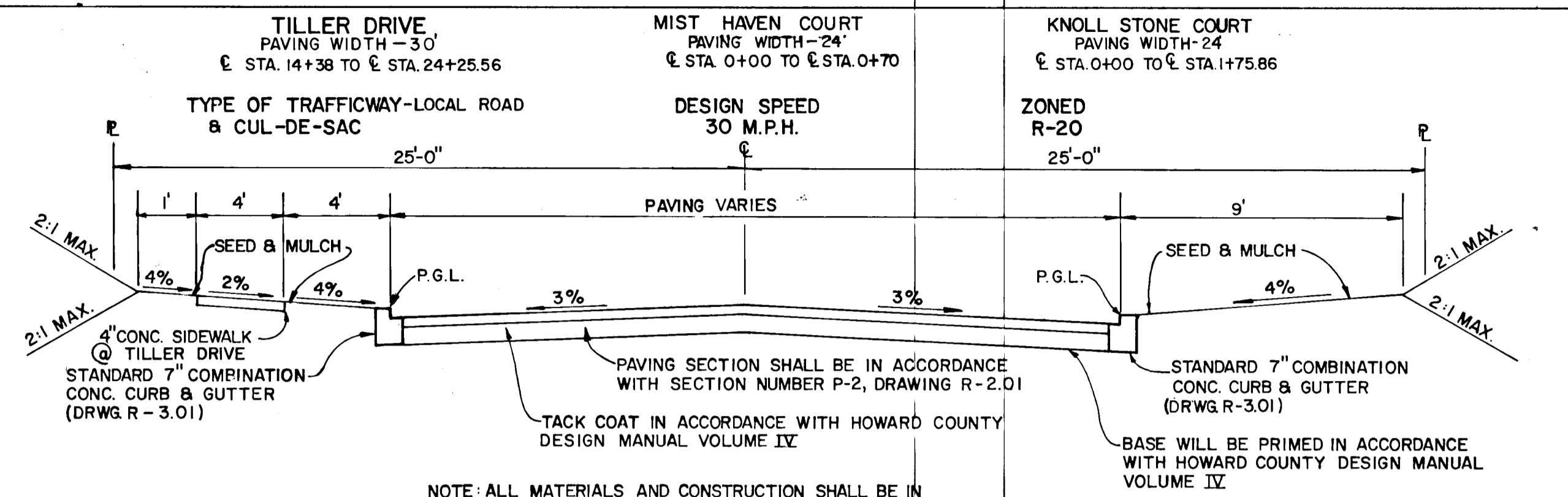
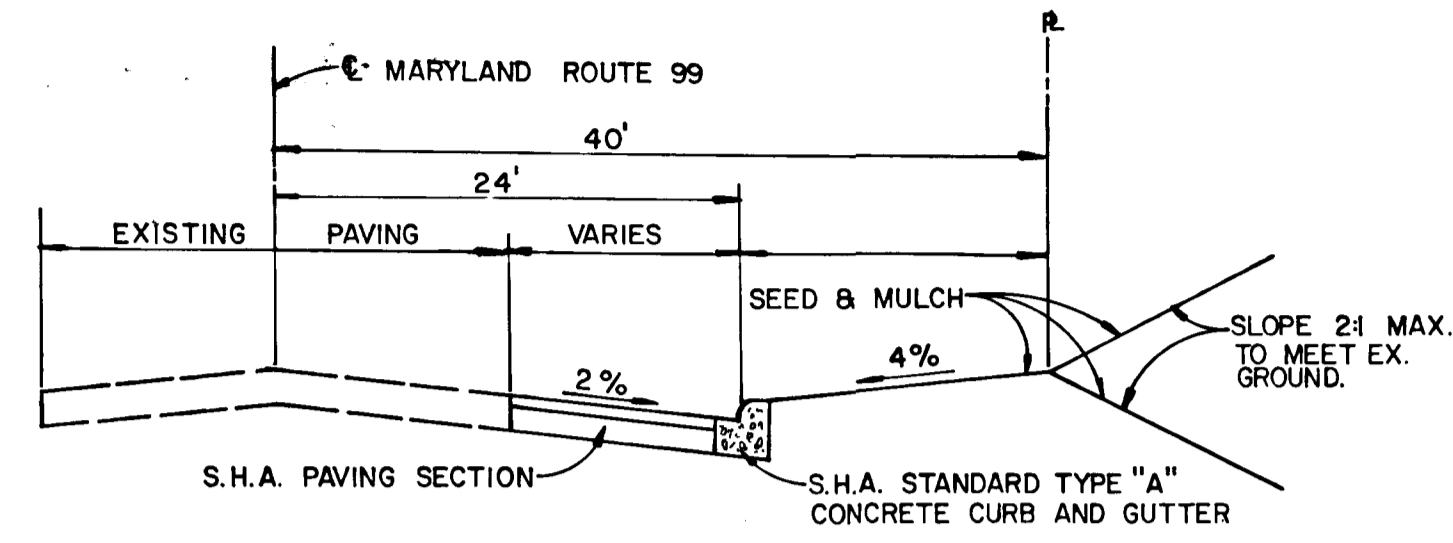
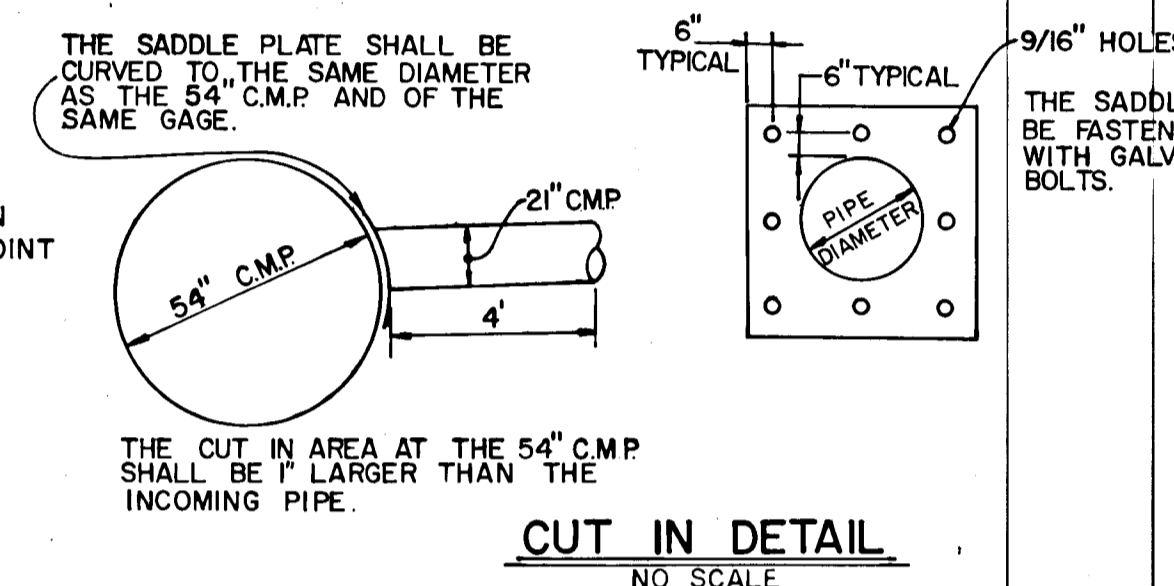
