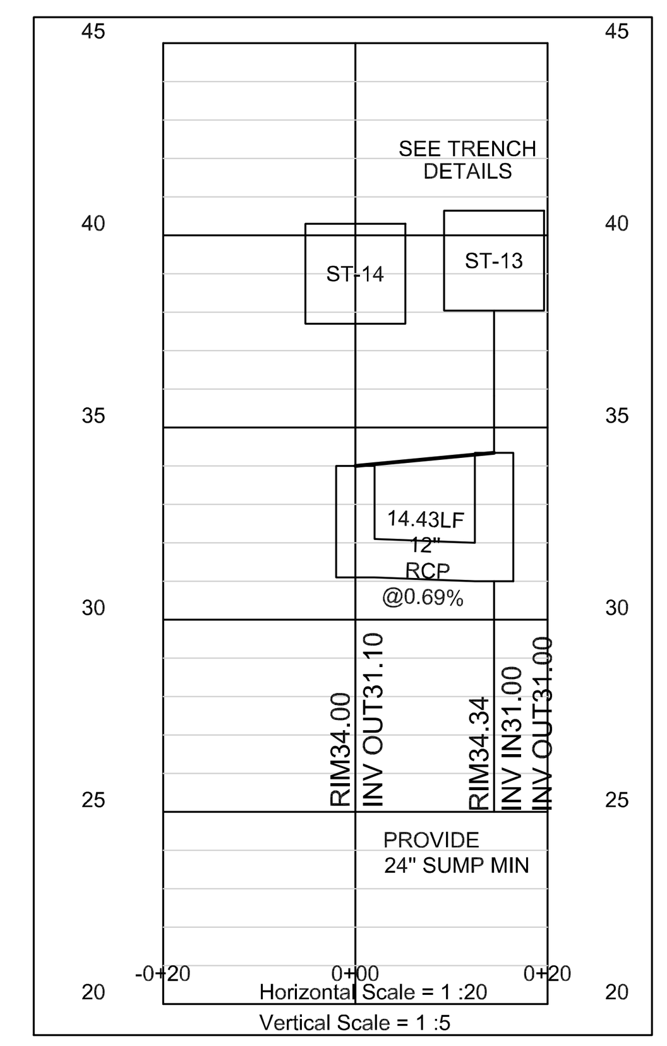
Sheet No: 9
Of: 11





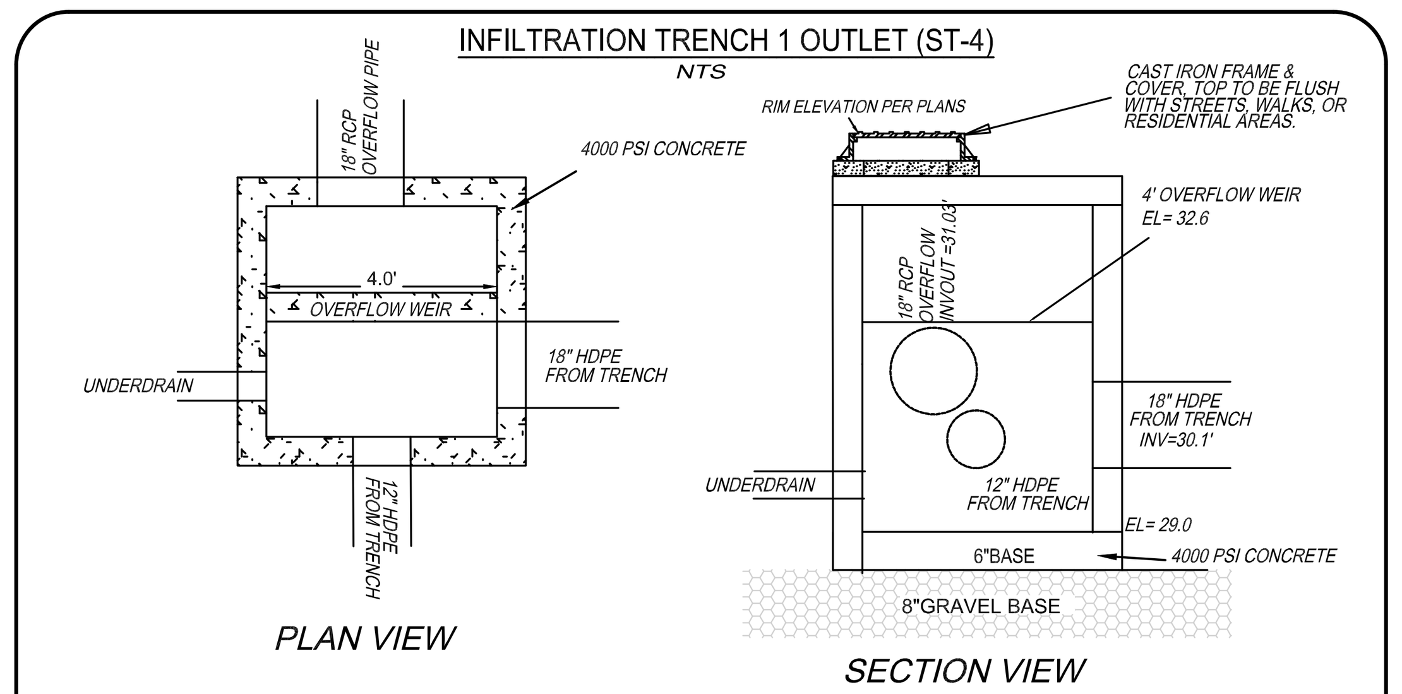




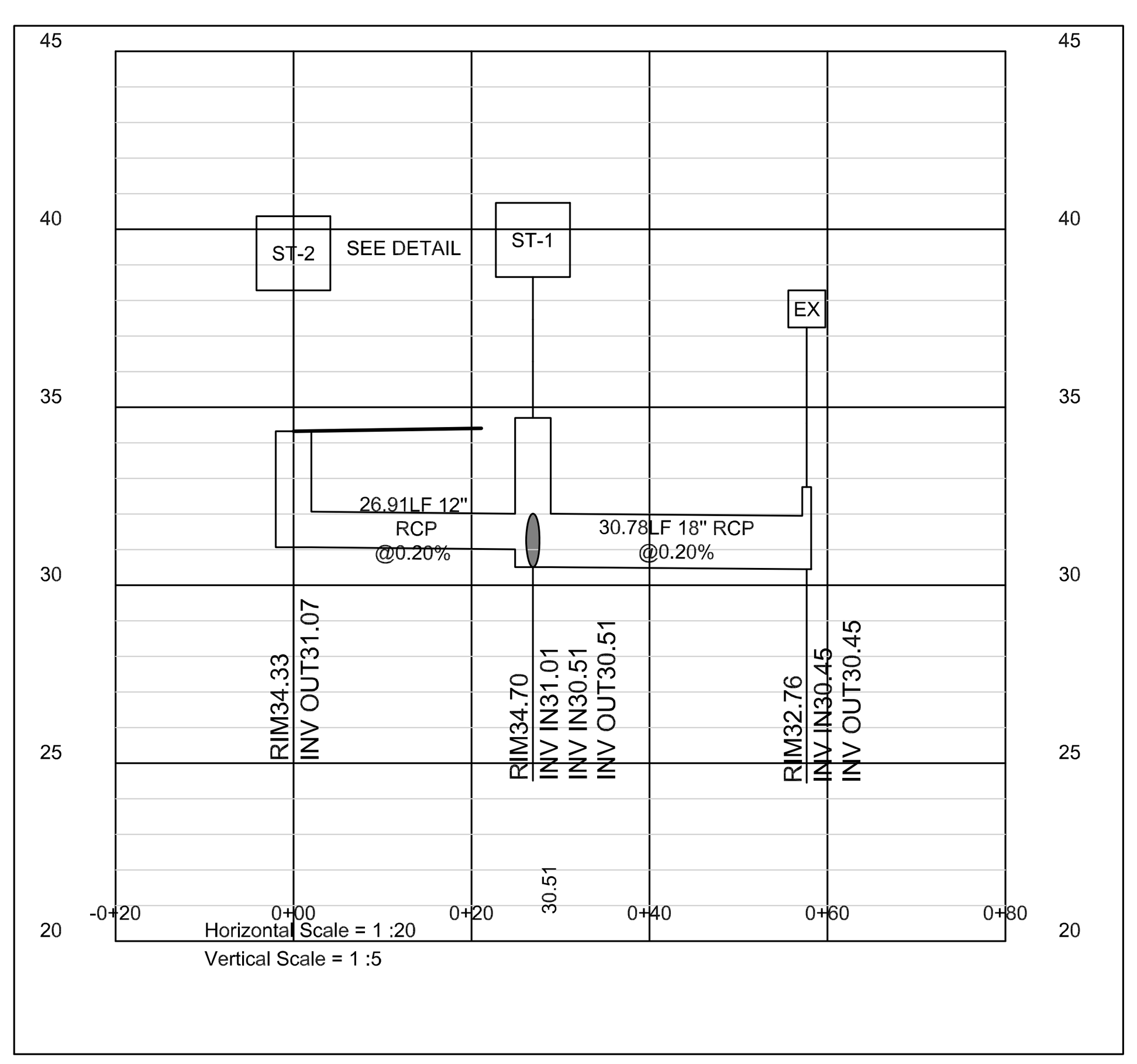


INFILTRATION TRENCH 1 OUTLET (ST-4)

NTS

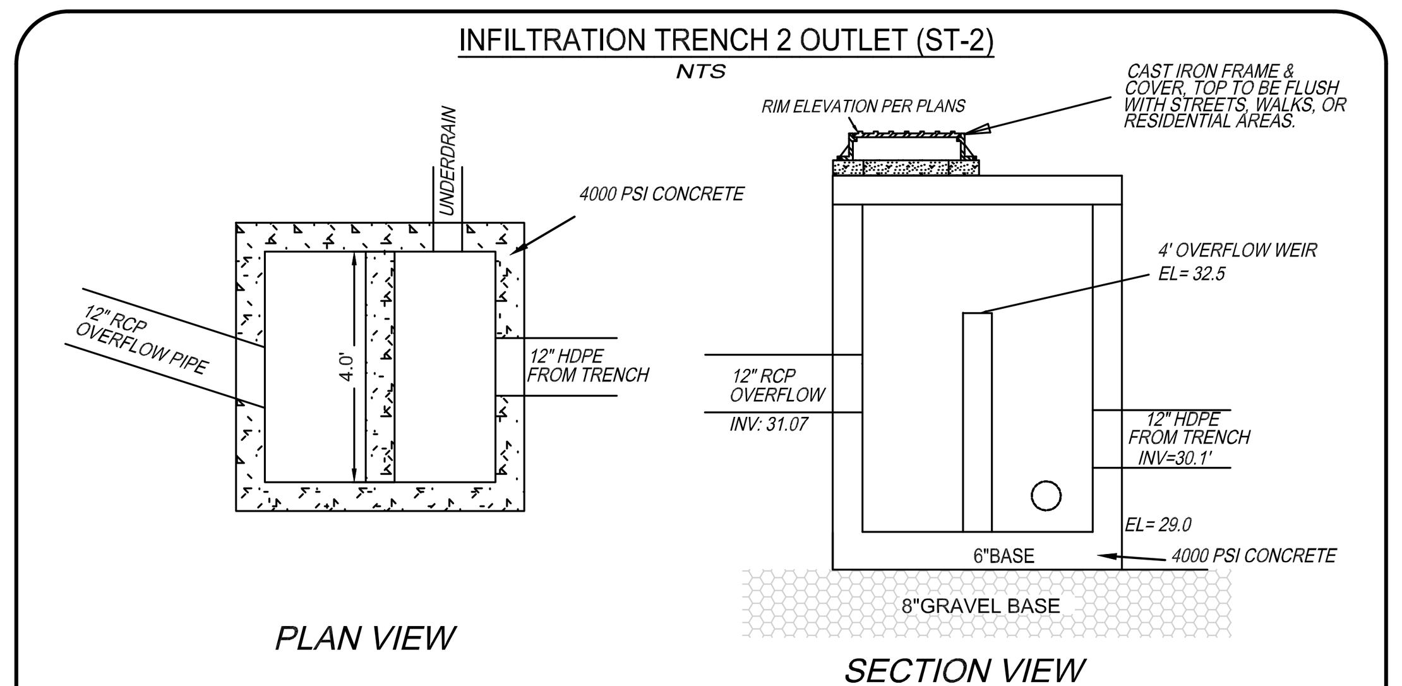


- CONTRACTOR TO SUBMIT SHOP DRAWING PRIOR TO ORDERING STRUCTURE
- SEE NCDOT 840.46 AND 840.31 FOR FURTHER DETAIL
- MH COVER ADJUSTED TO GRADE
- LADDER/STEPS TO BE PROVIDED



INFILTRATION TRENCH 2 OUTLET (ST-2)

NTS



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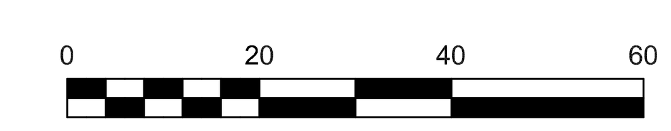

