3068 WEST OX ROAD

SULLY DISTRICT - FAIRFAX COUNTY, VIRGINIA

CONCEPTUAL/FINAL DEVELOPMENT PLAN

NOTES:

1. OWNER:
   JOSEPH A WELLS
   3068 WEST OX ROAD
   HERNDON, VA 20171

   APPLICANT:
   JOHN SCHLICK
   2400 41ST ST, NW #504
   WASHINGTON, DC 20007

2. THE PROPERTY SHOWN ON THIS PLAN IS IDENTIFIED ON THE FAIRFAX COUNTY ZONING MAP AS 035-2-01-0038 TOTALING ±92,041 SF OR ±2.1130 AC.

3. THE SITE IS CURRENTLY ZONED R-1, RESIDENTIAL, ONE DWELLING UNIT PER ACRE. THIS REZONING APPLICATION REQUESTS THE SITE BE REZONED TO THE PDH-2, PLANNED DEVELOPMENT HOUSING DISTRICT, TWO DWELLING UNITS PER ACRE. THE PROPOSED USE IS SINGLE-FAMILY DETACHED DWELLINGS.

4. THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS FROM A FIELD RUN SURVEY BY WALTER L. PHILLIPS, INC. CONTOUR INTERVAL IS TWO (2) FEET.

5. THERE ARE EXISTING RESIDENTIAL USES (ALSO ZONED PDH-2) SURROUNDING THE PROPERTY. THE PROPOSED RESIDENTIAL USE WILL NOT POSE ANY ADVERSE IMPACTS ON THE ADJACENT OR NEIGHBORING PROPERTIES.

6. IT IS ANTICIPATED THAT DEVELOPMENT OF THIS SUBDIVISION WILL OCCUR IMMEDIATELY FOLLOWING COUNTY APPROVAL OF THE SUBDIVISION PLAN.

7. THERE ARE NO PROPOSED SPECIAL AMENITIES FOR THIS PROPERTY.

8. THE SITE IS SERVED BY PUBLIC WATER AND SEWER.

9. NO RESOURCE PROTECTION AREAS OR ENVIRONMENTAL QUALITY CORRIDORS, AS DEFINED, ARE DELINEATED ON THIS PROPERTY.

10. A REVIEW OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 515525 0025 D, EFFECTIVE DATE MARCH 5, 1990, DESIGNATES THE PROPERY AS BEING IN FLOODPLAIN X, "AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN."

11. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO GRAVES LOCATED ON THE SITE.

12. STORMWATER MANAGEMENT COMPLYING WITH THE REQUIREMENTS OF THE PUBLIC FACILITIES MANUAL WILL BE PROVIDED WITH THIS DEVELOPMENT.

13. THERE ARE NO KNOWN UTILITY EASEMENTS ON THE PROPERTY HAVING A WIDTH OF 25 FEET OR MORE.

14. THIS PROPOSED DEVELOPMENT COMPLIES WITH THE CURRENT COMPREHENSIVE PLAN RECOMMENDATION. TRAIL MAP SPECIFIES A 10' MAJOR PAVED TRAIL. AN 8' ASPHALT TRAIL WAS RECENTLY INSTALLED BY VDOT ACROSS THE WEST OX ROAD FRONTAGE. A WAIVER IS REQUESTED TO USE THE EXISTING 8' TRAIL IN LIEU OF THE 10' TRAIL.

15. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THERE ARE NO HAZARDOUS SUBSTANCES ON THIS PROPERTY.

16. THERE ARE NO SCENIC ASSETS OR NATURAL FEATURES ON THIS PROPERTY DESERVING OF PROTECTION AND/OR PRESERVATION.

17. THE PROPOSED APPLICATION CONFORMS TO THE PROVISIONS OF ALL APPLICABLE ORDINANCES, REGULATIONS, AND ADOPTED STANDARDS, EXCEPT AS NOTED IN WAIVERS/MODIFICATIONS SECTION.

18. THE EXISTING HOUSES AND OTHER EXISTING STRUCTURES WILL BE REMOVED.

19. NO DAM EMBANKMENT OR EMERGENCY SPILLWAYS ARE PROPOSED WITH THIS PLAN. THE APPLICANT WILL APPLY FOR A COMBINED SPILLWAY WITH THE FINAL SUBDIVISION PLAN.

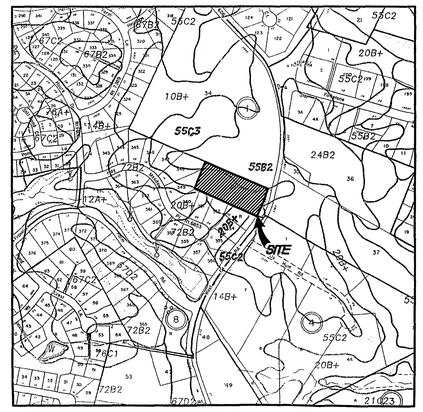
20. DESIGNATED OPEN SPACES WILL REMAIN FOR PASSIVE RECREATION AND BMP/SWM FACILITIES.

21. THIS PLAN IS CONCEPTUAL AND IS INTENDED TO BE USED IN CONJUNCTION WITH THE LAND USE APPROVAL PROCESS ONLY. IT IS NOT AN ENGINEERING CONSTRUCTION DRAWING, AND MINOR DEVIATIONS AND ADJUSTMENTS MAY BE REQUIRED, AND ARE PERMITTED PURSUANT TO ZONING ORDINANCE SECTION 18-204(5), AS PART OF THE FINAL DESIGN AND SUBDIVISION PLAN APPROVAL PROCESS; HOWEVER, THE FINAL CONSTRUCTION DRAWINGS SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THIS PLAN.

