

# 17TH STREET STORAGE

## 1101 S. 17TH STREET

### WILMINGTON, NORTH CAROLINA 28401

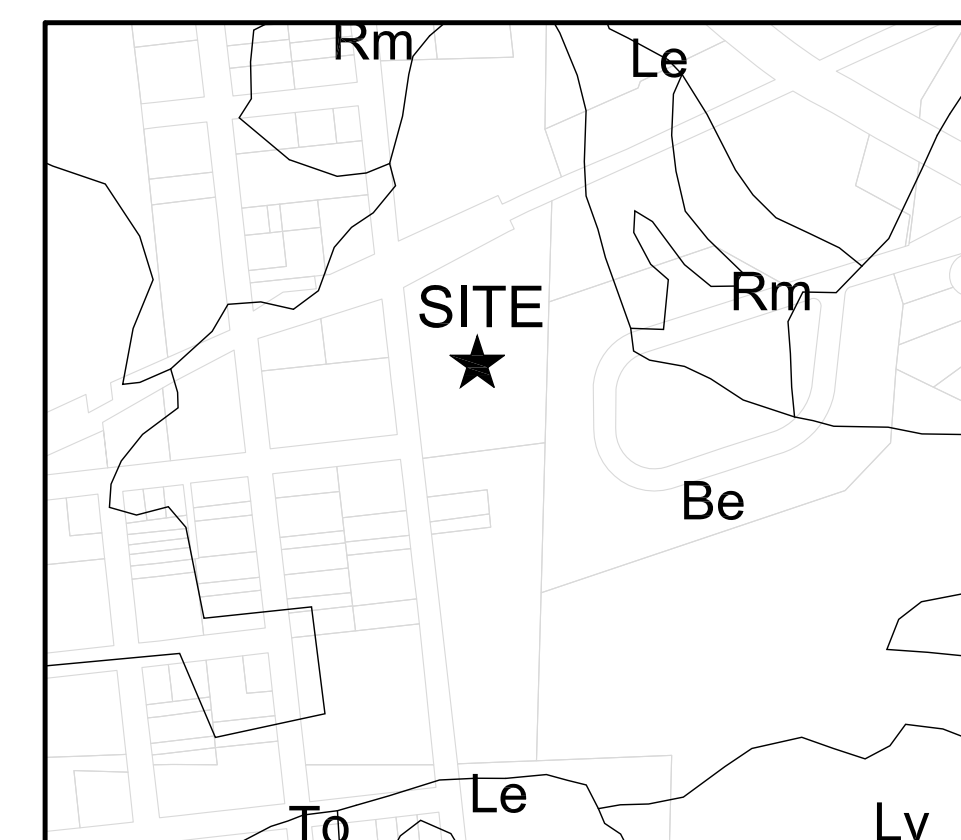
## DESIGN DOCUMENTS

### FEBRUARY 2017

PROJECT ADDRESS:  
1101 S. 17TH STREET  
WILMINGTON, NC 28401



VICINITY MAP  
SCALE: 1"=1000'



SOILS MAP  
SCALE: 1"=500'

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

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.

Approved Construction Plan

Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____

NCDENR PWSS WATER PERMIT #:	_____
WATER CAPACITY:	_____ GPD
DWQ SEWER PERMIT #:	_____
SEWER CAPACITY:	_____ GPD
SEWER SHED # AND PLANT:	_____
SEWER TO FLOW THROUGH NEI:	YES or NO (CIRCLE ONE)

**NOTICE REQUIRED**

- 1.) ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.
- 2.) CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION.
- 3.) CONTRACTOR SHALL CONTACT AT&T PRIOR TO ANY DEMOLITION TO ALLOW FOR AT&T TO DISCONNECT COMMUNICATIONS CABLES COMING INTO THE SITE.

CONTACT "CAROLINA ONE CALL" AT  
1-800-632-4949

CONTACT THESE UTILITIES

CITY OF WILMINGTON DEVELOPMENT SERVICES  
ATTN: BRIAN CHAMBERS  
PH: 910-342-2782

PIEDMONT NATURAL GAS  
ATTN: CARL PAQUET  
PH: 910-350-2242

EMERGENCY DIAL 911  
POLICE - FIRE - RESCUE

CAPE FEAR PUBLIC UTILITY AUTHORITY (WATER & SEWER)  
ATTN: MATTHEW TRIBETT  
PH: 910-332-6674

DUKE ENERGY PROGRESS  
ATTN: KEVIN LEATHERWOOD  
PH: 910-602-4304

AT&T  
ATTN: STEVE DAYVAULT (BUILDING ENGINEER)  
PH: 910-341-0741  
ATTN: JAMES BATSON (OFF-SITE COMMUNICATIONS ENGINEER)  
PH: 910-341-1621

TIME WARNER CABLE  
PH: 910-763-4638

OWNER:  
GHK CAPE FEAR DEVELOPMENT  
1051 MILITARY CUTOFF RD., STE. 200  
WILMINGTON, NORTH CAROLINA 28405  
ATTN: MIKE BROWN (910) 344-1010

ENGINEER (CIVIL):  
PARAMOUNTE ENGINEERING, INC.  
122 CINEMA DRIVE  
WILMINGTON, NORTH CAROLINA 28403  
ATTN: ROB BALLAND, P.E. (910) 791-6707

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
C-0.0	COVER SHEET
C-1.0	GENERAL NOTES
C-2.0	SITE LAYOUT
C-2.1	TREE REMOVAL PLAN
C-3.0	GRADING-DRAINAGE-EC PLAN
C-4.0-4.1	DETAILS
L-1.0	LANDSCAPE PLAN

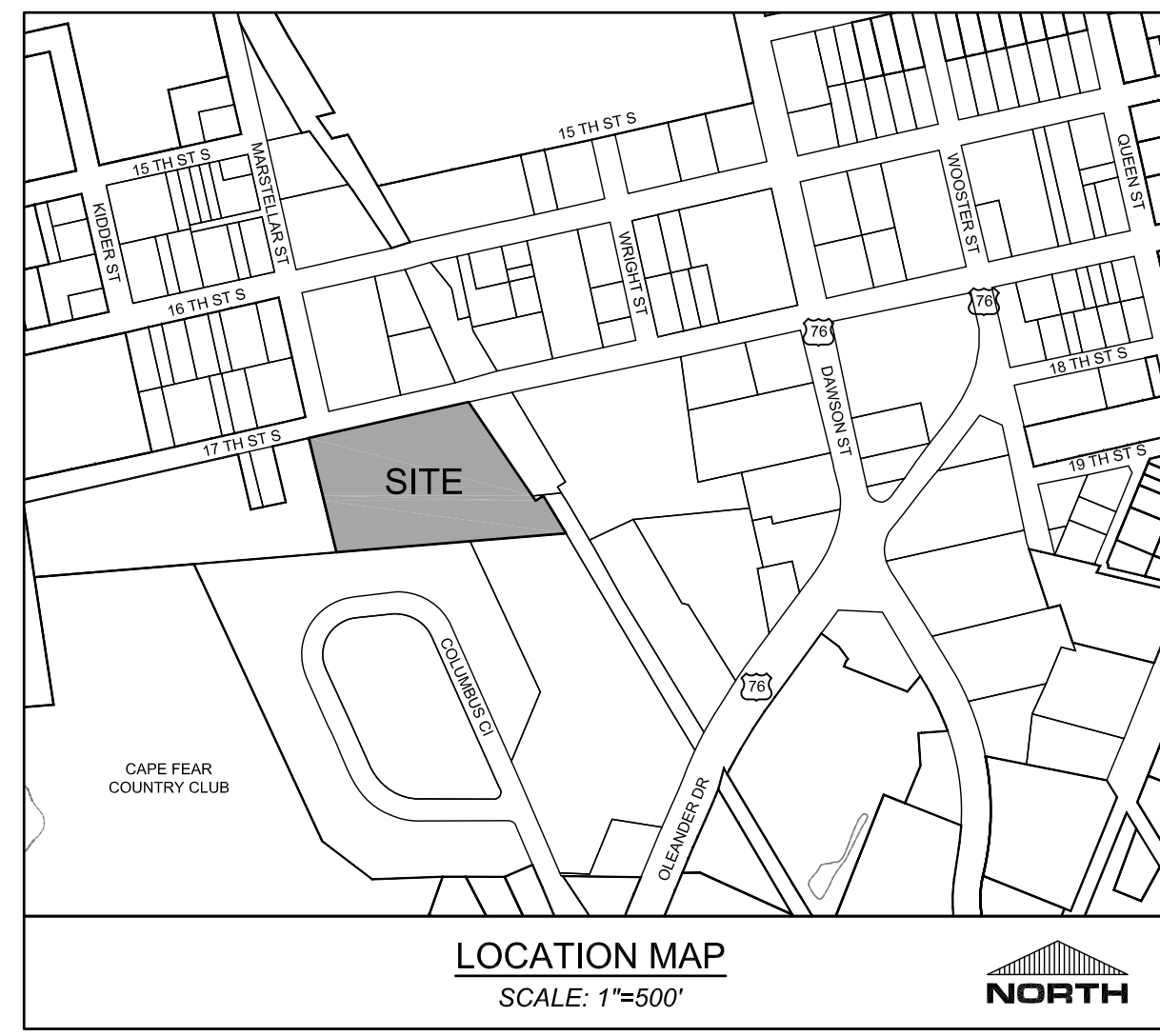
PREPARED BY:

**PARAMOUNTE**  
ENGINEERING, INC.

122 Cinema Drive  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6760 (F)  
NC License #: C-2846  
PROJECT # 16132.PE







**SITE INFORMATION**  
**OWNER INFORMATION:** CA NORTH CAROLINA HOLDINGS, INC.  
 PITTSFORD, NY 14534  
**PROJECT ADDRESS:** 1101 S. 17TH STREET  
 WILMINGTON, NC 28401  
**TAX PARCEL IDENTIFICATION #:** R05415-003-001-000  
**RECORDED DEED BOOK:** BK 5863 PG 014  
**CURRENT ZONING:** LI - LIGHT INDUSTRIAL  
**EXISTING USE:** UNDEVELOPED  
**PROPOSED USE:** MINI-WAREHOUSING  
**TOTAL SITE AREA:** 3.916 +/- ACRES

**FLOOD INFORMATION:** THIS PARCEL IS LOCATED IN FLOOD ZONE X, WHICH IS NOT A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY FEMA FLOOD PANEL 3720314800J, DATED APRIL 3, 2006

**CAMA LAND USE CLASSIFICATION:** URBAN

**DIMENSIONAL REQUIREMENTS**  
 LI - LIGHT INDUSTRIAL  
 - MINIMUM LOT AREA: 2 ACRE  
 - MINIMUM LOT WIDTH: N/A  
 - MAXIMUM LOT COVERAGE: N/A  
 - MINIMUM FRONT SETBACK: 50'  
 - MINIMUM REAR SETBACK: 0', 35' WHEN ABUTTING RESIDENTIAL USE  
 - MINIMUM INTERIOR SIDE SETBACK: 0', 20' WHEN ABUTTING RESIDENTIAL USE  
 - MINIMUM CORNER LOT SIDE SETBACK: 50'  
 - MAXIMUM BUILDING HEIGHT: 12'

**IMPERVIOUS INFORMATION**  
**EXISTING IMPERVIOUS AREA:** 0 SF  
**PROPOSED IMPERVIOUS AREA:**  
 TOTAL BUILDING (FOOTPRINT): 76,384 SF  
 ON-SITE PARKING & DRIVEWAYS: 42,910 SF  
 ON-SITE SIDEWALKS: 464 SF  
 FUTURE BUILDING EXPANSION: 0 SF  
 FUTURE IMPERVIOUS: 5,000 SF  
 TOTAL PROPOSED IMP. AREA: 124,758 SF (2.864 AC)  
**PROPOSED PERCENT IMPERVIOUS:** 124,758 / 170,601 = 73.1%

**BUILDING INFORMATION**  
**CONSTRUCTION TYPE:** XX  
**NUMBER OF PROPOSED BUILDINGS:** 1  
**PROPOSED BUILDING SF:** 76,384 SF  
**MAX. HEIGHT:** 12'-0"  
**LOT COVERAGE:** 44.8% (PROPOSED)

**SITE PARKING**  
**MINIMUM PARKING REQUIRED:** 3  
 (1 PER 400 SF GFA OFFICE)

**MAXIMUM PARKING ALLOWABLE:** N/A  
**TOTAL PARKING PROVIDED:** 7 SPACES

**HANDICAP PARKING REQUIRED:** 1 SPACES  
**HANDICAP PARKING PROVIDED:** 2 SPACES

**BICYCLE PARKING REQUIRED:** N/A  
**BICYCLE PARKING PROVIDED:** N/A

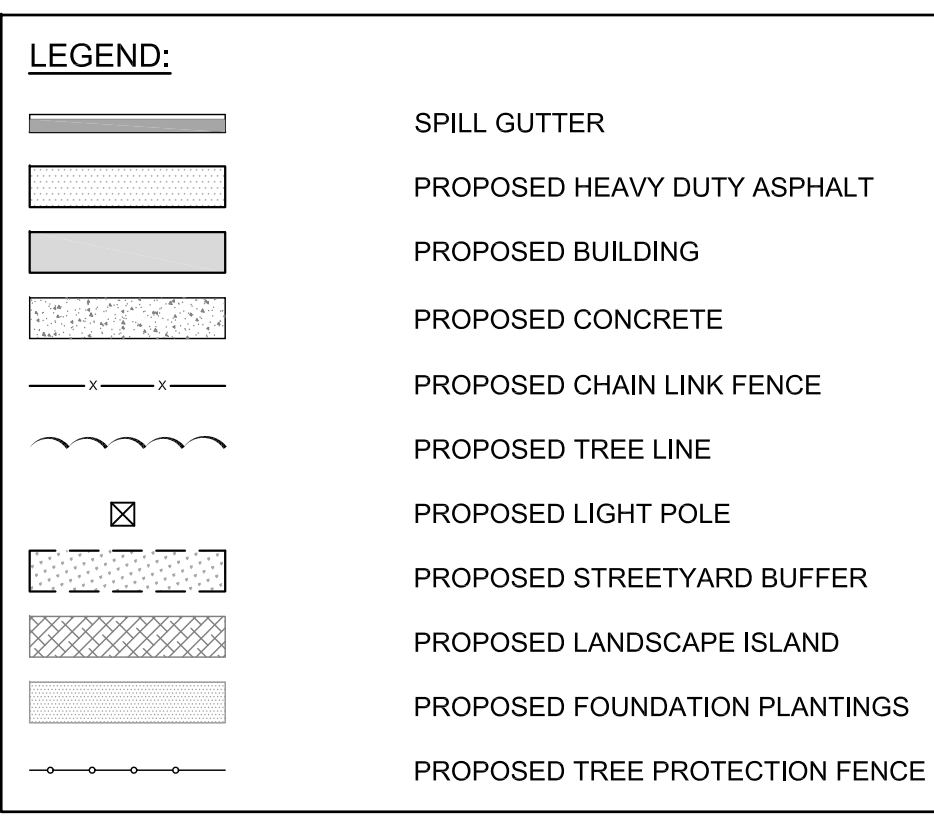
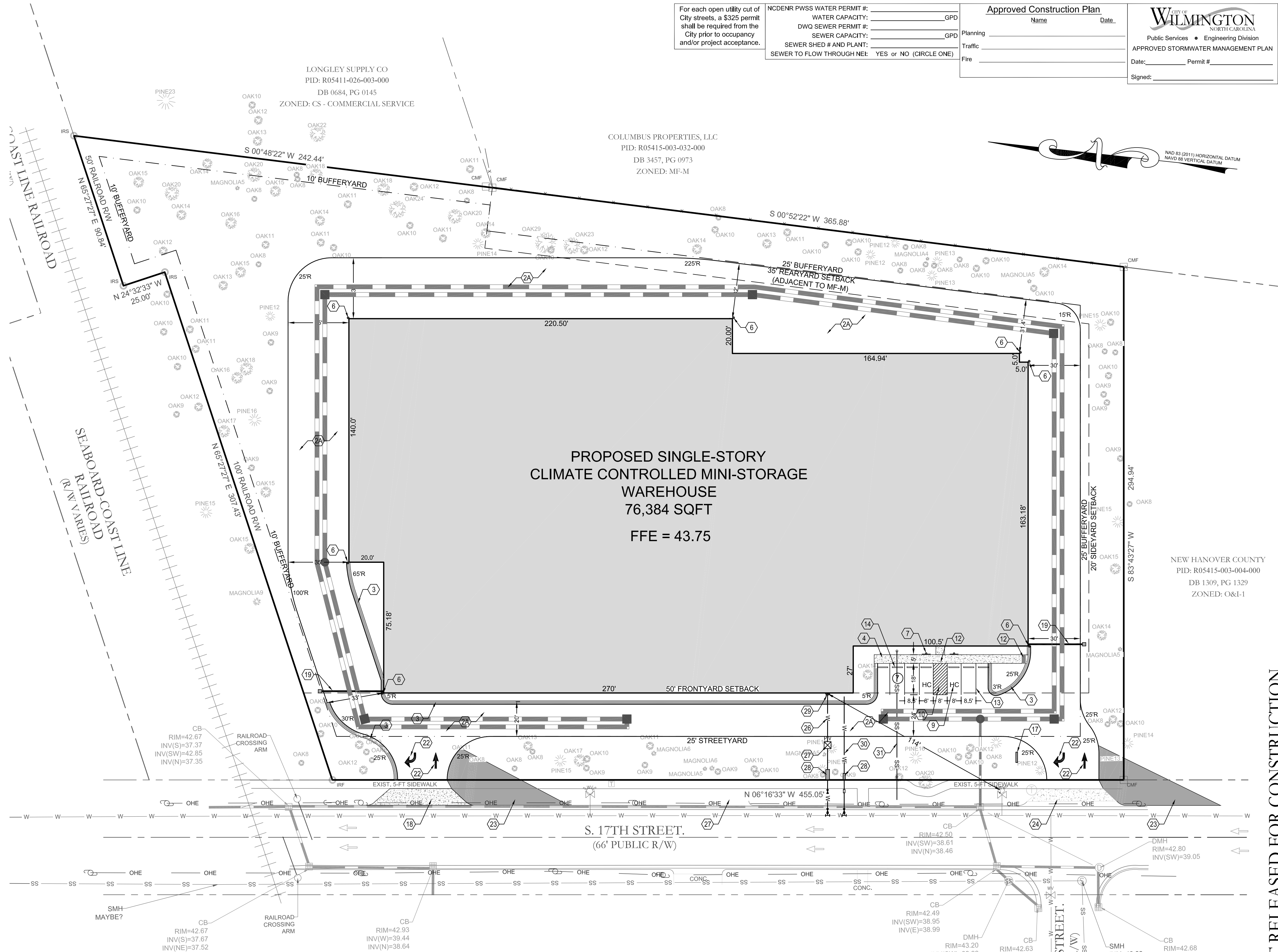
**LANDSCAPE CALCULATIONS**  
 SEE SHEET L-1.0 LANDSCAPE PLAN FOR CALCULATIONS.

