



STORMWATER MANAGEMENT – WATER QUALITY

BASED ON THE AREAS OF DISTURBANCE AND GROUND COVER CONDITIONS CONTAINED IN THESE PLANS, THE REDEVELOPMENT OF THE SITE WILL REQUIRE A TOTAL PHOSPHOROUS LOAD REDUCTION OF 2.93 LB/YEAR. ADDITIONALLY, IT IS REQUIRED TO PROVIDE PHOSPHOROUS REDUCTION OF 0.55 LB/YEAR TO ACCOUNT FOR PREVIOUS DEFERMENT OF WATER QUALITY REQUIREMENTS FOR THE LOWER LAKE PATIO CONSTRUCTION AND INSTALLATION OF MISCELLANEOUS SIDEWALKS THROUGHOUT THE CAMPUS. SOME PREVIOUS SIDEWALK AND PAVILION IMPERVIOUS INCREASES AT THE J.C. THOMAS FACILITY, AS WELL AS THE CURRENT CONSTRUCTION OF A NEW COTTAGE (NOT INCLUDED HEREIN). AS SUCH, THE TOTAL REQUIRED PHOSPHOROUS LOAD REDUCTION IS 3.48 LB/YEAR OF PHOSPHOROUS REMOVAL. THIS REQUIREMENT WILL BE MET THROUGH THE PURCHASE OF NUTRIENT CREDITS FROM A VIRGINIA DEQ APPROVED NUTRIENT CREDIT BANK AUTHORIZED TO ISSUE CREDITS FOR THIS LOCATION. THE NUTRIENT CREDITS WILL BE PURCHASED DIRECTLY BY THE OWNER, WITH NO REQUIREMENT OF THE CONTRACTOR FOR THIS ITEM.

STORMWATER MANAGEMENT – QUANTITY

A NEW ABOVE-GROUND SWM DETENTION BASIN AS SHOWN HEREIN ADDRESSES THE RUNOFF QUANTITY REQUIREMENTS THROUGH MEETING THE ENERGY BALANCE EQUATION FOR THE ONE-YEAR STORM ATTENUATION (CHANNEL PROTECTION), AND BY REDUCING THE 10-YEAR POST-DEVELOPMENT RUNOFF TO LESS THAN THE 10-YEAR PRE-DEVELOPMENT RATE (FLOOD PROTECTION), IN ACCORDANCE WITH 9VAC25-870-66.

SEE SHEET C5.2 FOR DETENTION BASIN GRADING

STORM DRAIN REQUIREMENTS

UNLESS SPECIFICALLY STATED OTHERWISE, ALL NEW STORM DRAIN STRUCTURES SHALL BE PRE-CAST CONCRETE. ALL STORM DRAIN MATERIALS, FABRICATION, AND INSTALLATION SHALL BE IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.

UNLESS SPECIFICALLY STATED OTHERWISE, ALL CLOSED SYSTEM NEW STORM DRAIN PIPE SHALL BE DOUBLE-WALL SMOOTH INTERIOR HDPE PIPE (ADS TYPE "N-12" OR APPROVED EQUAL), BEDDED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. ALL CONCRETE STORM DRAIN SHALL BE VDOT CLASS III RCP, BEDDED IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.

PROVIDE ADDITIONAL TEMPORARY COVER ON ALL NEW STORM DRAIN AS REQUIRED BY MANUFACTURER'S RECOMMENDATIONS (HDPE) OR VDOT STD PC-1 (CONCRETE).

WHERE INDICATED ON PROFILE SHEETS, NEW DUCTILE IRON STORM DRAIN SHALL BE MIN. CLASS 52 WITH "TYTON" JOINTS.

NEW YARD DRAINS (2) AT NORTHERN FACE OF NEW VILLAS BUILDING SHALL BE NYLOPLAST 24" DRAIN BASINS WITH CAST IRON GRATE. SET TOP OF GRATE MIN. 8" BELOW ADJACENT SIDEWALK GRADE.

SEE EXISTING CONDITIONS AND DEMOLITION SHEETS, AND PROFILES FOR REQUIREMENTS OF NEW INTERCONNECTIONS AT SOUTHERN END OF TRC BUILDING / WESTERN END OF RRCC BUILDING.

EXCEPT AS SHOWN HEREON, ALL NEW ROOF COLLECTORS WILL BE PIPED TO STORM SYSTEMS.

SEE SHEET C5.2 FOR ROOF COLLECTOR INFORMATION

SEE SHEETS C7.1 THROUGH C7.3 FOR STORM DRAIN PROFILES

SEE SHEET C15.4 FOR NEW PERMANENT STORMWATER MANAGEMENT FACILITY



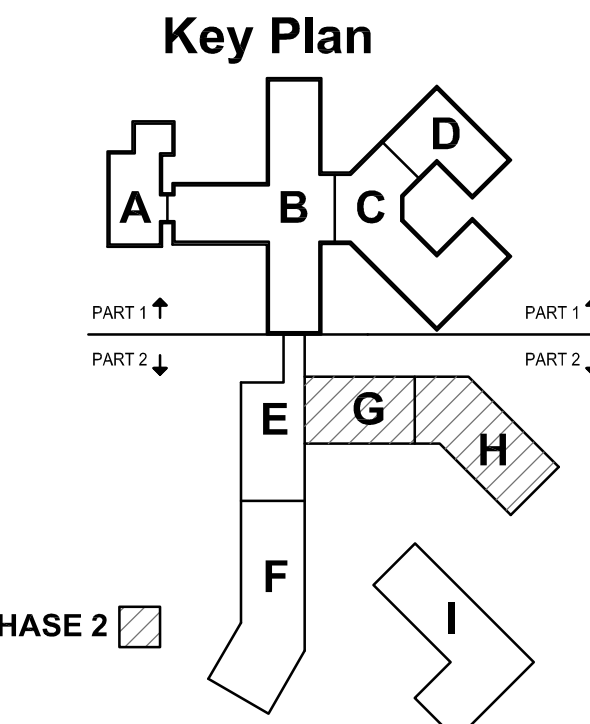
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Scale: 1" = 30'
W.O. 18-0045
Designed: C.L. White
Drawn: C.L. White



**PHASE 1-GRADING &
STORM DRAINAGE
PLAN-NORTH**

Issues and Revisions:	
10/15/2018	1ST SITE SUBMITTAL
11/09/2018	PERMIT SET
12/19/2018	PER 1ST SITE REVIEW
12/19/2018	CONSTRUCTION SET
04/02/2019	ADDENDUM 2



Commission No: 63132-17186
Drawn by:
Checked by:

SHEET

C5.1
30' 0' 30' 60'
1" = 30' GRAPHIC SCALE