

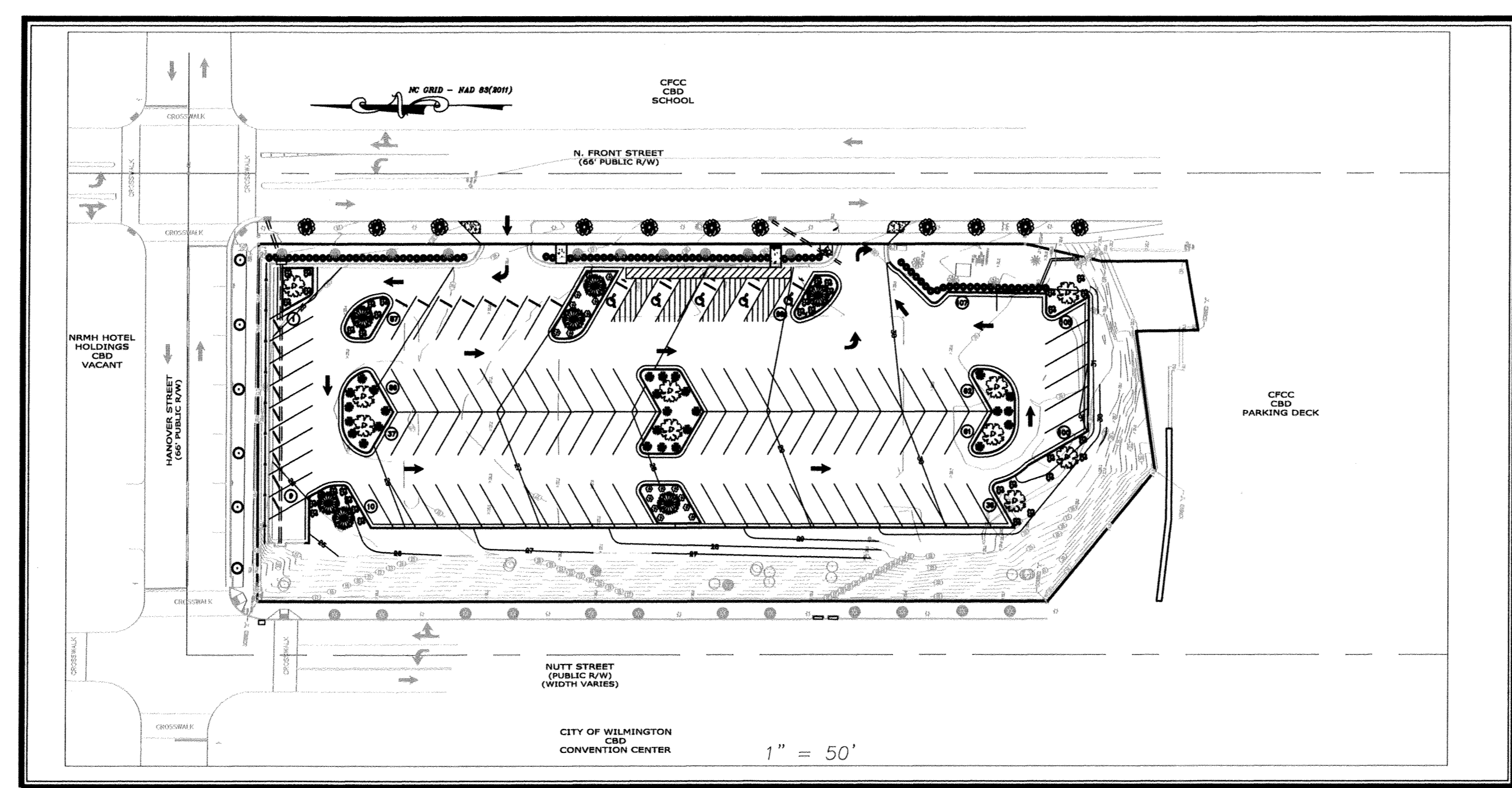
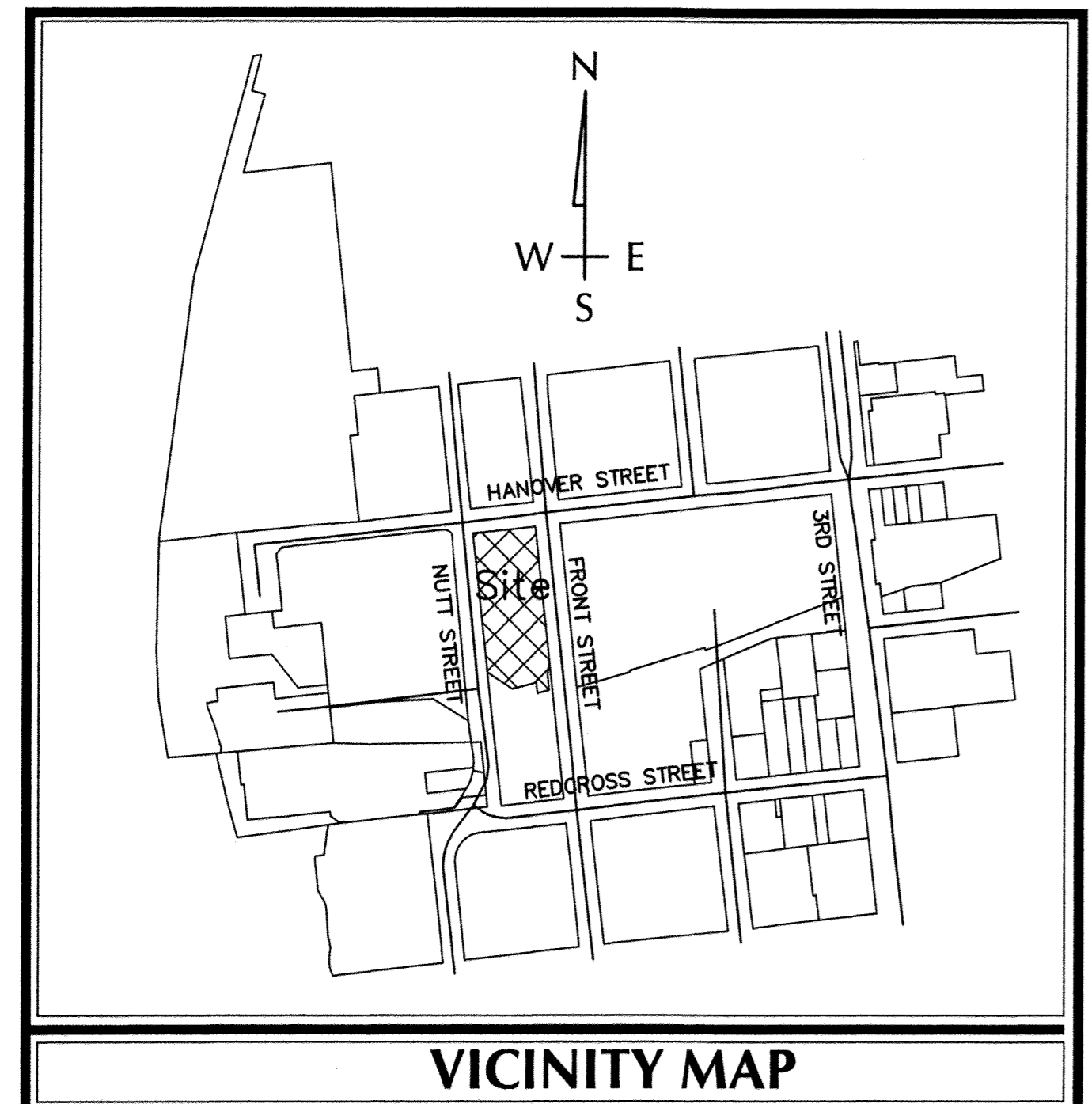
Site Development For

615 N FRONT STREET PARKING LOT

615 N FRONT STREET

MAY, 2018

WILMINGTON, NORTH CAROLINA



INDEX OF SHEETS	
SHT C-0	COVER SHEET
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SHT C-5	GRADING & DRAINAGE PLAN
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SHT C-6	EROSION CONTROL PLAN
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SHT L-1	LANDSCAPE PLAN

GENERAL NOTES:

- NEW HANOVER COUNTY PARCEL NO.: R04716-008-001-000
- TOTAL AREA: 1.58 AC.±
- EXISTING ZONING: CBD (CENTRAL BUSINESS DISTRICT)
- THE MAJORITY OF THIS PROPERTY IS NOT IN A FLOOD ZONE "X" PER FEMA FLOOD INSURANCE RATE MAP #3720311800K, EFFECTIVE DATE JUNE 2, 2008.
- CAMA LAND CLASSIFICATION: URBAN

DEVELOPMENT DATA:

TOTAL TRACT AREA = 68,749 SF = 1.58 ac
 TOTAL DISTURBED AREA = 1.45 ac

IMPERVIOUS SURFACES:

EXISTING IMPERVIOUS AREA: 48,803 SF
 (BUILDING, PARKING LOT, CONCRETE SLABS, WALL, ETC.)

PROPOSED PARKING LOT - 41,225 S.F. (PROPOSED)
 847 S.F. (EXISTING)

(PAVEMENT & CURB & GUTTER)
 PROPOSED SIDEWALK - 90 S.F.
 FUTURE IMPERVIOUS AREA - 8,641 S.F.
 TOTAL - 48,803 S.F. (70.99%)

PROVIDED: 102 SPACES WITH 5 HC FOR TOTAL OF 107 SPACES
 5 HC - REQ'D
 5 HC - PROV'D

NOTE:
 ALL DESIGN AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH CITY OF WILMINGTON & THE STATE OF NORTH CAROLINA

DESCRIPTION	EXISTING	PROPOSED
PROPERTY BOUNDARY	———	———
EASEMENT	———	———
STREAM	———	———
STRUCTURE	———	———
MINOR CONTOURS	- - - 8 - - -	- - - 8 - - -
MAJOR CONTOURS	- - - 10 - - -	- - - 10 - - -
GAS LINE	- G - - G	- G - - G
OVERHEAD POWER	- OHP - - OHP	- OHP - - OHP
WATER LINE	- W - - W	- W - - W
SANITARY SEWER LINE	- SS - - SS	- SS - - SS
SANITARY SEWER MANHOLE	(S)	(S)
STORM DRAINAGE PIPE	———	———
STORM DRAINAGE STRUCTURE	(S)	(S)
TREE	1" OAK ●	●
CONCRETE	[Pattern]	[Pattern]
SILT FENCE	- SF - - SF -	- SF - - SF -
TREE PROTECTION FENCE	- TP - - TP -	- TP - - TP -
FIRE HYDRANT ASSEMBLY	(FH)	(FH)
DISTURBED LIMITS	- DL - - DL -	- DL - - DL -

PORT CITY CONSULTING ENGINEERS, PLLC
 6216 STONEBRIDGE ROAD
 WILMINGTON, NC 28409
 910-599-1744 LICENSE No. P-1032
 mhargrove@ec.rr.com

OWNER
 615 N FRONT STREET, LLC
 1221 ARBORETUM DRIVE
 WILMINGTON, NC 28405
 TEL: 914.522-0605
 bob@newellfunding.com

Approved Construction Plan
 Name: [Signature] Date: 9-28-18
 Planning: [Signature] 9-28-18
 Traffic: [Signature] 9-28-18
 Fire: [Signature] 9-28-18

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 10/1/18 Permit # 2018044
 Signed: [Signature]

