ENGINEER'S CERTIFICATE

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

October 28, 1979 DATE

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPEMENT AND OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPEMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND 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.

8/20/85 DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE 11-18-85 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED:

DISTRICT COORDINATOR, HOWARD SOIL CONSERVATION DISTRICT 11/18/85 DATE

APPROVED:
DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING 11-25-85 DATE

APPROVED:
OFFICE OF PLANNING AND ZONING

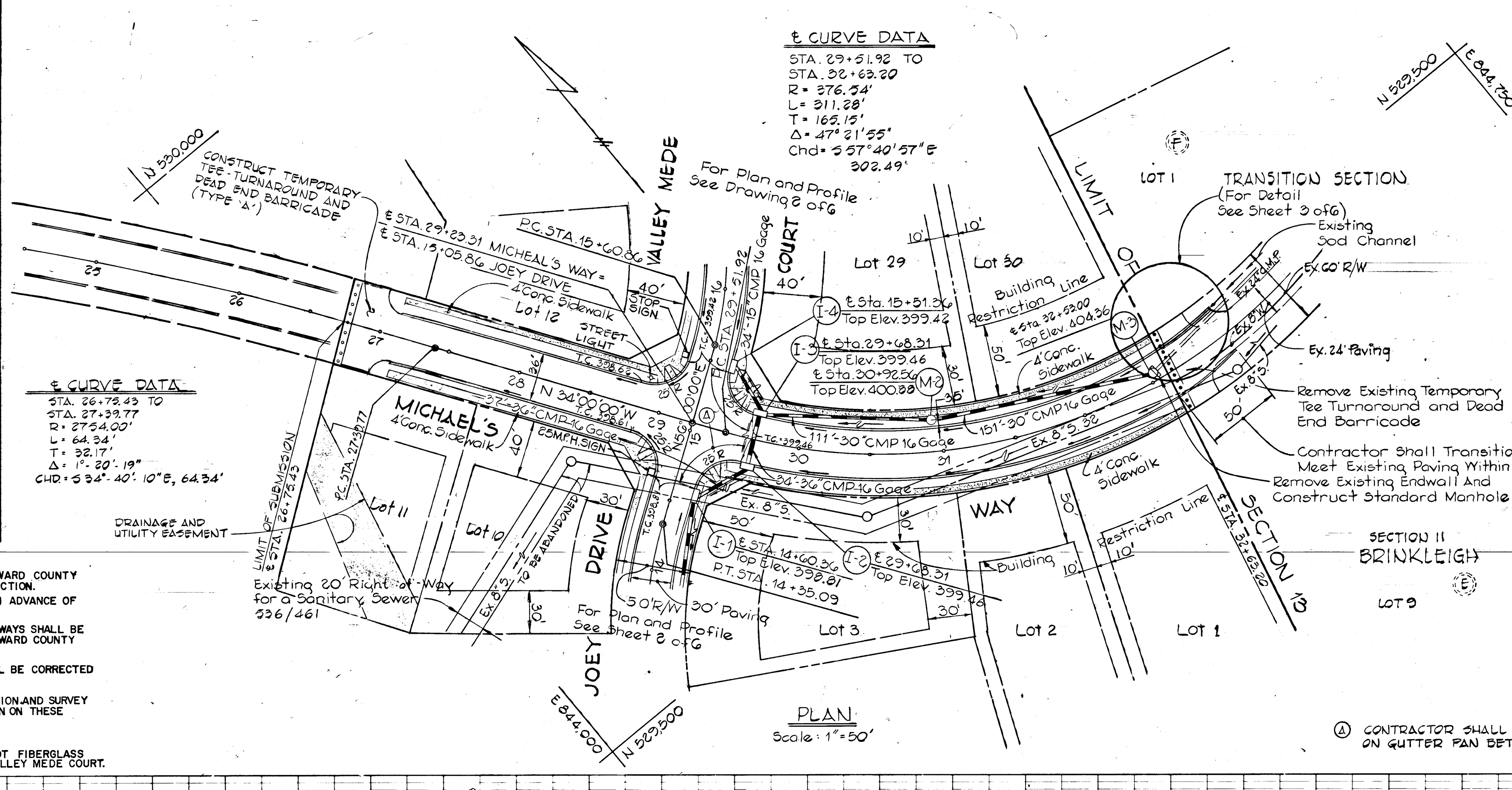
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION 11-19-85 DATE

GENERAL NOTES

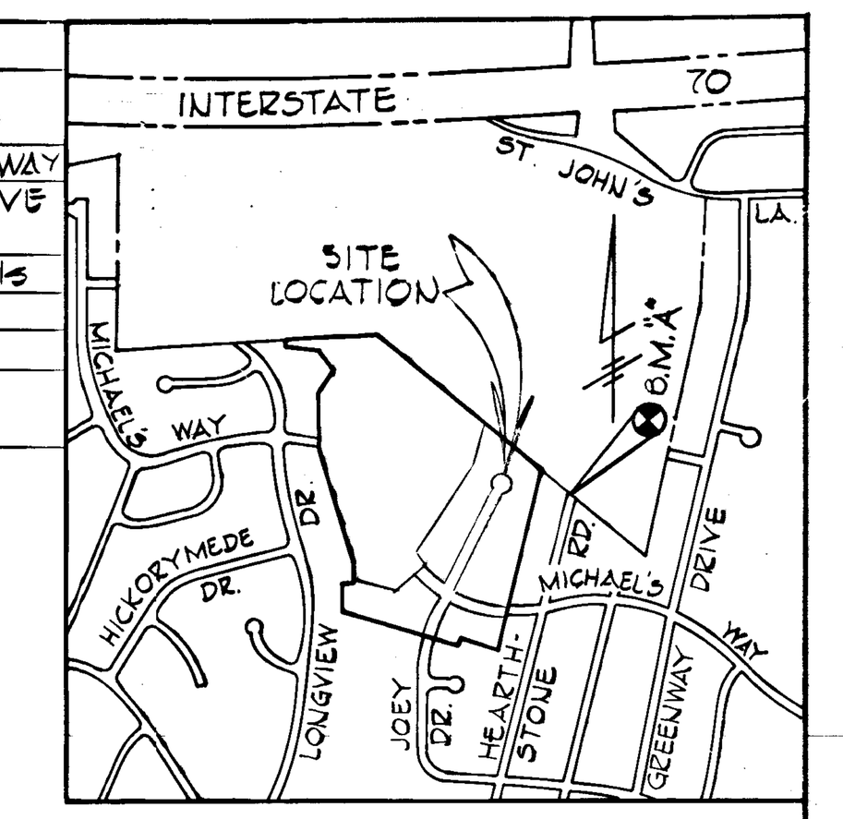
1) ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
2) ALL UTILITY COMPANIES MUST BE NOTIFIED 24 HRS. IN ADVANCE OF ANY CONSTRUCTION.
3) STORM DRAINAGE TRENCHES WITHIN ROAD RIGHTS-OF-WAYS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
4) ANY DAMAGE TO PUBLIC RIGHTS-OF-WAYS OR PAVING WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
5) CONTRACTOR TO NOTIFY THE HOWARD COUNTY INSPECTION AND SURVEY DIVISION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS-TELEPHONE= 792-7272

STREET LIGHTS

250 WATT POST TOP MERCURY VAPOR LAMP ON A 25 FOOT FIBERGLASS POLE AT THE INTERSECTION OF MICHAEL'S WAY AND VALLEY MEDE COURT.



INDEX OF DRAWINGS	
DRAWING No.	DESCRIPTION
1	Plan and Profile MICHAEL'S WAY
2	Plan and Profile's JOEY DRIVE and VALLEY MEDE COURT
3	Storm Drain Profiles & Details
4	Sediment Control Details
5	Drainage Area Map
6	Street Tree, Grading and Sediment Control Plan.



VICINITY MAP
SCALE: 1"=1200'

B.M. 'A' Elev 421.64
Road side flange fire bolt 5'± northwest from Corner Lot 10 @ Hearthstone Rd.

