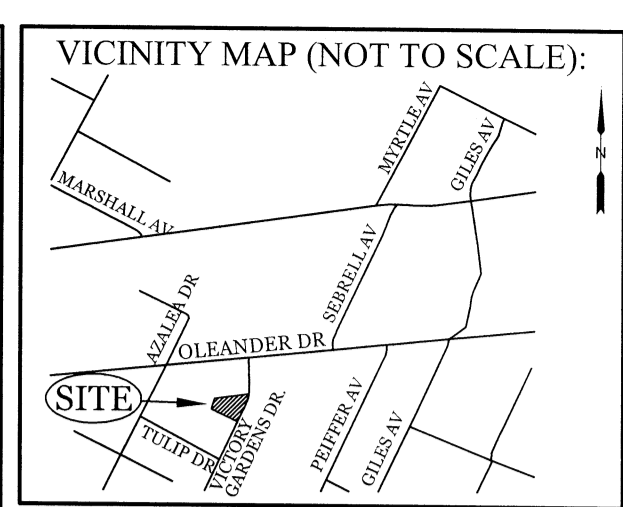


**PROPOSED TREES TO BE REMOVED**

SIZE	SPECIES	QTY	TYPE
12"	PINE	1	REGULATED
14"	PINE	1	REGULATED
16"	PINE	2	REGULATED
18"	PINE	1	REGULATED
22"	PINE	3	REGULATED
10"	MAPLE	1	REGULATED
16"	MAPLE	1	REGULATED
8"	GUM	1	REGULATED
10"	GUM	1	REGULATED
12"	GUM	1	REGULATED
19"	GUM	1	REGULATED
8"	OAK	1	REGULATED

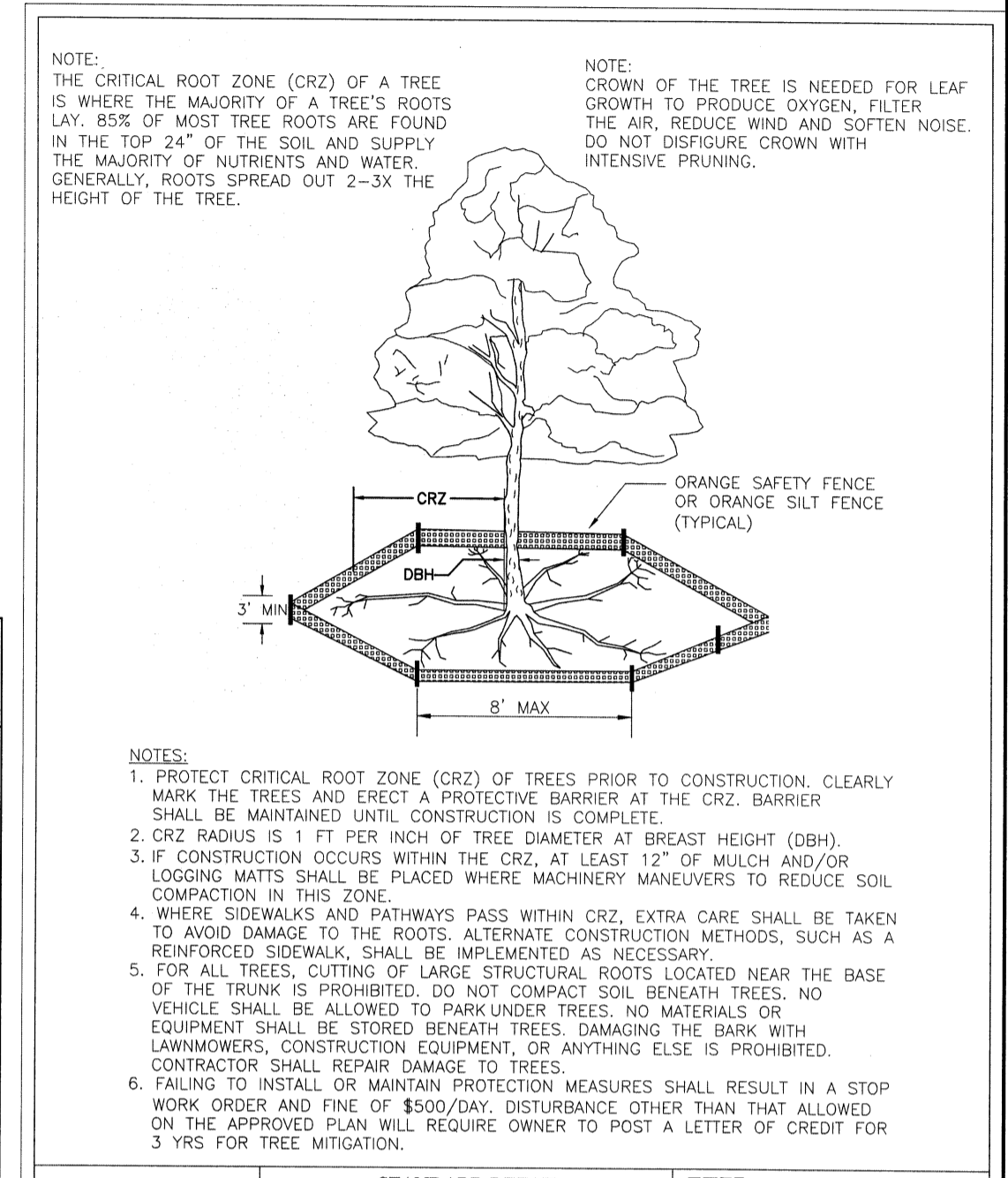
**SITE DATA**

PARCEL ID: R06207-015-010-000  
 CURRENT ZONING: CB  
 CAMA LAND USE CLASSIFICATION: WATERSHED RESOURCE PROTECTION  
 PROJECT ADDRESS: 216 VICTORY GARDENS DR WILMINGTON, NC 28409  
 CURRENT OWNER: BRANNON K. & RENEE R. SMITH 2213 MORELAND DR WILMINGTON, NC 28405  
 TOTAL ACREAGE IN PROJECT BOUNDARY: 14.123 S.F. (± 0.32 ac.)  
 EXISTING ONSITE IMPERVIOUS AREAS: GRAVEL PARKING AREA 5,750 S.F. (40.1%)

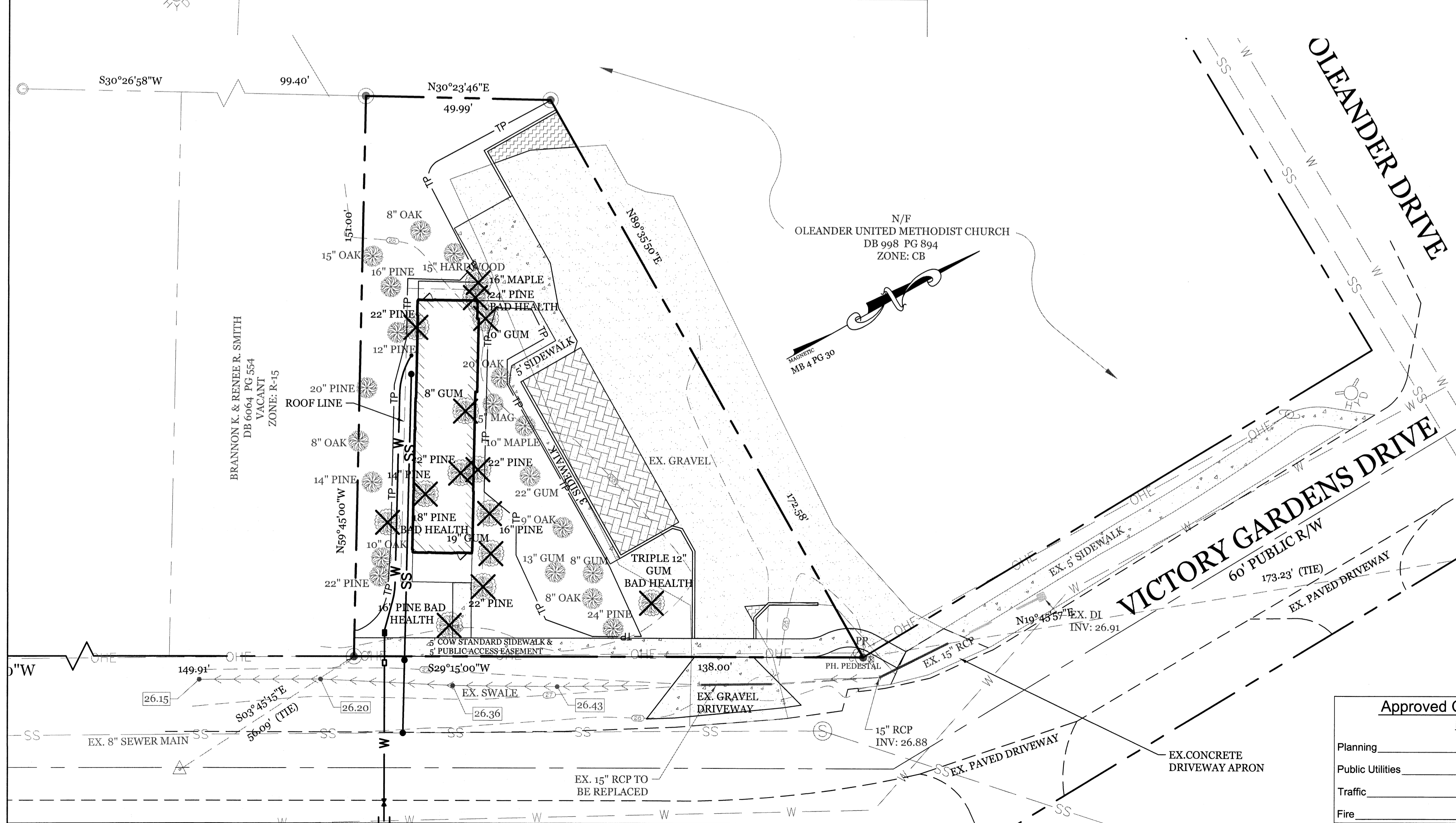


REVISIONS

NO.	DATE	DESCRIPTION

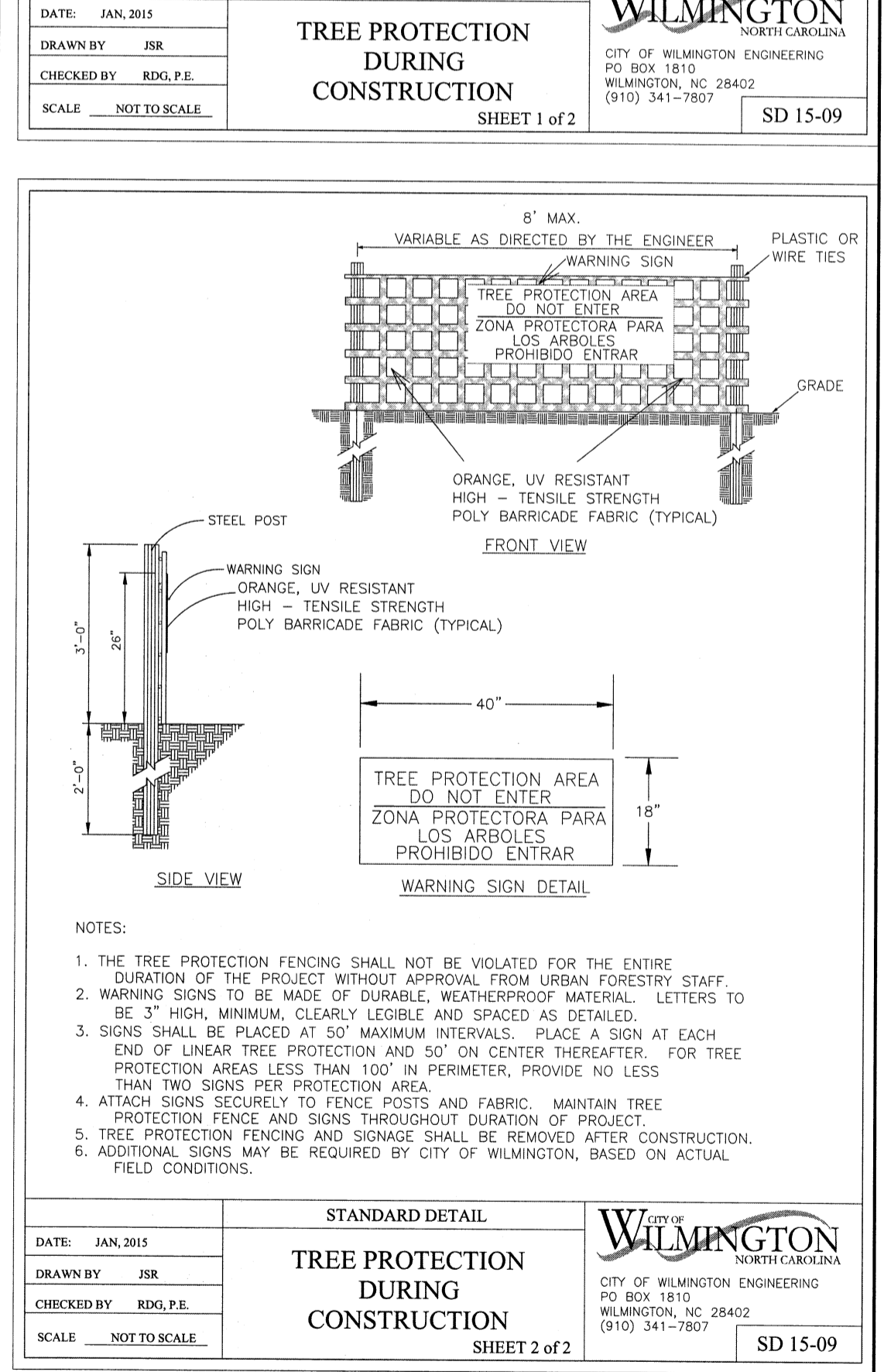


**INTRACOASTAL ENGINEERING, PLLC**  
 5725 Oleander Dr, Unit E-7  
 Wilmington, North Carolina 28403  
 Phone: 910.859.8983  
 Email: Charlie@intracoastalengineering.com  
 License Number: P-0662



