

VICINITY MAP
NTS

POINT OF ANALYSIS - 3
2.09 ACRES
1.08 ACRES IMPERVIOUS
CN = 81
TC = 0.74 MIN < 5.0 MIN

POINT OF ANALYSIS - 2
0.32 ACRES
0.0 ACRES IMPERVIOUS
CN = 61
TC = 3.3 MIN < 5 MIN

POINT OF ANALYSIS - 1
0.26 ACRES
0.0 ACRES IMPERVIOUS
CN = 63
TC = 9.2 MIN

VEGETATION:

- THE FOLLOWING CRITERIA APPLY TO VEGETATION IN AND AROUND THE WET POND:
1. THE DAM STRUCTURE, INCLUDING FRONT AND BACK EMBANKMENT SLOPES, OF THE POND SHALL BE VEGETATED WITH NON-CLUMPING TURF GRASS; TREES AND WOODY SHRUBS SHALL NOT BE ALLOWED. AND
 2. THE VEGETATED SLOPE SHALL BE PLANTED WITH A MINIMUM OF THREE DIVERSE SPECIES OF HERBACEOUS, NATIVE VEGETATION AT A MINIMUM DENSITY OF 30 PLANTS PER 200 SQUARE FEET OF SLOPE AREA.
 3. THE WET POND DESIGN SHOULD INCLUDE A LANDSCAPE PLAN THAT HAS BEEN PREPARED BY A QUALIFIED DESIGN PROFESSIONAL LICENSED ON NORTH CAROLINA. THE LANDSCAPE PLAN SHOULD PROVIDE SPECIFICATIONS FOR THE VEGETATION SPECIES, INSTALLATION AND THE POST-INSTALLATION CARE. THE LANDSCAPE PLAN SHALL COVER THE DAM, EMBANKMENT SLOPES AND THE VEGETATED SHELF.
 4. ON THE DAM AND THE DAM AND EMBANKMENT SLOPES, TURF GRASS PROVIDES STABILITY AND ENHANCES ACCESS TO THE FACILITY FOR MAINTENANCE. DESIGN RECOMMENDS PERENNIAL GRASSES SUCH AS HYBRID BERMUDA OR CENTAUREA IN THE COASTAL PLAIN AND PIEDMONT, AND COOL SEASON TURF GRASS SUCH AS FESCUE AND BLUEGRASS IN THE MOUNTAINS. WEEPING LOVE GRASS IS NOT ALLOWED BECAUSE IT DOES NOT PROVIDE LONG-TERM SLOPE STABILIZATION.
 5. TREES AND WOODY SHRUBS SHALL NOT BE PLANTED ON THE DAM OR EMBANKMENT SLOPES AND ANY VOLUNTEERS SHOULD BE REMOVED AS PART OF REGULAR MAINTENANCE ACTIVITIES. HOWEVER, TREES AND SHRUBS MAY BE PLANTED OUTSIDE OF THE EMBANKMENT SLOPES AND CAN SERVE TO SHADE THE WET.
 6. WETLAND SEED MIXES ARE NOT ALLOWED.
 7. CONTRACTOR IS RESPONSIBLE TO COORDINATE INSTALLATION OF ALL PLANTING WITH CITY OF GREENSBORO. ALL PLANTING SIZE AND SPACING SHALL MEET NCEM AND CITY OF GREENSBORO SIZE AND SPECIFICATIONS. (SEE NCEM STORMWATER MANUAL SECTION C-3 WETPOND FOR PLANT LIST).

Post-Development Curve Numbers

Point of Analysis 1	Post-Development (CN)	Area (SF)	Area (AC)
Impervious Surface	98	0	0.00
Open Space - (Good Condition)	61	0	0.00
Woods - (Fair)	63	11,325	0.26
TOTAL:			0.26
WEIGHTED CN:			63

Point of Analysis 2	Post-Development (CN)	Area (SF)	Area (AC)
Impervious Surface	98	0	0.00
Open Space - (Good Condition)	61	13,639	0.32
Woods - (Fair)	63	0	0.00
TOTAL:			0.32
WEIGHTED CN:			61

Point of Analysis 3	Post-Development (CN)	Area (SF)	Area (AC)
Impervious Surface	98	47,000	1.08
Open Space - (Good Condition)	61	18,730	0.43
Woods - (Fair)	63	25,264	0.58
TOTAL:			2.09
WEIGHTED CN:			81

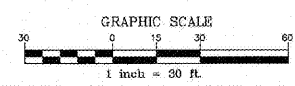
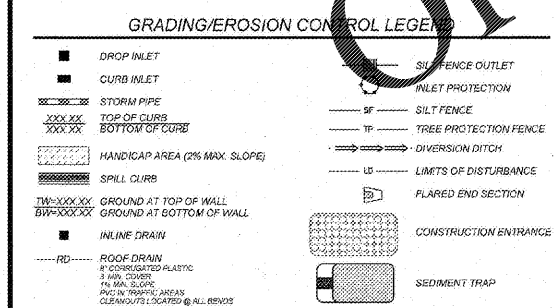
TRSS TC CALCULATIONS - POST DEVELOPMENT

POST DA-1	POST DA-2	POST DA-3
SHEET FLOW	SHEET FLOW	CHANNEL FLOW
Manning's n (ft/s) = 0.4	Manning's n (ft/s) = 0.05	Manning's n (ft/s) = 0.4
Flow Length (ft) = 100	Flow Length (ft) = 100	Wetted Perimeter (ft) = 3.92
25-year 24-hr intensity (in) = 5.87	25-year 24-hr intensity (in) = 5.87	Channel slope (ft/ft) = 3.5
Lateral slope (%) = 8.5	Lateral slope (%) = 4	Manning's velocity (ft/s) = 9.613
Travel Time (min) = 8.89	Travel Time (min) = 2.28	Velocity (ft/s) = 18.58
SHALLOW CONCENTRATED FLOW	SHALLOW CONCENTRATED FLOW	TOTAL TRAVEL TIME - T_{tc} = 0.74 min
Flow Length (ft) = 100	Flow Length (ft) = 367	
Watersource Slope (%) = 6	Watersource Slope (%) = 3	
Surface Description = Unpaved	Surface Description = Unpaved	
Average Velocity (ft/s) = 3.95	Average Velocity (ft/s) = 2.79	
Travel Time (min) = 0.96	Travel Time (min) = 1	
TOTAL TRAVEL TIME - T_{tc} = 9.25 min	TOTAL TRAVEL TIME - T_{tc} = 3.27 min	

NOTE: THE ON-SITE TIME OF CONCENTRATION (T_c) USED FOR POST-DEVELOPMENT STORMWATER DESIGN MODELING PURPOSES IS CONSERVATIVELY 3 MIN. (SEE STORMWATER REPORT FOR DETAILS)

Local Use Condition	1-year, 24-hr (CF%)	2-year, 24-hr (CF%)	10-year, 24-hr (CF%)	25-year, 24-hr (CF%)	100-year, 24-hr (CF%)
Pre-Development	1.16	2.19	5.44	7.69	11.69
Post-Dev. After Detention	0.46	1.05	4.94	6.86	9.51
Increase (+)/Decrease (-)	-0.70	-1.14	-0.50	-0.83	-2.18
	-60.34%	-52.05%	-9.19%	-10.79%	-18.30%

Area Elevation	1-year, 24-hr (CF%)	2-year, 24-hr (CF%)	10-year, 24-hr (CF%)	25-year, 24-hr (CF%)	100-year, 24-hr (CF%)
Wet Pond	773.14	773.31	773.82	774.09	774.50



Order Plans

REVISIONS

NO.	DATE	DESCRIPTION
1	05-14-19	
2	05-20-19	UPDATE BUILDING AREAS
3	05-26-19	CITY COMMENTS #2

CLIENT:
GENCAP DEVELOPMENT
210 WEST FOURTH STREET
SUITE 200
WINSTON-SALEM, NC 27101

PROJECT NO: GEM-1808
FILENAME: GEM1808-DA2
DRAWN BY: RCN
SCALE: 1" = 30'
DATE: 01-17-19
SHEET NO: DA-2

LDI Line.com

COMMERCIAL SITE DESIGN

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