APPLICATION ACCEPTED: December 18, 2012
PLANNING COMMISSION: June 20, 2013
BOARD OF SUPERVISORS: Not yet scheduled

County of Fairfax, Virginia

July 25, 2013

STAFF REPORT ADDENDUM

SEA 2009-DR-008

HUNTER MILL DISTRICT

APPLICANT:	Oakcrest School
ZONING:	R-E (Residential Estate)
PARCELS:	18-4 ((1)) 26C, 18-4 ((8)) 4 and A
ACREAGE:	22.71 acres
FAR:	0.136
PLAN MAP:	Residential at 0.2-0.5 du/ac
SE CATEGORY:	Category 3 – Private School of General Education
PROPOSAL:	To amend SE 2009-DR-008, previously approved for a private school of general education with a maximum daily enrollment of 450 students (grades 6-12), to permit modifications to development conditions and site access with no change to the maximum daily enrollment or the overall/approved FAR.

STAFF RECOMMENDATIONS:

To allow sufficient time for staff review of the latest submitted materials and modifications of the associated development conditions, staff recommends deferral of SEA 2009-DR-008 until July 31, 2013.

Joe Gorney

Department of Planning and Zoning
Zoning Evaluation Division
12055 Government Center Parkway, Suite 801
Fairfax, Virginia 22035-5509
Phone 703-324-1290 FAX 703-324-3924
www.fairfaxcounty.gov/dpz/

It should be noted that it is not the intent of staff to recommend that the Board, in adopting any conditions that are offered by the owner, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

It should be further noted that the content of this report reflects the analysis and recommendation of staff; it does not reflect the position of the Board of Supervisors.

The approval of this special exception amendment does not interfere with, abrogate, or annul any easement, covenants, or other agreements between parties as they may apply to the property subject to this application.

For information, contact the Zoning Evaluation Division, Department of Planning and Zoning, 12055 Government Center Parkway, Suite 801, Fairfax, Virginia 22035-5505, (703) 324-1290.

O:\jgorney\SEA-2009-DR-008-OakcrestSchool\PC-ADDENDUM\ADDENDUM-OakcrestSchool-072513.docx

Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 48 hours advance notice. For additional information on ADA call (703) 324-1334 or TTY 711 (Virginia Relay Center).

SPECIAL EXCEPTION AMENDMENT

OAKCREST SCHOOL

HUNTER MILL DISTRICT

FAIRFAX CO., VIRGINIA

(SEA 2009-DR-008)

SPECIAL EXCEPTION PLAN NOTES

1. THIS SPECIAL EXCEPTION AMENDMENT (SEA) APPLICATION IS TO MODIFY THE PREVIOUSLY APPROVED APPLICATION (SE 2009-DR-008) WHICH PERMITTED CONSTRUCTION OF A PRIVATE SCHOOL ON THE SUBJECT SITE.
2. THE PROPERTIES, WHICH ARE THE SUBJECT OF THIS APPLICATION, ARE IDENTIFIED ON THE FAIRFAX COUNTY TAX MAP AS PARCELS 18-4-((1)) PARCEL 26C, 18-4-((8)) PARCEL 4 AND 18-4-((8)) PARCEL A.
3. THE SUBJECT PROPERTY IS ZONED R-E RESIDENTIAL ESTATE.
4. THE BOUNDARY INFORMATION SHOWN HEREON IS BASED UPON A GROUND FIELD SURVEY PERFORMED BY VIKA, INC. IN DECEMBER 2003. THE PHYSICAL IMPROVEMENTS SHOWN HEREON ARE BASED UPON A GROUND FIELD SURVEY PERFORMED BY VIKA, INC. IN SEPTEMBER 2004 AND BY AN AERIAL SURVEY PROVIDED BY MCKENZEE/SCHNIDER ON DECEMBER 29, 2003. THE LAST FIELD DATE WAS JUNE 6, 2008.
5. THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS AT A CONTOUR INTERVAL OF TWO (2) FEET AND IS BASED ON GROUND SURVEY AND AERIAL SURVEY REFERENCED ABOVE.
6. THE LOCATION AND SIZE OF THE ON-SITE STORMWATER MANAGEMENT FACILITIES SHOWN HEREON ARE APPROXIMATE AND SUBJECT TO REVISION AT THE TIME OF FINAL ENGINEERING. STORM SEWER LAYOUT IS PRELIMINARY & SUBJECT TO FINAL ENGINEERING.
7. THE PROPERTY WILL BE SERVED BY BOTH PUBLIC WATER AND SEWER.
8. THE PROPOSED LIMITS OF CLEARING AND GRADING ARE APPROXIMATE AND SUBJECT TO ADJUSTMENT DUE TO FINAL ENGINEERING AND LOCATION OF UTILITIES BUT WILL BE IN SUBSTANTIAL CONFORMANCE WITH THAT WHICH IS PRESENTED HEREON.
9. THE BUILDINGS SHOWN HEREON APPEAR TO PLOT IN FLOOD ZONE "X" AREA, DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN AS SHOWN ON F.E.M.A. MAP PANEL NO. 515525 0050 D, DATED MARCH 5, 1990.
10. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO RESOURCE PROTECTION AREAS (RPA). ENVIRONMENTAL QUALITY CORRIDORS (EQC) OR FLOODPLAINS BASED ON FAIRFAX COUNTY MAPS.
11. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO UTILITY EASEMENTS GREATER THAN TWENTY-FIVE (25) FEET IN WIDTH, OTHER THAN SHOWN ON THIS SE PLAN. ALL EXISTING MAJOR UNDERGROUND UTILITIES ARE SHOWN.
12. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO GRAVES ON THIS SITE.
13. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO HAZARDOUS OR TOXIC SUBSTANCES, HAZARDOUS WASTE OR PETROLEUM PRODUCTS STORED ON THE SUBJECT PROPERTY.
14. DEVELOPMENT WILL COMMENCE UPON APPROVAL OF ALL REQUIRED PERMITS AND FUNDING.
15. TO THE BEST OF OUR KNOWLEDGE, THE PROPOSED DEVELOPMENT CONFORMS TO ALL CURRENT APPLICABLE LAND DEVELOPMENT ORDINANCES, REGULATIONS, AND ADOPTED STANDARDS.
16. MINOR MODIFICATIONS TO THE SIZES, DIMENSIONS, FOOTPRINTS, AND LOCATIONS OF THE BUILDINGS, SIDEWALKS, AND UTILITIES AS PRESENTED ON THE SE PLAN MAY OCCUR WITH FINAL ENGINEERING AND DESIGN.
17. IT IS TO BE UNDERSTOOD THAT ADDITIONAL SITE FEATURES SUCH AS TRASH/RECYCLING FACILITIES, PLANTERS, FENCES, RETAINING WALLS, AND GATES, IF SHOWN, ARE APPROXIMATE AND MAY BE ADJUSTED WITH FINAL ENGINEERING AND LANDSCAPE DESIGN AND, IF NOT REPRESENTED HEREON, MAY BE PROVIDED.
18. THE APPLICANT RESERVES THE RIGHT TO INSTALL ACCESSORY STRUCTURES AND USES DEFINED IN ARTICLE 10 OF THE ZONING ORDINANCE, INCLUDING, BUT NOT LIMITED TO FLAGPOLES, DECORATIVE FENCING, SCULPTURES, COMMUNICATION EQUIPMENT IN LOCATIONS THAT ARE NOT IN CONFLICT WITH THE LOCATIONAL REQUIREMENTS OF THE ZONING ORDINANCE OR THIS SPECIAL EXCEPTION.
19. BUILDING ELECTRIC, GAS, COMMUNICATION LINES TO BE SERVED VIA UNDERGROUND CONDUITS.
20. THE APPLICANT RESERVES THE RIGHT TO DEVELOP THE PROPERTY IN PHASES, PROVIDED THAT ALL APPLICABLE REQUIREMENTS OF THE SE FOR LANDSCAPING AND TRANSITIONAL SCREENING AND ALL COUNTY REQUIREMENTS FOR MINIMUM PARKING AND STORM WATER MANAGEMENT SHALL BE FULFILLED IN CONNECTION WITH EACH INDIVIDUAL PHASE.
21. PARKING LOT LIGHTING SHALL BE A MAXIMUM OF TWENTY (20) FEET IN HEIGHT FROM THE BOTTOM OF THE POLES TO THE BASE OF THE FIXTURE AND ALL PARKING LOT LIGHTING FIXTURES SHALL BE FULL CUT-OFF AND DIRECTED DOWNWARD.

STORMWATER MANAGEMENT NARRATIVE (THE FOLLOWING NARRATIVE FROM THE ORIGINAL S.E. APPROVAL IS HEREBY RESTATED).

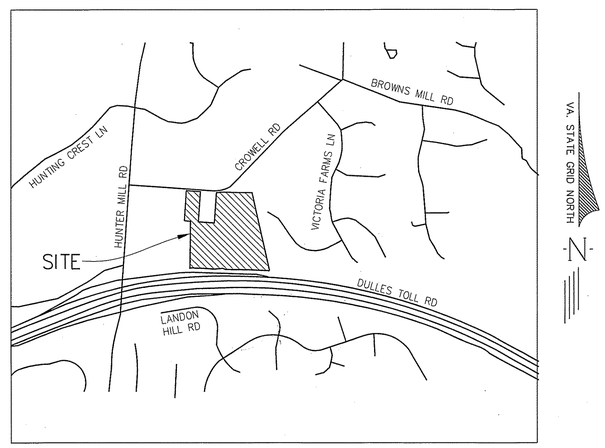
THE OAKCREST SCHOOL PROPERTY IS LOCATED WITHIN THE DIFFICULT RUN WATERSHED. A MAJORITY OF THE SITE IS TRIBUTARY TO THE MIDDLE DIFFICULT RUN BRANCH WITH THE REMAINDER TRIBUTARY TO THE COLVIN RUN BRANCH. THE AREA TRIBUTARY TO THE MIDDLE DIFFICULT RUN BRANCH DISCHARGES TO A CONSTRUCTED REGIONAL DETENTION BASIN, BASIN NO. D-52. THE REGIONAL BASIN WAS CONSTRUCTED BY THE DEVELOPER OF THE HUNTER MILL ESTATES SUBDIVISION IN OR AROUND 1991. THE REGIONAL POND WAS DESIGNED TO PROVIDE FLOOD CONTROL VOLUME UP TO THE 10-YEAR EVENT AND BMP VOLUME TO MEET THE 40% PHOSPHORUS REMOVAL REQUIREMENT PER THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM). THE DESIGN VOLUME WAS BASED ON ANTICIPATED FUTURE CONDITIONS USING THE FUTURE LAND USE PROJECTIONS. THE AMOUNT OF IMPERVIOUS SURFACE ASSOCIATED WITH THE OAKCREST SCHOOL PROJECT SLIGHTLY EXCEEDS THE AMOUNT PROJECTED FOR THE REGIONAL BASIN, HOWEVER, THE OVERALL "C" COEFFICIENT DOES NOT APPRECIABLY CHANGE AND PROVIDES THE REQUIRED BMP VOLUME FOR THIS PROJECT. THE REGIONAL POND DISCHARGES TO A STREAM THAT IS APPROXIMATELY 700 FEET UPSTREAM OF THE JUNCTION WITH MIDDLE BRANCH OF THE DIFFICULT RUN DRAIN WHERE THERE IS A FLOODPLAIN IN EXCESS OF THE 1 SQUARE MILE REQUIREMENT.

WITH RESPECT TO THE MIDDLE DIFFICULT RUN WATERSHED, THE OAKCREST SCHOOL SITE DRAINS TO TWO CULVERTS THAT CONVEY RUNOFF WATER ACROSS THE DULLES AIRPORT ACCESS ROAD AND THROUGH THE HUNTER MILL ESTATES SUBDIVISION TO THE REGIONAL BASIN. THE WESTERLY OUTLET POINT (TRIBUTARY A) IS A 36-INCH CONCRETE CULVERT. THE EASTERLY OUTLET POINT (TRIBUTARY B) IS A 42-INCH CONCRETE CULVERT. THE CULVERTS DISCHARGE TO NATURAL DRAINAGE CHANNELS WITH SEVERAL ROAD CROSSINGS BETWEEN THE DULLES AIRPORT ACCESS ROAD AND THE REGIONAL BASIN. FIELD EVALUATION OF THE DRAINAGE CHANNELS INDICATE THAT THEY ARE EXPERIENCING EROSION, INCISIONS, AND UNDERCUTTING, AND DO NOT MEET THE REQUIREMENTS OF AN ADEQUATE OUTLET PER THE FAIRFAX COUNTY PFM DUE TO THE RELATIVE STEEPNESS OF THE CHANNELS AND THE ERODIBILITY OF THE INCLINED CHANNELS.

IN ORDER TO ACHIEVE AN ADEQUATE OUTLET PER THE PFM, IT IS PROPOSED TO PROVIDE DETENTION VOLUME IN ORDER TO RESTRICT THE POST DEVELOPMENT FLOW RATES BELOW THAT OF A SITE IN GOOD FORESTED CONDITION IN ACCORDANCE WITH THE PROPORTIONAL IMPROVEMENT REQUIREMENT OF THE PFM. THE STORMWATER MANAGEMENT POND (SWM POND #1) IN THE SOUTHWEST CORNER OF THE SITE WILL PROVIDE APPROXIMATELY 75,439 CUBIC FEET (1.73 AC-FT) STORAGE. THE POND WILL HAVE AN OUTLET CONTROL STRUCTURE WILL BE A COMBINED CONTROL AND SPILLWAY STRUCTURE SIMILAR TO FAIRFAX COUNTY STANDARDS PFM PLATE #53-6 OR #54-6. THE OUTLET CONTROL STRUCTURE AND DAM/SPILLWAY WILL MEET THE REQUIREMENTS OF THE PFM DAM STANDARDS. THE AREA THAT DISCHARGES TO TRIBUTARY B WILL UTILIZE LOW IMPACT DEVELOPMENT (LID) TECHNIQUES SUCH AS VEGETATED SWALES, BIO-RETENTION BASINS AND A PERCOLATION TRENCH. THE ESTIMATED STORAGE TO BE PROVIDED BY THE VEGETATED SWALE IS 1,467 CUBIC FEET (0.3 AC-FT). THE BIO-RETENTION BASINS ARE 15,415 CUBIC FEET (0.35 AC-FT) OF STORAGE AND THE PERCOLATION TRENCH WILL PROVIDE 7,783 CUBIC FEET (0.18 AC-FT) OF FLOOD STORAGE RESPECTIVELY. OTHER LID TECHNIQUES MAY BE UTILIZED DURING FINAL DESIGN TO MINIMIZE THE AMOUNT OF STORAGE IN THE FACILITIES.

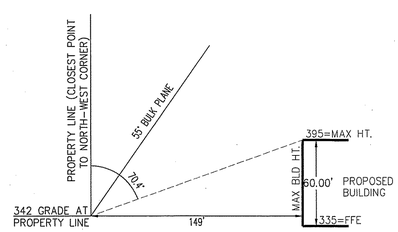
ALSO, THE APPLICANT RESERVES THE RIGHT TO COMBINE OR UTILIZE JOINT STORMWATER FACILITIES WITH MWAA IF IT IS DETERMINED DURING DESIGN THAT IT IS BENEFICIAL TO MWAA AND OAKCREST SCHOOLS PROVIDED THAT ALL APPLICABLE REQUIREMENTS OF THE PFM ARE MET. WITH THIS IN MIND, THE UNCONTROLLED AREA IN THE SOUTHWEST HAS NOT BEEN DESIGNED. DEPENDING ON THE FINAL COORDINATION WITH MWAA, ADDITIONAL LID MEASURES IN THIS AREA MAY BE NECESSARY TO MEET THE PFM REQUIREMENTS.

A SMALL PORTION OF THE SITE (0.10 ACRES) DRAINS NORTH AND WEST ALONG CROWELL ROAD AND IS TRIBUTARY TO COLVIN RUN BRANCH. IT IS NOT ANTICIPATED THAT RUNOFF FROM THESE AREAS WILL INCREASE RUNOFF INTO COLVIN RUN BRANCH.



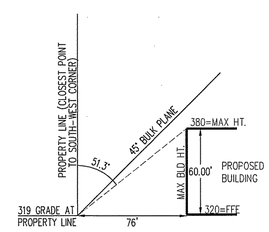
VICINITY MAP

SCALE: 1" = 1000'



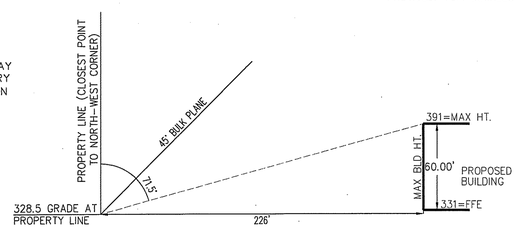
BULK PLANE FRONT YARD

REQUIRED: 55 DEGREES
PROVIDED: 70.4 DEGREES



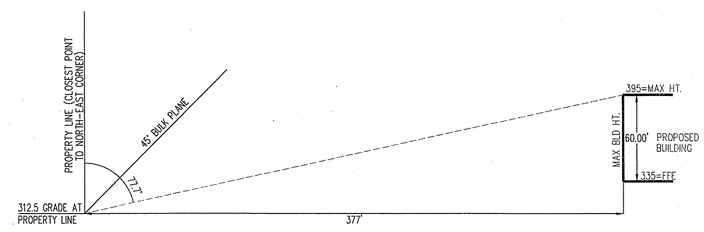
BULK PLANE REAR YARD

REQUIRED: 45 DEGREES
PROVIDED: 51.3 DEGREES



BULK PLANE WEST YARD

REQUIRED: 45 DEGREES
PROVIDED: 71.5 DEGREES



BULK PLANE EAST YARD

REQUIRED: 45 DEGREES
PROVIDED: 77.7 DEGREES

BULK PLANE DIAGRAMS

SPECIAL EXCEPTION PLAN NOTES

EXISTING ZONING — R-E RESIDENTIAL REAL ESTATE

MINIMUM LOT REQUIREMENTS
- MINIMUM LOT AREA = 75,000 S.F.
- PROVIDED LOT AREA = 987,324 S.F.
- MINIMUM LOT WIDTH = 200 FT
- PROVIDED LOT WIDTH = 200 FT

TOTAL AREA OF SITE FOR SPECIAL EXCEPTION
- PARCEL 1 (OUTLOT A) = 0.57 AC. (24,838 S.F.)
- PARCEL 2 (PARCEL A) = 20.14 AC. (877,486 S.F.)*
- PARCEL 2 (OUTLOT 4) = 1.95 AC. (85,000 S.F.)

*EXCLUDES AREA PREVIOUSLY INCLUDED IN PRIOR SE APPROVAL, WHICH HAS SINCE BEEN ACQUIRED BY MWWA (0.29 AC./12,700 S.F.)

*TOTAL SITE AREA FOR THIS SPECIAL PERMIT = 22.67 AC. (987,324 S.F.)

MAXIMUM PERMITTED GROSS FLOOR AREA: R-E FARM – 0.15
SITE AREA 989,120 S.F. X 0.15 = 148,368 MAX. CFA
(INCLUDES DENSITY CREDIT FOR MWWA TAKING)

PROPOSED GROSS FLOOR AREA
PROPOSED BUILDING = 134,500 S.F.
(DOES NOT INCLUDE NATATORIUM)

MAXIMUM PERMITTED FLOOR AREA RATIO = 0.15
*PROPOSED FLOOR AREA RATIO = 0.136

MAXIMUM PERMITTED BUILDING HEIGHT = 60 FT
PROPOSED BUILDING HEIGHT = 60 FT

REQUIRED MINIMUM YARDS (USING ZONING R-E CRITERIA):
- FRONT YARD: CONTROLLED BY 55° ANGLE OF BULK PLANE BUT NOT LESS THAN 50 FT
- REAR YARD: CONTROLLED BY 45° ANGLE OF BULK PLANE BUT NOT LESS THAN 20 FT
- SIDE YARD: CONTROLLED BY 45° ANGLE OF BULK PLANE BUT NOT LESS THAN 25 FT

PARKING

REQUIRED PARKING:
- 450 STUDENTS X .3 SPACES/STUDENT = 135 SPACES

OR
- SPECTATOR GYMNASIUM (300 SEATS) 300 X 0.3 SPACES/SEAT = 90 SPACES

PROVIDED PARKING:
- PAVED AUTOMOBILE PARKING AROUND BUILDING = 195 SPACES
- REINFORCED TURF OVERFLOW PARKING = 37 SPACES

OUTDOOR RECREATION AREA:

REQUIRED: 430 S.F. PER STUDENT
NO. OF STUDENTS = 450
REQUIRED RECREATION AREA = 193,500 S.F.

PROVIDED: 193,500 S.F. HAS BEEN PROVIDED AS SHOWN ON THE SE PLAN

PREVIOUSLY GRANTED MODIFICATIONS HEREBY CARRIED FORWARD

1. A MODIFICATION TO THE REQUIRED TRANSITIONAL SCREENING REQUIREMENT IS REQUESTED ALONG THE EAST AND A PORTION OF THE SOUTH PROPERTY LINE. IN LIEU OF THE TRANSITIONAL SCREENING REQUIREMENT, THIS AREA WILL BE DESIGNATED A TREE PRESERVATION AREA WITH SUPPLEMENTAL PLANTINGS WHERE VEGETATION IS SPARSE AS DETERMINED BY FAIRFAX COUNTY URBAN FORESTRY AT TIME OF SITE PLAN.
2. A MODIFICATION TO THE LOCATION OF THE REQUIRED BARRIER, PER SECTION 13-309 OF THE ZONING ORDINANCE IS REQUESTED ALONG THE SOUTHERLY PROPERTY LINES. THE SOUTHERN LOT LINE IS ADJACENT TO THE TOLL ROAD AND A FENCE ON THE RIGHT-OF-WAY LINE WILL PROVIDE A MORE EFFECTIVE BARRIER.

SHEET INDEX

1	COVER SHEET
2	BOUNDARY & TOPOGRAPHIC SURVEY
3	SPECIAL EXCEPTION PLAT OVERALL
4	SPECIAL EXCEPTION PLAT
5	SPECIAL EXCEPTION PLAT
6	CROWELL ROAD ENTRANCE DETAIL
7	ILLUSTRATIVE RIGHT-OF-WAY DEDICATION EXHIBIT
8	EXISTING VEGETATION MAP
9	LANDSCAPE PLANS
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12	EXTERIOR ELEVATIONS
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16	STORMWATER CALCULATIONS
17	STORMWATER CALCULATIONS
18	STORMWATER CALCULATIONS
19	STORMWATER CALCULATIONS

Zoning Evaluation Division
JUL 19 2013
RECEIVED
Department of Planning & Zoning

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE: 12/17/12, 03/28/13, 06/04/13, 07/18/13

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COMMONWEALTH OF VIRGINIA
ROBERT W. BROWN
Lic. No. 037041
7/18/13
PROFESSIONAL ENGINEER

COVER SHEET

OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINA

DATE: DEC, 2012

SCALE: 1"=AS NOTED

CL: N/A

SHEET 1 OF 19

SE-12643

NOTES

1. THE PROPERTIES SHOWN HEREON ARE IDENTIFIED ON FAIRFAX COUNTY TAX ASSESSMENT MAP NO. 018-4((01)) AS PARCEL 26C AND ON TAX ASSESSMENT MAP NO. 018-4((08)) AS PARCEL 4 AND OUTLOT "A" AND ALL ARE ZONED R-E.
2. THE HORIZONTAL DATUM SHOWN HEREON IS BASED UPON VIRGINIA STATE GRID NORTH 1983 (VCS 83)
3. THE BOUNDARY INFORMATION SHOWN HEREON IS BASED UPON A GROUND FIELD SURVEY PERFORMED BY VIKA, INC. IN DECEMBER 2003. THE PHYSICAL IMPROVEMENTS SHOWN HEREON ARE BASED UPON A GROUND FIELD SURVEY PERFORMED BY VIKA, INC. IN SEPTEMBER 2004 AND BY AN AERIAL SURVEY PROVIDED BY MCKENZEE/SNYDER ON DECEMBER 29, 2003. THE LAST FIELD DATE WAS OCTOBER 30, 2008.
4. THE SUBJECT PROPERTIES LIE IN FLOOD ZONE "X" (AREA TO BE DETERMINED OUTSIDE OF 500-YEAR FLOOD PLAIN) AS SHOWN ON FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 515525 0050 0, DATED MARCH 5, 1990.
5. PARCEL 4, OUTLOT "A", AND PARCEL A ARE CURRENTLY OWNED BY OAKCREST SCHOOL BY DEED RECORDED IN DEED BOOK 19650 AT PAGE 1542 AMONG THE LAND RECORDS OF FAIRFAX COUNTY VIRGINIA.
6. THERE IS NO OBSERVABLE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS.
7. THERE IS NO OBSERVABLE EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.
8. THERE IS NO OBSERVABLE EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.

AREA TABULATION

OUTLOT A (PARCEL 1).....24,838 SF, OR 0.57020 ACRES
LOT 4 (PARCEL 2).....85,000 SF, OR 1.95133 ACRES
PARCEL A (PARCEL 3).....877,486 SF, OR 20.144 ACRES

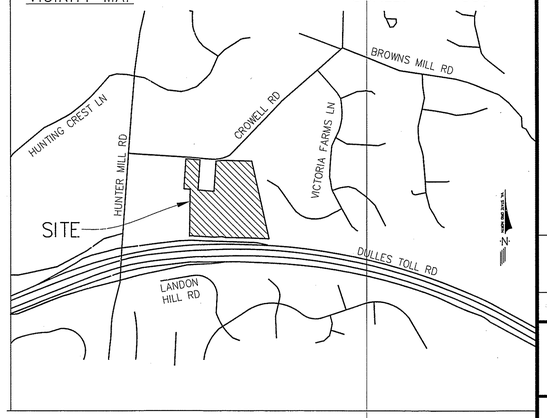
TOTAL AREA.....987,324 SF, OR 22.666 ACRES

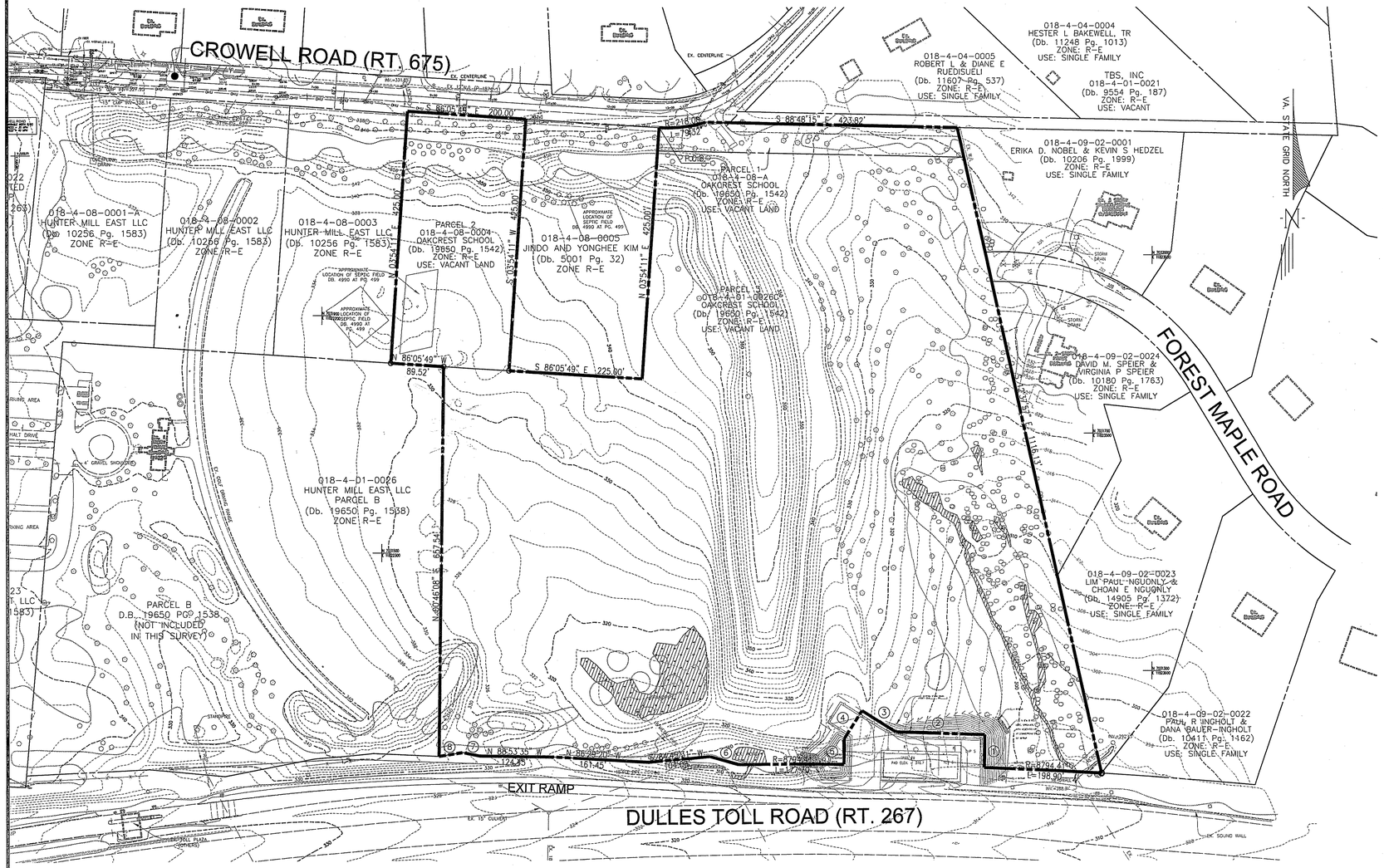
CURVE DATA

NO.	RADIUS	ARC	DELTA	TANGENT	CHORD	BEARING
1	218.00'	79.32'	20°50'47"	40.10'	78.88'	N 83°33'11" E
2	8794.41'	198.90'	01°17'45"	99.45'	198.90'	N 87°18'02" W
3	8794.41'	177.70'	01°09'28"	88.86'	177.70'	S 89°55'44" W

VICINITY MAP

SCALE: 1"=1000'





LEGAL DESCRIPTION

OAKCREST SCHOOL
ALL THE PROPERTY OF
DEED BOOK 19650 PAGE 1542
FAIRFAX COUNTY, VIRGINIA
JANUARY 22, 2009

BEING ALL OF PARCEL 1 (ALSO KNOWN AS OUTLOT "A" ROLLING HEIGHTS – SECTION ONE). PARCEL 2 (ALSO KNOWN AS LOT FOUR (4), SECTION 1 OF THE SUBDIVISION KNOWN AS ROLLING HEIGHTS) AND PARCEL 3 (ALSO KNOWN AS PARCEL A, PROPERTY OF HUNTER MILL EAST, LLC) AS DESCRIBED IN A DEED CONVERTED TO OAKCREST SCHOOL FROM HUNTER MILL EAST, LLC., BY DEED DATED NOVEMBER 7, 2007 AND RECORDED IN DEED BOOK 19650 AT PAGE 1542, AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING FOR THE SAME AT A POINT MARKING THE NORTHEASTERLY CORNER OF LOT 5, ROLLING HEIGHTS – SECTION ONE AS RECORDED IN DEED BOOK 4990 AT PAGE 499, AMONG THE AFORESAID LAND RECORDS, THENCE RUNNING WITH THE SOUTHERLY RIGHT-OF-WAY LINE OF CROWELL ROAD (WIDTH VARIES).

