

VICINITY MAP

INVENTORY SITE DATA

USE:	RETAIL SALES (ALCOHOL)
PROPERTY OWNER:	NEW HANOVER COUNTY ALCOHOLIC BOARD
EXISTING PARCEL (A) ID#:	R05407-028-008-000
EXISTING MAP ID# (A):	312710-46-5473.000
SITE ADDRESS (A):	523 S. 17TH STREET
CURRENT ZONING (A):	UMX-URBAN MIXED USE
EXISTING PARCEL (B) ID#:	R05407-028-009-000
EXISTING MAP ID# (B):	312710-46-7510.000
SITE ADDRESS (B):	510 S. 18TH STREET
CURRENT ZONING (B):	UMX-URBAN MIXED USE
EXISTING PARCEL (C) ID#:	R05407-028-007-000
EXISTING MAP ID# (C):	312710-46-6399.000
SITE ADDRESS (C):	CASTLE STREET
CURRENT ZONING (C):	UMX-URBAN MIXED USE
EXISTING PARCEL (D) ID#:	R05407-028-008-000
EXISTING MAP ID# (D):	312710-46-7440.000
SITE ADDRESS (D):	1771 CASTLE STREET
CURRENT ZONING (D):	UMX-URBAN MIXED USE
PARCEL AREA:	
EXISTING PARCEL AREA (A):	0.93 AC (40,511 SF)
EXISTING PARCEL AREA (B):	0.21 AC (9,235 SF)
EXISTING PARCEL AREA (C):	0.08 AC (4,130 SF)
EXISTING PARCEL AREA (D):	0.22 AC (9,440 SF)
SOIL TYPES:	Lo
CAMA LAND USE:	URBAN
SITE DOES NOT LIE WITHIN 100 YEAR FLOOD PLAIN	
NO CAMA AEC OR SETBACKS	
HISTORICAL SITE:	NONE
CEMETERY:	NONE
FORESTED AREA:	SEE PLAN FOR TREE SURVEY
WETLANDS:	NONE EXIST WITHIN SITE AREA
ENDANGERED SPECIES/HABITAT:	NONE REPORTED

**NEW HANOVER COUNTY
ABC FACILITY
RENOVATIONS**

**NORRIS & TUNSTALL
CONSULTING
ENGINEERS, P.C.**
902 MARKET STREET
WILMINGTON, NC 28401
PHONE (910) 343-9653
FAX (910) 343-9604
office@nteng.com
license #C-3641

**CONSTRUCTION
DOCUMENTS**



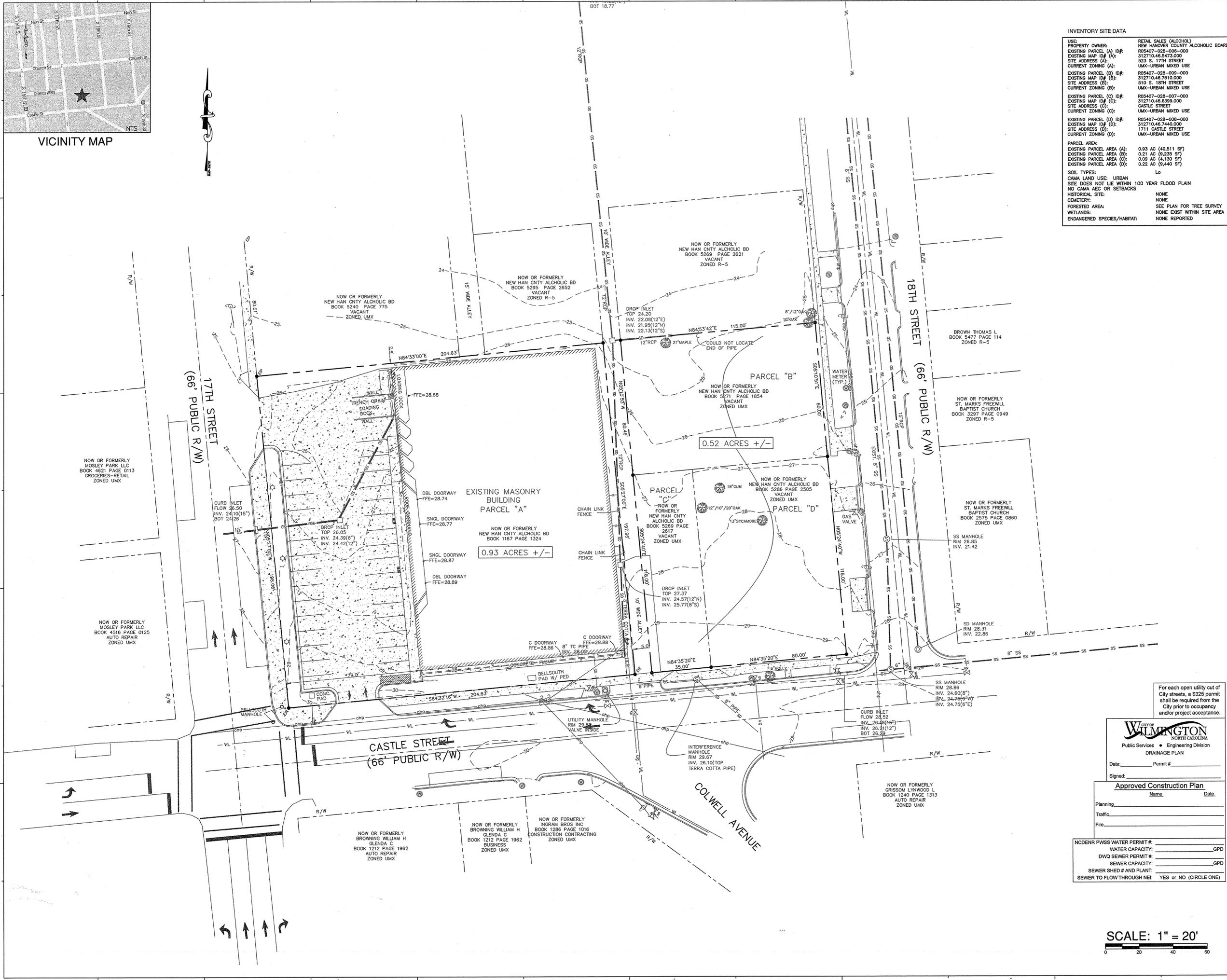
LS3P ASSOCIATES LTD.
2528 INDEPENDENCE BLVD., SUITE 200
WILMINGTON, NORTH CAROLINA 28412
TEL. 910.790.9901 FAX 910.790.3111
WWW.LS3P.COM



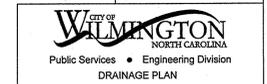
OWNER/DEVELOPER
NHC ABC BOARD
WILLIAM A KOPP, BOARD MEMBER
6009 MARKET STREET
WILMINGTON, NC 28405
910-762-7611

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REVISIONS:



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



Date: _____ Permit # _____
Signed: _____
Approved Construction Plan
Name _____ Date _____
Planning _____
Traffic _____
Fire _____
NCDENR PWSS WATER PERMIT #: _____ GPD
WATER CAPACITY: _____ GPD
DWQ SEWER PERMIT #: _____
SEWER CAPACITY: _____ GPD
SEWER SHED # AND PLANT: _____
SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

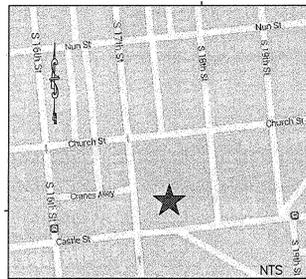
PROJECT: 7101-141210
DATE: 07/22/15
DRAWN BY: NKS
CHECKED BY: JST

