

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

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 ettlement to the design elevation. The fill neight all along the length of the embankment snall be increased at least 10 percent above the design elevation (including freepoard) unless otherwise shown on the plans. All fill material shall be CL or ML, as approved by Soils 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 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 downstream 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 the most impervious matterial available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability. Compact to 95% of AASHTO T-99 density. Materials shall be CL or ML as approved by Soils Engineer.

III. STRUCTURAL BACKFILL

Backfill material shall be of the type and quality conforming to that specified for the adjoining till 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 competely 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-196 or M-211, with watertight coupling bands. 2. 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
- 4. Laying pipe The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal lans at the sides.
- 5. Backfilling shall conform to structural backfill as shown above. δ_{κ} Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.
- Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications for Materials, Highways, Bridges, and Incidental Structures, Article 20.07 (Portland Cement Concrete Mixtures), Mix No. 3.
- All borrow areas shall be graded to provide proper drainage and left in a sightly 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.
- @ 11.5 1bs./1000 sq.ft. Crownvetch inoculated @ 0.5 lbs./1000 sq.ft. 'KY-31' Tall Fescue @ 1.5 lbs./1000 sq.ft. @ 80 1bs./1000 sq.ft. @ 8 gal./1000 sq.ft. Asphalt Tie-down: Slopes @ 5 gal./1000 sq.ft Flat areas
- VII. FENCING

 A 3'-6" chain-link fence shall be constructed in the location specified on the plan. Materials and construction shall be in accordance with Maryland State Highway Administration Standard Details 690.01 and 690.02.

CWNER AND DEVELOPER SOVENANT BAPTIST CHURCH 5960 SETAR LANE COLUMBIA MD. 21044

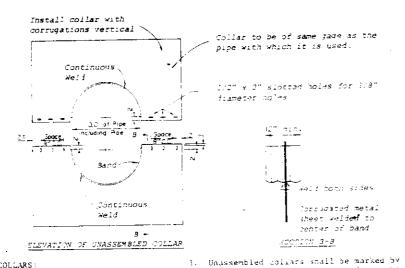
LOT NO	STREET ADDRESS
	ADDRESS CHART
$T^{(p)}$	5901 CEDAR FERN COURT

CIVIL ENGINEERS & LAND SURVEYORS

8388 COURT AVENUE

ELLICOTT CITY, MARYLAND 21043

(301) 461-2855



NOTES FOR COLLARS: . All materials to be in accordance with construction and construction material When specified on the plans, coating of collars shall be in accordance with construction and construction material

helical pipe

4. The lap between the two half sections and between the pipe and connecting band shall be caulked with isphalt mastic it time of installation. 5. Each collar shall be furnished with two 1/2" diameter rods with standard tank lugs for connecting collars to pipe.

painting or tagging to identify matching

DETAILS OF CORRUGATED METAL ANTI-SEEP COLLAR

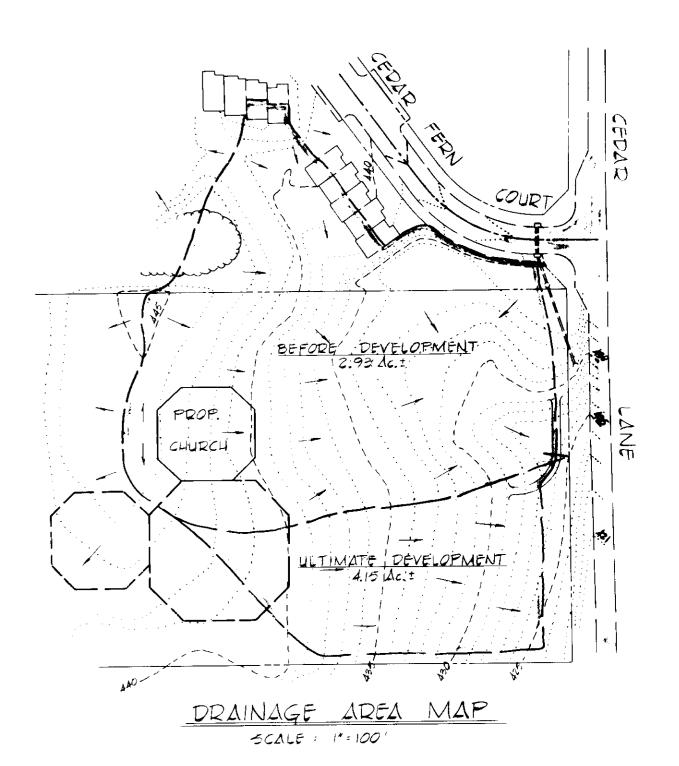
Weld 1 1/8"xl 1/8"xl/8" angles to collar or bend a 90° angle 1 1/8" wide as Size and spacing of slotted shown in drawing openings shall be the same as shown for CM collar NOTE FOR BANDS AND COLLARS: Modifications of the details Use rods and lugs to clamp bands securely 12 Min to pipe Sand of helical

shown may be used providing equal watertightness is maintained and detailed drawings are submitted and approved by the Engineer prior to delivery. Sheet metal collar shall be out to fit welded with a continuous weld.

ISOMETRIC VIEW

Metal collar to welded to center of helical pipe band NOTE: For details of fabrication dimensions, minimum gages, slotted holes, and notes, see detail above. DETAILS OF HELICAL PIPE ANTI-SEEP COLLAR Two other types of anti-seep collars are:

. Corrugated metal, similar to upper detail, except shop welded to a short (4 ft.) section of the pipe and connected with connecting bands to the pipe. . Concrete, six inches thick formed around the pipe with PARTIAL ELEVATION Ref: Engr. Field Manual #3 rebar spaced 15" horizontally and vertically.



12-10-87 MES

ENGINEER'S CERTIFICATE I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SED-IMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS FISHER, COLLINS & CARTER, INC. AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIRE-MENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER'S CERTIFICATE

FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE

RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SED-

CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL

IMENT AND EROSION BEFORE BEGINNING THE PROJECT LALSO

AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE

DEEMED NECESSARY"

PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN

BEVIEWED FOR HOWARD SOIL CONSERVATION DISTRIC / AND MEETS TECHNIC AL PEQUIREMENTS

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION APPROVED:

HOWARD SOIL CONSERVATION DISTRICT

APPROVED: OFFICE OF PLANNING AND ZONING LANNING AND LAND DEVELOPMENT

APPROVED HOWARD COUNTY HEALTH DEPARTMENT FOR PUBLIC WATER AND SEWERAGE SYSTEMS

HEALTH OFFICER

APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PUBLIC WATER & SEWER AND STORM DRAINAGE SYSTEMS AND ROADS.

SECTION/AREA PARCEL/LOT NO PROPERTY/SUBDIVISION LOT 1 OVENANT BAPTIST CHURCH PLAT NO./L.F. BLOCK NO. ZONE TAX/ZONE ELEC. DIST CENSUS TR. 7027 11 PSC 35 5TH 6053.01

DRAINAGE AREA MAP AND DETAILS

COVENANT BAPTIST CHURCH

5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND JULY 16, 1987 SCALE: 15 SHOWN

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