**PROPOSED TREES TO BE PRESERVED**

SIZE	SPECIES	QTY	TYPE
12"	PINE	1	REGULATED
14"	PINE	1	REGULATED
16"	PINE	2	REGULATED
20"	PINE	1	REGULATED
22"	PINE	1	REGULATED
24"	PINE	1	REGULATED
10"	MAPLE	1	REGULATED
5"	MAGNOLIA	1	REGULATED
8"	GUM	1	REGULATED
13"	GUM	1	REGULATED
22"	GUM	1	REGULATED
15"	HARDWOOD	1	REGULATED
8"	OAK	3	REGULATED
9"	OAK	1	REGULATED
10"	OAK	1	REGULATED
15"	OAK	1	REGULATED
20"	OAK	1	REGULATED



EXISTING CONDITIONS / TREE REMOVAL PLAN FOR  
**SMITH & GSELL DESIGN STUDIO**  
 CITY OF WILMINGTON  
 NEW HANOVER COUNTY, NC

**CHARLES D. GAYLER**  
 ENGINEER  
 032555  
 12-18-17

CLIENT INFORMATION:  
 Brannon Smith  
 2213 Moreland Dr  
 Wilmington NC 28405  
 910-612-3100  
 BrannonSpine@aol.com

DRAWN: JAE SHEET SIZE: 24x36  
 CHECKED: CDC DATE: 12/18/2017  
 APPROVED: CDC SCALE: 1" = 20'  
 PROJECT NUMBER: 2017-011

DRAWING NUMBER:  
**C-0**  
 1 OF 5

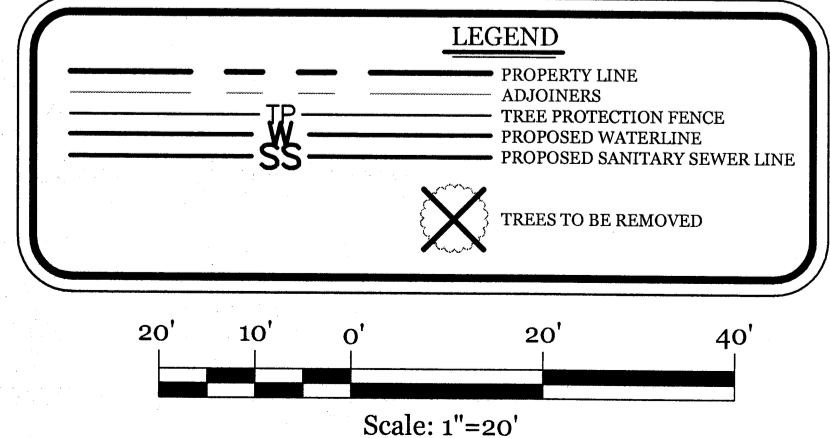
**Approved Construction Plan**

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

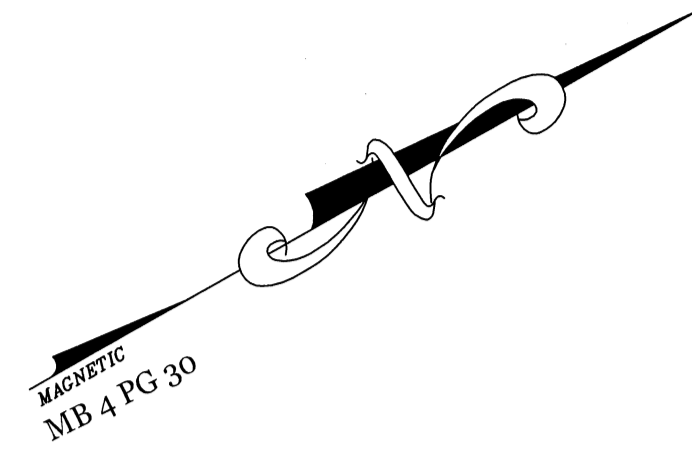
Planning \_\_\_\_\_  
 Public Utilities \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_

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

**CITY OF WILMINGTON NORTH CAROLINA**  
 Public Services • Engineering Division  
**APPROVED DRAINAGE PLAN**

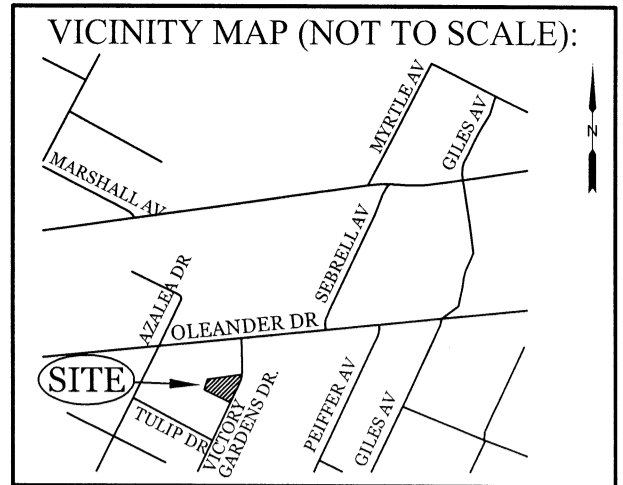






**SITE DATA**

PARCEL ID:	R06207-015-010-000	
CURRENT ZONING:	CB	
CAMA LAND USE CLASSIFICATION:	WATERSHED RESOURCE PROTECTION	
PROJECT ADDRESS:	216 VICTORY GARDENS DR WILMINGTON, NC 28409	
CURRENT OWNER:	BRANNON K. & RENEE R. SMITH 2213 MORELAND DR WILMINGTON, NC 28405	
TOTAL ACREAGE IN PROJECT BOUNDARY:	14,123 S.F. (± 0.32 ac.)	
BUILDING SIZE:	1,050 SF (1,738 SF ROOF)	
BUILDING HEIGHT:	16.5' (1 STORY)	
BUILDING SETBACKS:		
FRONT:	REQUIRED= 20'	PROPOSED= 20'
SIDE:	REQUIRED= 20'/0'	PROPOSED= 13.86*/41.6'
REAR:	REQUIRED= 10'	PROPOSED= 52'
* SETBACK LISTED AS 18" FROM ROOF LINE		
CALCULATION FOR BUILDING COVERAGE:	PROPOSED COVERAGE 1,738 S.F. + 14,123 S.F. = 12.3%	
EXISTING ONSITE IMPERVIOUS AREAS:	GRAVEL PARKING AREA 5,750 S.F. (40.1%)	
EXISTING ONSITE IMPERVIOUS AREA TO REMAIN:	GRAVEL PARKING AREA 3,625 S.F.	
PROPOSED ONSITE IMPERVIOUS AREAS:		
BUILDINGS	1,738 S.F.	
BRICK PAVEMENT PARKING AREA	972 S.F.	
GRAVEL PARKING	145 S.F.	
CONCRETE SIDEWALK/PARKING	1,646 S.F.	
TOTAL	4,510 S.F. (31.9%)	
TOTAL ONSITE IMPERVIOUS AREA:	4,510 S.F.	
EX. ONSITE IMP. AREA TO REMAIN:	3,625 S.F.	
TOTAL	8,135 S.F. (57.6%)	
PROPOSED ONSITE PERVIOUS AREAS:	WOOD WALKWAYS/RAMPS 566 S.F. (100% PERVIOUS)	
PROPOSED OFFSITE IMPERVIOUS AREAS:	CONCRETE SIDEWALK/DRIVE APRON 516 S.F.	
PARKING REQUIRED:		
MIN:	1 SPACE/ 300 S.F. = 3.5 SPACES (1 H.C.)	
MAX:	1 SPACE/ 200 S.F. = 5.25 SPACES (1 H.C.)	
PARKING PROVIDED:	7 SPACES (1 H.C.)	
PARKING LOT INTERIOR LANDSCAPING		
REQUIRED:	5,078 S.F.* 8% =	406 S.F.
PROVIDED:	749 S.F.	
FOUNDATION PLANTINGS:	76 LF X 14.5' FAÇADE X 12% REQUIRED:	132.24 S.F.
PROVIDED:	164 S.F.	
STREET/YARD REQUIREMENT:	(9' MIN & 27' MAX WIDTH)	
REQUIRED:	120.66 LF X 18" =	2,172 S.F.
PROVIDED:	2,238 S.F.	
EXISTING SEWER AND WATER DEMAND:	0 GPD	
PROPOSED SEWER AND WATER DEMAND:	@ 25 GAL/PERSON = 125 GPD	



**REVISIONS**

NO.	DESCRIPTION

**INTRACOASTAL ENGINEERING, PLLC**  
 5725 Oleander Dr. Unit E-7  
 Wilmington, North Carolina 28403  
 Phone: 910.859.8983  
 Email: charlie@intracoastalengineering.com  
 License Number: P-0662

**SITE, GRADING, DRAINAGE, & UTILITIES PLAN**  
 FOR  
**SMITH & GSELL DESIGN STUDIO**  
 CITY OF WILMINGTON  
 NEW HANOVER COUNTY, NC