**UTILITY INFORMATION**  
**SANITARY SEWER**  
 THIS PROJECT IS PROVIDING A NEW SEWER SERVICE TO AN EXISTING 8-INCH GRAVITY MAIN LOCATED WITHIN THE 17TH STREET RIGHT OF WAY. THIS PROJECT IS PROPOSING A 4-INCH SERVICE AND SANITARY SEWER ALLOCATION IS PROVIDED BY CFPUA.

**WATER**  
 A 8-INCH WATER MAIN IS LOCATED WITHIN THE 17TH STREET RIGHT OF WAY. THE PROPOSED BUILDING WILL HAVE A 8-INCH FIRE SERVICE AND A 3/4-INCH DOMESTIC SERVICE WILL BE CONNECTED TO THE EXISTING 8-INCH WATER MAIN. DOMESTIC WATER ALLOCATION PROVIDED BY CFPUA.

**NATURAL GAS**  
 THERE IS AN EXISTING GAS MAIN LOCATED WITHIN THE 17TH STREET RIGHT OF WAY. GAS IS PROVIDED BY PIEDMONT NATURAL GAS.

**SIDEWALK NOTE:**  
 ALL BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS, AND CURBING WILL BE REPLACED.



- KEY NOTES:**
- CONCRETE PAVING: REFER TO DETAIL C-4.0
  - LIGHT DUTY ASPHALT PAVING: REFER TO DETAIL C-4.0
  - HEAVY DUTY ASPHALT PAVING: REFER TO DETAIL C-4.0
  - STANDARD 24" CURB & GUTTER: REFER TO DETAIL C-4.0
  - CONCRETE SIDEWALK: REFER TO DETAIL C-4.0
  - CONCRETE DOOR LANDING: NOT APPLICABLE
  - STEEL BOLLARD: REFER TO DETAIL C-4.0
  - HANDICAP PARKING SIGN: REFER TO DETAIL C-4.0
  - CONCRETE SIDEWALK DETAIL: 6.5" EXPOSED FACE TO ASPHALT SEE DETAIL C-4.0
  - HANDICAP PARKING SYMBOL: REFER TO DETAIL C-4.0
  - HANDICAP ACCESS UNLOADING ZONE: SLOPE 2% MAX. EACH WAY (ADA COMPLIANT) AND STRIPE AS SHOWN.
  - DESIGNATED ACCESSIBLE ROUTE: PROVIDE STRIPING AND SLOPE 5% MAXIMUM IN DIRECTION OF TRAVEL WITH 2% MAXIMUM CROSS SLOPE.
  - DETECTABLE WARNING MAT: REFER TO DETAIL C-4.0
  - STRIPING: PROVIDE 4" WIDE PARKING LOT STRIPING AS SHOWN. USE HIGHWAY MARKING PAINT - WHITE (2 COATS).
  - CONCRETE BUMPER BLOCK: 8" x 5" x 6" LONG CONCRETE. ANCHOR TO PAVING WITH (2) 1"-6" LONG #4 REBAR. REFER TO DETAIL C-4.0
  - PARKING LOT LIGHTING: REFER TO SITE LIGHTING PLAN FOR LOCATION AND TYPE.
  - BICYCLE RACK (5 BIKE MIN. PER RACK): CONTRACTOR SHALL SUBMIT SHOP DWG. FOR REVIEW.
  - SIGN LOCATION: SIGN FURNISHED AND INSTALLED BY OWNER. REFER TO ARCHITECTURAL PLANS FOR LOCATION
  - CONCRETE DRIVE APRON: NOT APPLICABLE
  - ELECTRONIC SECURITY GATE: REFER TO DETAIL C-5.1
  - 4" CHAIN LINK FENCE (BLACK): NOT APPLICABLE
  - 6" CHAIN LINK FENCE (BLACK) W/ VISION SLATS: NOT APPLICABLE
  - DIRECTIONAL ARROW STRIPING: PROVIDE DIRECTION ARROW STRIPING AS SHOWN. USE HIGHWAY MARKING PAINT - WHITE (2 COATS). REFER TO DETAIL C-4.0
  - PARKING LOT LIGHTING: REFER TO SITE LIGHTING PLAN FOR LOCATION AND TYPE.
  - EXISTING DRIVEWAY APRON TO REMAIN: CITY OF WILMINGTON DRIVEWAY APRON TO REMAIN
  - EXISTING DRIVEWAY APRON TO BE DEMOLISHED: CITY OF WILMINGTON DRIVEWAY APRON TO BE DEMOLISHED AND NEW CURBING TO MATCH EXISTING CURB AND GUTTER ALONG 17TH ST.
  - 8" FIRE SERVICE: REFER TO ARCHITECTURAL PLANS FOR LOCATION
  - 8" DIP FIRE SERVICE IN ACCORDANCE WITH CFPUA STANDARDS AND SPECIFICATIONS
  - POST INDICATOR VALVE: 8" POST INDICATOR VALVE IN ACCORDANCE WITH COW FIRE STANDARDS AND SPECIFICATIONS
  - BACKFLOW PREVENTION DEVICE: BACKFLOW PREVENTION DEVICE AND COVER IN ACCORDANCE WITH CFPUA BACKFLOW PREVENTION POLICIES
  - FIRE DEPARTMENT CONNECTION: FDC CONNECTION IN ACCORDANCE WITH COW FIRE STANDARDS AND SPECIFICATIONS
  - 3/4" DOMESTIC WATER SERVICE: DOMESTIC SERVICE AND TAP TO BE IN ACCORDANCE WITH CFPUA STANDARDS AND SPECIFICATIONS
  - 4" DOMESTIC SEWER SERVICE: DOMESTIC SERVICE AND TAP TO BE IN ACCORDANCE WITH CFPUA STANDARDS AND SPECIFICATIONS

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 WATER CAPACITY: \_\_\_\_\_ GPD  
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**Approved Construction Plan**  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
 Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_

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

**REVISIONS:**

**CLIENT INFORMATION:**  
**GK Cape Fear**  
 DEVELOPMENT  
 1051 MILITARY CUTTUFF RD., STE. 200  
 WILMINGTON, NC 28405

**PARAMOUNT ENGINEERING**  
 122 Cinema Drive  
 Wilmington, North Carolina 28403  
 (910) 791-6707 (O) (910) 791-6700 (F)  
 NC License # C-2846

**SITE PLAN**  
 17TH STREET MINI STORAGE  
 1101 S. 17TH STREET  
 CITY OF WILMINGTON  
 NORTH CAROLINA

**PROJECT STATUS:**  
 CONCEPTUAL LAYOUT:  
 FINAL DESIGN:  
 RELEASED FOR CONST.:

**DRAWING INFORMATION:**  
 DATE: 01/28/2025  
 SCALE: 1"=30'  
 DESIGNED:  
 CHECKED:

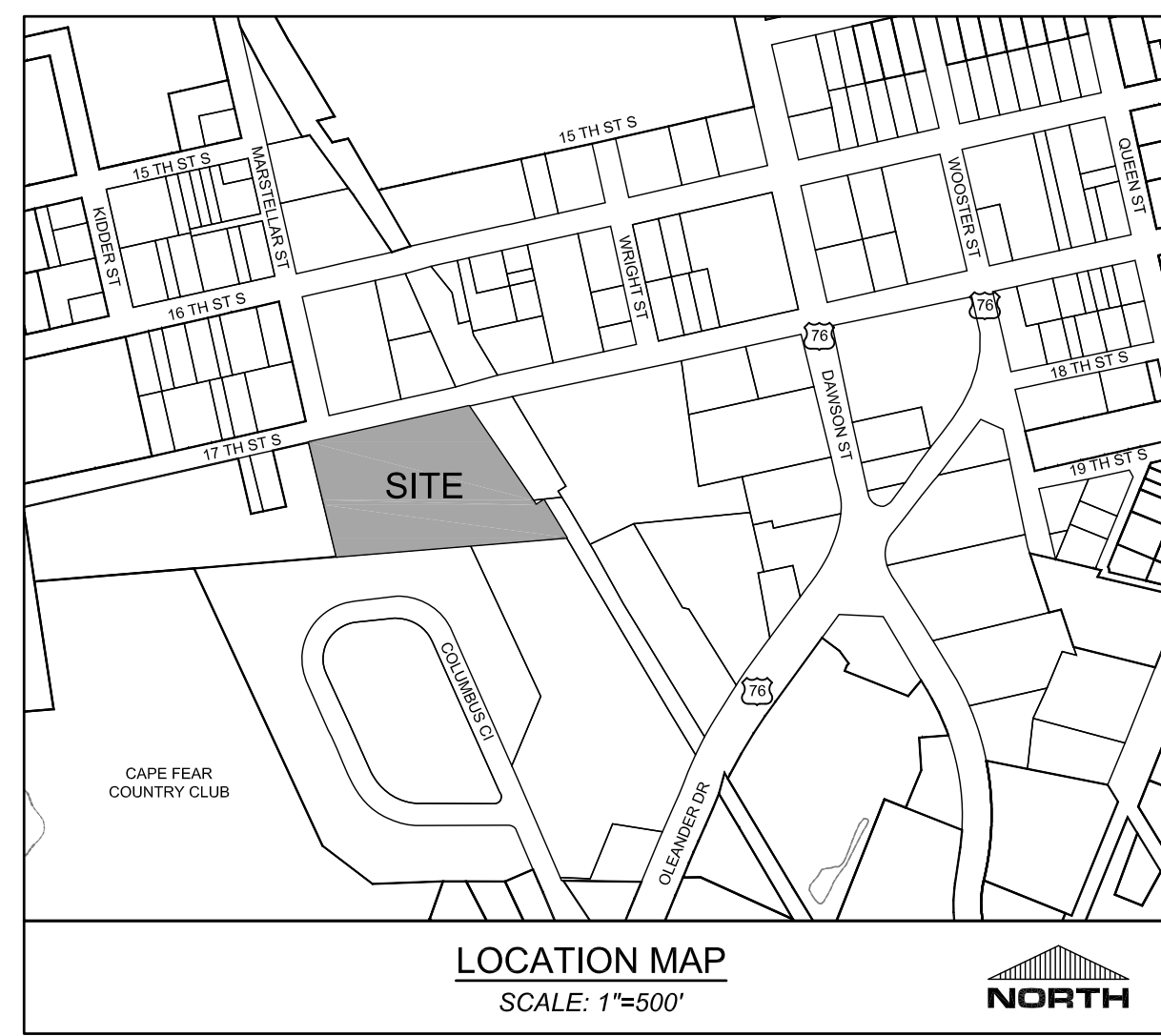
**SEAL**

**PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION**

**811**  
 Know what's below.  
 Call before you dig.

**GRAPHIC SCALE**  
 SCALE: 1"=30'

**C-2.0**  
 PEJ JOB#: 16312.PE



**SITE INFORMATION**

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PITTSFORD, NY 14534  
1101 S. 17TH STREET  
WILMINGTON, NC 28401

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**CAMA LAND USE CLASSIFICATION:** URBAN

**TREE MITIGATION NOTES:**

- EXISTING TREES TO REMAIN WILL COUNT TOWARD CREDIT AGAINST MITIGATION AS PER TABLE 1 'CREDIT FOR PRESERVED TREES' IN SECTION 18-448 OF THE CITY OF WILMINGTON LDC.
- CREDIT CALCULATIONS ARE AS FOLLOWS:  
331 CAL. INCHES OF PRESERVED TREES / 6 (AS PER TABLE 1) = 55 TREES FOR CREDIT
- TREE PROTECTION FENCING WILL BE INSTALLED AS PER CITY OF WILMINGTON STANDARDS AND BE PRESENT BEFORE AND DURING CONSTRUCTION TO PREVENT EQUIPMENT AND PERSONNEL FROM DAMAGING PRESERVED TREES.

**TREE REMOVAL NOTES:**

- 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 TREE PROTECTION FENCING.
- ALL TREES TO BE REMOVED SHALL BE DUE TO ESSENTIAL SITE IMPROVEMENTS. MITIGATION FOR ANY TREE REMOVAL SHALL ONLY BE APPLICABLE TO SIGNIFICANT TREES REMOVED.

