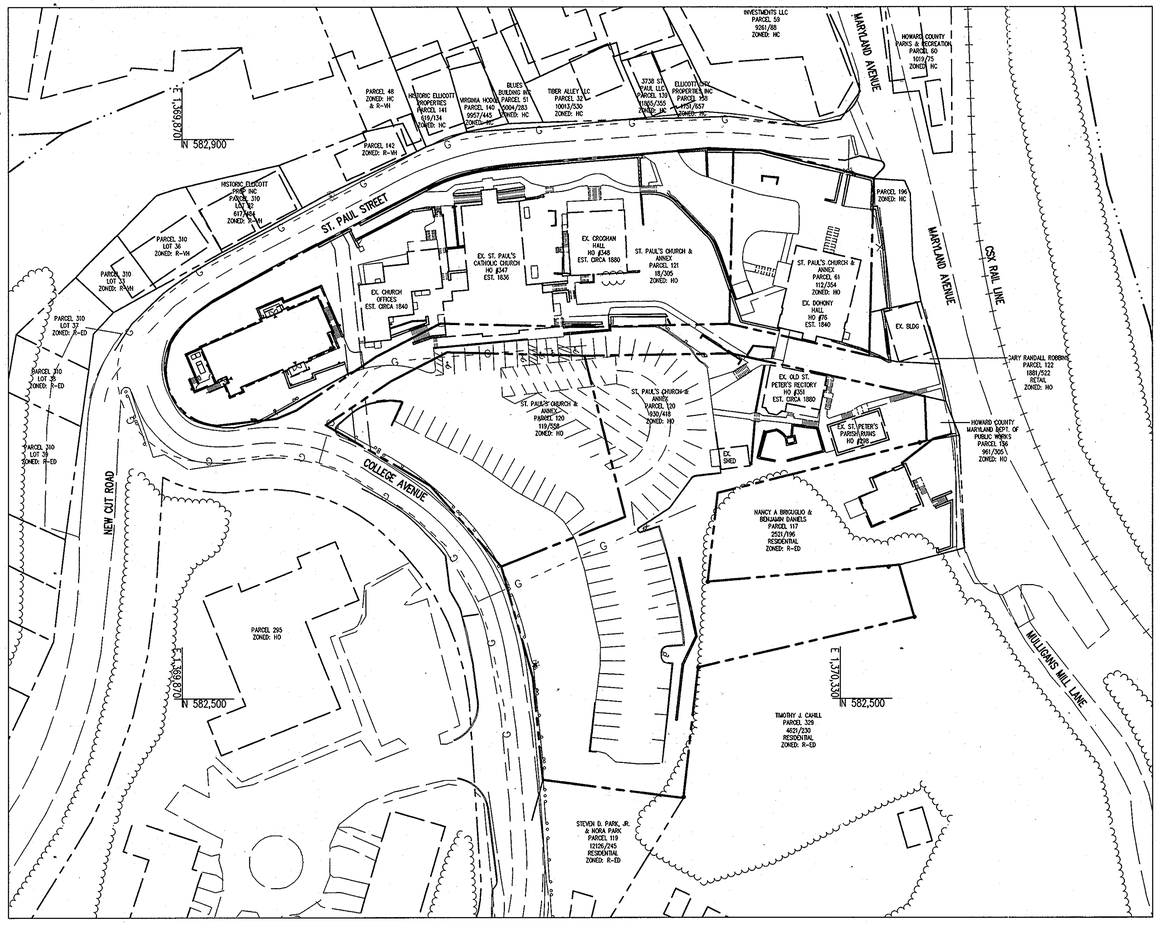
SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
2	OVERALL SITE DEVELOPMENT PLAN
3	EXISTING CONDITIONS & SOILS PLAN
4	DEMOLITION PLAN
5	SITE DEVELOPMENT PLAN
6	GRADING AND SEDIMENT CONTROL PLAN
7	SEDIMENT & EROSION CONTROL DETAILS
8	STORMWATER MANAGEMENT PLAN AND DETAILS
9	UTILITY PLAN
10	UTILITY PROFILES
11	LANDSCAPE PLAN
12	LANDSCAPE & FOREST CONSERVATION NOTES AND DETAILS
13	SITE DETAILS
14	SOIL BORING LOGS
15	RETAINING WALL PLANS & ELEVATIONS
16	EXTERIOR ELEVATIONS AND BUILDING SECTIONS
17	RETAINING WALL GENERAL NOTES
18	RETAINING WALL SECTIONS

SITE DEVELOPMENT PLAN
ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER
CLASSROOM FACILITY
PARCELS 61, 120, & 121
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



PLAN
SCALE: 1" = 50'

GRAPHIC SCALE 1"=50'
25' 0' 50' 100'

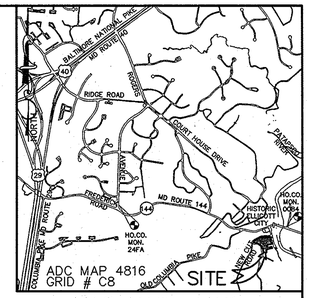
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2013

AS-BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

JAMES A. RUFF — PRINTED NAME
SIGNATURE
#21774 — MD PE NO.
10/23/12 — DATE

STATE OF MARYLAND — JAMES ARNOLD RUFF — NO. 21774 — REGISTERED PROFESSIONAL ENGINEER

SEE SHEET 16 FOR ARCHITECTURAL ELEVATIONS.



VICINITY MAP
SCALE: 1" = 2000'
COPYRIGHT ADC THE MAP PEOPLE, PERMITTED USE NO. 20811197
HOWARD COUNTY ADC MAP 4816 GRID C8

BENCHMARKS
HOWARD COUNTY SURVEY CONTROL: 0084
ELEVATION 124.948'
N 583,158.761 E 1,370,739.978
LOCATION IS ±14' NORTH OF FREDERICK ROAD AND ±15' WEST OF OELLA AVENUE.

HOWARD COUNTY SURVEY CONTROL: 24FA
ELEVATION 262.884'
N 583,751.413 E 1,366,091.862
LOCATION IS ±14' EAST OF ROGERS AVENUE NEAR THE INTERSECTION WITH FREDERICK ROAD.

SITE ANALYSIS DATA CHART

AREA OF SITE:	2.76 ACRES (120,053 SF) (INCLUDES ENTIRE CAMPUS)
LIMIT OF DISTURBED AREA:	0.27 ACRES ± (11,962 SF±)
PRESENT ZONING:	HO (HISTORIC: OFFICE DISTRICT)
EXISTING USES:	CHURCH & CHURCH OFFICES
PROPOSED USES:	CHURCH, EVANGELIZATION CENTER, & CHURCH OFFICES
FLOOR AREA OF PROPOSED BUILDING:	LOWER LEVEL FLOOR: 3,229 SF (CLASSROOM: 1,406 SF, UTILITY AREA: 289 SF, COMMON AREA 1,534 SF) MAIN LEVEL FLOOR: 3,219 SF (CLASSROOM: 1,448 SF, UTILITY AREA: 91 SF, COMMON AREA 1,680 SF) TOTAL: 6,448 SF
BUILDING HEIGHT:	MAXIMUM ALLOWABLE HEIGHT: 40'-0" HEIGHT OF PROPOSED BUILDING: 27'-10 3/8"
PARKING TABULATION: EXISTING PARKING: PROPOSED PARKING:	85 SPACES NO ADDITIONAL PARKING PROPOSED WITH THIS PLAN (SEE GENERAL NOTE #32)
EXISTING FLOOR AREA RATIO:	37,095 SF/120,053 SF = 0.31
PROPOSED FLOOR AREA RATIO:	41,128 SF/120,053 SF = 0.34

AS-BUILT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 12/20/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12.15.10
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 12-21-10

DATE	NO.	REVISION

OWNER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

PROJECT ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER

AREA TAX MAP 25-A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE TITLE SHEET

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL — STATE OF MARYLAND — JAMES A. RUFF — PROFESSIONAL ENGINEER
BY:
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2013"

DESIGNED BY : JSN
DRAWN BY: JSN
PROJECT NO : 14867-1-0
DATE : SEPTEMBER 13, 2010
SCALE : 1"=50'
DRAWING NO. 1 OF 18

P:\Project\14867\1-0\PLANS\C40050P01.DWG

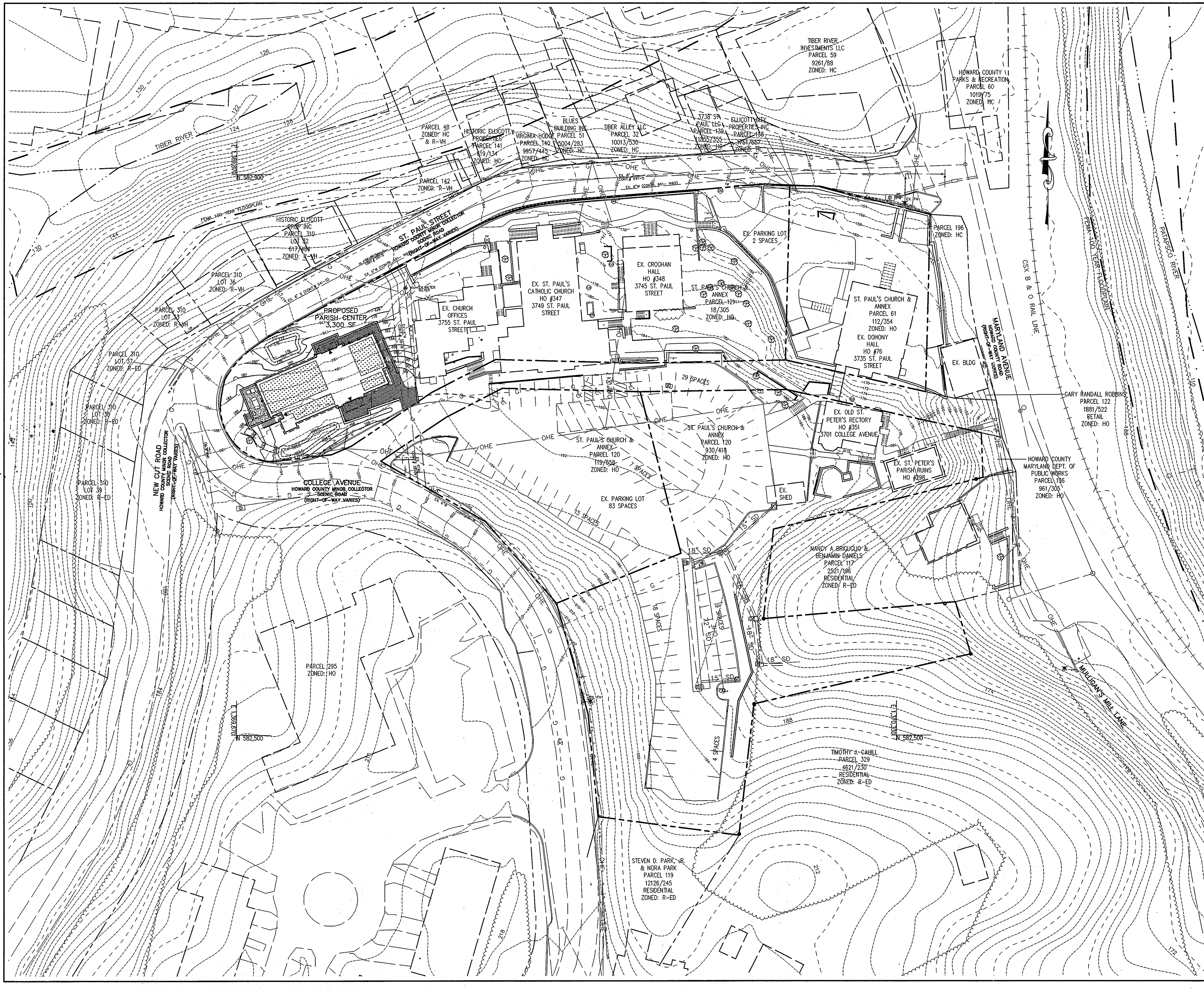
PERMIT INFORMATION CHART

PARCEL NUMBER	STREET ADDRESS
121	3765 ST. PAUL STREET

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

DEVELOPMENT			SECT./AREA		PARCEL
ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER			–		61, 120, & 121
PLAT NO. OR L/F	GRID #	ZONING	TAX MAP NO.	ELECT. DIST.	CENSUS TRACT
00832/0029	–	HO	25-A	2	602700

SDP-10-069



LEGEND

EXISTING 2' CONTOUR	302
EXISTING 10' CONTOUR	300
PROPOSED 2' CONTOUR	302
PROPOSED 10' CONTOUR	300
PROPERTY LINE AND RIGHT OF WAY	
EX. TREELINE	
EX. FIRE HYDRANT	
EX. OVERHEAD WIRES	OHE
EX. BUILDING	
PROP. BUILDING	
EX. CURB & GUTTER	
PROP. CURB & GUTTER	
EX. STORM DRAIN	D
EX. SEWER	S
EX. WATER METER	WM
PROPOSED GREEN ROOF	

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas E. Butler 12/21/10
DIRECTOR DATE

Chad Edmondson 12.15.10
CHIEF, DEVELOPMENT ENGINEERING DIVISION HGP DATE

Kent Sheubrooks 12-21-10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

PROJECT
ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER

AREA
TAX MAP 25-A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE
OVERALL SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
PHR+A
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL
STATE OF MARYLAND JAMES A. RUST 21774 PROFESSIONAL ENGINEER

BY:

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2011

DESIGNED BY JSN
DRAWN BY: JSN
PROJECT NO : 14867-1-0
DATE : SEPTEMBER 13, 2010
SCALE : 1"=30'
DRAWING NO. 2 OF 18

P:\Project\14867\1-0\PLANS\C400SDP02.DWG

SDP-10-069

LEGEND

- EXISTING 2' CONTOUR — 302
- EXISTING 10' CONTOUR — 300
- PROPERTY LINE AND RIGHT OF WAY
- EX. TREELINE
- EX. FIRE HYDRANT
- EX. OVERHEAD WIRES — OHE
- EX. BUILDING
- EX. SOILS — MgD
- EX. CURB & GUTTER
- EX. STORM DRAIN — D
- EX. SEWER — S
- EX. WATER METER — WM
- 15–25% SLOPES
- >25% SLOPES
- EXISTING TREES
- EXISTING PUBLIC SHA RIGHT-OF-WAY

GENERAL NOTES

1. THERE IS NO EXISTING FOREST ON SITE.
2. THERE ARE NO SPECIMEN TREES ON SITE.
3. THERE ARE NO STREAMS OR WETLANDS ON SITE.
4. THERE ARE NO REGULATED 25% STEEP SLOPES ON SITE.
5. THE EXISTING CAMPUS IS COMPRISED OF EXISTING LAWN AREA AND SCATTERED TREES. TREE TYPES INCLUDE CEDAR, SPRUCE, MAPLES, AND OTHER TYPICAL LANDSCAPE PLANT VARIETIES.

SOILS CHART

MAP SYMBOL	NAME	STRUCTURAL LIMITATIONS Dwellings w/ Basements	EROSION HAZARD	HYDRIC (Yes/No)	SLOPE (%)
LeC	Legore Silt Loam	Somewhat limited	Moderate	No	8–15
MgD	Manor–Bannertown Sandy Loams	Very limited	High	No	15–25
MgF	Manor–Bannertown Sandy Loams	Very limited	High	No	25–65

SOURCE: SOIL INFORMATION TAKEN FROM THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

GRAPHIC SCALE 1"=10'
10' 0' 10' 20'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 12/21/10

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/15/10

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 12-21-10

DATE	NO.	REVISION

OWNER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043–4655
(410) 547–5340

DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043–4655
(410) 547–5340

PROJECT
ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER

AREA TAX MAP 25–A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE
EXISTING CONDITIONS & SOILS PLAN

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL

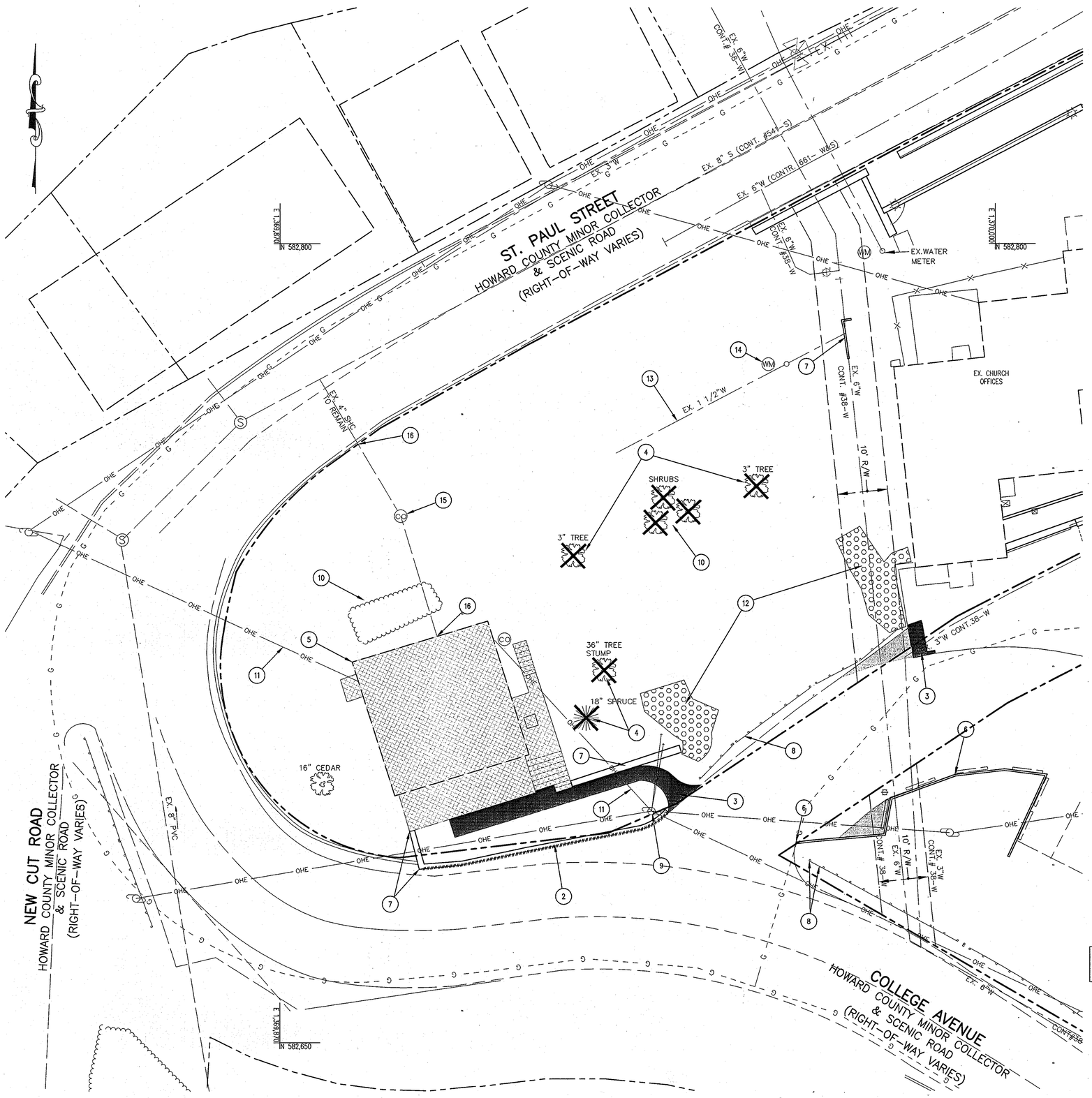
BY: _____

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2011"

DESIGNED BY : JSN
DRAWN BY: JSN
PROJECT NO : 14867-1-0
DATE : SEPTEMBER 13, 2010
SCALE : 1"=10'
DRAWING NO. 3 OF 18

P:\Projects\14867\1-0\PLANS\C4DGSDPC3.DWG

SDP-10-069



DEMOLITION KEY:

1. REMOVE EXISTING BITUMINOUS PAVING
2. REMOVE EXISTING CONCRETE CURB
3. REMOVE EXISTING SIDEWALK
4. REMOVE EXISTING TREE
5. REMOVE EXISTING BUILDING
6. REMOVE EXISTING TIMBER WALL
7. REMOVE EXISTING RETAINING WALL
8. REMOVE EXISTING GAURD RAIL
9. RELOCATE EXISTING UTILITY POLE
10. REMOVE EXISTING SHRUBS
11. ABANDON EXISTING UTILITY SERVICE
12. REMOVE EXISTING RIP RAP
13. REMOVE EXISTING WATER LINE TO MAIN
14. REMOVE EXISTING WATER METER
15. REMOVE EXISTING CLEANOUT
16. REMOVE EXISTING 4" SEWER HOUSE CONNECTION TO RIGHT-OF-WAY FOR ST. PAUL STREET

DEMOLITION LEGEND

- REMOVE EXISTING BITUMINOUS PAVING
- REMOVE CONCRETE SIDEWALK
- REMOVE EXISTING TREE
- REMOVE EXISTING CURB
- REMOVE EXISTING BUILDING

DEMOLITION NOTES:

1. ALL MATERIALS DEMOLISHED, UNLESS IDENTIFIED TO BE SALVAGED (CONCRETE, PAVING, AND OTHER DEBRIS) SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PER FEDERAL, STATE AND LOCAL REGULATIONS. ALL COSTS OF HAULING, DISPOSAL AND TIPPING FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR AS PART OF THE BASE BID. ITEMS TO BE DEMOLISHED SHALL BE DISPOSED OF IN SUCH A MANNER AS TO MEET APPLICABLE LEED CERTIFICATION REQUIREMENTS.
2. ALL MATERIALS IDENTIFIED TO BE SALVAGED/RELOCATED SHALL BE REMOVED WITH CARE TO MINIMIZE DAMAGE AND SHALL BE STORED ON SITE FOR REUSE OR FOR RETRIEVAL BY OWNER OR OWNER AGENT.
3. ALL QUANTITIES OF DEMOLITION SHALL BE DETERMINED BY THE CONTRACTOR AND COVERED IN THE BASE BID. CONTRACTOR SHALL MAKE NECESSARY SITE INSPECTIONS PRIOR TO BID TO VERIFY ALL QUANTITIES TO HIS SATISFACTION.
4. CONTRACTOR SHALL REFER TO SEPARATE PLANS IN THE CIVIL SERIES (SITE PLAN, STORMWATER MANAGEMENT PLAN, UTILITY PLAN, SEDIMENT CONTROL PLAN, ETC.) TO DETERMINE APPROPRIATE SEQUENCE OF ALL DEMOLITION ACTIVITIES.
5. REFER TO SEPARATE PLANS FOR SEDIMENT AND EROSION CONTROL REQUIREMENTS.
6. EXISTING UTILITY LINES HAVE BEEN SHOWN USING THE BEST AVAILABLE RECORDS OBTAINED FROM HOWARD COUNTY AND FIELD EVIDENCE. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL CALL MISS UTILITY TO LOCATE ALL UNDERGROUND UTILITY LINES AND SUPPLEMENT THOSE MARKINGS BY ENGAGING A PRIVATE UTILITY LOCATING COMPANY (AT CONTRACTORS EXPENSE) TO ENSURE THAT ALL EXISTING UTILITIES HAVE BEEN MARKED.
7. ALL PAVEMENT TO BE REMOVED SHALL BE RECYCLED TO THE EXTENT REQUIRED BY GENERAL PROJECT CONDITIONS (LEED CERTIFICATION REQUIRED).
8. THE TOTAL IMPERVIOUS AREA TO BE DEMOLISHED IS 0.03 AC (1,378 SF).
9. EXISTING UTILITY POLE TO BE RELOCATED BY OTHERS. CONTRACTOR SHALL COORDINATE WITH UTILITY OWNERS.
10. WATER METERS TO BE DISPOSED OF ACCORDING TO HOWARD COUNTY REQUIREMENTS.

