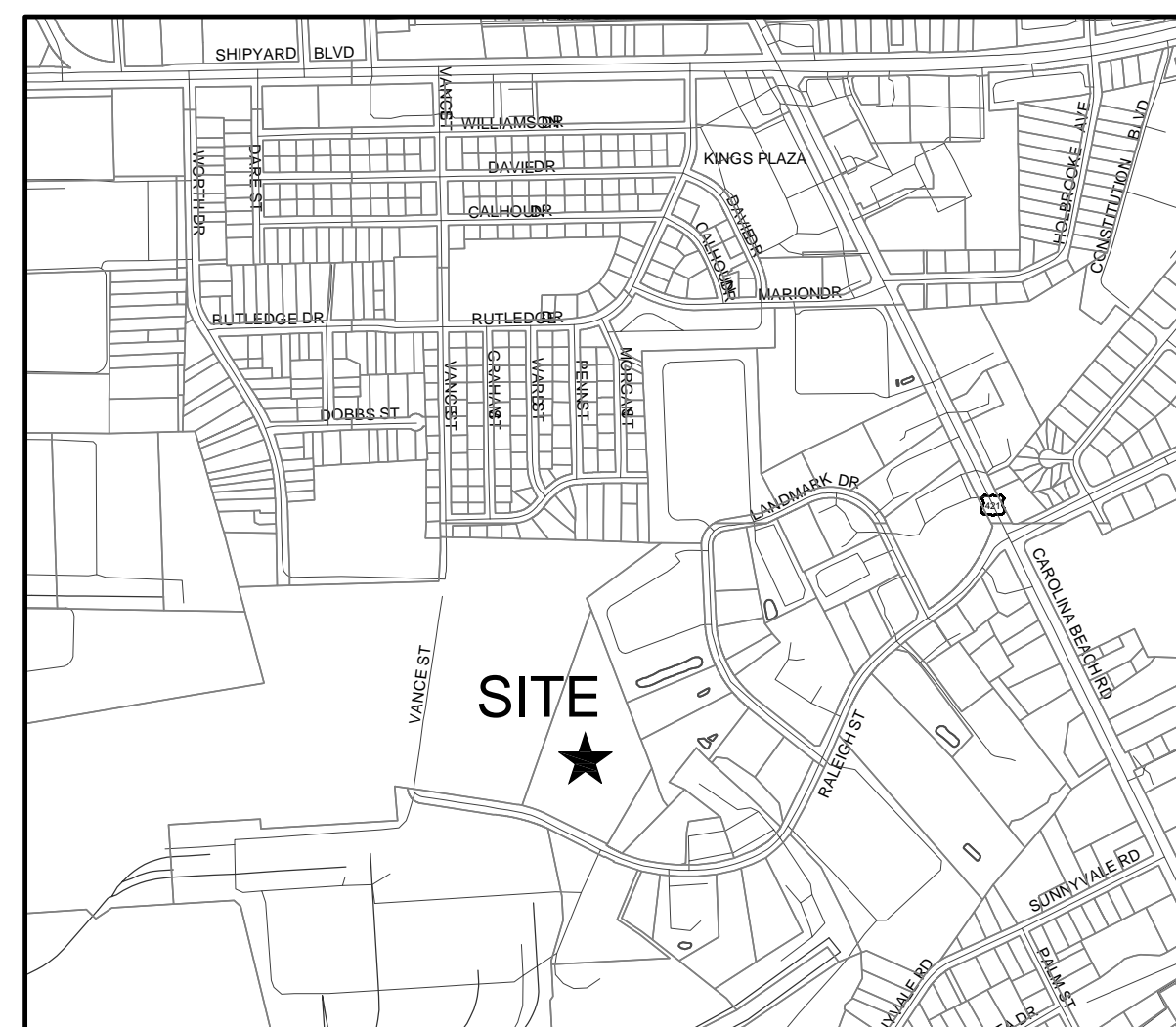


CONCRETE BATCHING PLANT

239 RALEIGH STREET
WILMINGTON, NORTH CAROLINA 28401

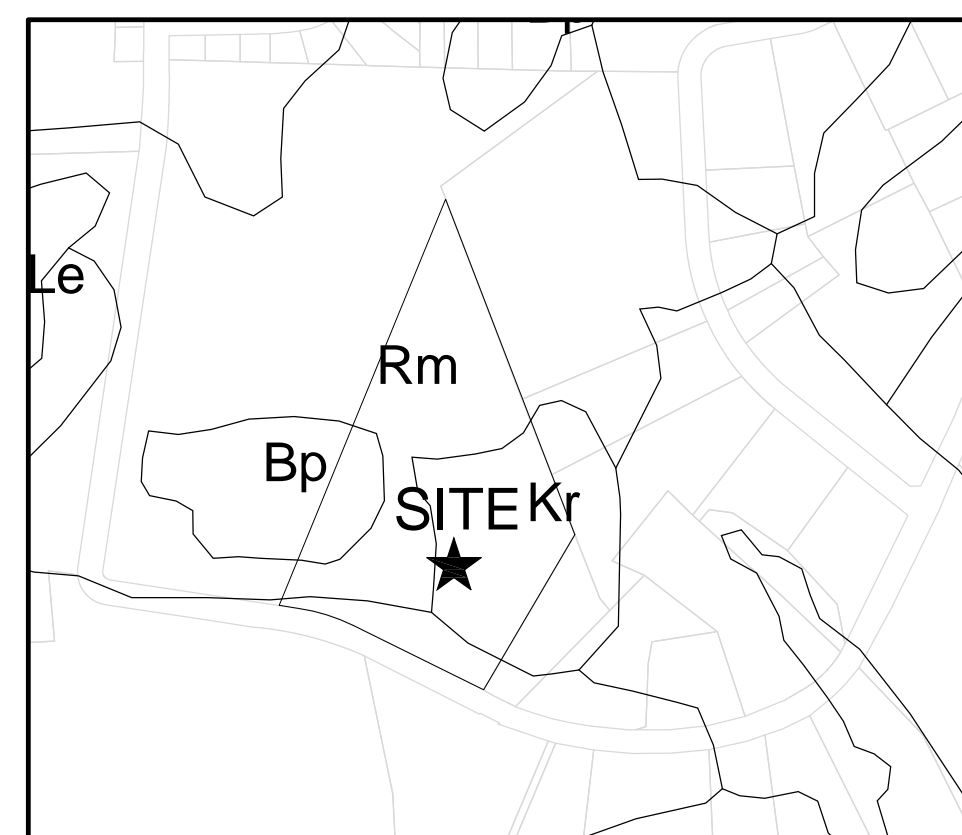
CONSTRUCTION DOCUMENTS

PROJECT ADDRESS:
239 RALEIGH STREET
WILMINGTON, NC 28401



VICINITY MAP

SCALE: 1"=1000'



SOILS MAP

SCALE: 1"=500'

NOTICE REQUIRED

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.

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.

CONTRACTORS SHALL CONTACT OVERHEAD ELECTRIC PROVIDER TO COMPLY WITH FEDERAL OSHA 1910.333 MINIMUM APPROACH DISTANCE TO ENERGIZED POWERLINES AND OSH 29 CFR 1926.1407-1411 MUST BE FOLLOWED.

CONTRACTOR SHALL CONTACT AT&T PRIOR TO ANY DEMOLITION TO ALLOW FOR AT&T TO DISCONNECT COMMUNICATIONS CABLES COMING INTO THE SITE.

CONTACT THESE UTILITIES

CITY OF WILMINGTON PLANNING & DEVELOPMENT
ATTN: BRIAN CHAMBERS, PLANNER
PH: 910-342-2782

ATTN: ZONING INSPECTIONS
PH: 910-254-0900

PIEDMONT NATURAL GAS
ATTN: CATHY PLEASANT
PH: 910-251-2827

EMERGENCY DIAL 911
POLICE - FIRE - RESCUE
ATTN: CITY OF WILMINGTON FIRE & LIFE SAFETY
PH: 910-343-0696

CAPE FEAR PUBLIC UTILITY AUTHORITY (WATER & SEWER)
ENGINEERING/INSPECTIONS
PH: 910-332-6560

OPERATIONS/MAINTENANCE
PH: 910-322-6550

DUKE ENERGY
DISTRIBUTION CONSTRUCTION SERVICE
DEP CSC PH: 1-800-452-2777

TRANSMISSION AGENT
BILL WILDER
PH: 910-772-4903

AT&T/BELL SOUTH
ATTN: STEVE DAYVAULT (BUILDING ENGINEERING)
PH: 910-341-0741

ATTN: JAMES BATSON, ENGINEERING
PH: 910-341-1621

SPECTRUM
GENERAL PH: 800-892-4357

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	_____	
Public Services • Engineering Division APPROVED STORMWATER MANAGEMENT PLAN Date: _____ Permit #: _____ Signed: _____		

OWNER / DEVELOPER:
CRETE HOLDINGS, LLC
2005 EASTWOOD RD., STE. 200
WILMINGTON, NORTH CAROLINA 28403
ATTN: JOHN ALLEN (910) 726-1693

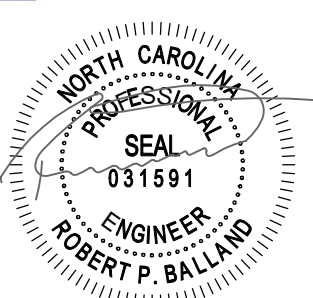
ENGINEER (CIVIL), & LANDSCAPE ARCHITECT:
PARAMOUNTE ENGINEERING, INC.
122 CINEMA DRIVE
WILMINGTON, NORTH CAROLINA 28403
ATTN: ROB BALLAND, P.E. (910) 791-6707

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
C-0.0	COVER SHEET
G-1.0	GENERAL NOTES
C-2.0	SITE PLAN
C-2.1	SITE INVENTORY MAP
G-3.0	PH: EROSION CONTROL PLAN
C-3.1	GRADING & DRAINAGE PLAN
G-3.2 & G-3.3	PRE / POST DRAINAGE AREA MAPS
G-3.4	STORM DRAINAGE DA MAP
C-4.0	UTILITY PLAN
C-5.0-5.1	DETAILS
L-1.0	LANDSCAPE PLAN

PREPARED BY:

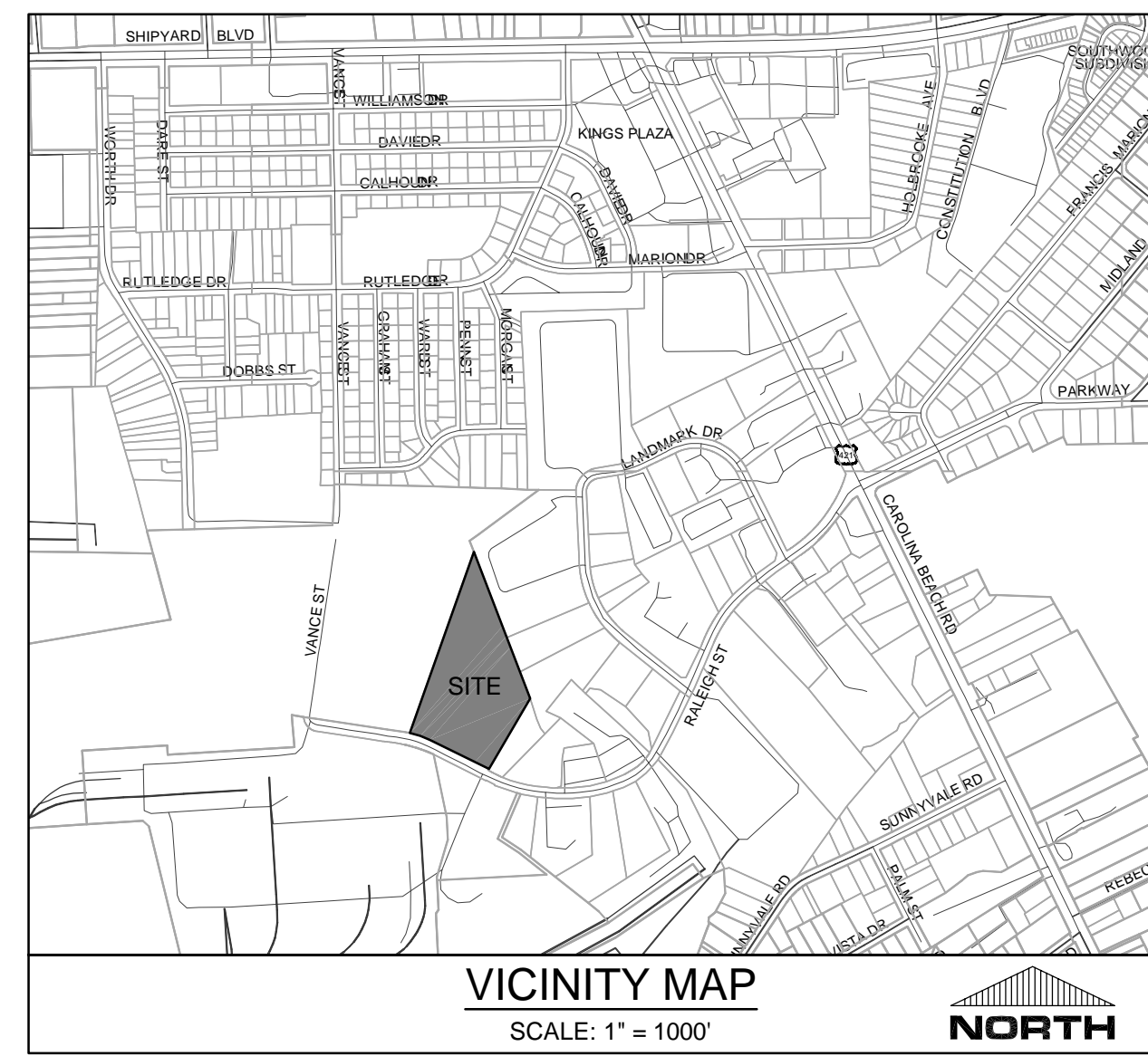
PARAMOUNTE
ENGINEERING, INC.

122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846
PROJECT # 17256.PE



10/25/17

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION



SITE DATA TABULATION

OWNER: CRETE HOLDINGS, LLC
PROJECT ADDRESS: 239 RALEIGH STREET, WILMINGTON, NC 28401
TAX PARCEL IDENTIFICATION #: R06400-002-008-000 (10.01 AC)
RECORDED DEED BOOK: BK 5896, PG 2491
TOTAL SITE AREA: 10.01 ACRES (436,036 SF)
CURRENT ZONING: IND - HEAVY INDUSTRIAL
CAMA LAND USE CLASSIFICATION: URBAN
MAXIMUM ALLOWABLE BUILDING HEIGHT: 35' MAXIMUM; 150' W/ ADDITIONAL SETBACKS
EXISTING LAND USE: UNDEVELOPED
PROPOSED LAND USE: CONCRETE BATCHING PLANT

SETBACK STANDARDS
 MINIMUM FRONT SETBACK: 50 FT.
 MINIMUM SIDE/REAR SETBACK: 18.4 FT. (81' BLDG. HT.-35'=46' / 10' * 4' = 18.4')

PER CITY OF WILMINGTON LAND DEVELOPMENT CODE SEC. 18-199.1.3.a
 REAR AND INTERIOR SIDE SETBACK REQUIREMENTS FOR BULK STORAGE AND HANDLING FACILITIES MAY MEASURED HORIZONTALLY FOR EACH SPECIFIED INCREMENT IN BUILDING HEIGHT.

SITE INFORMATION

LOT AREA: 436,036 SF (10.01 AC)
MINIMUM LOT SIZE: NONE
PROPOSED IMPERVIOUS AREA
 TOTAL BUILDING (PROPOSED FOOTPRINT): 6,691 SF
 ON-SITE PARKING & DRIVEWAYS: 24,000 SF
 GRAVEL DRIVE: 30,000 SF
 ON-SITE SIDEWALKS: 500 SF
 OFF-SITE IMPERVIOUS: (3,910) SF
 FUTURE IMPERVIOUS: 13,809 SF
 TOTAL PROPOSED IMP. AREA: 75,000 SF (1.722 AC)

PROPOSED PERCENT IMPERVIOUS: 75,000 / 436,036 SF = 17.20%

SITE PARKING

MINIMUM PARKING REQUIRED: 1/1,500 SF (MIN.) OR 1/1,000 SF (MAX.)
 PER SEC. 18-528 (e), FOR MANUFACTURING AND WAREHOUSING USES CONTAINING A MINIMUM (CUMULATIVE) STRUCTURE SIZE OF TWENTY-FIVE THOUSAND (25,000) SQUARE FEET AND WHICH ARE NOT GENERALLY DEPENDENT ON WALK-IN TRADE FOR THEIR BUSINESS OPERATIONS, THE PARKING REQUIREMENT MAY BE REDUCED TO A MINIMUM OF 1:15 PARKING SPACES PER EMPLOYEE ON THE SHIFT OF THE AVERAGE GREATEST EMPLOYMENT.
TOTAL PARKING REQUIRED ADJUSTED: 1.15 * 25,000SF = 28,750SF / 1,500SF = 19 SPACES
 ASSUMING 25,000SF MINIMUM:

TOTAL PARKING PROVIDED: 24 PARKING SPACES
HANDICAP PARKING REQUIRED: 1 SPACE
HANDICAP PARKING PROVIDED: 1 SPACE
BICYCLE PARKING REQUIRED: 0 SPACE

SURVEY NOTES:

EXISTING CONDITIONS, TOPOGRAPHIC, AND BOUNDARY SURVEY PROVIDED BY BNH SURVEY COMPANY. SURVEY DATED MAY 8, 2017.

WASTE DISPOSAL NOTE:

TRASH SERVICE WILL BE CONTRACTED WITH A PRIVATE WASTE PROVIDER.

KEY NOTES:

- 1A LIGHT-DUTY CONCRETE PAVING: REFER TO DETAIL C-5.0
- 1B HEAVY-DUTY CONCRETE PAVING: REFER TO DETAIL C-5.0
- 2A LIGHT DUTY ASPHALT PAVING: REFER TO DETAIL C-5.0
- 2B HEAVY DUTY ASPHALT PAVING: REFER TO DETAIL C-5.0
- 3 STANDARD 24" CURB & GUTTER: REFER TO DETAIL C-5.0
- 4 CONCRETE SIDEWALK: REFER TO DETAIL C-5.0
- 5 EXPOSED FACE CONCRETE SIDEWALK TO ASPHALT DETAIL: SEE DETAIL C-5.0
- 6 TRANSITION CURB DETAIL: SEE DETAIL C-5.0
- 7 CONCRETE DRIVE APRON (COMMERCIAL): SEE DETAIL C-5.1
- 8 STRIPING: PROVIDE 4" WIDE PARKING LOT STRIPING AS SHOWN. USE HIGHWAY MARKING PAINT - WHITE (2 COATS).
- 9 HANDICAP PARKING SIGN: REFER TO DETAIL C-5.0
- 10 HANDICAP PARKING SYMBOL: REFER TO DETAIL C-5.0
- 11 DETECTIBLE WARNING MAT: REFER TO DETAIL C-5.0
- 12 HANDICAP ACCESS UNLOADING ZONE: SLOPE 2% MAX. EACH WAY (ADA COMPLIANT) AND STRIPE AS SHOWN.
- 13 DESIGNATED ACCESSIBLE ROUTE: PROVIDE STRIPING AND SLOPE 5% MAXIMUM IN DIRECTION OF TRAVEL WITH 2% MAXIMUM CROSS SLOPE.
- 14 CONCRETE BUMPER BLOCK: 8" x 5" x 6"-0 LONG CONCRETE. ANCHOR TO PAVING WITH (2) 1'-6" LONG #4 REBAR. REFER TO DETAIL C-5.0
- 15 PARKING LOT SITE LIGHTING: REFER TO C-2.4 FOR COORDINATE PLAN AND STRUCTURAL AND ELECTRICAL FOR TYP. DETAILS
- 16 GRAVEL DRIVE/PARKING AREA: SEE DETAIL C-5.0
- 17 "DO NOT ENTER" SIGN: SIGNS PER MUTCD STANDARDS

FLOOD NOTE

THE SUBJECT PARCEL IS NOT LOCATED WITHIN A 100-YEAR FLOOD ZONE AS INDICATED BY FEMA FLOOD ZONE PANEL 3720312500J BEARING AN EFFECTIVE DATE OF APRIL 3, 2006.

UTILITIES

1. WATER AND SEWER UTILITIES WILL BE PROVIDED BY CFPWA.
2. STORM WATER MANAGEMENT TO BE PROVIDED ON-SITE. SITE DRAINS TO BARNARDS CREEK WITH A WATER CLASSIFICATION OF C,SW

GENERAL NOTES

1. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
2. ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD STANDARDS.
3. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT OF WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
4. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
5. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.

