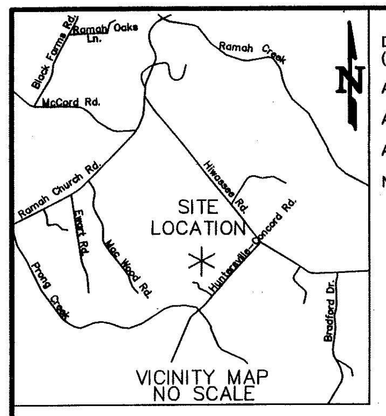


VICINITY MAP
NO SCALE

DESIGNATED TREESAVE = 19,003 SF
(AT TIME OF PLAT RECORDING)

AREA REMOVED FOR LID MEASURES = 2,747 SF

ADDED IN SIDE YARD = 1,159 SF

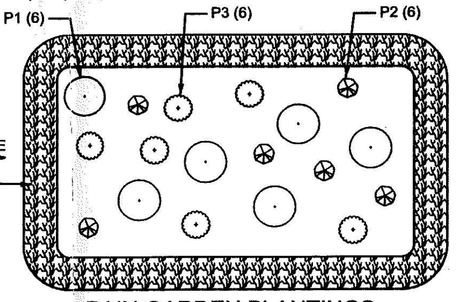
ADDED IN FRONT YARD = 1,654 SF

NET GAIN = 66 SF

RAIN GARDEN PLANTINGS:

2000 SHRUBS/AC = 2000 x (392/43560) = 18

P1 (6 EA) ARONIA MELANOCARPA (BLACK CHOKEBERRY)
P2 (6 EA) CLETHRA ALNIFOLIA (SWEET PEPPERBUSH)
P3 (6 EA) MUHLENBERGIA CAPILLARIS (PINK MUHLY GRASS)



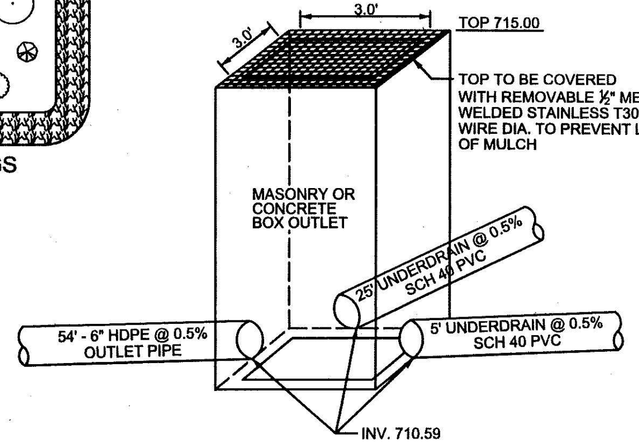
RAIN GARDEN PLANTINGS
N.T.S.

NAME OF DEVELOPMENT: THE PAVILION
LOT 7
PIN 01924318
13408 PAVILION ESTATES DRIVE
HUNTERSVILE, NORTH CAROLINA
WATERSHED: CLARKE
FEMA PANEL: 3701580088E - OUTSIDE
ZONING: R
OWNER OF RECORD: SIMONINI BUILDERS OF NC, LLC
CLIENT: KILLIAN SIMONINI, LLC
LOT SIZE: 1.45 AC - 63,211 SF

NOTES:
DEED FOR THIS PARCEL SHALL BE RERECORDED TO INCLUDE A REFERENCE TO THE BMP AND IT'S MAINTENANCE. A COPY OF THE RECORDED DEED SHALL BE PROVIDED TO MECKLENBURG COUNTY LUESA PRIOR TO ISSUANCE OF C.O.

TREE SAVE SHALL BE REVISED AND REPLATTED PRIOR TO ISSUANCE OF C.O.

OUTLET STRUCTURE DETAIL
N.T.S.



MAINTENANCE RESPONSIBILITIES.
TOWN OF HUNTERSVILLE WATER QUALITY DESIGN MANUAL 7/26/2007 ED.
SECT. 8.5.2.

