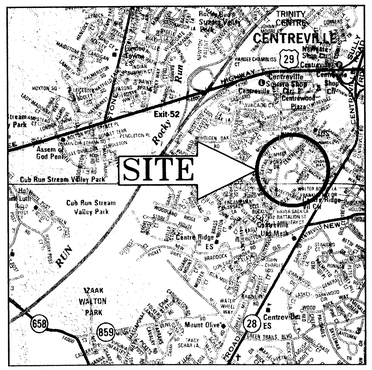
COMBINED CONCEPTUAL DEVELOPMENT PLAN/FINAL DEVELOPMENT PLAN
APPLICATION NO. PCA 91-Y-010-03, FDPA-91-Y-010-02
CENTRE RIDGE-A PORTION OF LANDBAY 11B

SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

LEGEND
FOR ENTIRE PLAN SET
(NOT TO SCALE)

EXISTING		PROPOSED
	ONSITE PROPERTY LINE / R.O.W. LINE	
	NEIGHBORING PROPERTY LINE / INTERIOR PARCEL LINE	
	EASEMENT LINE	
	SETBACK LINE	
	CONCRETE CURB & GUTTER	
	STORM SEWER	
	SANITARY SEWER MAIN	
S	SANITARY SEWER LATERAL	S
W	UG WATER LINE	W
E	UG ELECTRIC LINE	E
G	UG GAS LINE	G
OH	UG OVERHEAD WIRE	OH
T	UG TELEPHONE LINE	T
TC 516.4 OR 516.4	SPOT ELEVATIONS	TC 516.00 OR X 51.8 / TC 516.00 BC 515.55
	CONTOUR LINE	123
	HYDRANT	
	SANITARY MANHOLE	
	STORM MANHOLE	
	WATER METER	
	WATER VALVE	
	GAS VALVE	
	GAS METER	
	TYPICAL END SECTION	
OR	HEADWALL OR ENDWALL	
	YARD INLET	
	CURB INLET	
	CLEAN OUT	
SANITARY	SANITARY LABEL	
STORM	STORM LABEL	
	TYPICAL LIGHT	
	ACORN LIGHT	
	TRAFFIC LIGHT	
	UTILITY POLE	
	TYPICAL SIGN	
EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
	ELECTRIC MANHOLE	
	TELEPHONE MANHOLE	
	ELECTRIC BOX	
	ELECTRIC PEDESTAL	
	MONITORING WELL	
	TEST PIT	
	BENCHMARK	
	BORING	
	UTILITY POLE W/LIGHT	
	POLE LIGHT	

GENERAL NOTE:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.



LOCATION MAP
COPYRIGHT ADC THE MAP PEOPLE
PERMIT USE NO. 20602153-5
SCALE: 1"=2000'

APPLICANT
COMMERCE BANK
C/O STEPHEN TALBOTT
9000 ATRIUM WAY
MT. LAUREL, NJ 08054
(856) 727-3410

PREPARED BY:
BOHLER ENGINEERING, P.C.
22630 DAVIS DRIVE, SUITE 200
STERLING, VIRGINIA 20164
(703) 709-9500

SHEET INDEX

1 COVER SHEET
2 EXISTING CONDITIONS & VEGETATION MAP (EVM)
3 FINAL DEVELOPMENT PLAN AMENDMENT
4 SITE PLAN
5 SWM & GENERAL NOTES
6 LANDSCAPE PLAN
7 BUILDING ELEVATIONS
8 LANDBAY AREA MAP
9 LANDBAY AREA CHART
10 POND 2C PLAN & PROFILE
11 STORMWATER MANAGEMENT & BMP COMPUTATIONS
12 DISCHARGE STORAGE ELEVATION CURVES

PCA 91-Y-010-3
Application No.: FDPA 91-Y-010-2
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-18-05
Date of (BOS) (P.C.) approval 2-28-05
Sheet 1 of 12

Date of (BOS) (P.C.) approval 12-6-05 as amended by PC
SEE PROFFERS DATED 12-6-05
(DP) (GDP) (CDP) (FDP)
APPROVED DEVELOPMENT PLAN
Application No.: FDPA 91-Y-010-2
Sheet 1 of 12

MODIFICATIONS REQUESTED CONCURRENT WITH FDPA/PCA APPROVAL:

1. A WAIVER OF THE BARRIER REQUIREMENTS ALONG THE NORTHWEST AND NORTHEAST PROPERTY LINES, ADJACENT TO MACHEN ROAD AND CENTREWOOD DRIVE, PURSUANT TO SECTION 13-303 OF THE ZONING ORDINANCE.

2. A MODIFICATION OF THE TRANSITIONAL SCREENING REQUIREMENTS ALONG MACHEN ROAD ADJACENT TO THE PROPOSED BANK WITH DRIVE-THRU, PURSUANT TO PARAGRAPH 1 OF SECTION 13-302 OF THE ZONING ORDINANCE.

RECEIVED
Department of Planning & Zoning
JAN 18 2005
Zoning Evaluation Division

COMMONWEALTH OF VIRGINIA
EDWARD R. UMBRELL
No. 038388
1/17/05
PROFESSIONAL ENGINEER

MISS UTILITY
DIG WITH CARE
BEFORE YOU DIG CALL
1-800-552-7001
PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.

THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

A.J. VOLANTH — PROFESSIONAL ENGINEER — VIRGINIA LICENSE No. 0401-011438
E.R. UMBRELL — PROFESSIONAL ENGINEER — VIRGINIA LICENSE No. 0401-038388

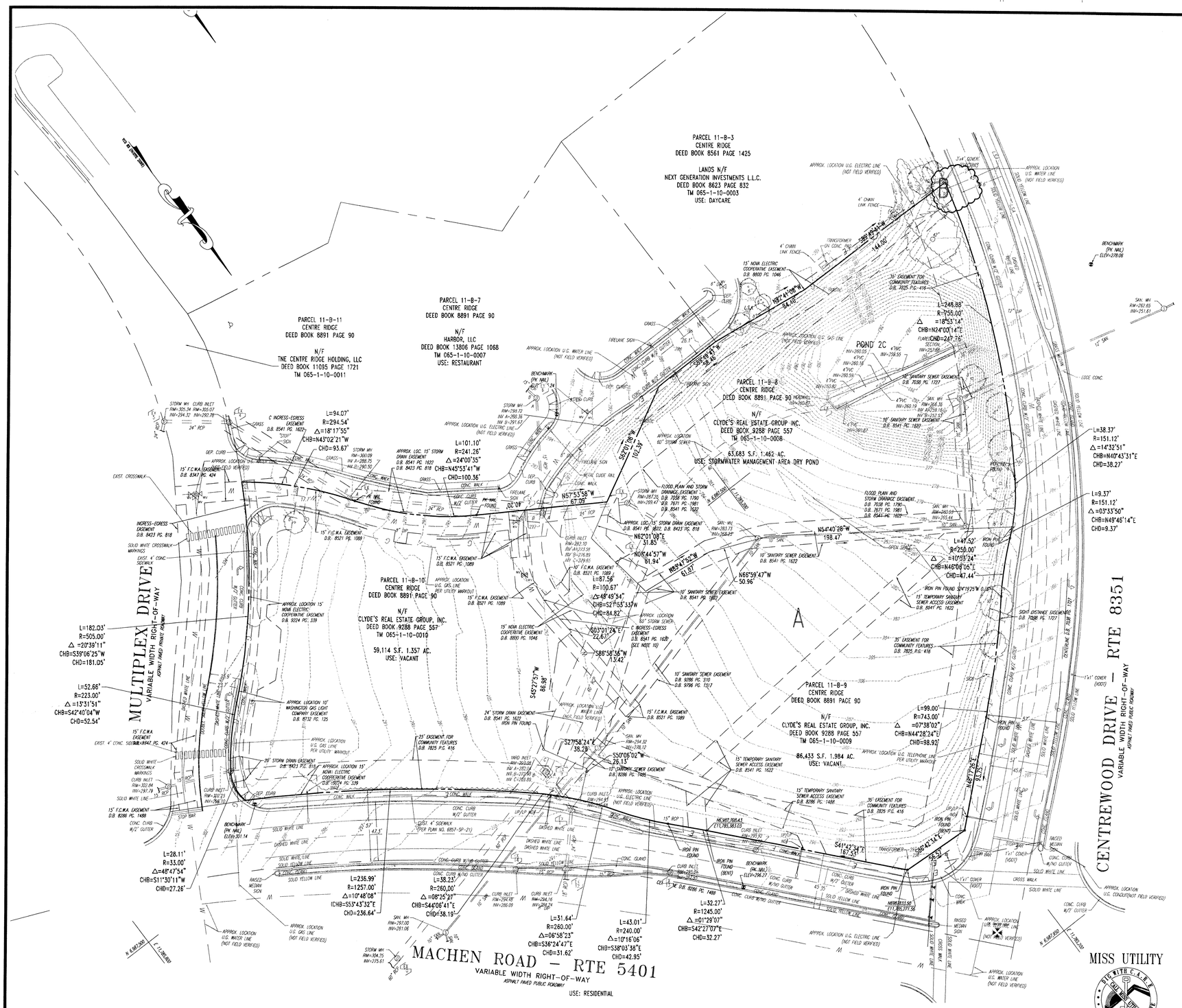
BOHLER ENGINEERING, P.C.
• PROFESSIONAL ENGINEERING SERVICES •
• 22630 DAVIS DRIVE, SUITE 200 •
• STERLING, VIRGINIA 20164 •
• (703) 709-9500 FAX: (703) 709-9501 | VA@bohlereng.com •

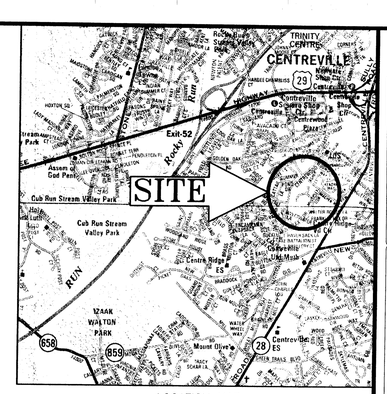
COMBINED CONCEPTUAL DEVELOPMENT PLAN/FINAL DEVELOPMENT PLAN
APPLICATION NO. PCA 91-Y-010-03, FDPA-91-Y-010-02
CENTRE RIDGE-A PORTION OF LANDBAY 11B
COVER SHEET
SULLY DISTRICT FAIRFAX COUNTY, VA

REVISIONS		
NO.	DATE	DESCRIPTION
1	11/19/04	REV. PER CO. COMMENTS
2	12/13/04	REV. PER CO. COMMENTS
3	1/13/05	REV. PER CO. COMMENTS
4		
5		
6		

SCALE (H):	N.T.S.
(V):	
DRAWN BY:	NSO
CHECKED BY:	JCP
DATE:	3/10/04
DRAWING #:	S037519
CAD ID #:	PC3

SHEET NUMBER
1





LOCATION MAP

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PERMIT USE NO. 20602153-5
SCALE: 1"=2000'

PCA 91-Y-010-3
Application No. _____ Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-18-05
Date of (BOS) (PC) approval 2-22-05
Sheet 2 of 12

FDPA 91-Y-010-2
Application No. _____ Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-25-05 as amended by PC
Date of (BOS) (PC) approval 1-26-05
Sheet 2 of 12

EVM- Commerce Bank PREPARED BY THE CARE OF TREES

TABLE 1. COVER TYPE SUMMARY TABLE

	Cover Type	Primary Species	Successional Stage	Condition*	Acreage	comments
A	maintained grasslands	ornamental plants	n.a	good	4.6 ac.	see condition
B	upland forest	hackberry	climax	good	2 ac.	see condition
C						
D						
E						
F						
G						
TOTAL ACREAGE:					4.8 ac.	

*Condition descriptions:

Cover Type A: The site consists of an open field of maintained grass with various landscape plantings. The majority of the plantings consists of eastern red cedar, spruce, red maple, and pin oak.

Cover Type B: Single specimen hackberry located in southwest corner of site

Cover Type C:

Cover Type D:

Cover Type E:

MISS UTILITY

DIG WITH C.A.R.E.
CALL WITHIN THREE WORKING DAYS
KEEP VIRGINIA SAFE

BEFORE YOU DIG CALL
1-800-552-7001
PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.

THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

COMMONWEALTH OF VIRGINIA
EDWARD R. UMBRELL
No. 038388
1/11/05
PROFESSIONAL ENGINEER

A.J. VOLANTH E.R. UMBRELL
PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER
COMMONWEALTH OF VIRGINIA No. 17326
DISTRICT OF COLUMBIA No. 15284
STATE OF GEORGIA LICENSE No. 024543
STATE OF NORTH CAROLINA LICENSE No. 20413
STATE OF SOUTH CAROLINA LICENSE No. 19461

BOHLER ENGINEERING, P.C.
• PROFESSIONAL ENGINEERING SERVICES •
• 22630 DAVIS DRIVE, SUITE 200 •
• STERLING, VIRGINIA, 20164 •
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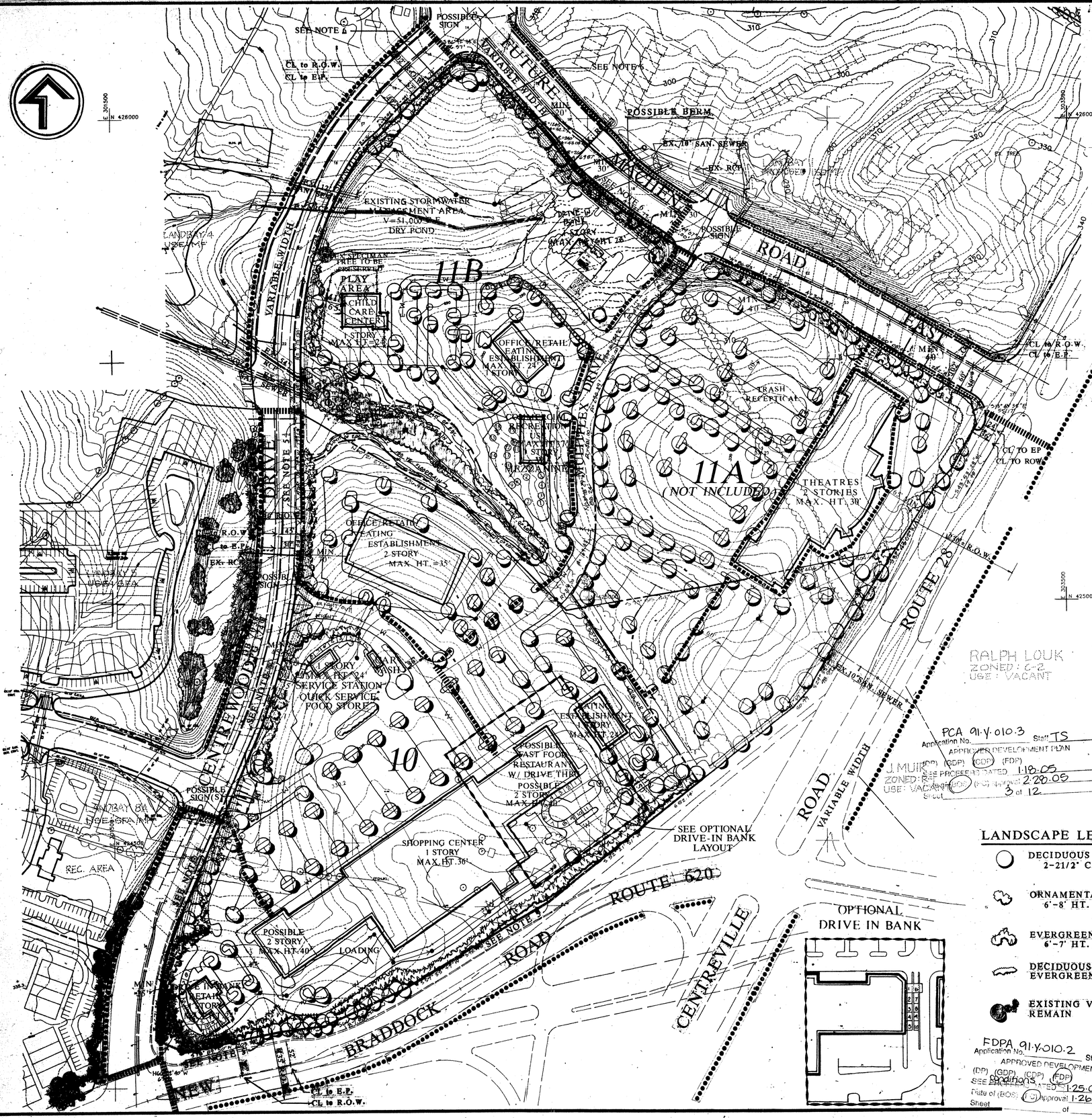
COMBINED CONCEPTUAL DEVELOPMENT PLAN/FINAL DEVELOPMENT PLAN
APPLICATION NO. PCA 91-Y-010-03, FDPA-91-Y-010-02
CENTRE RIDGE-A PORTION OF LANDBAY 11B
EXISTING CONDITIONS AND VEGATATION MAP (EVM)
SULLY DISTRICT FAIRFAX COUNTY, VA

REVISIONS		
NO.	DATE	DESCRIPTION
1	11/19/04	REV. PER CO. COMMENTS
2	12/13/04	REV. PER CO. COMMENTS
3	1/13/05	REV. PER CO. COMMENTS
4		
5		
6		

SCALE (H):	1" = 40'
(V):	
DRAWN BY:	NSO
CHECKED BY:	JCP
DATE:	3/10/04
DRAWING #:	S037519
CAD ID #:	PC3

SHEET NUMBER
2



TABULATION

LAND BAY 10

EXISTING ZONING ..... PDC
LAND AREA SUBJECT OF FDPA ..... 17.81± AC

PROPOSED GROSS FLOOR AREA OF SHOPPING CENTER ..... 179,500± SF
- SHOPPING CENTER ..... 125,000± SF
- DRIVE-IN BANK AND/OR EATING ESTABLISHMENT AND/OR RETAIL ..... 10,000± SF
- EATING ESTABLISHMENT ..... 7,500± SF
- SERVICE STATION/QUICK SERVICE FOOD STORE/CAR WASH ..... 3,000± SF
- OFFICE AND/OR RETAIL AND/OR EATING ESTABLISHMENTS ..... 30,000± SF

PROPOSED FLOOR AREA RATIO 0.23

PARKING SPACES REQUIRED/PROVIDED (SEE NOTE 10) ..... 702± (4.0 SPACES/1,000 GSF)

OPEN SPACE REQUIRED (15%) ..... 2.6 AC
OPEN SPACE PROVIDED (22%) ..... 4.0± AC

LAND BAY 11B

EXISTING ZONING ..... PDC

LAND AREA ..... 12.12± AC

PROPOSED GROSS FLOOR AREA OF SHOPPING CENTER ..... 35,000± SF
- OFFICE/RETAIL/EATING ESTABLISHMENT ..... 7,500± SF
- DRIVE-IN BANK ..... 4,500± SF
- COMMERCIAL RECREATION USE ..... 7,000± SF
- EXISTING CHILD CARE CENTER ..... 6,000± SF
  - ENROLLMENT 150
  - PLAY AREA ..... MIN. 7,500 SF

