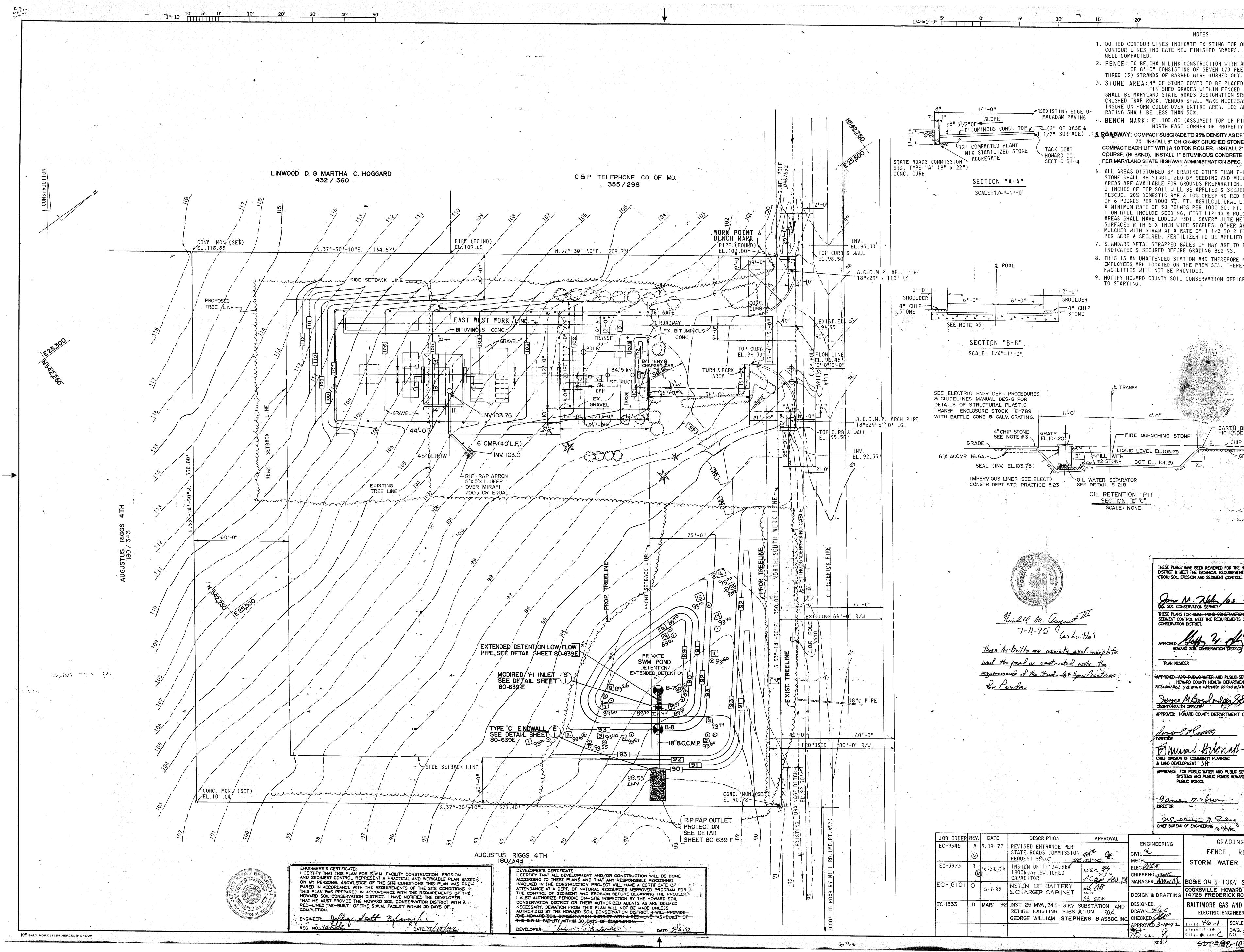


15/ 1/4"=1'--0" AFPROVED: LITUALT LATED OD CELED CVCTC REVIEWED: HOWARD COUNTY HEALTH DEPARTMENT NO FACILITIES REQUIRED Joyne M Logand Plaxer 4/25/92 REVIEWED: P115192 OUNTY HEALTH OFFICER DATE HOWARD CO. DEPT. OF PLANNING & ZONING B.M. 08IB. 🔂 10/16/92 ViAmenth 15192 CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEV. STDATE PROVED FOR PUBLIC WATER SEWERAGE & STORMER DRAIN SYSTEMS & ROADS. HOWARD CO. DEPARTMENT OF PUBLIC WORKS James M. Iron DIRECTOR DATE CHIEF, BUREAU OF ENGINEERING OD 9/0/02 DATE SH ROAD CEMETERY B.M.OBIA ROAD SINEERS'S CERTIFICATE: ERTIFY THAT THIS PLAN FOR S.W.M. FACILITY CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENT A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS THIS PLAN WAS PRE-PARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SITE CONDITIONS THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOLL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOLL CONSERVATION DISTRICT WITH A RED-UNED "AS-BUILT" OF THE SWILL FACILITY WITHIN 30 DAYS OF VICINITY PLAN SCALE:1"=2000' B.M. 08IA N 183, 217. 7955 E 399, 464.0662 ELEV. 150. 5 B.M. OBIB N 183 899 1758 E 398, 437 1266 ELEV. 149:7 **_** ÷ ENGINEER-SITE ANALYSIS REG. NO. 16506 7/17/97 DATE THIS PROPERTY IS LOCATED IN THE 4TH ELECTION DISTRICT DEVELOPER'S CERTIFICATE I 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 DEPT. OF NATURAL RESOURCES APPROVED 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 OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT. + WILL PROVIDE-THE HOWARD BOIL CONSERVATION DISTRICT. + WILL PROVIDE-THE HOWARD BOIL CONSERVATION DISTRICT. - WILL PROVIDE-THE HOWARD BOIL CONSERVATION DISTRICT. - WILL PROVIDE-OF HOWARD COUNTY, MARYLAND. TAX MAP 8, PARCEL 240, GRID 22 α ZONED R 100 . POLE PROPOSED SUBSTATION: 10,080 S.F. = 0.23 Ac.+ EXISTING SUBSTATION: 2,688 S.F. = 0.06 Ac.+ AREA OF: AREA TO BE RETIRED: 2,688 S.F. = 0.06 Ac. + GREEN AREA TO REMAIN: 117,912 S.T. = 2.71 Ac. + TOTAL SITE: '130,680 S.F. = 3.00 Ac.+ THE S.W.M. FABILITY, WITHIN - 30/ BATS OF COMPLETION, OWNER: B.G.& E. CO. P.O. BOX 1475 ian 6 padarate XEVELOPER-· DATI 1 BALTIMORE, MARYLAND 21203 Δ. PROPOSED USE: ELECTRICAL SUBSTATION ZONING CASE NUMBERS: JUNE 20, 1972 - 710C 355-298 BA-91-53E - APROVED MARCH 12,1992-SEE CONDITIONS BELOW ු SDP 92-103 JOS. BERKE **H** Ľ Ľ NOTE: SOUND LEVEL AT PROPERTY LINE IS EXPECTED . **L**. TO BE BELOW 65 dba. 0 ப ZONER BA-91-53E APPROVED 3-12-92 20'+0" PAVING 1. The Petitioner shall comply with all applicable laws. regulations and guidelines, including, but not limited to, those pertaining to limitations on noise levels. 2. The Petitioner shall submit a Site Developement Plan to the Department of Planning and Zoning within six (6) months of the date of this order. GENERAL NOTES 3. The special exception is limited to the installation and operation of the equipment as designated on the special Neximum building height - [6 exception plat submitted with the petition, and not to any other buildings, structures, additions or uses; any future All areas not being paved or receiving building coverage shall be transformers, capacitors, structures, additions, activities, or equipment not indicated on the special exception plat are, stabilized in accordance with the plans approved by Howard Soil Conservation District. not approved and are not a part of this granted special exception. 3. Any damage to public rights-of-way and/or adjacent properties shall be repaired immediately at the contractor's expense. 4. The Petitioner shall landscape the site in accordance with the special exception plat submitted with the petition. 4. The contractor shall maintain at least a 2' level bench behind all curb and gutter in fill areas. 5. All exterior lighting shall be directed downward and inward so as not to shine or reflect onto adjacent properties or 5. The contractor shall verify all existing utilities to his own satisfaction roads. before-starting construction 6. All'slopes shall be 2:1 or flatter. EXISTING 66 -0 R/W All work shall be done in accordance with Boward County Standard Specifications 331-0" 331-0" and Details for Construction, or as shown on these plans. **Existing Vegetative Communities** . The contractor shall notify the C & P Telephone Co. and the Gas and Electric 4 E D Company live days prior to starting work shown on these plans by calling "Miss Utility". Call 1-800-257-7777. Description: Hardwood Hedgerow Dominant Species: For details of ramps and signs for the handicapped, see the Maryland Build-8 P 119 LINI Robinia pseudo - acacia (Black locust) 6-12" DBH ing Code for the Sandicapped and Aged and as shown bereony See Sheet 2 of 5 Prunus serotina (Black cherry) 4-6" DBH 10. The contractor shall-maintain a minimum of 4' cover over all proposed water Acer negundo (Box elder) 6" DBH lines. Ailanthus altissima (Tree-of-heaven) 6" DBH All rip-rap shall be placed on filter cloth. Maturity and general condition: Intermediate growth in good condition 2. The contractor or developer shall contact the Construction Inspection/Survey SOUTH Division 24 hours in advance of commencement of work at 992-2417 or **B**. Group I Description: Ornamental Evergreens 707-7772. 18" PIPE Dominant Species: 13. The contractor shall remove all existing paving, curb and gutter, etc. Pinus strobus (White pine) 10-12" DBH that may interfere with proposed construction. 10 Picea abies (Norway Spruce) 6-8"DBH 14. All utilities installed shall receive full trench compaction. Juniperus chinensis glauca hetzi (Blue hetz juniper) 8' height Maturity and general condition: Ornamental evergreens in this community All water main tees bends, caps. etc. shall be buttressed in accordance are in good condition, with dense branching. with Howard County Design requirements. Specimen: 12" DBH Pinus strobus (White pine) located to immediate north 6. 111 sidewalks will be 6' wide (see architectural plans for details). PROPOSED 80'-0" R/W. of parking area. 40'-0" The owner shall provide a separate and independent sever connection for 40'-0" each tanint or occupant of any building, shown on this site development · C. -Group C plan who will discharge pon-domestic waste to the public severage system Description: Volunteer deciduous trees in an open field if this waste is regulated under Section 18.1222 of the Howard County Code Each separate and independent sever connection shall include a standard 2. Dominant species: menhole and other waste pretroatment, devices as required and approved by Prunus serotina (Black cherry) 2-6" DBH Howard County. Waste lines on the interior of the building shall be Acer rubrum (Red maple) 2-6" DBH designed, constructed or modified such that, non-domestic waste will be Acer saccharinum (Silver maple) 2-6" DBH discharged to the separate and independent sever connection. Ho tenant or occupant of any building shown on this site development plan shall dis-Liriodendron tulipifera (Yellow poplar) 3-6" DBH charge regulated non-domestic waste to the public severage system prior Robinia pseudo-acacia (Black locust) 4-6" DBH to installation or the separate and independent sever connection and related Maturity and general condition: Volunteer species, 7-12 years old, free to .interior vaste lines. The above requirements shall apply to all initial and future occupants or tenants. grow in open field. LIST OF DRAWINGS SHEET 1 SITE DEVELOPMENT PLAN, LOCATION/PLANTING PLAN SHEET 2 GRADING PLAN, FENCE, ROADWAY & STORN WATER MANAGEMENT R0XI SHEET 3 STORN WATER MANAGEMENT DETAILS 10 EXIST SHEET 4 SEDIMENT & EROSION CONTROL PLAN 000 SHEET 5 SEDIMENT & EROSION CONTROL DETAILS And the second of the second o SUBDIVISION NAME: COOKSVILLE HOWARD COUNTY - BG&E SUBSTATION PLAT # OR L/F BLOCK # ZONE: REV. DATE DESCRIPTION APPROVAL 606 - 654 ENGINEERING 22 R SITE DEVELOPMENT PLAN A 8-29-72 ADDED SCREENING EC-9346 P.w.C. LOCATION / PLANTING PLAN WATER CODE: " INSTLN OF 1- 34.5kV MECH. 1800kvar SWITCHED 10 23.79 WEC GG. ELEC. Art J CAPACITOR EC-3973 14725 FREDRICK PIKE PC asp. f. Pai CHIEFENG. 3.7-83 & CHARGER CABINET 18. MANAGER Muer 717 BG&E 34.5-13KV SUBSTATION WE C DEC 240 SUBSTATION 0.53 AC.+ (EC-6101) COOKSVILLE HOWARD COUNTY 14725 FREDERICK ROAD DESIGN & DRAFTING 34.5-13KV 25MVA_SUBSTA TAX/ZONE MAP ELECT DISTR CENSUS TR: BALTIMORE GAS AND ELECTRIC COMPANY 10-30-91 W/4 EDRS DESIGNED___ 8 #4 6040 EC 1533 DRAWN - SEWER CODE: ELECTRIC SYSTEM ENGINEERING CHECKED APPROVED 3-10-72 . 1 may 1 SCALE 1"=20"-0" TAX ACCOUNT NO. ÷. A Same NO 80-606-E , 30x SHEET I OF5



