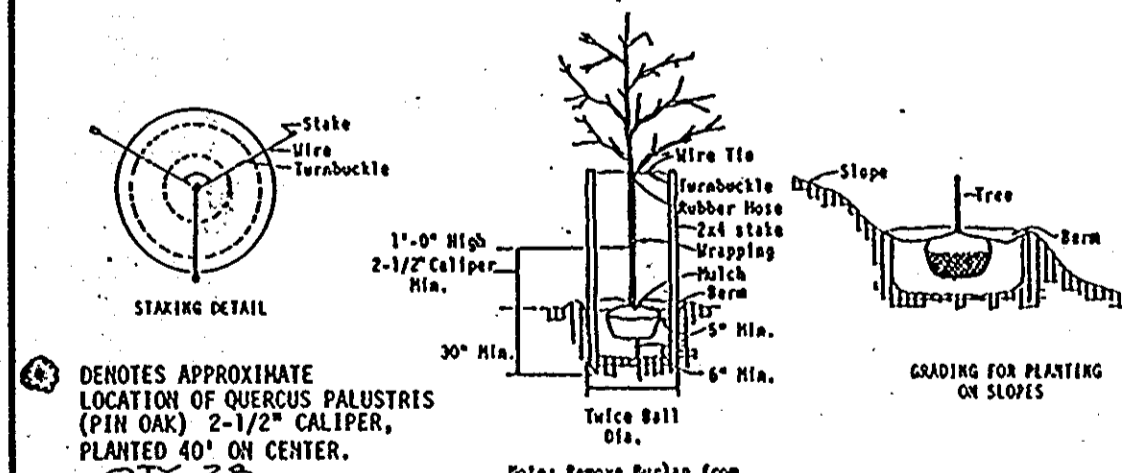


SEDIMENT CONTROL NOTES

- 1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2437).
- 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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, DICES, PERIMETER SLOPES AND ALL 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. 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. TEMPORARY SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY STABILIZATION (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 7) SITE ANALYSIS:
 - TOTAL AREA OF SITE: 3.765 ACRES
 - AREA TO BE ROOFED OR PAVED: 1.075 ACRES
 - AREA TO BE VEGETATIVELY STABILIZED: 3.822 ACRES
 - TOTAL CUT: 2,000 CU. YDS.
 - TOTAL FILL: 2,000 CU. YDS.
 - OFFSITE WASTE/BORROW AREA LOCATION: 1/2 MI. S.W. OF LOT 15
- 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 DEMAILED NECESSARY BY THE HOWARD COUNTY DOW SEDIMENT CONTROL INSPECTOR.
- 10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

REVISION	DATE	NO.
REMOVED PATHWAY, ADDED BOLLARDS	8/3/04	1
ADDED BOLLARD DETAIL	8/3/04	2

NOTE: TREES SHALL BE PLANTED A MINIMUM OF 5 FEET AWAY FROM THE BACK OF SIDEWALKS.



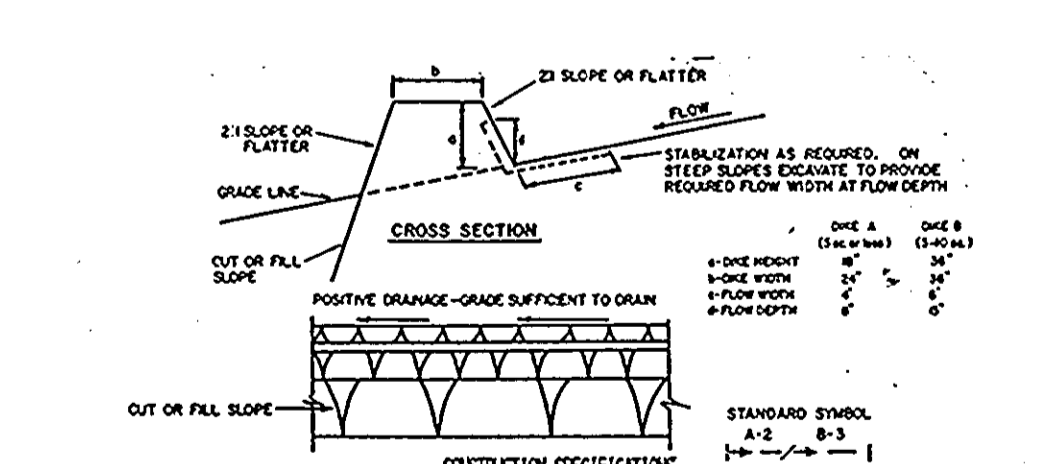
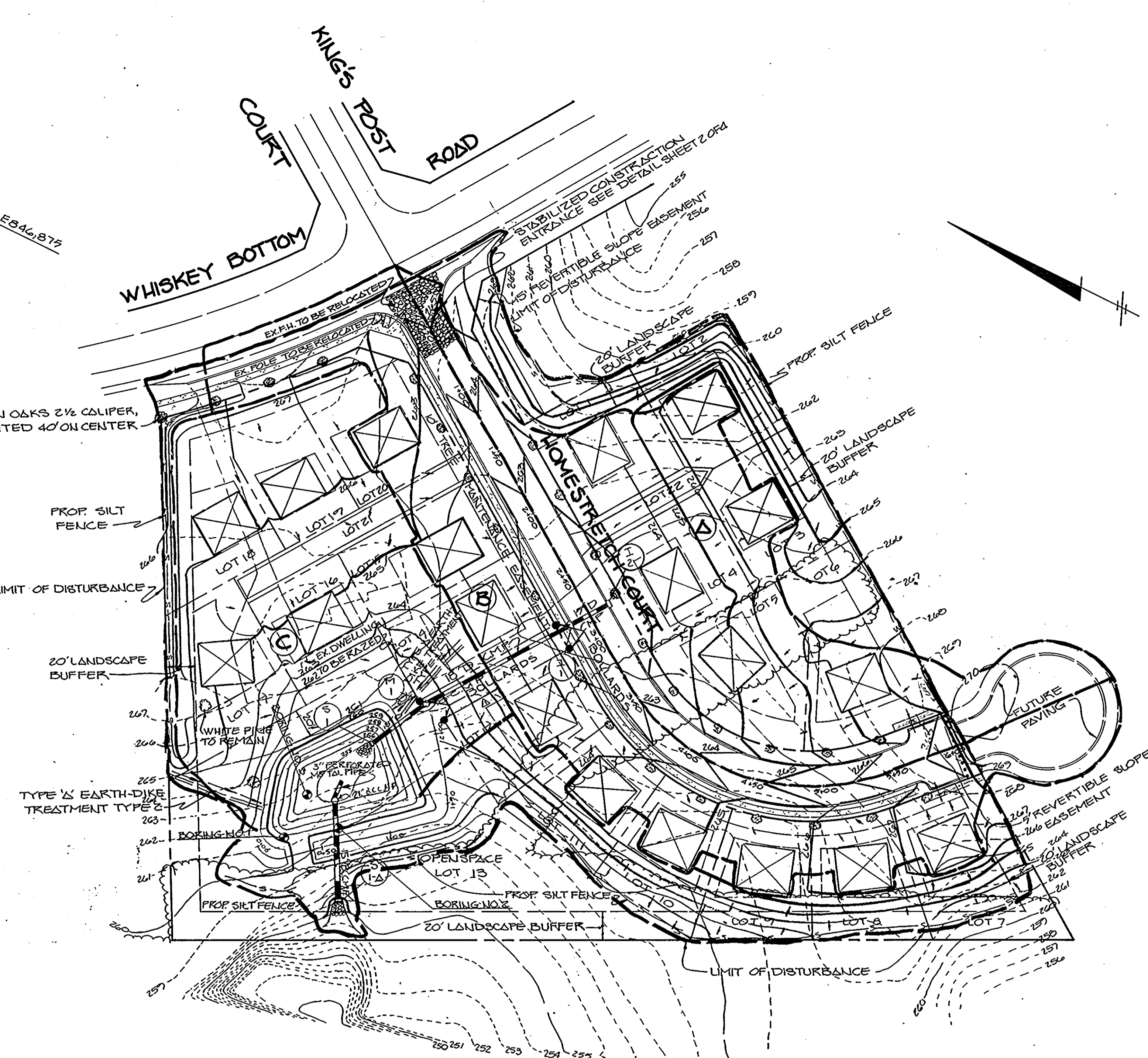
4) DENOTES APPROXIMATE LOCATION OF QUERCUS PALUSTRIS (PIN OAK) 2-1/2" CALIPER, PLANTED 40" ON CENTER.

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FINAL LOCATIONS OF TREES MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL COMPLY WITH "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS", SUBSTITUTIONS TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

TREE PLANTING DETAIL
NO SCALE

A TREE MAINTENANCE EASEMENT, ten feet in width, running along the edge of the public road right-of-way as shown on these drawings is reserved upon all lots fronting on the said public road right-of-way. This easement allows Howard County the right to access the property, when necessary, for the specific purpose of installation, repair, and maintenance of County-owned trees located within the boundaries of private lots. No building or structure of any kind shall be located on or over the said easement area.

FISHER, COLLINS & CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21043
TELEPHONE: (301) 461-2855



CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE CONSTRUCTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH SHALL BE 18 INCHES AND 18 INCHES FOR DIKES DESIGNED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUFFLE SHALL BE COVERED TO A SEPARATE TRAPPING DEVICE SUCH AS A SCOUR TRAP OR SEDIMENT BASIN WITH EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT SEPARATELY STABILIZED.
5. STABILIZATION SHALL BE: 100% IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON; 100% FLOW CHANNEL AS PER THE COURT ORDER.

TYPE OF TREATMENT	CHANNEL SIZE	DIKE A	DIKE B
1	5-3.0E	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0E	SEED AND STRAW MULCH	SEED WITH MULCH, 2\"/>
3	5.1-8.0E	SEED WITH MULCH, OR SEED STRAW MULCH	LINED RUP-300 8\"/>
4	8.1-20E	LINED RUP-300 8\"/>	ENGINEERING DESIGN

A. Stone to be 2" inch stone, or recycled concrete equivalent, in a layer at least 3\"/>

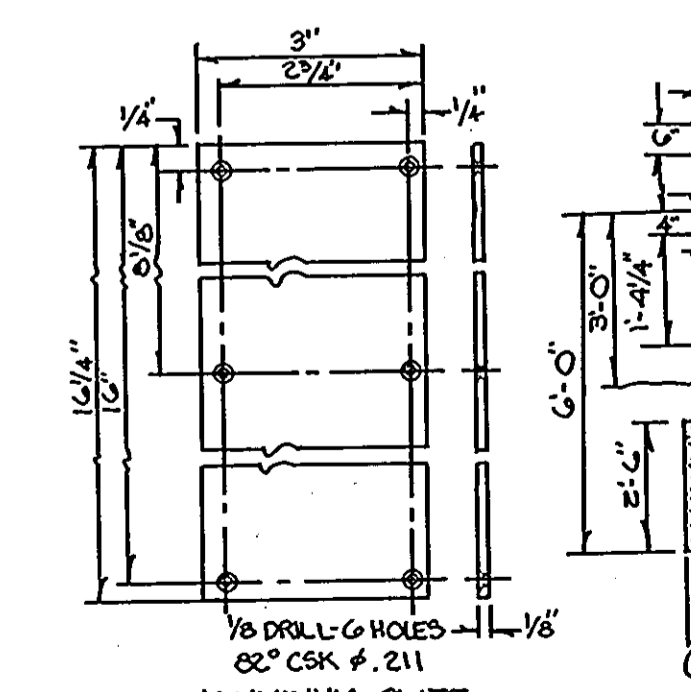
B. Rip-rap to be 4-8 inches in a layer at least 3 inches thickness and pressed into the soil.

7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

EARTH DIKE
NO SCALE

OWNER
EDNA J. PULJCKE
9287 WHISKEY BOTTOM ROAD
LAUREL MARYLAND 20723

DEVELOPER
LAND DESIGN AND DEVELOPMENT INC.
10809 HICKORY RIDGE ROAD
COLUMBIA MARYLAND 21044



ALUMINUM PLATE
SCALE 1:1

NOTE: BOLLARDS WILL BE PLACED AT THE FOUR CORNERS OF THE OPEN SPACE ACCESS STRIP. THE ALUM. PLATE WILL ONLY BE REQUIRED ON THE FRONT RIGHT BOLLARD DIRECTLY FACING THE ROAD. PLATE TO BE SCREWED & GLUED IN PLACE. SCREWS ARE TO BE COUNTERSUNK.

OPEN SPACE BOLLARD DETAIL

PERMANENT SEEDING NOTES:
APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO INTRUSIVE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

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

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

- 1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING.
- 2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE-INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 1 SEED WITH 60 LBS. PER ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS/1000 SQ. FT. OF HEERING LOVEGRASS. DURING THE PERIOD OF OCTOBER 15 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TON PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WEL ANCHORED STRAW MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OR UNROT SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING. MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES:
APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

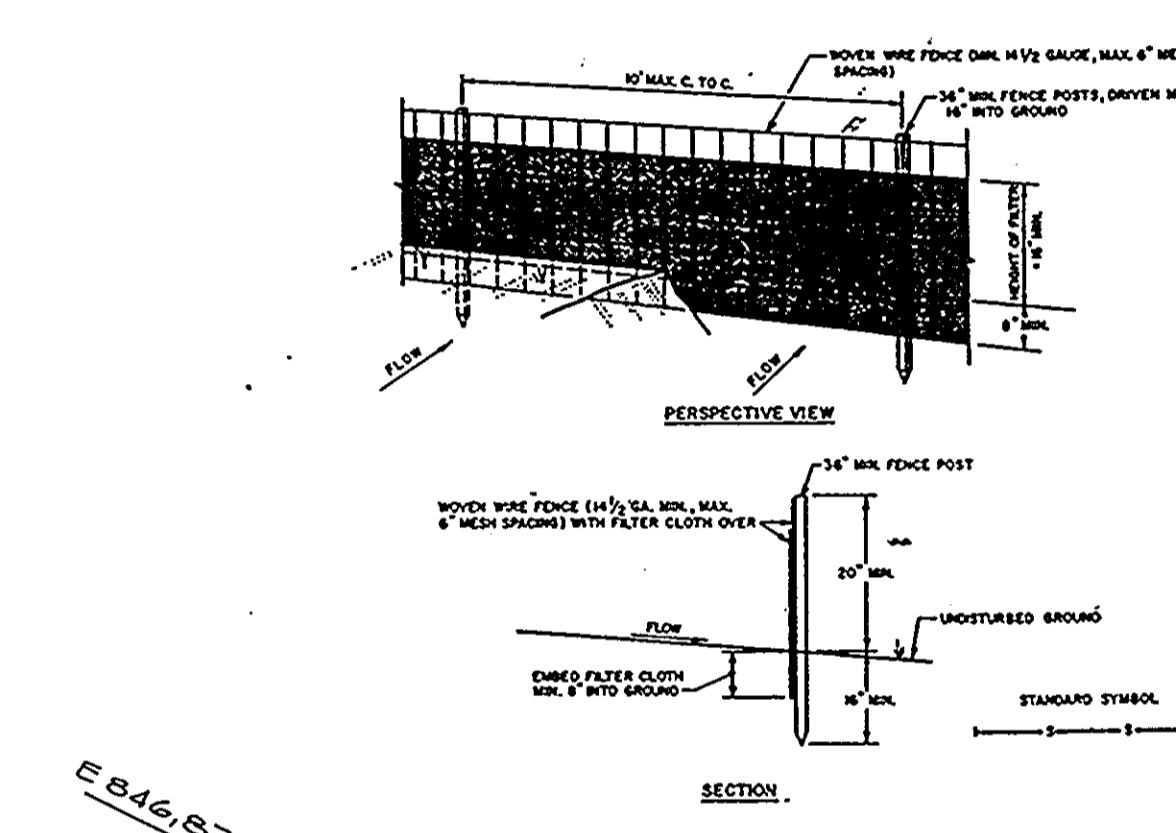
SEEDBED PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCH OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

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

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

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.