BMPS THAT ARE CONSTRUCTED ON PRIVATELY-OWNED LAND AND THAT ARE NOT WITHIN A PUBLIC EASEMENT SHALL BE MAINTAINED BY A HOMEOWNERS ASSOCIATION OR THE OWNER OF THE SUBJECT PROPERTY. BMPS THAT ARE CONSTRUCTED ON PUBLIC LAND WITHIN PUBLIC RIGHTS-OF-WAY, AND/OR WITHIN PUBLIC EASEMENTS SHALL BE MAINTAINED BY THE PUBLIC BODY WITH OWNERSHIP/JURISDICTION OF THE SUBJECT PROPERTY. THE FOLLOWING REQUIREMENTS SHALL BE MET FOR ALL BMPS THAT HAVE BEEN CONSTRUCTED ON PRIVATELY-OWNED PROPERTY AND NOT WITHIN A PUBLIC EASEMENT.

A.MAINTENANCE COVENANTS. PRIOR TO THE ISSUANCE OF AN OCCUPANCY PERMIT FOR ANY BUILDING WITHIN A PERMITTED DEVELOPMENT SERVED BY A BMP, THE APPLICANT OR OWNER OF THE BMP SHALL ESTABLISH A FORMAL MAINTENANCE COVENANT APPROVED BY THE MECKLENBURG COUNTY LAND USE AND ENVIRONMENTAL SERVICES AGENCY AND RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS IN WHICH THE OWNER ACKNOWLEDGES THE DUTY OF THE OWNER AND ALL SUBSEQUENT OWNERS OF THE PROPERTY TO MAINTAIN THE BMP IN ACCORDANCE WITH THE TERMS OF THE COVENANT. A MAINTENANCE PLAN AND SCHEDULE SHALL BE INCLUDED AS PART OF THE COVENANT AS WELL AS A MECHANISM FOR FUNDING MAINTENANCE AND REPAIRS. THE MAINTENANCE COVENANT SHALL ALSO SPECIFY THE HOMEOWNERS ASSOCIATION OR SIMILAR LEGAL ENTITY HAS THE POWER TO COMPEL CONTRIBUTIONS FROM RESIDENTS OF A DEVELOPMENT TO COVER THEIR PROPORTIONATE SHARES OF A TYPICAL MAINTENANCE COVENANT. APPENDIX H CONTAINS AN EXAMPLE MAINTENANCE PLAN AND INSPECTION CHECKLISTS.

