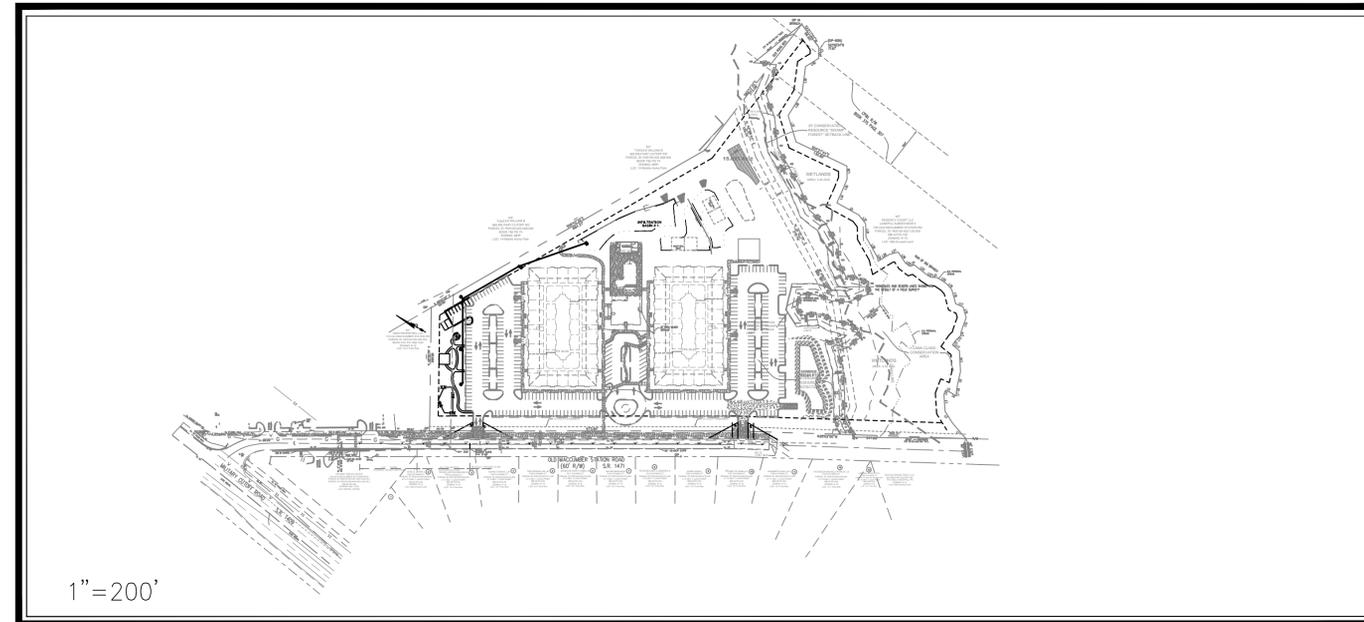
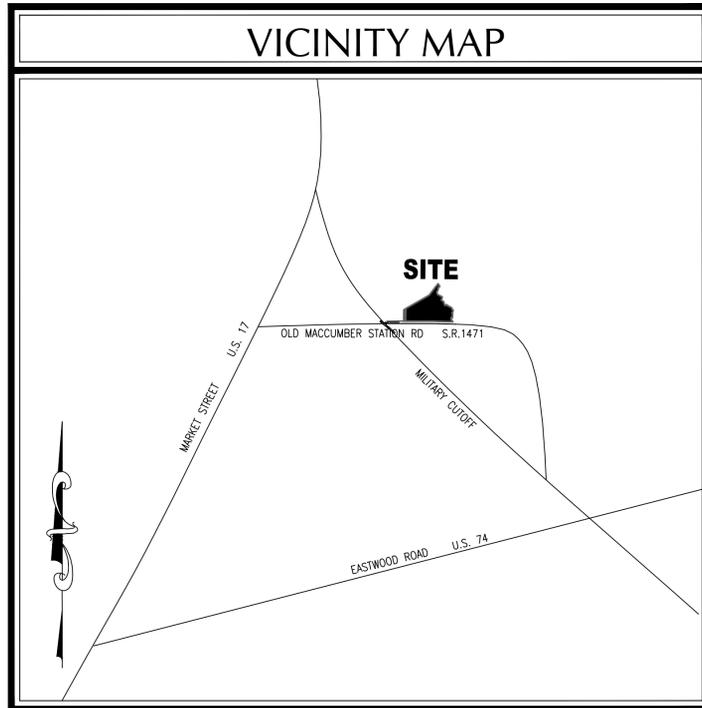


SITE DEVELOPMENT PLAN FOR HAWTHORNE AT THE STATION WILMINGTON, NORTH CAROLINA JANUARY 2016



DEVELOPER/OWNER

HAWTHORNE MIDWAY WILMINGTON, LLC
806 GREEN VALLEY ROAD, SUITE 301
GREENSBORO, NC 27408
PHONE: (336) 275-9513

PREPARED BY:

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road, Unit C, Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659 License # P-0718

LEGEND

DESCRIPTION	EXISTING	PROPOSED
1' CONTOUR INTERVAL	-----	-----
5' CONTOUR INTERVAL	-----	-----
PROPERTY LINE	-----	-----
ROADWAY CENTERLINE	-----	-----
RIGHT OF WAY LIMITS	-----	-----
EASEMENT LINE	-----	-----
CURB & GUTTER	-----	-----
SANITARY SEWER FACILITIES	---○---	---●---
STORM SEWER FACILITIES	---■---	---■---
WATERLINE	---□---	---□---
FIRE HYDRANT ASSEMBLY	⊕	⊕
WATERWAYS	~~~~~	N/A
PROPOSED LOT AND S.F.	X	5,000 s.f.
OPEN SPACE LABEL	(A)	
OPEN SPACE	▨	
BUILDING SET BACKS	-----	-----
PRIVATE SANITARY SET BACKS	-----	-----
SKIMMER	□	
	STREET SIGN	⊕
	404 WETLANDS	▨
	FLOW DIRECTION	→

INDEX OF SHEETS

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SITE DATA TABLE

GENERAL NOTES:

- NEW HANOVER COUNTY PARCEL NOS.:
PIN#S 315815.53.4689 & 315815.54.0039
SITE ADDRESS: 527 OLD MACCUMBER STATION ROAD
 - TOTAL AREA: 15.025 AC± (EXISTING APARTMENT COMPLEX)
0.354 AC± (AMENITY PROPERTY)
15.379 NEW TOTAL SITE ACREAGE
 - EXISTING ZONING: MF-M
SETBACKS

REQUIRED	PROPOSED
35' FRONT	35' FRONT
29' REAR	29' REAR
20' SIDE	20' SIDE
 - THIS PROPERTY IS WITHIN A SPECIAL FLOOD HAZARD ZONE PER FEMA FLOOD INSURANCE RATE MAP #3720315800J, EFFECTIVE DATE APRIL 3, 2006.
 - CAMA LAND CLASSIFICATION: WATER RESOURCE PROTECTION
- Development Data:**
- TOTAL TRACT AREA = 15.025 (EXISTING) & 0.354 (NEW) = 15.379 AC (TOTAL)
- BUILDING COVERAGE = 89,122 SF (EXISTING) & 1,055 SF (NEW)
= 90,177 SF (TOTAL) = 13.5% OF SITE
- 2 EXISTING APARTMENT BUILDINGS & 2 NEW BUILDINGS - MAINTENANCE BUILDING & COVERED PAVILION
- MAX. BLDG. HGTS. - 38' MEAN ROOF
- PARKING - 336 REQUIRED PER APPROVED PLANS
350 EXISTING PROVIDED + 4 NEW = 354 TOTAL SPACES PROVIDED
- NEW IMPERVIOUS SURFACES:**
- | | |
|-----------|------------|
| BUILDINGS | 1,055 SF |
| CONCRETE | 1,466 SF |
| PAVEMENT | 1,929 SF |
| TOTAL | 4,450 SF |
| EXISTING | 652,480 SF |
- OPEN SPACE - (MIN. 35% REQ'D.)
15.379 AC X 35% = 5.38 AC REQ'D.
** 5.49 AC OF EXISTING OPEN SPACE PROVIDED **
** 0.23 AC NEW OPEN SPACE PROVIDED **
** 5.72 AC TOTAL OPEN SPACE PROVIDED **
- RECREATION AREA - (MIN. 50% OPEN SPACE)
ACTIVE REC PROV'D. = 3.03 AC.
PASSIVE AREA PROV'D. = 2.69 AC±

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.

