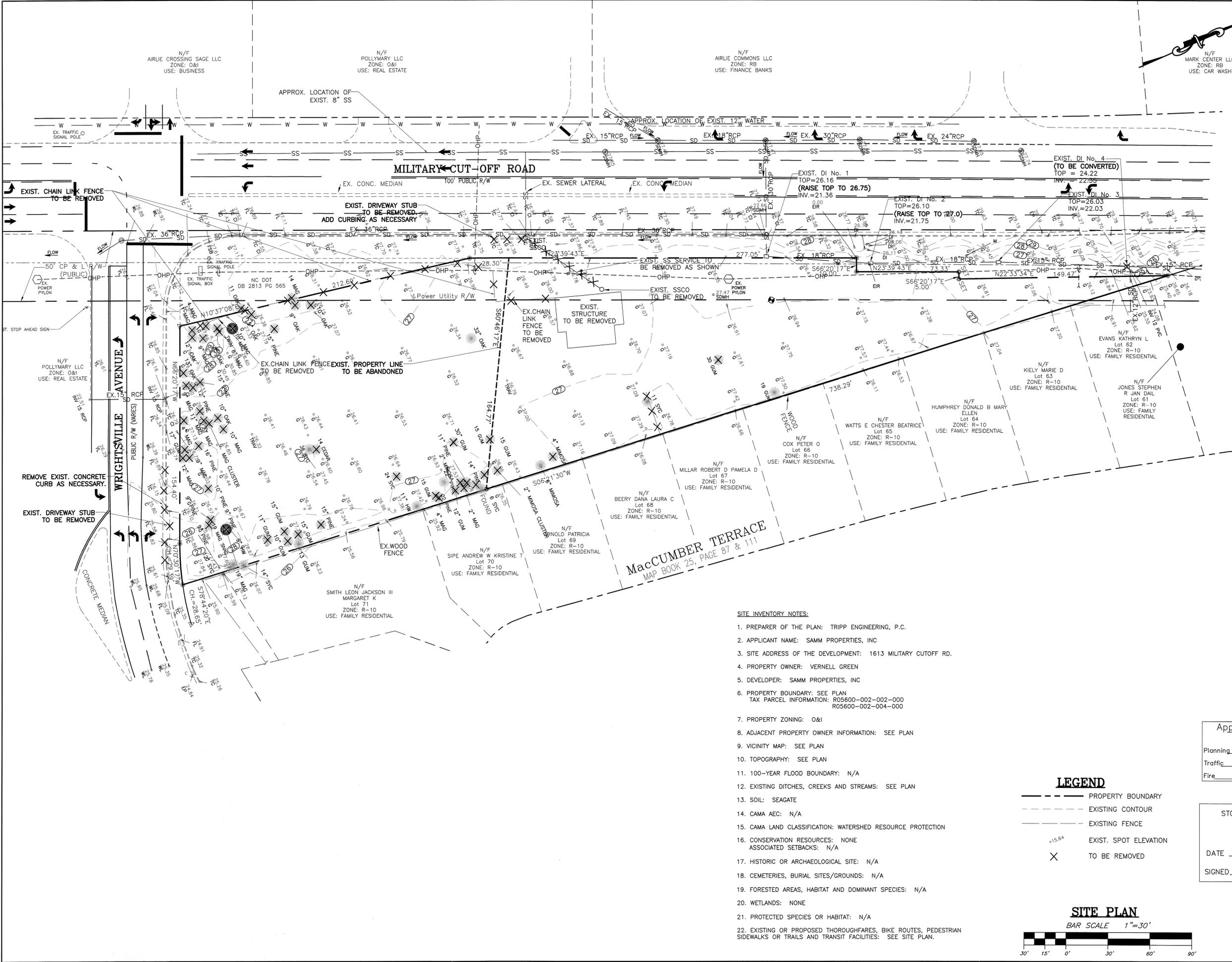


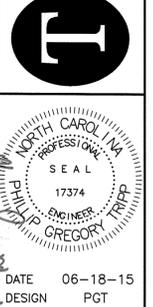
REVISIONS		
No.	Date	Description
01	07.02.15	ISSUE FOR PERMIT
02		REVISED PER CITY OF WILMINGTON COMMENTS
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LOCATION MAP
NTS



EXISTING CONDITIONS, SITE INVENTORY
AND DEMOLITION PLAN
AIRLIE OFFICES
1613 MILITARY CUTOFF ROAD
WILMINGTON, NORTH CAROLINA

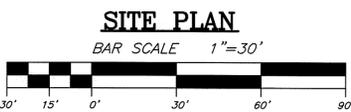
TRIPP ENGINEERING, P.C.
419 Chestnut Street
Wilmington, North Carolina 28401
Phone 910-763-5100
Fax 910-763-5631
© 2015 TRIPP ENGINEERING, P.C.
LICENSE NO. C-1427



- SITE INVENTORY NOTES:**
- PREPARER OF THE PLAN: TRIPP ENGINEERING, P.C.
 - APPLICANT NAME: SAMM PROPERTIES, INC
 - SITE ADDRESS OF THE DEVELOPMENT: 1613 MILITARY CUTOFF RD.
 - PROPERTY OWNER: VERNELL GREEN
 - DEVELOPER: SAMM PROPERTIES, INC
 - PROPERTY BOUNDARY: SEE PLAN
TAX PARCEL INFORMATION: R05600-002-002-000
R05600-002-004-000
 - PROPERTY ZONING: O&I
 - ADJACENT PROPERTY OWNER INFORMATION: SEE PLAN
 - VICINITY MAP: SEE PLAN
 - TOPOGRAPHY: SEE PLAN
 - 100-YEAR FLOOD BOUNDARY: N/A
 - EXISTING DITCHES, CREEKS AND STREAMS: SEE PLAN
 - SOIL: SEAGATE
 - CAMA AEC: N/A
 - CAMA LAND CLASSIFICATION: WATERSHED RESOURCE PROTECTION
 - CONSERVATION RESOURCES: NONE
ASSOCIATED SETBACKS: N/A
 - HISTORIC OR ARCHAEOLOGICAL SITE: N/A
 - CEMETERIES, BURIAL SITES/GROUNDS: N/A
 - FORESTED AREAS, HABITAT AND DOMINANT SPECIES: N/A
 - WETLANDS: NONE
 - PROTECTED SPECIES OR HABITAT: N/A
 - EXISTING OR PROPOSED THOROUGHFARES, BIKE ROUTES, PEDESTRIAN SIDEWALKS OR TRAILS AND TRANSIT FACILITIES: SEE SITE PLAN.

