



APPLICATION FILED: August 11, 2006
APPLICATION AMENDED: November 27, 2006
PLANNING COMMISSION: March 22, 2007
BOARD OF SUPERVISORS: Not Scheduled Yet

County of Fairfax, Virginia

March 21, 2007

STAFF REPORT ADDENDUM II

APPLICATION RZ 2006-LE-026

LEE DISTRICT

APPLICANT:	Eastwood Properties, Inc.
PRESENT ZONING:	R-1
REQUESTED ZONING:	PDH-2
PARCEL(S):	90-3 ((3)) 6, 7, 8
SITE AREA:	4.13 acres
DENSITY:	1.94 dwelling units per acre (du/acre)
PLAN MAP:	Residential; 1-2 du/acre
PROPOSAL:	Rezone the subject site from R-1 to PDH-2 for the development of eight (8) new single-family detached dwellings
REQUESTED MODIFICATIONS/WAIVERS:	Modification of Sect. 2-0103.2 of the Public Facilities Manual (PFM) which limits pipestem lots to 20% of the total number of lots in order to permit 50% of the total number of lots to be pipestem lots

O:\clewi4\rezonings\rz fdp 2006-le-026, eastwood properties inclAddendum II - new proffers.doc

Excellence * Innovation * Stewardship
Integrity * Teamwork * Public Service

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/

Modification of Sect. 6-0202.2A of the PFM to permit a diversion to the natural drainage divide

Modification of Sect. 7-0503 of the PFM to modify the requirements for pipestem driveways in order to permit a 10-foot wide planting strip in the center.

Modification of Sect. 7-0902 of the PFM which requires a minimum radius of 45 feet for cul-de-sacs to permit a 30-foot radius turnaround

STAFF RECOMMENDATIONS:

Staff recommends that RZ 2006-LE-026 and the Conceptual Development Plan be denied; however, if it is the intent of the Board of Supervisors to approve RZ 2006-LE-026, staff recommends that the approval be subject to the draft proffers contained in Attachment 1 of the staff report.

Staff recommends denial of FDP 2006-LE-026.

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

The approval of this rezoning 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.

It should be 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.

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.



Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 7 days advance notice. For additional information on ADA call (703) 324-1334 or TTY 711 (Virginia Relay Center).

Rezoning Application

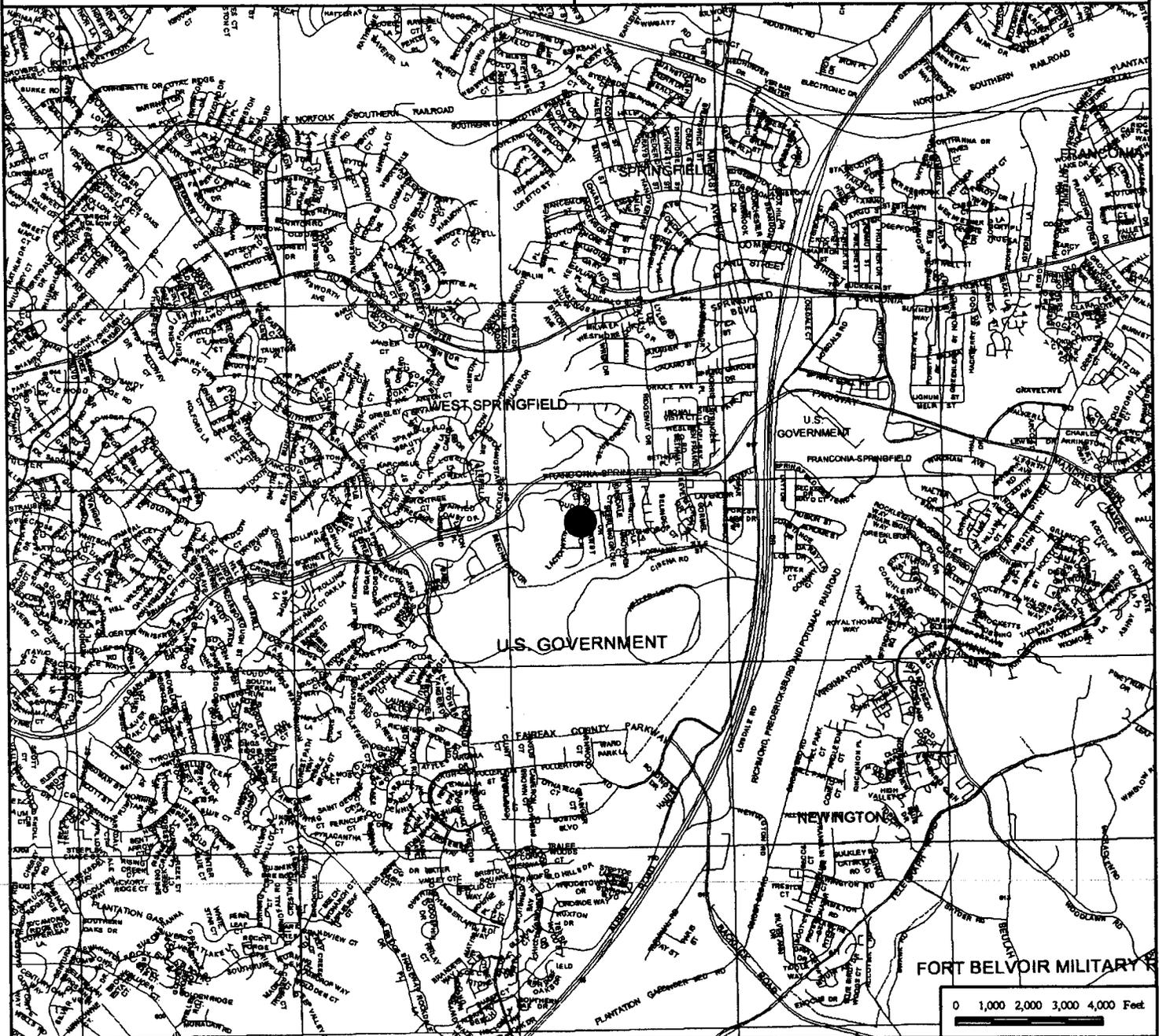
RZ 2006-LE-026

Applicant: EASTWOOD PROPERTIES, INC.
Accepted: 08/30/2006
Proposed: RESIDENTIAL
Area: 4.134 AC OF LAND; DISTRICT - LEE
Zoning Dist Sect:
Located: SOUTHEAST QUADRANT OF THE INTERSECTION OF LACKAWANNA DRIVE AND DUDROW ROAD
Zoning: FROM R- 1 TO PDH- 2
Overlay Dist:
Map Ref Num: 090-3- /03/ /0006 /03/ /0007 /03/ /0008

Final Development Plan

FDP 2006-LE-026

Applicant: EASTWOOD PROPERTIES, INC.
Accepted: 08/30/2006
Proposed: RESIDENTIAL
Area: 4.134 AC OF LAND; DISTRICT - LEE
Zoning Dist Sect:
Located: SOUTHEAST QUADRANT OF THE INTERSECTION OF LACKAWANNA DRIVE AND DUDROW ROAD
Zoning: PDH- 2
Overlay Dist:
Map Ref Num: 090-3- /03/ /0006 /03/ /0007 /03/ /0008



Rezoning Application

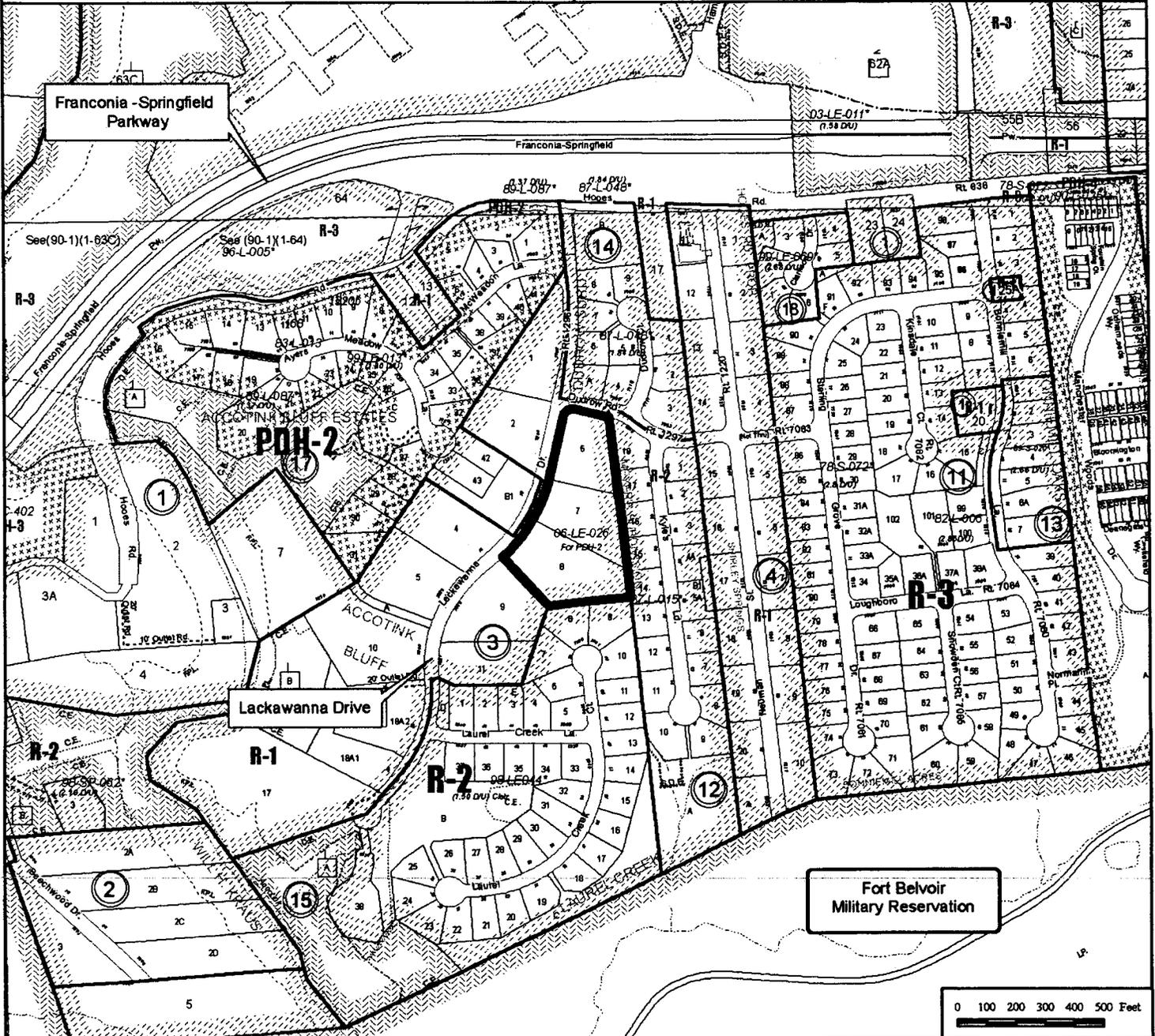
RZ 2006-LE-026

Applicant: EASTWOOD PROPERTIES, INC.
 Accepted: 08/30/2006
 Proposed: RESIDENTIAL
 Area: 4.134 AC OF LAND; DISTRICT - LEE
 Zoning Dist Sect: Located: SOUTHEAST QUADRANT OF THE INTERSECTION OF LACKAWANNA DRIVE AND DUDROW ROAD
 Zoning: FROM R- 1 TO PDH- 2
 Overlay Dist:
 Map Ref Num: 090-3- /03/ /0006 /03/ /0007 /03/ /0008

Final Development Plan

FDP 2006-LE-026

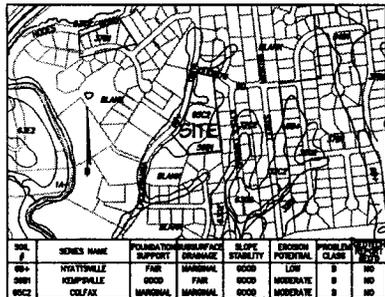
Applicant: EASTWOOD PROPERTIES, INC.
 Accepted: 08/30/2006
 Proposed: RESIDENTIAL
 Area: 4.134 AC OF LAND; DISTRICT - LEE
 Zoning Dist Sect: Located: SOUTHEAST QUADRANT OF THE INTERSECTION OF LACKAWANNA DRIVE AND DUDROW ROAD
 Zoning: PDH- 2
 Overlay Dist:
 Map Ref Num: 090-3- /03/ /0006 /03/ /0007 /03/ /0008



CONCEPTUAL / FINAL DEVELOPMENT PLAN LACKAWANNA DRIVE

LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2006-LE-026



SOILS MAP/DATA
SCALE: 1" = 500'

DENSITY TABULATIONS			
ACCRETION BLUFF			
SECTION	LOTS	AREA	DENSITY
SECTION ONE			
CURRENT CONFIGURATION	8	12.00 Ac	0.87 DU/AC
(LOTS 1, 2, 5-10)			
AREA OF REZONING	3	4.14 Ac	0.72 DU/AC
(LOTS 6, 7 & 8)			
RESIDUAL OF SECTION ONE	5	7.86 Ac	0.836 DU/AC
(LOTS 1, 2, 5, 9 & 10)			
SECTION TWO			
CURRENT CONFIGURATION	4	10.29 Ac	0.38 DU/AC
(LOTS 17, 18A1, 18A2, 18B)			
TOTAL	9	18.15 Ac	0.485 DU/AC

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

- Plot is at a minimum scale of 1"=50' (where it is depicted on one sheet with a minimum scale of 1"=100').
- A graphic depicting the stormwater management facility(ies) and both of storage and grading components the stormwater management facility(ies), storm drainage pipe systems and natural protection, pond capacity, erosion control, site stability, energy dissipation devices, and stream stabilization measures as shown on Sheet 2.
- Provide:

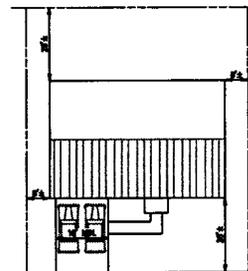
Facility Name/Type & No.	On-site area (acres)	Off-site area (acres)	Drainage area (acres)	Permitted area (acres)	Storage (cu ft)	Peak flow (cfs)
Dry Pond	0.032	0.000	0.000	0.000	36,000	100
- On-site drainage channels, outfalls, and pipe systems are shown on Sheet 2.
- Minimum access (road) to stormwater management facility is shown on Sheet 2. Type of maintenance access road surface noted on the plan is asphalt.
- Landscaping and tree preservation shown is and near the stormwater management facility is shown on Sheet 2.
- A "stormwater management narrative" which including a description of how detention and best management practices requirements will be met is provided on Sheet 2.
- A description of the siting conditions of each watershed site entitled submitted documentation from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (260 acres) is provided on Sheet 2.
- A description of how the siting requirements, including basin changes to contributing drainage areas (i.e. drainage diversion), of the Public Facilities Storage will be satisfied is provided on Sheet 2.
- Calculating topography with maximum contour intervals of two (2) feet and a note as to whether it is an arroyo or bad run is provided on Sheet 2, I.B.2.
- A submission number is requested for: N/A
- Stormwater management is not required because: N/A

SITE TABULATIONS

SITE AREA:	
LOT AREA	118,317.6 (2,738 Ac)
PARCEL "A" AREA	58,877.6 (1,352 Ac)
RIGHT-OF-WAY DEDICATION	1,888.6 (0.043 Ac)
TOTAL	180,082.6 (4,134 Ac)

PDH-2 ZONE

	REQUIRED	PROVIDED
NUMBER OF UNITS	---	8 SINGLE-FAMILY DETACHED
DENSITY	2 DU/AC (MAX)	1.94 DU/AC
MINIMUM LOT AREA	N/R	13,000 sq ft
AVERAGE LOT AREA	N/R	14,800 sq ft
MAXIMUM BUILDING HEIGHT	N/R	30'
OPEN SPACE	20%	25%
PARKING	2 SPACES/ UNIT	2 SPACES/ UNIT (16 TOTAL)



TYPICAL LOT LAYOUT
SCALE: 1" = 20'

NOTES

- THE PROPERTY DELINEATED ON THIS PLAN IS LOCATED ON FAIRFAX COUNTY TAX ASSESSMENT MAP NUMBER 90-3(3) LOTS 6, 7, & 8. THE SITE IS CURRENTLY ZONED R-1. THE PROPOSED ZONING IS PDH-2.
- THE PROPERTY HEREIN IS CURRENTLY IN THE OWNERSHIP OF:
 - LOT 6 - CLYFFORD F. LINDSAY, TR. AND JOYCE F. LINDSAY REVOCABLE TRUST IN DEED BOOK 18285 AT PAGE 383
 - LOT 7 - JOSEPH A. GILLESPIE, TR. IN WILL BOOK 461 AT PAGE 463, AND DEED BOOK 834 AT PAGE 231
 - LOT 8 - HANCOY J. & RICHARD M. VALENTINE, TRS. IN DEED BOOK 10240 AT PAGE 140
- BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A FIELD RUN SURVEY PREPARED BY CHARLES P. JOHNSON & ASSOCIATES, DATED MARCH 2006. CONTOUR INTERVAL EQUALS TWO FEET UNLESS NOTED OTHERWISE.
- THERE IS NO 100-YEAR FLOODPLAIN ON-SITE. NO FLOODPLAIN OR DRAINAGE STUDIES ARE REQUIRED FOR THIS PROJECT.
- THERE ARE NO RESOURCE PROTECTION AREAS (RPAA) OR ENVIRONMENTAL QUALITY CONSIDERS (EQCA) ON-SITE. A WATER QUALITY IMPACT ASSESSMENT WILL NOT BE REQUIRED.
- TO THE BEST OF OUR KNOWLEDGE, THE SITE HAS NO SCENIC ASSETS OR NATURAL FEATURES DESERVING OF PROTECTION AND PRESERVATION.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO KNOWN GRAVE, OBJECTS, OR STRUCTURES MARKING A PLACE OF BURIAL.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITY EMBLEMMENTS HAVING A WIDTH OF 30 FEET OR GREATER, NOR ANY MAJOR UNDERGROUND UTILITY EMBLEMMENTS LOCATED WITHIN THE SITE.
- ALL EXISTING WELLS AND DRAINFIELDS ON-SITE ARE TO BE CAPPED AND ABANDONED IN ACCORDANCE WITH HEALTH DEPARTMENT REGULATIONS.
- SEE SHEET 3 FOR A DESCRIPTION OF EXISTING VEGETATION.
- EXISTING STRUCTURES ARE TO BE REMOVED. DATES OF CONSTRUCTION FOR THE EXISTING BUILDINGS:
 - LOT 6 - 1988
 - LOT 7 - 1980
 - LOT 8 - 1980
- THERE ARE NO ZONING OVERLAY DISTRICTS ON THIS SITE.
- NO DENSITY REDUCTIONS ARE REQUIRED BY ZONING ORDINANCE SECTION 2-306.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO HAZARDOUS OR TOXIC SUBSTANCES AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 146.4, 302.4, AND 306; HAZARDOUS WASTE AS SET FORTH IN COMMONWEALTH OF VIRGINIA / DEPARTMENT OF WASTE MANAGEMENT WR 572-10-1 - VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATIONS; AND/OR PETROLEUM PRODUCTS AS DEFINED IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 281, TO BE GENERATED, UTILIZED, STORED, TREATED, AND/OR DISPOSED OF ON-SITE.
- THERE ARE NO AFFORDABLE DWELLING UNITS (ADU) REQUIRED FOR THIS PROJECT.
- IN ACCORDANCE WITH THE ADOPTED COMPREHENSIVE PLAN, THE PROPOSED DEVELOPMENT WILL PROVIDE RESIDENTIAL DEVELOPMENT AT 1.94 DWELLING UNITS PER ACRE AND WILL CONFORM TO ALL APPLICABLE ORDINANCES, REGULATIONS, AND ADOPTED STANDARDS EXCEPT AS NOTED BELOW:
 - A MODIFICATION OF PPM 3-0002 TO ALLOW PIPESTEM LOTS IN EXCESS OF 50% OF THE TOTAL NUMBER OF LOTS
 - A MODIFICATION OF PPM 7-0002 TO ALLOW A 30' RADIUS TURN AROUND.
 - A MODIFICATION OF THE TYPICAL SECTION OF A PIPESTEM DRIVEWAY (PS-2) TO ALLOW THE PIPESTEM SHOWN.
- PROPOSED PUBLIC IMPROVEMENTS:
 - A. WATER SERVICE TO BE PROVIDED BY EXISTING 8" MAINS LOCATED IN LACKAWANNA DRIVE AND DUNROD DRIVE
 - B. SANITARY SERVICE TO BE PROVIDED BY AN EXISTING 8" MAIN LOCATED IN LACKAWANNA DRIVE
- THERE ARE NO RECREATIONAL FACILITIES PROPOSED WITH THIS DEVELOPMENT.
- SPECIAL AMENITIES ARE NOT PROVIDED WITH THIS PLAN.
- A DEVELOPMENT SCHEDULE HAS NOT BEEN DETERMINED AT THIS TIME.
- SEE SHEET 3 FOR ARCHITECTURAL SKETCHES.
- A TRAIL IS NOT REQUIRED FOR THIS PROJECT PER THE FAIRFAX COUNTY TRAILS PLAN.
- PARCEL "A" WILL BE CONVEYED TO A HOMEOWNERS ASSOCIATION FOR OWNERSHIP AND MAINTENANCE.
- MINOR MODIFICATIONS TO THE BUILDING FOOTPRINTS, LOT AREAS, DIMENSIONS, UTILITY LAYOUT, AND LIMITS OF CLEARING AND BRACING MAY OCCUR WITH THE FINAL ENGINEERING DESIGN, IN SUBSTANTIAL CONFORMANCE WITH THE CDP/PPP, PROVIDED SUCH ARE IN ACCORDANCE WITH THE MINOR MODIFICATIONS PROVISION IN SECTION 16-403 OF THE ZONING ORDINANCE.



VICINITY MAP
SCALE: 1" = 2000'



DEVELOPER
3050 CHAM BRIDGE ROAD
SUITE 103
FAIRFAX, VIRGINIA 22030
(703) 383-8111

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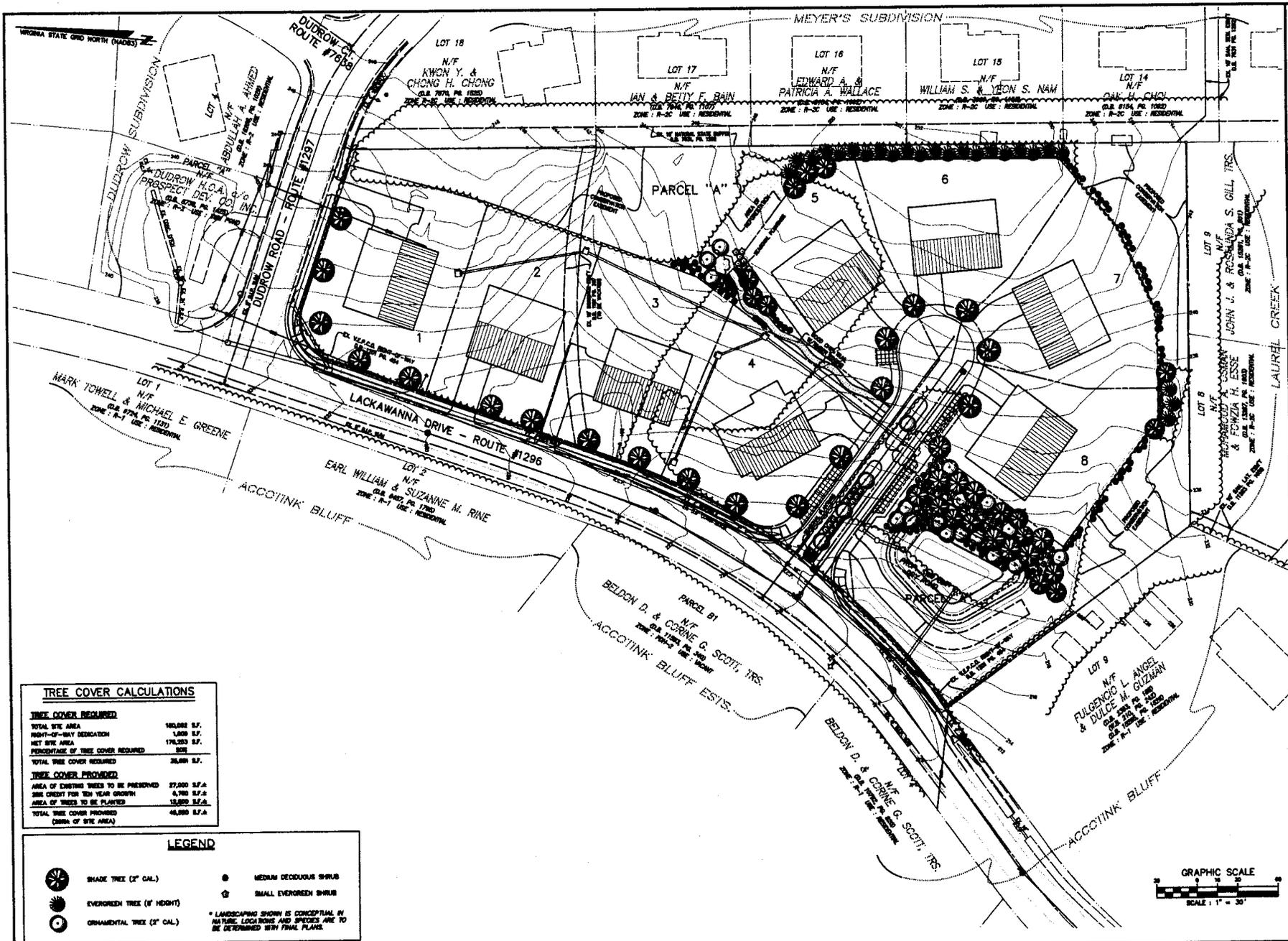
- COVER SHEET
- CONCEPTUAL/FINAL DEVELOPMENT PLAN
- CONCEPTUAL LANDSCAPE PLAN
- CROSS-SECTION
- ARCHITECTURAL ELEVATIONS
- EXISTING VEGETATION MAP
- PRELIMINARY SUTFALL ANALYSIS & CRISTE DRAINAGE DIVIDE MAP & OFFSITE DRAINAGE DIVIDE ANALYSIS

CPJ Charles P. Johnson & Associates, Inc.
PLANNING ENGINEER LANDSCAPE ARCHITECT SURVEYOR
3050 CHAM BRIDGE ROAD SUITE 103 FAIRFAX, VIRGINIA 22030 (703) 383-8111

DATE: JUNE 9, 2006
REVISED: AUGUST 2, 2006
AUGUST 10, 2006
OCTOBER 18, 2006
OCTOBER 31, 2006
FEBRUARY 20, 2007
FEBRUARY 28, 2007
MARCH 14, 2007

SHEET 1 OF 8

LACKAWANNA DRIVE



CONCEPTUAL LANDSCAPE PLAN

LACKAWANNA DRIVE

LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

CPJ
ARCHITECTS

PAUL R. JOHNSON
P.L.L.C.

FILE NO. 09-003-203

DATE: 03/27/07

PROJECT: 09-003-203

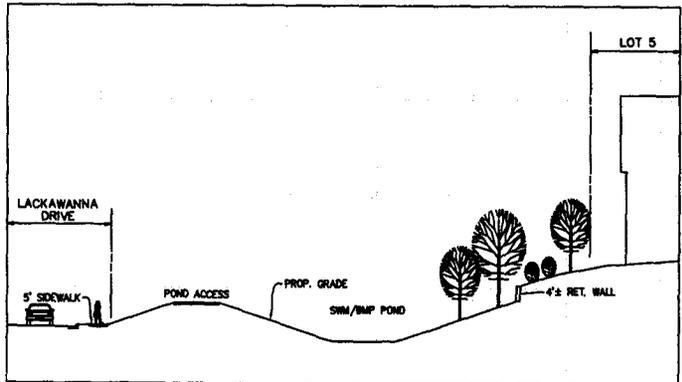
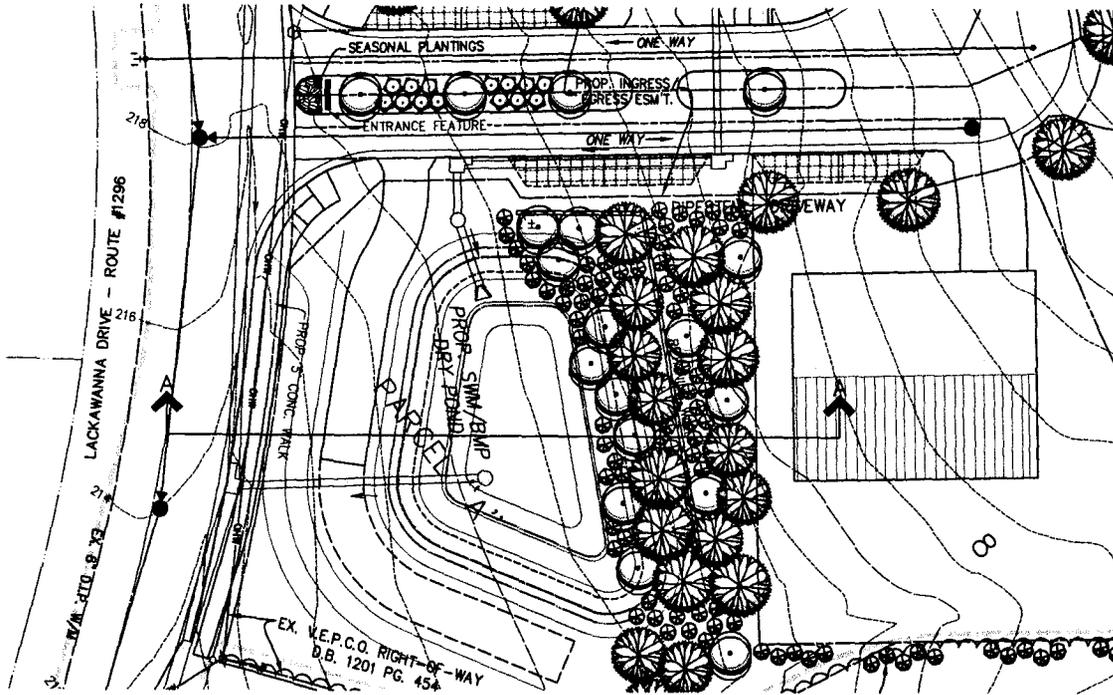
SCALE: 1" = 30'

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09-003-203

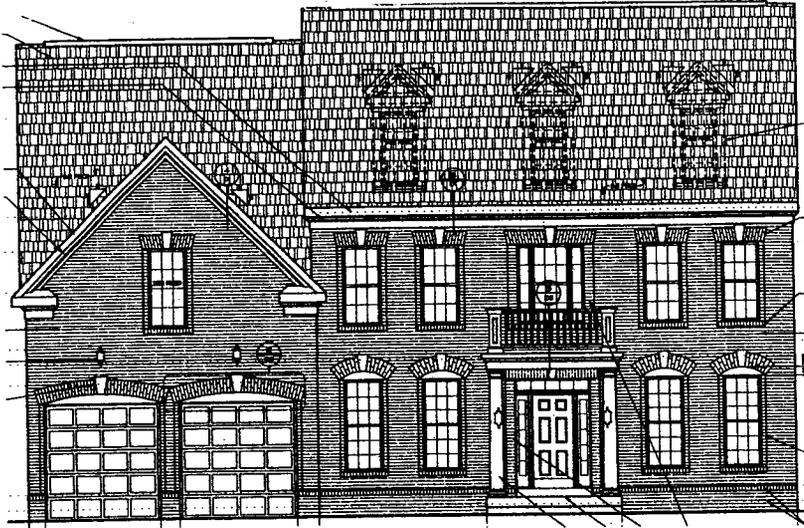
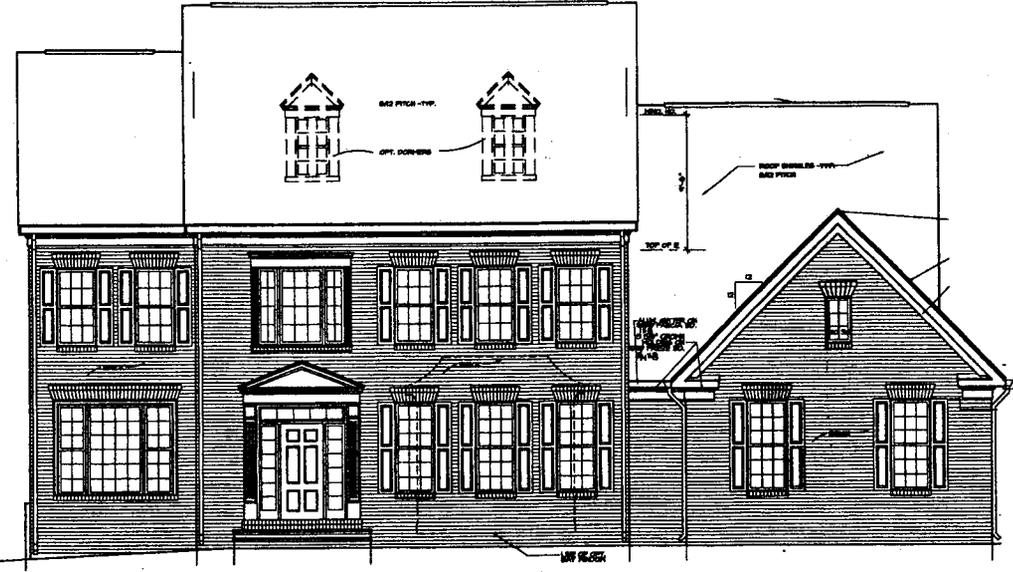
03/27/07

RZ 2006-LE-026



SECTION A-A
SCALE: 1" = 10'

<p>SEAL OF THE CITY OF FARMINGTON, VIRGINIA JOHN A. GIBSON Mayor</p>	
<p>CROSS-SECTION LACKAWANNA DRIVE LEE DISTRICT FARMINGTON COUNTY, VIRGINIA RZ 2008-LE-026</p>	
<p>Charles P. Johnson & Associates, Inc. LANDSCAPE ARCHITECTS 1000 W. MAIN ST., SUITE 200 FARMINGTON, VIRGINIA 22601 TEL: 540-338-1111 FAX: 540-338-1112 www.cpjva.com</p>	
<p>DATE: FEB. 2007</p>	<p>SCALE: 1" = 10'</p>
<p>SHEET 4</p>	<p>OF 8</p>
<p>PROJECT: 2008-004</p>	



ARCHITECTURAL ELEVATIONS

LACKAWANNA DRIVE

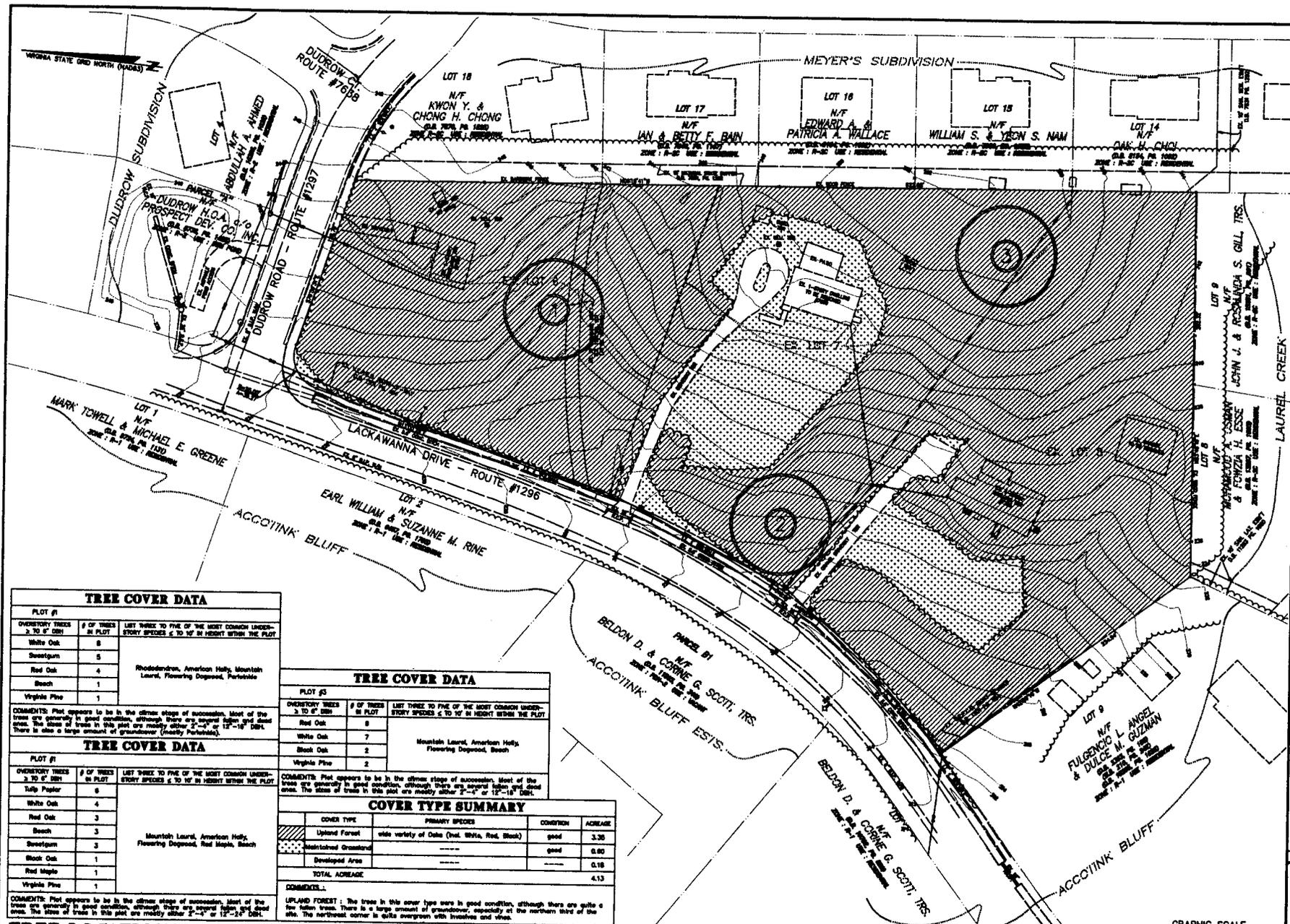
LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA



DATE	NO.	DESCRIPTION
5/8/07	5	REVISED
5/8/07	8	REVISED

REVISION: PRIOR TO APPROVAL
 Charles P. Johnson & Associates, Inc.
 1000 N. 19th St., Suite 200
 Arlington, VA 22209
 (703) 241-1111
CPJ
 Architects

RZ 2006-LE-026



TREE COVER DATA

OVERSTORY TREES 3 TO 6" DBH	# OF TREES IN PLOT	LIST THREE TO FIVE OF THE MOST COMMON UNDERSTORY SPECIES < 10' IN HEIGHT WITHIN THE PLOT
White Oak	8	Rhoisodendron, American Holly, Mountain Laurel, Flowering Dogwood, Parrotalia
Sweetgum	5	
Red Oak	4	
Beach	1	
Virginia Pine	1	

COMMENTS: Plot appears to be in the climax stage of succession. Most of the trees are generally in good condition, although there are several fallen and dead ones. The sizes of trees in this plot are mostly either 2"-4" or 12"-18" DBH. There is also a large amount of grasses/forbs (mostly Parrotalia).

TREE COVER DATA

OVERSTORY TREES 3 TO 6" DBH	# OF TREES IN PLOT	LIST THREE TO FIVE OF THE MOST COMMON UNDERSTORY SPECIES < 10' IN HEIGHT WITHIN THE PLOT
Tulip Poplar	6	Mountain Laurel, American Holly, Flowering Dogwood, Red Maple, Beach
White Oak	4	
Red Oak	3	
Beach	3	
Sweetgum	3	
Black Oak	1	
Red Maple	1	
Virginia Pine	1	

COMMENTS: Plot appears to be in the climax stage of succession. Most of the trees are generally in good condition, although there are quite a few fallen trees. There is a large amount of grasses/forbs, especially at the northern edge of the site. The sizes of trees in this plot are mostly either 2"-4" or 12"-18" DBH.

TREE COVER DATA

OVERSTORY TREES 3 TO 6" DBH	# OF TREES IN PLOT	LIST THREE TO FIVE OF THE MOST COMMON UNDERSTORY SPECIES < 10' IN HEIGHT WITHIN THE PLOT
Red Oak	8	Mountain Laurel, American Holly, Flowering Dogwood, Beach
White Oak	7	
Black Oak	2	
Virginia Pine	2	

COMMENTS: Plot appears to be in the climax stage of succession. Most of the trees are generally in good condition, although there are several fallen and dead ones. The sizes of trees in this plot are mostly either 2"-4" or 12"-18" DBH.

COVER TYPE SUMMARY

COVER TYPE	PRIMARY SPECIES	CONDITION	ACREAGE
Upland Forest	wide variety of Oaks (Red, White, Red, Black)	good	3.30
Maintained Grassland	-----	good	0.60
Developed Area	-----	-----	0.18
TOTAL ACREAGE			4.08

UPLAND FOREST: The trees in this cover type were in good condition, although there are quite a few fallen trees. There is a large amount of grasses/forbs, especially at the northern edge of the site. The northeast corner is quite overgrown with invasives and vines.

TREE LOCATIONS ARE APPROXIMATE AND HAVE NOT BEEN FIELD-VERIFIED



EXISTING VEGETATION MAP

LACKAWANNA DRIVE

LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

CPJ

Charles P. Johnson & Associates, Inc.
PLANNERS ENGINEERS LANDSCAPE ARCHITECTS SURVEYORS
10000 WOODBURN ROAD, SUITE 200, FARMERSVILLE, VIRGINIA 22031
TEL: 703-790-1100 FAX: 703-790-1101

DATE: 10/20/06

PROJECT: 06-000-008

SHEET 6 OF 8

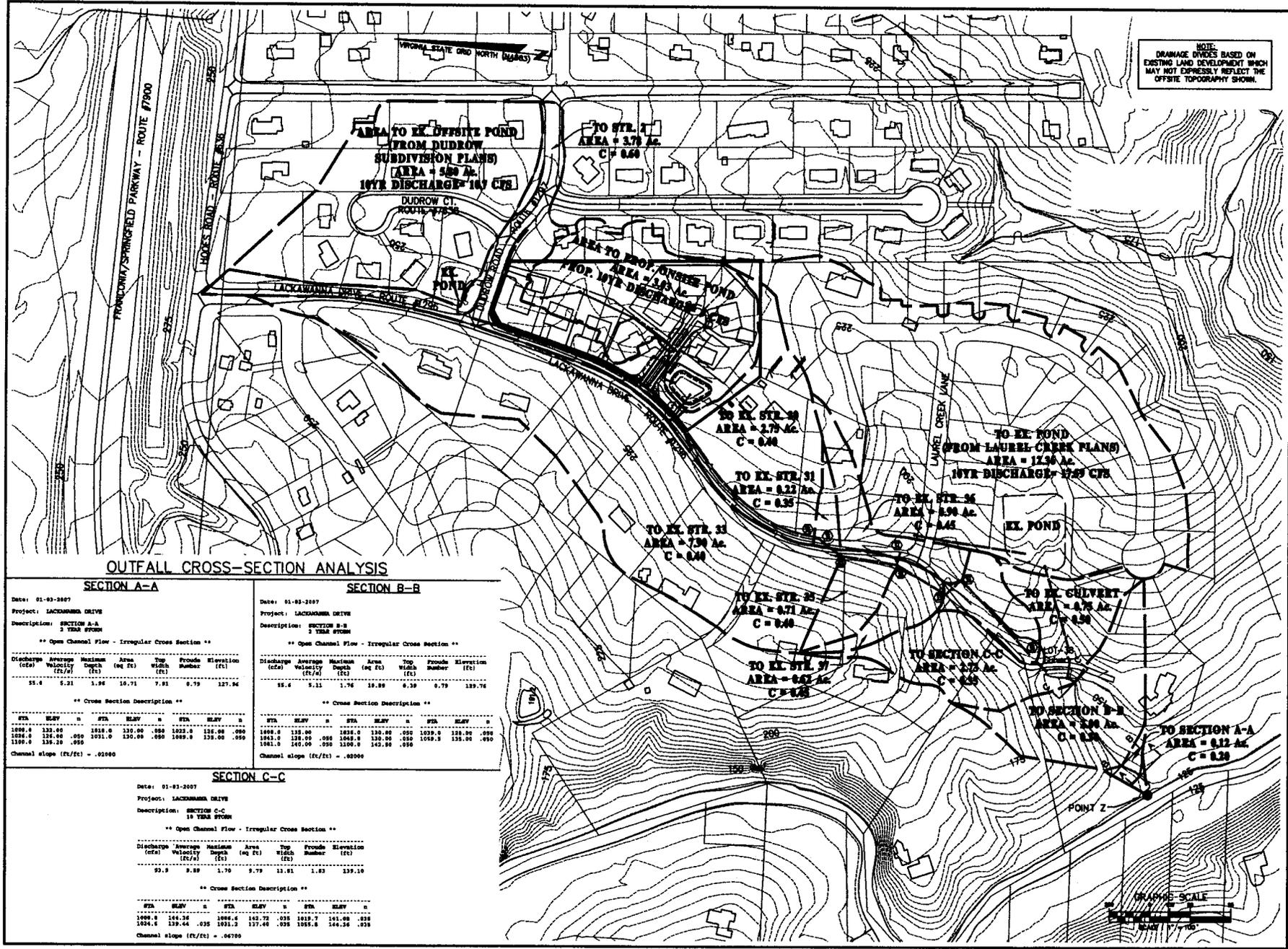
FILE NO: 06-500-008

DATE: 10/20/06

SCALE: 1" = 30'

RZ 2006-LE-028

NOTE:
DRAINAGE DIVIDES BASED ON
EXISTING LAND DEVELOPMENT WHICH
MAY NOT EXPRESSLY REFLECT THE
OFFSITE TOPOGRAPHY SHOWN.



OUTFALL CROSS-SECTION ANALYSIS

SECTION A-A

Date: 01-03-2007
Project: LACKAWANNA DRIVE
Description: SECTION A-A
2 YEAR STORM
** Open Channel Flow - Irregular Cross Section **

Discharge (cfs)	Average Velocity (ft/s)	Maximum Depth (ft)	Area (sq ft)	Top of Floods Elevation (ft)	Floods Number	Elevation (ft)
55.8	5.21	1.96	10.71	7.81	0.79	127.86

** Cross Section Description **

STN.	EL. (ft)	W.	STN.	EL. (ft)	W.	STN.	EL. (ft)	W.
1000.0	132.00	.000	1010.0	130.00	.000	1020.0	128.00	.000
1008.0	134.00	.050	1011.0	130.00	.050	1019.0	130.00	.050
1000.0	136.20	.050						

Channel slope (ft/ft) = .02900

SECTION B-B

Date: 01-03-2007
Project: LACKAWANNA DRIVE
Description: SECTION B-B
2 YEAR STORM
** Open Channel Flow - Irregular Cross Section **

Discharge (cfs)	Average Velocity (ft/s)	Maximum Depth (ft)	Area (sq ft)	Top of Floods Elevation (ft)	Floods Number	Elevation (ft)
55.8	5.11	1.76	10.89	6.39	0.79	128.78

** Cross Section Description **

STN.	EL. (ft)	W.	STN.	EL. (ft)	W.	STN.	EL. (ft)	W.
1000.0	138.00	.000	1010.0	130.00	.000	1020.0	128.00	.000
1003.0	138.00	.050	1008.0	130.00	.050	1013.0	130.00	.050
1001.0	140.00	.050	1010.0	130.00	.050	1015.0	130.00	.050

Channel slope (ft/ft) = .02900

SECTION C-C

Date: 01-03-2007
Project: LACKAWANNA DRIVE
Description: SECTION C-C
10 YEAR STORM
** Open Channel Flow - Irregular Cross Section **

Discharge (cfs)	Average Velocity (ft/s)	Maximum Depth (ft)	Area (sq ft)	Top of Floods Elevation (ft)	Floods Number	Elevation (ft)
93.0	9.89	1.70	9.79	11.93	1.83	139.10

** Cross Section Description **

STN.	EL. (ft)	W.	STN.	EL. (ft)	W.	STN.	EL. (ft)	W.
1000.0	144.00	.000	1010.0	137.00	.000	1020.0	141.00	.000
1004.0	139.44	.035	1013.0	137.00	.035	1018.0	141.00	.035

Channel slope (ft/ft) = .04700

Charles P. Johnson & Associates, Inc.
Professional Engineer
1000 N. 10th Street, Suite 200
Farmingdale, NY 11735
Tel: 631-253-1100
Fax: 631-253-1101

CPJ
Associates

OFFSITE DRAINAGE DIVIDE MAP &
OFFSITE CROSS-SECTION ANALYSIS

LACKAWANNA DRIVE

LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2006-LE-026

DATE: 01-03-2007
PROJECT: LACKAWANNA DRIVE
SHEET: 02 OF 02

STORMWATER MANAGEMENT AND BMP NARRATIVE

The Site consists of approximately 4.13 acres on which eight single-family detached lots are proposed, along with the related private street and utilities. The Site is mostly wooded with mature trees. The slopes vary, and range from 5% to 30%. There are three single-family dwellings and driveways on the property.

The major portion of the site (approximately 3.843 acres) sheet flows from east to west into an existing roadside concrete ditch along Lackawanna Drive. And a small portion of the site (approximately 0.29 acres) sheet flows to the east towards Lot 9.

PRE-DEVELOPMENT FLOWS:

- A1: AREA= 3.843 Ac.; C=0.35
 $Q_2 = 0.29 \times 3.843 \times 5.45 = 7.33 \text{ C.F.S.}$
 $Q_3 = 0.35 \times 3.843 \times 7.27 = 6.78 \text{ C.F.S.}$
- A2: AREA= 0.291 Ac.; C=0.20
 $Q_4 = 0.20 \times 0.291 \times 5.45 = 0.32 \text{ C.F.S.}$
 $Q_5 = 0.20 \times 0.291 \times 7.27 = 0.42 \text{ C.F.S.}$

After the development, the Site will maintain the same drainage pattern. The area that flows onto adjacent Lot 9 will be reduced to 0.1 acre (see this sheet for computations). Most of the Site's developed runoff is to be collected in a closed storm sewer system and taken to a proposed onsite dry BMP/STW facility at the southeast corner of the property. Approximately 3.03 acres of developed onsite area and 0.54 acre of the offsite area are to be captured by the pond. Approximately 1.1 acre of onsite area will be uncontrolled. The pond will then discharge into a closed storm sewer system and then into an existing concrete ditch along Lackawanna Drive.

POST-DEVELOPMENT FLOWS:

- A1: AREA= 1.0 Ac.; C=0.42
 $Q_6 = 1.0 \times 0.42 \times 5.45 = 2.29 \text{ C.F.S.}$
 $Q_7 = 1.0 \times 0.42 \times 7.27 = 3.05 \text{ C.F.S.}$
- A2: AREA= 0.10 Ac.; C=0.20
 $Q_8 = 0.10 \times 0.20 \times 5.45 = 0.11 \text{ C.F.S.}$
 $Q_9 = 0.10 \times 0.20 \times 7.27 = 0.15 \text{ C.F.S.}$
- A3 (ON SITE TO POND): AREA= 3.03 Ac.; C=0.40
 $Q_{10} = 3.03 \times 0.40 \times 5.45 = 6.61 \text{ C.F.S.}$
 $Q_{11} = 3.03 \times 0.40 \times 7.27 = 8.81 \text{ C.F.S.}$

THE DEVELOPMENT OF THE SITE WILL RESULT IN REDUCED FLOW OFFSITE FROM A1 AND A2, AS WELL SHEET FLOW TO THE PROPOSED CLOSED CONDUIT STORM SEWER SYSTEM WHICH IS PART OF THE OUTFALL FROM THE ONSITE POND. A3 WILL DRAIN TO THE PROPOSED ONSITE SWM/BMP POND.

Per PFM 6-020.4, detention method has been used to provide proportional improvement and no adverse impact to the downstream drainage system. Therefore, this subject pond will reduce the post development peak flows from the site for the 2-year and 10-year storms below the relative peak flows from the site in a "good foreward" condition. SCS hydrology has been used to route the pond. Additionally, the pond will detain the 1-year onsite storm for a minimum of 24 hours. This will satisfy the PFM adequate outfall requirements.

There is an existing dry detention pond located in Dudrow Subdivision just upstream of the subject site. This existing offsite pond will drain into a proposed storm sewer system running along the east side of Lackawanna Drive. The outflow from this offsite existing pond, 10.27 cfs, added to the total overland flow to the storm sewer system, approximately 16.49 cfs and the 10-year discharge from the proposed onsite pond, 9 cfs, at Structure #2 combine to create a maximum total flow through the pipe of 26.2 cfs. Based on this, a 30 inch pipe running at a slope of 1.0% has a capacity of 41 cfs and is adequate to handle the flows entering the system and ultimately draining into the existing roadside ditch.

The existing concrete ditch has been analyzed for the 10-year flow of 35.76 cfs. Considering this flow volume, the depth of flow through the existing concrete channel will be approximately 0.94 feet deep, which is less than the channel's overall depth of 1.25 feet. Therefore, the existing concrete ditch is adequate to handle the flow.

The existing concrete ditch drains into an existing offsite closed conduit storm sewer system at existing structure #30, located along the east side of Lackawanna Drive, that has been analyzed for the 10-year storm. The existing storm sewer has been analyzed by using Manning's Equation to find the pipe capacity and comparing this capacity to the approximate flows entering the existing storm sewer system. As demonstrated in the computations shown below, the existing pipe size of the offsite closed conduit storm sewer system are adequate to handle the 10-year flows after the development of the site.

The existing closed storm sewer system described above outfalls into an existing r/ramp lined channel at the end of Lackawanna Drive. The existing r/ramp channel has been analyzed at Section C-C for the 10-year storm (See cross-section computations and map on Sheet 5). The r/ramp channel has adequate capacity to convey the 10-year flow through this section.

The existing r/ramp channel flows to the southwest and discharges into a natural channel. The natural channel outfalls into Accotink Creek where the subject site is then less than 1% of the overall drainage shed. Sections A-A and B-B have been taken through the natural channel and have been analyzed for the 2 year storm. See outfall analysis and map on Sheet 5.

The subject site area of Point Z is less than 1.0% of the total watershed drainage to Accotink Creek. The existing outfall has been analyzed up to Point Z (see Sheet 5 for outfall map) to satisfy zoning requirements.

STRUCTURE FROM	TO	PIPE SIZE (in)	PIPE SLOPE (%)	PIPE CAPACITY (C.F.S.)	APPROXIMATE FLOW THRU PIPE (C.F.S.)
EX-20	EX-21	24"	15.32	121.00	44.19
EX-21	EX-22	24"	7.26	61.00	44.75
EX-22	EX-23	30"	5.33	95.00	63.45
EX-23	EX-24	30"	7.15	114.00	75.13
EX-24	EX-25	36"	2.54	89.00	67.80
EX-25	EX-26	36"	2.92	70.00	60.13

NOTE: ALL FLOWS ARE APPROXIMATE. PIPE SLOPES TAKEN FROM FFX CO LAUREL CREEK STORM DRAINAGE IMPROVEMENTS PLAN, LAND DESIGN CONSULTANTS AS-BUILT PLANS.

STORMWATER MANAGEMENT AND BMP SUMMARY

Stormwater Management is provided via an onsite dry pond. The subject pond will reduce the post development peak flows from the site and offsite for the 2-year and 10-year storms below the relative peak flows from the site in a "good foreward" condition. Additionally, the pond will detain the 1-year onsite storm for a minimum of 24-hours.

- Total Site Area = 4.133 acres
- Offsite Area to Pond = 3.03 acres
- Offsite Area to Pond = 0.543 acres
- Onsite Uncontrolled Area = 1.10 acres
- 2 Year Reduction = 20%
- 2 Year Allowable Release Rate = 2.7 cfs
- 2 Year Routing = 0.5 cfs
- 2 Year Volume = 12,200 cf
- 10 Year Reduction = 5%
- 10 Year Allowable Release Rate = 10.0 cfs
- 10 Year Routing = 9 cfs
- 10 Year Volume = 17,700 cf

BMPs will be provided via this dry detention pond, and onsite qualified undisturbed open space. The total phosphorus removal for the site is approximately 40.25%, which is greater than the required 40%. Therefore, the BMP requirements have been satisfied.

BMP COMPUTATIONS

Part 1. List all of the Subareas and 'C' Factors used in the BMP Computations

Subarea Designation and Description	'C' Factor (1)	Area (2)	Product (3)
A1 - Onsite to Pond	0.42	1.0	0.42
A2 - Onsite to Onsite Pond	0.20	0.291	0.058
A3 - Onsite to Pond	0.40	3.03	1.212
A4 - Onsite to Pond	0.40	0.291	0.116
A5 - Onsite to Pond	0.40	0.291	0.116

Part 2. Compute the Weighted Average 'C' Factor for the Site

(a) Area of the Site	(b) Weighted Average 'C' Factor	(c) Product
A1 - Onsite to Pond	0.42	0.42
A2 - Onsite to Onsite Pond	0.20	0.058
A3 - Onsite to Pond	0.40	1.212
A4 - Onsite to Pond	0.40	0.116
A5 - Onsite to Pond	0.40	0.116
Total	0.40	2.93

Part 3. Compute the Total Phosphorus Removal for the Site

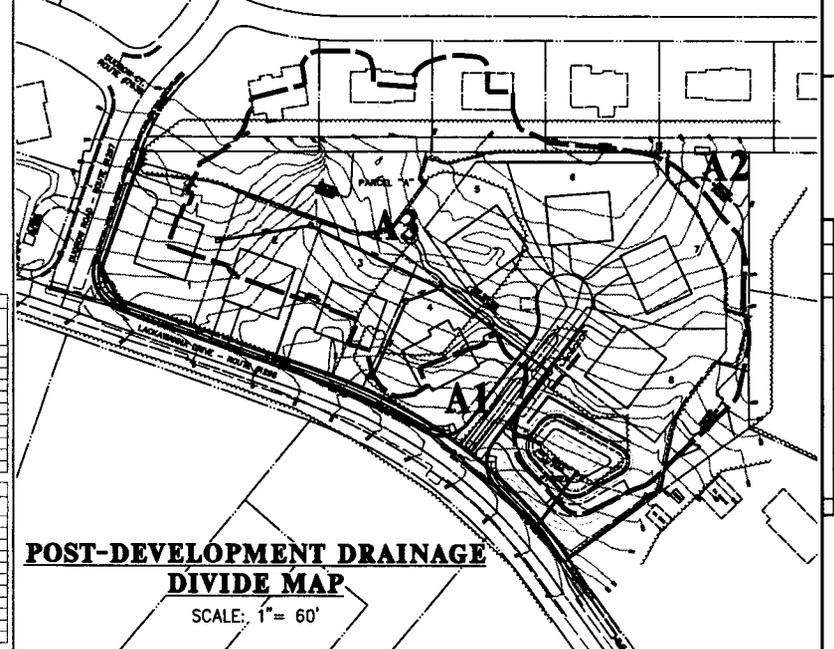
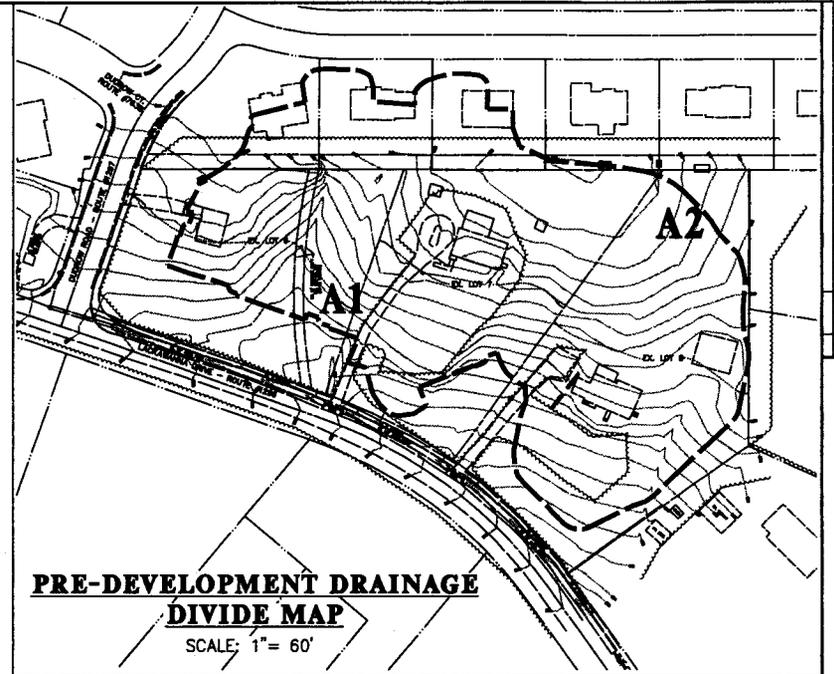
Subarea Designation	BMP Type	Removal Eff. (%) (1)	Area (2)	'C' Factor Ratio (3)	Product Ratio (4)	Product (5)
A1 - Onsite to Pond	Dry Pond	40	1.0	0.42	0.168	0.067
A2 - Onsite to Onsite Pond	Dry Pond	40	0.291	0.20	0.058	0.023
A3 - Onsite to Pond	Dry Pond	40	3.03	0.40	1.212	0.485
A4 - Onsite to Pond	Dry Pond	40	0.291	0.40	0.116	0.046
A5 - Onsite to Pond	Dry Pond	40	0.291	0.40	0.116	0.046
Total						1.067

(a) Total = 40.25

BMP STORAGE = 2,800 CF

10-YR OUTFLOW FROM EX-POUND (C.F.S.) DUDROW SUBDIVISION	10-YR OUTFLOW FROM PROPOSED POND (C.F.S.) LACKAWANNA DRIVE	10-YR OUTFLOW FROM EX-POUND (C.F.S.) LAUREL CREEK PLANS	OVERLAND FLOW AREA (SQ. FT.)	C	I	TOTAL OVERLAND FLOW (C.F.S.)	TOTAL 10-YR FLOW (C.F.S.)
TO PROP. STW. STR #2	7.7	0.0	3.78	0.60	7.27	14.49	36.19
TO EX. STW. STR #30	0.0	0.0	3.75	0.40	7.27	8.00	44.19
TO EX. STW. STR #31	0.0	0.0	0.22	0.35	7.27	0.56	44.75
TO EX. STW. STR #32	0.0	0.0	7.90	0.40	5.92	18.71	63.45
TO EX. STW. STR #33	0.0	0.0	7.71	0.40	5.92	18.68	63.15
TO EX. STW. STR #37	0.0	0.0	1.00	0.45	5.92	2.46	67.30
TO EX. STW. STR #38	0.0	0.0	0.50	0.45	5.92	1.33	69.13
TO EX. CULVERT (LOT 30)	0.0	0.0	0.77	0.50	5.92	2.26	71.61
TO SECTION C-C	17.58	0.0	2.73	0.35	5.10	4.87	82.87
TO SECTION B-B	0.0	0.0	2.00	0.38	5.10	3.06	86.93
TO SECTION A-A	0.0	0.0	0.12	0.28	5.10	0.12	87.05

2-YR OUTFLOW FROM EX-POUND (C.F.S.)	2-YR OUTFLOW FROM PROPOSED POND (C.F.S.)	2-YR OUTFLOW FROM EX-POUND (C.F.S.)	OVERLAND FLOW AREA (SQ. FT.)	C	I	TOTAL OVERLAND FLOW (C.F.S.)	TOTAL 2-YR FLOW (C.F.S.)
TO PROP. STW. STR #2	2.5	0.0	3.78	0.60	5.45	12.36	15.36
TO EX. STW. STR #30	0.0	0.0	3.75	0.40	5.45	6.00	24.36
TO EX. STW. STR #31	0.0	0.0	0.22	0.35	5.45	0.42	24.77
TO EX. STW. STR #32	0.0	0.0	7.90	0.40	4.60	14.64	39.31
TO EX. STW. STR #33	0.0	0.0	7.71	0.40	4.60	14.51	40.62
TO EX. STW. STR #37	0.0	0.0	1.00	0.45	4.60	2.07	42.69
TO EX. STW. STR #38	0.0	0.0	0.50	0.45	4.60	1.04	43.72
TO EX. CULVERT (LOT 30)	0.0	0.0	0.77	0.50	4.60	1.77	45.19
TO SECTION C-C	4.11	0.0	2.73	0.35	3.90	3.73	53.33
TO SECTION B-B	0.0	0.0	2.00	0.38	3.90	2.34	55.67
TO SECTION A-A	0.0	0.0	0.12	0.28	3.90	0.09	55.16



REVISION PROGR TO APPROVAL

NO.	DATE	DESCRIPTION

Charles P. Johnson & Associates, Inc.
 PLANNERS ENGINEERS LANDSCAPE ARCHITECTS SURVEYORS
 1000 POWER LINE, SUITE 200, FARMAN, VIRGINIA 22045
 TEL: 703-634-1100 FAX: 703-634-1101

CPJ
 ASSOCIATES

PRELIMINARY OUTFALL ANALYSIS & ONSITE DRAINAGE DIVIDE MAP

LACKAWANNA DRIVE

LEE DISTRICT
 FARRFAX COUNTY, VIRGINIA

REVISION PROGR TO APPROVAL

DATE: 2/27/07

PROJECT NO: 06-005-207

SHEET 7 OF 8

REVISION PROGR TO APPROVAL

DATE: 2/27/07 PROJECT NO: 06-005-207

BACKGROUND

The applicant, Eastwood Properties, Inc., requests to rezone the 4.13 acre subject site from the R-1 District to the PDH-2 District for the development of eight (8) single-family detached dwellings. The original site layout proposed an overall density of 1.94 dwelling units per acre (du/ac) with 22% open space.

On February 7, 2007, the Staff Report for RZ/FDP 2006-LE-026 was published. In this report, staff opined that the proposed site layout did not fulfill the purpose and intent of the P-District standards, which was to provide for a greater level of quality design and amenities than might be provided with a conventional zoning district. Staff believed that the proposed open space was neither usable, accessible nor integrated into the proposed development. In addition, the open space did not protect the best quality trees on site. Staff noted that the applicant proposed to place a cost limitation on the tree bond for the proposed tree save, which raised questions about the applicant's commitment to preserve any trees on site. Additionally, the Department of Public Works and Environmental Services (DPWES) notes that the proposed stormwater (SWM) pond could require that clearing and grading within an off-site parcel. Finally, no architectural elevations were provided for the proposed units. For these reasons, staff does not believe that this application is in conformance with the Residential Development Criteria of the Comprehensive Plan nor does it meet the requirements of the Zoning Ordinance.

On February 28, 2007, the applicant submitted a revised CDP/FDP, as revised through February 28, 2007, which is contained in the front of this staff addendum report. Under this revised CDP/FDP, the applicant has shifted the development to the north in order to provide additional tree save along the southern property line. The proposed shift in clearing and grading has allowed the applicant to increase the proposed amount of open space from 22% to 25%. In addition, this shift has allowed the applicant to relocate the proposed SWM pond further north such that no clearing and grading will be required on the off-site parcel [Tax Map Number 90-3 ((3)) 9]. In addition, the applicant has provided and proffered proposed architecture for the units. Finally, the applicant has revised the proffers to eliminate the previously-proposed cost limitation on the tree bond for the proposed tree save.

On March 14, 2006, a staff addendum was published. In this addendum, staff noted that while the revised CDP/FDP and proffers had addressed several of staff's concerns (including the previously-proposed cost limitation on the tree bond, the possibility that the proposed SWM pond could require that clearing and grading within an off-site parcel, and the lack of architectural elevations), the changes had not resolved staff's fundamental objection to the application. Namely, staff did not believe that the proposed site layout provided open space areas which are accessible and integrated into the proposed development. While the adjusted limits of clearing and grading helped to preserve some of the trees in the southern portion of the site (where Urban Forest Management believes the highest quality trees are located), staff still believed that the best option would be to reconfigure the site layout such that usable open space was situated in this portion of the site. Not only would a relocation of the open space preserve the best trees on the site, but it would also make the open space more accessible to the rest of the community. For these reasons, staff continued to recommend denial of the proposed application.

DISCUSSION

On March 16, 2007, the applicant submitted a new CDP/FDP, as revised through March 14, 2007, which is contained in the front of this staff addendum report. Under this revised CDP/FDP, the applicant has shifted the development further to the north in order to provide additional tree save along the southern property line. The applicant also submitted revised proffers dated March 16, 2007 (contained as Attachment 1). The revisions to the proffers included only two changes. Proffer 32 was revised by the applicant to clarify where and how certain existing structures would be removed and to commit to reforestation of those particular areas. Proffer 36 was revised by the applicant to double the proposed contribution to the Fairfax County Park Authority (FCPA) from \$5,035 to \$10,070.

CONCLUSIONS AND RECOMMENDATIONS

Staff Conclusions

Staff believes that the subject application is not in conformance with the Residential Development Criteria of the Comprehensive Plan nor does it meet the requirements of the Zoning Ordinance.

Recommendation

Staff recommends that RZ 2006-LE-026 and the Conceptual Development Plan be denied; however, if it is the intent of the Board of Supervisors to approve RZ 2006-LE-026, staff recommends that the approval be subject to the draft proffers contained in Attachment 1 of this staff report addendum.

Staff recommends denial of FDP 2006-LE-026.

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

The approval of this rezoning 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.

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

ATTACHMENTS

1. Proffers (blackline version showing changes from the February 20, 2007 proffers)

Proffers**Eastwood Properties, Lackawanna Drive****RZ 2006-LE-026****February 20, March 16, 2007**

Pursuant to Section 15.2-2303(A), Code of Virginia, 1950 as amended, the undersigned Applicant and Owners, in this rezoning proffer that the development of the parcel under consideration and shown on the Fairfax County Tax Map as Tax Map Reference 90-3((3))6, 7, 8 (hereinafter referred to as the "Property") will be in accordance with the following conditions (the "Proffered Conditions"), if and only if, said rezoning request for the PDH-2 Zoning District is granted. In the event said rezoning request is denied, these Proffered Conditions shall be null and void. The Owners and Applicant, for themselves, their successors and assigns hereby agree that these Proffered Conditions shall be binding on the future development of the Property unless modified, waived or rescinded in the future by the Board of Supervisors of Fairfax County, Virginia, in accordance with applicable County and State statutory procedures. The Proffered Conditions are:

I. GENERAL

1. **Substantial Conformance.** Subject to the provisions of Article 16 of the Fairfax County Zoning Ordinance (hereinafter referred to as the "Zoning Ordinance"), development of the Property shall be in substantial conformance with the Conceptual Development Plan/Final Development Plan (CDP/FDP), prepared by Charles P. Johnson & Associates, Inc., consisting of 5 sheets, dated June 9, 2006, revised through February 20,28, 2007.

2. Maximum Lot Yield. The development shall consist of a maximum of 8 single family detached units. Except as may be further qualified by these proffered conditions, minor modifications to the building envelopes including house location and sizes may be permitted in accordance with Section 16-403 of the Zoning Ordinance.

3. Establishment of HOA. Prior to subdivision plat approval, the Applicant shall demonstrate that the Property will be governed by a Homeowners Association (HOA) and be subject to a Declaration of Covenants, Conditions and Restrictions consistent with the requirements of Article 2 of the Zoning Ordinance.

4. Dedication to HOA. In conjunction with the appropriate subdivision plan review process, open space, common areas, pipestem drive, and amenities not otherwise conveyed or dedicated to the County shall be dedicated to the HOA and maintained by the same.

5. Disclosure. Prior to entering into a contract of sale, prospective purchasers shall be notified in writing by the Applicants of the maintenance responsibility for the pipestem drive, stormwater management facilities, grass-crete pavers, common area landscaping and any other open space amenities, and shall acknowledge receipt of this information in writing. The deeds of conveyance and HOA documents shall expressly contain these disclosures.

6. Garages. A minimum of two side-by-side parking spaces shall be provided within the garage of each new dwelling unit. Any conversion of garages that will preclude the parking of vehicles within the garage is prohibited. A covenant setting forth this restriction shall be recorded among the land records of Fairfax County in a form approved by the County Attorney prior to the sale of any lots and shall run to the benefit of the Board of Supervisors and the HOA and this restriction shall be included in the HOA documents.
7. Energy Conservation. All dwellings on the Property shall meet the thermal guidelines of the CABO Model Energy Program for energy efficient homes, or its equivalent as determined by DPWES for either gas or electric energy systems, as may be applicable.
8. Signs. No temporary signs (including “popsicle” style paper or cardboard signs), which are prohibited by Article 12 of the Zoning Ordinance and Chapter 7 of Title 33.1, and Chapter 8 of Title 46.2 of the Code of Virginia, shall be placed on or offsite by the Applicant or at the Applicant’s direction. The Applicant shall direct its agents and employees involved with the Property to adhere to this proffer.
9. Construction Hours. Construction shall only occur between the hours of 7:00 a.m. until 7:00 p.m. Monday through Friday, 8:00 a.m. until 6:00 p.m. on Saturday and 9:00 a.m. until 6:00 p.m. on Sunday. Construction activities shall not occur on the holidays of Memorial Day, July 4th, Labor Day, Thanksgiving, Christmas, Easter, and New Years Day. The construction hours shall be posted on the property. The allowable hours of

construction as specified in this proffer shall be listed within any contract with future sub-contractors associated with construction on the site.

10. Architecture. The fronts of the dwelling units and the sides of the units on Lots 1, 4 and 8 will be ~~designed~~**constructed** with brick and/or stone materials, exclusive of windows, doors, shutters and trim. Vinyl, hardi-plank or other similar cementitious siding products or a combination of these shall be used on the other sides and backs, exclusive of windows, doors, shutters and trim, although vinyl will only be used where the ultimate spacing between dwelling units will be 15 feet or greater. The retaining walls, as depicted on the CDP/FDP, shall be faced with masonry materials and shall be earthtone in color.
11. Lot Typical. The minimum front, side and rear yards shall be consistent with that shown on the typical lot layout on the CDP/FDP. Decks, bays, windows, patios, chimneys, areaways, mechanical equipment and other similar appurtenances may encroach into minimum yards as established on the "lot typical" generally described on the CDP/FDP, as permitted by Section 2-412 and ~~or~~ Article 10 of the Zoning Ordinance, as applicable.
12. Construction Staging. There shall be no staging or parking of construction vehicles, construction equipment, or construction workers vehicles on Lackawanna Drive or Dudrow Road associated with the construction of the proposed houses.

II. TRANSPORTATION

13. Right-of-Way Dedication. At the time of recordation of the first record plat or upon demand, whichever occurs first, right-of-way to 27.5 feet from the centerline of Lackawanna Drive and Dudrow Road, as shown on the CDP/FDP, shall be dedicated and conveyed to the Board of Supervisors in fee simple with density reserved subject to the provisions of Paragraph 4 of Section 2-308 of the Zoning Ordinance.
14. Pipestem Drive. The pipestem drive shall be constructed by the Applicant with materials and to the pavement thickness standard of private streets as set forth in the Public Facilities Manual (PFM), subject to DPWES approval. Prior to entering into a contract of sale, prospective purchasers shall be notified of the existence of the pipestem drive and the associated maintenance obligations and such information shall be included in the HOA documents.
15. Length of Driveways. The driveway on each residential lot shall have a minimum of 18 feet of pavement available for parking without infringing into the right-of-way or sidewalk area and shall be a minimum of 18 feet in width.
16. Frontage Improvements. Prior to the issuance of the first Residential Use Permit, the Applicant shall construct improvements along the property's entire frontage on Lackawanna Drive to 18 feet from the centerline to face of curb, as approved by DPWES. A 5 foot wide sidewalk will also be provided as part of the road improvements on Lackawanna Drive, as approved by DPWES.

17. Public Access Easements. A public access easement in a form approved by the County Attorney shall be placed on the pipestem drive within the approved development.

III. HOUSING TRUST FUND

18. Housing Trust Fund. At the time of the first building permit issuance, the Applicant shall contribute a sum equal to one-half of one percent (0.5%) of the projected sales price for each dwelling unit on the Property to the Fairfax County Housing Trust Fund, as determined by the Department of Housing and Community Development in consultation with the Applicant to assist the County in its goal to provide affordable dwellings. The projected sales price shall be based upon the aggregate sales price of all of the units, as if those units were sold at the time of the issuance of the first building permit and is estimated through comparable sales of similar type units.

IV. ENVIRONMENTAL

19. Stormwater Management Facilities and Best Management Practices Techniques. Stormwater Management and Best Management Practices (BMP's) shall be provided, as approved by DPWES, in the area shown on the CDP/FDP. The area surrounding the detention facility shall be landscaped to the maximum extent possible, as determined by the Urban Forest Management, in accordance with the planting policies of the Board of

Supervisors and as generally shown on Sheet 2 of 5 of the CDP/FDP. Specifically, water-tolerant grasses will be utilized in the base of the pond.

20. Limits of Clearing and Grading. The Applicant shall conform strictly to the limits of clearing and grading as shown on the CDP/FDP 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 outside of the limits of clearing and grading as shown on the CDP/FDP, they shall be located in the least disrupting manner possible as determined by Urban Forest Management, DPWES. A replanting plan shall be developed and implemented, subject to approval by the Urban Forest Management, DPWES, for any areas outside the limits of clearing and grading that must be disturbed.

21. Tree Preservation. The applicant shall submit a tree preservation plan as part of first and all subsequent subdivision plan submissions. The preservation plan shall be prepared by a professional with experience in the preparation of tree preservation plans, such as a certified arborist or landscape architect, and reviewed and approved by the Urban Forest Management (UFM), DPWES. The tree preservation plan shall consist of a tree survey that includes the location, species, size, crown spread and condition rating percentage of all trees 10 inches in diameter or greater and located within 20 feet to either side of the limits of clearing and grading shown on the CDP/FDP for the entire site. The tree survey shall also include areas of clearing and grading not shown on the CDP/FDP resulting from engineering requirements, such as off-site clearing and grading for utilities and stormwater outfall. The condition analysis ratings shall be prepared using methods

outlined in the latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture. Specific tree preservation activities that will maximize the survivability of trees identified to be preserved, such as: crown pruning, root pruning, soil treatments, mulching, fertilization, and others as necessary, shall be included in the plan.

22. Tree Value Determination. The Applicant shall retain a professional with experience in plant appraisal, such as a certified arborist or landscape architect, to determine the replacement value of all trees 10 inches (10”) in diameter or greater and located within twenty (20) feet of the outer edge of the limits of clearing and grading (i.e. outside the limits of clearing and grading) as shown on the CDP/FDP which are identified to be preserved on the Tree Preservation Plan. These trees and their value shall be identified on the Tree Preservation Plan at the time of the first submission of the Subdivision Plan. The replacement value shall take into consideration the age, size and condition of these trees and shall be determined by the “Trunk Formula Method” contained in the latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture, subject to review and approval by UFM, DPWES.

23. Tree Bonds. In order to provide a remedy for any unintended disruption to trees required to be preserved under these proffers, at the time of subdivision plan approval, the Applicant shall both post a cash bond and a letter of credit or similar corporate surety bond payable to the County of Fairfax to ensure preservation and/or replacement of the trees for which a tree value has been determined in accordance with the previous proffer

(hereinafter the “bonded trees”) that die or are dying due solely to unauthorized construction activities. The Applicant shall have no obligation for trees that die or are dying for reasons unrelated to unauthorized construction activities. The letter of credit or corporate surety bond shall be equal to fifty percent (50%) of the replacement value of the bonded trees. The cash bond shall consist of thirty three percent (33%) of the amount of the letter of credit or corporate surety bond.

During the time period in which the Tree Bond is required to be held, should unauthorized construction activity cause any bonded trees to die, or be removed, the Applicant shall replace such trees at its expense. As stated above, the Applicant shall have no obligation to replace trees that die or are dying for causes unrelated to unauthorized activities. The replacement trees shall be of equivalent size, species, and/or canopy cover as approved by UFM and shall incorporate native plant species. In addition to this replacement obligation, the Applicant shall also make a payment equal to the value of any Bonded Tree that is dead or dying or improperly removed due to unauthorized activity. This payment shall be determined based on the “Trunk Formula Method” and paid to a fund established by the County for furtherance of tree preservation objectives. Upon release of the site performance bond, any amount remaining in the tree bonds required by this proffer shall be returned/released to the Applicant. At the time of approval of the final RUP, the Applicant may request a release of any monies remaining in the cash bond and a reduction in the letter of credit or corporate surety bond to an amount up to twenty percent (20%) of the total amounts originally committed provided they are in good standing with the tree proffer commitments.

Any funds remaining in the letter of credit or cash bond will be released concurrently with the site performance bond release, or sooner, if approved by UFM.

24. Protection of Existing Understory Vegetation and Soil Conditions in Tree Preservation Areas. All tree preservation-related work occurring in or adjacent to tree preservation areas shall be accomplished in a manner that minimizes damage to vegetation to be preserved in the lower canopy environment, and to the existing top soil and leaf litter layers that provide nourishment and protection to that vegetation. Any removal of any vegetation or soil disturbance in tree preservation areas including the removal of plant species that may be perceived as noxious or invasive, such as poison ivy, greenbrier, multi-floral rose, etc. shall be subject to the review and approval of UFM.
25. Use of Equipment. Except as qualified herein, the use of motorized equipment in tree preservation areas will be limited to hand-operated equipment such as chainsaws, wheel barrows, rake and shovels. Any work that requires the use of motorized equipment, such as tree transplanting spades, skid loaders, tractors, trucks, stump-grinders, etc., or any accessory or attachment connected to this type of equipment shall not occur unless pre-approved by UFM.
26. Root Pruning and Mulching. The Applicant shall 1) root prune, 2) mulch, and 3) provide tree protection fencing in the form of four foot (4') high, fourteen (14) gauge welded wire attached to six foot (6') steel posts driven eighteen inches (18") into the ground and placed no further than ten feet (10') apart, or other forms of tree protection fencing

approved by UFM, DPWES for all tree preservation relevant areas. All treatments shall be clearly identified, labeled, and detailed on the erosion and sediment control sheets and demolition plan sheets of the subdivision plan submission. The details for these treatments shall be reviewed and approved by UFM, accomplished in a manner that protects affected and adjacent vegetation to be preserved, and may include, but not be limited to the following:

- Root pruning shall be done with a trencher, vibratory plow to a depth of eighteen inches (18").
- Root pruning shall take place prior to any clearing and grading, or demolition of structures.
- Root pruning shall be conducted with the supervision of a certified arborist.
- Tree protection fence 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 Erosion and Sedimentation activities are complete, mulch shall be applied at a depth of four inches (4") extending ten feet (10') inside the undisturbed area without the use of motorized equipment.
- A UFM representative shall be informed when all root pruning and tree protection fence installation is complete.

27. Tree Preservation Walk-Through. The Applicant shall retain the services of a certified arborist or landscape architect, and shall have the limits of clearing and grading marked with a continuous line of flagging prior to the pre-construction meeting. Before or during the pre-construction meeting, the Applicant's certified arborist or landscape architect shall walk the limits of clearing and grading with a UFM representative and a representative from the Lee District Land Use Committee to determine where adjustments to the clearing limits can be made to increase the area of tree preservation; increase the survivability of trees at the edge of the limits of clearing and grading; facilitate the removal of trees adjacent to the limits of clearing and grading; facilitate tree preservation activities such as root pruning or fencing; or

facilitate the installation of erosion and sediment control devices. Such adjustment shall be implemented. Trees that are identified specifically by UFM in writing as dead or dying may be removed as part of the clearing operation, but it is noted that unless a dead or dying tree presents a safety hazard, attempts will be made to retain the tree. The dead or dying tree may be topped in order to be retained if that eliminates the problem of a safety hazard. Any tree that is so designated shall be removed using a chain saw and such removal shall be accomplished in a manner that avoids damage to surrounding trees and associated understory vegetation. If a stump must be removed, this shall be done using a stump grinding machine in a manner causing as little disturbance as possible to the adjacent trees and associated understory vegetation and soil conditions.

28. Tree Protection Fencing. All trees shown to be preserved on the Tree Preservation Plan shall be protected by tree protection fencing, as proffered above. Tree protection fencing shall be installed prior to any clearing and grading activities including the demolition of any existing structures at the limits of clearing and grading as shown on the demolition, and Phase I & II erosion and sediment control sheets, as may be modified during the tree preservation walk through with an UFM representative. All tree protection fencing shall be installed after the tree preservation walk-through meeting but prior to any clearing and grading activities, including the demolition of any existing structures. The installation of all tree protection fence types shall be performed under the supervision of a certified arborist, and accomplished in a manner that does not harm existing vegetation that is to be preserved. Five (5) working days

prior to the commencement of any clearing, grading, or demolition activities, but subsequent to the installation of the tree protection devices including fencing, UFM and Lee District Supervisor staff shall be notified and given the opportunity to inspect the site to assure that all tree protection devices have been correctly installed. If it is determined that the fencing has not been installed correctly, no grading or construction activities shall occur until the fencing is installed correctly, as determined by UFM.

29. Site Monitoring. During any clearing or tree/vegetation structure removal or transplantation of vegetation on the subject site, a representative of the applicant shall be present to monitor the process and ensure that the activities are conducted as proffered and as approved by UFM. The applicant shall retain the services of a certified arborist or landscape architect to monitor all construction work and tree preservation efforts in order to ensure conformance with all tree preservation proffers/conditions, and UFM approvals. The inspection/monitoring schedule shall be described and detailed in the Landscaping and Tree Preservation Plan, and reviewed and approved by UFM, DPWES. The Lee District Supervisor shall be notified of the name and contact information of the Applicant's representative responsible for site monitoring at the tree preservation walk-through meeting.

30. Landscaping. Landscaping shall be consistent with the quality, quantity and general location shown on the Landscape Plan on Sheet 2 of the CDP/FDP. At the time of planting, the minimum caliper for deciduous trees shall be two and one-half (2.5) inches to three (3) inches and the minimum height for evergreen trees shall be seven (7) feet.

Actual types and species of vegetation shall be determined pursuant to more detailed landscape plans approved by Urban Forest Management at the time of subdivision plan approval. Such landscape plans shall provide tree coverage and species diversity consistent with the Public Facilities Manual (PFM) criteria, as determined by Urban Forest Management.

31. Conservation Easement. The area identified on the CDP/FDP as “proposed conservation easement” shall remain as undisturbed, except for areas necessary for installation of utility easements or trails determined necessary by the Director, DPWES. These undisturbed areas shall be subject to a conservation easement running to the benefit of ~~the HOA~~ Fairfax County, in a form approved by the County Attorney. Such easement shall prohibit the removal of trees except those which are diseased, noxious or hazardous or within utility or trail easements and the erection of fences or any other structures. If a tree is dead but does not pose a safety hazard, attempts will be made to retain the tree. The dead or dying tree may be topped in order to be retained if that eliminates the problem of a safety hazard. The homeowner’s association covenants shall contain clear language delineating this area, the restrictions in that area including the prohibition of any structures, fences, etc. and the responsibilities of individual homeowners. This Conservation Easement shall be recorded prior to final bond release.

32. Reforestation. A reforestation plan for that area on the CDP/FDP shown to be reforested shall be submitted concurrently with the first and all subsequent subdivision plan submissions for review and approval by UFM and shall be implemented as approved.

This plan shall be developed and implemented in accordance with the standards specified in Par. (f) of Section 118-3-3 of the Chesapeake Bay Preservation Ordinance and as reviewed and approved by Urban Forest Management, DPWES. The plan shall propose an appropriate selection of species based on existing and proposed site conditions to restore the area to a native forest cover type. The reforestation plan shall include, but not be limited to the following:

- plant list detailing species, sizes and stock type of tree and other vegetation to be planted
- soil treatments and amendments if necessary
- mulching specifications
- methods of installation
- maintenance
- mortality threshold
- monitoring
- replacement schedule

After removal by hand of the existing shed in the northern corner of the site, ~~which shall be removed by hand, the area~~ **within the Conservation Easement, the area shall be reforested as specified in this proffer. After removal of the existing garage in the southern portion of the site, the area within the Conservation Easement** shall be reforested as specified in this proffer. To the greatest extent possible, existing laurel bushes **Mountain Laurel shrubs** on the site within the areas to be graded will be used as reforestation material.

33. **Demolition of Existing Structures.** The demolition of existing features and structures shall be conducted in a manner that does not impact on individual trees and/or groups of trees that are to be preserved as reviewed and approved by Urban Forest Management, DPWES. Methods to preserve existing trees may include, but not be limited to, the use

of super silt fence, welded wire tree protection fence, root pruning, mulching, as approved by the Urban Forest Management.

34. Grass-Crete Paver Maintenance. On or before bond release for the proposed development, and as a condition thereto, the Applicant shall deposit \$3,000 into an escrow account established for the benefit of the HOA for future maintenance, repair and upkeep of the grass-crete pavers utilized in the off-street parking off of the pipestem drive. The HOA documents shall expressly state that the grass-crete pavers shall be maintained as pervious surfaces.

V. Recreation Facilities

35. Recreation Contribution. At the time of subdivision approval, the Applicant shall contribute the sum of \$955.00 per approved residential unit approved for the total number of dwelling units, to the Fairfax County Park Authority or use on recreational facilities in the general vicinity of the subject property, subject, however, to a credit for expenditures on-site for a gazebo, benches, trail and other similar facilities in open space areas depicted on the CDP/FDP.
36. Park Authority Contribution. In addition to Proffer 34 above, the Applicant shall contribute \$~~5,035~~10,070 to the Fairfax County Park Authority prior to the issuance of the first Residential Use Permit for park purposes and/or facilities in the area.

VI. SCHOOLS

37. Prior to the issuance of the first building permit, the Applicant shall contribute \$23,260 to the Board of Supervisors (“Board”) to be utilized for the provision of capital facilities within the Fairfax County schools serving this development.

VII. Successors and Assigns

These proffers shall bind and inure to the benefit of the Applicant and his/her successors and assigns.

VIII. Counterparts

These proffers may be executed in one or more counterparts, each of which when so executed and delivered shall be deemed an original document and all of which taken together shall constitute but one and the same instrument.

TITLE OWNERS AND APPLICANTS SIGNATURES TO FOLLOW ON THE NEXT PAGE:

Clifford F. Lindsay, Trustee for the Joyce F.
Lindsay Revocable Trust
Title Owner of TM 90-3((3))6

Clifford F. Lindsay, Trustee for the Joyce F.
Lindsay Revocable Trust

Joseph A. Gillespie, Trustee
Title Owner of TM 90-3((3))7

Joseph A. Gillespie, Trustee

Nancy J. Valentine, Trustee of the Nancy J.
Valentine Trust

Richard M. Valentine, Trustee of the Nancy J.
Valentine Trust

Title Owners of TM 90-3((3))8

Nancy J. Valentine, Trustee of the Nancy J.
Valentine Trust

Richard M. Valentine, Trustee of the Nancy J.
Valentine Trust