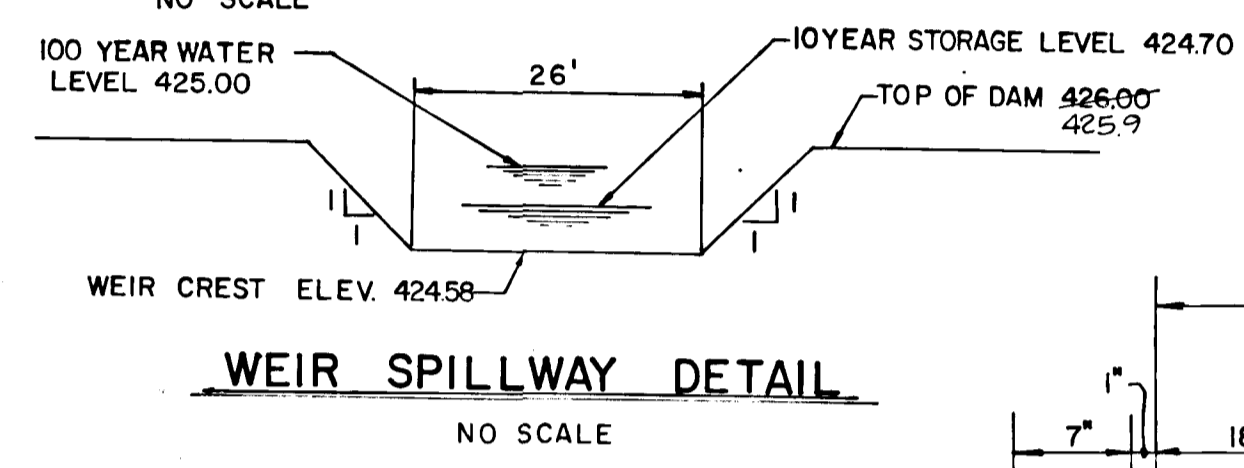
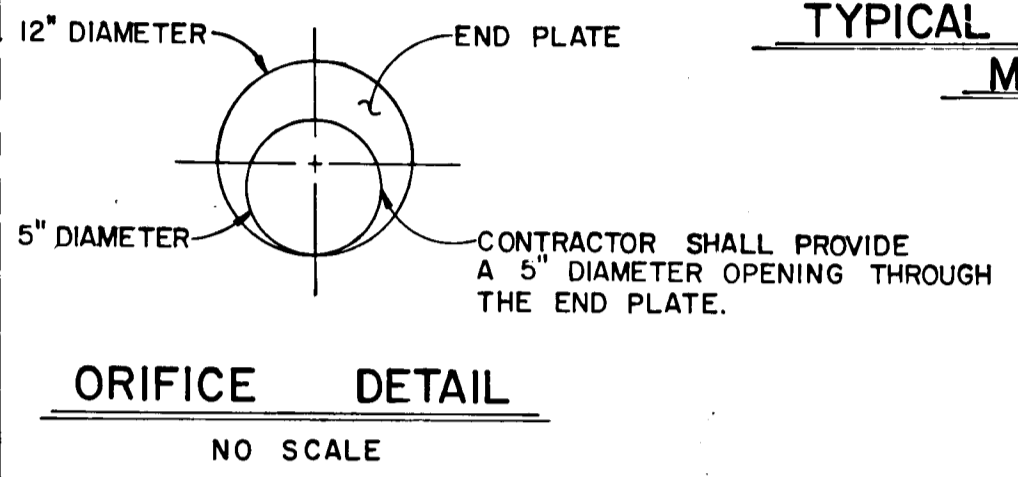