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WILMINGTON, N.C. 28403
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STORM PROFILES

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
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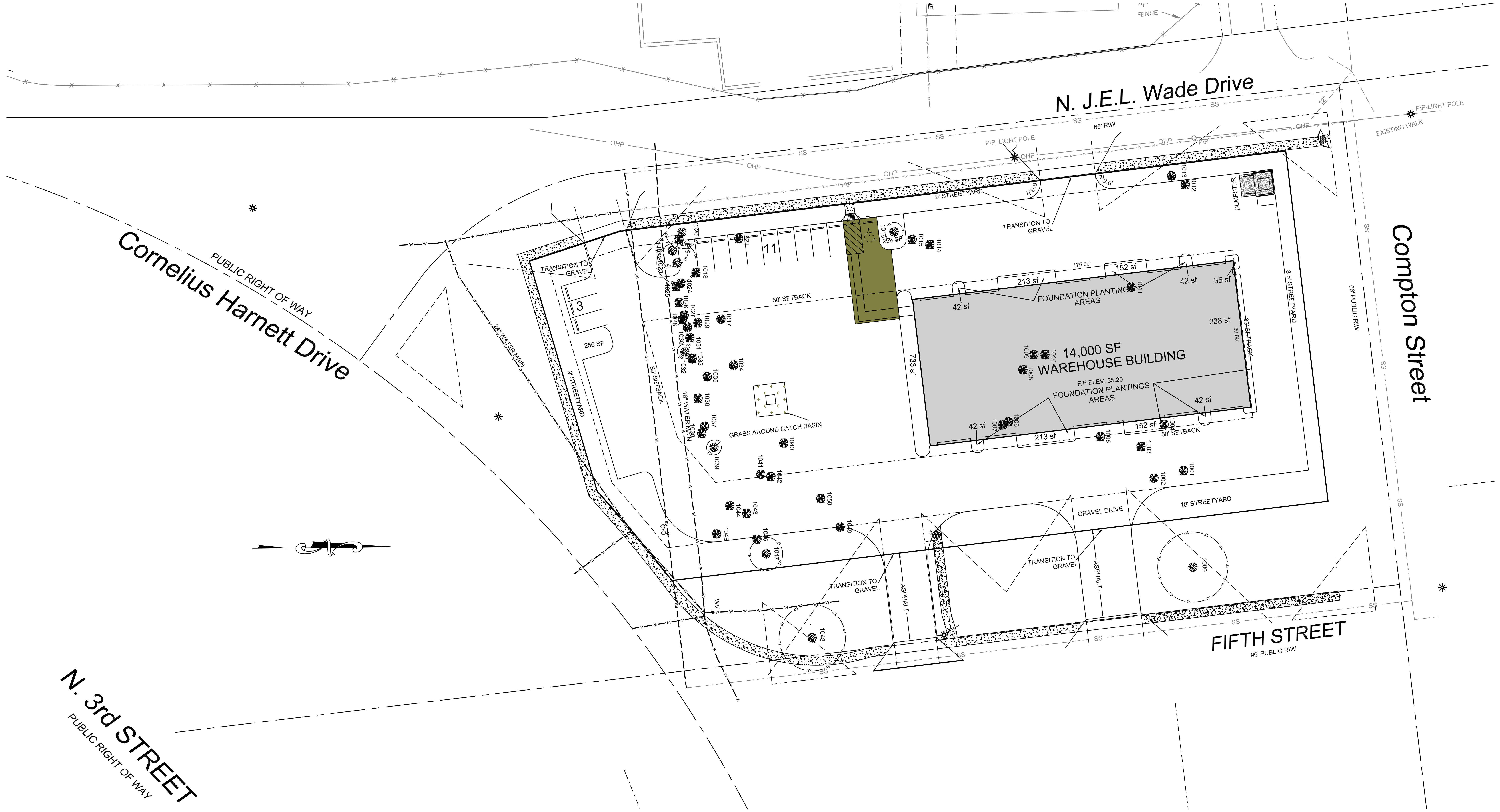
STORM PROFILES

Sheet No: 10
Of: 11



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1016,10" HARDWOOD *DENOTES RETAINAGE TREES*

TREE PROTECTION FENCE

0 30 60 90

PRELIMINARY PLAN

HANOVER DESIGN SERVICES, P.A.

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TREE SURVEY AND REMOVAL PLAN

OFF THE HOOK YACHT SALES

N.E. CAPE FEAR RIVER FACILITY

CAPE FEAR TOWNSHIP, NEW HANOVER COUNTY, NORTH CAROLINA

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TREE SURVEY & REMOVAL PLAN

Sheet No: 11
Of: 11

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

SiteASSIST® FOR STORMTECH INSTRUCTIONS, DOWNLOAD THE INSTALLATION APP

YACHT AREA-1

WILMINGTON, NC

SC-310 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-310.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR POLYETHYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418-16a (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. 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, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. 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 SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2922 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310 SYSTEM

1. STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

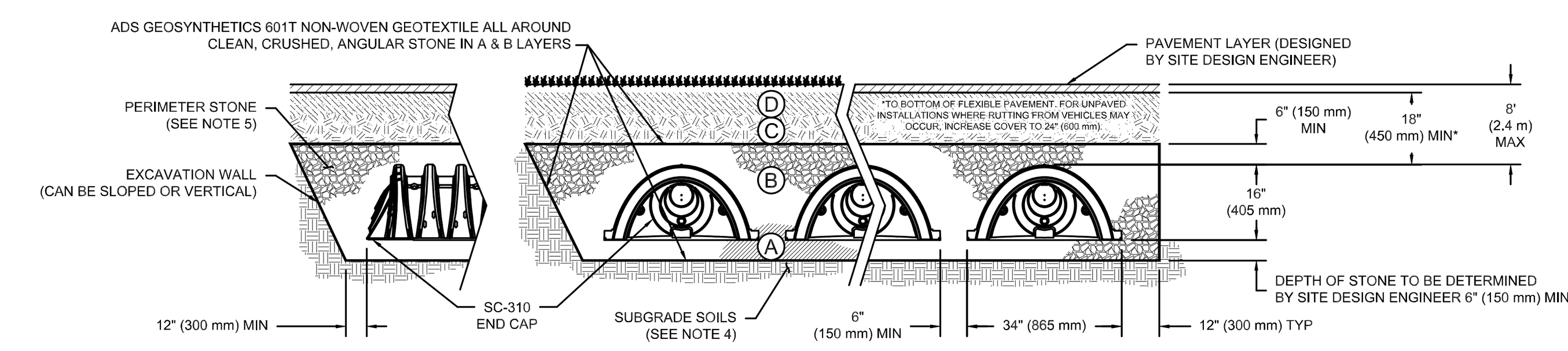
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO 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 FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	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 EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

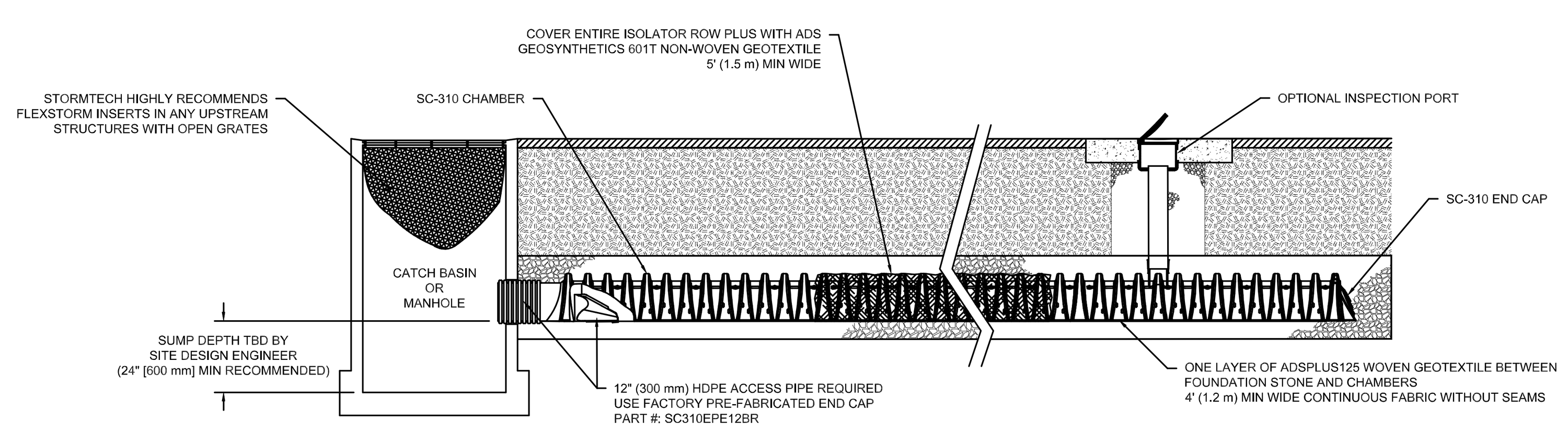
PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418-16a (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. 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.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. 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, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

YACHT AREA-2, WILMINGTON, NC — StormTech® Chamber System — ADS, 4640 TRUEMAN BLVD, HILLIARD, OH 43026, 1-800-733-7473 — SHEET 3 OF 5



SC-310 ISOLATOR ROW PLUS DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. 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. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. 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

1. 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.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

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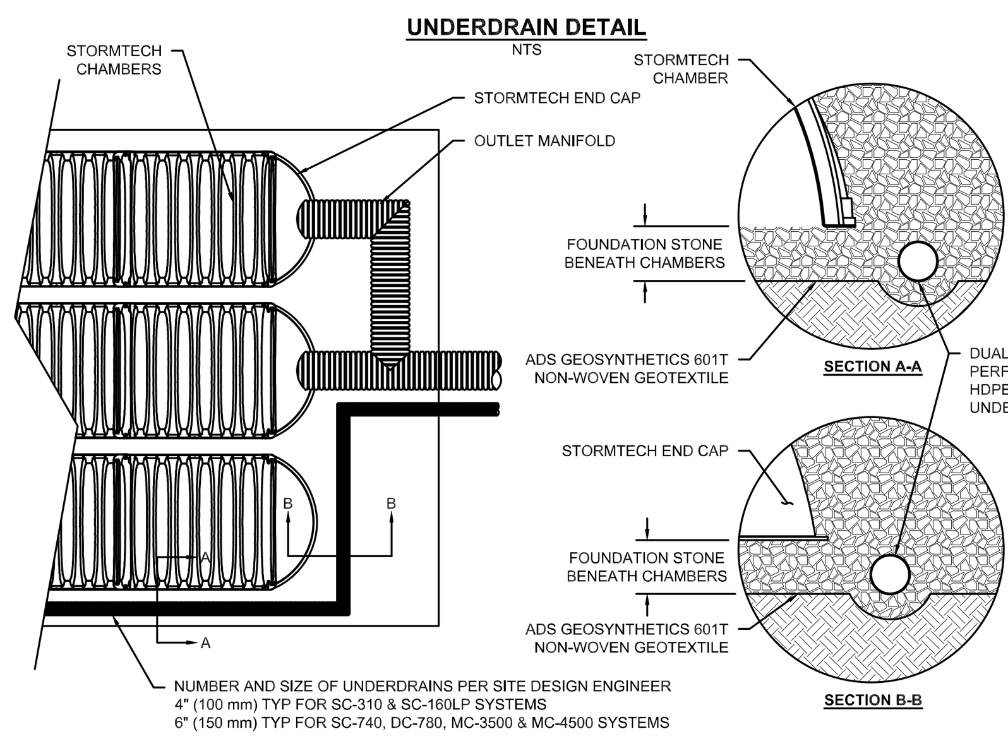
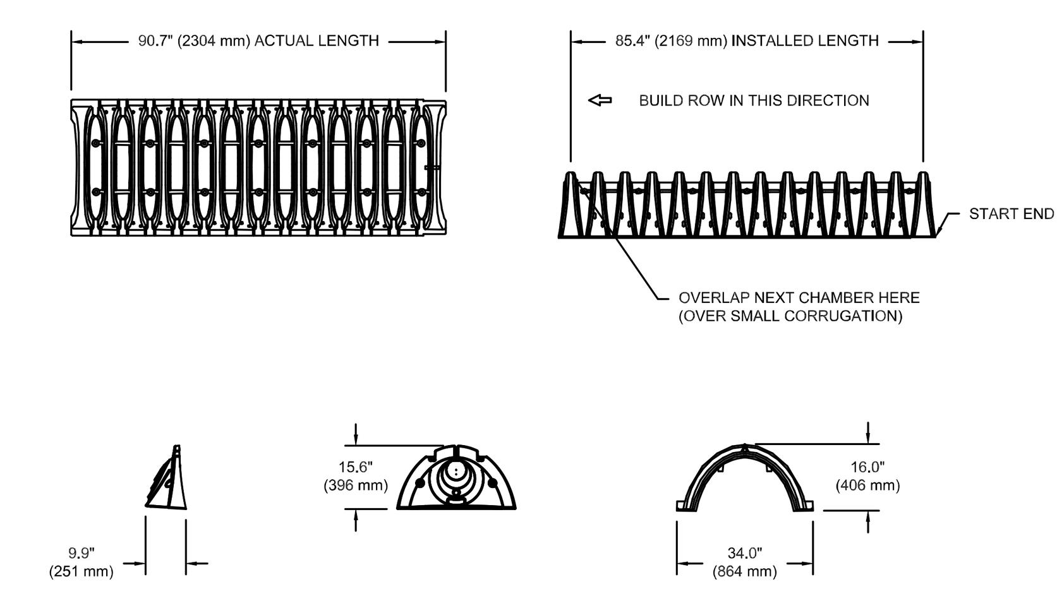
UNDERDRAIN DETAIL

NTS



SC-310 TECHNICAL SPECIFICATION

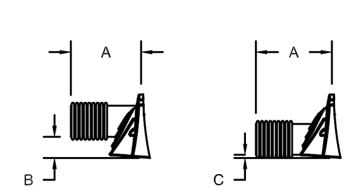
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	34.0" X 16.0" X 85.4"	(864 mm X 406 mm X 2169 mm)
CHAMBER STORAGE	14.7 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	31.0 CUBIC FEET	(0.88 m³)
WEIGHT	35.0 lbs.	(16.8 kg)

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



PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"
PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE CORED END CAPS END WITH "PC"

PART #	STUB	A	B	C
SC310EPE06T / SC310EPE06TPC	6" (150 mm)	9.6" (244 mm)	5.8" (147 mm)	---
SC310EPE06B / SC310EPE06BPC			---	0.5" (13 mm)
SC310EPE08T / SC310EPE08TPC	8" (200 mm)	11.9" (302 mm)	3.5" (89 mm)	---
SC310EPE08B / SC310EPE08BPC			---	0.6" (15 mm)
SC310EPE10T / SC310EPE10TPC	10" (250 mm)	12.7" (323 mm)	1.4" (36 mm)	---
SC310EPE10B / SC310EPE10BPC			---	0.7" (18 mm)
SC310EPE12B	12" (300 mm)	13.5" (343 mm)	---	0.9" (23 mm)
SC310EPE12BR	12" (300 mm)	13.5" (343 mm)	---	0.9" (23 mm)

ALL STUBS, EXCEPT FOR THE SC310EPE12B 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 1-888-892-2694.

* FOR THE SC310EPE12B THE 12" (300 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

YACHT AREA-2, WILMINGTON, NC — StormTech® Chamber System — ADS, 4640 TRUEMAN BLVD, HILLIARD, OH 43026, 1-800-733-7473 — SHEET 5 OF 5

0 20 40 60

PRELIMINARY PLAN

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
LICENSE # C-0597

	REVISIONS	DATE
3	REVISIONS \ TRC COMMENTS	4-21-2022
2	REVISIONS \ TRC COMMENTS	4-05-2022
1	REVISIONS \ TRC COMMENTS	2-03-2022

SITE 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 J.E.L. 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

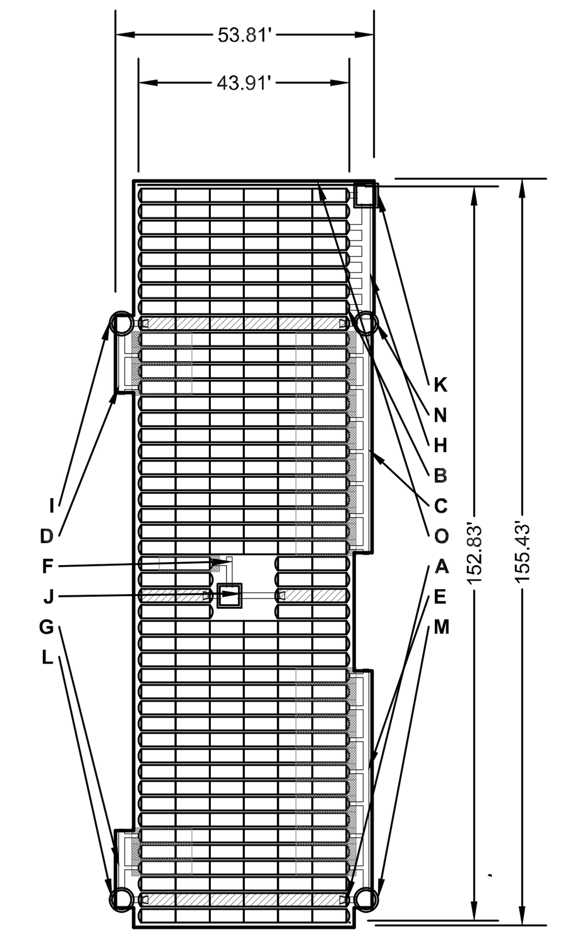
TRENCH-1

PROPOSED LAYOUT	
268	STORMTECH SC-310 CHAMBERS
100	STORMTECH SC-310 END CAPS
14	STONE ABOVE (in)
6	STONE BELOW (in)
40	STONE VOID
11666	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)
7744	SYSTEM AREA (SF)
433.6	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	40.33
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	34.33
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	33.83
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	33.83
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	33.83
TOP OF STONE:	33.50
TOP OF SC-310 CHAMBER:	32.33
12" x 8" TOP MANIFOLD INVERT (8" PIPE):	31.29
12" x 8" TOP MANIFOLD INVERT (8" PIPE):	31.29
12" x 8" TOP MANIFOLD INVERT (8" PIPE):	31.29
12" x 8" TOP MANIFOLD INVERT (8" PIPE):	31.29
12" x 8" TOP MANIFOLD INVERT (8" PIPE):	31.29
18" x 12" BOTTOM MANIFOLD INVERT (12" PIPE):	31.08
12" ISOLATOR ROW PLUS INVERT:	31.08
12" ISOLATOR ROW PLUS INVERT:	31.08
12" ISOLATOR ROW PLUS INVERT:	31.08
12" ISOLATOR ROW PLUS INVERT:	31.08
12" ISOLATOR ROW PLUS INVERT:	31.08
12" BOTTOM CONNECTION INVERT:	31.08
BOTTOM OF SC-310 CHAMBER:	31.00
12" x 8" TOP MANIFOLD INVERT (12" PIPE):	30.94
12" x 8" TOP MANIFOLD INVERT (12" PIPE):	30.94
12" x 8" TOP MANIFOLD INVERT (12" PIPE):	30.94
12" x 8" TOP MANIFOLD INVERT (12" PIPE):	30.94
12" x 8" TOP MANIFOLD INVERT (12" PIPE):	30.94
18" x 12" BOTTOM MANIFOLD INVERT (18" PIPE):	30.58
UNDERDRAIN INVERT:	30.50
BOTTOM OF STONE:	30.50

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	12" BOTTOM PREFABRICATED END CAP, PART#: SC310EPE12BR / TYP OF ALL 12" ISOLATOR ROW PLUS CONNECTIONS	0.90"	
PREFABRICATED END CAP	B	12" BOTTOM PREFABRICATED END CAP, PART#: SC310EPE12B / TYP OF ALL 12" BOTTOM CONNECTIONS	0.90"	
MANIFOLD	C	12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (12" PIPE) 12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (8" PIPE)	-0.75" 3.50"	
MANIFOLD	D	12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (12" PIPE) 12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (8" PIPE)	-0.75" 3.50"	
MANIFOLD	E	12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (12" PIPE) 12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (8" PIPE)	-0.75" 3.50"	
MANIFOLD	F	12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (12" PIPE) 12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (8" PIPE)	-0.75" 3.50"	
MANIFOLD	G	12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (12" PIPE) 12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (8" PIPE)	-0.75" 3.50"	
MANIFOLD	H	18" x 12" ADS N-12 (18" PIPE) 18" x 12" ADS N-12 (12" PIPE)	-5.02" 0.90"	
CONCRETE STRUCTURE	I	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		1.8 CFS IN
CONCRETE STRUCTURE	J	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		0.9 CFS IN
CONCRETE STRUCTURE	K	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		6.0 CFS OUT
CONCRETE STRUCTURE	L	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		1.8 CFS IN
CONCRETE STRUCTURE	M	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.5 CFS IN
CONCRETE STRUCTURE	N	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.5 CFS IN
UNDERDRAIN	O	4" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		



ISOLATOR ROW PLUS
(SEE DETAIL/TYP 4 PLACES)

PLACE MINIMUM 12.50' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

*INVERT ABOVE BASE OF CHAMBER

YACHT AREA-1
WILMINGTON, NC

DATE:
DRAWN: AG
PROJECT #:
CHECKED: N/A

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

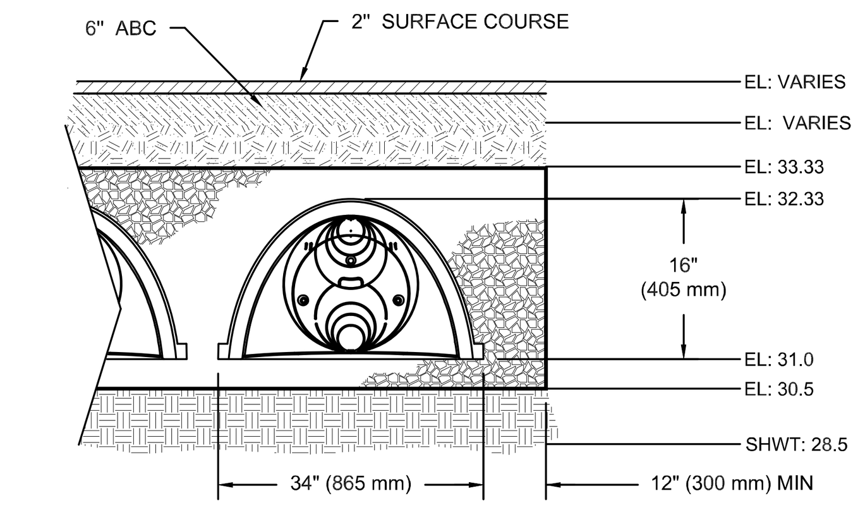
REV	DRW	CHK	DESCRIPTION

StormTech® Chamber System
888-892-2694 | WWW.STORMTECH.COM

ADS
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

0 40' 80'

SHEET
2 OF 5



TRENCH-2

PROPOSED LAYOUT	
268	STORMTECH SC-310 CHAMBERS
100	STORMTECH SC-310 END CAPS
14	STONE ABOVE (in)
6	STONE BELOW (in)
40	STONE VOID
11666	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)
7744	SYSTEM AREA (SF)
433.6	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	40.33
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	34.33
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	33.83
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	33.83
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	33.83
TOP OF STONE:	33.50
TOP OF SC-310 CHAMBER:	32.33
12" x 8" TOP MANIFOLD INVERT (8" PIPE):	31.29
12" x 8" TOP MANIFOLD INVERT (8" PIPE):	31.29
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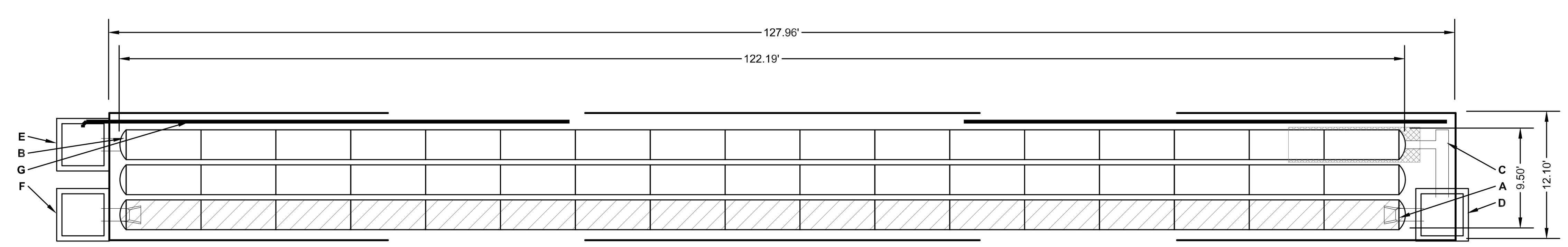
12" x 8" TOP MANIFOLD INVERT (8" PIPE):	31.29
12" x 8" TOP MANIFOLD INVERT (8" PIPE):	31.29
18" x 12" BOTTOM MANIFOLD INVERT (12" PIPE):	31.08
12" ISOLATOR ROW PLUS INVERT:	31.08
12" ISOLATOR ROW PLUS INVERT:	31.08
12" ISOLATOR ROW PLUS INVERT:	31.08
12" ISOLATOR ROW PLUS INVERT:	31.08
12" ISOLATOR ROW PLUS INVERT:	31.08
12" BOTTOM CONNECTION INVERT:	31.08
BOTTOM OF SC-310 CHAMBER:	31.00
12" x 8" TOP MANIFOLD INVERT (12" PIPE):	30.94
12" x 8" TOP MANIFOLD INVERT (12" PIPE):	30.94
12" x 8" TOP MANIFOLD INVERT (12" PIPE):	30.94
12" x 8" TOP MANIFOLD INVERT (12" PIPE):	30.94
12" x 8" TOP MANIFOLD INVERT (12" PIPE):	30.94
18" x 12" BOTTOM MANIFOLD INVERT (18" PIPE):	30.58
UNDERDRAIN INVERT:	30.50
BOTTOM OF STONE:	30.50

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	12" BOTTOM PREFABRICATED END CAP, PART#: SC310EPE12BR / TYP OF ALL 12" ISOLATOR ROW PLUS CONNECTIONS	0.90"	
PREFABRICATED END CAP	B	12" BOTTOM PREFABRICATED END CAP, PART#: SC310EPE12B / TYP OF ALL 12" BOTTOM CONNECTIONS	0.90"	
MANIFOLD	C	12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (12" PIPE) 12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (8" PIPE)	-0.75" 3.50"	
MANIFOLD	D	12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (12" PIPE) 12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (8" PIPE)	-0.75" 3.50"	
MANIFOLD	E	12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (12" PIPE) 12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (8" PIPE)	-0.75" 3.50"	
MANIFOLD	F	12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (12" PIPE) 12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (8" PIPE)	-0.75" 3.50"	
MANIFOLD	G	12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (12" PIPE) 12" x 8" REDUCING CONCENTRIC MOLDED FITTINGS (8" PIPE)	-0.75" 3.50"	
MANIFOLD	H	18" x 12" ADS N-12 (18" PIPE) 18" x 12" ADS N-12 (12" PIPE)	-5.02" 0.90"	
CONCRETE STRUCTURE	I	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		1.8 CFS IN
CONCRETE STRUCTURE	J	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		0.9 CFS IN
CONCRETE STRUCTURE	K	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		6.0 CFS OUT
CONCRETE STRUCTURE	L	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		1.8 CFS IN
CONCRETE STRUCTURE	M	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.5 CFS IN
CONCRETE STRUCTURE	N	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.5 CFS IN
UNDERDRAIN	O	4" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		



ISOLATOR ROW PLUS
(SEE DETAIL/TYP 4 PLACES)

PLACE MINIMUM 12.50' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

YACHT AREA-2
WILMINGTON, NC

DATE:
DRAWN: AG
PROJECT #:
CHECKED: N/A

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

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ADS
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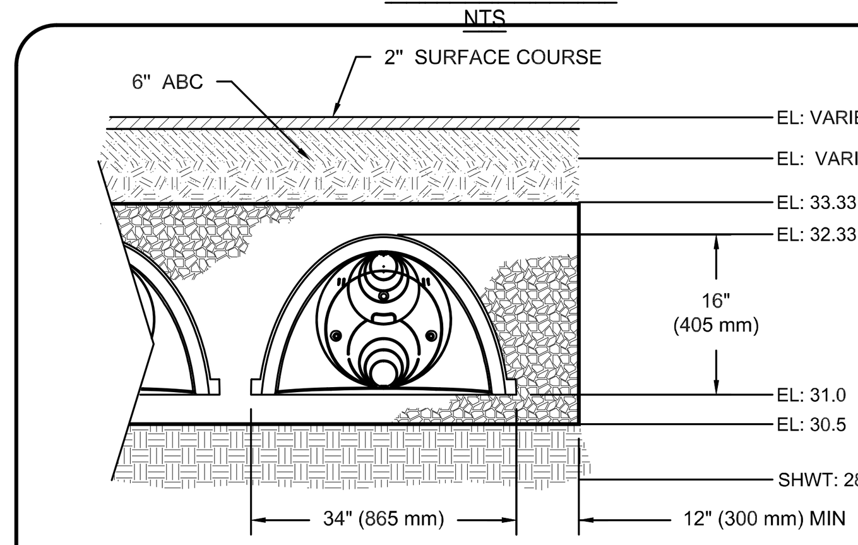
2 OF 5



0 20 40 60
1" = 20'

PRELIMINARY PLAN

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
LICENSE # C-0597

	REVISIONS	DATE
3	REVISIONS \ TRC COMMENTS	4-21-2022
2	REVISIONS \ TRC COMMENTS	4-05-2022
1	REVISIONS \ TRC COMMENTS	2-03-2022

SITE 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 J.E.L. WADE DR.
WILMINGTON N.C. 28401

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

ADS INFILTRATION TRENCH DETAILS

Sheet No: TD-2
Of: TD-2

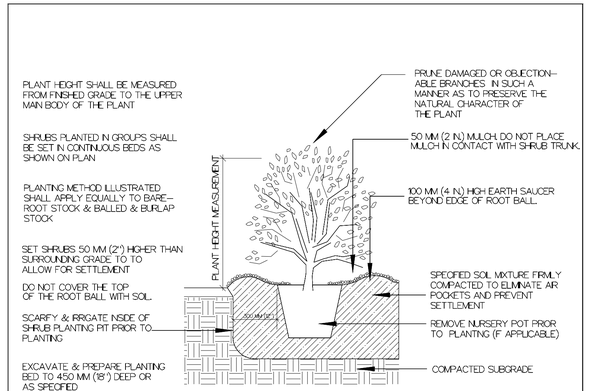
Qty	Botanical Name	Common Name	Size/Condition
Trees			
21	Ulmus chinensis Allee	ALLEE ELM	2" Caliper
13	Zelkova japonica	JAPANESE ZELKOVA	2" Caliper
8	Magnolia grandiflora	LITTLE GEM MAGNOLIA	8' Height
36	Ilex cornuta 'Carissa'	CARISSA CHINESE HOLLY	3G 15"H x 12"S
153	Ilex vomitoria 'Schilling's Dwarf'	SCHILLING'S DWARF YAUPON HOLLY	3G 15"H x 12"S
106	Ligustrum japonica	WAXLEAF LIGUSTRUM	7G 36"H x 24"S
31	Lomandra 'Breeze'	BREEZE GRASS	3G 12"H x 12"S
20	Muhlenbergia capillaris	PINK MUHLY GRASS	3G 12"H x 12"S

PER 18-448; REGARDLESS OF CREDIT (15)TREES PER DISTURBED ACRE 2" OR GREATER MUST BE RETAINED OR PLANTED ON THE DISTURBED SIDE
REQUIRED TREES: 27
EXISTING TREES GREATER THAN 2" CALIPER TO REMAIN: 7/ NEW 2" CALIPER TREES TO BE PLANTED: 35

TREE NUMBER	DIAMETER	DESCRIPTION	CREDIT
1000	38"	OAK	6
1016	10"	HARDWOOD	2
1020	18"	OAK	4
1022	17"	OAK	3
1023	22"	OAK	4
1047	18.5"	OAK	4
1048	36"	OAK	6

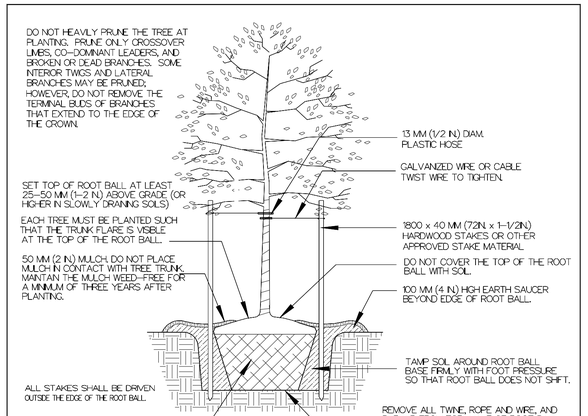
LANDSCAPE NOTES

EXISTING TREES TO REMAIN
TREE PROTECTION FENCE TO BE INSTALLED BEFORE CONSTRUCTION BEGINS
NOT CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ALLOWED WITHIN THE TREE PROTECTION AREA
ALL DISTURBED AREAS TO BE BERMUDA SOD
LANDSCAPE BEDS TO BE 3" HARDWOOD MULCH
EXISTING TREES IN STREETYARD TO BE INCLUDED IN LANDSCAPE CALCULATIONS
EXISTING TREES IN LANDSCAPE ISLANDS TO BE INCLUDED IN LANDSCAPE CALCULATIONS
STREETYARD TREES REQUIRED: 21
STREETYARDS TREES PROVIDED: 24
STREETYARD SHRUBS REQUIRED:130
STREETYARD SHRUBS PROVIDED: 151
(INDIVIDUAL STREETYARDS NOTED ON PLAN)
ISLAND TREES REQUIRED: 10
ISLAND TREES PROVIDED: 12
REQUIRED CANOPY COVERAGE: 9188 SQ.FT.
JAPANESE ZELKOVA CANOPY: 9191 SQ. FT.
PROVIDED CANOPY COVERAGE: 9191 SQ. FT.
TOTAL FOUNDATION PLANTING REQUIRED= 1352.4 SF
FOUNDATION PLANTING SHOWN: 2098 SF



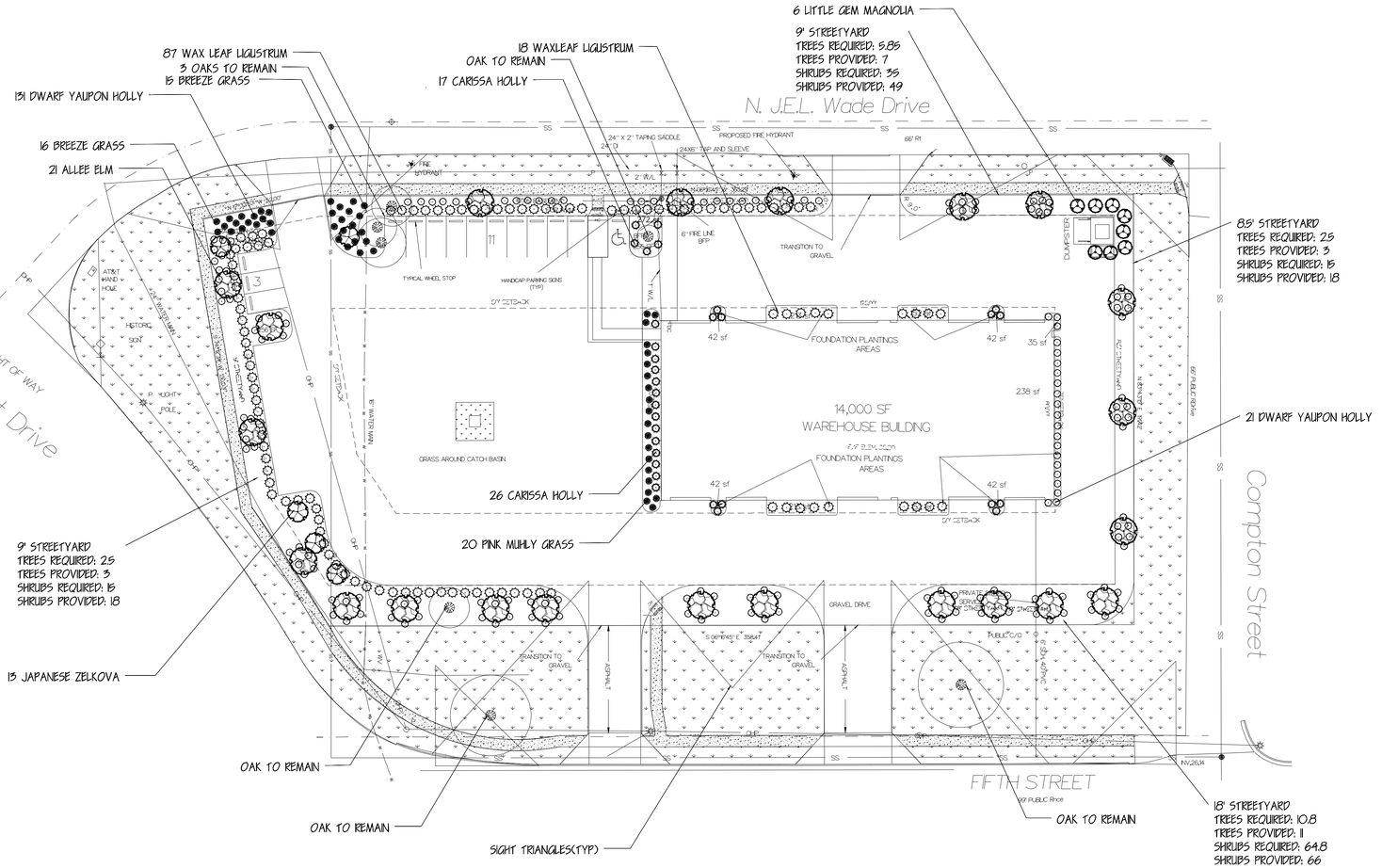
SHRUB PLANTING DETAIL

TYPICAL INSTALLATION



DECIDUOUS TREE PLANTING DETAIL

TYPICAL INSTALLATION – 3" (75MM) CALIPER OR LESS



NOTES

BSI LANDSCAPE ARCHITECTURE

No.	Date	Description
		REVISION:1/10/22
		REVISION: 3/1/22
		REVISION: 3/21/22
		REVISION: 4/15/22
		REVISION: 10/2/23

REVISIONS

SUPERSCAPES INC
1202 S FRONT STREET
WILMINGTON NC 28401

OFF THE HOOK
YACHT SALES
1701 N J.E.L WADE DR
WILMINGTON NC

SCALE	1"=30'
DRAWN BY	BSI
CHECKED BY	
DATE	10/2/2023
DATE OF PRINT	

PROJECT NO.

SHEET NO. L-1