LEGEND

---	PROPERTY BOUNDARY
- - - -	EXISTING CONTOUR
---	EXISTING FENCE
• 15.64	EXIST. SPOT ELEVATION
X	TO BE REMOVED



Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

STORMWATER MANAGEMENT PLAN
APPROVED

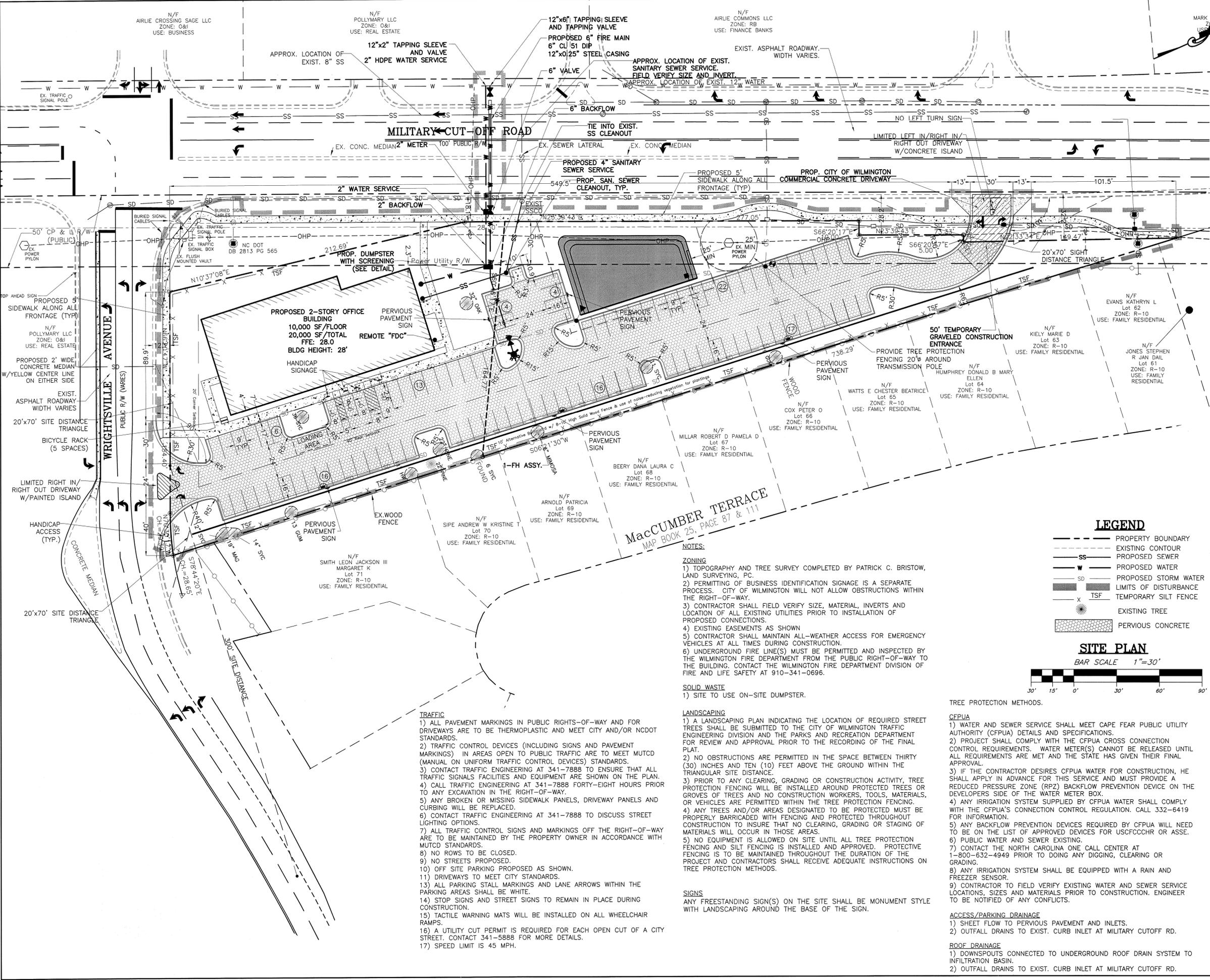
CITY OF WILMINGTON
ENGINEERING DEPARTMENT

DATE _____ PERMIT # _____

SIGNED _____

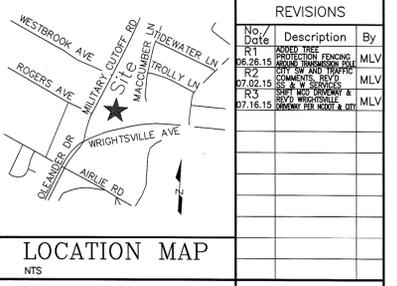
DATE 06-18-15
DESIGN PCT
DRAWN EJW

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



SITE DATA:

PROPERTY OWNER	THE OFFICES AT AIRLIE, LLC
PROJECT ADDRESS	1613 MILITARY CUTOFF RD.
PIN NUMBER	R05600-002-000-000 R05600-002-004-000
AREA NOT IN A FEMA 100-YEAR FLOOD ZONE	O&I-1 (CD) CD-6-214
ZONING DISTRICT	2.1 Ac.
DISTURBED AREA	
SETBACKS REQUIRED	FRONT: 20' REAR: 25' INTERIOR SIDE: 5' CORNER SIDE: 20'
PROPOSED BUILDING SETBACKS	FRONT: 14' REAR: 83' INTERIOR SIDE: - CORNER SIDE: 21'
*ALTERNATIVE FRONT SETBACK FOR TREE PRESERVATION	
TRACT AREA	78,683 SF (1.80 AC)
BUILDING USE	OFFICE-PROFESSIONAL
EXISTING BUILDING AREA	1,562 SF
PROPOSED BUILDING AREA (GROSS)	20,000 SF
BUILDING LOT COVERAGE (10,000/78,683)	12.7%
NUMBER OF BUILDINGS	1
NUMBER OF UNITS	1
BUILDING HEIGHT	28'
NUMBER OF STORIES	2
SF PER FLOOR (GROSS)	10,000 SF
EXISTING IMPERVIOUS AREAS:	
EXISTING BUILDING	1,562 SF
EXISTING CONCRETE	0 SF
EXISTING GRAVEL	0 SF
EXISTING IMPERVIOUS AREA	1,562 SF (2%)
PROPOSED IMPERVIOUS AREAS:	
PROPOSED BUILDING FOOTPRINT	10,000 SF
PROPOSED CONCRETE CURBING	2,760 SF
PROPOSED CONCRETE	2,455 SF
PERVIOUS PARKING	28,805 SF
CREDIT FOR PERVIOUS PARKING	-21,604 SF
EXISTING IMPERVIOUS (TO REMAIN)	0 SF
TOTAL IMPERVIOUS AREA	22,416 SF (28.5%)
PARKING REQUIRED: (OFFICE-PROFESSIONAL)	20,000 SF
MAXIMUM: 1/200	100
MINIMUM: 1/400	67
TOTAL PARKING PROVIDED:	98
CAMA LAND USE:	WATERSHED RESOURCE PROTECTION
PUBLIC WATER AND SEWER BY CFPWA	
EXISTING WATER FLOW:	0 GPD
EXISTING SEWER FLOW:	0 GPD
PROPOSED WATER FLOW:	(120 GPD/1,000 SF x 20,000 x 110%)
PROPOSED SEWER FLOW:	2,640 GPD
PROPOSED WATER FLOW:	(120 GPD/1,000 SF x 20,000 SF)
PROPOSED SEWER FLOW:	2,400 GPD
HANDICAP SPOTS REQUIRED	PROPOSED
(1-25 SPOTS= 1 HANDICAP SPOT)	
99 SPOTS/25=3.96	4 HANDICAP SPOTS
BICYCLE PARKING REQUIRED (99 SPACES)	5 BICYCLE PARKS
BICYCLE PARKING PROPOSED	5 BICYCLE PARKS
BUILDING CONSTRUCTION TYPE	TYPE V WOOD



REVISIONS

No.	Date	Description	By
R1	06.26.15	ADDED TREE PROTECTION FENCING	MLV
R2	07.02.15	REVISED PERVIOUS CONCRETE	MLV
R3	07.18.15	REVISED PERVIOUS CONCRETE	MLV

SITE AND UTILITY PLAN

AIRLIE OFFICES
1613 MILITARY CUTOFF ROAD
WILMINGTON, NORTH CAROLINA

TRIPP ENGINEERING, P.C.
419 Chestnut Street
Wilmington, North Carolina 28401
Phone 910-763-5100
Fax 910-763-5631
© 2015 TRIPP ENGINEERING, P.C.
LICENSE NO. EC-197

Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

STORMWATER MANAGEMENT PLAN APPROVED

CITY OF WILMINGTON
ENGINEERING DEPARTMENT

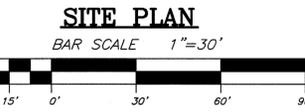
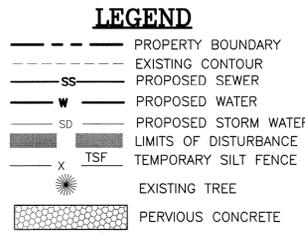
DATE _____ PERMIT # _____