**5001 Oriole Drive Tree Removal**

Quantity of Trees | Caliper Inches/Tree | Tree Common Name | Tree Type | % Mitigation | Total Cal. Inches

**Significant Trees**

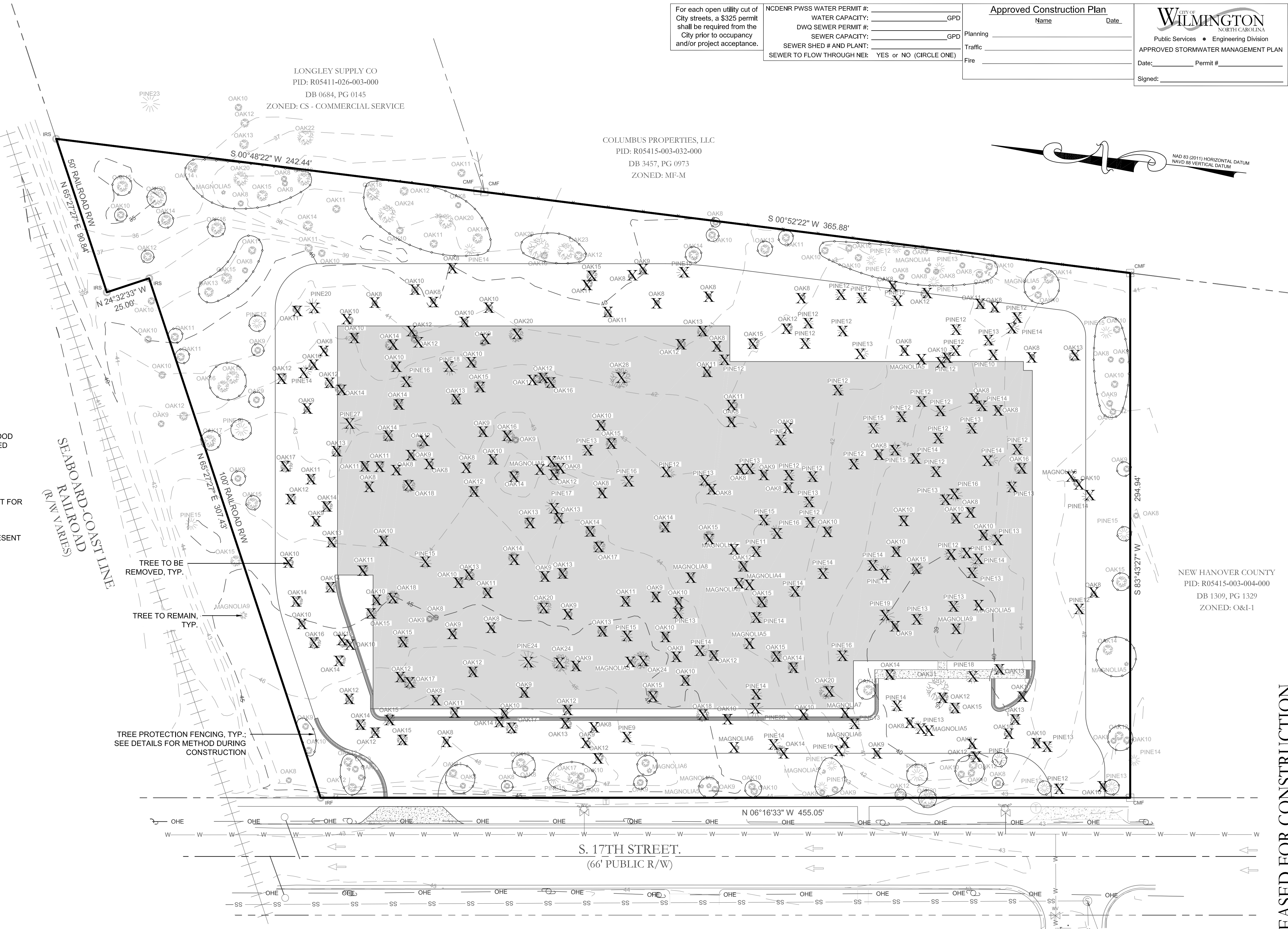
Category	Quantity	Caliper Inches/Tree	Tree Common Name	Tree Type	% Mitigation	Total Cal. Inches
Category I Mitigation (100%)	2	24	OAK	ornamental flowering	100	48
	1	28	OAK	ornamental flowering	100	28
	1	31	OAK	hardwood	100	31
Category II Mitigation (75%)	2	8	MAGNOLIA	ornamental flowering	75	16
	1	9	MAGNOLIA	ornamental flowering	75	9
Category III Mitigation (50%)	1	24	PINE	conifer	50	24
	1	27	PINE	conifer	50	27
<b>Total Significant Tree Caliper Inches to be Removed on Site</b>						<b>183</b>

**Regulated Trees**

Category	Quantity	Caliper Inches/Tree	Tree Common Name	Tree Type	% Mitigation	Total Cal. Inches
Category I Mitigation (100%)	36	8	OAK	hardwood	100	288
	19	9	OAK	hardwood	100	171
	33	10	OAK	hardwood	100	330
	15	11	OAK	hardwood	100	165
	22	12	OAK	hardwood	100	264
	21	13	OAK	hardwood	100	273
	17	14	OAK	hardwood	100	238
	14	15	OAK	hardwood	100	210
	4	16	OAK	hardwood	100	64
	4	17	OAK	hardwood	100	68
Category II Mitigation (75%)	3	18	OAK	hardwood	100	54
	3	20	OAK	hardwood	100	60
	1	4	MAGNOLIA	ornamental flowering	75	4
	6	5	MAGNOLIA	ornamental flowering	75	30
Category III Mitigation (50%)	1	6	MAGNOLIA	ornamental flowering	75	6
	1	7	MAGNOLIA	ornamental flowering	75	7
	1	9	PINE	conifer	50	9
	1	10	PINE	conifer	50	10
	1	11	PINE	conifer	50	11
	26	12	PINE	conifer	50	312
	18	13	PINE	conifer	50	234
	18	14	PINE	conifer	50	252
	6	15	PINE	conifer	50	90
	6	16	PINE	conifer	50	96
1	17	PINE	conifer	50	17	
2	18	PINE	conifer	50	36	
1	19	PINE	conifer	50	19	
2	20	PINE	conifer	50	40	
<b>Total Regulated Tree Caliper Inches to be Removed on Site</b>						<b>3299</b>
<b>Total Significant Caliper Inches to be Removed on Site</b>						<b>183</b>
<b>Total Caliper Inches to be Removed on Site</b>						<b>3482</b>

**LEGEND:**

- PROPOSED TREE LINE
- PROPOSED LIGHT POLE
- PROPOSED TREE PROTECTION FENCE
- EXISTING TREE TO BE REMOVED



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

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

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



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**REVISIONS:**

**CLIENT INFORMATION:**  
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**TREE REMOVAL PLAN**  
17TH STREET MINI STORAGE  
1101 S. 17TH STREET  
CITY OF WILMINGTON  
NORTH CAROLINA

**PROJECT STATUS:**  
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FINAL DESIGN LAYOUT: \_\_\_\_\_  
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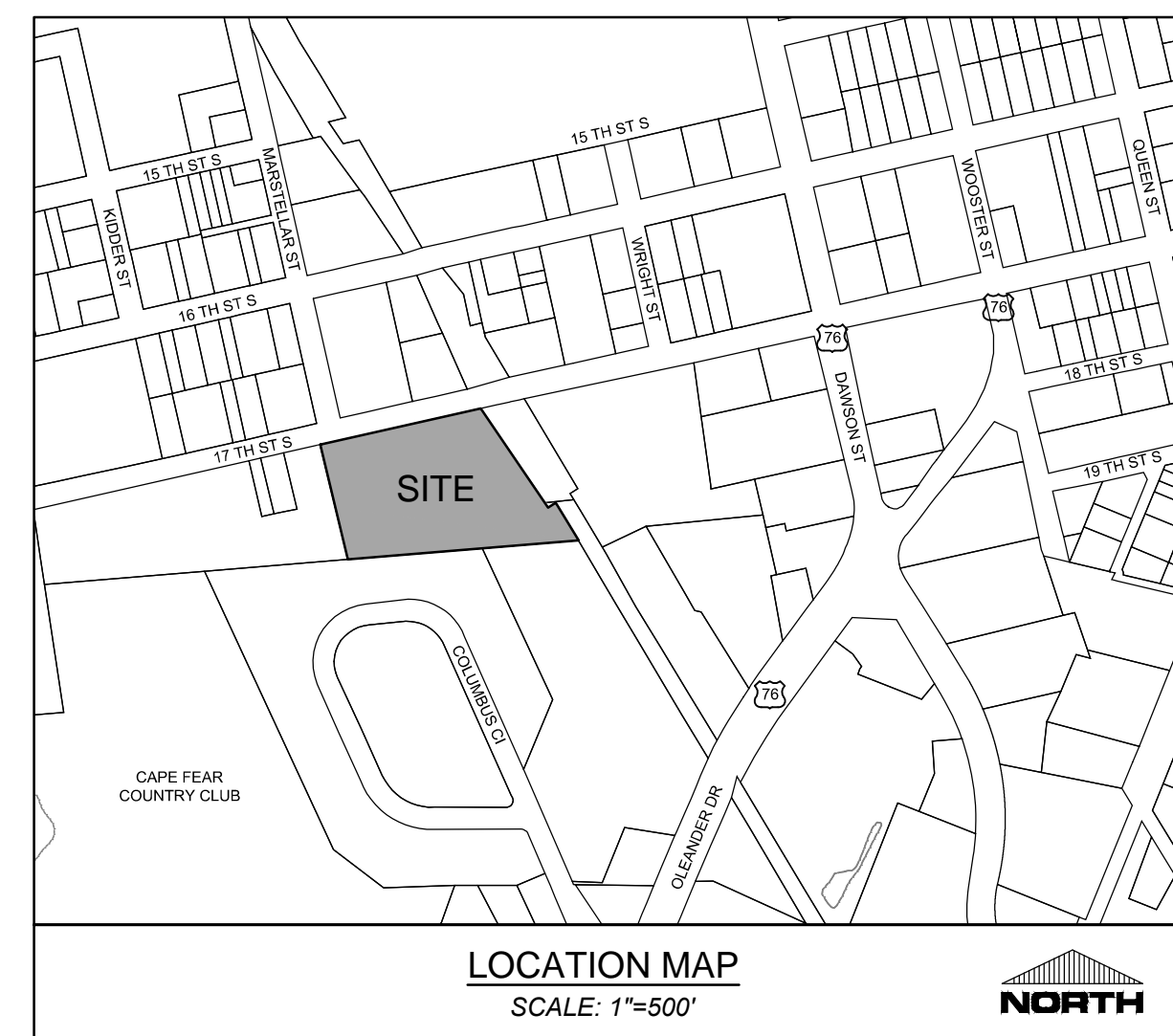
**DRAWING INFORMATION:**  
DATE: 01/08/2015  
SCALE: 1"=30'  
DESIGNED: PBE  
CHECKED: PBE

**SEAL**

**811**  
Know what's below.  
Call before you dig.

**C-2.1**

PEJ JOB#: 16312.PE



- EROSION CONTROL AND GRADING NOTES:**
1. SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL. SEE GENERAL NOTES SHEET FOR GRADING, DRAINAGE, AND EROSION CONTROL NOTES AND REQUIREMENTS. IN ADDITION, REFERENCE TECHNICAL SPECIFICATIONS AND DETAIL SHEETS FOR MORE INFORMATION.
  2. SEE GRADING AND DRAINAGE PLANS FOR FINISH GRADES AND STORM PIPE SCHEDULE.
  3. CONTRACTOR SHALL COORDINATE WITH OWNER OR OWNER'S REPRESENTATIVE REGARDING THE SITE'S EXISTING GRADE. EARTHWORK ACTIVITIES MAY HAVE TAKEN PLACE AFTER THE SURVEYED TOPOGRAPHY.
- ASPHALT, CONCRETE, AND BUILDING PAD NOTES:**
1. SITE CONTRACTOR SHALL STRIP TOPSOIL, AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED SUBGRADE IN PAVEMENT AND STRUCTURAL AREAS, IN ACCORDANCE WITH ANY SUBSURFACE GEOTECHNICAL EXPLORATION REPORTS, OR GEOTECHNICAL FIELD ENGINEERING, AND/OR TECHNICAL SPECIFICATIONS.

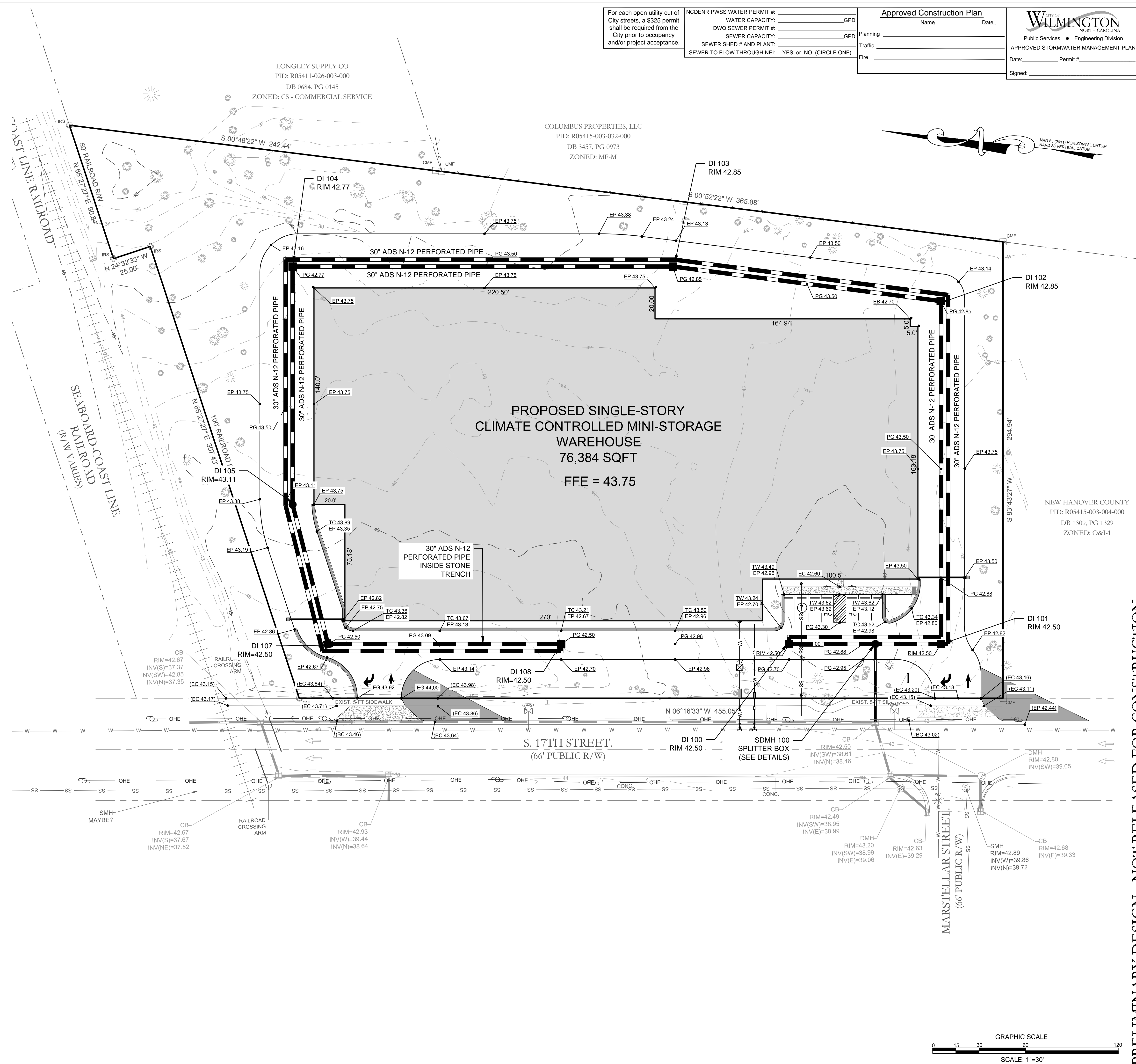
- STORM DRAINAGE NOTES:**
1. DRAINAGE EASEMENT AND STORMWATER WET PONDS MAINTENANCE (INCLUDING THE STORM DRAINAGE NETWORK) IS THE RESPONSIBILITY OF THE DEVELOPER OR HOA.
  2. NO OBSTRUCTIONS ARE ALLOWED IN DRAINAGE EASEMENTS, INCLUDING FENCES.
  3. IMPERVIOUS MUST DRAIN TO THE DESIGNED STORMWATER SYSTEM UNLESS APPROVED PLANS SHOW OTHERWISE.
  4. STORM DRAINAGE STRUCTURES WITHIN TRAFFIC AREAS SHALL BE TRAFFIC RATED FOR H-20 LOADS AT A MINIMUM.
  5. CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT AND/OR CONCRETE AREAS TO MATCH PROPOSED GRADES.
  6. PROPOSED SPOT ELEVATIONS SHOWN IN THE PARKING LOT ARE PROPOSED EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.
  7. RIM ELEVATIONS ARE LISTED AS THE 'GUTTER OF FLOWLINE ELEVATION' WITHIN A CURB INLET SECTION. THE CURB INLET RIM ELEVATION GIVEN IS 2 INCHES BELOW EDGE OF PAVEMENT (EP). FOR DROP INLETS, THE RIM ELEVATION IS LISTED AS THE CENTER OF GRADE FOR DROP INLETS. THE CONTRACTOR SHALL MAINTAIN A UNIFORM EDGE OF PAVEMENT (EP) WHEN PLACING THE STORM INLETS WITHIN THE CURB-LINE.
  8. MANHOLE RIM ELEVATION SHOWN ABOVE IS FLUSH WITH PROPOSED GRADE. CONTRACTOR SHALL PROVIDE 3" CLEARANCE ABOVE PROPOSED GRADE WHEN PLACED IN A GRASS/PERVIOUS AREA; AND A FLUSH CONDITION WITH PROPOSED PAVEMENT OR IMPERVIOUS COVER.
  9. PROPOSED BUILDINGS SHALL DIVERT ROOF DRAINAGE TO STORMWATER COLLECTION SYSTEM ONLY. SEE CIVIL OR ARCHITECTURAL DETAILS.
  10. THE CONTRACTOR SHALL USE EITHER RCP (CL. III) OR HDPE PIPE FOR THE STORM DRAINAGE SYSTEM. IF THE CONTRACTOR CHOOSES TO USE HDPE PIPE, IT SHALL BE ADS N-12 HP STORM PIPE OR APPROVED EQUAL AND SHALL BE INSTALLED TO MANUFACTURER SPECIFICATIONS.

