

LOCATION MAP
NOT TO SCALE

INVENTORY SITE PLAN
HEALTH DEPARTMENT PARKING LOT
2029 S. 17TH STREET
WILMINGTON, N. C.

OWNER/DEVELOPER
NHRMC
P.O. BOX 9000
WILMINGTON, NC 28402
910-343-2788

NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
2602 IRON GATE DR., SUITE 102
WILMINGTON, NC 28403
PHONE (910) 343-9633

INVENTORY SITE DATA
PARCEL ID# R06011-004-013-000

EXISTING PARCEL ID#: R06011-004-0137-000
EXISTING PARCEL PIN#: 312607.58.4313.000
PARCEL ADDRESS: 2029 S. 17TH ST.
PARCEL OWNER: NEW HANOVER REGIONAL MEDICAL CENTER
EXISTING PARCEL AREA: 5.41± AC
EXISTING PARCEL USE: MEDICAL SERVICES
PROPOSED PARCEL USE: EMPLOYEE SURFACE PARKING
CURRENT ZONING: O&I-1 OFFICE & INSTITUTION
CAMA LAND CLASSIFICATION: URBAN
SOIL TYPE: Le, Ur, Rm

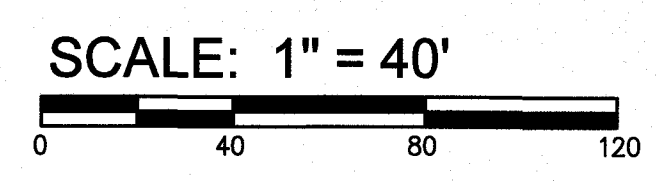
THE PARCEL IS LOCATED IN ZONE "X" - OUTSIDE THE 2% CHANCE OF FLOOD, AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP 3720312600K, DATED: AUG. 28, 2018.

WETLANDS DO NOT EXIST ON SITE.
HISTORICAL/ARCHAEOLOGICAL SITE: NONE
CEMETERY: NONE
FORESTED AREA: NONE (SEE TREE SURVEY)
WETLANDS: NONE
ENDANGERED SPECIES/HABITAT: NONE REPORTED

EXISTING SITE DATA:

EXISTING IMPERVIOUS:
BUILDINGS = 59,548 SF
ASPHALT, CURB & GUTTER = 95,820 SF
CONCRETE SIDEWALK = 11,942 SF
TOTAL EXISTING = 167,310 SF
69.0% IMPERVIOUS

EXISTING PARKING:
REGULAR SPACES: 225
HC ACCESSIBLE SPACES: 5
TOTAL EXISTING: 230



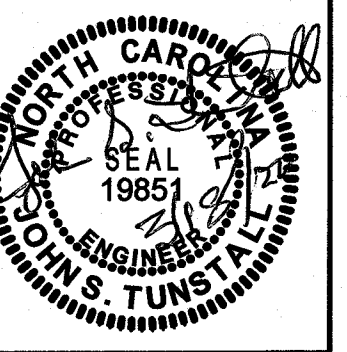
FOR PERMIT ONLY
NOT FOR CONSTRUCTION

APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

Approved Construction Plan
Name _____ Date _____
Planning _____
Traffic _____
Fire _____

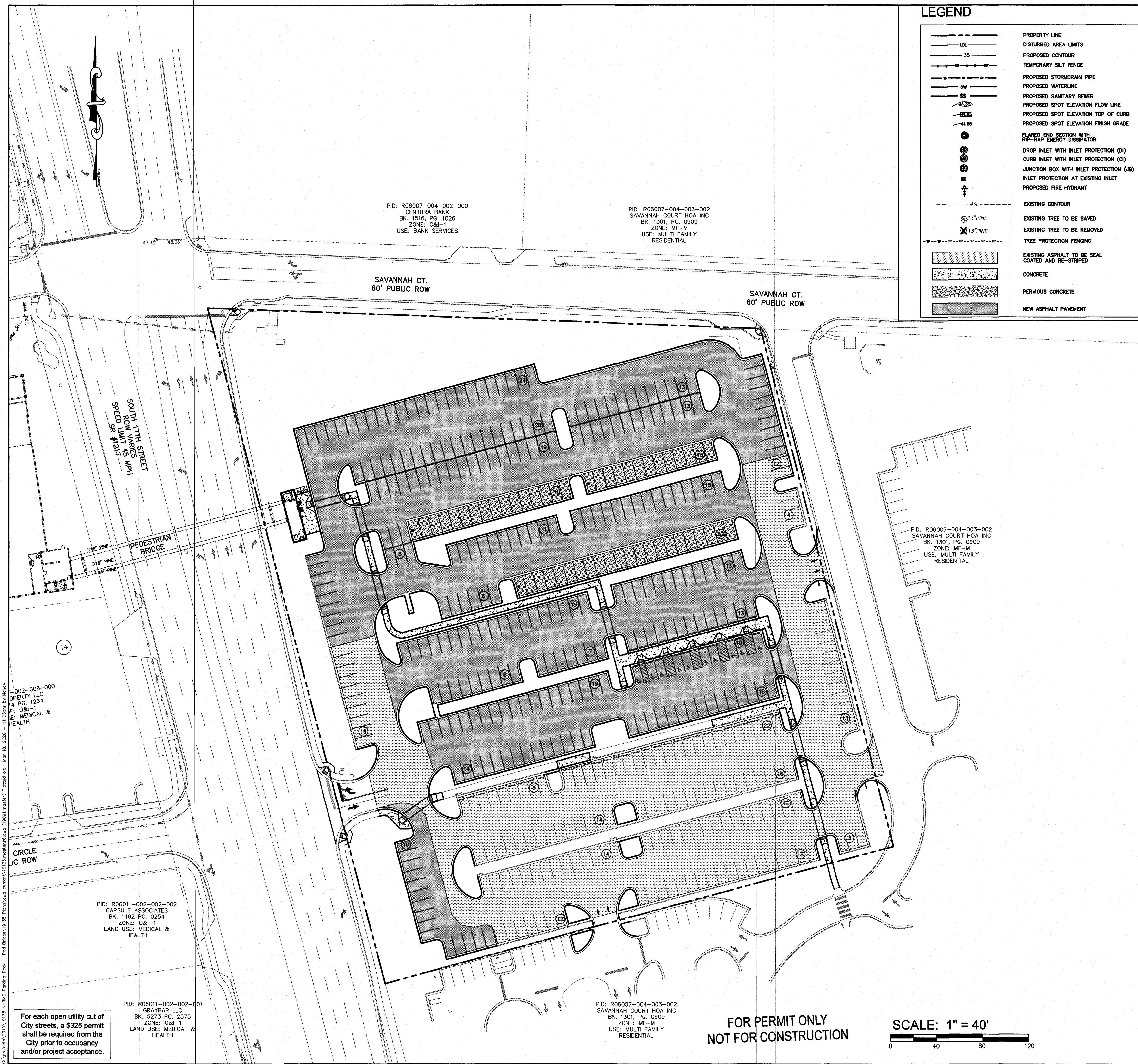
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Licence #C-3641
19091
DES. JST
C.D. JPN
DRWN. NKS
DATE 03/18/20



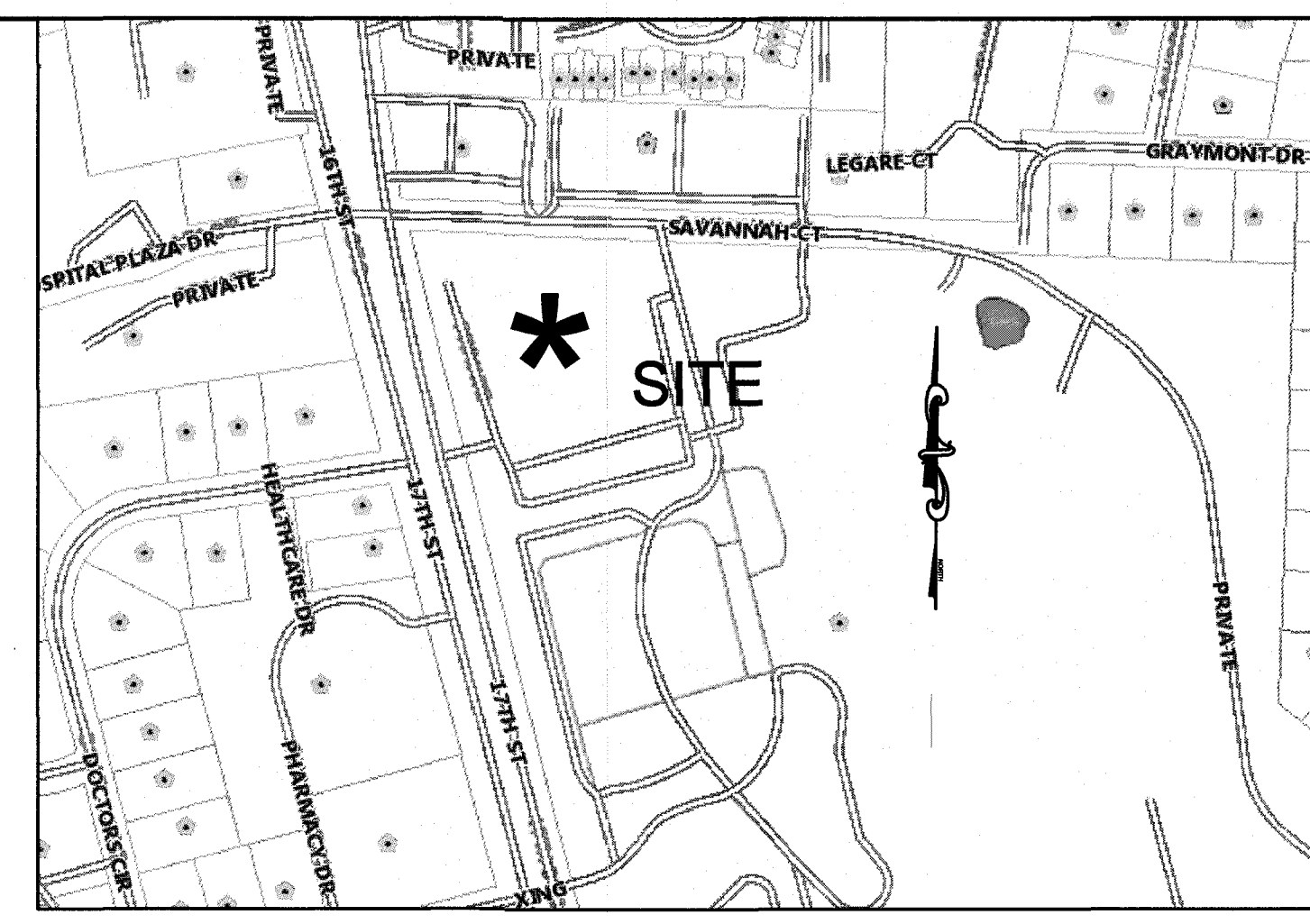
1-1
PRELIMINARY

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LEGEND

---	PROPERTY LINE
---	DISTURBED AREA LIMITS
---	PROPOSED CONTOUR
---	TEMPORARY SILT FENCE
---	PROPOSED STORMDRAIN PIPE
---	PROPOSED WATERLINE
---	PROPOSED SANITARY SEWER
---	PROPOSED SPOT ELEVATION FLOW LINE
---	PROPOSED SPOT ELEVATION TOP OF CURB
---	PROPOSED SPOT ELEVATION FINISH GRADE
○	FLARED END SECTION WITH RIP-RAP ENERGY DISSIPATOR
○	DROP INLET WITH INLET PROTECTION (DI)
○	CURB INLET WITH INLET PROTECTION (CI)
○	JUNCTION BOX WITH INLET PROTECTION (JB)
○	INLET PROTECTION AT EXISTING INLET
○	PROPOSED FIRE HYDRANT
---	EXISTING CONTOUR
○	EXISTING TREE TO BE SAVED
○	EXISTING TREE TO BE REMOVED
---	TREE PROTECTION FENCING
---	EXISTING ASPHALT TO BE SEAL COATED AND RE-STRIPE
---	CONCRETE
---	PERVIOUS CONCRETE
---	NEW ASPHALT PAVEMENT



PROPOSED IMPERVIOUS:

BUILDING:	523 SF
ASPHALT, CURB & GUTTER:	151,155 SF
CONCRETE SIDEWALK:	7,918 SF
TOTAL PROPOSED:	159,596 SF
PERVIOUS CONCRETE:	7,475

SITE DATA TABLE

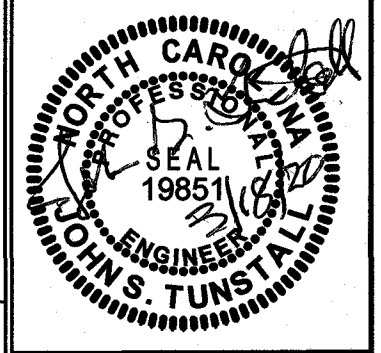
PROPOSED USE:	NHRMC SURFACE EMPLOYEE PARKING
SITE ADDRESS:	2029 S. 17TH ST.
PARCEL ID#:	R06011-004-013-000
MAP ID#:	312607.58.4313.000
PARCEL AREA:	5.56± ACRES (242,375 SF)
PARCEL OWNER:	NEW HANOVER REGIONAL MEDICAL CENTER
ZONING:	O&I-1 OFFICE AND INSTITUTIONAL
CAMA LAND USE:	URBAN
SOILS:	Le, Rm, Ur
THE PARCEL ARE LOCATED IN ZONE "X" - OUTSIDE THE 2% CHANCE OF FLOOD AND ZONE "X" - AREAS WITHIN THE 2% CHANCE OF FLOOD, AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP 3720312600J, PANEL , DATED: APRIL 3, 2006.	
WETLANDS DO NOT EXIST ON SITE	
BUILDING SETBACKS:	REQUIRED FRONT SETBACK: 20' PROPOSED FRONT SETBACK: 20' SIDE SETBACK SOUTH: 10' SIDE SETBACK SOUTH: 385' SIDE SETBACK NORTH: 20' SIDE SETBACK NORTH: 157' REAR SETBACK: 20' REAR SETBACK: 428'
MAXIMUM LOT COVERAGE: 40% PROPOSED LOT COVERAGE: .002%	
MAXIMUM BUILDING HEIGHT: 45', UP TO 75' WITH SPECIAL USE PERMIT, 35% LOT COVERAGE AND 80' BUILDING SETBACK WHEN ABUTTING A RESIDENTIAL DISTRICT.	
PROPOSED BUILDING HEIGHT: 33'±	
BUILDING AREA: 523 SF	
BUILDING CONSTRUCTION TYPE: II-B	
PROPOSED PARKING:	
PARKING REQUIREMENT HOSPITAL:	
1 PER EACH 2 LICENSED BEDS INTENDED FOR PATIENT USE, 1 PER EACH STAFF PERSON, INCLUDING MEDICAL AND SUPPORT STAFF BASED ON THE LARGEST EMPLOYEE SHIFT.	
-NO NEW BEDS -NO NEW EMPLOYEES	
SURFACE PARKING:	
REGULAR SPACES: 469 (51 ARE PERVIOUS CONCRETE)	
HC ACCESSIBLE SPACES: 10	
TOTAL PROPOSED: 479	
TOTAL PARKING: 480 SPACES	
HC SPACES REQUIRED (22): 10 SPACES	
HC SPACES PROVIDED: 10 SPACES	
BICYCLE PARKING REQUIRED: 20 SPACES	
BICYCLE PARKING PROVIDED: 20 SPACES	
LANDSCAPING. (REFER TO LANDSCAPE PLAN)	
STREET/YARD REQUIRED: 18 MULTIPLIER (9' MIN/27' MAX.)	
FRONT: 800-30X18 = 14,400 SF REQUIRED (10,260 SF PROVIDED)	
SIDE: 460X9 = 4,140 SF REQUIRED (4,140 SF PROVIDED)	
INTERIOR LANDSCAPING O&I-1: 30% CANOPY COVER OF INTERIOR AREA OF PARKING FACILITY BASED ON AMOUNT OF PARKING AREA IMPERVIOUS SURFACE. REFER TO LANDSCAPE PLAN.	
FOUNDATION PLANTINGS REQUIRED: 12% OF THE AREA OF THE FACE OF THE BUILDING. WEST SIDE: (44)(33)(.12)=174 SF REQUIRED AND PROVIDED. REFER TO LANDSCAPE PLAN	
SOLID WASTE REMOVAL: HAND CARTS TO BE MAINTAINED BY HOSPITAL MAINTENANCE.	
WATER AND SEWER CAPACITY NEEDS: NONE REQUIRED	
DISTURBED AREA LIMITS: 4.22± ACRES	

OVERALL SITE PLAN
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2602 IRON GATE DR., SUITE 102 1429 ASH-LITTLE RIVER RD. NW
WILMINGTON, NC 28403 ASHL, NC 28420
PHONE (910) 343-9635 PHONE (910) 287-5900

Licence #C-3641
19091
DES. JST
CHK. JPN
DRWL. NKS



C0
PRELIMINARY

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

FOR PERMIT ONLY
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SCALE: 1" = 40'
0 40 80 120

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

Approved Construction Plan
Name _____ Date _____
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Traffic _____
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TREE REMOVAL TABLE

REGULATED TREES		HOLLY		MAPLE		DOGWOOD	
OAKS	PINES	5"	12"	12"	14"	7"	11"
9" (2)	12" (1)	(1)	(1)	(2)	(2)	(1)	(1)
10" (2)	14" (1)	(1)	(1)	(2)	(1)	(1)	(1)
11" (4)	16" (1)	(1)	(1)	(1)	(1)	(1)	(1)
12" (1)	17" (1)	(1)	(1)	(1)	(1)	(1)	(1)
14" (3)	20" (1)	(1)	(1)	(1)	(1)	(1)	(1)
17" (2)	22" (1)	(1)	(1)	(1)	(1)	(1)	(1)
18" (1)							
20" (1)							
28" (1)							
SIGNIFICANT TREES							
OAKS							
28" (1)							

DEMOLITION AND PHASING PLAN
HEALTH DEPARTMENT PARKING LOT
2029 S. 17TH STREET
WILMINGTON, N. C.

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 2609 IRON GATE DR., SUITE 102
 WILMINGTON, NC 28403
 PHONE (910) 343-9653

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 DRWN. NKS
 DATE 03/18/20



C1
PRELIMINARY

PID: R06007-004-003-002
 SAVANNAH COURT HOA INC
 BK. 1301, PG. 0909
 ZONE: MF-M
 USE: MULTI FAMILY RESIDENTIAL

PID: R06007-002-008-000
 AGG PROPERTY LLC
 BK. 5514 PG. 1264
 ZONE: O&I-1
 LAND USE: MEDICAL & HEALTH

PID: R06011-002-002-002
 CAPSULE ASSOCIATES
 BK. 1482 PG. 0254
 ZONE: O&I-1
 LAND USE: MEDICAL & HEALTH

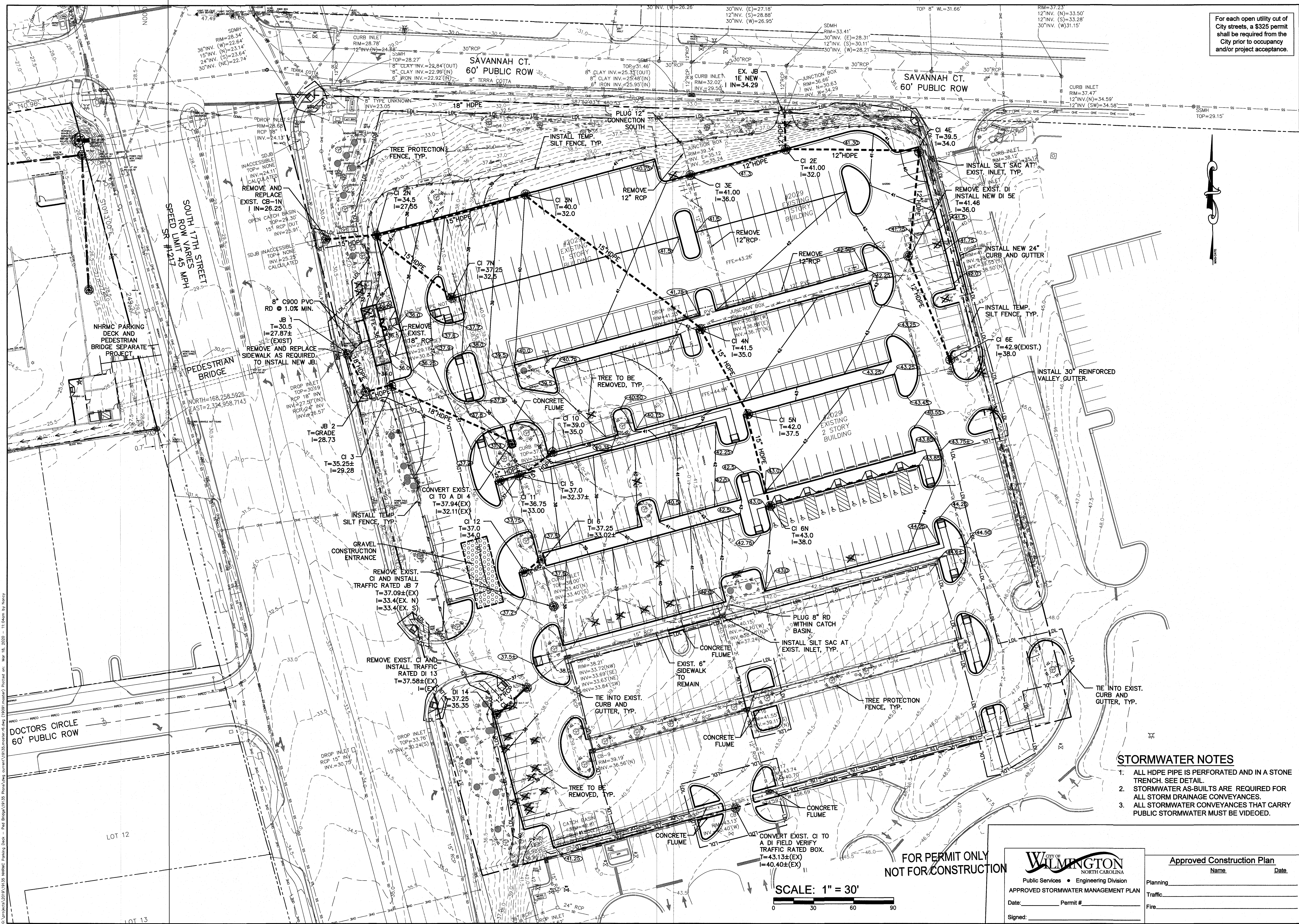
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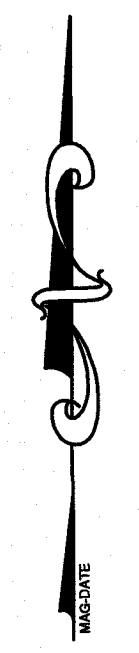
	PHASE 1
	PHASE 2
	PHASE 3
	EXISTING ASPHALT TO REMAIN

SCALE: 1" = 30'
 0 30 60 90

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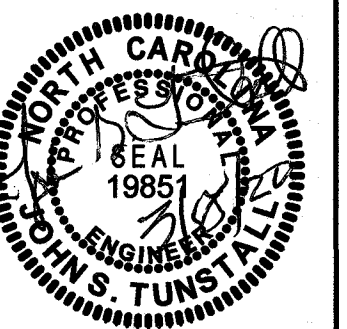


GRADING, DRAINAGE AND EROSION CONTROL PLAN
HEALTH DEPARTMENT PARKING LOT
2026 S. 17TH STREET WILMINGTON, N. C.

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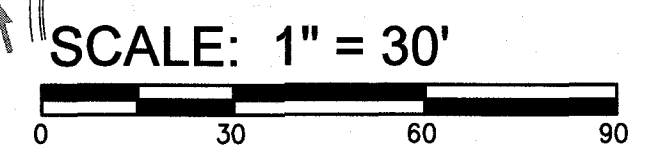
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PRELIMINARY

- STORMWATER NOTES**
1. ALL HDPE PIPE IS PERFORATED AND IN A STONE TRENCH. SEE DETAIL.
 2. STORMWATER AS-BUILTS ARE REQUIRED FOR ALL STORM DRAINAGE CONVEYANCES.
 3. ALL STORMWATER CONVEYANCES THAT CARRY PUBLIC STORMWATER MUST BE VIDEOED.

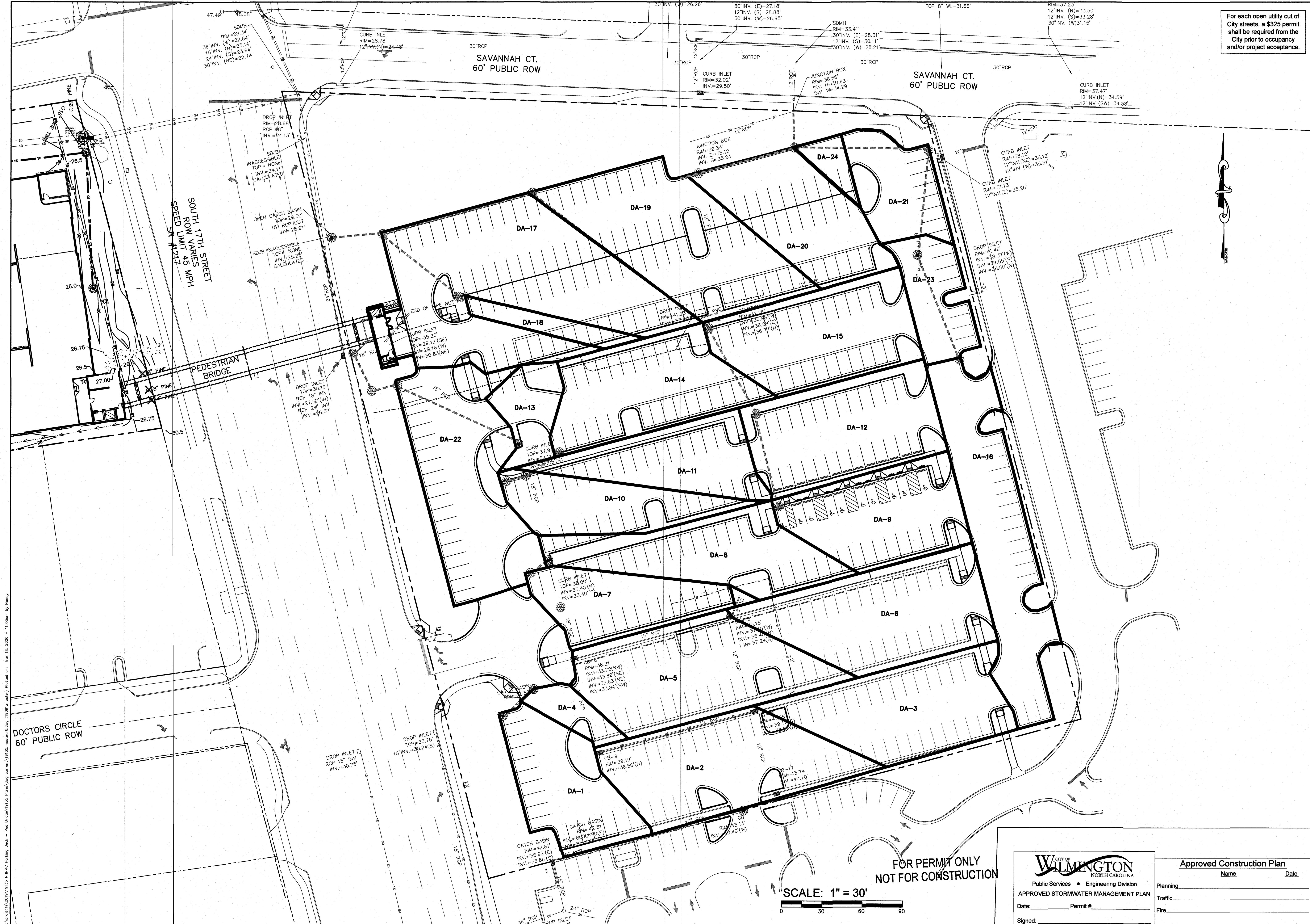
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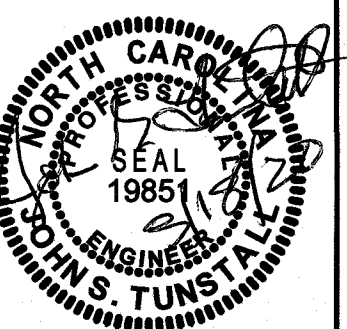
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DRAINAGE AREA PLAN
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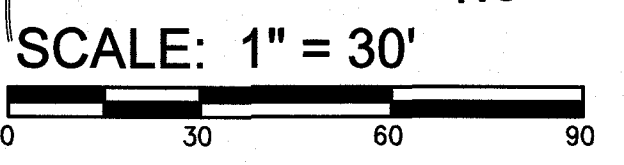
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 PHONE (910) 343-9635
 1429 ASH-LITTLE RIVER RD. NW
 ASH, NC 28620
 PHONE (910) 287-5900

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C2.1
PRELIMINARY

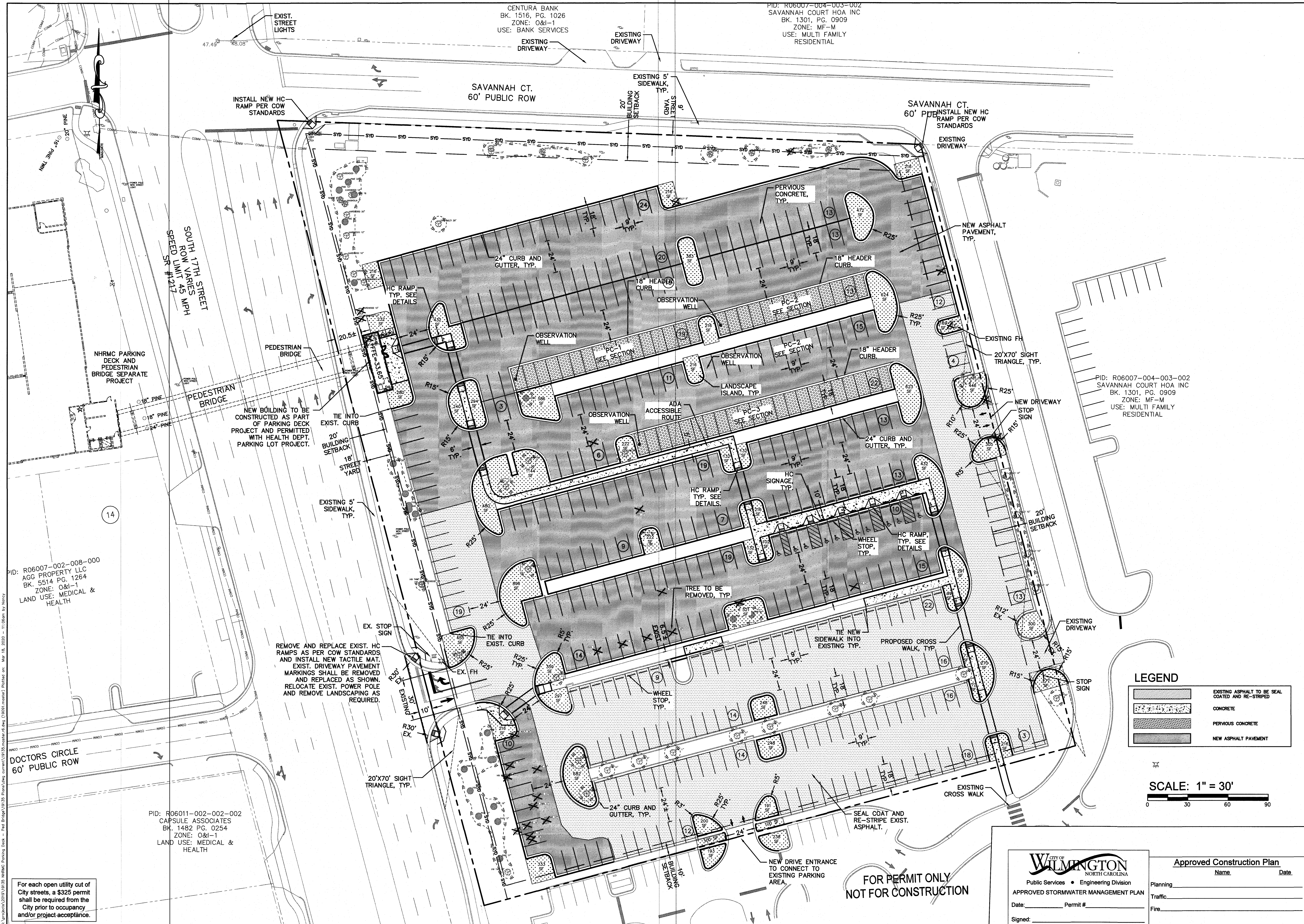
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PID: R06007-002-008-000
 AGG PROPERTY LLC
 BK. 5514 PG. 1264
 ZONE: O&I-1
 LAND USE: MEDICAL & HEALTH

DOCTORS CIRCLE
 60' PUBLIC ROW

PID: R06011-002-002-002
 CAPSULE ASSOCIATES
 BK. 1482 PG. 0254
 ZONE: O&I-1
 LAND USE: MEDICAL & HEALTH

CENTURA BANK
 BK. 1516, PG. 1026
 ZONE: O&I-1
 USE: BANK SERVICES

PID: R06007-004-003-002
 SAVANNAH COURT HOA INC
 BK. 1301, PG. 0909
 ZONE: MF-M
 USE: MULTI FAMILY RESIDENTIAL

PID: R06007-004-003-002
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LEGEND

	EXISTING ASPHALT TO BE SEAL COATED AND RE-STRIPPED
	CONCRETE
	PERVIOUS CONCRETE
	NEW ASPHALT PAVEMENT

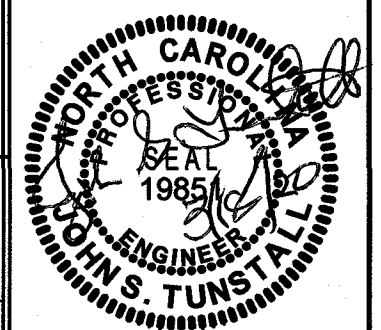
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LAYOUT PLAN
 HEALTH DEPARTMENT PARKING LOT
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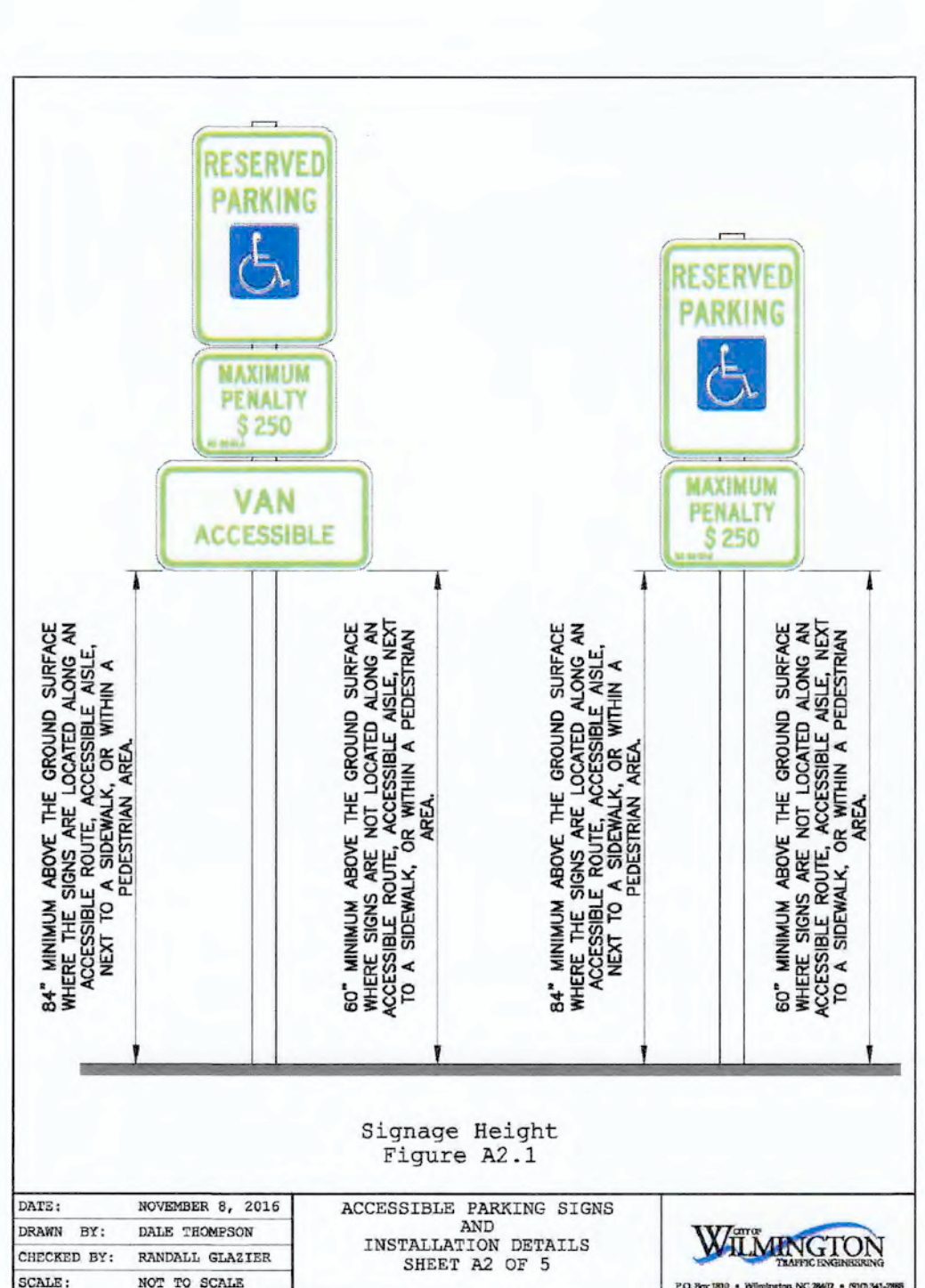
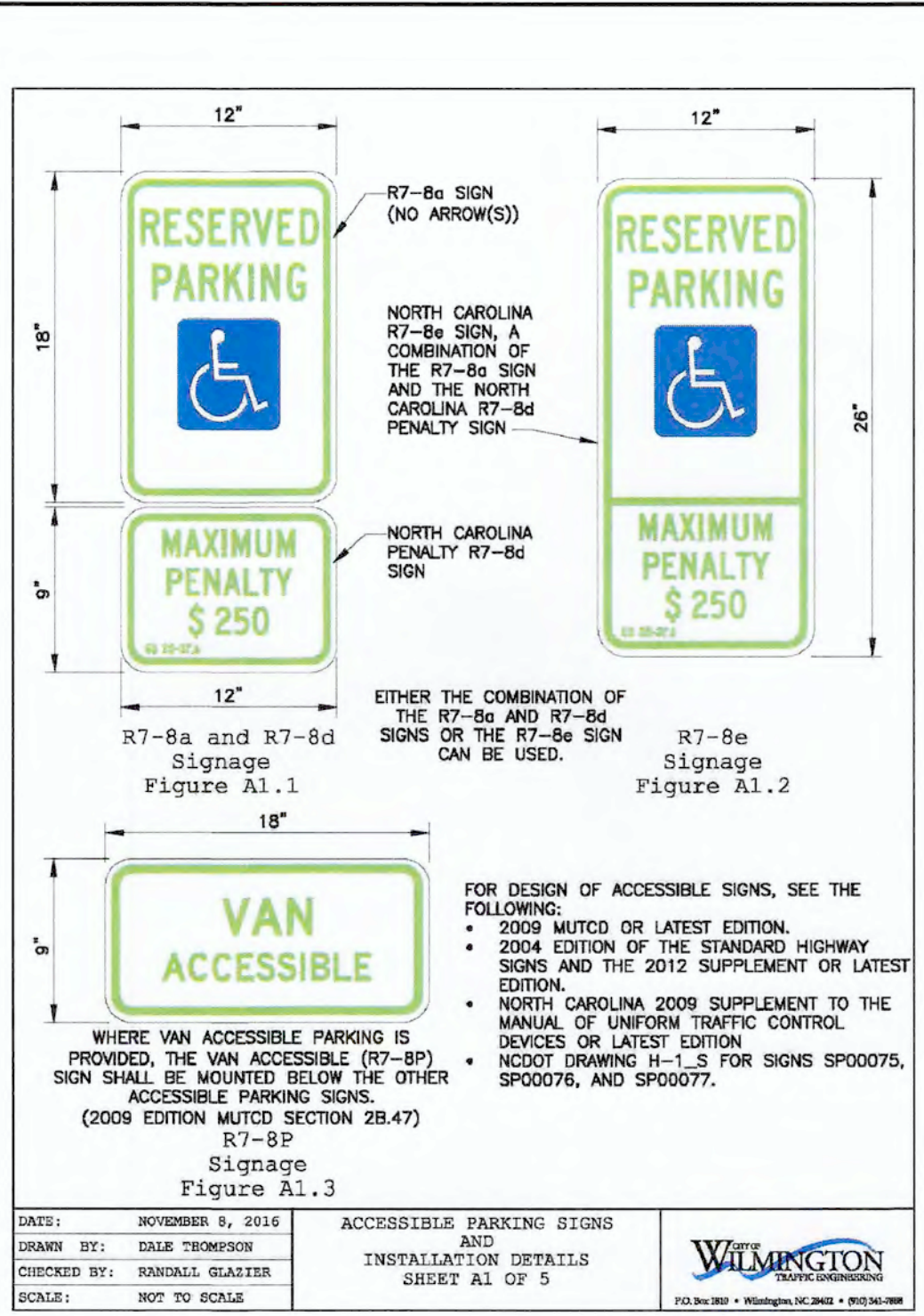
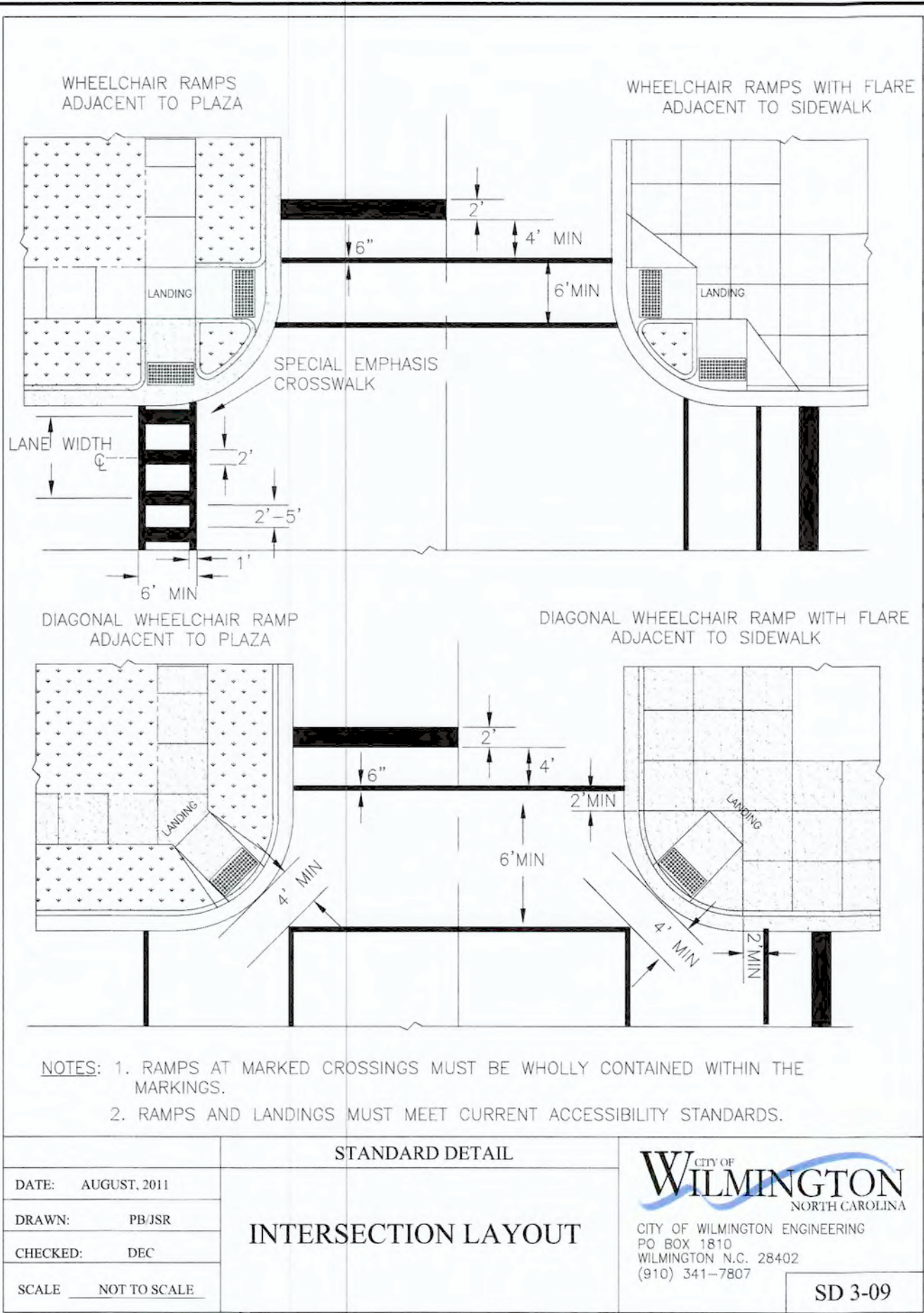
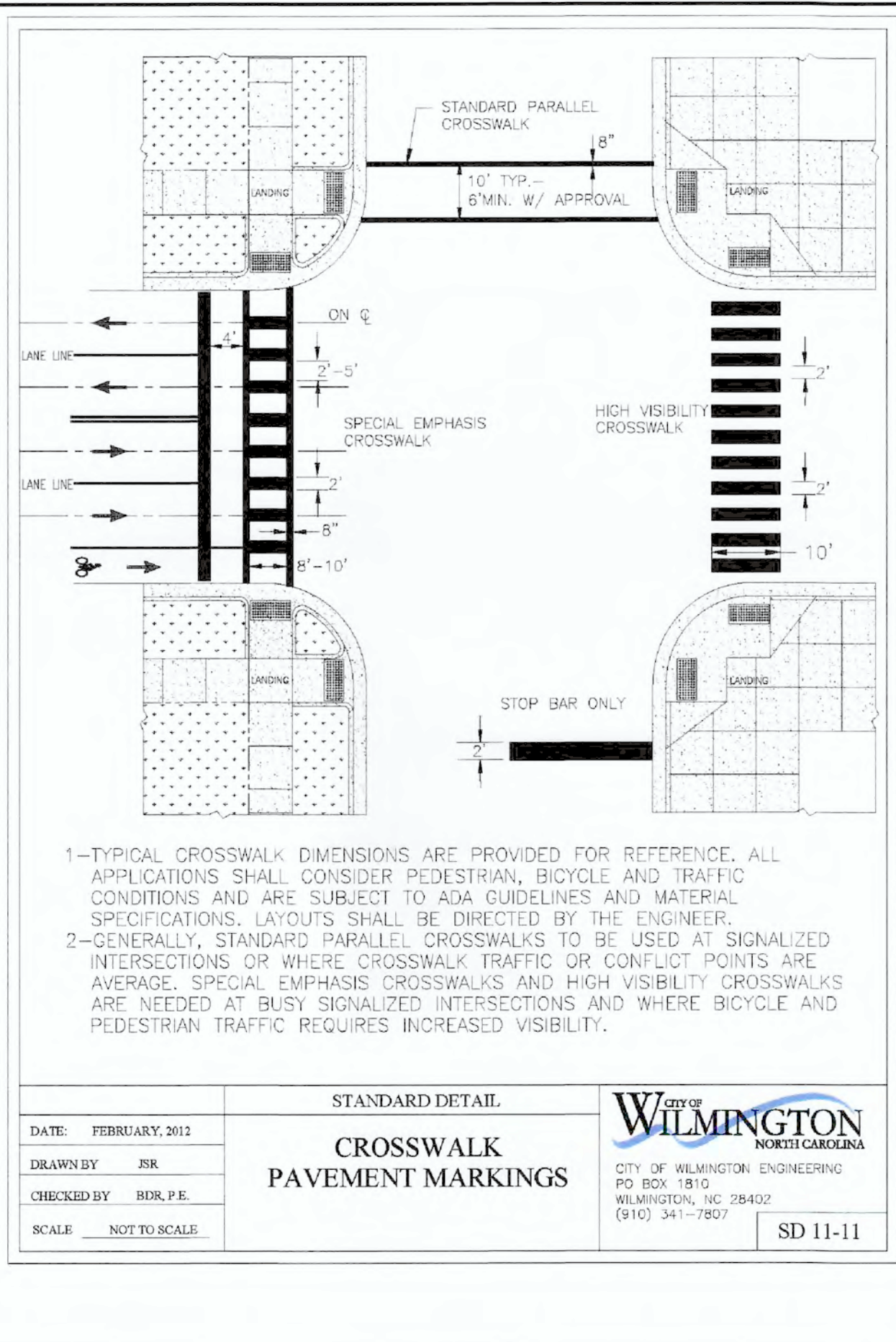
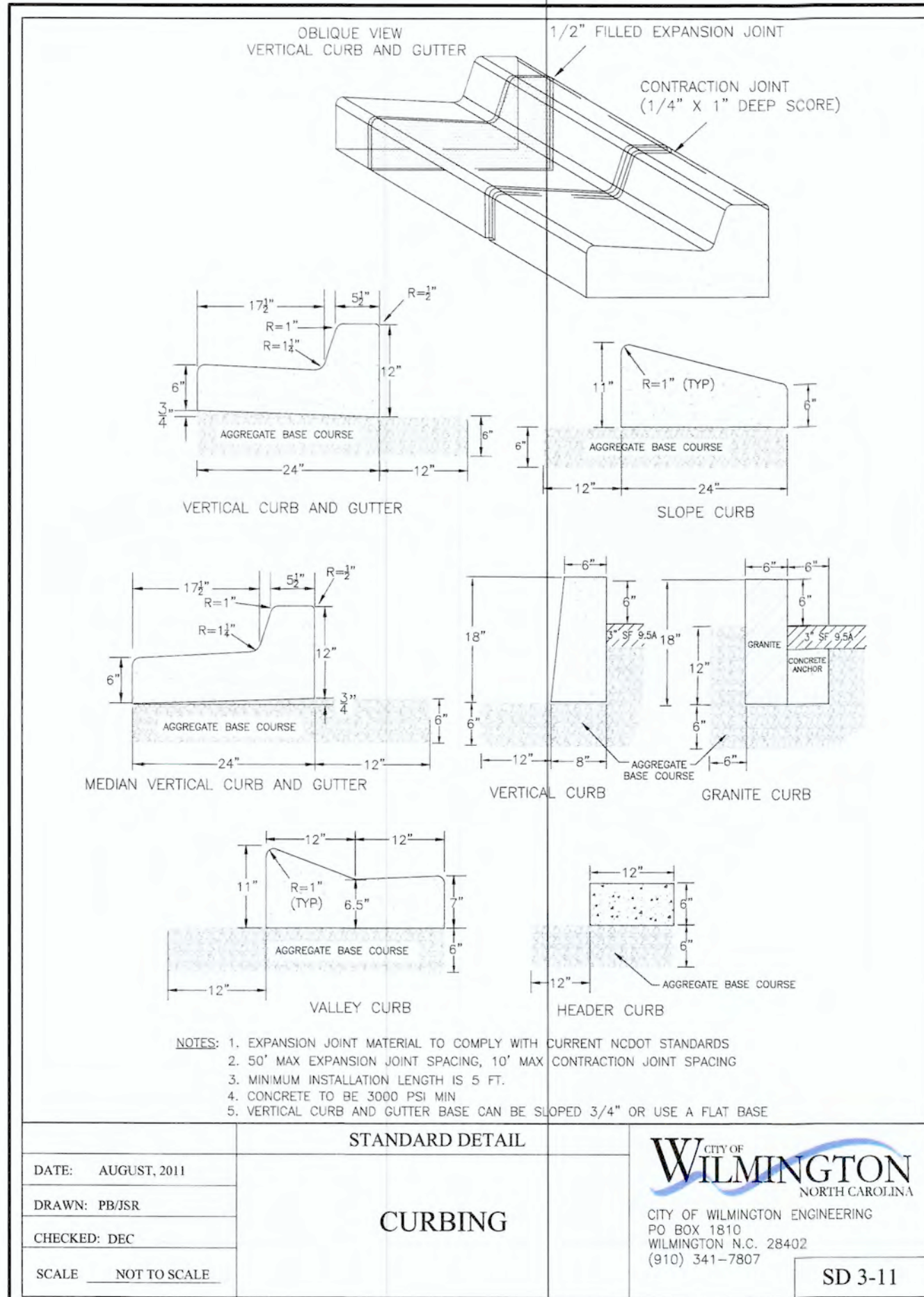
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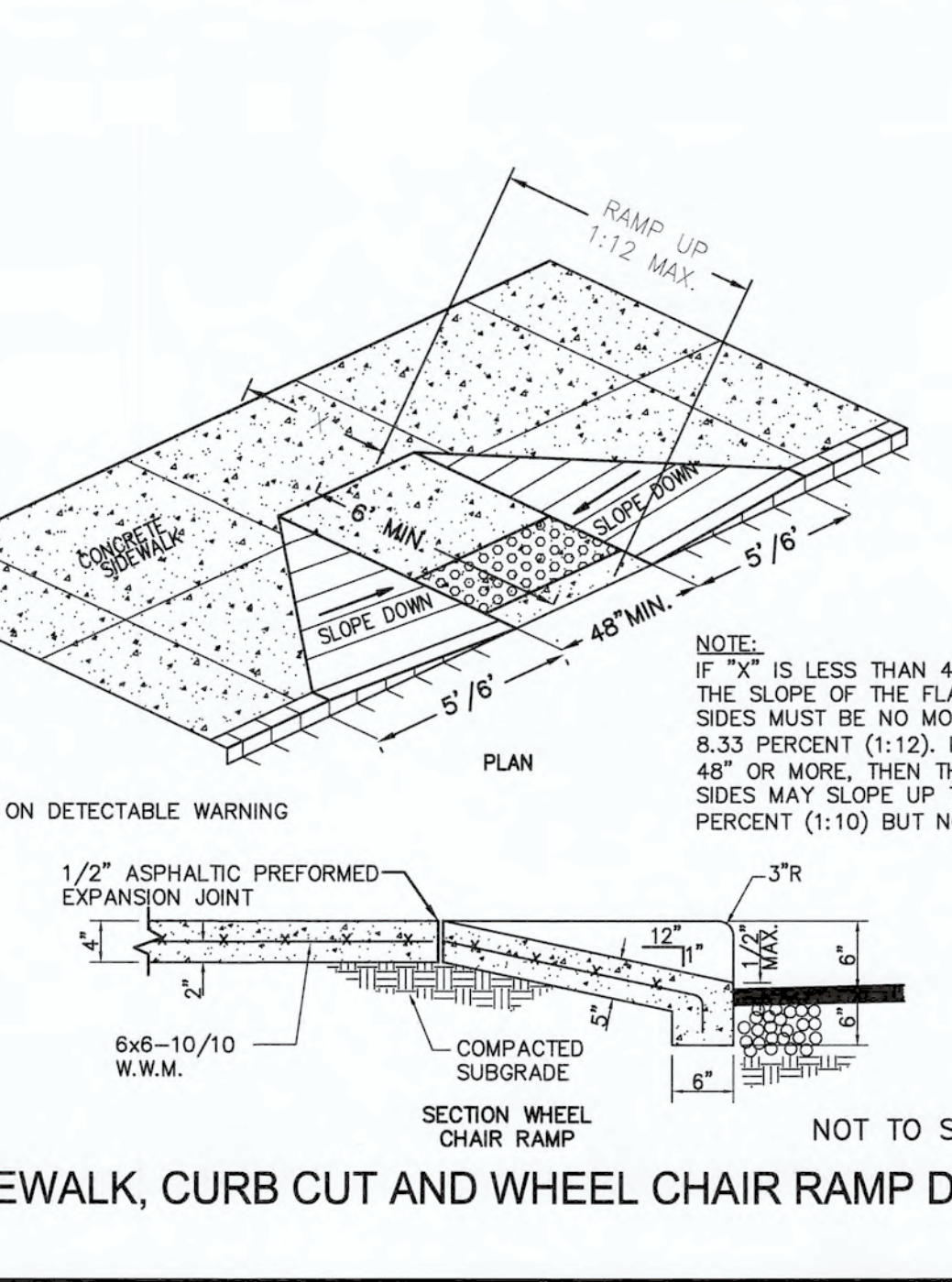
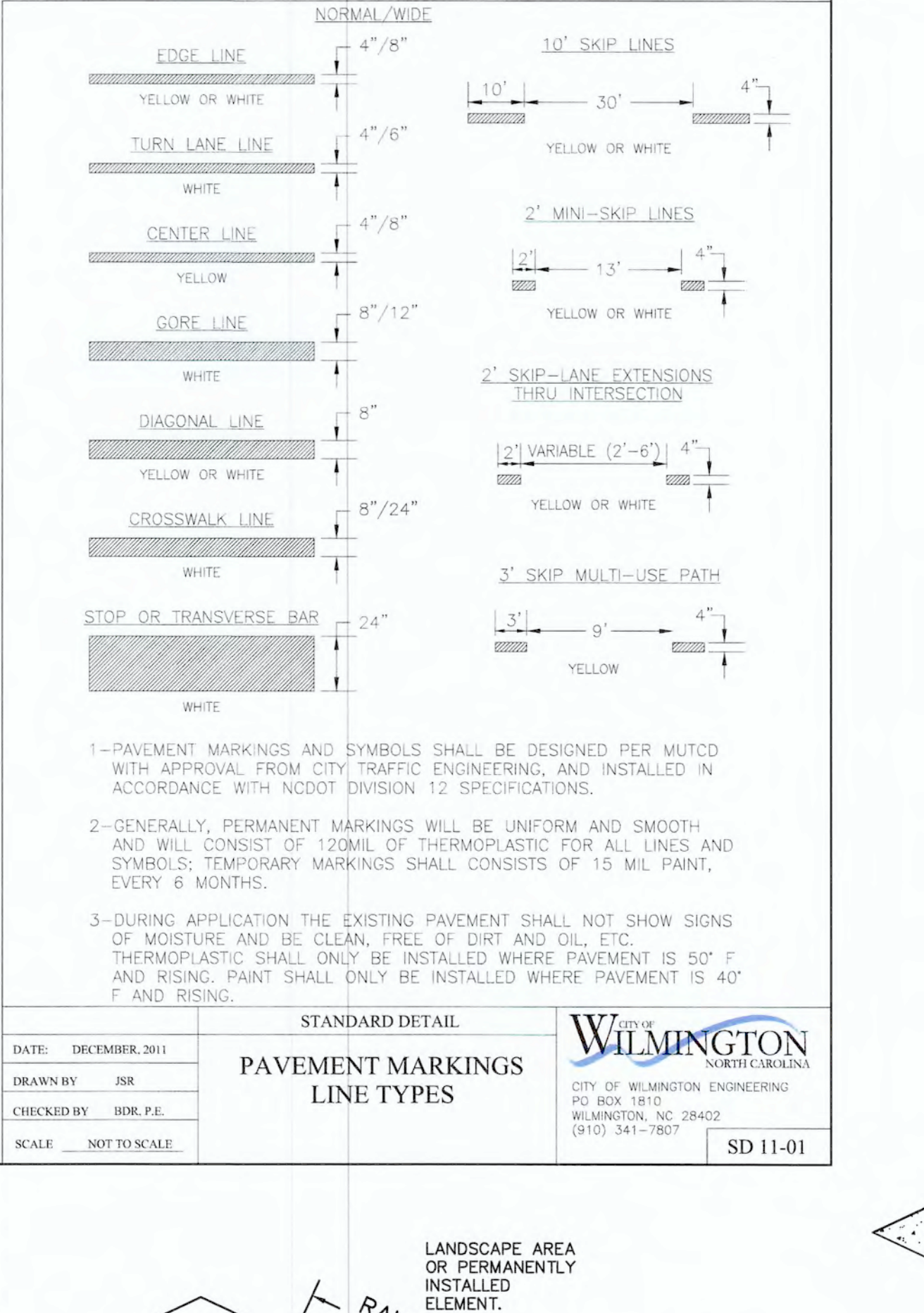
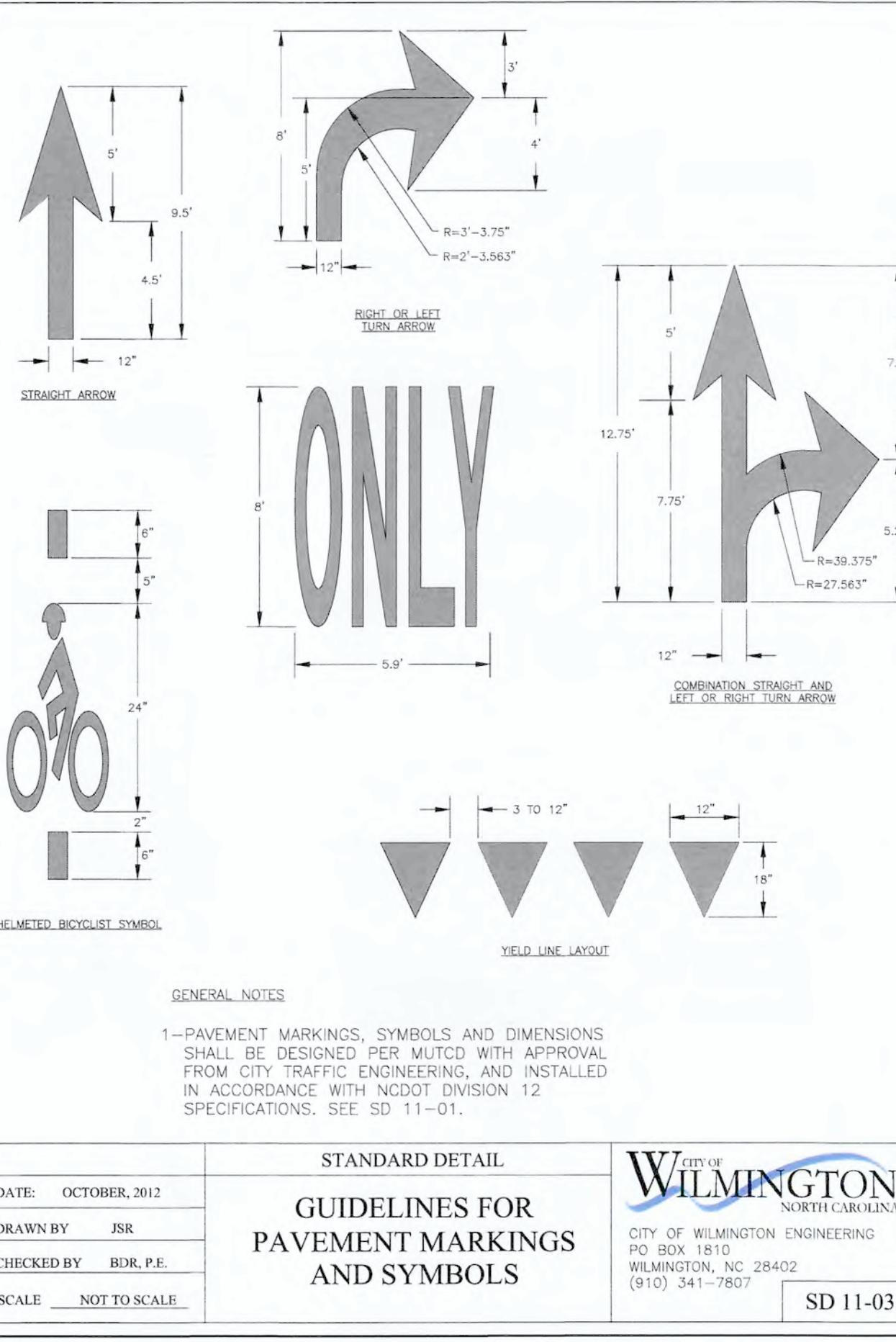
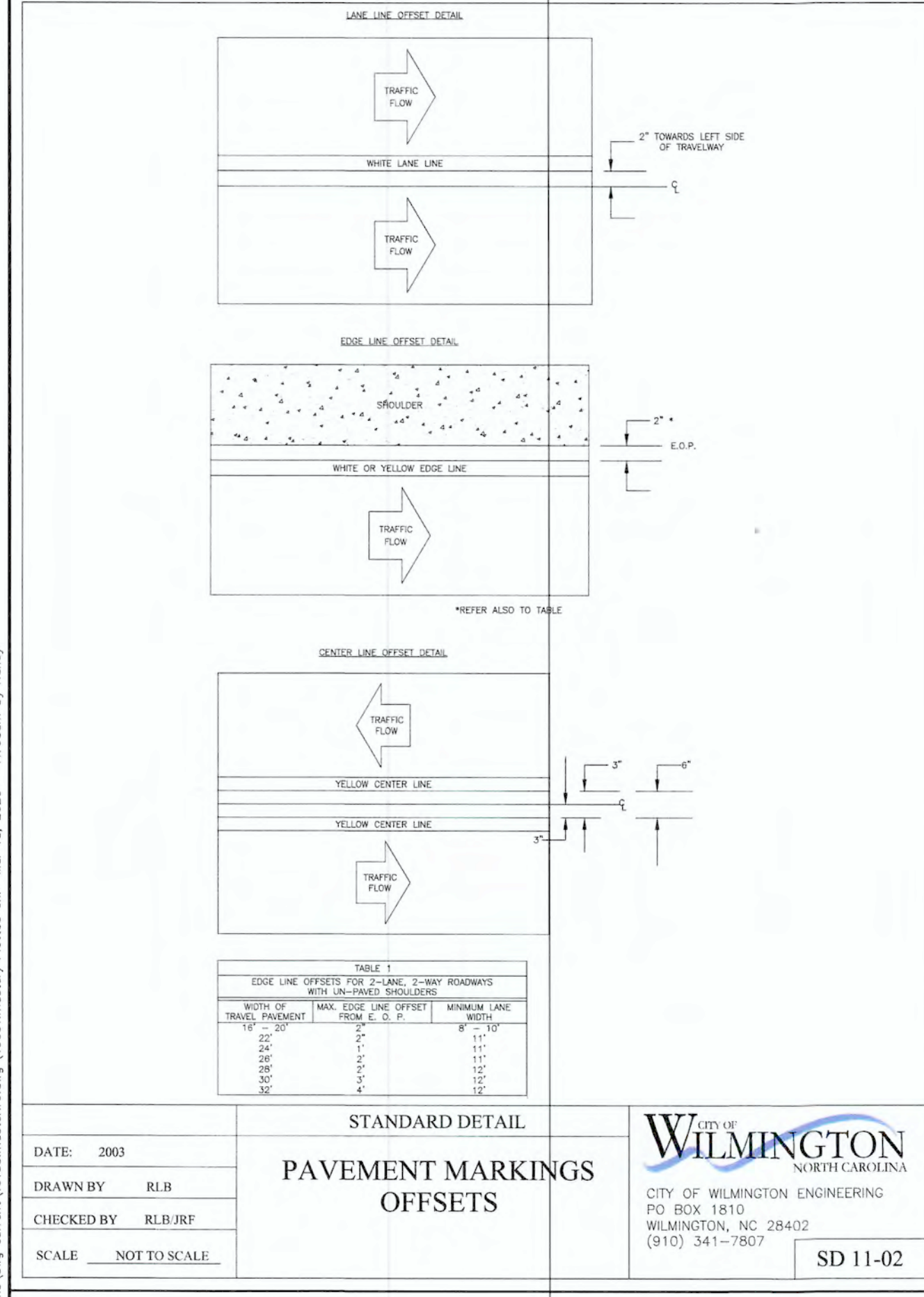


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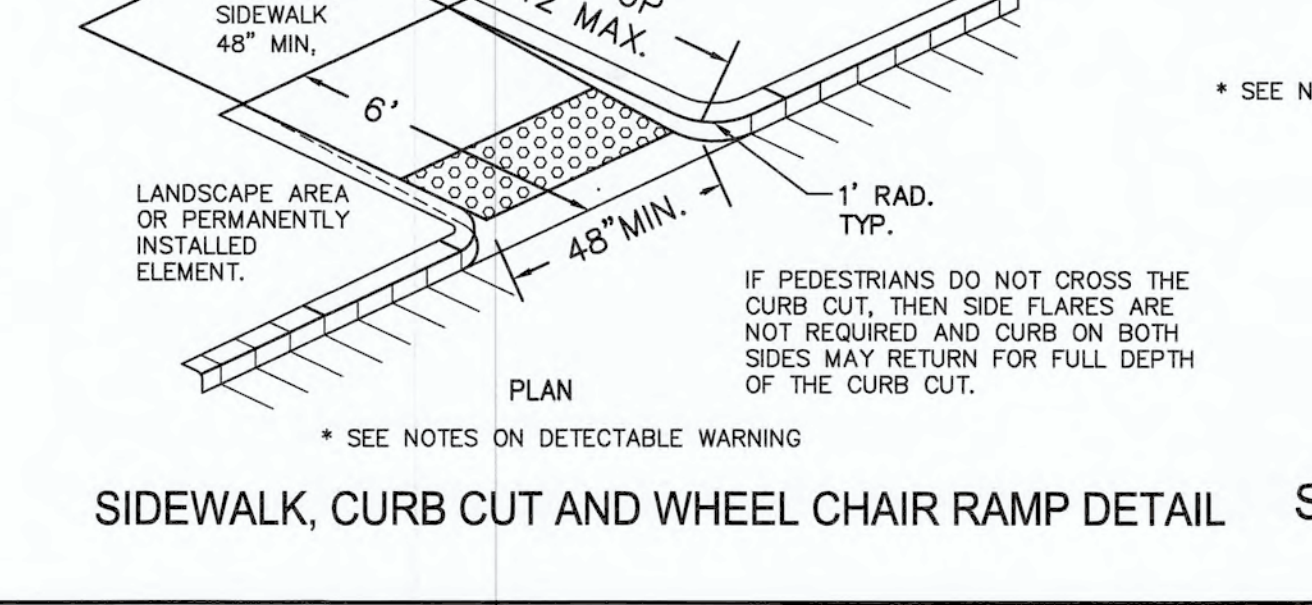
CITY OF WILMINGTON STANDARD NOTES:

- CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING AT 1-800-632-4949.
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
- INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAFFIC PRIOR TO ACTUAL STRIPING.
- TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD 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.
- IT SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER TO ERECT OFFICIAL STREET NAME SIGNS AT ALL INTERSECTIONS ASSOCIATED WITH THE SUBDIVISION IN ACCORDANCE WITH THE TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL. THE SUBDIVIDER MAY ACQUIRE AND ERECT OFFICIAL STREET NAME SIGNS OR MAY CHOOSE TO CONTRACT WITH THE CITY TO INSTALL THE STREET SIGNS AND THE SUBDIVIDER SHALL PAY THE COST OF SUCH INSTALLATION. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. POSTED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
- CONTACT 811 PRIOR TO CONTACTING CITY OF WILMINGTON TRAFFIC ENGINEERING REGARDING THE UTILITIES IN THE RIGHT-OF-WAY.
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5899 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
- ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS, AND CURBING WILL BE REPLACED.
- CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
- PROJECT SHALL COMPLY WITH CPDUA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 343-3910 FOR INFORMATION.
- IF THE CONTRACTOR DESIRES CPDUA 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.
- ANY IRRIGATION SYSTEM SUPPLIED BY CPDUA WATER SHALL COMPLY WITH CPDUA CROSS CONNECTION CONTROL REGULATIONS. CALL 332-6558 FOR INFORMATION.
- ANY BACKFLOW PREVENTION DEVICES REQUIRED BY CPDUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFCO/COHR OR ASSE.
- WHEN PVC WATER MAINS AND/OR POLYETHYLENE SERVICES ARE PROPOSED, THE PIPES ARE TO BE MARKED WITH NO. 10 INSULATED SINGLE STRAND COPPER WIRE INSTALLED THE ENTIRE LENGTH AND SECURED TO ALL VALVES. THIS WIRE IS TO BE ACCESSIBLE AT ALL FIRE HYDRANTS AND WATER METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
- THE NUMBER AND SPACING OF DRIVEWAYS FOR ALL INTERCONNECTED SITES WILL BE DETERMINED BY THE COMBINED FRONTAGE OF THE INTERCONNECTED PROPERTIES.
- UNDERGROUND FIRE LINE MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC ROW TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.
- A LANDSCAPE PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEER DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAN.
- IF AN IRRIGATION SYSTEM IS PLANNED FOR THE SITE, UTILIZE MOISTURE SENSORS.
- ALL PROPOSED VEGETATION WITHIN THE SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30'-10'.
- PLEASE CONSIDER INCORPORATING XERIC LANDSCAPING FOR ALL NEW LANDSCAPING.
- THE CONTRACTOR WILL MAINTAIN ALL-WEATHER EMERGENCY ACCESS TO CONSTRUCTION SITE AT ALL TIMES.
- UNDERGROUND UTILITIES: ALL ELECTRIC, CABLE TELEVISION AND TELEPHONE FACILITIES, FIRE ALARM CONDUITS, STREET LIGHTING WIRING AND OTHER WIRING CONDUITS, AND SIMILAR FACILITIES SHALL BE PLACED UNDERGROUND BY THE DEVELOPER OR THE APPROPRIATE UTILITY COMPANY.
- STREET TREES MUST BE LOCATED A MINIMUM OF 15' FROM STREET LIGHTS.



DETECTABLE WARNING NOTES

- RAMP SHALL HAVE A DETECTABLE WARNING COMPLYING WITH ADA GUIDELINES. "COLONIAL RED" COLOR FOR DOME.
- THE DETECTABLE WARNINGS AT CURB RAMPS SHALL BE 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
- MARKED CROSSINGS THAT ARE RAISED TO THE SAME LEVEL AS THE ADJOINING SIDEWALK SHALL BE PRECEDED BY A 24 INCH DEEP DETECTABLE WARNING EXTENDING THE FULL WIDTH OF THE MARKED CROSSING.
- DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 IN (23 MM), A HEIGHT OF NOMINAL 0.2 IN (5 MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 IN (60 MM) AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHOULD CONTRAST BY AT LEAST 70% - REFER TO ADA GUIDELINES FOR DEFINITION OF "CONTRAST".
- THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.



NOTES AND DETAILS
HEALTH DEPARTMENT PARKING LOT
2029 S. 17TH STREET
WILMINGTON, N. C.

OWNER/DEVELOPER
NHRMC
P.O. BOX 9000
WILMINGTON, NC 28402
910-343-2788

NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
2602 IRON GATE DR., SUITE 102
WILMINGTON, NC 28403
PHONE (910) 343-9665

License #C-3641
19091
DES. JST
CKD. JPN
DRWN. NKS
DATE: 03/18/20
C5
PRELIMINARY

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

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

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

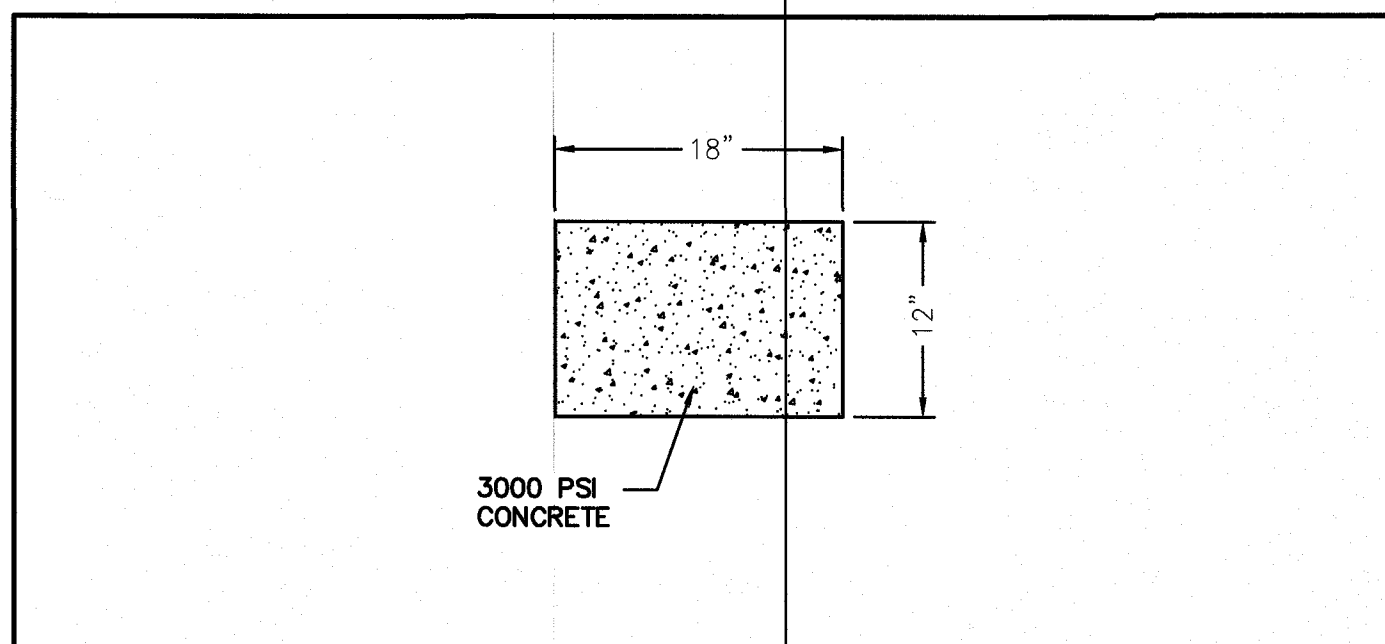
Signature: _____

Approved Construction Plan

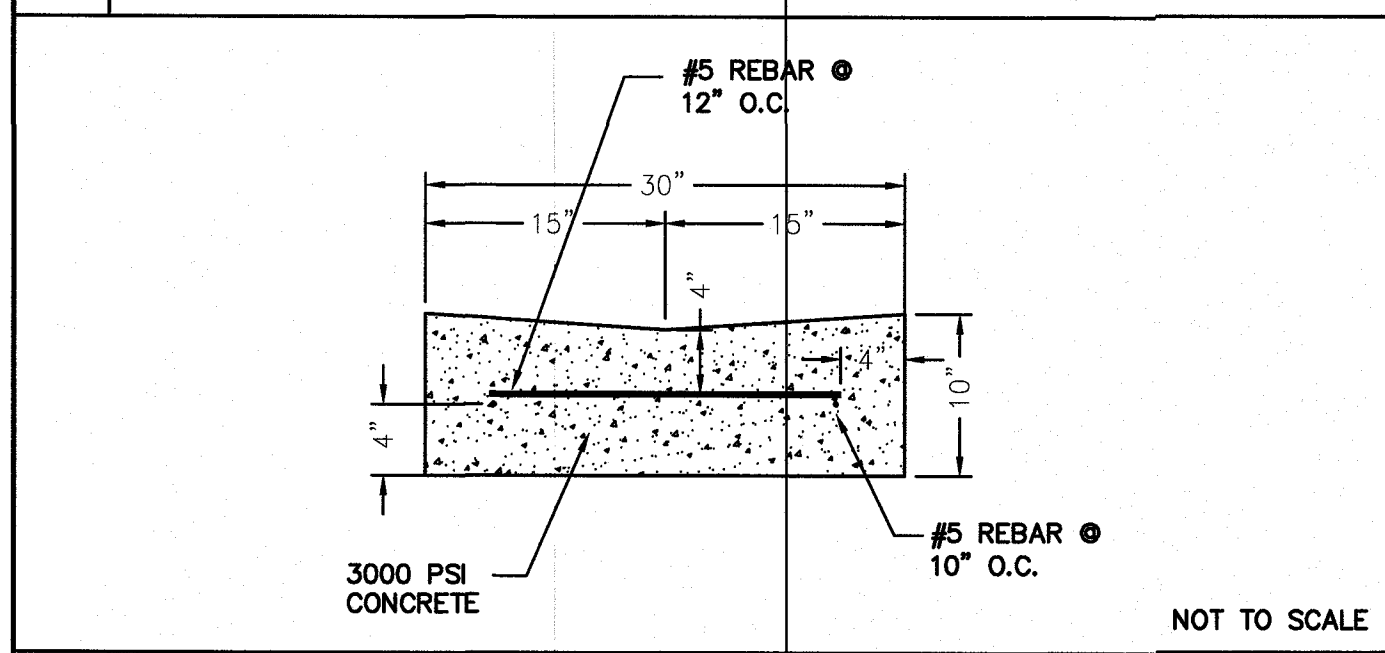
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Planning: _____
Traffic: _____
Fire: _____

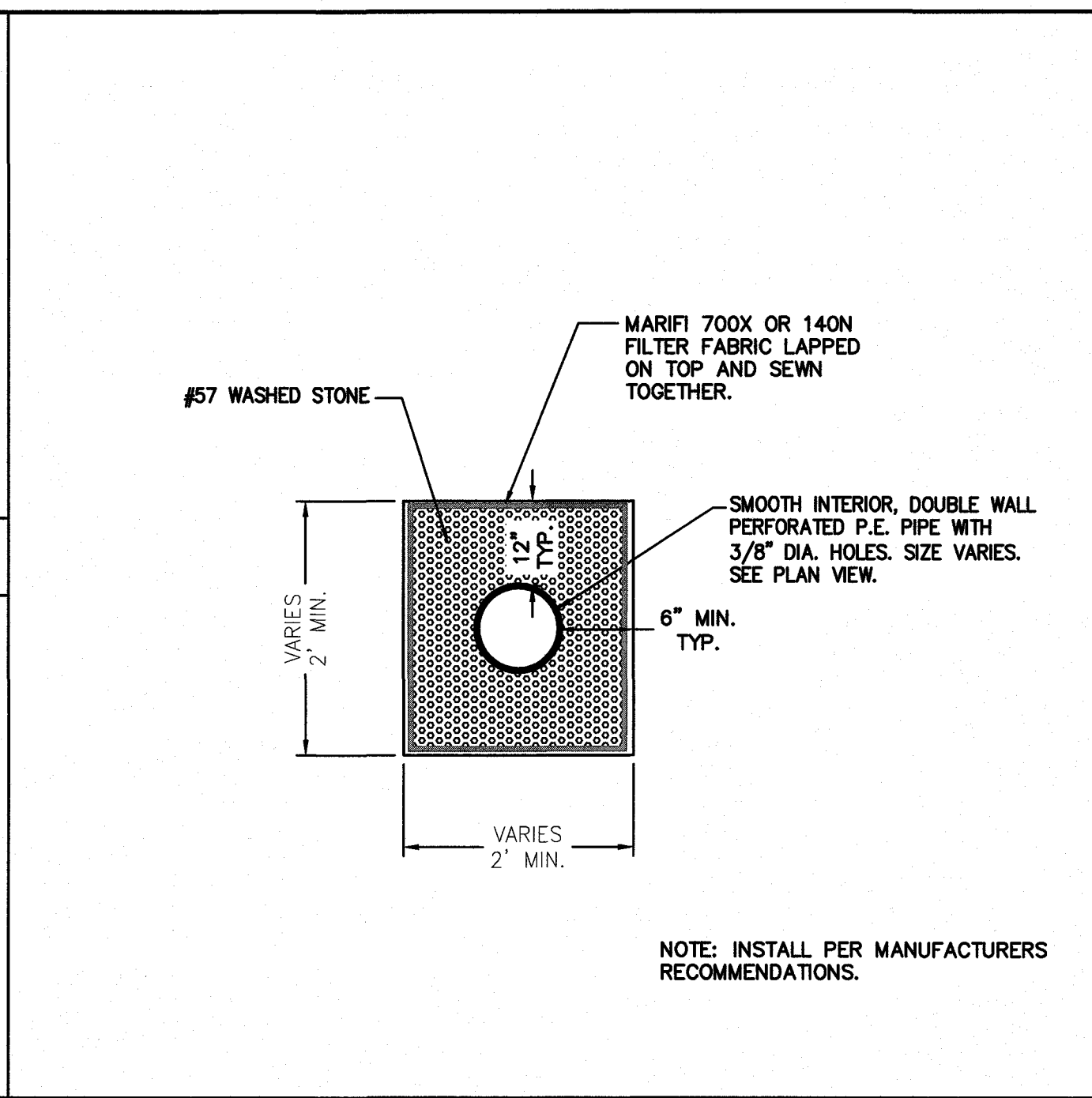
NCDENR PWSS WATER PERMIT #: _____ GPD
WATER CAPACITY: _____ GPD
DWQ SEWER PERMIT #: _____ GPD
SEWER SHED # AND PLANT: _____
SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)



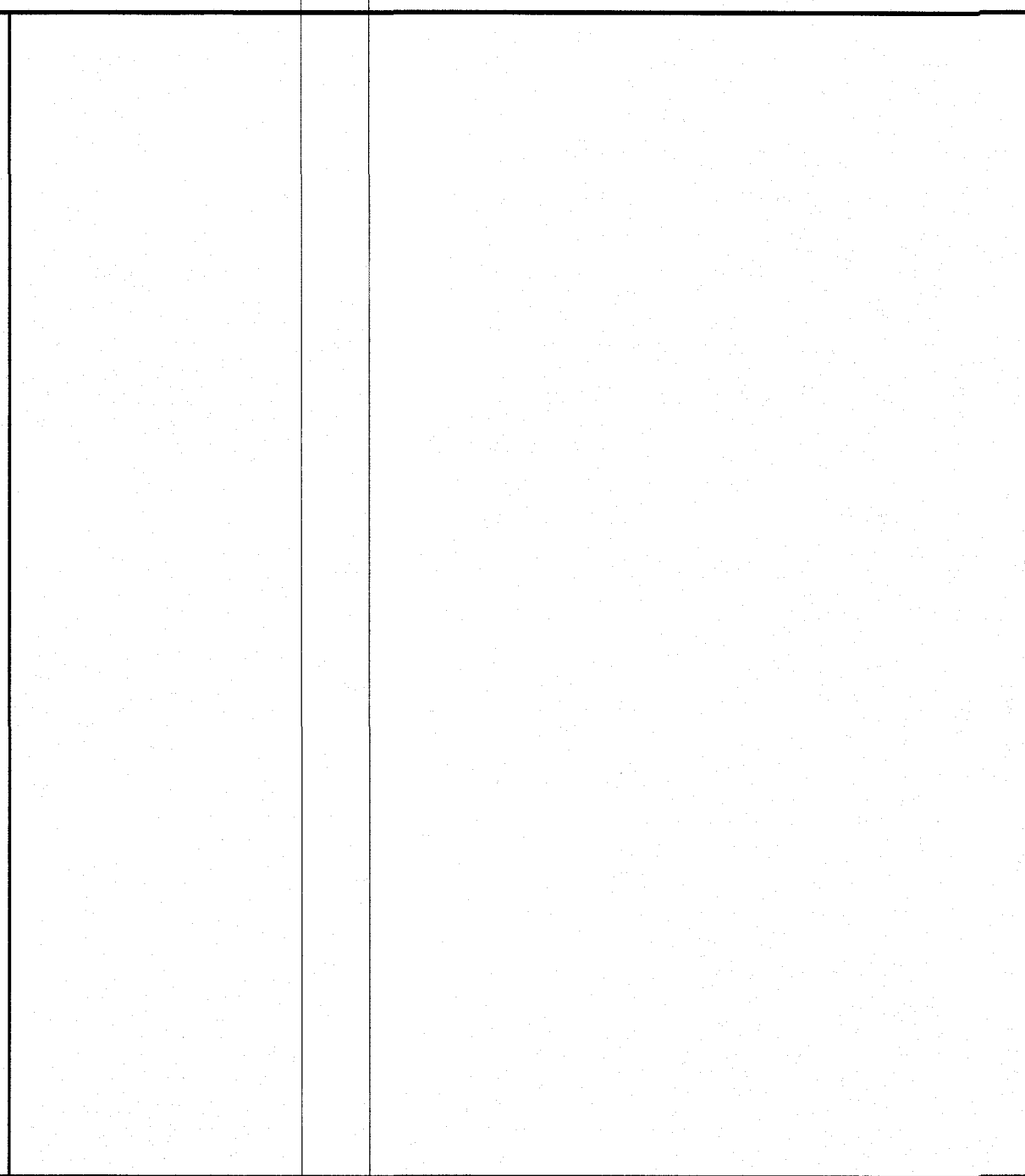
1 18" HEADER CURB DETAIL



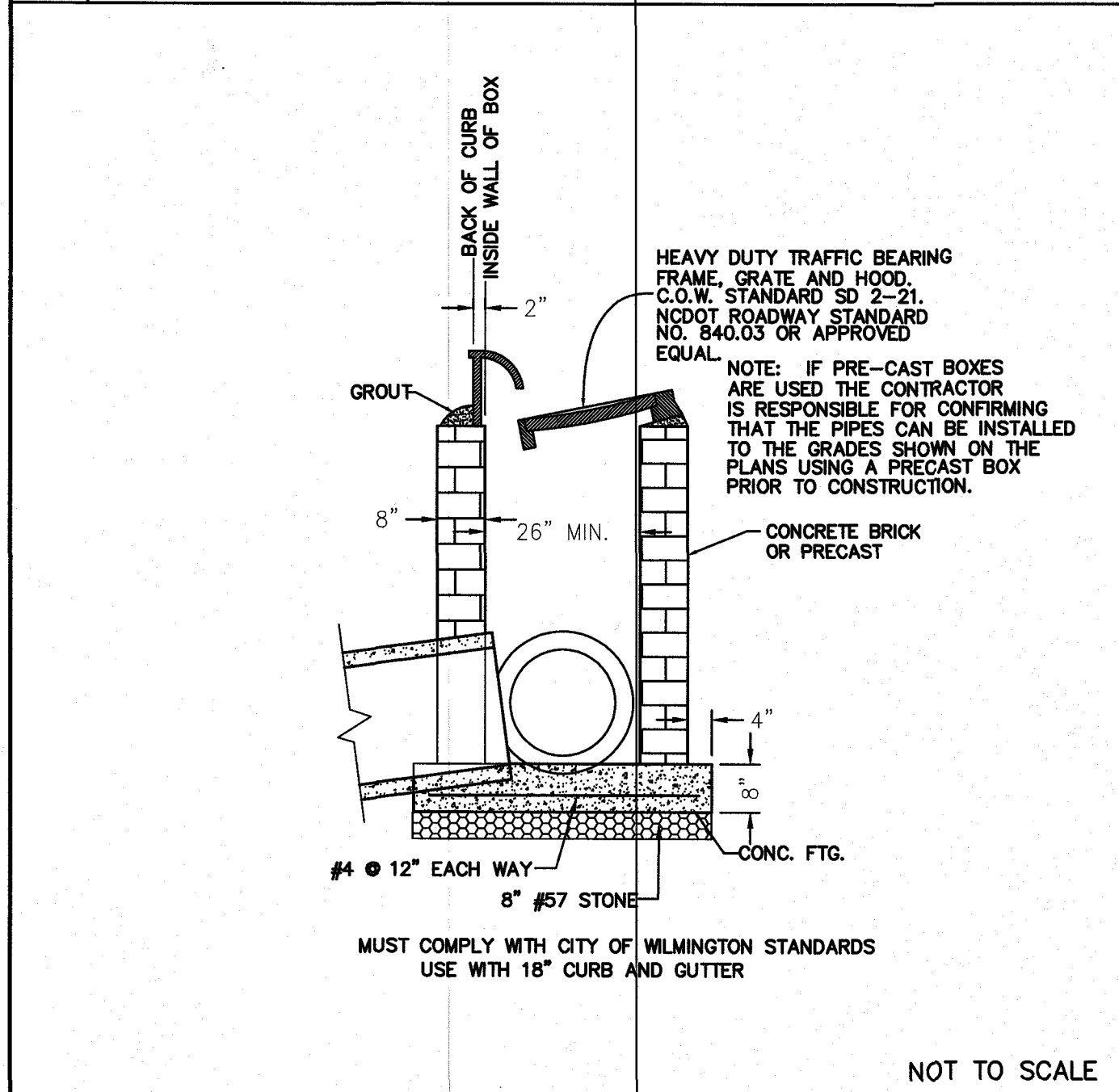
1a REINFORCED VALLEY GUTTER DETAIL



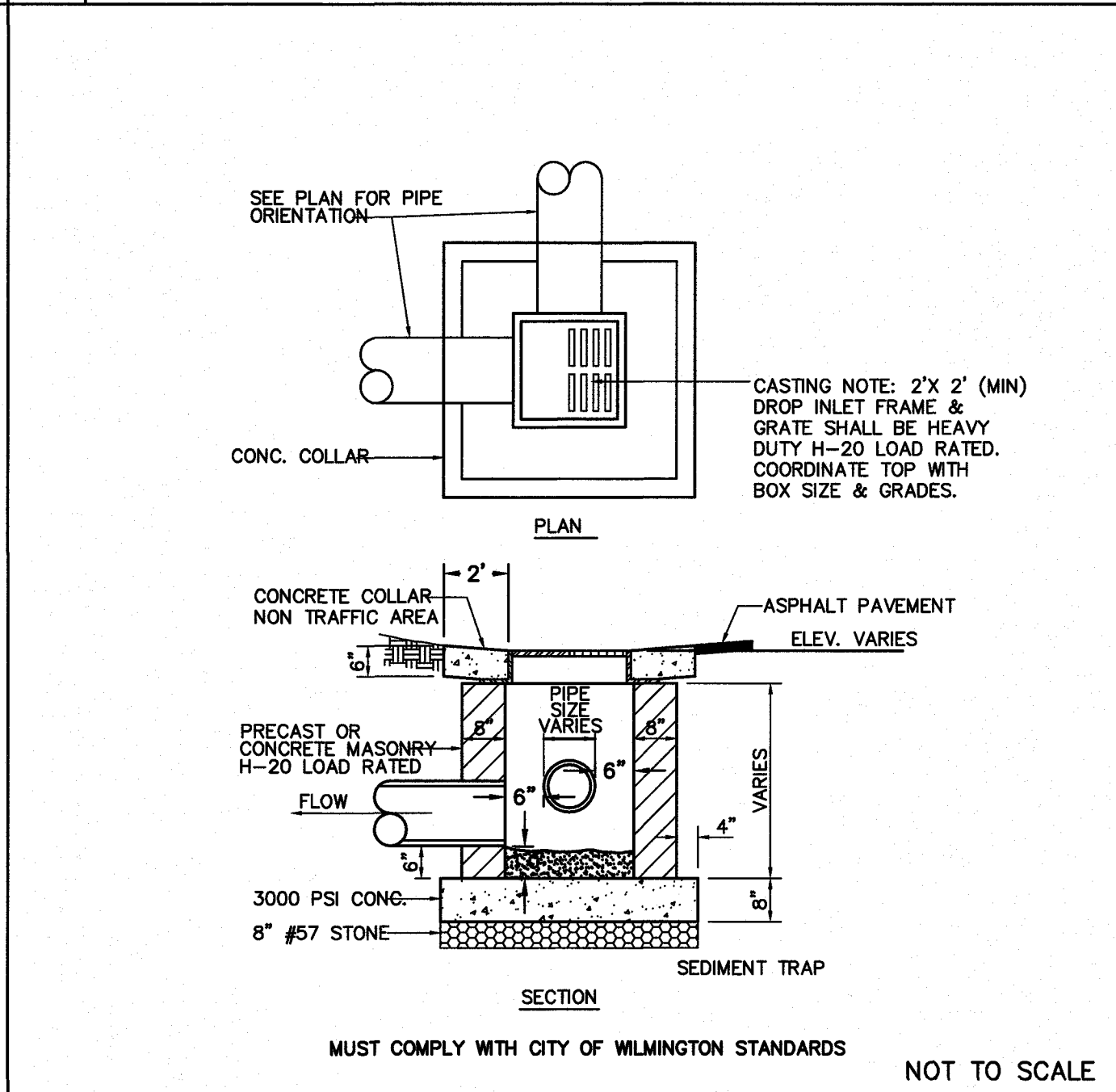
2 PERFORATED PIPE TRENCH DETAIL



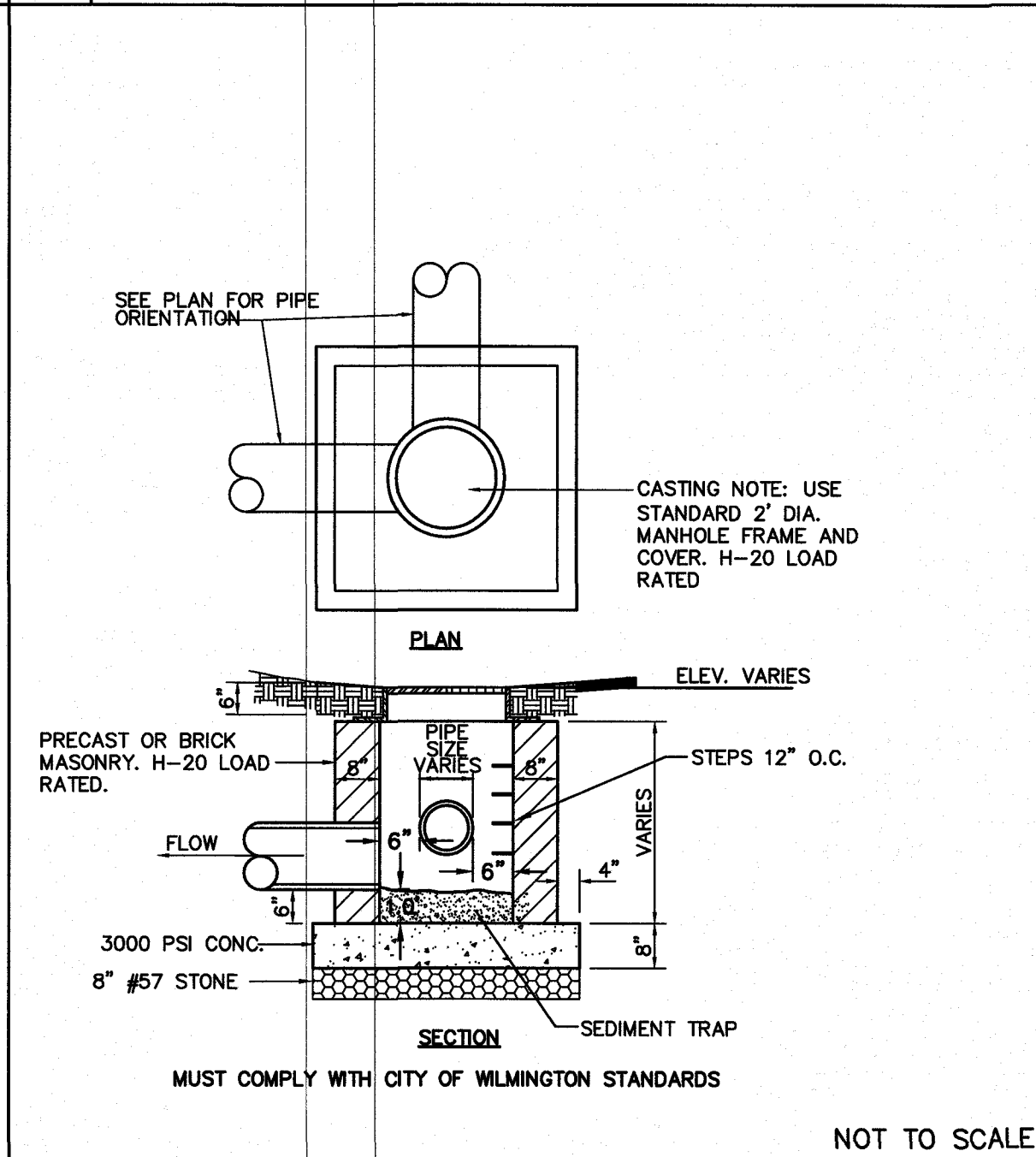
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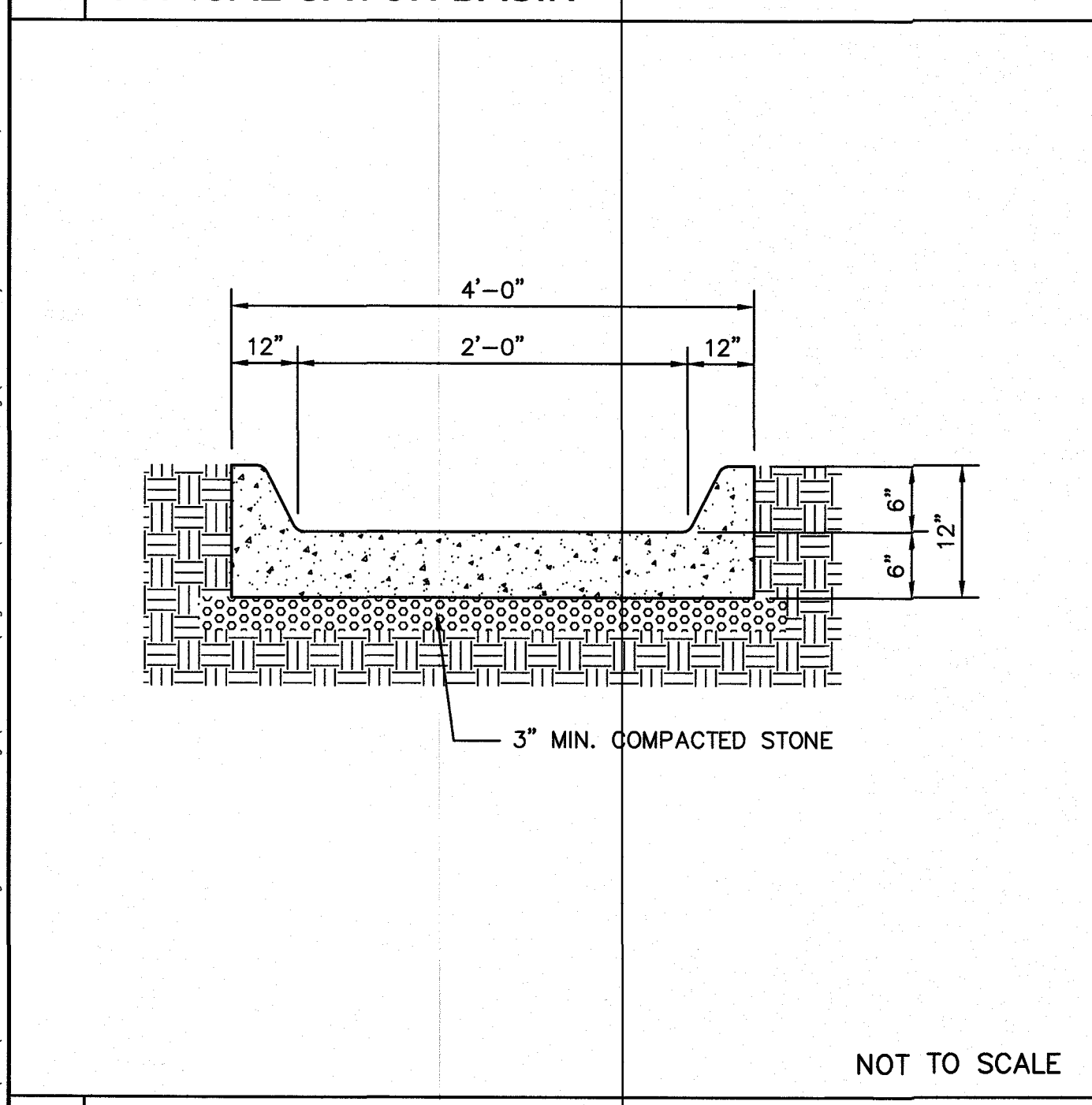
4 TYPICAL CATCH BASIN



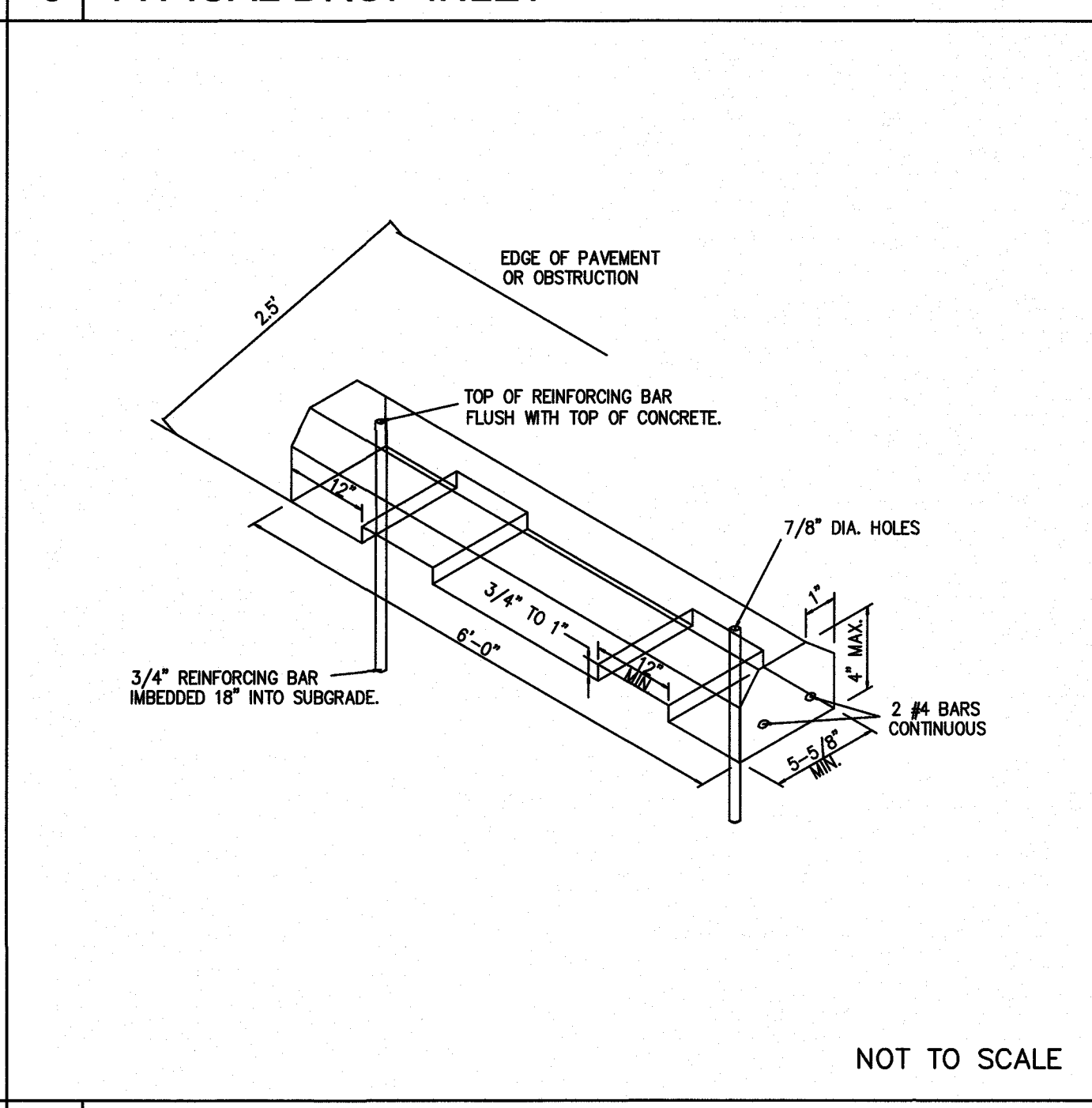
5 TYPICAL DROP INLET



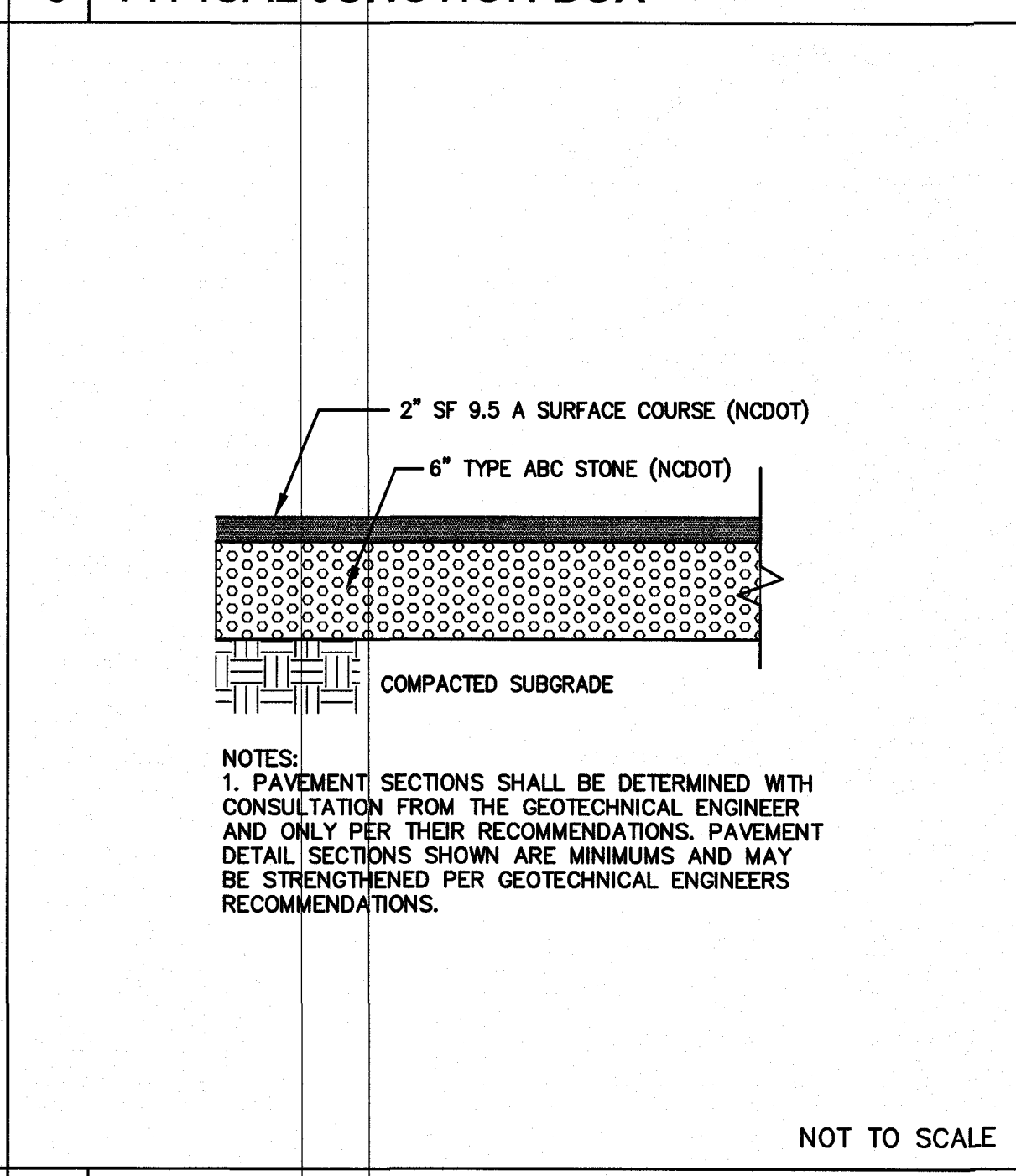
6 TYPICAL JUNCTION BOX



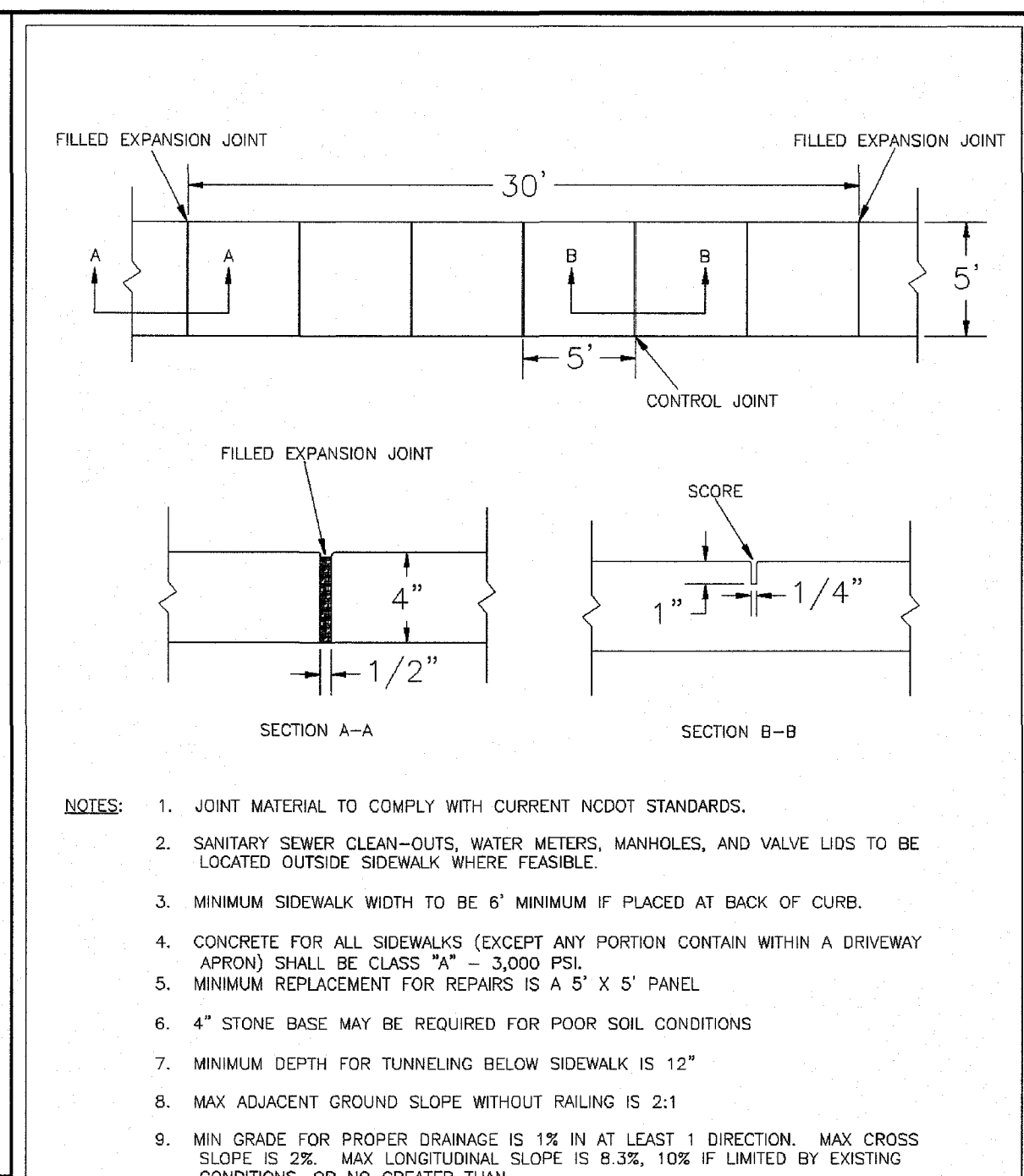
7 CONCRETE FLUME SECTION



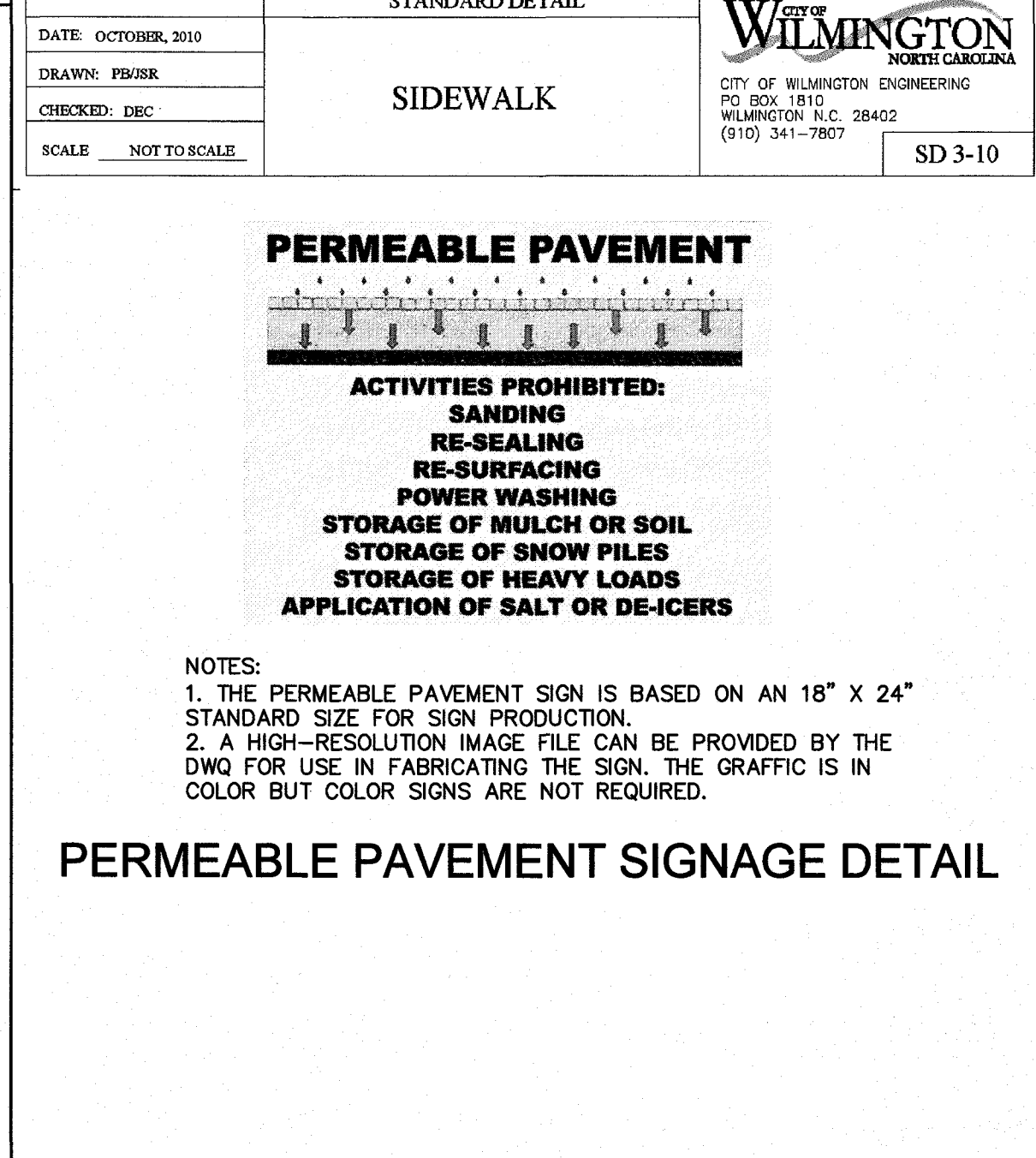
8 CONCRETE WHEEL STOPS



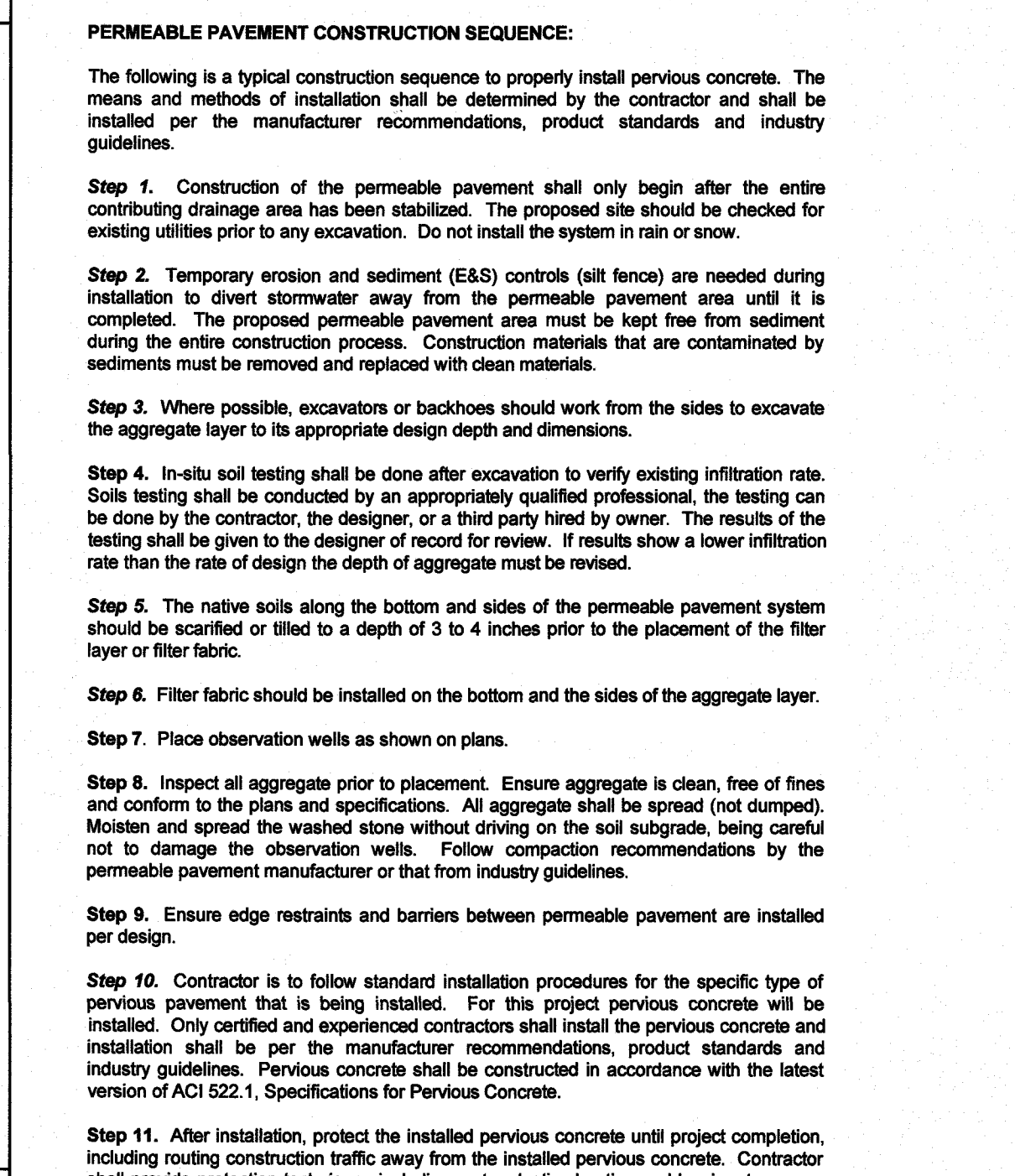
9 ASPHALT PAVEMENT SECTION



10 PERMEABLE PAVEMENT CONSTRUCTION SEQUENCE:



11 PERVIOUS PAVEMENT OBSERVATION WELL DETAIL



12 PERVIOUS PAVEMENT OBSERVATION WELL DETAIL FOR PERMIT ONLY

SITE WORK NOTES:

1. THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH FIELD CONSTRUCTION CONDITIONS.
2. CONTRACTOR SHALL COORDINATE WORK WITHIN NCDOT AND LOCAL RIGHT OF WAYS WITH PROPER AUTHORITIES AND SHALL MEET ANY REQUIREMENTS AS TO TRAFFIC CONTROL AND CONNECTION TO EXISTING STREETS.
3. CLEARING AND GRUBBING: REMOVE ALL TREES AS REQUIRED UNLESS OTHERWISE NOTED TO REMAIN, STUMPS, ROOTS, SHRUBBERY, ASPHALT, CONCRETE, STRUCTURES, BURIED UTILITIES, STORAGE TANKS, ETC. WITHIN LIMITS OF CONSTRUCTION.
4. STRIPPING: BEFORE EXCAVATING OR FILLING, REMOVE ALL TOPSOIL, WOOD, LEAVES, AND ANY OTHER UNSUITABLE MATERIAL.
5. MUCKING: REMOVE ANY SOFT, ORGANIC SILT MATERIALS AND EXISTING BURIED CONSTRUCTION DEBRIS AS REQUIRED AND FILL TO SUBGRADE ELEVATIONS WITH A CLEAN SELECT-FILL COMPACTED AS SPECIFIED.
6. DISPOSAL: CLEARED, GRUBBED, STRIPPED OR EXCAVATED SPOIL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES.
7. BORROW MATERIAL: THE CONTRACTOR SHALL FURNISH BORROW MATERIAL REQUIRED FROM OFF SITE AND OBTAIN ALL REQUIRED PERMITS ASSOCIATED WITH BORROW OPERATIONS.
8. FILL AND COMPACTION: AFTER STRIPPING THOSE AREAS DESIGNATED TO RECEIVE FILL SHOULD BE PROFFERED. THE TOP 8" OF SUBGRADE SHALL BE COMPACTED TO AT LEAST 98% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT. ANY AREA WHICH PUMPS OR RUNS EXCESSIVELY SHOULD BE UNDERDUT AND REPLACED WITH A CLEAN, SILTY OR CLAYEY SAND HAVING A UNIFIED SOIL CLASSIFICATION OF SP, SM, OR SC. FILL MATERIAL 5" OUTSIDE OF BUILDING AREAS SHALL THEN BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED TO 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. FILL MATERIALS WITHIN BUILDING AREAS TO A LINE OUTSIDE THE BUILDING AREAS SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. FILL MATERIALS WITHIN BUILDING AREAS TO A LINE OUTSIDE THE BUILDING AREAS SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED TO 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. FILL MATERIALS WITHIN BUILDING AREAS TO A LINE OUTSIDE THE BUILDING AREAS SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. IF THE MATERIAL IS TOO DRY TO COMPACT TO THE REQUIRED DENSITY EACH LAYER SHALL BE WETTED IN ACCORDANCE WITH COMPACTION REQUIREMENTS. IF THE MATERIAL IS TOO WET TO SECURE PROPER COMPACTION, IT SHALL BE HARROWED REPEATEDLY OR OTHERWISE AERATED WITH SUITABLE EQUIPMENT UNTIL OPTIMUM MOISTURE CONTENT IS OBTAINED. FILL SHALL BE PLACED IN SUCH A MANNER THAT THE SURFACE WILL DRAIN READILY AT ALL TIMES. SEE STRUCTURAL NOTES AND SOILS REPORT FOR ADDITIONAL REQUIREMENTS.
9. LAYOUT: THE CONTRACTOR SHALL PROVIDE ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION.
11. EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION FROM SURVEY BY BATEMAN CIVIL SURVEY COMPANY AND PROVIDED BY OWNER.
12. THE CONTRACTOR SHALL VERIFY DIMENSIONS AT JOBSITE.
13. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF RELOCATION OR DISCONNECTION OF ALL EXISTING UTILITIES WITH APPLICABLE AGENCIES AND AUTHORITIES.
14. ALL PAVEMENT AND BASE MATERIALS AND WORKMANSHIP SHALL CONFORM TO NCDOT STANDARDS.
15. WATER AND SEWER SERVICES SHALL BE INSTALLED TO MEET LOCAL AND STATE PLUMBING CODES. METER AND TAPS SHALL MEET ALL LOCAL REQUIREMENTS.
16. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE.
17. SEE SOILS REPORT FOR ADDITIONAL REQUIREMENTS.
18. CONTRACTOR SHALL NOTE THAT EARTHWORK QUANTITIES ARE HIS RESPONSIBILITY. PLANS DO NOT REPRESENT A BALANCED EARTHWORK CONDITION.
19. REINF. CONC. PIPE SHALL BE CLASS III W/RUBBER GASKETED JOINT OR "RAM NECK". INSTALL PER MANUFACTURER'S REQUIREMENTS.
20. USE WHITE LANE MARKING PAINT FOR ALL PAVEMENT MARKINGS. PAINT SHALL BE A CHLORINATED RUBBER ALKYD, FS TT-P-115, TYPE III, FACTORY MIXED, QUICK DRYING, NON-BLEEDING.
21. REFER TO THE PLUMBING DRAWINGS FOR LOCATION AND INVERTS OF NEW WASTE, WATER AND ROOF DRAIN LINES.

PERVIOUS PAVEMENT OBSERVATION WELL DETAIL FOR PERMIT ONLY NOT FOR CONSTRUCTION

1. IF THE SUBGRADE IS NOT TERRACED, THEN THE OBSERVATION WELL SHALL BE PLACED AT THE LOW END OF THE SUBGRADE SLOPE. IF THE SUBGRADE IS TERRACED, THEN ONE OBSERVATION WELL SHALL BE BUILT INTO THE LOW END OF EACH TERRACE.

2. OBSERVATION WELLS SHALL BE FITTED WITH A LOCKABLE CAP INSTALLED PLACED EVEN WITH THE PAVEMENT SURFACE TO FACILITATE QUARTERLY INSPECTION AND MAINTENANCE.

3. THE OBSERVATION WELL SHALL CONSIST OF A RIGID 4 TO 6 IN. DIAMETER PERFORATED PVC PIPE.

PERVIOUS PAVEMENT OBSERVATION WELL NOTES:

1. IF THE SUBGRADE IS NOT TERRACED, THEN THE OBSERVATION WELL SHALL BE PLACED AT THE LOW END OF THE SUBGRADE SLOPE. IF THE SUBGRADE IS TERRACED, THEN ONE OBSERVATION WELL SHALL BE BUILT INTO THE LOW END OF EACH TERRACE.

2. OBSERVATION WELLS SHALL BE FITTED WITH A LOCKABLE CAP INSTALLED PLACED EVEN WITH THE PAVEMENT SURFACE TO FACILITATE QUARTERLY INSPECTION AND MAINTENANCE.

3. THE OBSERVATION WELL SHALL CONSIST OF A RIGID 4 TO 6 IN. DIAMETER PERFORATED PVC PIPE.

APPROVED CONSTRUCTION PLAN

City of Wilmington, North Carolina
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____
Signed: _____

Name _____ Date _____
Planning _____
Traffic _____
Fire _____

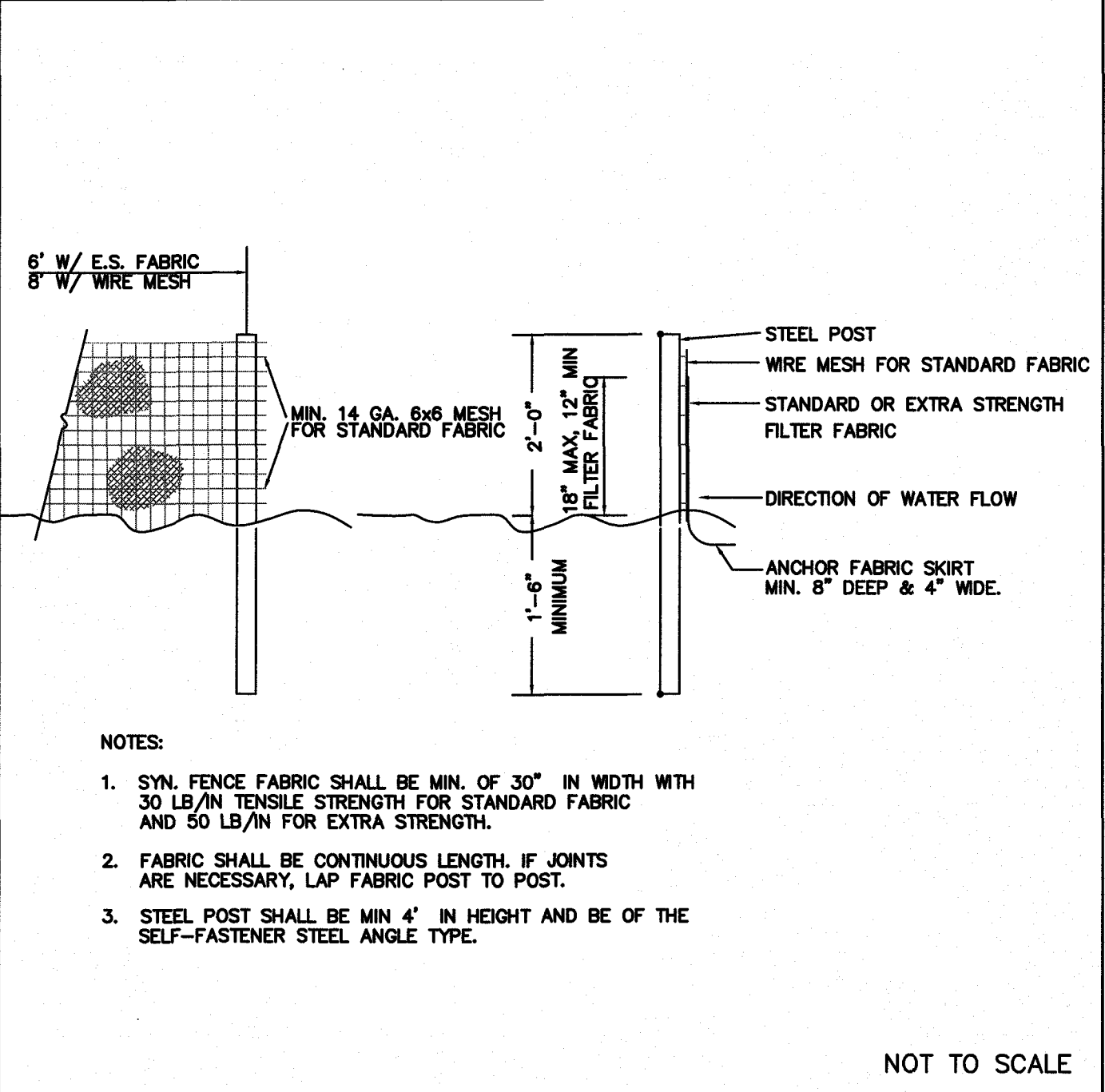
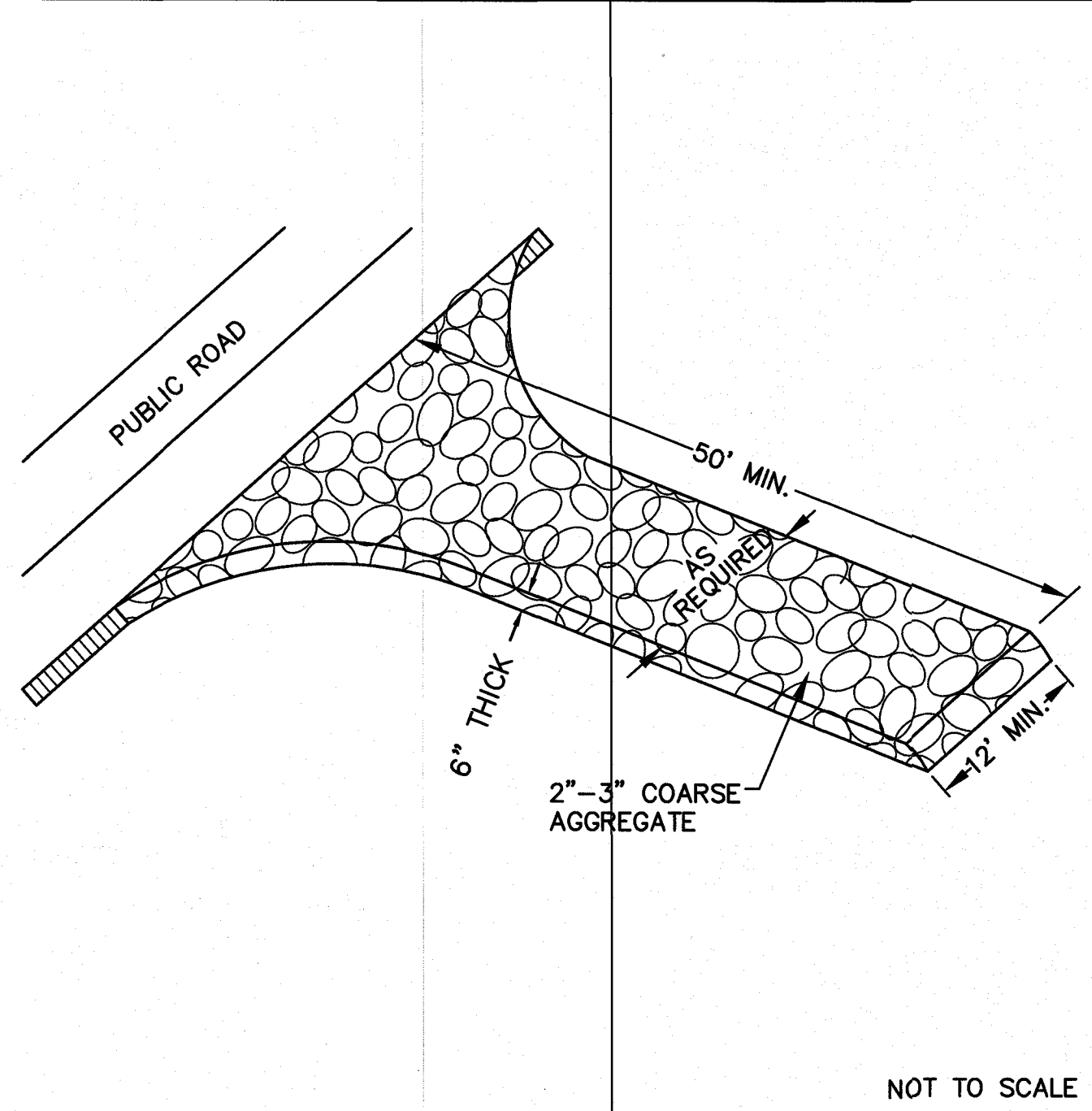
NOTES AND DETAILS
HEALTH DEPARTMENT PARKING LOT
2029 S. 17TH STREET
WILMINGTON, N. C.

OWNER/DEVELOPER
NHRMC
P.O. BOX 9000
WILMINGTON, NC 28402
910 343-2788

NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
2602 IRON GATE DR., SUITE 102 1429 ASH-LITTLE RIVER RD., NW
DUNN COUNTY, NC 28405
PHONE (910) 343-5960

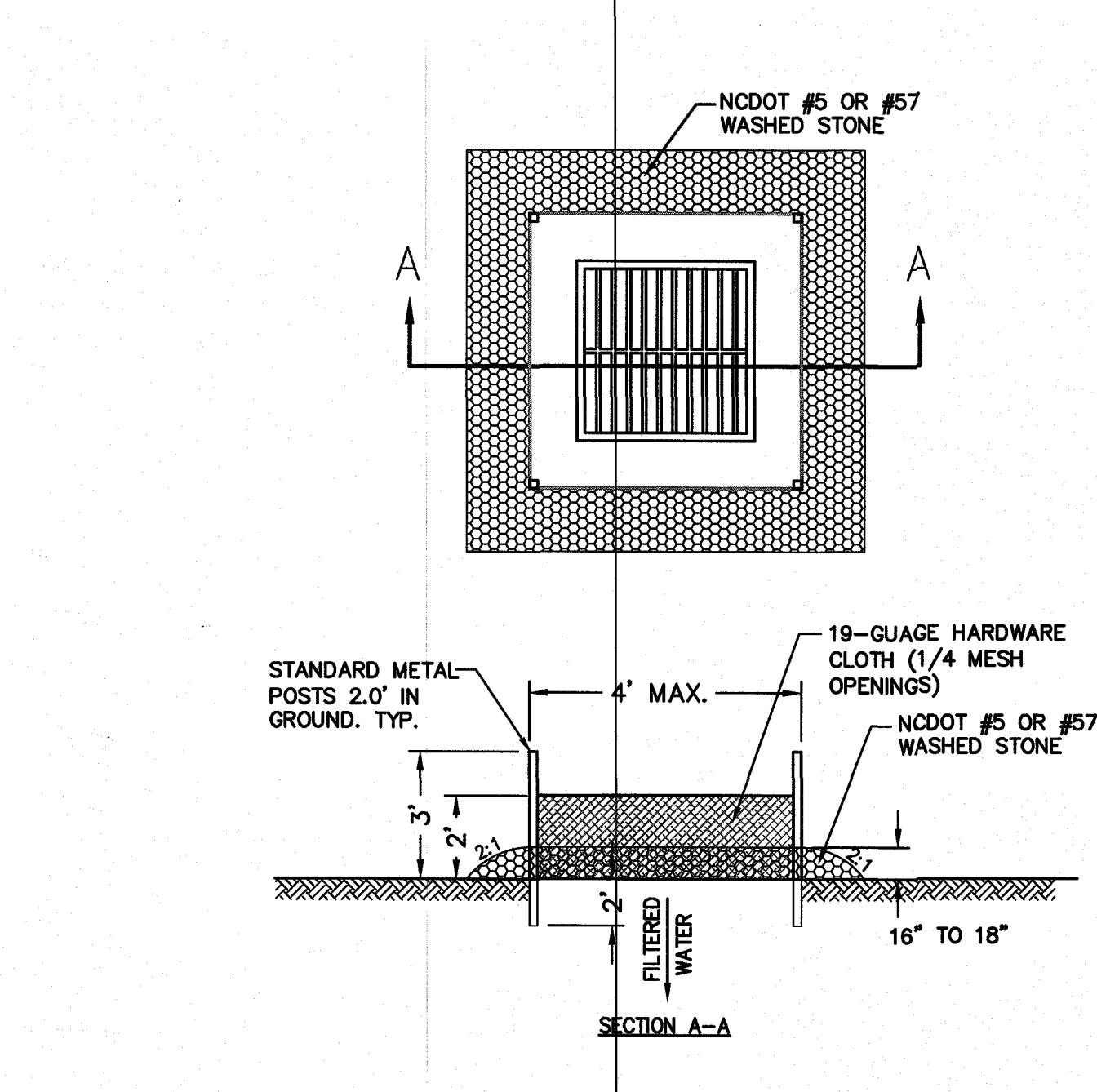
Licence #C-3641
19091
DES. JST
CHK. JPN
DRWN. NKS
DATE 03/18/20

C5.1 PRELIMINARY



1 TEMPORARY GRAVELLED CONSTRUCTION ENTRANCE

2 TEMPORARY SILT FENCE



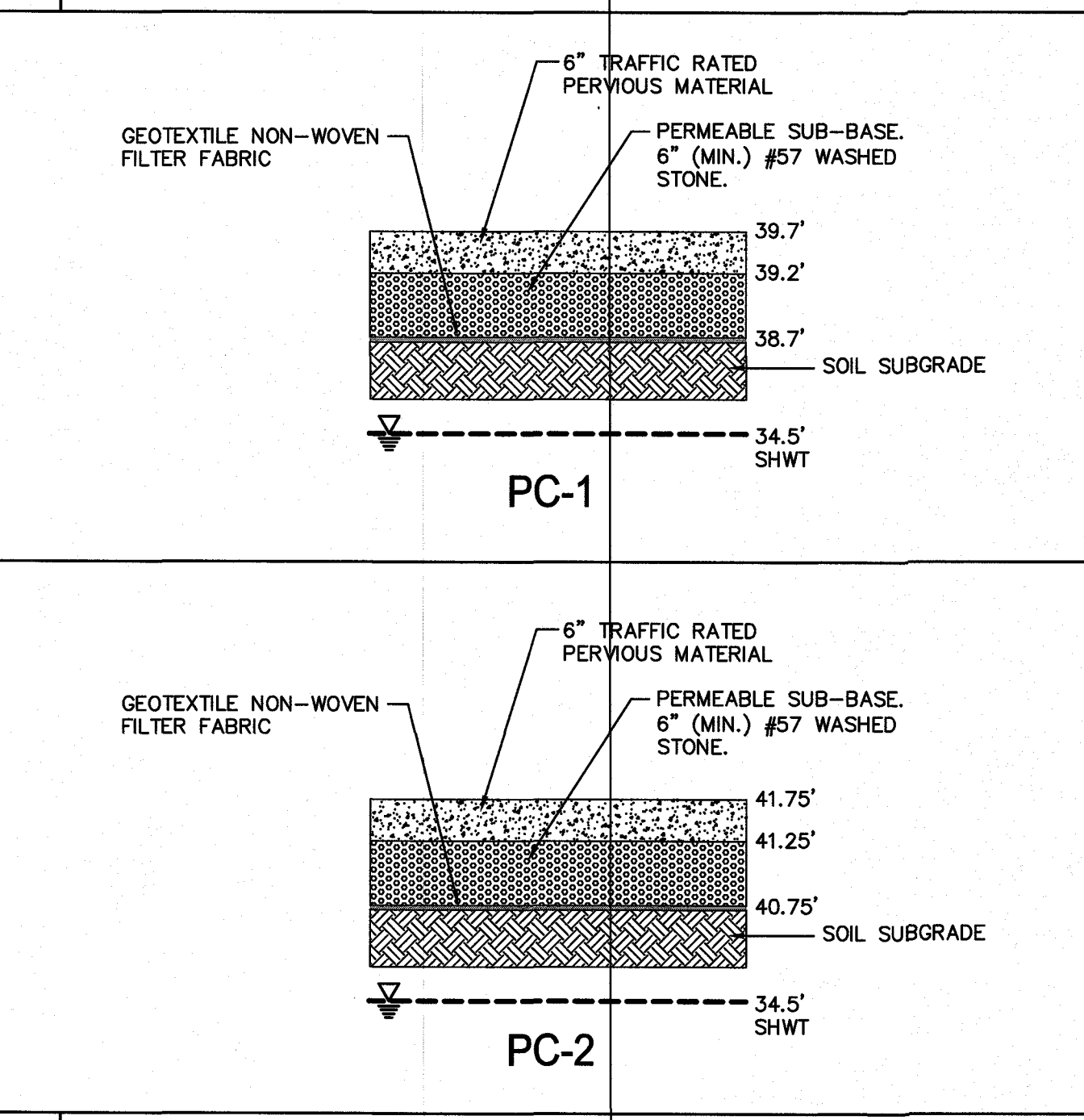
CONSTRUCTION SEQUENCE:

- UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
- DRIVE 5" STEEL POST 2' INTO THE GROUND SURROUNDING THE INLET. SPACE POST EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4' APART.
- SURROUND THE POST WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POST AT THE TOP, MIDDLE AND BOTTOM. PLACING A 2' FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
- PLACE CLEAN GRAVEL (NCDOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16" TO 18" AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
- ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
- COMPACT THE AREA PROPERLY AND STABILIZE IT WITH GROUND COVER.

MAINTENANCE:

INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REMOVE SEDIMENT WHEN ACCUMULATION REACHES HALF THE DEPTH OF ROCK. REPLACE STONE WHEN IT NO LONGER DRAINS AS DESIGNED.

3 HARDWARE CLOTH AND GRAVEL INLET PROTECTION



NOTES:

- 1=15.83 IN/HR (USE 7.0 IN/HR). ECS BORING I-8
- TRAFFIC RATED PERVIOUS MATERIALS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
- PERVIOUS MATERIALS SECTION MAY VARY DEPENDING UPON FIELD CONDITIONS.
- CROSS-SECTION ELEVATIONS REFLECT APPROXIMATE LOW POINT OF PAVEMENT SECTION.

4 PERVIOUS PAVEMENT SECTIONS

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE SPECIES	RATE (lb/acre)	(lb/1000 sf)
RYE (GRAIN)	120	2.75

SEEDING DATES:
MOUNTAINS - AUG. 15 - DEC. 15
COASTAL PLAIN AND PIEDMONT - AUG. 15 - DEC. 15

SOIL AMENDMENTS:
FOLLOW SOIL TEST OR APPLY 2,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 1,000 lb/acre 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 lb/acre STRAW, ANCHOR STRAW BY TACKLING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:
REPAIR AND REFERTILIZE DAMAGE AREAS IMMEDIATELY. TOP DRESS WITH 50 lb/acre OF NITROGEN IN MARCH, IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15. OVERSEED WITH 50 lb/acre KOBE (PIEDMONT AND COASTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

SEEDING MIXTURE SPECIES	RATE (lb/acre)	(lb/1000 sf)
GERMAN MILLET	40	0.92

SEEDING DATES:
MOUNTAINS - MAY 15 - AUG. 15
PIEDMONT - MAY 1 - AUG. 15
COASTAL PLAIN - APR. 15 - AUG. 15

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 750 lb/acre 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 lb/acre STRAW, ANCHOR STRAW BY TACKLING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE SPECIES	RATE (lb/acre)	(lb/1000 sf)
RYE (GRAIN)	120	2.75
ANNUAL LESPEDEZA	50	1.15

SEEDING DATES:
MOUNTAINS - ABOVE 2,500 FEET: FEB. 15 - MAY 15
BELOW 2,500 FEET: FEB. 1 - MAY 1
PIEDMONT - JAN. 1 - MAY 1
COASTAL PLAIN - DEC. 1 - APRIL 15

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 750 lb/acre 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 lb/acre STRAW, ANCHOR STRAW BY TACKLING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

PERMANENT SEEDING RECOMMENDATIONS FOR FALL AND EARLY SPRING

SEEDING MIXTURE SPECIES	RATE (lb/acre)	(lb/1000 sf)
TALL FESCUE	80	1.84
PENSACOLA BAHIAGRASS	50	1.15
SERICEA LESPEDEZA	30	0.69
KOBE LESPEDEZA	10	0.23

SEEDING NOTES:

- FROM SEPT. 1 THRU MAR. 1, USE UNSCARIFIED SERICEA SEED.
- ON POORLY DRAINED SITES OMIT SERICEA AND INCREASE KOBE TO 30 lb/acre.
- WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND INCREASE KOBE TO 40 lb/acre.

NURSE PLANTS: BETWEEN APR. 15 AND AUG. 15, ADD 10 lb/acre GERMAN MILLET OR 15 lb/acre SUDAGRASS. PRIOR TO MAY 10 OR AFTER APR. 15 ADD 25 lb/acre RYE (GRAIN).

SEEDING DATES:
EARLY SPRING: FEB. 15 - MAR. 20
FALL: SEPT. 1 - SEPT. 30
BEST: FEB. 15 - APR. 30
POSSIBLE: SEPT. 1 - OCT. 31

SOIL AMENDMENTS:
APPLY LIME AND FERTILIZE ACCORDING TO SOIL TESTS, OR APPLY 3,000-5,000 lb/acre (88.9-114.8 lb/1,000 sf) GROUND AGRICULTURAL LIMESTONE (USE THE LOWER RATE ON SANDY SOILS) AND 1,000 lb/acre (22.9 lb/1,000 sf) 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 lb/acre (91.8 lb/1,000 sf) GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKLING WITH ASPHALT, NETTING, OR ROVING OR CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:
IF GROWTH IS LESS THAN FULLY ADEQUATE, REFERTILIZE IN THE SECOND YEAR, ACCORDING TO SOIL TESTS OR TOPDRESS WITH 500 lb/acre (11.5 lb/1,000 sf) 10-10-10 FERTILIZER. MOW AS NEEDED WHEN SERICEA IS OMITTED FROM THE MIXTURE. RESEED, FERTILIZE, AND MULCH DAMAGED AREAS IMMEDIATELY.

PERMANENT SEEDING RECOMMENDATIONS FOR LATE SPRING AND EARLY SUMMER

SEEDING MIXTURE SPECIES	RATE (lb/acre)	(lb/1000 sf)
PENSACOLA BAHIAGRASS	50	1.15
SERICEA LESPEDEZA	30	0.69
COMMON BERMUDA	10	0.23
GERMAN MILLET	10	0.23

SEEDING NOTES:

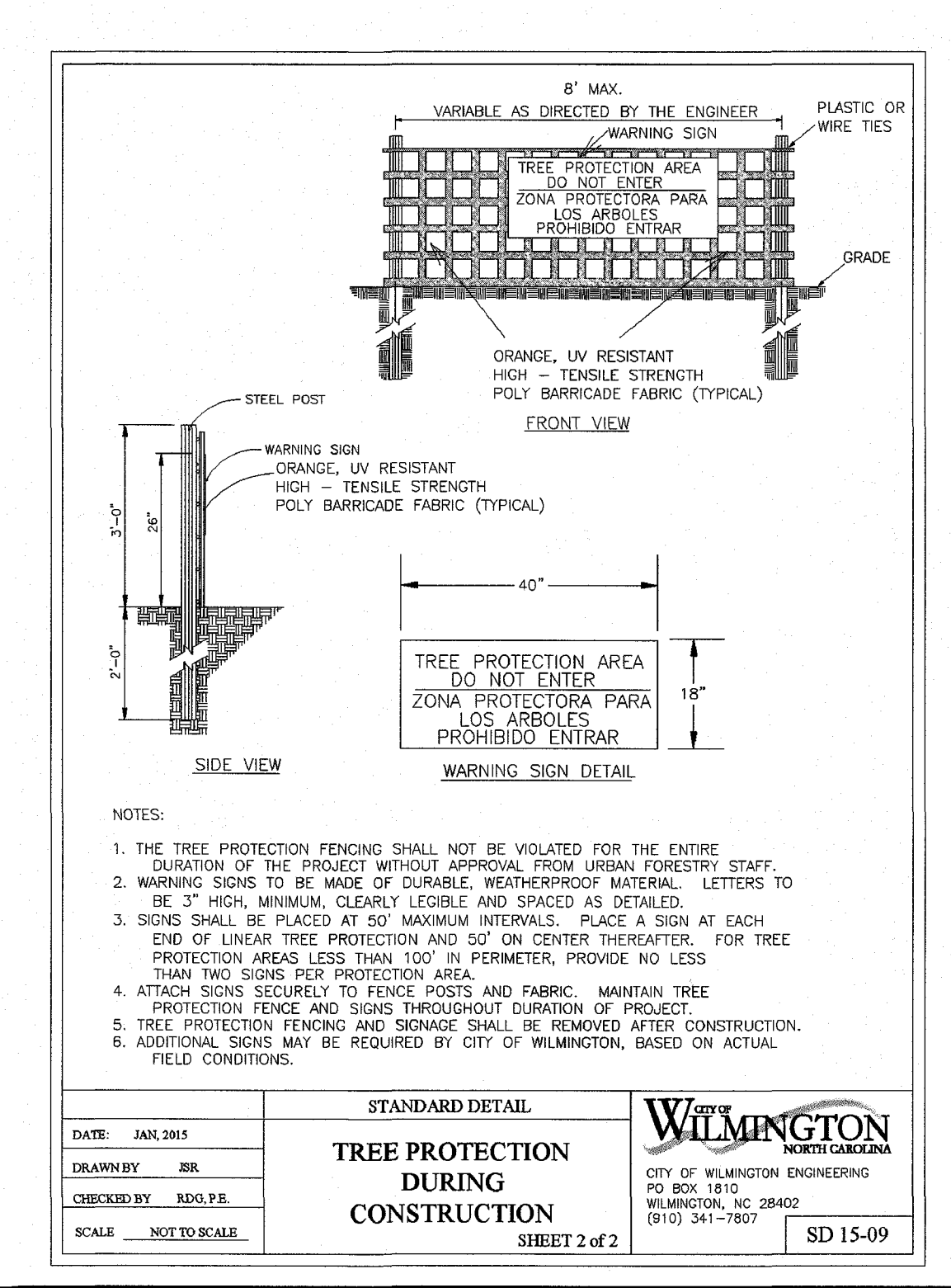
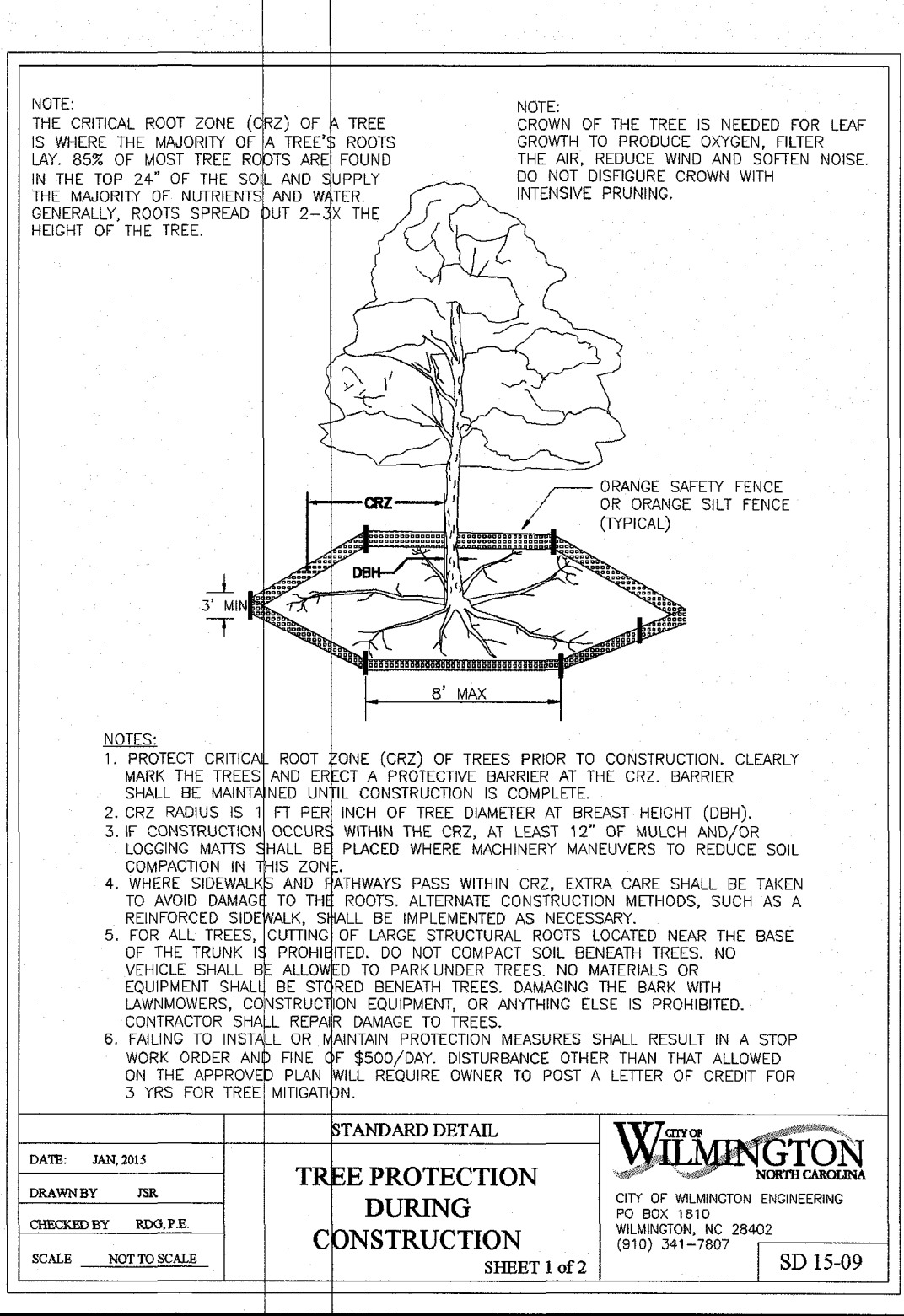
- WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA.
- USE COMMON BERMUDAGRASS ONLY ON ISOLATED SITES WHERE IT CANNOT BECOME A PEST. BERMUDAGRASS MAY BE REPLACED WITH 5 lb/acre CENTIPEDEGRASS.

SEEDING DATES:
APRIL 1 - JULY 15

SOIL AMENDMENTS:
APPLY LIME AND FERTILIZE ACCORDING TO SOIL TESTS, OR APPLY 3,000 lb/acre (88.9 lb/1,000 sf) GROUND AGRICULTURAL LIMESTONE AND 500 lb/acre (11.5 lb/1,000 sf) 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 lb/acre (91.8 lb/1,000 sf) GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKLING WITH ASPHALT, NETTING, OR ROVING OR CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:
REFERTILIZE THE FOLLOWING APRIL WITH 50 lb/acre (1.15 lb/1,000 sf) NITROGEN. REPEAT AS GROWTH REQUIRES. MAY BE MOWED ONLY ONCE A YEAR, WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND MOW AS OFTEN AS NEEDED.



EROSION CONTROL NOTES AND MAINTENANCE PLAN:

- 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 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 WATTLERS, 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. THE ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR WHEN 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 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.
- LAND QUALITY REQUIREMENTS:
ALL SEEDING 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.
WATER QUALITY REQUIREMENTS:
ALL SEEDING AREAS WILL BE FERTILIZED, RESEED AS NECESSARY AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, ALL SLOPES STEEPER THAN 3:1 HORIZONTAL TO 1:1 VERTICAL (3:1) AND ALL HIGH QUALITY WATER (HOW) ZONES SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN SEVEN (7) CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- FLOCCULANTS WILL BE USED TO ADDRESS TURBIDITY ISSUES. THE PUMPS, TANKS, HOSES AND INJECT SYSTEMS WILL BE CHECKED FOR PROBLEMS OR TURBID DISCHARGES DAILY.
- BASIN OUTLET STRUCTURES AND SKIMMERS SHALL WITHDRAW WATER FROM THE SURFACE.
- CONCRETE WASHOUTS SHOULD BE INSPECTED DAILY AND AFTER HEAVY RAINS. DAMAGES SHOULD BE REPAIRED PROMPTLY. IF FILLED TO OVER 75% CAPACITY WITH RAIN WATER IT SHOULD BE VACUUMED OR ALLOWED TO EVAPORATE TO AVOID OVERFLOWS. BEFORE HEAVY RAINS THE CONTAINERS LIQUID LEVEL SHOULD BE LOWERED OR THE CONTAINER COVERED TO AVOID AN OVER FLOW DURING RAIN. WHEN SOLIDS HAVE HARDENED THEY SHOULD BE REMOVED AND RECYCLED.

NOTES AND DETAILS
HEALTH DEPARTMENT PARKING LOT
2029 S. 17TH STREET
WILMINGTON, N. C.

OWNER/DEVELOPER
NHRMC
P.O. BOX 9000
WILMINGTON, NC 28402
910 343-2788

NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
1429 ASH-LITTLE RIVER RD. NW
WILMINGTON, NC 28403
PHONE (910) 343-9463

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

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

APPROVED STORMWATER MANAGEMENT PLAN

City of WILMINGTON, NORTH CAROLINA
Public Services • Engineering Division

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name: _____ Date: _____

Planning: _____
Traffic: _____
Fire: _____

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

C5.2 PRELIMINARY

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed. -7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(d) Slopes 3:1 to 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Roll-on erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Roll-on erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the leak has been corrected.
- Bring used fuels, lubricants, coolants, and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

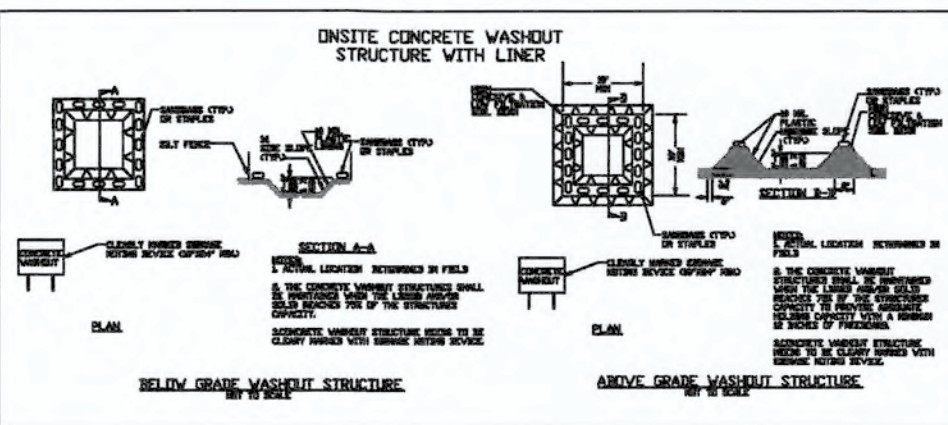
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpiles at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing deflected curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove loadings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining loadings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

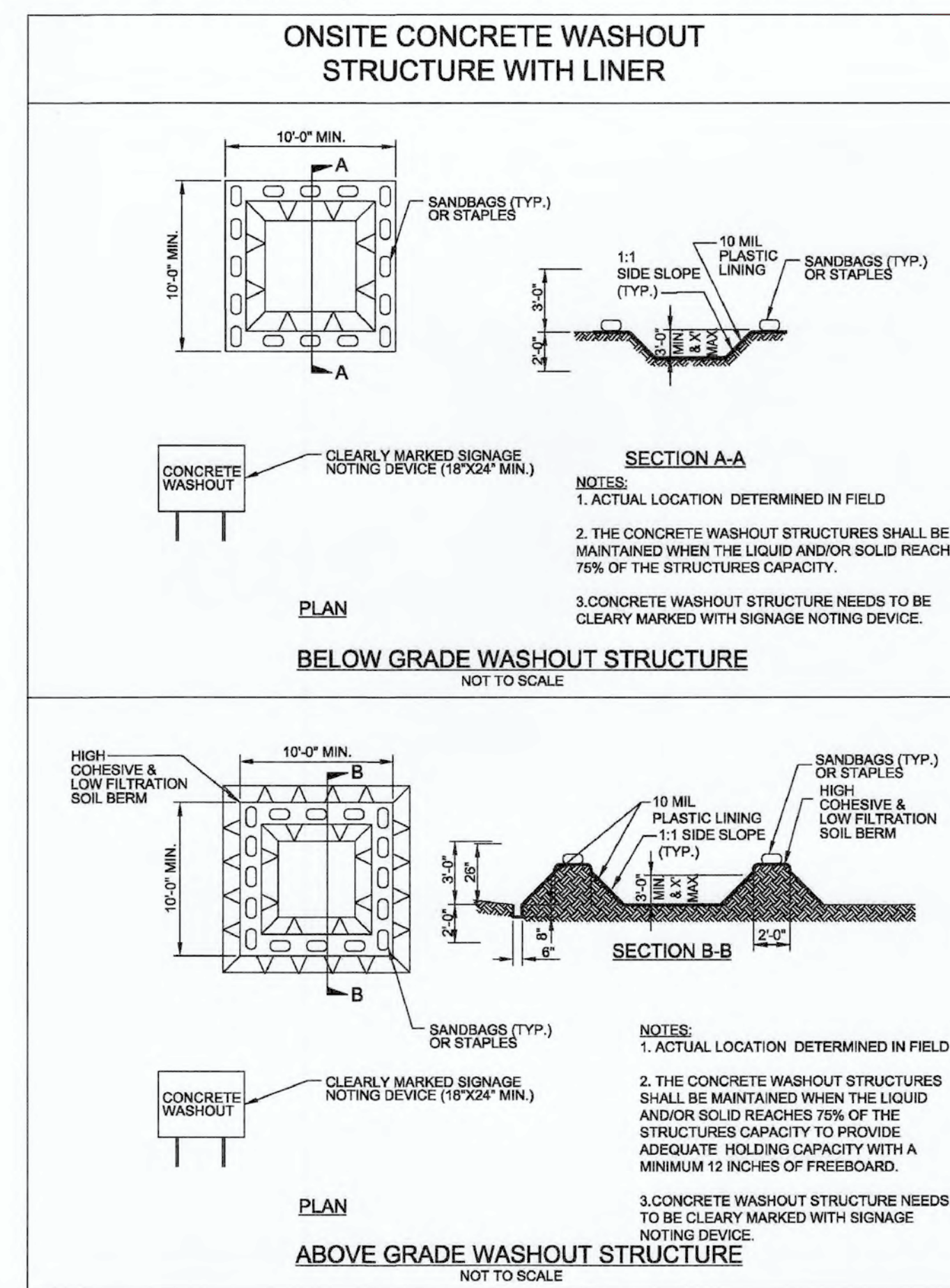
HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

WITH LINER, NO GRAVEL APPROACH



NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use approved by the Division.
(2) E&S Measures	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the measures inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures were operating properly. 5. Description of maintenance needs for the measure. 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the discharge. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration. 5. Indication of visible sediment leaving the site. 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits. 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where applicable)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required report to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&S measures, clearing and grubbing, installation of storm drainage facilities, completion of all land disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&S Plan Documentation
The approved E&S plan as well as any approved deviation shall be kept on the site. The approved E&S plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S plan shall be documented in the manner described:

Item to Document	Documentation Requirements
(a) Each E&S Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&S Plan.	Initial and date each E&S Measure on a copy of the approved E&S Plan or complete, date and sign an inspection report that lists each E&S Measure shown on the approved E&S Plan. This documentation is required upon the initial installation of the E&S Measures or if the E&S Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&S Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&S Plan.	Initial and date a copy of the approved E&S Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&S Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&S Measures.	Initial and date a copy of the approved E&S Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation

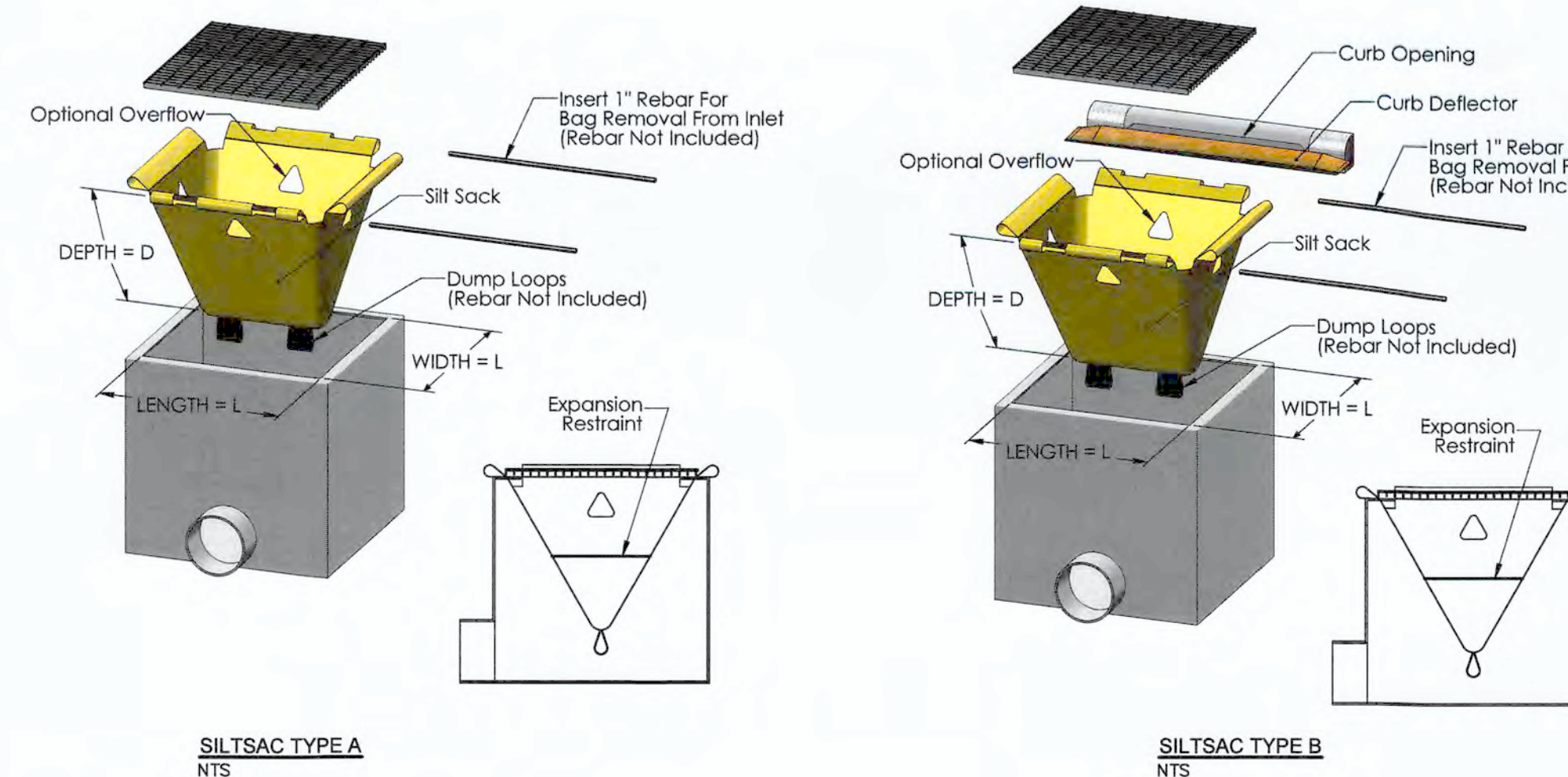
- In addition to the E&S Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:
- This general permit as well as the certificate of coverage, after it is received.
 - Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.
 - All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.412]

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

- 1. Occurrences that must be reported**
Permittees shall report the following occurrences:
- Visible sediment deposition in a stream or wetland.
 - Oil spills if:
 - They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
 - Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 145-215.85.
 - Anticipated bypasses and unanticipated bypasses.
 - Noncompliance with the conditions of this permit that may endanger health or the environment.
- 2. Reporting Timeframes and Other Requirements**
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the <i>NC 303(d) list</i> as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass. Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(j)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(j)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(i)(7)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(j)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.



NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE OPENING SIZE OF THE EXISTING OR PROPOSED CATCH BASIN OR DROP INLET. THE SILTSACK WILL BE MANUFACTURED TO FIT THE OPENING OF THE EXISTING OR PROPOSED CATCH BASIN OR DROP INLET.
- TO INSTALL THE SILTSACK IN THE CATCH BASIN, REMOVE THE GRATE AND PLACE THE SACK IN THE OPENING. HOLD OUT APPROXIMATELY SIX INCHES OF THE SACK OUTSIDE THE FRAME. THIS IS THE AREA OF THE LIFTING STRAPS. REPLACE THE GRATE TO HOLD THE SACK IN PLACE.
- THE SILTSACK IS FULL AND SHOULD BE EMPTIED WHEN THE RESTRAINT CORD IS NO LONGER VISIBLE.
- TO REMOVE THE SILTSACK, TAKE TWO PIECES OF 1" DIAMETER REBAR AND PLACE THROUGH THE LIFTING LOOPS ON EACH SIDE OF THE SACK TO FACILITATE THE LIFTING OF THE SILTSACK.
- TO EMPTY THE SILTSACK, PLACE IT WHERE THE CONTENTS WILL BE COLLECTED. PLACE THE REBAR THROUGH THE LIFT STRAPS (CONNECTED TO THE BOTTOM OF THE SACK) AND LIFT. THIS WILL TURN THE SILTSACK INSIDE OUT AND EMPTY THE CONTENTS. CLEAN OUT AND RINSE. RETURN THE SILTSACK TO ITS ORIGINAL SHAPE AND PLACE BACK IN THE BASIN.

SILT SACK NOTES

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

Approved Construction Plan

Name _____ Date _____
 Planning _____
 Traffic _____
 Fire _____
 Signed: _____



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

NORRIS & TUNSTALL
 CONSULTING ENGINEERS P.C.
 2605 IRON GATE DR., SUITE 102
 WILMINGTON, NC 28403
 PHONE (910) 343-9625

Licence #C-3641

19091

DES. JST
 CKD. JPN
 DRWN. NKS

DATE 03/18/20



C5.3
 PRELIMINARY

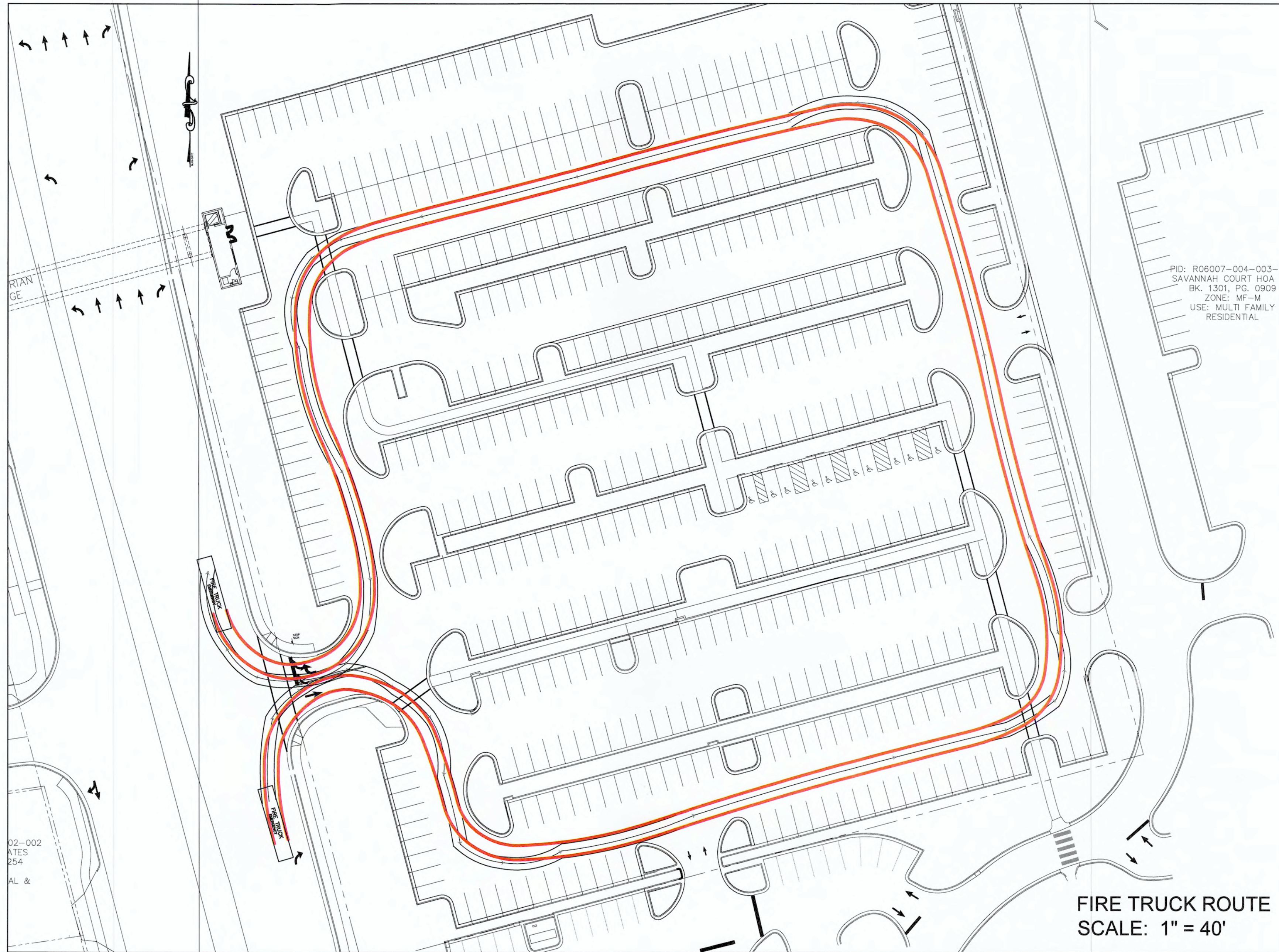
NOTES AND DETAILS
 HEALTH DEPARTMENT PARKING LOT
 2029 S. 17TH STREET
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OWNER/DEVELOPER
 NHRMC
 P.O. BOX 9000
 WILMINGTON, NC 28402
 910 343-2788

BY	DESCRIPTION	REVISIONS

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FIRE TRUCK ROUTE
SCALE: 1" = 40'

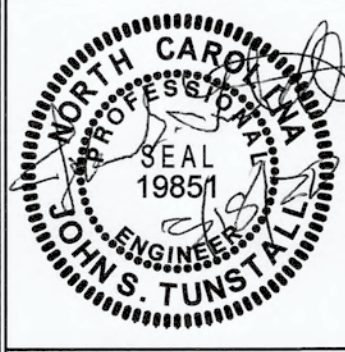
SYMBOL	DATE	DESCRIPTION	BY
		REVISIONS	
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FIRE TRUCK ROUTE
HEALTH DEPARTMENT PARKING LOT
 2029 S. 17TH STREET
 WILMINGTON, N. C.

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 DES. JST
 OKD. JPN
 DRWN. NKS
 DATE 03/18/20



C5.4
PRELIMINARY

FOR PERMIT ONLY
 NOT FOR CONSTRUCTION

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

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

Approved Construction Plan
 Name _____ Date _____
 Planning _____
 Traffic _____
 Fire _____

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

Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Public Utilities: _____

Traffic: _____

Fire: _____

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

Date: _____ Permit # _____

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SITE DATA

ADDRESS: 2131 S. 17TH STREET
PARCEL ID: R06011-004-013-000
PROPOSED USE: NHRMC SURFACE EMPLOYEE PARKING
EXISTING ZONING: O&I-1 - OFFICE AND INSTITUTIONAL
PARCEL AREA: 5.36 AC (242,375 SF)
DISTURBED AREA: 183,823 SF (4.22 AC)
CAMA LAND USE: URBAN

LANDSCAPE REQUIREMENTS

	REQUIRED	PROVIDED
PARKING LOT CANOPY COVERAGE (160,692 SF X 30%) (1 SHADE TREE = 707 SF)	48,208 SF, 68 TREES	48,821 SF, 81 TREES 27 EXISTING TREES CREDITS (19,089 SF)
STREET YARD PLANTING PRIMARY STREETYARD S. 17th STREET TREES REQUIRED	10,260 SF (570 LF x 18) 17 (1/600 SF)	10,260 SF 17 EXISTING TREES
SHRUBS REQUIRED	103 (6/600 SF)	92 PROPOSED SHRUBS 11 EXISTING AZALEAS
SECONDARY STREETYARD SAVANNAH COURT TREES REQUIRED	4,140 SF (460 LF x 9) 7 (1/600 SF)	4,140 SF 7 EXISTING TREES
SHRUBS REQUIRED	42 (6/600 SF)	54 PROPOSED SHRUBS
FOUNDATION PLANTING 12% FACADE AREA		
WEST SIDE	174 SF (44 LF x 33' x .12)	857 SF

RETAINED TREES COUNTING TOWARD REQUIREMENTS:

QUANTITY	SIZE	COMMON NAME
1	10"	HOLLY
2	12"	HOLLY
1	14"	HOLLY
1	15"	HOLLY
1	20"	CEDAR
1	7"	MAPLE
2	8"	MAPLE
2	12"	MAPLE
1	27"	MAPLE
1	8" TRIPLE	OAK
1	9"	OAK
4	10"	OAK
5	11"	OAK
2	12"	OAK
4	13"	OAK
5	14"	OAK
6	15"	OAK
1	17"	OAK
1	18"	OAK
1	20"	OAK
3	29"	OAK
1	7"	MAGNOLIA
1	12"	PINE
3	13"	PINE
2	15"	PINE
3	16"	PINE
4	17"	PINE
1	18"	PINE
1	21"	PINE
2	23"	PINE
1	24"	PINE

TOTAL: 1,036 / 6 = 173 TREE CREDITS

TREE MITIGATION REQUIREMENTS

REMOVED SIGNIFICANT TREES TO BE MITIGATED

QUANTITY	SIZE	COMMON NAME	% MITIGATION
1	28"	HARDWOOD	100

(28" x 2) / 3 = 17 TOTAL TREES

REMOVED REGULATED TREES TO BE MITIGATED

QUANTITY	SIZE	COMMON NAME	% MITIGATION
1	5"	HOLLY	100
1	12"	HARDWOOD	100
1	17"	HARDWOOD	100

34 / 3 = 12 TOTAL TREES

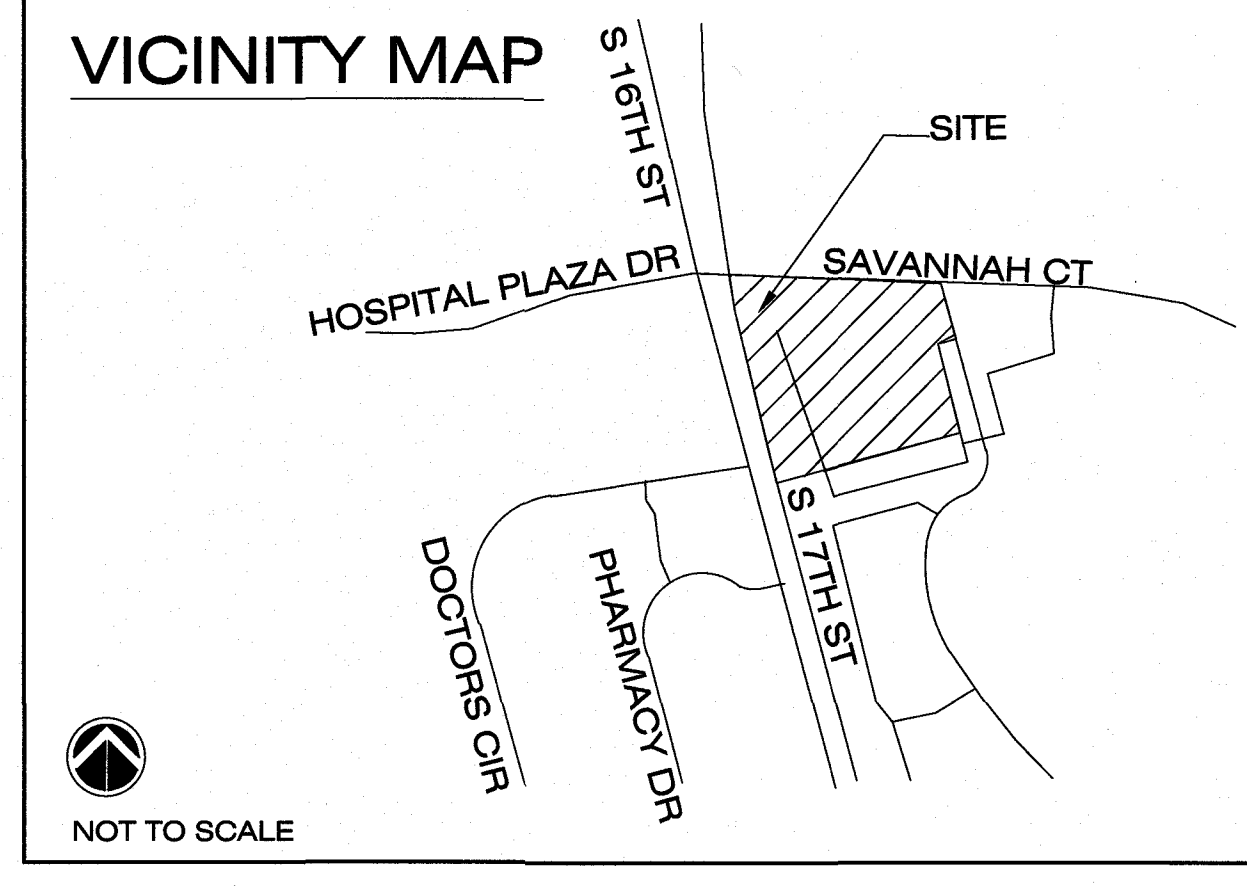
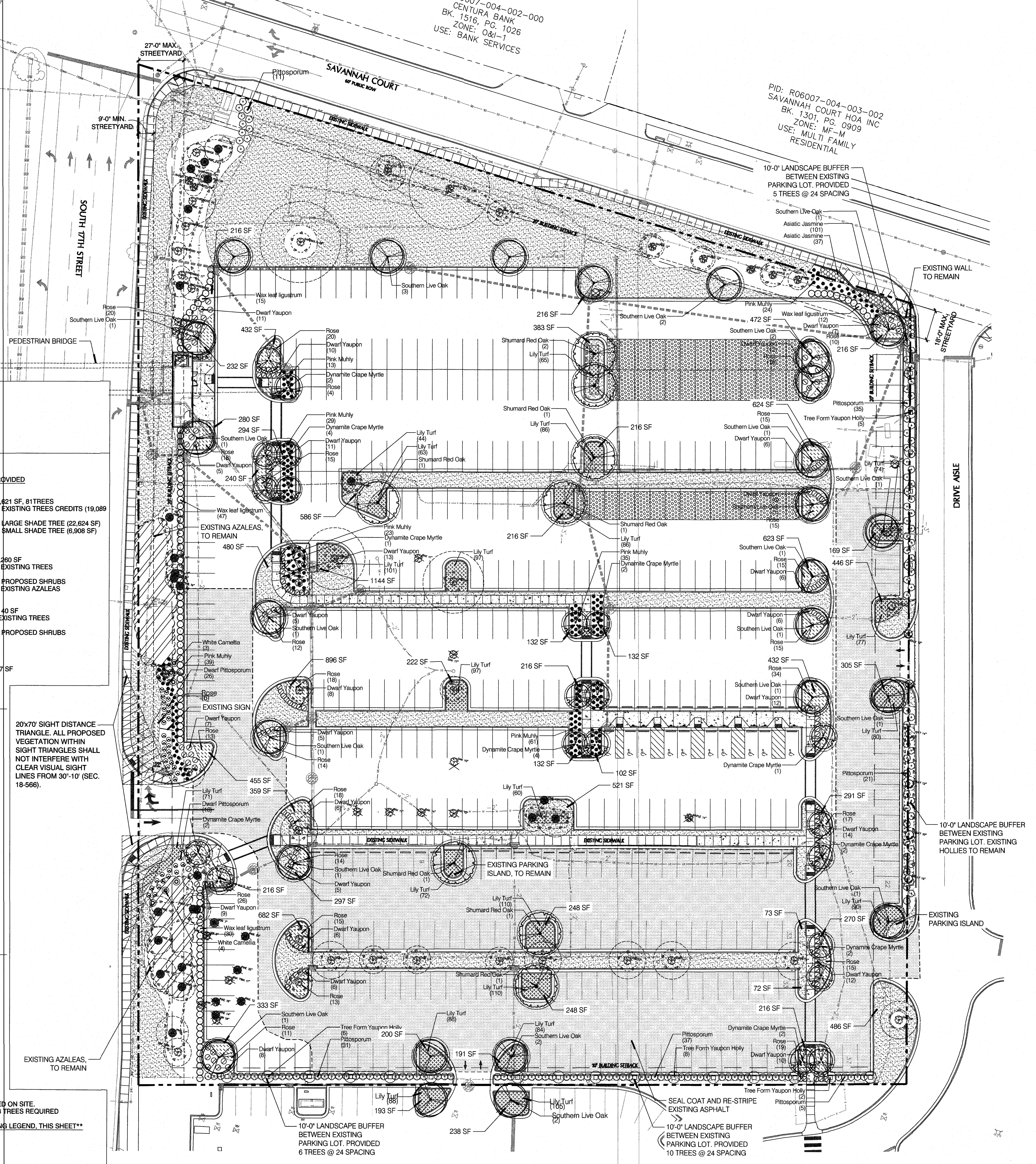
TOTAL TREES TO BE MITIGATED: 29 TREES
TREE CREDITS TO SATISFY MITIGATE: 29 CREDITS

TREE REQUIREMENTS PER DISTURBED ACRE

15 TREES PER DISTURBED ACRE MUST BE RETAINED OR PLANTED ON SITE.

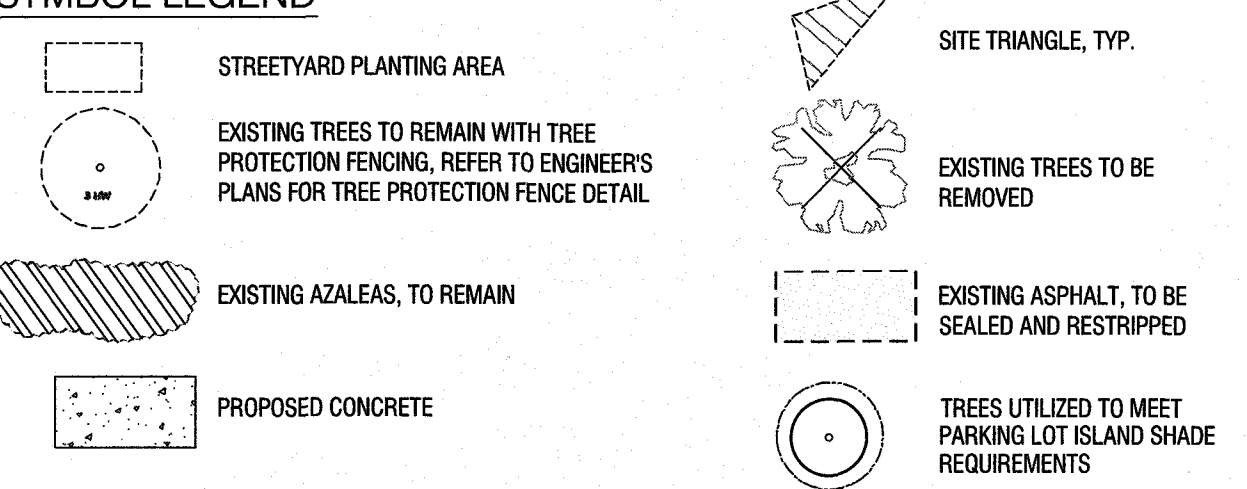
REQUIRED: 4.22 ACRES DISTURBED x 15 TREES = 63 TREES REQUIRED
PROVIDED: 69 RETAINED TREES
56 TREES PLANTED - REFER TO PLANTING LEGEND, THIS SHEET**

TOTAL: 125 TREES PROVIDED

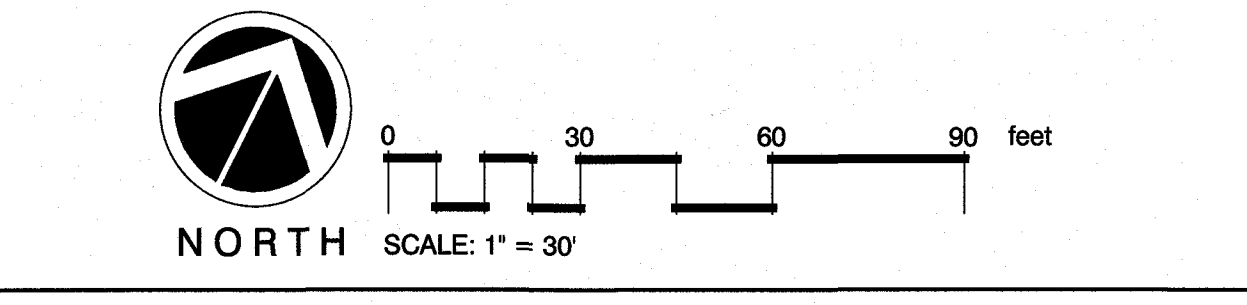


PLANT SCHEDULE

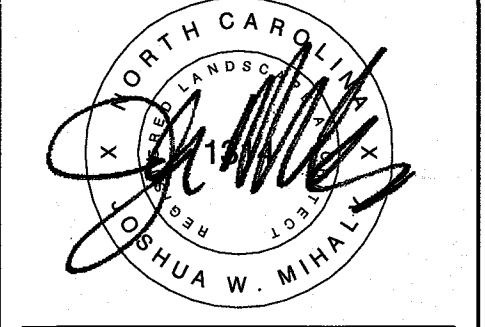
TREES	BOTANICAL / COMMON NAME	CONT	CAL	QTY	
	Lagerstroemia l. 'Dynamite' / Dynamite Crape Myrtle	B & B	3" CAL	22	
	Quercus shumardii / Shumard Red Oak	B & B	3" CAL	8	
	Quercus virginiana / Southern Live Oak	B & B	3" CAL	26	
SHRUBS	BOTANICAL / COMMON NAME	SIZE	RANGE	QTY	
	Camellia s. 'Hana Jiman' / White Camellia	7 gal	24-36" HT	7	
	Ilex vomitoria / Tree Form Yaupon Holly	B&B	7-8' HT	21	
	Ilex vomitoria 'Nana' / Dwarf Yaupon	3 gal	12-15" HT	206	
	Ligustrum j. 'Recurvifolium' / Wax leaf ligustrum	7 gal	36" HT	104	
	Muhlenbergia capillaris / Pink Muhly	3 gal	18-24" HT	224	
	Pittosporum tobira / Pittosporum	3 gal	18-24" HT	140	
	Pittosporum tobira 'Wheeler's Dwarf' / Dwarf Pittosporum	3 gal	12-15" HT	42	
GROUND COVERS	BOTANICAL / COMMON NAME	SIZE	RANGE	SPACING	QTY
	Liriope muscari / Lily Turf	1 qt	6-12" HT	18" o.c.	1,748
	Rosa x 'Flower Carpet Red' / Rosa	3 GAL	12-18" HT	36" o.c.	410
	Trachelospermum a. 'Asiatic' / Asiatic Jasmine	1 qt	6-12" HT	18" o.c.	138
SOD/SEED	BOTANICAL / COMMON NAME	SIZE	RANGE	SPACING	QTY
	Cynodon dactylon / Bermuda Grass	sod			



- GENERAL PLANTING NOTES**
- THIS WORK INCLUDES, BUT IS NOT LIMITED TO THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, FINAL GRADING, SEEDING, SOIL AMENDMENTS, ETC., AS MAY BE REQUIRED FOR A COMPLETE INSTALLATION.
 - QUANTITIES SHOWN IN PLANT LISTS ARE FOR CONVENIENCE ONLY. PLANS SHALL GOVERN.
 - THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES IN PLANT LOCATIONS OR INSUFFICIENT PLANT QUANTITIES DUE TO DIFFERENCES IN PLAN AND ACTUAL FIELD CONDITIONS.
 - ALL TREE AND SHRUB MATERIAL SPECIFIED MUST MEET STANDARD INDUSTRY SPECIFICATIONS FOR THE CONTAINER SIZE INDICATED. DOWNSIZING OR SUBSTITUTION OF PLANT MATERIAL WITHOUT PRIOR APPROVAL OF LANDSCAPE ARCHITECT WILL NOT BE ALLOWED.
 - ALL LANDSCAPE AREAS SHALL BE GRADED TO A SMOOTH EVEN SURFACE PRIOR TO ANY PLANT INSTALLATION. ALL PLANT MATERIALS SHALL BE INSTALLED USING GOOD HORTICULTURAL PRACTICES IN ACCORDANCE WITH THE PLANS AND DETAILS.
 - TREES SHALL NOT BE PLANTED CLOSER THAN FOUR (4) FEET FROM ANY WALKWAY OR PUBLIC SIDEWALK EXCEPT WHERE TREE WELLS OR PARKWAYS ARE PROVIDED IN THE SIDEWALK AREA. ALL TREE PLANTED WITHIN FIVE (5) FEET OF WALKS OR PUBLIC UTILITIES SHALL RECEIVE DEEP ROOT BARRIERS.
 - TREE LOCATIONS SHOWN ON PLAN MAY REQUIRE ADJUSTMENT IN THE FIELD, WHENEVER FEASIBLE. TREES SHOULD BE PLANTED A MINIMUM OF TEN (10) FEET FROM ALL UNDERGROUND UTILITIES, STREET LIGHTS, HYDRANTS, AND OUT OF DRAINAGE FLOW LINES. SHOULD THIS NOT BE POSSIBLE, CONTACT THE LANDSCAPE ARCHITECT FOR DECISION ON PLACEMENT.
 - ALL TREES IN TURF AREAS SHALL HAVE 12" MIN. CLR. CIRCUMFERENCE AROUND THE TRUNK BASE. PROVIDE 2" MIN. THK. MULCH AT BASE OF TRUNK.
 - GROUND COVER TYPE SHOWN SHALL BE PLANTED IN ALL SHRUB AREAS AS SPECIFIED ON PLANS. GROUND COVER SHALL BE PLANTED AT 9" ON-CENTER UNIFORM TRIANGULAR SPACING, AND SHALL BE CONTINUOUS UNDER ALL TREE AND SHRUB MASSES AS SHOWN ON PLAN.
 - MATURE PLANTINGS SHALL NOT INTERFERE WITH UTILITIES AND TRAFFIC SIGHT LINES.
 - ALL PLANTING AREAS SHALL BE MULCHED WITH PINESTRAW, EXCEPT FOR AREAS PLANTED WITH GROUND COVER. ALL AREAS PLANTED WITH GROUND COVER SHALL BE MULCHED WITH HARDWOOD MULCH.



MIHALY
LAND DESIGN
PLANNING + LANDSCAPE ARCHITECTURE
330 MILITARY CUTOFF RD., Suite A3
Wilmington, NC 28405 910.392.4355



Revisions

CLIENT
NHRMC
P.O. BOX
WILMINGTON, NC 28402
(910) 343-2788

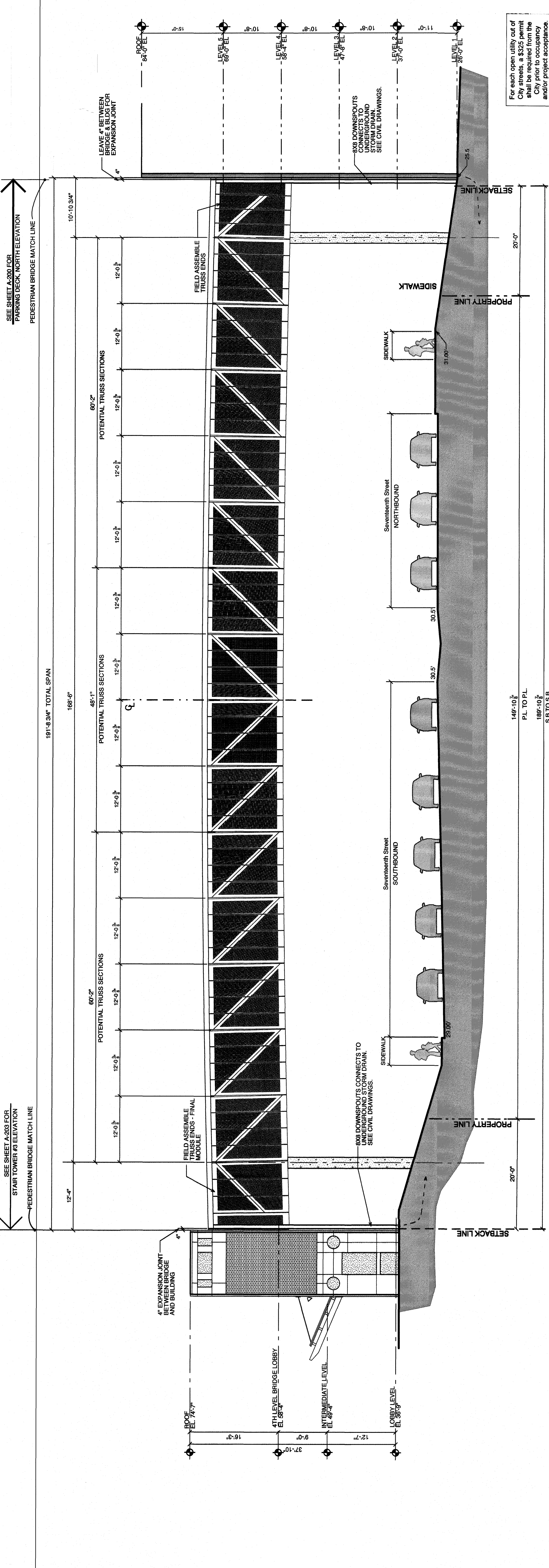
PROJECT
HEALTH DEP. PARKING LOT
2029 SOUTH 17TH STREET
WILMINGTON, NC
LANDSCAPE PLANS

CONSTRUCTION SET

Date: 03/12/2020
Phase:
Job Number: 680-18
Designed by: MLD
Drawn by: MAS
Checked by: JWM

Sheet Title:
PLANTING PLAN

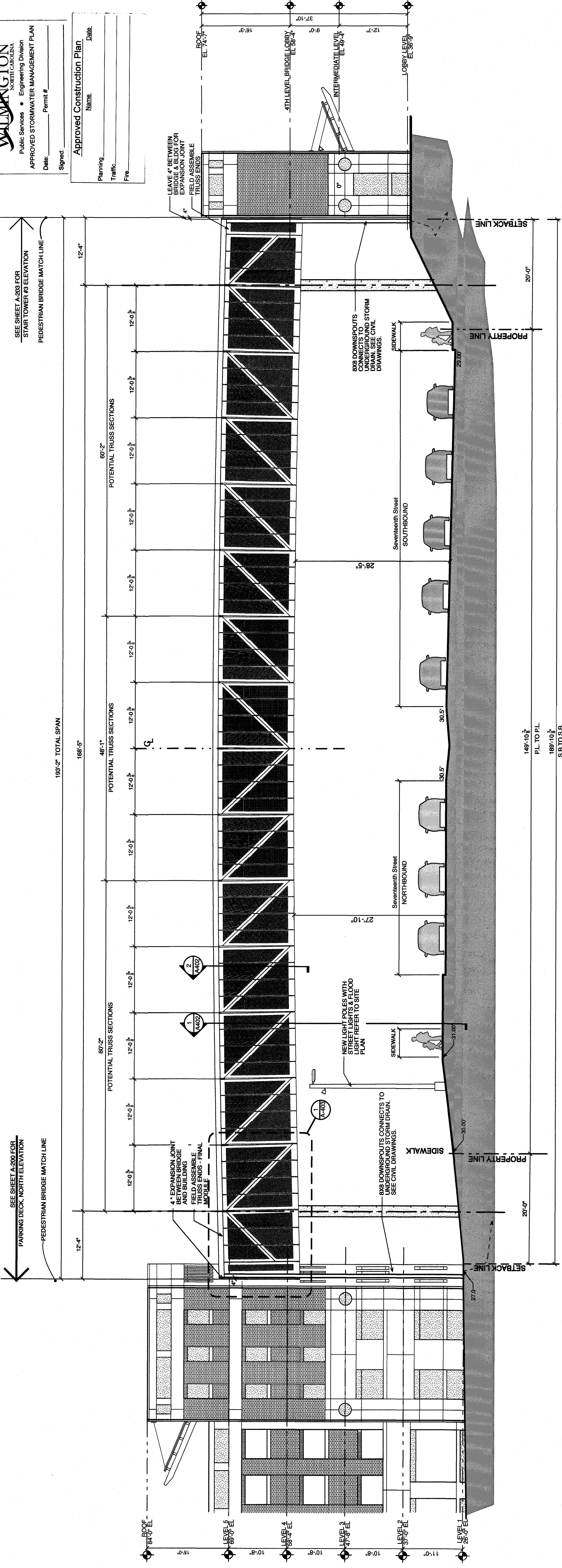
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of 1 sheets



2 SOUTH BRIDGE ELEVATION
 Scale: 1/8" = 1'-0"

APPROVED CONSTRUCTION PLAN
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signature: _____
 Planning: _____ Date: _____
 Traffic: _____ File: _____

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1 NORTH BRIDGE ELEVATION
 Scale: 1/8" = 1'-0"

SEE SHEET A-200 FOR PARKING DECK, NORTH ELEVATION
 PEDESTRIAN BRIDGE MATCH LINE

SEE SHEET A-203 FOR STAIR TOWER #3 ELEVATION
 PEDESTRIAN BRIDGE MATCH LINE

SEE SHEET A-205 FOR STAIR TOWER #2 ELEVATION
 PEDESTRIAN BRIDGE MATCH LINE

SEE SHEET A-200 FOR PARKING DECK, NORTH ELEVATION
 PEDESTRIAN BRIDGE MATCH LINE

SEE SHEET A-200 FOR PARKING DECK, NORTH ELEVATION
 PEDESTRIAN BRIDGE MATCH LINE

SEE SHEET A-203 FOR STAIR TOWER #3 ELEVATION
 PEDESTRIAN BRIDGE MATCH LINE