SIGNED _____

DATE 06-18-15
DESIGN PGT
DRAWN EJW

C2

SHEET 2 OF 5
13016



- NOTES:**
- ZONING**
- TOPOGRAPHY AND TREE SURVEY COMPLETED BY PATRICK C. BRISTOW, LAND SURVEYING, PC.
 - PERMITTING OF BUSINESS IDENTIFICATION SIGNAGE IS A SEPARATE PROCESS. CITY OF WILMINGTON WILL NOT ALLOW OBSTRUCTIONS WITHIN THE RIGHT-OF-WAY.
 - CONTRACTOR SHALL FIELD VERIFY SIZE, MATERIAL, INVERTS AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF PROPOSED CONNECTIONS.
 - EXISTING EASEMENTS AS SHOWN
 - CONTRACTOR SHALL MAINTAIN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
 - UNDERGROUND FIRE LINE(S) MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-341-0696.
- SOLID WASTE**
- SITE TO USE ON-SITE DUMPSTER.
- LANDSCAPING**
- A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND THE PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAT.
 - NO OBSTRUCTIONS ARE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE THE GROUND WITHIN THE TRIANGULAR SITE DISTANCE.
 - 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.
 - ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING, GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.
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- SIGNS**
- ANY FREESTANDING SIGN(S) ON THE SITE SHALL BE MONUMENT STYLE WITH LANDSCAPING AROUND THE BASE OF THE SIGN.

- TRAFFIC**
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND 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 TRAFFIC ENGINEERING AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNALS FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN.
 - CALL TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
 - ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
 - CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
 - ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
 - NO ROWS TO BE CLOSED.
 - NO STREETS PROPOSED.
 - OFF SITE PARKING PROPOSED AS SHOWN.
 - DRIVEWAYS TO MEET CITY STANDARDS.
 - ALL PARKING SHALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
 - STOP SIGNS AND STREET SIGNS TO REMAIN IN PLACE DURING CONSTRUCTION.
 - TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS.
 - A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5888 FOR MORE DETAILS.
 - SPEED LIMIT IS 45 MPH.

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

REVISIONS		
No.	Description	By
07.02.15	REVISED PER CITY OF WILMINGTON COMMENTS	MLV
07.16.15	REVISED PER CITY OF WILMINGTON COMMENTS	MLV

LOCATION MAP

THE OFFICES AT AIRLIE, LLC
 PROJECT ADDRESS
 PIN NUMBER
 AREA NOT IN A FEMA 100-YEAR FLOOD ZONE
 ZONING DISTRICT
 DISTURBED AREA
 SETBACKS REQUIRED
 PROPOSED BUILDING SETBACKS
 *ALTERNATIVE FRONT SETBACK FOR TREE PRESERVATION
 TRACT AREA
 BUILDING USE

EXISTING BUILDING AREA	1,562 SF
PROPOSED BUILDING AREA (GROSS)	20,000 SF
BUILDING LOT COVERAGE (10,000/78,683)	12.7%
NUMBER OF BUILDINGS	1
NUMBER OF UNITS	1
BUILDING HEIGHT	28'
NUMBER OF STORIES	2
SF PER FLOOR (GROSS)	10,000 SF
EXISTING IMPERVIOUS AREAS:	
EXISTING BUILDING	1,562 SF
EXISTING CONCRETE	0 SF
EXISTING GRAVEL	0 SF
EXISTING IMPERVIOUS AREA	1,562 SF (2%)
PROPOSED IMPERVIOUS AREAS:	
PROPOSED BUILDING FOOTPRINT	10,000 SF
PROPOSED CONCRETE CURBING	2,760 SF
PROPOSED CONCRETE PERVIOUS PARKING	2,455 SF
CREDIT FOR PERVIOUS PARKING	-28,805 SF
EXISTING IMPERVIOUS (TO REMAIN)	0 SF
TOTAL IMPERVIOUS AREA	22,416 SF (28.5%)

PARKING REQUIRED: (OFFICE-PROFESSIONAL)	20,000 SF
MAXIMUM: 1/200	100
MINIMUM: 1/400	67
TOTAL PARKING PROVIDED:	98
CAMA LAND USE:	WATERSHED RESOURCE PROTECTION
PUBLIC WATER AND SEWER BY CFPWA	
EXISTING WATER FLOW:	0 GPD
EXISTING SEWER FLOW:	0 GPD
PROPOSED WATER FLOW: (120 GPD/1,000 SF x 20,000 x 110%)	2,640 GPD
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HANDICAP SPOTS REQUIRED (1-25 SPOTS= 1 HANDICAP SPOT) 99 SPOTS/25=3.96	4 HANDICAP SPOTS
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BICYCLE PARKING PROPOSED	5 BICYCLE PARKS
BUILDING CONSTRUCTION TYPE	TYPE V WOOD