Approved Construction Plan

Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____



NOTE:
ALL DESIGN AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE, TECHNICAL STANDARDS MANUAL & THE STATE OF NORTH CAROLINA

COORDINATION NOTES

1. THE CONTRACTOR IS REQUIRED TO OBTAIN ANY/ALL PERMITS REQUIRED FOR CONSTRUCTION OF THESE PLANS.
2. ALL WORK IS TO BE IN ACCORDANCE WITH CITY OF WILMINGTON, NEW HANOVER COUNTY, THE CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) AND THE STATE OF NORTH CAROLINA.
3. THE CONTRACTOR IS TO ESTABLISH AND CHECK ALL HORIZONTAL AND VERTICAL CONTROLS TO BE USED WITH THE PROJECT. IN ADDITION, THE CONTRACTOR IS TO COMPUTE THE LAYOUT OF THE ENTIRE SITE PLAN IN ADVANCE OF BEGINNING ANY WORK ASSOCIATED WITH THE SUBJECT PLANS. CONTRACTOR SHALL EMPLOY A PROFESSIONAL SURVEYOR TO PERFORM SITE IMPROVEMENT STAKEOUT(S).
4. ANYTIME WORK IS PERFORMED OFF-SITE OR WITHIN AN EXISTING EASEMENT, THE CONTRACTOR IS TO NOTIFY THE HOLDER OF SAID EASEMENT AS TO THE NATURE OF PROPOSED WORK, AND TO FOLLOW ANY GUIDELINES OR STANDARDS WHICH ARE ASSOCIATED WITH OR REFERENCED IN THE RECORDED EASEMENT.

GENERAL NOTES:

1. EXISTING TOPOGRAPHY, BOUNDARY AND UTILITIES, HAVE BEEN PREPARED BY FIELD SURVEYS BY CPT ENGINEERING AND SURVEYING, ATLANTIC COAST SURVEY AND OTHER AVAILABLE INFORMATION.
2. REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF ALL EXISTING UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF DITCHING OPERATIONS BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES. IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF TRENCHING OPERATIONS SO AS TO ELIMINATE OR MINIMIZE DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING LOSS OF UTILITY REVENUES. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC...
3. CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
4. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAGMEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE DOT.
5. ALL MATERIAL CLEARED OR DEMOLISHED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE.
6. ALL WORK BY THE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR AFTER THE OWNER ACCEPTS THE WORK.
7. CONTRACTOR SHALL CALL THE NORTH CAROLINA ONE-CALL CENTER AT 1 (800) 632-4949 AND ALLOW THE CENTER TO LOCATE EXISTING UTILITIES BEFORE DIGGING.
8. CONTRACTOR SHALL REMOVE ASPHALT, AGGREGATE BASE COURSE, AND CONCRETE CURB & GUTTER WITHIN LIMITS OF DEMOLITION AS SHOWN ON PLAN.

DEMOLITION NOTES

1. CONTRACTOR TO COORDINATE WITH THE OWNER TO PROPERLY MAINTAIN OR RELOCATE EXISTING SERVICE CONNECTIONS WHEN NECESSARY.
2. CONTRACTOR IS TO WALK THE SITE AND BECOME FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW SITE IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND WILL BE UNCLASSIFIED EXCAVATION.
3. DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE PADS, CONCRETE DITCHES, FOUNDATIONS, SLABS, STEPS, AND STRUCTURES; ABANDONED UTILITIES, BUILDINGS, PAVEMENTS AND ALL MATERIALS CLEARED AND STRIPPED TO THE EXTENT NECESSARY AS DIRECTED BY THE SOILS ENGINEER FOR THE INSTALLATION OF THE NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING AND AS SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY, STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO PROPERTIES OF OTHERS DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO OWNER.
5. ELECTRIC, TELEPHONE, SANITARY SEWER, WATER AND STORM SEWER UTILITIES THAT SERVICE OFF-SITE PROPERTIES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS BY THE CONTRACTOR.
6. EXISTING UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED AND UNDISTURBED DURING DEMOLITION.
7. ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM THE PROPERTY AND PROPER DISPOSAL.
8. CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING OVER HEAD AND UNDERGROUND UTILITIES INCLUDING CABLE, GAS, TELEPHONE AND ELECTRIC AND ANY OTHER UTILITIES THROUGH THE SITE WITH THE RESPECTIVE COMPANIES.
9. PROVIDE SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS AND SIDEWALKS TO BE DEMOLISHED.
10. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS OSHA REGULATIONS.
11. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST PITS BY HAND.
12. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL NOTES:

1. CLEAR AND REMOVE FROM SITE ALL TREES, ROOTS, ROOT MAT, ETC. FROM THE AREA WITHIN DESIGNATED CLEARING LIMITS.
2. PLANT GRASS OVER ALL GRADED AREAS AS SHOWN IN THE TABLE ON THIS SHEET OF CEASE OF ANY GRADING ACTIVITY.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING TO PRE-CONSTRUCTION CONDITIONS ANY AREAS OUTSIDE THE PROJECT LIMITS THAT MAY INADVERTENTLY BE DAMAGED DUE TO THE FAILURE OF THE EROSION MEASURES.
4. DURING GRADING AND AFTER GRADING HAS BEEN COMPLETED, CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL INSPECTION AND APPROVAL BY NEW HANOVER COUNTY.
5. WATER, FERTILIZE, MOW AND MAINTAIN SPRIGGED, SOODED AND PLANTED AREAS UNTIL FINAL APPROVAL BY NEW HANOVER COUNTY.
6. ANY BORROW MATERIAL BROUGHT ONTO SITE MUST BE FROM A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.
7. ANY EXCESS MATERIAL REMOVED FROM SITE MUST BE HAULED TO A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.

MAINTENANCE PLAN

ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE, LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL.

ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL 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 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.

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.

ALL SEEDED AREAS WILL BE FERTILIZED, RESEDED 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.

FLOCCULANTS WILL BE USED TO ADDRESS TURBIDITY ISSUES. THE PUMPS, TANKS, HOSES AND INJECTION SYSTEMS WILL BE CHECKED FOR PROBLEMS OR TURBID DISCHARGES DAILY.

COMPOST FILTER SOCKS SHOULD BE INSPECTED REGULARLY, AS WELL AS AFTER EACH RAINFALL EVENT, TO ENSURE THAT THEY ARE INTACT AND THE AREA BEHIND THE SOCK IS NOT FILLED WITH SEDIMENT. IF THERE IS EXCESSIVE PONDING BEHIND THE FILTER SOCK OR ACCUMULATED SEDIMENTS REACH THE TOP OF THE SOCK, AN ADDITIONAL SOCK SHOULD BE ADDED ON TOP OR IN FRONT OF THE EXISTING FILTER SOCK IN THESE AREAS, WITHOUT DISTURBING THE SOIL OR ACCUMULATED SEDIMENT. IF THE FILTER SOCK WAS OVERTOPPED DURING A STORM EVENT, THE OPERATOR SHOULD CONSIDER INSTALLING AN ADDITIONAL FILTER SOCK ON TOP OF THE ORIGINAL, PLACING AN ADDITIONAL FILTER SOCK FURTHER UP THE SLOPE, OR USING AN ADDITIONAL BMP, SUCH AS A COMPOST BLANKET IN CONJUNCTION WITH THE SOCK(S).

STABILIZATION NOTES

1. ALL DISTURBED AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS OF CEASE OF ANY PHASE OF ACTIVITY AND SLOPES WITHIN 21 CALENDAR DAYS.

PERMANENT SEEDING SCHEDULE – MIXTURE 5CP

SPECIES	RATE (LB/ACRE)
CENTPEDE GRASS	10-20

Seeding Dates
MARCH – JUNE

Soil Amendments
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 300 LB/ACRE 10-10-10 FERTILIZER.

Mulch
DO NOT MULCH.

