			QUA	NTITIES				
		AS-BUILT						
ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER /SUPPLIER				
8" D.I.P.	471 LF		-					
6" D.I.P.	17.5 LF							
1⁄8 H.B.	3 EA.		-					
1⁄32 H.B.	3 EA.							
8 X 6 FHT	1 EA.							
2 X 8 TAPPING SLEEVE & VALVE	1 EA.							
8" VALVE	1 EA.							
4" D.I.P.	10 LF							
6" VALVE	2 EA.							
6" FIRE HYDRANT	1 EA.							
6" CAP	1 EA.							
8" CAP	1 EA.							
8" X 6" TEE	1 EA.							
NAME OF UTILITY	CONTRACTOR:							

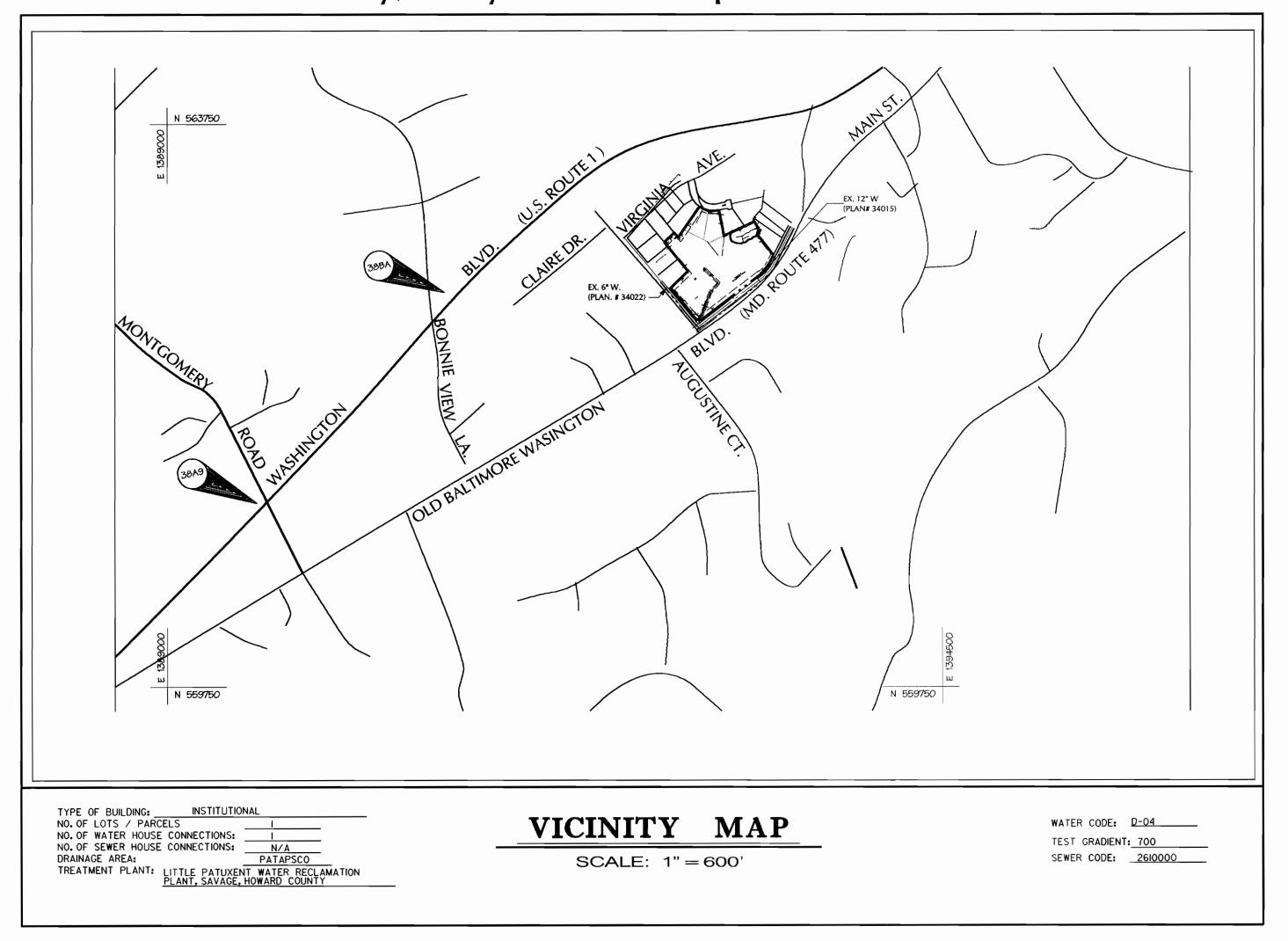
SHEET INDEX						
SHEET No.	DESCRIPTION					
1	COVER SHEET					
2	PLAN & PROFILE					
3	EROSION AND SEDIMENT CONTROL DETAILS					

St. Augustine Catholic Church Water Plan

Contract No.

44-3864-D

Howard County, Maryland Department of Public Works



GENERAL NOTES

GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.

 CLEAR ALL UTILITIES BY A MINIMUM OF 6° CLEAR ALL POLES BY 2'-0° MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE APPANISHED.
- HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES. ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL CORRDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- 6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME I
- AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.

 WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE VERIFIED BY THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

 CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

 STATE HIGHWAY ADMINISTRATION (410) 531-5533

 BALTIMORE GAS & ELECTRIC CO. CONTRACTOR SERVICES (410) 850-4620

 BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL (410) 291-4607

 MISS UTILITY 1-800 257-7777

 COLONIAL PIPELINE CO. (410) 549-4120
- - COLONIAL PIPELINE CO. (410) 549-4120 BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - (410) 313-4900 BELL ATLANTIC- I-800-446-5266
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- IO. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- II. GENERAL NOTES (SEE ATTACHED)
- 12. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT 410-313-2450 AT LEAST FIVE (5) WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADSFOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18,114(a) OF THE HOWARD COUNTY CODE.

PART II – WATER

- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
 TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE

- NOTED.
 VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH
 THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
 FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS.
 ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE
 WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN
 ACCORDANCE WITH SECTION 1003 OF THE STANDARD SPECIFICATIONS.
 THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER
 SYSTEM.

- SYSTEM.

 7. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.

 8. ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH A.W.W.A. SPECIFICATION C-153 DUCTILE IRON COMPACT FITTINGS, 3 INCH THROUGH 12 INCH FOR WATER AND OTHER LIQUIDS.

 9. ALL EXISTING VALVES TO BE CLOSED WHEN CONNECTION TO THE SYSTEM IS MADE.

BENCHMARK

DESCRIPTION

#38A9-DISC SET IN CONCRETE N 561056.341 E 1389634.145

ELEVATION = 223.4179.3 FT. EAST OF THE NORTH BOUND CURB ROUTE 1
65± FT. SOUTHERLY OF THE INTERSECTION OF MONTGOMERY RD.

#38BA-4" ALUMINUM CAP ON IRON ROD N 562553.293 E 1390967.941

ELEVATION = 166.939

9.5 FT. WEST OF SOUTHBOUND CURB ROUTE 1 100' NORTHERLY OF THE INTERSECTION OF BONNE VIEW LA.

REVIEWED FOR NATURAL RESOURCE CONSERVATION SERVICE

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND AS SHOWN ON THIS CONTRACT.

Environmental Professionals

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

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

Fax 296 4705



	DESIGN BY:				
MARY MARINE	BIS				
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NAL EMILIE	6-19-00	BY	NO.	REVISION	DATE
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COVER SHEET

600 SCALE MAP NO. 41

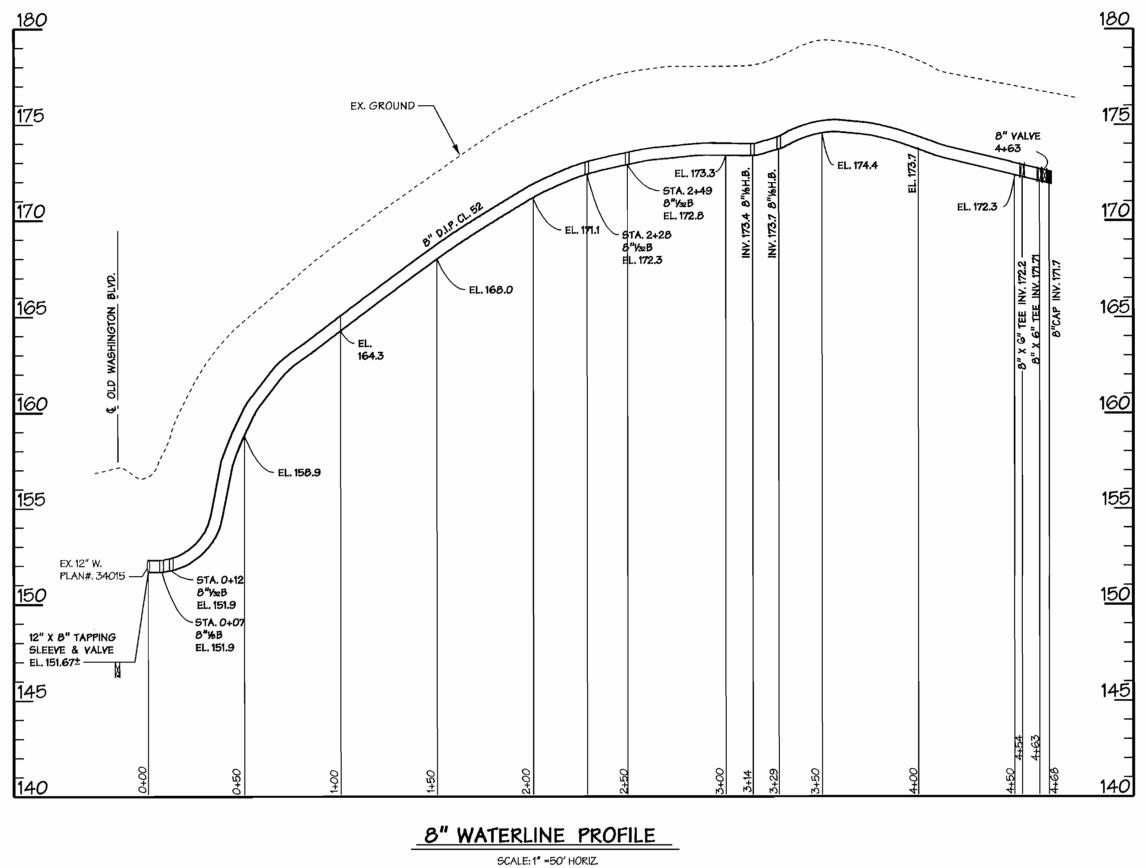
_BLOCK NO. <u>17</u>

St. Augustine Catholic Church HOWARD COUNTY MARYLAND

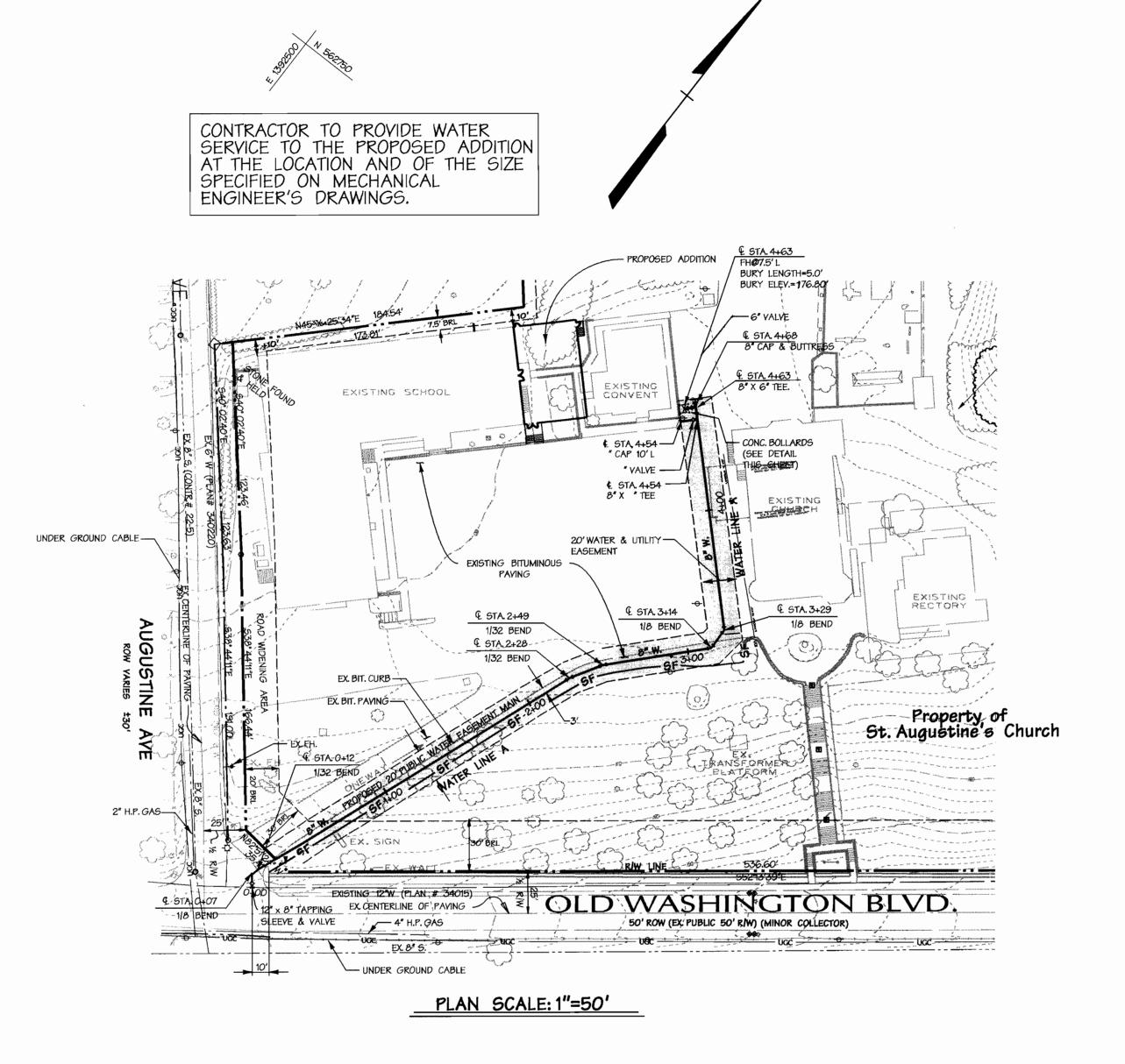
SCALE 1'' = 50'SHEET 1 OF 3

CONTRACT NO. 44-3864-D

APPURTENANCE SCHEDULE **APPURTENANCE** NORTHING W.L. STATION WATER LINE **EASTING** 12" X 8" TAPPING SLEEVE & VALVE SEE PLAN SEE PLAN STA. 0+00 562,340.5 1,392,776.7 8" 1/8 H.B. STA. 0+07 1,392,777.6 8" 1/32 H.B. 562,344.8 STA. 0+12 8" 1/32 H.B. 562,547.6 1,392,854.2 STA. 2+28 8" 1/32 H.B. 562,565.9 1,392,865.2 STA. 2+49 STA. 3+14 1,392,909.7 562,613.2 STA. 3+29 8" 1/8 H.B. 1,392,911.2 562,626.6 8"X 6" FHT TEE. STA. 4+63 562,686.7 1,392,849.0 FIRE HYDRANT STA. 4+17 15' RT. 562,697.3 1,392,859.6 8" X 6" TEE STA. 4+54 562,715.8 1,392,819.9 562,708.6 1,392,812.9 STA. 4+54 10' LT. STA. 4+68 562,723.1 1,392,812.6



1"=5' YERT.

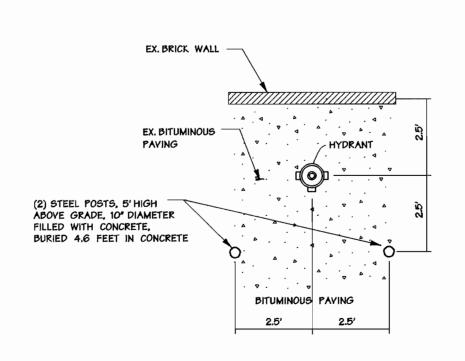


ANY EXCAVATED TRENCH MATERIAL WILL BE PLACED ON UPPER SIDE OF WATER LINE TRENCH DURING CONSTRUCTION.

ANY SILT FENCE REMOVED DURING WATER CONSTRUCTION

WILL BE REPLACED AT THE END OF THE DAY.

THE CONTRACTOR IS TO EXERCISE ALL DUE CARE IN ORDER TO LIMIT DRAINAGE TO EXISTING PAVING AND CURBS. PAVING CUTS ARE TO BE REPAIRED IN ACCORDANCE WITH STANDARD DETAIL G. 401



IO' DIAMETER STANDARD WEIGHT
STEEL PIPE, O.D.= 10.75',
I.D.= 10.02', WALL THICK.= .365'
FILLED WITH 3500 PSI CONCRETE
PAINTED IN COLOR SELECTED BY
THE OWNER

EX. BITUMINOUS PAYING

CONCRETE FILL
UNDISTURBED
EARTH
EXCAVATION
CRUSHED STONE

SPECIFICATIONS: HOWARD COUNTY (LATEST)
CONCRETE: SHA MIX NO. 3, fc= 3500 PSI
STEEL: ASTM A 36

Bollard Detail

Not To Scale

DEVELOPER'S CERTIFICATION:

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

CONSERVATION DISTRICT."

ENGINEER'S CERTIFICATION:

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

_BLOCK NO. <u>17</u>

SIGNATURE OF ENGINEER PRINT NAME BELOW SIGNATURE

DATE

THIS DESELOPMENT PLAN IS APPEARATION SERVATION DISTRICT.

HOWARD S.CO. DATE

THOWARD S.CO.

DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

CHIEF - BUREAU OF UTILITIES - DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

CHIEF - DEVELOPMENT ENGINEERING DIVISION - DATE

Daft · McCune · Walker

Daft · McCune · Walker, Inc.

A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals



DESIGN BY:					
BIS					
DRAWN BY:			-		PLAN
ADL			-		PF
CHECKED BY:					
JUR					
DATE:					
6-19-00	BY	NO.	REVISION	DATE	600 SCALE MAP NO. 41

SIGNATURE OF DEVELOPER PRINT NAME BELOW SIGNATURE

> PLAN & WATER PROFILE

St. Augustine
Catholic Church
HOWARD COUNTY MARYLAND

CONTRACT NO. 44-3864-D

2

SCALE

1"=50'

SHEET

2 OF 3

Topsoil Specification

FOR SEDIMENT CONTROL /STABILIZATION PURPOSES

21.0 STANDARD AND SPECIFICATIONS

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

Construction and Material Specifications

on the plans.

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

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

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slags, coarse fragments, gravel sticks, roots, trash, and other materials larger 1 1/2 inch in diameter.

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

iii. Where 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 | - Vegetative Stabilization Methods and

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

d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes 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 in Vegetative Stabilization Methods and

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slop Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled which have been previously established. shall be maintained, albeit 4* - 8* higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4* - 8* layer and lightly compacted to a minimum thickness of 4*. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or

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.

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.

<u>SOIL AMENDMENTS:</u> IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1. PREFERRED - APPLY 2 TONS PER ACRES 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./1000 SQ. 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 (1.4 LBS./1000 SQ.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./1000 SQ. FT.) OF WEEPING LOYEGRASS. 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. (3) -SEED WITH 60 LBSJACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL

MULCHING - APPLY 1½ TO 2 TONS PER ACRE (70 - 90 LBG/1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATIONS USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GALMOOD SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GALMOOD SQ. FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.

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./1000 SQ. FT.)

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 THRU OCTOBER 15, SEED WITH 2% BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.), FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS, PER ACRE OF WEEPING LOYEGRASS (107 LBS, 11000 SQ, FT.), FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28 PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING - APPLY 11/2 TO 2 TONS PER ACRE (70 - 90 LBS./1000 SQ. 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.

Sequence of Construction

MEASURES AND STABILIZE.

2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AND STABILIZE. 3. WHILE CONSTRUCTING UTILITIES THE LIMIT-OF -DISTURBANCE SHALL INCLUDE ONLY THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED AND STABILIZED IN ONE WORK DAY. 4. STABILIZE ALL AREAS IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS. 5. UPON APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, REMOVE ALL EROSION AND SEDIMENT CONTROL

IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 7. SITE ANALYSIS: TOTAL AREA OR SITE ±7.9 ACRES AREA DISTURBED AREA TO BE ROOFED OR PAYED 0.19 ACRES AREA TO BE VEGETATIVELY STABILIZED 0.07 ACRES

TOTAL CUT O CUBIC YARDS TOTAL FILL CUBIC YARDS OFF-SITE WASTE/BORROW AREA LOCATION WASTE -8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE. 9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF

INSPECTIONS, AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY

PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1.

FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

A SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES,

4. ALL SEDIMENT TRAPS/BASING SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND

THEIR PERIMETER IN ACCORDANCE WITH YOL. 1, CHAPTER 12, OF THE "HOWARD COUNTY DESIGN

5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN

EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS (SEC. 51), SODS (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

6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED

ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL

B. FOURTEEN DAYS AS TO ALL OTHER DISTURBED OF GRADED AREAS ON THE PROJECT SITE.

CONSTRUCTION (313-1855).

AND REVISIONS THERETO.

MANUAL", STORM DRAINAGE.

STABILIZATION SHALL BE COMPLETED WITHIN:

10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. 11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER

TOPSOIL SPECIFICATIONS

PERMANENT/TEMPORARY SEEDING NOTES

SEDIMENT CONTROL GENERAL NOTES

SEQUENCE OF CONSTRUCTION

DEVELOPER'S CERTIFICATION:

CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER

SIGNATURE OF ENGINEER

PRINT NAME BELOW SIGNATURE

PRINT NAME BELOW SIGNATUR

ENGINEER'S CERTIFICATION:

OF THE HOWARD SOIL CONSERVATION DISTRICT."

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING

THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS

A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS

TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION

PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING

36' MINIMUM LENGTH FENCE POST. 10 MAXIMUM CENTER TO CENTER F DRIVEN A MINIMUM OF 16' INTO GROUND - 16' MINIMUM HEIGHT OF GEOTEXTILE CLASS F *WHERE DOUBLE STAKED SILT FENCE IS CALLED FOR 5' MAXIMUM CENTER TO CENTER SHALL APPLY. 36' MINIMUM FENCE -FENCE POST SECTION FILTER CLOTH -MINIMUM 20' ABOVE - Undisturbed Ground IN THE THE TAX THE TIES TO EMBED GEOTEXTILE CLASS F-- FENCE POST DRIVEN INTO THE GROUND MINIMUM OF 16' INTO CROSS SECTION STANDARD SYMBOL _____SF____ JOINING TWO ADJACENT SILT - DOUBLE STAKED CONSTRUCTION SPECIFICATIONS 1. FENCE POSTS SHALL BE A MINIMUM OF 36' LONG DRIVEN 16' MINIMUM INTO THE GROUND, WOOD POSTS SHALL BE 11/2" x 11/2" SQUARE (MINIMUM) CUT, OR 17/4" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD, STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHTING NOT LESS THAN 1.00 POUND PER LINEAR FOOT 2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR

FLOW RATE 0.3 GAL FT/MIN (MAX) TEST: MSMT 322 FILTERING EFFICIENCY 3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS. 4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% OF THE FABRIC HEIGHT

50 LBS/IN (MIN.)

20 LBS/IN (MIN.)

GEOTEXTILE CLASS F: TENSILE STRENGTH

TENSILE MODULUS

E - 15 - 5

TEST: MSMT 509

TEST: MSMT 509

SILT FENCE

Not To Scale

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

CHIEF - BURBAU OF UTILITIES - DATE

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING

Daft · McCune · Walker, Inc.

A Team of Land Planners, 200 East Pennsylvania Avenue Landscape Architects, Engineers, Surveyors & Environmental Professionals



DESIGN BY:

BIS			
DRAWN BY:			
ADL CHECKED BY:			
DATE:			
6–19–00	BY	NO.	REVISION

SEDIMENT & EROSION CONTROL DETAILS

St. Augustine Catholic Church HOWARD COUNTY MARYLAND

1'' = 50'SHEET 3 OF 3

SCALE

CONTRACT NO. 44-3864-D

Towson, Maryland 21286 410 296 3333 Fax 296 4705

_BLOCK NO. <u>17</u>

DATE

Mon Jun 19 16:47:58 2000 n:\99040\99040w3

			QUAN	NTITIES			
			AS-BUILT				
ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER /SUPPLIER			
8" D.I.P.	471 LF	468.0	CL-52	GRIFFIN PIPE PRODUCTS			
6" D.I.P.	17.5 LF	17.5	CL-52	dy du lu			
1⁄8 H.B.	3 EA.	3.0EA.	DI 350	UNION FOUNDRY			
1⁄32 H.B.	3 EA.	~					
8 X 6 FHT	1 EA.	1.0 EA	DI 350	UNION FOUNDRY			
12 X 8 TAPPING SLEEVE & VALVE	1 EA.	1.0EA	01 350	MUELLER CO.			
8" VALVE	1 EA.	1.0EA	GATE	tr n			
		~	~				
4" D.I.P.	10 LF		·				
6" VALVE	2EA.	2.0 EA,	CATE	MUELLER CO.			
6" FIRE HYDRANT	1 EA.	1.0 EA	A423	MUEUER CO.			
6" CAP	1 EA.	1.0 EA.	DI 350	UNION FOUNDRY			
8" CAP	1 EA.	1.0EA	DI 350	at A			
8" X 6" TEE	1 EA .	1.0 EA	DI 350	it it			
NAME OF UTILITY	CONTRACTOR:						
SURVEY AND DRA	FTING DIVISION	AS-BUILT DA	TE:				

SHEET INDEX						
SHEET No.	DESCRIPTION					
1	COVER SHEET					
2	PLAN & PROFILE					
3	EROSION AND SEDIMENT CONTROL DETAILS					

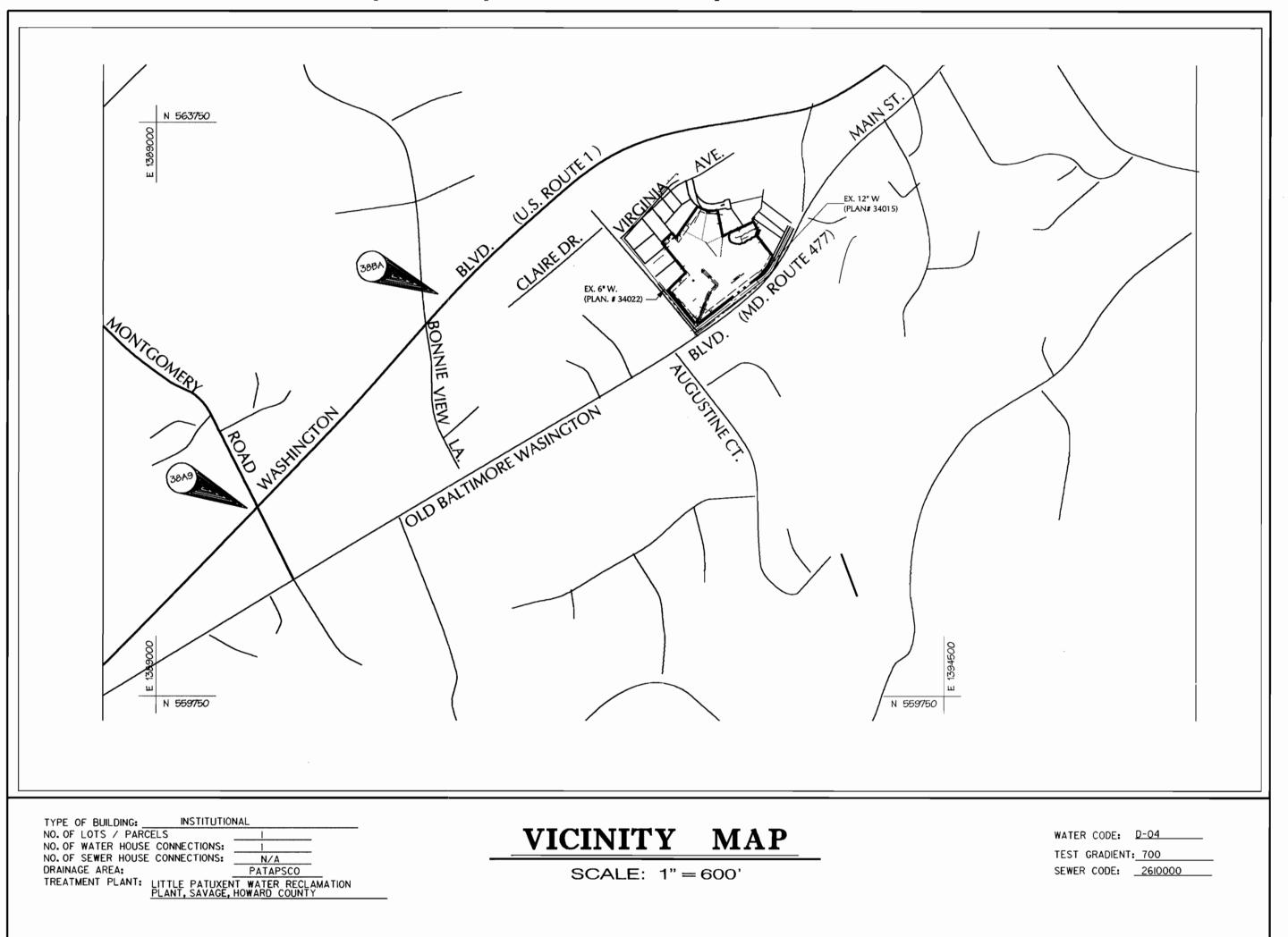
St. Augustine Catholic Church Water Plan

Contract No.

44-3864-D

Howard County, Maryland

Department of Public Works



GENERAL NOTES

GENERAL NOTES

- I. APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
 2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
 3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
 4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
 5. CLEAR ALL UTILITIES BY A MINIMUM OF 6° CLEAR ALL POLES BY 2′-0° MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES.
 ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES. ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR, THE CONTRACTOR SHALL
- 6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME

CORRDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.

- AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.

 7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

 8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

 STATE HIGHWAY ADMINISTRATION (410) 531-5533

 BALTIMORE GAS & ELECTRIC CO. "CONTRACTOR SERVICES (410) 850-4620

 BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL (410) 291-4607

 MISS UTILITY 1-800 257-7777

 COLONIAL PIPELINE CO. (410) 549-4120
- - COLONIAL PIPELINE CO. (410) 549-4120
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS (410) 313-4900 BELL ATLANTIC- 1-800-446-5266
- 9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- IO. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- II. GENERAL NOTES (SEE ATTACHED)
- 12. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT 410-313-2450 AT LEAST FIVE (5) WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADSFOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.

- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
 TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE

- NOTED.
 VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
 FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS.
 ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1003 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER
- 7. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- 8. ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH A.W.W.A. SPECIFICATION C-153 DUCTILE IRON COMPACT FITTINGS, 3 INCH THROUGH 12 INCH FOR WATER AND OTHER LIQUIDS.
 9. ALL EXISTING VALVES TO BE CLOSED WHEN CONNECTION TO THE SYSTEM IS MADE.

BENCHMARK

DESCRIPTION

#38A9-DISC SET IN CONCRETE E 1389634.145 ELEVATION = 223.4179.3 FT. EAST OF THE NORTH BOUND CURB ROUTE 1

#38BA-4" ALUMINUM CAP ON IRON ROD N 562553.293 E 1390967.941

ELEVATION = 166.939

9.5 FT. WEST OF SOUTHBOUND CURB ROUTE 1 100' NORTHERLY OF THE INTERSECTION OF BONNE VIEW LA.

65± FT. SOUTHERLY OF THE INTERSECTION OF MONTGOMERY RD.

REVIEWED FOR NATURAL RESOURCE CONSERVATION SERVICE

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND AS SHOWN ON THIS CONTRACT.

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

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



	DESIGN BY:				
	BIS				-
	DRAWN BY:				
	ADL				
	CHECKED BY:				
:	JWR				
	DATE:	KC.I	1	ASBUILT CONDITIONS APPED TO PLAN	12/16/00
	6–19–00	BY	NO.	REVISION	DATE
		-			

COVER SHEET

BLOCK NO. 17

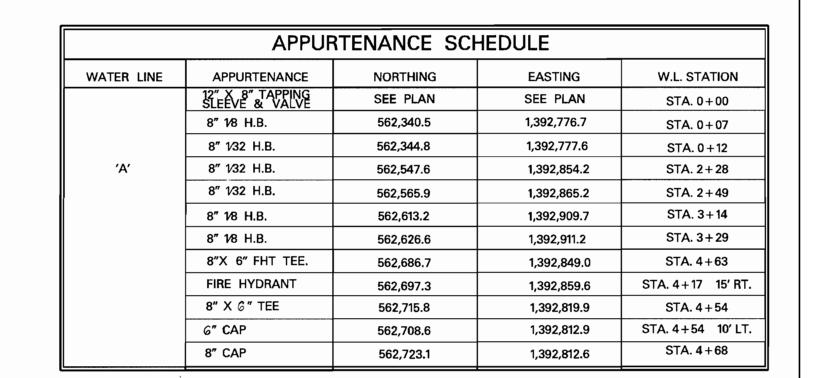
600 SCALE MAP NO. 41

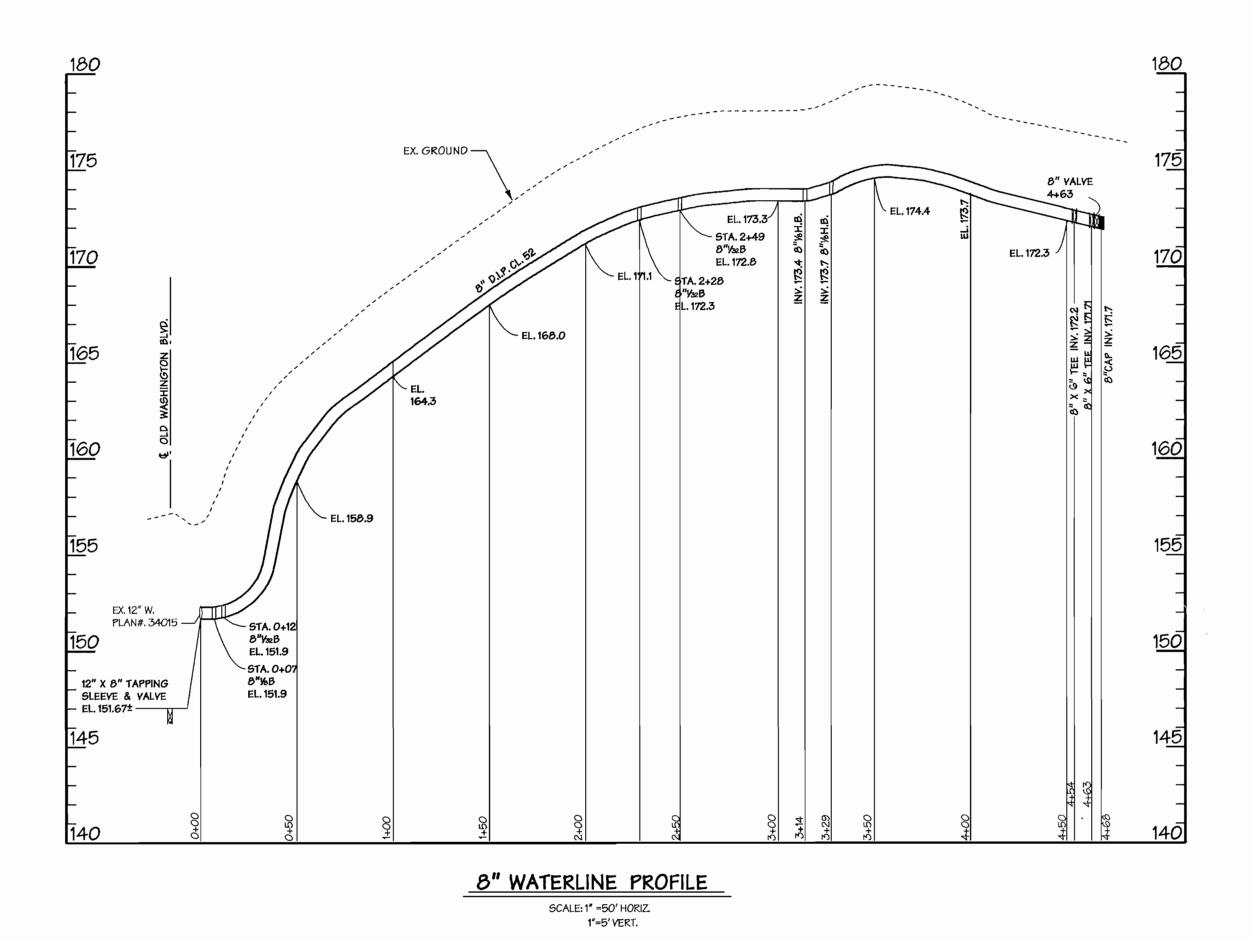
St. Augustine Catholic Church HOWARD COUNTY MARYLAND

SCALE 1'' = 50'SHEET

1 OF 3

CONTRACT NO. 44–3864–D





CONTRACTOR TO PROVIDE WATER SERVICE TO THE PROPOSED ADDITION AT THE LOCATION AND OF THE SIZE SPECIFIED ON MECHANICAL ENGINEER'S DRAWINGS. BURY LENGTH=5.0' BURY ELEV .= 176.80 EXISTING SCHOOL (SEE DETAIL UNDER GROUND CABLE-20' WATER & UTILITY-EASEMENT St. Augustine's Church EXISTING 12W (PLAN # 34015) 12' x 8" TAPPING EX CENTERLINE OF PAVING OLD WASHINGTON BLVD SLEEVE & VALVE 4" H.P. QAS - UNDER GROUND CABLE

PLAN SCALE: 1"=50'

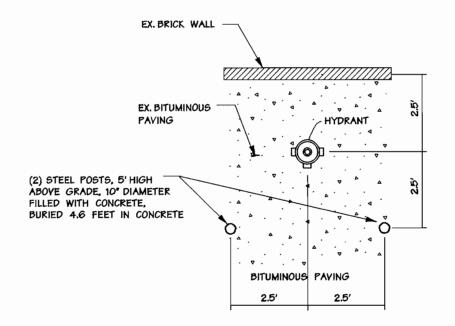
ANY EXCAVATED TRENCH MATERIAL WILL BE PLACED ON UPPER SIDE OF WATER LINE TRENCH DURING CONSTRUCTION.

THE CONTRACTOR IS TO EXERCISE ALL DUE CARE IN ORDER TO LIMIT DRAINAGE TO EXISTING PAVING AND CURBS PAVING CUTS ARE TO BE REPAIRED IN ACCORDANCE

ANY SILT FENCE REMOVED DURING WATER CONSTRUCTION

WILL BE REPLACED AT THE END OF THE DAY.

WITH STANDARD DETAIL G. 401



STEEL PIPE, O.D.= 10.75", I.D.= 10.02", WALL THICK.= .365" FILLED WITH 3500 PSI CONCRETE PAINTED IN COLOR SELECTED BY THE OWNER - EX. BITUMINOUS PAYING CONCRETE FILL JEXCAVATION ! SPECIFICATIONS: HOWARD COUNTY (LATEST) CONCRETE: SHA MIX NO. 3, fc= 3500 PSI STEEL: ASTM A 36

Bollard Detail

Landscape Architects,

Engineers, Surveyors &

Environmental Professionals

Not To Scale

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

ENGINEER'S CERTIFICATION:

_BLOCK NO. <u>17</u>

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

SIGNATURE OF ENGINEER PRINT NAME BELOW SIGNATURE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

CHIEF - BUREAU OF UTILITIES - DATE

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

Daft · McCune · Walker, Inc. A Team of Land Planners. 200 East Pennsylvania Avenue

Towson, Maryland 21286 410 296 3333 Fax 296 4705



DESIGN BY: BIS RAWN BY: ADL CHECKED BY: JWR K.C.T | 1 | ASBUILT CONDITIONS ADDED TO PLAN 12/16/00 6-19-00 DATE 600 SCALE MAP NO. 41 BY NO. REVISION

PLAN & WATER PROFILE

St. Augustine Catholic Church

CONTRACT NO. 44-3864-D

HOWARD COUNTY MARYLAND

Mon Jun 19 16:47:10 2000 n:\99040\99040w2

SCALE

1'' = 50'

SHEET

2 OF 3

Topsoil Specifications

21.0 STANDARD AND SPECIFICATIONS

TOPSOIL Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose Purpose

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

I. This practice is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

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

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slags, coarse fragments, gravel sticks, roots, trash, and other materials larger 1 1/2 inch in diameter.

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified. iii. Where 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

II. For sites having disturbed areas under 5 acres:

operations as described in the following procedures.

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

d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes 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, Slop Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4* - 8* higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4* - 8* layer and lightly compacted to a minimum thickness of 4*. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

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 ACRES 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./1000 SQ.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 (1.4 LBS./1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31 SEED WITH 60 LBG. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBG. PER ACRE (.05 LBS./1000 SQ.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. (3) -SEED WITH 60 LBS/JACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/JACRE WELL

MULCHING - APPLY 11/2 TO 2 TONS PER ACRE (70 - 90 LBS./1000 SQ.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/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES & FEET OR HIGHER, USE 348 GALLONS

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM

VEGETATIVE COVER IS NEEDED.

<u>SEEDBED PREPARATION</u> - 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./1000 SQ. FT.)

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 THRU OCTOBER 15, SEED WITH 21/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ. FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28 PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.

MULCHING - APPLY 11/2 TO 2 TONS PER ACRE (70 - 90 LBS./1000 SQ.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.11000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT. OR HIGHER, USE 348 GAL PER ACRE

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

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY

CONSTRUCTION (313-1855). 2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

AND REVISIONS THERETO. 3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A. SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES,

PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1. B. FOURTEEN DAYS AS TO ALL OTHER DISTURBED OF GRADED AREAS ON THE PROJECT SITE. 4. ALL SEDIMENT TRAPS/BASING SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL.1, CHAPTER 12, OF THE "HOWARD COUNTY DESIGN

MANUAL", STORM DRAINAGE. 5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS (SEC. 51), SODS (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 OR SITE ±7.9 ACRES AREA DISTURBED ACRES AREA TO BE ROOFED OR PAVED 0.19 ACRES AREA TO BE VEGETATIVELY STABILIZED 0.07 ACRES CUBIC YARDS TOTAL CUT

TOTAL FILL OFF-SITE WASTE/BORROW AREA LOCATION WASTE -8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF LITILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE

9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROYAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE

UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. 11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED

Sequence of Construction

1. OBTAIN A GRADING. _ 2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AND STABILIZE, _ 3. WHILE CONSTRUCTING UTILITIES THE LIMIT-OF -DISTURBANCE SHALL INCLUDE ONLY THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED AND STABILIZED IN ONE WORK DAY. 4. STABILIZE ALL AREAS IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS. 5. UPON APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, REMOVE ALL EROSION AND SEDIMENT CONTROL MEASURES AND STABILIZE. ______ 3

TOPSOIL SPECIFICATIONS

PERMANENTITEMPORARY SEEDING NOTES

SEDIMENT CONTROL GENERAL NOTES

SEQUENCE OF CONSTRUCTION

DEVELOPER'S CERTIFICATION:

CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER PRINT NAME BELOW SIGNATURE

SIGNATURE OF DEVELOPER PRINT NAME BELOW SIGNATURE

ENGINEER'S CERTIFICATION:

OF THE HOWARD SOIL CONSERVATION DISTRICT."

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING

THE PROJECT ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS

A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS

36" MINIMUM LENGTH FENCE POST, 10' MAXIMUM CENTER TO CENTER DRIVEN A MINIMUM OF 16" INTO GROUND WHERE DOUBLE STAKED SILT FENCE IS CALLED FOR 5' MAXIMUM CENTER TO CENTER SHALL APPLY. 36' MINIMUM FENCE-PERSPECTIVE VIEW POST LENGTH FENCE POST SECTION FILTER CLOTH -MINIMUM 20° ABOYE EMBED GEOTEXTILE CLASS F-- FENCE POST DRIVEN A A MINIMUM OF 8" VERTICALLY YILL INTO THE GROUND MINIMUM OF 16' INTO STANDARD SYMBOL —— SF ——— JOINING TWO ADJACENT SILT FENCE SECTIONS - DOUBLE STAKED SILT FENCE CONSTRUCTION SPECIFICATIONS 1, FENCE POSTS SHALL BE A MINIMUM OF 36' LONG DRIVEN 16' MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 16" x 16" SQUARE (MINIMUM) CUT, OR 1%" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD, STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHTING NOT LESS THAN 1.00 POUND PER LINEAR FOOT. 2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F: TEST: MSMT 509

50 LBS/IN (MIN.) 20 LBS/IN (MIN.) TEST: MSMT 509 TENSILE MODULUS 0.3 GAL FT/MIN (MAX) TEST: MSMT 322 FILTERING EFFICIENCY TEST: MSMT 322 3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.

4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% OF THE FABRIC HEIGHT

TENSILE STRENGTH

SILT FENCE

Not To Scale

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

South Berny 6-22-00

CHIEF - BUREAU OF UTILITIES - DATE

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

Daft·McCune·Walker, Inc. A Team of Land Planners, 200 East Pennsylvania Avenue

Landscape Architects,

Engineers,Surveyors &

Environmental Professionals



BIS			
DRAWN BY:			
ADL			
CHECKED BY:			
JAIR			
DATE:			
6-19-00	BY	NO.	

DESIGN BY:

	SEDIMENT & EROSION CONTROL DETAILS	
ATE	600 SCALE MAP NO. 41 BLOCK NO. 17	

St. Augustine Catholic Church HOWARD COUNTY MARYLAND

CONTRACT NO. \44-3864-D

SHEET 3 OF 3

SCALE

1'' = 50'

Mon Jun 19 16:47:58 2000 n:\99040\99040w3

DATE

Towson, Maryland 21286 410 296 3333 Fax 296 4705

REVISION

DATE | 600 SCALE MAP NO. <u>41</u>