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

STORMWATER MANAGEMENT PLAN APPROVED

CITY OF WILMINGTON
 ENGINEERING DEPARTMENT

DATE _____ PERMIT # _____

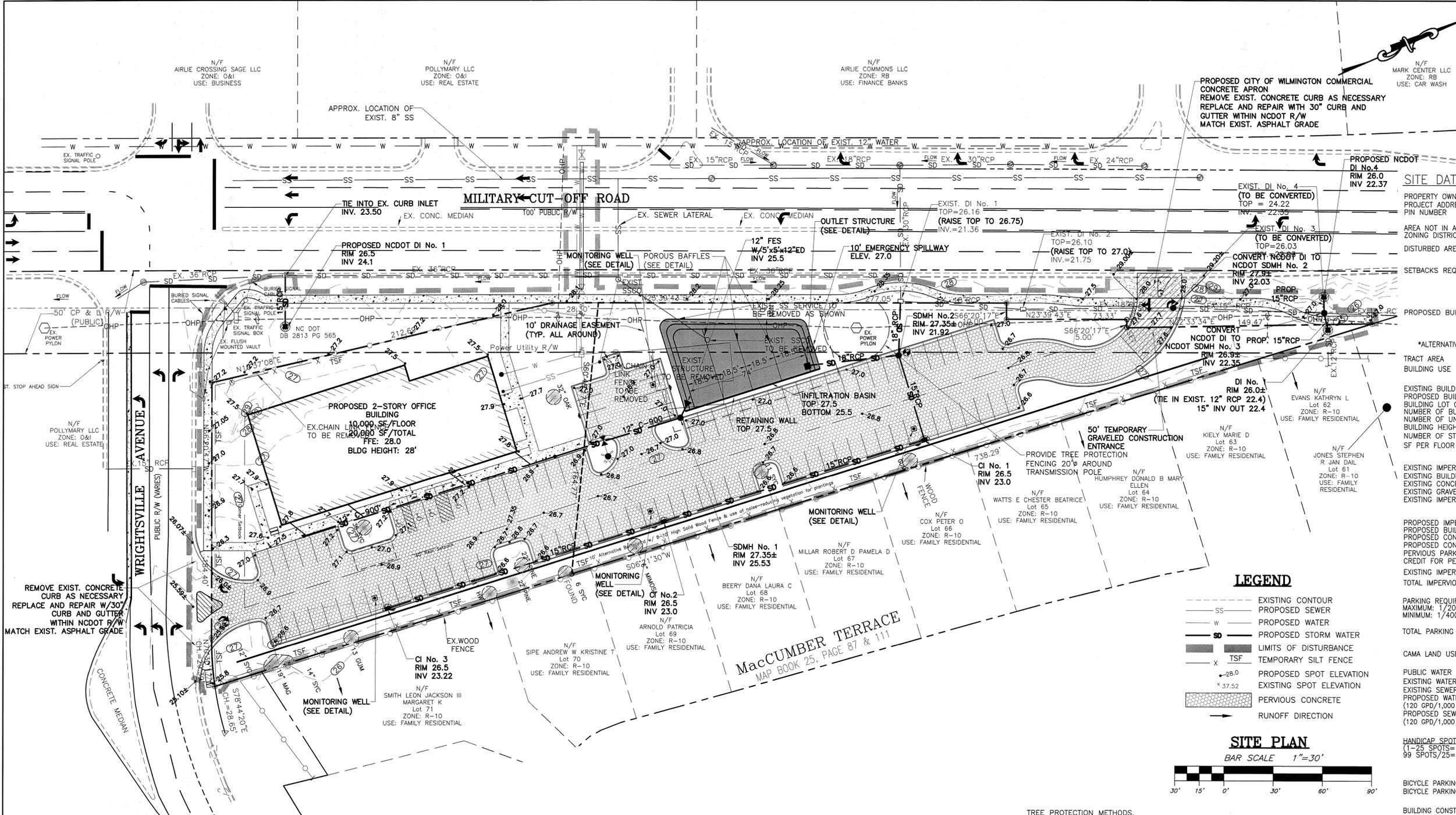
SIGNED _____

DATE 06-18-15
 DESIGN PGT
 DRAWN EJW

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

C3

SHEET 3 OF 5
 13016



LEGEND

- EXISTING CONTOUR
- SS PROPOSED SEWER
- W PROPOSED WATER
- SD PROPOSED STORM WATER
- LIMITS OF DISTURBANCE
- X TSF TEMPORARY SILT FENCE
- * 28.0 PROPOSED SPOT ELEVATION
- * 37.52 EXISTING SPOT ELEVATION
- PERVIOUS CONCRETE
- RUNOFF DIRECTION

SITE PLAN
 BAR SCALE 1"=30'

NOTES:

ZONING
 1) TOPOGRAPHY AND TREE SURVEY COMPLETED BY PATRICK C. BRISTOW, LAND SURVEYING, P.C.
 2) PERMITTING OF BUSINESS IDENTIFICATION SIGNAGE IS A SEPARATE PROCESS. CITY OF WILMINGTON WILL NOT ALLOW OBSTRUCTIONS WITHIN THE RIGHT-OF-WAY.
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SIGNS
 1) ANY FREESTANDING SIGN(S) ON THE SITE SHALL BE MONUMENT STYLE WITH LANDSCAPING AROUND THE BASE OF THE SIGN.

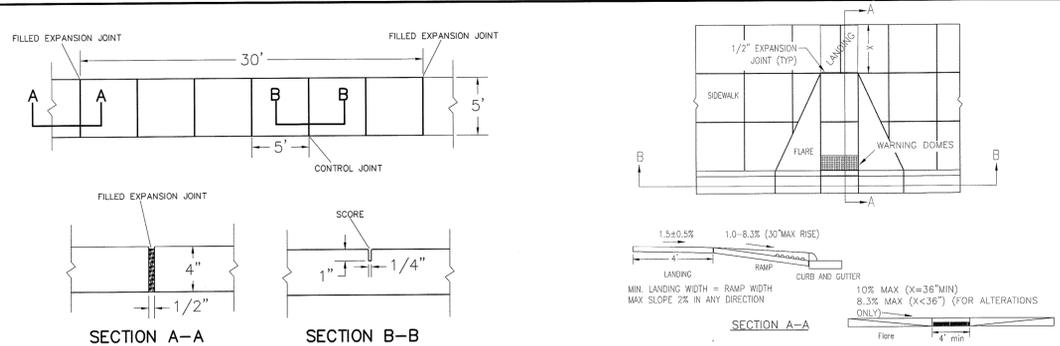
TREE PROTECTION METHODS.

CFPUA
 1) WATER AND SEWER SERVICE SHALL MEET CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) DETAILS AND SPECIFICATIONS.
 2) PROJECT SHALL COMPLY WITH THE CFPUA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL.
 3) IF THE 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 DEVELOPERS SIDE OF THE WATER METER BOX.
 4) ANY IRRIGATION SYSTEM SUPPLIED BY CFPUA WATER SHALL COMPLY WITH THE CFPUA'S CONNECTION CONTROL REGULATION. CALL 332-6419 FOR INFORMATION.
 5) ANY BACKFLOW PREVENTION DEVICES REQUIRED BY CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES FOR USCFCOHR OR ASSE.
 6) PUBLIC WATER AND SEWER EXISTING.
 7) CONTACT THE NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 PRIOR TO DOING ANY DIGGING, CLEARING OR GRADING.
 8) ANY IRRIGATION SYSTEM SHALL BE EQUIPPED WITH A RAIN AND FREEZER SENSOR.
 9) CONTRACTOR TO FIELD VERIFY EXISTING WATER AND SEWER SERVICE LOCATIONS, SIZES AND MATERIALS PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED OF ANY CONFLICTS.

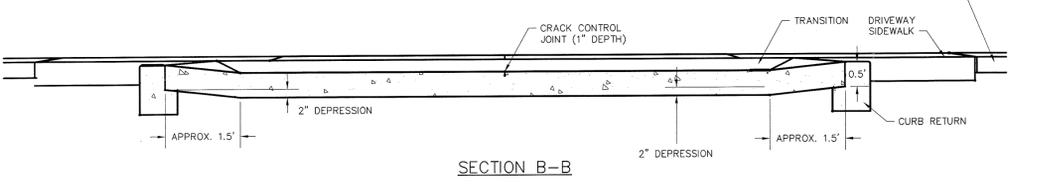
ACCESS/PARKING DRAINAGE
 1) SHEET FLOW TO PERVIOUS PAVEMENT AND INLETS.
 2) OUTFALL DRAINS TO EXIST. CURB INLET AT MILITARY CUTOFF RD.

ROOF DRAINAGE
 1) DOWNSPOUTS CONNECTED TO UNDERGROUND ROOF DRAIN SYSTEM TO INFILTRATION BASIN.
 2) OUTFALL DRAINS TO EXIST. CURB INLET AT MILITARY CUTOFF RD.

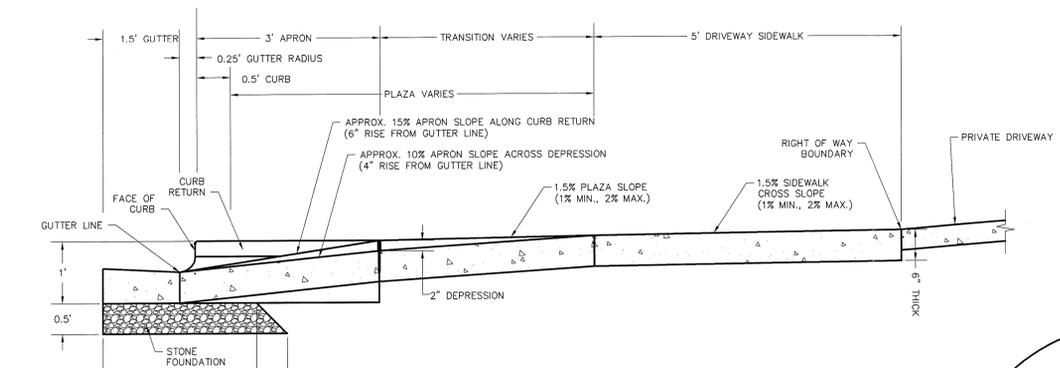
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 Wilmington, North Carolina 28401
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 LICENSE NO. C-1477



- NOTES:**
- JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
 - SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
 - MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
 - CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAIN WITHIN A DRIVEWAY APRON) SHALL BE CLASS "14" - 3,000 PSI.
 - MINIMUM REPLACEMENT FOR REPAIRS IS 4' 5" X 5' PANEL.
 - 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS.
 - MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
 - MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
 - MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAX CROSS SLOPE IS 2%. MAX LONGITUDINAL SLOPE IS 8.3% 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING PAVED ROAD.
- CITY OF WILMINGTON SIDEWALK SD 3-10**
NTS