**INVENTORY SITE
PLAN**

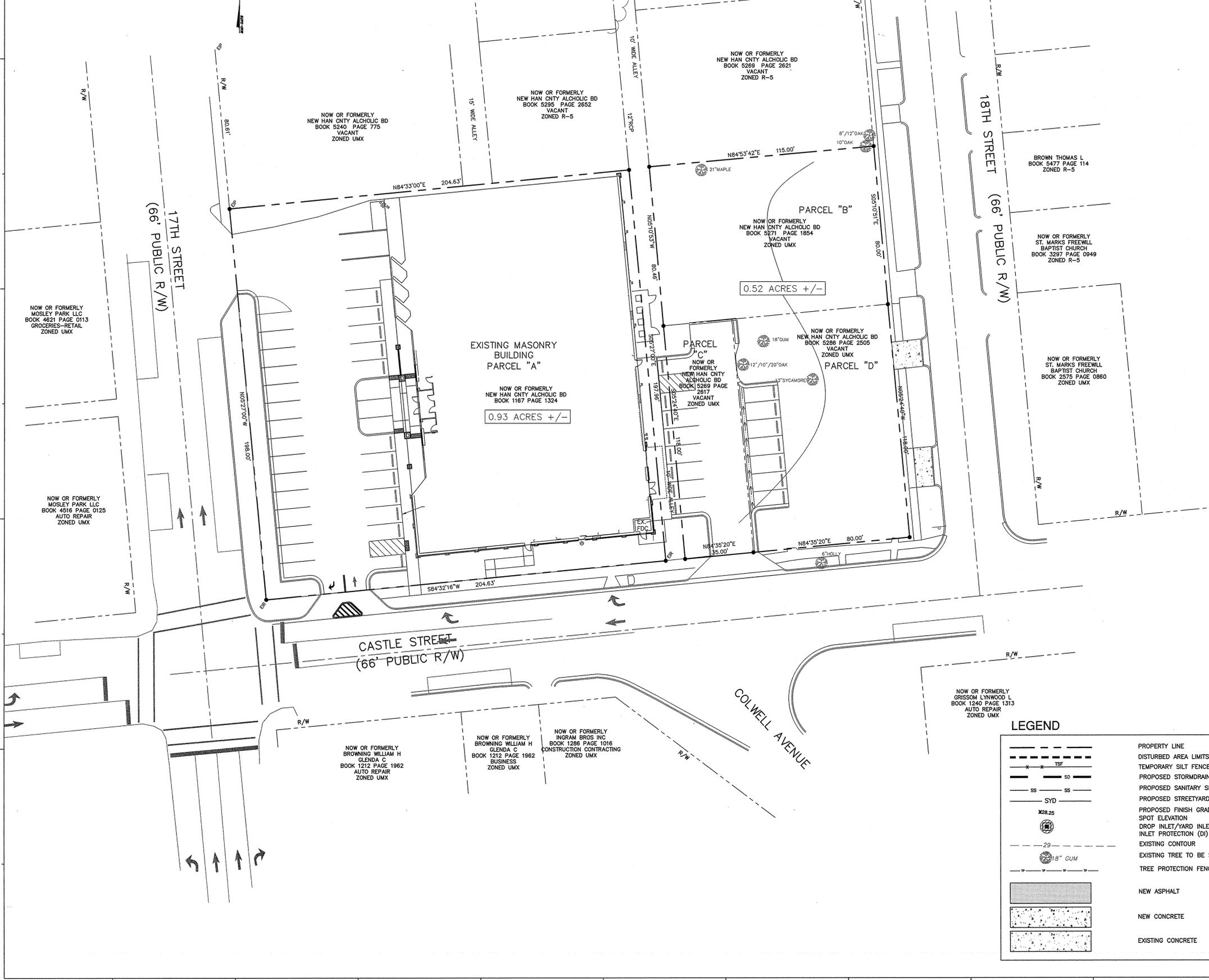
1-1

NT JOB #14105
SOLUTIONS THROUGH LISTENING
SERVICE BY DESIGN

SCALE: 1" = 20'
0 20 40 60



VICINITY MAP



SITE DATA TABLE	
USE:	RETAIL SALES (ALCOHOL)
PROPERTY OWNER:	NEW HANOVER COUNTY ALCOHOLIC BOARD
EXISTING PARCEL (A) ID#:	R05407-028-006-000
EXISTING MAP ID# (A):	312710-46-5473.000
SITE ADDRESS (A):	523 S. 17TH STREET
CURRENT ZONING (A):	UMX-URBAN MIXED USE
EXISTING PARCEL (B) ID#:	R05407-028-009-000
EXISTING MAP ID# (B):	312710-46-7510.000
SITE ADDRESS (B):	510 S. 18TH STREET
CURRENT ZONING (B):	UMX-URBAN MIXED USE
EXISTING PARCEL (C) ID#:	R05407-028-007-000
EXISTING MAP ID# (C):	312710-46-6309.000
SITE ADDRESS (C):	CASTLE STREET
CURRENT ZONING (C):	UMX-URBAN MIXED USE
EXISTING PARCEL (D) ID#:	R05407-028-008-000
EXISTING MAP ID# (D):	312710-46-7440.000
SITE ADDRESS (D):	1711 CASTLE STREET
CURRENT ZONING (D):	UMX-URBAN MIXED USE
PARCEL AREA:	
EXISTING PARCEL AREA (A):	0.53 AC (40,511 SF)
EXISTING PARCEL AREA (B):	0.21 AC (9,239 SF)
EXISTING PARCEL AREA (C):	0.09 AC (4,130 SF)
EXISTING PARCEL AREA (D):	0.22 AC (9,440 SF)
EXISTING ALLEY:	0.046 AC (2,014 SF)
TOTAL PARCEL AREA:	1.49 AC (65,330 SF)
PROPOSED PARCEL USE:	RETAIL PARKING
CAMA LAND CLASSIFICATION:	URBAN
BUILDING SETBACKS UMX:	FOR SIDE OF BUILDING ABUTTING SF ZONE: FRONT SETBACK: 5' MIN./10' MAX. REAR SETBACK: 5' MIN.
EXISTING BUILDING SETBACKS:	FRONT SETBACK: 7' SIDE SETBACK NORTH: 2.5' SIDE SETBACK SOUTH: 15' REAR SETBACKS: 5'
MAX. BUILDING HEIGHT UMX:	17TH ST. 4 STORES/45' CASTLE ST./18TH ST. 2 STORES/35'
EXISTING BUILDING:	17,323 SF
EXISTING BUILDING LOT COVERAGE:	42.76% SF
EXISTING BUILDING HEIGHT:	1 STORY (18' TO PARAPET/13' TO ROOF)
PARKING REQUIREMENT:	
PARKING REQ'D: UMX:	MAX. PER COW RETAIL: 1/200 SF=87 SPACES
MINI: NONE	
EXISTING PARKING:	30 REGULAR SPACES 1 HC ACCESSIBLE SPACE 31 TOTAL SPACES
PARKING PROPOSED:	39 REGULAR SPACES 3 HC ACCESSIBLE SPACE 42 TOTAL SPACES [R]
ACCESSIBLE PARKING REQUIRED:	2
ACCESSIBLE PARKING PROPOSED:	3
BICYCLE PARKING REQUIRED:	5
BICYCLE PARKING PROPOSED:	5
SOLID WASTE DISPOSAL BY HAND CART:	
WATER/SEWER DEMAND:	2,880 GPD
LANDSCAPING REQUIREMENTS (REFER TO LANDSCAPE PLAN):	
1/5 TREES PER DISTURBED ACRE REQUIRED	
[R] DISTURBED AREA = 0.49 AC x 15 = 7 TREES	
INTERIOR LANDSCAPING 0&=1: 20% CANOPY COVER OF INTERIOR AREA OF PARKING FACILITY	
BASED ON AMOUNT OF PARKING AREA IMPERVIOUS SURFACE.	
(PARKING IMPERVIOUS AREA=5,339 SF)	

IMPERVIOUS AREA	
SITE AREA:	65,330 SF (1.49 AC)
EXISTING IMPERVIOUS AREA:	
BUILDING:	21,800 SF
CONCRETE (SIDEWALK/PAVING):	14,784 SF
ASPHALT:	1,100 SF
TOTAL:	37,684 SF
PERCENT IMP.:	57.68%
EXISTING IMPERVIOUS AREA REMOVED:	
CONCRETE (SIDEWALK/PAVING):	4,255 SF
ASPHALT:	1,100 SF
TOTAL:	5,355 SF [R]
NEW IMPERVIOUS AREA ADDED:	
CONCRETE (SIDEWALK/PAVING):	4,353 SF
ASPHALT PAVING/C&G:	5,336 SF
TOTAL:	9,689 SF [R]
PROPOSED IMPERVIOUS AREA:	
BUILDING:	21,800 SF
CONCRETE (SIDEWALK/PAVING):	14,892 SF
ASPHALT PAVING/C&G:	5,336 SF
TOTAL:	42,018 SF
PERCENT IMP.:	64.62% [R]

LEGEND	
	PROPERTY LINE
	DISTURBED AREA LIMITS
	TEMPORARY SILT FENCE
	PROPOSED STORMDRAIN PIPE
	PROPOSED SANITARY SEWER
	PROPOSED STREETYARD
	PROPOSED FINISH GRADE
	SPOT ELEVATION
	DROP INLET/YARD INLET WITH INLET PROTECTION (DI)
	EXISTING CONTOUR
	EXISTING TREE TO BE SAVED
	TREE PROTECTION FENCING
	NEW ASPHALT
	NEW CONCRETE
	EXISTING CONCRETE

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
DRAINAGE PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

Fire: _____

NODENR PWSS WATER PERMIT #: _____

WATER CAPACITY: _____ GPD

DVO SEWER PERMIT #: _____

SEWER CAPACITY: _____ GPD

SEWER SHED # AND PLANT: _____

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

SCALE: 1" = 20'

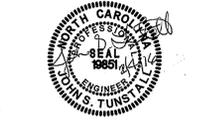
NEW HANOVER COUNTY
ABC FACILITY
RENOVATIONS

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office@nteng.com
licence #C-3641

CONSTRUCTION
DOCUMENTS



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OWNER/DEVELOPER
NHC ABC BOARD
WILLIAM A KOPP, BOARD MEMBER
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REVISIONS:
R1: 11/12/15-REVISED, GRADING, SIDEWALK AND PARKING ALONG THE FRONT OF THE EXIST. BUILDING, REVISED IMPERVIOUS AREA, PARKING COUNT AND DISTURBED AREA.

PROJECT: 7101-141210
DATE: 07/22/15
DRAWN BY: NKS
CHECKED BY: JUST

OVERALL SITE PLAN

C-0 R1

NT JOB #14105
SOLUTIONS THROUGH LISTENING
SERVICE BY DESIGN

**NORRIS & TUNSTALL
CONSULTING
ENGINEERS, P.C.**
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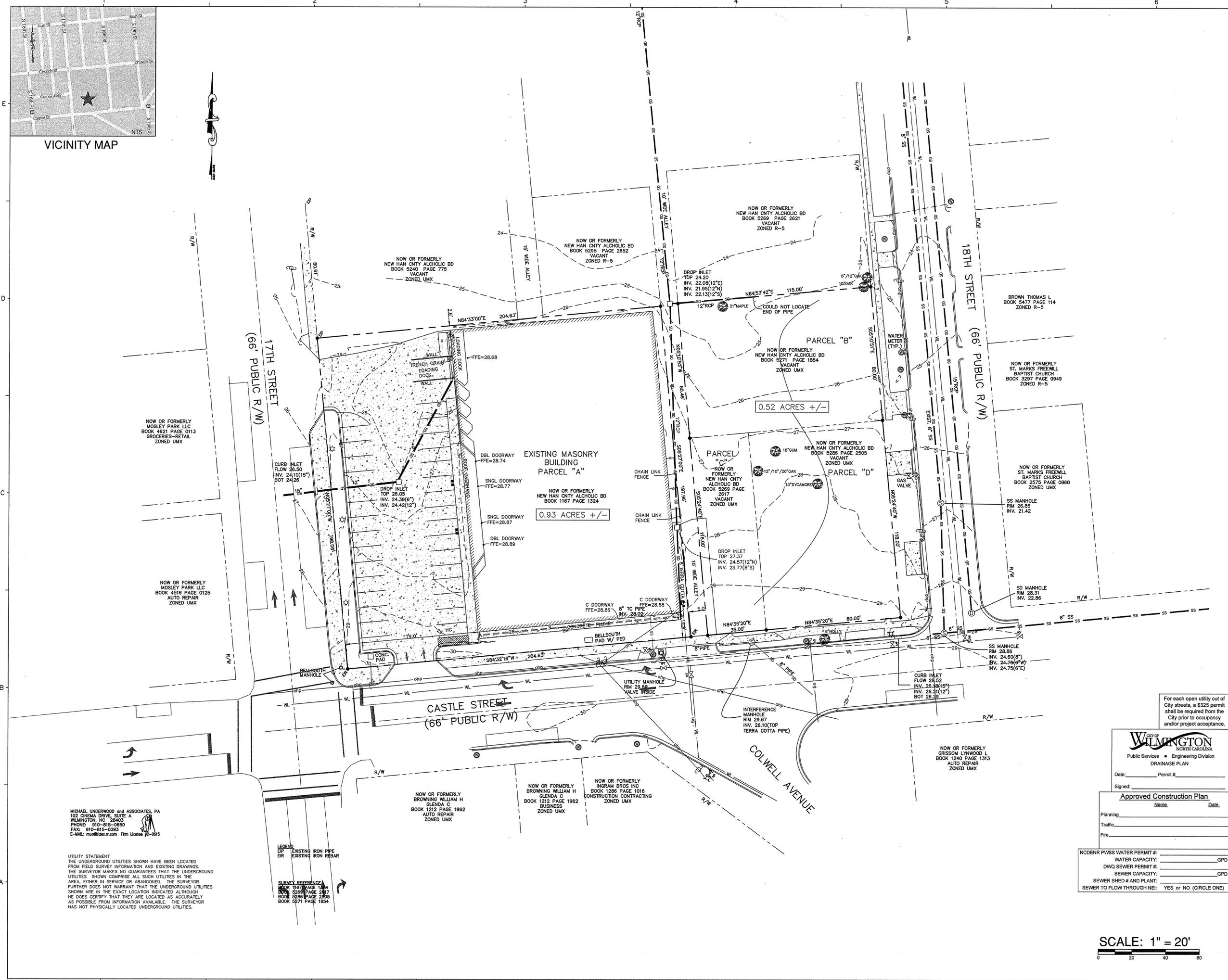
REVISIONS:

PROJECT: 7101-141210
DATE: 06/04/15
DRAWN BY: NKS
CHECKED BY: JST

SURVEY OF
EXISTING
CONDITIONS

C-1

NT JOB #14105
SOLUTIONS THROUGH LISTENING
SERVICE BY DESIGN



VICINITY MAP

MICHAEL UNDERWOOD and ASSOCIATES, PA
102 CINEMA DRIVE, SUITE A
WILMINGTON, NC 28403
PHONE: 910-815-0650
FAX: 910-815-0393
E-MAIL: mu@muac.com Firm License #C-0615

UTILITY STATEMENT
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED UNDERGROUND UTILITIES.