22. THERE WILL BE A MINIMUM OF 200 SQUARE FEET DESIGNATED AS A PRIVACY YARD ON EACH LOT.

MODIFICATION REQUESTED

1. REQUEST A MODIFICATION OF THE 10' TRAIL REQUIREMENT ALONG WEST OX ROAD TO ALLOW THE EXISTING 8' ASPHALT TRAIL WHICH WAS RECENTLY INSTALLED BY VDOT.

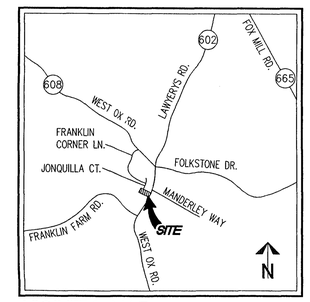


SOILS MAP SCALE: 1"=500'

SOILS DATA

SOIL ID NUMBERS	SERIES NAME	FOUNDATION SUPPORT	SUBSURFACE DRAINAGE	SLOPE STABILITY	ERODABILITY	GEOTECH REPORT REQ'D	PROBLEM CLASS
20B+	MEADOWVILLE	FAIR	MARGINAL	GOOD	MODERATE	YES	B
55B2	GLENELG	GOOD	GOOD	GOOD	SEVERE	NO	C
55C2	GLENELG	GOOD	GOOD	GOOD	SEVERE	NO	C
55C3	GLENELG	GOOD	GOOD	GOOD	SEVERE	NO	C

SOIL INFORMATION WAS TAKEN FROM FAIRFAX COUNTY SOILS MAP.



VICINITY MAP SCALE: 1"=2000'

ZONING TABULATION

EXISTING ZONE: R-1, RESIDENTIAL (1 DU/AC)
PROPOSED ZONE: PDH-2, PLANNED DEVELOPMENT HOUSING DISTRICT 2 DU/AC
SITE AREA: 92,041 SF OR 2.1130 AC*

	REQUIRED	PROVIDED
MIN. DISTRICT SIZE:	2 AC.	2.1130 AC.
MIN. LOT AREA:	NONE (200 SF PRIVACY YARD)	N/A (200 SF PRIVACY YARD)
MIN. LOT WIDTH:	NONE	N/A
AVERAGE LOT AREA:	NONE	N/A
MAX. BLD. HT:	35 FT.	≤35 FT.
MIN. YARD REQUIREMENTS:		
FRONT	NONE	N/A
SIDE	NONE	N/A
REAR	NONE	N/A
MAX. DENSITY:	2 DU/AC	±1.42 DU/AC**
OPEN SPACE	20%	±25%
TREE COVER	20%	±20%
PARKING REQUIREMENT FOR SINGLE FAMILY DETACHED, 2 SPACES PER LOT AS PROVIDED BY DRIVEWAY/GARAGE	6	±6

*INCLUDES ±10,020 SF OF RIGHT OF WAY DEDICATION
**DENSITY IS BASED ON PRE-DEDICATION SITE AREA

Application No. RZ/FDP 2007-SU-005 Sta~~ff~~ ~~WQD~~
Approved Development Plan(DP) (GDP) (CDP) (FDP)
See Proffers Dated 10/12/2007
Date of ~~BOS~~ (PC) Approval 10/15/2007
Sheet 1 of 6

SHEET INDEX

1. COVER SHEET
2. CONCEPTUAL/FINAL DEVELOPMENT PLAN
3. CONCEPTUAL LANDSCAPE PLAN
4. EXISTING VEGETATION MAP
5. PRELIMINARY SWM/BMP COMPUTATIONS
6. OUTFALL ANALYSIS

RECEIVED
Department of Planning & Zoning
AUG 24 2007
Zoning Evaluation Division

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 FAX (703) 533-1301 WWW.WLPINC.COM

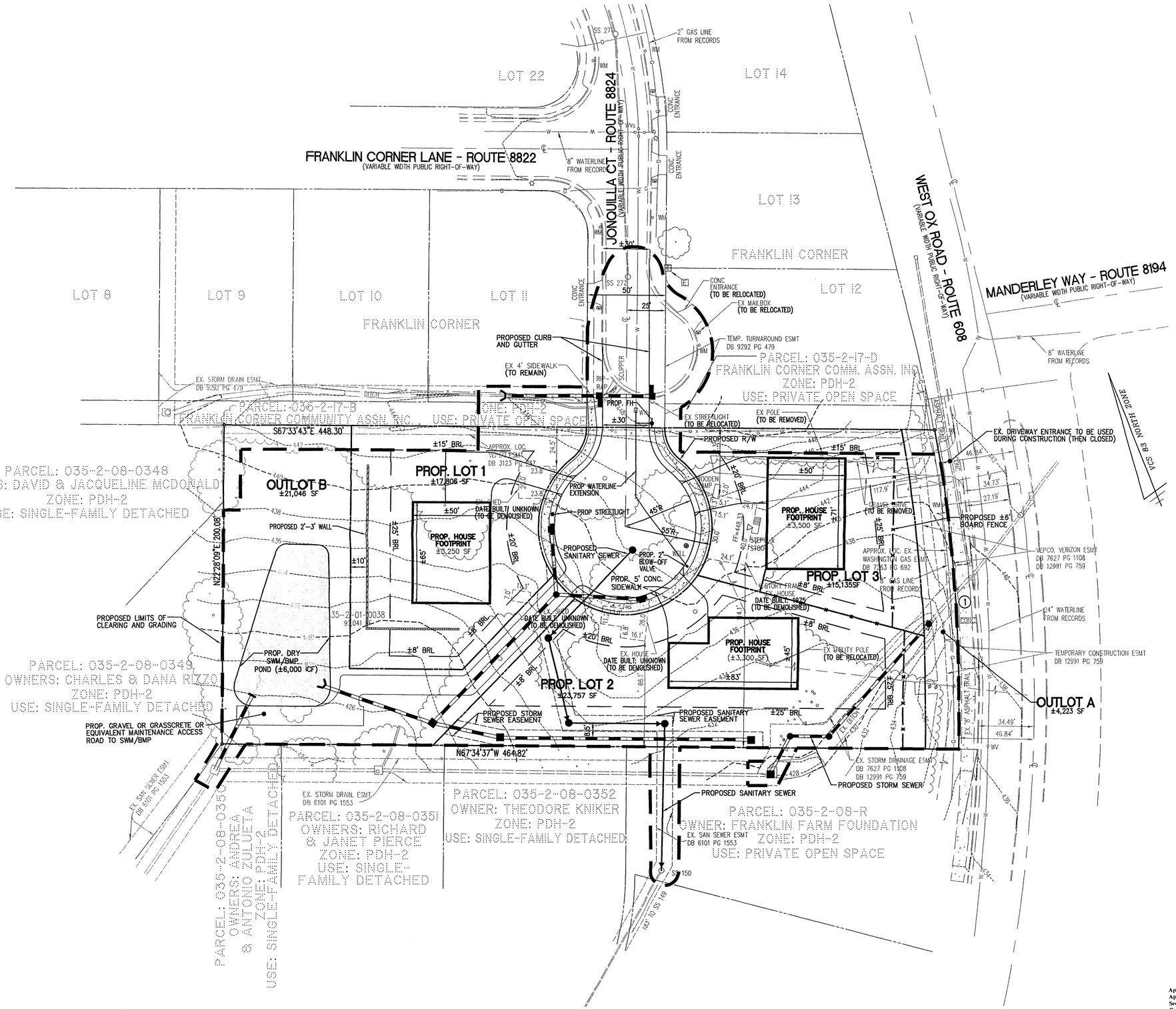
SCALE: 1" = 30'
DATE: 9/29/06; REV. 4/23/07, 5/22/07
REV. 6/6/07, 7/17/07, 8/21/07
DRAWN: MRW

