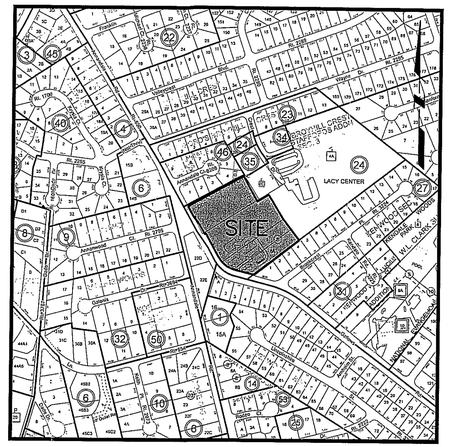
SPECIAL EXCEPTION PLAT
SEA 84-M-121-03

THE WESTMINSTER SCHOOL

APRIL 21, 2010
REV'D. DECEMBER 6, 2010



VICINITY MAP
SCALE: 1"=500'

PROJECT TEAM

OWNER/APPLICANT

WESTMINSTER SCHOOL, INC.
ATTN. ELLIS GLOVER
3819 GALLOWS ROAD
ANNANDALE, VA. 22003
PHONE: (703) 256-3620
FAX: (703) 256-9621

LAND USE ATTORNEY

WALSH, COLUCCI, LUBELY, EMRICH AND WALSH
ATTN. LYNNE STROBEL
2200 CLARENDON BOULEVARD
13TH FLOOR
ARLINGTON, VA. 22201
PHONE: (703) 528-4700
FAX: (703) 525-3197

ARCHITECT

SAMAHA ASSOCIATES, P.C.
ATTN. MARK MANETTI
9990 LEE HIGHWAY
SUITE 350
FAIRFAX, VA. 22030
PHONE: (703) 691-3311
FAX: (703) 691-3316

CIVIL ENGINEER

TRI-TEK ENGINEERING, INC.
ATTN. TED BRITT
690 CENTER STREET
SUITE 300
HERNDON, VA. 20170
PHONE: (703) 481-5900
FAX: (703) 481-5901

SHEET INDEX

1) COVER SHEET
2) NOTES & DETAILS
3) SPECIAL EXCEPTION PLAT
4) STORMWATER MANAGEMENT
5) OUTFALL ANALYSIS
6) EXISTING CONDITIONS AND VEGETATION MAP

Application No. SEA 84-M-121-03 Staff M.B.
APPROVED (SE)/ SP PLAN
SEE DEV CONDS DATED March 14, 2011
Date of (BOS) (BZA) approval March 28, 2011
Sheet 1 of 6

RECEIVED
Department of Planning & Zoning
DEC 06 2010
Zoning Evaluation Division

TRI-TEK ENGINEERING
CIVIL
ENVIRONMENTAL
LAND PLANNING
SURVEYING
690 Center Street
Suite 300
Herndon, Virginia 20170
V: (703) 481-5900
F: (703) 481-5901
info@tritekinc.com

COMMONWEALTH OF VIRGINIA
THEODORE D. BRITT
No. 023863
12.6.10
PROFESSIONAL ENGINEER

THE WESTMINSTER SCHOOL
MASON DISTRICT
FAIRFAX COUNTY, VIRGINIA

COVER SHEET

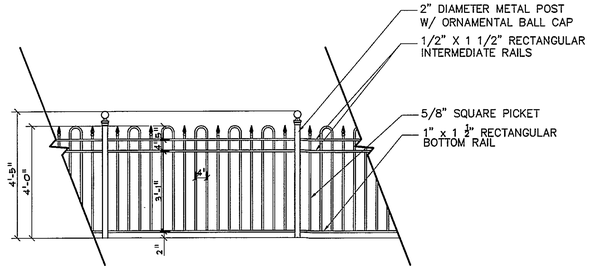
DATE	REVISION
7/2/10	PER COUNTY COMMENTS.
10/18/10	PER COUNTY COMMENTS.
12/6/10	PER COUNTY COMMENTS.

PM: TDB SCALE: NONE
PE: TDB DATE: 4/21/10
CO: MSO SHEET 1 OF 6

O:\drawings\F-2521\plots\SEP\2521-01-SEP-COV.dwg, 12/6/2010 12:43:45 PM, SOlson, Xerox 6204 - CADD.pc3, 1:1, TRI-TEK Engineering, Inc.

COPYRIGHT 2004. NO REPRODUCTION OR USE OF THE DRAWING IS ALLOWED IN PART OR IN WHOLE BY ANY PROCESS WITHOUT THE EXPRESS WRITTEN CONSENT OF TRI-TEK ENGINEERING, INC.

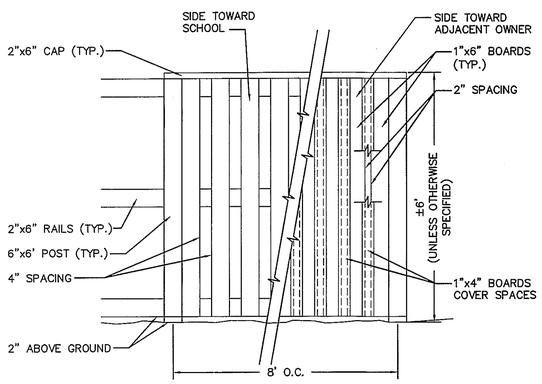
F-2521



ALUMINUM FENCE DETAIL

NOT TO SCALE

NOTE: THE DETAIL SHOWN IS THE TYPE OF FENCE TO BE PROVIDED. THE OWNER RESERVES THE RIGHT TO MODIFY THE STYLE OF THE PICKETS AND TO FURTHER DETAIL THE POST AND OVERALL DESIGN OF THE FENCE. FENCE TO BE PAINTED GREEN TO MATCH OTHER FENCING ON PROPERTY.



6' BOARD ON BOARD/PRIVACY FENCE DETAIL

(N.T.S.)

NOTE: FENCE SHALL BE PAINTED GREEN AND SHALL MATCH STYLE OF EXISTING 6' WOOD FENCE ON SCHOOL PROPERTY.

SITE DATA

- TAX MAP LOCATION: 60-3-24-0003, 60-3-24-0004, 60-3-24-0005
  60-3-24-0005A
- SITE ADDRESS: 3811 GALLOWS ROAD
- TOTAL SITE AREA: ±6.8356 ACRES OR ±297,761 S.F.
- STREET DEDICATION: ±0.0132 ACRES OR ±576 S.F.
- ZONING: R-3
- USE: PRIVATE SCHOOL OF GENERAL EDUCATION, NURSERY SCHOOL AND CHILD CARE CENTER
- EXISTING BUILDING AREA: ±53,791 S.F.
- PROPOSED BUILDING AREA: ±68,431 S.F.

SITE TABULATIONS

	REQUIRED:	PROPOSED:
• LOT SIZE REQUIREMENTS(*):		
LOT AREA:	10,500 SF	297,761 SF
LOT WIDTH:	80 LF	705 LF
• BULK REGULATIONS(*):		
BUILDING HEIGHT:	60 FT.	35 FT.
YARD REQUIREMENTS:		
FRONT:	CONTROLLED BY A 40° ANGLE OF BULK PLANE, BUT NOT LESS THAN 30 FT.	219± FT.
SIDE:	CONTROLLED BY A 35° ANGLE OF BULK PLANE, BUT NOT LESS THAN 10 FT.	30± FT.
REAR:	CONTROLLED BY A 35° ANGLE OF BULK PLANE, BUT NOT LESS THAN 25 FT.	29.7± FT.
F.A.R.:	0.25	0.25

- PARKING SCHEDULE:

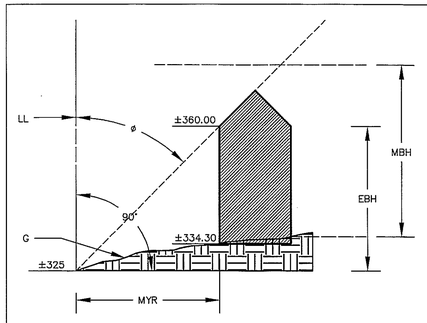
REQUIRED:
PRIVATE SCHOOL: ONE (1) SPACE PER FACULTY AND STAFF MEMBER AND OTHER FULL-TIME EMPLOYEE, PLUS FOUR (4) SPACES FOR VISITORS (59 FACULTY/STAFF MEMBER MAX.)
NURSERY SCHOOL/CHILD CARE CENTER: 0.19 SPACES PER CHILD
TOTAL STACES REQUIRED: 75 SPACES

PROVIDED: 81 PARKING SPACES

MODIFICATIONS/WAIVERS

THE SITE CONFORMS TO THE PROVISIONS OF ALL APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED STANDARDS OF FAIRFAX COUNTY, EXCEPT THE FOLLOWING:

1. A MODIFICATION OF THE REQUIREMENT TO PROVIDE TRANSITIONAL SCREENING AND BARRIERS ALONG THE SOUTHERN AND NORTHERN BOUNDARIES IN FAVOR OF THAT SHOWN ON THE SPECIAL EXCEPTION PLAT.
2. A WAIVER OF THE REQUIREMENT THAT USABLE OUTDOOR RECREATION AREA SHALL BE LIMITED TO AREAS OUTSIDE THE LIMITS OF THE REQUIRED FRONT YARD.



ø : ANGLE OF BULK PLANE = 45° FRONT, 35° SIDE & REAR
LL : LOT LINE
MYR : MINIMUM YARD REQUIREMENT = 30' FRONT, 10' SIDE, 25' REAR
EBH : EFFECTIVE BUILDING HEIGHT =
MBH : MAXIMUM BUILDING HEIGHT =
G : GRADE (FINISHED) = ± (AVG.)