1. 79.32 FEET ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 218.00 FEET, A CHORD BEARING AND DISTANCE OF NORTH 83 DEGREES 33 MINUTES 11 SECONDS EAST, 78.88 FEET TO A POINT; THENCE CONTINUING WITH CROWELL ROAD AND THE SOUTHERLY LINE OF THE PROPERTY OF TBS, INC. AS RECORDED IN DEED BOOK 9554 AT PAGE 187, AMONG THE AFORESAID LAND RECORDS.
2. SOUTH 88 DEGREES 48 MINUTES 15 SECONDS EAST A DISTANCE OF 423.82 FEET TO A POINT; THENCE LEAVING THE AFORESAID CROWELL ROAD AND TBS, INC PROPERTY AND RUNNING WITH THE WESTERLY LINE OF VICTORIA FARMS, SECTION 2 AS RECORDED IN DEED BOOK 9707 AT PAGE 1041, AMONG THE AFORESAID LAND RECORDS.
3. SOUTH 12 DEGREES 37 MINUTES 57 SECONDS EAST A DISTANCE OF 1116.13 FEET TO AN IRON PIPE FOUND ON NORTHERLY RIGHT-OF-WAY LINE OF THE DULLES AIRPORT ACCESS ROAD (ROUTE 267 – VARIABLE WIDTH RIGHT-OF-WAY), PASSING OVER AN IRON PIPE FOUND 3.10 FEET FROM THE BEGINNING OF SAID LINE, ALSO PASSING OVER AND IRON PIPE FOUND 220.33 FEET FROM THE BEGINNING OF SAID LINE AND ALSO PASSING OVER AN IRON PIPE FOUND 775.49 FEET FROM THE BEGINNING OF SAID LINE; THENCE LEAVING THE AFORESAID WESTERLY LINE OF VICTORIA FARMS AND RUNNING WITH SAID NORTHERLY RIGHT-OF-WAY LINE THE FOLLOWING THIRTEEN (13) COURSES AND DISTANCES
4. 198.90 FEET ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 8794.41 FEET, A CHORD BEARING AND DISTANCE OF NORTH 87 DEGREES 18 MINUTES 02 SECONDS WEST, 198.90 FEET TO A POINT; THENCE
5. NORTH 01 DEGREES 05 MINUTES 31 SECONDS EAST A DISTANCE OF 55.65 FEET TO A POINT; THENCE
6. NORTH 88 DEGREES 19 MINUTES 39 SECONDS WEST A DISTANCE OF 150.56 FEET TO A POINT; THENCE
7. NORTH 57 DEGREES 48 MINUTES 59 SECONDS WEST A DISTANCE OF 67.38 FEET TO A POINT; THENCE
8. SOUTH 32 DEGREES 11 MINUTES 01 SECONDS WEST A DISTANCE OF 55.55 FEET TO A POINT; THENCE
9. SOUTH 01 DEGREES 08 MINUTES 01 SECONDS WEST A DISTANCE OF 43.73 FEET TO A POINT; THENCE
10. 177.70 FEET ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 8794.41 FEET, A CHORD BEARING AND DISTANCE OF SOUTH 89 DEGREES 55 MINUTES 44 SECONDS WEST, 177.70 FEET TO A POINT; THENCE
11. NORTH 74 DEGREES 00 MINUTES 15 SECONDS WEST A DISTANCE OF 49.60 FEET TO A POINT; THENCE
12. SOUTH 84 DEGREES 45 MINUTES 31 SECONDS WEST A DISTANCE OF 104.06 FEET TO A POINT; THENCE
13. NORTH 86 DEGREES 29 MINUTES 20 SECONDS WEST A DISTANCE OF 161.45 FEET TO A POINT; THENCE
14. NORTH 88 DEGREES 53 MINUTES 35 SECONDS WEST A DISTANCE OF 124.45 FEET TO A POINT; THENCE
15. NORTH 78 DEGREES 46 MINUTES 20 SECONDS WEST A DISTANCE OF 29.23 FEET TO A POINT; THENCE
16. SOUTH 81 DEGREES 05 MINUTES 38 SECONDS WEST A DISTANCE OF 40.30 FEET TO A POINT MARKING THE SOUTHWESTERLY CORNER OF THE AFORESAID PARCEL A; THENCE LEAVING THE AFORESAID NORTHERLY RIGHT-OF-WAY LINE OF THE DULLES AIRPORT ACCESS ROAD AND RUNNING WITH THE WESTERLY LINE OF SAID PARCEL A.
17. NORTH 00 DEGREES 46 MINUTES 08 SECONDS EAST A DISTANCE OF 657.54 FEET TO A POINT ON THE SOUTHERLY LINE OF THE AFORESAID LOT 4; THENCE LEAVING THE AFORESAID WESTERLY LINE OF PARCEL A AND RUNNING WITH SAID SOUTHERLY LINE OF LOT 4.
18. NORTH 86 DEGREES 05 MINUTES 49 SECONDS WEST A DISTANCE OF 89.52 FEET TO THE SOUTHEASTERLY CORNER OF LOT 3 OF AFORESAID ROLLING HEIGHTS – SECTION ONE; THENCE LEAVING THE AFORESAID SOUTHERLY LINE OF LOT 4 AND RUNNING WITH THE WESTERLY LINE OF SAID LOT 3.
19. NORTH 03 DEGREES 54 MINUTES 11 SECONDS EAST A DISTANCE OF 425.00 FEET TO A POINT ON THE AFORESAID SOUTHERLY RIGHT-OF-WAY LINE OF CROWELL ROAD, THENCE LEAVING THE AFORESAID WESTERLY LINE OF LOT 3 AND RUNNING WITH SAID SOUTHERLY RIGHT-OF-WAY LINE
20. SOUTH 86 DEGREES 05 MINUTES 49 SECONDS EAST A DISTANCE OF 200.00 FEET TO THE NORTHWESTERLY CORNER OF AFORESAID LOT 5; THENCE LEAVING THE AFORESAID SOUTHERLY RIGHT-OF-WAY LINE OF CROWELL ROAD AND RUNNING WITH SAID LOT 5 THE FOLLOWING THREE (3) COURSES AND DISTANCES
21. SOUTH 03 DEGREES 54 MINUTES 11 SECONDS WEST A DISTANCE OF 425.00 FEET TO THE SOUTHWESTERLY CORNER OF THE AFORESAID LOT 6, THENCE
22. SOUTH 86 DEGREES 05 MINUTES 49 SECONDS EAST A DISTANCE OF 225.00 FEET TO THE SOUTHEASTERLY CORNER OF THE AFORESAID LOT 6, THENCE
23. NORTH 03 DEGREES 54 MINUTES 11 SECONDS EAST 425.00 FEET TO THE POINT OF BEGINNING CONTAINING 987,324 SQUARE FEET OR 22.666 ACRES OF LAND, MORE OR LESS

LEGEND

EXISTING STORM DRAIN	EXISTING ROAD SIGN
EXISTING MAJOR CONTOUR	EXISTING MANHOLE
EXISTING MINOR CONTOUR	EXISTING FENCE
EXISTING SANITARY SEWER	EXISTING OVERHEAD UTILITY
EXISTING WATER LINE	EXISTING WETLANDS
EXISTING TREE LINE	PROPERTY LINE
EXISTING FIBER OPTICS LINE	LIMITS OF SPECIAL EXCEPTION
EXISTING TELEPHONE LINE	PROP. CURB & GUTTER
EXISTING POWER POLE	PROP. FENCE
EXISTING LIGHT POLE	PEDESTRIAN CIRCULATION

LINE TABLE

NO.	BEARING	DISTANCE
1	N 01°05'31" E	55.65'
2	N 88°19'39" W	150.56'
3	N 57°48'59" W	67.38'
4	S 32°11'01" W	55.55'
5	S 01°08'01" W	43.73'
6	N 74°00'15" W	49.60'
7	N 78°46'20" W	29.23'
8	S 81°05'38" W	40.30'

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

No.	DATE	DESCRIPTION

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BOUNDARY & TOPOGRAPHIC SURVEY

OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT

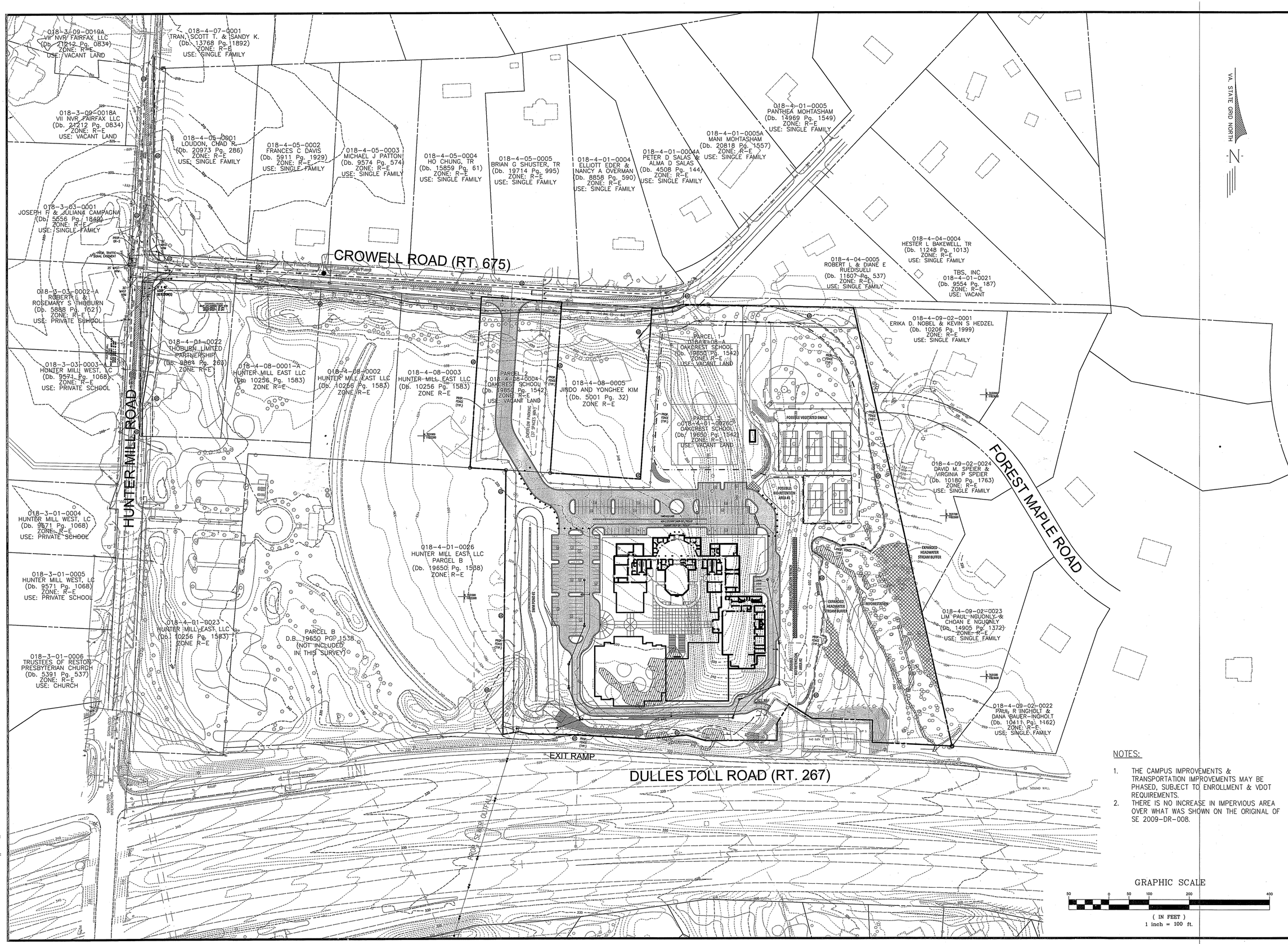
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: DEC, 2012

SCALE: 1"=AS NOTED C.I.: 2'

SHEET 2 OF 19

SE-12643



NOTES:

1. THE CAMPUS IMPROVEMENTS & TRANSPORTATION IMPROVEMENTS MAY BE PHASED, SUBJECT TO ENROLLMENT & VDOT REQUIREMENTS.
2. THERE IS NO INCREASE IN IMPERVIOUS AREA OVER WHAT WAS SHOWN ON THE ORIGINAL OF SE 2009-DR-008.

No.	DATE	DESCRIPTION

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SPECIAL EXCEPTION PLAT OVERALL

OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: DEC, 2012

SCALE: 1"=100'

C.I.: 1'

SHEET 3 OF 19

SE-12643

018-4-05-0003
MICHAEL J PATTON
(Db. 9574 Pg. 574)
ZONE: R-E
USE: SINGLE FAMILY

EX. BUILDING

018-4-05-0004
HO CHUNG, TR
(Db. 15859 Pg. 61)
ZONE: R-E
USE: SINGLE FAMILY

018-4-05-0005
BRIAN G SHUSTER, TR
(Db. 19714 Pg. 995)
ZONE: R-E
USE: SINGLE FAMILY

EX. BUILDING

018-4-01-0004
ELLIOTT EDER &
NANCY A OVERMAN
(Db. 8858 Pg. 590)
ZONE: R-E
USE: SINGLE FAMILY

EX. BUILDING

018-4-01-0004A
PETER D SALAS &
ALMA D SALAS
(Db. 4508 Pg. 144)
ZONE: R-E
USE: SINGLE FAMILY

EX. BUILDING

EX. BUILDING

018-4-04-0004
HESTER L BAKEWELL, TR
(Db. 11248 Pg. 1013)
ZONE: R-E
USE: SINGLE FAMILY

018-4-04-0005
ROBERT L & DIANE E
RUEDISUELI
(Db. 11607 Pg. 537)
ZONE: R-E
USE: SINGLE FAMILY

TBS, INC
018-4-01-0021
(Db. 9554 Pg. 1187)
ZONE: R-E
USE: VACANT

VA. STATE GRID NORTH

EX. CENTERLINE

INV.=331.85

EX. 12"W & (P 1874-1)

100' RTL + 100' TAPER

200' RTL + 100' TAPER

5' PAVED SHOULDER

DEDICATION AREA (33.53')

GRAVEL SHOULDER

SHARED UTILITY EASEMENT

PROP. R/W

PROP. TEMP. CONST. ESMT.

DITCHLINE

100' LTL + 150' TAPER

CROWELL ROAD (RT. 670)
R/W WIDTH VARIES

GRAVEL SHOULDER

PAVED SHOULDER

DITCHLINE

10' FUTURE ASPHALT TRAIL (BY OTHERS)

SHARED UTILITY & PUBLIC ACCESS ESMT

SHARED UTILITY ESMT

PROP. R/W

PROP. TEMP. CONST. ESMT.

10' FUTURE ASPHALT TRAIL (BY OTHERS)

PARCEL 1
018-4-08-A
OAKCREST SCHOOL
(Db. 19650 Pg. 1542)
ZONE: R-E
USE: VACANT LAND

SHARED UTILITY ESMT

PROP. R/W

018-4-09-02-0001
ERIKA D. NOBEL & KEVIN S HEDZEL
(Db. 10206 Pg. 1999)
ZONE: R-E
USE: SINGLE FAMILY

EX. 3 STORY STUCCO/STONE DWELLING W/BASEMENT

APPROXIMATE LOCATION OF SEPTIC FIELD DB. 4990 AT PG. 499

018-4-08-0003
HUNTER MILL EAST LLC
(Db. 10256 Pg. 1583)
ZONE R-E

PROP. FENCE (TYP.)

PARCEL 2
018-4-08-0004
OAKCREST SCHOOL
(Db. 19650 Pg. 1542)
ZONE: R-E
USE: VACANT LAND

018-4-08-0005
JINDO AND YONGHEE KIM
(Db. 5001 Pg. 32)
ZONE R-E

PARCEL 3
018-4-01-0026C
OAKCREST SCHOOL
(Db. 19650 Pg. 1542)
ZONE: R-E
USE: VACANT LAND

PROP. FENCE (TYP.)

APPROXIMATE LOCATION OF SEPTIC FIELD DB. 4990 AT PG. 499

N 7031900
E 11822200

APPROXIMATE LOCATION OF SEPTIC FIELD DB. 4990 AT PG. 499

OVERFLOW PARKING (37 SPACES MIN.)

POSSIBLE VEGETATED SWALE

N 7032000
E 11823500

FOREST MAPLE ROAD

STORM DRAIN

STORM DRAIN

DRIVEWAY

EX. 2-STORY FRAME DWELLING

018-4-09-02-0024
DAVID M. SPEIER &
VIRGINIA P SPEIER
(Db. 10180 Pg. 1763)
ZONE: R-E
USE: SINGLE FAMILY

POSSIBLE BIO-RETENTION AREA #1

N 7031700
E 11823500

THROUGH LANE

HOV-2 STUDENT DROP-OFF / PICK-UP

PRIMARY DROP-OFF / PICK-UP

EXPANDED HEADWATER STREAM BUFFER

018-4-01-0026
HUNTER MILL EAST LLC
PARCEL B
(Db. 19650 Pg. 1538)
ZONE: R-E

N 7031500
E 11822300

SWM POND #1

POSSIBLE PERCOLATION TRENCH

EXPANDED HEADWATER STREAM BUFFER

REFORESTATION

EX. BUILDING

018-4-09-02-0023
LIM PAUL NGUONLY &
CHOAN-E NGUONLY
(Db. 14905 Pg. 1372)
ZONE: R-E
USE: SINGLE FAMILY

GRAPHIC SCALE

30 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

SEE SHEET #5 FOR CONTINUATION

No.	DATE	DESCRIPTION

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SPECIAL EXCEPTION PLAT

OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=50'
C.L.: 1'
DATE: DEC, 2012

SHEET 4 OF 19

SE-12643

SEE SHEET #4 FOR CONTINUATION

018-4-08-0003
HUNTER MILL EAST LLC
(Db. 10256 Pg. 1583)
ZONE R-E

PARCEL 2
018-4-08-0004
OAKCREST SCHOOL
(Db. 19650 Pg. 1542)
ZONE: R-E
USE: VACANT LAND

018-4-08-0005
JINDO AND YONGHEE KIM
(Db. 15001 Pg. 32)
ZONE R-E

PARCEL 3
018-4-01-0026C
OAKCREST SCHOOL
(Db. 19650 Pg. 1542)
ZONE: R-E
USE: VACANT LAND

018-4-01-0026
HUNTER MILL EAST LLC
PARCEL B
(Db. 19650 Pg. 1538)
ZONE: R-E

018-4-09-02-0024
DAVID M. SPEIER &
VIRGINIA P SPEIER
(Db. 10180 Pg. 1763)
ZONE: R-E
USE: SINGLE FAMILY

018-4-09-02-0023
LIM PAUL NGUONLY &
CHOAN E NGUONLY
(Db. 14905 Pg. 1322)
ZONE: R-E
USE: SINGLE FAMILY

018-4-09-02-0022
PAUL R INGHOLT &
DANA BAUER-INGHOLT
(Db. 10411 Pg. 1162)
ZONE: R-E
USE: SINGLE FAMILY

LOCATION OF SEPTIC FIELD DB. 4990 AT PG. 499

APPROXIMATE LOCATION OF SEPTIC FIELD DB. 4990 AT PG. 499

N 7031900 E 11822200

OVERFLOW PARKING (37 SPACES MIN.)

PROP. FENCE (TYP.)

POSSIBLE VEGETATED SWALE

POSSIBLE BIO-RETENTION AREA #1

POSSIBLE BIO-RETENTION AREA #2

POSSIBLE PERCOLATION TRENCH

EXPANDED HEADWATER STREAM BUFFER

REFORESTATION

FOREST MAPLE ROAD

STORM DRAIN

DRIVEWAY

EX. 2-STORY FRAME DWELLING

EX. BUILDING

VA. STATE GRID NORTH

N 7032000 E 11823600

N 7031700 E 11823500

N 7031500 E 11822300

N 7031300 E 11823600

THROUGH LANE
HOV-2 STUDENT DROP-OFF / PICK-UP
PRIMARY DROP-OFF / PICK-UP

SWM POND #1

RETI WALL

PROP. FENCE (TYP.)

18" RCP PIPE

EXIT RAMP

EX. 15" CULVERT

EX. 18" CULVERT

DULLES TOLL ROAD (RT. 267)

HEADWALL

INV.=292.43

INV.=288.31

JPSS #9
PAD ELEV. = 316.7
TOP = 6

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

No.	DATE	DESCRIPTION

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SPECIAL EXCEPTION PLAT

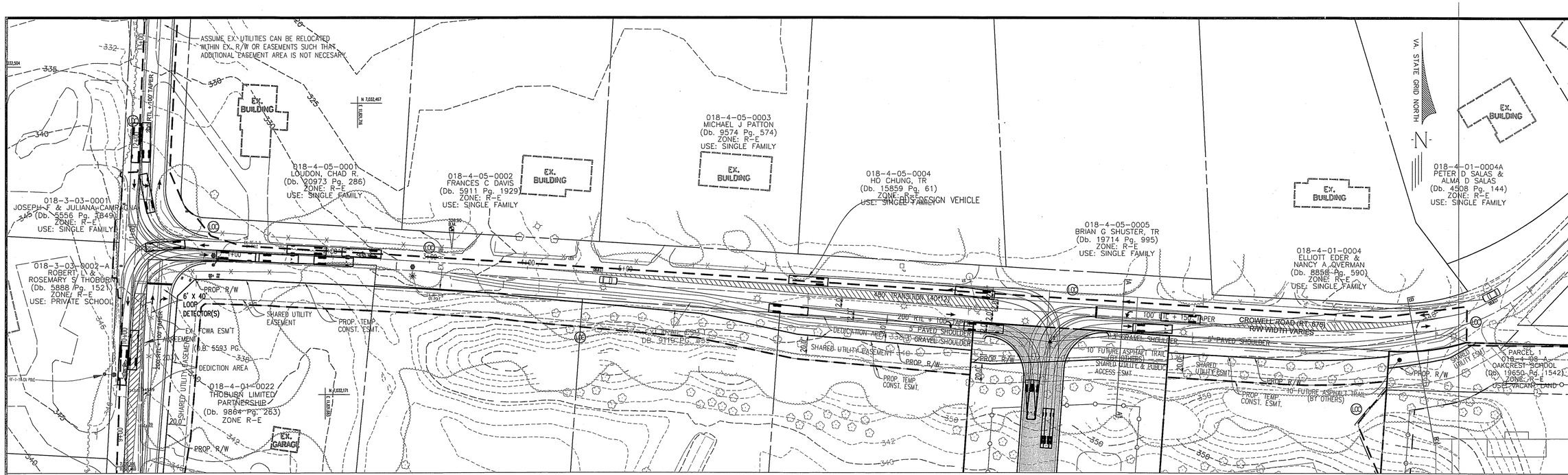
OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

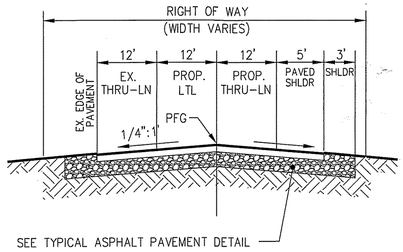
SCALE: 1"=30'
C.I.: 1'
DATE: DEC, 2012

SHEET 5 OF 19

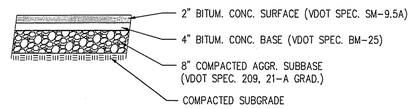
SE-12643



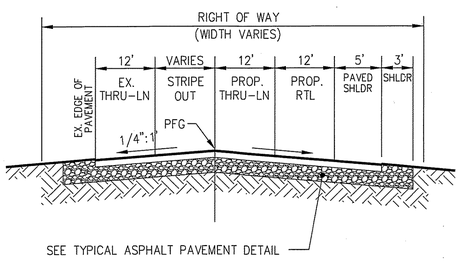
CROWELL ROAD TYPICAL SECTION EAST OF SITE ENTRANCE



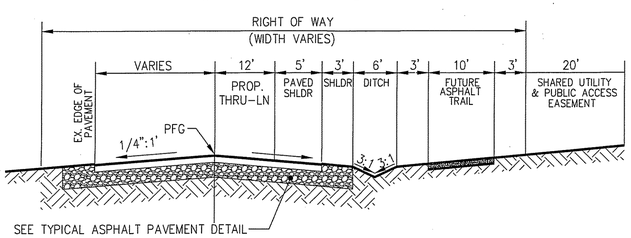
TYPICAL ASPHALT PAVING SECTION

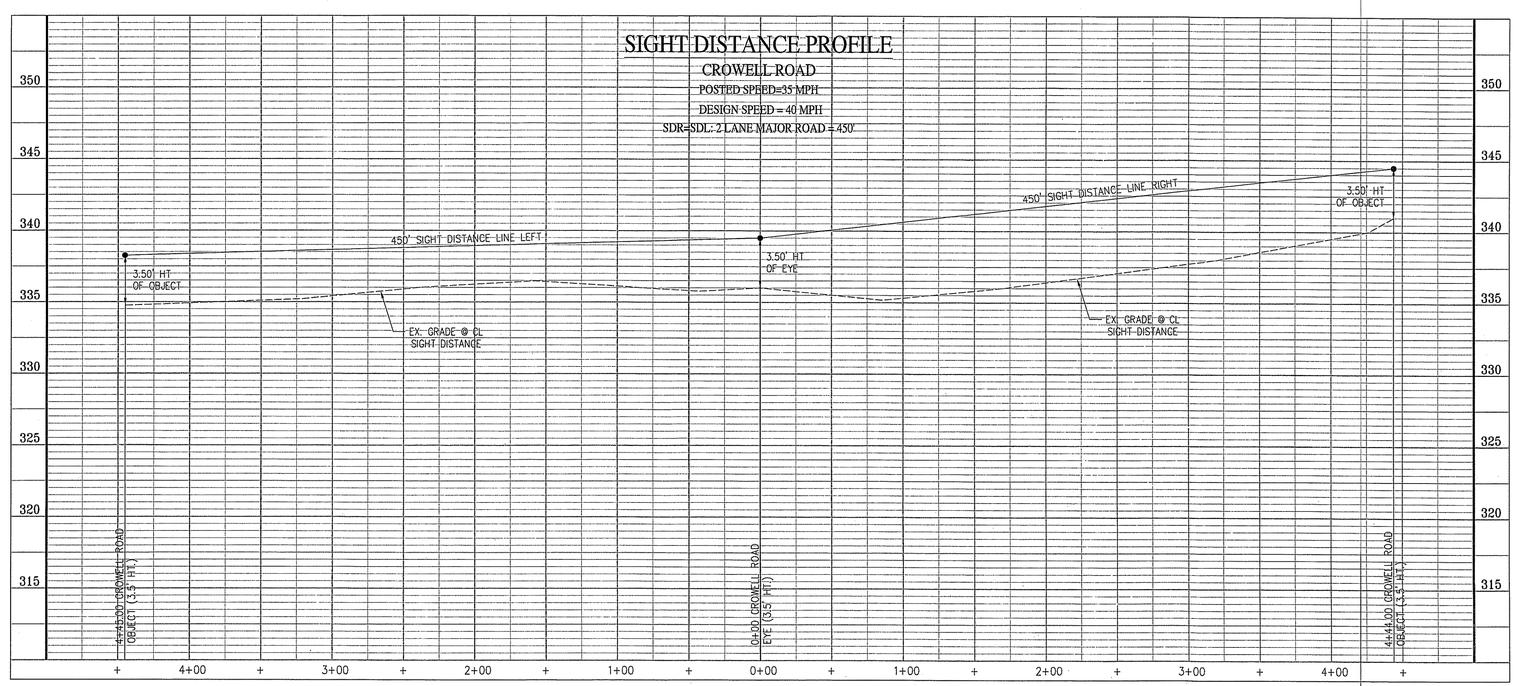


CROWELL ROAD TYPICAL SECTION WEST OF SITE ENTRANCE



CROWELL ROAD TYPICAL SECTION WITH 10' FUTURE ASPHALT TRAIL





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CROWELL ROAD ENTRANCE DETAIL

OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: AS NOTED
C.I.: 2'
DATE: DEC, 2012

SHEET 6 OF 19

SE-12643

018-3-09-0018A
VII NVR FAIRFAX LLC
(Db. 21212 Pg. 0834)
ZONE: R-E
USE: VACANT LAND

ASSUME EX. UTILITIES CAN BE RELOCATED WITHIN EX. R/W OR EASEMENTS SUCH THAT ADDITIONAL EASEMENT AREA IS NOT NECESARY.

018-3-03-0001
JOSEPH F & JULIANA CAMPAGNA
(Db. 5556 Pg. 1849)
ZONE: R-E
USE: SINGLE FAMILY

018-3-03-0002-A
ROBERT L & ROSEMARY S THOBURN
(Db. 5888 Pg. 1521)
ZONE: R-E
USE: PRIVATE SCHOOL

018-4-05-0001
LOUDON, CHAD R.
(Db. 20973 Pg. 286)
ZONE: R-E
USE: SINGLE FAMILY

018-4-05-0002
FRANCES C DAVIS
(Db. 5911 Pg. 1929)
ZONE: R-E
USE: SINGLE FAMILY

018-4-05-0003
MICHAEL J PATTON
(Db. 9574 Pg. 574)
ZONE: R-E
USE: SINGLE FAMILY

018-4-05-0004
HO CHUNG, TR
(Db. 15859 Pg. 61)
ZONE: R-E
USE: SINGLE FAMILY

018-4-05-0005
BRIAN G SHUSTER, TR
(Db. 19714 Pg. 995)
ZONE: R-E
USE: SINGLE FAMILY

018-4-01-0004
ELLIOTT EDER &
NANCY A OVERMAN
(Db. 8858 Pg. 590)
ZONE: R-E
USE: SINGLE FAMILY

CROWELL ROAD (RT. 675)

CROWELL ROAD (RT. 675)
R/W WIDTH VARIES

NAD 1983 NORTH

018-4-01-0022
THOBURN LIMITED
PARTNERSHIP
(Db. 9864 Pg. 263)
ZONE R-E

CROWELL ROAD
ROUTE 675-(VARIABLE WIDTH R/W)
POSTED SPEED = 35 MPH
DESIGN SPEED = 40 MPH

018-3-03-0003-A
HUNTER MILL WEST, LC
(Db. 9571 Pg. 1068)
ZONE: R-E
USE: PRIVATE SCHOOL

HUNTER MILL ROAD
ROUTE 674-(VARIABLE WIDTH R/W)
POSTED SPEED = 35 MPH
DESIGN SPEED = 40 MPH

018-4-08-0001-A
HUNTER MILL EAST LLC
(Db. 10256 Pg. 1583)
ZONE R-E

018-4-08-0002
HUNTER MILL EAST LLC
(Db. 10256 Pg. 1583)
ZONE R-E

018-4-08-0003
HUNTER MILL EAST LLC
(Db. 10256 Pg. 1583)
ZONE R-E

PARCEL 1
018-4-08-A
OAKCREST SCHOOL
(Db. 19650 Pg. 1542)
ZONE: R-E
USE: VACANT LAND

PARCEL 2
018-4-08-0004
OAKCREST SCHOOL
(Db. 19650 Pg. 1542)
ZONE: R-E
USE: VACANT LAND

018-4-08-0005
JINDO AND YONGHEE KIM
(Db. 5001 Pg. 32)
ZONE R-E

APPROXIMATE LOCATION OF SEPTIC FIELD DB. 4990 AT PG. 499

OVERFLOW PARKING (37 SPACES MAX.)

10' FUTURE ASPHALT TRAIL (BY OTHERS)

018-3-01-0004
HUNTER MILL WEST, LC
(Db. 9571 Pg. 1068)
ZONE: R-E
USE: PRIVATE SCHOOL

GRAVEL PARKING AREA

ASPHALT DRIVE

EXISTING ENTRANCE TO DRIVING RANGE

4' GRAVEL SHOULDER

EX. 1 STORY FRAME BUILDING #1627

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 in. = 50 ft.

LEGEND

PRELIMINARY REQUIRED RIGHT-OF-WAY DEDICATION*

***NOTE: THE REQUIRED EASEMENT AND RIGHT-OF-WAY AREAS SHOWN ON THIS PLAN ARE CONCEPTUAL AND MAY BE SUBJECT TO CHANGE BASED ON AGENCY REVIEW (I.E., VDOT & FAIRFAX COUNTY) AT THE TIME OF FINAL SITE PLAN. THE IMPROVEMENTS SHOWN HEREON MAY BE PHASED, SUBJECT TO ENROLLMENT AND VDOT REQUIREMENTS.**

PROPERTY ACQUISITION TABULATIONS (PRELIMINARY)*

TAX MAP #	OWNER	RIGHT-OF-WAY DEDICATION	PERMANENT EASEMENTS	TEMPORARY CONSTRUCTION EASEMENTS
0184 01 0022	THOBURN LIMITED PARTNERSHIP	12,285	11,226	2,174
0184 08 0001-A	HUNTER MILL EAST LLC	323	4,245	1,085
0184 08 0002	HUNTER MILL EAST LLC	1,544	4,053	1,013
0184 08 0003	HUNTER MILL EAST LLC	4,353	3,969	992
0184 08 0005	JINDO AND YONGHEE KIM	3,294	4,514	1,128
0183 03 0001	JOSEPH F. & JULIANA CAMPAGNA	-	119**	-
0183 03 0002-A	ROBERT L. & ROSEMARY S. THOBURN	-	180**	-

****NOTE: EASEMENTS ASSOCIATED WITH TRAFFIC SIGNAL**

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
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ILLUSTRATIVE RIGHT-OF-WAY DEDICATION EXHIBIT

OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINA

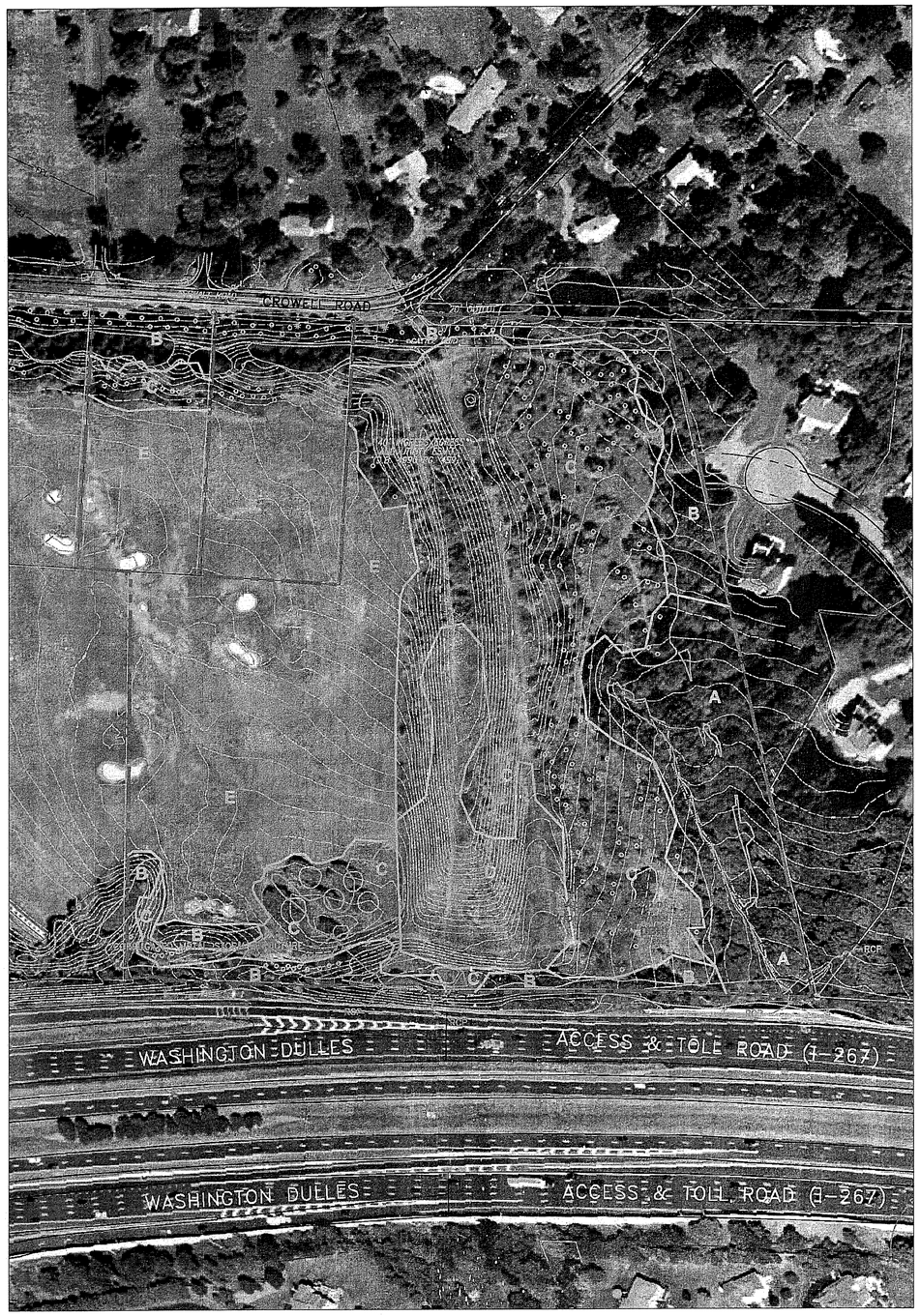
DATE: DEC, 2012

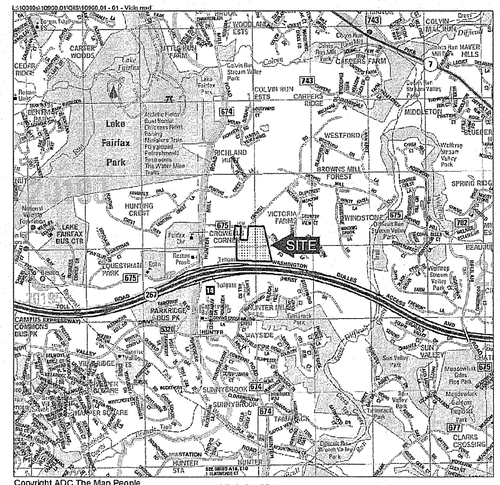
SCALE: 1"=50'

C.I.: N/A

SHEET 7 OF 19

SE-12643





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Vicinity Map
Oakcrest School
WSSI #10960.01
Scale: 1" = 2000'

Fairfax County

LEGEND

- SITE BOUNDARY
- VEGETATION COMMUNITY BOUNDARY
- INTERMITTENT STREAM (PER WSSI FIELD INVESTIGATION AND FAIRFAX COUNTY CHESAPEAKE BAY MAPPING, SEE NOTE 3)
- WETLAND BOUNDARY (SEE NOTE 3)
- APPROXIMATE LOCATION OF SPECIMEN TREE

NORTH

NOTES:

1. This Existing Vegetation Map is based upon examination of background materials, such as existing topography, the 1994 USGS Vienna, VA-MD topographic quadrangle map, the Fairfax County Soils Map, the 1998 Vienna, VA-MD National Wetlands Inventory Map, and aerial photography, as well as a field verification performed by Jennifer D. Feese, WPIT and Sean D. Sipple, PWS, CT of Wetland Studies and Solutions, Inc. (WSSI) on June 3, 2008.

2. Topography and boundary information from VIKA Inc. and Fairfax County Digital Data, and an Aerials Express October 2007 Natural Color Imagery orthophotograph, were used as the base for this exhibit.

3. Waters of the U.S. delineation information shown hereon, was performed by WSSI as described in a report dated January 22, 2004 and approved by the U.S. Army Corps of Engineers (COE) in a jurisdictional determination dated February 25, 2004 (COE #04-R0440). This report was revised on June 17, 2008. Confirmation from the COE is pending.

	COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION*	ACREAGE	COMMENTS
A	Bottomland Hardwood	Red Maple	Sub-Climax	Good	2.75	See condition description; Area contains one specimen tree.
B	Upland Forest	White Pine and Red Maple	Sub-Climax	Fair	2.75	See condition description.
C	Old Field	Sweet Gum	Pioneer	Fair	9.05	See condition description.
D	Open Field	Fescue	N/A	Good	2.05	See condition description.
E	Maintained	Fescue	N/A	N/A	6.40	See condition description.
TOTAL ACREAGE					23.00	

*CONDITION DESCRIPTION:

A. Area A is a sub-climax bottomland hardwood forest in good overall condition and comprises a part of the southeastern portion of the site. The canopy is dominated by red maple (*Acer rubrum*). Sub-dominants include black locust (*Robinia pseudoacacia*), black walnut (*Juglans nigra*), persimmon (*Diospyros virginiana*) and tulip poplar (*Liriodendron tulipifera*). The Diameter Breast Height (DBH) of these overstory species ranges from 3 to 34 inches. The understory includes black-haw (*Viburnum prunifolium*) and greenbriar (*Smilax rotundifolia*). A tulip poplar with a DBH of 34 inches is present in the southern portion of Area A. Exotic species are present in small numbers in the groundcover, including garlic mustard (*Aliaria petiolata*) and Nepal microstegium (*Eulalia viminia*).

B. Area B consists of a sub-climax upland forest in fair overall condition along the southern, northeastern and northwestern portions of the site. The canopy is dominated by red maple and white pine (*Pinus strobus*). Subdominants include black locust and black walnut. The DBH of these overstory species ranges from 5 to 25 inches. The understory is overgrown and includes eastern red cedar (*Juniperus virginiana*) and the exotic species autumn olive (*Elaeagenus umbellate*) and multiflora rose (*Rosa multiflora*). Exotic species are present in the groundcover, including garlic mustard, Nepal microstegium, and Japanese honeysuckle (*Lonicera japonica*).

C. Area C consists of an old field in the eastern and southwestern portions of the site. Dominant sapling species include sweet gum (*Liquidambar styraciflua*), eastern red cedar and the exotic species autumn olive, all greater than 12 inches in height. Herbaceous dominants include meadow fescue (*Festuca pratensis*), sweet vernal grass (*Anthoxanthum odoratum*) and crown vetch (*Securigera varia*). Exotic species are present in the groundcover, including garlic mustard, Nepal microstegium, and Japanese honeysuckle.

D. Area D consists of an open field in the central portion of the site. Herbaceous dominants include meadow fescue, sweet vernal grass, crown vetch, and broomsedge (*Andropogon virginicus*).

E. Area E consists of a maintained field associated with a golf course driving range on the western portion of the site. Meadow fescue is the dominant herbaceous plant species in this area.

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No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
12/17/12
03/28/13
06/04/13
07/18/13
- -
- -

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COMMONWEALTH OF VIRGINIA
ROBERT W. BROWN
Lic. No. 037041
7/18/13
PROFESSIONAL ENGINEER

EXISTING VEGETATION MAP

Prepared For: paradigm design

Oakcrest School
Fairfax County, Virginia

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EXISTING VEGETATION MAP
OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINA

SCALE: 1"=AS NOTED
C.I.: N/A
DATE: DEC, 2012

REVISIONS

No.	Date	Description	Rev. By	App. By
1	8-24-09	FINAL REVISIONS PER STAFF COMMENTS	JDF	MH
2	9-25-09	SE Resubmission	JDF	MH

DATE: June 2008
SCALE: 1" = 100'

Horizontal Datum: VCS NAD 83
Vertical Datum: NGVD 29
Boundary and Topo Source: Fairfax County Digital Data and VIKA, Inc.

Design	Draft	Approved
SDS	SDS	JDF/MH

Sheet # 4 of 19

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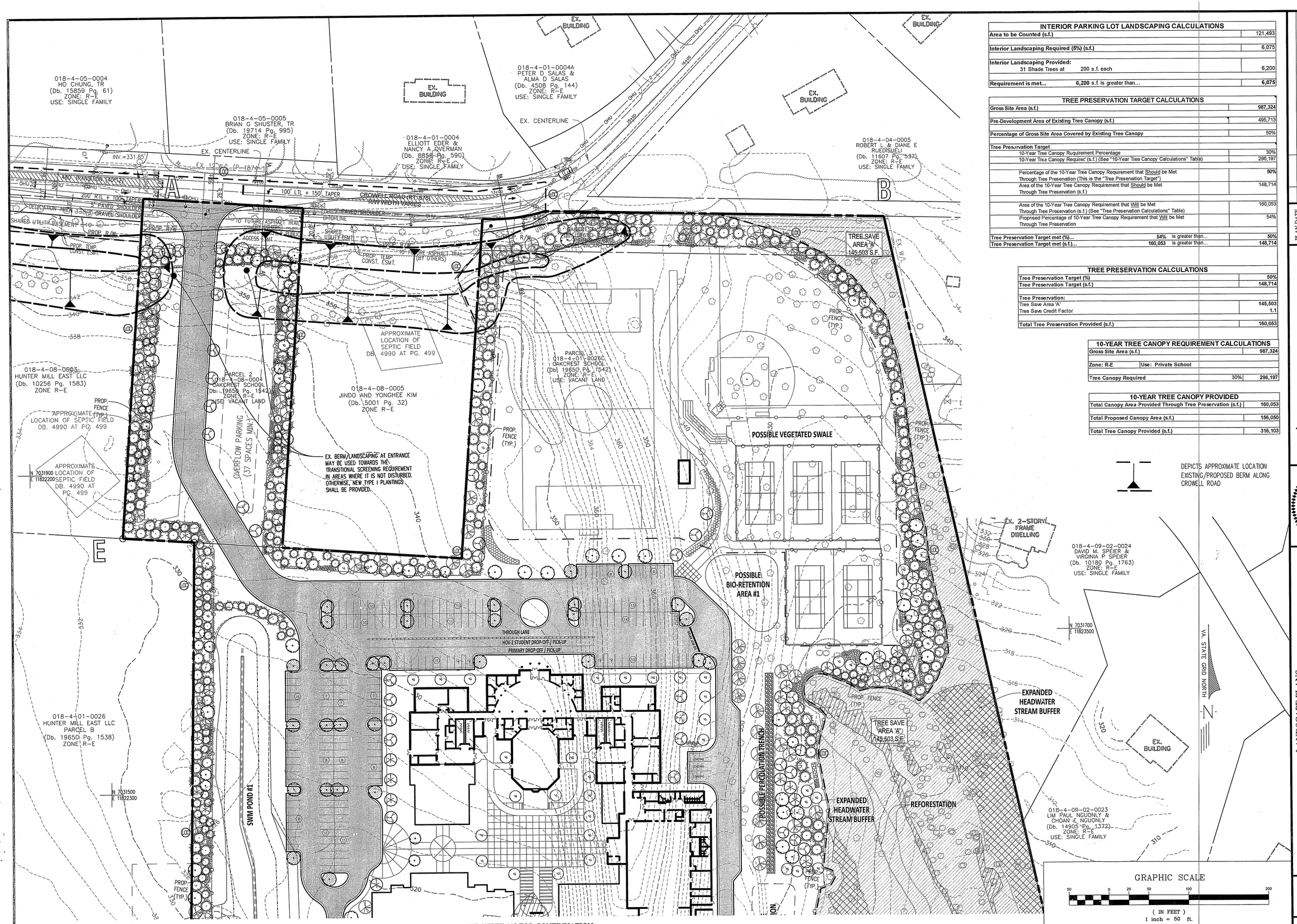
SHEET 8 OF 19

SE-12643

FOR INFORMATION PURPOSES ONLY! NO CHANGES MADE TO THIS SHEET!



SEE SHEET #10 FOR CONTINUATION

INTERIOR PARKING LOT LANDSCAPING CALCULATIONS

Area to be Counted (s.f.)	121,493
Interior Landscaping Required (5%) (s.f.)	6,075
Interior Landscaping Provided: 31 Shade Trees at 200 s.f. each	6,200
Requirement is met... 6,200 s.f. is greater than...	6,075

TREE PRESERVATION TARGET CALCULATIONS

Gross Site Area (s.f.)	987,324
Pre-Development Area of Existing Tree Canopy (s.f.)	495,713
Percentage of Gross Site Area Covered by Existing Tree Canopy	50%
Tree Preservation Target	
10-Year Tree Canopy Requirement Percentage	30%
10-Year Tree Canopy Requirement (s.f.) (See "10-Year Tree Canopy Calculations" Table)	296,197
Percentage of the 10-Year Tree Canopy Requirement that Should be Met Through Tree Preservation (This is the "Tree Preservation Target")	50%
Area of the 10-Year Tree Canopy Requirement that Should be Met Through Tree Preservation (s.f.)	148,714
Area of the 10-Year Tree Canopy Requirement that Will be Met Through Tree Preservation (s.f.) (See "Tree Preservation Calculations" Table)	160,053
Proposed Percentage of 10-Year Tree Canopy Requirement that Will be Met Through Tree Preservation	54%
Tree Preservation Target met (%)... 54% is greater than...	50%
Tree Preservation Target met (s.f.)... 160,053 is greater than...	148,714

TREE PRESERVATION CALCULATIONS

Tree Preservation Target (%)	50%
Tree Preservation Target (s.f.)	148,714
Tree Preservation:	
Tree Save Area 'A'	145,503
Tree Save Credit Factor	1.1
Total Tree Preservation Provided (s.f.)	160,053

10-YEAR TREE CANOPY REQUIREMENT CALCULATIONS

Gross Site Area (s.f.)		987,324
Zone: R-E	Use: Private School	
Tree Canopy Required	30%	296,197

10-YEAR TREE CANOPY PROVIDED

Total Canopy Area Provided Through Tree Preservation (s.f.)	160,053
Total Proposed Canopy Area (s.f.)	156,050
Total Tree Canopy Provided (s.f.)	316,103

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
12/17/12
03/26/13
06/04/13
07/18/13

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LANDSCAPE PLANS

OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: DEC, 2012

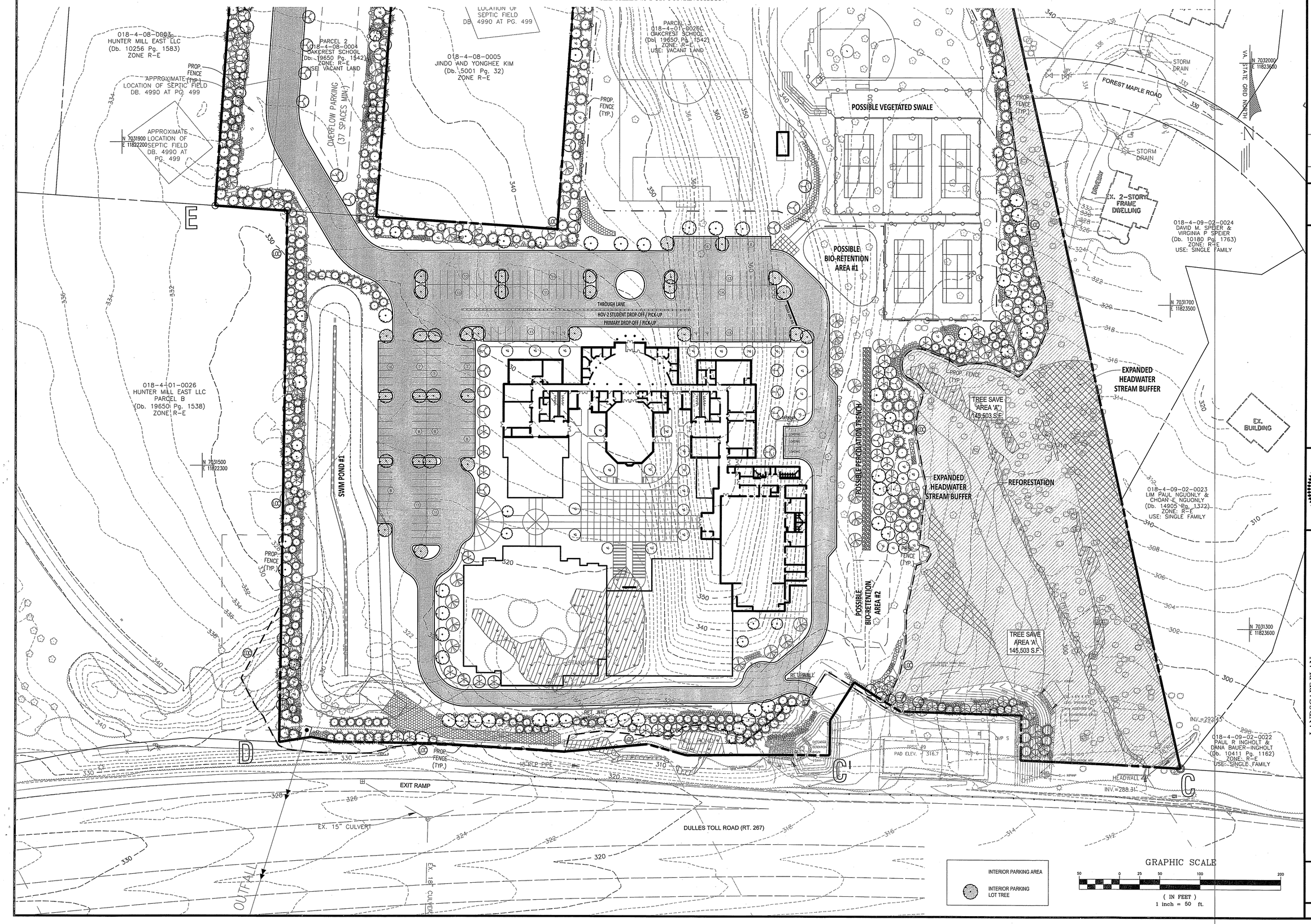
SCALE: 1"=50'

C.L.: 1'

SHEET 9 OF 19

SE-12643

SEE SHEET #9 FOR CONTINUATION



No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
12/17/12
05/28/13
06/24/13
07/18/13
- - -
- - -

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LANDSCAPE PLAN

OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT

HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINA

DATE: DEC, 2012

SCALE: 1"=AS NOTED

C.L.: N/A

SHEET 10 OF 19

SE-12643

PLANTING SPECIFICATIONS

1. QUALITY ASSURANCE:
   A. Landscape planting and related work shall be performed by a firm with a minimum of five years experience specializing in this type and scale of work.
   B. Applicable Specifications and Standards:
      Fairfax County Zoning Ordinance,
      American Joint Committee on Horticultural Nomenclature
      American Standard for Nursery Stock, latest edition
      American Association of Nurserymen Landscape Specification Guidelines for Baltimore Washington Metropolitan Areas, latest edition, Landscape Contractors Association.

2. SUBMITTALS: Submit the following to the Owner's Representative prior to beginning work:
   A. Copies of manufacturer's data for all materials required.
   B. Samples of required mulch material.
   C. Chemical and mechanical analysis and samples of all existing soil, topsoil, organic matter and soil mix to be used.
   D. Planting schedule showing the dates (earliest and latest) proposed for each type of plant specified, schedule each type of planting within the normal planting seasons for such work. Include requests for any proposed changes in the approved planting season and a list of proposed sources for all plant materials.
   E. List of proposed sources for all plant material.
3. DELIVERY, HANDLING, AND STORAGE:
   A. Deliver packaged materials in manufacturer's unopened containers or bundles, fully identified with name, brand, type, weight, and analysis. Store packaged materials in such a manner as to prevent damage or intrusion of foreign matter.
   B. Dig balled and burlapped (B& B) plants with firm, natural balls of earth, of a diameter not less than that shown on the plant list nor less than recommended by the American Standard for Nursery Stock, and of sufficient depth to include the fibrous and feeding roots. B&B plants will not be accepted if the ball is cracked or broken before or during planting operation.
   C. Deliver trees and shrubs after preparations for planting have been completed. Do not bend, bind, or tie trees or shrubs in such a manner as to damage bark, break branches or destroy natural shape. If planting is delayed more than 6 hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist by heeling-in bare root stock and covering plant balls with soil, peat moss or other acceptable material for balled stock. Plants shall be kept well watered and shall not remain unplanted for longer than ten (10) days after delivery.
   D. Plants shall be lifted and handled from the bottom of the ball only.
   E. Do not remove container-grown stock from containers until planting time.
4. DRAINAGE: Before planting, determine that areas to receive plant material have adequate subdrainage.
   A. The landscape contractor is responsible for drainage tests as necessary to identify any problems prior to beginning planting operations. Upon commencement of planting operations the landscape contractor assumes responsibility for soil conditions.
   B. Dig planting pits to full depth and dimensions indicated on drawings.
   C. At bottom of planting pit, excavate rectangular pit 12 inches by 12 inches by 18 inches deep. Quickly pour water into pit to a depth of 6 inches (approximately 3-3 3/4 gallon). Note time required for water to be completely absorbed. Divide time noted by 6 to achieve average rate of absorption for 1 inch of water. Where rate of absorption exceeds 60 minutes per inch, notify owner immediately for directions on how to proceed.
5. PLANTING DATES: Planting shall be done only within the following dates except as approved by Owner.
   A. Deciduous Trees and Shrubs: March 1 to May 31 and October 15 to December 15.
   B. Evergreen Trees, Shrubs and Vines: March 1 to May 31 and September 1 to November 15.
   C. All plant material shall be guaranteed by the Contractor for a period of 1 year from the date final acceptance to be in good, healthy and flourishing condition.
6. MATERIALS FOR PLANTING:
   A. Topsoil: shall be a fertile, friable natural loam, uniform in composition, free of stones, lumps, plants and their roots, debris and other extraneous matter over 1 inch in diameter, capable of sustaining vigorous plant growth. Soil shall be harvested at a single source from the O and/or A horizons of the soil profile.
      1) Topsoil shall have a pH range of 5.5 to 7.5.
      2) Topsoil shall contain 1.5-5% organic matter by dry weight .
      3) Soil Texture: sandy loam, sandy clay loam with the following particle size distribution:
         Gravel Less than 10%
         Silt 15-30%
         Clay 20-35%
         Chemical Levels shall be:
         Magnesium Mg 100+ units
         Phosphorus P205 150+ units
         Potassium - K20 120+ units
      4) Soluble Salts/ Conductivity - Not to exceed 900 ppm/0.9 mmhos/cm (in soil); not to exceed 3000 ppm/2.5 mmhos/cm (in high organic mix)
      5) Cation exchange capacity shall be a minimum of 8 meq/100g.
   B. Clay Loam to Sandy Clay Loam Soil: shall be a fertile, friable natural loam, uniform in composition, free of stones, lumps, plants and their roots, debris and other extraneous matter over 1 inch in diameter, capable of sustaining vigorous plant growth.
      1) Soil shall have a pH range of 5.5 to 6.5.
      2) Soil shall contain 2-5% organic content by volume.
      3) Soil Texture: Clay loam to sandy clay loam with the following particle size distribution:
         Gravel Less than 10%
         Sand 20-50%
         Silt <35%%
         Clay 20-40%
      4) Chemical Levels shall be:
         Magnesium Mg 100+ units
         Phosphorus P205 150+ units
         Potassium - K20 120+ units
      5) Soluble Salts/ Conductivity - Not to exceed 900 ppm/0.9 mmhos/cm (in soil); not to exceed 3000 ppm/2.5 mmhos/cm (in high organic mix)
      6) Cation exchange capacity shall be 20-35 meq/100g.
   C. Compost: Compost shall be mature, stable, weed free, and produced by aerobic decomposition of organic matter. Compost feedstock shall be plant matter, such as high lignin forestry products or yard waste (leaves, brush and yard trimmings).
      1) The product must not contain any visible refuse or other physical contaminants, substances toxic to plants, or over 5% sand, silt, clay or rock material by dry weight
      2) Compost shall be sampled and tested as required by the Seal of Testing Assurance Program of the United States Composting Council (USCC) and shall meet the physical requirements for compost as determined by USCC.
      3) The product shall possess no objectionable odors. The product must meet all applicable USEPA CFR, Title 40, Part 503 Standards for Class A biosolids.
      4) The moisture level shall be such that no visible water or dust is produced when handling the material.
   D. Composted Pine Bark Fines: Shall be approved composted, ground pine bark having no particle with a dimension greater than 3/4 inch. No more than 10% shall be wood.
   E. Sand: Shall be quartz based sharp concrete sand, ASTM C-33 Fine Aggregate, with a Fines Modulus Index between 2.8 and 3.2.
   F. Trace Elements: Shall be commercially available slow release materials containing zinc (Zn), Molybdenum (Mo), Copper (Cu), Boron (B), and Magnesium (Mn).
   G. Fertilizer: A commercial fertilizer for ornamental trees, shrubs and ground cover with an analysis of 10% Nitrogen, 6% Phosphorus and 4% Potassium shall be used. This fertilizer shall be granular with a minimum of 50% of the total Nitrogen in organic form. 14-14-14-Osmocote (or approved equal) shall be applied at a rate of 10 lbs. per square foot, tilled to a depth of 8 inch, shall be used for perennials.
   H. Soil Separator: Shall be rot resistant non-woven polypropylene filter fabric, water permeable, and unaffected by freezing and thawing. Acceptable products include: Mirafi 140N, Mirafi Civil Engineering Co., or Stabilenka Type T-80, American Enka Co., Enka, N.C.
   I. Planter Drainage Fabric: Shall be prefabricated planter drainage fabric Miradrain 9000, a composite system consisting of a Mirafi drainage fabric bonded to a three-dimensional highly impact-resistant plastic core. The core shall have the following attributes:
      1) Compressive Strength: (ASTM D-1621), 15,000 + PSF.
      2) Overlaps: Shall be capable of mechanically interlocking so as to prevent separation of the overlaps during backfill.
7. PLANT MATERIALS: (Refer to the PLANT LIST on the drawings for specific types and quantities of plants):
   H. Plants shall be nursery grown in accordance with good horticultural practices. Plants shall either be obtained from local nurseries and/or others, which have soil (heavy clay) and climatic conditions similar to those in the locality of the project.
   I. Plant material grown in sandy, well-drained soil will not be approved for this project. Plants shall be true to species and variety and unless specifically noted otherwise, all plants shall be of specimen quality, exceptionally heavy, symmetrical, tightly-knit plants, so trained or favored in their development and appearance as to be superior in form, number of branches, compactness and symmetry.
   C. Plants shall be sound, healthy and vigorous, well branched and densely foliated when in leaf, free of disease, insect pests, eggs or larvae and shall have healthy, well-developed root systems. They shall be free from physical damage or any conditions that would prevent thriving health and the desired appearance.
   D. Trees, which have a damaged or crooked leader, or multiple leaders, unless specified in the plant list, will be rejected. Trees with abrasion of the bark, sun scald, disfiguring knots, or pruning cuts more than 1 1/4 inch diameter which have not completely callused, will be rejected.
   E. Plants shall conform to measurements specified in the plant schedules except that plants larger than specified may be used if acceptable to the Landscape Architect or owner. Use of such plants shall not increase the contract price. If larger plants are accepted, the root ball shall be sized for the larger plant.
   F. Caliper Measurement: Shall be taken at a point on the trunk 6 inches above natural ground line for trees up to 4 inches diameter, and at a point 12 inches above the natural ground line for trees over 4 inches diameter.
   G. Plants shall be measured when branches are in the normal position. Height and spread dimensions specified refer to the main body of the plant and not from branch tip to tip.
8. SOIL MIXING PROCEDURES:
   A. Topsoil used in sand/soil mixes shall be screened or shredded prior to mixing in sands. Maximum clod inclusion for soil mixes shall not exceed:
      Clod size (largest dimension) — % of the soil mix volume
      Less than 1" Unlimited
      1 to 3 inches 20%
      3 to 6 inches 5%
      >6 inches Less than 2%
   B. Source material and soil mix stockpiles shall be protected from rain by covering with filter cloth.
9. INSPECTION:
   A. Examine the areas and conditions where soil mix is to be installed and notify the Architect of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.
   B. Cooperate with other Contractors and trades working in and adjacent to other work areas. Examine drawings which show development of entire project and become familiar with scope of other work required.
10. SOIL INSTALLATION - GENERAL PROCEDURES:
   A. If subgrade soil compaction exceeds 80%, existing soil shall be ripped to a depth of 12 inch to alleviate compaction which has taken place during construction. Prior to loosening of soil, Contractor must locate existing utilities and coordinate with Owner any underground electric lines, drainage pipes, conduits, etc.
   B. Prepare the subgrade by roughening the top 3" of the subsoil by dragging the teeth of a backhoe bucket across the surface.
   C. Begin soil installation as soon as subsoil is prepared. Use low impact equipment with track belts, large tires, or low tire pressure to lower compaction and soil damage during installation.
   D. Monitor compaction during installation and loosen soils as needed if compaction exceeds 80%.
   E. Install specified soil in 12"-18" thick lifts. Compact each lift sufficiently to reduce settling but not enough to prevent the movement of water and feeder roots through the soil. The soils in each lift should feel firm to the foot in all areas and make only slight heel prints.
11. INSTALLATION OF SOIL MIX FOR LAWN AREAS ON GRADE:
   A. Soil Mix for Lawns on Grade: shall consist of 10% compost and 90% topsoil, by volume. These materials must meet specifications described in Section 2.00.
   B. Loosen subgrade lawn areas to a minimum of 3". Remove stones more than 1-1/2" in any dimension and sticks, roots, rubbish, and other extraneous matter. Limit preparation to areas which will be planted promptly after preparation.
   C. Spread soil mix for lawn areas on grade to a minimum depth of 8" as required to meet grade and elevations shown on drawings, after lightly rolling and natural settlement. Allow for sod thickness in areas to be sodded.
12. INSTALLATION OF SOIL MIX FOR TREE PITS ON GRADE
   A. Confirm that native subsoil drains at a rate of at least ½" per hour. If drainage is less than ½" per hour, provide subsurface drainage lines.
   B. Install 30-36" of Soil Mix for Tree Pit Backfill on Grade:
      1) Shall consist of clay loam to sandy clay loam soil, sand, and composted pine bark fines at a rate of 5:5:1 to 10:5:1.5 to achieve the following:
         (a) Clay content of Soil Mix shall be 10-20% of the soil mix, by volume.
         (b) Minimum amount of coarse to medium sand in the mix shall be 55%
         (c) Minimum infiltration rate at 80-85% compaction shall be 1-3 inches per hour.
   A. Composted pine bark fines shall not exceed 10% of the total soil mix by volume.
   B. Till 4" of compost into the top 6" of the installed Soil Mix for Tree Pit Backfill on Grade.
13. INSTALLATION OF SOIL MIX FOR MULCHED SHRUB AND PERENNIAL BEDS:
   A. Confirm that native subsoil drains at a rate of at least ½" per hour. If drainage is less than ½" per hour, provide subsurface drainage lines.
   B. Install 14" of Soil Mix for Mulched Shrub and Perennial Beds on Grade:
      1) Shall consist of clay loam to sandy clay loam soil, sand, and composted pine bark fines at a rate of 5:5:1 to 10:5:1.5 to achieve the following:
         (a) Clay content of Soil Mix shall be 10-20% of the soil mix, by volume.
         (b) Minimum amount of coarse to medium sand in the mix shall be 55%
         (c) Minimum infiltration rate at 80-85% compaction shall be 1-3 inches per hour.
      2) Composted pine bark fines shall not exceed 10% of the total soil mix by volume.
   C. Till 4" of compost into the top 6" of the installed Soil Mix for Tree Pit Backfill on Grade.
14. INSTALLATION OF SILVA CELL PLANTING SOIL MIX:
   A. Soil Mix shall be installed per Manufacturer's recommendations.
   B. Planting Soil Mix shall consist of Topsoil, Compost, and coarse sand mixed to the following proportion:
      Material — % by volume
      Compost 12-17%
      Coarse Sand 35-50%
      Topsoil 35-50%
      1) Ratio shall be adjusted to achieve a water permeability between 0.75 and 1.75 inches per hour when compacted to 80-85% of maximum dry density. The permeability of the allowable topsoil materials will vary the overall permeability of the final mix. Submit multiple mix ratios for permeability to establish the correct mix ratio for the available topsoil.
      2) Final Mix shall have a pH between 5.5 and 6.5.
      3) Final mix shall have an organic matter content of between 3 and 5%.
15. GENERAL PLANT INSTALLATION:
   A. Excavation: Excavate all tree pits and planting areas to the width and depth shown in the planting details.
   B. Center plant in pit and orient for the best visual effect. Set plants plumb and hold rigidly in position until soil has been tamped firmly around root ball.
   C. Mulch within 48 hours after planting and after applying the pre-emergent herbicide, except ground cover areas (which shall have organic material placed before planting) with a 2" layer of mulch immediately after planting. All bed lines shall be cut with a smooth consistent edge to a minimum depth of 3 inches. Keep mulch out of the crowns of shrubs and off buildings, sidewalks, light standards, and other structures.
   D. All planting areas to conform to specified grades after full settlement has occurred and mulch has been applied. Provide saucers around tree pits as shown on planting details. Remove all tags, labels, strings, etc. from all plants.
16. PERMANENT SEEDING OR SODDING FOR GRASS AREAS:
   A. Lawn Seed or Sod varieties shall be an improved variety turf-type tall fescue blend. The landscape contractor shall select from varieties approved by the Maryland or Virginia Department of Agriculture.
   B. Refer to the Virginia Erosion and Sediment Control Handbook, for guidelines, specifications and installation techniques of seed and sod.
   C. Maintenance shall begin immediately after each plant and lawn area is installed and shall continue until 90 days after final acceptance of the last section.

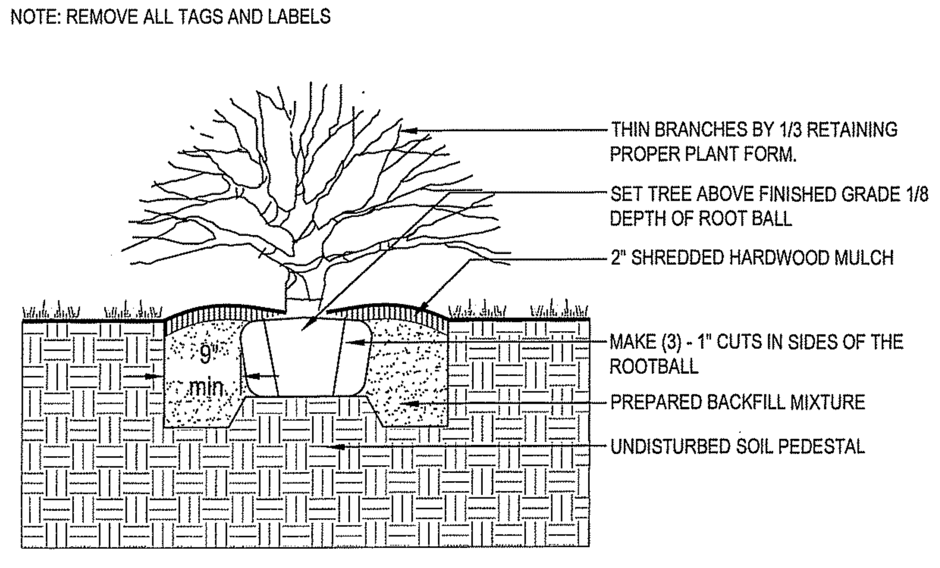
TRANSITIONAL SCREENING AND BARRIER CALCULATIONS

Adjacent Use (Group)	Required Transitional Screening / Barrier	Width (l.f.)	Length (l.f.)	Area (s.f.)	Required 10-Year Canopy Cover (75%)	Provided Trees and Shrubs			Total Canopy
North: Buffer A-B		25	1,171	29,275	21,956	58	Med. Evergreen @	100.00 s.f.	5,800 s.f.
Single Family Detached (Group 1)	Transitional Screening 1		300 l.f. has			37	Lrg. Deciduous@	200.00 s.f.	7,400 s.f.
	Barrier D,E, or F		existing trees			52	Lrg. Evergreen @	200.00 s.f.	10,400 s.f.
			to remain		3 Shrubs /10 l.f. (441 required)	441	Evergreen Shrubs		
Total									23,600 s.f.
Requirement is met...	23,600 s.f. is greater than...			21,956					
East: Buffer B-C		25	1,116	27,900	20,925	26	Med. Evergreen @	100.00 s.f.	2,600 s.f.
Single Family Detached (Group 1)	Transitional Screening 1					42	Lrg. Deciduous@	200.00 s.f.	8,400 s.f.
	Barrier D,E, or F					54	Lrg. Evergreen @	200.00 s.f.	10,800 s.f.
					3 Shrubs /10 l.f. (335 required)	335	Evergreen Shrubs		
Total									21,800 s.f.
Requirement is met...	21,800 s.f. is greater than...			20,925	The entire length of the buffer consists of existing trees to remain.				
South: Buffer C-C'	REQUIREMENT WAIVED								
Single Family Detached (Group 1)									
South: Buffer C'-D		25	665	16,625	12,469	42	Med. Evergreen @	100.00 s.f.	4,200 s.f.
Single Family Detached (Group 1)	Transitional Screening 1					21	Lrg. Deciduous@	200.00 s.f.	4,200 s.f.
	Barrier D,E, or F					21	Lrg. Evergreen @	200.00 s.f.	4,200 s.f.
					3 Shrubs /10 l.f. (200 required)	200	Evergreen Shrubs		
Total									12,600 s.f.
Requirement is met...	12,600 s.f. is greater than...			12,469					
Southwest: Buffer D-E		25	745	18,625	13,969	35	Med. Evergreen @	100.00 s.f.	3,500 s.f.
Single Family Detached (Group 1)	Transitional Screening 1					18	Lrg. Deciduous@	200.00 s.f.	3,600 s.f.
	Barrier D,E, or F					35	Lrg. Evergreen @	200.00 s.f.	7,000 s.f.
					3 Shrubs /10 l.f. (224 required)	224	Evergreen Shrubs		
Total									14,100 s.f.
Requirement is met...	14,100 s.f. is greater than...			13,969					
Northwest: Buffer E-A		25	338	8,450	6,338	10	Med. Evergreen @	100.00 s.f.	1,000 s.f.
Single Family Detached (Group 1)	Transitional Screening 1					10	Lrg. Deciduous@	200.00 s.f.	2,000 s.f.
	Barrier D,E, or F					19	Lrg. Evergreen @	200.00 s.f.	3,800 s.f.
					3 Shrubs /10 l.f. (102 required)	102	Evergreen Shrubs		
Total									6,800 s.f.
Requirement is met...	6,800 s.f. is greater than...			6,338					

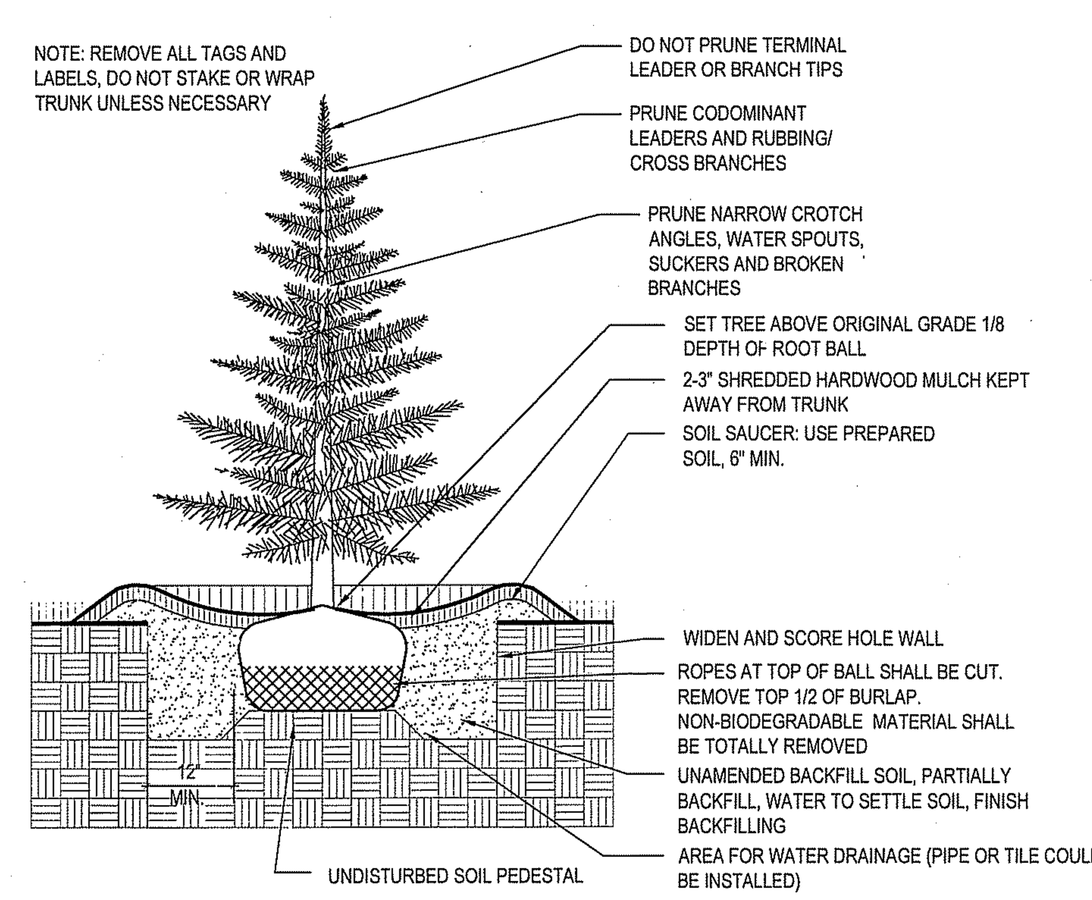
PLANT SCHEDULE

Qty.	Symbol	Botanical Name	Common Name	Size	Type	Remarks	Multiplier	10 yr. Canopy Total
		Cat. IV Deciduous Trees						
62	AR	Acer rubrum	Red Maple	2" Cal.	B & B	Uniform branching pattern	Wildlife Benefits: 1.50	18,600
60	CV	Carya ovata	Shagbark hickory	2" Cal.	B & B	Uniform branching pattern	Native: 1.50	18,000
60	QP	Quercus palustris	Pin Oak	2" Cal.	B & B	Uniform branching pattern	Native: 1.50	18,000
		Cat. III Deciduous Trees						
35	CO	Celtis occidentalis	Hackberry	2" Cal.	B & B	Uniform branching pattern	Native: 1.50	7,875
34	NS	Nyssa sylvatica	Black Gum	2" Cal.	B & B	Uniform branching pattern	Native: 1.50	7,650
33	DV	Diospiros virginiana	Persimmon	2" Cal.	B & B	Uniform branching pattern	Native: 1.50	7,425
		Cat. IV Evergreen Trees						
44	MG	Magnolia grandiflora	Southern Magnolia	8' Ht.	B & B	Full to ground, Dense		8,800
54	PR	Pinus rigida	Pitch Pine	8' Ht.	B & B	Full to ground, Dense	Native: 1.50	16,200
54	PT	Pinus taeda	Loblolly Pine	8' Ht.	B & B	Full to ground, Dense	Native: 1.50	16,200
52	PV	Pinus virginiana	Virginia Pine	8' Ht.	B & B	Full to ground, Dense	Native: 1.50	15,600
		Cat. II Evergreen Trees						
54	IO	Ilex opaca	American Holly	8' Ht.	B & B	Full to ground, Dense	Native: 1.50	8,100
54	JV	Juniperus virginiana	Eastern Redcedar	8' Ht.	B & B	Full to ground, Dense	Native 1.50	8,100
55	PP	Picea pungens	Colorado Blue Spruce	8' Ht.	B & B	Full to ground, Dense		5,500
		Shrubs						
186	BS	Buxus x 'Green Mountain'	Green Mountain Boxwood	18"-36" Ht.	B & B	Dense		
204	CL	Chamaecyparis lawsoniana	Lawson False Cypress	18"-36" Ht.	B & B	Dense		
201	IC	Ilex crenata	Japanese Holly	18"-36" Ht.	B & B	Dense		
130	IG	Ilex glabra	Inkberry Holly	18"-36" Ht.	B & B	Dense		
213	KL	Kalmia latifolia	Mountain Laurel	18"-36" Ht.	B & B	Dense		
232	MC	Morella cariliniensis	Southern Bayberry	18"-36" Ht.	B & B	Dense		
							Total (s.f.)	156,050

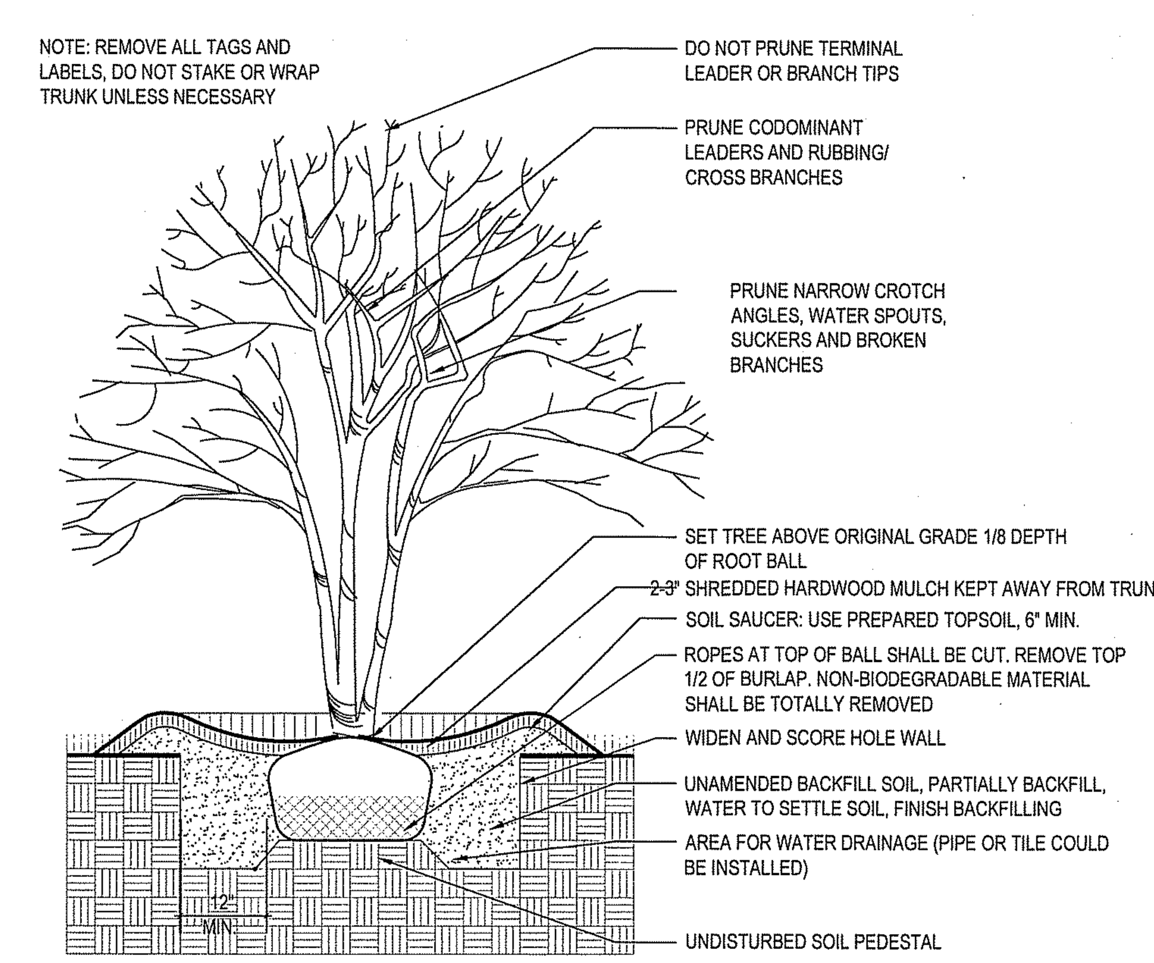
NOTE: IN ORDER TO RECEIVE NATIVE TREE CREDIT, A LETTER CERTIFYING THAT "ALL PLANT MATERIAL USED TO GAIN THE ADDITIONAL CREDITS HAS BEEN PROPAGATED FROM SEED OR NON-GENETICALLY MODIFIED GERMOPLASM COLLECTED WITHIN THE MID-ATLANTIC REGION" IS REQUIRED PRIOR TO INSTALLATION.



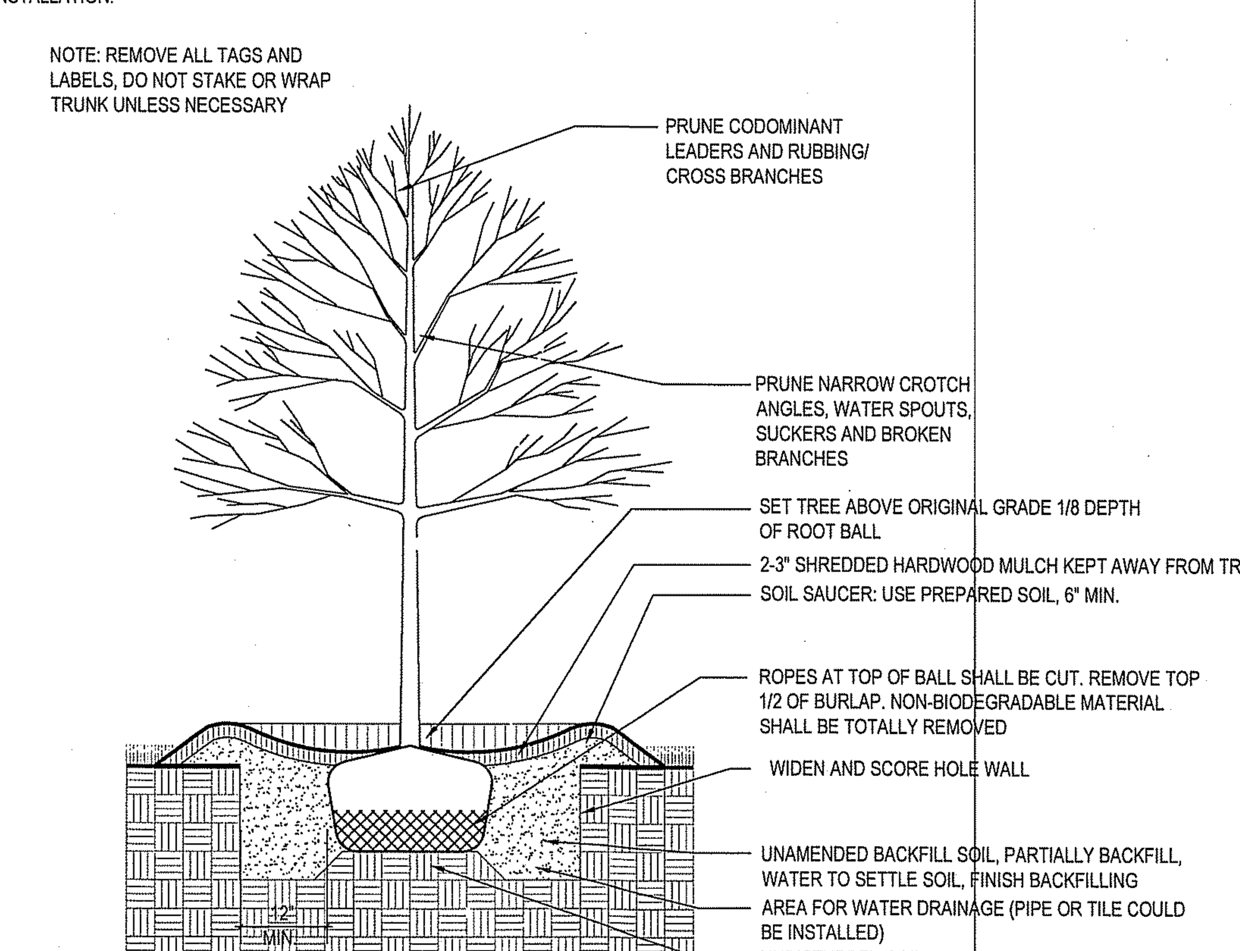
1 TYP. B&B SHRUB PLANTING
N.T.S.



2 EVERGREEN TREE PLANTING
NTS



3 ORNAMENTAL TREE PLANTING
NTS



4 DECIDUOUS TREE PLANTING
NTS

urban
Urban, Ltd.
4200-D Technology Court
Chantilly, Virginia 20151
Tel. 703.642.2306
www.urban-ltd.com
Planners Engineers Landscape Architects Land Surveyors

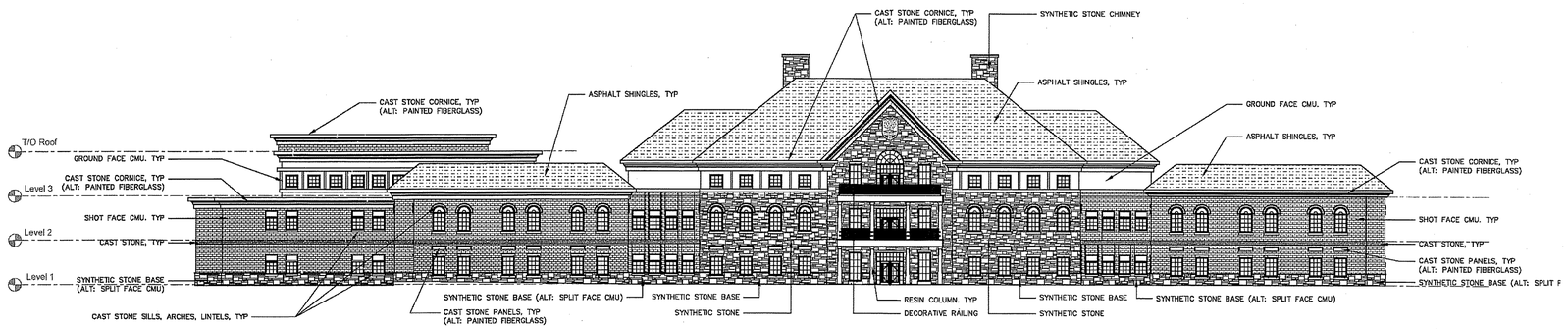
PLAN DATE: 12/17/12, 03/28/13, 06/04/13, 07/18/13

No. | DATE | DESCRIPTION
REVISIONS

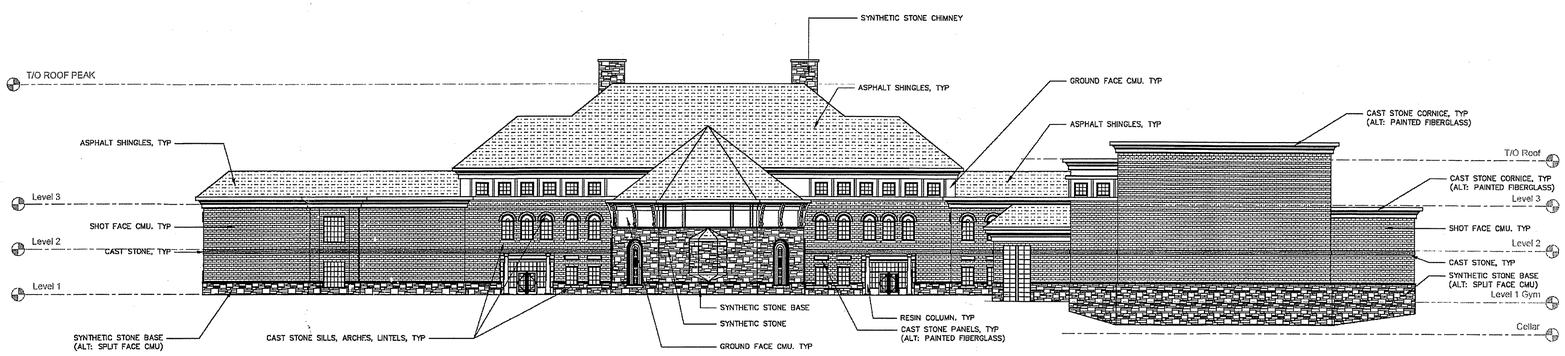
COMMONWEALTH OF VIRGINIA
ROBERT W. BROWN
Lic. No. 037041
7/18/13
PROFESSIONAL ENGINEER

LANDSCAPE DETAILS
OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA
SCALE: 1"=AS NOTED C.I.: N/A DATE: DEC, 2012

SHEET 11 OF 19
SE-12643



1 NORTH ELEVATION
1/16"=1'-0"



2 SOUTH ELEVATION
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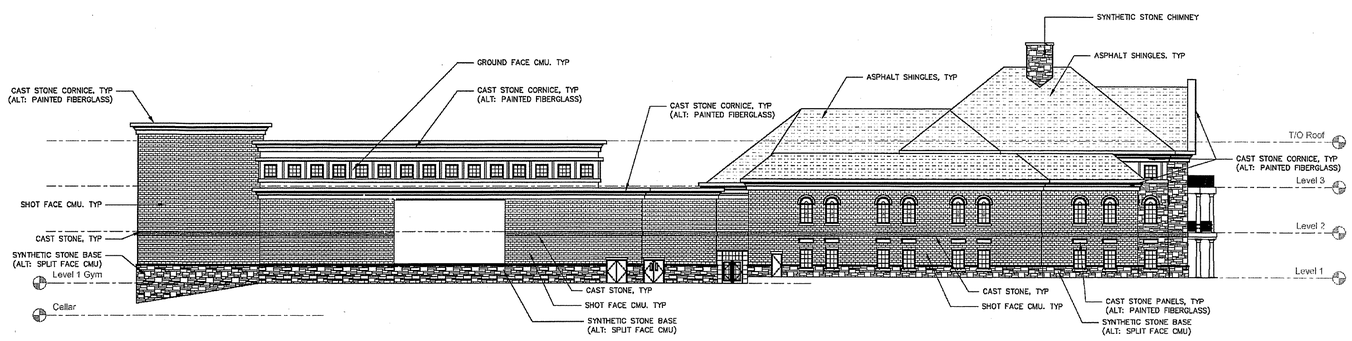

3 EAST ELEVATION
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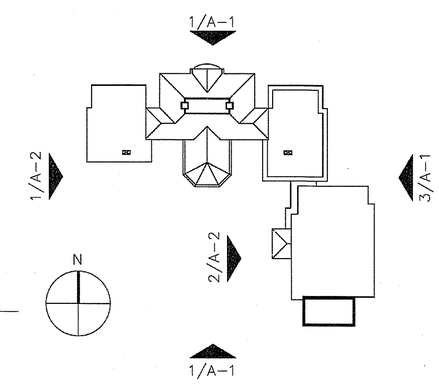

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dcs DESIGN

DAVIS CARTER SCOTT ltd
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Interior Architecture
Land Planning
1676 International Drive
Suite 800
McLean, Virginia 22102
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OAKCREST SCHOOL

PLAN DATE
12/17/12
03/26/13
06/04/13
07/18/13

No.	DATE	DESCRIPTION

REVISIONS

PRINT DATE 12/14/12, 3:26 pm

ISSUE DATE

REVISION DATE

PROJECT TITLE
OAKCREST SCHOOL
1627 CROWELL ROAD
VIENNA, VA 22101

PROJECT NO. 312168.01

DRAWING TITLE
EXTERIOR ELEVATIONS

DRAWN BY
CHECKED BY
QA REVIEWED BY

DRAWING NUMBER
A-1
SHEET OF
160_Elevation 1.dwg

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Planners Engineers Landscape Architects Land Surveyors

COMMONWEALTH OF VIRGINIA
ROBERT W. BROWN
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7/18/13
PROFESSIONAL ENGINEER

EXTERIOR ELEVATIONS
OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: DEC, 2012
SCALE: N.T.S.
CL.: N/A

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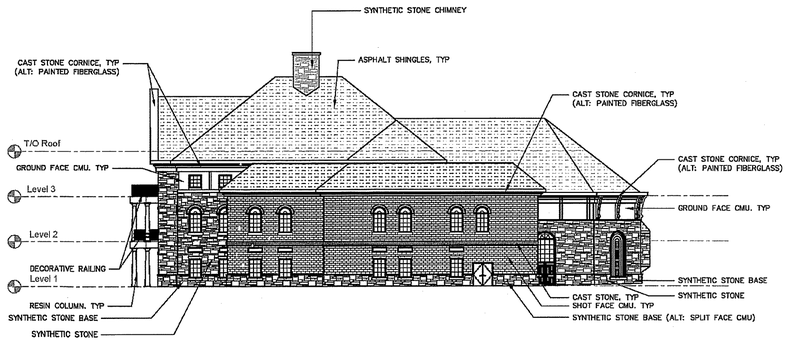
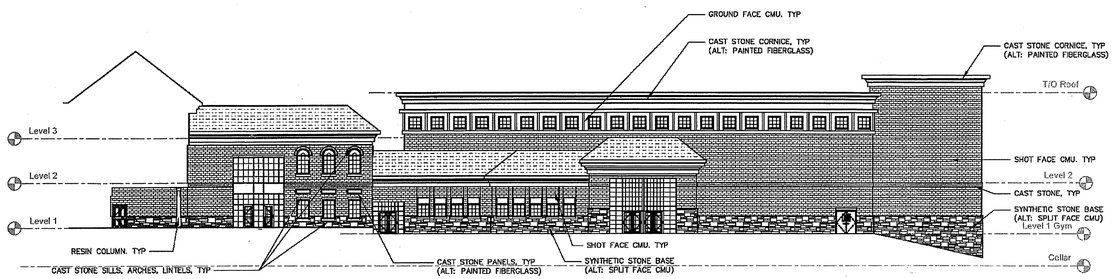
12
OF
19

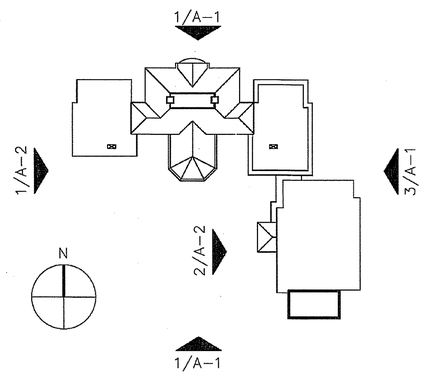
SE-12643



1 WEST ELEVATION
1/16"=1'-0"



2 WEST ELEVATION
1/16"=1'-0"



dcs DESIGN

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OAKCREST SCHOOL

PRINT DATE 12/14/12, 3:26 pm

ISSUE DATE

REVISION DATE

PROJECT TITLE
OAKCREST SCHOOL
1627 CROWELL ROAD
VIENNA, VA 22101

PROJECT NO. 312186.01

DRAWING TITLE
EXTERIOR ELEVATIONS

DRAWN BY
CHECKED BY
QA REVIEWED BY

DRAWING NUMBER
A-2
SHEET OF
166_Elevation 2.dwg

No.	DATE	DESCRIPTION

REVISIONS

PLAN DATE
12/17/12
03/28/13
06/04/13
07/18/13

urban
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COMMONWEALTH OF VIRGINIA
Robert Brown
ROBERT W. BROWN
Lic. No. 0.2041
7/16/15
PROFESSIONAL ENGINEER

EXTERIOR ELEVATIONS
OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: N.T.S.
C.I.: N/A
DATE: DEC, 2012

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13
OF
19

SE-12643

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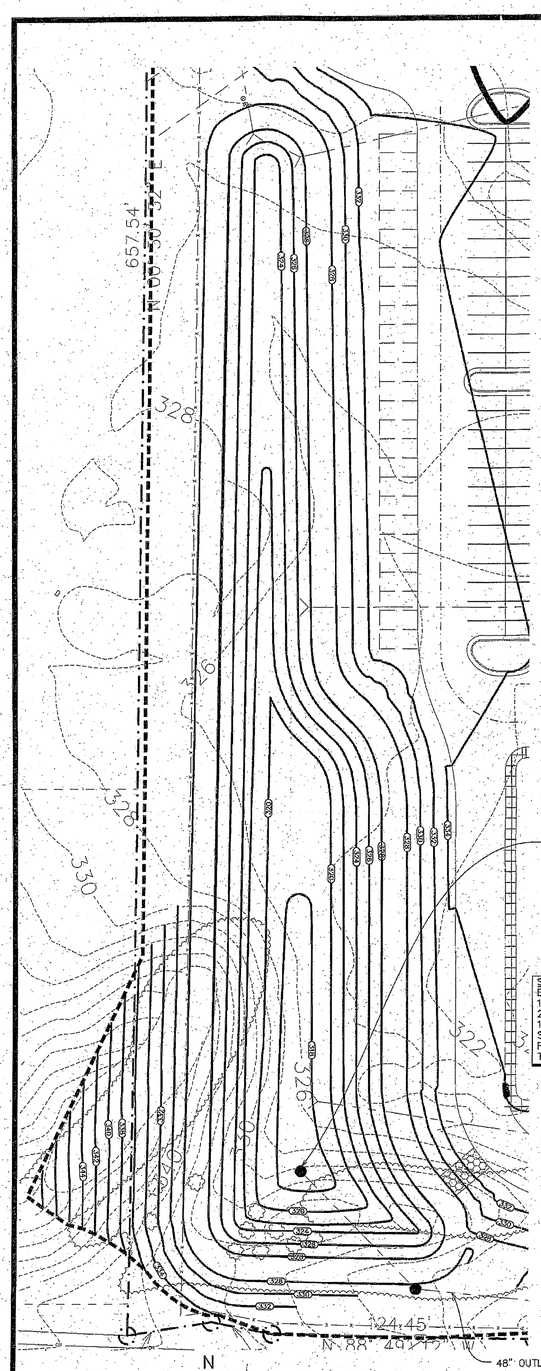
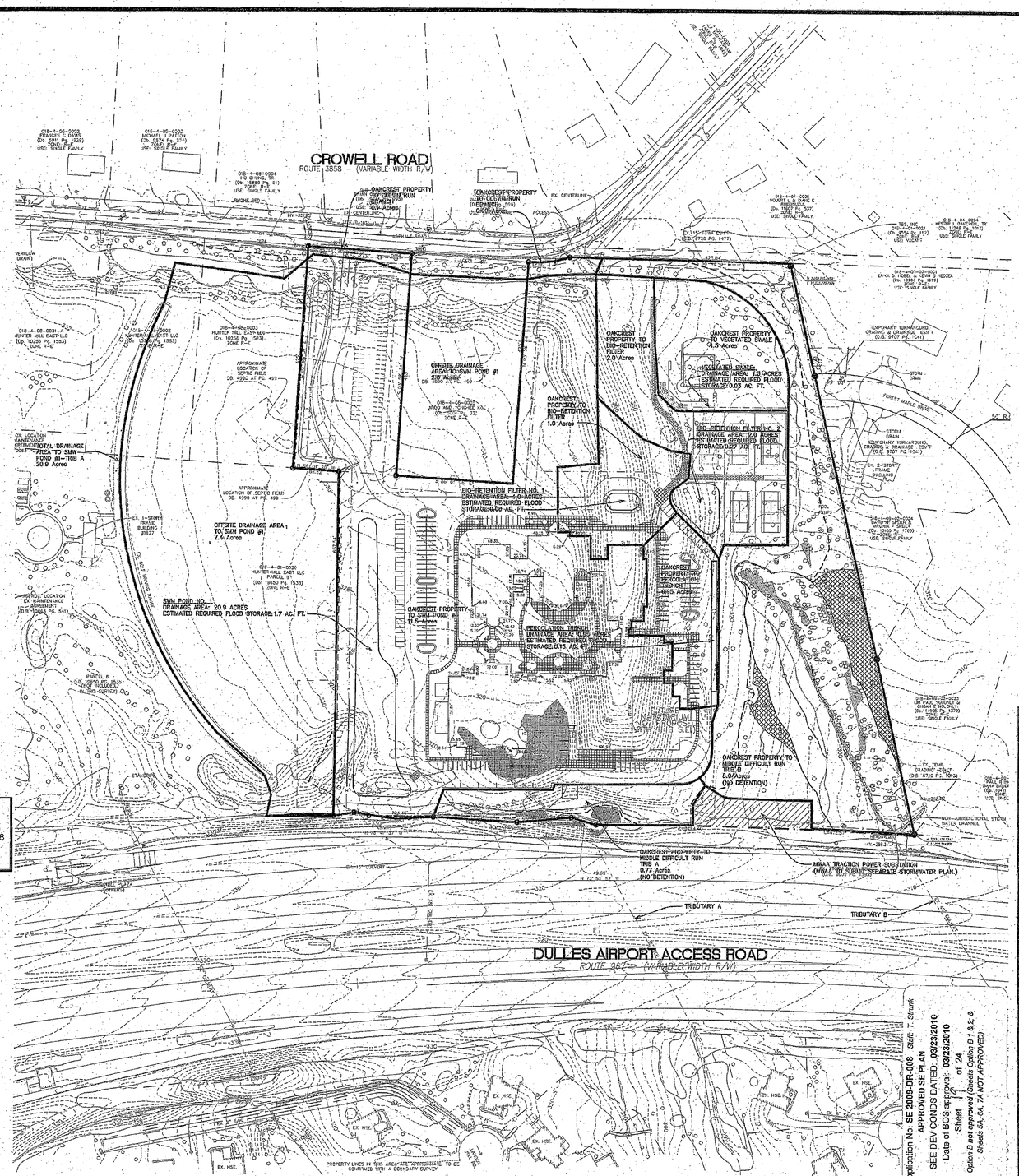


SWM POND 1 DATA
BOTTOM OF BASIN = 317.0
1-YR. STORM EL = 323.60
2-YR. STORM EL = 323.75
10-YR. STORM EL = 324.88
SDF EL = 326.00
FBH = 326.41
TOP OF BERM = 328.00

N

DETENTION POND DETAIL
SCALE: 0 = 30'

0 15 30 60



N

0 50 100 200

RELEASE DATES	
1-20-09	SE SUBMITTAL PACKAGE
3-20-09	COUNTY RE - SUBMISSION
7-17-09	REVISION PER STAFF REPORTS
8-24-09	FINAL REVISIONS PER STAFF REPORTS
9-23-09	SE RE - SUBMITTAL
12-16-09	SE RE-SUBMITTAL

Bouma Construction

paradigm design inc.
550 9 Mile Road N.W. Suite B Grand Rapids, MI 49544
Phone: (616) 785 - 5655 Fax: (616) 785 - 5657 www.ParadigmAE.com
CIVIL ENGINEERS

FAIRFAX COUNTY, VIRGINIA

OAKCREST SCHOOL
SPECIAL EXCEPTION
PLAT

Application No. SE 2009-DR-008 Staff: T. Strunk
APPROVED SE PLAN
SEE DEV CONDS DATED: 03/23/2016
Date of BOS approval: 03/23/2010
Sheet 14 of 24
Option 3 not approved (Sheets Option B 1 & 2, & Sheets 5A, 5A1, 7A1 NOT APPROVED)

Checked by: BMR Date:

Project No. 0802017 Sheet No. 14 of 19

DRAINAGE AREA MAP

FOR INFORMATION PURPOSES ONLY! – NO CHANGE FROM ORIGINAL SE.

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
12/17/12
03/28/13
06/04/13
07/18/13

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COMMONWEALTH OF VIRGINIA
ROBERT W. BROWN
Lic. No. 037041
7/18/15
PROFESSIONAL ENGINEER

DRAINAGE AREA MAP
OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINA

SCALE: 1"=AS NOTED C.I.: N/A DATE: DEC, 2012

SHEET 14 OF 19

SE-12643

SUBASIN DESIGNATION: Tributary A - Oakcrest School In Good Forested Condition
SUBASIN AREA: 12.3 ACRES

COVER DESCRIPTION	Area (acres)	Area (%)	HYDROLOGIC SOIL GROUP A 0%	B 67.5%	C 27.2%	D 5.4%	CN
Woods - Good Forested Cond	12.3	100%	30	55	70	77	60.3

RUNOFF CURVE NUMBER = 60

SUBBASIN DESIGNATION: Tributary A - Oakcrest School Developed Property
SUBASIN AREA: 11.5 ACRES

COVER DESCRIPTION	Area (acres)	Area (%)	HYDROLOGIC SOIL GROUP A 0%	B 65.2%	C 29.1%	D 5.7%	CN
Oakcrest:							
Lawn Areas - Good (Incl. Overflow Prkg and athletic fields)	5.6	48%	39	61	74	80	31.9
Building	2.2	19%	98	98	98	98	18.9
Asphalt Parking Area	2.8	24%	98	98	98	98	23.9
Concrete/Walks	0.9	8%	98	98	98	98	7.3

RUNOFF CURVE NUMBER = 83

SUBASIN DESIGNATION: Tributary A - Undetained Area
SUBASIN AREA: 0.8 ACRES

COVER DESCRIPTION	Area (acres)	Area (%)	HYDROLOGIC SOIL GROUP A 0%	B 100.0%	C 0.0%	D 0.0%	CN
Oakcrest:							
Lawn Areas - Good (Grass Slope)	0.8	100%	39	61	74	80	61.0

RUNOFF CURVE NUMBER = 61

SUBASIN DESIGNATION: Tributary B - Good Forested Condition
SUBASIN AREA: 10.3 ACRES

COVER DESCRIPTION	Area (acres)	Area (%)	HYDROLOGIC SOIL GROUP A 0%	B 77.7%	C 0.0%	D 21.9%	CN
Woods	10.3	100%	30	55	70	77	59.6

RUNOFF CURVE NUMBER = 60

SUBASIN DESIGNATION: Tributary B - Post Developed Condition
SUBASIN AREA: 10.3 ACRES

COVER DESCRIPTION	Area (acres)	Area (%)	HYDROLOGIC SOIL GROUP A 0%	B 77.7%	C 0.0%	D 21.9%	AREA X CN
Oakcrest:							
Parking Lot / Walks	0.9	9%	98	98	98	98	8.3
Tennis Courts	0.8	8%	98	98	98	98	7.8
Lawn Areas - Good (Incl. P.E. Fields)	3.6	35%	39	61	74	80	22.7
Meadow	2.6	25%	30	58	71	78	15.7
Woods (Tree Preservation Area)	2.4	23%	30	55	70	77	13.9

RUNOFF CURVE NUMBER = 68

SUBASIN DESIGNATION: Tributary B - Percolation Trench
SUBASIN AREA: 0.95 ACRES

COVER DESCRIPTION	Area (acres)	Area (%)	HYDROLOGIC SOIL GROUP A 0%	B 100.0%	C 0.0%	D 0.0%	AREA X CN
Parking Lot / Walks	0.74	78%	98	98	98	98	76.3
Lawn Areas - Good (Incl. P.E. Fields)	0.21	22%	39	61	74	80	13.5

RUNOFF CURVE NUMBER = 90

SUBASIN DESIGNATION: Tributary B - Vegetated Swale
SUBASIN AREA: 1.30 ACRES

COVER DESCRIPTION	Area (acres)	Area (%)	HYDROLOGIC SOIL GROUP A 0%	B 100.0%	C 0.0%	D 0.0%	AREA X CN
Lawn Areas - Good (Incl. P.E. Fields)	1.30	100%	39	61	74	80	61.0

RUNOFF CURVE NUMBER = 61

SUBASIN DESIGNATION: Tributary B - Bio-Retention Filter No. 1
SUBASIN AREA: 1.00 ACRES

COVER DESCRIPTION	Area (acres)	Area (%)	HYDROLOGIC SOIL GROUP A 0%	B 100.0%	C 0.0%	D 0.0%	AREA X CN
Parking Lot / Walks	0.33	33%	98	98	98	98	32.7
Lawn Areas - Good (Incl. P.E. Fields)	0.67	67%	39	61	74	80	40.9

RUNOFF CURVE NUMBER = 74

SUBASIN DESIGNATION: Tributary B - Bio-Retention Filter No. 2
SUBASIN AREA: 2.00 ACRES

COVER DESCRIPTION	Area (acres)	Area (%)	HYDROLOGIC SOIL GROUP A 0%	B 100.0%	C 0.0%	D 0.0%	AREA X CN
Tennis Courts	0.8	40%	98	98	98	98	39.2
Lawn Areas - Good (Incl. P.E. Fields)	1.20	60%	39	61	74	80	36.6

RUNOFF CURVE NUMBER = 76

SUBASIN DESIGNATION: Tributary B - Post Developed Condition
SUBASIN AREA: 5.0 ACRES

COVER DESCRIPTION	Area (acres)	Area (%)	HYDROLOGIC SOIL GROUP A 0%	B 54.8%	C 0.0%	D 45.2%	AREA X CN
Meadow	1.1	22%	30	58	71	78	14.7
Woods (Tree Preservation Area)	2.4	48%	30	55	70	77	31.2
Lawn Areas - Good (Incl. P.E. Fields)	1.2	24%	39	61	74	80	16.7
Woods (Trees Per Landcape Plan)	0.3	6%	30	55	70	77	4.2

RUNOFF CURVE NUMBER = 67

TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No. 1
Trib A: Oakcrest -Forested - Good Condition

Description	A	B	C	Totals
Sheet Flow				
Manning's n-value	= 0.400	0.400	0.011	
Flow length (ft)	= 65.0	235.0	0.0	
Two-year 24-hr precip. (in)	= 3.20	3.20	0.00	
Land slope (%)	= 22.00	3.20	0.00	
Travel Time (min)	= 5.83 +	35.25 +	0.00 =	41.08
Shallow Concentrated Flow				
Flow length (ft)	= 1553.00	0.00	0.00	
Watercourse slope (%)	= 2.50	0.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	= 2.55	0.00	0.00	
Travel Time (min)	= 10.15 +	0.00 +	0.00 =	10.15
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	= 0.00	0.00	0.00	
Flow length (ft)	= 0.0	0.0	0.0	
Travel Time (min)	= 0.00 +	0.00 +	0.00 =	0.00

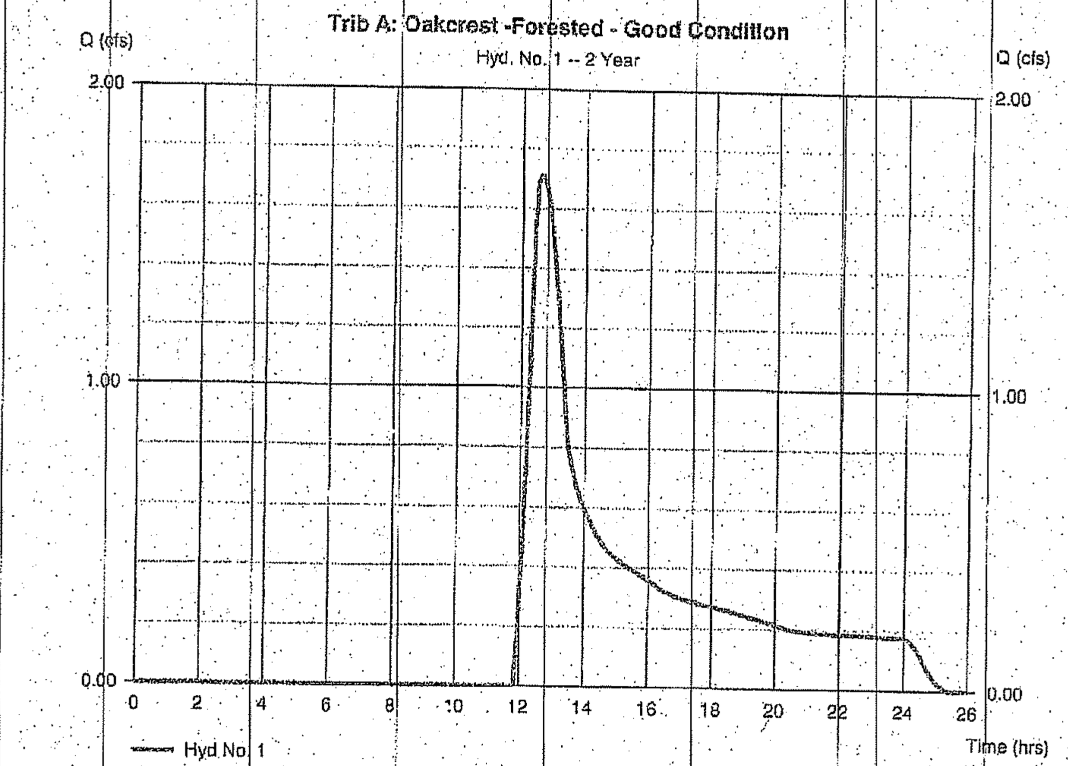
Total Travel Time, Tc .... 51.22 min

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 Thursday, Aug 20, 2009

Hyd. No. 1
Trib A: Oakcrest -Forested - Good Condition

Hydrograph type	= SCS Runoff	Peak discharge	= 1.712 cfs
Storm frequency	= 2 yrs	Time to peak	= 755 min
Time interval	= 5 min	Hyd. volume	= 18,495 cuft
Drainage area	= 12.300 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 51.20 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

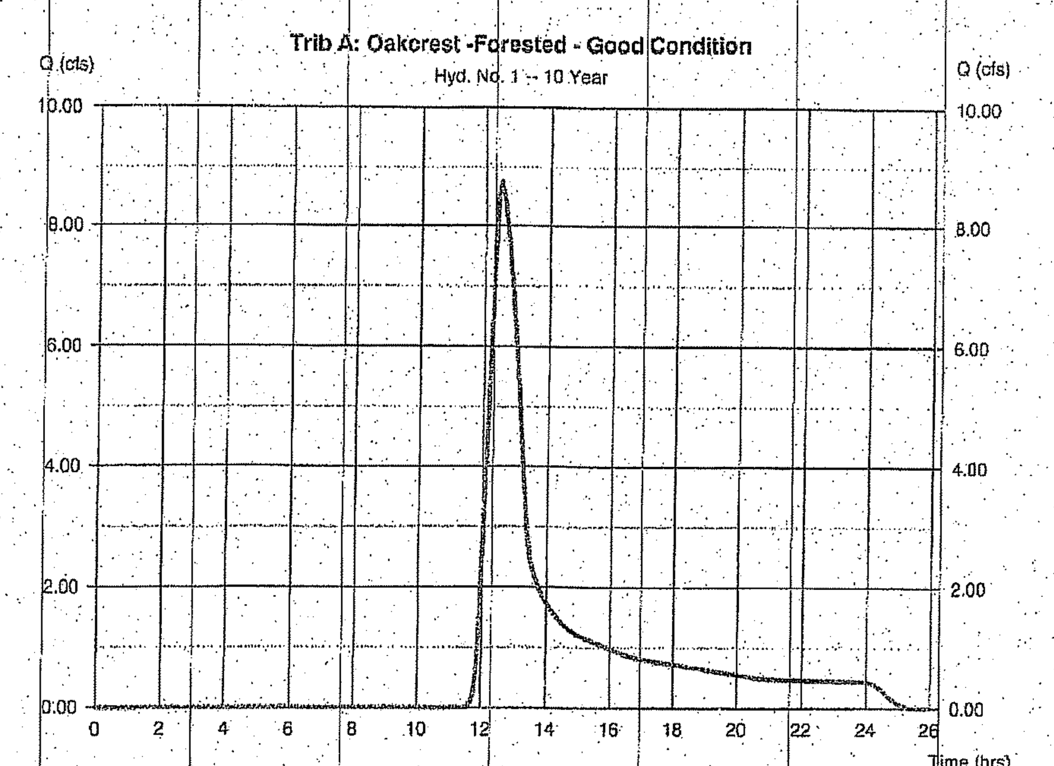


Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 Thursday, Aug 20, 2009

Hyd. No. 1
Trib A: Oakcrest -Forested - Good Condition

Hydrograph type	= SCS Runoff	Peak discharge	= 8.745 cfs
Storm frequency	= 10 yrs	Time to peak	= 750 min
Time interval	= 5 min	Hyd. volume	= 64,507 cuft
Drainage area	= 12.300 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 51.20 min
Total precip.	= 5.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No. 3
Trib A - Offsite

Description	A	B	C	Totals
Sheet Flow				
Manning's n-value	= 0.150	0.150	0.011	
Flow length (ft)	= 50.0	250.0	0.0	
Two-year 24-hr precip. (in)	= 3.20	3.20	0.00	
Land slope (%)	= 22.00	3.00	0.00	
Travel Time (min)	= 2.16 +	17.34 +	0.00 =	19.50
Shallow Concentrated Flow				
Flow length (ft)	= 660.00	250.00	0.00	
Watercourse slope (%)	= 2.00	3.50	0.00	
Surface description	= Unpaved	Unpaved	Paved	
Average velocity (ft/s)	= 2.28	3.02	0.00	
Travel Time (min)	= 4.82 +	1.38 +	0.00 =	6.20
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	= 0.00	0.00	0.00	
Flow length (ft)	= 0.0	0.0	0.0	
Travel Time (min)	= 0.00 +	0.00 +	0.00 =	0.00

Total Travel Time, Tc .... 25.70 min

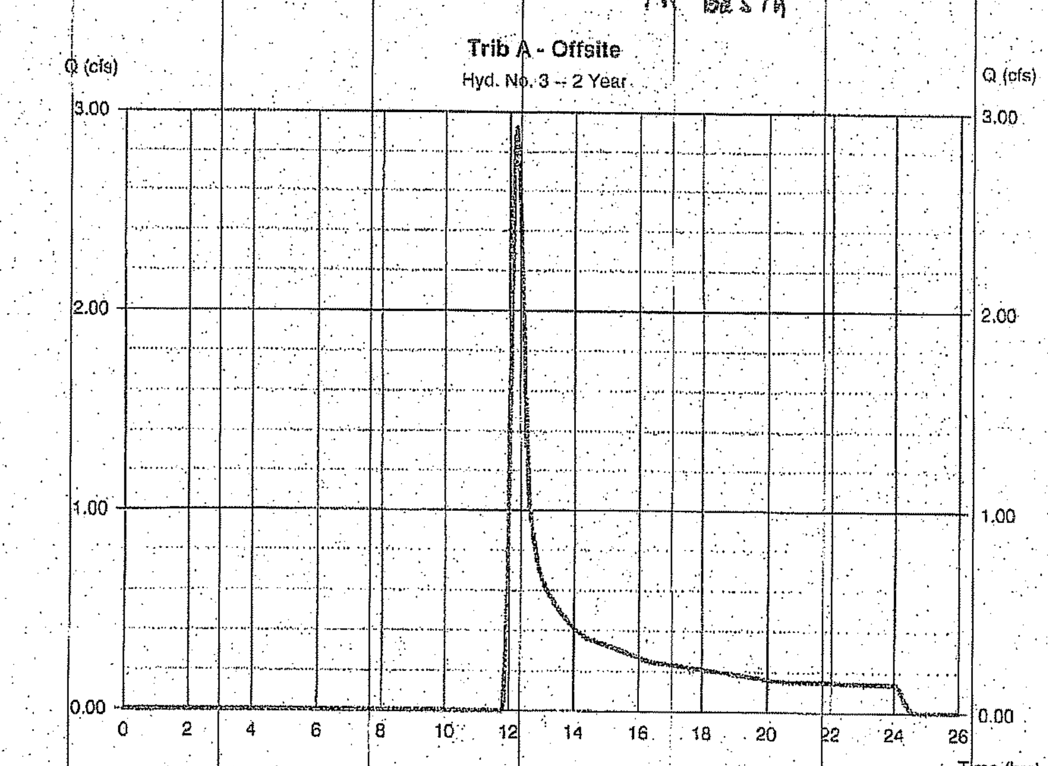
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 Thursday, Aug 20, 2009

Hyd. No. 3
Trib A - Offsite

Hydrograph type	= SCS Runoff	Peak discharge	= 2.922 cfs
Storm frequency	= 2 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 15,808 cuft
Drainage area	= 8.200 ac	Curve number	= 62
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 25.70 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

This flow to be passed thru the basin



Application No. SE 2009-DR-008 Staff: T. Strunk
APPROVED SE PLAN
SEE DEV CONDS DATED: 03/23/2010
Date of BOS approval: 03/23/2010
Sheet 20 of 24
Option B not approved (Sheets Option D 1 & 2; & Sheets 5A, 6A, 7A NOT APPROVED)

RELEASE DATES	
8-24-09	FINAL REVISIONS PER STAFF REPORTS
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FAIRFAX COUNTY, VIRGINIA

OAKCREST SCHOOL
SPECIAL EXCEPTION
PLAT

Checked by: BMH Date:

Project No. 0802017 Sheet No. 15 of 19

STORM WATER CALCULATIONS

FOR INFORMATION PURPOSES ONLY! - NO CHANGE FROM ORIGINAL SE.

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
12/17/12
03/28/13
06/04/13
07/18/13

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COMMONWEALTH OF VIRGINIA
ROBERT W. BROWN
Lic. No. 037041
7/18/13
PROFESSIONAL ENGINEER

STORMWATER CALCULATIONS
OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA
DATE: DEC, 2012
SCALE: 1"=AS NOTED C.I.: N/A

SHEET 15 OF 19

SE-12643

Hydrograph Report

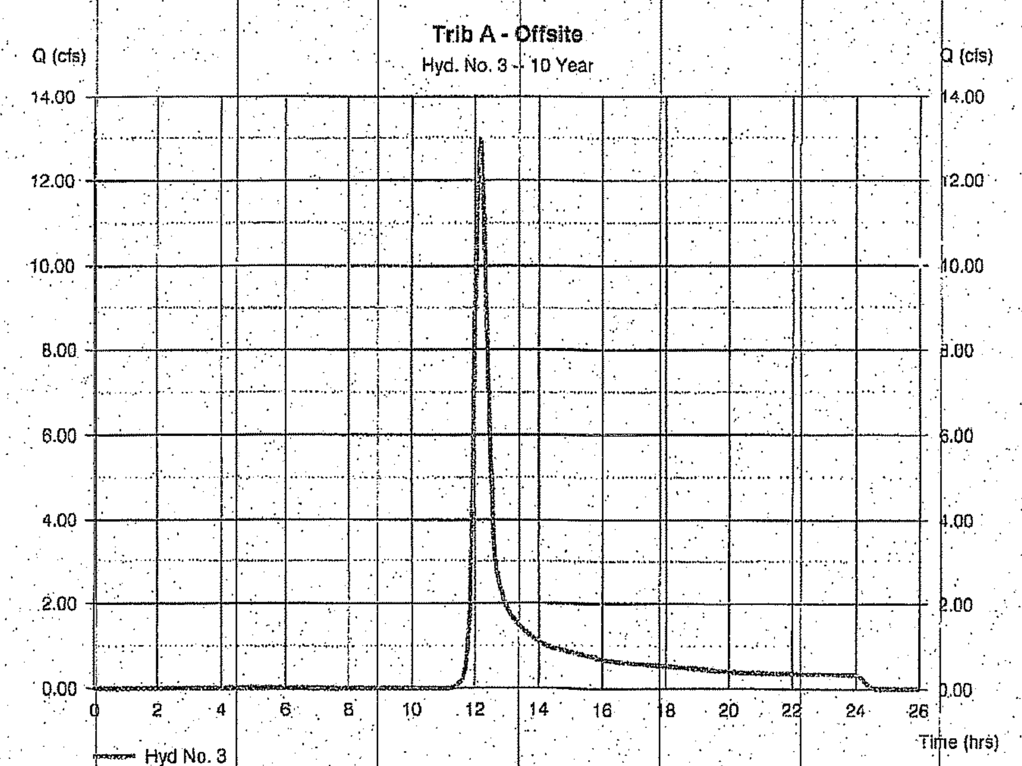
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 3

Trib A - Offsite

Hydrograph type	= SCS Runoff	Peak discharge	= 12.95 cfs
Storm frequency	= 10 yrs	Time to peak	= 730 min
Time interval	= 2 min	Hyd. volume	= 51,392 cuft
Drainage area	= 9.200 ac	Curve number	= 62
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 25.70 min
Total precip.	= 5.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

This flow to be bypassed in basin.



TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No. 2

Proposed Trib. A

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.016		0.011		0.011		
Flow length (ft)	= 300.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.20		0.00		0.00		
Land slope (%)	= 2.00		0.00		0.00		
Travel Time (min)	= 3.94	+	0.00	+	0.00	=	3.94
Shallow Concentrated Flow							
Flow length (ft)	= 0.00		0.00		0.00		
Watercourse slope (%)	= 0.00		0.00		0.00		
Surface description	= Paved		Paved		Paved		
Average velocity (ft/s)	= 0.00		0.00		0.00		
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Channel Flow							
X sectional flow area (sqft)	= 2.40		0.00		0.00		
Wetted perimeter (ft)	= 3.00		0.00		0.00		
Channel slope (%)	= 0.01		0.00		0.00		
Manning's n-value	= 0.015		0.015		0.015		
Velocity (ft/s)	= 0.60		0.00		0.00		
Flow length (ft)	= 320.0		0.0		0.0		
Travel Time (min)	= 8.82	+	0.00	+	0.00	=	8.82
Total Travel Time, Tc							12.76 min

Hydrograph Report

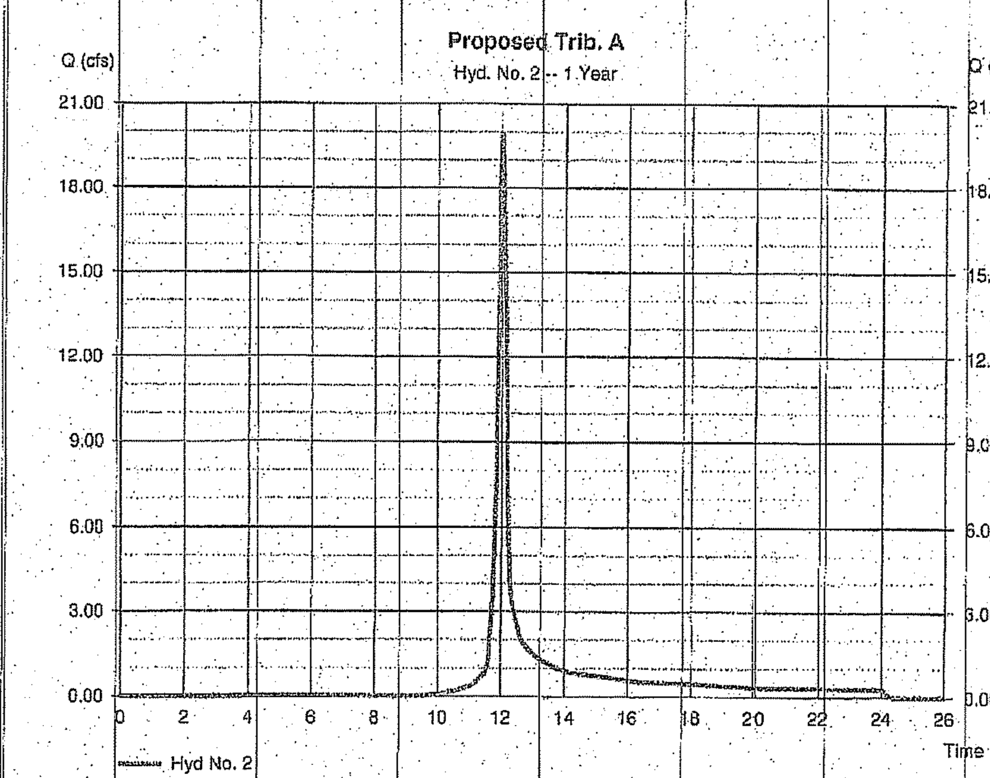
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 2

Proposed Trib. A

Hydrograph type	= SCS Runoff	Peak discharge	= 19.95 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 52,051 cuft
Drainage area	= 11.500 ac	Curve number	= 83
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 12.80 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Extended Detention Volume over 24 hours → 3" orifice



Hydrograph Report

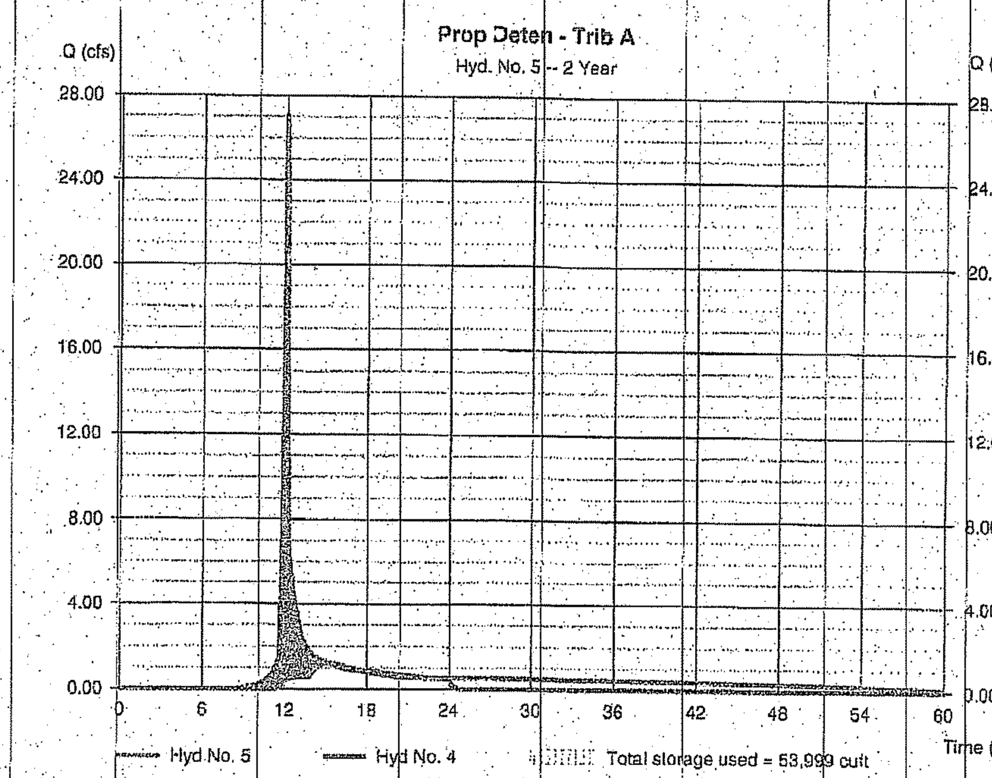
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 5

Prop Deten - Trib A

Hydrograph type	= Reservoir	Peak discharge	= 1.218 cfs
Storm frequency	= 2 yrs	Time to peak	= 914 min
Time interval	= 2 min	Hyd. volume	= 82,347 cuft
Inflow hyd. No.	= 4 - Trib A - Comb Offsite/Onsite	Max. Elevation	= 323.75 ft
Reservoir name	= Proposed SWM POND 1	Max. Storage	= 53,999 cuft

Storage Indication method used.



Hydrograph Report

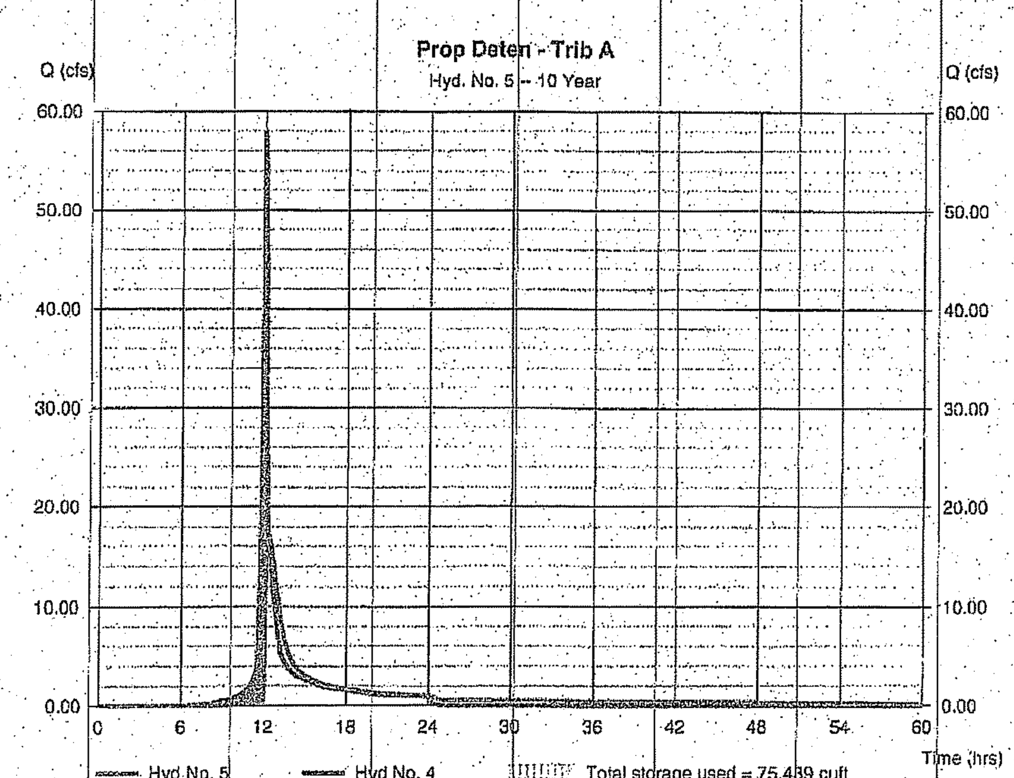
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 5

Prop Deten - Trib A

Hydrograph type	= Reservoir	Peak discharge	= 17.39 cfs
Storm frequency	= 10 yrs	Time to peak	= 736 min
Time interval	= 2 min	Hyd. volume	= 193,678 cuft
Inflow hyd. No.	= 4 - Trib A - Comb Offsite/Onsite	Max. Elevation	= 324.88 ft
Reservoir name	= Proposed SWM POND 1	Max. Storage	= 75,439 cuft

Storage Indication method used.



Pond Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Pond No. 1 - Proposed SWM POND 1

Pond Data

Contours - User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 317.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	317.00	399	0	0
1.00	318.00	2,009	1,204	1,204
2.00	319.00	5,106	3,557	4,761
3.00	320.00	7,124	6,115	10,876
4.00	321.00	8,854	7,989	18,865
5.00	322.00	11,153	10,004	28,868
6.00	323.00	14,698	12,926	41,794
7.00	324.00	18,038	16,368	58,162
8.00	325.00	21,441	19,740	77,901
9.00	326.00	24,900	23,171	101,072
10.00	327.00	28,417	26,659	127,730
11.00	328.00	31,990	30,204	157,934

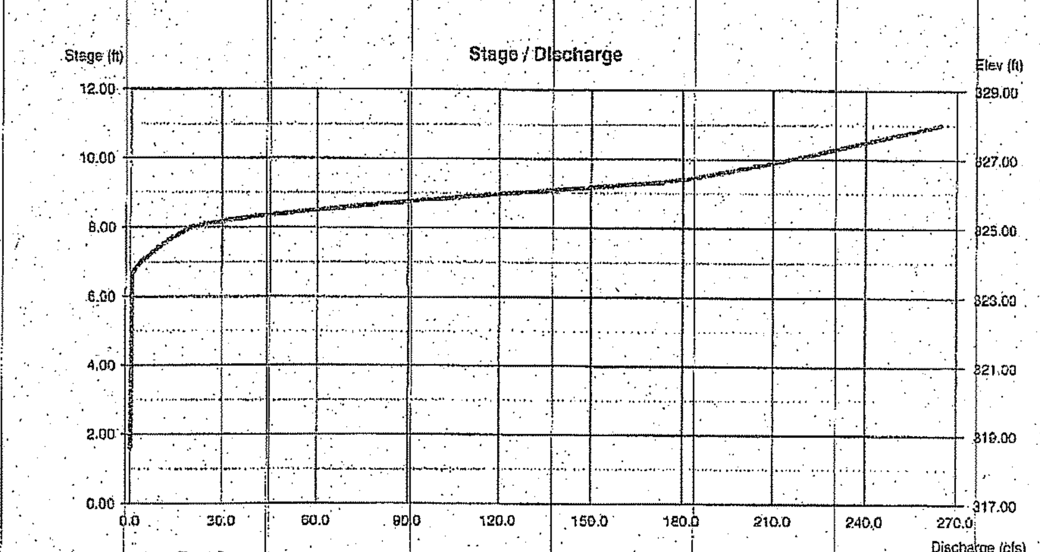
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 48.00	3.00	0.00	0.00
Span (in)	= 48.00	3.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 317.00	317.00	0.00	0.00
Length (ft)	= 269.00	0.00	0.00	0.00
Slope (%)	= 0.01	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 24.00	3.50	0.00	0.00
Crest El. (ft)	= 325.00	323.60	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Riser	Rect	---	---
Multi-Stage	= Yes	No	No	No
Exfil.(in/hr)	= 0.000 (by Contour)			
TW Elev. (ft)	= 318.50			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Pond Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Pond No. 1 - Proposed SWM POND 1

Pond Data

Contours - User-defined contour areas. Average end area method used for volume calculation. Begining Elevation = 317.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	317.00	399	0	0
1.00	318.00	2,008	1,204	1,204
2.00	319.00	5,106	3,557	4,761
3.00	320.00	7,124	6,115	10,876
4.00	321.00	8,854	7,989	18,865
5.00	322.00	11,153	10,004	28,868
6.00	323.00	14,698	12,926	41,794
7.00	324.00	18,038	16,368	58,162
8.00	325.00	21,441	19,740	77,901
9.00	326.00	24,900	23,171	101,072
10.00	327.00	28,417	26,659	127,730
11.00	328.00	31,990	30,204	157,934

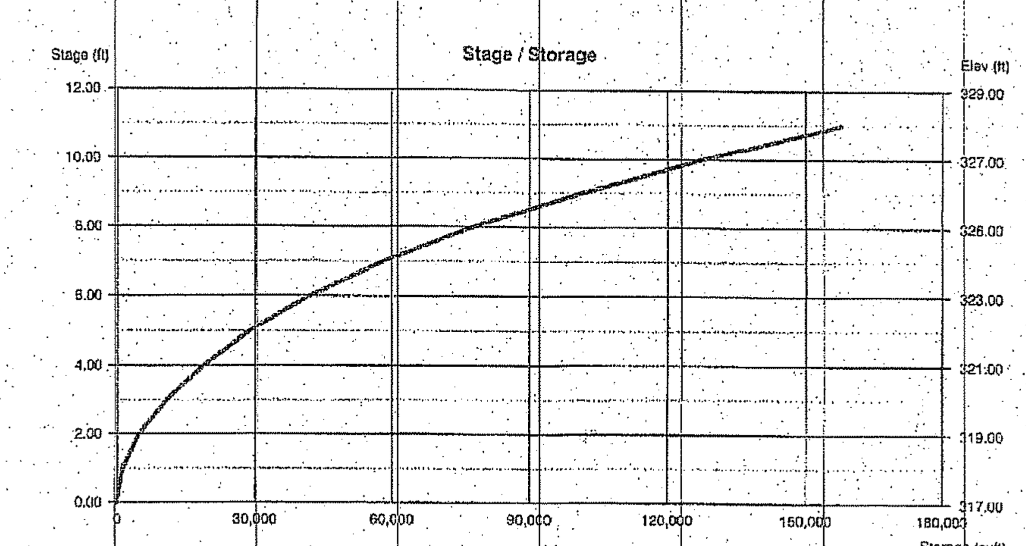
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 48.00	3.00	0.00	0.00
Span (in)	= 48.00	3.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 317.00	317.00	0.00	0.00
Length (ft)	= 269.00	0.00	0.00	0.00
Slope (%)	= 0.01	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 24.00	3.50	0.00	0.00
Crest El. (ft)	= 325.00	323.60	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Riser	Rect	---	---
Multi-Stage	= Yes	No	No	No
Exfil.(in/hr)	= 0.000 (by Contour)			
TW Elev. (ft)	= 318.50			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Application No. SE 2009-DR-008 Staff: T. Strunk
APPROVED SE PLAN
SEE DEV CONDS DATED: 03/23/2010
Date of BOS approval: 03/23/2010
Sheet 21 of 24
Option B not approved (Sheets Option B 1 & 2; & Sheets 5A, 6A, 7A NOT APPROVED)

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FAIRFAX COUNTY, VIRGINIA

OAKCREST SCHOOL SPECIAL EXCEPTION PLAT

Checked by: BMH Date:

Project No. 0802017 — Sheet No. 16 of 19

STORM WATER CALCULATIONS

FOR INFORMATION PURPOSES ONLY! - NO CHANGE FROM ORIGINAL SE.

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE: 12/17/12, 03/28/13, 06/04/13, 07/18/13

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COMMONWEALTH OF VIRGINIA — ROBERT W. BROWN — Lic. No. 037041 — 7/18/13 — PROFESSIONAL ENGINEER

STORMWATER CALCULATIONS
OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=AS NOTED — C.I.: N/A — DATE: DEC, 2012

SHEET 16 OF 19

SE-12643

Hydrograph Report

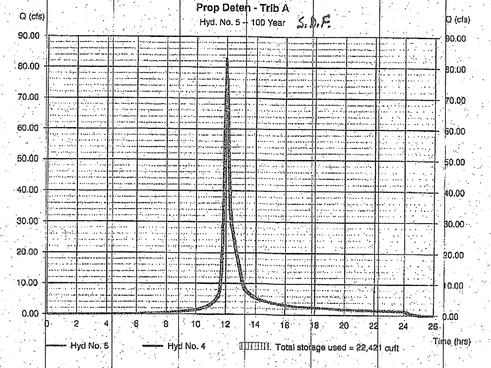
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 5

Prop Deten - Trib A

Hydrograph type	= Reservoir	Peak discharge	= 76.28 cfs
Storm frequency	= 100 yrs	Time to peak	= 725 min
Time interval	= 5 min	Hyd. volume	= 308,840 cuft
Inflow hyd. No.	= 4 - Trib A - Comb Offsite/Onsite	Max. Elevation	= 326.00 ft
Reservoir name	= SWM Pond 1 - SDF-FBH	Max. Storage	= 22,421 cuft

Storage indication method used.



Hydrograph Report

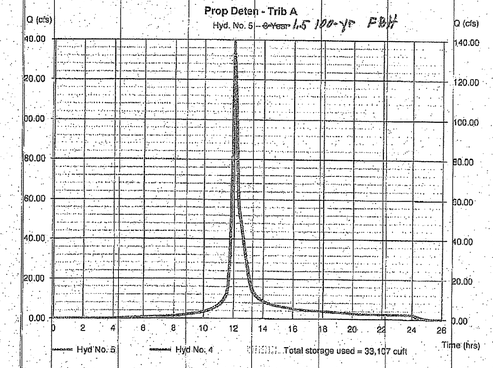
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 5

Prop Deten - Trib A

Hydrograph type	= Reservoir	Peak discharge	= 128.76 cfs
Storm frequency	= ~~2 yrs~~ 1.5 yr.	Time to peak	= 725 min
Time interval	= 5 min	Hyd. volume	= 544,586 cuft
Inflow hyd. No.	= 4 - Trib A - Comb Offsite/Onsite	Max. Elevation	= 326.41 ft
Reservoir name	= SWM Pond 1 - SDF-FBH	Max. Storage	= 33,107 cuft

Storage indication method used.



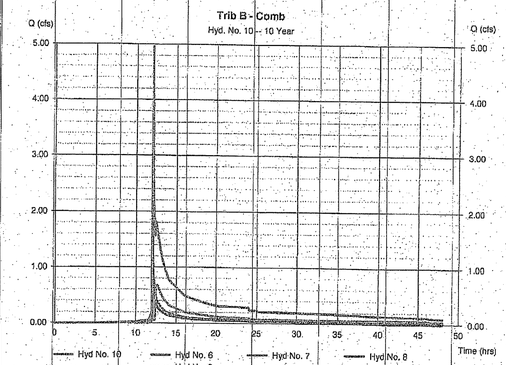
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 10

Trib B - Comb

Hydrograph type	= Combine	Peak discharge	= 4.965 cfs
Storm frequency	= 10 yrs	Time to peak	= 720 min
Time interval	= 1 min	Hyd. volume	= 40,847 cuft
Inflow hyds.	= 6, 7, 8, 9	Contrib. drain. area	= 0.000 ac



TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No. 1

Trib B - Good Forested Condition

Description		A		B		C		Totals
Sheet Flow								
Manning's n-value	=	0.400		0.011		0.011		
Flow length (ft)	=	300.0		0.0		0.0		
Two-year 24-hr precip. (in)	=	3.20		0.00		0.00		
Land slope (%)	=	3.76		0.00		0.00		
Travel Time (min)	=	40.17	+	0.00	+	0.00	=	40.17
Shallow Concentrated Flow								
Flow length (ft)	=	330.00		537.00		0.00		
Watercourse slope (%)	=	3.80		4.50		0.00		
Surface description	=	Unpaved		Unpaved		Paved		
Average velocity (ft/s)	=	3.19		3.42		0.00		
Travel Time (min)	=	1.73	+	2.61	+	0.00	=	4.34
Channel Flow								
X sectional flow area (sqft)	=	0.00		0.00		0.00		
Wetted perimeter (ft)	=	0.00		0.00		0.00		
Channel slope (%)	=	0.00		0.00		0.00		
Manning's n-value	=	0.015		0.015		0.015		
Velocity (ft/s)	=	0.00		0.00		0.00		
Flow length (ft)	=	0.0		0.0		0.0		
Travel Time (min)	=	0.00	+	0.00	+	0.00	=	0.00

Total Travel Time, Tc ..... 44.51 min

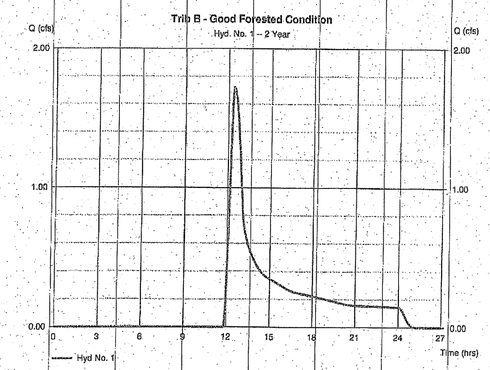
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 1

Trib B - Good Forested Condition

Hydrograph type	= SCS Runoff	Peak discharge	= 1.718 cfs
Storm frequency	= 2 yrs	Time to peak	= 744 min
Time interval	= 3 min	Hyd. volume	= 15,256 cuft
Drainage area	= 10.300 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 44.50 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



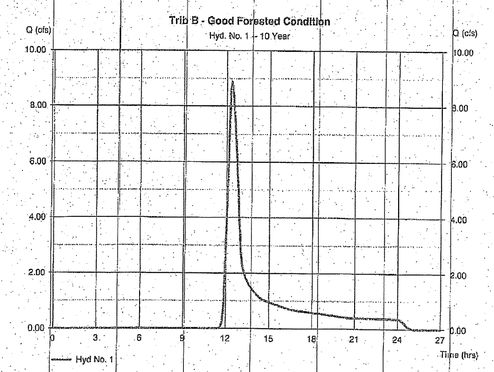
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 1

Trib B - Good Forested Condition

Hydrograph type	= SCS Runoff	Peak discharge	= 8.879 cfs
Storm frequency	= 10 yrs	Time to peak	= 741 min
Time interval	= 3 min	Hyd. volume	= 53,070 cuft
Drainage area	= 10.300 ac	Curve number	= 60
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 44.50 min
Total precip.	= 5.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No. 2

Percolation Trench

Description		A		B		C		Totals
Sheet Flow								
Manning's n-value	=	0.016		0.011		0.011		
Flow length (ft)	=	300.0		0.0		0.0		
Two-year 24-hr precip. (in)	=	3.20		0.00		0.00		
Land slope (%)	=	2.00		0.00		0.00		
Travel Time (min)	=	3.94	+	0.00	+	0.00	=	3.94
Shallow Concentrated Flow								
Flow length (ft)	=	0.00		0.00		0.00		
Watercourse slope (%)	=	0.00		0.00		0.00		
Surface description	=	Paved		Paved		Paved		
Average velocity (ft/s)	=	0.00		0.00		0.00		
Travel Time (min)	=	0.00	+	0.00	+	0.00	=	0.00
Channel Flow								
X sectional flow area (sqft)	=	0.00		0.00		0.00		
Wetted perimeter (ft)	=	0.00		0.00		0.00		
Channel slope (%)	=	0.00		0.00		0.00		
Manning's n-value	=	0.015		0.015		0.015		
Velocity (ft/s)	=	0.00		0.00		0.00		
Flow length (ft)	=	0.0		0.0		0.0		
Travel Time (min)	=	0.00	+	0.00	+	0.00	=	0.00

Total Travel Time, Tc ..... 3.94 min

Application No. SE 2009-DR-008 Staff: T. Strunk
APPROVED SE PLAN
SEE DEV CONDS DATED: 03/23/2010
Date of BOS Approval: 03/23/2010
Sheet 7 of 24
Option B not approved (Sheets Option B 1 & 2 & Sheets 54, 64, 74 NOT APPROVED)

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CIVIL ENGINEERS

FAIRFAX COUNTY, VIRGINIA

OAKCREST SCHOOL
SPECIAL EXCEPTION PLAT

Checked by: BMH Date:

Project No. 0802017 — Sheet No. 17 of 19

STORM WATER CALCULATIONS

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE: 12/17/12, 03/28/13, 06/04/13, 07/18/13

urban — Urban, Ltd. 4200-D Technology Court Chantilly, Virginia 20151 Tel. 703.642.8205 www.urban-ltd.com
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COMMONWEALTH OF VIRGINIA — ROBERT W. BROWN Lic. No. 037041 — 7/18/13 — PROFESSIONAL ENGINEER

STORMWATER CALCULATIONS

OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"=AS NOTED — C.I.: N/A — DATE: DEC, 2012

SHEET 17 OF 19

SE-12643

FOR INFORMATION PURPOSES ONLY! – NO CHANGE FROM ORIGINAL SE.

Hydrograph Report

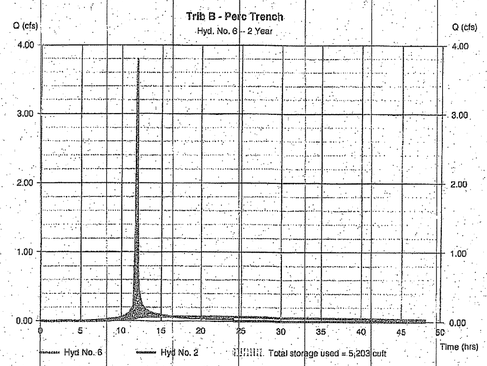
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 6

Trib B - Perc Trench

Hydrograph type	= Reservoir	Peak discharge	= 0.061 cfs
Storm frequency	= 2 yrs	Time to peak	= 992 min
Time interval	= 1 min	Hyd. volume	= 6,435 cuft
Inflow hyd. No.	= 2 - Percolation Trench	Max. Elevation	= 325.42 ft
Reservoir name	= Trib B - Perc Trench	Max. Storage	= 5,203 cuft

Storage Indication method used.



Hydrograph Report

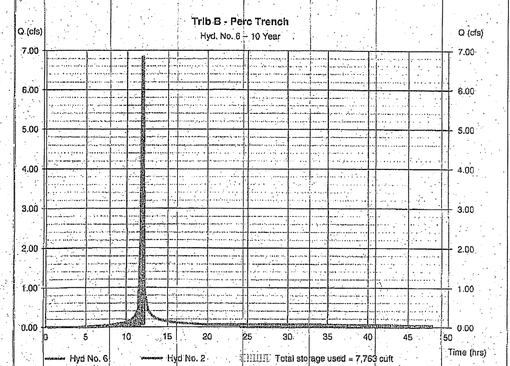
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 6

Trib B - Perc Trench

Hydrograph type	= Reservoir	Peak discharge	= 1.217 cfs
Storm frequency	= 10 yrs	Time to peak	= 724 min
Time interval	= 1 min	Hyd. volume	= 11,549 cuft
Inflow hyd. No.	= 2 - Percolation Trench	Max. Elevation	= 328.09 ft
Reservoir name	= Trib B - Perc Trench	Max. Storage	= 7,763 cuft

Storage Indication method used.



Hydrograph Report

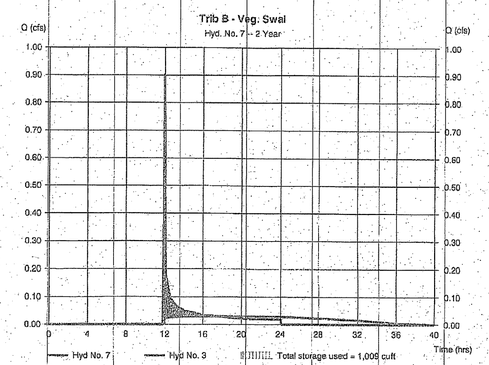
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 7

Trib B - Veg. Swal

Hydrograph type	= Reservoir	Peak discharge	= 0.030 cfs
Storm frequency	= 2 yrs	Time to peak	= 1054 min
Time interval	= 1 min	Hyd. volume	= 2,062 cuft
Inflow hyd. No.	= 3 - Trib B - Vegetated Swale	Max. Elevation	= 339.31 ft
Reservoir name	= Trib B - Veg. Swale	Max. Storage	= 1,009 cuft

Storage Indication method used.



Hydrograph Report

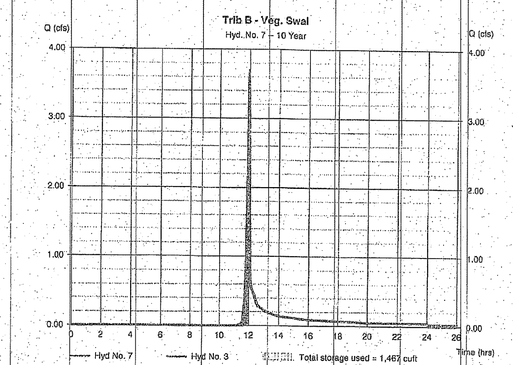
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 7

Trib B - Veg. Swal

Hydrograph type	= Reservoir	Peak discharge	= 3.405 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 1 min	Hyd. volume	= 7,001 cuft
Inflow hyd. No.	= 3 - Trib B - Vegetated Swale	Max. Elevation	= 339.69 ft
Reservoir name	= Trib B - Veg. Swale	Max. Storage	= 1,467 cuft

Storage Indication method used.



TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No. 4

Trib B - Bio Filter 1

Description		A		B		C		Totals
Sheet Flow								
Manning's n-value	=	0.016		0.011		0.011		
Flow length (ft)	=	50.0		0.0		0.0		
Two-year 24-hr precip. (in)	=	3.20		0.00		0.00		
Land slope (%)	=	2.00		0.00		0.00		
Travel Time (min)	=	0.94	+	0.00	+	0.00	=	0.94
Shallow Concentrated Flow								
Flow length (ft)	=	30.00		0.00		0.00		
Watercourse slope (%)	=	2.00		0.00		0.00		
Surface description	=	Paved		Paved		Paved		
Average velocity (ft/s)	=	2.87		0.00		0.00		
Travel Time (min)	=	0.17	+	0.00	+	0.00	=	0.17
Channel Flow								
X-sectional flow area (sqft)	=	0.00		0.00		0.00		
Wetted perimeter (ft)	=	0.00		0.00		0.00		
Channel slope (%)	=	0.00		0.00		0.00		
Manning's n-value	=	0.015		0.015		0.015		
Velocity (ft/s)	=	0.00		0.00		0.00		
Flow length (ft)	=	0.0		0.0		0.0		
Travel Time (min)	=	0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc								1.11 min

Hydrograph Report

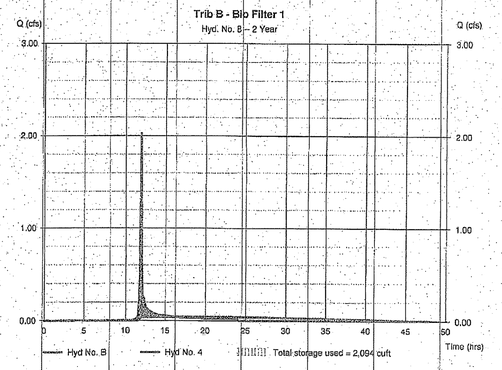
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 8

Trib B - Bio Filter 1

Hydrograph type	= Reservoir	Peak discharge	= 0.041 cfs
Storm frequency	= 2 yrs	Time to peak	= 982 min
Time interval	= 1 min	Hyd. volume	= 3,502 cuft
Inflow hyd. No.	= 4 - Trib B - Bio Filter 1	Max. Elevation	= 331.49 ft
Reservoir name	= Trib B - Bio Filter 1	Max. Storage	= 2,094 cuft

Storage Indication method used.



Hydrograph Report

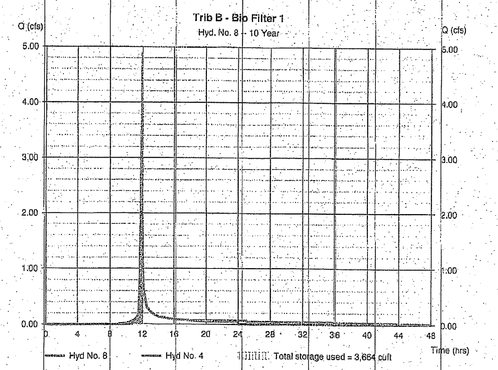
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 8

Trib B - Bio Filter 1

Hydrograph type	= Reservoir	Peak discharge	= 1.792 cfs
Storm frequency	= 10 yrs	Time to peak	= 721 min
Time interval	= 1 min	Hyd. volume	= 8,386 cuft
Inflow hyd. No.	= 4 - Trib B - Bio Filter 1	Max. Elevation	= 336.12 ft
Reservoir name	= Trib B - Bio Filter 1	Max. Storage	= 3,664 cuft

Storage Indication method used.



Application No. SE 2009-DR-008 Staff: T. Strunk
APPROVED SE PLAN
SEE DEV CONDS DATED: 03/23/2010
Date of BOS approval: 03/23/2010
Sheet 72 of 24
Option B not approved (Sheets Option B 1 & 2; & Sheets 9A, 9A1, 7A NOT APPROVED)

RELEASE DATES	
8-24-09	FINAL REVISIONS PER STAFF REPORTS
9-23-09	SE RE - SUBMISSION
12-16-09	SE RE - SUBMISSION

Bouma Construction

paradigm design inc.
550 3 Mile Road N.W. Suite B Grand Rapids, MI 49544
Phone: (616) 785 - 5656 Fax: (616) 785 - 5657 www.ParadigmAE.com
CIVIL ENGINEERS

FAIRFAX COUNTY, VIRGINIA

OAKCREST SCHOOL
SPECIAL EXCEPTION
PLAT

Checked by: BMH Date:

Project No. 0802017 — Sheet No. 18 of 19

STORM WATER CALCULATIONS

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
12/12/12
03/25/13
06/04/13
07/18/13

urban
Urban, Ltd.
4200-D Technology Court
Chantilly, Virginia 20151
Tel. 703.642.2306
www.urbanltd.com
Planners Engineers Landscape Architects Land Surveyors

COMMONWEALTH OF VIRGINIA ROBERT W. BROWN Lic. No. 027041 PROFESSIONAL ENGINEER 7/18/13

STORMWATER CALCULATIONS

OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: DEC, 2012

SCALE: 1"=AS NOTED — C.I.: N/A

SHEET 18 OF 19

SE-12643

FOR INFORMATION PURPOSES ONLY! – NO CHANGE FROM ORIGINAL SE.

TR55 Tc Worksheet

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066

Hyd. No. 5

Trib B - Bio-Retention No.2

Description		A	B	C	Totals
Sheet Flow					
Manning's n-value	=	0.016	0.011	0.011	
Flow length (ft)	=	300.0	0.0	0.0	
Two-year 24-hr precip. (in)	=	3.20	0.00	0.00	
Land slope (%)	=	2.00	0.00	0.00	
Travel Time (min)	=	3.94 +	0.00 +	0.00 =	3.94
Shallow Concentrated Flow					
Flow length (ft)	=	50.00	0.00	0.00	
Watercourse slope (%)	=	5.00	0.00	0.00	
Surface description	=	Unpaved	Paved	Paved	
Average velocity (ft/s)	=	3.61	0.00	0.00	
Travel Time (min)	=	0.23 +	0.00 +	0.00 =	0.23
Channel Flow					
X sectional flow area (sqft)	=	0.00	0.00	0.00	
Wetted perimeter (ft)	=	0.00	0.00	0.00	
Channel slope (%)	=	0.00	0.00	0.00	
Manning's n-value	=	0.015	0.015	0.015	
Velocity (ft/s)	=	0.00	0.00	0.00	
Flow length (ft)	=	0.0	0.0	0.0	
Travel Time (min)	=	0.00 +	0.00 +	0.00 =	0.00

Total Travel Time, Tc ..... **4.17 min**

Hydrograph Report

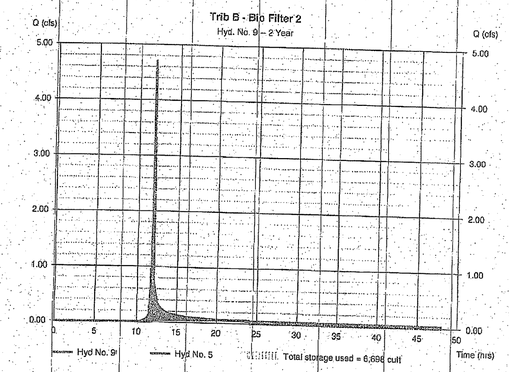
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 9

Trib B - Bio Filter 2

Hydrograph type	= Reservoir	Peak discharge	= 0.059 cfs
Storm frequency	= 2 yrs	Time to peak	= 1204 min
Time interval	= 1 min	Hyd. volume	= 5,282 cuft
Inflow hyd. No.	= 5 - Trib B - Bio-Retention No.2	Max. Elevation	= 334.01 ft
Reservoir name	= Trib B - Bio Filter 2	Max. Storage	= 6,698 cuft

Storage indication method used.



Hydrograph Report

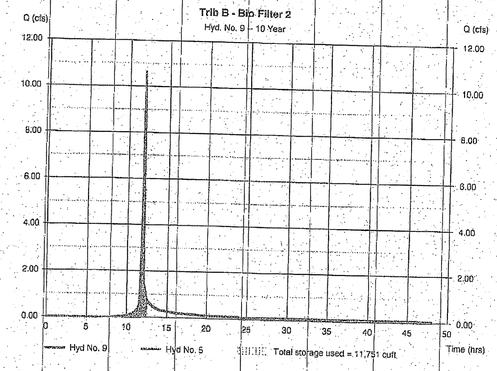
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 9

Trib B - Bio Filter 2

Hydrograph type	= Reservoir	Peak discharge	= 0.674 cfs
Storm frequency	= 10 yrs	Time to peak	= 757 min
Time interval	= 1 min	Hyd. volume	= 13,909 cuft
Inflow hyd. No.	= 5 - Trib B - Bio-Retention No.2	Max. Elevation	= 335.05 ft
Reservoir name	= Trib B - Bio Filter 2	Max. Storage	= 11,751 cuft

Storage indication method used.



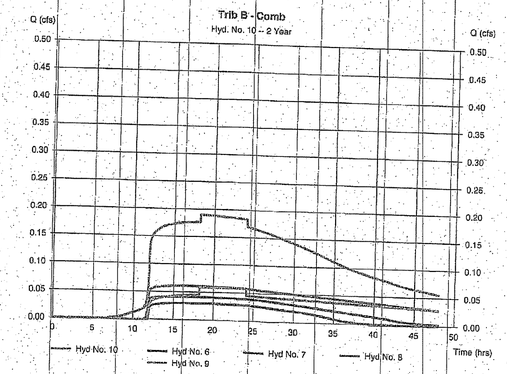
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2009 by Autodesk, Inc. v6.066 — Thursday, Aug 20, 2009

Hyd. No. 10

Trib B - Comb

Hydrograph type	= Combine	Peak discharge	= 0.190 cfs
Storm frequency	= 2 yrs	Time to peak	= 1095 min
Time interval	= 1 min	Hyd. volume	= 17,280 cuft
Inflow hyds.	= 6, 7, 8, 9	Contrib. drain. area	= 0.000 ac



OAKCREST SCHOOL - SPECIAL EXCEPTION AMENDMENT
PRELIMINARY SWM/BMP INFORMATIONAL CHART

FACILITY NAME/TYPE	ON-SITE AREA SERVED (ACRES)	OFF-SITE AREA SERVED (ACRES)	DRAINAGE AREA (ACRES)	FOOTPRINT AREA (SF)	STORAGE VOLUME (CF)	IF POND, DAM HEIGHT (FT)
SWM POND NO. 1	11.50	9.40	20.90	51,750	157,934	11.0
BIO-RETENTION FILTER NO. 1	1.00	0.00	1.00	5,600	2,094	N/A
BIO-RETENTION FILTER NO. 2	2.00	0.00	2.00	6,500	6,698	N/A
PERCOLATION TRENCH	0.95	0.00	0.95	2,500	5,203	N/A
VEGETATED SWALE	1.30	0.00	1.30	5,350	1,009	N/A
TOTAL:	16.75	9.40	26.15	71,700	172,938	-

Application No. SE 2009-DR-008 Staff: T. Strunk
APPROVED SE PLAN
SEE DEV CONDS DATED: 03/23/2010
Date of BOS approval: 03/23/2010
Sheet 21 of 24
Option B not approved (Sheets Option B 1 & 2; & Sheets 5A, 6A, 7A NOT APPROVED)

RELEASE DATES

8-24-09	FINAL REVISIONS PER STAFF REPORTS
9-23-09	SE RE - SUBMISSION
12-16-09	SE RE - SUBMISSION

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www.ParadigmAE.com
CIVIL ENGINEERS

FAIRFAX COUNTY, VIRGINIA

OAKCREST SCHOOL
SPECIAL EXCEPTION PLAT

Checked by: BMH Date:

Project No. 0802017

Sheet No. 19 of 19

STORM WATER CALCULATIONS

No.	DATE	DESCRIPTION
		REVISIONS

PLAN DATE
12/17/12
03/28/13
06/04/13
07/18/13

urban Urban, Ltd. 4200 Stonecroft Blvd. Chantilly, Virginia 20151 Tel. 703.642.2306 www.urban-ltd.com
Planners Engineers Landscape Architects Land Surveyors

COMMONWEALTH OF VIRGINIA
Robert W. Brown
ROBERT W. BROWN
Lic. No. 037041
7/18/13
PROFESSIONAL ENGINEER

STORMWATER CALCULATIONS
OAKCREST SCHOOL
SPECIAL EXCEPTION AMENDMENT
HUNTER MILL DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: DEC, 2012
SCALE: 1"=AS NOTED
C.I.: N/A

SHEET 19 OF 19

SE-12643

FOR INFORMATION PURPOSES ONLY! – NO CHANGE FROM ORIGINAL SE.

BACKGROUND AND DISCUSSION

The applicant, Oakcrest School, requests approval of an amendment to SE 2009-DR-008, which was previously approved for a private school of general education with a maximum daily enrollment of 450 students, grades 6 through 12. Oakcrest School requests this amendment to modify the previously approved development conditions and site access. The project site consists of three parcels, located on the north side of the Dulles Tollway, south of Crowell Road, and approximately 1,200 feet east of Hunter Mill Road. The site contains a total of 22.71 acres and is in the Residential-Estate (R-E) Zoning District. The modifications proposed by Oakcrest School include installation of a driveway access onto Crowell Road; installation of a traffic signal at the intersection of Hunter Mill Road and Crowell Road; and the minor reconfiguration of internal parking and driving lanes.

Staff Report – June 6, 2013

The Staff Report for SEA 2009-DR-008 published on June 6, 2013 recommended approval of the application. Staff concluded that the proposed modifications to the development conditions and site access would not increase the intensity of the uses above the levels previously approved by the Board, that the proposed modifications would facilitate improvements to the levels of service for the surrounding roadway network, including both Hunter Mill Road and Crowell Road, and that the project was designed to be compatible with the surrounding community. Furthermore, staff recommended development conditions to address the provision of traffic-calming measures along Crowell Road and the relocation of utilities. Staff concluded that the proposed uses would be in harmony with the Comprehensive Plan and comply with the applicable Zoning Ordinance provisions.

Planning Commission Public Hearing – June 20, 2013

At the public hearing, staff described the proposal, including the driveway access onto Crowell Road, the traffic signal at the intersection of Hunter Mill Road and Crowell Road, and the respective turn lanes. Additionally, staff highlighted significant aspects of the project, including the removal of portions of the existing berm, the reseeding of the berm, traffic calming measures along Crowell Road, including flashing beacons for the school zone, screening, pedestrian paths, and a school traffic management program.

Following public testimony regarding the application, the Planning Commission asked questions of the staff and the applicant. Topics of discussion included removal of the berm; screening; traffic calming; trip generation on Crowell Road; and alternatives to help mitigate the traffic generated by the school onto Crowell Road. The Planning Commission deferred the decision for the application until July 10, 2013. At the July 10, 2013 meeting, the Planning Commission again deferred the decision for the application until July 25, 2013.

PROJECT CHANGES

Following the public hearing, the applicant made several changes to the plat regarding the earthen berm along Crowell Road and proposed a development condition regarding the mitigation of school traffic onto Crowell Road. Additionally, staff considered various changes to the development conditions based on input at the public hearing regarding the berm, the disposition of the special permit for the golf driving range, and trip generation limits for Crowell Road. This addendum provides a status update for these topics.

Berm

Issue: The application includes changes to the previously approved landscaping along Crowell Road due to the revised access to the site that will be from Crowell Road. If approved, this revised access would require the removal of portions of the eastern half of an earthen berm that is currently located along the south side of Crowell Road. The original proposal anticipated the removal of the berm across the application property and that of an adjacent parcel (Parcel 18-4 ((8)) 5). To help preclude dust and erosion following the removal of the berm on the adjacent parcels, a development condition was proposed that addressed the stabilization of the soil and the reseeding of the area.

The Planning Commission inquired as to the retention of the berm for the purpose of screening.

Status: In response, the applicant revised the plat to remove only those portions of the berm necessary for the construction of the school facilities, to include the driveway and the athletic fields. To the extent feasible, the berm would remain extant across Parcel 18-4 ((8)) 5. The berm would be supplemented and extended along Crowell Road to the north of the athletic fields. The applicant provided an exhibit to the Planning Commission highlighting those areas to be disturbed due to the removal of the berm or portions of the berm. Additionally, staff notes that removal or grading of the berm would entail impacts to the trees currently growing on the berm. The current draft development condition requires the reseeding of the disturbed area within Parcel 18-4 ((8)) 5 with an herbaceous seed mixture. Staff continues to coordinate with the applicant to refine the plat and continues to refine the development condition regarding the retention of portions of the berm and its replanting.

Golf Driving Range Special Permit

Issue: SP 91-C-070 and its subsequent amendments predate the Applicant's application for a special exception amendment (SEA). This special permit, which is owned and/or held by Golf Park, Inc., still applies in part to the Application Property (Tax Map 18-4 ((1)) 26C and 18-4 ((8)) 4 and A) and the immediately adjacent property. In the staff report, dated June 6, 2013, staff deleted a draft development condition previously included as part of SE 2009-DR-008 regarding the vacation of SP 91-C-070. Based on guidance from the Zoning Administration Division, it was determined that retention of

the condition may help avoid confusion regarding the disposition of SP 91-C-070 and its subsequent amendments.

Status: Staff feels that a condition is necessary to make clear that the SEA cannot modify a vested right to the special permit that belongs to the holder of the special permit; in this case Golf Park, Inc., and that no activities related to Oakcrest School's development may be commenced while SP 91-C-070 applies to the Application Property. Staff has updated and reinserted a development condition regarding the vacation of SP 91-C-070. The condition is listed as Development Condition #4 and is highlighted in bold text (see Attachment 1).

Trip Generation and Access

Issue: As part of the proposed development conditions, dated June 6, 2013, staff proposed a Transportation Management condition closely aligned with typical County practices for single-use proposals, including private schools of general education. This draft condition replaced a development condition from SE 2009-DR-008, which linked student enrollment tiers to trip generation limits, all verified by traffic counts. Based on public comments made at the Planning Commission public hearing on June 20, 2013, the applicant offered to meet trip generation limits, similar to the condition associated with SE 2009-DR-008. Staff notes that such a condition would establish limits for vehicular trips generated at the school while giving the applicant flexibility to meet these limits in a manner of their choosing. The applicant's proposed condition would impose more stringent standards than typically seen for a private school and impose reductions of approximately 5, 10, and 15 percent for the vehicle trips generated by the school over Institute of Transportation Engineer (ITE) standard trip generation rates.

The proposed traffic signal at the intersection of Hunter Mill and Crowell Roads, the proposed school driveway, and the proposed turn lanes associated with these improvements have been shown to mitigate the school's impact at full build-out and to meet all applicable safety and service standards. Additionally, the installation of these measures, even with consideration of the additional traffic generated by the school, have been shown to significantly improve the levels of service along both Hunter Mill Road and Crowell Road for all the commuters and residents who drive on these roads, above the levels of service currently experienced without the school. Although the proposed improvements are sufficient to accommodate both the vehicles generated at the full build-out of the school and the traffic generated by the commuters and residents on these roadways, both now and in the future, the school has agreed to further voluntary vehicle trip restrictions. Staff notes that these limitations would be in addition to restrictions already imposed on school activities, including extracurricular activities, parent/teacher conferences, summer camps, weekend outdoor activities, and the use of athletic fields, which were carried forward from the original special exception (SE) approval.

In response to discussion at the public hearing, the applicant has proposed a development condition requiring a second school access point onto Hunter Mill Road (see Attachment 2). The applicant submitted an accompanying analysis regarding the

distribution of vehicular trips to and from the site under single-access (Crowell Road only) and dual-access (Hunter Mill Road and Crowell Road) scenarios. The analysis shows that the levels of service at the Hunter Mill Road/Crowell Road intersection would remain identical under both access scenarios.

Staff notes that the proposed traffic signal, school driveway, and respective turn lanes, without an additional access point, are reasonable to support the maximum enrollment of 450 students at the full build-out of the school and that an additional access point is not necessary to meet industry standards for levels of service and safety in the area.

Additionally, staff notes that the primary concern raised at the Planning Commission public hearing was not a second access point, per se, but rather the number of vehicle trips generated by the school and funneled onto Crowell Road. It is staff's contention that requiring a second access point onto Hunter Mill Road at some point in the future is merely one of several possible means to limit the amount of traffic that is allowed to be generated by the school and that will use Crowell Road.

Furthermore, while both Hunter Mill Road and Crowell Road are major commuting routes and while each carries significant volumes of traffic each day, Hunter Mill Road carries more traffic than Crowell Road.[1] Such a development condition, as proposed by the applicant, would require a second access point onto the busier of the two major local commuting roads.

Rather than introducing a prescriptive development condition, which specifies a particular means of achieving trip reductions along Crowell Road, it may be more appropriate to define those reductions along Crowell Road, per the applicant's analysis, and allow the applicant to determine how to best achieve those reductions. Such a method has the advantage of defining a clear objective, specifying the justification and standard for such a reduction, and allowing the applicant the flexibility to meet that standard in a manner of their choosing. While enhanced access to the site could be achieved through a second access onto Hunter Mill Road, bussing, shuttles, staggered pick-ups, carpools, or some other means may be more efficacious and cost-effective. Given that the Trip Generation development condition associated with SE 2009-DR-008 offers a possible framework to limit the number of trips generated by the school, it may be more appropriate to refine that condition based on the applicant's most recent analysis and retain a similar condition as part of the current application.

Staff notes that the applicant feels that it would be inappropriate to depict the entrance location and geometry for a second access point onto Hunter Mill Road on the plat at this time, since any projected enrollment trigger would not occur for several years and since the disposition of other properties and roadways in the area could change significantly in that time. In an effort to avoid the time and expense associated with another amendment to this application, the applicant proposes that a site plan be

1 In 2010, Hunter Mill Road carried approximately 13,000 vehicles per day while Crowell Road carried approximately 7,300 vehicles per day (source: Fairfax County Department of Transportation).

submitted at such time as there is more certainty as to the disposition of any proposed access point.

The Fairfax County Department of Transportation (FCDOT) has reviewed the applicant's proposed condition (see Attachment 3). The County would not be able to review or support a driveway that would be required to traverse an adjacent property; and would not be able to review or support an undefined secondary access point onto Hunter Mill Road, both without the benefit of a defined easement, without first having the details of that access annotated on the plat. Given the impact of such measures, to include an undefined access route and an undefined connection to a major commuting route would not be found to be in substantial conformance with this SEA and would require an additional SEA.

Status: If the Planning Commission remains concerned about further trip reductions along Crowell Road, staff could craft a development condition that combines the basic tenets of the Trip Generation development condition associated with SE 2009-DR-008 with the trip generation reductions onto Crowell Road of the applicant's recent analysis. Staff feels that such a condition would be consistent with previously approved development conditions for other schools and large child care centers. Staff also feels that such a condition would be more reasonable for the applicant, given the uncertainty associated with negotiating access across an adjacent property.

CONCLUSIONS AND RECOMMENDATIONS

Staff Conclusions

Staff concludes that further refinements to the development conditions are necessary to address the issues raised at the Planning Commission public hearing on June 20, 2013. If the Planning Commission desires, staff could produce a second addendum to the staff report, to be published on July 29, 2013, which would include a complete set of updated development conditions in response to these issues.

Recommendations

To allow sufficient time for staff review of the latest submitted materials and modifications of the associated development conditions, staff recommends deferral of SEA 2009-DR-008 until July 31, 2013.

It should be noted that it is not the intent of staff to recommend that the Board, in adopting any conditions that are offered by the owner, relieve the Oakcrest School from compliance with the provisions of any applicable ordinances, regulations, or adopted standards. The approval of this application does not and would not interfere with, abrogate, or annul any easements, covenants, or other agreements between parties, as they may apply to the property subject to this application.

It should be further noted that the content of this addendum reflects the analysis and recommendations of staff; it does not reflect the position of the Board of Supervisors.

Attachments:
1. Draft Development Conditions, dated July 25, 2013
2. Applicant's Proposed Access Development Condition
3. FCDOT Memorandum, dated July 15, 2013

ATTACHMENT 1

PROPOSED DEVELOPMENT CONDITIONS
SEA 2009-DR-008
July 25, 2013

If it is the intent of the Board of Supervisors (Board) to approve SEA 2009-DR-008, located on the south side of Crowell Road, Tax Map 18-4 ((1)) 26C and 18-4 ((8)) 4 and A, for a private school of general education, pursuant to Sect. 3-E04 of the Fairfax County Zoning Ordinance, the staff recommends that the Board condition the approval by requiring conformance with the following development conditions to supersede all previous conditions. (Those conditions that are identical to conditions that were included in the previous approval or that contain only minor editorial changes are marked with an asterisk*).

1. This Special Exception Amendment (SEA) is granted for and runs with the land indicated in this application and is not transferable to other land.*

2. This Special Exception Amendment is granted only for the purpose(s), structure(s) and/or use(s) indicated on the special exception plat approved with the application, as qualified by these development conditions.*

3. This Special Exception Amendment is subject to the provisions of Article 17, Site Plans, as may be determined by the Director, Department of Public Works and Environmental Services (DPWES). Any plan submitted pursuant to this special exception shall be in substantial conformance with the approved Special Exception Amendment Plat entitled "Oakcrest School," consisting of 19 sheets dated June 4, 2013, and these conditions. Minor modifications to the approved special exception may be permitted pursuant to Par. 4 of Sect. 9-004 of the Zoning Ordinance.*

4. (a) Prior to any development activity on the Application Property pursuant to this SEA, Golf Park, Inc., as the owner of SP 91-C-070 and its subsequent amendments (collectively "SP-91-C-070"), must initiate a vacation or amendment of this special permit so that it does not conflict with the SEA and so that it does not apply to the Application Property. Any such vacation or amendment of the special permit must be reviewed and approved by the Fairfax County Board of Zoning Appeals.

(b) No activities related to Oakcrest School's development that is the subject of this SEA may be commenced while SP 91-C-070 applies to the Application Property. The following is a non-exhaustive list of activities that Oakcrest School may not commence unless and until SP 91-C-070 is vacated or amended: site plan approval, clearing activities, grading activities, land disturbance activities, and requests for inspections of the Application Property by any County staff.

(c) This development condition does not require Golf Park, Inc. to initiate any such application and does not require the BZA to take any particular action with regard to the same. This development condition merely prohibits the Applicant from beginning any development related activities associated with its SEA before Golf Park, Inc. vacates or amends its existing special permit, and it in no way alters, amends, or changes SP 91-C-070. Neither Oakcrest School nor the Board of Supervisors approval of this SEA modify Golf Park, Inc.'s special permit.

5. A copy of these special exception amendment conditions shall be posted in a conspicuous place on the property, and made available to the public and all departments of the County of Fairfax during hours of operation.*

6. Architecture shall be in general conformance with that shown on Sheets 12 and 13 of the SEA Plat.*

7. Any retaining walls provided which are not shown on the SEA Plat shall not exceed three feet in height.*

8. The architectural treatment of the portions of any retaining walls over two feet in height that face the eastern, northern, or western lot lines shall consist of a split face, landscape block, masonry, concrete, concrete tie or stone finish, and shall be of a color compatible with the other structures on the property.*

9. The maximum daily enrollment shall be limited to 450 students, grades 6-12.*

10. The maximum number of staff on-site at any one time shall be 90.*

11. (a) The primary hours of operation, to include regular extracurricular activities, shall be limited to 7:00 am to 6:00 pm, Monday - Friday.*

    (b) Evening hours of operation for parent/teacher conferences and similar meetings shall be permitted Monday - Friday, but shall be scheduled to end by 10:00 pm.*

    (c) Other evening activities shall be permitted Monday - Friday, but shall be scheduled to end by 10:00 pm, Monday – Thursday and by 11:00 pm Friday, and shall be limited to a maximum of eight occurrences per month.*

    (d) Weekend activities shall be limited to 9:00 am to 11:00 pm on Saturday and 9:00 am to 5:00 pm on Sunday. Weekend activities with an anticipated attendance of 30 or more shall be limited to four events per month. No more than twice a year an indoor event on a Saturday may extend until 12:00 midnight.*

    (e) Weekend outdoor activities shall not extend beyond 7:30 pm.*

(f) The school buildings and outdoor playing fields shall not be leased, rented, or otherwise made available to groups not affiliated with or sponsored by the school.*

12. Any on-site summer camp or summer school activities shall be subject to the following restrictions:

    (a) The total maximum daily enrollment shall be limited to 450 children, limited to children entering 1st grade through those who have just graduated from 12th grade.*

    (b) The hours of operation of the summer camp / summer school shall be limited to 8:00 am to 5:00 pm, Monday - Friday.*

13. Prior to the first day of school each year, a neighborhood liaison committee shall be established to coordinate and meet with interested neighbors to discuss and address neighborhood concerns regarding the school. Prior to the first day of school, the neighborhood liaison committee shall designate a contact person, and the name and phone number of the contact person shall be provided to the presidents of surrounding civic associations and the office of the Hunter Mill District Supervisor or another local District Supervisor if the District is no longer the Hunter Mill District due to future redistricting or some other reason.*

14. No lighting shall be provided for the outdoor playing fields/tennis courts, and the use of outdoor public address speaker systems or bull horns shall be prohibited. However, this shall not preclude the use of a temporary public address speaker system to be used for outdoor graduation/baccalaureate ceremonies.*

15. All lighting, including security lighting, shall be in conformance with Part 9 of Article 14 of the Zoning Ordinance. Any light fixtures provided on the site shall be limited to a maximum height of 12 feet, from ground level to the top of the fixture.*

16. Indoor recreation space shall be provided for each student enrolled in accordance with the provisions of Chapter 30 of the Code.*

17. All vehicular parking shall be provided on-site. If additional parking is required during any special event, off-site parking and shuttle service shall be provided.*

18. The applicant shall designate an individual as the applicant's transportation coordinator to administer and encourage participation in a transportation management program designed to reduce the number of vehicle trips to and from the school during peak hours as a mechanism to minimize daily vehicular trips. The name of the transportation coordinator shall be provided to the Fairfax County Department of Transportation (FCDOT) within 30 days after the issuance of a Non-Residential Use Permit (Non-RUP) for the school and at any such time as the coordinator changes. A transportation management plan shall

be submitted to FCDOT within 90 days after the issuance of a Non-RUP for the school. An annual report shall be submitted to FCDOT in October of each year that demonstrates through surveys or other means of data collection how the number of vehicle trips to and from the school have been reduced from the AM peak hour trip generation rates as derived from the latest edition of the Trip Generation Manual of the Institute of Transportation Engineers. After the first three years of annual reports, these reports may be provided every two or three years, or not at all if mutually agreed to by the applicant and FCDOT.

19. The applicant shall acquire and dedicate sufficient right-of-way along the east side of Hunter Mill Road for the construction of a northbound right turn lane and associated taper approaching the Hunter Mill Road and Crowell Road intersection. These facilities shall be constructed prior to the issuance of a Non-RUP for the school.

20. The applicant shall construct a southbound left turn lane and associated taper approaching the Hunter Mill Road and Crowell Road intersection. These facilities shall be constructed prior to the issuance of a Non-RUP for the school.

21. The applicant shall acquire and dedicate sufficient right-of-way along the south side of Crowell Road for the construction of an eastbound right turn lane, a westbound left turn lane, and the respective tapers approaching the school driveway. For on-site areas along the south side of Crowell Road, the applicant shall dedicate sufficient right-of-way for turn lanes, tapers, buffers, a major paved trail, and clear zones, which are border areas starting at the edge of a traveled way available for safe use by an errant vehicle, according to VDOT and/or FCDOT standards, and as generally shown on the SEA plat.

22. Prior to the issuance of a Non-RUP, and with the exception of off-road paved trails, all transportation improvements shown on the SEA Plat (including, but not limited to, frontage improvements, turn lanes, tapers, the relocation of utilities, and a traffic signal at the intersection of Hunter Mill Road and Crowell Road), as approved by VDOT, shall be completed. The applicant shall construct the proposed transportation improvements and relocate utilities by using existing right-of-way or obtaining additional right-of-way through voluntary private agreements.

23. Pedestrian paths shall be provided as generally annotated on the SEA Plat, including those to the overflow parking lot, located to the northwest of the school, and to the athletic facilities, located to the northeast of the school.

24. Americans with Disabilities Act (ADA)-compliant pathways shall be provided from accessible parking spaces to the building entrances.

25. Before the issuance of the first Non-RUP for the school, the applicant shall install school zone flashing beacon lights within the existing right-of-way, if such lights are approved by VDOT, along Crowell Road at the eastbound and

westbound approaches to the school driveway. These signs shall comply with Sect. 46.2-873 of the Code of Virginia.

26. Within 60 days of the filing of the first site plan on the property, the applicant shall submit the necessary plats, plans, deeds, and other supporting documents to Fairfax County to cause the temporary cul-de-sac of Forest Maple Drive to be converted to a permanent cul-de-sac. The applicant shall be responsible for the preparation and processing of the necessary documents, the cost of the physical conversion of the cul-de-sac, and the reconstruction, if necessary, of the cul-de-sac. In the event the applicant is unable to obtain consent from the affected property owners for the filing of the dedication and vacation of right-of-way request, the applicant shall escrow with Fairfax County the projected cost of the preparation and processing of the necessary documents and the physical conversion of the cul-de-sac, such cost to be determined by the applicant in consultation with Fairfax County based on the unit price schedule for the improvement that is applicable on the date that the conversion of the cul-de-sac is to be commenced.

27. Vehicular access to the Traction Power Substation Site (TPSS) shown on the SEA Plat may be provided from the internal road system without amendment of the special exception amendment.*

28. In conjunction with the dedication/sale of the land for the TPSS, an access easement shall be provided to Metropolitan Washington Airports Authority (or, as appropriate, the Washington Metropolitan Area Transit Authority) to permit periodic access to the TPSS from the internal road system.*

29. If sewer service is not available to the site, a special exception amendment shall be required to provide a septic system, or other alternative system as approved by the Health Department, on the property.*

30. The applicant shall conform strictly to the limits of clearing and grading as shown on the SEA Plat, subject to the installation of utilities and/or trails as determined necessary by the Director of DPWES. If it is determined necessary to install utilities and/or trails within the limits of clearing and grading as shown on the SEA Plat, they shall be located in the least disruptive manner necessary as determined by the Urban Forest Management Division (UFM) of the Department of Public Works and Environmental Services (DPWES). A replanting plan shall be developed and implemented, subject to approval by UFM, for any areas within the limits of clearing and grading that must be disturbed.*

31. Dead, dying, or invasive vegetation may be removed from the areas protected by the limits of clearing and grading, if approved by UFM.*

32. The applicant shall request approval from the property owner of Tax Map Parcel 18-4 ((8)) 5 to remove the off-site berm and stabilize the area. If such approval is granted, the applicant shall remove the berm and stabilize the area. If such

approval is not granted, the applicant shall demonstrate that the grading and landscaping on the application property is in substantial conformance with that shown on the SEA Plat, or shall apply for a special exception amendment to modify those elements.

33. Following the removal of the berm on Tax Map Parcel 18-4 ((8)) 5, the applicant shall request approval from the property owner to reseed the area. If permission is granted, the applicant shall coordinate with DPWES, in consultation with the Fairfax County Park Authority (FCPA), and reseed the area in accordance with the following:

(a) The applicant shall use the following native seed mix:

Indian grass - Sorghastrum nutans – 25%
Little bluestem – Schizachyrium scoparium – 10%
Virginia wild rye – Elymus virginicus – 10%
Deer tongue - Panicum clandestinum – 15%
Purple top – Tridens flavus – 10%
Common milkweed – Asclepias syriaca – 5 %
Joe-Pye weed – Eupatorium fistulosum – 5%
New York ironweed – Vernonia noveboracensis – 5%
Heath aster – Aster pilosus – 3%
Purple mist flower – Conoclinium coelestinum – 2%
Early goldenrod – Solidago juncea – 3%
Grass-leaved goldenrod – Euthamia graminifolia – 3%
Black-eyed Susan – Rudbeckia hirta – 2%
Narrowleaf mountainmint – Pycnanthemum tenuifolium – 2%

(b) The native seed mix for this project must be obtained from Ernst Conservation Seeds of Meadville, Pennsylvania or a Fairfax County Park Authority (FCPA) approved alternate vendor. Bag tags that show what seed was used must be provided to the Park Authority.

(c) The native seed mix shall be seeded at a rate of 0.5 pounds/1,000 square feet (about 20 lbs/acre) with a cover crop of annual rye (Lolium multiflorum) at 1.5 lbs/1,000 square feet.

(d) Prior to seeding the contractor shall prepare the site using disking or raking.

(e) For broadcast application, in which seeds are spread uniformly across a broad area, the native seed mix shall be mixed with weed-free compost (Soilmate or equivalent). If organic compost is used, native seed mix may be sown directly onto the compost and no additional mulching is required. For broadcasting over bare soil, the native seed mix shall be mixed with clean moist sand. Native seed mix may also be drilled or shot by an operator who knows how to apply native seed mix and has the proper equipment (e.g., a Truax type seed drill intended for native seed mixes).

(f) Following application of the native seed mix, the contractor shall immediately overseed (note that hyrodseeding with fiber mulch may be best on steep slopes, and coir or straw mats shall be used in steep slope areas) with annual rye (Lolium multiflorum) at a rate of 60 pounds per acre (about 1.5 lbs/1,000 square feet) in order to get coverage and stabilization prior to germination and establishment of native warm season grasses. Winter wheat may be substituted for annual rye if seeding is done after October 1st.

(g) Following application of the native seed mix and the annual rye, the area shall be covered with clean wheat straw to a depth of about 1 inch. No straw needs to be applied if the native seed mix is sown into a SoilMate or equivalent compost blanket or hydroseeded.

(h) No matting containing plastic mesh is allowed.

34. To provide an effective, year round screen along the northernmost 550 feet of the eastern property boundary, the vegetation shown on the SEA Plat shall be further supplemented by understory plantings to provide ground level screening, as recommended and approved by UFM.*

35. If it is determined by UFM that the landscaping shown on the SEA Plat outside of the preservation area along the eastern boundary of the site, along with the additional plantings required by these conditions, does not meet the intent of Transitional Screening I, as defined by the Zoning Ordinance, such landscaping shall be further supplemented with additional plantings to meet the intent of Transitional Screening I, as determined by UFM.*

36. A landscape plan shall be submitted concurrent with site plan review and shall provide for the number, sizes, and locations of trees and plantings consistent with that shown on the SEA Plat and the additional requirements of these conditions. The landscape plan shall be subject to the review and approval of UFM. Minor modifications may be permitted by UFM to the extent that these do not result in significant physical impacts to the areas designated to be left undisturbed.*

37. At the time of site plan submission, a tree survey shall be submitted that identifies the trunk location, species, size, crown spread and condition analysis rating for all individual and groups of trees shown on the SEA Plat to be preserved, as well as all on and off-site trees, living or dead with trunks 8 inches in diameter and greater (measured at 4 ½ feet from the base of the trunk or as otherwise allowed in the 9th or latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture) located within 25 feet of the approved limits of clearing and grading for review by UFM. This tree survey shall be prepared by a Certified Arborist or Landscape Architect with experience in the preparation of tree preservation plans.*

38. The applicant shall take necessary steps and actions to ensure the long-term survival, and continuing structural integrity and health of trees designated on

the SEA Plat to be preserved. If any of these trees is found to be dead, dying, diseased, or hazardous (as determined by UFM) at or prior to, the final release of the project bond, and that such was not the result of unapproved construction practices, the applicant shall provide for restoration and remuneration by:

(a) Providing for the removal of the above ground portions of trees.

(b) Restoring understory plants and/or soil conditions damaged during tree removal activities (as determined by UFM).

(c) Providing for the restoration of the associated loss in canopy coverage in accordance with the tree cover guidance found in the Public Facilities Manual.*

39. The applicant shall: a) root prune the roots of trees to be preserved that may be damaged during clearing, demolition, grade changes, utility installation and/or the installation of retaining walls; b) mulch to a minimum depth of 3 inches within the areas to be left undisturbed where soil conditions are poor, lacking leaf litter or prone to soil erosion; and c) then provide tree protection fencing approved by UFM and where deemed necessary by UFM. The areas that will be root pruned and mulched shall be clearly identified on the Tree Designation Plan. All treatments for such trees and vegetation shall be clearly specified, labeled, and detailed on the erosion and sediment control sheets and demolition plan (if provided) sheets of the site plan submission. The details for these treatments shall be included in the Tree Designation Plan and shall be subject to the review and approval of UFM.*

All root pruning and mulching work shall be performed in a manner that protects adjacent trees and vegetation that are required to be preserved as shown on the SEA plat and may include, but not be limited to, the following:

- Root pruning shall be done with a trencher or vibratory plow to a depth of 18 inches.
- Root pruning shall take place prior to any clearing and grading and/or demolition of structures.
- Root pruning shall not sever or significantly damage structural or compression roots in a manner that may compromise the structural integrity of trees or the ability of the root system to provide anchorage for the above ground portions of the trees.
- Root pruning shall be conducted with the on-site supervision of a certified arborist.
- 14 gauge welded wire tree protection fencing shall be installed immediately after root pruning, and shall be positioned directly in the root pruning trench and backfilled for stability, or just outside the trench within the disturbed area.

- Immediately after the Phase II E&S activities are complete, mulch shall be applied at a depth of 3 inches within designated areas without the use of motorized equipment.
- Mulch shall consist of wood chips, shredded hardwood, and/or pine bark mulch. Hay or straw mulch shall not be used within tree preservation areas.
- UFM shall be informed in writing when all root pruning and tree protection fence installation is complete.*

40. All signage shall conform to Sect. 12-208 of the Zoning Ordinance.*

41. Outdoor construction activities shall be limited to the hours of 7:00 am – 7:00 pm, Monday through Friday and 9:00 am – 6:00 pm, Saturday. No outdoor construction activities shall take place on Sundays or Federal Holidays.*

42. If porta-potties are provided for temporary use at the outdoor athletic fields/tennis courts, they shall not be located within 100 feet of any property line.*

43. If a scoreboard is provided at the outdoor athletic fields/tennis courts, no more than one shall be permitted at a time on the entire site. It shall not be located within 100 feet of any property line and shall be fully screened from view so that it may not be viewed by any neighboring property off-site.*

The above proposed conditions are staff recommendations and do not reflect the position of the Board unless and until adopted by the Board.

This approval, contingent on the above noted conditions, shall not relieve the applicant from compliance with the provisions of any applicable ordinances, regulations, or adopted standards. The applicant shall be responsible for obtaining the required Non-RUP through established procedures, and this use shall not be established until this has been accomplished.

Pursuant to Section 9-015 of the Zoning Ordinance, this special exception shall automatically expire, without notice, 36 months after the date of approval unless, at a minimum, the use has been established or construction has commenced and been diligently prosecuted. The Board may grant additional time to establish the use or to commence construction if a written request for additional time is filed with the Zoning Administrator prior to the date of expiration of the special exception. The request must specify the amount of additional time requested, the basis for the amount of time requested, and an explanation of why additional time is required.

ATTACHMENT 2

APPLICANT'S PROPOSED DEVELOPMENT CONDITION
ACCESS POINT TO HUNTER MILL ROAD

Prior to the issuance of a Non-RUP for enrollment above 315 students, there shall be a second point of ingress/egress from the School property to Hunter Mill Road. This ingress/egress may be in the form that includes, but is not limited to a future private/public street, a driveway, or combinations of the same. The connection to the property to the west shall be accomplished with the minimum amount of disturbance necessary. Prior to making application for a Non Rup to increase enrollment above 315 students, the Applicant shall prepare and submit a written request to Fairfax County requesting confirmation that the location and form of the second point of ingress/egress is in substantial conformance with the governing approval and also is compliant with all applicable technical and engineering requirements of VDOT, FCDOT, and/or DPWES. This request shall be accompanied by appropriate plans and profiles needed to facilitate this review and the Applicant shall be obligated to provide all such supplementary information deemed necessary by Fairfax County to complete the necessary review in accordance with the requirements of this condition. If not part of a previously approved public or private street network, this required second access point shall be subject to the review and approval of VDOT. Establishment of, or connection to this second point of ingress/egress shall not require an amendment to this special exception provided any landscaping disturbed is reasonably relocated and further provided that any related changes or alteration to site features are in substantial conformance with this approval as determined by the Zoning Administrator.

ATTACHMENT 3

County of Fairfax, Virginia

MEMORANDUM

DATE: July 15, 2013

TO: Barbara Berlin, Director
Zoning Evaluation Division, DPZ

FROM: Angela Kadar Rodeheaver, Chief
Site Analysis Section, DOT

FILE: 3-5(SEA 2009-DR-008)

SUBJECT: ADDENDUM SEA 2009-DR-008; Oakcrest School
Land Identification Map: 18-4 ((1)) 26C; 18-4 ((8)) 4 and A

On June 20, 2013, the Fairfax County Planning Commission held a public hearing of the Oakcrest School Special Exception Amendment application.

One of the concerns raised during the public hearing included the additional vehicle trips on Crowell Road related to the Oakcrest development. In a response letter to the Planning Commission, Oakcrest proposed a second driveway that would extend from the Oakcrest property across the neighboring property that is not owned by Oakcrest and end at the section of Hunter Mill Road that is between the Dulles Toll Road and Crowell Road. This driveway to Hunter Mill Road would be in addition to the proposed access to Crowell Road. Oakcrest also submitted a Dual Site Driveway Traffic Analysis, dated July 3, 2013. Neither Oakcrest's correspondence nor the accompanying traffic analysis describes or otherwise shows the location or the design of the proposed access from the Oakcrest property to Hunter Mill Road other than the general description summarized here above. FCDOT has reviewed the traffic analysis, but without further information, including a plat showing the location and design of the new access, FCDOT cannot analyze or advise on the potential impact or viability of the yet unspecified access to Hunter Mill Road with regard to traffic patterns and congestion.

An additional concern raised at the public hearing was the uncertainty of securing right-of-way (ROW) from the adjacent property owners to construct the turn lanes and install signal equipment at the intersection of Hunter Mill Road and Crowell Road. To verify the adjacent property owners' consent for this ROW acquisition, the applicant should provide documentation between the applicant and the adjacent property owners indicating their consent to this ROW acquisition to construct the northbound right turn lane and taper and to install signal equipment. As stated in the previous memorandum, the applicant also should illustrate that utility relocation can be accommodated within the existing easements.

AKR/AY

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