# FLUVANNA COUNTY PUBLIC LIBRARY

FLUVANNA COUNTY, VIRGINIA

Fluvanna County

APPROVED FEB 2 1 2007

# **DRAWING LIST**

SHT. NO.	DESCRIPTION
C0.1	TITLE SHEET
C0.2	GENERAL NOTES
C1.1	EXISTING CONDITIONS PLAN
C1.2	EROSION & SEDIMENT CONTROL PLAN
C2.1	<b>GRADING &amp; STORMWATER MANAGEMENT PLAN</b>
C3.1	EROSION & SEDIMENT CONTROL DETAILS
C4.1	DRAINAGE PLAN

## SITE SUMMARY

Fluvanna County Board of Supervisors OWNER:

P.O. Box 299 Palmyra, VA 22963

CONTACT:

John Robins - Public Works Director

TELEPHONE:

434-591-1925 434-291-1924

LOCATION:

Rt. 53 - Pleasant Grove

JURISDICTION:

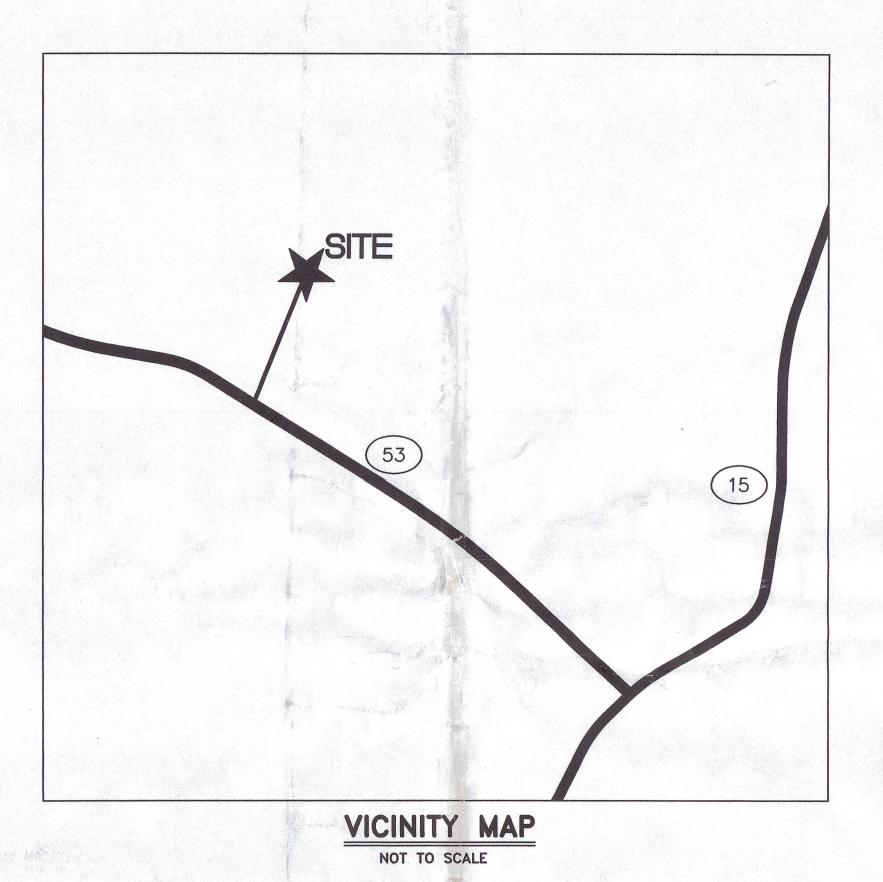
Fluvanna County

County Park (CP)

PRESENT ZONING:

# LIST OF ABBREVIATIONS

Α	AREA	MIN.	MINIMUM
AC	ACRE(S)	OP	OUTLET PROTECTION
AWWA	AMERICAN WATER WORKS ASSOCIATION	PB	PARCEL BOOK
CE	CONSTRUCTION ENTRANCE	PSI	POUNDS PER SQUARE INCH
CF	CUBIC FEET	PT	POINT OF TANGENCY
CG	CURB AND GUTTER	PVC	
CIP	CULVERT INLET PROTECTION	RCP	
CY	CUBIC YARD	R.D.	
D.B.	DEED BOOK	R/W	RIGHT-OF-WAY
DC.D.	DUST CONTROL	San.	SANITARY
DD	DIVERSION DIKE	S.F.	
D.I.	DUCTILE IRON	SF	SILT FENCE
DI	DROP INLET	SPEC.	SPECIFICATION
DIA	DIAMETER	SS	STREAM BANK STABILIZATION
DS	DOWNSPOUT	ST.	
EA	EACH	ST	SEDIMENT TRAP
EL	ELEVATION	STB	STRAW BALE BARRIER
EX.	EXISTING	STD.	STANDARD
FC	FACE OF CURB	SW	SIDEWALK
F.F.	FINISHED FLOOR	SY	SQUARE YARD
F.L.	FLOW LINE	TBM	TEMPORARY BENCH MARK
GS	GROUND SHOT	TC	TOP OF CURB
INV.	INVERT	TCF	TEMPORARY CONSTRUCTION FENCE
IP	INLET PROTECTION	TP	
LAT	LATERAL	TYP.	TYPICAL
LF	LINEAR FOOT (FEET)	VDOT	VIRGINIA DEPARTMENT OF TRANSPORTATION
MAX.	MAXIMUM	VESCH	VIRGINIA EROSION AND SEDIMENT CONTROL
МН	MANHOLE		HANDBOOK
		WV	WATER VALVE



**FEBRUARY 9, 2006** \* \* \* \* DAA PROJECT # CV06175-01

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ORIGINAL DATE OF PLANS:

# GENERAL LEGEND

	EXISTING FEATURES	
	DECIDUOUS TREE	$\odot$
	EVERGREEN TREE	*
	FIRE HYDRANT	<b>ф</b> -
	WATER METER	$\Theta$
	UNDERGROUND POWER LINE	uge
	COMMUNICATIONS VAULT (CONCRETE)	×
	SANITARY SEWER MANHOLE	<b>⊚</b>
	SANITARY SEWER LINE (SIZE INDICATED ON PLAN)	
	SIGNS	0 33
	WATERLINE	8" W
	STORM SEWER LINE	=======
	STORM SEWER YARD INLETS	
\ - - - -	STORM SEWER CURB INLETS	
	STORM SEWER ENDWALL (CONCRETE)	
	RIPRAP	
	BIRD HOUSE	
	CONCRETE	
	CURB/GUTTER	
	5' CONTOUR LINES	450
m's	1' CONTOUR LINES	
	UNDERGROUND GAS LINE (SIZE INDICATED ON PLAN)	4" G
	PROPOSED FEATURES	
	STORM DRAIN & MANHOLE	
	STORM DRAIN END SECTION (ES-1)	
	STORM DRAIN INLETS	
	SANITARY SEWER & MANHOLE	ssss
	CLEANOUT	•
	WATERLINE (SIZE)	4" W
	WATER VALVE	•
	FIRE HYDRANT	<b>+</b>
	CONTOUR LINE	100
	ASPHALT PAVEMENT	
	ASPRALI FAVEMENT	

# **APPROVALS**

DEPARTMENT	OF PLANNING AND	COMMUNITY	DEVELOPMENT		
DEPARTMENT	OF PUBLIC WORKS	5			-
FIRE OFFICER					
IRGINIA DEPA	RTMENT OF HEALT	TH •			<del></del>

NOTE: CONTRACTOR TO CONTACT MISS UTILITY (1-800-552-7001) AT LEAST 3 WORKING DAYS IN ADVANCE OF PLANNED WORK.



**m** ANN SHEET

REVISIONS

PRELIMINARY SUBMISSION PER E&S COMMENTS

CHECKED BY:

NOT TO SCALE

**FEBRUARY 19, 2007** CV06175-01

C<sub>0.1</sub>

# **EROSION AND SEDIMENT** CONTROL NOTES

- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.
- THE DIVISION OF SOIL AND WATER CONSERVATION OF 2. <u>ES-2.</u> THE DIVISION OF SOIL AND WATER CONSERVATION OF THE DEPARTMENT OF CONSERVATION AND RECREATION MUST BE NOTIFIED (804-527-4206) ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- 3. <u>ES-3.</u> ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING, GRADING OR LAND-DISTURBING AND SEQUENCE OF CONSTRUCTION APPROVED.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- PRIOR TO LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS OR OFF-SITE FILL ACTIVITIES, SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE DEPARTMENT OF CONSERVATION AND RECREATION/DIVISION OF SOIL AND WATER CONSERVATION.
- INSTALL ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY 6. <u>ES-6.</u> INSTALL ADDITIONAL EROSION CONTROL MEAS TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE DIVISION OF SOIL AND WATER CONSERVATION OF THE DEPARTMENT OF CONSERVATION AND RECREATION.
- SITE GRADING SHALL DRAIN TO THE PERIMETER CONTROLS AT 7. <u>ES-7.</u> SITE GRADING SHALL DRAIN TO THE PERIMETER CONTROLS A ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING CONSTRUCTION, UNTIL FINAL STABILIZATION IS ACHIEVED.
- INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY (AT LEAST DAILY) AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ALL NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY. MAINTAIN A LOG OF INSPECTIONS, MAINTENANCE PERFORMED AND REPAIRS MADE FOR INSPECTION BY THE OWNER AND THE DEPARTMENT OF CONSERVATION AND RECREATION/DIVISION OF SOIL AND WATER CONSERVATION.
- PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES 2. MS-2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKSHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. COORDINATE & MAINTAIN TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IN THE OPINION OF THE DIVISION OF SOIL AND WATER CONSERVATION OF THE DEPARTMENT OF CONSERVATION AND RECREATION. IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
- CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS
- 5. MS-10. ALL STORM SEWER INLETS THAT ARE MADE UPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER ALL STORM SEWER INLETS THAT ARE MADE OPERABLE CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- 6. MS-16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
- A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME. (SEE SHEET C1.06 FOR NOTES ON PERIMETER DRAIN.)
- B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT OFF SITE PROPERTY.
- D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- 7. MS-17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSEPTED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRAFFIC ONTO A MINIMIZE THE TRANSPORTED ONTO A WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED THE PAVED SURFACES. WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
- 8. MS-18. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED, AS ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE DETERMINED BY THE DIVISION OF SOIL AND WATER CONSERVATION OF THE DEPARTMENT OF CONSERVATION AND RECREATION.

- 9. MS-19 PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT
- SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA:
- A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE
- PIPE OR PIPE SYSTEM SHALL BE PERFORMED. B. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
- (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION:
  - (2) (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS;
  - (b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS;
  - (c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
- C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: (1) IMPROVE THE CHANNEL TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL
- NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE
- (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL;

THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;

- (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE PLAN-APPROVING AUTHORITY TO PREVENT DOWNSTREAM EROSION.
- D. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
- E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT OF THE SUBJECT PROJECT.
- F. THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE LOCALITY OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
- G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATERS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING
- CHANNEL. H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
- J. IN APPLYING THESE STORMWATER RUNOFF CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
- K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.

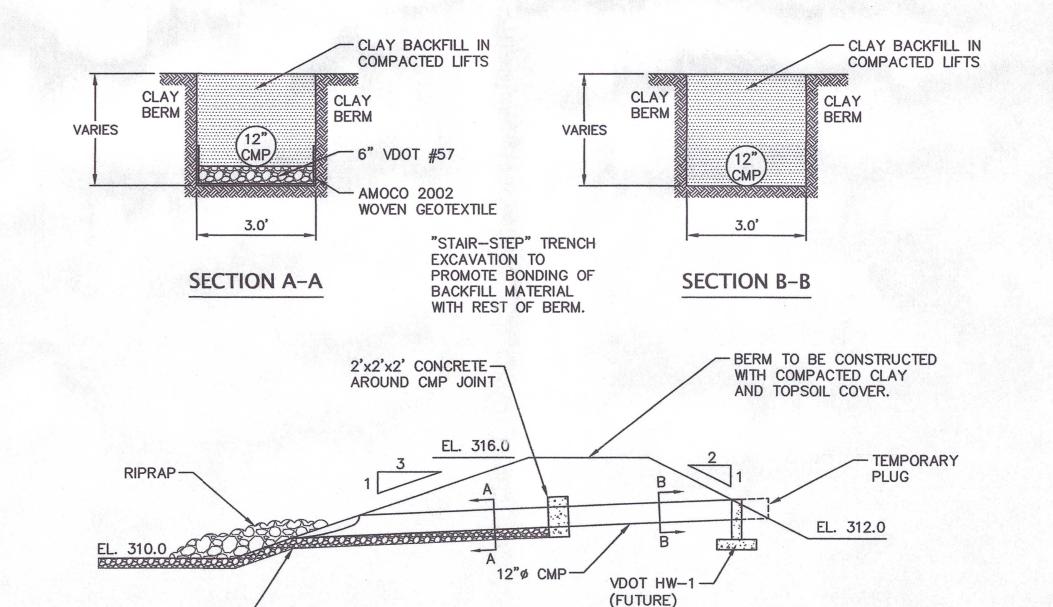
### GENERAL EROSION CONTROL NOTES

RETAIN A COPY OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, 3RD EDITION ON SITE AT ALL TIMES.

ADHERE TO THE STANDARDS LISTED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, 3RD EDITION.

### MAINTENANCE NOTE

ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED PER THE VESCH STANDARDS AND SPECIFICATIONS.



SECTION THROUGH BERM

NOTES: INSTALL PIPE ALONG WITH EROSION CONTROL MEASURES.

2. PLUG END OF PIPE INTO SEDIMENT TRAP.

3. UPON CONVERSION OF SEDIMENT TRAP TO STORMWATER MANAGEMENT FACILITY, TRIM PLUGGED END OF PIPE AND INSTALL HEADWALL.



6" VDOT #57-STONE UNDERLAIN

BY AN AMOCO 2002 WOVEN

GEOTEXTILE

STORMWATER POND OUTLET PIPE DETAIL

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(5) REVISIONS PRELIMINARY SUBMISSION

PER E&S COMMENTS

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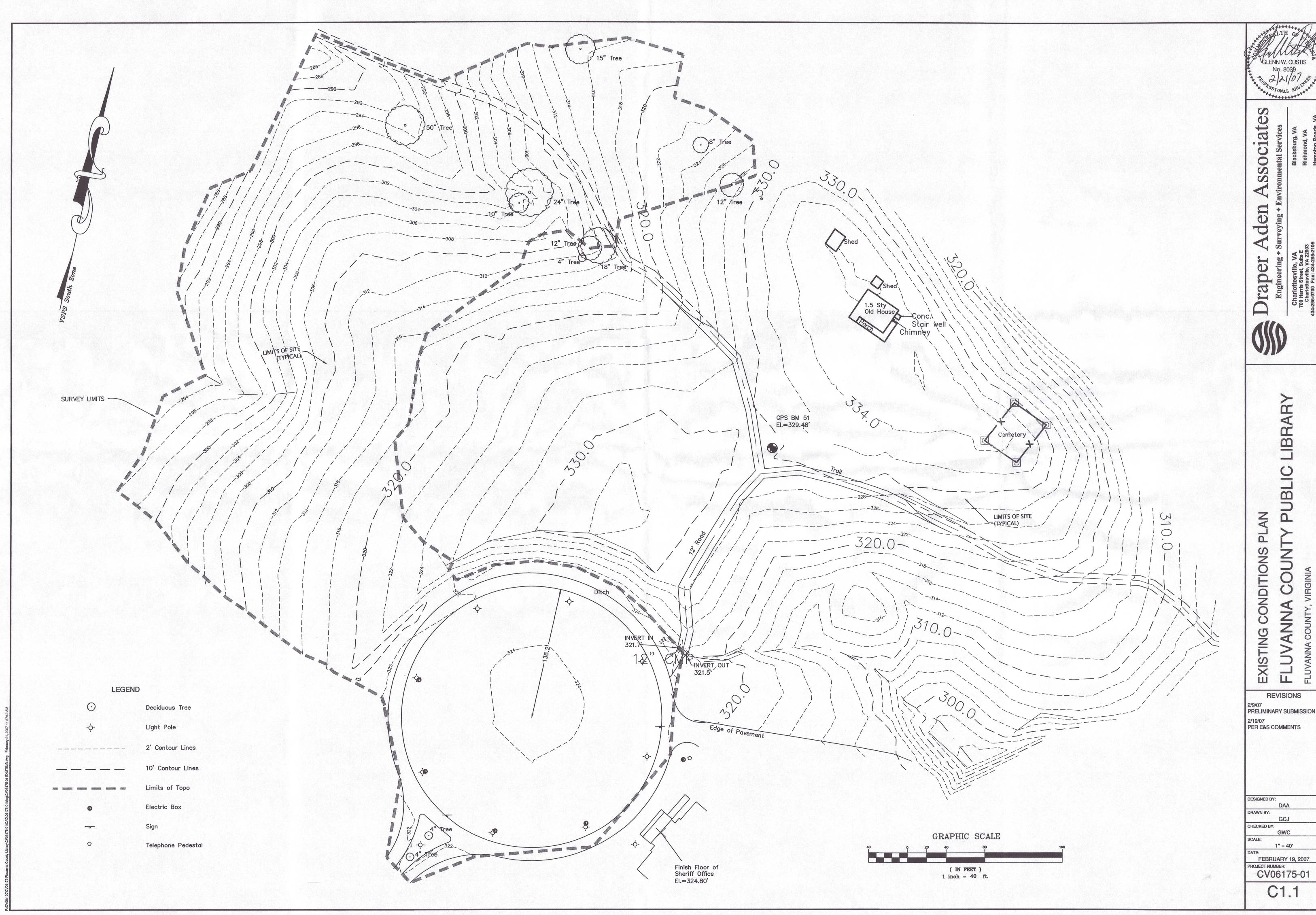
DESIGNED BY GWC RAWN BY:

GCJ CHECKED BY: GWC

SCALE: NOT TO SCALE

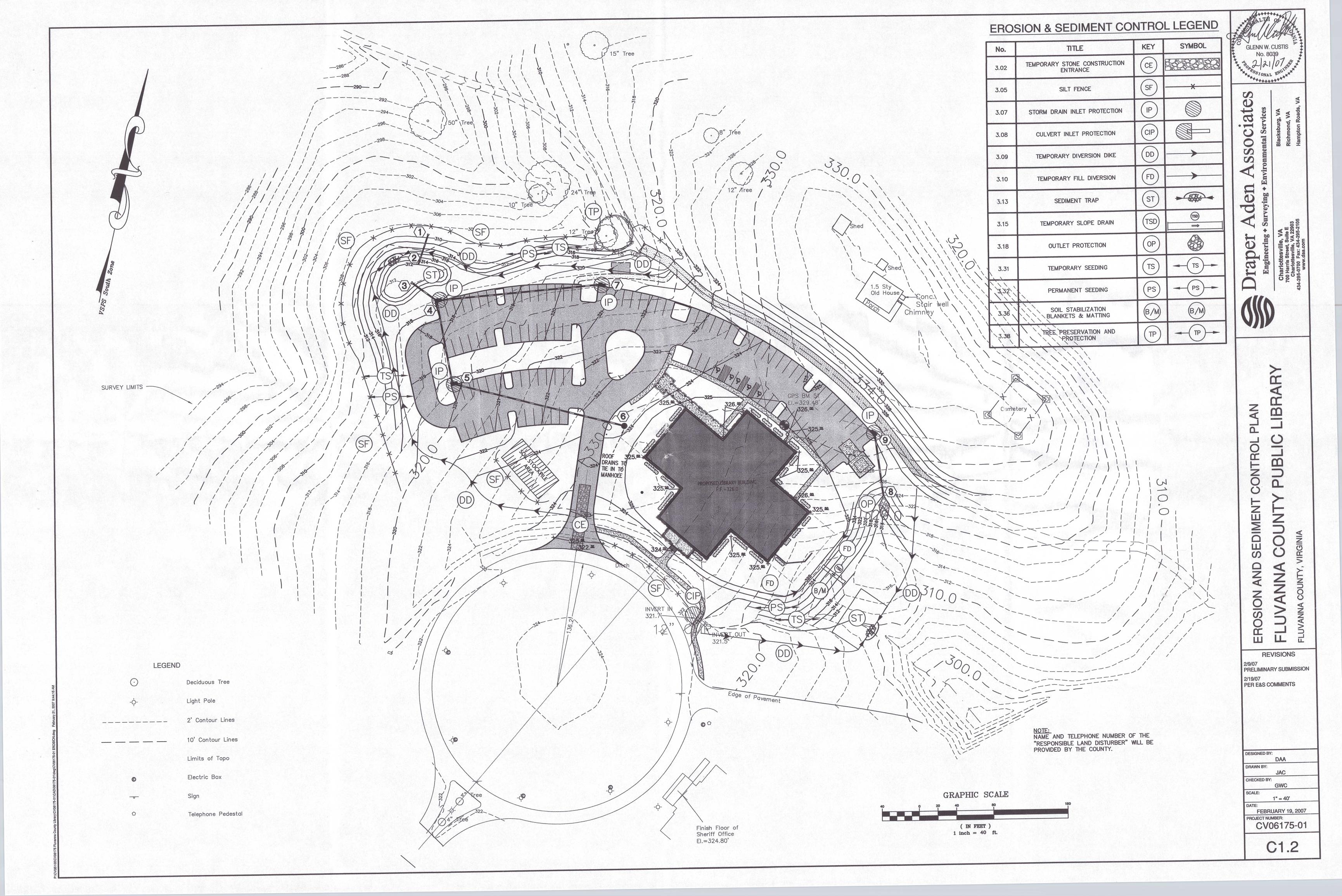
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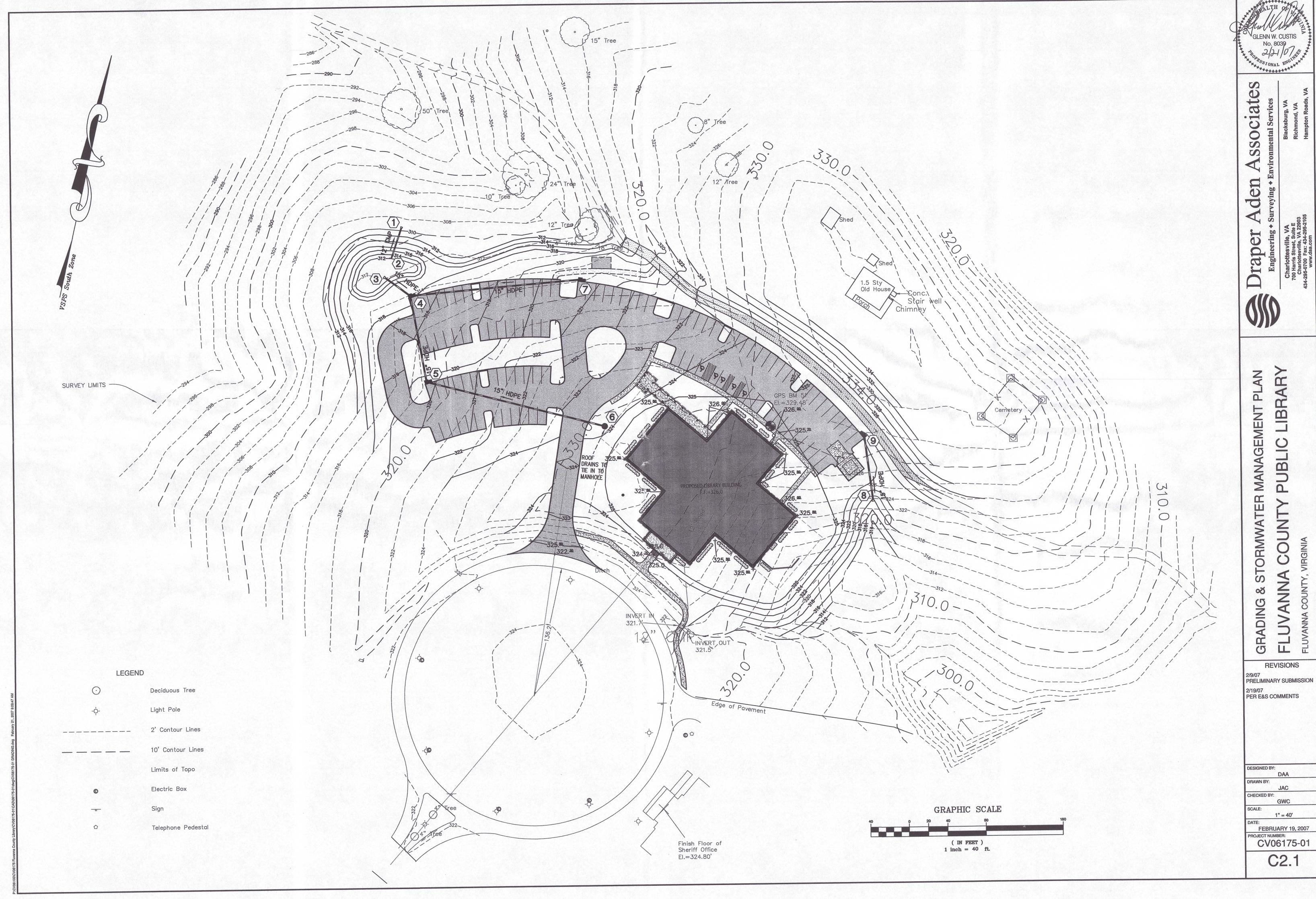
FEBRUARY 19, 2007



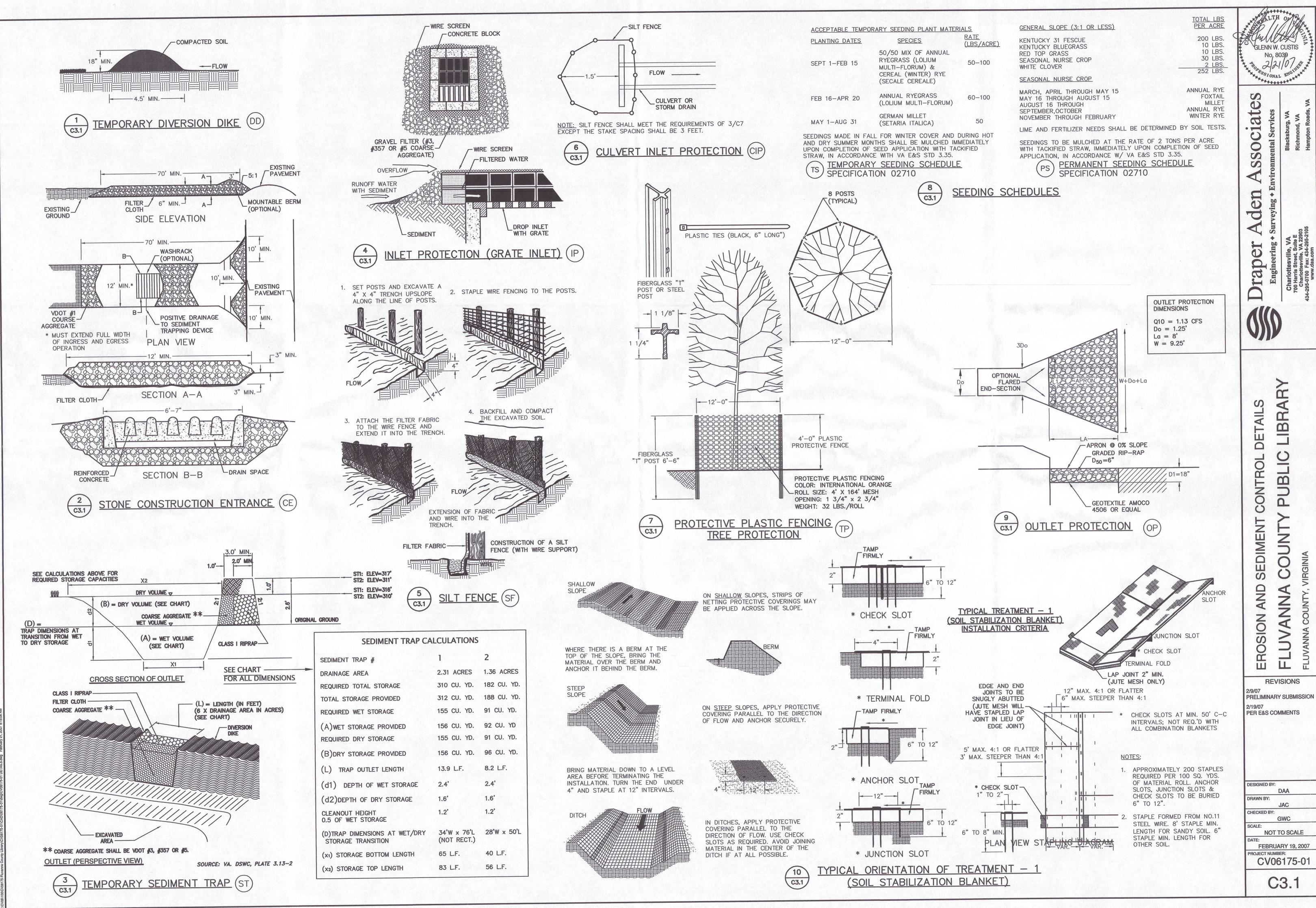
**REVISIONS** 

2/9/07 PRELIMINARY SUBMISSION 2/19/07 PER E&S COMMENTS





1" = 40' FEBRUARY 19, 2007
PROJECT NUMBER:
CV06175-01



DESIGNED BY: DAA

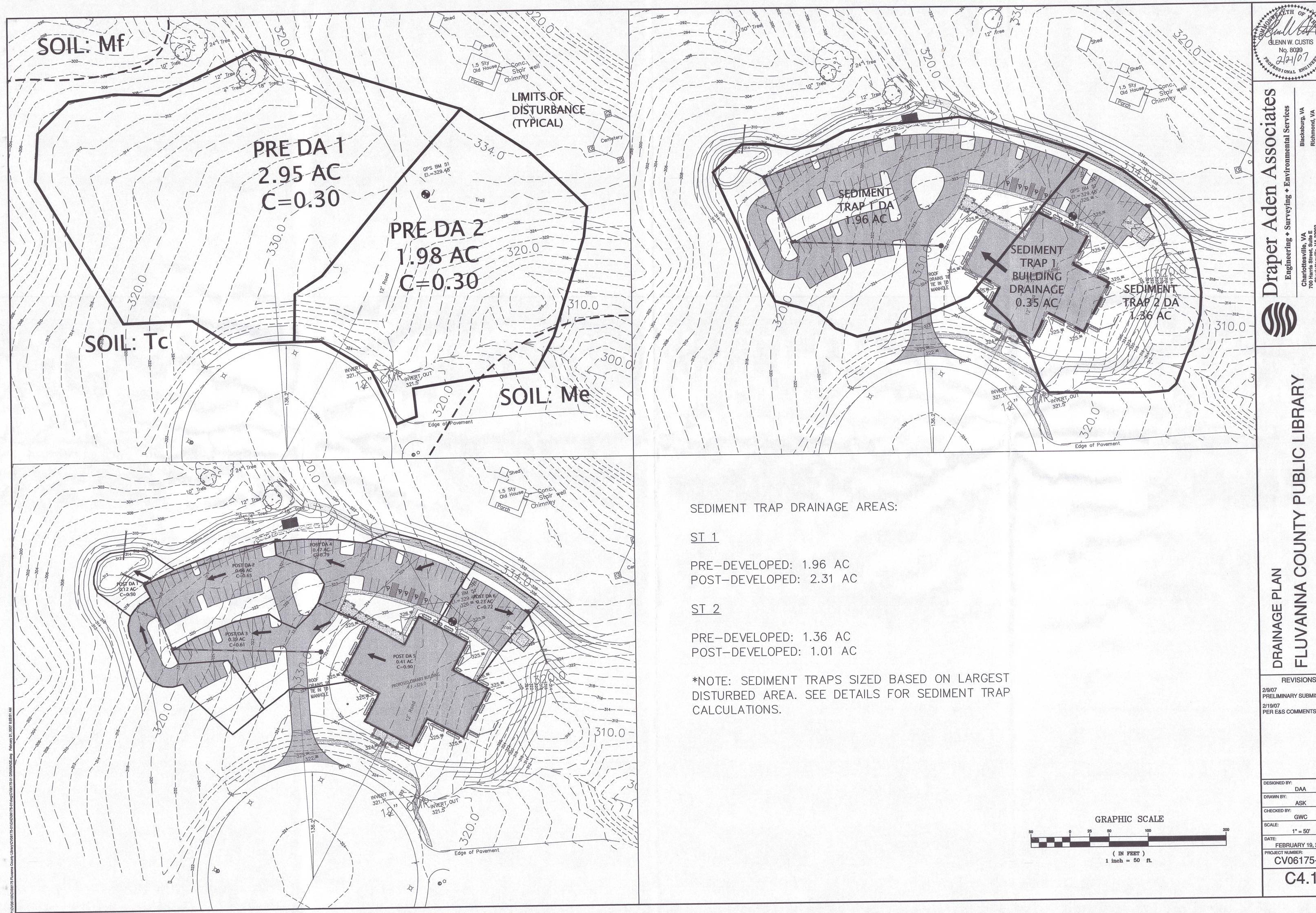
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NOT TO SCALE FEBRUARY 19, 2007

ROJECT NUMBER: CV06175-01

C3.1



REVISIONS 2/19/07 PER E&S COMMENTS

GWC

FEBRUARY 19, 2007
PROJECT NUMBER:

CV06175-01

C4.1