S.H.A. SECTION SHALL BE 5" (NOMINAL) BITUMINOUS CONCRETE SURFACE IN 2-1/2" LAYERS UTILIZING A 5N MIXTURE PLUS 5" (NOMINAL) BITUMINOUS CONCRETE BASE (OR 5" SAND ASPHALT BASE) ON ONE OF THE FOLLOWING:  
 4" CR-6 OR  
 4" DENSE GRADED AGGREGATE BASE OR  
 6" GRAVEL OR  
 12" SELECT BORROW OR EQUIVALENT MATERIAL.

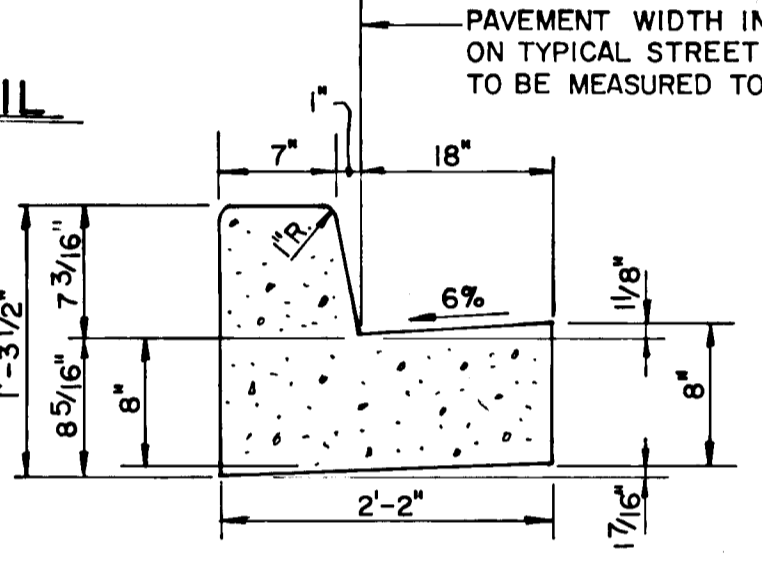
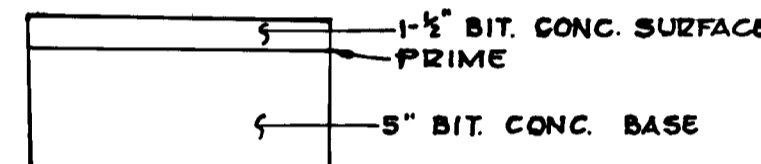


DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 SURVEYED, PLOTTED, CHECKED, REVISIONS CHECKED, PLAN NO. \_\_\_\_\_

STRUCTURE SCHEDULE						
NO	TYPE	INVERT IN	INVERT OUT	TOP ELEV.	STATION	REMARKS
I-1	A-5	438.00	438.00	444.50	2+13MIST HAVEN COURT LIN. PROFILE	DRWG. SD. 4.01
I-2	A-5	438.25	438.25	443.61	19+44.23.00 TILLER DRIVE	DRWG. SD. 4.01
I-3	A-5	427.29	427.40	433.61	19+44.23.00 TILLER DRIVE	DRWG. SD. 4.01
I-4	A-5 WITH DEFLECTORS	438.25	438.25	442.61	0+48.84 KNOLL STONE COURT	DRWGS. SD. 4.01 & SD.4.83
I-5	A-5 WITH DEFLECTORS	438.25	438.25	442.61	0+48.84 KNOLL STONE COURT	DRWGS. SD. 4.01 & SD.4.83
I-6	A-10 WITH DEFLECTORS	440.00	440.00	444.44	22+56.25 TILLER DRIVE	DRWGS. SD. 4.02 & SD.4.83
I-7	DOUBLE "S" COMB. INLET WITH RETICULAR GRATES	442.44	440.90	447.70	1+15 MD. ROUTE 99	DRWGS. MD.-379.04 & MD.379.08
M-1	STANDARD MANHOLE	433.34	433.34	438.70	21+29.72 TILLER DRIVE	DRWG. G. 5.01
S-2	METAL END SECTION	438.44	438.44	441.44	---	DRWG. SD. 5.61
M-2	STANDARD MANHOLE	432.00	432.00	441.40	---	DRWG. G. 5.01
S-1	METAL END SECTION	432.31	432.31	433.31	---	DRWG. SD. 5.61

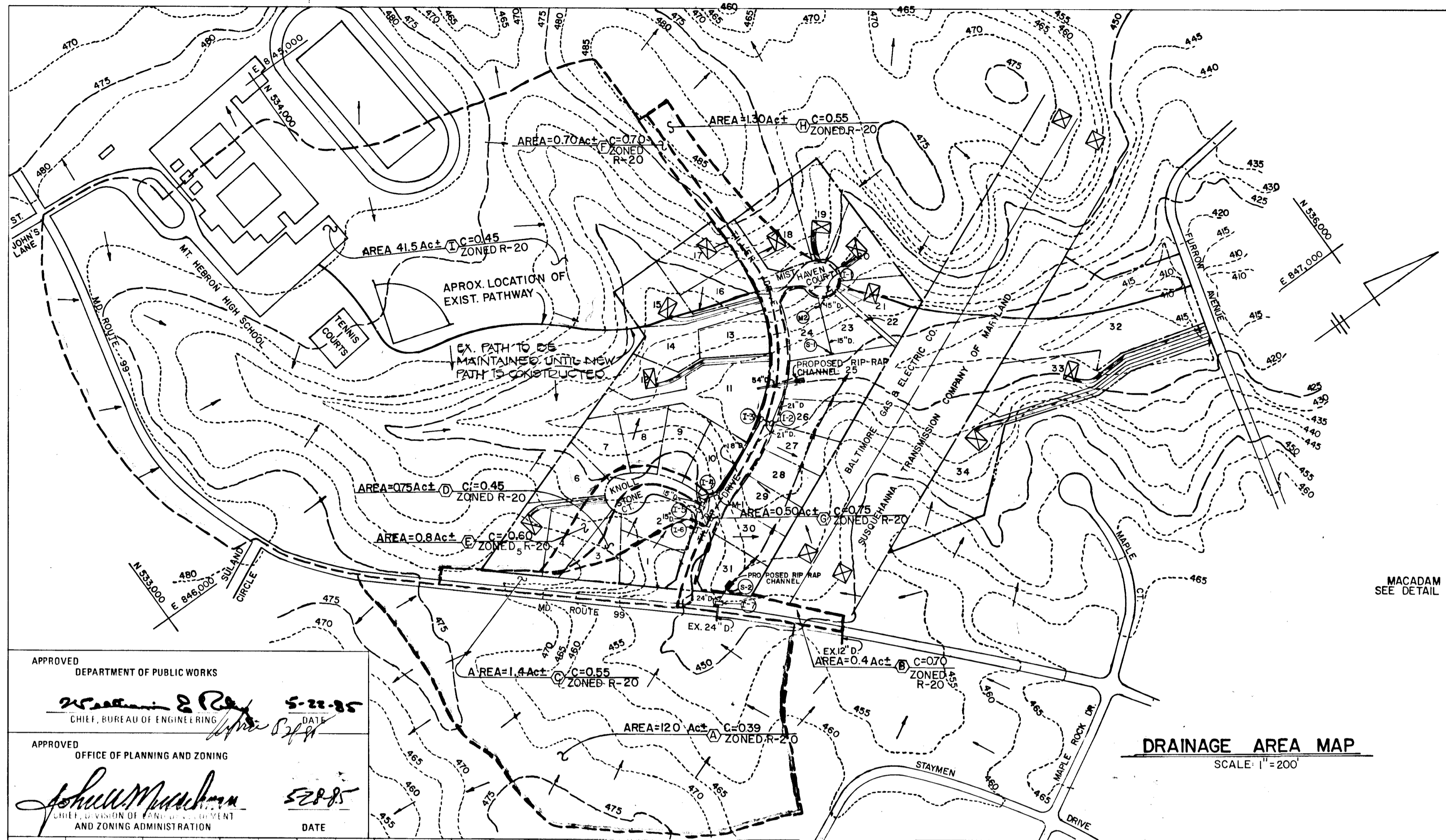


RIP RAP CHANNEL DESIGN DATA													
STRUCTURE	A	P	R	R <sub>2</sub>	S	S <sub>1/2</sub>	n	Q	V	d	W	RIP RAP SIZE	b
54" C.M.P.	24.24	18.84	1.2866	1.1829	1.33%	0.1153	0.04	123cts	5.07 fps	1.67'	11.5'	4"	6" 12"
S-2	5.81	8.44	0.6155	0.7236	3.00%	0.1732	0.04	270cts	4.66 fps	0.77'	6'	6"	9" 14"





DATE	
BY	
REVISIONS	
NO.	
PLAN	
NO.	
DATE	
BY	
REVISIONS	
NO.	

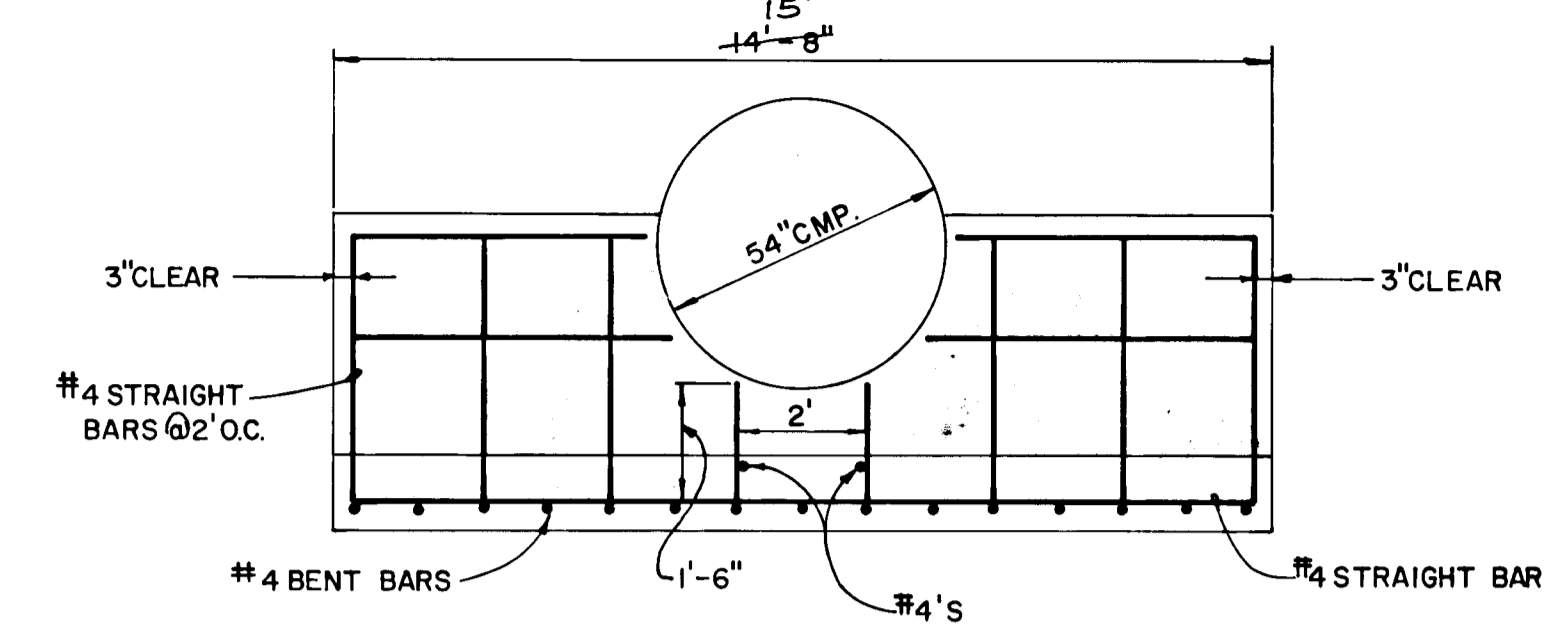


APPROVED  
DEPARTMENT OF PUBLIC WORKS  
CHIEF, BUREAU OF ENGINEERING

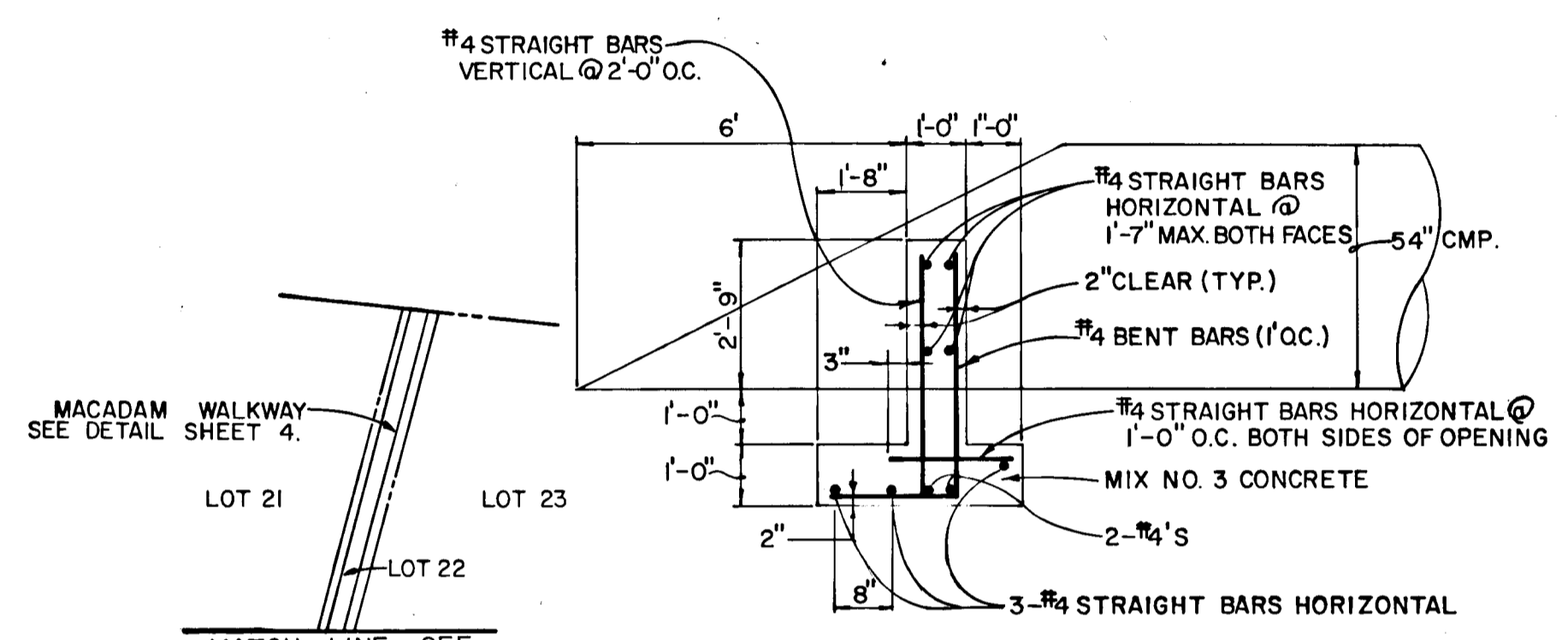
APPROVED  
OFFICE OF PLANNING AND ZONING  
CHIEF, DIVISION OF PERMITS AND ZONING ADMINISTRATION