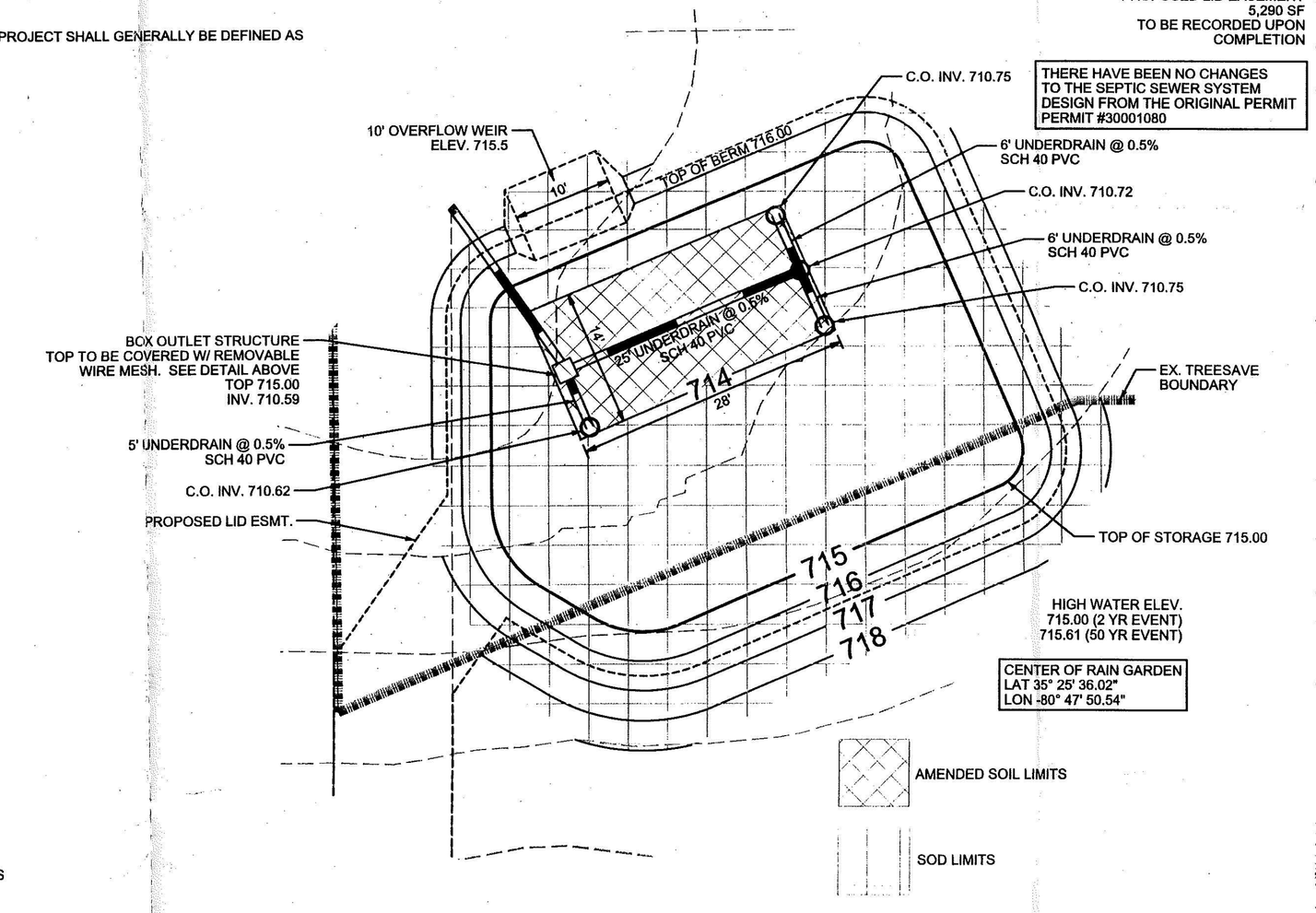
B.REQUIREMENTS FOR THE MAINTENANCE COVENANTS. BMPS SHALL BE INSPECTED AT A MINIMUM OF ANNUALLY BY A QUALIFIED PROFESSIONAL AS DESCRIBED IN THE MAINTENANCE COVENANT. THE PURPOSE OF THIS INSPECTION IS TO IDENTIFY MAINTENANCE AND REPAIR NEEDS TO ENSURE THE LONG-TERM FUNCTIONALITY OF THE BMP. ANY IDENTIFIED MAINTENANCE AND/OR REPAIR NEEDS SHALL BE ADDRESSED IN A TIMELY MANNER. THE INSPECTION AND MAINTENANCE REQUIREMENT MAY BE INCREASED AS DEEMED NECESSARY BY THE MECKLENBURG COUNTY WATER QUALITY PROGRAM (MCWQP) TO ENSURE PROPER FUNCTIONING OF THE BMP.

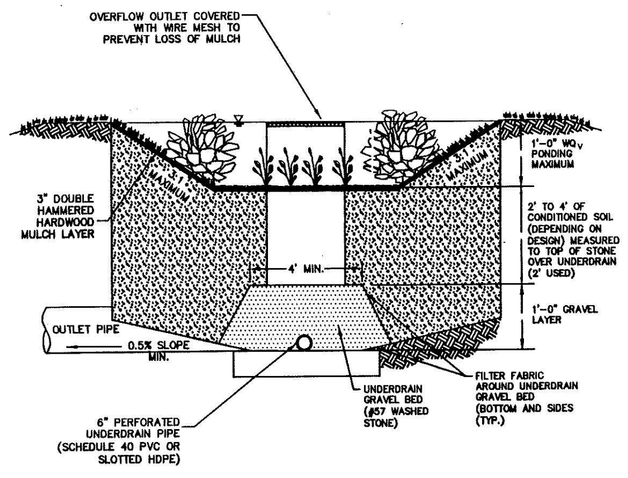
C.RECORDS OF INSTALLATION AND MAINTENANCE ACTIVITIES. PARTIES RESPONSIBLE FOR THE INSPECTION, OPERATION AND MAINTENANCE OF A BMP SHALL MAINTAIN RECORDS OF THE INSTALLATION OF ALL THE MAINTENANCE AND REPAIRS AND SHALL RETAIN THE RECORDS FOR THE LIFE OF THE BMP. AFTER INSPECTIONS AND MAINTENANCE HAVE BEEN PERFORMED, A COPY OF THE INSPECTION CHECKLIST (SEE APPENDIX H) SHALL BE FORWARDED BY THE OWNER TO MCWQP WITHIN TWO WEEKS OF THE INSPECTION. MCWQP STAFF WILL FILE SUBMITTED DATA BASE TO TRACK INSPECTIONS AND MAINTENANCE PERFORMED. ALL INSPECTION CHECKLISTS ARE TO BE MAILED TO 700 NORTH TRYON STREET, CHARLOTTE, NC 28202, ATTENTION: WATER QUALITY PROGRAM.