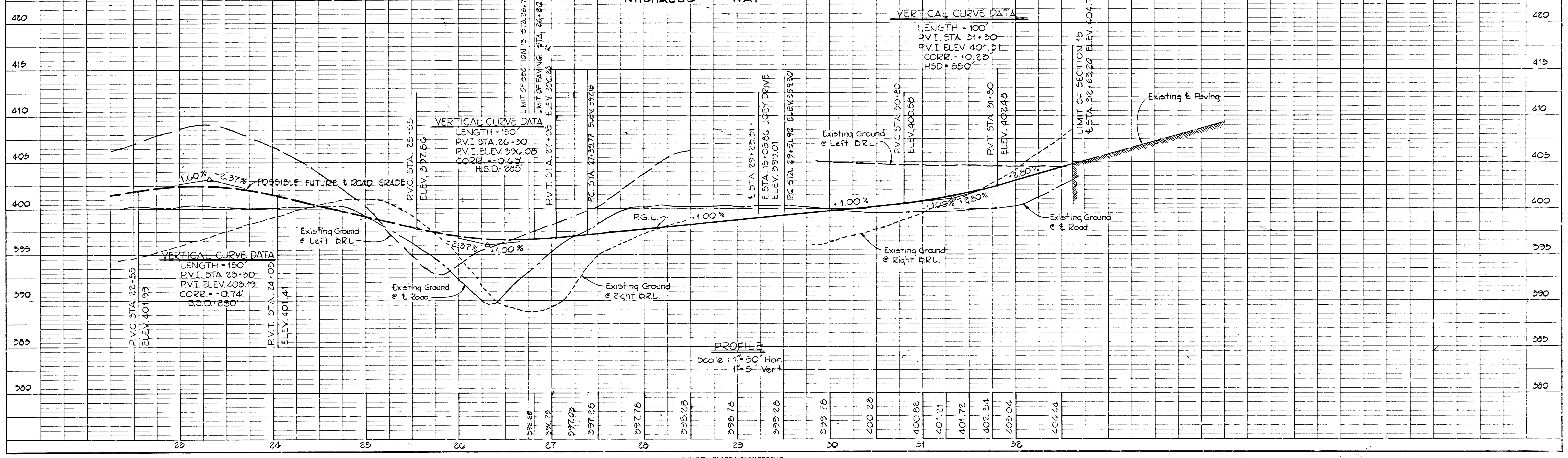
VALLEY MEDE
SECTION 13, AREA 1
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

MICHAEL'S WAY
PLAN AND PROFILE

OWNER AND DEVELOPER
ZENITH CONTRACTORS, INC.
P.O. BOX 501
ELLICOTT CITY, MARYLAND 21043

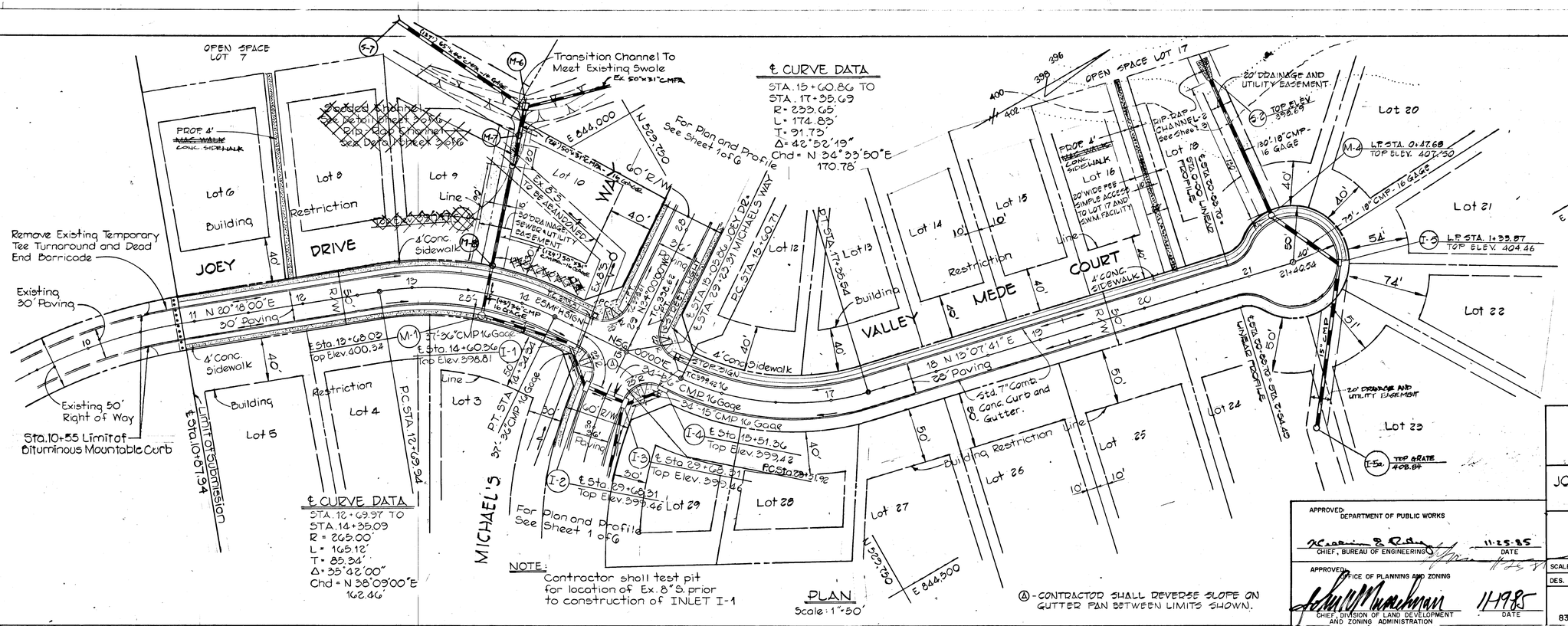
SCALE: As Shown	DATE: 5/10/85	DWG. NO. 1 OF 6
DES. C.C.	DRN. D.B.S.	CHK R.C.

FISHER, COLLINS AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043



#2

AS-BUILT JAN. 27, 1992 F-85-178



PLAN	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	DESIGN CHECKED		
No.	AS-BUILT NOTATIONS CHECKED		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	DESIGN CHECKED		
No.	STRUCTURE NOTATIONS CHECKED		

VALLEY MEDE

SECTION 13, AREA 1
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

JOEY DRIVE AND VALLEY MEDE CT. PLAN AND PROFILE

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING — DATE 11-25-85

APPROVED: OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 11-4-85

OWNER AND DEVELOPER
ZENITH CONTRACTORS, INC.
P.O. BOX 501
ELLICOTT CITY, MARYLAND 21043

SCALE: AS SHOWN	DATE: 5/10/85	DWG. NO. 2 OF 6
DES. C.C.	DRN. D.S	CHK. R.C.

FISHER, COLLINS AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

#2

K&E PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.
48 7024 MADE IN U.S.A.

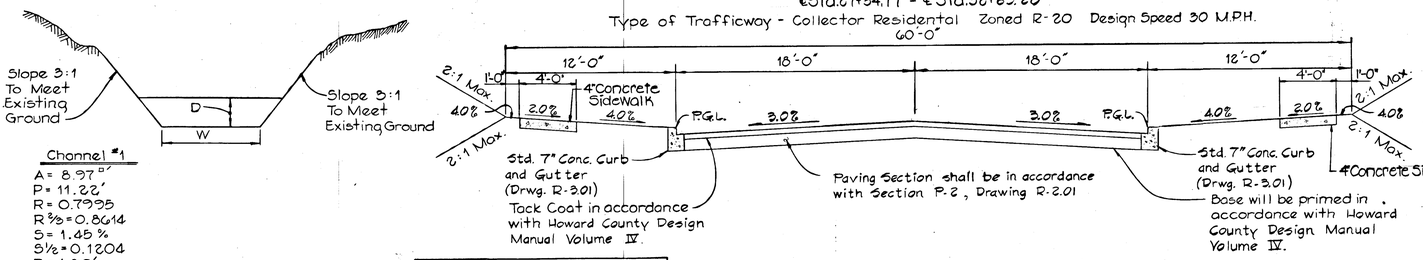
AS-BUILT - JAN. 27, 1992

F-85-172

MICHAEL'S WAY

£Sta.87+34.77 - £Sta.38+63.20

Type of Trafficway - Collector Residental Zoned R-20 Design Speed 30 M.P.H.