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

GRAPHIC SCALE 1"=10'

10' 0' 10' 20'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR	DATE 12/21/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 12.15.10
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 12-21-10

DATE	NO.	REVISION

OWNER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

PROJECT
ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER

AREA
TAX MAP 25-A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE
DEMOLITION PLAN

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL

STATE OF MARYLAND
JAMES A. NIGHT
PROFESSIONAL ENGINEER

BY:

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2012

DESIGNED BY :	JSN
DRAWN BY:	JSN
PROJECT NO :	14867-1-0
DATE :	SEPTEMBER 13, 2010
SCALE :	1"=10'
DRAWING NO.	4 OF 18

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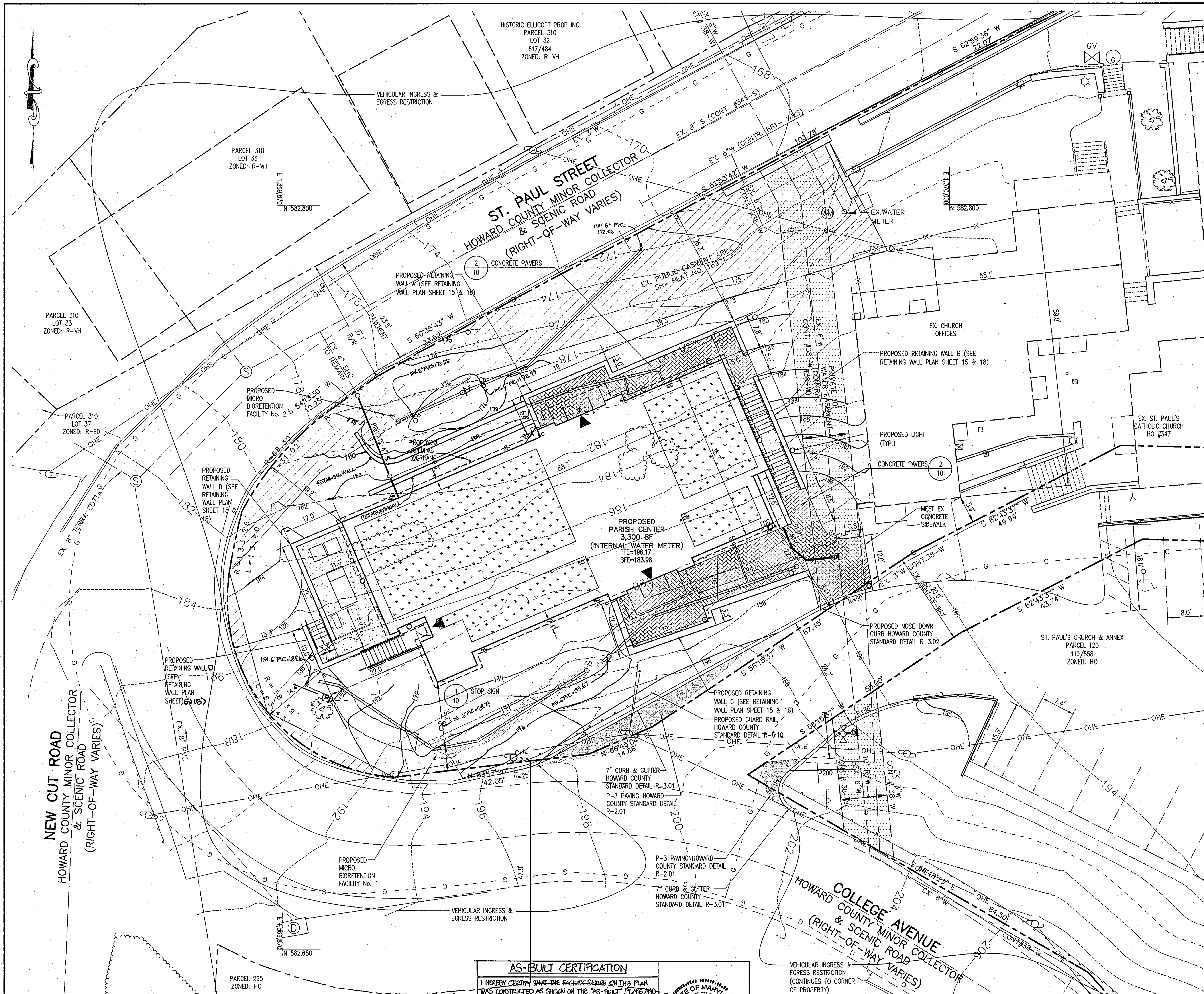
SDP-10-069



LEGEND

- PROPERTY LINE AND RIGHT OF WAY
- EX. TREELINE
- EX. FIRE HYDRANT
- EX. OVERHEAD WIRES — OHE
- EX. BUILDING
- EX. SOILS — MgD
- EX. CURB & GUTTER
- EX. STORM DRAIN
- EX. SEWER
- EX. WATER METER
- PROP. BUILDING
- PROP. CURB & GUTTER
- PROPOSED GREEN ROOF
- EXISTING TREES
- PROP. ASPHALT PAVING
- PROP. CONCRETE PAVERS
- PROP. GUARD RAIL
- EXISTING PUBLIC SHA RIGHT-OF-WAY
- EXISTING PRIVATE WATER EASEMENT
- PROP. RETAINING WALL
- PROP. BUILDING OVERHANG
- PROPOSED 2' CONTOUR — 302
- PROPOSED 10' CONTOUR — 300
- EXISTING 2' CONTOUR — 302
- EXISTING 10' CONTOUR — 300
- PROPOSED STORM DRAIN
- PROPOSED WATER LINE — 4" WHC
- PROPOSED SEWER LINE — 4" S
- PROPOSED TREE PROTECTION — TPD
- PROPOSED LIGHT

AS-BUILT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Marsha E. Butler 12/21/10
DIRECTOR DATE

Chad Edmondson 12.15.10
CHIEF, DEVELOPMENT ENGINEERING DIVISION HSP DATE

Kent Sheubrooks 12-21-10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

PROJECT ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER

AREA TAX MAP 25-A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
PHR+A
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL
STATE OF MARYLAND — JAMES A. RUFF — 21774 — PROFESSIONAL ENGINEER
BY:
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2011

DESIGNED BY : JSN
DRAWN BY: JSN
PROJECT NO : 14867-1-0
DATE : SEPTEMBER 13, 2010
SCALE : 1"-10'
DRAWING NO. 5 OF 18

SDP-10-069

P:\Project\14867\1-0\PLANS\C400SDP05.DWG

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

GRAPHIC SCALE 1"=10'
10' 0' 10' 20'

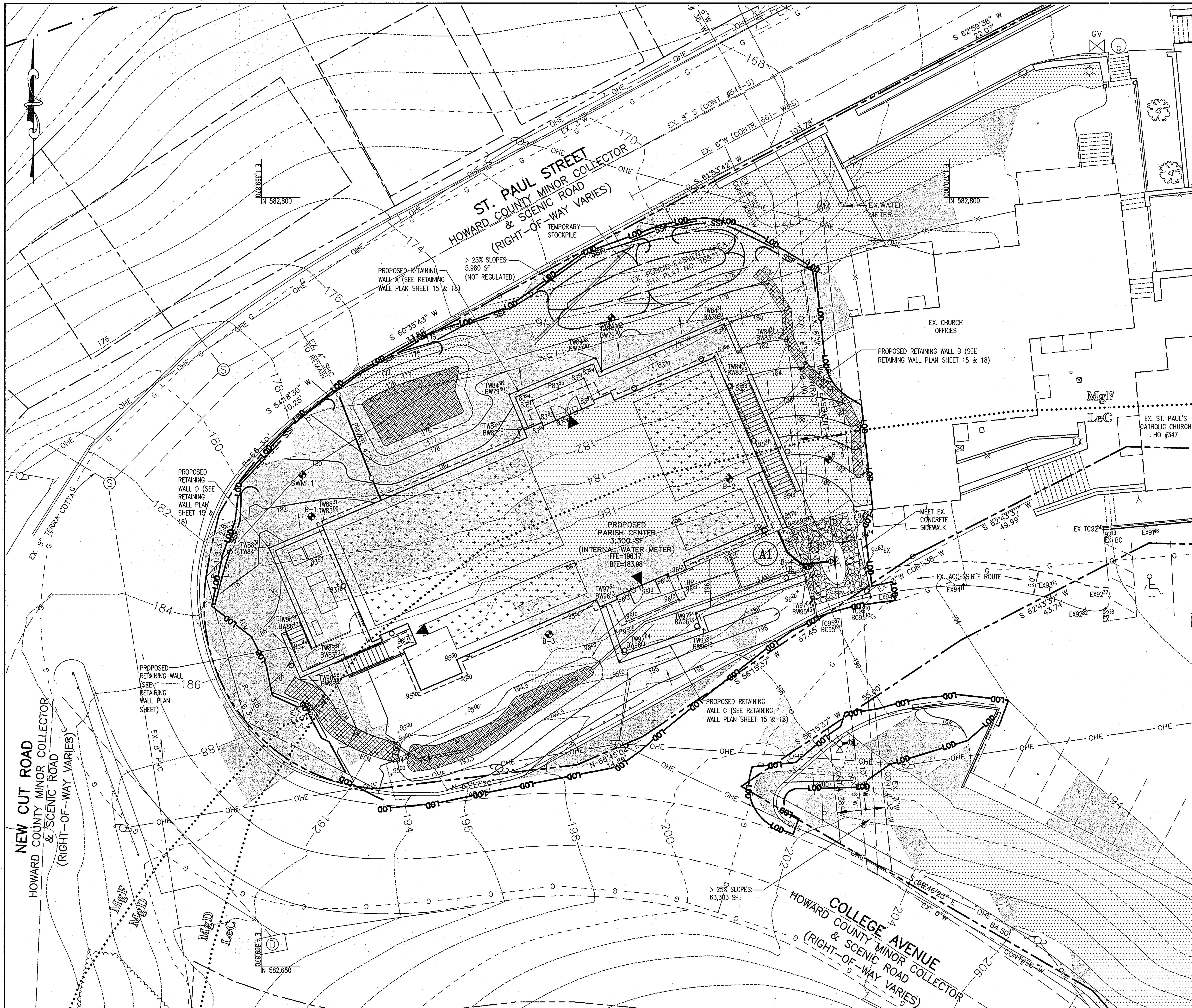
AS-BUILT CERTIFICATION

I HEREBY CERTIFY ~~THAT THE FACILITY SHOWN~~ ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

JAMES A. RUFF — PRINTED NAME
#21774 — MD P.E. No.
SIGNATURE
10/24/17 — DATE

STATE OF MARYLAND — JAMES ARNOLD RUFF — No. 21774 — REGISTERED PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774 EXPIRATION DATE: 11-10-2013



LEGEND

EXISTING 2' CONTOUR	302
EXISTING 10' CONTOUR	300
PROPERTY LINE AND RIGHT OF WAY	
EX. TREELINE	
EX. FIRE HYDRANT	
EX. OVERHEAD WIRES	OHE
EX. BUILDING	
EX. SOILS	MgD
EX. CURB & GUTTER	
EX. STORM DRAIN	
EX.POWER POLE	
SUPER SILT FENCE	SSF
EROSION CONTROL MATTING (ECM)	ECM
PROPOSED GREEN ROOF	
SOIL BORINGS	B-4
EX. SEWER	
EX. WATER METER	WM
PROP. BUILDING	
PROP. CURB & GUTTER	
PROPOSED 2' CONTOUR	302
PROPOSED 10' CONTOUR	300
LIMIT OF DISTURBANCE	LOD
15-25% SLOPES	
>25% SLOPES	
EX. GAURDRAIL	
STABILIZED CONSTRUCTION ENTRANCE	SCE
PROP. TREE PROTECTION	TPD

NOTE:
A DOUBLE ROW OF SUPER SILT FENCE IS TO BE PLACED ALONG ST. PAUL STREET AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mitchell T. Rozanski
DEVELOPER — DATE
MOST REV MITCHELL T. ROZANSKI, VICE-PRES

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER — 9/13/10 — DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R Robertson — 12/7/10
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Marsha S. Butler — 12/21/10
DIRECTOR — DATE

12-15-10
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

Kent Sheubrooks — 12-21-10
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION

OWNER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

PROJECT
ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER

AREA
TAX MAP 25-A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE
GRADING AND SEDIMENT CONTROL PLAN

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Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL

BY:
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2011

DESIGNED BY : JSN
DRAWN BY: JSN
PROJECT NO : 14867-1-0
DATE : SEPTEMBER 13, 2010
SCALE : 1"=10'
DRAWING NO. 6 OF 18

P\Project\14867\1-0\PLANS\C400SDP06.DWG

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

SOILS CHART

MAP SYMBOL	NAME	STRUCTURAL LIMITATIONS Dwellings w/ Basements	EROSION HAZARD	HYDRIC (Yes/No)	SLOPE (%)
LeC	Legore Silt Loam	Somewhat limited	Moderate	No	8–15
MgD	Manor–Bannertown Sandy Loams	Very limited	High	No	15–25
MgF	Manor–Bannertown Sandy Loams	Very limited	High	No	25–65

SOURCE: SOIL INFORMATION TAKEN FROM THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.

SDP-10-069

STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313–1855).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE–DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A)7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G.). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	2.76 ACRES
AREA DISTURBED	0.27 ACRES
AREA TO BE PAVED/ROOFED	0.15 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.13 ACRES
TOTAL CUT	460 CU. YARDS
TOTAL FILL	180 CU. YARDS

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK–FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
12. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
13. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
14. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT–TERM VEGETATIVE COVER IS NEEDED. WHERE AREAS WILL NOT BE DISTURBED AGAIN IN THE SHORT TERM, USE PERMANENT SEEDING AS NOTED BELOW.

SEEDBED PREPARATION : LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS : APPLY 600 LBS. PER ACRE 10–10–10 FERTILIZER (14 LBS. PER 1000 SQ.FT.).

SEEDING : FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2–1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS. PER 1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 10 LBS. PER ACRE OF FOXTAIL MILLET. FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING : APPLY 1–1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG–LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION : LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS : IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES :

1) PREFERRED – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ.FT.) AND 600 LBS. PER ACRE 10–10–10 FERTILIZER (14 LBS. PER 1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30–0–0 UREAFORM FERTILIZER (9 LBS. PER 1000 SQ.FT.).

2) ACCEPTABLE – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ.FT.) AND 1000 LBS. PER ACRE 10–10–10 FERTILIZER (23 LBS. PER 1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING : FOR THE PERIOD MARCH 1 THRU APRIL 30 AND FROM AUGUST 1 THRU OCTOBER 15, SEED WITH FOLLOWING MIXTURE: 100% TALL TURF TYPE FESCUE (3 WAY BLEND) AT 6 LBS/1,000 SF. ALL SEED VARIETIES MUST BE SELECTED FROM LIST OF RECOMMENDED CULTIVARS OF TURF–TYPE TALL FESCUES AS INDICATED BY THE UNIVERSITY OF MARYLAND AGRONOMY MIMEO 77 (REVISED MAY 1995) OR MOST CURRENT EDITION. SEED MIX SHALL CONSIST OF A THREE–WAY BLEND (34%, 33%, AND 33%) OF TURF–TYPE TALL FESCUES FROM ABOVE UNIVERSITY OF MARYLAND LIST OR RECOMMENDED CULTIVARS. DURING THE PERIOD OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY ONE OF THE FOLLOWING OPTIONS :

1) 2 TONS PER ACRE OF WELL–ANCHORED MULCH STRAW AND SEED AS SOON AS POSSIBLE IN THE SPRING.

2) USE SOD.

3) SEED AND MULCH WITH 2 TONS PER ACRE WELL ANCHORED STRAW.

MULCHING : APPLY 1–1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE : INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION
PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES
I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
--a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
-b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
--c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
--d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS
I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA–SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTATION STATION.

II. TOPSOIL SPECIFICATIONS – SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
-i. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1–1/2" IN DIAMETER.
-ii. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
-iii. WHERE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4–8 TONS/ACRE (200–400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
-i. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION – SECTION I – VEGETATIVE STABILIZATION METHODS AND MATERIALS.

IIII. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
-i. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
--a. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
--b. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
--c. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
--d. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO–TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES TO AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY MAY BE USED IN LIEU OF NATURAL TOPSOIL.

-ii. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION – SECTION I – VEGETATIVE STABILIZATION METHODS AND MATERIALS.

V. TOPSOIL APPLICATION
-i. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
-ii. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" – 8" HIGHER IN ELEVATION.
-iii. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" – 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
-iv. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

VI. ALTERNATIVE FOR PERMANENT SEEDING – INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
-i. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITE HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
--a. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
--b. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
--c. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
--d. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE. REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD–VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

EROSION CONTROL MATTING

Construction Specifications

1. Key–in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross–section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed–in.

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30.0 – DUST CONTROL

DEFINITION

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF–SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON OFF–SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS

TEMPORARY METHODS

1. MULCHES – SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
2. VEGATATIVE COVER – SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
3. TILLAGE – TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL–TYPE PLOWS SPACED ABOUT 12" APART, SPRING–TOOTHED HARROWS, AND SIMILIAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION – THIS IS GENERALLY DONE AS AN EMERGENGY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
5. BARRIERS – SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMIILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
6. CALCIUM CHLORIDE – APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS

1. PERMANENT VEGETATION – SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
2. TOPSOILING – COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
3. STONE – COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

REFERENCES

1. AGRICULTURE HANDBOOK 346. WIND EROSION FORCES IN THE UNITED STATES AND THEIR USES IN PREDICTING SOIL LOSS.
2. AGRICULTURE INFORMATION BULLETIN 354. HOW TO CONTROL WIND EROSION, USDA–ARS.

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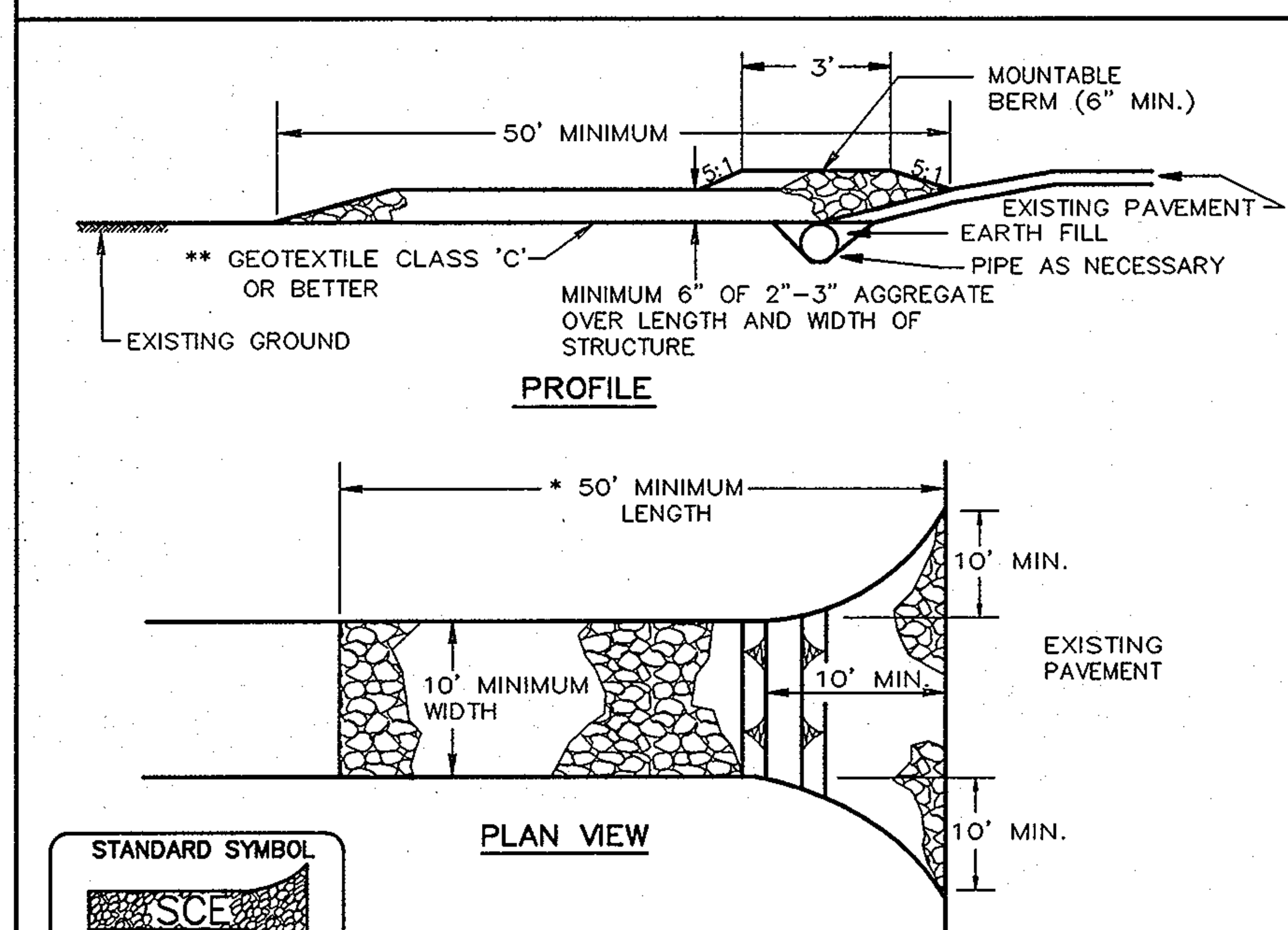
DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length – minimum of 50' (*30' for single residence lot).
2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

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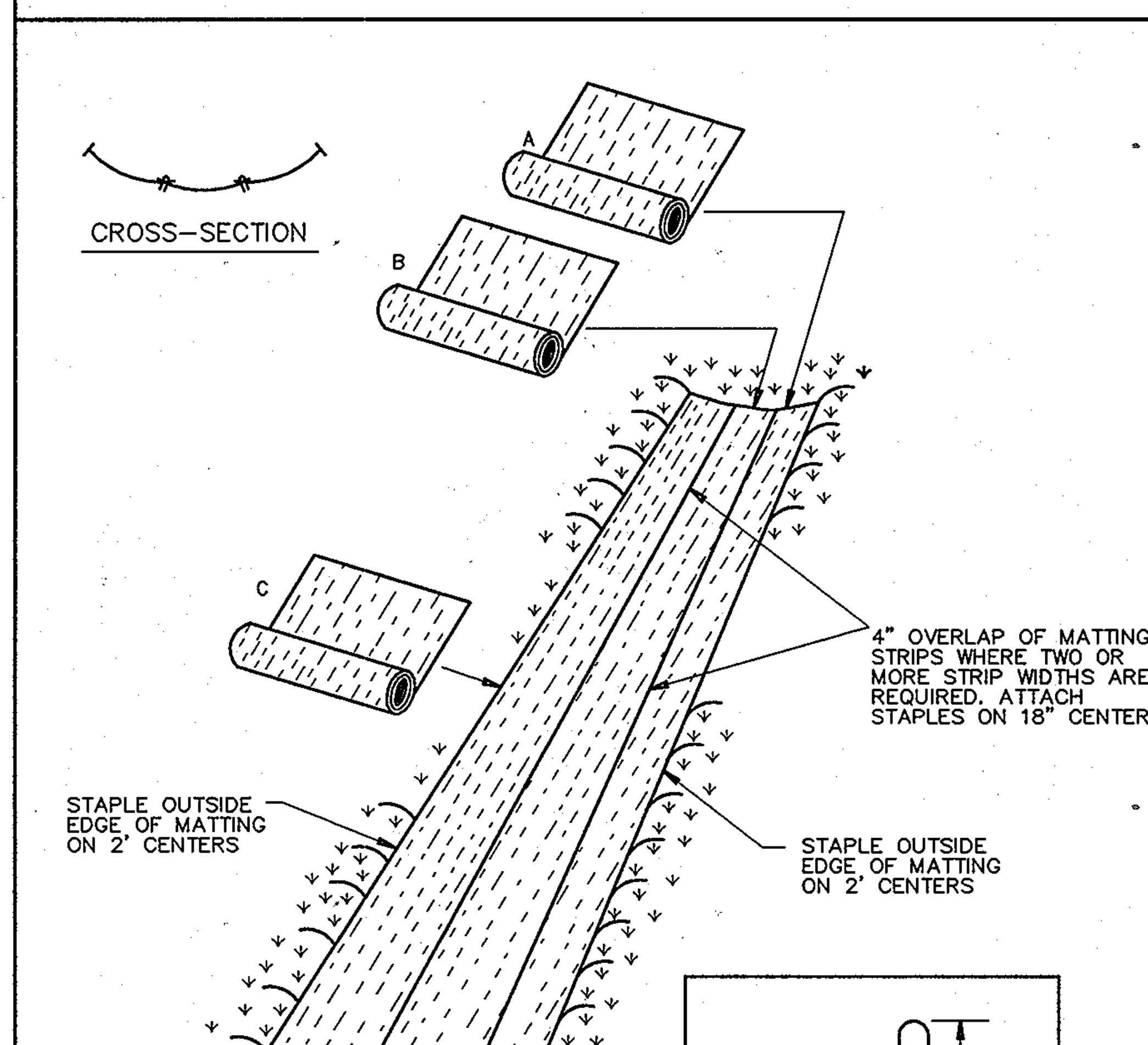
DETAIL 30 – EROSION CONTROL MATTING



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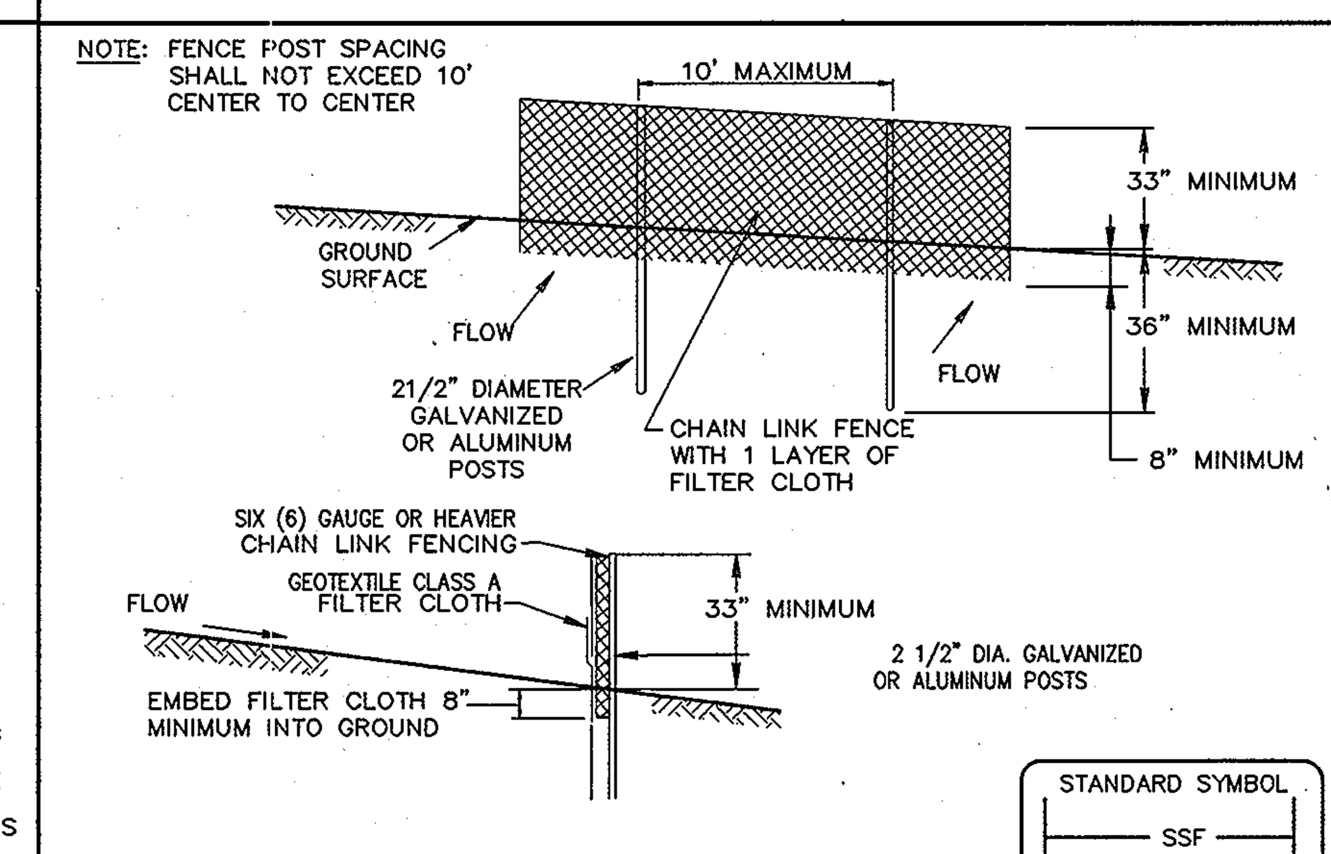
DETAIL 33 – SUPER SILT FENCE



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The SHA specifications for a 6 foot fence shall be used, substituting 42" fabric and 6 foot length posts.
2. The posts do not need to be set in concrete.
3. Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.
4. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
5. Filter cloth shall be embedded a minimum of 8" into the ground.
6. When two sections of geotextile fabric adjoin each other, they shall be overlapped by 6" and folded.
7. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height

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SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. INSTALL PERIMETER CONTROLS, STABILIZED CONSTRUCTION ENTRANCE, AND SUPER SILT FENCE (3 DAYS).
3. BEGIN ROUGH GRADING AND DEMOLITION (2 WEEKS).
4. AS SUBGRADE ELEVATIONS ARE ESTABLISHED, INSTALL WATER AND SEWER (3 WEEKS).
5. UPON COMPLETION OF UTILITY SYSTEMS, OBTAIN APPROVALS FROM INSPECTORS.
6. PROVIDE TEMPORARY AND PERMANENT SEEDING TO ESTABLISH VEGETATION ON DISTURBED STEEP SLOPE AREA.
7. BEGIN STRUCTURAL RETAINING WALLS AND BUILDING CONSTRUCTION (6 MONTHS).
8. INSTALL STORM WATER MANAGEMENT FACILITIES, AND MICRO BIORETENTION FACILITY AS INDICATED ON PLANS (3 WEEKS).
9. UPON COMPLETION OF STORM WATER MANAGEMENT FACILITIES, OBTAIN APPROVALS FROM INSPECTOR.
10. UPON COMPLETION OF BUILDING EXTERIOR, PERFORM FINE GRADING AROUND BUILDING AND INSTALL EROSION CONTROL MATTING AND LANDSCAPING (1 DAY).
11. UPON COMPLETION OF FINE GRADING, INSTALL CURB, GUTTER, AND BASE PAVING AS REQUIRED (2 WEEKS).
12. APPLY TOPSOIL AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES (2 DAYS).
13. UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES (1 DAY).

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON–SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mitchell T. Rozanski
DEVELOPER — DATE
MOST REV MITCHELL T. ROZANSKI, VICE PRES.

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER — DATE 9/13/10

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Roberts
HOWARD SOIL CONSERVATION DISTRICT — DATE 12/7/10

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Marsha S. Butler — 12/21/10
DIRECTOR — DATE

12.15.10
CHIEF, DEVELOPMENT ENGINEERING DIVISION HSP — DATE

12-21-10
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION

OWNER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
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ELLICOTT CITY MD 21043–4655
(410) 547–5340

DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043–4655
(410) 547–5340

PROJECT **ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER**

AREA TAX MAP 25–A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE **SEDIMENT & EROSION CONTROL DETAILS**

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
PHR+A
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL
STATE OF MARYLAND PROFESSIONAL ENGINEER
BY:
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11–10–2011

DESIGNED BY : JSN
DRAWN BY: JSN
PROJECT NO : 14867–1–0
DATE : SEPTEMBER 13, 2010
SCALE : AS SHOWN
DRAWING NO. 7 OF 18

SDP–10–069

P:\Project\14867\1–0\PLANS\C400SDP07.DWG

BIOFILTRATION SPECIFICATIONS

1. THE UNDERDRAIN PIPE MUST BE 6-INCH DIAMETER SCHEDULE 40 OR STRONGER PERFORATED PVC PIPE AT 0.003ft SLOPE. THREE INCHES OF GRAVEL MUST BE PLACED UNDER THE PIPE, WITH A MINIMUM OF 6 INCHES OF GRAVEL OVER THE PIPE. PERFORATIONS MUST BE 3/8 INCH IN DIAMETER AND MUST BE LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE. PERFORATED PIPE MUST BEGIN AT LEAST 5FT. INSIDE THE FILTER MEDIA. FILTER FABRIC MUST NOT BE WRAPPED AROUND THE UNDERDRAIN PIPE.

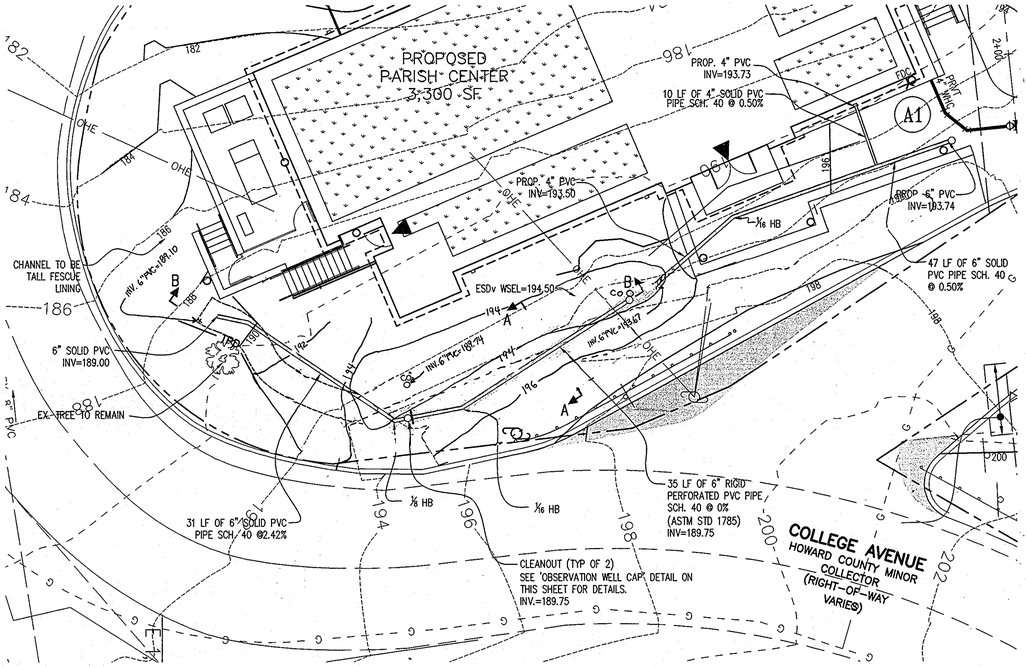
2. 4" INCH CLEAN-OUTS SHOULD BE USED. CLEANOUTS FOR EACH PIPE SHOULD EXTEND 6 INCHES ABOVE THE TOP OF THE PLANTING MEDIA AND HAVE A REMOVABLE CAP.

3. THE GRAVEL LAYER SURROUNDING THE UNDERDRAIN PIPES MUST MEET MSHA SIZE #7 (TABLE 901A), AND MUST PROVIDE A MINIMUM OF 6 INCHES COVER OVER THE PIPE, AND MINIMUM 3INCHES UNDER THE PIPE. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED ANYWHERE WITHIN THE FILTER MEDIA (STONE OR SAND).

4. A MINIMUM 6-INCH FINE AGGREGATE SAND LAYER SHALL BE PROVIDED BELOW THE SOIL FILTER/PLANTING MEDIA. A SAND WINDOW SHALL EXTEND FROM THE SAND FILTER TO THE SURFACE OF THE PLANTING MEDIA. THE SAND WINDOW MUST BE ASTM C33 FINE AGGREGATE CONCRETE SAND. MANUFACTURED SAND OR STONE DUST IS NOT ACCEPTABLE.

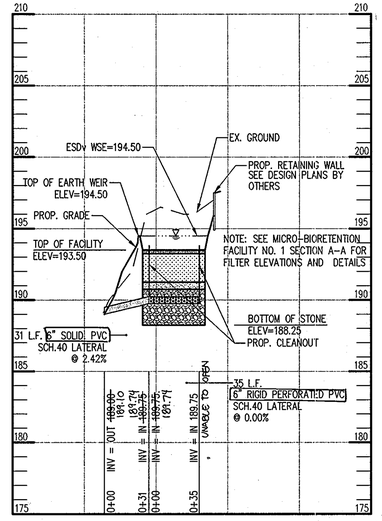
5. THE PLANTING MEDIA SHALL CONSIST OF 1/3 PERLITE, 1/3 COMPOST AND 1/3 TOPSOIL. THE PERLITE SHALL BE COARSE GRADE HORTICULTURAL PERLITE. THE COMPOST SHALL BE HIGH GRADE COMPOST FREE OF STONES AND PARTIALLY COMPOSTED WOODY MATERIAL. THE SOIL SHALL MEET THE FOLLOWING MINIMUM CRITERIA: CONTAIN NO MORE THAN 10% CLAY, 30-55% SILT AND 35-60% SAND. THE SOIL SHALL BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES. THE FIRST LAYER OF THE PLANTING MEDIA SHALL BE LIGHTLY TILLED TO MIX IT INTO THE SAND LAYER, SO NOT TO CREATE A DEFINITIVE BOUNDARY. THE PLANTING MATERIAL SHALL BE FLOODED AFTER PLACEMENT. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.

6. THE SURFACE MULCH LAYER WILL CONSIST OF STANDARD FINE SHREDDED AGED HARDWOOD MULCH. THE MULCH SHOULD BE UNIFORMLY TO A DEPTH OF 2 TO 3 INCHES. YEARLY REPLENISHING MAY BE NECESSARY. PINE BARK IS NOT ACCEPTABLE.



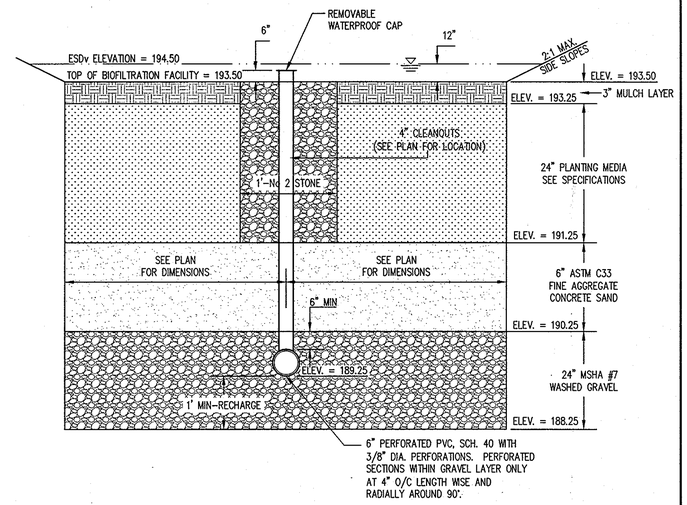
MICRO-BIORETENTION FACILITY NO. 1

SCALE : 1"=10'



PROFILE THROUGH MICRO-BIORETENTION FACILITY NO. 1-SECTION B-B

SCALE : HOR: 1"=50'
VERT: 1"=5'



MICRO-BIORETENTION FACILITY NO. 1
SECTION A-A

NOT TO SCALE

STORM DRAIN PIPE SCHEDULE

SIZE	TYPE	LINEAR FOOTAGE
4"	SOILD PVC SCH 40	17
6"	SOLID PVC SCH 40	157
6"	RIGID PERFORATED PVC SHC 40	50

STRUCTURE SCHEDULE

NUMBER	TYPE	LOCATION		TOP ELEVATION	SIZE	REMARKS
		STATION	OFFSET			
A1	NYLOPLAST INLINE DRAIN BASIN	SEE	PLAN	195.36	10" ø	STANDARD DUCTILE IRON GRATE
A2	NYLOPLAST INLINE DRAIN BASIN	SEE	PLAN	183.70	10" ø	STANDARD DUCTILE IRON GRATE
A3	NYLOPLAST INLINE DRAIN BASIN	SEE	PLAN	183.85	10" ø	STANDARD DUCTILE IRON GRATE

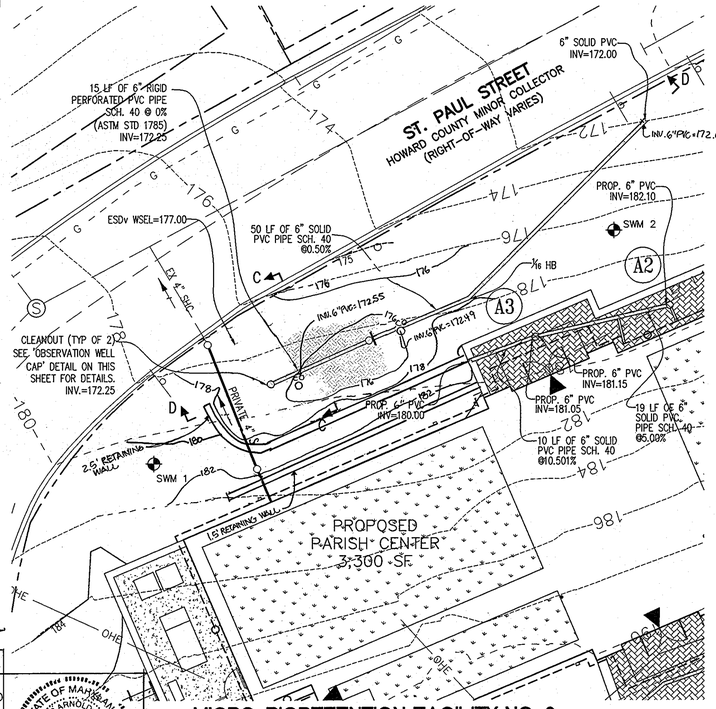
BIORETENTION AREA OPERATION AND MAINTENANCE SCHEDULE

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.

2. SCHEDULE OF PLANTING INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASE VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.

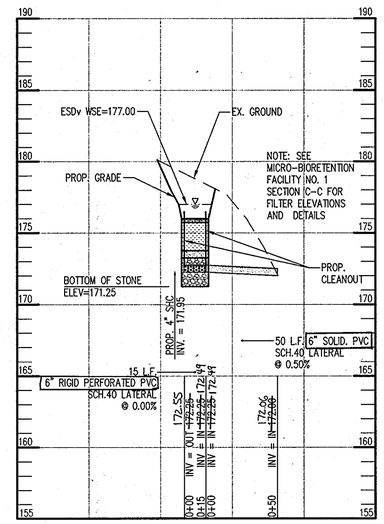
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.

4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE A MONTH AND AFTER HEAVY STORMS.



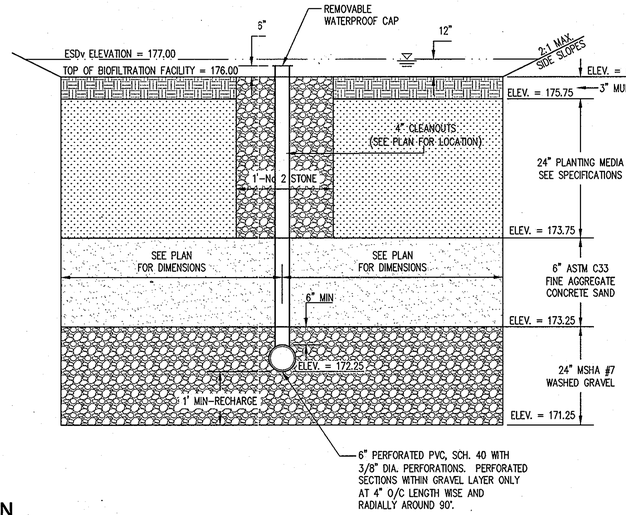
MICRO-BIORETENTION FACILITY NO. 2

SCALE : 1"=10'



PROFILE THROUGH MICRO-BIORETENTION FACILITY NO. 2-SECTION D-D

SCALE : HOR: 1"=50'
VERT: 1"=5'



MICRO-BIORETENTION FACILITY NO. 2
SECTION A-A

NOT TO SCALE

OBSERVATION WELL CAP

(NOT TO SCALE)

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2013

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

JAMES A. RUFF — PRINTED NAME
#21774 — MD PE. No.
SIGNATURE
10/23/12 — DATE

STATE OF MARYLAND — JAMES ARNOLD RUFF — NO. 21774 — REGISTERED PROFESSIONAL ENGINEER

AS-BUILT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 12/21/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12.15.10
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 12-21-10

DATE	NO.	REVISION

OWNER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

PROJECT: ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER

AREA: TAX MAP 25-A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT PLAN AND DETAILS

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL — STATE OF MARYLAND — JAMES ARNOLD RUFF — No. 21774 — PROFESSIONAL ENGINEER

BY:

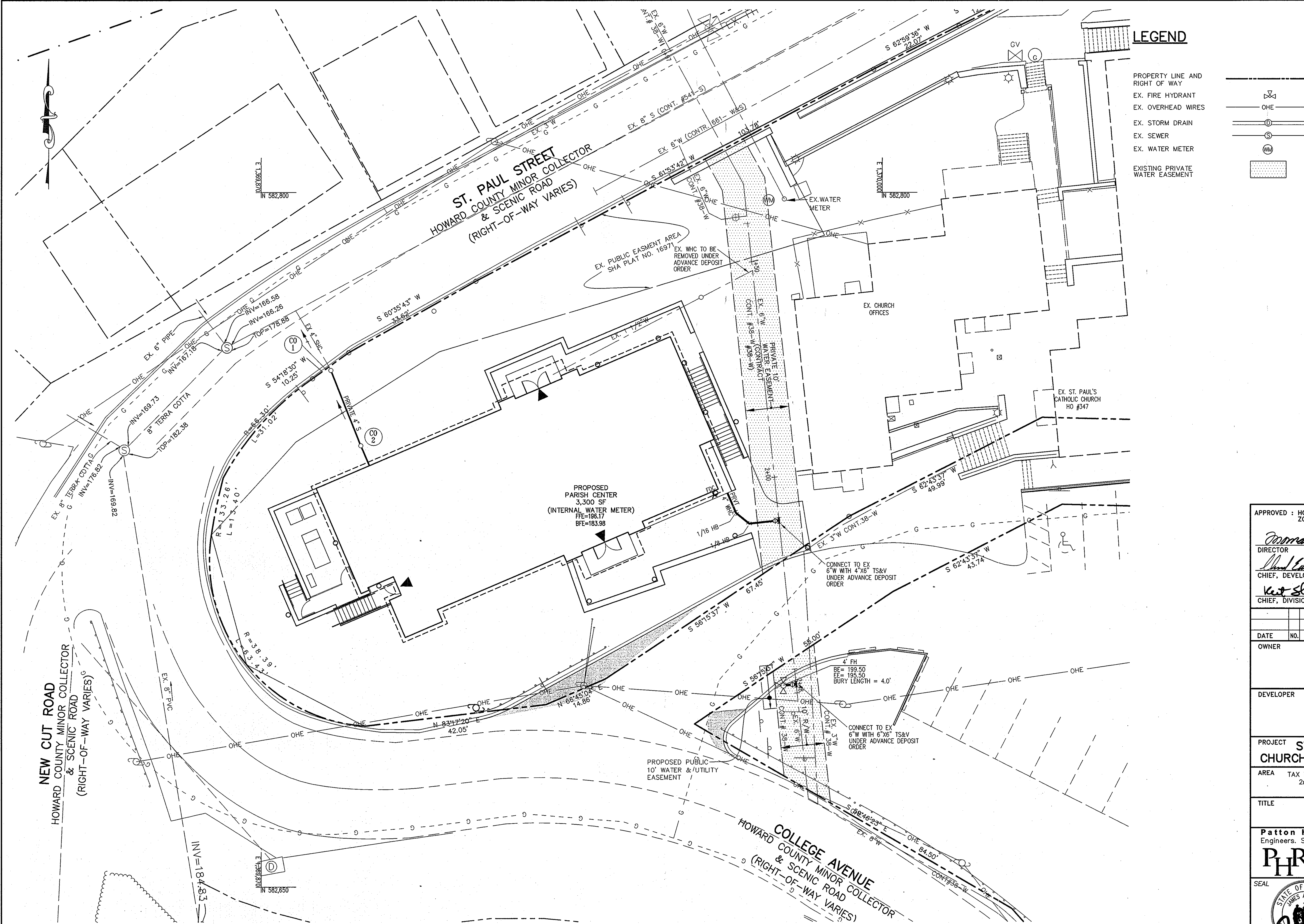
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2014"

DESIGNED BY	SER
DRAWN BY:	JSN
PROJECT NO	14867-1-0
DATE	SEPTEMBER 13, 2010
SCALE	SEE PLAN
DRAWING NO.	8 OF 18

P:\Project\14867\1-0\PLANS\C400SDP08.DWG

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

SDP-10-069



CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

GRAPHIC SCALE 1"=10'

10' 0' 10' 20'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas E. Butler 12/21/10
DIRECTOR DATE

12.15.10
CHIEF, DEVELOPMENT ENGINEERING DIVISION HSP DATE

12-21-10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
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ELLICOTT CITY MD 21043-4655
(410) 547-5340

DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

PROJECT **ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER**

AREA TAX MAP 25-A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE **UTILITY PLAN**

Patton Harris Rust & Associates
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Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL
STATE OF MARYLAND JAMES A. RUFF PROFESSIONAL ENGINEER
BY:
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2011

DESIGNED BY : JSN
DRAWN BY: JSN
PROJECT NO : 14867-1-0
DATE : SEPTEMBER 13, 2010
SCALE : 1"=10"
DRAWING NO. 9 OF 18

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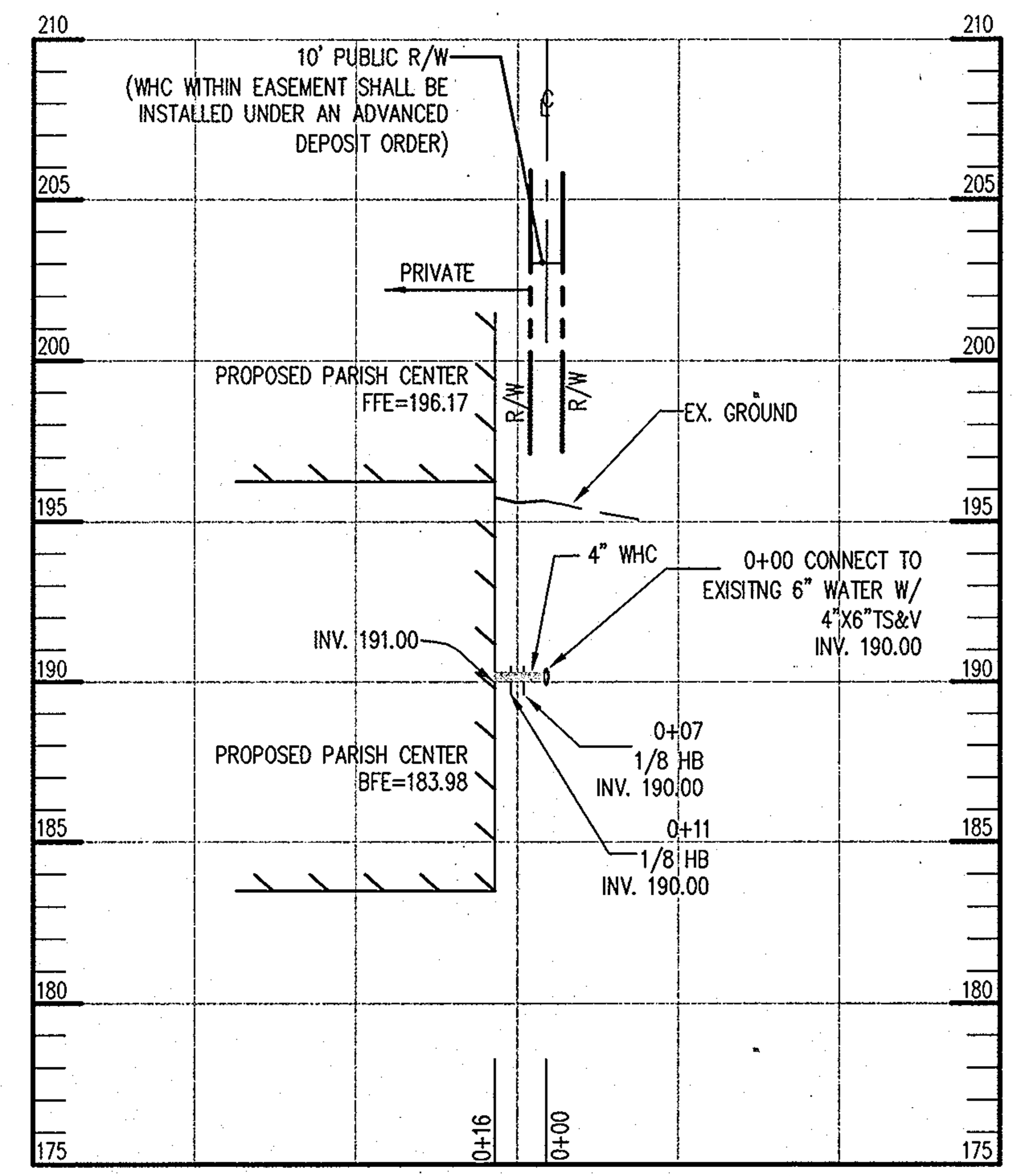
SDP-10-069



WATER PROFILE

SCALE : HOR: 1"=50'
VERT: 1"=5'

WATER AND SEWER PIPE SCHEDULE

SIZE	TYPE	LINEAR FOOTAGE
4" SEWER	PVC	23 LF (PRIVATE)
4" WATER	DIP	5 LF (PUBLIC) 11 LF (PRIVATE)

WATER FITTING SCHEDULE

QUANTITY	SIZE	TYPE
1	4"	1/8 HB
1	4"	1/16 HB
1	-	4"X6" TS&V
1	-	6"x8" TS&V
1	6"	FH

STRUCTURE SCHEDULE FOR PRIVATE SEWER

NUMBER	TYPE	LOCATION		TOP ELEVATION	PIPE INVERTS		REMARKS
		NORTHING	EASTING		INVERT IN	INVERT OUT	
CO-1	CLEANOUT	582775.94	1369883.58	177.00	171.35	165.51	HOWARD COUNTY STANDARD DETAIL S-3.21
CO-2	CLEANOUT	582756.38	1369889.52	180.00	174.95	174.95	

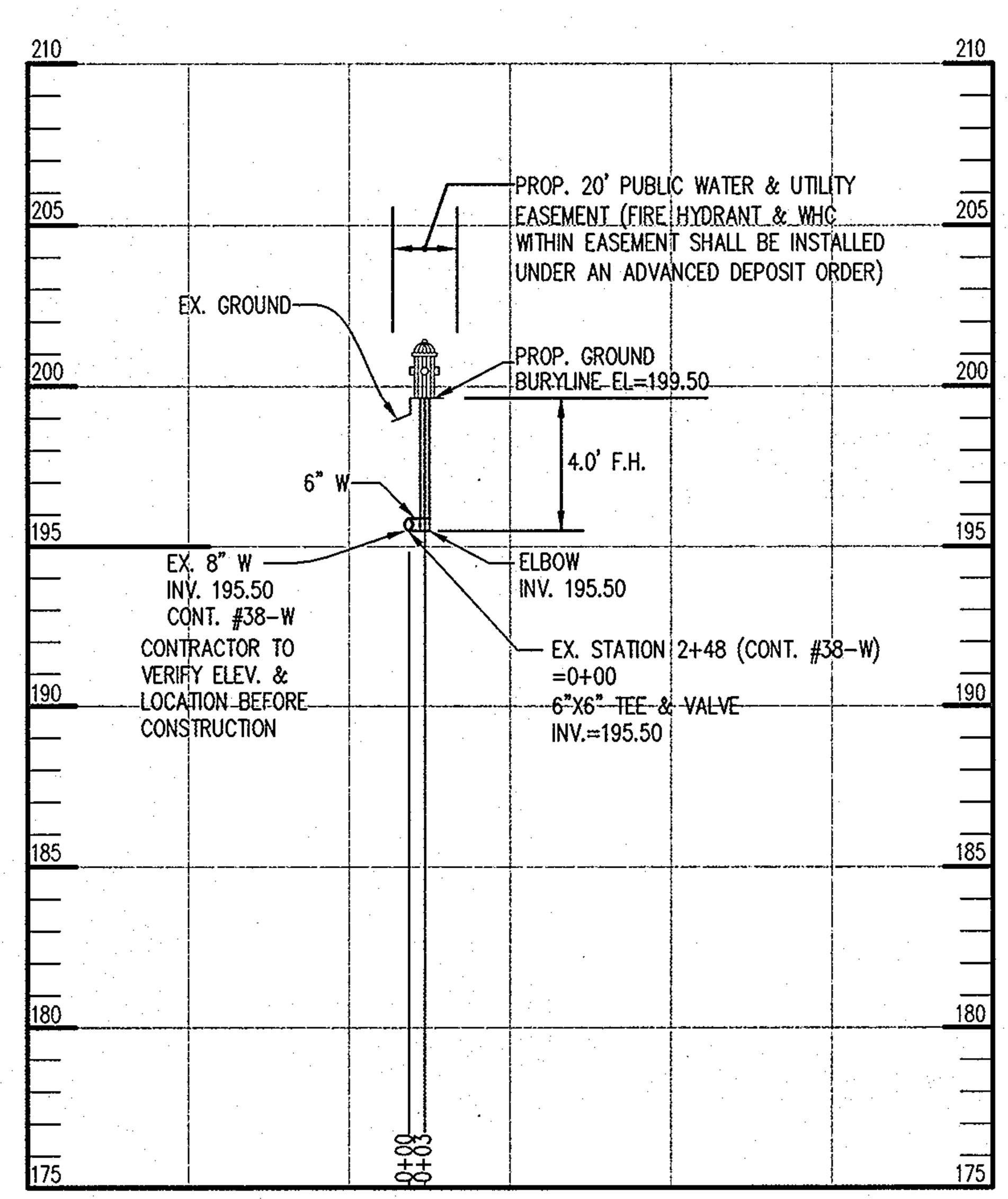
NOTES

1) ALL STRUCTURES ARE HOWARD COUNTY STANDARDS UNLESS NOTED OTHERWISE. CONTRACTOR MAY USE PRECAST STRUCTURE WHERE AVAILABLE TO MEET THE STANDARD STRUCTURE SPECIFIED.

2) STATIONS ARE GIVEN TO CENTER OF STRUCTURE FOR ALL STRUCTURES.

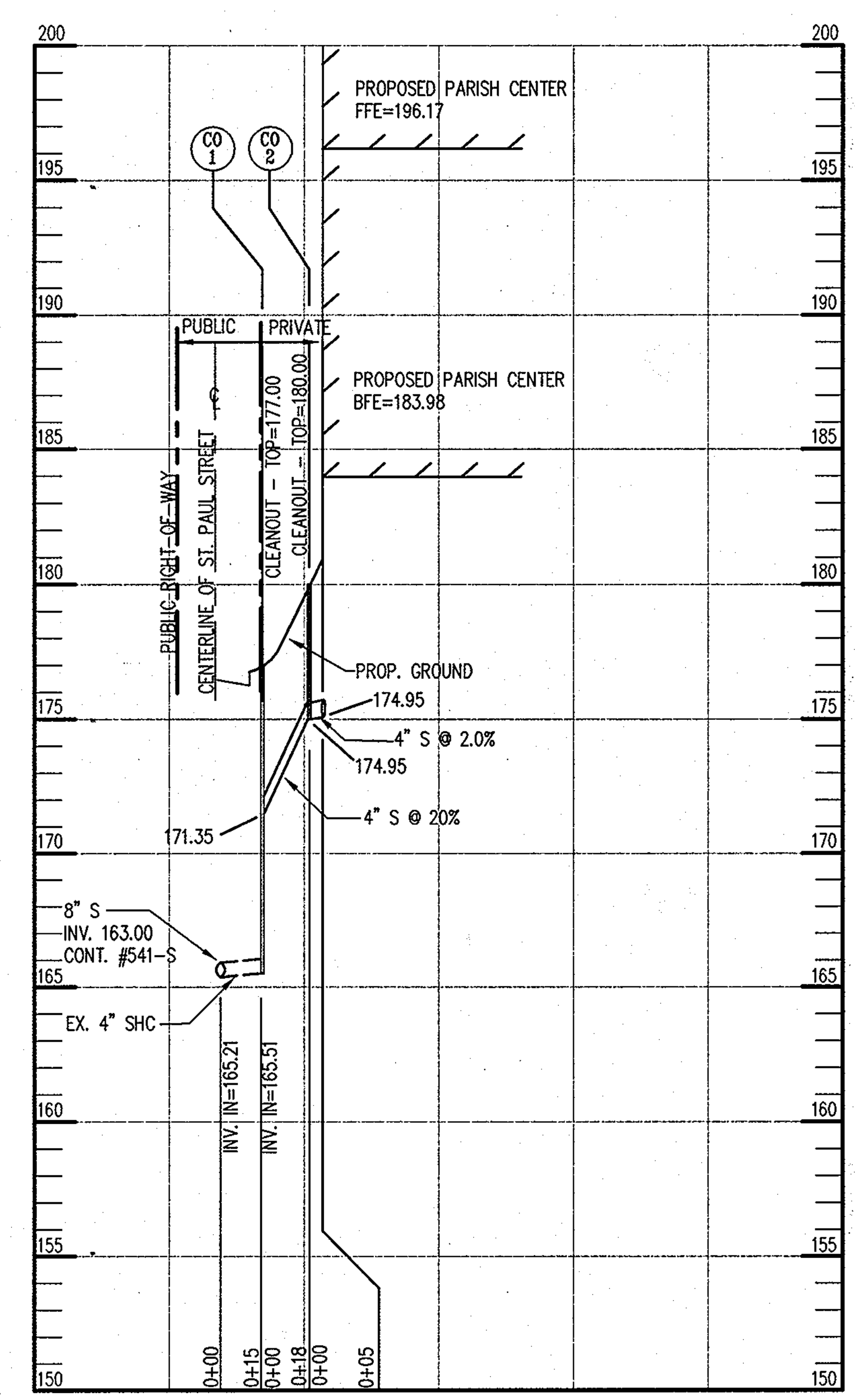
3) ELEVATIONS ARE GIVEN TO TOP LID FOR MANHOLES.

4) PIPE LENGTHS ARE GIVEN TO THE CENTER OF THE STRUCTURE. CONTRACTOR SHALL ADJUST LENGTH TO OBTAIN ACTUAL PIPE LENGTHS.



WATER PROFILE

SCALE : HOR: 1"=50'
VERT: 1"=5'



SEWER PROFILE

SCALE : HOR: 1"=50'
VERT: 1"=5'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas E. Butler 12/21/10
DIRECTOR DATE

12-15-10
CHIEF, DEVELOPMENT ENGINEERING DIVISION HSP DATE

Kent Sheubrooks 12-21-10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER
DOUG JOHNSON
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3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

PROJECT ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER

AREA TAX MAP 25-A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE UTILITY PROFILES

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
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Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL
STATE OF MARYLAND JAMES A. RUFF

BY:

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2011

DESIGNED BY : JSN
DRAWN BY: JSN
PROJECT NO : 14867-1-0
DATE : SEPTEMBER 13, 2010
SCALE : AS SHOWN
DRAWING NO. 10 OF 18

SDP-10-069

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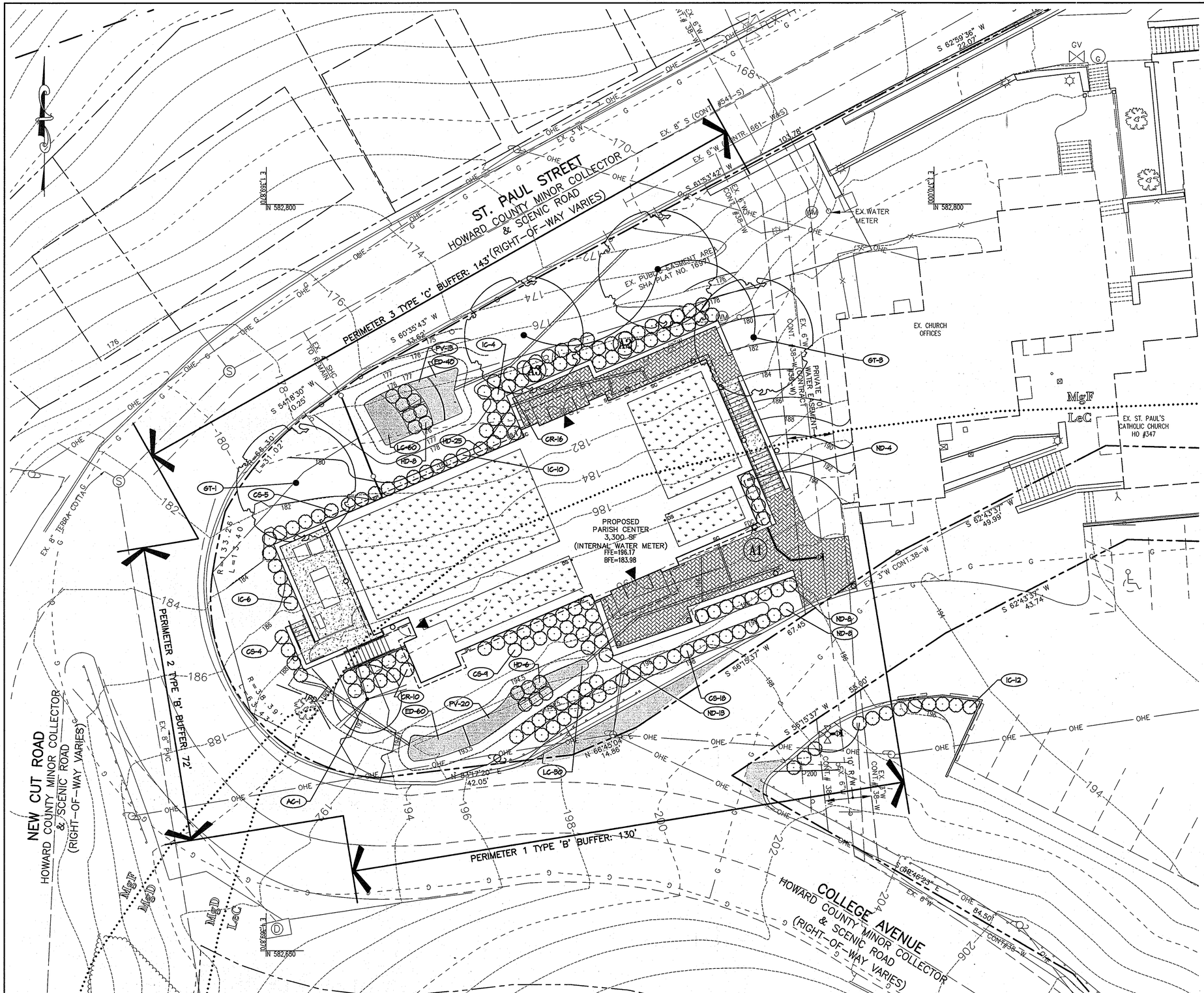

LEGEND

- EXISTING 2' CONTOUR — 302
- EXISTING 10' CONTOUR — 300
- PROPERTY LINE AND RIGHT OF WAY
- EX. TREELINE
- EX. FIRE HYDRANT
- EX. OVERHEAD WIRES — OHE
- EX. BUILDING
- EX. SOILS — MgD
- EX. CURB & GUTTER
- EX. STORM DRAIN — D
- EX. SEWER — S
- EX. WATER METER — WM
- PROP. BUILDING
- PROP. CURB & GUTTER
- PROPOSED 2' CONTOUR — 302
- PROPOSED 10' CONTOUR — 300
- PROPOSED GREEN ROOF
- PROPOSED SHADE TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED SHRUB
- EXISTING TREES

CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION AT 1-800-257-7777

GRAPHIC SCALE 1"=10'

10' 0' 10' 20'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas F. Butler — DIRECTOR — 12/21/10 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 12-15-10 DATE

Kent Sheubrooks — CHIEF, DIVISION OF LAND DEVELOPMENT — 12-21-10 DATE

DATE	NO.	REVISION

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DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

PROJECT **ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER**

AREA TAX MAP 25-A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE **LANDSCAPE PLAN**

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

STATE OF MARYLAND 3068 PETER JOSEPH STONE PROFESSIONAL ENGINEER
PETER J. STONE #3068

DESIGNED BY :	JSN
DRAWN BY:	JSN
PROJECT NO :	14867-1-0
DATE :	SEPTEMBER 13, 2010
SCALE :	1"=10'
DRAWING NO.	11 OF 18

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SDP-10-069

PLANTING SPECIFICATIONS

1. Plants, related material, and operations shall meet the detailed description, as given on the plans and as described herein. Where discrepancies exist between Standards & Guidelines referenced within these specifications and the Howard County Landscape Manual, the latter takes precedence.

2. All plant material, unless otherwise specified, that is not nursery grown, uniformly branched, does not have a vigorous root system, and does not conform to the most recent edition of the American Association of Nurserymen (AAN) Standards will be rejected. Plant material that is not healthy, vigorous, free from defects, decay, disfiguring roots, sunscald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements will be rejected. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will be rejected. All B & B plants shall be freshly dug; no healed–in plants or plants from cold storage will be accepted.

3. Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to the most recent edition of the "Landscape Specification Guidelines by the Landscape Contractors Association of MD, DC, & VA", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects.

4. Contractor shall guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section on the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

5. Contractor shall be responsible for notifying all relevant and appropriate utility companies, utility contractors, and "Miss Utility" a minimum of 48 hours prior to the beginning of any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Major changes will require the approval of the landscape architect. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

6. Protection of existing vegetation to remain shall be accomplished via the temporary installation of 4 foot high snow fence at the drip line, see detail.

7. Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction. Do not plant Pinus strobus or XCupressacyparis leylandii between November 15 and March 15. Landscape plants are not to be installed before site is graded to final grade.

8. Contractor to regrade, fine grade, sod, hydroseed and straw mulch all areas disturbed by their work.

9. Bid shall be based on actual site conditions. No extra payment shall be made for work arising from actual site conditions differing from those indicated on drawings and specifications.

10. Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence. Where discrepancies on the plan exist between the symbols and the callout leader, the number of symbols take precedence.

11. All shrubs and groundcover areas shall be planted in continuous planting beds, prepared as specified, unless otherwise indicated on plans. (See Specification 13). Beds to be mulched with minimum 2" and maximum 3" of composted, double–shredded hardwood mulch throughout.

12. Positive drainage shall be maintained on planting beds (minimum 2 percent slope).

13. Bed preparation shall be as follows: Till into a minimum depth of 6" 1 yard of Compro or Leafgro per 200 SF of planting bed, and 1 yard of topsoil per 100 SF of bed. Add 3 lbs of standard 5–10–5 fertilizer per cubic yard of planting mix and till. Ericaceous plants (Azaleas, Rhododendrons, etc.): top dress after planting with iron sulfate or comparable product according to package directions. Taxus baccata 'Repandens' (English weeping yews): Top dress after planting with 1/4 to 1/2 cup lime each.

14. Planting mix: For trees not in a prepared bed, mix 50% Compro or Leafgro with 50% soil from tree hole to use as backfill, see tree planting detail.

15. Weed & insect control: Incorporate a pre–emergent herbicide into the planting bed following recommended rates on the label. For tree planting, apply a pre–emergent on top of soil and root ball before mulching. Caution: For areas to be planted with a ground cover, be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated. Maintain the mulch weed–free for the extent of the warranty period. Under no circumstances is a pesticide containing chlorpyrifos to be used as a means of pest control.

16. Water: All plant material planted shall be watered thoroughly the day of planting. All plant material not yet planted shall be properly protected from drying out until planted. At a minimum, water unplanted plant material daily and as necessary to avoid dessication.

17. Pruning: Do not heavily prune trees and shrubs at planting. Prune only broken, dead, or diseased branches.

18. All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded, grass seed planted, and covered with straw mulch.

PLANT SCHEDULE

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREES					
GT	4	GLEDITSIA TRIACANTHOS INERMIS 'IMPERIAL' IMPERIAL THORNLESS HONEY LOCUST	2.5–3" CAL.	B&B	AS SHOWN
ORNAMENTAL TREES					
AC	1	AMELANCHIER CANADENSIS SHADBLOW SERVICEBERRY	8–10' HT.	B&B	AS SHOWN
SHRUBS					
CS	36	COTONEASTER SALICIFLIUS 'REPENS' WILLOWLEAF COTONEASTER	18–24" HT.	CONT	AS SHOWN
CR	26	CORNUS SERICEA REDOSIER DOGWOOD	18–24" HT.	CONT	AS SHOWN
IC	32	ILEX CORNUTA 'DWARF BURFORD' DWARF BURFORD HOLLY	18–24" HT.	CONT	AS SHOWN
HD	39	HYPERICUM DENSIFLORUM DENSE ST. JOHN'S WORT	12–18" HT.	CONT	AS SHOWN
ND	33	NANDINA DOMESTICA 'HARBOR DWARF' HARBOR DWARF NANDINA	18–24" HT.	CONT	AS SHOWN
PERENNIALS					
ED	100	EUPATORIUM DUBIUM JOE–PYE WEED	2 1/2" PEAT POT	FULL FLAT	FULL FLATS 12" O.C.
LC	90	LOBELIA CARDINALIS CARDINAL FLOWER	2 1/2" PEAT POT	FULL FLAT	FULL FLATS 12" O.C.
GRASSES					
PV	33	PANICUM VRGATUM VIRGINIA SWITCHGRASS	2 GAL.	CONT.	FULL SHAPE 3' O.C.

SOILS CHART

MAP SYMBOL	NAME	STRUCTURAL LIMITATIONS Dwellings w/ Basements	EROSION HAZARD	HYDRIC (Yes/No)	SLOPE (%)
LeC	Legore Silt Loam	Somewhat limited	Moderate	No	8–15
MgD	Manor–Bannertown Sandy Loams	Very limited	High	No	15–25
MgF	Manor–Bannertown Sandy Loams	Very limited	High	No	25–65

SOURCE: SOIL INFORMATION TAKEN FROM THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.

SCHEDULE A – PERIMETER LANDSCAPE EDGE

	ADJACENT TO ROADS	ADJACENT TO ROADS	ADJACENT TO ROADS	TOTAL NUMBER OF PLANTS
PERIMETER	1	2	3	
LANDSCAPE TYPE	B	B	C	
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	130' ±	72' ±	143' ±	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO –	NO –	NO –	
CREDIT FOR WALL, FENCE, BERM OR DRIVE AISLE (YES/NO/LINEAR FEET)	NO –	NO –	NO –	
LINEAR FEET REMAINING	130' ±	72' ±	143' ±	
TOTAL NUMBER OF PLANTS REQUIRED				
SHADE TREES	3	1	4	8
EVERGREEN TREES	3	2	7	12
SHRUBS	0	0	0	0
TOTAL NUMBER OF PLANTS PROVIDED				
SHADE TREES	0	0	4	4
EVERGREEN TREES	0	0	0	0
SMALL FLOWERING TREES	0	1	0	1
SHRUBS	60	20	60	140

SUBSTITUTION NOTES:

PERIMETER 1: 30 SHRUBS HAVE BEEN SUBSTITUTED FOR 3 SHADE TREES & 30 SHRUBS HAVE BEEN SUBSTITUTED FOR 3 EVERGREEN TREES.

PERIMETER 2: 1 FLOWERING TREE BEEN SUBSTITUTED FOR 1 EVERGREEN TREE & 20 SHRUBS HAVE BEEN SUBSTITUTED FOR 1 SHADE TREE AND 1 EVERGREEN TREE.

PERIMETER 3: 1 SHADE TREE HAS BEEN SUBSTITUTED FOR 2 EVERGREEN TREES & 60 SHRUBS HAVE BEEN SUBSTITUTED FOR 5 EVERGREEN TREES & 1 SHADE TREE.

Howard County Forest Conservation Worksheet

Project Name: St. Paul's Catholic Church
County File #: SDP-10-069
Date: February 3, 2010

			Acres
Net Tract Area			
A.	*Total Tract Area*	A =	0.28
B.	*Floodplain Area*	B =	0.00
C.	*Net Tract Area* Net Tract Area = (A-B-C)	C =	0.28
Land Use Category: IDA			
D.	*Afforestation Threshold* (Net Tract Area X 15%	D =	0.04
E.	*Conservation Threshold* (Net Tract Area X 20%	E =	0.06
Existing Forest Cover			
F.	***Existing Forest Cover within the Net Tract Area***	F =	0.00
G.	*Area of Forest Above Conservation Threshold* If the Existing Forest Cover (F) is greater than Conservation Threshold (G), then G = Existing Forest Cover (F) - Conservation Threshold (E); Otherwise G = 0	G =	0.00
Break Even Point			
H.	*Break Even* (Amount of forest that must be retained so that no mitigation is required) (1) If the area of forest above the Conservation Threshold (G) is greater than zero, then H = (0.2 X the area of forest above Conservation Threshold (G)) + the Conservation Threshold (E) (2) If the area of forest above the Conservation Threshold (G) is equal to zero, then H = Existing Forest Cover (F)	H =	0.00
I.	*Forest Clearing Permitted Without Mitigation* I = Existing Forest Cover (F) - Break Even Point (H)	I =	0.00
Proposed Forest Clearing			
J.	***Total Area of Forest to be Cleared***	J =	0.00
K.	*Total Area of Forest to be Retained* K = Existing Forest Cover (F) - forest to be cleared (J)	K =	0.00
Planting Requirements			
If the Total Area of Forest to be Cleared (K) is at or above the Breakeven Point (H), no planting is required and no further calculations are necessary (L=0, M=0, N=0, P=0); If not, calculate the planting requirement below.			
L.	*Reforestation for Clearing Above the Conservation Threshold* (1) if the total area of forest to be retained (K) is greater than the Conservation Threshold (E), then L = the area of forest to be cleared (J) X 0.25; or (2) If the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then L = area of forest above the Conservation Threshold (G) X 0.25	L =	0.00
M.	*Reforestation for Clearing Below the Conservation Threshold* (1) if Existing Forest Cover (F) is greater than Conservation Threshold (E) and the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then M = 2.0 X (the Conservation Threshold (E) - the forest to be retained (K)) (2) If Existing Forest (F) is less than or equal to the Conservation Threshold (E), then M = 2.0 X Forest to be cleared (J).	M =	0.00
N.	*Credit for Retention Above the Conservation Threshold* If the area of forest to be retained (K) is greater than the Conservation Threshold (E), then N = K - E	N =	0.00
P.	*Total Reforestation Required* P = L + M - N	P =	0.00
Q.	*Total Afforestation Required* (1) If Existing Forest Cover (F) is less than the Afforestation Threshold (D) then Q = the Afforestation Threshold (D) - the Existing Forest Cover (F)	Q =	0.04
R.	*Total Planting Requirement* R = P + Q	R =	0.04

FOREST CONSERVATION GENERAL NOTES

1. THE EXISTING TOPOGRAPHY IS TAKEN FROM AVAILABLE HOWARD COUNTY RECORDS AND FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED NOVEMBER 2009. THE BOUNDARY SURVEY FOR THIS PROJECT WAS PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED NOVEMBER 2008.

2. NO CRITICAL HABITATS OF RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.

3. NO TREES, SHRUBS, OR PLANTS IDENTIFIED AS RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.

4. THERE ARE NO KNOWN CEMETERIES OR BURIAL PLOTS LOCATED ON THE SITE, ACCORDING TO THE HOWARD COUNTY CEMETERIES INVENTORY.

5. SEVEN EXISTING BUILDINGS ARE PRESENT ON THE SITE.

6. THE SOILS ON SITE ARE LEGORE SILT LOAM (8–15% SLOPES) – LeC, MANOR–BANNERTOWN SANDY LOAMS (15–25% SLOPES) – MgD, AND MANOR–BANNERTOWN SANDY LOAMS (25–65% SLOPES) – MgF ACCORDING TO THE NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY.

7. THERE IS NO EXISTING FOREST COVER ON THE SITE, THEREFORE NO FOREST STAND DELINEATION (FSD) WAS CONDUCTED FOR THIS PROJECT.

8. THE HOWARD COUNTY FOREST CONSERVATION MANUAL SUPERCEDES ANY DISCREPANCIES BETWEEN THE MANUAL AND THESE PLANS.

9. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION FOR 0.04 ACRES OF AFFORESTATION PROVIDED BY A FEE–IN–LIEU IN THE AMOUNT OF $1,307.00 AT $0.75/SF.

GENERAL LANDSCAPE NOTES:

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

2. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $4,200.00.
   8 SHADE TREES @ $300 = $2,400.00
   0 ORNAMENTAL TREES @ $150 = $0
   12 EVERGREEN TREES @ $150 = $1,800.00
   0 SHRUBS @ $30 = $0

3. THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.

4. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

5. ALL MATERIAL SELECTED SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

6. ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION.

7. AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS SHALL BE OF THE PROPER HEIGHT AND/OR SPREAD REQUIREMENTS IN ACCORDANCE WITH THIS PLAN AND THE HOWARD COUNTY LANDSCAPE MANUAL.

8. NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.

9. SINCE THIS EXPANSION IS LESS THAN 50% OF THE SITE AREA, LANDSCAPING IS REQUIRED FOR THE EVANGELIZATION CENTER EXPANSION ONLY.

DEVELOPER'S/BUILDER'S CERTIFICATE:

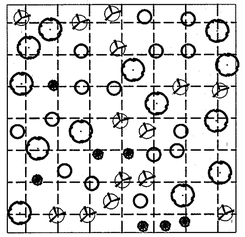
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Mitchell T. Rozanski

SIGNATURE

DATE

Most Rev Mitchell T. Rozanski, Vice-Pres.



KEY

TREES

- PLANT SPECIES 'A'
- PLANT SPECIES 'B'
- PLANT SPECIES 'C'
- PLANT SPECIES 'D'
- PLANT SPECIES 'E'

NOTES

1. RANDOMLY LOCATE GROUPS OF PLANT SPECIES, TAKING CARE NOT TO PLANT IN SUCCESSION MORE THAN 4 OF THE SAME SPECIES.
2. THIS DETAIL PROVIDES A HYPOTHETICAL, GRAPHIC DEPICTION OF A PROPOSED LAYOUT FOR FIVE DIFFERENT PLANT SPECIES (A–E). IT IS NOT MEANT TO BE FOLLOWED EXACTLY. THE PURPOSE IS TO ACHIEVE THE APPEARANCE OF RANDOM SPACING.
3. SEE PLANT LIST FOR ACTUAL NUMBER OF PLANT SPECIES. SEE PLANT LIST FOR ON–CENTER SPACING REQUIREMENTS.

GREEN ROOF
RANDOM PLANTING LAYOUT DETAIL
NOT TO SCALE

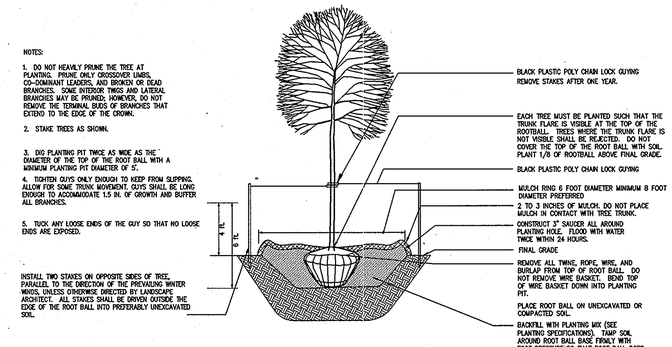
GREEN ROOF PLANT SCHEDULE

AS	–	ALLIUM SCHOENOPRASUM CHIVES	2 1/2" PEAT POT	FULL FLAT	2" O.C.
DN	–	DELOSPERMA NUBIGENUM 'BASUTOLAND' YELLOW ICE PLANT	2 1/2" PEAT POT	FULL FLAT	10" O.C.
SK	–	SEDUM KAMTSCHATICUM RUSSIAN STONECROP	2 1/2" PEAT POT	FULL FLAT	10" O.C.
SS	–	SEDUM SPURIUM 'FULDAGLUT' TWO ROW STONECROP	2 1/2" PEAT POT	FULL FLAT	8" O.C.
TC	–	TALINUM CALYCINUM FLAME FLOWER	2 1/2" PEAT POT	FULL FLAT	7" O.C.

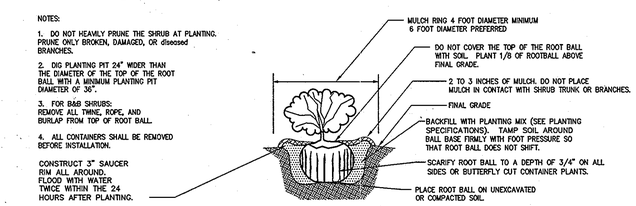
NOTES:

1. THE ABOVE GREEN ROOF PLANT SCHEDULE WAS TAKEN FROM EMORY KNOLL FARMS, INC. (www.greenroofplants.com).

2. PLANTS SHOWN IN THE ABOVE SCHEDULE ARE CONCEPTUAL AND MAY VARY WITH FINAL DESIGN, DEPENDING ON THE PARTICULAR GREEN ROOF SUPPLIER, AND THE AVAILABILITY OF PARTICULAR PLANTS AT THE TIME OF INSTALLATION. PLANTS TO BE SELECTED SHALL HAVE A HISTORY OF BEING USED FOR GREEN ROOFS, AND SHALL BE ACQUIRED FROM AN EXPERIENCED GREEN ROOF PLANT SUPPLIER. FINAL PLANT LIST SHALL BE APPROVED BY LANDSCAPE ARCHITECT/ARCHITECT.



DECIDUOUS B&B TREE PLANTING DETAIL (TREES 3" CAL. OR SMALLER)
NOT TO SCALE



INDIVIDUAL SHRUB PLANTING DETAIL – B&B AND CONTAINER SHRUBS
NOT TO SCALE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR	DATE 12/21/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 12.15.10
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 12-21-10

DATE	NO.	REVISION

OWNER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043–4655
(410) 547–5340

DEVELOPER
DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043–4655
(410) 547–5340

PROJECT
ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER

AREA TAX MAP 25–A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE
LANDSCAPE & FOREST CONSERVATION NOTES AND DETAILS

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

STATE OF MARYLAND 3068 PETER J. STONE REGISTERED LANDSCAPE ARCHITECT

PETER J. STONE #3068

DESIGNED BY :	JSN
DRAWN BY:	JSN
PROJECT NO :	14867–1–0
DATE :	SEPTEMBER 13, 2010
SCALE :	AS SHOWN
DRAWING NO.	12 OF 18

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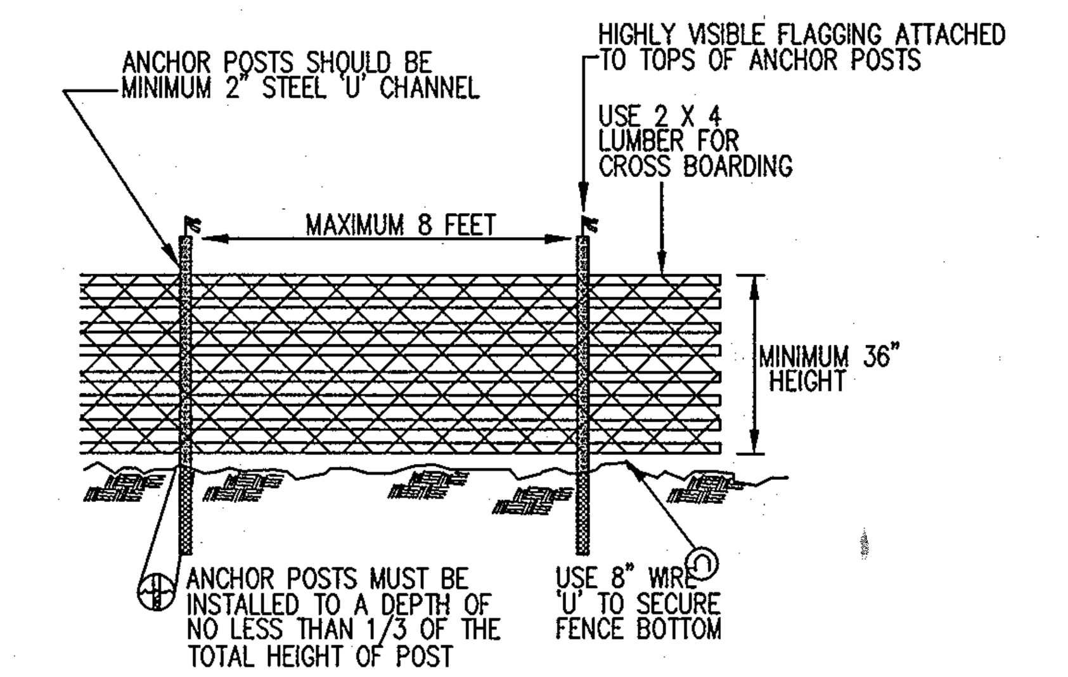
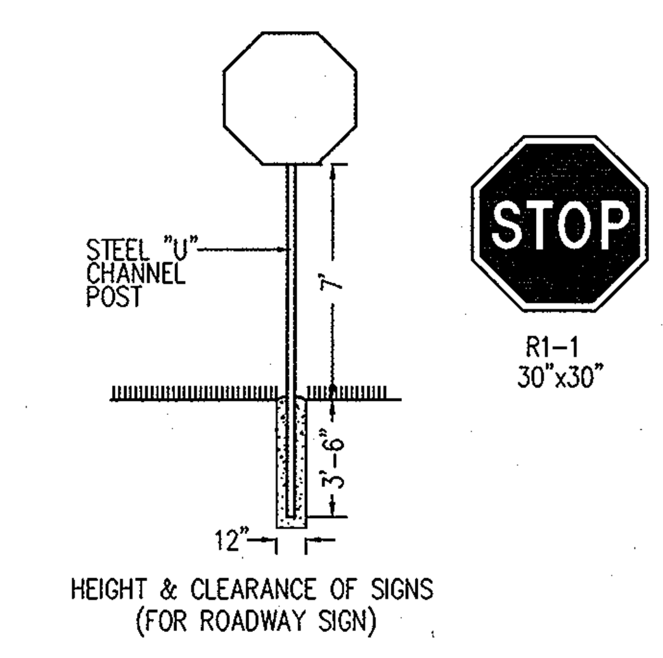
SDP–10–069

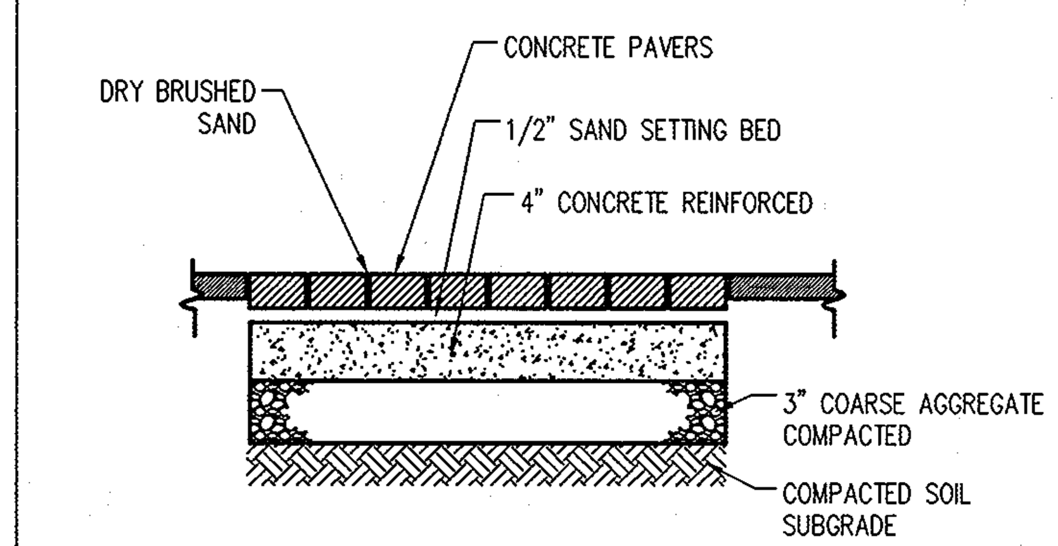


NOTES:
1. BLAZE ORANGE OR BLUE PLASTIC MESH FENCE FOR FOREST PROTECTION DEVICE, ONLY.
2. SUPER SILT FENCE MAY BE SUBSTITUTED FOR TREE PROTECTION FENCING.
3. BOUNDARIES OF RETENTION AREA WILL BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
4. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
5. AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVER LARGE ROOTS WHEN INSTALLING POSTS.
6. PROTECTION SIGNS ARE REQUIRED, SEE SIGN DETAIL.
7. FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

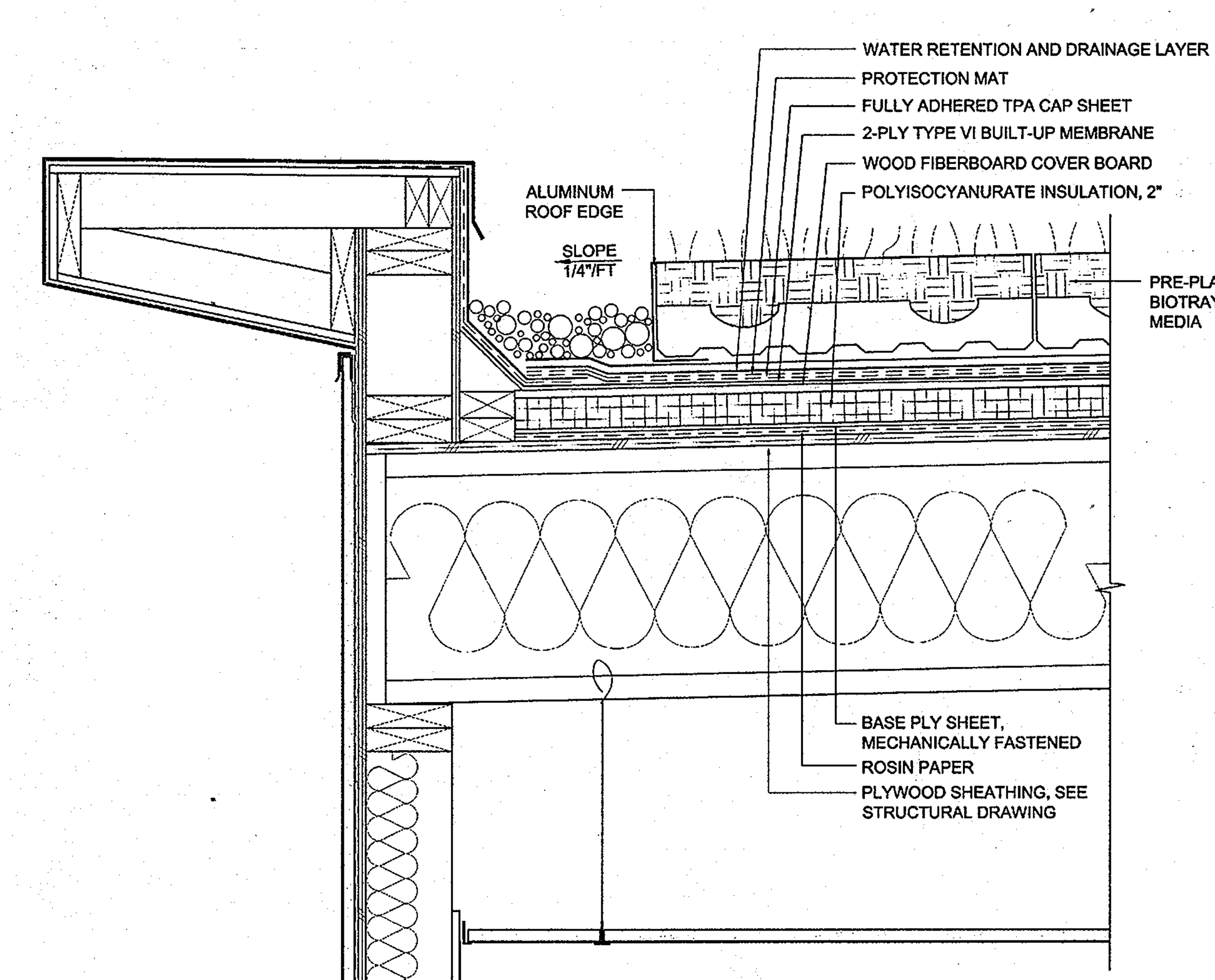
1/13 **TREE PROTECTION FENCING**
NOT TO SCALE



2/13 **STOP SIGN DETAIL**
NOT TO SCALE



3/13 **CONCRETE PAVERS**
NOT TO SCALE



ARCHITECTURAL REGISTRATION BOARD 7286-A STATE OF MARYLAND

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR

DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

DATE

Project # 0608-03	Sketch # SKA-051010-A
Scale: 1 1/2" = 1'-0"	SDP-10-069
Date: 5/10/10	
Project Name: St. Paul's Church Evangelization Center, 3675 College Avenue, Ellicott City, MD 21043	
Drawing Title: VEGETATIVE ROOF DETAIL	

PENZA+BAILEY ARCHITECTS
401 Woodbourne Avenue
Baltimore, Maryland 21212
Phone: 410.435.6677
Fax: 410.435.6868

NOTE:
ENGINEER SEAL ON THIS SHEET DOES NOT COVER THE STRUCTURAL OR ARCHITECTURAL DESIGN OF BUILDING RELATED ELEMENTS SUCH AS THOSE SHOWN IN THIS DETAIL.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED GREEN ROOF

THE FOLLOWING OPERATION AND MAINTENANCE SCHEDULE SHALL BE IMPLEMENTED TO THE FUNCTION OF THE GREEN ROOF SYSTEM IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE "GREEN ROOF SYSTEM DISTRIBUTOR":

WEED – ON AN ANNUAL BASIS REMOVE UNWANTED PLANT MATERIAL.
REPLACE – REPLACE FAILED PLANT MATERIAL WHEN THE FAILED PLANT ARE EXCEEDS FIVE PERCENT (5%) OF THE ROOF AREA.
IRRIGATE – A NEWLY INSTALLED ROOF SHOULD BE IRRIGATED DURING THE FIRST GROWING SEASON. SATURATE THE GREEN ROOF AT LEAST ONCE A WEEK DURING THE FIRST GROWING SEASON. AFTER VEGETATION IS ESTABLISHED, IRRIGATION MAY BE REQUIRED PERIODICALLY. DURING DRY PERIODS.
NUTRIENT – THE APPLICATION OF A SLOW-RELEASE FERTILIZER IN THE SPRING IS RECOMMENDED ON AN ANNUAL BASIS.
INSPECT FOR DRAINAGE – AFTER EACH SIGNIFICANT RAINFALL INSPECT DOWNSPOUTS OR DRAINAGE CHANNELS/COURSES FOR CLOGS.
INSPECT FOR LEAKS – AFTER EACH SIGNIFICANT RAINFALL INSPECT THE GREEN ROOF FOR LEAKS.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 12/21/10 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 12.15.10 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 12-21-10 DATE

DATE	NO.	REVISION

OWNER
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DEVELOPER
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ELLICOTT CITY MD 21043-4655
(410) 547-5340

PROJECT ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER

AREA TAX MAP 25-A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE
SITE DETAILS

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
PHR+A
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL
STATE OF MARYLAND — JAMES A. RUFF
BY:
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2011"

DESIGNED BY : JSN
DRAWN BY: JSN
PROJECT NO : 14867-1-0
DATE : SEPTEMBER 13, 2010
SCALE : AS SHOWN
DRAWING NO. 13 OF 18

P:\Project\14867\1-0\PLANS\C400SDP13.DWG

PATTON HARRIS RUST and ASSOCIATES, pc — HAND AUGER BORING LOG

PROJECT NAME:	PROJECT NUMBER:	BORING NUMBER:
ST. PAUL'S PARISH CENTER	14867-1-0	B-1

LOCATION: ELLICOTT CITY, MARYLAND — SHEET 1 OF 1

LOGGED BY: I. Howard — DRILLER: PHR+A — ELEVATION: 185.30'

GROUNDWATER DATA		DATE	TIME	ELAPSED	CAVED (FT)	DEPTH (FT)	DATE	TIME
ENCOUNTERED:	▽	10/23/08		---	---	DRY	START:	10/23/08
UPON COMPLETION:	▼	10/23/08		---		DRY	FINISHED:	10/23/08
SHORT TERM:	▽						DRILLING METHOD:	HAND
LONG TERM:	▽						EQUIPMENT:	DCP

Elevation (ft.)	Depth (ft.)	Equivalent N*	DCP (blows/1.75ft)	VISUAL DESCRIPTION	Stratum	Groundwater	MC (%)	LL (%)	PI (%)	Fines (%)	COMMENTS
185			5 4 4	Soft, brown, moist, micaceous fine to medium sandy SILT (ML), trace rootlets.							
	5	5									
			4 3 4	Loose to medium dense, yellow brown moist, micaceous silty fine to medium SAND (SM).							
			11 38 40	....yellow brown, white, black, little mica, trace fine gravel and rootlets.			19.3			35.4	
180	5	25									
				Gray, white, moist, fine to medium poorly graded SAND (SP), little silt, trace mica.							
	10			Hand auger terminated at 10.0 ft.							
175											

PATTON HARRIS RUST and ASSOCIATES, pc — HAND AUGER BORING LOG

PROJECT NAME:	PROJECT NUMBER:	BORING NUMBER:
ST. PAUL'S PARISH CENTER	14867-1-0	B-2

LOCATION: ELLICOTT CITY, MARYLAND — SHEET 1 OF 1

LOGGED BY: I. Howard — DRILLER: PHR+A — ELEVATION: 184.90'

GROUNDWATER DATA		DATE	TIME	ELAPSED	CAVED (FT)	DEPTH (FT)	DATE	TIME
ENCOUNTERED:	▽	10/23/08		---	---	DRY	START:	10/23/08
UPON COMPLETION:	▼	10/23/08		---		DRY	FINISHED:	10/23/08
SHORT TERM:	▽						DRILLING METHOD:	HAND
LONG TERM:	▽						EQUIPMENT:	DCP

Elevation (ft.)	Depth (ft.)	Equivalent N*	DCP (blows/1.75ft)	VISUAL DESCRIPTION	Stratum	Groundwater	MC (%)	LL (%)	PI (%)	Fines (%)	COMMENTS
			10 21 21	Medium dense, yellow brown, moist, silty fine to medium SAND (SM), trace rootlets, little mica.							
		13									
			26 35 36	Medium dense, yellow brown, moist, fine to medium poorly graded SAND (SP), little silt, trace mica.			14.1				
	5	23									
180			20 35 39	....yellow brown, white.							
		22									
			37 41 44	....trace medium gravel.							
		27									
175	10			Hand auger terminated at 10.0 ft.							

PATTON HARRIS RUST and ASSOCIATES, pc — HAND AUGER BORING LOG

PROJECT NAME:	PROJECT NUMBER:	BORING NUMBER:
ST. PAUL'S PARISH CENTER	14867-1-0	B-3

LOCATION: ELLICOTT CITY, MARYLAND — SHEET 1 OF 1

LOGGED BY: I. Howard — DRILLER: PHR+A — ELEVATION: 193.00'

GROUNDWATER DATA		DATE	TIME	ELAPSED	CAVED (FT)	DEPTH (FT)	DATE	TIME
ENCOUNTERED:	▽	10/23/08		---	---	DRY	START:	10/23/08
UPON COMPLETION:	▼	10/23/08		---		DRY	FINISHED:	10/23/08
SHORT TERM:	▽						DRILLING METHOD:	HAND
LONG TERM:	▽						EQUIPMENT:	DCP

Elevation (ft.)	Depth (ft.)	Equivalent N*	DCP (blows/1.75ft)	VISUAL DESCRIPTION	Stratum	Groundwater	MC (%)	LL (%)	PI (%)	Fines (%)	COMMENTS
			10 10 12	Loose to medium dense, yellow brown, moist, fine to medium poorly graded SAND (SP), trace silt and rootlets.							
		11									
			15 26 31	....gray, white, trace mica.							
190	5	15									
			21 37 41								
		25		....olive white							
185				....trace medium gravel.			7.4				
	10			Hand auger terminated at 10.0 ft.							

PATTON HARRIS RUST and ASSOCIATES, pc — HAND AUGER BORING LOG

PROJECT NAME:	PROJECT NUMBER:	BORING NUMBER:
ST. PAUL'S PARISH CENTER	14867-1-0	B-4

LOCATION: ELLICOTT CITY, MARYLAND — SHEET 1 OF 1

LOGGED BY: I. Howard — DRILLER: PHR+A — ELEVATION: 192.00'

GROUNDWATER DATA		DATE	TIME	ELAPSED	CAVED (FT)	DEPTH (FT)	DATE	TIME
ENCOUNTERED:	▽	10/23/08		---	---	DRY	START:	10/23/08
UPON COMPLETION:	▼	10/23/08		---		DRY	FINISHED:	10/23/08
SHORT TERM:	▽						DRILLING METHOD:	HAND
LONG TERM:	▽						EQUIPMENT:	DCP

Elevation (ft.)	Depth (ft.)	Equivalent N*	DCP (blows/1.75ft)	VISUAL DESCRIPTION	Stratum	Groundwater	MC (%)	LL (%)	PI (%)	Fines (%)	COMMENTS
			4 4 11	24" Organic surface with wood fragments.							
		11									
			6 9 8	Medium dense, yellow brown, moist silty fine to medium SAND (SM), little silt, trace to little mica.							
190		10									
			10 17 20	....olive gray, white, trace coarse gravel at 6 feet to 8 feet.							
	5	12									
							8.3			15.5	
185				....yellow brown, white.							
	10			Hand auger terminated at 10.0 ft.							

PATTON HARRIS RUST and ASSOCIATES, pc — HAND AUGER BORING LOG

PROJECT NAME:	PROJECT NUMBER:	BORING NUMBER:
ST. PAUL'S PARISH CENTER	14867-1-0	B-5

LOCATION: ELLICOTT CITY, MARYLAND — SHEET 1 OF 1

LOGGED BY: I. Howard — DRILLER: PHR+A — ELEVATION: 187.00'

GROUNDWATER DATA		DATE	TIME	ELAPSED	CAVED (FT)	DEPTH (FT)	DATE	TIME
ENCOUNTERED:	▽	10/23/08		---	---	DRY	START:	10/23/08
UPON COMPLETION:	▼	10/23/08		---		DRY	FINISHED:	10/23/08
SHORT TERM:	▽						DRILLING METHOD:	HAND
LONG TERM:	▽						EQUIPMENT:	DCP

Elevation (ft.)	Depth (ft.)	Equivalent N*	DCP (blows/1.75ft)	VISUAL DESCRIPTION	Stratum	Groundwater	MC (%)	LL (%)	PI (%)	Fines (%)	COMMENTS
			4 4 4	Loose, yellow brown, white, moist, silty fine to medium SAND (SM), trace mica.							
		5									
185			10 14 19	Medium dense, Yellow brown, white, moist, silty fine SAND (SM), little to some mica.							
		12									
			8 10 14				13.4				
	5	11									
180											
	10			Hand auger terminated at 10.0 ft.							

PATTON HARRIS RUST and ASSOCIATES, pc — HAND AUGER BORING LOG

PROJECT NAME:	PROJECT NUMBER:	BORING NUMBER:
ST. PAUL'S PARISH CENTER	14867-1-0	SWM-1

LOCATION: ELLICOTT CITY, MARYLAND — SHEET 1 OF 1

LOGGED BY: I. Howard — DRILLER: PHR+A — ELEVATION: 181.00'

GROUNDWATER DATA		DATE	TIME	ELAPSED	CAVED (FT)	DEPTH (FT)	DATE	TIME
ENCOUNTERED:	▽	11/26/08		---	---	DRY	START:	11/25/08
UPON COMPLETION:	▼	11/26/08		--		DRY	FINISHED:	11/25/08
SHORT TERM:	▽						DRILLING METHOD:	HAND
LONG TERM:	▽						EQUIPMENT:	DCP

Elevation (ft.)	Depth (ft.)	Equivalent N*	DCP (blows/1.75ft)	VISUAL DESCRIPTION	Stratum	Groundwater	MC (%)	LL (%)	PI (%)	Fines (%)	COMMENTS
			2 3 3	Loose, Brown, moist, silty fine SAND (SM), some mica, trace clay.							
180		4									
			4 7 8	Medium dense, yellow brown, moist, silty fine to medium SAND (SM), some mica, trace clay and rootlets.							
	5	10									
175			26				9.8	NP	NP		
		14									
			32	Medium dense, yellow brown, moist, fine to medium poorly graded SAND (SP), little silt, trace mica.							
	10	19									
170				Hand auger refusal at 9.92 ft.							

PATTON HARRIS RUST and ASSOCIATES, pc — HAND AUGER BORING LOG

PROJECT NAME:	PROJECT NUMBER:	BORING NUMBER:
ST. PAUL'S PARISH CENTER	14867-1-0	SWM-2

LOCATION: ELLICOTT CITY, MARYLAND — SHEET 1 OF 1

LOGGED BY: I. Howard — DRILLER: PHR+A — ELEVATION: 178.00'

GROUNDWATER DATA		DATE	TIME	ELAPSED	CAVED (FT)	DEPTH (FT)	DATE	TIME
ENCOUNTERED:	▽	11/26/08		---	---	DRY	START:	11/25/08
UPON COMPLETION:	▼	11/26/08		--		DRY	FINISHED:	11/25/08
SHORT TERM:	▽						DRILLING METHOD:	HAND
LONG TERM:	▽						EQUIPMENT:	DCP

Elevation (ft.)	Depth (ft.)	Equivalent N*	DCP (blows/1.75ft)	VISUAL DESCRIPTION	Stratum	Groundwater	MC (%)	LL (%)	PI (%)	Fines (%)	COMMENTS
			2 2 3	Very loose, brown, moist, silty fine to medium SAND (SM), some mica, traca fine gravel.							
175		4									
			4 4 4	Loose, olive white, moist, fine poorly graded SAND (SP).			12.3	NP	NP		
	5	5									
			30								
	15			Hand auger refusal at 6.67 ft.							
170											
	20										

NOTE: REFER TO GEOTECHNICAL REPORT FOR COMPLETE SET OF SITE AND BUILDING SOIL BORINGS.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 12/2/10

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12-15-10

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 12-14-10

DATE	NO.	REVISION

OWNER

DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

DEVELOPER

DOUG JOHNSON
ST. PAUL'S CHURCH & ANNEX
3675 COLLEGE AVE
ELLICOTT CITY MD 21043-4655
(410) 547-5340

PROJECT
ST. PAUL'S CATHOLIC CHURCH EVANGELIZATION CENTER

AREA TAX MAP 25-A PARCELS 61, 120, & 121
2nd ELECTION DISTRICT ZONED HO
HOWARD COUNTY, MARYLAND

TITLE
SOIL BORING LOGS

Patton Harris Rust & Associates
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

SEAL — STATE OF MARYLAND — JAMES A. RUFF — 21774

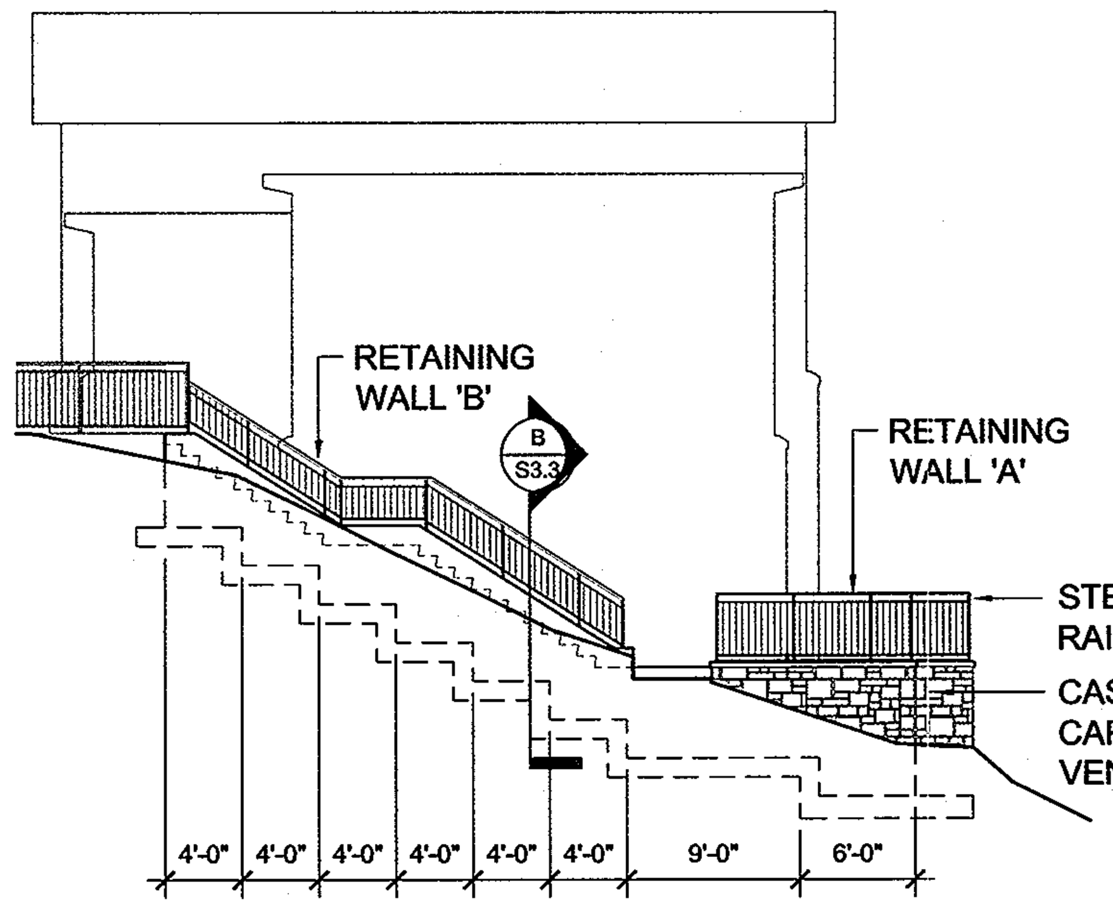
BY:

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11-10-2011"

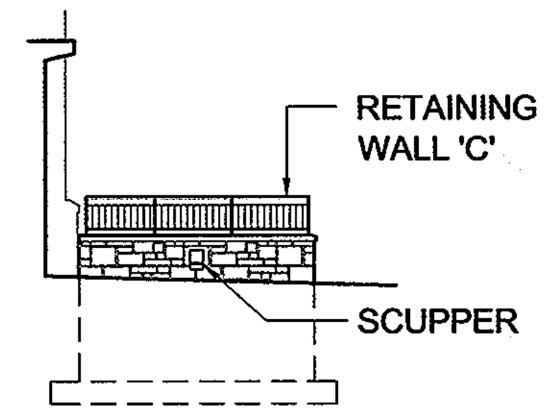
DESIGNED BY : JSN	
DRAWN BY: JSN	
PROJECT NO : 14867-1-0	
DATE : SEPTEMBER 13, 2010	
SCALE : AS SHOWN	
DRAWING NO. 14 OF 18	

P:\Project\14867\1-0\PLANS\C4005DP14.DWG

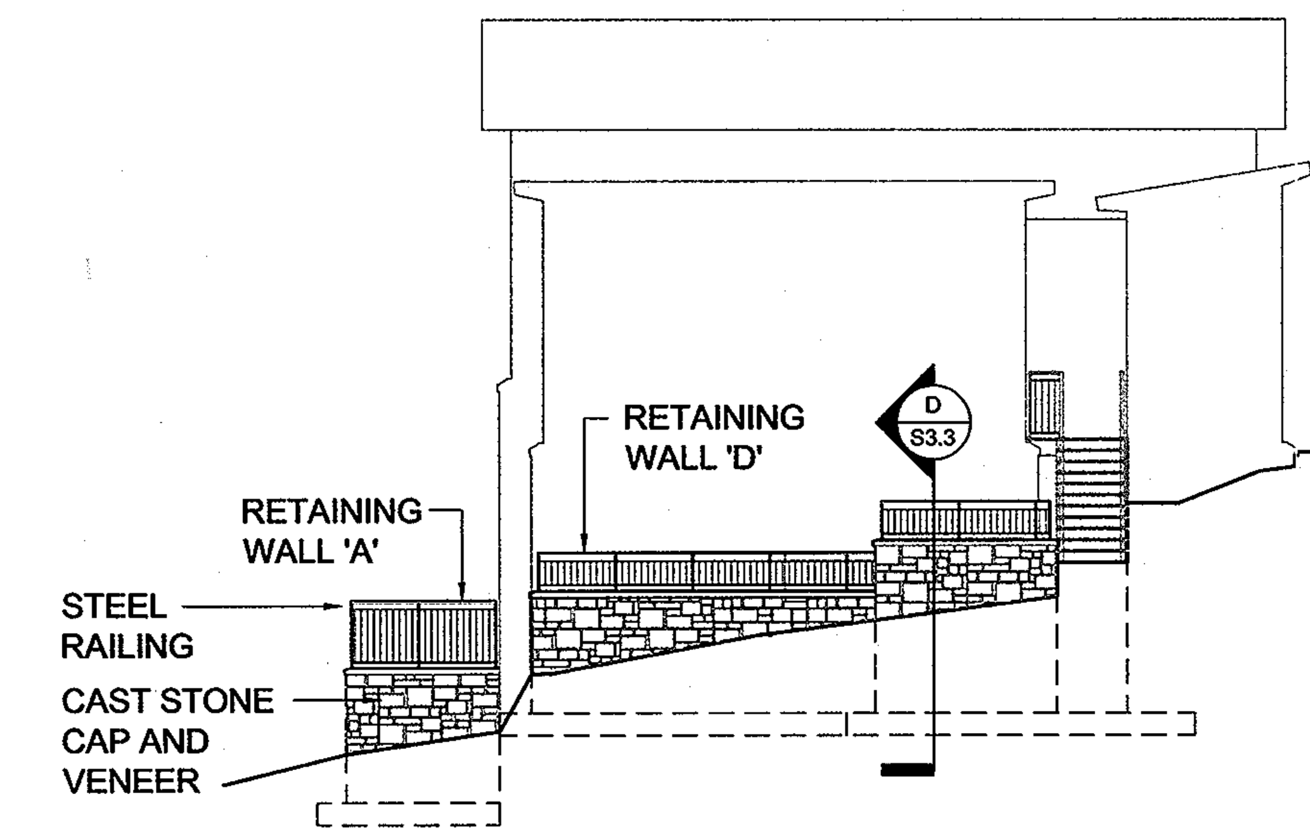
SDP-10-069



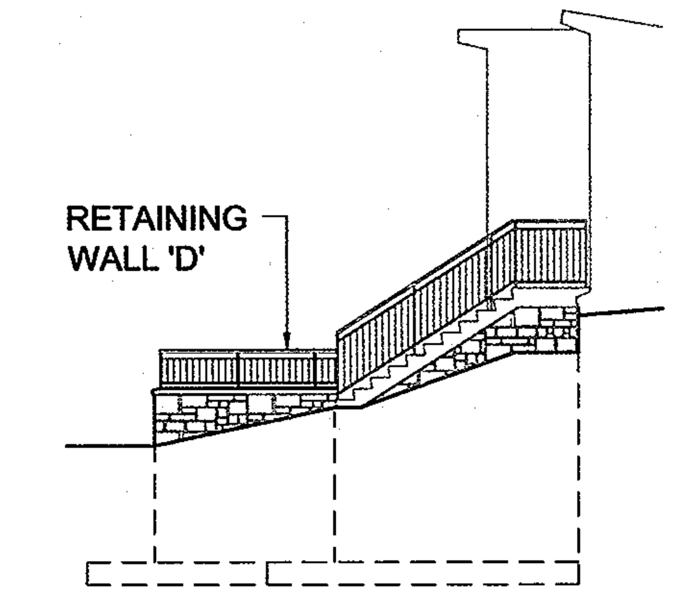
9 A2.0 EAST ELVATION - WALLS 'A' & 'B'
Scale: 1" = 10'-0"



6 A2.0 WEST ELEVATION - WALLS 'C' & 'E'
Scale: 1" = 10'-0"

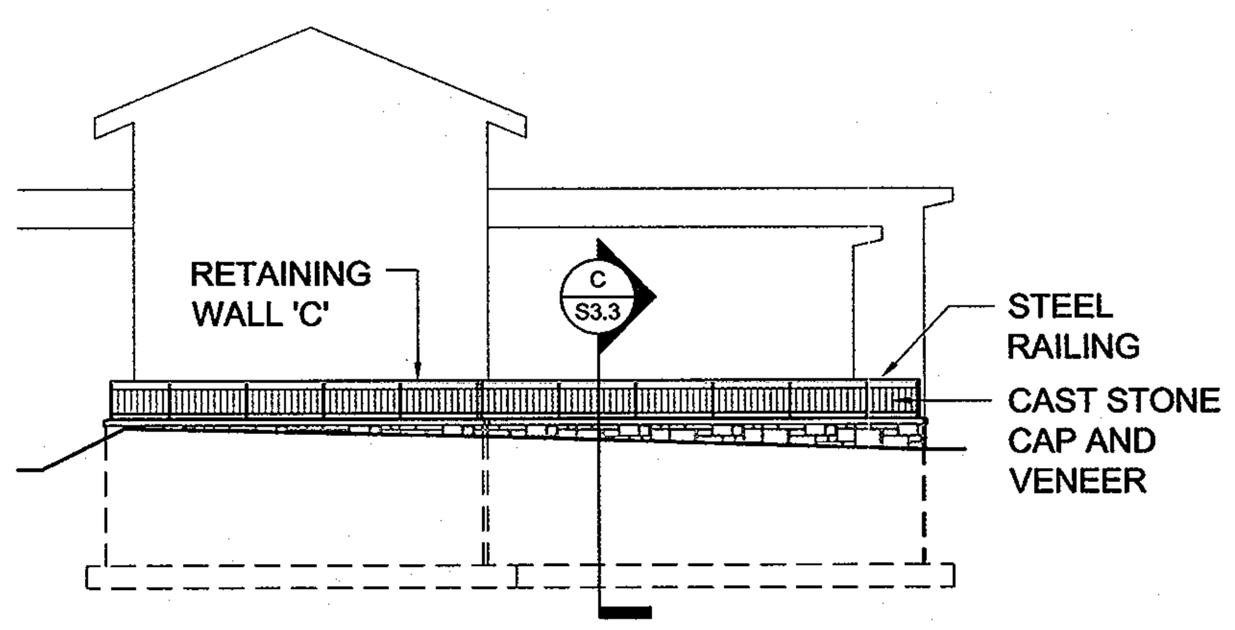


3 A2.0 WEST ELEVATION - WALL 'A' & 'D'
Scale: 1" = 10'-0"

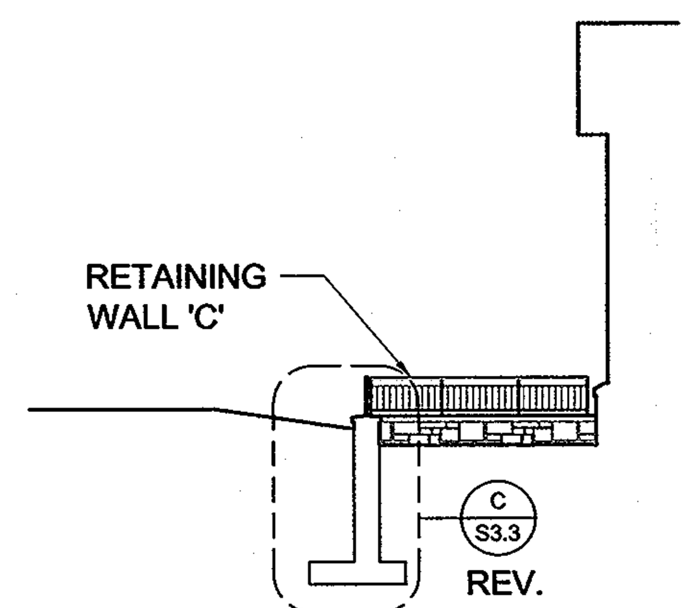


2 A2.0 SOUTH ELEVATION - WALL 'D'
Scale: 1" = 10'-0"

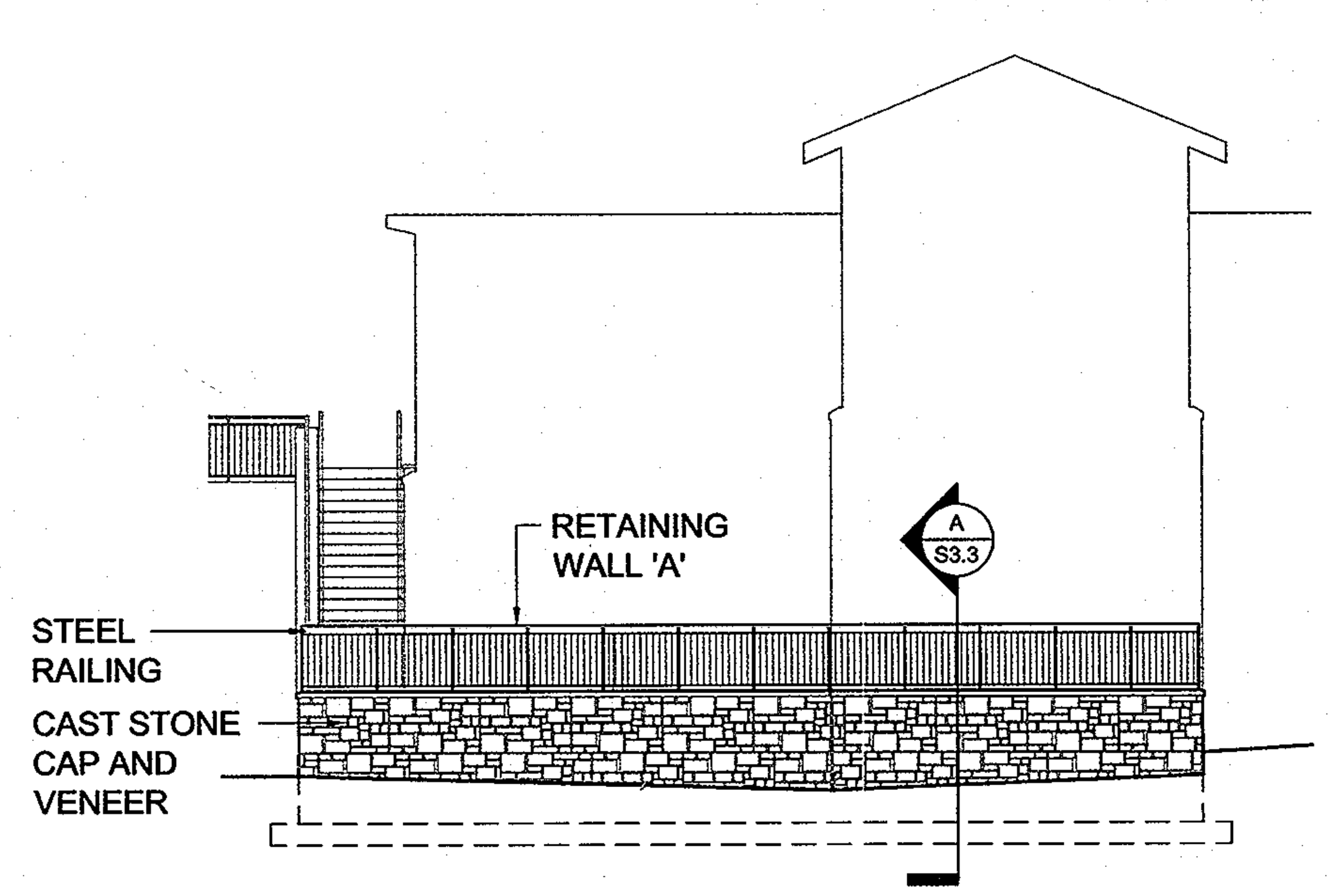
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 7286, EXPIRATION DATE: 09-29-12



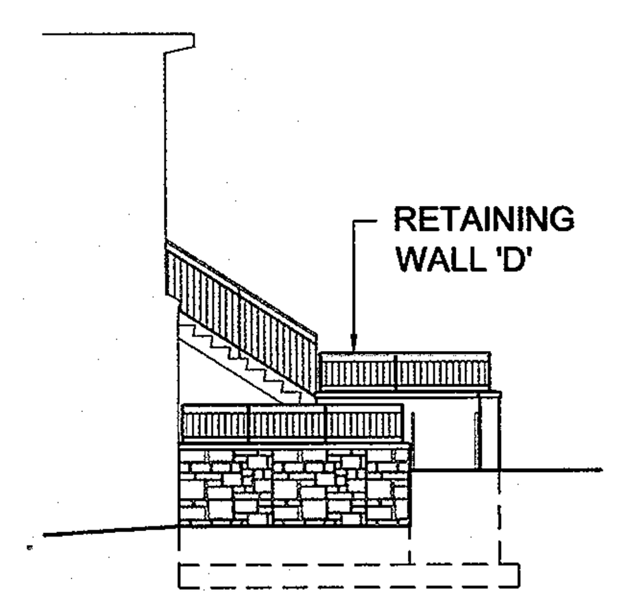
8 A2.0 SOUTH ELEVATION - WALL 'C'
Scale: 1" = 10'-0"



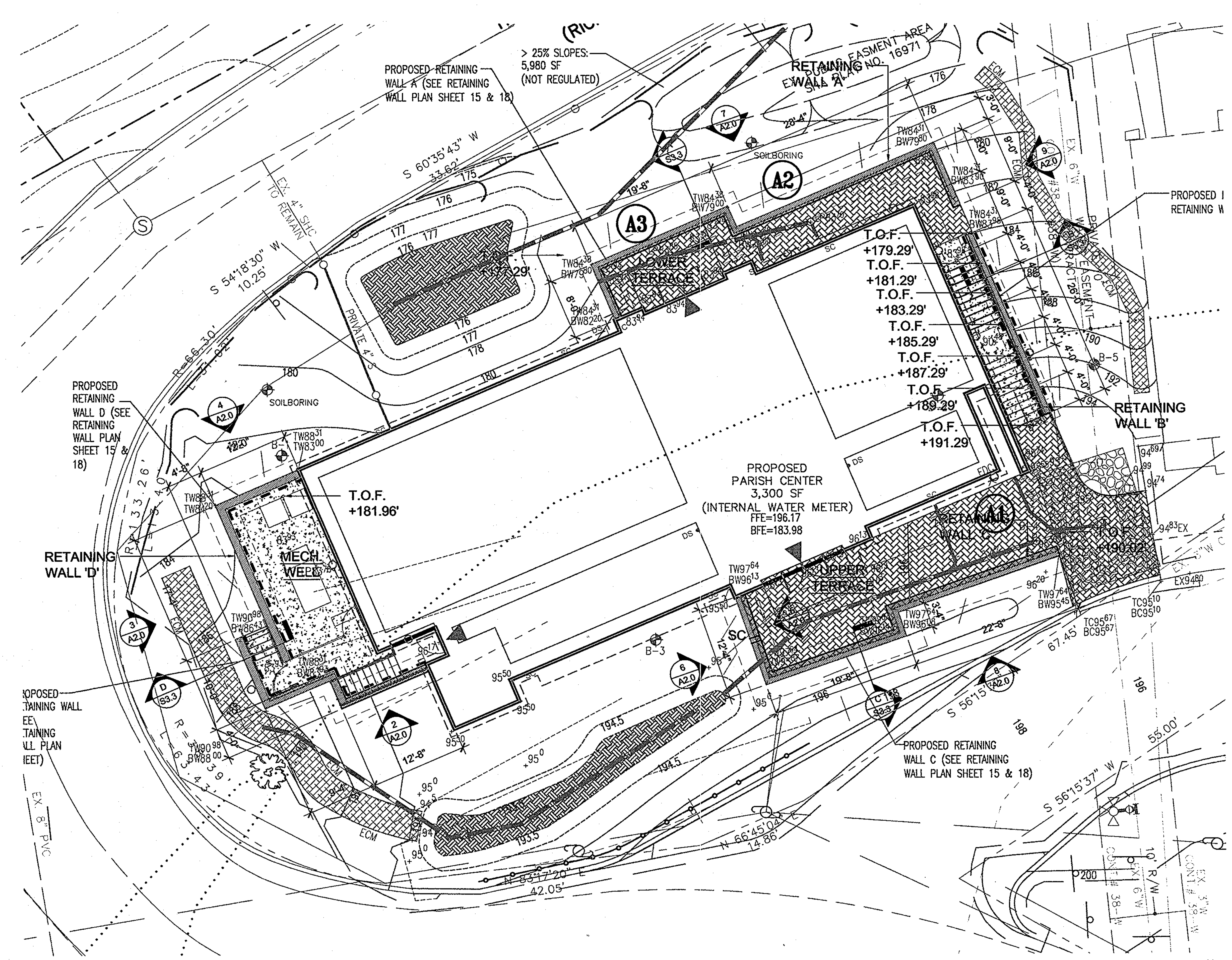
5 A2.0 EAST ELEVATION - WALL 'C'
Scale: 1" = 10'-0"



7 A2.0 NORTH ELEVATION - WALL 'A'
Scale: 1" = 10'-0"



4 A2.0 NORTH ELEVATION - WALL 'D'
Scale: 1" = 10'-0"



1 A2.0 RETAINING WALL PLAN
Scale: 1" = 10'-0"

GENERAL NOTES:

1. SEE SHEETS S3.1 AND S3.3 FOR STRUCTURAL NOTES.
2. SEE CIVIL SHEETS FOR GRADING, EASEMENTS, SWM, ETC.
3. ▪ ▬ ▪ ▬ ▪ DENOTES CMU WALLS TO BE PARGED & PAINTED.
4. SC = SCUPPER; SEE 5/A5.1 FOR DETAIL
5. SEE DETAIL 9/A5.2 FOR WATERPROOFING AT RETAINING WALL.

PENZA+BAILEY ARCHITECTS
401 Woodbourne Avenue
Baltimore, Maryland 21212
T 410-435-6677 | F 410-435-6868
www.PenzaBailey.com

ARCHITECTURAL REGISTRATION BOARD 7286-A JEFFREY A. PENZA STATE OF MARYLAND

Project Title:

New Evangelization Center
3765 St Paul Street
Ellicott City, Maryland 21043

For:

St Paul's Catholic Church
3755 St Paul Street
Ellicott City, Maryland 21043

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Thomas E. Butler
DIRECTOR
12/21/10
DATE

Chad Edmondson
CHIEF, DEVELOPMENT ENGINEERING DIVISION HSP
12.15.10
DATE

Kent Sheubrooks
CHIEF, DIVISION OF LAND DEVELOPMENT
12-21-10
DATE

#	DATE	DESCRIPTION

ISSUED FOR:
- [ ] REVIEW
- [x] SDP SUBMISSION
- [ ] BID
- [ ] 50% DD SET
- [ ] PERMIT
- [ ] CD SET

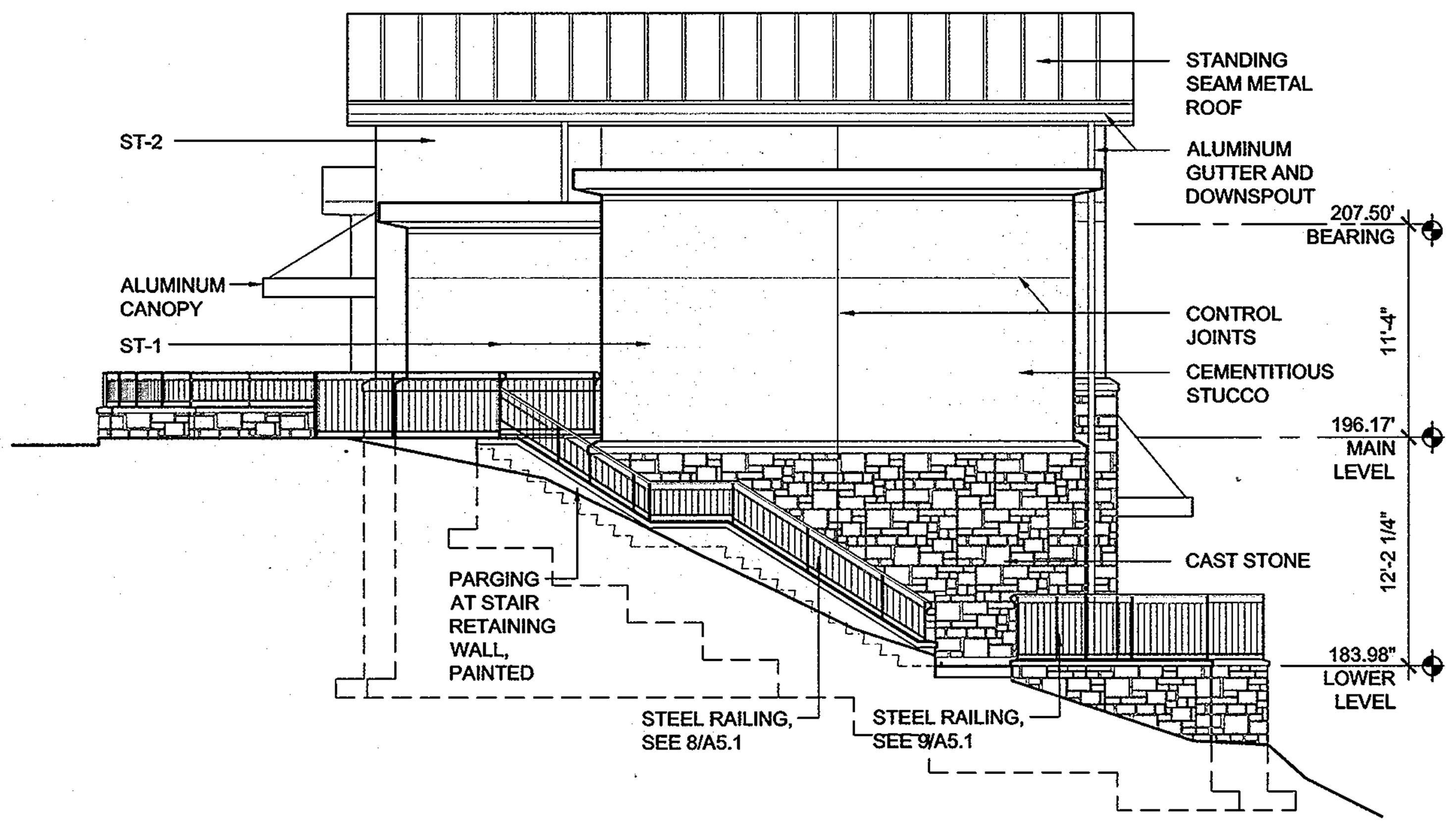
DRAWN: PROJECT #: 0608-03
CHECKED:
CAD FILE:
DATE:

RETAINING WALL PLANS & ELEVATIONS

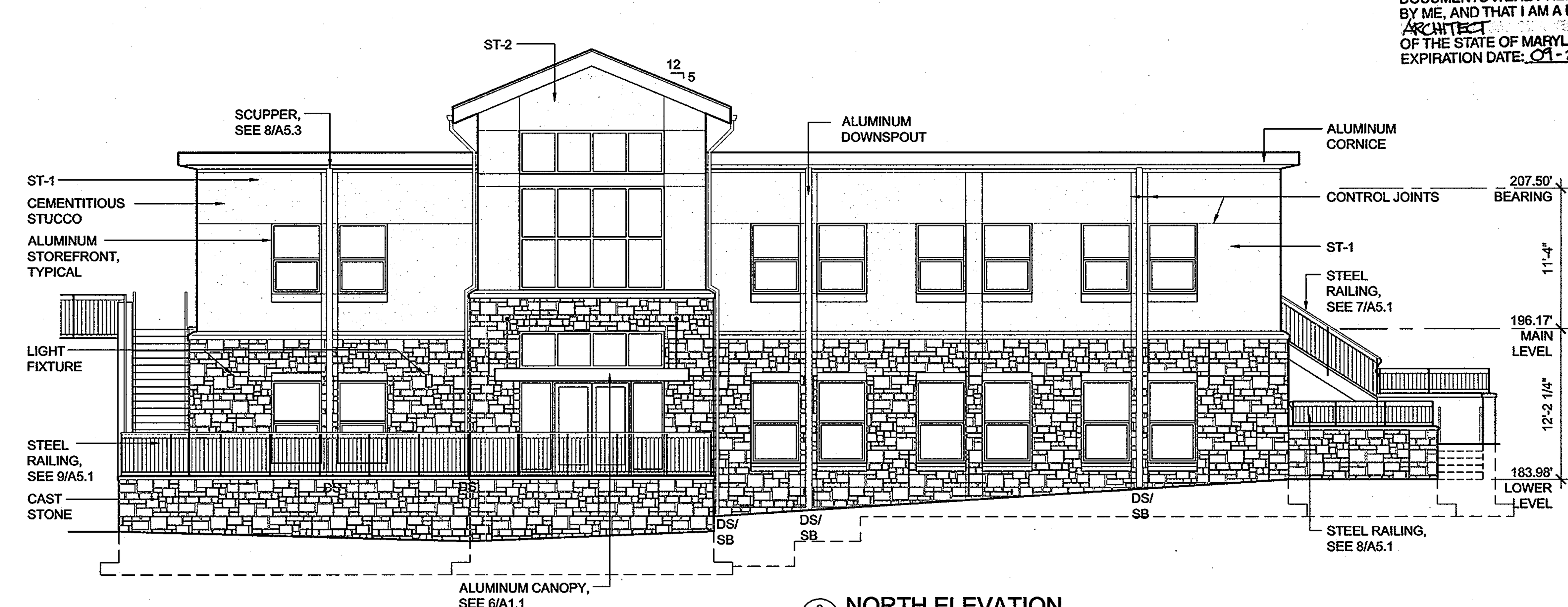
A2.0
SDP-10-069

SDP 10-069

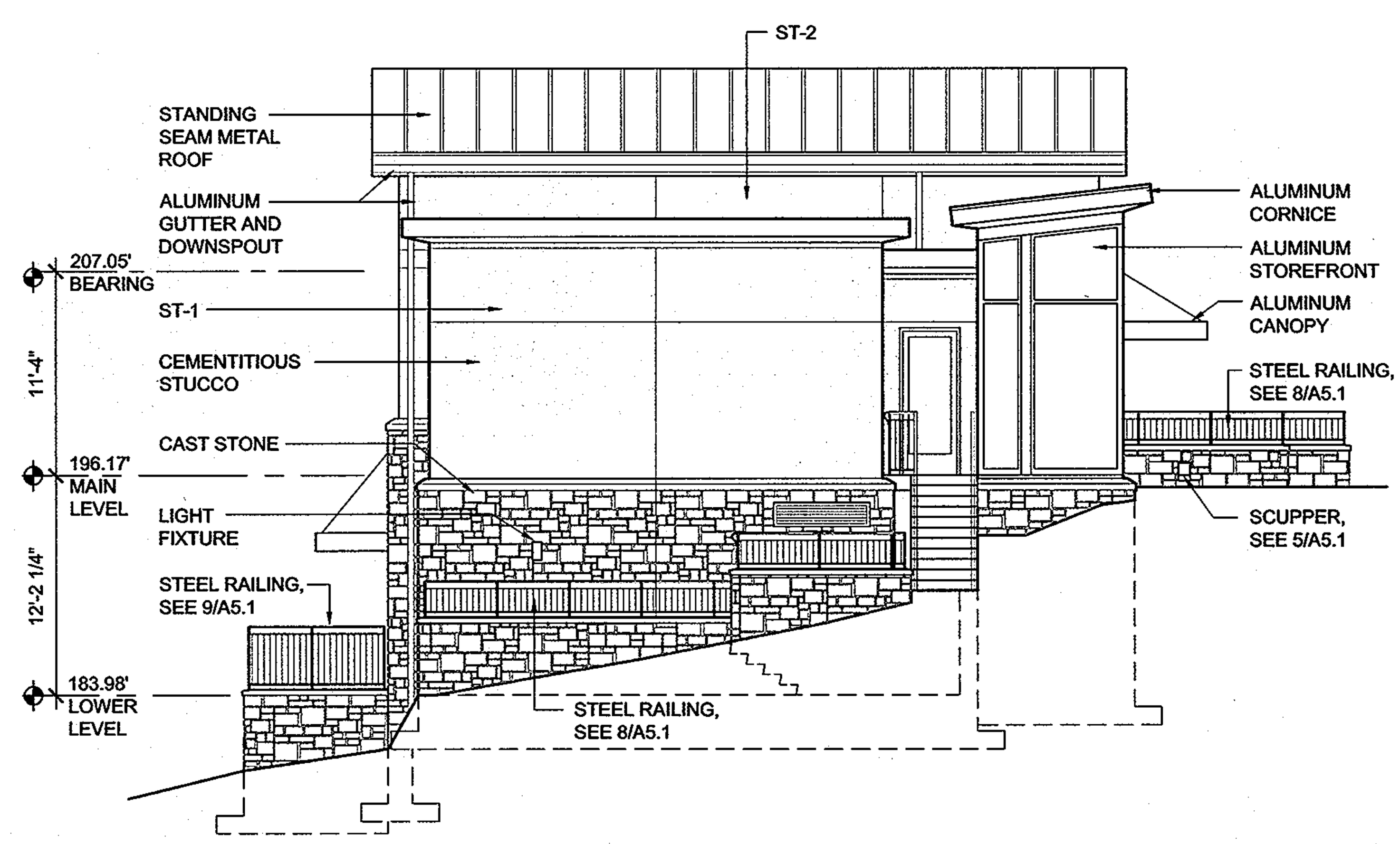
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 7286, EXPIRATION DATE: 09-29-12



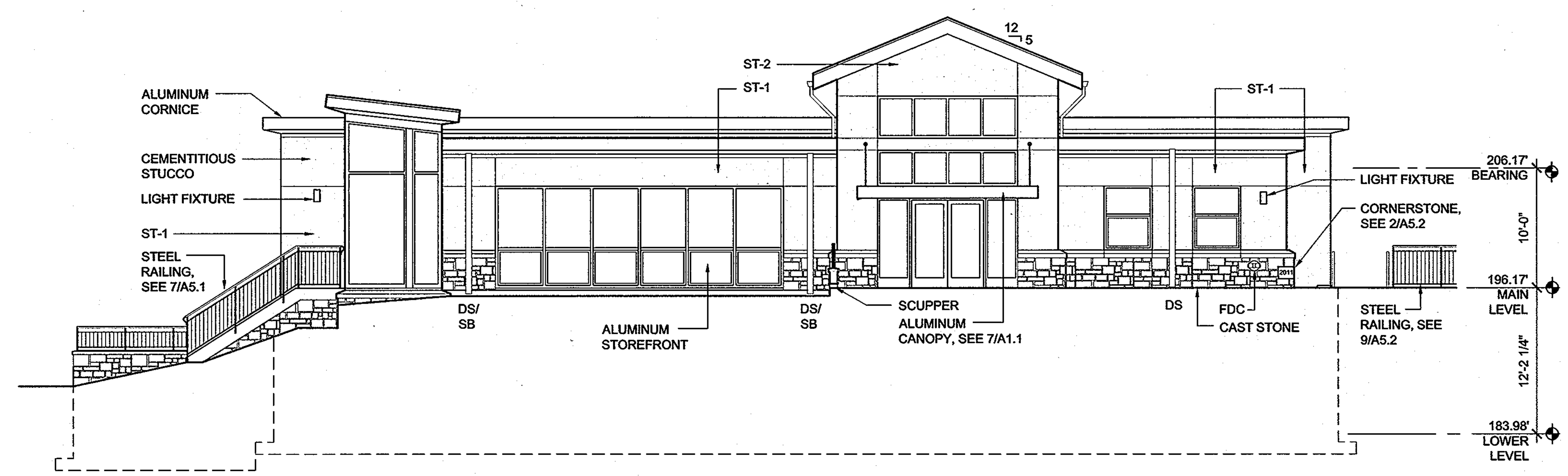
5 A2.1 EAST ELEVATION
Scale: 1/8" = 1'-0"



2 A2.1 NORTH ELEVATION
Scale: 1/8" = 1'-0"



4 A2.1 WEST ELEVATION
Scale: 1/8" = 1'-0"



1 A2.1 SOUTH ELEVATION
Scale: 1/8" = 1'-0"

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Baltimore, Maryland 21212
T 410-435-6677 | F 410-435-6868
www.PenzaBailey.com

ARCHITECTURAL REGISTRATION BOARD 7286-A STATE OF MARYLAND

Project Title:

New Evangelization Center
3765 St Paul Street
Ellicott City, Maryland 21043

For:

St Paul's Catholic Church
3755 St Paul Street
Ellicott City, Maryland 21043

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Marsha L. McLaughlin
DIRECTOR
12/21/10
DATE
Chad Edmondson
CHIEF, DEVELOPMENT ENGINEERING DIVISION
12-15-10
DATE
Kent Sheubrooks
CHIEF, DIVISION OF LAND DEVELOPMENT
12-21-10
DATE

#	DATE	DESCRIPTION

ISSUED FOR:

- [ ] REVIEW
- [x] SDP SUBMISSION
- [ ] BID
- [ ] 50% DD SET
- [ ] PERMIT
- [ ] CD SET

DRAWN:
PROJECT #: 0608-03
CHECKED:
CAD FILE:
DATE:

EXTERIOR ELEVATIONS AND BUILDING SECTIONS

A2.1

SDP-10-069

SDP 10-069

GENERAL NOTES

FOUNDATION AND SLAB-ON-GRADE:

1.) FOOTINGS ARE DESIGNED FOR A BEARING CAPACITY OF 2000 PSF BASED ON THE GEOTECHNICAL REPORT PREPARED BY PATTON HARRIS RUST AND ASSOCIATE DATED 01-26-2009. FOOTINGS SHALL BEAR ON NATURAL UNDISTURBED SOIL 1'-0" BELOW ORIGINAL GRADE OR ON STRUCTURALLY CPMPATED FILL. BOTTOM OF EXTERIOR FOOTINGS SHALL BE 2'-6" BELOW FINICHED GRADE. THE GEOTECHNICAL ENGINEER SHALL VERIFY SOIL PRESSURE IN THE FIELD. IF FOUND TO BE LESS THAN THE REQUIRED BEARING PRESSURE, THE FOOTINGS WILL HAVE TO BE REDESIGNED.

2.) ALL FILL UNDER SLABS-ON-GRADE SHALL BE COARSE GRANULAR MATERIAL COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM WATER CONTENT. SLABS-ON-GRADE SHALL BE POURED IN ACCORDANCE WITH ACI 302.1R "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION" (LATEST LOCAL APPROVED EDITION). SAW CUT CONTROL JOINTS SUCH THAT TOTAL AREA BOUNDED BY SAW CUTS AND FORMED EDGES DOES NOT EXCEED 650 Q/FT. AND LONG SIDE TO SHORT SIDE DOES NOT EXCEED 2:1 RATIO. PROVIDE #4 x 3'-0" LONG BAR AT MID-DEPTH OF SLAB AT ALL RE-ENTRANT CORNERS AND COLUMN ISOLATION JOINT CORNERS THAT DO NOT HAVE A CONTROL/CONSTRUCTION JOINT TERMINATING.

3.) DO NOT BACK FILL AGAINST WALLS UNTIL SUPPORTING SLABS ARE IN PLACE AND HAVE ATTAINED REQUIRED STRENGTH.

4.) WALLS SUPPORTED AT THE TOP BY A SLAB-ON-GRADE SHALL BE BRACED UNTIL SLAB HAS ATTAINED REQUIRED STRENGTH. BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

CONCRETE:

1.) ALL CONCRETE, EXCEPT AS NOTED, SHALL BE f'c=3500 psi NORMAL WEIGHT CONCRETE AT 28 DAYS. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE f'c=4500 psi NORMAL WEIGHT CONCRETE AND SHALL BE AIR ENTRAINED PER ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (LATEST LOCAL APPROVED EDITION) FOR SEVERE EXPOSURE.

2.) ALL REINFORCING SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM DESIGNATION A615 (LATEST LOCAL APPROVED EDITION), GRADE 60. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" (LATEST LOCAL APPROVED EDITION).

3.) ALL SPLICES IN REINFORCING SHALL BE CLASS "B" SPLICES IN ACCORDANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (LATEST LOCAL APPROVED EDITION) EXCEPT AS NOTED ON PLANS.

4.) WELDED WIRE FABRIC (W.W.F.) SHALL HAVE ENDS LAPPED ONE FULL MESH.

5.) WALL FOOTING REINFORCING SHALL EXTEND 2'-0" INTO ADJACENT COLUMN FOOTING, UNLESS NOTED OTHERWISE.

6.) UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS, PROVIDE CONCRETE PROTECTION FOR REINFORCING AS FOLLOWS:
- CAST AGAINST EARTH ..... 3"
- EXPOSED TO EARTH OR WEATHER:
  - No. 6 AND LARGER BARS ..... 2"
  - No. 5 AND SMALLER BARS ..... 1 1/2"
- NOT EXPOSED TO EARTH OR WEATHER:
  - SLABS AND WALLS ..... 3/4"

7.) ALL SLABS UNLESS OTHERWISE SPECIFIED SHALL HAVE THE FOLLOWING TEMPERATURE REINFORCING:
- 0" TO 5" ..... #3 AT 12"o.c.
- 5" TO 6 1/2" ..... #3 AT 9"o.c,
- OVER 6 1/2" ..... #4 AT 12"o.c.

8.) OPENINGS SHOWN ON STRUCTURAL PLANS ARE PRINCIPAL OPENINGS. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR OPENINGS NOT SHOWN.

9.) CONTRACTOR MUST SUBMIT A CONCRETE DESIGN MIX IN ACCORDANCE WITH ACI-318 (LATEST LOCAL APPROVED EDITION). SUCH DESIGN MIX SHALL BE ACCOMPANIED BY THE APPROPRIATE GRAPHS AND BACKGROUND DATA. CONCRETE DESIGN MIX SHALL INDICATE 7 AND 28 DAY STRENGTHS, CEMENT CONTENT AND WATER-CEMENT RATIO, FINE AND COARSE AGGREGATES AND ADMIXTURES FOR EACH DESIGN STRENGTH. THE ADDITION OF WATER AT THE PLANT OR IN THE FIELD GREATER THAN THE SPECIFIED WATER CONTENT IS STRICTLY PROHIBITED.

10.) ALL CONCRETE WORK SHALL CONFORM TO THE LATEST LOCAL APPROVED EDITIONS OF THE FOLLOWING ACI AND ASTM DOCUMENTS:
- ACI-301 ..... SPECIFICATIONS FOR STRUCTURAL CONCRETE
- ACI-318 ..... CODE
- ACI-214 ..... COMPRESSIVE TEST
- ACI-306 ..... COLD WEATHER
- ACI-315 ..... DETAILING
- ACI-347 ..... FORMWORK
- ACI-305 ..... HOT WEATHER
- ACI-211 ..... PROPORTIONS OF CONCRETE
- ACI-304 ..... PLACING CONCRETE
- ASTM C-94 ..... READY-MIX CONCRETE

11.) ALL FIELD AND LAB TESTING OF CONCRETE SHALL CONFORM TO THE LATEST LOCAL APPROVED EDITIONS OF ASTM:
- ASTM C-31 ..... FIELD CYLINDER SPECIMENS
- ASTM C-143 ..... SLUMP TEST
- ASTM C-231 ..... AIR CONTENT (WHEN REQUIRED)
- ASTM C-39 ..... LAB TESTING CYLINDERS
- ASTM C-172 ..... SAMPLING FRESH CONCRETE
- ASTM C-42 ..... HARDENED CORES (WHEN REQUIRED)

TEST RESULTS SHALL BE SIGNED AND SEALED BY PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION.

12.) ALL FORMWORK SHALL BE IN ACCORDANCE WITH ACI 347, "GUIDE TO FORMWORK FOR CONCRETE", (LATEST LOCAL APPROVED EDITION).

MASONRY:

1.) CONCRETE MASONRY SHALL CONFORM TO THE LATEST EDITION OF ASTM SPECIFICATION C90. CONCRETE MASONRY TO BE USED SHALL BE SAMPLED AND TESTED BY THE MASONRY SUPPLIER ACCORDING TO ASTM C140. ALL CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530/ASCE 5, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", (LATEST LOCAL APPROVED EDITION) AND ACI 530.1/ASCE 6, "SPECIFICATIONS FOR MASONRY STRUCTURES", (LATEST LOCAL APPROVED EDITION).

UNLESS OTHERWISE NOTED, CONCRETE MASONRY UNITS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1900 psi ON THE NET AREA. ALL BRICK SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3350 psi ON THE NET AREA.

ALL MORTAR SHALL CONFORM TO ASTM C270. MORTAR TO BE USED SHALL BE SAMPLED AND TESTED BY THE BRICK AND MASONRY SUPPLIERS ACCORDING TO ASTM C780 AND RESULTS SUBMITTED TO THE ENGINEER FOR APPROVAL. MORTAR SHALL BE PORTLAND CEMENT/LIME MORTAR TYPE "S" AS A MINIMUM.

MASONRY CONTINUED:

2.) UNLESS NOTED OTHERWISE PROVIDE THREE CONTINUOUS COURSES OF BRICK OR 100% SOLID MASONRY BELOW ALL JOISTS OR SLAB BEARING LINES. PROVIDE 16" MINIMUM BRICK OR 100% SOLID MASONRY BELOW ALL LINTELS AND/OR MINOR WALL BEARING BEAMS.

3.) LOOSE LINTELS FOR OPENINGS IN MASONRY WALLS SHALL BE AS FOLLOWS FOR EACH 4" WIDTH UNLESS NOTED OTHERWISE:
- 0'-0" TO 3'-0" ..... 3 1/2"x3 1/2"x5/16" ANGLE
- 3'-1" TO 5'-0" ..... 4"x3 1/2"x5/16" ANGLE
- 5'-1" TO 6'-0" ..... 5"x3 1/2"x3/8" ANGLE
- 6'-1" TO 8'-0" ..... 6"x3 1/2"x3/8" ANGLE

ALL ANGLES SHALL HAVE THEIR SHORT LEG OUTSTANDING AND 6"MINIMUM BEARING. LINTELS OVER OPENINGS IN INTERIOR NON-BEARING MASONRY PARTITIONS NOT OTHERWISE SPECIFIED SHALL BE PRECAST LIGHTWEIGHT CONCRETE LINTELS WITH 1-#5 BAR TOP AND BOTTOM FOR EACH 4"WIDTH.

4.) ALL SOLID CMU SHALL BE 100% SOLID BLOCK OR HOLLOW BLOCK WITH CELLS FILLED 100% SOLID WITH f'c=3000 PSI COARSE AGGREGATE GROUT CONFORMING TO ASTM C476. GROUT SHALL BE PLACED IN POUR HEIGHTS NOT TO EXCEED 4'-0" AS CMU CONSTRUCTION PROGRESSES. THE WEBS OF THE MASONRY UNITS SHALL BE FULLY MORTARED AROUND ALL GROUTED CELLS.

5.) ALL SPLICES IN REINFORCING STEEL FOR MASONRY WALLS SHALL BE 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.

6.) ALL CMU WALLS 8" OR WIDER SHALL HAVE THE FOLLOWING MINIMUM REINFORCING UNLESS NOTED OTHERWISE:
- INTERIOR WALLS ..... #5 AT 24"o.c.
- EXTERIOR WALLS ..... #5 AT 24"o.c.

7.) IN ADDITION TO REINFORCING STEEL NOTED ON PLANS, SCHEDULES AND SECTIONS, PROVIDE VERTICAL BARS WITHIN 8" OF EACH SIDE OF WALL CONTROL JOINTS, WITHIN 8" OF THE ENDS OF WALLS, WITHIN 16" OF EACH SIDE OF OPENINGS AND AT ALL CORNERS.

8.) REINFORCING BAR POSITIONERS SHALL BE USED TO HOLD BARS IN PROPER LOCATION. POSITIONERS SHALL BE PLACED AT A MAXIMUM VERTICAL SPACING OF 48"o.c.

9.) ALL 6" CMU NON-BEARING WALLS SHALL BE DOWELED TO SUPPORTING SLAB WITH #4 AT 48"o.c. UNLESS NOTED OTHERWISE.

10.) ALL MASONRY ANCHORS SHALL BE INSTALLED IN MASONRY THAT HAS BEEN GROUTED SOLID A MINIMUM OF 8" ABOVE AND BELOW THE ANCHOR AND A MINIMUM OF 8" EACH SIDE OF THE ANCHOR.

11.) UNLESS OTHERWISE NOTED PROVIDE ANCHORAGE OF MASONRY WALLS TO THE STRUCTURE IN THE FOLLOWING MANNER:
- AT BEAMS ..... 16"o.c.
- AT COLUMNS ..... ADJUSTABLE MASONRY ANCHORS AT 16"o.c.

12.) MASONRY CONSTRUCTION SHALL BE INSPECTED BY AN INDEPENDENT INSPECTION AGENCY PER THE REQUIREMENTS OF THE LATEST LOCAL APPROVED BUILDING CODE. AS A MINIMUM, THE FOLLOWING INSPECTION SHALL BE PROVIDED AND REPORTS SUBMITTED WITHIN FIVE DAYS OF THE TIME OF ACTUAL INSPECTION.

A. COMPRESSIVE STRENGTH OF MASONRY UNITS AND PROPER PROPORTIONING AND MIXING OF MORTAR

B. SIZE, GRADE AND PLACEMENT OF REINFORCING STEEL

C. GROUTING OPERATION

INSPECTORS SHALL BE NOTIFIED OF ALL PHASES OF CONSTRUCTION BY THE CONTRACTOR.

STEEL:

1.) STRUCTURAL STEEL FOR WIDE FLANGE SHAPES SHALL CONFORM TO ASTM SPECIFICATION A992. STRUCTURAL STEEL FOR TUBES SHALL CONFORM TO ASTM SPECIFICATION A500 GRADE B. STRUCTURAL STEEL FOR PIPES SHALL CONFORM TO ASTM SPECIFICATION A53 TYPE E, GRADE B. ALL OTHER STEEL SHALL CONFORM TO ASTM SPECIFICATION A36. MILL TEST REPORTS SHALL BE SUBMITTED TO THE ARCHITECT. ALL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC MANUAL, AISC SPECIFICATION AND AISC CODE OF STANDARD PRACTICE. ALL CONNECTIONS SHALL DEVELOP THE ALLOWABLE UNIFORM LOAD OF THE BEAM. IN GENERAL, FILED CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER A325 BOLTS UNLESS OTHERWISE NOTED AND SHOP CONNECTIONS SHALL BE WELDED.

2.) BOLTS, EXCEPT AS NOTED, NEED ONLY BE INSTALLED TO THE "SNUG TIGHT" CONDITION AS DEFINED IN THE RCSC "SPECIFICATION FOR STRUCTURAL JOINTS". BOLTS IN BEAM TO COLUMN CONNECTIONS THAT HAVE SLOTTED HOLES, BOLTS NOTED AS SLIP CRITICAL, AND BOLTS SUBJECT TO DIRECT TENSION SHALL BE FULLY PRE-TENSIONED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL JOINTS" (LATEST LOCAL APPROVED).

3.) WELDS SHALL BE MADE WITH E70XX LOW HYDROGEN ELECTRODES.

4.) FIELD MODIFICATION OF THE STRUCTURAL STEEL IS NOT ALLOWED WITHOUT PRIOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER.

5.) ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH A RUST INHIBITIVE PRIMER. ALL EXPOSED STEEL AND LINTELS IN EXTERIOR WALLS SHALL BE HOT DIPPED GALVANIZED.

6.) STRUCTURAL STEEL SHALL BE INSPECTED BY AN INDEPENDENT INSPECTION AGENCY PER THE REQUIREMENTS OF THE LATEST LOCAL APPROVED BUILDING CODE. INSPECTION REPORTS SHALL BE FILED WITH THE STRUCTURAL ENGINEER WITHIN FIVE DAYS OF THE TIME OF ACTUAL INSPECTION. INSPECTORS SHALL BE NOTIFIED OF ALL PHASES OF CONSTRUCTION BY THE CONTRACTOR.

WOOD:

1.) STRUCTURAL WOOD, BEAMS, STUDS AND COLUMNS SHALL BE SPF No.1, EXCEPT WOOD STUDS IN CORRIDOR WALLS BELOW ROOF AND MAIN LEVEL SHALL BE SOUTHERN PINE No.1, Fb=1850 PSI AND E=1, 700, 000 PSI. ALL FABRICATION, ERECTION, OTHER PROCEDURES AND MINIMUM UNIT STRESSES SHALL CONFORM TO THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" (LATEST LOCAL APPROVED EDITION). ALL MICRO-LAMS SHALL HAVE A MINIMUM BENDING STRESS Fb=2800 PSI.

2.) PROVIDE DOUBLE JOIST AT PARALLEL PARTITIONS WHERE PARTITION LENGTH EXCEEDS 1/2 JOIST SPAN. PROVIDE "TEE" ANCHORS AT 4'-0"o.c. IN MASONRY BEARING WALLS. PROVIDE ANCHORS IN WALLS PARALLEL TO JOISTS (ANCHORS SHALL ENGAGE AT LEAST 3 JOISTS). PROVIDE 1"x3" CROSS BRIDGING AT 8'-0"o.c.

WOOD CONTINUED:

3.) WOOD TRUSS AND TRUS JOIST DESIGNS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE LOCAL JURISDICTION. THE MINIMUM ROOF LIVE LOAD IS 30 PSF, AND THIS MUST BE INCREASED AS REQUIRED BY THE LOCAL BUILDING CODE. THE MINIMUM TOP CHORD DEAD LOAD IS 50 PSF. THE MINIMUM BOTTOM CHORD DEAD LOAD IS 10 PSF. THE WIND LOAD IS AS REQUIRED BY LOCAL BUILDING CODE. ALL CONNECTIONS AND ATTACHMENTS TO GIRDER TRUSSES, BEARING WALLS AND BEAMS MUST BE DESIGNED FOR THE APPROPRIATE LIVE AND DEAD LOAD COMBINATIONS, PLUS EFFECTS FROM WIND (INCLUDING UPLIFT).

4.) WOOD I JOIST DESIGN IS BASED ON "TRUS JOIST" PRODUCTS. SUBSTITUTIONS MAY BE ALLOWED PROVIDED THEY ARE EQUAL TO THE TRUS JOIST IN ALL RESPECTS. WOOD I JOIST SHOP DRAWINGS AND COMPUTATIONS, SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF MARYLAND, MUST BE PROVIDED BY THE WOOD I JOIST MANUFACTURER FOR REVIEW. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OTHER TRADES. PRINTED DESIGN, FABRICATION AND INSTRUCTION MATERIALS MUST ALSO BE SUBMITTED FOR OUR USE. FABRICATION AND ERECTION MUST BE IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS AND THE "GUIDELINES FOR WOOD I JOIST" PUBLISHED BY THE AMERICAN WOOD COUNCIL. UNLESS NOTED OTHERWISE DEFLECTION OF WOOD I JOISTS SHALL NOT EXCEED L/480.

5.) PREFABRICATED WOOD TRUSS MANUFACTURER MUST PROVIDE THE NECESSARY LATERAL BRACING BETWEEN THE TRUSSES TO INSURE TRUSS STABILITY AND STRENGTH.

6.) PROVIDE 2x4 CONTINUOUS BRIDGING AT ALL BOTTOM CHORD PANEL POINTS AND AS REQUIRED BY WOOD TRUSS MANUFACTURER.

7.) ANY HORIZONTAL DEFLECTIONS OF THE ROOF TRUSSES DUE TO THE TRUSS CONFIGURATION SHALL BE ACCOUNTED FOR IN THE TRUSS CONNECTION DETAIL AND SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW.

8.) ALLOWANCE SHALL BE MADE BY THE CONTRACTOR FOR POTENTIAL UPLIFT OF ROOF TRUSS BOTTOM CHORDS THAT MIGHT BE CAUSED BY DISTORTION OF THE TRUSS MEMBERS DUE TO VARIATIONS IN MOISTURE CONTENT OF THE TRUSS MEMBERS.

MISCELLANEOUS:

1.) ITEMS AND CONDITIONS NOTED OR IDENTIFIED IN SECTIONS AND DETAILS APPLY TO AREAS SIMILAR IN CONDITION TO THOSE DENOTED BY SECTION CUT OR DETAIL MARK.

2.) THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DOCUMENTS AND ANY OTHER DOCUMENTS OR EXISTING CONDITIONS FOR RESOLUTION PRIOR TO PROCEEDING WITH FABRICATION OR CONSTRUCTION.

3.) SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE CONTRACTOR. IF A CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE FIRM COLUMBIA ENGINEERING INC., WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND/OR THE DESIGN OF THE PROJECT.

AT THE TIME OF SHOP DRAWING SUBMISSION, THE CONTRACTOR SHALL STATE IN WRITING ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS BEFORE SUBMISSION AND MAKE ALL CORRECTIONS AS HE DEEMS NECESSARY AND SHALL CERTIFY ON EACH DRAWING AS FOLLOWS:

"I CERTIFY THAT THE CONTRACT DOCUMENT REQUIREMENTS HAVE BEEN MET AND ALL DIMENSIONS, CONDITIONS, AND QUANTITIES ARE VERIFIED AS SHOWN AND/OR AS CORRECTED ON THIS DRAWING".

SIGNED: _____
(FOR CONTRACTOR)

4.) REPRODUCTION OF CONTRACT DOCUMENTS WILL NOT BE ACCEPTED AS SHOP DRAWINGS.

5.) SHOP DRAWINGS SHALL BE SUBMITTED FOR ARCHITECT/ENGINEER REVIEW FOR THE FOLLOWING ITEMS:
- a.) CONCRETE/GROUT MIX DESIGNS
- b.) CONCRETE/MASONRY REINFORCING STEEL
- c.) WOOD JOIST

6.) THE FOLLOWING ITEMS SHALL BE DESIGNED FOR LOADS INDICATED IN THE LOCAL BUILDING CODE:
- a.) STAIRS
- b.) RAILINGS
- c.) STOREFRONT
- d.) SUNSHADES

SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE LOCAL JURISDICTION.

7.) ALL SHOP DRAWINGS USED FOR WORK SHALL BEAR THE STAMP OF THE ARCHITECT/ENGINEER AND SHALL BE MARKED "REVIEWED" OR "REVIEWED AS NOTED".

8.) THE BUILDING FRAME IS NOT SELF SUPPORTING UNTIL THE ENTIRE STRUCTURAL SYSTEM HAS BEEN INSTALLED. TEMPORARY BRACING MUST BE PROVIDED BY THE CONTRACTOR TO SUPPORT THE FRAME UNTIL THE STRUCTURAL SYSTEM HAS BEEN COMPLETED.

9.) ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 AND ALL LOCAL ORDINANCES. THE OWNER SHALL HIRE AN EXPERIENCED, QUALIFIED INSPECTOR TO PERFORM ALL THE REQUIRED INSPECTION WORK. THE ENGINEER WILL NOT PERFORM THE REQUIRED INSPECTION AS A PART OF HIS DESIGN SERVICE. THE ENGINEER MAY VISIT THE SITE TO ASCERTAIN GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS AND SUCH VISITS ARE NOT TO BE CONSTRUED AS MEETING INSPECTION REQUIREMENTS UNLESS THE ENGINEER SPECIFICALLY SO STATES IN WRITING.

10.) THE GENERAL CONTRACTOR AND IT'S SUB CONTRACTORS ARE TO HAVE A MINIMUM OF FIVE YEARS SUCCESSFUL EXPERIENCE IN THE CONSTRUCTION OF WORK SIMILAR IN NATURE TO THIS PROJECT.

DESIGN CODES:

1.) INTERNATIONAL BUILDING CODE 2009

2.) BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI-318-05

3.) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURE ACI-530-05/ASCE 5-05

4.) SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS ..... AISC 13TH EDITION

DESIGN LOADS:

FLOOR LIVE LOADS:

1.) MAIN LEVEL ..... 100 PSF
2.) SLAB ON GROUND ..... 100 PSF
3.) STAIRS ..... 100 PSF

ROOF LOAD:

1.) MINIMUM LIVE LOAD ..... 30 PSF
2.) GROUND SNOW LOAD (Pg) ..... 25 PSF
3.) FLAT ROOF SNOW LOAD (Pf) ..... 20 PSF
4.) SNOW EXPOSURE FACTOR (Ce) 1.0
5.) SNOW LOAD IMPORTANCE FACTOR (Is) 1.0
6.) THERMAL FACTOR (Ct) 1.0
7.) GREEN ROOF DEAD LOAD MUST NOT EXCCED 55 PSF.

WIND LOAD:

1.) BASIC WIND SPEED (3 SECOND GUST) ..... 90 MPH
2.) WIND LOAD IMPORTANCE FACTOR (Iw) 1.15
3.) WIND EXPOSURE C
4.) INTERNAL PRESSURE COEFFICIENT 0.18

EARTHQUAKE DESIGN DATA:

1.) SEISMIC DESIGN CATEGORY ..... B
2.) SPECTRAL RESPONSE COEFFICIENTS (S_{DS} AND S_{D1}) ..... 0.175 AND 0.081
3.) SITE CLASS ..... D
4.) BASIC SEISMIC-FORCE-RESISTING SYSTEM ..... INTERMEDIATE REINFORCED WOOD AND MASONRY SHEAR WALLS
5.) DESIGN BASE SHEAR (V) ..... 43 KIPS
6.) ANALYSIS PROCEDURE ..... EQUIVALENT LATERAL FORCE PROCEDURE

RETAINING WALLS:

1.) RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICTE, WACEL OR EQUIVALENT) CERTIFIED SOILS TECHNICIAN.

2.) THE REQUIRED BEARING PRESSURE BENEATH THE FOOTING OF THE WALL SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMIC CONE PENETROMETER TEST ASTM STP-399.

3.) THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ONSITE SOILS TECHNICIAN. EACH EIGHT (8) INCH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF CONSTRUCTION.

4.) FOR "CRITICAL" WALLS, ONE SOIL BORING SHALL BE REQUIRED EVERY 100 FEET ALONG THE ENTIRE LENGTH OF THE WALL. COPIES OF ALL BORING REPORTS SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION.

5.) ARCHITECT TO PROVIDE DETAILS FOR RAILINGS ABOVE RETAINING WALLS, AS REQUIRED.

WALL AND SHEATHING FASTENER SCHEDULE

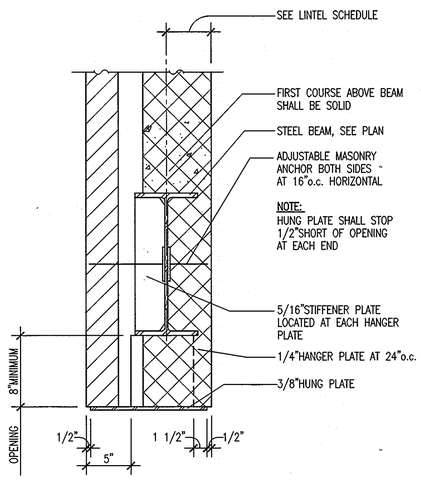
MATERIAL	FASTENER	NUMBER OR SPACING
STUDS TO SOLE PLATE	16d COMMON WIRE NAILS	2 AT EACH END
7/16" APA RATED STRUCTURAL SHEATHING	8d COMMON WIRE NAILS	6"o.c. AT EDGES AND 12"o.c. AT INTERMEDIATE SUPPORTS
5/8"GYPSUM SHEATHING (BOTH FACES)	12 GA., 1 1/4"LONG LARGE HEAD CORRISIVE RESISTIVE NAILS	WALLS BLOCKED AND NAILED w/6d COOLER NAILS AT 4"o.c. AT EDGES AND 7"o.c. AT INTERMEDIATE SUPPORTS

PRESSURE TREATED SILL PLATE TO CMU FASTENER SCHEDULE

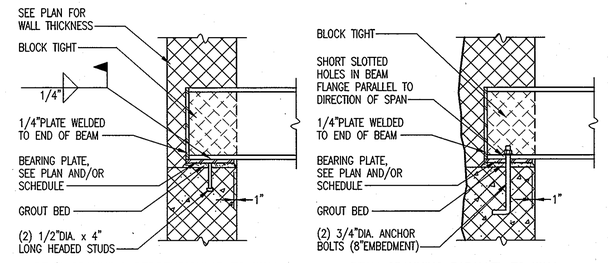
ATTACHMENT METHOD \ LOCATION	AT SHEAR WALLS AND AT EXTERIOR WALLS	AT ALL OTHER LOAD BEARING WALLS	AT ALL OTHER NON LOAD BEARING WALLS
1/2"DIAMETER ANCHOR BOLTS (7"MINIMUM EMBEDMENT)	1 AT 6" EACH END, BALANCE AT 1'-4"o.c.	1 AT 6"EACH END, BALANCE AT 4'-0"o.c.	4'-0"o.c.

WOOD FASTENER SCHEDULE

MATERIAL	FASTENER
JOIST TO SILL OR GIRDER	TOE NAIL WITH (3) 8d COMMON WIRE NAILS
BRIDGING TO JOIST	TOE NAIL EACH END WITH (2) 8d COMMON WIRE NAILS
LEDGER STRIP	(3) 16d COMMON WIRE NAILS AT EACH JOIST
SOLE PLATE TO JOIST OR BLOCKING	16d COMMON WIRE NAILS AT 16"o.c.
TOP OR SOLE PLATE TO STUD	(2) 16d COMMON WIRE NAILS AT EACH END
STUD TO SOLE PLATE	TOE NAIL WITH (4) 8d COMMON WIRE NAILS
DOUBLED STUDS	FACE NAIL WITH 10d COMMON WIRE NAILS AT 12"o.c.
DOUBLED TOP PLATES	FACE NAIL WITH 10d COMMON WIRE NAILS AT 15"o.c.
TOP PLATES, LAP AND INTERSECTIONS	FACE NAIL WITH (3) 16d COMMON WIRE NAILS
CONTINUOUS HEADER, TWO PIECES	16d COMMON WIRE NAIL AT 16"o.c ALONG EACH FACE
CONTINUOUS HEADER TO STUD	TOE NAIL WITH (4) 8d COMMON WIRE NAILS
1"BRACE TO EACH STUD AND PLATE	FACE NAIL WITH (2) 8d COMMON WIRE NAILS
BUILT-UP CORNER STUDS	16d COMMON WIRE NAIL AT 24"o.c.



TYPICAL HUNG PLATE AT EXTERIOR CAVITY WALL DETAIL



BEAM SPANNING PERPENDICULAR TO WALL

BEAM SPANNING PARALLEL TO WALL (LINTEL BEARING)

NOTES:
1.) BEAMS SHALL BEAR FULL LENGTH ON BEARING PLATE.
2.) DETAIL SIMILAR FOR CHANNELS AND TUBE SHAPES.

TYPICAL BEAM BEARING ON MASONRY WALL

PENZA+BAILEY
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Project Title:

New Evangelization Center

3765 St Paul Street
Ellicott City, Maryland 21043

For:

St Paul's Catholic Church
3755 St Paul Street
Ellicott City, Maryland 21043

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 12/21/10

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12.15.10

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 12-21-10

#	DATE	DESCRIPTION

ISSUED FOR:
- ☐ REVIEW
- ☒ SDP SUBMISSION
- ☐ BID
- ☐ 50% CD SET
- ☐ PERMIT
- ☐ CD SET

DRAWN: HW | PROJECT #: 0608-03
CHECKED: JN
CAD FILE:
DATE:

PLANS AND SCHEDULES

S3.1

SDP-10-069

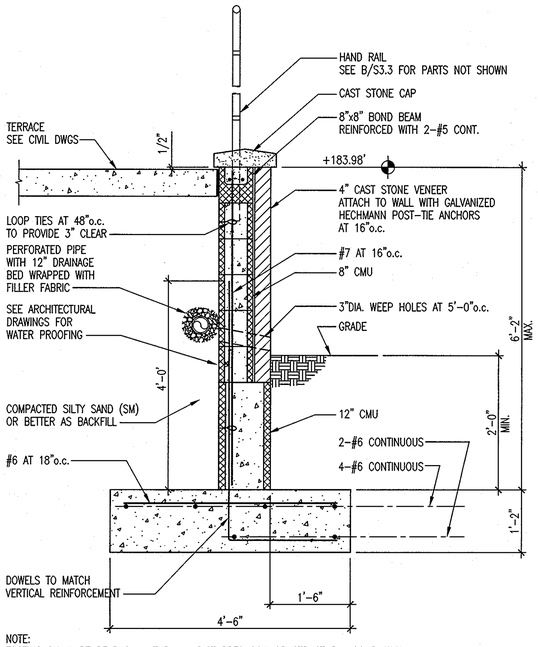
Columbia Engineering Inc.
Structural Engineers
6210 Old Dobbin Lane Suite 150
Columbia, Maryland 21045
410.992.9970 Tel
410.992.0627 Fax

Professional Certification.
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 8709, Expiration Date: 08-23-2011.
jocko@columbiaengineering.com

SDP 10-069

Drawing No. 17 of 18

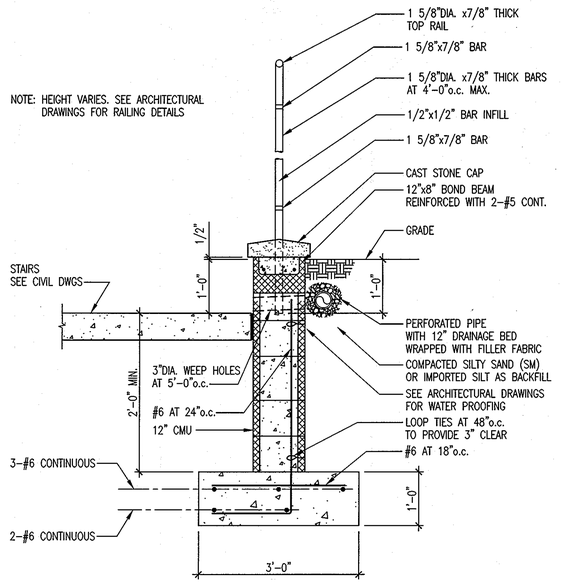
CEI: #27179



NOTE:
FOOTING SHALL BE BEAR ON NATURAL UNDISTURBED SOIL OR STRUCTURAL COMPACTED FILL.

LOWER TERRACE RETAINING WALL — A / S3.3

SCALE: 3/4"=1'-0"



NOTE:
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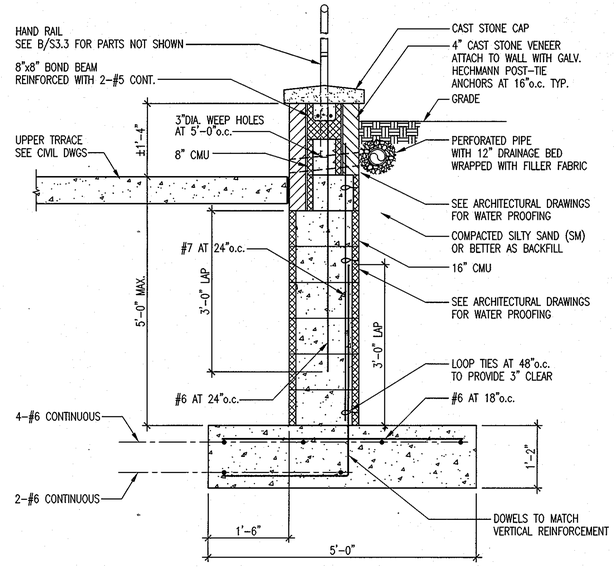
LOWER TERRACE STAIRS RETAINING WALL — B / S3.3

SCALE: 3/4"=1'-0"



NOTE:
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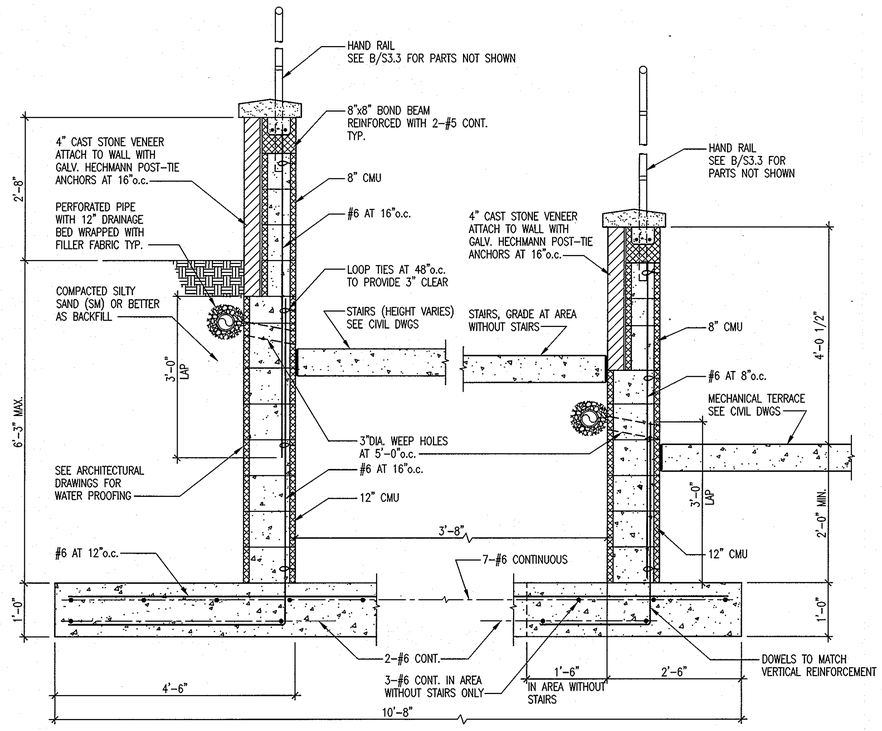
UPPER TERRACE RETAINING WALL — C / S3.3

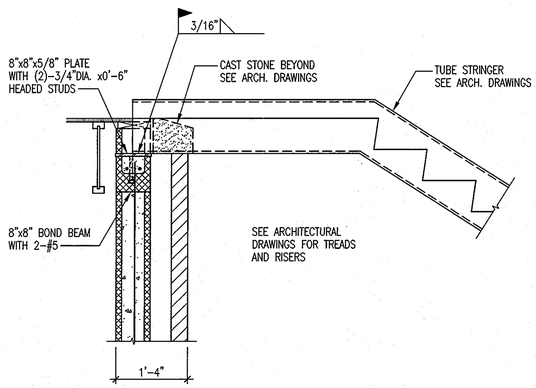
SCALE: 3/4"=1'-0"



NOTE:
FOOTING SHALL BE BEAR ON NATURAL UNDISTURBED SOIL OR STRUCTURAL COMPACTED FILL.

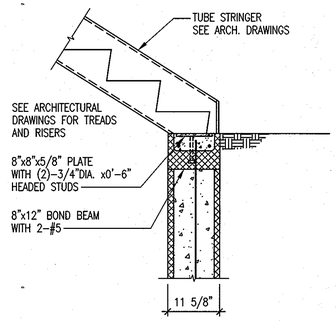
MECHANICAL TERRACE AND STAIR RETAINING WALL — D / S3.3

SCALE: 3/4"=1'-0"



SECTION — E / S3.3

SCALE: 3/4"=1'-0"



SECTION — F / S3.3

SCALE: 3/4"=1'-0"

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SECTIONS

S3.3

SDP-10-069

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Professional Certification.
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jocko@columbiaengineering.com

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