WATERING AND MAINTENANCE RESPONSIBILITIES DURING DIFFERENT PHASES OF A PROJECT SHALL GENERALLY BE DEFINED AS FOLLOWS, UNLESS CONTRACTUAL OBLIGATIONS REQUIRE OTHERWISE:
·CONSTRUCTION PHASE: DEVELOPER/BUILDER
·PROJECT ACCEPTANCE: BUILDER
·PROPERTY OWNERSHIP TRANSFER: BUILDER/PROPERTY OWNER
·WARRANTEE PHASE: PROPERTY OWNER
·OPERATION PHASE: PROPERTY OWNER/HOMEOWNERS ASSOCIATION

ENLARGED DETAIL
1"=10'

RAIN GARDEN - 392 SF
TOP OF STORAGE 715.00
TOP OF MULCH 714.00
STORAGE AT 715.00=1350 CF
STORAGE AT 716.00=3485 CF





NOTES:
1.EXCAVATE THE RAIN GARDEN TO THE DESIGN DIMENSIONS.
2.PLACE NON-WOVEN FILTER FABRIC (MIRAFI 140 OR EQUAL FILTER FABRIC) ACROSS THE BOTTOM OF THE EXCAVATION IN LOCATIONS FOR UNDERDRAINS.
3.INSTALL UNDERDRAIN SYSTEM ON TOP OF THE FILTER FABRIC IN THE BOTTOM OF THE EXCAVATION. DOUBLE WALL HDPE CORRUGATED PLASTIC PIPE IS RECOMMENDED DUE TO ITS RIGIDITY AND LONG LIFE EXPECTANCY. OTHER PIPE MATERIALS MAY BE SUBSTITUTED AT THE DESIGNER'S DISCRETION AND WITH THE INSPECTOR'S APPROVAL.
4.INSTALL CLEANOUT STANDPIPES AND OUTLETS TO THE UNDERDRAIN. THE CLEANOUT STANDPIPES MUST BE LOCATED AT THE UPPER END OF THE STRUCTURE AND BE CAPPED ABOVE THE WATER LEVEL ELEVATION. THE CLEANOUTS SHOULD CONSIST OF RIGID NON-PERFORATED PVC PIPE, 6 INCHES IN DIAMETER.
5.PLACE #57 WASH STONE (GRAVEL) OVER THE UNDERDRAIN TO A DEPTH OF 12 INCHES AND WIDTH OF 4 FEET.
6.PLACE FILTER FABRIC OVER THE GRAVEL BED TO FULLY ENCLOSE IT ON THE TOP, BOTTOM AND SIDES.
7.BACKFILL WITH A SOIL MIXTURE CONTAINING 80% WHITE MORTAR SAND AND 20% ORGANIC MATERIAL (COMPOST, TOPSOIL) TO A DEPTH OF 2 TO 4 FEET (DEPENDING ON DESIGN) MEASURED FROM THE TOP OF THE STONE OVER THE UNDERDRAIN. SOIL MUST PASS SEIVE TEST AND PHOSPHOROUS TEST. SOIL MUST NOT BE INSTALLED UNTIL ALL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED AND APPROVED BY THE INSPECTOR. NOTE: SOIL MIXTURE MUST BE PLACED IN LIFTS OF 12 INCHES AND WATERED UNTIL WATER FLOWS OUT OF UNDERDRAIN BEFORE PLACING NEXT LAYER. NO HEAVY EQUIPMENT IS ALLOWED IN THE BASIN AREA.
8.INSTALL VEGETATION AS PER APPROVED PLANS.
9.PLACE MULCH ON TOP OF THE SOIL MIXTURE TO A DEPTH OF 3 INCHES. MULCH IS TO BE DOUBLE HAMMERED, SCREENED HARDWOOD.
10.STABILIZE THE SLOPES DRAINING TO THE RAIN GARDEN WITH GRASS SOD TO A MINIMUM WIDTH OF 14 FEET AND SURROUND THE STRUCTURE WITH SILT FENCE UNTIL DRAINAGE AREA IS FULLY VEGETATED TO PREVENT SEDIMENT FROM CONTAMINATING THE SOIL MIXTURE.
11.AN ENERGY DISPERSION DEVICE IS REQUIRED FOR CONCENTRATED FLOW ENTERING THE STRUCTURE.
12.REFER TO SECTION 4.1 OF THE MECKLENBURG COUNTY BMP DESIGN MANUAL FOR SPECIFIC DESIGN CRITERIA FOR RAIN GARDENS/BIORETENTION SYSTEMS.

