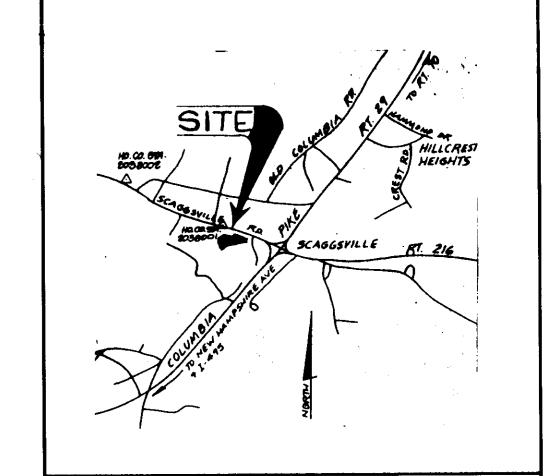
SITE DEVELOPMENT PLAN

ST. FRANCIS OF ASSISI MISSION WORSHIP AND PARISH CENTER

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND



SITE ANALYSIS

AREA OF PARCEL PRESENT ZONING

RR-DEO

PROPOSED USE BUILDING COVERAGE

RELIGIOUS FACILITY 12,070 SF (6.4% OF SITE)

6699 SF

67 SPACES*

12.47 ACRES (543,406 SF)

MAIN ASSEMBLY AREA # OF PARKING SPACES REQUIRED • 10 SPACES/1000 SQUARE FEET

OF PARKING SPACES PROVIDED

71 SPACES INCLUDING 3 HC SPACES

PAVED PARKING LOT AREA

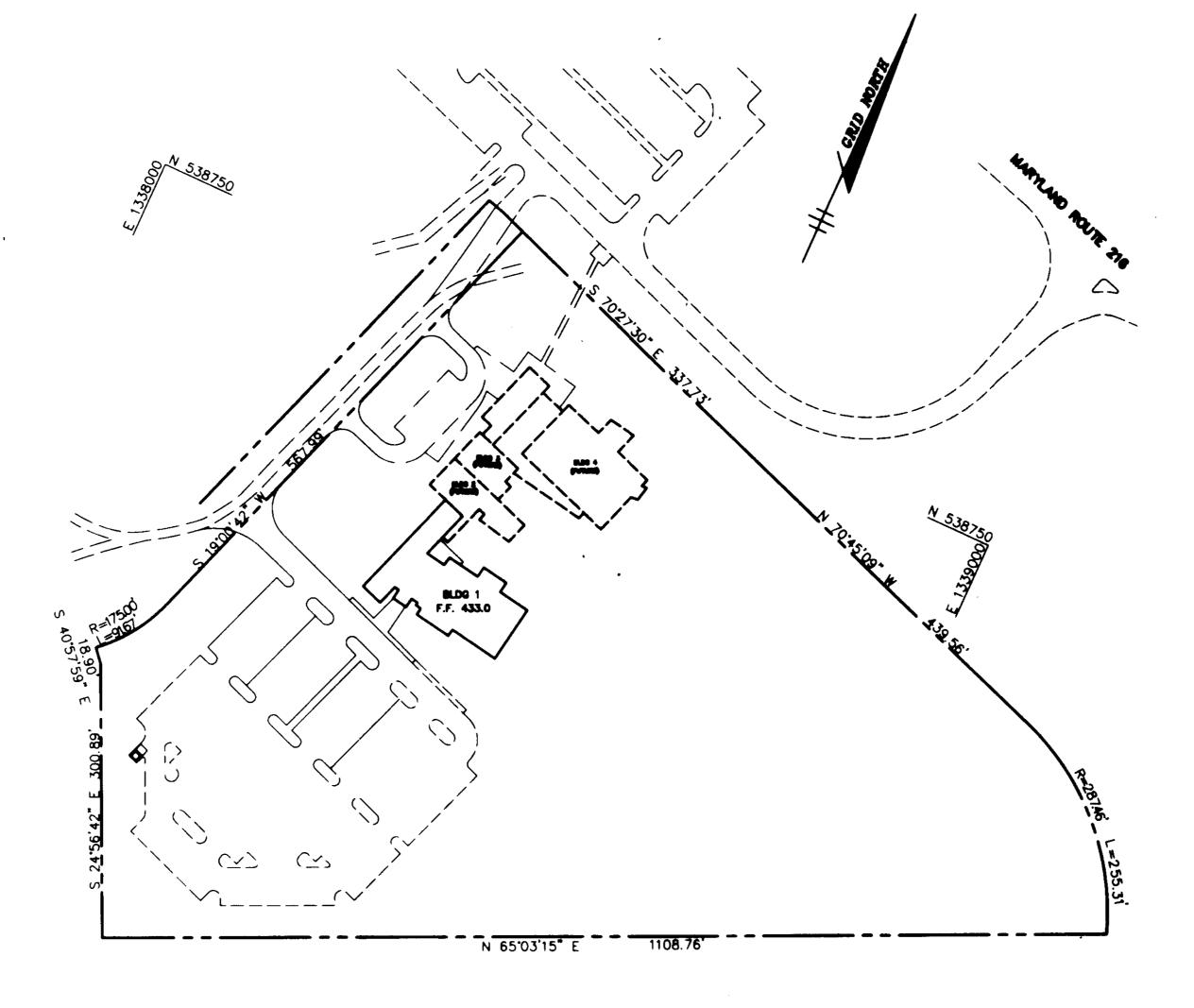
0.70 ACRES (30,492 SF)

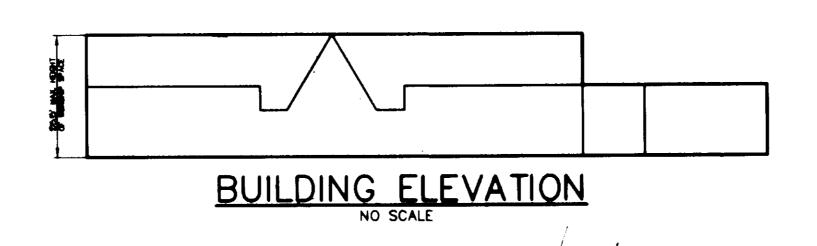
* PER ZONING REGULATIONS SECTION 133

SHEET INDEX DESCRIPTION TITLE SHEET 2 SITE DEVELOPMENT PLAN SEDIMENT CONTROL PLAN AND DRAINAGE AREA MAP STORM DRAIN PROFILES, NOTES AND DETAIL CHEET PROFILES NOTES AND DETAILS NOTES AND DETAILS LANDSCAPING PLAN

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY RIEMER MUEGGE & ASSOC. DATED MAY 1994.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
- ON-SITE WATER IS PRIVATE.
- 9. ON-SITE SOWER IS PRIVATE.
- THE STORMWATER MANAGEMENT FACILITY PROPOSED FOR THIS SITE IS A RETENTION-TYPE PRIVATE FACILITY TO BE MAINTAINED BY THE OWNER.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECCESSARY 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. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
- 12. THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY RIEMER MUEGGE & ASSOCIATES, INC. DATED AUGUST , 1995.
- THE GEOTECHNICAL STUDY FOR STORMWATER MANAGEMENT ON THIS PROJECT WAS PREPARED BY GEOTECH ENGINEERS, INC. DATED AUGUST 11, 1995.
- 14. THE BOUNDARY SURVEY FOR THIS PROJECT WAS PREPARED BY RIEMER MUEGGE & ASSOCIATES DATED
- SUBJECT PROPERTY ZONED RR-DEO PER 10-18-93 COMPREHENSIVE ZONING PLAN.
- 16. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
- SEE DEPARTMENT OF PLANNING AND ZONING FILE NOS. BA 90-57E, BA 95-12E, F-91-178, PERC. APPLICATION NO. A49926, AND STATE WATER APPROPRIATIONS PERMIT NO. H095G009(01).
- → 18. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT CO ELEVATIONS.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN
- ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO TIBO.
- BA 95-12E WAS A SPECIAL EXCEPTION PETITION FOR THIS CHURCH TO BE BUILT ON LAND ZONED AS RR-DEO AND WAS GRANTED ON AUGUST 3, 1995.
- GROUNDWATER APPROPRIATIONS FERMIT FOR THIS SITE HIS SEEN ISSUED UNDER FERMIT #HOOSGOOD(OI) AND EXPIRED ON AUGUST I, 1997, IF WATER IS NOT PUT INTO USE. OTHERWISE IT EXPIRES ON AUGUST 1, 2007.
- UNDER SECTION 10.808 (b)(2), THE FOLLOWING DEVELOPMENT IS EXEMPT FROM THE REQUIREMENTS OF THE SUBTITUE, EASED ON FILING OF DECLARATION OF INTENT STATING THAT ON A SINGLE LOT THE CLEARING OF FORESTS WILL BE LESS THAN
- THE JOINT PERMIT TRACKING NUMBER FOR DISTURBANCE TO THE WETLANDS AND BUFFERS 10 1906GEOGA.
- ETIGHORY HOHW, (S) (IXA) DII. DI NOITOSE SVIAW OT TESUPS A COI-DE-TW GRADING OR REMOVAL OF VEGETATIVE COVER WITHIN THE 25 FOOT WETLAND BUFFER AND THE 75 FOOT STREAM BUFFER, WAS ATTROVED BY THE PLANNING DIRECTOR ON WAY 20, 1906.





BENCHMARKS

5/8" REBAR & CAP N 538272.2961

BENCHMARK #2 5/8" REBAR & CAP N 538387.2307

E 1,338,950.5244

EL. 418.38

E 1,338,203.4633 EL. 441.80

> OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED STORMMATER HANAGEMENT FACILITY

WET DETENTION POND

ROUTINE MAINTENANCE

- Facility shall be inspected annually and after major storms.
 Inspections should be performed during wet weather to determine if the pond is functioning properly.
- Top and side slopes of the embankment shall be moved a minimum of two (2) times a year, once in June and once in September. Other side slopes and maintenance access should be moved as
- Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the pond as well as riprap outlet area shall be repaired as soon as it is noticed.

NON-ROUTINE HAINTENANCE

- Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components should be inspected during routine maintenance operations.
- Sediment should be removed when its accumulation significantly reduces the design storage, interfere with the function of the riser, when deemed necessary for aesthetic reasons, or when deemed necessary by the Howard County's Department of Public

AREA APPROVED: FOR PRIVATE WATER AND PRIMATE SEWERAGE TITLE BYSTEMS BY THE HOWARD COUNTY HEALTH DEPARTMENT. byliko) county Health officer STAC ADDRESS CHART STREET ADDRESS PARCEL 11505 SCAGGSVILLE RD 337, LOT 1 SOFER MOFERIN

6051.02

DATE APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND CHIEF. DEVELOPMENT ENGINEERING DIVISION CHIEF, DIVISION OF LAND DEVELOPMENT TC AND RESEARCH DATE NO. REVISION

AS BUILT CERTIFICATE

OWNER/DEVELOPER ARCHDIOCESE OF BALTIMORE

ST. FRANCIS OF ASSISI CHURCH 11445 SCAGGSVILLE RD. FULTON, MD 20759 (410) 792-0470

ST. FRANCIS OF ASSISI MISSION PHASE 1

WORSHIP AND PARISH CENTER PARCEL 337 LOT 1

ZONED RR-DEO TAX MAP 46 HOWARD COUNTY, MARYLAND 5th ELECTION DISTRICT

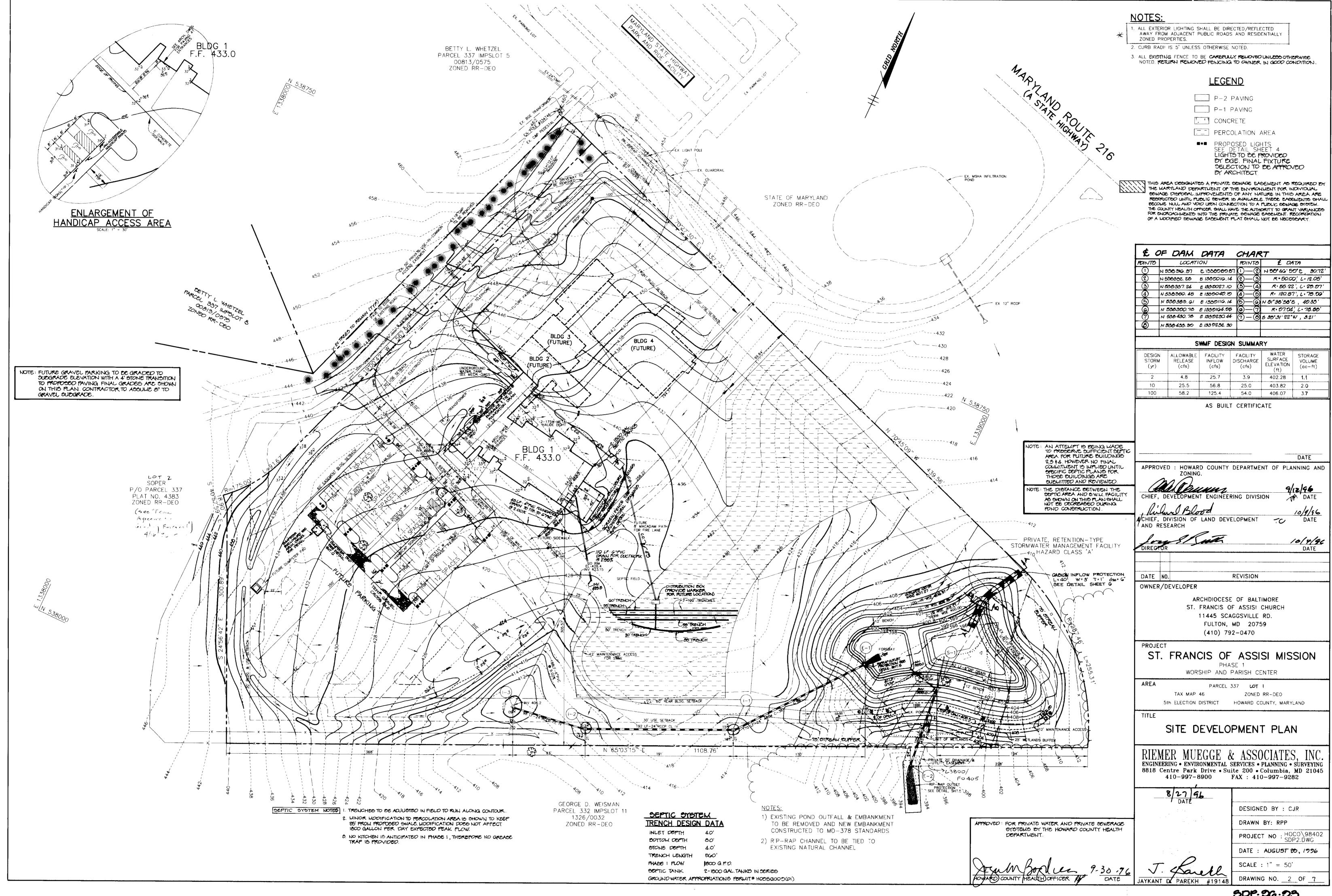
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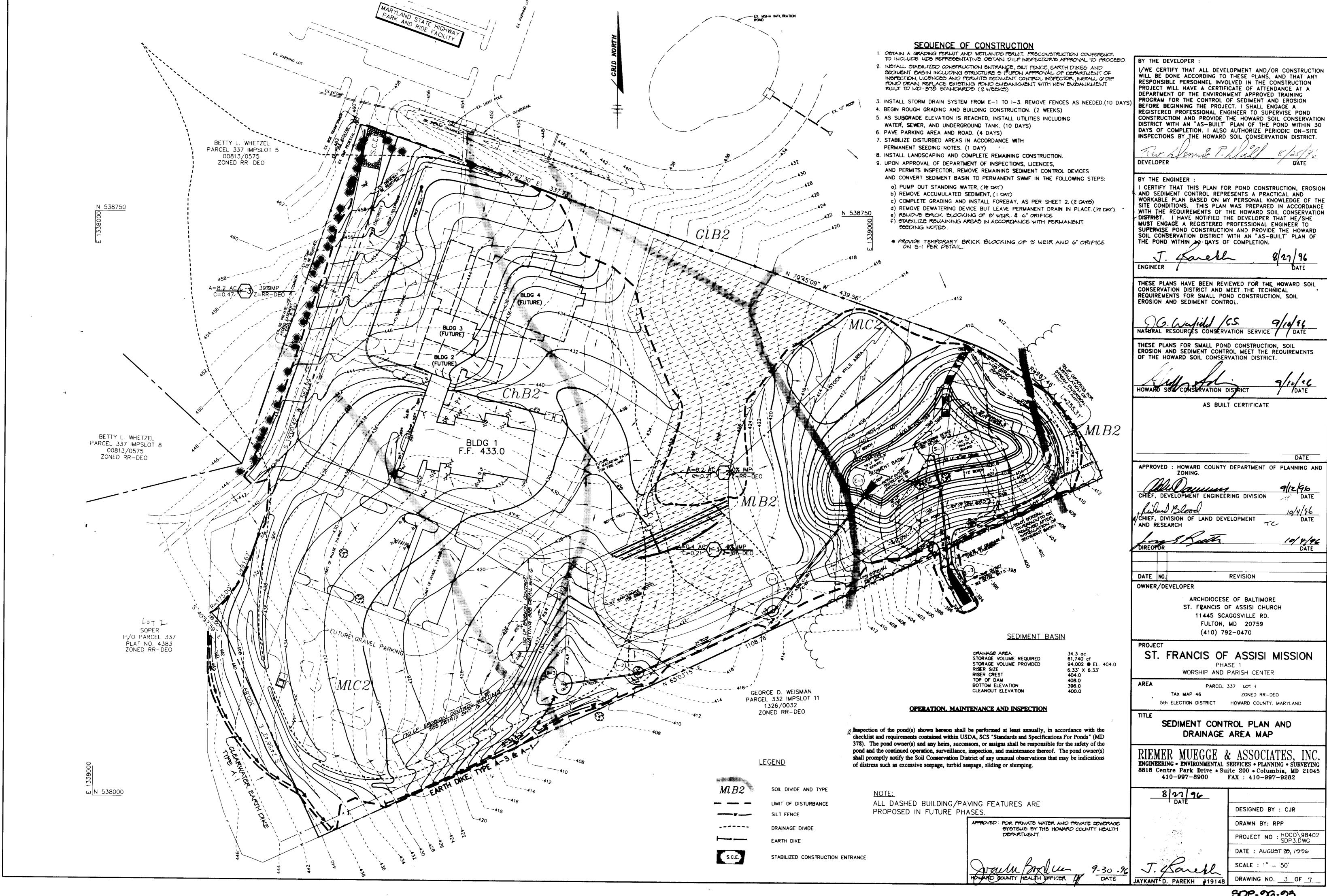
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING

8818 Centre Park Drive • Suite 200 • Columbia, MD 21045 410-997-8900 FAX: 410-997-9282 DESIGNED BY : CJR

DRAWN BY: RPP PROJECT NO : HOCO\98402 DATE : AUGUST 25 1996 **SCALE** : 1'' = 100'JAYKANT D. PAREKH #19148

DRAWING NO. 1 OF 7 SDP-96-98





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. -discing or other acceptable means before seeding, if not previously

Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14

<u>Seeding</u> For periods March 1 thru April 30 and from August 15 thru November 15, seed with $2 \cdot 1/2$ bushels per acre of annual rye (3.2 bs per 1000 sq.ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 3 tons per acre of well anchored straw mulch and seed as soon as passible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 bs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately ofter application using much anchoring tool or 218 gat, per acre (5 gat, per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gai.) per 1000 sq.ft) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permonent long-lived vegetative cover is needed.

Seedbed Preparation . Loosen upper three inches of soil by raking. discing or other acceptable means before seeding, if not previously

<u>Soil Armendments</u>, in tieu of soil test recommendations, use one of

- 1) Preferred Apply 2 tons per acre dolomitic limestone (92 lbs.) per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 precform fertilizer (9 bs. per 1000 sq.ft.).
- 🖒 Acceptable Apply 2 tons per acre dolomitic limestone (92 lbs : per 1000 sq.ft.) and 1000 bs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Horrow or disc into upper three inches of soil

<u>Seeding</u>: For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft. of Kentucky 31 Tal Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following

- 1) 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
- -2) Use soa.
- 马) Seed with 60 lbs. per acre Kentuck,31 Tail Fescue and muich with 2 tons per dare well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 ibs. per 1000 sa.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using much anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Maintenance : inspect all seeded areas and make needed repairs, replacements and reseedings

SEDIMENT CONTROL NOTES

- 1 A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY OCNSTRUCTION (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 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL. AND REVISIONS THERETO
- 3 FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A)7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- 4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 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 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL FOR PERMANENT SEEDINGS (SFC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONG 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 AREA DISTURBED AREA TO BE ROOFED OR PAVED AREA TO BE VEGETATIVELY STABILIZED TOTAL CUT TOTAL FILL

12.47 ACRES 11.25 ACRES 1.23 ACRES 10.02 ACRES 29,000 CU.YDS. 29,000 CULYDS.

- 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
- 10. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION

THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

- 11. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- 12. CUT AND FILE QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.
- 13. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., 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 O'R GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- 14. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE. LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

MD-378 STANDARDS AND SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

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 breaks

shall be slaped to no steeper than 1: Areas to be covered by the reservoir will be cleared of all trees, brush, logs. fences, rubbish and other objectionable material unless otherwise designated or the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management pands, a minimum of a 50 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 an the embankment and other designated areas.

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 material. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification (SC, CH or CL. Consideration may be given to the use of other materials in the embankment. I design and construction are supervised by a geotechnical engineer. Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8—inch thick (before compaction) layers which are to be continuous over the entire length of the fil. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed

Compaction \cdot 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 or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tire or vibratory roller. Fill material shall contain sufficient maisture such that the equired degree of compaction will be obtained with the equipment used. T ill 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.

concurrently with fill placement and not excavated into the embankment.

Where a minimum required density is specified, it shall not be less than 95% of aximum dry density with a moisture content within $\pm/-2\%$ 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 AASHTO Method 1-99

along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the

Cutoff Trench - The cutoff trench shall be excavated into impervious material

The back fill shall be compacted with construction equipment, rollers, or hand 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 four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or oipe, unless there is a compacted fill of 24" or greater over the structure

PIPE CONDUITS

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated

- Materials (Steel Pipe) This pipe and its appurtenances shall be galvanized and fully biturninous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any biturninous coating damaged or otherwise removed shall be replaced with cold applied biturninous coating compound. Steel plpes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used:

 Nexon, Plasti-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.
- Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.
- 3. Connections All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collors shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight
- All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 48" in diameter; flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with 0--ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 48" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24". Helically corrugated pipe shall have either continuously welded seams or have lock seams
- 4 Bedding The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or saft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate supp
- 5 Backfilling shall conform to "Structure Backfill" 6. Other details (anti-seep collars, valves, etc.) shall be as shown on the
- 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

- 2 Bedding All reinforced concrete pipe conduits shall be laid in a concrete pedding for their entire ength. This bedding shall consist of high slump concrete placed under the pipe and up the side of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown or
- 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 ocated within 2 feet
- 4. Backfilling shall conform to Structure Backfill
- 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the Polyvinyl Chloride (PVC) Pipe - All of the following criterio shall apply for polyvinyl chloride (PVC) pipe:
- Materials PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241
- 2. Joints and connections to anti-seep collars shall be completely watertight
- 3 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.
- 4 Backfilling shall conform to Structure "Backfill"
- 5. Other details (anti- seep collars, valves, etc.) shall be as shown on the CONCRETE
- Concrete shall meet the requirements of Maryland Department of Transportation. State Highway Administration Standard Specifications for Construction and Materials, Section 608, Mix No. 3
- All rock shall be dense, sound, and free from cracks, seams, and other defects conductive to accelerated weathering. The rock fragments shall be angular to subrounded in shape. The least dimension of an individual rock fragment shall be not less than one-third the greatest dimension of the fragment.
- The rock shall have the following properties 1. Bulk specific gravity (saturated surface—dry basis) not less than 2.5.
- 2 Absorption not more than three percent 3. Soundness. Weight loss in five cycles not more than 20 percent when sodium-
- Bulk specific gravity and absorption shall be determined according to ASTM (127. The test for soundness shall be performed according to ASTM C 88. The riprop shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprop 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. Filter cloth shall be placed under all riprop and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials Section 919.12.

XI=1/1/=/1/1E

CL, OR CH MATERIAL IS TO BE USED FOR CORE FRENCH. IF UNSUITABLE MATERIAL EXISTS ON SITE, ACCEPTABLE MATERIAL WILL NEED TO BE TRUCKED

TRENCH DETAIL

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 dikes, 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. All borrow areas shall be graded to provide proper drainage and left in c sightly condition. All exposed surfaces of the embankment, spillway, spoil and

borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown or the EROSION AND SEDIMENT CONTRO.

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local lows concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered. NOTE: AN ATTEMPT IS BEING MADE TO PRESERVE SUFFICIENT SEPTIC AREA FOR FUTURE

BUILDING 2,3 \$4. HOWEVER NO FINAL

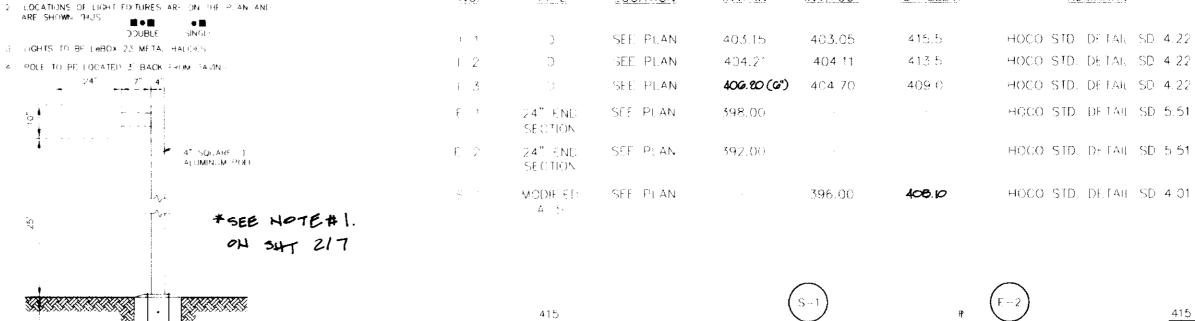
SEPTIC PLANS FOR THOSE BUILDINGS

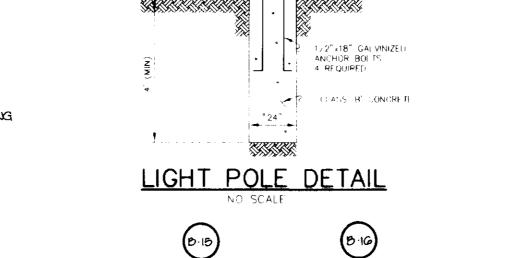
COMMITMENT IS IMPLIED UNTIL SPECIFIC

ARE SUBMITTED AND REVIEWED. NOTE: THE DISTANCE BETWEEN THE SEPTIC AREA AND S.W.M. FACILITY AS SHOWN ON THESE PLANS SHALL NOT BE DECREASED DURING POND CONSTRUCTION.

STORM DRAIN STRUCTURE SCHEDULE

LOCATION





CONSTRUCTED TOP OF DAM 410.9

100 : 1R WSE 40621

-CORE TRENCH

4' MIN.WIDTH

DEPTH

SETTLED TOP OF DAM 400.3

- IMPERVIOUS CORE /

NOTE: CORE TRENCH TO BE

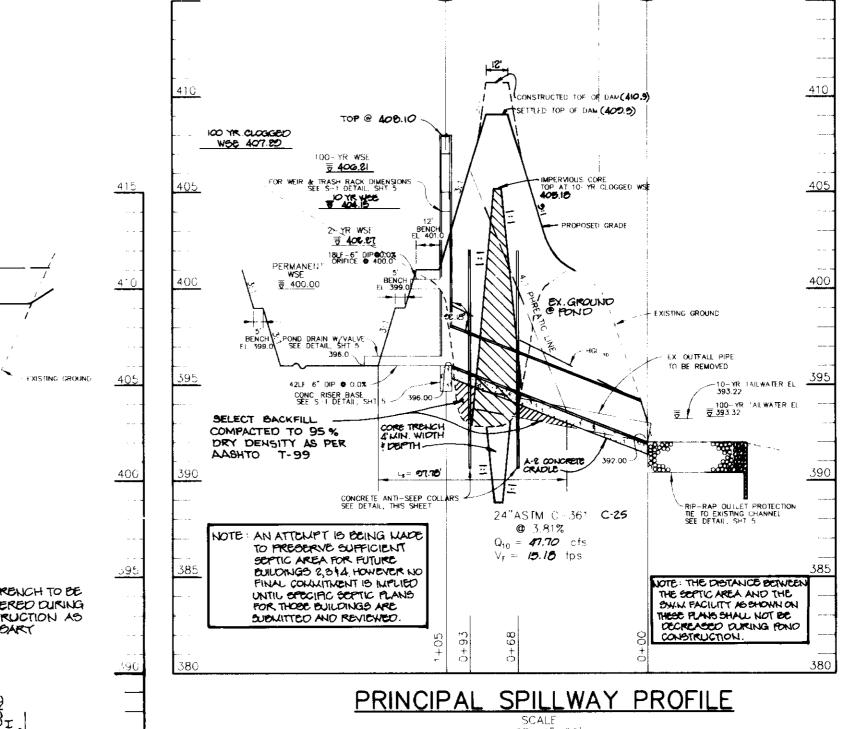
C-361 C-25

DEWATERED DURING

CONSTRUCTION AS

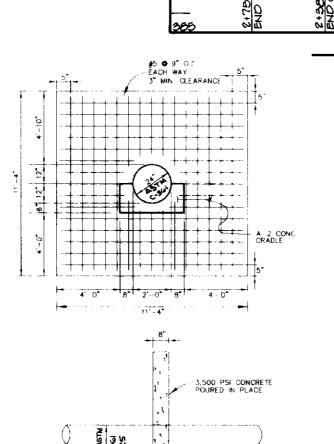
1 LIGHT FIXTURES TO BE EITHER SINGLE OR DOUBLE 250 WAT

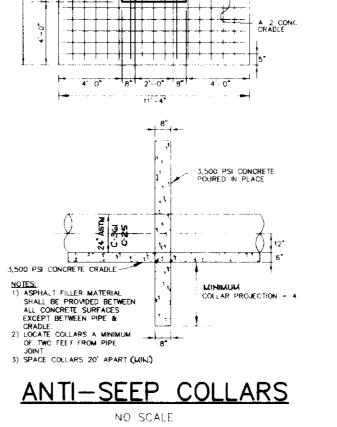
MERCURY TYPE WITH METAL POLES AND DIRECTED DOWN

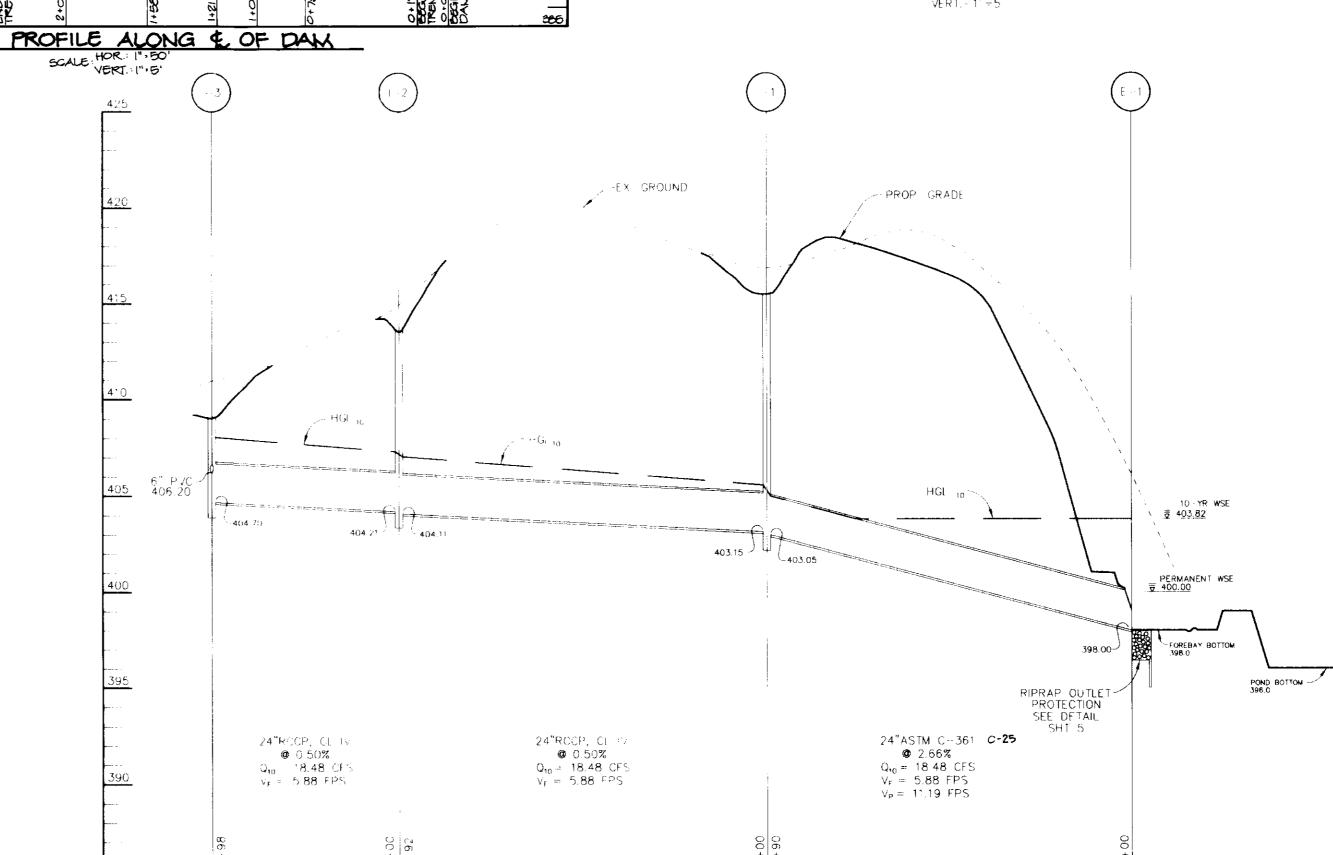


INV. IN INV. OUT TOP ELEV.

REMARKS







CLASS 'A' DAMS LESS THAN 50' HIGH A-2 CONCRETE CRADLE

STORM DRAIN PROFILE

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

9.30-9 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 THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL 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. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

BY THE HOWARD COUNTY HEALTH DEPARTMENT.

DEVELOPER

BY THE ENGINEER

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 POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF

ENGINEER

THE POND WITHIN 30 DAYS OF COMPLETION.

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

NATURAL RESOURCES CONSERVATION SERVICE

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

AS BUILT CERTIFICATE

DATE APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. 9/12/96 Mulaum

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

REVISION DATE NO. OWNER/DEVELOPER ARCHDIOCESE OF BALTIMORE

> 11445 SCAGGSVILLE RD. FULTON, MD 20759 (410) 792-0470

ST. FRANCIS OF ASSISI CHURCH

ST. FRANCIS OF ASSISI MISSION PHASE 1 WORSHIP AND PARISH CENTER

AREA PARCEL 337 LOT 1 TAX MAP 46 ZONED RR-DEO 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8818 Centre Park Drive • Suite 200 • Columbia, MD 21045 410-997-8900 FAX: 410-997-9282

STORM DRAIN PROFILES,

NOTES AND DETAIL SHEET

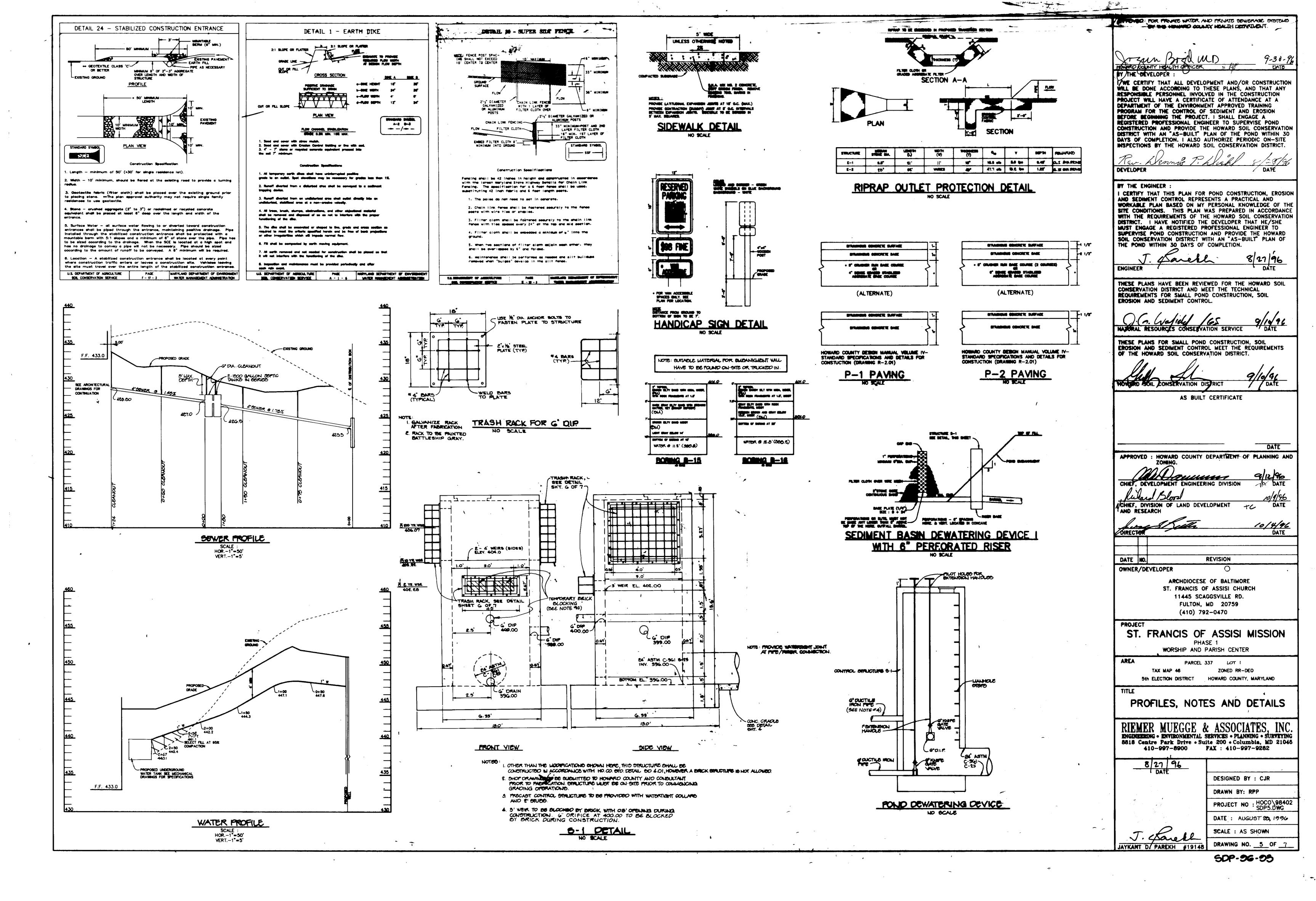
. PAREKH #19148

DRAWN BY: RPP PROJECT NO : HOCO\9840. DATE : AUGUST 20, 1995 SCALE : AS SHOWN

5DP-26-23

DRAWING NO. 4 OF 7

DESIGNED BY : CJR



21.0 STANDARD AND SPECIFICATIONS

TOPSOIL **Definition**

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

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.

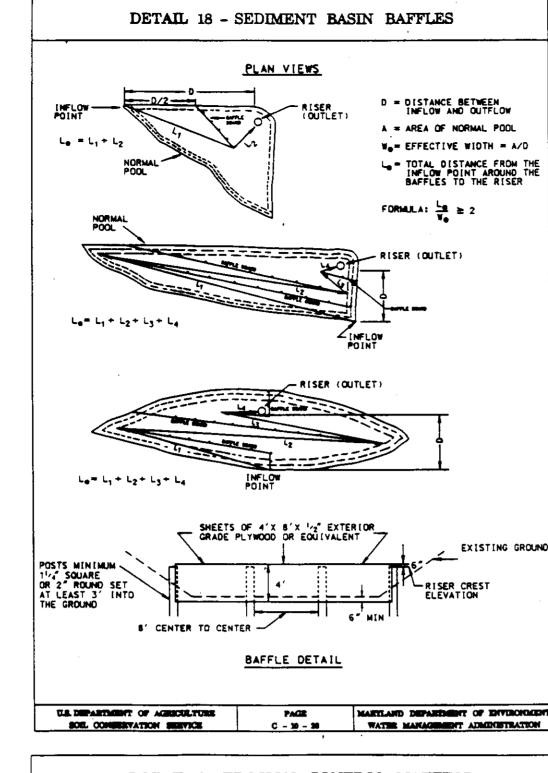
Construction and Material Specifications

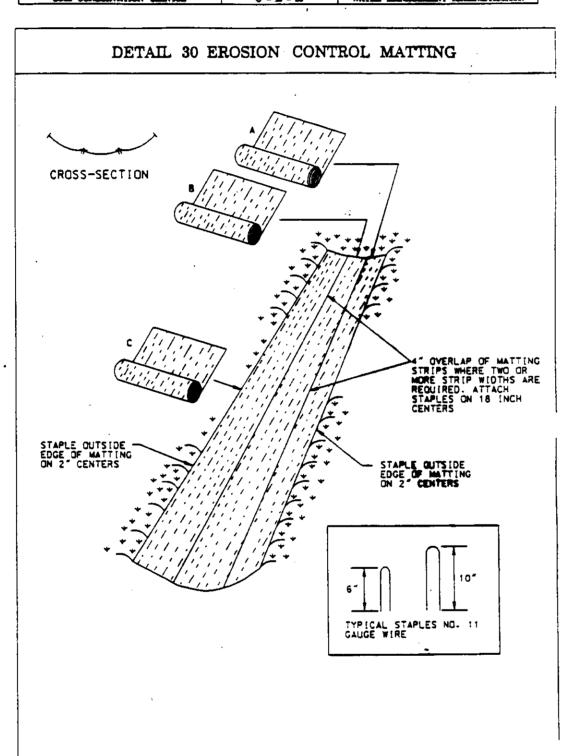
- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation 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 a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, siar, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 11/2" in diameter.
 - ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
- iii. Where 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 perscribed to raise the pH to 6.5 or higher.
 - b. Organic content of topsoil shall be not less than 1.5 percent by weight.
 - c. Topsoil having soluble salt content greater than 500 parts per million shall not be used. d. No sod or seed shall be placed on soil which has been treated with soil sterilants or
 - chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

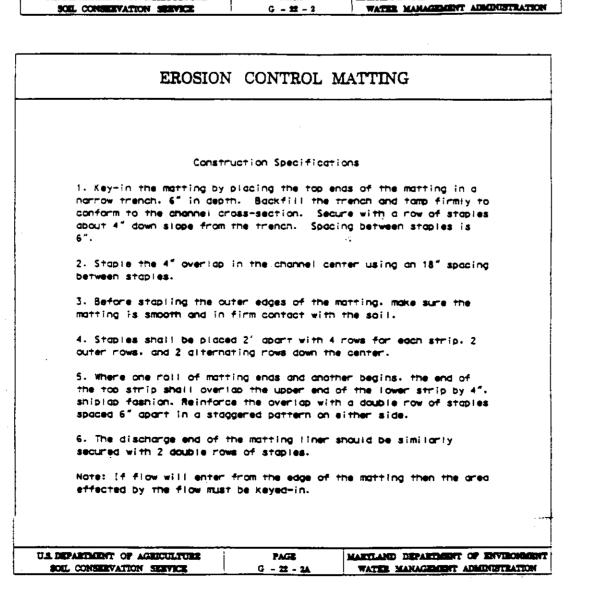
Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientistand approved by the appopriate approval authority, may be used in lieu of natural topsoil.

- ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vege Stabilization - Section I - Vegetative Stabilization Methods and Materials.
- V. Topsoil Application
- i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
- iii. Topsoil shall be uniformly distributed in a 4" 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
- VI. Alternative for Permanent Seeding Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
- i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
- a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
- b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements. the appropriate constituents must be added to meet the requirements prior to use.
- c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet
- iv. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

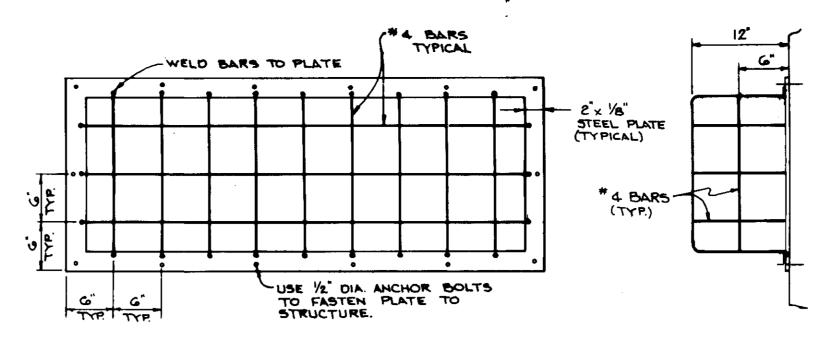






U.S. DEPARTMENT OF AGRICULTURE

MARTLAND DEPARTMENT OF ENVIRONMENT



GALVANIZE RACK AFTER FABRICATION

2. RACK TO BE PAINTED BATTLESHIP GRAY.

for Geotextile Class F:

Flow Rate

Tensile Strength

Tensile Modulus

U.S. DEPARTMENT OF AGRICULTURE

SOIL COMMERVATION SERVICE

Filtering Efficiency 75% (min.)

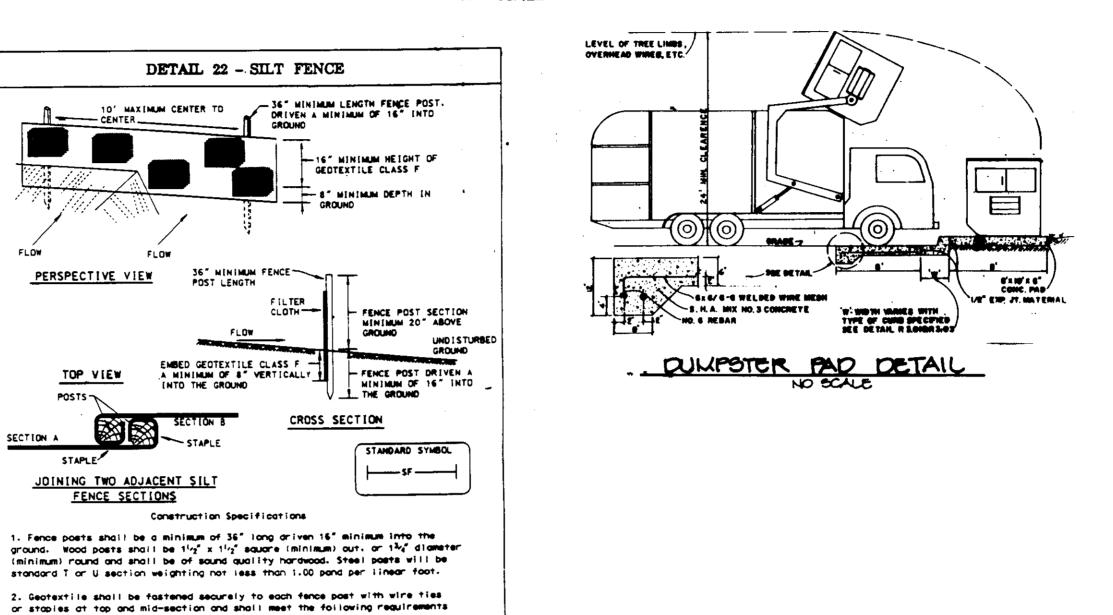
FRONT VIEW

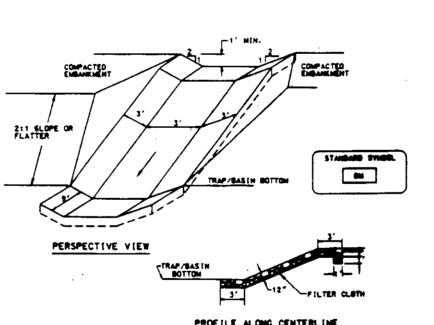
Test: MSMT 509

PAGE MARTLAND DEFARTMENT OF ENVIRONMENT
E - M - 3 WATER MANAGEMENT ASSESSMENTATION

RACK FOR FRONT & SIDE WEIRS

SIDE VIEW





50 (bs/in (min.)

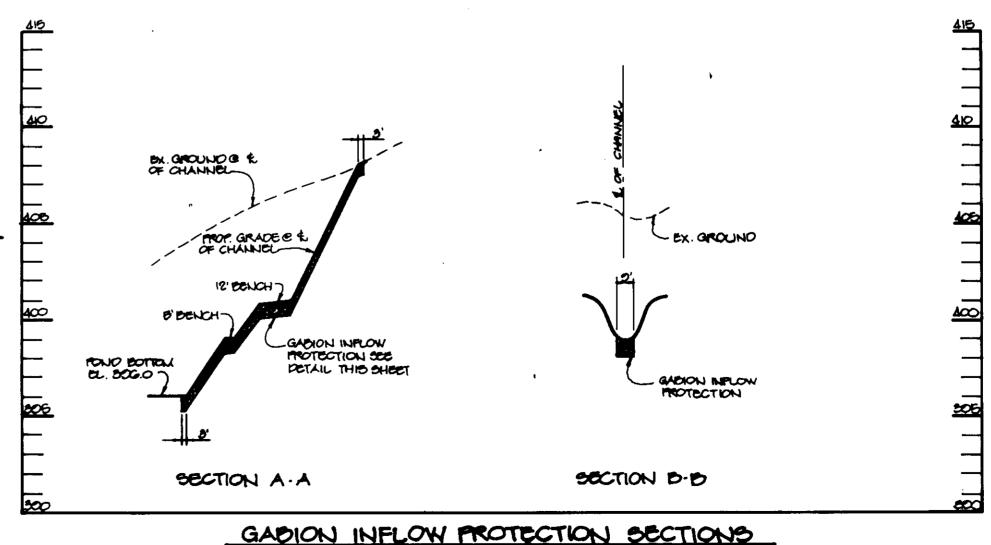
20 lbs/in (min.)

. Where ends of geotextile fabric come tagether, they shall be overlapped

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.

0.3 gal ft2/ minute (max.) Test: MSMT 322

1. Gabien inflow protection shell be concrupted of 9' x 3' x 9" gabien basists forming a trapezoidal cross section 1' deep, with 2:1 side sispessed and a 3' better width. 2. Geotextile Class C shall be installed under all public bestats. 3. The state used to fill the gabien backets shall be $4^{\sigma} = 7^{\sigma}$. 4. Gabians shall be installed in assertance with manufacturers recommendations. 5. Gabion Inflow Protection shall be used where concentrated flow is proceed GABION INFLOW PROTECTION



SCALE: HOR : 1" 50'

BY THE HOWARD COUNT 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 THE ENVIRONMENT APPROVED TRAINING . PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL 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, I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT. BY THE ENGINEER 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 POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. . Darell ENGINEER THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL. THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. CONSERVATION DISTRICT AS BUILT CERTIFICATE APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE NO. REVISION OWNER/DEVELOPER ARCHDIOCESE OF BALTIMORE ST. FRANCIS OF ASSISI CHURCH

11445 SCAGGSVILLE RD. FULTON, MD 20759 (410) 792-0470

ST. FRANCIS OF ASSISI MISSION

WORSHIP AND PARISH CENTER

AREA

TITLE

PARCEL 337 TAX MAP 46 ZONED RR-DEO 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

NOTES AND DETAILS

ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8818 Centre Park Drive • Suite 200 • Columbia, MD 21045 FAX: 410-997-9282 410-997-8900

> DRAWN BY: PROJECT NO : HOCO\98402 DATE : AUGUST 25 1996

SCALE : AS SHOWN DRAWING NO. 6 OF 7

DESIGNED BY : CJR