SILT FENCE
NO SCALE

STORM WATER MANAGEMENT POND CERTIFICATION AND APPROVAL

DEVELOPER'S CERTIFICATE

"I HEREBY 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD COUNTY CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 3/24/91

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD COUNTY CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

SIGNATURE OF ENGINEER: *[Signature]* DATE: 3/24/91

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

SIGNATURE OF SOIL CONSERVATION SERVICE: *[Signature]* DATE: 9/4/91

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] DATE: 9/16/91

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] DATE: 9/10/91

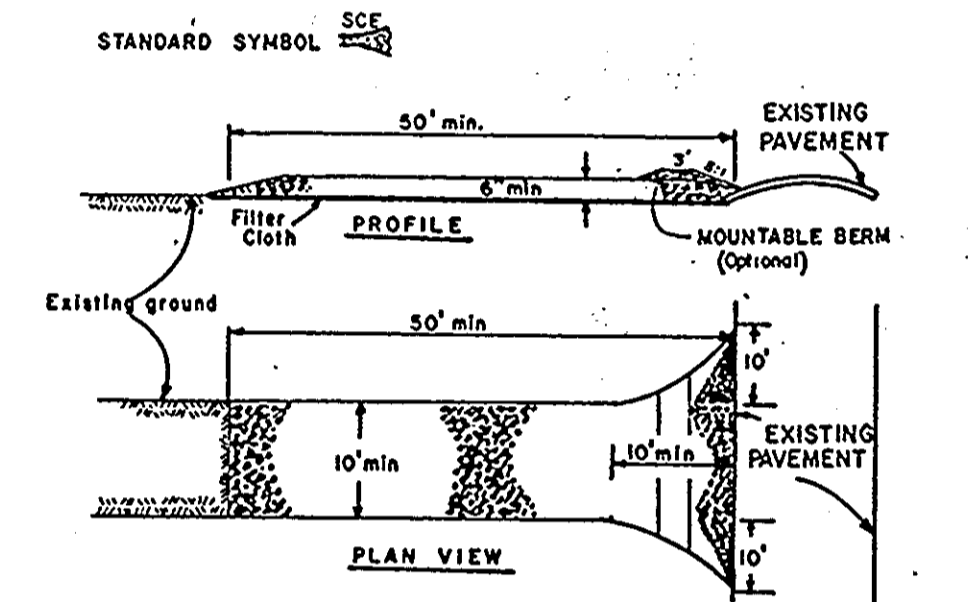
CHIEF, LAND DEVELOPMENT DIVISION

[Signature] DATE: 9/5/91

CHIEF, BUREAU OF HIGHWAYS

[Signature] DATE: 9-10-91

CHIEF, BUREAU OF ENGINEERING



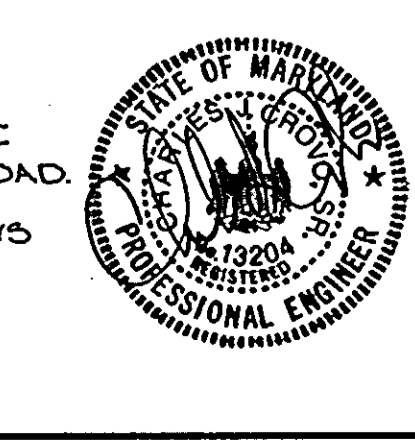
- CONSTRUCTION SPECIFICATIONS**
1. Stone Size - 1/2" 2" stone, or reclaimed or recycled concrete equivalent.
 2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
 3. Thickness - Not less than six (6) inches.
 4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
 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 directed toward construction entrances shall be piped across the entrance, if piping is impractical, a mountable berm with six slopes will be permitted.
 7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment on public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measure used to trap sediment. All sediment applied, dropped, washed or tracked on public rights-of-way must be removed immediately.
 8. Washing - Stone 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.

STABILIZED CONSTRUCTION ENTRANCE
NO SCALE

DRAINAGE AREA	AREA Δc.1	GONG TO C	ZONING
A	1.20	I-2	R-3C
B	1.32	I-1	R-3C
C	1.57	SWM-POND	R-3C

DRAINAGE AREA TABULATIONS

DRAINAGE AREAS STREET TREE, GRADING & SEDIMENT CONTROL PLAN HEATHERDOWNS
LOTS 1-22
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SHEET 2 OF 4



1632

POND SPECIFICATION

I. SITE PREPARATION

Areas under the embankment and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. To facilitate clean out and restoration, it is recommended that the permanent pool area be cleared of all brush and trees.

II. EARTH FILL Material
The fill material shall be taken from approved designated borrow area or areas. It shall be free from roots, stumps, wood, rubbish, over-size stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least 10 percent above the design elevation (including free-board) unless otherwise shown on the plans. All fill materials shall be CL or ML, as approved by Soils Engineer.

III. Placement
Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8 inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the down-stream portions of the embankment.

Core Trench
Where specified, a core trench shall be excavated 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 4-feet. The depth shall be at least 4-feet or as shown on the plans. The side slopes of the trench shall be 1:1 or flatter. The backfill material for the core trench shall be compacted either by equipment or rollers to assure maximum density and minimum permeability. Compact to 95% of AASHTO T-99 density. OC, SC, CC, CU, CL, ML materials only shall be used in the core trench.

STRUCTURAL BACKFILL
Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed 4 inches in thickness and compacted by hand tampers or other 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 4 feet to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a structure or pipe unless there is a compacted fill of 2 feet or greater over the structure or pipe.

IV. PIPE CONDUITS

A. CORRUGATED METAL PIPE

- Materials - Metal Pipe - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-195 or M-211, with water-tight coupling bands.
- Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the control structure shall be mortared all around. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.
- Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
- Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.
- Backfilling shall conform to structural backfill as shown above.
- Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

V. CONCRETE

Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications Materials: Highways, Bridges, and Incidental Structures Article 20.07 (Portland Cement Concrete Mixtures), Mix No. 3.

VI. STABILIZATION

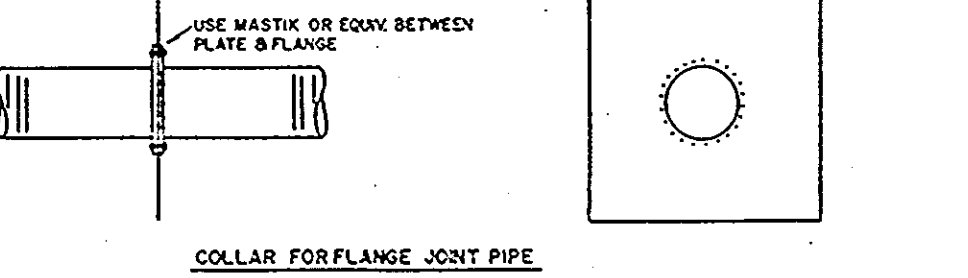
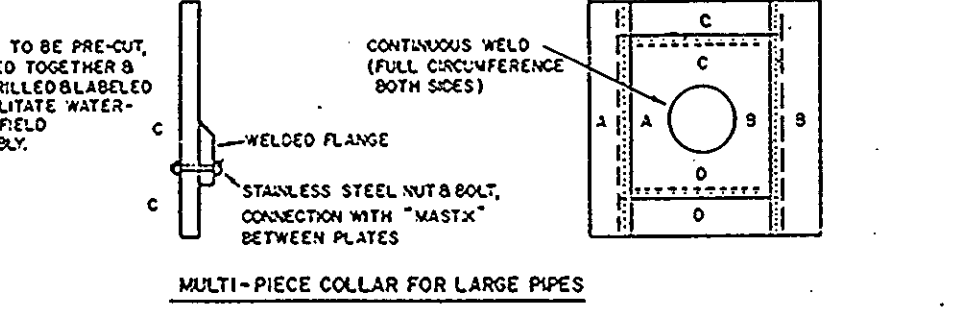
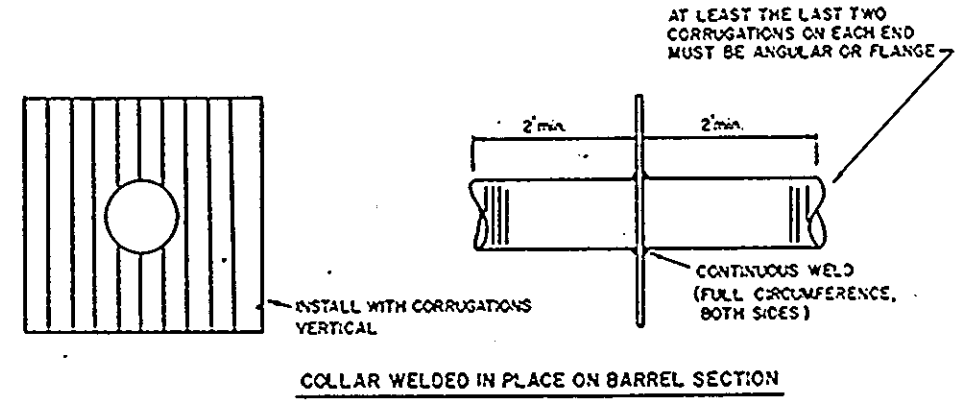
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway and borrow areas shall be stabilized by permanent seeding and applying straw mulch in accordance with Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas immediately after finish grading.

Fertilizer:	10-10-10	811.5 lbs./1000 sq. ft.
Seed:	Crownvetch inoculated	0.5 lbs./1000 sq. ft.
	KY-31 Tall Fescue	0.0 lbs./1000 sq. ft.
Mulch:	Straw	880 lbs./1000 sq. ft.
Asphalt Tie-down:	Slopes	8 gal./1000 sq. ft.
	Flat areas	8 gal./1000 sq. ft.

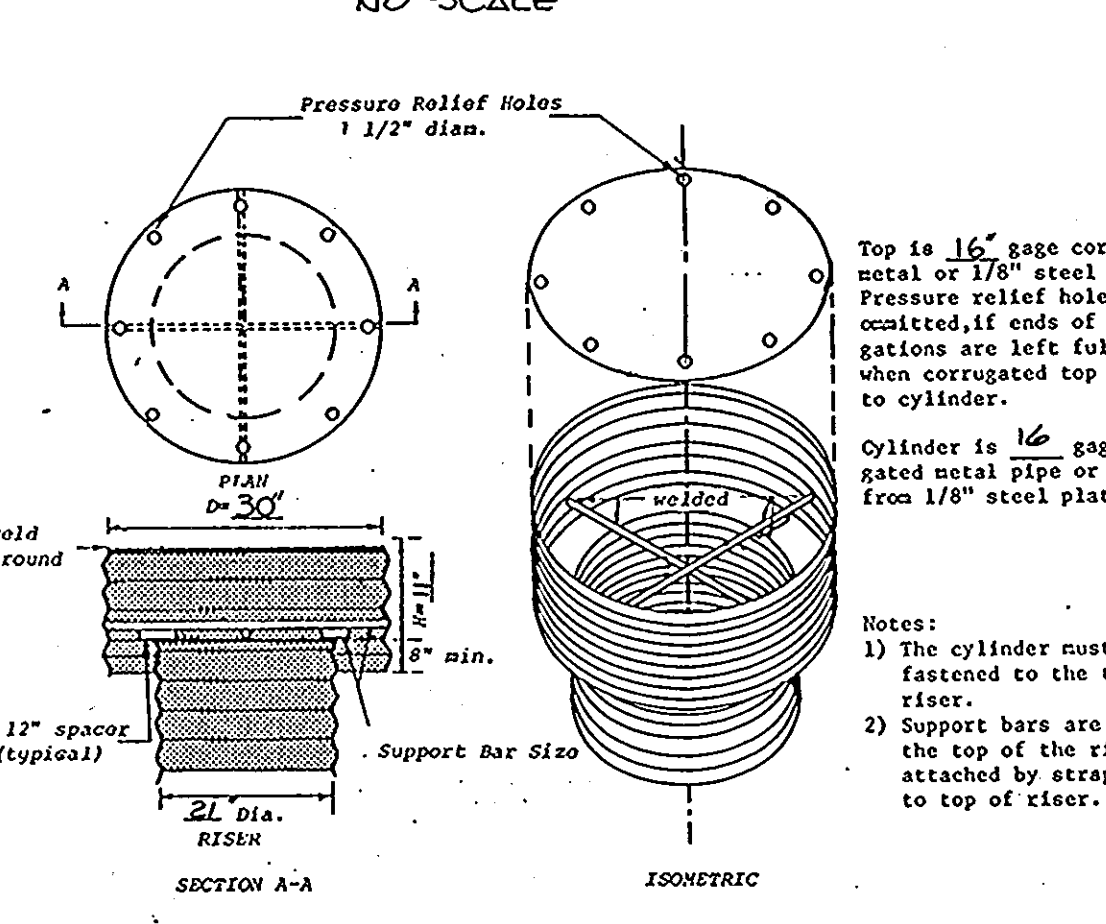
OPERATION AND MAINTENANCE SPECIFICATIONS

I HEREBY CERTIFY THAT I WILL OPERATE AND MAINTAIN THE COMPLETED POND IN ACCORDANCE WITH THE FOLLOWING:

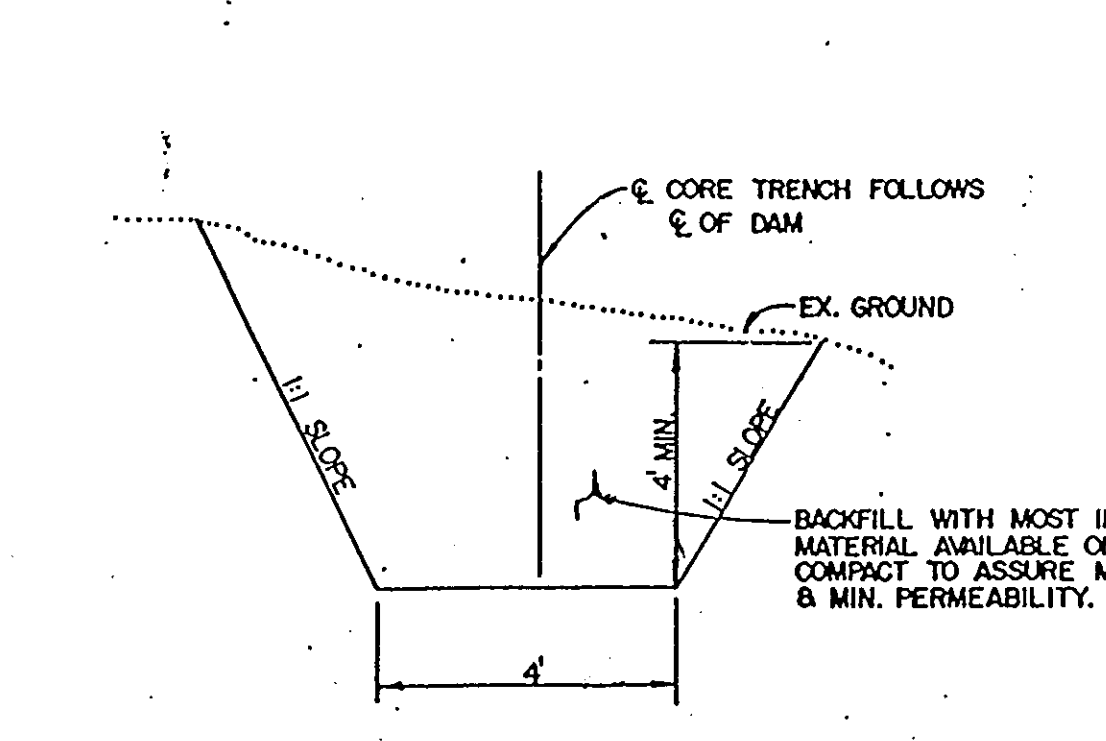
- PERIODIC INSPECTIONS OF THE FACILITY WILL BE MADE TO IDENTIFY POTENTIAL PROBLEMS THAT MAY AFFECT ITS SAFETY. THESE INSPECTIONS WILL BE MADE AFTER PERIODS OF HEAVY RAINFALL AND AT LEAST TWICE ANNUALLY. INSPECTION REPORTS SHALL BE KEPT UNTIL THE NEXT SUBSEQUENT INSPECTION. INSPECTIONS ITEMS TO BE LOOKED AT INCLUDE:
 - SPILLWAY AND OUTLET WORKS;
 - RIP-RAP;
 - VEGETATIVE COVER;
 - CRACKS IN THE FILL;
 - SLOPE FAILURES; AND
 - SEEPAGE AND OTHER SIGNS OF DISTRESS.
- PROBLEMS IDENTIFIED DURING INSPECTIONS WILL BE PROMPTLY CORRECTED. MAJOR PROBLEMS WILL BE BROUGHT TO THE ATTENTION OF THE SOIL CONSERVATION DISTRICT AND THE DAM SAFETY DIVISION OF THE MARYLAND WATER RESOURCES ADMINISTRATION AS A VERY MINIMUM. GRASSY VEGETATION WILL BE MAINTAINED IN A DENSE AND HEALTHY STATE, AND WOODY VEGETATION WILL NOT BE PERMITTED TO GROW ON THE EMBANKMENT.



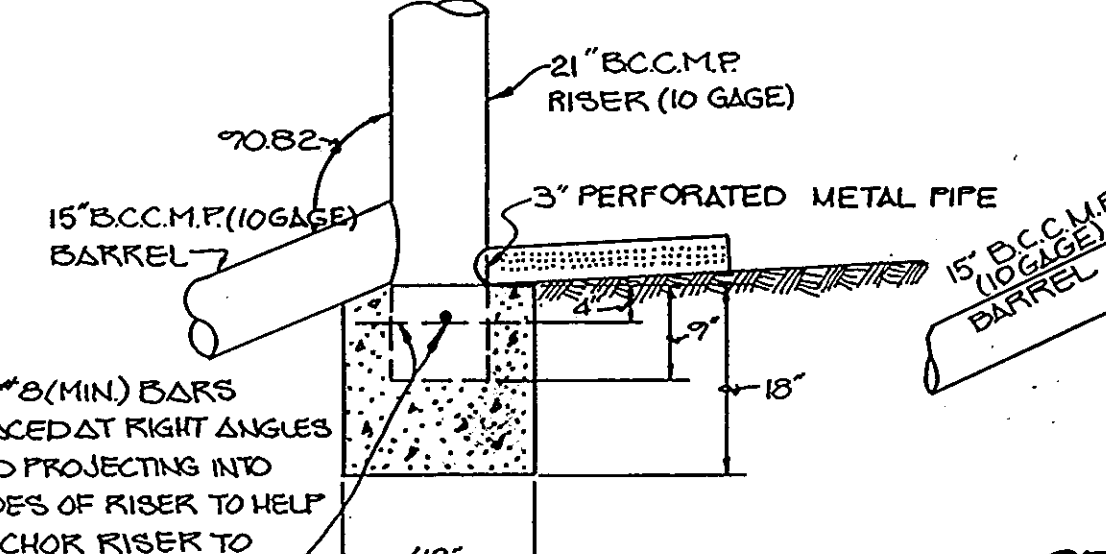
TYPICAL ANTI-SEEP COLLARS



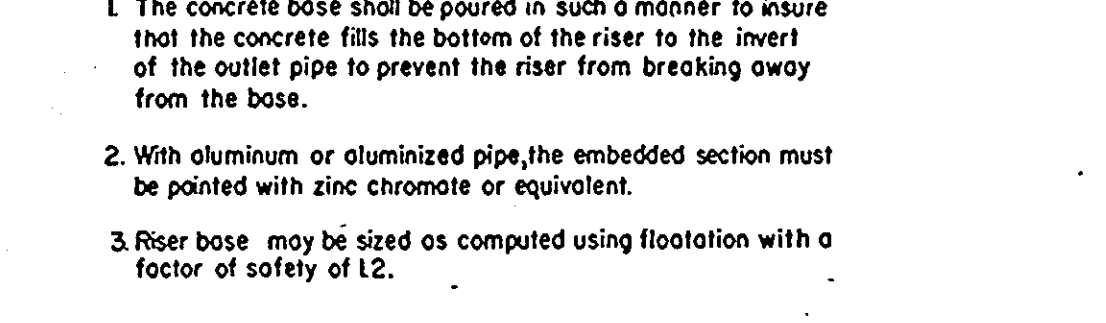
CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE DETAIL



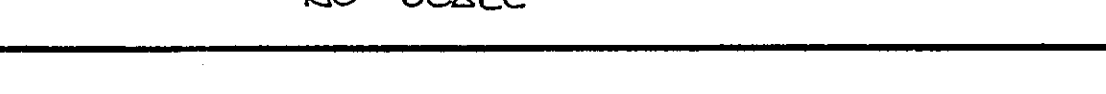
CORE TRENCH DETAIL



ORIFICE DETAIL



RISER BASE DETAIL



ELEV.	SOIL DESCRIPTION	DEPTH (ft.)	TEST RESULTS
262	Gray to yellowish brown moist fine silty SAND, pebbles, gravel	0-5	Top Soil: 2.0 inches.
260	USC: (SP-SM) USDA: Loamy SAND	5-10	Ground surface covered with grass and thin layer of snow.
258		10-15	Groundwater not encountered. Soil layers very moist below 4.0 feet.
256		15-20	Sides of test pit collapsed below 3.0 feet.
254		20-25	Penetrometer Test Results
252		25-30	Depth from Ground Surface
250		30-35	No. of Blows/ Foot.
248		35-40	Ground surface

ELEV.	SOIL DESCRIPTION	DEPTH (ft.)	TEST RESULTS
262	Gray to yellowish brown moist fine and silty SAND, pebbles, gravel	0-5	Top Soil: 2.0 inches
260	USC: (SM-SP) USDA: Loamy Sand	5-10	Ground surface covered with grass and thin layer of snow.
258		10-15	Groundwater not encountered. Soil layers below 3.0 ft. very moist
256		15-20	Sides of test pit collapsed below 2.0 ft.
254		20-25	Penetrometer Test Results
252		25-30	Depth from Ground Surface
250		30-35	No. of Blows/ Foot.
248		35-40	Ground surface

ELEV.	SOIL DESCRIPTION	DEPTH (ft.)	TEST RESULTS
262	Gray to yellowish brown moist fine and silty SAND with gravel, pebbles	0-5	Top Soil: 2.0 inches
260	USC: (SM-SP) USDA: Loamy Sand	5-10	Ground surface covered with grass and thin layer of snow.
258		10-15	Groundwater not encountered. Soil layer below 3.5 ft. very moist
256		15-20	Test pit sides collapsed below 2.0 feet.
254		20-25	Penetrometer Test Results
252		25-30	Depth from Ground Surface
250		30-35	No. of Blows/ Foot.
248		35-40	Ground surface

CONSTRUCTION SEQUENCE

- OBTAIN GRADING PERMIT.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE, EARTH DIKES AND STORMWATER MANAGEMENT FACILITY.
- CLEAR AND GRUB SITE TO LIMITS OF DISTURBANCE.
- GRADE ROADS TO SUBGRADE.
- CONSTRUCT STORM DRAINS.
- THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON, AFTER EACH RAINFALL AND ON A DAILY BASIS.
- SEDIMENT SHALL BE REMOVED FROM THE S.W.M. POND WHEN CLEANOUT ELEVATION HAS BEEN REACHED. POND SHALL BE DEMATERED BY PUMPING. SEDIMENT SHALL BE PLACED UP HILL FROM SITE.
- REMOVE SEDIMENT FROM EX-ROADWAYS AND DRESS STONE CONSTRUCTION ENTRANCE AS REQUIRED.
- CONSTRUCT ALL UTILITIES.
- INSTALL CURB AND GUTTER AND SUB-BASE ON ROADS.
- REMOVE STONE CONSTRUCTION ENTRANCE. CLEAN BASE COURSE. APPLY TACK COAT AND LAY SURFACE COURSES.
- ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN a) 7 CALENDAR DAYS FOR PERIMETER SEDIMENT CONTROL STRUCTURES, SLOPES GREATER THAN 3:1; b) 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- COMPLETE STABILIZATION OF ALL DISTURBED AREAS SHALL BE DONE PRIOR TO REMOVAL OF ALL SEDIMENT CONTROLS.
- NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS FOR FINAL INSPECTION AT DURATION OF PROJECT (301) 792-7272.

***NOTE:**
CONTRACTOR SHALL CUT IN 30" Ø HOLE IN THE RISER AND 2" WELD TO IT THE 30" Ø PERFORATED METAL PIPE AFTER THE REMOVAL OF ALL SEDIMENT CONTROLS AND FINAL CLEANOUT OF THE POND.

ELEV.	SOIL DESCRIPTION	DEPTH (ft.)	TEST RESULTS
262	Gray to yellowish brown moist fine and silty SAND with gravel, pebbles	0-5	Top Soil: 2.0 inches
260	USC: (SM-SP) USDA: Loamy Sand	5-10	Ground surface covered with grass and thin layer of snow.
258		10-15	Groundwater not encountered. Soil layer below 3.5 ft. very moist
256		15-20	Test pit sides collapsed below 2.0 feet.
254		20-25	Penetrometer Test Results
252		25-30	Depth from Ground Surface
250		30-35	No. of Blows/ Foot.
248		35-40	Ground surface

ELEV.	SOIL DESCRIPTION	DEPTH (ft.)	TEST RESULTS
262	Gray to yellowish brown moist fine and silty SAND with gravel, pebbles	0-5	Top Soil: 2.0 inches
260	USC: (SM-SP) USDA: Loamy Sand	5-10	Ground surface covered with grass and thin layer of snow.
258		10-15	Groundwater not encountered. Soil layer below 3.5 ft. very moist
256		15-20	Test pit sides collapsed below 2.0 feet.
254		20-25	Penetrometer Test Results
252		25-30	Depth from Ground Surface
250		30-35	No. of Blows/ Foot.
248		35-40	Ground surface

ELEV.	SOIL DESCRIPTION	DEPTH (ft.)	TEST RESULTS
262	Gray to yellowish brown moist fine and silty SAND with gravel, pebbles	0-5	Top Soil: 2.0 inches
260	USC: (SM-SP) USDA: Loamy Sand	5-10	Ground surface covered with grass and thin layer of snow.
258		10-15	Groundwater not encountered. Soil layer below 3.5 ft. very moist
256		15-20	Test pit sides collapsed below 2.0 feet.
254		20-25	Penetrometer Test Results
252		25-30	Depth from Ground Surface
250		30-35	No. of Blows/ Foot.
248		35-40	Ground surface

Test pit terminated at 7.0 ft.
Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

Test pit terminated at 11.0 ft.
Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

Test pit terminated at 7.0 ft.
Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

Test pit terminated at 7.0 ft.
Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

Test pit terminated at 7.0 ft.
Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

Test pit terminated at 7.0 ft.
Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

Test pit terminated at 7.0 ft.
Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

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Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

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Ground surface

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Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

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Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

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No. of Blows/ Foot.
Ground surface

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Penetrometer Test Results
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No. of Blows/ Foot.
Ground surface

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No. of Blows/ Foot.
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Ground surface

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Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

Test pit terminated at 7.0 ft.
Penetrometer Test Results
Depth from Ground Surface
No. of Blows/ Foot.
Ground surface

STORM WATER MANAGEMENT POND CERTIFICATION AND APPROVAL

DEVELOPER'S CERTIFICATE
"I HEREBY 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
SIGNATURE OF DEVELOPER: [Signature]
DATE: 3/22/91

ENGINEER'S CERTIFICATE
"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
SIGNATURE OF ENGINEER: [Signature]
DATE: 3/22/91

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.
[Signature]
DATE: 9/4/91

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature]
DATE: 9/4/91

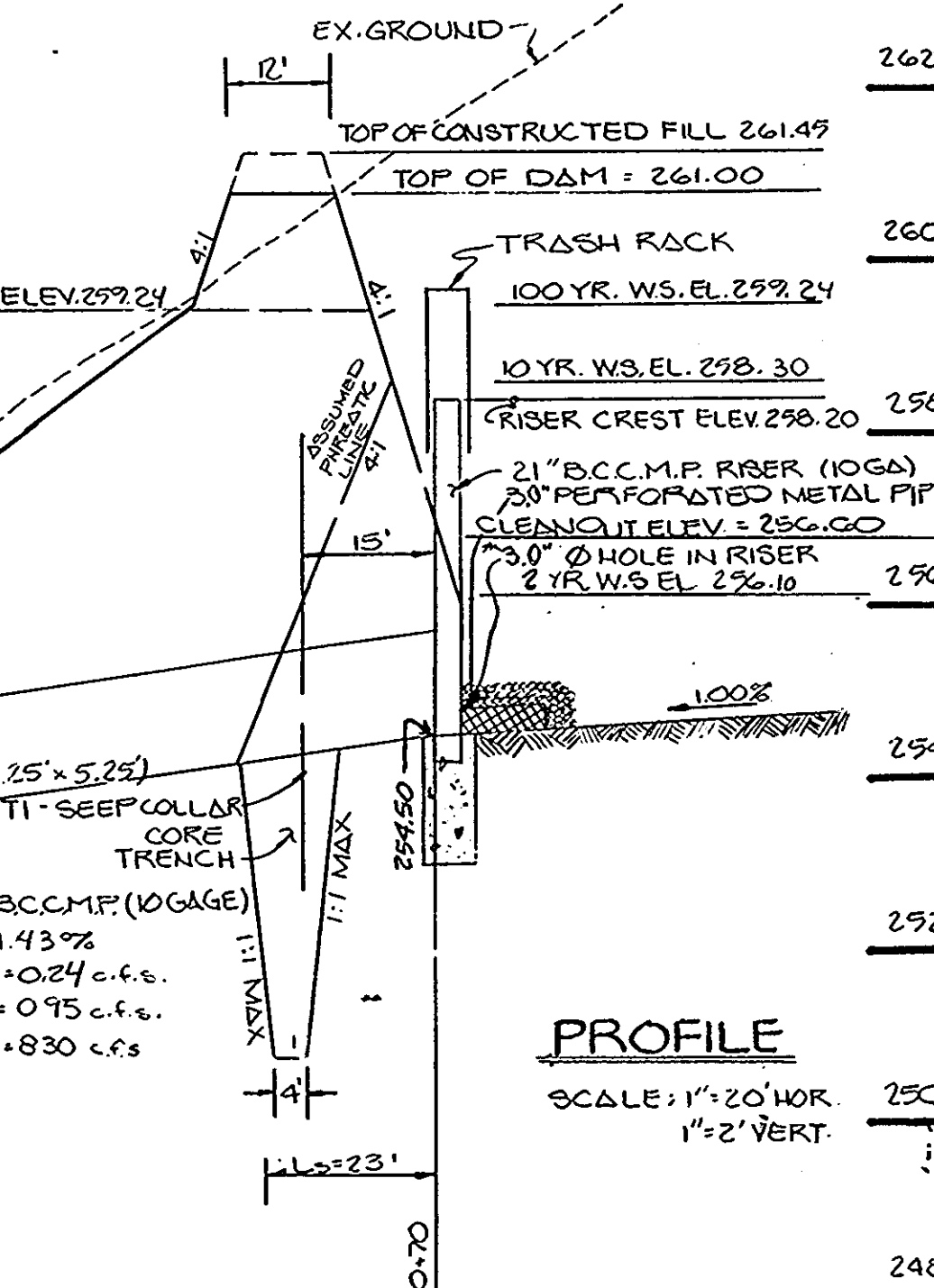
APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature]
DATE: 9/16/91

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature]
DATE: 9/5/91

APPROVED: BUREAU OF ENGINEERING
[Signature]
DATE: 9-10-91

POND CONSTRUCTION CERTIFICATION
I CERTIFY THAT UPON COMPLETION OF CONSTRUCTION I WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE (OMM) OF THE SMALL POND. OSM WILL BE PERFORMED BY ME IN ACCORDANCE WITH THE SPECIFICATIONS ON THIS PLAN. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS OF THE POND BY SITE AND LOCAL AGENCIES.
SIGNATURE OF DEVELOPER: [Signature]
DATE: 3/22/91

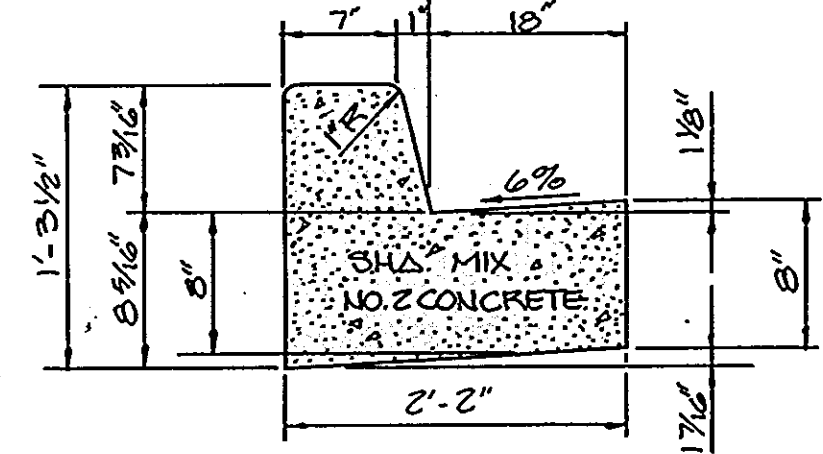
POND HAZARD CLASS:
SINCE THE POND IS IN CUT AND NO DOWNSTREAM FAILURE HAZARD EXISTS, THE POND IS IN HAZARD CLASS 'A'.



DATE	
BY	
REVISIONS	
PLANNING	
ENGINEERING	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	

DATE	
BY	
REVISIONS	
PLANNING	
ENGINEERING	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	

PAVEMENT WIDTH INDICATED ON TYPICAL STREET SECTION TO BE MEASURED TO THIS POINT

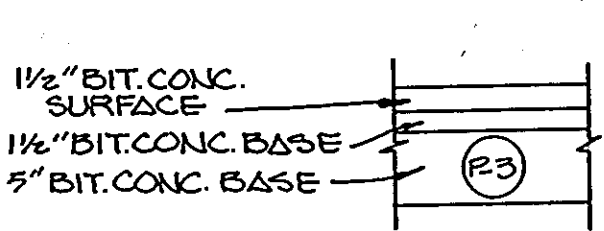


STANDARD SLOPE 7" COMB. CONC. CURB AND GUTTER
NO SCALE

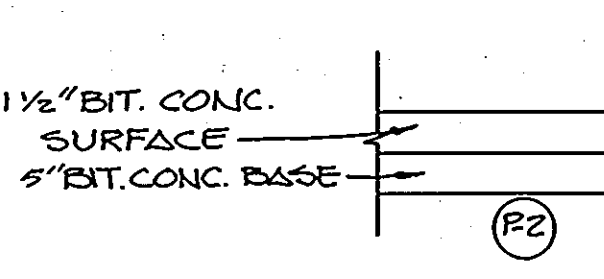
APPROVED
DEPARTMENT OF PUBLIC WORKS
Alan M. Pennington 9/10/91
CHIEF, LAND DEVELOPMENT DIVISION
DATE

APPROVED
DEPARTMENT OF PUBLIC WORKS
Granville W. Weisand 9/5/91
CHIEF, BUREAU OF HIGHWAYS
DATE

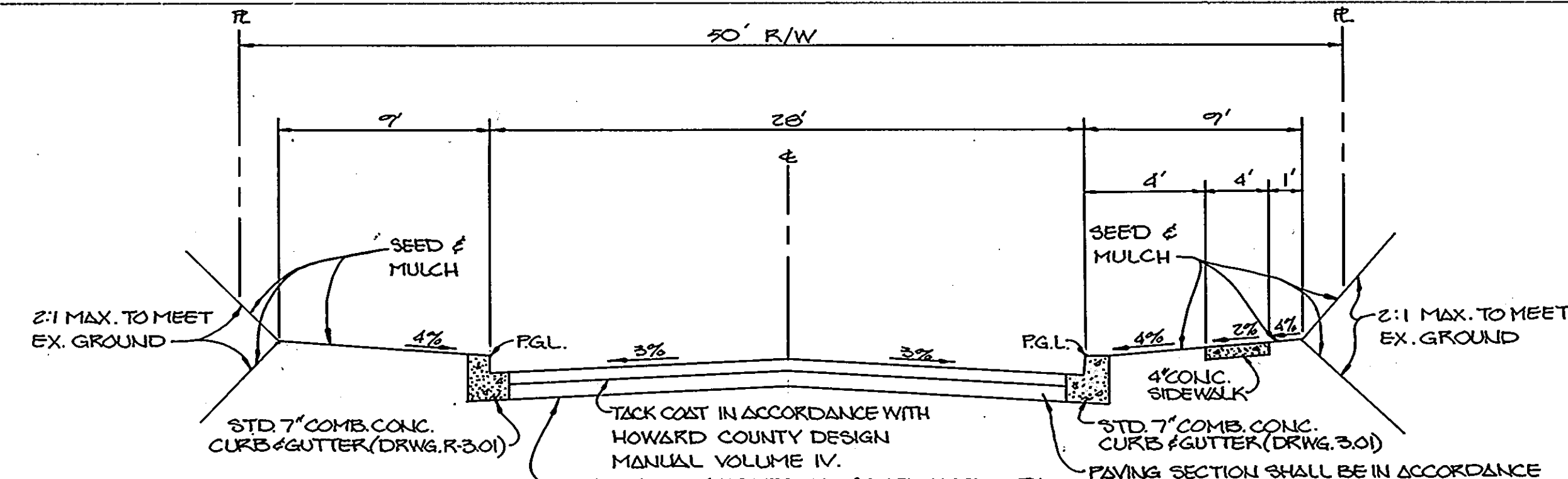
APPROVED
DEPT. OF PLANNING AND ZONING
Anna H. Benenath 9/16/91
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
DATE



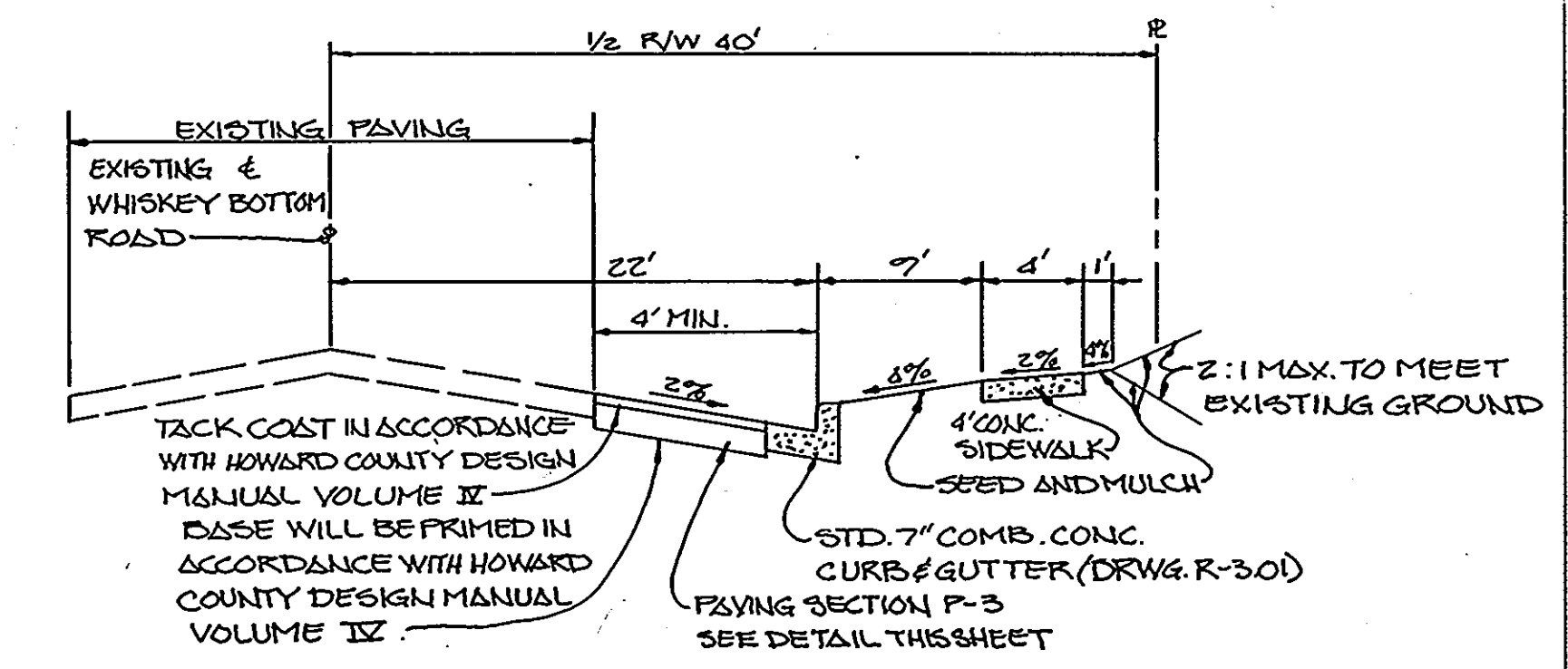
PAVING SECTION P-3
NO SCALE



PAVING SECTION P-2
NO SCALE



HOMESTRETCH COURT TYPICAL ROADWAY SECTION
NO SCALE



TYPICAL WIDENING SECTION FOR WHISKEY BOTTOM ROAD
NO SCALE

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS
HOMESTRETCH COURT	CUL-DE-SAC	30 MPH.	RSC	0+00 TO 4+73

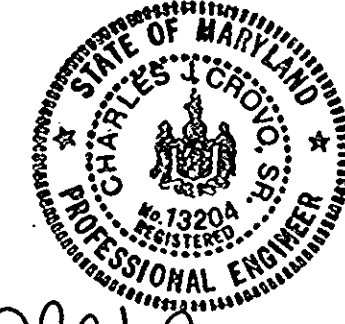
STRUCTURE SCHEDULE						
STRUCTURE	TYPE	TOP ELEVATION	INVERT IN	INVERT OUT	ROAD STATION	OFF-SET
I-1	A-3	262.21	257.10	256.05	2+81.78	14' RT. SD-401
I-2	A-3	262.21	—	257.35	2+81.78	14' LT. SD-401
M-1	STANDARD MANHOLE WITH METAL INLET	261.65	259.70	259.45	2+81.78	12' RT. G-901
B-1	—	256.30	—	259.00	SEE PLAN	— SD-561

HEATHERDOWNS
LOTS 1-22
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

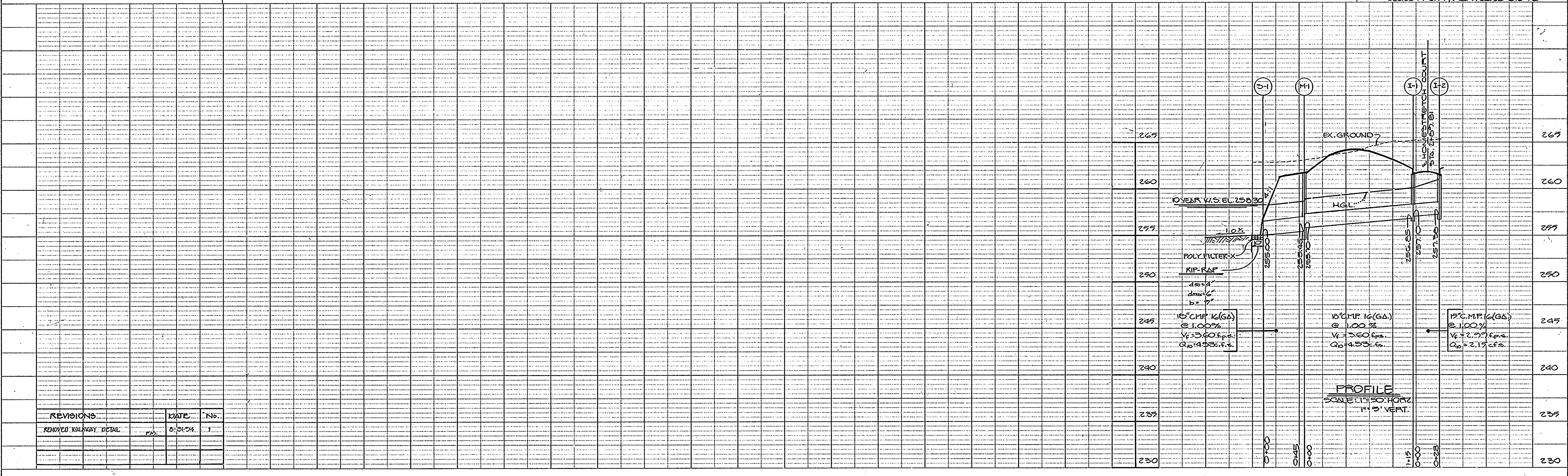
ROAD SECTIONS, DETAILS AND STORMDRAIN PROFILES

OWNER AND DEVELOPER
EDNA J. PUNCKE LAND DESIGN & DEVELOPMENT INC.
9287 WHISKEY BOTTOM ROAD WOODHICKORY RIDGE ROAD
LAUREL MARYLAND 20723 COLUMBIA MARYLAND 21044
SCALE AS SHOWN DATE MAY 22, 1991 DWG. NO. 4 OF 4
DES. Z.Y. FISCH DRW. M. YOUNG CHK. C. CROVO

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
9171 BALTIMORE NATIONAL PIKE, SUITE 100
ELKOTT CITY, MARYLAND 21042



Charles J. Crovo 3/22/91
DATE



REVISIONS	DATE	No.
REMOVED VALUARY DETAIL	8-31-74	1

1632