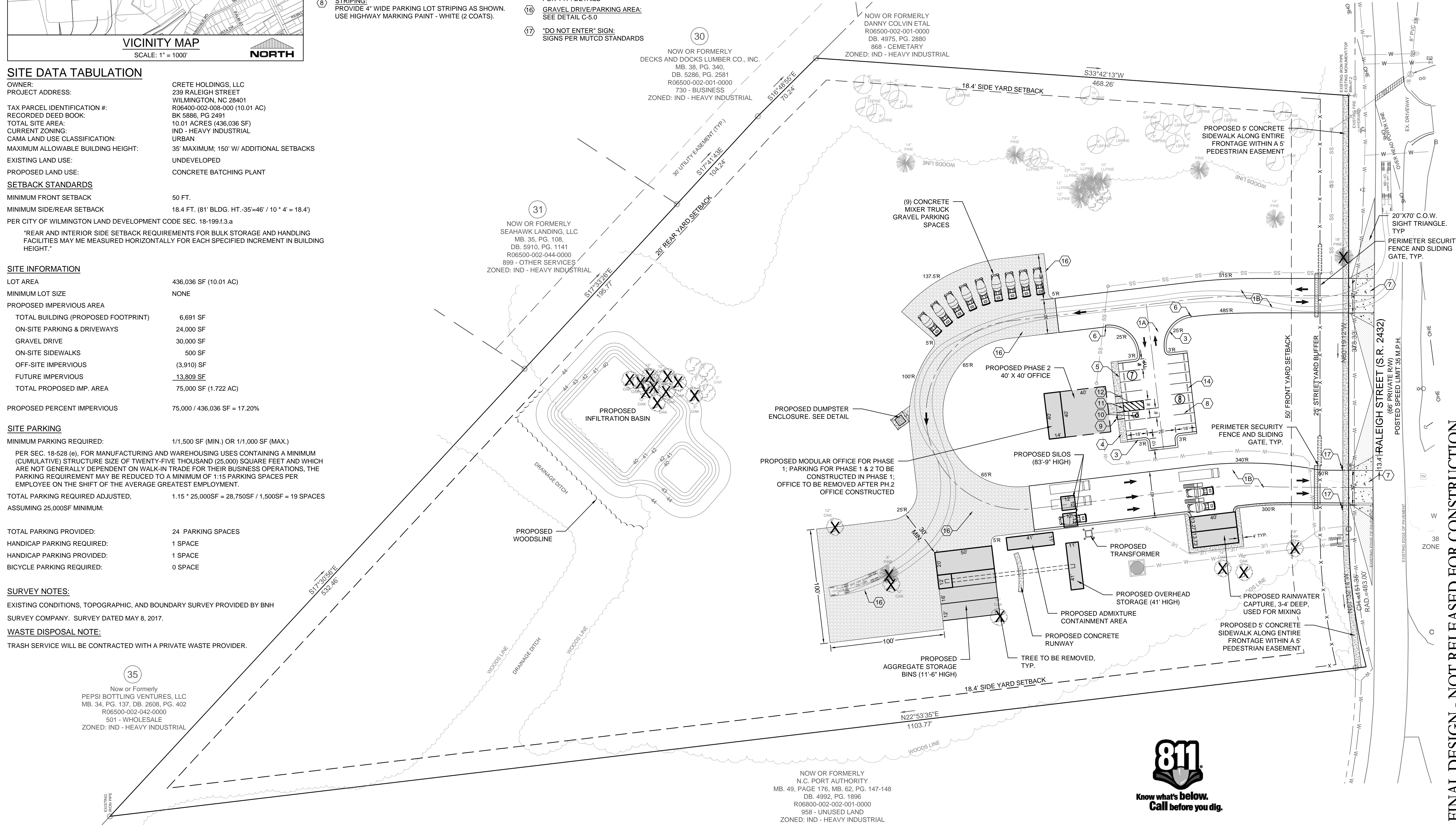
CITY OF WILMINGTON NORTH CAROLINA
 Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

Approved Construction Plan
 Name _____ Date _____

Planning _____
 Traffic _____
 Fire _____

NC DENR 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)

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



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

NO.	DATE	DESCRIPTION
1	11/16/17	REV 1: REVISED PER TRC COMMENTS

CLIENT INFORMATION:
PARAMOUNT ENGINEERING
 122 Cinema Drive
 Wilmington, North Carolina 28403
 (910) 791-6707 (O) (910) 791-6766 (F)
 NC License #: C-2846

SITE PLAN
239 RALEIGH STREET
WILMINGTON
NEW HANOVER COUNTY, NC

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

DRAWING INFORMATION:
 DATE: 11/16/17
 DESIGNED: _____
 CHECKED: _____

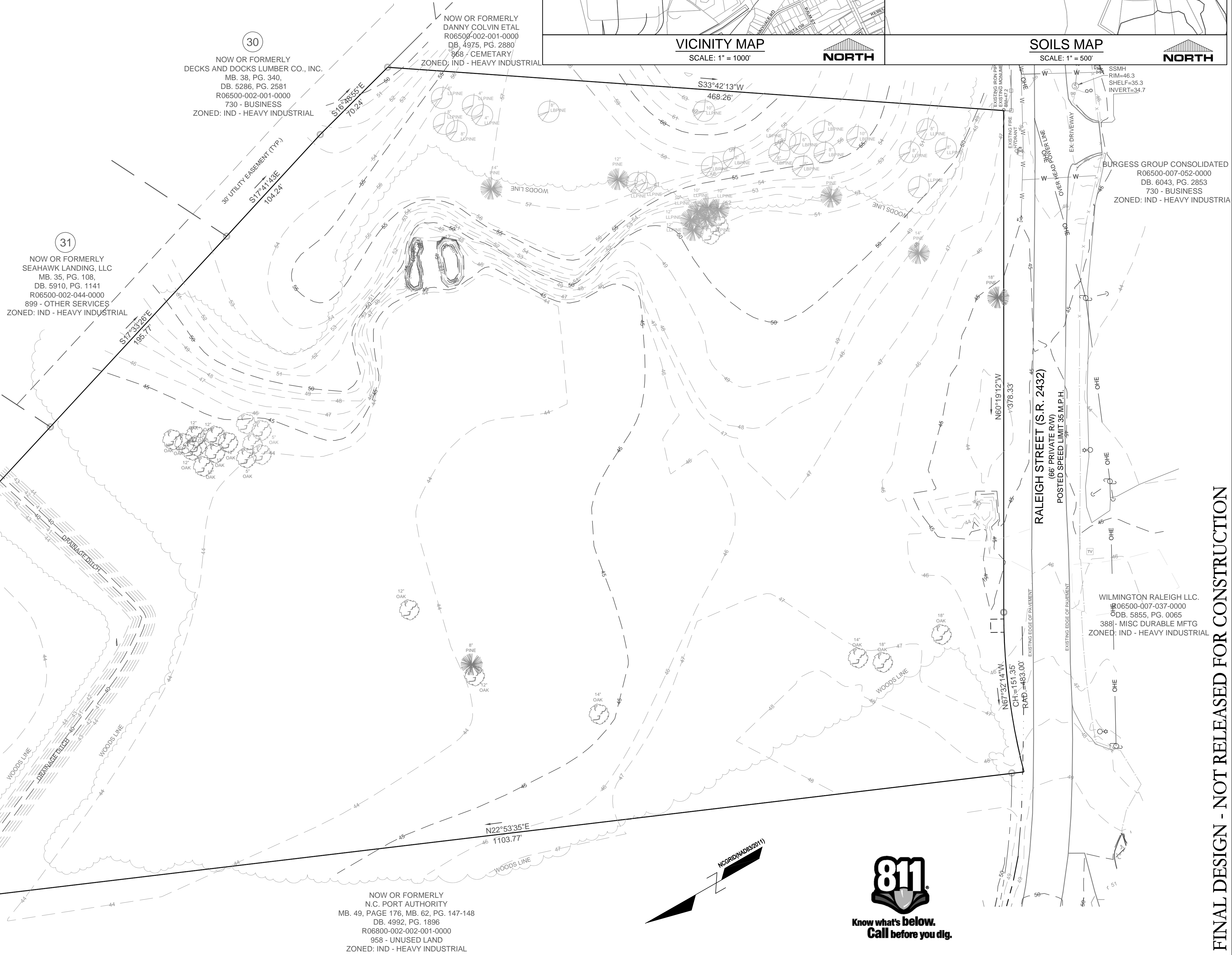
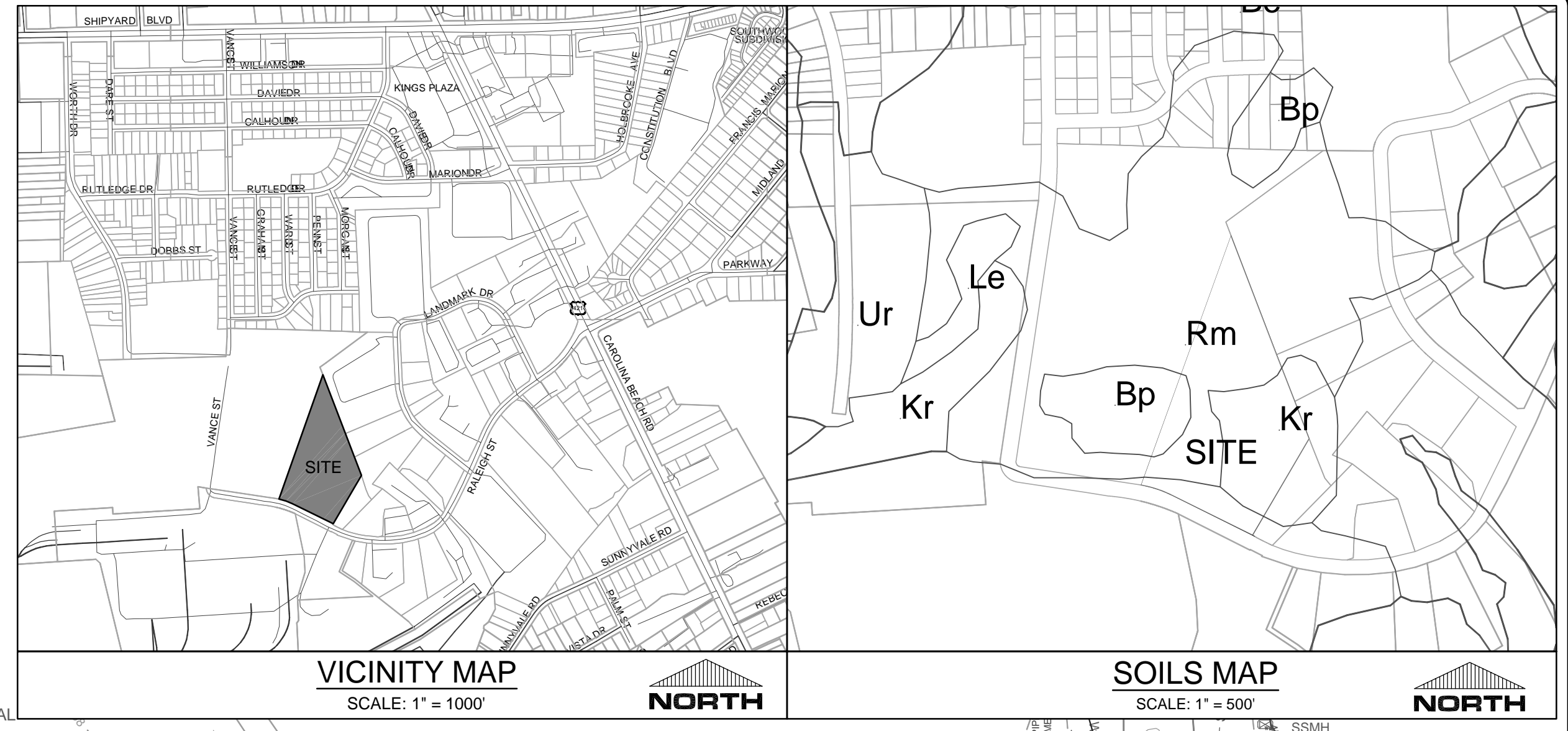
PEI JOB#: 17256.PE

C-2.0



SITE INVENTORY DATA

1. PREPARER OF THE PLAN:	PARAMOUNTE ENGINEERING 122 CINEMA DRIVE WILMINGTON, NC 28403
2. APPLICANT NAME:	CRETE HOLDINGS, LLC 2005 EASTWOOD RD., STE. 200 WILMINGTON, NC 28403
3. SITE ADDRESS:	239 RALEIGH STREET WILMINGTON, NC 28401
4. PROPERTY OWNER:	KILM INVESTMENTS, LLC 62 ROBIN HOOD ROAD BENSON, NC 27504
5. DEVELOPER:	SAME AS APPLICANT
6. PROPERTY BOUNDARY:	SEE PLAN
7. ZONING:	HI - HEAVY INDUSTRIAL
8. ADJACENT PROPERTY INFORMATION (OWNER AND ZONING):	SEE PLAN
9. VICINITY MAP:	SEE MAP ABOVE
10. TOPOGRAPHY:	SEE PLAN
11. 100 YEAR FLOOD PLAIN BOUNDARY:	SITE IS NOT LOCATED IN THE 100 YEAR FLOOD PLAIN
12. LOCATION OF EXISTING DITCHES, CREEKS, AND STREAMS:	SEE PLAN
13. SOILS:	KUREB (Kr) RIMINI (Rm) BORROW PIT (Bp) (SEE SOILS MAP ABOVE)
14. CAMA AEC & ASSOCIATED SETBACKS:	N/A
15. CAMA LAND CLASSIFICATION:	URBAN
16. CONSERVATION RESOURCES:	N/A
17. LOCAL, STATE, OR FEDERAL HISTORIC OR ARCHAEOLOGICAL SITE:	N/A
18. LOCATION OF CEMETERIES, BURIAL SITES, OR BURIAL GROUNDS:	CEMETERY ADJACENT TO SITE
19. SQUARE FOOTAGE OF FORESTED AREA, HABITAT, AND DOMINANT SPECIES:	N/A
20. SECTION 404 WETLANDS AND SECTION 10 WATERS:	N/A, VERIFIED BY LAND MANAGEMENT GROUP
21. PROTECTED SPECIES OR HABITAT:	N/A
22. THOROUGHFARES, BIKE ROUTES, SIDEWALKS, TRANSIT FACILITIES (EXISTING OR PROPOSED):	SEE PLAN & VICINITY MAP



REVISIONS:

REV 1:	REVISED PER TRC COMMENTS	11/16/17
--------	--------------------------	----------

CLIENT INFORMATION:
CRETE INVESTMENTS
 2005 Eastwood Road, Suite 200
 Wilmington, NC 28403

PARAMOUNTE
 ENGINEERING
 122 Cinema Drive
 Wilmington, North Carolina 28403
 (910) 791-6707 (O) (910) 791-6766 (F)
 NC License #: C-2846

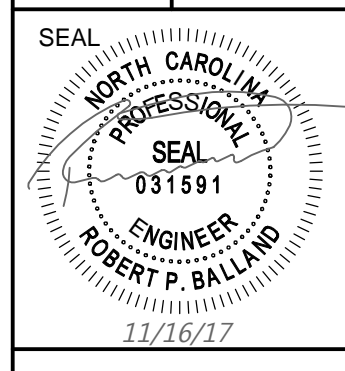
SITE INVENTORY MAP
 239 RALEIGH STREET
 WILMINGTON
 NEW HANOVER COUNTY, NC

PROJECT STATUS:

CONCEPTUAL LAYOUT:	11/16/17
PRELIMINARY LAYOUT:	
RELEASED FOR CONST.:	

DRAWING INFORMATION:

DATE:	11/16/17
DESIGNED:	
DRAWN:	
CHECKED:	

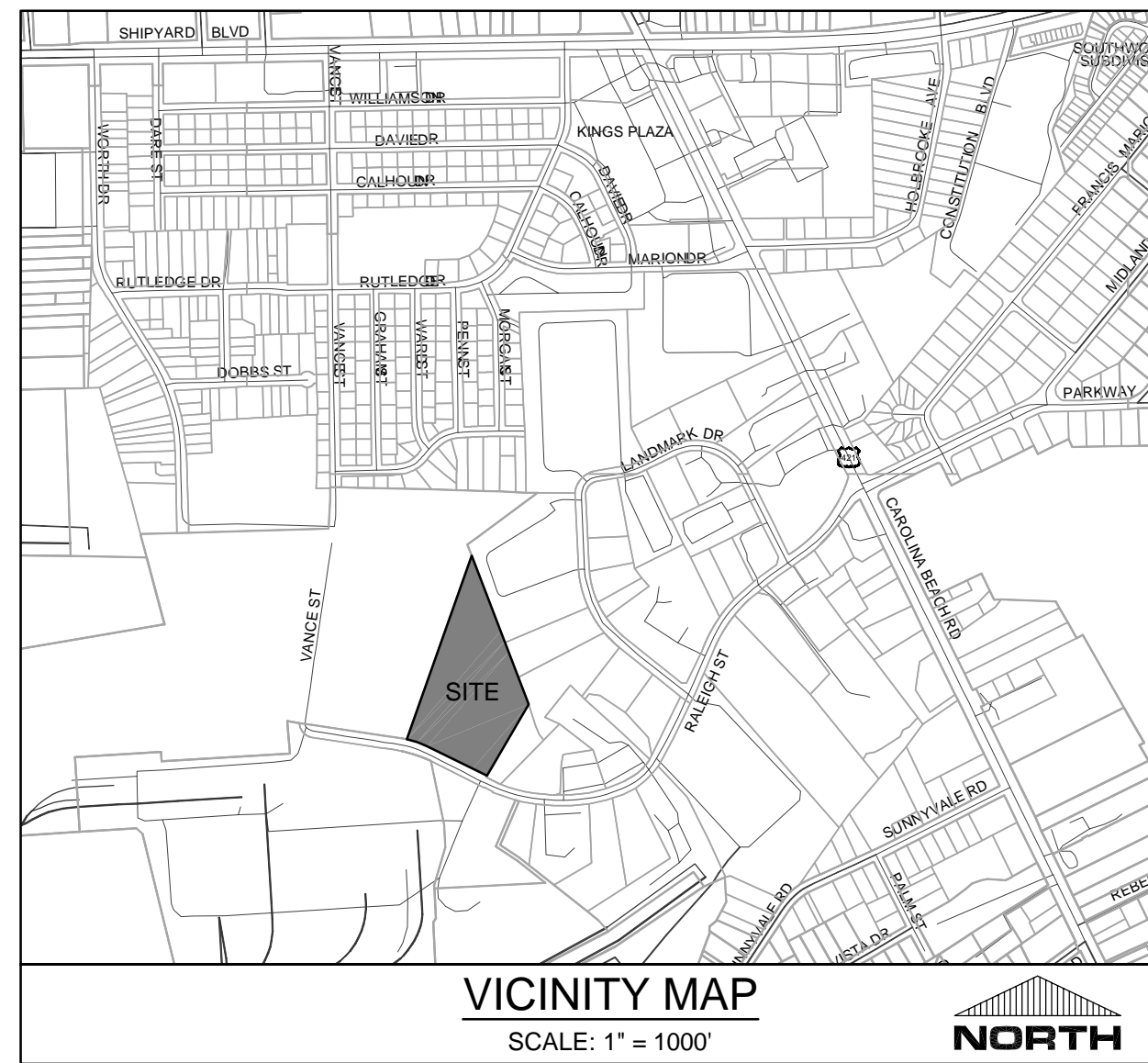


C-2.1
 PEI JOB#: 17256.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION



NOW OR FORMERLY
 N.C. PORT AUTHORITY
 MB. 49, PAGE 176, MB. 62, PG. 147-148
 DB. 4992, PG. 1896
 R06800-002-002-001-0000
 958 - UNUSED LAND
 ZONED: IND - HEAVY INDUSTRIAL



ASPHALT AREA NOTE:
 1. SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED SUBGRADE, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS.

BUILDING PAD NOTE:
 1. SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED BUILDING PAD, IN ACCORDANCE WITH STRUCTURAL DRAWINGS.

STORMWATER NOTE:
 1. THIS PROJECT DRAINS TO A PROPOSED ON-SITE STORM WATER INFILTRATION BASIN.
 2. ONCE SITE IS STABILIZED AND SEDIMENT BASIN IS CONVERTED TO AN INFILTRATION BASIN, CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM BASIN AND RESTORE TO DESIGN ELEVATIONS.
 3. CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PREVENT THE USE OF CONSTRUCTION EQUIPMENT OVER TOP OF THE PROPOSED INFILTRATION BASIN BOTTOM AREA CAUSING SOILS TO COMPACT.

GENERAL NOTES:
 1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL STATE OF NC, CITY OF WILMINGTON, AND NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.
 2. THE CONTRACTOR SHALL PLACE INLET PROTECTION AROUND ALL STORM DRAIN INLETS TO PROTECT THE SYSTEM FROM COLLECTING SEDIMENTATION DURING CONSTRUCTION. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE PARKING LOT IS PAVED.
 3. CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT OVERLAY AND NEW ASPHALT AREAS TO MATCH PROPOSED GRADES.
 4. ALL PROPOSED SPOT ELEVATIONS SHOWN IN THE PARKING LOT ARE PROPOSED EDGE OF PAVEMENT OR FACE OF CURB @ GUTTER FOR CURB SECTIONS, UNLESS NOTED OTHERWISE.
 5. ALL ROOF DRAINS SHALL BE DIRECTED TOWARDS ON-SITE COLLECTION SYSTEM. NO ROOF DRAINS SHALL BE DIRECTED OFF-SITE WITHOUT ENTERING THE ON-SITE COLLECTION FIRST.
 6. ALL SIDEWALK CROSS SLOPES HAVE BEEN GRADED TO MEET ADA REGULATIONS. CONTRACTOR SHALL CONFIRM GRADES BEFORE PLACING PAVEMENT OR SIDEWALKS AND REPORT ANY DISCREPANCIES TO OWNER AND/OR ENGINEER.
 7. THE CONTRACTOR SHALL USE EITHER RCP (CL. III) OR HDPE PIPE FOR THE STORM DRAINAGE SYSTEM UNLESS NOTED OTHERWISE. IF THE CONTRACTOR CHOOSES TO USE HDPE PIPE, IT SHALL BE ADS N-12 WT STORM PIPE OR APPROVED EQUAL AND SHALL BE INSTALLED TO MANUFACTURER SPECIFICATIONS. IN ADDITION, THE CONTRACTOR SHALL BE SURE TO PROVIDE CONCRETE COLLARS AROUND EACH F.E.S. TO PREVENT FLOATATION IF HDPE PIPE IS CHOSEN.
 8. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL ENGINEERING REPORT FOR 239 RALEIGH STREET - WILMINGTON, NC, PREPARED BY ECS CAROLINAS, LLP, PROJECT NUMBER: 22.25615, AND DATED JULY 20, 2017 FOR SITE CONSTRUCTION RECOMMENDATIONS.
 9. CONTRACTOR SHALL STAKE SILT FENCE ALONG LIMITS OF DISTURBANCE LINE. THE SILT FENCE LINETYPE IS OFFSET ON THE DRAWING FOR CLARITY.