Maintenance
FERTILIZE VERY SPARINGLY LB/ACRE NITROGEN IN SPRING WITH NO PHOSPHORUS. CENTPEDE GRASS CANNOT TOLERATE HIGH PH OR EXCESS FERTILIZER.

TEMPORARY SEEDING—LATE WINTER/EARLY SPRING

WINTER AND EARLY SPRING

SPECIES	RATE (LB/ACRE)
Rye (GRAIN)	120
*ANNUAL LESPEDEZA (KORE IN PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	50
*OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.	

SUMMER

SPECIES	RATE (LB/ACRE)
GERMAN MILLET	40

FALL

SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120

Seeding dates

COASTAL PLAIN – DEC.1–APR. 15 – LATE WINTER AND EARLY SPRING
APRIL 15 – AUG. 15 – SUMMER
AUG. 15 – DEC. 30 – FALL

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.

GENERAL GRADING NOTES

1. REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF SUCH UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF THE DITCHING OPERATION BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF THE TRENCHING OPERATIONS SO AS TO AVOID AND PREVENT DAMAGE TO THE EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING BUT NOT LIMITED TO REPAIRS AND LOSS SERVICE REVENUE. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC...
2. CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
3. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAG MEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE NCDOT.
4. ALL MATERIAL CLEARED AND GRUBBED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK, SUCH AS TREES, VEGETATION, FENCING, ETC... SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE OR BURNED IF PROPER PERMITS ARE RECEIVED.

SITE NOTES

1. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
2. THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND R.O.W.'S PUBLIC OR PRIVATE, PRIOR TO WORKING IN THESE AREAS.
3. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
4. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH THE RESPECTIVE UTILITY.
5. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
6. THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
7. THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
8. CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
9. IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE GIVEN TO THE OWNER FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENT SHALL BE MADE WITHOUT THE PERMISSION OF THE OWNER.
10. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE, OTHER OBSTRUCTIONS, OR FROM DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. CONTACT NORTH CAROLINA ONE CALL TOLL FREE 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NONSUBSCRIBING UTILITIES.
11. ALL PERMITS RELATIVE TO PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION
12. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY, AND LOCAL CODES.
13. FOR BUILDING DIMENSIONS, SEE ARCHITECTURAL DRAWINGS.
14. ALL DIMENSIONS AND RADII ARE TO OUTSIDE FACE OF BUILDING OR TO FACE OF CURB UNLESS OTHERWISE NOTED.
15. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
16. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.

GENERAL STORM SEWER NOTES

1. ALL STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF WILMINGTON AND THE STATE OF NORTH CAROLINA REQUIREMENTS AS SPECIFIED ON THE DRAWINGS AND IN THE PROJECT SPECIFICATIONS.
2. BEDDING FOR ALL STORM SEWER PIPE SHALL BE AS SPECIFIED ON THE DRAWINGS, PROJECT SPECIFICATIONS, AND MANUFACTURER SPECIFICATIONS.
3. ALL STORM SEWER PIPES TO BE HDPE ADS N-12 OR EQUIVALENT, UNLESS OTHERWISE SPECIFIED.
4. ALL STORM SEWER PIPES SHOWN AS RCP ON THE PLANS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, UNLESS INDICATED OTHERWISE ON PLANS.

SITE AREA DESCRIPTION	GROUND STABILIZATION	
	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HOW ZONES)

EXISTING UTILITY NOTES

1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THE ACTUAL LOCATION AND AVAILABILITY OF ALL EXISTING AND PROPOSED UTILITIES IN THE FIELD PRIOR TO GROUND BREAKING.
2. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.

UTILITY CONTACTS:

1. CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING AND DIGGING. 1-800-632-4949

NOTICE REQUIRED

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED BY CONTRACTOR PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO ANY EXCAVATION OR DEMOLITION.

CONTACT "CAROLINA ONE CALL" AT 1-800-632-4949

EMERGENCY DIAL 911 POLICE - FIRE - RESCUE

No.	Revision	Date	By

Designer	GSP	Scale	
Drawn By	GSP	Date	January 2016
License #	P-0718	Job No.	2015-0005

HAWTHORNE AT THE STATION
Wilmington New Hanover County North Carolina

GENERAL NOTES

PREPARED FOR:
HAWTHORNE MIDWAY WILMINGTON, LLC
806 GREEN VALLEY ROAD, SUITE 301
GREENSBORO, NC 27408

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

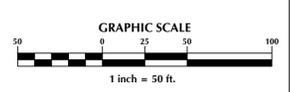
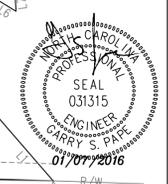
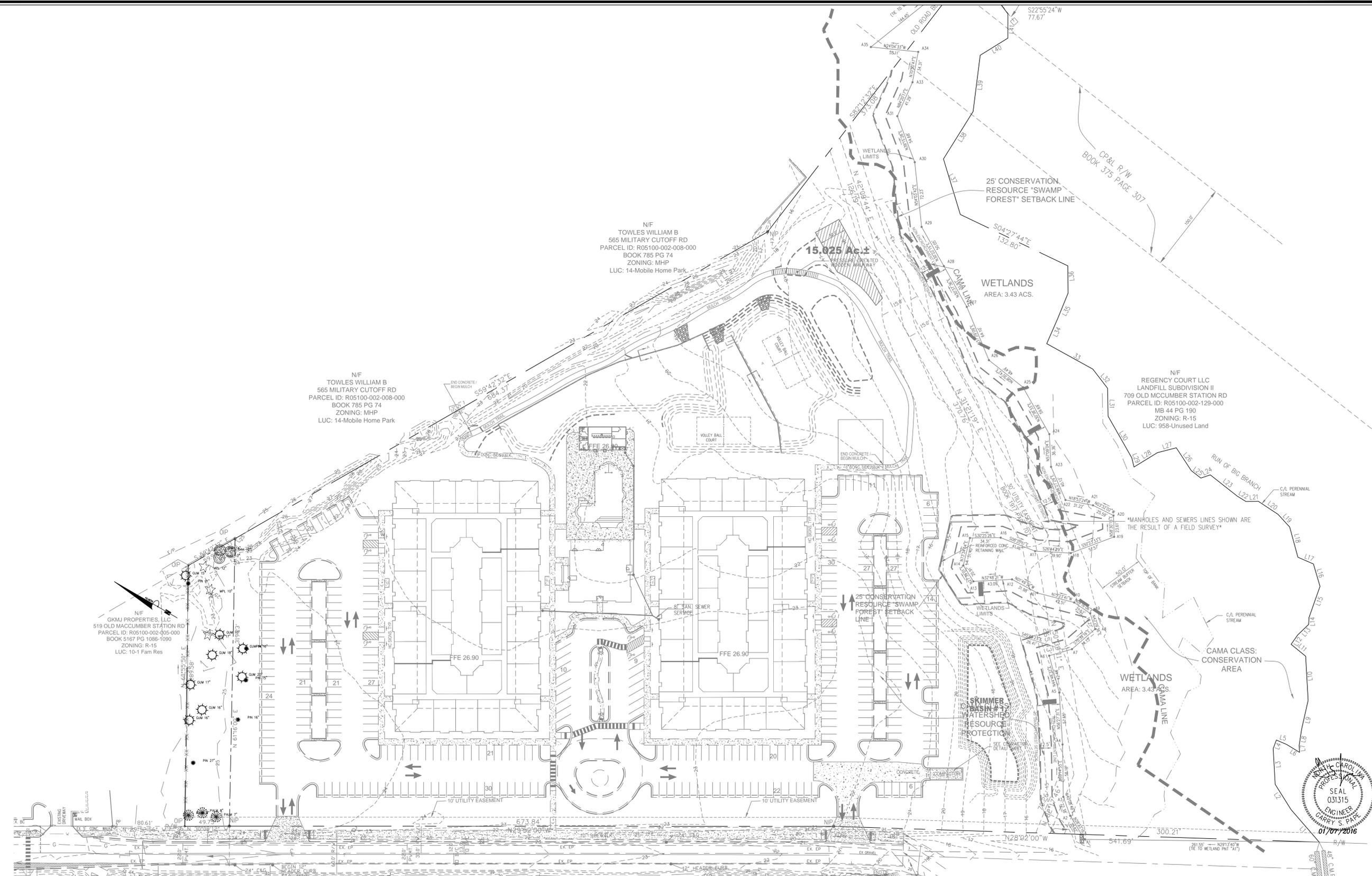
Sheet No.
C-1

