SPECIAL PERMIT PLAT

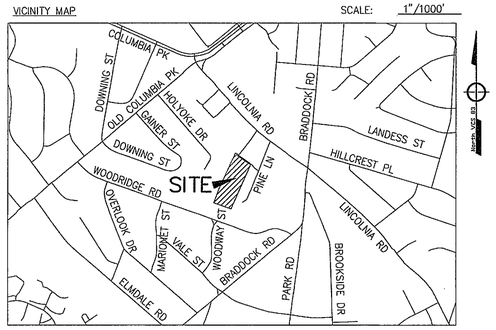
MAHEDERE SEBEHAT LEDETA LE-MARIAM ETHIOPIAN ORTHODOX CHURCH

MASON DISTRICT FAIRFAX COUNTY, VIRGINIA

ZONING REQUIREMENTS

1) ZONING R-2
2) AVERAGE LOT AREA 18,000 sq.ft. (sq.ft. or sq.m)
3) MIN. LOT AREA 15,000 sq.ft. (sq.ft. or sq.m)
4) MIN. LOT WIDTH 100 ft. (ft. or m)
5) MAX. BUILDING HEIGHT 60' ft. (ft. or m)
6) NUMBER OF FLOORS _____ (Commercial/Industrial ONLY)
7) MIN. YARD REQUIREMENTS:
   FRONT 35' (ft. or m) SIDE 15' (ft. or m) REAR 25' (ft. or m)
8) MAXIMUM FAR 0.2
9) MAXIMUM DENSITY 2 (D.U./Ac. or D.U./ha)
10) OPEN SPACE REQUIRED NONE % _____ (sq.ft. or sq.m)
11) ANGLE OF BULK PLANE: FRONT 45'/35' SIDE 40'/15' REAR 40'/25'
    SEE DETAIL SHEET 2
12) OVERLAY DISTRICT(S) N/A

VICINITY MAP SCALE: 1"/1000'

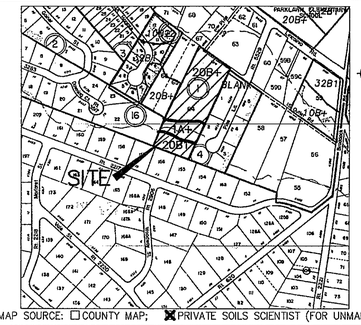


TRAIL MAINTENANCE: OOOO-FFX CO
ALL OTHER WALKS/TRAILS TO BE OWNER MAINTAINED

TAX MAP REFERENCE NUMBER(S)

MAP PAGE #	DOUBLE CIRCLE #	BLOCK (SINGLE CIRCLE #)	LOT/PARCEL(S) #
072-1	01		0064

SOILS MAP DATA SCALE: 1"=500'



SOILS MAP SOURCE: ☐ COUNTY MAP; ☒ PRIVATE SOILS SCIENTIST (FOR UNMAPPED SITES)

SOIL ID NUMBERS	SOIL SERIES NAME	FOUNDATION SUPPORT	SUBSURFACE DRAINAGE	SLOPE STABILITY	ERODABILITY	PROBLEM CLASS
20B+	MEADOWVILLE	MARGINAL-W	FAIR-B,W	GOOD	SLIGHT	B
20B1	MEADOWVILLE	MARGINAL-W	FAIR-B,W	GOOD	SLIGHT	B
1A+	MIXED ALLUVIAL	POOR-F, B, W	POOR-F, W	GOOD	SLIGHT	A

SOILS WITH IDENTIFICATION NUMBERS 59, 66, 69, 141, 142, AND 152 MAY OVERLIE PARENT BEDROCK FORMATIONS WHICH HAVE BEEN FOUND TO CONTAIN NATURALLY OCCURRING ASBESTOS MINERALS. SPECIAL MINIMUM CONSTRUCTION MEASURES AND PRECAUTIONS ARE REQUIRED IN COMPLIANCE WITH HEALTH DEPARTMENT DIRECTIVES WITHIN THESE SOILS OR WITHIN FILL ORIGINATING FROM THESE SOILS.

SITE ADDRESS:	4214 PINE LANE ALEXANDRIA, VA 22312
SITE AREA:	4.54 ACRES
PROPOSED USE:	CHURCH
PROPOSED # SEATS:	337
REQUIRED PARKING:	85 (1 SPACE PER 4.0 SEATS)
PARKING PROVIDED:	132 (1 SPACE PER 2.55 SEATS)
HANDICAPPED PARKING REQUIRED:	5
HANDICAPPED PARKING PROVIDED:	5 (4 VAN ACCESSIBLE)
PROPOSED BUILDING GROSS FLOOR AREA:	
CHURCH:	±6,300 SQUARE FEET
RECTORY:	±1,600 SQUARE FEET
TOTAL:	±7,900 SQUARE FEET
MAXIMUM FLOOR AREA RATIO	0.20
PROPOSED FLOOR AREA RATIO BEFORE DEDICATION (7,900 / 197,762):	±0.039
PROPOSED FRONT YARD:	±39'
PROPOSED SIDE YARD:	±32' (WEST) ±60' (EAST)
PROPOSED REAR YARD:	±290'
PROPOSED BUILDING HEIGHT:	60'
RIGHT OF WAY DEDICATION (50'):	13,538 SQUARE FEET
LOT WIDTH ALONG RIGHT OF WAY:	±271'

NOTES:

1. THERE IS RPA LOCATED ON THE SITE AND IS SHOWN PER THE CURRENT FAIRFAX COUNTY MAPS AND BASED ON A FIELD VERIFIED DELINEATION. A RPA DELINEATION PLAN HAS BEEN SUBMITTED FOR REVIEW. APPROVAL OF PLAN WILL BE REQUIRED AT TIME OF FINAL SITE PLAN.
2. A FLOODPLAIN STUDY HAS BEEN PREVIOUSLY SUBMITTED AND APPROVED UNDER FAIRFAX COUNTY #4906-FP-001.
3. BOUNDARY AND TOPOGRAPHY DELINEATED HEREIN IS BASED ON A FIELD RUN SURVEY BY RICE ASSOCIATES DATED FEBRUARY 3, 2005. HORIZONTAL DATUM IS NAD83 AND VERTICAL DATUM IS NAVD29.
4. THE SITE IS SERVED BY PUBLIC WATER AND SEWER. ADDITIONAL IMPROVEMENT MAY BE NECESSARY TO UPGRADE THE WATER SUPPLY FOR THE PROPOSED USE.
5. THE LOCATION OF ALL EXISTING UTILITY EASEMENTS HAVING A WIDTH OF TWENTY-FIVE (25) FEET OR MORE AND ALL MAJOR UNDERGROUND UTILITIES IS SHOWN HEREIN.
6. THE EXISTING HOUSE HAS A HEIGHT OF APPROXIMATELY 35 FEET AND THE TIMING OF CONSTRUCTION IS APPROXIMATELY 1910. THE EXISTING SHED IS APPROXIMATELY 7' X 10' WITH AN APPROXIMATE HEIGHT OF 10'. THE HOUSE AND SHED WILL BE REMOVED.
7. THERE ARE NO KNOWN GRAVES OR EVIDENCE OF ANY GRAVES ON THE SITE.
8. THE PROPOSED SITE SIGNAGE WILL MEET ALL ZONING REQUIREMENTS.
9. THERE IS NO TRAIL REQUIRED PER THE COMPREHENSIVE TRAILS PLAN.
10. THE CURRENT CHURCH BUILDING DESIGN INCLUDES AN APPROXIMATELY 4800 SQ. FT. CELLAR AS DEFINED BY FAIRFAX COUNTY ZONING ORDINANCE. THE CHURCH RESERVES THE RIGHT TO PROVIDE MORE OR LESS CELLAR SPACE IN ACCORDANCE WITH THE COUNTY DEFINITION.
11. APPLICANT PROPOSES TO DEDICATE APPROXIMATELY 13,538 SQ. FT. IN CONNECTION WITH STREET IMPROVEMENTS. THE APPLICANT RESERVES THE RIGHT, PURSUANT TO SECTION 2-308 OF THE FAIRFAX COUNTY ZONING ORDINANCE TO RESERVE DENSITY CREDIT AS MAY BE PERMITTED UNDER THE ORDINANCE.
12. APPLICANT RESERVES THE RIGHT TO MAKE MINOR MODIFICATIONS TO THE SPECIAL PERMIT PLAT BASED ON FINAL ENGINEERING AND DESIGN.
13. THE PROPOSED SITE WILL MEET ALL ZONING REQUIREMENTS EXCEPT AS NOTED ON THE SPECIAL PERMIT PLAT.

WAIVERS/MODIFICATION REQUEST:

1. A WAIVER OF THE TRANSITIONAL SCREENING, BARRIER AND PERIPHERAL PARKING LOT LANDSCAPING REQUIREMENTS ALONG THE SOUTHERN PROPERTY BOUNDARY IS HEREBY REQUESTED.
2. A MODIFICATION OF THE TRANSITIONAL SCREENING YARD PLANTING REQUIREMENTS IS REQUESTED TO ALLOW THE USE OF EXISTING VEGETATION TO SATISFY THOSE REQUIREMENTS ALONG PORTIONS OF THE EAST AND WEST, AND ENTIRE SOUTHERN PROPERTY LINES AS SHOWN HEREON.
3. A MODIFICATION OF THE TRANSITIONAL SCREENING YARD WIDTH IS REQUESTED FOR THAT PORTION OF THE NORTHWEST PROPERTY CORNER ADJACENT TO THE TEMPORARY TURN AROUND, TO THAT SHOWN HEREON.
4. A WAIVER OF THE BARRIER REQUIREMENTS IS REQUESTED ALONG THOSE PORTIONS OF THE EAST, WEST, AND ENTIRE SOUTHERN PROPERTY LINES AS SHOWN HEREON.

Application No. SP 2010-MA-041
Approved
John W Gillen
Chairman, Board of Zoning Appeals

SHEET INDEX

1. COVER SHEET
2. NOTES AND DETAILS
3. SPECIAL PERMIT PLAT
4. PRELIMINARY LANDSCAPE PLAN
5. STORMWATER MANAGEMENT PLAN
6. STORMWATER MANAGEMENT COMPUTATIONS
7. EXISTING VEGETATION MAP
8. TREE PRESERVATION PLAN
9. TREE PRESERVATION NARRATIVE AND DETAILS
10. CHURCH BUILDING ELEVATIONS
11. CHURCH CELLAR FLOOR PLAN
12. RECTORY BUILDING ELEVATIONS
13. SITE CROSS SECTION EXHIBIT

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DEC 06 2010
Zoning Evaluation Division

Burry+Partners
ENGINEERING SOLUTIONS
Consulting Engineers and Surveyors
3810 Concorde Parkway, Suite 1000
Chantilly, Virginia 20151
Tel 703/968-8600 Fax 703/968-4866
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COVER SHEET
MAHEDERE SEBEHAT LEDETA LE-MARIAM
ETHIOPIAN ORTHODOX CHURCH
MASON DISTRICT FAIRFAX COUNTY, VIRGINIA

SP 2010-MA-041
COUNTY PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
WILLIAM D. HUME
LIC. No. 037880
11/9/10
12/2/10
PROFESSIONAL ENGINEER

PLAN STATUS	
5-27-10	REV PER COUNTY
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	COMMENTS
8-12-10	PER-STAFFING
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10-14-10	PER-STAFFING
	COMMENTS
11-9-10	PER COMMENTS
12-2-10	PER COMMENTS
DATE	DESCRIPTION

MT	KF	MT
DESIGN	DRAWN	CHKD

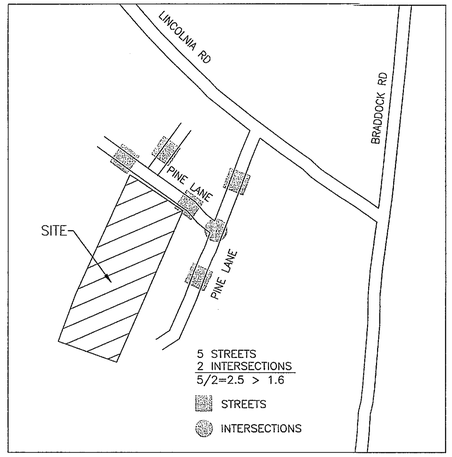
SCALE H: V:

JOB No. 8105-01-001

DATE : MARCH 01, 2010

FILE No.

SHEET 1 OF 13



STREET CONNECTIVITY INDEX REQUIREMENT

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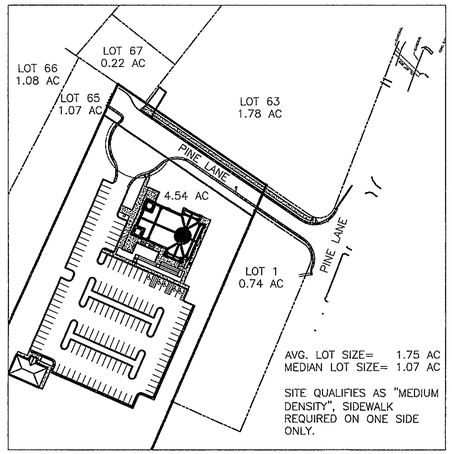

PEDESTRIAN CONNECTIVITY INDEX REQUIREMENT

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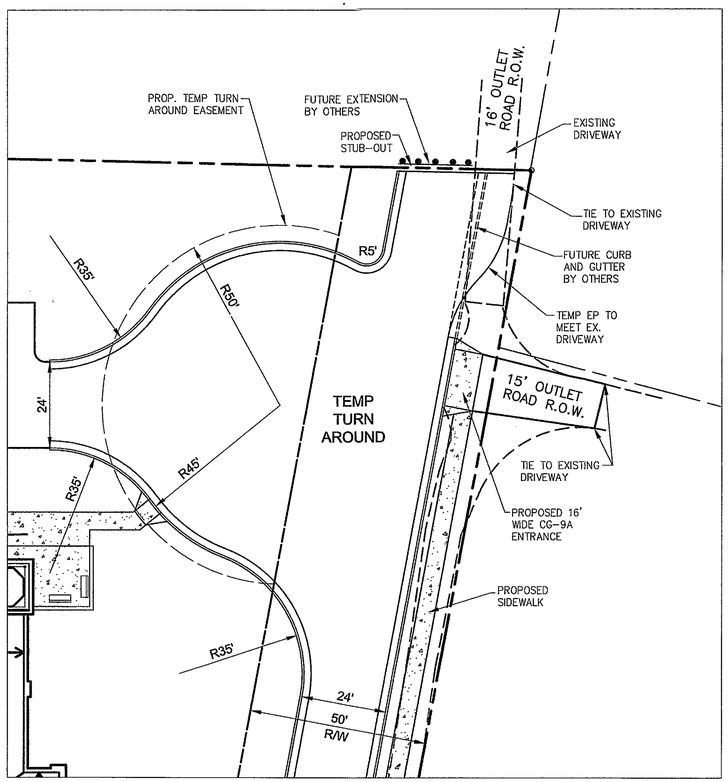


TEMPORARY TURN AROUND AND EXTENSION EXHIBIT

SCALE: 1"=20'

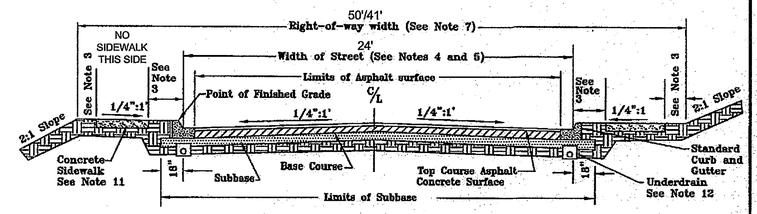
Ref. Sec. 7-0101, 7-0405.1D, 7-0406.7B 7-0502.4A, 7-0502.4B

Rev. 04-07

STANDARD TYPICAL SECTION FOR UNDIVIDED STREETS WITH CURB & GUTTER

PLATE NO. 2-7

STD. NO. TS-2



NOTES

1) This typical section may be used in subdivisions in which the average lot size is less than 18,000 sf on streets that have an ADT up to 5499.
2) For streets with projected traffic volumes over 8000 ADT, or serving heavy commercial or industrial traffic, the street shall be designed in accordance with the current VDOT Road Design Manual. Pedestrian facilities shall be provided in accordance with Section 8 of the Public Facilities Manual.
3) Distances between features, and distances between features and the right-of-way line shall be in accordance with the current Appendix B of the VDOT Road Design Manual. VDOT will accept sidewalk, which is a minimum of 1 foot from the right-of-way line.
4) For streets with an ADT of 4000 or less; design speed, sight distance, centerline radius, street width from face of curb to face of curb, grade, K values for sag and crest, and clear zone shall be in accordance with the current Appendix B of the VDOT Road Design Manual.
5) For streets with an ADT between 4001 and 5499; sight distance, centerline radius, grade, K values for sag and crest, and clear zone shall be in accordance with the current VDOT Road Design Manual based on urban road criteria and a 40 mph design speed. The minimum street width from face of curb to face of curb shall be 40 feet.
6) Streets with an ADT greater than 4000 shall be superelevated in accordance with VDOT Road Design Manual.
7) The required right-of-way width shall be based on containing the features to be maintained by VDOT within the right-of-way in accordance with the current VDOT Road Design Manual.
8) Grades of relatively short length (up to 295 feet), which are on a street with a projected traffic volume up to 400 ADT, may be increased by 50% of the value upon approval by the Director and VDOT.
9) Surface, base and subbase designs shall be predicated upon a subgrade CBR of 10 or greater and shall be designed in accordance with the current VDOT Pavement Design Guide for Subdivision and Secondary Roads in Virginia.
10) Stone base or subbase material shall extend under the curb and gutter a minimum distance of 18" from the face of curb. The stone thickness under the curb and gutter shall be the pavement depth in excess of the 7" depth of the gutter face but no less than 4".
11) Sidewalk shall be provided in accordance with Section 8-0100 et seq. of the Public Facilities Manual and shall meet the standards set forth in the current Appendix B of the VDOT Road Design Manual. Sidewalk cross slope, including passing areas (full 5-foot width) and driveway crossings (3-foot width) should not exceed 2%.
12) Underdrains and combination underdrains shall be provided in accordance with the current VDOT Road and Bridge Standards. Underdrains are required on streets with an ADT of 1000 or greater.

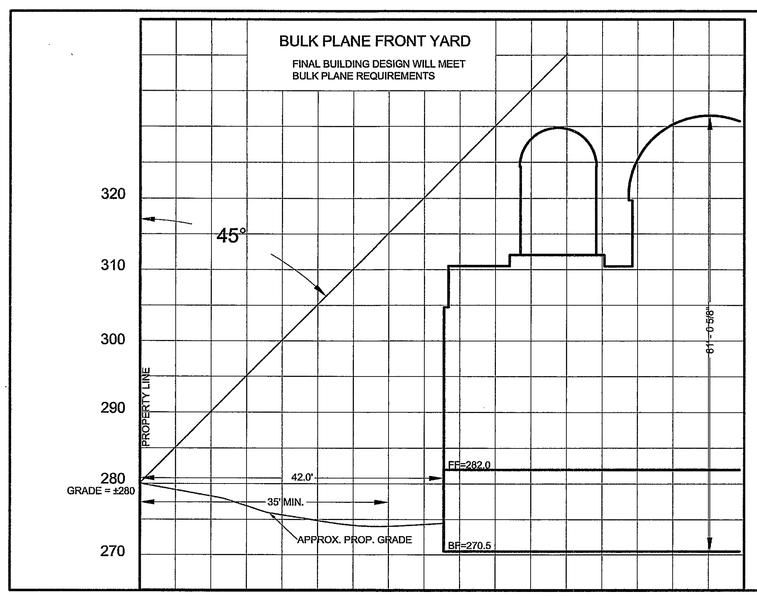
FAIRFAX COUNTY PUBLIC FACILITIES MANUAL

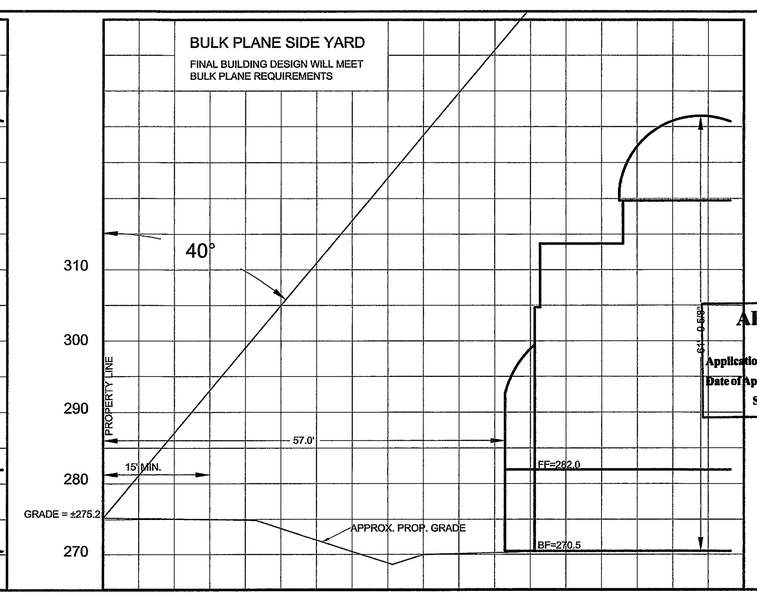
PINE LANE

PROPOSED RIGHT-OF-WAY WIDTH = 50' (PROJECT FRONTAGE)

EXISTING RIGHT OF WAY WIDTH = 41' (OFF-SITE)

PAVEMENT WIDTH (P) = 24' (CURB TO CURB) PER TABLE 1 (NO PARKING)





REAR YARD BULK PLANE:

AT AN ANGLE OF 40° AND A DISTANCE OF 515' FROM THE REAR LOT LINE, THE PROPOSED BUILDING HEIGHT WILL BE FAR BELOW THE BULK PLANE.

THE BUILDING WILL MEET THE REQUIREMENT FROM THE REAR.

SCALE 1" = 10'

APPROVED PLAT

Application No. SP 2010-MA-041

Date of Approval 12/15/10

Sheet 2 of 13

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NOTES AND DETAILS

MAHEDERE SEBEHAT LEDETA LE-MARIAM ETHIOPIAN ORTHODOX CHURCH

MASON DISTRICT

FAIRFAX COUNTY, VIRGINIA

SP 2010-MA-041

COUNTY PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
WILLIAM D. HUME
LIC. No. 037880
12/2/10
PROFESSIONAL ENGINEER

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	COMMENTS
11-9-10	PER COMMENTS
12-2-10	PER COMMENTS

DATE	DESCRIPTION	
MT	KF	MT
DESIGN	DRAWN	CHKD

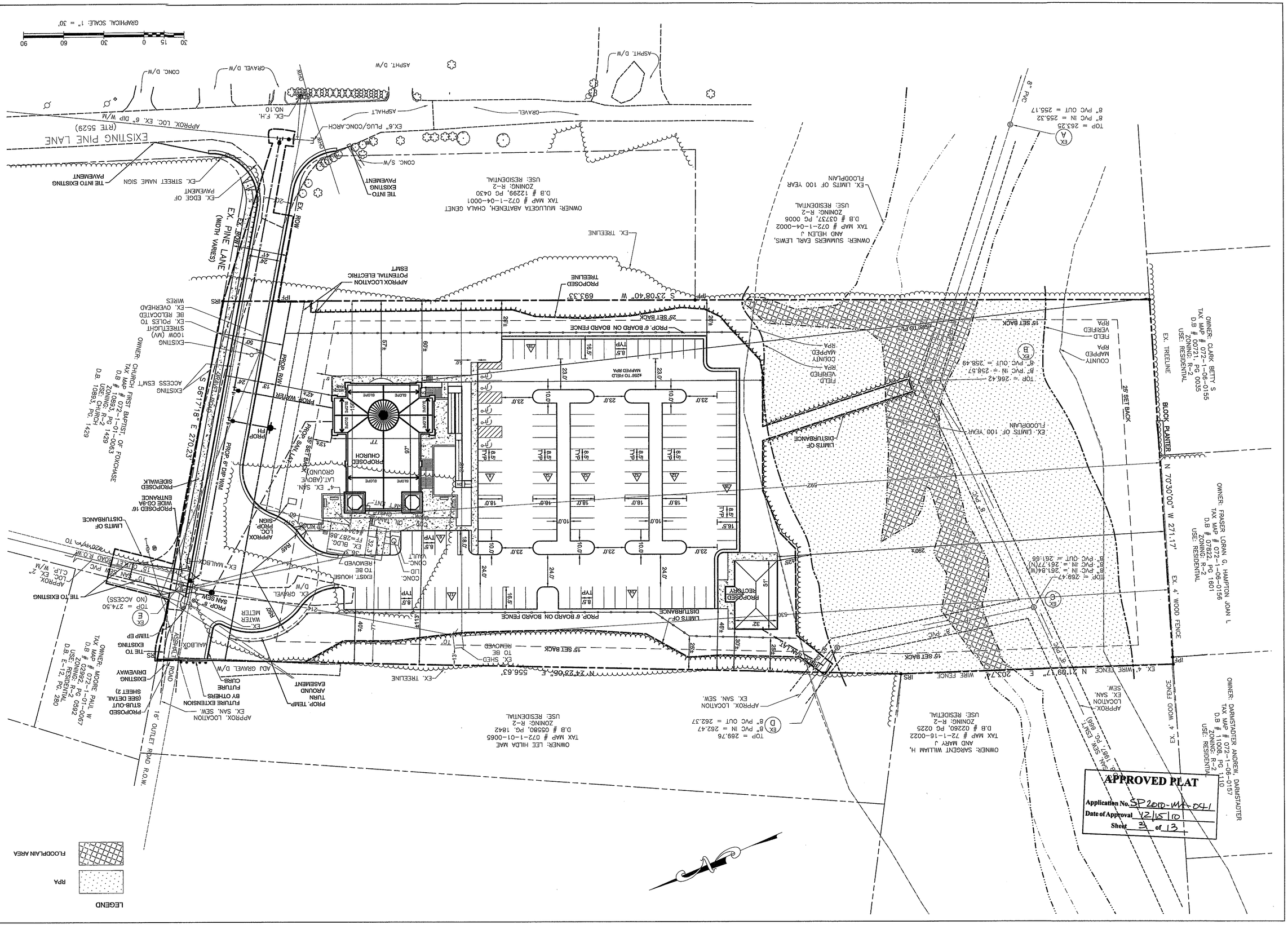
SCALE H: V:

JOB No. 8105-01-001

DATE : MARCH 01, 2010

FILE No.

SHEET 2 OF 13



SPECIAL PERMIT PLAT

MAHEDERE SEBEHAT LE-MARIAM ETHIOPIAN ORTHODOX CHURCH

MASON DISTRICT

FAIRFAX COUNTY, VIRGINIA

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12-2-10 PER COMMENTS

DATE	DESCRIPTION
MT	MT
KF	KF
MT	MT

DESIGN	DRAWN	CHKD
HF	HF	

SCALE
1" = 30'

JOB No.
8105-01-001

DATE :
MARCH 01, 2010

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SHEET
3 OF 13

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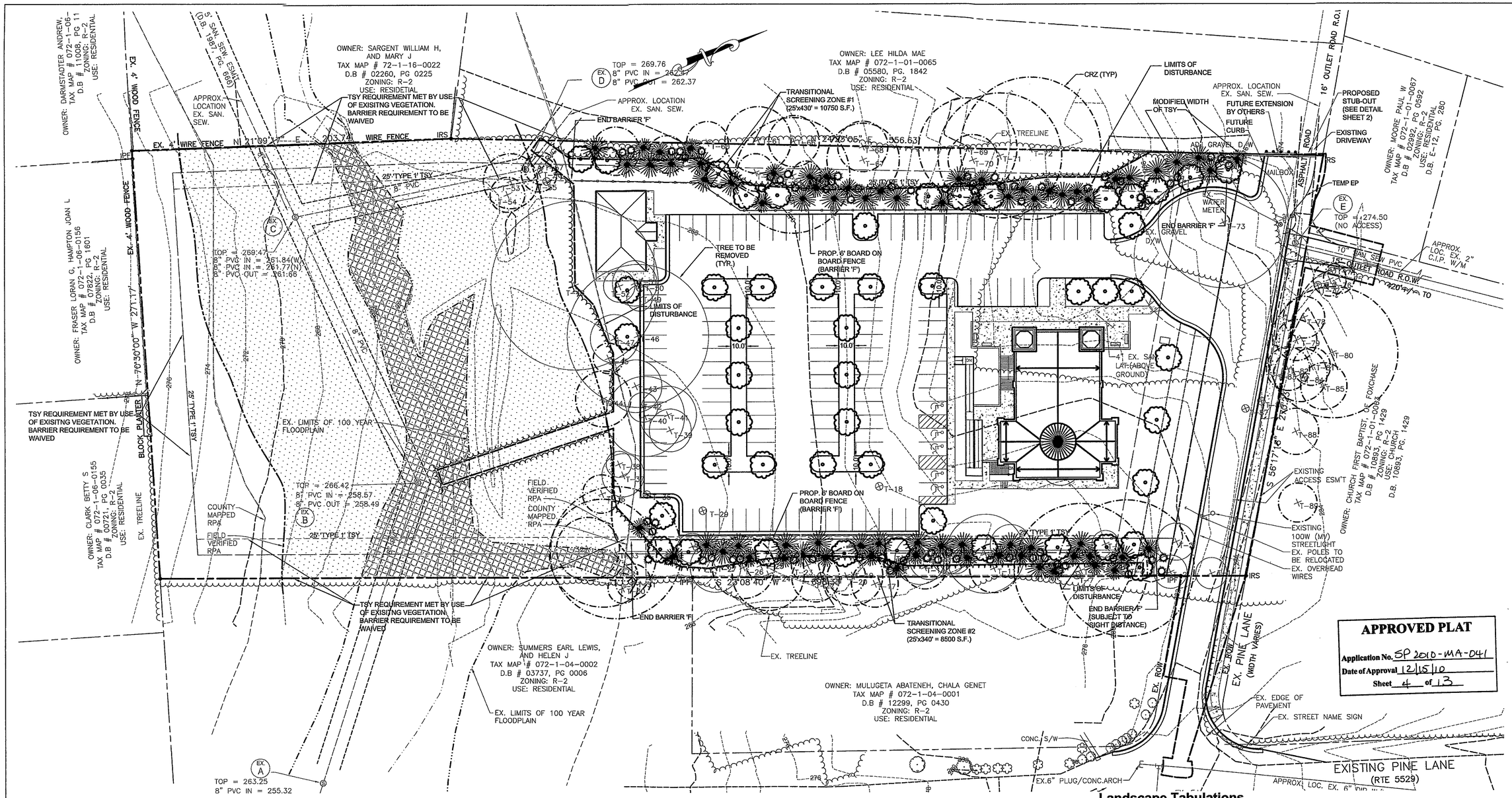
P:\Planning Department temp directory\Projects Pending\Ethiopian Orthodox Church\20368-Ethiopian Church\01-Ethiopian Church\100 - Drawings\Presentation\Special Permit\BG3 11.08.10\020368- (3) Special Permit Plat.dwg, 12/2/2010 2:57:01 PM, kf



APPROVED PLAT
Application No. SP 2010-MA-041
Date of Approval 12/15/10
Sheet 4 of 13

Landscape Tabulations

POSSIBLE PLANT SPECIES SHOULD INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

	COMMON NAME
LARGE EVERGREEN TREES:	
PINUS RIGIDA	PITCH PINE
PINUS SYLVESTRIS	SCOTCH PINE
PINUS VIRGINIANA	VIRGINIA PINE
MEDIUM EVERGREEN TREES:	
ILEX OPACA	AMERICAN HOLLY
JUNIPERUS VIRGINIANA	EASTERN RED CEDAR
TSUGA CANADENSIS	EASTERN HEMLOCK
LARGE DECIDUOUS TREES:	
ACER RUBRUM	RED MAPLE
LIQUIDAMBAR STYRACIFLUA	SWEETGUM
PLATANUS OCCIDENTALIS	SYCAMORE
QUERCUS PALUSTRUS	PIN OAK
SHRUBS:	
BUXUS SPECIES AND VARIETIES	BOXWOOD
ILEX SPECIES AND VARIETIES	HOLLIES
RHODODENDRON SPECIES AND VARIETIES	AZALEAS
TAXUS SPECIES AND VARIETIES	YEWS

SEE SHEET 9 FOR EXISTING TREE TABLE

Plant Schedule

Proposed Plant Material	Qty.	Stock Size	Stock Type	10-yr Tree Canopy (s.f.)	Tree Canopy Sub-total (s.f.)
Large Deciduous Tree	50	2" cal.	B&B	200	10,000
Large Evergreen Tree	34	8' ht.	B&B	200	6,800
Medium Evergreen Tree	33	8' ht.	B&B / CONT	100	3,300
Evergreen Shrub	77	24" ht.	CONT	0	0
	Total 10-yr Canopy of Proposed Plantings				20,100

LEGEND

- LARGE DECIDUOUS TREE (CAT. IV; 200 S.F. CANOPY)
- LARGE EVERGREEN TREE (CAT. IV; 200 S.F. CANOPY)
- MEDIUM EVERGREEN TREE (CAT. II; 100 S.F. CANOPY)
- MEDIUM EVERGREEN SHRUB
- EXISTING TREE (TO REMAIN) — T-89
- EXISTING TREE (TO BE REMOVED) — T-58
- PROPOSED TREE LINE
- TRANSITIONAL SCREENING YARD — TSY

Interior Parking Lot Landscaping (IPLL)

Parking Lot Area	42,400sf
Required IPLL (42,400 sf x 5.0%)	2120sf
Provided IPLL (3600 sf = 8.5%)	3600sf

Peripheral Parking Lot Landscaping (PPLL)

North Property Line	60'lf
Required Landscaping (1 Tree per 40')	2trees
Provided Landscaping	2trees

Parking Lot Landscape Note:

1. The PPLL requirements for the east and west property lines are being met by the required transitional screening.
2. A waiver of the required PPLL along the southern property line is hereby requested. Refer to Waiver Note 1 on Sheet 1.
3. 24 large deciduous trees (Cat. IV; 200 sf) have been proposed to meet the IPLL and PPLL requirements.

Transitional Screening Requirements - Western Property Line

Total Property Length = 710 LF
Area of TSY Met By Existing Vegetation = 280 LF
Remaining Transitional Screening Area =(25' x 430' lf)=10750 sf

Required Landscaping = 8063 sf (75% of TSY at 10-yr canopy)

Provided Landscaping:	8100sf
19 - Large Evergreen Trees (Cat. IV; 200 sf avg.)	3800sf
17 - Medium Evergreen Trees (Cat. II; 100 sf avg.)	1700sf
13 - Large Deciduous Trees (Cat. IV; 200 sf avg.)	2600sf
43- Medium Evergreen Shrubs (3 per 10 lf of transitional screen)	0sf

Transitional Screening Yard and Barrier Notes/ Waivers / Modifications:

1. A modification of the Transitional Screening Yard planting requirements is requested to allow the use of existing vegetation to satisfy those requirements along portions of the the East and West, and entire Southern property lines as shown hereon.
2. A modification of the Transitional Screening Yard width is requested for that portion of the northwest property corner adjacent to the temporary turn around, to that shown hereon.
3. A waiver of the Barrier requirements is requested along those portions of the East, West, and entire Southern property lines as shown hereon.
4. Proposed planting within Transitional Screening Areas are to consist of no more than 35% of any single of evergreen or deciduous tree.

Transitional Screening Requirements - Eastern Property Line

Total Property Length = 643 LF
Area of TSY Met By Existing Vegetation = 303 LF
Remaining Transitional Screening Area = (25' x 340' lf)= 8500 sf

Required Landscaping = 6375 sf (75% of TSY at 10-yr canopy)

Provided Landscaping:	6400 sf
15 - Large Evergreen Trees (Cat. IV; 200 sf avg.)	3000sf
16 - Medium Evergreen Trees (Cat. II; 100 sf avg.)	1600sf
9 - Large Deciduous Trees (Cat. IV; 200 sf avg.)	1800sf
34 - Medium Evergreen Shrubs (3 per 10 lf of transitional screen)	0sf

NOTE: SEE SHEET 8 FOR 10-YR CANOPY CALCULATION WORKSHEET

30 15 0 30 60 90
GRAPHICAL SCALE: 1" = 30'

Bury+Partners
ENGINEERING SOLUTIONS
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PRELIMINARY LANDSCAPE PLAN
MAHEDERE SEBEHAT LEDETA LE-MARIAM
ETHIOPIAN ORTHODOX CHURCH
FAIRFAX COUNTY, VIRGINIA
MASON DISTRICT

SP 2010-MA-041
COUNTY PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
WILLIAM D. HUME
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12/2/10
PROFESSIONAL ENGINEER

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	COMMENTS
11-9-10	PER COMMENTS
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MT	KF	MT
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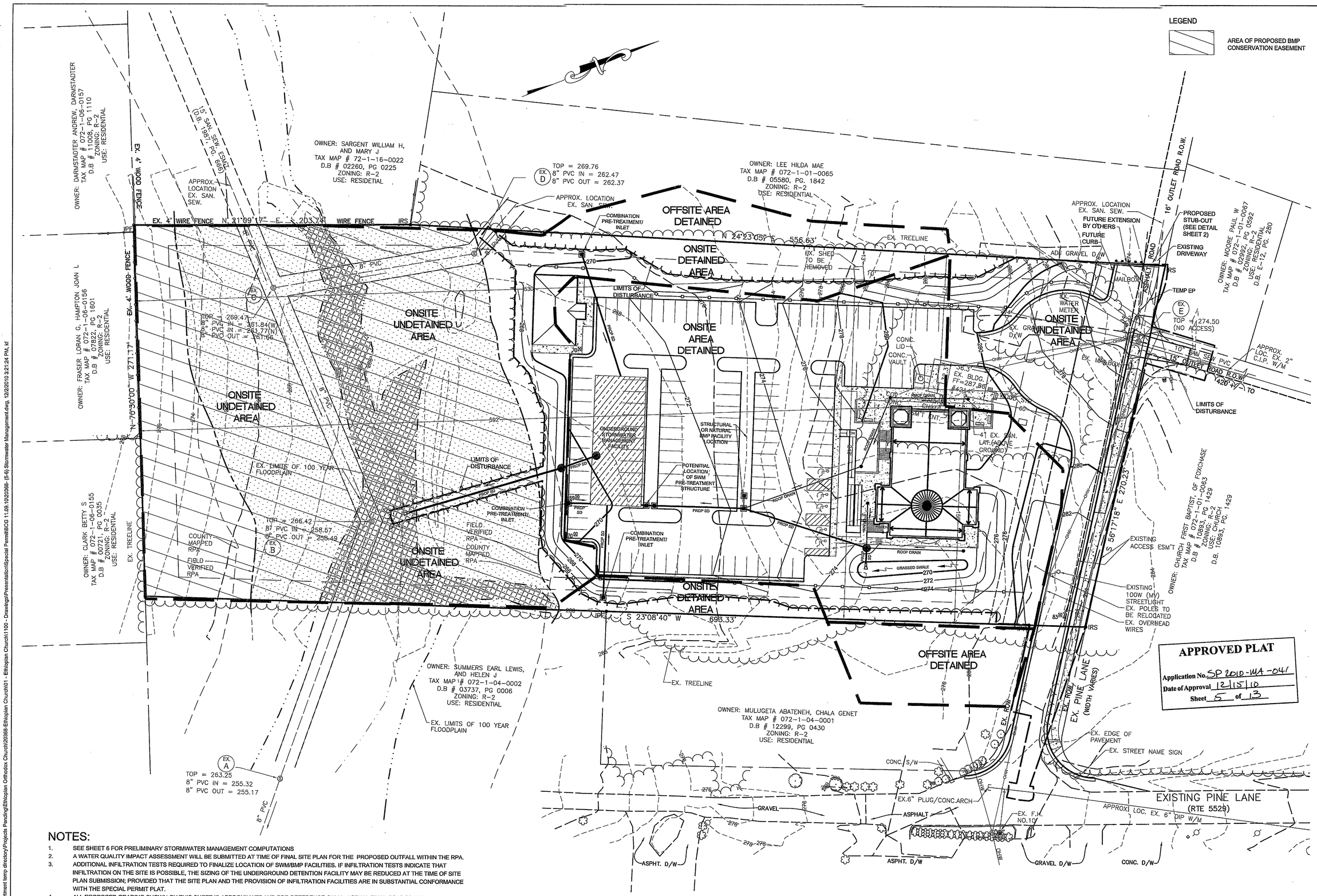
SCALE H: V:
JOB No. 8105-01-001
DATE : MARCH 01, 2010
FILE No.
SHEET 4 OF 13

P:\Planning Department temp directory\Projects Pending\Ethiopian Orthodox Church\203368-Ethiopian Church\01 - Ethiopian Church\1100 - Drawings\Presentation\Special Permit\BCG 11.09.10\203368- (4) LS_PLAN.dwg, 12/2/2010 2:52:44 PM, kf



NOTES:

1. SEE SHEET 6 FOR PRELIMINARY STORMWATER MANAGEMENT COMPUTATIONS
2. A WATER QUALITY IMPACT ASSESSMENT WILL BE SUBMITTED AT TIME OF FINAL SITE PLAN FOR THE PROPOSED OUTFALL WITHIN THE RPA.
3. ADDITIONAL INFILTRATION TESTS REQUIRED TO FINALIZE LOCATION OF SWM/BMP FACILITIES. IF INFILTRATION TESTS INDICATE THAT INFILTRATION ON THE SITE IS POSSIBLE, THE SIZING OF THE UNDERGROUND DETENTION FACILITY MAY BE REDUCED AT THE TIME OF SITE PLAN SUBMISSION; PROVIDED THAT THE SITE PLAN AND THE PROVISION OF INFILTRATION FACILITIES ARE IN SUBSTANTIAL CONFORMANCE WITH THE SPECIAL PERMIT PLAT.
4. ALL PROPOSED GRADING SHOWN ON THIS SHEET IS APPROXIMATE AND FOR REFERENCE ONLY. ACTUAL FINAL GRADES FOR CONSTRUCTION SHALL BE INDICATED WITH THE SITE PLAN SUBMISSION DRAWINGS.
5. UPON APPROVAL OF FIELD DELINEATED RPA, PROPOSED GRADING WILL BE PROVIDED OUTSIDE OF RPA IN ORDER TO CONSTRUCT IMPROVEMENTS.

APPROVED PLAT
Application No. SP 2010-MA-041
Date of Approval 12/15/10
Sheet 5 of 13

Bury+Partners
ENGINEERING SOLUTIONS
Consulting Engineers and Surveyors
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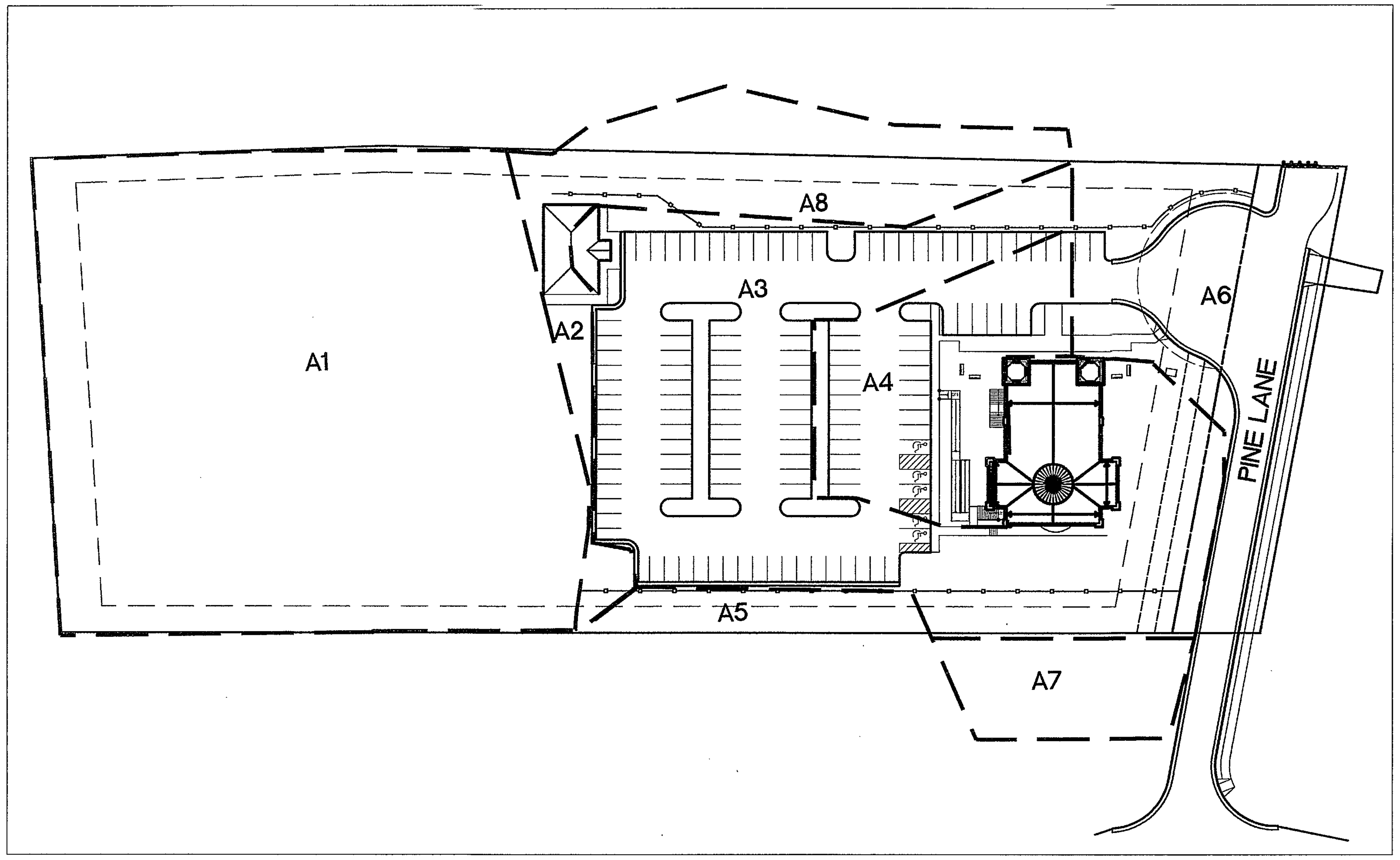
STORMWATER MANAGEMENT PLAN
MAHEDERE SEBEHAT LEDETA LE-MARIAM ETHIOPIAN ORTHODOX CHURCH
FAIRFAX COUNTY, VIRGINIA
MASON DISTRICT

SP 2010-MA-041
COUNTY PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
WILLIAM D. HUME
LIC. No. 037880
12/2/10
PROFESSIONAL ENGINEER

PLAN STATUS		
5-27-10	REV PER COUNTY	
	COMMENTS 5-19-10	
7-26-10	PER PRE-STAFFING	
	COMMENTS	
8-12-10	PER-STAFFING	
	COMMENTS	
10-14-10	PER-STAFFING	
	COMMENTS	
11-9-10	PER COMMENTS	
12-2-10	PER COMMENTS	
DATE	DESCRIPTION	
MT	KF	MT
DESIGN	DRAWN	CHKD
SCALE	H: V:	
JOB No. 8105-01-001		
DATE : MARCH 01, 2010		
FILE No.		
SHEET 5 OF 13		

P:\Planning Department temp directory\Projects Pending\Ethiopian Orthodox Church\20368-Ethiopian Church\01 - Ethiopian Church\1100 - Drawings\Presentation\Special Permit\BCG 11.09.10\20368- (5-6) Stormwater Management.dwg, 12/2/2010 3:21:24 PM, kf



BMP MAP

NOT TO SCALE

PRE-DEVELOPMENT - ALLOWABLE RELEASE

2 YR STORM = Q = CIA = (0.35)(5.45)(4.54) = 8.66 CFS
10 YR STORM = Q = CIA = (0.35)(7.27)(4.54) = 11.55 CFS

POST DEVELOPMENT

2-YR = [(1.856+0.096+0.459)(5.45)(0.4)] + 2.11 = 7.37 CFS
10-YR = [(1.856 +0.096+0.459)(7.27)(0.4)] + 3.34 = 10.35 CFS

POST DEVELOPMENT ROUTING SUMMARY

Type.... Pond Routing Summary — Page 1.01
Name.... STORAGE OUT Tag: 2 — Event: 2 yr
Storm... 2 Tag: 2

LEVEL POOL ROUTING SUMMARY
Inflow HYG file = NONE STORED - STORAGE IN 2
Outflow HYG file = NONE STORED - STORAGE OUT 2

Pond Node Data = STORAGE
Pond Volume Data = STORAGE
Pond Outlet Data = Outlet 1

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 263.21 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 2.50 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow = 7.88 cfs at 5.00 min
Peak Outflow = 2.11 cfs at 30.00 min

Peak Elevation = 265.89 ft
Peak Storage = 3891 cu.ft

Type.... Pond Routing Summary — Page 1.02
Name.... STORAGE OUT Tag: 10 — Event: 10 yr
Storm... 10 Tag: 10

LEVEL POOL ROUTING SUMMARY

Inflow HYG file = NONE STORED - STORAGE IN 10
Outflow HYG file = NONE STORED - STORAGE OUT 10

Pond Node Data = STORAGE
Pond Volume Data = STORAGE
Pond Outlet Data = Outlet 1

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 263.21 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 2.50 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow = 10.55 cfs at 5.00 min
Peak Outflow = 3.34 cfs at 25.00 min

Peak Elevation = 266.75 ft
Peak Storage = 5432 cu.ft

BMP FACILITY DESIGN CALCULATIONS

Watershed: Cameron Run
Plan Name: Ethiopian Orthodox Church — Date: October 11, 2010
Plan Number: 00-00000 — Engineer:

PART I: SUBAREA DESIGNATION AND DESCRIPTION.

		"C"	ACRES
A1	ON-SITE, UNDEVELOPED (UNCONTROLLED)	0.20	1.856
A2	ON-SITE, DEVELOPED (UNCONTROLLED)	0.30	0.096
A3	ON-SITE, DEVELOPED (CONTROLLED)	0.75	1.385
A4	ON-SITE, DEVELOPED (CONTROLLED)	0.75	0.407
A5	ON-SITE, DEVELOPED (UNCONTROLLED)	0.30	0.099
A6	ON-SITE, DEVELOPED (UNCONTROLLED)	0.75	0.459
A7	OFF-SITE, UNDEVELOPED (CONTROLLED)	0.30	0.203
A8	ON-SITE, DEVELOPED (UNCONTROLLED)	0.30	0.240
		TOTAL	4.74322888

PART 2: COMPUTE THE WEIGHTED AVERAGE "C" FACTOR FOR THE SITE
(A) AREA OF SITE (a) 4.74322888 Ac

Subarea	Description	"C"	ACRES	CXA
A1	ON-SITE, UNDEVELOPED (UNCONTROLLED)	0.20	1.856	0.37
A2	ON-SITE, DEVELOPED (UNCONTROLLED)	0.30	0.096	0.03
A3	ON-SITE, DEVELOPED (CONTROLLED)	0.75	1.385	1.04
A4	ON-SITE, DEVELOPED (CONTROLLED)	0.75	0.407	0.31
A5	ON-SITE, DEVELOPED (UNCONTROLLED)	0.30	0.099	0.03
A6	ON-SITE, DEVELOPED (UNCONTROLLED)	0.75	0.459	0.34
A7	OFF-SITE, UNDEVELOPED (CONTROLLED)	0.30	0.203	0.06
A8	ON-SITE, DEVELOPED (UNCONTROLLED)	0.30	0.240	0.07
			TOTAL =	2.1782

WT."C" = 0.46

PART 3: Calculate Total Phosphorous Removal for Site.

Subarea	BMP Type	Removal EFF. (%)	Area Ratio	"C" Factor Ratio	Product
A1	CONSERVATION EASEMENT	100	0.391	1.000	39.12
A2	NONE	0	0.020	0.653	0.00
A3	NONE	0	0.292	1.633	0.00
A4	BIORETENTION/OTHER	50	0.086	1.633	7.01
A5	NONE	0	0.021	0.653	0.00
A6	NONE	0	0.097	1.633	0.00
A7	NONE	0	0.043	0.653	0.00
A8	NONE	0	0.051	0.653	0.00
				TOTAL =	46.14 Percent (%)

PART 4: Determine compliance with requirements.

Water Supply Overlay District
(Occoquan Watershed) — Req'd Removal: 40%

If Part 3 46.14% is greater than 40% :
Then the Phosphorous removal requirement is satisfied.

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 2 & 4L)	PRC Plan (16-303 1E & 10)
FDP P Districts (except PRC) 916-502 1F & 1Q)	Amendments (18-202 10F & 10I)

1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100).
2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheet 3 AND 6
3. Provide:

Facility Name/ Type & No.	On-Site area served (acres)	Off-Site are served (acres)	Drainage area (acres)	Footprint area (sf.)	Storage Volume (cf.)	If pond, dam height (ft.)
UNDERGROUND VAULT	±2.1	±0.20	±2.2	±4,000	±6,300	n/a
(e.g. dry pond A. infil. Trench, underground vault, etc.)						
					Totals	

4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 5 AND 6 .
5. Maintenance accesses (road) to stormwater management facility(ies) are shown on Sheet n/a .
6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet 4 & 9 .
7. A "stormwater management narrative" which contains a description of how detention and best management practices requirements will be met is provided on Sheet 6 .
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 .
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 .
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 AND 5 .
11. A submission waiver is requester for n/a .
12. Stormwater management is not required because n/a .

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STORMWATER MANAGEMENT NARRATIVE

THE ON-SITE STORM WATER DETENTION SYSTEM IS DESIGNED TO DETAIN THE STORMWATER RUNOFF, WHILE DECREASING POST DEVELOPMENT FLOW TO PRE-DEVELOPMENT FLOW RATES.

IT IS ANTICIPATED AT THIS TIME THAT AN UNDERGROUND DETENTION FACILITY WILL BE UTILIZED IN A SYSTEM TO BE APPROVED BY FAIRFAX COUNTY DPWE&S AT THE TIME OF FINAL SITE PLAN. THIS FACILITY, (LOCATION AS SHOWN ON THE STORMWATER MANAGEMENT PLAN SHEET 5) WILL ACCOMMODATE THE REQUIRED STORAGE VOLUME UNLESS SOIL TESTS INDICATE THAT INFILTRATION ON THE SITE IS POSSIBLE. IF ACCEPTABLE INFILTRATION RATES ARE ACHIEVED ELSEWHERE ON SITE, THE SIZING OF THE UNDERGROUND DETENTION FACILITY MAY BE REDUCED, PROVIDED THAT THE SITE PLAN AND THE PROVISION OF INFILTRATION FACILITIES ARE IN SUBSTANTIAL CONFORMANCE WITH THE SPECIAL PERMIT PLAT.

PRE-TREATMENT OF THE STORMWATER RUNOFF PRIOR TO IT ENTERING THE UNDERGROUND FACILITY WILL BE ACHIEVED VIA ISOLATED OR COMBINATION INLET STRUCTURAL SYSTEM TO BE LOCATED WITHIN THE DEVELOPMENT AREA, AS SHOWN ON SHEET 5

BEST MANAGEMENT PRACTICES NARRATIVE:

THE MAJORITY OF THE BEST MANAGEMENT PRACTICES FOR PHOSPHOROUS REMOVAL WILL BE MET THROUGH A CONSERVATION EASEMENT PLACED OVER THE RPA AREA. THE REMAINDER OF REQUIRED BMP WILL BE MET THROUGH NATURAL OR STRUCTURAL SYSTEMS LOCATED WITHIN THE DEVELOPMENT AREA (SEE SHEET 5).

AT THE TIME OF FINAL SITE PLAN, SUBMISSION OF A RPA DELINEATION PLAN WILL BE REQUIRED. RESULTS OF THE DELINEATION MAY ALTER THE LIMITS OF THE RPA SHOWN HEREON. BASED ON RESULTS OF THE APPROVED DELINEATION, THE DEVELOPER RESERVES THE RIGHT TO REVISE THE CONSERVATION AREA AND PROVIDE MORE DETENTION/INFILTRATION TO MEET THE BMP'S IF NEEDED. FINAL BMP COMPUTATIONS WILL BE CALCULATED AT TIME OF FINAL SITE PLAN.

ADEQUATE OUTFALL NARRATIVE

THE PROPOSED STORMWATER MANAGEMENT FACILITY OUTFALLS ON SITE INTO AN EXISTING INCISED AND BED/BANK CHANNEL (WITHIN THE LIMITS OF THE RPA AND FLOODPLAIN) THAT RUNS FROM WEST TO EAST THROUGH THE SITE. FROM THIS POINT THE CHANNEL TRAVELS ANOTHER 60 FEET TO THE PROJECT'S EASTERN BOUNDARY. AN OVERALL DRAINAGE AREA OF APPROXIMATELY 85 ACRES DRAINS TO THE OUTFALL OF THE SITE.

THE EXISTING CHANNEL (INCISED AND BED/BANK) LEAVES THE SITE AND TRAVELS APPROXIMATELY 150 FEET EAST TO A 30 INCH RCP CULVERT (DEBRIS FILLED) LOCATED BENEATH THE DRIVEWAY ACCESS ROAD SERVING LOT 2, AT THE END OF PINE LANE (RTE 5529). FROM THIS POINT THE OUTFALL CONTINUES IN AN INCISED, BED/BANK CHANNEL ANOTHER 850 FEET TO A TWIN 30 INCH RCP CULVERT UNDER BRADDOCK ROAD (RTE 620), THEN ANOTHER 300 FEET TO ANOTHER CULVERT UNDER BROOKSIDE DRIVE (RTE 740). FROM THERE THE CONVEYANCE CHANNEL TURNS SOUTH AND TRAVELS APPROXIMATELY 3,963 FEET TO THE CULVERT AT LITTLE RIVER TURNPIKE. FROM THIS CULVERT APPROXIMATELY 730 FEET SOUTH THERE IS ANOTHER EXISTING CHANNEL THAT COMBINES WITH TURKEYCOCK RUN. AT THIS POINT THE DRAINAGE AREA IS 1,095 ACRES (1.71 SQUARE MILES) AND THE PROJECT SITE IS 0.4% OF THIS DRAINAGE AREA.

IN CONCLUSION IT IS THE OPINION OF THE SUBMITTING ENGINEER THAT THE OUTFALL IS ADEQUATE. CROSS SECTIONS WILL BE MODELED AT THE APPROPRIATE LOCATIONS IN ACCORDANCE WITH FAIRFAX COUNTY ORDINANCES TO MEET THE ADEQUATE OUTFALL REQUIREMENTS AT TIME OF FINAL SITE PLAN.

APPROVED PLAT

Application No. SP 2010-MA-041
Date of Approval 12/15/10
Sheet 6 of 13

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STORMWATER MANAGEMENT COMPUTATIONS
MAHEDERE SEBEHAT LEDETA LE-MARIAM ETHIOPIAN ORTHODOX CHURCH
MASON DISTRICT — FAIRFAX COUNTY, VIRGINIA

SP 2010-MA-041
COUNTY PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
WILLIAM D. HUME
LIC. No. 037880
11/9/10
12/2/10
PROFESSIONAL ENGINEER

PLAN STATUS	
5-27-10	REV PER COUNTY COMMENTS 5-19-10
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11-9-10	PER COMMENTS
DATE	DESCRIPTION

MT DESIGN	KF DRAWN	MT CHKD

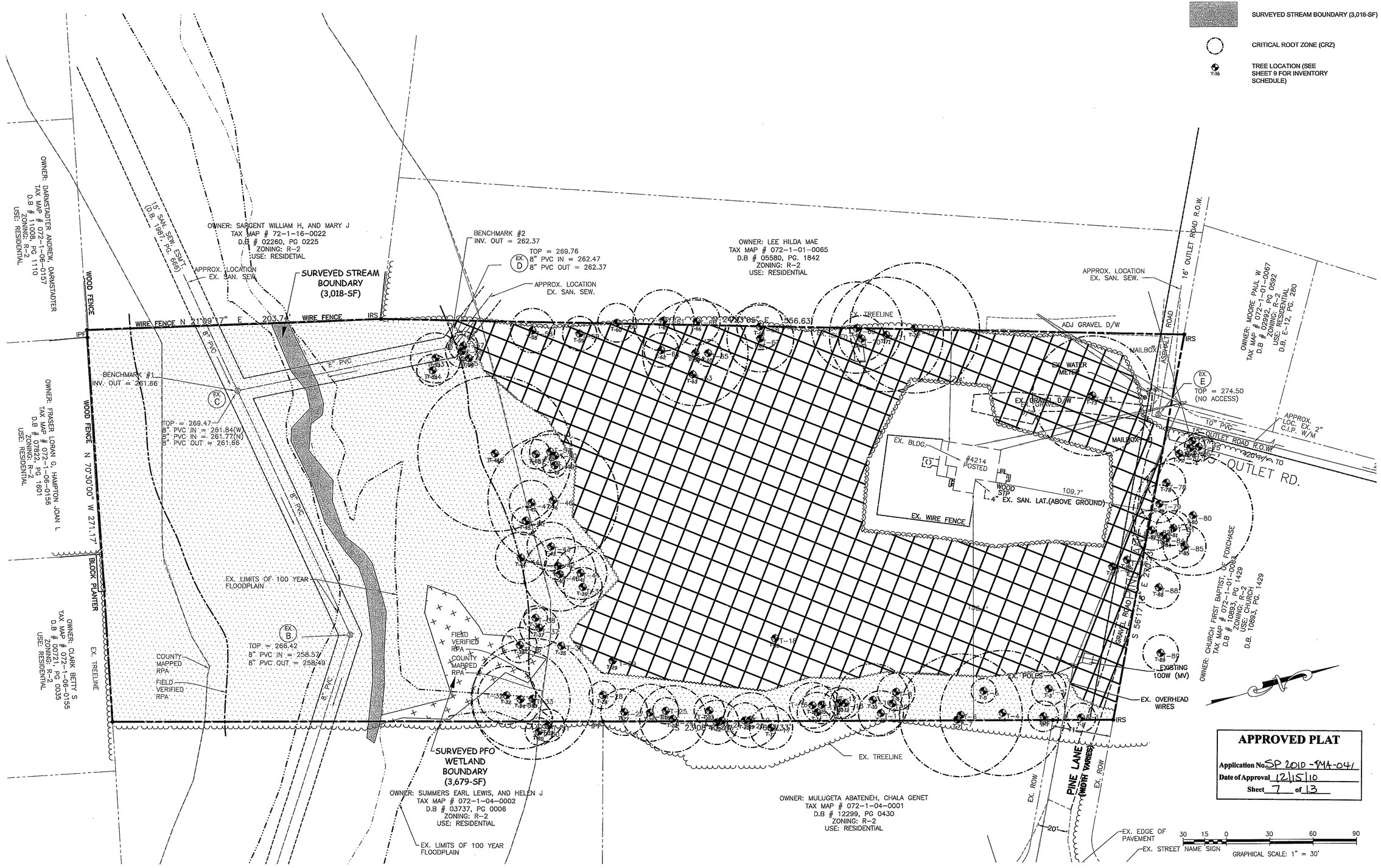
SCALE H: V:
JOB No. 8105-01-001
DATE : MARCH 01, 2010
FILE No.

P:\Planning Department temp directory\Projects Pending\Ethiopian Orthodox Church\20369-Ethiopian Church\01 - Ethiopian Church\1100 - Drawings\Presentation\Special Permit\BCG 11.09.10\20369-(5-6) Stormwater Management.dwg, 11/8/2010 11:38:31 AM, kf

NOTE:
1. SEE SHEETS 8 & 9 FOR TREE PRESERVATION INFORMATION.
2. EXISTING VEGETATION MAPPING AND ANALYSIS PROVIDED BY ECS-MID ATLANTIC LLC. DATED SEPTEMBER 2010.

LEGEND

- TREELINE
- EXISTING CANOPY (3) EARLY SUCCESSIONAL FOREST (82,302-SF)
- EXISTING CANOPY (2) UPLAND FOREST (73,508-SF)
- EXISTING CANOPY (7) BOTTOMLAND FOREST (3,697-SF) (VERIFIED RPA / COUNTY)
- SURVEYED STREAM BOUNDARY (3,018-SF)
- CRITICAL ROOT ZONE (CRZ)
- T-16 TREE LOCATION (SEE SHEET 9 FOR INVENTORY SCHEDULE)



APPROVED PLAT
Application No. SP 2010-MA-041
Date of Approval 12/15/10
Sheet 7 of 13

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EXISTING VEGETATION MAP
MAHEDERE SEBEHAT LE-MARIAM
ETHIOPIAN ORTHODOX CHURCH
FAIRFAX COUNTY, VIRGINIA
MASON DISTRICT

SP 2010-MA-041
COUNTY PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
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	COMMENTS
11-9-10	PER COMMENTS

DATE	DESCRIPTION	
MT	KF	MT
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SCALE	H: V:	
JOB No.		
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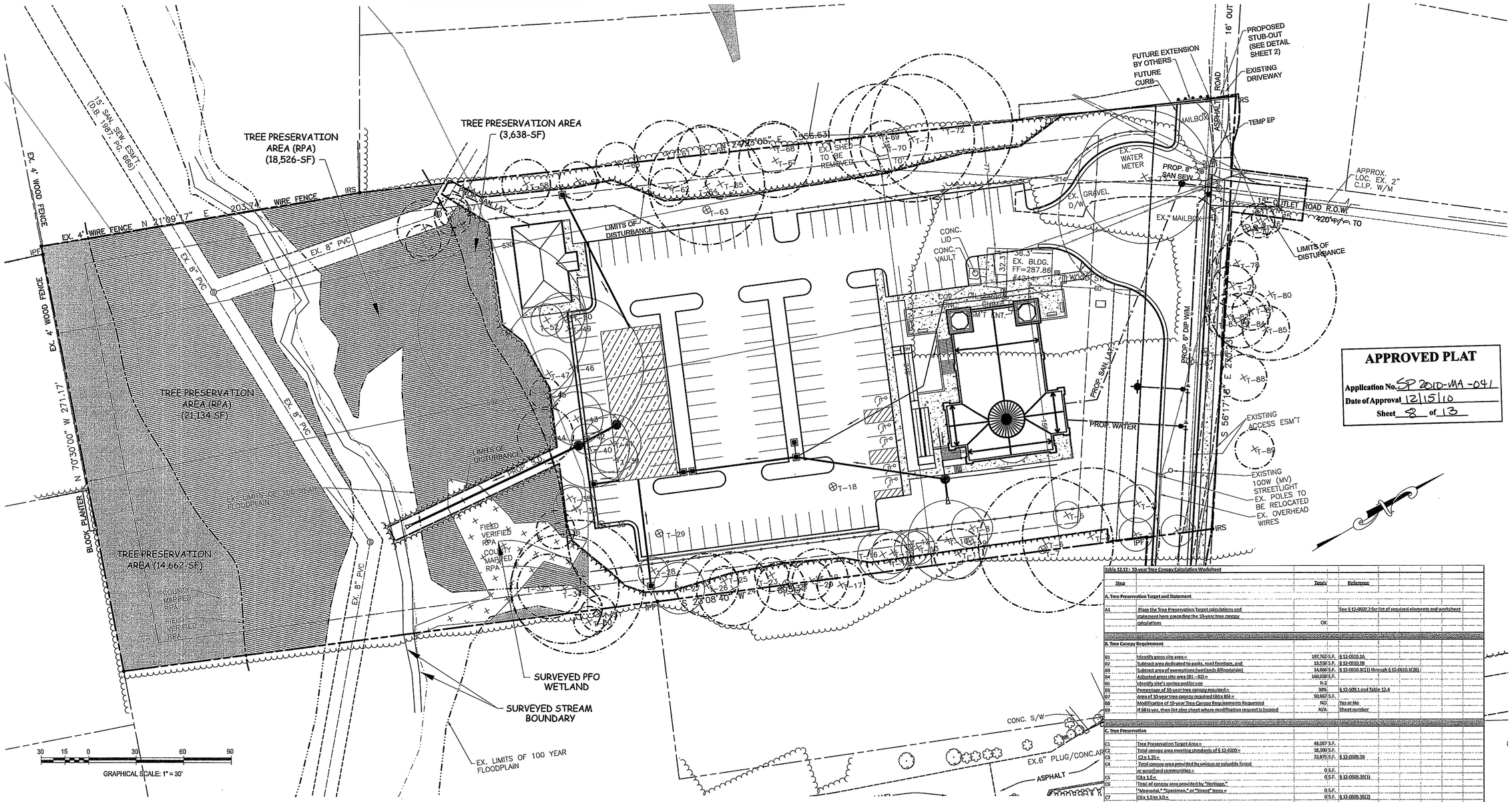
SHEET 7 OF 13		

P:\Planning Department temp directory\Projects Pending\Ethiopian Orthodox Church\20369-Ethiopian Church\01 - Ethiopian Church\100 - Drawings\Presentation\Special Permit\BDG 11.03.10\20369- (7) EVM.dwg, 11/8/2010 11:34:29 AM, kf



APPROVED PLAT

Application No. SP 2010-MA-041
Date of Approval 12/15/10
Sheet 8 of 13

TREE PRESERVATION & CANOPY CALCULATIONS

A.	GROSS SITE AREA	4.54-AC	197,762 SF
	ROAD DEDICATION		-13,538 SF
	FLOODPLAIN & WETLAND		-14,666 SF
B.	NET SITE AREA		169,558 SF
C.	CANOPY COVERAGE PERCENTAGE REQUIRED (ZONED R2)	30%	50,867 SF
	TREE PRESERVATION AREA OUTSIDE RPA (18,300 SF)	(X 1.25 CREDIT)	22,875 SF
	TREE PRESERVATION AREA INSIDE RPA (39,660 SF)	(X 1.00 CREDIT)	39,660 SF
D.	TOTAL AREA OF EXISTING TREES TO BE PRESERVED		62,535 SF
E.	PROPOSED CREDIT PROVIDED BY PLANTING (SEE SHEET 4)		20,100 SF
F.	TOTAL TREE COVER PROVIDED (D+E)	49%	82,635 SF
	HAS THE TREE PRESERVATION TARGET BEEN MET?		YES

LEGEND

- TREE PRESERVATION AREA OUSIDE RPA (18,300 S.F.)
- TREE PRESERVATION AREA INSIDE RPA (39,660 S.F.)
- CRITICAL ROOT ZONE (CRZ) (EXISTING TREE TO REMAIN - SEE NOTE 3)
- CRITICAL ROOT ZONE (CRZ) (EXISTING TREE TO REMOVED)
- EXISTING DEAD TREE

NOTES

1. SEE SHEET 7 FOR EXISTING CONDITIONS. SEE SHEET 9 FOR TREE INVENTORY
2. TREE CONSERVATION MAY BE REDUCED UPON APPROVAL OF THE RPA DELINEATION PLAN AND ADJUSTMENT OF CLEARING LIMITS FOR ADDITIONAL PARKING.
3. APPLICANT SHALL WALK THE SITE WITH THE URBAN FORESTER TO FURTHER REVIEW THE CONDITION OF THE MAPPED TREES AND DETERMINE ADDITIONAL POTENTIAL TREES TO BE SAVED. ALL SHARED TREES WILL BE SAVED UNTIL THIS WALK THROUGH.
4. EXISTING ENVIRONMENTAL FEATURES MAPPING PREPARED BY ECS MID ATLANTIC.

Table 12.2 Tree Preservation Target Calculations and Statement

A	Pre-development area of existing tree canopy (from Existing Vegetation Map) =	159, 507 S.F.	
B	Percentage of gross site area covered by existing tree canopy =	81%	
C	Percentage of 10-year canopy required for site (see Table 12.4) =	30% (50,329 S.F.)	
D	Percentage of the 10-year tree canopy requirement that should be met through tree preservation =	81% (48,057 S.F.)	
E	Proposed percentage of canopy requirement that will be met through tree preservation =	121% (57,960 S.F.)	
F	Has the Tree Preservation Target minimum been met?	YES	
G	If No for line F, then a request to deviate from the Tree Preservation Target shall be provided on the plan that states one or more of the justifications listed in 12-0507.3 along with a narrative that provides a site-specific explanation of why the Tree Preservation Target cannot be met. Provide sheet number where deviation request is located.	N/A	
H	If step G requires a narrative, it shall be prepared in accordance with 12-0507.4	N/A	
I	Place this information prior to the 10-year Tree Canopy Calculations as per instructions in Table 12.12	OK	

Table 12.12 : 10-year Tree Canopy Calculation Worksheet

	Step	Totals	Reference
	A. Tree Preservation Target and Statement		
A1	Place the Tree Preservation Target calculations and statement here preceding the 10-year tree canopy calculations	OK	See § 12-0507.2 for list of required elements and worksheet
	B. Tree Canopy Requirement		
B1	Identify gross site area =	197,762 S.F.	§ 12-0510.1A
B2	Subtract area dedicated to parks, road frontage, and	13,538 S.F.	§ 12-0510.1B
B3	Subtract area of exemptions (wetlands &floodplain)	14,666 S.F.	§ 12-0510.1C(1) through § 12-0510.1C(6)
B4	Adjusted gross site area (B1 – B2) =	169,558 S.F.	
B5	Identify site's zoning and/or use	R-2	
B6	Percentage of 10-year tree canopy required =	30%	§ 12-509.1 and Table 12.4
B7	Area of 10-year tree canopy required (B4x B6) =	50,867 S.F.	
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 =	48,057 S.F.	
C2	Total canopy area meeting standards of § 12-0300 =	18,300 S.F.	
C3	C2 x 1.25 =	22,875 S.F.	§ 12-0509.3B
C4	Total canopy area provided by unique or valuable forest or woodland communities =	0 S.F.	
C5	C4 x 1.5 =	0 S.F.	§ 12-0509.3B(1)
C6	Total of canopy area provided by "Heritage," "Memorial," "Specimen," or "Street" trees =	0 S.F.	
C7	C6 x 1.5 to 3.0 =	0 S.F.	§ 12-0509.3B(2)
C8	Canopy area of trees within Resource Protection Areas and 100-year floodplains =	39,660 S.F.	
C9	C8 x 1.0 =	39,660 S.F.	§ 12-0509.3C(1)
C10	Total of C3, C5, C7 and C9 = If area of C10 is less	62,535 S.F.	If area of C10 is less than B7 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) =	0 S.F.	
D2	Area of canopy Planted for air quality benefits =	0 S.F.	
D3	x 1.5 =	0 S.F.	§ 12-0509.4B(1)
D4	Area of canopy planted for energy conservation =	0 S.F.	
D5	x 1.5 =	0 S.F.	§ 12-0509.4B(2)
D6	Area of canopy planted for water quality benefits =	0 S.F.	
D7	D7 x 1.25 =	0 S.F.	§ 12-0509.4B(3)
D8	Area of canopy planted for wildlife benefits =	0 S.F.	
D9	D9 x 1.5 =	0 S.F.	§ 12-0509.4B(4)
D10	Area of canopy provide by native trees =	0 S.F.	
D11	D11 x 1.5 =	0 S.F.	§ 12-0509.4B(5)
D12	Area of canopy provided by improved cultivars and varieties =	0 S.F.	
D13	D13 X 1.25=	0 S.F.	§ 12-0509.4B(6)
D14	Area of canopy provided through tree seedlings =	0 S.F.	§ 12-0509.4D(1)
	x1.0=	0 S.F.	
D15	Area of canopy provided through native shrubs or woody seed mix =	0 S.F.	§ 12-0509.4D(1)(a)
	x1.0=	0 S.F.	§ 12-0509.4D(1)(a)
D16	Percentage of D14 represented by D15 =	0%	Must not exceed 33% of D14
D17	Total of canopy area provided through tree planting =	20,100 S.F.	
D18	Is an offsite planting relief requested?	NO	Yes or No
D19	D19 Tree Bank or Tree Fund?	N/A	§ 12-0511
D20	Canopy area requested to be provided through offsite 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) =	62,535 S.F.	
E2	Total of canopy area provided through tree planting (D17) =	20,100 S.F.	
E3	Total of canopy area provided through offsite mechanism (D19) =	0 S.F.	
E4	Total of 10-year Tree Canopy Provided = Total of E1 through E3.	82,635 S.F.	Total of E1 through E3. Area should meet or exceed area in B6

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TREE PRESERVATION PLAN
MAHEDERE SEBEHAT LE-MARIAM
ETHIOPIAN ORTHODOX CHURCH
FAIRFAX COUNTY, VIRGINIA
MASON DISTRICT

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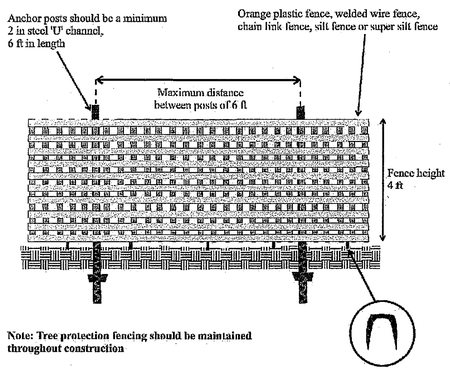
5–27–10	REV PER COUNTY
	COMMENTS 5–19–10
7–26–10	PER PRE–STAFFING
	COMMENTS
8–12–10	PER–STAFFING
	COMMENTS
10–14–10	PER–STAFFING
	COMMENTS
11–9–10	PER COMMENTS
12–2–10	PER COMMENTS

DATE	DESCRIPTION	
MT	KF	MT
DESIGN	DRAWN	CHKD

SCALE H: V:
JOB No. 8105-01-001
DATE : MARCH 01, 2010
FILE No.
SHEET 8 OF 13

P:\Planning Department temp directory\Projects Pending\Ethiopian Orthodox Church\20369-Ethiopian Church\01 - Ethiopian Church\1100 - Drawings\Presentation\Special Permit\BCG 11.09.10\20369- (8-9) TPP.dwg, 12/2/2010 2:57:40 PM, kf

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL

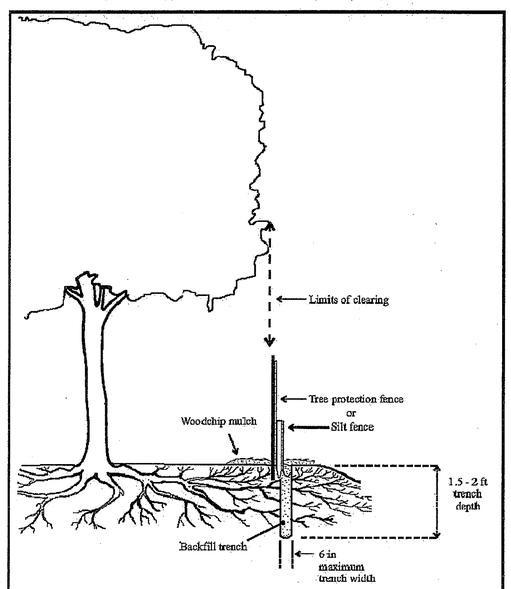


Note: Tree protection fencing should be maintained throughout construction

Adapted from *Woodland Conservation Manual*, Prince George County, Maryland

Ref. Sec. 12-0703.1B Rev. 10-08	TREE PROTECTION FENCE INSTALLATION	PLATE NO. 6-12	STD. NO.

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Ref. Sec. 12.0702.1 Rev. 10-08	ROOT PRUNING	PLATE NO. 7-12	STD. NO.

Tree Inventory & Condition Analysis

ECS Mid-Atlantic, LLC (ECS) conducted a site reconnaissance to evaluate the wooded habitat on the project site in March 2010. Dominant site vegetation is listed below in Table 1. The undeveloped portions of the site are comprised of Upland Hardwoods (i.e.: Oak) Softwoods and maintained grasslands.

Table 1 Dominant Site Vegetation

Common Name	Scientific Name
Black Walnut	*Juglans nigra*
Northern Red Oak	*Quercus rubra*
Red Maple	*Acer rubrum*
Pin Oak	*Quercus palustris*
Black Cherry	*Prunus serotina*
Pignut Hickory	*Carya glabra*
Sweetgum	*Liquidambar styraciflua*
Common Greenbrier	*Smilax rotundifolia*
Japanese Honeysuckle	*Lonicera japonica*
Poison Ivy	*Toxicodendron radicans*
Virginia Pine	*Pinus virginiana*
Tulip Poplar	*Liriodendron tulipifera*
Southern Red Oak	*Quercus falcata*
White Oak	*Quercus alba*

Based on our site reconnaissance, invasive and/or noxious species (i.e.: Japanese Honeysuckle) are present within the property boundary. The invasive species are predominantly located within the proposed limits of clearing and grading, and as such, should be eradicated during the proposed construction activities; however some are located within the preservation areas. Any invasive species located within the areas to be preserved should be removed by hand wherever practicable to minimize site disturbance. Towards the end of the growing season, an application of an environmentally sensitive approved herbicide may be applied to these areas by a Virginia certified applicator. The trees onsite are in fair/good condition, except where otherwise noted on the EVM (i.e.: Poor or Dead). Onsite trees within 150-feet of the proposed limits of clearing meet the standards for structural integrity and health identified in § 12-0403.2A and 12-0403.2B and are identified on the Existing Vegetation Map. At the time of inspection there were poor and dead trees located within 150-feet of the proposed limits of clearing and are identified on the Existing Vegetation Map.

In accordance with § 12-0506.E2(1), all trees designated for preservation shall be protected during construction.

Tree Preservation Narrative

§ 12-0508.3B: Any dead or potentially hazardous trees shall be removed upon their discovery if they are located within 150-feet of the proposed limits of clearing. Dead trees not within this area shall be left in place to serve as wildlife habitat. Dead or potentially hazardous trees will be removed by hand (i.e.: chainsaw) wherever practical and will be conducted in a manner that incurs the least amount of damage to surrounding trees and vegetation proposed for preservation. Felled trees shall be left in place and brush should be removed by hand. No heavy equipment shall be used within tree preservation areas.

§ 12-0508.3C: Based on the current condition of the existing wooded areas, no adverse human health risks are anticipated.

§ 12-0508.3D: Invasive and/or noxious species (i.e.: Japanese Honeysuckle) are present within the property boundary. This species is fairly prevalent throughout the site and is located within the proposed limits of clearing and grading and the preservation areas. Any invasive species located within the areas to be preserved should be removed by hand wherever practicable to minimize site disturbance. Towards the end of the growing season, an application of an environmentally sensitive approved herbicide may be applied to these areas by a Virginia certified applicator. Most of the forested areas within the tree preservation area do not contain invasive plant species at levels that endanger the long-term ecological functionality, health, and regenerative capacity of any native plant communities present onsite.

§ 12-0508.3E: The Applicant is not requesting official Specimen Tree designation for any of the large trees located onsite and is not using a multiplier for tree canopy calculations.

§ 12-0508.3F: Non-impacted Specimen trees located on and off-site shall be protected throughout all phases of construction by utilizing tree protection fencing as required by § 12-0506.2D(1).

§ 12-0508.3G: Root pruning shall be conducted along the proposed limits of clearing and grading adjacent to the wooded habitat to be preserved and along property boundaries where the CRZ of off-site trees will be impacted. Locations of root pruning and tree protection fencing are shown on the Tree Preservation & Protection Plan.

§ 12-0508.3H: No trees will be transplanted as part of the proposed construction activities.

§ 12-0508.3I: Tree protection fencing and signage shall be placed subsequent to the staking of the limits of clearing in the field prior to construction in accordance with current Fairfax County ordinances.

§ 12-0508.3J: No work shall occur within the areas to be protected. All onsite trees within the limits of clearing and grading will be removed. No trees outside this area shall be removed unless indicated on the plan. Trees in preservation areas indicated on the plan to be removed shall be removed by hand. Dead or hazardous trees within this area may be limbed or topped, rather than removing the entire tree and left as snags.

§ 12-0508.3K: There are no known proffer conditions which would require a tree inventory, tree condition, tree valuation or tree bonding information.

Tree Number	Common Name	Size (inches DBH)	Critical Root Zone (inches)	Condition	Remove	Notes
1	Northern Red Oak	10.0	10.0	Good	x	
2	Pignut Hickory	10.6	10.6	Poor	x	Poor Condition
3	Northern Red Oak	11.9	11.9	Fair	x	
4	Pignut Hickory	43.3	43.3	Good		
5	Pignut Hickory	8.6	8.6	Good	x	
6	Post Oak	42.5	42.5	Poor		Poor Condition
7	Dead	-	-	Dead		Shared Tree, Dead
8	Black Walnut	13.0	13.0	Fair	x	
9	Dead	-	-	Dead	x	Dead - To Be Removed
10	Black Walnut	25.2	25.2	Good	x	
11	Black Walnut	15.6	15.6	Fair		
12	Black Walnut	10.6	10.6	Fair	x	
13	Black Walnut	10.9	10.9	Fair	x	
14	Pignut Hickory	13.9	13.9	Poor		Poor Condition
15	Black Cherry	13.1	13.1	Poor	x	Poor Condition
16	Black Walnut	15.9	15.9	Fair	x	
17	White Oak	14.9	14.9	Fair		Offsite Tree
18	Dead	-	-	Dead	x	Dead - To Be Removed
19	Black Cherry	19.0	19.0	Good		Shared Tree
20	Black Cherry	12.2	12.2	Good		Shared Tree
21	Dead	-	-	Good		Shared Tree
22	Black Cherry	15.3	15.3	Poor		Shared Tree
23	Black Cherry	10.6	10.6	Fair		
24	Black Walnut	23.1	23.1	Good		
25	Southern Red Oak	9.1	9.1	Poor		Poor Condition
26	Pignut Hickory	19.8	19.8	Good		
27	Black Cherry	16.2	16.2	Poor	x	Poor Condition
28	Pignut Hickory	9.6	9.6	Poor	x	Poor Condition
29	Dead	-	-	Dead	x	Dead
30	Pignut Hickory	9.5	9.5	Fair		Offsite Tree
31	Pignut Hickory	11.3	11.3	Fair		Offsite Tree
32	Northern Red Oak	20.1	20.1	Good		
33	Pignut Hickory	41.9	41.9	Fair		
34	Red Maple	34.3	34.3	Fair		
35	Dead	40.0	40.0	Dead	x	Dead - To Be Removed
36	Red Maple	12.1	12.1	Good		
37	Red Maple	13.6	13.6	Good	x	
38	Red Maple	8.2	8.2	Good	x	
39	Northern Red Oak	13.4	13.4	Good	x	
40	Black Cherry	25.2	25.2	Poor	x	Poor Condition
41	Northern Red Oak	18.2	18.2	Fair	x	
42	Red Maple	9.4	9.4	Fair	x	
43	Tulip Poplar	16.7	16.7	Good	x	
44	Black Cherry	17.7	17.7	Poor		Poor Condition
45	Red Maple	9.7	9.7	Good		
46	Red Maple	45.2	45.2	Fair	x	
47	Red Maple	15.4	15.4	Good	x	
48	Tulip Poplar	53.5	53.5	Fair	x	
49	Black Cherry	8.2	8.2	Poor	x	Poor Condition
50	Dead	-	-	Dead	x	Dead - To Be Removed
51	Black Cherry	14.3	14.3	Poor	x	Poor Condition
52	Red Maple	10.1	10.1	Poor	x	Poor Condition
53	Tulip Poplar	17.4	17.4	Fair		
54	Red Maple	11.1	11.1	Poor		Poor Condition
55	Dead	-	-	Dead	x	Dead - To Be Removed
56	Black Cherry	11.4	11.4	Poor		Poor Condition
57	Black Cherry	10.2	10.2	Poor		Poor Condition
58	Black Walnut	15.3	15.3	Fair		
59	Black Walnut	11.9	11.9	Poor		Poor Condition
60	Pignut Hickory	13.3	13.3	Fair		Shared Tree
61	Black Walnut	21.1	21.1	Good		Offsite Tree
62	Black Walnut	11.9	11.9	Fair		
63	Dead	-	-	Dead	x	Dead - To Be Removed
64	Black Cherry	36.6	36.6	Poor		Poor Condition
65	Black Cherry	9.3	9.3	Poor		Poor Condition
66	Black Walnut	16.2	16.2	Fair		Offsite Tree
67	Black Cherry	23.1	23.1	Poor		Poor Condition
68	Black Walnut	16.0	16.0	Fair		Shared Tree
69	Black Walnut	31.4	31.4	Poor		Shared Tree
70	Black Walnut	16.0	16.0	Poor		Poor Condition
71	Black Walnut	39.5	39.5	Poor		Poor Condition
72	Black Walnut	44.9	44.9	Poor		Offsite Tree
73	Black Cherry	41.4	41.4	Poor	x	Poor Condition
74	Dead	-	-	Dead		Offsite Tree
75	Virginia Pine	9.9	9.9	Poor		Offsite Tree, Poor Condition
76	Virginia Pine	10.6	10.6	Poor		Offsite Tree, Poor Condition
77	Dead	-	-	Dead		Offsite Tree
78	Virginia Pine	13.2	13.2	Poor		Offsite Tree, Poor Condition
79	Black Walnut	13.0	13.0	Fair		Offsite Tree
80	Virginia Pine	41.5	41.5	Fair		Offsite Tree
81	Black Cherry	12.0	12.0	Fair		Offsite Tree
82	Black Walnut	13.8	13.8	Poor		Offsite Tree, Poor Condition
83	Virginia Pine	17.1	17.1	Poor		Offsite Tree, Poor Condition
84	Dead	-	-	Dead		Offsite Tree
85	Northern Red Oak	14.8	14.8	Fair		Offsite Tree
86	Dead	10.0	10.0	Dead	x	Dead
87	Dead	-	-	Dead	x	Dead
88	Northern Red Oak	14.5	14.5	Fair		Offsite Tree
89	Pignut Hickory	12.3	12.3	Fair		Offsite Tree

* APPLICANT SHALL WALK THE SITE WITH THE URBAN FORESTER TO FURTHER REVIEW THE CONDITION OF THE MAPPED TREES AND DETERMINE ADDITIONAL POTENTIAL TREES TO BE SAVED OR REMOVED. ALL SHARED TREES WILL BE SAVED UNTIL THIS WALK THROUGH.

APPROVED PLAT

Application No. SP 2010-MA-041
Date of Approval 12/15/10
Sheet 9 of 13

Bury+Partners
ENGINEERING SOLUTIONS
Consulting Engineers and Surveyors
3800 Concorde Parkway, Suite 1000
Chantilly Virginia 20151
Tel: 703/968-0090 Fax: 703/968-0686
Bury+Partners-VA, Inc.

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TREE PRESERVATIONS NARRATIVE AND DETAILS

MAHEDERE SEBEHAT LE-MARIAM
ETHIOPIAN ORTHODOX CHURCH

MASON DISTRICT

FAIRFAX COUNTY, VIRGINIA

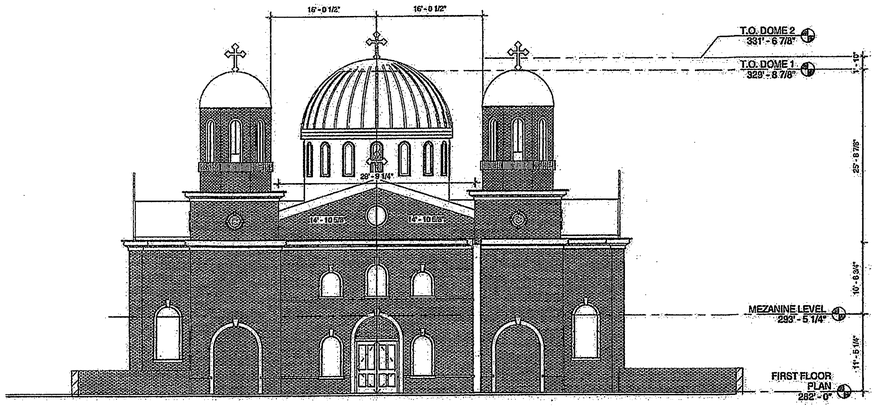
SP 2010-MA-041
COUNTY PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
WILLIAM D. HUME
LIC. No. 037880
11/9/10
12/2/10
PROFESSIONAL ENGINEER

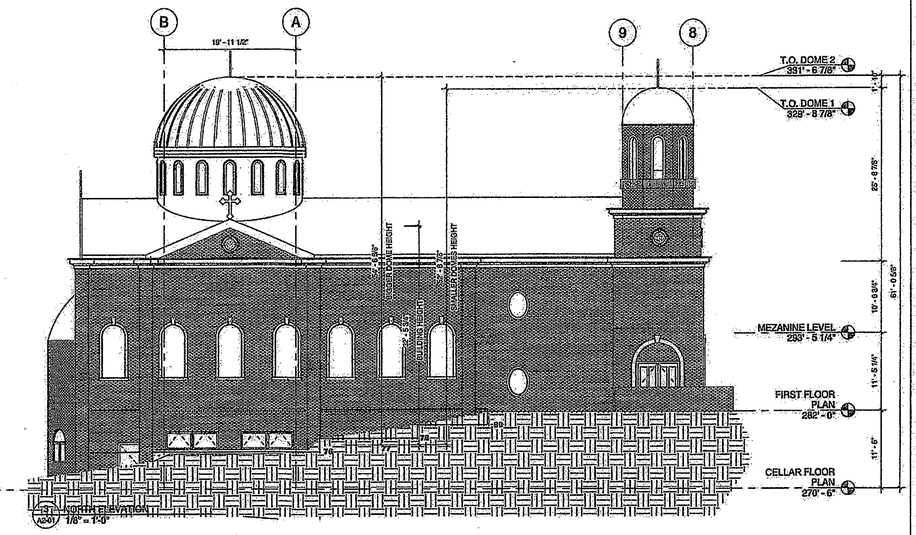
PLAN STATUS	
5-27-10	REV PER COUNTY
	COMMENTS 5-19-10
7-26-10	PER PRE-STAFFING
	COMMENTS
8-12-10	PER-STAFFING
	COMMENTS
10-14-10	PER-STAFFING
	COMMENTS
11-9-10	PER COMMENTS

DATE	DESCRIPTION	
MT	KF	MT
DESIGN	DRAWN	CHKD
SCALE	H: V:	
JOB No.		
DATE :	MARCH 01, 2010	
FILE No.		
SHEET	9 OF 13	

P:\Planning Department temp directory\Projects Pending\Ethiopian Orthodox Church\20368-Ethiopian Church\01 - Ethiopian Church\1100 - Drawings\Presentation\Special Permit\ECG 11.09.10\20368- (8-9) TPP.dwg, 11/8/2010 11:32:35 AM, M



1 WEST ELEVATION
A2-01 1/8" = 1'-0"



3 NORTH ELEVATION
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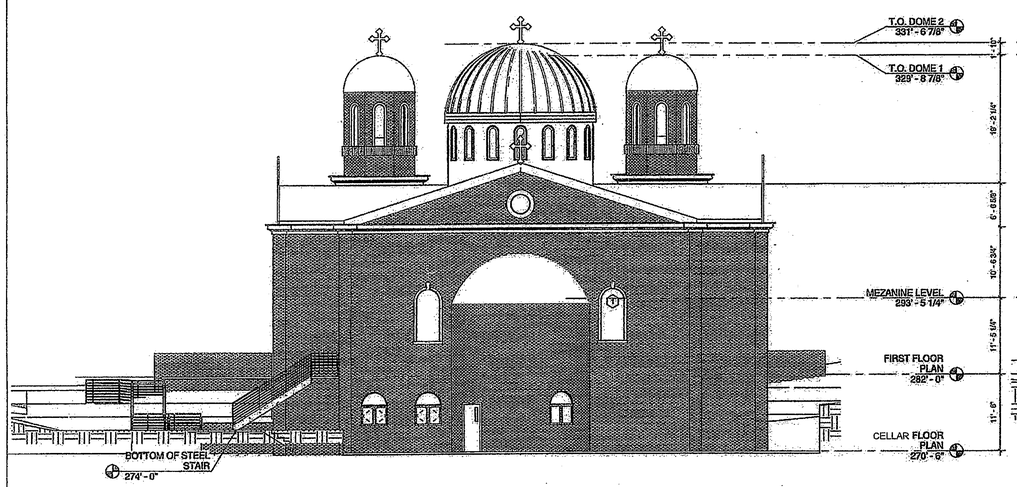

2 EAST ELEVATION
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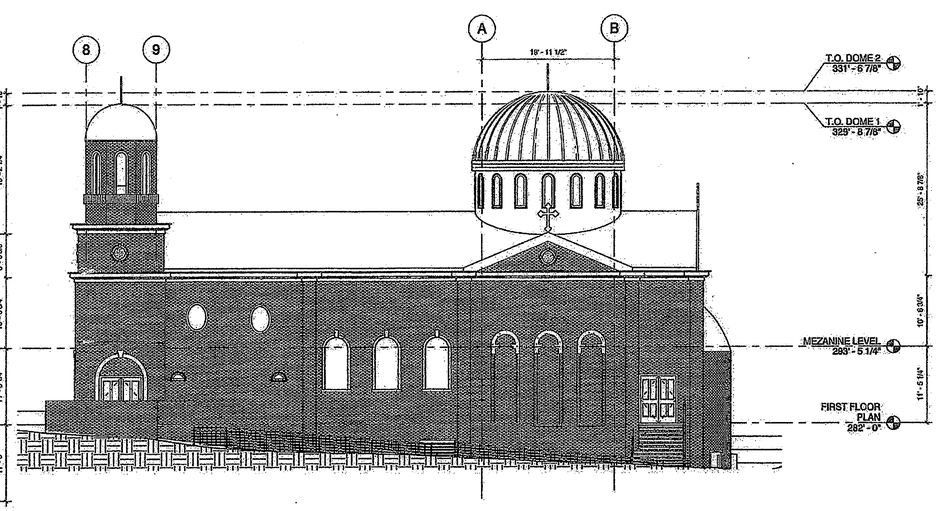


4 SOUTH ELEVATION
A2-01 1/8" = 1'-0"

THIS SHEET FOR INFORMATION AND ILLUSTRATIVE PURPOSES ONLY (10 OF 13)

MAHEDERE SEBEHAT LEDETA LEMARIAM ETHIOPIAN ORTHODOX TEWAHEDO CHURCH

SAMSON KEBEDE, AIA, ARCHITECTS PLC

APPROVED PLAT
Application No. SP 2010-MA-041
Date of Approval 12/15/10
Sheet 10 of 13

No.	Description	Date
-		-

CHURCH BUILDING ELEVATIONS

Date 08/12/2010
Prepared by SAMSON KEBEDE

A2-01

Scale 1/8" = 1'-0"

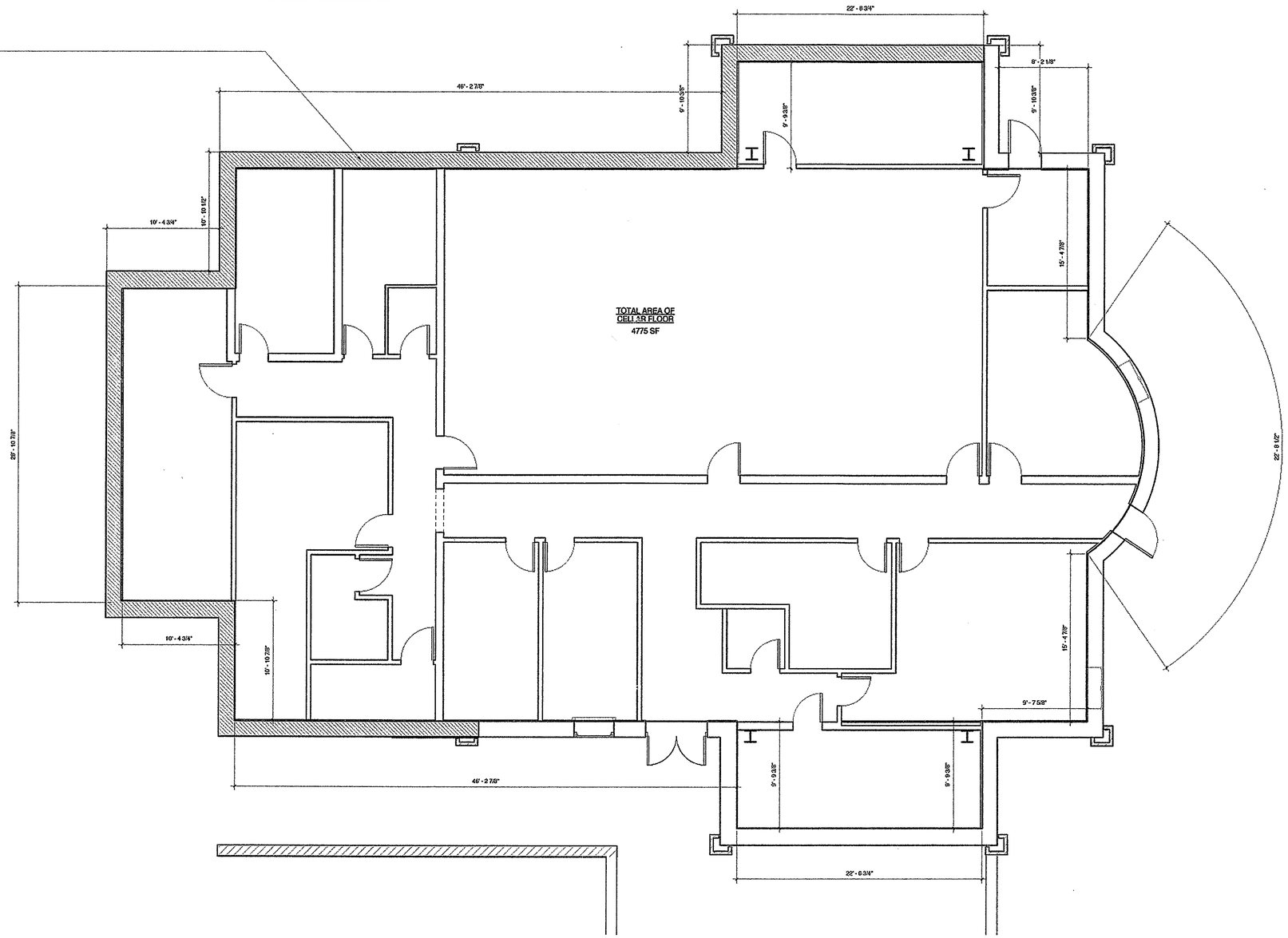
TOTAL PERIMETER OF BASEMENT FLOOR = 321'-4"

50% OF THE PERIMETER OF THE BASEMENT FLOOR = 160'-8"

PERIMETER OF BASEMENT PARTLY UNDERGROUND HAVING HALF OR MORE OF ITS CLEAR HEIGHT BELOW THE GRADE LINE = 172'-4 3/4" AND IS MORE THAN THE CALCULATED 50% OF THE PERIMETER OF THE BASEMENT FLOOR. THEREFORE THE BASEMENT QUALIFIES AS A CELLAR.

AVERAGE GRADE CALCULATED = 276'-6"

HATCH REPRESENTS THE EXTENT OF THE PERIMETER OF THE BASEMENT PARTLY UNDERGROUND HAVING HALF OR MORE OF ITS CLEAR HEIGHT BELOW THE GRADE LINE



1 / A4 CELLAR FLOOR PLAN
1/4" = 1'-0"

THIS SHEET FOR INFORMATION AND ILLUSTRATIVE PURPOSES ONLY **(11 OF 13)**

MAHEDERE SEBEHAT LEDETA LEMARIAM ETHIOPIAN ORTHODOX TEWAHEDO CHURCH

SAMSON KEBEDE, AIA, ARCHITECTS PLC

APPROVED PLAT
Application No. SP 2010-MA-041
Date of Approval 12/15/10
Sheet 11 of 13

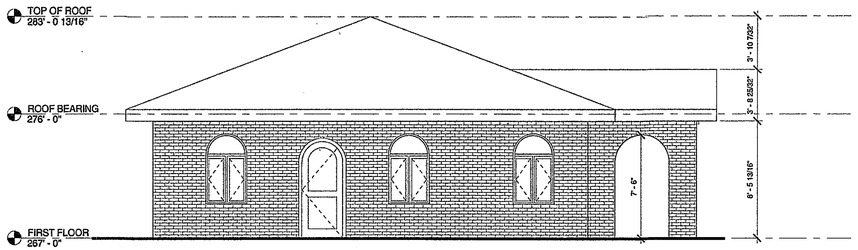
No.	Description	Date
-	-	-

CHURCH CELLAR FLOOR PLAN

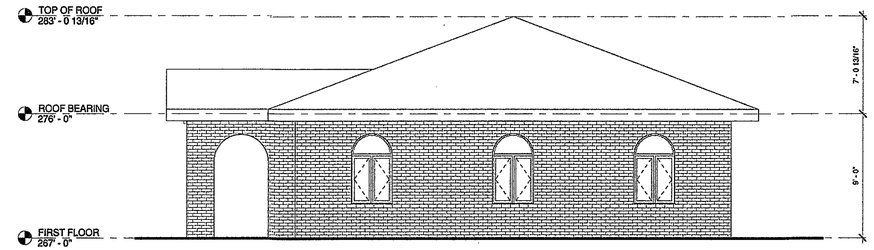
Date	08/12/2010
Prepared by	S.K.
-	-
Scale	1/4" = 1'-0"

A4

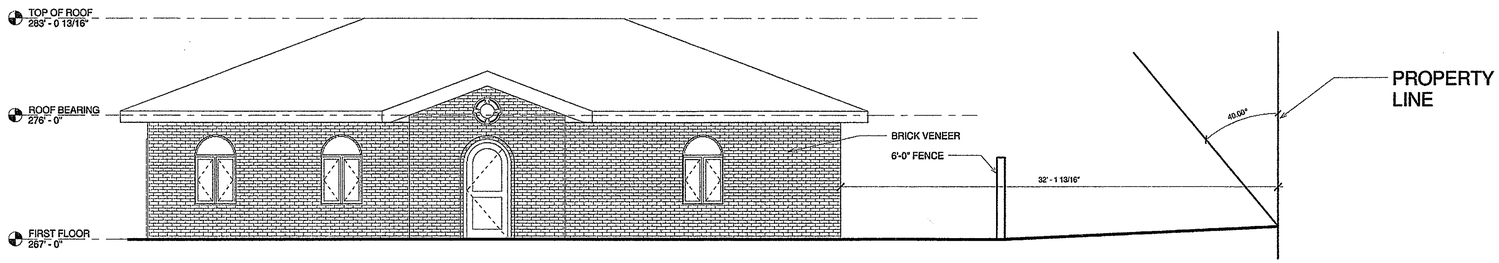
8/10/2010 2:51:10 AM



4 LEFT ELEVATION
1/4" = 1'-0"



3 RIGHT ELEVATION
1/4" = 1'-0"



2 FRONT ELEVATION
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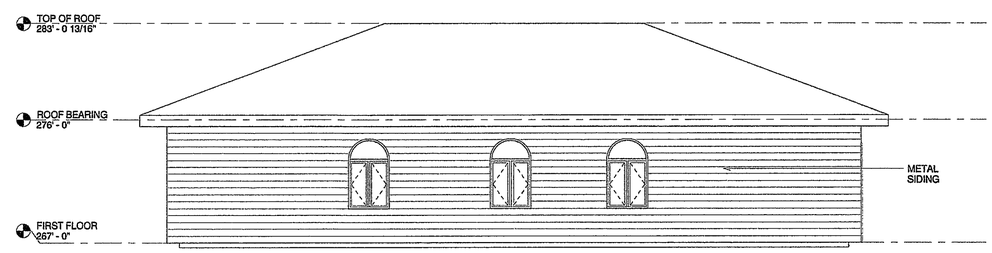


5 REAR ELEVATION
1/4" = 1'-0"

THIS SHEET FOR INFORMATION AND ILLUSTRATIVE PURPOSES ONLY (12 OF 13)

MAHDERE SEBEHAT LEDETA LEMARIAM ETHIOPIAN ORTHODOX TEWAHEDO CHURCH

SAMSON KEBEDE, AIA, ARCHITECTS PLC

APPROVED PLAT

Application No. SP 2010-MA-041
Date of Approval 12/15/10
Sheet 12 of 12

No.	Description	Date
	-	-

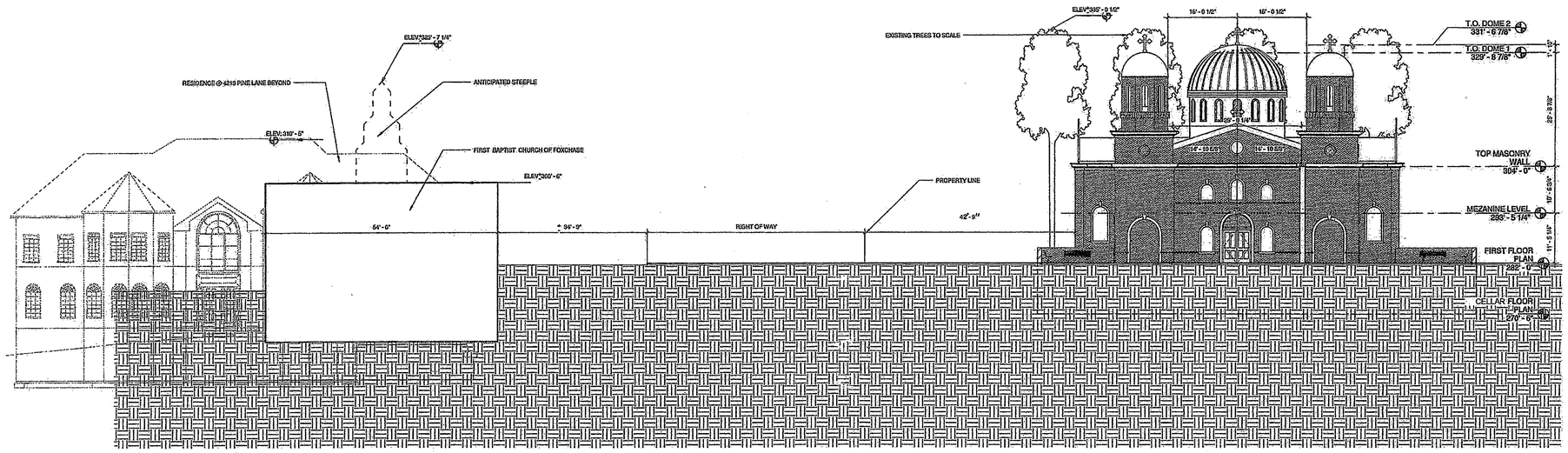
RECTORY BUILDING ELEVATIONS

Date	Issue Date
Prepared by	Author
-	Checker

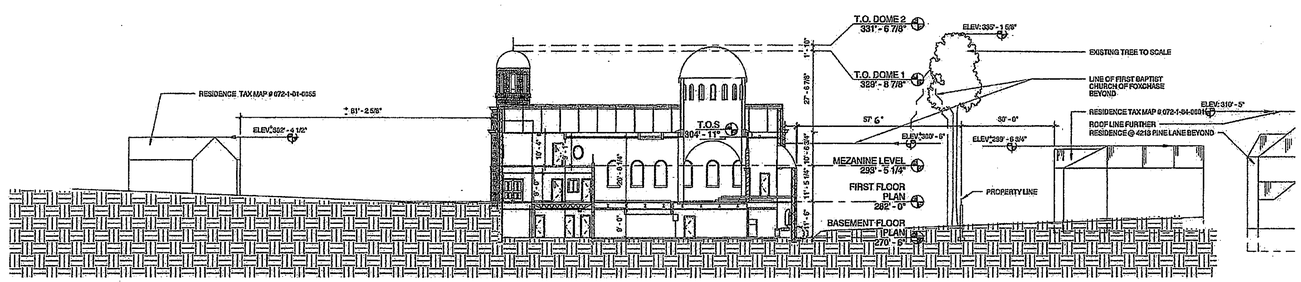
A1

Scale 1/4" = 1'-0"

10/13/2010 12:23:51 AM



1 / A3 WEST ELEVATION IN RELATION TO SURROUNDING STRUCTURES
1" = 16'-0"



3 / A3 LONGITUDINAL SECTION LOOKING NORTH
1/16" = 1'-0"

THIS SHEET FOR INFORMATION AND ILLUSTRATIVE PURPOSES ONLY **(13 OF 13)**

MAHEDERE
SEBEHAT LEDETA
LEMARIAM
ETHIOPIAN
ORTHODOX
TEWAHEDO CHURCH

SAMSON KEBEDE, AIA,
ARCHITECTS PLC

APPROVED PLAT

Application No. SP 2010-MA-04
Date of Approval 12/15/10
Sheet 3 of 13

No.	Description	Date

SITE CROSS
SECTION EXHIBIT

Date: 08/12/2010
Prepared by: SAMSON KEBEDE

A3

Scale: As indicated