CITY OF WILMINGTON CURB RAMP SD 3-07
NTS

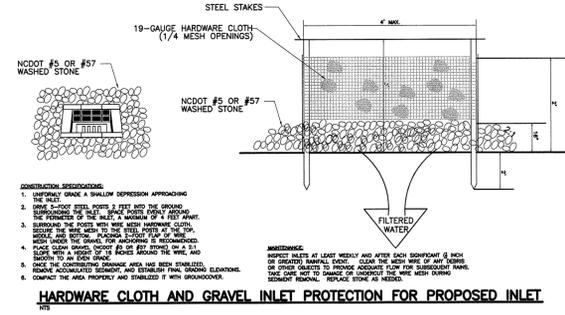


CITY OF WILMINGTON COMMERCIAL DRIVEWAY SD 3-03
NTS

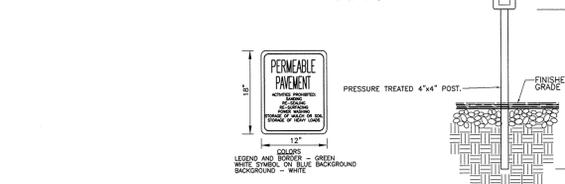
STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE _____ PERMIT # _____
SIGNED _____

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

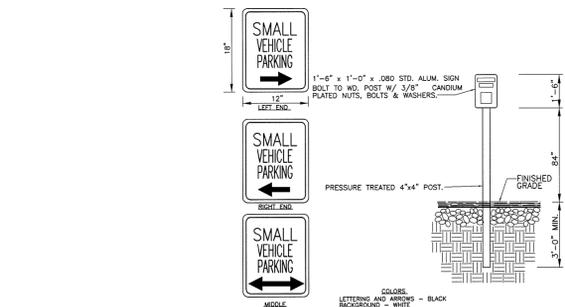
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



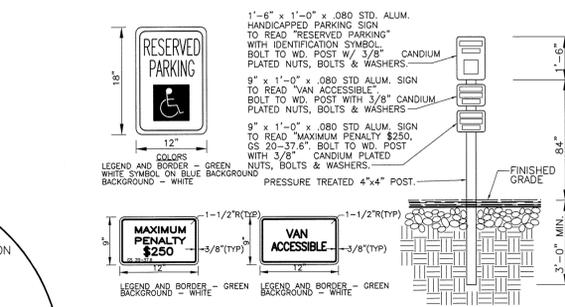
HARDWARE CLOTH AND GRAVEL INLET PROTECTION FOR PROPOSED INLET
NTS



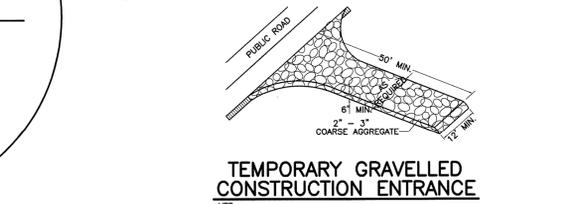
PERVIOUS PAVEMENT SIGN DETAIL
NTS



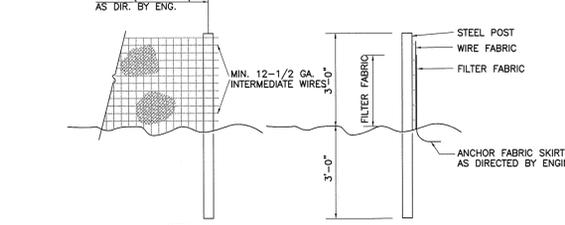
SMALL VEHICLE PARKING SIGN DETAIL
NTS



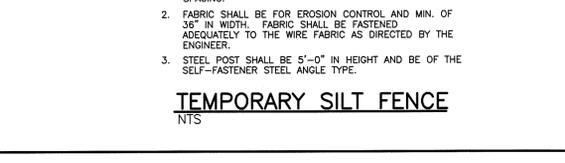
TYPICAL HANDICAPPED SIGN DETAIL
NTS



TEMPORARY GRAVELLED CONSTRUCTION ENTRANCE
NTS



TEMPORARY FALL GRASSING DETAIL
NTS



TEMPORARY SILT FENCE
NTS

SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION TIMEFRAME EXCEPTIONS
PERMITTER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATERWAYS (HQP) 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 PERMITTER AND HQZ ZONES)

NPDES GROUND STABILIZATION CRITERIA
NTS

SEEDING MIXTURE	RATE (lb/acre)
PEDAGIA BAHARASS	50
SENECA LEONADA	50
COMMON BERBERIS GRASS	10
GERMAN MILLET	50
TALL FESCUE	50

SEEDING NOTES:

- WHERE A NEAT APPEARANCE IS DESIRED, OMIT SEEDS.
- USE COMMON BERBERIS GRASS ONLY ON GRASSLESS SLOPES WHERE IT CANNOT BECOME A PEST. BERBERIS GRASS MAY BE REPLACED WITH 5 lb/acre CENTAUREA GRASS.

SEEDING DATES:
APRIL 1 - JULY 15

SOIL AMENDMENTS:
APPLY LINE AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 3,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 500 lb/acre 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 lb/acre GRASS STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH ANCHOR BY TACKING WITH ASPHALT, NETTING, OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A CURB WITH BLACKS SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:
REFERTILIZE THE FOLLOWING APRIL WITH 40 lb/acre NITROGEN. REPEAT AS GROWTH REQUIRES. MAY BE MOVED ONLY ONCE A YEAR WHERE A NEAT APPEARANCE IS DESIRED. OMIT SEEDS AND MULCH AS OTHER AS DESIRED.

SEEDING MIXTURE	RATE (lb/acre)
TALL FESCUE (BLEND OF TWO OR MORE IMPROVED VARIETIES)	200
RYE (GRASS)	25

SEEDING DATES:
JANUARY - APRIL
MAY - DECEMBER

SOIL AMENDMENTS:
APPLY LINE 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.

MULCH:
APPLY 4,000 lb/acre GRASS STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH ANCHOR BY TACKING WITH ASPHALT, NETTING, OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A CURB WITH BLACKS SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

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 12-8-8 (14-4-8) OR 10-10-10 FERTILIZER. DO NOT APPLY FERTILIZER TO WET GRASS. WIND WEARERS AS THIS INCREASES SAND LOSSES TO SOILS. REPEAT FERTILIZER AND MULCH DURING WET WEATHER AS THIS INCREASES SAND LOSSES TO SOILS. REPEAT FERTILIZER AND MULCH DURING WET WEATHER AS THIS INCREASES SAND LOSSES TO SOILS. REPEAT FERTILIZER AND MULCH DURING WET WEATHER AS THIS INCREASES SAND LOSSES TO SOILS.

SEEDING MIXTURE	RATE (lb/acre)
Rye (grass)	120
Arroyo lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50
Omit annual lespedeza when duration of temporary cover is not to extend beyond one year.	

SEEDING DATES:
Mountains - Above 2500 ft: Feb. 15-May 15
Piedmont - Below 2500 ft: Feb. 1-May 1
Coastal Plain - Dec. 1-Apr. 15

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 FERTILIZER.

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

MAINTENANCE:
Refer to note 7 of growth is not fully adequate. Reseed, refer to note 7 of growth is not fully adequate. Reseed, refer to note 7 of growth is not fully adequate.

SEEDING MIXTURE	RATE (lb/acre)
IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUNGRASS MAY BE SUBSTITUTED AT A RATE OF 30 LB/ACRE.	40

SEEDING NOTES:
MOUNTAINS - MAY 15-JULY 15
PIEDMONT - MAY 1-JULY 15
COASTAL PLAIN - APR 15-AUG 15

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

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

MAINTENANCE:
Refer to note 7 of growth is not fully adequate. Reseed, refer to note 7 of growth is not fully adequate.

SEEDING MIXTURE	RATE (lb/acre)
Rye (grass)	120

SEEDING NOTES:
MOUNTAINS - AUG 15-DEC 15
PIEDMONT AND COASTAL PLAIN - AUG 15-DEC 30

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

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

MAINTENANCE:
Refer to note 7 of growth is not fully adequate. Reseed, refer to note 7 of growth is not fully adequate.

- SITE WORK NOTES:**
- THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS BOTH ON AND IMMEDIATELY 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 SORT AREAS.
 - DISPOSAL- CLEARED, GRUBBED, STRIPPED OR OTHER WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A PROPERLY PERMITTED FACILITY.
 - FILL AND COMPACT- 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 SORT AREAS.
 - 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.
 - 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.
 - EXISTING SURVEYING PERFORMED BY MIKE UNDERWOOD, PLS AND SUPPLIED BY THE OWNER. 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 PVC UTILITY MANS SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER AT FINAL GRADE.
 - ALL SERVICE CONNECTIONS SHALL BE INSTALLED TO MEET ALL LOCAL AND STATE CODES. METERS, TAPS, MATERIALS, WORKMANSHIP AND ALL FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH ALL REQUIREMENTS.
 - ALL PAVEMENT, BASE AND SUBGRADE SHALL CONFORM TO NCDOT STANDARDS INCLUDING WORKMANSHIP, MATERIALS AND EQUIPMENT. APPROPRIATE BARRICADES, SIGNS, LIGHTS OR OTHER TRAFFIC CONTROL DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH NCDOT TO MAINTAIN SAFETY AND TWO WAY TRAFFIC.
 - ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE. THE 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 STORM DRAINAGE PIPE SHALL BE CLASS III WITH RUBBER GASKETED JOINTS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
 - USE WHITE LANE MARKING PAINT FOR ALL PAVEMENT MARKINGS. PAINT SHALL BE A CHLORINATED RUBBER ACRYLIC TYPE III. FACTORY MIXED, QUICK DRYING, NON BLEEDING. REFLECTIVE MATERIAL MAY BE ADDED AT OWNER'S OPTION FOR NIGHT REFLECTING.
 - DUCTILE IRON SHALL BE CLASS 50.
 - 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.
 - SEE GEOTECHNICAL REPORT NO. _____ DATED _____ BY _____ FOR ADDITIONAL REQUIREMENTS.

- CONSTRUCTION SEQUENCE:**
- 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 AND AFTER CONSTRUCTION.
 - INSTALL PRIMARY EROSION CONTROL MEASURES BEFORE BEGINNING CONSTRUCTION INCLUDING BUT NOT LIMITED TO GRAVELLED CONSTRUCTION ENTRANCE, SILT FENCE, CHECK DAMS, ETC. INSTALL ALL SECONDARY EROSION CONTROL MEASURES AS SOON AS POSSIBLE AFTER BEGINNING CONSTRUCTION.
 - ALL EROSION CONTROL MEASURES TO BE INSPECTED AFTER EACH RAIN. SILT FENCE AND INLET PROTECTION ARE TO BE CLEANED WHEN 0.5 FEET OF SEDIMENT HAVE ACCUMULATED IN FRONT OF THE DEVICE OR WHEN THEY LEAK OR FALL. SEDIMENT TRAPS ARE CLEANED OUT AS STATED OR WHEN HALF FULL.
 - IF APPLICABLE, CONSTRUCT PROPOSED RETENTION POND TO ACT AS A SEDIMENT BASIN DURING CONSTRUCTION. REMOVE ACCUMULATION OF SILT AS REQUIRED TO ALLOW PROPER FUNCTIONING. RESTORE POND TO DESIGN LEVELS AT THE COMPLETION OF CONSTRUCTION.
 - IF APPLICABLE, INSTALL DROP INLETS WITH INLET PROTECTION TO ACT AS SILT TRAPS DURING CONSTRUCTION. REMOVE ACCUMULATED SILT AS NEEDED TO PREVENT SILT FROM ENTERING STORM DRAIN PIPING.
 - 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.

- 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 CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. THE SITE WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL (LITTER, 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, ROCK DOUGHNUT INLET PROTECTION AND ROCK PIPE INLET PROTECTION WHEN THE DESIGNATION 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.
 - CUT 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 SLOPE.
 - 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 USED, ROCK FILTERS ARE DESIGNED AT LOW POINTS IN THE SILT 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 DESIGNATED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. THE ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR IF THE ROCK IS DISLODGED. BARRIERS WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.
 - 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. BARRIERS WILL BE REPAIRED OR REPLACED IF THEY TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED FROM THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.
 - ALL SEEDED AREAS WILL BE FERTILIZED, RESEED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL SLOPES WILL BE STABILIZED WITHIN 21 CALENDAR DAYS. ALL OTHER AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS.
 - FLOCCULATES WILL BE USED TO ADDRESS TURBIDITY ISSUES. THE PUMPS, TANKS, HOSES AND INJECTION SYSTEMS WILL BE CHECKED FOR PROBLEMS OR TURBID DISCHARGES DAILY.

- SITE POLLUTANTS NOTES:**
- LOCATE AREAS DEDICATED FOR MANAGEMENT OF LAND CLEARING AND DEMOLITION DEBRIS, CONSTRUCTION AND DOMESTIC WASTE. DEBRIS SHALL BE REMOVED AT LEAST 50' AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
 - DUMPING OF PAINT MATERIALS, WASTES IN STORM DRAINS IS PROHIBITED.
 - LITTER AND SANITARY WASTE-THE PERMITTEE SHALL CONTROL THE MANAGEMENT AND DISPOSAL OF LITTER AND SANITARY WASTE FROM THE SITE.
 - LOCATE LEAKEN-MATERIAL STOCK PILE AREAS AT LEAST 50' AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
 - CONCRETE MATERIALS, INCLUDING CONCRETE, MUST BE CONTROLLED AND MANAGED TO AVOID CONTACT WITH SURFACE WATERS, WETLANDS OR BUFFERS. NO CONCRETE OR CEMENT SLURRY SHALL BE DISCHARGED FROM THE SITE. ANY HARDENED CONCRETE RESIDUE WILL BE RECYCLED OR ON SITE, IN ACCORDANCE WITH LOCAL AND STATE SOLID WASTE REGULATIONS.
 - SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA AT A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:
I. ALL PERMITTER DIKES, SWALES, DITCHES, PERMITTER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACTIVITY.
II. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
III. EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE UNPRACTICABLE.
IV. ALL SLOPES 50' IN LENGTH OR GREATER SHALL APPLY TO GROUND COVER WITHIN 7 DAYS EXCEPT WHEN THE SLOPE IS FLATTER THAN 4:1. SLOPES LESS THAN 50' SHALL APPLY TO GROUND COVER WITHIN 14 DAYS EXCEPT WHEN SLOPES ARE STEEPER THAN 4:1. ANY SLOPED AREA FLATTER THAN 4:1 SHALL BE EXEMPT FROM THE 7-DAY GROUND COVER REQUIREMENT.
V. SLOPES 10' OR LESS IN LENGTH SHALL BE EXEMPT FROM THE 7-DAY GROUND COVER REQUIREMENT EXCEPT WHEN THE SLOPE IS STEEPER THAN 2:1.
VI. ALTHOUGH STABILIZATION IS USUALLY SPECIFIED AS GROUND COVER, OTHER METHODS, SUCH AS CHEMICAL STABILIZATION, MAY BE ALLOWED ON A CASE-BY-CASE BASIS.
 - FOR PORTIONS OF PROJECTS WITHIN THE SEDIMENT CONTROL COMMISSION-DEFINED "HIGH QUALITY WATER ZONE" (15A NCDAC 04A.0105), STABILIZATION SHALL BE ACHIEVED AS SOON AS PRACTICABLE BUT IN ANY EVENT ON ALL AREAS OF THE SITE WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACT.

REVISIONS

No./Date	Description	By
P2	ADD SW AND TRAFFIC SIGNS, REV. 07.20.15	MLV

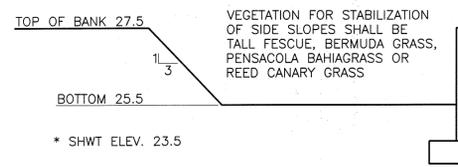
DETAILS AND NOTES

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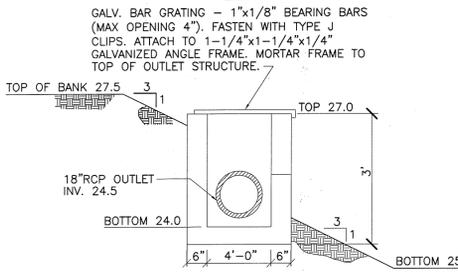
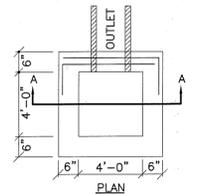
SEAL
17374
NORTH CAROLINA PROFESSIONAL ENGINEER

DATE 06-18-15
DESIGN PGT
DRAWN EJW

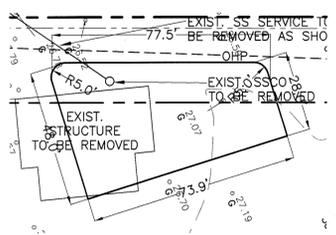
C4
SHEET 4 OF 5
13016



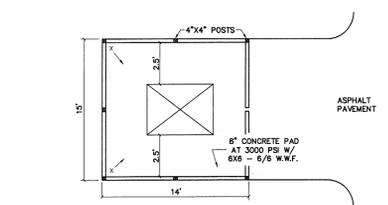
INFILTRATION BASIN SECTION
NTS



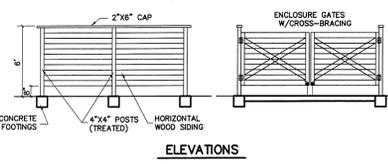
SECTION A - A
INFILTRATION BASIN OUTLET STRUCTURE
NTS



INFILTRATION BASIN BOTTOM DIMENSIONS
1"=30'

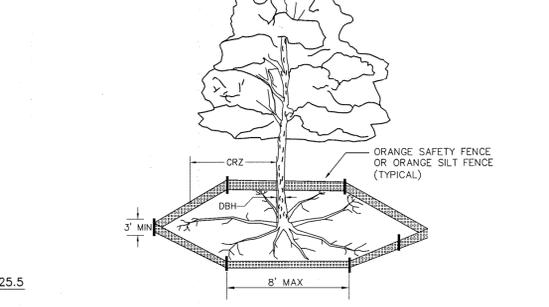


DUMPSTER PAD & ENCLOSURE DETAIL
NTS

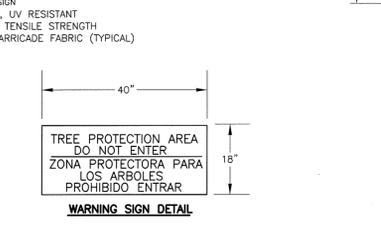
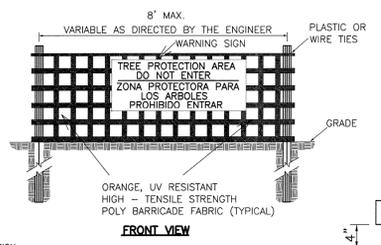


ELEVATIONS

NOTE: THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.



- NOTES:**
1. 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.
 2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
 3. 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.
 4. 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.
 5. 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.
 6. 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.

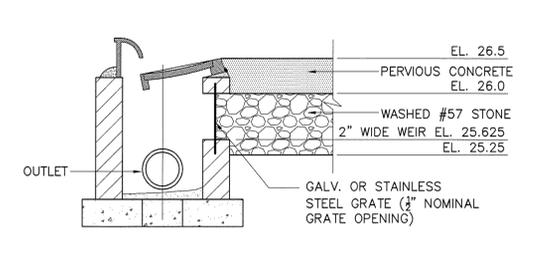
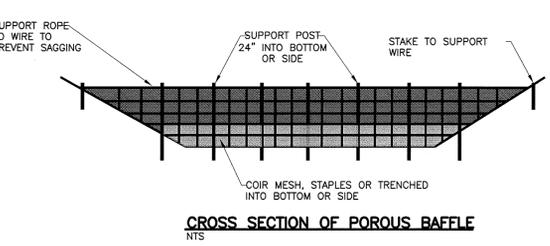


- NOTES:**
1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
 2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
 3. SIGNS SHALL BE 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.
 4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCING AND SIGNS THROUGHOUT DURATION OF PROJECT.
 5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
 6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

TREE PROTECTION DURING CONSTRUCTION SD 15-09
NOT TO SCALE

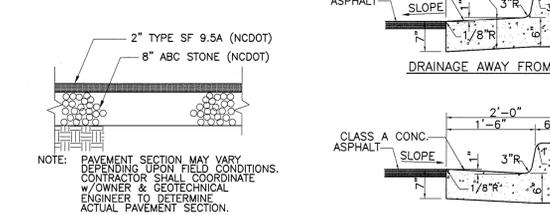
STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE _____ PERMIT # _____
SIGNED _____

- BAFFLE CONSTRUCTION SPECIFICATION:**
1. GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
 2. INSTALL THE COIR FIBER BAFFLES IMMEDIATELY UPON EXCAVATION OF THE BASINS.
 3. INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP.
 4. STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES AND SPACED A MAXIMUM OF 4 FEET APART. THE TOP OF THE FABRIC SHOULD BE 8 INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE EARTHEN EMBANKMENT.
 5. INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN 20 FEET IN LENGTH MAY USE 2 BAFFLES.
 6. ATTACH A 9 GAUGE HIGH TENSION WIRE STRAND TO THE STEEL POSTS AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION WITH PLASTIC TIES OR WIRE FASTENERS TO PREVENT SAGGING. IF THE TEMPORARY SEDIMENT BASIN WILL BE CONVERTED TO A PERMANENT STORMWATER BASIN OF A GREATER DEPTH, THE BAFFLE HEIGHT SHOULD BE BASED ON THE POOL DEPTH DURING USE AS A TEMPORARY SEDIMENT BASIN.
 7. EXTEND 9 GAUGE MINIMUM HIGH TENSION WIRE STRAND TO SIDE OF BASIN OR INSTALL STEEL T-POSTS TO ANCHOR BAFFLE TO SIDE OF BASIN AND SECURE TO VERTICAL END POSTS.
 8. DRAPE THE COIR FIBER MAT OVER THE WIRE STRAND MOUNTED AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION. SECURE THE COIR FIBER MAT TO THE WIRE STRAND WITH PLASTIC TIES OR WIRE FASTENERS. ANCHOR THE MATTING TO THE SIDES AND FLOOR OF THE BASIN WITH 12 INCH WIRE STAPLES, APPROXIMATELY 1 FT APART, ALONG THE BOTTOM AND SIDE SLOPES OF THE BASIN.
 9. DO NOT SPLICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE BASIN.
 10. ADJUSTMENTS MAY BE REQUIRED IN THE STAPLING REQUIREMENTS TO FIT INDIVIDUAL SITE CONDITIONS.