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

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

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





OWNER		ADDRESS		PARCEL ID		ZONING		LUC	
1	N/F	GKMJ PROPERTIES, LLC	519 OLD MACCUMBER STATION RD	R05100-002-005-000	BOOK 3167 PG 1086-1090	R-15	10-1 Fam Res		
2	N/F	TOWLES WILLIAM B	565 MILITARY CUTOFF RD	R05100-002-008-000	BOOK 785 PG 74	MHP	14-Mobile Home Park		
3	N/F	TOWLES WILLIAM B	565 MILITARY CUTOFF RD	R05100-002-008-000	BOOK 785 PG 74	MHP	14-Mobile Home Park		
4	N/F	REGENCY COURT LLC	709 OLD MCCUMBER STATION RD	R05100-002-129-000	MB 44 PG 190	R-15	958-Unused Land		
5	N/F	TOWLES WILLIAM B	565 MILITARY CUTOFF RD	R05100-002-008-000	BOOK 785 PG 74	MHP	14-Mobile Home Park		
6	N/F	TOWLES WILLIAM B	565 MILITARY CUTOFF RD	R05100-002-008-000	BOOK 785 PG 74	MHP	14-Mobile Home Park		
7	N/F	TOWLES WILLIAM B	565 MILITARY CUTOFF RD	R05100-002-008-000	BOOK 785 PG 74	MHP	14-Mobile Home Park		
8	N/F	TOWLES WILLIAM B	565 MILITARY CUTOFF RD	R05100-002-008-000	BOOK 785 PG 74	MHP	14-Mobile Home Park		
9	N/F	TOWLES WILLIAM B	565 MILITARY CUTOFF RD	R05100-002-008-000	BOOK 785 PG 74	MHP	14-Mobile Home Park		
10	N/F	TOWLES WILLIAM B	565 MILITARY CUTOFF RD	R05100-002-008-000	BOOK 785 PG 74	MHP	14-Mobile Home Park		
11	N/F	TOWLES WILLIAM B	565 MILITARY CUTOFF RD	R05100-002-008-000	BOOK 785 PG 74	MHP	14-Mobile Home Park		
12	N/F	TOWLES WILLIAM B	565 MILITARY CUTOFF RD	R05100-002-008-000	BOOK 785 PG 74	MHP	14-Mobile Home Park		
13	N/F	TOWLES WILLIAM B	565 MILITARY CUTOFF RD	R05100-002-008-000	BOOK 785 PG 74	MHP	14-Mobile Home Park		

No.	Revision	Date	By

Designer	GSP	Scale	1" = 50'
Drawn By	GSP	Date	January 2016
License #	P-0718	Job No.	2015-0005

HAWTHORNE AT THE STATION
 Wilmington New Hanover County North Carolina

EXISTING CONDITIONS

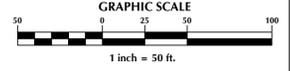
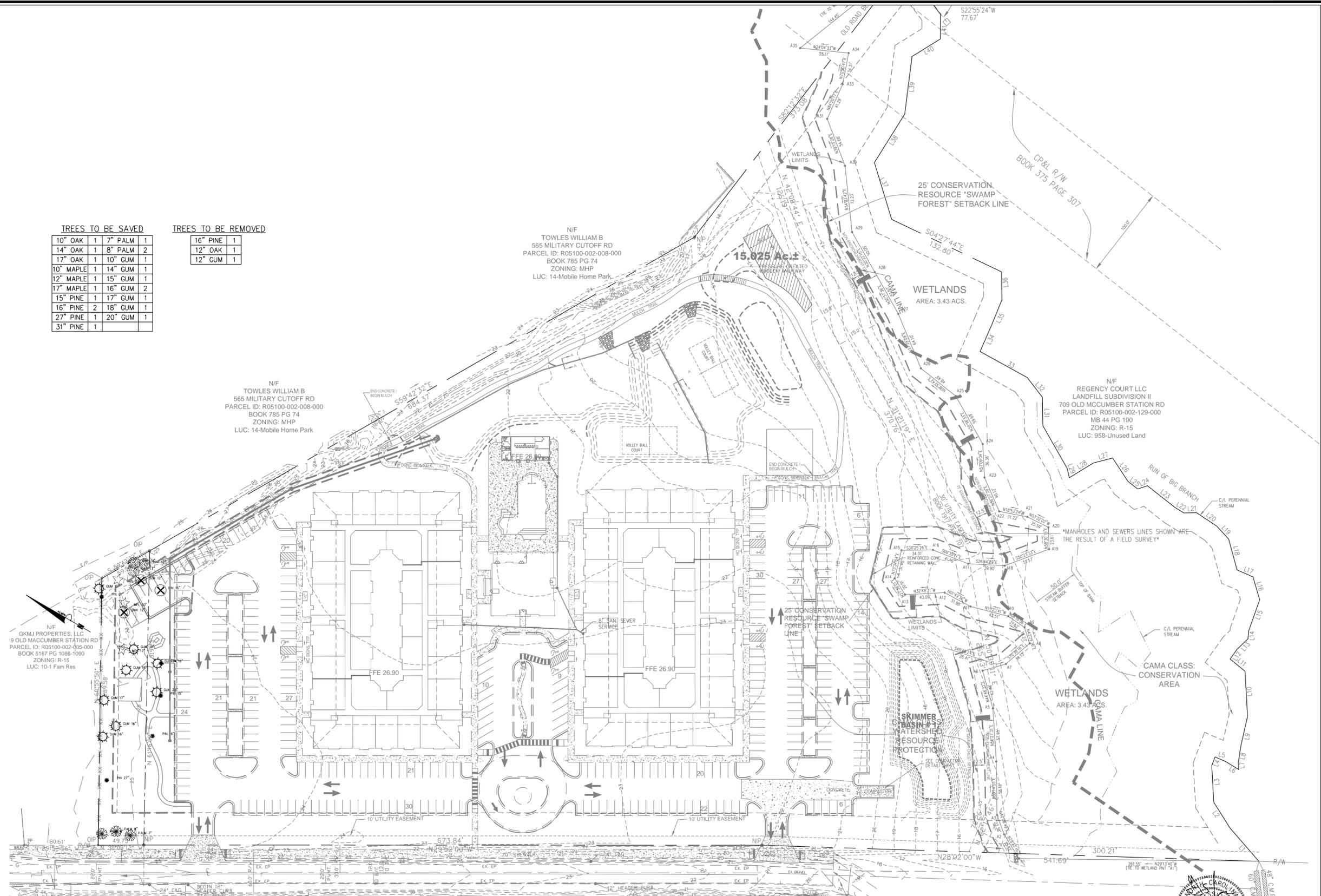
PREPARED FOR:
 HAWTHORNE MIDWAY WILMINGTON, LLC
 806 GREEN VALLEY ROAD, SUITE 301
 GREENSBORO, NC 27408

GSP CONSULTING, PLLC
 ENGINEERING
 6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-2

TREES TO BE SAVED			
10" OAK	1	7" PALM	1
14" OAK	1	8" PALM	2
17" OAK	1	10" GUM	1
10" MAPLE	1	14" GUM	1
12" MAPLE	1	15" GUM	1
17" MAPLE	1	16" GUM	2
15" PINE	1	17" GUM	1
16" PINE	2	18" GUM	1
27" PINE	1	20" GUM	1
31" PINE	1		

TREES TO BE REMOVED		
16" PINE	1	
12" OAK	1	
12" GUM	1	



No.	Revision	Date	By

Designer: GSP
 Drawn By: GSP
 License #: P-0718
 Scale: 1" = 50'
 Date: January 2016
 Job No.: 2015-0005

HAWTHORNE AT THE STATION
 Wilmington New Hanover County North Carolina

SITE INVENTORY PLAN

PREPARED FOR:
 HAWTHORNE MIDWAY WILMINGTON, LLC
 806 GREEN VALLEY ROAD, SUITE 301
 GREENSBORO, NC 27408

GSP CONSULTING, PLLC
 ENGINEERING
 6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-2.1