**AS-BUILT SURVEY NOTE:**

1. THE CONTRACTOR WILL EMPLOY A LAND SURVEYOR LICENSED IN THE STATE OF NORTH CAROLINA TO PROVIDE ACCURATE REPRODUCIBLE AS-BUILT DRAWINGS OF THE WET DETENTION BASINS AND INFILTRATION BASIN TO THE OWNER UPON COMPLETION OF CONSTRUCTION. UPON CHECKING BY THE OWNER ANY DISCREPANCIES WILL BE INDICATED. THEN THESE PLANS SHALL BE RETURNED TO THE CONTRACTOR FOR CORRECTION PRIOR TO FINAL PAYMENT AND FINAL INSPECTION.

**LEGEND:**

— 16 —	EXISTING CONTOUR
— 29 —	PROPOSED CONTOUR
TC 20.50 EP 20.00	PROPOSED SPOT GRADES
DI	= DROP INLET
SDMH	= STORM MANHOLE
TC	= TOP OF CURB ELEVATION
GC	= GUTTER CURB (FLOW LINE) ELEVATION
CC	= CURB CUT (FLUME) ELEVATION
PG	= PROPOSED GRADE (GROUND)
GLV	= PROPOSED GRAVEL GRADES
PV	= PROPOSED PAVEMENT
EP	= EDGE OF PAVEMENT
EC	= EDGE OF CONCRETE
TW	= TOP OF WALK (SIDEWALK) ELEVATION
CL	= CENTERLINE
INV	= INVERT
=	= EXISTING GRADE
(XX)	= EXISTING ELEVATIONS, TYP.

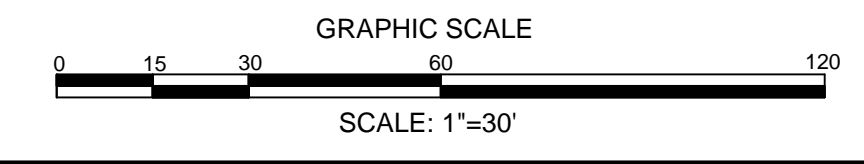


For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

NCDENR PWSS WATER PERMIT #: \_\_\_\_\_ GPD  
 WATER CAPACITY: \_\_\_\_\_  
 DWO SEWER PERMIT #: \_\_\_\_\_ GPD  
 SEWER CAPACITY: \_\_\_\_\_  
 SEWER TO FLOW THROUGH NEI: YES OR NO (CIRCLE ONE)

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

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



PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

**REVISIONS:**


**CLIENT INFORMATION:**  
**GK CapeFear** DEVELOPMENT  
 1051 MILITARY CUTOFF RD., STE. 200  
 WILMINGTON, NC 28405

**PARAMOUNT ENGINEERING, INC.**  
 122 Cinema Drive  
 Wilmington, North Carolina 28403  
 (910) 791-6707 (O) (910) 791-6760 (F)  
 NC License #: C-2846

**GRADING AND DRAINAGE PLAN**  
**17TH STREET MINI STORAGE**  
 1101 S. 17TH STREET  
 CITY OF WILMINGTON  
 NORTH CAROLINA

**PROJECT STATUS:**  
 CONCEPTUAL LAYOUT:  
 PRIMARY LAYOUT:  
 RELEASED FOR CONST.

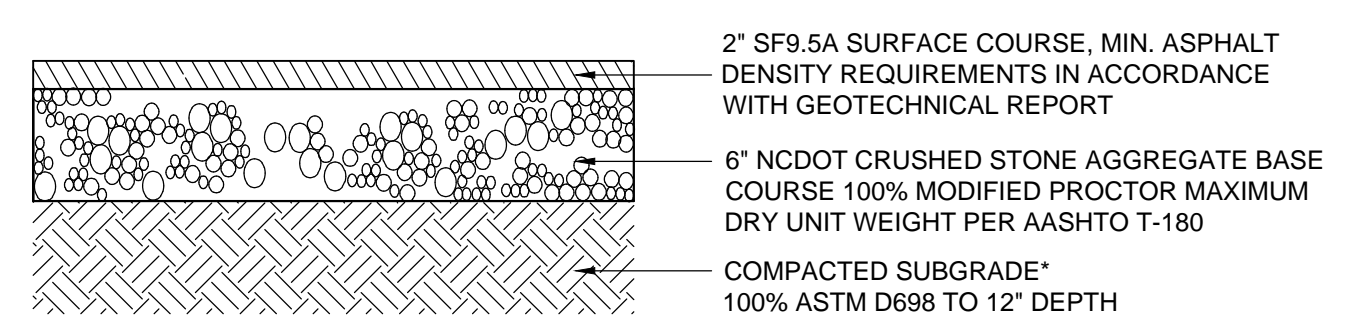
**DRAWING INFORMATION:**  
 DATE: 01/26/2017  
 DESIGNED: JRS  
 DRAWN: RRB  
 CHECKED: RRB

**C-3.0**  
 PEI JOB#: 16312.PE

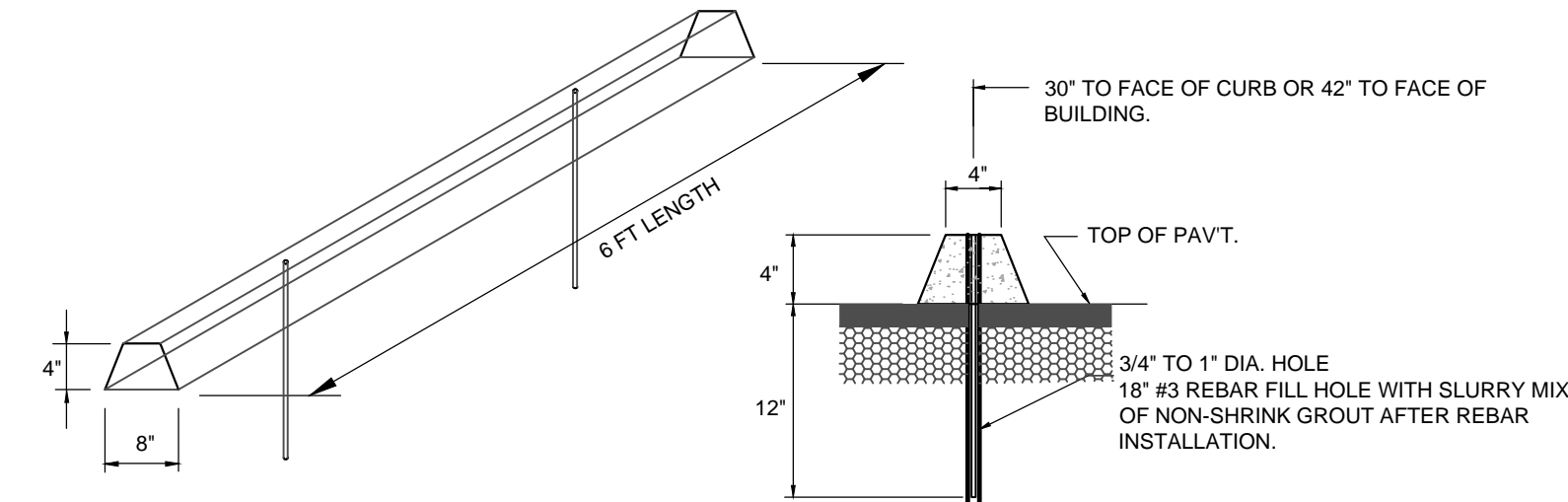
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Approved Construction Plan  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
 Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 File \_\_\_\_\_

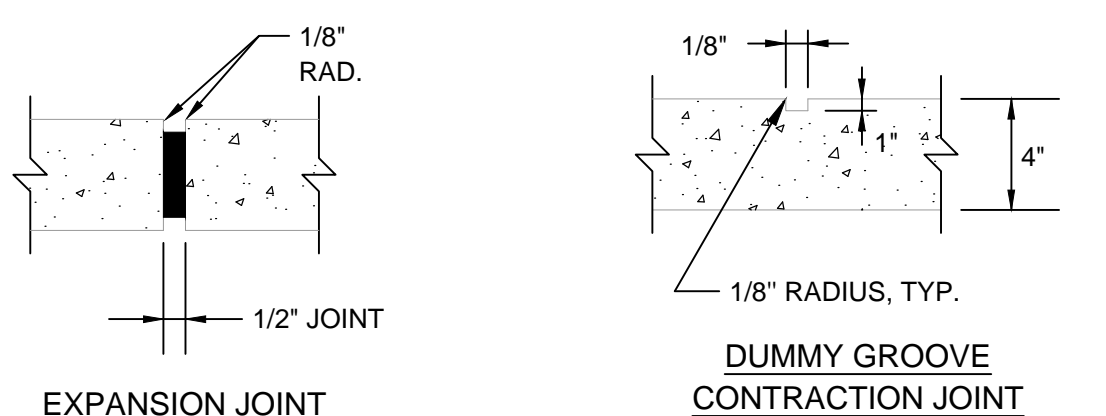
**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_



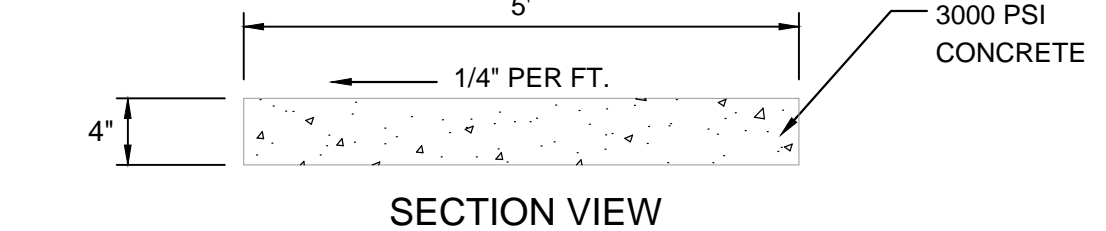
**LIGHT DUTY PAVEMENT SECTION**  
 NOT TO SCALE



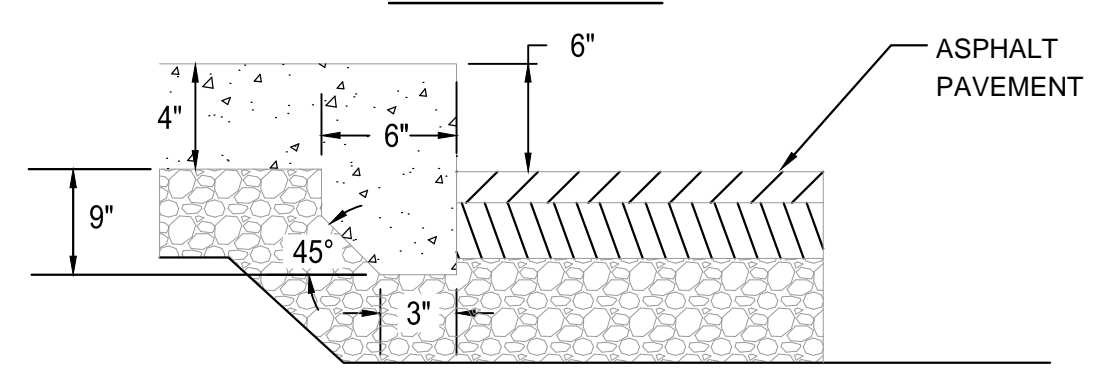
**CONCRETE WHEEL STOP DETAIL**  
 NOT TO SCALE



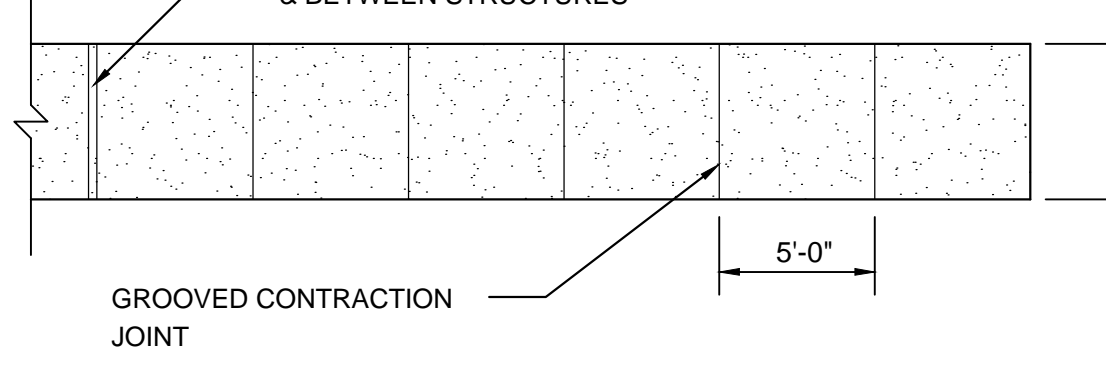
**EXPANSION JOINT** and **DUMMY GROOVE CONTRACTION JOINT**



**SECTION VIEW**

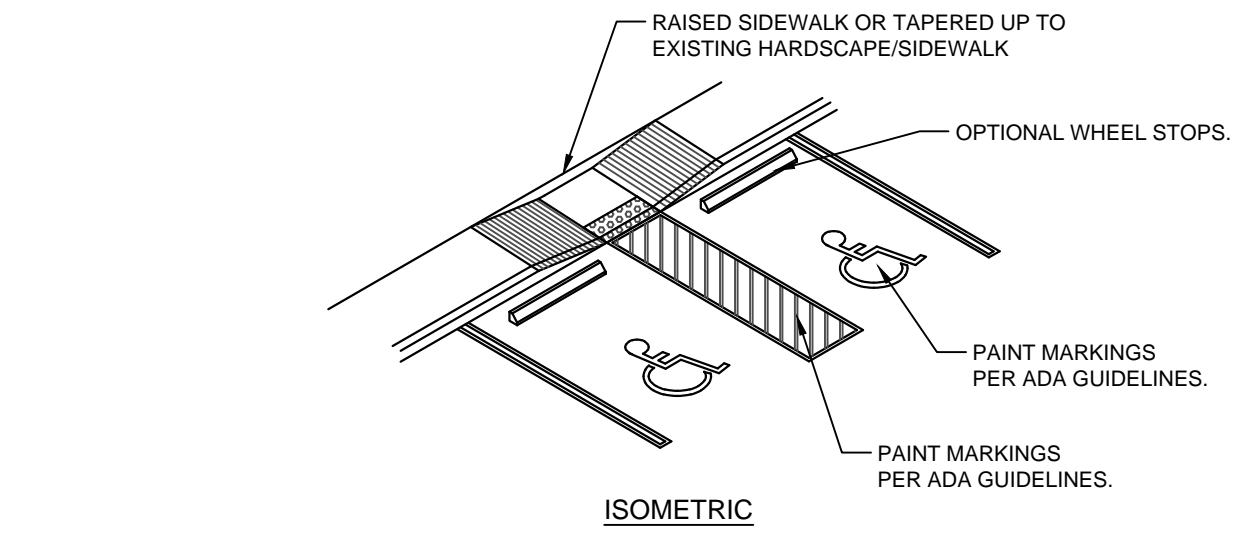


**ASPHALT PAVEMENT**

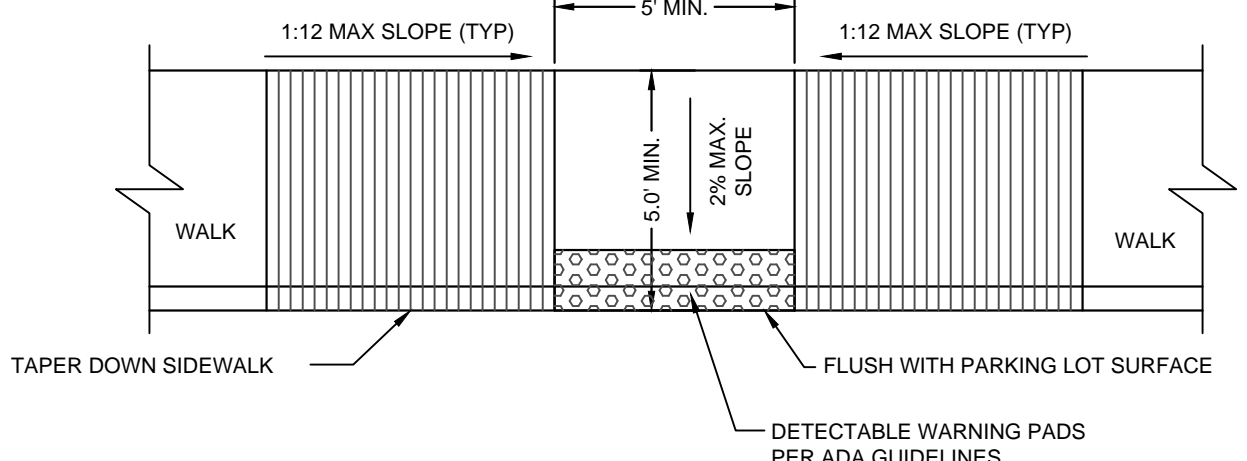


**PLAN VIEW**

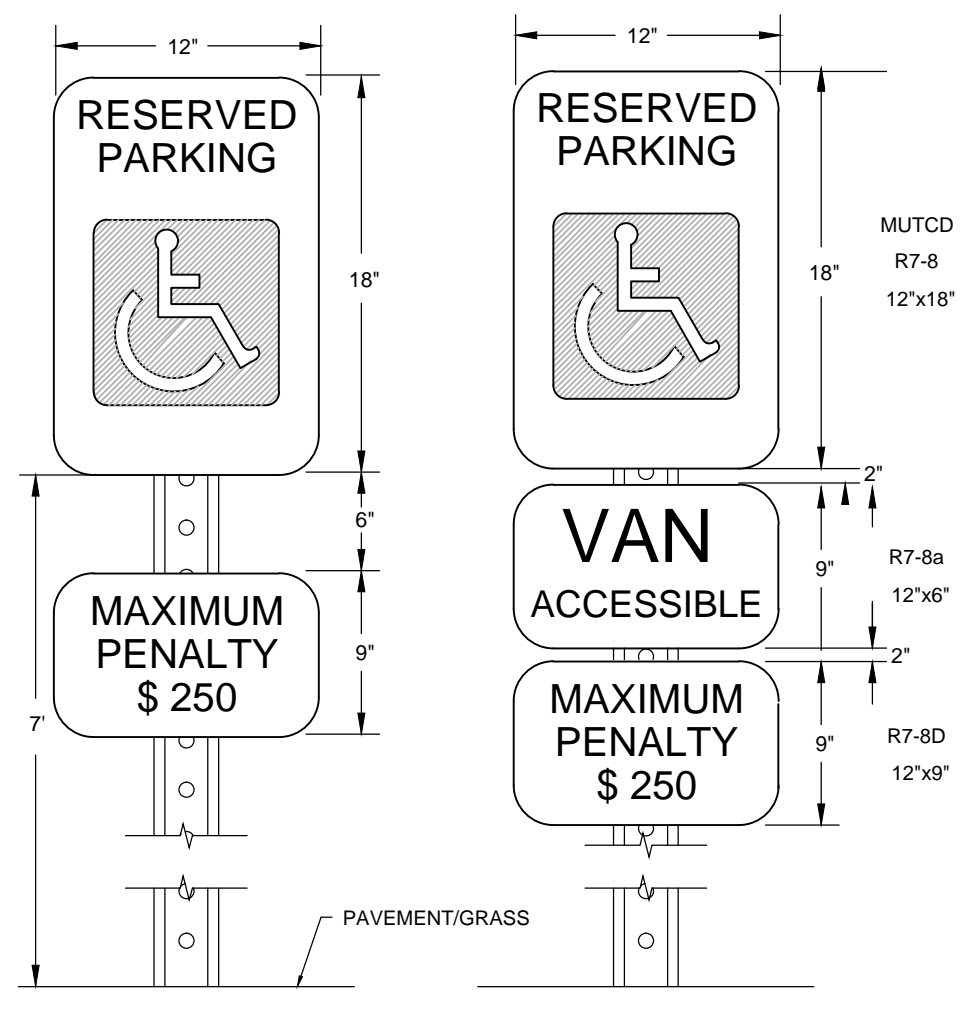
**SIDEWALK DETAILS**  
 NOT TO SCALE



**ISOMETRIC**

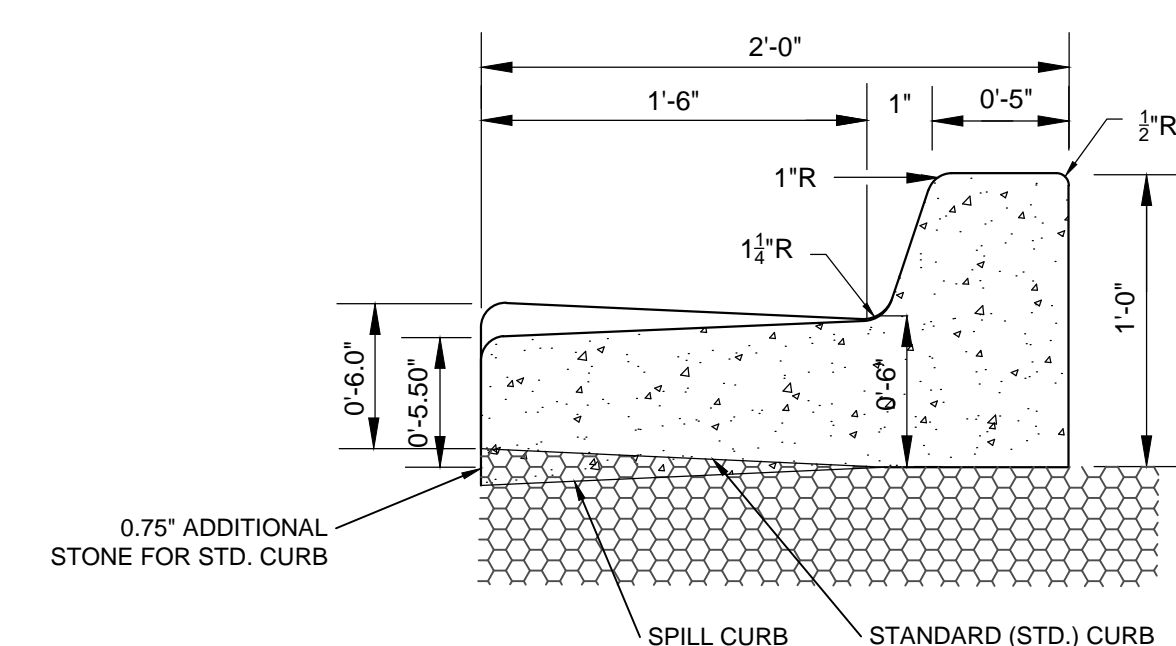


**HANDICAP CURB ACCESS RAMP AND MARKINGS DETAIL**  
 NOT TO SCALE



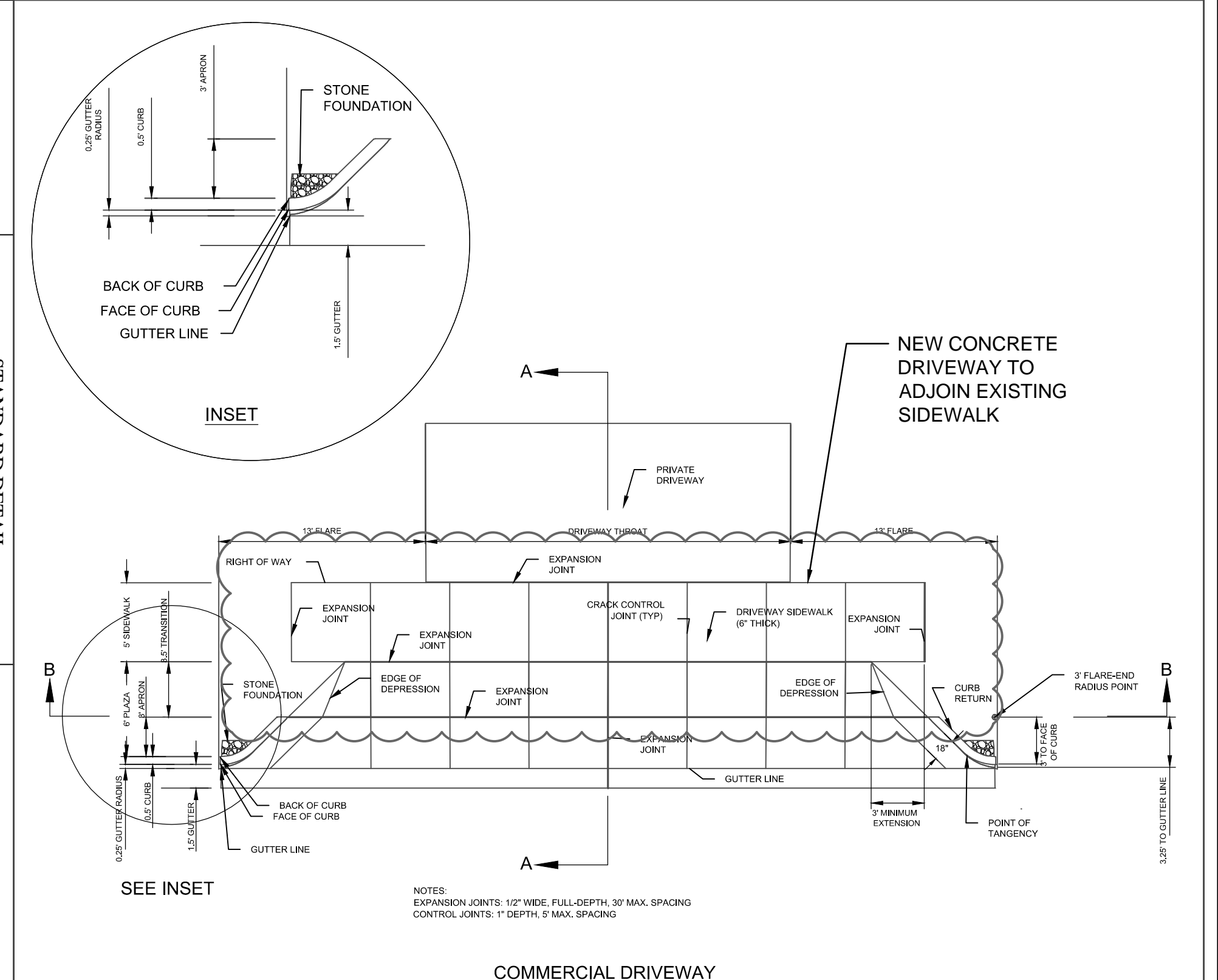
**HANDICAP SIGN DETAIL**  
 NOT TO SCALE

- NOTES:**
- METAL POST AND ALL HARDWARE SHALL BE GALVANIZED STEEL, ASTM A307-90.
  - POST HOLES SHALL BE FILLED WITH GRANULAR BACKFILL IN 3-INCH TO 4-INCH LIFTS. THOROUGHLY HAND TAMP EACH LIFT AND CROWN BACKFILL AT TOP TO SHED WATER.
  - CONCRETE FOR FOOTING SHALL BE PORTLAND CEMENT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
  - SIGNS SHALL BE CONSTRUCTED OF ALUMINUM, TYPE 6061-T6 AND IN CONFORMANCE WITH ASTM STD B-209. THICKNESS SHALL BE 0.80 INCHES.
  - TOP EDGE TREATMENT FILM SHALL BE 3" WIDE, CLEAR AND TRANSPARENT WITH A SUB-RESISTANT PRESSURE SENSITIVE NON-YELLOWING ADHESIVE, "SKOTCHCAL" TRANSPARENT FILM #639.
  - REFLECTIVE FACING MATERIAL SHALL BE SCOTCHLITE HIGH INTENSITY, MANUFACTURED BY 3M COMPANY.
  - SIGN LETTERING SHALL BE NPS MODIFIED CLARENDON TYPEFACE. UPPERCASE LETTERS SHALL BE 3.75" HEIGHT AND LOWERCASE LETTERS SHALL BE 2.5" HEIGHT WITH 3.75" SPACING BETWEEN LINES.
  - CORNER RADIUS OF SIGNS SHALL BE 2.5".
  - ARROWS SHALL BE 5.625" LONG BY 3.75" HIGH.
  - MOUNT ON BUILDING OR METAL POST AS DIRECTED.



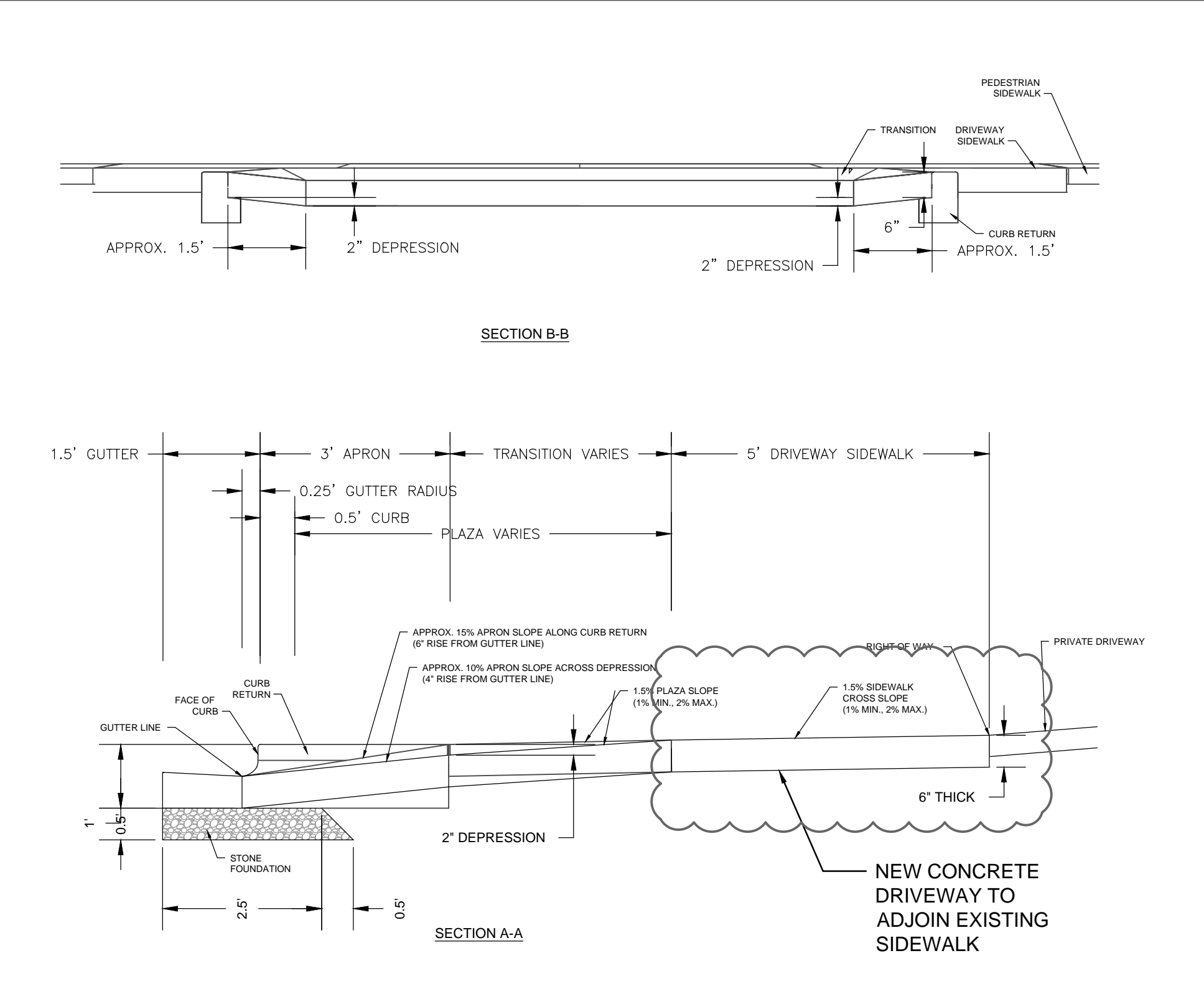
**24\"/>
 NOT TO SCALE**

DATE: JUNE 1, 2015  
 DRAWN BY: JSR  
 CHECKED BY: D.E.C., P.E.  
 SCALE: NOT TO SCALE



**NOTES:**  
 EXPANSION JOINTS: 12" WIDE, FULL DEPTH, 30" MAX. SPACING  
 CONTRACTION JOINTS: 1" DEPTH, 5' MAX. SPACING

DATE: APRIL 2015  
 DRAWN BY: JSR  
 CHECKED BY: D.E.C., P.E.  
 SCALE: NOT TO SCALE



**COMMERCIAL DRIVEWAY PLAN**  
 1 of 2  
 CITY OF WILMINGTON ENGINEERING  
 WILMINGTON, NC, 28402  
 (910) 341-7897  
 SD 3-03.3