COMMONWEALTH OF VIRGINIA
CHARLES F. DUNAGAN
Lic. No. 1309-B
9/24/07
LAND SURVEYOR

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

CONCEPTUAL/FINAL DEVELOPMENT PLAN
COVER SHEET
3068 WEST OX ROAD
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA



CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	TANGENT	CHORD	CHORD BEARING
1	937.41'	201.02'	12°17'11"	100.89'	200.63'	S17°44'43"W

Application No. RZ/FDP 2007-SU-005 Staff: [illegible]
Approved Development Plan(DP) (GDP)(CDP) (FDP)
See Proffers Dated 10/12/2007
Date of BOS (PC) Approval 10/15/2007
Sheet 2 of 6

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CHARLES F. DUNLAP
Lic. No. 1309-B
9/29/06
LAND SURVEYOR

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

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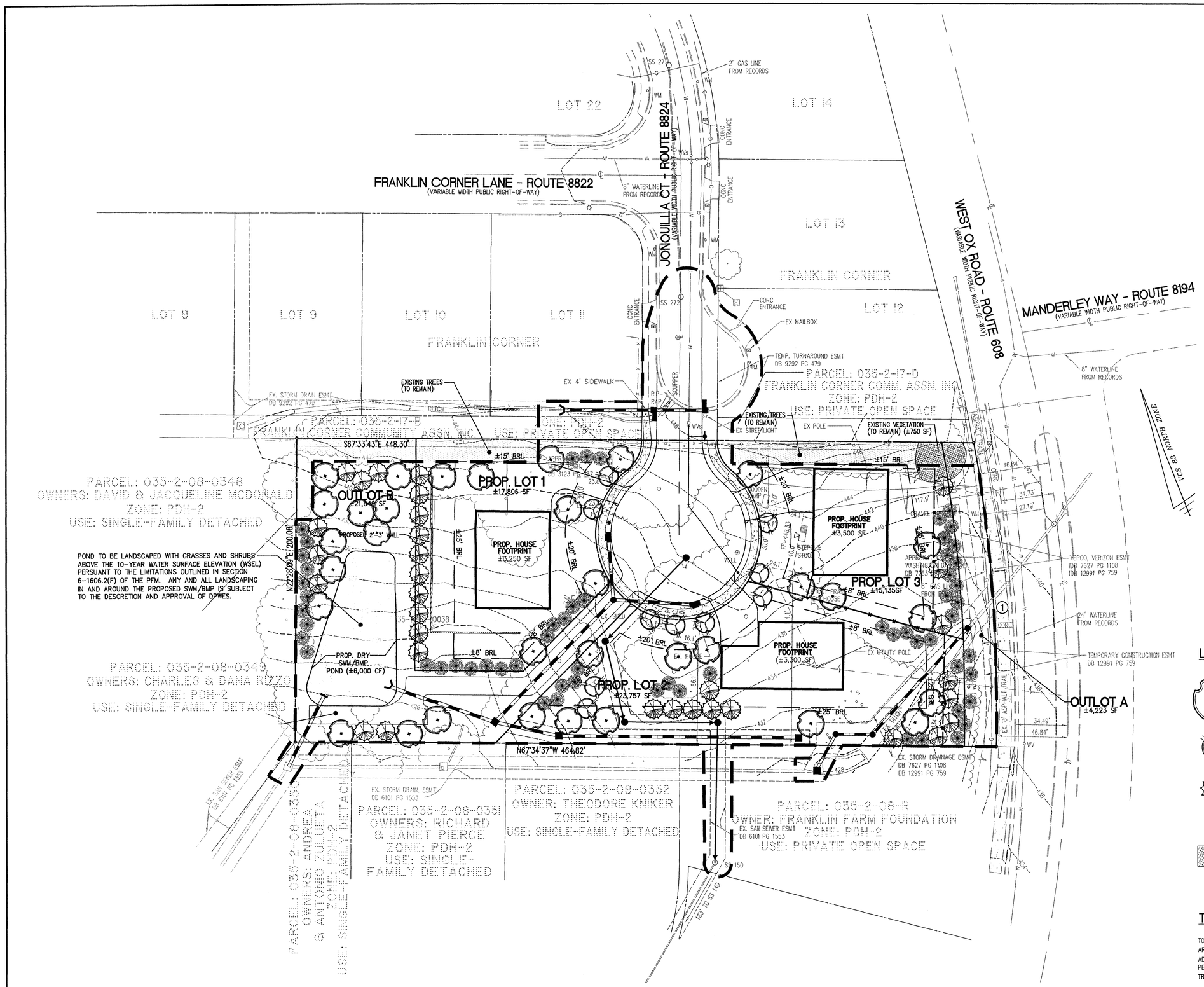
CONCEPTUAL/FINAL DEVELOPMENT PLAN