$MYR = EBH \tan ø$

$EBH = \frac{MYR}{\tan ø}$

	ANGLE PROVIDED	SETBACK PROVIDED	EFFECTIVE BLDG. HT.
FRONT	80°	219.8'±	35'
SIDE	35°	30'±	35'
REAR	35°	29.7'±	35'

USE: SCHOOL
CURRENT ZONING: R-3

ANGLE OF BULK PLANE

(NOT TO SCALE)

GENERAL NOTES

1. THE PROPERTY DELINEATED ON THIS PLAT CONTAINS 6.8356± ACRES (297,761± S.F.) AND IS LOCATED ON FAIRFAX COUNTY TAX MAP 60-3-24-0003, 60-3-24-0004, 60-3-24-0005 & 60-3-24-0005A. THE PROPERTY IS ZONED R-3 AND IS CURRENTLY USED AS A PRIVATE SCHOOL.
2. THIS SPECIAL EXCEPTION AMENDMENT REQUEST IS SUBMITTED FOR APPROVAL TO PERMIT THE ADDITION OF LAND, CONSTRUCTION OF AN ADDITION TO THE BUILDING, ADDITION OF A SCHOOL USE (NURSERY) AND CHILD CARE CENTER AND CONSTRUCTION OF A NEW ATHLETIC FIELD AND ANCILLARY PLAYGROUND AREAS AND THE RELOCATION OF A WOOD STORAGE SHED.
3. BOUNDARY INFORMATION IS BASED ON A FIELD RUN SURVEY BY TRI-TEK ENGINEERING (MAY, 2009). NO TITLE REPORT FURNISHED FOR LOT 3 ONLY.
4. TOPOGRAPHY INFORMATION SHOWN HEREON IS AT 2 FT. CONTOUR INTERVALS BASED ON A FIELD SURVEY BY TRI-TEK ENGINEERING (MAY, 2009).
5. THE PROPERTY DELINEATED ON THIS PLAT IS NOW IN THE NAME OF WESTMINSTER SCHOOL, INC. AS RECORDED IN DEED BOOK 19695 AT PAGE 1555 (60-3-24-0003) AND DEED BOOK 3004 AT PAGE 226 (60-3-24-0004, 60-3-24-0005 & 60-3-24-0005A) AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA.
6. THE SITE IS SERVED BY PUBLIC WATER AND PUBLIC SEWER.
7. OFF STREET PARKING AND LOADING IS PROVIDED IN ACCORDANCE WITH ARTICLE 11 OF THE FAIRFAX COUNTY ZONING ORDINANCE MODIFIED AS PERMITTED UNDER SECTION A7-209.3.
8. THIS PLAN IS COMPATIBLE WITH THE ADOPTED COMPREHENSIVE PLAN OF FAIRFAX COUNTY AND ADJACENT DEVELOPMENT. THERE ARE NO TRAILS INDICATED ON THE TRAILS PLAN ALONG GALLOWS ROAD.
9. TO THE BEST OF OUR KNOWLEDGE, THE PROPOSED USE DOES NOT ADVERSELY AFFECT ADJACENT OR NEIGHBORING PROPERTIES.
10. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO GENERAL AREAS THAT HAVE SCENIC ASSETS OR NATURAL FEATURES DESERVING OF PROTECTION AND PRESERVATION.
11. THIS SITE DOES NOT HAVE AREA SUBJECT TO 100 YEAR FLOODING OR EQC CRITERIA AND NO RPA EXISTS ON THE PROPERTY.
12. PROPOSED CONSTRUCTION WILL ADD IMPERVIOUS AREA TO THE SITE. DEVELOPMENT IS THEREFORE ANTICIPATED TO INCREASE STORMWATER RUNOFF AND IS PROPOSED TO BE CONTROLLED BY AN UNDERGROUND AND/OR STORM TECH TYPE SYSTEM AND WATER QUALITY CONTROLS PROVIDED BY STORM FILTER DEVICES AND/OR OTHER STRUCTURAL CONTROLS.
13. DEVELOPMENT REQUIRED FOR THIS PROJECT SHALL COMMENCE AT SUCH TIME AS APPROPRIATE COUNTY APPROVALS HAVE BEEN OBTAINED AND SUBJECT TO THE DISCRETION OF THE OWNER.
14. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THERE IS NO EVIDENCE OF ANY GRAVE, OBJECT OR STRUCTURE MARKING A PLACE OF BURIAL.
15. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THERE ARE NO KNOWN HAZARDOUS OR TOXIC SUBSTANCES THAT ARE TO BE GENERATED, UTILIZED, STORED, TREATED AND/OR DISPOSED OF ON THIS SITE OTHER THAN THOSE CONSISTENT WITH THE USE OF THE PROPERTY.
16. ALL NEW SIGNAGE AND NEW OUTDOOR LIGHTING FIXTURES ONSITE SHALL BE PROVIDED IN ACCORDANCE WITH APPLICABLE STANDARDS SET FORTH BY THE COUNTY OF FAIRFAX.
17. THE PROPERTY WHICH IS THE SUBJECT OF THIS APPLICATION SHALL BE DEVELOPED IN ACCORDANCE WITH THIS PLAT PREPARED BY TRI-TEK ENGINEERING, INC. PROVIDED THAT MINOR MODIFICATIONS SHALL BE PERMITTED PURSUANT TO THE PROVISIONS OF SEC. 9.004. MODIFICATIONS WILL BE DETERMINED AS PART OF THE FINAL ENGINEERING AND SITE PLAN REVIEW BY THE DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES (DPWES).
18. SITE ACCESS WILL BE FROM GALLOWS ROAD (ROUTE 711).
19. THE EXISTING BUILDINGS ON THE SITE TO BE RETAINED WERE CONSTRUCTED AS FOLLOWS:

EXISTING SCHOOL: 1971, ADDITION BUILT IN 2003	±45,285 S.F.
STONE HOUSE: 1930	±2,414 S.F.
2 STORY ACCESSORY BUILDING: 2003	±1,845 S.F.
SHEDS	±587 S.F.
TOTAL:	±50,131 S.F.

EXISTING HOUSE (TO BE REMOVED): 1951 ±3,660 S.F.
NOTE: THE EXISTING HOUSE TO BE USED AS A RESIDENCE UNTIL IT IS REMOVED TO CONSTRUCT THE PROPOSED ATHLETIC FIELD.

20. THERE ARE NO EXISTING UTILITY EASEMENTS IN EXCESS OF TWENTY FIVE (25) FT. WIDE AND NO MAJOR UNDERGROUND UTILITY LOCATED ON THE PROPERTY.
21. THERE ARE NO WATERS AND/OR WETLANDS REGULATED UNDER SECTION 404 OF THE CLEAN WATER ACT IDENTIFIED ON THE PROPERTY PER A STUDY CONDUCTED BY ANGLER ENVIRONMENTAL AND CONFIRMATION BY THE CORPS (NOVEMBER 2, 2009).
22. OUTDOOR USEABLE RECREATIONAL SPACE IS ESTIMATED TO BE ±68,000 S.F.

Application No. SEA 84-M-21-3 Staff MB
APPROVED (SE) SP PLAN
SEE DEV CONDS DATED 3/14/11
Date of (BOS) (BZA) approval 3/29/11
Sheet 2 of 6

TRI-TEK ENGINEERING
CIVIL
ENVIRONMENTAL
LAND PLANNING
SURVEYING
690 Center Street
Suite 300
Herndon, Virginia 20170
V: (703) 481-5900
F: (703) 481-5901
info@tritekinc.com

