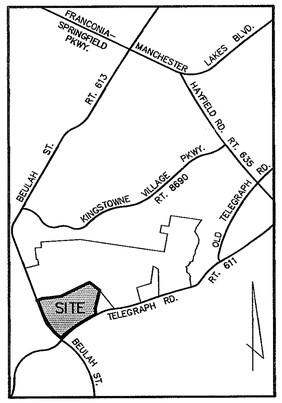
HILLTOP VILLAGE CENTER

Lee District Fairfax County, Virginia

Conceptual Development Plan Amendment / Final Development Plan Amendment CDPA / FDPA



VICINITY MAP
SCALE : 1"= 2,000'

Applicant:
WRI Hilltop Village, LLC
9420 Forum Drive, Suite 101
Raleigh, NC 27615

Application No PCA/FDPA 2008-MD-003 Staff Mayland
APPROVED DEVELOPMENT PLAN
(CDPA) (FDPA)
See PROFFERS dated June 27, 2012
Date of (BOS) Approval July 31, 2012
Date of (PC) Approval July 26, 2012
Sheet 1 of 13
FDP Conditions dated 12, 2012

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HILLTOP VILLAGE CENTER
Conceptual Development Plan Amendment /
Final Development Plan Amendment
CDPA / FDPA

Dewberry
Dewberry & Davis LLC
8401 ARLINGTON BLVD.
FAIRFAX, VA 22031
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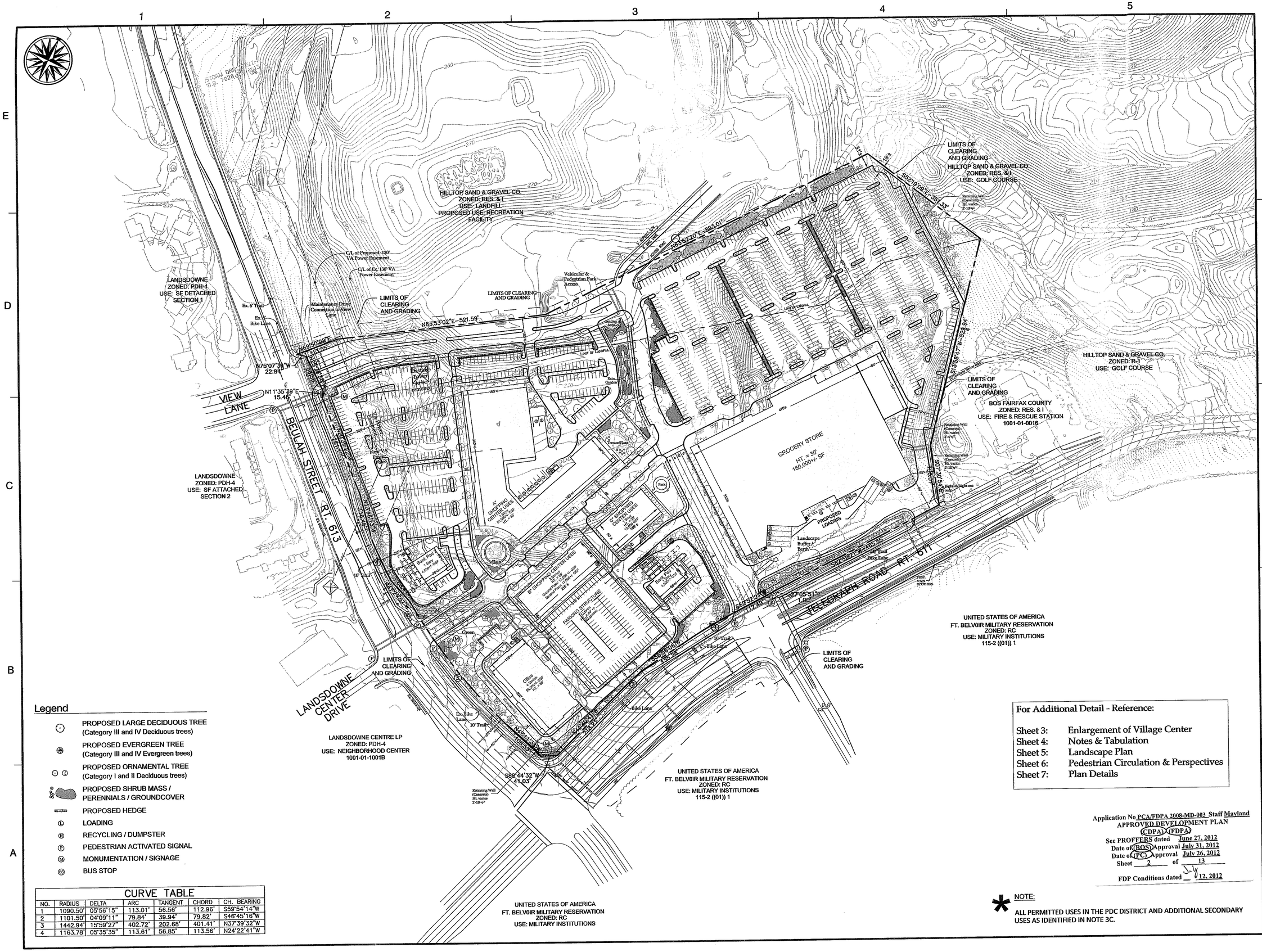
SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
Lic. No. 044512
6-6-2012
PROFESSIONAL ENGINEER

RECEIVED
Department of Planning & Zoning
JUN 06 2012
Zoning Evaluation Division

Revised June 6, 2012
Revised March 13, 2012
February 17, 2012

M-10804



Legend

- PROPOSED LARGE DECIDUOUS TREE (Category III and IV Deciduous trees)
- PROPOSED EVERGREEN TREE (Category III and IV Evergreen trees)
- PROPOSED ORNAMENTAL TREE (Category I and II Deciduous trees)
- PROPOSED SHRUB MASS / PERENNIALS / GROUNDCOVER
- PROPOSED HEDGE
- (L) LOADING
- (R) RECYCLING / DUMPSTER
- (P) PEDESTRIAN ACTIVATED SIGNAL
- (M) MONUMENTATION / SIGNAGE
- (BS) BUS STOP

CURVE TABLE

NO.	RADIUS	DELTA	ARC	TANGENT	CHORD	CH. BEARING
1	1090.50'	05°56'15"	113.01'	56.56'	112.96'	S59°54'14"W
2	1101.50'	04°09'11"	79.84'	39.94'	79.82'	S46°45'16"W
3	1442.94'	15°59'27"	402.72'	202.68'	401.41'	N37°39'32"W
4	1163.78'	05°35'35"	113.61'	56.85'	113.56'	N24°22'41"W

For Additional Detail - Reference:

Sheet 3:	Enlargement of Village Center
Sheet 4:	Notes & Tabulation
Sheet 5:	Landscape Plan
Sheet 6:	Pedestrian Circulation & Perspectives
Sheet 7:	Plan Details

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Sheet 2 of 13
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* NOTE:

ALL PERMITTED USES IN THE PDC DISTRICT AND ADDITIONAL SECONDARY USES AS IDENTIFIED IN NOTE 3C.

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HILLTOP VILLAGE CENTER

CONCEPTUAL DEVELOPMENT PLAN
AMENDMENT / FINAL DEVELOPMENT PLAN AMENDMENT
CDPA / FDPA

LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
Lic. No. 044542
6-6-2012
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

0' 100' 200'

No.	DATE	BY	Description
2	06.06.12	DMC	Landscape Revision
1	03.13.12	ARC	

REVISIONS

DRAWN BY ARC
APPROVED BY
CHECKED BY DMC
DATE February 17, 2012

TITLE

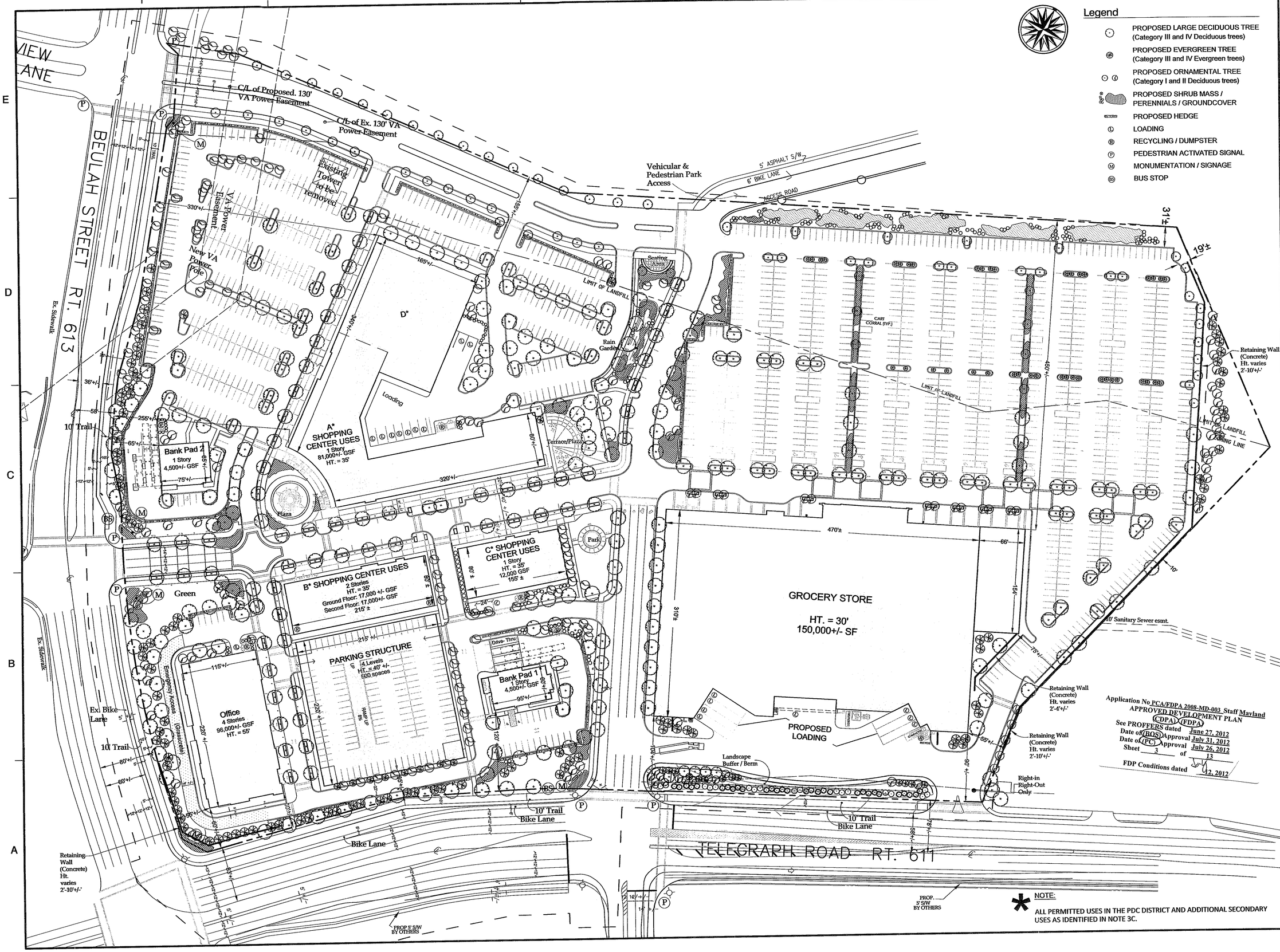
HILLTOP VILLAGE CENTER
Conceptual Development Plan Amendment / Final Development Plan Amendment
CDPA / FDPA

PROJECT NO.

2

SHEET NO. 2 OF 13

M-10804



* NOTE:
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HILLTOP
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CONCEPTUAL DEVELOPMENT PLAN
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LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

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COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
Lic. No. 044542
6-6-12
PROFESSIONAL ENGINEER

KEY PLAN

SCALE
0' 60' 120'

No.	DATE	BY	Description
2	06.06.12	DMC	Landscape Revision
1	03.13.12	ARC	

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TITLE
HILLTOP VILLAGE CENTER
Conceptual Development Plan
Amendment / Final Development
Plan Amendment
CDPA / FDPA Enlargement

PROJECT NO.

3

SHEET NO. 3 OF 13

M-10804

NOTES:

1. THE PROPERTY THAT IS THE SUBJECT OF THIS CONCEPTUAL DEVELOPMENT PLAN AMENDMENT / FINAL DEVELOPMENT PLAN AMENDMENT (CDPA / FDPA) IS IDENTIFIED ON THE FAIRFAX COUNTY TAX MAPS AS 100-1 ((1)) 9A, 11A, 11A1, 14 AND 15 AND CONTAINS A TOTAL OF 31.87 ACRES. THE PROPERTY IS LOCATED IN THE LEE MAGISTERIAL DISTRICT.

2. THE PROPERTY IS ZONED PLANNED DEVELOPMENT COMMERCIAL (PDC) DISTRICT TO PERMIT THE ESTABLISHMENT OF A MIXED USE DEVELOPMENT WHICH INCLUDES OFFICE AND RETAIL SALES ESTABLISHMENTS, INCLUDING RETAIL SALES ESTABLISHMENT- LARGE, AND OTHER PERMITTED USES.

3. THE CDPA / FDPA HAS BEEN FILED TO:

   a. ADD 15,000± (A MEZZANINE LEVEL) WITHIN THE PREVIOUSLY APPROVED 65,000± 1 STORY RETAIL BUILDING, (BUILDING "D") MAINTAINING THE 35' HEIGHT AND INCREASING THE TOTAL SQUARE FOOTAGE OF BUILDING "D" TO 81,000± GSF.

   b. MODIFY THE PERMITTED USES WITHIN THE 17,000± GSF ON THE SECOND FLOOR OF BUILDING "B".

   c. EXPAND THE PERMITTED SECONDARY USES WITHIN THE VILLAGE CENTER TO INCLUDE: HEALTH CLUBS, CHILD CARE CENTERS AND NURSERY SCHOOLS, COLLEGES/UNIVERSITIES, FAST FOOD RESTAURANTS, PRIVATE SCHOOLS OF SPECIAL EDUCATION, QUICK SERVICE FOOD STORES, VETERINARY HOSPITALS.

   d. MODIFY THE LANDSCAPE BUFFER ALONG TELEGRAPH ROAD, SOUTH OF THE PROPOSED RETAIL SALES ESTABLISHMENT-LARGE, TO REFLECT EASEMENTS ASSOCIATED WITH THE WIDENING OF TELEGRAPH ROAD.

4. THE CDPA / FDPA IS COMPRISED OF UP TO 96,000 SQUARE FEET OF GROSS FLOOR AREA (GFA) OF OFFICE SPACE, 286,000 SQUARE FEET OF GFA OF SHOPPING CENTER USES. THE SHOPPING CENTER SHALL BE COMPRISED OF ALL PERMITTED USES IN THE PDC DISTRICT AND THOSE SECONDARY USES IDENTIFIED HEREIN. A PROFFERED CONDITION AMENDMENT (PCA) HAS BEEN FILED TO ACCOMPANY THIS CDPA / FDPA.

5. THE TOPOGRAPHIC INFORMATION HEREON IS FROM AERIAL SURVEY, AT TWO FOOT CONTOUR ELEVATIONS, FROM VIRGINIA RESOURCE MAPPING FLOWN IN DECEMBER 2007.

6. THE BOUNDARY INFORMATION IS FIELD RUN BY DEWBERRY & DAVIS LLC.

7. A STATEMENT THAT CONFIRMS THE OWNERSHIP OF THE PROPERTY AND THE NATURE OF THE APPLICANT'S INTEREST IS THE SAME IS PROVIDED IN A SEPARATE ASSOCIATED DOCUMENT.

8. PUBLIC UTILITIES ARE AVAILABLE TO THE SITE AND WILL BE EXTENDED AS REQUIRED BY THE PROJECT.

9. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO GRAVES ON THE SUBJECT PROPERTY.

10. THERE IS NO FLOODPLAIN, RESOURCE PROTECTION AREA (RPA) OR ENVIRONMENTAL QUALITY CORRIDOR (EQC) ON THE SUBJECT PROPERTY.

11. THERE ARE EXISTING STRUCTURES ON THE SUBJECT PROPERTY AS SHOWN HEREON. NONE OF THESE STRUCTURES ARE REGISTERED AS HAVING HISTORIC OR ARCHITECTURAL SIGNIFICANCE. THESE STRUCTURES WILL BE REMOVED AS PART OF THE DEVELOPMENT PROCESS. THERE IS AN EXISTING BALLFIELD WHICH WILL BE RELOCATED TO THE PROPOSED RECREATION COMPLEX IMMEDIATELY NORTH OF THE SUBJECT APPLICATION AREA.

12. THERE IS A UTILITY GREATER THAN TWENTY-FIVE (25) FEET ON THE SUBJECT PROPERTY IN THE FORM OF A 130 FOOT VEPCO EASEMENT WHICH HOUSES OVERHEAD TRANSMISSION LINES. THE EXISTING TOWER IN THE NORTHWEST CORNER OF THE SUBJECT PROPERTY IS PROPOSED FOR RELOCATION WHICH WILL RESULT IN ADJUSTMENT TO THE UTILITY EASEMENT ALIGNMENT AS DEPICTED ON THE GRAPHIC. IN ADDITION, THERE ARE NO MAJOR UNDERGROUND UTILITIES ON THE SUBJECT PROPERTY.

13. STORMWATER MANAGEMENT WILL BE PROVIDED AND WILL COMPLY WITH THE REQUIREMENTS OF THE PUBLIC FACILITIES MANUAL AS DETERMINED BY THE DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES (DPWES). THIS CDPA / FDPA MAKES NO CHANGES TO COVERAGE, PERVIOUS,OR IMPERVIOUS AREAS IDENTIFIED IN THE APPROVED CDP/FDP ASSOCIATED WITH RZ 2008-MD-003 AND STORMWATER MANAGEMENT WILL BE CONTROLLED BY THE TWO (2) WET PONDS AT THE LOCATIONS IDENTIFIED IN RZ 2008-MD-003.

14. ADJACENT PROPERTIES INCLUDE: A PUBLIC FACILITY (FIRE STATION) ON THE EAST, A GOLF COURSE OPERATION ON TOP OF A CLOSED LANDFILL ON THE EAST AND NORTH, AN ACTIVE CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL ALSO ON THE NORTH, THAT WILL BE CLOSED AND IS PROPOSED FOR CONVERSION TO AN ACTIVE RECREATION FACILITY ONCE THE APPROVED GRADES ARE REACHED. THE SOUTHERN AND WESTERN BOUNDARIES ABUT TELEGRAPH ROAD AND BEULAH STREET, RESPECTIVELY.

15. THE SITE DOES NOT CURRENTLY INCLUDE SCENIC ASSETS WORTHY OF PROTECTION.

16. THE SUBJECT PROPERTY IS IN THE LEHIGH COMMUNITY PLANNING SECTOR (RH-4) IN THE ROSE HILL PLANNING DISTRICT OF AREA IV. THE COMPREHENSIVE PLAN RECOMMENDS PRIVATE RECREATION AND AS AN OPTION RESIDENTIAL USE AT 2-3 DWELLING UNITS PER ACRE, PROVIDED THERE IS SUBSTANTIAL PARCEL CONSOLIDATION AND CONSOLIDATED ACCESS. FURTHER, AS AN OPTION, RETAIL AND OFFICE USE UP TO .3 FAR MAY BE APPROPRIATE ON A TOTAL SITE AREA OF APPROXIMATELY 33 ACRES THAT INCLUDES TAX MAP 100-1 ((1)) 9A, 11A, 11A1, 14 AND 15, SUBJECT TO THE CONDITIONS ENUMERATED IN THE COMPREHENSIVE PLAN (RECOMMENDATION #47).

    THE PROPOSED DEVELOPMENT PROGRAM REVISIONS FOR THE SUBJECT PROPERTY ARE IN CONFORMANCE WITH THE LAND USE RECOMMENDATIONS AS SET FORTH UNDER THE RETAIL-OFFICE OPTION.

17. THE DEVELOPMENT WILL BE CONSTRUCTED IN PHASES. THE EXACT PHASING SCHEDULE WILL BE DICTATED BY MARKET CONDITIONS.

18. THERE ARE PROPOSED IMPROVEMENTS TO THE EXISTING PUBLIC RIGHTS-OF-WAY AS SHOWN HEREON FOR THOSE PORTIONS OF THE PROPERTY THAT HAVE FRONTAGE ON PUBLIC ROADS.

19. A STATEMENT OF THE PUBLIC IMPROVEMENTS PROPOSED AND THE TIMING OF SUCH IMPROVEMENTS WILL BE INCLUDED IN THE PROFFERS.

20. THE COMPREHENSIVE PLAN MAP IDENTIFIES A PEDESTRIAN/BICYCLE TRAIL ALONG THE BEULAH STREET AND TELEGRAPH ROAD FRONTAGES OF THE PROPERTY WHICH ARE AS SHOWN ON THE GRAPHIC.

21. AT A MINIMUM, PARKING WILL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 11 OF THE FAIRFAX COUNTY ZONING ORDINANCE. THE NUMBER AND LOCATION OF ACCESSIBLE PARKING SPACES WILL BE DETERMINED AT TIME OF SITE PLAN SUBMISSION AND WILL BE IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 11. THE APPLICANT RESERVES THE RIGHT TO ADD PARKING SPACES BEYOND WHAT IS SHOWN ON THE CDPA / FDPA PROVIDED THE AMOUNT OF OPEN SPACE AND THE DISTANCE TO THE PERIPHERAL LOT LINES IS NOT DIMINISHED. FURTHERMORE THE APPLICANT RESERVES THE RIGHT TO REQUEST A REDUCTION IN THE NUMBER OF REQUIRED PARKING SPACES AS MAY BE APPROVED BY THE BOARD OF SUPERVISORS IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN SECT. 11-102 OF THE ZONING ORDINANCE.

22. PURSUANT TO PAR. 9 OF SECT. 9-205 OF THE ZONING ORDINANCE, THE APPLICANT SEEKS REAFFIRMATION OF THE PREVIOUSLY APPROVED WAIVER (RZ 2008-MD-003) TO PERMIT SITE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO PARKING, VEHICULAR DRIVES, SIDEWALKS AND LANDSCAPING WITHIN THE LIMITS OF A FORMER LANDFILL PRIOR TO THE STIPULATED TWENTY (20) YEAR PERIOD FROM TERMINATION OF THE LANDFILL OPERATIONS SUBJECT TO THE APPROVAL CRITERIA OF SAID PARAGRAPH 9.

23. PURSUANT TO PAR. 3B OF SECT. 11-202 OF THE ZONING ORDINANCE, THE APPLICANT SEEKS REAFFIRMATION OF THE APPROVED MODIFICATION (RZ 2008-MD-003) TO THE REQUIRED NUMBER AND DISTRIBUTION OF LOADING SPACES. LOADING SPACES SHALL BE PROVIDED AS DEPICTED ON THE GRAPHIC WITH LOADING AREAS FOR THE TWO MAJOR CONCENTRATIONS OF RETAIL SALES ESTABLISHMENTS AUGMENTED BY SERVICING THE STREET SIDE RETAIL AND OFFICE WITH FRONT LOADING AND/OR PROVISIONS WITHIN THE PARKING GARAGE AND A SINGLE OFF STREET LOADING SPACE FOR THE PROPOSED OFFICE BUILDING.

24. PURSUANT TO PAR. 3B OF SECT. 11-202 OF THE ZONING ORDINANCE, THE APPLICANT SEEKS REAFFIRMATION OF THE APPROVED (RZ 2008-MD-003) WAIVER OF LOADING SPACES FOR THE TWO DRIVE-IN BANK FACILITIES.

25. PURSUANT TO PAR 23 OF SECT. 11-104, ANY EATING ESTABLISHMENTS INCLUDED IN THE SHOPPING CENTER, MUST DEMONSTRATE CONFORMANCE TO THE APPLICABLE PARKING STANDARD FOR THAT USE.

26. PURSUANT TO PAR. 1 OF SECT. 13-304 OF THE ZONING ORDINANCE, THE APPLICANT SEEKS REAFFIRMATION OF THE APPROVED WAIVER (RZ 2008-MD-003) OF THE TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS BETWEEN THE DIFFERENT USES WITHIN THE SUBJECT PROPERTY IN FAVOR OF THE LANDSCAPE DEPICTED ON THE GRAPHIC.

27. PURSUANT TO PAR. 1 OF SECT. 13-304 OF THE ZONING ORDINANCE, THE APPLICANT SEEKS REAFFIRMATION OF THE APPROVED (RZ 2008-MD-003) WAIVER OF THE TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS TO THE ADJACENT EXISTING LANDFILL AND FUTURE RECREATION FACILITY ON THE NORTHERN BOUNDARY AND EXISTING GOLF COURSE AND FIRE STATION ON THE EASTERN BOUNDARY.

28. THE PROPOSED IMPROVEMENTS TO THE SITE AND BUILDINGS ARE BASED ON PRELIMINARY DESIGN. THEY ARE SUBJECT TO ADJUSTMENT AND REFINEMENT WITH FINAL ENGINEERING AND ARCHITECTURAL DESIGN SO LONG AS THEY REMAIN IN SUBSTANTIAL CONFORMANCE WITH THE REPRESENTATIONS ON THE CDPA / FDPA. THE TOTAL GROSS FLOOR AREA AND THE BUILDING HEIGHT PRESENTED IN THE TABULATION ARE TO BE CONSIDERED MAXIMUMS. THE OPEN SPACE AS REPRESENTED IN THE TABULATION AND THE DIMENSIONS TO THE PERIPHERAL LOT LINES OF THE PDC DISTRICT AS REPRESENTED ON THE GRAPHIC ARE TO BE CONSIDERED MINIMUMS WITH THE UNDERSTANDING THAT ALL DIMENSIONS SHOWN ON THE GRAPHIC ARE SUBJECT TO MINOR MODIFICATION IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN SECT. 16-403 OF THE ZONING ORDINANCE.

29. PURSUANT TO PAR. 1 OF SECT. 13-304 OF THE ZONING ORDINANCE, THE APPLICANT SEEKS REAFFIRMATION OF THE APPROVED (RZ 2008-MD-003) WAIVER OF THE TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS ALONG THE FRONTAGES OF BEULAH STREET (WESTERN BOUNDARY) AND TELEGRAPH ROAD (SOUTHERN BOUNDARY) IN FAVOR OF THE STREETSCAPE/LANDSCAPE TREATMENT DEPICTED ON THE GRAPHIC. THIS TREATMENT IS INCLUSIVE OF STREET TREES, CONTINUOUS HEDGE PLANTING AND/OR WALL OR FENCE ALONG THOSE SIDES OF THE PARKING AREAS EXPOSED TO THE PUBLIC RIGHTS-OF-WAY AND SUPPLEMENTAL PLANT MATERIAL AS WELL AS THE BERMING, FENCING AND SUPPLEMENTAL SCREEN LANDSCAPING AT THE DEPICTED LOADING AREA ADJACENT TO TELEGRAPH ROAD AS MODIFIED.

30. ON-SITE FACILITIES INCLUDE URBAN STREETSCAPE FEATURES SUCH AS A CENTRAL MAIN STREET, ATTRACTIVELY LANDSCAPED SIDEWALKS AND STRATEGICALLY PLACED OPEN SPACE THAT SERVE AS GATHERING PLACES FOR THE PATRONS AND TENANTS OF THE VILLAGE CENTER. IT IS TO BE UNDERSTOOD THAT ADDITIONAL SITE FEATURES SUCH AS GAZEBOS, TRELLISES, SIGNS, FLAGPOLES, SIDEWALKS/TRAILS, LIGHT STANDARDS, HISTORICAL MARKER, PASSIVE AND ACTIVE RECREATIONS FACILITIES, WALLS, FENCES, SEATING/TABLES AND /OR UTILITY AND MAINTENANCE STRUCTURES MAY BE PROVIDED AS LONG AS THE RESULTANT PROPOSED DEVELOPMENT IS IN SUBSTANTIAL CONFORMANCE WITH THAT REPRESENTED ON THE GRAPHIC.

31. IT IS TO BE UNDERSTOOD THAT DURING THE PHASED CONSTRUCTION, PROPOSED PARKING GARAGE AND BUILDING SITES MAY BE USED FOR INTERIM SURFACE PARKING AREAS FOR THE ADJACENT USES/BUILDINGS ON SITE.

32. PURSUANT TO SECT. 16-410, PAR. 8 OF THE ZONING ORDINANCE, THE APPLICANT SEEKS REAFFIRMATION OF THE APPROVED VARIANCE (RZ 2008-MD-003) IN THE STRICT APPLICATION OF SECTION 6-206 OF THE ZONING ORDINANCE TO ALLOW SECONDARY USES TO EXCEED TWENTY-FIVE PERCENT (25%) OF THE GROSS FLOOR AREA OF ALL PRINCIPAL USES IN THE DEVELOPMENT.

33. FINAL ARCHITECTURAL ELEVATIONS ARE NOT AVAILABLE AT THIS TIME. IT IS UNDERSTOOD THAT SCHEMATIC ELEVATIONS AND CONCEPTUAL PERSPECTIVE SKETCHES INCLUDED IN THIS SUBMISSION ARE ILLUSTRATIVE AND MEANT TO CONVEY A SENSE OF SCALE AND DESIGN INTENT ONLY.

34. THE PROPOSED BUILDINGS MAY HAVE A PENTHOUSE DESIGNED IN PART TO SHIELD THE MECHANICAL EQUIPMENT LOCATED ON THE ROOFS. THE HEIGHT AND ROOF AREA COVERAGE OF THE PENTHOUSES WILL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE ZONING ORDINANCE, WILL BE COMPATIBLE WITH THE HEIGHT AND SCALE OF THE BUILDINGS, AND WILL BE CONSTRUCTED OF MATERIALS THAT ARE AN EXTENSION OF/OR HARMONIOUS WITH THE ARCHITECTURAL MATERIALS.

35. THE PROPOSED USE WILL NOT GENERATE, UTILIZE, STORE, TREAT OR DISPOSE OF ANY HAZARDOUS OR TOXIC SUBSTANCES AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS PARTS 116.4, 302.4 AND 355 WITH THE EXCEPTION OF METHANE GAS, GENERATED BY THE LANDFILL, WHICH WILL BE REGULATED IN ACCORDANCE WITH THE RULES AND POLICIES OF THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE COUNTY FIRE MARSHALL OFFICE; ANY HAZARDOUS WASTE AS SET FORTH IN THE COMMONWEALTH OF VIRGINIA/DEPARTMENT OF WASTE MANAGEMENT VR 672-10-1 - VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATIONS; AND/OR ANY PETROLEUM PRODUCTS AS DEFINED IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 280.

36. IN ACCORDANCE WITH PRIOR APPROVAL THE FLOOR AREA RATIO (FAR) CALCULATIONS ARE BASED ON THE ORIGINAL LAND AREA OF 33 ACRES. THE APPLICANT RESERVES DENSITY CREDIT AS MAY BE PERMITTED BY PROVISIONS OF PAR. 4 OF SECT. 2-308 OF THE ZONING ORDINANCE FOR ALL DEDICATIONS AS MAY BE REASONABLY REQUIRED BY FAIRFAX COUNTY OR VDOT.

37. TO THE BEST OF OUR KNOWLEDGE, THE PROPOSED DEVELOPMENT CONFORMS TO ALL CURRENT APPLICABLE LAND DEVELOPMENT ORDINANCES AND ADOPTED STANDARDS EXCEPT AS NOTED HEREON.

38. THE LANDSCAPING PROPOSED ON TELEGRAPH ROAD IN THE REAR OF THE PROPOSED GROCERY STORE IS SUBJECT TO REVIEW AND APPROVAL FROM DOMINION VIRGINIA POWER.

39. THE OFF-SITE IMPROVEMENTS ALONG TELEGRAPH ROAD ARE SUBJECT TO THE RECEIPT OF NECESSARY LETTER OF PERMISSION AND/OR EASEMENT FROM THE U.S. GOVERNMENT.

TABULATION:

EXISTING ZONING : PDC
PROPOSED ZONING: PDC

LAND AREA OF THE ORIGINAL CDP/FDP (RZ2008-MD-003):	33.0 ± AC (3)
LAND AREA DEDICATED	1.13 ± AC
LAND AREA OF SUBJECT CDPA / FDPA:	31.87 ± AC

OFFICE.....96,000 SF
PERMITTED SECONDARY USES AND SHOPPING CENTER (1) (2).....286,000 SF
TOTAL GROSS FLOOR AREA.....382,000 SF

MAXIMUM PERMITTED FLOOR AREA RATIO (FAR).....1.5
MAXIMUM PROPOSED FLOOR AREA RATIO (FAR)..... 0.2657 (3)

PARKING SPACES REQUIRED (1).....1432 SP
OFFICE BUILDING .....288 SP
(96,000SF/ 1000 x 3 PER)

SHOPPING CENTER (2) .....1144 SP
(286,000 SF / 1000 x 4 PER)

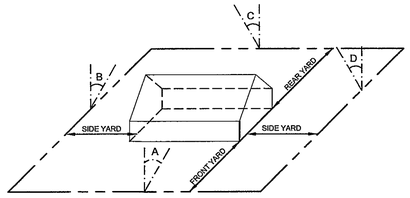
PARKING SPACES PROVIDED.....1855 SP
STRUCTURED..... 500 SP
SURFACE.....1355 SP

LANDSCAPED OPEN SPACE REQUIRED (15%).....215,622± SF (3)
LANDSCAPED OPEN SPACE PROVIDED (20%) ..... 298,347± SF (3)

(1) TWO (2) DRIVE-IN BANK FACILITIES (4,500 SF EA x 2 = 9,000 SF) ARE INCLUDED IN THE SHOPPING CENTER GROSS SQUARE FOOTAGE. DRIVE-IN BANK STACKING SPACES ARE SHOWN ON THE GRAPHIC IN ACCORDANCE WITH THE PAR. 5 OF SECT. 11-104 OF THE ZONING ORDINANCE.

(2) AS CITED IN NOTE 26, PARKING FOR EATING ESTABLISHMENTS IS NOT INCLUDED IN THE SHOPPING CENTER PARKING STANDARD AS IDENTIFIED IN PAR. 23 OF SECT. 11-104 OF THE ZONING ORDINANCE. INCLUSION OF ANY EATING ESTABLISHMENTS IN THE TENANCY OF THE CENTER WILL REQUIRE A DEMONSTRATION OF THE ADEQUACY OF PARKING BASED ON THE APPLICABLE STANDARDS OF SECT. 11-104.

(3) SEE NOTE 36.



FRONT YARD : ∠.1 A 45° WITH A BUILDING HEIGHT OF 60', THE FRONT YARD = 60' BUT NOT LESS THAN 40'

SIDE YARD : ∠.1 B NO REQUIREMENT

REAR YARD : ∠.1 C 20'

ANGLE OF BULK PLANE

MINIMUM REQUIRED YARD FOR BUILDING WITH 60' HEIGHT

NOTE:
THERE IS NO ANGLE OF BULK PLANE REQUIREMENT FOR THE PDC DISTRICT. THIS GRAPHIC DEPICTION IS OF THE C-6 DISTRICT CONSIDERATION OF THE PROPOSED RETAIL / COMMERCIAL COMMUNITY AT THE PERIPHERAL BOUNDARY LINES AND THE DESIGN STANDARD SET FORTH IN PAR. 1 OF SECTION 16-102 OF THE ZONING ORDINANCE.

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LEE DISTRICT
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SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER L. DEPASCALE
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KEY PLAN

SCALE

No.	DATE	BY	Description
2	06.06.12	DMC	EDIT/ ADD NOTES #38 & 39.
1	03.13.12	ARC	

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TITLE

HILLTOP VILLAGE CENTER

Conceptual Development Plan / Amendment / Final Development Plan Amendment

Notes and Tabulation

PROJECT NO.

4

SHEET NO. 4 OF 13

M-10804

Preliminary Tree Cover Tabulation

GROSS SITE AREA.....(31.87 AC) 1,388,257 SF±
TREE COVER REQUIRED (10% FOR PDC).....138,825 SF±
PRELIMINARY AREA OF EXISTING TREES TO REMAIN.....2,372 SF±
2,372 SF X 1.25.....2,965 SF±
PRELIMINARY AREA OF PROPOSED LANDSCAPING.....95,650 SF±
335 TREES @ AVG. 175 SF EA = 58,625;
130 TREES @ AVG. 125 SF EA = 16,250;
271 TREES @ AVG. 75 SF EA = 20,325;
9 TREES @ AVG. 50 SF EA = 450
TOTAL PRELIMINARY TREE COVER PROPOSED (7.1%)...98,615 SF±

Preliminary Parking Lot Landscaping Tabulation

PRELIMINARY PARKING LOT AREA .....624,709 SF±
PRELIMINARY PARKING LOT LANDSCAPING REQUIRED (5%).....31,235 SF±
PRELIMINARY PARKING LOT LANDSCAPING PROPOSED (6.3%)....39,425 SF±

188 PROPOSED TREES @ AVG. 175 SF EA = 32,900 SF
87 TREES @ AVG. 75 SF EA = 6,525 SF

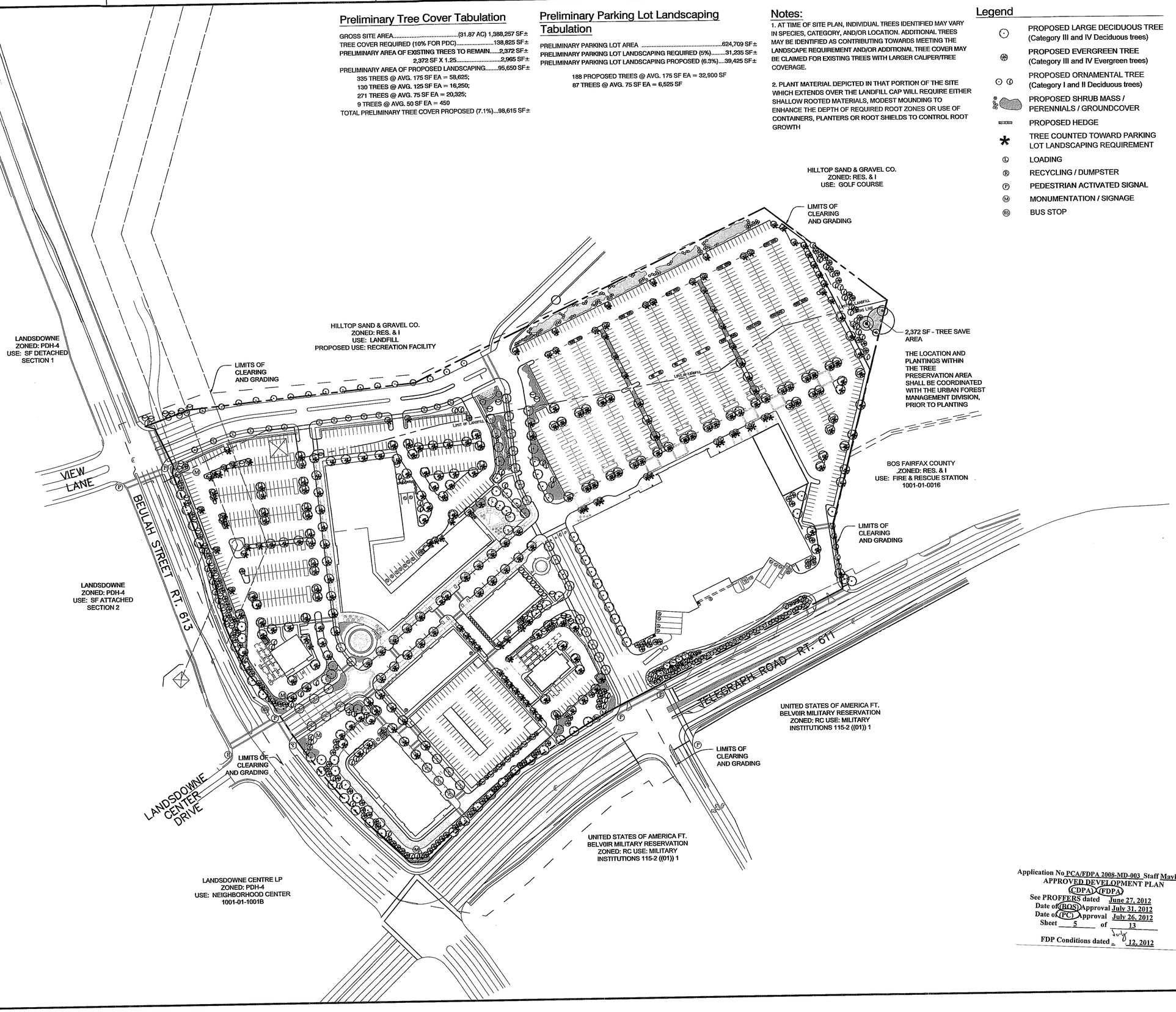
Notes:

1. AT TIME OF SITE PLAN, INDIVIDUAL TREES IDENTIFIED MAY VARY IN SPECIES, CATEGORY, AND/OR LOCATION. ADDITIONAL TREES MAY BE IDENTIFIED AS CONTRIBUTING TOWARDS MEETING THE LANDSCAPE REQUIREMENT AND/OR ADDITIONAL TREE COVER MAY BE CLAIMED FOR EXISTING TREES WITH LARGER CALIPER/TREE COVERAGE.

2. PLANT MATERIAL DEPICTED IN THAT PORTION OF THE SITE WHICH EXTENDS OVER THE LANDFILL CAP WILL REQUIRE EITHER SHALLOW ROOTED MATERIALS, MODEST MOUNDING TO ENHANCE THE DEPTH OF REQUIRED ROOT ZONES OR USE OF CONTAINERS, PLANTERS OR ROOT SHIELDS TO CONTROL ROOT GROWTH

Legend

- PROPOSED LARGE DECIDUOUS TREE (Category III and IV Deciduous trees)
- PROPOSED EVERGREEN TREE (Category III and IV Evergreen trees)
- PROPOSED ORNAMENTAL TREE (Category I and II Deciduous trees)
- PROPOSED SHRUB MASS / PERENNIALS / GROUNDCOVER
- PROPOSED HEDGE
- TREE COUNTED TOWARD PARKING LOT LANDSCAPING REQUIREMENT
- (L) LOADING
- (R) RECYCLING / DUMPSTER
- (P) PEDESTRIAN ACTIVATED SIGNAL
- (M) MONUMENTATION / SIGNAGE
- (BS) BUS STOP



Application No PCA/FDPA 2008-MD-003 Staff Mayland
APPROVED DEVELOPMENT PLAN
(CDPA) (FDPA)
See PROFFERS dated June 27, 2012
Date of (BOS) Approval July 31, 2012
Date of (PC) Approval July 26, 2012
Sheet 5 of 13
FDP Conditions dated July 12, 2012

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HILLTOP VILLAGE CENTER

CONCEPTUAL DEVELOPMENT PLAN
AMENDMENT / FINAL DEVELOPMENT PLAN AMENDMENT
CDPA / FDPA

LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
Lic. No. 044562
PROFESSIONAL ENGINEER

KEY PLAN

SCALE
0' 100' 200'

No.	DATE	BY	Description
2	06.06.12	DMC	Landscape Revision
1	03.13.12	ARC	

REVISIONS

DRAWN BY ARC
APPROVED BY
CHECKED BY DMC
DATE February 17, 2012

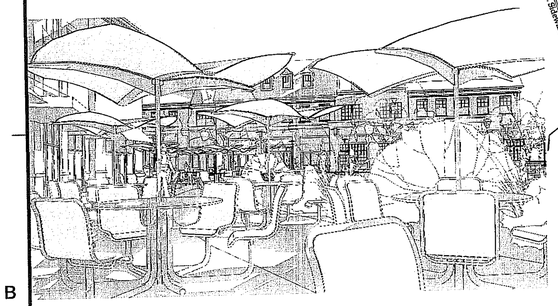
TITLE
HILLTOP VILLAGE CENTER
Conceptual Development Plan Amendment / Final Development Plan Amendment
Landscape Plan

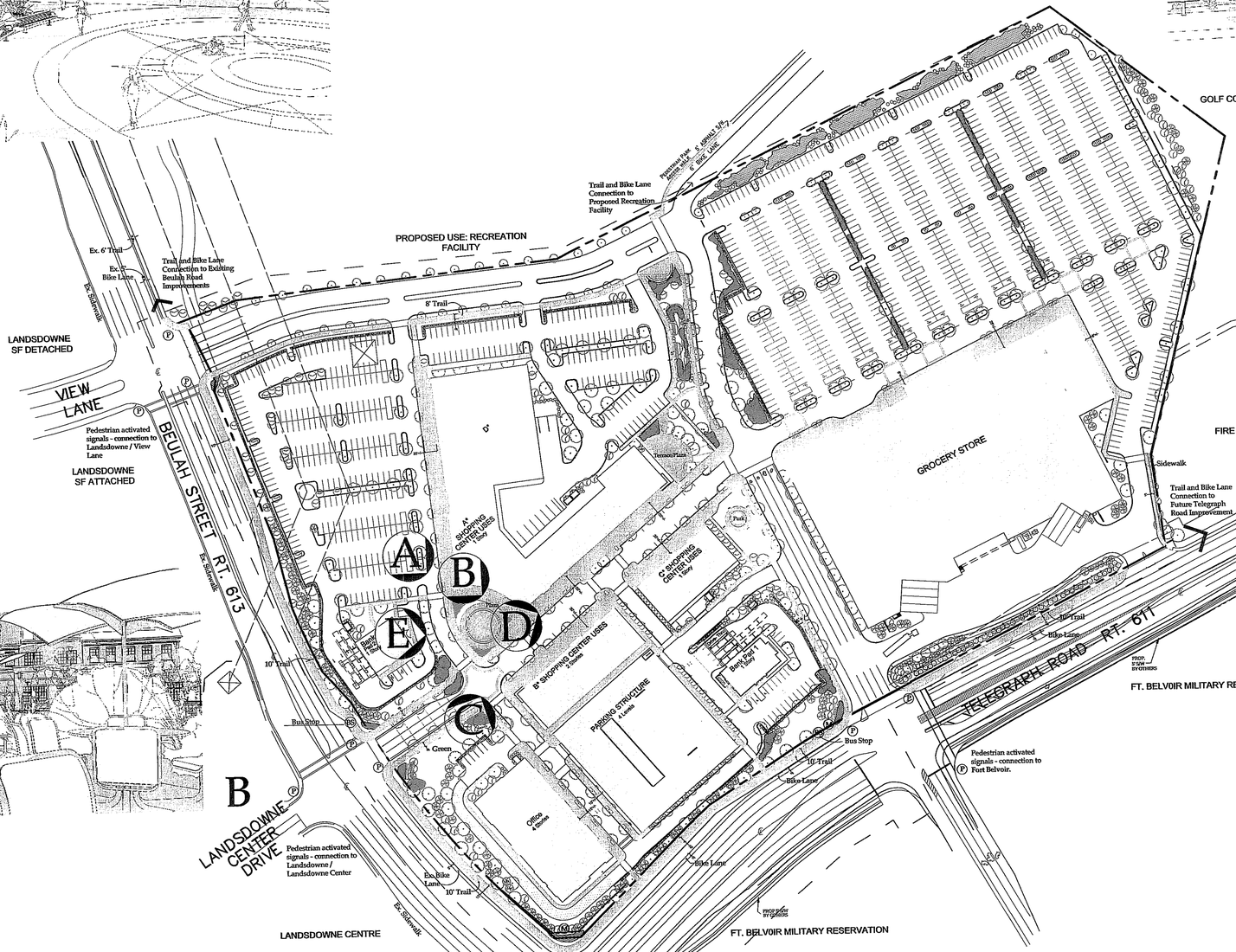
PROJECT NO.

5

SHEET NO. 5 OF 13

M-10804





Perspective views shown on this sheet are for illustrative purposes to show intended character and scale of the proposed Hilltop Village Center. Architecture and landscape detail are subject to change with final design.

* NOTE:

ALL PERMITTED USES IN THE PDC DISTRICT AND ADDITIONAL SECONDARY USES AS IDENTIFIED IN NOTE 3C.

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LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
Lic. No. 044542
6-6-2012
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

0' 100' 200'

No.	DATE	BY	Description
2	06.06.12	DMC	No Change -- This Sheet
1	03.13.12	ARC	

REVISIONS

DRAWN BY ARC
APPROVED BY
CHECKED BY DMC
DATE February 17, 2012

TITLE

HILLTOP VILLAGE CENTER

Conceptual Development Plan Amendment / Final Development Plan Amendment

Pedestrian Circulation & Perspectives

PROJECT NO.

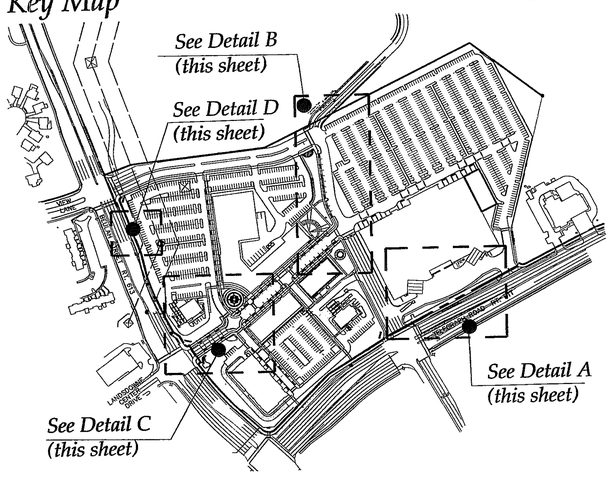
6

SHEET NO. 6 OF 13

M-10804

Key Map

N.T.S.

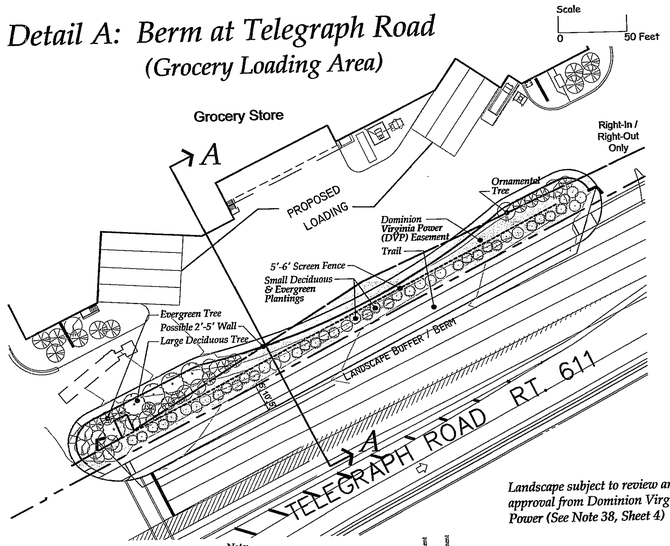


NOTE:.
Detail Plans reflect development/design intent. Specific pavement patterns, textures and placement of plant material, street furniture and streetscape elements subject to coordination with final engineering and architectural design.

LANDSCAPE LEGEND

- CANOPY & STREET TREES
- EVERGREEN TREES
- ORNAMENTAL TREES
- SHRUB / GROUND COVER MASS
- HEDGE
- SMALL TREES
- SHRUBS
- GROUND COVER / PERENNIALS

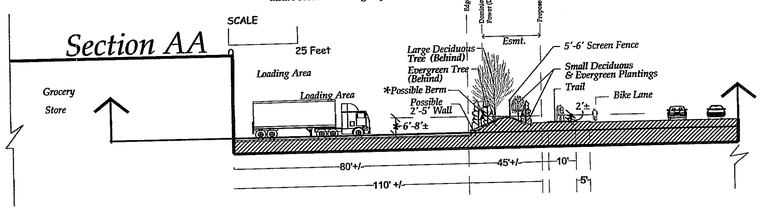
Detail A: Berm at Telegraph Road (Grocery Loading Area)



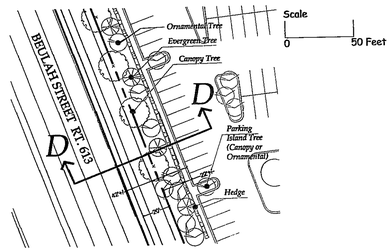
Landscape subject to review and approval from Dominion Virginia Power (See Note 38, Sheet 4)

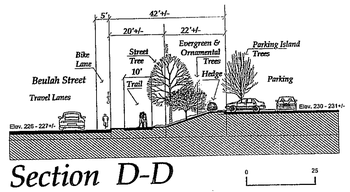
Note:
* Possible wall elements where necessary to insure overall berm height of 6'-8'

Section AA



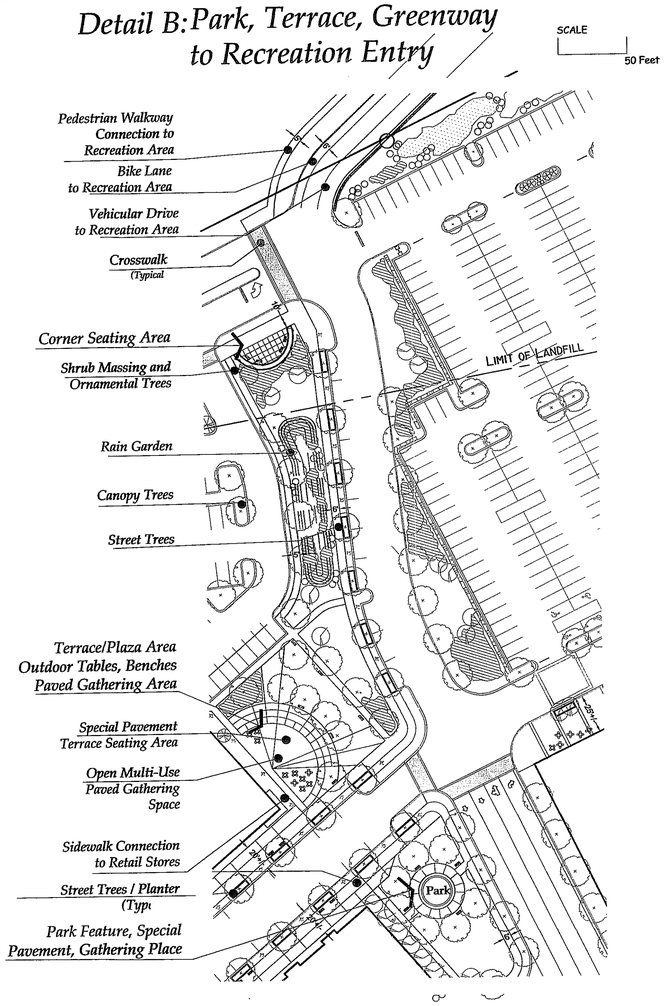
Detail D: Landscape Edge at Parking Beulah Street Frontage



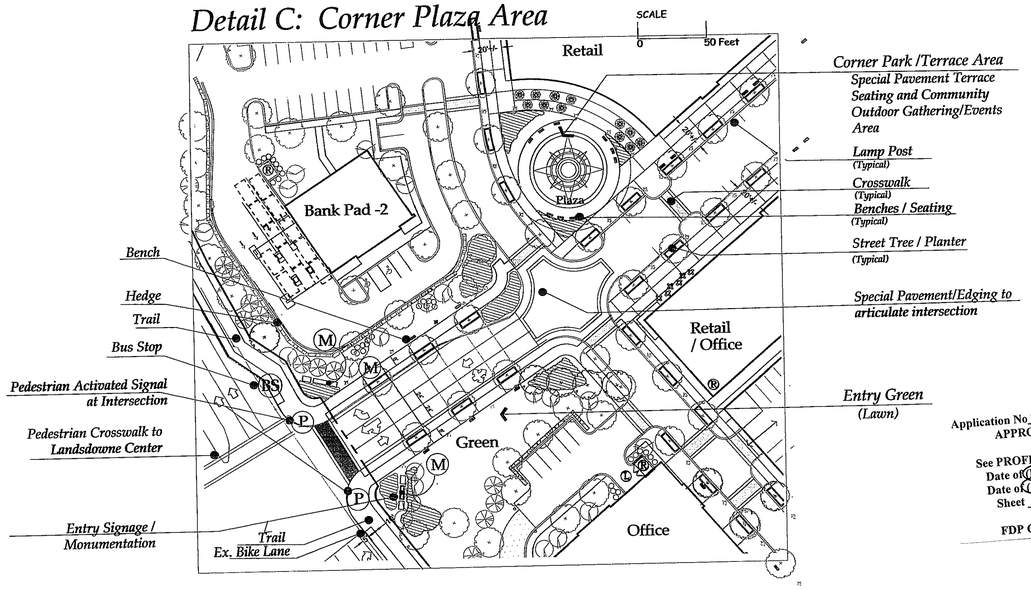


Section D-D

Detail B: Park, Terrace, Greenway to Recreation Entry



Detail C: Corner Plaza Area



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6-6-2012
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	DATE	BY	Description
2	06.06.12	DMC	Revised Detail A
1	03.13.12	ARC	

REVISIONS

DRAWN BY ARC
APPROVED BY
CHECKED BY DMC
DATE February 17, 2012

TITLE
HILLTOP VILLAGE CENTER
Conceptual Development Plan
Amendment / Final Development
Plan Amendment
Plan Details

PROJECT NO.

7

SHEET NO. 7 OF 13

M-10804

SWM NARRATIVE

STORMWATER MANAGEMENT (DETENTION) IS PROVIDED FOR THIS SITE PLAN AS WELL AS THE FUTURE RECREATION CENTER LOCATED TO THE IMMEDIATE NORTH OF HILLTOP VILLAGE CENTER. DETENTION WILL BE PROVIDED IN THE PROPOSED WET POND, IDENTIFIED AS SWM POND 2, WHICH WILL BE PRIVATELY OWNED AND MAINTAINED. THE PROPOSED DRAINAGE AREA TO SWM POND 2 IS 62.0 ACRES.

THE PROPOSED PROJECT IS LOCATED IN TWO (2) WATERSHEDS – DOGUE CREEK AND ACCOTINK CREEK. DETENTION ANALYSIS CONFIRMS THAT POST–DEVELOPMENT 2– AND 10–YEAR PEAK FLOW RATES WILL NOT INCREASE ABOVE PRE–DEVELOPMENT CONDITIONS IN BOTH WATERSHEDS. THIS SITE PLAN INCLUDES THE PROPOSED HILLTOP VILLAGE CENTER DEVELOPMENT AND REQUISITE SPOT IMPROVEMENTS TO TELEGRAPH ROAD AND BEULAH STREET, WHICH AMOUNTS TO A TOTAL DISTURBED AREA OF 44.85 ACRES. OF THE 44.85 ACRES, 38.92 ACRES IS IN THE DOGUE CREEK WATERSHED AND 5.93 ACRES IS IN THE ACCOTINK CREEK WATERSHED. THE FUTURE RECREATION CENTER, WHERE DETENTION IS BEING PROVIDED WITH THIS SITE PLAN, AMOUNTS TO A TOTAL OF 16.83 ACRES, WHICH IS LOCATED IN THE DOGUE CREEK WATERSHED.

A SUMMARY OF THE DETENTION ANALYSIS IS PROVIDED BELOW. FOR FURTHER DETAILS PLEASE REFER TO SHEETS 53, 54 AND 55.

	DOGUE CREEK WATERSHED *			ACCOTINK CREEK WATERSHED **	
	2–YEAR	10–YEAR	100–YEAR***	2–YEAR	10–YEAR
POST–DEV (1)	155 CFS	287 CFS	426 CFS	20 CFS	36 CFS
PRE–DEV (2)	88 CFS	182 CFS	283 CFS	22 CFS	46 CFS
DETENTION REQUIRED (1)–(2)	67 CFS	105 CFS	143 CFS	NONE	NONE
DETENTION PROVIDED (SEE SHT 55)	127 CFS	258 CFS	147 CFS	2 CFS	10 CFS

* AREA REQUIRING DETENTION = PROPOSED DISTURBED AREA + FUTURE RECREATION CENTER = 38.92 AC + 16.83 AC = 55.75 AC (DETENTION PROVIDED IN SWM POND 2)
** AREA REQUIRING DETENTION = PROPOSED DISTURBED AREA = 5.93 AC (DETENTION PROVIDED BY REDUCTION IN PRE–DEVELOPMENT RUNOFF DUE TO PROPOSED IMPROVEMENTS.
*** 100–YEAR DETENTION IS PROVIDED IN DOGUE CREEK WATERSHED TO ENSURE THE PROPOSED PROJECT DOES NOT IMPACT APPROVED FLOODPLAIN STUDY 7239–FP–02–1.

THE OUTLET WORKS OF PROPOSED SWM POND 2 WILL CONSIST OF A COMBINED DROP INLET PRINCIPLE/EMERGENCY SPILLWAY. SITE CONSTRAINTS PRECLUDE THE USE OF A SEPARATE OVERLAND EMERGENCY SPILLWAY IN CUT. THE PROPOSED DAM EMBANKMENT WILL BE 24 FT HIGH WITH LESS THAN 50 AC–FT OF STORAGE AT THE TOP OF DAM. DEWBERRY CONTACTED DCR DIVISION OF DAM SAFETY TO CONFIRM THAT THE DAM WOULD NOT BE STATE REGULATED. DCR CONFIRMED THAT IT IS NOT – SEE COPY OF EMAIL TRANSMISSION ON SHEET 95.

BASED ON THE PROPOSED DAM HEIGHT AND CORRESPONDING IMPOUNDMENT CAPACITY, THE SPILLWAY DESIGN FLOOD (SDF) AND FREEBOARD HYDROGRAPH (FBH) STORMS USED FOR DESIGN ARE THE 1.5X100–YEAR AND 2.5X100–YEAR FLOODS, RESPECTIVELY. MORE THAN 2 FT OF FREEBOARD IS PROVIDED ABOVE THE SDF POOL ELEVATION.

FOR THE RANGE OF PEAK OUTFLOW DISCHARGES CONSIDERED IN THIS SITE PLAN THAT LEAVE PROPOSED SWM POND 2, THE CORRESPONDING POOL ELEVATION IN POND 2 IS NOT DEPENDENT ON THE TAILWATER CONDITIONS AT THE TOE OF THE DAM. TO THAT END, FOR THE PURPOSE OF THIS SITE PLAN, A CONSTANT TAILWATER ELEVATION EQUAL TO THAT AT THE TOP OF 8'X8' BOX CULVERT SPILLWAY AT ITS OUTLET WAS USED (EL. 132.00 FT). SEE TABLE THIS SHEET FOR A SUMMARY OF THE TAILWATER ANALYSIS.

PROPOSED SWM POND 2 SPILLWAY– RISER BUOYANCY CHECK

REQUIRED PER PFM SEC.6-1604.1C:

1. FACTOR OF SAFETY (FS) SHALL BE EQUAL TO OR GREATER THAN 1.3 UNDER ANY FLOODING CONDITION.
2. FACTOR OF SAFETY (FS) SHALL BE EQUAL TO OR GREATER THAN 1.5 AT THE NORMAL POOL ELEVATION.

ASSUMPTIONS:

1. ASSUME WORST CASE FLOODING CONDITION OCCURS WHEN THE 4' X 1' ORIFICE IS BLOCKED AND THE POOL IS PONDED TO THE TOP OF THE RISER AT EL. 143.50.
2. ASSUME 1.5' THICK WALLS, 1.5' THICK FOOTING, AND 1.5' FOOTING PROJECTION.
3. ASSUME CONCRETE BALLAST, IF REQUIRED.

DIMENSIONS OF RISER SPILLWAY:

RISER INTERIOR WIDTH	Wi =	15 FT	RISER EXTERIOR WIDTH	Wx=	18 FT
RISER INTERIOR LENGTH	Li =	15 FT	RISER EXTERIOR LENGTH	Lx=	18 FT
RISER WALL THICKNESS	Tw=	1.5 FT	FOOTER WIDTH	Wf=	21 FT
MAX RISER HEIGHT	Hr=	20.5 FT	FOOTER LENGTH	Lf=	21 FT
FOOTING THICKNESS	Tf=	1.5 FT			
FOOTING PROJECTION	Pf=	1.5 FT	RISER HEIGHT AT NORMAL POOL	Hn=	13.5 FT

VOLUME OF WATER DISPLACED AT TOP OF RISER (Vwt):

BY RISER:	(Wx) (Lx) (Hr) =	6942 CF
BY FOOTING:	(Wf) (Lf) (Tf) =	661.5 CF
TOTAL:	Vwt =	7603.5 CF

VOLUME OF WATER DISPLACED AT NORMAL POOL (Vwn):

BY RISER:	(Wx) (Lx) (Hn) =	4374 CF
BY FOOTING:	(Wf) (Lf) (Tf) =	661.5 CF
TOTAL:	Vwn =	5035.5 CF

WEIGHT OF WATER DISPLACED AT TOP OF RISER (Fwt):

Fwt = (62.4 LB/CF) (Vwt) = 455738.4 LB

WEIGHT OF WATER DISPLACED AT NORMAL POOL (Fwn):

Fwn = (62.4 LB/CF) (Vwn) = 314215.2 LB

VOLUME OF CONCRETE PROVIDED (Vc):

BY RISER:	[(Wx) (Lx) - (Wi) (Li)] (Hr) =	2029.5 CF
BY FOOTING:	(Wf) (Lf) (Tf) =	661.5 CF
LESS 4.5' X 1' X 1.5' RISER ORIFICE:	=	-5.8 CF
TOTAL:	Vc =	2684.3 CF

WEIGHT OF CONCRETE PROVIDED (Fc)

Fc = (150 LB/CF) (Vc) = 402637.5 LB

VOLUME OF SOIL ABOVE RISER FOOTING PROJECTION (Vs):

AT DOWNSTREAM SIDE:	191.7 CF
AT UPSTREAM SIDE:	222.8 CF
2 ADJACENT SIDES:	724.5 CF
TOTAL: Vs =	1139.0 CF

WEIGHT OF SOIL ABOVE FOOTING PROJECTION (Fs)

Fs = (100-62.4 LB/CF) (Vs) = 42826.4 LB

VOLUME OF BALLAST PROVIDED INSIDE RISER (Vb):

Vb = 1017.75 CF

WEIGHT OF BALLAST PROVIDED INSIDE RISER (Fb)

Fb = (150 LB/CF) (Vb) = 152662.5 LB

TOTAL WEIGHT PROVIDED (Ft): Ft = Fc + Fs + Fb = 402637.5 + 42826.4 + 152662.5 = 598126.4 LB

FACTOR OF SAFETY PROVIDED AT TOP OF RISER (FSt): FSt = Ft / Fwt = 1.3 OK

FACTOR OF SAFETY PROVIDED AT NORMAL POOL (FSn): FSn = Ft / Fwn = 1.9 OK

PROPOSED SWM POND 2 – STAGE VS STORAGE

SWM POND 2 -STAGE VS. STORAGE

STAGE (FEET)	AREA (ACRES)	INCREMENTAL VOLUME (ACRE-FEET)	TOTAL STORAGE (ACRE-FEET)
125.50	0.00		0.0000
126.00	0.38	0.0950	0.0950
128.00	0.45	0.8300	0.9250
130.00	0.54	0.9900	1.9150
132.00	0.63	1.1700	3.0850
134.00	0.72	1.3300	4.4350
136.00	0.94	1.6800	6.0950
138.50	0.97	1.7400	8.5900
139.00	1.05	1.9900	8.0850
140.00	1.17	2.2200	10.3050
142.00	1.29	2.4600	12.7650
144.00	1.41	2.7000	15.4650
146.00	1.54	2.9500	18.4150
148.00	1.68	3.2200	21.6350
148.15	1.76	0.2550	21.8930

BMP POOL EL.

DRAINAGE DIVIDE NARRATIVE

THIS PROJECT PROPOSES AN ALTERATION TO THE EXISTING TOPOGRAPHIC DRAINAGE DIVIDE THAT DRAINS TO EXISTING SWM POND 1. IT IS PROPOSED THAT:

1. APPROXIMATELY 5.48 ACRES OF DRAINAGE BE DIVERTED FROM THE ACCOTINK WATERSHED TO THE DOGUE CREEK WATERSHED. THIS DRAINAGE WILL BE CONVEYED TO PROPOSED POND 2. (SEE SHEETS 53 AND 54). THIS DIVERSION IS NECESSARY IN ORDER TO IMPROVE AN EXISTING INADEQUATE OUTFALL CONDITION AT THE INTERSECTION OF TELEGRAPH ROAD AND BEULAH STREET. HERE, THE EXISTING STORM SEWER SYSTEM DOES NOT HAVE ADEQUATE CAPACITY TO HANDLE THE EXISTING DRAINAGE. BY DIVERTING 5.48 ACRES AWAY FROM THIS SYSTEM, THE EXISTING SYSTEM IS THEN CAPABLE OF HANDLING THE DESIGN DISCHARGE.
2. ALL DRAINAGE THAT LEAVES PROPOSED POND 2 BE DIVERTED VIA A PROPOSED BOX CULVERT STORM SEWER AND PROPOSED CHANNEL TO A POINT IMMEDIATELY DOWNSTREAM OF EXISTING SWM POND 1 (SEE SHEETS 58 AND 59A), BECAUSE EXISTING POND 1 WAS CONSTRUCTED BASED ON OUTDATED PFM CRITERIA FOR SPILLWAY CAPACITY AND FREEBOARD, THE DRAINAGE FROM PROPOSED POND 2 HAS BEEN DIVERTED TO JUST DOWNSTREAM OF EXISTING POND 1. PROPOSED POND 2 PROVIDES THE REQUIRED BMP, DETENTION AND SPILLWAY CAPACITY PER CURRENT PFM REQUIREMENTS. FURTHER, AS DEMONSTRATED ON SHEETS 58 THRU 60, OUTFALL 1, WHICH WILL RECEIVE THE DIVERTED FLOW FROM PROPOSED POND 2 IS DETERMINED TO BE ADEQUATE.

WATERSHED NOTE:
THE EXISTING DRAINAGE DIVIDES SHOWN ON SHEET 53 REPRESENT THE CURRENT TOPOGRAPHIC CONDITIONS OF THE PROPERTY. DUE TO ROADWAY MODIFICATIONS TO BEULAH STREET AND THE OPERATIONS AND MAINTENANCE OF THE LANDFILL AREA OVER THE LAST 15 +/– YEARS ON THE APPLICANT PROPERTY, THE TOPOGRAPHIC FEATURES OF THE SITE ARE NO LONGER REFLECTIVE OF THE TOPOGRAPHIC FEATURES OF THE SITE PLAN AREA PRIOR TO THESE MODIFICATIONS. WHILE THE EXISTING TOPOGRAPHIC DIVIDES AND ANALYSIS ON SHEET 53 INDICATE AN APPARENT CHANGE IN TOTAL AREA OF THE NAMED WATERSHEDS, THEY IN FACT REPRESENT A RESTORATION OF THE CONTRIBUTING SITE AREA TO EACH WATERSHED THAT WAS IN EXISTENCE PRIOR TO THE REFERENCED LAND DISTURBANCE IN THIS AREA. THE PLAN SHEET FROM THE APPROVED LANDFILL RECLAMATION PROJECT, 3365–LF–01, INCLUDED ON SHEET 98E, DEMONSTRATES THE SITE TOPOGRAPHY CIRCA 1996. IT IS THE INTENT OF THIS SITE PLAN TO RESTORE THE TOTAL ACREAGE WITHIN THE NAMED WATERSHEDS TO THE APPROXIMATE CONTRIBUTING AREAS EXISTING AT THAT TIME.

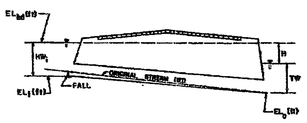
PROPOSED SWM POND 2 SPILLWAY– CULVERT RATING CURVE

HYDROLOGICAL DATA
METHOD: NRCS
DRAINAGE AREA: 62.0 AC

DESIGN FLOWS / TAILWATER

R.I. (YEARS)	FLOW (CFS)	TW Elev.
	100	132
	200	132
	400	132
	600	132
	800	132
	1000	132
	1100	132
	1200	132
	1375	132

CULVERT TYPE: RCBC
ENT. TYPE: SQ. EDGE WITH HEADWALLS
NO. OF CELLS = 1
SPAN = 8
HEIGHT = 8
MANNINGS 'n' = 0.013
Ko = 0.7
ELi = 124.75
ELo = 124
ELr = 148.15
ELsh = 148
L = 100



CULVERT DESCRIPTION: MATERIAL-SHAPE-SIZE-ENTRANCE	TOTAL FLOW Q (CFS)	FLOW PER BARREL Q/N	HEADWATER CALCULATIONS: INLET CONTROL HWi/D	INLET CONTROL HWi	INLET CONTROL EL(hi)	OUTLET CONTROL TW Depth	OUTLET CONTROL dc	OUTLET CONTROL (dc+D)/2	OUTLET CONTROL ho	Ko	H	EL(ho)	CONTROL HW ELEV.	APPROX OUTLET VEL.	COMMENTS
8x8 RCBC, sq. edge with headwalls	100	100	0.37	2.97	127.72	8.00	1.70	4.85	8.00	0.7	0.07	132.07	132.07	1.58	O.C.
8x8 RCBC, sq. edge with headwalls	200	200	0.67	4.69	129.34	8.00	2.89	5.35	8.00	0.7	0.29	132.29	132.29	3.13	O.C.
8x8 RCBC, sq. edge with headwalls	400	400	0.90	7.21	131.86	8.00	4.28	6.14	8.00	0.7	1.15	133.15	133.15	6.25	O.C.
8x8 RCBC, sq. edge with headwalls	600	600	1.21	9.68	134.41	8.00	5.69	6.85	8.00	0.7	2.69	134.69	134.69	9.38	O.C.
8x8 RCBC, sq. edge with headwalls	800	800	1.56	12.48	137.23	8.00	6.79	7.39	8.00	0.7	4.80	136.80	137.23	12.50	I.C.
8x8 RCBC, sq. edge with headwalls	1000	1000	2.00	15.97	140.72	8.00	7.88	7.94	8.00	0.7	7.18	139.18	140.72	15.63	I.C.
8x8 RCBC, sq. edge with headwalls	1100	1100	2.25	18.02	142.77	8.00	8.00	8.00	8.00	0.7	9.65	140.65	142.77	17.19	I.C.
8x8 RCBC, sq. edge with headwalls	1200	1200	2.54	20.29	145.04	8.00	8.00	8.00	8.00	0.7	10.34	142.34	145.04	18.75	I.C.
8x8 RCBC, sq. edge with headwalls	1375	1375	3.09	24.78	149.51	8.00	8.00	8.00	8.00	0.7	13.58	145.58	149.51	21.48	I.C. RD. O.T.

PROPOSED SWM POND 2 SPILLWAY RATING CURVE

RISER ORIFICE FLOW

ORIFICE NO.	CENTROID ELEV.	AREA	C	DESCRIPTION
1	137	4.5	0.6	4.5' X 1' ORIFICE INV=136.50
2				
3 (top)	143.5	225	0.6	TOP OF 15' X 15' RISER

RISER WEIR FLOW

WEIR NO.	CREST ELEV.	LENGTH	C
1			
2			
3 (top)	143.5	60	3

EMER. SPILLWAY FLOW
CREST ELEV. =
WIDTH =
Z =
C =

CULVERT RATING CURVE
SIZE: 8' X 8' RCBC

ELEV.	DISCHARGE
124.75	0
132.07	100
132.29	200
133.15	400
134.59	600
137.23	800
140.72	1000
142.77	1100
145.04	1200
149.51	1375

ELEV.	ORIFICES Q1	Q2	Q3	WEIRS Q1	Q2	Q3	RISER FLOW	CULVERT CAPACITY	Q P.S.W. (Control)	Q E.S.W.	TOTAL FLOW	COMMENTS
136.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	745.0	0.0	0.0	0.0	
138	21.7	0.0	0.0	0.0	0.0	0.0	21.7	844.2	21.7	0.0	21.7	
141	43.3	0.0	0.0	0.0	0.0	0.0	43.3	1013.5	43.3	0.0	43.3	
143.5	55.2	0.0	0.0	0.0	0.0	0.0	55.2	1132.0	55.2	0.0	55.2	
144	57.3	0.0	0.0	766.1	0.0	0.0	63.6	121.0	1154.1	121.0	0.0	121.0	
146	65.0	0.0	0.0	1713.0	0.0	0.0	711.5	776.5	1237.7	776.5	0.0	776.5	
148	71.9	0.0	0.0	2298.2	0.0	0.0	1718.3	1316.0	1790.1	1316.0	0.0	1316.0	culvert control
149.5	76.6	0.0	0.0	2653.7	0.0	0.0	2645.4	2722.1	1374.7	1374.7	0.0	1374.7	culvert control

PROPOSED SWM POND 2 SPILLWAY RATING CURVE – CLOGGED CONDITION

RISER ORIFICE FLOW

ORIFICE NO.	CENTROID ELEV.	AREA	C	DESCRIPTION
1	137	0	0.6	4.5' X 1' ORIFICE INV=136.50
2				
3 (top)	143.5	225	0.6	TOP OF 15' X 15' RISER

RISER WEIR FLOW

WEIR NO.	CREST ELEV.	LENGTH	C
1			
2			
3 (top)	143.5	60	3

EMER. SPILLWAY FLOW
CREST ELEV. =
WIDTH =
Z =
C =

CULVERT RATING CURVE
SIZE: 8' X 8' RCBC

ELEV.	DISCHARGE
124.75	0
132.07	100
132.29	200
133.15	400
134.59	600
137.23	800
140.72	1000
142.77	1100
145.04	1200
149.51	1375

ELEV.	ORIFICES Q1	Q2	Q3	WEIRS Q1	Q2	Q3	RISER FLOW	CULVERT CAPACITY	Q P.S.W. (Control)	Q E.S.W.	TOTAL FLOW	COMMENTS
136.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	745.0	0.0	0.0	0.0	
138	0.0	0.0	0.0	0.0	0.0	0.0	0.0	844.2	0.0	0.0	0.0	
141	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1013.5	0.0	0.0	0.0	
143.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1132.0	0.0	0.0	0.0	
144	0.0	0.0	766.1	0.0	0.0	63.6	63.6	1154.1	63.6	0.0	63.6	
146	0.0	0.0	1713.0	0.0	0.0	711.5	711.5	1237.7	711.5	0.0	711.5	
148	0.0	0.0	2298.2	0.0	0.0	1718.3	1718.3	1316.0	1316.0	0.0	1316.0	culvert control
149.5	0.0	0.0	2653.7	0.0	0.0	2645.4	2645.4	1374.7	1374.7	0.0	1374.7	culvert control

PROPOSED SWM POND 2 SPILLWAY RATING CURVE – TAILWATER ANALYSIS

STORM	2-YEAR		10-YEAR		100-YEAR		SDF		FBH		USED FOR DESIGN	
Q (CFS)	36		54		315		681		1152		NA	
TWE (FT)	124.10		124.28		126.04		129.50		131.10		132.00**	
	CULVERT RTG CURVE	SPILLWAY RTG CURVE	CULVERT RTG CURVE	SPILLWAY RTG CURVE	CULVERT RTG CURVE	SPILLWAY RTG CURVE	CULVERT RTG CURVE	SPILLWAY RTG CURVE	CULVERT RTG CURVE	SPILLWAY RTG CURVE	CULVERT RTG CURVE	SPILLWAY RTG CURVE
	Q (CFS) WSE (FT)	Q (CFS) WSE (FT)	Q (CFS) WSE (FT)	Q (CFS) WSE (FT)	Q (CFS) WSE (FT)	Q (CFS) WSE (FT)	Q (CFS) WSE (FT)	Q (CFS) WSE (FT)	Q (CFS) WSE (FT)	Q (CFS) WSE (FT)	Q (CFS) WSE (FT)	Q (CFS) WSE (FT)
	0 124.75	0.0 136.5	0 124.75	0.0 136.5	0 124.75	0.0 136.5	0 124.75	0.0 136.5	0 124.75	0.0 136.5	0 124.75	0.0 136.5
100	128.92	21.7 138	100 128.92	21.7 138	100 128.92	21.7 138	100 129.57	21.7 138	100 131.24	21.7 138	100 132.07	21.7 138
200	129.63	43.3 141	200 129.63	43.3 141	200 129.63	43.3 141	200 129.79	43.3 141	200 131.56	43.3 141	200 132.29	43.3 141
400	131.96	55.2 143.5	400 131.96	55.2 143.5	400 131.96	55.2 143.5	400 131.95	55.2 143.5	400 132.42	55.2 143.5	400 133.15	55.2 143.5
600	134.41	121.0 144	600 134.41	121.0 144	600 134.41	121.0 144	600 134.41	121.0 144	600 134.41	121.0 144	600 134.59	121.0 144
800	137.23	776.5 146	800 137.23	776.5 146	800 137.23	776.5 146	800 137.23	776.5 146	800 137.23	776.5 146	800 137.23	776.5 146
1000	140.72	1316.0 148	1000 140.72	1316.0 148	1000 140.72	1316.0 148	1000 140.72	1316.0 148	1000 140.72	1316.0 148	1000 140.72	1316.0 148
1100	142.77	1374.7 149.5	1100 142.77	1374.7 149.5	1100 142.77	1374.7 149.5	1100 142.77	1374.7 149.5	1100 142.77	1374.7 149.5	1100 142.77	1374.7 149.5
1200	145.04		1200 145.04		1200 145.04		1200 145.04		1200 145.04		1200 145.04	
1375	149.51		1375 149.51		1375 149.51		1375 149.51		1375 149.51		1375 149.51	

TWE = TAILWATER ELEVATION
** ELEVATION OF INSIDE TOP OF 8' X 8' BOX CULVERT SPILLWAY CONDUIT AT OUTLET

* NOTE:
THE STORMWATER MANAGEMENT INFORMATION SHOWN HEREON, INCLUDING THE DETENTION, BMP, AND OUTFALL DATA, WAS APPROVED WITH SITE PLAN 3365-SP-008 FOR THE HILLTOP VILLAGE CENTER IMPROVEMENTS AND IS PROVIDED IN THIS APPLICATION FOR INFORMATION ONLY.

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HILLTOP VILLAGE CENTER
CONCEPTUAL DEVELOPMENT PLAN
AMENDMENT / FINAL DEVELOPMENT PLAN AMENDMENT
CDPA / FDPA
LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL
COMMONWEALTH OF VIRGINIA
SCOTT C. CLARKE
Lic. No. 33417
PROFESSIONAL ENGINEER
1130-10

KEY PLAN
COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
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11-30-2010
PROFESSIONAL ENGINEER

SCALE

No.	DATE	BY	Description
2			No Change – This Sheet
1	03.13.12	ARC	
No.	DATE	BY	Description

REVISIONS

DRAWN BY
APPROVED BY SCC
CHECKED BY GLC
DATE NOVEMBER 30, 2010

TITLE
SWM COMPUTATIONS AND NARRATIVE

PROJECT NO. 3365–SP–008–3

SHEET NO. 52 OF 112
SP-2170

Application No PCA/FDPA 2008-MD-003 Staff Mayland
APPROVED DEVELOPMENT PLAN
(CDPA) (FDPA)
See PROFFERS dated June 27, 2012
Date of (BOS) Approval July 31, 2012
Date of (PC) Approval July 26, 2012
Sheet 8 of 13
FDP Conditions dated 12, 2012

No.	DATE	BY	Description
2			No Change – This Sheet
1	03.13.12	ARC	
No.	DATE	BY	Description

REVISIONS

DRAWN BY ARC
APPROVED BY
CHECKED BY DMC
DATE February 17, 2012

TITLE
HILLTOP VILLAGE CENTER
Conceptual Development Plan
Amendment / Final Development Plan Amendment
Stormwater Management *

PROJECT NO.

8

SHEET NO. 8 OF 13

M-10804

PROPOSED SWM POND 2 SPILLWAY DESIGN MODEL – HEC-1 INPUT

```
X     X  XXXXXXX   XXXXX        X
X     X  X        X     X      XX
X     X  X        X             X
XXXXXXX  XXXX     X      XXXXX  X
X     X  X        X             X
X     X  X        X     X       X
X     X  XXXXXXX   XXXXX       XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                HEC-1 INPUT                                          PAGE 1

LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1       ID      HILLTOP VILLAGE CENTER
  2       ID      FAIRFAX COUNTY, VIRGINIA
  3       ID      SCS TYPE II, 24-HOUR RAINFALL DISTRIBUTION
  4       ID      FAIRFAX COUNTY PFM RAINFALL DEPTHS
  5       ID      SPILLWAY MODEL
          *DIAGRAM
  6       IT      2                     800
  7       IO      5
          *            SDF        FBH
          *            1.5X100    2.5X100
  8       JR   PREC   10.95      18.25
          *
  9       KK    1-B
 10       KM  BASIN 1-B RUNOFF HYDROGRAPH
 11       BA   0.097
 12       FB      1
          * SCS TypeII Rainfall Distribution Pattern
 13       IN      6
 14       PC     0.0  .00101  .00202  .00305  .00408  .00513  .00618  .00725  .00832  .00941
 15       PC  .01050  .01161  .01272  .01385  .01498  .01613  .01728  .01845  .01962  .02081
 16       PC    .022  .02321  .02442  .02565  .02688  .02813  .02938  .03065  .03192  .03321
 17       PC  .03450  .03581  .03712  .03845  .03978  .04113  .04248  .04385  .04522  .04661
 18       PC    .048  .04941  .05084  .05229  .05376  .05525  .05676  .05829  .05984  .06141
 19       PC    .063  .06461  .06624  .06789  .06956  .07125  .07296  .07469  .07644  .07821
 20       PC     .08  .08181  .08364  .08549  .08736  .08925  .09116  .09309  .09504  .09701
 21       PC    .099  .10101  .10304  .10509  .10716  .10925  .11136  .11349  .11564  .11781
 22       PC     .12  .12225  .12460  .12705  .12960  .13225    .135  .13785  .14080  .14385
 23       PC    .147   .1502  .15340   .1566   .1598    .163  .16628  .16972  .17332  .17708
 24       PC    .181  .18512  .18948  .19408  .19892    .204   .2094   .2152   .2214    .228
 25       PC    .235  .24268  .25132  .26092  .27148    .283  .30684  .35436  .43079  .56786
 26       PC    .663  .68196  .69864  .71304  .72516    .735  .74344  .75136  .75876  .76564
 27       PC    .772  .77796  .78364  .78904  .79416    .799   .8036    .808   .8122   .8162
 28       PC     .82  .82367  .82726  .83079  .83424  .83763  .84094  .84419  .84736  .85047
 29       PC  .85350  .85647  .85936  .86219  .86494  .86763  .87024  .87279  .87526  .87767
 30       PC     .88  .88229  .88455  .88679    .889  .89119  .89335  .89549   .8976  .89969
 31       PC  .90175  .90379   .9058  .90779  .90975  .91169   .9136  .91549  .91735  .91919
 32       PC    .921  .92279  .92455  .92629    .928  .92969  .93135  .93299   .9346  .93619
 33       PC  .93775  .93929   .9408  .94229  .94375  .94519   .9466  .94799  .94935  .95069
 34       PC    .952   .9533  .95459  .95588  .95716  .95844  .95971  .96098  .96224   .9635
 35       PC  .96475    .966  .96724  .96848  .96971  .97094  .97216  .97338  .97459   .9758
 36       PC    .977   .9782  .97939  .98058  .98176  .98294  .98411  .98528  .98644  .98760
 37       PC  .98875   .9899  .99104  .99218  .99331  .99444  .99556  .99668  .99779   .9989
 38       PC     1.0
 39       LS             87
 40       UD     0.1
          *
 41       KK   PSWM2
 42       KM  ROUTE 1-B RUNOFF HYDROGRAPH THROUGH PROPOSED WET POND (SWM POND 2)
 43       RO                                          22
 44       RS       1    ELEV   143.5
 45       SV       0   0.095   0.925   1.915   3.085   4.435   6.095   8.085  10.305  12.765
 46       SV  15.465  18.415  21.635  21.893
 47       SE   125.5     126     128     130     132     134     136     138     140     142
 48       SE     144     146     148  148.15
 49       SQ       0       0       0       0    63.6   711.5    1316
 50       SE   136.5     138     141   143.5     144     146     148
          *
 51       KK       2
 52       KM  BASIN 2 RUNOFF HYDROGRAPH
 53       BA  0.0095
 54       LS             76
 55       UD     0.1
          *
 56       KK   FLOW1
 57       KM  COMBINE OUTFLOW FROM SWM POND 2 AND BASIN 2
 58       HC       2
          *
 59       ZZ
```

PROPOSED SWM POND 2 SPILLWAY DESIGN MODEL – HEC-1 OUTPUT

```
              SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

 NO.       (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  9        1-B
            V
            V
 41      PSWM2
            .
            .
 51         .          2
            .          .
            .          .
 56      FLOW1..........

        PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
                        FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
                                    TIME TO PEAK IN HOURS

                                                      RATIOS APPLIED TO PRECIPITATION
OPERATION        STATION    AREA   PLAN          RATIO 1   RATIO 2
                                                   10.95     18.25
                                                    SDF       FBH
HYDROGRAPH AT
+                  1-B       .10     1   FLOW      728.     1253.
                                         TIME     11.97     11.97

ROUTED TO
+                PSWM2       .10     1   FLOW      681.     1152.
                                         TIME     12.03     12.03

                                   ** PEAK STAGES IN FEET **
                                     1   STAGE    145.91    147.46
                                         TIME     12.03     12.03

HYDROGRAPH AT
+                    2       .01     1   FLOW       63.      116.
                                         TIME     11.97     11.97

 2 COMBINED AT
+                FLOW1       .11     1   FLOW      740.     1260.
                                         TIME     12.03     12.03

*** NORMAL END OF HEC-1 ***
```

PROPOSED SWM POND 2 POOL ELEVATIONS FOR SDF AND FBH

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HILLTOP VILLAGE CENTER
TELEGRAPH ROAD
LEE AND MOUNT VERNON DISTRICTS
FAIRFAX COUNTY, VIRGINIA

SEAL
COMMONWEALTH OF VIRGINIA
SCOTT C. CLARKE
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8-11-10
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KEY PLAN
COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
Lic. No. 044542
8-11-2010
PROFESSIONAL ENGINEER

SCALE

No.	DATE	BY	Description

REVISIONS

DRAWN BY
APPROVED BY SCC
CHECKED BY GLC
DATE AUGUST 2010

TITLE
SPILLWAY DESIGN HEC-1 MODEL

PROJECT NO. 3365-SP-008-2

SHEET NO. 56 OF 112
SP-2170

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)
- Cluster Subdivision (9-615 1G & 1N)
- Development Plans PRC District (16-302 3 & 4L)
- FDP P Districts (except PRC) (16-502 1F & 1Q)
- Special Exceptions (9-011 2J & 2L)
- Commercial Revitalization Districts (9-622 2A (12) & 14))
- PRC Plan (16-303 1E & 1O)
- 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 11.

☒ 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)
Wet Pond	35	27	62	76665.6	213336	24.5
(e.g. dry pond A, infill, trench, underground, vault, etc.)						
Totals						

☒ 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 10. Pond inlet and outlet pipe systems are shown on Sheet 8.

☒ 5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet 10. Type of maintenance access road surface noted on the plat is 10 (e.g. asphalt, geoblock, gravel, etc.).

☒ 6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet 10.

☒ 7. A stormwater management narrative which contains a description of how detention and best management practice requirements will be met is provided on Sheet 8.

☒ 8. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet 11.

☒ 9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet 11.

☒ 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 4.

☐ 11. A submission waiver is requested for N/A.

☐ 12. Stormwater management is not required because N/A.

Industry Letter 05-03 dated 02/02/05

Application No PCA/FDPA 2008-MD-003 Staff Mayland
APPROVED DEVELOPMENT PLAN
(CDPA) (FDPA)
See PROFFERS dated June 27, 2012
Date of (BOS) Approval July 31, 2012
Date of (PC) Approval July 26, 2012
Sheet 9 of 13
FDP Conditions dated July 12, 2012

* NOTES:

1. THE STORMWATER MANAGEMENT INFORMATION SHOWN HEREON, INCLUDING THE DETENTION, BMP, AND OUTFALL DATA, WAS APPROVED WITH SITE PLAN 3365-SP-008 FOR THE HILLTOP VILLAGE CENTER IMPROVEMENTS AND IS PROVIDED IN THIS APPLICATION FOR INFORMATION ONLY.

2. THE SUBJECT CDPA / FDPA MAKES NO CHANGES TO THE COVERAGE, PERVIOUS, OR IMPERVIOUS AREAS IDENTIFIED IN THE APPROVED CDP/FDP ASSOCIATED WITH RZ 2008-MD-003.

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HILLTOP VILLAGE CENTER
CONCEPTUAL DEVELOPMENT PLAN AMENDMENT / FINAL DEVELOPMENT PLAN AMENDMENT
CDPA / FDPA
LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL
COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
Lic. No. 044542
6-6-2012
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	DATE	BY	Description
2	06.06.12		No Change – This Sheet
1	03.13.12	ARC	

REVISIONS

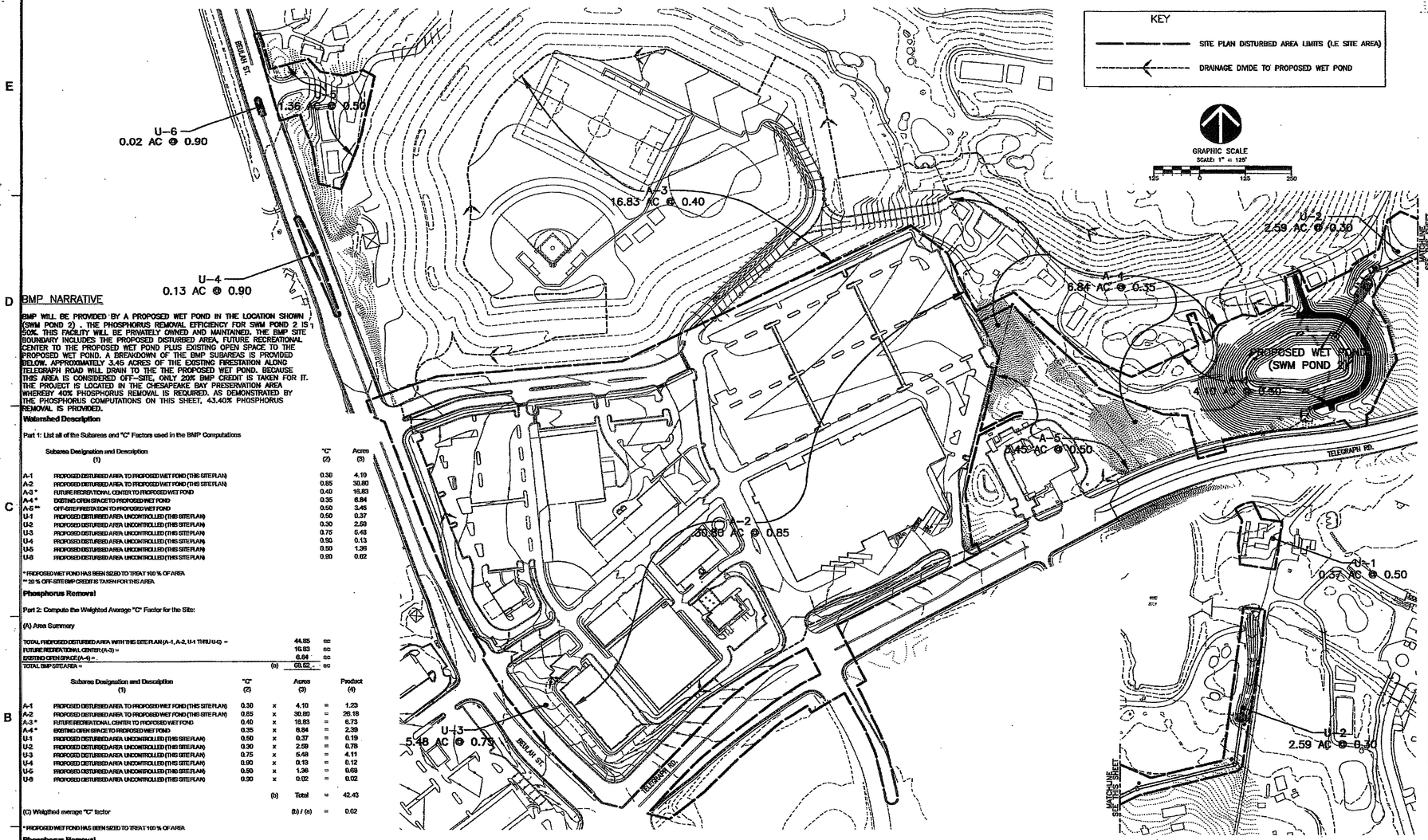
DRAWN BY ARC
APPROVED BY
CHECKED BY DMC
DATE February 17, 2012

TITLE
HILLTOP VILLAGE CENTER
Conceptual Development Plan Amendment / Final Development Plan Amendment
Stormwater Management *

PROJECT NO.

9

M-10804



BMP NARRATIVE

BMP WILL BE PROVIDED BY A PROPOSED WET POND IN THE LOCATION SHOWN (SWM POND 2) . THE PHOSPHORUS REMOVAL EFFICIENCY FOR SWM POND 2 IS 50%. THIS FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED. THE BMP SITE BOUNDARY INCLUDES THE PROPOSED DISTURBED AREA, FUTURE RECREATIONAL CENTER TO THE PROPOSED WET POND PLUS EXISTING OPEN SPACE TO THE PROPOSED WET POND. A BREAKDOWN OF THE BMP SUBAREAS IS PROVIDED BELOW. APPROXIMATELY 3.45 ACRES OF THE EXISTING FIRESTATION ALONG TELEGRAPH ROAD WILL DRAIN TO THE THE PROPOSED WET POND. BECAUSE THIS AREA IS CONSIDERED OFF-SITE, ONLY 20% BMP CREDIT IS TAKEN FOR IT. THE PROJECT IS LOCATED IN THE CHESAPEAKE BAY PRESERVATION AREA WHEREBY 40% PHOSPHORUS REMOVAL IS REQUIRED. AS DEMONSTRATED BY THE PHOSPHORUS COMPUTATIONS ON THIS SHEET, 43.40% PHOSPHORUS REMOVAL IS PROVIDED.

Watershed Description

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

Subarea Designation and Description (1)		"C" (2)	Acres (3)
A-1	PROPOSED DISTURBED AREA TO PROPOSED WET POND (THIS SITE PLAN)	0.30	4.10
A-2	PROPOSED DISTURBED AREA TO PROPOSED WET POND (THIS SITE PLAN)	0.85	30.80
A-3 *	FUTURE RECREATIONAL CENTER TO PROPOSED WET POND	0.40	16.83
A-4 *	EXISTING OPEN SPACE TO PROPOSED WET POND	0.35	6.84
A-5 **	OFF-SITE FIRESTATION TO PROPOSED WET POND	0.50	3.45
U-1	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.50	0.37
U-2	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.30	2.59
U-3	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.75	5.48
U-4	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.90	0.13
U-5	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.50	1.36
U-6	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.90	0.02

* PROPOSED WET POND HAS BEEN SIZED TO TREAT 100 % OF AREA
** 20 % OFF-SITE BMP CREDIT IS TAKEN FOR THIS AREA

Phosphorus Removal

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

(A) Area Summary

TOTAL PROPOSED DISTURBED AREA WITH THIS SITE PLAN (A-1, A-2, U-1 THRU U-6) =	44.85	ac
FUTURE RECREATIONAL CENTER (A-3) =	16.83	ac
EXISTING OPEN SPACE (A-4) =	6.84	ac
TOTAL BMP SITE AREA = (a)	68.52	ac

Subarea Designation and Description (1)		"C" (2)		Acres (3)		Product (4)
A-1	PROPOSED DISTURBED AREA TO PROPOSED WET POND (THIS SITE PLAN)	0.30	x	4.10	=	1.23
A-2	PROPOSED DISTURBED AREA TO PROPOSED WET POND (THIS SITE PLAN)	0.85	x	30.80	=	26.18
A-3 *	FUTURE RECREATIONAL CENTER TO PROPOSED WET POND	0.40	x	16.83	=	6.73
A-4 *	EXISTING OPEN SPACE TO PROPOSED WET POND	0.35	x	6.84	=	2.39
U-1	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.50	x	0.37	=	0.19
U-2	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.30	x	2.59	=	0.78
U-3	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.75	x	5.48	=	4.11
U-4	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.90	x	0.13	=	0.12
U-5	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.50	x	1.36	=	0.68
U-6	PROPOSED DISTURBED AREA UNCONTROLLED (THIS SITE PLAN)	0.90	x	0.02	=	0.02
		(b)		Total	=	42.43

(C) Weighted average "C" factor (b) / (a) = 0.62

* PROPOSED WET POND HAS BEEN SIZED TO TREAT 100 % OF AREA

Phosphorus Removal

Part 3: Compute the Total Phosphorus Removal for the Site

Subarea	BMP Type	Removal Eff (%)	"C"	Acres	Area Ratio	C-factor Ratio	Product (%)
A-1	WET POND 2	50	0.30	4.10	0.06	0.484	1.50
A-2	WET POND 2	50	0.85	30.80	0.45	1.371	30.80
A-3 *	WET POND 2	50	0.40	16.83	0.246	0.645	7.90
A-4 *	WET POND 2	50	0.35	6.84	0.1	0.565	2.80
A-5 **	WET POND 3	50	0.50	3.45	0.01	0.806	0.40
U-1	NONE	0	0.50	0.37	0.005	0.806	0.00
U-2	NONE	0	0.30	2.59	0.038	0.484	0.00
U-3	NONE	0	0.75	5.48	0.08	1.210	0.00
U-4	NONE	0	0.90	0.13	0.002	1.452	0.00
U-5	NONE	0	0.50	1.36	0.02	0.806	0.00
U-6	NONE	0	0.90	0.02	0	1.452	0.00
				(a)	Total	=	43.40

* PROPOSED WET POND HAS BEEN SIZED TO TREAT 100 % OF AREA
** 20 % OFF-SITE BMP CREDIT IS TAKEN FOR THIS AREA

Phosphorus Removal

Part 4: Determine Compliance with Phosphorus Removal

Select Requirement:

Water Supply Overlay District (Occoquan Watershed) = 50% (Fairfax County and Prince William County)

Chesapeake Bay Preservation Area (New Development) = 40% (Fairfax County) 50% (Prince William County)

Chesapeake Bay Preservation Area (Redevelopment) = [1-0.9x("prev"/"post")]x100 = _____ %

Requirement (a) 40.00 %

If Line 3(a) 43.40 >=Line 4(a) 40.00 then Phosphorus removal requirement is satisfied

Storage

Part 7: Compute the Weighted Average "C" Factor for the Proposed Wet Pond

Subarea Designation and Description (1)		"C" (2)		Acres (3)		Product (4)
POND 2						
A-1	PROPOSED DISTURBED AREA TO PROPOSED WET POND (THIS SITE PLAN)	0.30	x	4.10	=	1.23
A-2	PROPOSED DISTURBED AREA TO PROPOSED WET POND (THIS SITE PLAN)	0.85	x	30.80	=	26.18
A-3 *	FUTURE RECREATIONAL CENTER TO PROPOSED WET POND	0.40	x	16.83	=	6.73
A-4 *	EXISTING OPEN SPACE TO PROPOSED WET POND	0.35	x	6.84	=	2.39
A-5 **	OFF-SITE FIRESTATION TO PROPOSED WET POND	0.50	x	0.69	=	0.35
			(a)	59.28	(b)	36.88

(C) Pond 2 weighted average "C" factor (b) / (a)=(c) = 0.62

* PROPOSED WET POND HAS BEEN SIZED TO TREAT 100 % OF AREA
** 20 % OFF-SITE BMP CREDIT IS TAKEN FOR THIS AREA

Storage

Part 8: Determine the Storage Required for Proposed Wet Pond

C = 0.62 (weighted "C" for area draining to Pond)

Volume of runoff per acre from mean storm:
1452 x C = 900 cf/ac

Design 2 (4 x Volume of runoff from mean storm)

Effective Drainage Area to Pond =	59.28 ac
Volume of runoff from mean storm =	53334 cf
4 x Volume of runoff from mean storm	213336 cf
	4.9 ac-ft
Wet Storage Provided =	6.69 ac-ft
Wet Storage Elevation =	138.5 ft

Application No PCA/FDPA 2008-MD-003 Staff Mayland
APPROVED DEVELOPMENT PLAN
(CDPA) (FDPA)
See PROFFERS dated June 27, 2012
Date of (BOS) Approval July 31, 2012
Date of (PC) Approval July 26, 2012
Sheet 10 of 13
FDP Conditions dated 12, 2012

NOTES:

1. THE STORMWATER MANAGEMENT INFORMATION SHOWN HEREON, INCLUDING THE DETENTION, BMP, AND OUTFALL DATA, WAS APPROVED WITH SITE PLAN 3365-SP-008 FOR THE HILLTOP VILLAGE CENTER IMPROVEMENTS AND IS PROVIDED IN THIS APPLICATION FOR INFORMATION ONLY.

2. THE POND ACCESS ROAD SHOWN HEREON WILL BE ASPHALT AS DEPICTED ON THE APPROVED SITE PLAN 3365-SP-008.

3. REFER TO THE APPROVED SITE PLAN 3365-SP-008 FOR POND LANDSCAPING AND TREE PRESERVATION.

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FAX:703.849.0518
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HILLTOP
VILLAGE CENTER
TELEGRAPH ROAD

LEE AND MOUNT VERNON DISTRICTS
FAIRFAX COUNTY, VIRGINIA

SEAL
COMMONWEALTH OF VIRGINIA
SCOTT C. CLARKE
Lic. No. 33417
8-11-10
PROFESSIONAL ENGINEER

KEY PLAN

SCALE
AS SHOWN

No.	DATE	BY	Description

REVISIONS

DRAWN BY
APPROVED BY SCC
CHECKED BY GLC
DATE AUGUST 2010

TITLE
BMP ANALYSIS

PROJECT NO. 3365-SP-008-2

SHEET NO. 57 OF 112
SP-2170

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HILLTOP
VILLAGE CENTER
CONCEPTUAL DEVELOPMENT PLAN
AMENDMENT / FINAL DEVELOPMENT
PLAN AMENDMENT
CDPA / FDPA

LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL
COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
Lic. No. 044542
6-4-2012
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	DATE	BY	Description
2	06.06.12		No Change -- This Sheet
1	03.13.12	ARC	

REVISIONS

DRAWN BY ARC
APPROVED BY
CHECKED BY DMC
DATE February 17, 2012

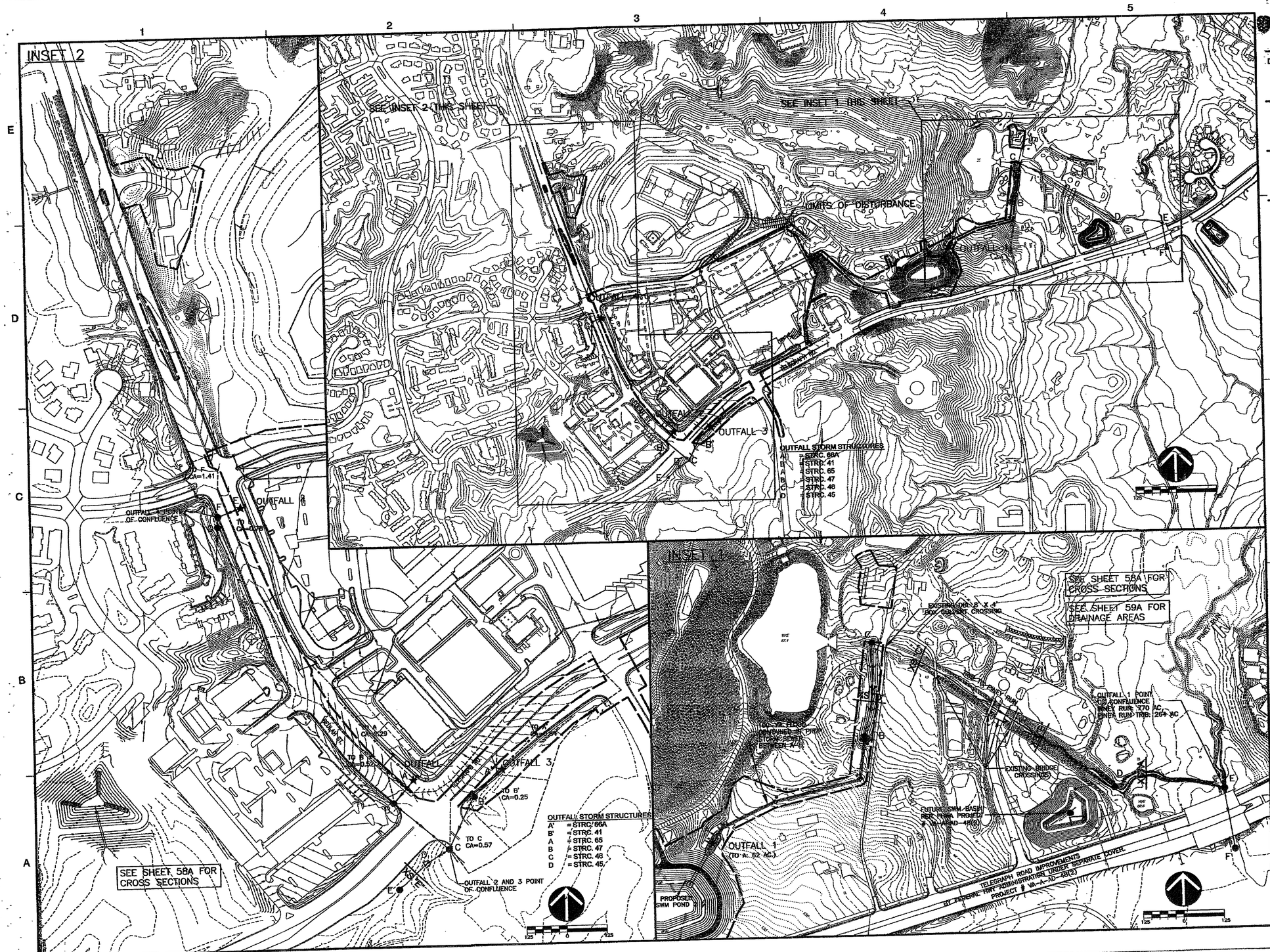
TITLE
HILLTOP VILLAGE CENTER
Conceptual Development Plan
Amendment / Final Development
Plan Amendment
Stormwater Management *

PROJECT NO.

10

SHEET NO. 10 OF 13

M-10804



* NOTE:

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FAIRFAX COUNTY, VIRGINIA

SEAL

COMMONWEALTH OF VIRGINIA
SCOTT C. CLARKE
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11.30.10
PROFESSIONAL ENGINEER

KEY PLAN

COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
Lic. No. 044562
11-30-2010
PROFESSIONAL ENGINEER

SCALE

AS SHOWN

No.	DATE	BY	Description

REVISIONS

DRAWN BY
APPROVED BY SCC
CHECKED BY GLC
DATE NOVEMBER 30, 2010

TITLE

OUTFALL ANALYSIS

OUTFALL MAP

PROJECT NO. 3365-SP-008-3

SHEET NO. 58 OF 112

SP-2170

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PLAN AMENDMENT
CDPA / FDPA

LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
Lic. No. 044562
6-6-2012
PROFESSIONAL ENGINEER

KEY PLAN

Application No PCA/FDPA 2008-MD-003 Staff Maylan
APPROVED DEVELOPMENT PLAN
(CDPA) (FDPA)
See PROFFERS dated June 27, 2012
Date of (BOS) Approval July 31, 2012
Date of (PC) Approval July 26, 2012
Sheet 11 of 13
FDP Conditions dated 12, 2012

No.	DATE	BY	Description
2	06.06.12		No Change – This Sheet
1	03.13.12	ARC	

REVISIONS

DRAWN BY ARC
APPROVED BY
CHECKED BY DMC
DATE February 17, 2012

TITLE

HILLTOP VILLAGE CENTER

Conceptual Development Plan
Amendment / Final Development
Plan Amendment

Stormwater Management *

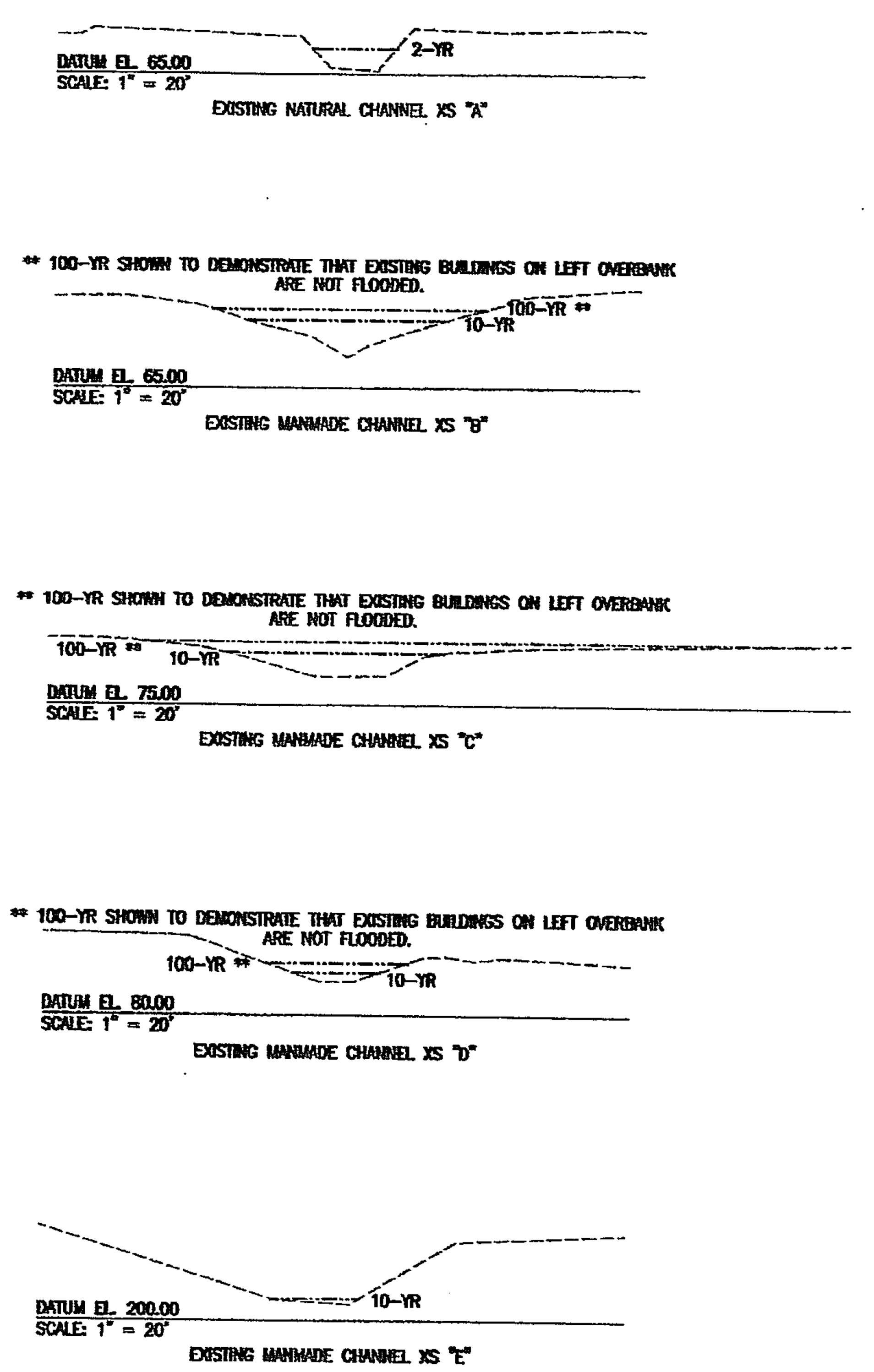
PROJECT NO.

11

SHEET NO. 11 OF 13

M-10804

OUTFALL CROSS SECTIONS



SEE SHEET 59 FOR CHANNEL CAPACITY COMPUTATIONS.

EXISTING SWM POND 1 – STAGE VS STORAGE

STAGE (FEET)	AREA (ACRES)	INCREMENTAL VOLUME (ACRE-FEET)	TOTAL STORAGE (ACRE-FEET)
87.10	1.81		0.0000
88.00	1.88	1.6515	1.6515
89.00	1.82	1.8900	3.5415
90.00	1.98	1.9500	5.4915
91.00	2.05	2.0150	7.5065
92.00	2.12	2.0850	9.5915
93.00	2.18	2.1500	11.7415
94.00	2.32	2.2500	13.9915
95.00	2.40	2.3800	16.3515
101.00	2.40	14.4000	30.7515

EXISTING POND 1 NOTES:

1. STAGE VS STORAGE CURVE USED IN FLOOD ROUTING OF EXISTING POND 1 IS DERIVED FROM 1 FT CONTOUR INTERVAL TOPOGRAPHIC MAPPING USED FOR THE PROJECT (SEE SHEET 58).
2. RATING CURVE USED IN FLOOD ROUTING OF EXISTING POND 1 IS BASED ON DEWBERRY'S 4/2009 FIELD SURVEY OF THE EXISTING OUTLET STRUCTURE FOR POND 1.
3. THE EXISTING NORMAL POOL ELEVATION FOR POND 1 IS 87.1 FT AND WAS TAKEN FROM THE TOPOGRAPHIC MAPPING DEFINED IN 1 ABOVE (SEE SHEET 58).

EXISTING SWM POND 1 – ASSUMED RATING CURVE

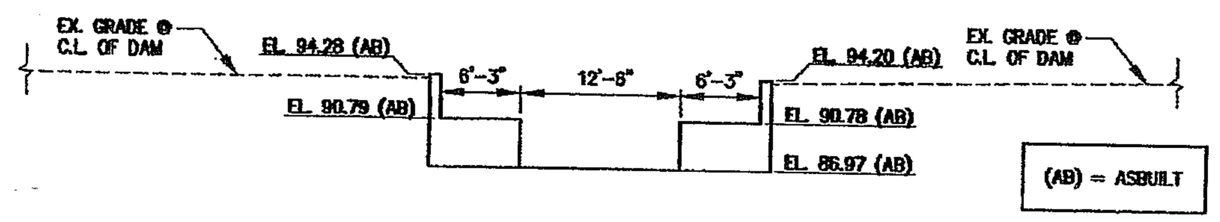
HEC-RAS Version 4.0.0 March 2008
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

PROJECT DATA
Project Title: HILLTOP-FINAL DESIGN
Project File : HILLTOP-FINALDESIG.prj
Run Date and Time: 3/30/2010 2:49:10 PM

Project in English units

Profile Output Table - EX. SWM POND 1 RATING CURVE

Reach	River Sta	Profile	E.G. Elev (ft)	W.S. Elev (ft)	Q Total (cfs)	Q Weir (cfs)	Q Gates (cfs)
main	349	PF 1	91.96	91.96	400.00	400.00	
main	349	PF 2	94.05	94.05	800.00	800.00	
main	349	PF 3	95.01	95.00	1200.00	1200.00	
main	349	PF 4	95.58	95.58	1600.00	1600.00	
main	349	PF 5	96.01	96.00	2000.00	2000.00	
main	349	PF 6	96.35	96.34	2400.00	2400.00	
main	349	PF 7	96.63	96.63	2800.00	2800.00	
main	349	PF 8	96.90	96.89	3200.00	3200.00	
main	349	PF 9	97.37	97.36	4000.00	4000.00	
main	349	PF 10	98.29	98.27	6000.00	6000.00	



EX. SWM POND 1 WEIR WALL OUTLET WORKS
SCALE: 1" = 10'

EXISTING SWM POND 1 – RATING CURVE CHECK

THE ASSUMED RATING CURVE FOR EXISTING SWM POND 1 WAS COMPUTED USING HEC–RAS AND A RANGE OF CONSTANT DISCHARGES. THE TAILWATER FOR THE RATING CURVE INCLUDES THE BACKWATER EFFECTS OF THE EXISTING BOX CULVERT LOCATED IMMEDIATELY DOWNSTREAM OF THE EXISTING SPILLWAY. TO CONFIRM THE VALIDITY OF THE RATING CURVE AND TAILWATER IMPACT THAT THE OUTFALL OF SWM POND 1 HAS ON THE RATING CURVE, THE PLAN HEC–1 FLOWS TAKEN FROM THE OUTFALL AND DAM BREAK MODELS WHERE RUN THROUGH THE RATING CURVE HEC–RAS MODEL AND THE RESULTING WATER–SURFACE ELEVATIONS COMPARED TO THE ASSUMED RATING CURVE TO DETERMINE IF THERE ARE ANY SIGNIFICANT TAILWATER IMPACTS. WHEN COMPARING THE CHECK RATING CURVE BELOW WITH THE ASSUMED RATING CURVE ABOVE IT IS CONCLUDED THAT WATER–SURFACE ELEVATION ARE NOT SIGNIFICANTLY IMPACTED BY TAILWATER EFFECTS ASSOCIATED WITH THE PROPOSED SWM POND 1 OURFALL.

CHECK RATING CURVE

RIVER STA	HEC–1 NODE	SEE SHEET	Q TOTAL (CFS)	Q WEIR (CFS	E.G. ELEV. (FT)	W.S. ELEV. (FT)
349	XSWM1	60	185	185	90.19	90.19
349	XSWM1	60	391	391	91.90	91.90
349	XSWM1	60	734	734	93.74	93.74
349	EXSWM1	62	5684	5684	98.16	98.15
349	EXSWM1	62	5548	5548	98.11	98.10

Adequate Outfall Narrative

This project proposes the construction of a commercial development and requisite improvements to Telegraph Road and Beulah Street. The total disturbed area associated with this plans is approximately 44.85 acres. The project site is located northeast of the intersection between Telegraph Road and Beulah Street and is adjacent to Fort Belvoir to the south and existing commercial/residential developments to the west. Four (4) outfall points are identified for this project and are shown on Sheet 58.

Outfall 1 Description

Outfall 1 serves as the main outfall for this project and will convey the majority of drainage from the project site via proposed SWM pond 2. Along Reach A-C the outfall has been engineered to pass the 100-year peak outflow from the proposed SWM Pond. The engineered outfall includes 574 ft of 6 ft x 4 ft box culvert (Reach A-B) and approximately 300 ft of trapezoidal channel with 6 ft bottom width and 3:1 side slopes (Reach B-C). Along Reach C-D flow is conveyed thru an existing manmade channel which has 10-year capacity and contains the 100-year flood without flooding any adjacent buildings. Reach C-D contains one (1) culvert crossing, three (3) footbridges, and one (1) vehicular bridge. All existing bridges in Reach C-D span the existing manmade channel, which contains the 100-year flood, and are, therefore, considered to be adequate. The existing box culvert in Reach C-D has 10-year capacity with approximately 10 inches of freeboard and the 100-year flood overtops this culvert with less than 1 foot of flow over the road. Along Reach D-E flow is conveyed thru an existing natural channel before discharging into Piney Run, which serves as the point of confluence for Outfall 1. Downstream of the confluence along Reach E-F, Piney Run flows through an inadequate box culvert at Telegraph Road, which will be replaced with a new bridge crossing proposed under a separate plan by the Federal Highway Administration/VDOT (project # VA-A-AD-48(2). The new bridge crossing is a VDOT proffered condition and will improve the adequacy of Outfall 1 at Telegraph Road.

Outfalls 2 and 3 Description

Outfalls 2 and 3 drain the intersection at Telegraph Road and Beulah Street. Reaches A-D and A'-D consist of existing storm sewer which are adequate under proposed conditions but not existing conditions. Under proposed conditions the total drainage area to this system will be reduced by diverting a portion of it to proposed SWM Pond 2 (see Sheet 52 for Diversion Narrative). At the outfall of the storm sewer network (Reach D-E), flow is conveyed to an existing manmade riprap lined ditch that runs parallel to Telegraph Road.

Outfall 4 Description

Outfall 4 is located approximately 1200 ft north of the Telegraph Road / Beulah Street intersection along Beulah Street. Here drainage from the proposed improvements along Beulah Street enters an existing storm sewer system that flows west (Reach E-G).

Opinion of Outfall Adequacy

Based on field observations and outfall computations provided on Sheets 46B, 46D, 59, 59A, and 60 it is the opinion of the engineer that:

1. Cross sections shown are reflective of the stream reach analyzed.
2. Adequacy of the downstream drainage system for each outfall studied is met within the identified extent of review.
3. Within 4 Outfalls extent of review, there will be no flooding of existing dwellings, or buildings constructed under an approved building permit by the 100-year storm event.

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TELEGRAPH ROAD
LEE AND MOUNT VERNON DISTRICTS
FAIRFAX COUNTY, VIRGINIA

SEAL: COMMONWEALTH OF VIRGINIA — SCOTT C. CLARKE, Lic. No. 33417, 11-30-10, PROFESSIONAL ENGINEER

KEY PLAN: COMMONWEALTH OF VIRGINIA — CHRISTOPHER J. DEPASCALE, Lic. No. 044542, 11-30-2010, PROFESSIONAL ENGINEER

SCALE: AS SHOWN

No.	DATE	BY	Description

REVISIONS

DRAWN BY
APPROVED BY SCC
CHECKED BY GLC
DATE NOVEMBER 30, 2010

TITLE
OUTFALL ANALYSIS NARRATIVE CROSS SECTIONS AND COMPUTATIONS

PROJECT NO. 3365-SP-008-3

SHEET NO. 58A OF 112
SP-2170

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HILLTOP VILLAGE CENTER
CONCEPTUAL DEVELOPMENT PLAN AMENDMENT / FINAL DEVELOPMENT PLAN AMENDMENT
CDPA / FDPA
LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL: COMMONWEALTH OF VIRGINIA — CHRISTOPHER J. DEPASCALE, Lic. No. 044542, 6-6-2012, PROFESSIONAL ENGINEER

KEY PLAN

Application No PCA/FDPA 2008-MD-003 Staff Mayland
APPROVED DEVELOPMENT PLAN
(CDPA) (FDPA)
See PROFFERS dated June 27, 2012
Date of (BOS) Approval July 31, 2012
Date of (PC) Approval July 26, 2012
Sheet 12 of 13
FDP Conditions dated July 12, 2012

No.	DATE	BY	Description
2	06.06.12		No Change – This Sheet
1	03.13.12	ARC	

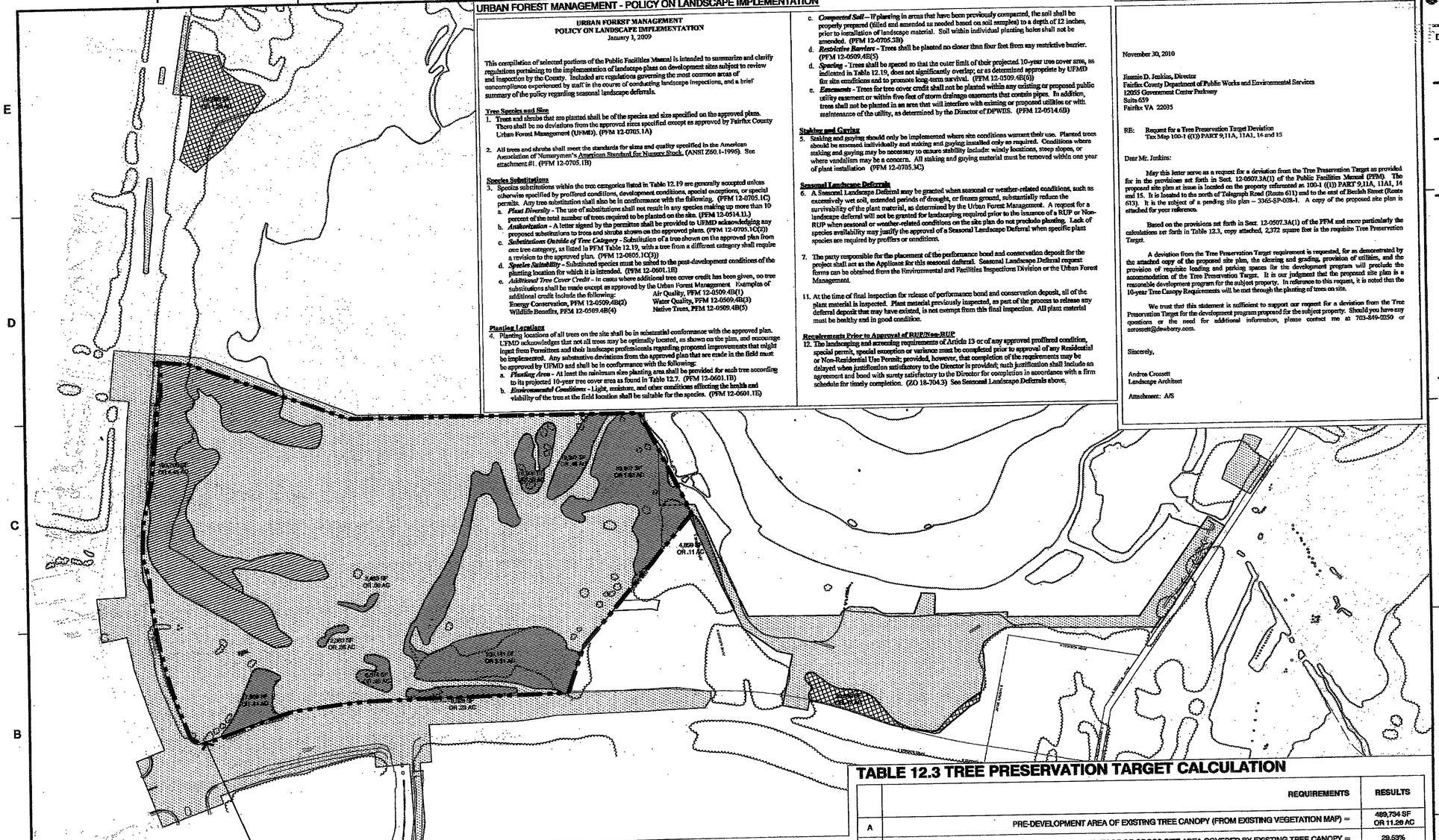
REVISIONS

DRAWN BY ARC
APPROVED BY
CHECKED BY DMC
DATE February 17, 2012

TITLE
HILLTOP VILLAGE CENTER
Conceptual Development Plan Amendment / Final Development Plan Amendment
Stormwater Management *

PROJECT NO.

* NOTE:
THE STORMWATER MANAGEMENT INFORMATION SHOWN HEREON, INCLUDING THE DETENTION, BMP, AND OUTFALL DATA, WAS APPROVED WITH SITE PLAN 3365-SP-008 FOR THE HILLTOP VILLAGE CENTER IMPROVEMENTS AND IS PROVIDED IN THIS APPLICATION FOR INFORMATION ONLY.



URBAN FOREST MANAGEMENT - POLICY ON LANDSCAPE IMPLEMENTATION

URBAN FOREST MANAGEMENT
POLICY ON LANDSCAPE IMPLEMENTATION
January 1, 2009

This compilation of selected portions of the Public Facilities Manual is intended to summarize and clarify regulations pertaining to the implementation of landscape plans on development sites subject to review and inspection by the County. Included are regulations governing the most common areas of noncompliance experienced by staff in the course of conducting landscape inspections, and a brief summary of the policy regarding seasonal landscape deferrals.

Tree Species and Size

1. Trees and shrubs that are planted shall be of the species and size specified on the approved plans. There shall be no deviations from the approved sizes specified except as approved by Fairfax County Urban Forest Management (UFMD). (PFM 12-0705.1A)

2. All trees and shrubs shall meet the standards for sizes and quality specified in the American Association of Nurserymen's American Standard for Nursery Stock, (ANSI Z60.1-1996). See attachment #1. (PFM 12-0705.1B)

Species Substitutions

3. Species substitutions within the tree categories listed in Table 12.19 are generally accepted unless otherwise specified by proffered conditions, development conditions, special exceptions, or special permits. Any tree substitution shall also be in conformance with the following. (PFM 12-0705.1C)
   a. *Plant Diversity* - The use of substitutions shall not result in any species making up more than 10 percent of the total number of trees required to be planted on the site. (PFM 12-0514.1L)
   b. *Authorization* - A letter signed by the permittee shall be provided to UFMD acknowledging any proposed substitutions to trees and shrubs shown on the approved plans. (PFM 12-0705.1C(2))
   c. *Substitutions Outside of Tree Category* - Substitution of a tree shown on the approved plan from one tree category, as listed in PFM Table 12.19, with a tree from a different category shall require a revision to the approved plan. (PFM 12-0805.1C(3))
   d. *Species Suitability* - Substituted species must be suited to the post-development conditions of the planting location for which it is intended. (PFM 12-0601.1B)
   e. *Additional Tree Cover Credit* – In cases where additional tree cover credit has been given, no tree substitutions shall be made except as approved by the Urban Forest Management. Examples of additional credit include the following:
      Air Quality, PFM 12-0509.4B(1)
      Water Quality, PFM 12-0509.4B(3)
      Native Trees, PFM 12-0509.4B(5)
      Energy Conservation, PFM 12-0509.4B(2)
      Wildlife Benefits, PFM 12-0509.4B(4)

Planting Locations

4. Planting locations of all trees on the site shall be in substantial conformance with the approved plan. UFMD acknowledges that not all trees may be optimally located, as shown on the plan, and encourage input from Permittees and their landscape professionals regarding proposed improvements that might be implemented. Any substantive deviations from the approved plan that are made in the field must be approved by UFMD and shall be in conformance with the following:
   a. *Planting Area* - At least the minimum size planting area shall be provided for each tree according to its projected 10-year tree cover area as found in Table 12.7. (PFM 12-0601.1B)
   b. *Environmental Conditions* - Light, moisture, and other conditions affecting the health and viability of the tree at the field location shall be suitable for the species. (PFM 12-0601.1E)
   c. *Compacted Soil* – If planting in areas that have been previously compacted, the soil shall be properly prepared (tilled and amended as needed based on soil samples) to a depth of 12 inches, prior to installation of landscape material. Soil within individual planting holes shall not be amended. (PFM 12-0705.3B)
   d. *Restrictive Barriers* - Trees shall be planted no closer than four feet from any restrictive barrier. (PFM 12-0509.4B(5)
   d. *Spacing* - Trees shall be spaced so that the outer limit of their projected 10-year tree cover area, as indicated in Table 12.19, does not significantly overlap, or as determined appropriate by UFMD for site conditions and to promote long-term survival. (PFM 12-0509.4B(6))
   e. *Easements* - Trees for tree cover credit shall not be planted within any existing or proposed public utility easement or within five feet of storm drainage easements that contain pipes. In addition, trees shall not be planted in an area that will interfere with existing or proposed utilities or with maintenance of the utility, as determined by the Director of DPWES. (PFM 12-0514.6B)

Staking and Guying

5. Staking and guying should only be implemented where site conditions warrant their use. Planted trees should be assessed individually and staking and guying installed only as required. Conditions where staking and guying may be necessary to ensure stability include: windy locations, steep slopes, or where vandalism may be a concern. All staking and guying material must be removed within one year of plant installation (PFM 12-0705.3C)

Seasonal Landscape Deferrals

6. A Seasonal Landscape Deferral may be granted when seasonal or weather-related conditions, such as excessively wet soil, extended periods of drought, or frozen ground, substantially reduce the survivability of the plant material, as determined by the Urban Forest Management. A request for a landscape deferral will not be granted for landscaping required prior to the issuance of a RUP or Non-RUP when seasonal or weather-related conditions on the site plan do not preclude planting. Lack of species availability may justify the approval of a Seasonal Landscape Deferral when specific plant species are required by proffers or conditions.

7. The party responsible for the placement of the performance bond and conservation deposit for the project shall act as the Applicant for this seasonal deferral. Seasonal Landscape Deferral request forms can be obtained from the Environmental and Facilities Inspections Division or the Urban Forest Management.

11. At the time of final inspection for release of performance bond and conservation deposit, all of the plant material is inspected. Plant material previously inspected, as part of the process to release any deferral deposit that may have existed, is not exempt from this final inspection. All plant material must be healthy and in good condition.

Requirements Prior to Approval of RUP/Non-RUP

12. The landscaping and screening requirements of Article 13 or of any approved proffered condition, special permit, special exception or variance must be completed prior to approval of any Residential or Non-Residential Use Permit; provided, however, that completion of the requirements may be delayed when justification satisfactory to the Director is provided; such justification shall include an agreement and bond with surety satisfactory to the Director for completion in accordance with a firm schedule for timely completion. (ZO 18-704.3) See Seasonal Landscape Deferrals above.

DEVIATION REQUEST LETTER

November 30, 2010

Jimmie D. Jenkins, Director
Fairfax County Department of Public Works and Environmental Services
12055 Government Center Parkway
Suite 659
Fairfax VA 22035

RE: Request for a Tree Preservation Target Deviation
Tax Map 100-1 ((1)) PART 9,11A, 11A1, 14 and 15

Dear Mr. Jenkins:

May this letter serve as a request for a deviation from the Tree Preservation Target as provided for in the provisions set forth in Sect. 12-0507.3A(1) of the Public Facilities Manual (PFM). The proposed site plan at issue is located on the property referenced as 100-1 ((1)) PART 9,11A, 11A1, 14 and 15. It is located to the north of Telegraph Road (Route 611) and to the east of Beulah Street (Route 613). It is the subject of a pending site plan – 3365-SP-008-1. A copy of the proposed site plan is attached for your reference.

Based on the provisions set forth in Sect. 12-0507.3A(1) of the PFM and more particularly the calculations set forth in Table 12.3, copy attached, 2,372 square feet is the requisite Tree Preservation Target.

A deviation from the Tree Preservation Target requirement is requested, for as demonstrated by the attached copy of the proposed site plan, the clearing and grading, provision of utilities, and the provision of requisite loading and parking spaces for the development program will preclude the accommodation of the Tree Preservation Target. It is our judgment that the proposed site plan is a reasonable development program for the subject property. In reference to this request, it is noted that the 10-year Tree Canopy Requirements will be met through the planting of trees on site.

We trust that this statement is sufficient to support our request for a deviation from the Tree Preservation Target for the development program proposed for the subject property. Should you have any questions or the need for additional information, please contact me at 703-849-0250 or acrossett@dewberry.com.

Sincerely,

Andrea Crossett
Landscape Architect

Attachment: A/S

EXISTING VEGETATION INVENTORY

KEY	COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGES	CONDITION	ACREAGE	COMMENTS
	MAINTAINED GRASSLANDS	NA	NA	NA	32.09± AC	EXISTING GOLF COURSE AND LANDFILL
	EARLY SUCCESSIONAL FOREST COMMUNITY	CEDAR, POPLAR, SWEETGUM	SUB-CLIMAX	FAIR	10.79± AC	MAINTAINED LANDSCAPE AREAS
	UPLAND FOREST	OAK, POPLAR, HICORY, VIRGINIA PINE	SUB-CLIMAX	FAIR	4.62± AC	
				TOTAL ACREAGE OF DISTURBANCE:	47.80 AC	

TABLE 12.3 TREE PRESERVATION TARGET CALCULATION

	REQUIREMENTS	RESULTS
A	PRE-DEVELOPMENT AREA OF EXISTING TREE CANOPY (FROM EXISTING VEGETATION MAP) =	489,734 SF OR 11.29 AC
B	PERCENTAGE OF GROSS SITE AREA COVERED BY EXISTING TREE CANOPY =	29.59%
C	PERCENTAGE OF 10-YEAR TREE CANOPY REQUIRED FOR SITE =	10% OF 38.11 AC = 3.81 AC
D	PERCENTAGE OF THE 10-YEAR CANOPY REQUIREMENT THAT SHOULD BE MET THROUGH TREE PRESERVATION =	29.59% = 1.18 AC
E	PROPOSED PERCENTAGE OF CANOPY REQUIREMENT THAT WILL BE MET THROUGH TREE PRESERVATION =	2,372 SF X 1.25 OR 0.07 AC
F	HAS THE TREE PRESERVATION TARGET MINIMUM BEEN MET?	NO
G	IF NO FOR LINE F, THEN REQUEST A DEVIATE FROM THE TREE PRESERVATION TARGET SHALL BE PROVIDED ON THE PLAN THAT STATES ONE OF MORE OF THE JUSTIFICATIONS LISTING IN 12-0507.3 ALONG WITH A NARRATIVE THAT PROVIDES A SITE-SPECIFIC EXPLANATION OF WHY THE TREE PRESERVATION TARGET CANNOT BE MET. PROVIDE A SHEET NUMBER WHERE THE DEVIATION REQUEST IS LOCATED.	THIS SHEET
H	IF STEP G REQUIRES A NARRATIVE, IT SHALL BE PREPARED IN ACCORDANCE WITH 12-0507.4	
I	PLACE THIS INFORMATION PRIOR TO THE 10-YEAR TREE CANOPY CALCULATIONS AS PER INSTRUCTIONS IN TABLE 12.12	

* NOTE:

THE EXISTING VEGETATION INFORMATION SHOWN HEREON, INCLUDING THE EXISTING VEGETATION INVENTORY AND THE TREE PRESERVATION TARGET CALCULATION, WAS APPROVED WITH SITE PLAN 3365-SP-008 FOR THE HILLTOP VILLAGE CENTER IMPROVEMENTS AND IS PROVIDED IN THIS APPLICATION FOR INFORMATION ONLY.

Dewberry

Dewberry & Davis LLC
8401 ARLINGTON BLVD.
FAIRFAX, VA 22031
PHONE: 703.849.0100
FAX: 703.849.0519
www.dewberry.com

HILLTOP VILLAGE CENTER
TELEGRAPH ROAD

LEE AND MOUNT VERNON DISTRICTS
FAIRFAX COUNTY, VIRGINIA

SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER JAMES DEPASCALE
Lic. No. 04562
11-30-2010
PROFESSIONAL ENGINEER

KEY PLAN

SCALE
140 70 0 140
SCALE IN FEET

No.	DATE	BY	Description

REVISIONS

DRAWN BY JMC
APPROVED BY TCC
CHECKED BY CJD
DATE NOVEMBER 30, 2010

TITLE

EXISTING VEGETATION MAP

PROJECT NO. 3365-SP-008-3

SHEET NO. 84 OF 112
SP-2170

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HILLTOP VILLAGE CENTER
CONCEPTUAL DEVELOPMENT PLAN
AMENDMENT / FINAL DEVELOPMENT PLAN AMENDMENT
CDPA / FDPA

LEE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER J. DEPASCALE
Lic. No. 04562
6-6-2012
PROFESSIONAL ENGINEER

KEY PLAN

Application No PCA/FDPA 2008-MD-003 Staff Mayland
APPROVED DEVELOPMENT PLAN
(CDPA) (FDPA)
See PROFFERS dated June 27, 2012
Date of (BOS) Approval July 31, 2012
Date of (PC) Approval July 26, 2012
Sheet 13 of 13
FDP Conditions dated July 12, 2012

No.	DATE	BY	Description
2	06.06.12		No Change - This Sheet
1	03.13.12	ARC	

REVISIONS

DRAWN BY ARC
APPROVED BY
CHECKED BY DMC
DATE February 17, 2012

TITLE

HILLTOP VILLAGE CENTER
Conceptual Develoment Plan
Amendment / Final Development Plan Amendment
Existing Vegetation Map *

PROJECT NO.

13

SHEET NO. 13 OF 13

M-10804