LEGEND:

- 16 --- EXISTING CONTOUR
- 29 --- PROPOSED CONTOUR
- EQ=25.05 EXISTING GRADE SPOT ELEVATION
- EP=25.05 PROPOSED EDGE OF PAVEMENT
- TW=25.05 PROPOSED SIDEWALK ELEVATION
- GL=25.05 PROPOSED GUTTER FLOW LINE
- TC=25.05 PROPOSED TOP OF CURB ELEVATION
- [Symbol] INLET PROTECTION
- [Symbol] LIMITS OF DISTURBANCE
- [Symbol] SILT FENCE
- [Symbol] TREE PROTECTION FENCING
- [Symbol] DRAINAGE FLOW PATH
- [Symbol] DRAINAGE INLET LABEL
- [Symbol] SPILL GUTTER
- [Symbol] ROCK INLET PROTECTION
- [Symbol] GEOTECH BORING LOCATION
- [Symbol] DRAINAGE FLOW PATH & SLOPE
- [Symbol] PROTECTIVE TREE FENCING

NOTATION:

- CI = CURB INLET
- DI = DROP INLET
- CO = CLEANOUT
- DDI = DOUBLE DROP INLET
- MH = STORM DRAIN CLEANOUT
- RD = ROOF DRAIN CLEANOUT
- FFE = FINISHED FLOOR ELEVATION
- BPE = BUILDING PAD ELEVATION

STORM SEWER SCHEDULE:

Upstream Node	Downstream Node	Diameter (in)	Upstream Pipe Invert (ft)	Downstream Pipe Invert (ft)	Pipe Length (ft)	Slope (%)	Upstream Rim Elev (ft)	Downstream Rim Elev (ft)	Pipe Material
DI-4	MH-3	15	41.63	41.27	72	0.50	46.46	47.18	RCP III
MH-3	DI-2	15	41.27	40.67	120	0.50	47.18	44.78	RCP III
DI-2	DI-1	18	40.67	40.01	132	0.50	44.78	44.78	RCP IV
DI-1	FES-1	18	40.01	39.00	201	0.50	44.78	42.00	RCP III
DI-5	MH-3	15	41.76	41.27	97	0.50	45.20	47.18	RCP IV

SWALE SCHEDULE:

SWALE #	RUNOFF			CHANNEL										Adequate Capacity?	Lining Required?
	A _d (acres)	C	Q _{design} (cfs)	Length (ft)	Inv In (ft)	Inv Out (ft)	S (ft/ft)	d (ft)	A _c (sf)	P (ft)	R	V _{actual} (fps)	Q _{actual} (cfs)		
Swale #1	0.96	0.68	4.63	579	44.94	42.00	0.0051	0.66	3.22	7.11	0.45	1.56	5.03	Y	N
Swale #2	0.67	0.23	1.09	136	42.95	42.54	0.0030	0.35	1.42	5.21	0.27	0.86	1.22	Y	N
Swale #3	0.51	0.26	0.94	108	43.57	43.25	0.0030	0.35	1.42	5.21	0.27	0.85	1.21	Y	N
Swale #4	0.41	0.27	0.79	108	47.50	43.87	0.0336	0.15	0.52	3.95	0.13	1.76	0.91	Y	N

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

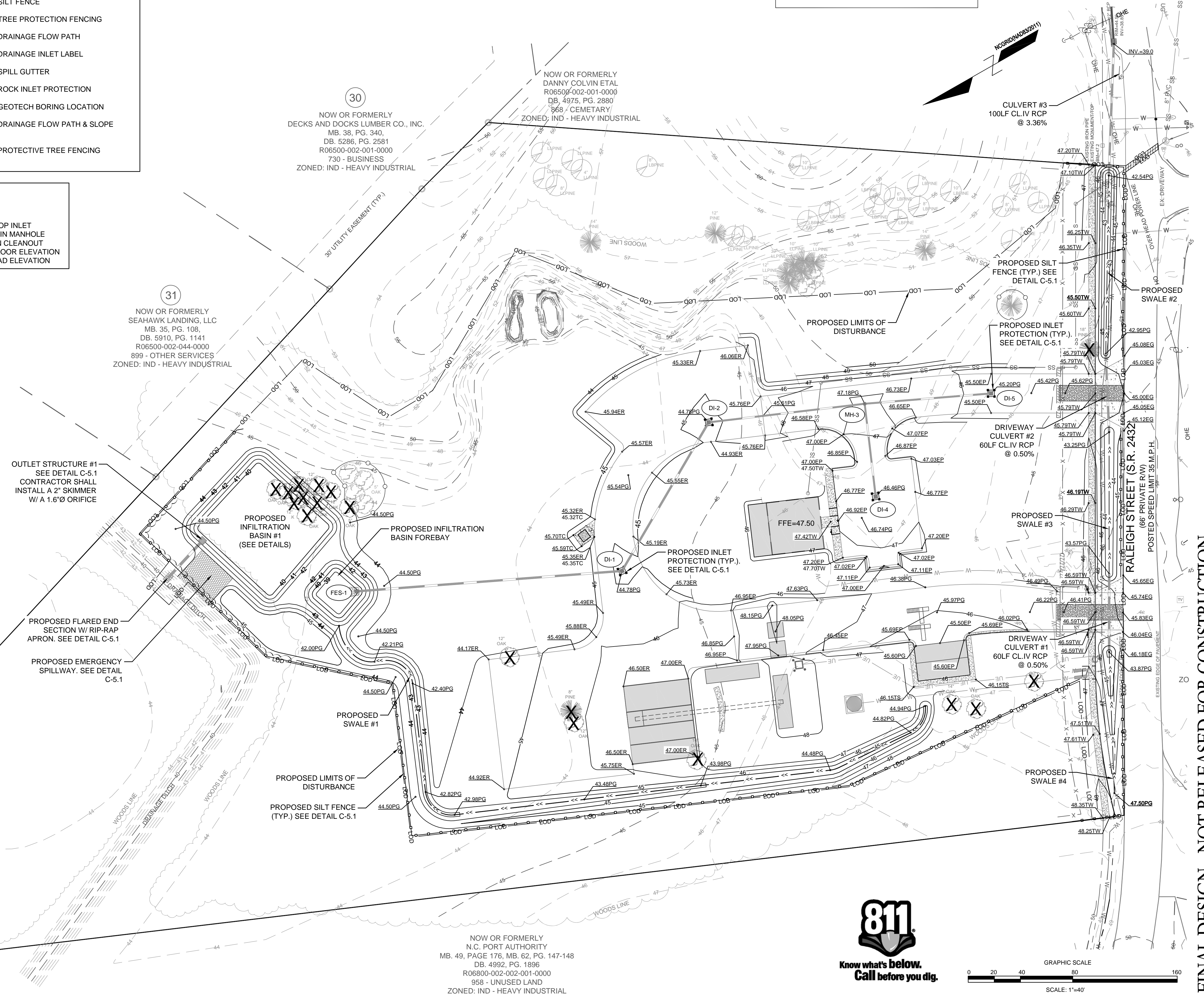
Date: _____ Permit # _____
 Signed: _____

Approved Construction Plan
 Name _____ Date _____

Planning _____
 Traffic _____
 Fire _____

NC DENR 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)

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



REVISIONS:

CLIENT INFORMATION:
CRETE INVESTMENTS
 2005 Eastwood Road, Suite 200
 Wilmington, NC 28403

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 (910) 791-6707 (O) (910) 791-6766 (F)
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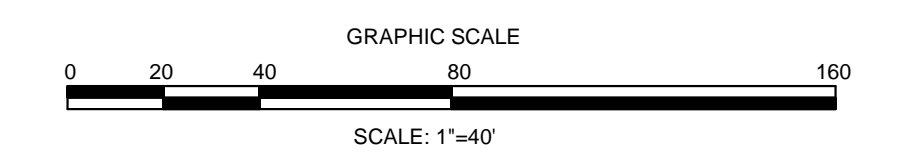
GRADING-DRAINAGE-EC PLAN
 239 RALEIGH STREET
 WILMINGTON
 NEW HANOVER COUNTY, NC

PROJECT STATUS:
 CONCEPTUAL LAYOUT: _____
 PRELIMINARY LAYOUT: _____
 RELEASED FOR CONST: _____

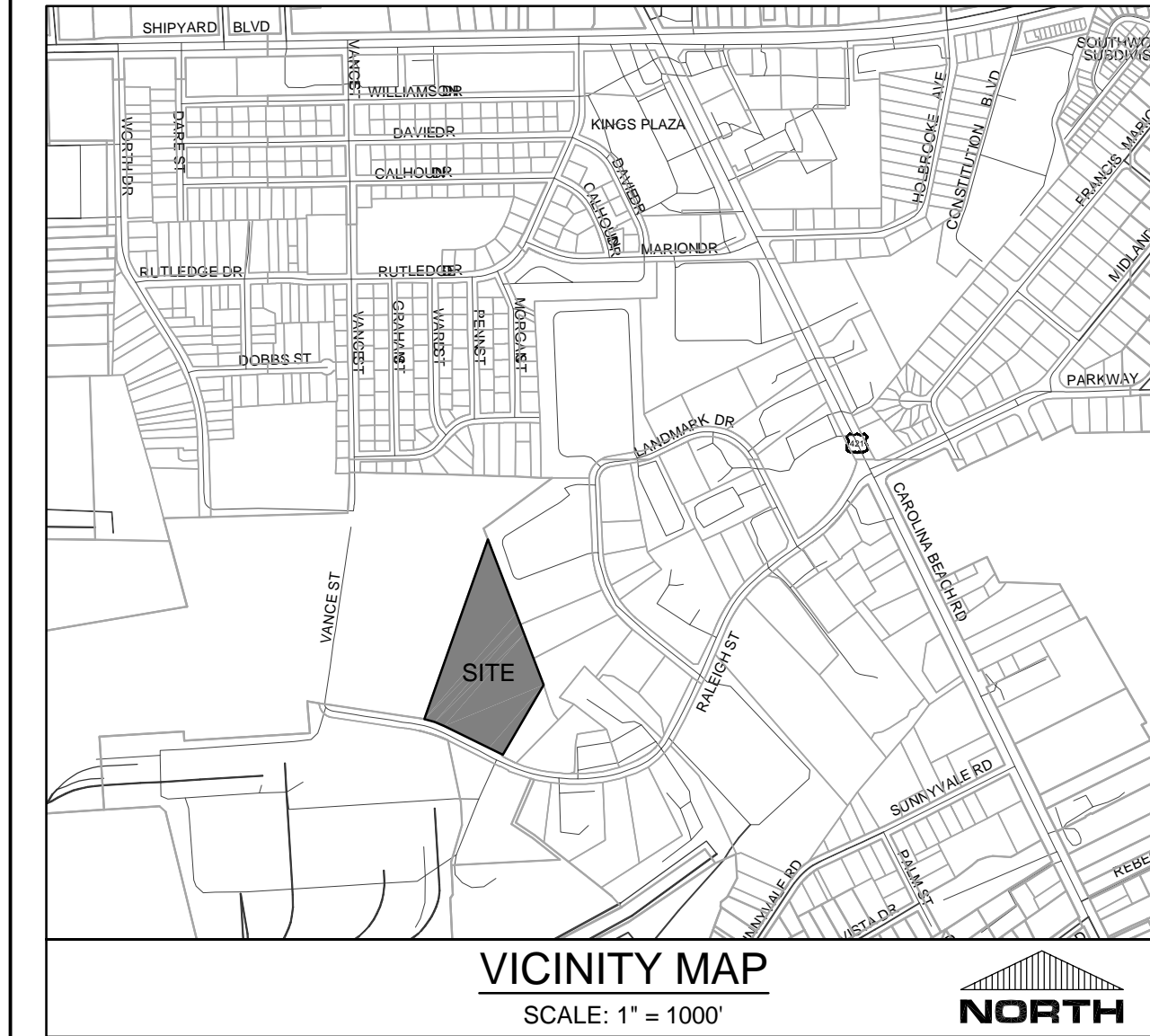
DRAWING INFORMATION:
 DATE: 10/25/17
 DESIGNED: _____
 CHECKED: _____

SEAL:
 NORTH CAROLINA PROFESSIONAL SEAL
 031591
 ENGINEER
 ROBERT P. BALLARD
 10/25/17

C-3.1
 PEI JOB#: 17256.PE



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION



SITE DATA TABULATION	
OWNER:	CRETE HOLDINGS, LLC
PROJECT ADDRESS:	239 RALEIGH STREET WILMINGTON, NC 28401
TAX PARCEL IDENTIFICATION #:	R06400-002-008-000 (10.01 AC)
RECORDED DEED BOOK:	BK 5886, PG 2491
TOTAL SITE AREA:	10.01 ACRES (436,036 SF)
CURRENT ZONING:	IND - HEAVY INDUSTRIAL
CAMA LAND USE CLASSIFICATION:	URBAN
MAXIMUM ALLOWABLE BUILDING HEIGHT:	35' MAXIMUM; 150' W/ ADDITIONAL SETBACKS
EXISTING LAND USE:	UNDEVELOPED
PROPOSED LAND USE:	CONCRETE BATCHING PLANT
CONSTRUCTION TYPE:	TYPE V

UTILITY INFORMATION

SANITARY SEWER

THIS PROJECT IS PROVIDING A NEW SEWER SERVICE TO AN EXISTING 10-INCH GRAVITY MAIN LOCATED WITHIN THE SHORT SIDE OF MARKET STREET RIGHT OF WAY. THIS PROJECT IS PROPOSING 6-INCH AND 4-INCH SERVICES AND SANITARY SEWER ALLOCATION IS PROVIDED BY CFPUA.

WATER

A 8-INCH WATER MAIN IS LOCATED WITHIN THE SHORT SIDE OF MARKET STREET RIGHT OF WAY. THE PROPOSED BUILDING WILL HAVE A 6-INCH FIRE SERVICE AND A 2-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 6" PLASTIC GAS MAIN LOCATED ALONG THE NORTH SIDE OF MARKET STREET EXTENDING FROM THE WEST AND ENDS JUST WEST OF THE SITE AT JUDGES ROAD. GAS IS PROVIDED BY PIEDMONT NATURAL GAS.

FLOOD NOTE

THE SUBJECT PARCEL IS NOT LOCATED WITHIN A 100-YEAR FLOOD ZONE AS INDICATED BY FEMA FLOOD ZONE PANEL 3720314800J BEARING AN EFFECTIVE DATE OF APRIL 3, 2006.

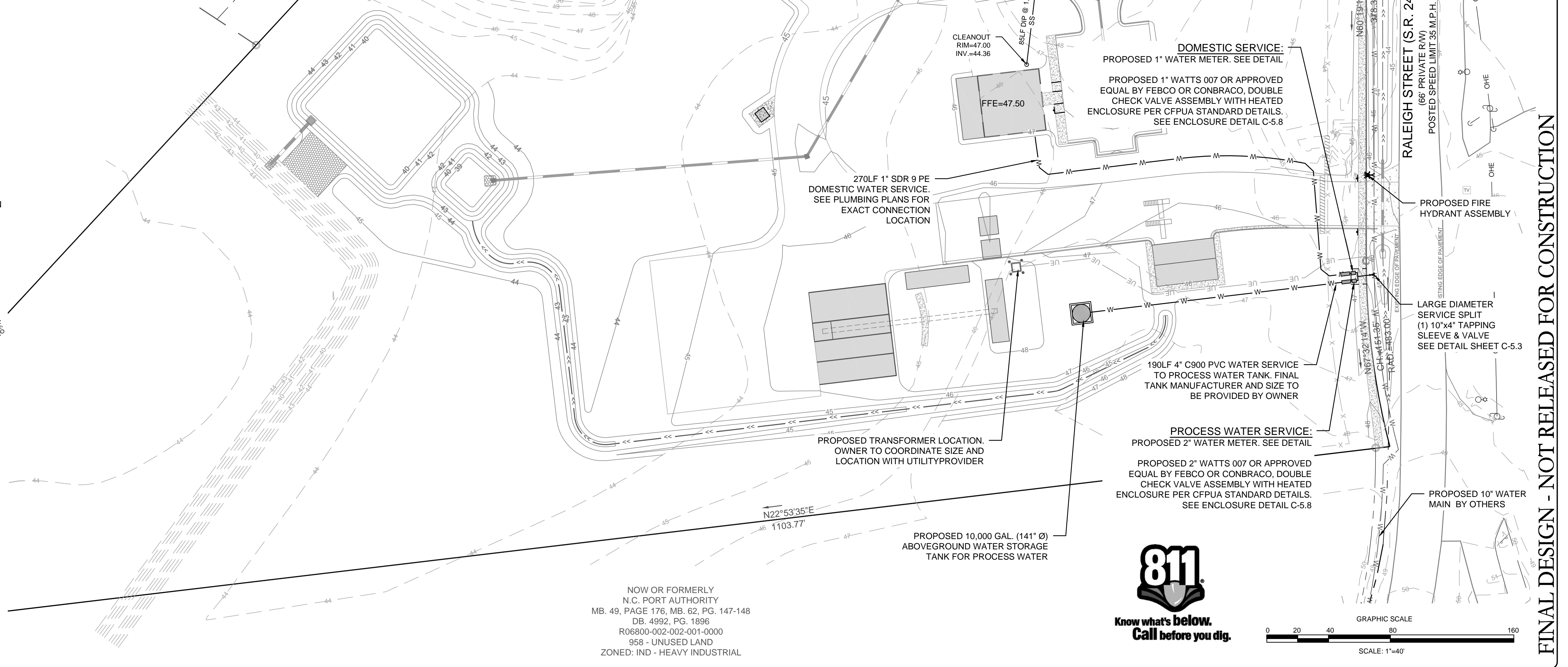
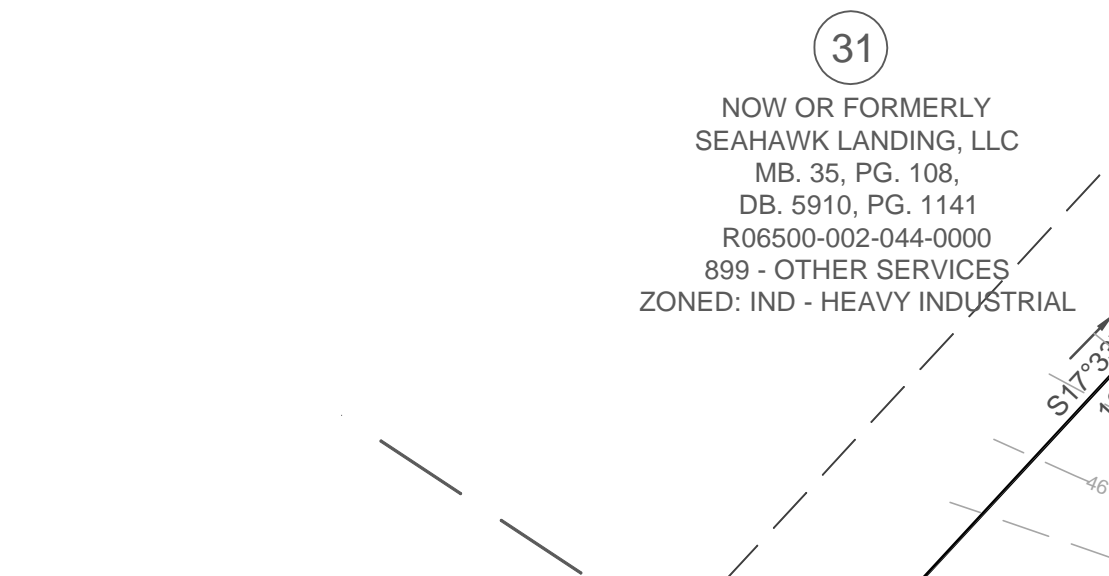
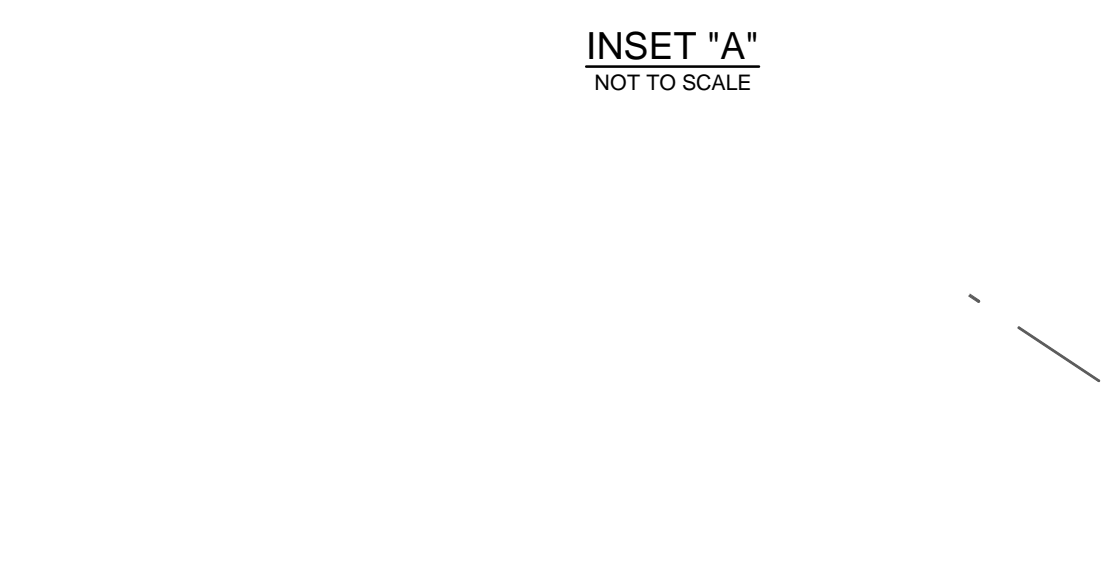
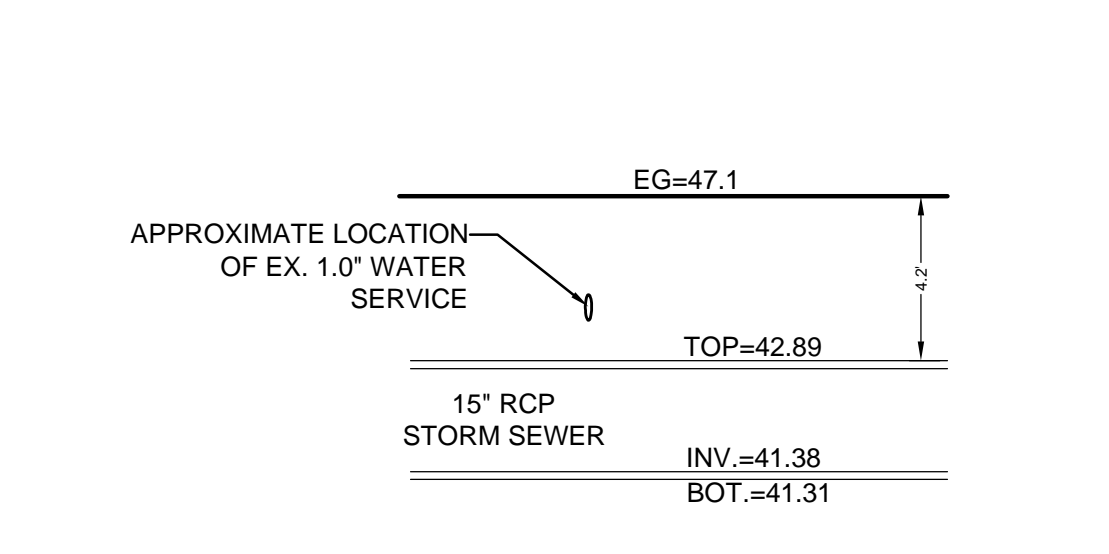
UTILITY NOTES: (NCAC 15A.02T.0305 / T15A.18C.0906)

1. WATER MAINS SHALL BE LAID SO AS TO PROVIDE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET FROM SEWERS. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, THE WATER MAIN CAN BE INSTALLED AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, EITHER IN A SEPARATE TRENCH, OR IN THE SAME TRENCH ON A BENCH OF UNDISTURBED EARTH.
2. WHEN CROSSING A WATER MAIN OVER A SEWER, THE WATER MAIN SHALL BE LAID AT LEAST 18 INCHES ABOVE THE SEWER. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH JOINTS THAT MEET WATER MAIN STANDARDS. THE DUCTILE IRON PIPE SHALL EXTEND 10 FEET ON EACH SIDE OF THE CROSSING WITH A SECTION OF WATER MAIN PIPE CENTERED ON THE CROSSING.
3. CROSSING A WATER MAIN UNDER A SEWER, WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
4. 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 AND STORM DRAIN SHALL BE RC PIPE.
5. 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 AND STORM DRAIN SHALL BE RC PIPE.

FIRE & LIFE SAFETY NOTES:

1. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS WITHIN ANY DEVELOPMENT.
2. HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
3. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION. THIS CAN BE SATISFIED BY INSTALLING THE BASE COURSE OF THE PROPOSED PAVEMENT SECTION.
4. A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
5. UNDERGROUND FIRE LINE & PRIVATE WATER MAINS MUST BE PERMITTED & INSPECTED BY CITY OF WILMINGTON FIRE & LIFE SAFETY SERVICES FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING.
6. ANY FDC MUST BE WITHIN 150' OF A FIRE HYDRANT & WITHIN 40' OF FIRE APPARATUS PLACEMENT.
7. LANDSCAPING OR PARKING CAN NOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT (3) CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF HYDRANTS AND FDC.

- CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER 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 R/W LINE. SEWER SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN 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 ALL PROPERTY CORNERS. WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNER.



CITY OF WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division

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 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.

REVISIONS:

REV 1:	REVISED PER TRC COMMENTS	11/16/17
--------	--------------------------	----------

CLIENT INFORMATION:

PARAMOUNT ENGINEERING

122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6766 (F)
NC License #: C-2846

UTILITY PLAN

239 RALEIGH STREET
WILMINGTON
NEW HANOVER COUNTY, NC

PROJECT STATUS:

CONCEPTUAL LAYOUT: _____

PRELIMINARY LAYOUT: _____

RELEASED FOR CONST: _____

DRAWING INFORMATION:

DATE: 11/16/17

DESIGNED: _____

CHECKED: _____

11/16/17

SEAL:

ROBERT P. BALLARD
ENGINEER
031591
11/16/17

C-4.0

PEI JOB#: 17256.PE

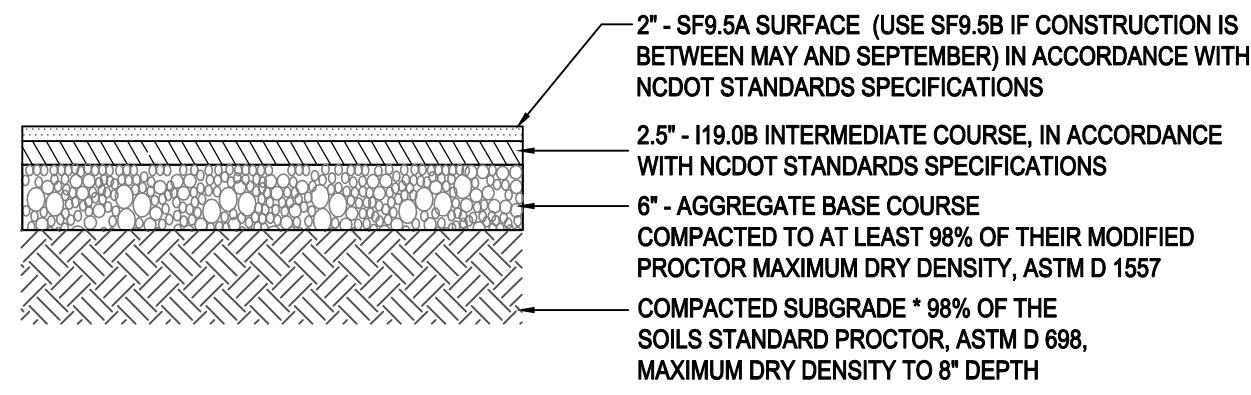
Know what's below.
Call before you dig.

GRAPHIC SCALE

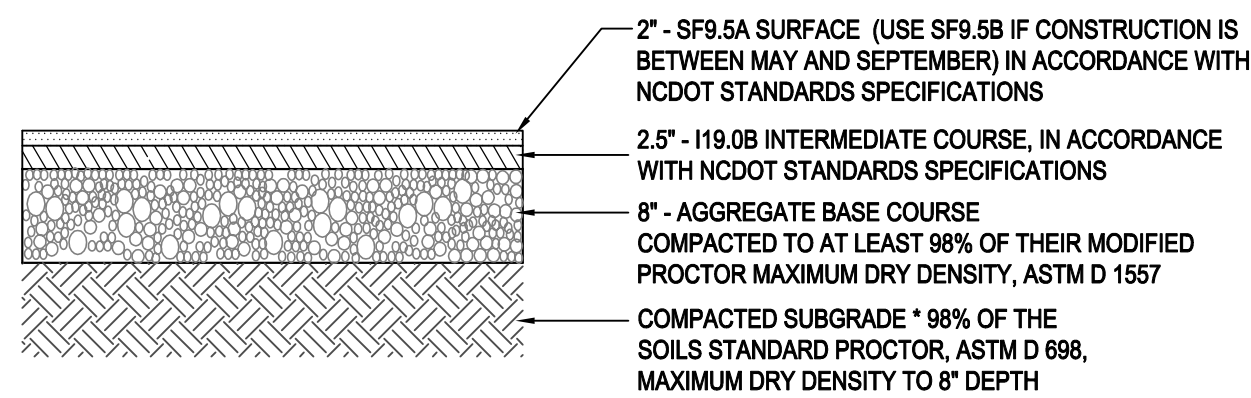
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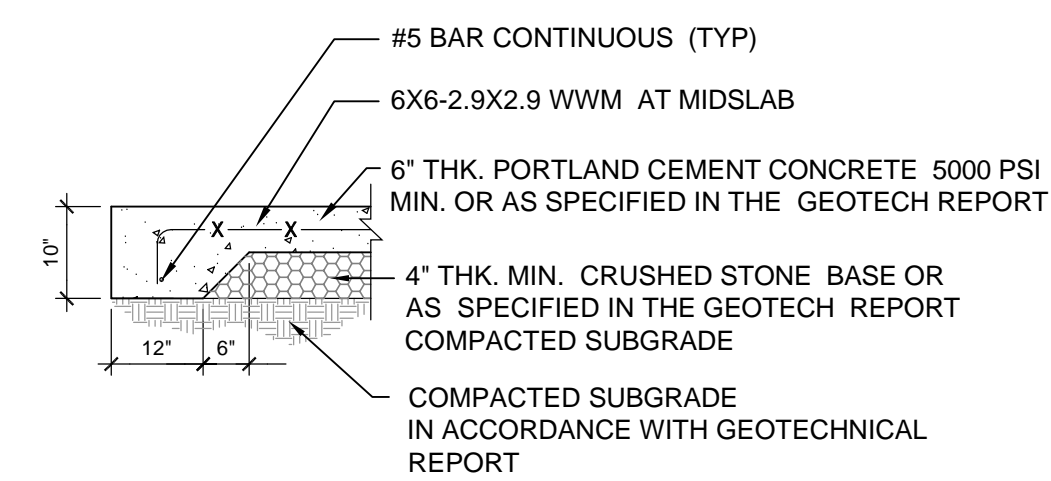
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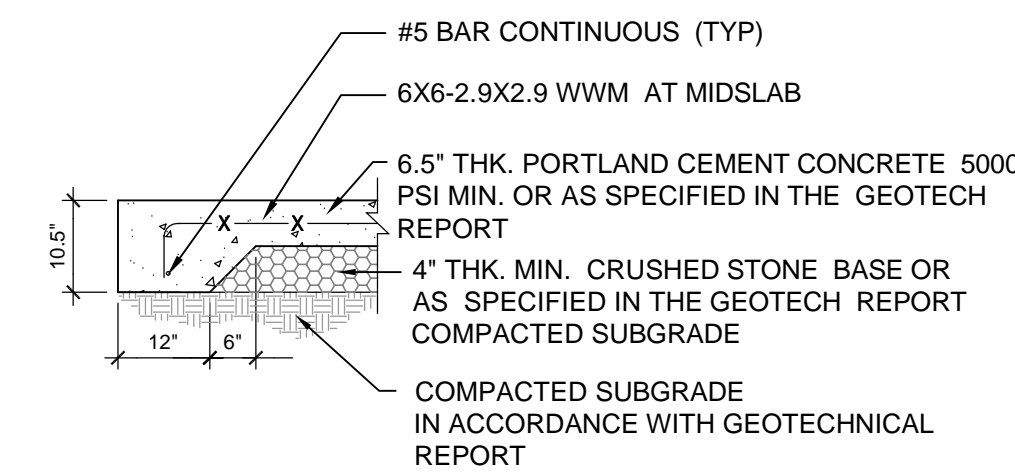
LIGHT DUTY ASPHALT PAVEMENT SECTION
N.T.S.



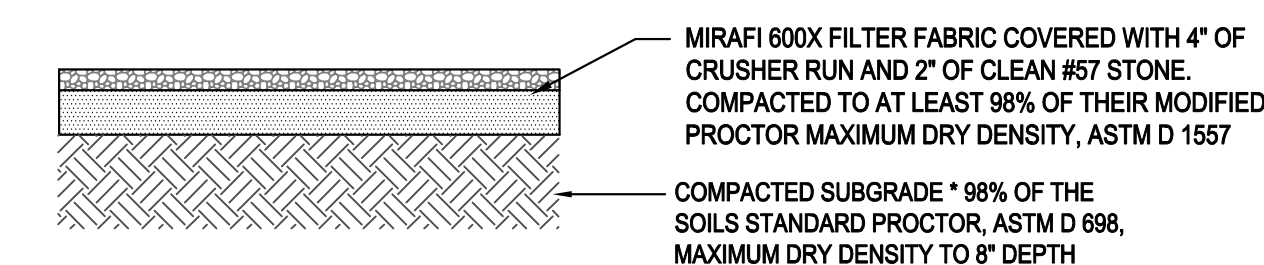
HEAVY DUTY ASPHALT PAVEMENT SECTION
N.T.S.



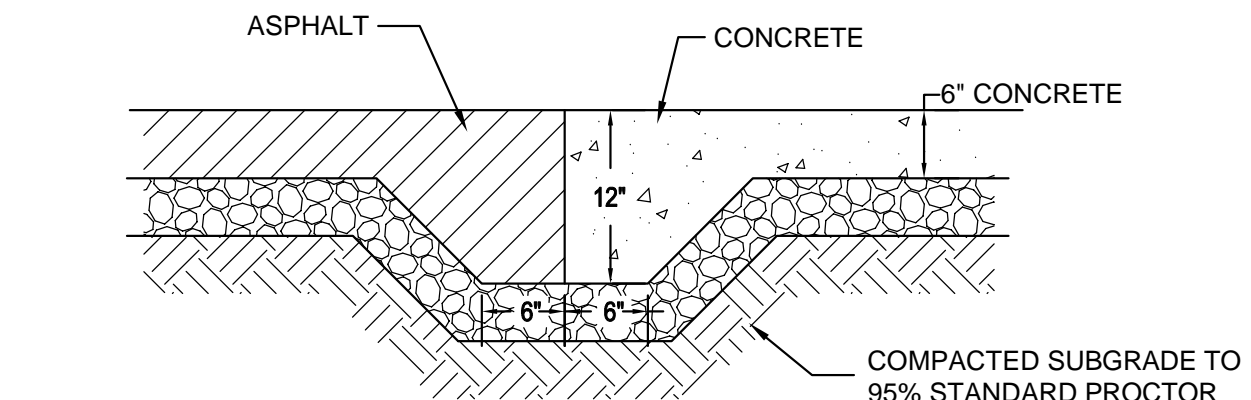
LIGHT-DUTY CONCRETE PAVEMENT SECTION
NOT TO SCALE



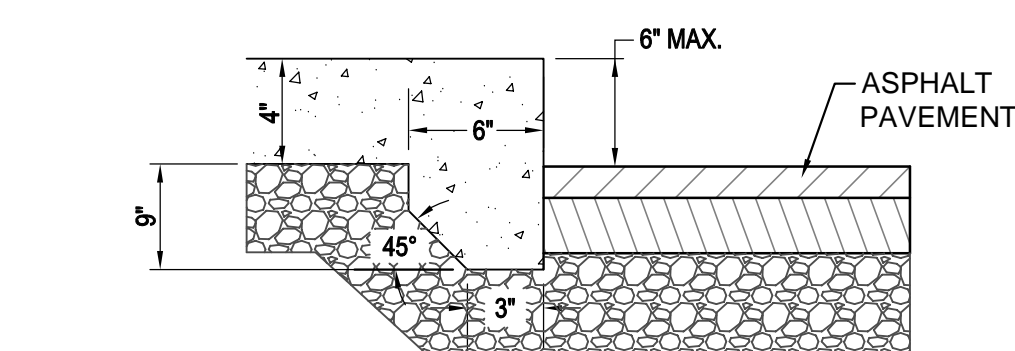
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NOT TO SCALE



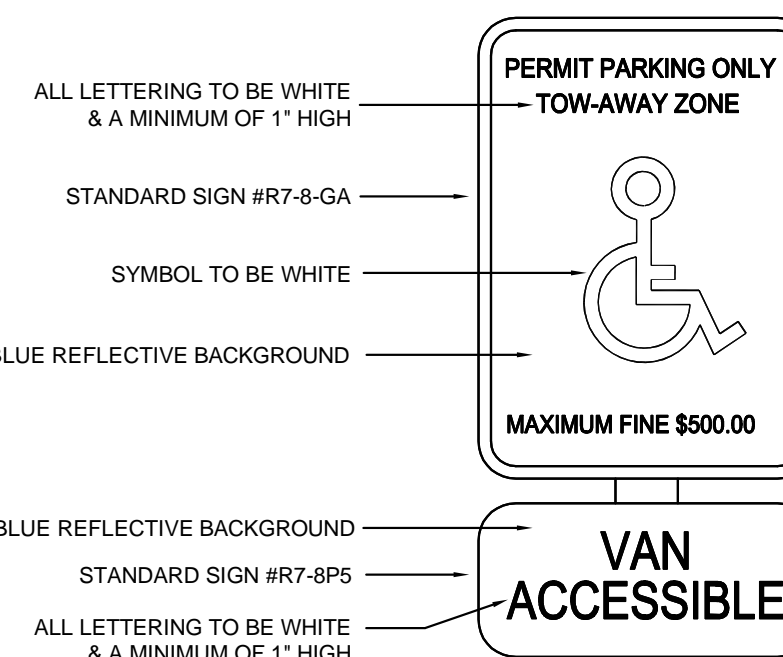
12' GRAVEL DRIVE SECTION
N.T.S.



ASPHALT TO CONCRETE PAVEMENT TRANSITION
NOT TO SCALE



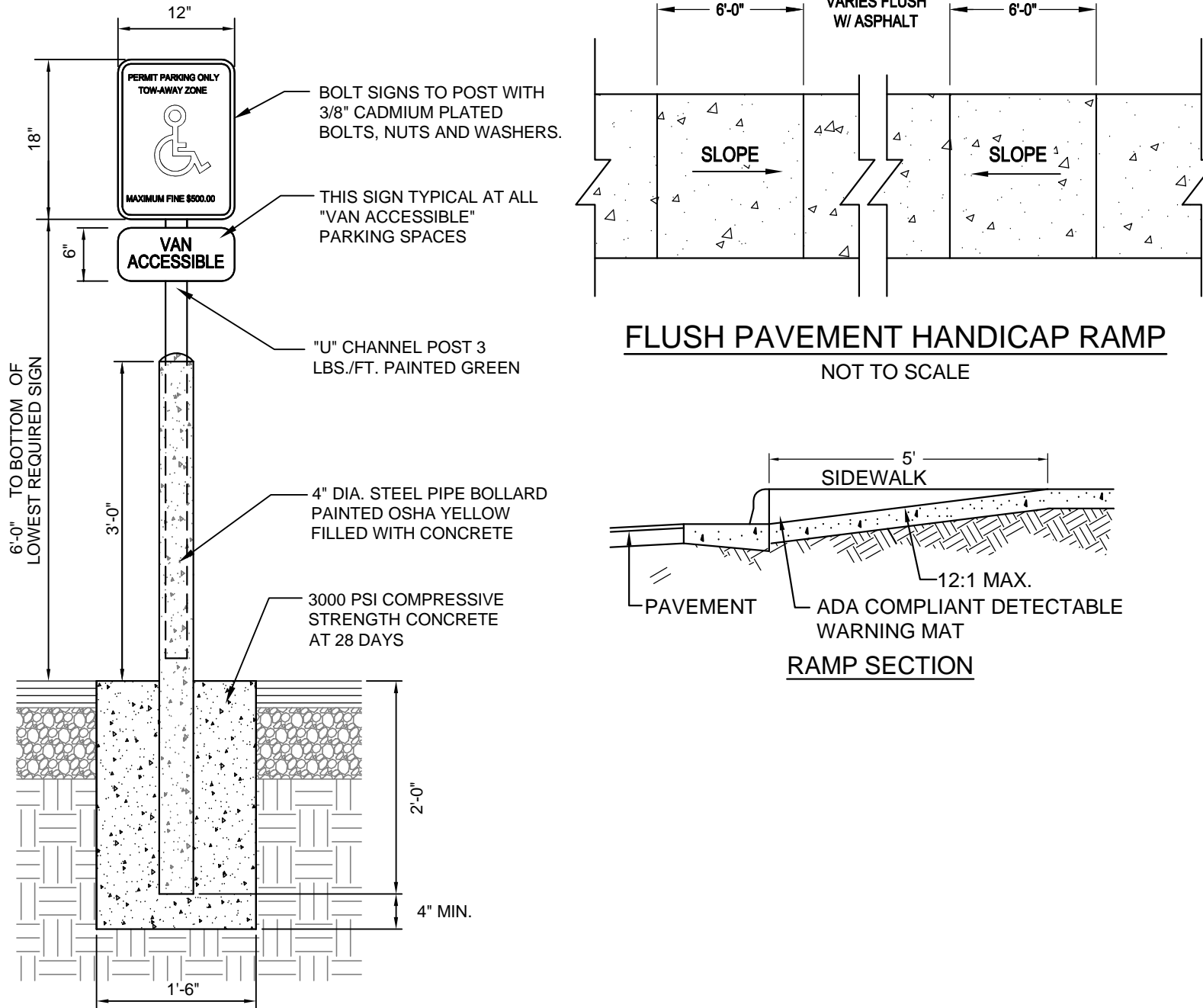
EXPOSED FACE CONCRETE WALK TO ASPHALT DETAIL
NOT TO SCALE



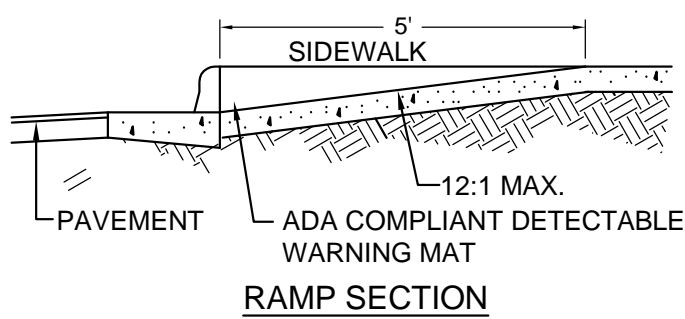
HANDICAP SIGN DETAIL
NOT TO SCALE

ONE AT EACH HANDICAP SPACE. WHERE HANDICAP SPACES FACE EACH OTHER WITHOUT WALKWAY, THERE SHALL BE ONE POST WITH SIGNS MOUNTED BOTH SIDES

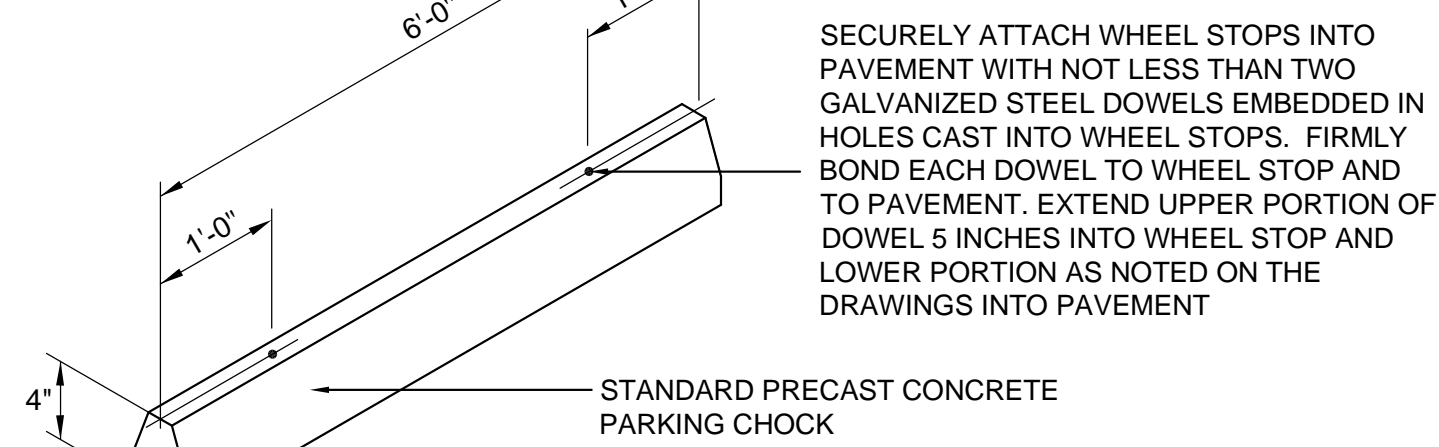
- NOTES:**
1. ALL SIGNS TO BE 0.080\"/>



FLUSH PAVEMENT HANDICAP RAMP
NOT TO SCALE



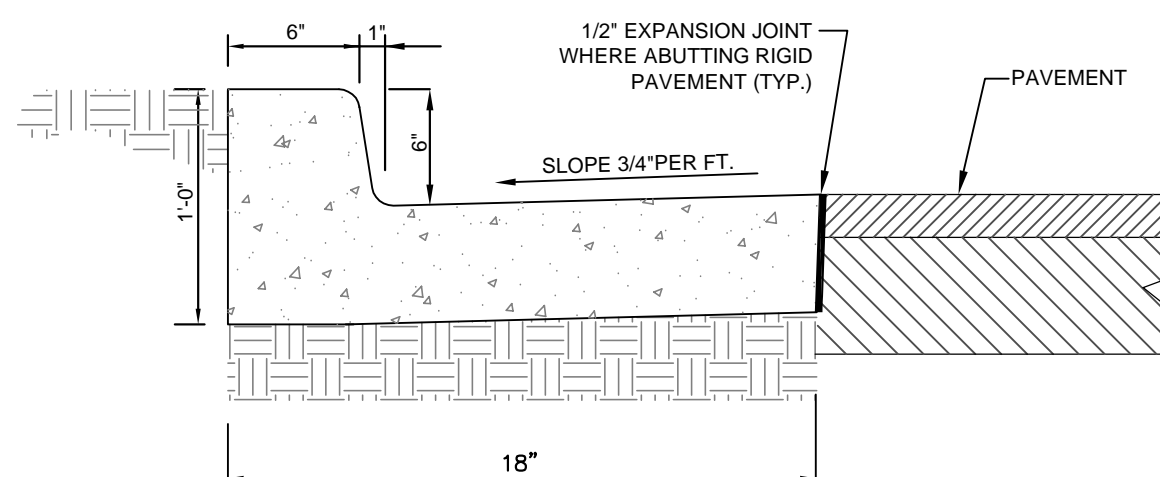
RAMP SECTION



WHEEL STOP
NOT TO SCALE

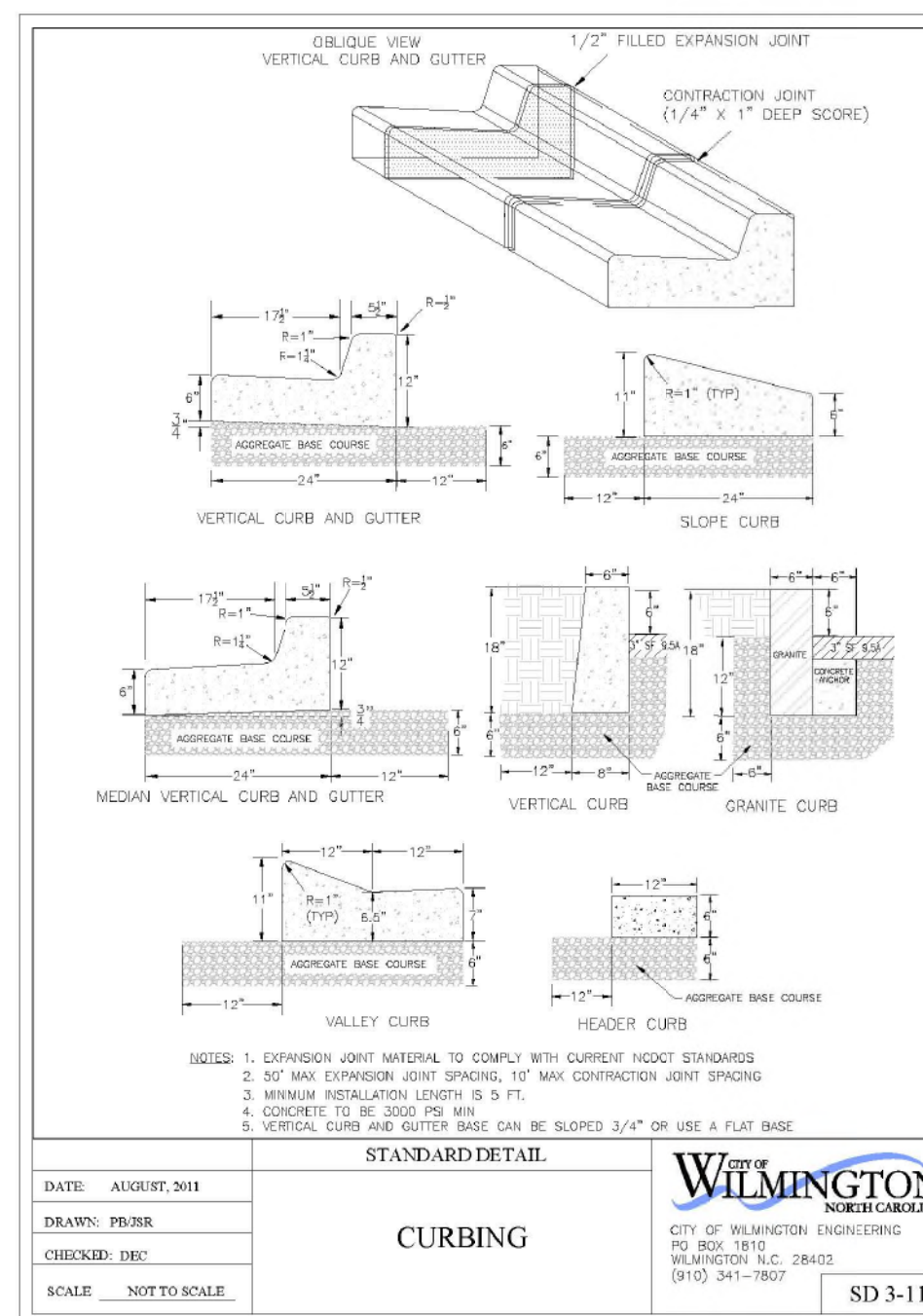
*NOTE: WHEEL STOPS SHALL BE PLACED 2.5' FROM THE END OF THE PARKING STALL

SECURELY ATTACH WHEEL STOPS INTO PAVEMENT WITH NOT LESS THAN TWO GALVANIZED STEEL DOWELS EMBEDDED IN HOLES CAST INTO WHEEL STOPS. FIRMLY BOND EACH DOWEL TO WHEEL STOP AND TO PAVEMENT. EXTEND UPPER PORTION OF DOWEL 5 INCHES INTO WHEEL STOP AND LOWER PORTION AS NOTED ON THE DRAWINGS INTO PAVEMENT



STANDARD CONCRETE CURB & GUTTER
N.T.S.

- NOTES:**
1. FOR SPILL CURB SLOPE 3/4\"/>



CURBING

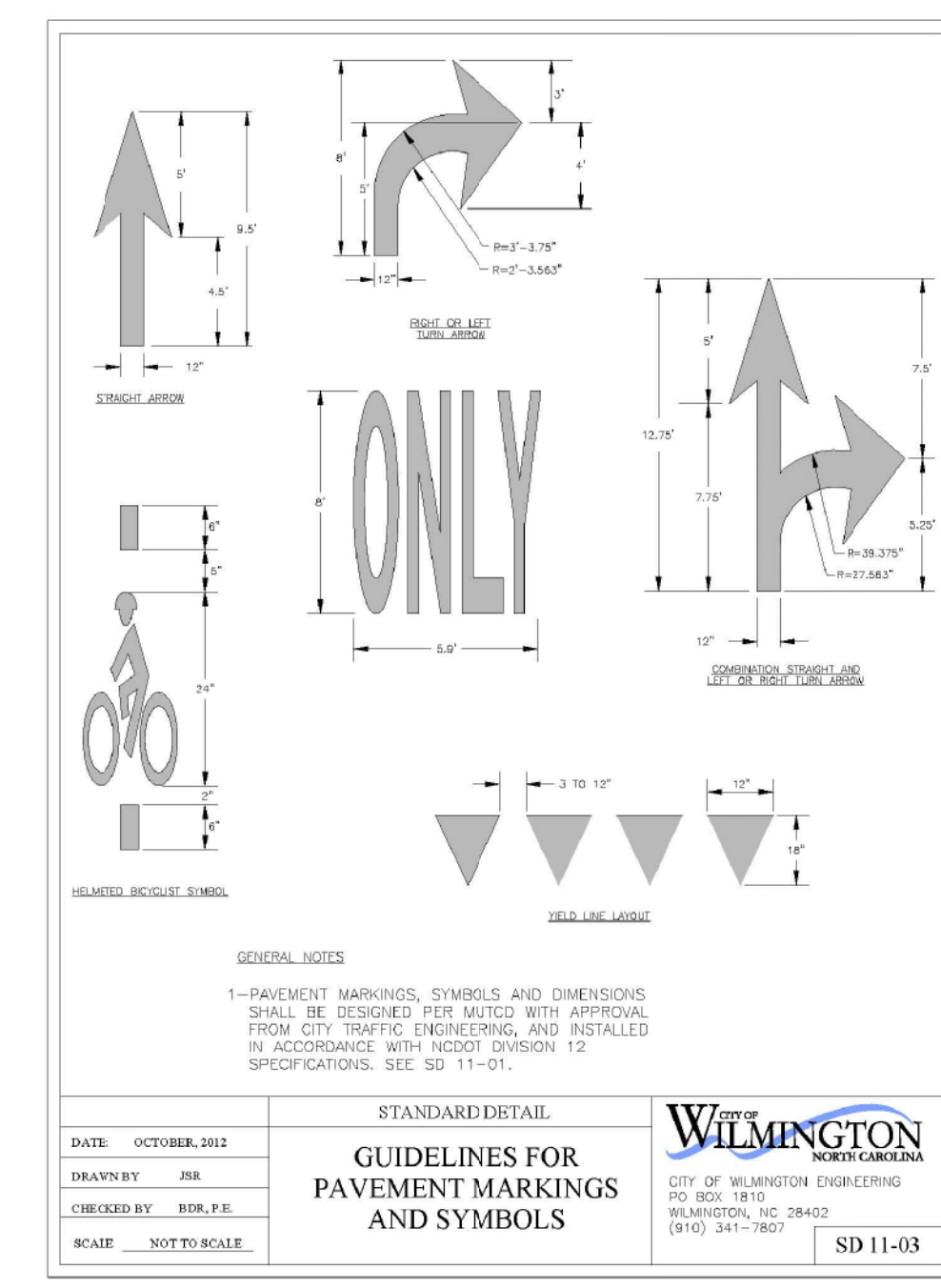
DATE: AUGUST 2013

DRAWN BY: JBR

CHECKED BY: DEC

SCALE: NOT TO SCALE

SD 3-11



GUIDELINES FOR PAVEMENT MARKINGS AND SYMBOLS

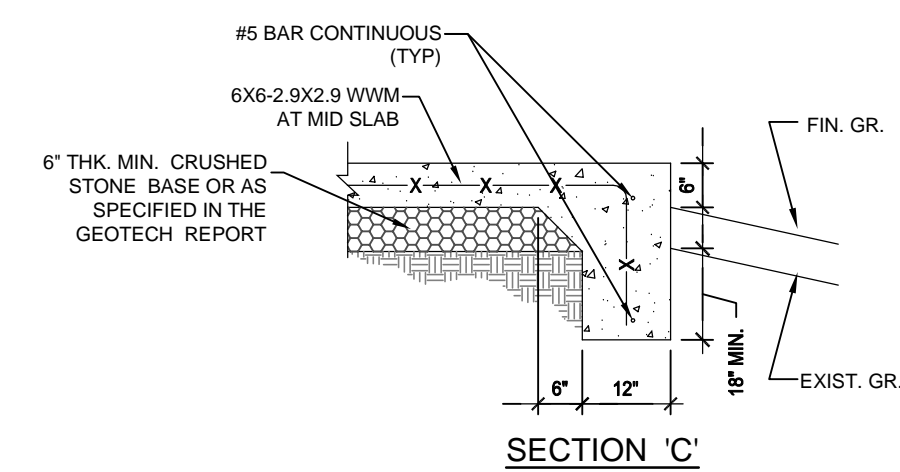
DATE: OCTOBER 2012

DRAWN BY: JBR

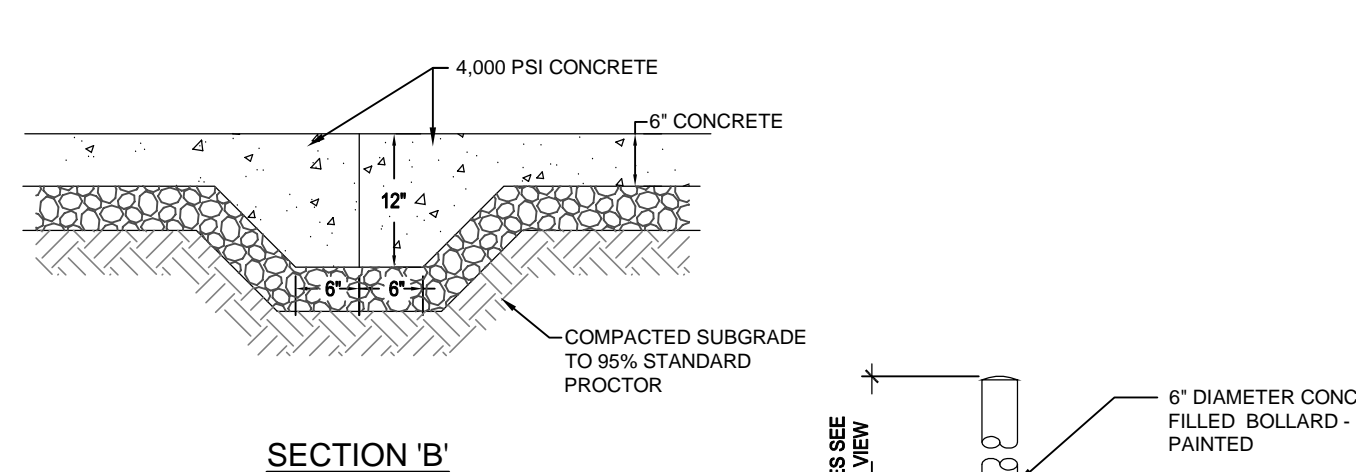
CHECKED BY: RHM, P.E.

SCALE: NOT TO SCALE

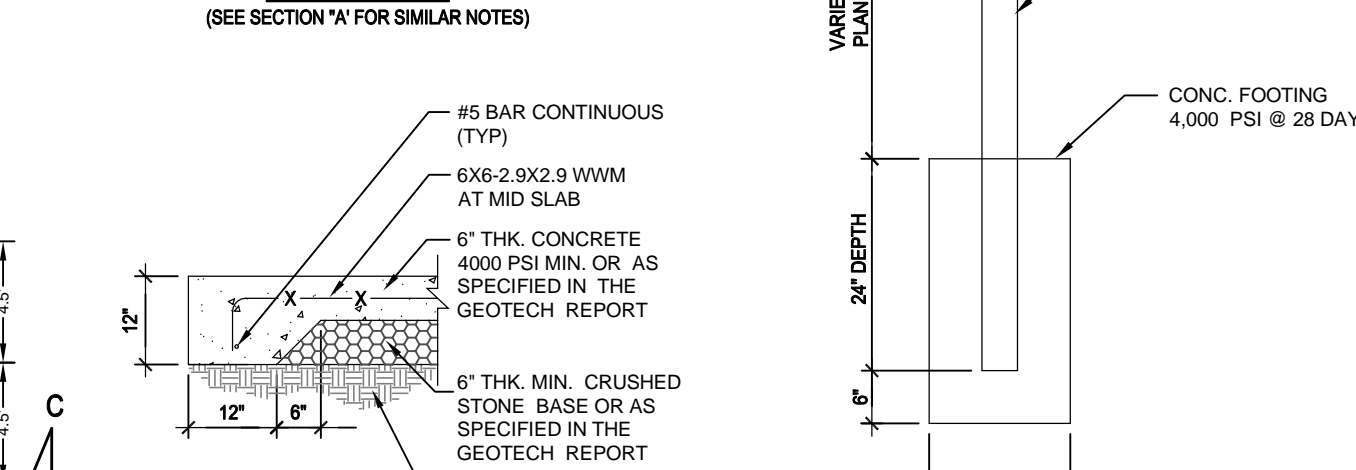
SD 11-03



SECTION C'



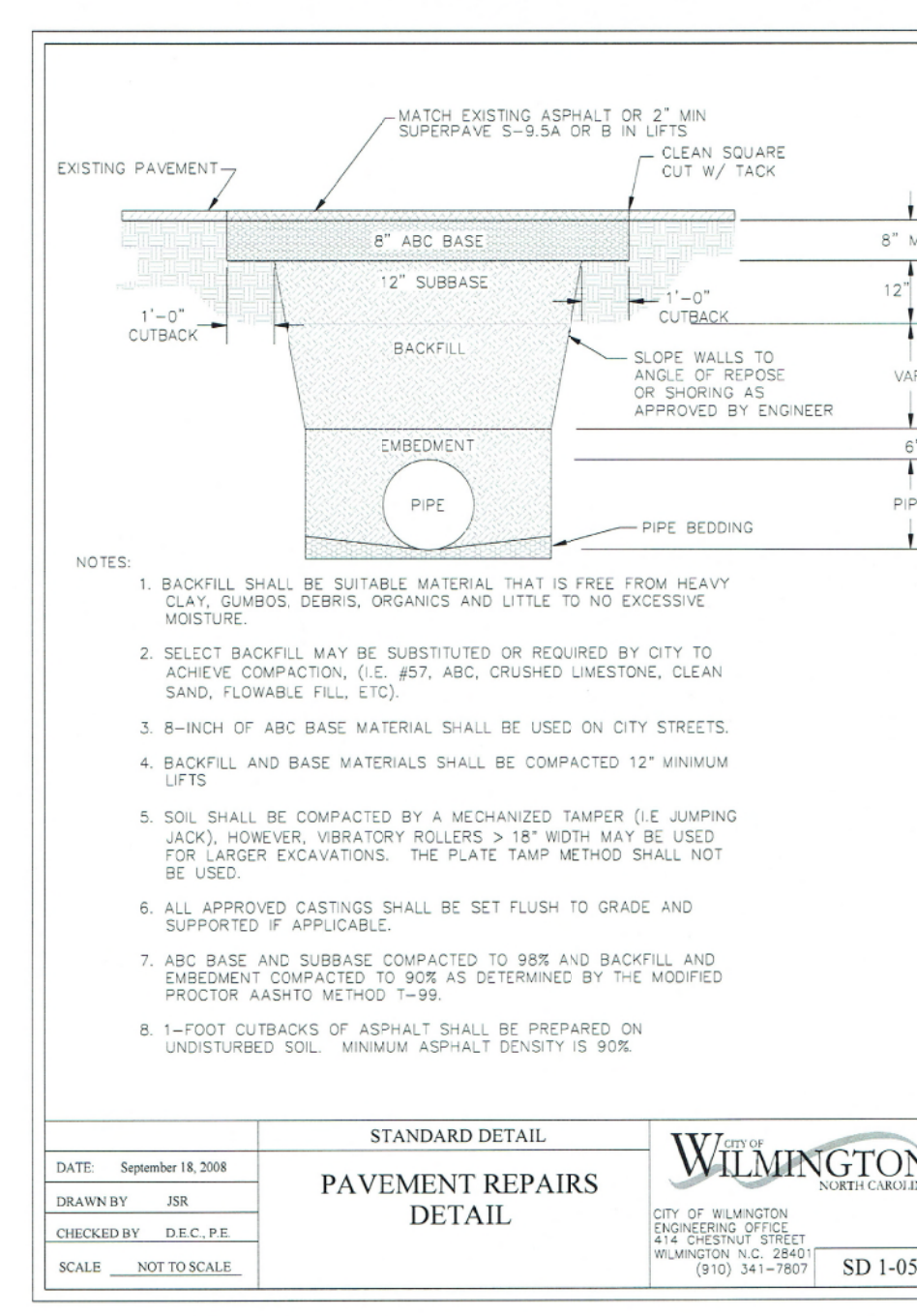
SECTION B'
(SEE SECTION 'A' FOR SIMILAR NOTES)



SECTION A'

- NOTES:**
1. FOOTINGS SHALL EXTEND 18\"/>

DUMPSTER PAD DETAILS
NOT TO SCALE



PAVEMENT REPAIRS DETAIL

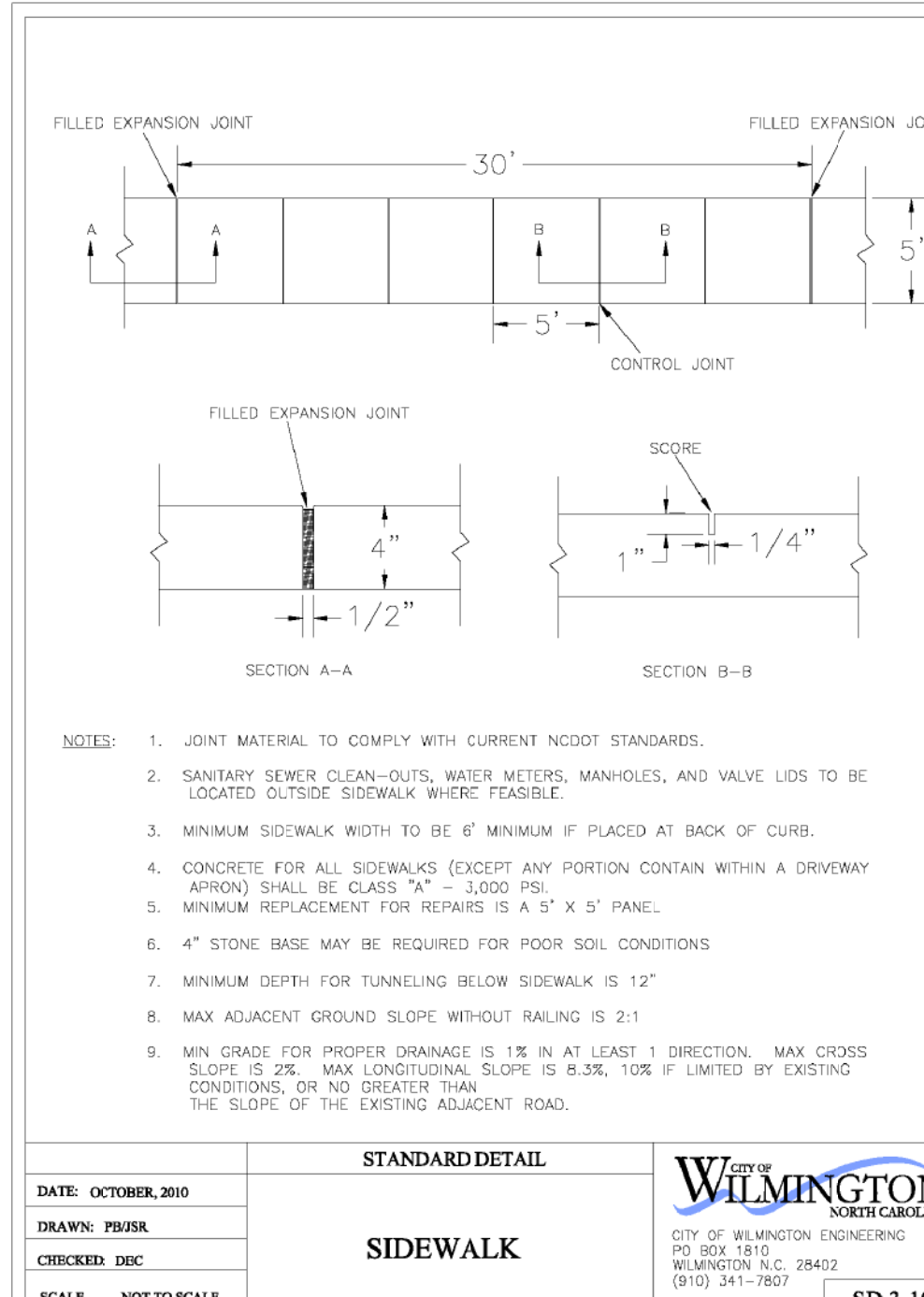
DATE: September 14, 2008

DRAWN BY: JBR

CHECKED BY: D.E.C. P.E.

SCALE: NOT TO SCALE

SD 1-05



SIDEWALK

DATE: OCTOBER 2010

DRAWN: PUSHA

CHECKED: DEC

SCALE: NOT TO SCALE

SD 3-10

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
CRETE INVESTMENTS
2005 Eastwood Road, Suite 200
Wilmington, NC 28403

PARAMOUNT ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6766 (F)
NC License #: C-2846

DETAILS
239 RALEIGH STREET
WILMINGTON
NEW HANOVER COUNTY, NC

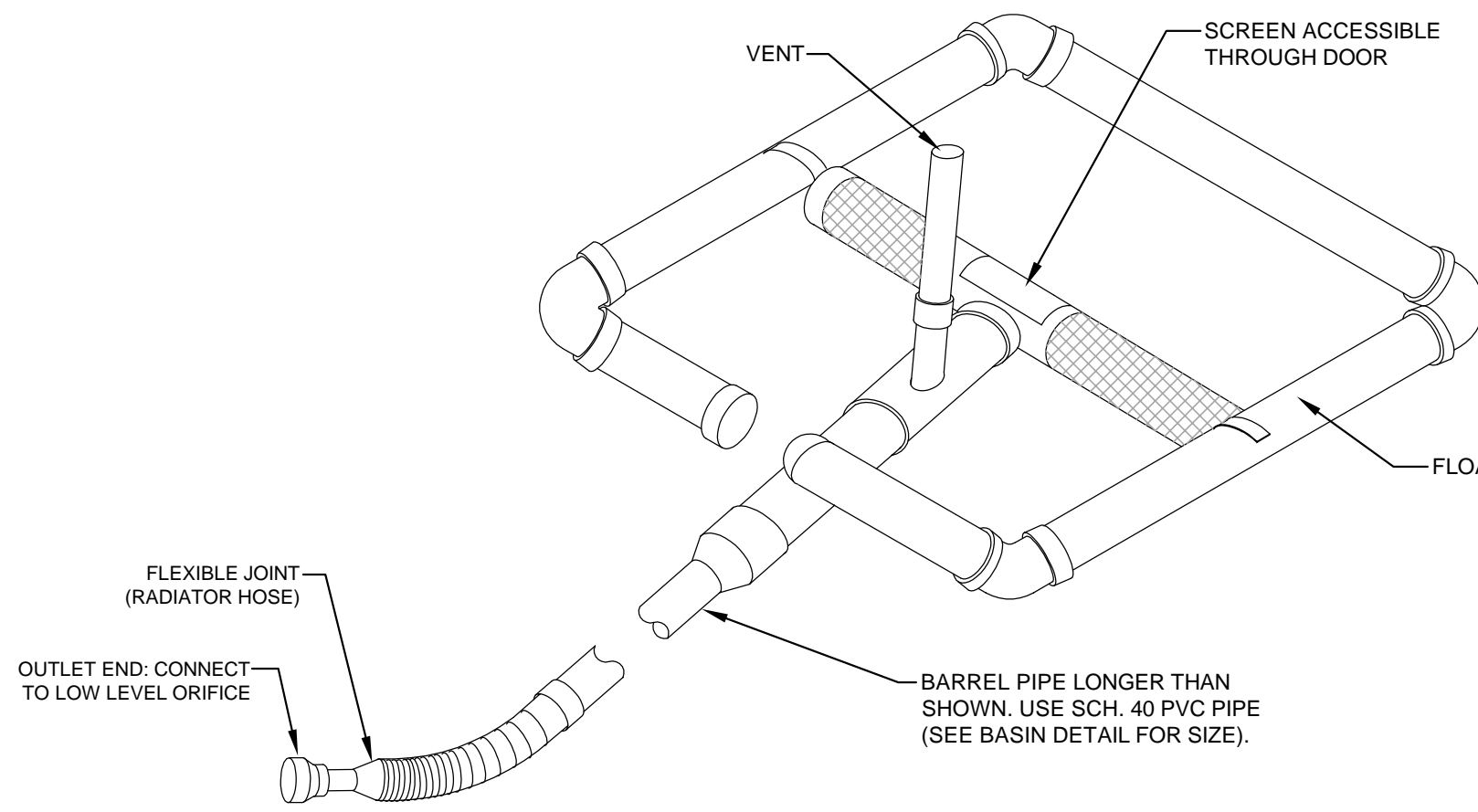
PROJECT STATUS:
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
RELEASED FOR CONSTRUCTION

DRAWING INFORMATION:
DATE: 11/16/17
DESIGNED: ROBERT P. BALLARD
CHECKED: ROBERT P. BALLARD
SCALE: AS SHOWN

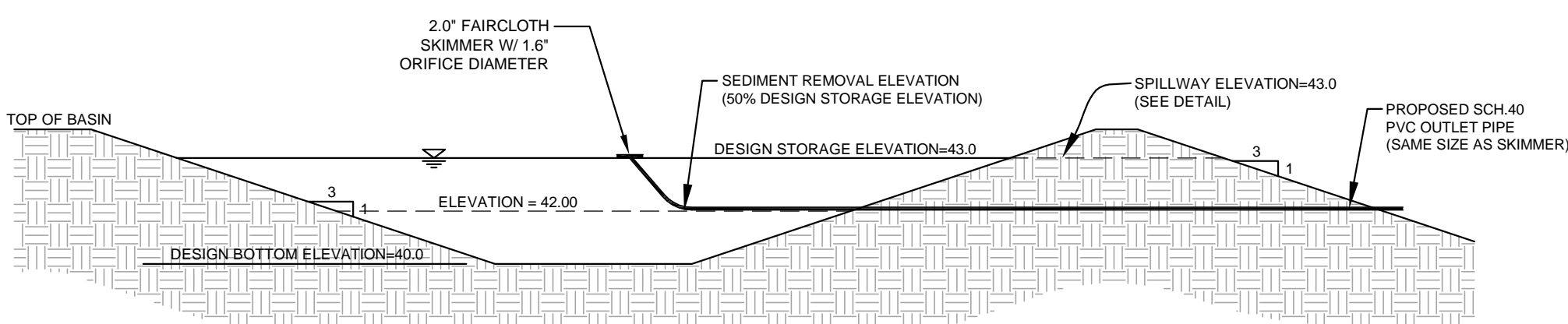
SEAL: NORTH CAROLINA ENGINEER SEAL 031591 ROBERT P. BALLARD 11/16/17

PEI JOB#: 17256.PE

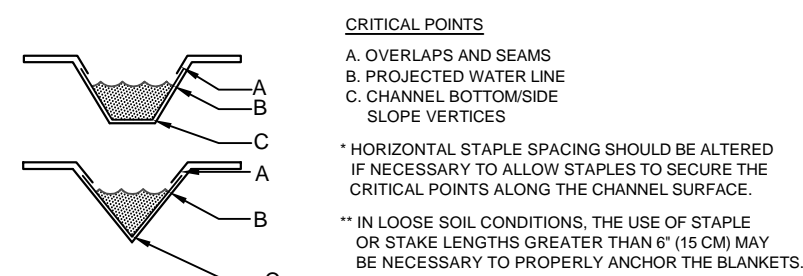
C-5.0



FAIRCLOTH SKIMMER DETAIL
NOT TO SCALE



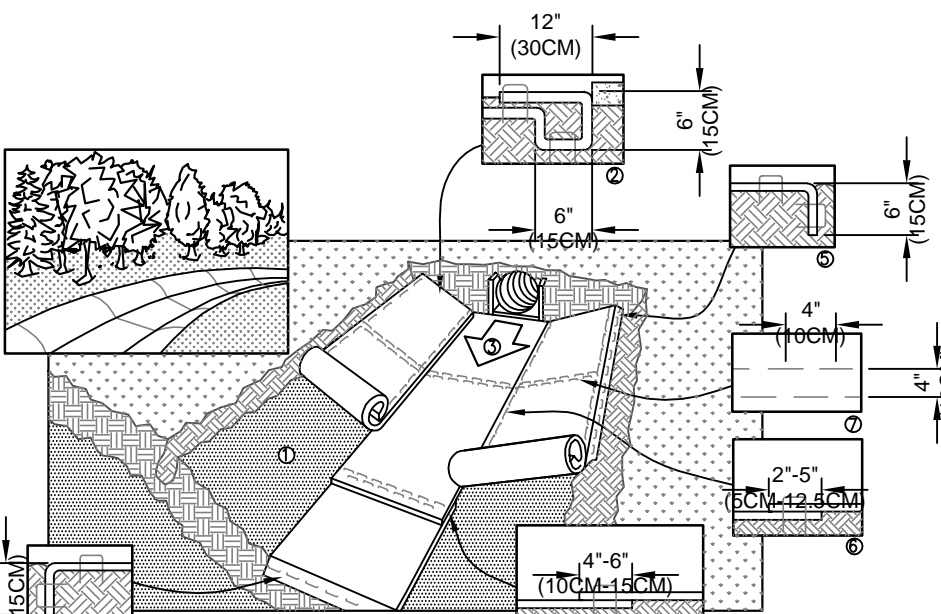
TEMPORARY SKIMMER SEDIMENT BASIN DETAIL
NOT TO SCALE



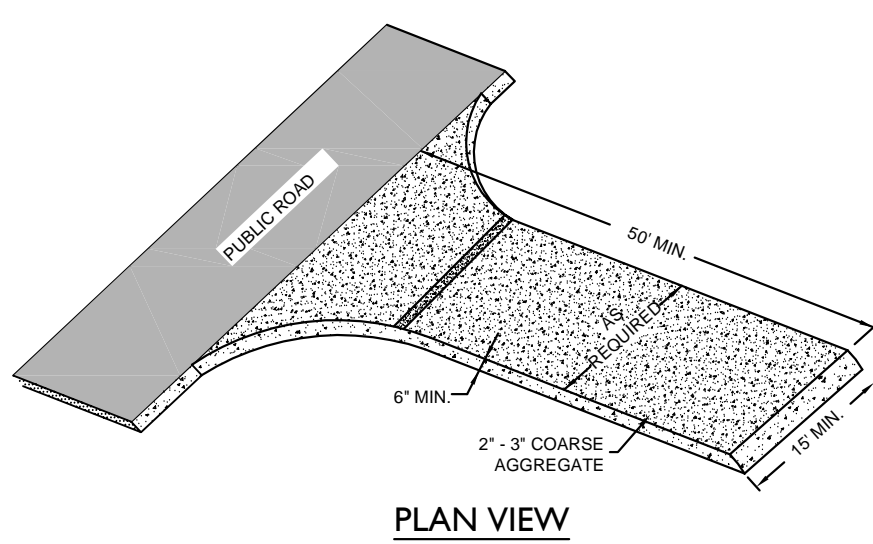
CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOMSIDE SLOPE VERTICES

* HORIZONTAL STRAP SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

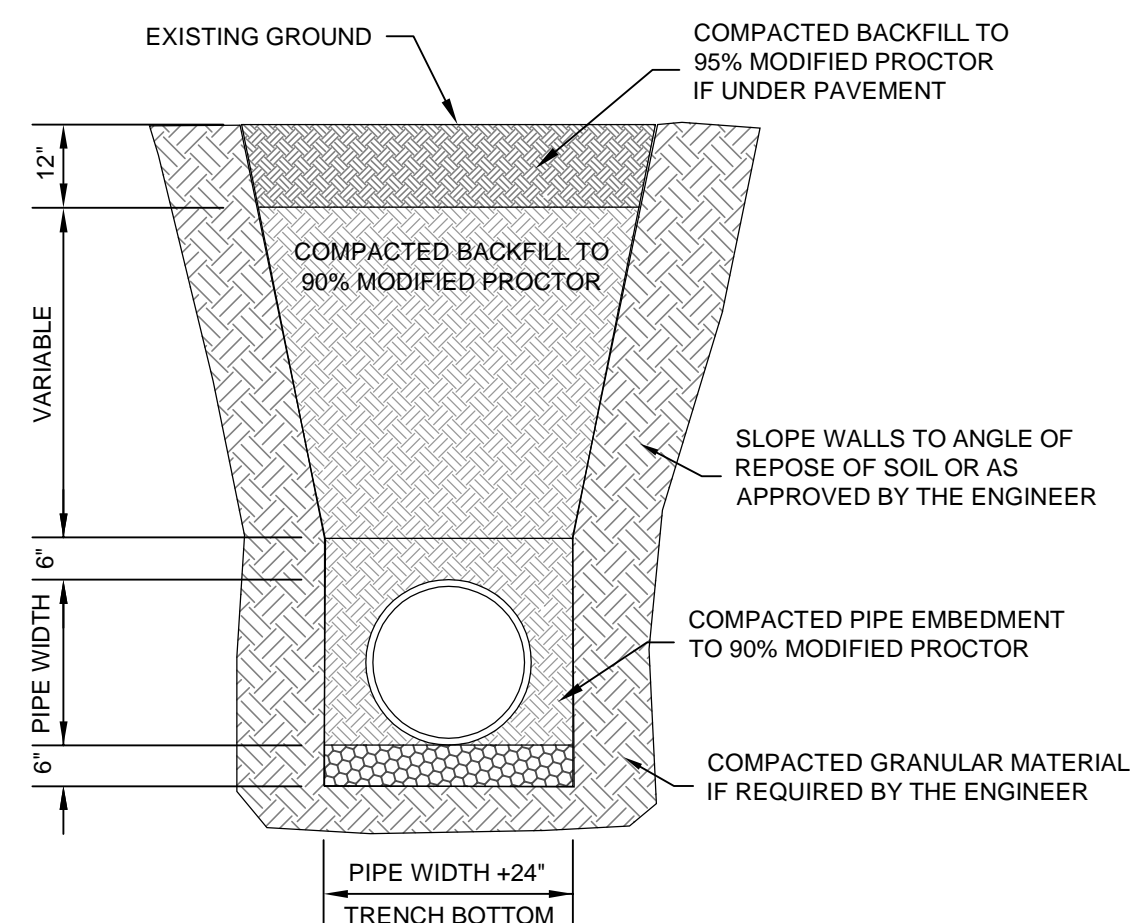


ROLLED EROSION CONTROL LINING
NOT TO SCALE

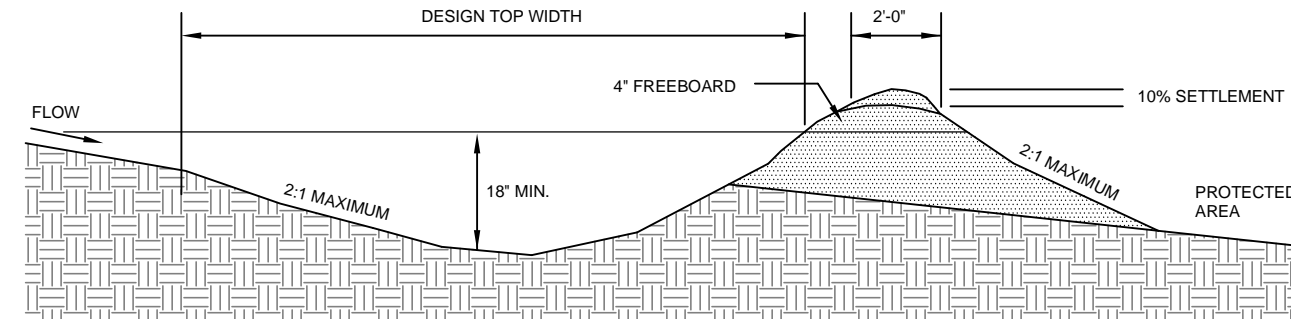


TEMPORARY CONSTRUCTION ENTRANCE
NOT TO SCALE

TDD #	RUNOFF						CHANNEL									
	A _s (acres)	C	Q _{design} (cfs)	Length (ft)	Inv Up (ft)	Inv Down (ft)	S (ft/ft)	d (ft)	A _c (sf)	P (ft)	R (ft)	V _{actual} (fps)	Q _{actual} (cfs)	Adequate Capacity? (Y/N)	Lining Required? (Y/N)	
1	1.50	0.35	3.73	233	43.20	42.00	0.0052	0.70	1.47	4.43	0.33	2.56	3.77	Y	Y	



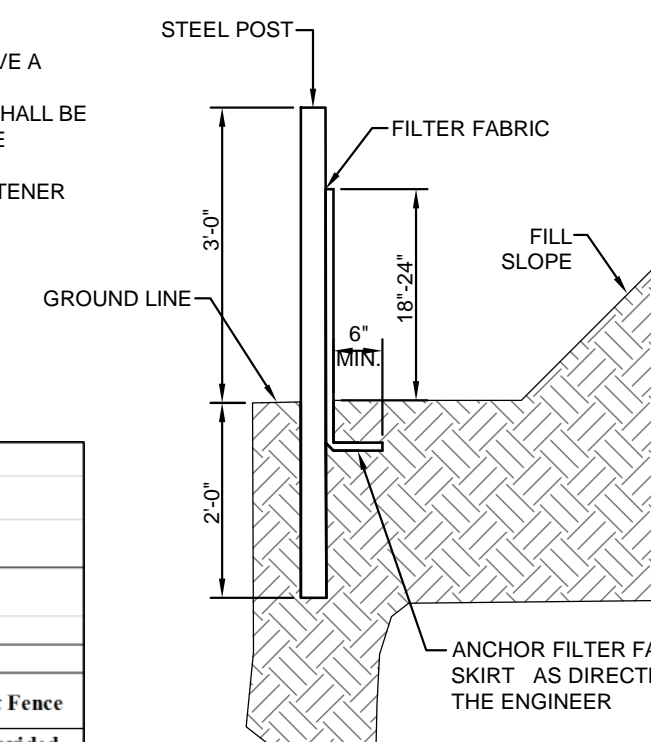
STANDARD PIPE TRENCH DETAIL
NOT TO SCALE



GUIDELINES FOR TEMPORARY DIVERSION DITCH
NOT TO SCALE

NOTE:
BUILD RIDGE HIGHER THAN DESIGN AND COMPACT WITH WHEELS OF CONSTRUCTION EQUIPMENT. COMPACTED RIDGE MUST AT OR ABOVE DESIGN GRADE AT ALL POINTS. CHANNEL MUST BE CONSTRUCTED ON DESIGN GRADE. LEAVE SUFFICIENT AREA ALONG DIVERSION TO PERMIT CLEANOUT AND REGRADEING.

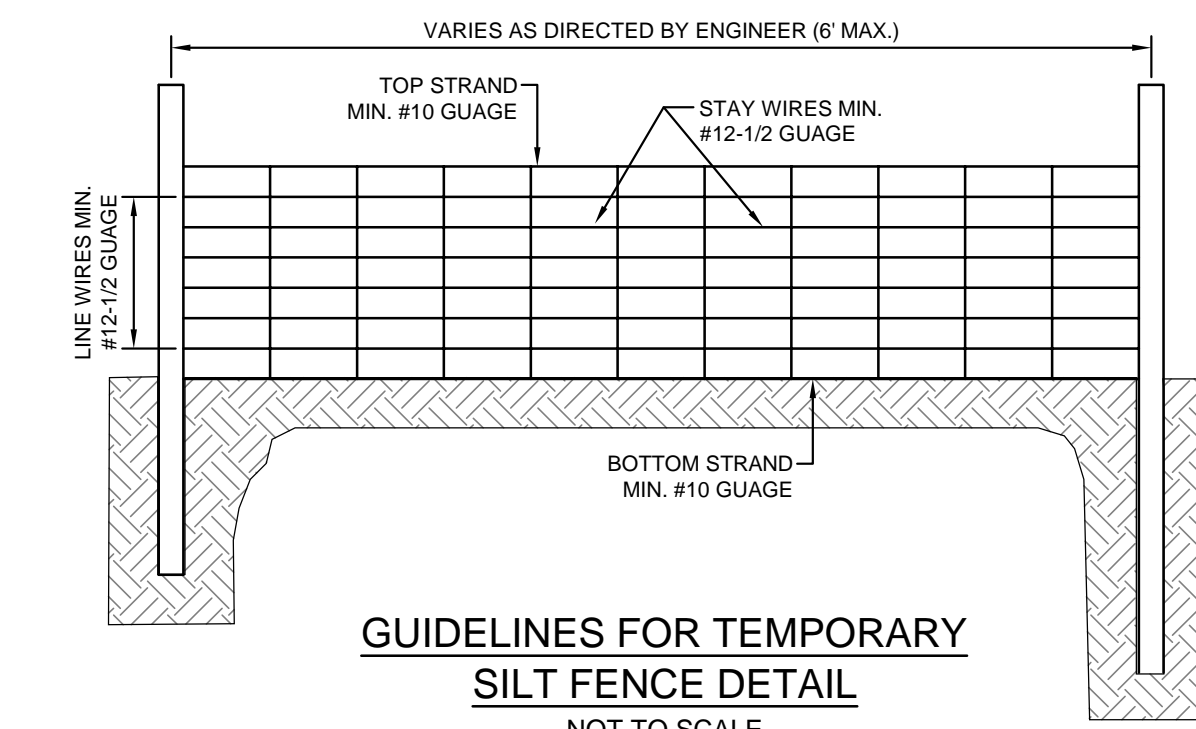
NOTES:
1. WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES W/12" STAY SPACING
2. FILTER FABRIC SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL BE FASTENED ADEQUATELY TO THE WIRE AS DIRECTED BY THE ENGINEER
3. STEEL POST SHALL BE 5' 0" IN HEIGHT AND BE OF SELF FASTENER ANGLE STEEL TYPE



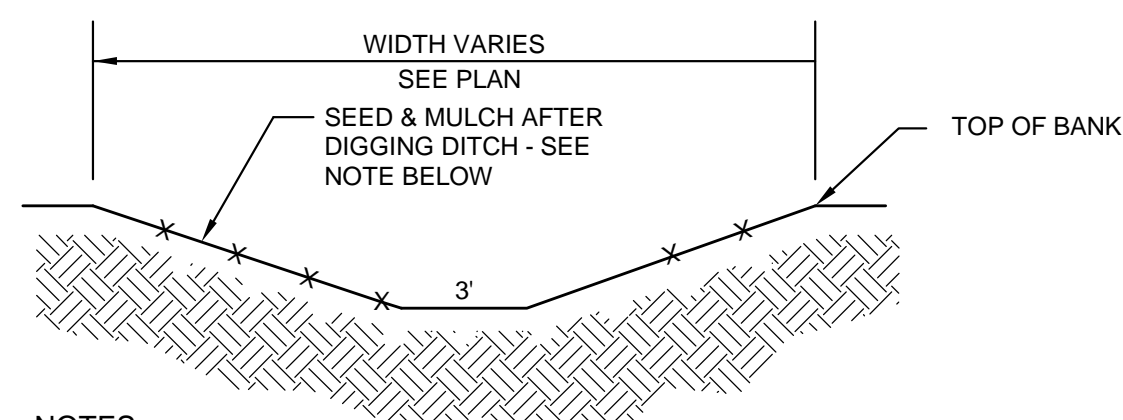
**239 Raleigh Street
Temporary Sediment Fence - Ph I EC**

Requirement = 100 ft per 0.25 acres disturbed

SF DA #	Disturbed	Total	Silt	Silt
	area	area	Fence	Fence
	(ac)	(ac)	(ft)	(ft)
1	1.40 ac	1.40 ac	560	567

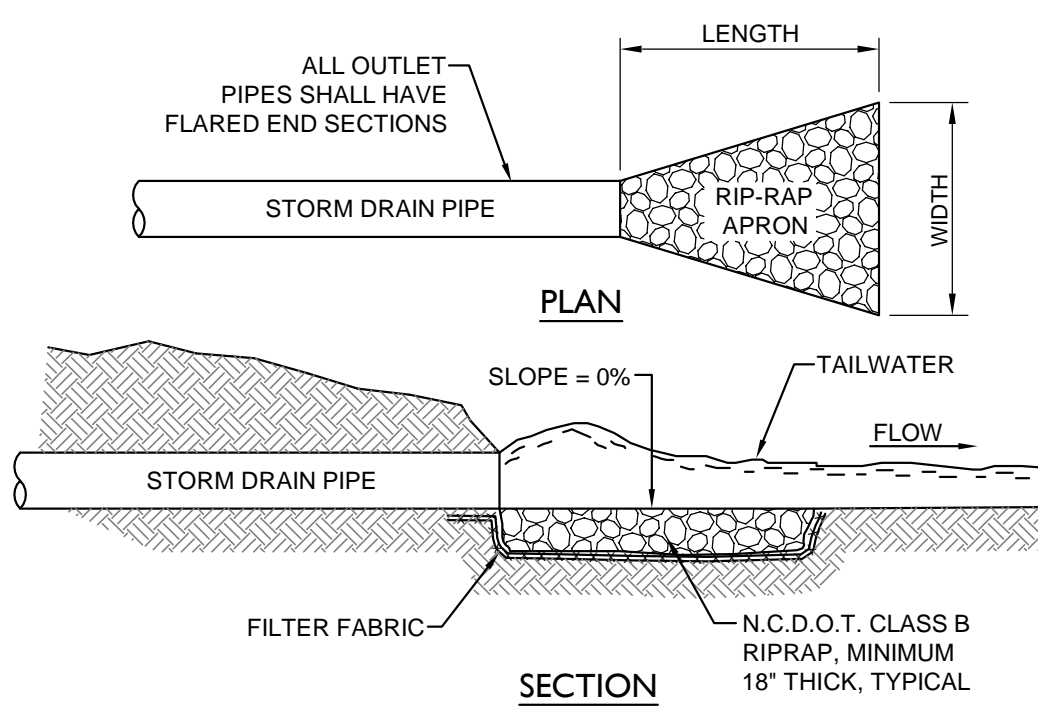


GUIDELINES FOR TEMPORARY SILT FENCE DETAIL
NOT TO SCALE



NOTES:
1. 3:1 SIDE SLOPES.
2. DITCH TO BE FULLY LINED WITH EROSION CONTROL BLANKETS PRIOR TO SEEDING & MULCHING FROM TOP OF BANK TO TOP OF BANK, AS REQUIRED BY LAND QUALITY.
3. PROPOSED SWALES WILL HAVE A BOTTOM WIDTH OF 3 FEET.
4. SEE PLAN FOR HORIZONTAL LOCATION OF SWALES.
5. SWALES TO BE CONSTRUCTED WITH 6" OF DEPTH ADDED TO CALCULATED DEPTH ABOVE.

TYPICAL SWALE
NOT TO SCALE



RIP-RAP SCHEDULE

PIPE DIA. (IN.)	LENGTH (FT.)	UPSTREAM	DOWNSTREAM
		WIDTH (FT.)	WIDTH (FT.)
100	18	10	4.5
			11.5

RIP-RAP APRON
NOT TO SCALE

BAFFLES CONSTRUCTION SPECIFICATION

- Grade the basin so that the bottom is level front to back and side to side.
- Install posts or saw horses across the width of the sediment trap (Practice 6.62, Sediment Fence).
- Steel posts should be driven to a depth of 24 inches, spaced a maximum of 4 feet apart, and installed up the side of the basin as well. The top of the fabric should be 6 inches higher than the invert of the spillway. Tops of baffles should be 2 inches lower than the top of the berms. Install at least three rows of baffles between the inlet and outlet discharge point. Basins less than 20 feet in length may use 2 baffles.
- When using posts, add a support wire or rope across the top of the measure to prevent sagging.
- Wrap jute, backed by coir material, over a sawhorse or the top wire. Hammer rebar into the sawhorse legs for anchoring. The fabric should have five to ten percent openings in the weave. Attach fabric to a rope and a support structure with zip ties, wire or staples.
- The bottom and sides of the fabric should be anchored in a trench or pinned with 8-inch erosion control matting staples.
- Do not splice the fabric, but use a continuous piece across the basin.

MAINTENANCE

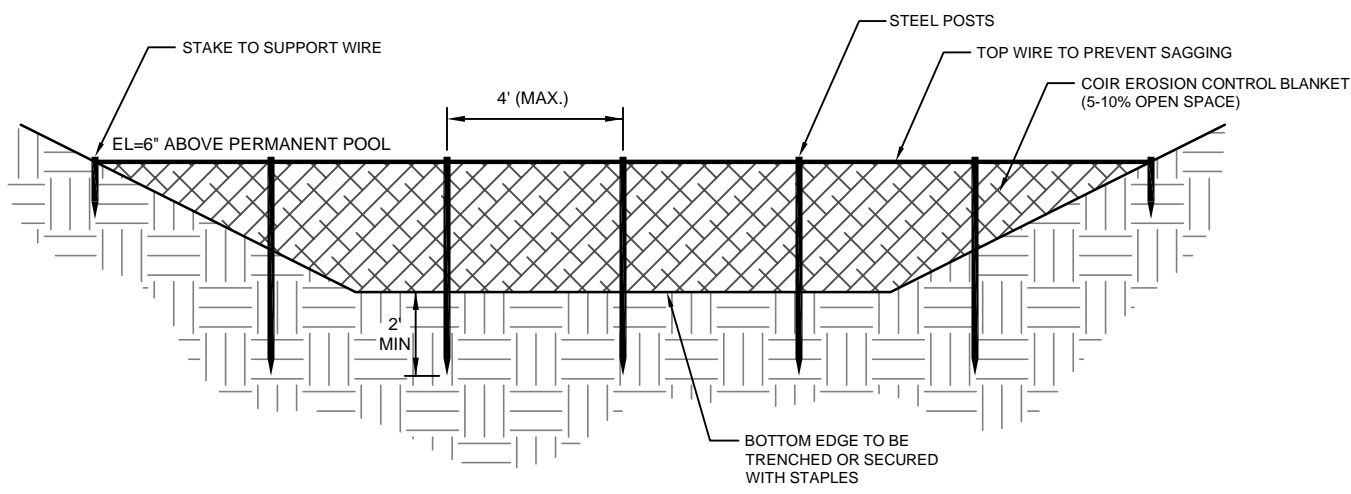
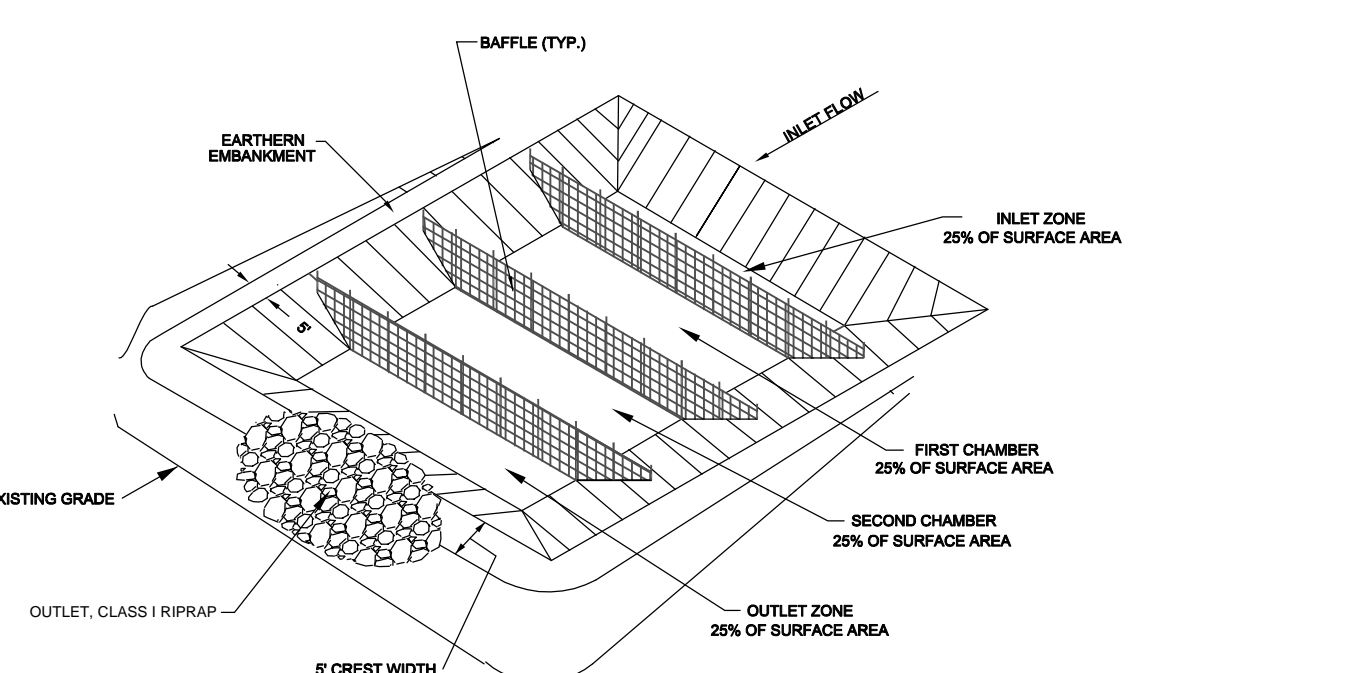
Inspect baffles at least once a week and after each rainfall. Make any required repairs immediately. Be sure to maintain access to the baffles. Should the fabric of a baffle collapse, tear, decompose, or become ineffective, replace it promptly.

Remove sediment deposits when it reaches half full to provide adequate storage volume for the next rain and to reduce pressure on the baffles. Take care to avoid damaging the baffles during cleanout. Sediment depth should never exceed half the designed storage depth.

After the contributing drainage area has been properly stabilized, remove all baffle materials and unstable sediment deposits, bring the area to grade, and stabilize it.

NOTE:

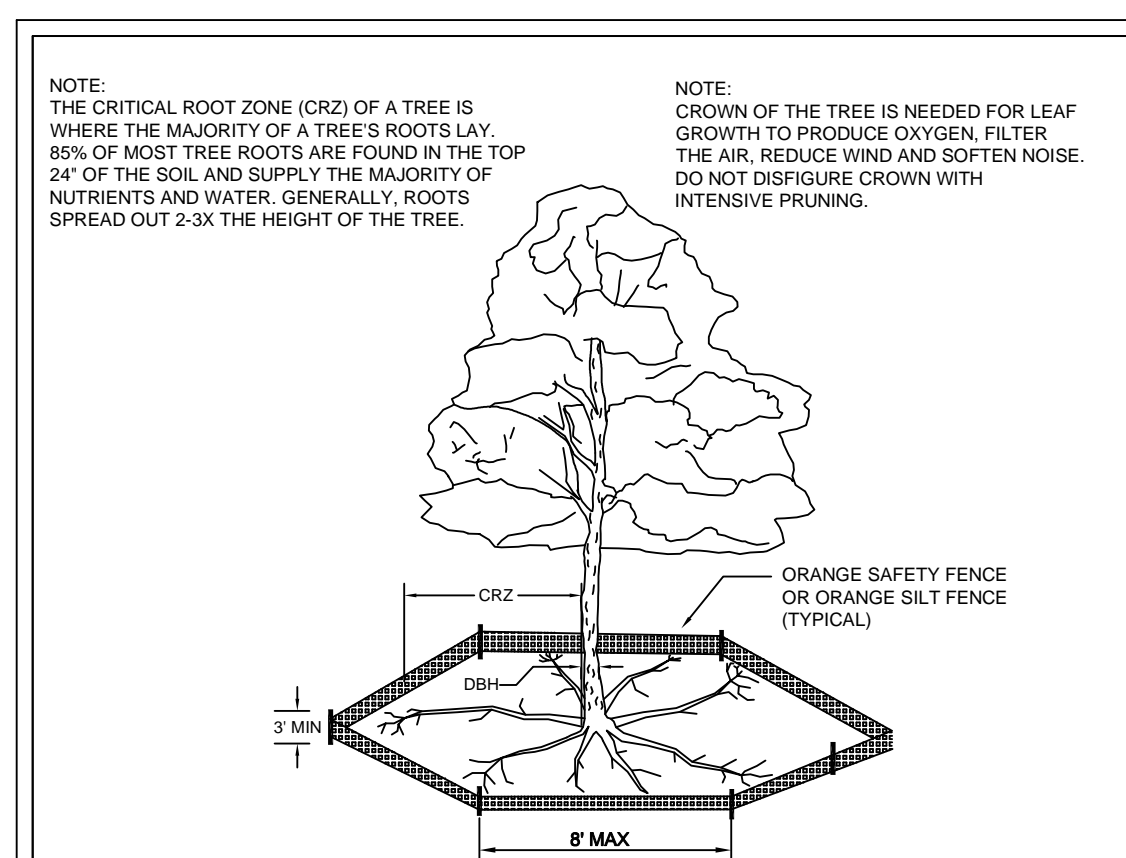
Porous baffles shall be installed inside all temporary sediment traps, rock dams, skimmer basin or sediment basins to reduce the velocity and turbulence of the water flowing through the measure, and facilitate the settling of sediment from the water before discharge.



NOTES:
1. INSTALL ONE CONTINUOUS PIECE OF FABRIC ACROSS THE ENTIRE BASIN-DO NOT SPLICE.

Surface Area (sf)	Length (ft)	Inlet Area (sf)	Chamber 1 Area (sf)	Chamber 2 Area (sf)	Outlet Area (sf)	Baffle #1 (Distance from End) (ft)	Baffle #2 (Distance from End) (ft)	Baffle #3 (Distance from End) (ft)
2,760	82	690	690	690	690	21	41	62
6,879	175	1,720	1,720	1,720	1,720	44	88	131

BAFFLE DETAIL
NOT TO SCALE



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.

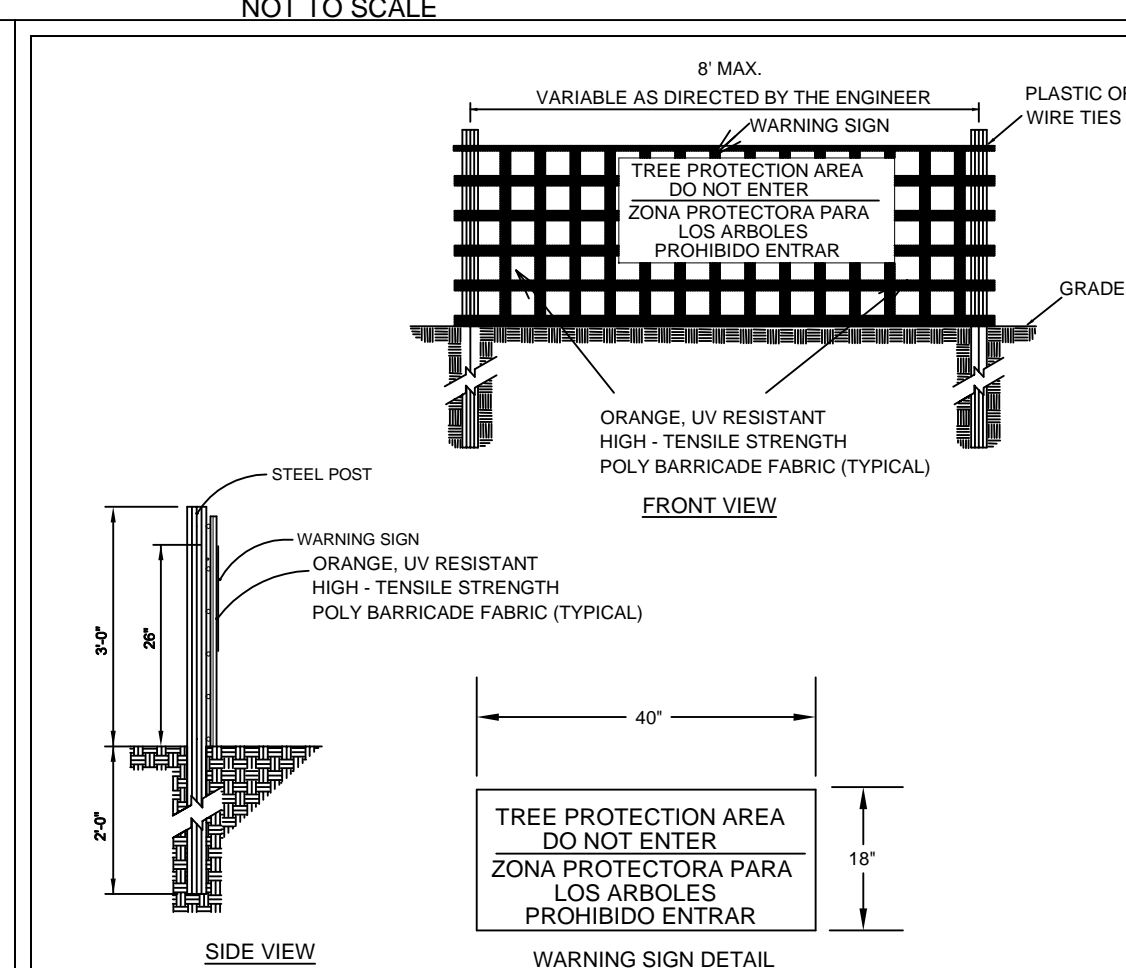
NOTES:
1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
4. WHERE SIDEWALKS AND PATHWAYS 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 LAWNMOVERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED.
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.

DATE: JAN, 2015
DRAWN BY: JSR
CHECKED BY: RDG, P.E.
SCALE: NOT TO SCALE

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
SHEET 1 of 2

CITY OF WILMINGTON
WILMINGTON, NC 28402
(910) 341-7807

SD 15-09



NOTE:
1. FOR CURB INLETS AND DROP INLETS

INLET PROTECTION
NOT TO SCALE

DATE: JAN, 2015
DRAWN BY: JSR
CHECKED BY: RDG, P.E.
SCALE: NOT TO SCALE

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
SHEET 2 of 2

CITY OF WILMINGTON
WILMINGTON, NC 28402
(910) 341-7807

SD 15-09

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
PARAMOUNT ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6766 (F)
NC License #: C-2846

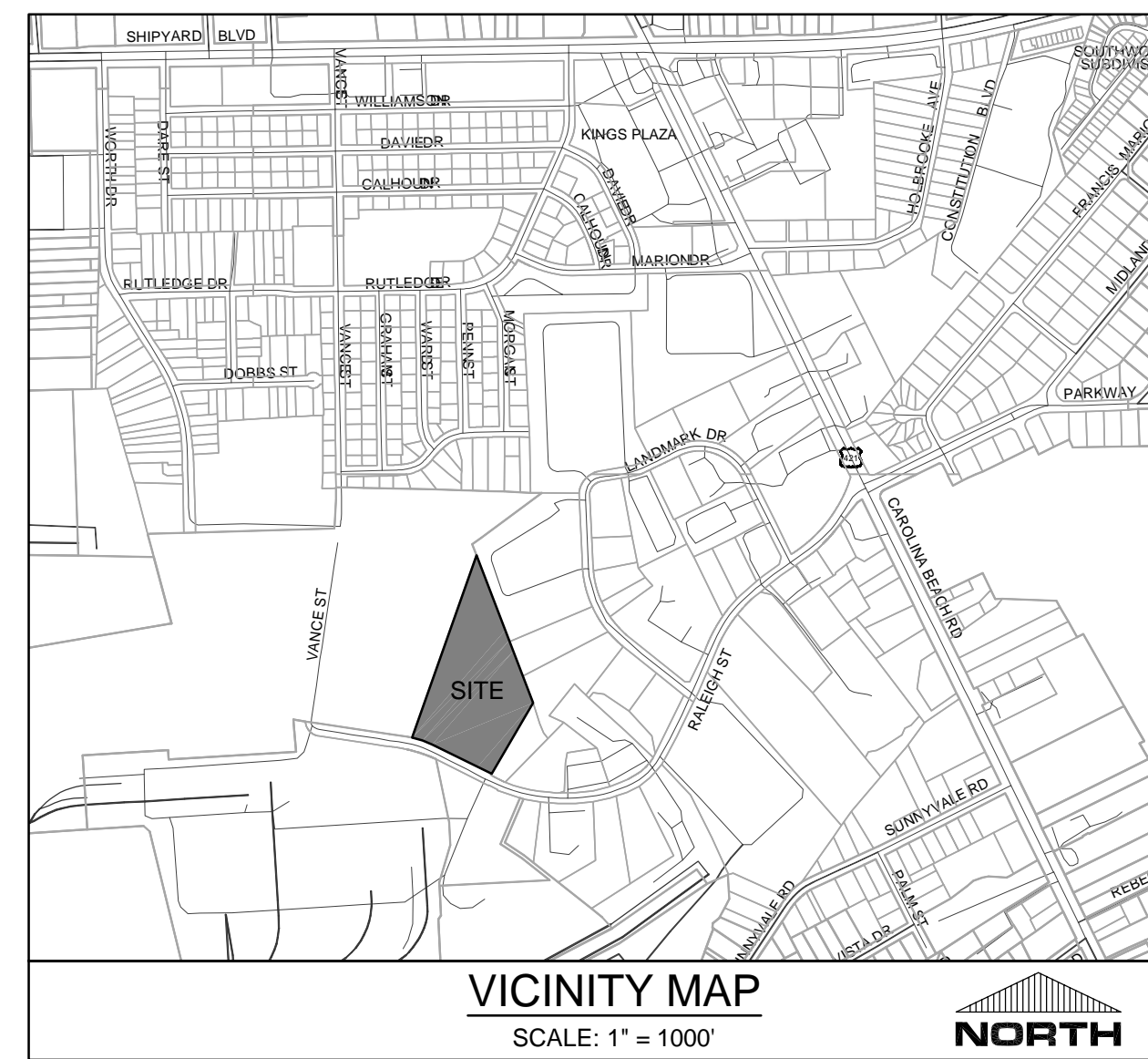
PROJECT STATUS:
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
RELEASED FOR CONSTRUCTION

DRAWING INFORMATION:
DATE: 10/25/17
DESIGNED BY: RDG, P.E.
CHECKED BY: JSR, P.E.
DRAWN BY: JSR, P.E.

SEAL:
NORTH CAROLINA PROFESSIONAL ENGINEER
ROBERT BALLARD
031591
10/25/17

PEL JOB#: 17256.PE

C-5.1



SITE DATA TABULATION

OWNER: CRETE INVESTMENTS, LLC
PROJECT ADDRESS: 239 RALEIGH STREET WILMINGTON, NC 28401
TAX PARCEL IDENTIFICATION #: R06400-002-008-000 (10.01 AC)
RECORDED DEED BOOK: BK 5886, PG 2491
TOTAL SITE AREA: 10.01 ACRES (436,036 SF)
CURRENT ZONING: IND - HEAVY INDUSTRIAL
CAMA LAND USE CLASSIFICATION: URBAN
MAXIMUM ALLOWABLE BUILDING HEIGHT: 35' MAXIMUM; 150' W/ ADDITIONAL SETBACKS
EXISTING LAND USE: UNDEVELOPED
PROPOSED LAND USE: CONCRETE BATCHING PLANT

SURVEY NOTES:
 SURVEY BOUNDARY AND ADJACENT PARCELS PROVIDED BY BNH SURVEY COMPANY.
 SURVEY DATED MAY 8, 2017.

LANDSCAPE NOTES:

- CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- TREES SHALL BE LOCATED A MINIMUM OF 6 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 EXISTING TREES 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. ALL GROUPS OF PLANTS SHOULD BE WITHIN 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.
- 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.
- 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.
- AUTOMATIC IRRIGATION IS PROVIDED AND SHALL BE DESIGNED AND INSTALLED BY A LICENSED IRRIGATION CONTRACTOR IN THE STATE OF NORTH CAROLINA.
- 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. ALL MATERIAL INCLUDING SOIL AND SEEDED 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 SHALL BE SEEDED.
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES.
- NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.

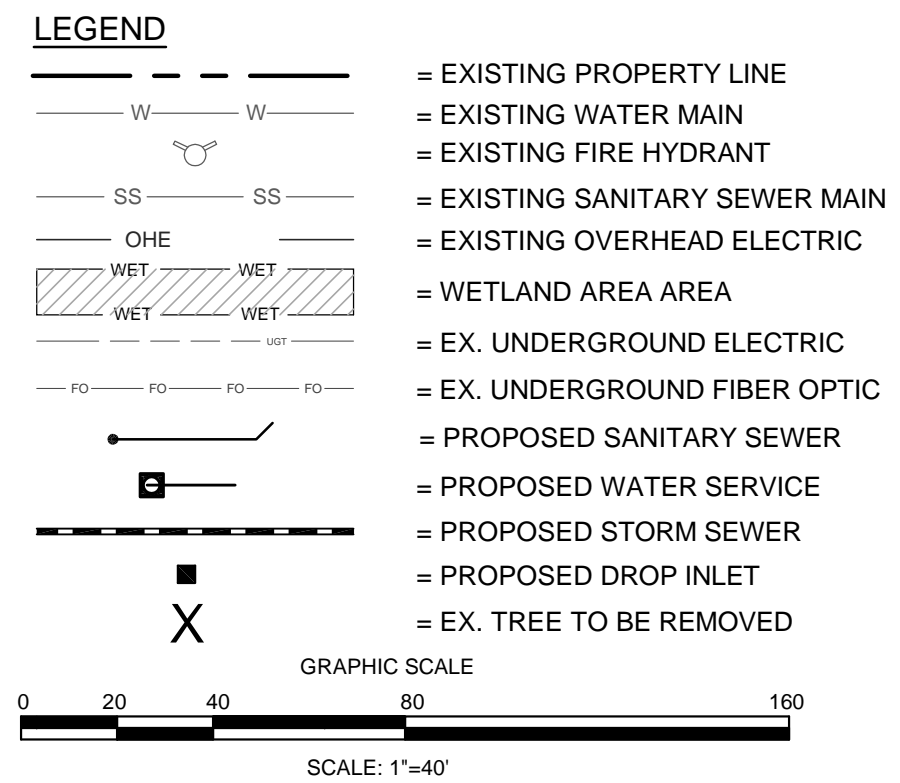
LANDSCAPE CALCULATIONS:

RALEIGH STREET PRIMARY STREETYARD (MAX WIDTH 37.5', MIN WIDTH 12.5') (529.68 LF - 60 LF OF DRIVEWAYS) = 469.68 LF * 25	REQUIRED	PROVIDED
1 CANOPY / 600 SF (19.57 MULTIPLIER)	20	20
6 SHRUBS / 600 SF	118	118
PARKING AREA INTERIOR 5,815 SF * 20% SHADING LARGE SHADE / CANOPY TREES @ 707 SF	1,163 SF	2,828 SF
PARKING AREA PERIMETER - N/A	2	4
FOUNDATION PLANTINGS PHASE 2 OFFICE BUILDING 40 LF * 20 FT HGT * 0.12	96 SF	144 SF
BUFFERYARDS - N/A		
TREE REMOVAL & MITIGATION - SEE CHART AND NOTES THIS SHEET.		

PLANT SCHEDULE

TREES	QTY	COMMON NAME	SIZE
AMH	17	AMERICAN HOLLY ILEX OPACA	2.5' CAL
BCY	4	BALD CYPRESS TAXODIUM DISTICHUM	2.5' CAL
BOE	3	BOSQUE ELM ULMUS PARVIFOLIA 'BOSQUE'	2.5' CAL
SHRUBS	QTY	COMMON NAME	CONT
LORR	33	RUBY LOROPETALUM LOROPETALUM CHINENSE 'RUBY'	12" HGT. MIN.
VPI	119	VARIEGATED MOCK ORANGE PITTOSPORUM TOBIRA 'VARIEGATA'	12" HGT. MIN.
WM	7	WAX MYRTLE MYRTICA CERIFERA	4' HT

- PLANTING NOTES:**
- PLANT SPACING AS SHOWN ON PLAN.
 - ALL DISTURBED AREAS TO BE SEEDED WITH CENTIPEDE SEED.
 - ALL MULCH SHALL BE PINE STRAW APPLIED AT 3" THICK MIN., 4" THICK MAX.



CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____
 Signed: _____

Approved Construction Plan
 Name _____ Date _____

Planning _____
 Traffic _____
 Fire _____

NC DENR 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)

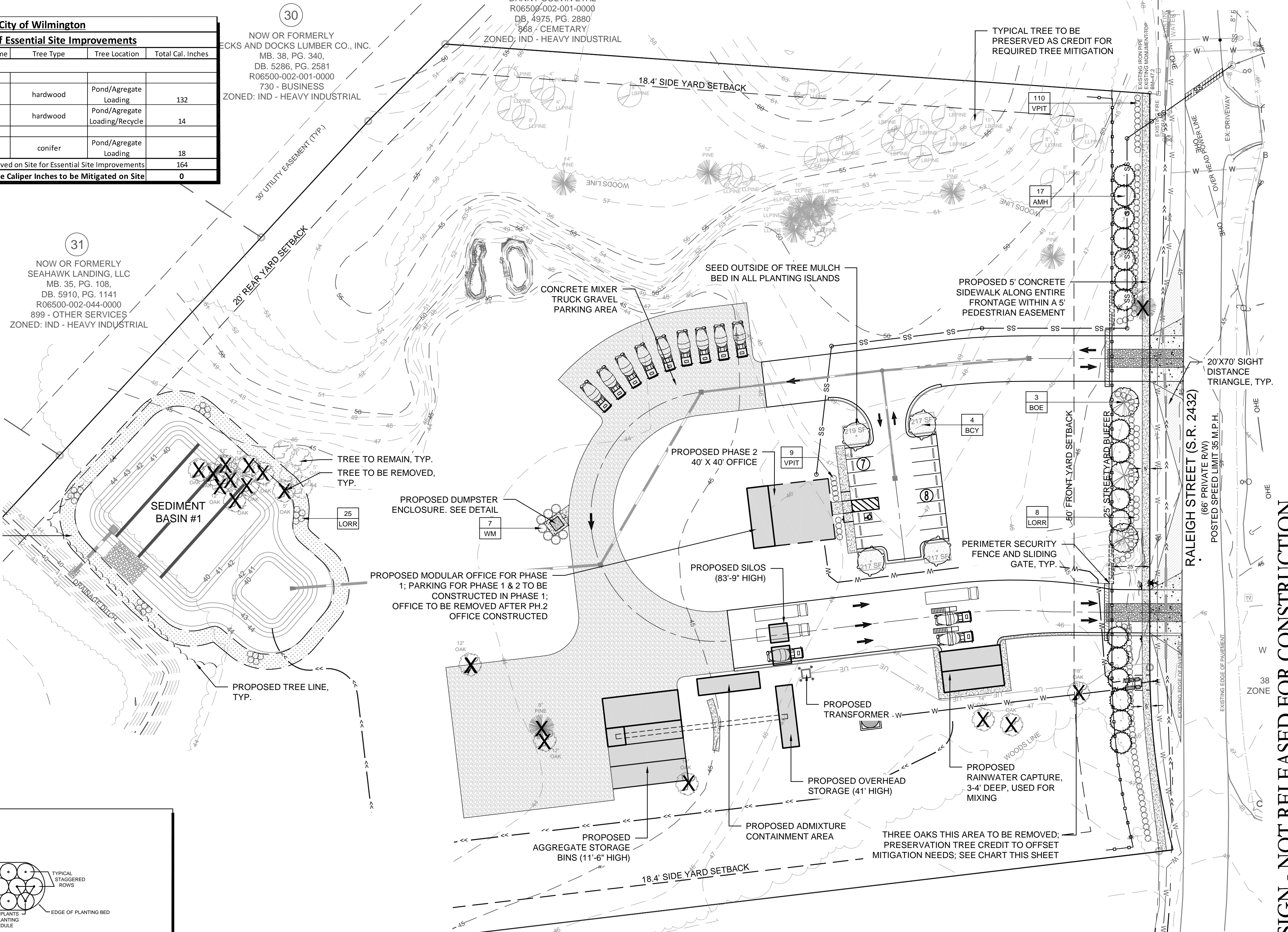
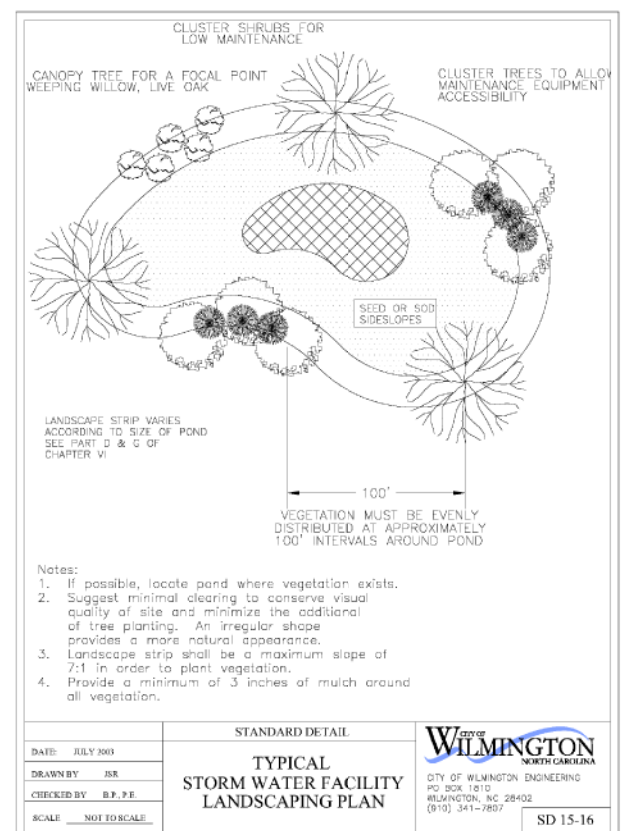
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

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

Raleigh St. Tract - City of Wilmington

Tree Removal within Areas of Essential Site Improvements

Quantity of Trees	Caliper Inches/Tree	Tree Common Name	Tree Type	Tree Location	Total Cal. Inches
Regulated Trees					
Category I Mitigation (100%)					
11	12	Oak	hardwood	Pond/Aggregate Loading	132
1	14	Oak	hardwood	Pond/Aggregate Loading/Recycle	14
Category III Mitigation (50%)					
1	18	Loblolly Pine	conifer	Pond/Aggregate Loading	18
Total Regulated Tree Caliper Inches to be Removed on Site for Essential Site Improvements					164
Total Regulated Tree Caliper Inches to be Mitigated on Site					0



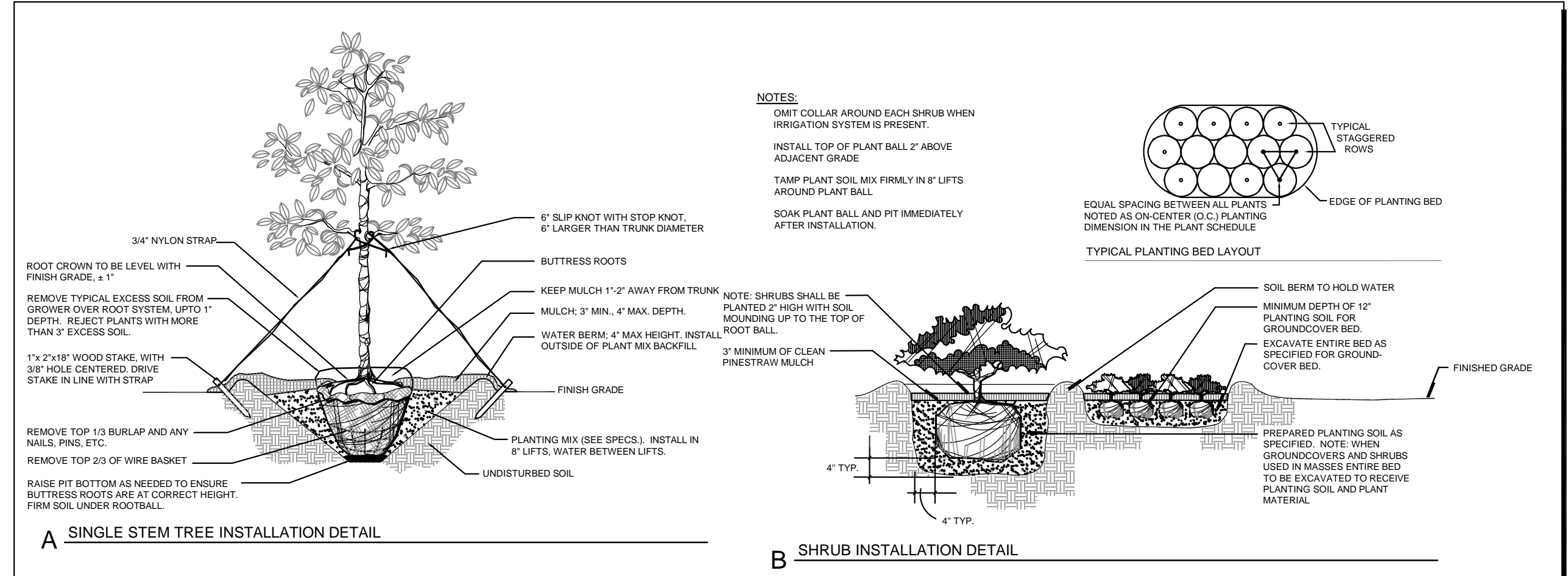
Raleigh St. Tract - City of Wilmington

Tree Mitigation for Regulated Trees

Quantity of Trees	Caliper Inches/Tree	Tree Common Name	Tree Type	Tree Location	Total Cal. Inches	CoW Mitigation %	Total 2.5" - 3" Replacement Trees	Tree Preservation Credit
Regulated Trees								
Category I Mitigation (100%)								
2	18	Oak	hardwood	Recycled Aggregate Area	36	100		12
1	14	Oak	hardwood	Aggregate Area	14	100		5
Total Regulated Tree Caliper Inches to be Removed on Site for Essential Site Improvements					50			17
Total Regulated Tree Caliper Inches to be Mitigated on Site								17

Tree Preservation Credit Chart

Quantity of Trees	Caliper Inches/Tree	Tree Common Name	Tree Type	Tree Location	Total Cal. Inches	Credit Per Preserved Tree (from chart Section 19-454 Table 3)	Credit for Preserved Tree
2	4	Longleaf Pine	conifer	southeast edge of property	8	1	8
3	6	Loblolly Pine	conifer	southeast edge of property	18	2	36
1	6	Longleaf Pine	conifer	southeast edge of property	6	2	12
6	8	Longleaf Pine	conifer	southeast edge of property	48	2	96
3	8	Loblolly Pine	conifer	southeast edge of property	24	2	48
6	10	Longleaf Pine	conifer	southeast edge of property	60	2	120
1	10	Loblolly Pine	conifer	southeast edge of property	10	2	20
total					168		328



REVISIONS:

REV 1: REVISED PER TRC COMMENTS	8/16/17
REV 2: REVISED PER TRC COMMENTS	10/23/17
REV 3: REVISED PER TREE MITIGATION COMMENTS 11/6/17	
REV 4: REVISED PER TRC COMMENTS	11/16/17

CLIENT INFORMATION:

PARAMOUNT ENGINEERING
 122 Cinema Drive
 Wilmington, North Carolina 28403
 (910) 791-6707 (O) (910) 791-6766 (F)
 NC License #: C-2846

LANDSCAPE PLAN

239 RALEIGH STREET WILMINGTON NEW HANOVER COUNTY, NC

PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

PROJECT STATUS:
 CONCEPTUAL LAYOUT:
 PRELIMINARY LAYOUT:
 RELEASED FOR CONSTRUCTION

DRAWING INFORMATION:
 DATE: 10/23/17
 DRAWN BY: T. A. B. A. E.
 CHECKED BY: T. A. B. A. E.

SEAL:
 T. A. B. A. E.
 1823
 11/16/2017
 PROFESSIONAL ENGINEER

L-1.0

PEI JOB#: 17256.PE



VICINITY MAP
SCALE: 1" = 1000'



CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

NC DENR PWSS WATER PERMIT #: _____

WATER CAPACITY: _____ GPD

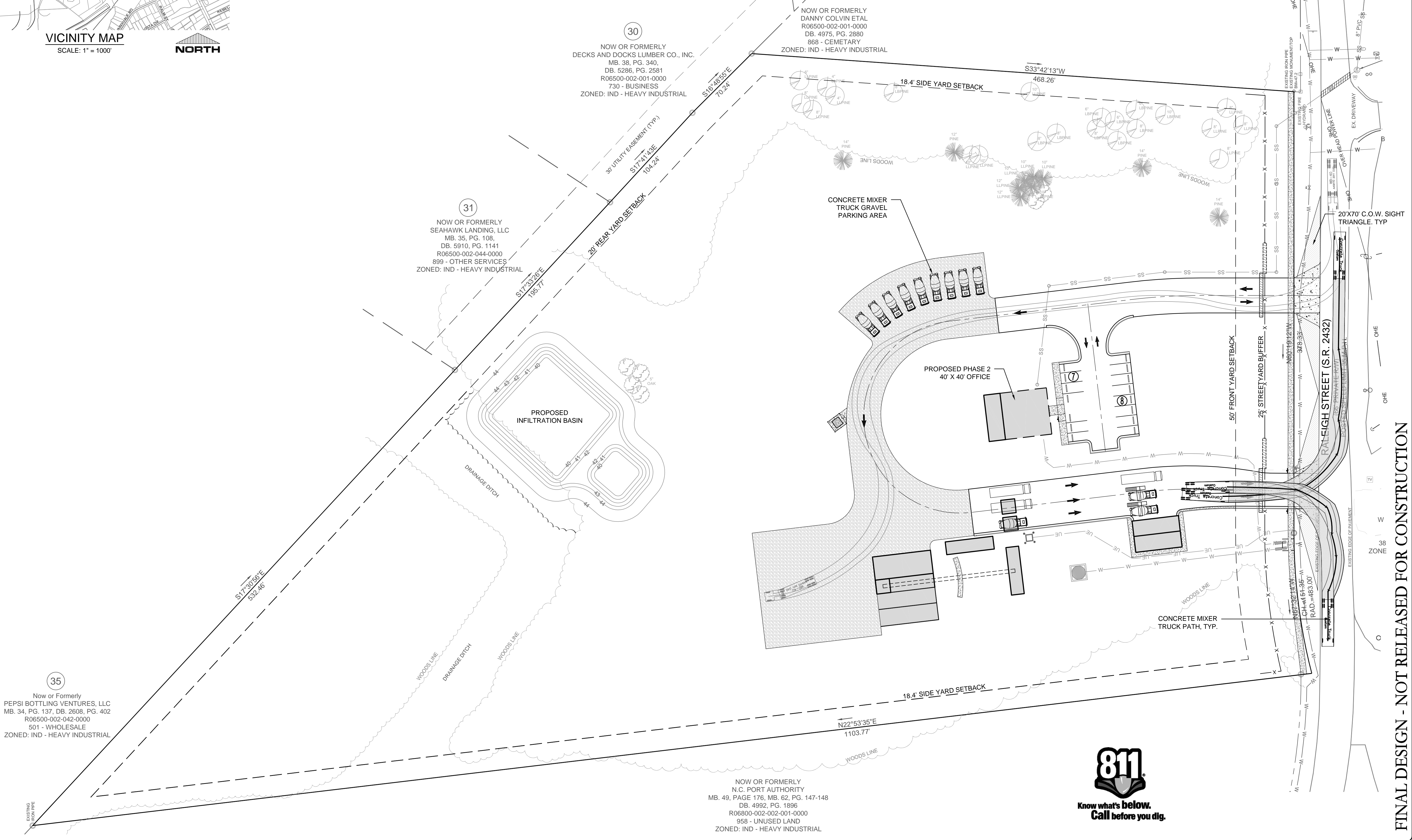
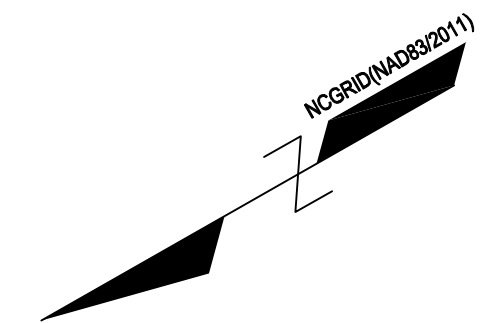
DWQ SEWER PERMIT #: _____

SEWER CAPACITY: _____ GPD

SEWER SHED # AND PLANT: _____

SEWER TO FLOW THROUGH NE: YES or NO (CIRCLE ONE)

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



35
Now or Formerly
PEPSI BOTTLING VENTURES, LLC
MB. 34, PG. 137, DB. 2608, PG. 402
R06500-002-042-0000
501 - WHOLESALE
ZONED: IND - HEAVY INDUSTRIAL

31
NOW OR FORMERLY
SEAHAWK LANDING, LLC
MB. 35, PG. 108,
DB. 5910, PG. 1141
R06500-002-044-0000
899 - OTHER SERVICES
ZONED: IND - HEAVY INDUSTRIAL

30
NOW OR FORMERLY
DECKS AND DOCKS LUMBER CO., INC.
MB. 38, PG. 340,
DB. 5286, PG. 2581
R06500-002-001-0000
730 - BUSINESS
ZONED: IND - HEAVY INDUSTRIAL

NOW OR FORMERLY
N.C. PORT AUTHORITY
MB. 49, PAGE 176, MB. 62, PG. 147-148
DB. 4992, PG. 1896
R06800-002-002-001-0000
958 - UNUSED LAND
ZONED: IND - HEAVY INDUSTRIAL



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
CRETE INVESTMENTS
2005 Eastwood Road, Suite 200
Wilmington, NC 28403

PARAMOUNT
ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6766 (F)
NC License #: C-2846

TRUCK TURN EXHIBIT
239 RALEIGH STREET
WILMINGTON
NEW HANOVER COUNTY, NC

PROJECT STATUS	CONCEPTUAL LAYOUT: PRELIMINARY LAYOUT: RELEASED FOR CONST.:
DRAWING INFORMATION	DATE: 11/17/17 DESIGNED: T.A.E. DRAWN: J.R.C. CHECKED: P.H.
SEAL	

EX-1