COMMONWEALTH OF VIRGINIA
THEODORE D. BRITT
NO. 023803
12-6-10
PROFESSIONAL ENGINEER

THE WESTMINSTER SCHOOL

FAIRFAX COUNTY, VIRGINIA
MASON DISTRICT

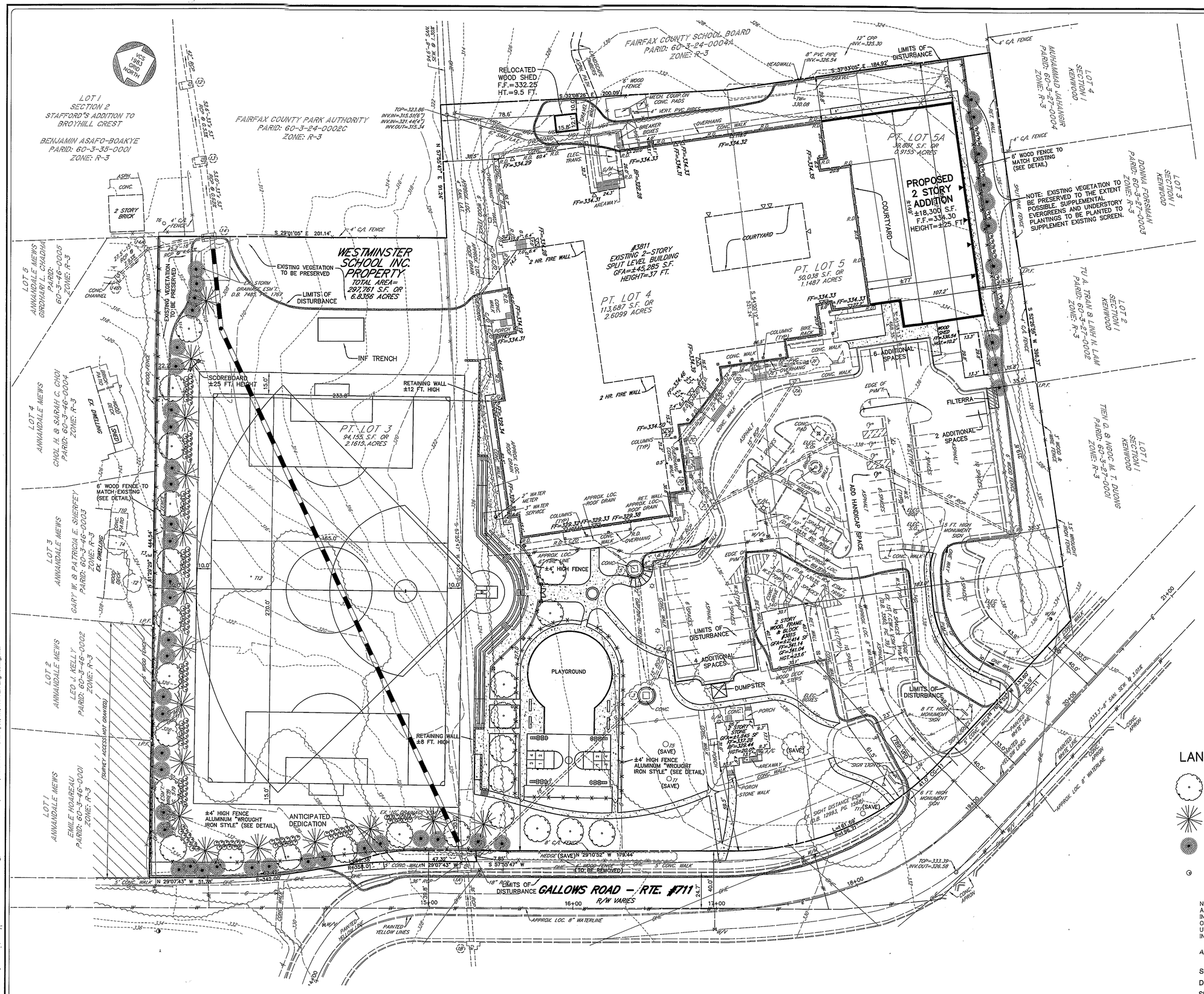
NOTES & DETAILS

DATE	REVISION
7/2/10	PER COUNTY COMMENTS.
10/18/10	PER COUNTY COMMENTS.
12/6/10	PER COUNTY COMMENTS.

PM: TDB SCALE: NONE
PE: TDB DATE: 4/21/10
CO: MSO SHEET 2 OF 6

O:\drawings\F-2521\plots\SEP\2521-02-SEP-N&D.dwg, 12/6/2010 12:43:21 PM, SOlson, Xerox 6204 - CADD.pc3, 1:1, TRI-TEK Engineering, Inc.

COPYRIGHT 2004. NO REPRODUCTION OR USE OF THE DRAWING IS ALLOWED IN PART OR IN WHOLE BY ANY PROCESS WITHOUT THE EXPRESS WRITTEN CONSENT OF TRI-TEK ENGINEERING, INC.



STORM SEWER DATA:

(1) TOP=327.50 INV.IN=322.33(18") INV.IN=321.25(36") INV.OUT=321.21	(7B) TOP=333.50 INV.IN=328.38 INV.OUT=328.36
(1A) TOP=327.69 INV.IN=321.49 INV.OUT=321.18	(7C) TOP=333.51 INV.IN=328.74 INV.OUT=328.72
(1B) TOP=327.64 INV.IN=321.63 INV.OUT=321.58	(7D) TOP=333.70 INV.IN=329.26 INV.OUT=329.24
(2) TOP=327.72 INV.IN=322.65 INV.OUT=322.55	(7E) TOP=333.58 INV.IN=329.47 INV.OUT=329.47
(3) TOP=331.44 INV.IN=326.39(15") INV.IN=323.39(72") INV.OUT=323.47	(7F) TOP=333.83 INV.IN=329.95 INV.OUT=329.95
(4) TOP=333.47 INV.OUT=328.89	(8) TOP=338.05 INV.IN=327.34 INV.OUT=327.26
(5) TOP=331.37 INV.IN=325.16(10") INV.IN=324.08(18") INV.OUT=323.41	(9) TOP=333.30 INV.OUT=327.93
(6) TOP=334.06 INV.IN=326.84(6") INV.IN=326.25(6") INV.IN=324.96(18") INV.OUT=324.96	(12) TOP=311.84 INV.IN=305.72 INV.OUT=305.68
(7) TOP=336.68 INV.IN=327.36(12") INV.IN=326.24(15"FR.S.E.) INV.IN=321.72(15"FR.E) INV.OUT=325.44	(13) TOP=311.39 INV.IN=306.06 INV.OUT=306.00
(7A) TOP=336.57 INV.OUT=333.36	(14) TOP=311.59 INV.IN=302.71(18") INV.IN=306.53(38"x 60") INV.OUT=306.33
	(14A) TOP=314.33 INV.IN=310.78 INV.OUT=309.81
	(14B) TOP=316.08 INV.OUT=312.96

LEGEND

SIGN
FLAG POLE
GROUND LIGHTS NOT SHOWN
POWER POLE
POWER/LIGHT
LIGHT POLE
GUY WIRE
GUY POLE
GAS VALVE
GAS METER
CLEAN OUT
DROP INLET GRATE
SANITARY MANHOLE
STORM MANHOLE
IRRIGATION VALVE
WATER VALVE
WATER METER
FIRE HYDRANT
UGT — UNDG. TELECOMM
OHE — OVERHEAD ELECTRIC
G — GAS LINE
W — WATER LINE
CURB & GUTTER
CURB
FENCE
DRIPLINE

TREE TABLE

T1	40" TREE
T2	3" 4X TREE
T3	10" TREE
T4	6" 2X TREE
T5	46" MAPLE
T6	27" MAPLE
T7	11" 3X HOLLY
T8	12" 2X HOLLY
T9	11" HOLLY
T10	3" HOLLY
T11	41" POPLAR
T12	10" OAK
T13	15" DT

LANDSCAPE SCHEDULE

LARGE DECIDUOUS (2"–3" CAL.)
RED OAK, PIN OAK, RED MAPLE, LITTLE LEAF LINDEN, JAPANESE CRABAPPLE

LARGE EVERGREEN (6'–8')
SOUTHERN MAGNOLIA, SCOTCH PINE, LOBLOLLY PINE

MEDIUM EVERGREEN (6'–8')
LEYLAND CYPRESS, AMERICAN HOLLY, JAPANESE CRYTOMERIA, EASTERN RED CEDAR

SHRUBS
FOSTERS HOLLY, JAPANESE HOLLY, AZALEA, CHERRY LAUREL, RHODODENDRON, KOREAN SPICE VIBURNUM

NOTE: THE LANDSCAPE MATERIALS REFERENCED ABOVE ARE REPRESENTATIVE OF THE TYPES TO BE INSTALLED. WE RESERVE THE RIGHT WITH APPROVAL OF URBAN FORESTRY TO SUBSTITUTE MATERIALS UPON PREPARATION OF THE FINAL SITE PLAN AND INSTALLATION IN THE FIELD.

Application No. SEP 84-H-121-08 Staff TM B
APPROVED (SE) SP PLAN
SEE DEV CONDS DATED 3/14/11
Date of (BOS) (BZA) approval 3/29/11
Sheet 3 of 6

TRI-TEK ENGINEERING
CIVIL
ENVIRONMENTAL
LAND PLANNING
SURVEYING
690 Center Street
Suite 300
Herndon, Virginia 20170
V: (703) 481–5900
F: (703) 481–5901
info@tritekinc.com