REVISIONS:

**CLIENT INFORMATION:**  
**GK CapeFear**  
 DEVELOPMENT  
 1051 MILITARY CUTOFF RD., STE. 200  
 WILMINGTON, NC 28405

**PARAMOUNT ENGINEERING**  
 122 Cinema Drive  
 Wilmington, North Carolina 28403  
 (910) 791-0707 (O) (910) 791-6760 (F)  
 NC License #: C-2846

**DETAILS**  
**17TH STREET MINI STORAGE**  
 1101 S. 17TH STREET  
 CITY OF WILMINGTON  
 NORTH CAROLINA

**PROJECT STATUS:**  
 CONCEPTUAL LAYOUT:  
 PRELIMINARY LAYOUT:  
 RELEASED FOR CONST.

**DRAWING INFORMATION:**  
 DATE: 01/26/2017  
 DESIGNED: JSR  
 DRAWN: RRB  
 CHECKED: RRB

SEAL

**C-4.0**

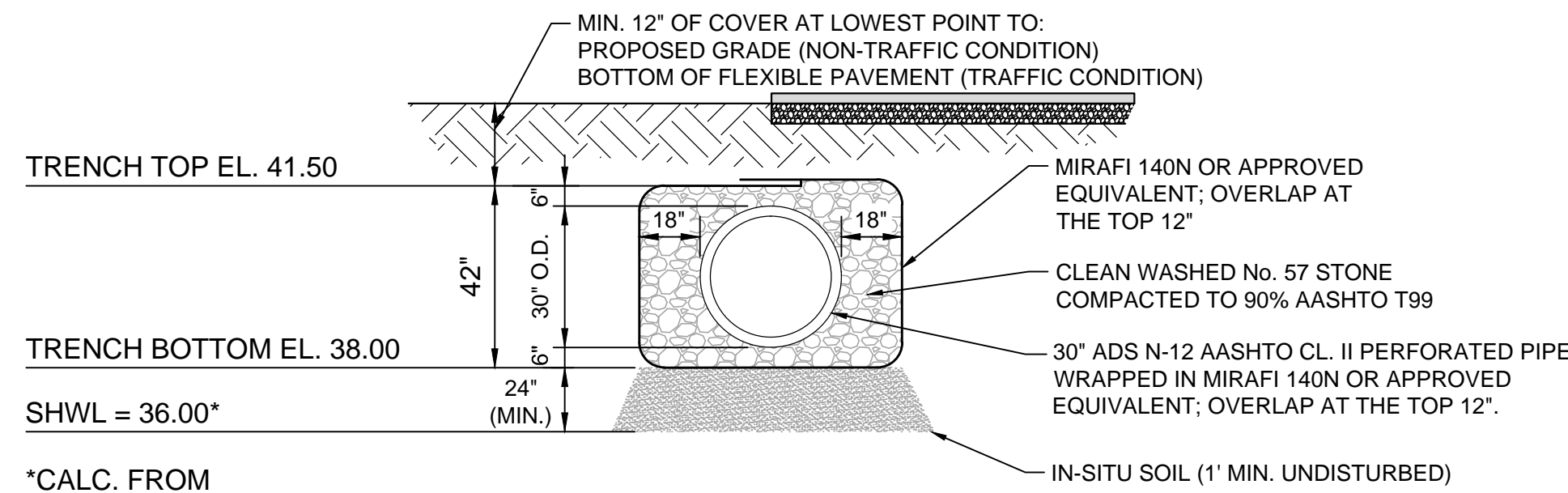
PEI JOB#: 16312.PE

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

NCDENR PWSS WATER PERMIT #:  
 WATER CAPACITY: \_\_\_\_\_ GPD  
 DWQ SEWER PERMIT #:  
 SEWER CAPACITY: \_\_\_\_\_ GPD  
 SEWER SHED # AND PLANT:  
 SEWER TO FLOW THROUGH NEI: YES OR NO (CIRCLE ONE)

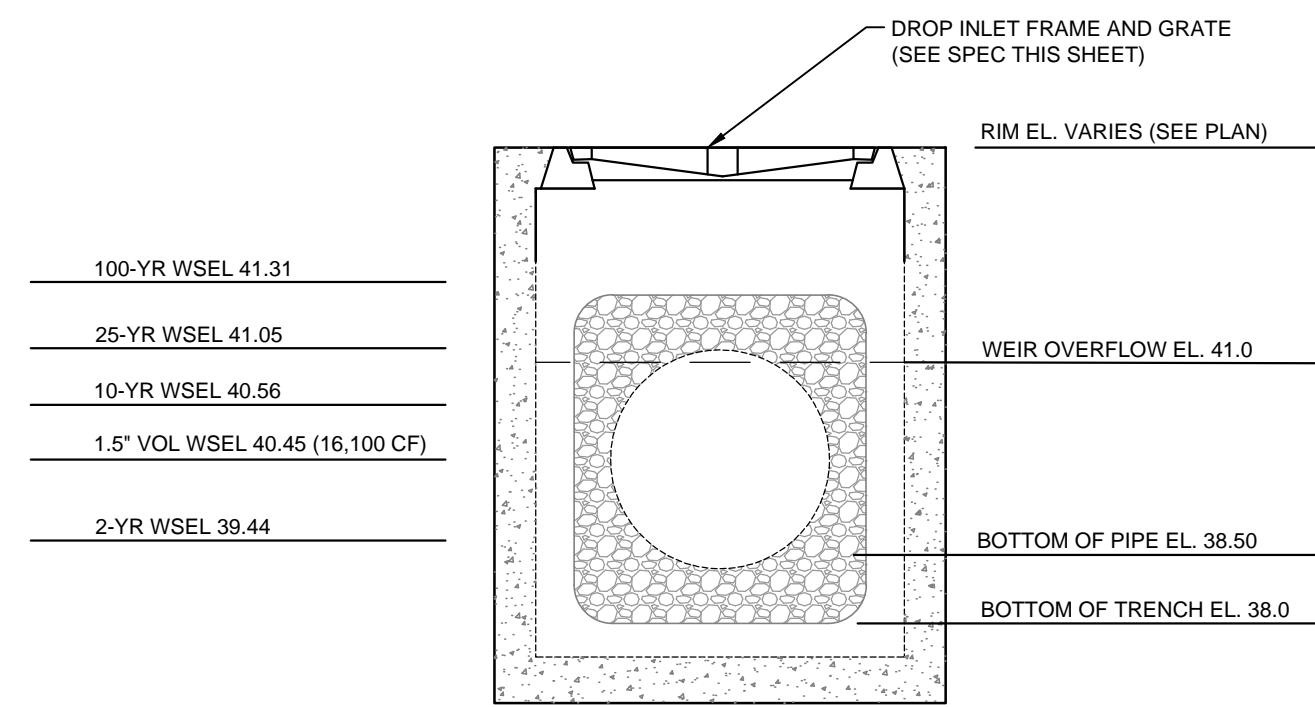
Approved Construction Plan  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
 Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_

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



\*CALC. FROM  
 ECS REPORT 49.3814  
 DATED 1/24/17

**SINGLE PIPE INFILTRATION TRENCH, TYP.**  
 NOT TO SCALE



**DROP INLET SECTION, TYP.**  
 NOT TO SCALE

**ADS N-12® ST IB PIPE (per AASHTO) SPECIFICATION:**

**Scope**  
 This specification describes 4- through 60-inch (100 to 1500 mm) ADS N-12 ST IB pipe (per AASHTO) for use in gravity-flow drainage applications.

- Pipe Requirements**  
 ADS N-12 ST IB pipe (per AASHTO) shall have a smooth interior and annular exterior corrugations.
- 4- through 10-inch (100 to 250 mm) shall meet AASHTO M252, Type S or SP.
  - 12- through 60-inch (300 to 1500 mm) shall meet AASHTO M294, Type S or SP or ASTM F2306.
  - Manning's "n" value for use in design shall be 0.012.

**Joint Performance**  
 Pipe shall be joined using a bell & spigot joint meeting AASHTO M252, AASHTO M294 or ASTM F2306. The joint shall be soil-tight and gaskets, when applicable, shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. A joint lubricant supplied by the manufacturer shall be used on the gasket and bell during assembly.

**Fittings**  
 Fittings shall conform to AASHTO M252, AASHTO M294, or ASTM F2306. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the soil-tight joint performance requirements of AASHTO M252, AASHTO M294 or ASTM F2306.

**Material Properties**  
 Virgin material for pipe and fitting production shall be high density polyethylene conforming with the minimum requirements of cell classification 424420C for 4- through 10-inch (100 to 250 mm) diameters, or 435400C for 12- through 60-inch (300 to 1500 mm) diameters, as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. The 12- through 60-inch (300 to 1500 mm) virgin pipe material shall comply with the notched constant ligament-stress (NCLS) test as specified in Sections 9.5 and 5.1 of AASHTO M294 and ASTM F2306, respectively.

**Installation**  
 Installation shall be in accordance with ASTM D2321 and ADS recommended installation guidelines, with the exception that minimum cover in trafficked areas for 4- through 48-inch (100 to 1200 mm) diameters shall be one foot (0.3 m) and for 54- and 60-inch (1350 and 1500 mm) diameters, the minimum cover shall be 2 ft. (0.6 m) in single run applications. Backfill for minimum cover situations shall consist of Class 1, Class 2 (minimum 90% SPD) or Class 3 (minimum 90%) material. Maximum fill heights depend on embedment material and compaction level; please refer to Technical Note 2.01. Contact your local ADS representative or visit our website at www.ads-pipe.com for a copy of the latest installation guidelines.

**ADS N-12® WT IB PIPE (per AASHTO) SPECIFICATION:**

**Scope**  
 This specification describes 4- through 60-inch (100 to 1500 mm) ADS N-12 WT IB pipe (per AASHTO) for use in gravity-flow applications.

- Pipe Requirements**  
 N-12 WT IB pipe (per AASHTO) shall have a smooth interior and annular exterior corrugations.
- 4- through 10-inch (100 to 250 mm) shall meet AASHTO M252, Type S.
  - 12- through 60-inch (300 to 1500 mm) shall meet AASHTO M294, Type S or ASTM F2306.
  - Manning's "n" value for use in design shall be 0.012.

**Joint Performance**  
 Pipe shall be joined with the N-12 WT IB joint meeting the requirements of AASHTO M252, AASHTO M294, or ASTM F2306.

4- through 60-inch (100 to 1500 mm) shall be watertight according to the requirements of ASTM D3212. Gaskets shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly.

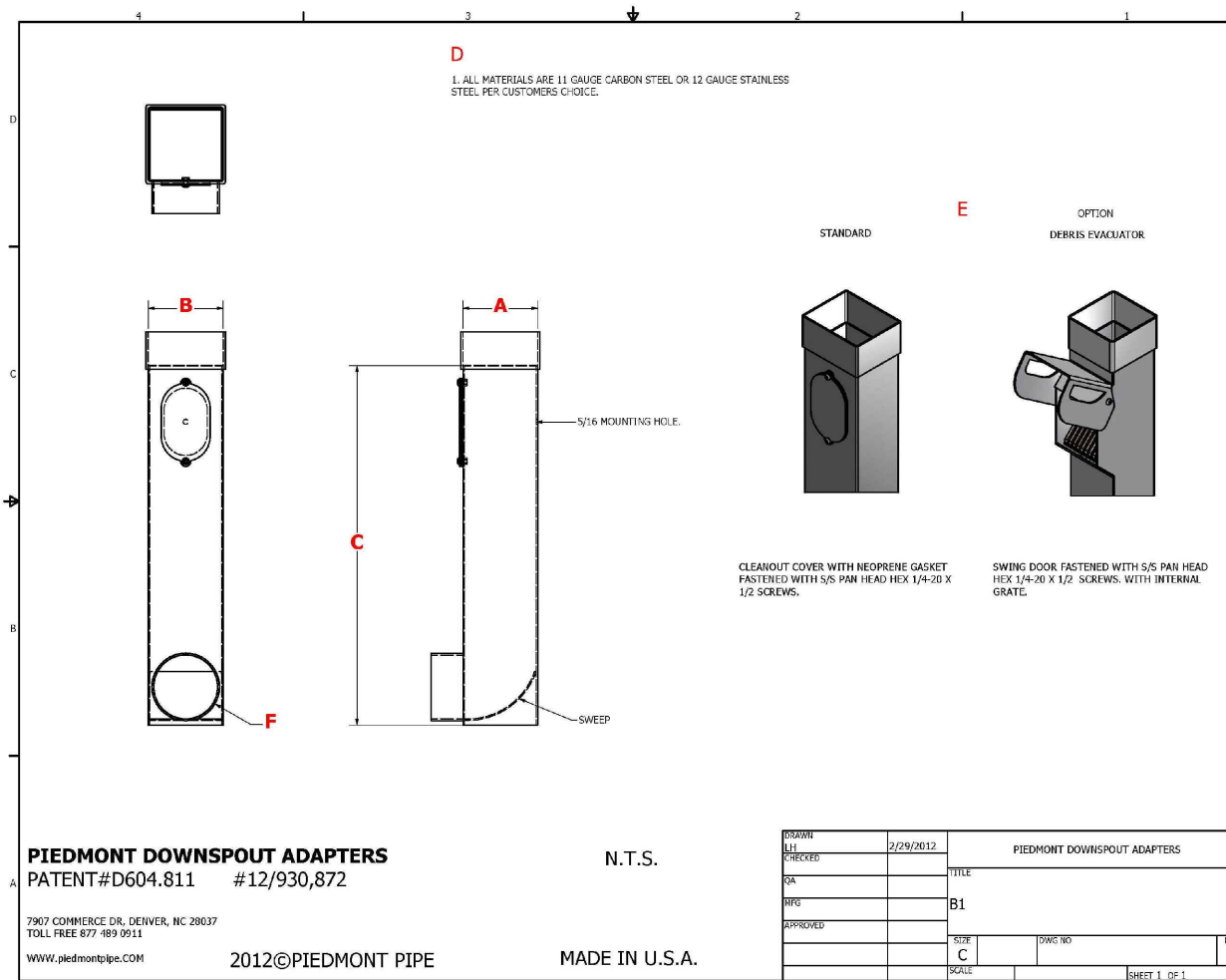
12- through 60-inch (300 to 1500 mm) diameters shall have an exterior bell wrap installed by the manufacturer.

**Fittings**  
 Fittings shall conform to AASHTO M252, AASHTO M294, or ASTM F2306. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the watertight joint performance requirements of AASHTO M252, AASHTO M294 or ASTM F2306.

**Field Pipe and Joint Performance**  
 To assure watertightness, field performance verification may be accomplished by testing in accordance with ASTM F2487. Appropriate safety precautions must be used when field-testing any pipe material. Contact the manufacturer for recommended leakage rates.

