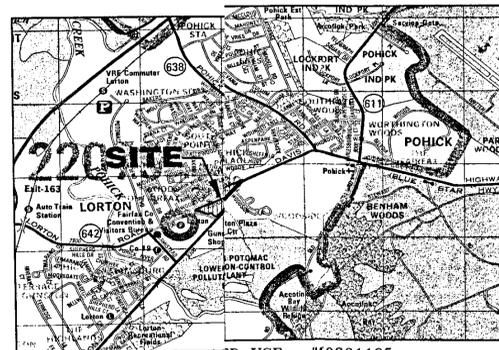


LORTON CORNER

MT. VERNON DISTRICT, FAIRFAX COUNTY, VIRGINIA

GENERALIZED DEVELOPMENT PLAN / SPECIAL EXCEPTION PLAT

REVISED 12-28-2007
 REVISED 02-29-2008
 REVISED 04-16-2008
 REVISED 05-28-2008
 REVISED 06-02-2008
 REVISED 07-30-2008
 REVISED 09-09-2008
 REVISED 10-15-2008



PERMITTED USE: #20801195
VICINITY MAP
 (SCALE: 1"=200')

APPLICANT:
 LORTON CORNER ROAD LLC
 4919 BETHESDA AVENUE
 BETHESDA, MARYLAND 20814

ATTORNEY FOR APPLICANT:
 REED SMITH LLP
 NEW PARK CIVE, SUITE 1400
 3110 FAIRVIEW CHURCH/A 22042
 FALLS CHURCH, VIRGINIA
 CONTACT: (703) 641-44

Application No PCA-1993-V-028-02 Staff S.W.
 APPROVED DEVELOPMENT PLAN
 (DP) (CDP) (FDP)
 SEE PROFFERS DATED Oct 14, 2008
 Date of (BOS) (PC) Approval Nov 17, 2008
 Sheet 1 of 12
 (Concurrent w/ SE-2007-MV-031
 See Dev Conds. dated Nov 17, 2008)

RECEIVED
 Department of Planning & Zoning
 OCT 17 2008
 Zoning Evaluation Division

Huntley, Nyce & Associates, Ltd.
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 CHANTILLY OFFICE:
 14428 ALBEMARLE POINT PLACE, SUITE 120
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OTHER OFFICES:
 Arlington Va., Culpeper Va., Leesburg Va., Manassasburg Va.

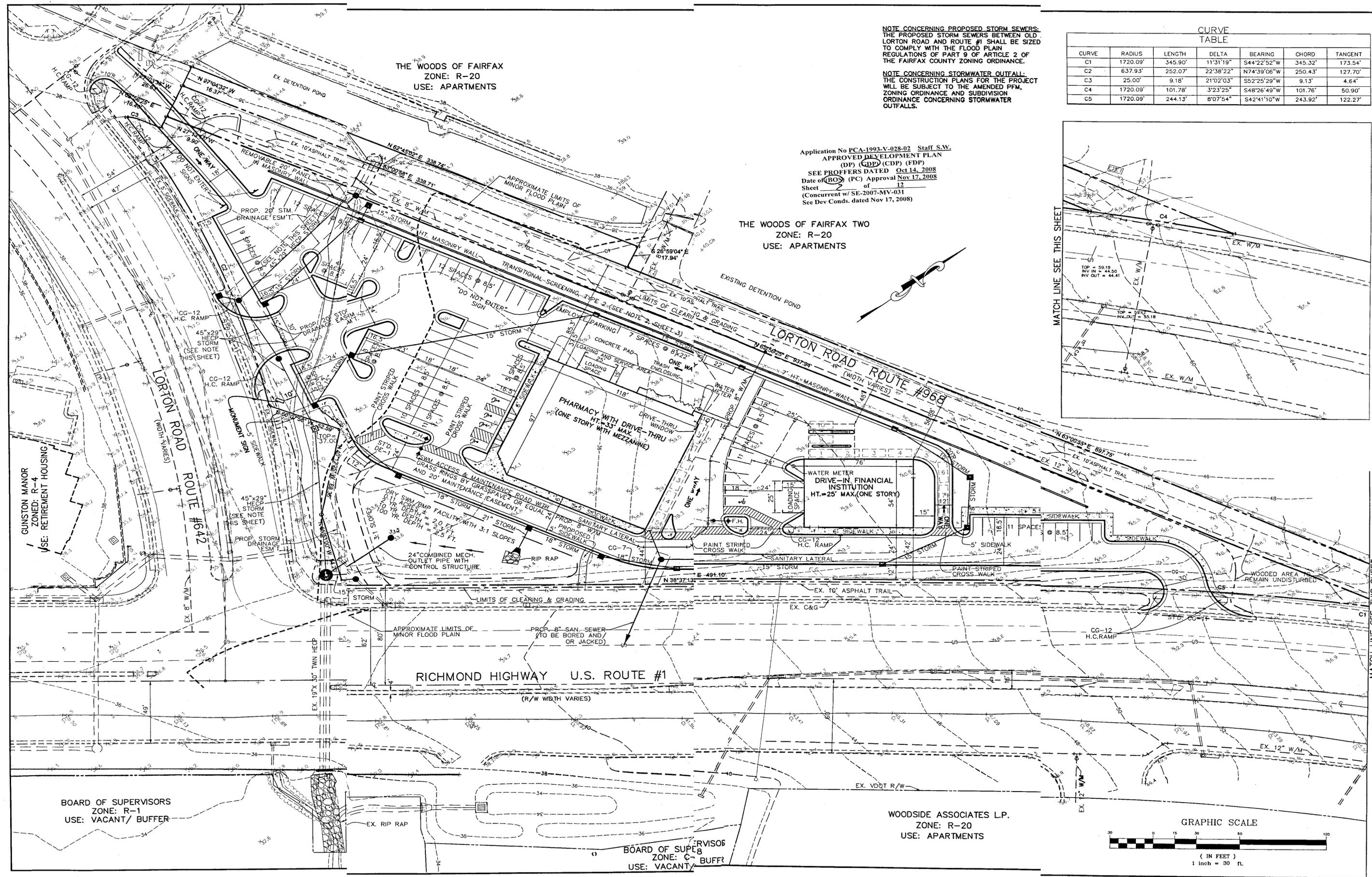
LORTON CORNER
 MT. VERNON DISTRICT
 FAIRFAX COUNTY, VIRGINIA

COVER SHEET

SCALE:	AS SHOWN
DATE:	01-29-07
REVISIONS:	
DPZ REV. 12-20-2007	
DPZ REV. 02-29-2008	
DPWES REV. 06-02-08	
DPWES REV. 07-30-08	
DPWES REV. 09-09-08	
DPZ REV. 10-15-2008	
DESIGN:	RLS
CADD:	DT
CHECK:	RLS
SHEET:	1 OF 12
FILE NO.:	PL-3802

SHEET INDEX

- COVER SHEET (REV. 10-15-08)
- GENERALIZED DEVELOPMENT PLAN / SPECIAL EXCEPTION PLAT (REV. 10-15-08)
- NOTES, SITE TABULATION AND SOILS MAP AND BULK PLANE EXHIBIT (REV. 07-30-08)
- LANDSCAPE PLAN (REV. 09-09-08)
- EXISTING VEGETATION MAP
- STORM WATER MANAGEMENT/ B.M.P. AND DRAINAGE OUTFALL DATA (REV. 12-20-07)
- ELEVATION VIEWS OF PHARMACY (ADDED 12-20-07)
- PROFFERED CONDITION AMENDMENT RZ 93-V-028 (PREVIOUSLY APPROVED)
- EXISTING TOPOGRAPHICAL SURVEY (SHEET ADDED 06-02-08)
- DETAILS AND GRADING FOR SWM/BMP FACILITY, STORAGE VOLUMES, DETENTION AND B.M.P.s, B.M.P. COMPUTATIONS, AND NARRATIVE FOR STORM DRAINAGE OUTFALL, AND OVERLAND RELIEF (REV. 09-09-08)
- DRAINAGE DIVIDES EXHIBIT, EXISTING DAM AND EXISTING 36" CULVERT DETAIL OF REMOVABLE WALL PANEL (REV. 07-30-08)
- OUTFALL ANALYSIS OF EXISTING CHANNEL BELOW ROUTE #1 (SHEET ADDED 06-02-08)



THE WOODS OF FAIRFAX
ZONE: R-20
USE: APARTMENTS

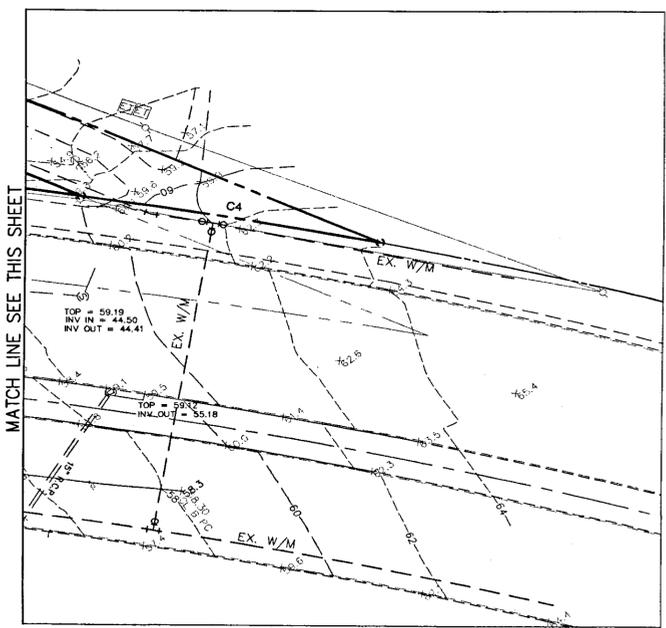
THE WOODS OF FAIRFAX TWO
ZONE: R-20
USE: APARTMENTS

NOTE CONCERNING PROPOSED STORM SEWERS:
THE PROPOSED STORM SEWERS BETWEEN OLD LORTON ROAD AND ROUTE #1 SHALL BE SIZED TO COMPLY WITH THE FLOOD PLAIN REGULATIONS OF PART 9 OF ARTICLE 2 OF THE FAIRFAX COUNTY ZONING ORDINANCE.

NOTE CONCERNING STORMWATER OUTFALL:
THE CONSTRUCTION PLANS FOR THE PROJECT WILL BE SUBJECT TO THE AMENDED PFM, ZONING ORDINANCE AND SUBDIVISION ORDINANCE CONCERNING STORMWATER OUTFALLS.

Application No PCA-1993-V-028-02 Staff S.W.
APPROVED DEVELOPMENT PLAN
(DP) (DDP) (CDP) (FDP)
SEE PROFFERS DATED Oct 14, 2008
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Sheet 2 of 12
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CURVE TABLE						
CURVE	RADIUS	LENGTH	DELTA	BEARING	CHORD	TANGENT
C1	1720.09'	345.90'	11°31'19"	S44°22'52"W	345.32'	173.54'
C2	637.93'	252.07'	22°38'22"	N74°39'06"W	250.43'	127.70'
C3	25.00'	9.18'	21°02'03"	S52°25'29"W	9.13'	4.64'
C4	1720.09'	101.78'	3°23'25"	S48°26'49"W	101.76'	50.90'
C5	1720.09'	244.13'	8°07'54"	S42°41'10"W	243.92'	122.27'

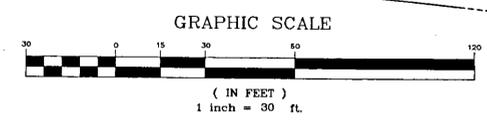


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COMMONWEALTH OF VIRGINIA
ROBERT L. SPROLES
Lic. No. 24833
10-16-08
PROFESSIONAL ENGINEER

LORTON CORNER
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA
GENERALIZED DEVELOPMENT PLAN / SPECIAL EXCEPTION PLAN

SCALE: 1" = 30'
DATE: 01-29-07
REVISIONS:
DPZ REV. 12-20-2007
DPZ REV. 02-29-2008
SWM AND INTERPARCEL
CONN. REV. 07-30-08
JPZ & DPWES REV. 9-9-08
DPZ REV. 10-15-2008
DESIGN: RLS
CADD: DT
CHECK: RLS
SHEET: 2 OF 12
FILE NO. PL-3802



BOARD OF SUPERVISORS
ZONE: R-1
USE: VACANT/ BUFFER

BOARD OF SUPERVISORS
ZONE: C-8
USE: VACANT/ BUFF

WOODSIDE ASSOCIATES L.P.
ZONE: R-20
USE: APARTMENTS

SUBMISSION REQUIREMENTS PURSUANT TO SECTION 9-011:

- A. The boundary with bearings and distances is shown on the attached Special Exception Plat (Sheet 2). The entire site is within the C-5 Zoning District.
- B. The site area and zoning are shown on the site tabulation (Sheet 2), which is part of the Special Exception Plat.
- C. The north arrow and scale are shown on the attached Special Exception Plat (Sheet 2).
- D. There are no existing dwelling structures located on the site. The building footprint, exterior dimensions and maximum height are shown on the attached Special Exception Plat (Sheet 2).
- E. Transitional screening, Type 2, is required along the northern, rear property line. A modification in the width of the required transitional yard is requested with this application based upon the installation of a 7 ft. high masonry wall.
- F. Street names, route numbers, existing improvements, existing center-line location, and dimensions from the face of curb, and right-of-way line from the centerline are shown on the attached Special Exception Plat (Sheet 2).
- G. There is an entrance onto Lorton Road, Route #642, and an entrance onto Route #1 as indicated on the attached Special Exception Plat (Sheet 2); Both entrances are right-in/right-out only traffic movements.
- H. All proposed parking spaces are shown on the attached Special Exception Plat (Sheet 2) with distances to the property lines indicated. The parking tabulation indicating spaces required and spaces provided per Article II of the Zoning Ordinance is shown in the site tabulation attached herewith (Sheet 2).
- I. The site is to be served by public sanitary sewer and public water supply.
- J. See sheet 6 and 10 for responses to these storm drainage related items.
- K. See site tabulation on Special Exception Plat (Sheet 2).
- L. See Note #1 on Special Exception Plat (Sheet 3).
- M. See Special Exception Plat (Sheet 2) for proposed clearing limits; See existing Tree and Vegetation Map (Sheet 5); and see Landscape Plan (Sheet 4), all attached herewith.
- N. The site is located within a resource management area, and a portion of the site is located within an undefined minor flood plain. The site is not located within a designated resource protection area, or an environmental quality corridor.
- O. Outside lighting will be typical building mounted and parking area lighting fixtures. A screening fence will be provided along the Route #1 side of the loading area.
- P. There are no utility easements that exceed 25' width and no major underground utility easements within this site.
- Q. The trail along Route #1 is existing; It was installed by VDOT with the U.S. Route #1 widening and improvement project which was recently completed.
- R. To the best of our knowledge, there are no grave or burial plots within this site.
- S. Professional seal and signature is affixed to all sheets of this Special Exception Plat.

- K. Tax map 108-3, 001, parcels 1A and 6 which contains multi-family rental units located at the rear, north side, of the site. These units will be screened by the installation of a 7 foot high masonry wall supplemented by the installation of landscape plantings consisting of one large evergreen tree for every 10 linear feet, one medium evergreen tree for every 5 linear feet, and one large deciduous tree every 30 linear feet within the transitional yard between the 7 foot wall and the property line. A combination of architect treatment and landscape techniques will be utilized adjacent to all other neighboring properties.
- L. There are no existing structures located within this property.
- M. See Item K of the Special Exception Application Submission Requirements Narrative on this Sheet.
- N. Open space is shown in the Site Tabulation on Sheet 3.
- O. There are no special amenities proposed with the project.
- P. All offsite public improvements along Route #1 and Lorton Road were installed with the V.D.O.T. Widening and Improvements project which was recently completed including a 10 foot wide pedestrian/bike trail along Route #1.

The only onsite improvements consist of the sanitary sewer and water mains to serve the proposed use; and the storm sewer improvements to convey runoff thru and away from the site.
- Q. Timing of construction will subject to market conditions.
- R. There are no resource protection areas or environmental quality corridors which impact this property; however, the site is within a resource management area.

The limits of the existing minor flood plain are shown on Sheet 5 and the limits of the proposed minor flood plain are shown on Sheet 2.
- S. All improvements within the R/W of Route #1 and Lorton Road were installed with the widening and improvement project by V.D.O.T. which was recently completed. The center lines of the streets along with dimensions to the edge of pavement or curb and gutter, and existing R/W line are shown on Sheet 3.
- T. The proposed clearing limits are shown on Sheet 2; the proposed screening and landscaping are shown on Sheets 4 and the existing vegetation map is shown on Sheets 5.
- U. To the best of our knowledge there are no grave or burial sites within the property.
- V. Lorton Corner Road LLC is the owner and developer of the property which is recorded at D.B. 18,005 and page 2,071.

Site Tabulation

Tax Map Reference:
108-3-001, parcels 2 and 3
108-3-002, parcels 2, 5 and 6, and a portion of Lorton Road, Route #968

Site Area: 3.5567 Acres or 154,928 square feet*

Zoning: C-5

Use: Drive-in Bank and Drive-in Pharmacy

Gross Floor Areas:
Drive-in Bank = 3,848 sq. ft.
Drive-in Pharmacy = 10,940 sq. ft. (retail space)
+ 4,000 sq. ft. (mezzanine space for merchandise storage)

Floor Area Ratio:
F.A.R. Allowed = 39,350 sq. ft. or F.A.R. of 0.19 per PCA 93-V-028
Proposed F.A.R. = 18,788 sq. ft./154,928 sq. ft. = 0.1213

Parking:

Required:
Drive-in Bank:
• 2,748 sq. ft. lobby area @ 4 spaces per 1,000 sq. ft. GFA = 11 spaces
• 1,100 sq. ft. office area @ 3.6 spaces per 1,000 sq. ft. GFA = 4 spaces
Drive-in Pharmacy:
• 14,940 sq. ft. GFA @ 5 spaces the first 1,000 sq. ft. GFA + 6 spaces per additional 1,000 sq. ft. = 89 spaces
Total spaces required = 104 spaces
Provided:
Regular spaces = 99 spaces
Handicap spaces = 5 spaces
Total spaces = 104 spaces

Open Space:

Site area = 154,928 sq. ft.
% open space required = 20%
Open space required = 30,986 sq. ft.
Open space provided = 72,088 sq. ft. (47%)

Interior Parking Lot Landscaping:
See sheet 4 of 8.

Yard/Setback Requirements:

Minimum:
Front yard = 40' minimum + 45° bulk plane
Side yard = no requirement
Rear yard = 20' minimum

Actual:

Drive-in bank
Front = 42.00'
Side = N/A
Rear = 30.82'
Drive-in Pharmacy
Front = 44.00'
Side = N/A
Rear = 85.30'

* **Note:** The PCA application approved with this special exception reduces the proffered area from 3.6901 acres to 3.5567 acres.

Submission requirements pursuant to section 18-202:

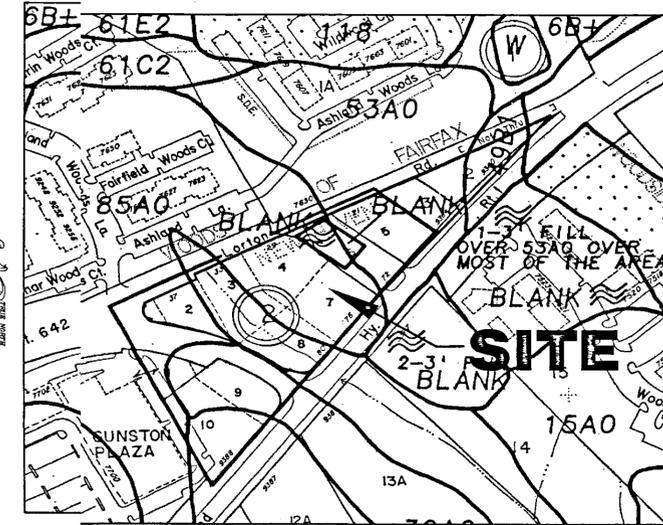
- A. See Item "C" of the Special Exception Application Submission Requirements Narrative on this sheet.
- B. See Item "D" of the Special Exception Application Submission Requirements on this sheet. A graphic depiction of the angles of bulk plain are shown on Sheet 4.
- C. See attached Special Exception Plat, Sheet 3, for proposed traffic circulation plan showing right-in and right-out entrances on Lorton Road, and at the northern end of the site on Route #1. All pedestrian/bike trails along the western side of Route #1 were installed by V.D.O.T. with their recently completed widening and improvement project for Route #1.
- D. There will be no major open space area remaining, and no proposed community or public facilities other than the utility infrastructure required to serve the site.
- E. No major sanitary sewer improvements will be required for the site; however, an 8" sanitary sewer line will be extended from an existing MH in Route #1 to serve the site.
- F. See sheet 6 and 10 for responses to these storm drainage related items.
- G. See Item P of the Special Exception Application Submission Requirements Narrative on this Sheet.
- H. See Item H of the Special Exception Application Submission Requirements Narrative on this Sheet.
- I. See Item L of the Special Exception Application Submission Requirements Narrative on this Sheet.
- J. There are no scenic assets or natural features which would require protection or preservation with this project.

NOTES:

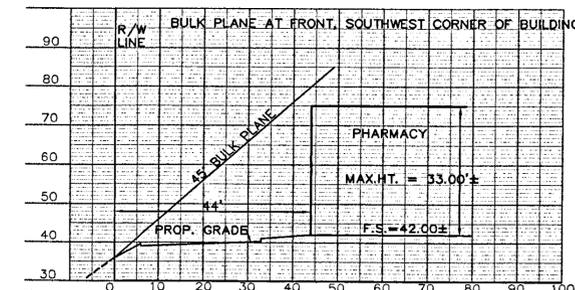
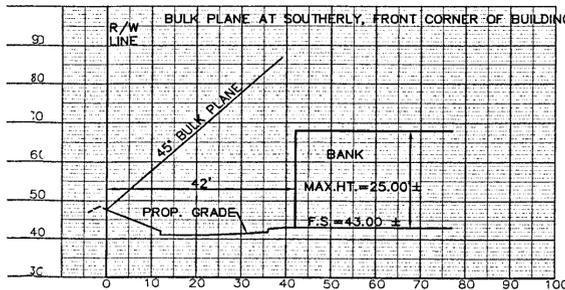
1. TOPOGRAPHY WAS FIELD RUN BY HNA IN 2008 AT TWO (2) FT. CONTOUR INTERVAL.
2. THE APPLICANT RESERVES THE RIGHT TO REQUEST A WAIVER OF STORM WATER DETENTION AT TIME OF SITE PLAN SUBMISSION AND REVIEW.

TRANSITIONAL YARD NOTES:

1. MODIFICATION OF THE REQUIRED WIDTH OF THE TRANSITIONAL YARDS AND DELETION OF THE BARRIER REQUIREMENT ALONG ROUTE #1 ADJACENT TO THE RESIDENTIALLY ZONED PROPERTIES PER SECTION 13-304, PARAGRAPH 3, OF THE FAIRFAX COUNTY ZONING ORDINANCE, IN FAVOR OF THE LANDSCAPING INDICATED ON THE ATTACHED PROFFERED CONDITION AMENDMENT/SPECIAL EXCEPTION LANDSCAPE PLAN.
2. MODIFICATION OF THE REQUIRED TRANSITIONAL YARD WIDTH AND ASSOCIATED PLANTINGS PER SECTION 13-304, PARAGRAPH 4 OF THE FAIRFAX COUNTY ZONING ORDINANCE IN THE FAVOR OF THE 12' WIDE YARD, 7' HIGH MASONRY WALL AND EVERGREEN PLANTINGS PROPOSED BY THE ATTACHED LANDSCAPE PLAN ALONG THE NORTH PROPERTY LINE ADJACENT TO THE WOODS OF FAIRFAX PROJECT.



SOILS MAP
SCALE 1"=200'



HORIZ. & VERT. SCALE 1"=20'

SITE OUTFALL NOTES:

1. THE APPLICANT MUST COMPLY WITH THE FLOODPLAIN REGULATIONS OF PART 9 OF ARTICLE 2 OF THE ZONING ORDINANCE WITH SUBMISSION OF THE SITE PLAN AND CONSTRUCTION PLANS INCLUDING, BUT NOT LIMITED TO, SUBMITTING A FLOODPLAIN STUDY DEMONSTRATING THE PROPOSED CULVERTS ARE SIZED APPROPRIATELY AND THE FILL ON THE SITE WILL NOT INCREASE THE WATER SURFACE ELEVATION.
2. THE CONSTRUCTION PLANS FOR THE PROJECT WILL BE SUBJECT TO THE AMENDED PFM, ZO AND SUBDIVISION ORDINANCE CONCERNING STORMWATER OUTFALLS.

Application No PCA-1993-V-028-02 Staff S.W.
APPROVED DEVELOPMENT PLAN
(DP) (CDP) (FDP)
SEE PROFFERS DATED Oct 14, 2008
Date of (BO) (PC) Approval Nov 17, 2008
Sheet 3 of 12
(Concurrent w/ SE-2007-MV-031
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ROBERT L. SPROULES
Lic. No. 24833
7-30-08

LORTON CORNER
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

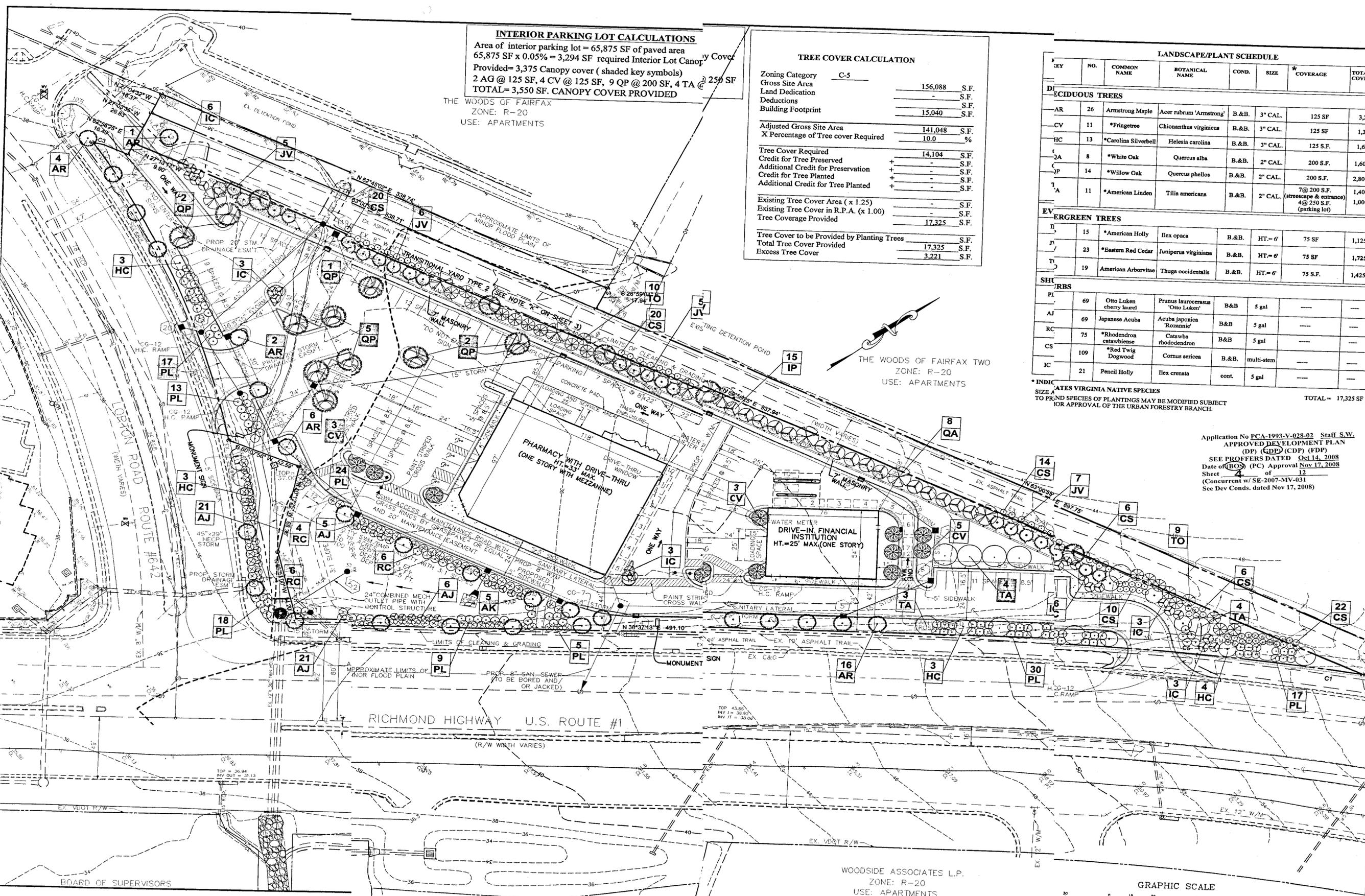
NOTES, SITE TABULATION, AND SOILS MAP AND BULK PLANE EXHIBITS

SCALE: AS NOTED
DATE: 01-29-07

REVISIONS:
DPZ REV. 12-20-2007
DPZ REV. 02-29-2008
DPWES REV. 07-30-08

DESIGN: RLS
CADD: DT
CHECK: RLS

SHEET: 3 OF 12
FILE NO.: PL-3802



INTERIOR PARKING LOT CALCULATIONS
 Area of interior parking lot = 65,875 SF of paved area
 $65,875 \text{ SF} \times 0.05\% = 3,294 \text{ SF}$ required Interior Lot Canopy Cover
 Provided = 3,375 Canopy cover (shaded key symbols)
 2 AG @ 125 SF, 4 CV @ 125 SF, 9 QP @ 200 SF, 4 TA @ 250 SF
TOTAL = 3,550 SF. CANOPY COVER PROVIDED

TREE COVER CALCULATION

Zoning Category	C-5	
Gross Site Area	156,088	S.F.
Land Dedication	-	S.F.
Deductions	-	S.F.
Building Footprint	15,040	S.F.
Adjusted Gross Site Area	141,048	S.F.
X Percentage of Tree cover Required	10.0	%
Tree Cover Required	14,104	S.F.
Credit for Tree Preserved	+	S.F.
Additional Credit for Preservation	+	S.F.
Credit for Tree Planted	+	S.F.
Additional Credit for Tree Planted	+	S.F.
Existing Tree Cover Area (x 1.25)	-	S.F.
Existing Tree Cover in R.P.A. (x 1.00)	-	S.F.
Tree Coverage Provided	17,325	S.F.
Tree Cover to be Provided by Planting Trees	-	S.F.
Total Tree Cover Provided	17,325	S.F.
Excess Tree Cover	3,221	S.F.

LANDSCAPE/PLANT SCHEDULE

KEY	NO.	COMMON NAME	BOTANICAL NAME	COND.	SIZE	* COVERAGE	TOTAL COVERAGE
DECIDUOUS TREES							
AR	26	Armstrong Maple	Acer rubrum 'Armstrong'	B.&B.	3" CAL.	125 SF	3,250 SF
CV	11	*Fringetree	Chionanthus virginicus	B.&B.	3" CAL.	125 SF	1,375 SF
IC	13	*Carolina Silverbell	Halesia carolina	B.&B.	3" CAL.	125 S.F.	1,625 SF
TA	8	*White Oak	Quercus alba	B.&B.	2" CAL.	200 S.F.	1,600 SF
QP	14	*Willow Oak	Quercus phellos	B.&B.	2" CAL.	200 S.F.	2,800 S.F.
LA	11	*American Linden	Tilia americana	B.&B.	2" CAL.	7@ 200 S.F. (streetscape & entrance) 4@ 250 S.F. (parking lot)	1,400 SF 1,000 SF
EVERGREEN TREES							
IL	15	*American Holly	Ilex opaca	B.&B.	HT.= 6'	75 SF	1,125 SF
JV	23	*Eastern Red Cedar	Juniperus virginiana	B.&B.	HT.= 6'	75 SF	1,725 SF
TI	19	American Arborvitae	Thuja occidentalis	B.&B.	HT.= 6'	75 S.F.	1,425 SF
SHRUBS							
PL	69	Otto Luken cherry laurel	Prunus laurocerasus 'Otto Luken'	B.&B.	5 gal	---	---
AJ	69	Japanese Acuba	Acuba japonica 'Rozannie'	B.&B.	5 gal	---	---
RC	75	*Rhododendron catawbiense	Catawba rhododendron	B.&B.	5 gal	---	---
CS	109	*Red Twig Dogwood	Cornus sericea	B.&B.	multi-stem	---	---
IC	21	Pencil Holly	Ilex crenata	cont.	5 gal	---	---

* INDICATES VIRGINIA NATIVE SPECIES
 SIZE AND SPECIES OF PLANTINGS MAY BE MODIFIED SUBJECT TO APPROVAL OF THE URBAN FORESTRY BRANCH.

TOTAL = 17,325 SF

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ROBERT L. PROFFER
 Lic. No. 14833
 9-9-08
 PROFESSIONAL ENGINEER

LORTON CORNER
 MT. VERNON DISTRICT
 FAIRFAX COUNTY, VIRGINIA
 LANDSCAPE PLAN

SCALE: 1" = 30'

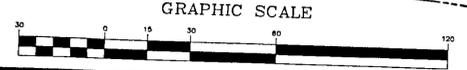
DATE: 01-29-07

REVISIONS:

NO.	DATE	DESCRIPTION
1	12-20-2007	DPZ REV.
2	07-29-2008	SWM REV.
3	09-09-2008	DPZ & D.

DESIGN: RLS
 CHECK: RLS

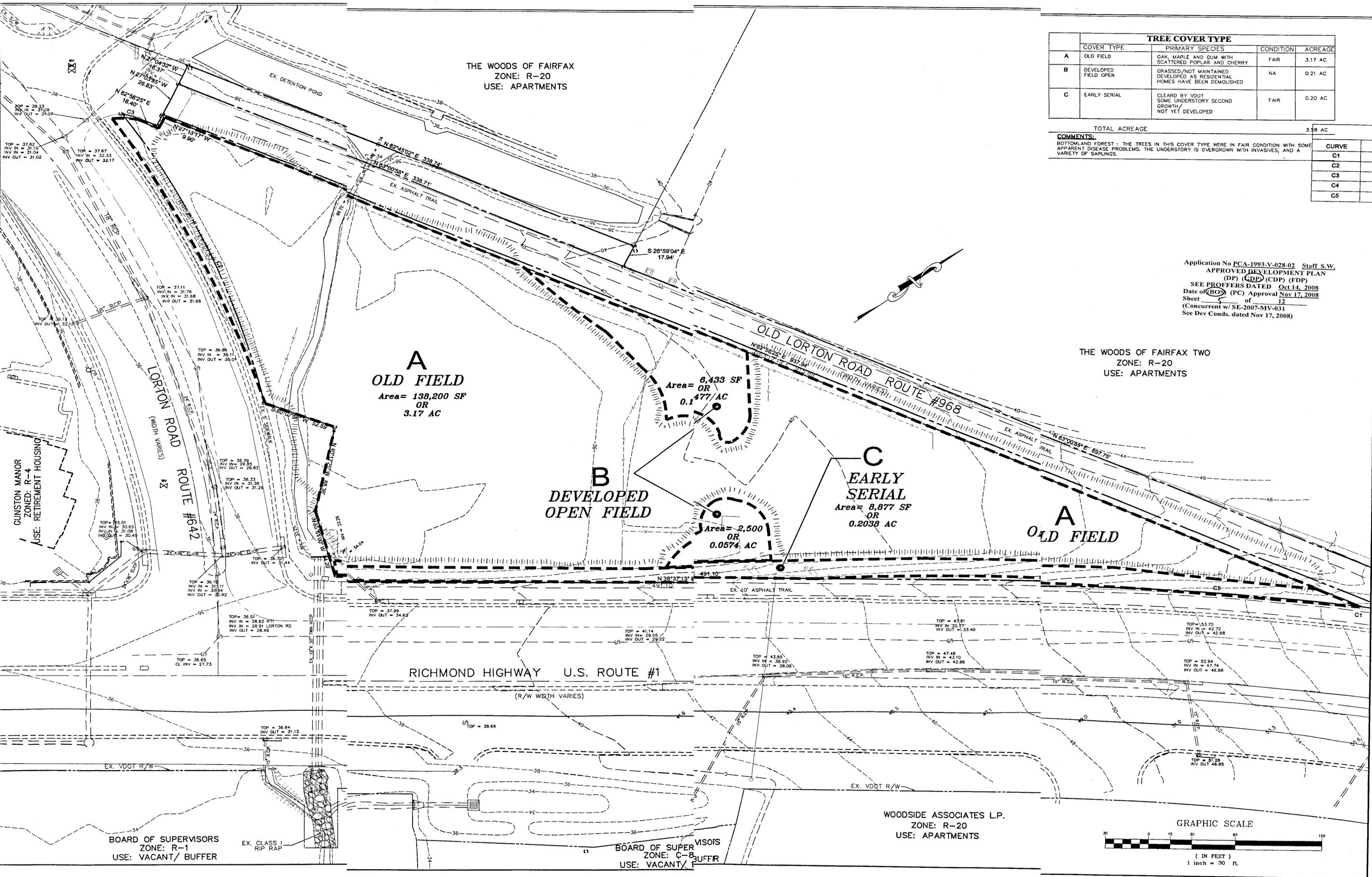
4 OF 12
 FL-3802



WOODSIDE ASSOCIATES L.P.
 ZONE: R-20
 USE: APARTMENTS

BOARD OF SUPERVISORS

BOARD OF SUPERVISORS



TREE COVER TYPE			
COVER TYPE	PRIMARY SPECIES	CONDITION	ACREAGE
A	OLD FIELD	OAK, MAPLE AND GUM WITH SCATTERED POPLAR AND CHERRY	FAIR 3.17 AC
B	DEVELOPED FIELD OPEN	GRASSED/NOT MAINTAINED DEVELOPED AS RESIDENTIAL HOMES HAVE BEEN DEMOLISHED	NA 0.21 AC
C	EARLY SERIAL	CLEARED BY VDOT SOME UNDERSTORY SECOND GROWTH/NOT YET DEVELOPED	FAIR 0.20 AC
TOTAL ACREAGE			3.58 AC

COMMENTS:
 BOTTOMLAND FOREST: THE TREES IN THIS COVER TYPE WERE IN FAIR CONDITION WITH SOME APPARENT DISEASE PROBLEMS. THE UNDERSTORY IS OVERGROWN WITH INVASIVES, AND A VARIETY OF SAPLINGS.

CURVE
C1
C2
C3
C4
C5

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COMMONWEALTH OF VIRGINIA

Robert L. Stroles
 No. 024833
 6-3-06
 PROFESSIONAL ENGINEER

LORTON CORNER
 MT. VERNON DISTRICT
 FAIRFAX COUNTY, VIRGINIA

EXISTING VEGETATION MAP

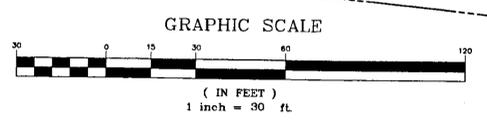
SCALE: 1" = 30'

DATE: AUGUST, 2006

REVISIONS:

NO.	DESCRIPTION

DESIGNED: [] CADD: [] CHECKED: []
 DRAWN: [] DATE: []
 SHEET: 5 OF 12
 FILE NO: PL-3802



OTHER OFFICES:
 Arlington Va. • Chappell Va. • Leesburg Va. • Manassas Va.

ITEM "J" CONTINUED FROM SHEET 3 OF 8

Storm Outfall Narrative:

Lorton corner site is 3.58 acres and is located in Mount Vernon district. The current zoning for the site is C-5 with projected use of a drive through pharmacy and a bank. Subject site is within the Phoick Creek watershed and drains into a tributary of Phoick creek.

To the north of the property there is an existing SWM facility that drains through the site via an existing swale. A majority of the site also drains to this swale and the runoff is then conveyed to an existing twin pipe that conveys the runoff under Richmond Hwy (Route #1) to an existing minor flood plain. Runoff from site will be directed to a proposed SWM/BMP facility that will provide reduction in peak flow and provide Best Management Practices for the site. Run off from the proposed pond will be directed to the existing twin culverts under Richmond Hwy. Immediately at the outfall point for the existing twin culverts we can find the point of confluence. As required by FPM we have provided analysis for three cross sections down stream of the point of confluence, (see sheet 12). Per definition the outfall is an existing Bed & bank channel with a very uniform in size, depth and shape, as indicated by the cross sections shown on the plan. The alignment of the existing channel is very straight for three hundred feet below Route #1 with slight meandering in the remainder of the outfall (see attached topographical survey of the outfall). The channel and banks consist of a mixture of alluvial silt material with some sand and gravel which appears to be stable in its present state. The maximum allowable velocity for this type of soil from table 1A of Erosion & Sediment handbook is 3.5 fps. All velocities calculated for the 2 year storm are well below the permissible velocity and also as shown on sheet 10 there is capacity for the 10 year storm event in the existing outfall channel.

Given the above and per guidelines specified in section 6-0203.3 of PPFM it is our opinion that adequate outfall exists for the above referenced site and proposed development of the subject site will not create an adverse impact or flooding of any existing structure down stream of the site.

SWM/BMP Narrative:

SWM and BMP will be provided for the site in the form of a dry extended detention facility. The dry detention facility will provide reduction in peak flow will be provided for the 2 year and 10 year storm events. The post development rate of discharge from site will be reduced to less than the runoff for the entire site in existing condition. Best Management Practices (40% removal rate) will be provided in a form of Dry extended facility (see BMP comps on sheet 8).

100 Year Overland Narrative

100 year storm event will be conveyed through the site utilizing the limited capacity of the proposed storm sewer system and the surface capacity of the travel lanes through out the site to the low point at intersection of Route #1 and Lorton road. From this point the 100 year storm event will be discharged to an existing minor flood plain at the east side of Route #1.

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

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

This information is required under the following Zoning Ordinance paragraphs:
 Special Permits (8-011 2J & 2L) Special Exceptions (9-011 2J & 2L)
 Cluster Subdivision (9-615 1G & 1N) Commercial Revitalization Districts (9-022 2A (12) & (14))
 Development Plans PRC District (18-302 3 & 4L) PRC Plan (18-303 1E & 1C)
 FDP P Districts (except PRC) (18-502 1F & 1Q) Amendments (18-202 10F & 10I)

- 1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100').
- 2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheet 3 and 10.

3. Provide:

Facility Name/ Type & No.	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage Volume (cf)	If pond, dam height (ft)
Dry Pond	3.58	0.33	3.34	5,000	11,738	5.0
Totals						

- 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 3. Pond inlet and outlet pipe systems are shown on Sheet 10.
- 5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet 3. Type of maintenance access road surface noted on the plat is 21A (asphalt, geoblock, gravel, etc.).
- 6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet 5.
- 7. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet 2 and 10.
- 8. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (840 acres) is provided on Sheet 2 and 10.
- 9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet 2 and 10.
- 10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets 2 and 9.
- 11. A submission waiver is requested for _____
- 12. Stormwater management is not required because _____

- (1)(a) The footprint and height of the dam for the Storm Water Management Facility is shown on the Special Exception Plat (Sheets 2 and 10). This is a very small facility, therefore, the 100 year storm is routed through a combined mechanical outlet structure and pipe.
- (b) The S.W.M. Facility serves an onsite drainage area of 3.58 acres, and a smaller offsite area of 0.33 acres consisting of the Old Lorton Road right of way and a 10' wide asphalt trail for a total drainage area of 3.34 acres to the S.W.M Facility.
- (c) See attached Special Exception Plat (Sheet 2) for layout of storm sewers, inlets and the mechanical outlet structure and pipe from the S.W.M. Facility.
- (d) See attached Special Exception Plat (Sheet 2) for layout of storm sewers, inlets, and the outlet structure and pipe from the S.W.M. Facility.
- (e) See attached Landscape Plan for landscaping and plantings in and near the S.W.M. Facility (Sheet 5).
- (f) See attached Special Exception Plat (Sheet 2) for clearing and grading limits, onsite SWM Facility, storm drainage system, access roads, rip rap outlet protection, and slope stabilization.
- (2)(a) See item "J" of this narrative, and details of the swm facility on sheet 10.
- (b) The area of the SWM Facility is about 0.11 acres, and storage volume is approximately 11,738 cu. ft. ±.
- (c) For description of existing outfall conditions downstream from the site, see item "J" of this narrative, and sheet 8 for outfall conditions and analysis.
- (d) See sheet 12 attached herewith for outfall analysis below U.S. Route #1 within the existing flood plain area on the Lower Potomac Waste Water Treatment Plant Site.

ITEM "F" CONTINUED FROM SHEET 3 OF 8

F. See Item "J" of the Special Exception Application Submission Requirements Narrative on this Sheet.

- (1)(a). See Item J(1)(a) of the Special Exception Application Submission Requirements Narrative on this Sheet.
- (1)(b). See Item J(1)(b) of the Special Exception Application Submission Requirements Narrative on this Sheet.
- (1)(c). See Item J(1)(c) of the Special Exception Application Submission Requirements Narrative on this Sheet.
- (1)(d). See Item J(1)(d) of the Special Exception Application Submission Requirements Narrative on this Sheet.
- (1)(e). See Item J(1)(e) of the Special Exception Application Submission Requirements Narrative on this Sheet.
- (1)(f). See Item J(1)(f) of the Special Exception Application Submission Requirements Narrative on this Sheet.
- (2)(a). See Item J(2)(a) of the Special Exception Application Submission Requirements Narrative on this Sheet.
- (2)(b). See Item J(2)(b) of the Special Exception Application Submission Requirements Narrative on this Sheet.
- (2)(c). See Item J(2)(c) of the Special Exception Application Submission Requirements Narrative on this Sheet.
- (2)(d). See Item J(2)(d) of the Special Exception Application Submission Requirements Narrative on this Sheet.

Application No PCA-1993-V-028-02 Staff S.W.
 APPROVED DEVELOPMENT PLAN
 (DP) (GDP) (CDP) (FDP)
 SEE PROFFERS DATED Oct 14, 2008
 Date of (BO) (PC) Approval Nov 17, 2008
 Sheet 2 of 12
 (Concurrent w/ SE-2007-MV-031
 See Dev Conds. dated Nov 17, 2008)

Huntley, Nyce & Associates, Ltd.
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 CHANTILLY, VIRGINIA, 20151
 TEL: 703-790-5490 FAX: 703-378-8899
 www.huntleynyce.com
 OTHER OFFICES:
 Ashburn Va. • Culpeper Va. • Leesburg Va. • Manassas Va.

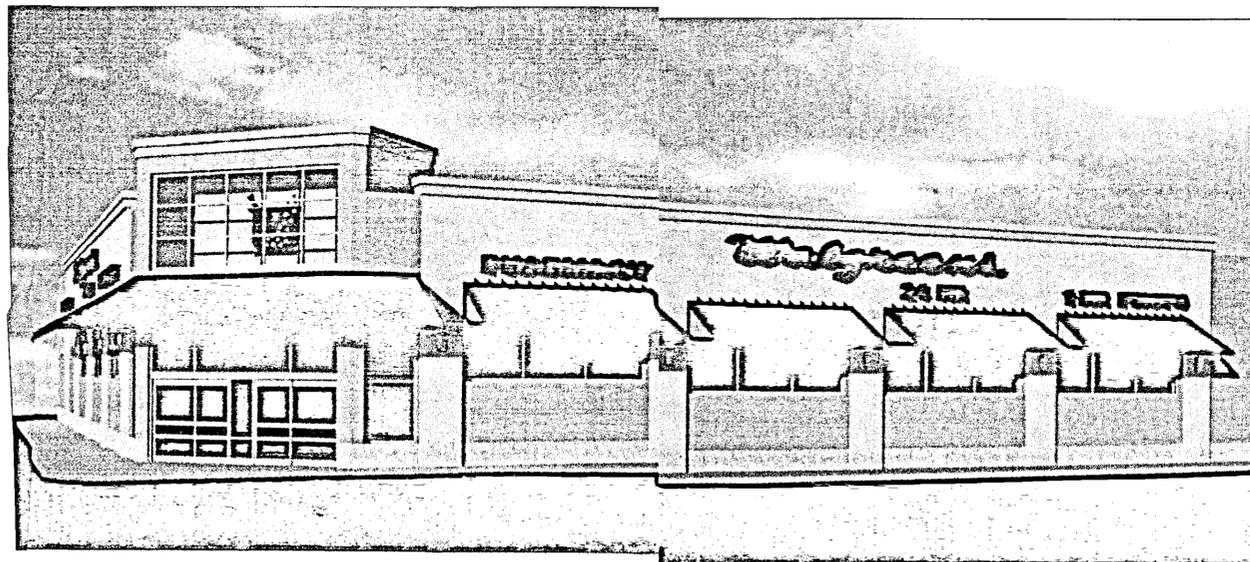
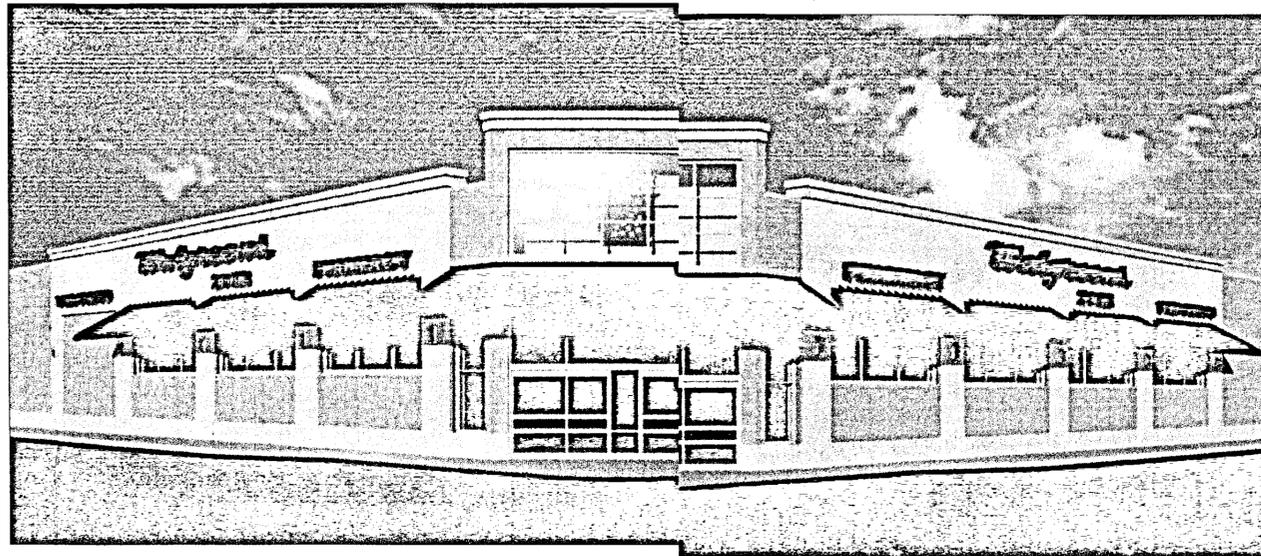
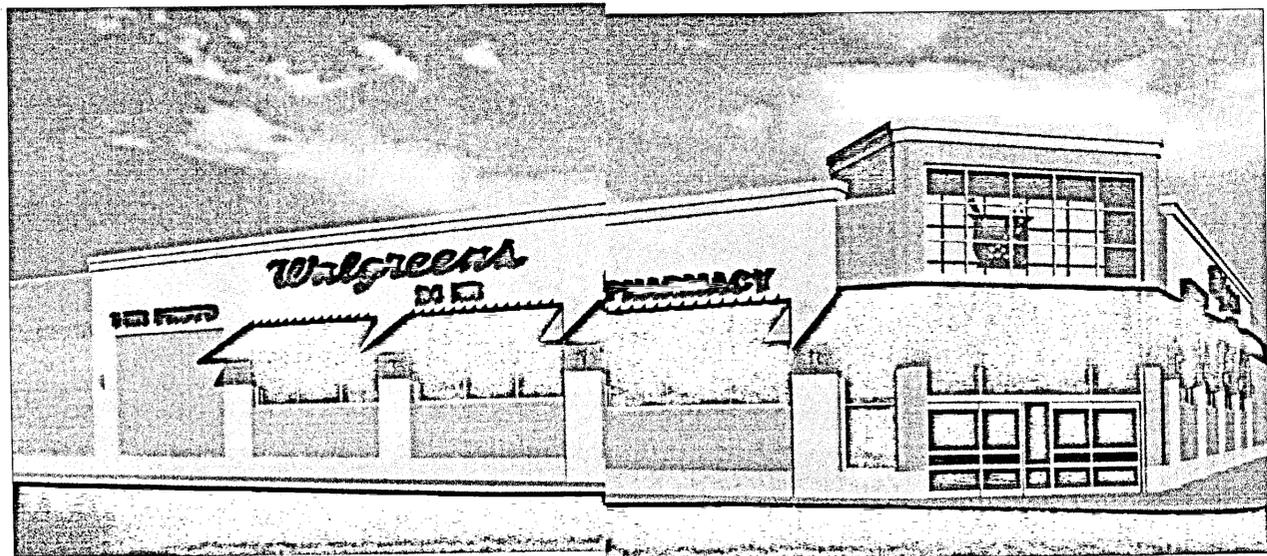
COMMONWEALTH OF VIRGINIA
 ROBERT S. PROLES
 No. 024833
 PROFESSIONAL ENGINEER

LORTON CORNER
 MT. VERNON DISTRICT
 FAIRFAX COUNTY, VIRGINIA

STORM WATER MANAGEMENT/ B.M.P AND DRAINAGE OUTFALL DATA

SCALE: AS SHOWN
 DATE: 01-29-07
 REVISIONS:
 DPZ REV. 12-20-2007

DESIGN: RLS	CADD: MD	CHECK: RLS
SHEET: 6 OF 12		
FILE NO. PL-3802		



Application No PCA-1993-Y-028-02 Staff S.W.
 APPROVED DEVELOPMENT PLAN
 (DP) (CDP) (FDP)
 SEE PROFFERS DATED Oct 13, 2008
 Date of (BO) (PC) Approval Nov 17, 2008
 Sheet 7 of 12
 (Concurrent w/ SE-2007-MV-031
 See Dev Conds. dated Nov 17, 2008)

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 TEL: 703-790-3490, FAX: 703-718-8899
 www.huntleynye.com
 OTHER OFFICES:
 Arlington Va • Culpeper Va • Leesburg Va • Martinsburg W Va



LORTON CORNER
 MT. VERNON DISTRICT
 FAIRFAX COUNTY, VIRGINIA
 ELEVATION VIEWS OF PHARMACY

SCALE: AS SHOWN

DATE: AUGUST, 2006

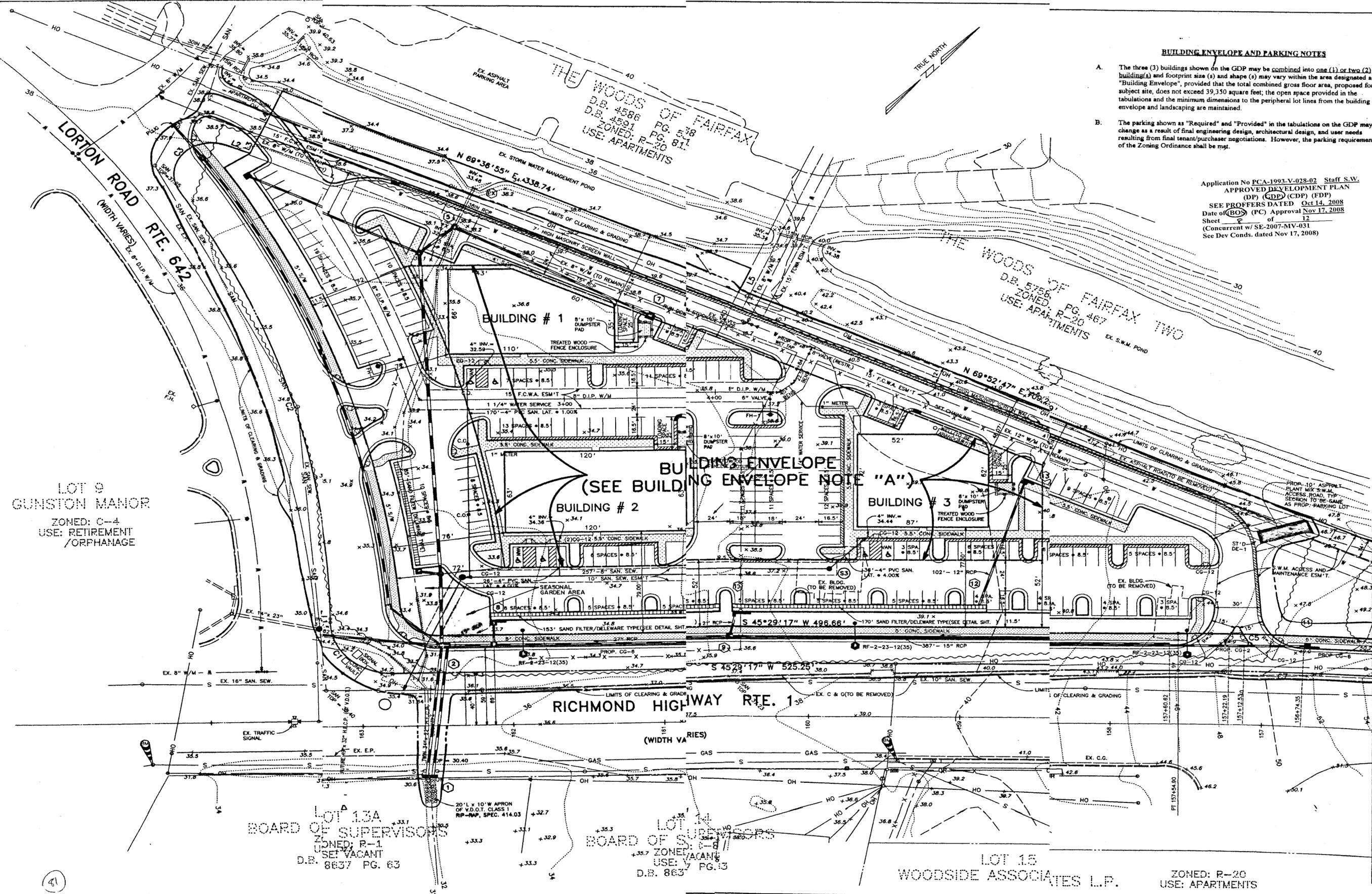
REVISIONS:

DPZ REV. 12-20-2007

DESIGN:	CADD:	CHECK:
RLS	DT	RLS

SHEET: 7 OF 12

FILE NO. PL-3802



BUILDING ENVELOPE AND PARKING NOTES

- A. The three (3) buildings shown on the GDP may be combined into one (1) or two (2) building(s) and footprint size (s) and shape (s) may vary within the area designated as "Building Envelope", provided that the total combined gross floor area, proposed for the subject site, does not exceed 39,350 square feet; the open space provided in the tabulations and the minimum dimensions to the peripheral lot lines from the building envelope and landscaping are maintained.
- B. The parking shown as "Required" and "Provided" in the tabulations on the GDP may change as a result of final engineering design, architectural design, and user needs resulting from final tenant/purchaser negotiations. However, the parking requirements of the Zoning Ordinance shall be met.

Application No PCA-1993-V-028-02 Staff S.A.V.
 APPROVED DEVELOPMENT PLAN
 (DP) (GDP) (CDP) (FDP)
 SEE PROFFERS DATED Oct 14, 2008
 Date of (BO) (PC) Approval Nov 17, 2008
 Sheet of 12
 (Concurrent w/ SE-2007-MV-031
 See Dev Conds. dated Nov 17, 2008)

Huntley, Myce & Associates, Ltd.
 SURVEYING • CIVIL ENGINEERING • LAND PLANNING
 7302 POPLAR ST
 ANNANDALE, VIRGINIA 22003
 703-752-3490
 45150 RUSSELL BRANCH PARKWAY
 SUITE 100
 FARMERSBURGH, VIRGINIA 22011
 703-752-0140 METRO 478-1051
 (OFFICE) © HUNTER, MYCE AND ASSOCIATES, LTD.

ROBERT L SPRICKS
 No. 026833
 10-4-96
 PROFESSIONAL ENGINEER

GENERALIZED DEVELOPMENT PLAN, LANDSCAPING PLAN
LORTON CORNER (FORMERLY NEW HAVEN)
 MT. VERNON DISTRICT
 FAIRFAX COUNTY, VIRGINIA
 PROFFERED CONDITION AMENDMENT RZ 93-V-028

SCALE: 1" = 30'

DATE: 03-05-96

REVISIONS:

REV. - 10-3-96
REV. - 10-29-96
DPZ REV. 12-20-2007

SHEET 1 OF 4
 FILE NO. PL - 1749

MATCH LINE - SEE SHEET 2

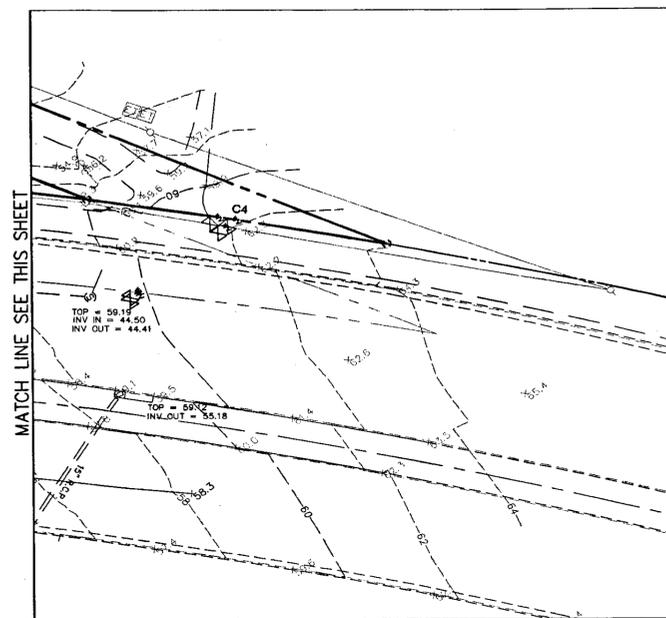
FOR INFORMATION PURPOSES ONLY.

PLAN PCA 93-V-028 APPROVED BY BOARD OF SUPERVISORS. MARCH 24, 1997

SHEET 8 OF 12

CURVE
TABLE

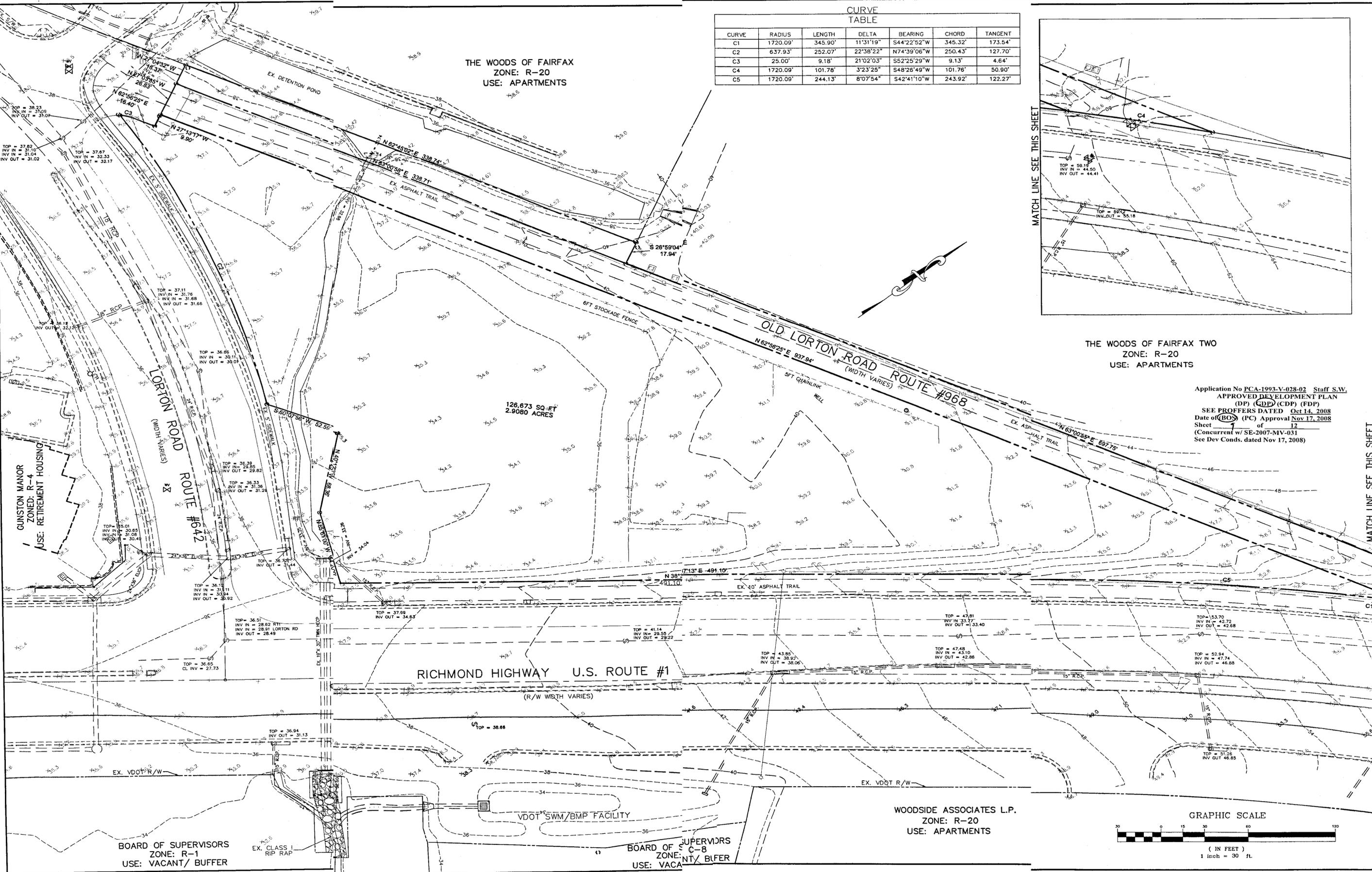
CURVE	RADIUS	LENGTH	DELTA	BEARING	CHORD	TANGENT
C1	1720.09'	345.90'	11°31'19"	S44°22'52"W	345.32'	173.54'
C2	637.93'	252.07'	22°38'22"	N74°39'06"W	250.43'	127.70'
C3	25.00'	9.18'	21°02'03"	S52°25'29"W	9.13'	4.64'
C4	1720.09'	101.78'	3°23'25"	S48°26'49"W	101.76'	50.90'
C5	1720.09'	244.13'	8°07'54"	S42°41'10"W	243.92'	122.27'



THE WOODS OF FAIRFAX
ZONE: R-20
USE: APARTMENTS

THE WOODS OF FAIRFAX TWO
ZONE: R-20
USE: APARTMENTS

Application No PCA-1993-Y-028-02 Staff S.W.
APPROVED DEVELOPMENT PLAN
(DP) (CDP) (FDP)
SEE PROFFERS DATED Oct 14, 2008
Date of (BOS) (PC) Approval Nov 17, 2008
Sheet 1 of 12
(Concurrent w/ SE-2007-MV-031
See Dev Conds. dated Nov 17, 2008)



MATCH LINE SEE THIS SHEET

Huntley, Nyce & Associates, Ltd.
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CHANTILLY, VIRGINIA 20151
TEL: 703-503-3490 FAX: 703-576-8899
www.hnaysurvey.com

OTHER OFFICES:
Arlington, Va. • Leesburg, Va. • Martinsburg, W.Va.

COMMONWEALTH OF VIRGINIA
ROBERT L. NYCE
No. 024833
6-31-08
PROFESSIONAL ENGINEER

LORTON CORNER
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

EXISTING TOPOGRAPHICAL SURVEY

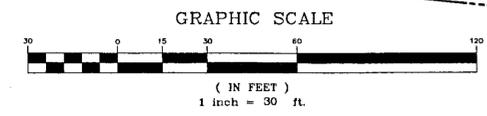
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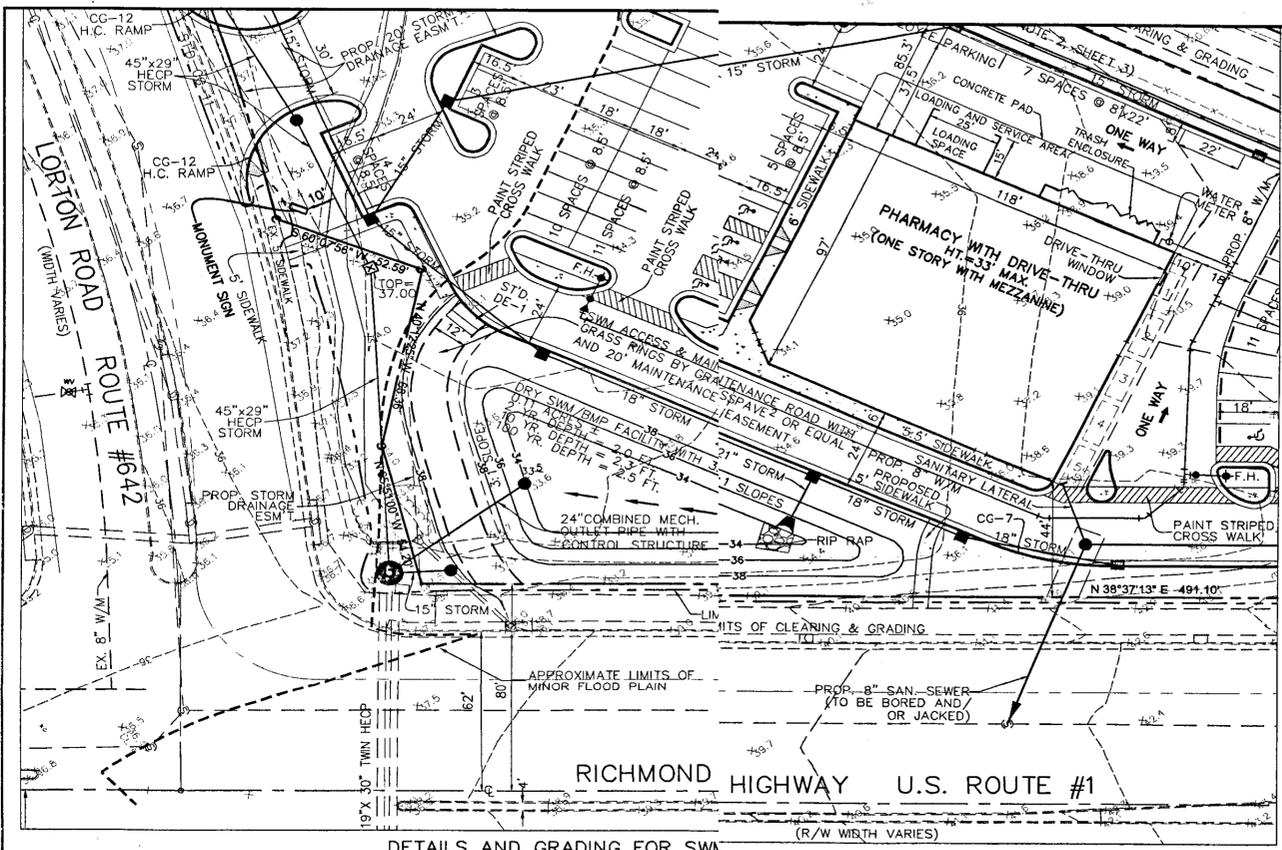
DATE: AUGUST, 2006

REVISIONS:
DPZ REV. 12-20-2007
DPZ REV. 06-02-2008

DESIGN:	CADD:	CHECK:
RLS	DT	RLS

SHEET: 9 OF 12
FILE NO. PL-3802

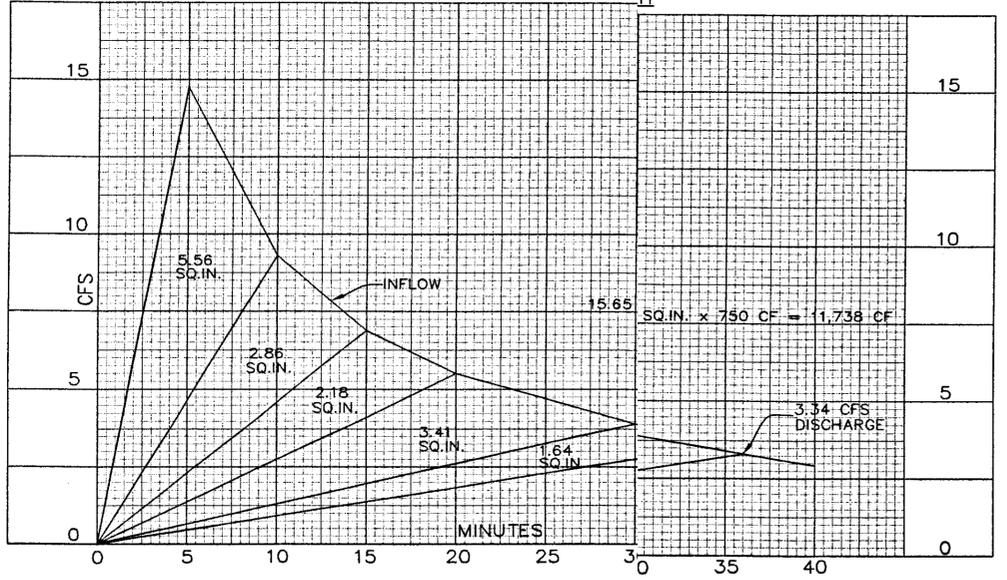




DETAILS AND GRADING FOR SWM/BMP FACILITY
SCALE: 1" = 30'

Application No PCA-1993-V-028-02 Staff S.W.
APPROVED DEVELOPMENT PLAN
(DP) (CDP) (CDP) (FDP)
SEE PROFFERS DATED Oct 14, 2008
Date of (BOS) (PC) Approval Nov 17, 2008
Sheet 12 of 12
(Concurrent w/ SE-2007-MV-031
See Dev Conds. dated Nov 17, 2008)

10 YEAR STORAGE HYDROGRAPH



- Pre-Development Runoff:
3.58 AC. X 0.20 X 5.92 = 4.24Q10
3.29Q2
- Uncontrolled Runoff:
0.08 AC. @ 0.90 X 7.27 = 0.52Q10
0.15 AC. @ 0.35 X 7.27 = 0.38Q10
0.90Q10 0.67Q2
- Allowed Discharge From SWM Facility:
4.24 Q10 - 0.90Q10 = 3.34 CFS10
3.29 Q10 - 0.67Q10 = 2.62 CFS2
- SWM Facility Storage Volume:

Elevation	End Area	Avg. Area	Depth	Volume	Accum Volume
33.60	0	0	0	0	0
34.00	2,720	1,360	0.40	544	544
36.00	4,390	3,555	2.00	7,110	7,654
38.00	6,740	5,565	2.00	11,130	18,784
38.60	7,280	7,010	0.60	3,505	22,289

Top of DAM = 38.60
10 year storage volume required from Hydrograph is 11,738 cu.ft. which is at elevation = 36.60±

5. B.M.P. Storage:
Site Area = 3.58 Acres
Site Imperviousness:
2.16 IMP.AC. = 60.34% Impervious
3.58 AC.

Storage (CF/Acre) = 4375 (C) - 875
(From P.F.M., Chart A6-40, 1988)
4375 cu.ft. (0.6034) - 875 cu.ft. = 1,765 cu.ft./Acre
3.58 Acres X 1,765 cu.ft./Acre = 6319 cu.ft. of B.M.P. Storage Required
B.M.P. Storage Volume of 6319 cu.ft will occur at elevation = 35.65±

WOODS OF FAIRFAX
POND DATA

	POND #1	POND #2	POND #3
POND INV.	35.3	31.0	
Normal W.L.		36.0	39.8
PIPE @ W.L.	36" C.M.P.	8" φ	6" φ
STANDPIPE		15" φ	15" φ
" INV.		33.7 (2.7')	49.8 (10')
DISCHARGE PIPE		12" φ	12" φ
" INV.		36.0	39.8
MAX. ALLOW. W.L.	2.9 (38.20)	5.5 (41.50)	17.2 (57.00)
2 YR STORM			
PEAK TIME (MIN)	45	110	110
PEAK RATE (CFS)	10.0	2.36	2.82
W.S. ELEV.	1.44 (36.74)	15.7 (37.57)	4.8 (44.60)
10 YR STORM			
PEAK TIME (MIN)	45	110	120
PEAK RATE (CFS)	17.9	5.5	4.0
W.S. ELEV.	2.07 (37.37)	2.82 (38.32)	9.4 (49.20)
100 YR STORM			
PEAK TIME (MIN)	45	120	120
PEAK RATE (CFS)	24.8	8.4	13.2
W.S. ELEV.	2.53 (37.83)	5.00 (41.00)	15.20 (55.00)
PRE-COAST POND @ EX. 36" C.M.P. (35.3)			
PEAK TIME (MIN)	95	95	
PEAK RATE (CFS)	17.9	34.0	
W.S. ELEV.	2.05 (37.35)	3.10 (38.40)	

NOTE: ALL DATA ATTACHED WAS REPRODUCED FROM THE STORM WATER DETENTION COMPUTATIONS, WOODS OF FAIRFAX, PHASE II, FAIRFAX COUNTY # 4451-SP-01-2

Storm Outfall Narrative:
Lorton corner site is 3.58 acres and is located in Mount Vernon district. The current zoning for the site is C-5 with projected use of a drive through pharmacy and a bank. Subject site is within the Phoick Creek watershed and drains into a tributary of Phoick creek.
To the north of the property there is an existing SWM facility that drains through the site via an existing swale. A majority of the site also drains to this swale and the runoff is then conveyed to existing twin pipe culverts that conveys the runoff under Richmond Hwy (Route #1) to an existing minor flood plain at the East side of route #1. Runoff from site will be directed to a proposed SWM/BMP facility that will provide reduction in peak flow and provide Best Management Practices for the site. Run off from the proposed pond will be directed to the existing twin culverts under Richmond Hwy. Immediately at the outfall point for the existing twin culverts we find the point of confluence. As required by FPM we have provided analysis for three cross sections down stream of the point of confluence, (see sheet 12). Per definition the outfall is an existing Bed & bank channel with a very uniform size, depth and shape, as indicated by the cross sections shown on the plan. The alignment of the existing channel is very straight for three hundred feet below Route #1 with slight meandering in the remainder of the outfall (see attached topographical survey of the outfall). The channel and banks consist of a mixture of alluvial silt material with some sand and gravel which appears to be stable in its present state. The maximum allowable velocity for this type of soil from table 1A of Erosion & Sediment handbook is 3.5 fps. All velocities calculated for the 2 year storm are well below the permissible velocity and also as shown on sheet 12, also, there is capacity for the 10 year storm event in the existing outfall channel.
Given the above and per guidelines specified in section 6-0203.3 of PFM it is our opinion that adequate outfall exists for the above referenced site and proposed development of the subject site will not create any adverse impact or flooding of any existing structure down stream of the site.

SWM/BMP Narrative:
SWM and BMP will be provided for the site in the form of a dry extended detention facility. The dry detention facility will provide reduction in peak flows and will provide for the 2 year and 10 year storm events. The post development rate of discharge from site will be reduced to less than the runoff for the entire site in existing condition. Best Management Practices (40% removal rate) will be provided in a form of Dry extended facility (see BMP comp on this sheet).

100 Year Overland Narrative
100 year storm event will be conveyed through the site utilizing the limited capacity of the proposed storm sewer system and the surface capacity of the travel lanes through out the site to the low point at intersection of Route #1 and Lorton road. From this point the 100 year storm event will be discharged to an existing minor flood plain at the east side of Route #1.

BMP Facility Design Calculations

Plan Name: Lorton Corner
Plan Number: PCA 93-V-028-2
Date: 012-19-2007
Engineer: RLS

I. Water Quality Narrative
See narratives attached herewith!

II. Watershed Information

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

Subarea Designation and Description	"C" (1)	Acres (3)
(1) ONSITE CONTROLLED	1.87	0.90
(2) ONSITE CONTROLLED	1.37	0.35
(3) ONSITE UNCONTROLLED	0.08	0.90
(4) ONSITE UNCONTROLLED	0.26	0.35
(5) OFFSITE CONTROLLED (EXISTING TRAIL)	0.18	0.90
(6) OFFSITE CONTROLLED	0.18	0.35

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

APPENDIX 4-5

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

(A) Area of the site	(a) 3.58	acres
(B) Subarea Designation	"C"	Acres
(1) ONSITE CONTROLLED	1.87 X 0.90	= 1.683
(2) ONSITE CONTROLLED	1.37 X 0.35	= 0.480
(3) ONSITE UNCONTROLLED	0.08 X 0.90	= 0.072
(4) ONSITE UNCONTROLLED	0.26 X 0.35	= 0.091
(5) OFFSITE CONTROLLED (EX TRAIL)	0.18 X 0.90	= 0.162
(6) OFFSITE CONTROLLED	0.18 X 0.35	= 0.063
(b) Total =	2.551	
(c) Weighted average "C" factor	(b) / (a) = (c)	0.712

Part 3: Compute the Total Phosphorus Removal for the Site

Subarea Designation (1)	BMP Type (2)	Removal Eff. (%) (3)	Area Ratio (4)	"C" Factor (5)	Product (6)
(1) ONSITE CONTROLLED	DRY	40%	X 1.87/3.58	X 0.90/0.712	= 26.41
(2) ONSITE CONTROLLED	DRY	40%	X 1.37/3.58	X 0.35/0.712	= 7.52
(3) ONSITE UNCONTROLLED	DRY	100%	X 0.18/3.58	X 0.90/0.712	= 6.36
(4) ONSITE UNCONTROLLED	DRY	100%	X 0.18/3.58	X 0.35/0.712	= 2.47

(a) Total = 42.76

Huntley, Nyce & Associates, Ltd.
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OTHER OFFICES:
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ROBERT R. NYCE
Lic. No. 44833
7-9-08
PROFESSIONAL ENGINEER

LORTON CORNER
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

DETAILS AND GRADING FOR SWM/BMP FACILITY, STORAGE VOLUMES FOR STORM DETENTION AND B.M.P.'s, B.M.P. COMPUTATIONS, AND NARRATIVE FOR B.M.P.'s, THE STORM DRAINAGE OUTFALL, AND OVERLAND RELIEF.

SCALE: 1" = 30'
DATE: 01-29-07
REVISIONS:
REV. 12-20-2007
REV. 07-30-2008
REV. 09-09-08

DESIGNED BY: RLS
CHECKED BY: RLS
DATE: 10 OF 12
PROJECT: PL-3802

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COMMONWEALTH OF VIRGINIA
 ROBERT L. SPROLES
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 7-30-08
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LORTON CORNER
 MT. VERNON DISTRICT
 FAIRFAX COUNTY, VIRGINIA

DRAINAGE DIVIDES EXHIBIT, EXISTING DAM AND EX. 36" CULVERT
 PROFILE, AND DETAIL OF REMOVABLE WALL PANEL

SCALE: AS SHOWN
 DATE: 01-29-07
 REVISIONS:
 DPZ REV. 12-20-2007
 SWM REV. 7-30-2008
 DPWES REV. 07-30-08

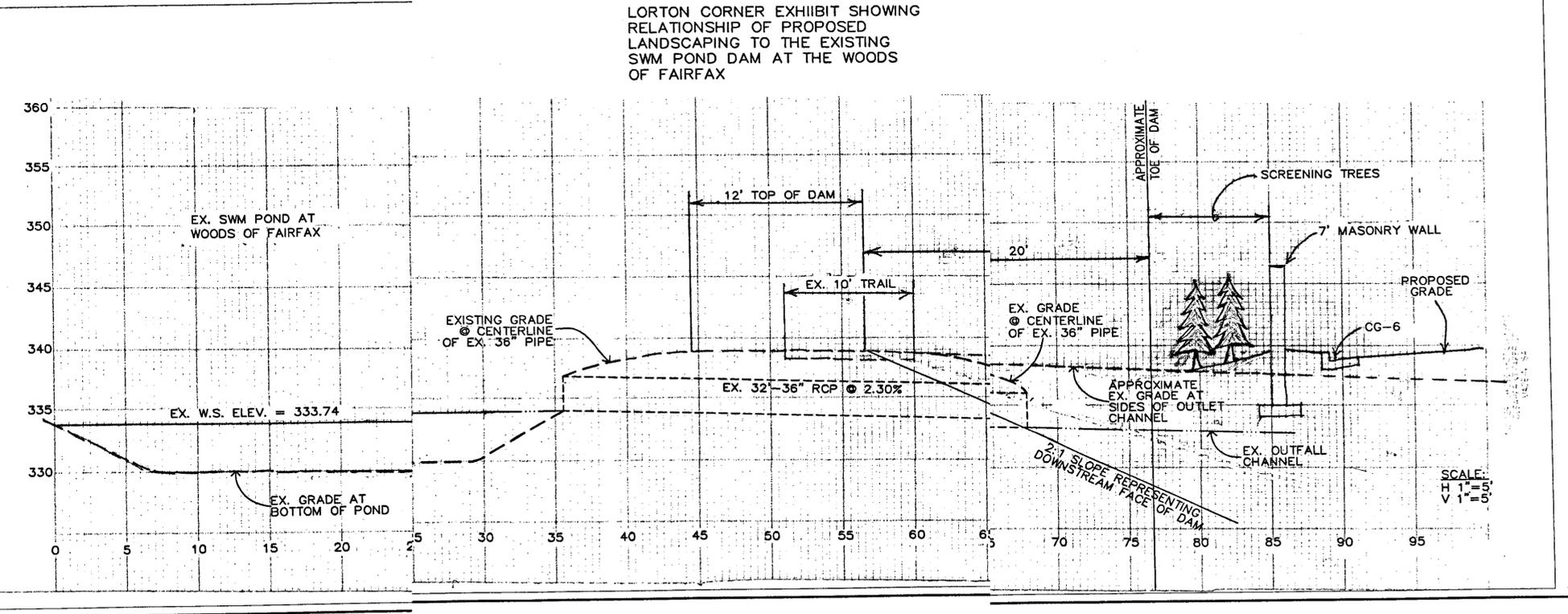
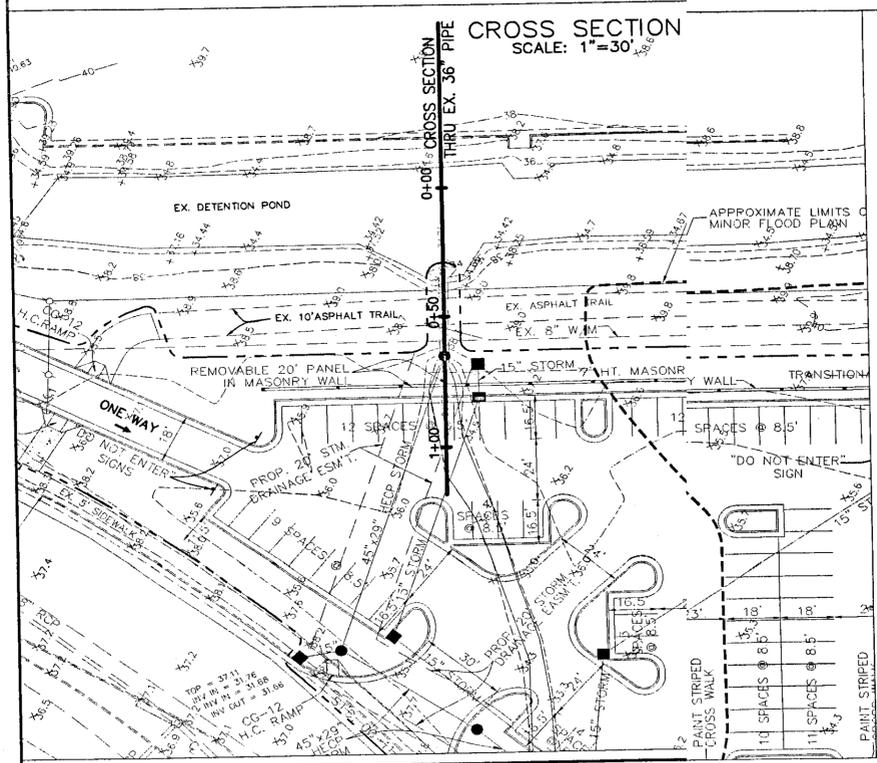
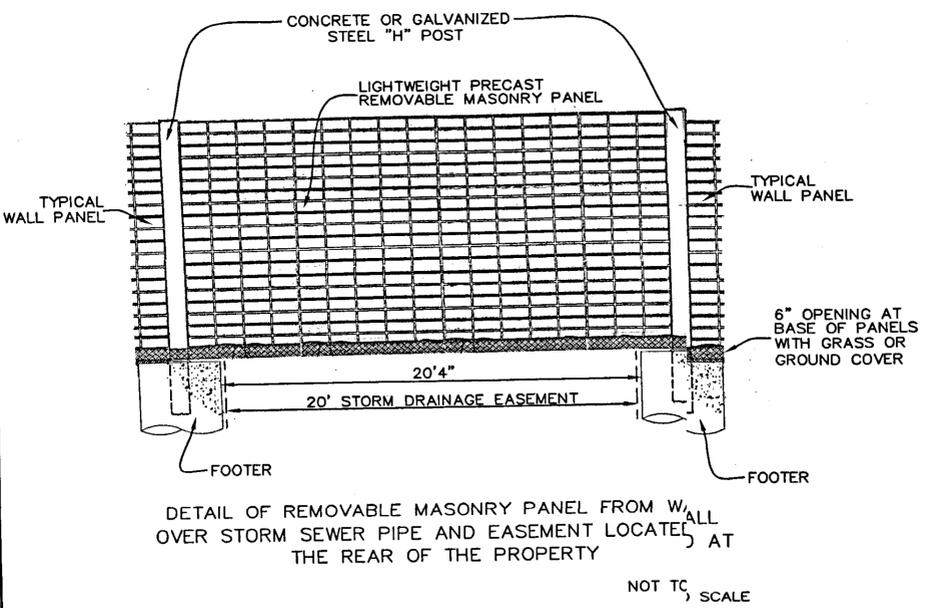
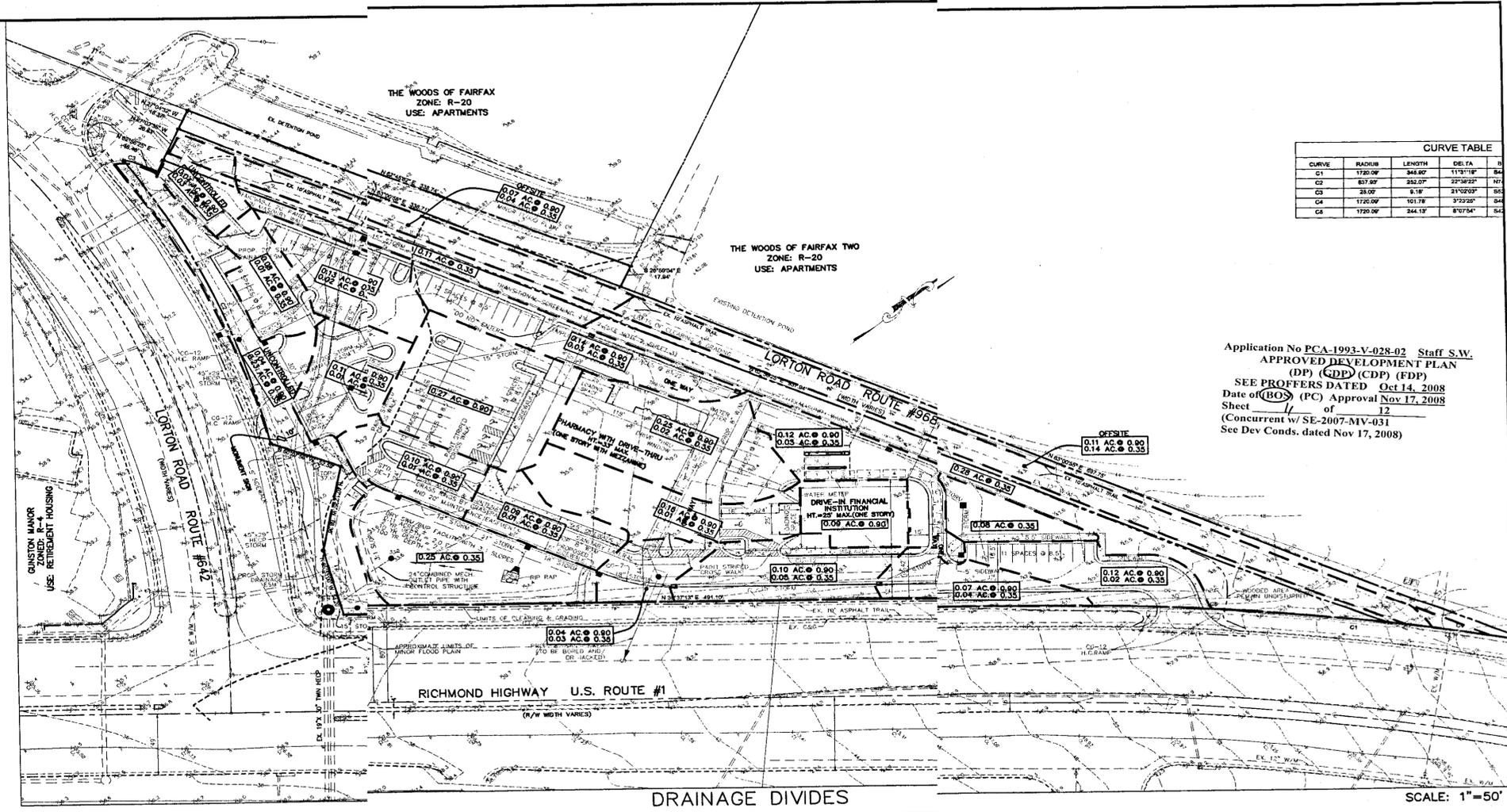
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 CADD: DT
 CHECK: RLS

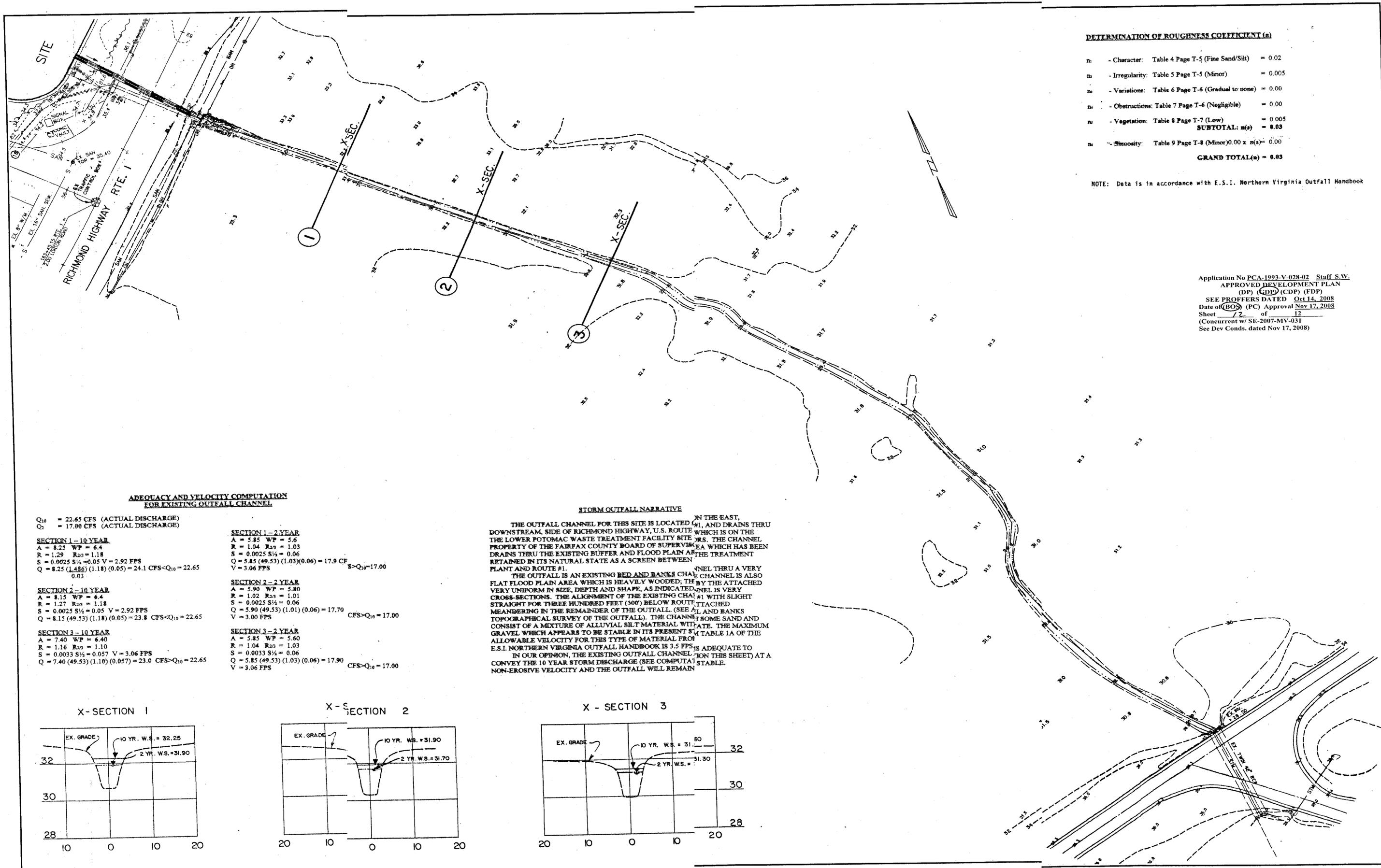
SHEET: 11 OF 12
 FILE NO. PL-3802

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	PI
C1	1120.00'	346.80'	171°31'18"	84
C2	837.67'	252.07'	22°49'22"	87
C3	28.00'	6.18'	21°02'03"	88
C4	1720.00'	101.78'	3°23'22"	84
C5	1720.00'	244.13'	8°17'54"	84

Application No PCA-1993-V-028-02 Staff S.W.
 APPROVED DEVELOPMENT PLAN
 (DP) (DDP) (DDP) (DDP)
 SEE PROFFERS DATED Oct 14, 2008
 Date of (BOS) (PC) Approval Nov 17, 2008
 Sheet of 12
 (Concurrent w/ SE-2007-MV-031
 See Dev Conds. dated Nov 17, 2008)





DETERMINATION OF ROUGHNESS COEFFICIENT (n)

n	- Character:	Table 4 Page T-5 (Fine Sand/Silt)	= 0.02
n	- Irregularity:	Table 5 Page T-5 (Minor)	= 0.005
n	- Variations:	Table 6 Page T-6 (Gradual to none)	= 0.00
n	- Obstructions:	Table 7 Page T-6 (Negligible)	= 0.00
n	- Vegetation:	Table 8 Page T-7 (Low)	= 0.005
			SUBTOTAL: n(s) = 0.03
n	- Smoothness:	Table 9 Page T-8 (Minor) 0.00 x n(s)	= 0.00
			GRAND TOTAL(n) = 0.03

NOTE: Data is in accordance with E.S.I. Northern Virginia Outfall Handbook

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 APPROVED DEVELOPMENT PLAN
 (DP) (GDP) (CDP) (FDP)
 SEE PROFFERS DATED Oct 14, 2008
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ADEQUACY AND VELOCITY COMPUTATION FOR EXISTING OUTFALL CHANNEL

Q ₁₀ = 22.65 CFS (ACTUAL DISCHARGE)	SECTION 1 - 2 YEAR
Q ₂ = 17.00 CFS (ACTUAL DISCHARGE)	A = 5.85 WP = 5.6
	R = 1.04 R ₂₅ = 1.03
	S = 0.0025 S _{1/4} = 0.06
	Q = 5.85 (49.53) (1.03)(0.06) = 17.9 CFS
	V = 3.06 FPS
	S-Q ₁₀ = 17.00
	SECTION 2 - 2 YEAR
	A = 5.90 WP = 5.80
	R = 1.02 R ₂₅ = 1.01
	S = 0.0025 S _{1/4} = 0.06
	Q = 5.90 (49.53) (1.01)(0.06) = 17.70 CFS
	V = 3.00 FPS
	S-Q ₁₀ = 17.00
	SECTION 3 - 2 YEAR
	A = 5.85 WP = 5.60
	R = 1.04 R ₂₅ = 1.03
	S = 0.0033 S _{1/4} = 0.06
	Q = 5.85 (49.53) (1.03)(0.06) = 17.90 CFS
	V = 3.06 FPS
	S-Q ₁₀ = 17.00

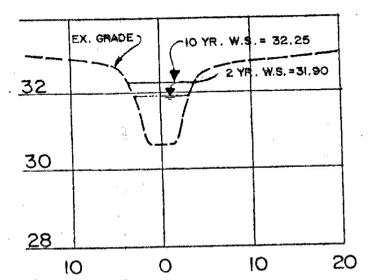
STORM OUTFALL NARRATIVE

ON THE EAST, DOWNSTREAM, SIDE OF RICHMOND HIGHWAY, U.S. ROUTE #1, AND DRAINS THRU THE LOWER POTOMAC WASTE TREATMENT FACILITY SITE. THE CHANNEL PROPERTY OF THE FAIRFAX COUNTY BOARD OF SUPERVISORS, WHICH HAS BEEN DRAINS THRU THE EXISTING BUFFER AND FLOOD PLAIN AT THE TREATMENT PLANT AND ROUTE #1.

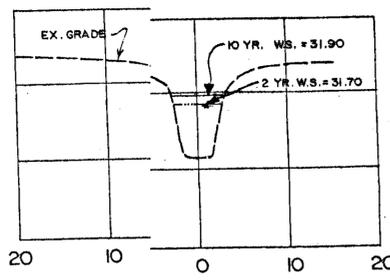
THE OUTFALL IS AN EXISTING BED AND BANKS CHANNEL THRU A VERY FLAT FLOOD PLAIN AREA WHICH IS HEAVILY WOODED; THE CHANNEL IS ALSO VERY UNIFORM IN SIZE, DEPTH AND SHAPE, AS INDICATED BY THE ATTACHED CROSS-SECTIONS. THE ALIGNMENT OF THE EXISTING CHANNEL IS VERY STRAIGHT FOR THREE HUNDRED FEET (300') BELOW ROUTE #1 WITH SLIGHT MEANDERING IN THE REMAINDER OF THE OUTFALL. (SEE ATTACHED TOPOGRAPHICAL SURVEY OF THE OUTFALL). THE CHANNEL BED AND BANKS CONSIST OF A MIXTURE OF ALLUVIAL SILT MATERIAL WITH SOME SAND AND GRAVEL WHICH APPEARS TO BE STABLE IN ITS PRESENT STATE. THE MAXIMUM ALLOWABLE VELOCITY FOR THIS TYPE OF MATERIAL FROM TABLE 1A OF THE E.S.I. NORTHERN VIRGINIA OUTFALL HANDBOOK IS 3.5 FPS.

IN OUR OPINION, THE EXISTING OUTFALL CHANNEL IS ADEQUATE TO CONVEY THE 10 YEAR STORM DISCHARGE (SEE COMPUTATIONAL TABLE) AT A NON-EROSIVE VELOCITY AND THE OUTFALL WILL REMAIN STABLE.

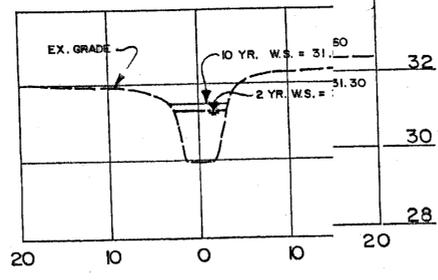
X-SECTION 1



X-SECTION 2



X-SECTION 3



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OUTFALL ANALYSIS OF EXISTING CHANNEL BELOW ROUTE # 1

SCALE: 1" = 30'

DATE: 01-29-07

REVISIONS:
 DPZ REV. 12-20-2007
 DPWES REV. 06-02-2008

DESIGN:	CADD:	CHECK:
RLS	DT	RLS

SHEET: 12 OF 12
 FILE NO. PL-3802