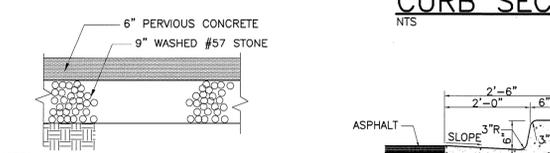


CURB INLET AT PERVIOUS CONCRETE
NTS

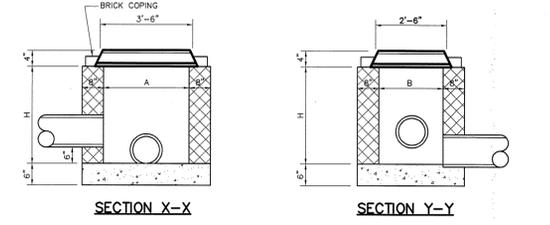
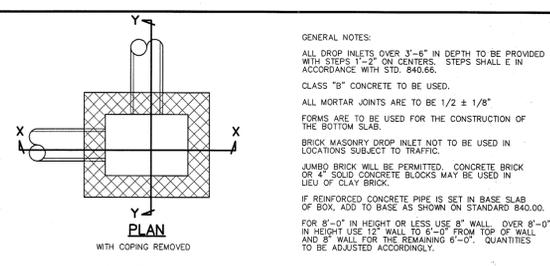
TURN DOWN SIDEWALK
NTS



ASPHALT SECTION
NTS

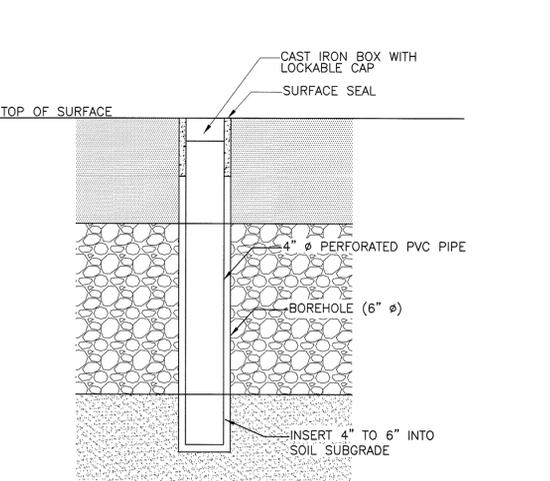


PERVIOUS CONCRETE PAVEMENT SECTION
NTS

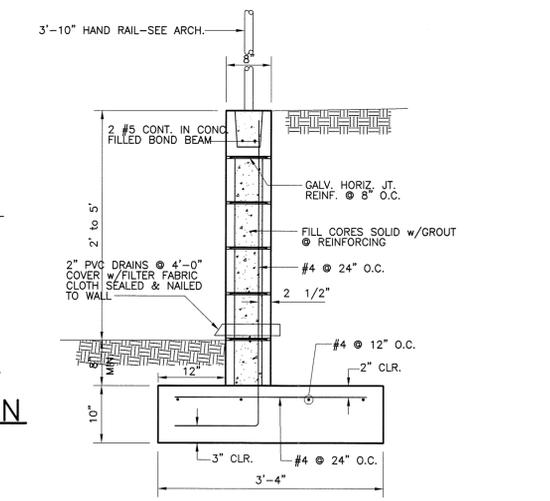


DIMENSIONS OF BOX & PIPE		DIMENSIONS AND QUANTITIES		DEDUCTIONS FOR ONE PIPE			
PIPE D	SPAN A	WIDTH B	HEIGHT H	PER FT. IN BASE	PER FT. BRICK MIN. COPIING	C.M.	R.C.
12"	3'-0"	2'-0"	2'-6"	0.267	0.313	0.037	0.871
15"	3'-0"	2'-0"	3'-0"	0.267	0.313	0.037	0.976
18"	3'-0"	2'-0"	3'-6"	0.267	0.313	0.037	1.106
24"	3'-0"	2'-0"	4'-0"	0.267	0.313	0.037	1.289
30"	3'-0"	2'-0"	4'-3"	0.267	0.313	0.037	1.367

NCDOT DROP INLET DETAIL
NTS

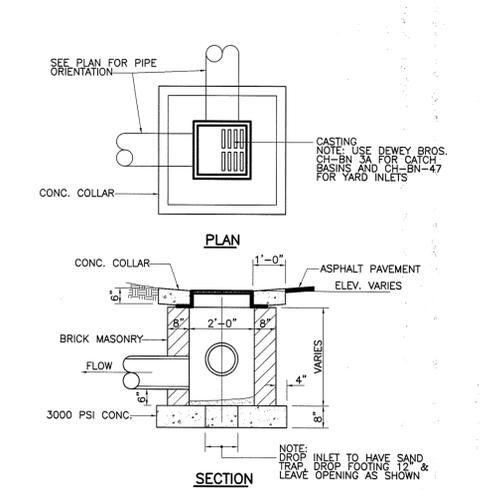


OBSERVATION WELL DETAIL
NTS

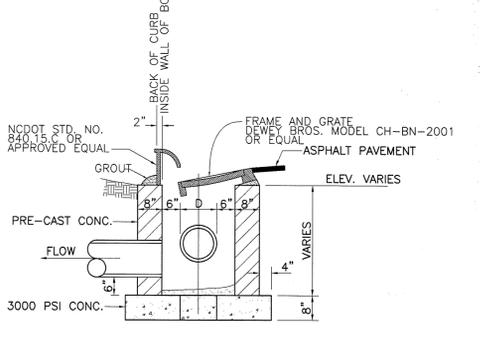


TYPICAL RETAINING WALL SECTION
NTS

CONTRACTOR TO SUBMIT SHOP DRAWINGS TO NEW HANOVER COUNTY FOR THE RETAINING WALL PRIOR TO CONSTRUCTION.

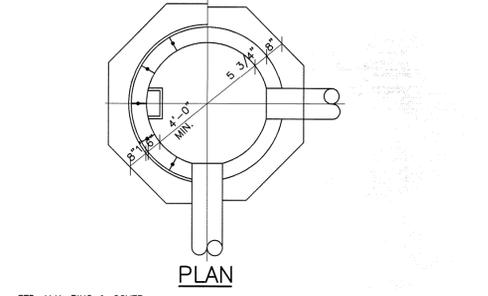


DROP INLET DETAIL
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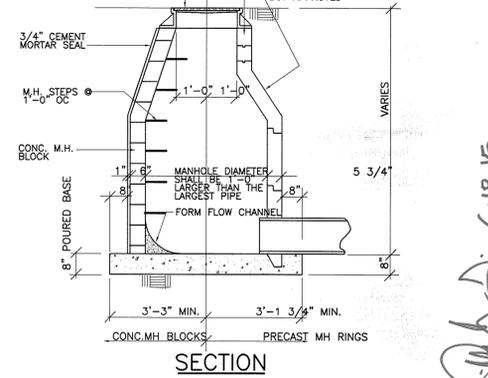


CURB INLET DETAIL
NTS

- NOTES:**
1. CONTRACTOR MAY USE BRICK WITH MAX. CORBEL 1" PER COURSE
 2. CONTRACTOR MAY USE ECCENTRIC M.H. UNIT



STORM DRAIN MANHOLE DETAIL
NTS

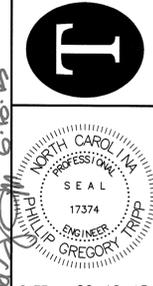


STORM DRAIN MANHOLE DETAIL
NTS

REVISIONS		
No.	Date	Description
R2	07.02.15	ADD NEW AND EXISTING
R3	07.16.15	ADD ASPHALT SECTION

DETAILS AND NOTES
AIRLIE OFFICES
1613 MILITARY CUTOFF ROAD
WILMINGTON, NORTH CAROLINA

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DATE 06-18-15
DESIGN PGT
DRAWN EJW

C5
SHEET 5 OF 5
13016