COMMONWEALTH OF VIRGINIA
THEODORE D. BRITT
NO. 023803
12.6.10
PROFESSIONAL ENGINEER

SPECIAL EXCEPTION PLAT

THE WESTMINSTER SCHOOL

FAIRFAX COUNTY, VIRGINIA
MASON DISTRICT

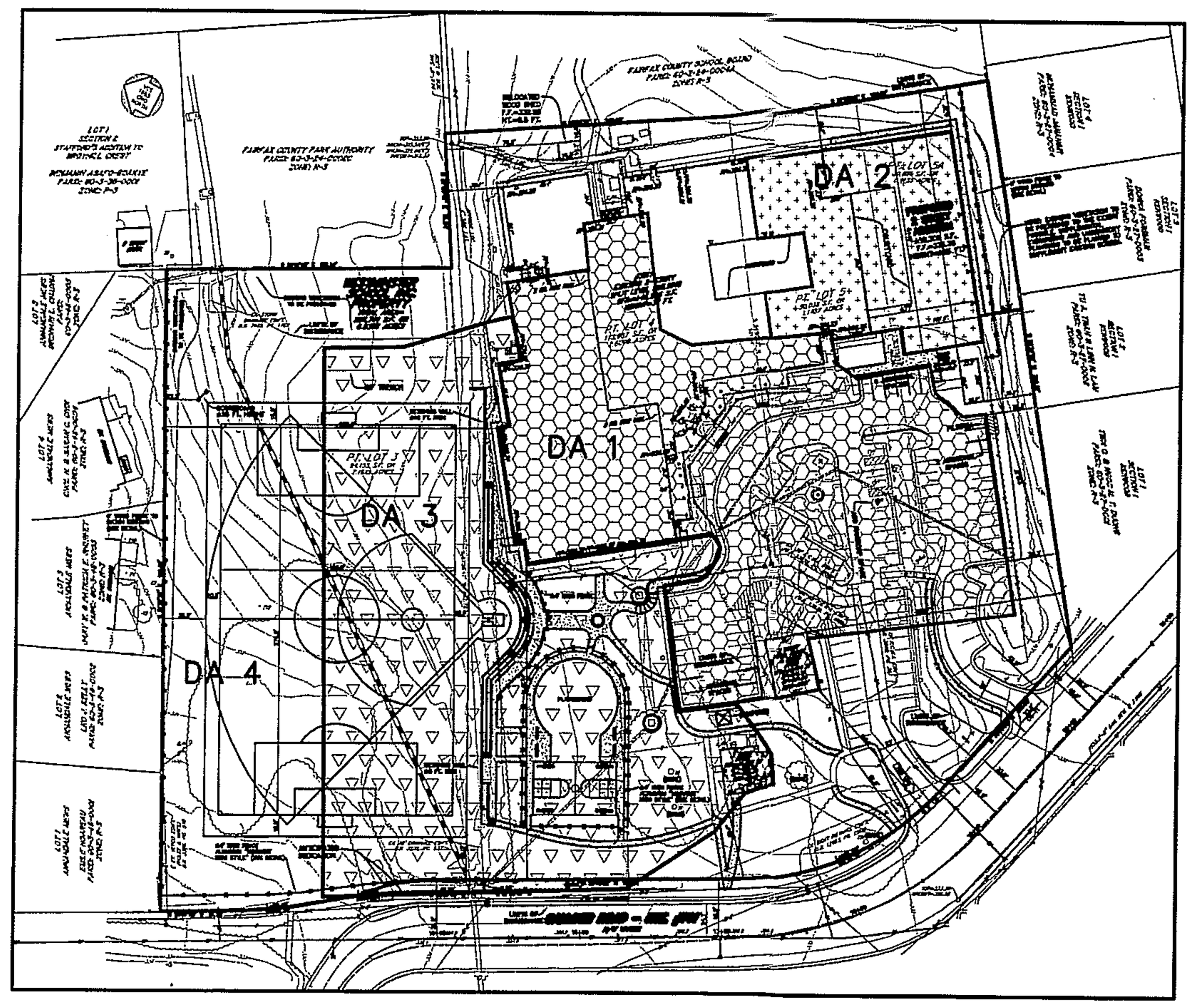
DATE	REVISION
7/2/10	PER COUNTY COMMENTS.
10/18/10	PER COUNTY COMMENTS.
12/6/10	PER COUNTY COMMENTS.

PM: TDB SCALE: 1"=30'
PE: TDB DATE: 4/21/10
CO: MSO SHEET 3 OF 6

F-2521

COPYRIGHT 2004. NO REPRODUCTION OR USE OF THE DRAWING IS ALLOWED IN PART OR IN WHOLE BY ANY PROCESS WITHOUT THE EXPRESS WRITTEN CONSENT OF TRI-TEK ENGINEERING, INC.

O:\drawings\F-2521\plots\SEP\2521-03-SEP-PLAN.dwg, 12/6/2010 1:05:51 PM, SOlson, Xerox 6204 - CAD.pc3, 1:1, TRI-TEK Engineering, Inc.



BMP AREA MAP

SCALE 1"=100'

II. Watershed Information

Part 1: List all of the Subareas and "C" Factors used in the BMP Computations

Subarea Designation and Description (1)	"C" (2)	Acres (3)
DA1: ONSITE CONTROLLED	0.81	1.72
DA2: ONSITE CONTROLLED	0.90	0.43
DA3: ONSITE CONTROLLED	0.39	1.90
DA4: ONSITE UNCONTROLLED	0.42	2.79

NOTE: Rational formula "C" factors are taken from the general zoning values listed in Appendix 4-1 or 4-2 depending on the location of the BMP facility (Fairfax County Public Facilities Manual Chart A6-19 or Prince William County Design and Construction Standards Manual, Exhibit 1).

Part 2: Compute the Weighted Average "C" Factor for the Site

(A) Area of the site (a) 6.84 acres

(B)

Subarea Designation (1)	"C" (2)		Acres (3)		Product (4)
DA1: ONSITE CONTROLLED	0.81	X	1.72	=	1.39
DA2: ONSITE CONTROLLED	0.90	X	0.43	=	0.39
DA3: ONSITE CONTROLLED	0.39	X	1.90	=	0.74
DA4: ONSITE UNCONTROLLED	0.42	X	2.79	=	1.17

(b) Total = 3.69

(C) Weighted average "C" factor (b) / (a) = (c) 0.54

Part 3: Compute the Total Phosphorus Removal for the Site

Subarea Designation (1)	BMP Type (2)	Removal Eff. (%) (3)		Area Ratio (4)		"C" Factor Ratio (5)		Product (6)
DA1	EX. INFIL TRENCH	50	X	0.368	X	1.25	=	23.00
DA2	FILTERRA	55	X	0.092	X	1.38	=	6.98
DA3	INFIL TRENCH	50	X	0.278	X	0.72	=	10.02

(a) Total = 40.00 %

Part 4: Determine Compliance with Phosphorus Removal Requirement

(A) Select Requirement (a) 40

- Water Supply Overlay District (Occoquan Watershed) = 50% (Fairfax County and Prince William County)
- Chesapeake Bay Preservation Area (New Development) = 40% (Fairfax County) 50% (Prince William County)
- Chesapeake Bay Preservation Area (Redevelopment) = [1-0.9 x ("I"pre / "I"post)] x 100 = __%

(B) If Line 3(a) 40 ≥ Line 4(a) 40.00 then Phosphorus removal requirement is satisfied.

THEREFORE, BMP REQUIREMENTS FOR THIS SITE HAVE BEEN MET.

SITE NARRATIVES

STORM DRAINAGE NARRATIVE:

THIS SITE PLAN WILL ADD AN ADJOINING LOT TO THE WESTMINSTER SCHOOL PROPERTY. DRAINAGE FROM THE SCHOOL SITE PRINCIPALLY FLOWS IN A SOUTHWESTERLY DIRECTION ONTO THE ADDED LOT AND INTO AN EXISTING ROCK LINED DRAINAGE CHANNEL ON THE ADDED LOT. THE CHANNEL CONVEYS THE RUNOFF TO THE NORTHWEST WHERE IT ENTERS AN EXISTING CLOSED-CONDUIT STORM SEWER SEWER AT AN EXISTING ENDWALL (STR. EX 15) AT THE NORTHWESTERN END OF THE PROPERTY.

THE WELL DEFINED, ROCK LINED CHANNEL ON THE SMALLER LOT WILL BE REMOVED BY THIS SITE PLAN TO FACILITATE CONSTRUCTION OF THE ATHLETIC FIELD. THE RUNOFF THAT ORIGINALLY FLOWED THROUGH THIS CHANNEL WILL BE INTERCEPTED BY NEW INLETS AND ROUTED THROUGH A NEW CLOSED CONDUIT SYSTEM.

THE PIPED OUTFALL (FROM STR. EX 15) CONTINUES TO FLOW NORTH FROM THE NORTHWESTERN PROPERTY LINE FOR APPROXIMATELY 3,500 FEET TO AN UNNAMED TRIBUTARY OF HOLMES RUN AND THEN TO LAKE BARCROFT IN THE CAMERON RUN WATERSHED.

STORMWATER OUTFALL NARRATIVE:

STORMWATER FROM THE SITE DRAINS BY OVERLAND SHEET FLOW AND ONSITE CLOSED CONDUIT STORM SEWER SYSTEMS FROM THE NORTHEAST PORTION OF THE SITE TO THE SOUTHWEST PORTION THEN FINALLY EXITING THE SITE AT THE NORTHWEST PROPERTY CORNER. THE PROPOSED SITE OUTFALLS INTO AN EXISTING STORM SEWER SYSTEM THAT FLOWS NORTH BY NORTHEAST THROUGH THE ADJACENT PROPERTIES VIA AN EXISTING SERIES OF 42" CONCRETE PIPES. THE STORM SEWER OUTFALLS INTO A GRASS AND RIP-RAP LINED CHANNEL THROUGH THE LACY CENTER PROPERTY. EAST OF THE LACY CENTER PROPERTY, THE CHANNEL IS LINED WITH CHANNEL (THIS IS THE POINT OF CONFLUENCE FOR THIS OUTFALL ANALYSIS). THE CONCRETE LINED CHANNEL LEADS TO ROUTE 2293 WHERE THE RUNOFF IS PIPED, VIA A 66" PIPE CULVERT UNDER THE ROAD, INTO THE BED AND BANKS OF AN UNNAMED TRIBUTARY OF HOLMES RUN.

AT THE POINT OF CONFLUENCE IDENTIFIED ABOVE, THE STORMWATER FROM THE CONTRIBUTING DRAINAGE AREA OF THE SITE (47.1 ACRES) IS JOINED BY ANOTHER BED AND BANKS CHANNEL THAT HAS A DRAINAGE AREA OF APPROXIMATELY 70.4 ACRES. THIS DRAINAGE AREA IS GREATER THAN 90 PERCENT OF 47.1 ACRES, THE SIZE OF THE CONTRIBUTING DRAINAGE AREA OF THE SITE. AS SUCH, THE EXTENT OF REVIEW IS 150 FEET DOWNSTREAM OF THIS POINT OF CONFLUENCE OF THE TWO (2) DRAINAGE AREAS. THE CHANNEL WITHIN THE STUDY POINT IS LINED WITH CONCRETE. SEE THIS SHEET FOR OUTFALL CROSS SECTION LOCATIONS AND SHEET 8 FOR CROSS SECTIONS WITH DESCRIPTIONS.

BEYOND THE EXTENT OF REVIEW, THE CHANNEL CONTINUES TO FLOW IN A NORTH EASTERLY DIRECTION APPROXIMATELY 1,800 FT. TO THE BED AND BANKS OF HOLMES RUN THAT HAS A DRAINAGE AREA IN EXCESS OF 100 TIMES THE SITE AREA.

IT IS OUR OPINION THAT THE OUTFALL FOR THIS SITE IS ADEQUATE.

STORMWATER MANAGEMENT NARRATIVE:

STORMWATER MANAGEMENT FOR THIS SITE IS PROVIDED THROUGH THE USE OF AN EXISTING OVERSIZED UNDERGROUND STORM SEWER PIPE AND INFILTRATION TRENCH LOCATED BETWEEN THE EXISTING PARKING LOT AND THE PROPOSED PLAYGROUND AREA. THIS UNDERGROUND SYSTEM WAS INSTALLED WITH APPROVED FAIRFAX COUNTY PLAN #1021-SP-01-1 (WESTMINSTER SCHOOL).

THE EXISTING 72" CMP PROVIDES EXCESS DETENTION THAN WHAT WAS REQUIRED PER THE IMPROVEMENTS OF PLAN #1021-SP-01-1. THE EXCESS DETENTION FOR THE 2-YR EVENT IS 1.83 CFS AND FOR THE 10-YR EVENT IS 2.81 CFS. THE INCREASE IN IMPERVIOUSNESS PROPOSED BY THIS PLAN WILL NOT INCREASE THE RUNOFF OF THE SITE BY MORE THAN THESE LEVELS. AS SUCH, NO ADDITIONAL ONSITE STORMWATER MANAGEMENT IS REQUIRED FOR THIS PLAN.

FOR THE REASONS STATED ABOVE, IT IS OUR OPINION THAT STORMWATER MANAGEMENT REQUIREMENTS FOR THIS SITE HAVE BEEN MET BY THE EXISTING ONSITE FACILITY.

STORMWATER MANAGEMENT COMPUTATIONS:

PREDEVELOPMENT RUNOFF: Q=CIA

C = ((2.42*.9)+(4.42*.3))/6.84 = 0.51

$Q_{2\ YR,\ 2\ HR}$:	0.51 x 5.45 IN/HR x 6.84 AC =	19.01 CFS
$Q_{10\ YR,\ 2\ HR}$:	0.51 x 7.27 IN/HR x 6.84 AC =	25.36 CFS
$V_{2\ YR,\ 2\ HR}$:	0.51 x 2"/12" x 6.84 AC =	0.5814 AC-FT

POST-DEVELOPMENT RUNOFF: Q=CIA

C = ((2.75*.9)+(4.09*.3))/6.84 = 0.54

$Q_{2\ YR,\ 2\ HR}$:	0.54 x 5.45 IN/HR x 6.84 AC =	20.13 CFS
$Q_{10\ YR,\ 2\ HR}$:	0.54 x 7.27 IN/HR x 6.84 AC =	26.85 CFS
$V_{2\ YR,\ 2\ HR}$:	0.54 x 2"/12" x 6.84 AC =	0.6156 AC-FT

INCREASE DUE TO DEVELOPMENT:

$Q_{2\ YR,\ 2\ HR}$:	20.13 CFS - 19.01 CFS =	1.12 CFS
$Q_{10\ YR,\ 2\ HR}$:	26.85 CFS - 25.36 CFS =	1.49 CFS
$V_{2\ YR,\ 2\ HR}$:	0.6156 AC-FT - 0.5814 AC-FT =	0.0342 AC-FT

BMP NARRATIVE:

THIS PROJECT PROPOSES THE ADDITION OF A 2.16 AC WOODED/RESIDENTIAL LOT TO THE EXISTING WESTMINSTER SCHOOL LOT (4.68 AC). THE EXISTING SCHOOL LOT IS CURRENTLY CONTROLLED BY A BMP FACILITY (INFILTRATION TRENCH) BUT THE LOT BEING ADDED HAS NO EXISTING BMP.

FOR THE PURPOSES OF THESE BMP CALCULATIONS, THE PHOSPHORUS LOADING HAS BEEN COMPUTED FROM THE SITE AS IT EXISTED PRIOR TO THE INSTALLATION OF THE INFILTRATION TRENCH (IN APPROVED PLAN 1021-SP-01-1) TO ACCURATELY COMPUTE THE OVERALL SITE PHOSPHORUS REMOVAL. IN ORDER TO MEET THE 40% PHOSPHORUS REMOVAL REQUIREMENT, TWO ADDITIONAL BMP FACILITIES ARE REQUIRED. THIS SITE PLAN PROPOSES THE USE OF A ROOFDRAIN FILTERRA AND A SECOND INFILTRATION TRENCH TO PROVIDE THE ADDITIONAL TREATMENT NECESSARY TO PROVIDE A COMBINED PHOSPHORUS REMOVAL GREATER THAN THE 40% REQUIRED.

FOR THE REASONS STATED ABOVE, IT IS OUR OPINION THAT BEST MANAGEMENT PRACTICES FOR THE SITE HAVE BEEN MET.

THE APPLICANT RESERVES THE RIGHT TO REVISE THE BMP FACILITIES PROPOSED BY THIS PLAN IN THE EVENT A SYNTHETIC TURF FIELD IS INSTALLED INSTEAD OF A NATURAL GRASS FIELD. PER PRIOR SYNTHETIC TURF FIELD INSTALLATIONS IN THE COUNTY, SYNTHETIC TURF FIELDS HAVE BEEN APPROVED AS AN INNOVATIVE BMP TECHNIQUE. WE RESERVE THE RIGHT TO SUBSTITE BMP TYPES AND FACILITIES AT FINAL ENGINEERING IF SITE CONSTRAINTS PROHIBIT THE USE OF THESE DOCUMENTED FACILITIES.

ALL BMP FACILITIES WILL BE PRIVATELY MAINTAINED.

SITE IMPERVIOUSNESS CALCULATIONS:

*FOR BMP COMPUTATIONS, THE "EXISTING IMPERVIOUS AREA" IS THE SITE IMPERVIOUS AREA PRIOR TO THE IMPROVEMENTS ASSOCIATED WITH FFX COUNTY PLAN #1021-SP-01-1, "WESTMINSTER SCHOOL", APPROVED 06/13/02

SITE AREA = 6.48 AC.
EXISTING IMPERVIOUS AREA* = 81,893 SF (1.88 AC.)
PROPOSED IMPERVIOUS AREA = 119,859 SF (2.75 AC.)

SITE IMPERVIOUS PERCENTAGE:
EXISTING CONDITIONS = 1.88 AC./6.48 AC.= 29.0%
PROPOSED CONDITIONS = 2.75 AC./6.48 AC.= 42.4%
CHANGE IN SITE IMPERVIOUSNESS = 42.4%-29.0% = 13.4%

NET INCREASE IN IMPERVIOUS AREA = $\frac{2.75\ AC. - 1.88\ AC.}{1.88\ AC.}$ X 100
= 46.27% ... THEREFORE 40% PHOSPHORUS REMOVAL REQUIRED

MINIMUM STORMWATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS

The following information is required to be shown or provided in all zoning applications, or a waiver request of the submission requirement with justification shall be attached. Note: Waivers will be acted upon separately. Failure to adequately address the required submission information may result in a delay in processing this application.

This information is required under the following Zoning Ordinance paragraphs:

Special Permits (8-011 2J & 2L)	Special Exceptions (9-011 2J & 2L)
Cluster Subdivision (9-615 1G & 1N)	Commercial Revitalization Districts (9-622 2A (12) & (14))
Development Plans PRC District (16-302 3 & 4L)	PRC Plan (16-303 1E & 1O)
FDP P Districts (except PRC) (16-502 1F & 1Q)	Amendments (18-202 10F & 10I)

[X] 1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100').

[ ] 2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheet ____.

[X] 3. Provide:

Facility Name/ Type & No.	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage Volume (cf)	If pond, dam height (ft)
EX. INFIL TRENCH (e.g. dry pond A, infil. trench, underground vault, etc.)	1.72	0	1.72	1,584	2,045	
FILTERRA	0.43	0	0.43	91	N/A	
INFIL TRENCH	1.90	0	1.90	2,400	7,269	
Totals						

[X] 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 3. Pond inlet and outlet pipe systems are shown on Sheet ____.

[ ] 5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet ____. Type of maintenance access road surface noted on the plat is ________ (asphalt, geoblock, gravel, etc.).

[ ] 6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet ____.

[X] 7. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet 4.

[X] 8. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet 4.

[X] 9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet 4.

[X] 10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets 2 & 3.

[ ] 11. A submission waiver is requested for ________.

[X] 12. Stormwater management is not required because EXISTING FACILITY ONSITE.

13

MS-19 NARRATIVE

A) ANALYSIS SHALL BE MADE TO A POINT AT LEAST 150 FEET DOWNSTREAM OF THE POINT WHERE THE RECEIVING PIPE OR CHANNEL IS JOINED BY ANOTHER THAT HAS A DRAINAGE AREA THAT IS AT LEAST 90% OF THE SIZE OF THE FIRST DRAINAGE AREA AT THE POINT OF CONFLUENCE.
-POINT OF CONFLUENCE PROVIDED ON SHEET 5.

B) NATURAL CHANNEL SHALL BE ANALYZED USING TWO YEAR STORM FOR OVERTOPPING AND EROSIVE VELOCITY.
-THE OUTFALL HAS BEEN ANALYZED, SEE SHEET 5 FOR CROSS SECTION INFORMATION. THE OUTFALL APPEARS TO BE ADEQUATE. THE OUTFALL POINT WILL BE FURTHER ANALYZED FOR THE ABOVE CRITERIA IN FINAL ENGINEERING PLANS.

C) PROVIDE A DETAILED SITE SPECIFIC OUTFALL NARRATIVE.
-OUTFALL NARRATIVE PROVIDED ON THIS SHEET.

D) PROVIDE OUTFALL LOCATION MAP(S) AND ALL DETAILED OUTFALL ANALYSIS COMPUTATIONS.
-SEE SHEET 5 FOR OUTFALL COMPUTATIONS AND OUTFALL MAP

E) AT LEAST 3 TO 5 CROSS SECTIONS, SELECTED AT CRITICAL LOCATIONS SHALL BE USED TO VERIFY THE ADEQUACY OF OUTFALL. CROSS SECTIONAL MUST BE BASED ON FIELD SURVEY DATA OR 2 FT CONTOUR INTERVALS.
-THE OUTFALL HAS BEEN ANALYZED, SEE SHEET 5 FOR CROSS SECTION INFORMATION. THE OUTFALL APPEARS TO BE ADEQUATE. FINAL SURVEYED CROSS SECTIONS AT THE OUTFALL WILL BE INCLUDED IN FINAL ENGINEERING PLANS.

F) CROSS SECTIONS MUST HAVE SAME VERTICAL AND HORIZONTAL SCALE TO GIVE CLEAR PICTURE OF BED & BANKS.
-CROSS SECTIONS ARE SHOWN AT SAME VERTICAL AND HORIZONTAL SCALE.

G) OUTFALL VELOCITIES SHALL BE COMPARED WITH EROSIVE VELOCITIES OF EXISTING CHANNEL.
-OUTFALL VELOCITIES HAVE BEEN ANALYZED. THE OUTFALL POINT WILL BE FURTHER ANALYZED FOR THE ABOVE CRITERIA IN FINAL ENGINEERING PLANS.

H) THE USE OF 1-YR EXTENDED DETENTION IS RECOMMENDED TO REMEDY EXISTING DOWNSTREAM CHANNEL EROSION PROBLEMS.
-IF VELOCITIES ARE FOUND TO BE EROSIVE, METHODS WILL BE EMPLOYED DURING FINAL ENGINEERING DESIGN TO REMEDY EROSION PROBLEMS AND PROVIDE AN ADEQUATE OUTFALL.

IMPERVIOUS AREA TABULATION	EXISTING	PROPOSED
BUILDINGS & OVERHANGS	56,480 SF	61,475 SF
ASPHALT PAVEMENT/CURB & GUTTER	32,971 SF	36,485 SF
GRAVEL DRIVES	4,295 SF	121 SF
CONC. WALKS/PADS	10,416 SF	19,362 SF
BRICK WALKS/PATIOS	396 SF	0 SF
PORCHES/STOOPS/AREAWAYS	495 SF	444 SF
RETAINING WALLS	488 SF	558 SF
BLEACHERS	0 SF	1,414 SF
TOTAL	105,541 SF	119,859 SF

Application No. SEA 84-M-121-03 Staff MB
APPROVED (SE) SP PLAN
SEE DEV CONDS DATED 3/14/11
Date of (BOS) (BZA) approval 3/29/11
Sheet 4 of 6

TRI-TEK ENGINEERING
CIVIL
ENVIRONMENTAL
LAND PLANNING
SURVEYING
690 Center Street
Suite 300
Herndon, Virginia 20170
V: (703) 481-5900
F: (703) 481-5901
info@tritekinc.com

COMMONWEALTH OF VIRGINIA
THEODORE D. BRITT
NO. 023803
12-6-10
PROFESSIONAL ENGINEER

THE WESTMINSTER SCHOOL
FAIRFAX COUNTY, VIRGINIA
MASON DISTRICT

STORMWATER MANAGEMENT

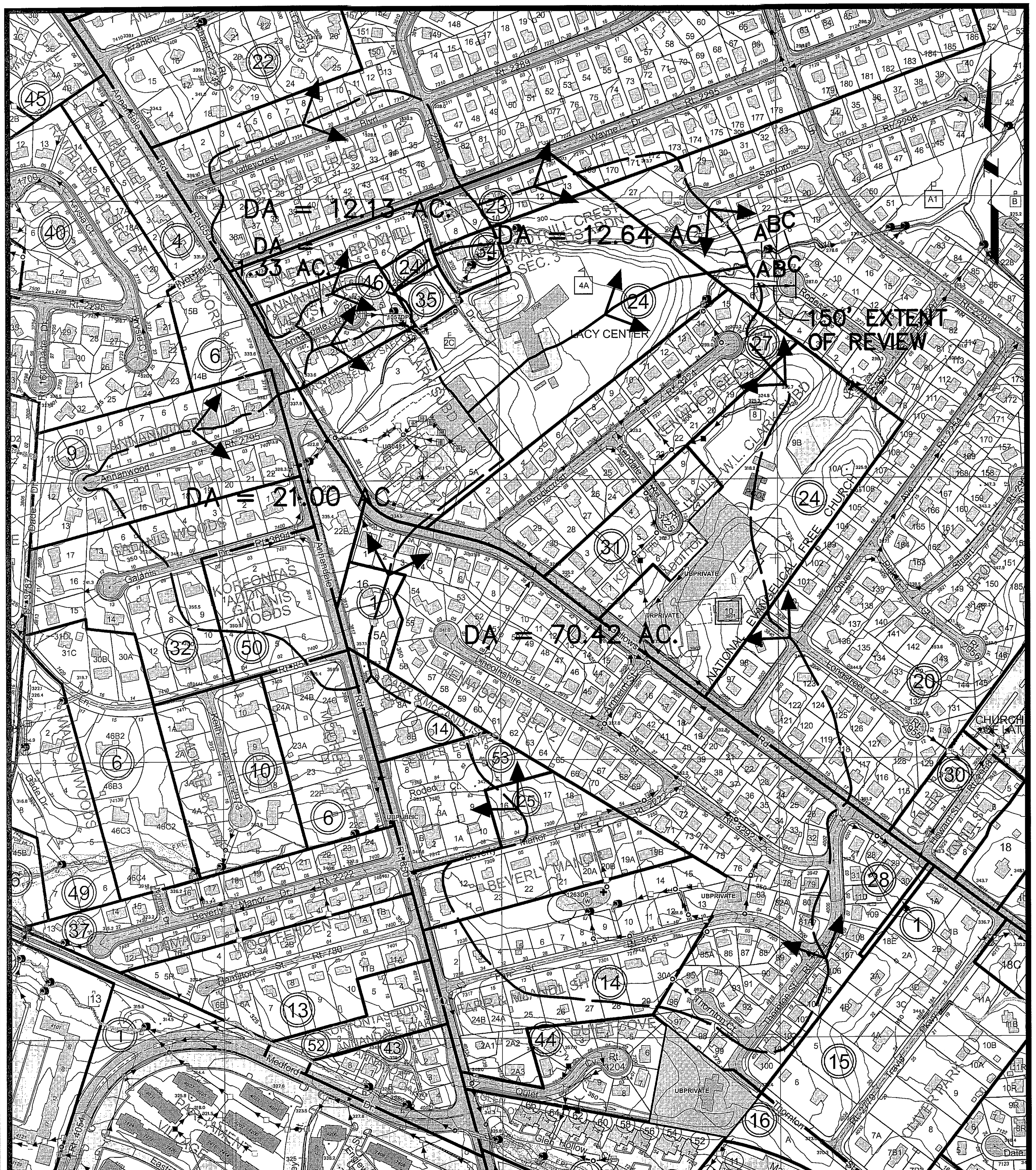
DATE	REVISION
7/2/10	PER COUNTY COMMENTS.
10/18/10	PER COUNTY COMMENTS.
12/6/10	PER COUNTY COMMENTS.

PM: TDB SCALE: NONE
PE: TDB DATE: 4/21/10
CO: MSO SHEET 4 OF 6

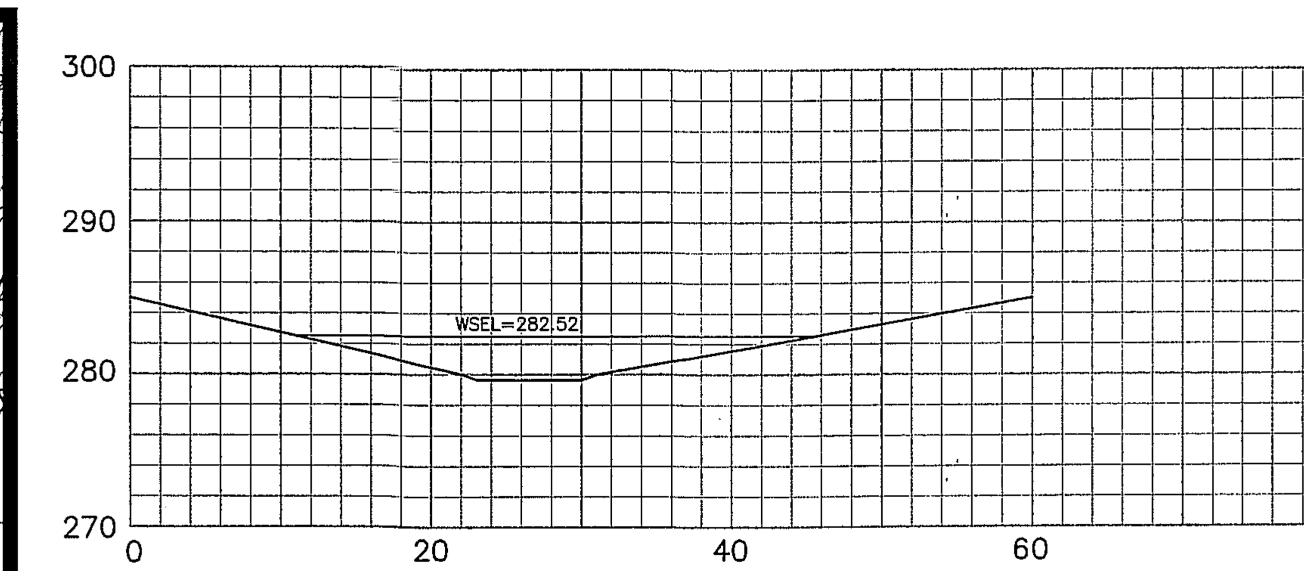
F-2521

COPYRIGHT 2004. NO REPRODUCTION OR USE OF THE DRAWING IS ALLOWED IN PART OR IN WHOLE BY ANY PROCESS WITHOUT THE EXPRESS WRITTEN CONSENT OF TRI-TEK ENGINEERING, INC.

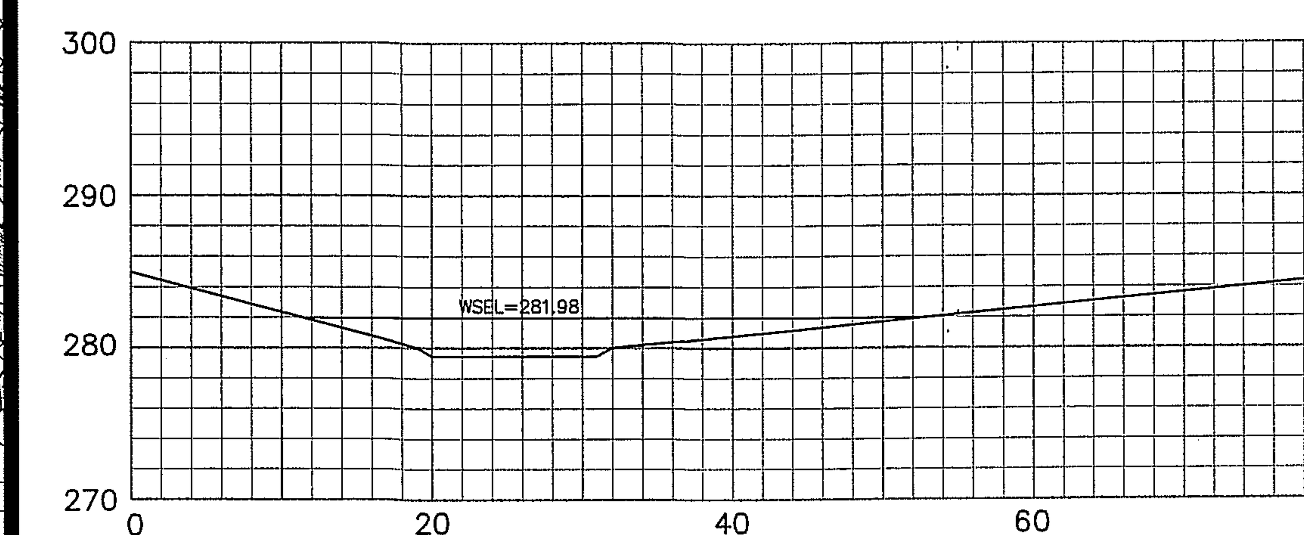
O:\drawings\F-2521\plots\SEP\2521-04-SEP-SWM.dwg, 12/6/2010 12:42:19 PM, SOlson, Xerox 6204 - CADD.pc3, 1:1, TRI-TEK Engineering, Inc.



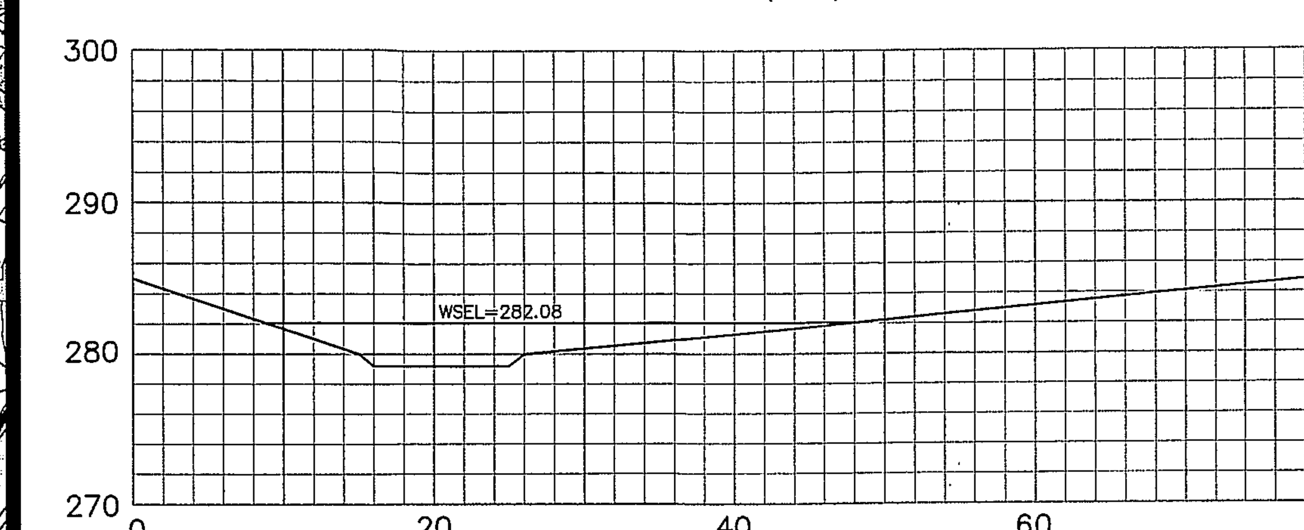
OUTFALL DRAINAGE
AREA MAP
SCALE: 1"=200'



SECTION A–A
SCALE: 1"=5' (H & V)



SECTION B–B
SCALE: 1"=5' (H & V)



SECTION C–C
SCALE: 1"=5' (H & V)

Application No. SEA 84-M-121-03 Staff MB
APPROVED (SE) / SP PLAN
SEE DEV CONDS DATED 3/14/11
Date of (BOS) (BZA) approval 3/29/11
Sheet 5 of 6

TRI-TEK ENGINEERING
CIVIL
ENVIRONMENTAL
LAND PLANNING
SURVEYING
690 Center Street
Suite 300
Herndon, Virginia 20170
V: (703) 481-5900
F: (703) 481-5901
info@tritekinc.com

COMMONWEALTH OF VIRGINIA
THEODORE D. BRITT
NO. 023603
12.6.10
PROFESSIONAL ENGINEER

THE WESTMINSTER SCHOOL

MASON DISTRICT
FAIRFAX COUNTY, VIRGINIA

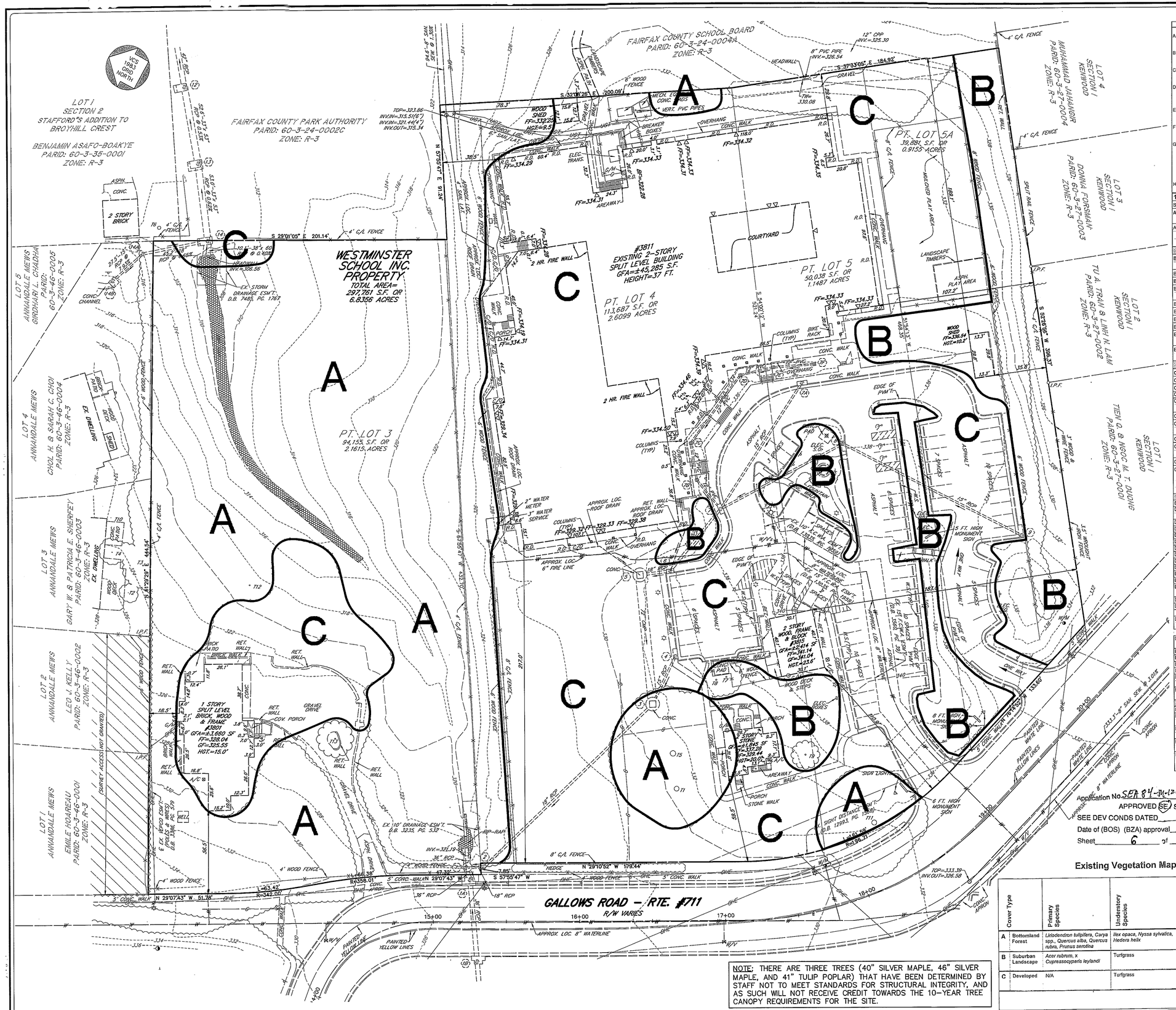
OUTFALL ANALYSIS

DATE	REVISION
7/2/10	PER COUNTY COMMENTS.
10/18/10	PER COUNTY COMMENTS.
12/6/10	PER COUNTY COMMENTS.

PM: TDB SCALE: AS SHOWN
PE: TDB DATE: 4/21/10
CO: MSO SHEET 5 OF 6

F-2521

COPYRIGHT 2004. NO REPRODUCTION OR USE OF THE DRAWING IS ALLOWED IN PART OR IN WHOLE BY ANY PROCESS WITHOUT THE EXPRESS WRITTEN CONSENT OF TRI-TEK ENGINEERING, INC.



NOTE: THERE ARE THREE TREES (40" SILVER MAPLE, 46" SILVER MAPLE, AND 41" TULIP POPLAR) THAT HAVE BEEN DETERMINED BY STAFF NOT TO MEET STANDARDS FOR STRUCTURAL INTEGRITY, AND AS SUCH WILL NOT RECEIVE CREDIT TOWARDS THE 10-YEAR TREE CANOPY REQUIREMENTS FOR THE SITE.

Tree Preservation Target Calculations and Statement		
A	Pre-development area of existing tree canopy (from Existing Vegetation Map) =	113,215
B	Percentage of gross site area covered by existing tree canopy =	38.1%
C	Percentage of the 10-year tree canopy required for site (see Table 12.4) =	10%
D	Percentage of the 10-year tree canopy requirement that should be met through tree preservation =	38.1%
E	Proposed percentage of canopy requirement that will be met through tree preservation =	80%
F	Has the Tree Preservation Target minimum been met?	YES
G	If No for line F, then a request to deviate from the Tree Preservation Target shall be provided on the plan that states one or more of the justifications listed in § 12-0507.3 along with a narrative that provides a site-specific explanation of why the Tree Preservation Target cannot be met. Provide sheet number where deviation request is located.	
H	If step G requires a narrative, it shall be prepared in accordance with § 12-0507.4 & included in the plan set. Provide sheet number where narrative is located.	

10-year Tree Canopy Calculation Worksheet			
Step		Totals	Reference
A. Tree Preservation Target and Statement			
A1	Place the Tree Preservation Target Calculations and statement here preceding the 10-year tree canopy calculations	SEE ABOVE	See § 12-0507.2 for list of required elements and worksheet
B. Tree Canopy Requirement			
B1	Identify gross site area (SF) =	297,761	§ 12-0510.1A
B2	Subtract area dedicated to parks & road frontage	576	§ 12-0510.1B
B3	Subtract area of exemptions =	0	§ 12-0510.1C(1) through § 12-0510.1C(6)
B4	Adjusted gross site area (B1-B2) =	297,185	
B5	Identify site's zoning and/or use =	R-3	
B6	Percentage of 10-year tree canopy required =	10	12-509.1 and Table 12.4
B7	Area of 10-year tree canopy required (B4 x B6) =	29,719	
B8	Modification of 10-year Tree Canopy Requirements requested?	NO	Yes or No
B9	If B8 is yes, then list plan sheet where modification request is located.		List Sheet Number
C. Tree Preservation			
C1	Tree Preservation Target Area =	11,323	
C2	Total canopy area meeting standards of § 12-0200 =	23,878	
C3	C2 x 1.25 =	29,848	§ 12-0509.3B
C4	Total canopy area provided by unique or valuable forest or woodland communities =	0	
C5	C4 x 1.5 =	0	§ 12-0509.3B(1)
C6	Total of canopy area provided by "Heritage," "Memorial," "Specimen," or "Street," trees =	0	
C7	C6 x 1.5 to 3.0 =	0	§ 12-0509.3B(2)
C8	Canopy area of trees within Resource Protection Areas and 100-year floodplains =	0	
C9	C8 x 1.0 =	0	§ 12-0509.3C(1)
C-10	Total of C3, C5, C7 and C9=	29,848	If area of C10 is less than B7 remainder of requirement must be met through tree planting - go to D
D. Tree Planting			
D1	Area of canopy to be met through tree planting (B7-C10) =	0	
D2	Area of canopy planted for air quality benefits =	0	
D3	x 1.5 =	0	§ 12-0509.4B(1)
D4	Area of canopy planted for energy conservation =	0	
D5	x 1.5 =	0	§ 12-0509.4B(2)
D6	Area of canopy planted for water quality benefits =	0	
D7	x 1.25 =	0	§ 12-0509.4B(3)
D8	Area of canopy planted for wildlife benefits =	0	
D9	x 1.5 =	0	§ 12-0509.4B(4)
D10	Area of canopy provide by native trees =	12,800	
D11	x 1.5 =	19,200	§ 12-0509.4B(5)
D12	Area of canopy provided by improved cultivars and varieties =	0	
D13	x 1.25 =	0	§ 12-0509.4B(6)
D14	Area of canopy provided through tree seedlings =	0	§ 12-0509.4D(1)
	x 1.0 =	0	
D15	Area of canopy provided through native shrubs or woody seed mix =	0	§ 12-0509.4D(1)(a)
	x 1.0 =	0	§ 12-0509.4D(1)(a)
D16	Percentage of D14 represented by D15 =	0	Must not exceed 33% of D14
D17	Area of canopy provide by non-native trees =	0	
D18	Total of canopy area provided through tree planing =	19,200	
D19	Is an offsite planting relief requested ?		Yes or No
D20	Tree Bank or Tree Fund?		§ 12-0511
D21	Canopy area requested to be provided through offsite Banking or Tree Fund		
D22	Amount to be deposited into the Tree Preservation and Planting Fund		
E. Total of 10-year Tree Canopy Provided			
E1	Total of canopy area provided through tree preservation (C10) =	29,848	
E2	Total of canopy area provided through tree planting (D18) =	19,200	
E3	Total of canopy area provided through offsite mechanism (D21) =	0	
E4	Total of 10-year Tree Canopy Provided =	49,048	Total of E1 through E3. Area should meet or exceed area in B7.

Application No. SEA 84-M-121-03 Staff M.B.
APPROVED (SE) SP PLAN
SEE DEV CONDS DATED 3/14/11
Date of (BOS) (BZA) approval 3/29/11
Sheet 6 of 6

TREE TABLE

T1 40" TREE	T8 12" 2X HOLLY
T2 3" 4X TREE	T9 11" HOLLY
T3 10" TREE	T10 3" HOLLY
T4 6" 2X TREE	T11 41" POPLAR
T5 46" MAPLE	T12 10" OAK
T6 27" MAPLE	T13 15" DT
T7 11" 3X HOLLY	

Existing Vegetation Map — The Westminster School

	Cover Type	Primary Species	Understory Species	Comments	Successional Stage	Condition	Area	Canopy Area
A	Bottomland Forest	*Liriodendron tulipifera, Carya spp., Quercus alba, Quercus rubra, Prunus serotina*	*Ilex opaca, Nyssa sylvatica, Hedera helix*	Existing forest around older home and in remnants on school site; some evergreen screen plantings are along southern edge of forest.	Sub-climax	Good mostly	2.29 AC.	96,539 SF
B	Suburban Landscape	*Acer rubrum, x Cupressocyparis leylandi*	Turfgrass	Lawn and landscape, house, school, and associated hardscape	N/A	Fair to good	0.69 AC.	9,326 SF
C	Developed	N/A	Turfgrass	Lawn and landscape, house, school, and associated hardscape	N/A	N/A	3.86 AC.	7,350 SF
					Total Area		6.84 AC.	113,215 SF

TRI-TEK ENGINEERING
CIVIL
ENVIRONMENTAL
LAND PLANNING
SURVEYING
690 Center Street
Suite 300
Herndon, Virginia 20170
V: (703) 481-5900
F: (703) 481-5901
info@tritekinc.com

COMMONWEALTH OF VIRGINIA — THEODORE V. BRUN — NO. 023808 — PROFESSIONAL ENGINEER — 12-6-10

THE WESTMINSTER SCHOOL

FAIRFAX COUNTY, VIRGINIA

MASON DISTRICT

EXISTING CONDITIONS AND VEGETATION MAP

DATE	REVISION
7/2/10	PER COUNTY COMMENTS.
10/18/10	PER COUNTY COMMENTS.
12/6/10	PER COUNTY COMMENTS.

PM: TDB SCALE: 1"=30'
PE: TDB DATE: 4/21/10
CO: MSO SHEET 6 OF 6

F-2521

O:\drawings\F-2521\plots\SEP\2521-06-SEP-EVM.dwg, 12/6/2010 12:39:12 PM, SOlson, Xerox 6204 - CADD.pc3, 1:1, TRI-TEK Engineering, Inc.

COPYRIGHT 2004. NO REPRODUCTION OR USE OF THE DRAWING IS ALLOWED IN PART OR IN WHOLE BY ANY PROCESS WITHOUT THE EXPRESS WRITTEN CONSENT OF TRI-TEK ENGINEERING, INC.