PORT CITY CONSULTING ENGINEERS, PLLC
 6216 STONEBRIDGE ROAD, WILMINGTON, NC 28409
 910-599-1744 LICENSE No. P-1032

615 NORTH FRONT STREET DEMO

615 N FRONT STREET, LLC

1221 ARBORETUM DRIVE

WILMINGTON, NC 28405

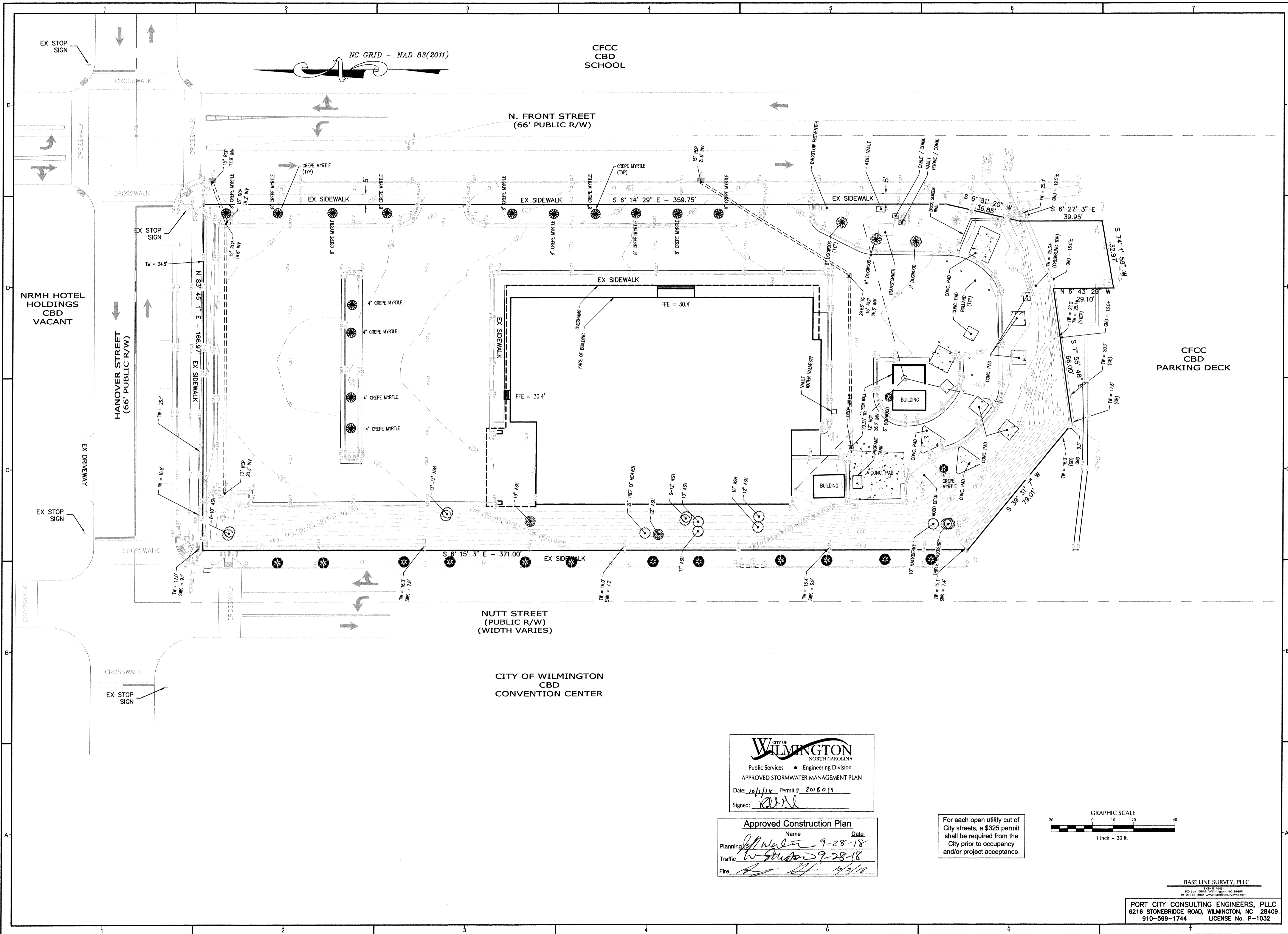
MARK	DATE	DESCRIPTION

PROJECT NUMBER: 17041
 DESIGNED BY: MNH
 CHECKED BY: MNH
 DRAWN BY: MNH
 DATE: 5/23/18
 SHEET TITLE: COVER SHEET

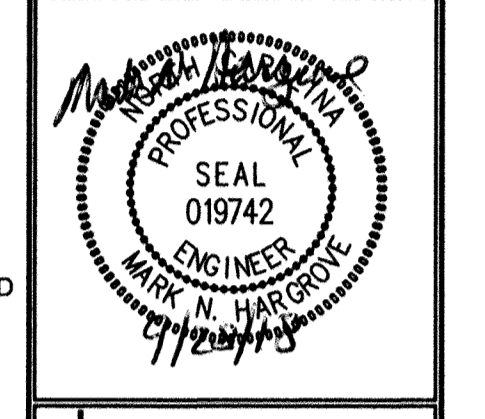
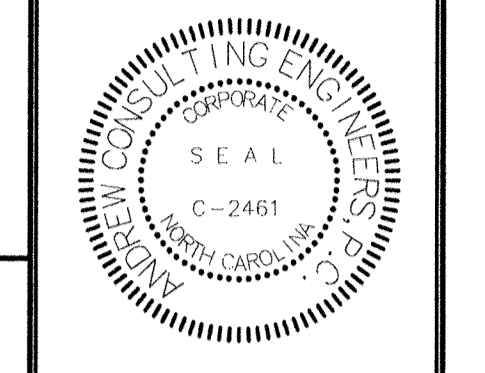
C-0

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 3811 Peachtree Avenue Suite 300
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 Phone: 404.555.5555
 www.AndrewEngineers.com



615 NORTH FRONT STREET PARKING LOT
 615 N FRONT STREET, LLC
 1221 ARBORETUM DRIVE
 WILMINGTON, NC 28405

MARK	DATE	DESCRIPTION

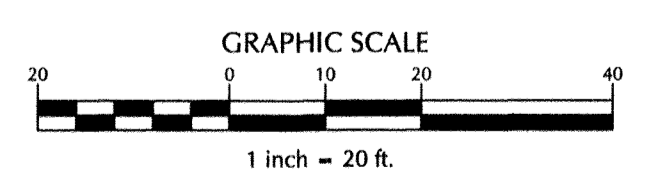
PROJECT NUMBER: 17041
 DESIGNED BY: MNH
 CHECKED BY: MNH
 DRAWN BY: MNH
 DATE: 5/23/18
 SHEET TITLE:

EXISTING CONDITIONS
C-2

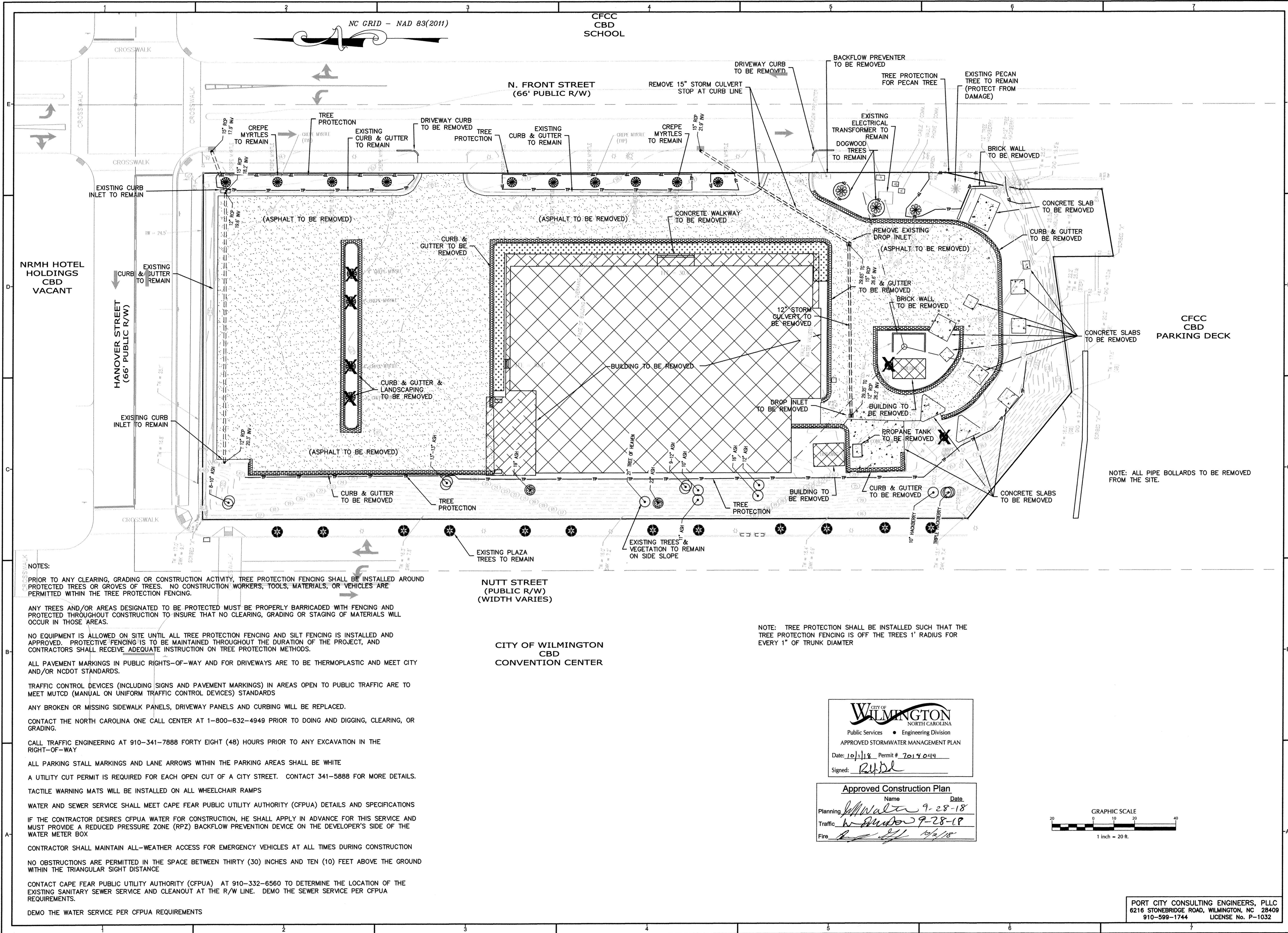
CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
 Date: 10/11/18 Permit # 2018019
 Signed: *[Signature]*

Approved Construction Plan	
Name	Date
Planning: <i>[Signature]</i>	9-28-18
Traffic: <i>[Signature]</i>	9-28-18
Fire: <i>[Signature]</i>	10/2/18

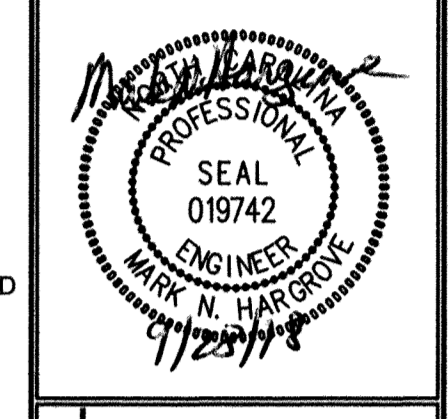
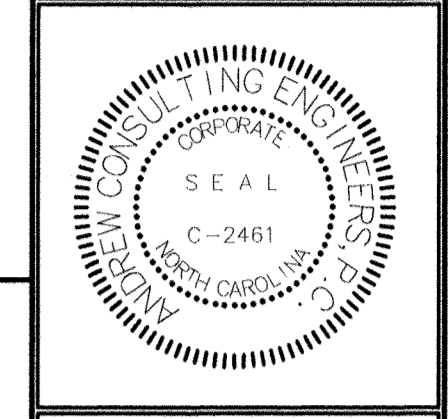
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



BASE LINE SURVEY, PLLC
 6216 STONEBRIDGE ROAD, WILMINGTON, NC 28409
 910-599-1744 LICENSE No. P-1032



ANDREW CONSULTING ENGINEERS
 3811 Peachtree Avenue Suite 300
 Wilmington, NC 28403
 910-341-7888
 www.AndrewEngineers.com



615 NORTH FRONT STREET PARKING LOT
 615 N FRONT STREET, LLC
 1221 ARBORETUM DRIVE
 WILMINGTON, NC 28405

MARK	DATE	DESCRIPTION

PROJECT NUMBER: 17041
 DESIGNED BY: MNH
 CHECKED BY: MNH
 DRAWN BY: MNH
 DATE: 5/23/18
 SHEET TITLE:

DEMOLITION PLAN

C-3

NOTES:

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

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

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

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

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

ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.

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

CALL TRAFFIC ENGINEERING AT 910-341-7888 FORTY EIGHT (48) HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY

ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE

A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5888 FOR MORE DETAILS.

TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS

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

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

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

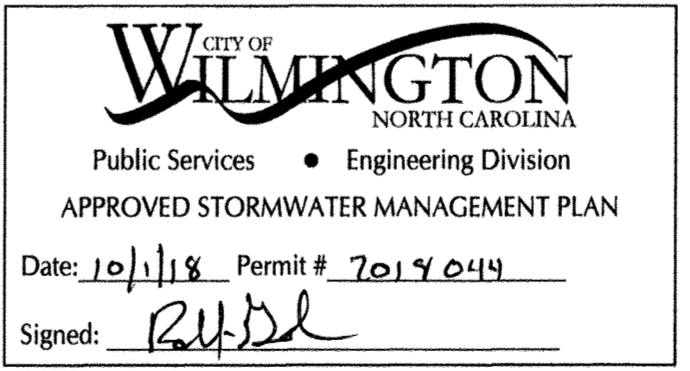
NO OBSTRUCTIONS ARE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE THE GROUND WITHIN THE TRIANGULAR SIGHT DISTANCE

CONTACT CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) AT 910-332-6560 TO DETERMINE THE LOCATION OF THE EXISTING SANITARY SEWER SERVICE AND CLEANOUT AT THE R/W LINE. DEMO THE SEWER SERVICE PER CFPUA REQUIREMENTS.

DEMO THE WATER SERVICE PER CFPUA REQUIREMENTS

CITY OF WILMINGTON
 CBD
 CONVENTION CENTER

NOTE: TREE PROTECTION SHALL BE INSTALLED SUCH THAT THE TREE PROTECTION FENCING IS OFF THE TREES 1' RADIUS FOR EVERY 1" OF TRUNK DIAMETER



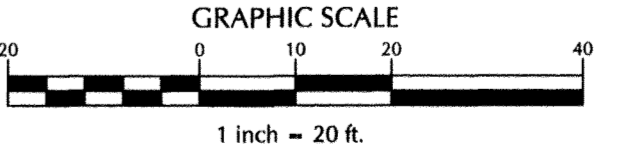
Approved Construction Plan

Name: *[Signature]* Date: *9-28-18*

Planning: *[Signature]* 9-28-18

Traffic: *[Signature]* 9-28-18

Fire: *[Signature]* 9/28/18



PORT CITY CONSULTING ENGINEERS, PLLC
 6216 STONEBRIDGE ROAD, WILMINGTON, NC 28409
 910-599-1744 LICENSE No. P-1032

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CFCC
CBD
SCHOOL

N. FRONT STREET
(66' PUBLIC R/W)

CONCRETE WALKWAY
CONNECTION TO EXISTING
SIDEWALK WITH HANDICAP
DETECTABLE WARNING MAT

BICYCLE PARKING (5 SPACE)

DO NOT ENTER SIGN
(R5-1)

NEW CONCRETE
DRIVEWAY FLARE

EXISTING 5' SIDEWALK
(TO REMAIN)

70' X 20'
SIGHT TRIANGLE

CUT CURB
FOR SIDEWALK
CONNECTION

23'
(EXISTING)

CONNECT TO
EXISTING CURB &
GUTTER

70' X 20'
SIGHT TRIANGLE

NRMH HOTEL
HOLDINGS
CBD
VACANT

HANOVER STREET
(66' PUBLIC R/W)

EXISTING
CURB & GUTTER

CONNECT TO
EXISTING CURB &
GUTTER

CFCC
CBD
PARKING DECK

NUTT STREET
(PUBLIC R/W)
(WIDTH VARIES)

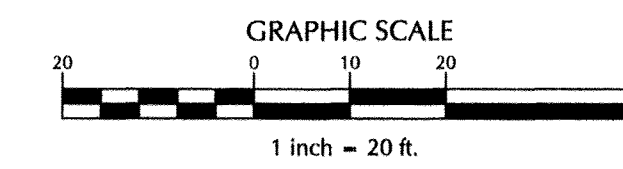
CITY OF WILMINGTON
CBD
CONVENTION CENTER

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 10/15/18 Permit # 2018014
Signed: [Signature]

Approved Construction Plan

Name	Date
Planning	9-28-18
Traffic	9-28-18
Fire	9/2/18

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



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CONSULTING ENGINEERS
3811 Peachtree Avenue Suite 300
Atlanta, GA 30305
P: 404.303.5555 F: 404.303.5558
www.AndrewEngineers.com



615 NORTH FRONT STREET PARKING LOT
615 N FRONT STREET, LLC
1221 ARBORETUM DRIVE
WILMINGTON, NC 28405

MARK	DATE	DESCRIPTION

PROJECT NUMBER: 17041
DESIGNED BY: MNH
CHECKED BY: MNH
DRAWN BY: MNH
DATE: 5/23/18
SHEET TITLE:

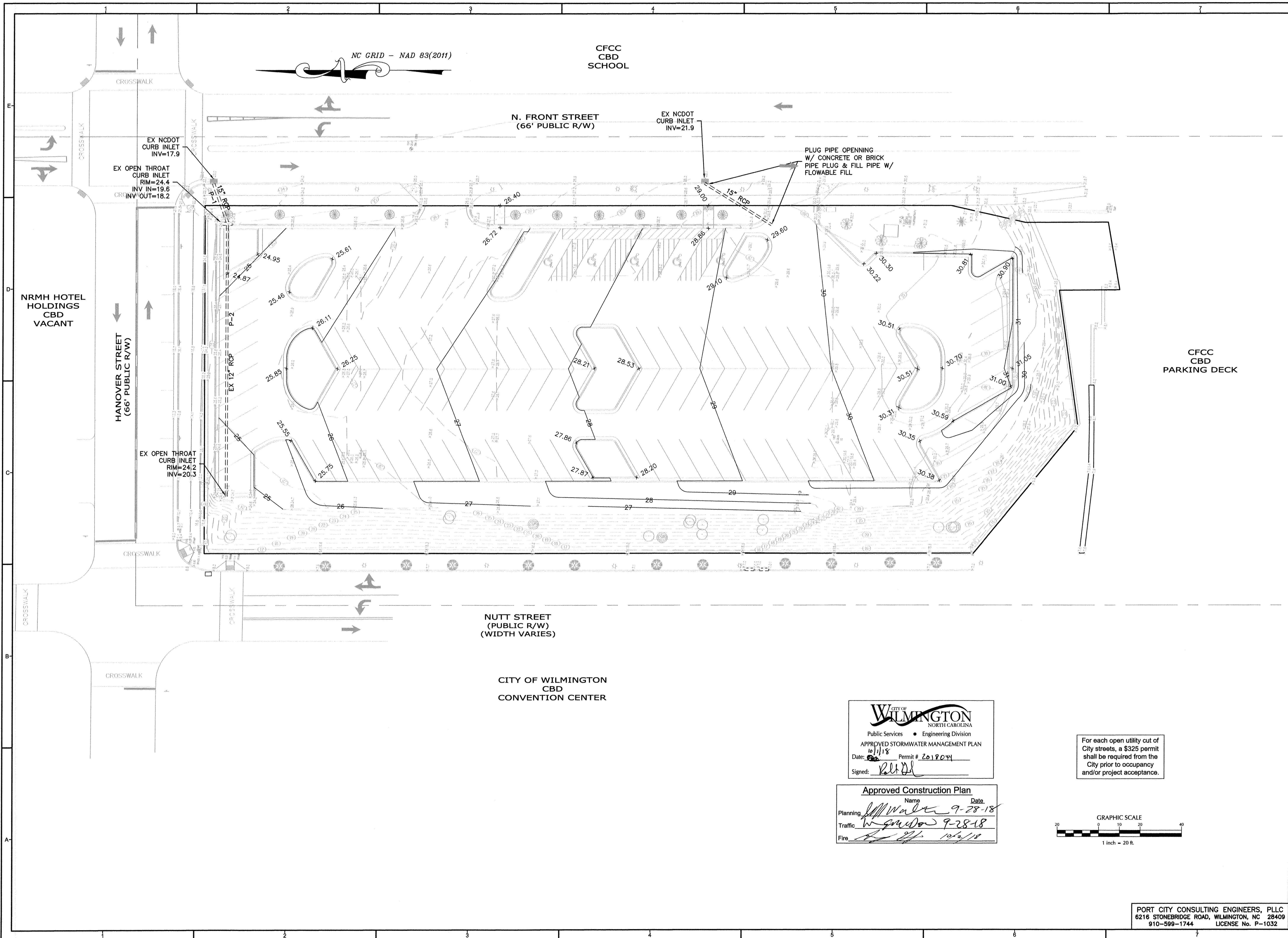
LAYOUT PLAN

C-4

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910-599-1744 LICENSE No. P-1032

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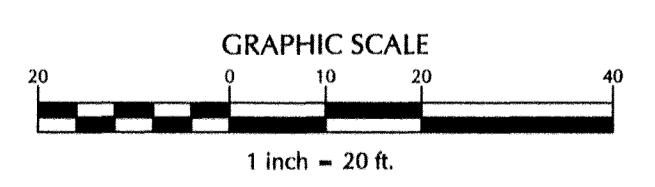
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CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 10/1/18 Permit # 2018044
 Signed: *Robert D. DeLoach*

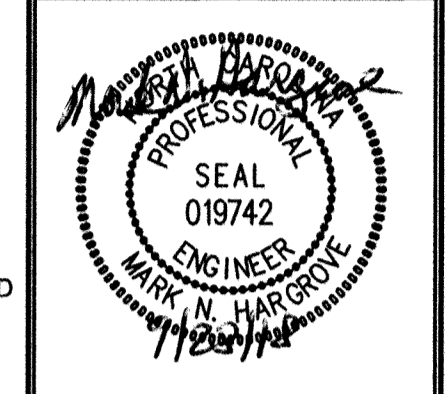
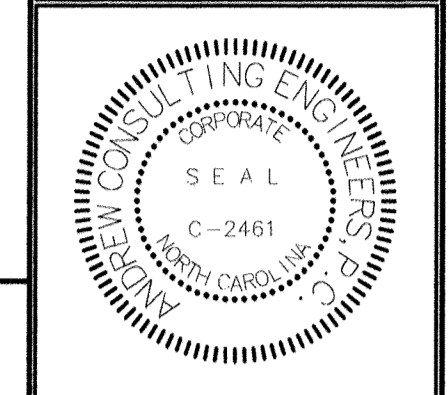
Approved Construction Plan
 Name Date
 Planning *W. Walker* 9-28-18
 Traffic *W. Walker* 9-28-18
 Fire *W. Walker* 10/2/18

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



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 6216 STONEBRIDGE ROAD, WILMINGTON, NC 28409
 910-599-1744 LICENSE No. P-1032

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 Atlanta, GA 30303
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615 NORTH FRONT STREET PARKING LOT
 615 N FRONT STREET, LLC
 1221 ARBORETUM DRIVE
 WILMINGTON, NC 28405

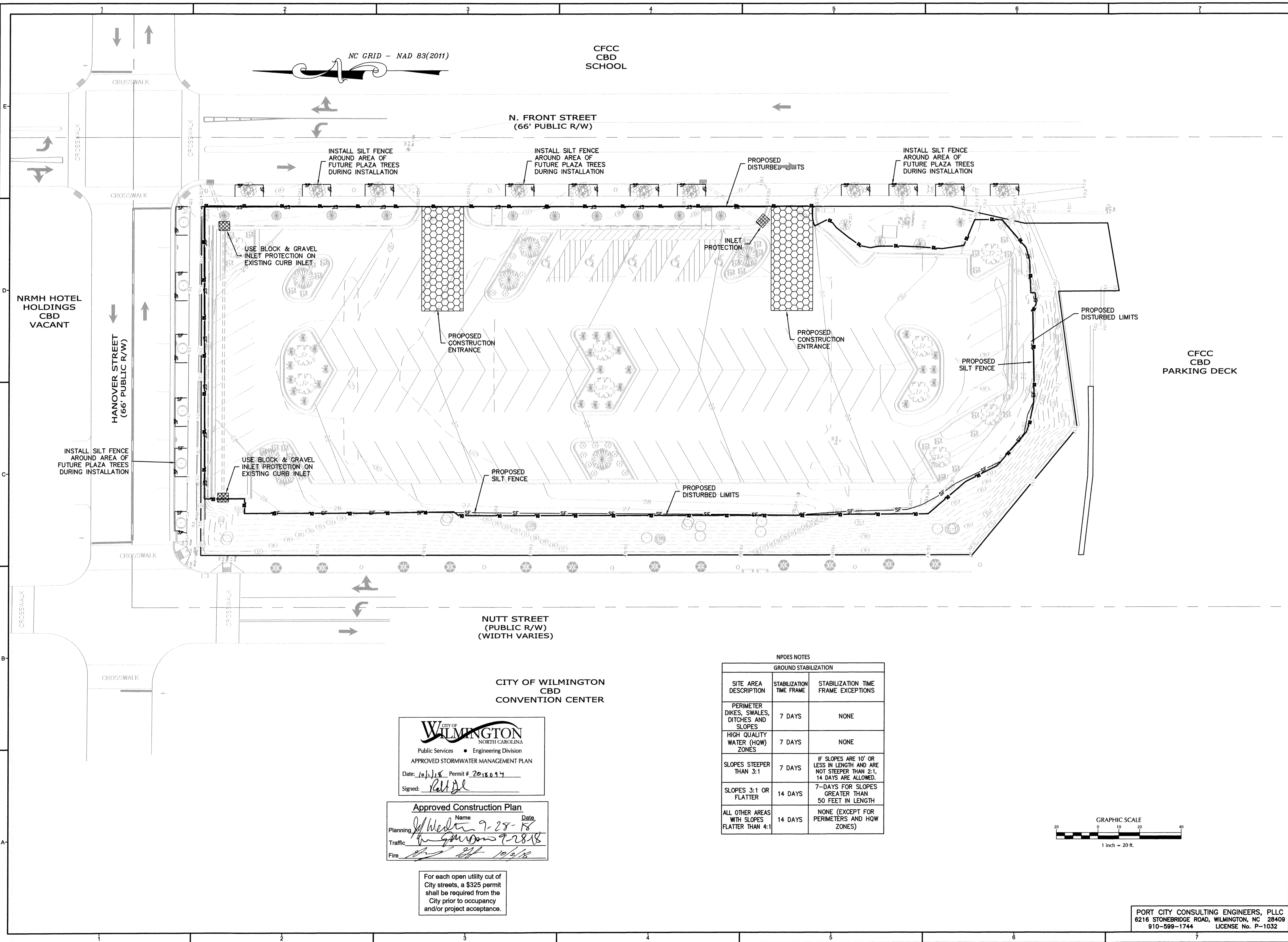
MARK	DATE	DESCRIPTION

PROJECT NUMBER: 17041
 DESIGNED BY: MNH
 CHECKED BY: MNH
 DRAWN BY: MNH
 DATE: 5/23/18

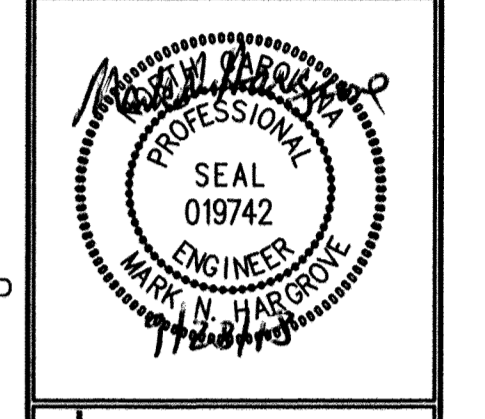
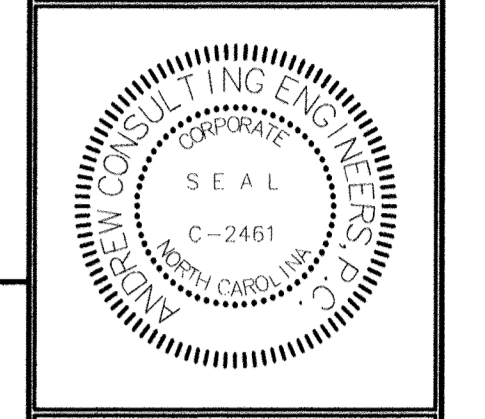
SHEET TITLE:
GRADING & DRAINAGE PLAN

C-5

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Building Strong Communities Back to Back
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 www.AndrewEngineers.com



615 NORTH FRONT STREET PARKING LOT
 615 N FRONT STREET, LLC
 1221 ARBORETUM DRIVE
 WILMINGTON, NC 28405

**CITY OF WILMINGTON
 CBD
 CONVENTION CENTER**

**CITY OF WILMINGTON
 NORTH CAROLINA**
 Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
 Date: 10/1/18 Permit # 2018014
 Signed: [Signature]

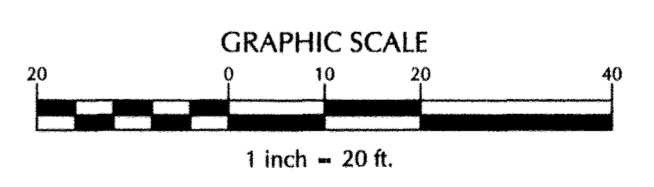
Approved Construction Plan

Name	Date
Planning [Signature]	9-28-18
Traffic [Signature]	9-28-18
Fire [Signature]	10/2/18

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

NPDES NOTES

GROUND STABILIZATION		
SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME 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 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)



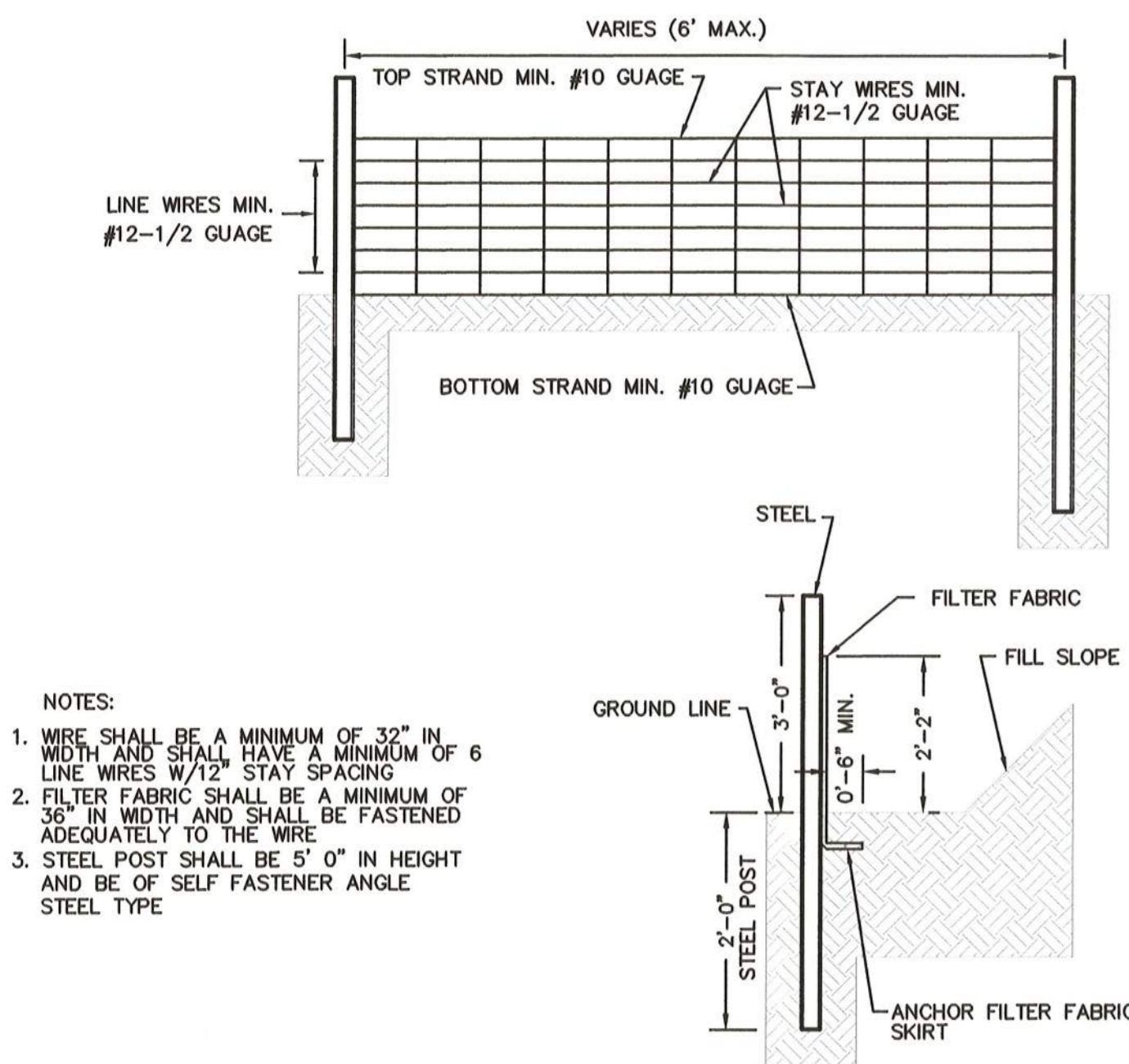
MARK	DATE	DESCRIPTION

PROJECT NUMBER: 17041
 DESIGNED BY: MNH
 CHECKED BY: MNH
 DRAWN BY: MNH
 DATE: 5/23/18

EROSION CONTROL PLAN

C-6

PORT CITY CONSULTING ENGINEERS, PLLC
 6216 STONEBRIDGE ROAD, WILMINGTON, NC 28409
 910-599-1744 LICENSE No. P-1032



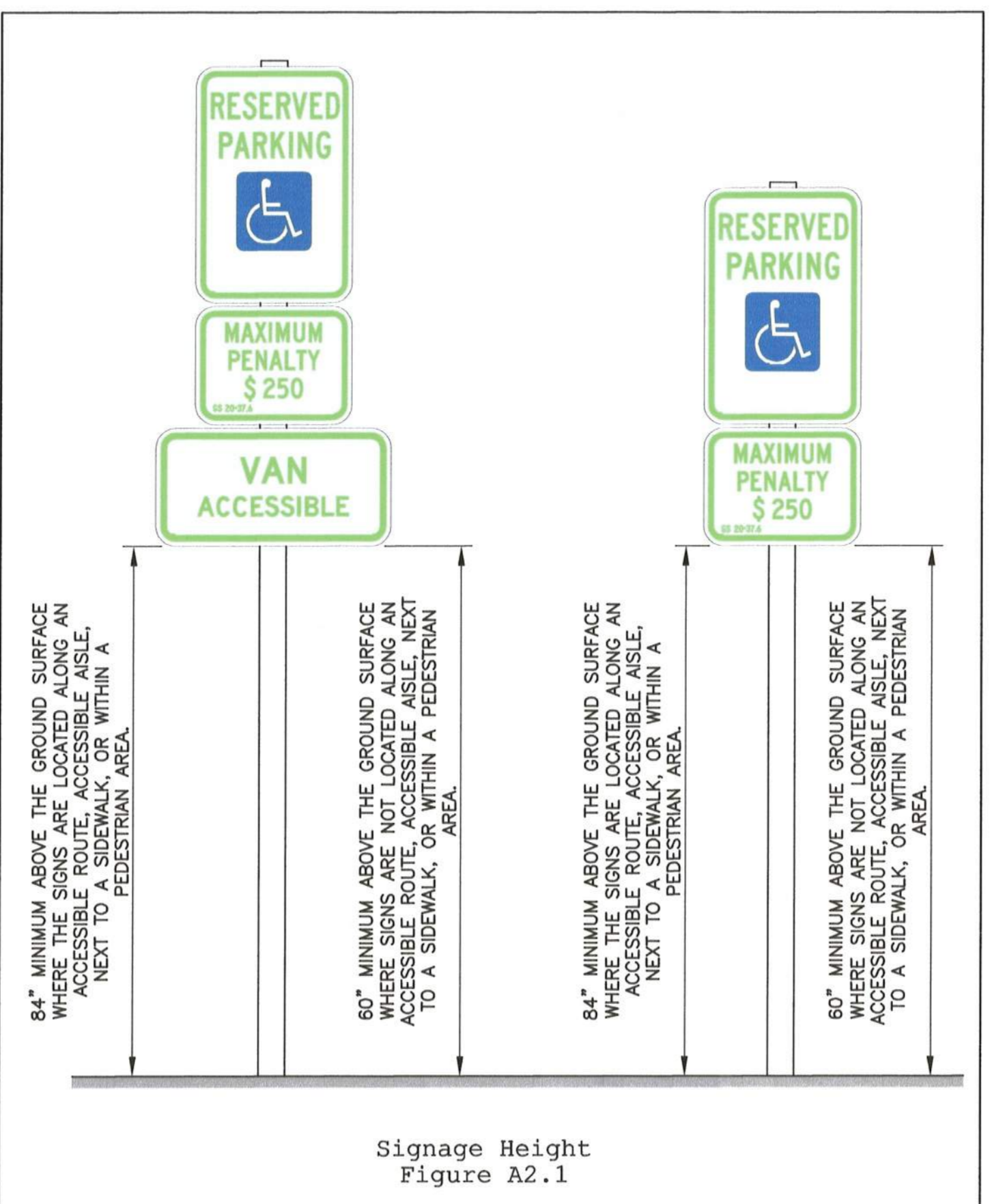
- NOTES:
1. WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES W/12" STAY SPACING
 2. FILTER FABRIC SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL BE FASTENED ADEQUATELY TO THE WIRE
 3. STEEL POST SHALL BE 5' 0" IN HEIGHT AND BE OF SELF FASTENER ANGLE STEEL TYPE

SILT FENCE
N.T.S.

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 10/1/18 Permit # 2019044
Signed: *[Signature]*

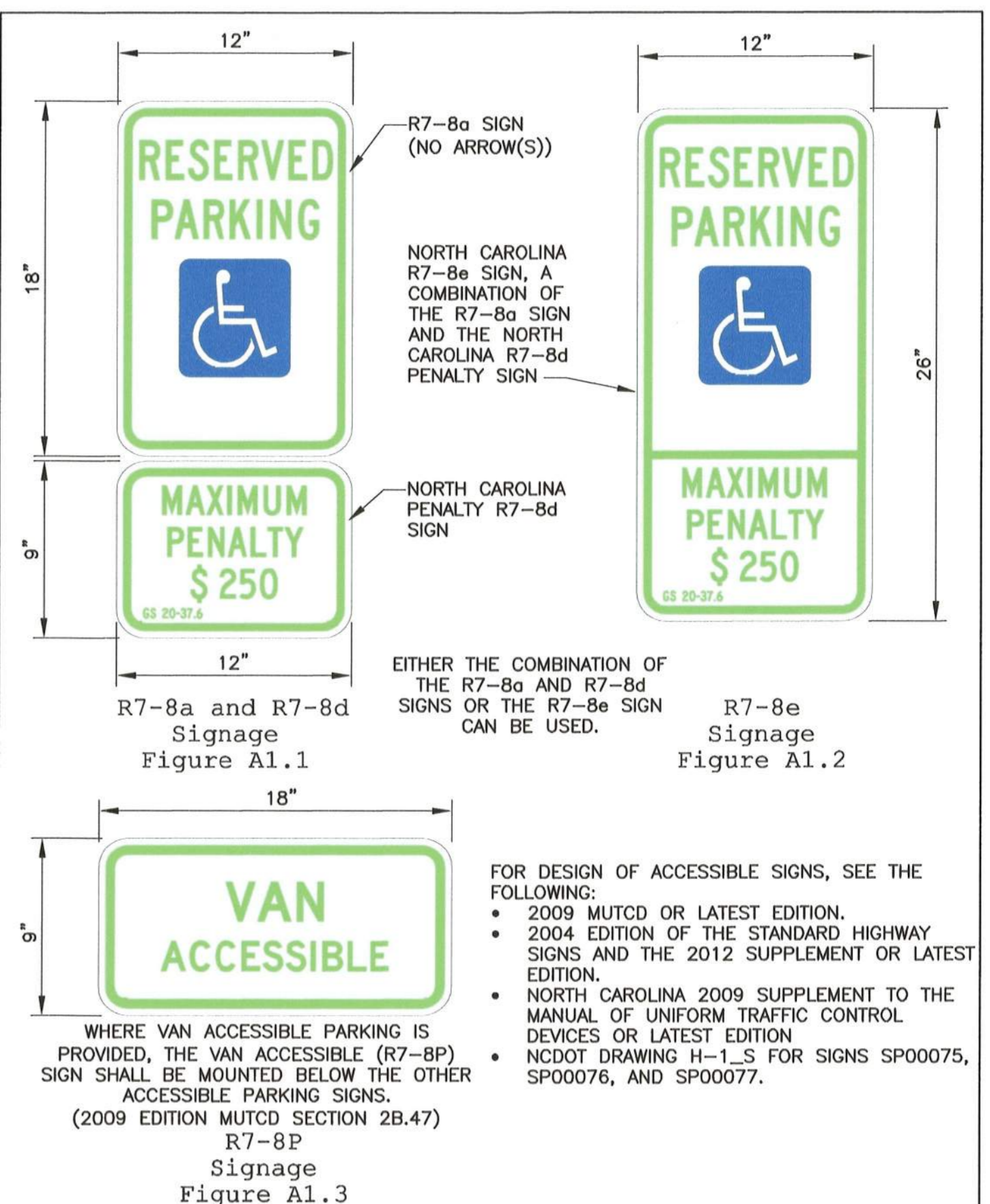
Approved Construction Plan

Planning	Name	Date
	<i>[Signature]</i>	9-28-18
Traffic	<i>[Signature]</i>	9-28-18
Fire	<i>[Signature]</i>	10/2/18



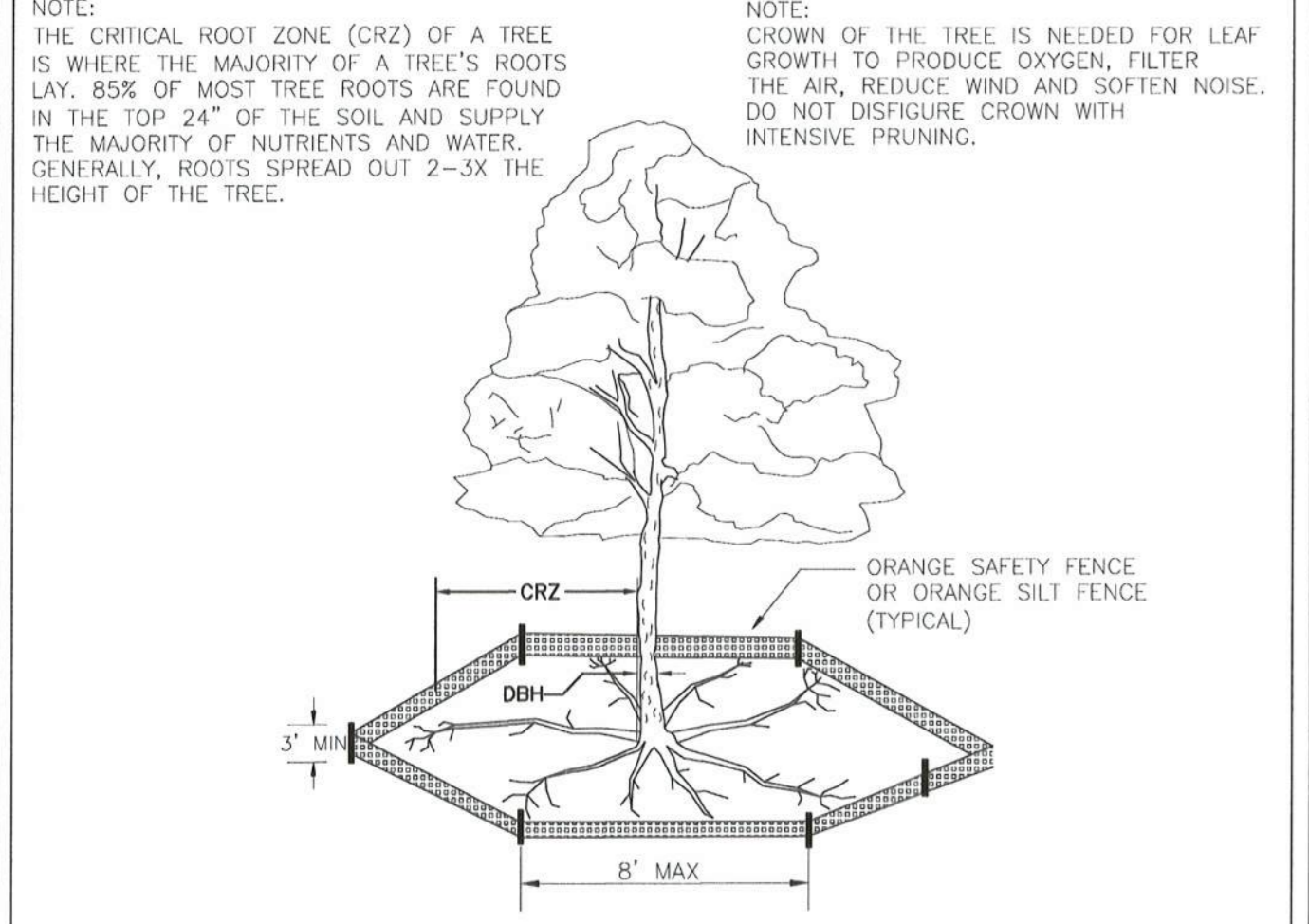
Signage Height
Figure A2.1

DATE:	NOVEMBER 8, 2016	ACCESSIBLE PARKING SIGNS AND INSTALLATION DETAILS	SHEET A2 OF 5
DRAWN BY:	DALE THOMPSON		
CHECKED BY:	RANDALL GLAZIER		
SCALE:	NOT TO SCALE		



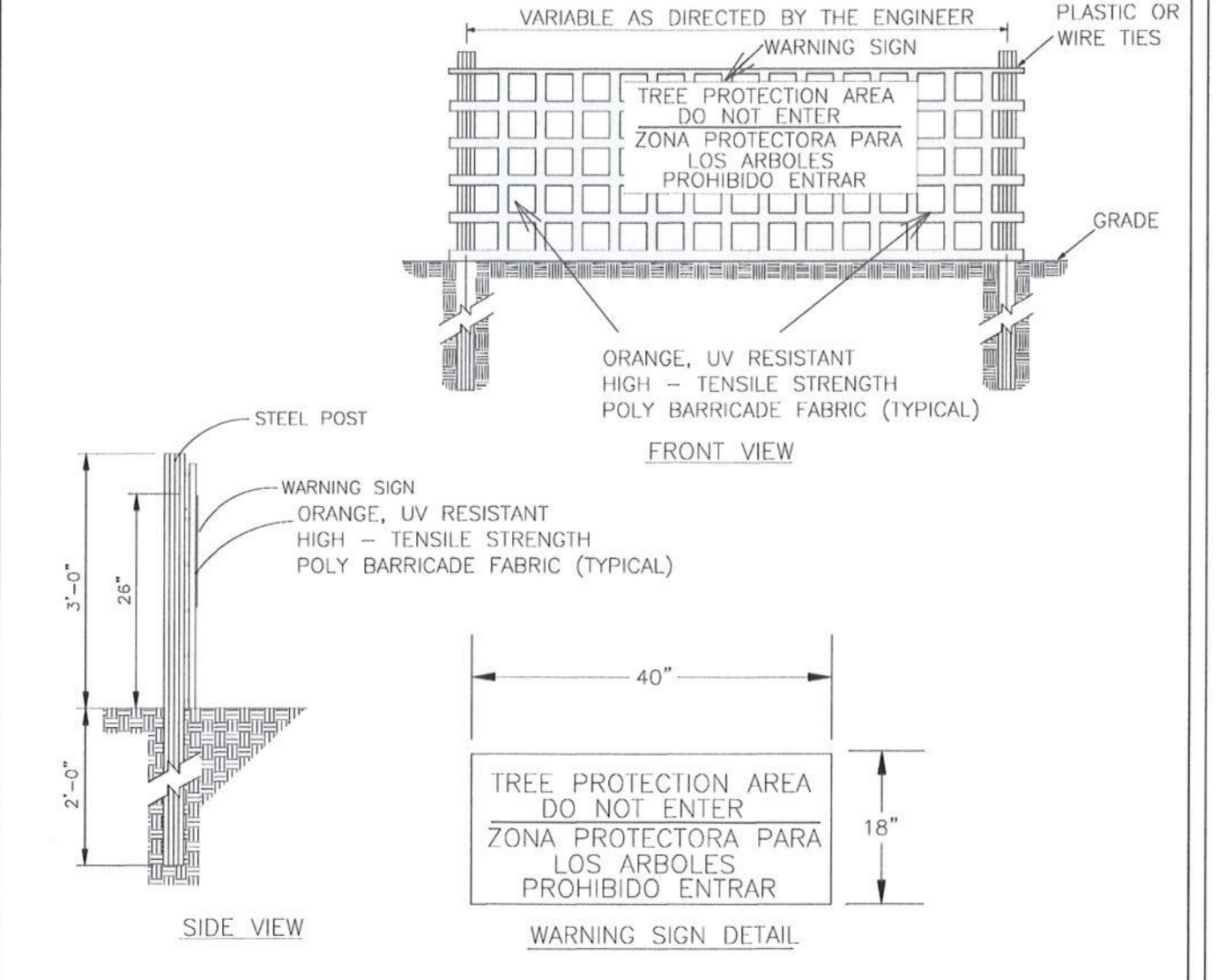
Signage
Figure A1.3

DATE:	NOVEMBER 8, 2016	ACCESSIBLE PARKING SIGNS AND INSTALLATION DETAILS	SHEET A1 OF 5
DRAWN BY:	DALE THOMPSON		
CHECKED BY:	RANDALL GLAZIER		
SCALE:	NOT TO SCALE		



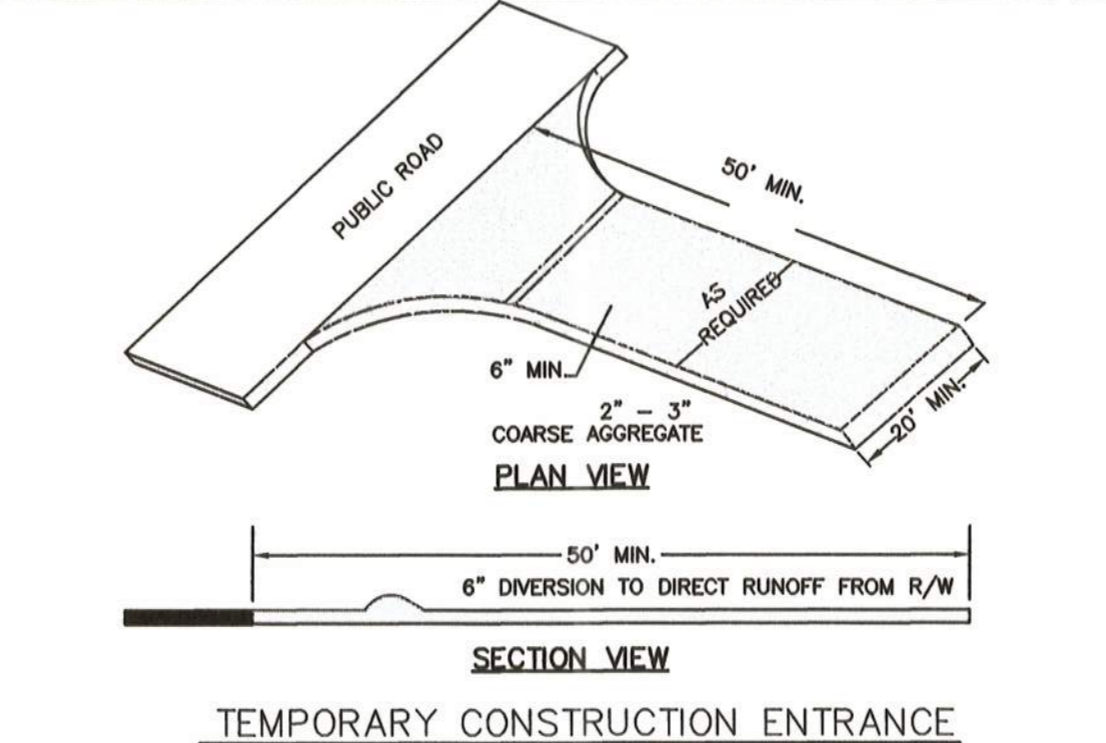
- NOTE: THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.
- NOTE: CROWN OF THE TREE IS NEEDED FOR LEAF 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 LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
 6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF \$500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
SHEET 1 of 2
SD 15-09

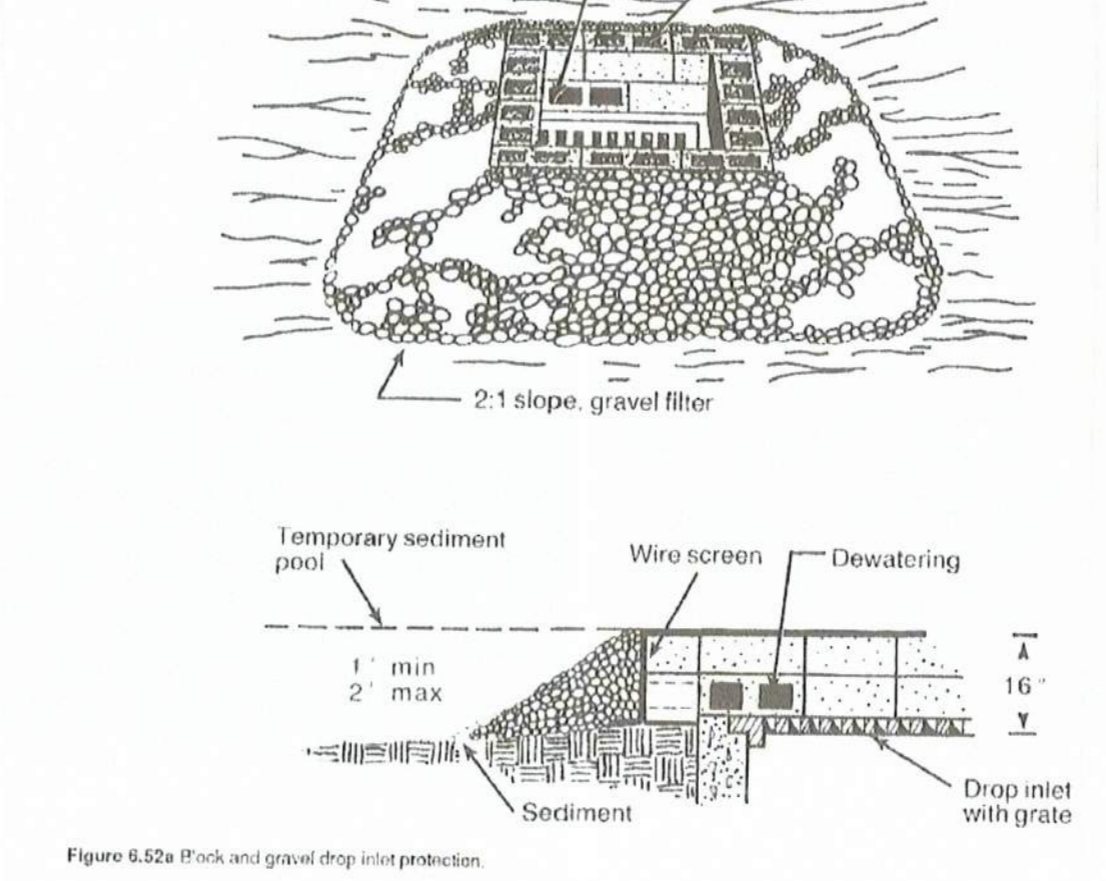


- NOTES:
1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
 2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHER-PROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
 3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
 4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
 5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
 6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

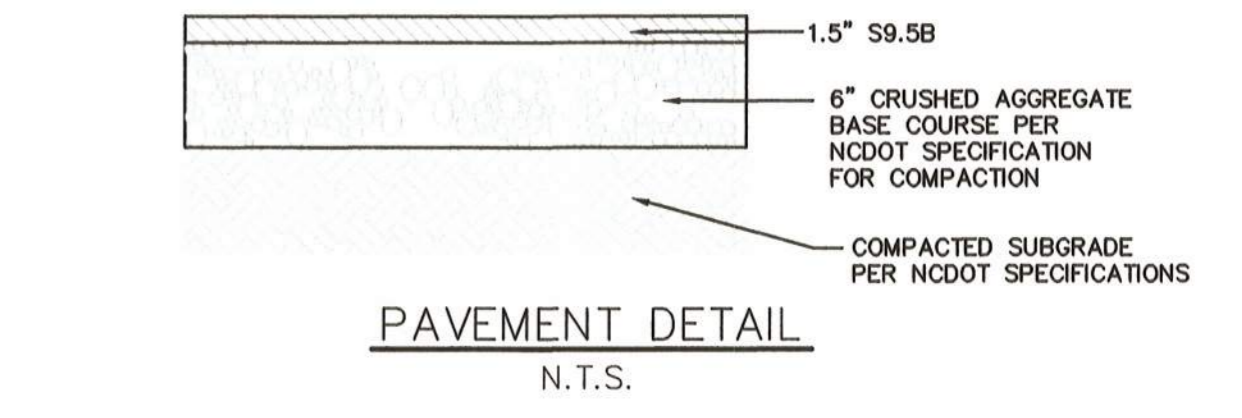
STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
SHEET 2 of 2
SD 15-09



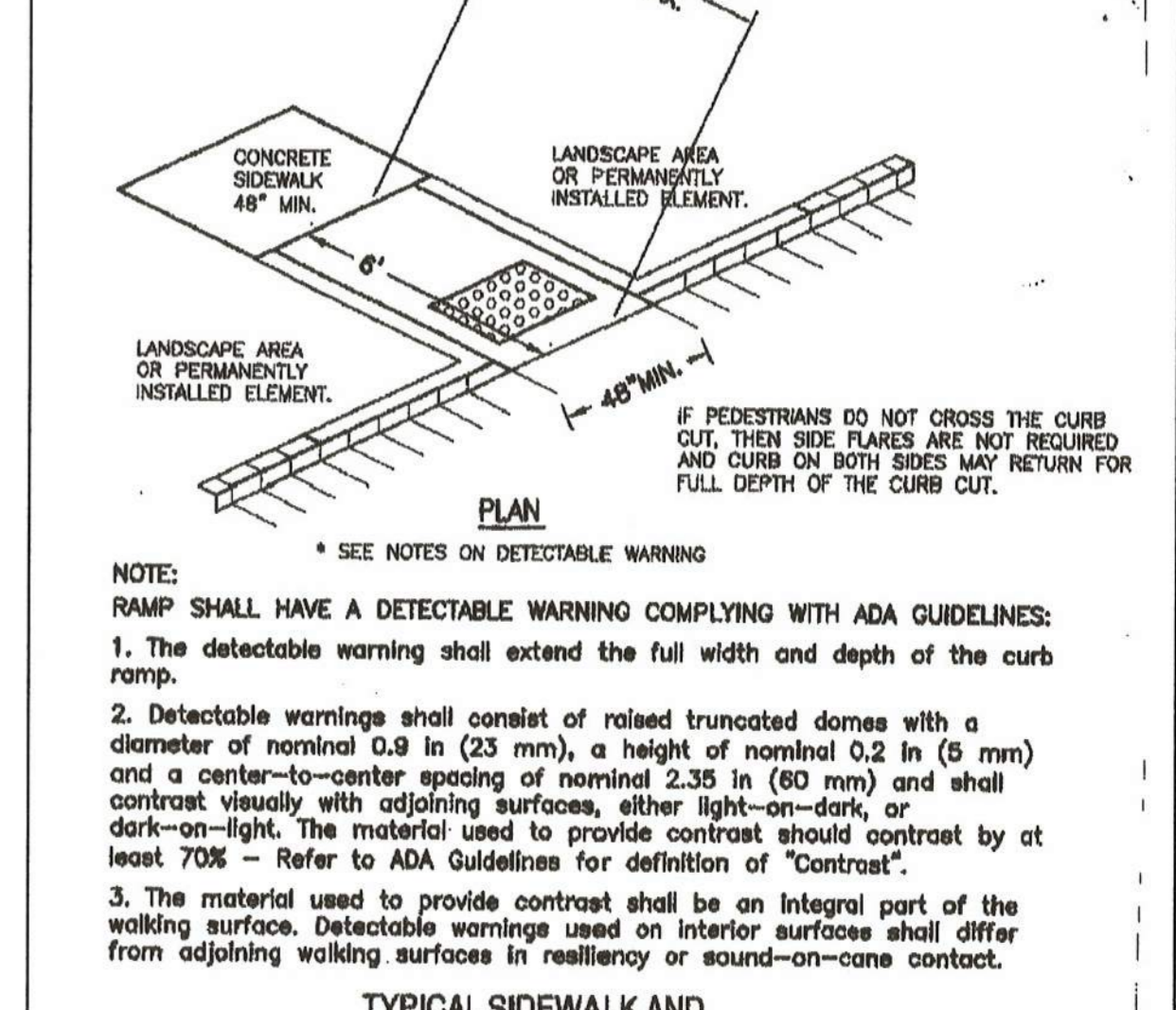
TEMPORARY CONSTRUCTION ENTRANCE
N.T.S.



BLOCK & GRAVEL INLET PROTECTION
N.T.S.



PAVEMENT DETAIL
N.T.S.



TYPICAL SIDEWALK AND WHEEL CHAIR RAMP DETAIL
N.T.S.

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ANDREW CONSULTING ENGINEERS, P.C.
Professional Engineer
No. 019742
Mark W. Johnson

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Mark W. Johnson

615 NORTH FRONT STREET DEMO
615 N FRONT STREET, LLC
1221 ARBORETUM DRIVE
WILMINGTON, NC 28405

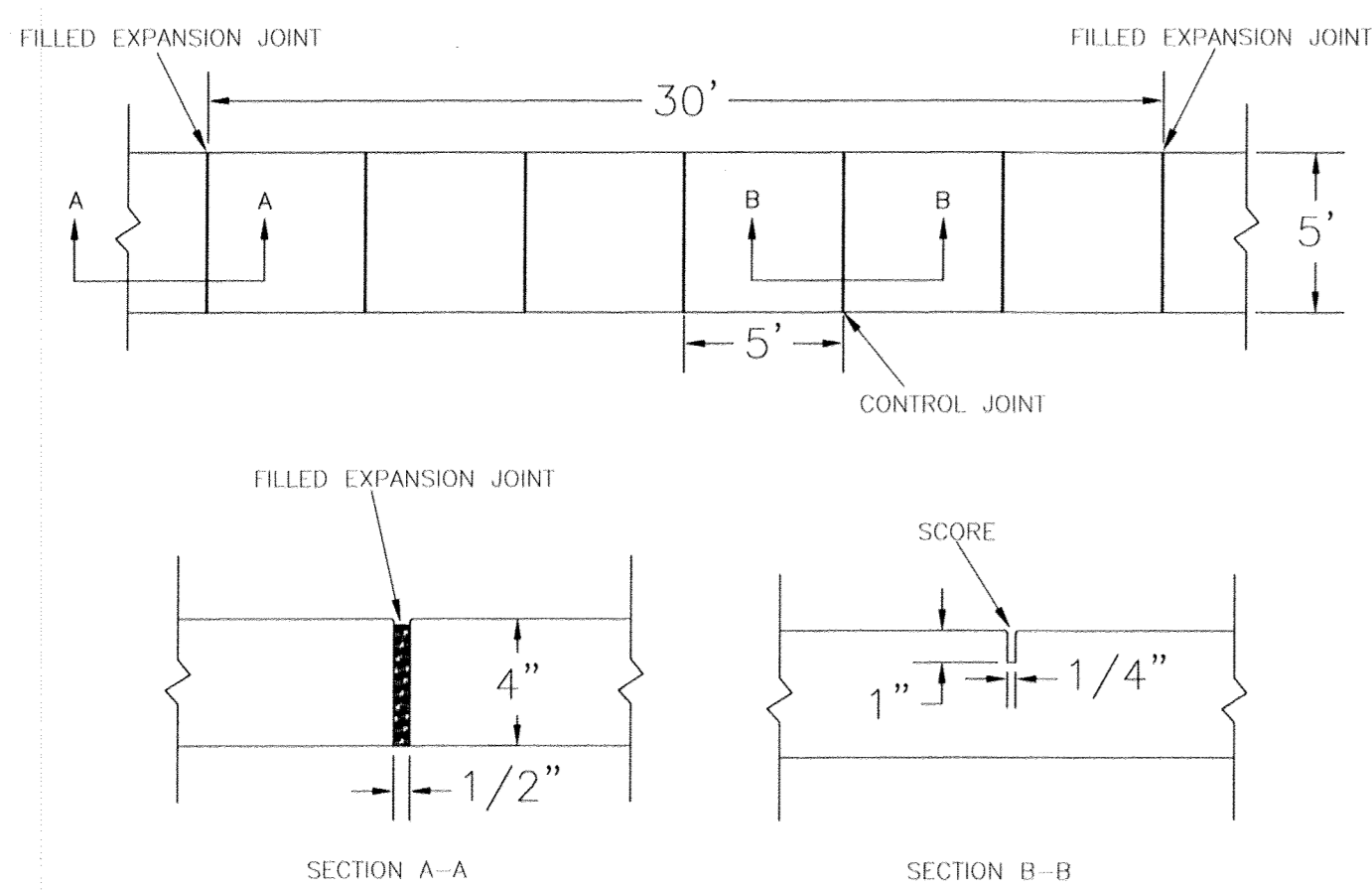
MARK	DATE	DESCRIPTION

PROJECT NUMBER: 17041
DESIGNED BY: MNH
CHECKED BY: MNH
DRAWN BY: MNH
DATE: 5/23/18
SHEET TITLE:

MISC. DETAILS

C-7.0

PORT CITY CONSULTING ENGINEERS, PLLC
6216 STONEBRIDGE ROAD, WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032



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

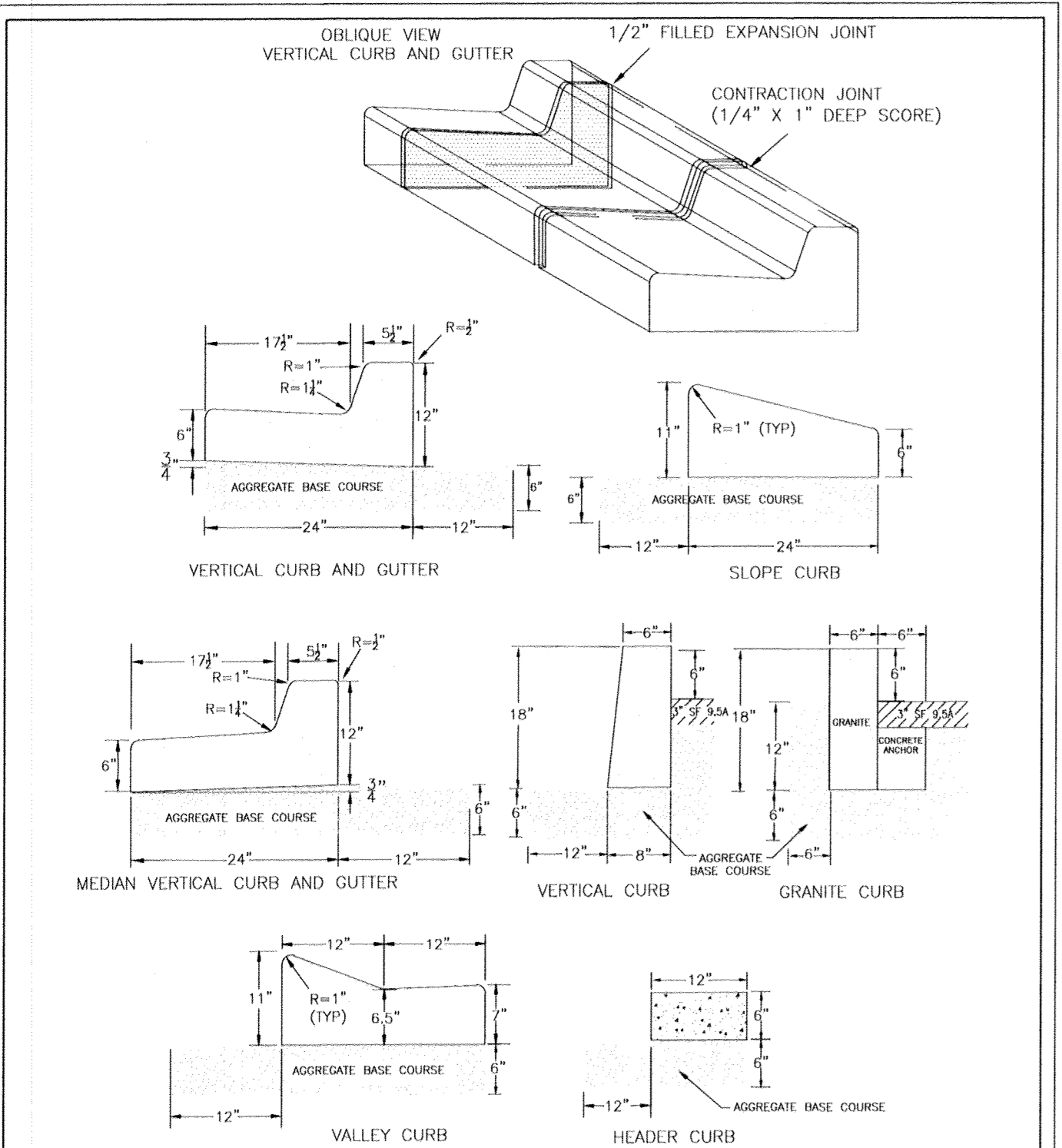
STANDARD DETAIL

SIDEWALK

DATE: OCTOBER, 2010
 DRAWN: PBJ/SR
 CHECKED: DEC
 SCALE: NOT TO SCALE

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

SD 3-10



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

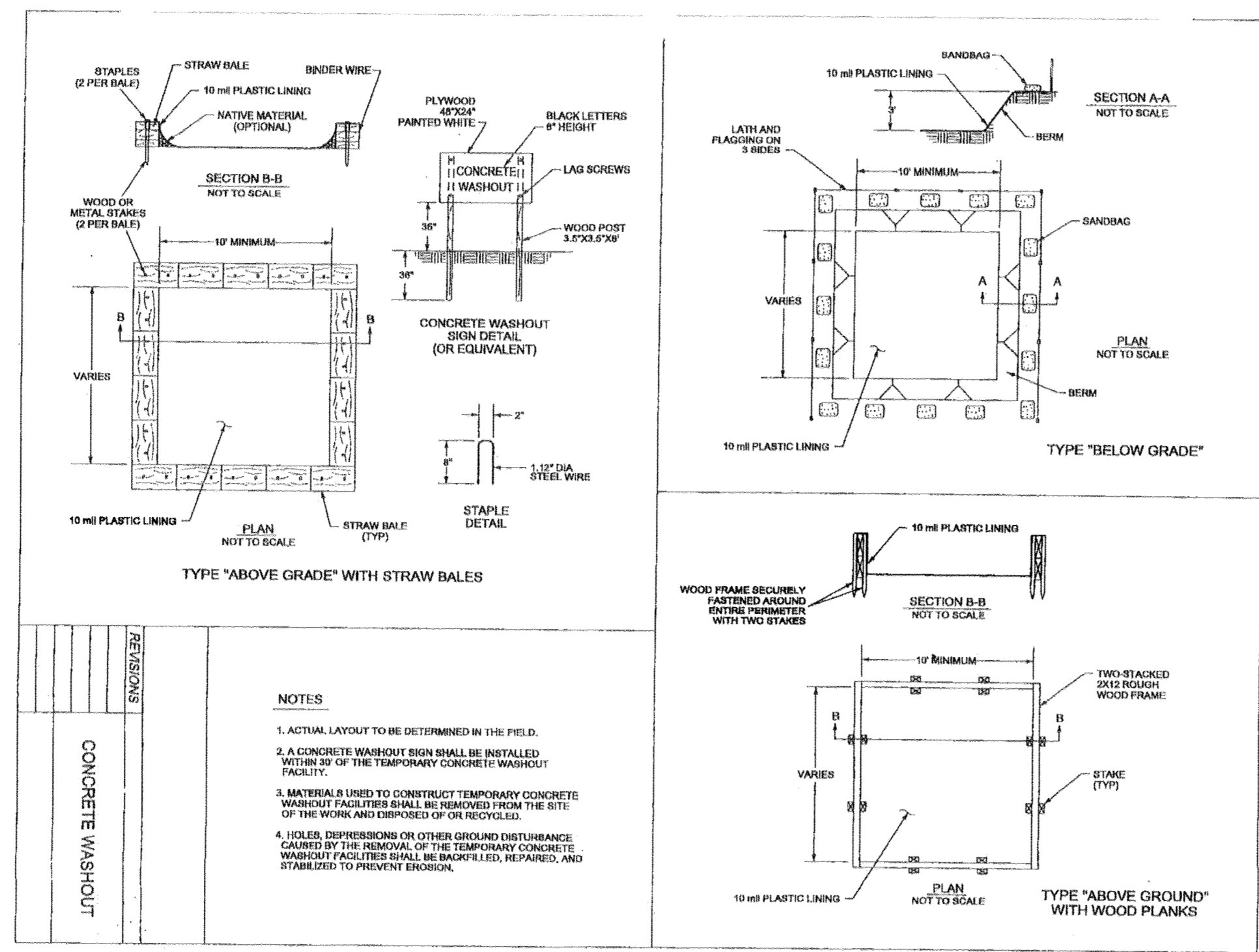
STANDARD DETAIL

CURBING

DATE: AUGUST, 2011
 DRAWN: PBJ/SR
 CHECKED: DEC
 SCALE: NOT TO SCALE

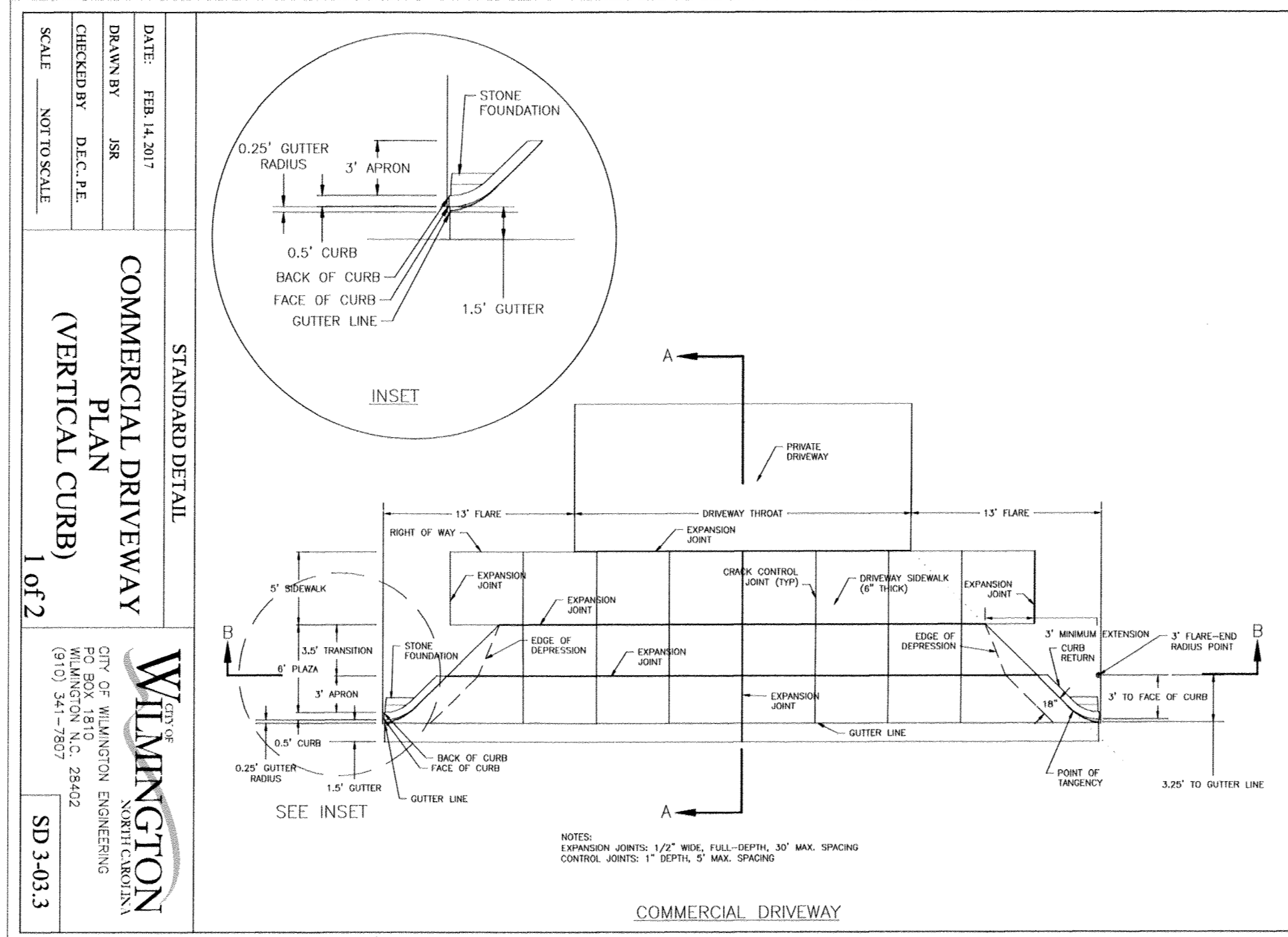
WILMINGTON
 NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C., 28402
 (910) 341-7807

SD 3-11



- NOTES:
1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
 2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 20' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
 3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
 4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

CONCRETE WASHOUT DETAIL
N.T.S.



STANDARD DETAIL

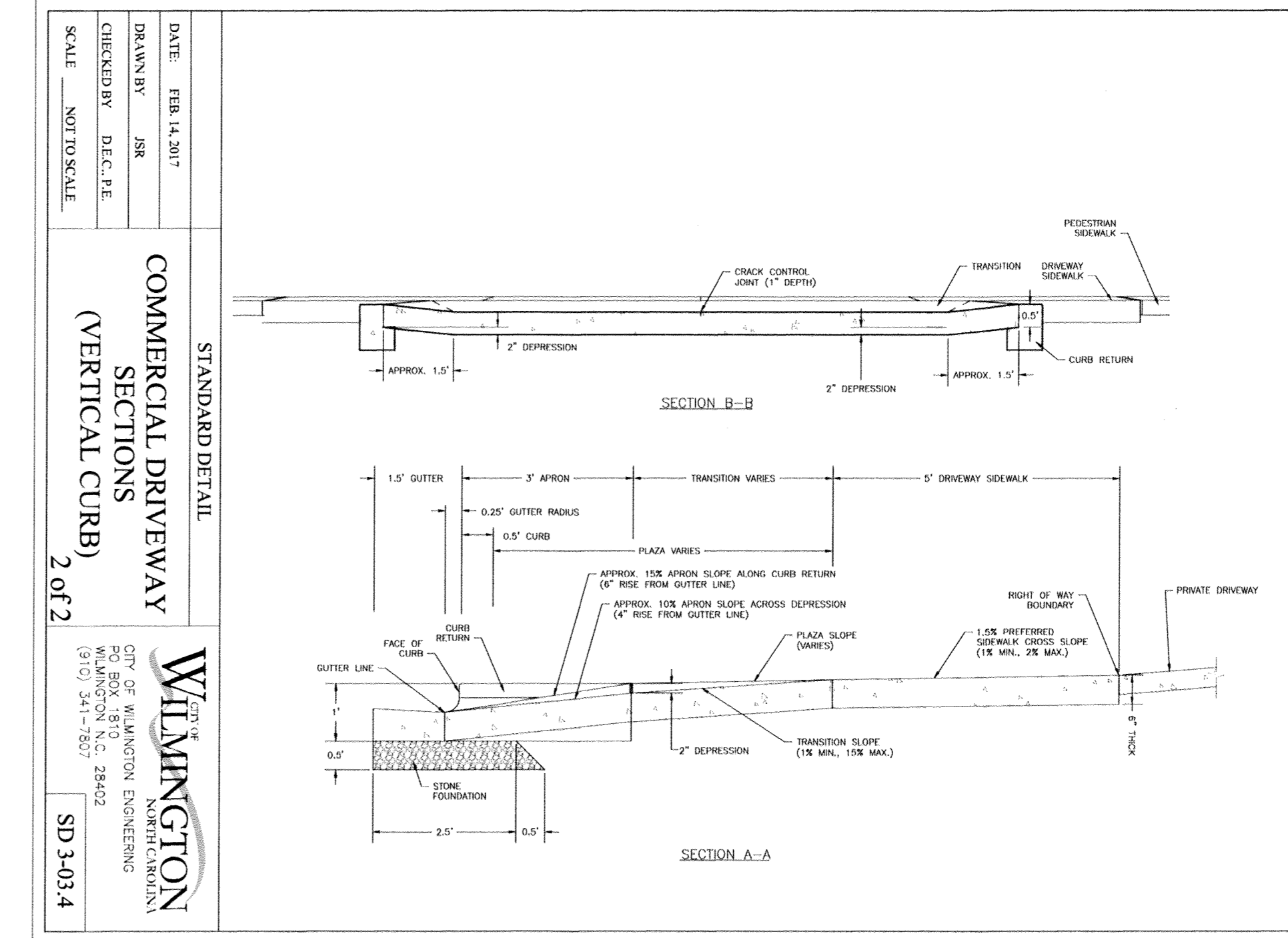
COMMERCIAL DRIVEWAY
 PLAN
 (VERTICAL CURB)