TYPICAL BIORETENTION 85% TSS REMOVAL
N.T.S.

NOTES:
1. OWNER/CLIENT RESERVES THE RIGHT TO MAKE LAYOUT CHANGES WITHIN THOSE ALLOWED BY THE ENGINEERING AND ZONING ORDINANCE OF HUNTERSVILLE, MECKLENBURG COUNTY, NORTH CAROLINA.
2. NO MORE THAN 9,250 SF OF IMPERVIOUS AREA IS ALLOWED ON THIS LOT.
3. OWNER/CLIENT MUST COMPLY WITH APPLICABLE SECTIONS OF THE TOWN OF HUNTERSVILLE WATER QUALITY DESIGN MANUAL JULY 26, 2007 EDITION. IN ADDITION OWNER/CLIENT IS REQUIRED TO PROVIDE EASEMENT AND MAINTENANCE AGREEMENT TO SATISFY THE ABOVE REFERENCED MANUAL.
4. OWNER/CLIENT IS RESPONSIBLE FOR PERIODIC INSPECTION AND MAINTENANCE OF ALL MEASURES INSTALLED. WHEN REQUIRED BY THE ORDINANCE AND DESIGN MANUAL, QUALIFIED PROFESSIONALS SHALL BE RETAINED TO PROVIDE THE APPROPRIATE DOCUMENTATION.
5. OWNER/CLIENT SHALL BE RESPONSIBLE TO VERIFY THAT MEASURES HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLAN.
6. FIELD ADJUST TO MAINTAIN THE MINIMUM 25' SEPARATION BETWEEN SEPTIC FIELD AND TOP OF RAIN GARDEN (MAX. POND LEVEL).
7. SEPTIC FIELD LOCATED BY S&ME. OWNER TO OBTAIN ALL SEPTIC AND WELL PERMITS. OWNER TO COORDINATE INSTALLATION WITH REQUIRED AGENCIES.
8. REVISIONS TO THE TREE SAVE LINE DUE TO FIELD ADJUSTMENTS SHALL BE MADE AND REPLATTED.
9. ALL CLEARING LIMITS SHALL BE CLEARLY MARKED PRIOR TO BEGINNING CLEARING AND OR CONSTRUCTION.

BMP Inset Table
Bioretention Garden

Project Name:	The Pavilion - Lot 7
Sequence ID:	7
Surface Area (sq. ft.):	392
Drainage Area (acres):	0.79
Land Use/Development Type:	.05-2 ac Residential
Percent Built-Upon Area:	14.6
Maximum Pool Depth (ft.):	1
Sand Depth (ft.):	2
Mulch Depth (in.):	3
Flow Diverter Present (Y/N):	N
Regulated By:	LID Huntersville
Treatment Effectiveness:	Standard
NC State Plane X (easting):	1464592.26
NC State Plane Y (northing):	615062.63

NOTES:
DEED FOR THIS PARCEL SHALL BE RERECORDED TO INCLUDE A REFERENCE TO THE BMP AND IT'S MAINTENANCE. A COPY OF THE RECORDED DEED SHALL BE PROVIDED TO MECKLENBURG COUNTY LUESA PRIOR TO ISSUANCE OF C.O.

TREE SAVE SHALL BE REVISED AND REPLATTED PRIOR TO ISSUANCE OF C.O.