Utility Notes:

- Existing water and sanitary sewer services are currently available to the site from Cape Fear Public Utility Authority public mains.
- All utility services, such as electric power, CATV, gas & telephone shall be installed underground.
- All water & sewer utilities to be installed per CFPUA Technical Specifications & Standards.
- Project shall comply with CFPUA Cross Connection Control requirements. Water meter(s) cannot be released until all requirements are met and N.C.D.E.N.R. has issued their "Final Approval." Call 343-3910 for information.
- Any backflow prevention devices required by the CFPUA will need to be on the list of approved devices by USCFCCCHR or ASSE.
- Water & sewer services can not be activated on new mains until the Engineer's Certification and as-builts are received and "Final Approval" issued by the Public Water Supply Section of NCDENR, and "Final Engineering Certification" issued by Division of Water Quality Section of NCDENR.
- If contractor desires CFPUA water for construction, he shall apply in advance for this service and must provide a reduced pressure zone (RPZ) backflow prevention device on the developer's side of the water meter box.
- When PVC water mains and services are proposed, the pipes are to be marked with No. 10 insulated, single-strand copper wire installed & strapped to the pipes with duct tape. This is to be accessible in all valves and meter boxes to aid in future location of facilities.
- The contractor is responsible for the location and protection of existing utilities during construction. Call U-LOCO at 1-800-632-4949. Contractor is responsible for the repair and replacement of any utilities, curb & gutter, pavement, etc. that may be damaged during construction. Damaged items shall be repaired to at least the quality or workmanship found in the original item.
- The BellSouth contact is Steve Dayvault, Building Industry Consultant, at 910-392-8712. Contact him prior to starting the project in order to facilitate good communication and maximum flexibility.
- The process for telephone cable placement:
 - Final grade will need to be established.
 - Power will place their cable first - approximately 3' deep.
 - BellSouth & Cable TV will then place their cable at approximately 2' deep.
- Solid waste disposal will be handled with dumpster pickup by private contractor.

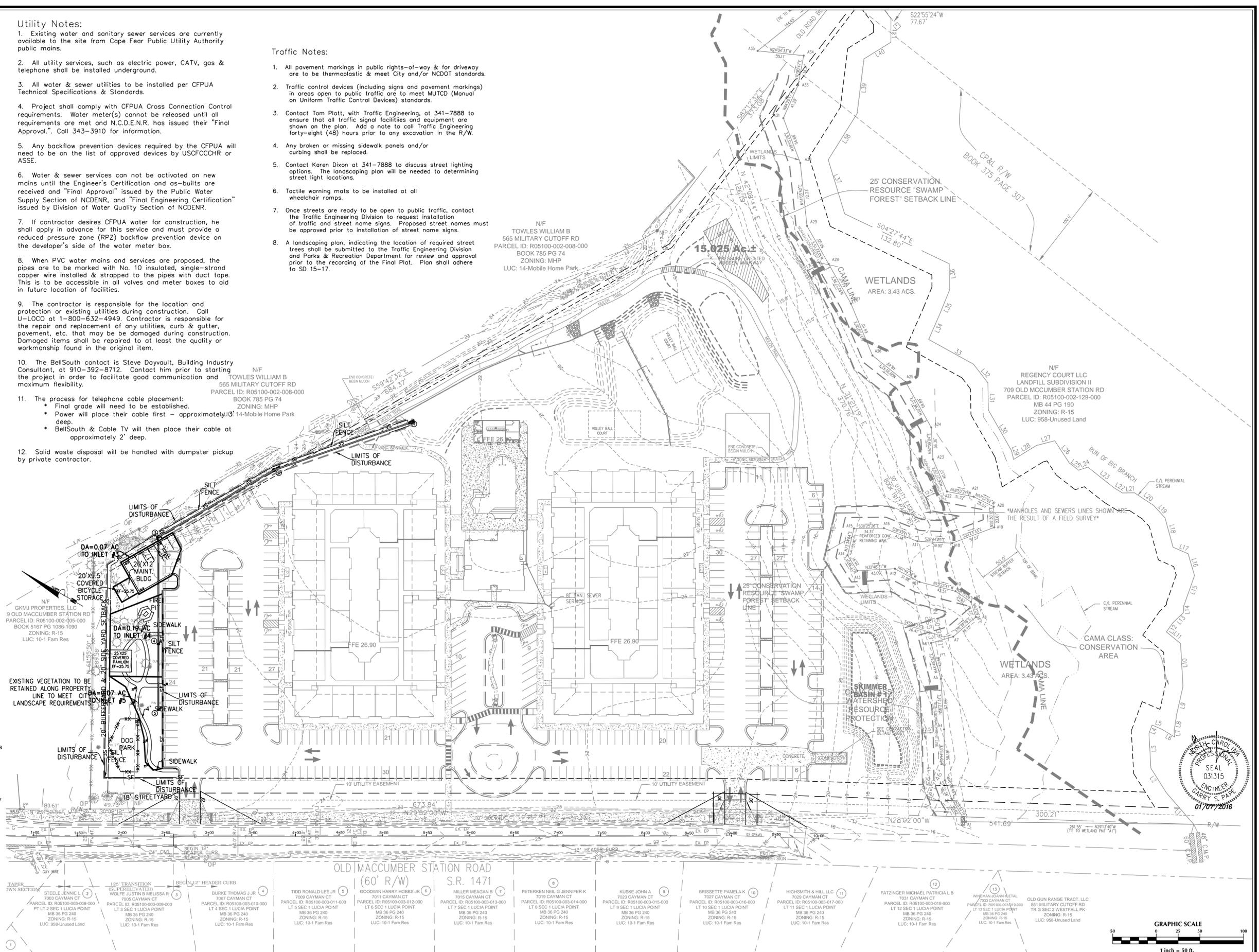
Traffic Notes:

- All pavement markings in public rights-of-way & for driveway are to be thermoplastic & meet City and/or NCDOT standards.
- Traffic control devices (including signs and pavement markings) in areas open to public traffic are to meet MUTCD (Manual on Uniform Traffic Control Devices) standards.
- Contact Tom Platt, with Traffic Engineering, at 341-7888 to ensure that all traffic signal facilities and equipment are shown on the plan. Add a note to call Traffic Engineering forty-eight (48) hours prior to any excavation in the R/W.
- Any broken or missing sidewalk panels and/or curbing shall be replaced.
- Contact Karen Dixon at 341-7888 to discuss street lighting options. The landscaping plan will be needed to determine street light locations.
- Tactile warning mats to be installed at all wheelchair ramps.
- Once streets are ready to be open to public traffic, contact the Traffic Engineering Division to request installation of traffic and street name signs. Proposed street names must be approved prior to installation of street name signs.
- A landscaping plan, indicating the location of required street trees shall be submitted to the Traffic Engineering Division and Parks & Recreation Department for review and approval prior to the recording of the Final Plat. Plan shall adhere to SD 15-17.

Fire & Life Safety Notes:

- New hydrants must be available for use prior to construction of the buildings within any development.
- Hydrants must be located within 8' of the curb.
- Temporary street signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles.
- Contractor shall maintain an all weather access for emergency vehicles at all times during construction.
- A minimum of 5' shall separate underground fire lines or private water mains from other underground utilities.
- Underground fire line & private water mains must be permitted & inspected by the Wilmington Fire Department from the public right-of-way to the building. Contact the WFD - Division of Fire & Life Safety at 910-343-0696 for additional information.
- Construction Type - 5B
- The FDC must be within 150' of a fire hydrant & within 40' of fire apparatus placement.
- Landscaping or parking can not block or impede the FDC or fire hydrants. A 3-foot (3') clear space shall be maintained around the circumference of hydrants and FDC.
- Installation of security gates across a fire apparatus road or parking lot will require pre-approval by Wilmington Fire Department.

Contour Interval - 1'
Boundary & Topographic data & tree locations compiled from an actual field survey by Atlantic Coast Survey & CPT Engineering & Surveying, Inc.



No.	Revision	Date	By

Designer	GSP	Scale	1" = 50'
Drawn By	GSP	Date	January 2016
License #	P-0718	Job No.	2015-0005

HAWTHORNE AT THE STATION

Wilmington New Hanover County North Carolina

SITE, GRADING, DRAINAGE, UTILITY & E&SC PLAN

PREPARED FOR:
HAWTHORNE MIDWAY WILMINGTON, LLC
806 GREEN VALLEY ROAD, SUITE 301
GREENSBORO, NC 27408

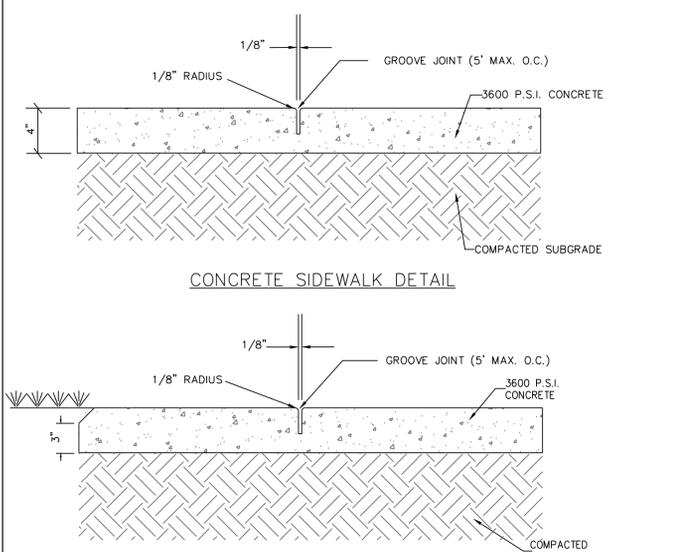
GSP CONSULTING, PLLC
ENGINEERING

6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

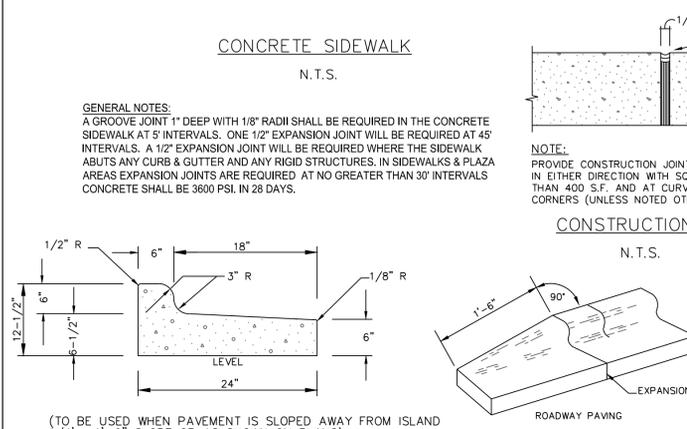
Sheet No.
C-3

- GENERAL NOTES**
- I. LOCATION OF WHEELCHAIR RAMPS:**
- IN ACCORDANCE WITH THE RATIFIED HOUSE BILL 1296, ALL STREET CURBS IN NORTH CAROLINA BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1, 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY HANDICAPPED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTERS AND SIDEWALKS ARE PROVIDED AND AT OTHER MAJOR POINTS OF PEDESTRIAN FLOW.
 - WHEELCHAIR RAMPS SHOULD BE LOCATED AS INDICATED IN DETAIL DRAWINGS, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.
- II. CONSTRUCTION NOTES:**
- NO SLOPE SHALL EXCEED 1"-1" (12:1) ON THE RAMP OR SIDEWALK.
 - IN NO CASE SHALL THE WIDTH OF WHEELCHAIR RAMPS BE LESS THAN 40" (3'-4"), WIDTHS MAY EXCEED 40" IF NECESSARY.
 - USE CLASS "A" CONCRETE WITH THE SURFACE HAVING A ROUGH, NON-SKID TYPE FINISH.
 - 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE CONCRETE WHEELCHAIR RAMP JOINS ANY RIGID PAVEMENT OR STRUCTURE.
 - CONSTRUCTION METHODS SHALL CONFORM WITH THOSE OF THE GOVERNING BODY WHICH HAS JURISDICTION OF THE PARTICULAR STREET.
- III. ADDITIONAL NOTES:**
- THE INSIDE PEDESTRIAN CROSSWALK LINES SHALL BE ESTABLISHED BY BISECTING THE INTERSECTION RADII WHERE MARKED (SEE NOTE 6).
 - THE WHEELCHAIR RAMP SHALL BE LOCATED SO THAT THE BEGINNING OF THE WHEEL CHAIR RAMP WILL BE TWO FEET FROM THE INSIDE PEDESTRIAN CROSSWALK LINE.
 - THE WIDTH OF THE PEDESTRIAN CROSSWALK SHALL BE 10 FEET UNLESS A GREATER WIDTH IS REQUIRED TO ACCOMMODATE THE PEDESTRIAN TRAFFIC.
 - STOP BARS SHALL BE USED WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN, OR OTHER LEGAL REQUIREMENTS.
 - PARKING SHALL BE ELIMINATED A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.
 - ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION. THIS IS AVAILABLE FROM THE SUPERINTENDENT OF DOCUMENTS, U.S GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402.

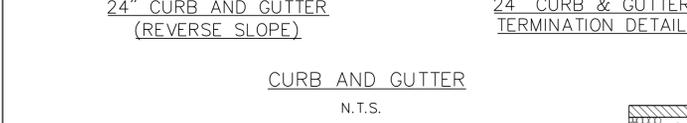
GUIDELINES FOR WHEELCHAIR RAMPS



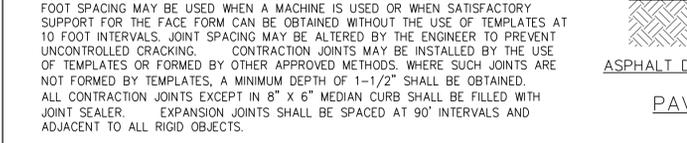
SIDEWALK ADJACENT TO GRASSED AREAS AND PLANTERS



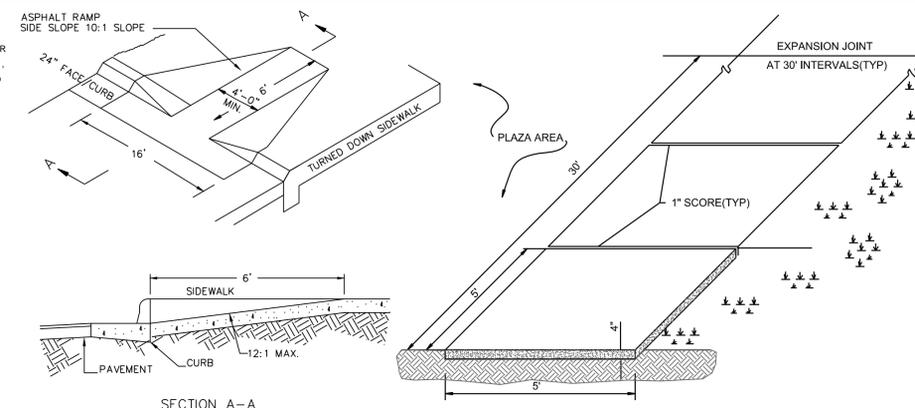
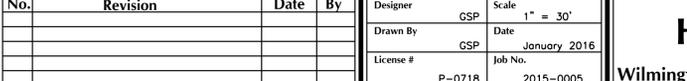
24" CURB AND GUTTER (REVERSE SLOPE)