DATE: FEB. 14, 2017
 DRAWN BY: JBR
 CHECKED BY: DEC, P.E.
 SCALE: NOT TO SCALE

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

SD 3-03.3

COMMERCIAL DRIVEWAY



STANDARD DETAIL

COMMERCIAL DRIVEWAY
 SECTIONS
 (VERTICAL CURB)

DATE: FEB. 14, 2017
 DRAWN BY: JBR
 CHECKED BY: DEC, P.E.
 SCALE: NOT TO SCALE

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

SD 3-03.4

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

Date: 10/11/18 Permit # 2015044
 Signed: [Signature]

Approved Construction Plan

Name: [Name] Date: [Date]

Planning: [Signature] 9-28-18
 Traffic: [Signature] 9-28-18
 Fire: [Signature] 10/2/18

PORT CITY CONSULTING ENGINEERS, PLLC
 6216 STONEBRIDGE ROAD, WILMINGTON, NC 28409
 910-599-1744 LICENSE No. P-1032

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

ROADWAY STANDARD DRAWING FOR
CONCRETE AND BRICK PIPE PLUG

SHEET 1 OF 1
840.71

ANDREW CONSULTING ENGINEERS
 3811 Peachtree Avenue Suite 300
 Wilmington, NC 28403
 P-910.202.5555 F-910.202.5558
 www.AndrewEngineers.com



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 615 N FRONT STREET, LLC
 1221 ARBORETUM DRIVE
 WILMINGTON, NC 28405

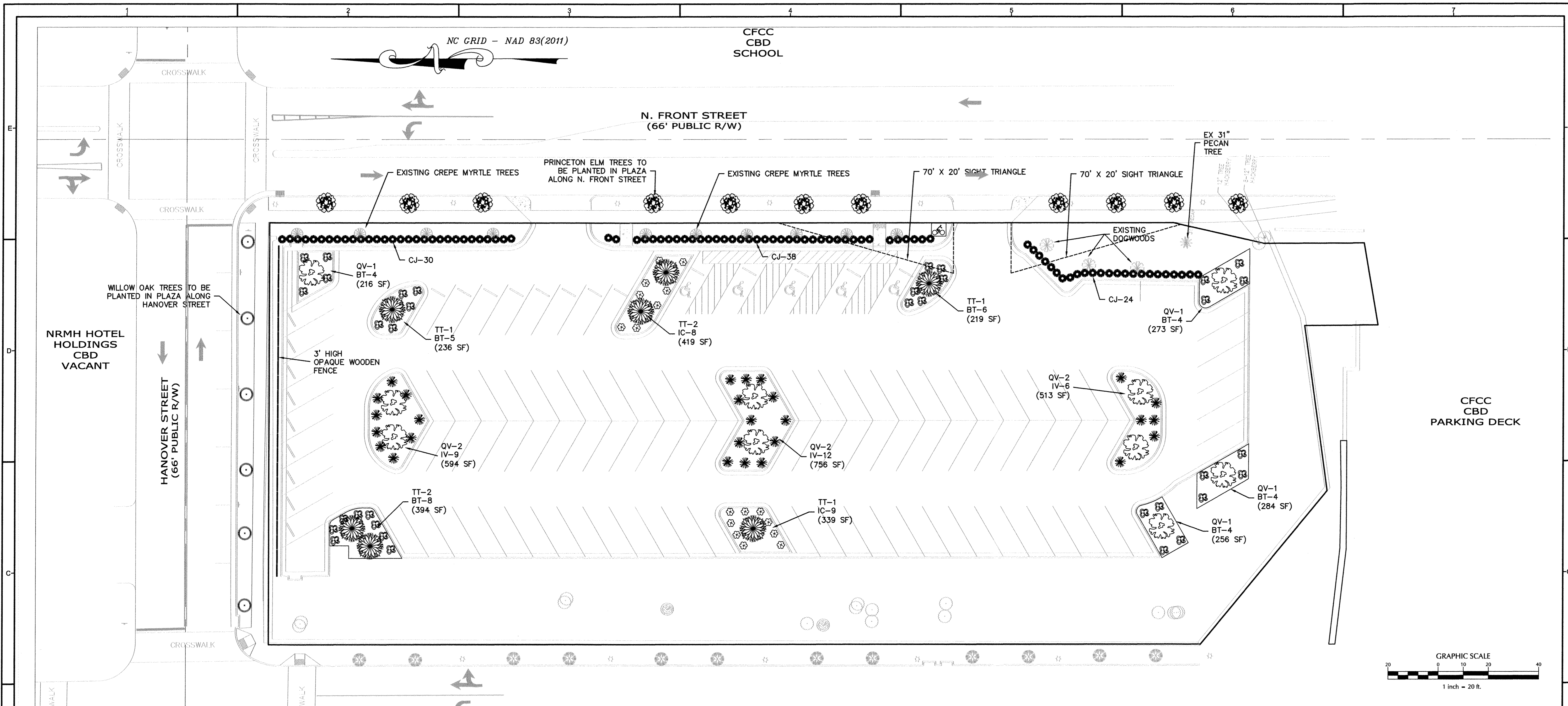
MARK	DATE	DESCRIPTION

PROJECT NUMBER: 17041
 DESIGNED BY: MNH
 CHECKED BY: MNH
 DRAWN BY: MNH
 DATE: 5/23/18

SHEET TITLE:
MISC. DETAILS

C-7.1

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LEGEND

- Existing Trees
- QV (LIVE OAK)
- OP (WILLOW OAK)
- U (CREPE MYRTLE)
- CJ (CLERYERA)
- BT (BARBERRY)
- IV (DWARF YAUPON)
- IC (CHINESE HOLLY)
- UA (PRINCETON ELM)
- TT (SILVER LINDEN)

KEY	NO.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	PLANTING REMARKS
TT	7	TILIA TOMENTOSA	SILVER LINDEN	2"-2.5" CAL.	SPACING AS SHOWN
QV	10	QUERCUS VIRGINIANA	LIVE OAK	2"-2.5" CAL.	SPACING AS SHOWN
CJ	92	CLEYER JAPONICA	CLERYERA	36" HGT.	LOW BUFFER SHRUB
BT	35	BERBERIS THUNBERGII CRIMSON PYGMY	JAPANESE BARBERRY	12-15" HGT.	SMALL SHRUB
IV	27	ILEX VOMITORIA NANA	DWARF YAUPON HOLLY	12-15" HGT.	SMALL SHRUB
IC	17	ILEX CORNUTAENADA NEEDLEPOINT	CHINESE HOLLY	15-18" HGT.	SMALL SHRUB
OP	6	QUERCUS PHELLOS	WILLOW OAK	2"-2.5" CAL.	SPACING AS SHOWN
UA	11	ULMUS AMERICANA	PRINCETON ELM	2"-2.5" CAL.	SPACING AS SHOWN

O.C. - "ON CENTER" CAL. - "CALIPER AT 6" ABOVE GRADE"

**CITY OF WILMINGTON
CBD
CONVENTION CENTER**

LANDSCAPE CALCULATIONS:

PARKING AREA INTERIOR -
42,072 S.F. X 20% SHADING
MIN. 75% LG. SHADE/CANOPY @ 707 S.F.
MIN. 25% SM. SHADE/CANOPY @ 314 S.F.

FOUNDATION PLANTINGS - N/A
BUFFERYARD - N/A

FRONT STREET PLAZA TREES (360 FT - 46' (DRIVEWAY)) = 314 LF/30 FT = 10 TREES REQ'D
10 TREES PROV'D

HANOVER STREET PLAZA TREES (167 FT/ 30 FT) = 5.6 ~ 6 TREES REQ'D
6 TREES PROV'D

NUTT STREET PLAZA TREES (371 FT/ 30 FT) = 12.4 ~ 12 TREES REQ'D
12 TREES PROV'D

OVERALL SITE -
1.45AC. ± DEVELOPMENT AREA X 15 TREES/AC. 24 16
31 EXISTING TREES WILL ALSO BE SAVED

LANDSCAPE NOTES:

- ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM STANDARDS SET FORTH IN THE 'AMERICAN STANDARD FOR NURSERY STOCK' BY THE AMERICAN ASSOCIATION OF NURSERMEN.
- ALL PLANTING BEDS SHALL RECEIVE A MINIMUM OF 4" OF PINE BARK MULCH.
- ALL AREAS DISTURBED AND NOT SPECIFIED AS MULCHED PLANTING BEDS WILL BE GRASSED WITH COMMON BERMUDA GRASS. LAWN AREAS MAY BE SEEDED OR SODDED.
- CONTRACTOR SHALL USE WHATEVER METHOD OF TREE STAKING HE DEEMS FIT. HOWEVER, HE WILL BE HELD LIABLE FOR ANY DAMAGES CAUSED TO TREES BY IMPROPER STAKING METHODS, OR ABSENCE OF STAKING, AND IS RESPONSIBLE FOR UPRIGHTING AND REPLANTING TREES WHICH ARE BLOWN OVER.
- CONTRACTOR SHALL WARRANT ALL TREES AND STRUBS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE FOR THE WORK OF THE LANDSCAPE PLAN.
- IF DISCREPANCIES OR AVAILABILITIES ARE FOUND IN THE PLANT SPECIES AND/OR SIZES REQUIRED, CONTRACTOR SHALL NOTIFY THE OWNER. SUBSTITUTIONS MAY BE MADE, WITH AUTHORIZATION, AS LONG AS THE PLANTS FOLLOW THE INTENDED FORM & FUNCTION OF THE REQUIREMENT.

ADDITIONAL CITY REQUIREMENTS:

- ALL PLANTINGS SHALL BE CURBED OR OTHERWISE PHYSICALLY PROTECTED FROM VEHICULAR TRAFFIC.
- TREE PRESERVATION/REMOVAL PERMIT IS REQUIRED PRIOR TO CLEARING AND LAND DISTURBING.
- PRIOR TO CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.
- THE OWNER IS RESPONSIBLE FOR MAINTAINING ALL REQUIRED PLANT MATERIAL AND PLANTING AREAS IN GOOD HEALTH AND APPEARANCE. AND DEAD, UNHEALTHY OR MISSING PLANTS MUST BE REPLACED WITHIN SIXTY (60) DAYS WITH VEGETATION WHICH CONFORMS TO THE INITIAL PLANTING RATES AND STANDARDS.

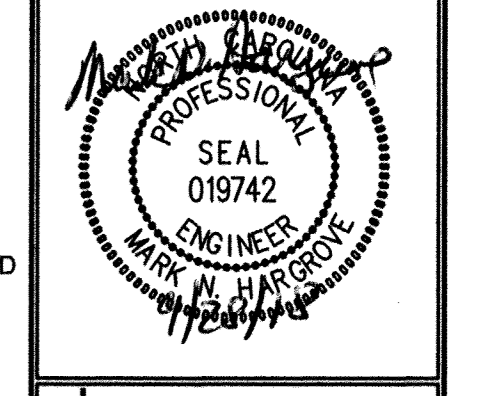
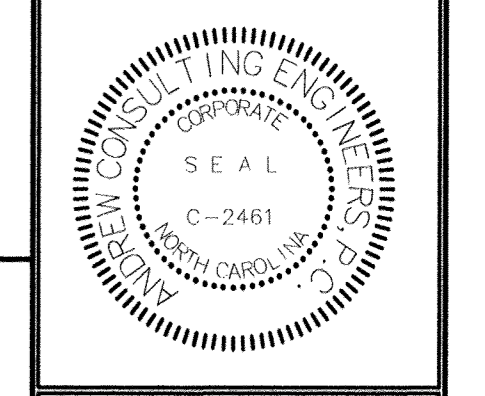
CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 10/1/18 Permit # 2018097
Signed: [Signature]

Approved Construction Plan
Name: [Signature] Date: 7-28-18
Planning: [Signature] 7-28-18
Traffic: [Signature] 9-28-18
Fire: [Signature] 10/2/18

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

PORT CITY CONSULTING ENGINEERS, PLLC
6216 STONEBRIDGE ROAD, WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032

ANDREW CONSULTING ENGINEERS
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Wilmington, NC 28403
910.202.3555 FAX 910.202.5558
www.AndrewEngineers.com



615 NORTH FRONT STREET PARKING LOT
615 N FRONT STREET, LLC
1221 ARBORETUM DRIVE
WILMINGTON, NC 28405

MARK	DATE	DESCRIPTION

PROJECT NUMBER: 17041
DESIGNED BY: MNH
CHECKED BY: MNH
DRAWN BY: MNH
DATE: 5/23/18

LANDSCAPE PLAN

L-1