NOTES 1. DOTTED CONTOUR LINES INDICATE EXISTING TOP OF GRADE. FULL CONTOUR LINES INDICATE NEW FINISHED GRADES. ALL FILL TO BE 2. FENCE: TO BE CHAIN LINK CONSTRUCTION WITH AN OVERALL HEIGHT OF 8'-O" CONSISTING OF SEVEN (7) FEET OF FABRIC WITH THREE (3) STRANDS OF BARBED WIRE TURNED OUT. 3. STONE AREA: 4" OF STONE COVER TO BE PLACED OVER NEW FINISHED GRADES WITHIN FENCED AREA. STONE COVER SHALL BE MARYLAND STATE ROADS DESIGNATION SRC-4 BLUE GRAY CRUSHED TRAP ROCK. VENDOR SHALL MAKE NECESSARY ARRANGEMENTS TO INSURE UNIFORM COLOR OVER ENTIRE AREA. LOS ANGELES ABRASION 4. BENCH MARK: EL.100.00 (ASSUMED) TOP OF PIPE LOCATED AT NORTH EAST CORNER OF PROPERTY. 5 ROADWAY: COMPACT SUBGRADE TO 95% DENSITY AS DETERMINED BY ASTM-1557 70. INSTALL 8" OR CR-467 CRUSHED STONE BASE ON TWO LIFTS & COMPACT EACH LIFT WITH A 10 TON ROLLER. INSTALL 2" BITUMINOUS BINDER COURSE, (BI BAND). INSTALL 1" BITUMINOUS CONCRETE SURFACE, (SN BAND) AS 6. ALL AREAS DISTURBED BY GRADING OTHER THAN THOSE COVERED WITH STONE SHALL BE STABILIZED BY SEEDING AND MULCHING AS SOON AS AREAS ARE AVAILABLE FOR GROUNDS PREPARATION. APPROXIMATELY 2 INCHES OF TOP SOIL WILL BE APPLIED & SEEDED WITH 70% KENTUCK FESCUE. 20% DOMESTIC RYE & 10% CREEPING RED FESCUE AT A RATE OF 6 POUNDS PER 1000 ST. FT. AGRILCULTURAL LIME TO BE ADDED A A MINIMUM RATE OF 50 POUNDS PER 1000 SQ. FT. SLOPE STABILIZA-TION WILL INCLUDE SEEDING, FERTILIZING & MULCHING. CRITICAL AREAS SHALL HAVE LUDLOW "SOIL SAVER" JUTE NETTING APPLIED TO SURFACES WITH SIX INCH WIRE STAPLES. OTHER AREAS WILL BE MULCHED WITH STRAW AT A RATE OF 1 1/2 TO 2 TONS OF WHEAT STRAW PER ACRE & SECURED. FERTILIZER TO BE APPLIED AT 25 LBS/1000 SQ.FT 7. STANDARD METAL STRAPPED BALES OF HAY ARE TO BE PLACED WHERE. 8. THIS IS AN UNATTENDED STATION AND THEREFORE NO PERMANENT EMPLOYEES ARE LOCATED ON THE PREMISES. THEREFORE SANITARY 9. NOTIFY HOWARD COUNTY SOIL CONSERVATION OFFICE 24 HOURS PRIOR - EARTH BERM 6" HIGH ON HIGH SIDE ONLY CHIP STONE ובורבוובוובווב וובוביו and the Color and a THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOL CONSERVATION DISTRICT & MEET THE TECHNICAL REQUIREMENTS FOR-SMALL POND CONSTRU-CTION; SOL EROSION AND SEDIMENT CONTROL James M. Rillin / O.S. 8/21/92 THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT. APPROVED 27 PLAN NUMBER APPROVED: W/O PUBLIC WATER AND PUBLIC SEWERACE DISTELIES HOWARD COUNTY HEALTH DEPARTMENT. RETURN TO: MO FA CILITIZE REGULARED 8/25/92 NTY HEALTH OFFICER APPROVED: HOWARD COUNT DEPARTMENT OF PLANNING & ZONING 10/10/92 Kitt CHEF DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT () APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. 10/8/91 morni 2.9.92 2H 3 - 2 Rau 25 edan CHIEF BUREAU OF ENGINEERING ON 9/6/4 GRADING PLAN, FENCE, ROADWAY & STORM WATER MANAGEMENT BGBE 34.5-13KV SUBSTATION

COOKSVILLE HOWARD COUNTY BALTIMORE GAS AND ELECTRIC COMPANY ELECTRIC ENGINEERING DEPARTMENT 100 46-1 | SCALE 1"=20'-0" REV icrefilme-d-SDP-103/ SHEET 2 OF 5

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.

Site Preparation

Areas designated for borrow areas, embankment and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 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 on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated porrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

<u>Placement</u> - 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 fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

<u>Compaction</u> - 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 tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 88.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap 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 riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

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 ion shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a 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 on the accompanying drawings.

Erosion and Sediment Control

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

Where a minimum required density is specified, it shall not be less than 95% of maximum 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 T-

<u>Cut Off Trench</u> - The cutoff trench shall be excavated into impervious material 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 trench shall be I to I or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

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 that 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 pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

rrugated metal pipe:

All pipes shall be circular in cross section. Corrugated Metal Pipe - All of the following criteria shall apply for

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel shall be replaced with cost applied ortuninous coating compound. Steel pipes 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.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its ourtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied vituminous coating compound.

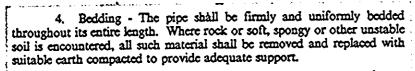
Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

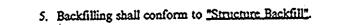
2. Coupling bands, anti-scep collars, end sections, etc., must be mposed of the same material as the pipe. Metals must be insulated from ssimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

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 collars 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 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 hugs. 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.





6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361. An approved equivalent is AWWA Specification C-302.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Polyvinyl Chloride (PVC) Pice - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. 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-scep collars shall be completely

watertigh 3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock of 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 drawings.

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. Rock Rippap

All rock shall be dense, sound, and free from cracks, seams and other defects conducive 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

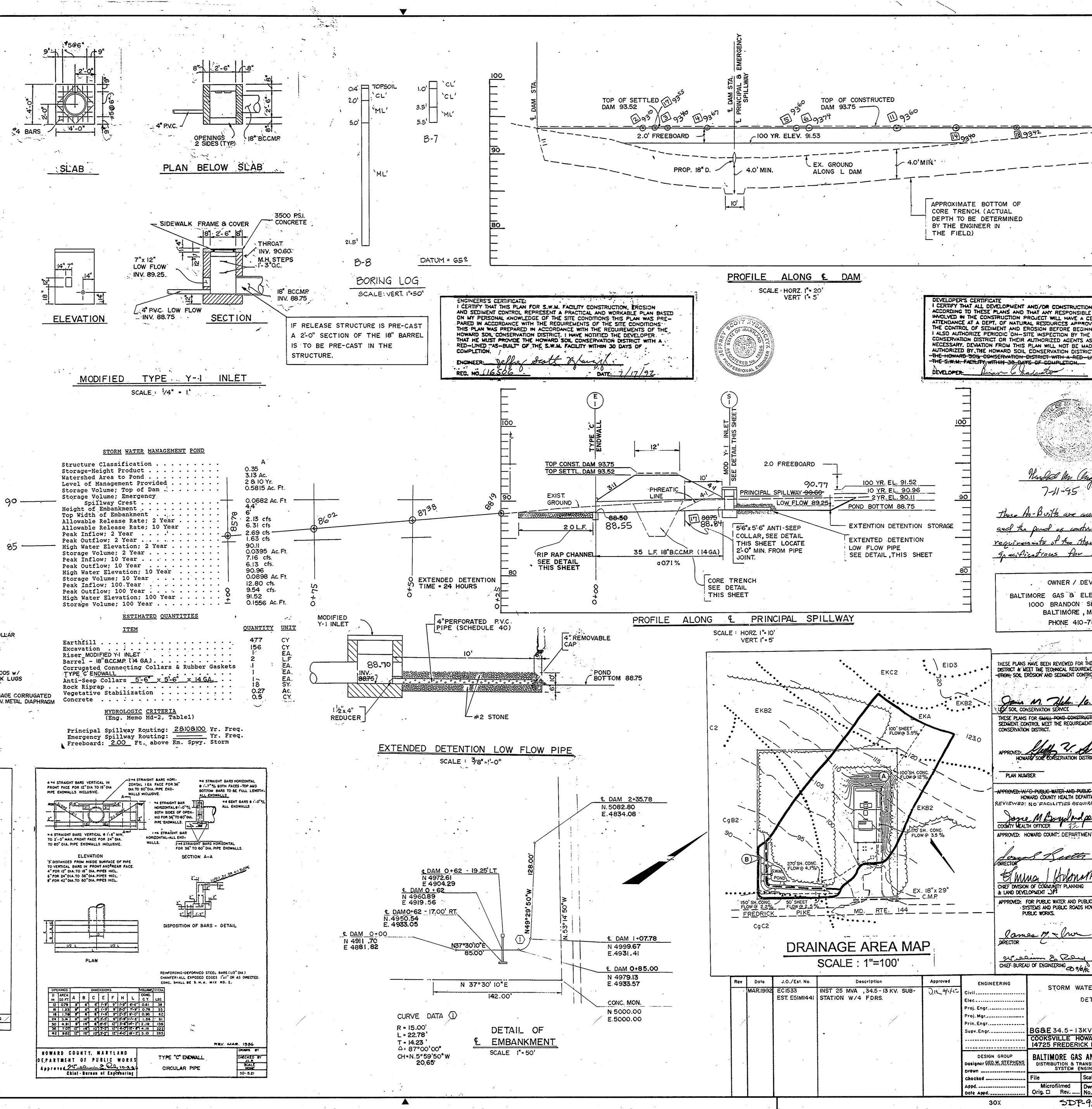
The rock shall have the following properties:

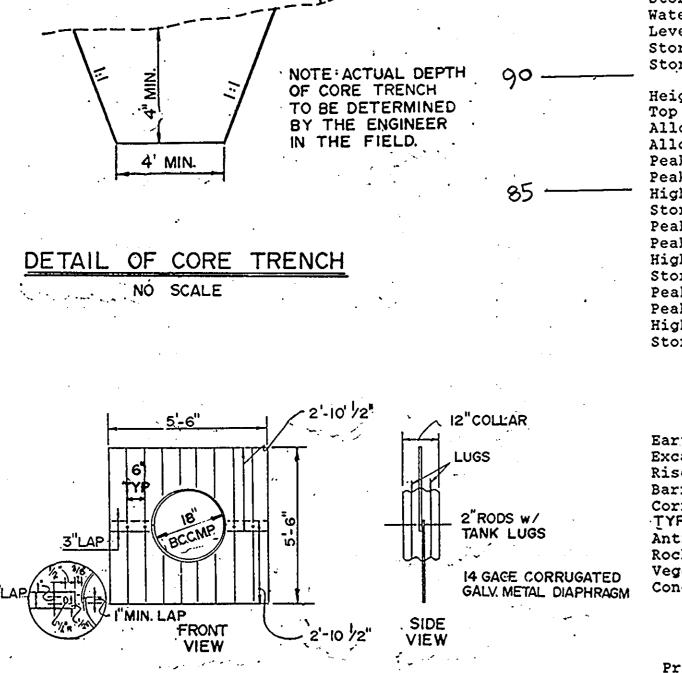
1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.

2. Absorption not more than three percent.

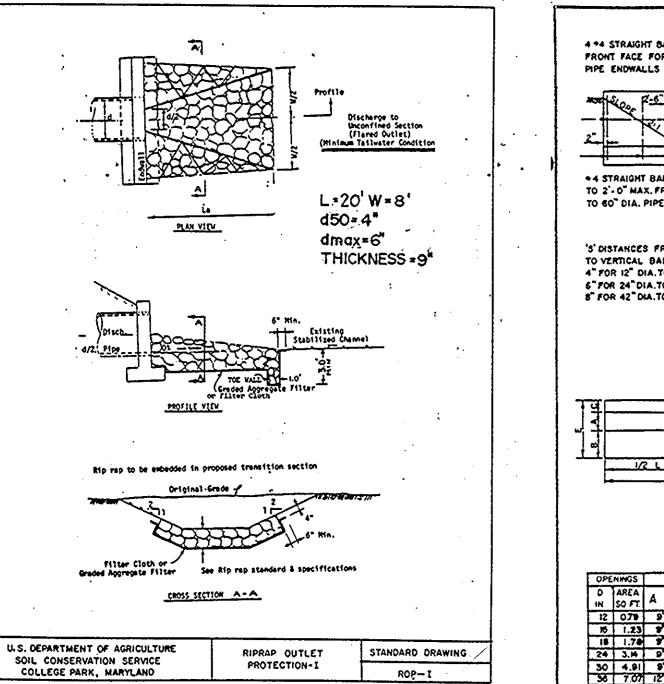
Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

EX. GROUND





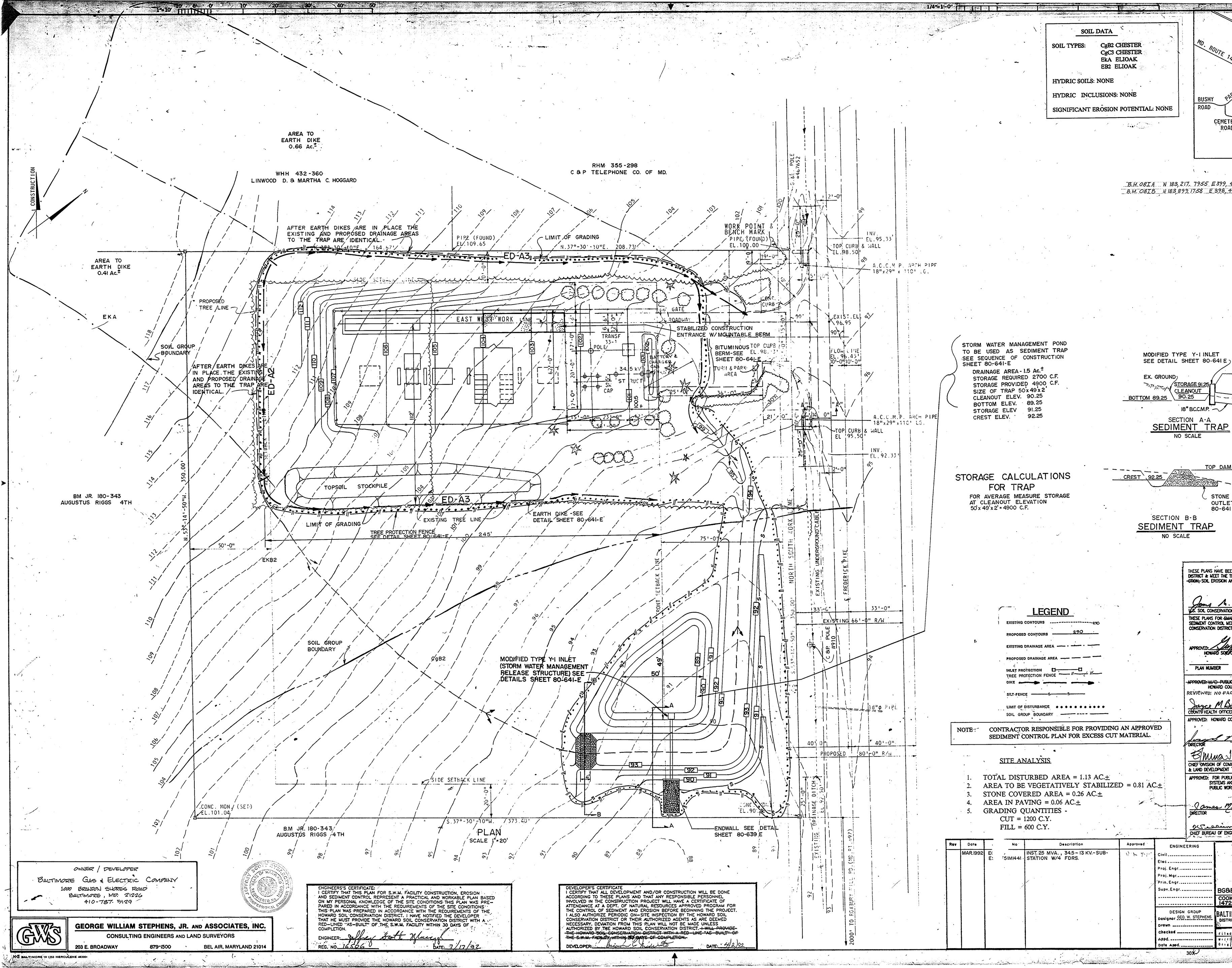
DETAIL OF ANTI-SEEP COLLAR NO SCALE





BEL AIR, MARYLAND 21014 879-1500

13 9342____ I 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 DEPT. OF NATURAL RESOURCES APPROVED 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 OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A RED-UNE "AS-BUILT" OF Juian 6 paderato DATE 4/2/ 7-11-95 (As builts) these As - Builts are accounte and complete and the point as constructed mats the requirements of the standards and gracifications for Poinds. OWNER / DEVELOPER BALTIMORE GAS & ELECTRIC COMPANY 1000 BRANDON SHORES ROAD BALTIMORE, MD. 21226 PHONE 410-787-5129 THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT & MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTR CTION, SOIL EROSION AND SEDUMENT CONTROLS S. SOIL CONSERVATION SERVICE THESE PLANS FOR SMALL POND CONSTRUCTION -- SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT. PPROVED: W/O PUBLIC WATER AND PUBLIC SEWERACE SYSTEMS ----HOWARD COUNTY HEALTH DEPARTMENT. REVIEWED: NO FACILITIES REQUIRED DOWTY YEAR TH OFFICER 12 APPROVED: HOWARD COUNT DEPARTMENT OF PLANNING & ZONING CHIEF DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT DF APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. James M. - Inon 10/8/92 م مز، مدح CHIEF- BUREAU OF ENGINEERING . JH 3 . • ¹ . • • • STORM WATER MANAGEMENT DETAILS BG&E 34.5-13KV SUBSTATION COOKSVILLE HOWARD COUNTY 14725 FREDERICK ROAD BALTIMORE GAS AND ELECTRIC COMPANY DISTRIBUTION & TRANSMISSION ENGINEERING DEPT. SYSTEM ENGINEERING SECTION Scale AS SHOWN Microfilmed Dwg. 80-639-E Orig. D Rev. No. 5DP-92-103 SHEET 3 OF 5



B.N. OBT B 17 CEMETERY ROAD B.M.OBIA VICINITY PLAN SCALE:1"=2000' B.H. OBIA N 183, 217. 7955 E399, 464.0662 ELEV. 150.5 B.M. OBIB N 183,899, 1758 E 398, 437, 1266 ELEV. 149-7 TOP DAM 93.5 - ENDWALL SEE DETAIL SHEET 80-639 E IS" BCCM.P. 12255227522 TOP DAM 93.5 - EX. GROUND STONE WEIR SEE DETAIL OF STONE OUTLET SEDIMENT TRAP SHEET 80-64I-E THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT & MEET THE TECHNICAL REQUIREMENTS FOR-SMALL POND CONSTRU-GRIGH-SOIL EROSION AND SEDIMENT CONTROL. Joms M. Alla Jos. 8/21/92 THESE PLANS FOR SMALL POND-CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT. APPROVED JUST LA ALL 8/21/92 REVIEWED: NO FACILITIES REQUIRED COUNTY HEALTH OFFICER FF PL Son 8/25)92 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING 10/16/92 B/mman thomask CHIEF DMSION OF COMMUNITY PLANNING & LAND DEVELOPMENT ' J PA APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. 10/8/92 DRECTOR Sec. 1 CHIEF BUREAU OF ENGINEERING OD 9/0 /42 <u>q.q.q</u>z The word JH SEDIMENT & EROSION CONTROL PLAN BG&E 34 5- 13KV SUBSTATION COOKSVILLE HOWARD COUNTY BALTIMORE GAS AND ELECTRIC COMPANY DISTRIBUTION & TRANSMISSION ENGINEERING DEPT. SYSTEM ENGINEERING SECTION SCALE 1"=20'-0" REV. ilad. DWG. 80 - 640-E crofriltes 2 Rev SDP-92-103 SHEET 4 OF 5 A HAR ST A CONTRACTOR

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TEMPORARY SEEDING NOTES	STABILIZED CONSTRUCTION ENTRANCE
SEEDBED PREPARATION: LOOSEN UPPER 3 INCHES BY DISCING, RAKING, OR OTHER ACCEPTABLE MEANS.	STANDARD SYMBOL
SOIL AMENDMENTS:	SO' min. EXISTING
APPLY 600 LBS. PER ACRE (14 LBS/1.000 SQ. FT.) OF 10-10-10 FERTILIZER. * SEEDING:	Filter PROFILE MOUNTABLE BERM
FOR PERIODS MARCH 1 THRU APRIL 30, AND FROM aUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHELS PER ACRE (3.2 LBS./1,000 SQ. FT.) OF ANNUAL RYE. FOR THE PERIOD mAY 1 THRU aUGUST 14 SEED	Existing ground 50° min
WITH 3 LBS./ACRE (0.07 LBS./1,000 SQ. FT.) OF WEEPING LOVEGRASS. FOR PERIOD NOVEMBER 16 THRU FEBRUARY 28. PROTECT SITE BY APPLYING 2 TONS/ACRE OF WELL ANCHORED STRAW MULCH AND	
SEED AS SOON AS POSSIBLE IN THE SPRING. OR USE SOD.	10'min 10
MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1.000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING.	PLAN VIEW
ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS/ACRE (5 GALLONS/1.000 SQ. FT.) OF	CONSTRUCTION SPECIFICATIONS
EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER USE 348 GALLONS PER ACRE (8 GALLONS/1,000 SQ. FT.)FOR ANCHORING.	 Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
PERMANENT VEGETATIVE STABILIZATION ALL DISTURBED AREAS, WHICH ARE NOT TO BE PAVED, SHALL BE	 Thickness - Not less than six (6) inches. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
PERMANENTLY STABILIZED AS FOLLOWS:	 5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot. 6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, 1. HOVEN WIRE F TO FENCE POS C. FILTER CLOTH WIRE F TO FENCE POS C. FILTER CLOTH WIRE F TO FENCE POS C. FILTER CLOTH WIRE F TO FENCE POS C. FILTER CLOTH Store Will Store S
A) SEEDED PREPARATION: LOOSEN OPPER 3 INCHES OF SOLE DA RAKING, DISING OR OTHER ACCEPTABLE MEANS AFTER SPREADING 4 INCHES OF TOPSOIL.	 7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand 3. Wen TWO SEC ADJOIN EACH
B) SOIL AMENDMENTS: APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS.?1.000 SQ. FT.) AND 600 LBS. PER ACRE 0-20-20	and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately. 8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto MEDED AND M
FERTILIZER (14 LBS./1,000 SQ.FT.). HORROW OR DISC LIME AND FERTILIZER INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING. APPLY 400 LBS. PER ACRE (9.2 LBS./1.000 SQ. FT.) OF 38-0-0	 8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device. 9. Periodic inspection and needed maintenance shall be provided after each rain.
UREAFORM FERTILIZER AND 500 LBS. PER ACRE (11.5 LBS./1,000 SQ.FT.) OF 10-20-20 FERTILIZER.	U. S. DEPARTMENT OF AGRICULTURE STABILIZED CONSTRUCTION Standard COLLEGE F
C) SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS./1,000 SQ. FT.)	College Park, Hd. SCE-i
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./1,000 SQ. FT.) OF WEEPING LOVEGRASS.	BIT
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) -	MIN.#2 STONE
USE SOD. (3) - SEED WITH 60 LBS./PER ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.	EX.
NOTE: FOR A QUICK COVER WITH KENTUCKY 31 TALL FESCUE PERMANENT SEEDING FROM MARCH 1 TO APRIL 30 AND AUGUST 1 TO OCTOBER 15, ADD 1 1/2 - 2 LBS. OF RYE, BARLEY, OR OATS PER 1,000 SQ.	MIN. COMPACTED EARTH
FT. OF AREA TO BE STABILIZED. D) MULCHING: APPLY 1 1/2 - 2 TONS PER ACRE (70 TO 90 LBS./1.000 SQ. FT.)	MOUNTABLE BERM DETAIL
D) MULCHING: APPLY 11/2-2 TONS PER ACRE (10 TO 30 2003 TELY AFTER OF UNROTTED SMALL GRAIN STRAW. IMMEDIATELY AFTER MULCHING, APPLY 200 GALLONS PER ACRE (5 GALLONS/1,000 SQ. FT.) OF IMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR	<u>NO</u> SCALE
OF IMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES IT LET ON HIGHER. USE 348 GALLONS PER ACRE (8 GALLONS - 1.000 SQ. FT.) FOR ANCHORING.	STONE OUTLET SEDIMENT TRAP X
E) MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS, AND RESEEDINGS.	
TEMPORARY SEEDING SHALL CONSIST OF:	
 BARLEY, OATS, OR RYE @ 2 1/2 - 9 BOSHELOTER MORE. B) ITALIAN OR PERENNIAL RYE GRASS @ 40 LBS. PER ACRE. C) OTHER TEMPORARY SEED MIX PER STANDARD SPECS, 	FSTORAGE
	LIMIT PLOW IS UNCOUNTRY AND AND
	Filler Chells
	OFTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.
	CONSTRUCTION SPECIFICATIONS FOR ST-V 1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
	 The fill material for the embaniment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. All cut and fill slopes shall be 211 or flatter.
	4. The stone used in the outlet shall be small riprep 4"-8" along with a 1' thickness of 2" aggregate placed on the up-grade side on the small riprep of embedded filter cloth in the riprep.
	 5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to b the design depth of the trap. 6. The structure shall be inspected after each rain and repairs made as meeded.
	7. Construction operations shall be carried out in such a manner than erosion and water pollution is minimized.
	8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized. Maximum Drainage Area: 5 Acres
	US DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE STONE OUTLET SEDIMENT TRAP COLLEGE PARK, MARYLAND STONE OUTLET SEDIMENT TRAP
· · · · · · · · · · · · · · · · · · ·	
	ANCHOR POST SHOULD BE USE 2" x 4"
	MINIMUM 2" STEEL 'U' CHANNEL LUMBER FOR OR 2" x 2" TIMBER, 6' IN LENGTH. CROSS BRACING. (TOP ONLY)
	HIGHLY
	<pre>> // // // // // // // // // // // // /</pre>
	ANCHOR POSTS MUST BE USE AN 8"
	EVEN SET IN THE GROUND TO A WIRE 'U' TO DEPTH OF AT LEAST 1/3 SECURE THE
	OF THE TOTAL HEIGHT OF BOTTOM. THE POST.
	NOTES: I. FOREST PROTECTION DEVICE ONLY.
	2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS. 3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
	4. ROOT DAMAGE SHOULD BE AVOIDED. 5. PROTECTION SIGNAGE MAY BE USED. 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.
	TREE PROTECTION FENCING
	(NOT TO SCALE)
	MULTON STATES
	GENARD STATES
	ENGINEERS'S CERTIFICATE: I CERTIFY THAT THIS PLAN FOR S.W.M. AND SEDIMENT CONTROL REPRESENT ON MY PERSONAL KNOWLEDGE OF THI
	SSYDYAL ENTITY HOWARD SOIL CONSERVATION DISTRICT
GEORGE WILLIAM STEPHENS, JR	AND ASSOCIATES, INC.
CONSULTING ENGINEERS AND 203 E. BROADWAY 879-1500	LAND SURVEYORS ENGINEER: Jeffrey Scatt

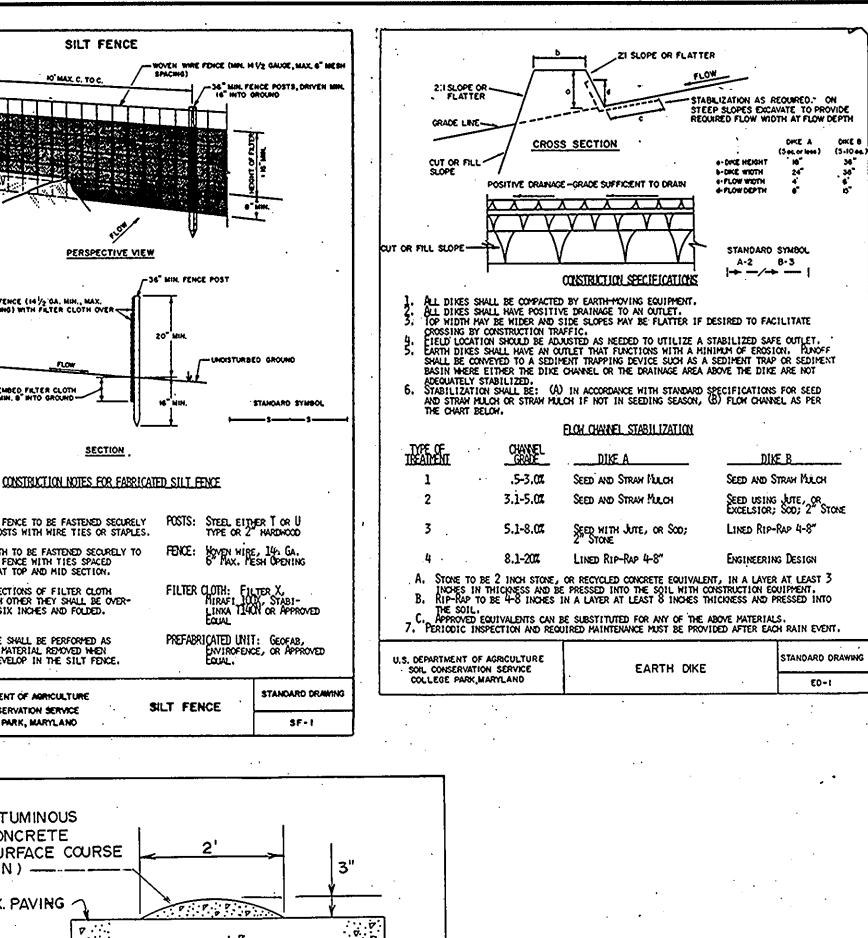
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JAJ WHITE MARSH, MO.



SEDIMENT CONTROL NOTES

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10.

A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437) All vegetative and structural practices are to be installed according to the previsions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. Following initial soll 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 greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site: 4. . . All sediment traps/basins shown must be fenced and warning signs posted around their

perimeter in accordance with Vol.I, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage. All disturbed areas must be stabilized within the time period specified above in accordance

with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and (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. 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. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance. Additional sediment controls must be provided, if deemed necessary by the Howard County

DPW sediment control inspector. 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. Material will be obtained from a site with an approved sediment control pla

DETAIL BITUMINOUS BERM NO SCALE

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FACILITY CONSTRUCTION, EROSION A PRACTICAL AND WORKABLE PLAN BASED E SITE CONDITIONS THIS PLAN WAS PRE-

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QUIREMENTS OF THE SITE CONDITIONS T. I HAVE NOTIFIED THE DEVELOPER SOIL CONSERVATION DISTRICT WITH A • FACILITY WITHIN 30 DAYS OF Margh DATE: 7/17/92

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DEVELOPER:____

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DATE: 4/2)92

DEVELOPER'S CERTIFICATE I 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 DEPT. OF NATURAL RESOURCES APPROVED 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 OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT. I WILL PROVIDE THE SW.M. FACILITY WITHIN 30 DAYS OF COMPLETION. Aug & productor

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OWNER / DEVELOPER BALTIMORE GAS & ELECTRIC COMPANY 1000 BRANDON SHORES ROAD BALTIMORE, MD. 21226 PHONE 410-787-5129

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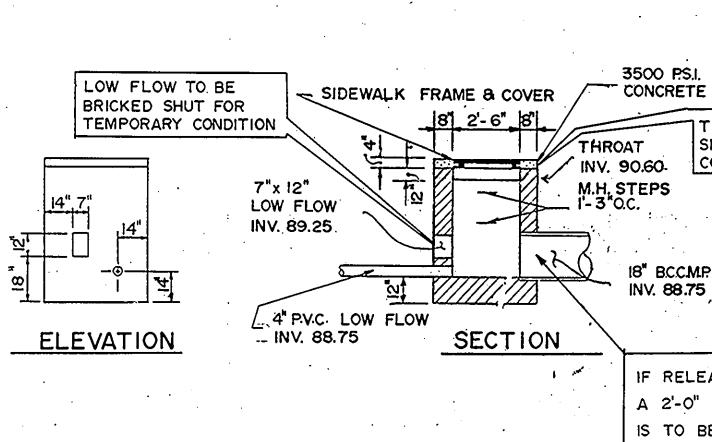
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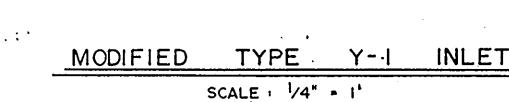
2'-0" . 4" P.V.C. 4'-0" OPENINGS 2 SIDES (TYP)

SLAB

PLAN BELOW SLAB

18" BCCMP





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SEQUENCE OF CONSTRUCTION

Obtain grading permit Notity the Howard County Department of Permits and Licenses Inspector 48 hours before beginning work. Phone (410) 313-2420. Clear and grub area for stabilized construction entrance. Install stabilized construction entrance. Clear area for silt fence. Install sitt fonce & TREE PROTECTION FENCE AS SHOWN ON PLAN. Clear area for sediment trap. install the sediment trap (storm water management pond). Berm along east property line to be constructed and meet earth dike near turn and park area. Bottom of trap shall only be excevated to elevation 89.25 at this time. Construct the modified Y-1 inlet and brick shut the two openings as shown on detail, this sheet. 4" P.V.C. low flow pipe will not be installed at this time. Clear and grub area where earth dikes will be installed. natall earth dikes and bituminous berm as shown on plan. Strip and stockpile topsoil. Seed & mulch topsoil stockpile. Grade site, except in topsoil stockpile, maintaining positive drainage to odiment basin. Temporary stabilization Construct foundations.

10 Days nstali electrical equipment. 60 Days Place stone cover on site. 5 Days

1 Day Pave road, Grade topsoil stockpile area and spread topsoil in graded areas. 1 Day 2 Days

Excavate bottom of trap to elevation 88.75. 22. With approval of sediment control inspector, open low flow and throat 23. openings and install 4" P.V.C. low flow pipe. Remove the weir from the sediment trap and complete construction of the 24. dam and stabilize. After obtaining permission from the sediment control inspector, remove

the remaining sediment control measures. Stabilization of areas disturbed as a result of note 25 above. Description J.O./Est. No.

EST. E5IMI441 STATION W/4 FDRS.

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DIRECTOR

APPROVED: PLAN NUMBER

1 yumax & LAND DEVELOPMENT SPT

ENGINEERING Civil..... Elec Proj. Engr. Proj. Mgr. Prin.Engr..... Supv.Engr....

DESIGN GROUP

Designer GEO. W. STEPHENS

30X

Drawn _____

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Appd. ____.

Date Appd.__

Approved 1).~4/1/42 --------------

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The group of the second se

INST. 25 MVA. , 34.5 - 13 KV SUB-

Construct steel structures

Permanent vegetative stabilization. (AREA TO BE RETIRED AT THIS TIME)

25. 26.

1 Day 5 Days 1 Day 30 Days

2 Days 2 Days 5 Days

3 Days

5 Days

1 Day

1 Day

2 Days

3 Days

2 Days

1 Day

Date

MAR.1992 EC1533

Rev

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APPROX, TIME

1 Day

1 Day

1 Day 1 Day 2 Days

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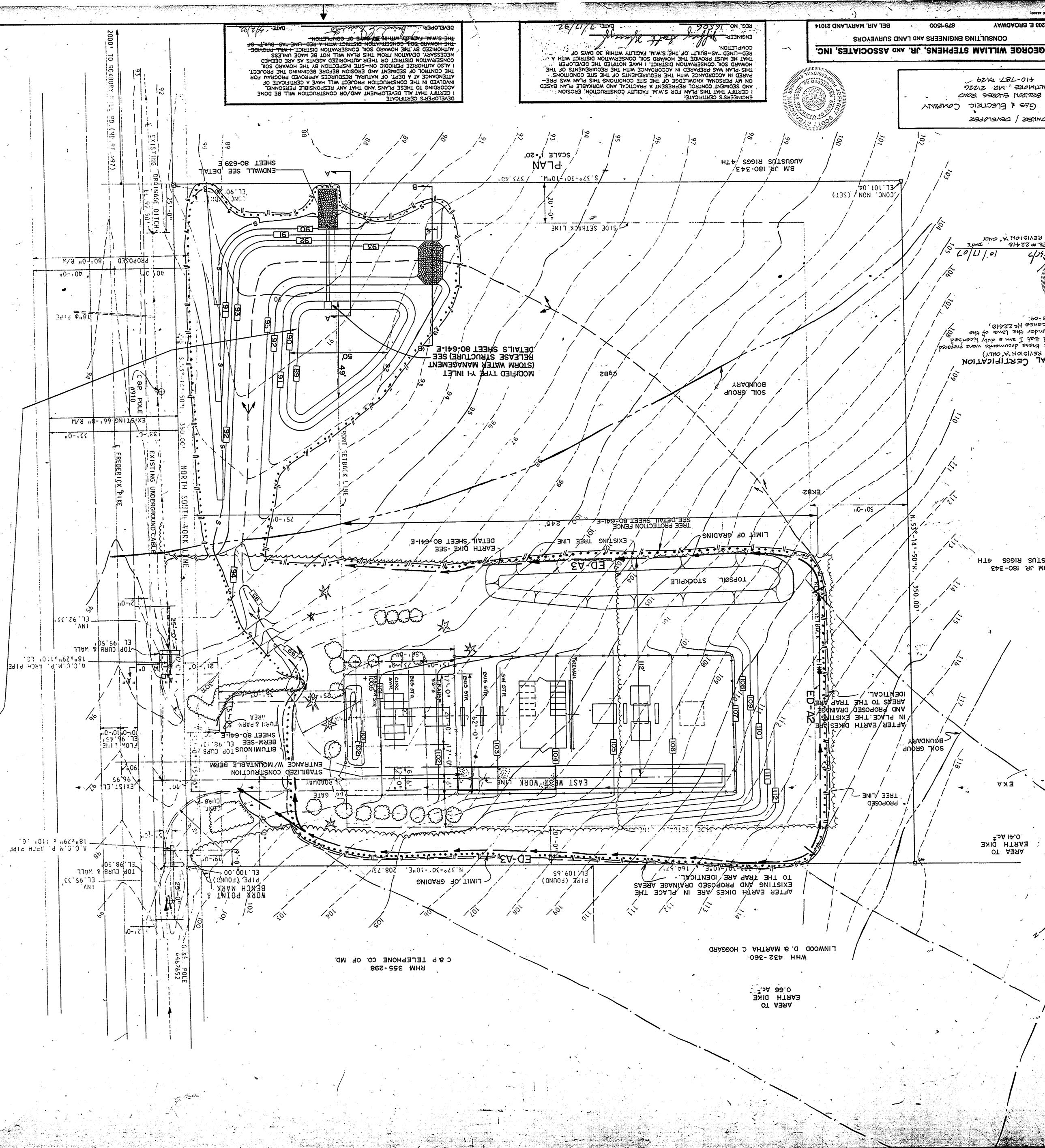
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THROAT TO BE BRICK SHUT FOR TEMPORARY CONDITION. 18" BCCMP INV. 88.75 IF RELEASE STRUCTURE IS PRE-CAST A 2'-O" SECTION OF THE 18" BARREL IS TO BE PRE-CASTED IN THE STRUCTURE. • • . . THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT & MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRU-GRON, SOIL EROSION AND SEDIMENT CONTROL. U.S. SOL CONSERVATION SERVICE THESE PLANS FOR SMALL POND CONSTRUCTION; SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT. HOWARD SOL CONSERVATION DISTRICT APPROVED. W/O PUBLIC-WATER AND PUBLIC-SEWERAGE SYSTEMS-HOWARD COUNTY HEALTH DEPARTMENT. GVIEWED: NO FACILITIES REQUIRED COOLITY HEALTH OFFICER 14. APPROVED ... HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING 10/16/92 199 CHEEF/DIVISION OF COMMUNITY PLANNING APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. James of from 10/8/92 CHIEF BUREAU OF ENGINEERING CD 9/0/12 9-9-92 JH 12 SEDIMENT & EROSION CONTROL DETAILS BG8E 345 - I3KV SUBSTATION COOKSVILLE HOWARD COUNTY 14725 FREDERICK ROAD BALTIMORE GAS AND ELECTRIC COMPANY DISTRIBUTION & TRANSMISSION ENGINEERING DEPT. SYSTEM ENGINEERING SECTION Scale AS SHOWN File Microfilmed Dwg. 80 - 641-E Orig. 🗆 Rev. 507-98-103 SHEET 5 0F5

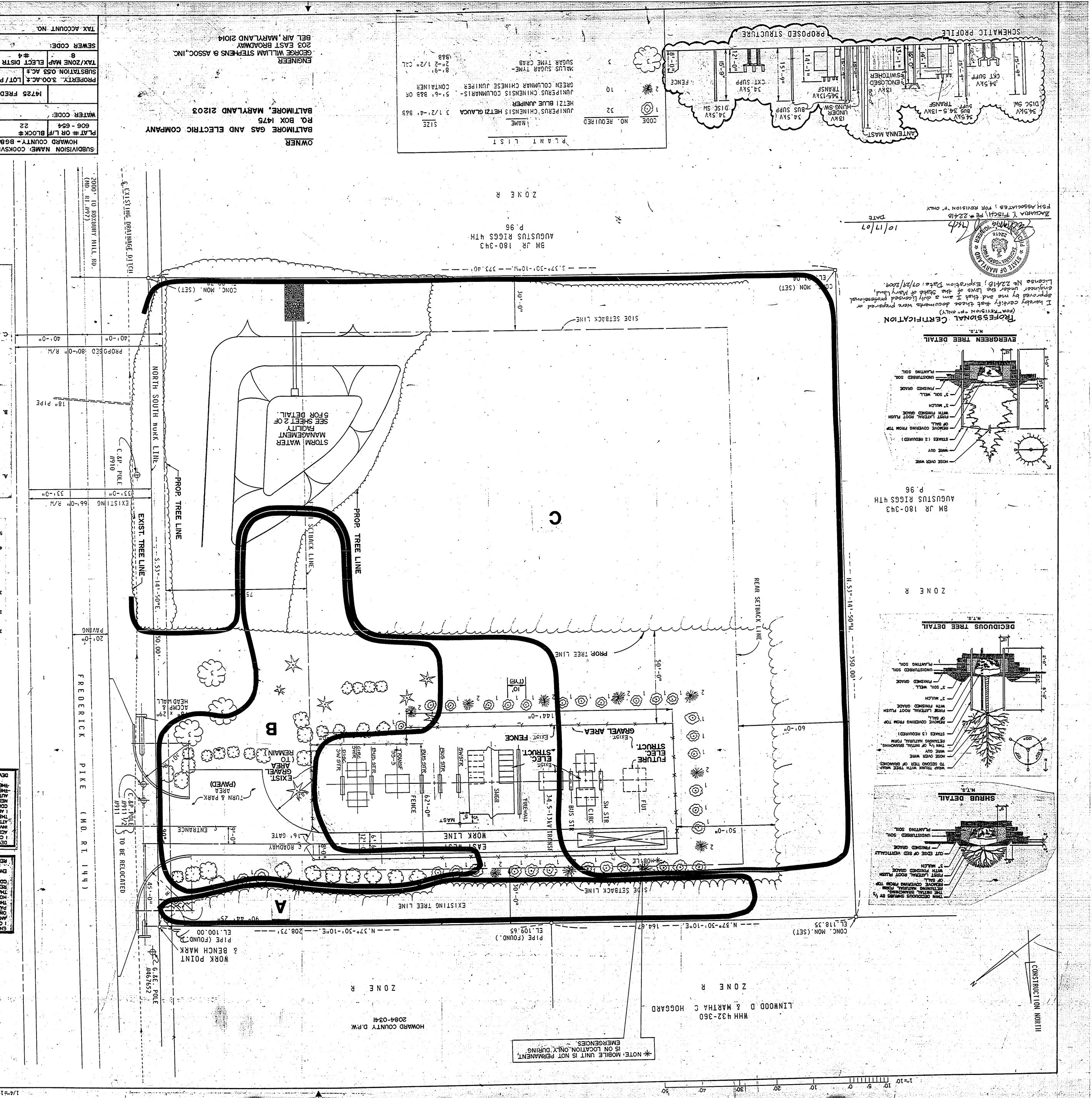
1 5-10-26-103 SHEEL & OL-26-20-2 منكحة تعمد مر 30X MO 3-079-08 0 -,940-E ♥ "pddv a: - 0311115 SCALE 1"=20"-0" THEV-Neckee -----SYSTER ENGINEERING SECTION ---- UAD DOSIGNOL GEO. W. STEPHENS BALTIMORE GAS AND ELECTRIC COMPANY DESIGN CEODE COOKSVILLE HOWARD COUNTY BOBE 34 2- 13KA 20821VILON -'JOU3'Adne רוֹה, בֿחסַר..... 5 N -----.10M.(o) roj. Engr. ----- . 041200 1002700 HENANT AVARS VAEI-EAS ONS TENI CONTROL PLAN INST 25 MVA., 34.5-13 KV.-SUB-STATION W/4 FDRS. 1441WIS SEDIMENT & EROSION "" 11AE 1.1. 2. SEELAAM ENCINEERINC eroù veñ Description Approved THE BUSEN OF ENCINEERING OF 1/2 45 H.C. EILL = 600 C.Y.2,00,00 COT = 1200 C.Y.GRADING QUANTITIES -131 tomo X. min - win 26/8/91 $\pm 0.06 \pm 0.06 \pm 0.06 \pm 0.06$ STONE COVERED AREA = 0.26 AC. FUBLIC WORKS. AREA TO BE VEGETATIVELY STABILIZED = 0.81 AC.± SYSTEMS AND FUBLIC ROADS HOWARD COUNTY DEPARTMENT OF TOTAL DISTURBED AREA = 1.13 AC \pm SITE ANALYSIS COMM/2 2611 • ~ 26/91/91 SEDIMENT CONTROL PLAN FOR EXCESS CUT MATERIAL. CONTRACTOR RESPONSIBLE FOR PROVIDING AN APPROVED **HION** POPROVED HOWARD COUNTY DEPARTMENT OF FLANNING & ZONING SOIL GROUP BOUNDARY COONTRHEALTH OFFICER LIMIT OF DISTURBANCE. 26(58/8 REVIEWED: NO FACILITIES REDURED HOWARD COUNTY HEALTH DEPARTNENT. -SWEESKS BOWERS ON BAR ON SELEVICE EXECUTE TREE PROTECTION FENCE илат рвотестюи С PLAN NUMBER - ABRA BDANIARD OBSOGOR ----- ABRA BDANIARD DNITEIX3 PROPOSED CONTOURS CONSERVINON DISTINCT. SEDMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL THESE PLANS FOR SMALL POND CONSTRUCTION. SOIL EROSION AND EXISTING CONTOURS **LEGEND** TO ZOR CONZERVITION SERVICE -CHICK- 201" ELSOZION WAD ZEDINEAL CONLISOF DISTRICT & MEET THE TECHNICAL REQUIREMENTS FOR SWALL POND CONSTRUCT THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONS NO SCALE **SEDIMENT TRAP** SECTION B-B 3-149-08 AT CLEANOUT ELEVATION TEAHS GAAT TNAMIDAS TALTO FOR AVERAGE MEASURE STORAGE STONE WEIR SEE DETAIL OF STONE ЧАЯТ ЯОЭ STORAGE CALCULATIONS EX. GROUND CREST , 92.25 Z.EE MAD 90T NO SCALE SEDIMENT TRAP SECTION A-A CREST ELEV. **92.2**5 STORAGE ELEV 91°52 BOTTOM ELEV. 89.25 BOTTOM 89.25 STORAGE 9125 SIZE OF TRAP 50×49×2 3 629-08 T33H2 - ENDWALL SEE DETAIL STORAGE PROVIDED 4900 C.F. STORAGE REQUIRED 2700 C.F. EX. GROUND) T.SA C.I - ABRA BOANIARD 2.56 MAD 90T SHEET 80-641-E SEE SEQUENCE OF CONSTRUCTION SEE DETAIL SHEET 80.641 E) WODIELED TYPE Y-I INLET TO BE USED AS SEDIMENT TRAP GNOA TNEMEDANAM AETAW MAOTE 8 W OSIB N 183'83' 1128 E 338' 431 1269 ETEN 14' 2 B.H. 081 4 N 183' 211' 1966 E 2399' 494 0665 ETEN 180 H.B. SCALE:1"=2000' VALCINITY PLAN YRAAD CEMETERY AI80.M.8 N A SIGNIFICANT EROSION POTENTIAL: NONE HADBIC INCTORIONS: NONE HADKIC 20ITS: NONE EBS EFIOAK EKY ELIOAK B.H. OST B C⁸C3 CHE2LEK C⁸B3 CHE2LEK SOIL TYPES: SOIL DATA 0-1 =.++/1



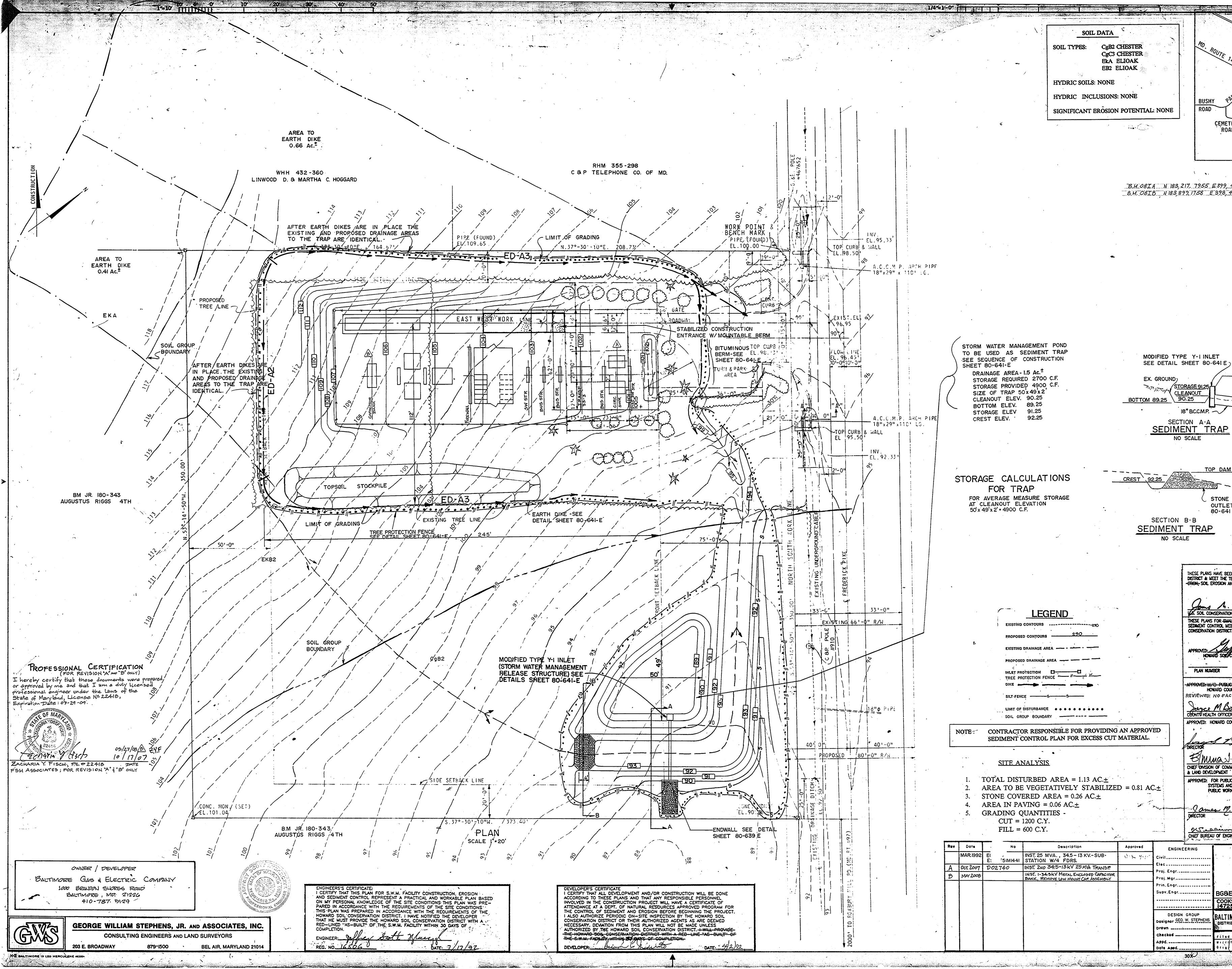
THE BALTINORS IS 1233 HERCUCANE 40000-203 E. BROADWAY SMP - 6219 :L8L-015 1 - معرب -BALTMORE, MR. 21226 1000 BRANDON SUDRES ROAD BALTIMORE GAS & ELECTRIC COMPANY OWNERS / DEVELOPER PICE A SSOCIATES ; FOR REVISION X ONLY 60/61/01 1 4115422 4297 2.9221 Professional Engineer under the laws of the Btate of Maryland, License Ne 22418, Expiration Trate: 07-29-09. T hereby certify that these documents were prepared PROFESSIONAL CERTIFICATION (FOR REVISION & ONLY) AUGUSTUS RIGGS 4TH BM JR. 180-343 EK С Е В В Т Н DIKE О.4I Рс.[±] OT A39A

SAGETTOPE SOL-26-26-26-26-26-26-26-26-26-26-26-26-26-	
	EC 1233 MB 24-2-12KV 25MVA
DESIGNED COOKSVILLE HOWARD COUNTY	Z40 TR CENSUS TR: 0 0.30-9/ W/4 EDRS 25MVA SUBSTA 20 86.6.51 24.5-13KV 25MVA SUBSTA 20 86.6.51
US WANAGER MALES BERGE 34 5-13KA SUBSTATION	V PARCEL # CHARCEL # INSTLU OF BATTERY
	SEDRICK : PIKE
	B 10 8-29-22 ADDED SCREENING
JAROVAL All and a second s	CONE: REV. DATE DESCRIPTION A
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SHEEL & SEDIMENT & EBOSION CONTROL DETAILS SHEEL & SEDIMENT & EBOSION CONTROL PLAN	
SHEEL 3 SLOEN AVLES NVAVGERENL DELVITS	
NVRVGEMERT SHEET 2 GEVDING LIVN' BENCE' BOVDAVI & SLOHN AVLES SHEET 1 SILE DEAETOBMENT BIVN' FOCVLION/BIVNLING BIVN	• 7
TIZI OF DEVALUES	
interior ware lines. The above requirements shall apply to all interior with the store requirements of the shore requirements apply to all interior of the store requirements apply to all interior of the shore requirements apply the store requirements of the store the store re	3. Maturity and general condition: Volunteer species, 7-12 years old, free to grow in open field.
CO THEFTTERTON OF THE SEPERTE AND THEODENEEDE SEMES CONNECTION AND TELEGO CHERGE TEMPTERE NOT COMPARTE AND THEODENEEDE SEMET CONNECTION AND TELEGO OF OCCUPANE OF AND PUTTERTE AND THEODENEE SEMET CONNECTION. NO CENANT OTECHTREDE CO CHE SEDERTES AND THEODENEE SEMET CONNECTION. NO CENANT CONTRACTOR CO CHE SEDERTES AND THEODENEE SEMET CONNECTION. NO CENANT	Liriodendron tulipitera (Yellow poplar) 3-6" DBH Robinia pseudo-acacia (Black locust) 4-6" DBH
designed, constructed or modified such that, non-domestic waste will be soward county, waste pretroatment, devices as required and approved by designed, constructed or modified such that, non-domestic waste will be	Prunus scrotina (Black cherry) 2-6" DBH Acer rubrun (Red maple) 2-6" DBH Häd "2-6" DBH
Rach seperate and independent sever connection shall include a standard if this wares is required under sever connection 18,1228 of the Bowerd Councy Code, plan who will discharge non-domatic waste to the public severage system each tennit or occupant of and building, shown on this site development	C. <u>Group C</u> I. Description: Volunteer deciduous trees in an open field Z. Dominant species
. The owner shall provide a separate and independent sever connection for	of parking area.
5. All werer mein rees bends, caps. ecc. shall be buttressed in accordance vith Roward County Design requirements.	 3. Maturity and general condition: Ornamental evergreens in this community 1, 2 4. Specimen: 12" DBH Pinus strobus (White pine) located to immediate north 4.
the may intertore with proposed construction.	Finus strobus (White pine) 10-12" DBH Pices abies (Norway Spruce) 6-8"DBH Juniperus chinensis glauca herzi (Blue herz juniper) 8' height
3. The contrector shall remove all existing pering, curb and gutter, ecc. 792-7272.	I. Description: Ornamental Evergreens
2. The contractor or developer shall contact the Construction Inspection/Survey	3. Maturity and general condition: Intermediate growth in good condition B. Crown B
). The contractor shall-maintain a minimum of 6' cover over all proposed verer	Had "d-h Cherry) karon serouna surury Had "d-h Cherry) also surury Had "d (mbb xog) obnugar mod Had "d (moved) of DBH
5 TO 2 JUNCE CON CONSTRUCTION AND THE DATE DATE DATE DATE TO STRUCT THE PARTY OF SOLUTION AND TH	2. Domissif Species (Black locust) 6-12" DBH
8. The contractor shell notify the C 4 P Telephone Co. and the Gas and Electric Company five days prior to scarting work shown on those plans by calling "Miss Diliting". Call 1-800-257-7777.	A. Group. A. Structures I. I.
And Decalls for Construction, or as shown on those plans.	Existing Vegetive Communities
5. The contractor shall verify all existing utilities to his own satisfaction before starting construction . All slopes shall be 211 or flatter.	
4. The contractor shall maintain at least a 3' level bench benind all cuth and gutter in fill areas.	5. All exterior lighting shall be directed downward and inward so as not to shine or reflect onto adjacent properties or roads.
separad temptic rights-of-wey and/or adjacent properties shall be	
3. All areas not being paved or receiving building coverage shall be stratified in accordance with the plans approved by Howard Soil Con- stratification District.	other buildings, structures, additions or uses; any future transformers, capacitors, structures, additions, activities, or equipment not indicated on the special exception plat are not approved and are not a part of this granted special
. Nextmus building beight [6.	3. The special exception is limited to the installation and operation of the equipment as designated on the special exception plat submitted with the petition, and not to any
	2. The Petitioner shall submit a Site Developement Plan to the Department of Planning and Soning within six (6) months of the date of this order.
	1. The Petitioner shall comply with all applicable laws requistions and quidelines, including, but not limited to, those pertaining to limitations on noise levels.
	BA-91-53E APPROVED 3-12-92
	ZONE K
NOTE: SOUND LEVEL AT PROPERTY LINE IS EXPECTED	TIME TANOISS AND THE
SDP 92-103 BA-91-53E-APROVED MARCH IS, 1992-SEE CONDITIONS BELOW	102. BERKE 322-298
JUNE 20, 1972 - 710C	
PROPOSED USE: ELECTRICAL SUBSTATION	A CANANA AND A CANANA
OWNER: B.G.& E. CO. P.O. BOX 1475 BALTIMORE, MARYLAND 21203	DEAETOBER MILLING TO THE OF COMMETELION
AREA TO BE RETIRED: 2,688 5,5 = 0.06 Ac.+ GREEN AREA TO REMAIN:117,912 5,5 = 2.01 Ac.+ TOTAL SITE: '130,680 S.F. = 3.00 Ac.+	THE HOMMED DOIL CONSERVATION DISTRICT, HWILL PROVIDE AND ADDITION OF CONSERVATION OF CONSERVAT
AREA OF: PROPOSED SUBSTATION: LO,080 S.F. = 0.23 AC.+ EXISTING SUBSTATION: 2,688 S.F. = 0.06 AC.+	ATTENDANCE AT A DEPT. OF NATURAL RESOURCES APPROVED PROCRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BECINNING THE PROJECT.
OF HOWARD COUNTY, MARYLAND. TAX MAP 8, PARCEL 240, GRID 22 ZONED R	VCCORDING LO LHEZE LIVINZ VNO LIVY VNA BEZDONZIBIE LEBERZONNET I CEBLIEL LIVIT DELETOLINENL VNO OB CONZLENCLION MIT BE DONE DELETOLEBEZ CEBLIELICYLE
THIS PROPERTY IS LOCATED IN THE 4TH ELECTION DISTRICT	26/L1/L -31VO - 90591 - ON - 338
7.641 NJJ 264 4865 2 398, 437 1266 ELEN 149.7 SISYJANA JTIS	ENCINATELON CONDITION
<u>BW 0814</u> <u>N 183² 217 1955 E 399 494 0957 E7EN 120 E</u> SCALE:1"= 2000'	HED-FINED -VZ-BRITL, OL THE S'W'N' EVCITILA MILHIN 20 DVAZ OL THVI HE MITRI LANONDE THE HOWERD SOIT CONSERVENCIN DISTRICT WITH V' HOWVED SOIT CONSERVENCIN DISTRICT' I HAVE NOTHERD THE DEVELOPER THIS PLAN WAS PREPARED IN ACCORDINCE WITH THE REOURDEMENTS OF THE
ΛΙΟΙΝΙΤΥ ΡΔΑΝ	BARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STE CONDITIONS PARE
ARRIANURY M	I CERTIFY THAT THIS PLAN FOR SUMM FACILITY CONSTRUCTION, EROSION
CEMETERY WE SAIR OBTE SHORT N	CHIEF, BUREAU OF ENGINE
DATE E TAY ANSUS TRAD	DIRECTOR DIRECTOR
S & ROADS. HOWARD CO	APPROVED
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EPT. OF PLANNING& ZONING	APPROVED: HOWARD CO. DI
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B.M. OBT B CEMETERY B.M.OBIA ROAD VICINITY PLAN SCALE:1"=2000' B.M. OBIA N 183, 217. 7955 E399, 464.0662 ELEV. 160.5 B.M. OBIB N 183, 899, 1758 E 398, 437. 1266 ELEV. 149.7 TOP DAM 93.5 - ENDWALL SEE DETAIL SHEET 80-639 E TOP DAM 93.5 EX. GROUND STONE WEIR SEE DETAIL OF STONE OUTLET SEDIMENT TRAP SHEET 80-64I-E THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT & MEET THE TECHNICAL REQUIREMENTS FOR-SMALL POND CONSTRU-CTION-SOIL EROSION AND SEDIMENT CONTROL. Joms M. Alen Jos. 8/21/92 THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT. VPROVED W/O PUBLIC WATER AND PUBLIC SEWERACE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT. REVIEWED: NO FACILITIES REQUIRED COUNTY HEALTH OFFICER # PAR Som 8/25)92 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING 10/16/92 CHEEF DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT ' J 19-APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. 11 1 1 2 7 James M. Inun 10/8/92 Act. Q.04,013 NSagain & Realing CHIEF BUREAU OF ENGINEERING OD 9/8/41 The word JH SEDIMENT & EROSION CONTROL PLAN 0 · · · · · · BG&E 34 5- 13KV SUBSTATION COOKSVILLE HOWARD COUNTY BALTIMORE GAS AND ELECTRIC COMPANY DISTRIBUTION & TRANSMISSION ENGINEERING DEPT. SYSTEM ENGINEERING SECTION SCALE 1"=20'-0" Filad DWG. 80 - 640-E iccolileod -Ple v. 50P-92-103 SHEET 4 OF 5 S. Street

SPECIFICATIONS These specifications are appropriate to all ponds within the scope of

specifications apply to the most recent version. Site Preparation Areas designated for borrow areas, embankment and structural

the Standard for practice MD-378. All references to ASTM and AASHTO

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 sloped to no steeper than 1:1. Areas to be covered by the reservoir will be cleared of all trees,

brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 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 on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish; stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

<u>Placement</u> - 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 fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading outpoment 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 tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be soucceed out.

Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 88.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap 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 riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

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 ion shall be accomplished in a manner and to the extent that wi maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left a 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 on the accompanying drawings.

Erosion and Sediment Control

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

Where a minimum required density is specified, it shall not be less than 95% of maximum 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 T-

<u>Cut Off Trench</u> - The cutoff trench shall be excavated into impervious material 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 trench shall be I to I or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

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 that 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 pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for orrugated metal pipe:

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes 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.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its purtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-scep collars, end sections, etc., must be omposed of the same material as the pipe. Metals must be insulated from lissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. Connections - All connections with pipes must be completely vatertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars 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 oining 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 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 hugs. A 12" wide by 3/8" thick closed cell circular coprene gasket will be installed on the end of each pipe for a total of 24".

Helically corrugated pipe shall have either continuously welded

eams or have lock seams.

and see

JAJ WHITE MARSH, MO.

4. Bedding - The pipe shall be firmly and uniformly bedded roughout 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. 5. Backfilling shall conform to "Structure Backfill".

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings. Reinforced Concrete Pipe - All of the following criteria shall apply

for reinforced concrete pipe: 1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-

361. An approved equivalent is AWWA Specification C-302. 2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bodding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least

10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings. 3. Laying pipe - Bell and spigot pipe shall be placed with the bell

end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. 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 drawings. 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. *Rock Ripmp

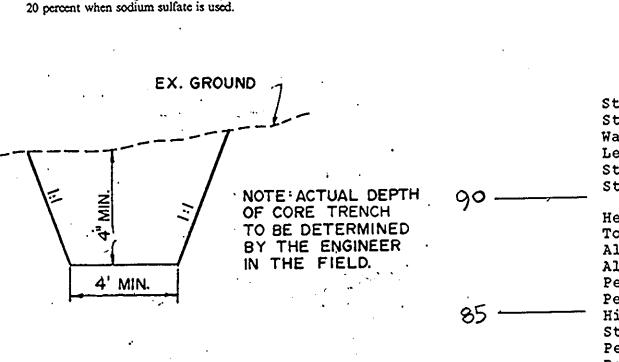
All rock shall be dense, sound, and free from cracks, seams and other defects conducive to accelerated weathering. The rock fragments shall be angular to subrounded in shape. The least dimension of an individual rock fragment shall be not less than one-third the greatest dimension of the

The rock shall have the following properties:

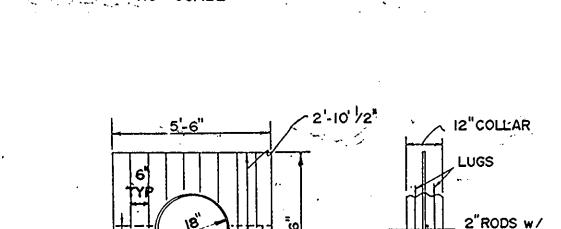
1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.

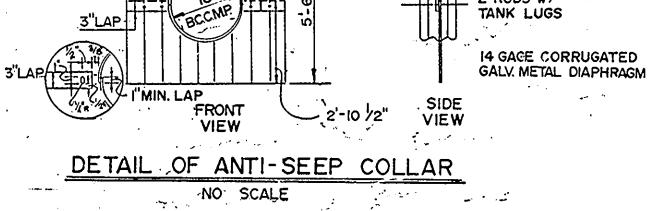
2. Absorption not more than three percent.

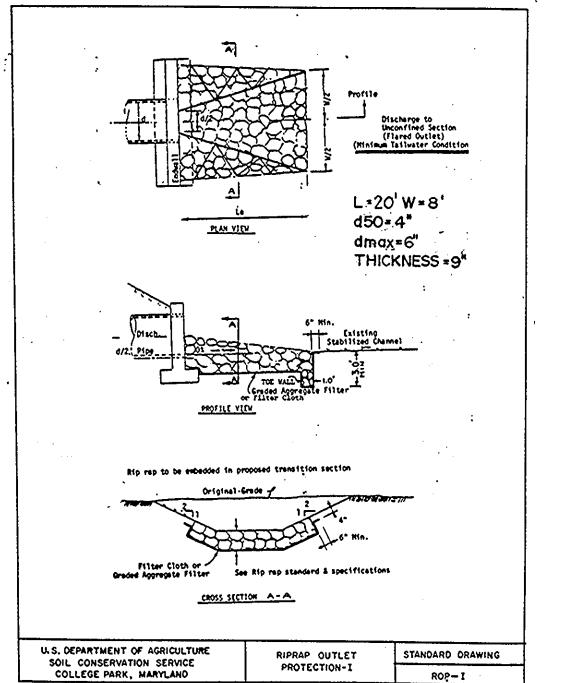
3. Soundness: Weight loss in five cycles not more than

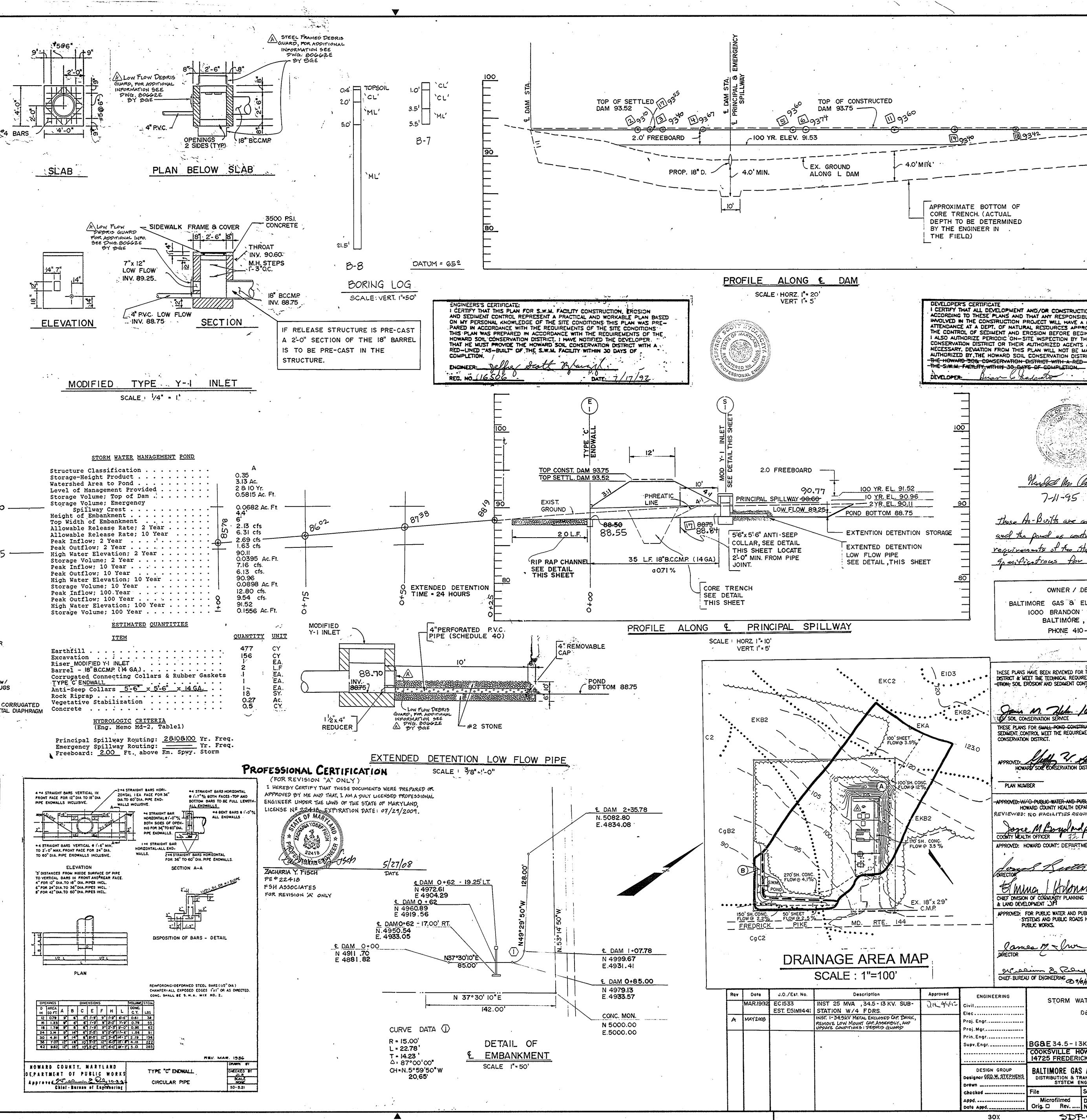








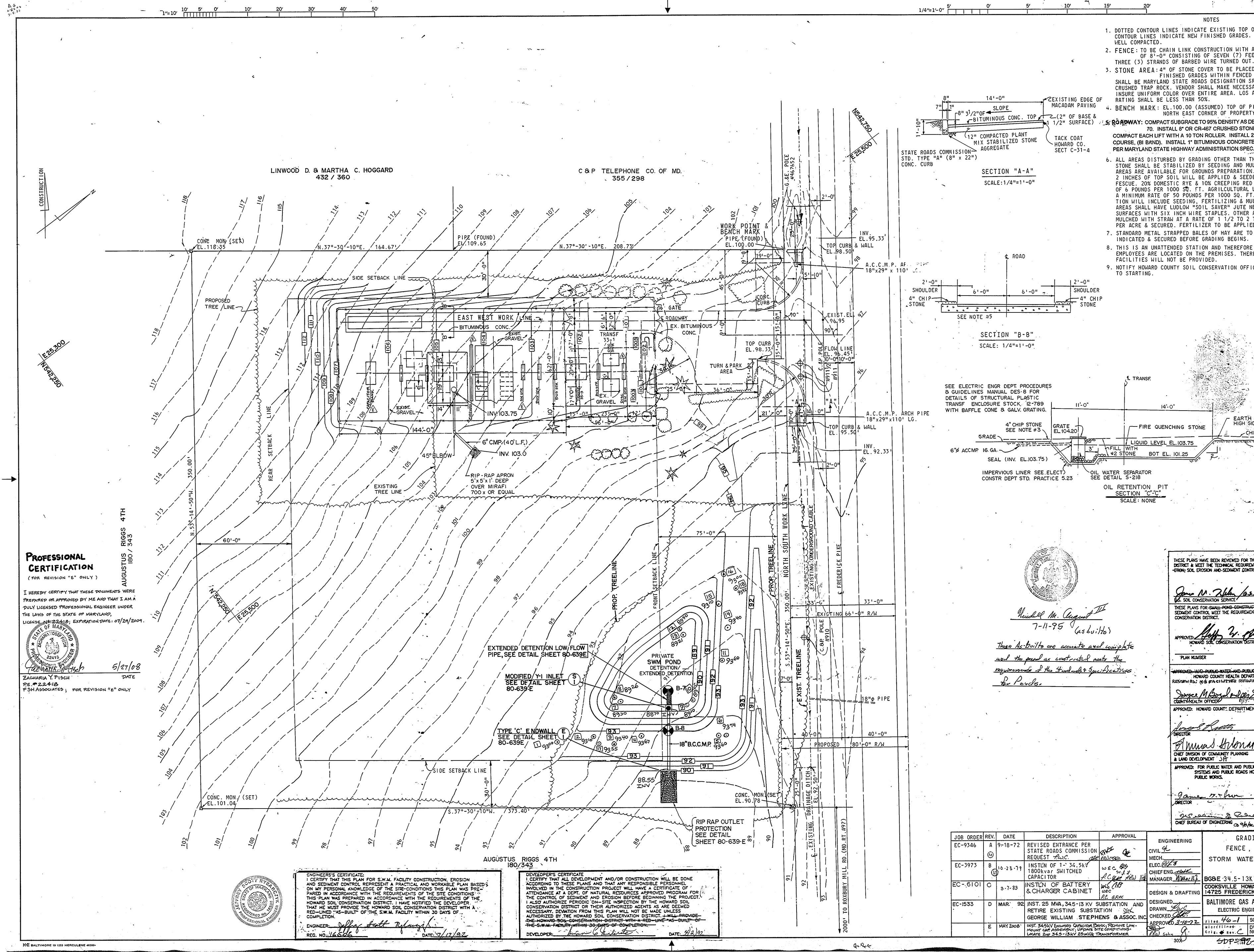




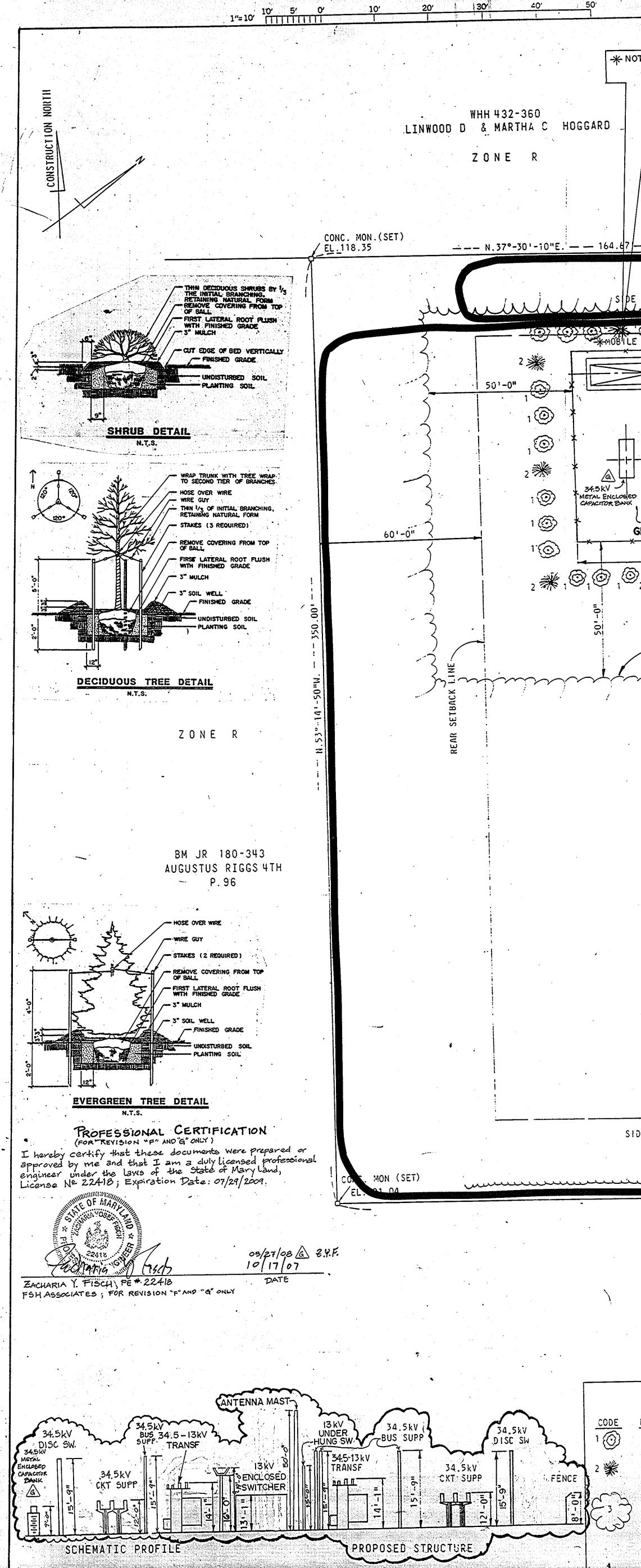
GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC. CONSULTING ENGINEERS AND LAND SURVEYORS BEL AIR, MARYLAND 21014

203 E. BROADWAY 879-1500

18 9342____ _____ I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL HNOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL RESOURCES APPROVED 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 OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY, THE HOWARD SOIL CONSERVATION DISTRICT. + WILL PROVIDE--THE-HOWARD-SOIL CONSERVATION-DISTRICT WITH A-RED-LINE-WAS-BUILT OF-DATE 1/2/ 7-11-95 (As builts) these As - Builts are accounte and complete and the pour as constructed mats the requirements of the Standards and Specifications for Pourds. OWNER / DEVELOPER BALTIMORE GAS & ELECTRIC COMPANY 1000 BRANDON SHORES ROAD BALTIMORE, MD. 21226 PHONE 410-787-5129 THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT & MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRU -CTION, SOIL EROSION AND SEDIMENT CONTROLS Sol CONSERVATION SERVICE THESE PLANS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL APPROVED: W/O-PUBLIC WATER AND PUBLIC SEWERACE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT. REVIEWED: NO FACILITIES REQUIRED OUBTY NEALTH OFFICER 11 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING CHIEF DIVISION OF COMMUNITY PLANNIN & LAND DEVELOPMENT 'J' APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. James M. - In 10/8/92 \mathcal{L} gracing & Ray <u>9.9,9,2</u> CHIEF BUREAU OF ENGINEERING OD 9/8/6 · JH 3 STORM WATER MANAGEMENT DETAILS BG&E 34.5-13KV SUBSTATION COOKSVILLE HOWARD COUNTY 4725 FREDERICK ROAD BALTIMORE GAS AND ELECTRIC COMPANY DISTRIBUTION & TRANSMISSION ENGINEERING DEPT. SYSTEM ENGINEERING SECTION Scale AS SHOWN Dwg. 80-639-E Microfilmed Orig. 🗆 🛛 Rev. . 5DP-92-103 SHEET 3 OF 5

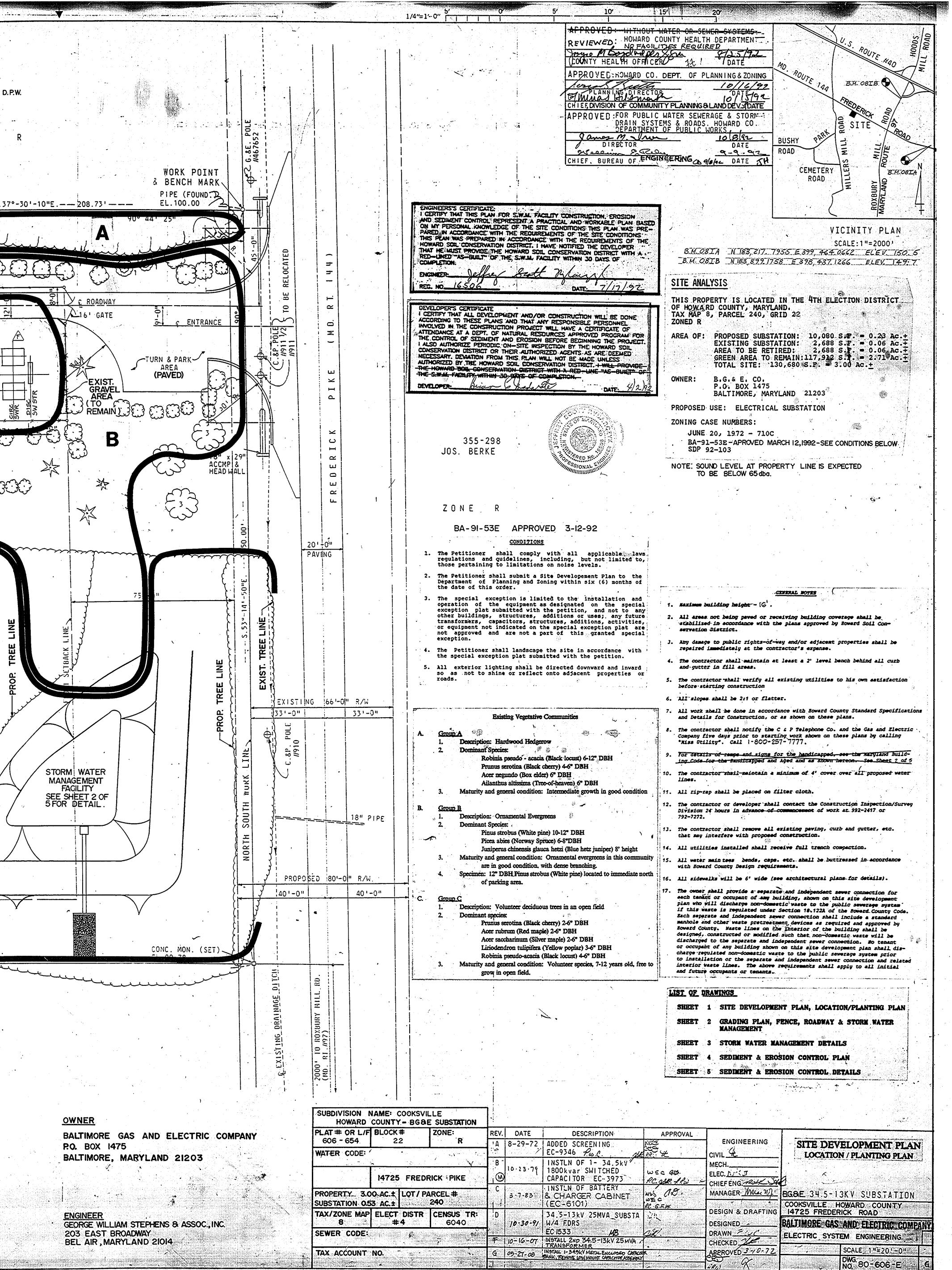


NOTES 1. DOTTED CONTOUR LINES INDICATE EXISTING TOP OF GRADE. FULL CONTOUR LINES INDICATE NEW FINISHED GRADES. ALL FILL TO BE 2. FENCE: TO BE CHAIN LINK CONSTRUCTION WITH AN OVERALL HEIGHT OF 8'-O" CONSISTING OF SEVEN (7) FEET OF FABRIC WITH 3. STONE AREA: 4" OF STONE COVER TO BE PLACED OVER NEW FINISHED GRADES WITHIN FENCED AREA. STONE COVER SHALL BE MARYLAND STATE ROADS DESIGNATION SRC-4 BLUE GRAY CRUSHED TRAP ROCK. VENDOR SHALL MAKE NECESSARY ARRANGEMENTS TO INSURE UNIFORM COLOR OVER ENTIRE AREA. LOS ANGELES ABRASION 4. BENCH MARK: EL.100.00 (ASSUMED) TOP OF PIPE LOCATED AT NORTH EAST CORNER OF PROPERTY. 5 STROADWAY: COMPACT SUBGRADE TO 95% DENSITY AS DETERMINED BY ASTM-1557 70. INSTALL 8" OR CR-467 CRUSHED STONE BASE ON TWO LIFTS & . COMPACT EACH LIFT WITH A 10 TON ROLLER. INSTALL 2" BITUMINOUS BINDER COURSE, (BI BAND), INSTALL 1" BITUMINOUS CONCRETE SURFACE, (SN BAND) A ALL AREAS DISTURBED BY GRADING OTHER THAN THOSE COVERED WITH STONE SHALL BE STABILIZED BY SEEDING AND MULCHING AS SOON AS AREAS ARE AVAILABLE FOR GROUNDS PREPARATION. APPROXIMATELY 2 INCHES OF TOP SOIL WILL BE APPLIED & SEEDED WITH 70% KENTUCK FESCUE. 20% DOMESTIC RYE & 10% CREEPING RED FESCUE AT A RATE OF 6 POUNDS PER 1000 ST. FT. AGRILCULTURAL LIME TO BE ADDED AT A MINIMUM RATE OF 50 POUNDS PER 1000 SQ. FT. SLOPE STABILIZA-TION WILL INCLUDE SEEDING, FERTILIZING & MULCHING. CRITICAL AREAS SHALL HAVE LUDLOW "SOIL SAVER" JUTE NETTING APPLIED TO SURFACES WITH SIX INCH WIRE STAPLES. OTHER AREAS WILL BE MULCHED WITH STRAW AT A RATE OF 1 1/2 TO 2 TONS OF WHEAT STRAW PER ACRE & SECURED. FERTILIZER TO BE APPLIED AT 25 LBS/1000 SQFT 7. STANDARD METAL STRAPPED BALES OF HAY ARE TO BE PLACED WHERE 8. THIS IS AN UNATTENDED STATION AND THEREFORE NO PERMANENT EMPLOYEES ARE LOCATED ON THE PREMISES. THEREFORE SANITARY 9. NOTIFY HOWARD COUNTY SOIL CONSERVATION OFFICE 24 HOURS PRIOR - EARTH BERM 6" HIGH ON HIGH SIDE ONLY CHIP STONE STATE WEINE WEINEN - GRADE بالمجرب للمتريجا and an array a THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT & MEET THE TECHNICAL REQUIREMENTS FOR-SMALL POND CONSTRU-GTION, SOIL EROSION AND-SEDIMENT CONTROL Jones M. Julin / a.s. THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT. SOL CONSERVATION PLAN MUNBER SOCIED W/O PUBLIC WATER AND PUBLIC SOMERACE OFSTEMS HOWARD COUNTY HEALTH DEPARTMENT. Existed: No FACILITYES REQUIRED 8/25/92 COONTINHEALTH OFFICER APPROVED: HOWARD COUNTY, DEPARTMENT OF, PLANNING & ZONING 10/10/92 CHEF DMISION OF CONDUNITY PLANNING & LAND DEVELOPMENT 'SA APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF-PUBLIC WORKS. James M. Those S <u>ب</u> 215 main & Radap 9.9.92 JH 3 CHEF BUREAU OF ENGINEERING CO 9/0/4 GRADING PLAN, FENCE, ROADWAY & STORM WATER MANAGEMENT BGBE 34.5-13KV SUBSTATION COOKSVILLE HOWARD COUNTY 14725 FREDERICK ROAD BALTIMORE GAS AND ELECTRIC COMPANY ELECTRIC ENGINEERING DEPARTMENT Filed. 46-1 SCALE 1"=20'-0" REV. lerefilmed tig. ₩ Rev. C | DWG. 80 - 603 -Wierefilmed-SDP -103/1_SHEET 20F5



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OTE: MOBILE UNIT IS NOT PERMANENT, IS ON LOCATION_ONLY DURING EMERGENCIES.				
EMERGENCIES	HOWARD	D COUNTY D.P.W. 084-034!		
PIPE (F0) EL.109.6		ZONE R 		WORK POINT & BENCH MARK PIPE (FOUND.P EL.100.00
E SETBACK LINE	EXISTING TREE LINI		A	
	EAST MEST		$\frac{1}{2} \frac{1}{16^{1}} \frac{1}{6 \text{ GATE}}$	ENTRANCE
Alternational and a second sec		BUS STR	EXIST. GRAVEL AREA (TO REMAIN)	URN & PARK AREA (PAVED)
GRAVEL AREA			B	ACCMP HEAD W
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	180-343 RIGGS 4TH		un entered	······································
ZQNE	R			
<u>PLANT</u> <u>NO. REQUIRED</u> 32 JUNIPERUS CHINENS HETZI BLUE JUNIPER 10 JUNIPERUS CHINENS GREEN COLUMNAR CH	IS HETZI GLAUCA 3 1/2'-4' 3&3 IS COLUMNARIS- 5'-6' 8&8 08		OWNER BALTIMORE GAS A P.O. BOX 1475 BALTIMORE, MARYL	
MALUS SUGAR TYME- 3 SUGAR TYME CRAB			ENGINEER GEORGE WILLIAM STEF 203 EAST BROADWAY BEL AIR, MARYLAND	Contract in the second second



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