EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT, FAIRFAX COUNTY

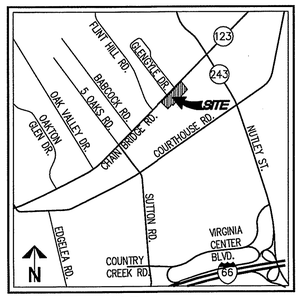
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT

NOTES

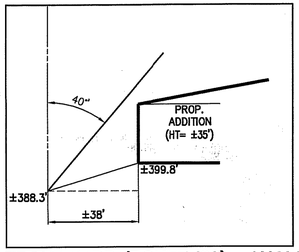
1. OWNER/APPLICANT:
   TRUSTEES OF EMMANUEL LUTHERAN CHURCH
   2589 CHAIN BRIDGE ROAD
   VIENNA, VA 22181
2. PROPERTY IS DELINEATED ON ASSESSMENT MAP NUMBER 038-3-01-0034, 038-3-01-0035, AND 038-3-01-0038A. THE SITE CURRENTLY ZONED R-1 (RESIDENTIAL DISTRICT) AND IS PROPOSED TO BE REZONED TO R-3.
3. THIS APPLICATION REQUESTS A ZONING MAP AMENDMENT SPECIAL EXCEPTION (CATEGORY 3) FOR EXPANSION OF THE EXISTING PLACE OF WORSHIP, EXPANSION OF THE CHILD CARE CENTER, AND FOR THE ADDITION OF A PRIVATE SCHOOL OF GENERAL EDUCATION FOR KINDERGARTEN.
4. THE TOTAL SITE AREA IS ±220,261 SF OR 5.06 ACRES.
5. TO THE BEST OF OUR KNOWLEDGE, ALL UTILITY EASEMENTS HAVING A WIDTH OF 25 FEET OR MORE ON THIS PROPERTY ARE SHOWN OR NONE EXIST.
6. THIS PLAT DOES NOT SHOW ALL COVENANTS, EASEMENTS, RESTRICTIONS, OR DEDICATIONS WHICH MAY EXIST IN THE CHAIN OF TITLE.
7. THE PROPOSED DEVELOPMENT CONFORMS TO ALL APPLICABLE FAIRFAX COUNTY ORDINANCES, REGULATIONS, AND ADOPTED STANDARDS, EXCEPT AS NOTED IN THE WAIVERS/MODIFICATIONS REQUESTED SECTION.
8. EXISTING CONDITIONS, BOUNDARY, AND TOPOGRAPHY INFORMATION TAKEN FROM A FIELD SURVEY BY WALTER L. PHILLIPS DATED DECEMBER 16, 2011. CONTOUR INTERVAL IS 2 FEET.
9. THE SITE IS SERVED BY PUBLIC WATER AND SEWER.
10. NO RESOURCE PROTECTION AREAS OR ENVIRONMENTAL QUALITY CORRIDORS, ARE LOCATED ON THIS PROPERTY.
11. TO THE BEST OF OUR KNOWLEDGE NO GRAVES OR OTHER EVIDENCE OF BURIAL PLACES ARE FOUND ON THIS PROPERTY.
12. 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.
13. THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR FAIRFAX COUNTY, VIRGINIA, MAP NUMBER 51059C0145E, EFFECTIVE DATE SEPTEMBER 17, 2010, DESIGNATES THE PROPERTY AS BEING IN ZONE X, "AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOODPLAIN".
14. NO TRANSITIONAL SCREENING OR BARRIER IS REQUIRED ALONG THE EAST PROPERTY LINE PER THE TRANSITIONAL SCREENING AND BARRIER MATRIX BECAUSE THE ADJACENT USE IS AN EXISTING OFFICE.
15. FINAL LOCATION OF TREE SAVE AREAS SHALL BE DETERMINED AT TIME OF SITE PLAN, BUT SHALL BE NO LESS THAN THAT WHICH IS SHOWN ON THIS PLAT. LOCATION OF ANY PROPOSED PLANTING WITHIN TREE SAVE AREAS SHALL BE COORDINATED WITH THE URBAN FOREST MANAGEMENT (UFM) DIVISION AT TIME OF PLANTING.
16. IT IS ANTICIPATED THAT DEVELOPMENT OF PHASE 1 OF THIS PROJECT WILL OCCUR IMMEDIATELY FOLLOWING COUNTY APPROVAL AND THAT COMPLETION OF ULTIMATE DEVELOPMENT WILL OCCUR AS DEEMED APPROPRIATE BY THE OWNER.
17. EXISTING 95' x 3' x 2' GRAVEL FILLED DETENTION TRENCH 8" PERFORATED PIPE TAKEN FROM THE AS-BUILT SITE PLAN BY COPELAND & KEPHART, DATED JAN. 8, 1979.
18. APPLICANT RESERVES THE RIGHT TO USE ANY SQUARE FOOTAGE PROPOSED IN PHASE I DURING ULTIMATE DEVELOPMENT.
19. ALL SIGNAGE WILL CONFORM WITH ARTICLE 12 OF THE ZONING ORDINANCE.
20. EXISTING ORIGINAL CHURCH BUILDING ON SITE WAS CONSTRUCTED AROUND 1957 WITH ADDITIONS MADE IN 1980 AND 1997. THE EXISTING SINGLE FAMILY DETACHED BUILDING WAS CONSTRUCTED AROUND 1949.
21. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO HAZARDOUS OR TOXIC SUBSTANCES ON THE SITE. ASBESTOS IS KNOWN TO EXIST INSIDE THE EXISTING BUILDING.

WAIVERS/MODIFICATIONS REQUESTED

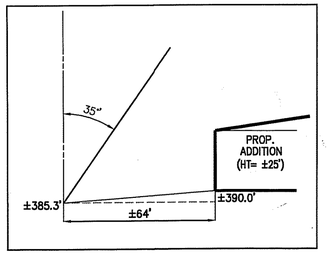
1. A REAFFIRMATION OF THE PREVIOUSLY APPROVED TRANSITIONAL SCREENING MODIFICATION IS REQUESTED ALONG THE EASTERN PORTION OF THE SOUTHERN PROPERTY LINE DUE TO EXISTING SPACE CONSTRAINTS WHERE THE 25' WIDTH IS NOT ACHIEVABLE WHILE STILL MAINTAINING MINIMUM REQUIRED PARKING AND DRIVE AISLE DIMENSIONS. WE REQUEST THAT THE 25' TRANSITIONAL SCREEN DIMENSION BE REDUCED BY 1/3 TO 18' MIN. A 7' HT. BLOCK WALL HAS BEEN ADDED PER SECTION 13-305 OF THE ZONING ORDINANCE *TO SUPPORT THIS REDUCTION.*
2. WAIVER OF THE SERVICE DRIVE REQUIREMENT ALONG ROUTE 123 IS REQUESTED.
3. WAIVER OF BARRIER REQUIREMENT ALONG THE NORTH LOT LINE IS REQUESTED, CONSISTENT WITH SPA-78-P-072 CONDITION NUMBER 10, DATED SEPTEMBER 6, 1995.



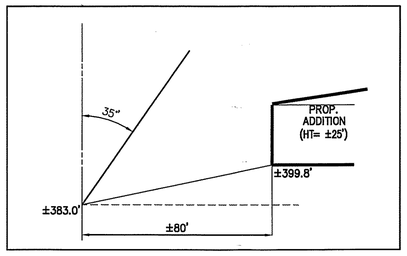
VICINITY MAP SCALE: 1"=2000'



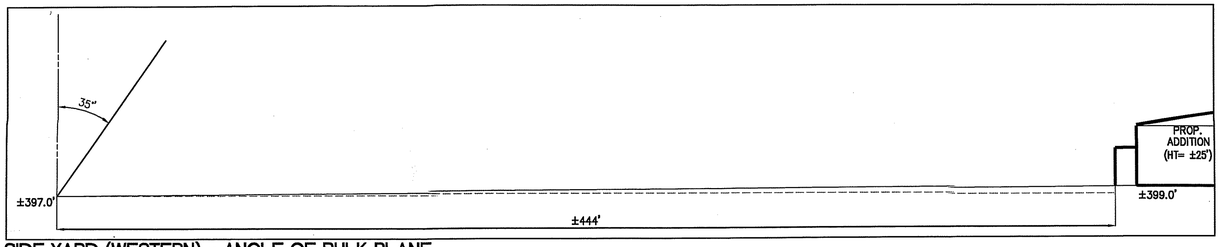
FRONT YARD (ROUTE 123) - ANGLE OF BULK PLANE
SCALE: 1"=30'



REAR YARD - ANGLE OF BULK PLANE
SCALE: 1"=30'



SIDE YARD (EASTERN) - ANGLE OF BULK PLANE
SCALE: 1"=30'



SIDE YARD (WESTERN) - ANGLE OF BULK PLANE
SCALE: 1"=30'

PARKING TABULATION:

EXISTING PARKING: 169 SPACES (INCL. 5 HC)

USE: PLACE OF WORSHIP/SCHOOL OF GENERAL EDUCATION/ CHILD CARE CENTER

RATE: PLACE OF WORSHIP
1 SPACE PER EVERY 4 SEATS
PHASE I: 366 SEATS/4 = 92 SPACES
ULTIMATE: 576 SEATS/4 = 144 SPACES

RATE: SCHOOL OF GENERAL EDUCATION
1 SPACE PER STAFF MEMBER PLUS 4 VISITOR SPACES;
PHASE I: 4 STAFF MEMBERS + 4 = 8 SPACES
ULTIMATE: 4 STAFF MEMBERS + 4 = 8 SPACES

RATE: CHILD CARE CENTER
0.16 SPACE PER CHILD (MAX. DAILY ENROLLMENT 100 OR MORE)
PHASE I: 184 CHILDREN (TOTAL) x 0.16 = 30 SPACES
ULTIMATE: 220 CHILDREN (TOTAL) x 0.16 = 36 SPACES

PARKING REQUIRED PHASE I = 92+8+30 = 130 SPACES
PARKING PROVIDED PHASE I = 149 SPACES (INCL. 6 HC)
PARKING REQUIRED ULTIMATE = 144+8+36 = 188 SPACES
PARKING PROVIDED ULTIMATE = 209 SPACES (INCL. 8 HC)

NOTE:
1) SHARED PARKING WILL BE UTILIZED FOR THE CHILDCARE CENTER/SCHOOL AND CHURCH USES BUT IS NOT REQUIRED TO MEET MINIMUM PARKING REQUIREMENTS.

2) APPLICANT IS SEEKING AN AGREEMENT WITH THE COMMERCIAL PROPERTY EAST OF THE SITE TO USE APPROXIMATELY 60 PARKING SPACES TO BE ACCESSIBLE TO THE CHURCH FOR USE ON SUNDAYS.

ZONING TABULATION

EXISTING ZONE: R-1, RESIDENTIAL DISTRICT
PROPOSED ZONE: R-3, RESIDENTIAL DISTRICT

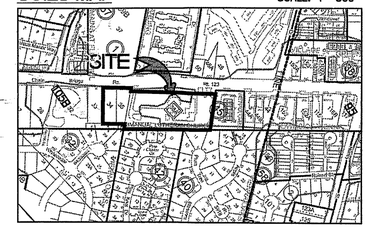
	REQUIRED	PROVIDED - PHASE 1	PROVIDED - ULTIMATE
LOT AREA:	10,500 SF	±220,261 SF OR ±5.06 AC*	±220,261 SF OR ±5.06 AC*
LOT WIDTH:	80 FT	±807 FT	±807 FT
MAX BLD HT:	60 FT	±50 FT	±50 FT
YARD REQUIREMENTS:			
FRONT	40' ABP; 30'	±38 FT	±38 FT
SIDE	35' ABP; 10'	±100 FT & ±460 FT	±80 FT & ±444 FT
REAR	35' ABP; 25'	±66 FT	±64 FT
MAX FAR:	0.25	±0.19*	±0.25*
OPEN SPACE:	NONE	N/A	N/A
INTERIOR PARKING LOT LANDSCAPING:	5%	SEE SHEETS P-0401 & P-0403	SEE SHEETS P-0402 & P-0403
TREE COVER:	25%	SEE SHEETS P-0401 & P-0403	SEE SHEETS P-0402 & P-0403

*SEE BLDG. AREA/FAR TABULATION BELOW

BLDG. AREA/FAR TABULATION

	AREA	F.A.R.
PHASE I		
EX. BUILDING	±31,050 GSF	
PROP. CHILD CARE ADDITION	±7,250 GSF	
PROP. FELLOWSHIP HALL	±4,300 GSF	
TOTAL BLDG. AREA PHASE I	= ±42,600 GSF	= ±0.19
ULTIMATE		
EXISTING BLDG. AREA FROM PHASE I	= ±42,600 GSF	
PROP. CHILD CARE ADDITION	±7,500 GSF	
PROP. ATRIUM	±2,400 GSF	
PROP. SANCTUARY ADDITION	±1,500 GSF	
TOTAL BLDG AREA	= ±54,000 GSF	= ±0.25

SOILS MAP SCALE: 1"=500'



SOILS DATA TABLE

SOIL ID NUMBERS	SERIES NAME	FOUNDATION SUPPORT	SOIL DRAINAGE	SLOPE STABILITY	EROSION POTENTIAL	GEOTECH REPORT REQ'D	PROBLEM CLASS
95	URBAN LAND	N/A	N/A	N/A	N/A	N/A	IVB
105B	WHEATON-GLENELG COMPLEX	GOOD	GOOD	N/A	HIGH	YES	IVB

SOIL INFORMATION WAS TAKEN FROM FAIRFAX COUNTY SOILS MAP AND DESCRIPTION AND INTERPRETIVE GUIDE TO SOILS IN FAIRFAX COUNTY, REVISED 2011.

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 1 of 14

Concurrent w/ RZ 2012-PR-011

SHEET INDEX

P-0101	COVER SHEET
P-0201	EXISTING CONDITIONS PLAN
P-0202	EXISTING VEGETATION MAP
P-0301	GDP/SPECIAL EXCEPTION PLAT - PHASE 1
P-0302	GDP/SPECIAL EXCEPTION PLAT - ULTIMATE
P-0303	SECTIONS
P-0304	PERSPECTIVES
P-0401	CONCEPTUAL LANDSCAPE PLAN - PHASE 1
P-0402	CONCEPTUAL LANDSCAPE PLAN - ULTIMATE
P-0403	ADDITIONAL LANDSCAPE NOTES & CALCULATIONS
P-0501	PRELIM. STORMWATER MANAGEMENT PLAN - PHASE 1
P-0502	PRELIM. STORMWATER OUTFALL ANALYSIS - PHASE 1
P-0503	PRELIM. STORMWATER MANAGEMENT PLAN - ULTIMATE
P-0504	PRELIM. STORMWATER OUTFALL ANALYSIS - ULTIMATE

RECEIVED
Department of Planning & Zoning
Zoning Evaluation Division

WALTER L. PHILLIPS INCORPORATED ESTABLISHED 1945
Engineers • Surveyors • Planners
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207 PARK AVENUE
FALLS CHURCH, VIRGINIA 22046
(703) 532-6163 Fax (703) 533-1301
www.WLPINC.com

DRAWN: BR | CHECKED: AV

SCALE: AS SHOWN | DATE: 5/10/2012, 7/11/2012, 11/2/2012, 12/4/2012, 1/3/2013

COMMONWEALTH OF VIRGINIA AARON M. VINSON Lic. No.041851 1/3/13 PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	REVISION APPROVED BY REV. BY	APPROVED

COVER SHEET

EMMANUEL LUTHERAN CHURCH
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

File No. FM-18 Tax Map No. 38-3 Job No. 07066 Cadd Dwg. File: Q:\sdskproj\07066\dwg\Planning\Zoning\07066P-0101.dwg Xref: DIR\0000

SHEET: P-0101

PARCEL: 38-3-01-0037
OWNER: STUNTZ FAMILY LP
ZONE: R-1
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-41, PARCEL 1-18
OWNER: VARIOUS CONDO OWNERS
ZONE: R-20
USE: MULTI-FAMILY, ATTACHED

PARCEL: 38-3-01-0050
OWNER: KULWINDER SANDHU
ZONE: R-1
USE: SINGLE-FAMILY RESIDENCES INFO COMMERCIAL/INDUSTRIAL

PARCEL: 38-3-01-0046A
OWNER: KULWINDER SANDHU
ZONE: R-1
USE: NURSERY SCHOOL

PARCEL: 38-3-01-0048
OWNER: ROBERT PANNIER
ZONE: R-20
USE: VACANT LAND

CHAIN BRIDGE ROAD - ROUTE 123
(VARIABLE WIDTH PUBLIC RIGHT-OF-WAY)
(POSTED SPEED = 35 MPH)

GRASS MEDIAN

EX. SIGN (HT=±5.75 FT) (±5.75' x ±2')

EX. SIGN (HT=±4 FT) (±1' x ±6') (TO BE REMOVED)

"METROBUS" STOP (TO REMAIN)

EX. 5' SIDEWALK

EX. PLANTER WALL (HT ±2')

INGRESS-EGRESS ESMT DB 9833 PG 192 (TO REMAIN)

EX. HOUSE (HT=±25 FT) (DATE BUILT: 1949) (TO REMAIN IN PHASE 1) (TO BE REMOVED IN ULTIMATE)

EX. GARAGE (HT=±23 FT) (DATE BUILT: 1949) (TO BE REMOVED IF AND WHEN INGRESS/EGGRESS EASEMENT IS GRANTED OR IN ULTIMATE PHASE)

#2695 CHAIN BRIDGE RD. 1½ STORY MASONRY

ASPHALT DRIVEWAY

GRAVEL DRIVEWAY PATH

INGRESS-EGRESS ESMT DB 9833 PG 192 DB 21649 PG 2056 (TO BE VACATED)

SANITARY SEWER ESMT DB 5007 PG 238

PARCEL ONE
TAX MAP #: 038-3-01-0038A
49,803 SQ.FT.

PARCEL B
TAX MAP #: 38-3-01-0034
26,339 SQ.FT.

PARCEL C
TAX MAP #: 038-3-01-0035
23,761 SQ.FT.

APPROXIMATE LOCATION VIRGINIA POWER ESMT DB 10824 PG 1173

EX. WOOD LINK FENCE (HT=±4 FT)

EX. WALL (HT=±2 FT)

CAMPANILE

GRAVEL

EX. WALL (HT=±6 FT)

EX. 6' SIDEWALK

EMMANUEL LUTHERAN CHURCH
#2589 CHAIN BRIDGE ROAD
EX. 2½ STORY MASONRY BLDG.
(HT= ±35 FT)
(DATE BUILT: 1957)
(TO REMAIN)

PARCEL TWO
TRACT 1
TAX MAP #: 039-3-01-0038A
96,238 SQ.FT.

PARCEL TWO
TRACT 2
TAX MAP #: 038-3-01-0038A
24,120 SQ.FT.

EX. PLAY AREA

CONC PAD

EX. CANOPY (HT=±16' FT)

EX. FENCE (HT=±4' FT)

EX. WALL (HT=±6' FT)

EX. 5' SIDEWALK

ASPHALT

EX. PAVERS

EXISTING PARKING

EXISTING DUMPSTER LOCATION (TO BE RELOCATED)

EX. STM INFILTRATION TRENCH

EX. TREE

TOWN OF VIENNA WATER ESMT DB 10234 PG 235

SANITARY SEWER ESMT DB 10256 PG 1991

SANITARY SEWER ESMT DB 10256 PG 1998

10' TOWN OF VIENNA WATER ESMT DB 10255 PG 496

10' TOWN OF VIENNA WATER ESMT DB 9833 PG 192

EX. CONCRETE CHANNEL

EX. CHAIN LINK FENCE (HT=±7 FT)

EX. PATH

EX. GATE (±4 FT)

EX. WOOD FENCE (HT=±7 FT)

RECORD LOCATION ONLY

15"RCP INV=370.57

DITCH

RIP-RAP

PARCEL: 38-3-32-0029
OWNER: JAMES LINZA
ZONE: R-3
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-32-0028
OWNER: ISABELLE FONTAINES TR.
ZONE: R-3
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-42-E
OWNER: PINE GLEN HOMEOWNERS ASSOCIATION
ZONE: R-5
USE: OPEN SPACE

PARCEL: 38-3-42-0025
OWNER: JAMES BLAUCH
ZONE: R-5
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-42-0024
OWNER: PAUL EDWARD KIM
ZONE: R-5
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-42-0023
OWNER: ERICA MEADOWS
ZONE: R-5
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-42-D
OWNER: PINE GLEN HOMEOWNERS
ZONE: R-5
USE: OPEN SPACE

PARCEL: 38-3-40-0011
OWNER: FRANK AND DONNA CRUMP
ZONE: R-3
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-01-0033
OWNER: JAMES & JULIA LINZA
ZONE: R-1
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-45-0001A-02F
OWNER: VIENNA OAKS OFFICE CENTER
ZONE: C-2
USE: CONDOMINIUM OFFICES

VCS 1983 – NORTH ZONE

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 2 of 14

Concurrent w/ RZ 2012-PR-011

LEGEND

DESCRIPTION	EXISTING
EDGE OF PAVEMENT	EP.
MANHOLE	MH
WATER VALVE	WV
WATER METER	WM
GAS METER	GM
TRAFFIC CONTROL BOX	TCB
LIGHT POLE	LP
LIGHT POLE WITH SIGNALS	LP/S
CURB & GUTTER CG-2	
TRANSITION FROM CG-6 TO CG-6R	CG-6 CG-6R
SANITARY SEWER	S
SANITARY LATERAL	SL
CLEAN OUT	C.O.
STORM SEWER	
WATER MAIN	W
FIRE HYDRANT	
PLUG	
OVERHEAD WIRES	
UTILITY POLE	
UNDERGROUND ELECTRIC	UE

LEGEND

DESCRIPTION	EXISTING
TELEPHONE	T
GAS MAIN	G
ELECTRICAL	E
TRANSFORMER	
HANDICAP RAMP (CG-12)	
GUARDRAIL	
FENCE	
TRAFFIC FLOW	
LIGHT	
DOOR	
TREES	

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

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ESTABLISHED 1945

DRAWN: BR
CHECKED: AV
SCALE: 1" = 30'-0"
DATE: 5/10/2012, 7/11/2012, 11/2/2012, 12/4/2012, 1/3/2013

COMMONWEALTH OF VIRGINIA
AARON M. VINSON
Lic. No.041851
PROFESSIONAL ENGINEER
1/3/13

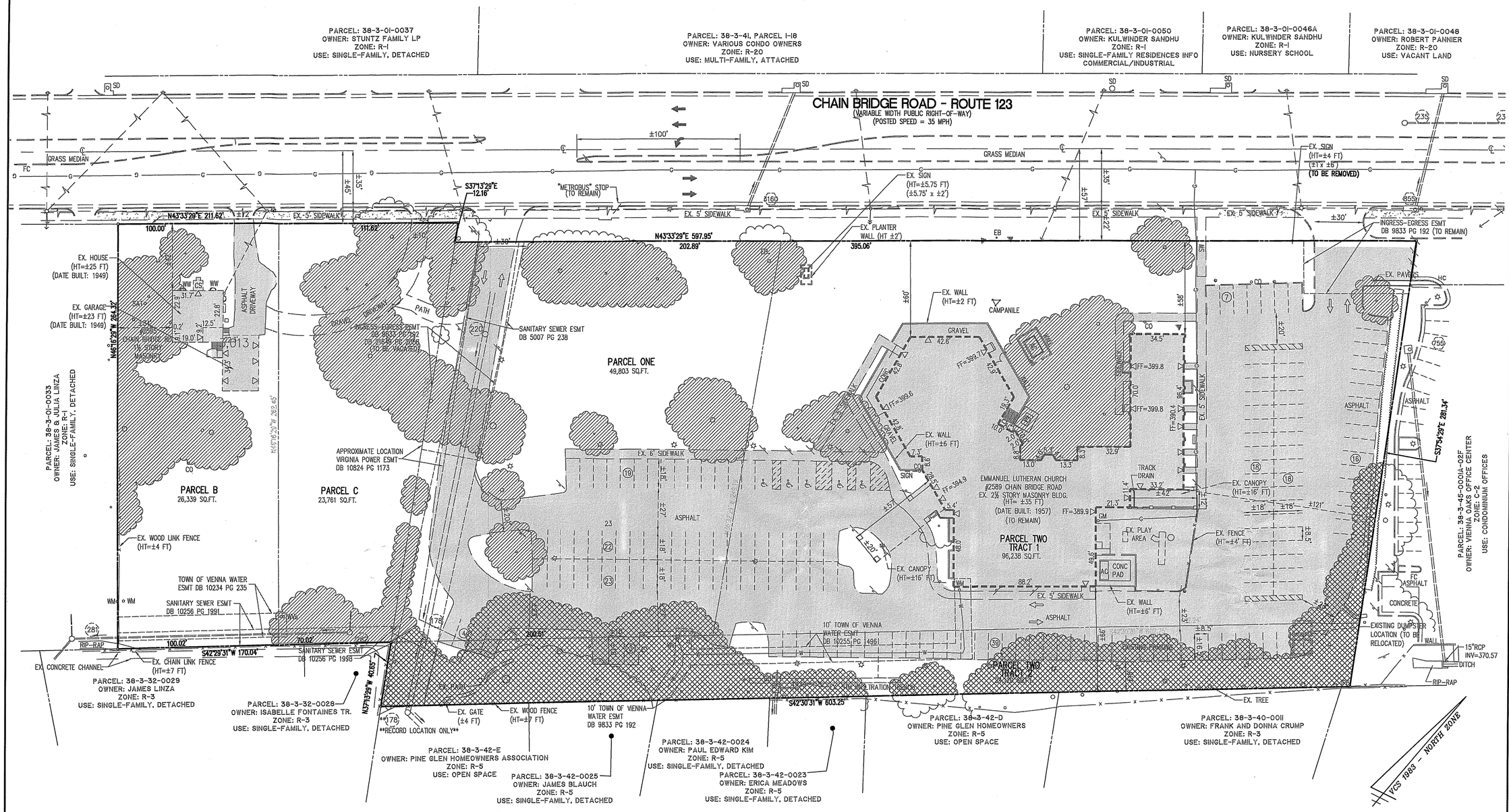
NO.	DESCRIPTION	DATE	REVISION APPROVED BY REV. BY	APPROVED

EXISTING CONDITIONS PLAN

EMMANUEL LUTHERAN CHURCH
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SHEET: P-0201

File No. FM-18 Tax Map No. 38-3 Job No. 07066 Cadd Dwg. File: Q:\sdskproj\07066\dwg\Planning\Zoning\07066P-0201.dwg Xref: DIR\0000



EXISTING VEGETATION MAP INFORMATION

		COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION	ACREAGE	COMMENTS
A		EARLY SUCCESSIONAL FOREST COMMUNITY	LIRIODENDRON TULIPIFERA, ROBINIA PSEUDOACIA, PINUS STROBUS	EARLY SUCCESSIONAL	POOR TO FAIR	23,060 SF 0.52 AC	SOME INVASIVE VINES, TREES AND UNDERBRUSH
B		DEVELOPED LAND	BUILDINGS, PARKING AREAS, WALKS, ETC.	N/A	N/A	97,521 SF 2.24 AC	
C		MAINTAINED GRASSLANDS	LANDSCAPED AREAS, ATHLETIC FIELD	N/A	FAIR	58,937 SF 1.36 AC	
D		LANDSCAPED TREE CANOPY	ACER RUBRUM, PICEA ABIES, ILEX OPACA	N/A	GOOD/FAIR	40,743 SF 0.94 AC	ALSO INCLUDES SHRUB, AND MULCHED ORNAMENTAL PLANTING AREAS

TOTAL SITE AREA: ±220,261 SF OR ±5.06 AC

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 3 of 14

Concurrent w/ RZ 2012-PR-011

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

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ESTABLISHED 1945

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COMMONWEALTH OF VIRGINIA
ANTHONY M. VINSON
LIC. No. 041851
1/3/13
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	REVISION APPROVED BY: REV. BY	APPROVED

EXISTING VEGETATION MAP

EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

SHEET: P-0202

File No. FM-18 Tax Map No. 38-3 Job No. 07066 Cadd Dwg. File: Q:\sdskproj\07066\dwg\Planning\Zoning\07066P-0202.dwg Xref: DIR\0000

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PARCEL: 38-3-41, PARCEL I-18
OWNER: VARIOUS CONDO OWNERS
ZONE: R-20
USE: MULTI-FAMILY, ATTACHED

PARCEL: 38-3-01-0050
OWNER: KULWINDER SANDHU
ZONE: R-1
USE: SINGLE-FAMILY RESIDENCES INFO COMMERCIAL/INDUSTRIAL

PARCEL: 38-3-01-0046A
OWNER: KULWINDER SANDHU
ZONE: R-1
USE: NURSERY SCHOOL

PARCEL: 38-3-01-0048
OWNER: ROBERT PANNIER
ZONE: R-20
USE: VACANT LAND

CHAIN BRIDGE ROAD - ROUTE 123
(VARIABLE WIDTH PUBLIC RIGHT-OF-WAY)
(POSTED SPEED = 35 MPH)

PROP. LIMITS OF CLEARING AND GRADING
PROP. 100' RIGHT TURN TAPER
PROP. LIMITS OF CLEARING AND GRADING
PROP. LIMITS OF CLEARING AND GRADING – PHASE 1
PROP. R/W DEDICATION (±5,757 SF)
EX. SIGN (HT=±4 FT) (±1'x ±6') (TO BE REMOVED)
EX. SIGN (HT=±5.75 FT) (±5.75' x ±2')
"METROBUS" STOP (TO REMAIN)
GRASS MEDIAN
EX. 5' SIDEWALK
PROP. 5' WALK
EX. PLANTER WALL (HT ±2')
INGRESS-EGRESS ESMT DB 9833 PG 192 (TO REMAIN)
EX. HOUSE (HT=±25 FT) (DATE BUILT: 1949) (TO REMAIN IN PHASE 1) (TO BE REMOVED IN ULTIMATE)
EX. GARAGE (HT=±23 FT) (DATE BUILT: 1949) (TO BE REMOVED IF AND WHEN INGRESS/EGGRESS EASEMENT IS GRANTED OR IN ULTIMATE PHASE)
#2595 CHAIN BRIDGE RD. 1½ STORY MASONRY
ASPHALT DRIVEWAY
GRAVEL DRIVEWAY
PATH
INGRESS-EGRESS ESMT DB 9833 PG 192 DB 21648 PG 2058 (TO BE VACATED)
SANITARY SEWER ESMT DB 5007 PG 238
PROP. AMENITY GARDEN AREA
PROP. GATHERING AREA
PROP. WALK
PROP. OUTDOOR GATHERING AREA
EX. WALL (HT=±2 FT)
RAMP
PROPOSED 2-STORY CHILD CARE ADDITION W/ GREEN ROOF HT=±25 FT 7,250 SF
PROPOSED FELLOWSHIP HALL ADDITION W/ GREEN ROOF HT=±31 FT 4,300 SF
RELOCATED CHILD CARE ENTRY
PROPOSED MECHANICAL ENCLOSURE
PROP. ENCLOSURE COULD LOOK LIKE AN EXTENSION OF THE NEW BUILDING ADDITION
VEHICULAR CIRCULATION FOR CHILD CARE DROP-OFF AND PICK-UP
APPROX. LOCATION POTENTIAL FUTURE 24' INGRESS-EGRESS ESMT (TO BE PROVIDED UPON REQUEST)
APPROXIMATE LOCATION VIRGINIA POWER ESMT DB 10824 PG 1173
EX. 6' SIDEWALK
PROP. 6' WALK
PROP. ADA PARKING SPACE
EX. WALL (HT=±6 FT)
EMMANUEL LUTHERAN CHURCH #2589 CHAIN BRIDGE ROAD EX. 2½ STORY MASONRY BLDG. (HT= ±35 FT) (DATE BUILT: 1957) (TO REMAIN)
PROP. CURB ALONG SOUTHERN EDGE OF PARKING LOT WILL HAVE A HEIGHT OF 8" TO MINIMIZE POTENTIAL OF SPILL OVER DURING LARGE STORM EVENTS
TRACK DRAIN
EX. CANOPY (HT=±16' FT)
EX. PLAY AREA
EX. FENCE (HT=±4' FT)
PROP. DUMPSTER AREA
AC CONC PAD
EX. WALL (HT=±6' FT)
PROP. 8" CURB
EX. 5' SIDEWALK
EX. PAVERS
EXISTING DUMPSTER LOCATION (TO BE RELOCATED)
CONCRETE
ASPHALT
FC ASPHALT
EXISTING PARKING
PROP. COLUMBARIUM (HEIGHT ±4') (WILL BE CONSTRUCTED IN SEGMENTS)
PROP. LANDSCAPE HARDSCAPE AREA AT COLUMBARIUM. (COLUMBARIUM DESIGN IS CONCEPTUAL AND IS SUBJECT TO CHANGE)
EX. WOOD LINK FENCE (HT=±4 FT)
TOWN OF VIENNA WATER ESMT DB 10234 PG 235
SANITARY SEWER ESMT DB 10256 PG 1991
TRANSITION CURB TO TIE TO EX. EDGE OF PAVEMENT
10' TOWN OF VIENNA WATER ESMT DB 10255 PG 1961
EX. STM INFILTRATION TRENCH
EX. CHAIN LINK FENCE (HT=±7 FT)
PARCEL: 38-3-32-0029 OWNER: JAMES LINZA ZONE: R-3 USE: SINGLE-FAMILY, DETACHED
PROP. RAIN GARDEN 1B
PARCEL: 38-3-32-0028 OWNER: ISABELLE FONTAINES TR. ZONE: R-3 USE: SINGLE-FAMILY, DETACHED
IF FEASIBLE A BERM WILL BE CONSTRUCTED IN THIS AREA TO CAPTURE ADDITIONAL RUNOFF TO THE RAIN GARDEN BEFORE IT FLOWS OFFSITE
PROP. PEDESTRIAN GATE LOCATION
EX. PATH
EX. GATE (±4 FT)
EX. WOOD FENCE (HT=±7 FT)
RECORD LOCATION ONLY
PARCEL: 38-3-42-E OWNER: PINE GLEN HOMEOWNERS ASSOCIATION ZONE: R-5 USE: OPEN SPACE
PARCEL: 38-3-42-0025 OWNER: JAMES BLAUCH ZONE: R-5 USE: SINGLE-FAMILY, DETACHED
10' TOWN OF VIENNA WATER ESMT DB 9833 PG 192
PROP. BOARD ON BOARD FENCE (HT=±6')
PARCEL: 38-3-42-0024 OWNER: PAUL EDWARD KIM ZONE: R-5 USE: SINGLE-FAMILY, DETACHED
PARCEL: 38-3-42-0023 OWNER: ERICA MEADOWS ZONE: R-5 USE: SINGLE-FAMILY, DETACHED
PARCEL: 38-3-42-D OWNER: PINE GLEN HOMEOWNERS ZONE: R-5 USE: OPEN SPACE
PROP. CURB AND GUTTER WILL BE CONSTRUCTED ALONG SOUTHERN EDGE OF PARKING LOT FROM THIS POINT EAST WITH PHASE 1 TO DIVERT RUNOFF AWAY FROM NEIGHBORING PROPERTIES AND INTO STORMWATER COLLECTION SYSTEM.
PROP. BLOCK WALL (HT=±7') (SEE SHEET P-0303)
PROP. LIMITS OF CLEARING AND GRADING – PHASE 1
FINE GRADING TO BE PERFORMED IN EXISTING SWALE TO ENSURE PROPER DRAINAGE AS NEEDED (ANY DISTURBANCE WILL BE MINIMAL AND DONE BY HAND IN ORDER TO PROTECT EXISTING VEGETATION IN AREA)
PARCEL: 38-3-40-0011 OWNER: FRANK AND DONNA CRUMP ZONE: R-3 USE: SINGLE-FAMILY, DETACHED
PROP. STORM INLETS LOCATED IN SOUTHEAST CORNER OF SITE WILL BE OVERSIZED TO MINIMIZE POTENTIAL FOR SPILLOVER
15"RCP INV=370.57 DITCH
RIP-RAP
EX. CONCRETE CHANNEL
PARCEL: 38-3-01-0033 OWNER: JAMES & JULIA LINZA ZONE: R-1 USE: SINGLE-FAMILY, DETACHED
PARCEL: 38-3-45-0001A-02F OWNER: VIENNA OAKS OFFICE CENTER ZONE: C-2 USE: CONDOMINIUM OFFICES
VCS 1983 – NORTH ZONE

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 4 of 14

Concurrent w/ RZ 2012-PR-011

LEGEND

PROPOSED	DESCRIPTION	EXISTING
EP	EDGE OF PAVEMENT	EP.
MH	MANHOLE	MH
WV	WATER VALVE	WV
WM	WATER METER	WM
GM	GAS METER	GM
TCB	TRAFFIC CONTROL BOX	TCB
LP	LIGHT POLE	LP
LP/S	LIGHT POLE WITH SIGNALS	LP/S
CG-2	CURB & GUTTER	
CG-6R / CG-6	TRANSITION FROM CG-6 TO CG-6R	CG-6 / CG-6R
S	SANITARY SEWER	S
SL	SANITARY LATERAL	SL
C.O.	CLEAN OUT	C.O.
D	STORM SEWER	D
W	WATER MAIN	W
	FIRE HYDRANT	
	PLUG	
	OVERHEAD WIRES	
	UTILITY POLE	
UE	UNDERGROUND ELECTRIC	UE

LEGEND

PROPOSED	DESCRIPTION	EXISTING
T	TELEPHONE	T
G	GAS MAIN	G
E	ELECTRICAL	E
	TRANSFORMER	
	HANDICAP RAMP (CG-12)	
	GUARDRAIL	
	FENCE	
	TRAFFIC FLOW	
	LIGHT	
	DOOR	
	TREES	
	LIMITS OF CLEARING AND GRADING	

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

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FALLS CHURCH, VIRGINIA 22046
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WALTER L. PHILLIPS INCORPORATED ESTABLISHED 1945

DRAWN: BR | CHECKED: AV

DATE: 5/10/2012, 7/11/2012, 11/2/2012, 12/4/2012, 1/3/2013

SCALE: 1"=30'-0"

COMMONWEALTH OF VIRGINIA
AARON M. VINSON
LIC. NO. 047821
1/3/13
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

REVISION APPROVED BY

GDP/SPECIAL EXCEPTION PLAT - PHASE 1

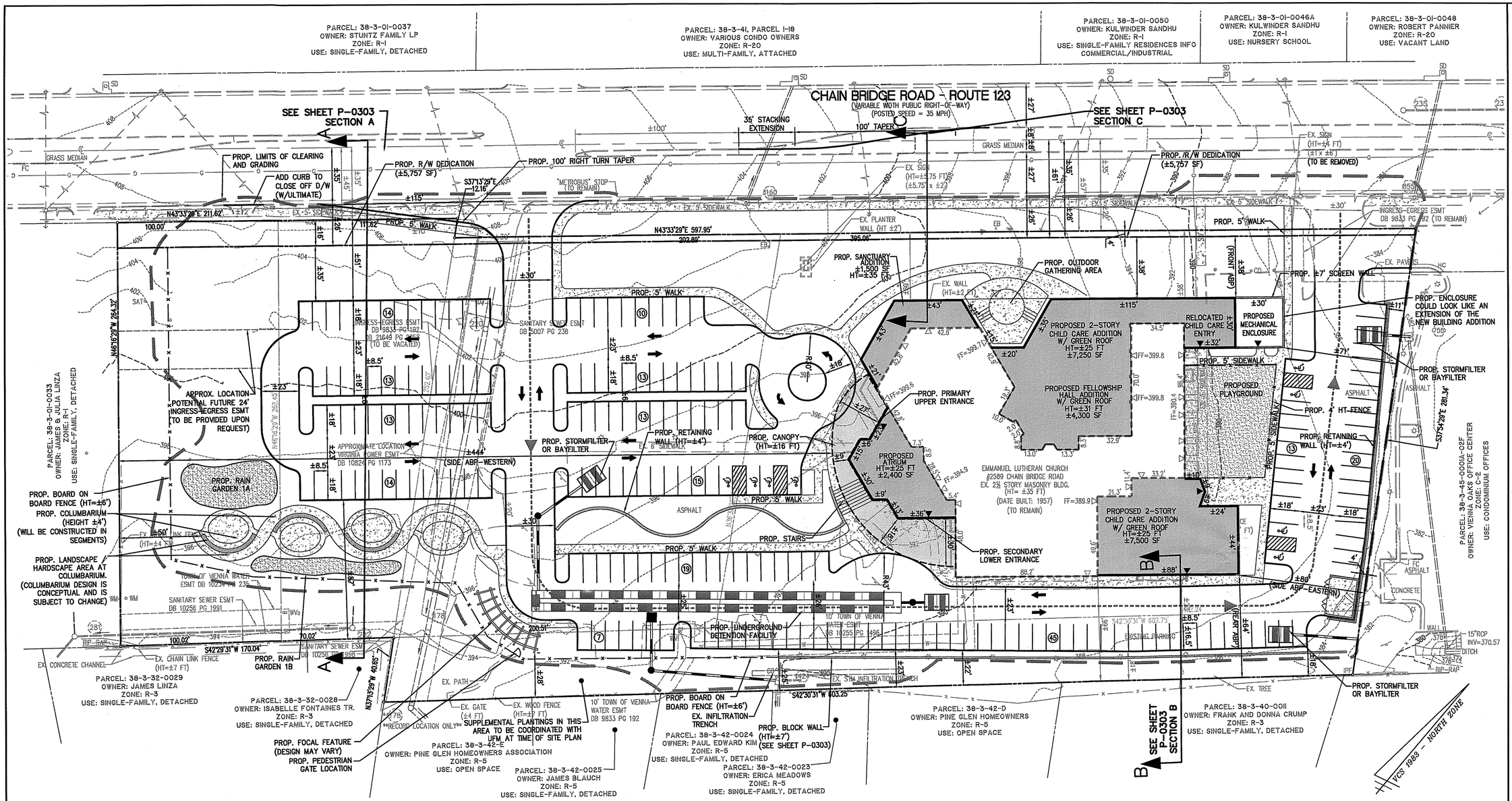
EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

File No. FM-18 Tax Map No. 38-3 Job No. 07066 Cadd Dwg. File: Q:\sdskproj\07066\dwg\Planning\Zoning\07066P-0301.dwg Xref: DIR\0000

SHEET: P-0301



PHASING NARRATIVE

PER SHEET P-0301 PHASE 1 WILL CONSIST OF A TWO STORY CHILD CARE ADDITION AND FELLOWSHIP HALL ON THE NORTH SIDE OF THE EXISTING BUILDING. THIS IS THE ONLY DEFINED PHASE. HOWEVER, POTENTIAL PHASING MAY PROCEED BUT IS NOT RESTRICTED TO THE FOLLOWING SEQUENCE (PER SHEET P-0302):
- TWO STORY CHILD CARE ADDITION ON SOUTH OF EXISTING BUILDING
- SANCTUARY EXPANSION

ADEQUATE PARKING AND OTHER SUPPORTING INFRASTRUCTURE WILL BE PROVIDED AT EACH PHASE. THIS SEQUENCING IS FOR GENERAL REFERENCE PURPOSES ONLY AND IS NOT A COMMITMENT TO CONSTRUCT ANY OR ALL OF THESE ITEMS IN ANY PARTICULAR SEQUENCE.

ADDITIONALLY THE PROPOSED COLUMBARIUM MAY BE ADDED AT ANY POINT DURING THE CHURCH EXPANSION DESCRIBED HERE IN. THE COLUMBARIUM WILL BE CONSTRUCTED IN SEGMENTS AS NEED DICTATES.

GREEN BUILDING NARRATIVE

SEVERAL GREEN BUILDING PRACTICES MAY BE UTILIZED DURING THE CHURCH EXPANSION PROPOSED WITH THIS PLAN. SITE FEATURES TO ASSIST IN STORMWATER MANAGEMENT AND FILTRATION INCLUDE BUT ARE NOT LIMITED TO RAIN GARDENS, STORM FILTERS AND GREEN ROOFS. THE BUILDING EXPANSION WILL ALSO INCLUDE ENERGY EFFICIENCY MEASURES SUCH AS A GREEN ROOF, DOUBLE PANE LOW-E GLAZING FOR ALL NEW WINDOWS AND ENERGY EFFICIENT MECHANICAL AND LIGHTING SYSTEMS. ADDITIONALLY LOW-FLOW PLUMBING FIXTURES, THE USE OF LOW EMITTING MATERIALS AND LOW VOC PAINTS, SEALANTS, AND ADHESIVES WILL BE USED AS WELL.

TRAFFIC CIRCULATION NARRATIVE

AS SHOWN ON THIS SHEET, TODAY AND IN THE FUTURE, DROP-OFF AND PICK-UP FOR CHILD CARE WILL OCCUR WITH VEHICLES ENTERING THE SITE AT THE WESTERN ENTRANCE, PARKING TO DROP-OFF OR PICK-UP, AND EXITING AT THE EASTERN ENTRANCE. THIS PATTERN HAS BEEN REQUIRED OF PARENTS AND WILL CONTINUE TO BE REQUIRED AS THE CHILD CARE FACILITIES AND ENROLLMENT EXPAND.

SITE LIGHTING NARRATIVE

EACH SITE PLAN WHICH INCLUDES NEW OR RE-STRIPED PARKING ADJOINING RESIDENTIAL PROPERTY SHALL ALSO INCLUDE A PHOTOMETRIC STUDY CONFIRMING THAT THE PROPOSED LIGHTING OF THE PARKING WILL COMPLY WITH THE REQUIREMENTS OF THE ZONING ORDINANCE.

SITE SEATING NARRATIVE

SEATING (IE. BENCHES) WILL BE PLACED AT APPROPRIATE LOCATIONS AS DEEMED NECESSARY BY THE CHURCH.

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 5 of 14

Concurrent w/ RZ 2012-PR-011

LEGEND

PROPOSED	DESCRIPTION	EXISTING
EP	EDGE OF PAVEMENT	EP
MH	MANHOLE	MH
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WM	WATER METER	WM
GM	GAS METER	GM
TCB	TRAFFIC CONTROL BOX	TCB
LP	LIGHT POLE	LP
LP/S	LIGHT POLE WITH SIGNALS	LP/S
	CURB & GUTTER CG-2	
CG-6R CG-6	TRANSITION FROM CG-6 TO CG-6R	CG-6 CG-6R
	SANITARY SEWER	S
SL	SANITARY LATERAL	SL
C.O.	CLEAN OUT	C.O.
	STORM SEWER	
	WATER MAIN	W
	FIRE HYDRANT	
c	PLUG	c
	OVERHEAD WIRES	
	UTILITY POLE	
UE	UNDERGROUND ELECTRIC	UE

LEGEND

PROPOSED	DESCRIPTION	EXISTING
T	TELEPHONE	T
G	GAS MAIN	G
E	ELECTRICAL	E
T	TRANSFORMER	T
	HANDICAP RAMP (CG-12)	
	GUARDRAIL	
	FENCE	
	TRAFFIC FLOW	
	LIGHT	
	DOOR	
	TREES	
	LIMITS OF CLEARING AND GRADING	

(IN FEET)
1 INCH = 30'

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SCALE: 1"=30'-0"

COMMONWEALTH OF VIRGINIA — AARON M. VINSON — Lic. No.041651 — PROFESSIONAL ENGINEER — 1/3/13

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NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

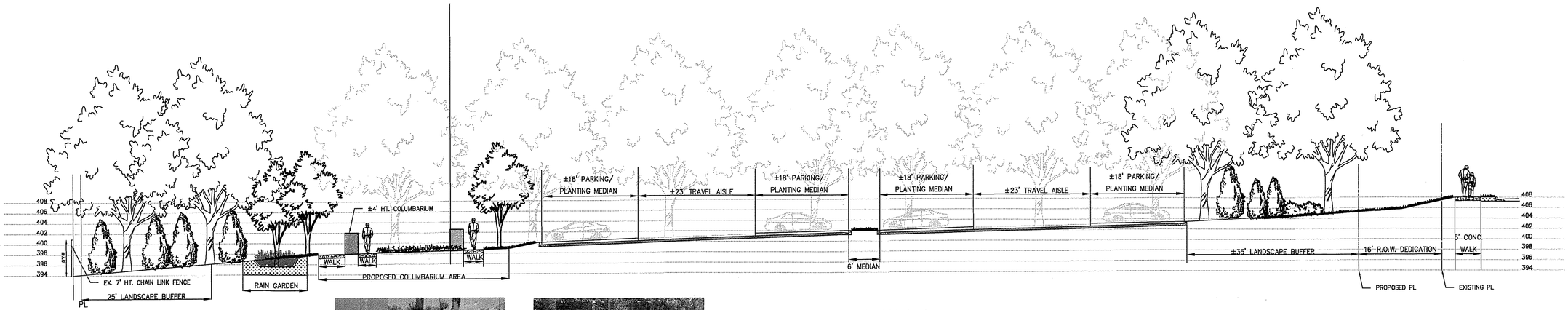
GDP/SPECIAL EXCEPTION PLAT - ULTIMATE

EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT

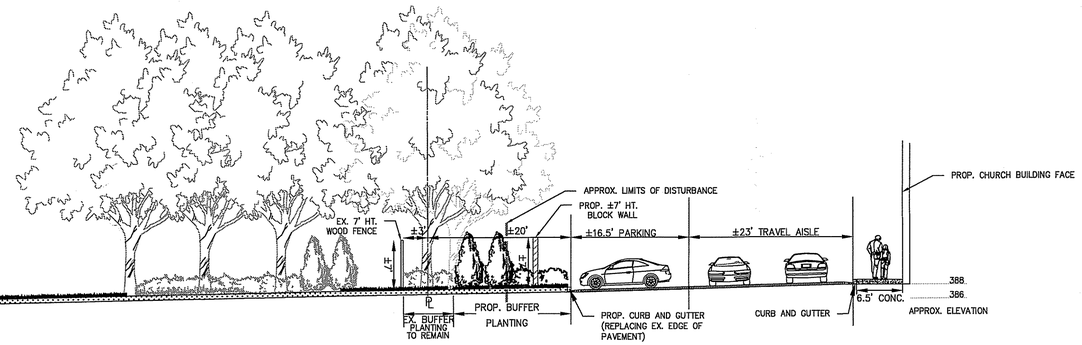
FAIRFAX COUNTY, VIRGINIA

SHEET: P-0302



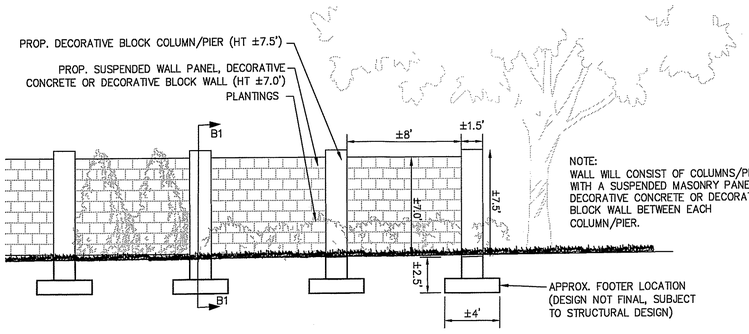
SAMPLE IMAGES OF COLUMBARIUM (FOR ILLUSTRATION PURPOSES ONLY, FINAL DESIGN MAY VARY)

SECTION A-A
WEST PARKING LOT - PROPOSED CONDITIONS
SCALE: 1" = 10'



SECTION B-B
SOUTH SIDE OF PROPERTY AT PARCEL 38-3-40-0011 - PROPOSED CONDITIONS
SCALE: 1" = 10'

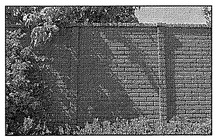
NOTE: THIS SCHEMATIC PRELIMINARY IN NATURE. WALL LOCATION AND DESIGN MAY VARY.
SEE: SECTIONS B1-B1 AND B2-B2 THIS SHEET FOR ENLARGED VIEWS.

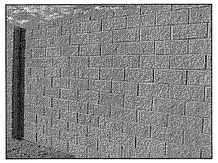


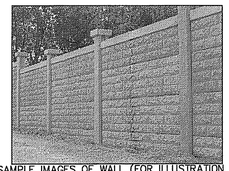
NOTE:
WALL WILL CONSIST OF COLUMNS/PIERS WITH A SUSPENDED MASONRY PANEL OR DECORATIVE CONCRETE OR DECORATIVE BLOCK WALL BETWEEN EACH COLUMN/PIER.

SECTION B2-B2
SCHEMATIC WALL SECTION/ELEVATION
SOUTH SIDE OF PROPERTY - PROPOSED CONDITIONS
SCALE: 1" = 5'

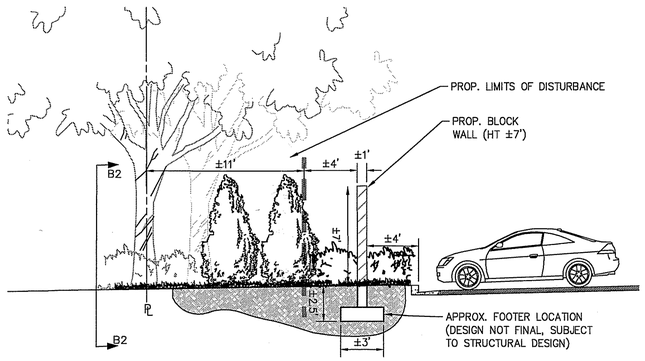
NOTE: THIS IS A SCHEMATIC PRELIMINARY IN NATURE. WALL LOCATION AND DESIGN MAY VARY.





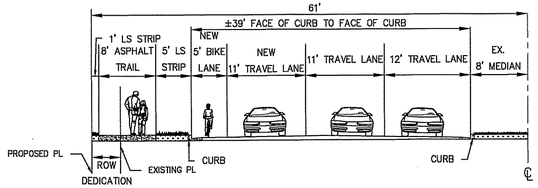


SAMPLE IMAGES OF WALL (FOR ILLUSTRATION PURPOSES ONLY, FINAL DESIGN MAY VARY)



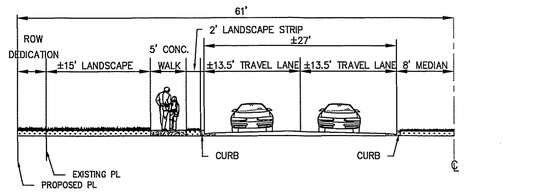
SECTION B1-B1
SCREEN WALL SCHEMATIC SECTION
SOUTH SIDE OF PROPERTY - PROPOSED CONDITIONS
SCALE: 1" = 5'

NOTE: THIS IS A SCHEMATIC PRELIMINARY IN NATURE. WALL LOCATION AND DESIGN MAY VARY.



SECTION C-C
ROUTE 123 - FUTURE ROAD WIDENING CONDITION
SCALE: 1" = 10'

NOTE: THIS SECTION IS INTENDED ONLY TO SHOW THAT THE PROPOSED ROW DEDICATION IS ADEQUATE FOR THE POTENTIAL WIDENING OF ROUTE 123. NO WIDENING OF ROUTE 123 IS PROPOSED WITH THIS PLAN.



SECTION C-C
ROUTE 123 - PROPOSED CONDITIONS
SCALE: 1" = 10'

Application No. SE 2012-PR-010 Staff MAT

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(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
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Sheet 6 of 14

Concurrent w/ RZ 2012-PR-011

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SCALE: AS SHOWN | DATE: 9/10/2012, 7/11/2012, 11/7/2012, 12/4/2012, 1/3/2013

COMMONWEALTH OF VIRGINIA — AARON M. VINSON — Lic. No. 041851 — 1/3/13 — PROFESSIONAL ENGINEER

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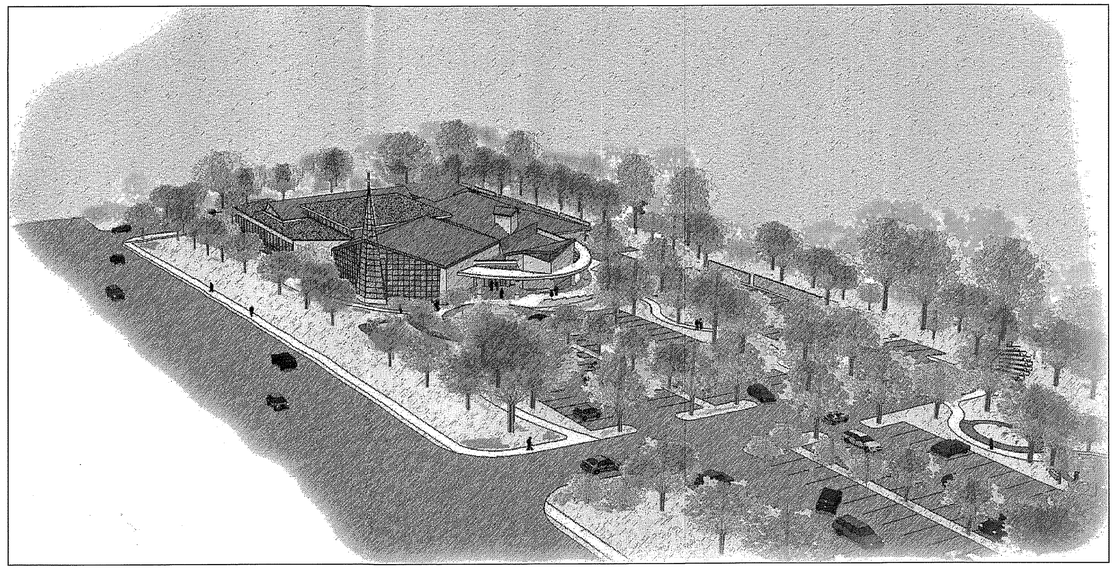
SECTIONS

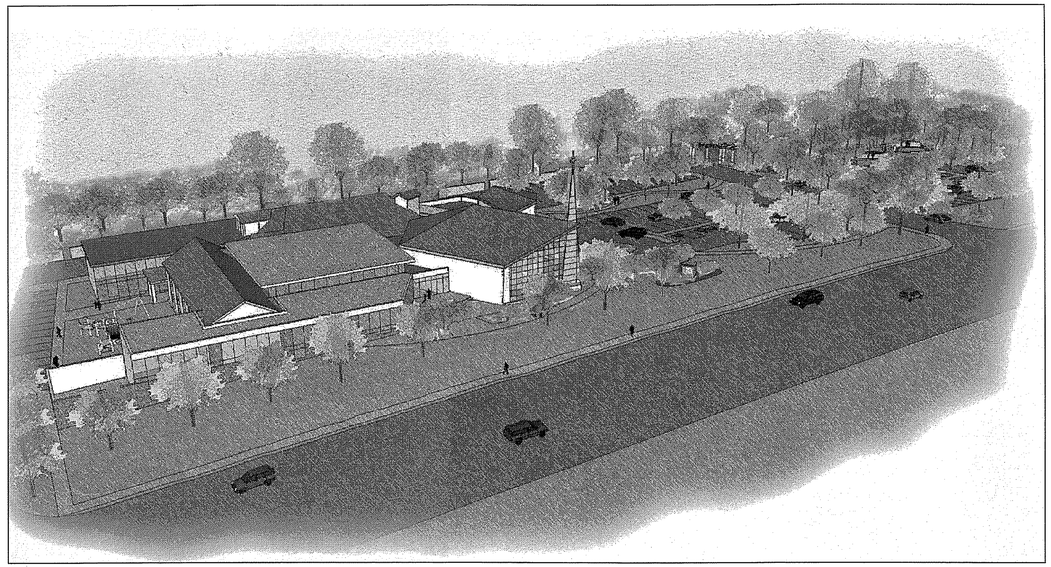
EMMANUEL LUTHERAN CHURCH
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

SHEET: P-0303

ULTIMATE PLAN PERSPECTIVES

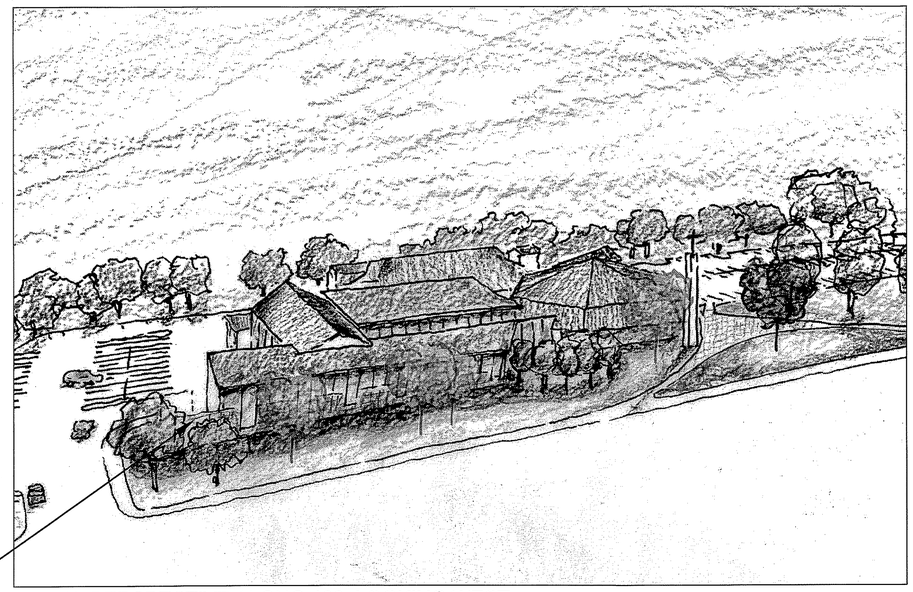


AERIAL PERSPECTIVE ALONG 123, LOOKING EAST



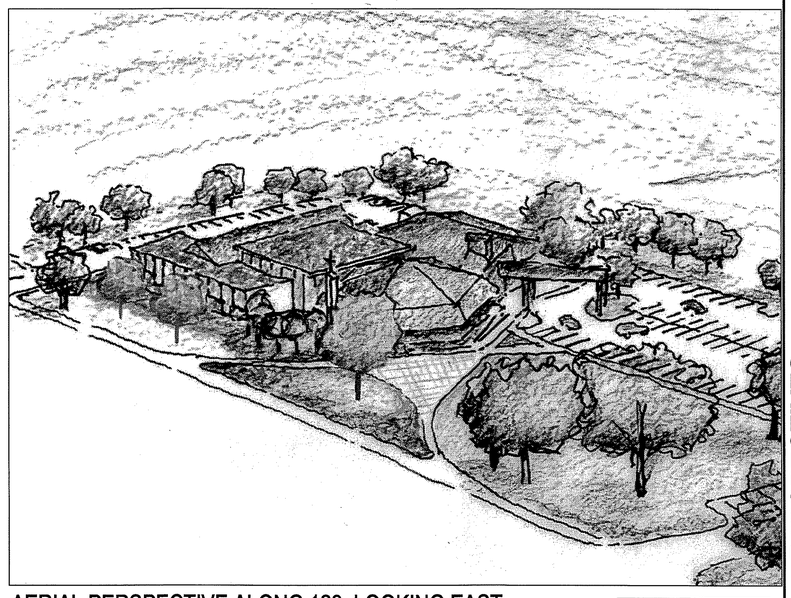
AERIAL PERSPECTIVE ALONG 123, LOOKING WEST

PHASE ONE PERSPECTIVES



PROP. ENCLOSURE COULD LOOK LIKE AN EXTENSION OF THE NEW BUILDING ADDITION

AERIAL PERSPECTIVE ALONG 123, LOOKING WEST



AERIAL PERSPECTIVE ALONG 123, LOOKING EAST

Application No. SE 2012-PR-010 Staff MAT

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(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
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Sheet 7 of 14

Concurrent w/ RZ 2012-PR-011

MTFA architecture

architecture interiors planning

PERSPECTIVES

EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

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SCALE: NA
DRAWN: BR
CHECKED: AV

COMMONWEALTH OF VIRGINIA
AARON M. VINSON
Lic. No.041851
1/3/13
PROFESSIONAL ENGINEER

File No. FM-18 Tax Map No. 38-3 Job No. 07066 Cadd Dwg. File: Q:\sdskproj\07066\dwg\Planning\Zoning\07066P-0304.dwg Xref: DIR\0000

SHEET: P-0304

PARCEL: 38-3-01-0037
OWNER: STUNTZ FAMILY LP
ZONE: R-1
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-41, PARCEL 1-18
OWNER: VARIOUS CONDO OWNERS
ZONE: R-20
USE: MULTI-FAMILY, ATTACHED

PARCEL: 38-3-01-0050
OWNER: KULWINDER SANDHU
ZONE: R-1
USE: SINGLE-FAMILY RESIDENCES INFO COMMERCIAL/INDUSTRIAL

PARCEL: 38-3-01-0046A
OWNER: KULWINDER SANDHU
ZONE: R-1
USE: NURSERY SCHOOL

PARCEL: 38-3-01-0048
OWNER: ROBERT PANNIER
ZONE: R-20
USE: VACANT LAND

CHAIN BRIDGE ROAD - ROUTE 123
(VARIABLE WIDTH PUBLIC RIGHT-OF-WAY)
(POSTED SPEED = 35 MPH)

PROP. LIMITS OF CLEARING AND GRADING
PROP. 100' RIGHT TURN TAPER
PROP. LIMITS OF CLEARING AND GRADING
PROP. LIMITS OF CLEARING AND GRADING - PHASE 1
PROP. R/W DEDICATION (±5,757 SF)
EX. SIGN (HT=±4 FT) (±1'x ±6') (TO BE REMOVED)
EX. SIGN (HT=±5.75 FT) (±5.75' x ±2')
"METROBUS" STOP (TO REMAIN)
GRASS MEDIAN
EX. 5' SIDEWALK
PROP. 5' WALK
EX. PLANTER WALL (HT ±2')
INGRESS-EGRESS ESMT DB 9833 PG 192 (TO REMAIN)
EX. HOUSE (HT=±25 FT) (DATE BUILT: 1949) (TO REMAIN IN PHASE 1) (TO BE REMOVED IN ULTIMATE)
EX. GARAGE (HT=±23 FT) (DATE BUILT: 1949) (TO BE REMOVED IF AND WHEN INGRESS/EGGRESS EASEMENT IS GRANTED OR IN ULTIMATE PHASE)
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PROP. OUTDOOR GATHERING AREA
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PROP. ENCLOSURE COULD LOOK LIKE AN EXTENSION OF THE NEW BUILDING ADDITION
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INGRESS-EGRESS ESMT DB 9833 PG 192 (TO BE VACATED)
SANITARY SEWER ESMT DB 5007 PG 238
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PROPOSED 2-STORY CHILD CARE ADDITION W/ GREEN ROOF HT=±25 FT 7,250 SF
RELOCATED CHILD CARE ENTRY
PROPOSED MECHANICAL ENCLOSURE
PROPOSED FELLOWSHIP HALL ADDITION W/ GREEN ROOF HT=±31 FT 4,300 SF
EX. WALL (HT=±2 FT)
GRAVEL
CAMPANILE
FF=399.7
FF=399.8
FF=390.4
APPROX. LOCATION POTENTIAL FUTURE 24' INGRESS-EGRESS ESMT (TO BE PROVIDED UPON REQUEST)
APPROXIMATE LOCATION VIRGINIA POWER ESMT DB 10824 PG 1173
EX. 6' SIDEWALK
EX. WALL (HT=±6 FT)
PROP. 6' WALK
PROP. ADA PARKING SPACE
FF=394.9
EMMANUEL LUTHERAN CHURCH #2589 CHAIN BRIDGE ROAD EX. 2½ STORY MASONRY BLDG. (HT= ±35 FT) (DATE BUILT: 1957) (TO REMAIN)
FF=389.9
TRACK DRAIN
EX. CANOPY (HT=±16' FT)
EX. PLAY AREA
AC CONC PAD
EX. FENCE (HT=±4' FT)
PROP. DUMPSTER AREA
EX. 5' SIDEWALK
EX. WALL (HT=±6' FT)
PROP. 8" CURB
EX. CANOPY (HT=±16' FT)
PROP. COLUMBARIUM (HEIGHT ±4') WILL BE CONSTRUCTED IN SEGMENTS)
EX. WOOD LINK FENCE (HT=±4 FT)
PROP. LANDSCAPE HARDSCAPE AREA AT COLUMBARIUM. (COLUMBARIUM DESIGN IS CONCEPTUAL AND IS SUBJECT TO CHANGE)
WATER
10' TOWN OF VIENNA WATER ESMT DB 10255 PG 1496
EXISTING PARKING
EXISTING DUMPSTER LOCATION (TO BE RELOCATED)
15"RCP INV=370.57 DITCH
RIP-RAP
EX. CONCRETE CHANNEL
EX. CHAIN LINK FENCE (HT=±7 FT)
PROP. RAIN GARDEN 1B
EX. GATE (±4 FT)
EX. WOOD FENCE (HT=±7 FT)
RECORD LOCATION ONLY
PROP. BOARD-ON-BOARD FENCE (HT=±6')
PROP. BLOCK WALL (HT=±7') (SEE SHEET P-0303)
PROP. LIMITS OF CLEARING AND GRADING - PHASE 1
FINE GRADING TO BE PERFORMED IN EXISTING SWALE TO ENSURE PROPER DRAINAGE AS NEEDED (ANY DISTURBANCE WILL BE MINIMAL AND DONE BY HAND IN ORDER TO PROTECT EXISTING VEGETATION IN AREA)
EX. TREE
VCS 1983 - NORTH ZONE

PARCEL: 38-3-01-0033
OWNER: JAMES & JULIA LINZA
ZONE: R-1
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-32-0029
OWNER: JAMES LINZA
ZONE: R-3
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-32-0028
OWNER: ISABELLE FONTAINES TR.
ZONE: R-3
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-42-E
OWNER: PINE GLEN HOMEOWNERS ASSOCIATION
ZONE: R-5
USE: OPEN SPACE

PARCEL: 38-3-42-0025
OWNER: JAMES BLAUCH
ZONE: R-5
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-42-0024
OWNER: PAUL EDWARD KIM
ZONE: R-5
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-42-0023
OWNER: ERICA MEADOWS
ZONE: R-5
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-42-D
OWNER: PINE GLEN HOMEOWNERS
ZONE: R-5
USE: OPEN SPACE

PARCEL: 38-3-40-0011
OWNER: FRANK AND DONNA CRUMP
ZONE: R-3
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-45-0001A-02F
OWNER: VIENNA OAKS OFFICE CENTER
ZONE: C-3
USE: CONDOMINIUM OFFICES

TABLE 12.3, PHASE 1

TABLE 12.3 TREE PRESERVATION TARGET CALCULATIONS AND STATEMENT

A. PRE-DEVELOPMENT AREA OF EXISTING TREE CANOPY (FROM EVM): 56,957 SF

B. PERCENTAGE OF GROSS SITE AREA COVERED BY EXISTING TREE CANOPY: 25.9 %

C. PERCENTAGE OF 10-YEAR TREE CANOPY REQUIRED FOR SITE: 25% (53,626 SF)
TOTAL SITE AREA = (220,261 SF - 5,757 SF ROW DEDICATION) = 214,504 SF

D. PERCENTAGE OF 10 YEAR TREE CANOPY REQUIREMENT THAT SHOULD BE MET THROUGH TREE PRESERVATION: (53,626 x .259) 25.9% = 13.889 SF

E. PROPOSED PERCENTAGE OF CANOPY REQUIREMENT THAT WILL BE MET THROUGH TREE PRESERVATION: (34,783 > 13,889) (64.9%) >25.9 %

F. HAS THE TREE PRESERVATION TARGET MINIMUM BEEN MET? YES

TABLE 12.10
SEE SHEET P-0403

TREE COVER CALCULATIONS

TOTAL SITE AREA	±220,261 S.F.
PROP. R.O.W. DEDICATION	- ±5,757 S.F.
ADJUSTED SITE AREA	±214,504 S.F.
PERCENT REQUIRED	X 25 %
TREE COVER REQUIRED	**±53,626 S.F.**
TREE COVER PROVIDED (PLANTED)	±14,500 S.F. (125 TREES)
EXISTING TREE COVERAGE TO REMAIN	
AREA COUNTED WITH MULTIPLIER (33,092 X 1.25)	±41,365 S.F.
AREA COUNTED W/O MULTIPLIER (1,691)	±1,691 S.F.
TOTAL EXISTING TREE COVERAGE TO REMAIN	±43,056 S.F.
TOTAL TREE COVERAGE PROVIDED	**±57,556 S.F.**

INTERIOR PARKING LOT LANDSCAPING CALCULATION

TOTAL PARKING AREA	±67,750 S.F.
PERCENT REQUIRED	x 5 %
REQUIRED	**±3,388 S.F.**
PROP. (6 CATEGORY IV TREES @ 200 SF EA.)	±1,200 S.F.
EXISTING (14 TREES @ 250 SF EA.)	±3,500
PROVIDED	**±4,700 S.F.**

LEGEND

- PROPOSED DECIDUOUS TREES CATEGORY IV (3" CAL.): EXAMPLE SPECIES: RED MAPLE, RED OAK, WILLOW OAK ±25 @ 200 SF EACH=5,000 SF)
- PROPOSED DECIDUOUS TREES (COUNTED TOWARD INTERIOR PARKING LOT LANDSCAPING) CATEGORY IV (3" CAL.): EXAMPLE SPECIES: RED MAPLE, RED OAK, WILLOW OAK (±6 @ 200 SF EACH=1,200 SF)
- PROPOSED MEDIUM EVERGREEN TREES CATEGORY II (8' - 10' HT (3" CAL.)): EXAMPLE SPECIES: AMERICAN HOLLY, EASTERN REDCEDAR (18 @ 125 SF EACH=2,250 SF)
- PROPOSED MEDIUM EVERGREEN TREES CATEGORY I (6' - 8' HT (3" CAL.)): EXAMPLE SPECIES: FOSTERS HOLLY, ARBORVITAE (76 @ 75 SF EACH=5,700 SF)
- EXISTING TREES TO BE PRESERVED (EXISTING TREES COUNTED TOWARDS TREE COVER)
- PROPOSED SHRUBS

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

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 8 of 14

Concurrent w/ RZ 2012-PR-011

Engineers • Surveyors • Planners
Landscape Architects • Arborists
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WALTER L. PHILLIPS, INCORPORATED
ESTABLISHED 1945

DRAWN: BR
CHECKED: AV
DATE: 9/10/2012, 7/11/2012, 11/2/2012, 12/4/2012, 1/3/2013
SCALE: 1" = 30'-0"

COMMONWEALTH OF VIRGINIA
AARON M. VINSON
Lic. No.041953
PROFESSIONAL ENGINEER
1/3/13

NO.	DESCRIPTION	DATE	REV. BY	APPROVED

REVISION APPROVED BY

CONCEPTUAL LANDSCAPE PLAN - PHASE 1

EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

SHEET: P-0401

File No. FM-18 Tax Map No. 38-3 Job No. 07066 Cadd Dwg. File: Q:\sdskproj\07066\dwg\Planning\Zoning\07066P-0401.dwg

PARCEL: 38-3-01-0037
OWNER: STUNTZ FAMILY LP
ZONE: R-1
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-41, PARCEL I-18
OWNER: VARIOUS CONDO OWNERS
ZONE: R-20
USE: MULTI-FAMILY, ATTACHED

PARCEL: 38-3-01-0050
OWNER: KULWINDER SANDHU
ZONE: R-1
USE: SINGLE-FAMILY RESIDENCES INFO COMMERCIAL/INDUSTRIAL

PARCEL: 38-3-01-0046A
OWNER: KULWINDER SANDHU
ZONE: R-1
USE: NURSERY SCHOOL

PARCEL: 38-3-01-0048
OWNER: ROBERT PANNIER
ZONE: R-20
USE: VACANT LAND

CHAIN BRIDGE ROAD - ROUTE 123
(VARIABLE WIDTH PUBLIC RIGHT-OF-WAY)
(POSTED SPEED = 35 MPH)

SEE SHEET P-0303 SECTION A

SEE SHEET P-0303 SECTION C

35' STACKING EXTENSION

100' TAPER

GRASS MEDIAN

PROP. LIMITS OF CLEARING AND GRADING

PROP. R/W DEDICATION (±5,757 SF)

ADD CURB TO CLOSE OFF D/W (W/ULTIMATE)

PROP. 100' RIGHT TURN TAPER

S37°13'29"E 12.16'

"METROBUS" STOP (TO REMAIN)

EX. SIGN (HT=±5.75 FT) (±5.75 x ±2')

PROP. BARRIER H AND 10' PER. PARKING LANDSCAPE STRIP

PROP. R/W DEDICATION (±5,757 SF)

EX. SIGN (HT=±4 FT) (±1'x ±6') (TO BE REMOVED)

EX. 5' SIDEWALK

N43°33'29"E 211.62'

100.00'

111.62'

PROP. 5' WALK

TRANSITIONAL SCREENING TYPE 1 (SEE CHART THIS PAGE - BUFFER 'A')

±1,691 SF TREE PRESERVATION AREA

N43°33'29"E 597.95'

202.89'

395.06'

EX. PLANTER WALL (HT ±2')

PROP. SANCTUARY ADDITION ±1,500 SF HT=±35 FT

PROP. OUTDOOR GATHERING AREA

INGRESS-EGRESS ESMT DB 9833 PG 192 (TO REMAIN)

PROP. ±7' SCREEN WALL

EX. PAVERS

PROP. ENCLOSURE COULD LOOK LIKE AN EXTENSION OF THE NEW BUILDING ADDITION

PROP. PERIPHERAL PARKING LANDSCAPE STRIP

INGRESS-EGRESS ESMT DB 9833 PG 192 (TO BE VACATED) DB 21649 PG 2459

SANITARY SEWER ESMT DB 5007 PG 238

PROPOSED 2-STORY CHILD CARE ADDITION W/ GREEN ROOF HT=±25 FT ±7,250 SF

RELOCATED CHILD CARE ENTRY

PROPOSED MECHANICAL ENCLOSURE

PROPOSED FELLOWSHIP HALL ADDITION W/ GREEN ROOF HT=±31 FT ±4,300 SF

PROP. 5' SIDEWALK

PROPOSED PLAYGROUND

PROP. 4' HT. FENCE

PROP. 5' SIDEWALK

PROP. RETAINING WALL (HT=±4')

PROP. CANOPY (HT=±16 FT)

PROP. PRIMARY UPPER ENTRANCE

PROPOSED ATRIUM HT=±25 FT ±2,400 SF

EMMANUEL LUTHERAN CHURCH
#2589 CHAIN BRIDGE ROAD
EX. 2½ STORY MASONRY BLDG.
(HT= ±35 FT)
(DATE BUILT: 1957)
(TO REMAIN)

PROPOSED 2-STORY CHILD CARE ADDITION W/ GREEN ROOF HT=±25 FT ±7,500 SF

PROP. SECONDARY LOWER ENTRANCE

PROP. 5' WALK

PROP. STAIRS

PROP. 5' WALK

ASPHALT

APPROX. LOCATION POTENTIAL FUTURE 24' INGRESS-EGRESS ESMT (TO BE PROVIDED UPON REQUEST)

±370 SF TREE PRESERVATION AREA

APPROXIMATE LOCATION VIRGINIA POWER ESMT DB 10824 PG 1173

PROP. BOARD ON BOARD FENCE (HT=±6')

PROP. COLUMBARIUM (HEIGHT ±4') (WILL BE CONSTRUCTED IN SEGMENTS)

PROP. LANDSCAPE / HARDSCAPE AREA AT COLUMBARIUM. (COLUMBARIUM DESIGN IS CONCEPTUAL AND IS SUBJECT TO CHANGE)

EX. 6' WOOD FENCE

WATER ESMT DB 10255 PG 496

±2,130 SF TREE PRESERVATION AREA

S42°29'31"W 170.04'

100.02'

70.02'

SANITARY SEWER ESMT DB 10255 PG 496

EX. CHAIN LINK FENCE (HT=±7 FT)

EX. CONCRETE CHANNEL

RIP-RAP

PARCEL: 38-3-32-0029
OWNER: JAMES LINZA
ZONE: R-3
USE: SINGLE-FAMILY, DETACHED

TRANSITIONAL SCREENING TYPE 1 (SEE CHART THIS PAGE - BUFFER 'C')

PARCEL: 38-3-01-0033
OWNER: JAMES & JULIA LINZA
ZONE: R-1
USE: SINGLE-FAMILY, DETACHED

TRANSITIONAL SCREENING TYPE 1 (SEE CHART THIS PAGE - BUFFER 'B')

N43°29'29"W 404.45'

N37°53'29"W 40.16'

PARCEL: 38-3-32-0028
OWNER: ISABELLE FONTAINES TR.
ZONE: R-3
USE: SINGLE-FAMILY, DETACHED

PROP. FOCAL FEATURE (DESIGN MAY VARY)

PROP. PEDESTRIAN GATE LOCATION

±3,960 SF TREE PRESERVATION AREA

EX. GATE (±4 FT)

EX. WOOD FENCE (HT=±7 FT)

SUPPLEMENTAL PLANTINGS IN THIS AREA TO BE COORDINATED WITH UFM AT TIME OF SITE PLAN

PARCEL: 38-3-42-E
OWNER: PINE GLEN HOMEOWNERS ASSOCIATION
ZONE: R-5
USE: OPEN SPACE

10' TOWN OF VIENNA WATER ESMT DB 9833 PG 192

PROP. BOARD ON BOARD FENCE (HT=±6')

PARCEL: 38-3-42-0025
OWNER: JAMES BLAUCH
ZONE: R-5
USE: SINGLE-FAMILY, DETACHED

PARCEL: 38-3-42-0024
OWNER: PAUL EDWARD KIM
ZONE: R-5
USE: SINGLE-FAMILY, DETACHED

PROP. BLOCK WALL (HT=±7') (SEE SHEET P-0303)

PARCEL: 38-3-42-0023
OWNER: ERICA MEADOWS
ZONE: R-5
USE: SINGLE-FAMILY, DETACHED

±622 SF TREE PRESERVATION AREA

10' TOWN OF VIENNA WATER ESMT DB 10255 PG 496

S42°30'31"W 80.25'

TRANSITIONAL SCREENING TYPE 1 (SEE CHART THIS PAGE - BUFFER 'D')

PARCEL: 38-3-42-B
OWNER: PINE GLEN HOMEOWNERS
ZONE: R-5
USE: OPEN SPACE

SEE SHEET P-0303 SECTION B

PARCEL: 38-3-40-0011
OWNER: FRANK AND DONNA CRUMP
ZONE: R-3
USE: SINGLE-FAMILY, DETACHED

EX. TREE

±6,609 SF TREE PRESERVATION AREA

EX. 5' SIDEWALK

EX. 6' SIDEWALK

ASPHALT

FC ASPHALT

CONCRETE

WALL

DITCH

RIP-RAP

S37°54'29"E 281.34'

PARCEL: 38-3-45-0001A-02F
OWNER: VIENNA OAKS OFFICE CENTER
ZONE: C-2
USE: CONDOMINIUM OFFICES

VCS 1983 - NORTH ZONE

TRANSITIONAL SCREENING AND BARRIER ANALYSIS

TRANSITIONAL SCREENING TYPE 1		SCREENING/BUFFER 'A' (230 LF)	SCREENING/BUFFER 'B' (222 LF)	SCREENING/BUFFER 'C' (145 LF)	SCREENING/BUFFER 'D' (603 LF)
	REQUIRED	PROVIDED	PROVIDED	PROVIDED	PROVIDED
DIMENSIONS	25'	>25'	>25'	>25'	18' - >25'
10 YEAR CANOPY	75%	REQUIRED: 4,313 SF	REQUIRED: 4,163 SF	REQUIRED: 2,719 SF	REQUIRED: 15,075 SF
PLANTING MIXTURE	70% EVERGREEN MIN./ 35% MAX. OF ANY SINGLE SPECIES	6 DECID. CAT. IV @ 250 = 1,500 SF 12 EV. CAT. II @ 125 = 1,500 SF 18 EV. CAT. I @ 75 = 1,350 SF TOTAL CANOPY PROVIDED = 4,350 SF* 70% EVERGREEN MIN./ 35% MAX. OF ANY SINGLE SPECIES	10 DECID. CAT. IV @ 250 = 2,500 SF 9 EV. CAT. II @ 125 = 1,125 SF 30 EV. CAT. I @ 75 = 2,250 SF TOTAL CANOPY PROVIDED = 5,875 SF* 70% EVERGREEN MIN./ 35% MAX. OF ANY SINGLE SPECIES	3 DECID. CAT. IV @ 250 = 750 SF 7 EV. CAT. II @ 125 = 875 SF 17 EV. CAT. I @ 75 = 1,275 SF TOTAL CANOPY PROVIDED = 2,900 SF* 70% EVERGREEN MIN./ 35% MAX. OF ANY SINGLE SPECIES	8 DECID. CAT. IV @ 250 = 2,000 SF 9 EV. CAT. II @ 125 = 1,125 SF 55 EV. CAT. I @ 75 = 4,125 SF EXISTING CANOPY = 8,191 SF TOTAL CANOPY PROVIDED = 15,441 SF* 70% EVERGREEN MIN./ 35% MAX. OF ANY SINGLE SPECIES
DIMENSIONS	3 SHRUBS/10 LINEAR FEET	> 3 SHRUBS/10 LINEAR FEET	> 3 SHRUBS/10 LINEAR FEET	> 3 SHRUBS/10 LINEAR FEET	> 3 SHRUBS/10 LINEAR FEET
BARRIER	TYPE D, E, OR F	NONE (WAIVER REQUESTED PER PREVIOUSLY GRANTED WAIVER)	6' HT BOARD ON BOARD FENCE	6' HT BOARD ON BOARD FENCE	7' BLOCK WALL FOR PORTION OF BUFFER AREA LESS 25' IN WIDTH. (PER Z.O. 13-305.4); 6' HT BOARD ON BOARD FENCE AREAS GREATER THAN 25' IN WIDTH

* PROVIDED FOR INFORMATION ONLY. APPLICANT COMMITS TO MEETING MINIMUM REQUIREMENTS ONLY. LANDSCAPE DESIGN MAY VARY ON SITE PLAN.

TABLE 12.3
SEE SHEET P-0403

TABLE 12.10
SEE SHEET P-0403

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 9 of 14

Concurrent w/ RZ 2012-PR-011

TREE COVER CALCULATIONS

TOTAL SITE AREA	±220,261 S.F.
PROP. R.O.W. DEDICATION	– ±5,757 S.F.
ADJUSTED SITE AREA	±214,504 S.F.
PERCENT REQUIRED	X 25 %
TREE COVER REQUIRED	±53,626 S.F.
TREE COVER PROVIDED (PLANTED)	±35,525 S.F. (253 TREES)
EXISTING TREE COVERAGE TO REMAIN	
AREA COUNTED WITH MULTIPLIER (13,691 X 1.25)	±17,113 S.F.
AREA COUNTED W/O MULTIPLIER (1,691)	±1,691 S.F.
TOTAL EXISTING TREE COVERAGE TO REMAIN	±18,804 S.F.
TOTAL TREE COVERAGE PROVIDED	±54,329 S.F.

INTERIOR PARKING LOT LANDSCAPING CALCULATION

TOTAL PARKING AREA	±75,000 S.F.
PERCENT REQUIRED	x 5 %
REQUIRED	±3,750 S.F.
PROP. (26 CATEGORY IV TREES @ 250 SF EA.)	±6,500 S.F.
PROVIDED	±6,500 S.F.*

* FOR INFORMATION ONLY. APPLICANT COMMITS TO MEETING MINIMUM REQUIREMENTS ONLY.

LEGEND

- PROPOSED DECIDUOUS TREES
  CATEGORY IV (3" CAL.): EXAMPLE SPECIES: RED MAPLE, RED OAK, WILLOW OAK
  (±54 @ 250 SF EACH=13,500 SF)
- PROPOSED DECIDUOUS TREES (COUNTED TOWARD INTERIOR PARKING LOT LANDSCAPING)
  CATEGORY IV (3" CAL.): EXAMPLE SPECIES: RED MAPLE, RED OAK, WILLOW OAK
  (±26 @ 250 SF EACH=6,500 SF)
- PROPOSED FLOWERING OR UNDERSTORY TREES
  CATEGORY II (3" CAL.): EXAMPLE SPECIES: REDBUD, DOGWOOD
  (±14 @ 125 SF EACH=1,750 SF)
- PROPOSED MEDIUM EVERGREEN TREES
  CATEGORY II (8' – 10' HT. (3" CAL.)): EXAMPLE SPECIES: AMERICAN HOLLY, EASTERN REDCEDAR
  (±37 @ 125 SF EACH=4,625 SF)
- PROPOSED MEDIUM EVERGREEN TREES
  CATEGORY I (6' – 8' HT. (3" CAL.)): EXAMPLE SPECIES: FOSTERS HOLLY, ARBORVITAE
  (±122 @ 75 SF EACH=9,150 SF)
- EXISTING TREES TO BE PRESERVED (EXISTING TREES COUNTED TOWARDS TREE COVER)
- PROPOSED SHRUBS

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

WALTER L. PHILLIPS INCORPORATED
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ESTABLISHED 1945

DRAWN: BR | CHECKED: AV

DATE: 5/10/2012, 7/11/2012, 11/2/2012, 12/4/2012, 1/3/2013

SCALE: 1"=50'-0"

COMMONWEALTH OF VIRGINIA
AARON M. WINSON
Lic. No.041851
PROFESSIONAL ENGINEER
1/3/13

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

REVISION APPROVED BY

CONCEPTUAL LANDSCAPE PLAN - ULTIMATE

EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

SHEET: P-0402

File No. FM-18 Tax Map No. 38-3 Job No. 07066 Cadd Dwg. File: Q: \sdskproj\07

Xref: DIR\0000

TABLE 12.3: ULTIMATE

TABLE 12.3 TREE PRESERVATION TARGET CALCULATIONS AND STATEMENT

A. PRE-DEVELOPMENT AREA OF EXISTING TREE CANOPY (FROM EVM): 56,957 SF

B. PERCENTAGE OF GROSS SITE AREA COVERED BY EXISTING TREE CANOPY: 25.9 %

C. PERCENTAGE OF 10-YEAR TREE CANOPY REQUIRED FOR SITE: 25% (53,626 SF)
TOTAL SITE AREA = (220,261 SF – 5,757 SF ROW DEDICATION) = 214,504 SF

D. PERCENTAGE OF 10 YEAR TREE CANOPY REQUIREMENT THAT SHOULD BE MET THROUGH TREE PRESERVATION: (53,626 x .259) 25.9% = 13,889 SF

E. PROPOSED PERCENTAGE OF CANOPY REQUIREMENT THAT WILL BE MET THROUGH TREE PRESERVATION: (15,382 > 13,889) (28.7%) >25.9 %

F. HAS THE TREE PRESERVATION TARGET MINIMUM BEEN MET? YES

PHASE I: 10-YEAR TREE CANOPY CALCULATIONS

Table 12.10 10-year Tree Canopy Calculation Worksheet

Step		Totals	Reference
A. Tree Preservation Target and Statement			
A 1	Place the Tree Preservation Target calculations and statement here preceding the 10-year tree canopy calculations	SEE TABLE 12.3 ON SHEET P-0401	see § 12-0508.2 for list of required elements and worksheet
B. Tree Canopy Requirement			
B1	Identify gross site area =	220,261	§ 12-0511.1A
B2	Subtract area dedicated to parks, road frontage, and	5,757	§ 12-0511.1B
B3	Subtract area of exemptions =		§ 12-0511.1C(1) through § 12-0511.1C(6)
B4	Adjusted gross site area (B1 – B2) =	214,504	
B5	Identify site's zoning and/or use	R-4	
B6	Percentage of 10-year tree canopy required =	25%	§ 12-0510.1 and Table 12.4
B7	Area of 10-year tree canopy required (B4 x B6) =	53,626	
B8	Modification of 10-year Tree Canopy Requirements requested?	NO	Yes or No
B9	If B8 is yes, then list plan sheet where modification request is located	N/A	Sheet number
C. Tree Preservation			
C1	Tree Preservation Target Area =	13,889	SEE TABLE 12.3, SHEET P-0401
C2	Total canopy area meeting standards of § 12-0400 =	54,788	
C3	C2 x 1.25 = (39,092 x 1.25) + 1,691 =	49,056	§ 12-0510.3B
C4	Total canopy area provided by unique or valuable forest or woodland communities =	0	
C5	C4 x 1.5 =		§ 12-0510.3B(1)
C6	Total of canopy area provided by "Heritage," "Memorial," "Specimen," or "Street" trees =	0	
C7	C6 x 1.5 to 3.0 =		§ 12-0510.3B(2)
C8	Canopy area of trees within Resource Protection Areas and 100-year floodplains =	0	
C9	C8 x 1.0 =		§ 12-0510.3C(1)
C10	Total of C3, C5, C7 and C9 =	49,056	If area of C10 is less than B7 then remainder of requirement must be met through tree planting - go to D
D. Tree Planting			
D1	Area of canopy to be met through tree planting (B7-C10) =	14,500	
D2	Area of canopy planted for air quality benefits =	0	
D3	x 1.5 =		§ 12-0510.4B(1)
D4	Area of canopy planted for energy conservation =	0	
D5	x 1.5 =		§ 12-0510.4B(2)
D6	Area of canopy planted for water quality benefits =	0	
D7	x 1.25 =		§ 12-0510.4B(3)
D8	Area of canopy planted for wildlife benefits =	0	
D9	x 1.5 =		§ 12-0510.4B(4)
D10	Area of canopy provided by native trees =	0	
D11	x 1.5 =		§ 12-0510.4B(5)
D12	Area of canopy provided by improved cultivars and varieties =	0	
D13	x 1.25	0	§ 12-0510.4B(6)
D14	Area of canopy provided through tree seedlings =	0	
	x 1.0		§ 12-0510.4D(1)
D15	Area of canopy provided through native shrubs =	0	
	x1.0		§ 12-0510.4D(1)
D16	Percentage of D14 represented by D15=	0	Must not exceed 33% of D14
D17	Total of canopy area provided through tree planting =	14,500	
D18	Is an off-site planting relief requested?	NO	Yes or No
D19	Tree Bank or Tree Fund?	N/A	§ 12-0512
D20	Canopy area requested to be provided through off-site banking or tree fund	N/A	
D21	Amount to be deposited into the Tree Preservation and Planting Fund	N/A	
E. Total of 10-year Tree Canopy Provided			
E1	Total of canopy area provided through tree preservation (C10) =	49,056	
E2	Total of canopy area provided through tree planting (D17) =	14,500	
E3	Total of canopy area provided through off-site mechanism (D19) =	N/A	
E4	Total of 10-year Tree Canopy Provided = (E1+E2+E3)	57,556	Total of E1 through E3. Area should meet or exceed area required by B7

ULTIMATE: 10-YEAR TREE CANOPY CALCULATIONS

Table 12.10 10-year Tree Canopy Calculation Worksheet

Step		Totals	Reference
A. Tree Preservation Target and Statement			
A 1	Place the Tree Preservation Target calculations and statement here preceding the 10-year tree canopy calculations	SEE TABLE 12.3 ON SHEET P-0402	see § 12-0508.2 for list of required elements and worksheet
B. Tree Canopy Requirement			
B1	Identify gross site area =	220,261	§ 12-0511.1A
B2	Subtract area dedicated to parks, road frontage, and	5,757	§ 12-0511.1B
B3	Subtract area of exemptions =		§ 12-0511.1C(1) through § 12-0511.1C(6)
B4	Adjusted gross site area (B1 – B2) =	214,504	
B5	Identify site's zoning and/or use	R-4	
B6	Percentage of 10-year tree canopy required =	25%	§ 12-0510.1 and Table 12.4
B7	Area of 10-year tree canopy required (B4 x B6) =	53,626	
B8	Modification of 10-year Tree Canopy Requirements requested?	NO	Yes or No
B9	If B8 is yes, then list plan sheet where modification request is located	N/A	Sheet number
C. Tree Preservation			
C1	Tree Preservation Target Area =	13,889	SEE TABLE 12.3, SHEET P-0402
C2	Total canopy area meeting standards of § 12-0400 =	15,382	
C3	C2 x 1.25 = (13,691 x 1.25) + 1,691 =	18,804	§ 12-0510.3B
C4	Total canopy area provided by unique or valuable forest or woodland communities =	0	
C5	C4 x 1.5 =		§ 12-0510.3B(1)
C6	Total of canopy area provided by "Heritage," "Memorial," "Specimen," or "Street" trees =	0	
C7	C6 x 1.5 to 3.0 =		§ 12-0510.3B(2)
C8	Canopy area of trees within Resource Protection Areas and 100-year floodplains =	0	
C9	C8 x 1.0 =		§ 12-0510.3C(1)
C10	Total of C3, C5, C7 and C9 =	18,804	If area of C10 is less than B7 then remainder of requirement must be met through tree planting - go to D
D. Tree Planting			
D1	Area of canopy to be met through tree planting (B7-C10) =	35,525	
D2	Area of canopy planted for air quality benefits =	0	
D3	x 1.5 =		§ 12-0510.4B(1)
D4	Area of canopy planted for energy conservation =	0	
D5	x 1.5 =		§ 12-0510.4B(2)
D6	Area of canopy planted for water quality benefits =	0	
D7	x 1.25 =		§ 12-0510.4B(3)
D8	Area of canopy planted for wildlife benefits =	0	
D9	x 1.5 =		§ 12-0510.4B(4)
D10	Area of canopy provided by native trees =	0	
D11	x 1.5 =		§ 12-0510.4B(5)
D12	Area of canopy provided by improved cultivars and varieties =	0	
D13	x 1.25	0	§ 12-0510.4B(6)
D14	Area of canopy provided through tree seedlings =	0	
	x 1.0		§ 12-0510.4D(1)
D15	Area of canopy provided through native shrubs =	0	
	x1.0		§ 12-0510.4D(1)
D16	Percentage of D14 represented by D15=	0	Must not exceed 33% of D14
D17	Total of canopy area provided through tree planting =	35,525	
D18	Is an off-site planting relief requested?	NO	Yes or No
D19	Tree Bank or Tree Fund?	N/A	§ 12-0512
D20	Canopy area requested to be provided through off-site banking or tree fund	N/A	
D21	Amount to be deposited into the Tree Preservation and Planting Fund	N/A	
E. Total of 10-year Tree Canopy Provided			
E1	Total of canopy area provided through tree preservation (C10) =	18,804	
E2	Total of canopy area provided through tree planting (D17) =	35,525	
E3	Total of canopy area provided through off-site mechanism (D19) =	N/A	
E4	Total of 10-year Tree Canopy Provided = (E1+E2+E3)	54,329	Total of E1 through E3. Area should meet or exceed area required by B7

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 10 of 14

Concurrent w/ RZ 2012-PR-011

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ESTABLISHED 1945

DRAWN: BR | CHECKED: AP

DATE: 9/10/2012, 7/11/2012, 11/2/2012, 12/4/2012, 1/8/2013

SCALE: AS SHOWN

COMMONWEALTH OF VIRGINIA — ARON M. VINSON — Lic. No. 041851 — PROFESSIONAL ENGINEER — 1/3/13

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV'D BY	APPROVED	DATE

ADDITIONAL LANDSCAPE NOTES & CALCULATIONS

EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

SHEET: P-0403

PRELIMINARY BMP FACILITY DESIGN CALCULATIONS - PHASE 1

THE EXISTING PROPERTY IS CURRENTLY SERVED BY AN INFILTRATION TRENCH CONSTRUCTED WHEN THE BUILDING AND PARKING LOT ON THE PROPERTY WERE EXPANDED PREVIOUSLY. THE INFILTRATION TRENCH WAS CONSTRUCTED TO INFILTRATE THE ADDITIONAL RUNOFF RESULTING FROM THE PREVIOUS EXPANSION. IT IS NOW PROPOSED TO EXPAND THE BUILDING AND PARKING AREAS AGAIN. WITH THE PROPOSED EXPANSION ADDRESSED BY THIS PLAN THE NET INCREASE IN IMPERVIOUS AREA WILL BE LESS THAN 20% AT PHASE 1 DEVELOPMENT AND THEREFORE UNDER PFM SECTION 6-0401.2D THIS PROJECT IS CONSIDERED REDEVELOPMENT FOR WATER QUALITY PURPOSES. AS SHOWN BELOW, THE WATER QUALITY REQUIREMENT IS THAT THE PROPOSED PHOSPHOROUS LOAD SHALL BE REDUCED BY 9.18% COMPARED TO THE POST DEVELOPMENT PHOSPHOROUS LOAD WITHOUT BMP'S IN ACCORDANCE WITH PFM SECTION 6-0401A.

PART 1 - LIST ALL SUBAREAS & "C" FACTORS USED IN THE BMP COMPUTATIONS

	(1) DESCRIPTION	(2) "C"	(2) ACRES
A2	BIORETENTION FILTER 1B	0.38	0.76
A3	INFILTRATION TRENCH	0.58	0.53
A8	VEGETATED ROOF	0.90	0.18
A9	UNTREATED ONSITE	0.63	3.59

PART 2 - COMPUTE THE WEIGHTED AVERAGE "C" FACTOR FOR THE ENTIRE SITE

(A) AREA OF THE SITE (a) 5.06 ACRES

(B)

SUBAREA DESIGNATION	DESCRIPTION (1)	"C" (2)	ACRES (3)	PRODUCT (4)
A2	BIORETENTION FILTER 1B	0.38	0.76	0.29
A3	INFILTRATION TRENCH	0.58	0.53	0.31
A8	VEGETATED ROOF	0.90	0.18	0.16
A9	UNTREATED ONSITE	0.63	3.59	2.26
	(b) TOTALS =		5.06	3.02

C) WEIGHTED "C" FACTOR = (b)/(a) = 3.02 / 5.06 = 0.60

PART 3 - COMPUTE THE TOTAL PHOSPHOROUS REMOVAL FOR THE SITE

SUBAREA DESIGNATION	DESCRIPTION	REMOVAL EFF. (%)	AREA RATIO	"C" FACTOR RATIO	PRODUCT
(1)	(2)	(3)	(4)	(5)	(6)
A2	BIORETENTION FILTER 1B	50	0.76 / 5.06	0.38 / 0.60	4.78
A3	INFILTRATION TRENCH	50	0.53 / 5.06	0.58 / 0.60	5.09
A8	VEGETATED ROOF	40	0.18 / 5.06	0.90 / 0.60	2.15
				TOTAL =	12.02

PART 4: DETERMINE COMPLIANCE WITH PHOSPOROUS REMOVAL REQUIREMENT

(A)	SELECT REQUIREMENT	9.18%
	*WATER SUPPLY OVERLAY DISTRICT (OCCOQUAN WATERSHED) =	50%
	*CHESAPEAKE BAY PRESERVATION AREA (NEW DEVELOPMENT) =	40%
	*CHESAPEAKE BAY PRESERVATION AREA (REDEVELOPMENT) = [1-.9 X ("I" PRE/"I" POST)] X 100 =	9.18%

IF LINE 3(a) 41.58 > LINE 4(a) 40%, THEN PHOSPOROUS REMOVAL REQUIREMENT IS SATISFIED.

NOTE

THIS SUMMARY AND PROPOSED BMP FACILITIES ARE PRELIMINARY AND SUBJECT TO CHANGE AT TIME OF SITE PLAN. AS PROJECT IS DEVELOPED IN PHASES, MINIMUM BMP REQUIREMENTS FOR REDEVELOPMENT OR NEW DEVELOPMENT (WHICHEVER IS APPROPRIATE) WILL BE MET AT EACH PHASE IN ACCORDANCE WITH APPLICABLE STANDARDS.

BMP NARRATIVE

THE PROPOSED PHASE 1 CONSTRUCTION IS CONSIDERED REDEVELOPMENT FOR WATER QUALITY PURPOSES AS THERE IS LESS THAN A 20% INCREASE IN IMPERVIOUS AREA IN A RMA PHASE 1. THEREFORE, THE PHOSPHOROUS REMOVAL REQUIREMENT FOR THIS PROJECT AT PHASE 1 DEVELOPMENT IS THAT THE POST REDEVELOPMENT PHOSPHOROUS LOAD BE REDUCED BY 9.18% COMPARED TO THE PHOSPHOROUS LOAD WITHOUT BMP'S. THE EXISTING DEVELOPMENT IS CURRENTLY SERVED BY AN INFILTRATION TRENCH WHICH WILL REMAIN IN SERVICE POST DEVELOPMENT. ADDITIONAL BMP FACILITIES INCLUDING RAIN GARDENS (BIORETENTION FILTERS), GREEN ROOFS, AND STORMFILTERS OR BAYFILTERS ARE CURRENTLY PROPOSED WITH PHASE 1 OF THIS PLAN. THE EXISTING AND PROPOSED BMP MEASURES WILL REMOVE A TOTAL OF 12.02% OF THE PHOSPOROUS LOAD AS SHOWN IN THE ABOVE COMPUTATIONS.

DRAINAGE IMPROVEMENTS NARRATIVE

THE PROPOSED PHASE 1 CONSTRUCTION IMPROVEMENTS WILL TAKE INTO CONSIDERATION OFFSITE DRAINAGE CONCERNS OF THE NEIGHBORING PROPERTIES TO THE SOUTH OF THE CHURCH PROPERTY. CURRENTLY 4.27 ACRES OF THE 5.06 ACRE CHURCH SITE DRAINS TO THE SOUTH VIA UNCONTROLLED FLOW INTO AN EXISTING CONCRETE CHANNEL AT THE SOUTHWEST, AN EXISTING INFILTRATION TRENCH TO THE SOUTH AND AN EXISTING SWALE TO THE SOUTHEAST. THE PROPOSED PHASE 1 IMPROVEMENTS WILL CONSIST OF A PROPOSED RAIN GARDEN AND IMPROVEMENTS TO THE SWALE AND INFILTRATION TRENCH. AN 8" CURB AND GUTTER WILL ALSO BE ADDED AT THE SOUTHEAST PORTION OF THE PARKING LOT WHICH WILL REDIRECT A SIGNIFICANT AMOUNT OF THE STORMWATER CURRENTLY FLOWING TO THE SOUTH AND SOUTHEAST TO A STORM INLET AND CONTROLLED PIPE SYSTEM. THE CURRENT AREA OF 4.27 ACRES THAT CURRENTLY LEAVES THE SITE UNCONTROLLED TO THE SOUTH WILL BE REDUCED TO 1.11 ACRES LEAVING THE SITE TO THE SOUTH WITH ONLY 0.12 ACRES LEAVING UNCONTROLLED VIA THE SWALE TO THE SOUTHEAST. ADDITIONALLY ALL NEW BUILDING CONSTRUCTION IN PHASE 1 WILL INCORPORATE A GREENROOF SYSTEM WHICH WILL ACTUALLY REDUCE THE IMPERVIOUS AREA CURRENTLY IN THE PROPOSED BUILDING FOOTPRINT. IN SUMMARY, IT IS THE OPINION OF THE SUBMITTING ENGINEER THAT DRAINAGE IMPROVEMENTS PROPOSED WITH PHASE 1 DEVELOPMENT WILL RESULT IN A SIGNIFICANT IMPROVEMENT TO EXISTING DRAINAGE CONDITIONS. THIS IS MOST CLEARLY DEMONSTRATED BY THE FACT THAT UNCONTROLLED RUNOFF LEAVING THE SITE WILL BE REDUCED BY 75% FROM 4.27 ACRES TO 1.11 ACRES. UNCONTROLLED RUNOFF LEAVING THE SITE WILL BE FURTHER REDUCED AT ULTIMATE DEVELOPMENT.

PRELIMINARY OVERALL SITE DRAINAGE SUMMARY

I. PRE-DEVELOPMENT:

A. TOTAL AREA = 5.06 AC.

CONTRIBUTING AREAS:

2.22 AC. @ 0.90 (IMPERVIOUS AREA ON-SITE)
2.84 AC. @ 0.30 (GREEN AREA ON-SITE)
5.06 AC.

B. WEIGHTED "C":

$$\frac{(2.22)\ (0.90) + (2.84)\ (0.30)}{5.06} = 0.56$$

C. TIME OF CONCENTRATION = 5 MIN.

D. RUNOFF: Q2 = (0.56) (5.45) (5.06) = 15.44 CFS
Q10 = (0.56) (7.27) (5.06) = 20.60 CFS

II. POST-DEVELOPMENT:

A. TOTAL AREA = 5.06 AC.

CONTRIBUTING AREAS:

2.42 AC. @ 0.90 (IMPERVIOUS AREA ON-SITE)
2.64 AC. @ 0.30 (GREEN AREA ON-SITE)
5.06 AC.

B. WEIGHTED "C":

$$\frac{(2.42)\ (0.90) + (2.64)\ (0.30)}{5.06} = 0.59$$

C. TIME OF CONCENTRATION = 5 MIN.

D. RUNOFF: Q2 = (0.59) (5.45) (5.06) = 16.27 CFS
Q10 = (0.59) (7.27) (5.06) = 21.70 CFS

III. INCREASE:

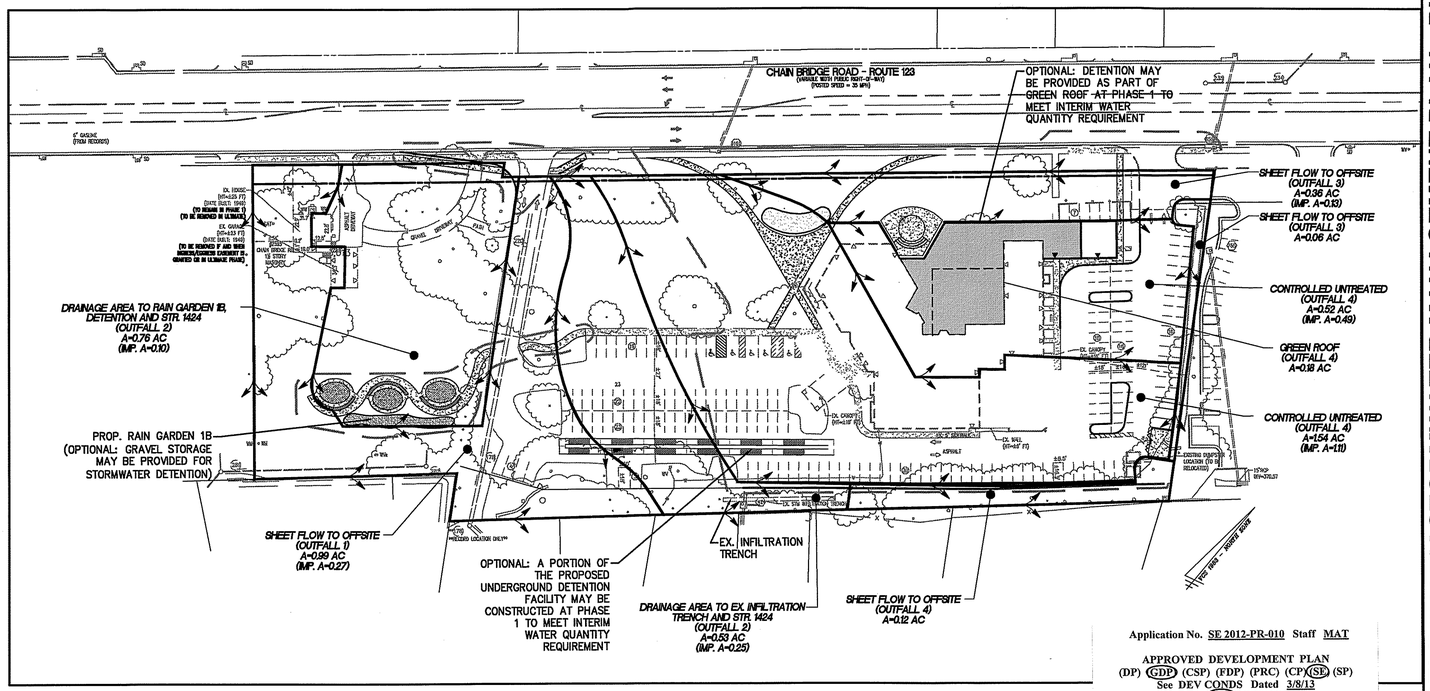
Q2 = 16.27 - 15.44 = 0.85 CFS
Q10 = 21.70 - 20.60 = 1.10 CFS

NOTE

THIS SUMMARY AND THE PROPOSED SWM FACILITIES ARE PRELIMINARY AND SUBJECT TO CHANGE AT TIME OF SITE PLAN. AS PROJECT IS DEVELOPED IN PHASES, MINIMUM STORMWATER MANAGEMENT REQUIREMENTS WILLBE MET AT EACH PHASE IN ACCORDANCE WITH APPLICABLE STANDARDS.

SWM NARRATIVE

THE EXISTING DEVELOPED SITE HAS AN INFILTRATION FACILITY. THE ALLOWABLE RUNOFF PEAK RELEASE RATE FROM THE SITE WITH THE PROPOSED REDEVELOPMENT SHALL BE THE RELEASE RATE FROM THE SITE IN ITS CURRENT DEVELOPED CONDITION. THE INCREASES IN 2-YEAR AND 10-YEAR PEAK RELEASE RATES DUE TO THE INCREASE IN IMPERVIOUSNESS WILL BE ATTENUATED BY SOME OR ALL OF THE FOLLOWING: GRAVEL STORAGE UNDER RAIN GARDEN 1B, ROOFTOP DETENTION AS PART OF PROPOSED GREEN ROOF, A PORTION OF THE PROPOSED STORMWATER DETENTION FACILITY, AND THE EXISTING INFILTRATION TRENCH WILL REMAIN IN SERVICE.



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 following Zoning Ordinance paragraphs:

Special Permits (8-011 2J & 2L)	Special Exceptions (9-011 2J & 2L)
Cluster Subdivision (9-615 1G & 1N)	Commercial Revitalization Districts (9-622 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 EX. INFIL. TRENCH AND OPTIONAL PROP. UG DET., GREEN ROOF DETENTION OR GRAVEL STORAGE SHOWN THIS SHEET.

[ ] 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)
	EX. INFIL. TRENCH	0.53	0	0.09	750	2630	
OPTIONAL:	PROP. UG DETENTION						
OPTIONAL:	PROP. GREEN ROOF DETENTION						
OPTIONAL:	PROP. GRAVEL STORAGE						
	Totals						

[X] 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet P-0302
Pond inlet and oulet pipe systems are shown on Sheet N/A.

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

[X] 6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet ____. P-0201, P-0402

[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 THIS SHEET

[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 P-0502

[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 P-0502

[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 P-0201.

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

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

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 11 of 14

Concurrent w/ RZ 2012-PR-011

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ESTABLISHED 1945

DRAWN: BR | CHECKED: AV

DATE: 5/10/2012, 7/11/2012, 11/2/2012, 12/4/2012, 1/3/2013

SCALE: 1" = 60'-0"

COMMONWEALTH OF VIRGINIA — AARON M. WINSON — Lic. No. 041851 — 1/3/13 — PROFESSIONAL ENGINEER

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV'. BY	APPROVED

PRELIMINARY STORMWATER MANAGEMENT PLAN - PHASE 1

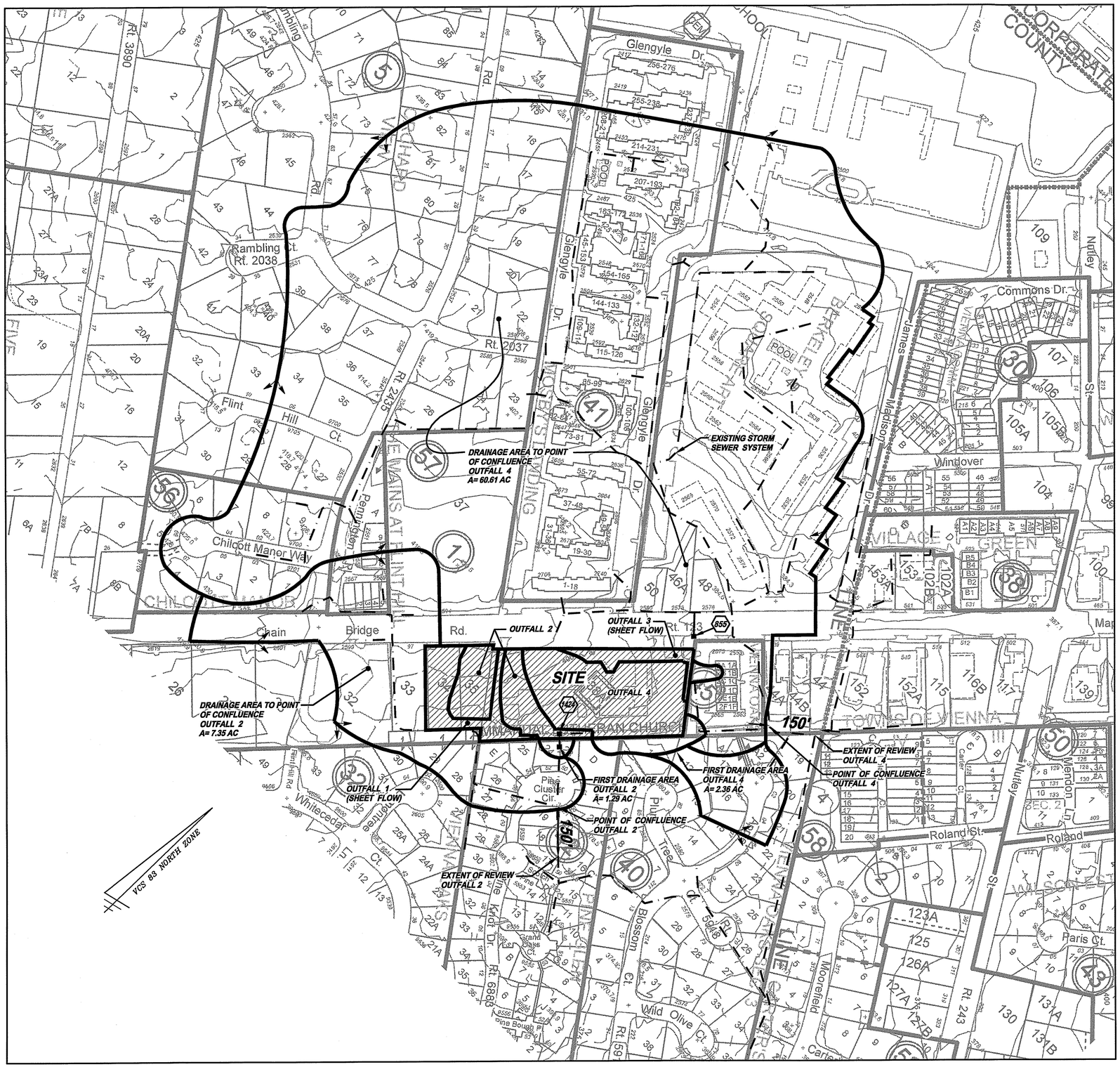
EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

SHEET: P-0501

File No. FM-18 Tax Map No. 38-3 Job No. 07066 Cadd Dwg. File: Q:\sdskproj\07066\dwg\Planning\Zoning\07066P-0501.dwg Xref: DIR\0000



OUTFALL NARRATIVE - PHASE 1

EXISTING CONDITIONS:
THE SITE IS CURRENTLY DEVELOPED WITH A CHURCH AS WELL AS TWO EXISTING SINGLE FAMILY HOMES. MUCH OF THE SITE'S RUNOFF LEAVES THE SITE AS SHEET FLOW THOUGH SOME IS COLLECTED IN A STORM DRAIN ON THE SOUTHERN EDGE OF THE PROPERTY. RUNOFF LEAVES THE SITE VIA SIX OUTFALLS WHICH ALL EVENTUALLY FLOW TO THE SOUTH AND SOUTHEAST. THE SHEET FLOW RUNOFF TO OUTFALLS 3 LEAVE THE SITE IN A NORTHEASTERLY DIRECTION AND ARE COLLECTED BY STORM SEWERS IN CHAIN BRIDGE ROAD. THESE STORM SEWERS THEN CONVEY THE RUNOFF IN A SOUTHERLY DIRECTION. THE SITE RUNOFF WHICH FLOWS TO OUTFALL 2 FLOWS TO AN INFILTRATION FACILITY LOCATED ALONG THE SOUTHERN PROPERTY LINE. THIS OUTFALL 2 RUNOFF THAT DOES NOT INFILTRATE IS COLLECTED IN EXISTING INLET 1424 AND THEN LEAVES THE SITE AND HEADS IN A SOUTHERLY DIRECTION. THE SHEET FLOW RUNOFF TO THE REMAINING OUTFALLS (OUTFALLS 1 AND 3) LEAVE THE SITE UNCONTROLLED AS SHEET FLOW AND FLOW IN A SOUTHERLY DIRECTION. REFER TO THE OUTFALL PLAN THIS SHEET.

PROPOSED CONDITIONS:
IN THE POST REDEVELOPMENT CONDITION THE RUNOFF FROM THE SITE WILL BE CONVEYED TO FOUR OUTFALLS. A SIGNIFICANT AMOUNT OF SHEET FLOW RUNOFF IN THE PREDEVELOPMENT CONDITION WILL BE DIVERTED TO OUTFALL 4 DUE TO THE REQUEST OF THE NEIGHBORING PROPERTIES TO THE SOUTH TO REDUCE THE SITE RUNOFF THAT FLOWS TO THEIR PROPERTIES. SOME ONSITE FLOW WILL CONTINUE TO BE ROUTED TO THE EXISTING INFILTRATION FACILITY AND OUTFALL 2 WITH NO CHANGES TO THE FACILITY. THERE ARE THREE POTENTIAL OPTIONS BEING CONSIDERED IN ORDER TO PROVIDE THE REQUIRED DETENTION ON SITE DURING THE PHASE 1 REDEVELOPMENT IMPROVEMENTS. THESE OPTIONS INCLUDE GRAVEL STORAGE IN THE PROPOSED RAIN GARDEN, DETENTION INCORPORATED INTO THE PROPOSED GREEN ROOF OR CONSTRUCTING A PORTION OF THE PROPOSED UNDERGROUND DETENTION FACILITY DURING THE PHASE 1 REDEVELOPMENT. ANY OF THESE OPTIONS MAY BE UTILIZED DURING PHASE 1 IN ORDER TO SATISFY DETENTION REQUIREMENTS. A PROPOSED STORM SEWER SYSTEM WILL COLLECT ADDITIONAL SITE RUNOFF AND CONVEY IT TO AN EXISTING OFFSITE DETENTION POND ON THE ADJACENT PROPERTY TO THE EAST WHICH IS OUTFALL 4. THE RUNOFF TO THIS OFFSITE POND WILL NOT BE INCREASED ABOVE EXISTING PEAK RATES FOR THE 2 AND 10 YEAR STORMS WITHOUT THE NEED FOR A DETENTION FACILITY. ALL OTHER RUNOFF (TO OUTFALLS 1 AND 3) WILL CONTINUE TO LEAVE THE SITE AS SHEET FLOW AS IT DOES TODAY.

IN ACCORDANCE WITH PFM SECTION 6-0203.2A, THE EXTENT OF DOWNSTREAM OUTFALL REVIEW CAN END 150' DOWNSTREAM OF A POINT WHERE A RECEIVING PIPE OR CHANNEL IS JOINED BY ANOTHER THAT HAS A DRAINAGE AREA THAT IS AT LEAST 90 PERCENT OF THE SIZE OF THE FIRST DRAINAGE AREA AT THE POINT OF CONFLUENCE IF THAT 150' OUTFALL SECTION IS ADEQUATE. THIS RULE DETERMINES THE EXTENT OF REVIEW FOR OUTFALLS 2 AND 4. THE OUTFALL MAP SHOWS THE EXTENT OF REVIEW FOR OUTFALLS 2 AND 4. THE STORM SEWERS FOR OUTFALLS 2 AND 4 WITHIN THE EXTENT OF REVIEW HAVE ADEQUATE CAPACITY FOR A 10-YEAR EVENT. THEREFORE, IT IS OUR OPINION THAT THESE TWO SITE OUTFALLS WILL BE ADEQUATE. FOR THE THREE REMAINING OUTFALLS, THE RUNOFF LEAVES THE SITE AS SHEET FLOW WITH NO ADVERSE IMPACT SO THE OUTFALLS ARE ALSO ADEQUATE IN OUR OPINION.

DRAINAGE DIVIDES AND CHANNEL INFORMATION WERE DETERMINED USING AVAILABLE RECORD INFORMATION AND TOPOGRAPHY. THIS OUTFALL ANALYSIS IS SUBJECT TO CHANGE WITH FINAL ENGINEERING AND WILL BE REEVALUATED AND VERIFIED AT SITE PLAN.

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 12 of 14

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ESTABLISHED 1945

DRAWN: BR | CHECKED: AV
SCALE: 1" = 150' | DATE: 5/10/2012, 7/11/2012, 11/2/2012, 12/4/2012, 1/3/2013

COMMONWEALTH OF VIRGINIA — AARON M. VINSON — Lic. No. 041851 — 1/3/13 — PROFESSIONAL ENGINEER

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED

PRELIMINARY STORMWATER OUTFALL ANALYSIS - PHASE 1

EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

SHEET: P-0502

File No. FM-18 Tax Map No. 38-3 Job No. 07066 Cadd Dwg. File: Q:\sdskproj\07066\dwg\Planning\Zoning\07066P-0501.dwg Xref: DIR\0000

PRELIMINARY BMP FACILITY DESIGN CALCULATIONS

THE EXISTING PROPERTY IS CURRENTLY SERVED BY AN INFILTRATION TRENCH CONSTRUCTED WHEN THE BUILDING AND PARKING LOT ON THE PROPERTY WERE EXPANDED PREVIOUSLY. THE INFILTRATION TRENCH WAS CONSTRUCTED TO INFILTRATE THE ADDITIONAL RUNOFF RESULTING FROM THE PREVIOUS EXPANSION. IT IS NOW PROPOSED TO EXPAND THE BUILDING AND PARKING AREAS AGAIN. WITH THE PROPOSED EXPANSION ADDRESSED BY THIS PLAN THE NET INCREASE IN IMPERVIOUS AREA EXCEEDS 20% AT ULTIMATE DEVELOPMENT AND THEREFORE UNDER PFM SECTION 6-0401.2D THIS PROJECT IS CONSIDERED NEW DEVELOPMENT FOR WATER QUALITY PURPOSES. THEREFORE, THE WATER QUALITY REQUIREMENT IS THAT THE PROPOSED PHOSPHOROUS LOAD SHALL BE REDUCED AT LEAST 40% COMPARED TO THE POST DEVELOPMENT PHOSPHOROUS LOAD WITHOUT BMP'S IN ACCORDANCE WITH PFM SECTION 6-0401A.

PART 1 - LIST ALL SUBAREAS & "C" FACTORS USED IN THE BMP COMPUTATIONS

	(1) DESCRIPTION	(2) "C"	(2) ACRES
A1	BIORETENTION FILTER 1A	0.65	0.41
A2	BIORETENTION FILTER 1B	0.68	0.38
A3	INFILTRATION TRENCH	0.30	0.09
A4	STORMFILTER OR BAYFILTER #4	0.72	0.77
A5	STORMFILTER OR BAYFILTER #3	0.82	0.85
A6	STORMFILTER OR BAYFILTER #1	0.77	0.52
A7	STORMFILTER OR BAYFILTER #2	0.88	0.36
A8	VEGETATED ROOF	0.90	0.29
A9	UNTREATED ONSITE	0.36	1.39

PART 2 - COMPUTE THE WEIGHTED AVERAGE "C" FACTOR FOR THE ENTIRE SITE

(A) AREA OF THE SITE (a) 5.06 ACRES

(B)

SUBAREA DESIGNATION	DESCRIPTION (1)	"C" (2)	ACRES (3)	PRODUCT (4)
A1	BIORETENTION FILTER 1A	0.65	0.41	0.27
A2	BIORETENTION FILTER 1B	0.68	0.38	0.26
A3	INFILTRATION TRENCH	0.30	0.09	0.03
A4	STORMFILTER OR BAYFILTER #4	0.72	0.77	0.55
A5	STORMFILTER OR BAYFILTER #3	0.82	0.85	0.70
A6	STORMFILTER OR BAYFILTER #1	0.77	0.52	0.40
A7	STORMFILTER OR BAYFILTER #2	0.88	0.36	0.32
A8	VEGETATED ROOF	0.90	0.29	0.26
A9	UNTREATED ONSITE	0.36	1.39	0.50
	(b) TOTALS =		5.06	3.28

C) WEIGHTED "C" FACTOR = (b)/(a) = 3.28 / 5.06 = 0.65

PART 3 - COMPUTE THE TOTAL PHOSPHOROUS REMOVAL FOR THE SITE

SUBAREA DESIGNATION	DESCRIPTION	REMOVAL EFF. (%)	AREA RATIO	"C" FACTOR RATIO	PRODUCT
(1)	(2)	(3)	(4)	(5)	(6)
A1	BIORETENTION FILTER 1A	50	0.41 / 5.06	0.65 / 0.65	4.06
A2	BIORETENTION FILTER 1B	50	0.38 / 5.06	0.68 / 0.65	3.94
A3	INFILTRATION TRENCH	50	0.09 / 5.06	0.30 / 0.65	0.41
A4	STORMFILTER OR BAYFILTER #4	50	0.77 / 5.06	0.72 / 0.65	8.45
A5	STORMFILTER OR BAYFILTER #3	50	0.85 / 5.06	0.82 / 0.65	10.62
A6	STORMFILTER OR BAYFILTER #1	50	0.52 / 5.06	0.77 / 0.65	6.10
A7	STORMFILTER OR BAYFILTER #2	50	0.36 / 5.06	0.88 / 0.65	4.83
A8	VEGETATED ROOF	40	0.29 / 5.06	0.90 / 0.65	3.18
				TOTAL =	41.58

PART 4: DETERMINE COMPLIANCE WITH PHOSPOROUS REMOVAL REQUIREMENT

(A)	SELECT REQUIREMENT	40%
	*WATER SUPPLY OVERLAY DISTRICT (OCCOQUAN WATERSHED) =	50%
	*CHESAPEAKE BAY PRESERVATION AREA (NEW DEVELOPMENT) =	40%
	*CHESAPEAKE BAY PRESERVATION AREA (REDEVELOPMENT) = [1-.9 X ("I" PRE/"I" POST)] X 100 =	

IF LINE 3(a) 41.58 > LINE 4(a) 40%, THEN PHOSPOROUS REMOVAL REQUIREMENT IS SATISFIED.

NOTE

THIS SUMMARY AND PROPOSED BMP FACILITIES ARE PRELIMINARY AND SUBJECT TO CHANGE AT TIME OF SITE PLAN. AS PROJECT IS DEVELOPED IN PHASES, MINIMUM BMP REQUIREMENTS FOR REDEVELOPMENT OR NEW DEVELOPMENT (WHICHEVER IS APPROPRIATE) WILL BE MET AT EACH PHASE IN ACCORDANCE WITH APPLICABLE STANDARDS.

BMP NARRATIVE

THE PROPOSED CONSTRUCTION IS CONSIDERED NEW DEVELOPMENT FOR WATER QUALITY PURPOSES AS THERE IS MORE THAN A 20% INCREASE IN IMPERVIOUS AREA IN A RMA. THEREFORE, THE PHOSPHOROUS REMOVAL REQUIREMENT FOR THIS PROJECT AT ULTIMATE DEVELOPMENT IS THAT THE POST DEVELOPMENT PHOSPHOROUS LOAD BE REDUCED AT LEAST 40% COMPARED TO THE PHOSPHOROUS LOAD WITHOUT BMP'S. THE EXISTING DEVELOPMENT IS CURRENTLY SERVED BY AN INFILTRATION TRENCH WHICH WILL REMAIN IN SERVICE POST DEVELOPMENT. ADDITIONAL BMP FACILITIES INCLUDING RAIN GARDENS (BIORETENTION FILTERS), GREEN ROOFS, AND STORMFILTERS OR BAYFILTERS ARE CURRENTLY PROPOSED WITH THIS PLAN. THE EXISTING AND PROPOSED BMP MEASURES WILL REMOVE A TOTAL OF 41.58% OF THE PHOSPOROUS LOAD AS SHOWN IN THE ABOVE COMPUTATIONS.

PRELIMINARY OVERALL SITE DRAINAGE SUMMARY

I. PRE-DEVELOPMENT:

A. TOTAL AREA = 5.06 AC.

CONTRIBUTING AREAS:

2.22 AC. @ 0.90 (IMPERVIOUS AREA ON-SITE)
2.84 AC. @ 0.30 (GREEN AREA ON-SITE)
5.06 AC.

B. WEIGHTED "C":

$$\frac{(2.22)\ (0.90) + (2.84)\ (0.30)}{5.06} = 0.56$$

C. TIME OF CONCENTRATION = 5 MIN.

D. RUNOFF: Q2 = (0.56) (5.45) (5.06) = 15.44 CFS
Q10 = (0.56) (7.27) (5.06) = 20.60 CFS

II. POST-DEVELOPMENT:

A. TOTAL AREA = 5.06 AC.

CONTRIBUTING AREAS:

2.87 AC. @ 0.90 (IMPERVIOUS AREA ON-SITE)
2.19 AC. @ 0.30 (GREEN AREA ON-SITE)
5.06 AC.

B. WEIGHTED "C":

$$\frac{(2.87)\ (0.90) + (2.19)\ (0.30)}{5.06} = 0.64$$

C. TIME OF CONCENTRATION = 5 MIN.

D. RUNOFF: Q2 = (0.64) (5.45) (5.06) = 17.65 CFS
Q10 = (0.64) (7.27) (5.06) = 23.54 CFS

III. INCREASE:

Q2 = 17.65 - 15.44 = 2.21 CFS
Q10 = 23.54 - 20.60 = 2.94 CFS

NOTE

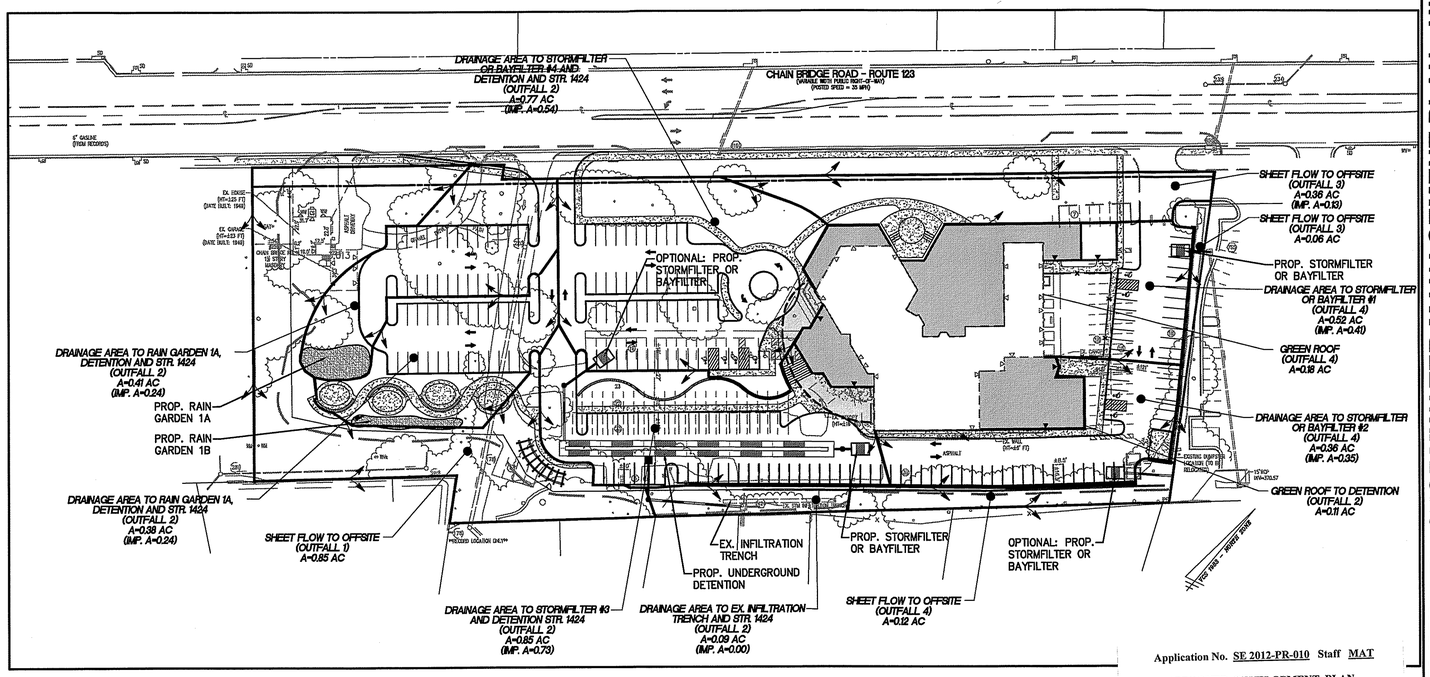
THIS SUMMARY AND THE PROPOSED SWM FACILITIES ARE PRELIMINARY AND SUBJECT TO CHANGE AT TIME OF SITE PLAN. AS PROJECT IS DEVELOPED IN PHASES, MINIMUM STORMWATER MANAGEMENT REQUIREMENTS WILLBE MET AT EACH PHASE IN ACCORDANCE WITH APPLICABLE STANDARDS.

SWM NARRATIVE

THE EXISTING DEVELOPED SITE HAS AN INFILTRATION FACILITY. THE ALLOWABLE RUNOFF PEAK RELEASE RATE FROM THE SITE WITH THE PROPOSED REDEVELOPMENT SHALL BE THE RELEASE RATE FROM THE SITE IN ITS CURRENT DEVELOPED CONDITION. THE INCREASES IN 2-YEAR AND 10-YEAR PEAK RELEASE RATES DUE TO THE INCREASE IN IMPERVIOUSNESS WILL BE ATTENUATED BY A PROPOSED UNDERGROUND STORMWATER DETENTION FACILITY. THE EXISTING INFILTRATION TRENCH WILL REMAIN IN SERVICE.

NOTE

SOME PROPOSED STORMWATER MANAGEMENT ELEMENTS WILL BE INSTALLED IN PHASE 1 AS NEEDED.



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 following Zoning Ordinance paragraphs:

Special Permits (8-011 2J & 2L)	Special Exceptions (9-011 2J & 2L)
Cluster Subdivision (9-615 1G & 1N)	Commercial Revitalization Districts (9-622 2A (12) & (14))
Development Plans PRC District (16-302 3 & 4L)	PRC Plan (16-303 1E & 1O)
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 PROP. UG DET. AND EX. INFIL. TRENCH SHOWN THIS SHEET

[ ] 3. Provide:

Facility Name/ Type & No.	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage Volume (cf)	If pond, dam height (ft)
EX. INFIL. TRENCH (e.g. dry pond A, infil. trench, underground vault, etc.)	0.09	0	0.09	750	2630	
PROP. UG DET.	2.61	0	2.61	4200	10000	
Totals						

[X] 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet P-0302
Pond inlet and oulet pipe systems are shown on Sheet N/A

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

[X] 6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet ____. P-0201, P-0402

[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 THIS SHEET

[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 P-0504

[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 P-0504

[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 P-0201.

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

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

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 13 of 14

Concurrent w/ RZ 2012-PR-011

WALTER L. PHILLIPS INCORPORATED
ESTABLISHED 1945
Engineers • Surveyors • Planners
Landscape Architects • Arborists
207 PARK AVENUE
FALLS CHURCH, VIRGINIA 22046
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www.WLPINC.com

DRAWN: BR | CHECKED: AV

SCALE: 1"= 60' | DATE: 5/10/2012, 7/11/2012, 11/2/2012, 12/4/2012, 1/3/2013

COMMONWEALTH OF VIRGINIA — AARON M. VINSON — Lic. No.041851 — 1/3/13 — PROFESSIONAL ENGINEER

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED

PRELIMINARY STORMWATER MANAGEMENT PLAN - ULTIMATE

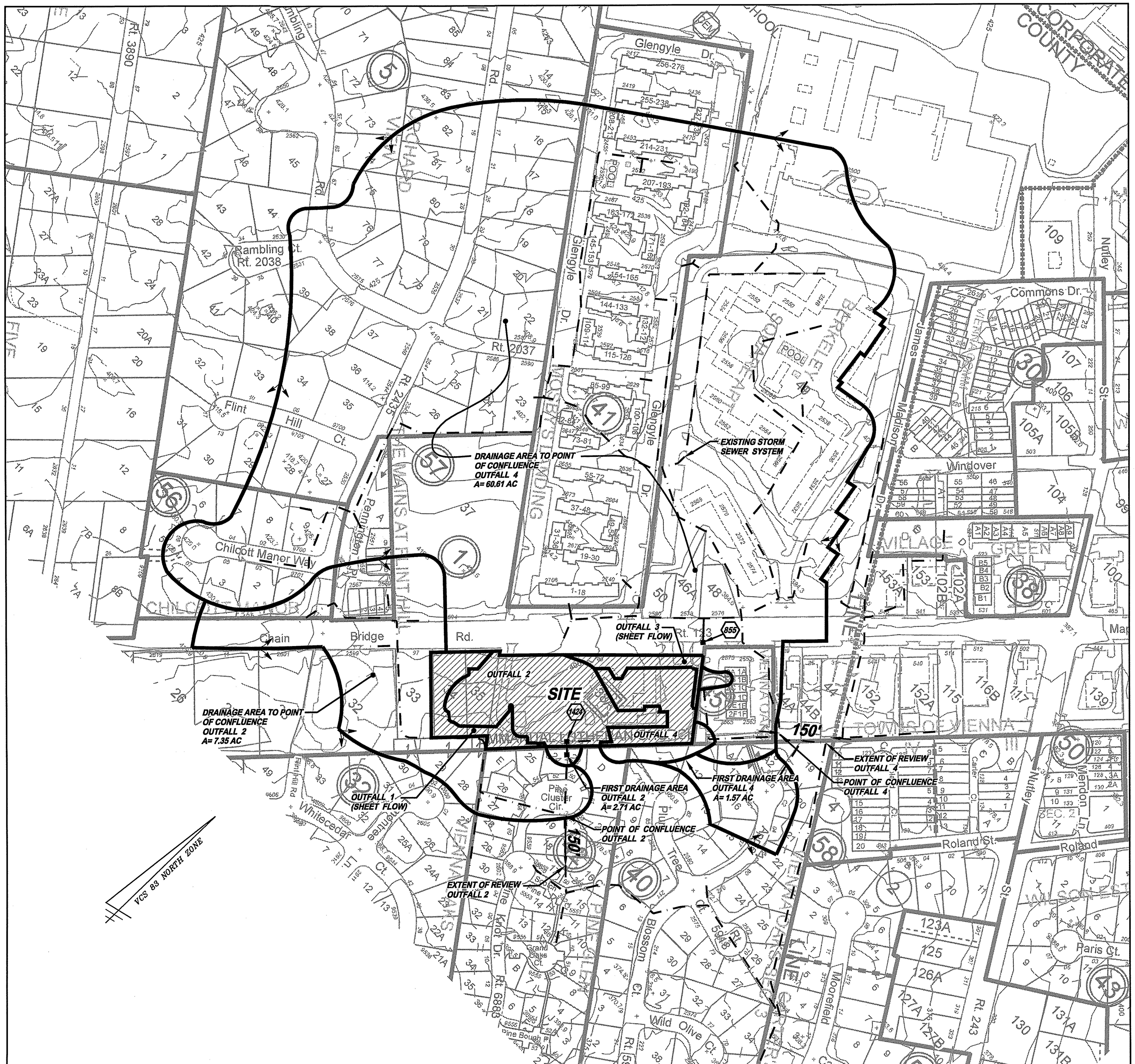
EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

SHEET: P-0503

File No. FM-18 Tax Map No. 38-3 Job No. 07066 Cadd Dwg. File: Q:\sdskproj\07066\dwg\Planning\Zoning\07066P-0503.dwg Xref: DIR\0000



OUTFALL NARRATIVE - ULTIMATE

EXISTING CONDITIONS:
THE SITE IS CURRENTLY DEVELOPED WITH A CHURCH AS WELL AS TWO EXISTING SINGLE FAMILY HOMES. MUCH OF THE SITE'S RUNOFF LEAVES THE SITE AS SHEET FLOW THOUGH SOME IS COLLECTED IN A STORM DRAIN ON THE SOUTHERN EDGE OF THE PROPERTY. RUNOFF LEAVES THE SITE VIA SIX OUTFALLS WHICH ALL EVENTUALLY FLOW TO THE SOUTH AND SOUTHEAST. THE SHEET FLOW RUNOFF TO OUTFALLS 3 LEAVE THE SITE IN A NORTHEASTERLY DIRECTION AND ARE COLLECTED BY STORM SEWERS IN CHAIN BRIDGE ROAD. THESE STORM SEWERS THEN CONVEY THE RUNOFF IN A SOUTHERLY DIRECTION. THE SITE RUNOFF WHICH FLOWS TO OUTFALL 2 FLOWS TO AN INFILTRATION FACILITY LOCATED ALONG THE SOUTHERN PROPERTY LINE. THIS OUTFALL 2 RUNOFF THAT DOES NOT INFILTRATE IS COLLECTED IN EXISTING INLET 1424 AND THEN LEAVES THE SITE AND HEADS IN A SOUTHERLY DIRECTION. THE SHEET FLOW RUNOFF TO THE REMAINING OUTFALLS (OUTFALLS 1 AND 3) LEAVE THE SITE UNCONTROLLED AS SHEET FLOW AND FLOW IN A SOUTHERLY DIRECTION. REFER TO THE OUTFALL PLAN THIS SHEET.

PROPOSED CONDITIONS:
IN THE POST DEVELOPMENT CONDITION THE RUNOFF FROM THE SITE WILL BE CONVEYED TO FOUR OUTFALLS. A MINOR AMOUNT OF SHEET FLOW RUNOFF IN THE PREDEVELOPMENT CONDITION WILL BE DIVERTED TO OUTFALL 4 DUE TO THE REQUEST OF THE NEIGHBORING PROPERTIES TO THE SOUTH TO REDUCE THE SITE RUNOFF THAT FLOWS TO THEIR PROPERTIES. SOME ONSITE FLOW WILL CONTINUE TO BE ROUTED TO THE EXISTING INFILTRATION FACILITY AND OUTFALL 2 WITH NO CHANGES TO THE FACILITY. ADDITIONAL DRAINAGE AREA WITH NEW IMPERVIOUS AREA WILL BE ROUTED TO AN UNDERGROUND DETENTION FACILITY AND THEN THE EXISTING ONSITE STRUCTURE 1424 BEFORE BEING RELEASED TO OUTFALL 2. THE DETENTION FACILITY IS REQUIRED SO AS TO NOT INCREASE THE PEAK RATES OF RUNOFF FROM THE SITE. NO OTHER DETENTION FACILITIES ARE REQUIRED OR PROPOSED. A PROPOSED STORM SEWER SYSTEM WILL COLLECT ADDITIONAL SITE RUNOFF AND CONVEY IT TO AN EXISTING OFFSITE DETENTION POND ON THE ADJACENT PROPERTY TO THE EAST WHICH IS OUTFALL 4. THE RUNOFF TO THIS OFFSITE POND WILL NOT BE INCREASED ABOVE EXISTING PEAK RATES FOR THE 2 AND 10 YEAR STORMS WITHOUT THE NEED FOR A DETENTION FACILITY. ALL OTHER RUNOFF (TO OUTFALLS 1 AND 3) WILL CONTINUE TO LEAVE THE SITE AS SHEET FLOW AS IT DOES TODAY.

IN ACCORDANCE WITH PFM SECTION 6-0203.2A, THE EXTENT OF DOWNSTREAM OUTFALL REVIEW CAN END 150' DOWNSTREAM OF A POINT WHERE A RECEIVING PIPE OR CHANNEL IS JOINED BY ANOTHER THAT HAS A DRAINAGE AREA THAT IS AT LEAST 90 PERCENT OF THE SIZE OF THE FIRST DRAINAGE AREA AT THE POINT OF CONFLUENCE IF THAT 150' OUTFALL SECTION IS ADEQUATE. THIS RULE DETERMINES THE EXTENT OF REVIEW FOR OUTFALLS 2 AND 4. THE OUTFALL MAP SHOWS THE EXTENT OF REVIEW FOR OUTFALLS 2 AND 4. THE STORM SEWERS FOR OUTFALLS 2 AND 4 WITHIN THE EXTENT OF REVIEW HAVE ADEQUATE CAPACITY FOR A 10-YEAR EVENT. THEREFORE, IT IS OUR OPINION THAT THESE TWO SITE OUTFALLS WILL BE ADEQUATE. FOR THE THREE REMAINING OUTFALLS, THE RUNOFF LEAVES THE SITE AS SHEET FLOW WITH NO ADVERSE IMPACT SO THE OUTFALLS ARE ALSO ADEQUATE IN OUR OPINION.

DRAINAGE DIVIDES AND CHANNEL INFORMATION WERE DETERMINED USING AVAILABLE RECORD INFORMATION AND TOPOGRAPHY. THIS OUTFALL ANALYSIS IS SUBJECT TO CHANGE WITH FINAL ENGINEERING AND WILL BE REEVALUATED AND VERIFIED AT SITE PLAN.

Application No. SE 2012-PR-010 Staff MAT

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CSP) (FDP) (PRC) (CP) (SE) (SP)
See DEV CONDS Dated 3/8/13
Date of (BOS) (PC) 3/19/13

Sheet 14 of 14

Concurrent w/ RZ 2012-PR-011

PRELIMINARY STORMWATER OUTFALL ANALYSIS - ULTIMATE

EMMANUEL LUTHERAN CHURCH

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

COMMONWEALTH OF VIRGINIA
AARON M. VINSON
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