HOUSE FOUNDATION IS TO FOLLOW EXISTING GRADE TO MINIMIZE CLEARING. ELEVATIONS SHOWN ARE A GUIDELINE TO SHOW THAT THE FOOTPRINT AND ASSOCIATED DRIVEWAY CAN WORK WITH THE LOT LAYOUT AND EXISTING GRADES.

NOTE: TREE REMOVAL GREATER THAN 6" TO BE APPROVED BY HOME OWNER'S ASSOCIATION

THE HOUSE/DRIVEWAY/SIDEWALK SHOWN IS AN APPROXIMATE LAYOUT FOR DESIGN PURPOSES. ACTUAL HOUSE LAYOUT WILL VARY. THE BMP HAS BEEN DESIGNED FOR 9,250 SF OF IMPERVIOUS AREA. ACTUAL LOT IMPERVIOUS AREA IS NOT TO EXCEED 9,250 SF.

AERIAL TOPOGRAPHY WAS USED TO DO THIS DESIGN. CONTRACTOR IS TO FIELD VERIFY EXISTING TOPOGRAPHY PRIOR TO ANY CONSTRUCTION TO CONFIRM DESIGN ELEVATIONS.

PROPOSED LID EASEMENT
5,290 SF
TO BE RECORDED UPON COMPLETION

THERE HAVE BEEN NO CHANGES TO THE SEPTIC SEWER SYSTEM DESIGN FROM THE ORIGINAL PERMIT PERMIT #30001080

LOT #7

APPROVED AS NOTED
* SEE NOTE TO LEFT
Approved Storm Drainage
8/6/2009
Date
Designation

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CHARLOTTE-MECKLENBURG LAND DEVELOPMENT STANDARDS MANUAL

PRELIMINARY SUBDIVISION PLAN APPROVED BY THE TOWN OF HUNTERSVILLE
Planning Dir.
8/6/09
Date

INV. 710.32
10' STORM DRAINAGE EASEMENT
TREESAVE AREA
50' REAR YARD/UNDISTURBED BUFFER
54' - 6" HDPE @ 0.5% MINIMAL DISTURBANCE TO INSTALL
EX. TREESAVE BOUNDARY
BIORETENTION LT7 RAIN GARDEN
3/4" DOMESTIC UNDERGROUND WATER SERVICE FROM WELL
12' SIDEYARD
12' SIDEYARD
LOT 7
1.45 AC
63,211 SF
APPROXIMATE RESIDENCE LAYOUT
MAX. IMPERVIOUS ALLOWED 9,250 SF
1159 SF TREESAVE ADDED
NOTE: ROOF DRAINS MUST OUTLET TO SWALES OR YARD INLETS AND BE TREATED BY BMP'S. THIS MUST BE VERIFIED BY LID INSPECTOR PRIOR TO RELEASE OF C.O.
4' SIDEWALK
PANEL BLOCK REPAIR
86' PRIMARY
12'
DRIVEWAY
1654 SF TREESAVE ADDED
20' - 15" RCP
FES BOTH ENDS
INV. UP 737.80
INV. DN 737.14
TIE TO EXISTING ROAD CONTRACTOR TO FIELD VERIFY ELEVATION AND COORDINATE ENTRANCE WITH HUNTERSVILLE
24.0
27.50
33.67
33.52
33.42
33.40
44.68'
32.0
100'
60'
40'
25'
12'

0 10 20 40
GRAPHIC SCALE
SCALE: 1" = 20'

NO.	DATE	REVISIONS REMARKS
1	06-04-09	ADDRESSED COMMENTS
2	07-01-09	ADDRESSED COMMENTS
3	07-30-09	ADJUSTED AMENDED SOIL AREA

DATE: 04-01-2009
TECHNICIAN: SCD
CHECKED BY: AKS
SCALE: 1"=20'
PROJECT NO.
DRAWING TITLE: Lot 7.pzh

SHEET NO. 1 OF 2

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030181 ANTHONY K. SNYDER
7.27.09

CLIENT
LOT 7 PAVILION
KILLIAN SIMONINI , LLC
1910 SOUTH BLVD., SUITE 200
CHARLOTTE, NC 28203

TASK
SITE LAYOUT & DETAILS

LOT 7

INSITE Engineering & Surveying
8041 Corporate Center Drive
Suite 200
Charlotte, NC 28226
Phone: (704) 540-4706
Fax: (704) 540-4708