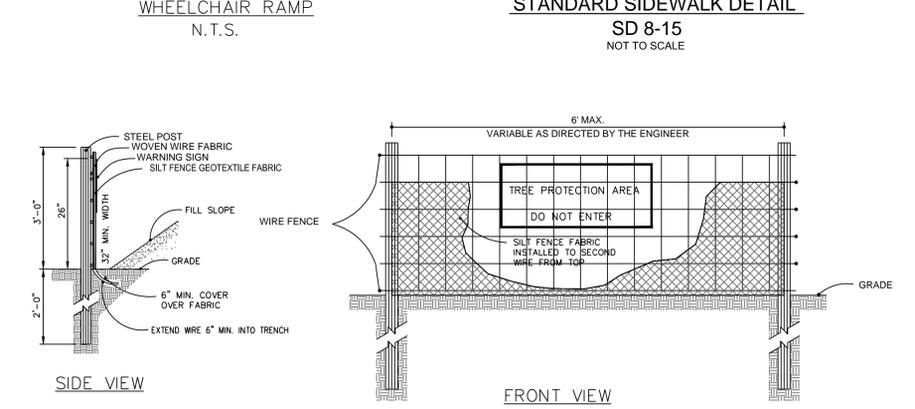
CURB AND GUTTER



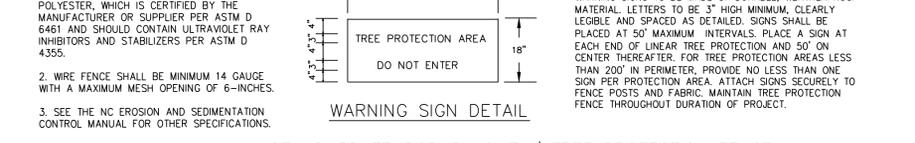
ASPHALT DETAIL FOR PARKING LOT



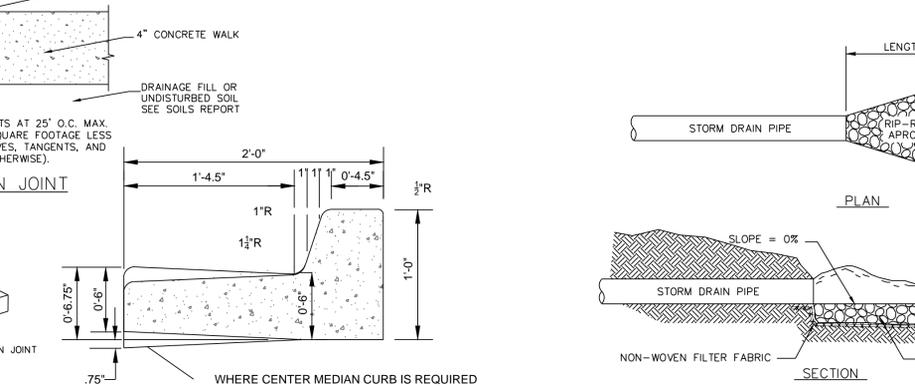
SECTION A-A WHEELCHAIR RAMP (DROP CURB)



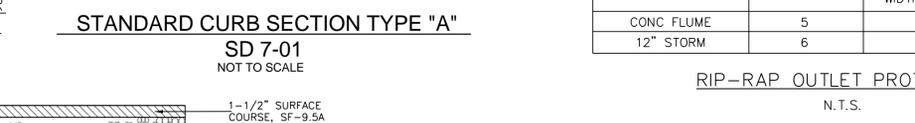
STANDARD TEMPORARY SILT / TREE PROTECTION FENCE



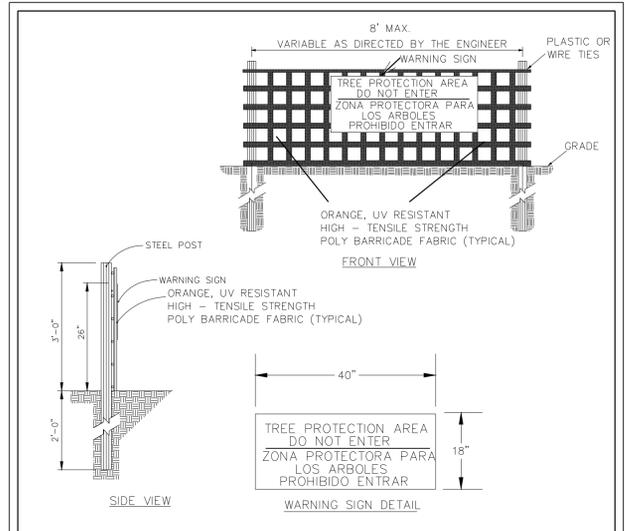
CONSTRUCTION JOINT



STANDARD CURB SECTION TYPE "A"



PAVEMENT DETAIL



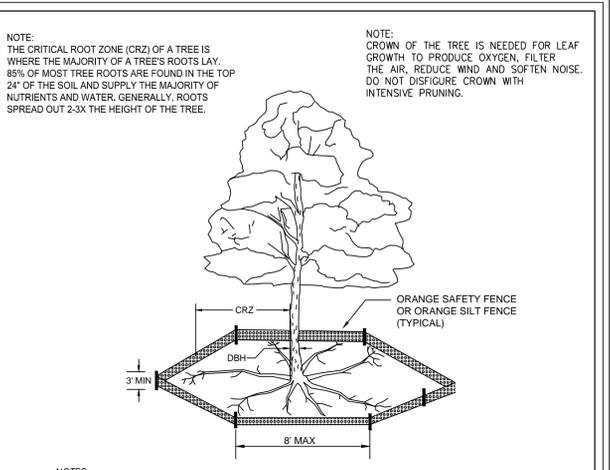
- NOTES:**
- THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
 - WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
 - SIGNS SHALL BE PLACED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

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
SHEET 2 of 2

DATE: JAN, 2015
DRAWN BY: JSR
CHECKED BY: RDG, P.E.
SCALE: NOT TO SCALE

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

SD 15-09



- NOTES:**
- PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
 - CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
 - IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
 - WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
 - FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
 - FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF \$500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
SHEET 1 of 2

DATE: JAN, 2015
DRAWN BY: JSR
CHECKED BY: RDG, P.E.
SCALE: NOT TO SCALE

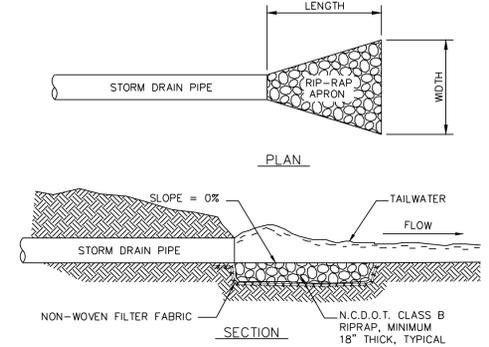
CITY OF WILMINGTON
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SD 15-09

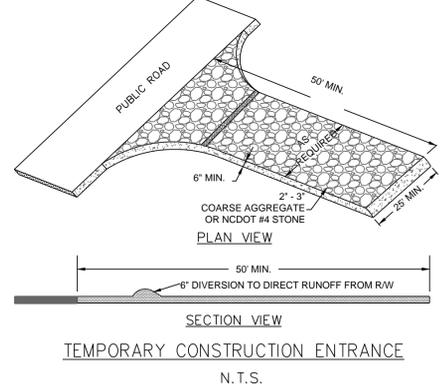
SEQUENCE OF CONSTRUCTION

LIMITS OF CONSTRUCTION = 1.85 ACRES

- INSTALL TEMPORARY CONSTRUCTION ENTRANCE AS SHOWN ON EROSION & SEDIMENT CONTROL PLAN.
- INSTALL PERIMETER CONTROLS (TEMPORARY SILT FENCE, TREE PROTECTION FENCING, SEDIMENT BASIN) AS SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN. THIS STEP NEEDS TO BE COMPLETED PRIOR TO UPSLOPE LAND DISTURBING ACTIVITIES.
- THE PROPOSED INFILTRATION BASIN WILL ACT AS A SEDIMENT BASIN DURING CONSTRUCTION ACTIVITIES.
- ONCE PERIMETER CONTROLS AND SEDIMENT TRAPPING MEASURES ARE INSTALLED CLEAR AND GRUB SITE WITHIN LIMITS OF DISTURBANCE. THE SEDIMENT BASIN WILL BE PUMPED DOWN BY MECHANICAL MEANS AS NEEDED TO MUCK OUT SEDIMENT WHEN THE SEDIMENT REACHES 50% CAPACITY.
- UPON BRINGING THE SITE TO ROUGH GRADE, STABILIZE ALL AREAS WITH TEMPORARY VEGETATION IF LEFT UNDISTURBED FOR 15 WORKING DAYS AND ALL SLOPES WITHIN 21 CALENDAR DAYS.
- ONCE THE PARKING AREAS, SANITARY SEWERS, WATERLINES AND STORM SEWERS ARE IN PLACE, INSTALL INLET PROTECTION AS SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN.
- UPON BRINGING THE PARKING AREA TO SUBGRADE ELEVATIONS, STABILIZE THE AREAS BY PLACING STONE BASE AS EARLY AS POSSIBLE. PERMEABLE PAVEMENT TO BE INSTALLED AS CLOSE TO THE END OF CONSTRUCTION AS POSSIBLE IN ORDER TO AVOID CLOGGING OF THE SYSTEM.
- FOR TEMPORARY VEGETATIVE STABILIZATION OF ALL DENUDED AREAS SEE NOTE REFERENCING THE EROSION CONTROL PROGRAM AND SPECIFICATIONS ON SHEET C-1.
- AFTER CONSTRUCTION OPERATIONS HAVE ENDED AND ALL DISTURBED AREAS HAVE BEEN STABILIZED, MECHANICAL SEDIMENT CONTROLS SHALL BE REMOVED. SEDIMENT FROM TEMPORARY SEDIMENT TRAPPING DEVICES SHALL BE DISPOSED OF BY SPREADING ON THE SITE OR HAULING AWAY IF NOT SUITABLE FOR FILL. ALL DENUDED AREAS ARE TO BE PERMANENTLY STABILIZED WITH PERMANENT VEGETATION.



RIPRAP LOCATIONS	LENGTH (FT.)	UPSTREAM WIDTH (FT.)	DOWNSTREAM WIDTH (FT.)
CONC FLUME	5	5	6
12" STORM	6	3	4



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.



No.	Revision	Date	By

Designer	GSP	Scale	1" = 30'
Drawn By	GSP	Date	January 2016
License #	P-0718	Job No.	2015-0005

HAWTHORNE AT THE STATION
Wilmington New Hanover County North Carolina

STANDARD DETAILS

PREPARED FOR:
HAWTHORNE MIDWAY WILMINGTON, LLC
806 GREEN VALLEY ROAD, SUITE 301
GREENSBORO, NC 27408

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-4

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

ENGLISH STANDARD DRAWING FOR CONCRETE DROP INLET 12" THRU 30" PIPE

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS MUCH CLOSER WITH STD. DRAWING 840.66.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
 CONSTRUCT WITH PIPE CROWNS MATCHING.
 SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.
 INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
 INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 7MM STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWING NOT TO SCALE.

NCDOT DETAIL 840.14

DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX				DEDUCTIONS FOR ONE PIPE			
PIPE	SPAN	WIDTH	MIN. HEIGHT	BOTTOM SLAB	WALL	PER FT. HT.	TOTAL CUBIC YARDS	C.M.	R.C.	C.S.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015	0.026			
15"	3'-0"	2'-3"	2'-3"	0.649	0.649	0.023	0.036				
18"	3'-0"	2'-6"	2'-6"	0.703	0.703	0.033	0.049				
24"	3'-0"	3'-0"	3'-0"	0.614	0.614	0.059	0.085				
30"	3'-0"	3'-6"	3'-6"	0.222	0.222	0.925	0.082	0.127			

SHEET 1 OF 1
840.14

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

ENGLISH STANDARD DRAWING FOR CONCRETE JUNCTION BOX (WITH OPTIONAL MANHOLE) 12" THRU 66" PIPE

GENERAL NOTES:
 CHAMFER ALL EXPOSED CORNERS 1".
 USE CLASS "B" CONCRETE THROUGHOUT.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS TO CONSTRUCT THE BOTTOM SLAB.
 IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.
 PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.
 ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB.)
 MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.

DIMENSIONS OF BOX AND PIPE				REINFORCEMENT BARS "A"				TOP SLAB DIMENSIONS			CUBIC YARDS IN BOX			TOTAL QUANTITIES BOX AND SLABS		DEDUCTIONS FOR ONE PIPE CU.YDS.	
PIPE	SPAN	WIDTH	HEIGHT	NO.	LENGTH	E	F	TOP SLAB	BOTTOM SLAB	WALL	FT. OF HT.	LBS. REINF.	CU. YDS. MIN.	"H"	C.S.	R.C.	
12"	2'-0"	2'-0"	2'-3"	12	2'-9"	3'-0"	3'-0"	0.167	0.167	0.185	22	0.750	0.015	0.024			
15"	2'-3"	2'-3"	2'-6"	12	3'-0"	3'-3"	3'-3"	0.196	0.196	0.204	24	0.802	0.023	0.036			
18"	2'-6"	2'-6"	2'-9"	14	3'-3"	3'-6"	3'-6"	0.227	0.227	0.222	30	1.065	0.033	0.049			
24"	3'-0"	3'-0"	3'-3"	16	3'-9"	4'-0"	4'-0"	0.296	0.296	0.269	40	1.434	0.059	0.085			
30"	3'-6"	3'-6"	3'-9"	18	4'-3"	4'-6"	4'-6"	0.375	0.375	0.296	51	1.860	0.092	0.127			
36"	4'-0"	4'-0"	4'-3"	20	4'-9"	5'-0"	5'-0"	0.463	0.463	0.333	64	2.341	0.132	0.178			
42"	4'-6"	4'-6"	4'-9"	22	5'-3"	5'-6"	5'-6"	0.560	0.560	0.370	77	2.873	0.160	0.243			
48"	5'-4"	5'-4"	5'-9"	26	6'-3"	6'-4"	6'-4"	0.743	0.743	0.407	111	3.623	0.235	0.317			
54"	5'-10"	5'-10"	6'-3"	28	6'-7"	6'-10"	6'-10"	0.865	0.865	0.444	126	4.283	0.297	0.401			
60"	6'-6"	6'-6"	6'-9"	30	7'-3"	7'-6"	7'-6"	1.042	1.042	0.481	145	5.090	0.367	0.495			
66"	7'-1"	7'-1"	6'-9"	32	7'-10"	8'-1"	8'-1"	1.210	1.210	0.518	169	5.917	0.444	0.589			

SHEET 1 OF 1
840.31

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

ENGLISH STANDARD DRAWING FOR CONCRETE JUNCTION BOX (WITH OPTIONAL MANHOLE) 12" THRU 66" PIPE

STANDARD INLET PROTECTION
NOT TO SCALE

NOTES:
 1. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
 2. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 1-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
 3. PLACE CLEAN GRAVEL (NC DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A MIN HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.

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

ENGLISH STANDARD DRAWING FOR DROP INLET FRAME AND GRATES FOR USE WITH STD. DWG. S 840.14 AND 840.15

NCDOT DETAIL 840.16

SHEET 1 OF 1
840.16

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

ENGLISH STANDARD DRAWING FOR DROP INLET FRAME AND GRATES FOR USE WITH STD. DWG. S 840.14 AND 840.15

STORM DRAINAGE FLUME
N.T.S.

SHEET 1 OF 1
840.16

TEMPORARY INLET SEDIMENT FILTER

POLYPROPYLENE "BOOT" GRATE, CATCH BASIN, OVERFLOW, 2 EACH DUMP STRAPS, EXPANSION RESTRAINT (1/4" NYLON ROPE 2" FLAT WASHERS)

INSTALLATION DETAIL, BAG DETAIL

SILT SACK DETAIL
NOT TO SCALE

NOTE: TEMPORARY INLET SEDIMENT FILTER TO BE INSTALLED ON ALL PAVED CATCH BASINS OR STORM INLETS.

STORM TABLE

FROM	TO	LENGTH (ft)	DIAMETER (in)	SLOPE (%)	INV. DN (ft)	INV. UP (ft)	RIM (ft)	MATERIAL
2	1	164	12	0.20	22.20	22.53	25.00	HDPE
3	2	153	12	0.20	22.53	22.83	24.80	HDPE
4	3	122	12	0.18	22.83	23.05	25.05	HDPE
5	4	75	12	0.18	23.05	23.18	25.18	HDPE

HAWTHORNE AT THE STATION
 Wilmington New Hanover County North Carolina

STANDARD DETAILS

PREPARED FOR:
 HAWTHORNE MIDWAY WILMINGTON, LLC
 806 GREEN VALLEY ROAD, SUITE 301
 GREENSBORO, NC 27408

GSP CONSULTING, PLLC
 ENGINEERING
 6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No. **C-5**

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

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.