CONCEPTUAL/FINAL DEVELOPMENT PLAN
3068 WEST OX ROAD
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

File No. FS-20 Tax Map No. 35-2 Job No. 06008 CADD Dwg. File: 06008CDP Xref:

SHEET: 2 OF 6



Application No. RZ/FDP 2007-SU-005 Staff:WOD
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See Proffers Dated 10/12/2007
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Sheet 3 of 6

LANDSCAPE LEGEND

- PROPOSED LARGE DECIDUOUS TREES
- PROPOSED FLOWERING TREES
- PROPOSED LARGE EVERGREEN TREES
- PROPOSED SMALL/MEDIUM EVERGREEN TREES
- EXISTING VEGETATION TO REMAIN

TREE COVER CALCULATIONS

TOTAL SITE AREA	±92,041	S.F.
AREA TO BE DEDICATION	– ±10,074	S.F.
ADJUSTED SITE AREA	±81,967	S.F.
PERCENT REQUIRED	X 20	%
TREE COVER REQUIRED	**±16,393**	**S.F.**
TREE COVER PROVIDED (PLANTED)	±15,700	S.F.
EXISTING TREE COVERAGE (750 SF x 1.25)	+ ±938	S.F.
TOTAL TREE COVERAGE	**±16,638**	**S.F.**

0 15 30 60
(IN FEET)
1 INCH = 30'

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	TANGENT	CHORD	CHORD BEARING
1	937.41'	201.02'	12°17'11"	100.89'	200.63'	S17°44'43"W

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REV. 6/6/07, 7/27/07, 8/23/07
SCALE: 1" = 30' DRAWN: MRW

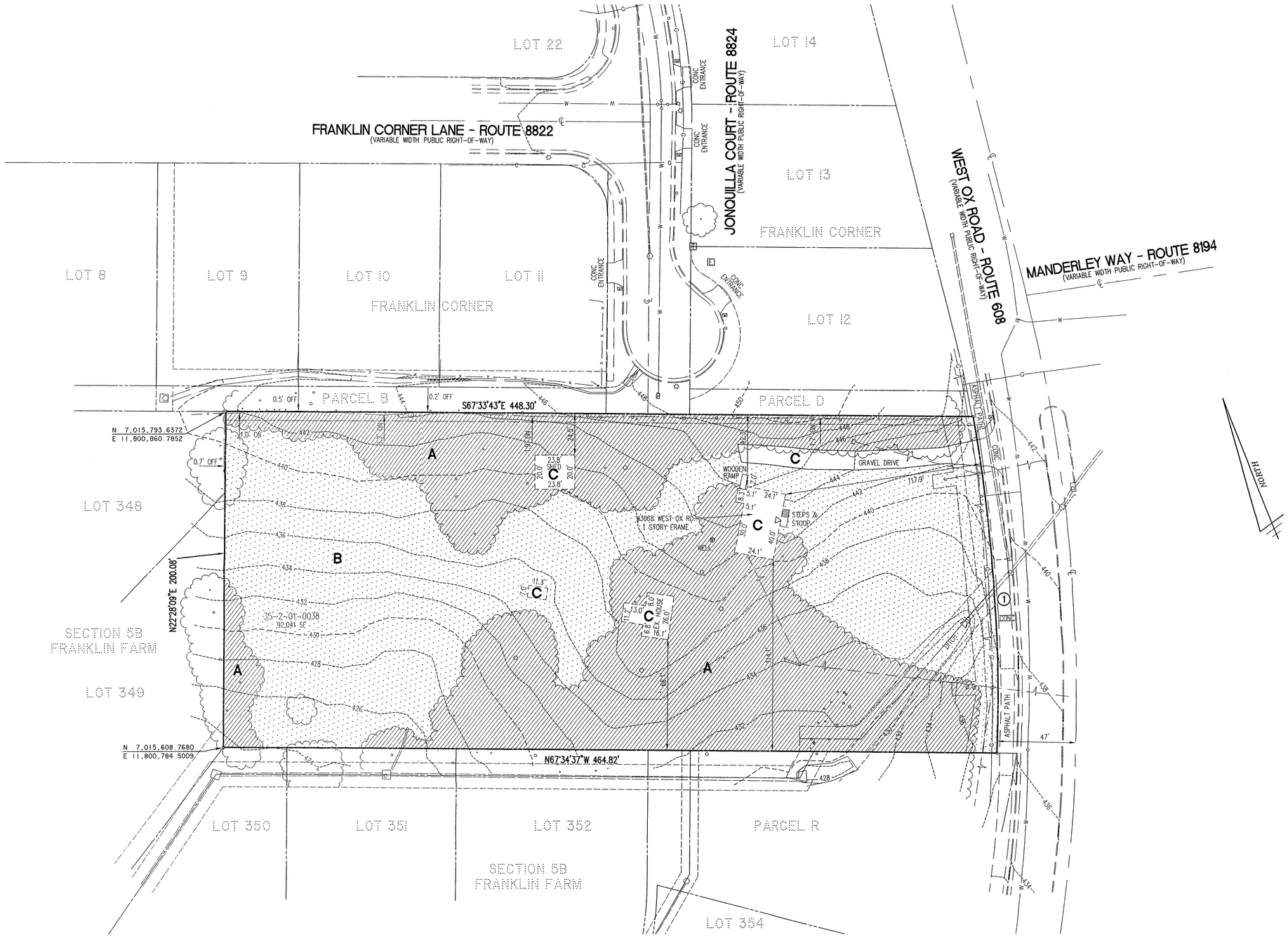
LICENSED PROFESSIONAL ENGINEER
CHARLES F. DUNLAP
Lic. No.1309-B
9/29/06
LICENSED LAND SURVEYOR

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

REVISION APPROVED BY

CONCEPTUAL/FINAL DEVELOPMENT PLAN

CONCEPTUAL LANDSCAPE PLAN
3068 WEST OX ROAD
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA



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See Proffers Dated 10/12/2007
Date of (BOS) (PC) Approval 10/15/2007
Sheet 4 of 6

0 15 30 60
(IN FEET)
1 INCH = 30'

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	TANGENT	CHORD	CHORD BEARING
1	937.41'	201.02'	12°17'11"	1100.89'	200.63'	S17°44'43"W

EXISTING VEGETATION MAP INFORMATION

KEY	COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION	ACREAGE	COMMENTS
A	UPLAND FOREST	TULIP POPLAR, RED MAPLE BLACK CHERRY, LOCUST EASTERN REDCEDAR	LONG-TERM SUB-CLIMAX	GOOD	43,051 SF OR 0.988 AC	
B	LAWN AND LANDSCAPED	N/A	N/A	N/A	44,629 SF OR 1.025 AC	NOT MAINTAINED, OVERGROWN WITH NOXIOUS WEEDS AND UNDERBRUSH
C	DEVELOPED	N/A	N/A	N/A	4,361 SF OR 0.100 AC	
				TOTAL SITE AREA:	92,041 SF OR 2.113 AC	

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SCALE: 1" = 30'

COMMONWEALTH OF VIRGINIA
CHARLES F. DONLAP
Lic. No.1309-B
9/29/06
LAND SURVEYOR

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

CONCEPTUAL/FINAL DEVELOPMENT PLAN

EXISTING VEGETATION MAP
3068 WEST OX ROAD
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

File No. FS-20 Tax Map No. 35-2 Job No. 06008 Cadd Dwg. File: 06008GDP/06008EVMref:

OVERALL SITE DRAINAGE SUMMARY:

I. PRE-DEVELOPMENT- 2 YEAR STORM:

A. TOTAL AREA = 2.11 AC.

CONTRIBUTING AREAS:

0.09 AC. @ 0.90 (IMPERVIOUS AREA ON-SITE) (4.3% IMPERVIOUS AREA)
2.02 AC. @ 0.20 (GREEN AREA ON-SITE)
2.11 AC.

B. WEIGHTED "C":

$$\frac{(0.09)\ (0.90) + (2.02)\ (0.2)}{2.11} = 0.23$$

C. TIME OF CONCENTRATION = 5 MIN.

D. RUNOFF: Q2 = (0.23) (5.45) (2.11) = 2.64 CFS

II. PRE-DEVELOPMENT- 10 YEAR STORM:

A. TOTAL AREA = 2.11 AC.

CONTRIBUTING AREAS:

0.09 AC. @ 0.90 (IMPERVIOUS AREA ON-SITE)
2.02 AC. @ 0.30 (GREEN AREA ON-SITE)
2.11 AC.

B. WEIGHTED "C":

$$\frac{(0.09)\ (0.90) + (2.02)\ (0.3)}{2.11} = 0.32$$

C. TIME OF CONCENTRATION = 5 MIN.

D. RUNOFF: Q10 = (0.32) (7.27) (2.11) = 4.91 CFS

III. POST-DEVELOPMENT- UNDETAINED:

A. CONTRIBUTING AREAS:

0.00 AC. @ 0.90 (IMPERVIOUS AREA ONSITE)
0.24 AC. @ 0.30 (GREEN AREA ONSITE)
0.24 AC.

B. WEIGHTED "C":

$$\frac{(0.00)\ (0.90) + (0.24)\ (0.30)}{0.24} = 0.30$$

C. RUNOFF: Q2 = (0.30) (5.45) (0.24) = 0.39 CFS
Q10 = (0.30) (7.27) (0.24) = 0.52 CFS

IV. POST-DEVELOPMENT- TO POND:

A. CONTRIBUTING AREAS:

0.60 AC. @ 0.90 (IMPERVIOUS AREA ONSITE)
1.27 AC. @ 0.30 (GREEN AREA ONSITE)
1.87 AC.

B. WEIGHTED "C":

$$\frac{(0.60)\ (0.90) + (1.27)\ (0.30)}{1.87} = 0.49$$

C. RUNOFF: Q2 = (0.49) (5.45) (1.87) = 4.99 CFS
Q10 = (0.49) (7.27) (1.87) = 6.66 CFS

V. OFFSITE- TO POND:

A. CONTRIBUTING AREAS:

0.05 AC. @ 0.90 (IMPERVIOUS AREA)
0.11 AC. @ 0.30 (GREEN AREA)
0.16 AC.

B. WEIGHTED "C":

$$\frac{(0.05)\ (0.90) + (0.11)\ (0.30)}{0.16} = 0.49$$

C. RUNOFF: Q2 = (0.49) (5.45) (0.16) = 0.43 CFS
Q10 = (0.49) (7.27) (0.16) = 0.57 CFS

VI. INCREASE:

TOTAL POST-DEVELOPMENT RUNOFF = POST-DEVELOPMENT UNDETAINED + POST-DEVELOPMENT TO POND

Q2 = 0.39 + 4.99 = 5.38 CFS
Q10 = 0.52 + 6.66 = 7.18 CFS

INCREASE IN RUNOFF = POST-DEVELOPMENT - PRE-DEVELOPMENT

Q2 = 5.38 - 2.64 = 2.74 CFS
Q10 = 7.18 - 4.91 = 2.27 CFS

VI. ALLOWABLE RELEASE FROM DETENTION POND:

ALLOWABLE RELEASE FROM POND = PRE-DEVELOPMENT - POST-DEVELOPMENT UNDETAINED + OFFSITE TO POND

Q2 = 2.64 - 0.39 + 0.43 = 2.68 CFS
Q10 = 4.91 - 0.52 + 0.57 = 4.96 CFS

BMP FACILITY DESIGN CALCULATIONS

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 ONSITE DRAINAGE AREA TO POND	0.49	1.87
A_2 ONSITE UNCONTROLLED	0.30	0.24
A_3 OFFSITE DRAINAGE AREA TO POND	0.49	0.16

PART 2: COMPUTE THE WEIGHTED AVERAGE "C" FACTOR FOR THE SITE

(A) AREA OF THE SITE (a) 2.11 ACRES

(B) WEIGHTED AVERAGE "C" FACTOR

SUBAREA DESIGNATION AND DESCRIPTION (1)	"C" (2)	ACRES (3)	CA (4)
A_1 ONSITE DRAINAGE AREA TO POND	0.49	1.87	0.92
A_2 ONSITE UNCONTROLLED	0.30	0.24	0.07
		TOTAL CA=	0.99

WEIGHTED AVERAGE "C" FACTOR= 0.99/2.11= 0.47

PART 3: COMPUTE THE TOTAL PHOSPHORUS REMOVAL FOR THE SITE

SUBAREA DESIGNATION (1)	BMP TYPE (2)	REMOVAL EFF. (%) (3)	AREA RATIO (4)	"C" FACTOR RATIO (5)	PRODUCT (6)
A_1 ONSITE DRAINAGE AREA TO POND		40 x	1.87/2.11 x	0.49/0.47	= 37.0
A_3 OFFSITE DRAINAGE AREA TO POND		40 x	0.16/2.11 x	0.49/0.47	= 3.2
				(a) TOTAL =	40.2%

PART 4: DETERMINE COMPLIANCE WITH PHOSPHORUS REMOVAL REQUIREMENT

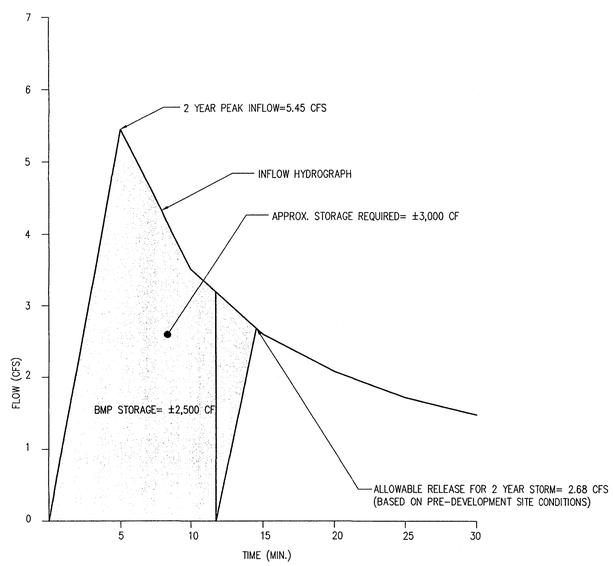
(A) SELECT REQUIREMENT (a)

* WATER SUPPLY OVERLAY DISTRICT (OCCOQUAN WATERSHED) = 50 %

* CHESAPEAKE BAY PRESERVATION AREA (NEW DEVELOPMENT) = 40 %

(B) IF LINE 3(a) 40.2 ≥ LINE 4(a) 40 THEN PHOSPHORUS REMOVAL REQUIREMENT IS SATISFIED.

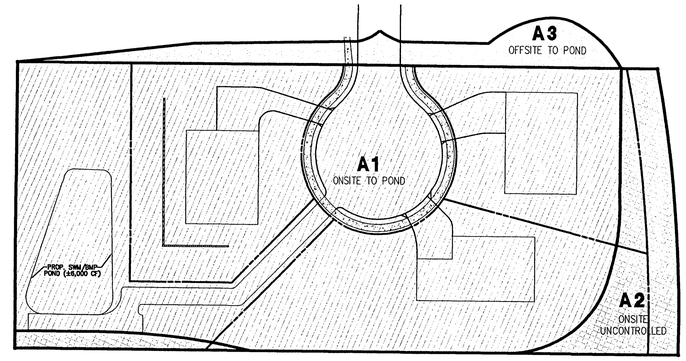
2 YEAR STORM INFLOW HYDROGRAPH:



NOTE: ALL VALUES ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON FINAL ENGINEERING DESIGN.

DRAINAGE DIVIDE MAP

SCALE: 1"=50'



A1 ONSITE TO POND
A2 ONSITE UNCONTROLLED
A3 OFFSITE TO POND

BMP NARRATIVE:

BMP FOR THE SITE IS PROVIDED BY MEANS OF AN EXTENDED DETENTION DRY POND, WHICH IS ASSIGNED A 40% PHOSPHORUS REMOVAL RATE. THE POND CONTROLS ALL OF THE PROPOSED DEVELOPED AREA, WHILE IT DOES NOT CONTROL APPROXIMATELY 0.24 ACRES OF GREEN SPACE AREA AT THE EASTERN AND SOUTHWESTERN FRINGE OF THE PROPERTY. APPROXIMATELY 0.16 ACRES OF OFFSITE AREA FLOWS NATURALLY TO THE POND AND IS BEING INCLUDED FOR FULL BMP CREDIT. THE POND IS TO BE MAINTAINED BY FAIRFAX COUNTY.
AT THE TIME OF FINAL SITE DESIGN AND ENGINEERING, THE POND FOOTPRINT, LOCATION AND DRAINAGE AREA MAY BE ADJUSTED IN ORDER TO PROVIDE THE APPROPRIATE AMOUNT OF PHOSPHOROUS REMOVAL FOR THE SITE; HOWEVER, THE PROPOSED LIMITS OF CLEARING AND GRADING WILL NOTE BE EXPANDED. ALL DESIGN COMPUTATIONS AND DETAILS ARE TO BE FINALIZED AT THE TIME OF FINAL ENGINEERING.

SWM NARRATIVE:

THE ALLOWABLE RELEASE FROM THE SITE WITH THE PIROPOSED DEVELOPMENT SHALL BE EQUAL TO THE PRE-DEVELOPMENT FLOW. THE 2-YEAR ALLOWABLE RELEASE IS 2.68 CFS, AND THE 10-YEAR ALLOWABLE RELEASE IS 4.91 CFS. DETENTION IS PROPOSED TO BE PROVIDED BY AN EXTENDED DETENTION DRY POND FACILITY. THE POND IS TO BE MAINTAINED BY FAIRFAX COUNTY AND HAS A ZERO HEIGHT EMBANKMENT.
AT THE TIME OF FINAL SITE DESIGN AND ENGINEERING, THE POND FOOTPRINT, LOCATION AND DRAINAGE AREA MAY BE ADJUSTED IN ORDER TO PROVIDE THE APPROPRIATE AMOUNT OF STORMWATER MANAGEMENT STORAGE FOR THE SITE; HOWEVER, THE PROPOSED LIMITS OF CLEARING AND GIRADING WILL NOT BE EXPANDED. ALL DESIGN COMPUTATIONS AND DETAILS ARE TO BE FINALIZED AT THE TIME OF FINAL ENGINEERING.

STORMWATER MANAGEMENT CHECKLIST

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 folllowing Zoning Ordinance paragraphs:

Special Permits (9-011 2J & 2L)	Special Exceptions (9-011 2J & 2L)
Cluster Subdivision (9-615 1G & 1N)	Commercial Revitalization Districts (9-622 2A (12) & (14))
Development Plans PRC District (16-302 3 & 4L)	PRC Plan (16-303 1E & 1Q)
FDP P Districts (except PRC) (16-502 1F & 1Q)	Amendments (18-202 10F & 10I)

[X] 1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100').

[X] 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 2.

[X] 3. Provide:

Facility Name/ Type & No. (e.g. dry pond A, infil. trench, underground vault, etc.)	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage Volume (cf)	If pond, dam height (ft)
EXTENDED DETENTION DRY POND	±1.87	±0.16	±2.03	±4,500	±6,000	N/A
Totals						

[X] 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 2. Pond inlet and oulet pipe systems are shown on Sheet 2.

[X] 5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet 2. Type of maintenance access road surface noted on the plat is SEE SHEET 2 (asphalt, geoblock, gravel, etc.).

[X] 6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet 3.

[X] 7. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet 5.

[X] 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 6.

[X] 9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet 6.

[X] 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 1,2.

[ ] 11. A submission waiver is requested for N/A.

[ ] 12. Stormwater management is not required because N/A.

Application No. RZ/FDP 2007-SU-005 Staff/WOD
Approved Development Plan(DP) (GDP) (CDP) (FDP)
See Proffers Dated 10/12/2007
Date of (BOS) (PC) Approval 10/15/2007
Sheet 5 of 6

WALTER L. PHILLIPS
INCORPORATED
CIVIL ENGINEERS LAND SURVEYORS PLANNERS LANDSCAPE ARCHITECTS
207 PARK AVENUE FALLS CHURCH, VIRGINIA 22046 WWW.WLPINC.COM
(703) 532-6163 FAX (703) 533-1301

DATE: 9/29/06; REV. 4/23/07, 5/22/07 REV. 6/6/07, 7/27/07, 8/23/07
DRAWN: MRW
SCALE: NONE

COMMONWEALTH OF VIRGINIA
CHARLES F. DUNLOP
Lic. No. 1309-B
9/29/06
LAND SURVEYOR

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

CONCEPTUAL/FINAL DEVELOPMENT PLAN

PRELIMINARY SWM/BMP COMPUTATIONS

3068 WEST OX ROAD

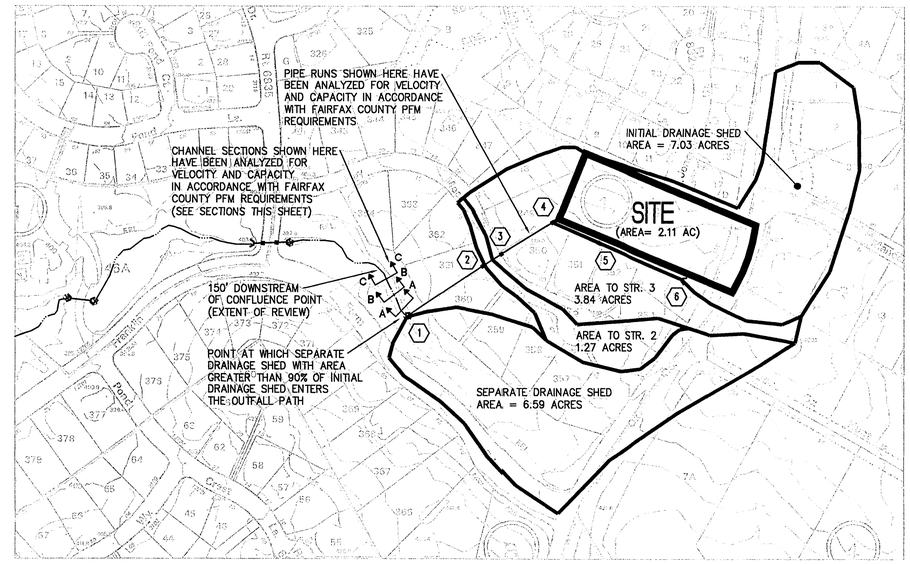
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

OUTFALL NARRATIVE:

THIS SITE IS LOCATED IN THE HORSEPEN CREEK WATERSHED. THE STORMWATER FROM THIS SITE IS CONVEYED DOWNSTREAM VIA STORM SEWER AND OPEN CHANNEL FLOW. WE HAVE DETERMINED THE EXISTING DRAINAGE DIVIDES, AND VERIFIED THE EXISTING OFFSITE STORM SEWER AND CHANNEL SECTIONS USING RECORD AS-BUILT AND TOPOGRAPHY INFORMATION AS WELL AS INFORMATION GATHERED IN THE FIELD.

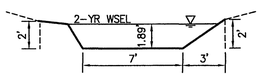
THE MAJORITY OF ONSITE RUNOFF FLOWS VIA SHEET FLOW FROM NORTH TO SOUTH AND IS INTERCEPTED BY AN EXISTING STORM SEWER. THIS SYSTEM FLOWS WESTWARD, AND THEN TO THE SOUTHWEST UNDER HAY MEADOW PLACE, AND AN EXISTING DITCH. THE DITCH IS LOCATED WITHIN THE EXISTING FLOODPLAIN, THE SITE AREA IS 2.11 ACRES AND THE INITIAL DRAINAGE SHED AREA TO STRUCTURE 2 IS EQUAL TO 7.03 ACRES. THE DOWNSTREAM EXTENT OF REVIEW IS TAKEN TO A POINT 150-FEET DOWNSTREAM FROM THE POINT OF CONFLUENCE WHERE A SEPARATE DRAINAGE SHED WITH AN AREA GREATER THAN 90% (6.59 ACRES IS GREATER THAN 90% OF 7.03 ACRES OR 6.33 ACRES) ENTERS THE OUTFALL PATH. PER THE FX. CO. PFM, SECTION 6-0203.2A, THE OUTFALL ANALYSIS CAN BE ENDED 150' DOWNSTREAM OF THE CONFLUENCE POINT, PROVIDED THE OUTFALL IS ADEQUATE.

SINCE RUNOFF FROM THE SITE WILL NOT BE INCREASED AFTER DEVELOPMENT, AND OUR ANALYSIS SHOWS THAT THE STORM SEWER PIPE SYSTEM IS ADEQUATE TO CONVEY THE 10-YEAR DESIGN STORM AT AN ACCEPTABLE VELOCITY, AND THE NATURAL DITCH CROSS-SECTIONS AT THE DOWNSTREAM EXTENT OF REVIEW ARE CAPABLE OF CONVEYING THE 2-YEAR VELOCITY, IT IS IN THE OPINION OF THE SUBMITTING ENGINEER THAT THE OUTFALL IS ADEQUATE.



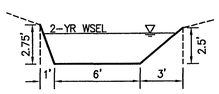
OUTFALL AREA MAP
SCALE: 1"=200'

SECTION A-A
NATURAL STREAM CHANNEL
SCALE: 1"= 5'



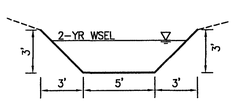
SLOPE= 0.4%
DISCHARGE= Q2= 44.60 CFS
MANNINGS n= 0.04
FLOW AREA= 17.9 SF
FLOW TOP WIDTH= 11.9'
WETTED PERIMETER= 13.23'
DEPTH= 1.89'
CRITICAL DEPTH= 1.01'
VELOCITY= 2.50 FPS

SECTION B-B
NATURAL STREAM CHANNEL
SCALE: 1"= 5'



SLOPE= 0.3%
DISCHARGE= Q2= 47.15 CFS
MANNINGS n= 0.04
FLOW AREA= 17.9 SF
FLOW TOP WIDTH= 9.58'
WETTED PERIMETER= 12.02'
DEPTH= 2.29'
CRITICAL DEPTH= 1.18'
VELOCITY= 2.64 FPS

SECTION C-C
NATURAL STREAM CHANNEL
SCALE: 1"= 5'



SLOPE= 0.3%
DISCHARGE= Q2= 48.29 CFS
MANNINGS n= 0.041
FLOW AREA= 18.4 SF
FLOW TOP WIDTH= 10.24'
WETTED PERIMETER= 12.14'
DEPTH= 2.42'
CRITICAL DEPTH= 1.29'
VELOCITY= 2.62 FPS

Application No. RZ/FDP 2007-SU-005 Staff WOD
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Sheet 6 of 6

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DATE: 9/29/06 REV. 4/23/07 7/27/07
REV. 4/9/07 7/27/07 8/23/07
SCALE: AS SHOWN
DRAWN: AV

COMMONWEALTH OF VIRGINIA
CHARLES F. DONLAP
Lic. No. 1309-B
9/29/06
LAND SURVEYOR

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

REVISION APPROVED BY

CONCEPTUAL/FINAL DEVELOPMENT PLAN

OUTFALL ANALYSIS
3068 WEST OX ROAD
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA