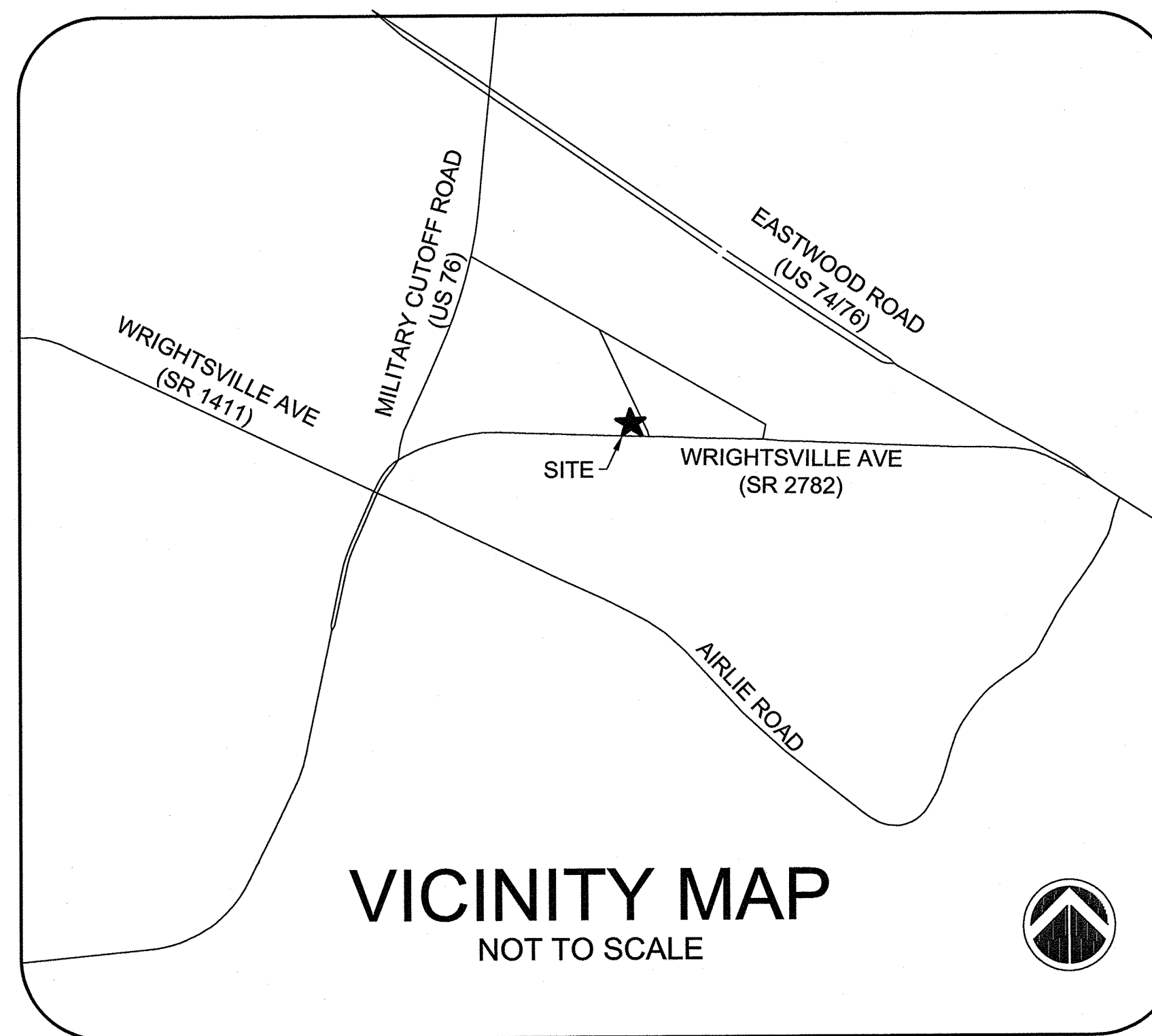


CONSTRUCTION PLANS FOR TROLLEY STATION

Wilmington, North Carolina



INDEX

COVER	
C-001	GENERAL NOTES
C-002	ABBREVIATIONS AND LEGEND
VF100	EXISTING CONDITIONS
CD101	DEMOLITION PLAN
CS101	SITE PLAN
CU101	UTILITY PLAN
CG101	STORMWATER AND GRADING PLAN
LS101	LANDSCAPE PLAN
C-500	SITE DETAILS-1
C-501	SITE DETAILS-2
C-502	STORMWATER DETAILS - 1
C-503	STORMWATER DETAILS - 2
C-504	EROSION CONTROL DETAILS - 1
C-505	EROSION CONTROL DETAILS - 2
C-506	UTILITY DETAILS-1
A-100	BUILDING ELEVATIONS

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: 3/28/19 Permit: 2019017
Signed: *[Signature]*

Approved Construction Plan

	Name	Date
Planning	<i>mc</i>	3-27-2019
Traffic	<i>W. Miller</i>	3-29-19
Fire	<i>James Merrill</i>	3-28-19

RECEIVED

MAR 27 2019

PLANNING DIVISION

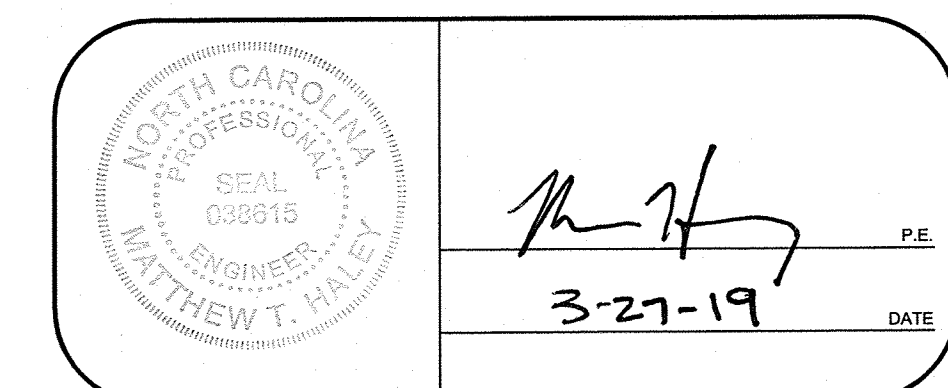
DEVELOPER INFORMATION:

BAILEY AND ASSOCIATES, INC.
405-D WESTERN BOULEVARD
JACKSONVILLE, NC 28546
910-346-8443

CAPE FEAR ENGINEERING

151 Poole Rd., Suite 100; Belville, NC, 28451
TEL (910) 383-1044; FAX (910) 383-1045
www.capefearengineering.com
N.C. LICENSE # C-1621

ISSUED FOR CONSTRUCTION

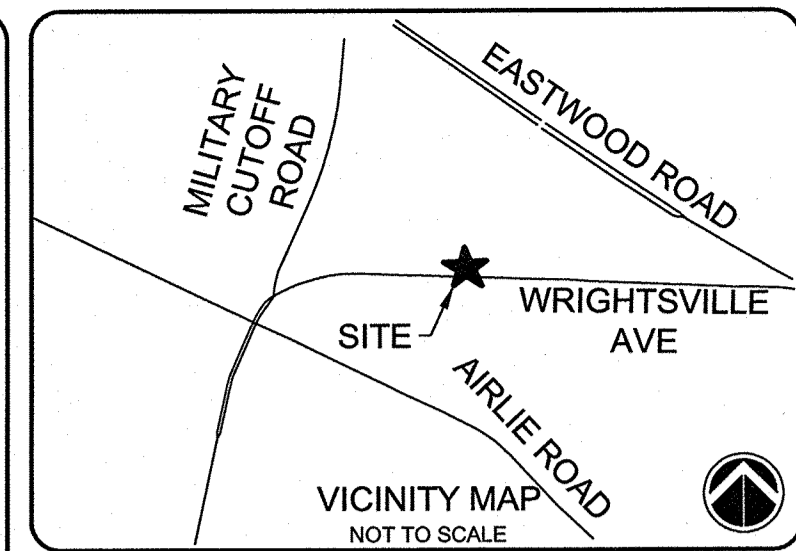


LEGEND	EXISTING	PROPOSED
PROPERTY LINE		
PROPERTY CORNER		
SETBACKS		
LANDSCAPE BUFFER		
EASEMENT		
CONTOURS		
SPOT ELEVATIONS TOP OF PAVEMENT TOP OF SIDEWALK		
ASPHALT PAVEMENT		
CONCRETE PAVEMENT		
PERVIOUS CONCRETE		
ASPHALT PAVEMENT OVER EXISTING SURFACE		
SIDEWALK		
BUILDING		
CURB & GUTTER		
VERTICAL CURB		
HEADER CURB		
WHEEL STOPS		
WATERLINE		
WL VALVE		
WATER METER		
BACKFLOW PREVENTER		
SEWERLINE		
SEWER MANHOLE		
SEWER CLEANOUT		
SEWER VALVE BOX		
STORMDRAIN PIPE		
STORM DROP INLET		
DRAINAGE SWALE		
DOWNSPOUT		
FLARED END SECTION		
POWER POLE		
GUY WIRE		
TELEPHONE PEDESTAL		
OVERHEAD ELECTRIC		
COMMUNICATIONS MANHOLE		
LIMITS OF DISTURBANCE		
INLET PROTECTION		
TEMPORARY CONSTRUCTION ENTRANCE		
SILT FENCE		
GRASS (SEED/SOD)		
SIGN		
FIRE HYDRANT		
FIRE DEPARTMENT CONNECTION		
FENCE		
LANDSCAPE WALL		
12' DIRECT BURY POLE WITH LED HOE BOX FIXTURE.		
LED BOLLARD TYPE LOW LEVEL LIGHTING		

LANDSCAPE LEGEND	EXISTING TO REMAIN	EXISTING TO BE DEMOLISHED	PROPOSED
LANDSCAPE BUFFER			
GRASS (SEED/SOD) (SEE VEGETATION SCHEDULE ON SHEET D-1)			
TREE - GUM			
TREE - PINE			
TREE - OAK			
TREE - MAGNOLIA			
TREE - MAPLE			
TREE PROTECTION			

ABBREVIATIONS	
ABC	- AGGREGATE BASE COURSE
ABD	- ABANDONED
AC	- ACRE
ACI	- AMERICAN CONCRETE INSTITUTE
APPROX	- APPROXIMATE
ASTM	- AMERICAN SOCIETY FOR TESTING AND MATERIAL
BEN	- BENCH
BC	- BACK OF CURB
BLDG	- BUILDING
CAMA	- COASTAL AREA MANAGEMENT PLAN
CATV	- CABLE TELEVISION
CB	- CATCH BASIN
CF	- CUBIC FEET
CFPUA	- CAPE FEAR PUBLIC UTILITY AUTHORITY
CJ	- CONTRACTION JOINT
CL	- CENTERLINE
CO	- SEWER CLEANOUT
COMM	- COMMUNICATION
CONC	- CONCRETE
CRSI	- CONCRETE REINFORCING STEEL INSTITUTE
CVR	- COVER
DB	- DIVERSION BOX
DCJ	- DOWELED CONSTRUCTION JOINT
DI	- DROP INLET
DIA	- DIAMETER
Ø	- DIAMETER
DIM	- DIMENSION
DIP	- DUCTILE IRON PIPE
DOM	- DOMESTIC
E	- EASTING
EJ	- EXPANSION JOINT
EL/ELEV	- ELEVATION
ELEC	- ELECTRIC
EX	- EXISTING
FDC	- FIRE DEPARTMENT CONNECTION
FEMA	- FEDERAL EMERGENCY MANAGEMENT AGENCY
FES	- FLARED END SECTION
FFE	- FINISHED FLOOR ELEVATION
FH	- FIRE HYDRANT
FIRM	- FLOOD INSURANCE RATE MAP
FOC	- FACE OF CURB
GPM	- GALLONS PER MINUTE
GW	- GUY WIRE
HVAC	- HEATING/AIR CONDITIONING UNIT
IE/INV	- INVERT ELEVATION
L:W	- LENGTH TO WIDTH
LCJ	- LONGITUDINAL CONTRACTION JOINT
LF	- LINEAR FEET
LKJ	- LONGITUDINAL CONSTRUCTION JOINT
LP	- LIGHT POLE
MAP	- MAPLE TREE
MAX	- MAXIMUM
MH	- MANHOLE
MIN	- MINIMUM
MUTCD	- MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	- NORTHING
N/A	- NOT APPLICABLE
NAD	- NORTH AMERICA DATUM
NAVD	- NORTH AMERICA VERTICAL DATUM
NCDEQ	- NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY
NCDOT	- NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
NRCS	- NATURAL RESOURCES CONSERVATION SERVICE
PP	- POWER POLE
PVC	- POLYVINYL CHLORIDE
R	- RADIUS

RCP	- REINFORCED CONCRETE PIPE
RD	- ROOF DRAIN
RED	- REDUCER
RPDA	- REDUCED PRESSURE DETECTOR ASSEMBLY
SCH	- SCHEDULE
SD	- STORM DRAIN
SF	- SQUARE FEET
SHWT	- SEASONAL HIGH WATER TABLE
SS	- SANITARY SEWER
SSCO	- SANITARY SEWER CLEANOUT
SSMH	- SANITARY SEWER MANHOLE
ST	- SEDIMENT TRAP
T PED	- TELEPHONE PEDESTAL
TC	- TOP OF CURB
TCJ	- TRANSVERSE CONTRACTION JOINT
TE	- THICKENED EDGE
TEJ	- THICKENED EDGE WITH EXPANSION JOINT
TP	- TREE PROTECTION
TYP	- TYPICAL
UNK	- UNKNOWN
USDA	- UNITED STATES DEPARTMENT OF AGRICULTURE
W	- WATER
WL	- WATER LINE
WM	- WATER METER
WV	- WATER VALVE
WWF	- WELDED WIRE FABRIC



SEE THIS SHEET FOR ABBREVIATIONS AND LEGEND.

ISSUED FOR CONSTRUCTION

REV. #	DESCRIPTION	REV. BY	DATE
1	ISSUED FOR CONSTRUCTION	MTH	3/27/19
REVISIONS			



CAPE FEAR ENGINEERING
 151 Poole Rd., Suite 100, Belville, NC, 28451
 TEL (910) 383-1044; FAX (910) 383-1045
 www.capefearengineering.com
 N.C. LICENSE # C-1621

PROJECT NUMBER:	275-96
SCALE:	AS SHOWN
DATE:	MARCH 27, 2019

TROLLEY STATION
 6789 WRIGHTSVILLE AVE
 WILMINGTON, NC

ABBREVIATIONS AND LEGEND

PROJECT NUMBER	SHEET NUMBER
275-96	C-002

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED DRAINAGE PLAN
 Date: 3/27/19 Permit #: 2019017
 Signed: Josh Christensen



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

NOTICE REQUIRED

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

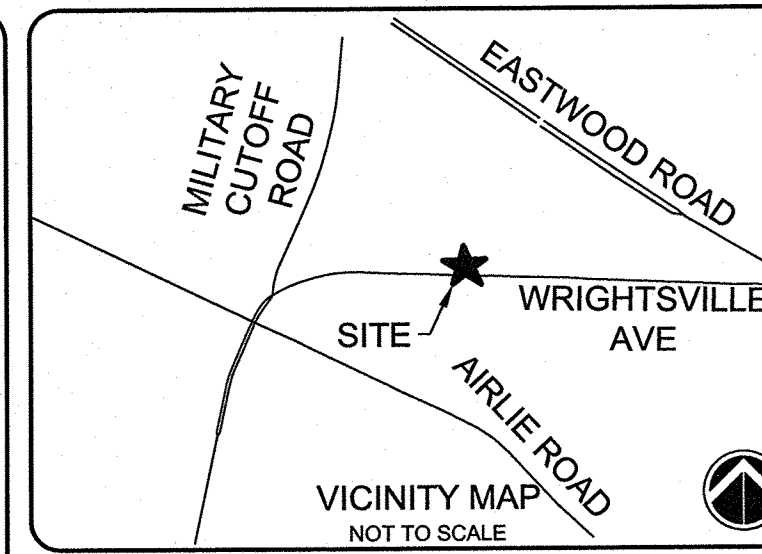
NORTH CAROLINA LAW REQUIRES A TWO WORKING DAYS NOTICE BE GIVEN TO THE UTILITY OWNERS BEFORE YOUR DIGGING BEGINS. ONCE ALL UNDERGROUND FACILITIES HAVE BEEN MARKED, YOU MAY BEGIN YOUR EXCAVATION ACTIVITIES.

CONTACT "CAROLINA ONE CALL" AT 811
 EMERGENCY DIAL 911 POLICE - FIRE - RESCUE

Approved Construction Plan

Name	Date
Planning	cmc 3.27.2019
Traffic	W. Shubert 3.29.19
Fire	Jamie Merritt 3.28.19

BORING	GRADE ELEV.	DEPTH TO SHWT	SHWT ELEV.
A	27.40	29"	24.98
B	27.45	26"	25.28



SEE SHEET C-001 FOR GENERAL NOTES.
SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

REV. #	DESCRIPTION	DATE	MTH	REV. BY
1	ISSUED FOR CONSTRUCTION		MTH	3/27/19
	REVISIONS			

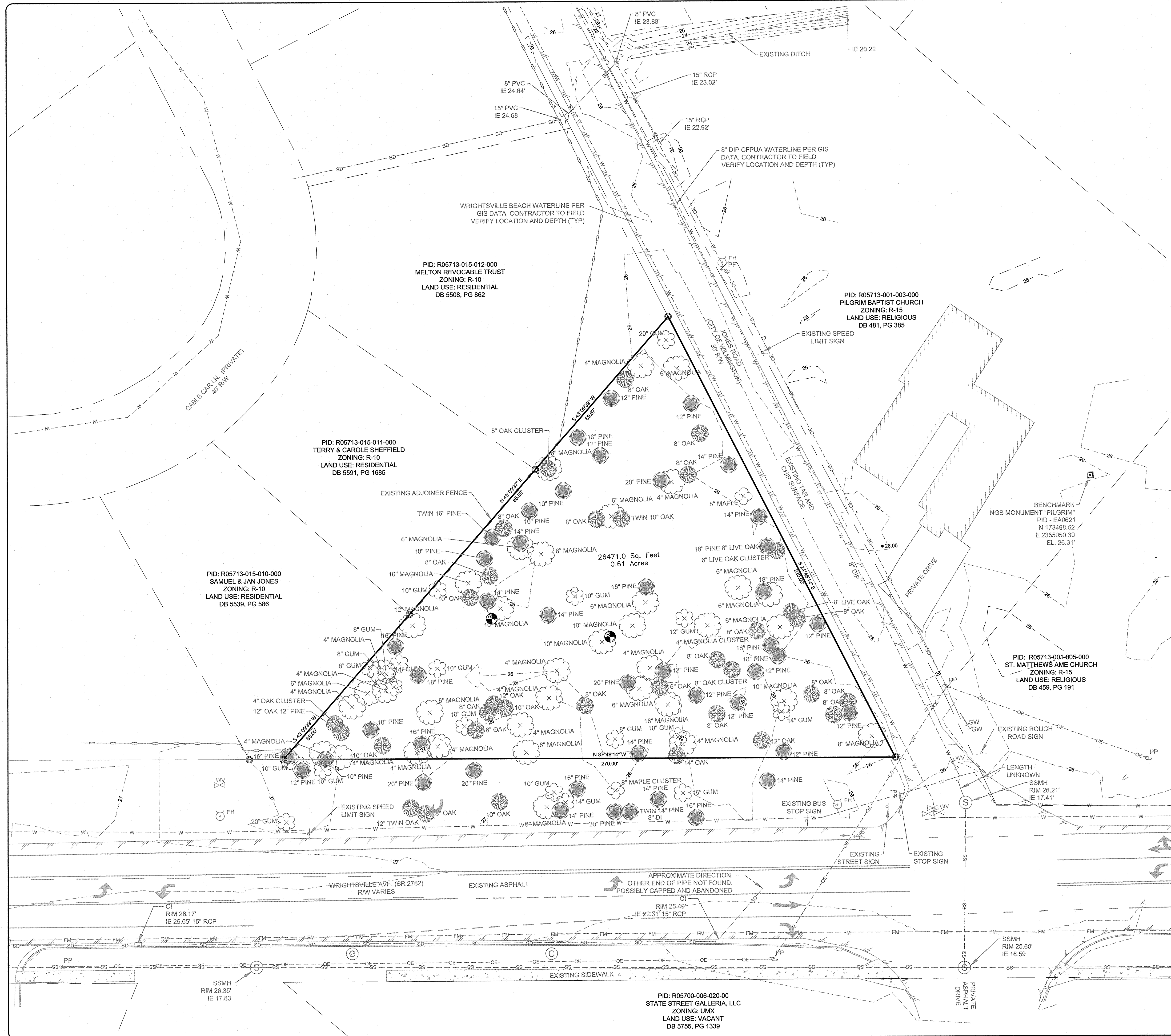
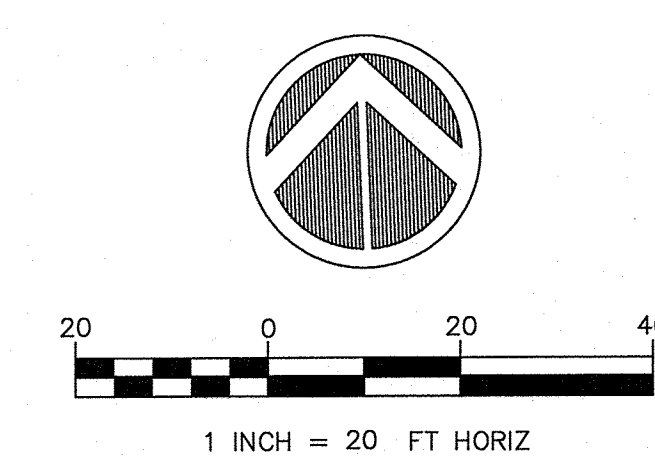


CAPE FEAR ENGINEERING
151 Poole Rd., Suite 100, Belville, NC, 28451
TEL (910) 383-1044; FAX (910) 383-1045
www.capefearengineering.com
N.C. LICENSE # C-1621

CITY OF WILMINGTON
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: 3/28/19 Permit # 2019017
Signed: *[Signature]*

Approved Construction Plan

Name	Date
Planning <i>[Signature]</i>	3-27-2019
Traffic <i>[Signature]</i>	3-29-19
Fire <i>[Signature]</i>	3-28-19

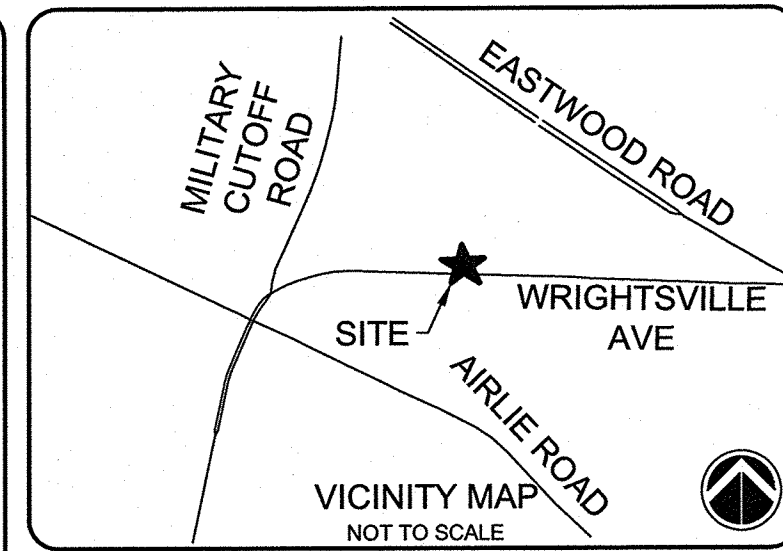
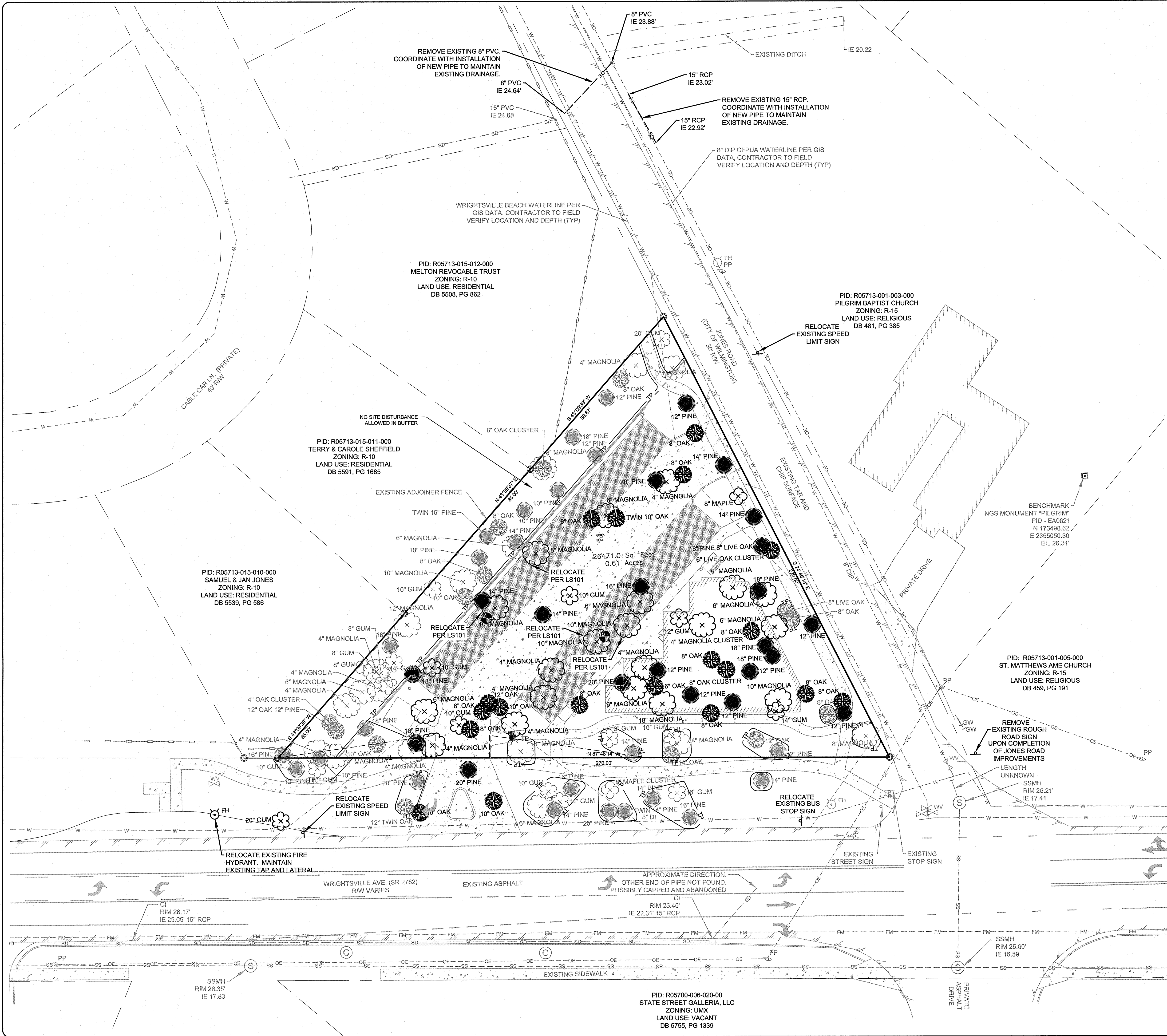


PID: R05700-006-020-00
STATE STREET GALLERIA, LLC
ZONING: UMX
LAND USE: VACANT
DB 5755, PG 1339

TROLLEY STATION
6789 WRIGHTSVILLE AVE
WILMINGTON, NC

EXISTING CONDITIONS

PROJECT NUMBER 275-96	SHEET NUMBER VF100
---------------------------------	------------------------------



SEE SHEET C-001 FOR GENERAL NOTES.
SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

1	ISSUED FOR CONSTRUCTION	MTH 3/27/19
REV. #	DESCRIPTION	REV. BY DATE
	REVISIONS	



WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: 3/28/19 Permit # 2019017
Signed: Rich Christensen

Approved Construction Plan

Name	Date
Planning <i>Ymc</i>	3-27-2019
Traffic <i>W. Smith</i>	3-27-19
Fire <i>James Merrill</i>	3-28-19

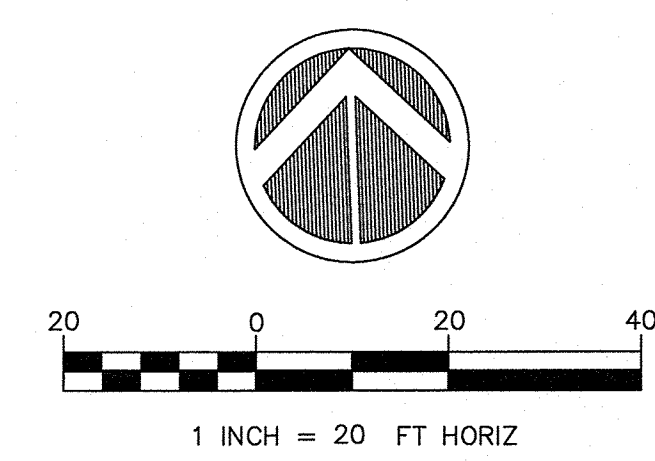
CAPE FEAR ENGINEERING
151 Poole Rd., Suite 100, Belville, NC, 28451
TEL (910) 383-1044; FAX (910) 383-1045
www.capefearengineering.com
N.C. LICENSE # C-1621

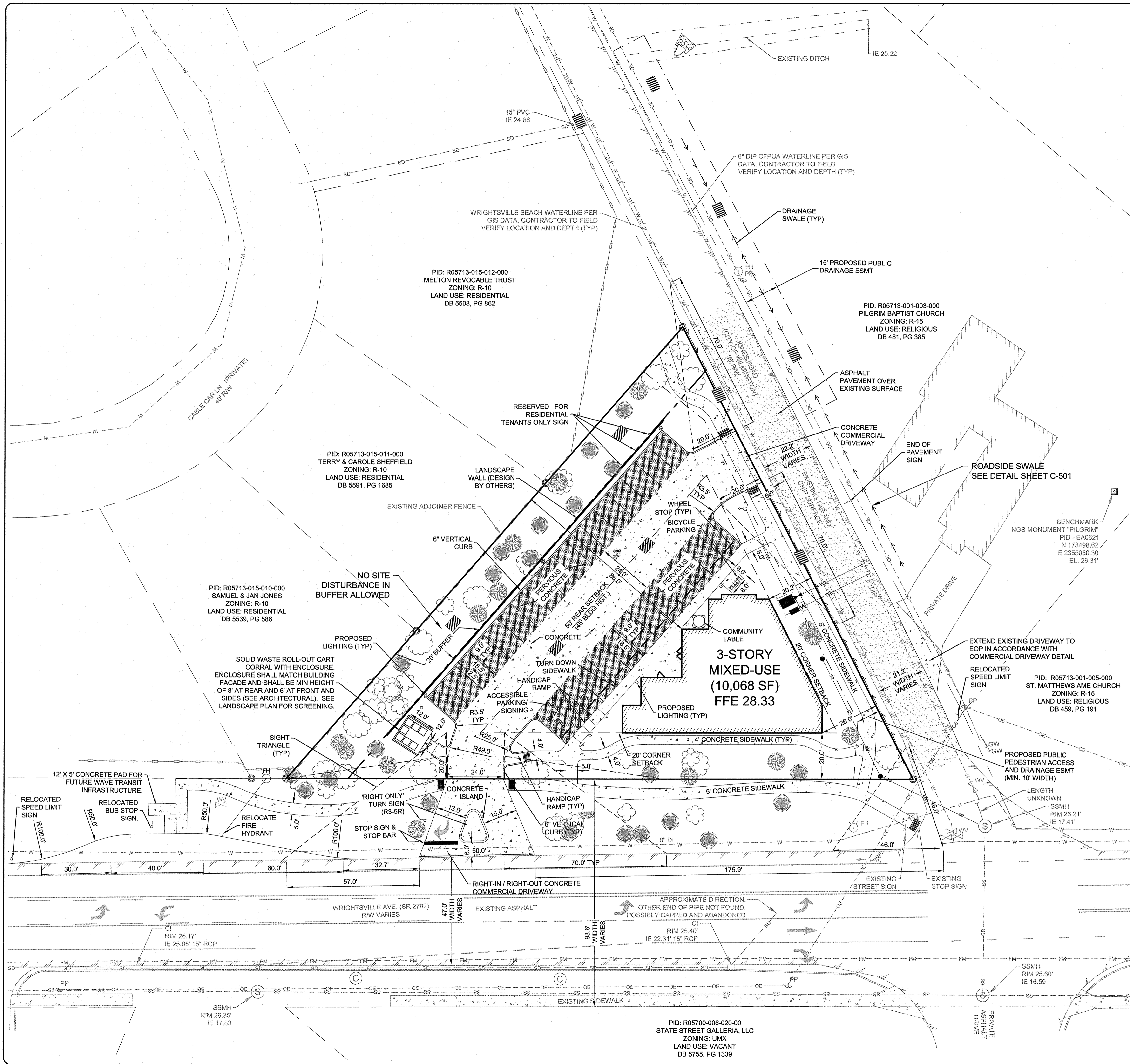
PROJECT NUMBER	275-96
SCALE	AS SHOWN
DATE	MARCH 27, 2019

TROLLEY STATION
6789 WRIGHTSVILLE AVE
WILMINGTON, NC

DEMOLITION PLAN

PROJECT NUMBER	275-96	SHEET NUMBER	CD101
----------------	--------	--------------	-------





SITE DATA TABLE
 PROJECT NAME: TROLLEY STATION
 PROJECT ADDRESS: 6789 WRIGHTSVILLE AVENUE
 PARCEL ID: R05713-015-021-000
 ZONING: O&I-1 (CD 25-518) OFFICE & INSTITUTIONAL
 USE: COMMERCIAL DISTRICT MIXED USE (CDMU) - NEIGHBORHOOD RETAIL (2-UNITS), PROFESSIONAL OFFICE (2-UNITS), RESIDENTIAL UNITS (3-UNITS)

REQUIRED SETBACKS	PROVIDED SETBACKS
20' FRONT	20' FRONT
20' CORNER	20' CORNER
50' (25' REAR TO RESIDENTIAL)	+/- 86' REAR
(+ 1:1 RATIO FOR HGT OVER 20')	

LOT AREA: 0.61 AC (26,471 SF)
 BUILDING HEIGHT: 3 STORY / MAXIMUM 45'
 BUILDING CONSTRUCTION TYPE: VB
 GROSS FLOOR AREA: 10,068 SF
 FIRST FLOOR = 3,346 SF GFA, 2,776 SF RETAIL
 SECOND FLOOR = 3,346 SF GFA, 2,797 SF OFFICE
 THIRD FLOOR = 3,376 SF GFA, 2,627 SF (3) APARTMENTS, 213 SF DECK
 CAMA LAND USE CLASSIFICATION: WATERSHED RESOURCE PROTECTION
 LIGHTING PLAN SHOWN IS CONCEPTUAL. ALL OUTDOOR LIGHTING IS TO BE INSTALLED SO AS TO NOT SHINE OR REFLECT DIRECTLY ONTO ADJACENT PROPERTIES.

PARKING/BUILDING SIZE TABLE:

FIRST FLOOR:	RETAIL SPACE - 2,776 SF	MIN. 1 SPACE/400 SF	MAX. 1 SPACE/200 SF
SECOND FLOOR:	OFFICE SPACE - 2,797 SF	MIN. 1 SPACE/300 SF	MAX. 1 SPACE/200 SF
THIRD FLOOR:	(3) - 1 BEDROOM APARTMENTS	MIN. 1.5 SPACES/1 BEDROOM UNIT	MAX 2.5 SPACES/UNIT

MIN. = 2,776SF / (1 PER 400 SF) + 2,797 SF / (1 PER 300 SF) + 3 UNITS / (1.5 PER UNIT) = MINIMUM 21 SPACES REQUIRED.
 MAX = 2,776 SF / (1 PER 200 SF) + 2,797 SF / (1 PER 200 SF) + 3 UNITS / (2.5 PER UNIT) = MAXIMUM 36 SPACES ALLOWED.
 SPACES PROVIDED = 29 SPACES (INCLUDING HANDICAP)
 HANDICAP SPACE REQUIRED = 2 SPACES (MIN. 1 VAN SPACE)
 HANDICAP SPACES PROVIDED = 2 SPACES (INCLUDING 1 VAN SPACE)

BICYCLE PARKING:
 5 BICYCLE SPACES PROVIDED

PROPOSED LOT COVERAGE
 TOTAL AREA: 26,471 SF (0.61 ACRES)

ONSITE IMPERVIOUS AREA:	
BUILDING FOOTPRINT:	3,376 SF
CURB, PARKING AND AISLES:	4,578 SF
SIDEWALKS / PADS:	1,784 SF
FUTURE TOTAL:	9,997 SF

OFFSITE IMPERVIOUS AREA:	
PAVEMENT:	1,535 SF
SIDEWALKS:	2,920 SF
WAVE TURNOUT AND PAD:	1,095 SF
TOTAL:	5,550 SF

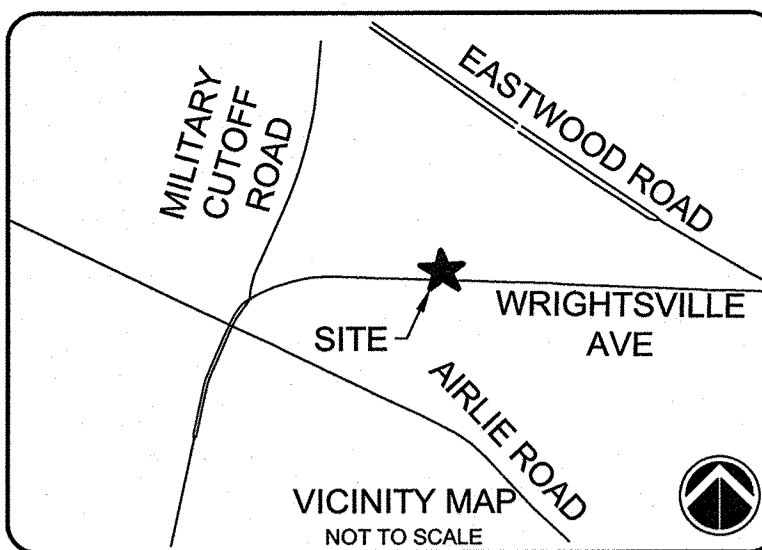
PERMEABLE PAVEMENT: 4,486 SF (100% PVIOUS CREDIT)
 PERCENT COVERAGE = 9,999 SF (IMPERVIOUS) / 26,471 SF (TOTAL LOT) = 37.8%
 BUILDING COVERAGE = 3,376 SF / 26,417 SF = 12.8%

THIS PROJECT MEETS EXCEPTIONAL DESIGN AND THEREFORE IS NOT LIMITED TO 25% BUA MAXIMUM REQUIRED BY CAMA LAND USE CLASSIFICATION.

TRAFFIC NOTES:
 JONES ROAD IS THE ONLY INTERSECTION STREET WITHIN 250 FEET OF PROPERTY. THERE ARE NO TRAFFIC SIGNALS WITHIN 500 FEET OF THE PROPERTY LINE.

OWNER INFORMATION:
 ROSEMAN PATRICIA M REV TRUST
 WILMINGTON, NC 28411

DEVELOPER INFORMATION:
 BAILEY AND ASSOCIATES, INC.
 405-D WESTERN BOULEVARD
 JACKSONVILLE, NC 28546
 910-346-8443



SEE SHEET C-001 FOR GENERAL NOTES.
 SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

1	ISSUED FOR CONSTRUCTION	MTH
REV.	DESCRIPTION	REV. BY
#	REVISIONS	DATE

PROPOSED LOT COVERAGE
 TOTAL AREA: 26,471 SF (0.61 ACRES)

ONSITE IMPERVIOUS AREA:	
BUILDING FOOTPRINT:	3,376 SF
CURB, PARKING AND AISLES:	4,578 SF
SIDEWALKS / PADS:	1,784 SF
FUTURE TOTAL:	9,997 SF

OFFSITE IMPERVIOUS AREA:	
PAVEMENT:	1,535 SF
SIDEWALKS:	2,920 SF
WAVE TURNOUT AND PAD:	1,095 SF
TOTAL:	5,550 SF

PERMEABLE PAVEMENT: 4,486 SF (100% PVIOUS CREDIT)
 PERCENT COVERAGE = 9,999 SF (IMPERVIOUS) / 26,471 SF (TOTAL LOT) = 37.8%
 BUILDING COVERAGE = 3,376 SF / 26,417 SF = 12.8%

THIS PROJECT MEETS EXCEPTIONAL DESIGN AND THEREFORE IS NOT LIMITED TO 25% BUA MAXIMUM REQUIRED BY CAMA LAND USE CLASSIFICATION.

TRAFFIC NOTES:
 JONES ROAD IS THE ONLY INTERSECTION STREET WITHIN 250 FEET OF PROPERTY. THERE ARE NO TRAFFIC SIGNALS WITHIN 500 FEET OF THE PROPERTY LINE.

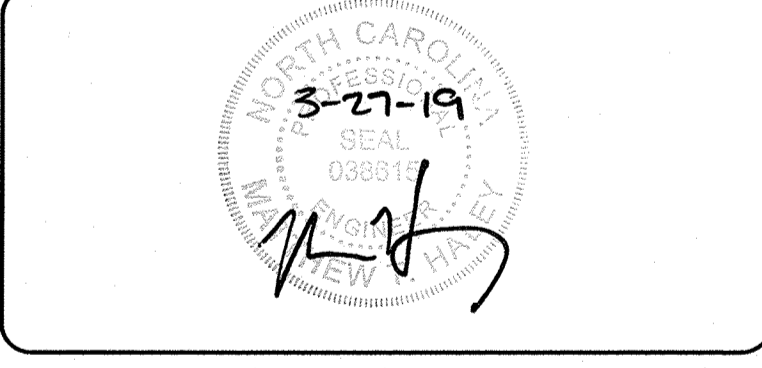
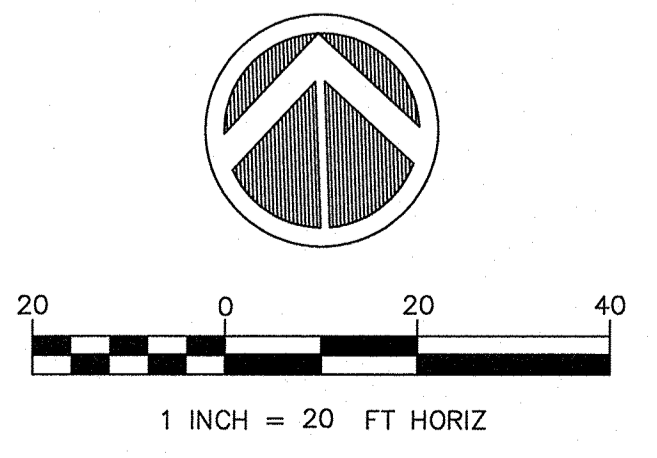
OWNER INFORMATION:
 ROSEMAN PATRICIA M REV TRUST
 WILMINGTON, NC 28411

DEVELOPER INFORMATION:
 BAILEY AND ASSOCIATES, INC.
 405-D WESTERN BOULEVARD
 JACKSONVILLE, NC 28546
 910-346-8443

WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED DRAINAGE PLAN
 Date: 3/22/19 Permit # 2019017
 Signed: *[Signature]*

Approved Construction Plan

Name	Date
Planning <i>[Signature]</i>	3-27-2019
Traffic <i>[Signature]</i>	3-29-19
Fire <i>[Signature]</i>	3-28-19



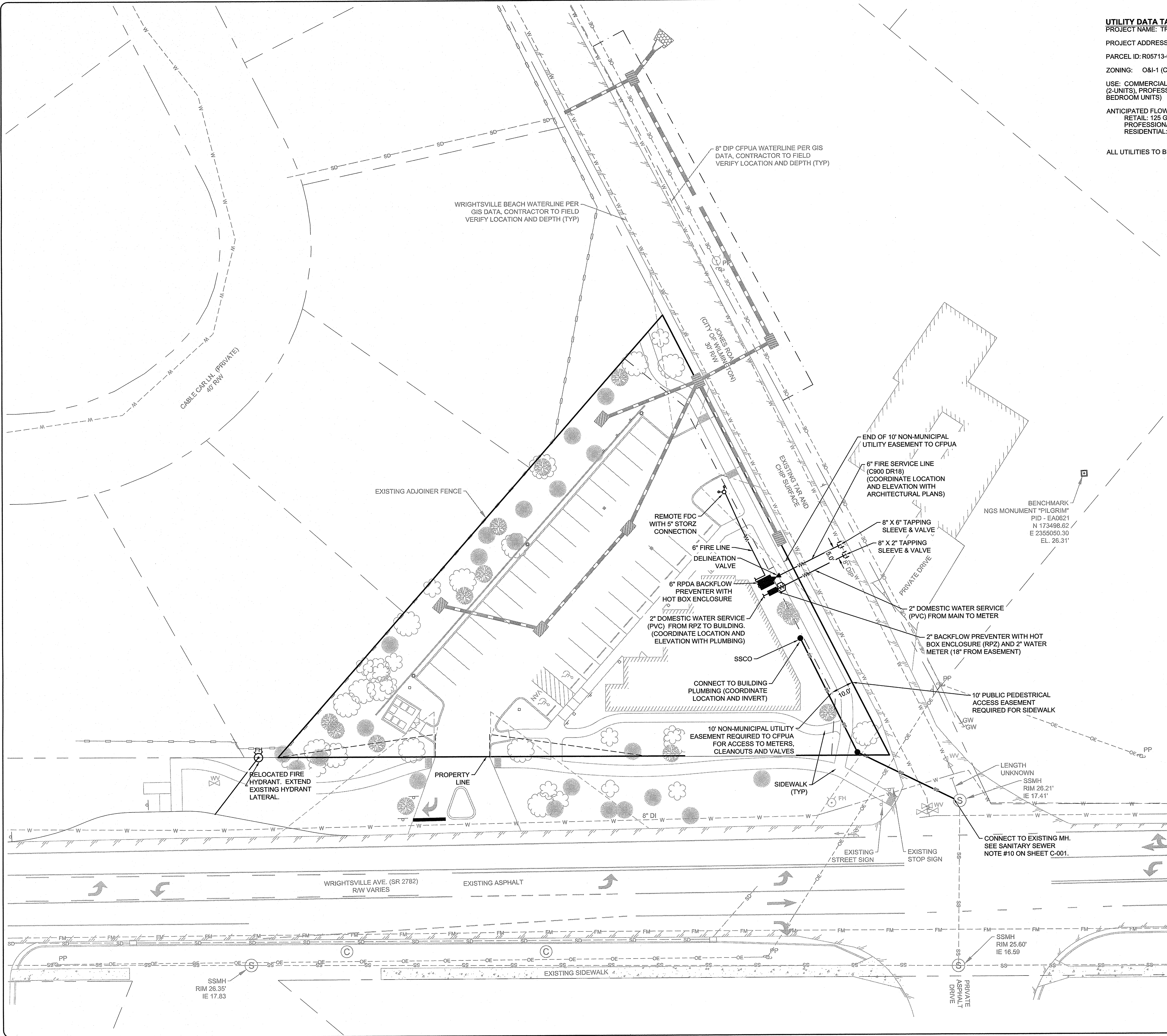
CAPE FEAR ENGINEERING
 151 Poole Rd., Suite 100; Belville, NC, 28451
 TEL (910) 383-1044; FAX (910) 383-1045
 www.capefearengineering.com
 N.C. LICENSE # C-1621

PROJECT NUMBER:	275-96
SCALE:	AS SHOWN
DATE:	MARCH 27, 2019

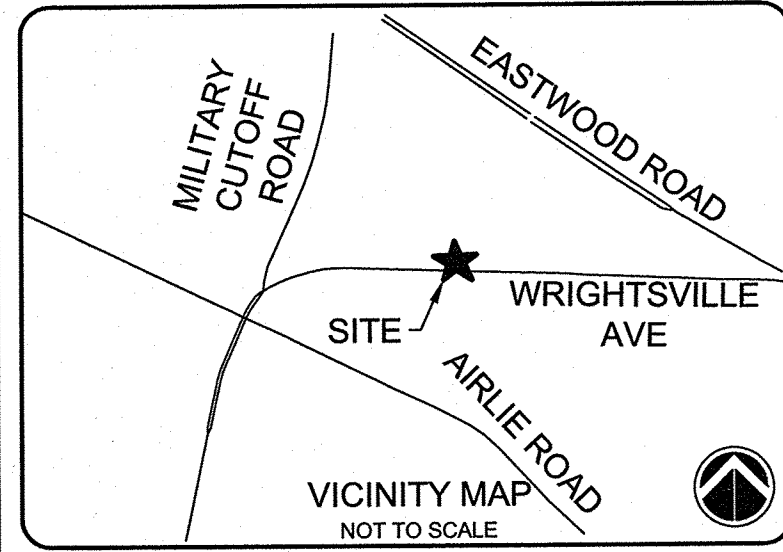
TROLLEY STATION
 6789 WRIGHTSVILLE AVE
 WILMINGTON, NC

SITE PLAN

PROJECT NUMBER	SHEET NUMBER
275-96	CS101



UTILITY DATA TABLE
 PROJECT NAME: TROLLEY STATION
 PROJECT ADDRESS: 6789 WRIGHTSVILLE AVENUE
 PARCEL ID: R05713-015-021-000
 ZONING: O&I-1 (CD 25-518) OFFICE & INSTITUTIONAL
 USE: COMMERCIAL DISTRICT MIXED USE (CDMU) - NEIGHBORHOOD RETAIL (2-UNITS), PROFESSIONAL OFFICE (2-UNITS), RESIDENTIAL UNITS (3-1 BEDROOM UNITS)
 ANTICIPATED FLOW: PER 2T RULES
 RETAIL: 125 GPD/PLUMBING FIXTURE X 2 FIXTURES = 250 GPD
 PROFESSIONAL OFFICE: 25 GPD/EMPLOYEE X 4 EMPLOYEES = 100 GPD
 RESIDENTIAL: 240 GPD/UNIT X 3 UNITS = 720 GPD
 TOTAL = 1,070 GPD
 ALL UTILITIES TO BE INSTALLED VIA OPEN CUT AND TRENCH.



SEE SHEET C-001 FOR GENERAL NOTES.
 SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

1	ISSUED FOR CONSTRUCTION	MTH
REV. #	DESCRIPTION	REV. BY DATE
	REVISIONS	

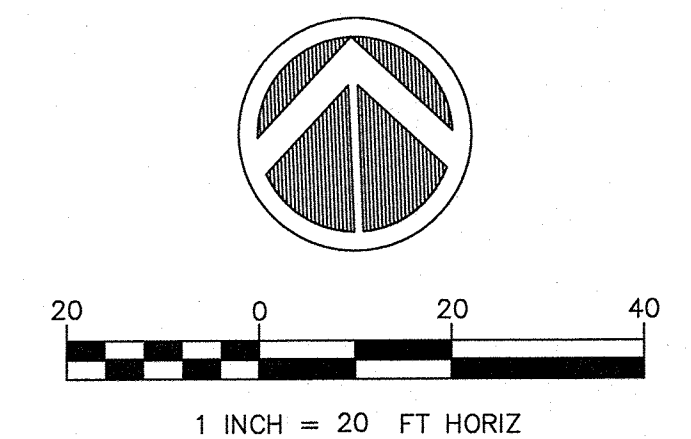


CAPE FEAR ENGINEERING
 151 Poole Rd., Suite 100, Belville, NC, 28451
 TEL (910) 383-1044; FAX (910) 383-1045
 www.capefearengineering.com
 N.C. LICENSE # C-1621

WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED DRAINAGE PLAN
 Date: 3/23/19 Permit # 2019017
 Signed: *John Christman*

Approved Construction Plan

Name	Date
Planning <i>UNC</i>	3-27-2019
Traffic <i>W. Schwab</i>	3-29-19
Fire <i>James Merrett</i>	3-28-19



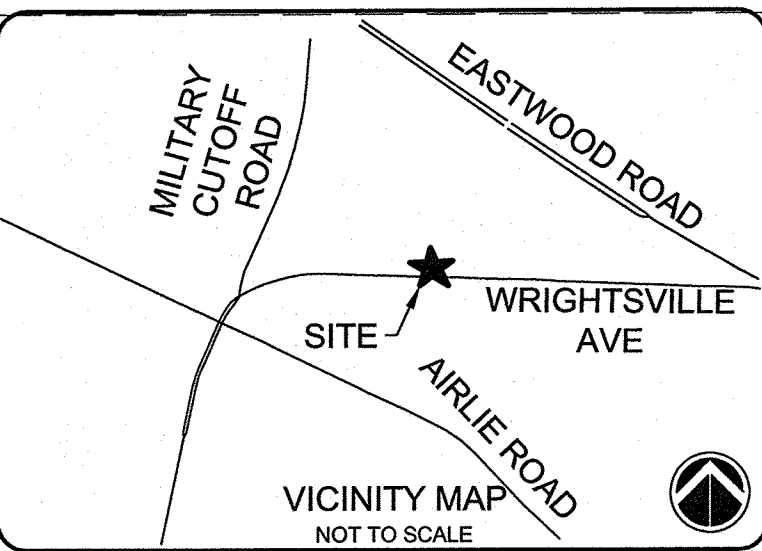
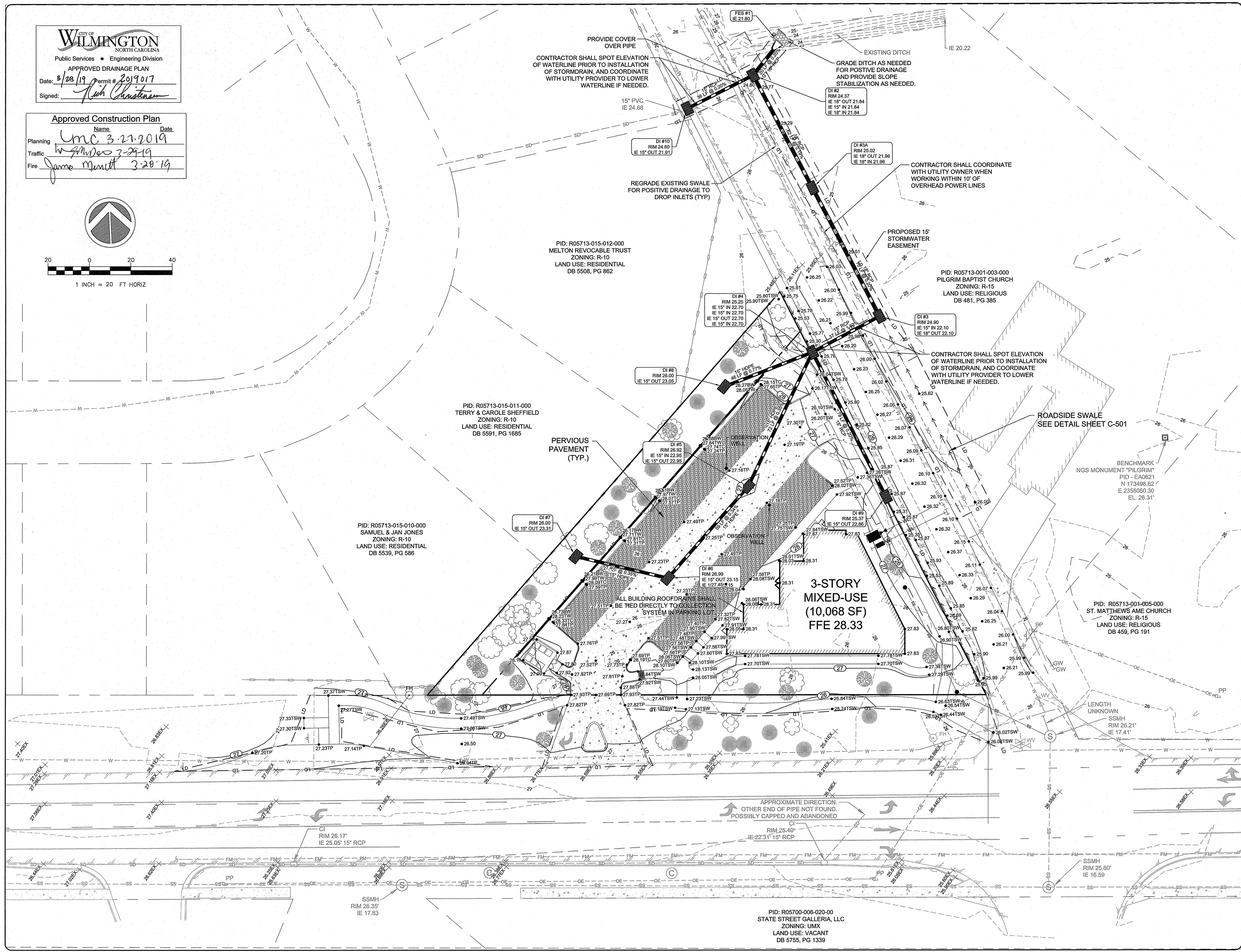
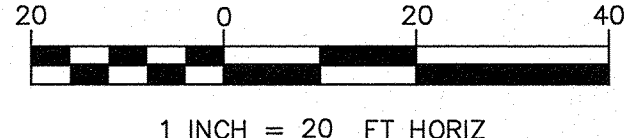
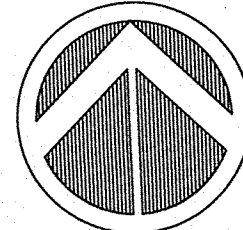
TROLLEY STATION
 6789 WRIGHTSVILLE AVE
 WILMINGTON, NC

UTILITY PLAN

PROJECT NUMBER	SHEET NUMBER
275-96	CU101

Approved Construction Plan

Name	Date
Umc	3-27-2019
Planning	
Traffic	
Fire	



SEE SHEET C-001 FOR GENERAL NOTES.
SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

1	ISSUED FOR CONSTRUCTION	MTH
REV. #	DESCRIPTION	REV. BY
	REVISIONS	DATE



CAPE FEAR ENGINEERING
151 Poole Rd., Suite 100, Belville, NC, 28451
TEL (910) 383-1044; FAX (910) 383-1045
www.capefearengineering.com
N.C. LICENSE # C-1621

PROJECT NUMBER:	275-96
SCALE:	AS SHOWN
DATE:	MARCH 27, 2019

TROLLEY STATION
6789 WRIGHTSVILLE AVE
WILMINGTON, NC

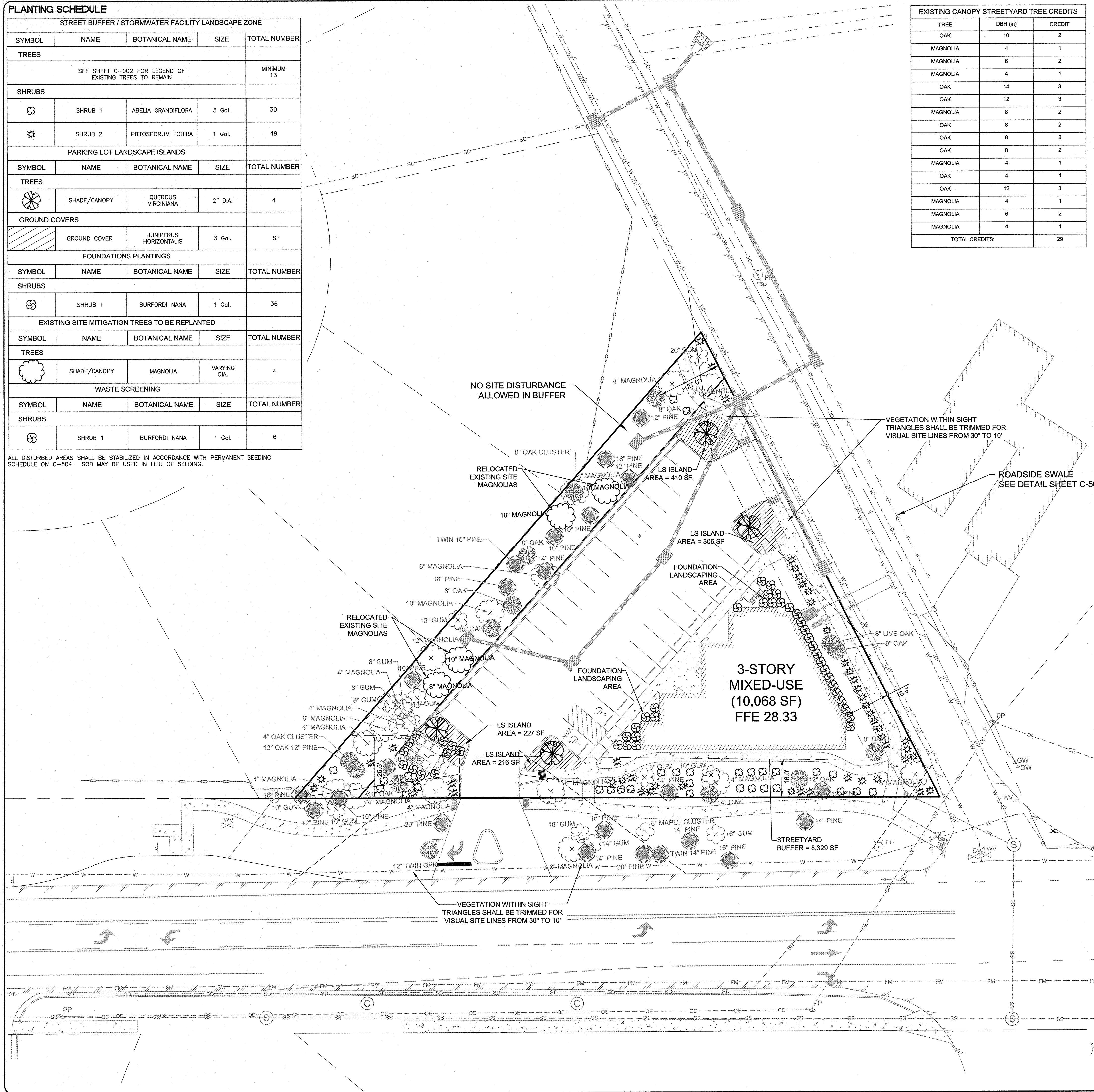
STORMWATER AND GRADING PLAN

PROJECT NUMBER	SHEET NUMBER
275-96	CG101

PLANTING SCHEDULE

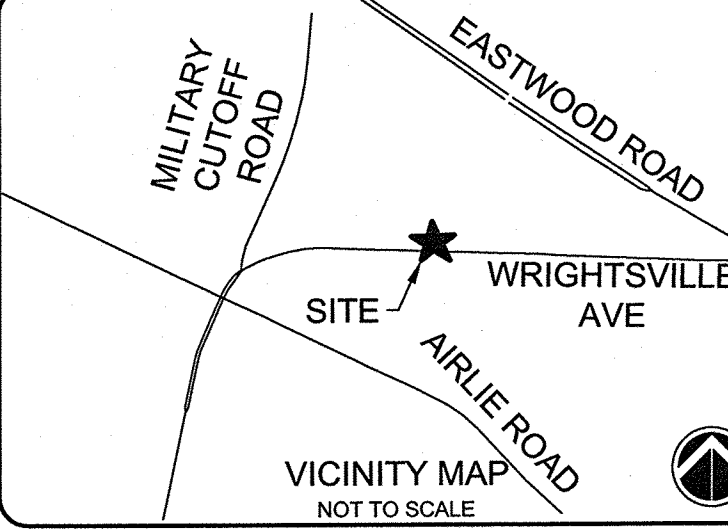
STREET BUFFER / STORMWATER FACILITY LANDSCAPE ZONE				
SYMBOL	NAME	BOTANICAL NAME	SIZE	TOTAL NUMBER
TREES				
SEE SHEET C-002 FOR LEGEND OF EXISTING TREES TO REMAIN				MINIMUM 13
SHRUBS				
☐	SHRUB 1	ABELIA GRANDIFLORA	3 Gal.	30
☐	SHRUB 2	PITTOSPORUM TOBIRA	1 Gal.	49
PARKING LOT LANDSCAPE ISLANDS				
SYMBOL	NAME	BOTANICAL NAME	SIZE	TOTAL NUMBER
TREES				
☐	SHADE/CANOPY	QUERCUS VIRGINIANA	2" DIA.	4
GROUND COVERS				
▨	GROUND COVER	JUNIPERUS HORIZONTALIS	3 Gal.	SF
FOUNDATIONS PLANTINGS				
SYMBOL	NAME	BOTANICAL NAME	SIZE	TOTAL NUMBER
SHRUBS				
☐	SHRUB 1	BURFORDI NANA	1 Gal.	36
EXISTING SITE MITIGATION TREES TO BE REPLANTED				
SYMBOL	NAME	BOTANICAL NAME	SIZE	TOTAL NUMBER
TREES				
☐	SHADE/CANOPY	MAGNOLIA	VARYING DIA.	4
WASTE SCREENING				
SYMBOL	NAME	BOTANICAL NAME	SIZE	TOTAL NUMBER
SHRUBS				
☐	SHRUB 1	BURFORDI NANA	1 Gal.	6

ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH PERMANENT SEEDING SCHEDULE ON C-504. SOD MAY BE USED IN LIEU OF SEEDING.



TREE	DBH (in)	CREDIT
OAK	10	2
MAGNOLIA	4	1
MAGNOLIA	6	2
MAGNOLIA	4	1
OAK	14	3
OAK	12	3
MAGNOLIA	8	2
OAK	8	2
OAK	8	2
MAGNOLIA	4	1
OAK	4	1
OAK	12	3
MAGNOLIA	4	1
MAGNOLIA	6	2
MAGNOLIA	4	1
TOTAL CREDITS:		29

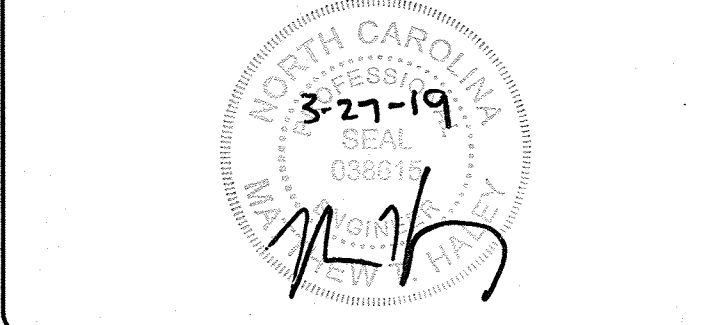
MITIGATION CALCULATIONS (SECTION 18-456):
 SEE DEMOLITION PLAN, SHEET CD101 FOR ALL TREES TO BE REMOVED.
 MITIGATION FOR TREES TO BE REMOVED IN PARKING LOT REGULATED TREES EXEMPT FROM MITIGATION PER SEC 18-461 SINCE ESSENTIAL SITE IMPROVEMENT.
 SIGNIFICANT TREES = 4; TO BE SPADED & RELOCATED SO NO MITIGATION NECESSARY. SHOULD EXISTING TREES NOT BE ABLE TO BE RELOCATED, 22 TREES SHALL BE PLANTED IN THE EXISTING BUFFER PER BELOW CALCULATIONS.
 $(38" \text{ DBH} * 2 * 0.85) / 3 = 22 \text{ TREES}$
 MITIGATION FOR TREES TO BE REMOVED IN BUILDING FOOTPRINT REGULATED & SIGNIFICANT TREES EXEMPT AS SITE DOES NOT EXCEED 25% BUILDING COVERAGE.
STREET YARD CALCULATIONS (SEC 18-477):
 FOR O&I ZONING:
 STREET YARD MULTIPLIER = 18
 MAXIMUM WIDTH = 27
 MINIMUM WIDTH = 9
 REQUIRED STREET YARD = LF of Frontage - Driveway Width x Multiplier
 = 439 LF x 18
 = 7,902 SF
 PROVIDED STREET YARD = 8,329 SF
 STREET YARD IMPERVIOUS AREA = 564 SF
 % STREET YARD IMPERVIOUS = 7%
 REQUIRED PLANTINGS:
 1 - CANOPY/SHADE TREE PER 600 SF
 $7,902 \text{ SF} / 600 * 1 = 13 \text{ CANOPY/SHADE TREES}$
 6 - SHRUBS, 12-INCHES HIGH AT PLANTING
 $7,902 / 600 * 6 = 79 \text{ SHRUBS}$
 PROVIDED PLANTINGS:
 EXISTING TREES MEET/EXCEED THE 13 CANOPY/SHADE TREE REQUIREMENT.
 85 PROPOSED SHRUBS
PARKING LOT LANDSCAPING CALCULATIONS (SECTION 18-481):
 PARKING AREA = 9,064 SF
 SHADING REQUIRED:
 20% OF PARKING AREA = 1,813 SF
 SHADING AREA PROVIDED:
 3 - PROPOSED CANOPY TREES @ 707 SF EACH = 2,121 SF
FOUNDATION LANDSCAPING CALCULATIONS (SECTION 18-490):
 REQUIRED AREA = 12% OF BUILDING FACE AREA
 BUILDING HEIGHT = 45 FT
 BUILDING LENGTH @ FOUNDATION = 121.3 FT
 BUILDING FACE AREA = 5,459 SF
 BUILDING FACE AREA * 0.12 = (5,459)*0.12 = 655 SF
 PROVIDED AREAS = 220 SF + 447 SF = 667 SF
GENERAL STANDARDS FOR LANDSCAPING (SECTION 18-448(D)):
 REGARDLESS OF CREDIT GRANTED, FIFTEEN (15) TREES PER DISTURBED ACRE, TWO (2) INCHES DBH OR GREATER, MUST BE RETAINED OR PLANTED ON THE DISTURBED PORTION OF THE SITE.
 0.5 DISTURBED ACRES * 15 = 7.5;
 29 TREES RETAINED/REPLANTED ON SITE WHICH EXCEEDS MINIMUM REQUIREMENT.



SEE SHEET C-001 FOR GENERAL NOTES.
 SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

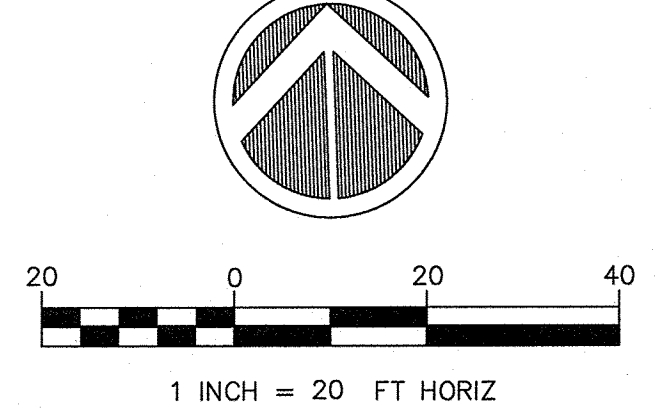
REV. #	DESCRIPTION	DATE
1	ISSUED FOR CONSTRUCTION	3/27/19



CAPE FEAR ENGINEERING
 151 Poole Rd., Suite 100; Belville, NC, 28451
 TEL (910) 383-1044; FAX (910) 383-1045
 www.capefearengineering.com
 N.C. LICENSE # C-1621

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED DRAINAGE PLAN
 Date: 3/28/19 Permit # 2019017
 Signed: *L.H. Christensen*

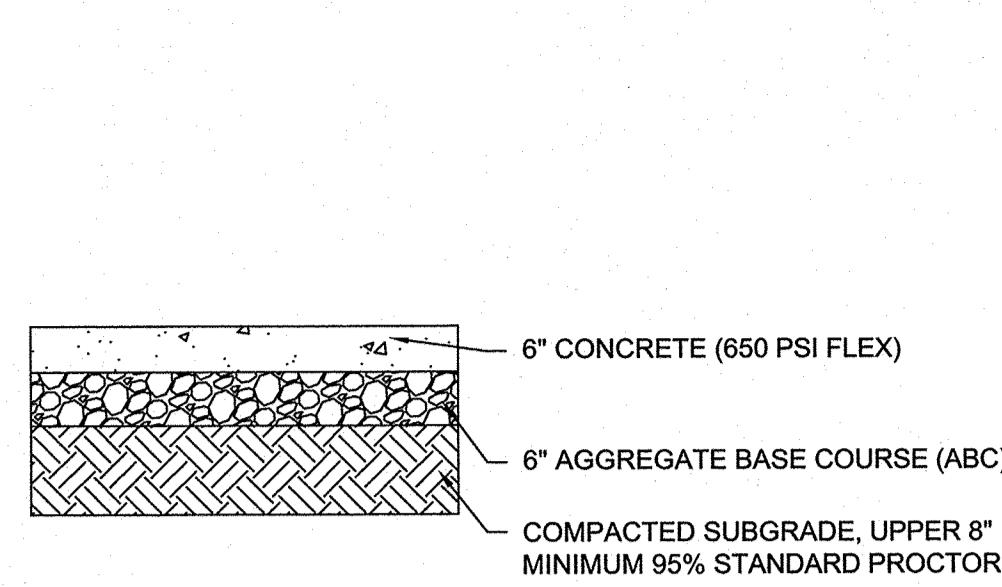
Approved Construction Plan
 Name: _____ Date: _____
 Planning: *YMC 3-27-2019*
 Traffic: *W. H. H. 3-29-19*
 Fire: *James Merrill 3-28-19*



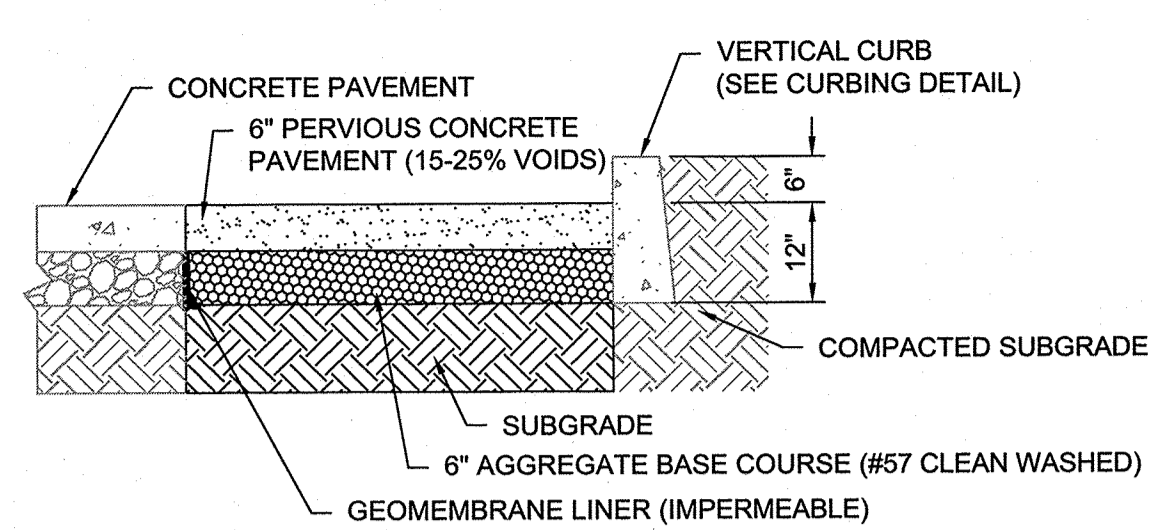
TROLLEY STATION
 6789 WRIGHTSVILLE AVE
 WILMINGTON, NC

LANDSCAPE PLAN

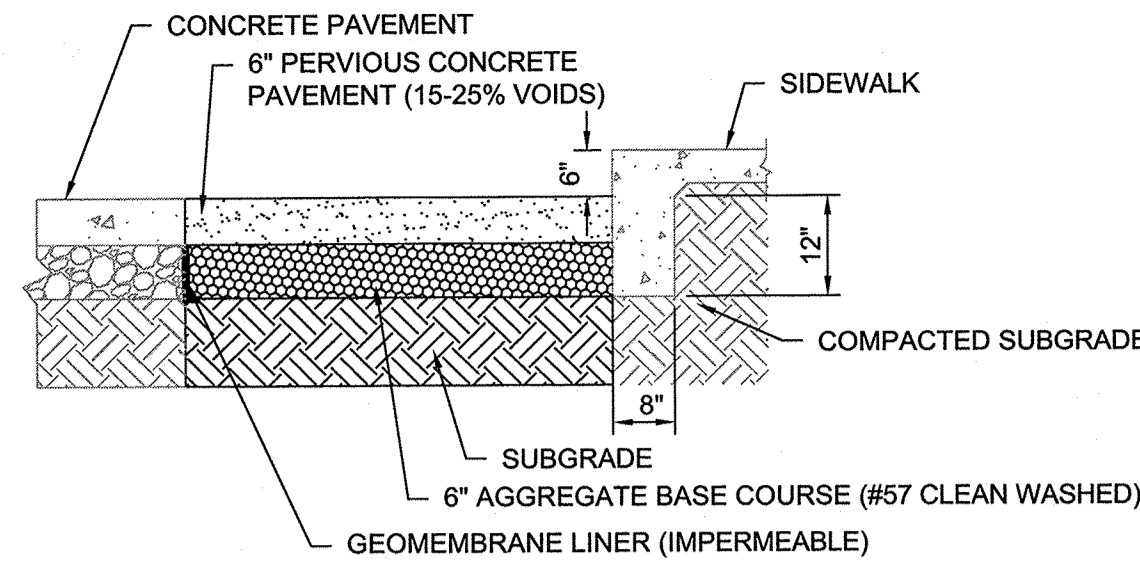
PROJECT NUMBER 275-96	SHEET NUMBER LS101
---------------------------------	------------------------------



CONCRETE PAVEMENT AND CONCRETE PADS
NOT TO SCALE

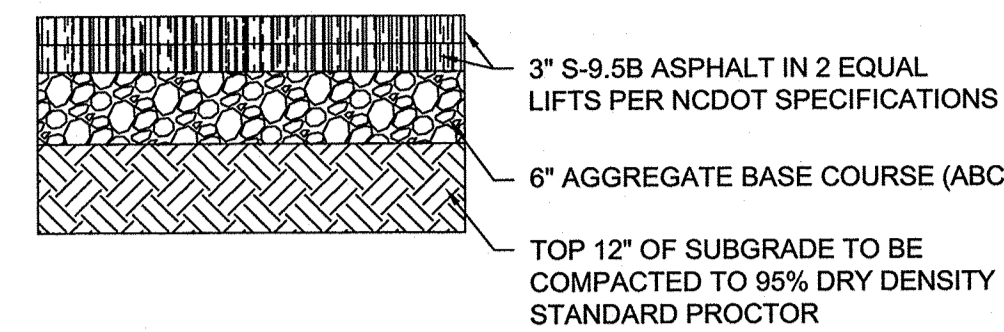


ADJACENT TO CURB

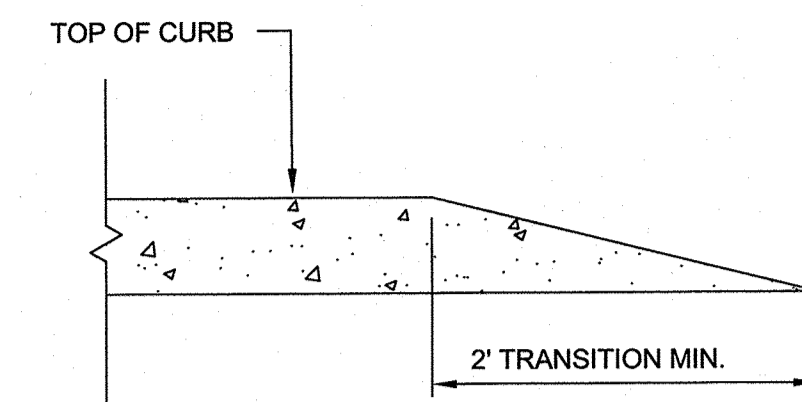


ADJACENT TO TURN DOWN SIDEWALK

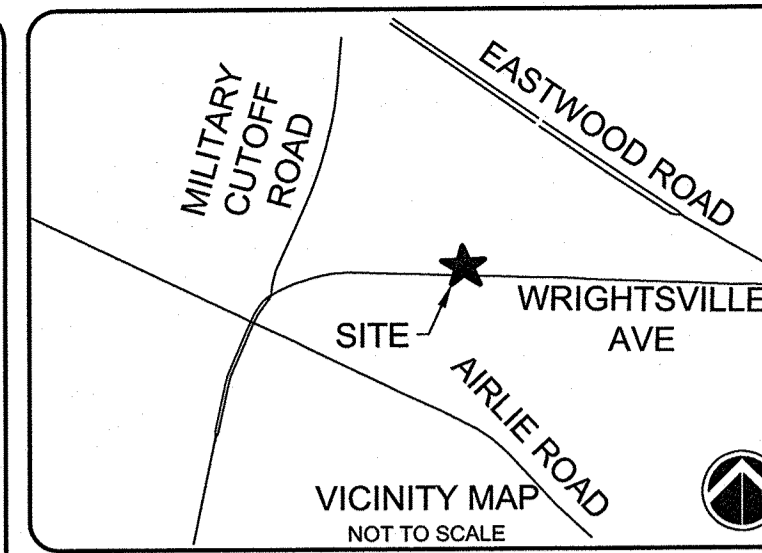
PERVIOUS PAVEMENT
NOT TO SCALE



ASPHALT PAVEMENT (BUS TURN OUT)
NOT TO SCALE



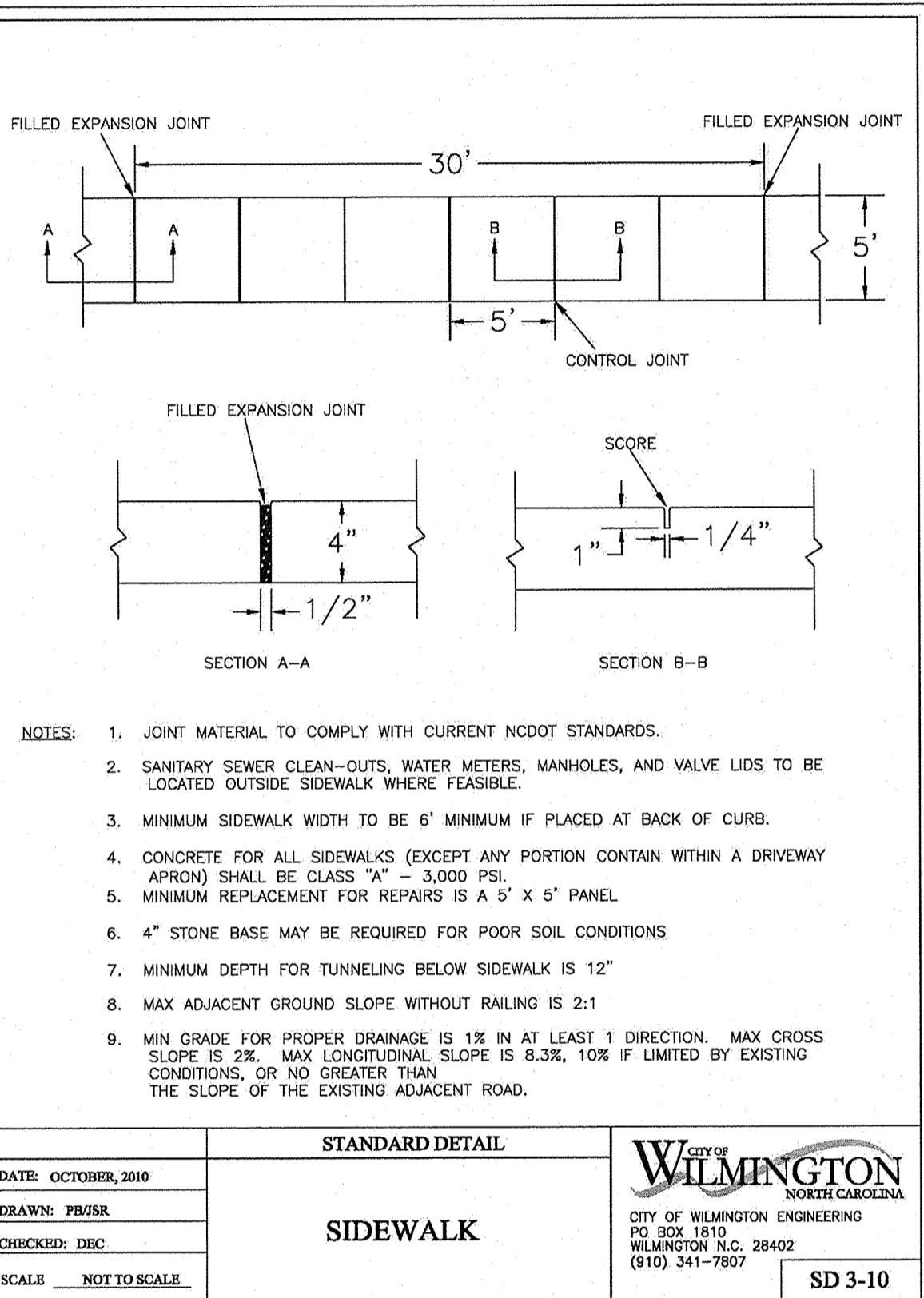
CURB WIPEDOWN
NOT TO SCALE



SEE SHEET C-001 FOR GENERAL NOTES.
SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

1	ISSUED FOR CONSTRUCTION	MTH
REV. #	DESCRIPTION	REV. BY
	REVISIONS	DATE



NOTES:

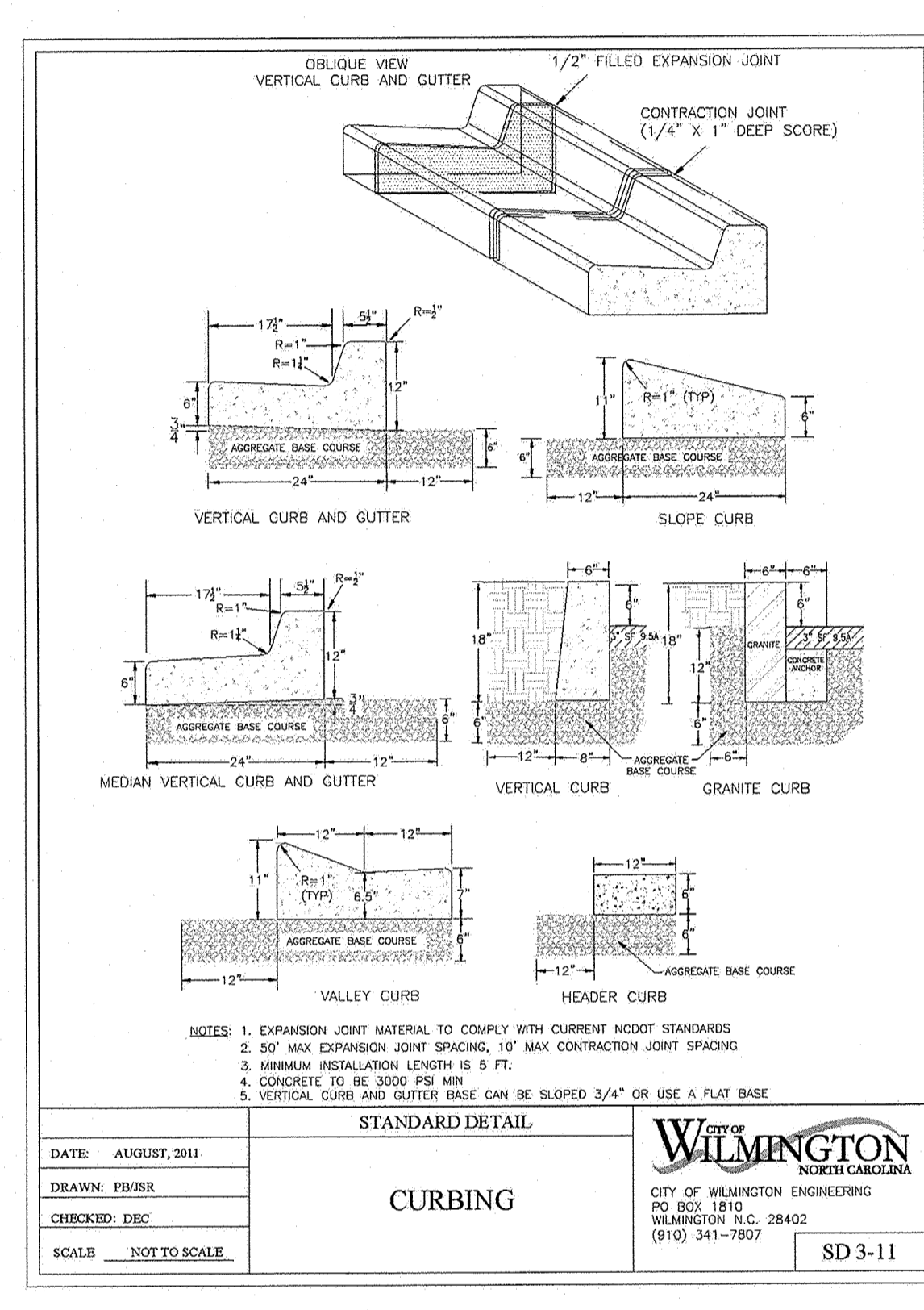
- JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
- SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
- MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
- CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAINING A DRIVEWAY APRON) SHALL BE CLASS "A" - 3,000 PSI.
- MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL.
- 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS.
- MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12".
- MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1.
- MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAX CROSS SLOPE IS 2%. MAX LONGITUDINAL SLOPE IS 0.3%, 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

STANDARD DETAIL
SIDEWALK

DATE: OCTOBER, 2010
DRAWN BY: PBR
CHECKED BY: DEB
SCALE: NOT TO SCALE

CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SD 3-10

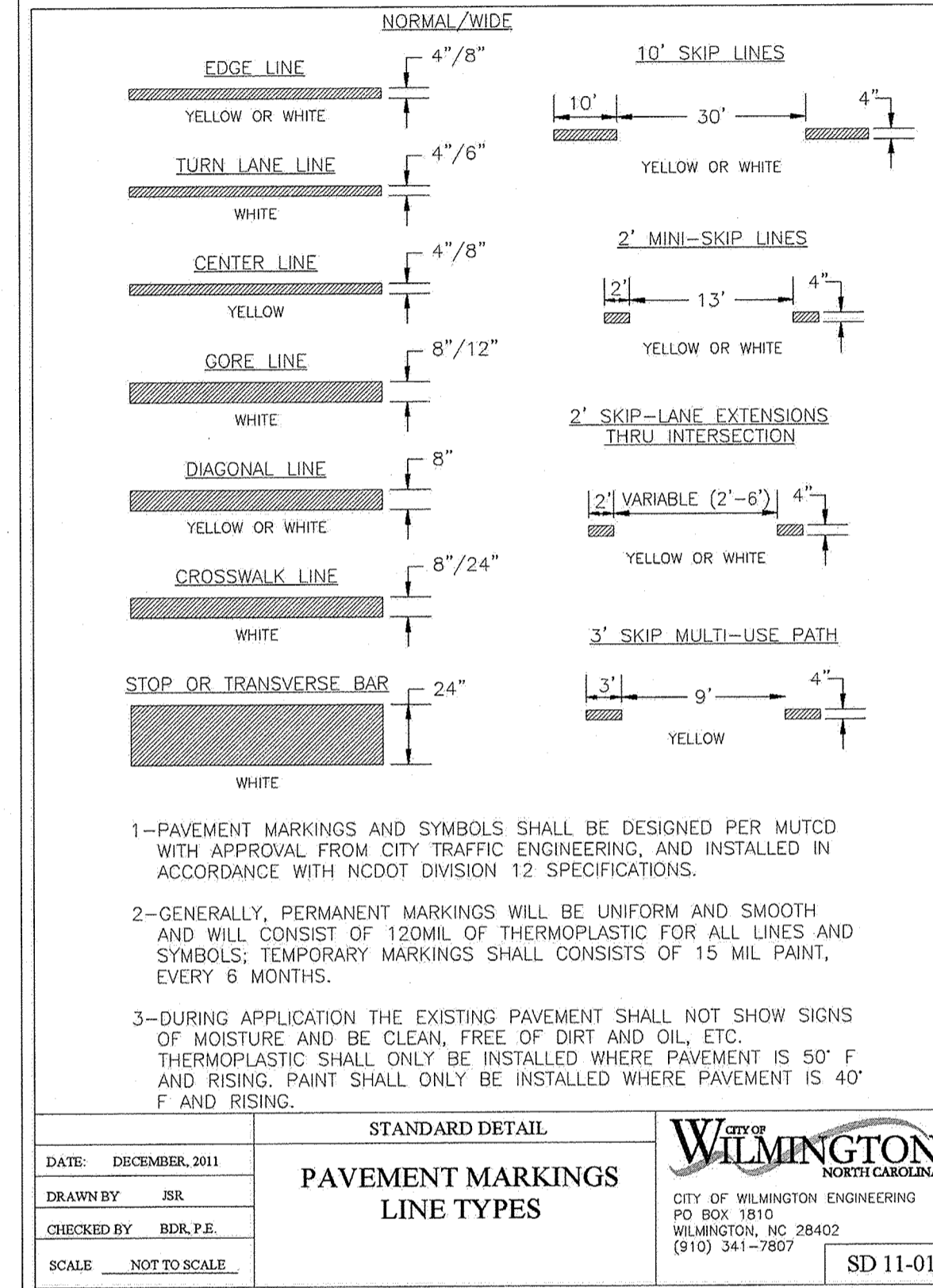


STANDARD DETAIL
CURBING

DATE: AUGUST, 2011
DRAWN BY: PBR
CHECKED BY: DEB
SCALE: NOT TO SCALE

CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SD 3-11

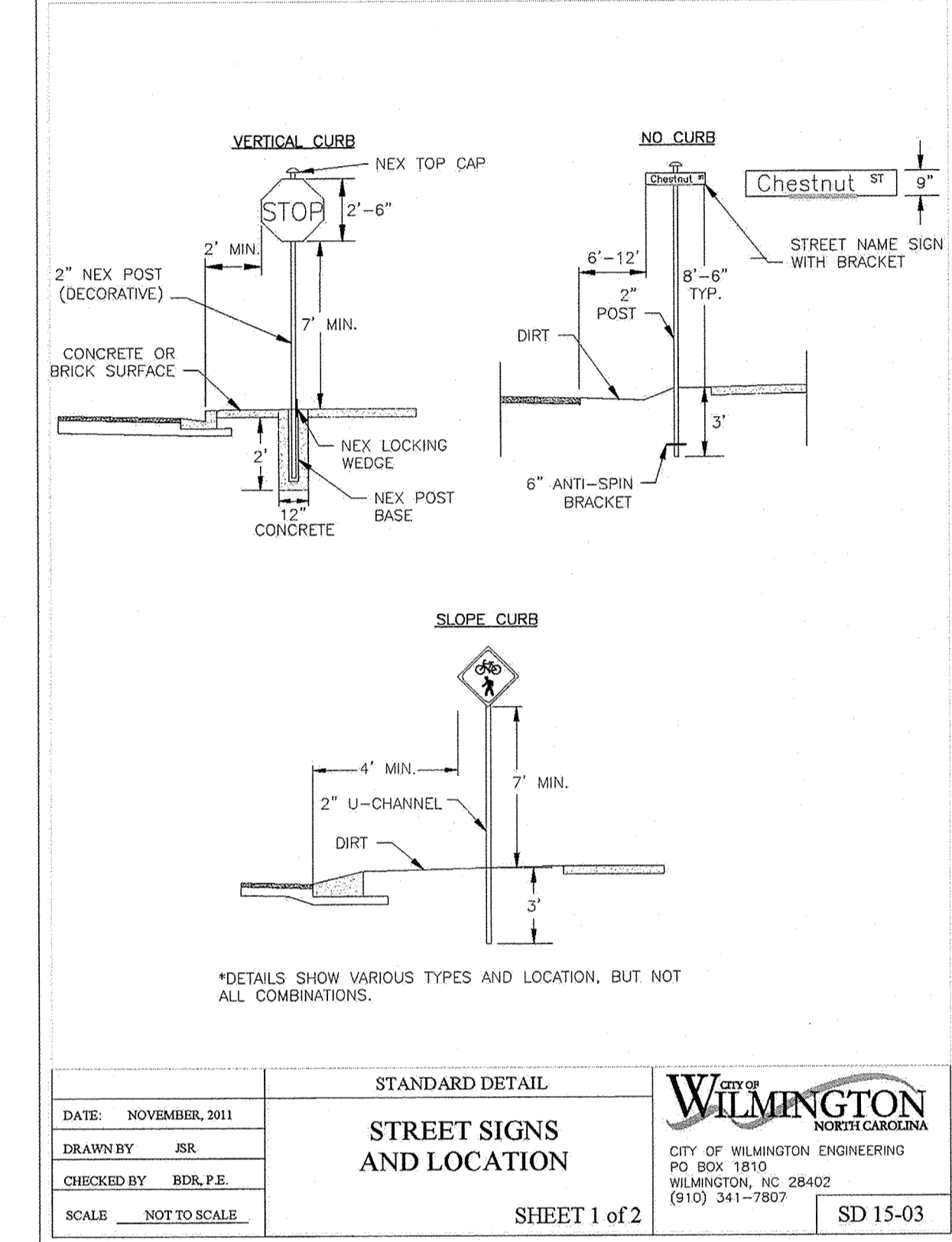


STANDARD DETAIL
PAVEMENT MARKINGS LINE TYPES

DATE: DECEMBER, 2011
DRAWN BY: RR
CHECKED BY: BDR, P.E.
SCALE: NOT TO SCALE

CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SD 11-01



STANDARD DETAIL
STREET SIGNS AND LOCATION

DATE: NOVEMBER, 2011
DRAWN BY: RR
CHECKED BY: BDR, P.E.
SCALE: NOT TO SCALE

CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SHEET 1 of 2
SD 15-03

SIGNS

- All signs shall meet the requirements of MUTCD and City Traffic Engineering in effect at the time of construction.
- All Traffic Control Signs including multi-use paths shall be fabricated with 0.080 inch aluminum blanks using high intensity prismatic reflective sheeting Type IV or better. STOP signs shall be a minimum of 30"x30".
- SPECIAL DESIGNATION signs by location and type shall adhere to City of Wilmington signage plan (i.e. downtown, historic, cross-city trail, parks, riverfront, scenic by-way, parking, etc.) and all associated policies.
- POST MOUNTED STREET NAME SIGNS shall be fabricated with 9" extruded aluminum street name sign blanks using a standard cut-out. Minimum sign length is 18" long and increasing in 6" increments to 54" maximum as dictated by the number of letters in the name. The color scheme shall be white letters on a green background without a border. Generally in the downtown and historic areas or as designated in the City of Wilmington signage plan the background shall be blue and contain a topper.
- Decorative sign posts shall consist of the NEX sign support system, 2" octagonal tube, 14 gauge, powder coated glossy black and include cap, post, base and wedge.
- All other sign posts shall be u-channel posts made of galvanized steel with 8" posts 2lbs/ft or 12" posts 3lbs/ft. Galvanized NEX post may be substituted with approval from the City Signs and Markings Engineer.
- OVERHEAD STREET NAME SIGNS shall be fabricated with 0.080 inch aluminum flat sign blanks 18" in height using a standard cut-out. Sign length will be dictated by the number of letters in the name. For mast-arm type traffic signal supports and other overhead support systems refer to the design plans for maximum sign length.
- All sign lettering, colors and fonts shall adhere to the MUTCD in effect at the time of construction. Fluorescent Yellow-Green shall be used on signs, in place of Yellow, when listed as an optional color in the MUTCD. Generally, the font will be FHWA series fonts (Highway Gothic.) Other font types require prior City Signs and Markings Engineer approval.
- Sign locations depend on the edge of road condition. Generally, signs shall be a minimum 2' from face of a vertical curb, 4' from front of slope face curb, and 8' from edge of pavement without curb. Signs shall not be located more than 12' from any of these locations.
- Sign posts installed in dirt shall be buried a minimum of 36". Octagonal posts shall utilize an anti-spin device, 6" in length minimum. Sign posts installed in concrete or brick shall utilize a base cast in concrete 24" x 12" diameter.
- Street name signs shall be installed 8'-6" from the ground to the bottom of the sign. Street name signs co-located with STOP signs shall be installed above the STOP sign. A 6" space shall be maintained between the STOP sign and a Street name sign that is parallel to the STOP sign face. All other signs should be mounted per MUTCD guidelines for Urban Areas.

STANDARD DETAIL
STREET SIGNS AND LOCATION

DATE: NOVEMBER, 2011
DRAWN BY: RR
CHECKED BY: BDR, P.E.
SCALE: NOT TO SCALE

CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SHEET 2 of 2
SD 15-03

STANDARD DETAIL
ACCESSIBLE PARKING SIGNS AND INSTALLATION DETAILS

DATE: NOVEMBER 8, 2016
DRAWN BY: DALE THOMPSON
CHECKED BY: RANDALL GLAISER
SCALE: NOT TO SCALE

CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SHEET A1 OF 5

STANDARD DETAIL
ACCESSIBLE PARKING SIGNS AND INSTALLATION DETAILS

DATE: NOVEMBER 8, 2016
DRAWN BY: DALE THOMPSON
CHECKED BY: RANDALL GLAISER
SCALE: NOT TO SCALE

CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SHEET A2 OF 5

STANDARD DETAIL
ACCESSIBLE PARKING SIGNS AND INSTALLATION DETAILS

DATE: NOVEMBER 8, 2016
DRAWN BY: DALE THOMPSON
CHECKED BY: RANDALL GLAISER
SCALE: NOT TO SCALE

CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SHEET A2 OF 5

CITY OF WILMINGTON
NORTH CAROLINA
3-27-19

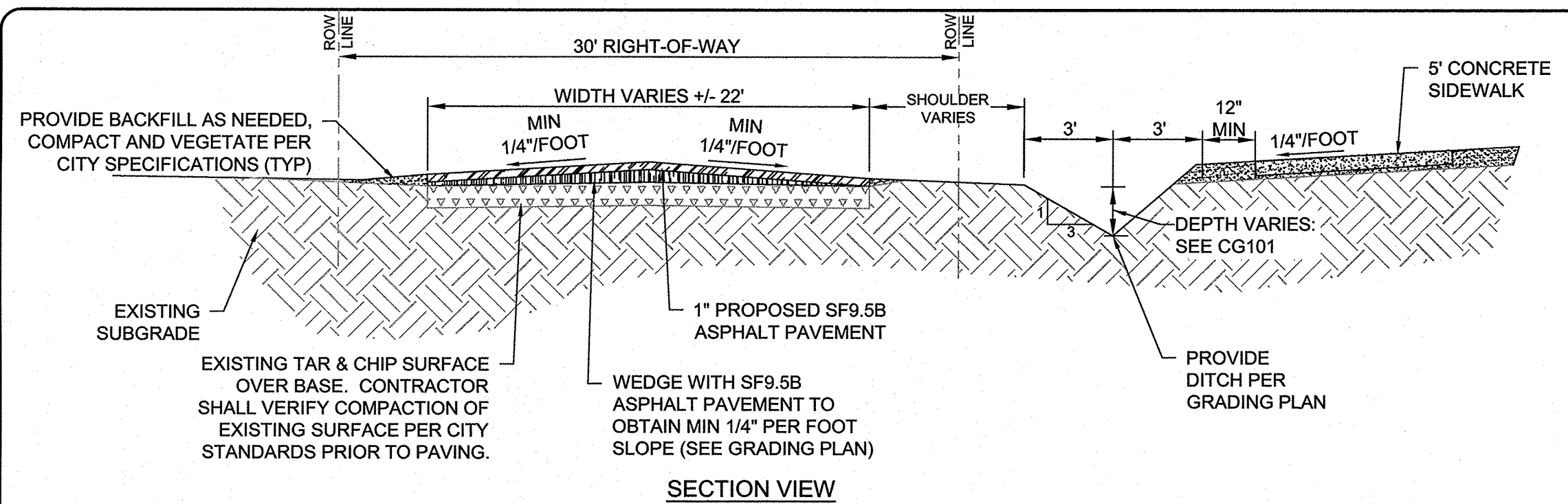
CAPE FEAR ENGINEERING
151 Poole Rd., Suite 100, Belville, NC, 28451
TEL (910) 383-1044; FAX (910) 383-1045
www.capefearengineering.com
N.C. LICENSE # C-1621

PROJECT NUMBER: 275-96
SCALE: AS SHOWN
DATE: MARCH 27, 2019

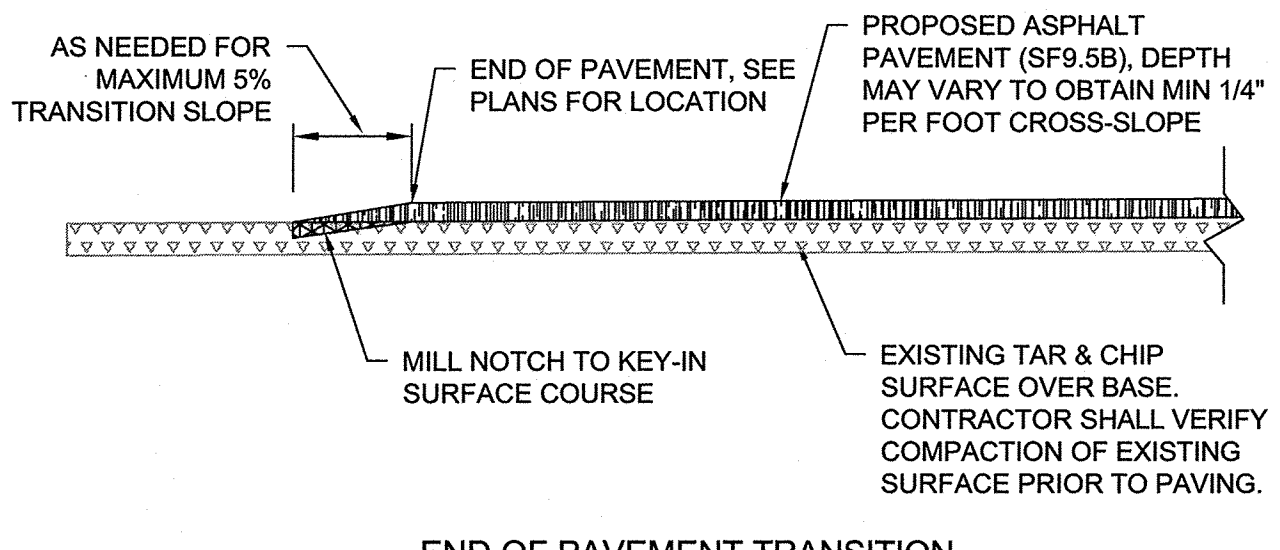
TROLLEY STATION
6789 WRIGHTSVILLE AVE
WILMINGTON, NC

SITE DETAILS-1

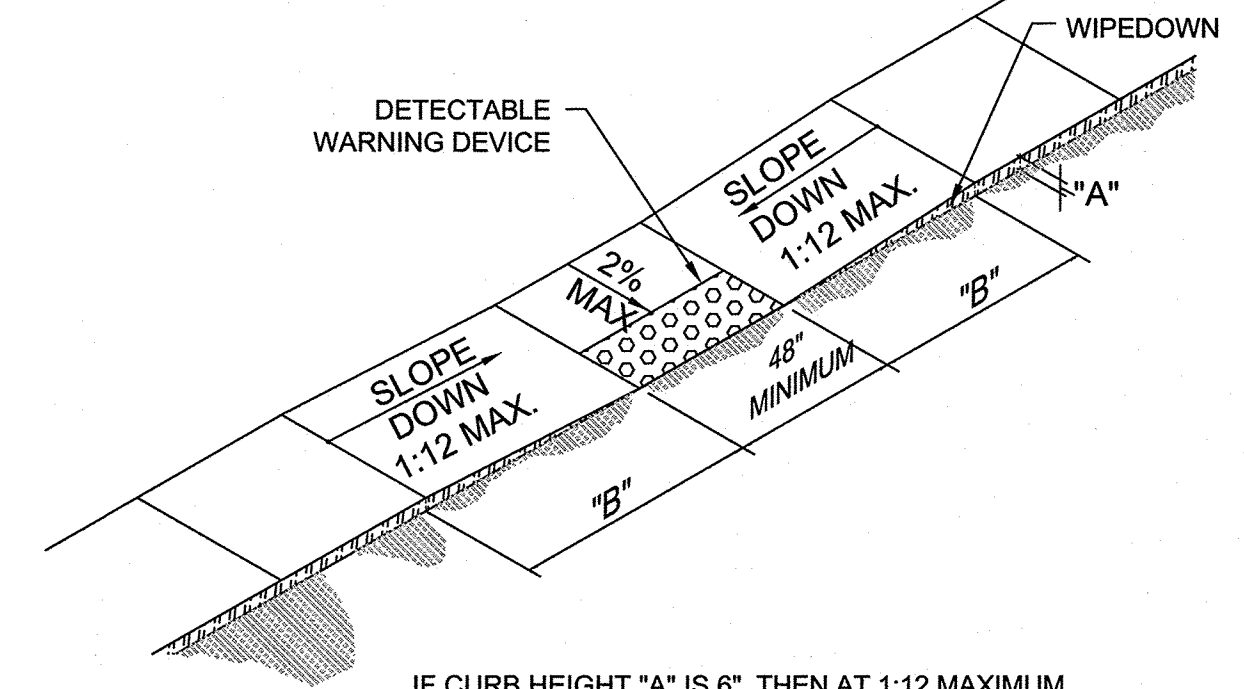
PROJECT NUMBER: 275-96
SHEET NUMBER: C-500



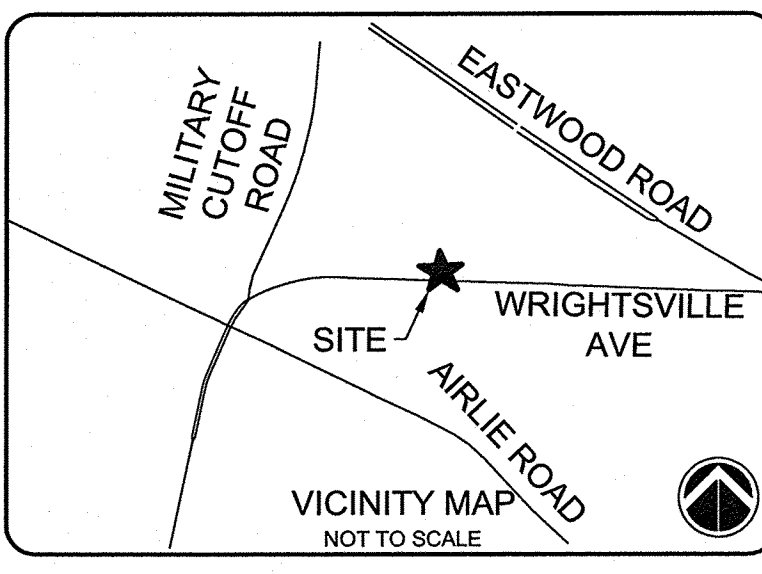
JONES ROAD IMPROVEMENTS
NOT TO SCALE



END OF PAVEMENT TRANSITION



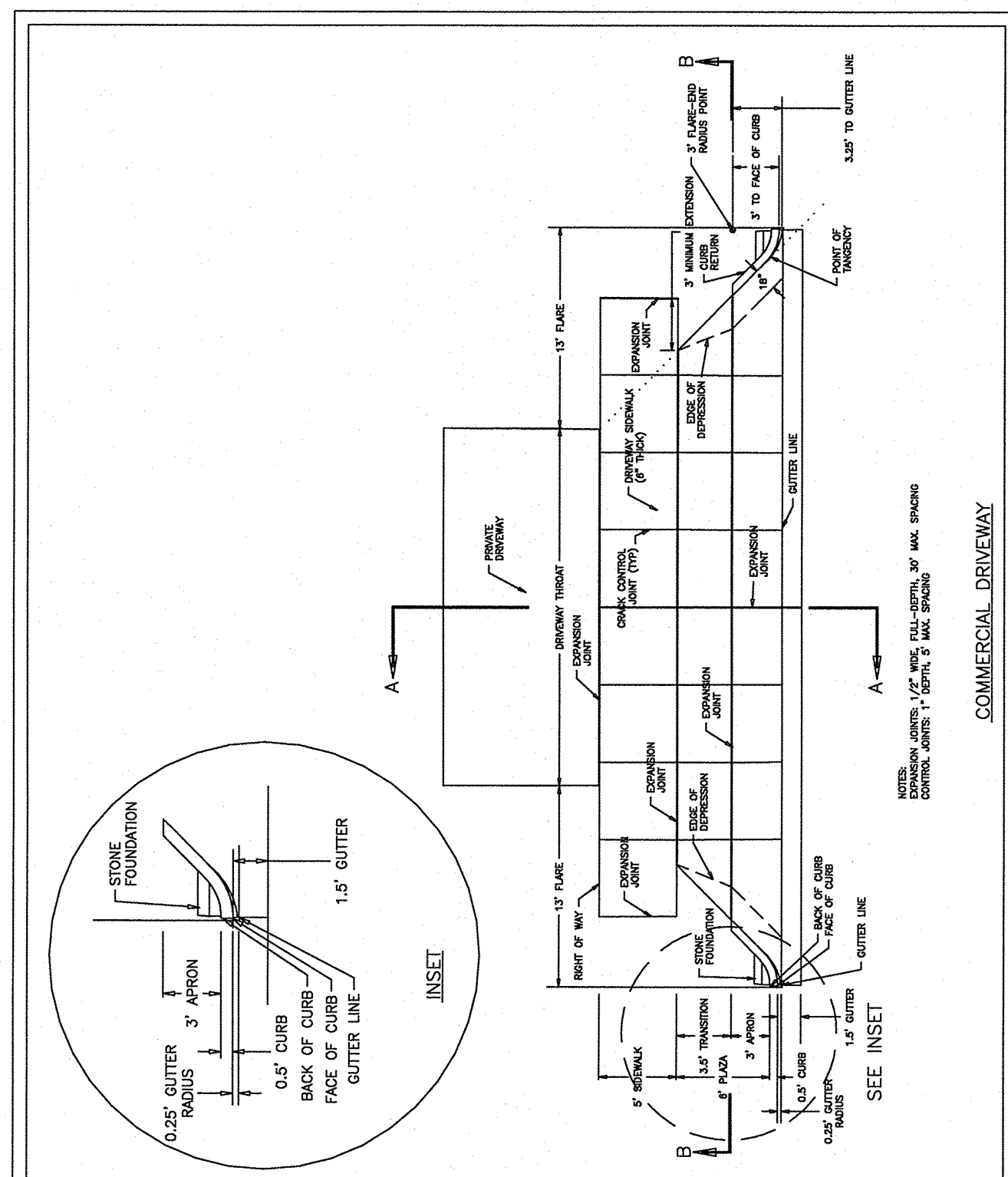
HANDICAPPED RAMP DETAIL
NOT TO SCALE



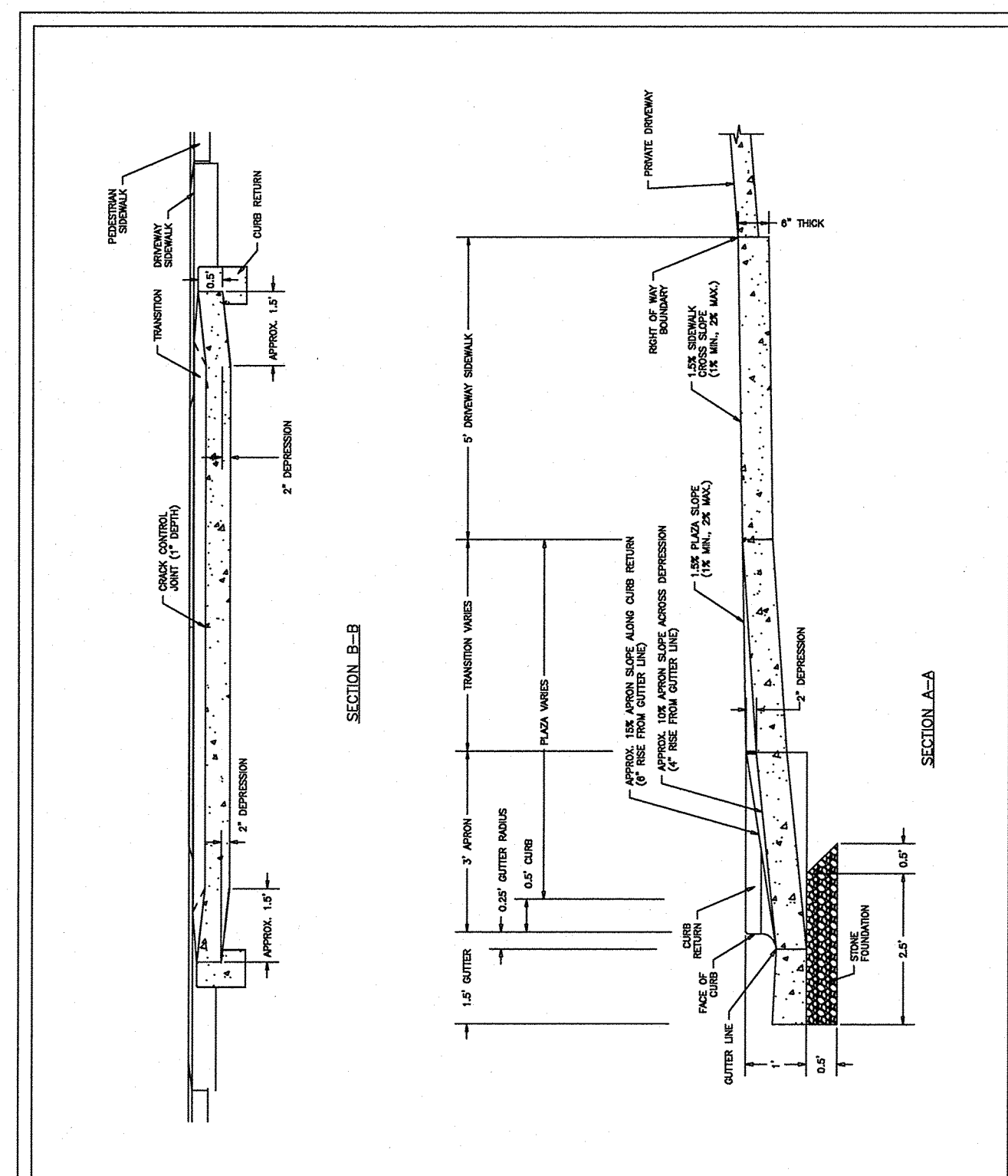
SEE SHEET C-001 FOR GENERAL NOTES.
SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

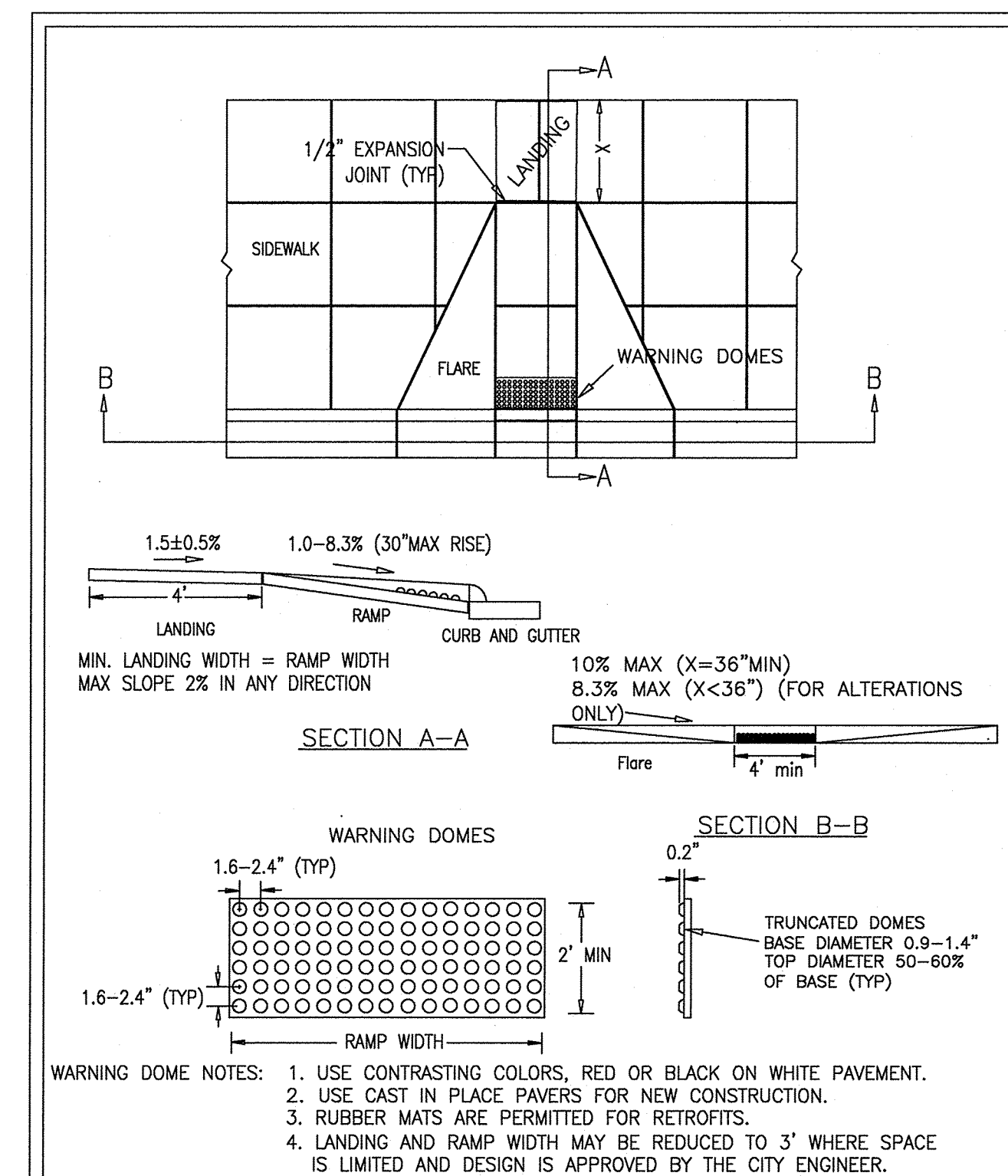
REV. #	DESCRIPTION	MTH	REV. BY	DATE
1	ISSUED FOR CONSTRUCTION	MTH		3/27/19
	REVISIONS			



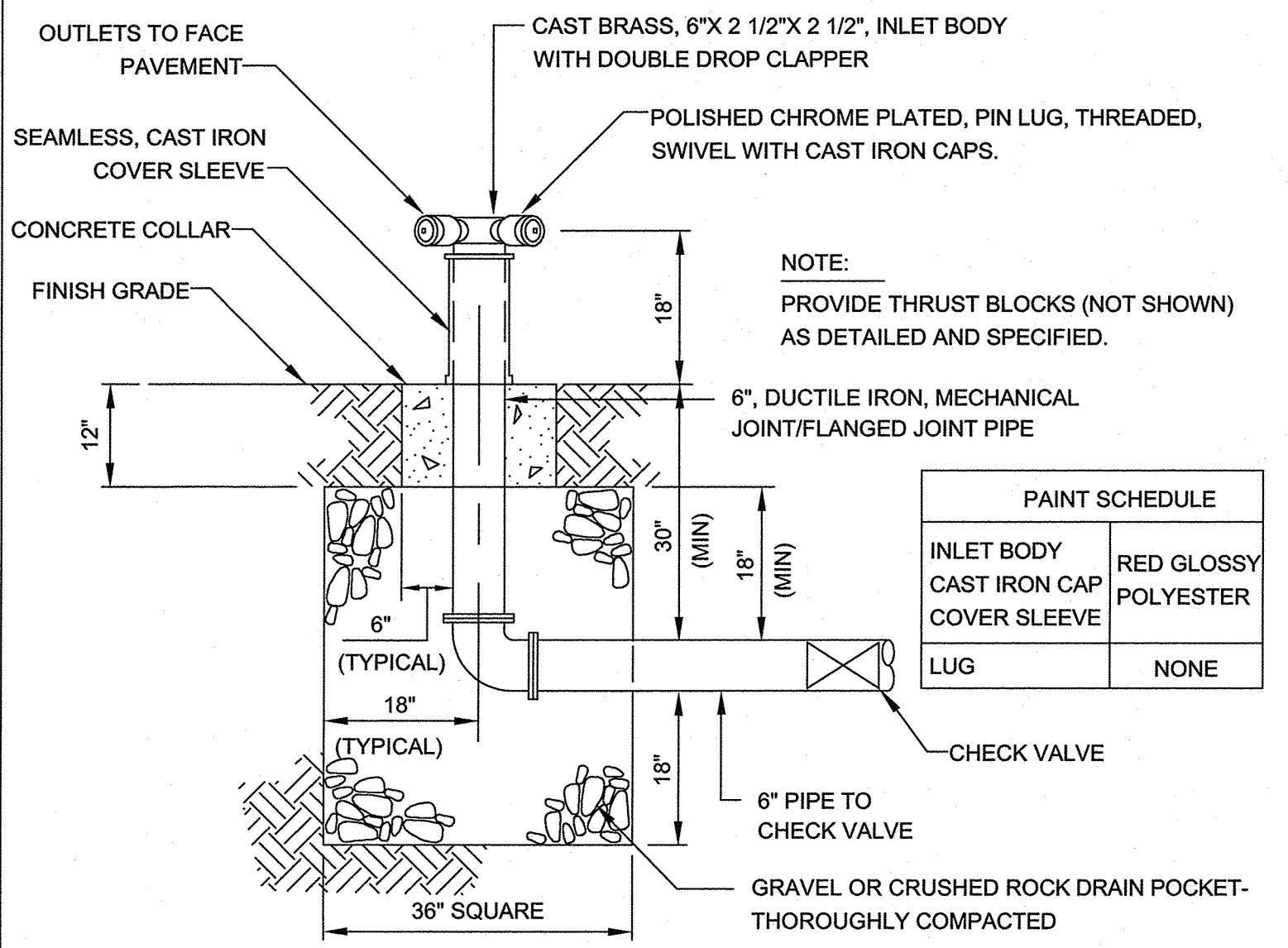
COMMERCIAL DRIVEWAY PLAN
1 of 2
SD 3-03.3



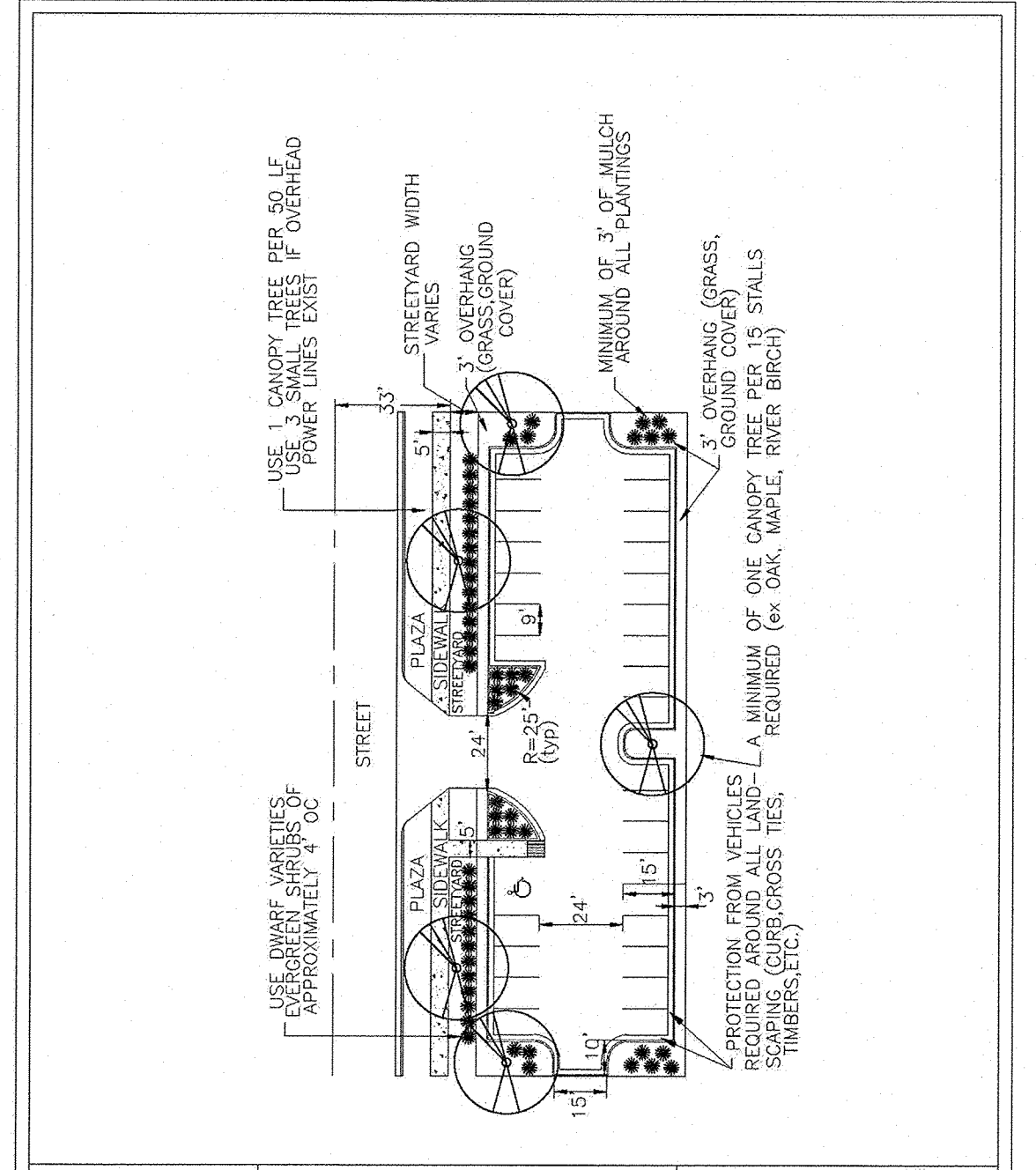
COMMERCIAL DRIVEWAY SECTIONS
2 of 2
SD 3-03.4



PERPENDICULAR CURB RAMP ADJACENT TO WALKING SURFACE
SD 3-07



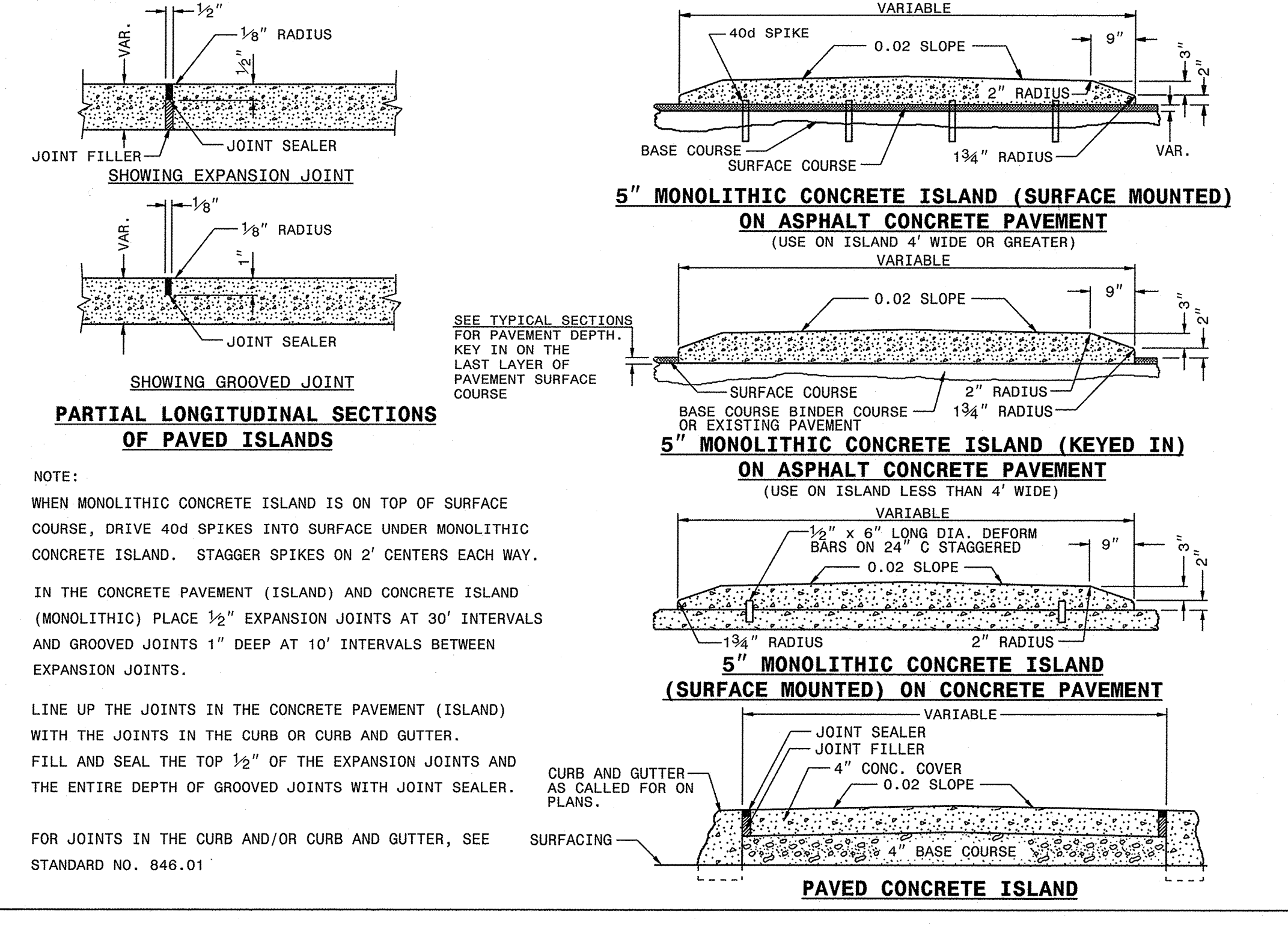
REMOTE FIRE DEPARTMENT CONNECTION
NOT TO SCALE



PARKING FACILITY EQUAL TO OR GREATER THAN 25 STALLS
SHEET 1 OF 2
SD 15-12

- Variances on stall widths, angle and other dimensions will be allowed only upon approval of the Traffic Engineer.
- Wheel stops shall be required three (3) feet from the end of parking stall when using eighteen (18) feet deep stalls.
- Curbing, crossovers, utility poles, etc., can be used as wheel stops. (Must be anchored down)
- All medians shall be a minimum of six (6) feet wide.
- Parking bays which terminate at a circulation way shall provide for a minimum turning radius of twenty-five (25) feet, as measured from the edge of the travel portion.
- All parking stall markings and lane arrows shall be white.
- All other pavement markings, signs or other traffic control devices shall conform to the latest edition and/or interpretation of the Manual on Uniform Traffic Control Devices (MUTCD).
- No obstructions will be allowed adjacent to a parking stall which would prevent safe ingress and egress from a parked vehicle.
- Parking in fire lanes and in non-residential driveways shall be prevented by standard signs and as needed by portable barricades.

PARKING FACILITY DESIGN NOTES
SD 15-13

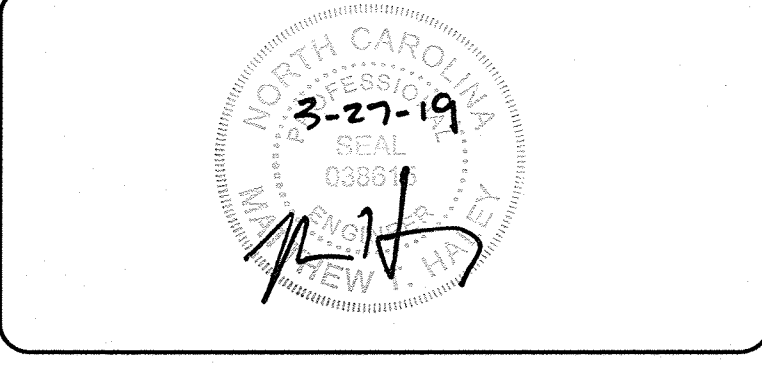


PARTIAL LONGITUDINAL SECTIONS OF PAVED ISLANDS
STANDARD NO. 846.01

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N. C.

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: 3/28/19 Permit # 1919017
Signed: *John Christensen*

Approved Construction Plan
Name: *umc* Date: *3-27-2019*
Traffic: *W. Edwards* Date: *3-29-19*
Fire: *James Marshall* Date: *3-28-19*



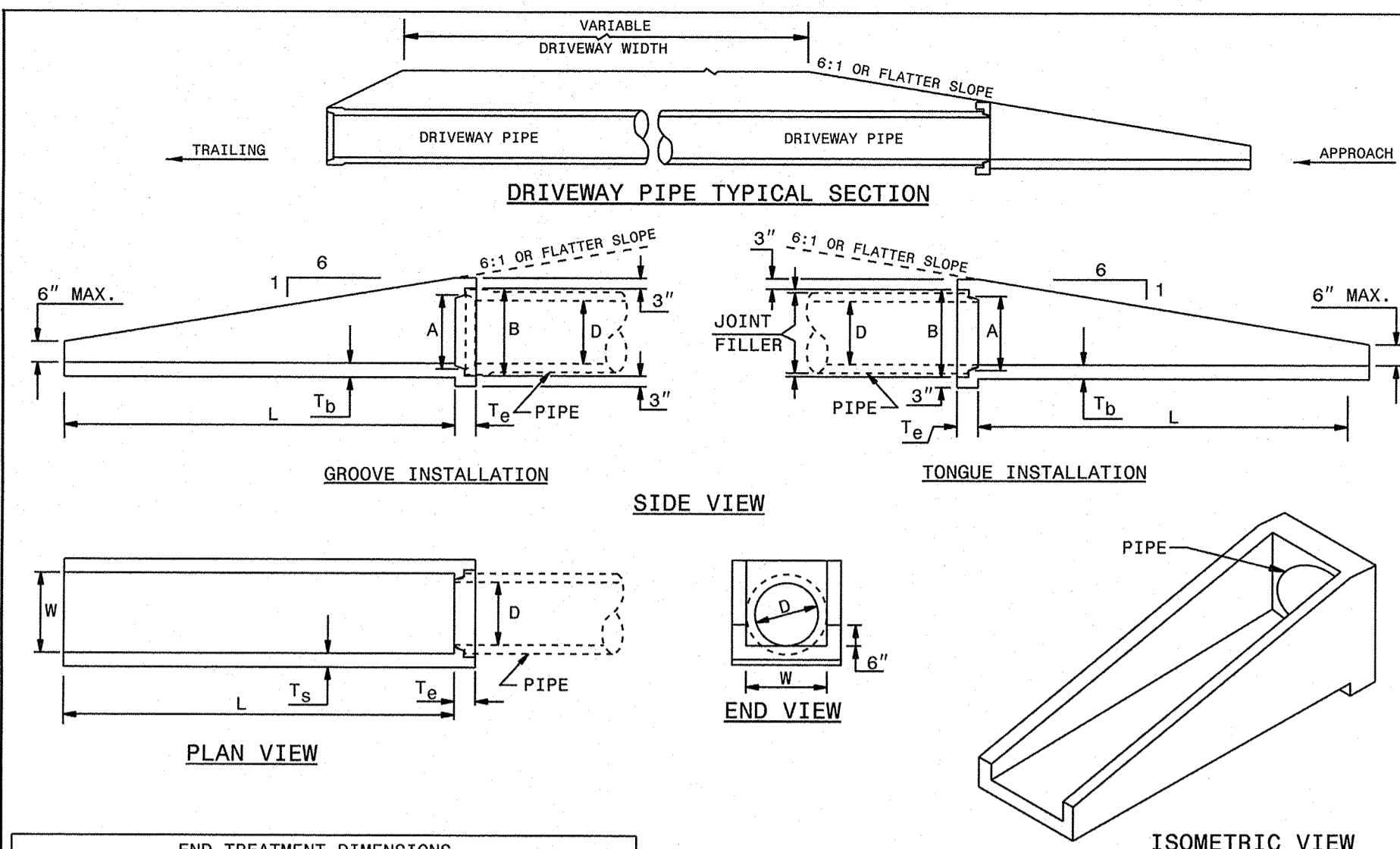
CAPE FEAR ENGINEERING
151 Poole Rd., Suite 100; Belville, NC, 28451
TEL (910) 383-1044; FAX (910) 383-1045
www.capefearengineering.com
N.C. LICENSE # C-1621

PROJECT NUMBER: 275-96
SCALE: AS SHOWN
DATE: MARCH 27, 2019

TROLLEY STATION
6789 WRIGHTSVILLE AVE
WILMINGTON, NC

SITE DETAILS-2

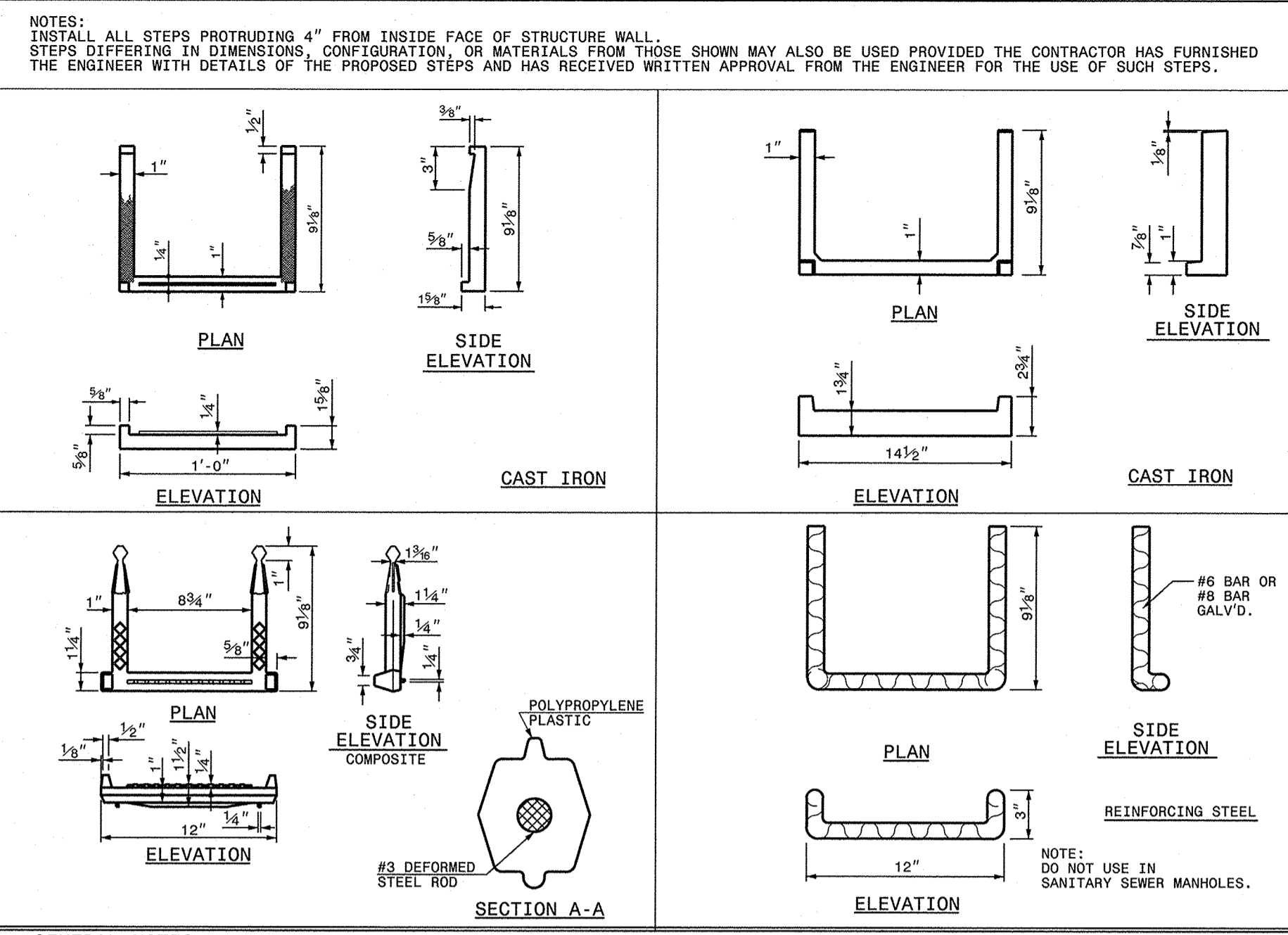
PROJECT NUMBER: 275-96
SHEET NUMBER: C-501



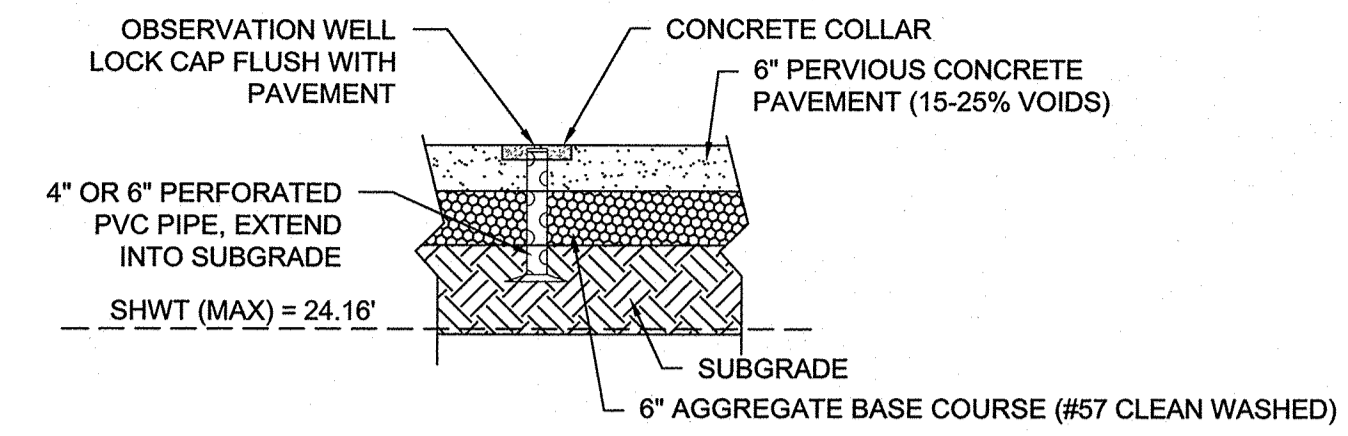
D	L	W	T _s	T _d	T _e	A	B
15"	7'-6"	19"	4"	4"	6"	17 3/4"	20 7/8"
18"	9'-0"	23"	4"	4"	6"	21 1/4"	25"
24"	12'-6"	30"	4"	4"	6"	27 3/8"	32"

NOTES:
 1. CONSTRUCT PIPE END SECTION USING #4 REBAR SPACED 9" EACH WAY AND MEET ALL REQUIREMENTS OF STD. SPEC. 310.
 2. CHAMFER ALL EXPOSED CORNERS 3/4".

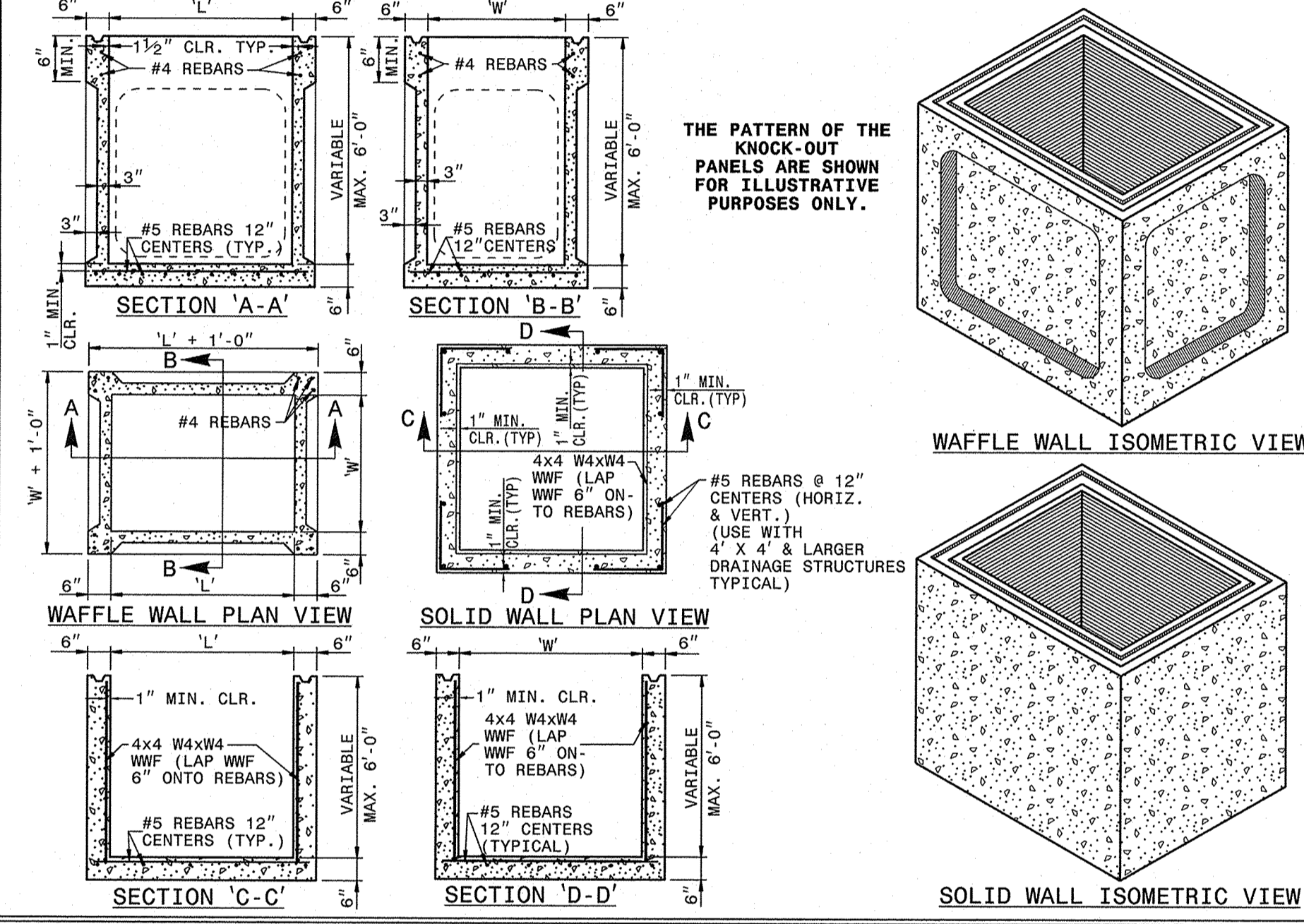
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
PARALLEL PIPE END SECTION
 PRECAST CONCRETE SECTION FOR 15" TO 24" PIPE
 SHEET 1 OF 1
310.02



STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
DRAINAGE STRUCTURE STEPS
 SHEET 1 OF 1
840.66

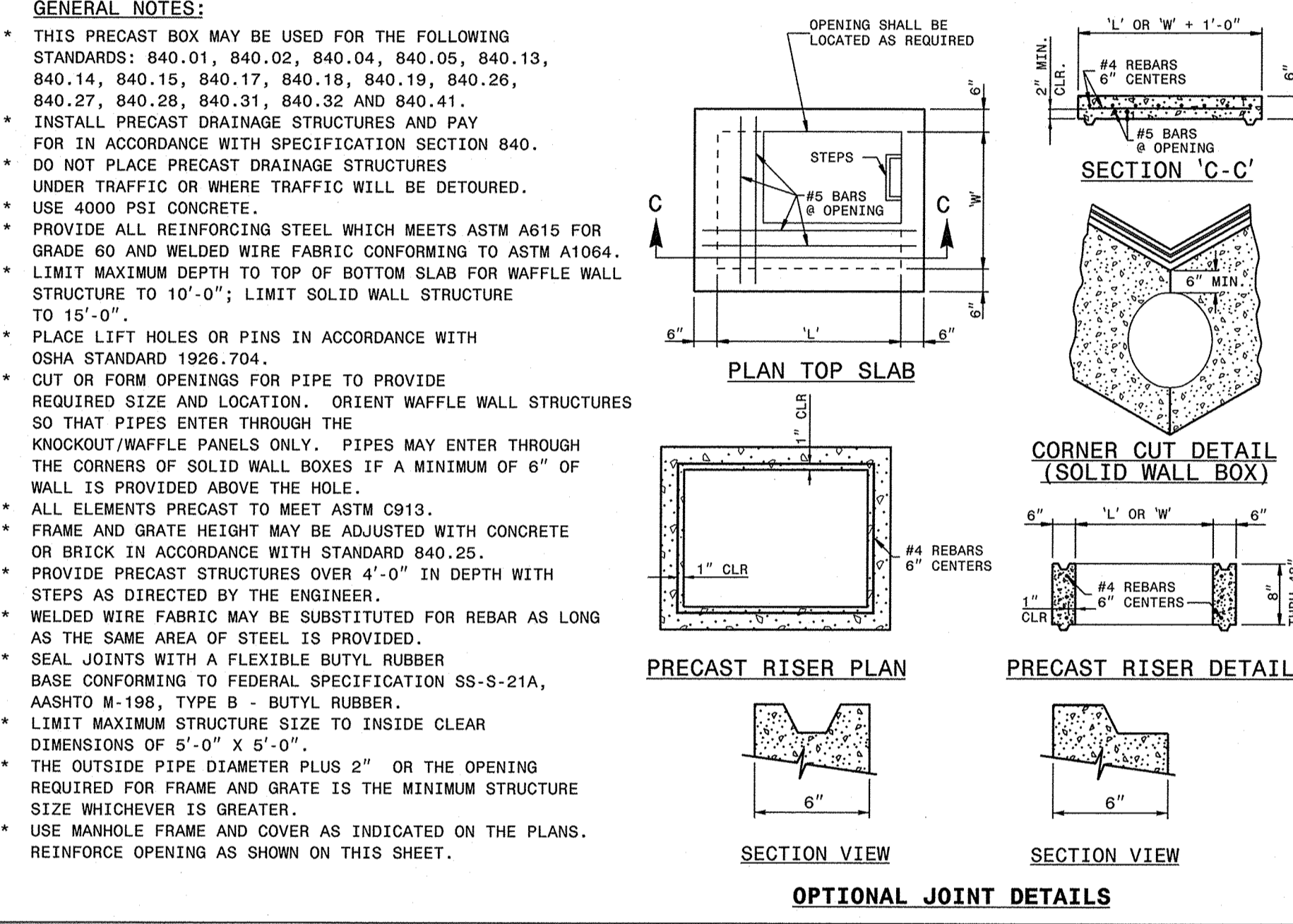


OBSERVATION WELL
 NOT TO SCALE

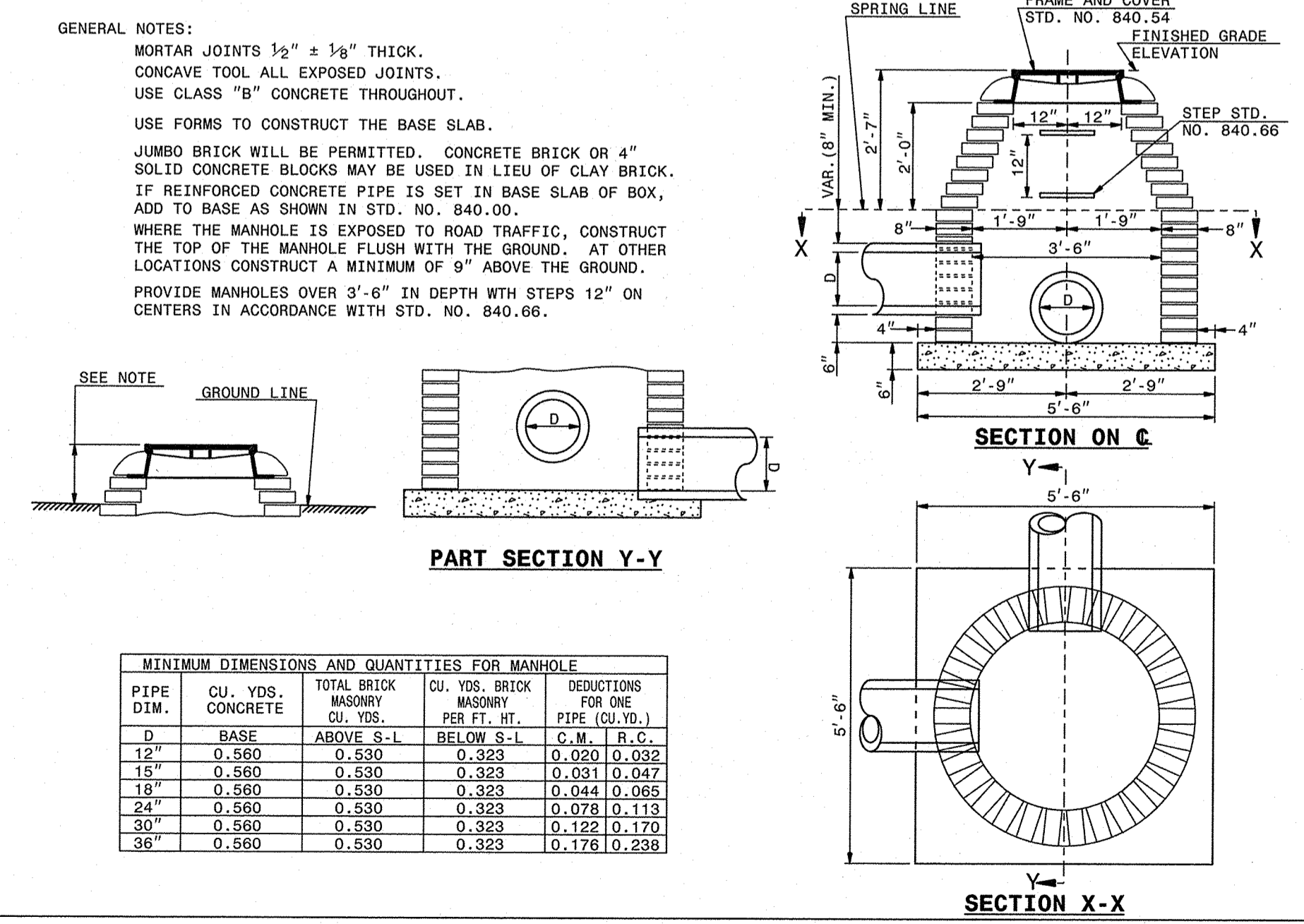


THE PATTERN OF THE KNOCK-OUT PANELS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE
 (SOLID AND WAFFLE WALL)
 SHEET 1 OF 2
840.45

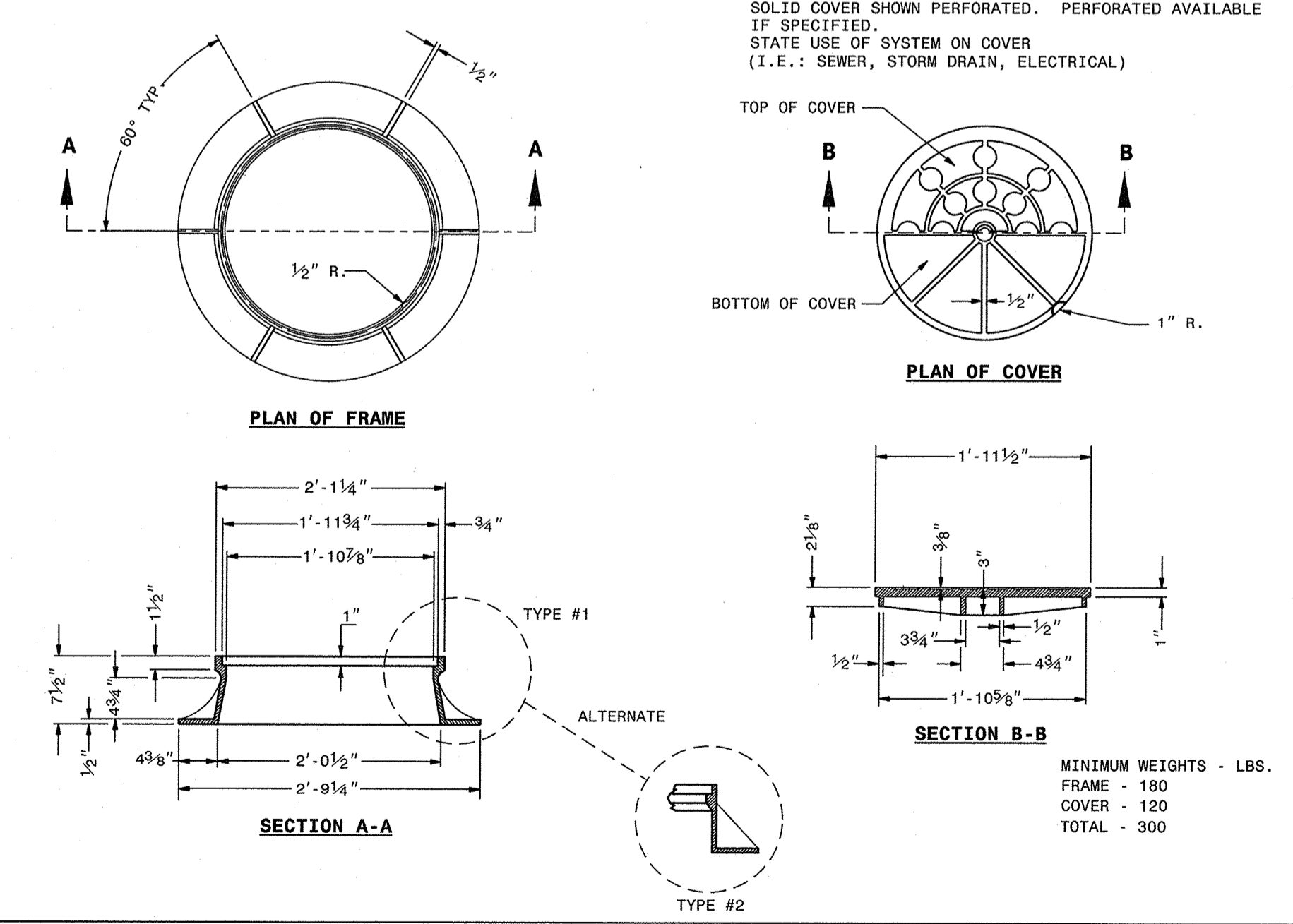


STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE
 (GENERAL NOTES AND DETAILS)
 SHEET 2 OF 2
840.45

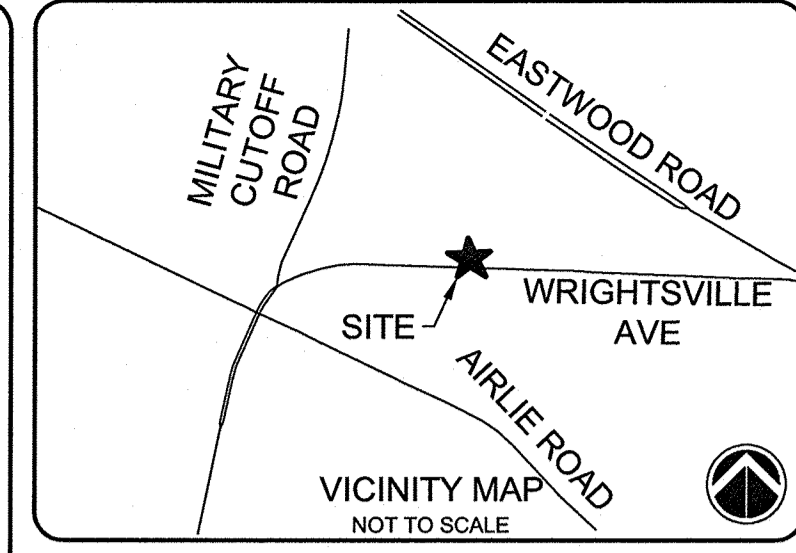


PIPE DIM.	CU. YDS. CONCRETE	TOTAL BRICK MASONRY CU. YDS.	CU. YDS. BRICK MASONRY PER FT. HT.	DEDUCTIONS FOR ONE PIPE (CU.YD.)	C.M.	R.C.
D	BASE	ABOVE S-L	BELOW S-L			
12"	0.560	0.530	0.323	0.020	0.032	
15"	0.560	0.530	0.323	0.031	0.047	
18"	0.560	0.530	0.323	0.044	0.065	
24"	0.560	0.530	0.323	0.078	0.113	
30"	0.560	0.530	0.323	0.122	0.170	
36"	0.560	0.530	0.323	0.178	0.238	

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
BRICK MANHOLE
 12" THRU 36" PIPE
 SHEET 1 OF 1
840.51



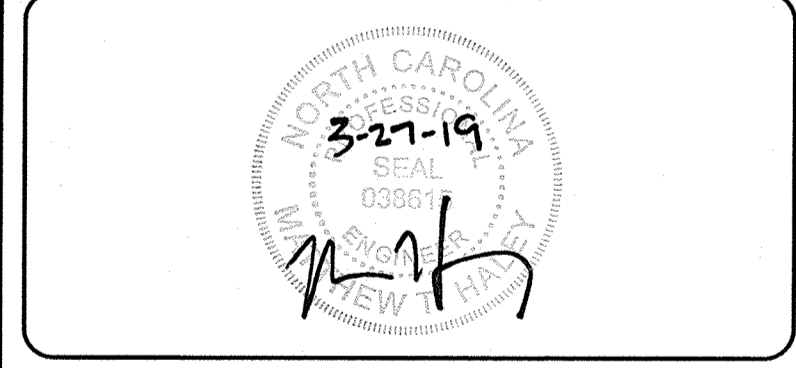
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
MANHOLE FRAME AND COVER
 SHEET 1 OF 1
840.54



SEE SHEET C-001 FOR GENERAL NOTES.
 SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

REV. #	DESCRIPTION	MTH	REV. BY	DATE
1	ISSUED FOR CONSTRUCTION	MTH		3/27/19
REVISIONS				



CAPE FEAR ENGINEERING
 151 Poole Rd., Suite 100, Belville, NC, 28451
 TEL (910) 383-1044; FAX (910) 383-1045
 www.capefearengineering.com
 N.C. LICENSE # C-1621

PROJECT NUMBER:	275-96
SCALE:	AS SHOWN
DATE:	MARCH 27, 2019

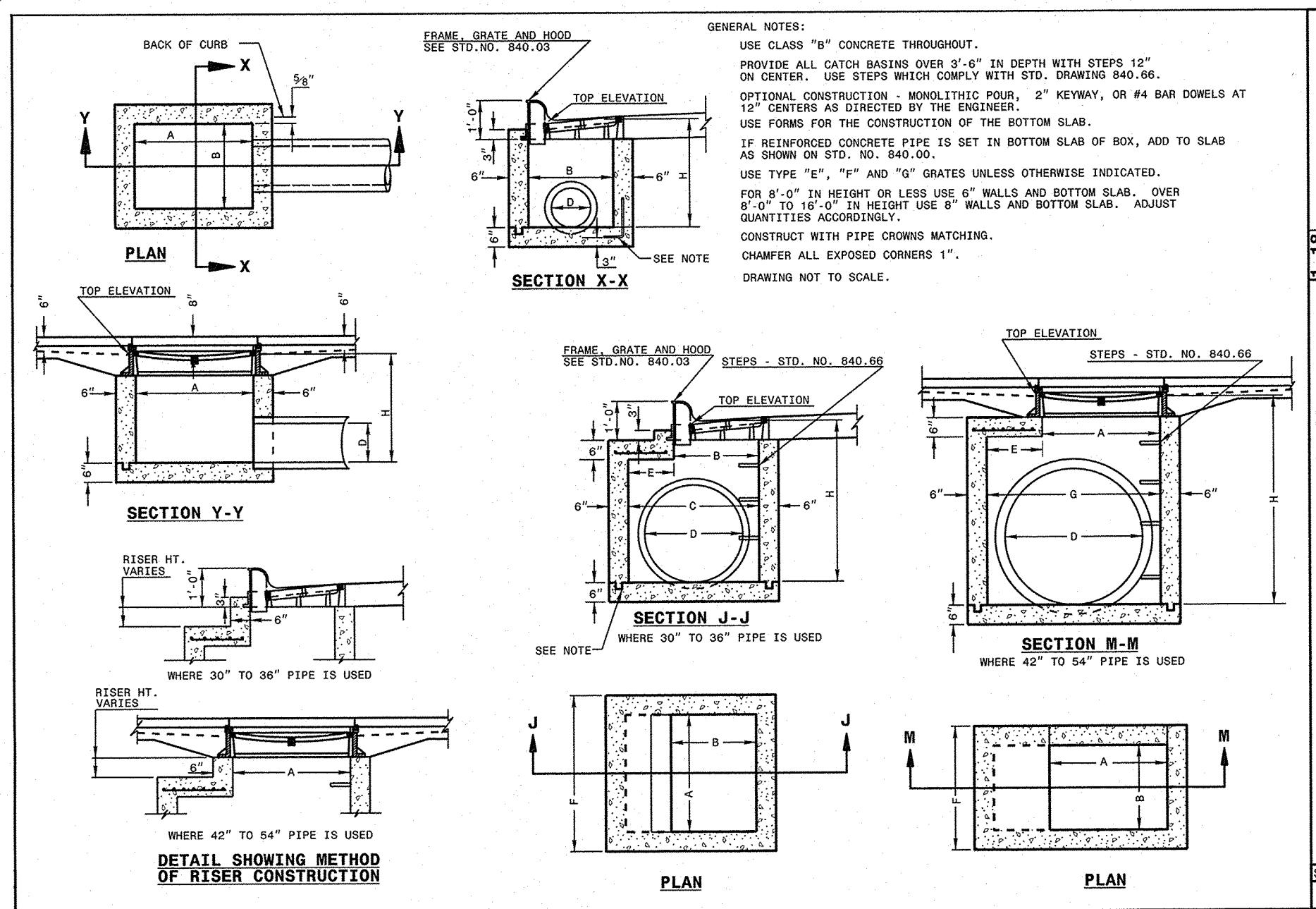
TROLLEY STATION
 6789 WRIGHTSVILLE AVE
 WILMINGTON, NC

STORMWATER
 DETAILS-1

PROJECT NUMBER	275-96	SHEET NUMBER	C-502
----------------	--------	--------------	-------

WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED DRAINAGE PLAN
 Date: 3/28/19 Permit # 2019017
 Signed: *Fresh Christensen*

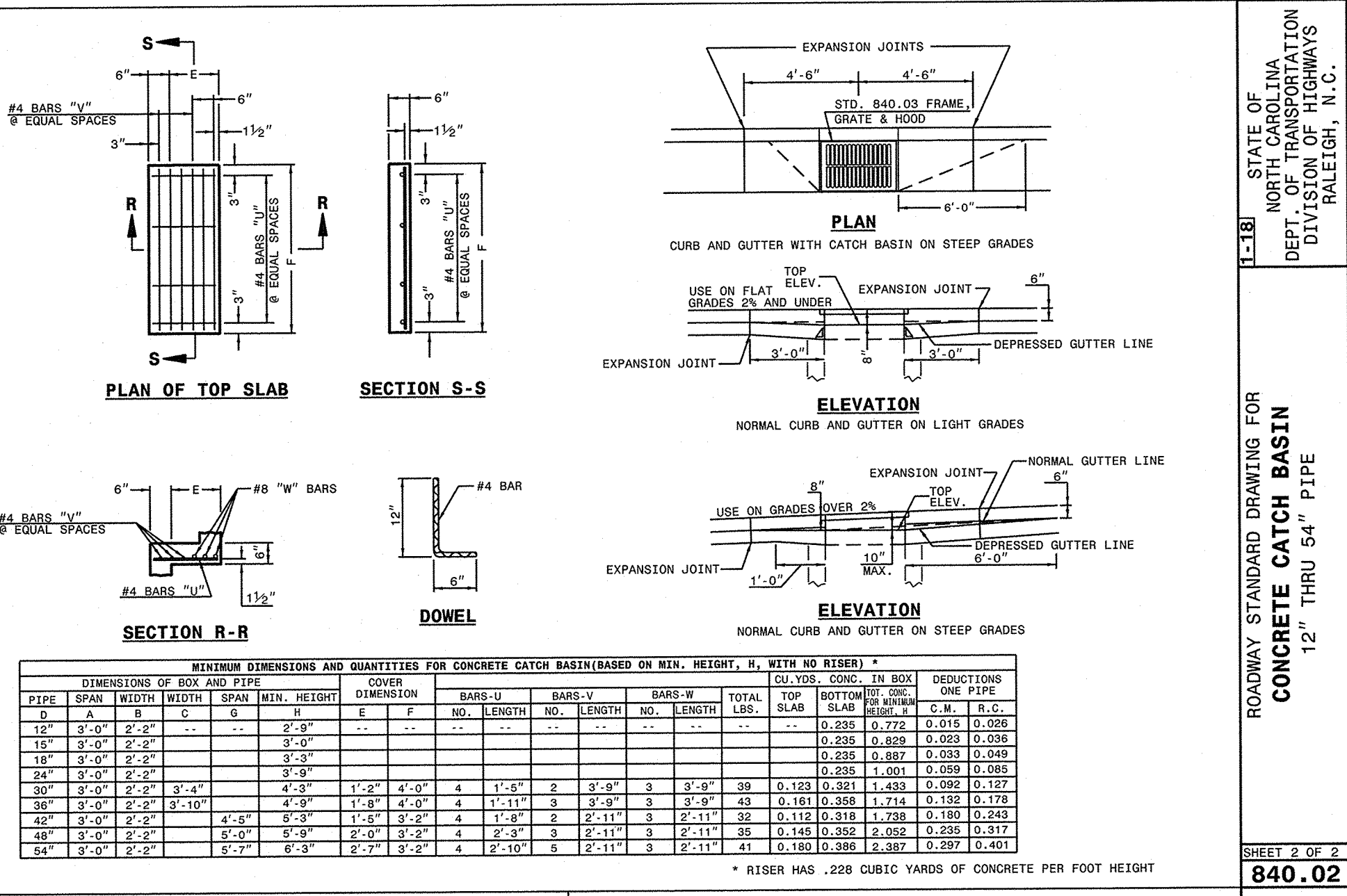
Approved Construction Plan
 Name: *MC* Date: *3-27-2019*
 Planning: *W Edmonds*
 Traffic: *W Edmonds*
 File: *Jama Merritt* 3.28.19



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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

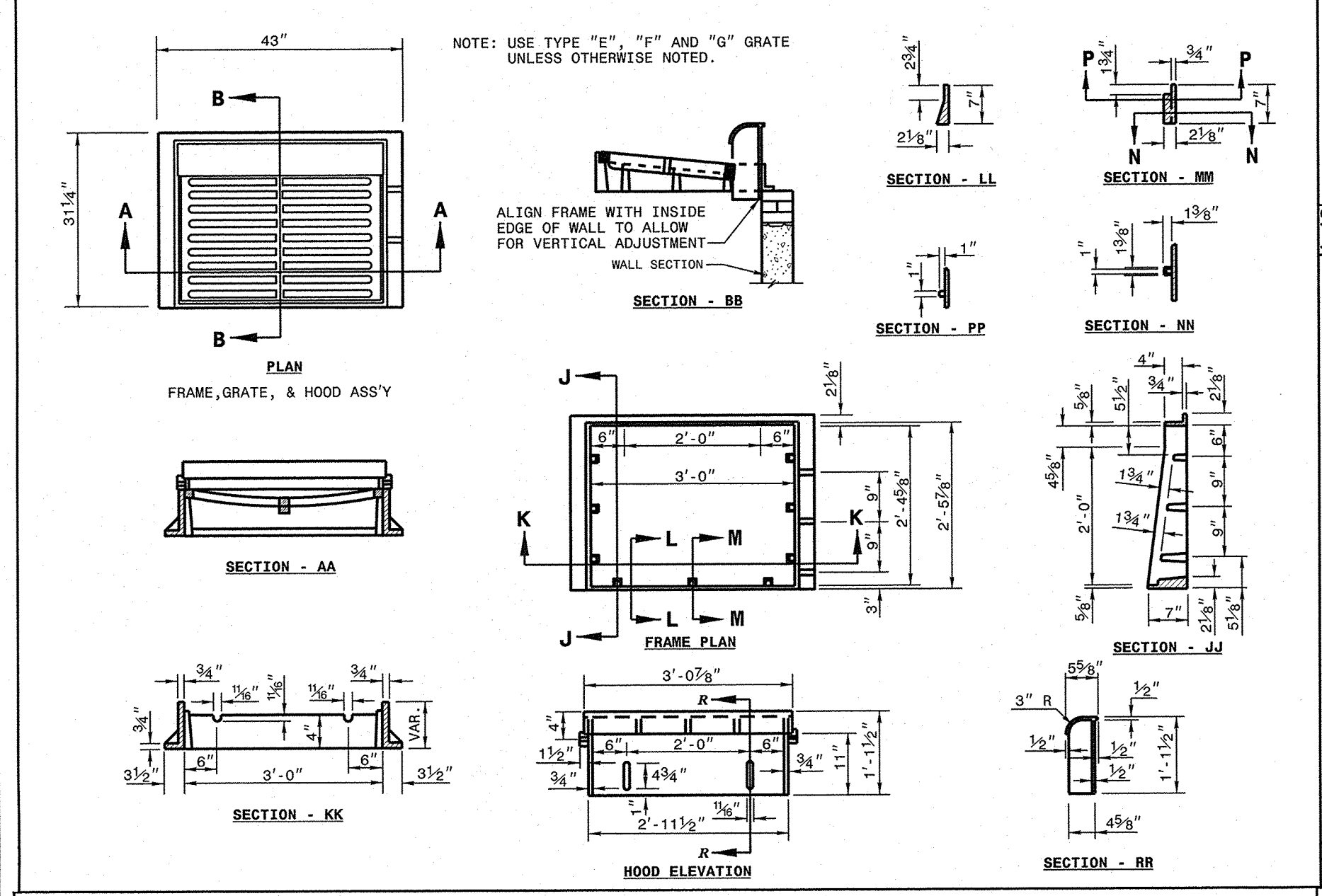
SHEET 2 OF 2
840.02



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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

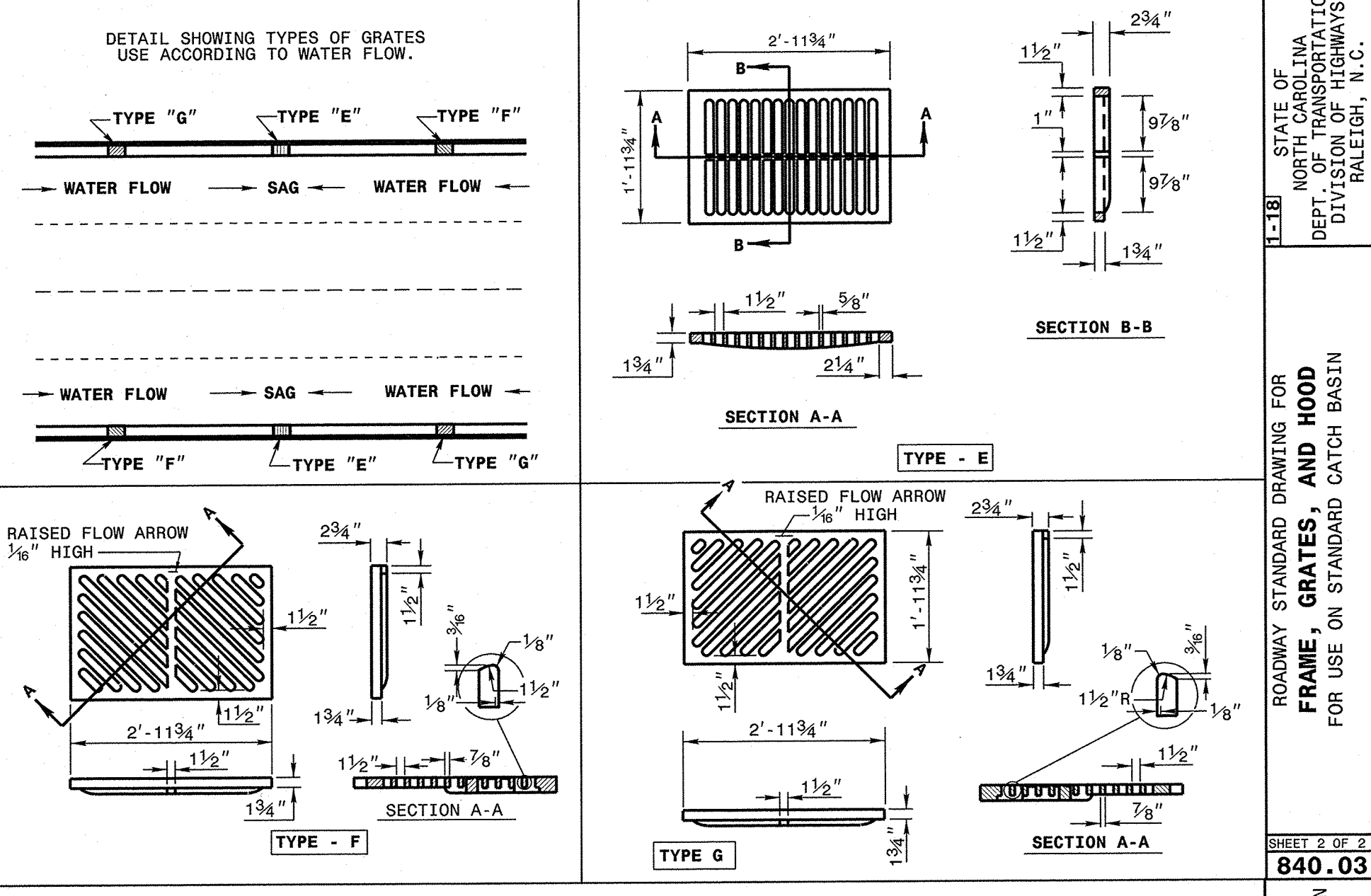
SHEET 2 OF 2
840.02



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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

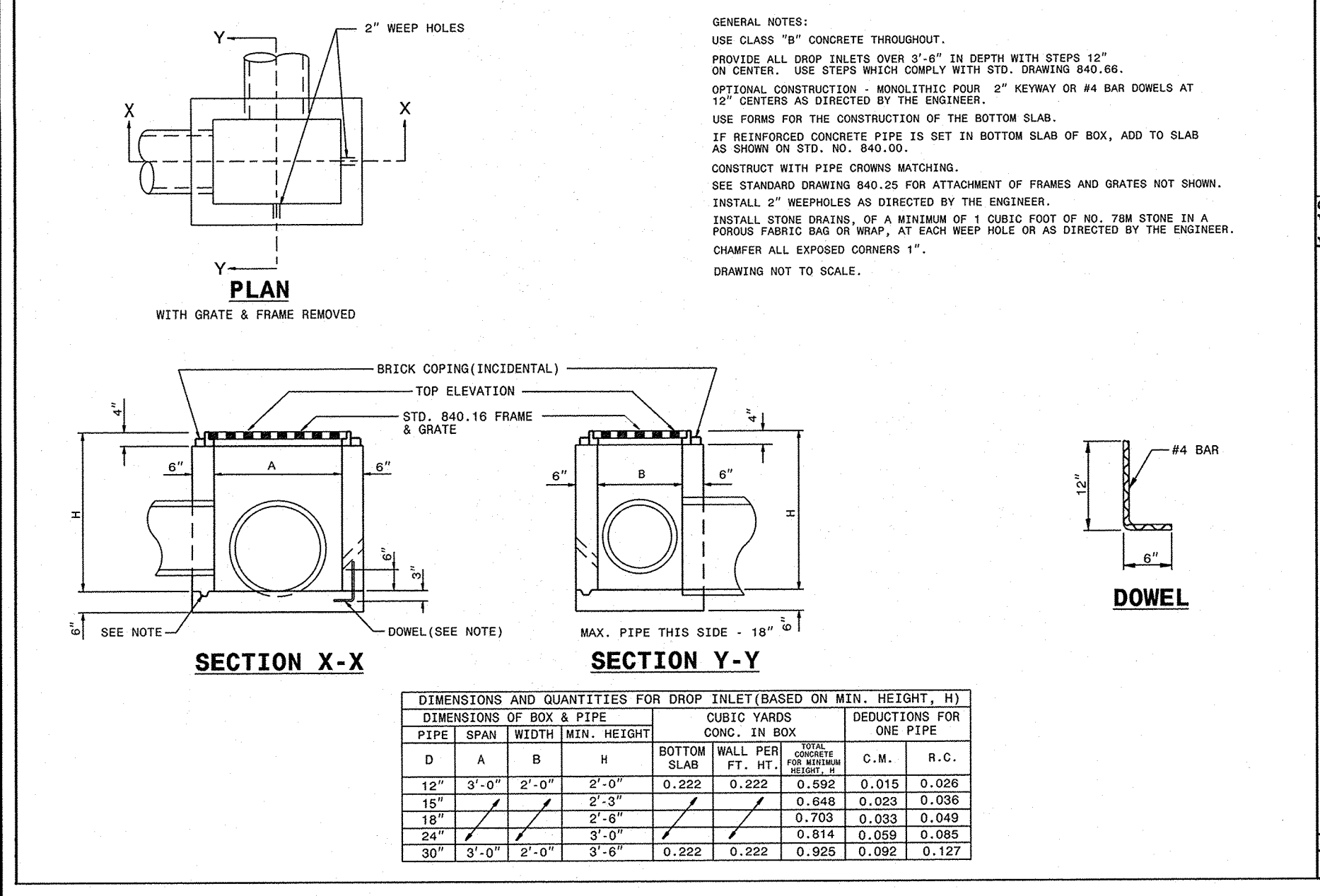
SHEET 1 OF 2
840.03



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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

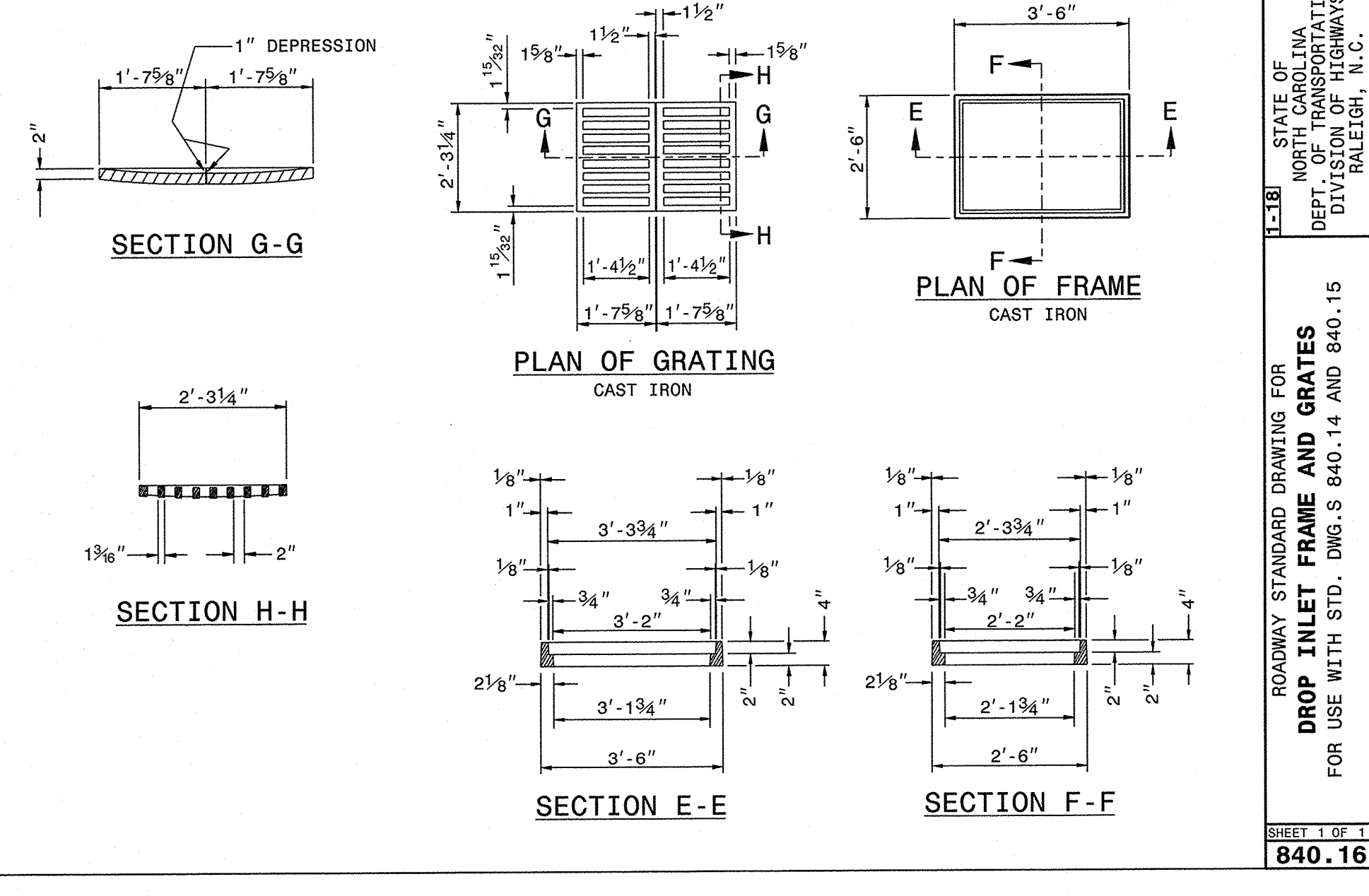
SHEET 2 OF 2
840.03



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE DROP INLET
12" THRU 30" PIPE

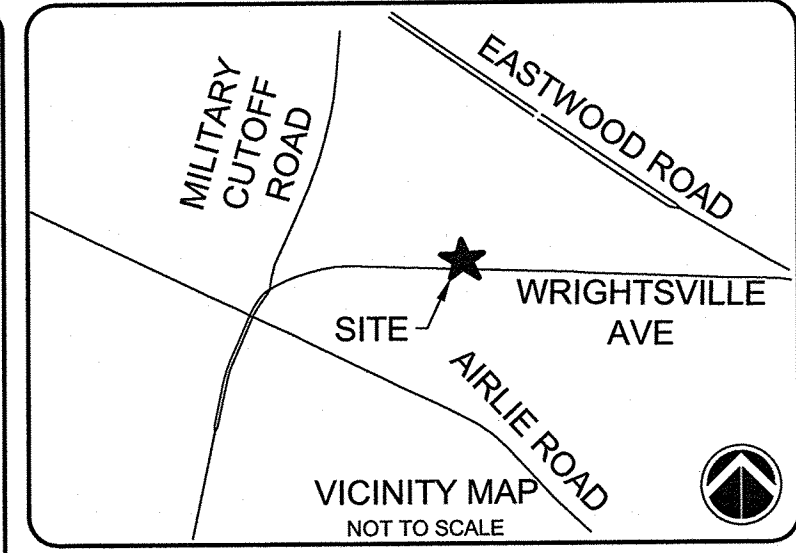
SHEET 1 OF 1
840.14



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
FOR USE WITH STD. Dwg.S 840.14 AND 840.15

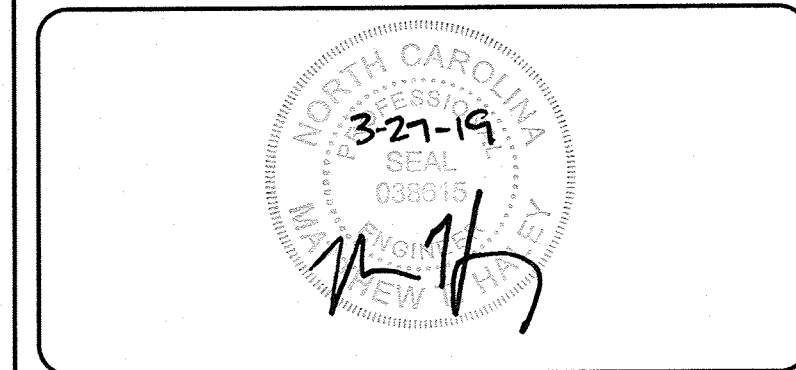
SHEET 1 OF 1
840.16



SEE SHEET C-001 FOR GENERAL NOTES.
SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

1	ISSUED FOR CONSTRUCTION	MTH 3/27/19
REV. #	DESCRIPTION	REV. BY DATE
	REVISIONS	



CAPE FEAR ENGINEERING
151 Poole Rd., Suite 100, Belville, NC, 28451
TEL (910) 383-1044; FAX (910) 383-1045
www.capefearengineering.com
N.C. LICENSE # C-1621

PROJECT NUMBER: 275-96
SCALE: AS SHOWN
DATE: MARCH 27, 2019

TROLLEY STATION
6789 WRIGHTSVILLE AVE
WILMINGTON, NC

STORMWATER
DETAILS-2

PROJECT NUMBER: 275-96
SHEET NUMBER: C-503

City of **WILMINGTON**
NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: 3/28/19 Permit # 2019017
Signed: *Rich Christman*

Approved Construction Plan
Name: *UMC* Date: *3-27-2019*
Planning: *W. M. Meritt*
Traffic: *James M. Meritt*
Fire: *3-28-19*

TEMPORARY SILT FENCE

TEMPORARY CONSTRUCTION ENTRANCE

ROCK CHECK DAM

LAND DISTURBING ACTIVITIES MUST BE MANAGED TO AVOID SEDIMENT RUN-OFF AND POLLUTION FROM CONSTRUCTION SITES. WHERE PERMITTED LOCALLY BY NEW HANOVER COUNTY, AN EROSION AND SEDIMENT CONTROL (EASC) PLAN WILL CONTAIN DETAILS AND GUIDANCE. EASC PLANS ARE PERFORMANCE BASED AND OFTEN REQUIRE ADJUSTMENTS OR REPAIRS. AS PERMITTED BY NCEM, DIVISIONS OF WATER QUALITY AND LAND RESOURCES, A STORMWATER PERMIT WILL REQUIRE SELF-MONITORING REPORTS (WEEKLY, 31" RAIN EVENT) OR SELF-INSPECTION REPORTS AFTER EACH CONSTRUCTION PHASE, BASED ON ELEMENTS OF THE EASC PLAN.

DATE: SEPTEMBER, 2012
DRAWN BY: JSR
CHECKED BY: BDR, P.E.
SCALE: NOT TO SCALE

STANDARD DETAIL
GUIDELINES FOR SEDIMENT CONTROL BMPs
CITY OF WILMINGTON NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SHEET 1 OF 2 SD 3-104

FILTER FABRIC BURIAL

FILTER FABRIC INSTALLATION

LOW FLOW INLET FILTERS

BLOCK AND GRAVEL INLET PROTECTION

INLET PROTECTION-SEDIMENT TUBE

DATE: SEPTEMBER, 2012
DRAWN BY: JSR
CHECKED BY: BDR, P.E.
SCALE: NOT TO SCALE

STANDARD DETAIL
GUIDELINES FOR SEDIMENT CONTROL BMPs
CITY OF WILMINGTON NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SHEET 2 OF 2 SD 3-104

NOTE: THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.

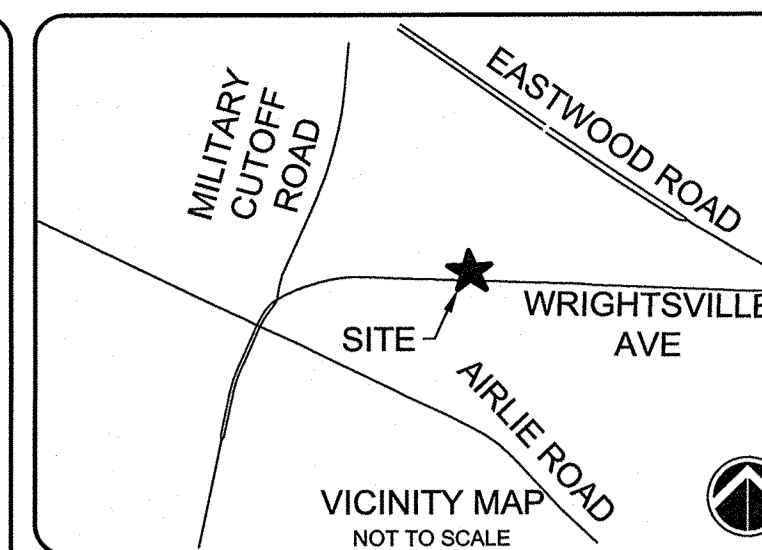
NOTE: CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFIGURE CROWN WITH INTENSIVE PRUNING.

CRZ
DBH
ORANGE SAFETY FENCE OR ORANGE SILT FENCE (TYPICAL)

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

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
CITY OF WILMINGTON NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SHEET 1 OF 2 SD 15-09



SEE SHEET C-001 FOR GENERAL NOTES.
SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

1	ISSUED FOR CONSTRUCTION	MTH
REV. #	DESCRIPTION	REV. BY
	REVISIONS	DATE

FRONT VIEW

SIDE VIEW

WARNING SIGN DETAIL

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

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
CITY OF WILMINGTON NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SHEET 2 OF 2 SD 15-09

MULCHING MATERIALS AND APPLICATION RATES

MATERIAL	RATE PER ACRE	QUALITY	NOTES
STRAW	2 TONS	DRY, UNCHOPPED, UNWEATHERED; AVOID WEEDS	SHOULD COME FROM WHEAT OR OATS SPREAD BY HAND OR MACHINE, MUST BE TACKED DOWN

TEMPORARY SEEDING

TIME OF SEEDING	GRASS TYPE	AMOUNT/ACRE	FERTILIZATION/ACRE	FERTILIZATION/ACRE MAINTENANCE
DEC 1-APR 15	RYE (GRAIN) & LESPEDEZA, KOBE	120 LBS. & 50 LBS.	750 LBS. 10-10-10	NA
APR 15-AUG 15	GERMAN MILLET	40 LBS.	750 LBS. 10-10-10	NA
AUG 15-DEC 30	RYE (GRAIN)	120 LBS.	1,000 LBS. 10-10-10	NA

PERMANENT SEEDING

NCDEQ ESCM	TIME OF SEEDING	GRASS TYPE	AMOUNT/ACRE	FERTILIZATION/ACRE
NO. 1CP (WELL TO POORLY DRAINED SOILS W/ GOOD MOISTURE RET; LOW MAINTENANCE)	15 FEB - 30 APR OR 01 SEPT - 31 OCT	TALL FESCUE PENSACOLA BAHIAGRASS SERICEA LESPEDEZE KOBE LESPEDEZA	80 LBS 50 LBS 30 LBS 10 LBS	1,000 LBS 10-10-10 *
NO. 2CP (POORLY DRAINED SOILS W/ GOOD MOISTURE RET; HIGH MAINTENANCE)	15 FEB - 30 APR AND 01 SEPT - 31 OCT	TALL FESCUE RYE (GRAIN)	200 LBS 25 LBS	1,000 LBS 10-10-10 *
NO. 4CP (WELL DRAINED SANDY LOAMS TO DRY SANDS; LOW-MED MAINTENANCE)	01 MAR - 31 JUNE	CENTPEDEGRASS	10-20 LBS 33 BU/AC (SPRIGS)	300 LBS 10-10-10 *
NO. 5CP (WELL DRAINED SANDY LOAMS TO DRY SANDS; LOW MAINTENANCE)	01 APR - 15 JULY	PENSACOLA BAHIAGRASS SERICEA LESPEDEZA COMMON BERMUDAGRASS GERMAN MILLET	50 LBS 30 LBS 10 LBS 10 LBS	500 LBS 10-10-10 *

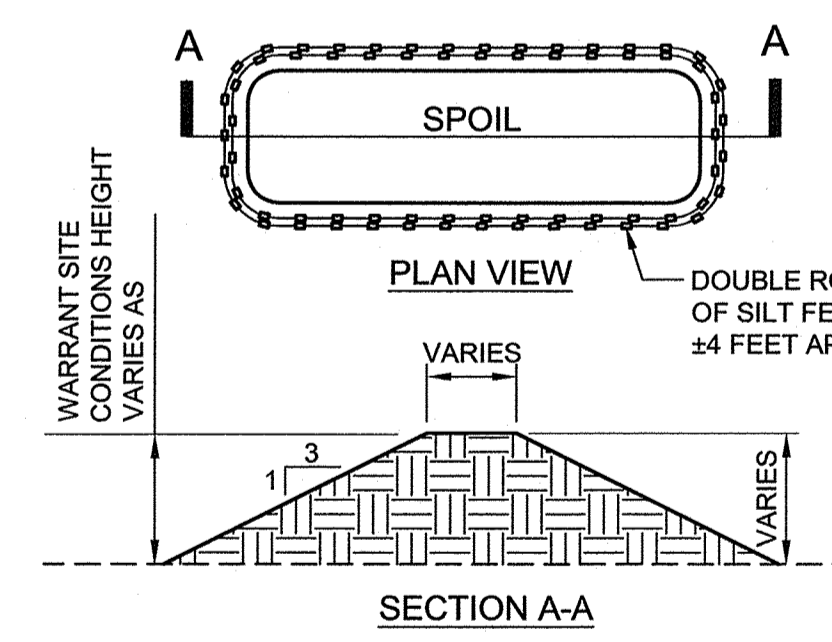
NOTE: FERTILIZATION RATES ABOVE ARE GENERAL GUIDANCE BASED ON THE NORTH CAROLINA SEDIMENTATION AND EROSION CONTROL MANUAL. CONTRACTOR SHALL HAVE THE ONSITE SOILS TESTED TO DETERMINE THE SPECIFIC NUTRIENT REQUIREMENTS. SUBMIT SOIL TEST RECOMMENDATIONS AND RESULTS FOR ENGINEER REVIEW. CONTRACTOR MAY SUBMIT OTHER SPECIES OF TEMPORARY SEED FOR APPROVAL PROVIDED SPECIES ARE IN ACCORDANCE WITH NCDEQ ESCM.

NEW STABILIZATION TIMEFRAMES

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES

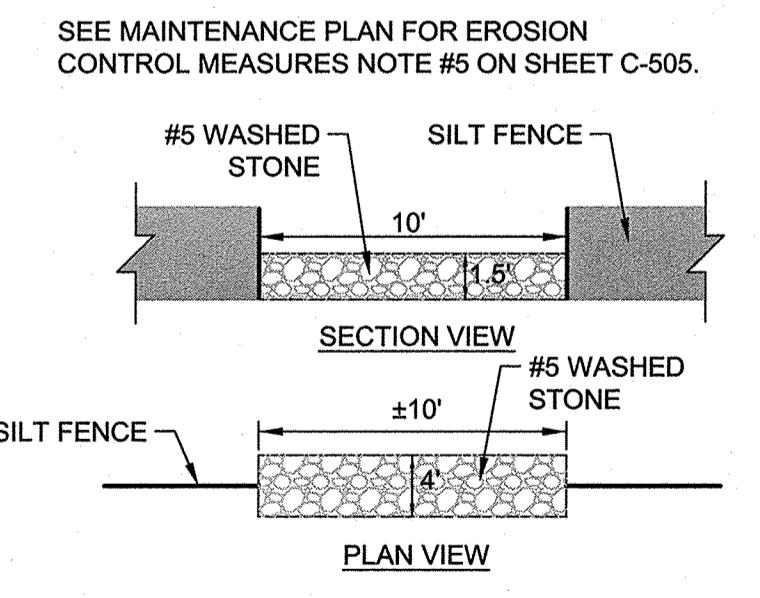
NOTE: TEMPORARY SEEDING SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.10 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL.

VEGETATION SCHEDULE
NOT TO SCALE



SPOIL STORAGE BERM
NOT TO SCALE

NOTE: CONTRACTOR SHALL LOCATE STOCKPILES AS NEEDED FOR CONSTRUCTION SEQUENCE/PHASING. STOCKPILES SHALL NOT BE LOCATED NEAR PLANNED CUT/FILL LINES, IMMEDIATELY ADJACENT TO PROJECT LIMIT LINE OR IN ANY OTHER AREA THAT MAY INCREASE POTENTIAL FOR EROSION OR NEGATIVELY IMPACT THE SITE



SILT FENCE ROCK OUTLET
NOT TO SCALE

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division

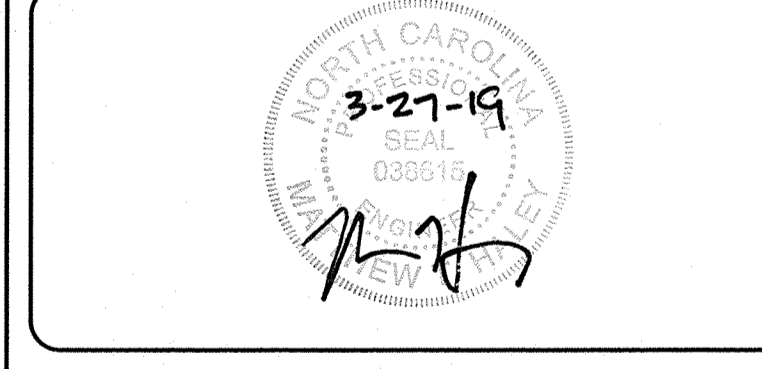
APPROVED DRAINAGE PLAN

Date: 3/28/19 Permit # 2019017
Signed: [Signature]

Approved Construction Plan

Name: [Name] Date: [Date]

Planning: [Signature] 3-27-2019
Traffic: [Signature] 3-29-19
Fire: [Signature] 3-20-19



CAPE FEAR ENGINEERING
151 Poole Rd., Suite 100, Belville, NC, 28451
TEL (910) 383-1044; FAX (910) 383-1045
www.capefearengineering.com
N.C. LICENSE # C-1621

PROJECT NUMBER: 275-96
SCALE: AS SHOWN
DATE: MARCH 27, 2019

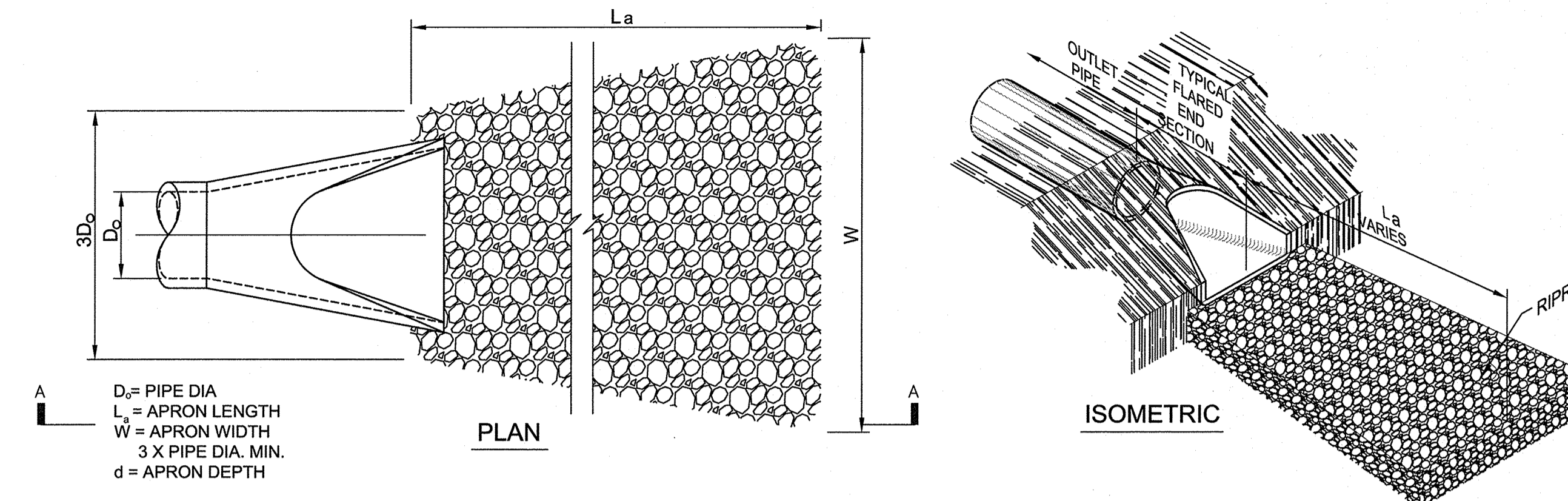
TROLLEY STATION
6789 WRIGHTSVILLE AVE
WILMINGTON, NC

EROSION CONTROL
DETAILS-1

PROJECT NUMBER	SHEET NUMBER
275-96	C-504

MAINTENANCE PLAN FOR EROSION CONTROL MEASURES (NEW HANOVER COUNTY)

- ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE, LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL.
- ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL SPILLED WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.
- SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, BLOCK AND GRAVEL INLET PROTECTION, ROCK DOUGHNUT INLET PROTECTION AND ROCK PIPE INLET PROTECTION WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARDWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT.
- DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE REPAIRED. SWALES MUST BE TEMPORARILY STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF ACTIVITY ASSOCIATED WITH A SWALE.
- SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET MAX. WITH THE USE OF EXTRA STRENGTH FABRIC, WITHOUT WIRE BACKING. STAKE SPACING WILL BE 8 FEET MAX. WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS ARE DESIGNED AT LOW POINTS IN THE SEDIMENT FENCE THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF FULL OF SEDIMENT, NO LONGER DRAINS AS DESIGNED OR IS DAMAGED.
- SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT.
- BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1st BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED AND KEPT CLEAN WEEKLY.
- SEDIMENT WILL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE DESIGN STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR IF THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED FROM BAFFLES WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1st BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.
- ALL SEEDED AREAS WILL BE FERTILIZED, RESEED AS NECESSARY AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL SLOPES WILL BE STABILIZED WITHIN 21 CALENDAR DAYS. ALL OTHER AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS.
- FLOCCULANTS WILL BE USED TO ADDRESS TURBIDITY ISSUES. THE PUMPS, TANKS, HOSES AND INJECTION SYSTEMS WILL BE CHECKED FOR PROBLEMS OR TURBID DISCHARGES DAILY.



STR ID	Do (IN.)	La (FT.)	W (FT.)	d (IN.)	CLASS
FES #1	18	9	4.5	6	B

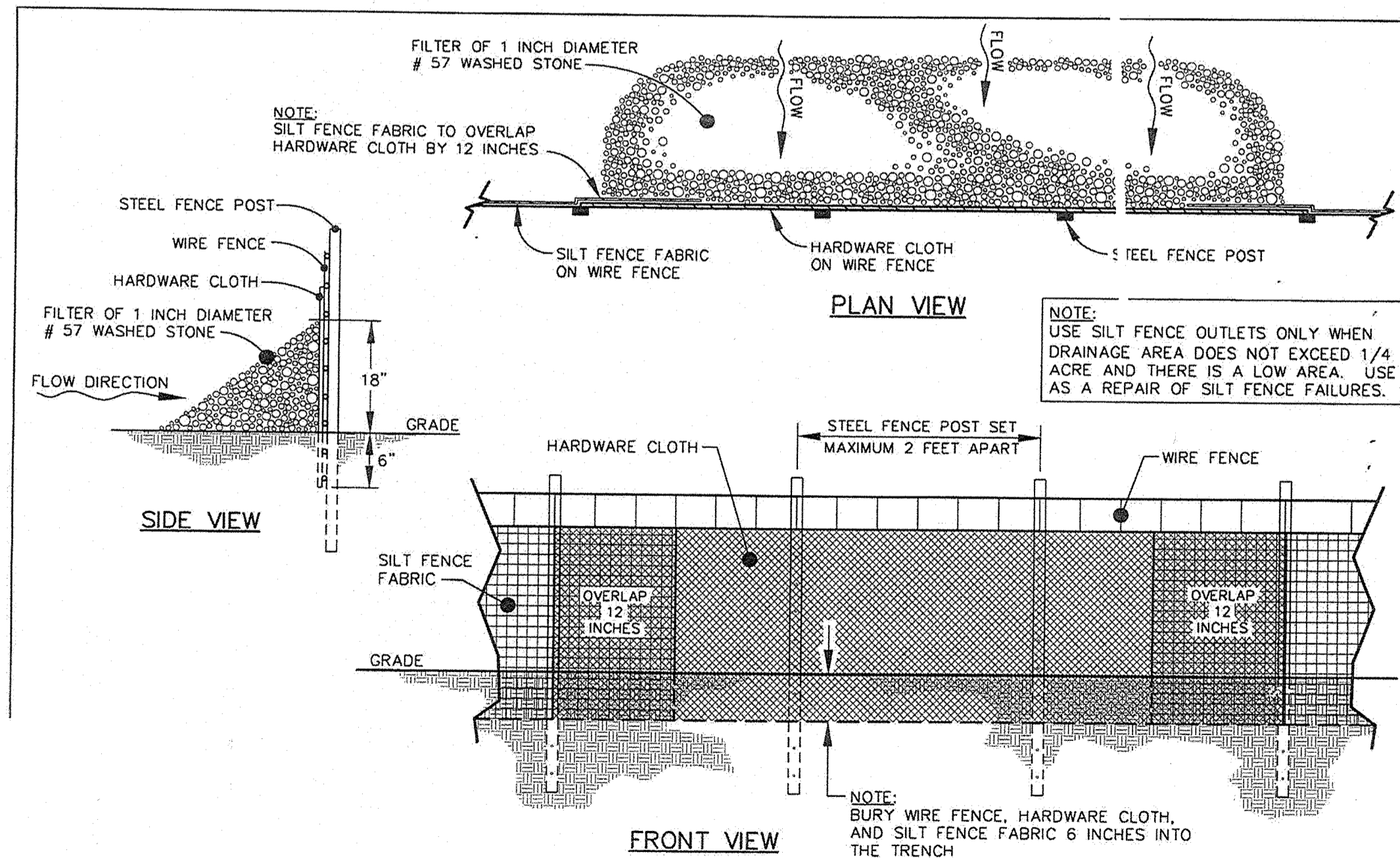
RIP-RAP APRON SCHEDULE

NOTES:

- La is the length of the riprap apron.
- d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
- A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

SCALE 1/4"=1'-0"
SECTION A-A

RIP-RAP OUTLET PROTECTION
NOT TO SCALE



GENERAL NOTES:

- SEDIMENT FILTER OUTLET AND HARDWARE CLOTH SHALL BE 16 INCHES HIGH BUT NO TALLER THAN 18 INCHES.
- HARDWARE CLOTH SHALL BE ANCHORED TO THE STEEL POSTS SECURELY USING APPROPRIATE ANCHORS. HARDWARE CLOTH SHALL BE KEPT IN A MINIMUM OF 12 INCHES IN LENGTH AND BACKFILLED PROPERLY AS SHOWN IN ABOVE DETAIL. HARDWARE CLOTH TO BE SAME AS STD. #3009 (19 GAUGE, 1/4" SPACING).
- POSTS SHALL BE NO MORE THAN 4 FEET APART.
- SITE OUTLETS AT ANY POINT SMALL CONCENTRATED FLOWS ARE ANTICIPATED AND AT THE DIRECTION OF THE INSPECTOR.
- ONE ACRE MAXIMUM DRAINAGE AREA PFR 0111 FT

MAINTENANCE NOTES:

- FILTER OUTLETS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
- THE STONE SHALL BE REPLACED PROMPTLY AFTER ANY EVENT THAT HAS CLOGGED OR REMOVED IT.
- SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OUTLET IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

SILT FENCE DETAIL
NOT TO SCALE

1. GROUND STABILIZATION

SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DITCHES, SHOULDS, BUNDLES, AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETER AND HOW ZONES)

2. BUILDING WASTES HANDLING

- NO PAINT OR LIQUID WASTES IN STREAM OR STORM DRAINS.
- DEDICATED AREAS FOR DEMOLITION, CONSTRUCTION AND OTHER WASTES MUST BE LOCATED 60' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE.
- EARTHEN MATERIALS STOCKPILES MUST BE LOCATED 60' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE.
- CONCRETE MATERIALS MUST BE CONTROLLED TO AVOID CONTACT WITH SURFACE WATERS, WETLANDS, OR BUFFERS.

3. INSPECTIONS

- SAME WEEKLY INSPECTION REQUIREMENTS.
- SAME RAIN GAUGE & INSPECTIONS AFTER 0.5" RAIN EVENT.
- INSPECTIONS ARE ONLY REQUIRED DURING "NORMAL BUSINESS HOURS".
- INSPECTION REPORTS MUST BE AVAILABLE ON-SITE DURING BUSINESS HOURS UNLESS A SITE-SPECIFIC EXEMPTION IS APPROVED.
- RECORDS MUST BE KEPT FOR 3 YEARS AND AVAILABLE UPON REQUEST.
- ELECTRONICALLY AVAILABLE RECORDS MAY BE SUBSTITUTED UNDER CERTAIN CONDITIONS.

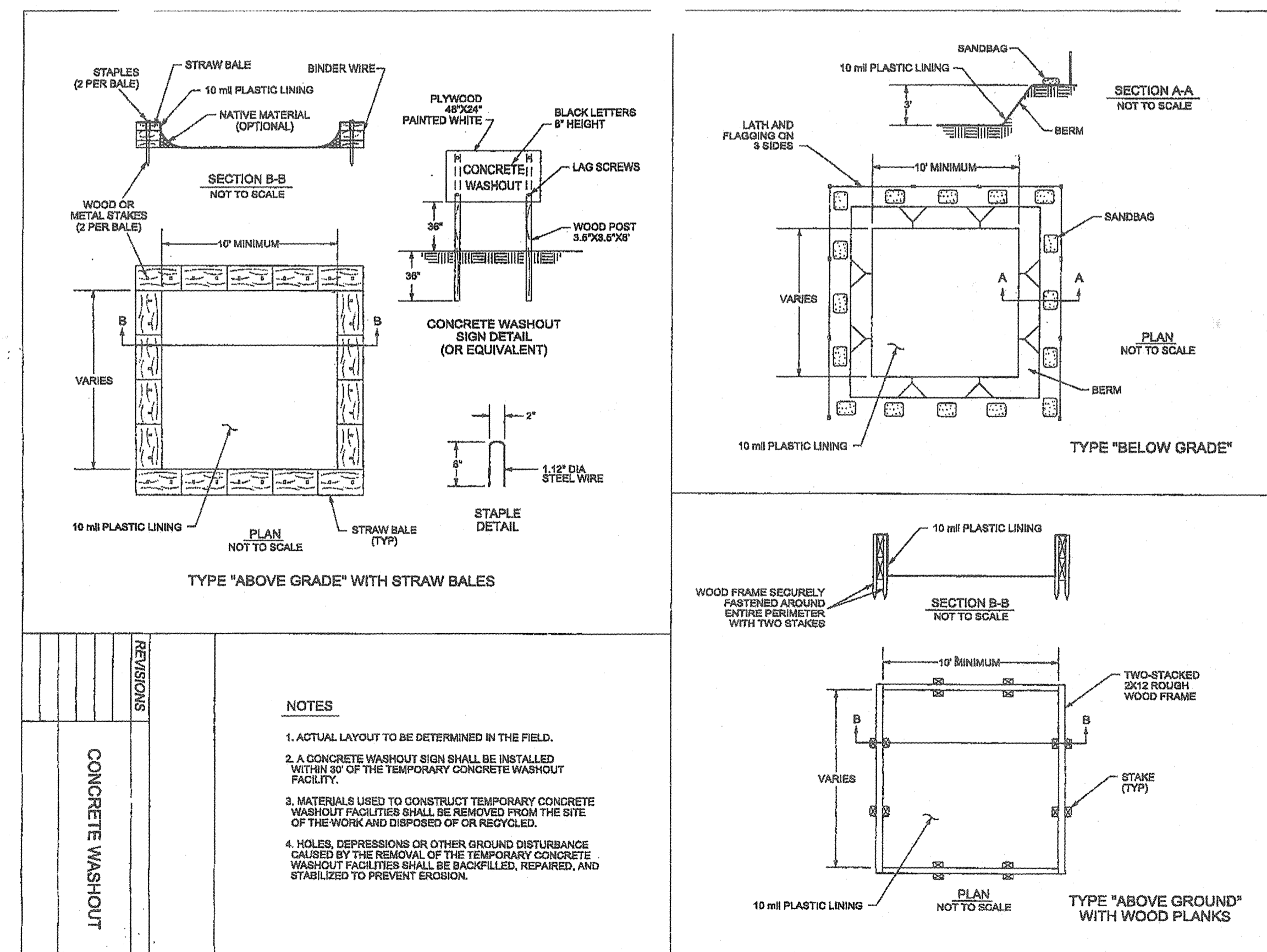
4. SEDIMENT BASINS

- OUTLET STRUCTURES MUST WITHDRAW FROM BASIN SURFACE UNLESS DRAINAGE AREA IS LESS THAN 1 ACRE.
- USE ONLY DWD-APPROVED FLOCCULANTS.

NPDES - SPECIFIC PLAN SHEETS NOTES

- THIS PAGE IS SUBMITTED TO COMPLY WITH NPDES GENERAL STORMWATER PERMIT NCGS010000.
- THIS PAGE CAN BE APPROVED BY THE COUNTY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCGS010000 ONLY.
- THIS PAGE OF THE APPROVED PLANS IS ENFORCEABLE EXCLUSIVELY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCGS010000.
- THE COUNTY IS NOT AUTHORIZED TO ENFORCE THIS PAGE OF THE PLANS AND IT IS NOT A PART OF THE APPROVED PLANS FOR THE PURPOSES OF ENFORCEMENT ACTION UNDER THE COUNTY CODE.

NPDES NOTES
NOT TO SCALE



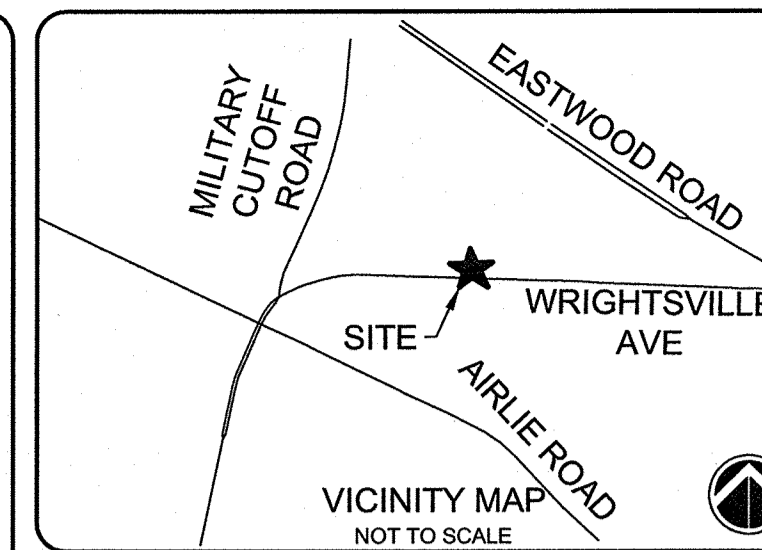
CONCRETE WASHOUT
NOT TO SCALE

NOTES:

- ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
- A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 50' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
- MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
- HOLE, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: 3/20/19 permit # 2019017
Signed: Rich Christensen

Approved Construction Plan
Name: YMC 3-27-2019 Date: 3-27-2019
Planning: YMC 3-27-2019
Traffic: W. S. 3-29-19
Fire: James Merritt 3-28-19



SEE SHEET C-001 FOR GENERAL NOTES.
SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

REV. #	DESCRIPTION	DATE
1	ISSUED FOR CONSTRUCTION	MTH 3/27/19

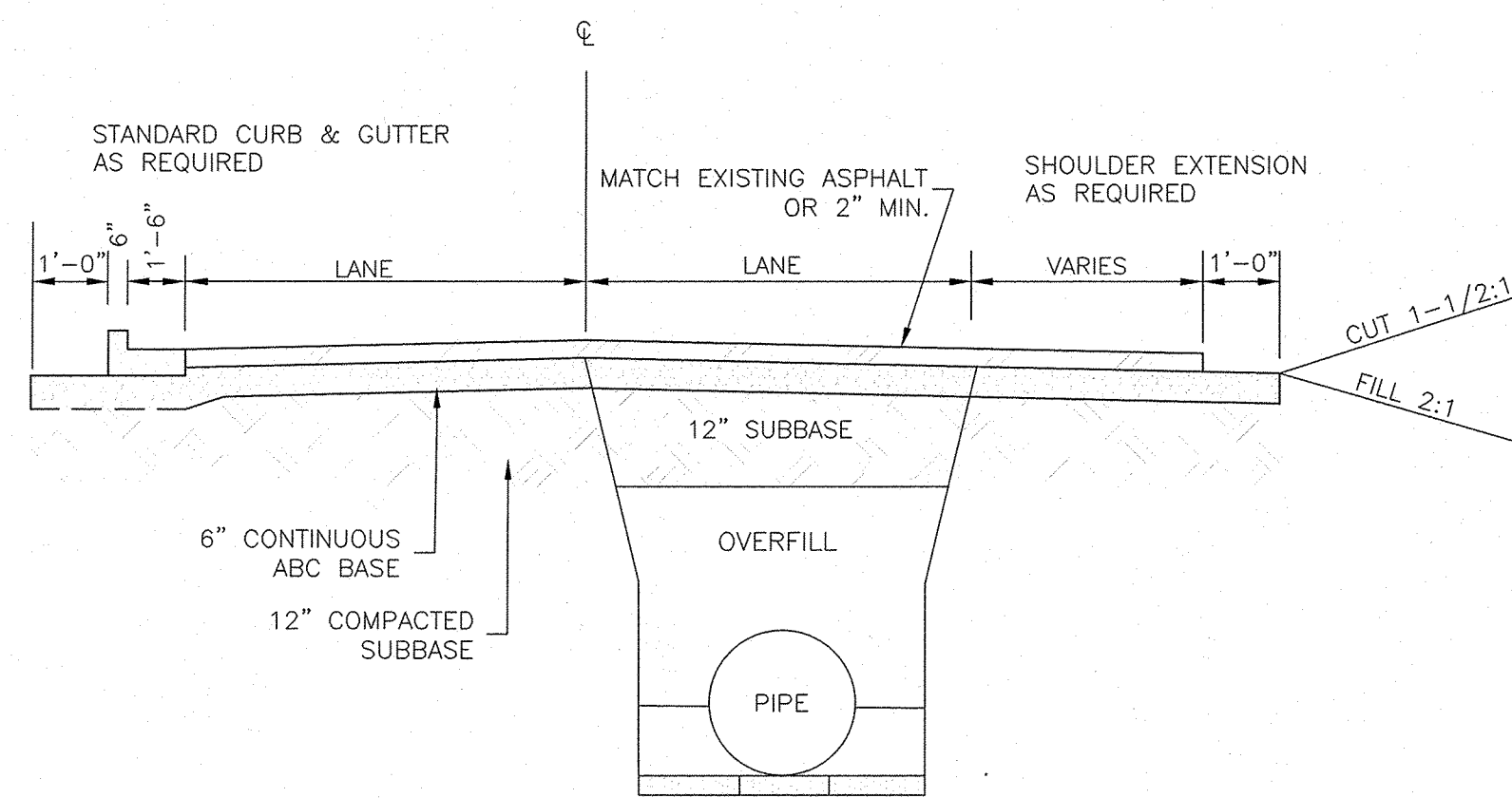
CAPE FEAR ENGINEERING
151 Poole Rd., Suite 100, Belville, NC, 28451
TEL (910) 383-1044; FAX (910) 383-1045
www.capefearengineering.com
N.C. LICENSE # C-1621

PROJECT NUMBER:	275-96
SCALE:	AS SHOWN
DATE:	MARCH 27, 2019

TROLLEY STATION
6789 WRIGHTSVILLE AVE
WILMINGTON, NC

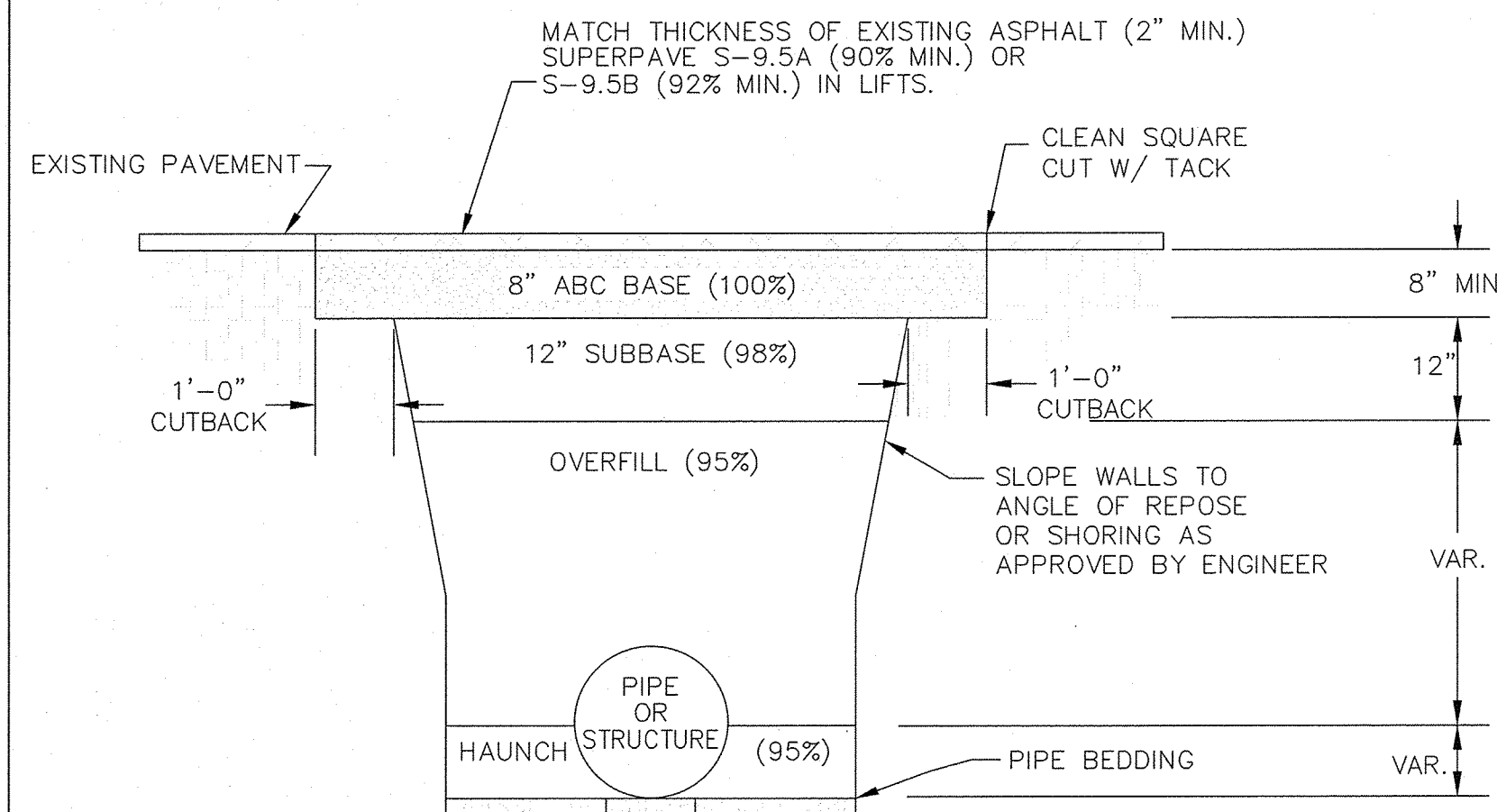
EROSION CONTROL
DETAILS-2

PROJECT NUMBER	SHEET NUMBER
275-96	C-505



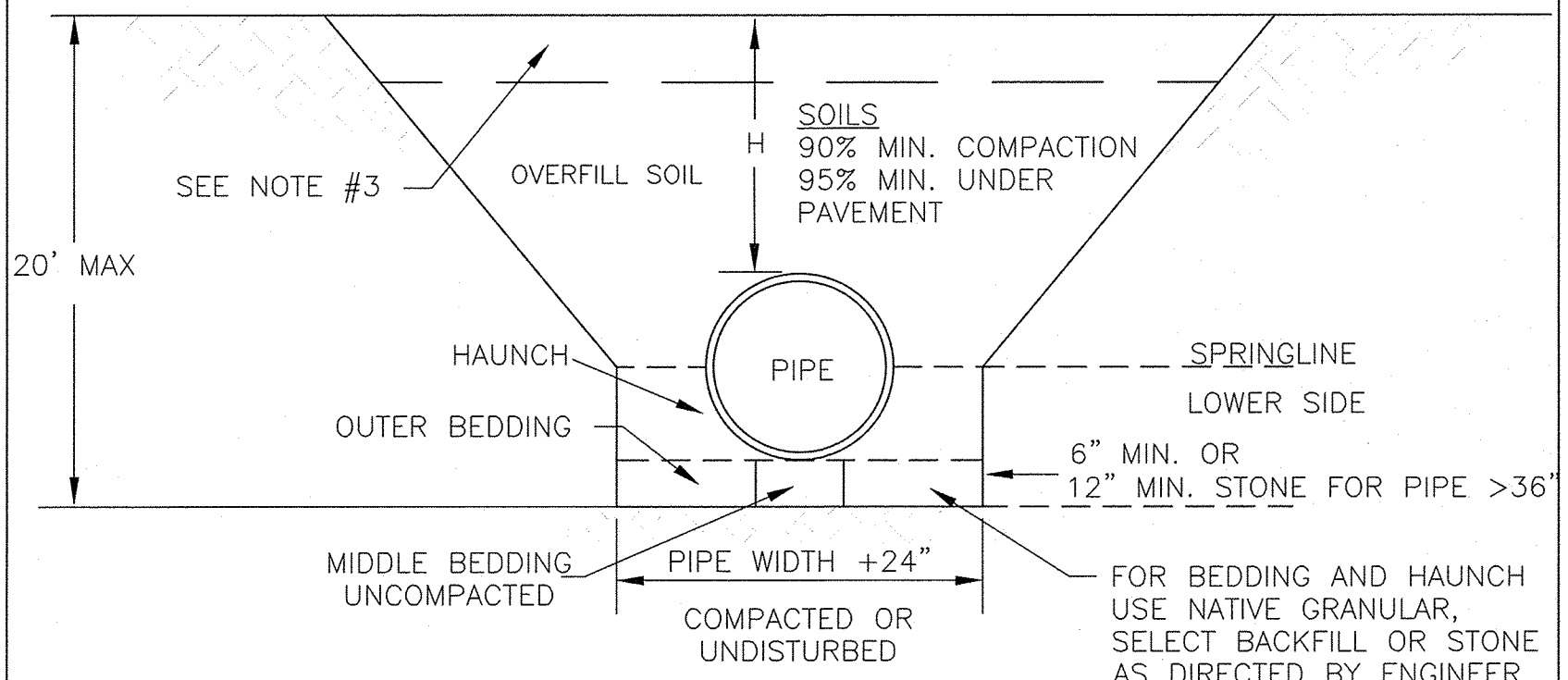
- NOTES:
1. PAVEMENT RESTORATION DESIGN IS DEPENDENT ON CITY STREET CUT POLICY AND PERMITTED CONDITIONS.
 2. PIPE TRENCH AND COMPACTION REQUIREMENTS PER SPECIFICATIONS. SEE SD 1-07 AND SD1-05.

DATE: MAY, 2013	STANDARD DETAIL	<p>CITY OF WILMINGTON ENGINEERING 212 OPERATIONS CENTER DR. WILMINGTON, NC 28412 (910) 341-7807</p>	SD 1-04
DRAWN BY JSR	TYPICAL ROAD REBUILD		
CHECKED BY B.R., P.E.			
SCALE NOT TO SCALE			



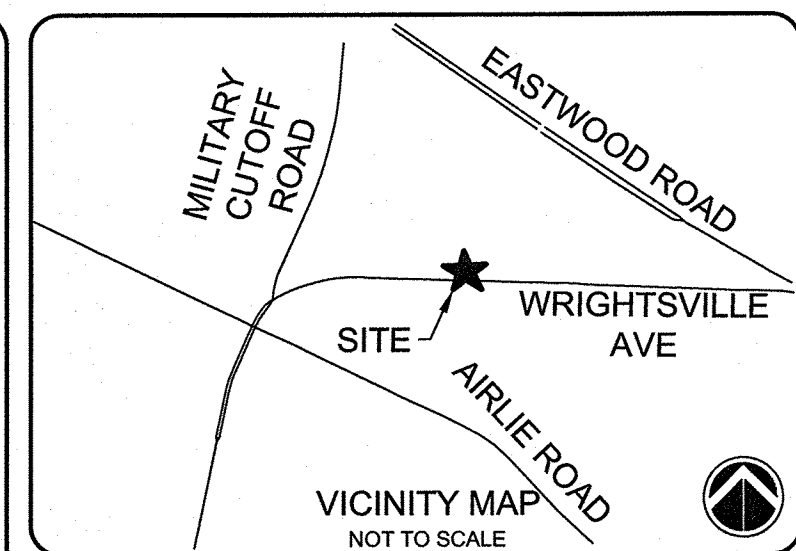
- NOTES:
1. CONTRACTOR SHALL ENSURE BOTTOM OF TRENCH IS SUITABLE FOR INSTALLATION AND DOES NOT REQUIRE FOUNDATION CONDITIONING STONE.
 2. FILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.
 3. SELECT BACKFILL MAY BE SUBSTITUTED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

DATE: MAY, 2013	STANDARD DETAIL	<p>CITY OF WILMINGTON ENGINEERING OFFICE 212 OPERATIONS CENTER DRIVE WILMINGTON N.C. 28412 (910) 341-7807</p>	SD 1-05
DRAWN BY JSR	PAVEMENT REPAIRS- UTILITY CUTS		
CHECKED BY D.E.C., P.E.			
SCALE NOT TO SCALE			



- NOTES:
1. CONTRACTOR SHALL ENSURE BOTTOM OF TRENCH IS SUITABLE FOR PIPE INSTALLATION AND DOES NOT REQUIRE FOUNDATION CONDITIONING STONE.
 2. CONTRACTOR TO INSTALL BEDDING AND PIPE BEFORE INSTALLING HAUNCH AND THEN OVERFILL. SOILS SHALL BE INSTALLED IN 6"-8" LIFTS AND COMPACTED TO MIN. % DENSITY AS DETERMINED BY THE STANDARD PROCTOR ASTM D-698-A METHOD.
 3. WHERE IN PAVEMENT, CONTRACTOR SHALL ADHERE TO CITY STREET CUT POLICY AND SD 1-04 OR SD 1-05 FOR ROAD AND PAVEMENT REBUILD.
 4. SOIL SHALL BE COMPACTED BY A MECHANIZED TAMPER (I.E. JUMPING JACK). HOWEVER, VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
 5. THIS DETAIL IS REPRESENTATIVE AND PIPE TRENCH DESIGN IS SUBJECT TO SPECIFIC SOIL CATEGORY (I, II, III), AND INSTALLATION TYPE (1, 2, 3, 4), AS DIRECTED BY THE ENGINEER AND SITE CONDITIONS.

DATE: MAY, 2013	STANDARD DETAIL	<p>CITY OF WILMINGTON ENGINEERING OFFICE 212 OPERATIONS CENTER DRIVE WILMINGTON N.C. 28412 (910) 341-7807</p>	SD 1-07
DRAWN BY JSR	PIPE TRENCH TYPICAL		
CHECKED BY BDR, P.E.			
SCALE NOT TO SCALE			



SEE SHEET C-001 FOR GENERAL NOTES.
SEE SHEET C-002 FOR ABBREVIATIONS AND LEGEND

ISSUED FOR CONSTRUCTION

1	ISSUED FOR CONSTRUCTION	MTH
REV. #	DESCRIPTION	REV BY DATE
	REVISIONS	



CAPE FEAR ENGINEERING
151 Poole Rd., Suite 100, Belville, NC, 28451
TEL (910) 383-1044; FAX (910) 383-1045
www.capefearengineering.com
N.C. LICENSE # C-1621

PROJECT NUMBER:	275-96
SCALE:	AS SHOWN
DATE:	MARCH 27, 2019

TROLLEY STATION
6789 WRIGHTSVILLE AVE
WILMINGTON, NC

UTILITY DETAILS-1

PROJECT NUMBER	275-96	SHEET NUMBER	C-506
----------------	--------	--------------	-------

Public Services • Engineering Division
APPROVED DRAINAGE PLAN
Date: 3/28/19 Permit # 2019017
Signed: Rich Christman

Approved Construction Plan
Name: YMC Date: 3-27-2019
Planning: W Smith Date: 3-27-19
Traffic: James Murch Date: 3-28-19
Fire: James Murch Date: 3-28-19



PARKING/JONES AVE ELEVATION
6789 WRIGHTSVILLE AVE.



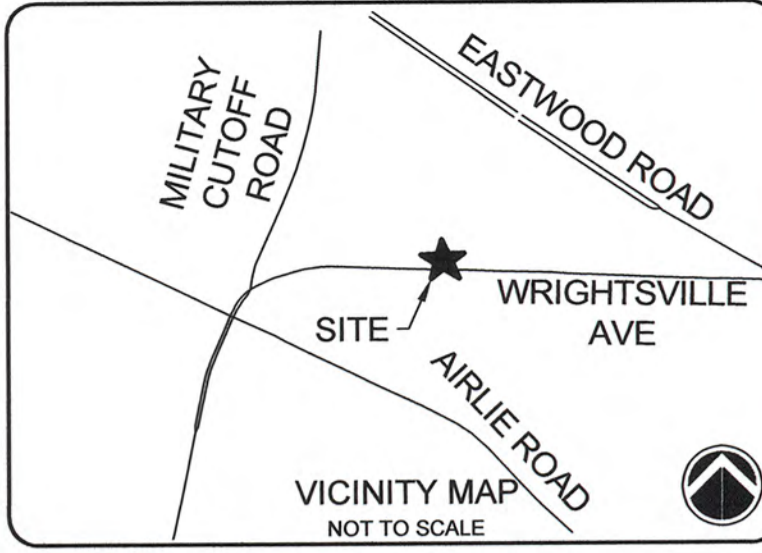
PARKING/WRIGHTSVILLE AVE ELEVATION
6789 WRIGHTSVILLE AVE.



WRIGHTSVILLE AVE/JONES AVE ELEVATION
6789 WRIGHTSVILLE AVE.



WRIGHTSVILLE AVE ELEVATION
6789 WRIGHTSVILLE AVE.



SEE SHEET C-001 FOR GENERAL NOTES.
SEE SHEET C-002 FOR ABBREVIATIONS AND
LEGEND

ISSUED FOR CONSTRUCTION

REV. #	DESCRIPTION	REV. BY	DATE
REVISIONS			

1	ISSUED FOR CONSTRUCTION	MTH	3/27/19
---	-------------------------	-----	---------



CAPE FEAR ENGINEERING

151 Poole Rd., Suite 100; Belville, NC, 28451
TEL (910) 383-1044; FAX (910) 383-1045
www.capefearengineering.com
N.C. LICENSE # C-1621

PROJECT NUMBER:	275-96
SCALE:	AS SHOWN
DATE:	MARCH 27, 2019

TROLLEY STATION
6789 WRIGHTSVILLE AVE
WILMINGTON, NC

BUILDING
ELEVATIONS

PROJECT NUMBER	SHEET NUMBER
275-96	A-100

NOTE: BUILDING ELEVATIONS
PROVIDED BY GOODRICH
ARCHITECTURE, PA. NO WORK
BY CAPE FEAR ENGINEERING, INC.



Approved Construction Plan	
Name	Date
Planning <i>umc</i>	3-27-2019
Traffic <i>W. G. D. S.</i>	3-29-19
Fire <i>James Meredith</i>	3-28-19