

**INVENTORY SITE DATA**  
**PARCEL ID# R06007-002-009-000**

EXISTING PARCEL ID#: R06007-002-009-000  
 EXISTING PARCEL PIN#: 312606.48.6317.000  
 PARCEL ADDRESS: 2026 S. 16TH STREET  
 PARCEL OWNER: NEW HANOVER REGIONAL MEDICAL CENTER  
 EXISTING PARCEL AREA: 4.64 AC  
 EXISTING PARCEL USE: PARKING  
 PROPOSED PARCEL USE: NHRMC EMPLOYEE PARKING LOT AND DECK  
 CURRENT ZONING: O&I-1 OFFICE & INSTITUTION  
 CAMA LAND CLASSIFICATION: URBAN  
 SOIL TYPE: Le, Jo, Mu

THE PARCEL IS LOCATED IN ZONE "X" - OUTSIDE THE 2% CHANCE OF FLOOD AND ZONE "X" - AREAS WITHIN THE 2% CHANCE OF FLOOD, AND ZONE AE WITH BFE OR DEPTH (ELEV. 9') AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP 3720312600K, PANEL , DATED: AUGUST 28, 2018.

WETLANDS EXISTING ON SITE AND ARE DELINEATED ON THE SITE INVENTORY PLAN.

HISTORICAL/ARCHAEOLOGICAL SITE: NONE  
 CEMETERY: NONE  
 FORESTED AREA: SEE PLAN FOR TREE SURVEY  
 WETLANDS: NONE  
 ENDANGERED SPECIES/HABITAT: NONE REPORTED

**INVENTORY SITE DATA**  
**PARCEL ID# R06007-002-007-000**

EXISTING PARCEL ID#: R06007-002-007-000  
 EXISTING PARCEL PIN#: 312606.48.8210.000  
 PARCEL ADDRESS: 1635 DOCTORS CIRCLE  
 PARCEL OWNER: NEW HANOVER REGIONAL MEDICAL CENTER  
 EXISTING PARCEL AREA: 0.41 AC  
 EXISTING PARCEL USE: SURFACE EMPLOYEE PARKING LOT ACCESS  
 PROPOSED PARCEL USE: SURFACE EMPLOYEE PARKING LOT ACCESS  
 CURRENT ZONING: O&I-1 OFFICE & INSTITUTION  
 CAMA LAND CLASSIFICATION: URBAN  
 SOIL TYPE: Le, Ur

THE PARCEL IS LOCATED IN ZONE "X" - OUTSIDE THE 2% CHANCE OF FLOOD AND ZONE "X" - AREAS WITHIN THE 2% CHANCE OF FLOOD, AND ZONE AE WITH BFE OR DEPTH (ELEV. 9') AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP 3720312600K, PANEL , DATED: AUGUST 28, 2018.

WETLANDS DO NOT EXIST ON SITE.

HISTORICAL/ARCHAEOLOGICAL SITE: NONE  
 CEMETERY: NONE  
 FORESTED AREA: NONE  
 WETLANDS: NONE  
 ENDANGERED SPECIES/HABITAT: NONE REPORTED

**EXISTING SITE DATA:**  
 (BOTH PARCELS COMBINED)

**EXISTING IMPERVIOUS:**  
 ASPHALT, CURB & GUTTER = 88,540 SF  
 CONCRETE SIDEWALK = 8,753 SF  
 FUTURE = 10,000 SF  
 TOTAL = 107,293 SF  
 48.7% IMPERVIOUS

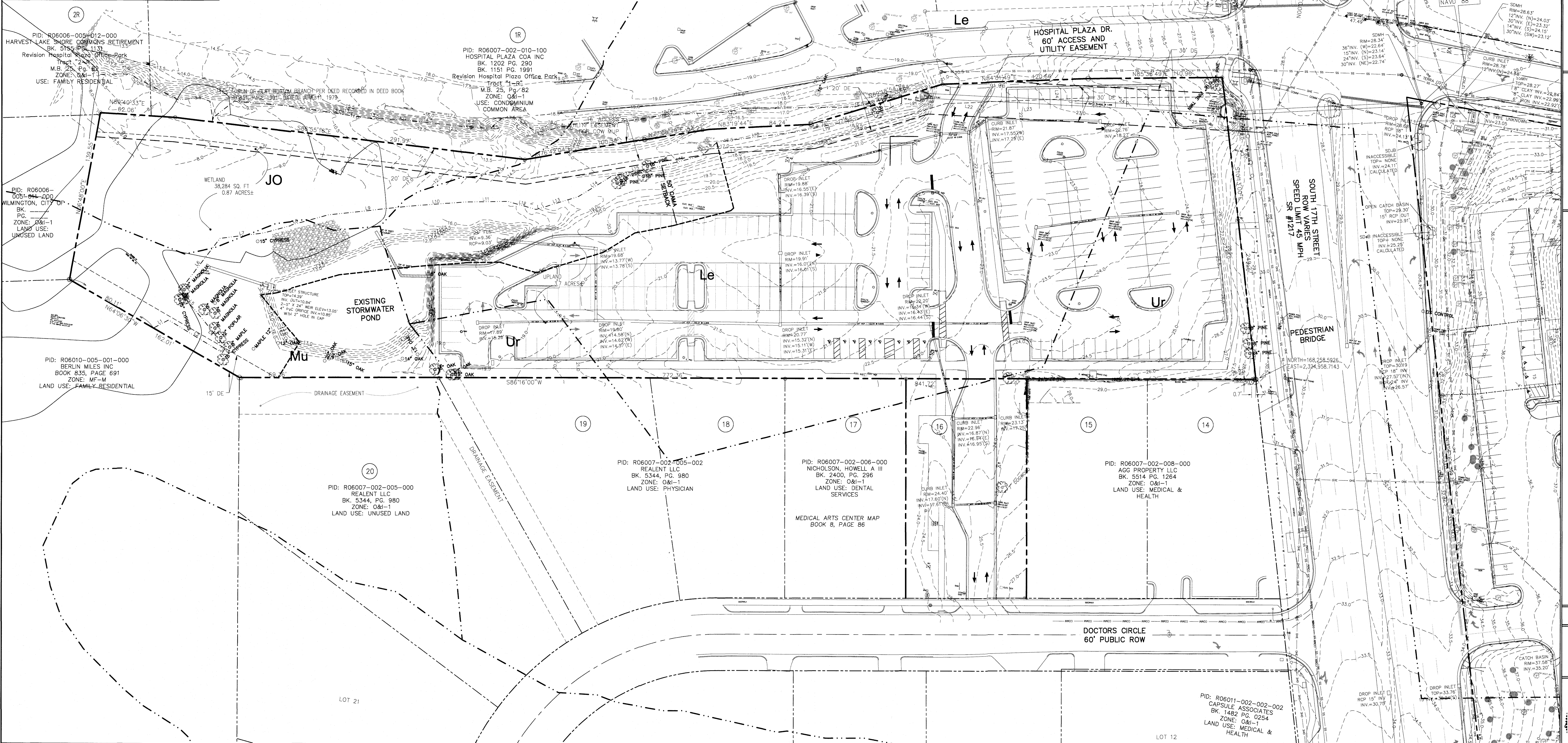
PERVIOUS CONCRETE = 8,515 SF  
 (100% CREDIT)

OFF-SITE IMPERVIOUS = 1,370 SF

**EXISTING PARKING:**  
 REGULAR SPACES: 237  
 HC ACCESSIBLE SPACES: 8  
 TOTAL PROPOSED: 245

**EXISTING BICYCLE PARKING:** 20 SPACES

PID: R06007-002-010-003  
 WILMINGTON NC 2018 LLC  
 BK. 6158, PG. 442  
 ZONE: O&I-1  
 USE: LEGAL SERVICES



SYMBOL	DATE	DESCRIPTION	BY
		REVISIONS	

**INVENTORY SITE PLAN**  
**NHRMC EMPLOYEE PARKING DECK**  
**WITH PEDESTRIAN BRIDGE**  
**2026 S. 16TH 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) 343-9653

License #C-3641  
**19135**  
 DES. JST  
 CKD. JPN  
 DRWN. NKS  
 DATE 04/28/20

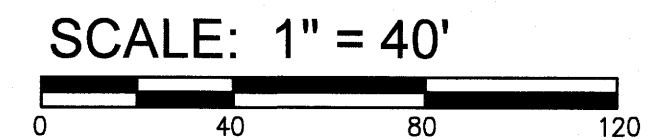
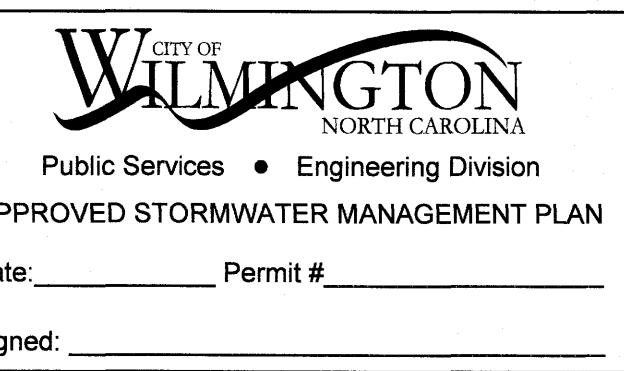
NCDENR PWSS WATER PERMIT #: \_\_\_\_\_ GPD  
 WATER CAPACITY: \_\_\_\_\_ GPD  
 DWQ SEWER PERMIT #: \_\_\_\_\_ GPD  
 SEWER CAPACITY: \_\_\_\_\_ GPD  
 SEWER SHED # AND PLANT: \_\_\_\_\_  
 SEWER TO FLOW THROUGH NEI: YES OR NO (CIRCLE ONE)

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

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

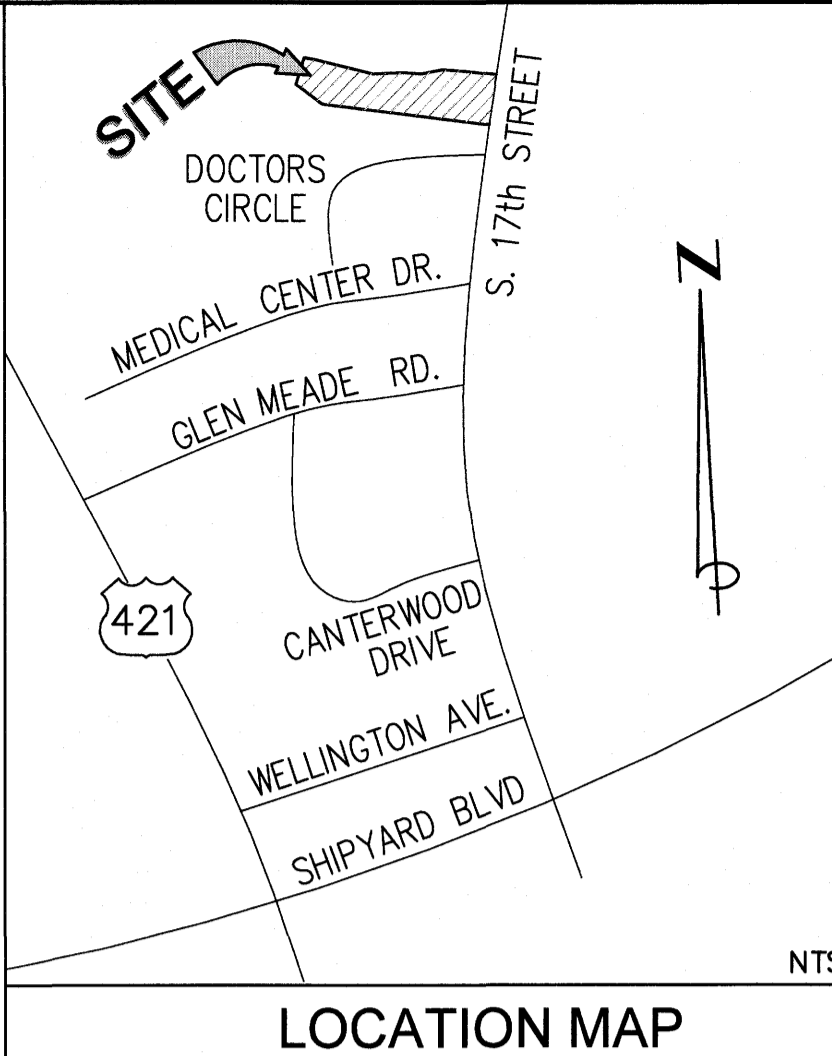
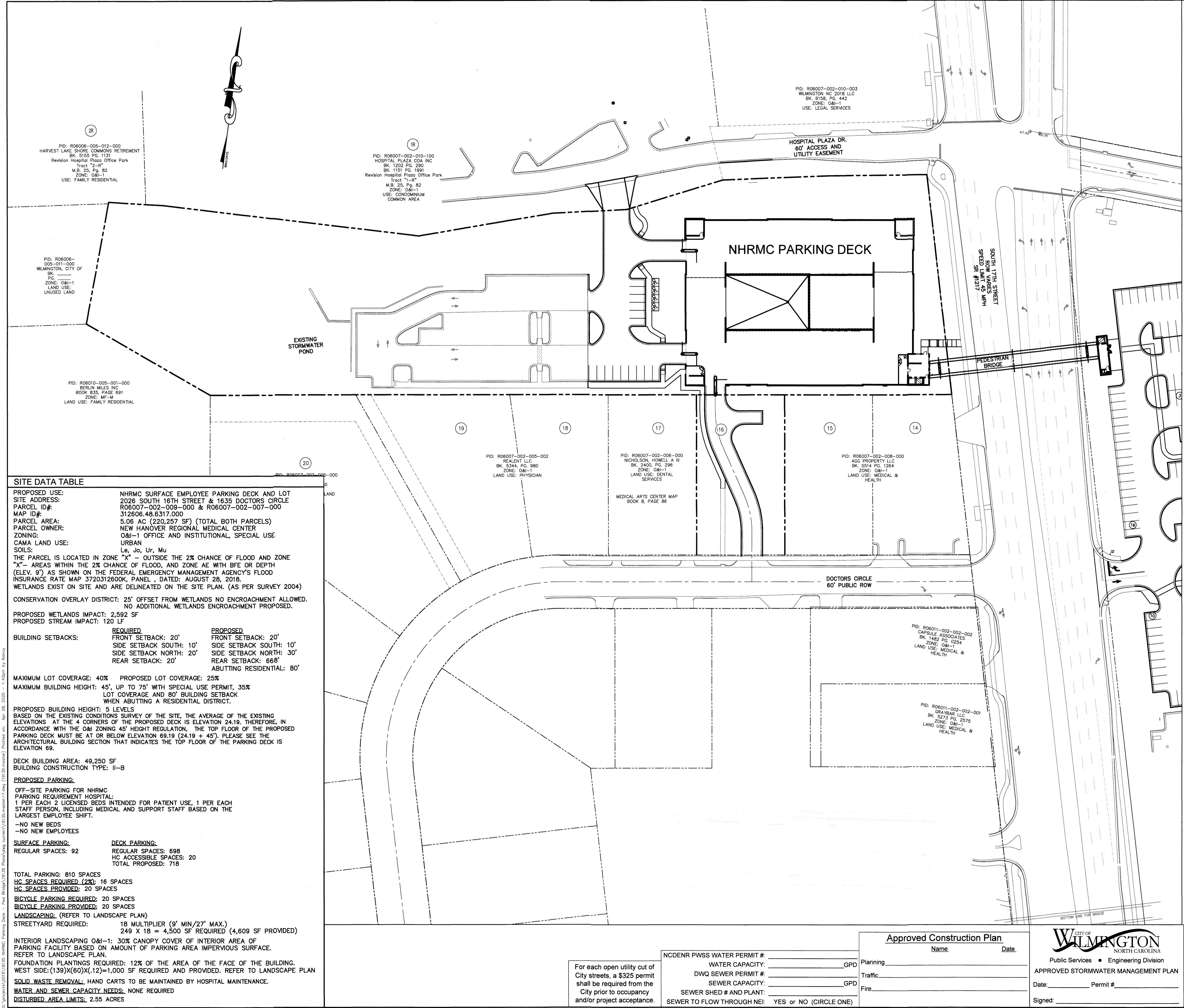
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_



**1-1**

© Vantech/2019/19/05 NHRMC parking deck - Red Blotchy/19/05/19135/master/7.dwg (19135.master) Plotted on: Apr 28, 2020 - 1:10pm by Nancy





**SITE DATA TABLE**

PROPOSED USE: NHRMC SURFACE EMPLOYEE PARKING DECK AND LOT  
 SITE ADDRESS: 2026 SOUTH 16TH STREET & 1635 DOCTORS CIRCLE  
 PARCEL ID#: R06007-002-009-000 & R06007-002-007-000  
 MAP ID#: 312606.48.6317.000  
 PARCEL AREA: 5.06 AC (220,257 SF) (TOTAL BOTH PARCELS)  
 PARCEL OWNER: NEW HANOVER REGIONAL MEDICAL CENTER  
 ZONING: O&I-1 OFFICE AND INSTITUTIONAL, SPECIAL USE  
 CAMA LAND USE: URBAN  
 SOILS: Le, Jo, Ur, Mu  
 THE PARCEL IS LOCATED IN ZONE "X" - OUTSIDE THE 2% CHANCE OF FLOOD AND ZONE "X" - AREAS WITHIN THE 2% CHANCE OF FLOOD, AND ZONE AE WITH BFE OR DEPTH (ELEV. 9') AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP 3720312600K, PANEL , DATED: AUGUST 28, 2018.  
 WETLANDS EXIST ON SITE AND ARE DELINEATED ON THE SITE PLAN. (AS PER SURVEY 2004)  
 CONSERVATION OVERLAY DISTRICT: 25' OFFSET FROM WETLANDS NO ENCRoACHMENT ALLOWED. NO ADDITIONAL WETLANDS ENCRoACHMENT PROPOSED.  
 PROPOSED WETLANDS IMPACT: 2,592 SF  
 PROPOSED STREAM IMPACT: 120 LF

REQUIRED	PROPOSED
BUILDING SETBACKS:	FRONT SETBACK: 20'
FRONT SETBACK: 20'	FRONT SETBACK: 20'
SIDE SETBACK SOUTH: 10'	SIDE SETBACK SOUTH: 10'
SIDE SETBACK NORTH: 20'	SIDE SETBACK NORTH: 30'
REAR SETBACK: 20'	REAR SETBACK: 668'
	ABUTTING RESIDENTIAL: 80'

MAXIMUM LOT COVERAGE: 40% PROPOSED LOT COVERAGE: 25%  
 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: 5 LEVELS  
 BASED ON THE EXISTING CONDITIONS SURVEY OF THE SITE, THE AVERAGE OF THE EXISTING ELEVATIONS AT THE 4 CORNERS OF THE PROPOSED DECK IS ELEVATION 24.19. THEREFORE, IN ACCORDANCE WITH THE O&I ZONING 45' HEIGHT REGULATION, THE TOP FLOOR OF THE PROPOSED PARKING DECK MUST BE AT OR BELOW ELEVATION 69.19 (24.19 + 45'). PLEASE SEE THE ARCHITECTURAL BUILDING SECTION THAT INDICATES THE TOP FLOOR OF THE PARKING DECK IS ELEVATION 69.

DECK BUILDING AREA: 49,250 SF  
 BUILDING CONSTRUCTION TYPE: II-B

**PROPOSED PARKING:**

OFF-SITE PARKING FOR NHRMC  
 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: 92  
**DECK PARKING:** REGULAR SPACES: 698  
 HC ACCESSIBLE SPACES: 20  
 TOTAL PROPOSED: 718

TOTAL PARKING: 810 SPACES  
 HC SPACES REQUIRED (2%): 16 SPACES  
 HC SPACES PROVIDED: 20 SPACES  
 BICYCLE PARKING REQUIRED: 20 SPACES  
 BICYCLE PARKING PROVIDED: 20 SPACES  
 LANDSCAPING: (REFER TO LANDSCAPE PLAN)  
 STREETYARD REQUIRED: 18 MULTIPLIER (9' MIN/27' MAX.)  
 249 X 18 = 4,500 SF REQUIRED (4,609 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: (139)(60)(X)(12)=1,000 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: 2.55 ACRES

**NHRMC Parking Requirements**  
 April 22, 2020

City of Wilmington Code:

Hospital: 1 space / 2 licensed beds intended for patient use, plus 1 space per each staff person including medical and support staff based on the largest employee shift.  
 Medical Office: 1 Space / 170 SF Maximum; 1 Space / 250 Minimum  
 Hospital Beds = 804 Beds = 402 Parking Spaces  
 Hospital Staff, Medical and Support Staff on Largest Shift = 3,344 Employees = 3,344 Parking Spaces  
 Zimmer Cancer Center = 90,000 SF Medical Office = 529 Parking Spaces Maximum; 390 Parking Spaces Minimum

**Total Required Parking Spaces: 4,275 Maximum Parking Spaces; 4,106 Minimum Parking Spaces**

Existing On-Campus Parking Spaces = 1,993 Parking Spaces\*  
 Existing Deck and Surface Lot = 780 Parking Spaces\*  
 Existing Glen Meade Lot = 54 Parking Spaces\*  
 \*Existing Parking Per Walker Parking Consultant Parking Assessment

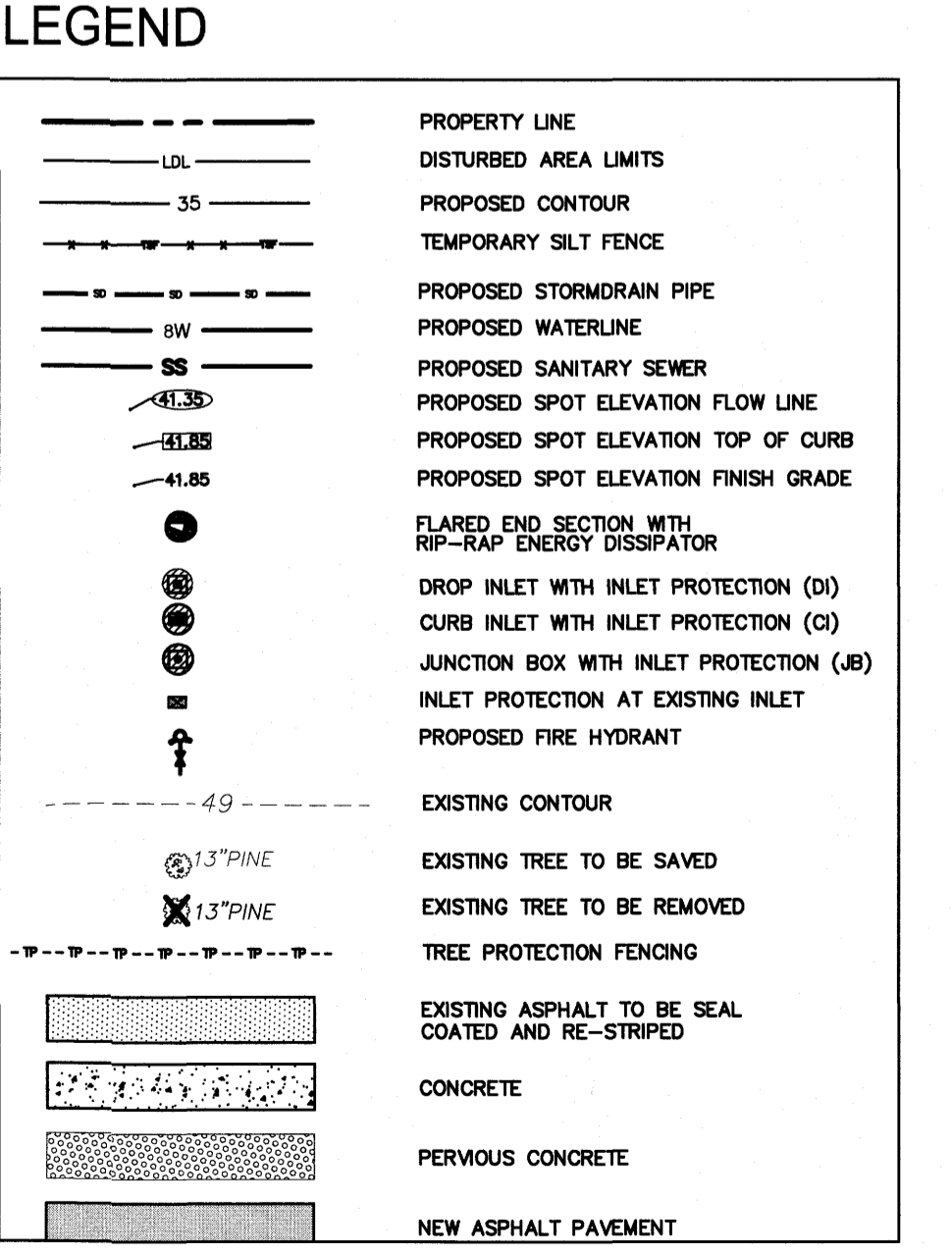
**Total Existing Parking Spaces: 2,827 Parking Spaces**

Proposed Health Department = 480 Parking Spaces  
 Proposed Parking Deck & Surface Lot (Old VIAC Site) = 810 Parking Spaces  
**Total Existing & Future Parking Spaces = 4,117 Parking Spaces**

**PROPOSED IMPERVIOUS:**  
 (BOTH PARCELS COMBINED)

**PROPOSED IMPERVIOUS:**  
 BUILDING: 49,250 SF  
 ASPHALT, CURB & GUTTER: 42,473 SF  
 CONCRETE SIDEWALK: 2,857 SF  
 FUTURE: 5,710 SF  
 TOTAL PROPOSED = 100,290 SF  
 45.53% IMPERVIOUS

PERVIOUS CONCRETE = 5,488 SF  
 (100% CREDIT)



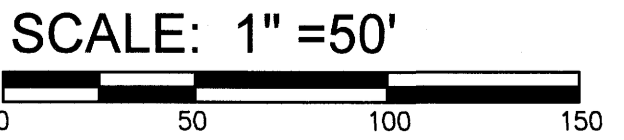
**Approved Construction Plan**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

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

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

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



**OVERALL SITE PLAN**  
 NHRMC EMPLOYEE PARKING DECK  
 WITH PEDESTRIAN BRIDGE  
 2026 S. 16TH STREET  
 WILMINGTON, N. C.

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

**NORRIS & TUNSTALL**  
 CONSULTING ENGINEERS P.C.  
 2420 IRON GATE DR. SUITE 102  
 WILMINGTON, NC 28405  
 PHONE: (910) 443-9633

License #C-3641  
**19135**  
 DES. JST  
 CKD. JPN  
 DRWN. NKS  
 DATE 4/28/20

**CO**

G:\projects\2019\19135\_NHRMC\_Parking\_Deck - final\Bldg\19135\_Plan\NHRMC\_Parking\_Deck.dwg (10/30/2019) Plotted on: Apr 28, 2020 - 1:02pm by Nancy

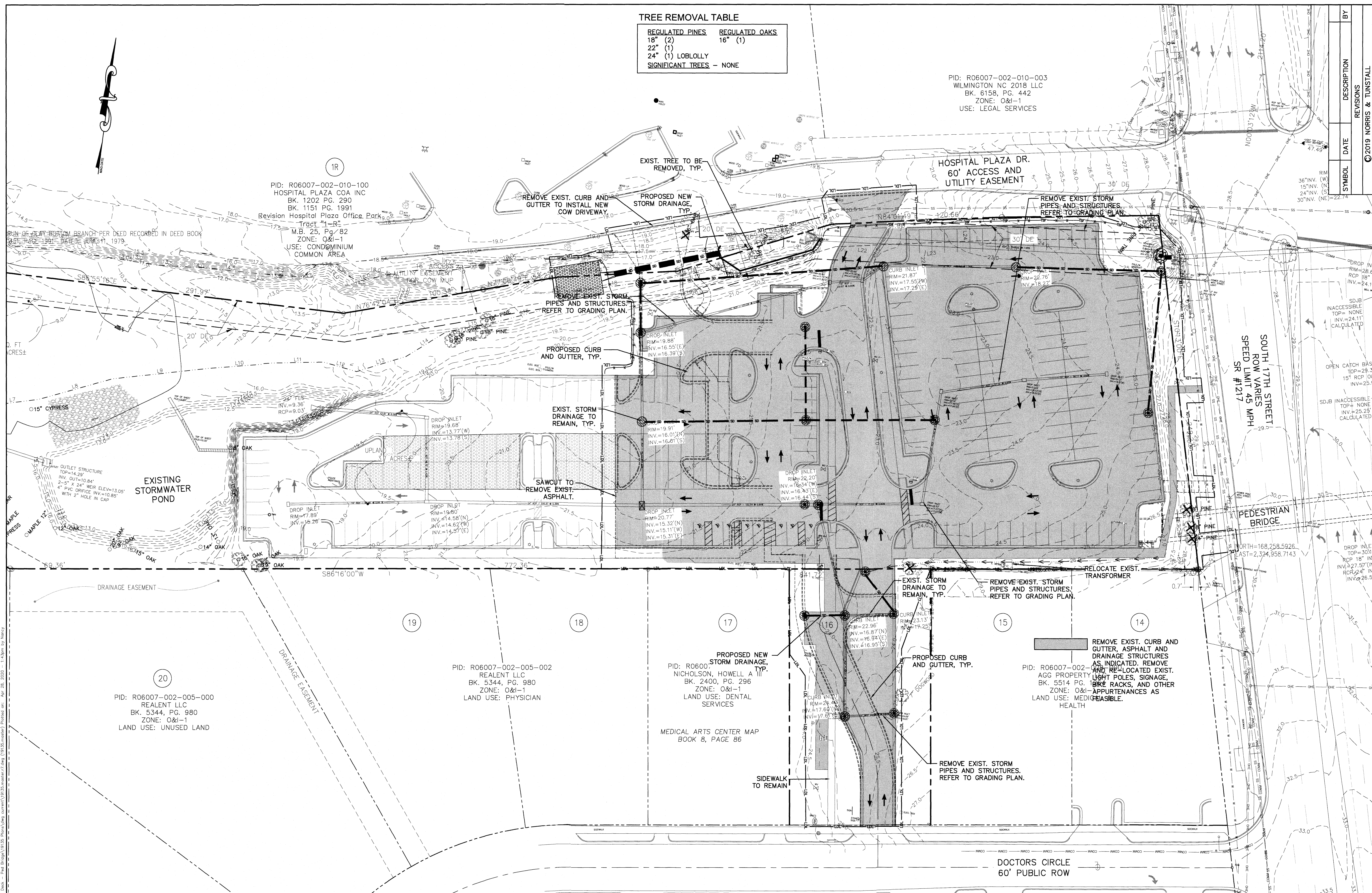


**TREE REMOVAL TABLE**

REGULATED PINES	REGULATED OAKS
18" (2)	16" (1)
22" (1)	
24" (1) LOBLOLLY	
SIGNIFICANT TREES - NONE	

PID: R06007-002-010-003  
 WILMINGTON NC 2018 LLC  
 BK. 6158, PG. 442  
 ZONE: O&I-1  
 USE: LEGAL SERVICES

BY	DESCRIPTION	DATE	REVISIONS



**DEMOLITION PLAN**  
 NHRMC EMPLOYEE PARKING DECK  
 WITH PEDESTRIAN BRIDGE  
 2026 S. 16TH 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) 343-9653

Licence #C-3641  
**19135**  
 DES. JST  
 C.D. JPN  
 DRWN. NKS  
 DATE 4/28/20

**C1**

PID: R06007-002-010-100  
 HOSPITAL PLAZA COA INC  
 BK. 1202 PG. 290  
 Revision Hospital Plaza Office Park  
 Tract "1-R"  
 M.B. 25, Pg. 82  
 ZONE: O&I-1  
 USE: CONDOMINIUM  
 COMMON AREA

**EXISTING STORMWATER POND**

PID: R06007-002-005-000  
 REALENT LLC  
 BK. 5344, PG. 980  
 ZONE: O&I-1  
 LAND USE: UNUSED LAND

PID: R06007-002-005-002  
 REALENT LLC  
 BK. 5344, PG. 980  
 ZONE: O&I-1  
 LAND USE: PHYSICIAN

PID: R06007-002-005-003  
 NICHOLSON, HOWELL A III  
 BK. 2400, PG. 296  
 ZONE: O&I-1  
 LAND USE: DENTAL  
 SERVICES

MEDICAL ARTS CENTER MAP  
 BOOK 8, PAGE 86

PID: R06007-002-005-004  
 AGG PROPERTY LLC  
 BK. 5514 PG. 980  
 ZONE: O&I-1  
 LAND USE: MEDICAL  
 HEALTH

**Approved Construction Plan**  
 Name \_\_\_\_\_ Date \_\_\_\_\_

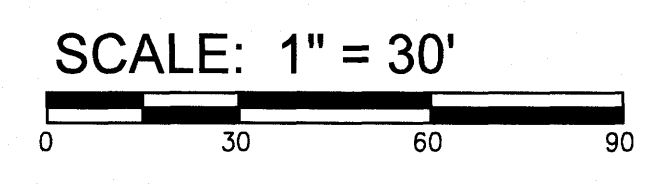


For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

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

Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_  
 Signed: \_\_\_\_\_

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

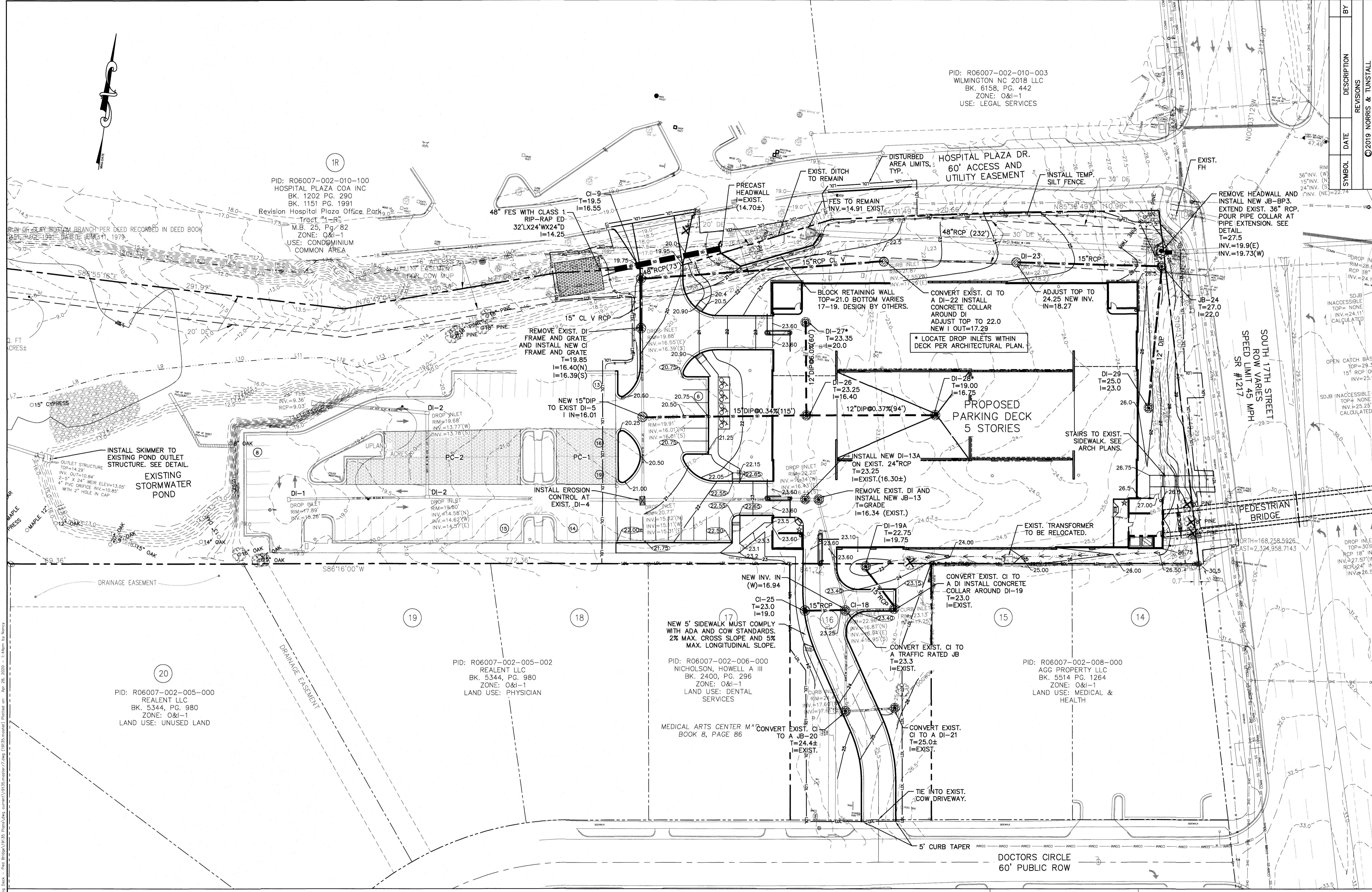






PID: R06007-002-010-003  
 WILMINGTON NC 2018 LLC  
 BK. 6158, PG. 442  
 ZONE: O&I-1  
 USE: LEGAL SERVICES

PID: R06007-002-010-100  
 HOSPITAL PLAZA COA INC  
 BK. 1202 PG. 290  
 BK. 1151 PG. 1991  
 Revision Hospital Plaza Office Park  
 Tract 1-R  
 M.B. 25, Pg. 82  
 ZONE: O&I-1  
 USE: CONDOMINIUM  
 COMMON AREA



BY	REVISIONS	DESCRIPTION	DATE	SYMBOL

**GRADING, DRAINAGE AND EROSION CONTROL PLAN**  
 NHRMC EMPLOYEE PARKING DECK  
 WITH PEDESTRIAN BRIDGE  
 2026 S. 16TH 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) 343-9653  
 1429 ASHLITTLE RIVER RD. NW  
 ASH, NC 28420  
 PHONE (910) 287-5900

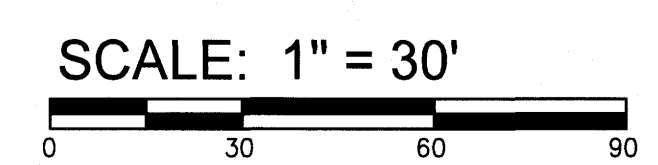
License #C-3641  
**19135**  
 DES. JST  
 CRD. JPN  
 DRWN. NKS  
 DATE 4/28/20

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

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

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

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



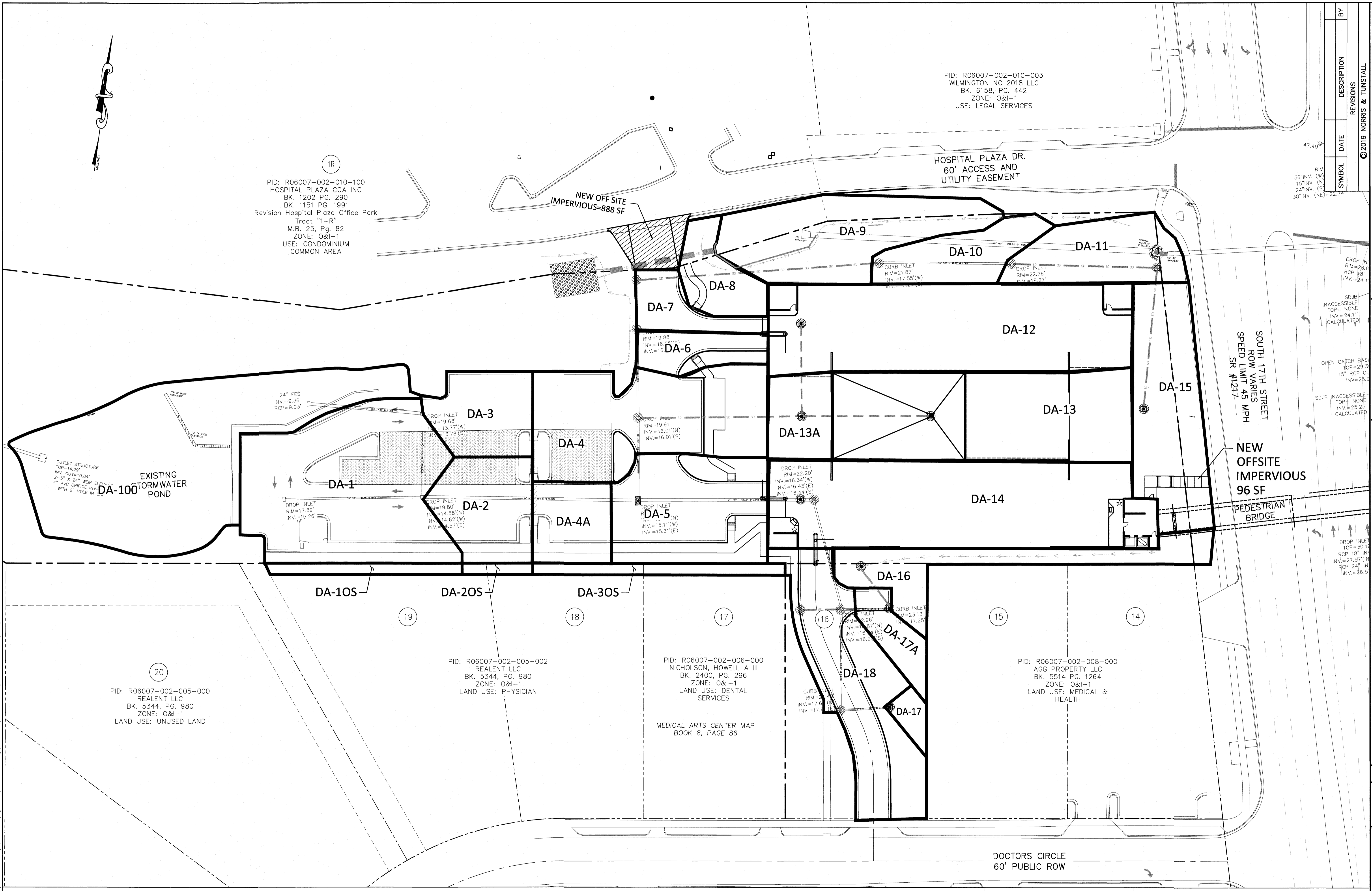
**C2**





PID: R06007-002-010-100  
 HOSPITAL PLAZA COA INC  
 BK. 1202 PG. 290  
 BK. 1151 PG. 1991  
 Revision Hospital Plaza Office Park  
 Tract "1-R"  
 M.B. 25, Pg. 82  
 ZONE: O&I-1  
 USE: CONDOMINIUM  
 COMMON AREA

PID: R06007-002-010-003  
 WILMINGTON NC 2018 LLC  
 BK. 6158, PG. 442  
 ZONE: O&I-1  
 USE: LEGAL SERVICES



SYMBOL	DATE	DESCRIPTION	BY
36" INV. (W)			
15" INV. (N)			
24" INV. (S)			
30" INV. (NE)			

©2019 NORRIS & TUNSTALL  
**DRAINAGE AREA PLAN**  
 NHRMC EMPLOYEE PARKING DECK  
 WITH PEDESTRIAN BRIDGE  
 2026 S. 16TH STREET WILMINGTON, N. C.

**NORRIS & TUNSTALL**  
 CONSULTING ENGINEERS P.C.  
 1429 ASH-LITTLE RIVER RD NW  
 WILMINGTON, NC 28403  
 PHONE (910) 343-9653

Licence #C-3641  
**19135**  
 DES. JST  
 CDD. JPN  
 DRWN. NKS  
 DATE 5/1/20

PID: R06007-002-005-000  
 REALENT LLC  
 BK. 5344, PG. 980  
 ZONE: O&I-1  
 LAND USE: UNUSED LAND

PID: R06007-002-005-002  
 REALENT LLC  
 BK. 5344, PG. 980  
 ZONE: O&I-1  
 LAND USE: PHYSICIAN

PID: R06007-002-006-000  
 NICHOLSON, HOWELL A III  
 BK. 2400, PG. 296  
 ZONE: O&I-1  
 LAND USE: DENTAL  
 SERVICES  
 MEDICAL ARTS CENTER MAP  
 BOOK 8, PAGE 86

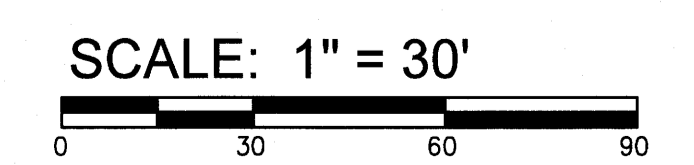
PID: R06007-002-008-000  
 AGG PROPERTY LLC  
 BK. 5514 PG. 1264  
 ZONE: O&I-1  
 LAND USE: MEDICAL &  
 HEALTH

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 \_\_\_\_\_

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



**C2.1**

C:\projects\2019\19135\_NHRMC\_Parking\_Deck - Ped Bridge\19135\_Plan\19135-master.dwg (19135-master) Plotted on: May 01, 2020 - 8:11am by Nancy



PID: R06007-002-010-003  
 WILMINGTON NC 2018 LLC  
 BK. 6158, PG. 442  
 ZONE: O&I-1  
 USE: LEGAL SERVICES

**UTILITY NOTES FOR FIRE HYDRANTS:**

1. FIRE HYDRANTS MUST BE WITHIN 150' OF THE FIRE DEPARTMENT CONNECTION.
2. THE FIRE DEPARTMENT CONNECTION MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
3. LANDSCAPING AND PARKING CANNOT BLOCK OR IMPEDE THE FIRE DEPARTMENT CONNECTIONS OR FIRE HYDRANTS. A 3' CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE FIRE HYDRANT CONNECTION AND THE FIRE HYDRANT.
4. FIRE HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
5. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS.
6. NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS BEING DELIVERED TO THE JOB SITE.
7. THE CONTRACTOR WILL MAINTAIN ALL-WEATHER EMERGENCY ACCESS TO CONSTRUCTION SITE AT ALL TIMES.
8. TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.
9. UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.
10. A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UTILITIES.
11. HYDRANTS SHALL BE OF SUFFICIENT NUMBERS TO ACCOMMODATE BASE FIRE FLOW REQUIREMENTS OF THE STRUCTURE.
12. ADDITIONAL FIRE PROTECTION AND/OR ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
13. THE CONTRACTOR SHALL SUBMIT A RADIO SIGNAL STRENGTH STUDY THAT DEMONSTRATES THAT EXISTING EMERGENCY RESPONDER RADIO SIGNAL LEVELS MEET THE REQUIREMENTS OF SEC. 510 OF THE 2018 FIRE CODE.
14. BUILDING CONSTRUCTION TYPE: II-B
15. PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE AND LIFE SAFETY DIVISION 910-343-0696
16. ALL ISOLATION VALVES WITHIN THE "HOT BOX" AND BETWEEN THE "HOT BOX" AND THE RISER ROOM MUST BE ELECTRICALLY SUPERVISED.

BY	DESCRIPTION
REVISIONS	
DATE	
SYMBOL	

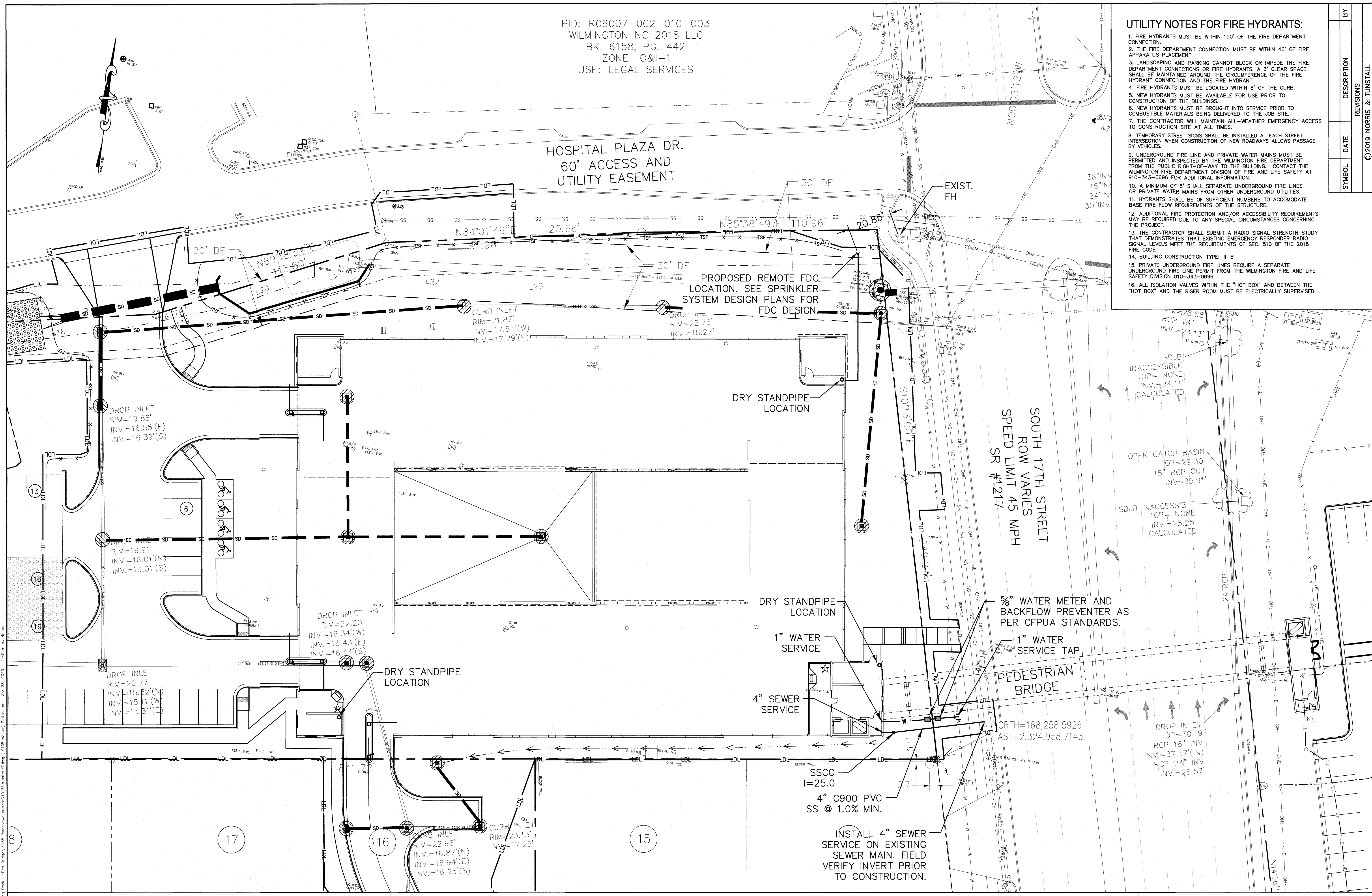
UTILITY PLAN  
 NHRMC EMPLOYEE PARKING DECK  
 WITH PEDESTRIAN BRIDGE  
 2026 S. 16TH STREET WILMINGTON, N. C.

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  
 WILMINGTON, NC 28403 ASH, NC 28420  
 PHONE (910) 343-9653 PHONE (910) 287-5900

Licence #C-3641  
**19135**  
 DES. JST  
 CRD. JPN  
 DRWN. NKS  
 DATE 4/28/20

**C3**



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**

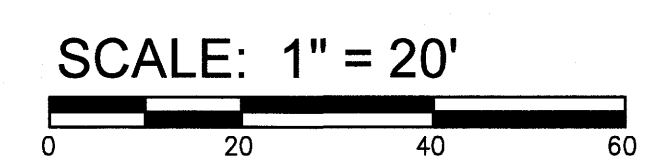
Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

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







PID: R06007-002-010-003  
 WILMINGTON NC 2018 LLC  
 BK. 6158, PG. 442  
 ZONE: O&I-1  
 USE: LEGAL SERVICES

PID: R06007-002-010-100  
 HOSPITAL PLAZA COA INC  
 BK. 1202 PG. 290  
 BK. 1151 PG. 1991  
 Revision Hospital Plaza Office Park  
 Tract "1-R"  
 M.B. 25, Pg. 82  
 ZONE: O&I-1  
 USE: CONDOMINIUM  
 COMMON AREA

EXISTING  
 STORMWATER  
 POND

PID: R06007-002-005-000  
 REALENT LLC  
 BK. 5344, PG. 980  
 ZONE: O&I-1  
 LAND USE: UNUSED LAND

PID: R06007-002-005-002  
 REALENT LLC  
 BK. 5344, PG. 980  
 ZONE: O&I-1  
 LAND USE: PHYSICIAN

PID: R06007-002-006-000  
 NICHOLSON, HOWELL A III  
 BK. 2400, PG. 296  
 ZONE: O&I-1  
 LAND USE: DENTAL  
 SERVICES

MEDICAL ARTS CENTER M. TIE INTO EXIST.  
 5' SIDEWALK  
 BOOK 8, PAGE 86

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

HOSPITAL PLAZA DR.  
 60' ACCESS AND  
 UTILITY EASEMENT

PROPOSED  
 PARKING DECK  
 5 STORIES

DOCTORS CIRCLE  
 60' PUBLIC ROW

SYMBOL	DATE	DESCRIPTION	BY
		REVISIONS	

© 2019 NORRIS & TUNSTALL

LAYOUT PLAN  
 NHRMC EMPLOYEE PARKING DECK  
 WITH PEDESTRIAN BRIDGE  
 2026 S. 16TH 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 ASHLITTLE RIVER RD. NW  
 WILMINGTON, NC 28403 ASHL. NC 28420  
 PHONE (910) 343-9653 PHONE (910) 287-5900

Licence #C-3641

19135

DES. JST  
 CIP. JPN  
 DRWL. NKS

DATE 4/28/20

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

NCDENR PWSS WATER PERMIT #: \_\_\_\_\_ GPD  
 WATER CAPACITY: \_\_\_\_\_ 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 \_\_\_\_\_

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

SCALE: 1" = 30'  
 0 30 60 90

C4



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

**COMMERCIAL DRIVEWAY STANDARD DETAIL**

1 OF 2

SD 3-03.3

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

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

**COMMERCIAL DRIVEWAY SECTIONS**

2 OF 2

SD 3-03.4

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

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

**STANDARD DETAIL CURBING**

SD 3-11

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

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

**STANDARD DETAIL SIDEWALK**

SD 3-10

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

DATE: FEBRUARY, 2012  
DRAWN BY: JSR  
CHECKED BY: HJR, P.E.  
SCALE: NOT TO SCALE

**STANDARD DETAIL CROSSWALK PAVEMENT MARKINGS**

SD 11-11

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

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

**STANDARD DETAIL CURBING**

SD 3-11

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

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

**STANDARD DETAIL SIDEWALK**

SD 3-10

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

DATE: FEBRUARY, 2012  
DRAWN BY: JSR  
CHECKED BY: HJR, P.E.  
SCALE: NOT TO SCALE

**STANDARD DETAIL CROSSWALK PAVEMENT MARKINGS**

SD 11-11

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

**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 LAYOUT PRIOR TO ACTUAL STRIPING.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY 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 911 PRIOR TO CONTACTING THE 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 CFPWA 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 CFPWA 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 CFPWA WATER SHALL COMPLY WITH CFPWA CROSS CONNECTION CONTROL REGULATIONS. CALL 332-6558 FOR INFORMATION.
- ANY BACKFLOW PREVENTION DEVICES REQUIRED BY CFPWA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFCCHHR 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 PLAT. STREET TREES MUST BE LOCATED A MINIMUM OF 15' FROM STREET LIGHTS.
- 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.

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

**STANDARD DETAIL SIDEWALK**

SD 3-10

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

DATE: FEBRUARY, 2012  
DRAWN BY: JSR  
CHECKED BY: HJR, P.E.  
SCALE: NOT TO SCALE

**STANDARD DETAIL CROSSWALK PAVEMENT MARKINGS**

SD 11-11

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

**NOTES AND DETAILS**

NHRMC EMPLOYEE PARKING DECK WITH PEDESTRIAN BRIDGE

2026 S. 16TH 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) 343-9663

DATE: 4/28/20

DES: JST  
CKD: JPN  
DRWN: NKS

DATE: 4/28/20

Approved Construction Plan

Name: \_\_\_\_\_ Date: \_\_\_\_\_

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

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)

**C5**

C:\projects\2013\13135\_NHRMC\_Parking\_Deck\_-\_Redesign\13135\_Plan\13135-master-2.dwg (13135-master-2.dwg) Apr 28, 2020 - 1:51pm by Nancy



### 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	None

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

#### 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 problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids 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 oils, 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, provide relocation of portable toilet behind site 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 waste hauler to remove leaking portable toilets and replace with properly operating unit.

#### EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas 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

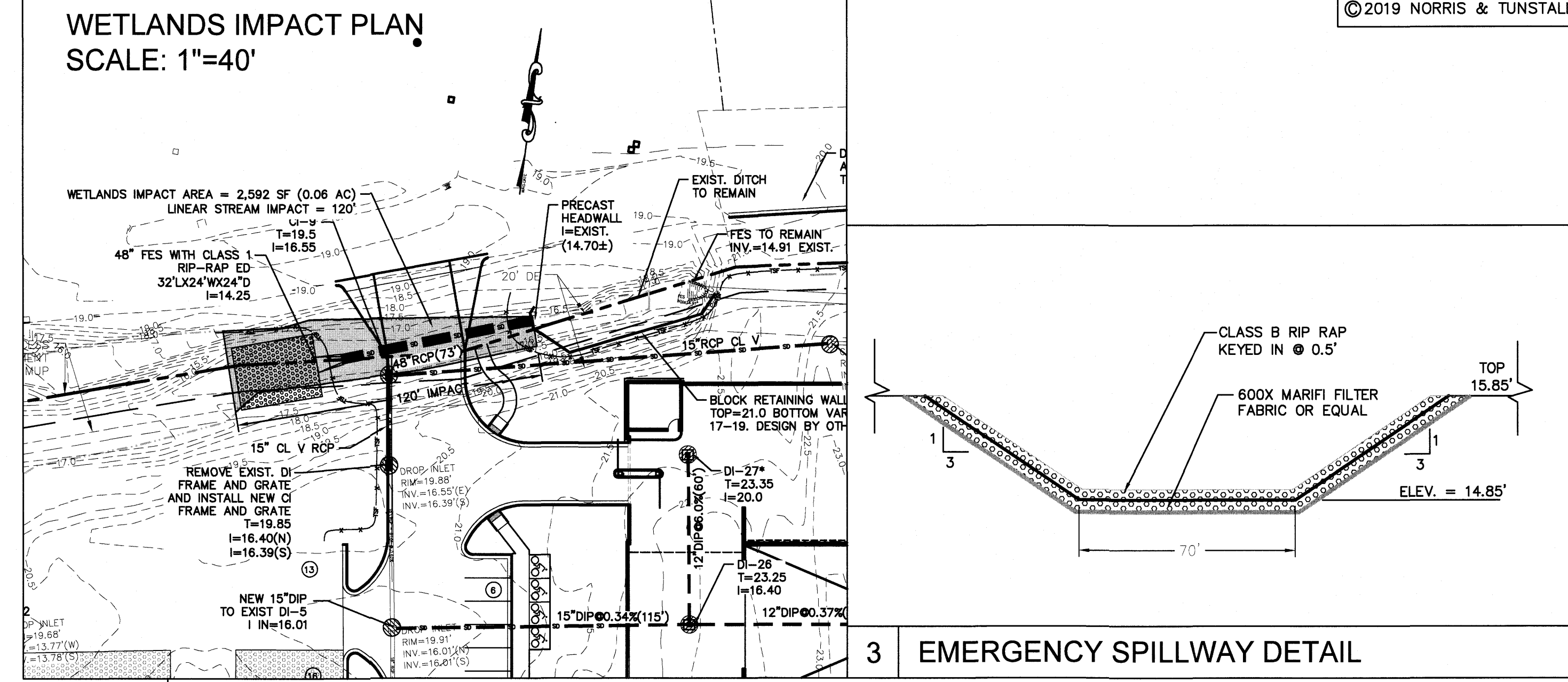
- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the 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 defective 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 inlets 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 using 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.



#### DETENTION POND NOTES:

- UPON STABILIZATION OF SITE, RESTORE POND TO DESIGN SIZE AND SHAPE.
- INSTALL TOPSOIL ON SIDE SLOPES ABOVE NORMAL POOL AND SEED WITH A MIX OF 20% CARPET GRASS, 24% BERBERA, 20% FESCUE, 10% CREEPING RED FESCUE, AND 24% RYE. SEED AT A RATE OF 2-3 POUNDS PER 1000 SF.
- VEGETATED SHELF: THE CONTRACTOR SHALL INSTALL EQUAL NUMBERS OF THE LISTED SUITABLE SPECIES. GROUP SIMILAR SPECIES OF PLANTS TOGETHER (APPROX. 10-15 PLANTS PER GROUP). NO PLANTS SHALL BE PLANTED WITHIN 10 FEET OF THE OUTLET STRUCTURE.
- BOTTOM HALF OF VEGETATED SHELF SHALL BE PLANTED WITH SHALLOW WATER PLANT SPECIES, A MINIMUM OF (3) DIVERSE SPECIES, SEE TABLE.
- TOP HALF OF VEGETATED SHELF SHALL BE PLANTED WITH SHALLOW LAND PLANT SPECIES, A MINIMUM OF (3) DIVERSE SPECIES, SEE TABLE.
- THE VEGETATED SHELF SHALL BE PLANTED WITH PLUGS OR POTS (MIN. 2 CU IN) AT 24"-36" O.C. IN A CHECKERBOARD PATTERN. A MINIMUM OF 50 PLANTS PER 200 SF OF SHELF AREA SHALL BE PLANTED.
- PORTABLE PUMP TO BE USED IN EMERGENCY SITUATIONS AND IN TYPES OF MAINTENANCE.
- STORMWATER POND TO BE USED AS SEDIMENT BASIN DURING CONSTRUCTION. ONCE SITE IS STABLE, POND IS TO BE RETURNED TO DESIGN CONDITIONS AND ACCUMULATED SEDIMENT IS TO BE REMOVED.

APPROVED SHALLOW WATER PLANTS	APPROVED SHALLOW LAND PLANTS
SWEETFLAG	SWAMP MILKWEED
WATER PLANTAIN	QUILL SEDGE
WATERPOD	WHITE TURTLEHEAD
BLUE FLAG IRIS	DWARF JOE PYE WEED
SOFT RUSH	JOE PYTE WEED
ARROW ARUM	SPOTTED TRUMPETWEED
PRIMROSE WILLOW	SCARLET ROSE MALLOW
PICKERELWEED	HALBERDLEAF ROSEMARY
DUCK POTATO	SEASHORE MALLOW
BULLTONGUE	CARDINAL FLOWER
LIZARD'S TAIL	LONGLEAF LOBELIA
THREE-SQUARE BULRUSH	GREAT BLUE LOBELIA
WOOLGRASS	STARBUSS WHITEPOPP
GIANT CUTGRASS	NARROW PLUMEGRASS

NOTE: CATTAILS NOT ALLOWED TO BE PLACED IN OR AROUND POND.

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 is 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 another rain-measuring device approved by the Division.
(2) E&SC 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 outfalls (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 outfalls inspected. 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. 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or office (where accessible)	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 reports to the appropriate Division Regional Office per Part B, Section C, Item (2)(a) of this permit of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or re-vegetation, permanent ground cover) 2. Documentation that the required ground stabilization measures have been provided within the required timeframe and 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

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

Item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC 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&SC Plan.	Initial and date a copy of the approved E&SC 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&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC 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&SC 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 other inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

### PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

#### SECTION C: REPORTING

##### 1. Occurrences that must be reported

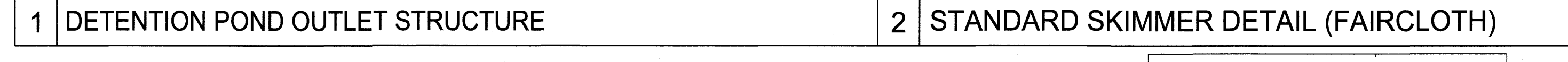
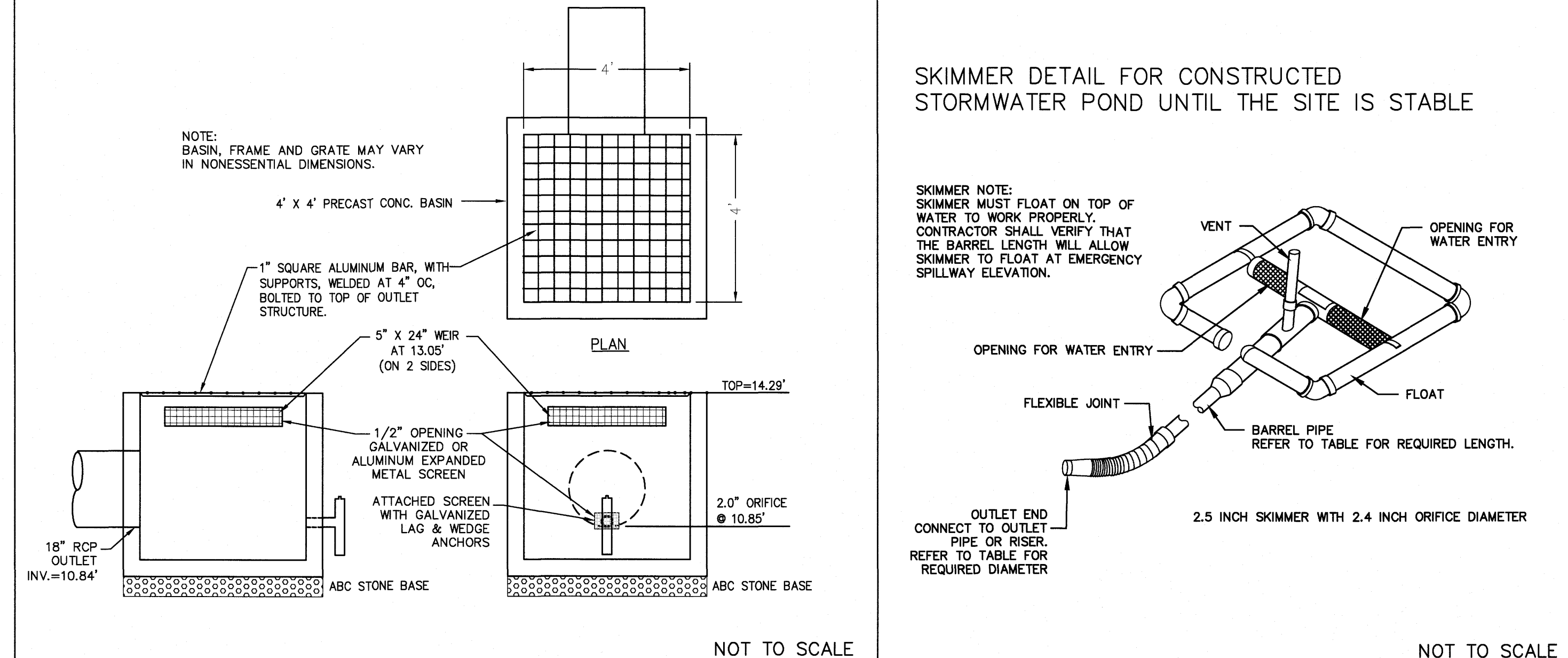
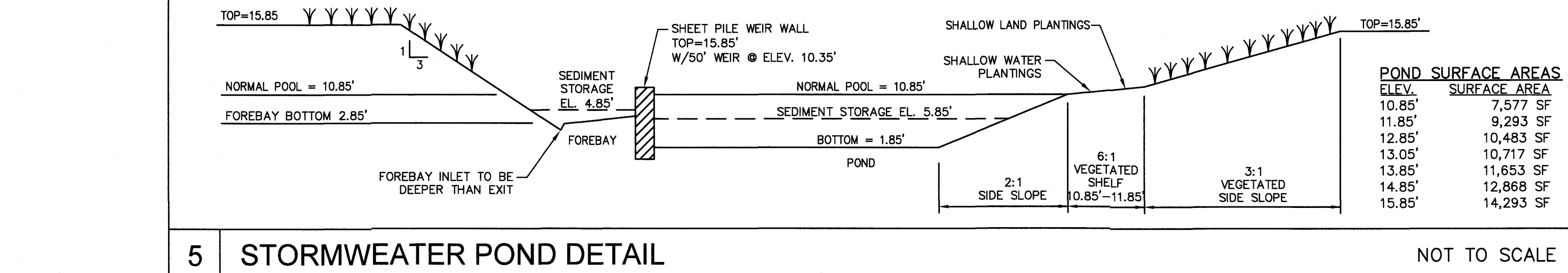
Permittees shall report the following occurrences:

- 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. 143-215.85.
- 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"> <li>Within 24 hours, an oral or electronic notification.</li> <li>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.</li> <li>If the stream is named on the NC 303(d) list 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.</li> </ul>
(b) Oil spills and release of hazardous substances per Item 1(b)(i) above	<ul style="list-style-type: none"> <li>Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.</li> </ul>
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li>A report at least ten days before the date of the bypass. The report shall include an evaluation of the anticipated quality and effect of the bypass.</li> </ul>
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li>Within 24 hours, an oral or electronic notification.</li> <li>Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.</li> </ul>
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(j)(7)]	<ul style="list-style-type: none"> <li>Within 24 hours, an oral or electronic notification.</li> <li>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 noncompliance is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(i)(6).</li> <li>Division staff may waive the requirement for a written report on a case-by-case basis.</li> </ul>



NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING EFFECTIVE: 04/01/19

Approved Construction Plan

Name \_\_\_\_\_ Date \_\_\_\_\_

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

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

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

City of Wilmington  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit #: \_\_\_\_\_  
 Signed: \_\_\_\_\_

© 2019 NORRIS & TUNSTALL

NOTES AND DETAILS  
 NHRMC EMPLOYEE PARKING DECK  
 WITH PEDESTRIAN BRIDGE  
 2026 S. 16TH STREET WILMINGTON, N. C.

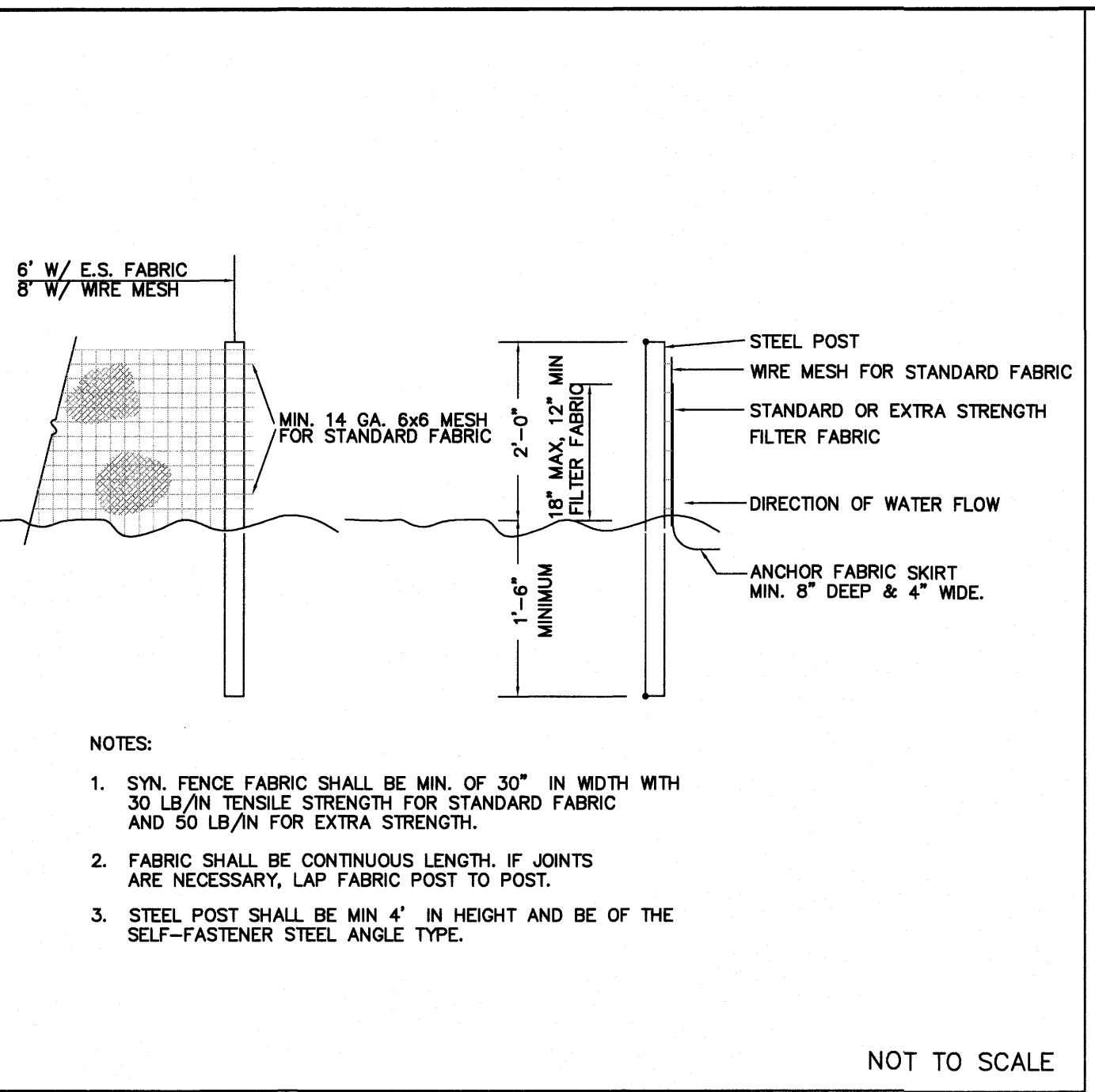
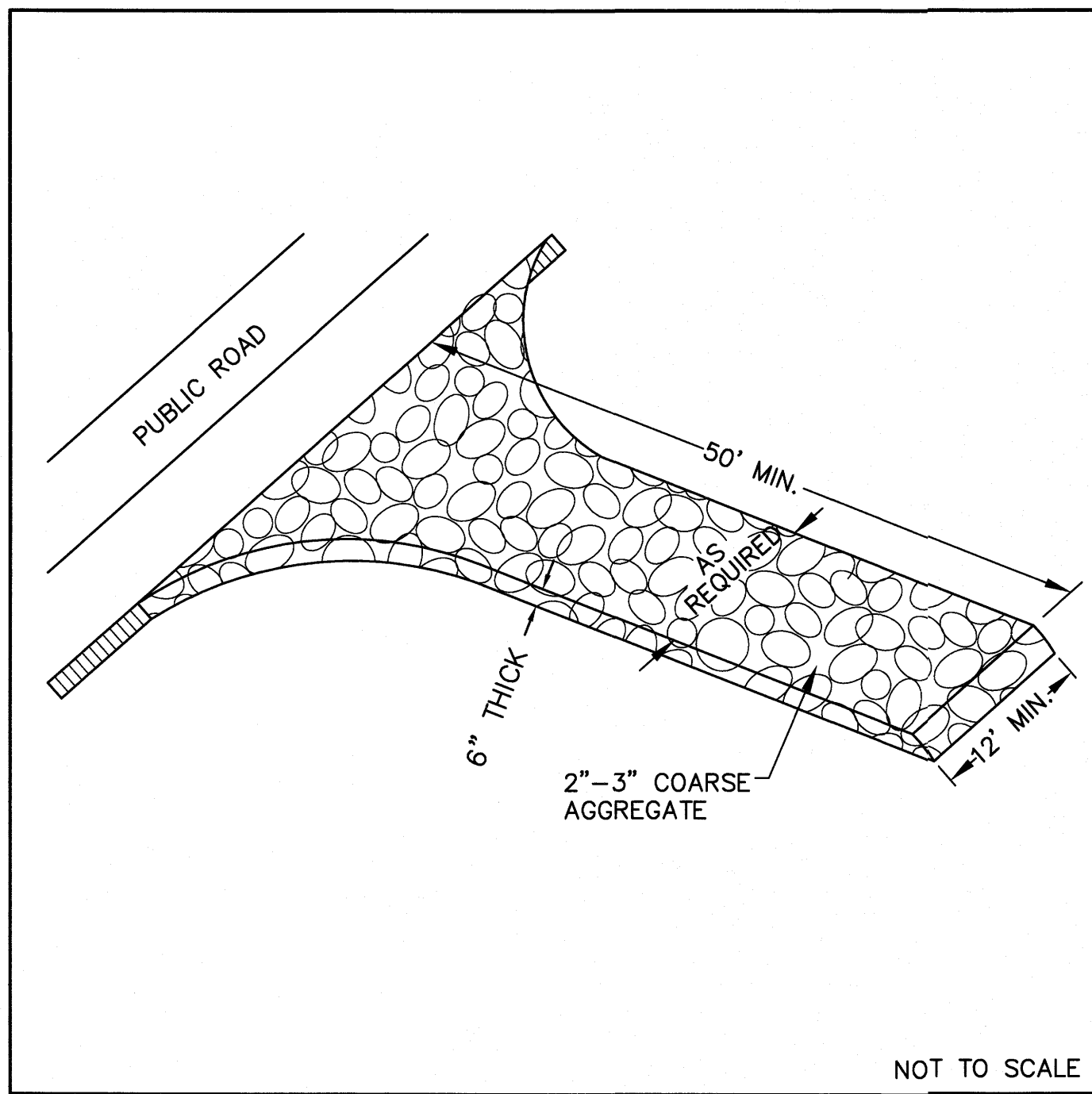
OWNER/DEVELOPER  
 NHRMC  
 P.O. BOX 9000  
 WILMINGTON, NC 28402  
 910 343-2788

NORRIS & TUNSTALL  
 CONSULTING ENGINEERS P.C.  
 1429 ASH LITTLE RIVER RD. NW  
 WILMINGTON, NC 28403  
 PHONE (910) 343-9653

License #C-3641  
 19135  
 DES. JST  
 CDR. JPN  
 DRWL. NKS  
 DATE 4/28/20

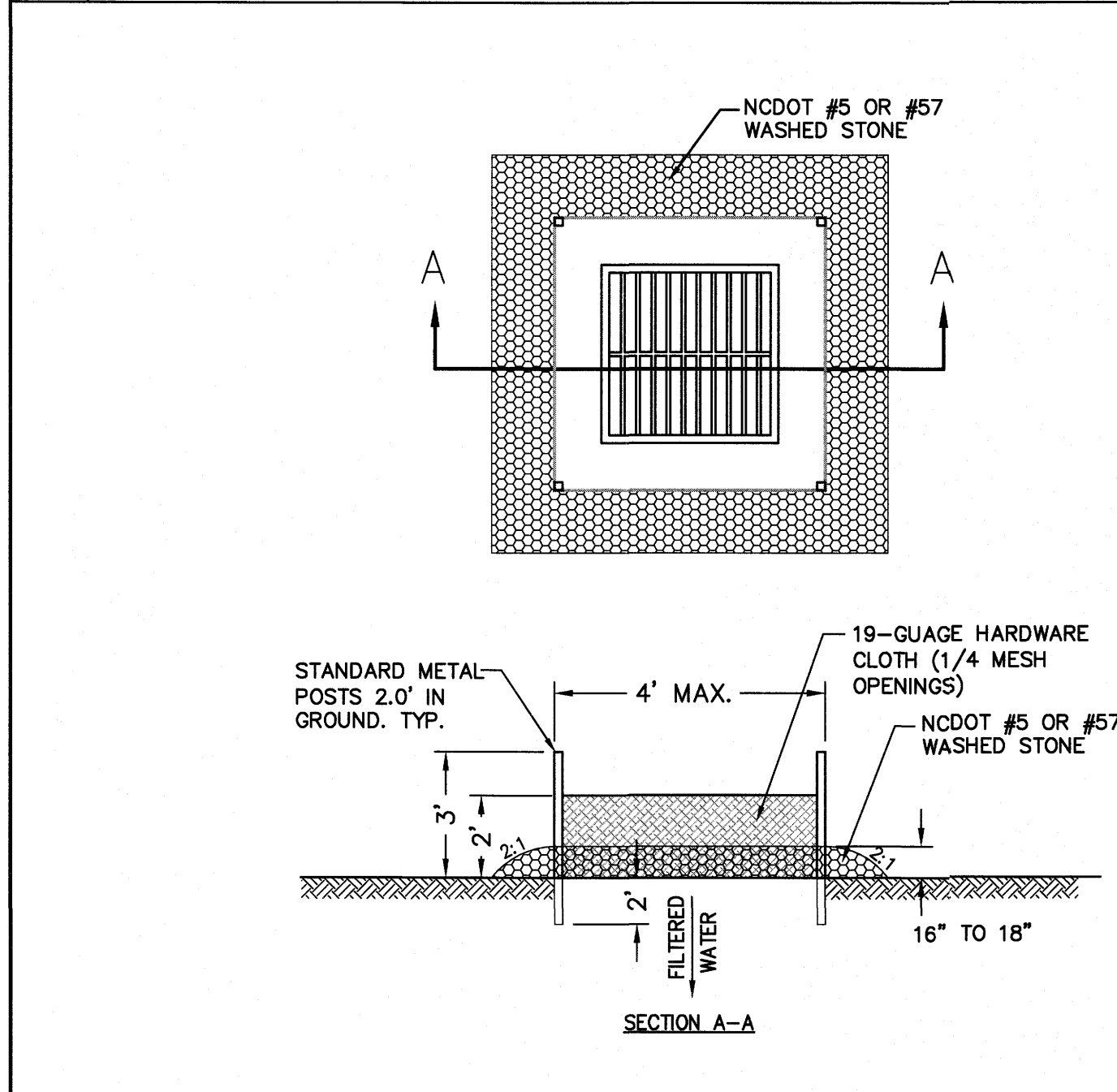
C5.1





1 TEMPORARY GRAVELLED CONSTRUCTION ENTRANCE

2 TEMPORARY SILT FENCE



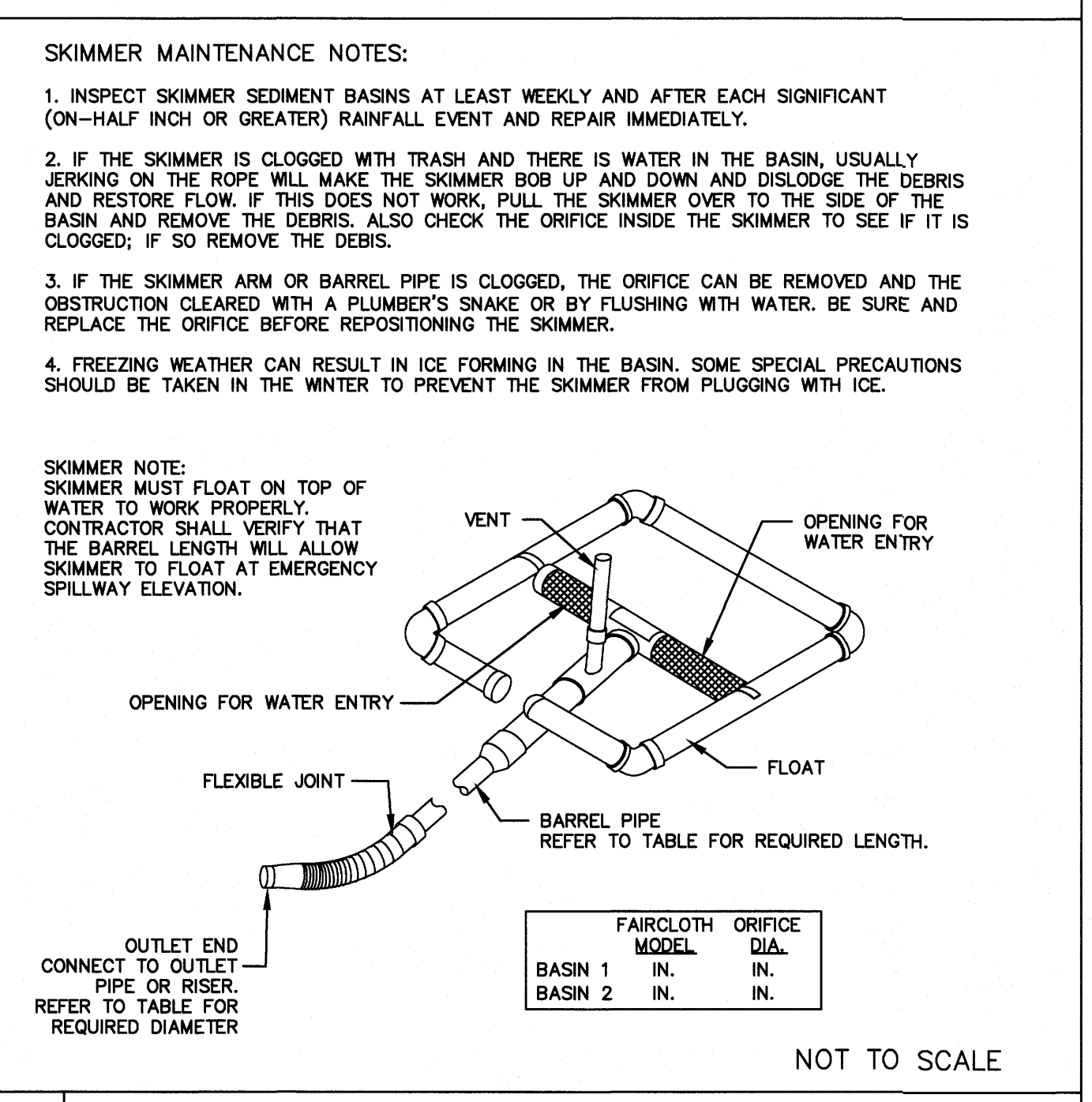
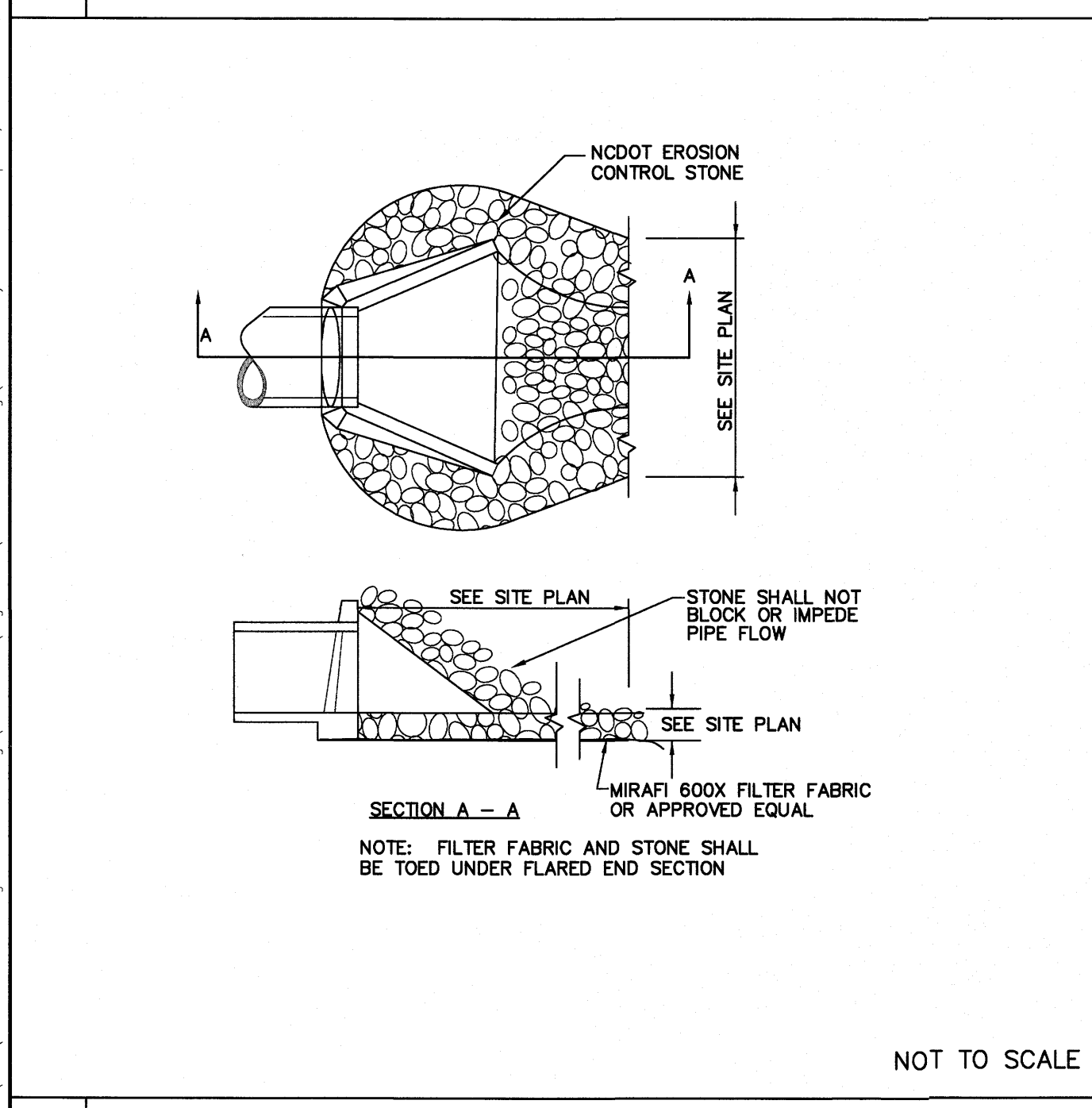
**CONSTRUCTION SEQUENCE:**

- 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 ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS. REPLACE STONE WHEN IT NO LONGER DRAINS AS DESIGNED.

3 HARDWARE CLOTH AND GRAVEL INLET PROTECTION

NOT TO SCALE



4 ENERGY DISSIPATOR DETAIL

5 STANDARD SKIMMER DETAIL

**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 TACKING 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 FERTILIZER 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 TACKING 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**

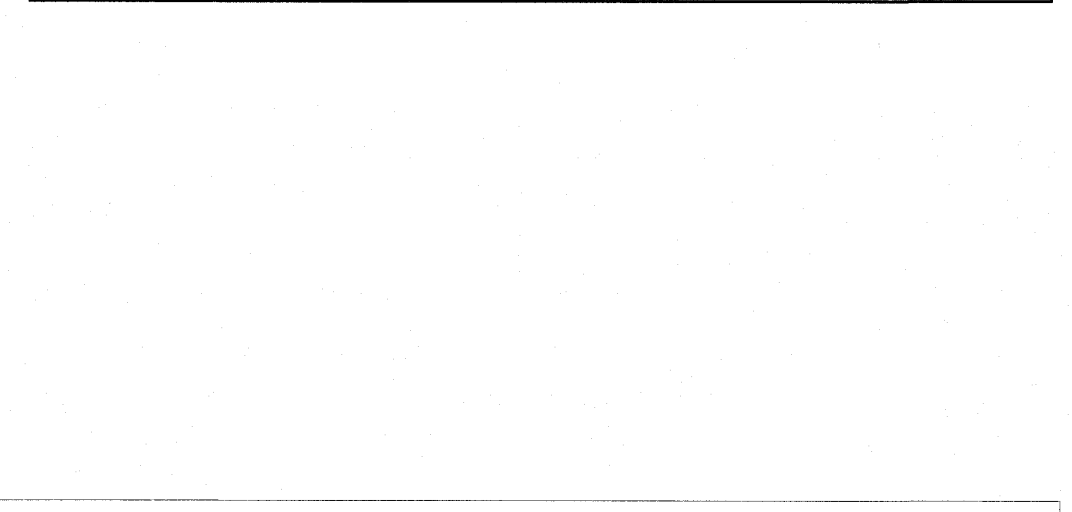
SEEDING MIXTURE SPECIES	RATE (lb/acre)	(lb/1000 sf)
RYE (GRAIN)	120	2.75
ANNUAL LESPEDEZA (KOBE IN PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	50	1.15

**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 TACKING 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.



**STANDARD DETAIL**

**DATE:** JAN 2015

**DRAWN BY:** JRR

**CHECKED BY:** RDS/PE

**SCALE:** NOT TO SCALE

**WILMINGTON NORTH CAROLINA**

**CITY OF WILMINGTON ENGINEERING**

**PO BOX 1810 WILMINGTON, NC 28402 (910) 341-7807**

**SHEET 1 of 2**

**SD 15-09**

**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
SERICA LESPEDEZA	30	0.69
KOBE LESPEDEZA	10	0.23

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

**SOIL AMENDMENTS:**  
APPLY LIME AND FERTILIZE ACCORDING TO SOIL TESTS, OR APPLY 3,000-5,000 lbs/acre (68.9-114.9 lbs/1,000 sf) GROUND AGRICULTURAL LIMESTONE (USE THE LOWER RATE ON SANDY SOILS) AND 1,000 lbs/acre (22.9 lbs/1,000 sf) 10-10-10 FERTILIZER.

**MULCH:**  
APPLY 4,000 lb/acre (91.8 lbs/1,000 sf) GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR ROVING OR BY 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 lbs/acre (11.5 lbs/1,000 sf) 10-10-10 FERTILIZER. MOW AS NEEDED WHEN SERICIA IS OMITTED FROM THE MIXTURE. RESEED, FERTILIZE, AND MULCH DAMAGED AREAS IMMEDIATELY.

**PERMANENT SEEDING RECOMMENDATIONS FOR LATE SPRING AND EARLY SUMMER**

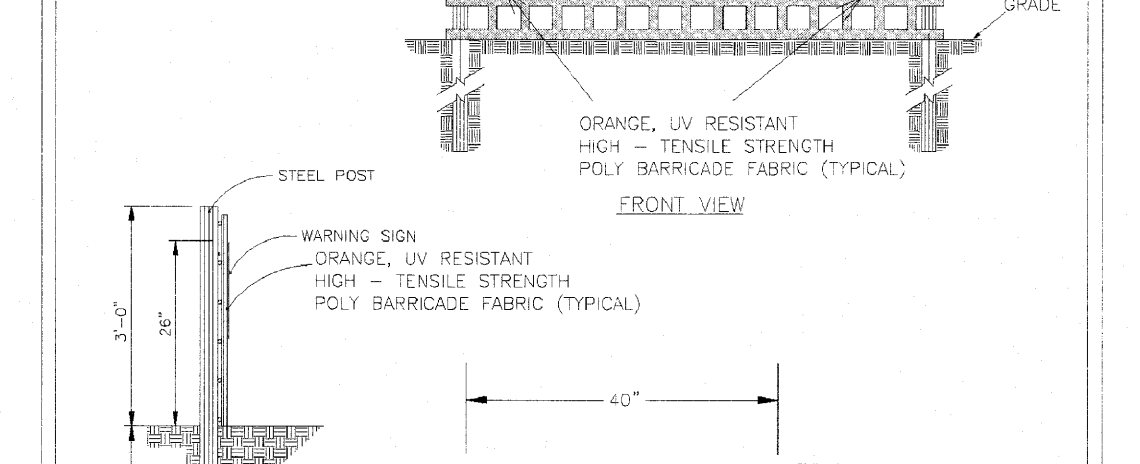
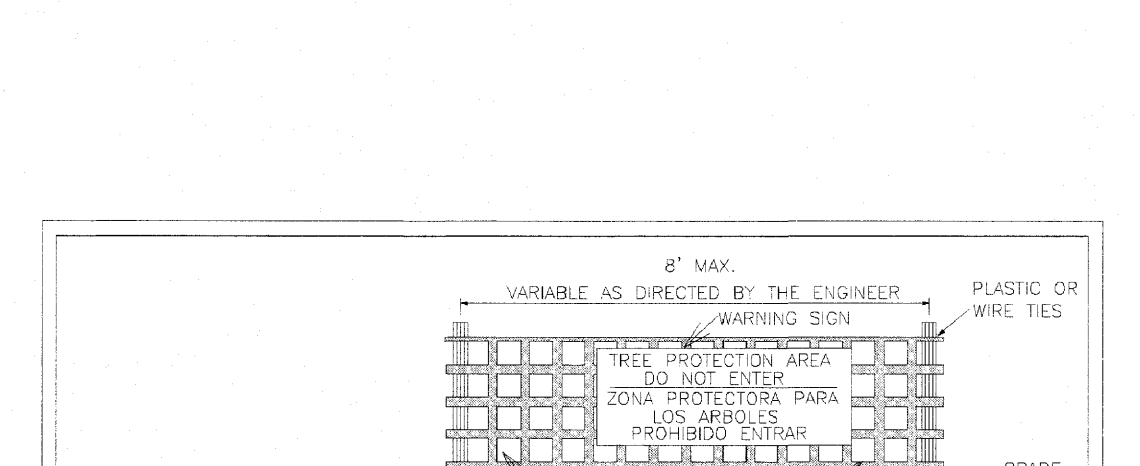
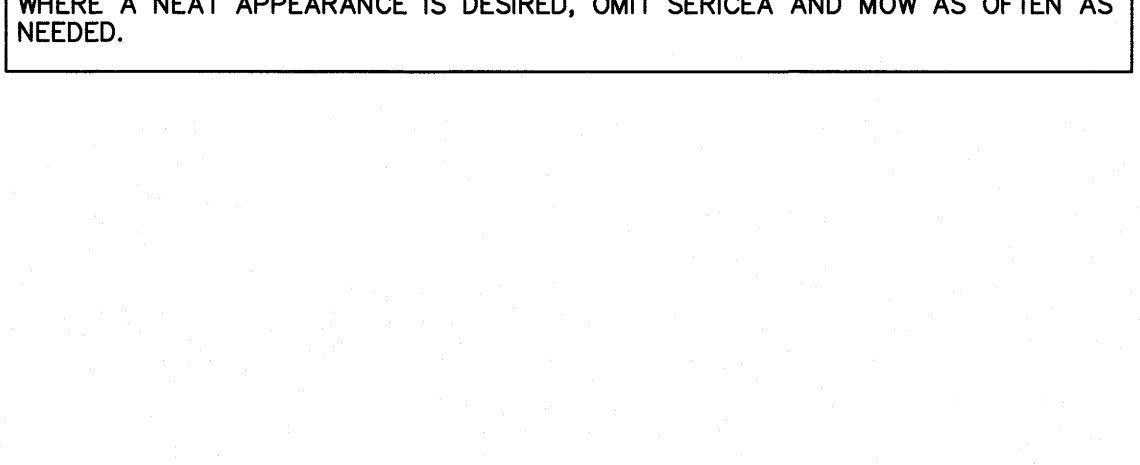
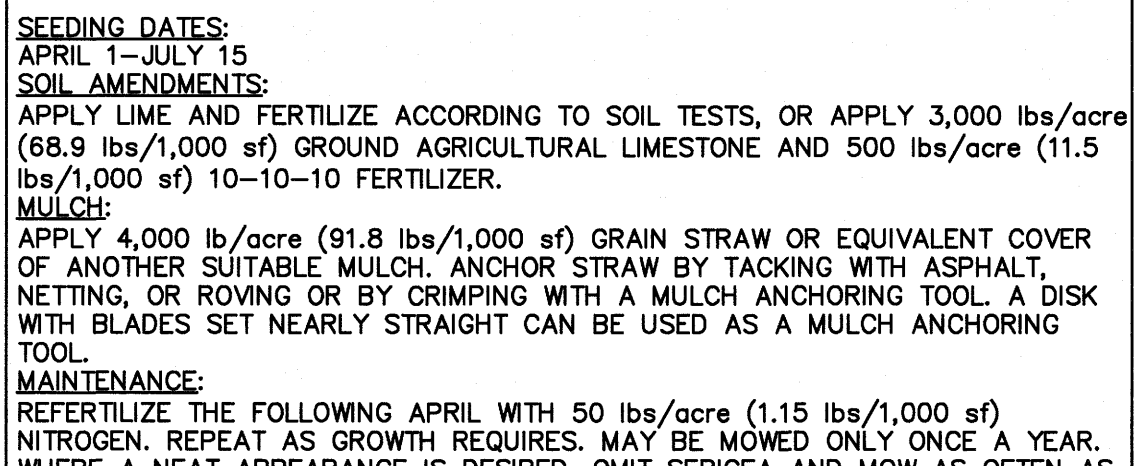
SEEDING MIXTURE SPECIES	RATE (lb/acre)	(lb/1000 sf)
PENSACOLA BAHIAGRASS	50	1.15
SERICA LESPEDEZA	30	0.69
COMMON BERMUDEA	10	0.23
GERMAN MILLET	10	0.23

**SEEDING DATES:**  
APRIL 1-JULY 15

**SOIL AMENDMENTS:**  
APPLY LIME AND FERTILIZE ACCORDING TO SOIL TESTS, OR APPLY 3,000 lbs/acre (68.9 lbs/1,000 sf) GROUND AGRICULTURAL LIMESTONE AND 500 lbs/acre (11.5 lbs/1,000 sf) 10-10-10 FERTILIZER.

**MULCH:**  
APPLY 4,000 lb/acre (91.8 lbs/1,000 sf) GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR ROVING OR BY 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 lbs/acre (1.15 lbs/1,000 sf) NITROGEN. REPEAT AS GROWTH REQUIRES. MAY BE MOWED ONLY ONCE A YEAR, WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICIA AND MOW AS OFTEN AS NEEDED.



**STANDARD DETAIL**

**DATE:** JAN 2015

**DRAWN BY:** JRR

**CHECKED BY:** RDS/PE

**SCALE:** NOT TO SCALE

**WILMINGTON NORTH CAROLINA**

**CITY OF WILMINGTON ENGINEERING**

**PO BOX 1810 WILMINGTON, NC 28402 (910) 341-7807**

**SHEET 2 of 2**

**SD 15-09**

**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 #4 STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED UNDER DRY CONDITIONS TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIALS SPILLED WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.
- SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, BLOCK AND GRAVEL INLET PROTECTION, ROCK DOUGHNUT INLET PROTECTION AND ROCK PIPE INLET PROTECTION WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARDWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND 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 WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED AND KEPT CLEAN WEEKLY.
- SEDIMENT WILL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE DESIGN STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR IF THE ROCK IS DISLODGED. Baffles WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED FROM Baffles WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.
- LAND QUALITY REQUIRES:  
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 REQUIRES:  
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' HORIZONTAL TO 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.

**REVISIONS**

NO.	DESCRIPTION	DATE	BY

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

**NOTES AND DETAILS**  
NHRMC EMPLOYEE PARKING DECK  
WITH PEDESTRIAN BRIDGE  
2026 S. 16TH STREET WILMINGTON, N. C.

**© 2019 NORRIS & TUNSTALL**

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 #: \_\_\_\_\_

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)

**19135**

DES. JST  
CHK. JPN  
DRWL. NKS

DATE 4/8/20

**C5.2**

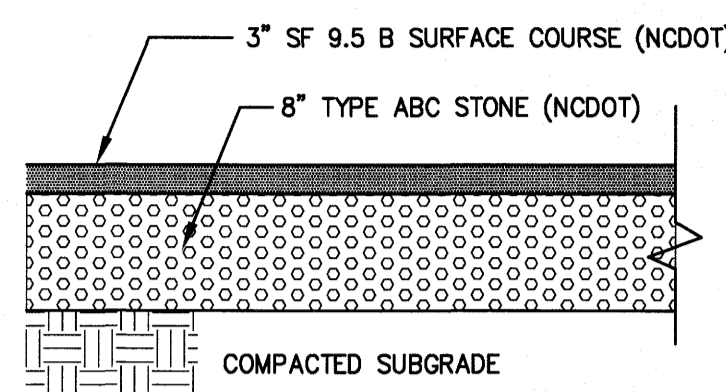
**NORRIS & TUNSTALL**  
CONSULTING ENGINEERS P.C.

2620 IRON GATE DR. SUITE 102  
WILMINGTON, NC 28403  
PHONE: (910) 343-9663

1429 ASH-LITTLE RIVER DR. NW  
WILMINGTON, NC 28405  
PHONE: (910) 285-5900

Licence #C-3641



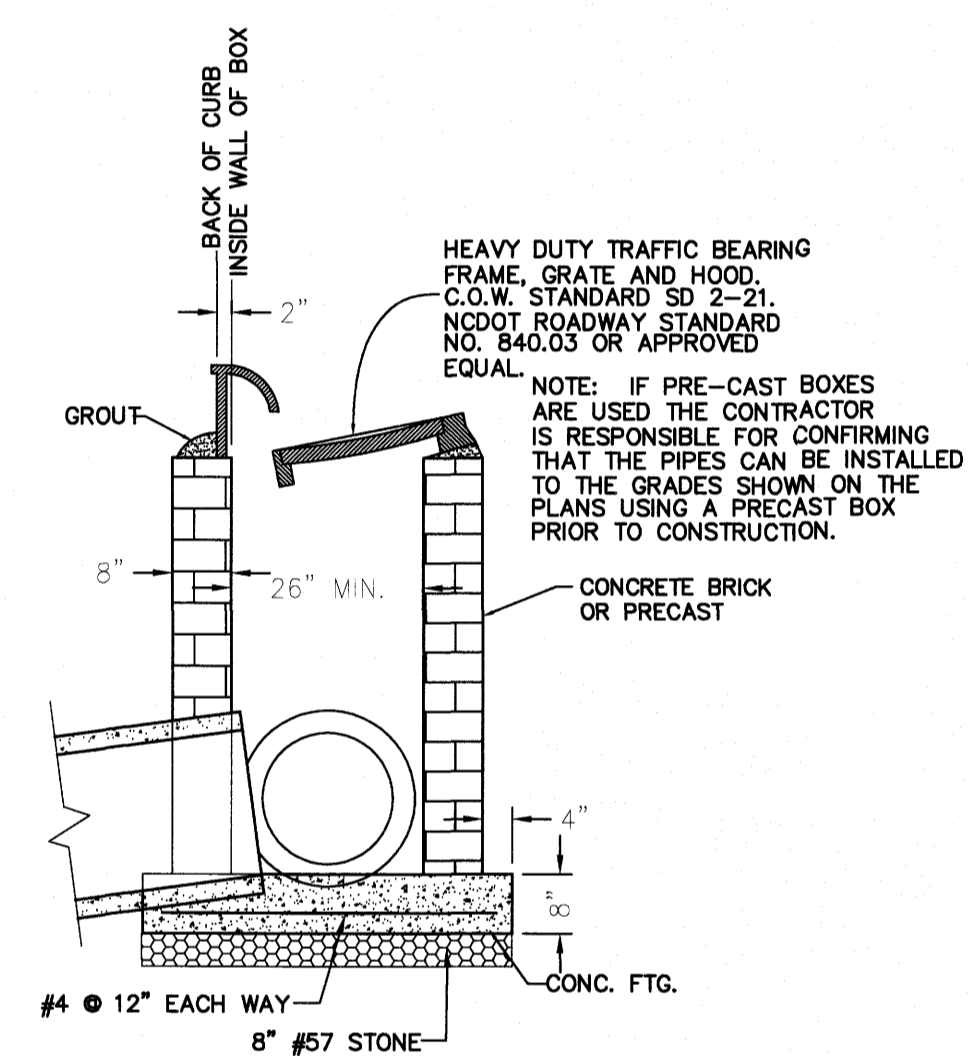


NOTES:  
 1. PAVEMENT SECTIONS SHALL BE DETERMINED WITH CONSULTATION FROM THE GEOTECHNICAL ENGINEER AND ONLY PER THEIR RECOMMENDATIONS. PAVEMENT DETAIL SECTIONS SHOWN ARE MINIMUMS AND MAY BE STRENGTHENED PER GEOTECHNICAL ENGINEERS RECOMMENDATIONS.  
 2. REFERENCE GEOTECHNICAL REPORT FOR UNDERCUTTING IN AREAS OF PROPOSED PARKING AND DRIVE AREAS. CONSULT WITH GEOTECHNICAL ENGINEER TO DETERMINE REQUIRED SUBGRADE UNDERCUTTING AND REPLACEMENT.

NOT TO SCALE

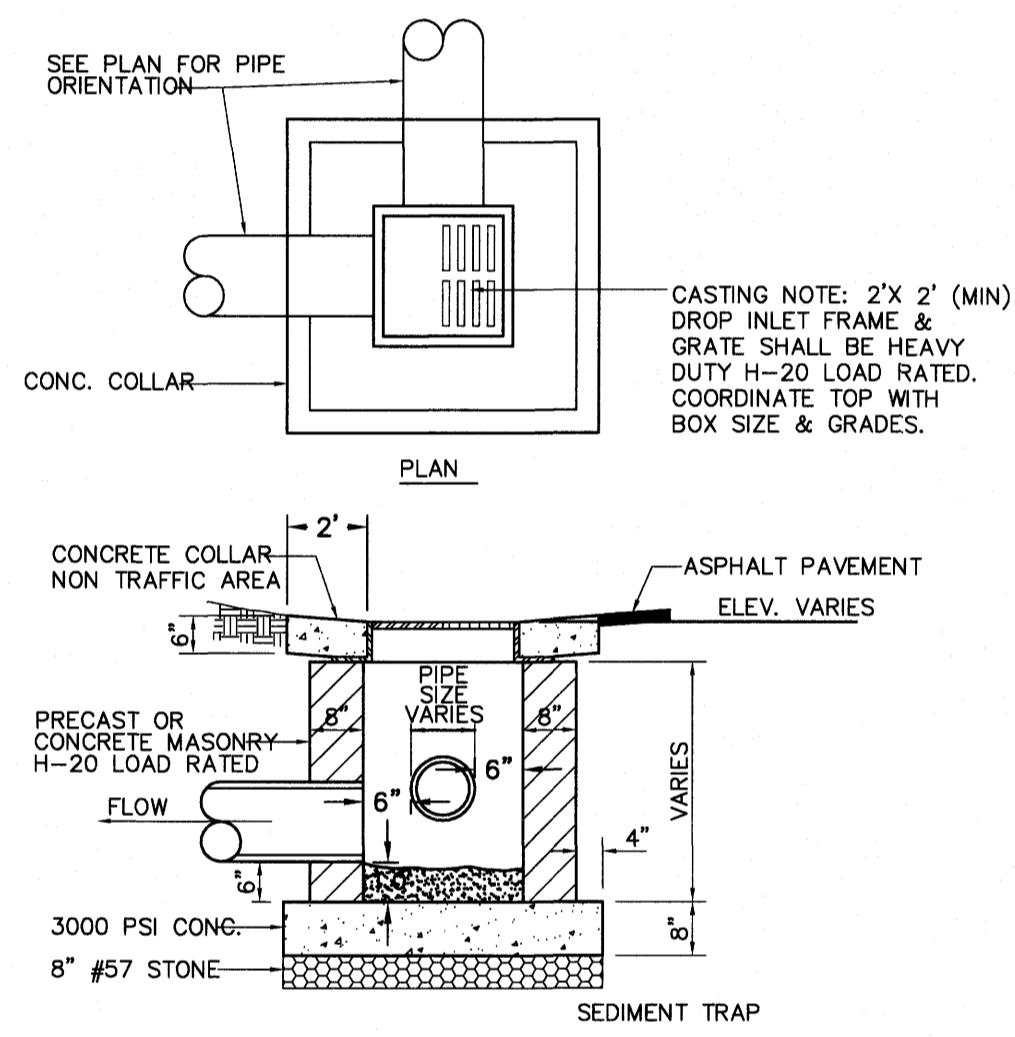
1 ASPHALT PAVEMENT SECTION

2



NOT TO SCALE

3 TYPICAL CATCH BASIN

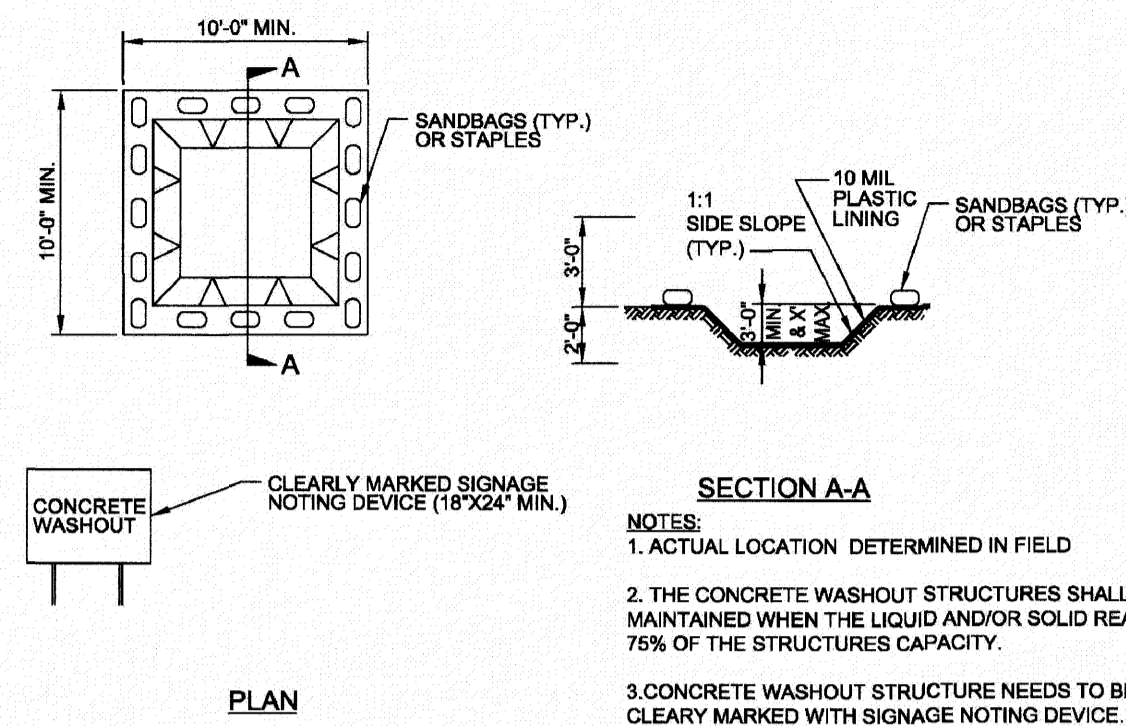


MUST COMPLY WITH CITY OF WILMINGTON STANDARDS NOT TO SCALE

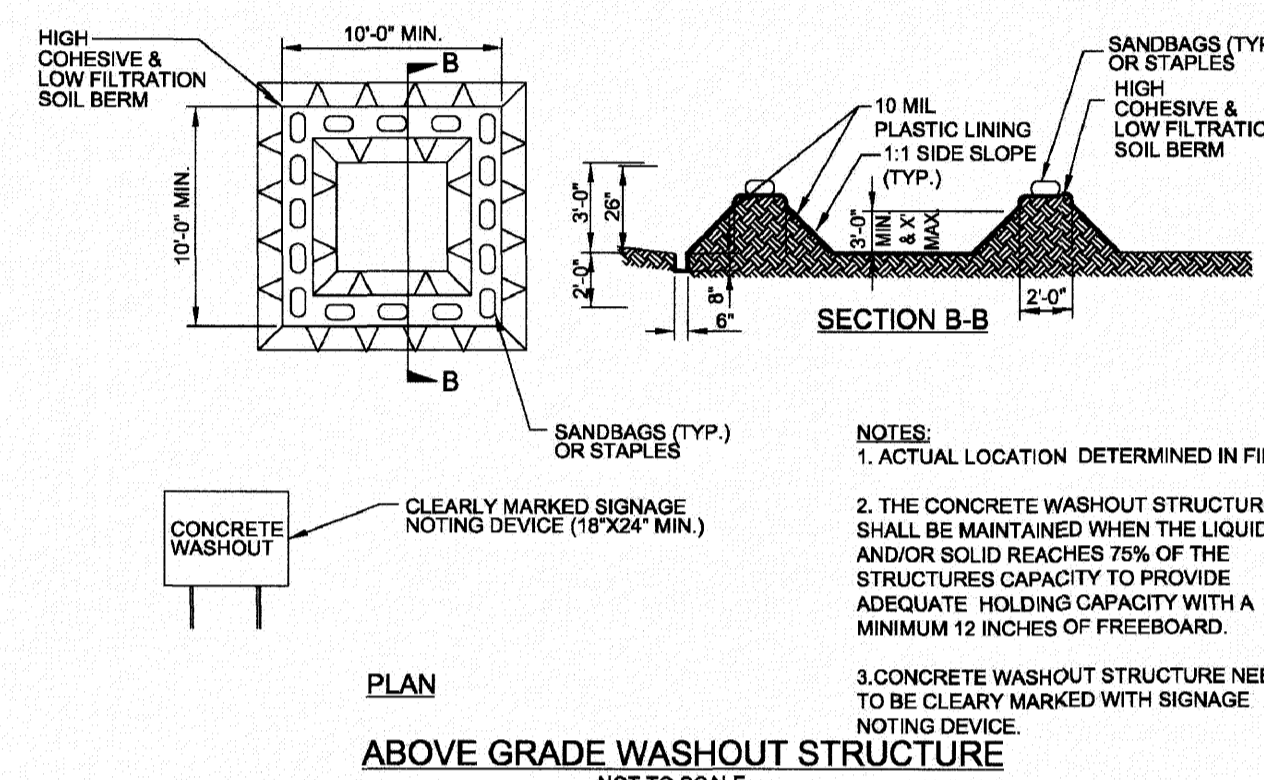
4 TYPICAL DROP INLET

WITH LINER, NO GRAVEL APPROACH

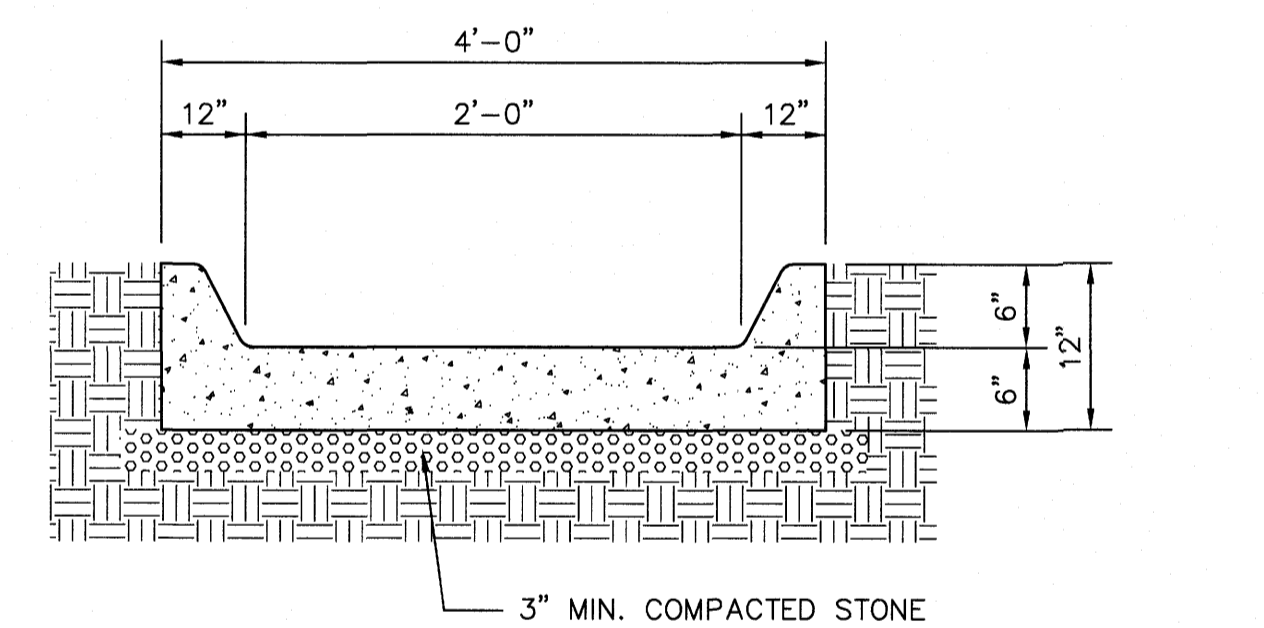
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



BELOW GRADE WASHOUT STRUCTURE

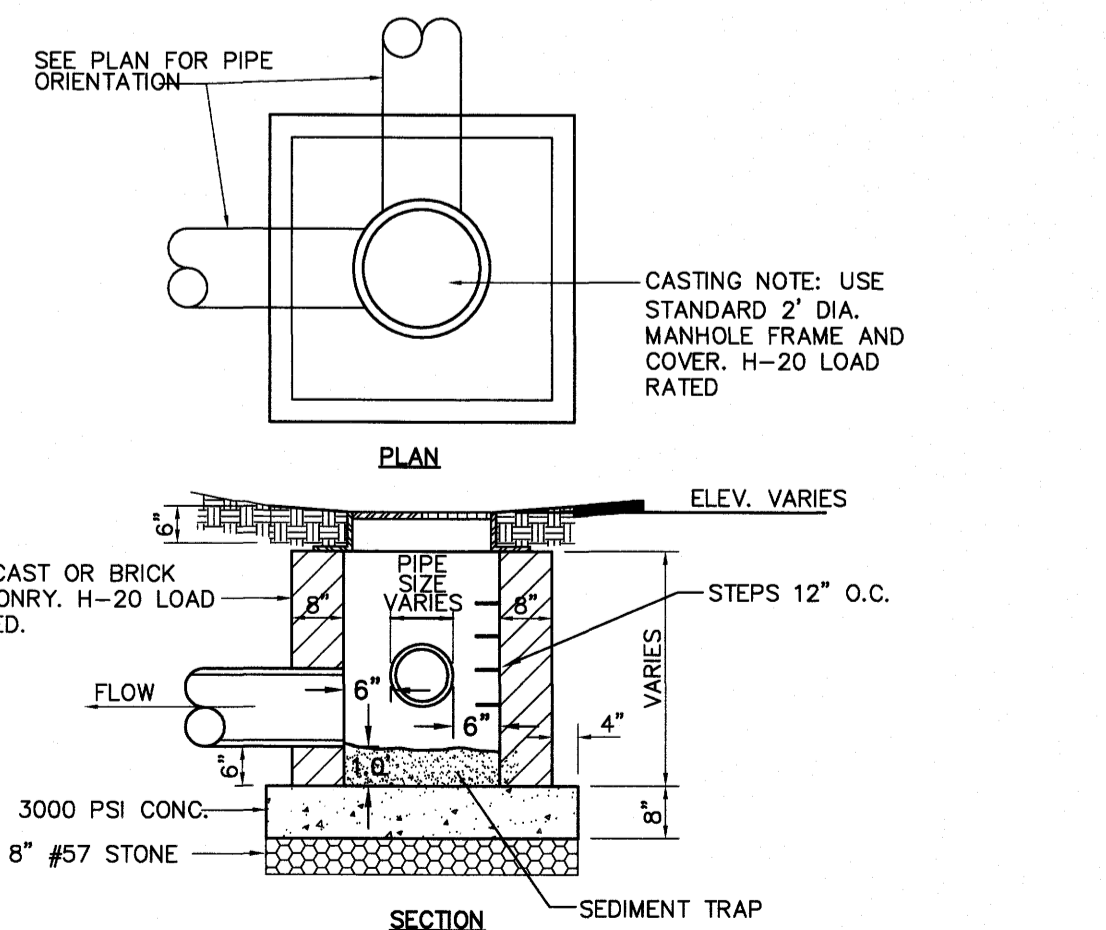


ABOVE GRADE WASHOUT STRUCTURE



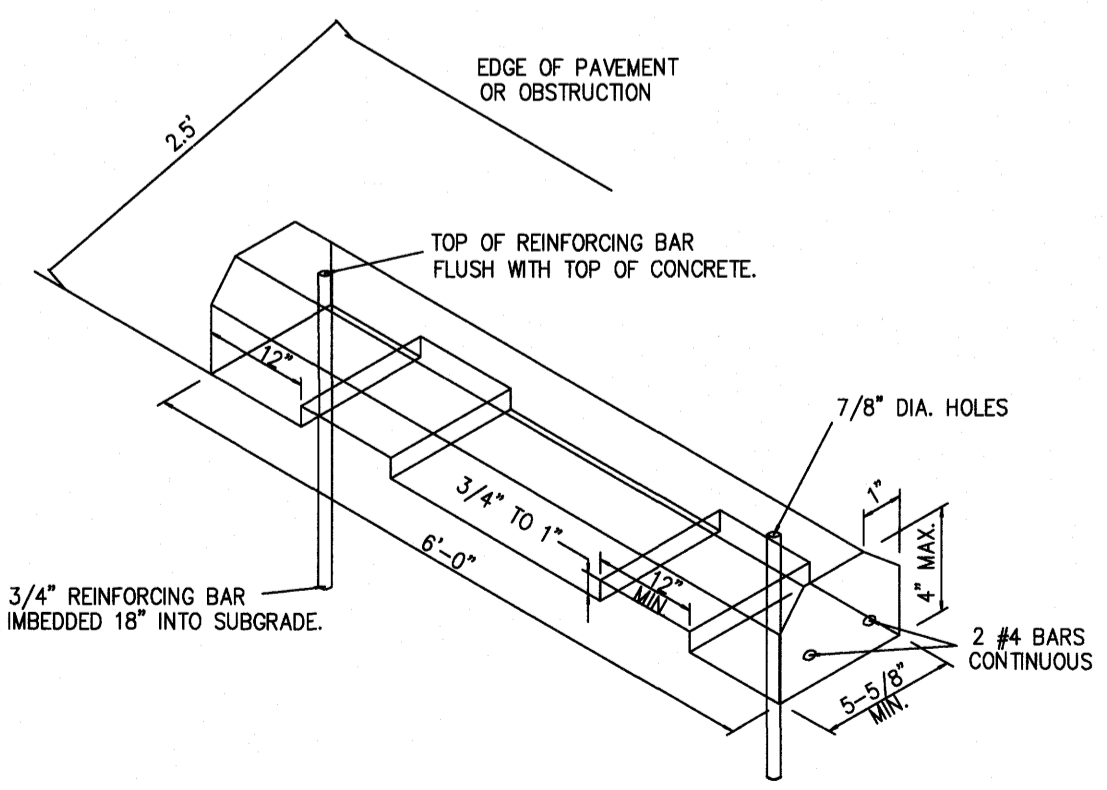
NOT TO SCALE

5 CONCRETE FLUME SECTION



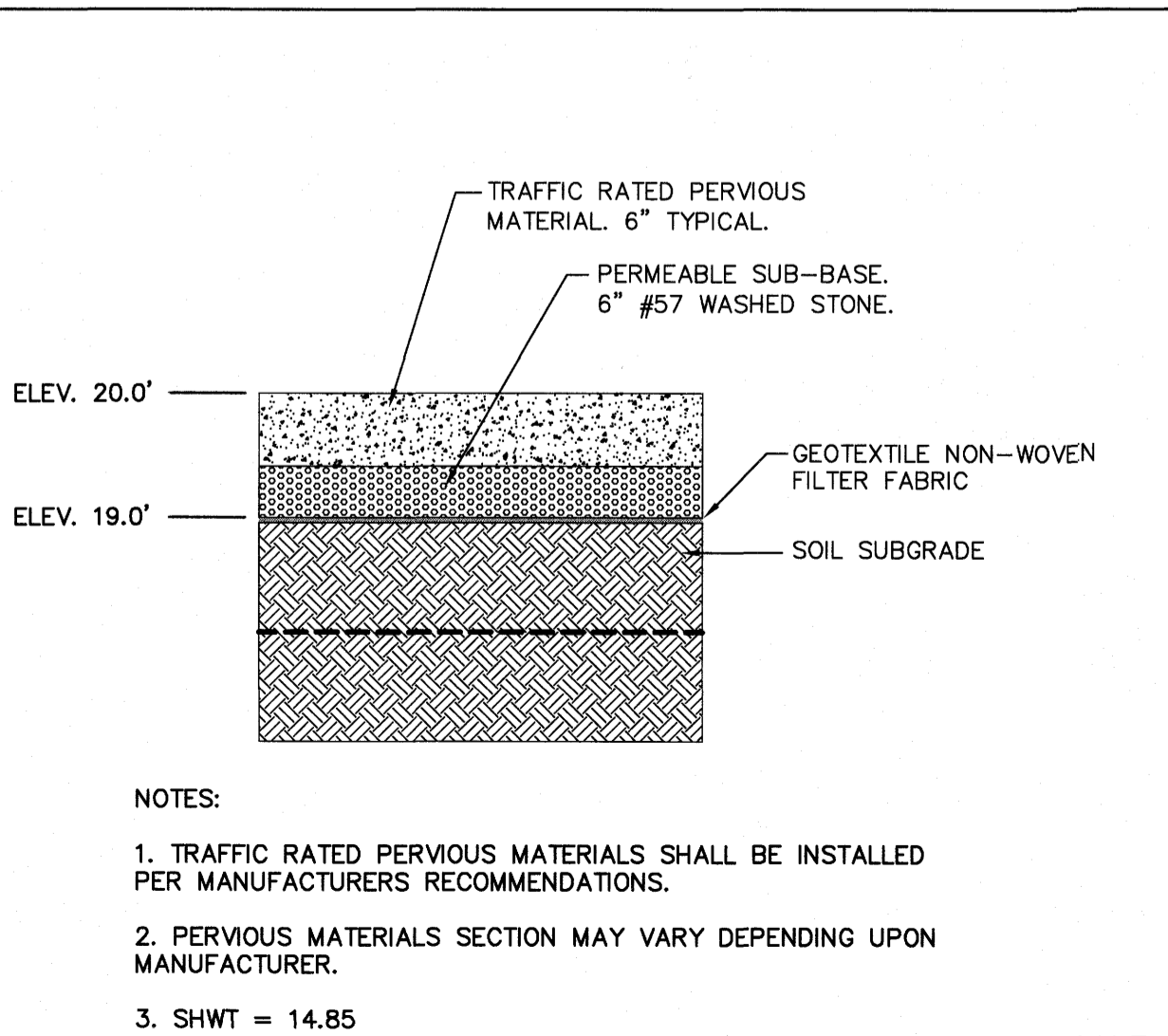
NOT TO SCALE

6 TYPICAL JUNCTION BOX



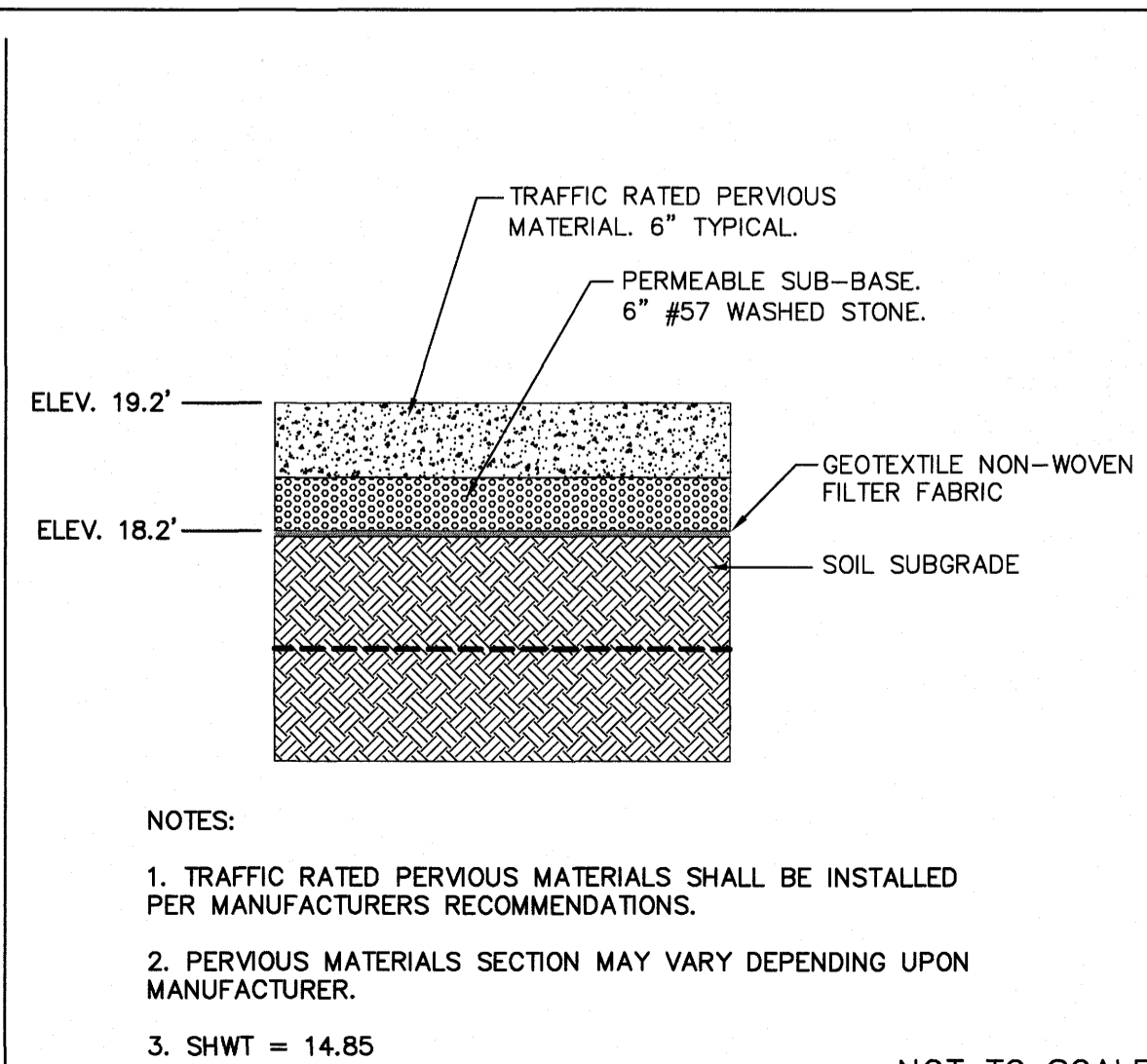
NOT TO SCALE

7 CONCRETE WHEEL STOPS



NOT TO SCALE

8 PERVIOUS PAVEMENT SECTION PC-1



NOT TO SCALE

9 PERVIOUS PAVEMENT SECTION PC-2

SITE WORK NOTES:

1. THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH FIELD CONSTRUCTION CONDITIONS.
2. CONTRACTOR SHALL COORDINATE WORK WITH 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 PROOFROLLED. 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 UNDERCUT 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 (ASTM D-698) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED IN 6 INCH LAYERS TO 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. IN AREAS WHERE NO STRUCTURAL FILL IS TO BE PLACED THE UPPER 12 INCHES OF IN-PLACE SUBGRADE SHOULD BE 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 MICHAEL UNDERWOOD AND ASSOCIATES, P.A.
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 ALKYO, 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.

NOTES AND DETAILS  
 NHRMC EMPLOYEE PARKING DECK  
 WITH PEDESTRIAN BRIDGE  
 2026 S. 16TH STREET WILMINGTON, N. C.

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

**NORRIS & TUNSTALL**  
 CONSULTING ENGINEERS P.C.  
 3602 IRON GATE DR., SUITE 102 1429 ASH-LITTLE RIVER RD. NW  
 WASHINGTON, NC 28405 WASHINGTON, NC 28405  
 PHONE (910) 343-9625 PHONE (910) 287-5960

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

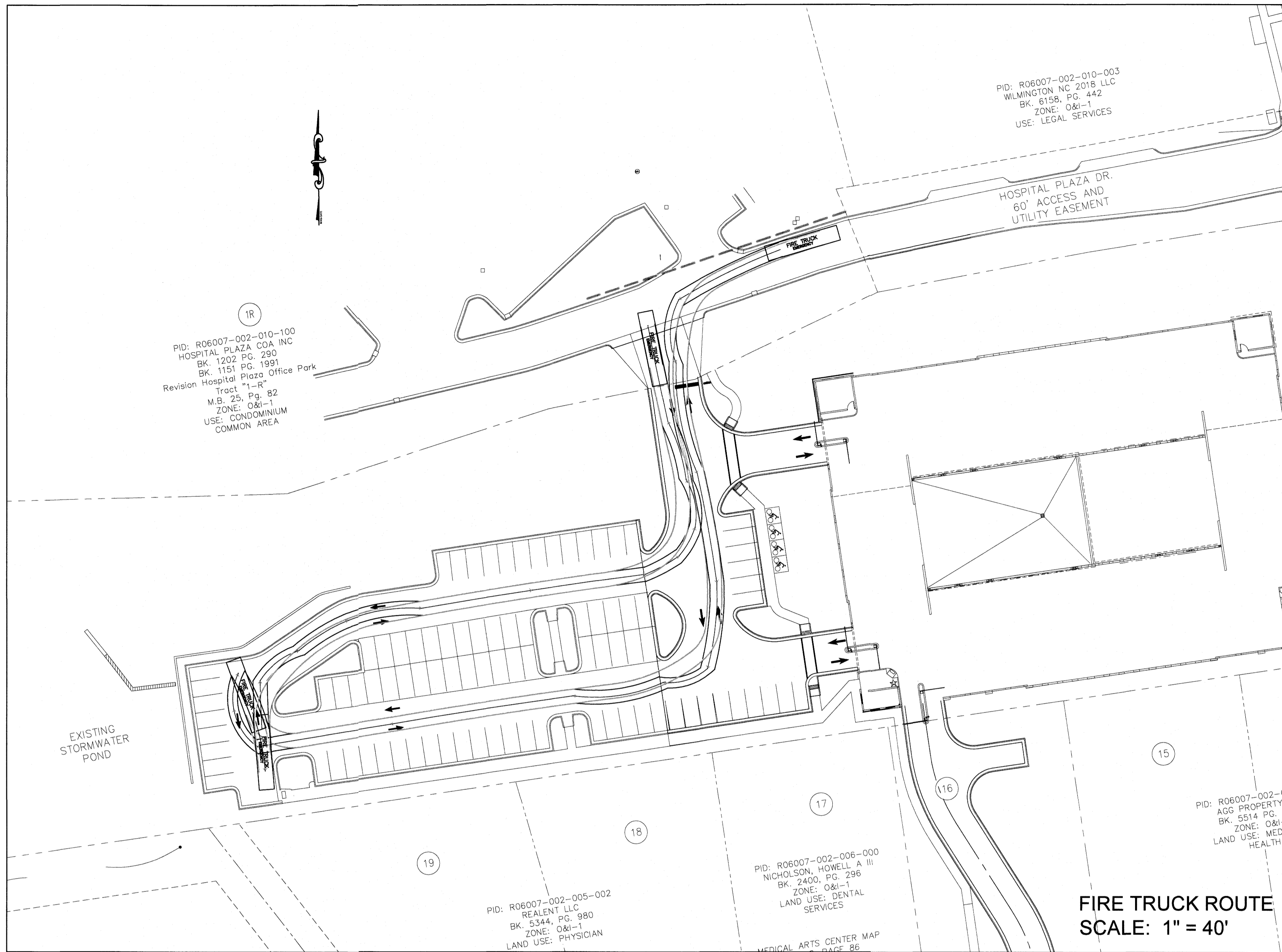
**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_  
**Approved Construction Plan**  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
 Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_

NODENR 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)

Licence #C-3641  
**19135**  
 DES. JST  
 Ckd. JPN  
 DRWN. NKS  
 DATE 4/8/20  
**C5.3**

C:\projects\2019\19135 NHRMC Parking Deck - Ped Bridge\19135 Plans\dwg current\19135.master.r7.dwg, 4/7/2020 9:12:16 AM  
 C:\projects\2019\19135 NHRMC Parking Deck - Ped Bridge\19135 Plans\dwg current\19135.master.r7.dwg (10/15/master) Plotted on: Apr 08, 2020 - 9:12am by nhszy





C:\projects\2019\19135\_nhrmc\_parking\_deck - Ped Bridge\19135\_nhrmc\_parking\_deck.dwg (19135.master) Printed on: May 21, 2020 - 8:00am by Nancy

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

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

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

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

**FIRE TRUCK ROUTE**  
**NHRMC EMPLOYEE PARKING DECK**  
**WITH PEDESTRIAN BRIDGE**  
**2026 S. 16TH 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) 343-9653  
 1429 ASH-LITTLE RIVER RD. NW  
 ASH, NC 28420  
 PHONE (910) 287-5900

Licence #C-3641

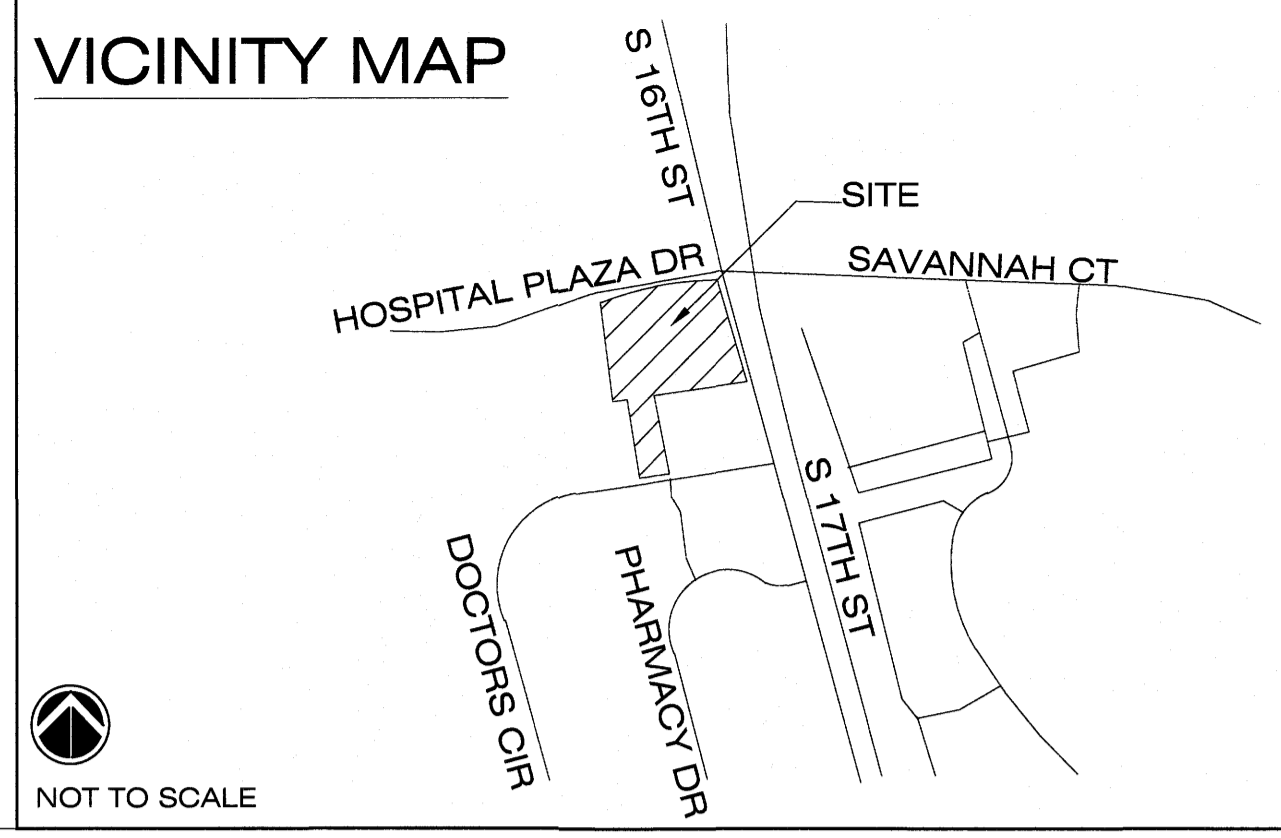
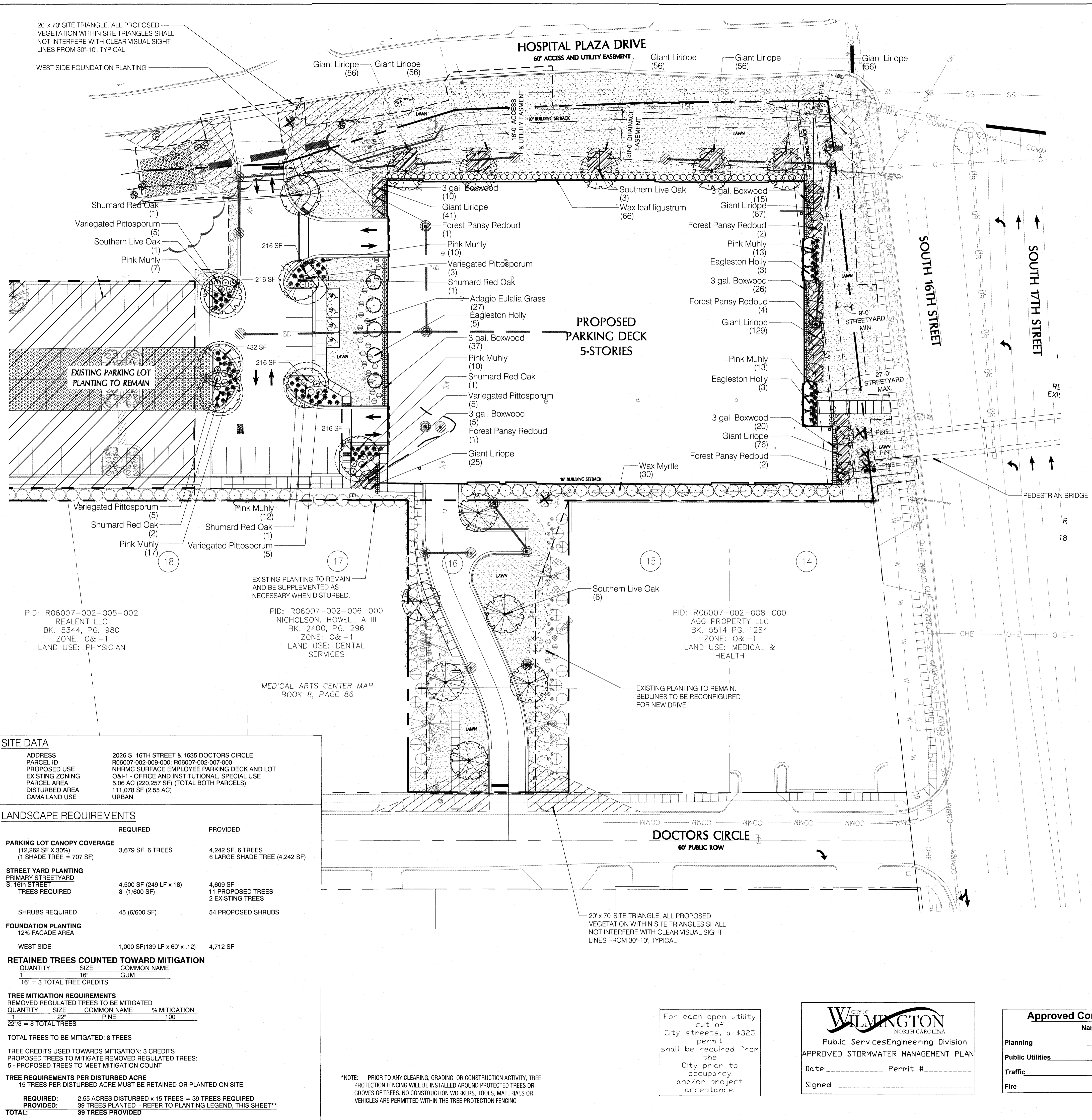
**19135**

DES. JUST  
 CVD. JPN  
 DRWN. NKS

DATE 5/21/20

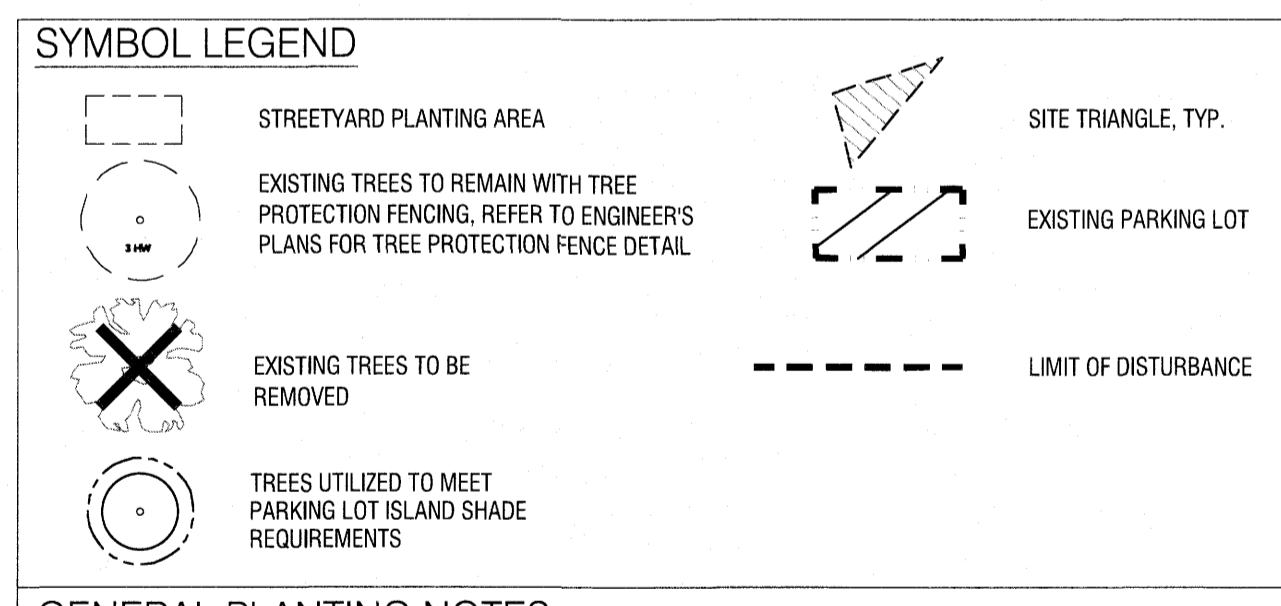
**C5.4**





### PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME	CONT	CAL	RANGE	MIN. REQ. SIZE	QTY
	Cercis c. 'Forest Pansy' / Forest Pansy Redbud	B & B	3" CAL		2-2.5' CAL	10
	Ilex x a. 'Eagleston' / Eagleston Holly	B&B	3" CAL		2-2.5' CAL	11
	Quercus shumardii / Shumard Red Oak	B & B	3" CAL		2-2.5' CAL	6
	Quercus virginiana / Southern Live Oak	B & B	3" CAL		2-2.5' CAL	12
SHRUBS	BOTANICAL / COMMON NAME	SIZE	RANGE	MIN. REQ. SIZE	QTY	
	Buxus m. 'Wintergreen' / 3 gal. Boxwood	3 gal	12-18" HT	12" HT	115	
	Ligustrum j. 'Recurvifolium' / Wax leaf ligustrum	7 gal	30-36" HT	12" HT	66	
	Miscanthus s. 'Adagio' / Adagio Eulalia Grass	3 gal	18-24" HT	12" HT	27	
	Muhlenbergia capillaris / Pink Muhly	3 gal	18-24" HT	12" HT	86	
	Myrica cerifera / Wax Myrtle	25 gal	5-6" HT	12" HT	30	
	Pittosporum t. 'Variegata' / Variegated Pittosporum	3 gal	18-24" HT	12" HT	23	
GROUND COVERS	BOTANICAL / COMMON NAME	SIZE	RANGE	SPACING	QTY	
	Liriope gigantea / Giant Liriope	1 GAL	12-18" HT	24" o.c.	618	
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 AT A MINIMUM OF TEN (10) FEET FROM ALL UNDERGROUND UTILITIES, STREETLIGHTS, 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.
  - GROUNDCOVER TYPE SHOWN SHALL BE PLANTED IN ALL SHRUB AREAS AS SPECIFIED ON PLANS. GROUNDCOVER SHALL BE PLANTED AT 8" 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 GROUNDCOVER. ALL AREAS PLANTED WITH GROUNDCOVER SHALL BE MULCHED WITH HARDWOOD MULCH.

### SITE DATA

ADDRESS	2026 S. 16TH STREET & 1635 DOCTORS CIRCLE
PARCEL ID	R06007-002-005-000, R06007-002-007-000
PROPOSED USE	NHRMC SURFACE EMPLOYEE PARKING DECK AND LOT
EXISTING ZONING	O&I-1 - OFFICE AND INSTITUTIONAL, SPECIAL USE
PARCEL AREA	5.06 AC (220,257 SF) (TOTAL BOTH PARCELS)
DISTURBED AREA	111,078 SF (2.55 AC)
CAMA LAND USE	URBAN

### LANDSCAPE REQUIREMENTS

	REQUIRED	PROVIDED
<b>PARKING LOT CANOPY COVERAGE</b> (12,262 SF X 30%) (1 SHADE TREE = 707 SF)	3,679 SF, 6 TREES	4,242 SF, 6 TREES 6 LARGE SHADE TREE (4,242 SF)
<b>STREET YARD PLANTING</b> <b>PRIMARY STREETYARD</b> S. 16th STREET TREES REQUIRED	4,500 SF (249 LF x 18) 8 (1/600 SF)	4,609 SF 11 PROPOSED TREES 2 EXISTING TREES
SHRUBS REQUIRED	45 (6/600 SF)	54 PROPOSED SHRUBS
<b>FOUNDATION PLANTING</b> 12% FACADE PLANTING		
WEST SIDE	1,000 SF (139 LF x 60' x 12)	4,712 SF

### RETAINED TREES COUNTED TOWARD MITIGATION

QUANTITY	SIZE	COMMON NAME	% MITIGATION
1	16"	GUM	
16" = 3 TOTAL TREE CREDITS			

### TREE MITIGATION REQUIREMENTS

REMOVED REGULATED TREES TO BE MITIGATED	QUANTITY	SIZE	COMMON NAME	% MITIGATION
	22	16"	PINE	100
22/3 = 8 TOTAL TREES				

TOTAL TREES TO BE MITIGATED: 8 TREES

TREE CREDITS USED TOWARDS MITIGATION: 3 CREDITS

PROPOSED TREES TO MITIGATE REMOVED REGULATED TREES: 5 - PROPOSED TREES TO MEET MITIGATION COUNT

### TREE REQUIREMENTS PER DISTURBED ACRE

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

REQUIRED:	2.55 ACRES DISTURBED x 15 TREES = 39 TREES REQUIRED
PROVIDED:	39 TREES PLANTED - REFER TO PLANTING LEGEND, THIS SHEET**
TOTAL:	39 TREES PROVIDED

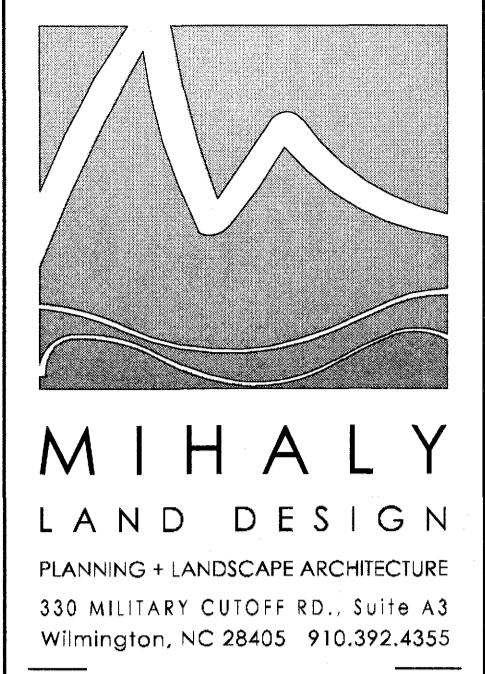
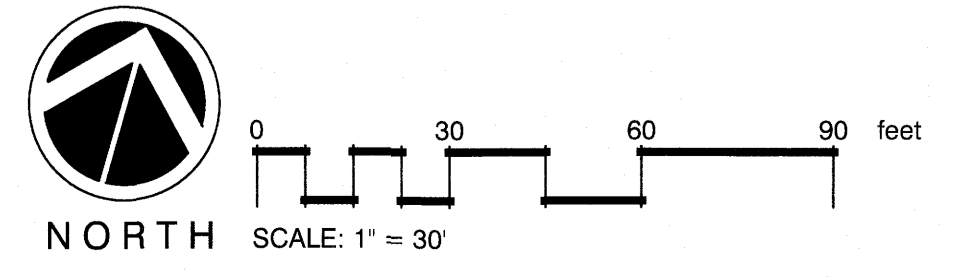
\*NOTE: PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING

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

City of WILMINGTON  
Public Services/Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

Approved Construction Plan

Name	Date
Planning	
Public Utilities	
Traffic	
Fire	



Revisions  
2020-04-03: UPDATE PER ENGINEERS REVISION  
2020-04-13: UPDATE PER ENGINEERS REVISED BASE  
2020-05-01: REVISE PER COV COMMENTS

CLIENT  
**NHRMC**  
P.O. BOX 9000  
WILMINGTON, NC 28402  
(910) 343-2788

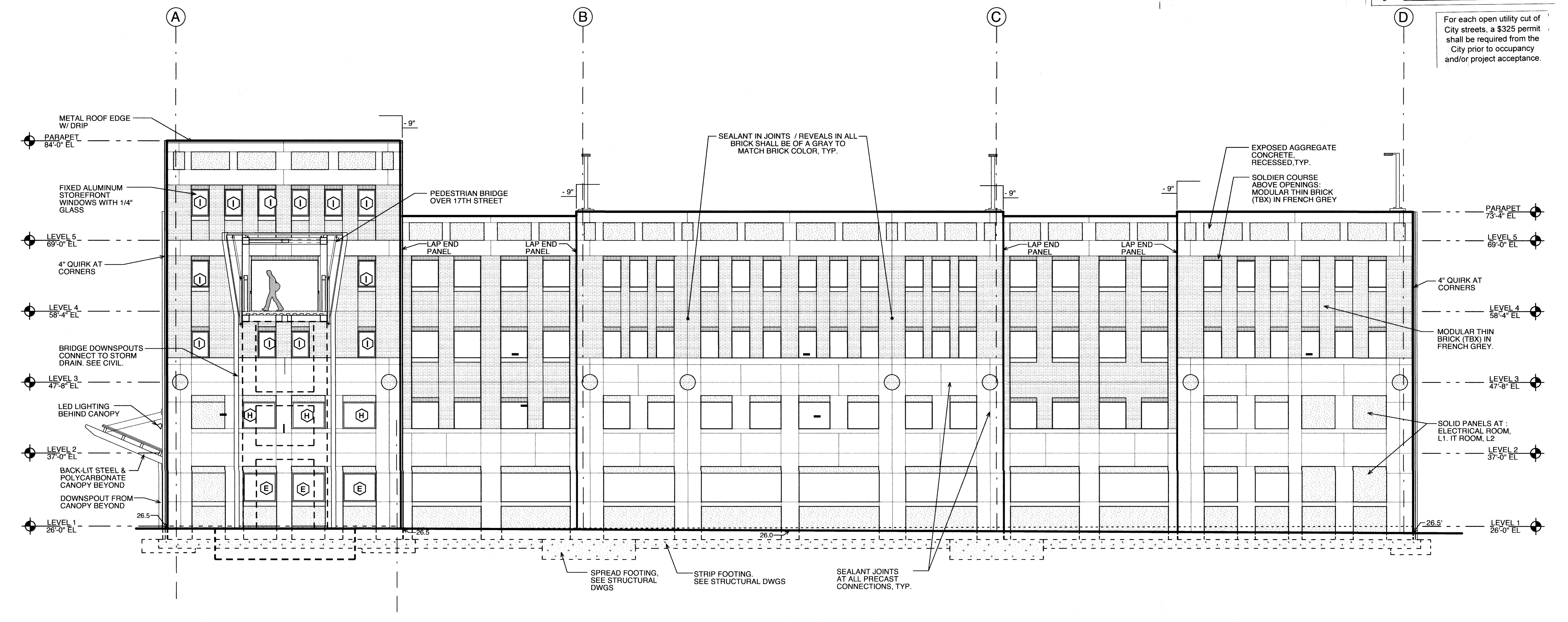
PROJECT  
**NHRMC EMPLOYEE PARKING DECK**  
2026 S. 16TH STREET  
WILMINGTON, NC  
LANDSCAPE PLANS

CONSTRUCTION SET

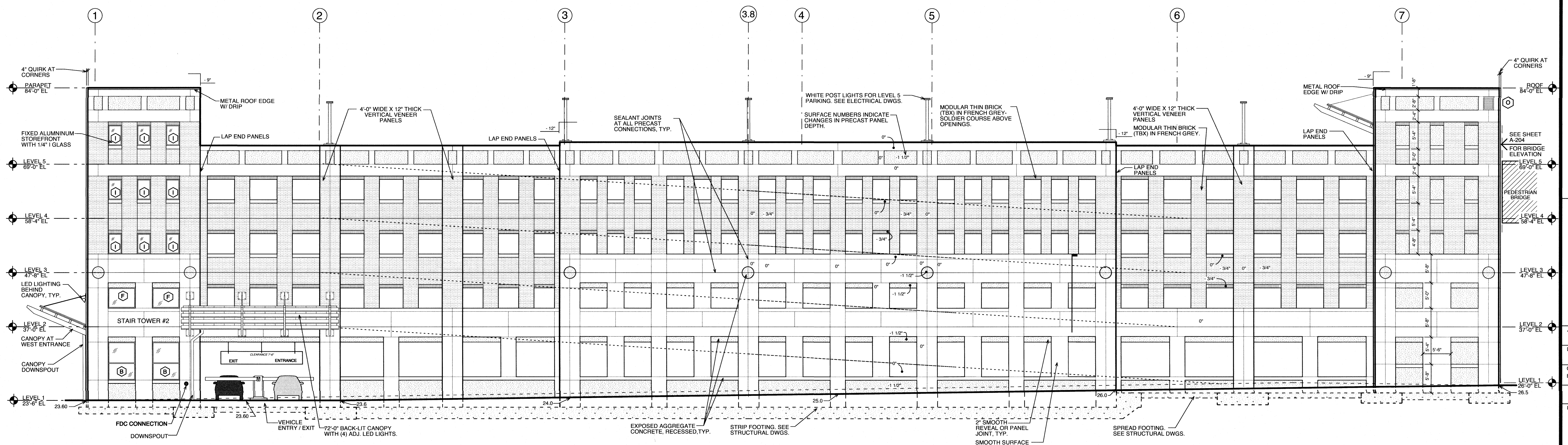
Date: 03/17/2020  
Phase:  
Job Number: 680-19  
Designed by: MLD  
Drawn by: MAS  
Checked by: JWM  
Sheet Title: PLANTING PLAN  
Sheet Number: **L1.0**  
of 1 sheets

19135





**2 EAST ELEVATION**  
 A-200 scale: 1/8" = 1'-0"



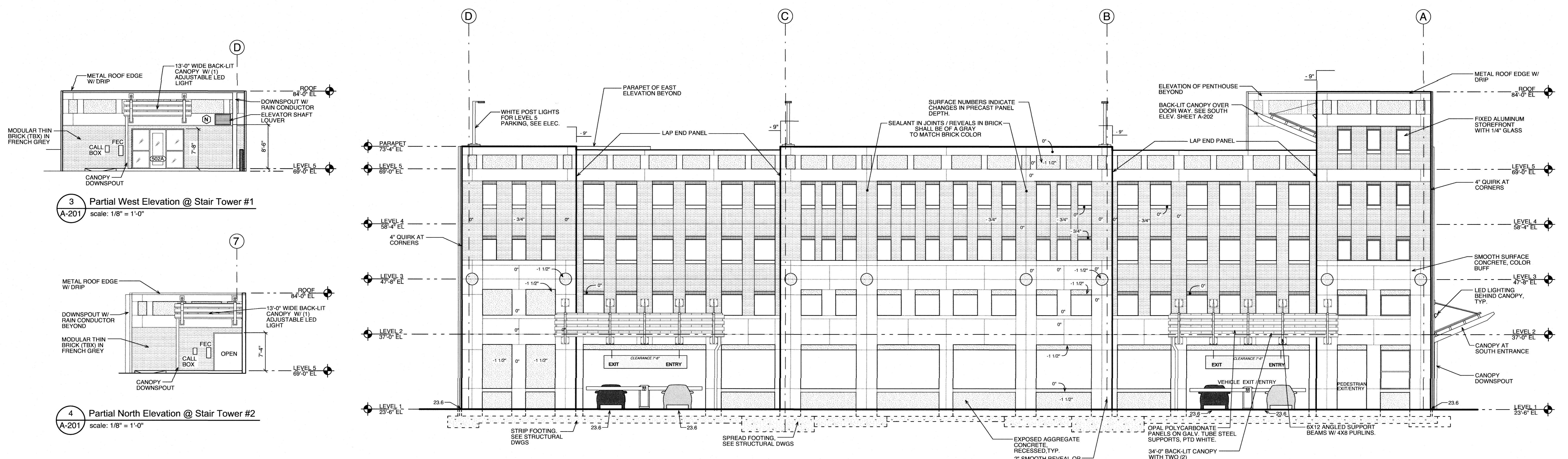
**1 SOUTH ELEVATION**  
 A-200 scale: 1/8" = 1'-0"

**New Hanover Regional Medical Center**  
**Five Level Parking Structure**  
 Wilmington, North Carolina 28401

**SOUTH AND EAST ELEVATIONS**

JOB NUMBER	
DRAWN BY	DP
CHECKED BY	BOWMAN
DATE	
REVISIONS	
SHEET NUMBER	



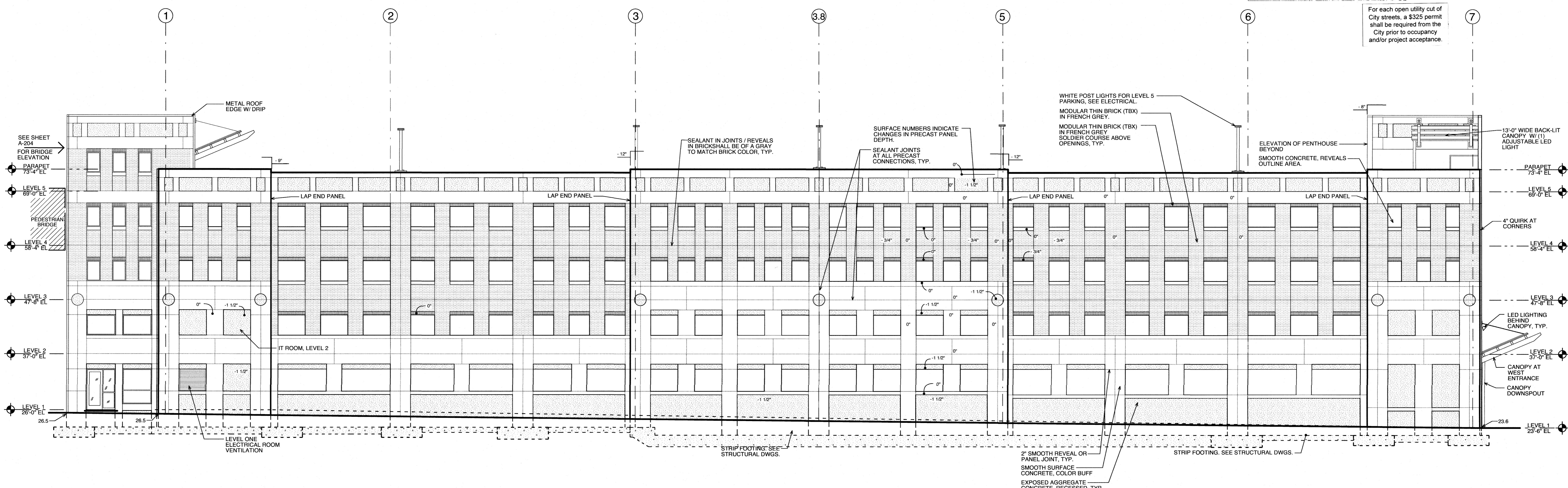


**2 WEST ELEVATION**  
 A-201 scale: 1/8" = 1'-0"

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

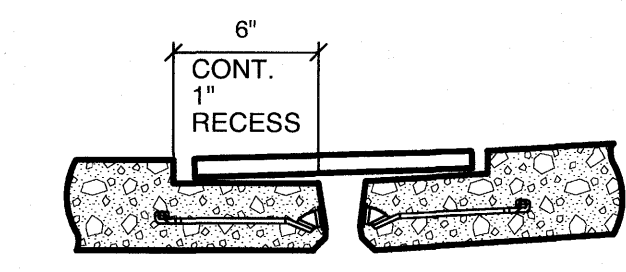
CITY OF WILMINGTON  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

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

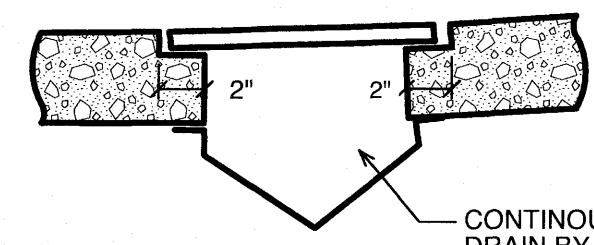


**1 NORTH ELEVATION**  
 A-202 scale: 1/8" = 1'-0"

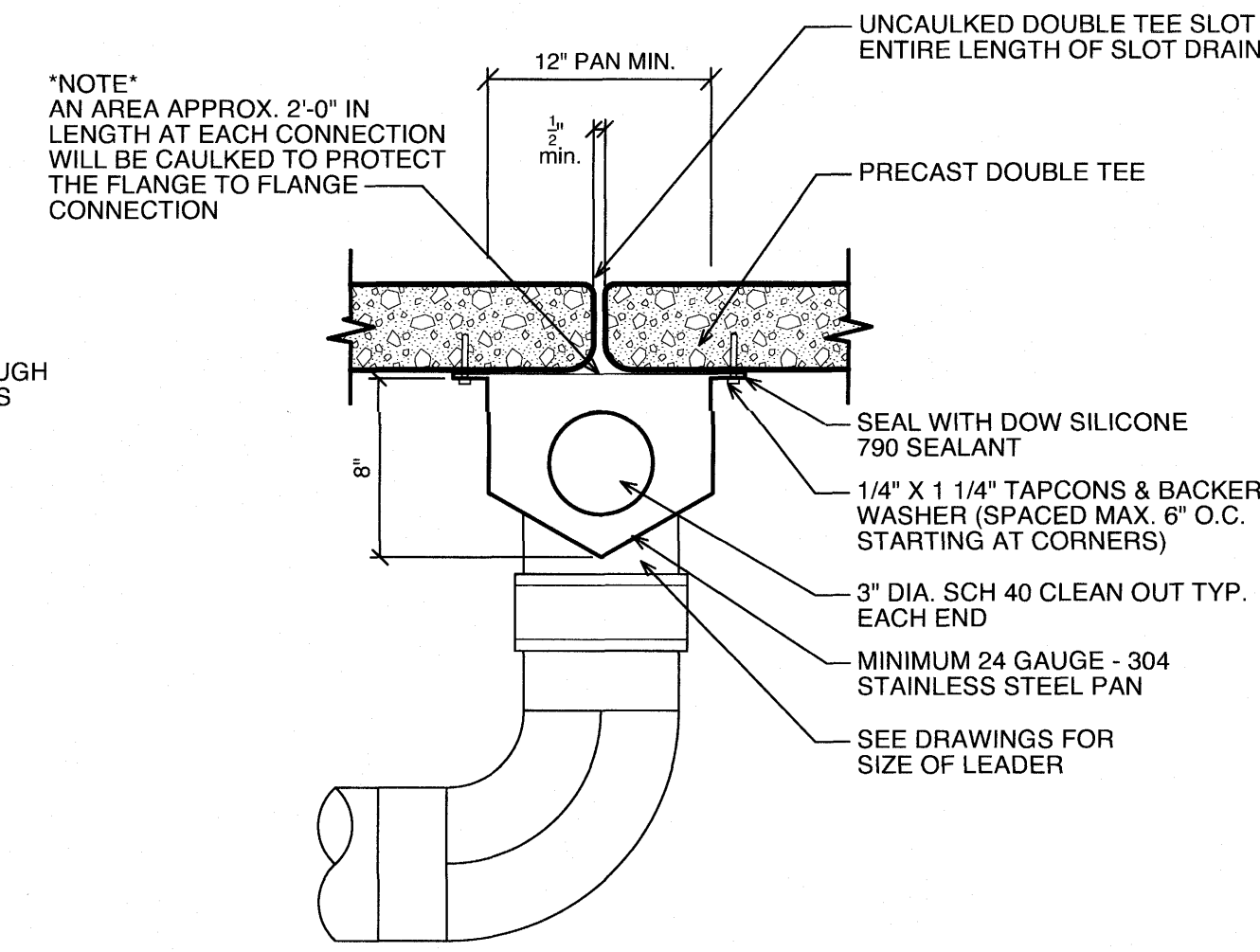




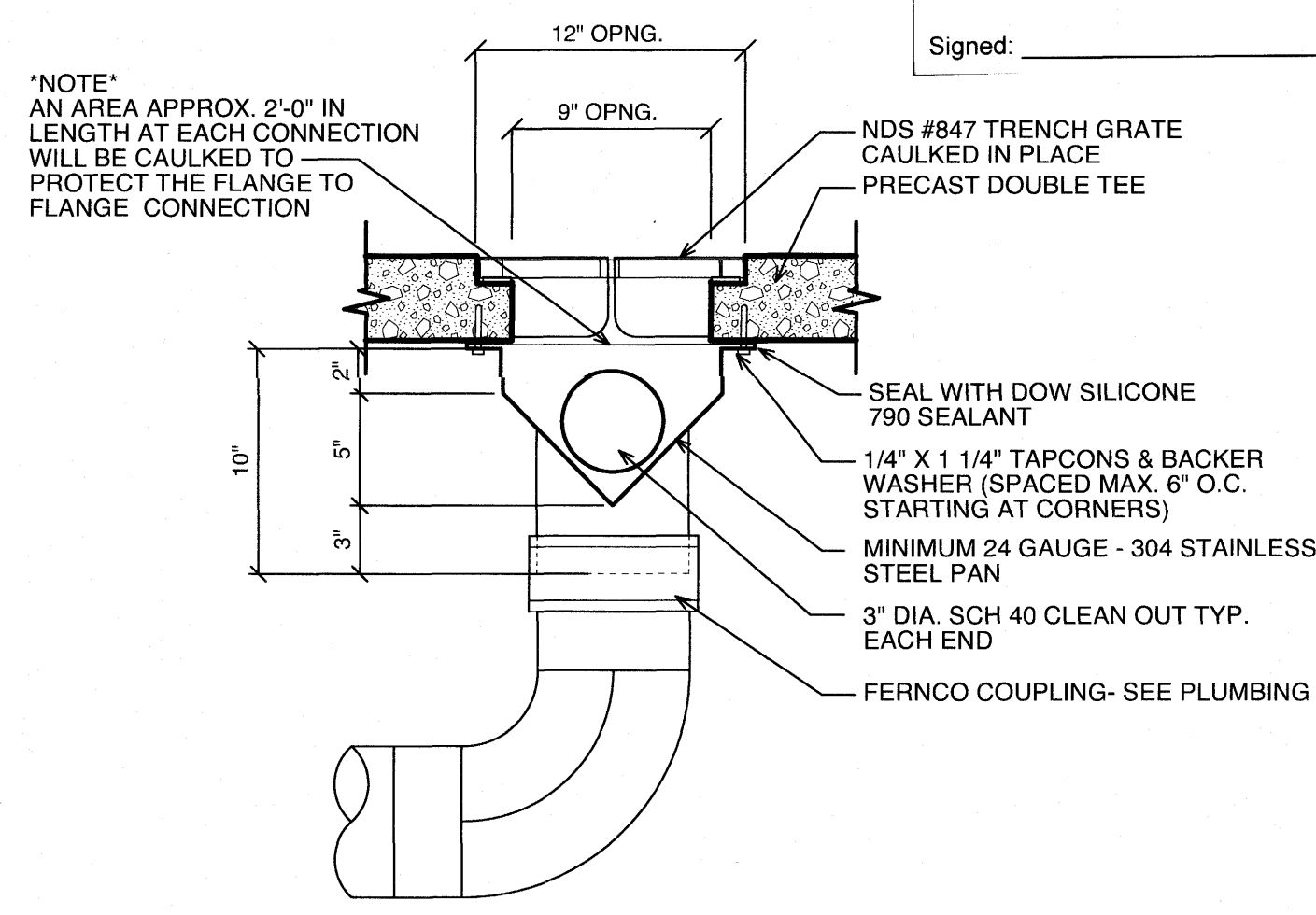
**8 Trench Detail Between Connections**  
 A-300 scale: 1-1/2" = 1'-0"



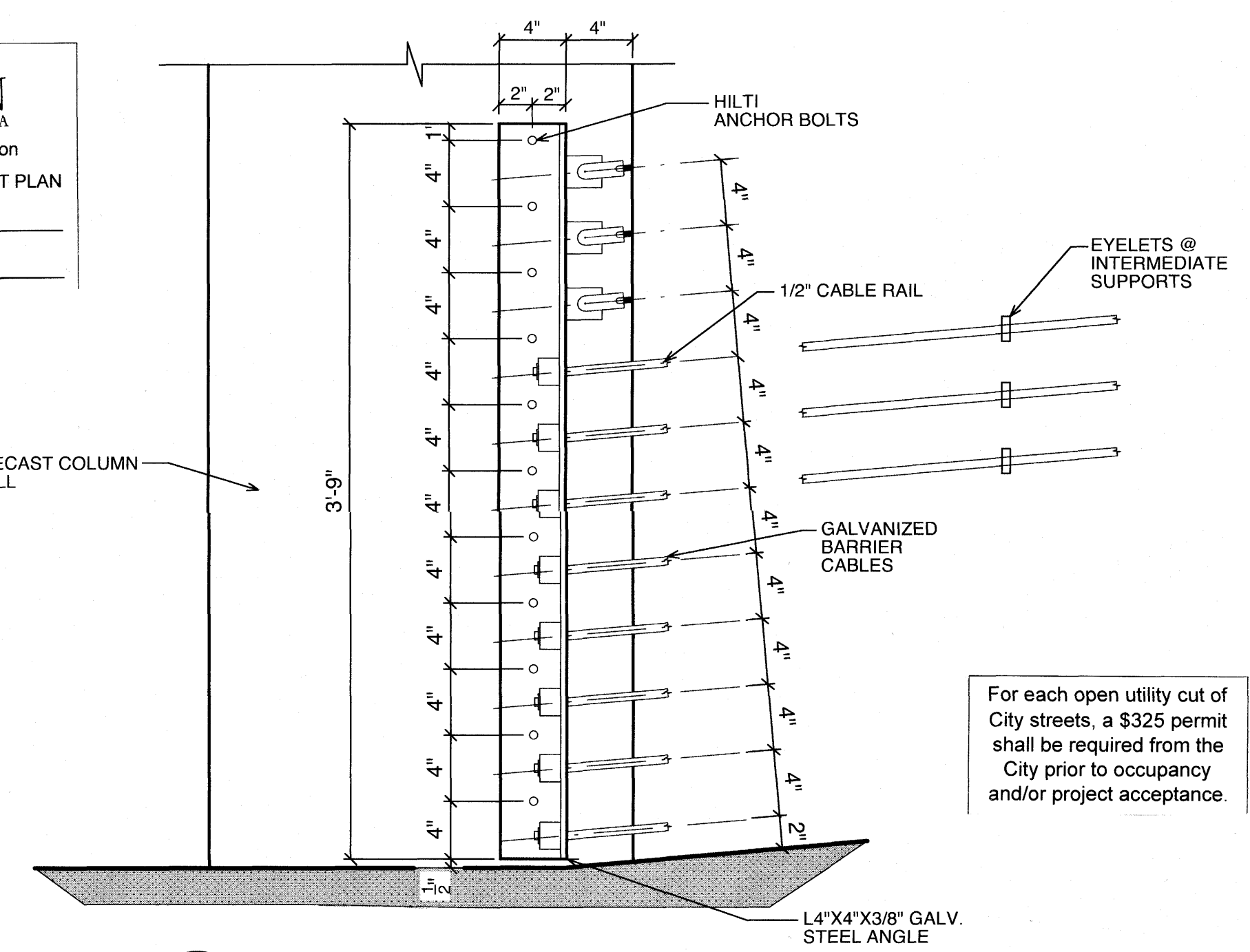
**7 Trench Detail at Connection**  
 A-300 scale: 1-1/2" = 1'-0"



**6 Slot Drain Details**  
 A-300 scale: 1-1/2" = 1'-0"



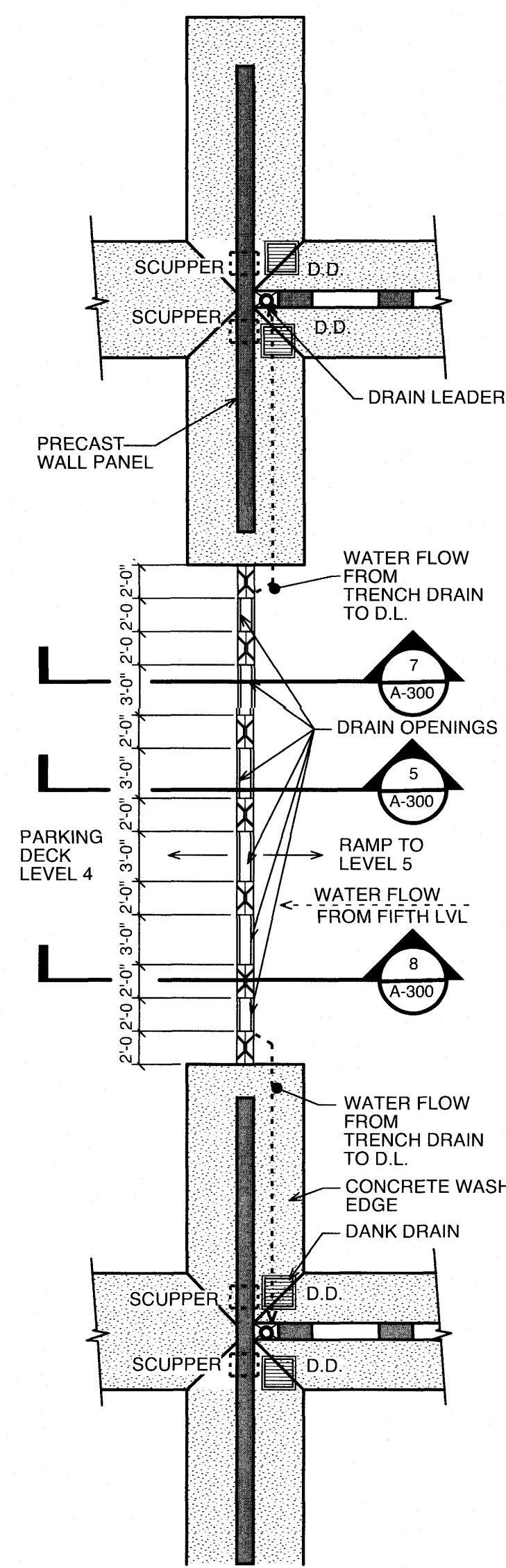
**5 Typical Trench Drain Details**  
 A-300 scale: 1-1/2" = 1'-0"



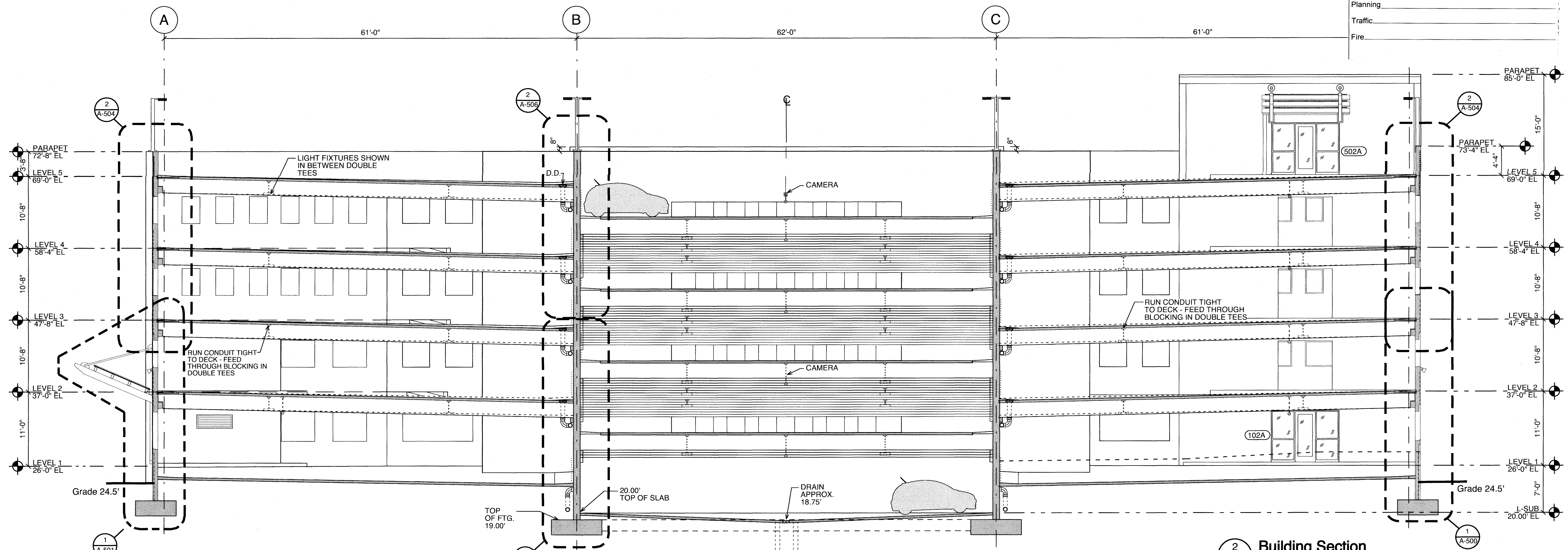
**4 Typical Barrier Cable Detail**  
 A-300 scale: 1-1/2" = 1'-0"

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

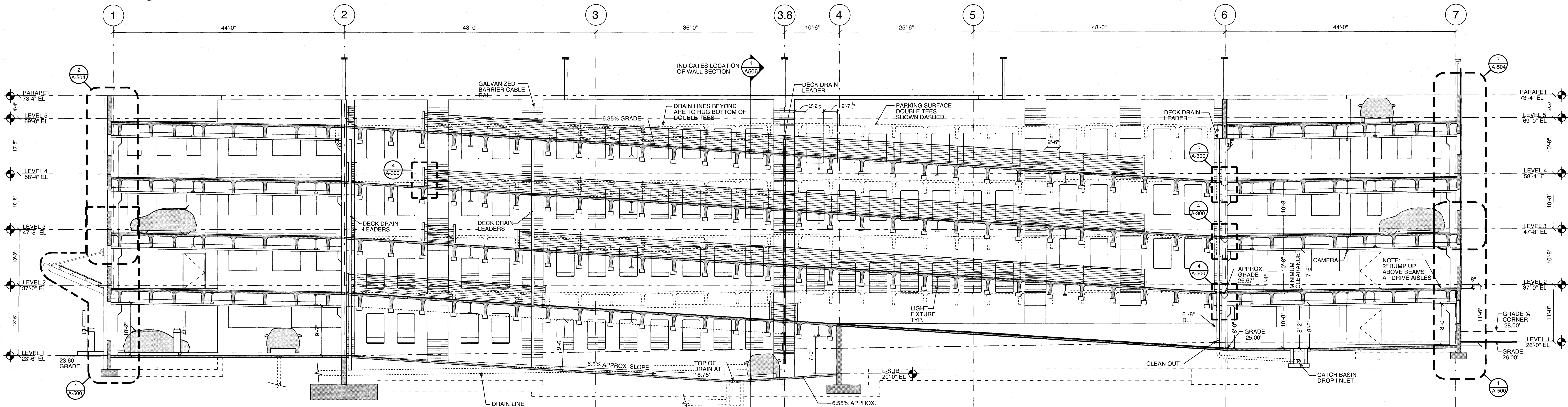
Approved Construction Plan	
Name	Date
Planning	
Traffic	
Fire	



**3 Trench Drain Enlarged Plan**  
 A-300 scale: 1/8" = 1'-0"



**2 Building Section**  
 A-300 scale: 1/8" = 1'-0"



**1 Longitudinal Building Section**  
 A-300 scale: 1/8" = 1'-0"

BUILDING SECTIONS

JOB NUMBER	
DRAWN BY	DP
CHECKED BY	BOWMAN
DATE	
REVISIONS	
SHEET NUMBER	