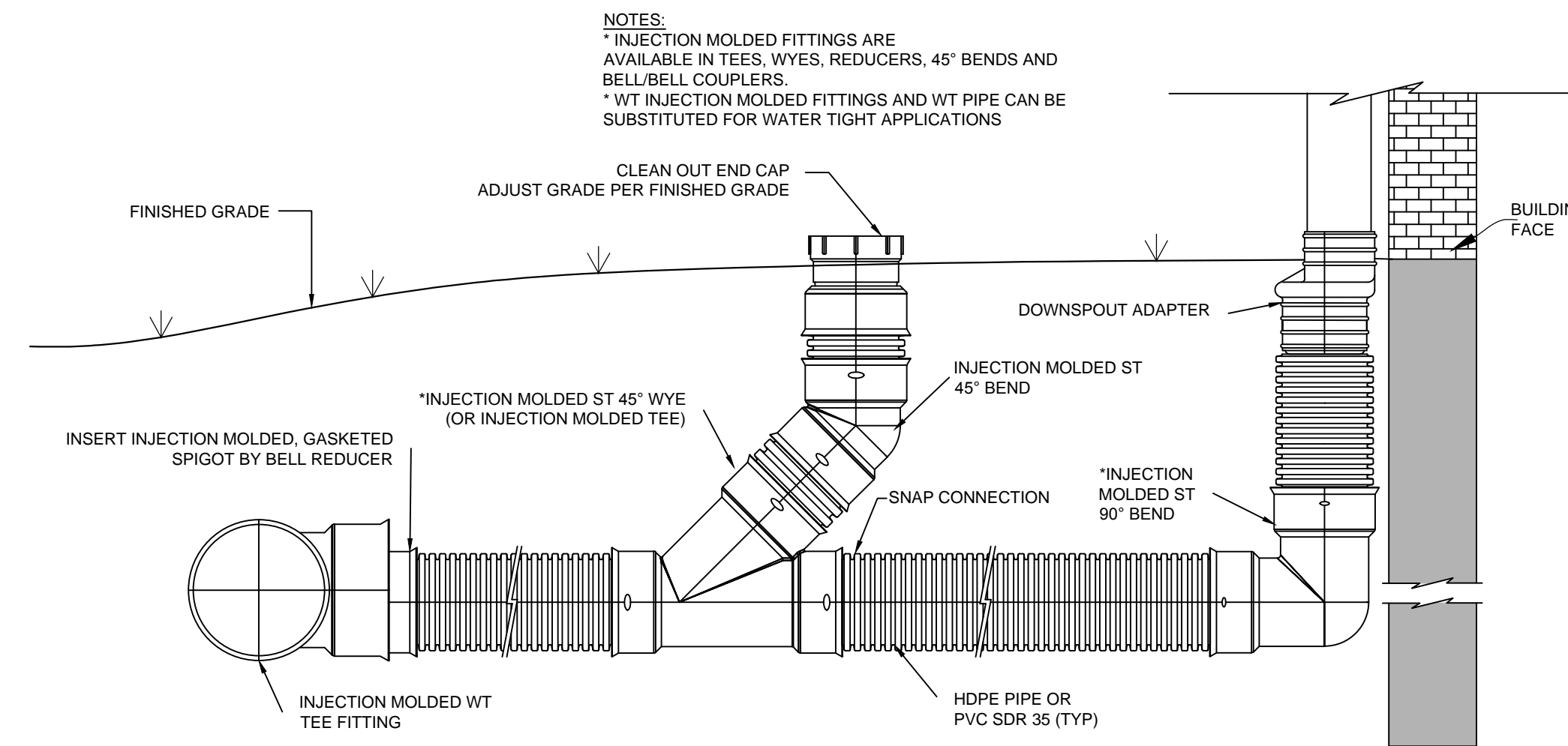
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 Virgin material for pipe and fitting production shall be high-density polyethylene conforming with the minimum requirements of cell classification 424420C for 4- through 10-inch (100 to 250 mm) diameters, and 435400C for 12- through 60-inch (300 to 1500 mm) diameters, as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. The 12- through 60-inch (300 to 1500 mm) virgin pipe material shall comply with the notched constant ligament-stress (NCLS) test as specified in Sections 9.5 and 5.1 of AASHTO M294 and ASTM F2306 respectively.

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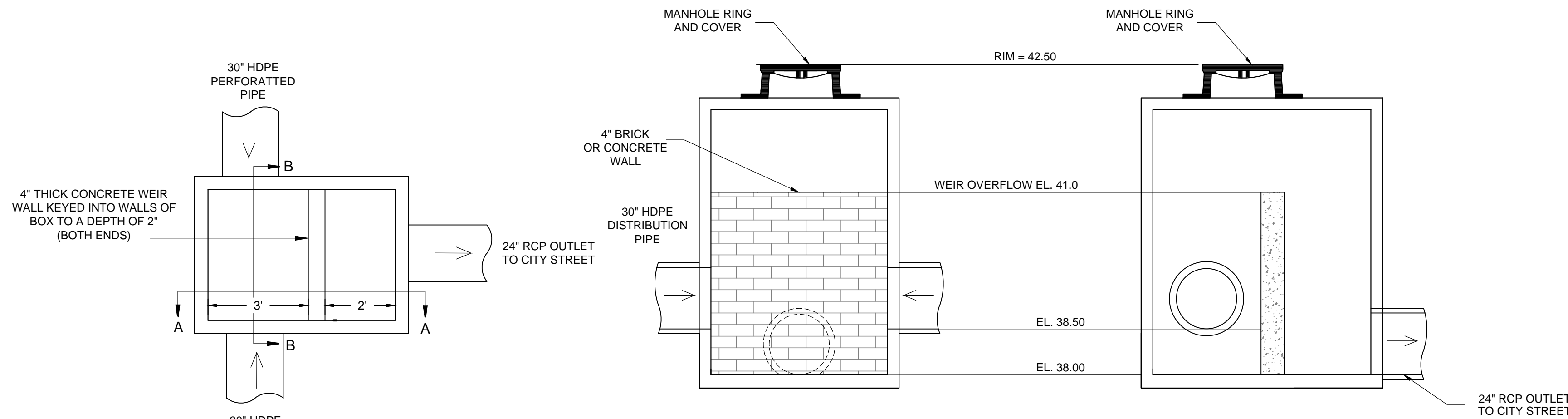


- NOTES:**
- BOOTS SHALL BE STAINLESS STEEL.
  - BOOTS SHALL INCLUDE DEBRIS EVACUATOR OPTION.
  - BOOTS SHALL BE POWDER-COATED TO MATCH DOWNSPOUT - SEE ARCHITECTURAL PLANS FOR COLOR.
  - SEE ARCHITECTURAL PLANS FOR DOWNSPOUT DIMENSIONS.

**DOWNSPOUT BOOT**  
 NOT TO SCALE



**ROOF DRAIN DETAIL WITH CLEANOUT**  
 NOT TO SCALE

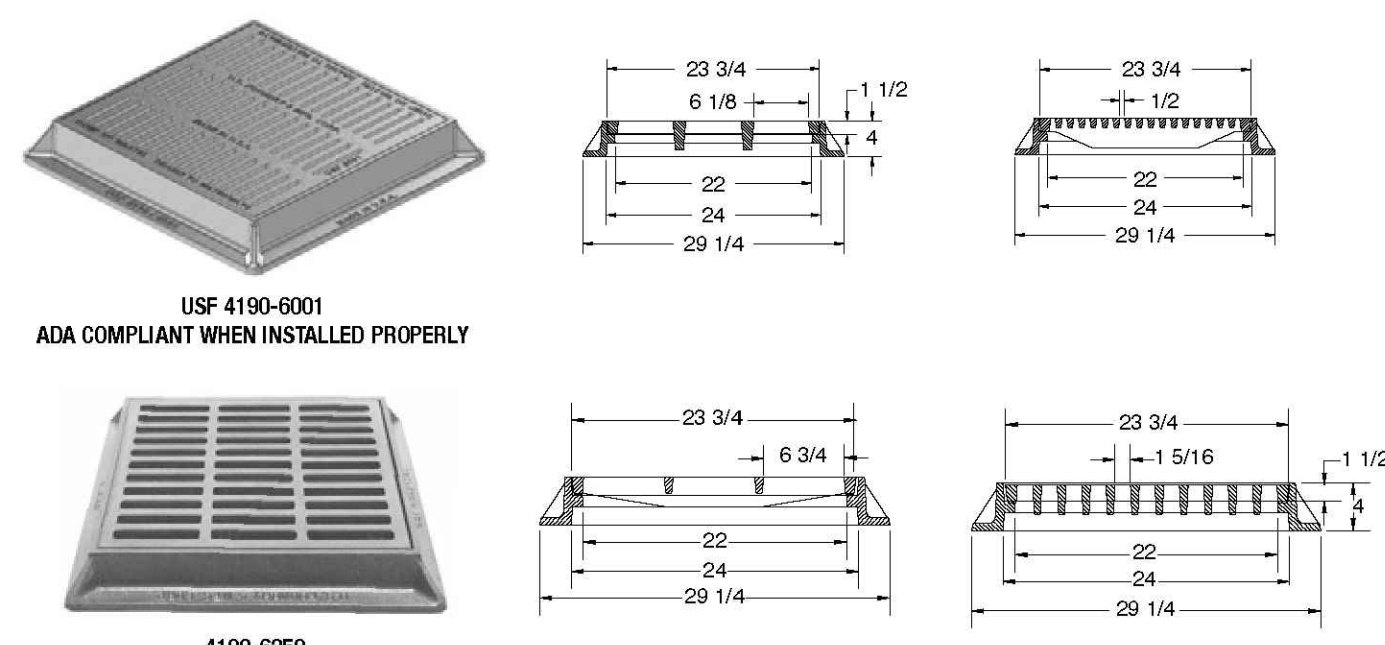


**SECTION (B-B)**

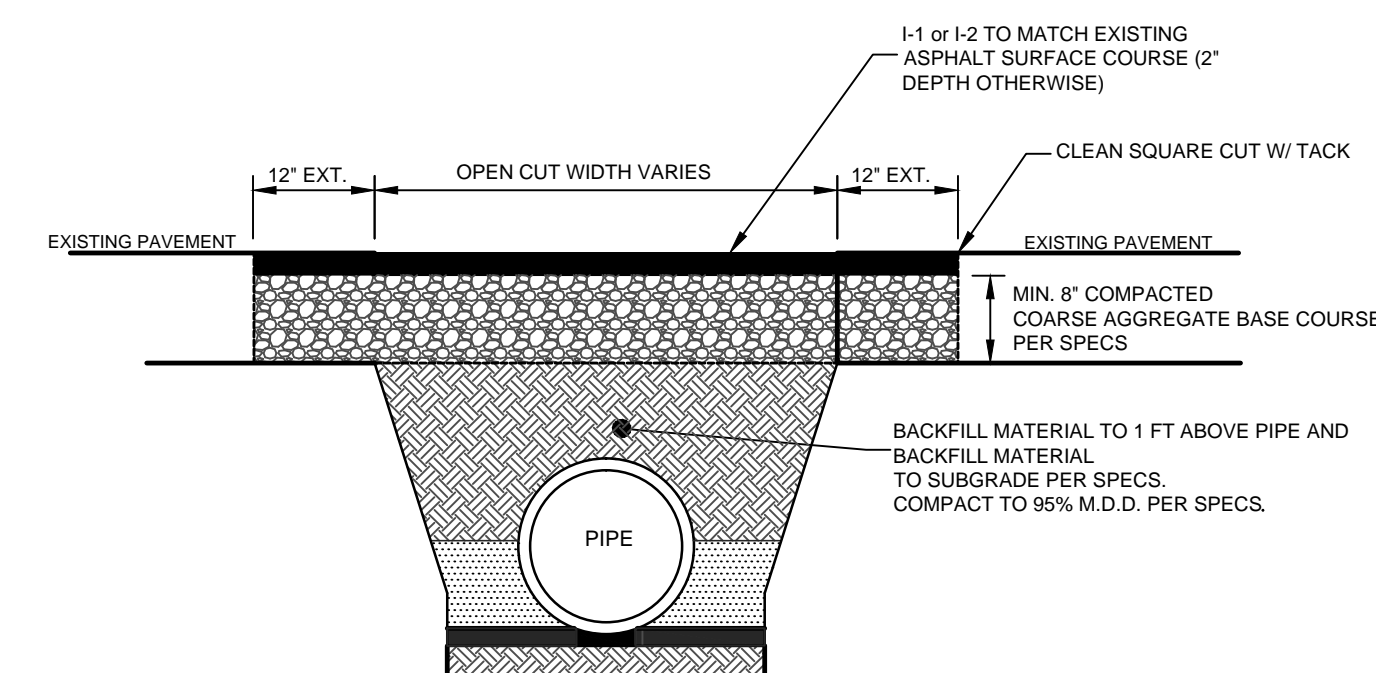
**SECTION (A-A)**

**OVERFLOW SPLITTER MANHOLE**  
 NOT TO SCALE

**USF 4190 FRAME AND GRATE SERIES**



**STORM DRAIN INLET DETAIL**  
 NOT TO SCALE



**PAVEMENT REPLACEMENT SECTION**  
 NOT TO SCALE (CITY STD. SD 1-05)

REVISIONS:

**GK CapeFear**  
 DEVELOPMENT  
 CLIENT INFORMATION:  
 1051 MILITARY CUTOFF RD., STE. 200  
 WILMINGTON, NC 28405

**PARAMOUNT ENGINEERING**  
 122 Cinema Drive  
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 (910) 791-6707 (O) (910) 791-6760 (F)  
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**DETAILS**  
 17TH STREET MINI STORAGE  
 1101 S. 17TH STREET  
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 NORTH CAROLINA

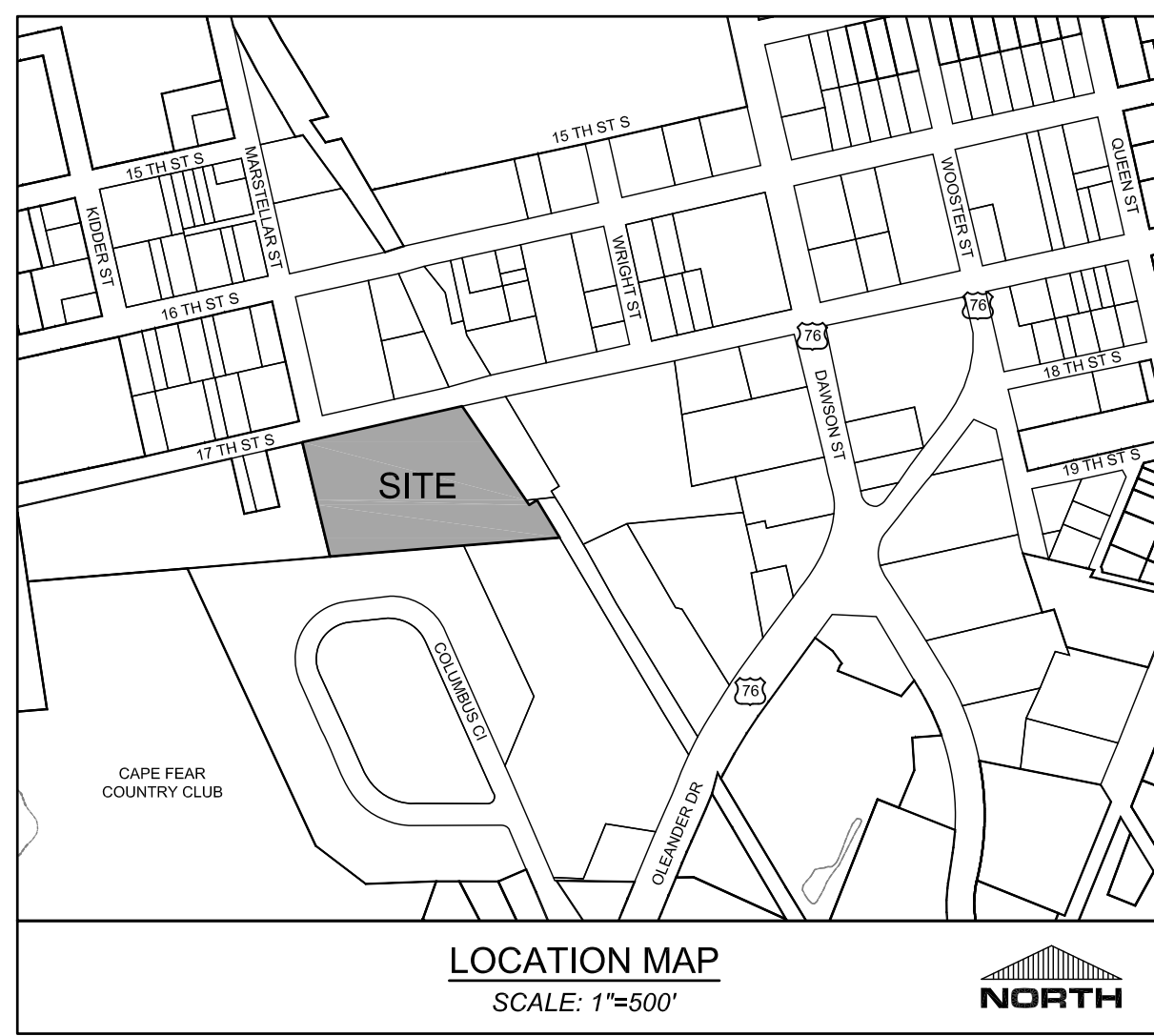
**PROJECT STATUS**  
 CONCEPTUAL LAYOUT:  
 PRELIMINARY LAYOUT:  
 RELEASED FOR CONST.