LEGEND
EXISTING IRON PIPE
EXISTING IRON REBAR

SURVEY REFERENCE
BOOK 1167 PAGE 134
BOOK 5269 PAGE 2671
BOOK 5295 PAGE 2652
BOOK 5271 PAGE 1854

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



Date: _____ Permit # _____
Signed: _____
Approved Construction Plan
Name: _____ Date: _____
Planning _____
Traffic _____
Fire _____

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

SCALE: 1" = 20'
0 20 40 60

**NEW HANOVER COUNTY
ABC FACILITY
RENOVATIONS**

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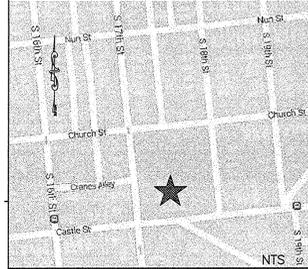
REVISIONS:
7/10/15: ASI 1-ADDED NOTE.
R2: 11/12/15-REVISED, GRADING, SIDEWALK
AND PARKING ALONG THE FRONT OF THE
EXIST. BUILDING, REVISED INTERIORS AREA,
PARKING COUNT AND DISTURBED AREA.

PROJECT: 7101-141210
DATE: 07/22/15
DRAWN BY: NKS
CHECKED BY: JST

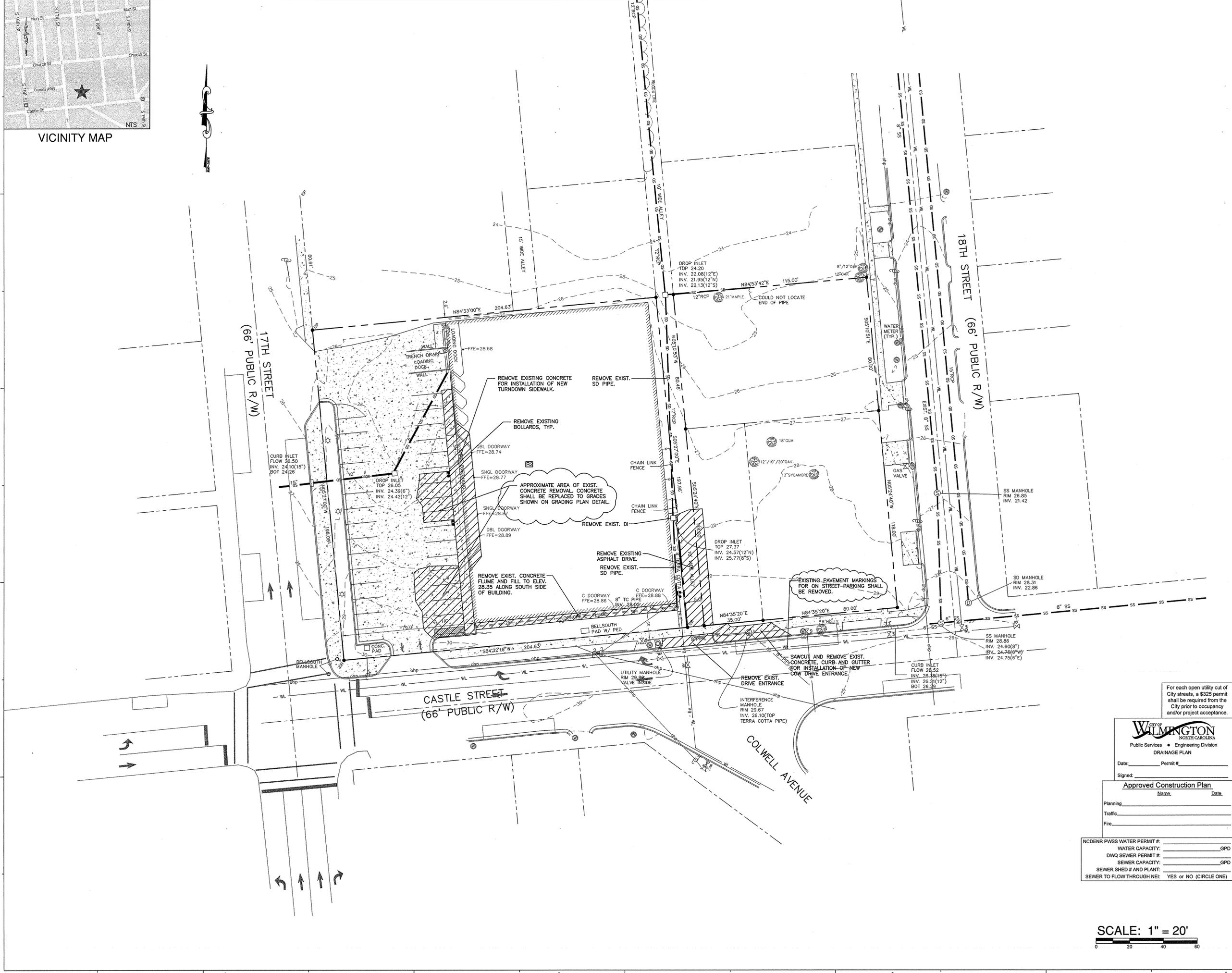
**DEMOLITION
PLAN**

C-2 R2

NT JOB #14105
**SOLUTIONS THROUGH LISTENING
SERVICE BY DESIGN**



VICINITY MAP



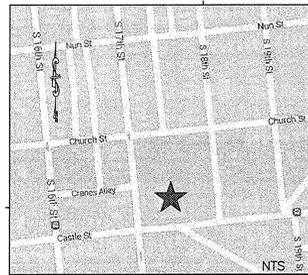
For each open utility out of
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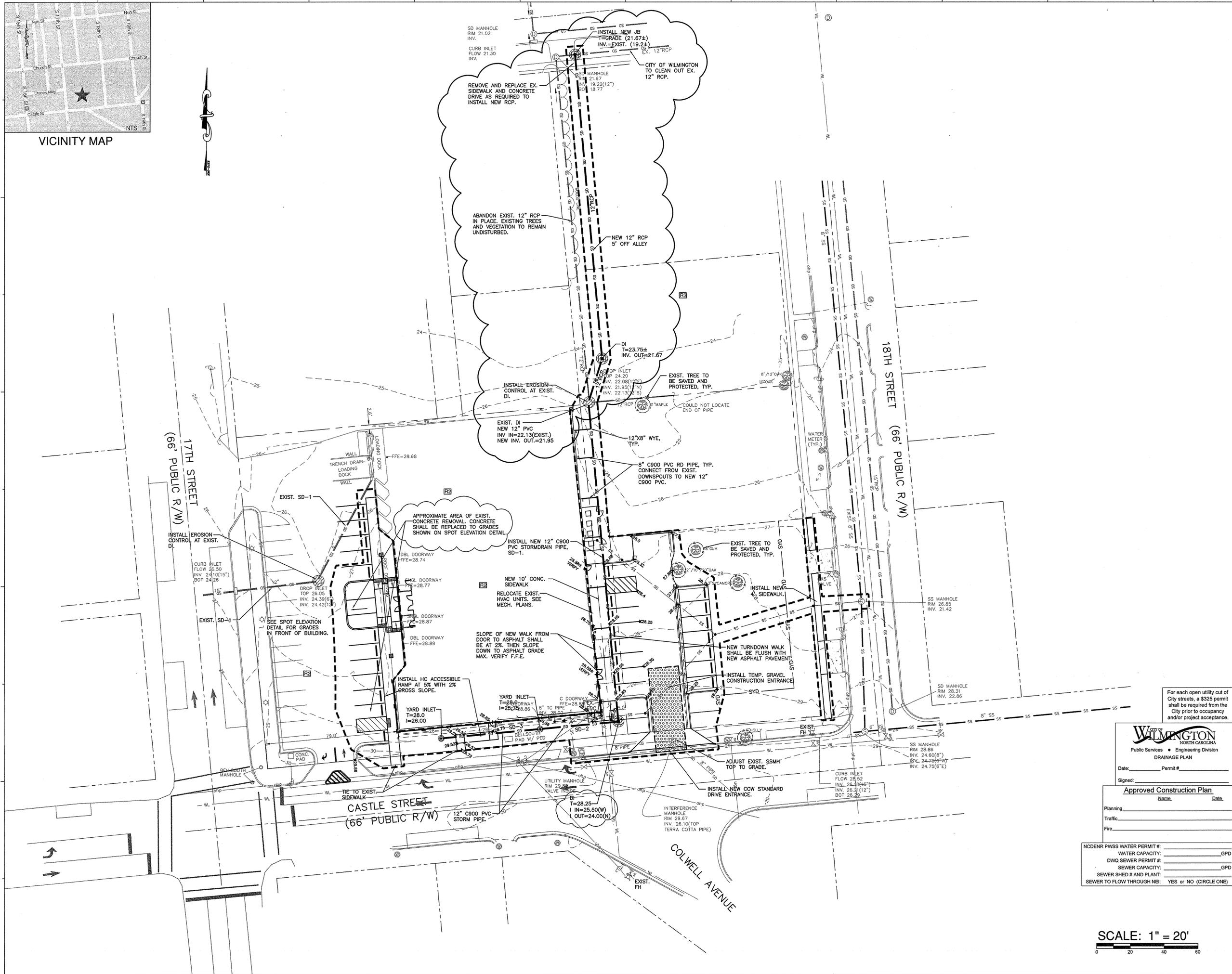
Date: _____ Permit # _____
Signed: _____
Approved Construction Plan
Name: _____ Date: _____
Planning: _____
Traffic: _____
Fire: _____

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

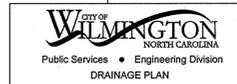
SCALE: 1" = 20'
0 20 40 60



VICINITY MAP



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



Public Services • Engineering Division
DRAINAGE PLAN
 Date: _____ Permit # _____
 Signed: _____
Approved Construction Plan
 Name: _____ Date: _____
 Planning _____
 Traffic _____
 Fire _____

NC DENR 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)	

SCALE: 1" = 20'
 0 20 40 60

**NEW HANOVER COUNTY
 ABC FACILITY
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REVISIONS:
 R1: 01/15/15-AS1-ADDED NOTES AND DOME MAT. ADDED P.V.M.T. MARKINGS FOR RIGHT IN RIGHT OUT.
 R2: 11/12/15-REVISED, GRADING, SIDEWALK AND PARKING ALONG THE FRONT OF THE EXIST. BUILDING. REVISED IMPERVIOUS AREA, PARKING COUNT AND DISTURBED AREA.
 R3: 12/9/15-ADDED STORMDRAIN OUTFALL PIPE, DROP INLET AND JUNCTION BOX.