PROPOSED FLOOR AREA RATIO 0.07

PARKING SPACES REQUIRED/PROVIDED (SEE NOTE 10) ..... 100±
- SHOPPING CENTER ..... 50±
  (4.0 SPACES/1,000 GSF)
- DRIVE-IN BANK ..... 18±
  (4.0 SPACES/1,000 GSF)
- CHILD CARE CENTER ..... 24±

OPEN SPACE REQUIRED (15%) ..... 1.8 AC
OPEN SPACE PROVIDED (40%) ..... 5.0± AC

CUMULATIVE TABULATION FOR LANDBAYS 10 AND 11B

LAND AREA ..... 29.93± AC

PROPOSED GROSS FLOOR AREA ..... MAX. 200,000 SF
PROPOSED FLOOR AREA RATIO 0.15

PARKING SPACES REQUIRED/PROVIDED (SEE NOTE 10) ..... 802±

OPEN SPACE REQUIRED (15%) ..... 4.49 AC
OPEN SPACE PROVIDED (30%) ..... 9.0 AC

NOTES

1. THE PROPERTY THAT IS THE SUBJECT OF THIS FINAL DEVELOPMENT PLAN AMENDMENT (FDPA) IS IDENTIFIED ON THE FAIRFAX COUNTY ZONING MAP AS 65-1 ((1)) 32 AND ((10)) 1-3 (FORMERLY 65-1 ((1)) 32).
2. THE TOPOGRAPHY SHOWN HEREON IS AT A CONTOUR INTERVAL OF TWO (2) FEET BY AIR SURVEY BY DEWBERRY & DAVIS PRIOR TO DEVELOPMENT.
3. THE BOUNDARY INFORMATION SHOWN HEREON IS BY DEWBERRY & DAVIS.
4. BEST MANAGEMENT PRACTICES (BMP'S) WILL BE PROVIDED IN ACCORDANCE WITH THE APPROVED CONCEPTUAL DEVELOPMENT PLAN AND PROFFERED CONDITIONS AS AMENDED. QUALITY WILL BE PROVIDED IN ACCORDANCE WITH THE REGULATIONS SET FORTH IN THE PUBLIC FACILITIES MANUAL. THE TYPE AND DETAILED SIZE OF THE STORMWATER MANAGEMENT FACILITY SHOWN HEREON IS SUBJECT TO CONCURRENCE WITH FINAL ENGINEERING. THERE IS NO RESOURCE PROTECTION AREA LOCATED ON THE SUBJECT PROPERTY. SHOWN OF THE CHESAPEAKE BAY PRESERVATION AREA MAPS DATED MARCH 1993.
5. TRANSITIONAL SCREENING WILL BE PROVIDED ALONG THE WESTERN PROPERTY LINE OF LAND BAY 10 ADJACENT TO CENTREWOOD DRIVE IN ACCORDANCE WITH THE LANDSCAPING SHOWN HEREON AND AS DEPENDENTED ON THE DETAILS ON SHEET 2. RE-APPROVAL OF THE WAIVER OF THE BARRIER REQUIREMENT IS REQUIRED.

   RE-APPROVAL OF THE WAIVER OF THE BARRIER REQUIREMENT ALONG THE SOUTHERN PROPERTY LINE ALONG NEW BRADDOCK ROAD IS REQUESTED. LANDSCAPING WILL BE PROVIDED IN THIS AREA IN ACCORDANCE WITH THE LANDSCAPING SHOWN HEREON.

   IN ADDITION, LANDSCAPED BERM(S) WILL BE INCORPORATED INTO THE LANDSCAPING ALONG CENTREWOOD DRIVE AND MACHEN ROAD WHERE IT IS DETERMINED WITH FINAL ENGINEERING THAT THE GRADING WILL MAKE A BERM(S) EFFECTIVE.
6. RE-APPROVAL OF THE WAIVER OF THE BARRIER REQUIREMENT IS REQUIRED ALONG THE NORTHERN AND WESTERN PROPERTY LINES OF LAND BAY 11B ADJACENT TO MACHEN ROAD AND CENTREWOOD DRIVE RESPECTIVELY, PURSUANT TO PAR. 1 OF SECT. 13-304 OF THE ZONING ORDINANCE. A MODIFICATION OF THE TRANSITIONAL SCREENING REQUIREMENT IS REQUESTED ALONG ROAD AND CENTREWOOD DRIVE ADJACENT TO THE PROPOSED EATING ESTABLISHMENT PURSUANT TO PAR. 1 OF SECT. 13-304 OF THE ZONING ORDINANCE.
7. AS PREVIOUSLY APPROVED, A WAIVER OF THE SERVICE DRIVE ALONG ROUTE 28 IS STILL REQUESTED.
8. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO GRAVES LOCATED ON THE SUBJECT PROPERTY.
9. THE FOOTPRINTS OF THE BUILDINGS SHOWN HEREON MAY BE INCREASED BY UP TO FIVE PERCENT SO LONG AS THE OPEN SPACE PROVIDED IN THE TABULATION AND MINIMUM DIMENSIONS TO THE PERIPHERAL LOT LINES ARE NOT DIMINISHED. THE SIZES AND SHAPES OF THE BUILDINGS AND INDICATIVE GOLF CURSES ARE PRELIMINARY AND MAY VARY AND THE ENTRY LOCATIONS, NUMBER OF SERVICE, ETC. SHOWN IN THE TABULATION MAY CHANGE AS A RESULT OF FINAL ENGINEERING AND ARCHITECTURAL DESIGN, AND FINAL TENANT NEGOTIATIONS. THE TOTAL GROSS FLOOR AREA AND THE BUILDING HEIGHTS DEPENDENTED IN THE TABULATION ARE TO BE CONSIDERED MAXIMUMS, HOWEVER, AND THE DIMENSIONS TO THE PERIPHERAL LOT LINES DEPENDENTED ON THE GRAPHIC ARE TO BE DEPEND MINIMUMS. THE FLOOR AREA OF THE INDIVIDUAL BUILDINGS MAY VARY AS A RESULT OF FINAL ARCHITECTURAL DESIGN SO LONG AS THE TOTAL MAXIMUM FLOOR AREA OF 213,400+ SQUARE FEET FOR THE ENTIRE SHOPPING CENTER WITHIN THE LIMITS OF THE FDPA IS NOT EXCEEDED. THE APPLICANT RESERVES THE RIGHT TO DEVELOP A LESSER AMOUNT OF GROSS FLOOR AREA FROM THE TOTAL REPRESENTED IN THE TABULATION AND THE BUILDING FOOTPRINT(S) AND ASSOCIATED PARKING LOT PAVE(S) WILL BE REVISED ACCORDINGLY. ADDITIONAL PARKING SPACES MAY BE PROVIDED WHERE THE BUILDING FOOTPRINTS ARE REDUCED, REVISED OR MODIFIED SO LONG AS TO NOT ENCROACH INTO AREAS DEPICTED AS TREE SAVE OR LANDSCAPED OPEN SPACE AS DETERMINED BY THE URBAN FORESTER. THE LOCATION OF TRAILS, SIDEWALKS AND UTILITIES PRESENTED HEREON ARE SUBJECT TO CHANGE WITH FINAL ENGINEERING AND DESIGN. IN ADDITION, THE SERVICE STATION BUILDING MAY BE INTEGRATED WITHIN THE CANOPIED AREA DESIGNATED FOR THE GAS PUMPS.
10. A FINAL NUMBER OF PARKING SPACES WILL BE DETERMINED AT TIME OF SITE PLAN(S) SUBMISSION AND WILL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 11 OF THE ZONING ORDINANCE. IT IS TO BE UNDERSTOOD THAT THE NUMBER OF PARKING SPACES MAY BE INCREASED OR DECREASED FROM THE NUMBER REPRESENTED IN THE TABULATION AND ON THE FDPA GRAPHIC BASED ON FINAL USE MIX AS LONG AS THE OPEN SPACE PROVIDED SHOWN IN THE TABULATION AND THE MINIMUM DIMENSIONS TO THE PERIPHERAL LOT LINES ARE NOT REDUCED.

    THE REQUIRED TOTAL NUMBER OF LOADING SPACES APPROXIMATES 18 SPACES. LOADING SPACES WILL BE PROVIDED IN ACCORDANCE WITH ARTICLE 11 OF THE ZONING ORDINANCE AND THE PUBLIC FACILITIES MANUAL.
11. IF IS TO BE UNDERSTOOD THAT THE FOLLOWING PRINCIPAL AND ACCESSORY USES MAY BE ESTABLISHED WITHIN THE RETAIL BUILDINGS AND BUILDINGS IDENTIFIED AS OFFICE AND/OR RETAIL AND/OR EATING ESTABLISHMENTS:
    - ACCESSORY USES AND ACCESSORY SERVICE USES.
    - AUTOMOTIVE ORIENTED USES.
    - BUSINESS SERVICE AND SUPPLY SERVICE ESTABLISHMENTS.
    - CHILD CARE CENTER AND NURSERY SCHOOL.
    - COMMERCIAL AUTOMOTIVE TOOLS, EQUIPMENT AND MACHINERY SALES AND RENTAL ESTABLISHMENTS.
    - COMMERCIAL RECREATION ESTABLISHMENTS: THE FOLLOWING USES, SHOULD THEY BE PROPOSED, WILL NOT EXCEED 10,000 SF: DANCE HALLS, OR GAY WEDDING, WILL NOT EXCEED 10,000 SF: AND ANY MINUTES THE INDOOR CLUB WILL NOT EXCEED 30,000 SF.
    - FENCING AND OTHER SIMILAR OUTDOOR RECREATIONAL USES.
    - MINIATURE GOLF COURSE.
    - SKATING FACILITIES. (LIMITED TO ICE)
    - AND OTHER SIMILAR COMMERCIAL RECREATION USES.
    - COMMUNITY USES.
    - EATING ESTABLISHMENTS.
    - ESTABLISHMENTS FOR SCIENTIFIC RESEARCH, DEVELOPMENT AND TESTING WHERE ASSEMBLY, INTERSECTION AND PRESSING OF PRODUCTS IS CONFINED TO ENCLOSED BUILDINGS AND IS INCIDENTAL TO THE PRIMARY USE OF SCIENTIFIC RESEARCH, DEVELOPMENT AND TESTING.
    - FAST FOOD RESTAURANTS (LIMITED TO 10% OF THE GROSS FLOOR AREA OF THE STRUCTURE).
    - FINANCIAL INSTITUTIONS.
    - INSTITUTIONAL USES (GROUP 3).
    - LIGHT PUBLIC UTILITY USES (CATEGORY 1).
    - MEDICAL CARE FACILITIES, EXCEPT NURSING FACILITIES.
    - OFFICES.
    - PERSONAL SERVICE ESTABLISHMENTS.
    - PRIVATE CLUBS AND PUBLIC BENEFIT ASSOCIATIONS (TO BE CLOSED IN 12:30 AM).
    - PRIVATE SCHOOLS OF SPECIAL EDUCATION.
    - PUBLIC USES.
    - QUICK-SERVICE FOOD STORES.
    - REPAIR SERVICES ESTABLISHMENTS.
    - RETAIL SALES ESTABLISHMENTS.
    - VETERINARY HOSPITALS.

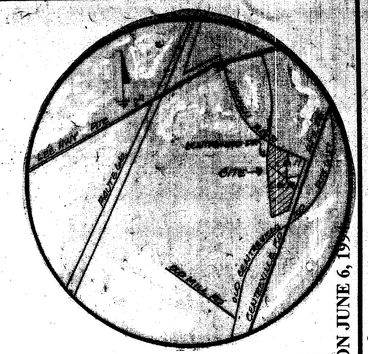
    IF IS TO BE UNDERSTOOD THAT A VEHICLE LIGHT SERVICE ESTABLISHMENT MAY ALSO BE ESTABLISHED WITHIN A BUILDING AS MAY BE PERMITTED BY THE ADOPTION OF AN AMENDMENT TO THE PROVISIONS OF THE ZONING ORDINANCE. IF PROVIDED, THE SERVICE BAYS WILL BE LOCATED ON THE REAR OF THE BUILDING. THERE WILL BE NO OUTSIDE STORAGE OF VEHICLES PERMITTED.
12. AT THIS TIME, IT IS ANTICIPATED THAT DEVELOPMENT OF THE DISTRICT PROPERTY WILL COMMENCE AS SOON AS ALL NECESSARY COUNTY APPROVALS ARE OBTAINED. HOWEVER, THIS IS SUBJECT TO CHANGE BASED ON MARKET CONDITIONS.
13. THERE IS NO DEVELOPED RECREATIONAL OPEN SPACE PROPOSED IN THESE LAND BAYS.
14. NO BONUS DENSITY/FLOOR AREA IS PROPOSED WITH THIS APPLICATION.
15. ARCHITECTURAL SKETCHES OF THE PROPOSED USES ARE NOT AVAILABLE AT THIS TIME.
16. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO HAZARDOUS OR TOXIC SUBSTANCES CURRENTLY STORED ON THE SUBJECT PROPERTY. FURTHER, THE PROPOSED SERVICE STATION WILL UTILIZE, STORE, TRANSFER AND DISPOSE OF SUCH SUBSTANCES IN ACCORDANCE WITH APPLICABLE REGULATIONS AND GUIDELINES.
17. THERE ARE NO EXISTING UTILITY EASEMENTS HAVING A WIDTH OF TWENTY-FIVE (25) FEET OR MORE LOCATED ON THE SUBJECT PROPERTY.
18. THE TOTAL AREA OF THIS FDPA CONSISTS OF APPROXIMATELY 29.93 ACRES. IF AN AMENDMENT TO ANY PORTION OF THIS FDPA INCLUDE RESIDENTIAL AT A LATER DATE, THE APPLICANT RESERVES THE RIGHT TO SUBMIT ONLY THAT SECTION WHICH IS AFFECTED BY THE AMENDMENT FOR REVIEW AND APPROVAL.
19. THE WIDTH OF THE INTERNAL ROADWAYS AND LOCATION OF THE PROPOSED UTILITIES SHOWN HEREON ARE SUBJECT TO CHANGE WITH FINAL ENGINEERING.
20. THE PAVED SPACES FOR THE ENTRY INTO LAND BAY 10 AND THE EXIT ONTO NEW BRADDOCK ROAD ARE REPRESENTED IN THE AREA OF THE EXISTING STORMWATER MANAGEMENT FACILITY WILL BE LOCATED AS EITHER SURFACE PARKING SPACES WHERE A RECONFIGURATION OF THE STORMWATER MANAGEMENT FACILITIES AND ASSOCIATED RETAINING WALLS OR A PARKING DECK OVER THE EXISTING STORMWATER MANAGEMENT FACILITY IS APPROVED BY DPWES. IN THE EVENT THESE PARKING SPACES ARE NOT APPROVED BY DPWES, THERE WILL BE DEDUCTED. THE NUMBER OF PARKING SPACES REPRESENTED OUTSIDE OF THE STORMWATER MANAGEMENT FACILITY WILL SATISFY THE REQUIRED NUMBER OF SPACES FOR THE SHOPPING CENTER STRUCTURE.
21. TO THE BEST OF OUR KNOWLEDGE, EXCEPT WHERE NOTED HEREON, THE PROPOSED DEVELOPMENT DOES CONFORM TO ALL CURRENT APPLICABLE LAND DEVELOPMENT ORDINANCES, REGULATIONS AND ADOPTED STANDARDS.

LANDSCAPE LEGEND

- DECIDUOUS TREE 2-21/2" CAL. MIN.
- ORNAMENTAL TREE 6'-8' HT. MIN.
- EVERGREEN TREE 6'-7' HT. MIN.
- DECIDUOUS AND/OR EVERGREEN SHRUB MASS
- EXISTING VEGETATION TO REMAIN

LEGEND

- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING WATERMAIN
- PROPOSED WATERMAIN
- EXISTING VEGETATION
- LIMITS OF CLEARING AND GRADING
- MIN. 3' HIGH FENCE
- APPROXIMATE LIMIT OF EQC
- APPROXIMATE LIMIT OF 100 YEAR FLOODPLAIN
- FUTURE 4' SIDEWALK (PER PLAN NO. 8837-SP-2D)
- EXISTING 5' TYPE I ASPHALT TRAIL
- PROPOSED MIN. 6' ASPHALT OR 4' CONCRETE SIDEWALK
- EXISTING SIDEWALK
- PROPOSED CROSSWALK



VICINITY MAP 1"=2000'

COMMONWEALTH OF VIRGINIA
Edward R. Umbrell
No. 038388
PROFESSIONAL ENGINEER
8/26/04

Dewberry & Davis
Architects Engineers Planners Surveyors
8401 Arlington Blvd., Fairfax, VA 22031
☎ 703 849-0100

AS APPROVED BY THE PLANNING COMMISSION ON MARCH 24, 1994 AND BY THE BOARD OF SUPERVISORS ON JUNE 6, 1994

FINAL DEVELOPMENT PLAN AMENDMENT
APPLICATION NO. FDPA 81-S-058-3

CENTRE RIDGE LANDBAY 10 AND 11B

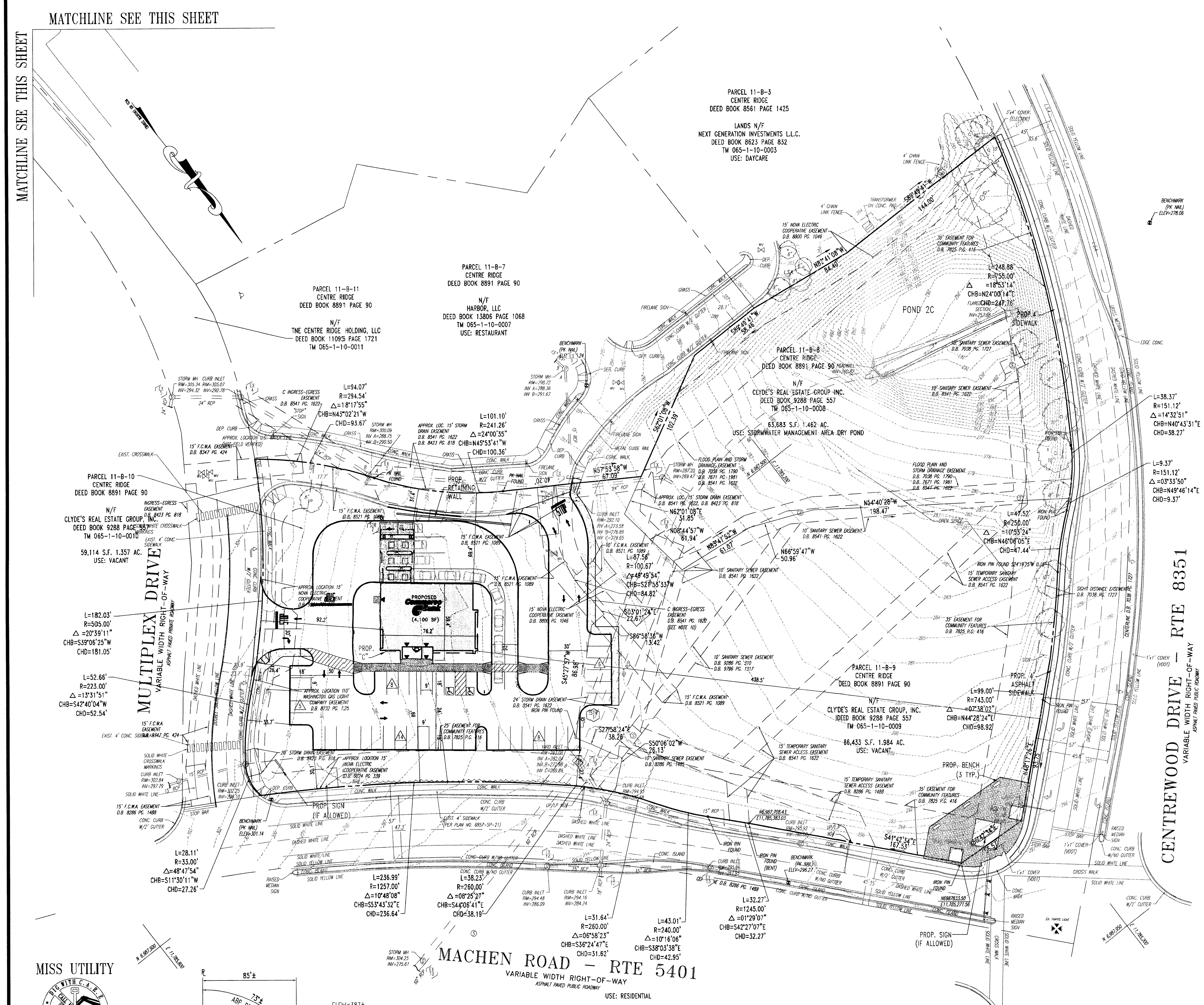
SULLY DISTRICT

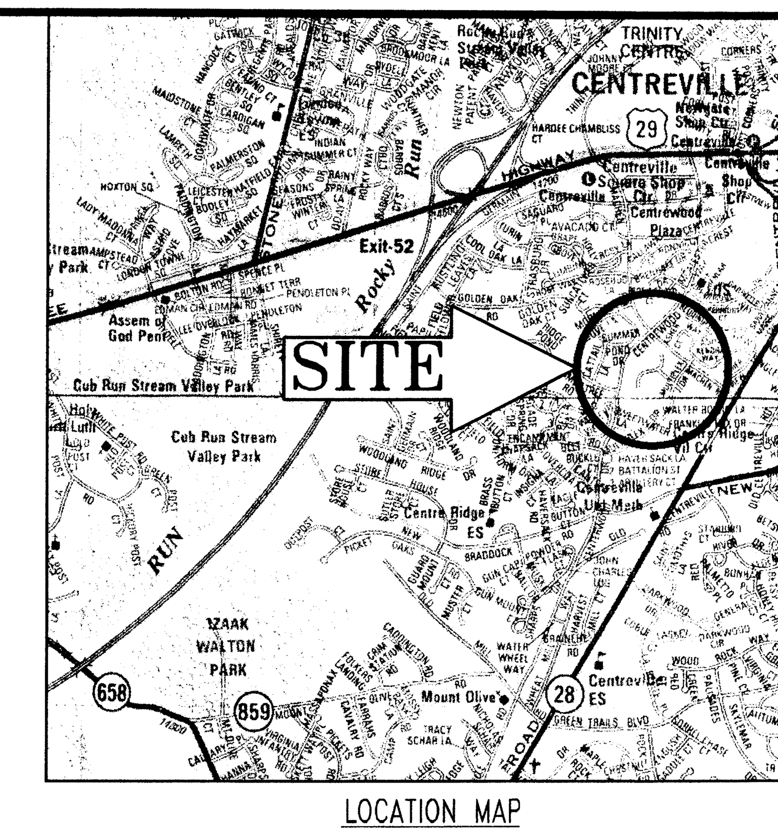
Drawn By	KGHR
Designed By	ERU
Checked By	SYLRT
Date	8-6-93 REV 12-9-93 REV 1-4-94
Scale	1"=100'
Plan Number	
Zoned	
Sheet	3 OF 12
File Number	M-8768
	REV 3-4-94 REV 3-28-94

CYRT1 PLAN D4258 FDPA

MATCHLINE SEE THIS SHEET

MATCHLINE SEE THIS SHEET





LOCATION MAP

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PERMIT USE NO. 20602153-5
SCALE: 1"=2000'

TABULATION

PART OF LANDBAY 11B (PARCELS 11-B-8, 11-B-9 & 11-B-10)

EXISTING ZONING....................PDC
LAND AREA SUBJECT OF FDPA....................4.803±AC.

PROPOSED GROSS FLOOR AREA OF BANK W/DRIVE-THROUGH........4,100± S.F.

PROPOSED FLOOR AREA RATIO....................0.02

PARKING SPACES REQUIRED
(SHOPPING CENTER RATES 4.0 SPACES/1,000 GFA....................17 SPACES
PARKING SPACES PROVIDED....................41 SPACES

OPEN SPACE REQUIRED (15%)....................31,385 S.F. (0.72 AC.)
OPEN SPACE PROVIDED (81%)....................170,496 S.F. (3.91 AC.)

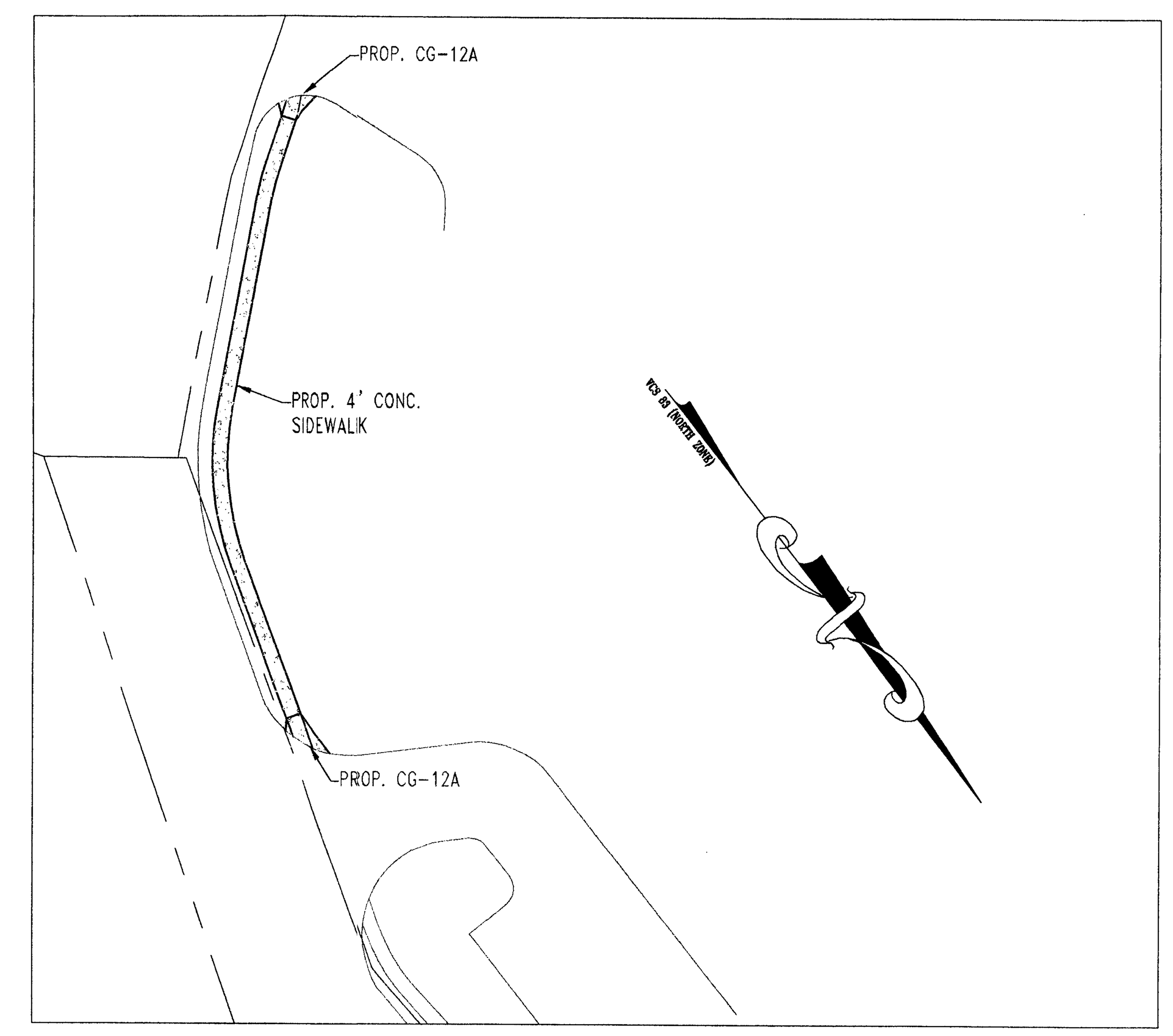
CUMULATIVE TABULATION FOR LANDBAYS 10 & 11B-FOR INFORMATIONAL PURPOSES ONLY
(FROM PREVIOUSLY APPROVED FDPA 81-S-058-3, FDPA 91-Y-010)

LAND AREA....................29.93±AC.

PROPOSED GFA....................MAX. 200,900 S.F.
PROPOSED FLOOR AREA RATIO....................0.15

PARKING SPACES REQUIRED/PROVIDED....................802±

OPEN SPACE REQUIRED....................4.49 AC.
OPEN SPACE PROVIDED....................9.0±



MATCHLINE SEE THIS SHEET

OFF-SITE SIDEWALK IMPROVEMENTS DETAIL
SCALE: 1"=40'

MISS UTILITY

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1-800-552-7001
PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE

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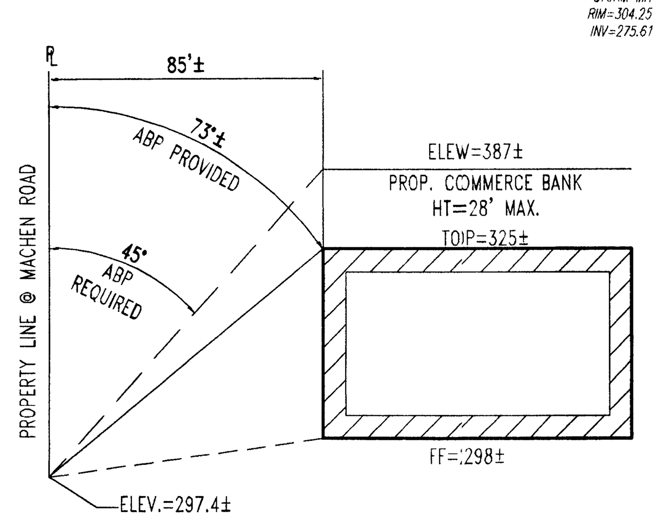
THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.



ANGLE OF BULK PLANE

Application No. PCA 91-Y-010-3 Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-18-05
Date of (BOS) (PC) approval 2-28-05
Sheet 4 of 12

Application No. FDPA 91-Y-010-2 Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED Conditions 1-25-05 as amended by PC
Date of (BOS) (PC) approval 1-26-05
Sheet 4 of 12

COMMONWEALTH OF VIRGINIA
EDWARD R. UMBRELL
No. 038388
1/17/05
PROFESSIONAL ENGINEER

A.J. VOLANTH
PROFESSIONAL ENGINEER
VIRGINIA LICENSE No. 0402 031438
MARYLAND LICENSE No. 21342
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GEORGIA LICENSE No. 026541
NORTH CAROLINA LICENSE No. 23432
SOUTH CAROLINA LICENSE No. 20143
TENNESSEE LICENSE No. 107048

E.R. UMBRELL
PROFESSIONAL ENGINEER
VIRGINIA LICENSE No. 0402 038388

BOHLER ENGINEERING, P.C.
PROFESSIONAL ENGINEERING SERVICES
22630 DAVIS DRIVE, SUITE 200
STERLING, VIRGINIA, 20164
(703) 709-9500 FAX: (703) 709-9501 | VA@bohlereng.com

COMBINED CONCEPTUAL DEVELOPMENT PLAN/FINAL DEVELOPMENT PLAN
APPLICATION NO. PCA 91-Y-010-03, FDPA-91-Y-010-02
CENTRE RIDGE-A PORTION OF LANDBAY 11B

SITE PLAN

SULLY DISTRICT FAIRFAX COUNTY, VA

REVISIONS

NO.	DATE	DESCRIPTION
1	11/19/04	REV. PER CO. COMMENTS
2	12/13/04	REV. PER CO. COMMENTS
3	1/13/05	REV. PER CO. COMMENTS

SCALE (H): 1" = 40'
(V):

DRAWN BY:	NSO
CHECKED BY:	JCP
DATE:	3/10/04
DRAWING #:	S037519
CAD ID #:	S037519PC1

SHEET NUMBER

4

STORMWATER MANAGEMENT NARRATIVE

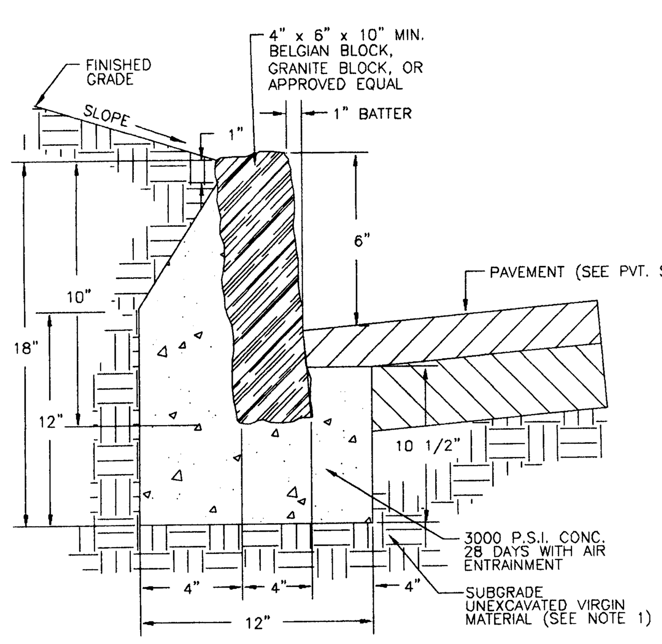
THE SITE IS CURRENTLY AN UNDEVELOPED PARCEL TOTALING 4.803 ACRES. THE SCOPE OF THIS PROJECT IS THE CONSTRUCTION OF A COMMERCE BANK WITH A DRIVE-THRU THAT IS TO BE LOCATED IN THE EASTERN CORNER OF THE UNDEVELOPED PARCEL. THE RUNOFF FROM THE PARCEL IS COLLECTED INTO TWO PROPOSED STORM STRUCTURES AND TAKEN TO A DRY STORMWATER MANAGEMENT POND VIA A CLOSED STORM SEWER SYSTEM. THE DESIGN FOR THIS POND AND ITS NECESSARY STRUCTURES CAN BE FOUND ON SHEETS 8 THROUGH 13 OF THIS PLAN SET. THE EXISTING POND WAS DESIGNED TO HANDLE THE FUTURE RUNOFF FROM OUR SITE.

ADEQUATE OUTFALL NARRATIVE

THE GRADING AND TOPOGRAPHY FOR THE PROPOSED COMMERCE BANK IS SUCH THAT THE RAIN WATER RUNOFF DRAINS IN THE SOUTHERN DIRECTION. THE RUNOFF IS COLLECTED IN A SERIES OF STORM GRATE INLETS LOCATED WITHIN THE SITE AND ALONG THE EXISTING SERVICE DRIVE. THESE STRUCTURES, LABELED EXISTING 1 THROUGH EXISTING 14, THEN DIRECT THE RUNOFF INTO A CLOSED SYSTEM RUNNING ALONG THE EXISTING SERVICE DRIVE TOWARDS THE SOUTHERN PORTION OF THE SITE. THE STORM SYSTEM THEN DISCHARGES INTO A DRY STORMWATER MANAGEMENT POND, POND 2C. IN ADDITION, AN AREA OF APPROXIMATELY 40 ACRES DRAINS INTO POND 2C. SEE SHEETS 8 THROUGH 13 FOR OFFSITE DRAINAGE DIVIDES AND CALCULATIONS. THE WATER THEN FLOWS INTO TWO CONSECUTIVE WET STORMWATER MANAGEMENT PONDS, PONDS 2B AND 2A, WHICH ARE ALSO USED AS BMP FACILITIES. THE FLOW THEN TRAVELS SOUTHWARD AND CROSSES UNDERNEATH ROUTE 66. WE ARE PROPOSING TO ADD TWO NEW STRUCTURES TO THIS SYSTEM: STRUCTURES 1 AND 2. THESE TWO NEW STRUCTURES ARE LOCATED IN THE PARKING LOT OF THE COMMERCE BANK. THEY ARE DESIGNED TO COLLECT THE RUNOFF FROM THE BANK PAD, THE BUILDING, AND THE SURROUNDING PARKING LOT AND DISCHARGE THE WATER INTO THE EXISTING SYSTEM. IT IS THE OPINION OF THIS ENGINEER THAT THE SITE HAS ADEQUATE OUTFALL. THE EXISTING SYSTEM AND PROPOSED SYSTEMS ARE ADEQUATE TO HANDLE THE 10-YEAR STORM AND THAT NO STRUCTURES WILL BE IMPACTED BY THE 100-YEAR STORM EVENT.

BMP NARRATIVE

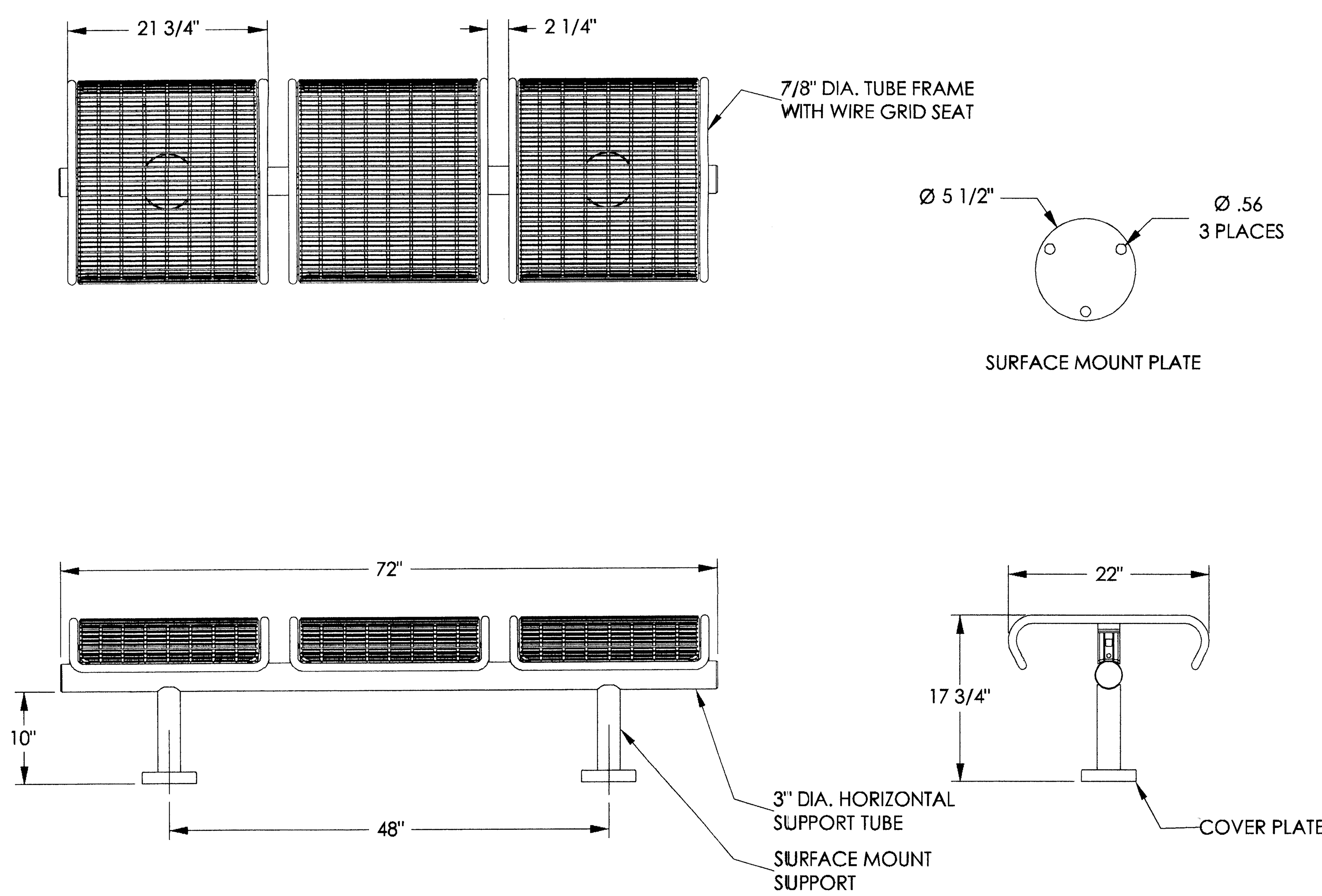
THE SITE CURRENTLY DRAINS TO INLETS LOCATED WITHIN THE PAD AND ALONG THE SERVICE DRIVE WITHIN THE PARCEL. ONCE IN THIS INLET, THE WATER TRAVELS WEST THROUGH A CLOSED 24" PIPE SYSTEM ALONG THE SERVICE DRIVE AND INTO A DRY STORMWATER MANAGEMENT POND, POND 2C. THE RUNOFF THEN CONTINUES SOUTH INTO A WET STORMWATER MANAGEMENT POND AND BMP FACILITY, POND 2B. THE BMP CALCULATIONS FOR THIS POND, WHICH COVERS THE ENTIRE PARCEL AREA, CAN BE FOUND ON SHEETS 8 THROUGH 13.



NOTES:
1. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN CRUSHED STONE. ALL SUBGRADES SHALL BE APPROVED BY THE TOWNSHIP ENGINEER PRIOR TO POURING.
2. JOINTS SHALL BE NOT MORE THAN 1/4" WIDE FOR DRESSED BLOCK AND 3/8" WIDE FOR QUARRY SPLIT BLOCK. THE JOINTS SHALL BE POINTED WITH 1:1 CEMENT-SAND MORTAR.

BELGIAN BLOCK CURB DETAIL

NOT TO SCALE



l a n d s c a p e f o r m s ®

431 LAWNDALE AVE. PHONE: 800-521-2546
KALAMAZOO, MI 49048 FAX: 269-381-3455

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TITLE: BACKLESS, 3 SEAT STRAIGHT, SURFACE MOUNT
DESIGN: PLEXUS II
PATENT:
FILE: LX3508
DATE: 4-28-03
AUTHOR: TAH

BENCH DETAIL

N.T.S

NOTES:

1. THE PROPERTY THAT IS THE SUBJECT OF THIS COMBINED CONCEPTUAL DEVELOPMENT PLAN/FINAL DEVELOPMENT PLAN (FDPA) IS IDENTIFIED ON THE FAIRFAX COUNTY ZONING MAP AS 65-1-(10)-8, 9 & 10.

2. THE TOPOGRAPHY SHOWN HEREON IS AT A CONTOUR INTERVAL OF ONE (1) FOOT BY A FIELD RUN BOUNDARY AND TOPOGRAPHIC SURVEY BY CONTROL POINT ASSOCIATES, INC. DATED 2-10-04, FILE NO. S037519.SR.

3. THE BOUNDARY INFORMATION SHOWN HEREON IS BY CONTROL POINT ASSOCIATES, INC.

4. BEST MANAGEMENT PRACTICES (BMP'S) WILL BE PROVIDED IN ACCORDANCE WITH THE APPROVED CONCEPTUAL DEVELOPMENT PLAN AND PROFFERED CONDITIONS. AN ADEQUATE OUTFALL WILL BE PROVIDED IN ACCORDANCE WITH THE REGULATIONS SET FORTH IN THE PUBLIC FACILITIES MANUAL. STORMWATER MANAGEMENT (BMP AND DETENTION) FOR THE SUBJECT DEVELOPMENT HAVE BEEN ACCOUNTED FOR IN CENTRE RIDGE-STORMWATER MANAGEMENT PLAN AND POND DESIGN FOR PONDS 1A,1B,2A, 2B AND 2C (6857-SP-02), PREPARED BY DEWBERRY & DAVIS, DATED JULY, 1987, LAST REVISED APRIL 9, 1990. REFER TO APPROVED PLANS (6857-SP-02) FOR BMP CALCULATIONS. SEE SHEETS 8 - 13 OF THIS PLAN SET FOR DETAILS. STORM DRAINAGE WILL BE PROVIDED IN ACCORDANCE WITH SECTION 6-0000 OF THE PUBLIC FACILITY MANUAL (PFM). THE TYPE AND ESTIMATED SIZE OF THE STORMWATER MANAGEMENT FACILITY SHOWN HEREON IS SUBJECT TO CHANGE WITH FINAL ENGINEERING.

5. A MODIFICATION OF THE TRANSITIONAL SCREENING REQUIREMENT IS REQUESTED ALONG MACHEN ROAD ADJACENT TO THE PROPOSED BANK WITH DRIVE-THROUGH PURSUANT TO PAR. 1 OF SECT. 13-302 OF THE ZONING ORDINANCE. REFER TO SHEET 6 FOR DETAILS.

6. A WAIVER OF THE BARRIER REQUIREMENT IS REQUESTED ALONG THE NORTHEAST & NORTHWEST PROPERTY LINES OF LAND BAY 11B ADJACENT TO MACHEN ROAD AND CENTREWOOD DRIVE RESPECTIVELY, PURSUANT TO PAR. 1 OF SECT. 13-303 OF THE ZONING ORDINANCE. REFER TO SHEET 6 FOR DETAILS.

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

8. COMMERCE BANK DOES NOT REQUIRE ANY LOADING SPACES.

9. THIS SITE WILL BE SERVICED BY PUBLIC WATER AND SEWER.

10. AT THIS TIME, IF IS ANTICIPATED THAT DEVELOPMENT OF THE SUBJECT PROPERTY WILL COMMENCE AS SOON AS ALL NECESSARY COUNTY APPROVALS ARE OBTAINED. HOWEVER, THIS IS SUBJECT TO CHANGE BASED ON MARKET CONDITIONS.

11. THERE IS NO DEVELOPED RECREATIONAL OPEN SPACE PROPOSED IN THIS PORTION OF LAND BAY 11B.

12. NO BONUS DENSITY/FLOOR AREA IS PROPOSED WITH THIS APPLICATION.

13. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO HAZARDOUS OR TOXIC SUBSTANCES CURRENTLY STORED ON THE SUBJECT PROPERTY. FURTHER, THE PROPOSED BANK WITH DRIVE-THROUGH WILL UTILIZE, STORE, TREAT AND DISPOSE OF SUCH SUBSTANCES IN ACCORDANCE WITH APPLICABLE REGULATIONS AND GUIDELINES.

14. THERE ARE NO EXISTING UTILITY EASEMENTS HAVING A WIDTH OF TWENTY-FIVE (25) FEET OR MOTE LOCATED ON THE SUBJECT PROPERTY.

15. NO RESOURCE PROTECTION AREA, ENVIRONMENTAL QUALITY CORRIDOR OR FLOOD PLAIN IS KNOWN TO EXIST ON THIS PROPERTY. THE ENTIRE SITE EXISTS WITHIN A RESOURCE MANAGEMENT AREA (RMA). THE PROPERTY IS LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOOD PLAIN) PER MAP ENTITLED "FIRM, FLOOD INSURANCE RATE MAP, FAIRFAX COUNTY, VIRGINIA (UNINCORPORATED AREAS), PANEL 25 OF 150", COMMUNITY-PANEL NUMBER 515525 0025 D, MAP REVISED MARCH 5, 1990.

16. THE TOTAL AREA OF THIS FDPA CONSISTS OF APPROXIMATELY 4.803 ACRES.

17. THE WIDTH OF THE INTERNAL ROADWAYS AND LOCATION OF THE PROPOSED UTILITIES SHOWN HEREON ARE SUBJECT TO CHANGE WITH FINAL ENGINEERING.

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

19. LIGHTING WILL BE PROVIDED IN ACCORDANCE WITH THE OUTDOOR LIGHTING STANDARDS IN ARTICLE 14-900 OF THE ZONING ORDINANCE, THE APPLICANT RESERVES THE RIGHT TO MAKE ADJUSTMENTS TO THE PROPOSED LIGHTING LOCATIONS THROUGHOUT THE SITE PLAN PROCESS.

20. SIGNAGE WILL BE IN STRICT ACCORDANCE WITH ARTICLE 12 OF THE FAIRFAX COUNTY ZONING ORDINANCE. THE APPLICANT RESERVES THE RIGHT TO MAKE MINOR AD JUSTMENTS TO THE LOCATION OF THE SIGNS.

21. THE PROPOSED USE (BANK WITH DRIVE-THROUGH) IS COMPATIBLE WITH THE COMPREHENSIVE PLAN.

22. POND ACCESS CAN BE OBTAINED BY USING EITHER CENTREWOOD DRIVE, ROUTE 8351, OR THE EXISTING SERVICE DRIVE WHICH CONNECTS THE PARCEL WITH MULTIPLEX DRIVE.

23. THE OUTFALL FROM POND 2C ACTS AS A COMBINED SPILLWAY; THEREFORE, THERE IS NO EMERGENCY SPILLWAY BUILT INTO THE POND FOR THE HUNDRED YEAR STORM.

24. THERE ARE NO EXISTING STRUCTURES ON THE PROPERTY.

25. THE EXISTING PARCEL IS WITHIN THE CUB RUN WATERSHED WHICH DRAINS TO THE OCCOQUAN RIVER. THE PROPERTY LIES WITHIN THE WATER SHED PROTECTION OVERLAY DISTRICT.

Application No. PCA 91-Y-010-3 Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-18-05
Date of (BOS) (PC) approval 2-28-05
Sheet 5 of 12

Application No. FDPA 91-Y-010-2 Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP) as amended by PC
SEE ~~PROFFERS~~ conditions DATED 1-25-05
Date of (BOS) (PC) approval 1-26-05
Sheet 5 of 12

MISS UTILITY

DIG WITH C.A.R.E. CALL MISS UTILITY KEEP VIRGINIA SAFE

BEFORE YOU DIG CALL 1-800-552-7001
PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE

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THE CONTRACTOR TO CALL MISS UTILITY TO HAVE ALL EXISTING UTILITIES MARKED 48 HOURS PRIOR TO ANY CONSTRUCTION.

COMMONWEALTH OF VIRGINIA
EDWARD R. UMBRELL
No. 038388
1/12/05
PROFESSIONAL ENGINEER

A.J. VOLANTH
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COMBINED CONCEPTUAL DEVELOPMENT PLAN/FINAL DEVELOPMENT PLAN
APPLICATION NO. PCA 91-Y-010-03, FDPA-91-Y-010-02
CENTRE RIDGE-A PORTION OF LANDBAY 11B

SWM AND GENERAL NOTES

SULLY DISTRICT FAIRFAX COUNTY, VA

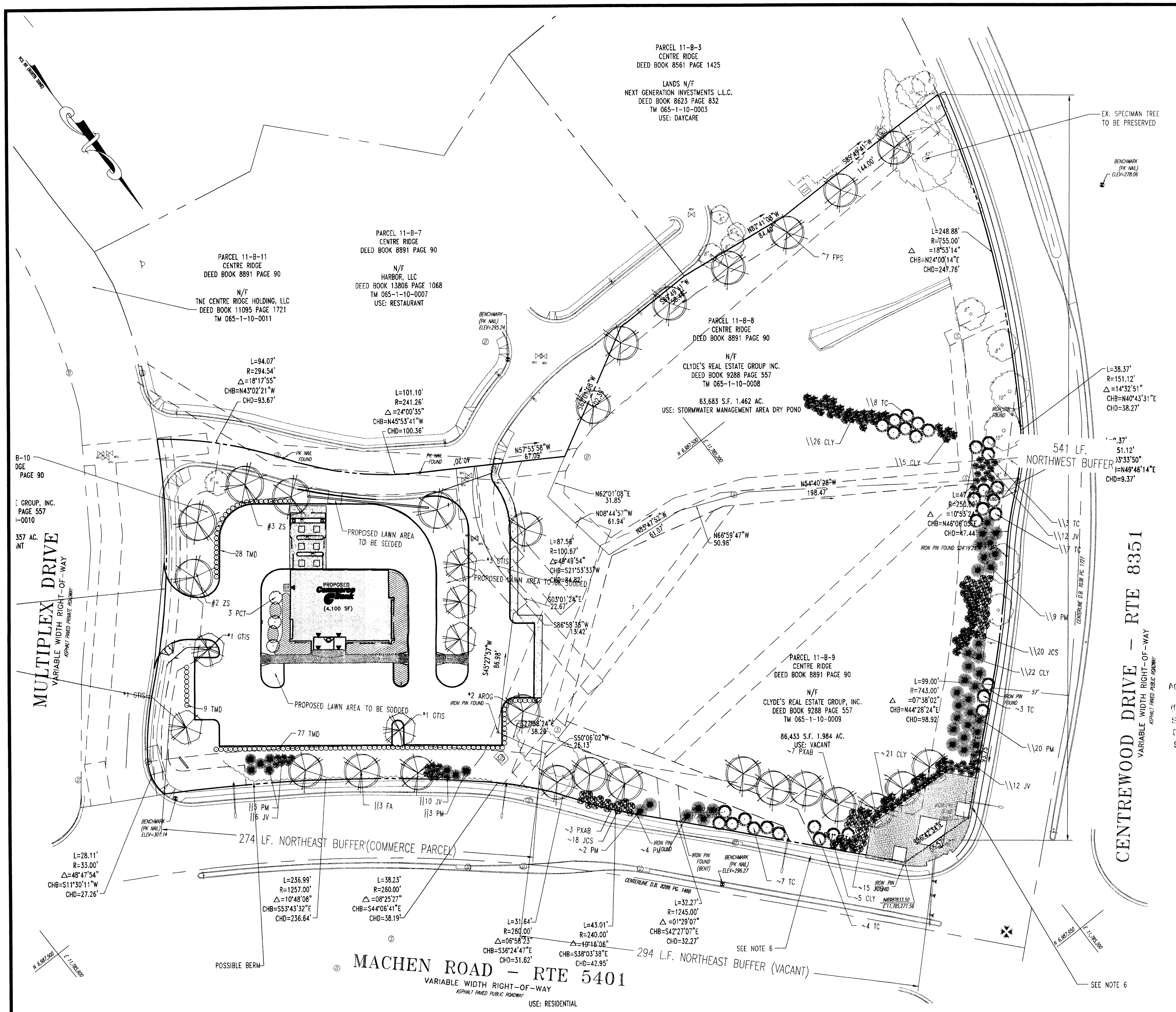
REVISIONS

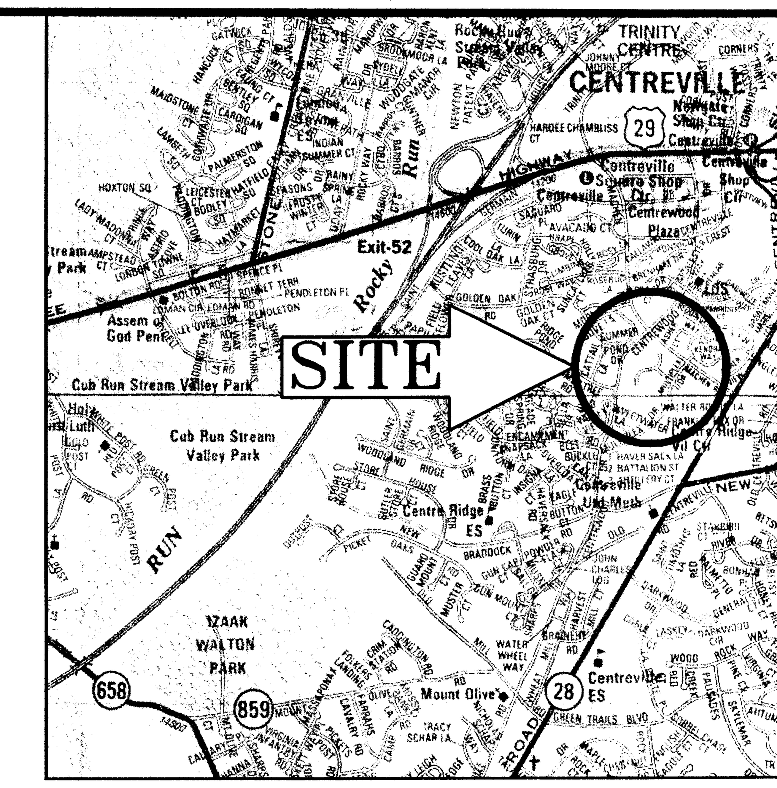
NO.	DATE	DESCRIPTION
1	11/19/04	REV. PER CO. COMMENTS
2	12/13/04	REV. PER CO. COMMENTS
3	1/13/05	REV. PER CO. COMMENTS

SCALE (H):	N.T.S.
(V):	
DRAWN BY:	NSO
CHECKED BY:	JCP
DATE:	3/10/04
DRAWING #:	S037519
CAD ID #:	PC3

SHEET NUMBER

5





LOCATION MAP

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PERMIT USE NO. 20602153-5
SCALE: 1"=2000'

PCA 91-Y-010-3 Staff TS
Application No.
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-18-05
Date of (BOS) (PC) approval 2-28-05
Sheet 6 of 12

FDPA 91-Y-010-2 Staff TS
Application No.
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP) as amended by PC
SEE conditions DATED 1-25-05
Date of (BOS) (PC) approval 1-26-05
Sheet 6 of 12

LEGEND

PROPOSED GROUND COVER

MISS UTILITY

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COMMONWEALTH OF VIRGINIA
EDWARD R. UMBRELL
No. 038388
1/17/05
PROFESSIONAL ENGINEER

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

TREE COVER CALCULATIONS

GROSS SITE AREA:
209,193 SF. - 4,100 SF. 205,093 SF.
TREE COVER REQUIRED:
205,093 SF. X .10 TREE COVER REQUIRED (COMMERCIAL)=20,509 SF.
CREDITS:
0
EQUAL TREE COVER PROVIDED:
36,100 SF. (17.6%)

LANDSCAPE SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	QTY	SIZE	10 YR. TREE COVER	TREE COVER SUB TOTAL	REMARKS
SHADE TREE(S)							
AROG	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2	2- 2 1/2" CAL.	250	500	B+B
FA	FRAXINUS AMERICANA	WHITE ASH	3	2- 2 1/2" CAL.	175	525	B+B
FPS	FRAXINUS PENSYLVANICA 'SUMMIT'	SUMMIT GREEN ASH	7	2- 2 1/2" CAL.	175	1,225	B+B
GTIS	GLEDITSIA TRIACANTHOS VAR. INTERMIS 'SHADEMASTER'	SHADEMASTER HONEYLOCUST	6	2 1/2-3" CAL.	250	1,500	B+B
PXAB	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANETREE	10	2 1/2-3" CAL.	250	2,500	B+B
ZS	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	5	2- 2 1/2" CAL.	250	1,250	B+B
			33				
ORNAMENTAL TREE(S)							
PCT	PRUNUS CERASIFERA 'THUNDERCLOUD'	THUNDERCLOUD PLUM	3	2 1/2" CAL. MIN.	125	375	B+B 4' CLEAR TRUNK FROM GRADE
EVERGREEN TREE(S)							
CLY	X CUPRESSOCYPARIS LEYLANDII	LEYLAND CYPRESS	79	6-7'	125	9,875	B+B
JCS	JUNIPERUS CHINENSIS 'SPARTAN'	SPARTAN JUNIPER	64	3-4'	75	3,975	B+B
JV	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	40	8-10'	125	5,000	B+B
PM	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	43	6-7'	125	5,375	B+B
TC	TSUGA CANADENSIS	CANADIAN HEMLOCK	48	6-7'	125	4,000	B+B
			274				
EVERGREEN SHRUBS							
TMD	TAXUS X MEDIA 'DENSIFORMIS'	DENSIFORMIS YEW	114	2.5-3'			

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.

TREE COVER TOTAL: 36,100 SF.

COMPLIANCE CHART FOR THE PUBLIC FACILITIES MANUAL

SECTION	REQUIREMENTS	CALCULATIONS (REQUIRED/PROPOSED)	COMPLIANCE
PLANT MATERIAL SPECIFICATIONS	12-0701.6 PLANT DIVERSITY. TO CURTAIL THE SPREAD OF DISEASE OR INSECT INFESTATION IN A PLANT SPECIES, NO MORE THAN 70% OF THE TREES REQUIRED TO BE PLANTED ON-SITE SHALL BE OF ONE GENUS. IN ADDITION, WHEN MORE THAN 20 TREES ARE REQUIRED ON A SITE, NO MORE THAN 35% OF THE DECIDUOUS TREES NOR 35% OF THE EVERGREEN TREES SHALL BE OF A SINGLE SPECIES.	PROPOSED: SHADE TREES: AROG-6% FA-9% FPS- 21% GTIS-18% PXAB-30% ZS-16% EVERGREEN TREES: CLY-29% JCS-23% JV-15% PM-16% TC-17%	COMPLIES
	12-0701.9 TREE COVER CALCULATIONS. ALL REQUIRED CALCULATIONS FOR TREE COVER SHALL BE PROVIDED ON THE LANDSCAPE PLAN SHEET IN A TABLE SIMILAR TO TABLE 12.12.	SEE TREE COVER CALCULATION TABLE PROVIDED ON THIS SHEET	COMPLIES
	12-0701.10 INTERIOR PARKING LOT LANDSCAPING. ALL CALCULATIONS AND ILLUSTRATIONS FOR INTERIOR PARKING LOT LANDSCAPING SHALL BE PROVIDED ON THE LANDSCAPE PLAN SHEET.	SEE INTERIOR LANDSCAPING CALCUALTIONS TABLE PROVIDED BELOW: SECTION 12-0703.1	———
	12-0701.11A THE LANDSCAPE PLAN SHALL SHOW ALL EXISTING AND PROPOSED EASEMENTS THAT MAY CONFLICT WITH THE TREE PLANTING REQUIREMENTS OF ARTICLE 13 OF THE ZONING ORDINANCE.	(EASEMENTS DEPICTED ON PLAN)	COMPLIES
	12-0701.11B TREES SHALL NOT BE PLANTED WITHIN ANY EXISTING OR PROPOSED PUBLIC UTILITY EASEMENT THAT IS REQUIRED TO BE DELINEATED ON THE PLAN, OR WITHIN 5' (1.5 M) OF STORM DRAINAGE EASEMENTS THAT CONTAIN PIPES. IN ADDITION, TREES SHALL NOT BE PLANTED IN AN AREA WHICH WILL INTERFERE WITH EXISTING OR PROPOSED UTILITIES OR OBSTRUCT OR INTERFERE WITH ACCESS OF MAINTENANCE PERSONNEL OR EQUIPMENT, AS DETERMINED BY THE DIRECTOR, EXCEPT AS MAY BE ALLOWED IN ACCORDANCE WITH SECTION 12-701.11C.	PROPOSED: NO TREES PLANTED WITHIN EASEMENT OR WITHIN 5' OF STORM DRAINAGE EASEMENTS THAT CONTAIN PIPES	COMPLIES
	12-0701.12 EXISTING VEGETATION OR PROPOSED PLANTINGS IN VDOT RIGHTS-OF-WAY SHALL NOT BE CREDITED TOWARD MEETING THE REQUIREMENTS OF ARTICLE 13 OF THE ZONING ORDINANCE, EXCEPT AS MAY BE PERMITTED IN A COMMERCIAL REVITALIZATION DISTRICT	NO TREES IN VDOT R.O.W. CREDITED TOWARDS THE REQUIREMENTS OF ARTICLE 13	NOT APPLICABLE
INTERIOR PARKING LOT LANDSCAPING	12-0703.1 AS STATED IN ARTICLE 13 OF THE ZONING ORDINANCE, ALL PARKING LOTS WITH 20 OR MORE SPACES ARE REQUIRED TO PROVIDE INTERIOR PARKING LOT LANDSCAPING THAT COVERS NO LESS THAN 5 % OF THE TOTAL AREA OF THE PARKING LOT.	TOTAL PARKING AREA: 27,416 SF. 27,416 SF. X .05=1,371 SF. PROPOSED: 2,000 SF. (7.3%)	COMPLIES
	12-0703.4 CALCULATIONS. TO DETERMINE THE AMOUNT OF INTERIOR PARKING LOT LANDSCAPING REQUIRED, A) MULTIPLY THE AREA TO BE COUNTED AS DESCRIBED IN SECTION 12-0703.2 BY 5%; B) BASED ON 10-YEAR TREE COVER, CALCULATE THE TOTAL TREE COVER PROVIDED BY EACH TREE AND/OR THE TOTAL AMOUNT OF PRESERVED VEGETATION THAT PROVIDES SHADE DIRECTLY TO THE PARKING LOT. THE TOTAL TREE COVER PROVIDED MUST EQUAL OR EXCEED THE TOTAL LANDSCAPED AREA REQUIRED. A TABLE SIMILAR TO THAT SHOWN IN TABLE 12.13 SHALL BE PROVIDED ON THE LANDSCAPE SHEET.	TOTAL PARKING AREA: 27,416 SF. REQUIRED: 27,416 SF. X .05=1,371 SF. PROPOSED: 250 SQ.FT. COVERAGE PER TREE. 1,371/ 250= 5.5 OR 6 TREES (GTIS) OR 5 % COVERAGE * INDICATES PLANT MATERIAL UTILIZED TO MEET THIS REQUIREMENT	COMPLIES

COMPLIANCE CHART FOR THE FAIRFAX COUNTY ZONING ORDINANCE

SECTION	REQUIREMENTS	CALCULATIONS (REQUIRED/PROPOSED)	COMPLIANCE
13-202 PERIPHERAL PARKING LOT LANDSCAPING (COMMERCE BANK PARCEL)	IF ANY PARKING LOT CONTAINS 20 OR MORE SPACES AND TRANSITIONAL SCREENING IS NOT REQUIRED BY SECTION 301 AND 302 BELOW, THEN PERIPHERAL PARKING LOT LANDSCAPING SHALL BE REQUIRED AS FOLLOWS: 1. WHEN A PROPERTY LINE ABUTS LAND NOT IN THE R.O.W. OF A STREET: A. A LANDSCAPING STRIP FOUR FEET IN WIDTH SHALL BE LOCATED BETWEEN THE PARKING LOT AND THE ABUTTING PROPERTY LINES, EXCEPT WHERE DRIVEWAYS OR OTHER OPENINGS MAY NECESSITATE OTHER TREATMENT B. AT LEAST ONE TREE SHALL BE PLANTED FOR EACH FIFTY FEET WITHIN THE LANDSCAPING STRIP 2. WHERE A PROPERTY LINE ABUTS THE R.O.W. OF A STREET: A. A LANDSCAPE STRIP 10' IN WIDTH, WHICH SHALL NOT INCLUDE A SIDEWALK OR TRAIL, SHALL BE LOCATED BETWEEN THE PARKING LOT AND THE PROPERTY LINE. B. AT LEAST ONE TREE FOR EVERY 40' SHALL BE PLANTED WITHIN THE LANDSCAPING STRIP.	PROPOSED USE: DRIVE THROUGH BANK ADJACENT USES: -MULTI-FAMILY (NORTHEAST) -MOVIE THEATER (SOUTHEAST) -RESTAURANT (SOUTH) -VACANT (NORTHWEST) REQUIRED: ALONG THE SOUTHEAST BOUNDARY ABUTTING A R.O.W.: A LANDSCAPE STRIP OF 10' IN WIDTH AND ONE TREE EVERY FORTY FEET ALONG THE SOUTH BOUNDARY ABUTTING LAND NOT IN THE R.O.W.: PROPOSED: SOUTHEAST BOUNDARY 10' MIN. BUFFER WIDTH, 2 ZS AT 40' O.C. WITH EXCEPTION FOR EASEMENTS. SOUTH BOUNDARY 4' MIN. BUFFER WIDTH, 3 ZS AT 50' O.C. #INDICATES PLANT MATERIAL UTILIZED TO MEET THIS REQUIREMENT	COMPLIES
13-202 PERIPHERAL LANDSCAPING (VACANT LOT)	WHEN TRANSITIONAL SCREENING IS NOT REQUIRED BY SECTION 301 AND 302 BELOW, THEN PERIPHERAL LANDSCAPING SHALL BE REQUIRED AS FOLLOWS: 1. WHEN A PROPERTY LINE ABUTS LAND NOT IN THE R.O.W. OF A STREET: A. A LANDSCAPING STRIP FOUR FEET IN WIDTH SHALL BE LOCATED BETWEEN THE PARKING LOT AND THE ABUTTING PROPERTY LINES, EXCEPT WHERE DRIVEWAYS OR OTHER OPENINGS MAY NECESSITATE OTHER TREATMENT B. AT LEAST ONE TREE SHALL BE PLANTED FOR EACH FIFTY FEET WITHIN THE LANDSCAPING STRIP 2. WHERE A PROPERTY LINE ABUTS THE R.O.W. OF A STREET: A. A LANDSCAPE STRIP 10' IN WIDTH, WHICH SHALL NOT INCLUDE A SIDEWALK OR TRAIL, SHALL BE LOCATED BETWEEN THE PARKING LOT AND THE PROPERTY LINE. B. AT LEAST ONE TREE FOR EVERY 40' SHALL BE PLANTED WITHIN THE LANDSCAPING STRIP.	PROPOSED USE: VACANT ADJACENT USES: -MULTI-FAMILY (NORTHEAST) -COMMERCE (SOUTHEAST) -RESTAURANT (SOUTH) -MULTI-FAMILY (NORTHWEST) REQUIRED: ALONG THE SOUTHERN BOUNDARY ABUTTING LAND NOT IN THE R.O.W.: A LANDSCAPE STRIP OF 4' FEET IN WIDTH AND ONE TREE EVERY FIFTY FEET. PROPOSED: SOUTH BOUNDARY 4' MIN. BUFFER WIDTH, 7 FPS AT 50' O.C. ^INDICATES PLANT MATERIAL UTILIZED TO MEET THIS REQUIREMENT	COMPLIES
13-302 TRANSITIONAL SCREENING REQUIREMENTS (COMMERCE BANK PARCEL)	TRANSITIONAL SCREENING AND BARRIERS SHALL BE PROVIDED IN ACCORDANCE WITH THE MATRIX PRESENTED IN THE FAIRFAX COUNTY ZONING ORDINANCE C. TRANSITIONAL SCREENING SHALL CONSIST OF AN UNBROKEN STRIP OF OPEN SPACE A MINIMUM OF 35 FEET WIDE PLANTED WITH: ONE LARGE EVERGREEN TREE FOR EVERY 10 LINEAR FEET, ONE MEDIUM EVERGREEN TREE FOR EVERY 5 LINEAR FEET, AND ONE LARGE DECIDUOUS TREE FOR EACH 30 LINEAR FEET.	PROPOSED USE: DRIVE THROUGH BANK ADJACENT USES: -MULTI-FAMILY (NORTHEAST) -MOVIE THEATER (SOUTHEAST) -RESTAURANT (SOUTH) -VACANT (NORTHWEST) REQUIRED: ALONG THE NORTHEAST, TRANSITIONAL SCREENING #2 SHALL CONSIST OF AN UNBROKEN STRIP OF OPEN SPACE A MINIMUM OF 35 FEET WIDE, 1 LARGE EVERGREEN EVERY 10', ONE MEDIUM EVERGREEN TREE EVERY 5', ONE DECIDUOUS TREE EVERY 30'. NORTHEAST- 35' BUFFER, 274 LF./10= 27.4 OR 27 LARGER EVERGREEN TREES 274/5= 54.8 OR 55 MEDIUM EVERGREEN TREES 274/30= 9.1 OR 9 DECIDUOUS TREES PROPOSED: NORTHEAST- 25' MIN. BUFFER, 8 LARGE EVERGREEN TREES (PM), 16 MEDIUM EVERGREEN TREES (JV) AND 3 DECIDUOUS TREES (FA) {} INDICATES PLANT MATERIALS UTILIZED TO MEET THIS REQUIREMENT	REQUESTING MODIFICATION FOR MIN. BUFFER
13-302 TRANSITIONAL SCREENING REQUIREMENTS (VACANT LOT)	TRANSITIONAL SCREENING AND BARRIERS SHALL BE PROVIDED IN ACCORDANCE WITH THE MATRIX PRESENTED IN THE FAIRFAX COUNTY ZONING ORDINANCE C. TRANSITIONAL SCREENING SHALL CONSIST OF AN UNBROKEN STRIP OF OPEN SPACE A MINIMUM OF 35 FEET WIDE PLANTED WITH: ONE LARGE EVERGREEN TREE FOR EVERY 10 LINEAR FEET, ONE MEDIUM EVERGREEN TREE FOR EVERY 5 LINEAR FEET, AND ONE LARGE DECIDUOUS TREE FOR EACH 30 LINEAR FEET.	PROPOSED USE: DRIVE THROUGH BANK ADJACENT USES: -MULTI-FAMILY (NORTHEAST) -MOVIE THEATER (SOUTHEAST) -RESTAURANT (SOUTH) -MULTI-FAMILY (NORTHWEST) REQUIRED: ALONG THE NORTHEAST, (TRANSITIONAL SCREENING #2) SHALL CONSIST OF AN UNBROKEN STRIP OF OPEN SPACE A MINIMUM OF 35 FEET WIDE, 1 LARGE EVERGREEN EVERY 10', ONE MEDIUM EVERGREEN TREE EVERY 5', ONE DECIDUOUS TREE EVERY 30'. ALONG THE NORTHWEST, 25' BUFFER (TRANSITIONAL SCREENING #1) 1 LARGE EVERGREEN TREE FOR EVERY 10 LF., 1 MEDIUM EVERGREEN TREE FOR EVERY 5 LINEAR FEET NORTHEAST: 294 LF. 294/10 = 29.4 OR 29 LARGE EVERGREEN TREES 294/5 = 58.8 OR 59 MEDIUM EVERGREEN TREES 294/30 = 9.8 OR 10 LARGE DECIDUOUS TREES NORTHWEST: 541 LF. 541/10= 54.1 OR 54 LARGE EVERGREEN TREES 541/5= 108.2 OR 108 MEDIUM EVERGREEN TREES PROPOSED: NORTHEAST- 29 LARGE EVERGREEN TREES (TC & PM), 59 MEDIUM EVERGREEN TREES (CLY & JCS), AND 10 LARGE DECIDUOUS TREES (PXAB) ~ INDICATES PLANT MATERIALS UTILIZED TO MEET THIS REQUIREMENT NORTHWEST- 54 LARGE EVERGREEN TREES (PM&TC), AND 108 MEDIUM EVERGREEN TREES (CLY, JCS, AND JV) \\ INDICATES PLANT MATERIALS UTILIZED TO MEET THIS REQUIREMENT	COMPLIES
13-303 BARRIER REQUIREMENTS	BARRIERS SHALL BE LOCATED BETWEEN THE REQUIRED TRANSITIONAL SCREENING AND THE USE BEING SCREENED FROM.	NO BARRIER PROPOSED	REQUESTING WAIVER
13-401 TREE COVER REQUIREMENTS	ZONING DISTRICT: COMMERCIAL SITE SHALL HAVE 10% COVERAGE OF TREE CANOPY	SEE CHART PROVIDED ON THIS SHEET	———

A.J. VOLANTH
PROFESSIONAL ENGINEER
VIRGINIA LICENSE No. 0402 031438
MARYLAND LICENSE No. 21342
DISTRICT OF COLUMBIA LICENSE No. 10726
GEORGIA LICENSE No. 026541
NORTH CAROLINA LICENSE No. 23432
SOUTH CAROLINA LICENSE No. 20143
TENNESSEE LICENSE No. 107048

E.R. UMBRELL
PROFESSIONAL ENGINEER
VIRGINIA LICENSE No. 0402 038388

BOHLER ENGINEERING, P.C.
• PROFESSIONAL ENGINEERING SERVICES •
• 22630 DAVIS DRIVE, SUITE 200 •
• STERLING, VIRGINIA, 20164 • (703) 709-9500 FAX: (703) 709-9501 | VA@bohlereng.com •

COMBINED CONCEPTUAL DEVELOPMENT PLAN/FINAL DEVELOPMENT PLAN
APPLICATION NO. PCA 91-Y-010-03, FDPA-91-Y-010-02
CENTRE RIDGE-A PORTION OF LANDBAY 11B

LANDSCAPE PLAN

SULLY DISTRICT FAIRFAX COUNTY, VA

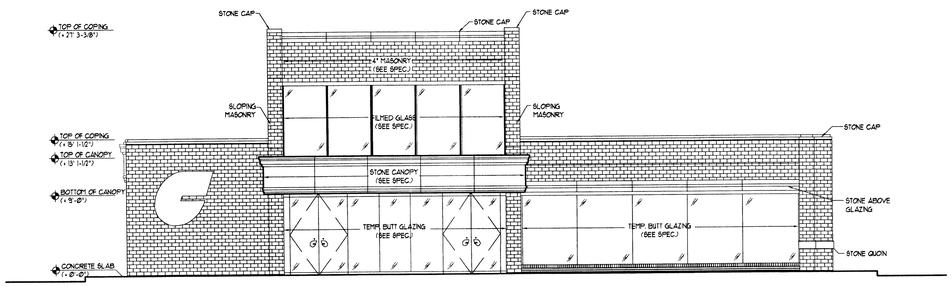
REVISIONS

NO.	DATE	DESCRIPTION
1	11/19/04	REV. PER CO. COMMENTS
2	12/13/04	REV. PER CO. COMMENTS
3	1/13/05	REV. PER CO. COMMENTS

SCALE (H): (V):	1"=40'
DRAWN BY:	NSO
CHECKED BY:	JCP
DATE:	3/10/04
DRAWING #:	S037519
CAD ID #:	PC3

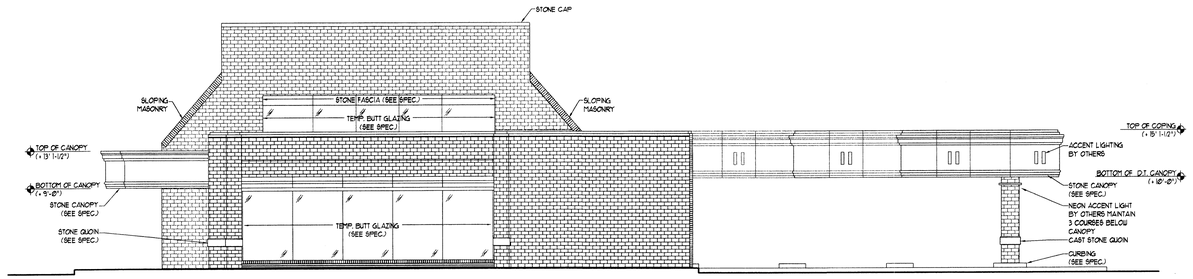
SHEET NUMBER

6



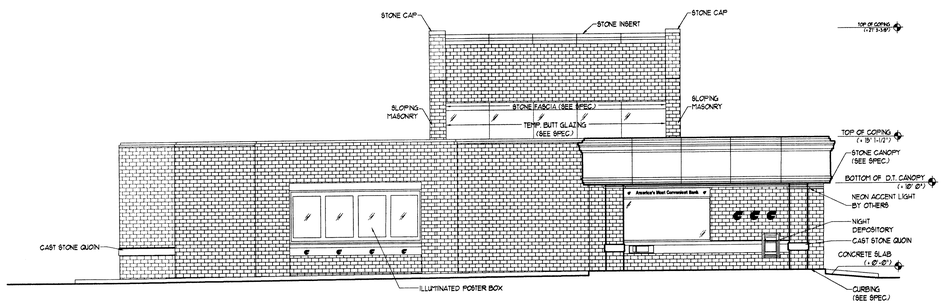
1 FRONT ELEVATION

1"-8'



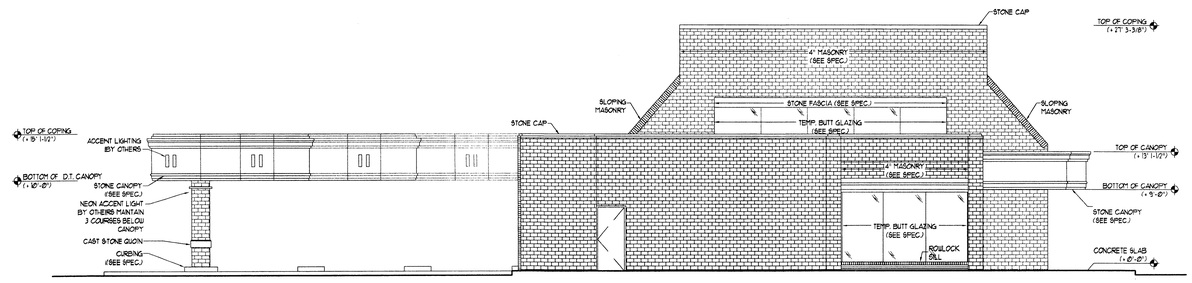
2 SIDE ELEVATION

1"-8'



3 REAR ELEVATION

1"-8'



4 SIDE ELEVATION

1"-8'

FDPA Application No. 91-Y-010-2 Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1.25.05 as amended by PC
Date of (BOS) (FC) approval 1.26.05
Sheet 7 of 12

PCA Application No. 91-Y-010-3 Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1.18.05
Date of (BOS) (FC) approval 2.28.05
Sheet 7 of 12

MATERIALS: RED BRICK, EXTERIOR BUTT GLASS WINDOWS AND DOORS, AND WHITE CAST STONE CANOPY AND TRIM.

COMMONWEALTH OF VIRGINIA
EDWARD R. UMBRELL
No. 038388
11/17/05
PROFESSIONAL ENGINEER

A.J. VOLANTH E.R. UMBRELL

PROFESSIONAL ENGINEER
VIRGINIA LICENSE No. 0402 031428
MARYLAND LICENSE No. 21234
DISTRICT OF COLUMBIA LICENSE No. 1076
NORTH CAROLINA LICENSE No. 21413
SOUTH CAROLINA LICENSE No. 19048
TENNESSEE LICENSE No. 103048

PROFESSIONAL ENGINEER
VIRGINIA LICENSE No. 0402 031388

BOHLER ENGINEERING, P.C.

• PROFESSIONAL ENGINEERING SERVICES •
• 22630 DAVIS DRIVE, SUITE 200 •
• STERLING, VIRGINIA 20164 •
• (703) 709-9500 FAX: (703) 709-9501 | WWW.BOHLERENG.COM •

COMBINED CONCEPTUAL DEVELOPMENT PLAN/FINAL DEVELOPMENT PLAN
APPLICATION NO. PCA 91-Y-010-03, FDPA-91-Y-010-02
CENTRE RIDGE-A PORTION OF LANDBAY 11B

BUILDING ELEVATIONS

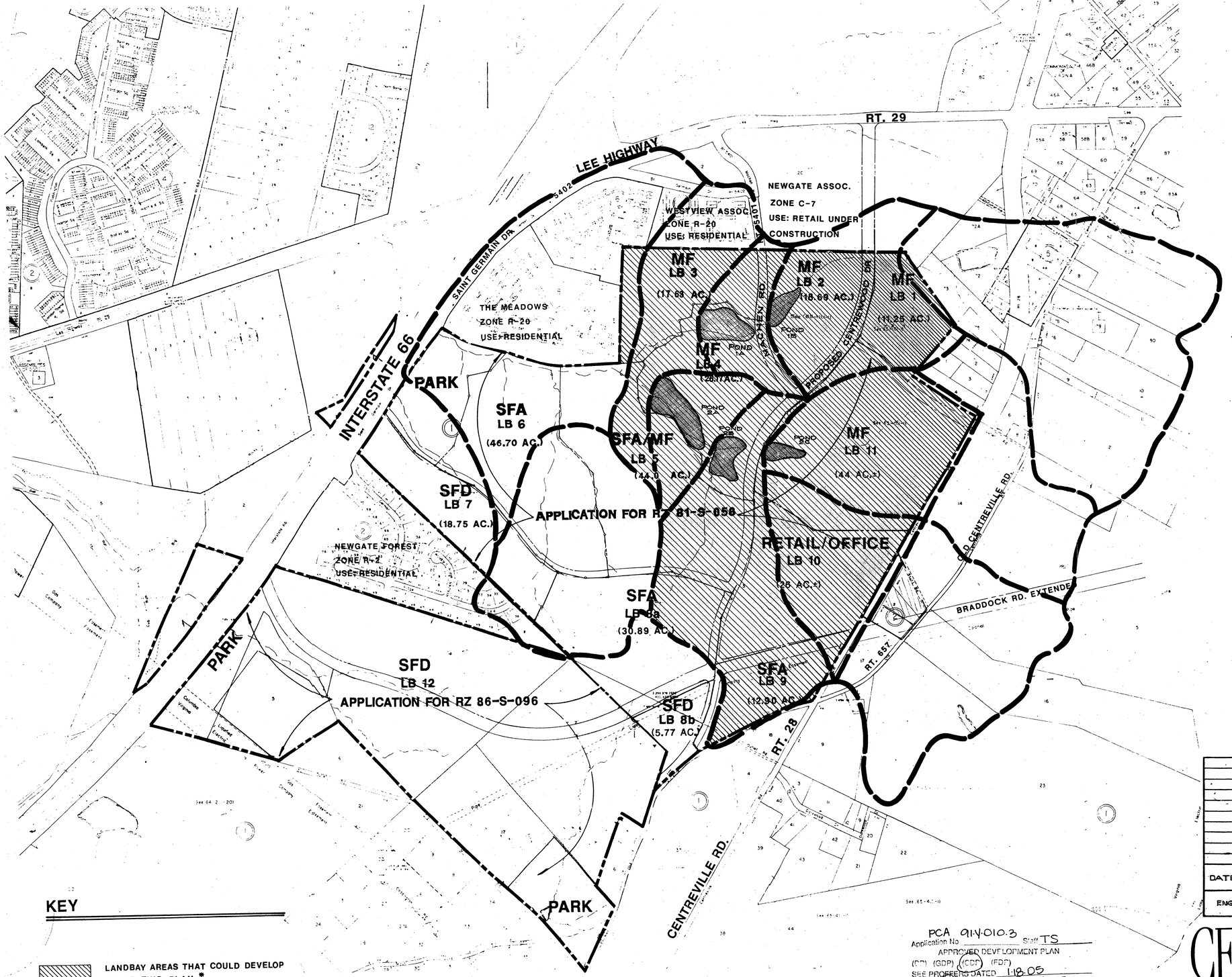
SULLY DISTRICT FAIRFAX COUNTY, VA

REVISIONS		
NO.	DATE	DESCRIPTION
1	11/19/04	REV. PER CO. COMMENTS
2	12/13/04	REV. PER CO. COMMENTS
3	1/13/05	REV. PER CO. COMMENTS
4		
5		
6		

SCALE (H):	1"=8'
(V):	
DRAWN BY:	NSO
CHECKED BY:	JCP
DATE:	3/10/04
DRAWING #:	S037519
CAD ID #:	PC3

SHEET NUMBER

7



KEY

- LANDBAY AREAS THAT COULD DEVELOP UNDER THIS PLAN.*
- BOUNDARY OF CENTRE RIDGE
- DRAINAGE AREA / AREA OF ANALYSIS

* SEE CENTRE RIDGE OVERALL STORMWATER MANAGEMENT STUDY. (FAIRFAX CO. PLAN. # 6657-DS-01-1 ALSO SHOWN ON SHEET 4A & 4B OF THIS STUDY) FOR CONSTRUCTION SEQUENCE.

VIRGINIA STATE GRID NORTH

COMMONWEALTH OF VIRGINIA
Edward R. Umbreit
No. 038388
PROFESSIONAL ENGINEER
8/22/07

COMMONWEALTH OF VIRGINIA
COUNTY OF FAIRFAX
Office of Comprehensive Planning
10640 Page Avenue
Fairfax, Virginia 22030

April 7, 1987

Jeffrey Saxe
Hazel/Peterson Companies
12500 Fair Lakes Circle, Suite 400
Fairfax, VA 22033

Re: Proffer Interpretation for FDP 81-S-058-1

Dear Mr. Saxe:

This is in response to your letter of April 1, 1987 requesting minor deviations from the Final Development Plan 81-S-058-1 approved in conjunction with the approval of RZ 81-S-058 on December 15, 1986. As I understand it, the deviations are:

- A reduction in the number of buildings from 14 to 13, even though the total number of dwelling units remains the same.
- The site circulation has been changed slightly, and now reflects the circulation pattern recommended by the Staff during the zoning.
- The two tennis courts have been rotated approximately 45 degrees.
- The amount of open space on the site has actually increased because of the lesser number of buildings.

It is my determination that these minor deviations from the approved Final Development Plan for Land Bay 4, a multi-family residential land bay within the Centre Ridge project, will not significantly change the FDP and therefore are permissable. The primary reason for the deviations is the increased requirement for storm water retention, which was not foreseen at the time of rezoning and FDP approval. This determination has been made in my capacity as the duly authorized agent of the Zoning Administrator.

If you have any questions regarding this interpretation, please feel free to contact me or John Theilacker at 691-3387.

Sincerely,

Barbara Byron

Barbara A. Byron, Director
Zoning Evaluation Division
Office of Comprehensive Planning

BAB/JT

cc: Supervisor McConnell, Springfield District Supervisor
Jane W. Gwinn, Zoning Administrator
Irving Birmingham, Director, Design Review Division, DEM
Bonds and Agreement Branch, DRD, DEM
File: RZ 81-S-058 & FDP 81-S-058-1

FDPA 91-Y-010-2
Application No. _____ Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP) as amended by PC
SEE PROFFERS DATED 12-5-05
Date of (BOS) (PC) approval 1-20-05
Sheet 8 of 12

PCA 91-Y-010-3
Application No. _____ Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-18-05
Date of (BOS) (PC) approval 2-28-05
Sheet 8 of 12

DATE	DESIGNER	NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE
ENGINEER			REVISION APPROVED BY : DIVISION OF DESIGN REVIEW			

CENTRE RIDGE

FOR INFORMATIONAL PURPOSES ONLY

COMMONWEALTH OF VIRGINIA
G. BRENT HENSON
No. 025...
PROFESSIONAL ENGINEER

ORIGINAL

Dewberry & Davis
Engineers Architects Planners Surveyors
8401 Arlington Blvd., Fairfax, VA 22031
☎ 703 849-0100

LANDBAY AREA MAP

CENTRE RIDGE
STORMWATER MANAGEMENT PLAN & POND DESIGN
FOR PONDS 1A,1B,2A,2B & 2C
Springfield District Fairfax County Virginia

Scale 1" = 400'
Sheet 8 OF 12
Date DEC. 1987
File Number FP-345

CENTRE RIDGE

PCA 91-Y-010-3 Application No. Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-18-05
Date of (BOS) (PC) approval 2-28-05
Sheet 9 of 12

COMMONWEALTH OF VIRGINIA
Edward R. Umbrell
No. 038388
8/26/04
PROFESSIONAL ENGINEER

PONDS	LAND BAYS COVERED BY POND(S)	* AREA (AC.)	REQUIRED DISCHARGE 2-YR. (C.F.S.)	REQUIRED DISCHARGE 10-YR. (C.F.S.)	REQUIRED VOLUME 2-YR. (AC.-FT.)	REQUIRED VOLUME 10-YR. (AC.-FT.)	REQUIRED B.M.P. (AC.-FT.)	PROVIDED DISCHARGE 2-YR. (C.F.S.)	PROVIDED DISCHARGE 10-YR. (C.F.S.)	PROVIDED VOLUME 2-YR. (AC.-FT.)	PROVIDED VOLUME 10-YR. (AC.-FT.)	PROVIDED B.M.P. (AC.-FT.)	COMMENTS
1A, 1B, 2A, 2B, 2C	1, 2, 3, 4, 9, 10, 11 55% OF 5 16% OF 8A SINGLETONS GROVE	214.3	184	498	15	22	27.4	[181] 185	[489] 480	16.4	27	[43.9] 45.1	THESE PONDS ARE LOCATED IN THE NORTHERN DRAINAGE SHED AND WILL BE CONSTRUCTED FIRST.
3	80% OF 6 45% OF 5 39% OF 8A 23% OF 7	73.2	11	49	3	4	5.5	9	60	2	3	5.6	THIS POND ALONG WITH POND 4 WILL BE CONSTRUCTED AS THE SECOND PHASE OF THE STORMWATER MANAGEMENT SYSTEM.
TRIPLE 5'×5' BOX CULVERT UNDER I-66	1-5 9-11 23% OF 7 55% OF 8 80% OF 6	287.5	184	498	18	26	32.9	186	501	18.4	29	50.7	POINT OF COMPARISON FOR THE PORTION OF THE STUDY USING HEC-1 ANALYSIS.
4	77% OF 7 20% OF 6	23.8	4.6	18	0.8	0.5	–	4.5	12.2	0.6	0.8	–	AS STATED ABOVE, THIS POND WILL BE CONSTRUCTED WITH POND 3 AND WILL COMPLETE THE STORMWATER MANAGEMENT FOR THE NORTHERN DRAINAGE SHED. NOTE: B.M.P. REQUIREMENTS FOR THIS PORTION OF THE NORTHERN DRAINAGE SHED ARE SATISFIED IN WET PONDS 1A – 3.
5	71% OF 12	103.1	65	142	2.3	2.3	2.2	61	98	2.3	3.0	2.3	POND 5 WILL SATISFY THE SOUTH-WESTERN DRAINAGE SHED STORMWATER MANAGEMENT REQUIREMENTS.
6	8B 45% OF 8A 29% OF 12	60.6	23.5	56.4	2.0	2.8	2.1	20.5	46.5	2.1	2.9	2.5	POND 6 SATISFIES THE SOUTHEASTERN DRAINAGE SHED STORMWATER MANAGEMENT REQUIREMENTS.
TOTAL		475.0	—	—	22.9	31.8	37.2	—	—	23.4	36.7	56.4	

* SEE LANDBAY AREAS SHOWN ON SHEET # 4A
[ ] INDICATES AS-BUILT DATA

FDPA 91-Y-010-2 Application No. Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-25-05 as amended by PC
Date of (BOS) (PC) approval 1-26-05
Sheet 9 of 12

COMMONWEALTH OF VIRGINIA
MENDELSON
PROFESSIONAL ENGINEER

DATE	DESIGNER	NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE
4-9-90	D.M.J.	3	ADDED AS-BUILT INFORMATION			
4-26-89	D.M.J.	2	SINGLETONS GROVE B.M.P. CREDIT			
8-17-88	R.P.I.	1	UPDATE SUMMARY CHART FOR PONDS 5 & 6			

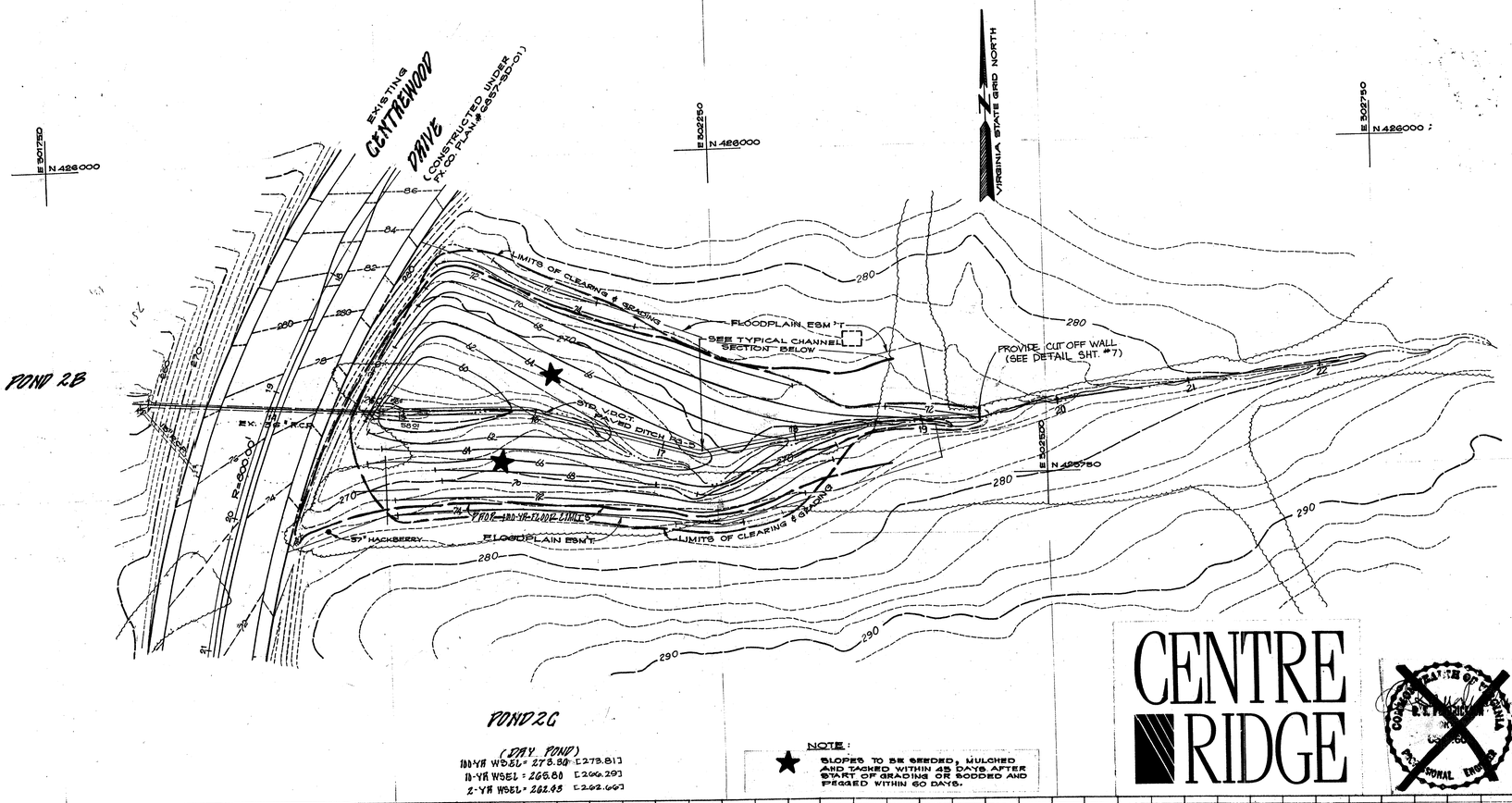
ENGINEER — REVISION APPROVED BY: DIVISION OF DESIGN REVIEW

FOR INFORMATIONAL PURPOSES ONLY

Dewberry & Davis
Architects Engineers Planners Surveyors
8401 Arlington Blvd., Fairfax, VA 22031
☎ 703 849-0100

CENTRE RIDGE
STORMWATER MANAGEMENT PLAN & POND DESIGN
FOR PONDS 1A, 1B, 2A, 2B & 2C
Springfield District Fairfax County Virginia

Scale
Sheet 9 OF 12
Date JULY, 1987
File Number PP-3437



PCA 91-Y-010-3
Application No. _____ Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-18-05
Date of (BOS) (PC) approval 2-28-05
Sheet 10 of 12

FDPA 91-Y-010-2
Application No. _____ Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP) as amended by PC
SEE PROFFERS DATED 1-25-05
Date of (BOS) (PC) approval 1-26-05
Sheet 10 of 12

COMMONWEALTH OF VIRGINIA
Edward R. Umbrell
No. 038388
PROFESSIONAL ENGINEER

CENTRE RIDGE

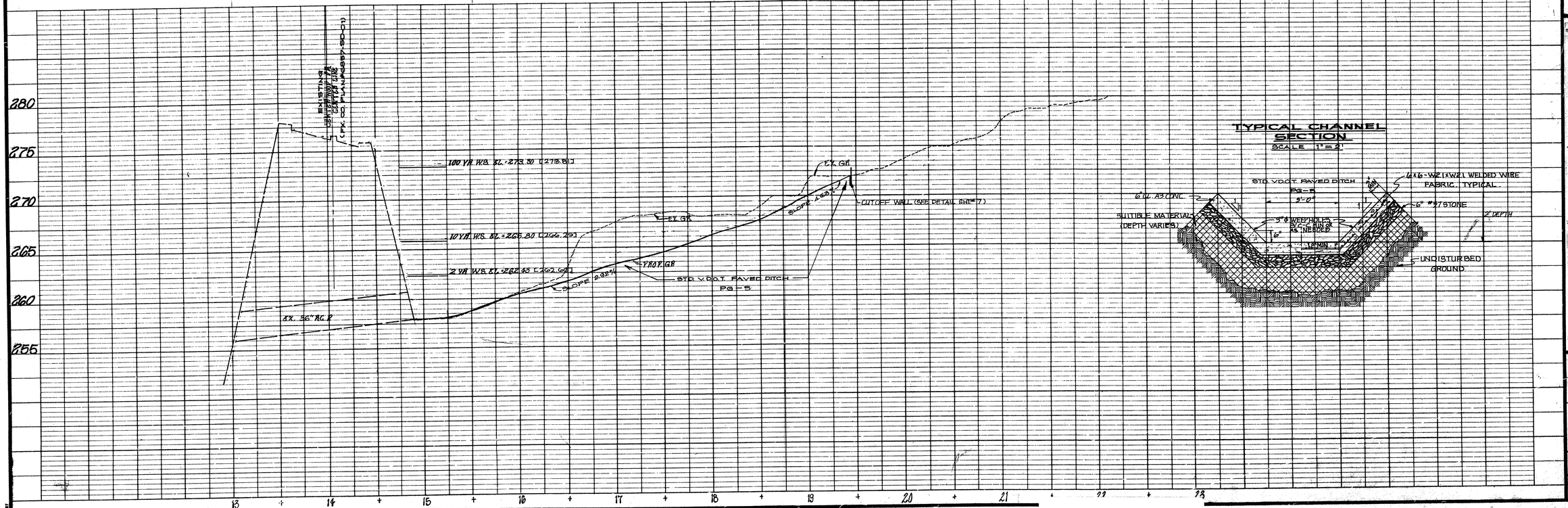
COMMONWEALTH OF VIRGINIA
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	INITIALS	APPROVED	DATE
2	ADDED AS-BUILT INFORMATION			
1	REVISED POND OUTFALL DETAIL PER DEQ LETTER DATED 2-22-05			

—REVISION APPROVED BY: DIVISION OF DESIGN REVIEW

Dewberry & Davis
Engineers Architects Planners Surveyors
8401 Arlington Blvd., Fairfax, VA 22031
☎ 703 849-0100

POND 2C PLAN & PROFILE



TYPICAL CHANNEL SECTION
SCALE 1"=2'

CENTRE RIDGE
STORMWATER MANAGEMENT PLAN
& POND DESIGN
FOR PONDS 2A, 2B & 2C
Springfield District Fairfax County Virginia

Vertical Scale 1" = 5'
Horizontal Scale 1" = 50'
Sheet 10 OF 12
Date JULY, 1987
File Number FP-3487

FOR INFORMATIONAL PURPOSES ONLY

STORMWATER MANAGEMENT REQUIREMENTS/PROVISIONS

Total site area considered for this plan = ± 193 Ac.

The breakdown of this area (refer to Land Bay Area Map) is as follows:

Land Bay 1	11.25 Ac.
Land Bay 2	18.70 Ac.
Land Bay 3	17.63 Ac.
Land Bay 4	26.17 Ac.
Land Bay 5	24.15 Ac.
Land Bay 8a	5.1 Ac.
Land Bay 9	12.9 Ac.
Land Bay 10	26.0 Ac.
Land Bay 11	44.0 Ac.
SINGLETON'S GROVE (OFF-SITE)	90.8 Ac.
TOTAL (ON-SITE)	196.3 Ac.
TOTAL	814.8 AC.

METHOD OF ANALYSIS

This stormwater management plan is part of an overall Centre Ridge Stormwater Management scheme outlined in the study submitted separately under County Plan No. 6857-DS-01-1 and is related also to the Flood Plain Study submitted separately under County Plan No. 6857-FP-01. Discharges for existing and proposed conditions were developed for and taken directly from the above referenced plans. Hydrologic and hydraulic analyses were done with the use of the U.S. Army Corps of Engineers Computer Program, HEC-1 Flood Hydrograph Package. A summary of the results of the HEC-1 analysis is shown in Table 1, this sheet.

EXISTING CONDITION ANALYSIS

As outlined in the Centre Ridge Stormwater Management Study (6857-DS-10-1), the existing site condition was modeled assuming that the upstream offsite areas were fully developed and stormwater detention was provided. This assumption is justified due to the advance stage of development now occurring in the upstream areas (per site plans for Singleton's Grove, Winding Ridge, Heritage Estates, etc.). A separate offsite 2- and 10-year, 2-hour inflow hydrographs reflecting & detention response were synthetically determined (explained in more detail in Plan No. 6857-DS-01-1) to represent offsite developed condition flows. These inflow hydrographs are comprised of the developed condition runoff volume distributed uniquely to reflect peak offsite reductions to predevelopment runoff levels. The combined onsite predevelopment and offsite post development (detained) flows are outlined in Table 1 (Peak discharges/existing conditions). Areas and curve number (CN) used for the HEC-1 model are given on the Drainage Area Map.

DEVELOPED CONDITION ANALYSIS

The full development of onsite landbays within the study area in this plan was considered for the analysis to determine post development peak flows. Two different types of post development flows were developed, one without detention and the other with detention as outlined in Table 1 (Peak discharges/developed condition without detention, and with detention). As shown in Table 1, the post development 2- and 10-year peak flows were successfully reduced to predevelopment levels at the site's outfall (3 - 5'x5' box culvert) at I-66. This outfall is described and analysed in the section on "Outfall Narrative." The CN values for developed conditions are given on the Drainage Area Map.

The onsite stormwater detention is achieved by five different ponds acting in series and parallel (refer to Drainage Area Map for locations). The ponds are briefly described as follows:

Pond 1A - A wet pond with approximately 1.84 acres of lake surface area and permanent pool elevation at 259.0. The lake will serve as stormwater detention and BMP for onsite and offsite areas it drains (combined 135.3 acres, including 45.5 acres onsite). Detention is achieved by a combined principal and emergency concrete intake structure and 8' x 6' box outflow culvert.

Pond 1B - A dry pond upstream the Machen Road culvert with a concrete box riser at the culvert's inlet. This pond acts in series with Pond 1A to reduce the 2- and 10-year flows and passes the 100-year flow under Machen Road. Pond 1B drains approximately 126.2 acres combined which includes 37 acres onsite. No BMP is offered by Pond 1B.

Pond 1C - A natural storage area behind the proposed Centrewood Drive culvert is utilized only for routing and attenuating the 100-year flow. No credit is taken for 2- or 10-year detention nor BMPs.

Pond 2A - A wet pond with approximately 3.0 acres lake surface area and permanent pool elevation at 246.0. This lake serves as both stormwater detention and BMPs by acting in series with Ponds 2B and 2C upstream. A combined total of 208 acres of which 117 acres are onsite area is drained by Pond 2A. Detention is achieved by a CMP principal riser and outflow pipe and a natural emergency spillway section partially lined with riprap and a concrete retaining wall.

Pond 2B - A wet pond with approximately 1.6 acres lake surface area and permanent pool elevation at 256.0. This pond serves as both stormwater detention and BMP's and acts in series with Pond 2A downstream and Pond 2C upstream. This pond drains a combined total of 197 acres of which 106 acres are onsite area. Detention is achieved by a combined principal and emergency concrete riser and double 8' x 8' box culvert outflow.

Pond 2C - A dry pond upstream proposed Centrewood Drive and is formed by the down sizing of the culvert under Centrewood Drive. 2- and 10-year detention is achieved by the culvert's inlet and the 100-year flows over the roadway at the low point. No credit is taken for BMP's.

For complete details on the stormwater routings for post development conditions, refer to the HEC-1 computer printouts on Sheets 15 through 17. Also consult Table 1 for additional information on discharge-storage-elevation data.

The storage/elevation and discharge/elevation characteristics for each pond are presented on Sheets 18 & 19.

POND FREEBOARD SUMMARY:

Pond	Freeboard (Ft) 100-Yr.	1.5 x 100-Yr.	2.0 x 100-Yr.	2.5 x 100-Yr.
1A	1.66 [2.0]	1.28 [2.2]	0.94 [1.9]	0.16 [11.0]
2A	2.84 [2.8]	2.04 [1.8]	1.10 [0.8]	0.41 [0.1]
2B	3.31 [4.8]	2.47 [3.4]	1.34 [2.5]	0.29 [11.2]

TABLE 1

Pond #	Method of Analysis	Storm Frequency (Yr)	Peak Discharges (cfs) Existing Conditions	Developed Condition Without Detention	Developed Condition With Detention	Water Surface Elevations	Normal Pool Water Surface Elevations	Dam Crest	Storage Volume Provided (CF/Ac-Ft)	Surface Area (Acres)
1B	HEC-1	2	54	98	79 [67]	262.57 [264.20]	Dry	274.25 [273.5]	34,848/0.8	—
		10	143	197	146 [100]	265.71 [266.60]			126,324/2.9	
		100*	310	570	489 [498]	268.45 [268.79]			300,564/6.9	
1A	HEC-1	2	56	111	61 [55]	261.15 [261.07]	259.00	264.9	827,640/19.0	1.84
		10	148	220	149 [151]	261.83 [264.75]	[258.60]	[265.2]	888,624/20.4	
		100*	320	587	492 [496]	263.24 [262.60]			1,014,948/23.3	
2C	HEC-1	2	17	71	53 [60]	262.43 [268.67]	Dry	274.30 [274.1]	21,780/0.5	—
		10	58	146	79 [91]	265.80 [266.90]			69,696/1.6	
		100*	114	385	127 [135]	273.30 [273.80]			361,548/8.3	
2B	HEC-1	2	78	243	136 [151]	259.03 [259.05]	256.00	264.0	640,332/14.7	1.58
		10	217	471	320 [345]	259.70 [259.98]	[256.90]	[265.0]	696,960/16.0	
		100*	390	1,059	686 [698]	260.69 [260.72]			779,724/17.9	
2A	HEC-1	2	81	257	96 [106]	247.77 [246.95]	246.00	252.50 [252.5]	1,184,832/27.2	2.92
		10	225	496	252 [209]	248.54 [247.69]	[245.35]		1,293,732/29.7	
		100*	404	1,092	682 [676]	249.66 [249.49]			1,437,480/33.0	
3-5'x5' Box Culvert**	HEC-1	2	184	526	184 [184]	N/A	N/A	—	N/A	—
		10	498	1,008	481 [488]	N/A			N/A	
		100*	925	2,003	1,382 [1372]	N/A			N/A	

* The existing condition discharges are based on the 2 hour storm. The 6 hour storm duration was used for determining the developed condition peak discharges.

** Point of comparison for the drainage shed.

Off-site B.M.P. Credit

In agreement with U.S. Home Corporation, Centre Ridge will provide B.M.P. volumes for Singleton's Grove (See Sheet 3) in Ponds 2A and 2B. Calculations for Pond #1 (FOR SINGLETON'S GROVE SECTION 7 AND 8 AND Pond #2 (Singleton's Grove SECTION 1 PHASE 3) are as follows:

"C" Factor for Pond #1 = 0.63 Storage Required = 1900 CF/ACRE*
"C" Factor for Pond #2 = 0.68 Storage Required = 2130 CF/ACRE*

*Fairfax County PFM Pg. A6-40

B.M.P. Volume required for credit:
Pond #1: 14.3 Acres x 1900 CF/ACRE x 3 = 81,510 C.F.
Pond #2: 14.1 Acres x 2130 CF/ACRE x 3 = 90,099 C.F.
171,609 C.F. = 3.9 Acre/-Ft.

Credit is taken for 28.4 acres (14.3 acres flowing to Singleton's Grove Pond #1, 14.1 flowing to Singleton's Grove Pond #2).

BMP - PHOSPHOROUS REMOVAL EFFICIENCY

Total Site Area Under Consideration (This Plan) = 214.3 Ac

Total Area Controlled by Facilities (Pond 1A, 2A, & 2B) = 162.2 Ac

Percentage of Area Controlled = 162.2/214.3 = 75.7% > 70%

Area Controlled by Pond 1A = 45.4 Ac; 45.5/214.3 = 21.2 %

(P) Removal for Pond 1A = 21.2% x 0.65 = 13.8 %

Area Controlled by Pond 2A & 2B = 106.1 Ac; 106.1/214.3 = 49.5 %

(P) Removal for Series Pond 2A & 2B = 49.5 x .878* = 43.5%

Area Controlled by Pond 2A (alone) = 10.6 Ac; 10.6/214.3 = 4.9 %

(P) Removal for Pond 2A = 4.9 x 0.65 = 3.2 %

Total (P) Removal Efficiency for Site Area = 13.8 + 43.5 + 3.2 = 60.5 %
60.5% > 50% Required by Ordinance

* Combine Removal Efficiency for Series Wet Pond:

[1 - ((1 - 0.65) x (1 - 0.65))] x 100

[1 - (0.35 x 0.35)] x 100 = 0.878 x 100 = 87.8%

COMMONWEALTH OF VIRGINIA
Edward R. Umbrell
No. 038388
PROFESSIONAL ENGINEER

FDPA 91-Y-010-2 Application No. Staff TS
APPROVED DEVELOPMENT PLAN
(DPD) (GDP) (CDP) (FDP) as amended
SEE PROFFERS DATED 1-25-05 by PC
(BOS) (PC) Approval 1-20-05
Sheet 11 of 12

BMP STORAGE SUMMARY

Pond	Storage Provided Below Pool (CF/AC-FT)	Storage Required for Onsite Development (CF/AC-FT)	Storage available for Regional Developments (CF/AC-FT) ***
1A	[684,200/15.7] 627,264/14.4	252,648/5.8	[451,552/10.4] 374,616/8.60 *
2A & 2B	[1,227,360/28.2] 1,337,292/30.7	771,012/17.7	[456,336/10.48] 566,280/13.00 **
Total	[1,911,560/43.9] 1,964,556/45.1	1,023,660/23.5	[687,180/20.88] 940,896/21.60

* Approximately 70% of offsite area is provided for by Pond 1A.

** Over 100% of offsite area is provided for by Pond 2A & 2B. THIS INCLUDED 90 ACRES FROM SINGLETON'S GROVE (171,609 CF/3.9 ACRE-FT)

*** NOTE: DRAINAGE AREAS FOR PONDS 1A AND 2A & 2B ARE 135 AND 208 ACRES, RESPECTIVELY WHICH COULD SATISFY REGIONAL BMP DESIGN CRITERIA.

B.M.P. COMPUTATIONS

BMP FACILITY DESIGN FORMAT

FOR NORMAL DESIGN

POND 1A

Step No. 1:
(A) Area of site draining into Occoquan Watershed — 214.3 acres
(B) Area of proposed impervious cover for subject site — ____ acres
(C) % of site to be impervious [(B)/(A) x 100] = ____ % impervious
or general zoning value from Chart 1, Public Facilities Manual — ____ % impervious
or — 0.64 "C" Factor
(D) Chart A value for BMP storage/acre — 1,850 C.F./acre
(E) Total BMP storage required [(A) x (D)] = 417,885 C.F. OR 9.59 Ac-FT.

Step No. 2:
(A) Measure the onsite (and offsite if credit is to be taken for it) areas draining to the proposed BMP facility — 45.5 acres
(B) Measurement of impervious area onsite (and offsite if credit is to be taken for it) which drains to the proposed BMP facility — ____ acres
(C) % of the onsite (and offsite if credit is to be taken for it) drainage area to the proposed facility [(B)/(A) x 100] = 0.62 "C" Factor
(D) Chart A value for BMP storage/acre — 1,850 C.F./acre
(E) Total BMP storage required for this proposed BMP facility [(A) x (D)] = 84,175 C.F. OR 1.93 Ac-FT.

(Note: Repeat Step 2 for each proposed BMP facility.)

MIN. POND STORAGE REQUIRED = 3 x 1.93 = 5.79 Ac-FT.
B.M.P. STORAGE PROVIDED = 14.49 Ac-FT. [15.71] Ac-FT.

POND 2A&2B

Step No. 2:
(A) Measure the onsite (and offsite if credit is to be taken for it) areas draining to the proposed BMP facility — 145.1 acres
(B) Measurement of impervious area onsite (and offsite if credit is to be taken for it) which drains to the proposed BMP facility — ____ acres
(C) % of the onsite (and offsite if credit is to be taken for it) drainage area to the proposed facility [(B)/(A) x 100] = 0.63 "C" Factor
(D) Chart A value for BMP storage/acre — 2,200 C.F./acre
(E) Total BMP storage required for this proposed BMP facility [(A) x (D)] = 319,220 C.F. OR 7.33 Ac-FT.

(Note: Repeat Step 2 for each proposed BMP facility.)

MIN. POND STORAGE REQUIRED = 3 x 7.33 = 21.99 Ac-FT.
B.M.P. STORAGE PROVIDED = 31.53 Ac-FT. [28.18]
TOTAL B.M.P STORAGE REQUIRED FOR ALL FACILITIES UNDER NORMAL DESIGN = 5.79 + 7.33 = 13.12 Ac-FT. OR 571,507 C.F.

TOTAL B.M.P STORAGE PROVIDED = 14.49 + 31.53 = 46.02 Ac-FT. = 2,004,631 C.F.
[15.71 + 28.18] = [43.89 Ac-FT.]

Decision Plateau:

- Step No. 2 (E) 571,507 CF (≥) (<) Step No. 1 (E) 417,885 C.F.
- If Step No. 2 (E) is ≥ No. 1 (E), design is acceptable. (Note: Even where this condition is met, designers are encouraged to proceed to Step No. 3 in order to maximize site coverage.)
- If Step No. 2 (E) is < No. 1 (E), proceed to Step No. 3.

Step No. 3: (A) In the uncontrolled areas measure all open areas, sheet flow areas, and impervious areas draining to pass slowly over pervious areas — ____ acres
(B) Multiply (A) x 50% — ____ acres
(C) Multiply No. 3 (B) x No. 1 (D) — ____ C.F.

Step No. 4: Step No. 2 (E) + Step No. 3 (C) — 571,507 C.F.

Decision Plateau:

- Step No. 4 571,507 70% x Step No. 1 (E) 292,520
- If Step No. 4 is ≥ 70% x Step No. 1 (E), design is acceptable.
- If Step No. 4 is < 70% of Step No. 1 (E), then add additional BMP facilities, Step No. 2; more pervious sheet flow areas, Step No. 3; or apply to the Director for partial waiver of BMP site requirements with reasons for justification.

PCA 91-Y-010-3 Application No. Staff TS
APPROVED DEVELOPMENT PLAN
(DPD) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-18-05
(BOS) (PC) Approval 2-28-05
Sheet 11 of 12

POND DESIGN AND MAINTENANCE NOTES

1. Stormwater Management Stage - Storage curves for all ponds are based on ultimate development condition of the site.
2. The normal pool portion of the stage - Storage curves in all wet ponds (Ponds 1A, 2A & 2B) do not provide any detention. This portion of the ponds have been excavated beyond minimum requirements for the wet ponds to reduce maintenance cost in the early phases of the project. Differences between the design grades and the as-built grades shall be acceptable, subject to minimum BMP storage requirements.
3. The Wet Ponds (Ponds 1A, 2A & 2B), riser structures and pond-common areas shall be privately maintained by owners.

CENTRE RIDGE

COMMONWEALTH OF VIRGINIA
Edward R. Umbrell
No. 038388
PROFESSIONAL ENGINEER

CONDENSED DRAINAGE ANALYSIS (ON-SITE ONLY)

CENTRE RIDGE STORMWATER MANAGEMENT — Site Name — 6857-SP-02 — County Plan Number

Drainage Shed(s) CUB RUN — Site Area 185.9 Acre(s)

*Pre Development Peak Runoff (10 year, 2 hour storm = Q10)	498	Cubic Feet/Second (c.f.s.)
*Post Development Peak Runoff (10 year, 2 hour storm = Q10) [without detention]	1,008	Cubic Feet/Second (c.f.s.)
Post Development Peak Runoff (10 year, 2 hour storm = Q10 [after detention - if applicable]	480	Cubic Feet/Second (c.f.s.)
**Pre Development Volume Runoff (2 year, 2 hour storm = Vp)	0.78 (0.5 x 17.24 x 0.15)	Acre Feet (Ac. Ft.) (DISTURBED AREA)
Post Development Volume Runoff (2 year, 2 hour storm = Vd)	0.78 (0.5 x 17.24 x 0.15)	Acre Feet (Ac. Ft.) (DISTURBED AREA)

Any Runoff Increase
* Peak Runoff (Q10) 0 c.f.s
** Volume Runoff (Δv= Vd-Vp) 0 Ac. Ft.

Prepared by: BOB IRWIN Date: 5-31-88 Phone: 849-0100

County Plan Reviewer: ____

NOTES:
1.) STORMWATER MANAGEMENT AS PROPOSED ON THIS PLAN REDUCES 10-YEAR, 2-HOUR PEAK RUN OFF RATES TO PRE-DEVELOPMENT LEVELS FOR ALL ON SITE AREAS DRAINING TO PROPOSED PONDS (SEE SHEET 45 OF 29) THERFORE, NO PEAK RUN OFF PRO-RATA SHARE ASSESSMENT IS REQUIRED
2.) NO IMPERVIOUS ACRES ARE TO BE CONSTRUCTED AS PART OF THIS PLAN. THEREFORE, VOLUME PRO RATA SHARE IS NOT APPLICABLE TO THIS PLAN. VOLUME PRO RATA WILL BE ADDRESSED WITH EACH SITE PLAN SUBMISSION INVOLVING IMPERVIOUS AREA.

DATE	DESIGNER	NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE
4-9-90	D.M.J.	3	ADDED AS-BUILT INFORMATION			
12-12-88	D.M.J.	2	FINAL REVISIONS TO B.M.P. DESIGNS			
8-17-88	R.F.H.	1	REVISED POND 2A WATER SURFACE ELEVATIONS			

ENGINEER — REVISION APPROVED BY: DIVISION OF DESIGN REVIEW

FOR INFORMATIONAL PURPOSES ONLY

Dewberry & Davis
Engineers Architects Planners Surveyors
9401 Arlington Blvd., Fairfax, VA 22031
703 849-0100

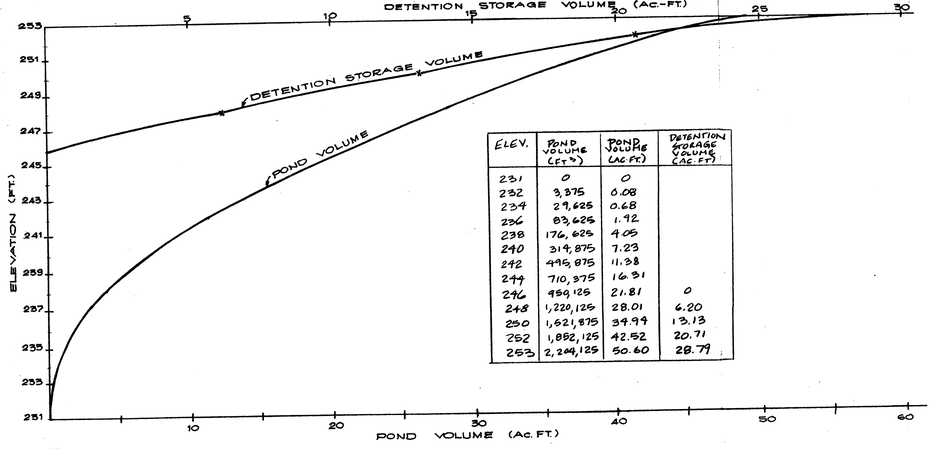
STORMWATER MANAGEMENT & BMP COMPUTATIONS

CENTRE RIDGE
STORMWATER MANAGEMENT PLAN
FOR POND 1A, 2A & 2B
Springfield District Fairfax County Virginia

Scale —
Sheet 11 OF 12
Date JULY, 1987
File Number PP-3457

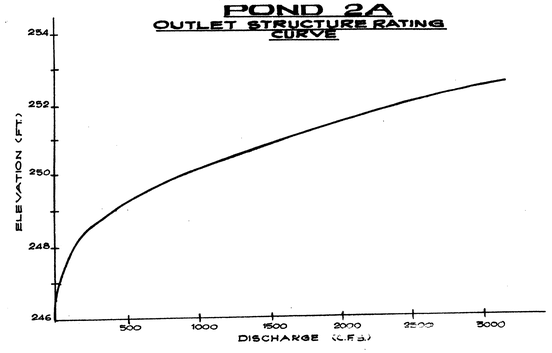
FX.00 PLAN # 6857-SP-02

POND 2A
STORAGE VS. ELEVATION



ELEV.	POND VOLUME (FT³)	POND VOLUME (AC.FT)	DETENTION STORAGE VOLUME (AC.FT)
231	0	0	
232	3,875	0.08	
234	29,625	0.68	
236	83,625	1.92	
238	176,625	4.05	
240	319,875	7.23	
242	496,875	11.38	
244	710,375	16.31	
246	959,125	21.81	0
248	1,220,125	28.01	6.20
250	1,621,875	34.99	13.13
252	1,882,125	42.52	20.71
253	2,249,125	50.60	28.79

POND 2A
OUTLET STRUCTURE RATING CURVE



OUTLET STRUCTURE CURVE DATA

ELEVATION	HEAD, (Ft.)	Q^*_{BLOT} (CFS.)	$HEAD_2$ (Ft.)	Q^*_{RISER} (CFS)	$HEAD_3$ (Ft.)	L_3	$Q^*_{Spillway}$ (CFS)	Q^*_{TOTAL} (CFS)
246.0	0	0						0
246.5	0.5	4.2	0	0				4.4
247.0	1.0	12.0	0.5	16.2				28.3
247.5	1.5	22.0	1.0	45.9				68.5
248.0	2.0	33.9	1.5	84.3	0	52	0	119.1
248.5	2.5	47.4	2.0	129.7	0.5	54	57.3	236.6
249.0	3.0	62.4	2.5	181.4	1.0	57	171.0	416.1
250.0	4.0	96.0	3.5	300.4	2.0	60	509.0	819.0
251.0	5.0	134.2	4.5	438.0	3.0	67	1044.4	1,364.4
252.0	6.0	176.4	5.5	591.8	4.0	70	1680.0	2,015.0
252.5	6.5	198.9	6.0	674.3	4.5	75	2147.8	2,492.8

* DISCHARGE EQUATIONS.

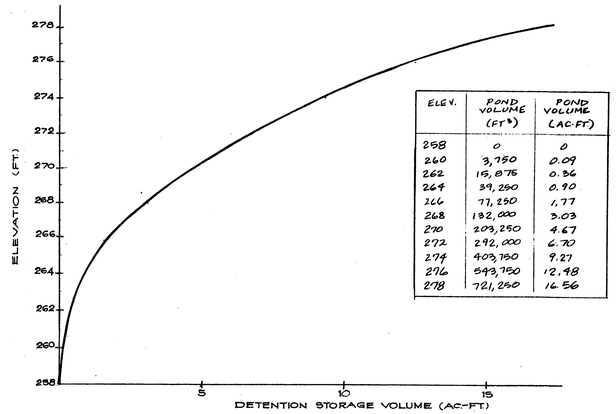
$Q_{BLOT} = C L_{BLOT} H_{BLOT}^{3/2} \longrightarrow L_{BLOT} = 4'$; C 3.1

$Q_{RISER} = C L_{RISER} H_{RISER}^{3/2} \longrightarrow L_{RISER} = 14.8'$; C 3.1

$Q_{SPILLWAY} = C L_{SPILLWAY} H_{SPILLWAY}^{3/2} \longrightarrow L_{SPILLWAY} = VARIES$; C 3.0

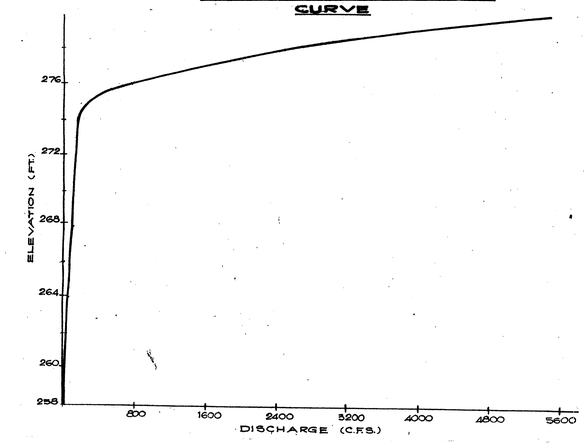
$Q_{TOTAL} = Q_{BLOT} + Q_{RISER} + Q_{SPILLWAY}$

POND 2C
STORAGE VS. ELEVATION



ELEV.	POND VOLUME (FT³)	POND VOLUME (AC.FT)
258	0	0
260	3,750	0.09
262	15,876	0.36
264	39,250	0.90
266	77,250	1.77
268	132,000	3.03
270	203,250	4.67
272	292,000	6.70
274	403,750	9.27
276	543,750	12.48
278	721,250	16.56

POND 2C
OUTLET STRUCTURE RATING CURVE



OUTLET STRUCTURE CURVE DATA

ELEVATION (Ft.)	HEAD H_v (Ft.)	H_v/D	Q^*_{Pipe} (cfs)	$HEAD_1$ (Ft)	L_1	Q^*_{Road} (cfs)	Combined Q^* (cfs)
258	0	0	0				0
260	2	0.67	17				18
262	4	1.33	48				48
264	6	2.0	70				70
266	8	2.67	88				88
268	10	3.33	100				100
270	12	4.0	110				110
272	14	4.67	118				118
273	15	5.0	126	0	0	0	126
274	16	5.33	130	1	15'	39	169
276	18	6.0	138	3	45	608	746
278	20	6.67	148	5	80	2326	2,474
280	22	7.33	155	7	110	5247	5,402

* DISCHARGE EQUATIONS.

Q_{PIPE} — TAKEN FROM FHA, CIRCULAR No. 5, CHART 2

$Q_{ROAD} = C L_1 H_1^{3/2} \longrightarrow C_1 = 2.6$; L_1 (VARIES)

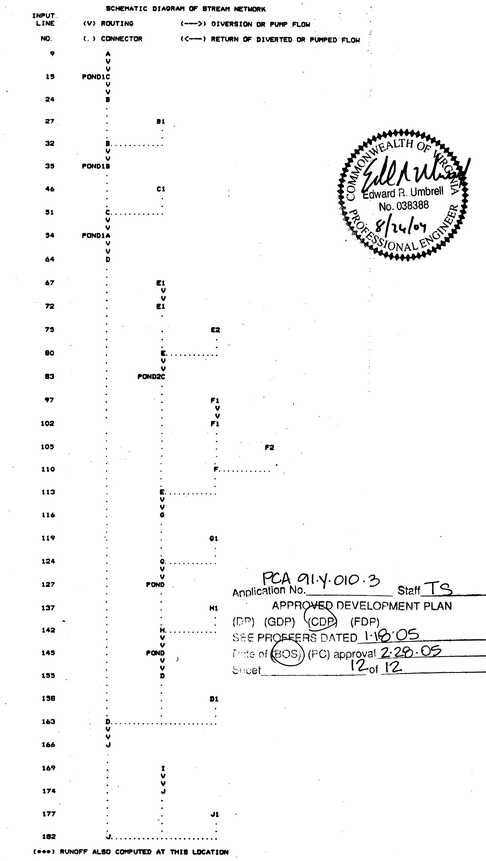
$Q_{COMBINED} = Q_{PIPE} + Q_{ROAD}$

SCHEMATIC DIAGRAM OF STREAM NETWORK

(V) ROUTING (—→) DIVERSION OR PUMP FLOW

(.) CONNECTOR (←—) RETURN OF DIVERTED OR PUMPED FLOW

INPUT LINE NO.



(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

COMMONWEALTH OF VIRGINIA
Edward R. Umbrell
No. 038388
8/24/04
PROFESSIONAL ENGINEER

PCA 91-Y-010-3
Application No. _____ Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-18-05
Date of (BOS) (PC) approval 2-28-05
Sheet 12 of 12

FDPA 91-Y-010-2
Application No. _____ Staff TS
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 1-25-05 as amended by PC
Date of (BOS) (PC) approval 1-26-05
Sheet 12 of 12

DATE	DESIGNER	NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE
8-17-88	RPI	1	REVISED Q TOTAL FOR POND 2A OUTLET STRUCTURES CURVE DATA			
ENGINEER			REVISION APPROVED BY: DIVISION OF DESIGN REVIEW			

CENTRE RIDGE

COMMONWEALTH OF VIRGINIA
L.E. JACKSON
055261
PROFESSIONAL ENGINEER

Dewberry & Davis
Engineers Architects Planners Surveyors
8401 Arlington Blvd., Fairfax, VA 22031
☎ 703 849-0100

DISCHARGE - STORAGE - ELEVATION CURVES & STREAM NETWORK DIAGRAM

CENTRE RIDGE
STORMWATER MANAGEMENT PLAN & POND DESIGN
FOR PONDS 2A, 2B, & 2C
Springfield District Fairfax County Virginia

Scale NONE
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Date JULY, 1987
File Number PP-3437

FOR INFORMATIONAL PURPOSES ONLY

EX 33 PLAN # 6257