**DRAWING INFORMATION**  
 01/26/2017  
 DATE: 1/26/2017  
 DESIGNED: JRS  
 DRAWN: RFB  
 CHECKED: RFB

SEAL

**C-4.1**

PEI JOB#: 16312.PE



TREES	CODE	BOTANICAL NAME	SIZE	QTY
ORNAMENTAL TREES	LO	QUERCUS VIRGINIANA Southern Live Oak	2.5" CAL	3
	JM	ACER PALMATUM 'EMPEROR I' Emperor I Japanese Maple	2.5" CAL - 8' H	8
	KC	PRUNUS SERRULATA 'KWANZAN' Flowering Cherry	2.5" CAL - 8' H	5
SHRUBS	FA	AZALEA L 'FORMOSA' Formosa Azalea	3 GAL	74
	RRA	AZALEA 'RED RUFFLES' Red Ruffles Azalea	3 GAL	27
	DBH	ILEX CORNUTA 'BURFORDII NANA' Dwarf Burford Holly	3 GAL	21
	BH	ILEX VOMITORIA 'BORDEAUX' Bordeaux Holly	3 GAL	38
	WM	MYRICA CERIFERA Wax Myrtle	7 GAL	36
	PV	PITTOSPORUM T. 'VARIEGATA' Variegated Mock Orange	3 GAL	41

- LANDSCAPE NOTES:**
- ALL PLANT BEDS SHALL RECEIVE PINE STRAW MULCH 3" DEPTH MIN. - 4" DEPTH MAX
  - SEED ALL DISTURBED AREAS OUTSIDE OF MULCH AREAS WITH BERMUDA 'BLACKJACK'

**SITE INFORMATION**  
OWNER INFORMATION: CA NORTH CAROLINA HOLDINGS, INC.  
PITTSFORD, NY 14534  
1101 S. 17TH STREET  
WILMINGTON, NC 28401  
R05415-003-001-000  
BK 5863 PG 014  
LI - LIGHT INDUSTRIAL  
UNDEVELOPED  
MINI-WAREHOUSING  
3.916 +/- ACRES

**TAX PARCEL IDENTIFICATION #:** R05415-003-001-000  
**RECORDED DEED BOOK:** BK 5863 PG 014  
**CURRENT ZONING:** LI - LIGHT INDUSTRIAL  
**EXISTING USE:** UNDEVELOPED  
**PROPOSED USE:** MINI-WAREHOUSING  
**TOTAL SITE AREA:** 3.916 +/- ACRES

**FLOOD INFORMATION:** THIS PARCEL IS LOCATED IN FLOOD ZONE X, WHICH IS NOT A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY FEMA HAZARD PANEL 3720314800J, DATED APRIL 3, 2006

**CAMA LAND USE CLASSIFICATION:** URBAN

**BUILDING INFORMATION**  
CONSTRUCTION TYPE: XX  
NUMBER OF PROPOSED BUILDINGS: 1  
PROPOSED BUILDING SF: 76,384 SF  
MAX. HEIGHT: 12'-0"  
LOT COVERAGE: 44.8% (PROPOSED)

**LANDSCAPE CALCULATIONS:**

STREETYARDS	REQ'D	PROV
17TH STREET 393 LF * 25' = 9,825 SF 9,825 SF / 600 SF = 16.375	17	105
1 CANOPY / 600 SF 6 SHRUBS / 600 SF	102	105
PARKING AREA INTERIOR	REQ'D	PROV
13,551 SF * 20% SHADING 2 TREES @ 707 SF EACH = 1,414 SF EXISTING CANOPY SHADE = 1,790 SF	2,710 SF	3,204 SF
FOUNDATION PLANTINGS	REQ'D	PROV
397.5 LF * 12 FT HGT = 4,770 SF * 0.12	572 SF	764 SF
BUFFER PLANTINGS	REQ'D	PROV
365 LF OF BOUNDARY ADJACENT TO MF-M	13 8' TREES	13 8' TREES
OVERALL SITE TREE PLANTING REQUIREMENTS	REQ'D	PROV
3,916 AC * 15 TREES / AC	59	71

PROTECTED MITIGATION TREES REQUIRED (183 CAL. INCHES / 2.5")

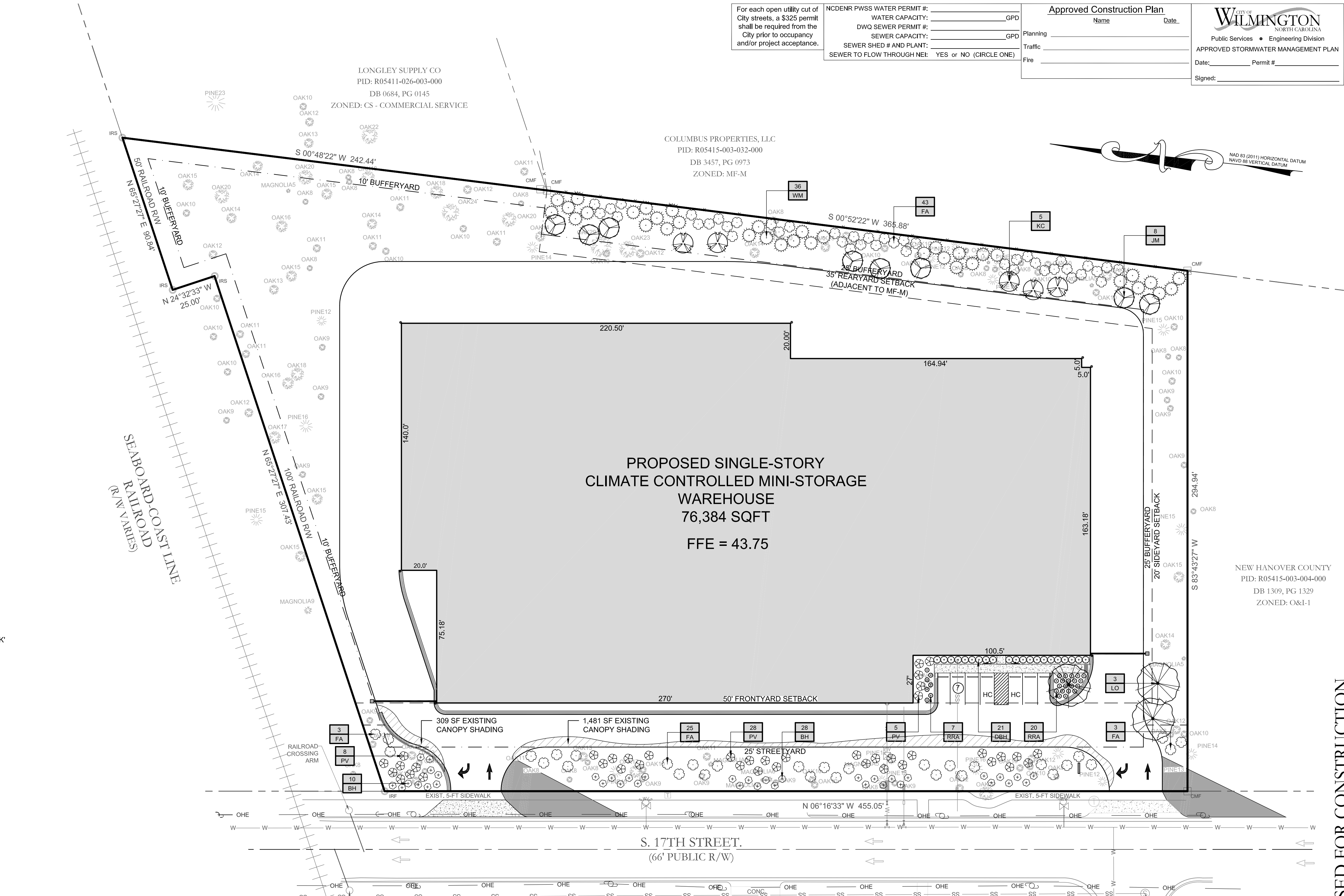
TOTAL TREES REQ. 133

CREDITS FOR RETAINED TREES 55

2.5" CAL MIN. TREES PROVIDED 16

TOTAL TREES PROVIDED 71

CLIENT WILL PAY IN LIEU OF 62 TREE SHORTFALL

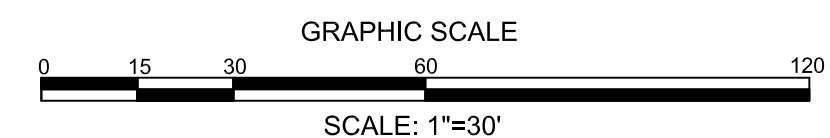


- LANDSCAPE NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR AS OTHERWISE DICTATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
  - ALL PLANT MATERIAL SHALL MEET THE CURRENT VERSION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS.
  - NO TREE, OTHER THAN THOSE SHOWN ON APPROVED PLANS FOR REMOVAL WITH THESE PLANS AND/OR TREE REMOVAL PERMIT PLANS, SHALL BE REMOVED WITHOUT WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
  - ALL SHRUB BEDS AND/OR PLANTING AREAS EXCLUDING TURF AREAS SHALL BE MULCHED WITH 3 INCH MINIMUM AND 4 INCH MAXIMUM DEPTH PINE STRAW MULCH UNLESS OTHERWISE NOTED.
  - ALL PLANTS, 4 FEET OR LESS APART, WILL BE CONNECTED IN ONE PLANTING BED WITH THE EDGE OF MULCH EXTENDING 2 FEET BEYOND THE EDGE OF PLANT MASS. SINGLE TREES SHOULD HAVE A CIRCLE OF MULCH NOT LESS THAN 5 FEET DIAMETER.
  - SHALL BE MULCHED WITH 3 INCH MINIMUM AND 4 INCH MAXIMUM DEPTH PINE STRAW MULCH UNLESS OTHERWISE NOTED.
  - PLANTING SOIL MIX: MIX EXISTING SOIL WITH THE SOIL AMENDMENTS AND FERTILIZERS IN THE QUANTITIES RECOMMENDED BY THE SOIL TESTING LABORATORY, THIRD PARTY RECOGNIZED BY THE STATE DEPARTMENT OF AGRICULTURE OR AS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
  - ANY AND ALL SUBSTITUTIONS OF PLANT MATERIAL SHALL BE APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. FAILURE IN OBTAINING APPROVAL MAY RESULT IN LIABILITY TO THE CONTRACTOR.
  - ALL VEGETATION PROPOSED WITHIN SIGHT DISTANCE AREAS SHALL NOT INTERFERE WITH SIGHT DISTANCE FROM 30' TO 10'.
  - THE CONTRACTOR SHALL REPLACE DEAD AND/OR UNHEALTHY PLANT MATERIAL WITHIN 12 MONTHS OF ACCEPTANCE OF THE INSTALLED MATERIAL FROM THE OWNER OR OWNER'S REPRESENTATIVE.
  - THE CONTRACTOR SHALL PREPARE ALL SEEDING OR SODDED AREAS TO ASSURE THAT THE SUBGRADE HAS BEEN RAKED AND ROLLED TO ACCEPT THE SOD/SEED. ALL SODDED AREAS MUST BE IRRIGATED OR HAND WATERED. ALL SOD SHALL BE PLACED WITH STAGGERED JOINTS AND NO GAPS BETWEEN SOD JOINTS. SOD SHOULD BE ROLLED AFTER INSTALLATION. ALL SEEDING AND/OR SODDED AREAS SHOULD PROVIDE A SMOOTH SURFACE FREE OF DIPS AND UNLEVELED GROUND.
  - IRRIGATION SHALL BE DESIGNED AND INSTALLED BY A LICENSED IRRIGATION CONTRACTOR IN THE STATE OF NORTH CAROLINA. IRRIGATION IS REQUIRED AT THE BUILDING PERIMETER, FRONT ENTRY, AND THE PLAYGROUND FIELDS. PLANS AND SPECIFICATIONS FOR THE IRRIGATION DESIGN SHALL BE SUBMITTED TO THE OWNER OR OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO PURCHASE OR INSTALLATION OF THE MATERIALS. (IBD ALT. #13)
  - THE CONTRACTOR IS RESPONSIBLE FOR HAND WATERING THE INSTALLED PLANT MATERIAL FOR A PERIOD OF 6 MONTHS FROM THE ACCEPTANCE FROM THE OWNER OR OWNER'S REPRESENTATIVE IF IRRIGATION HAS NOT BEEN INSTALLED AT THE TIME OF SUBSTANTIAL COMPLETION. ALL MATERIAL INSTALLED SOD AND SEEDING AREAS SHALL BE HAND WATERED ONCE WEEKLY OR AS NEEDED TO ENSURE SURVIVAL OF PLANTS.
  - CONTRACTOR IS RESPONSIBLE FOR REMOVING TRASH, DEBRIS AND EXCESS MATERIALS FROM THE JOB SITE ONCE THE PROJECT IS COMPLETE. SECURING ANY MATERIALS LEFT ON SITE DURING THE COURSE OF THE PROJECT IS THE CONTRACTOR'S RESPONSIBILITY. ALL DISTURBED AREAS NOT DESIGNATED FOR SOD SHALL BE SEEDING.
  - ALL VEGETATION PROPOSED WITHIN SIGHT DISTANCE AREAS SHALL NOT INTERFERE WITH SIGHT DISTANCE FROM 30' TO 10'.

- BUFFER LANDSCAPE CALCULATIONS:**
- BUFFER REQUIREMENTS:**
- LOCATED BETWEEN ANY RESIDENTIAL AND NON RESIDENTIAL USE
  - 100% OPAQUE WITHIN 3 YRS OF PLANTING
  - EXISTING VEGETATION TO REMAIN UNDISTURBED WITHIN BUFFER AREAS. BUFFER AREAS TO BE AUGMENTED WHERE DEEMED UNSUITABLE BY CITY OF WILMINGTON PLANNING STAFF.
  - BUFFERS TO BE AUGMENTED BY PLANTING AS FOLLOWS:
    - SHADE TREES TO BE A MINIMUM OF 2.5" CAL., UNDERSTORY AND MULTI-STEM TREES TO BE A MINIMUM OF 8' - 10' HGT., AND SHRUBS TO BE A MINIMUM OF 12" HGT.
  - PLANT TYPES ARE TO BE CONSISTENT WITH THOSE PROPOSED ON THIS PLAN OR AS EXISTING WITHIN THOSE BUFFER AREAS AS APPROPRIATE.
  - BUFFER WIDTH = 50% OF BUILDING SETBACK, NOT LESS THAN 20'.
    - LEFT (NORTH): N/A (ADJACENT TO RAILROAD)
    - RIGHT (SOUTH): N/A (ADJACENT TO O&I PROPERTY)
    - REAR (EAST): 25' WIDE (ADJACENT TO MF-M PROPERTY)
    - N/A (ADJACENT TO CS PROPERTY)

**LEGEND:**

[Symbol]	SPILL GUTTER
[Symbol]	PROPOSED HEAVY DUTY ASPHALT
[Symbol]	PROPOSED BUILDING
[Symbol]	PROPOSED CONCRETE
[Symbol]	PROPOSED CHAIN LINK FENCE
[Symbol]	PROPOSED TREE LINE
[Symbol]	PROPOSED LIGHT POLE
[Symbol]	PROPOSED TREE PROTECTION FENCE



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

NCDCNR PWSS WATER PERMIT #: \_\_\_\_\_ GPD  
WATER CAPACITY: \_\_\_\_\_ GPD  
DWQ SEWER PERMIT #: \_\_\_\_\_ GPD  
SEWER CAPACITY: \_\_\_\_\_ GPD  
SEWER SHED # AND PLANT: \_\_\_\_\_  
SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

**Approved Construction Plan**  
Name \_\_\_\_\_ Date \_\_\_\_\_  
Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

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

**REVISIONS:**

**CLIENT INFORMATION:**  
**GK Cape Fear** DEVELOPMENT  
1051 MILITARY CUTTUFF RD., STE. 200  
WILMINGTON, NC 28405

**PARAMOUNTE ENGINEERING**  
122 Cinema Drive  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6700 (F)  
NC License # C-2846

**LANDSCAPE PLAN**  
17TH STREET MINI STORAGE  
1101 S. 17TH STREET  
CITY OF WILMINGTON  
NORTH CAROLINA

**PROJECT STATUS:**  
CONCEPTUAL LAYOUT:  
FINAL DESIGN:  
RELEASED FOR CONST:

**DRAWING INFORMATION:**  
DATE: 01/20/2025  
SCALE: 1"=30'  
DESIGNED: [Signature]  
CHECKED: [Signature]

SEAL

**L-1.0**

PEJ JOB#: 16312.PE

PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION