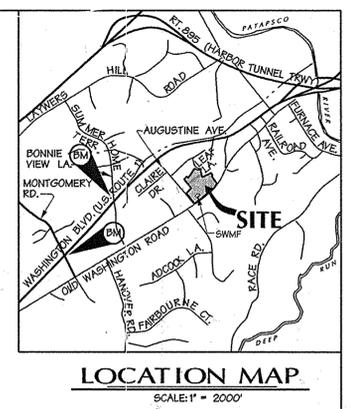


SHEET INDEX	
SHEET	DESCRIPTION
1	COVER SHEET
2	SITE PLAN
3	GRADING, EROSION AND SEDIMENT CONTROL PLAN
4	EROSION AND SEDIMENT CONTROL DETAILS
5	STORMWATER MANAGEMENT DETAILS AND SOIL BORINGS
6	LANDSCAPE PLAN AND DETAILS
7	SITE DETAILS
8	PLAN, SECTIONS AND ELEVATIONS
9	FOREST CONSERVATION PLAN AND TEMPORARY PARKING LOT EXPANSION
10	FOREST CONSERVATION NOTES & DETAILS
11	SWM PROFILES AND SPECIFICATIONS
12	STORM DRAIN DRAINAGE AREA MAP

ADDED COLUMBARIUM
ADDED COLUMBARIUM

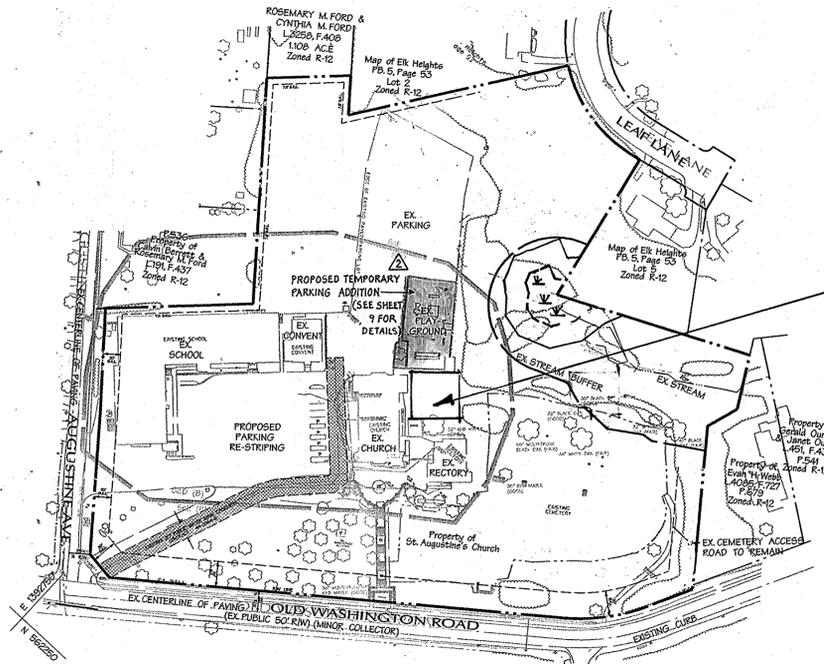
Site Improvements for St. Augustine Church in Elkridge, MD

SHEET INDEX ADDITIONS	
SHEET	DESCRIPTION
13	C1 COLUMBARIUM SITE PLAN
14	C2 PATIO DRAINS
15	A0 TITLE / INDEX
16	A1 FOUNDATION / SPREAD FTG. PLANS
17	A2 FLOOR PLAN ELEVATIONS
18	A3 PRECAST NICHE LIMITS
19	A4 PRECAST NICHE LIMITS
20	A5 ENLARGED PLAN DETAILS
21	A6.1 SECTIONS
22	A6.2 SECTIONS
23	A7 ELEVATIONS
24	S1 STRUCTURAL SPECIFICATIONS
25	G1 STONE DRAWINGS
26	G2 STONE DRAWINGS
27	G3 STONE DRAWINGS



GENERAL NOTES

- All construction shall be performed in accordance with the latest standards and specifications of Howard County, plus MSHA standards and specifications if applicable or as specified.
- Approximate location of existing utilities are based solely on available records. Contractor shall verify the location of any utilities which may be impacted by the work. The contractor shall take all necessary precautions to protect the existing utilities and maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- The contractor shall test pit existing utilities at least five (5) days before starting work shown on these drawings to verify their location and elevation. The contractor shall notify the engineer immediately if location of utilities is other than shown.
- The contractor shall notify 'Miss Utility' at 1-800-257-7777 at least 48 hours prior to any excavation work being done, and shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1800 at least five (5) working days prior to the start of work.
- Any damage caused by the Contractor to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be repaired at the Contractor's expense.
- Topography per aerial survey of Air Survey Corp. dated 3/98 and supplemented by field run details by DMW dated Feb-13, 2001.
- Public water and sewer provided by contracts No. 44-3864-D and No. 108-B-30345-A.
- All fill areas shall be compacted to a minimum of 95% of the maximum dry density as determined and verified in accordance with AASHTO T-180.
- The SWM facility is BMP Type F-5 - Pocket Sand Filter to be owned and maintained by St. Augustine Church.
- There are no wetlands, streams, or related buffers on within the LOD. There is no floodplain on site. No clearing, grading, or construction shall be permitted within the wetlands, streams, or their buffers located on this site.
- No traffic study is required for these improvements as there is no increase in square footage or number of seats within the facility.
- Operating existing valves, switches, services or start up of new services shall be coordinated with the owners representative.
- Trench compaction for storm drains shall be in accordance with Howard County Design Manual IV, Std. No. G-2.01.
- Unless otherwise noted, dimensions from curb are measured at face of curb.
- The Contractor shall coordinate the location of all water, sewer, and drain house connections with the mechanical drawings.
- The Contractor shall maintain 2.0 feet minimum cover over all utilities during construction.
- Unless otherwise noted, all utility connections shall be capped or plugged five feet from buildings.
- Electric, telephone, gas, cable, lighting, and retaining walls to be designed by others. Where those facilities are shown, they are for coordination purposes only.
- All Spot Elevations are to the bottom of curb unless otherwise noted.
- There is a known cemetery on this site. The developer will be subject to Section 16.1305 of the Howard County Subdivision and Land Development Regulations.
- An exterior lighting fixtures shall be installed in compliance with Section 134 of the Zoning Regulations.
- Geotechnical investigation by D.W. Kozera, Inc dated 11/2/02.
- Boundary Information shown hereon is based upon a survey by Riemer Muegge & Assoc., dated 6/99.
- See sheets 9 and 10 for fulfillment of the Ho. Co. forest conservation requirements per Section 16.1202(h)(1)(v) of Howard County Code. 1.58 acres of forest retention were provided and 22 acres of reforestation were required. This 22 acre reforestation obligation will be satisfied by making a "fee-in-lieu" payment in the amount of \$7,187.40. Surety has been posted in the amount of \$16,615.00 with the Developer's Agreement. The Forest Conservation Easements shown on this plan were recorded with a survey and boundary description by a plat of the Forest Conservation Easement, F03-09 on 8/1/02 as plat number 15529.
- WP-00-10: approved waiver of Sect. 16.155 (a)(1)(i) which requires an SDP prior to building permits for Parish Meeting Center. WP-00-09 approved waiver of Sect. 16.102(b) to allow merger subdivision without submission of sketch or preliminary plans prior to record plat.
- Cemetery on site is No. 38-2 in the Howard County Cemetery Inventory.
- In BA 99-65-E & V, St. Augustine Church petitioned and was granted approval for enlargements to an existing religious facility and private school and for reduction of the 30 foot rear setback to 10 feet for a parish meeting center. The petition was approved on April 11, 2000 with the following conditions:
 - that the variance apply only to the parish meeting center;
 - that the special exception apply only to the Parish Meeting Center, Parish Life Activity Center, Adult Education Fellowship Hall and related site modifications;
 - that the landscape edge on the west side be a type D screen with evergreen tree emphasis;
 - that outdoor lighting conform to county regulations;
 - that the improvements be constructed per the proposed phasing; and
 - that the improvements comply with all applicable regulations.
- Private Elementary School (K through 8) with 300 students; Hours of Operation: Weekdays, 8 AM to 9 PM.
- This plan conforms to the 5th edition of the Howard County Subdivision and Land Development Regulations.
- Per WP 02-83 (which requested a waiver for Section 16.118(c) which prohibits grading or construction within 30' of a cemetery boundary or 10' of individual graves), approval was granted on April 15, 2002 for construction of a wall providing the following conditions. Wall construction shall not be permitted closer than 5.0' to the southwestern edge of the proposed pedestrian plaza wall and the northern edge of the wall shall be no closer than 5.2' to the cemetery boundary line. Grading associated with wall construction shall be the minimum necessary, and shall not extend beyond the cemetery boundary as shown on the Cemetery Accommodation Plan filed with the waiver petition.



Overall Property Outline
Scale: 1" = 100'

COLUMBARIUM GARDEN

A - Columbarium - This Columbarium has been reviewed by the Resource Conservation Division, Comprehensive and Community Planning Division, and the Zoning Division and it has been determined that no approval is required by any applicable panel, commission, or board of appeals.

BENCHMARKS

DESCRIPTION
BM1 #5849-DISC SET IN CONCRETE N 561056.341 E 1309634.145 ELEVATION = 223.417 9.3 FT. EAST OF THE NORTH BOUND CURB ROUTE 1 65+ FT. SOUTHERLY OF THE INTERSECTION OF MONTGOMERY RD.
BM2 #3004-4" ALUMINUM CAP ON IRON ROD N 562953.293 E 1309667.941 ELEVATION = 166.939 9.5 FT. WEST OF SOUTHBOUND CURB ROUTE 1 100' NORTHERLY OF THE INTERSECTION OF BONNE VIEW LA.

ADDRESS CHART	
PARCEL NUMBERS	STREET ADDRESS
PARCEL A-1	5976 Old Washington Road Elkridge, MD 21075-5335

SITE ANALYSIS DATA CHART

- General Site Data
 - Present Zoning: R-12
 - Applicable DPZ File References: WP-00-102, BA 99-65 EAV, DA 92-23 EAV, WP-00-09, F-00-80, WP 02-83, F-03-03
 - Existing/Proposed Use of Site or Structure(s): Private Religious Facility and Private School
 - Proposed Water and Sewer Systems: Public Private
 - Any Other Information Which May be Relevant: The purpose of this site plan is to reconstruct a pedestrian plaza and restripe a parking lot.
- Area Tabulation
 - Total Project Area: 17.9 Acres
 - Area of this Plan Submission: 0.54 Acres
 - Limit of Disturbed Area: 0.54 Acres
 - Building Coverage of Site: 0.21 Acres and 9 % of Gross Area (Proposed)
- Parking Space Data*
 - Floor Space on Each Level per Building(s) per Use: N/A
 - Maximum Number of Employees, Tenants On-Site per Use: N/A
 - Number of Parking Spaces Required by Zoning Regulations and Criteria: 1 SPACE PER 3 SEATS; 360 SEATS IN EX. CHURCH = 120 SPACES REQUIRED
 - Total Number of Parking Spaces Provided On-Site: 179 SPACES (PER MASTER PLAN)
Number of Handicapped Parking Spaces Provided: 9 SPACES
* Under this site plan - restripe existing parking areas to have a total count of 64 spaces which includes 7 handicapped spaces.

Perimeter and internal landscaping shall be provided in accordance with Section 16.184 of the Howard County Code and Landscape Manual. Financial surety for required plantings shall be posted with the Developer's Agreement for this project. (\$6,300.00)

SWM EXEMPTION TRACKING TABLE			
REVISION	DATE	DESCRIPTION	AREA OF DISTURBANCE
4		COLUMBARIUM GARDEN	3,990 S.F.

NOTE: WHEN THE COMBINED DISTURBANCES ASSOCIATED WITH FUTURE PDLINES EXCEED 5,000 SF STORM WATER MANAGEMENT SHALL BE REQUIRED.

FOR REVISION 4 ONLY
8/27/2015
LANDSCAPE ARCHITECT 899

FOR REVISION 2 ONLY
12/1/09
Professional Engr. No. 208225

FOR REVISION 3 ONLY
1-5-2010
Date

FOR REVISION 2 ONLY
7-25-02
Date

Professional Engr. No. 10551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

8/7/02
DATE

8/19/02
DATE

8/19/02
DATE

10-1-02
11-13-09
1-5-10

REV. PARKING SPACE COUNT.
SHOW TEMPORARY PARKING ADDITION
REVISED FOREST CONSERVATION NOTE
COLUMBARIUM GARDEN; This Columbarium has been reviewed by the Resource Conservation Division...

St. Augustine Church Site Improvements

OWNER: The Archbishop of Baltimore
DEVELOPER: The Reverend Gerard J. Bowen, Pastor
St. Augustine Catholic Church
320 Cathedral Street
Baltimore, MD 21201
Elkridge, MD 21075-5335

DMW
Datt - McCune - Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME: ST. AUGUSTINE CHURCH
PLAT OR BLOCK #:
SECTION AREA:
PARCEL #:
DATE: 8/19/02

FILE NO. 15529

DRN BY: AJG
DES BY: BSW
CHK BY:

Scale: AS NOTED
Date: 06-13-02
Approved:

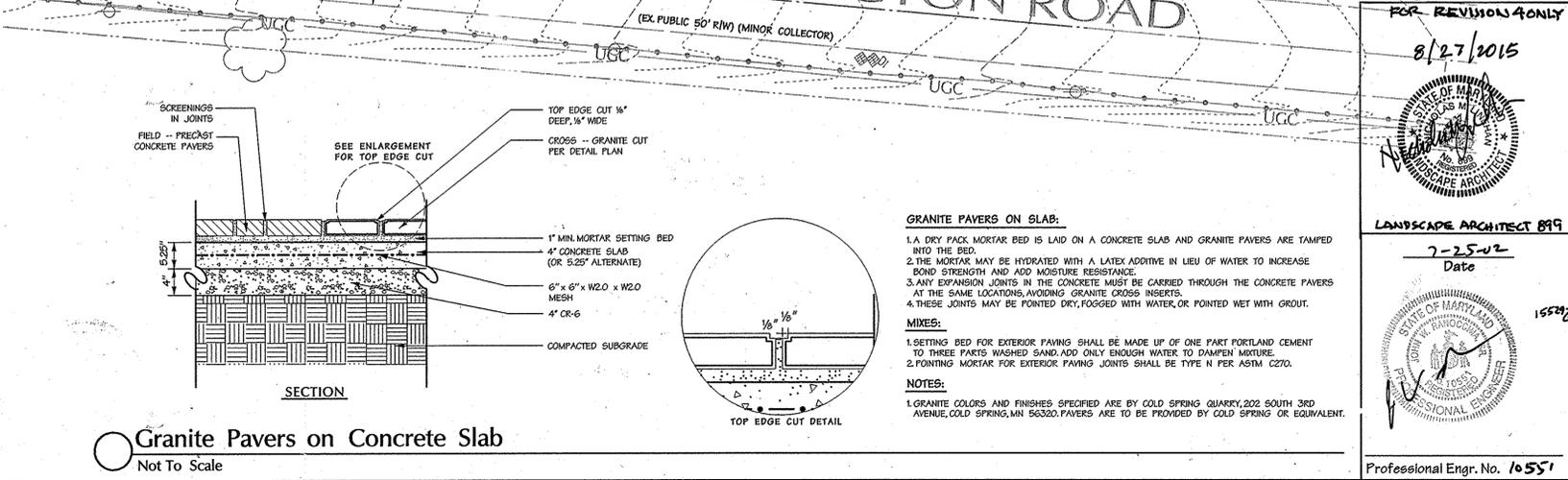
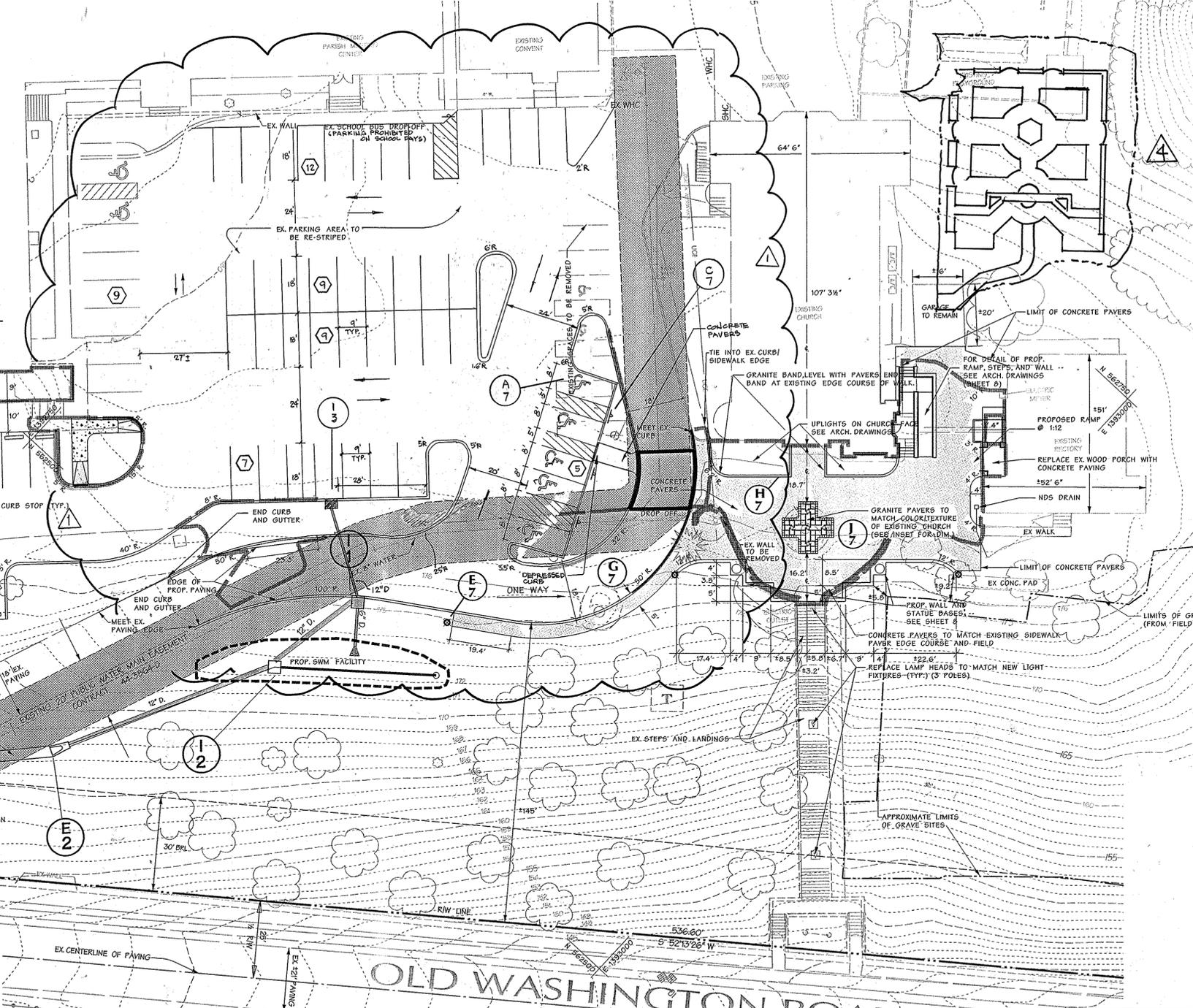
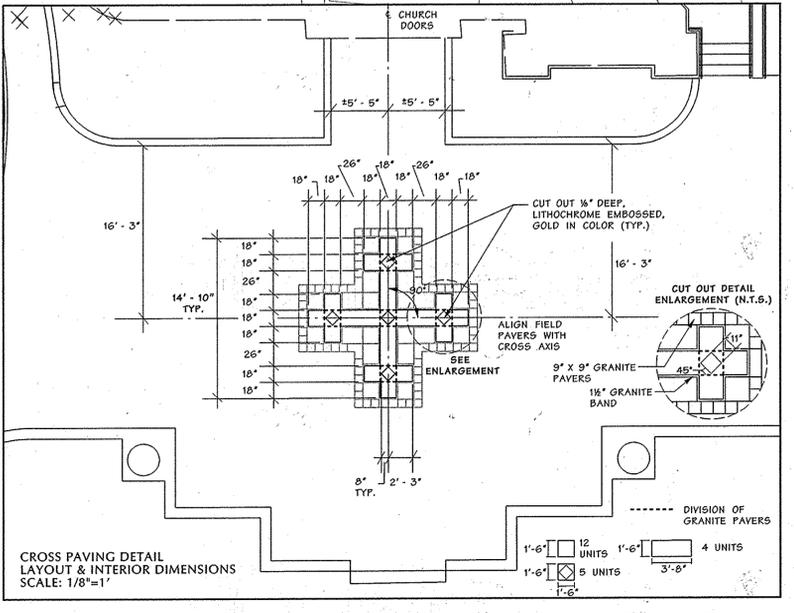
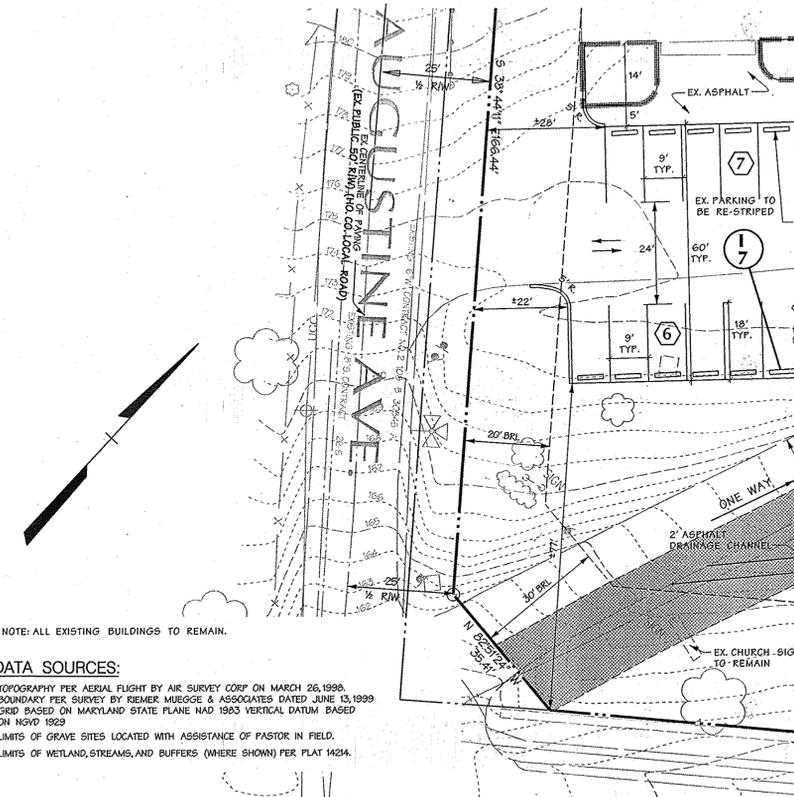
Proj. No. 990402
1 of 27

NOTE: METER INSIDE EXISTING PARISH MEETING CENTER.

LEGEND

- PROPOSED AREA TO BE SURFACED WITH CONCRETE PAVERS
- EX. CURB & GUTTER
- EX. MAJOR CONTOURS
- EX. MINOR CONTOURS
- PROP. STORM DRAIN
- PROP. SEWER
- PROP. WATER
- EX. STORM DRAIN
- EX. SEWER
- EX. WATER
- PARKING COUNT LABELS
- CONCRETE SIDEWALKS
- MODIFIED CURB & GUTTER
- DEPRESSED CURB & GUTTER
- REVERSE CURB & GUTTER
- HANDICAP SYMBOLS
- PROP. LIGHT FIXTURE
- EXISTING TREE
- PROPOSED H.C. RAMP
- PROPOSED PARKING STRIPING
- EXISTING PARKING STRIPING
- CONCRETE WALK
- CONCRETE CURB, TYPICAL
- ASPHALT PAVING DETAIL
- EX. EASEMENT
- LIMITS OF SAWCUT/REMOVAL OF EX. PAVING
- LIMITS OF PAVING OVERLAY

○ Cross Detail: Granite Paver Schedule and Exterior Dimensions
Scale: 1/4" = 1'



GRANITE PAVERS ON SLAB:

1. A DRY PACK MORTAR BED IS LAID ON A CONCRETE SLAB AND GRANITE PAVERS ARE TAMPED INTO THE BED.
2. THE MORTAR MAY BE HYDRATED WITH A LATEX ADDITIVE IN LIEU OF WATER TO INCREASE BOND STRENGTH AND ADD MOISTURE RESISTANCE.
3. ANY EXPANSION JOINTS IN THE CONCRETE MUST BE CARRIED THROUGH THE CONCRETE PAVERS AT THE SAME LOCATIONS, AVOIDING GRANITE CROSS INSERTS.
4. THESE JOINTS MAY BE POINTED DRY, FOGGED WITH WATER, OR POINTED WET WITH GROUT.

MIXES:

1. SETTING BED FOR EXTERIOR PAVING SHALL BE MADE UP OF ONE PART PORTLAND CEMENT TO THREE PARTS WASHED SAND, ADD ONLY ENOUGH WATER TO DAMPEN MIXTURE.
2. POINTING MORTAR FOR EXTERIOR PAVING JOINTS SHALL BE TYPE N PER ASTM C270.

NOTES:

1. GRANITE COLORS AND FINISHES SPECIFIED ARE BY COLD SPRING QUARRY, 202 SOUTH 3RD AVENUE, COLD SPRING, MN 56320. PAVERS ARE TO BE PROVIDED BY COLD SPRING OR EQUIVALENT.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

8/2/02 DATE

8/16/02 DATE

8/17/02 DATE

Date	No.	Revision Description
10-1-02	1	REV. PARKING LAYOUT
	2	COLUMBARIUM GARDEN

St. Augustine Church Site Improvements

OWNER: The Archbishop of Baltimore
Cardinal William H. Keeler
320 Cathedral Street
Baltimore, MD 21201

DEVELOPER: The Reverend Gerard J. Pown, Pastor
St. Augustine Catholic Church
5976 Old Washington Road
Elkridge, MD 21075-5335

DMW
Darr M. McCune - Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 286 3333
Fax 286 4705

DATE: 7-25-02

PROJ. NO. 99040.B

2 of 27

FOR REVISION ONLY

8/27/2015

LANDSCAPE ARCHITECT 899

7-25-02

Date

Professional Engr. No. 10551

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL, EROSION AND SEDIMENT CONTROL.

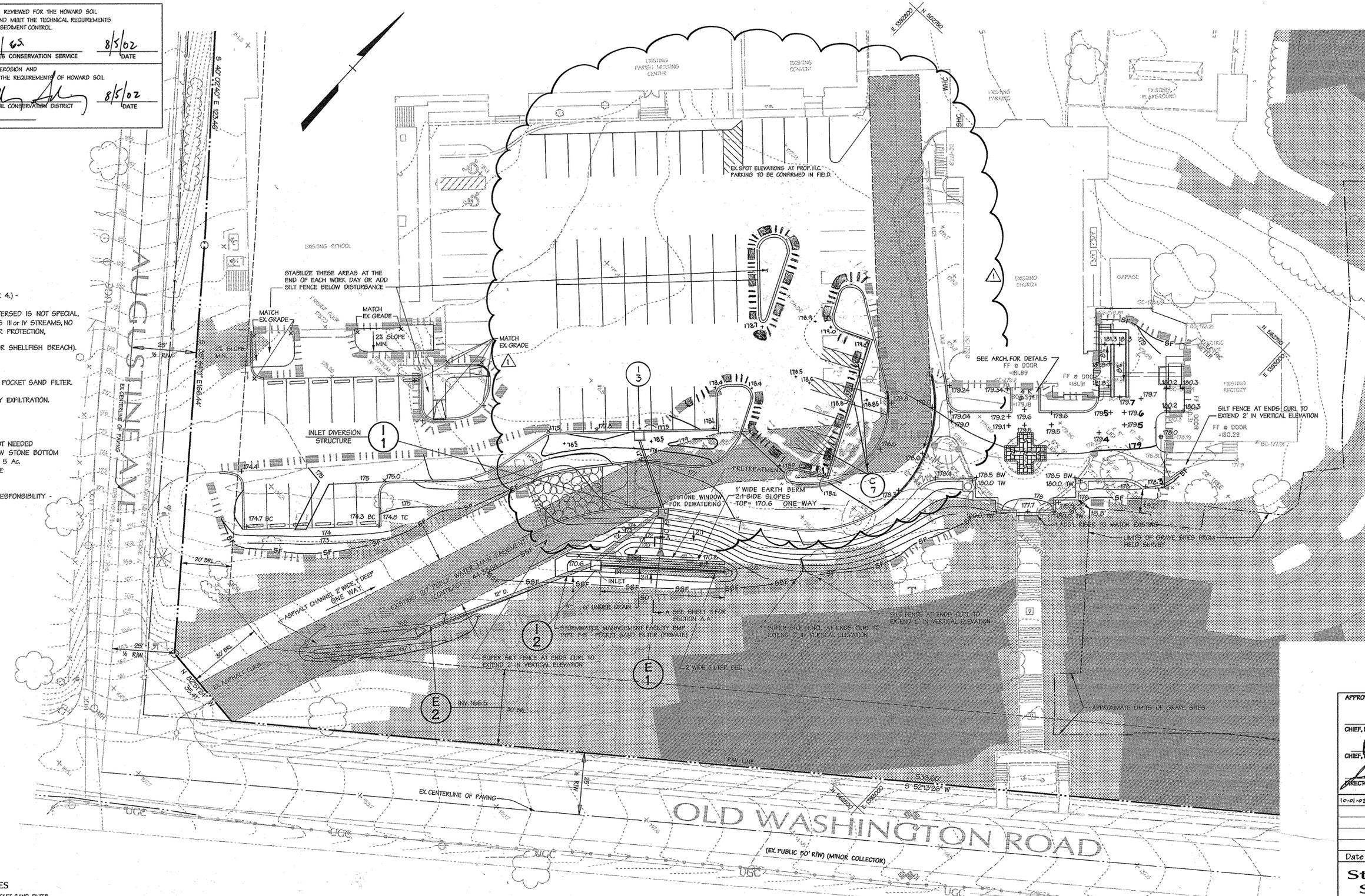
8/5/02
DATE

APPROVED: HOWARD SOIL CONSERVATION DISTRICT
PLAN NUMBER

BMP SELECTION (PER CHAPTER 4.)

- 1) FILTERING SYSTEM 'OK' WATERSED IS NOT SPECIAL. (NO CRITICAL AREA, NO CLASS III or IV STREAMS, NO SENSITIVE STREAM, NO AQUIFER PROTECTION, NO RESERVOIR PROTECTION NOR SHELLFISH BREACH).
- 2) NO TERRAIN FACTORS.
- 3) THE BMP SELECTED IS F-5 POCKET SAND FILTER.

Rev - MAY BE PROVIDED BY EXFILTRATION.
Cp - CONTROL ALLOWED
Qp - CONTROL ALLOWED
NO SAFETY CONCERNS
THIS IS NOT A HOT SPOT
SPECIAL NATURAL SOILS NOT NEEDED
EX WATER TABLE > 2' BELOW STONE BOTTOM
SITE AREA = 0.20 AC. ± < 5 AC.
SLOPE RESTRICTIONS - NONE
HEAD > 5.0'
ULTRA-URBAN = N/A
OWNERSHIP/MAINTENANCE RESPONSIBILITY - ST. AUGUSTINE CHURCH



LEGEND

- EX CURB & GUTTER
- EX MAJOR CONTOURS
- EX MINOR CONTOURS
- PROP. STORM DRAIN
- PROP. SEWER
- PROP. WATER
- EX STORM DRAIN
- EX SEWER
- EX WATER
- PARKING COUNT LABELS
- CONCRETE SIDEWALKS
- STANDARD CURB
- DEPRESSED CURB
- REVERSE CURB
- HANDICAP SYMBOLS
- PROP. LIGHT FIXTURE
- EXISTING TREE
- PROPOSED H.C. RAMP
- STEEP SLOPES (25%+)
- STEEP SLOPES (15%-25%)
- PROP. MINOR CONTOUR (1')
- PROP. MAJOR CONTOUR (5')
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE

SWQ NOTES

BMP TYPE - F-5 - POCKET SAND FILTER
HAZARD CLASS - A

NO.	CATEGORY	DA 1	DA 2	DA 3
1	WQv	282	*347	NA**
2	Rev	152	160	NA**
3	Cpv	< 2 cfs	< 2 cfs	< 2 cfs
4	Qp10	N/A	NA	NA
5	Qp100	N/A	NA	NA
6	Ex. D.A./ DP	0.52 AC.±	0.03	0.008
7	DEV. D.A./ JDP	0.52 AC.±	0.03	0.008
8	DEV. TO POND	0.16 AC.±	NA	NA
9	WQv WSE	170.0 - 170.6	NA	NA
10	Rev WSE	167.75 - 163.75	NA	NA
11	Cpv WSE	N/A	NA	NA
	EX. 1 YR.	0.54 cfs	0.03	0.11
	PROP. 1 YR.	0.58 cfs	0.01	0.04
	VOLUME PROVIDED TO REDUCE 1 YR. STORM	296 CF		

* INCLUDES 94 CF OF PRETREATMENT
** REDUCED IMPERVIOUS AREA BY 20%

DEVELOPERS CERTIFICATE:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN.

Rev. Gerard J. Bowen
SIGNATURE OF DEVELOPER
DATE: 06/21/02

ENGINEERS CERTIFICATE:

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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

John V. Ranocchia, Sr.
SIGNATURE OF ENGINEER
DATE: 7-25-02

NOTE: TEMPORARY STOCKPILE AREA TO BE LOCATED BY SEDIMENT CONTROL INSPECTOR AND CONTRACTOR.

DATA SOURCES:

TOPOGRAPHY PER AERIAL FLIGHT BY AIR SURVEY CORP ON MARCH 26, 1998.
BOUNDARY PER SURVEY BY RIEMER MUEGGE & ASSOCIATES DATED JUNE 13, 1999
GRID BASED ON MARYLAND STATE PLANE HAD 1983 VERTICAL DATUM BASED ON NGVD 1929

LIMITS OF GRAVE SITES LOCATED WITH ASSISTANCE OF PASTOR IN FIELD.
LIMITS OF WETLAND, STREAMS, AND BUFFERS (WHERE SHOWN) PER PLAT 1424.



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John J. ... 8/12/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION

... 8/16/02
CHIEF, DIVISION OF LAND DEVELOPMENT

... 8/19/02
DIRECTOR

Date	No.	Revision Description
10-01-02	1	REV. PARKING AND GRADING

St. Augustine Church Site Improvements

OWNER: The Archbishop Of Baltimore, Cardinal William H. Keeler, 320 Cathedral Street, Baltimore, MD 21201

DEVELOPER: The Reverend Gerard J. Bowen, Pastor, St. Augustine Catholic Church, 5976 Old Washington Road, Elkridge, MD 21075-5335

DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue, Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME: ST. AUGUSTINE CHURCH
PLAT OF OFFICE & ZONE: 1424 3 E-12
WATER CODE: N/A
SEWER CODE: N/A

TITLE: GRADING, EROSION AND SEDIMENT CONTROL, AND STORMWATER MANAGEMENT PLAN

Drn By: AJS
Des By: BSM
Chk By:

Scale: 1"=20'
Date: 06-13-02
Approved:

Proj. No. 89040.B
3 of 27

Professional Engr. No. 10551

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/ARS in cooperation with Maryland Agricultural Experiment Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. Topsoil shall be a loam, sandy loam, clay loam, silty loam, sandy clay loam, loamy sand, or silty soil. It 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, clumps, coarse fragments, roots, trash, and other materials larger than 1/2 inch in diameter.

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.

iii. Where the 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.

II. 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.

iii. 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 contents 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.

or chemicals used for weed control until sufficient time has elapsed (14 days min) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes or 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.

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.

Topsoil Specifications

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (312-9595).

2. ALL NEIGHBORING AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:

- A. SIXTY CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1.
- B. FORTY EIGHT DAYS AS TO ALL OTHER DISTURBED OR GRADING AREAS ON THE PROJECT SITE.

4. ALL SEDIMENT TRAPPING DEVICES MUST BE FINISHED AND WORKING AS POSTED ABOVE THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, SIGNATURE REQUIRED.

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 SEEDINGS (SEC-50), SOCS (SEC-54), TEMPORARY SEEDING (SEC-50), AND MULCHING (SEC-52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN 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	730 ACRES
AREA TO BE RECOVERED OR PAVED	054 ACRES
AREA TO BE VEGETATIVELY STABILIZED	028 ACRES
TOTAL CUT	3004 CUBIC YARDS
TOTAL FILL	3004 CUBIC YARDS
OFF-SITE WASTEWATER TREATMENT AREA LOCATION	WASTE = 1A

8. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUIRED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER SEEDING OR GRADING APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE FEET DEPTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITH ONE WORKING DAY MINIMUM IS SHOWN.

Sediment Control General Notes

Not To Scale

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, disking 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./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 Ureaform Fertilizer (9 lbs./1000 sq. ft.).
2. Acceptable - Apply 2 tons per acre Dolomitic Limestone (92 lbs./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000sq.ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (14 lbs./1000sq.ft.) of Kentucky 31 tall fescue. For the period May 1 thru July 31 seed with 60 lbs. Kentucky 31 tall fescue per acre and 2 lbs. per acre (.05 lbs./1000sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) - 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) - Use sod. Option (3) - seed with 60 lbs./acre Kentucky 31 tall fescue and mulch with 2 tons/acre well anchored straw.

Mulching - Apply 1-1/2 to 2 tons per acre (70 - 90 lbs./1000sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after applications using mulch anchoring tool or 218 gallons per acre (5 gal./1000sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal./1000sq.ft.) for anchoring.

Maintenance - Inspect all seeding areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seedbed preparation - Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil amendments - Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000sq.ft.)

Seeding - For the periods March 1 thru April 30, and August 15 thru October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs./1000sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000sq.ft.). For the period November 15 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 - 90 lbs./1000sq.ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal./1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 ft. or higher, use 348 gal. per acre (8 gal./1000 sq.ft.) for anchoring.

Refer to the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control for additional rates and methods not covered.

Permanent Seeding Notes

SEQUENCE	NUMBER OF DAYS
1. OBTAIN A GRADING PERMIT.	1
2. INSTALL SEDIMENT AND EROSION CONTROL DEVICES, CHURCH & RECTORY ACCESS NEEDS TO BE COORDINATED WITH ST. AUGUSTINE CHURCH PRIOR TO START OF WORK.	2
3. ROUGH GRADE SITE.	2
6. FINE GRADE SITE.	5
7. INSTALL CURB & GUTTER, PAVING, SIDE WALKS AND DIVERSION INLET, BLOCK INLET.	7
8. STABILIZE ALL AREAS IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS.	5
9. UPON APPROVAL OF THE SEDIMENT AND EROSION CONTROL INSPECTION REMOVE ALL EROSION CONTROL MEASURES, INSTALL SWM BMP TYPE F-5 POCKET SAND FILTER, EXCAVATE TO INVERT OF RECHARGE AREA, INSTALL UNDER DRAIN GRAVEL, 6" PERFORATED PIPE OVERFLOW INLET AND 12" OUTFALL, INSTALL GEOTEXTILE AND CLEAN WASHED CONCRETE SAND, INSTALL 3" TOP SOIL AND PEA GRAVEL AS SHOWN ON PLAN, INSTALL GABION BETWEEN PRETREATMENT AND SAND FILTER, STABILIZE ALL DISTURBED AREA, ONCE EVERYTHING IS STABILIZED, REMOVE INLET BLOCKING.	8

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL, EROSION AND SEDIMENT CONTROL.

APPROVED: *John M. ...* 8/5/02 DATE

APPROVED: *John M. ...* 8/5/02 DATE

PLANNING NUMBER

DEVELOPERS CERTIFICATE:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN.

APPROVED: *John M. ...* 06/21/02 DATE

SIGNATURE OF DEVELOPER PRINT NAME BELOW SIGNATURE

ENGINEERS CERTIFICATE:

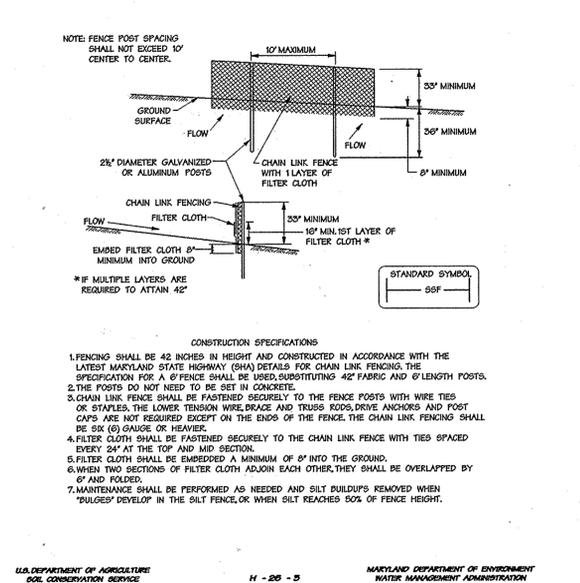
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE FOND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FOND WITHIN 30 DAYS OF COMPLETION.

APPROVED: *John M. ...* 7-25-02 DATE

SIGNATURE OF ENGINEER PRINT NAME BELOW SIGNATURE *John M. ...* DATE

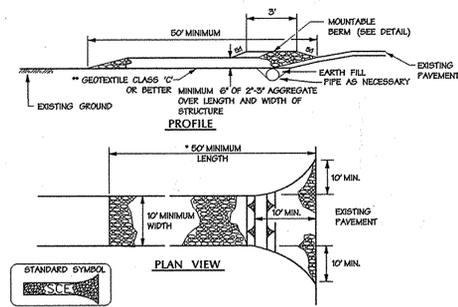
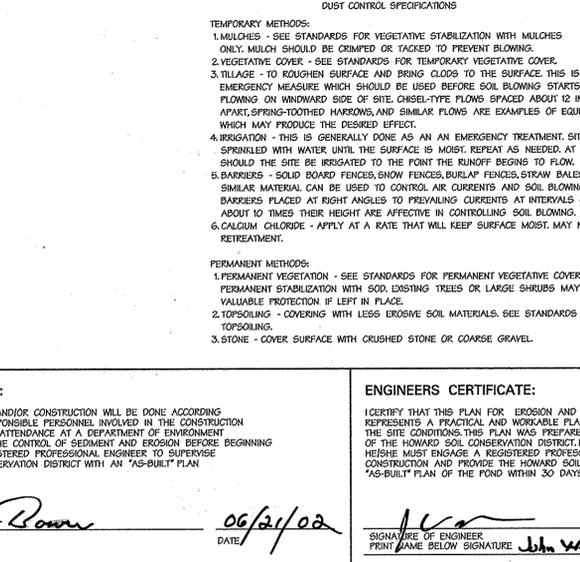
Silt Fence

Not To Scale



Super Silt Fence

Not To Scale



Stabilized Construction Entrance

Not To Scale

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>John M. ...</i>	8/7/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>John M. ...</i>	8/14/02
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>John M. ...</i>	8/16/02
DIRECTOR	DATE

Date	No.	Revision Description

St. Augustine Church Site Improvements

OWNER: The Archbishop of Baltimore, Cardinal William H. Keeler, 320 Cathedral Street, Baltimore, MD 21201

DEVELOPER: The Reverend Gerard J. Bowen, Pastor, St. Augustine Catholic Church, 5976 Old Washington Road, Elkridge, MD 21075-5335

DMW
Daft • McCune • Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue, Towson, Maryland 21286
410 296 3333 Fax 296 4705

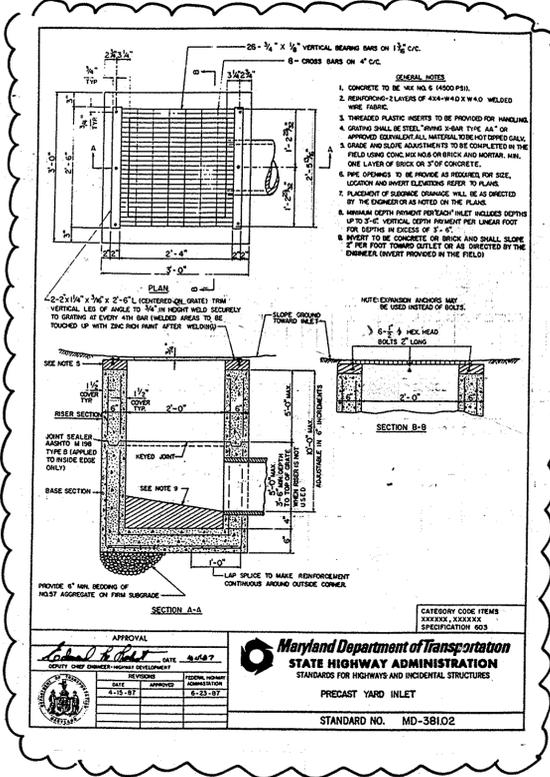
SUBDIVISION NAME	SECTION AREA	DATE
ST. AUGUSTINE CHURCH		
PLANS OR LOTBLOCK #	ZONING	TAXMAP NO.
14214	R-12	3B
WATER CODE	N/A	SEWER CODE
	N/A	

EROSION AND SEDIMENT CONTROL DETAILS

Drn By: AJS	Scale: AS SHOWN	Proj. No. 98040.B
Des By: BGM	Date: 06-13-02	
Chk By: #	Approved:	4 of 27

Table B.3.1 Material Specifications for Sand Filters

Material	Specification/Test Method	Size	Notes
sand	clean AASHTO M-6 or ASTM-C-33 concrete sand	0.075" to 0.04"	Sand substitutions such as Diabase and Graystone #1 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.
peat	ash content <15 percent pH range: 5.2 to 4.9 loose bulk density 0.12 to 0.15 g/cc	n/a	The material must be reed-edge hemlock peat, shredded, uncompacted, uniform, and clean.
leaf compost	n/a	n/a	
underdrain gravel	AASHTO M-43	0.375" to 0.75"	
geotextile fabric (if required)	ASTM-D-4833 (puncture strength - 125 lb.) ASTM-D-4632 (tensile strength - 300 lb.)	0.008" thick equivalent opening size of #80 sieve	Must maintain 125 gpm per sq. ft. flow rate. Note: a 4" pea gravel layer may be substituted for geotextile means to "separate" said filter layers.
impermeable liner (if required)	ASTM-D-4833 (thickness) ASTM-D-412 (tensile strength 1,100 lb., elongation 200%) ASTM-D-624 (tear resistance - 150 lb./in.) ASTM-D-471 (water absorption: +8 to 2 percent max)	30 mil thickness	Liner to be unimpaired resistant. A geotextile fabric should be used to protect the liner from puncture.
underdrain piping	F 756, Type P 5 2B or AASHTO M-27B	4" - 6" rigid schedule 40 PVC or SDR 35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes.
concrete (cast-in-place)	MSHA Standards and Specs. Section 902, Mix No. 3, f' = 3600 psi, normal weight, air-entrained; re-inforcing to meet ASTM #5 60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland.
concrete (pre-cast)	per pre-cast manufacturer	n/a	SEE ABOVE NOTE
non-rebar steel	ASTM A-36	n/a	structural steel to be hot-dipped galvanized; ASTM A-123



ENGINEERS CERTIFICATE:

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POCKET SAND FILTER CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

7-25-02
DATE

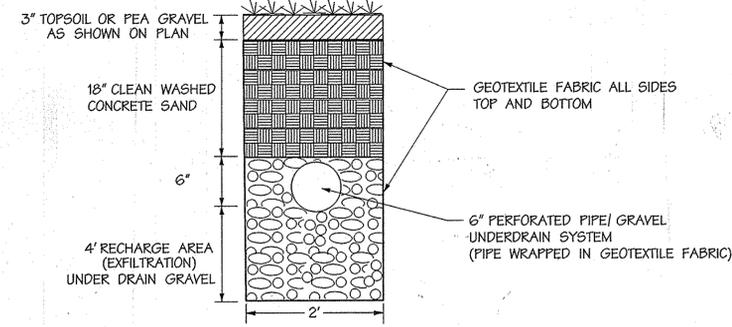
SIGNATURE OF ENGINEER: *John W. Ranaccio, Jr.*
PRINT NAME BELOW SIGNATURE: John W. Ranaccio, Jr.

DEVELOPERS CERTIFICATE:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POCKET SAND FILTER CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

06/21/02
DATE

SIGNATURE OF DEVELOPER: *R. C. Roman*
PRINT NAME BELOW SIGNATURE: R. C. Roman



TYPICAL FILTER DETAIL
Not To Scale

- OPERATION AND MAINTENANCE SCHEDULE**
- The stormwater wetland facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
 - The top and side slopes of the embankment shall be mowed a minimum of once per year, when vegetation reaches 10-inches in height or as needed.
 - Filters that have a grass cover shall be mowed a minimum of three times per growing season to maintain a maximum grass height of less than 12 inches.
 - Debris and litter shall be removed during regular mowing operations and as needed.
 - Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
 - Remove silt when it exceeds four inches deep in the forebay.
 - When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of discolored material shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
 - A log book shall be maintained to determine the rate at which the facility drains.
 - The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
 - Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

- B.3.A SAND FILTER SPECIFICATIONS**
- Material Specifications for Sand Filters**
The allowable materials for sand filter construction are detailed in Table B.3.1.
 - Sand Filter Testing Specifications**
Underground sand filters, facilities within sensitive groundwater aquifers, and filters designed to serve urban hot spots are to be tested for water tightness prior to placement of filter media. Entrances and exits should be plugged and the system completely filled with water to demonstrate water tightness. Water tightness means no leakage for a period of 8 hours.
All overflow weirs, multiple orifices and flow distribution slots are to be field-tested to verify adequate distribution of flows.
 - Sand Filter Construction Specifications**
Provide sufficient maintenance access (i.e., 12-foot-wide road with legally recorded easement). Vegetated access slopes are to be a maximum of 10 percent; gravel slopes to 15 percent; paved slopes to 25 percent.
Absolutely no runoff is to enter the filter until all contributing drainage areas have been stabilized.
Surface of filter bed is to be level.
All underground sand filters should be clearly delineated with signs so that they may be located when maintenance is due.
Surface sand filters may be planted with appropriate grasses; see Appendix A.
"Pocket" sand filters shall be etched with a stone "window" that covers approximately 10 percent of the filter area. This "window" shall be filled with pea gravel (3/4-inch stone).

D. W. KOZERA, INC.
Baltimore, Maryland
PROFESSIONAL ENGINEER & GEOLOGIST

TEST BORING LOG
Boring No.: B-2
Contract No.: 99022.1D
Page: 1 of 1

Project: St. Augustine Church
Location: Old Washington Boulevard
Elkridge, Maryland

Ground Surf. El. (ft): 173.0
Date Started: 12-15-01
Date Completed: 12-18-01
Contractor: GeoService Corp., Inc.
Driver: Ronald Statham
Cone: cmc 55
Drill Method: 2 1/4" HSA
Inspector: A. Zimola

Depth (ft)	Surf. Elev. (ft)	Flow Cautions	Flow Values	W.P. Level	Water Column	LUCCS	Description	Formation	Stratum	Remarks
0	173.0						Sandy Clay FILL, brown	FILL	A	Topsoil = 0.4
1	172.0						CLAYEY SAND, trace gravel, moist, brown	SC	B	
2	171.0						LEAN CLAY, moist, gray, brown	CL		
3	170.0						SANDY SILT with Clayey Sand, moist, brown, gray	ML		
4	169.0						contains borings at 13.0'			
5	168.0									
6	167.0						SILT SAND, moist, gray	SM	C	Bottom of boring at 15.0'

D. W. KOZERA, INC.
Baltimore, Maryland
PROFESSIONAL ENGINEER & GEOLOGIST

TEST BORING LOG
Boring No.: B-2
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Page: 1 of 1

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2	171.0						LEAN CLAY, moist, gray, brown	CL		
3	170.0						SANDY SILT with Clayey Sand, moist, brown, gray	ML		
4	169.0						contains borings at 13.0'			
5	168.0									
6	167.0						SILT SAND, moist, gray	SM	C	Bottom of boring at 15.0'

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John W. Ranaccio, Jr.
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 8/17/02

John W. Ranaccio, Jr.
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 8/16/02

John W. Ranaccio, Jr.
DIRECTOR
DATE: 8/19/02

10/1/02 1 ADD DETAIL

Date No. Revision Description

St. Augustine Church Site Improvements

OWNER: The Archbishop Of Baltimore
Cardinal William H. Keeler
320 Cathedral Street
Baltimore, MD 21201

DEVELOPER: The Reverend Gerard J. Bowen, Pastor
St. Augustine Catholic Church
5876 Old Washington Road
Elkridge, MD 21075-5335

7-25-02
Date

Professional Engr. No. 10651

DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME: ST. AUGUSTINE CHURCH
SECTION AREA: PARCEL 'A'-1
PLAN OR LAYOUT: 14214
SCALE: 3/8" = 1'-0"
DATE: 06-13-02
PROJECT NO.: 99040.B

TITLE: STORMWATER MANAGEMENT DETAILS AND SOIL BORINGS

Drn By: AJS
Des By: BGM
Chk By:

Scale: AS SHOWN
Date: 06-13-02
Approved:

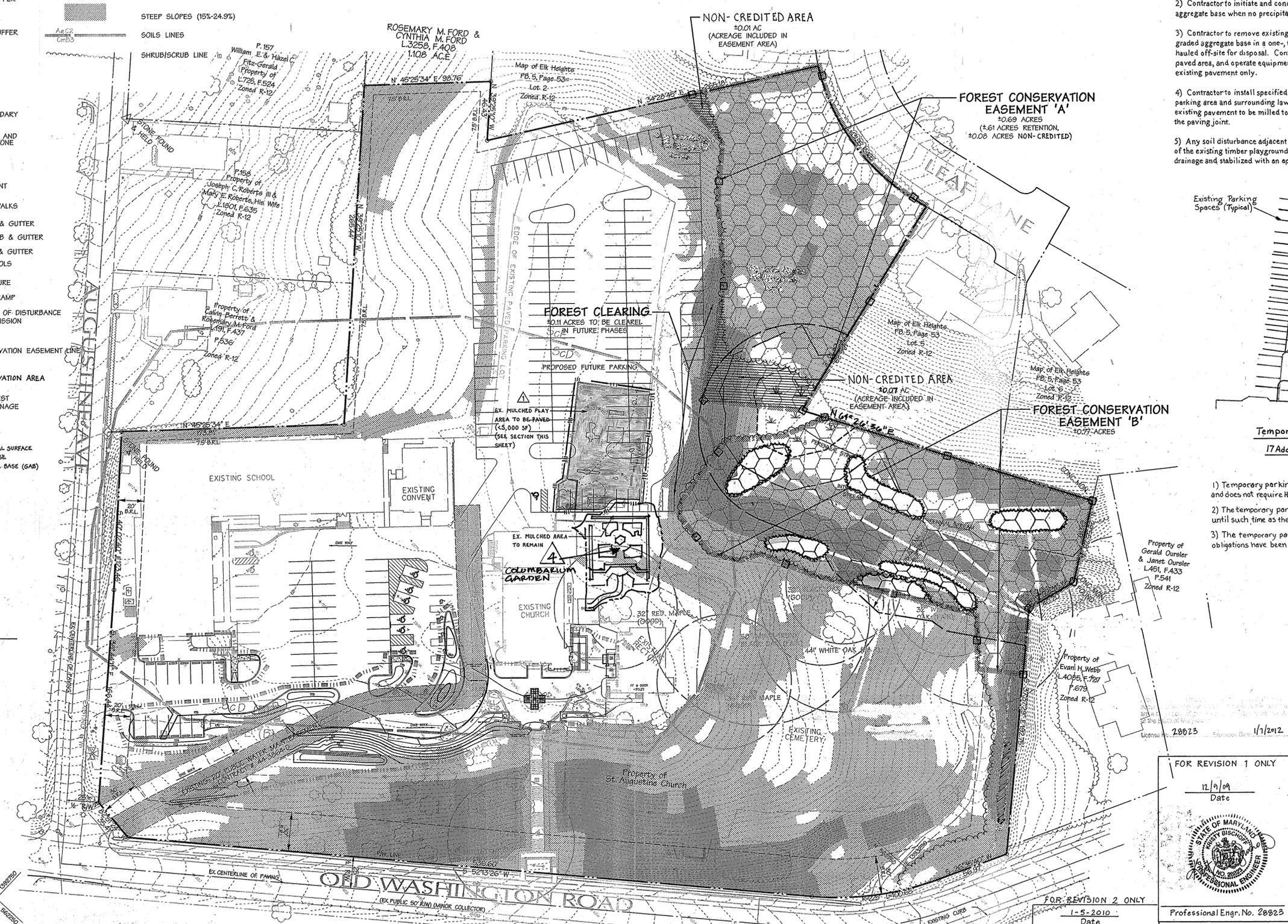
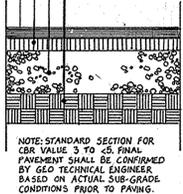
Proj. No. 99040.B
5 of 27

LEGEND

- STREAM CENTERLINE
- 75' STREAM BUFFER
- WETLAND
- 25' WETLAND BUFFER
- EX. TREELINE
- EX. 5' CONTOUR
- EX. 25' CONTOUR
- EX. STRUCTURE
- PROPERTY BOUNDARY
- SPECIMEN TREE AND CRITICAL ROOT ZONE
- EX. TREE
- UTILITY EASEMENT
- CONCRETE SIDEWALKS
- MODIFIED CURB & GUTTER
- DEPRESSED CURB & GUTTER
- REVERSE CURB & GUTTER
- HANDICAP SYMBOLS
- PROP. LIGHT FIXTURE
- PROPOSED H.C. RAMP
- PROPOSED LIMIT OF DISTURBANCE FOR THIS SUBMISSION
- PROP. TREELINE
- FOREST CONSERVATION EASEMENT LINE
- NON-CREDITED FOREST CONSERVATION AREA
- PROPOSED FOREST PROTECTION SIGNAGE
- STEEP SLOPES (25%+)
- STEEP SLOPES (15%-24.9%)
- SOILS LINES
- SHRUB/SCRUB LINE

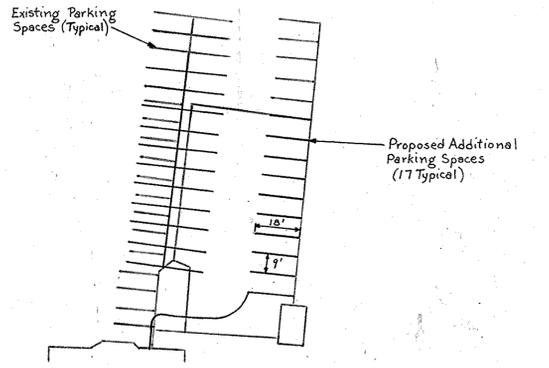
- 1.5" HMA SUPERPAVE FINAL SURFACE
- 2.0" HMA SUPERPAVE BASE
- 8.5" GRADED AGGREGATE BASE (GAB)
- COMPACTED SUBGRADE

P1 Paving Section
Not To Scale



Temporary Parking Area Addition Notes

- 1) No storm water management is required for this addition of pavement; however, any additional site improvements will require compliance with storm water management regulations in effect at that time.
- 2) Contractor to initiate and conduct removal of mulch and placement of graded aggregate base when no precipitation is being forecast for a consecutive 3 day period.
- 3) Contractor to remove existing mulch and topsoil, compact the subgrade and install graded aggregate base in a one-, to two-day timeframe. Excavated material will be hauled off-site for disposal. Contractor to stage equipment and materials on existing paved area, and operate equipment within the existing mulched playground area and on existing pavement only.
- 4) Contractor to install specified paving section to match the grade of the existing paved parking area and surrounding lawn and provide positive drainage. Adjacent edge of existing pavement to be milled to a beveled edge and new pavement shall overlap along the paving joint.
- 5) Any soil disturbance adjacent to the existing playground and incidental to the removal of the existing timber playground edging shall be raked by hand to provide positive drainage and stabilized with an approved permanent grass seed mixture, straw, and tack.



Temporary Parking Addition Detail
17 Additional Spaces Proposed
Scale: 1" = 40'

- 1) Temporary parking expansion has been approved by the Zoning Administration and does not require Hearings Examiner approval.
- 2) The temporary parking expansion is exempt from parking lot landscaping until such time as the entire parking area is installed.
- 3) The temporary parking expansion is not subject to forest conservation since obligations have been previously addressed.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>[Signature]</i>	8/1/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	8/16/02
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	8/16/02
DIRECTOR	DATE

11-13-09	TO SHOW TEMPORARY PARKING ADDITION
1-5-10	ELIMINATED REFORESTATION AREA
	COLUMBARIUM GARDEN
Date No.	Revision Description

St. Augustine Church Site Improvements

OWNER: The Archbishop of Baltimore
Cardinal William H. Keeler
320 Cathedral Street
Baltimore, MD 21201

DEVELOPER: The Reverend Gerard J. Bowen, Pastor
St. Augustine Catholic Church
5976 Old Washington Road
Elkridge, MD 21075-5335

DMW	
Daf & McCune - Walker, Inc.	
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals	
200 East Pennsylvania Avenue Towson, Maryland 21286 410 296 3333 410 296 4705	
SUBDIVISION NAME	SECTION AREA
ST. AUGUSTINE CHURCH	Parcel 'A-1'
PLAT OR REFERENCE	TAXING MAP
14214	3
ZONE	BLK/DISTRICT
R-12	1ST
CELEBRITY TRACT	
601102	
WATER CODE	SEWER CODE
NA	N/A

TITLE		
FOREST CONSERVATION PLAN & TEMPORARY PARKING LOT EXPANSION		
Drn By: AJS	Scale: 1"=40'	Proj. No. 99040.B
Des By:	Date: 06-13-02	
Chk By:	Approved:	9 of 27

FOR REVISION 1 ONLY

12/9/09
Date

Professional Engr. No. 28823

FOR REVISION 2 ONLY

1-5-2010
Date

Professional Engr. No. 28823

7-25-02
Date

FOR REVISION 4 ONLY

8/27/2015
Date

LANDSCAPE ARCHITECT 899

DATA SOURCES:

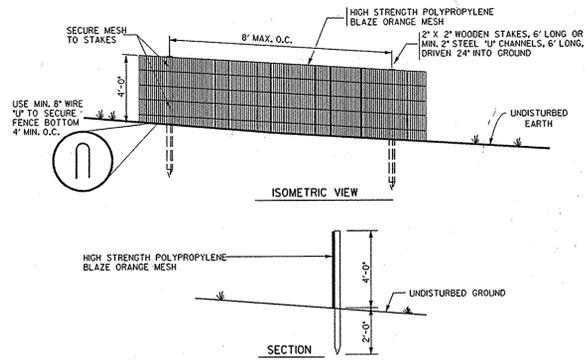
TOPOGRAPHY PER AERIAL FLIGHT BY AIR SURVEY CORP ON MARCH 26, 1998.

BOUNDARY PER SURVEY BY REIMER MESSAGE & ASSOCIATES DATED JUNE 13, 1999

GRID BASED ON MARYLAND STATE PLANE NAD 1983 VERTICAL DATUM BASED ON NGVD 1929

LIMITS OF GRAVE SITES LOCATED WITH ASSISTANCE OF PASTOR IN FIELD.

LIMITS OF WETLAND, STREAMS, AND BUFFERS (WHERE SHOWN) PER PLAT 14214.

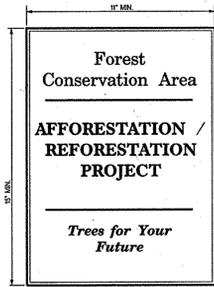


- NOTES:
- THIS DETAIL IS FOR FOREST PROTECTION FENCE ONLY.
 - FOREST RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 - BOUNDARIES OF FOREST RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING THE DEVICE.
 - ROOT DAMAGE SHALL BE AVOIDED.
 - PROTECTION SIGNAGE MAY ALSO BE USED.
 - FOREST PROTECTION FENCE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

Forest Protection Fence

Not To Scale

* WHERE SUPER SILT FENCE (S.S.F.) IS TO BE INSTALLED ADJACENT TO FOREST RETENTION AREAS, ATTACH HIGH VISIBILITY TAPE OR FLAGGING TO THE TOP EDGE OF S.S.F. AT 5' INTERVALS AND USE S.S.F. IN LIEU OF BLAZE ORANGE FENCE. TEMPORARY FOREST PROTECTION SIGNAGE MAY BE ATTACHED TO S.S.F.



Permanent Signage

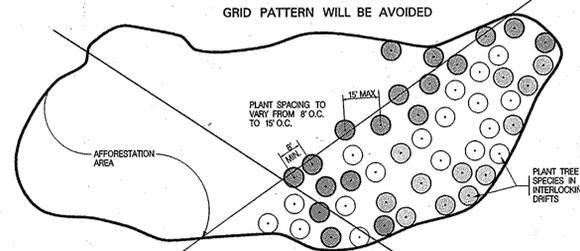
Not To Scale

SIGN TO BE PLACED ON METAL POSTS 6\"/>

FOREST CONSERVATION CALCULATIONS

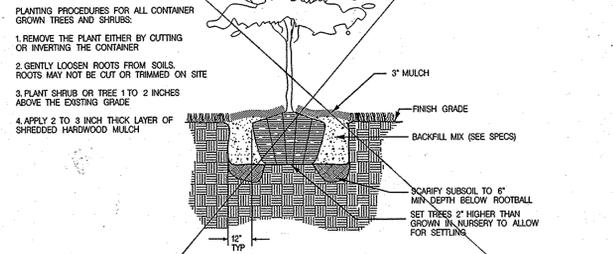
BASIC SITE DATA	ACRES (110)
GROSS SITE AREA	8.00
AREA WITHIN 100 YEAR FLOODPLAIN	0.00
AREA TO REMAIN WITHIN AGRICULTURAL PRODUCTION	0.00
NET TRACT AREA	8.00
LAND USE CATEGORY	RESIDENTIAL - SUBURBAN (R-12)
INFORMATION FOR CALCULATIONS	
A. NET TRACT AREA	8.00
B. REFORESTATION THRESHOLD (20% x A)	1.60
C. AFFORESTATION MINIMUM (15% x A)	1.20
D. EXISTING FOREST ON NET TRACT AREA	1.49
E. FOREST AREAS TO BE CLEARED	0.11
F. FOREST AREAS TO BE RETAINED	1.38
REFORESTATION CALCULATIONS	
A. NET TRACT AREA	7.90
B. REFORESTATION THRESHOLD (20% x A)	1.59
C. EXISTING FOREST ON NET TRACT AREA	1.49
D. FOREST AREAS TO BE CLEARED	0.11
E. FOREST AREAS TO BE RETAINED	1.38
F. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD	0.00
G. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD	0.11
H. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD	0.00
CLEARING ABOVE THE THRESHOLD ONLY	
IF FOREST AREAS TO BE RETAINED ARE GREATER THAN THE REFORESTATION THRESHOLD (IF E IS GREATER THAN B), THE FOLLOWING CALCULATIONS APPLY:	
REFORESTATION FOR CLEARING ABOVE THRESHOLD (F)(A)	0.00
REFORESTATION FOR CLEARING BELOW THRESHOLD (G)(2)	0.22
TOTAL REFORESTATION REQUIRED (F)(A) + (G)(2)	0.22
CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD	0.00
REFORESTATION REQUIRED (SEE IN-LIEU)	0.22 ACRES
REFORESTATION PROVIDED	(SEE IN-LIEU)

- NOTES:
- Should the church propose future expansion which will encroach into the established forest conservation easement areas the DPZ will allow the standard square foot fee for afforestation/ reforestation fee-in-lieu to be paid to the forest conservation fund rather than the fee required for abandonment of easement areas. In addition, the Forest Conservation Plat of Easement for this site shall be re-recorded to show the changes in easement areas.
 - Forest Conservation obligations in accordance with Section 16.1202 of the Howard County Code and the Forest Conservation Manual for this site have been fulfilled by the retention of 1.38 acres and payment of fee-in-lieu in the amount of \$7,187.40. Surety in the amount of \$16,374.16 shall be posted with the Developers' Agreement.
 - There is no floodplain on this site.
 - There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easements except as permitted by the Howard County Forest Conservation Program.



Planting Design Schematic

Not To Scale



Typical Tree Planting (For container grown)

Not To Scale

- PLANTING PROCEDURES FOR ALL CONTAINER GROWN TREES AND SHRUBS:
- REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER.
 - GENTLY LOOSEN ROOTS FROM SOILS. ROOTS MAY NOT BE CUT OR TRIMMED ON SITE.
 - PLANT SHRUB OR TREE 1 TO 2 INCHES ABOVE THE EXISTING GRADE.
 - APPLY 2 TO 3 INCH THICK LAYER OF SHREDDED HARDWOOD MULCH.

GOALS AND OBJECTIVES

The goals and objectives of this Forest Conservation Plan are to identify forest resources to be retained, and cleared, and to identify the means for addressing reforestation obligations to satisfy Forest Conservation Act requirements associated with current and future development at the St. Augustine's Church and school property. Approximately 0.11 acres of existing forest will be cleared, and 1.38 acres will be retained, generating a 0.22-acre reforestation requirement. The reforestation obligation will be satisfied by payment of a fee-in-lieu in the amount of \$7,187.40.

The forest of highest priority (i.e. forest adjacent to water resources) will be retained to the extent feasible. Non-credited areas within the proposed Forest Conservation Easement will be allowed to naturally succeed into a forested condition over time, such that existing canopy gaps will close and competing exotic invasive vegetation will be eliminated.

Proposed forest clearing as shown on page nine will not occur at this time, but is proposed with the future Master Plan improvements. Although permanent signage shall be installed around FCE's during current improvements, no temporary forest protection fence is needed at this time. Temporary fencing will be installed around retained forests within 50' of the proposed limit of disturbance at the time of future improvements.

FOREST RETENTION

Tree retention/Soil Protection areas will be delineated with temporary signage as appropriate. See Temporary Signage Detail prior to the beginning of any construction activity. Attachment of signs to trees is prohibited.

Forest protection fencing and retention area signage to be installed during later phases of construction where grading has not been indicated.

PRECONSTRUCTION MEETING/CONSTRUCTION PERIOD PRACTICES

Before construction begins, a required preconstruction meeting shall be held. The principle contractor, engineer, Howard County Inspector and a qualified forest professional familiar with the plan shall be present. All items pertaining to forest retention, tree preservation, and construction period practices shall be discussed.

Any changes to the plan due to on-site conditions must be approved by the Howard County Department of Planning and Zoning.

No grading, excavation, utility placement, sediment and erosion control activities, or vehicular traffic will occur within forest retention areas.

Storage of equipment and materials shall not be permitted in the forest retention areas.

There will be no burial or disposal of discarded material on-site within the retention area.

There will be no open burning within 100 feet of woodlands.

Temporary structures including, but not limited to construction trailers, sanitary facilities, etc. shall not be placed within the forest retention areas.

Employee parking shall not be permitted in the forest retention areas.

POST CONSTRUCTION MANAGEMENT/MAINTENANCE BY CONTRACTOR

All dead trees or tree limbs which pose an immediate safety hazard will be felled. Trees dropped within the forest retention area will not be removed.

All temporary forest protection structures will be removed after construction and permanent signage will be placed where indicated on the plan.

ALL FOREST RETENTION AREAS SHOWN ON THIS PLAN TO BE PLACED IN FOREST CONSERVATION EASEMENT

STANDARDS AND SPECIFICATIONS FOR PLANTING

- PLANT MATERIAL SELECTION**
 - Nursery grown plant materials greater than 1" caliper shall meet or exceed the requirements of the American Nurserymen Specifications, i.e. should be typical of the species and variety, have a normal habit of growth, be first quality, sound, vigorous, well-branched, have healthy, well-kempered root systems, and be free of disease, insect pests and mechanical injuries.
 - Planting stock less than 1" caliper should meet the following standards:
 - Seedlings/whips
 - Hardwoods - 1/4" to 1/2" caliper with roots not less than 8" long
 - Shrubs - 1/8" or larger caliper with 8" root system.
- PLANTING SITE PREPARATION**

Soils shall not be disturbed outside the area necessary for planting individual specimens and the removal of exotic invasive plant material. These areas should be stabilized as shown on the temporary seeding notes on sheet 8.
- PLANTING PERIOD**

All material shall be planted between September 15 and May 31. Material shall not be installed when ground is frozen.
- PLANT MATERIAL STORAGE**

Plants should be planted within 24 hours of delivery if possible. Plant material which are left unplanted for more than 24 hours shall be protected from direct sun and weather and kept moist. Nursery stock should not be left unplanted for more than two weeks.
- ON-SITE INSPECTION**

Prior to planting, planting stock shall be inspected by the landscape architect or other qualified professional familiar with this plan. Plant material not conforming to standard nurserymen specifications for size, form, vigor, roots, trunk wounds, insects and disease should be replaced.
- TOPSOIL FOR PLANTING SOIL**
 - On-site material or imported from same source as topsoil used on site for finish grading.
 - Uniform composition, free of subsoil, clay lumps, stones, stumps, roots or similar objects larger than 1 inch.
 - Topsoil must be free of plants or plant parts of bermudagrass, quackgrass, Johnsongrass, nutsedge, poison ivy, Canada thistle, or others as specified.
 - All topsoil shall be tested by a recognized laboratory for pH and soluble salts. A pH of 4.5 to 7.5 is required. Soluble salts shall not be higher than 500 parts per million.
- ADDITIVE FOR BACKFILL MIX**
 - Wood Residuals:
 - 1. Source shall be well composted, not chemically treated.
 - 2. Physical properties - grading:

U.S. Sieves	Dry Weight Percent Passing
20"	100
14"	90 - 100
No. 8	70 - 100
No. 35	0 - 30
 - Organic content by ash analysis: 90 - 100 percent dry weight
 - Chemistry:
 - a. Saturation Extract Conductivity (EC) NI - 3.5
 - b. Reaction (pH) 3.0 - 5.5
 - c. Salinity: Maximum saturation extract conductivity 1.0 millimhos per cm at 25 degrees centigrade.
 - Sand:
 - Physical Properties - Grading:

U.S. Sieves	Dry Weight Percent Passing
No. 4	100
No. 10	95 - 100
No. 18	90 - 100
No. 30	85 - 100
No. 60	0 - 50
No. 140	0 - 20
No. 270	0 - 7
 - Chemistry:
 - Saturation Extract Conductivity (EC) NI - 3.0
 - Sodium Absorption Ratio (SAR) NI - 6.0
 - Boron - ppm in saturation extract solution NI - 1.0
 - Reaction (pH) 6.0 - 7.5
 - Available calcium - sodium acetate extractable - ppm NI - 2000 dry weight

7. ADDITIVE FOR BACKFILL MIX

- Wood Residuals:
 - Source shall be well composted, not chemically treated.
 - Physical properties - grading:

U.S. Sieves	Dry Weight Percent Passing
20"	100
14"	90 - 100
No. 8	70 - 100
No. 35	0 - 30
 - Organic content by ash analysis: 90 - 100 percent dry weight
 - Chemistry:
 - a. Saturation Extract Conductivity (EC) NI - 3.5
 - b. Reaction (pH) 3.0 - 5.5
 - c. Salinity: Maximum saturation extract conductivity 1.0 millimhos per cm at 25 degrees centigrade.
- Sand:
 - Physical Properties - Grading:

U.S. Sieves	Dry Weight Percent Passing
No. 4	100
No. 10	95 - 100
No. 18	90 - 100
No. 30	85 - 100
No. 60	0 - 50
No. 140	0 - 20
No. 270	0 - 7
 - Chemistry:
 - Saturation Extract Conductivity (EC) NI - 3.0
 - Sodium Absorption Ratio (SAR) NI - 6.0
 - Boron - ppm in saturation extract solution NI - 1.0
 - Reaction (pH) 6.0 - 7.5
 - Available calcium - sodium acetate extractable - ppm NI - 2000 dry weight

8. MULCH

- Shredded long fiber hardwood.
- Mulch shall have been shredded within the last six (6) months.

9. PLANTING MIX

- Planting mix shall be prepared at approved on-site staging area using approved on-site existing soil. Mix minimum quantities of 20 cubic yards or sufficient mix for entire job if less than 20 cubic yards is required.
- Thoroughly mixed in the following proportions for tree and shrub planting mix:
 - 5/8 Existing soil
 - 2/8 Sharp sand
 - 8/8 Wood residuals
 - 5/8 1/2 lb. Triple superphosphate
 - 5/8 lbs. Dolomite limestone (eliminate for acid loving plants)

10. LAYOUT AND EXCAVATION OF PLANTING AREAS

- Plants shall be placed in each zone at random locations shown as indicated on the plan.
- The Landscape Architect or qualified professional will check location of plants in the field and shall adjust to exact position before planting begins.
- Subsoil shall not be worked when moisture content is so great that excessive compaction will occur nor when it is so dry that clods will not readily break. Water shall be applied, if necessary, to bring soils to optimum moisture content before tilling and planting.
- Tree pits shall not be excavated more than 24 hours in advance of planting operation. Tree pits shall be excavated to the following dimensions:

Excavation for	Width	Depth
Canned Trees	Can + 12 in.	Can + 4 in.
B&B Trees	Ball + 12 in.	Ball + 4 in.
- Excavate shrub pits to the following depths:

Excavation for	Width	Depth
Shrubs	Ball/Can + 8 in.	Can + 4 in., not less than 12 in.

11. PREPARING PLANT MATERIALS FOR PLANTING

- Container stock shall be removed carefully after plants have been cut on two sides with approved cutter. Do not use spade to cut cans. Do not lift or handle container plants by tops, stems or trunks at any time.
- Do not bind or handle any plant with wire or rope at any time so as to damage bark or break branches. Lift and handle plants only from bottom of ball.
- Ball and burlap (B&B) plants shall have firm ball hearts. Plants moved with a ball/wire by accepted if the ball is crushed or broken before or during planting operation. B&B material shall be dug only when compact. Pre-dug stored B&B material shall be inspected and approved at the storage site.
- Do not force roots for bare rooted trees into excavated pits - custom dig pits to receive roots without deformation.

12. MIXING

- Mix soil base, amendments and chemical additives by mechanical means.
- Soil and sand bases shall be completely pulverized and free of lumps or aggregated material. Moisture content of base materials shall not be such that chemical granular or pelletized additives become dissolved during the mixing process.
- Mix media in quantities of not less than 20 cubic yards or mix total quantity required, less than 50 cubic yards. The Contractor shall be responsible for continuity between batches.
- Containing backfill mix with unmixd soil in backfill mixing lots shall be avoided.

13. INSTALLATION OF PLANT MATERIAL

- Scarify the walls and bottom of all plant pits immediately prior to the placement of plant and backfill. The Contractor shall remove all piling of soil caused by an auger or mechanical hole digger.
- Wells around trees and shrubs: after planting is complete, form a soil well 3 inches high around each plant extending to the outer limit of the plant pit in accordance with planting details shown on the drawings.
- Smooth planted areas to conform to specified grades after full settlement as occurred. Contractor shall bear final responsibility for proper surface drainage of planted areas. Any discrepancy in the drawings or specifications, obstructions on the site, or prior work done by another party, which Contractor feels precludes establishing proper drainage, shall be brought to the attention of the Landscape Architect in writing.
- Water all plants immediately again after planting.
- Spread mulch in required areas to the compacted depth of 2 inches.

GUARANTEE:

A MINIMUM SURVIVAL RATE OF 75% IS TO BE GUARANTEED BY THE CONTRACTOR AT THE END OF THE TWO YEAR MAINTENANCE PERIOD.

Reforestation Area Planting Plan*

Plants required - 77 (350 whips/acre x 0.22 acres)

Species	Size	Spacing	Quantity	Stage	Stratum	Tolerance	Remarks
<i>Acer rubrum</i>	1 1/2" - 2 1/2" cont. stock	8' - 11' random	16	all	tree	I-VT	FAC
<i>Platanus occidentalis</i>	1 1/2" - 2 1/2" cont. stock	8' - 11' random	10	early-mid	tree	MT	FACW
<i>Fraxinus pennsylvanica</i>	1 1/2" - 2 1/2" cont. stock	8' - 11' random	10	early-mid	tree	I-MT	FACW
<i>Quercus alba</i> *	1 1/2" - 2 1/2" cont. stock	8' - 11' random	10	early-mid	tree	MT	FACU
<i>Quercus valutina</i> *	1 1/2" - 2 1/2" cont. stock	8' - 11' random	10	early-mid	tree	MT	NI
<i>Liriodendron tulipifera</i> *	1 1/2" - 2 1/2" cont. stock	8' - 11' random	13	pioneer	tree	I	FACU
<i>Viburnum dentatum</i>	1 1/2" - 2 1/2" cont. stock	8' - 11' random	8	late	shrub	T	FAC
TOTALS			77				

* Upland species shall be installed on drier, upland portions of the planting zone. Plantings are to be installed after invasive vegetation has been removed, and randomly within canopy gaps and scrub shrub areas adjacent to the stream as shown.

NOTE:

- THE PRECISE LOCATION OF PLANT MASSINGS WILL BE LOCATED IN THE FIELD BY LANDSCAPE ARCHITECT.
- GRID PATTERNS WILL BE AVOIDED
- PLANT MATERIAL MAY BE GROUPED IN CLUSTERS OF NO MORE THAN 5 TO 7 WHIPS OF THE SAME PLANT. PLANTS WILL BE INSTALLED IN A RANDOM FASHION.

FOR REVISION ONLY

1-5-2010
Date

7-25-02
Date

LANDSCAPE ARCHITECT

STATE OF MARYLAND
REGISTERED LANDSCAPE ARCHITECT
NO. 55

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Michael Deacon 8/2/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

W. J. Pheasant 8/16/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Leah Rutter 8/16/02
DIRECTOR DATE

Date	No.	Revision Description
1-5-10	1	ELIMINATED REFORESTATION NOTES & DETAILS

St. Augustine Church Site Improvements

OWNER: The Archbishop Of Baltimore
Cardinal William H. Keeler
320 Cathedral Street
Baltimore, MD 21201

DEVELOPER: The Reverend Gerard J. Down, Pastor
St. Augustine Catholic Church
5976 Old Washington Road
Elkridge, MD 21075-5335

DMW
DaR • McCune • Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME: ST. AUGUSTINE CHURCH
SECTION AREA: Parcel 'A-1'
PLAT OR L.P. BLOCK: 14214
ZONE: R-12
TAX MAP: 20
BLK. DISTRICT: 1ST
GEN. TRACT: 6011.02
WATER CODE: N/A
SEWER CODE: N/A

TITLE: FOREST CONSERVATION NOTES AND DETAILS

Drn By: AJS
Des By:
Chk By:

Scale: AS SHOWN
Date: 06-15-02
Approved:

Proj. No. 99040.B
10 of 27

**STORMWATER MANAGEMENT POND
GENERAL CONSTRUCTION SPECIFICATIONS**

- GENERAL**
ALL STORMWATER MANAGEMENT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY'S "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (OCT. 1990)" AND THE N.R.C.S. MARYLAND "STANDARD SPECIFICATIONS FOR PONDS" (MD-376, 2000).
THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD PRACTICE MD-376 ALL REFINISHED AND ASHITO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.
- SITE PREPARATION**
AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BIRLS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL TREES SHALL BE CLEARED AND GRUBBED WITHIN 10 FEET OF THE EMBANKMENT.
AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 25-FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.
ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.
- EARTH FILL**
MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6" FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CL OR CL AND MUST HAVE AT LEAST 30% PASSING THE #200 SIEVE. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGNED BY A GEOTECHNICAL ENGINEER. SUCH SPECIAL DESIGNS MUST HAVE CONSTRUCTION SUPERVISED BY A GEOTECHNICAL ENGINEER.
MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT EROSION OF THE EMBANKMENT.
PLACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT. FILL MATERIAL SHALL BE PLACED IN MAXIMUM 9 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.
COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT. THE FILL SHALL BE COMPACTED TO A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRE OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE, YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.
WHEN REQUIRED BY THE REVIEWING AGENCY THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF THE MAXIMUM MOISTURE CONTENT WITHIN 2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY ASHITO METHOD T-99 (STANDARD PRACTICE).
CUT OFF TRENCH - THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE EQUIPMENT USED FOR EXCAVATION WITH THE MINIMUM WIDTH BEING FOUR FEET SHALL GOVERN THE BOTTOM WIDTH OF THE TRENCH. THE DEPTH SHALL BE AT LEAST 4 FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

- PLASTIC PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR PLASTIC PIPE:**
 - MATERIALS - PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D-1785 OR ASTM D-2241 CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) COUPLINGS AND FITTINGS SHALL CONFORM TO THE FOLLOWING: 4" - 10" INCH PIPE SHALL MEET THE REQUIREMENTS OF ASHITO MESA TYPE 5, AND 12" THROUGH 24" SHALL MEET THE REQUIREMENTS OF ASHITO MESA TYPE 6.
 - JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATERTIGHT.
 - BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.
 - BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".
 - OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC) SHALL BE AS SHOWN ON THE DRAWINGS.
- CONCRETE**
CONCRETE SHALL MEET THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION #44, MIX NO. 3.
CAST-IN-PLACE CONCRETE STRUCTURES
 - SPECIFICATIONS: MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, LATEST EDITION.
 - DESIGN: CONCRETE DESIGN BY THE "SERVICE LOAD DESIGN METHOD".
 - CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION #44 AND 902, MIX NO. 3.
 - CONTRACTOR MAY ADD COLOR MIX AT PLANT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION "C-12 MESA BEIGE" AS MANUFACTURED BY L.M. SCOFIELD COMPANY (213) 723-5245.
 - CONTRACTOR SHALL SUPPLY MIX DESIGN FOR APPROVAL PRIOR TO APPLICATION. LOAD AND MIX TESTS SHALL BE SUPPLIED FOR EACH TRUCK DELIVERY. NO PARTIAL FIELD MIXES SHALL BE ALLOWED.
 - ALL CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSF AT 28 DAYS. DESIGN FC = 1,200 PSI.
 - ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" X 3/4". ALL CONSTRUCTION KEYS ARE SHOWN NOMINAL SIZE.
 - REINFORCING STEEL: REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60, WHERE NOT INDICATED. BAR LAP SPACINGS SHALL BE IN ACCORDANCE WITH ASHITO SPECIFICATIONS. THE MINIMUM CONCRETE COVER SHALL BE 2 INCHES UNLESS OTHERWISE NOTED. DESIGN IS = 24,000 PSI.
 - FOUNDATION: PRESUMED SOIL BEARING CAPACITY = 2,500 PSF. THE ENGINEER MUST APPROVE ALL FOUNDATIONS PRIOR TO CONCRETE PLACEMENT. IF UNSUITABLE MATERIAL IS ENCOUNTERED, THE MATERIAL SHALL BE UNDERCUT AND BACKFILLED WITH STRUCTURAL BACKFILL.
 - STRUCTURAL BACKFILL: CAST-IN-PLACE CONCRETE STRUCTURES AND PIPE SHALL BE BACKFILLED WITH SELECT GRANULAR BACKFILL MEETING THE REQUIREMENTS OF SHA GRADED AGGREGATE-SUB-BASE. STRUCTURAL FILL SHALL BE PLACED IN LOOSE LIFTS OF APPROXIMATELY 6 INCHES, AND COMPACTED TO 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASHITO T-80. THE STATIC WEIGHT OF EQUIPMENT USED ADJACENT TO WALLS SHALL NOT EXCEED 3,000 POUNDS. NO BACKFILL SHALL BE PLACED AGAINST THE CAST-IN-PLACE WALLS UNTIL THE CONCRETE HAS ATTAINED THE SPECIFIED 28 DAY STRENGTH.

- PRE-CAST CONCRETE STRUCTURES**
SHOP DRAWINGS FOR PRE-CAST STRUCTURES WITH SUPPORTING STRUCTURAL COMPUTATIONS (SIGNED AND SEALED BY A MARYLAND REGISTERED PROFESSIONAL ENGINEER) MEETING ASHM REQUIREMENTS FOR PRE-CAST STRUCTURES MUST BE SUBMITTED TO THE ENGINEER AND THE APPROVING AGENCY (BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENT PROTECTION AND RESOURCE MANAGEMENT) FOR APPROVAL PRIOR TO FABRICATION.
- ROCK RIP-RAP**
ROCK RIP-RAP SHALL MEET THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 311.
GEOTEXTILE SHALL BE PLACED UNDER ALL RIP-RAP AND SHALL MEET THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 921.09, CLASS C.
THE RIP-RAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN ONE OPERATION. THE ROCK SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THE RIP-RAP IN PLACE SHALL BE REASONABLY HOMOGENEOUS WITH THE LARGER ROCKS UNIFORMLY DISTRIBUTED AND FIRMLY IN CONTACT ONE TO ANOTHER WITH THE SMALLER ROCKS FILLING THE VOIDS BETWEEN THE LARGER ROCKS.
- CARE OF WATER DURING CONSTRUCTION**
ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DICES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM THE VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM OF REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER TO SUMPS FROM WHICH THE WATER SHALL BE PUMPED.
- STABILIZATION**
ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH THE NATURAL RESOURCES CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-242) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.
- EROSION AND SEDIMENT CONTROL**
CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES TO BE EMPLOYED DURING THE CONSTRUCTION PROCESS.
ALL DISTURBED AREAS SHALL BE CONTROLLED BY AN EROSION AND SEDIMENT CONTROL PLAN WHICH HAS BEEN APPROVED BY THE BALTIMORE COUNTY SOIL CONSERVATION DISTRICT (B.C.S.C.D.).

- SEEDING**
SEEDING, FERTILIZING AND MULCHING SHALL BE AS FOLLOWS:
SEED MIX: 50% KENTUCKY BLUEGRASS
40% PENNLAWN CREEPING RED FESCUE
10% STREAKER REDTOP
APPLIED AT A RATE OF 150 LBS. PER ACRE.
(OR)
REBEL II TALL FESCUE (125 LBS. PER ACRE)
PENNINE PERENNIAL RYEGRASS (15 LBS. PER ACRE)
KENTUCKY BLUEGRASS (10 LBS. PER ACRE)
(OR)
PENNLAWN CREEPING RED FESCUE (70 LBS. PER ACRE)
AURORA HARD FESCUE (50 LBS. PER ACRE)
COMMON WHITE CLOVER (5 LBS. PER ACRE)
WINTER RYE (45 LBS. PER ACRE)
(OR)
70% FORAGER TALL FESCUE
30% CHEMUNG CROWMETCH, INOCULATED
APPLIED AT A RATE OF 85 LBS. PER ACRE
OPTIMUM SEEDING DATES: MARCH 1 TO APRIL 30.
LIME: 2 TONS/ACRE DOLOMITIC LIMESTONE.
FERTILIZER: 600 LBS./ACRE 10-10-10 FERTILIZER BEFORE SEEDING,
400 LBS./ACRE 30-0-0 UREAFORM FERTILIZER AT TIME OF SEEDING.
MULCH: STRAW AT 4,000 LBS. PER ACRE.
ANCHORING: MULCHING TOOL OR WOOD CELLULOSE FIBER BINDER AT A NET DRY BINDER RATE OF 750 POUNDS PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH 50% CHEMUNG CROWMETCH. THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER OR AT RATES RECOMMENDED BY THE MANUFACTURER.
- FILTER CLOTH**
ALL FILTER CLOTH SHALL CONFORM TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, OR THE LATEST EDITION.
- GABIONS**
ALL GABIONS SHALL BE PVC COATED WOVEN WIRE BASKETS. STONE SIZE SHALL BE 4 INCHES TO 7 INCHES. (CLASS IV GABIONS).
- CONSTRUCTION INSPECTION BY DESIGNATED ENGINEERS**
THE CONSTRUCTION OF THE POND AND EMBANKMENT, AND CERTIFICATION THAT THE POND AND EMBANKMENT HAVE BEEN BUILT IN ACCORDANCE WITH THE PLANS SHALL BE UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER. THE ENGINEER SHALL BE IN ADVANCE OF CONSTRUCTION IN ORDER THAT ARRANGEMENTS CAN BE MADE FOR (1) INSPECTION OF PIPE TRENCH AND BEDDING, (2) INSPECTION OF RIPER AND ANTI-SEEP COLLARS AND (3) SUPERVISION OF EMBANKMENT CONSTRUCTION AND COMPACTION TESTING. THE ENGINEER SHALL DIRECT THE HANDLING OF WATER DURING CONSTRUCTION, MINOR CHANGES NOT AFFECTING THE INTEGRITY OF THE DAM IN ORDER TO COMPENSATE FOR UNUSUAL SOIL CONDITIONS, AND THE REMOVAL AND REPLACEMENT OF DEFECTIVE FILL.

- STRUCTURE BACKFILL**
BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 4 INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO BE COMPACTED COMPLETELY. ALL EXCAVATIONS AND ADJACENT AREAS SHALL BE PROTECTED FROM OVERLOADING. EQUIPMENT SHALL NOT BE ALLOWED TO OPERATE CLOSER THAN 4 FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.
STRUCTURE BACKFILL MAY BE FLOWABLE FILL MEETING THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 902.01. THE FLOWABLE FILL SHALL HAVE A MINIMUM PH OF 4.0 AND A MINIMUM RESISTIVITY OF 200 OHM FEET. FILLERS SHALL BE PLACED IN LOOSE LIFTS OF APPROXIMATELY 6 INCHES, AND COMPACTED TO 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASHITO T-80. THE STATIC WEIGHT OF EQUIPMENT USED ADJACENT TO WALLS SHALL NOT EXCEED 3,000 POUNDS. NO BACKFILL SHALL BE PLACED AGAINST THE CAST-IN-PLACE WALLS UNTIL THE CONCRETE HAS ATTAINED THE SPECIFIED 28 DAY STRENGTH.
- REMOVAL AND REPLACEMENT OF DEFECTIVE FILL**
FILL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITY OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED ACCEPTABLE RANGE OF MOISTURE CONTENT OR OTHERWISE NOT CONFORMING TO THE REQUIREMENTS OF THESE SPECIFICATIONS SHALL BE REMOVED TO MEET THE REQUIREMENTS OR REMOVED AND REPLACED BY ACCEPTABLE FILL. THE BOTTOMS OF SUCH EXCAVATIONS SHALL BE FINISHED FLAT OR GENTLY CURVING, AND AT THE SIDES OF SUCH EXCAVATIONS THE ADJACENT SOUND FILL SHALL BE TRIMMED TO A SLOPE NOT STEEPER THAN 3 FEET HORIZONTALLY TO 1 FOOT VERTICALLY EXTENDING FROM THE BOTTOM OF THE EXCAVATION TO THE FILL SURFACE.
- PIPE CONDUITS**
ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION. ALL PERFORATED PIPES SHALL HAVE A MINIMUM OF 3.31 SQUARE INCHES OF OPENING PER SQUARE FOOT OF PIPE SURFACE (EX. 30 3/8-INCH HOLES PER SQUARE FOOT). PERFORATIONS ARE TO BE UNIFORMLY SPACED AROUND THE FULL PERIPHERY OF THE PIPE. ANY HOLES BLOCKED OR PARTIALLY BLOCKED BY BITUMINOUS COATING SHALL BE OPENED PRIOR TO INSTALLATION.
REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:
 - MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EXCEED ASTM C-361.
 - BEDDING - REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING FOR THEIR ENTIRE LENGTH. THIS BEDDING / CRADLE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50 PERCENT OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES, WHERE CONCRETE CRADLE IS NOT NEEDED FOR STRUCTURAL REASONS. FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE "STRUCTURE BACKFILL" SECTION OF THIS STANDARD. GRAVEL BEDDING IS NOT PERMITTED.
 - LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.
 - BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".
 - CONNECTIONS - ALL CONNECTIONS (TO ANTI-SEEP COLLARS, RISER, ETC) SHALL BE WATERTIGHT.
 - OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC) SHALL BE AS SHOWN ON THE DRAWINGS.

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Myers 8/5/02
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *John V. Ramoche* 8/5/02
HOWARD SOIL CONSERVATION DISTRICT DATE

PLAN NUMBER

DEVELOPERS CERTIFICATE:

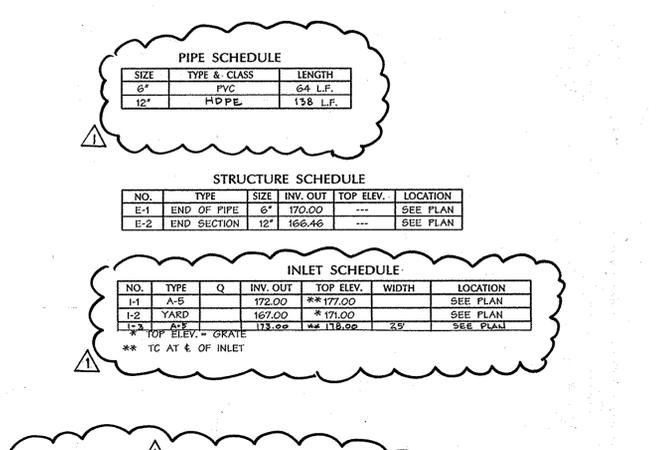
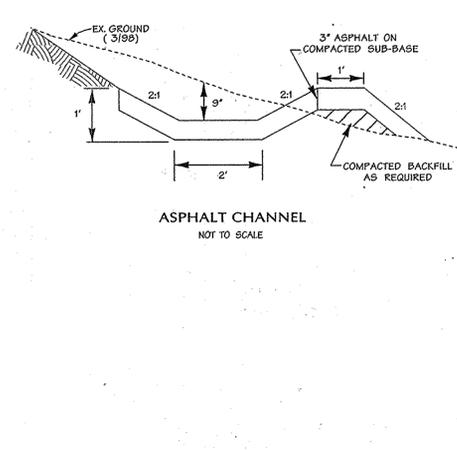
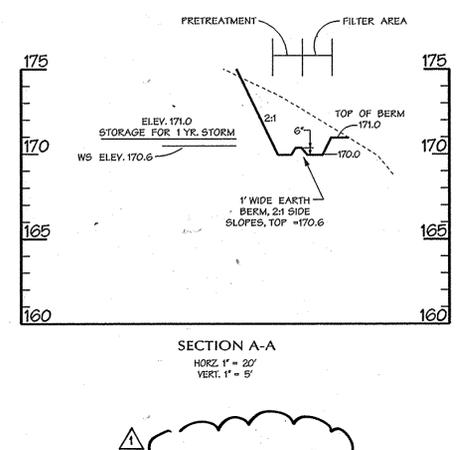
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POCKET SAND FILTER CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I/ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

R. Cooney Bowen 8/6/02
SIGNATURE OF DEVELOPER DATE
PRINT NAME BELOW SIGNATURE

ENGINEERS CERTIFICATE:

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THAT THE ENGINEER THAT HE/HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POCKET SAND FILTER CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

John V. Ramoche 7-25-02
SIGNATURE OF ENGINEER DATE
PRINT NAME BELOW SIGNATURE



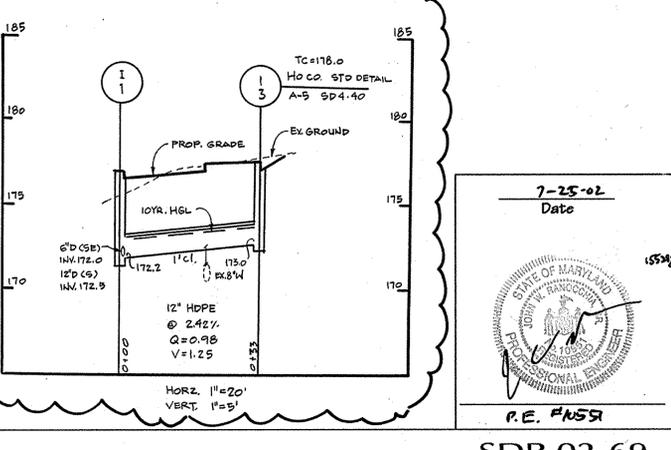
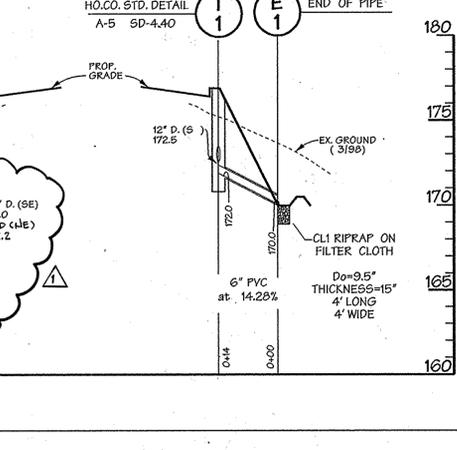
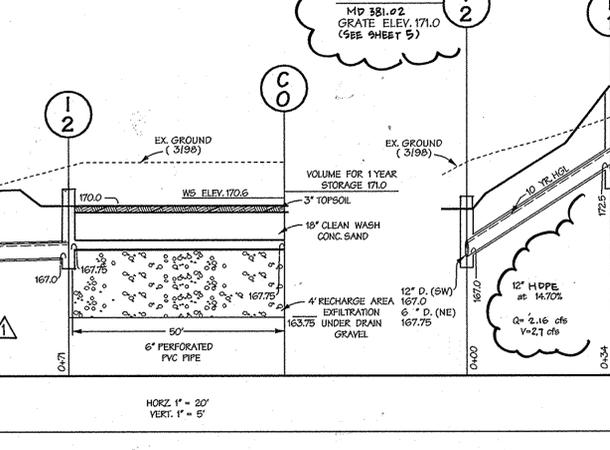
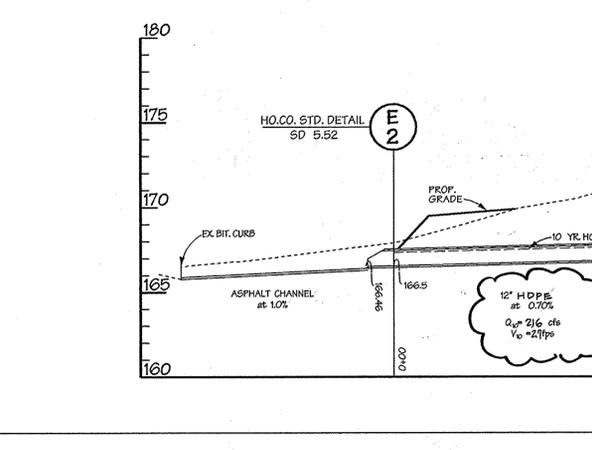
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John V. Ramoche 8/7/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

John V. Ramoche 8/16/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John V. Ramoche 8/19/02
DATE

Date	No.	Revision Description
10-1-02	1	REV. PIPE TYPE AND ADD INLET



**St. Augustine Church
Site Improvements**

OWNER: The Archbishop of Baltimore, Cardinal William H. Keeler, 320 Cathedral Street, Baltimore, MD 21201
DEVELOPER: The Reverend Gerard J. Bowen, Pastor, St. Augustine Catholic Church, 5976 Old Washington Road, Elkridge, MD 21075-5335

DMW
Daft · McCune · Walker, Inc.
200 East Pennsylvania Avenue, Towson, Maryland 21286
410 296 3333
410 296 4705

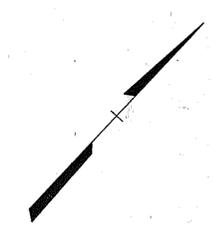
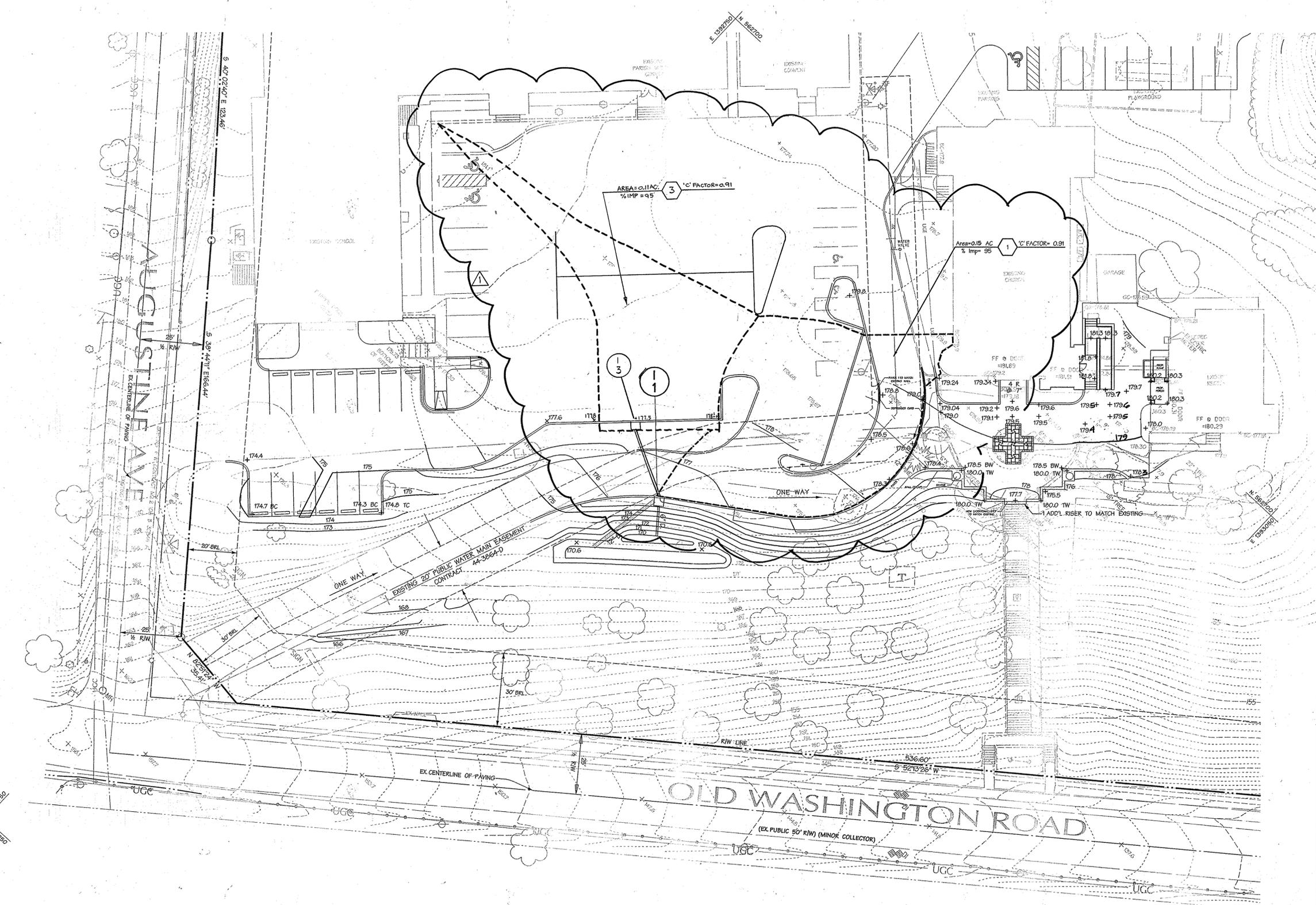
SUBDIVISION NAME: ST. AUGUSTINE CHURCH
SECTION AREA: 1.1
DATE OF LATEST PLAN: 12/14/01
ZONE: R-12
PARCEL NO.: 6011.02

SWM PROFILES & SPECIFICATIONS

Drn By: KDE
Des By: RLH
Chk By: P.E. RAUSA

Scale: AS SHOWN
Date: 06-13-02
Approved:

Proj. No. 99040.B
11 of 27



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

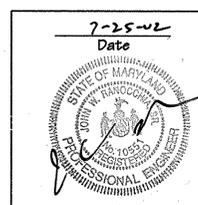
[Signature] 8/2/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 8/16/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 8/19/02
 DIRECTOR DATE

10-1-02	REV. DRAINAGE AREA	
Date	No.	Revision Description
St. Augustine Church Site Improvements		
OWNER The Archbishop Of Baltimore Cardinal William H. Keeler 320 Cathedral Street Baltimore, MD 21201	DEVELOPER The Reverend Gerard J. Bowen, Pastor St. Augustine Catholic Church 5976 Old Washington Road Elkridge, MD 21075-5305	
DMW D. ft. M' Cune · Walker, Inc. A Team of Land Planners, Landscape Architects, Engineers Surveyors & Environmental Professionals		
200 East Pennsylvania Avenue Towson, Maryland 21286 410 296 3333 fax 296 4705		
SUBDIVISION NAME ST. AUGUSTINE CHURCH	SECTION AREA	DATE OF PLAN 10/11/02
DATE OF PLAN 10/11/02	TAXZONE MAP R-12	ELECT. DISTRICT 1ST
WATER CODE N/A	SEWER CODE N/A	REVISION # 0011.02
TITLE STORM DRAIN DRAINAGE AREA MAP		
Drn By: KDE	Scale: 1"=20'	9904C.B
Des By: RLH	Date: 06-12-02	
Chr. By:	Approved:	12 of 27

DATA SOURCES:
 TOPOGRAPHY PER AERIAL FLIGHT BY AIR SURVEY CORP ON MARCH 26, 1999.
 BOUNDARY PER SURVEY BY RIEMER MUEGGE & ASSOCIATES DATED JUNE 13, 1999
 GRID BASED ON MARYLAND STATE PLANE NAD 1983 VERTICAL DATUM BASED
 ON NGVD 1929
 LIMITS OF GRAVE SITES LOCATED WITH ASSISTANCE OF PASTOR IN FIELD.
 LIMITS OF WETLAND, STREAMS, AND BUFFERS (WHERE SHOWN) PER PLAT 14214.



Section 2722
Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall be of the inline drain type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

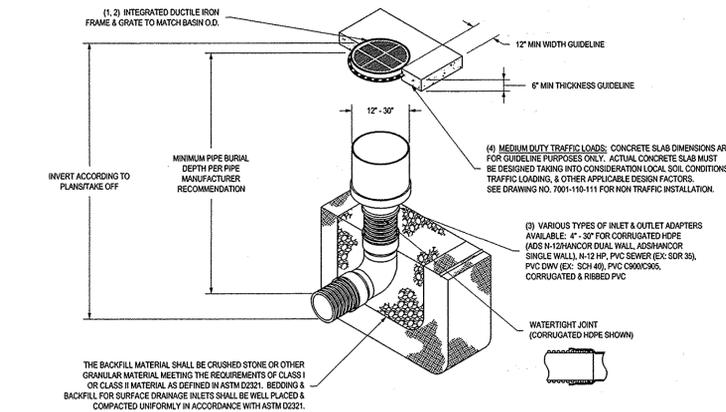
MATERIALS
The inline drain required for this contract shall be manufactured from PVC pipe stock, utilizing a thermo-molding process to reform the pipe stock to the furnished configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F427. The pipe bell spigot shall be joined to the inline drain body by use of a swage mechanical joint. The raw material used to manufacture the pipe stock that is used to manufacture the inline drain body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates furnished for all surface drainage inlets shall be ductile iron grates for sizes 8", 10", 12", 15", 18", 24" and 30" shall be made specifically for each fitting so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for inline drains shall be capable of supporting H-20 wheel loading for traffic areas or H-10 loading for pedestrian areas. 12" and 15" square grates will be hinged to the frame using pins. Metal used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05 for ductile iron. Grates shall be provided painted black.

INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1 or class 2 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For H-20 load rated installations, a concrete ring will be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

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NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE

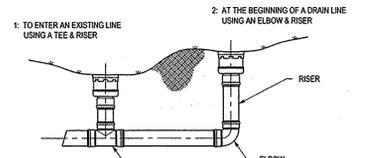


- 12" - 30" PEDESTRIAN GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 12" - 30" FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR JOINTS FOR DRAIN AND SEWER PLASTIC PIPE USING FLEXIBLE ELASTOMERIC SEALS.
- 12" - 30" PEDESTRIAN GRATES SHALL MEET H-10 LOADING REQUIREMENTS (SEE DRAWING NO. 7003-110-022 FOR H-20 TRAFFIC LOAD GUIDELINES).

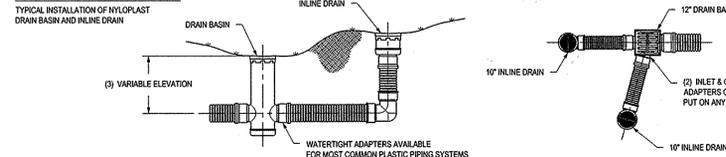
THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE HEREFROM FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST.	DATE: 04-06-07 REVISED BY: CCA DATE: 03-20-13	DRAWN BY: EBC DATE: 04-06-07 REVISED BY: CCA DATE: 03-20-13	MATERIAL: INLINE DRAIN WITH PEDESTRIAN GRATE TITLE: INLINE DRAIN WITH PEDESTRIAN GRATE DWG NO.: 7003-110-027 REV: C
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WHEN ARE INLINE DRAINS USED?

- 2708AG _X
- 2710AG _X
- 2712AG _X
- 2715AG _X
- 2718AG _X
- 2724AG _X
- 2730AG _X

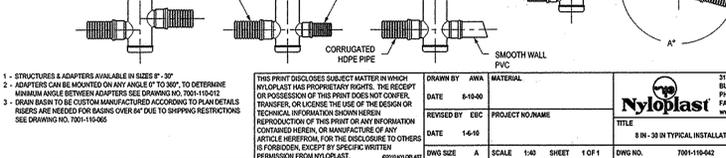


TYPICAL INSTALLATIONS



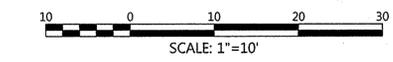
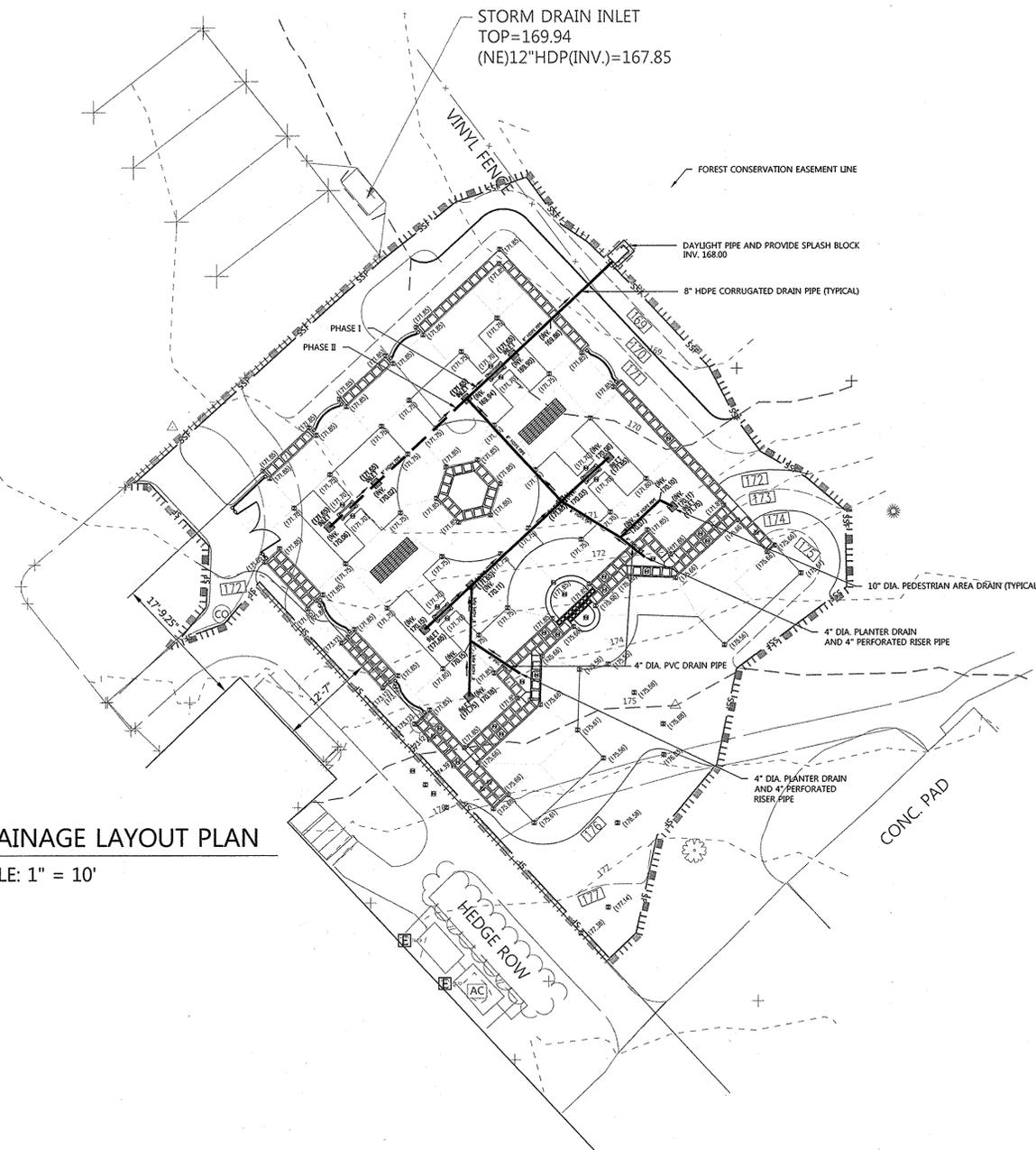
WHEN ARE DRAIN BASINS USED?

- 1: TO CHANGE ELEVATION
- 2: TO CHANGE PIPE DIAMETER
- 3: TO CHANGE PIPE TYPE
- 4: FOR SHALLOW APPLICATIONS
- 5: TO CHANGE DIRECTION



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---	--	---	--

DRAINAGE LAYOUT PLAN
SCALE: 1" = 10'



NOTES: SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR NICHE WALLS AND RETAINING WALL LAYOUT AND DETAILS.

CONTRACTOR SHALL PROVIDE ALL PIPING, INLETS, ELBOWS, RISERS, TREES, FRAMES, GRATES, BACKFILL MATERIAL, AND ALL MATERIALS REQUIRED TO INSTALL THE PATIO DRAIN SYSTEMS.

DRAINAGE INLETS AND PIPES SHALL BE NYLOPLAST INLINE DRAIN SYSTEM OR ACCEPTABLE EQUIVALENT.

LIMIT OF DISTURBANCE = 4,990.00 SF
Less than 100 cy of dirt shall be excavated.

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT	DATE
COUNTY HEALTH OFFICER	DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
DIRECTOR	DATE

Date	No.
------	-----

St. Augustine Columbarium
5976 Old Washington Road, Elkridge, MD
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER:

OWNER: The Archbishop of Baltimore
320 Cathedral Street
Baltimore, MD 21201

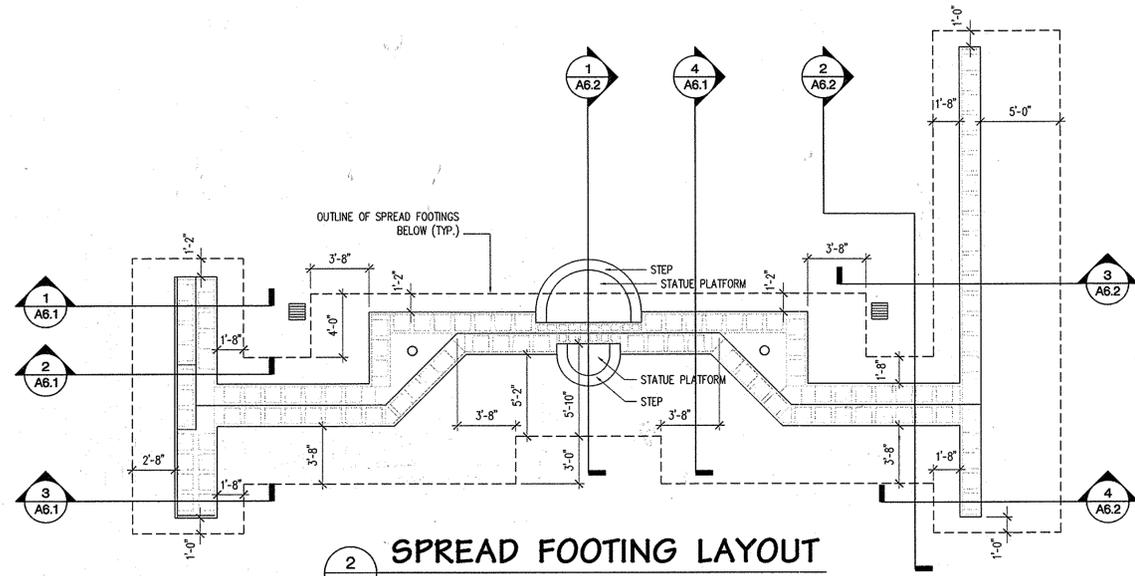
DEVELOPER: St. Augustine Catholic Church
5976 Old Washington Road
Elkridge, MD 21075-5335



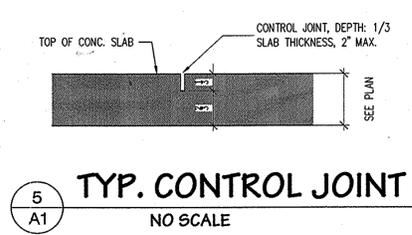
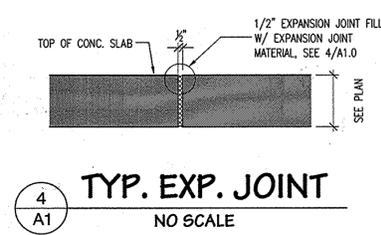
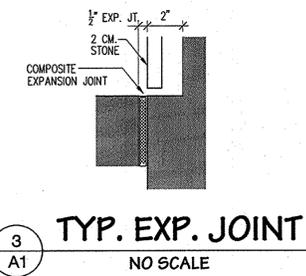
501 FAIRMOUNT AVENUE SUITE 300 TOWSON, MD 21286 P: 410 296 3333 F: 410 296 4705 WWW.DMW.COM
SECTION/AREA: 38
DATE: 8/27/2015
TITLE: Patio Drains
Des By: NML Scale: 1"=10' Proj. No. 99040.F
Drn By: SEC Date: 7-17-15
Chk By: NML Approved
14 OF 27

8/27/2015
Date

Nicholas M. Lindran
Landscape Architect No. 899



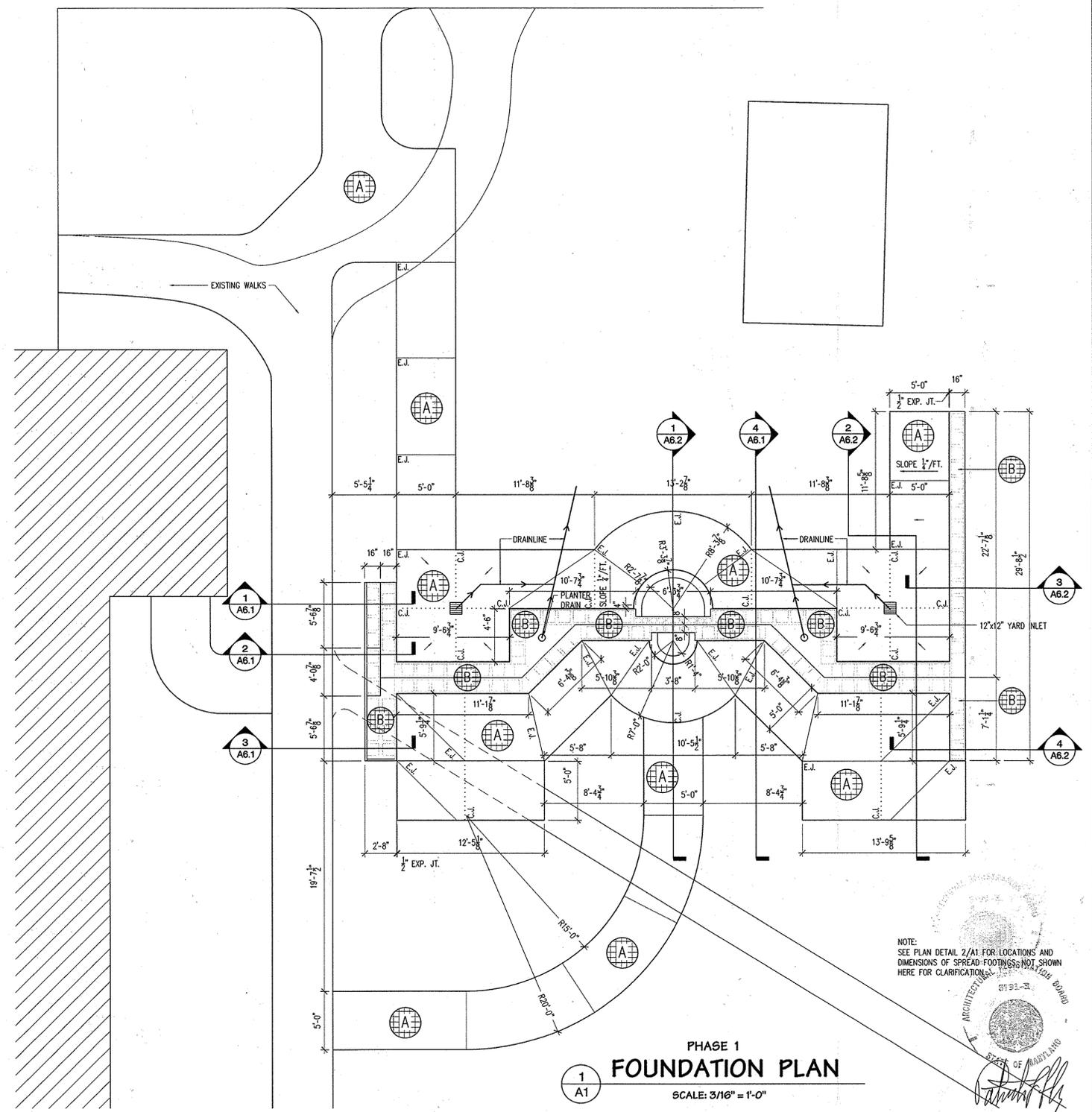
2 SPREAD FOOTING LAYOUT
SCALE: 3/16" = 1'-0"



- FOUNDATION GENERAL NOTES:**
- ALL DIMENSIONS SHOWN ARE TO FACE OF LEDGE OR FOOTINGS UNLESS NOTED OTHERWISE.
 - ALL REINFORCED CONCRETE FOOTINGS ARE TO BE EARTH-FORMED AND POURED-IN-PLACE, TYPICAL.
 - ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
 - ALL STEEL BAR REINFORCEMENT SHALL BE ASTM A-615, GRADE 60.
 - WELDED WIRE MESH (W.W.M.) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-185.
 - MAXIMUM SPACING FOR CONTROL JOINTS @ SIDEWALKS = 8'-0".
 - ALL CONCRETE SIDEWALKS TO BE BROOM FINISHED AND TO SLOPE AWAY FROM THE BUILDING AT 1/4" PER 1'-0" (UNLESS NOTED OTHERWISE).

- CONCRETE FOUNDATION/ SLAB REINFORCING SCHEDULE:**
- EXTERIOR SIDEWALKS:**
6" X 6" X W1.4 X W1.4 WWF (IN 4" CONC. SLAB) OVER A MIN. OF 4" CRUSHED STONE (3/4") OVER COMPACTED SOIL.
 - NICHE BANK FOOTING:**
SEE ALL SECTIONS ON SHEETS A6.1 & A6.2

- FOUNDATION PLAN LEGEND**
- C.J. = HAND TROWELED CONTROL JOINT, SEE DETAIL 2/A1
 - E.J. = EXPANSION JOINT, SEE DETAILS 3/A1 & 4/A1



1 PHASE 1 FOUNDATION PLAN
SCALE: 3/16" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edwards 9-2-15
CHIEF DIVISION OF ENGINEERING DEVELOPMENT DATE

Vet Steedman 9-2-15
CHIEF DIVISION OF LAND DEVELOPMENT DATE

N. Williams 9-2-15
DIRECTOR DATE

St. Augustine Church Site Improvements

Developer: The Reverend Gerard J. Bowman, Pastor
St. Augustine Catholic Church
5976 Old Washington Road
Elkridge, MD 21075-5335

OWNER: The Archbishop of Baltimore
Cardinal William H. Keeler
320 Cathedral Street
Baltimore, MD 21201

PREPARED FOR:
ST. AUGUSTINE CATHOLIC CHURCH
5976 OLD WASHINGTON ROAD
ELKRIDGE, MD 21075-5335
SDP-02-69

OWNER:
THE ARCHBISHOP OF BALTIMORE
320 CATHEDRAL STREET
BALTIMORE, MD 21201

PROJECT:
MEMORIAL GARDEN

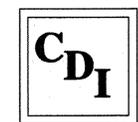
Revisions

Date July 17, 2015
Job No. ST. AUGUSTINE
Checked By: CDI
Drawn by: jda

Sheet Title
FOUNDATION PLAN

Sheet No.
A1 (16 of 27)

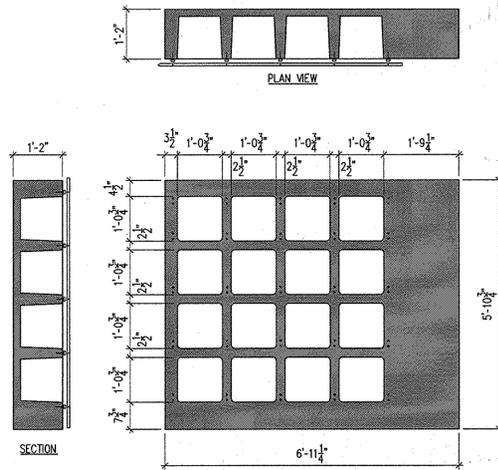
SDP-02-069



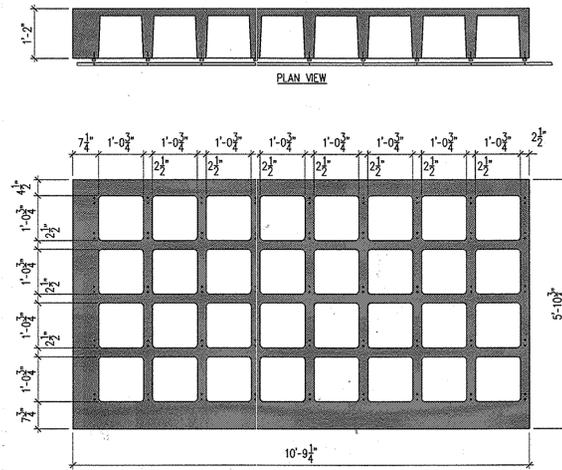
Columbarium Designers Inc.

723 Church Street
Buford, Georgia - 30518
800-964-4020 x800

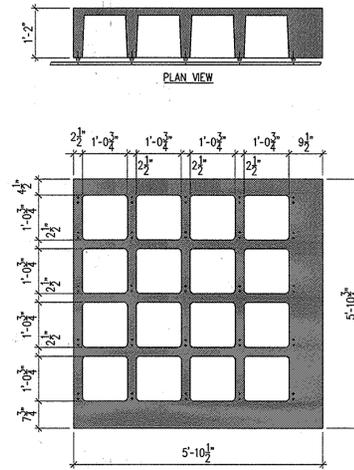
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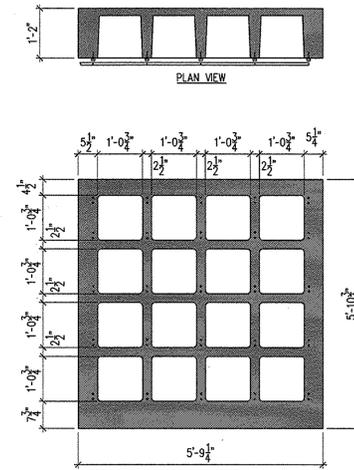
ELEV. 1



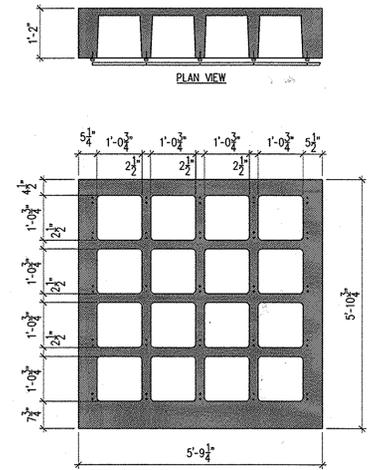
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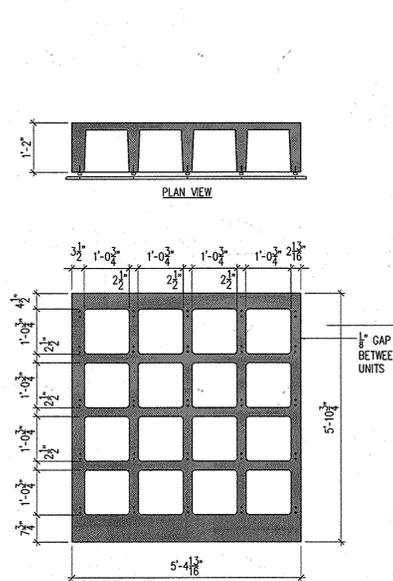
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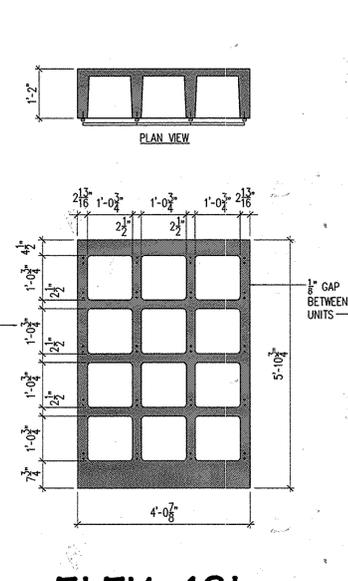
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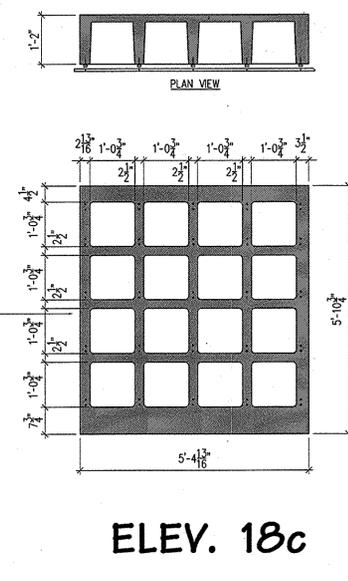
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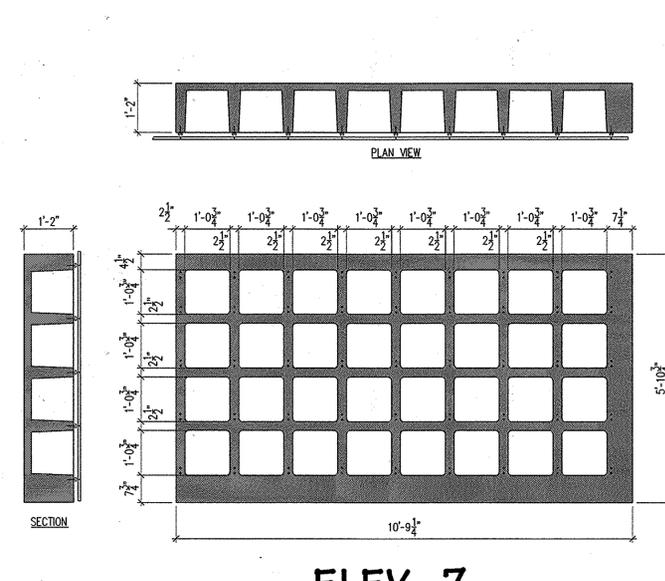
ELEV. 18a



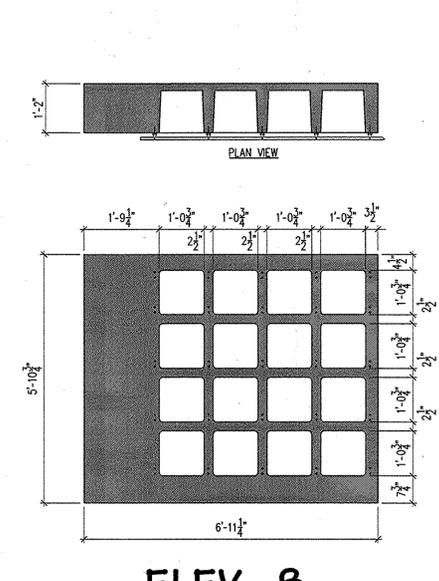
ELEV. 18b



ELEV. 18c

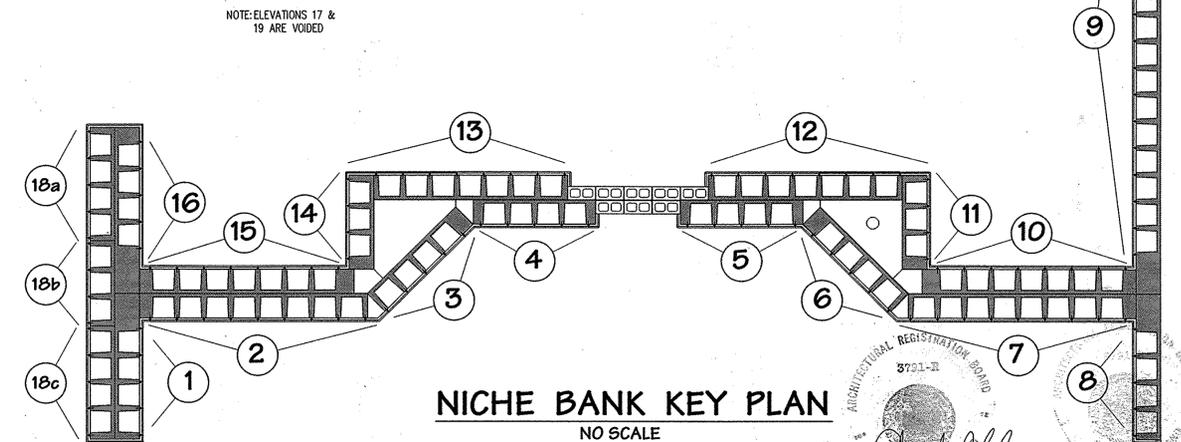


ELEV. 7



ELEV. 8

NOTE: ELEVATIONS 17 & 19 ARE VOIDED



NICHE BANK KEY PLAN
NO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard County Department of Planning and Zoning
CHIEF DIVISION OF ENGINEERING DEVELOPMENT 9-2-15 DATE

Howard County Department of Planning and Zoning
CHIEF DIVISION OF LAND DEVELOPMENT 9-2-15 DATE

Howard County Department of Planning and Zoning
DIRECTOR 9-2-15 DATE

St. Augustine Church Site Improvements

Developer:
The Reverend Gerard J. Bowman, Pastor
St. Augustine Catholic Church
5976 Old Washington Road
Elkridge, MD 21075-5335

OWNER:
The Archbishop of Baltimore
Cardinal William H. Keeler
320 Cathedral Street
Baltimore, MD 21201



**Columbarium Designers
Inc.**

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Buford, Georgia - 30518
800-964-4020 x800

PREPARED FOR:
ST. AUGUSTINE CATHOLIC CHURCH
5976 OLD WASHINGTON ROAD
ELKRIDGE, MD 21075-5335
SDP-02 69

OWNER:
THE ARCHBISHOP OF BALTIMORE
320 CATHEDRAL STREET
BALTIMORE, MD 21201

PROJECT:
MEMORIAL
GARDEN

Revisions

No.	Description

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Date: July 17, 2015
Job No: ST. AUGUSTINE
Checked By: CDI
Drawn by: jda



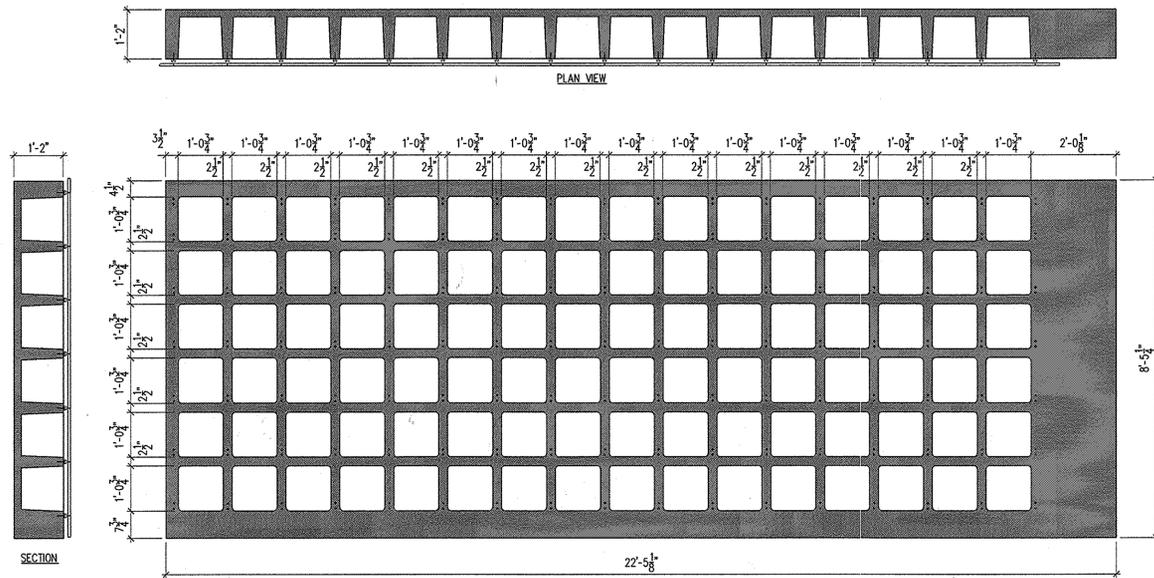
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**PRE-CAST
NICHE UNITS**

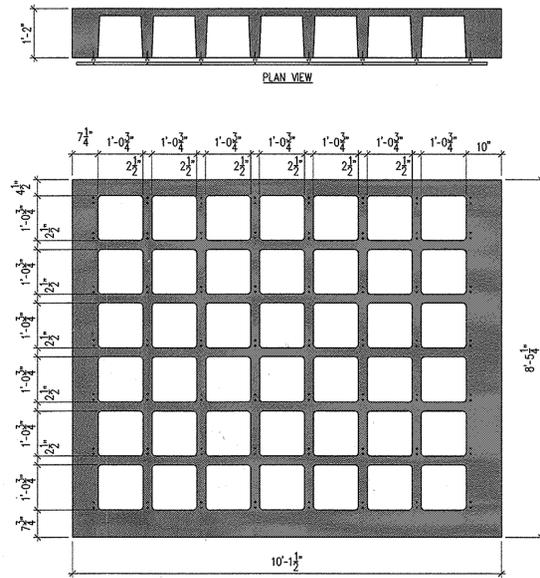
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A3 (18 of 27)

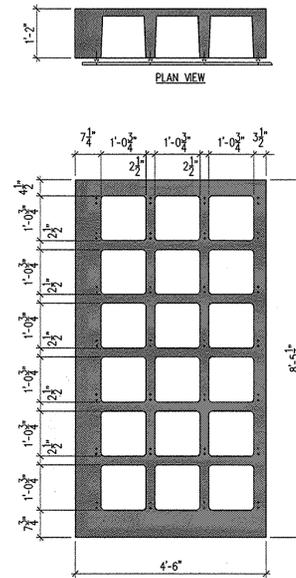
SDP-02-069



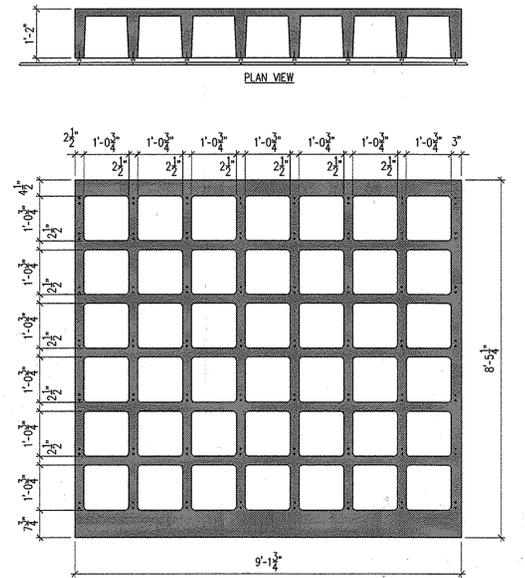
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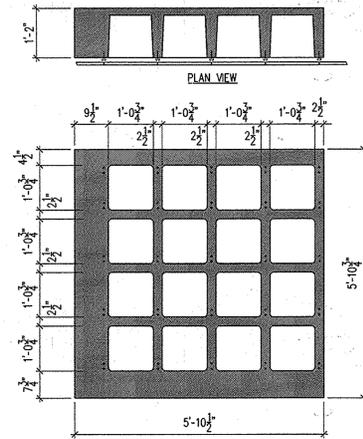
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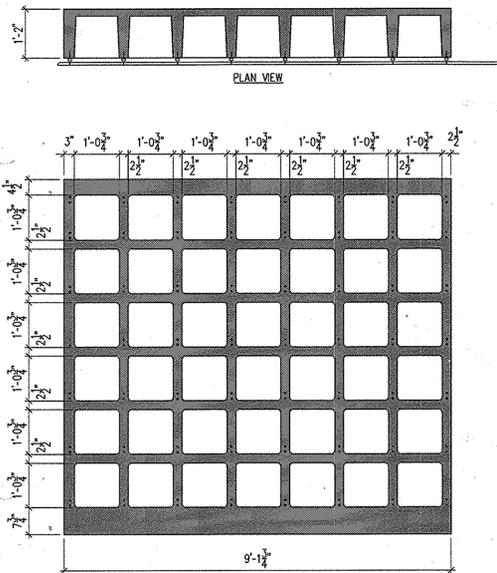
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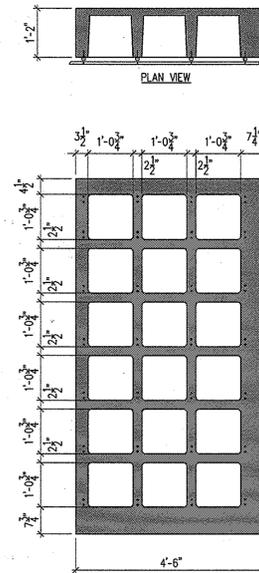
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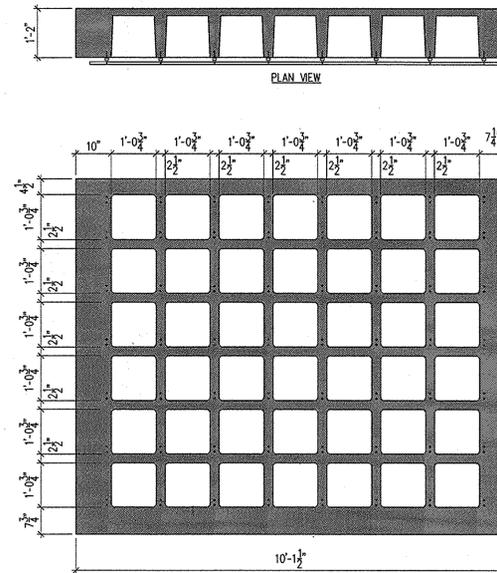
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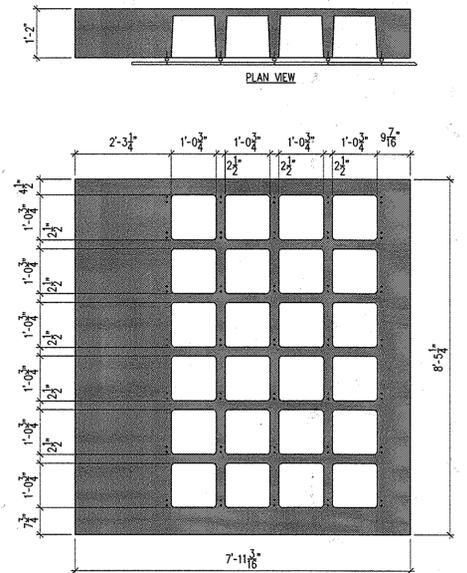
ELEV. 13



ELEV. 14



ELEV. 15



ELEV. 16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard County Seal
 CHIEF DIVISION OF ENGINEERING DEVELOPMENT 9-2-15 DATE

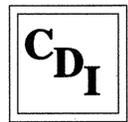
Kevin Schuchman
 CHIEF DIVISION OF LAND DEVELOPMENT 9-2-15 DATE

William Jaffe
 DIRECTOR 9-2-15 DATE

St. Augustine Church Site Improvements

Developer: The Reverend Gerard J. Bowman, Pastor
 St. Augustine Catholic Church
 5976 Old Washington Road
 Elkridge, MD 21075-5335

OWNER: The Archbishop of Baltimore
 Cardinal William H. Keeler
 320 Cathedral Street
 Baltimore, MD 21201



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PREPARED FOR:
 ST. AUGUSTINE CATHOLIC CHURCH
 5976 OLD WASHINGTON ROAD
 ELKRIDGE, MD 21075-5335

SDP-02 69

OWNER:
 THE ARCHBISHOP OF BALTIMORE
 320 CATHEDRAL STREET
 BALTIMORE, MD 21201

PROJECT:
 MEMORIAL GARDEN

Revisions

No.	Description

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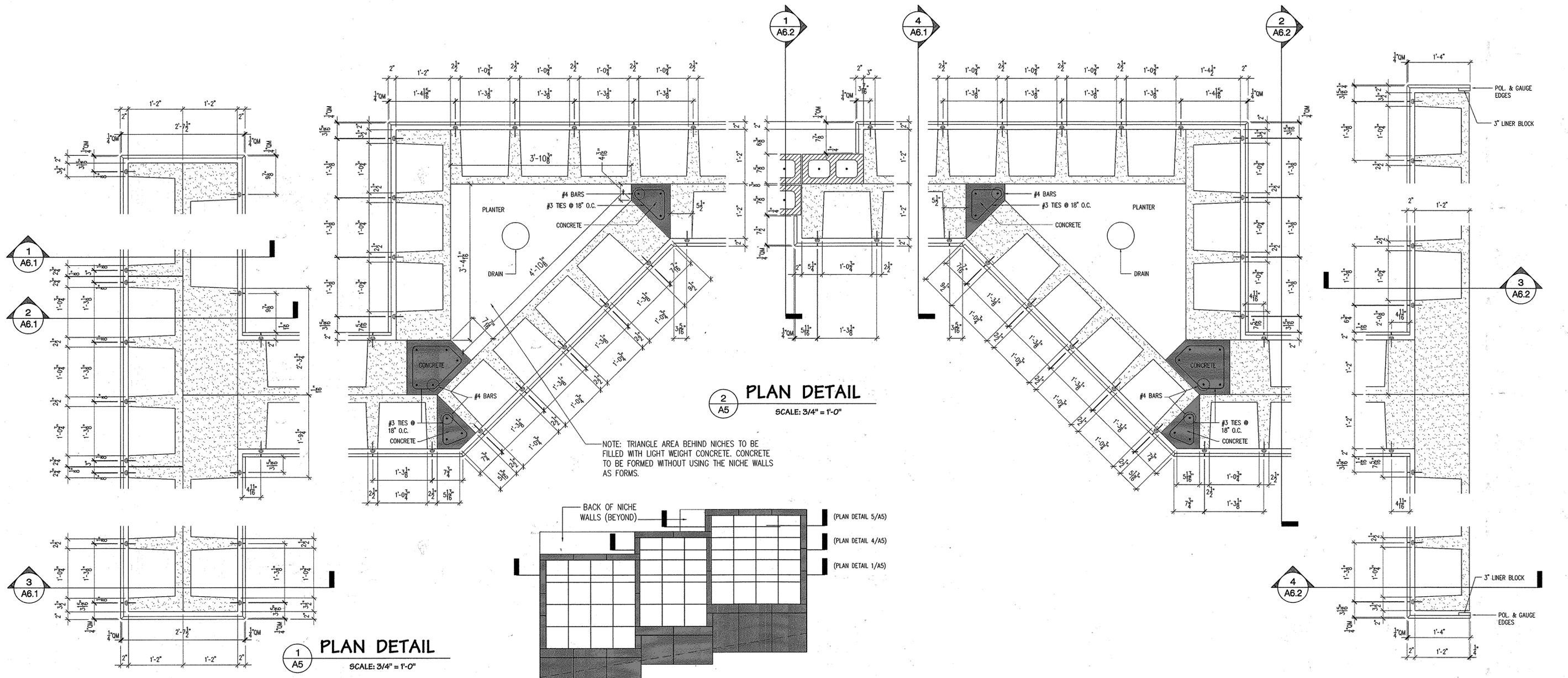
Date July 17, 2015
 Job No. ST. AUGUSTINE
 Checked By: CDI
 Drawn by: jda



Sheet Title
PRE-CAST NICHE UNITS

Sheet No.
A4 (19 of 27)

SDP-02-069



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[Signature] 9-2-15
 CHIEF DIVISION OF ENGINEERING DEVELOPMENT DATE

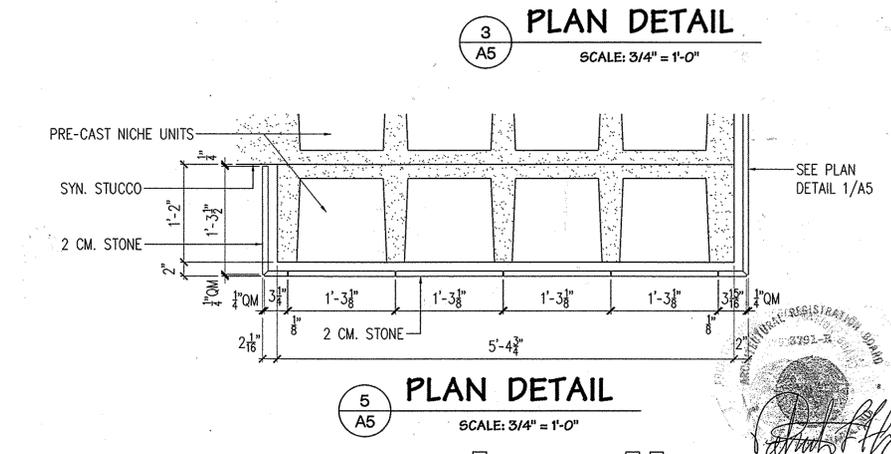
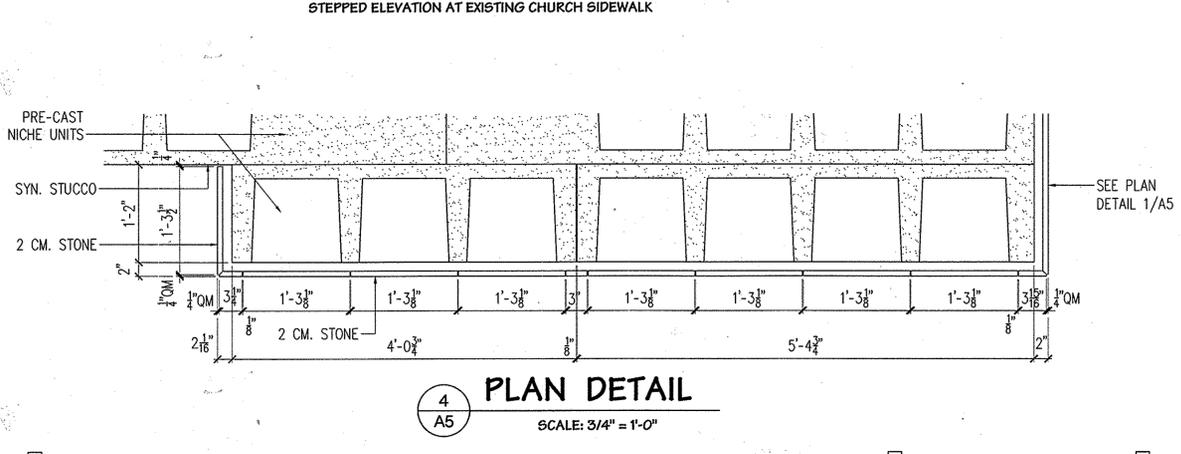
[Signature] 9-2-15
 CHIEF DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9-2-15
 DIRECTOR DATE

St. Augustine Church Site Improvements

Developer:
 The Reverend Gerard J. Bowman, Pastor
 St. Augustine Catholic Church
 5976 Old Washington Road
 Elkridge, MD 21075-5335

OWNER:
 The Archbishop of Baltimore
 Cardinal William H. Keeler
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 5976 OLD WASHINGTON ROAD
 ELKRIDGE, MD 21075-5335
 SDP - 02 69

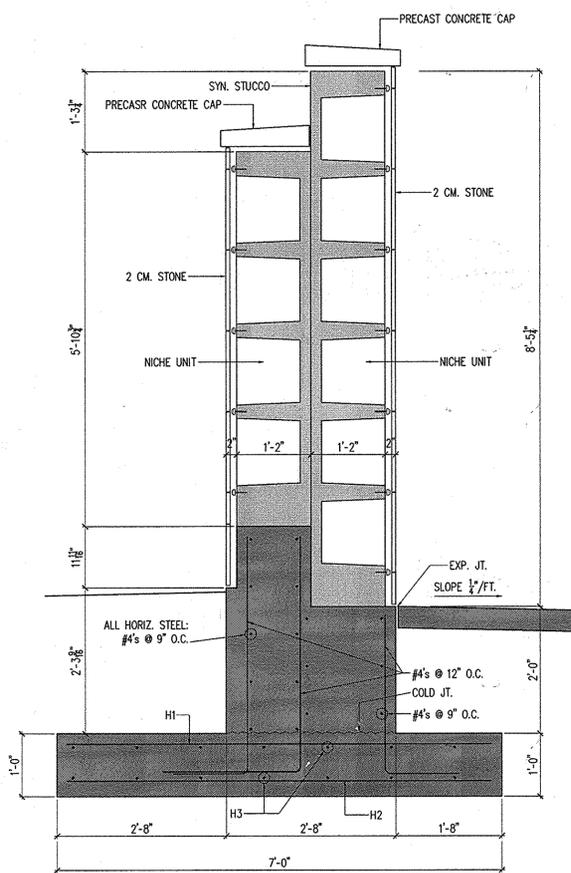
OWNER:
 THE ARCHBISHOP OF BALTIMORE
 320 CATHEDRAL STREET
 BALTIMORE, MD 21201

PROJECT:
 MEMORIAL GARDEN

Revisions

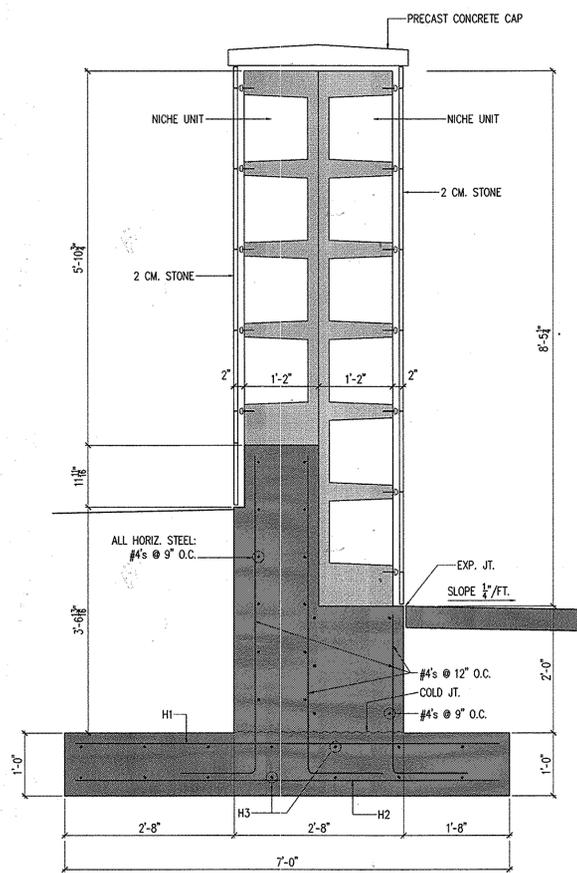
Date July 17, 2015
 Job No. ST. AUGUSTINE
 Checked By: CDI
 Drawn by: jda

Sheet Title
PLAN DETAIL
 Sheet No.
A5 (20 of 27)
 SDP-02-069



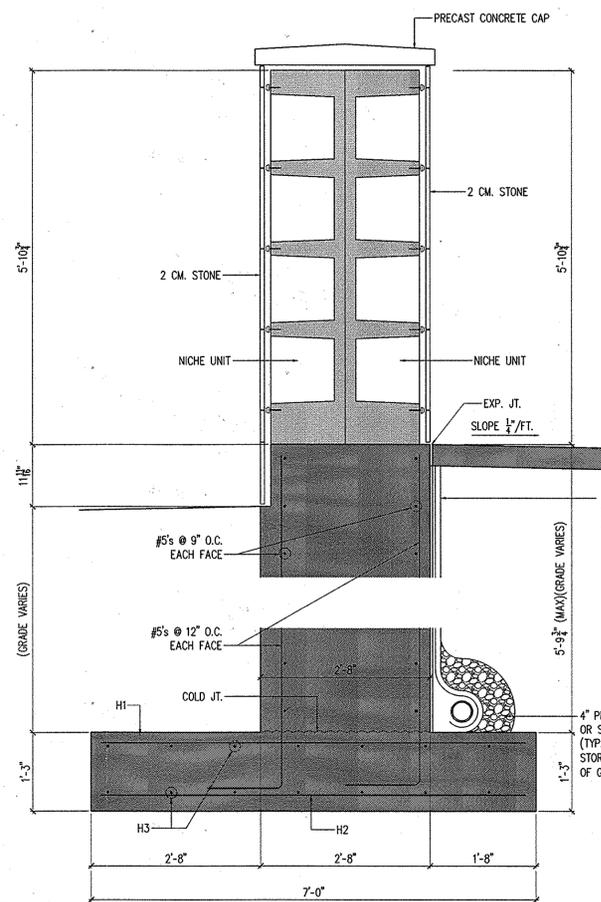
1 SECTION
A6.1 SCALE: 3/4" = 1'-0"

NOTE:
WALL RESTRAINED FROM SLIDING
BY CONCRETE SLAB.
DO NOT BACKFILL WALL UNTIL
SLAB IS IN PLACE AND CURED.

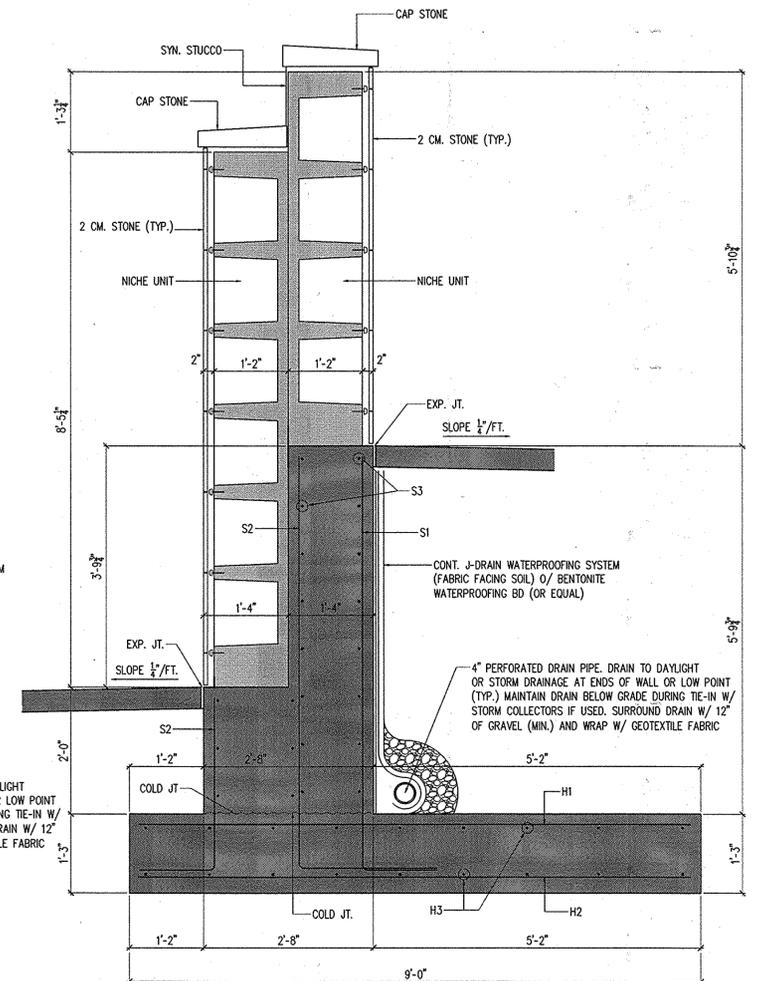


2 SECTION
A6.1 SCALE: 3/4" = 1'-0"

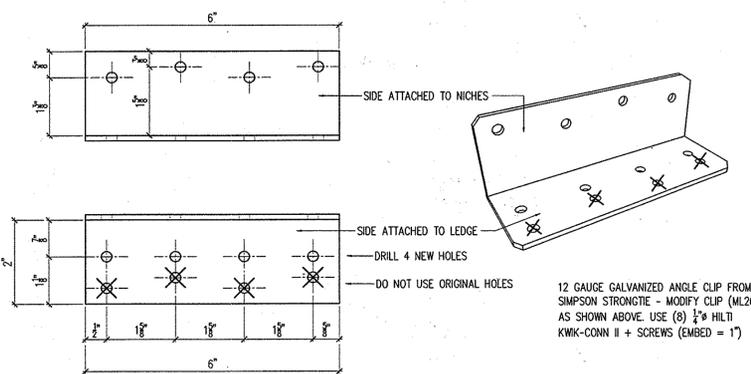
REINFORCING:
S1: #5 BARS @ 12" O.C.
S2: #4 BARS @ 12" O.C.
S3: #4 BARS @ 9" O.C.
H1: #4 BARS @ 12" O.C.
H2: #4 BARS @ 12" O.C.
H3: #4 BARS @ 12" O.C.



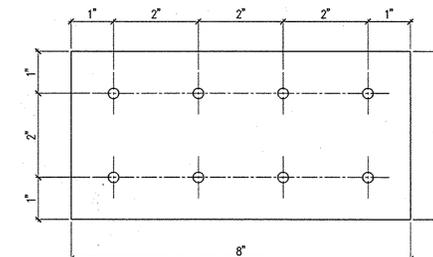
3 SECTION
A6.1 SCALE: 3/4" = 1'-0"



4 SECTION
A6.1 SCALE: 3/4" = 1'-0"



4 ANGLE CLIP
A6.1 SCALE: 6" = 1'-0"



5 STRAP PLATE
A6.1 SCALE: 6" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard County 9-2-15
CHIEF DIVISION OF ENGINEERING DEVELOPMENT DATE

Valdis Jofis 9-2-15
CHIEF DIVISION OF LAND DEVELOPMENT DATE

Valdis Jofis 9-2-15
DIRECTOR DATE

St. Augustine Church Site Improvements

Developer:
The Reverend Gerard J. Bowman, Pastor
St. Augustine Catholic Church
5976 Old Washington Road
Elkridge, MD 21075-5335

OWNER:
The Archbishop of Baltimore
Cardinal William H. Keeler
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5976 OLD WASHINGTON ROAD
ELKRIDGE, MD 21075-5335

SDP - 02 69

OWNER:
THE ARCHBISHOP OF BALTIMORE
320 CATHEDRAL STREET
BALTIMORE, MD 21201

PROJECT:
MEMORIAL GARDEN

Revisions

Date

July 17, 2015

Job No.

ST. AUGUSTINE

Checked By:

CDI

Drawn by:

jda

Sheet Title

SECTIONS

Sheet No.

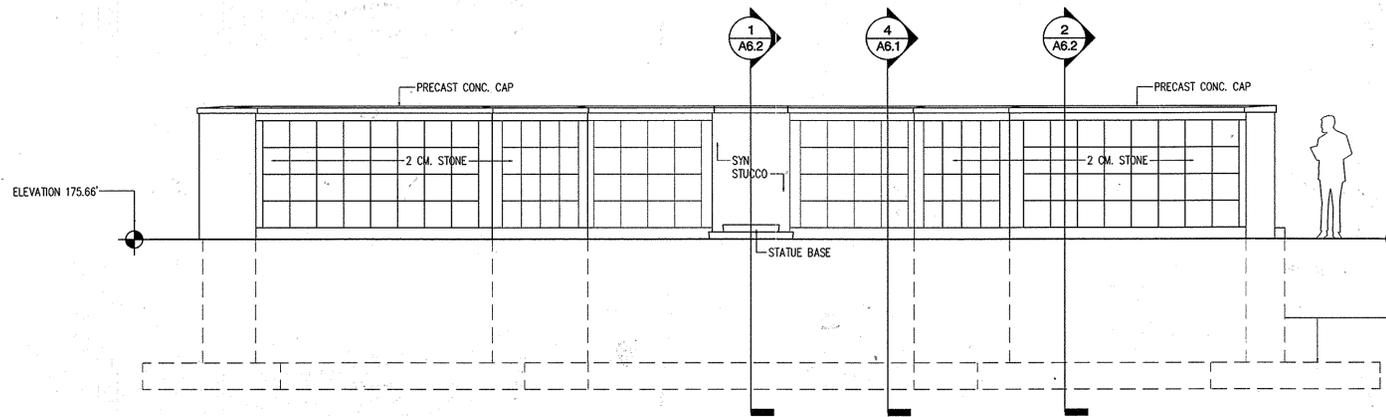
A6.1 (21 of 27)

SECTIONS

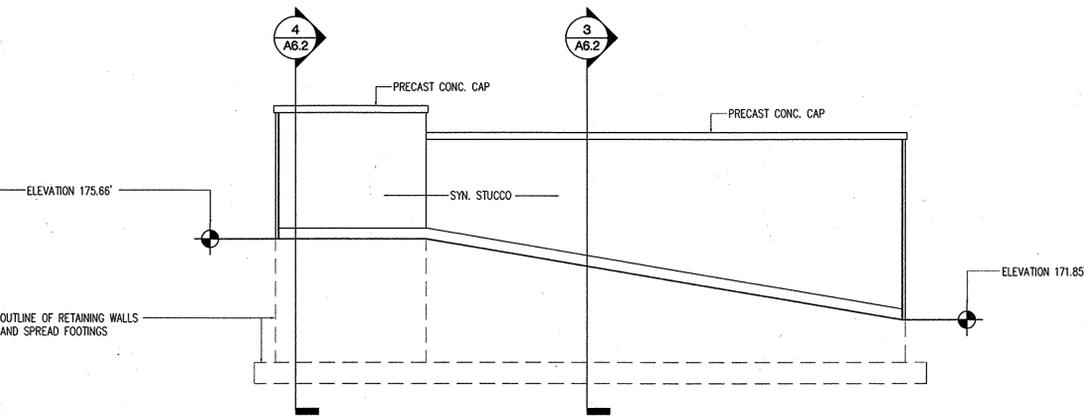
A6.1 (21 of 27)

SDP-02-069

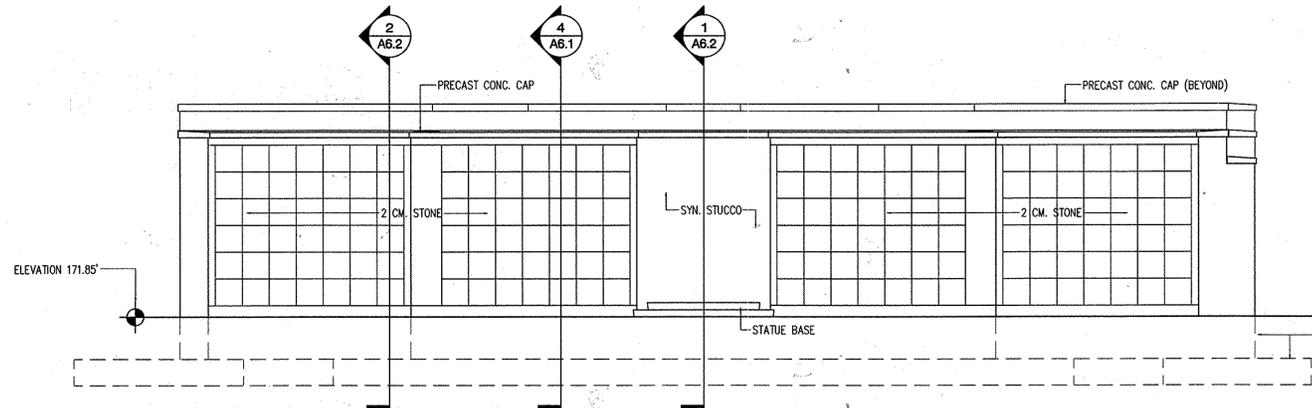
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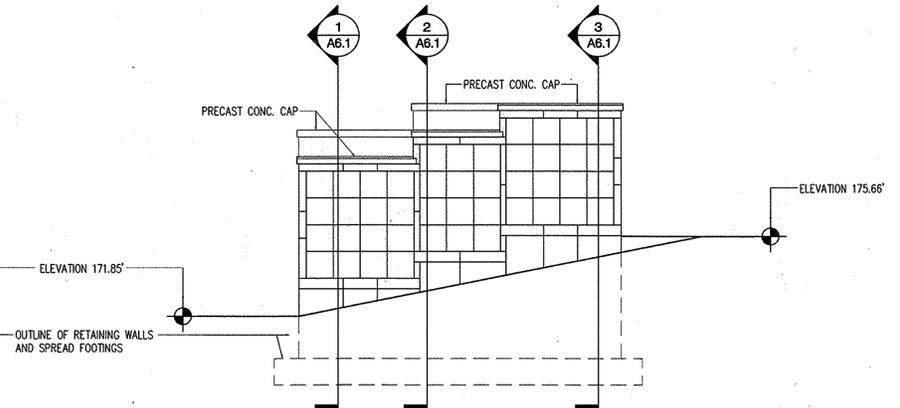
1 EAST ELEVATION
SCALE: 1/4" = 1'-0"



2 NORTH ELEVATION
SCALE: 1/4" = 1'-0"



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



4 NORTH ELEVATION
SCALE: 1/4" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad E. ... 9-2-15
CHIEF DIVISION OF ENGINEERING DEVELOPMENT DATE

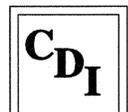
Kurt ... 9-2-15
CHIEF DIVISION OF LAND DEVELOPMENT DATE

Val ... 9-2-15
DIRECTOR DATE

St. Augustine Church Site Improvements

Developer:
The Reverend Gerard J. Bowman, Pastor
St. Augustine Catholic Church
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OWNER:
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Cardinal William H. Keeler
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PREPARED FOR:
ST. AUGUSTINE CATHOLIC CHURCH
5976 OLD WASHINGTON ROAD
ELKRIDGE, MD 21075-5335
SDP - 02 69

OWNER:
THE ARCHBISHOP OF BALTIMORE
320 CATHEDRAL STREET
BALTIMORE, MD 21201

PROJECT:
MEMORIAL GARDEN

Revisions

Date July 17, 2015
Job No. ST. AUGUSTINE
Checked By: CDI
Drawn by: jda

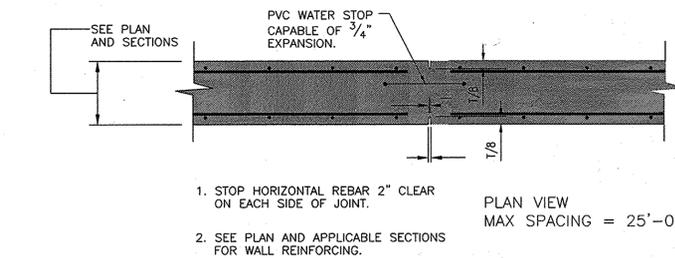
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Sheet Title
ELEVATIONS
Sheet No.
A7 (23 of 27)

MASONRY NOTES:

- REINFORCED MASONRY GROUT (R.M.G.) FOR FILLING CELLS IN C.M.U. WALLS SHALL CONFORM TO: "STANDARD SPECS. FOR MORTAR AND GROUT REINFORCED MASONRY", A.S.T.M. C-476, WITH A SLUMP OF BETWEEN 8" AND 10", AND PLACED NOT MORE THAN 1-1/2 HOURS AFTER WATER HAS FIRST BEEN ADDED (ONE PART CEMENT TO 2-1/2 PARTS FINE AGGREGATE BY VOLUME, DEVELOPING 3000 P.S.I. AT 28 DAYS).
- TYPE "S" MORTAR SHALL BE USED FOR ALL C.M.U. WALLS.
- FILLED CELLS SHALL BE CONTINUOUS FROM FOOTING TO TOP BOND BEAM COURSE IN ANY GIVEN WALL SEGMENT.
- ALL VERTICAL REINFORCEMENT IN FILLED CELLS SHALL BE DOWELED INTO FOOTING AT BOTTOM AND BOND BEAM COURSE AT TOP. THESE DOWELS SHALL BE IN EQUAL SIZE AND QUANTITY AS VERTICAL BAR REINFORCEMENT AND SHALL HAVE A 1'-6" BEND INTO EITHER FOOTING OR BOND BEAM.
- CONTRACTOR SHALL PROVIDE STANDARD GAUGE "DUR-O-WAL" (JOINT REINFORCEMENT) AT 16" O.C. IN ALL C.M.U. WALLS UNLESS SPECIFICALLY NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS. "DUR-O-WAL" SHALL BE PROVIDED IN A WIDTH APPROPRIATE FOR THE OVERALL TOTAL THICKNESS OF THE FINISHED WALL.
- REINFORCING BARS FOR VERTICAL FILLED CELLS SHALL BE LAPPED AS FOLLOWS UNLESS MECHANICAL CONNECTORS CONFORMING TO ACI 530/ASCE 5/TMS 402 SECTION 2.1.8.6.3 ARE UTILIZED.

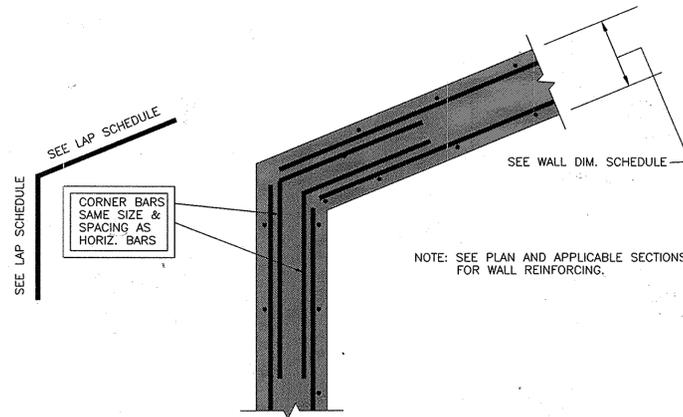
BAR SIZE	LENGTH OF LAP
#4	3'-0"
#5	3'-9"
#6	4'-6"
#7	5'-3"
#8	6'-0"



1 CONCRETE WALL CONTRACTION JOINT
NO SCALE

CONCRETE NOTES:

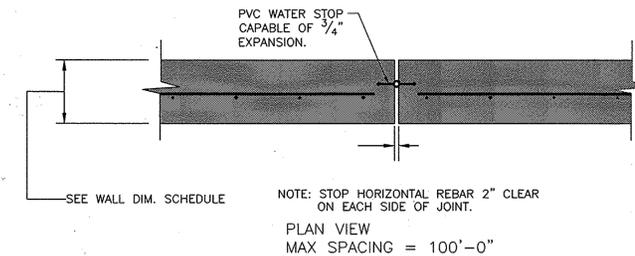
- ALL CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 5" ± 1" AND A MINIMUM 28 DAY COMPRESSIVE STRENGTH AS FOLLOWS:
3000 P.S.I.
3000 P.S.I.
- AIR ENTRAINING AGENTS SHALL BE USED TO PRODUCE 4 1/2% ± 1 1/2% AIR BY VOLUME
- ALL STEEL BAR REINFORCEMENT SHALL BE A.S.T.M. A-615, GRADE 60 U.N.O. ALL BARS USED IN WELDED CAPACITIES SHALL BE A.S.T.M. A-706.
- MAINTAIN MINIMUM CONCRETE COVERAGE FOR REINFORCING STEEL AS INDICATED UNLESS OTHERWISE NOTED IN THE DRAWINGS.
 - 3" CLEAR WHERE CONCRETE IS DEPOSITED DIRECTLY AGAINST EARTH.
 - 2" CLEAR WHERE CONCRETE IS EXPOSED TO EARTH OR WEATHER BUT CAST AGAINST FORMS FOR BARS #6 OR LARGER.
 - 1 1/2" CLEAR WHERE CONCRETE IS EXPOSED TO EARTH OR WEATHER BUT CAST AGAINST FORMS FOR BARS #5 OR SMALLER.
 - 3/4" CLEAR FOR SLABS AND WALLS FORMED ABOVE GRADE AND NOT EXPOSED TO WEATHER.
 - 1-1/2" CLEAR FOR BEAMS AND COLUMNS FORMED ABOVE GRADE AND NOT EXPOSED TO WEATHER.
- UNLESS NOTED OTHERWISE IN THE DRAWINGS, CAST IN PLACE CONCRETE SHALL HAVE THE FOLLOWING TRIM STEEL ADDED AROUND ALL OPENINGS: TWO (2) - #5 BARS (LENGTH OF BARS = LENGTH OF OPENING + 4'-0") ALONG EACH SIDE OF OPENING AND TWO (2) - #5 x 5'-0" DIAGONALLY AT EACH CORNER.
- FLY ASH MAY BE USED AS A DIRECT SUBSTITUTE FOR PORTLAND CEMENT. FLY ASH MUST CONFORM TO ALL ASPECTS OF ASTM C618-05 STANDARD SPECIFICATION FOR FLY ASH. CLASS F OR CLASS C FLY ASH MAY BE USED, HOWEVER, TOTAL LOSS ON IGNITION OF FLY ASH MUST BE 3% OR LESS. FLY ASH MAY BE SUBSTITUTED ON A 1:1 RATIO BY WEIGHT AND ONLY UP TO A 25% REDUCTION IN THE ORIGINAL CEMENT CONTENT. CONCRETE PROPORTIONS SHALL BE SELECTED ON THE BASIS OF TRIAL MIXES CONFORMING TO A.C.I. 211.1.
- SEE ARCHITECTURAL DRAWINGS/SPECIFICATIONS FOR CONCRETE FLOOR/SIDEWALK FINISH REQUIREMENTS.
- ALL EXPOSED CORNERS SHALL HAVE 3/4" CHAMFER U.N.O..
- DESIGN OF CONCRETE STRUCTURAL ELEMENTS IS IN ACCORDANCE WITH ACI 318-11 (BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE)
- RESULTS FOR ALL CONCRETE COMPRESSIVE STRENGTH TESTS SHALL BE AVAILABLE AT THE JOB SITE FOR REVIEW BY THE INSPECTOR
- CONCRETE SUPPLIER TO PROVIDE MIX DATA IN COMPLIANCE WITH ACI 318-11 CHAPTER 5.
- CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR REVIEW WELL IN ADVANCE OF CONCRETE PLACEMENT. CONCRETE MIX DESIGN SHALL INCLUDE ALL STRENGTH DATA NECESSARY TO SHOW COMPLIANCE WITH THE PROJECT SPECS BY EITHER THE TRIAL BATCH OR FIELD EXPERIENCE METHOD AND SHALL BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER.
- WHERE FOOTINGS, WALLS, OR OTHER STRUCTURAL ELEMENTS INTERSECT, CORNER OR TEE, PROVIDE CORNER BARS WITH REQUIRED LAP LENGTHS TO PROVIDE CONTINUITY OF HORIZONTAL STEEL REINFORCING U.N.O.
- MINIMUM LAP AND SPLICE LENGTH FOR A REINFORCEMENT BAR SHALL BE CLASS B PER THE SCHEDULE BELOW AND BASED UPON THE LARGEST BAR UNO. WELDING OF REINFORCEMENT NOT ALLOWED UNLESS APPROVED OTHERWISE.
- PLACE REINFORCEMENT IN THE LOCATIONS SHOWN ON THE DRAWINGS. SUPPORT BARS PLACED IN THE FOOTINGS ON CONCRETE BRICKETS OR BROKEN BRICK OR TILE. SECURE REINFORCEMENT WITH NOT LESS THAN 16 GAUGE ANNEALED WIRE.



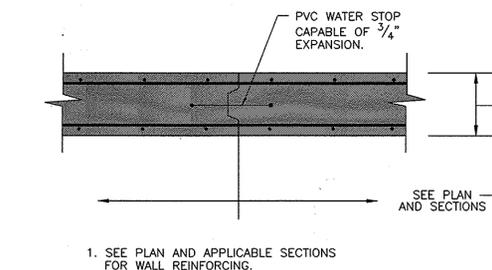
3 TYP. WALL CORNER WALL REINFORCING
NO SCALE

16. MATERIALS SHALL CONSIST OF:

- PORTLAND CEMENT: CONFORM TO TYPE 1, ASTM C-150. ONE BRAND ONLY.
 - AGGREGATES: CONFORM TO ASTM C-33. COARSE AGGREGATE SIZES: NO 57 FOR SECTIONS 4" THICK OR MORE AND NO. 7 FOR ALL OTHER SECTIONS LESS THAN 4" THICK.
 - WATER: CLEAN AND FREE FROM OIL, ACID, ALKALI, ORGANIC MATERIAL, SALTS OR OTHER DELETERIOUS MATERIALS.
 - CONCRETE: READY-MIXED CONFORMING TO ASTM SPECIFICATION C-94.
 - ADMIXTURES: CONFORM TO ASTM C-494.
- FIVE (5) TEST CYLINDERS SHALL BE TAKEN FROM EACH 100 CUBIC YARDS OF CONCRETE, EXCEPT THAT A MINIMUM OF FOUR CYLINDERS SHALL BE TAKEN FOR EACH DAY'S POUR OF LESS THAN 50 CUBIC YARDS. CONCRETE SELECTED FOR THE CYLINDERS SHALL ACCURATELY REPRESENT THE QUALITY OF CONCRETE IN THE POUR BEING TESTED.
 - CONCRETE CYLINDERS SHALL BE TESTED AS FOLLOWS:
 - ONE CYLINDER: TESTED FOR COMPRESSIVE STRENGTH AT AGE SEVEN DAYS.
 - THREE CYLINDERS: TESTED AT AGE 28 DAYS. THESE THREE CYLINDERS CONSTITUTE ONE TEST UNDER THE DEFINITION OF THIS SPECIFICATION.
 - ONE CYLINDER: RESERVE TESTED AT AGE 56 DAYS IF REQUIRED BY ARCHITECT.
 - TESTS OF CONCRETE WILL BE DEEMED SATISFACTORY IF THE FOLLOWING CONDITIONS ARE MET FOR 28 DAY TESTS:
 - NO ONE CYLINDER BREAK OF A TEST IS MORE THAN 500 PSI BELOW THE SPECIFIED STRENGTH.
 - THE AVERAGE OF ANY TWO CYLINDER BREAKS OF A TEST IS NOT LESS THAN 92.5% OF THE DESIGN STRENGTH.
 - THE AVERAGE OF ALL THREE CYLINDER BREAKS OF A TEST IS EQUAL TO, OR GREATER THAN, THE SPECIFIED STRENGTH.
 - FAILURE TO MEASURE UP TO ANY OF THE SPECIFIED CONDITIONS CONSTITUTES FAULTY CONCRETE. UNLESS OTHERWISE DIRECTED BY THE ENG. OF RECORD, FAULTY CONCRETE SHALL BE REMOVED AND REPLACED WITH CONCRETE AS SPECIFIED, AT NO EXPENSE TO THE OWNER. ADDITIONAL TESTS OF FAULTY CONCRETE MAY BE MADE ONLY IF PERMITTED BY THE ENG. OF RECORD, AND AT NO EXPENSE TO THE OWNER. LOAD TEST, IF PERMITTED BY THE ENG. OF RECORD, SHALL BE CONDUCTED IN ACCORDANCE WITH THE LOADING CRITERIA AS REQUIRED BY THE DESIGN OF THE STRUCTURE, AS DETERMINED BY THE ENGINEER OF RECORD.
 - ALL CONCRETE SHALL BE PRODUCED AND DELIVERED WITH THE USE OF EQUIPMENT AND METHODS IN CONFORMITY WITH ALL APPLICABLE PROVISIONS OF ASTM DESIGNATION C94 AND THE FOLLOWING REQUIREMENTS:
 - CONCRETE SHALL BE DISCHARGED WITHIN ONE AND ONE HALF (1-1/2) HOURS AFTER THE CONCRETE IS MIXED.
 - WATER SHALL NOT BE ADDED TO THE CONCRETE AT THE JOB SITE.
 - DEPOSIT CONCRETE AS NEARLY AS PRACTICABLE IN ITS FINAL POSITION TO AVOID SEGREGATION DUE TO REHANDLING OR FLOWING. NO CONCRETE SHALL BE DEPOSITED ON THE WORK THAT HAS PARTIALLY HARDENED OR BEEN CONTAMINATED BY FOREIGN MATERIAL. NOR SHALL RETEMPERED CONCRETE BE USED. IN NO CASE SHALL CONCRETE BE USED WHEN THE ELAPSED TIME AFTER THE ADDITION OF WATER AND CEMENT TO BATCH EXCEEDS 1-1/2 HOURS. ONCE STARTED, CARRY ON PLACEMENT OF CONCRETE AS A CONTINUOUS OPERATION UNTIL THE PLACING OR THE PANEL OF SECTION IS COMPLETED. THE TOP SURFACE SHALL BE FINISHED TO A TRUE PLANE. ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY SUITABLE MEANS AND SHALL BE THOROUGHLY WORKED AROUND THE REINFORCEMENT AND EMBEDDED FIXTURES AND INTO THE CORNERS OF THE FORMS.
 - IN COLD WEATHER (40°F AND FALLING), WATER OR AGGREGATES, OR BOTH, SHALL BE HEATED SUFFICIENTLY TO INSURE THAT THE TEMPERATURE OF THE CONCRETE AT THE TIME OF DELIVERY SHALL BE NOT LESS THAN 55°F. NO DEPENDENCE SHALL BE PLACED ON SALT OR OTHER CHEMICALS FOR THE PREVENTION OF FREEZING. PROTECTION OF THE CONCRETE, MAINTENANCE OF ADEQUATE CURING TEMPERATURES AND PROPER CURING PROCEDURES SHALL BE AS SPECIFIED IN ACI-306 "COLD WEATHER CONCRETING."
 - ADMIXTURES MAY BE USED ONLY WITH THE WRITTEN PERMISSION OF THE ENGINEER OF RECORD. ADMIXTURES CONTAINING CHLORIDE SALTS SHALL NOT BE USED.
 - CONCRETE SHALL BE KEPT CONTINUALLY MOIST FOR A MINIMUM PERIOD OF SEVEN DAYS BY APPLICATION OF CURING COMPOUND.



2 CONCRETE WALL EXPANSION JOINT
NO SCALE



4 CONCRETE WALL CONSTRUCTION JOINT
NO SCALE

BAR SIZE	HOOKED BAR SCHEDULE		
	X	ldh	Y
#3	0'-6"	0'-6"	1'-10"
#4	0'-8"	0'-8"	2'-5"
#5	0'-10"	0'-10"	3'-0"
#6	1'-0"	1'-0"	3'-7"
#7	1'-2"	1'-2"	5'-3"
#8	1'-4"	1'-4"	6'-0"

LAP SPLICE SCHEDULE (CLASS B)	
BAR SIZE	LAP SPLICE DIMENSION (IN.)
#3	1'-10"
#4	2'-5"
#5	3'-0"
#6	3'-7"
#7	5'-3"
#8	6'-0"

DESIGN LOAD INFORMATION

WIND DESIGN DATA:
Basic Wind Speed: 115 MPH (90 MPH - Service)
Wind Importance Factor Iw = 1.0 / Risk Category II
Wind Exposure: C

WALL DESIGN DATA:
Moist Soil Unit Weight: = 120 P.C.F.
At-Rest Pressure (EP) = 60 P.C.F.
(Ka) = 0.5
Passive Pressure (EP) = 150 P.C.F. (minimum value specified in IBC, chapter 18)
(Kp) = 1.25
Coefficient Of Friction (u) = 0.25 (minimum value specified in IBC, chapter 18)
Allowable Soil Bearing Pressure (Q) = 2000 P.S.F. (minimum value specified in IBC, chapter 18)
Cohesion (C) = 0
Assembly Surcharge Top of Wall = 100 P.S.F.
ASTM A615 Grade 60 Reinforcement
28-Day Compressive Strength of Concrete (fc) = 3000 P.S.I.
Minimum Safety Factor for Overturning Stability = 2.0
Minimum Safety Factor for Sliding Stability = 2.0

RETAINING WALL GENERAL NOTES

- RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, WACEL, OR EQUIVALENT) CERTIFIED SOILS TECHNICIAN.
- 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 CODE PENETROMETER TEST ASTM STP-399.
- 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.
- FOR "CRITICAL" WALLS, ONE SOIL BORING SHALL BE REQUIRED EVERY 100' 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.

BUILDING CODES

2015 INTERNATIONAL BUILDING CODE
2015 LIFE SAFETY CODE
2009 NATIONAL STANDARD PLUMBING CODE

PROFILE OF FOOTINGS INDICATED ON DRAWINGS REPRESENT MINIMUM CONCRETE DIMENSIONS. ALL FOOTINGS TO BE EARTH-FORMED UNLESS SPECIFICALLY NOTED OTHERWISE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 9-2-15
CHIEF DIVISION OF ENGINEERING DEVELOPMENT DATE

[Signature] 9-2-15
CHIEF DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9-2-15
DIRECTOR DATE

St. Augustine Church Site Improvements

Developer:
The Reverend Gerard J. Bowman, Pastor
St. Augustine Catholic Church
5976 Old Washington Road
Elkridge, MD 21075-5335

OWNER:
The Archbishop of Baltimore
Cardinal William H. Keeler
320 Cathedral Street
Baltimore, MD 21201

Columbarium Designers Inc.

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800-964-4020 x800

PREPARED FOR:
ST. AUGUSTINE CATHOLIC CHURCH
5976 OLD WASHINGTON ROAD
ELKRIDGE, MD 21075-5335

SDP-02 69

OWNER:
THE ARCHBISHOP OF BALTIMORE
320 CATHEDRAL STREET
BALTIMORE, MD 21201

PROJECT:
MEMORIAL GARDEN

Revisions

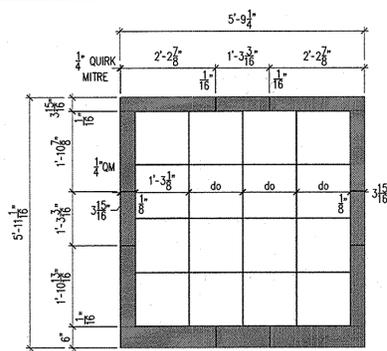
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Date July 17, 2015
Job No. ST. AUGUSTINE
Checked By: CDI
Drawn by: jda

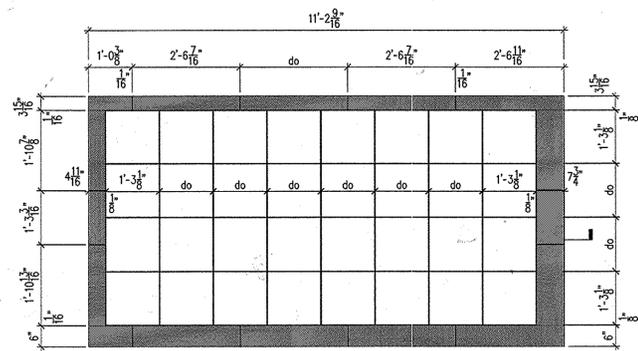
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STRUCTURAL NOTES & DETAILS

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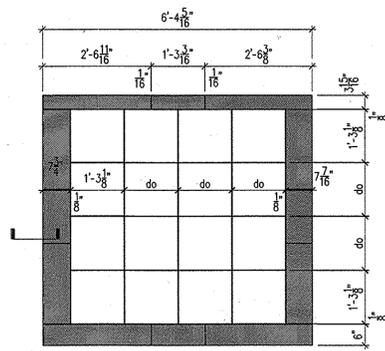
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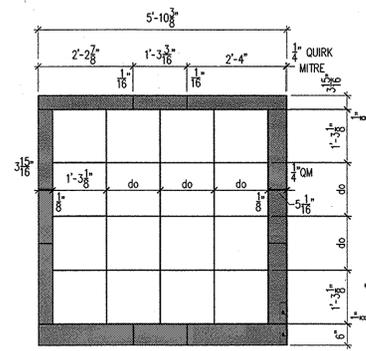
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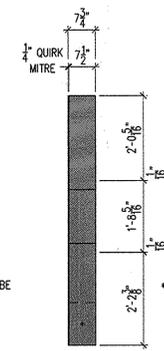
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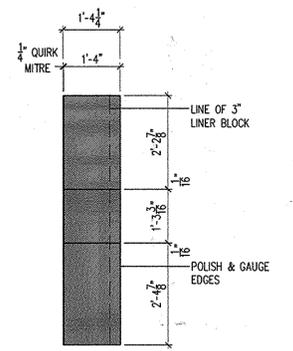
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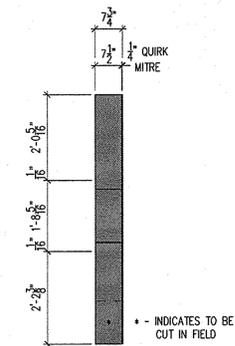
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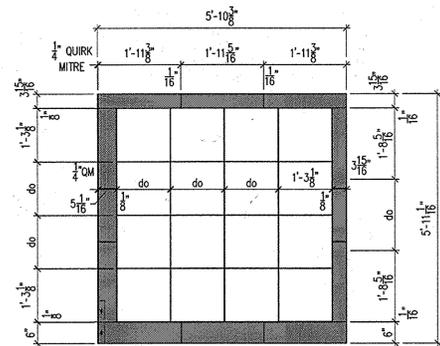
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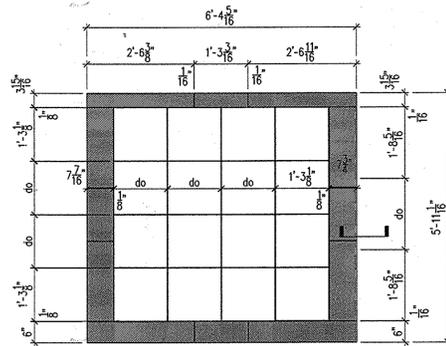
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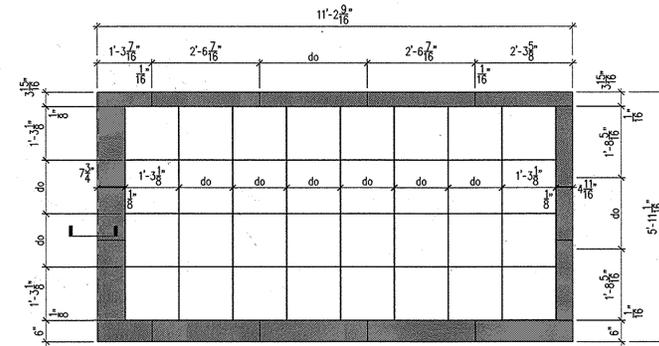
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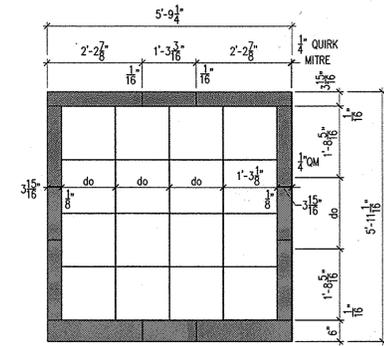
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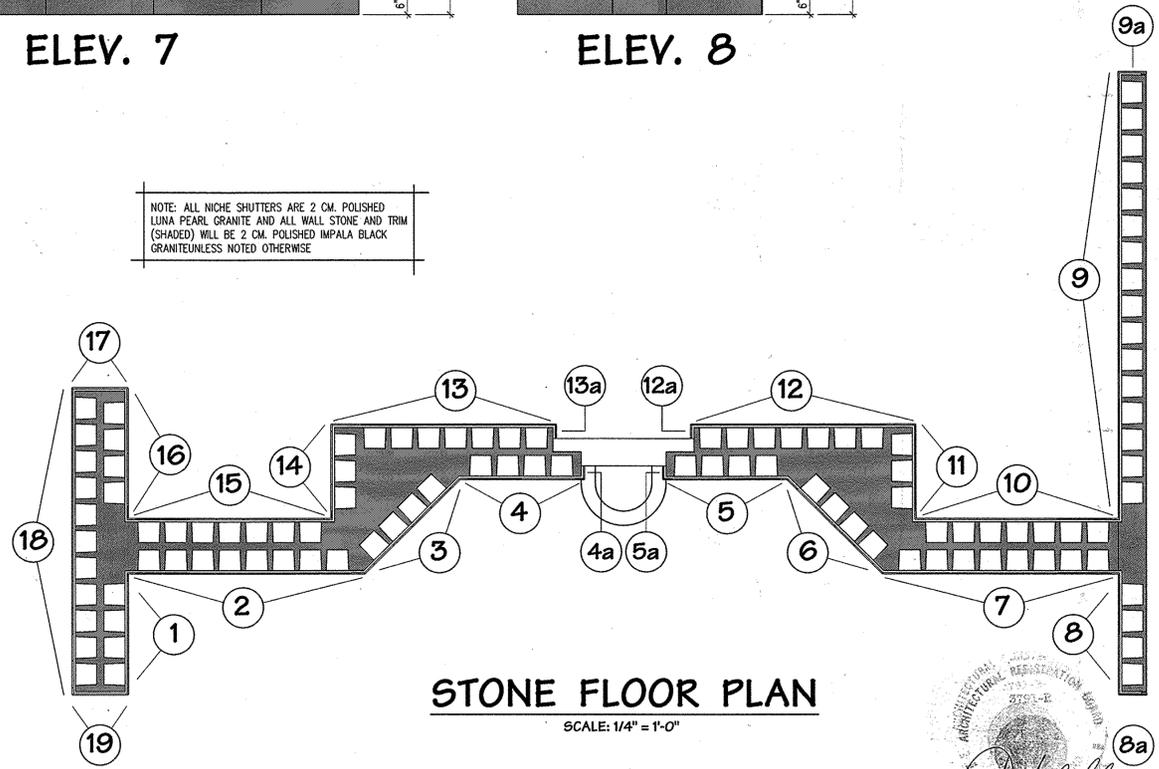


ELEV. 7



ELEV. 8

NOTE: ALL NICHE SHUTTERS ARE 2 CM. POLISHED LUNA PEARL GRANITE AND ALL WALL STONE AND TRIM (SHADED) WILL BE 2 CM. POLISHED IMPALA BLACK GRANITE UNLESS NOTED OTHERWISE



STONE FLOOR PLAN

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 9-2-15
CHIEF DIVISION OF ENGINEERING DEVELOPMENT DATE

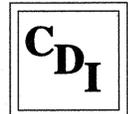
[Signature] 9-2-15
CHIEF DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9-2-15
DIRECTOR DATE

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St. Augustine Catholic Church
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OWNER:
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PREPARED FOR:
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5976 OLD WASHINGTON ROAD
ELKCRIDGE, MD 21075-5335
SDP - 02 69

OWNER:
THE ARCHBISHOP OF BALTIMORE
320 CATHEDRAL STREET
BALTIMORE, MD 21201

PROJECT:
MEMORIAL GARDEN

Revisions

Date July 17, 2015
Job No. ST. AUGUSTINE
Checked By: CDI
Drawn by: jda

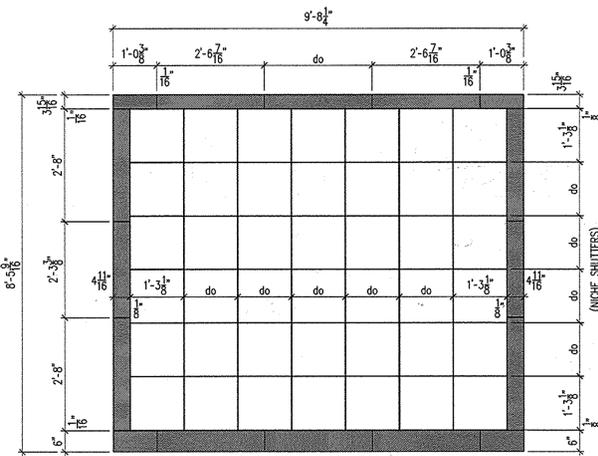
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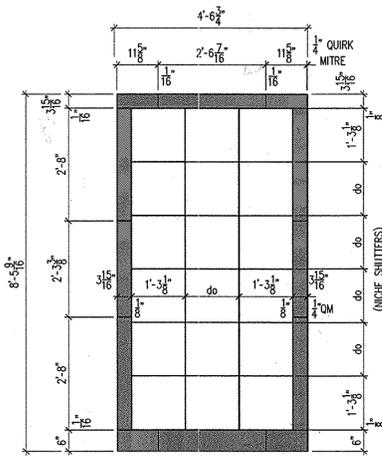
STONE FLOOR PLAN & ELEVATIONS

G1 (25 of 27)

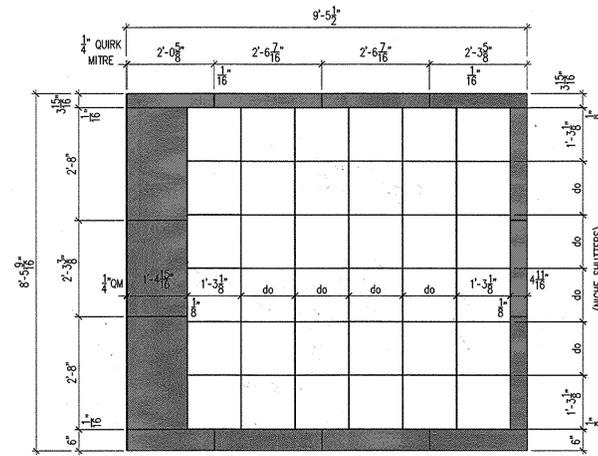
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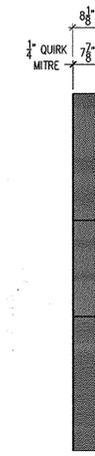
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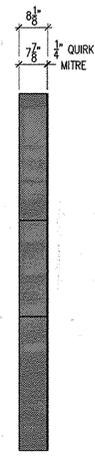
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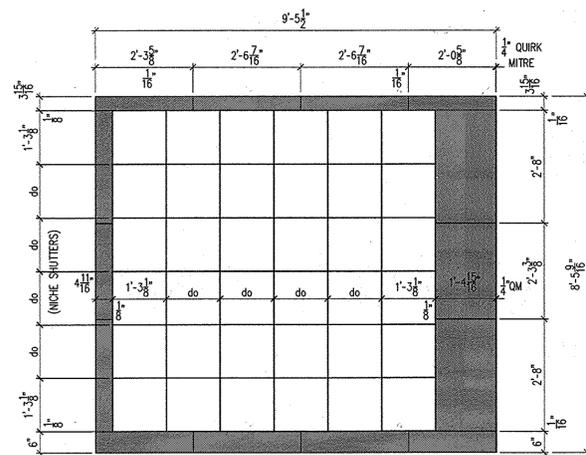
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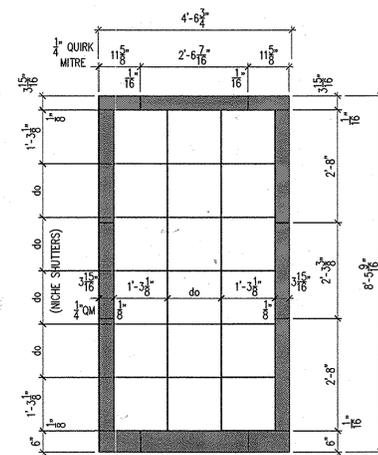
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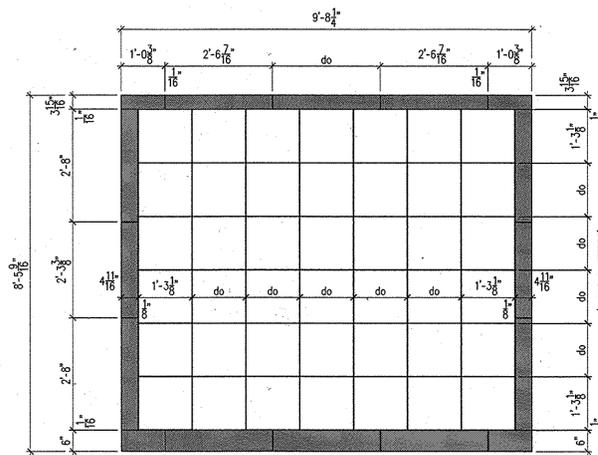
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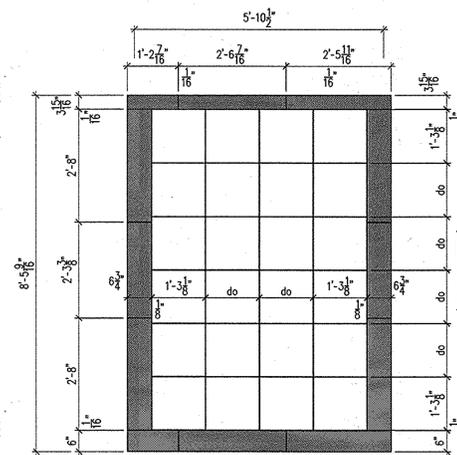
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ELEV. 14

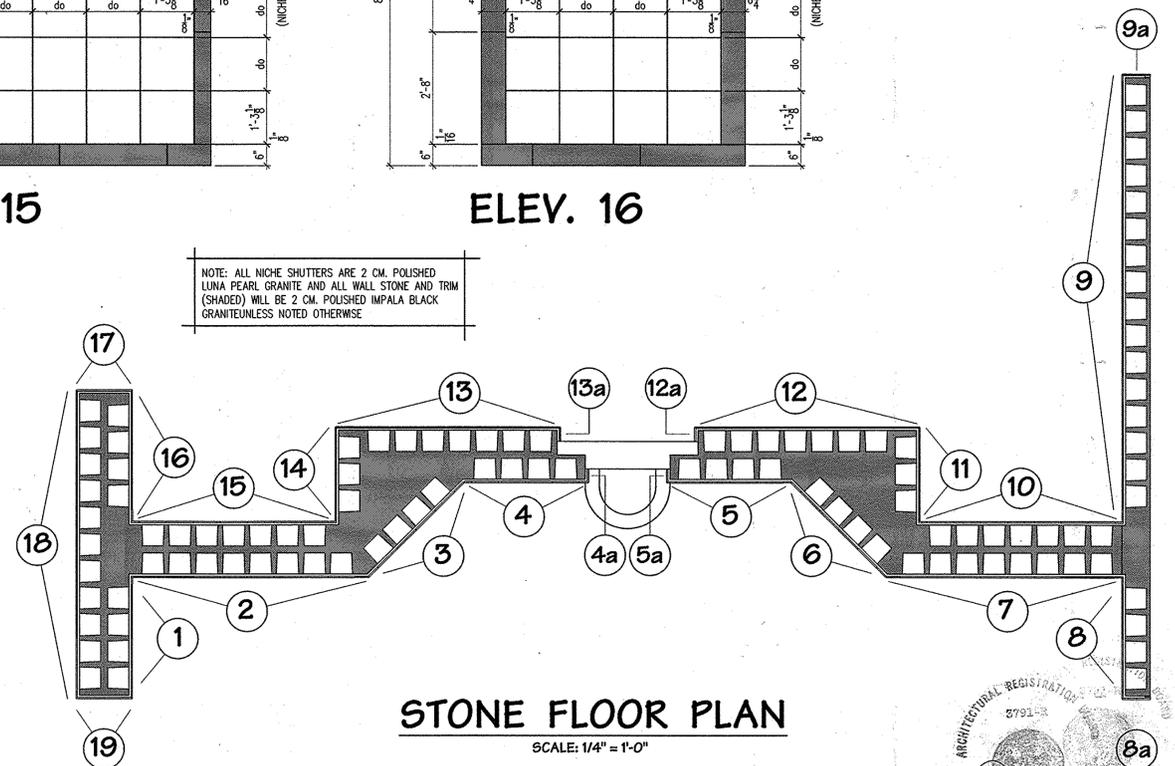


ELEV. 15



ELEV. 16

NOTE: ALL NICHE SHUTTERS ARE 2 CM. POLISHED LUNA PEARL GRANITE AND ALL WALL STONE AND TRIM (SHADED) WILL BE 2 CM. POLISHED IMPALA BLACK GRANITE UNLESS NOTED OTHERWISE



STONE FLOOR PLAN
SCALE: 1/4" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Clark 9-2-15
CHIEF DIVISION OF ENGINEERING DEVELOPMENT DATE

Kate DeLuca 9-2-15
CHIEF DIVISION OF LAND DEVELOPMENT DATE

Valerie Jolic 9-2-15
DIRECTOR DATE

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SDP - 02 69 SDP - 02 69

PROJECT:
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Revisions

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Checked By: CDI
Drawn by: jda

ARCHITECTURAL REGISTRATION
27931-2

Valerie Jolic

Sheet Title
STONE FLOOR PLAN & ELEVATIONS

Sheet No.
G2 (26 of 27)