PROJECT: 7101-14210
 DATE: 07/22/15
 DRAWN BY: NKS
 CHECKED BY: JST

**GRADING,
 DRAINAGE AND
 EROSION
 CONTROL PLAN
 C-3R3**

NT JOB #14105
**SOLUTIONS THROUGH LISTENING
 SERVICE BY DESIGN**

**NEW HANOVER COUNTY
ABC FACILITY
RENOVATIONS**

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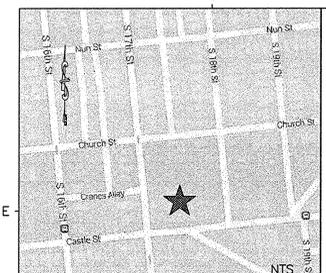
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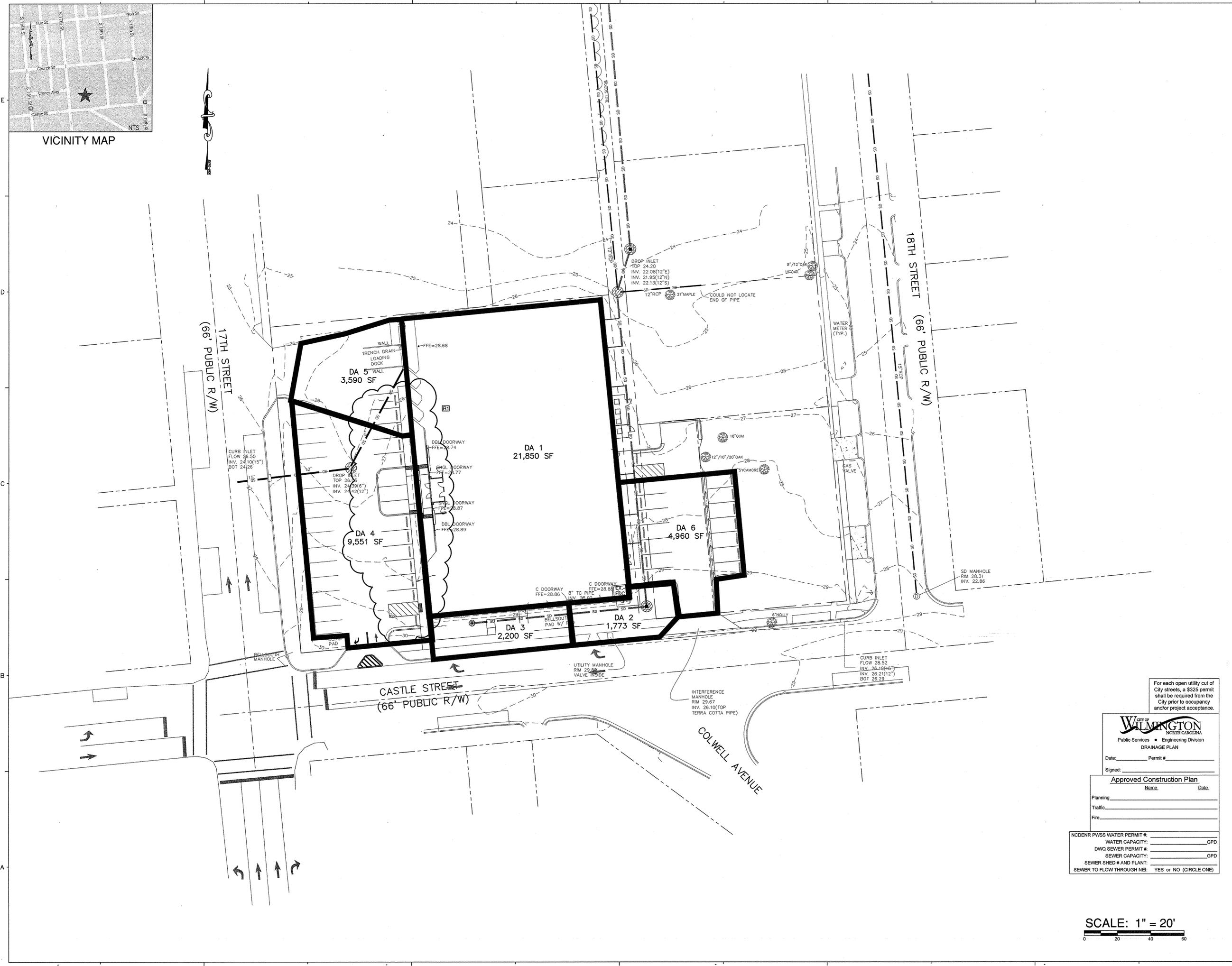
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VICINITY MAP



For each open utility cut of
City streets, a \$325 permit
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City prior to occupancy
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Date: _____ Permit # _____
Signed: _____

Approved Construction Plan	
Name	Date
Planning	_____
Traffic	_____
File	_____

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

PROJECT: 7101-141210
DATE: 07/22/15
DRAWN BY: NKS
CHECKED BY: JST

**DRAINAGE AREA
PLAN**

C-3.1R1

NT JOB #14108
SOLUTIONS THROUGH LISTENING
SERVICE BY DESIGN



**NEW HANOVER COUNTY
ABC FACILITY
RENOVATIONS**

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REVISIONS:
7/10/15: ASI 1-ADDED NOTES AND DOME
MAT. ADDED PVMT. MARKINGS FOR RIGHT
IN RIGHT OUT.
R2: 11/12/15-REVISED, GRADING, SIDEWALK
AND PARKING ALONG THE FRONT OF THE
EXIST. BUILDING. REVISED IMPERVIOUS AREA,
PARKING COUNT AND DISTURBED AREA.

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City prior to occupancy
and/or project acceptance.

City of WILMINGTON
Public Services • Engineering Division
DRAINAGE PLAN

Date: _____ Permit # _____
Signed: _____

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

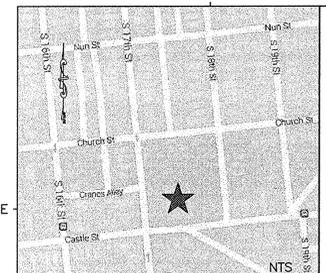
NC DENR PWSS WATER PERMIT #: _____ GPD
WATER CAPACITY: _____ GPD
DWQ SEWER PERMIT #: _____
SEWER CAPACITY: _____ GPD
SEWER SHED # AND PLANT: _____
SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

PROJECT: 7101-141210
DATE: 07/22/15
DRAWN BY: NKS
CHECKED BY: JST

LAYOUT PLAN

C-4 R2

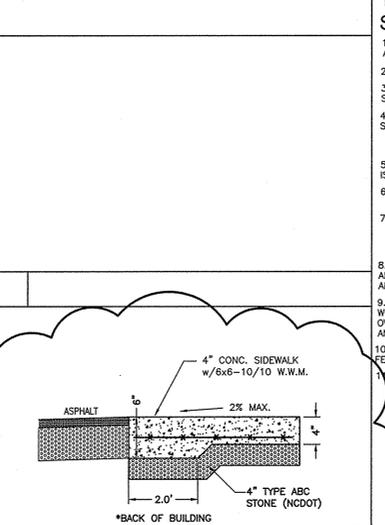
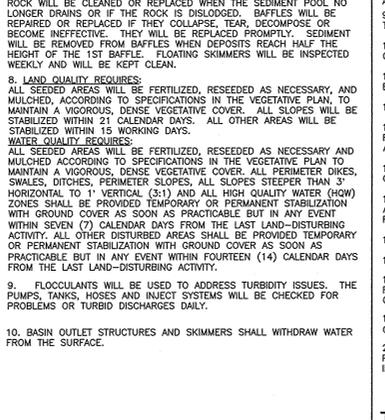
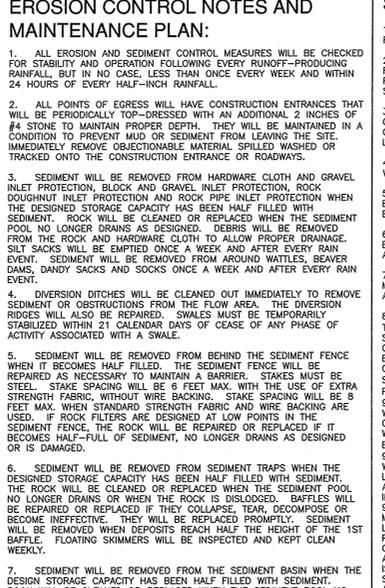
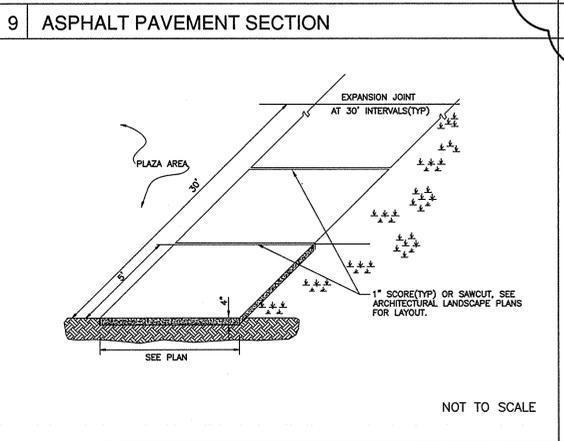
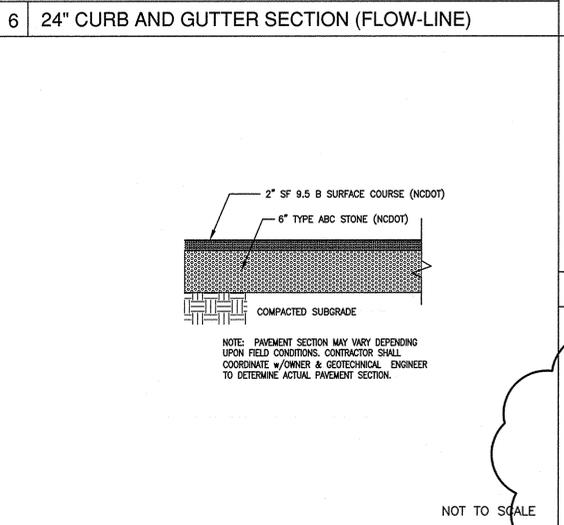
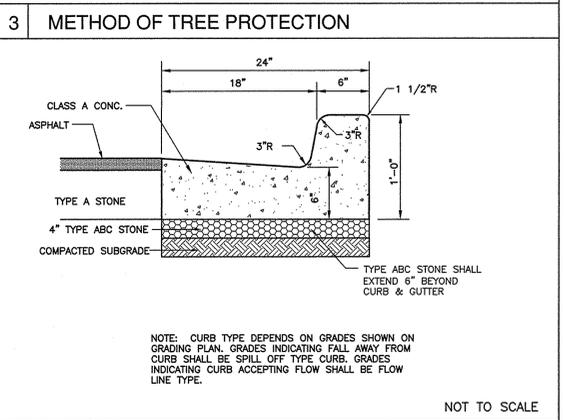
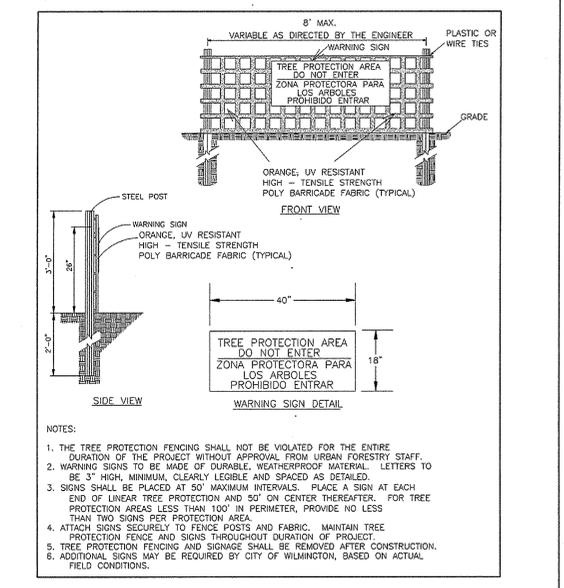
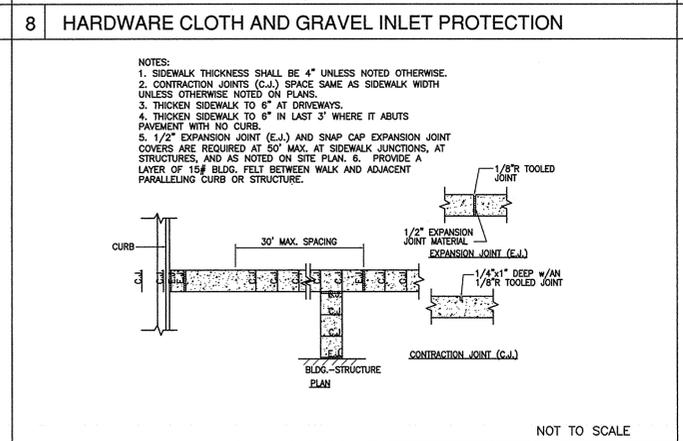
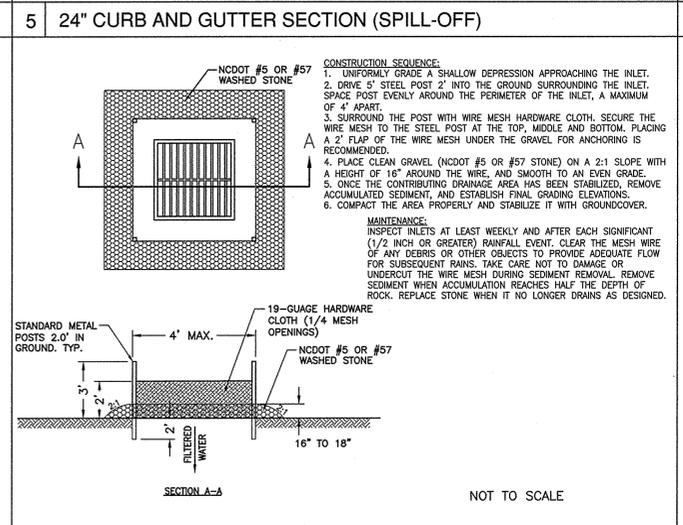
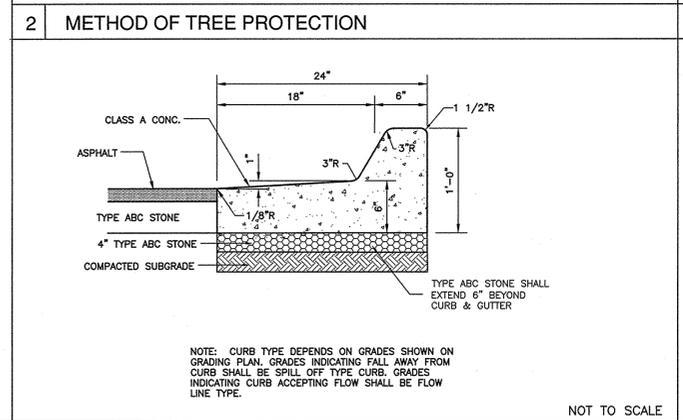
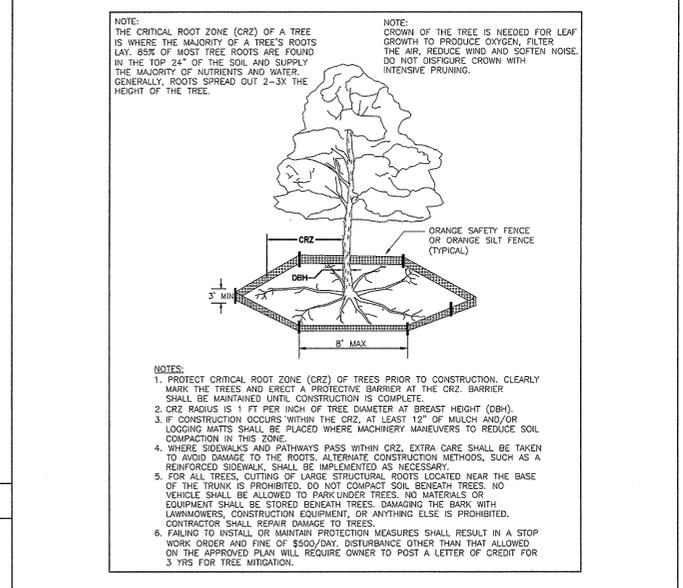
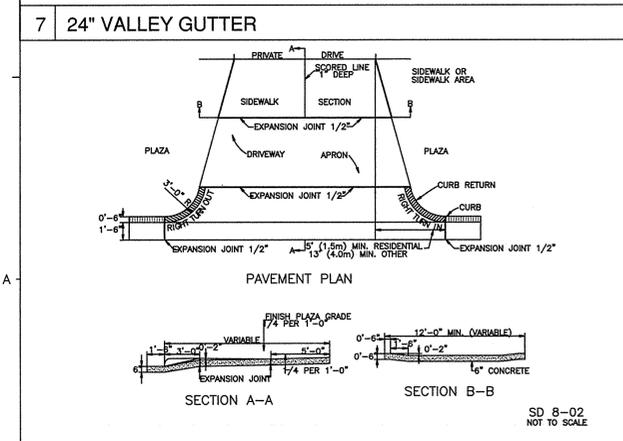
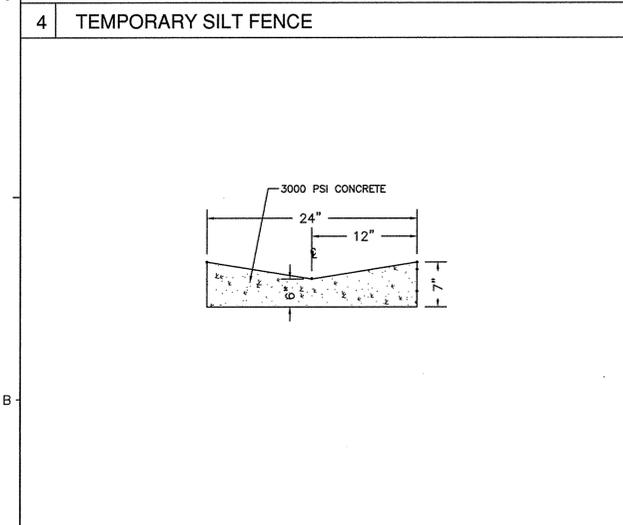
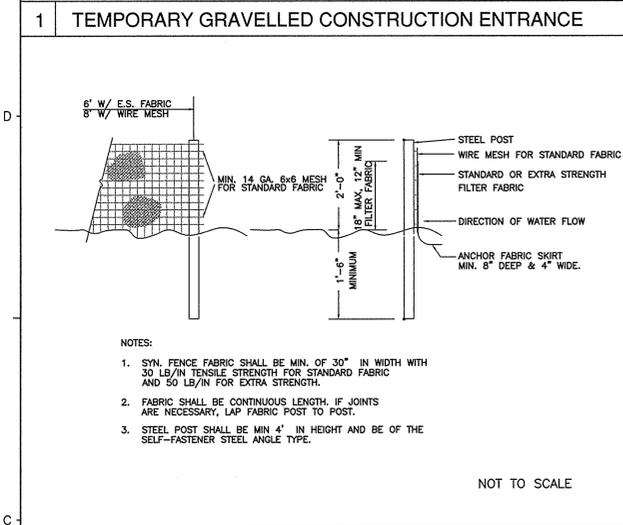
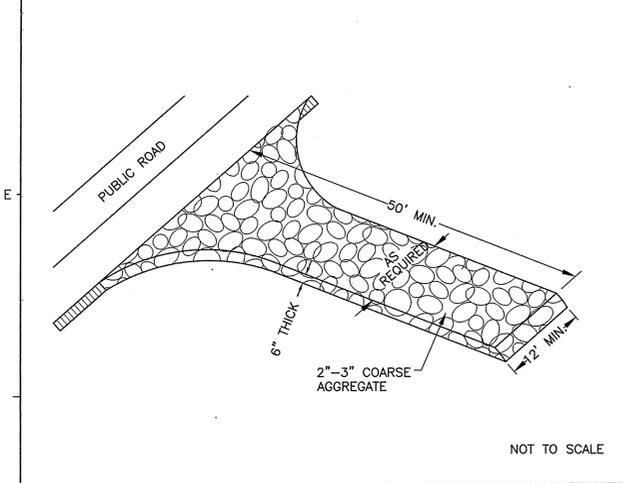
NT JOB #14105
SOLUTIONS THROUGH LISTENING
SERVICE BY DESIGN



VICINITY MAP



SCALE: 1" = 20'
0 20 40 60



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 WAY 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 SILTY 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 SOIL 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 COMPACT: AFTER STRIPPING THOSE AREAS DESIGNATED TO RECEIVE FILL SHOULD BE PROOFROLLED TO TOP 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 REWORKED 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 EXPOSED IN LAYERS NOT TO EXCEED 6" TO BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-998) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED TO 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-998) WITHIN BUILDING AREAS TO A LINE OUTSIDE THE BUILDING AREAS SHALL BE PLACED IN LAYERS NOT TO EXCEED 6" AND COMPACTED TO AT LEAST 98% 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 EXISTING SUBGRADE IS TOO DRY TO COMPACT TO THE REQUIRED DENSITY EACH LAYER SHALL BE WETTED IN ACCORDANCE WITH COMPACTOR REQUIREMENTS. IF THE MATERIAL IS TOO WET TO SECURE PROPER COMPACTATION, 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 STRUCTURE NOTES AND SOILS REPORT FOR ADDITIONAL REQUIREMENTS.
9. LAYOUT: THE CONTRACTOR SHALL PROVIDE ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION.
11. EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION FROM SURVEY BY MICHAEL UNDERWOOD AND ASSOC. PA AND PROVIDED BY OWNER.
12. THE CONTRACTOR SHALL VERIFY DIMENSIONS AT JOBSITE.
13. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF RELOCATION OR DISCONNECTION OF ALL EXISTING UTILITIES WITH APPLICABLE AGENCIES AND AUTHORITIES.
14. ALL PAVEMENT AND BASE MATERIALS AND WORKMANSHIP SHALL CONFORM TO NCDOT STANDARDS.
15. WATER AND SEWER SERVICES SHALL BE INSTALLED TO MEET LOCAL AND STATE PLUMBING CODES. METER AND TAPS SHALL MEET ALL LOCAL REQUIREMENTS.
16. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE.
17. SEE SOILS REPORT FOR ADDITIONAL REQUIREMENTS.
18. CONTRACTOR SHALL NOTE THAT EARTHWORK QUANTITIES ARE HIS RESPONSIBILITY. PLANS DO NOT REPRESENT A BALANCED EARTHWORK CONDITION.
19. REINF. CONC. PIPE SHALL BE CLASS III W/RUBBER GASKETED JOINT OR "RAV GASK" INSTALL PER MANUFACTURER'S REQUIREMENTS.
20. USE WHITE LANE MARKING PAINT FOR ALL PAVEMENT MARKINGS. PAINT SHALL BE A CHLORINATED RUBBER ALKYO, FS II-P-115, TYPE III, FACTORY MIXED, QUICK DRYING, NON-BLEEDING.

TEMPORARY/PERMANENT GRASS SPECIFICATION:

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS.
2. RIP THE ENTIRE AREA TO A 6 INCH DEPTH.
3. REMOVE ALL ROCKS, ROOTS AND OTHER OBSTRUCTIONS LEAVING SURFACES SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME AND FERTILIZER UNIFORMLY AND MIX WITH SOIL.
LIME: 45 LBS. PER 1000 S.F.
PHOSPHOROUS: 20 LBS PER 1000 S.F.
FERTILIZER: 17 LBS. PER 1000 S.F.
5. CONTINUE TILLAGE UNTIL A WELL PULVERIZED, FIRM, UNIFORM SEED BED IS PREPARED 4-6 INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEED BED AND COVER SEED LIGHTLY. 2 - 3 LBS PER 1000 S.F. (SEE MIXTURE BELOW)
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
GRASS STRAW & HAY AT 75 TO 100 LBS PER 1000 S.F.
WOOD CHIPS AT 500 LBS. PER 1000 S.F.
JUTE & MESH AS PER MANUFACTURER
8. ASPHALT FOR ANCHORING MULCH SHALL BE TYPE SS-1 EMULSION AND APPLIED AT A RATE OF 1000 GAL. PER ACRE FOR SLOPE STABILIZATION, AND 150 GAL. PER TON OF STRAW FOR ANCHORING STRAW.
9. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEED WITHIN THE PLANTING SEASON, IF POSSIBLE. IF GRASS STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
10. CONSULT CONSERVATION INSPECTOR ON MAINTENANCE, TREATMENT, AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

SEED FOR TEMPORARY AND PERMANENT APPLICATIONS SHALL BE:

- 20% BERMUDA GRASS
- 20% TURF FESCUE
- 10% CREEPING RED FESCUE
- 20% ANNUAL RYE GRASS

*BERMUDA SEED SHALL BE HULLED FOR WARM WEATHER PLANTING. PURITY OF SEED SHALL BE A MIN. OF 98% AND GERMINATION SHALL BE A MIN. OF 85%

ALL DISTURBED AREA SHALL BE SEEDED WITHIN 7-14 DAYS OF THE COMPLETION OF GRADING. SEE EROSION CONTROL AND MAINTENANCE NOTES. CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUEED AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS. OTHER SEEDING SCHEDULES MAY BE POSSIBLE.

CALL 811 (3) WORKING DAYS BEFORE YOU DIG.

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

Public Services • Engineering Division
DRAINAGE PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name: _____ Date: _____

Planning _____

Traffic _____

Fire _____

SYMBOL	DATE	DESCRIPTION	BY

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NEW HANOVER COUNTY ABC FACILITY RENOVATIONS

NORRIS & TUNSTALL CONSULTING ENGINEERS, P.C.
902 MARKET STREET
WILMINGTON, NC 28401
PHONE (910) 343-8653
FAX (910) 343-9604
office@nrt.com
license #C-3641

CONSTRUCTION DOCUMENTS

LS3P

LS3P ASSOCIATES LTD.
2528 INDEPENDENCE BLVD., SUITE 200
WILMINGTON, NORTH CAROLINA 28412
TEL. 910.790.9991 FAX 910.790.3111
WWW.LS3P.COM

OWNER/DEVELOPER
NHC ABC BOARD
WILLIAM A. KOPP, BOARD MEMBER
6009 MARKET STREET
WILMINGTON, NC 28405
910-762-7611

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REVISIONS:
17/16: ASI 1-ADDED NOTES AND DOME MAT. ADDED AND REVISED DETAILS.

PROJECT: 7101-141210
DATE: 07/22/15
DRAWN BY: JKS
CHECKED BY: NTS

NOTES AND DETAILS

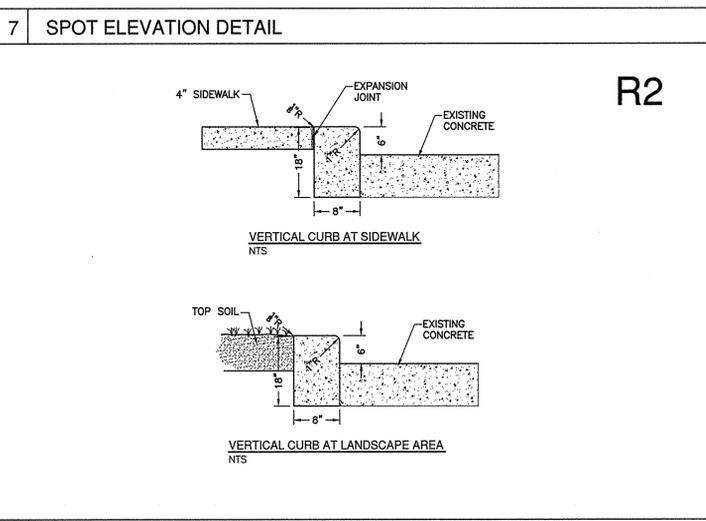
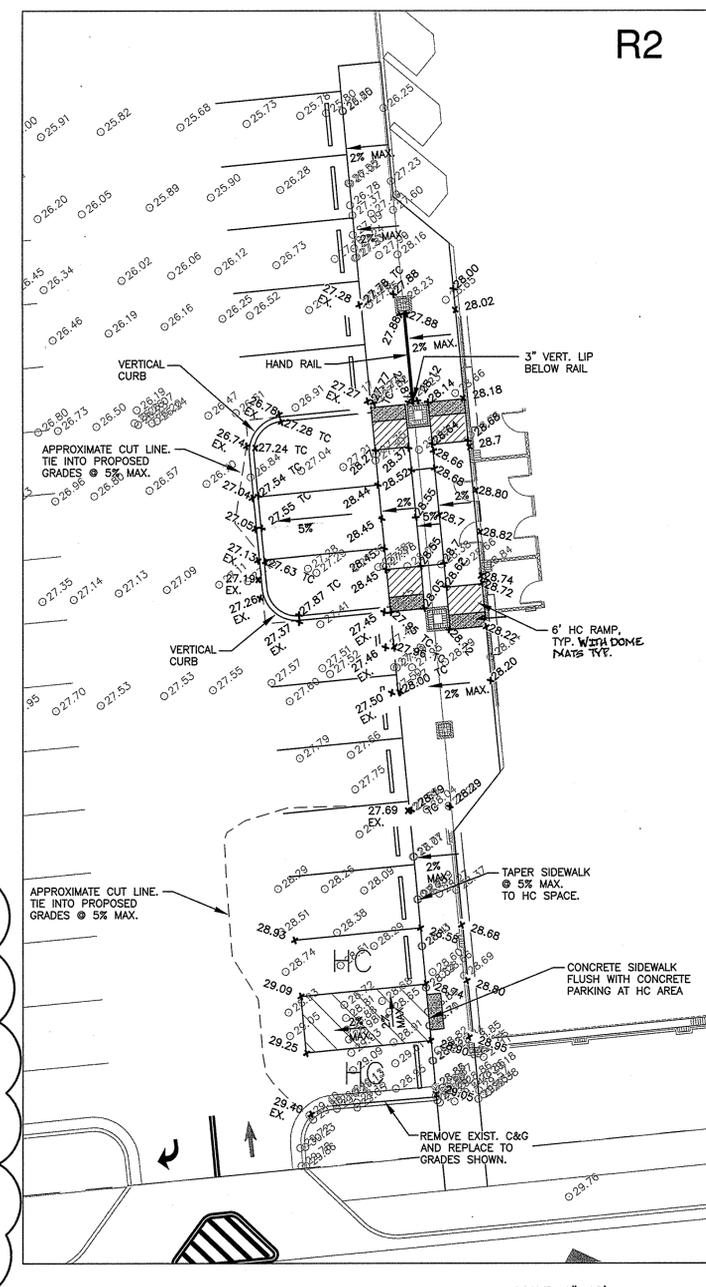
C-6.R1

NT JOB #14105
SOLUTIONS THROUGH LISTENING SERVICE BY DESIGN



CITY OF WILMINGTON STANDARD NOTES:

- CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING AT 1-800-832-4494.
- 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 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 TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5868 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
- 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 USFCOCHR 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.
- 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'.



**CALL 811 (3) WORKING
DAYS BEFORE YOU DIG.**

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



Public Services • Engineering Division
DRAINAGE PLAN

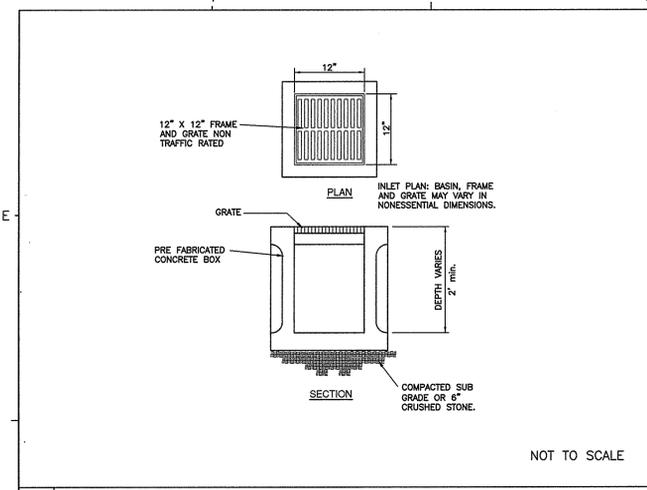
Date: _____ Permit # _____
Signed: _____

Approved Construction Plan

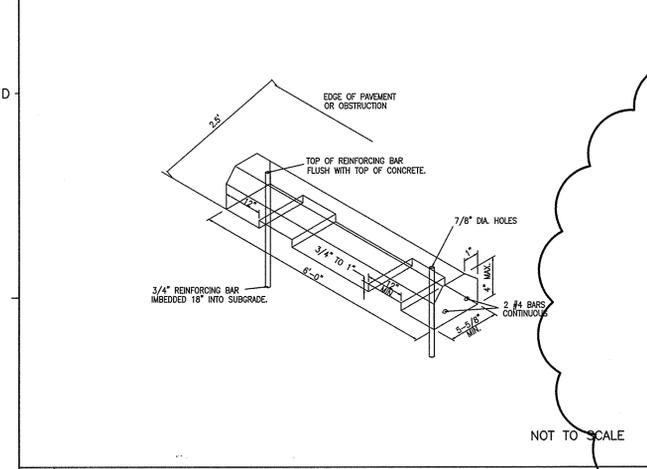
Name: _____ Date: _____

Planning _____
Traffic _____
Fire _____

SYMBOL	DATE	DESCRIPTION	BY
REVISIONS			
© 2014 NORRIS & TUNSTALL			



1 YARD INLET DETAIL

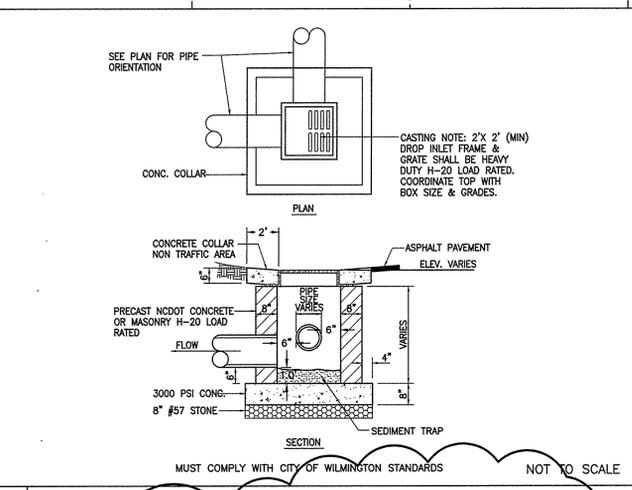


3 CONCRETE WHEEL STOP

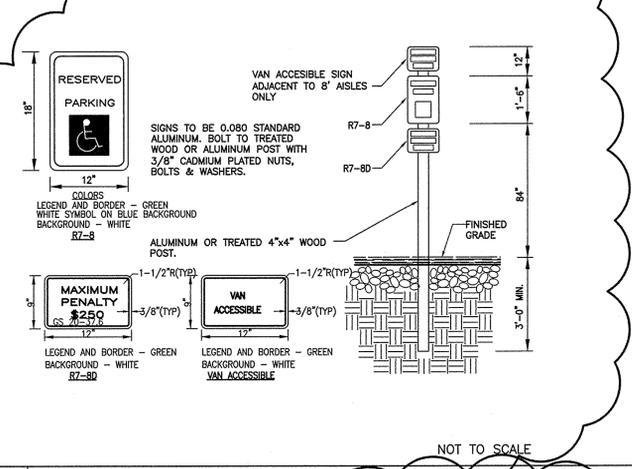
NOTE:

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

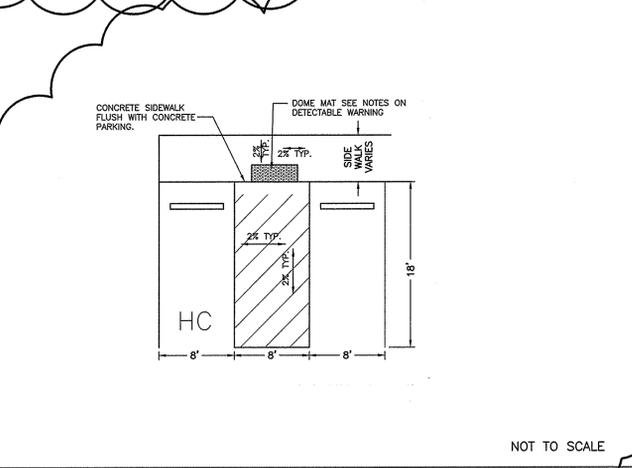
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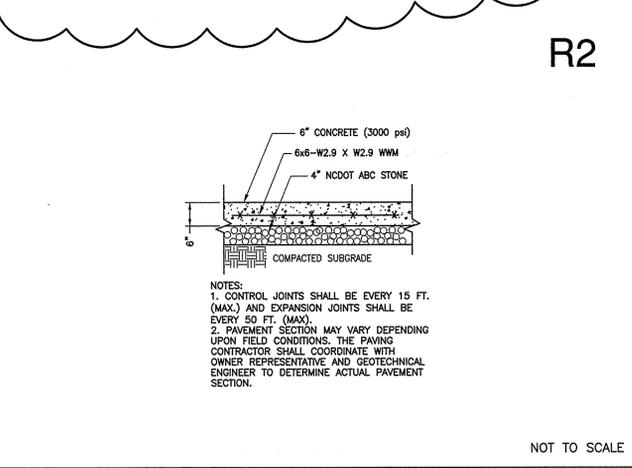
2 DROP INLET DETAIL



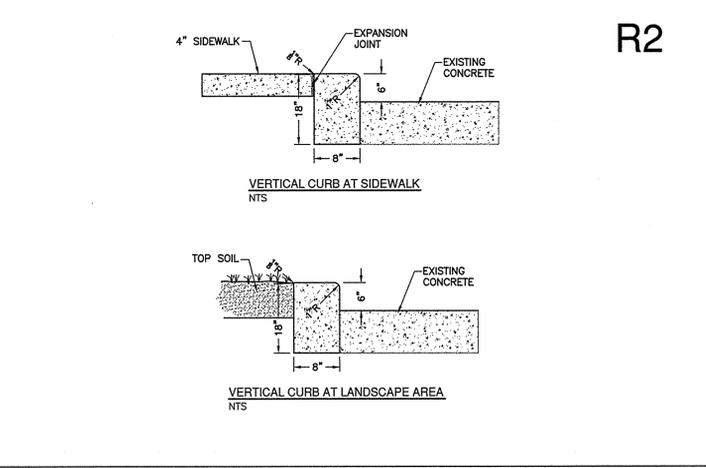
4 TYPICAL HANDICAPPED SIGN DETAIL



6 HC RAMP AT FRONT OF BUILDING

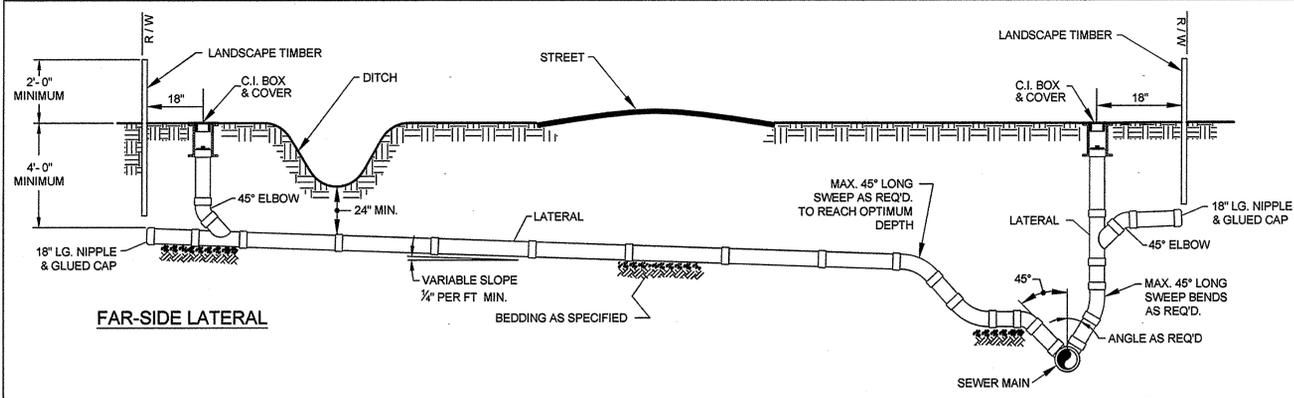


9 HEAVY DUTY CONCRETE PAVEMENT SECTION

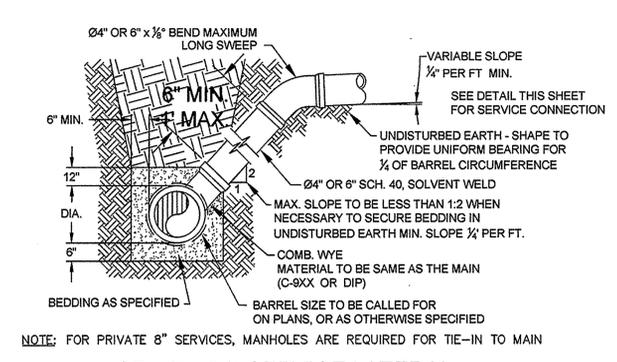


7 SPOT ELEVATION DETAIL

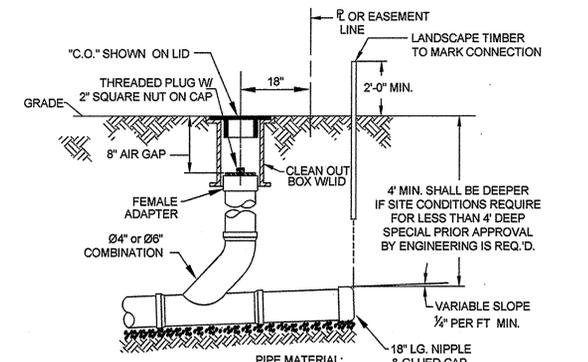
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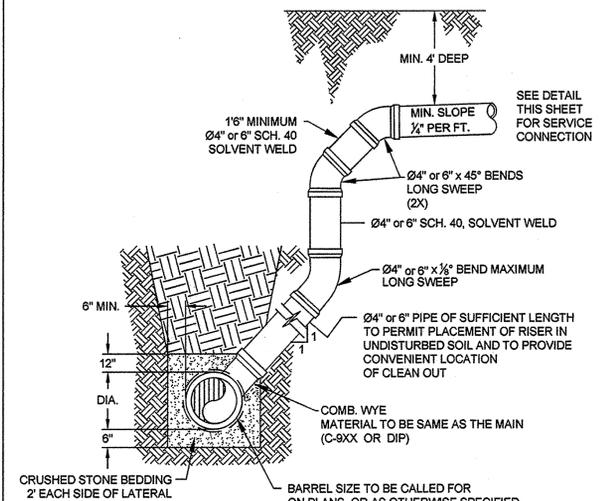
STANDARD SERVICE CONNECTION TO SANITARY SEWER
NOT TO SCALE



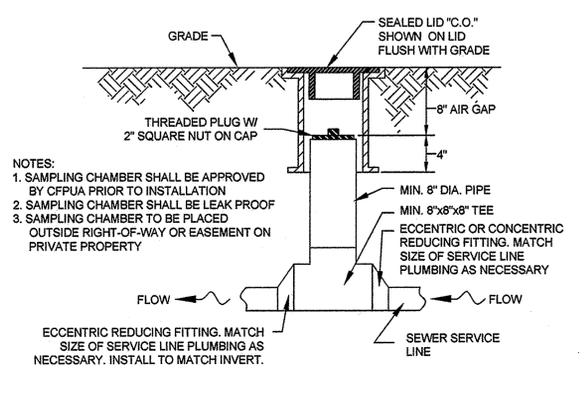
STANDARD SERVICE LATERAL
(MAIN DEPTH LESS THAN 8ft)
NOT TO SCALE



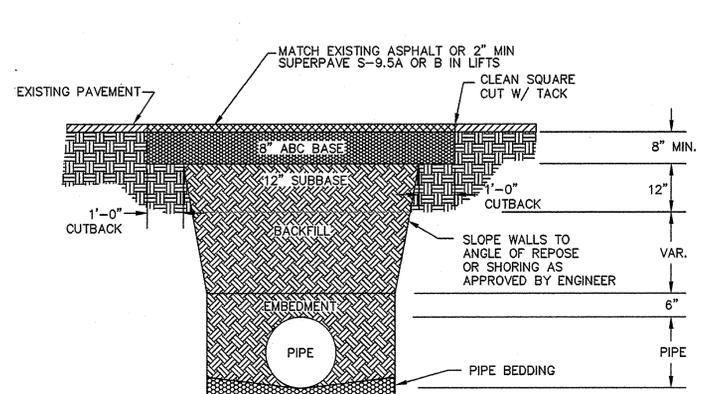
SERVICE CONNECTION & CLEAN-OUT
NOT TO SCALE



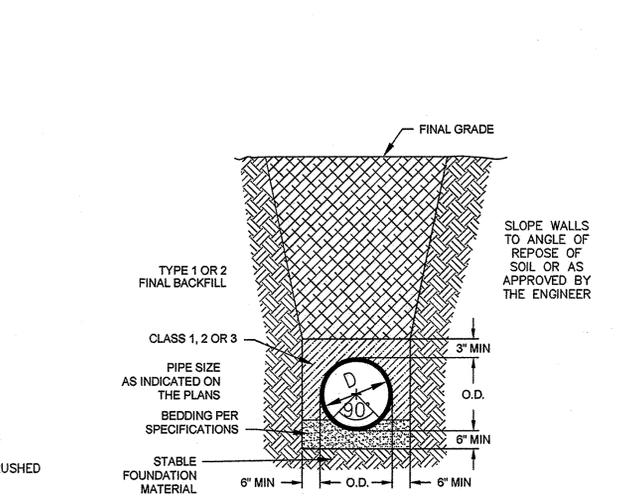
DEEP SERVICE LATERAL
(MAIN DEPTH GREATER THAN 8ft)
NOT TO SCALE



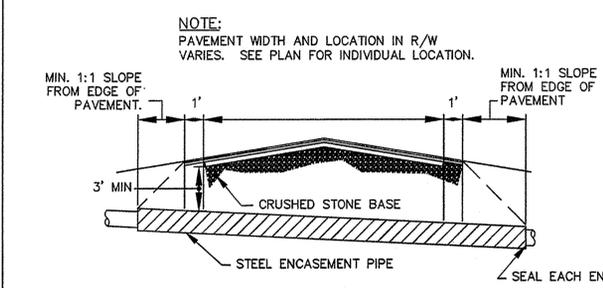
SAMPLING CHAMBER
NOT TO SCALE



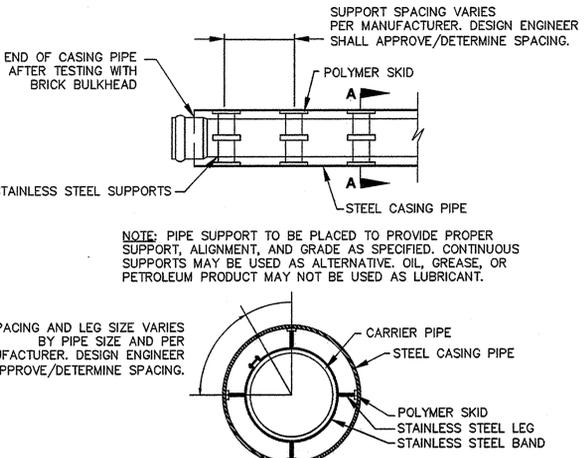
PAVEMENT REPAIR WHERE PIPE INSTALLED
(FOR PRIVATE ROADS AND PAVED AREAS; CONTRACTOR TO MEET MIN. REQUIREMENTS AS DEFINED BY RIGHT-OF-WAY OWNER FOR PUBLIC ROAD REPAIRS)
NOT TO SCALE



CL 50 DUCTILE IRON DR 18 PVC PIPE TRENCH DETAIL
NOT TO SCALE



TYPICAL BORING/JACKING DETAIL
NOT TO SCALE



PIPE CASING SUPPORT DETAIL
NOT TO SCALE

GENERAL NOTES:

- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
- THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
- THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
- THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN & STOCKPILE AREAS (TO ARRANGE AND INSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04

THESE DETAILS ARE A WORK PRODUCT OF CFPUA FOR SEWER SYSTEM DESIGN AND CONSTRUCTION AND HAVE BEEN REVIEWED AND APPROVED FOR CONTENT AND GENERAL CONFORMANCE WITH THE SEWER DESIGN FOR THIS PROJECT.

REV.	DESCRIPTION:	DATE:
1	SAMPLING CHAMBER REVISED	10/26/12

CFPUA SANITARY SEWER

DATE: 1/9/12
SCALE: N/A
DRAWN BY: CFPUA
CHECKED BY: CFPUA
PROJECT NO.: 14105

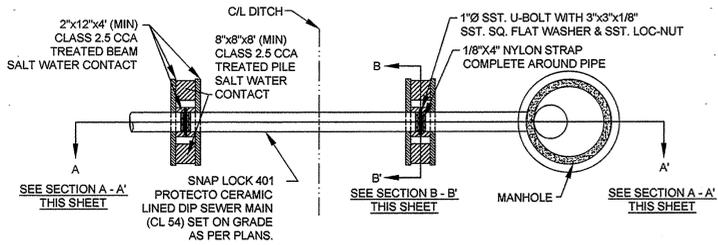
STANDARD DETAILS

CFPUA
SEAL 1991
ENGINEER
JOHN S. TUNSTALL

CFPUA SANITARY SEWER
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6560

STEWARDSHIP. SUSTAINABILITY. SERVICE.

SHEET NO.: **SSD-2**

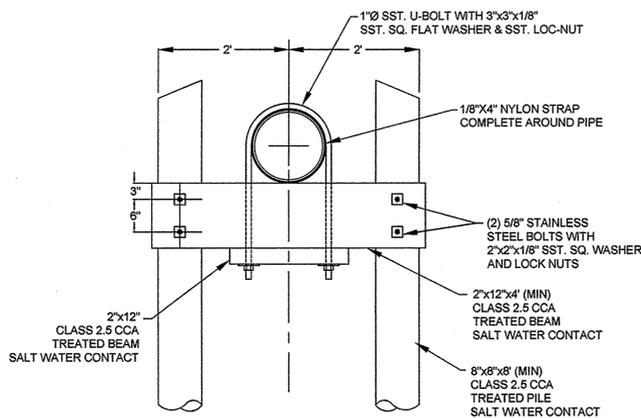


NOTES:

- (1) PILES AND PILE DRIVING SHALL CONFORM TO NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, JANUARY 2002, SECTIONS 445, 450, 1062-2 & 1084-2
- (2) CENTERLINE OF BOLTS TO BE A MINIMUM OF 3" FROM OUTSIDE EDGE OF TIMBER. BOLTS TO BE A MINIMUM OF 3" CENTERLINE TO CENTERLINE
- (3) ALL STAINLESS STEEL SHALL BE 316. STAINLESS STRAP TO BE COLD FORMED.
- (4) PILE SHALL NOT OBSTRUCT FLOW OR CAUSE EROSION OF DITCH/STREAM BANK.
- (5) MIN. CLASS 54 DIP-ENGINEER MUST DESIGN LOADING.
- (6) DESIGN SHALL BE APPROVED BY CFPJA

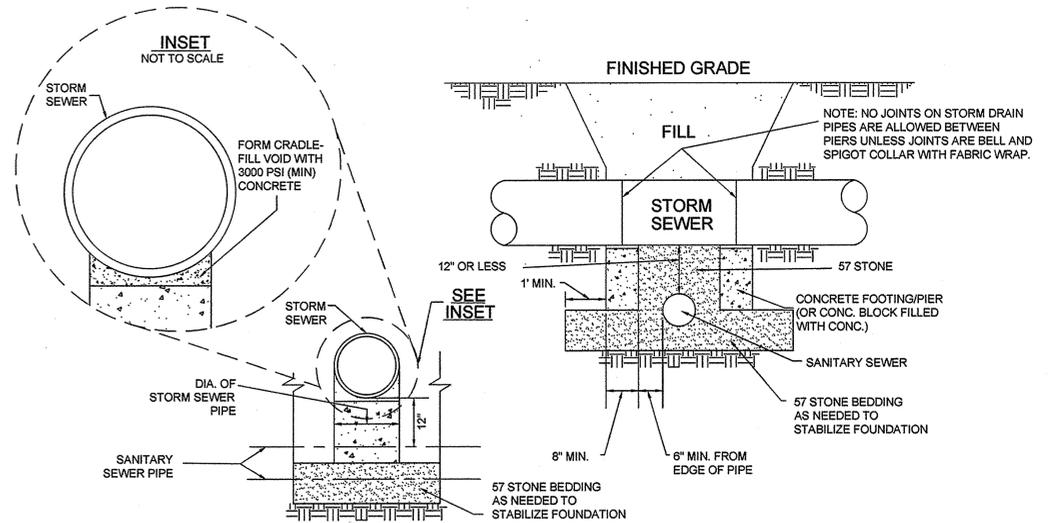
PILE AND BENT

NOT TO SCALE



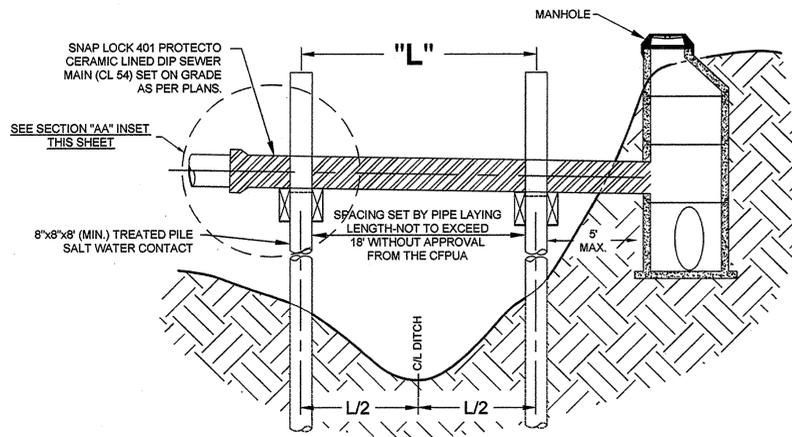
PILE AND BENT SECTION B - B'

NOT TO SCALE



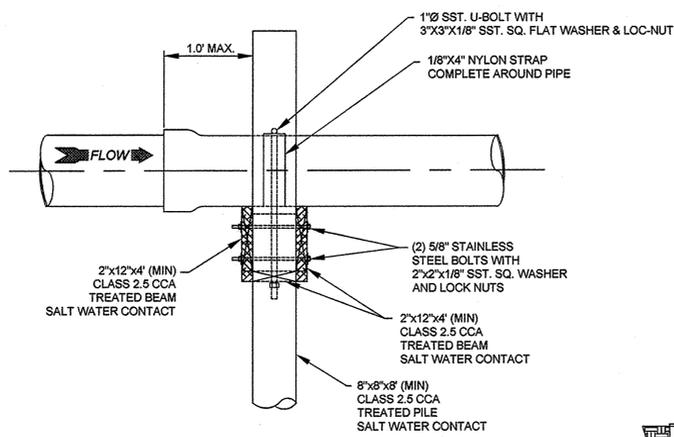
STRUCTURAL BRIDGING DETAIL FOR STORMWATER OVER GRAVITY SEWER INSTALLATIONS WITH LESS THAN 12" SEPARATION

NOT TO SCALE



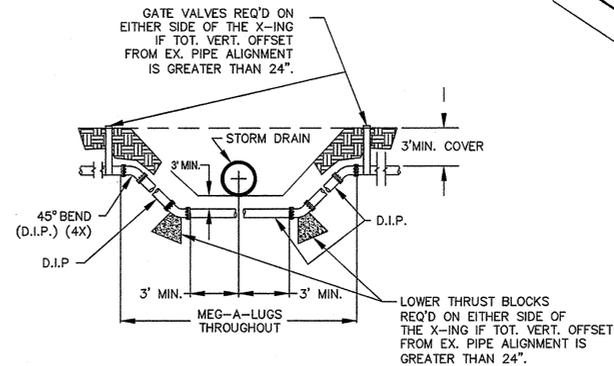
PILE AND BENT SECTION A - A'

NOT TO SCALE



PILE AND BENT SECTION A - A' INSET

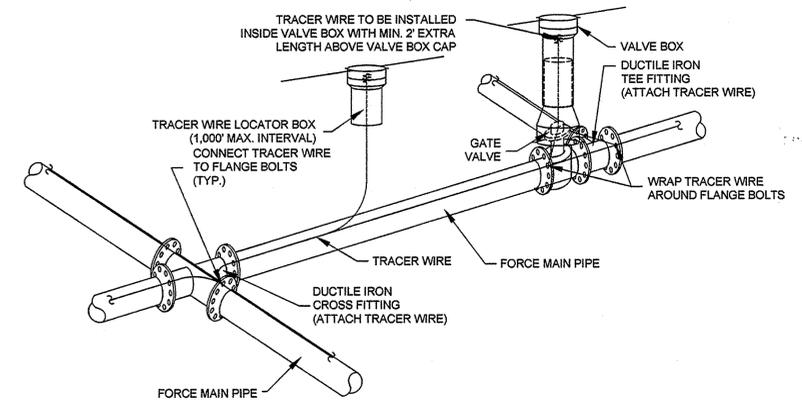
NOT TO SCALE



NOTE: USE D.I.P. (CL50 OR BETTER)

FORCE MAIN DITCH & STORM DRAIN CROSSING

NOT TO SCALE



- NOTES:**
- 1. TRACER WIRE SHALL BE #10 COPPER SOLID CORE COPPER WIRE WITH GAS AND OIL RESISTANT INSULATION
 - 2. WIRE SHALL BE STRAPPED TO ALL PVC FORCE MAIN PIPING WITH DUCT TAPE AT 12-FT. INTERVALS.
 - 3. SECURE WIRE TO ALL TEE AND CROSS FITTINGS.
 - 4. ALL WIRE SPLICES SHALL HAVE WATER PROOF WIRE CONNECTIONS.

TRACER WIRE DETAIL

NOT TO SCALE

GENERAL NOTES:

- 1. NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN & STOCKPILE AREAS (TO ARRANGE AND INSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

THE DETAILS SHOWN HEREON SUPERCEDE CFPJA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04

THESE DETAILS ARE A WORK PRODUCT OF CFPJA FOR SEWER SYSTEM DESIGN AND CONSTRUCTION AND HAVE BEEN REVIEWED AND APPROVED FOR CONTENT AND GENERAL CONFORMANCE WITH THE SEWER DESIGN FOR THIS PROJECT.

REV:	DESCRIPTION:	DATE:

CFPUA SANITARY SEWER

DATE: 1/9/12
SCALE: N/A
DRAWN BY: CFPJA
CHECKED BY: CFPJA
PROJECT NO.: 14105

STANDARD DETAILS



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SHEET NO.: SSD-3