Channel #1

A = 8.97°
P = 11.22'
R = 0.7995
R⅔ = 0.8614
S = 1.45 %
S½ = 0.1204
D = 1.30'
W = 3.00'
n = 0.03
V = 1.485/n × R⅔ × S½
V = 1.485/0.03 × 0.8614 × 0.1204 = 5.13 fps
Q = V × A = 5.13 × 8.97
Q = 46.0 cfs

SODDED CHANNEL DETAIL

No Scale

STRUCTURE SCHEDULE						
NO.	TYPE	INV. IN	INV. OUT	TOP ELEV	£ LOC.	REMARKS
I-1	A-5 WITH DEFLECTORS	391.83	391.58	398.81	14 +40.36	DRWG. G4-A PAGE 119-A
I-2	A-10	392.39	392.64	399.46	23+68.31	
I-3	A-10	394.76	393.01	399.46	23+68.31	
I-4	A-5 WITH DEFLECTORS	———	395.13	399.42	15+51.36	
I-5	A-10	———	401.20	404.46	1+33.87*	
M-1	HO.CO.STD MANHOLE	390.11	389.86	400.34	13+68.03	DRWG. D-103 PAGE 158
M-2	SHALLOW MANHOLE	395.51	395.26	400.88	30+92.56	SEE SHEET 6 OF 6 FOR DETAIL
M-3	SHALLOW MANHOLE	400.12	399.62	404.36	—	
S-1	METAL END SECTION	———	387.67	390.67	—	
S-2		———	396.59	398.09	—	
M-4	HO.CO.STD. MANHOLE	399.58	399.33	407.50	0+47.68*	DRWG. D-103 PAGE 158

* £ Locations for I-5 and M-4 are £ Linear Profile

BY	NO	REVISION	DATE
MGY	4	REMOVED DAM #2 & HALLWAY TIE	9/25/90
DAD	3	CHANGE RUNOFF QUANTITIES FROM S-1 THROUGH I-2	3-25-86

TYPICAL ROADWAY SECTION

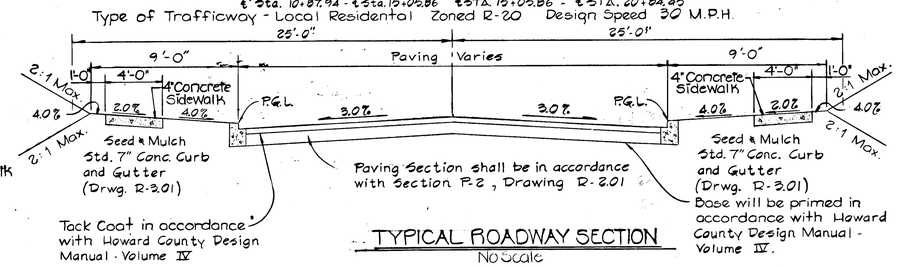
No Scale

JOEY DRIVE & VALLEY MEDE COURT

Paving Width - 30' Paving Width - 28'

£ Sta. 10+87.94 - £ Sta. 13+05.86 £ STA. 13+05.86 - £ STA. 20+84.45

Type of Trafficway - Local Residental Zoned R-20 Design Speed 30 M.P.H.



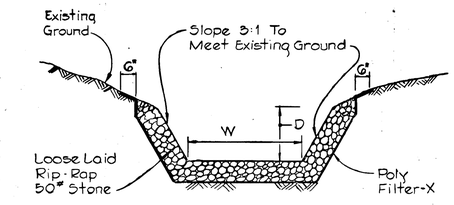
TYPICAL ROADWAY SECTION

No Scale

NOTE: £ CONCRETE WALK BOTH SIDES JOEY DR ONLY

NOTE:

All materials and construction shall be in accordance with the Howard County Design Manual - Volume IV, Standard Specifications and Details for Construction.

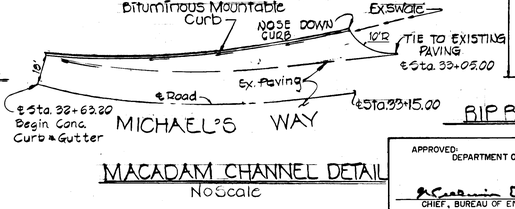


Channel #1

A = 11.25°
P = 12.48'
R = 0.901
R⅔ = 0.933
S = 1.45 %
S½ = 0.1204
D = 1.50'
W = 3.00'
n = 0.04
V = 1.485/n × R⅔ × S½
V = 1.485/0.04 × 0.933 × 0.1204 = 4.17 fps
Q = V × A = 4.17 × 11.25
Q = 46.9 cfs

RIP-RAP CHANNEL

No Scale

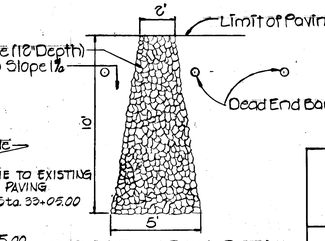


Channel #2

A = 2.81°
P = 6.24'
R = 0.450
R⅔ = 0.587
S = 1.00 %
S½ = 0.1000
D = 0.75'
W = 1.50'
n = 0.04
V = 1.485/n × R⅔ × S½
V = 1.485/0.04 × 0.587 × 0.1000 = 2.18 fps
Q = V × A = 2.18 × 2.81
Q = 6.13 cfs

MACADAM CHANNEL DETAIL

No Scale



RIP RAP APRON DETAIL

No Scale

VALLEY MEDE

SECTION 13, AREA 1
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

STORM DRAIN PROFILES & TYPICAL ROAD SECTIONS

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING — DATE 11-25-85

APPROVED: OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 1/4/1985

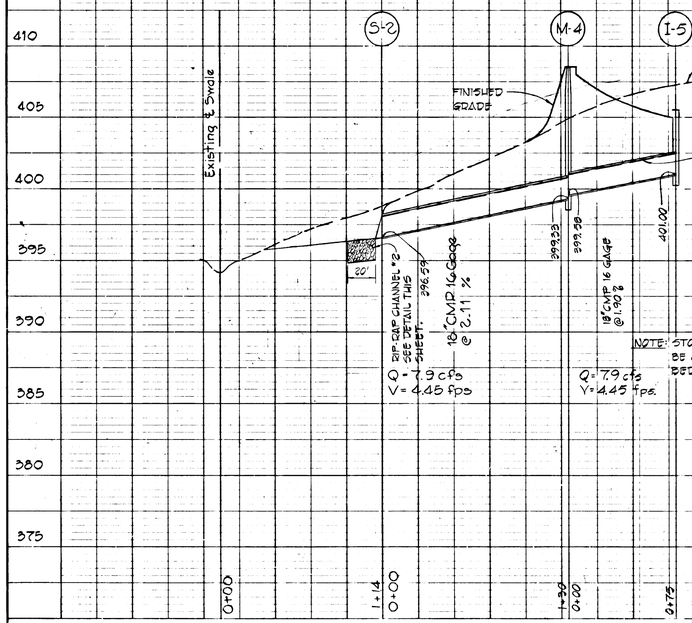
OWNER AND DEVELOPER
ZENITH CONTRACTORS, INC.
P.O. BOX 501
ELLICOTT CITY, MARYLAND 21043

SCALE: As Shown	DATE: 5/10/85	DWG. NO. 5 OF 6
DES. C.C.	DRN. D.S	CHK. R.C.

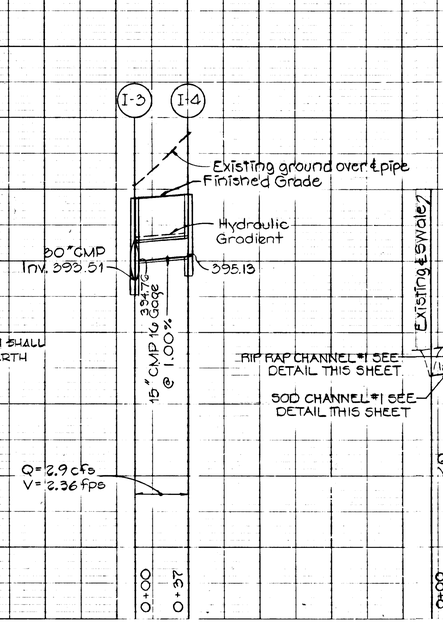
FISHER, COLLINS AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

PLAN / PROFILE — SURVEYED, PLOTTED, NOTE BOOK, GRADES CHECKED, R/W NOTED, STRUCTURE LOCATIONS CHECKED, ASSIGNMENT CHECKED, R/W WAY CHECKED, BY, DATE, No.

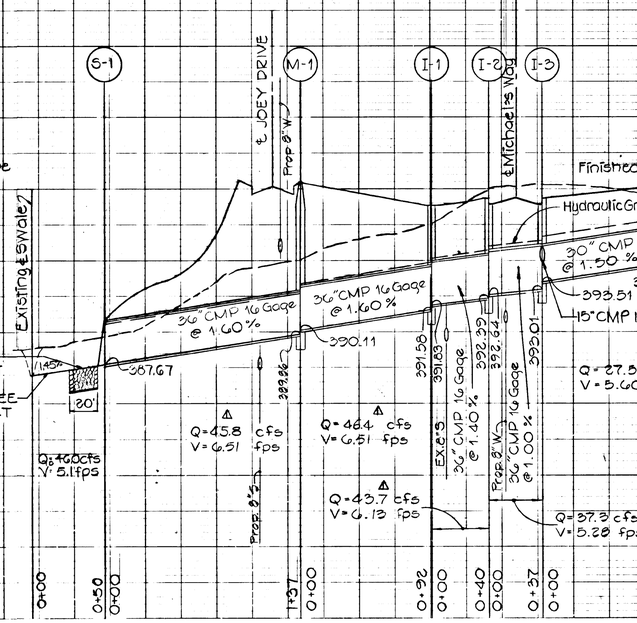
VALLEY MEDE COURT



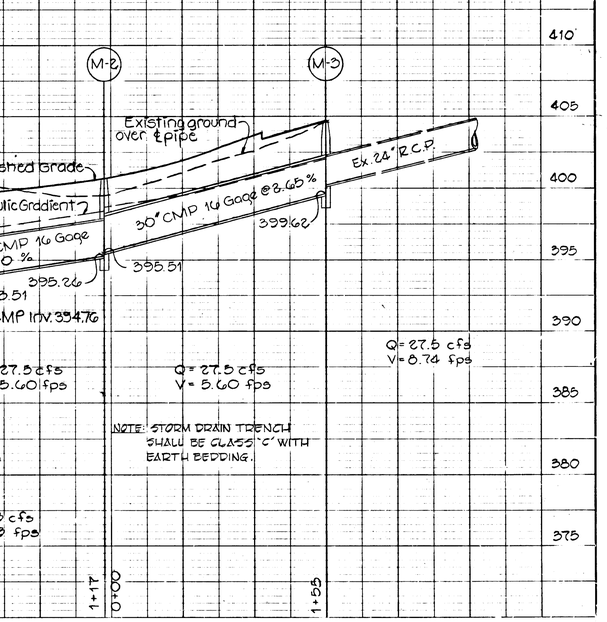
VALLEY MEDE COURT



JOEY DRIVE



MICHAEL'S WAY

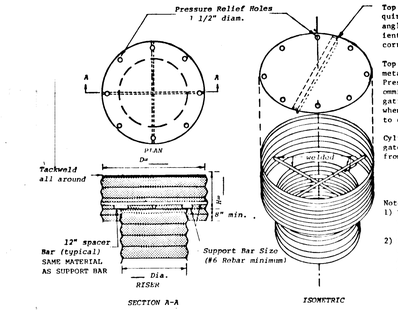


PROFILE — SURVEYED, PLOTTED, NOTE BOOK, GRADES CHECKED, R/W NOTED, STRUCTURE LOCATIONS CHECKED, BY, DATE, No.

K&E PLATE 1, PLAN PROFILE
KEUFFEL & ESSER CO.
48 7024 MADE IN U.S.A.

AS-BUILT JAN. 27, 1992

F-85-172



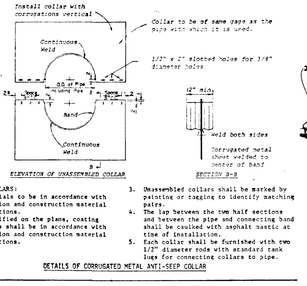
Top stiffener (if required) is ___ x ___ angle welded to top and oriented perpendicular to corrugations.

Top is ___ gage corrugated metal or 1/8" steel plate. Pressure relief holes may be committed, if ends of corrugations are left fully open when corrugated top is welded to cylinder.

Cylinder is ___ gage corrugated metal pipe or fabricated from 1/8" steel plate.

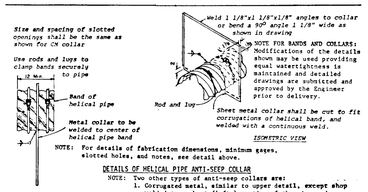
Notes:
1) The cylinder must be firmly fastened to the top of the riser.
2) Support bars are welded to the top of the riser or attached by straps bolted to top of riser.

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE
(not to scale)



NOTES FOR COLLARS:
1. All materials to be in accordance with construction and construction material specifications.
2. When specified on the plans, coating of collars shall be in accordance with construction and construction material specifications.
3. Unassembled collars shall be marked by painting or tagging to identify matching pairs.
4. The lap between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at time of installation.
5. Each collar shall be furnished with two 1/2" diameter rods with standard rank lugs for connecting collars to pipe.

DETAILS OF CORRUGATED METAL ANTI-SEEP COLLAR

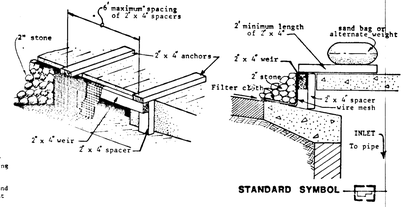


NOTE: For details of fabrication dimensions, minimum gages, slotted holes, and notes, see detail above.

DETAILS OF HELICAL PIPE ANTI-SEEP COLLAR

NOTE: Two other types of anti-seep collars are:
1. 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.
2. Concrete, six inches thick formed around the pipe with #3 rebar spaced 15" horizontally and vertically.

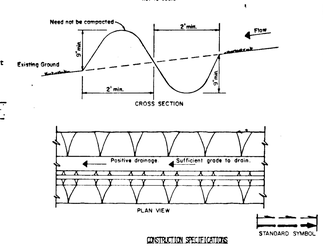
CURB INLET PROTECTION DETAIL



B. Curb Inlet Protection.

1. Attach a continuous piece of wire mesh (30" min. width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.
2. Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6' apart).
4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.

PERIMETER DIKE/SWALE
not to scale



CONSTRUCTION SPECIFICATIONS

1. All perimeter dike/swale shall have uninterrupted positive grade to an outlet.
2. Diverted runoff from a disturbed area shall be conveyed to a sediment trapping device.
3. Diverted runoff from an undisturbed area shall outlet into an undisturbed stabilized area at non-erosive velocity.
4. The shall shall be excavated or shaped to line, grade, and cross section as required to meet the criteria specified in the standard.
5. Stabilization of the area disturbed by the dike and swale shall be done in accordance with the standard and specification for seed and straw mulch, and shall be done within 10 days.
6. Periodic inspection and required maintenance must be provided after each rain event.

ENGINEER'S CERTIFICATE

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

Donald O. Fisher — 9/26/85
DATE

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPEMENT AND OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPEMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND 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.

S. Ruff Waddell — 9/26/85
DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE — 11-18-85 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

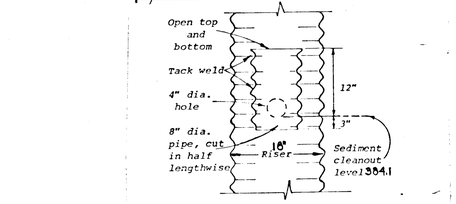
APPROVED:
DISTRICT COORDINATOR
HOWARD SOIL CONSERVATION DISTRICT — 11/6/85 DATE

APPROVED:
DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF ENGINEERING — 11-25-85 DATE

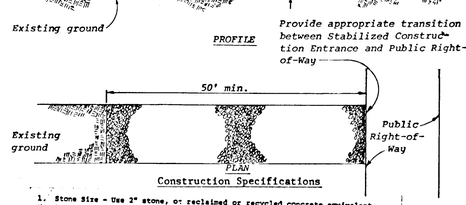
APPROVED:
OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — 11-19-85 DATE



SEDIMENT BASIN DEWATERING DETAIL
No Scale

STABILIZED CONSTRUCTION ENTRANCE
(not to scale)



Construction Specifications

1. Stone Size - Use 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 diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
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 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 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.

3. CONSTRUCTION SPECIFICATIONS

Site Preparation

Areas under the embankment shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots or other objectionable material. In order to facilitate clean-out and restoration, the pool area (measured at the top of the pipe spillway) will be cleared of all brush, trees, and other objectionable materials.

Cut-off-Trench

A cut-off trench shall be excavated along the centerline of earth fill embankments. The minimum depth shall be two feet. The cut-off trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be four feet, but wide enough to permit operation of excavation and compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for embankment. The trench shall be dewatered during the backfilling-compaction operations.

Embankment

The fill material shall be taken from approved areas shown on the plans. It shall be clean mineral soil free of roots, woody vegetation, oversized stones, rocks, or other objectionable material. Relatively pervious materials such as sand or gravel (Unified Soil Classes GW, GP, SW & SP) shall not be placed in the embankment. Areas on which fill is to be placed shall be scarified prior to placement of fill. The fill material shall contain sufficient moisture so that it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. Fill material shall be placed six-inch to eight-inch thick continuous layers over the entire length of the fill. Compaction shall be obtained by routing and hauling the construction equipment over the fill so that the entire surface of each layer of the fill is traversed by at least one wheel or tread track of the equipment or by the use of a compactor. The embankment shall be constructed to an elevation 10 percent higher than the design height to allow for settlement.

Pipe Spillways

The riser shall be securely attached to the barrel or barrel stub by welding the full circumference making a watertight structural connection. The barrel stub must be attached to the riser at the same percent (angle) of grade as the outlet conduit. The connection between the riser and the riser base shall be watertight. All connections between barrel sections must be achieved by approved watertight band assemblies. (See page 18.22 for details.) The barrel and riser shall be placed on a firm, smooth foundation of impervious soil. Pervious materials such as sand, gravel, or crushed stone shall not be used as backfill around the pipe or anti-seep collars. The fill material around the pipe spillway shall be placed in four inch layers and compacted under and around the pipe to at least the same density as the adjacent embankment.

A minimum depth of two feet of hand compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment. Steel base plates on risers shall have at least 2-1/2 feet of compacted earth, stone or gravel placed over it to prevent flotation.

Emergency Spillway

The emergency spillway shall be installed in undisturbed ground. The achievement of planned elevations, grades, design width, entrance and exit channel slopes are critical to the successful operation of the emergency spillway and must be constructed within a tolerance of ± 0.2 feet.

Vegetative Treatment

Stabilize the embankment and emergency spillway in accordance with the appropriate vegetative Standard and Specifications immediately following construction. In no case shall the embankment remain unstabilized for more than seven(7) days.

Erosion and Pollution Control

Construction operations shall be carried out in such a manner that erosion and water pollution will be minimized. State and local laws shall be complied with concerning pollution abatement.

Safety

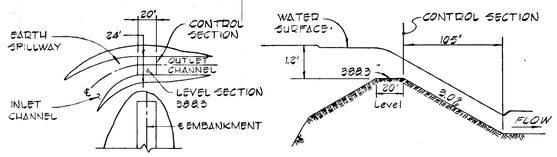
State and local requirements shall be met concerning fencing and signs, warning the public of hazards of soft sediment and floodwater.

Maintenance

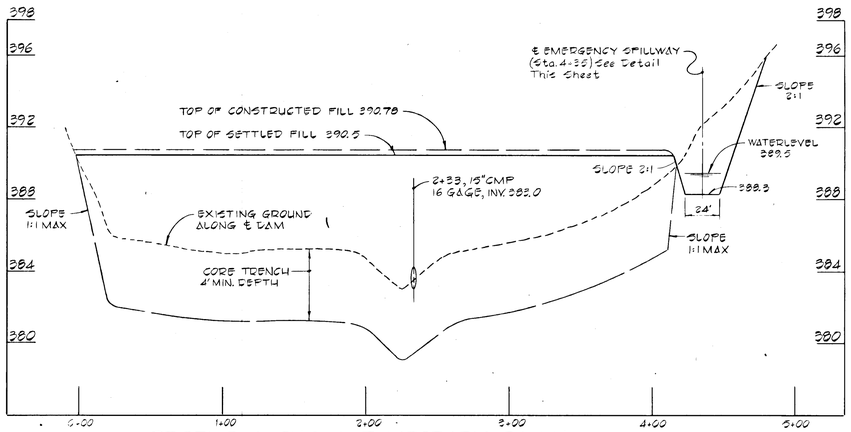
1. Repair all damages caused by soil erosion and construction equipment at or before the end of each working day.
2. Sediment shall be removed from the basin when it reaches the specified distance below the top of the riser. This sediment shall be placed in such a manner that it will not erode from the site. The sediment shall not be deposited downstream from the embankment, adjacent to a stream or flood plain.

Final Disposal

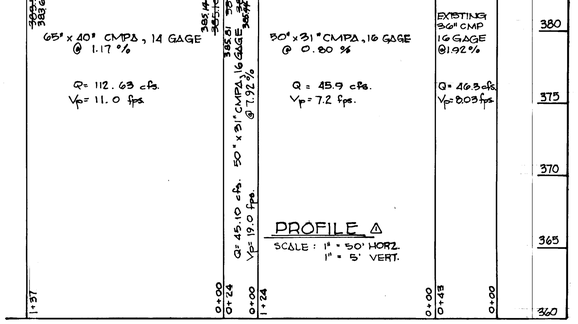
When temporary structures have served their intended purpose and the contributing drainage area has been properly stabilized, the embankment and resulting sediment deposits are to be leveled or otherwise disposed of in accordance with the approved sediment control plan. The proposed use of a sediment basin site will often dictate final disposition of the basin and any sediment contained therein. If the site is scheduled for future construction, then the basin material and trapped sediments must be removed, safely disposed of, and backfilled with a structural fill. When the basin area is to remain open space the pond may be pumped dry, graded and back filled.

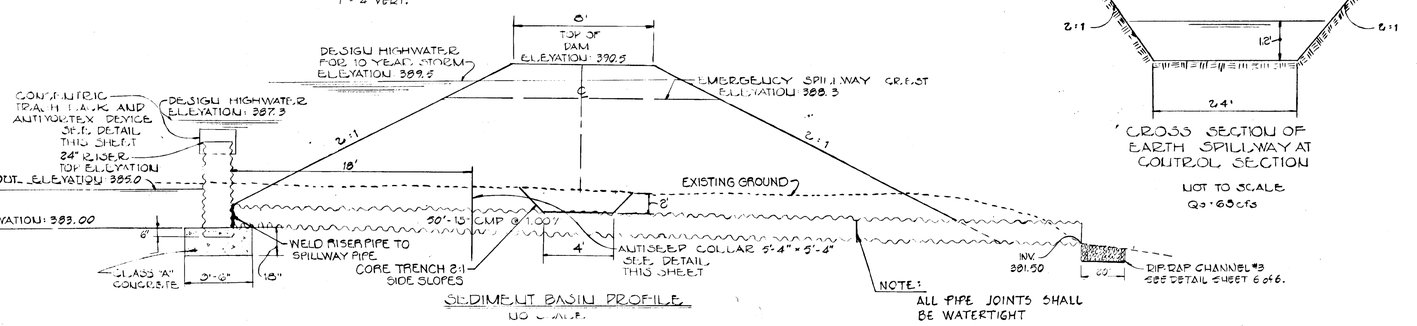


EARTH SPILLWAY DETAILS
NO SCALE



PROFILE ALONG ℄ TEMPORARY BASIN
SCALE: 1" = 50' HOR.
1" = 4' VERT.





SEDIMENT BASIN PROFILE
NO SCALE

CROSS SECTION OF EARTH SPILLWAY AT CONTROL SECTION
NOT TO SCALE
Q=85 cfs

REVISIONS	DATE
△ Storm Drain extension plan and profile.	6/22/88 AWS.

REVISED M.V. 9/25/90
REMOVED ORIFICE DETAIL & WEIR SPILLWAY DETAIL

VALLEY MEDE
SECTION 13, AREA 1
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SEDIMENT CONTROL DETAILS

OWNER AND DEVELOPER
ZENITH CONTRACTORS, INC.
P.O. BOX 501
ELLICOTT CITY, MARYLAND 21043

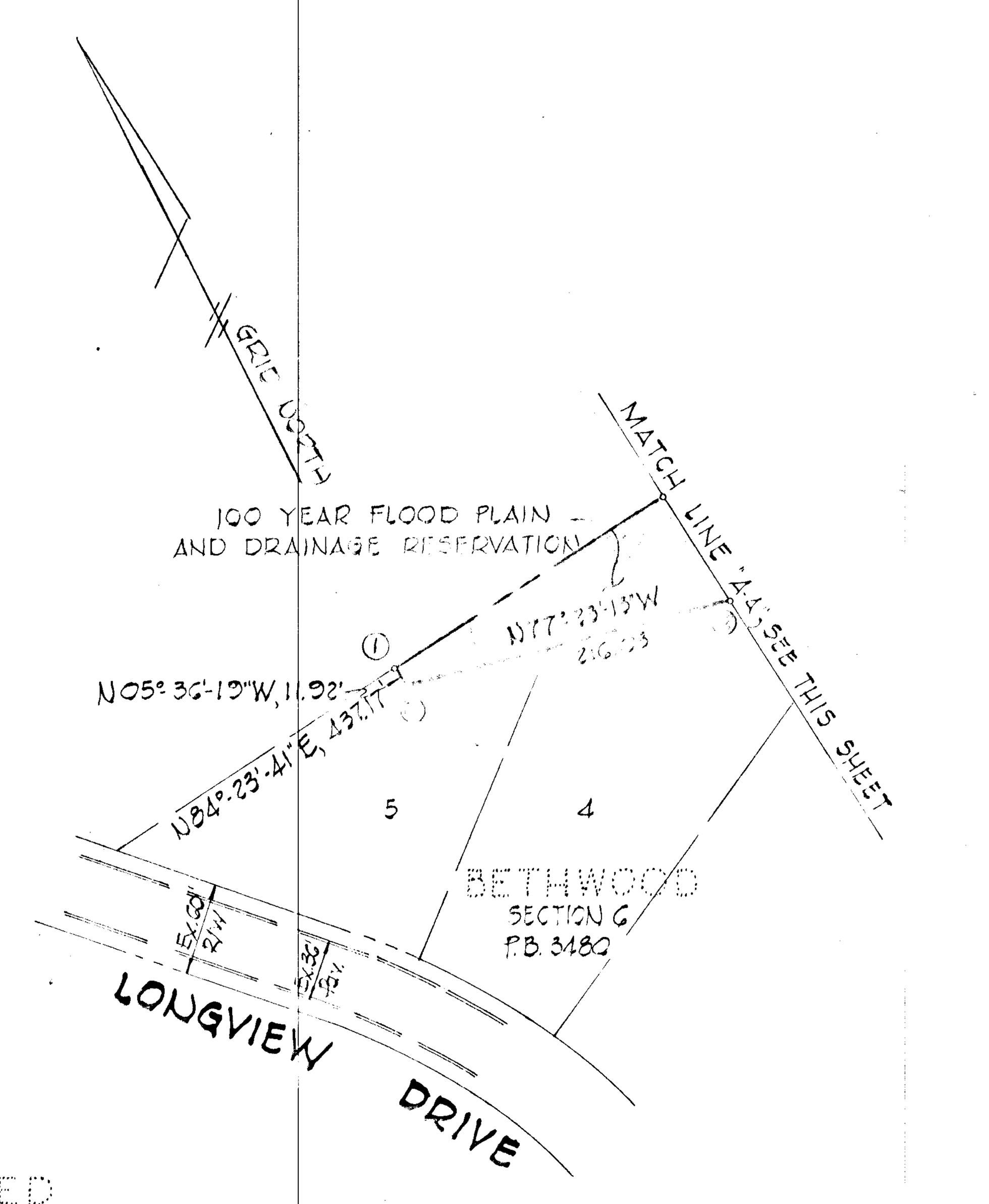
SCALE: NONE	DATE: 5/9/88	DWG NO. 4 OF 6
DES. G.G.	DRN. M.S.	CHK. R.B.C.

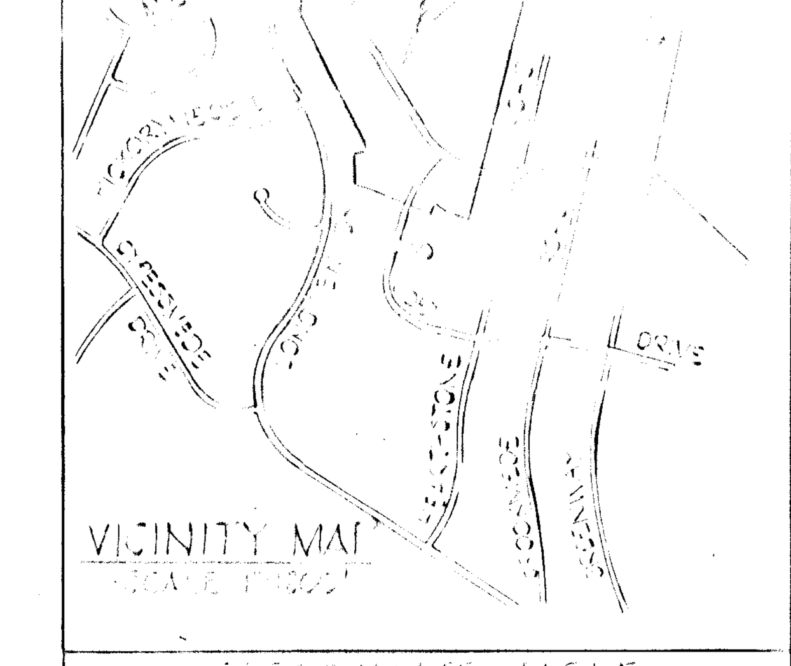
FISHER, COLLINS AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

AS-BUILT JAN. 27, 1992

F-85-172

#2





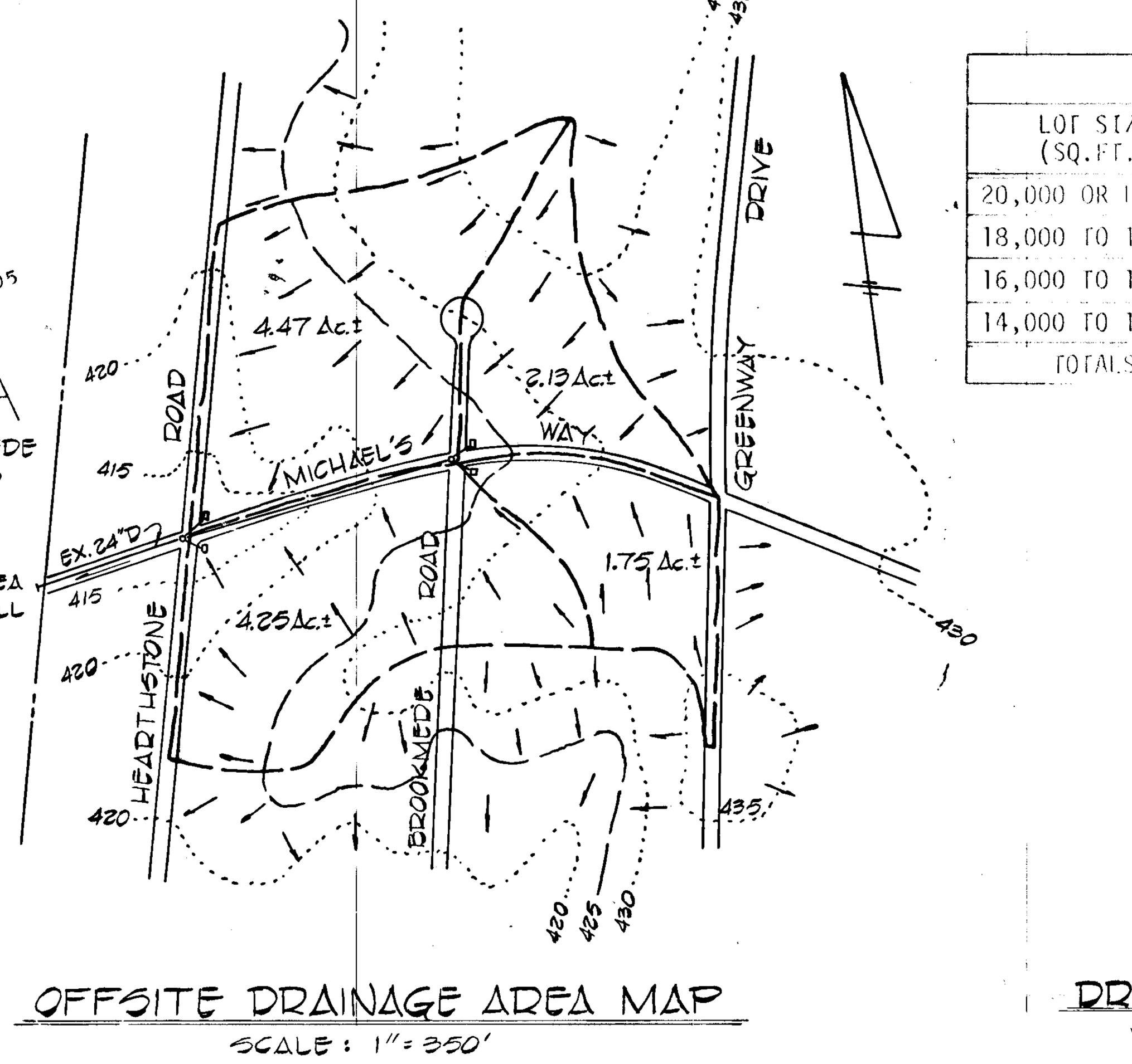
COORDINATE TABLE		
NO.	NORTH	EAST
1	531,[illegible].77	[illegible]
2	531,200.80	843,583.[illegible]
3	531,107.87	843,643.77
4	530,384.14	844,[illegible]
5	530,213.03	844,401.80
6	530,215.01	844,330.[illegible]
7	530,290.41	844,130.27
8	530,223.80	844,174.73
9	530,326.53	843,707.05
10	530,457.08	843,462.00
11	530,580.19	843,463.23
12	[illegible]	[illegible]
13	[illegible]	843,[illegible].91
14	530,[illegible]	843,[illegible]
15	530,151.54	843,[illegible]
16	530,400.19	843,[illegible]
17	530,493.53	843,519.33
18	530,559.35	843,383.50
19	530,[illegible].75	843,318.[illegible]
20	530,870.52	843,327.84
21	531,002.94	843,330.02
22	531,[illegible].71	[illegible]
23	531,105.91	[illegible]

COORDINATES SHOWN ON THIS SHEET ARE BASED ON THE MARYLAND STATE GRID SYSTEM.

GENERAL NOTES:

1. SUBJECT PROPERTY IS LOCATED ON TAX MAP 17, PARCEL 139.
2. SUBJECT PROPERTY IS ZONED R-20 AS PER 8/2/85 COMPREHENSIVE ZONING PLAN.
3. PROPOSED NUMBER OF BUILDABLE LOTS: 63
4. TOTAL AREA OF LOTS: 23.643 AC.+
5. TOTAL AREA OF OPEN SPACE REQUIRED: 5.1[illegible] AC.+
6. TOTAL AREA OF OPEN SPACE, 100 YEAR FLOOD PLAIN AND DRAINAGE EASEMENT PROVIDED: 12.236 AC.+
7. TOTAL AREA OF NON-FLOOD PLAIN OPEN SPACE PROVIDED: 6.676 AC.+
8. TOTAL AREA OF 100 YEAR FLOOD PLAIN AND DRAINAGE EASEMENT: 5.560 AC.+
9. TOTAL AREA OF ROADS TO BE DEDICATED TO HOWARD COUNTY: 4.547 AC.+
10. OPEN SPACE ALLOWED FOR 100 YEAR FLOOD PLAIN AND DRAINAGE EASEMENT: NONE
11. TOTAL AREA OF PROPERTY: 40.426 AC.+
12. PUBLIC WATER AND SEWER WILL BE UTILIZED IN THIS DEVELOPMENT.
13. SEE OFFICE OF PLANNING AND ZONING FILE P-79-40 VP 85-69.

LOT SIZE AND MANDATORY OPEN SPACE REQUIREMENTS				
LOT SIZE (SQ.FT.)	NUMBER OF LOTS	AREA OF LOTS (ACRES)	MANDATORY OPEN SPACE(%)	AREA OF OPEN SPACE (ACRES)
20,000 OR LARGER	11	5.264	6	0.316
18,000 TO 19,999	[illegible]	1.[illegible]	10	0.[illegible]
16,000 TO 17,999	[illegible]	3.[illegible]	20	0.[illegible]
14,000 TO 15,999	40	13.[illegible]	30	4.[illegible]
TOTALS	63	23.[illegible]	--	5.[illegible]



OFFSITE DRAINAGE AREA MAP
SCALE: 1" = 350'

APPROVED:
DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING 11-25-85 DATE

APPROVED:
OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION 11-19-85 DATE

FERRELL A. FISHER, P.E.
MD. REG. NO. 3757
May 3, 1979
DATE

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERING CONSULTANTS
8388 COURT AVENUE
ELLICOTT CITY, MARYLAND 21043
TELEPHONE: (301) 461-2855

OWNER AND DEVELOPER
TARTAN DEVELOPMENT OF MD., INC.
SUITE 402
11130 NEW HAMPSHIRE AVENUE
SILVER SPRING, MD. 20904

DRAINAGE AREA MAP
VALLEY MEDE
SECTION 13, AREA 1
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: 1" = 100' MAY 16, 1985
SHEET 5 of 6

#2
W.O. 30166
AS-BUILT JAN. 27, 1992
F-85-172

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE 11/11/85

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — DATE 11/8/85

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE — DATE 11-18-85

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

APPROVED: DISTRICT HOWARD SOIL CONSERVATION DISTRICT — DATE 11/18/85

APPROVED: DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF ENGINEERING — DATE 11-25-85

APPROVED: OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 11-19-85

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, 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. 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 FOR PERMANENT SEEDINGS (SEC.51) SOD (SEC.54), TEMPORARY SEEDING (SEC.50) AND MULCHING (SEC.52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7) SITE ANALYSIS:

TOTAL AREA OF SITE	15.30	ACRES
AREA DISTURBED	5.18	ACRES
AREA TO BE ROOFED OR PAVED	1.20	ACRES
AREA TO BE VEGETATIVELY STABILIZED	3.98	ACRES
TOTAL CUT	—	CU.YDS.
TOTAL FILL	—	CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION		

8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.

PERMANENT SEEDING NOTES:

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

SEEDBED PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

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 SQUARE FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE-INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ.FT.).
2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE-INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/100ft SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING: APPLY 1½ 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 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, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

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

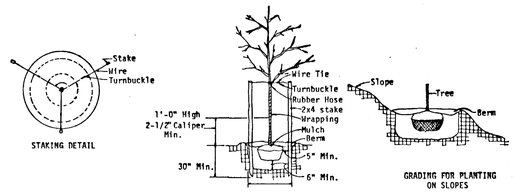
SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2½ BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1½ 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.

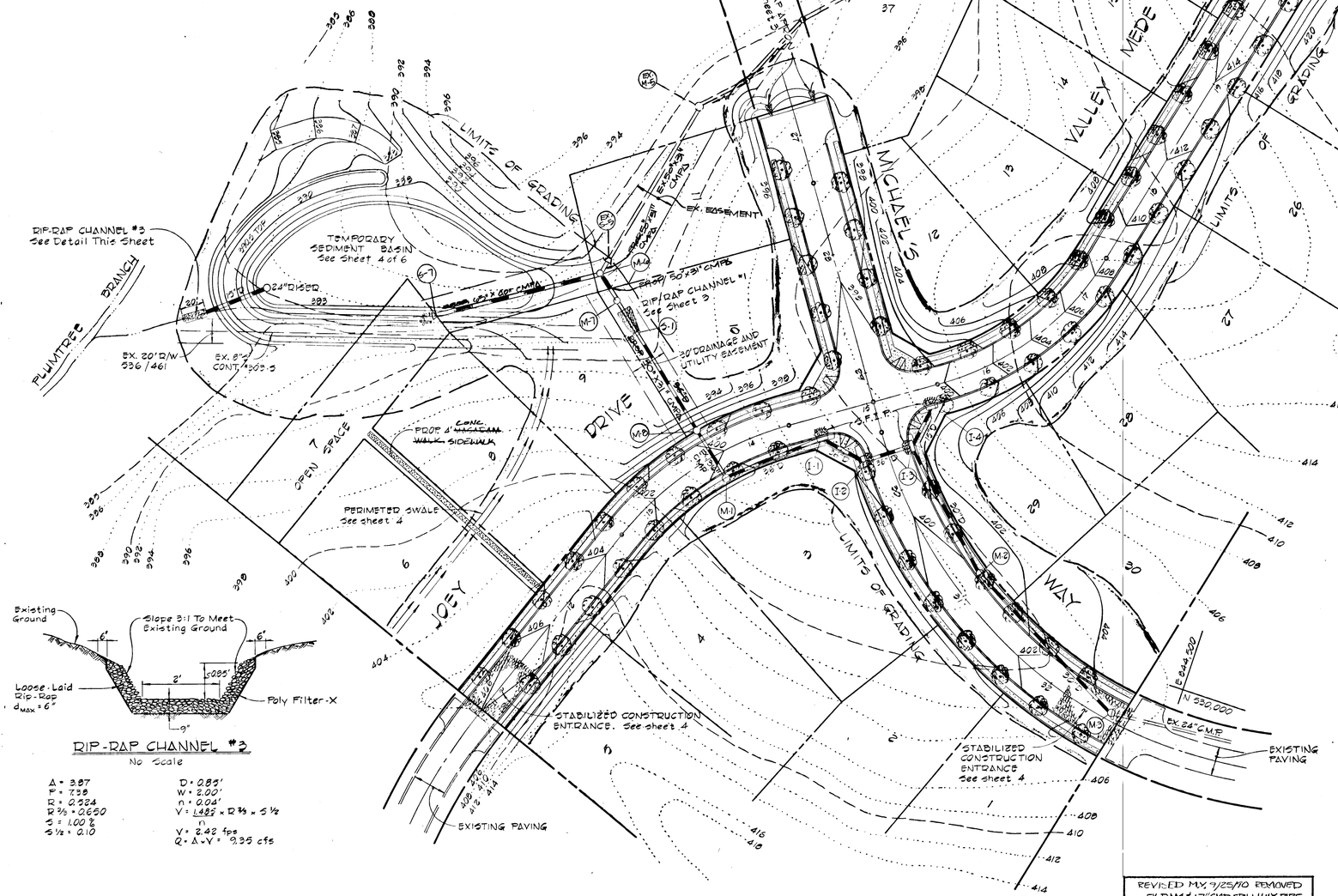
REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

CONSTRUCTION SEQUENCE:

1. OBTAIN GRADING PERMIT.
2. CONSTRUCT STONE CONSTRUCTION ENTRANCES.
3. CONSTRUCT TEMPORARY SEDIMENT BASIN AND PERIMETER SWALES AND STABILIZE USING TEMPORARY SEEDING.
4. CONSTRUCT PERMANENT STORM WATER MANAGEMENT POND AND STABILIZE USING TEMPORARY SEEDING.
5. THE ORIFICE PIPE SHALL BE BLOCKED IN ACCORDANCE WITH THE DETAIL ON THIS SHEET. THE PIPE SHALL REMAIN BLOCKED UNTIL SUCH TIME WHEN THE SEDIMENT BASIN TRANSITIONS TO FUNCTION AS A STORM WATER MANAGEMENT POND.
6. CLEAR MICHAEL'S WAY AND LARCHMEDE DRIVE.
7. GRADE ROADS TO SUBGRADE STABILIZING SLOPE AREAS BETWEEN EXISTING GROUND AND BACK OF CURB USING PERMANENT SEEDING.
8. CONSTRUCT STORM DRAIN SYSTEM.
9. INSTALL INLET PROTECTION DEVICES AT ALL STORM DRAIN INLETS. CONSTRUCT CONCRETE CURB AND LAY BASE COURSE.
10. UPON STABILIZATION OF GRADED AREAS, INLETS SHALL BE OPENED AND ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE STORM DRAIN SYSTEM.
11. DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED FROM THE STORM WATER MANAGEMENT POND AND TEMPORARY SEDIMENT BASIN WHEN THE CLEANOUT ELEVATION OF 386.0 HAS BEEN REACHED. DURING CONSTRUCTION AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON.
12. THE TEMPORARY SEDIMENT BASIN SHALL BE DEWATERED BY PUMPING. THE SEDIMENT FROM THE BASIN SHALL BE SPREAD ON LOTS 6, 7 AND 8 IN ACCORDANCE WITH THE SEEDING SPECIFICATIONS IN THE SEDIMENT CONTROL NOTES.
13. REMOVE STONE CONSTRUCTION ENTRANCES.
14. CLEAN BASE COURSE, APPLY TACK COAT TO BASE COURSES AND LAY SURFACE COURSE. STABILIZE ALL SHOULDERS USING PERMANENT SEEDING.
15. REMOVE STONE BLOCKING DEVICE AND ACCUMULATED SEDIMENT FROM STORM WATER MANAGEMENT POND. THE POND SHALL BE GRADED IN ACCORDANCE WITH SHEETS AND STABILIZED WITH PERMANENT SEEDING SPECIFICATIONS IN THE SEDIMENT CONTROL NOTES.
16. INSTALL RIP-RAP APRONS.
17. ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.
18. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE ACCEPTED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; b) 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.



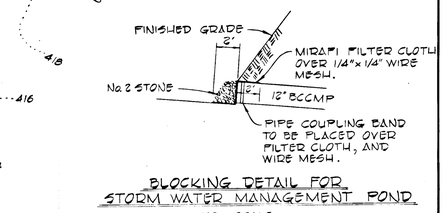
NOTE: THE CONTRACTOR SHALL REMOVE THE EXISTING DAMS, AND 12"CMP SPILLWAY PIPE ALONG WITH THE WEIR SPILLWAY. THE EXCAVATED MATERIAL SHALL BE PLACED ALONG THE EXISTING SLOPE ADJACENT TO THE REAR OF LOTS 15 AND 16. MATERIAL SHALL BE ALSO PLACED AROUND THE PERIMETER OF THE OPEN SPACE LOT ADJACENT TO LOTS 36 AND 37. THE PLACEMENT OF THE MATERIAL SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE FLOW FROM THE REAR OF THE LOTS THAT ARE ADJACENT TO THE FILL AREAS. THE AREAS DISTURBED SHALL BE SEED AND MULCHED IMMEDIATELY UPON COMPLETION OF THE GRADING OPERATION. THE DEBIS SHALL BE REMOVED FROM THE EX. 50"X31"CMPA, AND SILT FENCE SHALL BE INSTALLED AT THE TOE OF THE PROPOSED SLOPES. THE CONTRACTOR SHALL PROVIDE A SWALE FROM WHERE THE EXISTING 12" CMP WAS REMOVED TO THE EX. 50"X31"CMPA..



RIP-RAP CHANNEL #3
No Scale

A = 3.87
P = 7.38
R = 2.524
$R^{2/3}$ = .0650
S = 1.00 %
$S^{1/2}$ = 0.10

D = 0.83'
W = 2.00'
n = 0.04'
$V = \frac{1.486}{n} \times R^{2/3} \times S^{1/2}$
V = 2.42 fps
Q = A·V = 9.35 cfs



BLOCKING DETAIL FOR STORM WATER MANAGEMENT POND
NO SCALE

OWNER AND DEVELOPER
ZENITH CONTRACTORS, INC.
P.O. BOX 501
ELLICOTT CITY, MARYLAND 21043

PLAN
SCALE 1" = 50'

6-27-88	ANS	STORM DRAIN EXTENSION
DATE	BY	REVISIONS

REVISED MAY 7/25/10 REMOVED EX. DAMS & 12"CMP SPILLWAY PIPE AND ADDED NOTE:.

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
VALLEY MEDE
SECTION 13 AREA 1
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: AS SHOW MAY 31, 1985
SHEET 6 OF 6

AS-BUILT JAN. 27, 1992

F-85-172

FISHER, COLLINS AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8388 COURT AVENUE
ELLICOTT CITY, MARYLAND 21043
TELEPHONE: (301) 461-2855

#2