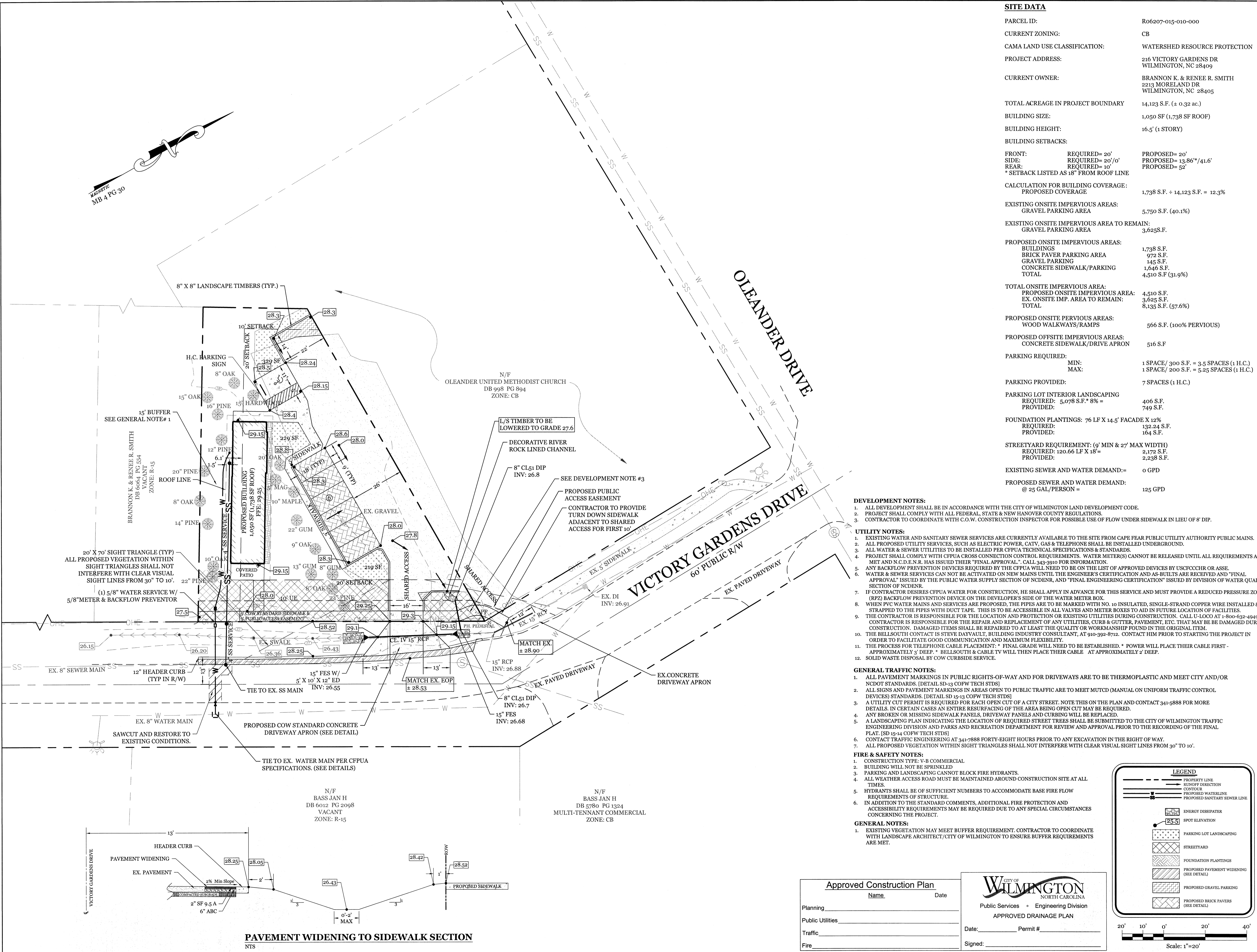
*Charles D. Gsell*  
12.18.17

**CLIENT INFORMATION:**

Brannon Smith  
 2213 Moreland Dr  
 Wilmington NC 28405  
 910-612-3100  
 BrannonSpine@aol.com

DRAWN: JAE SHEET SIZE: 24x36  
 CHECKED: CDC DATE: 12/18/2017  
 APPROVED: CDC SCALE: 1" = 20'  
 PROJECT NUMBER: 2017-011

DRAWING NUMBER: **C-1**



**Approved Construction Plan**

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

Planning \_\_\_\_\_  
 Public Utilities \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_

**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED DRAINAGE PLAN

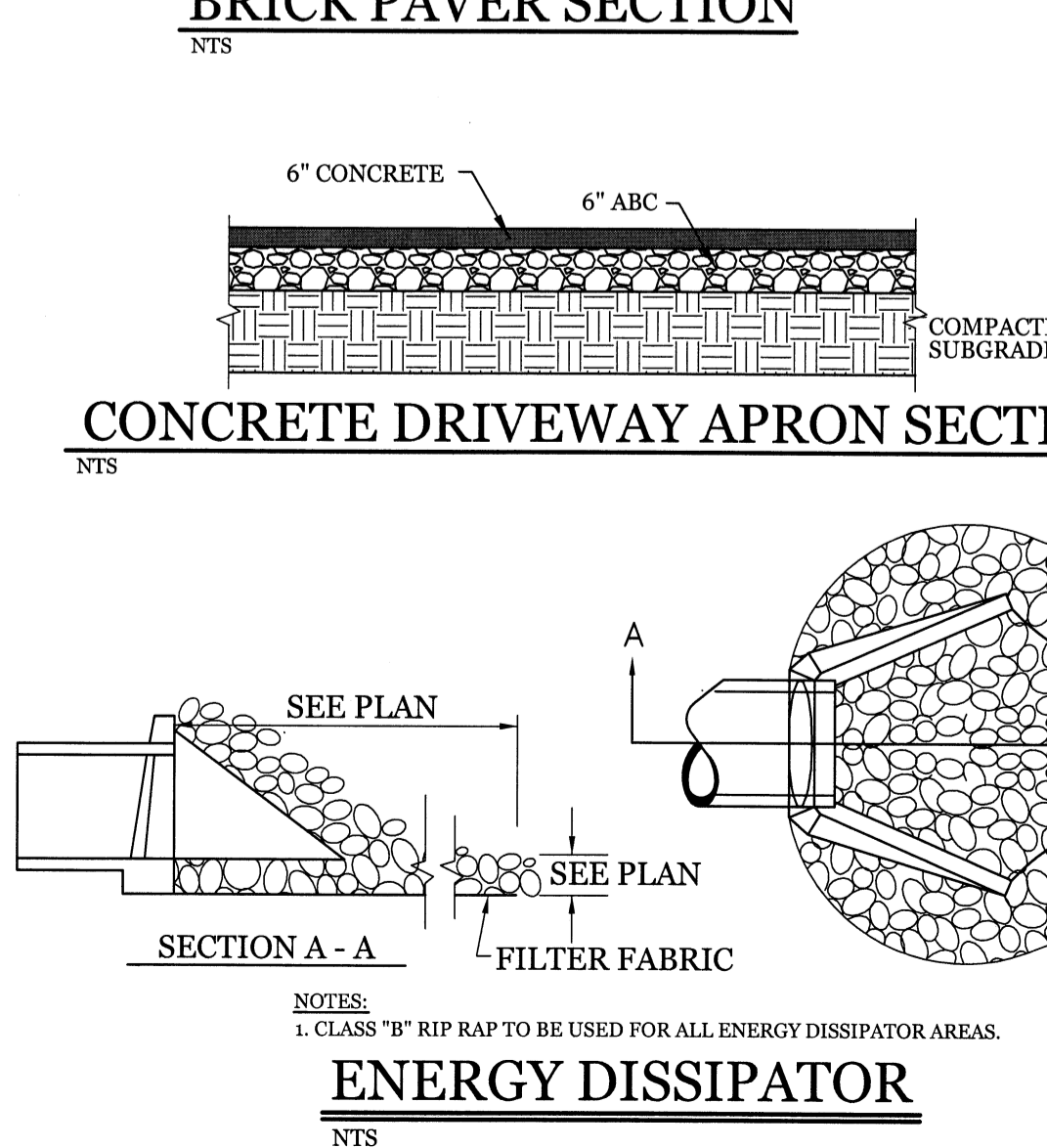
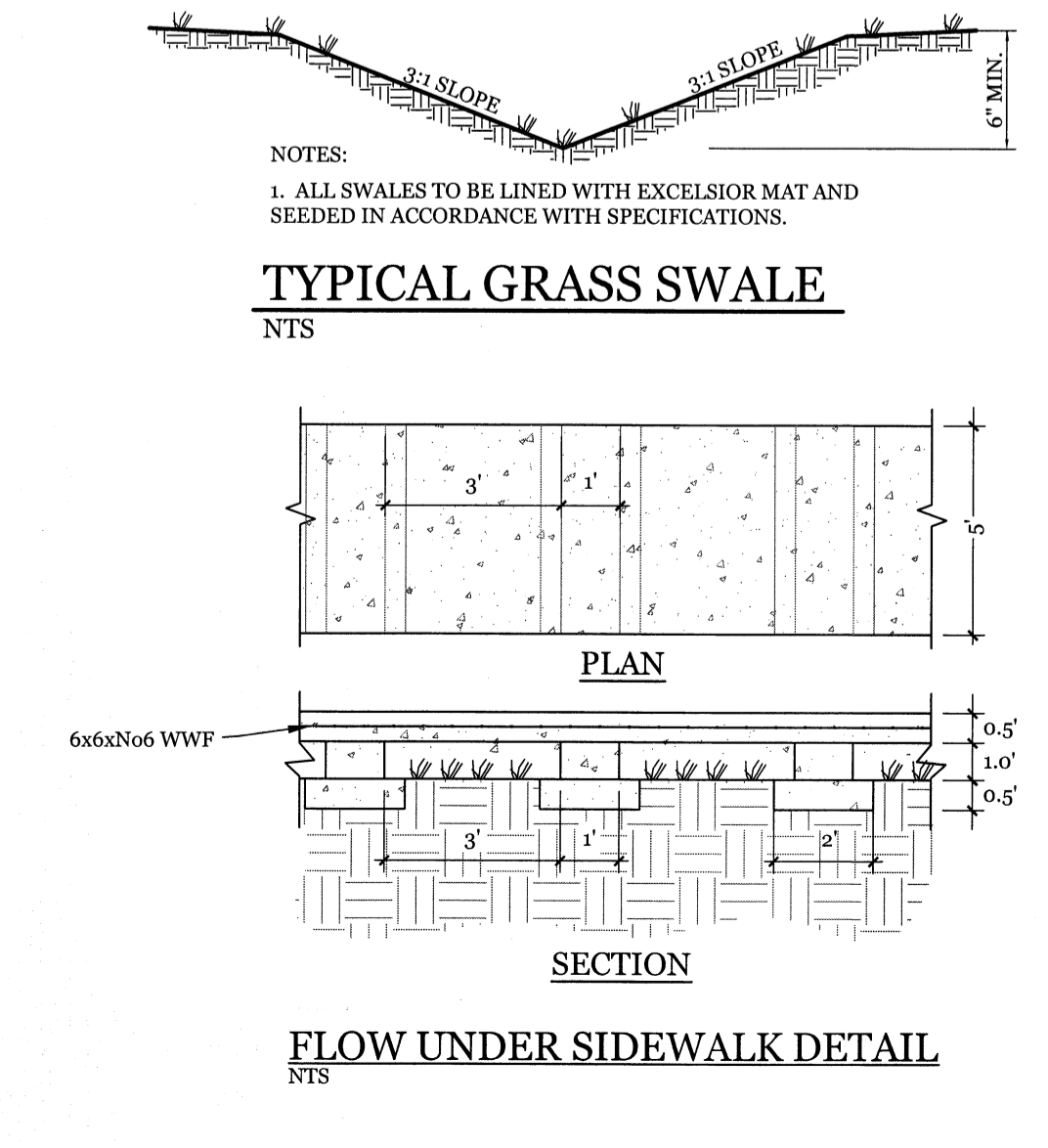
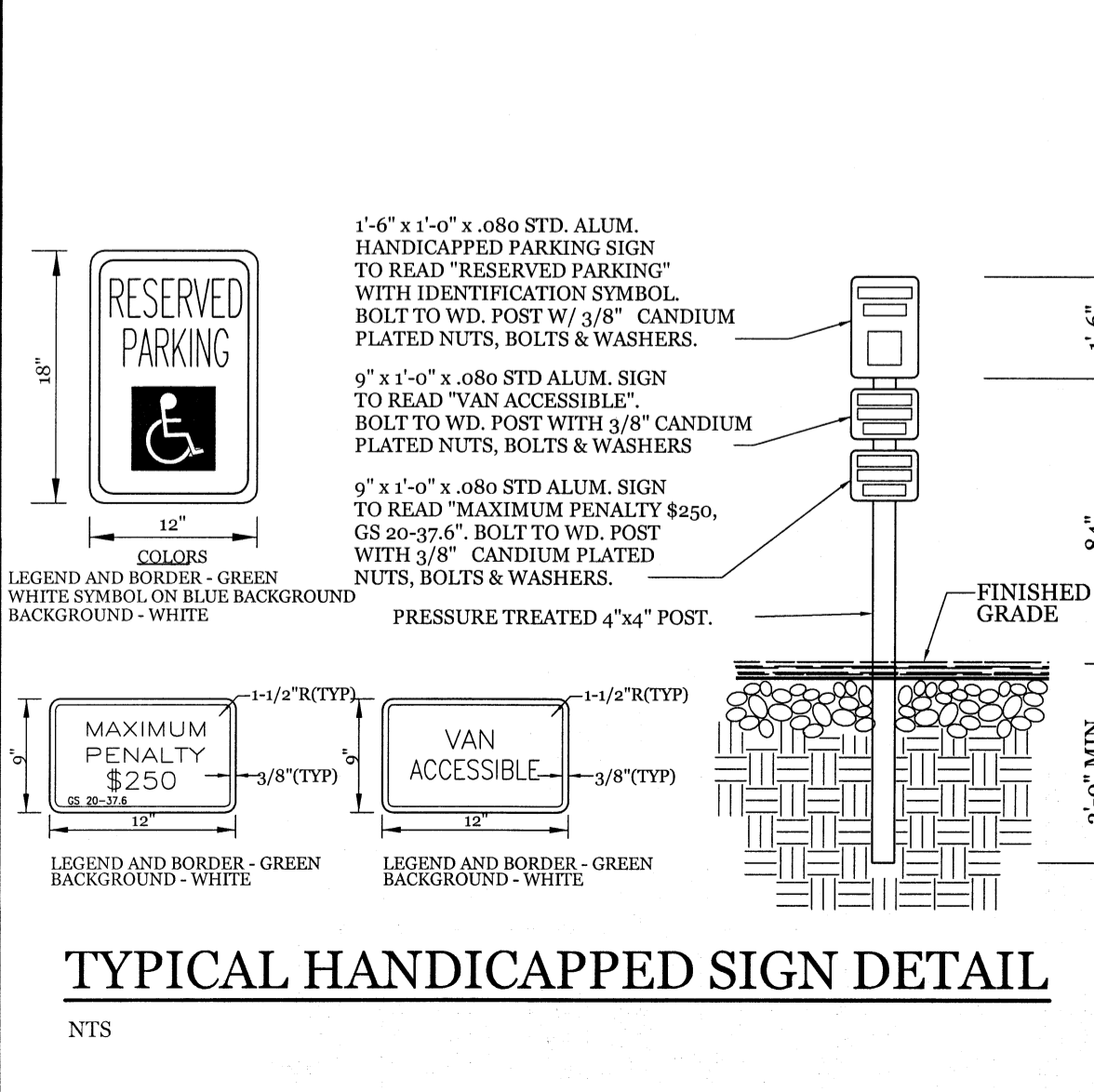
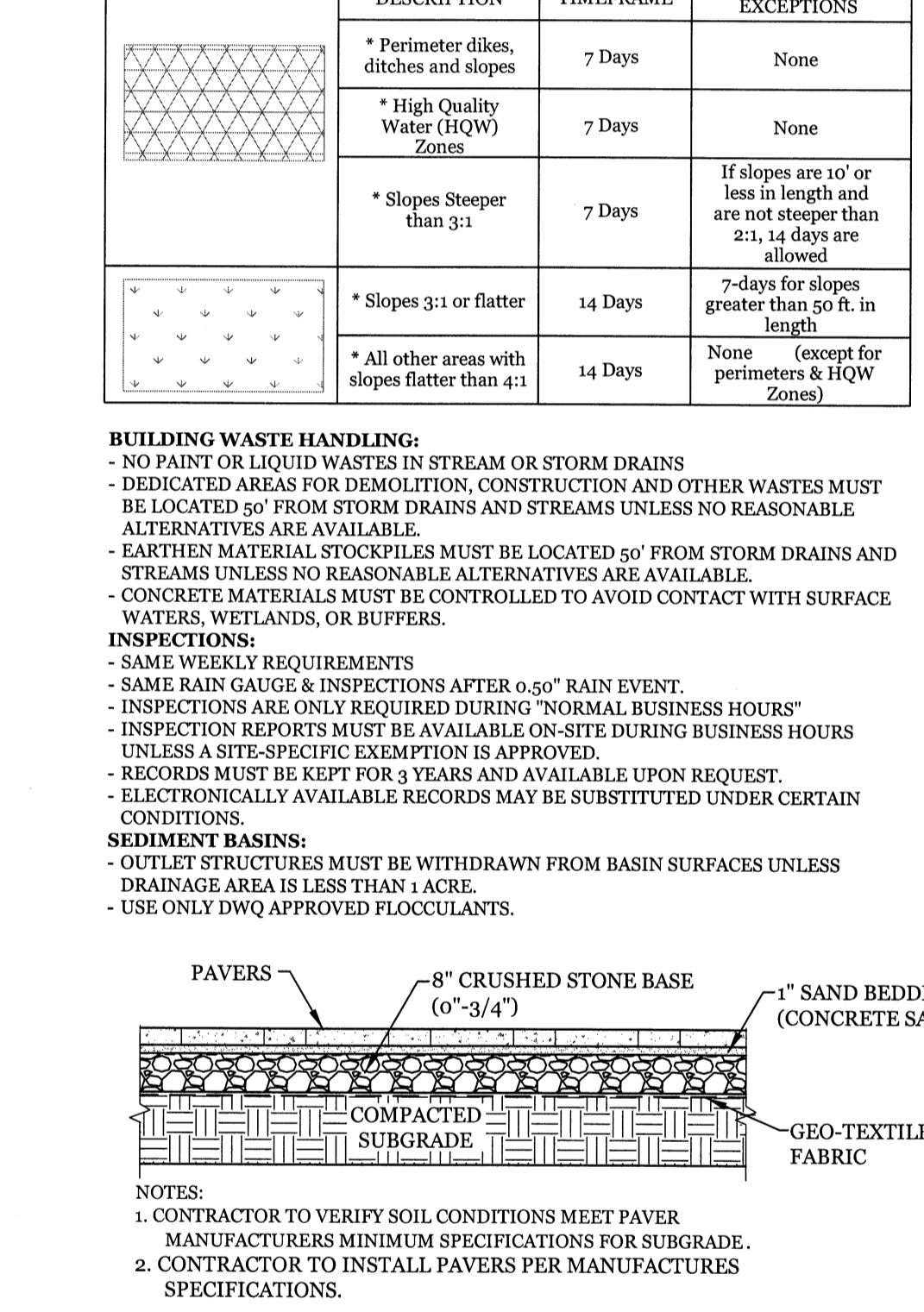
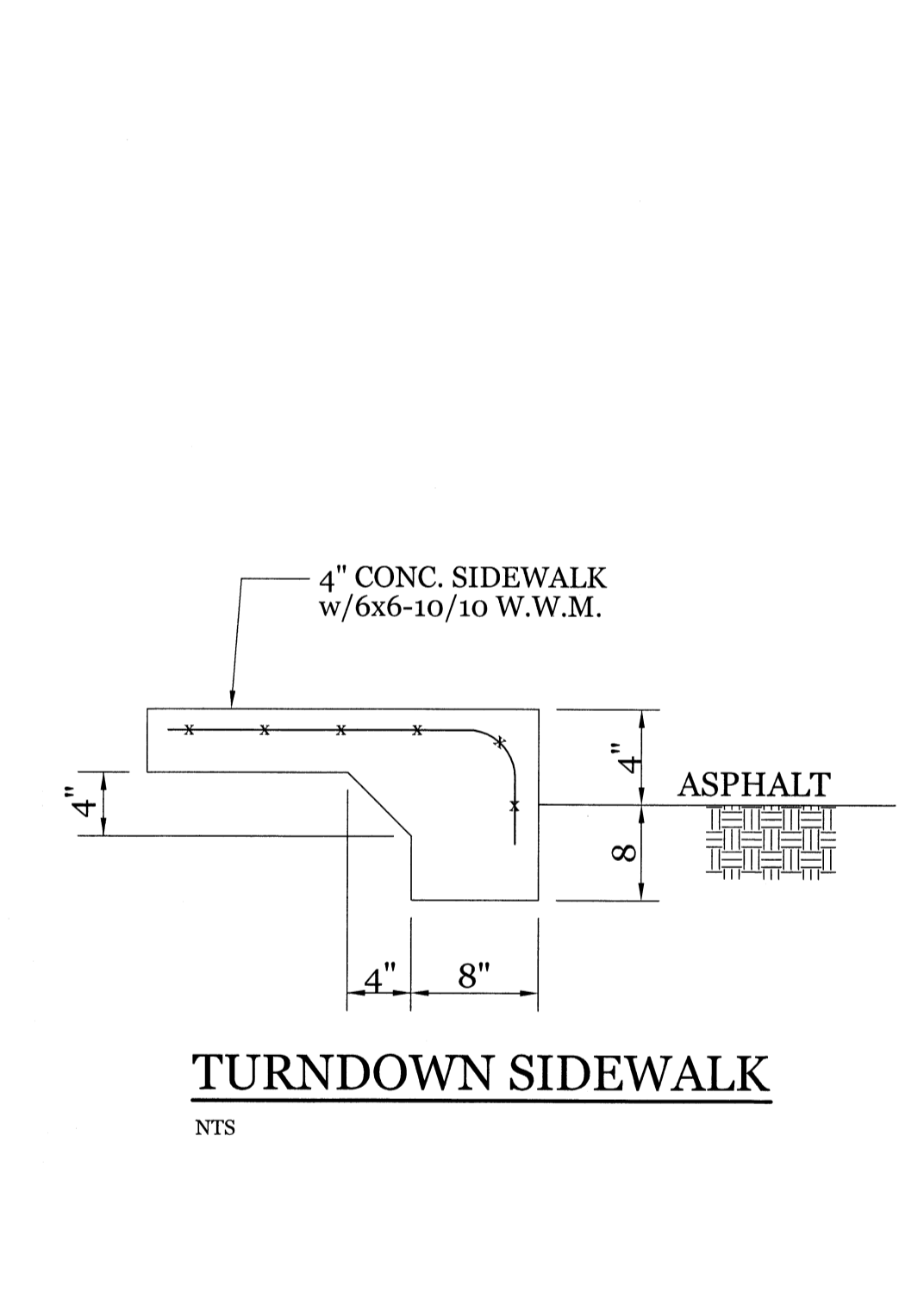
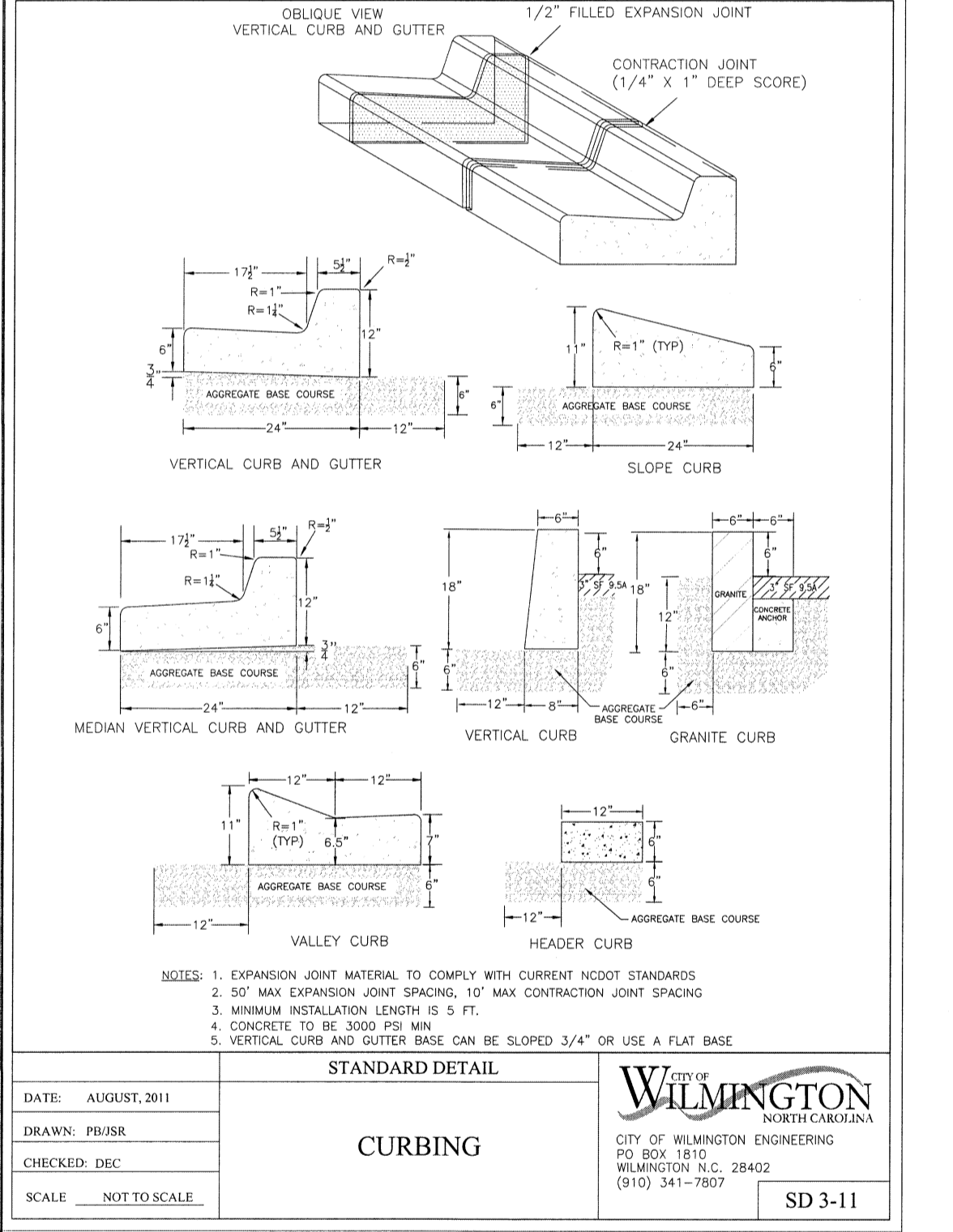
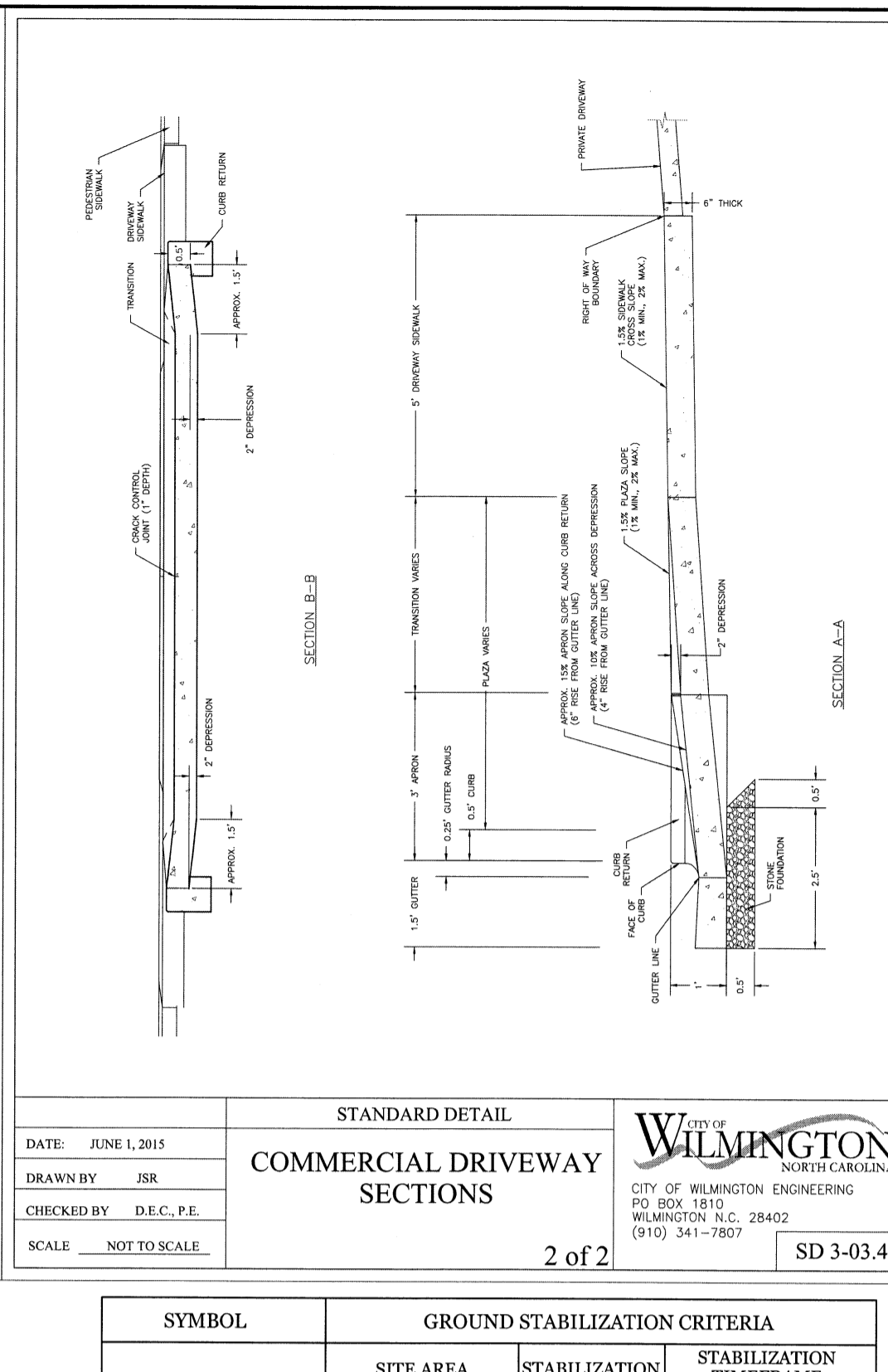
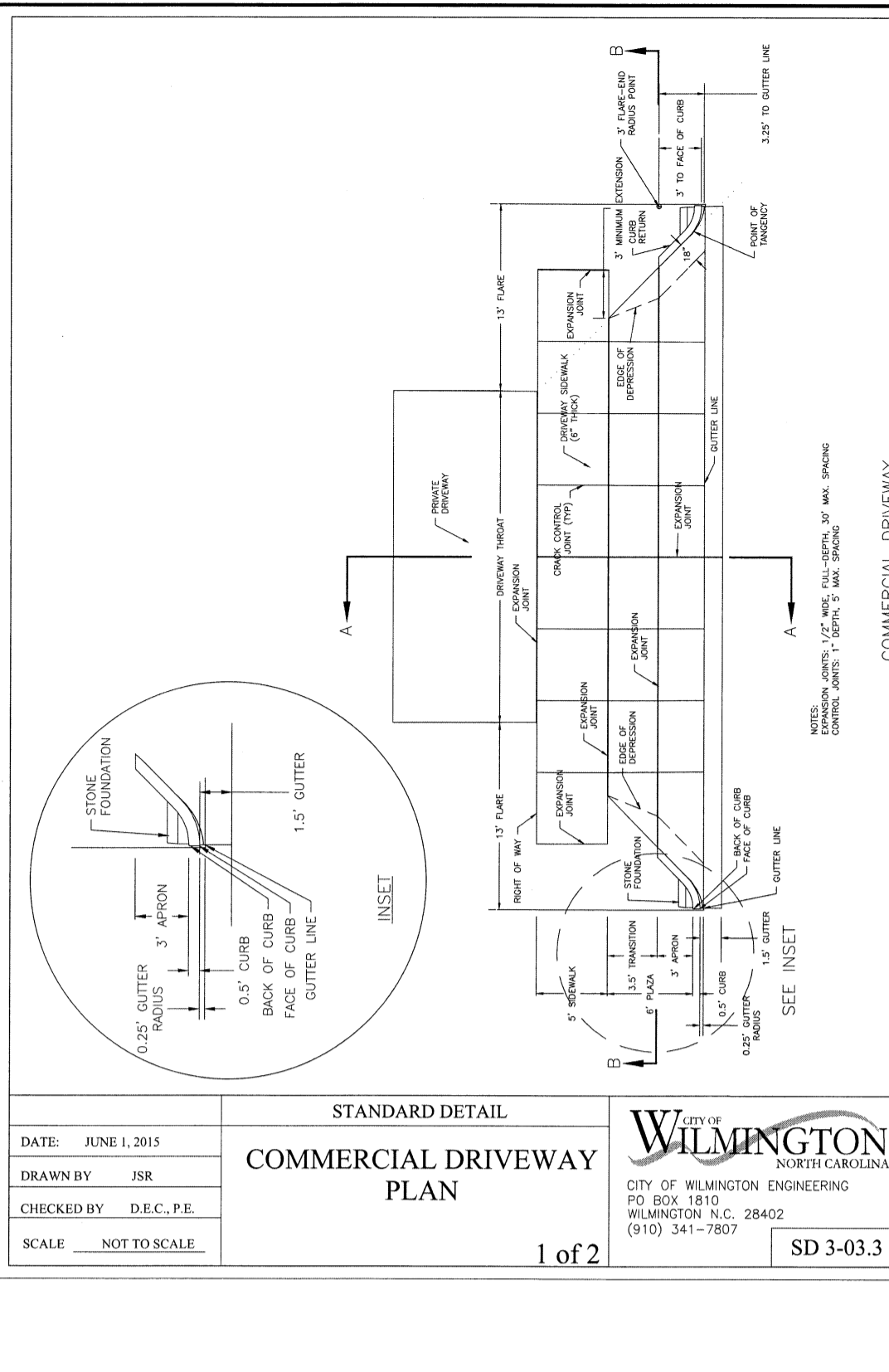
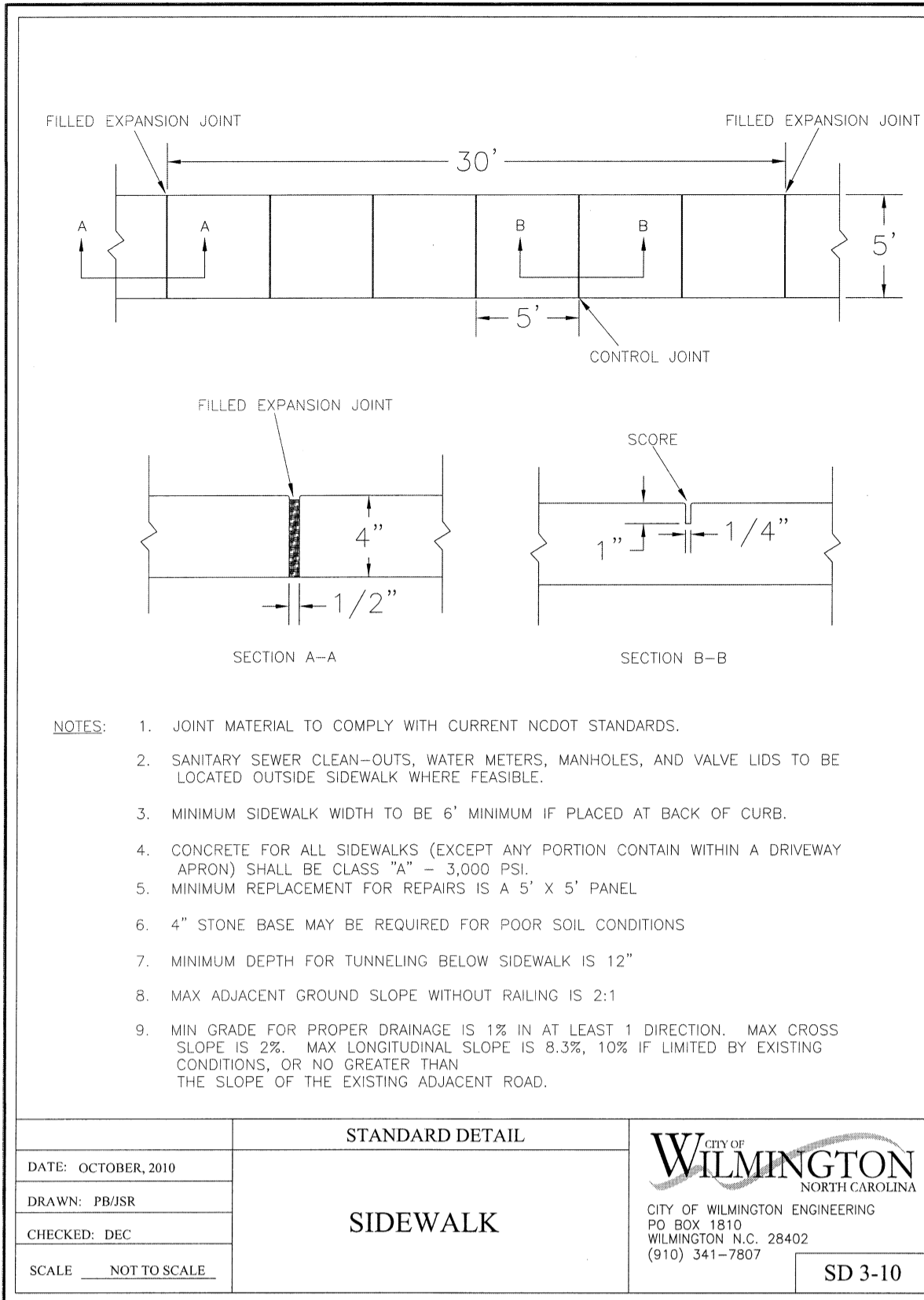
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

**LEGEND**

- PROPERTY LINE
- RUNOFF DIRECTION
- CONTOUR
- PROPOSED WATERLINE
- PROPOSED SANITARY SEWER LINE
- ENERGY DISSIPATOR
- SPOT ELEVATION
- PARKING LOT LANDSCAPING
- STREET/YARD
- FOUNDATION PLANTINGS
- PROPOSED PAVEMENT WIDENING (SEE DETAIL)
- PROPOSED GRAVEL PARKING
- PROPOSED BRICK PAVERS (SEE DETAIL)

Scale: 1"=20'





**SITE WORK NOTES:**

- THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS BOTH ON AND ADJACENT TO THE SITE.
- CLEARING: CONTRACTOR SHALL REMOVE ALL TREES AND VEGETATION WITHIN LIMITS OF CONSTRUCTION UNLESS OTHERWISE DESIGNATED TO REMAIN.
- GRUBBING AND STRIPPING: CONTRACTOR SHALL RAKE AND REMOVE ROOTS, STUMPS, VEGETATION, DEBRIS, EXISTING STRUCTURES ABOVE AND BELOW GRADE, ORGANIC MATERIAL OR ANY OTHER UNSUITABLE MATERIAL WITHIN LIMITS OF CONSTRUCTION.
- MUCKING: CONTRACTOR SHALL COORDINATE WITH OWNER AND THEIR GEOTECHNICAL REPRESENTATIVE TO COORDINATE REMOVAL OF ANY SOFT AREAS.
- DISPOSAL: CLEARED, GRUBBED, STRIPPED OR OTHER WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A PROPERLY PERMITTED FACILITY.
- FILL AND COMPACTION SHOULD COMPLY WITH GEOTECHNICAL RECOMMENDATIONS.
- THE CONTRACTOR SHALL NOTE THAT THE GRADING PLAN MAY NOT REPRESENT A BALANCED EARTHWORK CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT AND FILL QUANTITIES AND COMPLETE INSTALLATION TO SPECIFIED GRADES.
- THE CONTRACTOR SHALL FURNISH SUITABLE BORROW MATERIAL FROM AN OFF-SITE PROPERLY PERMITTED FACILITY AS REQUIRED.
- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES AT ALL CROSSINGS PRIOR TO COMMENCING TRENCH EXCAVATION. IF ACTUAL CLEARANCES ARE LESS THAN INDICATED ON PLAN, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. ANY CONDITION DISCOVERED OR EXISTING THAT WOULD NECESSITATE A MODIFICATION OF THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
- NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NO ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. BEFORE COMMENCING ANY EXCAVATIONS IN OR ALONG ROADWAYS OR RIGHT-OF-WAYS, PUBLIC AREAS OR IN PRIVATE EASEMENTS, THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE PERSONNEL OF THEIR INTENT TO EXCAVATE, IN WRITING, NOT LESS THAN 10 DAYS PRIOR TO EXCAVATING.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE DISCONNECTION/ RECONNECTION AND/OR THE RELOCATION OF ALL EXISTING UTILITIES WITH APPROPRIATE PERSONNEL.
- CONTRACTOR SHALL ADJUST ALL MANHOLES, VALVE & CURB BOXES TO FINAL GRADE UPON COMPLETION OF ALL CONSTRUCTION. ANY BOXES DAMAGED OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
- EXISTING SURVEYING PERFORMED BY PATRICK C. BRISTOW, N.C. PLS No. L-4148
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AT THE SITE. FURTHERMORE THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES OR QUESTIONS TO THE ENGINEER PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE ANY AND ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK UNLESS OTHERWISE DIRECTED BY OWNER.
- ALL SERVICE CONNECTIONS SHALL BE INSTALLED TO MEET ALL LOCAL, STATE, AND CPWA CODES. METERS, TAPS, MATERIALS, WORKMANSHIP AND ALL FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH ALL REQUIREMENTS.
- ALL BACKFILL FROM UTILITY INSTALLATION MUST BE COMPACTED OR AMENDED TO PROVIDE TRAFFIC BEARING CAPACITY. GEOTECHNICAL ENGINEER TO BE CONSULTED AT CONTRACTORS COST AS NECESSARY.
- ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO INSTALLATION. ALL AREAS SHALL BE SLOPED TO DRAIN AWAY FROM BUILDINGS AT ALL TIMES.
- CONCRETE FOR WALKS, CURBS AND DRIVES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS - AIR ENTRAINED.
- FIELD TESTING SHALL BE DONE BY AN INDEPENDENT TESTING LABORATORY PAID FOR BY THE OWNER. FURTHER TESTING REQUIRED DUE TO A FAILED TEST WILL BE PAID FOR BY THE CONTRACTOR.
- ALL SIDEWALKS SHALL BE FREE OF CRACKS, BREAKS, OR ANY OTHER DEFECT PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY.

**MAINTENANCE PLAN:**

- ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE, LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL.
- ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF 2-3 INCH STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL, SPILLED, WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.
- SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, ROCK DOUGHNUT INLET PROTECTION, SEDIMENT TRAP Baffles, AND ROCK PIPE INLET PROTECTION WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARDWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT.
- DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE REPAIRED. SWALES MUST BE TEMPORARILY STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF ACTIVITY ASSOCIATED WITH A SWALE.
- SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET MAX. WITH THE USE OF EXTRA STRENGTH FABRIC, WITHOUT WIRE BACKING. STAKE SPACING WILL BE 8 FEET MAX WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS ARE DESIGNED AT LOW POINTS IN THE 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.

**CONSTRUCTION SEQUENCE:**

CONSTRUCTION OF SITE TO START WITH INSTALLATION OF CONSTRUCTION ENTRANCE AND SILT FENCE ALONG ALL LOCATIONS PER PLANS. UPON INSTALLATION OF SILT FENCE, TREES SHOULD BE REMOVED IN LOCATIONS AS NECESSARY. ALL SLOPED AREAS SHOULD BE SEEDED IN ACCORDANCE TO SPECIFICATIONS. SLOPE STABILIZATION IS WITHIN 21 CALENDAR DAYS OF ANY PHASE OF CONSTRUCTION. ALL OTHER AREAS MUST BE STABILIZED WITHIN 15 WORKING DAYS. CONTRACTOR TO FOLLOW NPDES STABILIZATION REQUIREMENTS PER STRUMENT REQUIREMENT TO BE MET.

- GENERAL CLEARING AND GRADING OF THIS SITE WILL NOT BE DONE UNTIL THE TEMPORARY SILT FENCE & CONSTRUCTION ENTRANCE HAS BEEN INSTALLED.
- NO CUT SLOPE OR FILL SLOPE SHALL EXCEED A RISE OR FALL OF ONE FOOT FOR EVERY RUN OF 3 FEET (1 VERTICAL TO 3 HORIZONTAL).
- NO SEDIMENT WILL BE ALLOWED TO EXIT THE SITE. ALL EROSION SHALL BE CONTROLLED INCLUDING SIDE SLOPES DURING AND AFTER CONSTRUCTION.
- INSTALL PRIMARY EROSION CONTROL MEASURES BEFORE BEGINNING CONSTRUCTION INCLUDING BUT NOT LIMITED TO GRAVELED CONSTRUCTION ENTRANCE, SILT FENCE, TREE PROTECTION FENCE & SEDIMENT BASINS. CONTRACTOR TO BE FAMILIAR WITH USACE GENERAL PERMIT CONDITIONS FOR ROAD CROSSINGS. SPECIFIC CONSTRUCTION METHODS MAY BE REQUIRED ABOVE AND BEYOND WHAT IS SPECIFIED IN THIS PLAN. INSTALL ALL SECONDARY EROSION CONTROL MEASURES, SUCH AS INLET PROTECTION AS SOON AS POSSIBLE AFTER BEGINNING CONSTRUCTION.
- ALL EROSION CONTROL MEASURES TO BE INSPECTED AFTER EACH RAIN. SILT FENCE AND INLET PROTECTION TO BE CLEANED WHEN HALF FULL.
- A 4" LAYER OF TOPSOIL SHALL BE APPLIED TO ALL NEW AREAS TO BE GRASSED.
- MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PROJECT IS COMPLETE.
- MORE STRINGENT MEASURES MAY BE REQUIRED TO HALT EROSION IF THOSE ON THIS PLAN PROVE TO BE LESS EFFECTIVE.
- REMOVE ALL TEMPORARY EROSION CONTROL MEASURES UPON COMPLETION OF CONSTRUCTION. ALL PERMANENT MEASURES SHALL BE WELL ESTABLISHED PRIOR TO PROJECT COMPLETION.

SYMBOL	GROUND STABILIZATION CRITERIA	
	SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME
	* Perimeter dikes, ditches and slopes	7 Days
	* High Quality Water (HQW) Zones	7 Days
	* Slopes Steeper than 3:1	7 Days
	* Slopes 3:1 or flatter	14 Days
	* All other areas with slopes flatter than 4:1	14 Days

**BUILDING WASTE HANDLING:**

- NO PAINT OR LIQUID WASTES IN STREAM OR STORM DRAINS
- DEDICATED AREAS FOR DEMOLITION, CONSTRUCTION AND OTHER WASTES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES ARE AVAILABLE.
- EARTHEN MATERIAL STOCKPILES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES ARE AVAILABLE.
- CONCRETE MATERIALS MUST BE CONTROLLED TO AVOID CONTACT WITH SURFACE WATERS, WETLANDS, OR BUFFERS.

**INSPECTIONS:**

- SAME WEEKLY REQUIREMENTS
- SAME RAIN GAUGE & INSPECTIONS AFTER 0.50" RAIN EVENT
- INSPECTIONS ARE ONLY REQUIRED DURING "NORMAL BUSINESS HOURS"
- INSPECTION REPORTS MUST BE AVAILABLE ON-SITE DURING BUSINESS HOURS UNLESS A SITE-SPECIFIC EXEMPTION IS APPROVED.
- RECORDS MUST BE KEPT FOR 3 YEARS AND AVAILABLE UPON REQUEST.
- ELECTRONICALLY AVAILABLE RECORDS MAY BE SUBSTITUTED UNDER CERTAIN CONDITIONS.

**SEDIMENT BASINS:**

- OUTLET STRUCTURES MUST BE WITHDRAWN FROM BASIN SURFACES UNLESS DRAINAGE AREA IS LESS THAN 1 ACRE.
- USE ONLY DWQ APPROVED FLOCCULANTS.

**NORTH CAROLINA TEMPORARY GRASSING DETAIL**

SEEDING MIXTURE SPECIES	APPLICATION RATE
<b>LATE WINTER &amp; EARLY SPRING:</b> Rye (grain)	100 (lb/acre)
Ornitho Ispedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50 (lb/acre)
<i>Omit annual Ispedeza when duration of temporary cover is not to extend beyond June</i>	
<b>SUMMER:</b> German Millet In the Piedmont and Mountains, a small-stemmed sundgrass may be substituted at a rate of 50 (lb/acre)	40 (lb/acre)
<b>FALL:</b> Rye (grain)	120 (lb/acre)

**SEEDING DATES**

**LATE WINTER & EARLY SPRING:**  
Mountains - Above 2500 ft. Feb. 15-May 15  
Piedmont - Jan. 1-May 1  
Coastal Plain - Dec. 1-Apr. 15

**SUMMER:**  
Mountains - May 15-Aug. 15  
Piedmont - May 1-Aug. 15  
Coastal Plain - Apr. 15-Aug. 15

**FALL:**  
Mountains - Aug. 15-Dec. 15  
Coastal Plain and Piedmont - Aug. 15-Dec. 30

**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.

**NORTH CAROLINA PERMANENT GRASSING DETAIL**

SEEDING MIXTURE SPECIES	APPLICATION RATE
<b>FALL &amp; WINTER:</b> Tall Fescue (blend of two or three improved varieties)	200 (lb/acre)
Rye (grain)	25 (lb/acre)
<b>SPRING &amp; SUMMER:</b> Pensacola Bahiagrass Sericea Leptodeza Common Bermudagrass German Millet Tall Fescue	50 (lb/acre) 30 (lb/acre) 10 (lb/acre) 10 (lb/acre) 50 (lb/acre)

**SEEDING DATES**

**FALL & WINTER:**  
January - April  
August - December

**SOIL AMENDMENTS:**  
Apply lime and fertilizer according to soil tests, or apply 3,000-5,000 lb/acre ground agricultural limestone (use the lower rate on sandy soils) and 1,000 lb/acre 10-10-10 fertilizer.

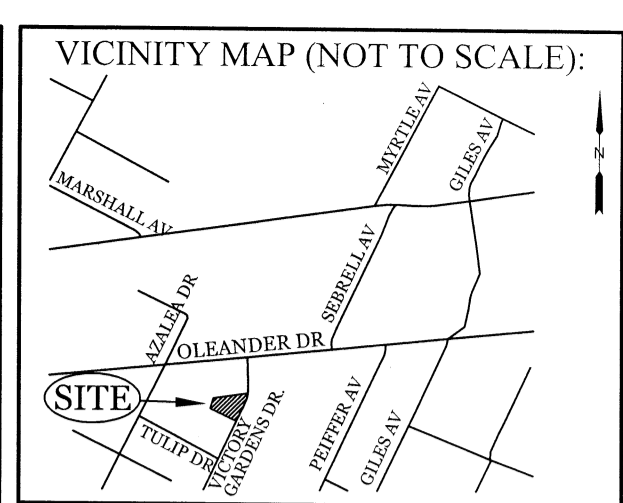
**MAINTENANCE:**  
Fertilize according to soil tests or apply 40 lb/acre nitrogen in January or February, 40 lb in September and 40 lb in November, from a 12-4-8, 16-4-8, or similar turf fertilizer. Avoid fertilizer applications during warm weather, as this increases stand losses to disease. Reseed, fertilize, and mulch damaged areas immediately. mow to a height of 2.5-3.5 inches as needed.

**SPRING & SUMMER:**  
April 1 - July 15

**SOIL AMENDMENTS:**  
Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agriculture limestone and 500 lb/acre 10-10-10 fertilizer.

**MAINTENANCE:**  
Refertilize the following April with 50 lb/acre nitrogen. Repeat as growth requires. may be mowed only once a year. Where a neat appearance is desired, omit sericea and mow as often as needed.

**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.



**REVISIONS**

NO.	DATE	DESCRIPTION

**INTRACOASTAL ENGINEERING, PLLC**

5725 Olander Dr. Unit E-7  
Wilmington, North Carolina 28403  
Phone: 910 859 8983  
Email: charlie@intracoastalengineering.com  
License Number: P-0662

**DETAILS FOR SMITH & GSELL DESIGN STUDIO**

CITY OF WILMINGTON  
NEW HANOVER COUNTY, NC

CHARLES D. WATTER  
ENGINEER  
12.13.17

**CLIENT INFORMATION:**

Brannon Smith  
2213 Moreland Dr  
Wilmington NC 28405  
910-612-3100  
BrannonSpine@aol.com

DRAWN: JAE SHEET SIZE: 24x36  
CHECKED: CDC DATE: 12/18/2017  
APPROVED: CDC SCALE: NTS  
PROJECT NUMBER: 2017-011

DRAWING NUMBER: **C-2**

3 OF 5

**Approved Construction Plan**

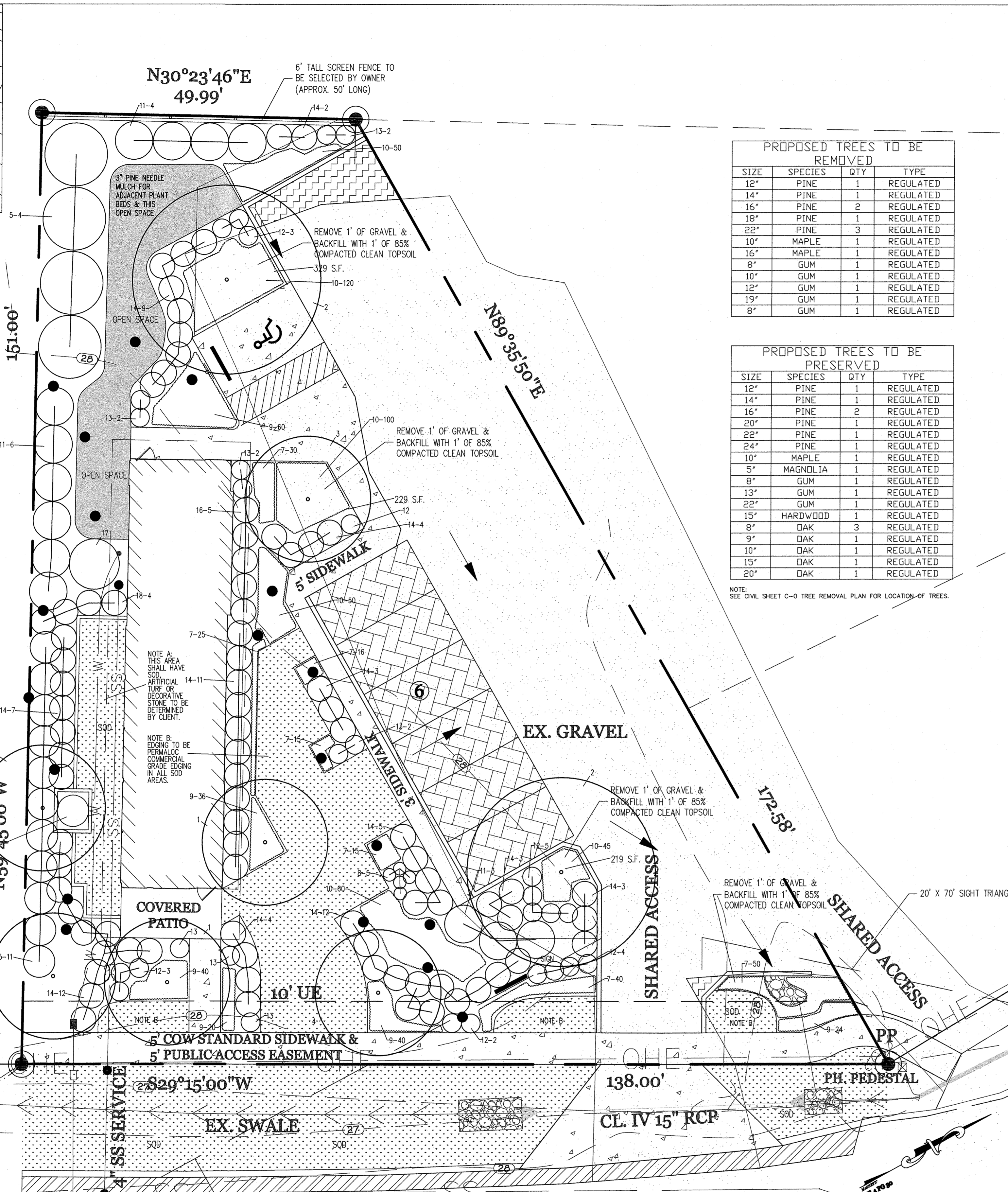
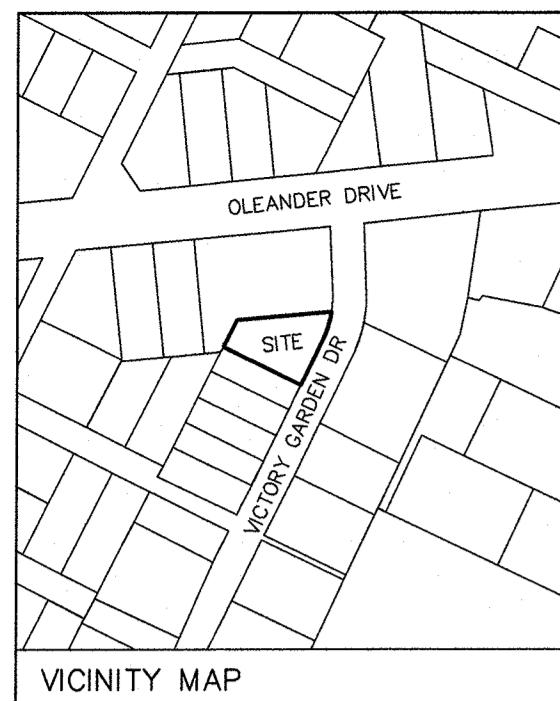
Name: \_\_\_\_\_ Date: \_\_\_\_\_

Planning: \_\_\_\_\_  
Public Utilities: \_\_\_\_\_  
Traffic: \_\_\_\_\_  
Fire: \_\_\_\_\_

**APPROVED DRAINAGE PLAN**

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





**PROPOSED TREES TO BE REMOVED**

SIZE	SPECIES	QTY	TYPE
12"	PINE	1	REGULATED
14"	PINE	1	REGULATED
16"	PINE	2	REGULATED
18"	PINE	1	REGULATED
22"	PINE	3	REGULATED
10"	MAPLE	1	REGULATED
16"	MAPLE	1	REGULATED
8"	GUM	1	REGULATED
10"	GUM	1	REGULATED
12"	GUM	1	REGULATED
19"	GUM	1	REGULATED
8"	GUM	1	REGULATED

**PROPOSED TREES TO BE PRESERVED**

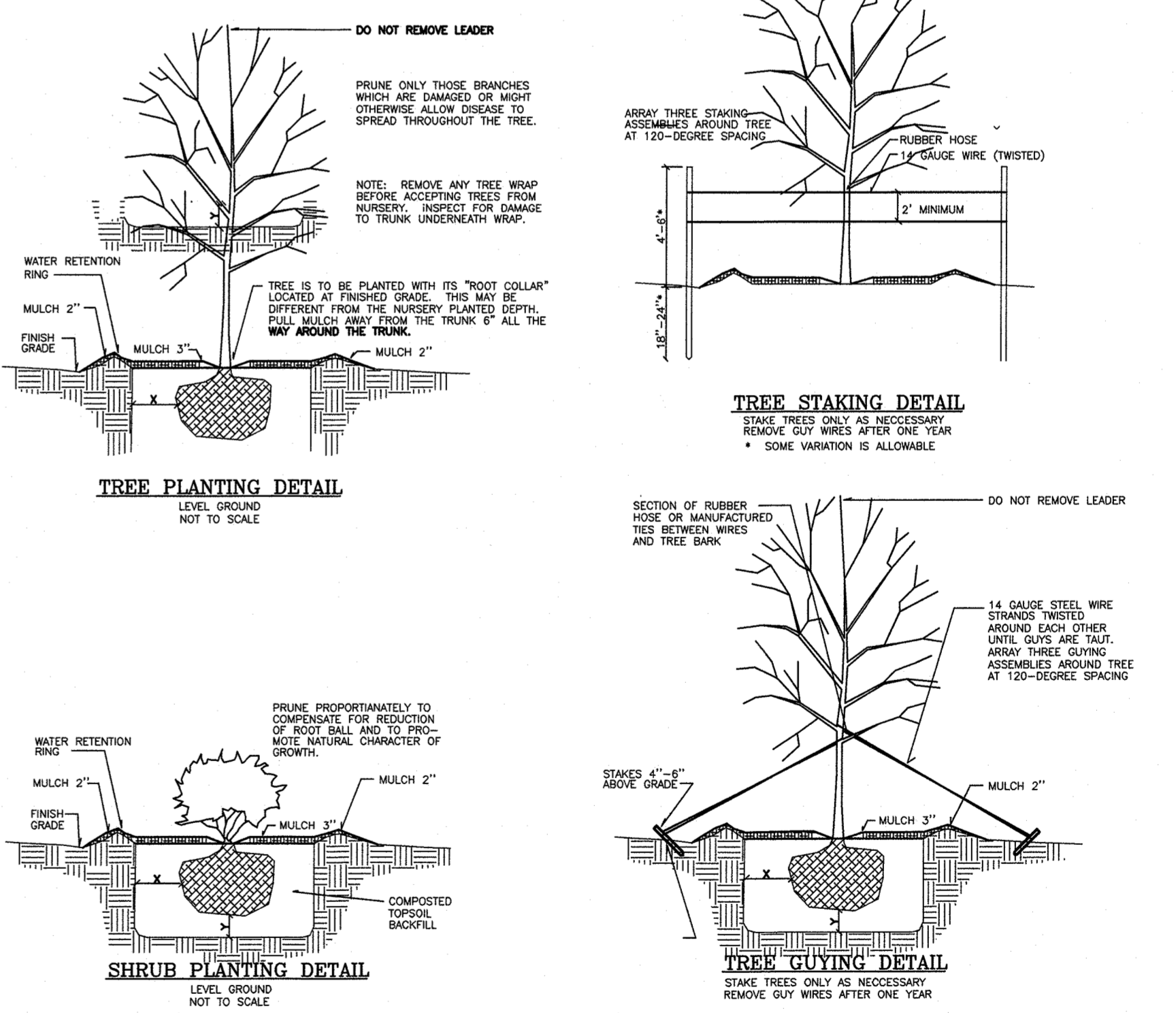
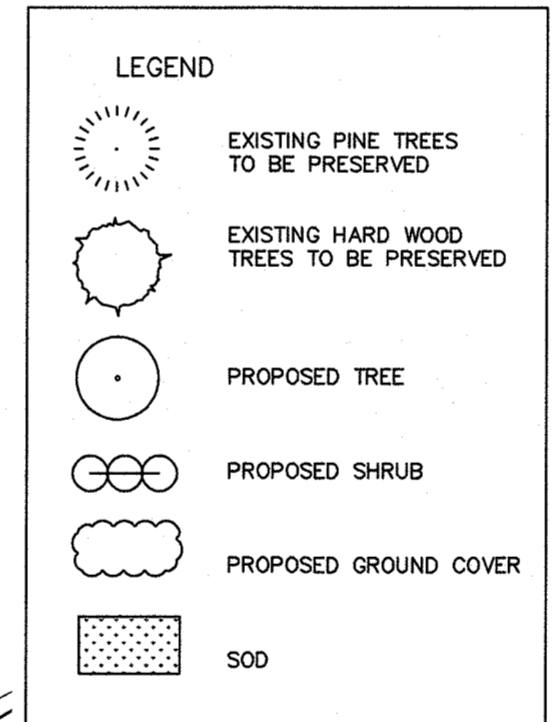
SIZE	SPECIES	QTY	TYPE
12"	PINE	1	REGULATED
14"	PINE	1	REGULATED
16"	PINE	2	REGULATED
20"	PINE	1	REGULATED
22"	PINE	1	REGULATED
24"	PINE	1	REGULATED
10"	MAPLE	1	REGULATED
5"	MAGNOLIA	1	REGULATED
8"	GUM	1	REGULATED
13"	GUM	1	REGULATED
22"	GUM	1	REGULATED
15"	HARDWOOD	1	REGULATED
8"	DAK	3	REGULATED
9"	DAK	1	REGULATED
10"	DAK	1	REGULATED
15"	DAK	1	REGULATED
20"	DAK	1	REGULATED

**PLANT LIST**

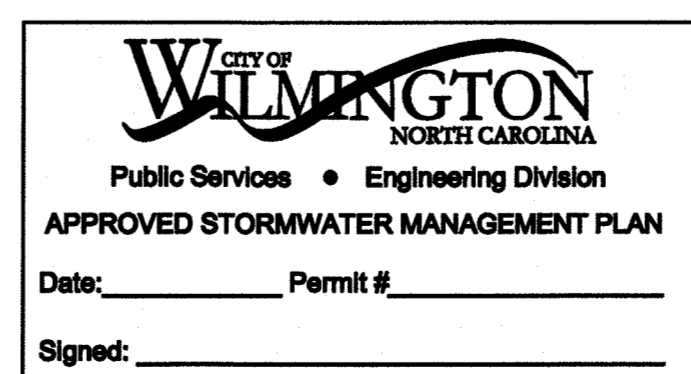
KEY NO.	QUANTITY	BOTANICAL NAME	COMMON NAME	ROOT CAL.	HT.	REMARKS
<b>UNDERSTORY TREES / CANOPY TREES</b>						
1	3	ACER PALMATUM	JAPANESE MAPLE	15 GAL.	15' - 20'	BLOODGOOD
2	2	QUERCUS VIRGINIANA	LIVE OAK	WE	3 1/2"	
3	1	PRUNUS CERASIFERA	PISSARD PLUM	WE	3"	
4	1	CORNUS FLORIDA	FLOWERING DOGWOOD	WE	8'-10'	WHITE DOGWOOD
5	4	LINPERUS CHINENSIS KAIZUKA	HOLLYWOOD JASMINE	15 GAL.		10' O.C.
6	1	PODOCARPUS MACROPHYLLUS	JAPANESE YEW	30 GAL.	6'-7'	15' O.C.
<b>GROUND COVER</b>						
7	101	LIRIOPE MUSCARI	LILY TURF	1 GAL.		1" O.C. SUBER-BLUFF
8	5	MATTEUCUCIA STRIMPTONENSIS	OSTRICH FERN	3 GAL.		2' O.C.
9	220	VINCA MAJOR	BIG PERIWINKLE	1 GAL.		1" O.C.
10	305	HEDERA HELIX	ENGLISH IVY	1 GAL.		1" O.C. VAR. BALTIC
<b>SMALL SHRUBS</b>						
11	13	AZALEA INDICA	INDIAN AZALEA	7 GAL.		3' O. PLANTING 8' O.C. GLACIER
12	18	PENNETSETUM ALOPECUROIDES	DWARF FOUNTAIN GRASS	3 GAL.		3' O.C.
13	11	MISCANTHUS SHINENSIS	EULALIA GRASS	3 GAL.		3' O.C.
<b>LARGER SHRUBS</b>						
14	75	BUXUS MICROPHYLLA	WINDGREEN BOXWOOD	7 GAL.		4' O.C. KOREANA
15	11	LIGUSTRUM JAPONICUM	JAPANESE PRIVET	7 GAL.		3' O. PLANTING 5' O.C.
16	5	AUCUBA JAPONICA	JAPANESE AUCUBA	3 GAL.		4' O.C.
17	1	BUXUS SEMPERVIRENS	AMERICAN BOXWOOD	B & R		8' O.C.
18	4	THYIA OCCIDENTALIS	EMERALD GREEN ARBORVIT	5 GAL.		4' O.C.

**SITE DATA**  
 PARCEL ID: R06007-015-010-000  
 CURRENT ZONING: CB  
 CAMA LAND USE CLASSIFICATION: WATERSHED RESOURCE PROTECTION  
 PROJECT ADDRESS: 216 VICTORY GARDENS DR WILMINGTON, NC 28409  
 CURRENT OWNER: BRANNON K. & RENEE R. SMITH 2213 MORELAND DR WILMINGTON, NC 28405  
 TOTAL ACREAGE IN PROJECT BOUNDARY: 14,123 S.F. (0.32 AC.)  
 BUILDING SIZE: 1,050 SF (1,738 SF ROOF)  
 BUILDING HEIGHT: 16.5' (1 STORY)  
 BUILDING SETBACKS:  
 FRONT: REQUIRED=20' PROPOSED=20'  
 SIDE: REQUIRED=20'/0' PROPOSED=13.86'/41.6'  
 REAR: REQUIRED=20' PROPOSED=25'  
 \* SETBACK LISTED AS 15' FROM ROOF LINE  
 CALCULATION FOR BUILDING COVERAGE:  
 PROPOSED COVERAGE: 1,738 S.F. + 14,123 S.F. = 12.3%  
 EXISTING ONSITE IMPERVIOUS AREAS:  
 GRAVEL PARKING AREA: 5,750 S.F. (40.1%)  
 EXISTING ONSITE IMPERVIOUS AREA TO REMAIN: GRAVEL PARKING AREA: 5,625 S.F.  
 PROPOSED ONSITE IMPERVIOUS AREAS:  
 BUILDINGS: 1,738 S.F.  
 BRICK PAVEMENT PARKING AREA: 978 S.F.  
 GRAVEL PARKING: 145 S.F.  
 CONCRETE SIDEWALK/PARKING: 1,646 S.F.  
 TOTAL: 4,510 S.F. (31.9%)  
 TOTAL ONSITE IMPERVIOUS AREA: PROPOSED ONSITE IMPERVIOUS AREA: 4,510 S.F.  
 EX. ONSITE IMP. AREA TO REMAIN: 5,625 S.F.  
 TOTAL: 8,135 S.F. (57.6%)  
 PROPOSED ONSITE PERVIOUS AREAS:  
 WOOD WALKWAYS/RAMPS: 556 S.F. (100% PERVIOUS)  
 PROPOSED OFFSITE IMPERVIOUS AREAS:  
 CONCRETE SIDEWALK/DRIVE APRON: 216 S.F.  
 PARKING REQUIRED:  
 MIN: 1 SPACE/300 S.F. = 3.5 SPACES (1 H.C.)  
 MAX: 1 SPACE/200 S.F. = 5.25 SPACES (1 H.C.)  
 PARKING PROVIDED: 7 SPACES (1 H.C.)  
 PARKING LOT INTERIOR LANDSCAPING REQUIRED: 5,078 S.F. 8% = 406 S.F. PROVIDED: 749 S.F.  
 FOUNDATION PLANTINGS: 76 LF X 14.5' FACADE X 12% REQUIRED: 132.24 S.F. PROVIDED: 164 S.F.  
 STREET YARD REQUIREMENT: (9' MIN & 27' MAX WIDTH) REQUIRED: 120.66 LF X 18' = 2,172 S.F. PROVIDED: 2,238 S.F.  
 EXISTING SEWER AND WATER DEMAND: 0 GPD  
 PROPOSED SEWER AND WATER DEMAND: @ 25 GAL/PERSON = 125 GPD

NOTE:  
 The key number refers to the Plant List. Where there is only one number, it is the key number and the quantity is one. Where there are two numbers connected by a dash, the first is the key number and the second is the quantity required for the planting bed indicated.  
 RB = Root Ball and Burlap  
 WB = Wire Basket  
 C = Container grown  
 All plant bed areas shall be covered in 3" of dark chocolate mulch unless otherwise noted on plan.  
 SOD SHALL BE EMERALD 2072A.  
 THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND FLAGGING ALL UNDERGROUND UTILITIES PRIOR TO PROCEEDING WITH ANY EXCAVATION WORK. IF ANY DAMAGE IS DONE TO EXISTING OR NEW UTILITIES, ALL NECESSARY REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO COST TO THE OWNER.  
 CALL 1-800-832-4349 TO LOCATE UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION.  
 PLANTING LINES MAY BE LOCATED BY SITE CONTRACTOR TO VERIFY WITH OWNER OR OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH ANY EXCAVATION.  
 THE PLANT QUANTITIES SHOWN ON THE PLANT LIST ARE PROVIDED AS A CONVENIENCE TO THE CONTRACTOR. IN THE EVENT THERE IS A DIFFERENCE IN QUANTITY BETWEEN PLANT QUANTITIES IN THE PLANT LIST AND PLANT QUANTITIES ON THE PLAN, THE CONTRACTOR SHALL USE THE QUANTITY SHOWN ON THE PLAN. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY QUANTITY DIFFERENCE.  
 SOURCE FOR DWARF FOUNTAIN GRASS BASKET: ENVIRONMENTAL NURSERY AT 1-866-814-9118



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



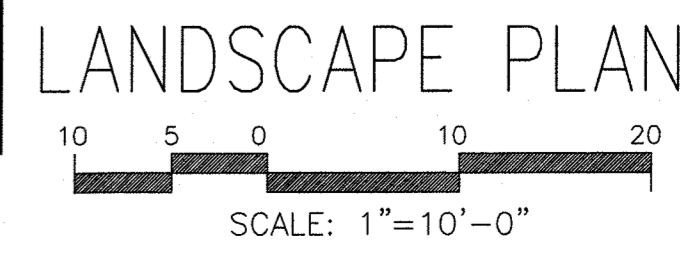
**Approved Construction Plan**

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

Planning: \_\_\_\_\_

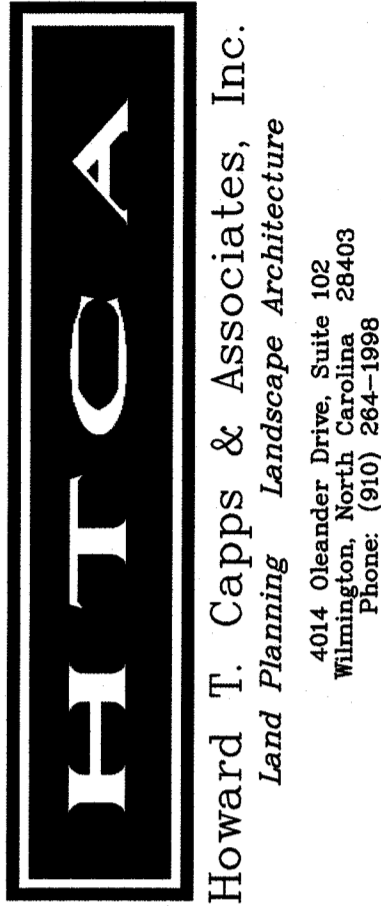
Traffic: \_\_\_\_\_

Fire: \_\_\_\_\_



**REVISIONS**

NO.	DATE	DESCRIPTION



Smith & Gsell Design Studio  
 216 Victory Garden Drive  
 Wilmington, North Carolina

DESIGNED: H. Capps  
 DRAWN: R. Capps

DATE: 12-11-2017  
 SCALE: 1"=10'  
 JOB NO.: 441-01015  
 SHEET: 1 OF SHEETS