DATE: 5-22-85

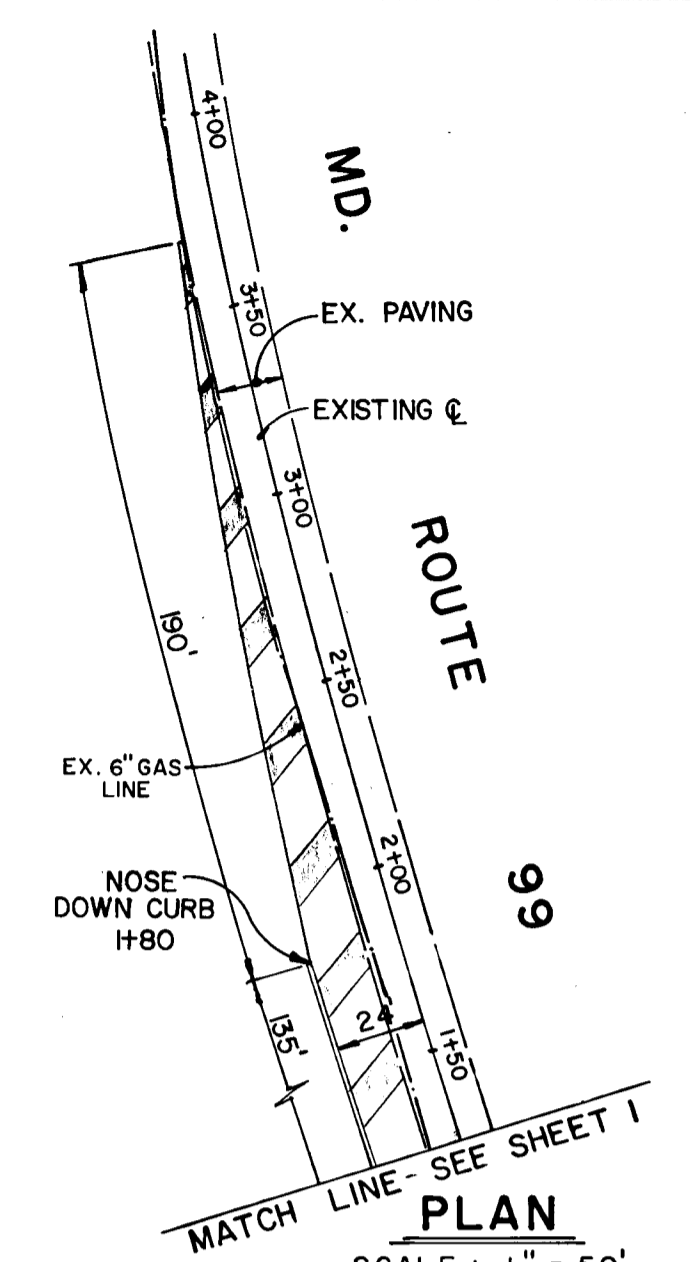
**DRAINAGE AREA MAP**  
SCALE: 1"=200'



NOTE: REINFORCING STEEL SHALL BE FREE FROM MUD, OIL, OR OTHER NON-METALLIC COATINGS THAT ADVERSELY AFFECT BONDING CAPACITY. BARS SHALL BE SECURELY TIED TO PREVENT DISPLACEMENT DURING THE PLACEMENT OF CONCRETE.



**END SUPPORT WALL DETAIL**  
NO SCALE



**PLAN**  
SCALE: 1"=50'

**MT. HEBRON SECTION 17**  
LOTS 1-34  
2ND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**DRAINAGE AREA MAP AND STORM DRAIN PROFILES**

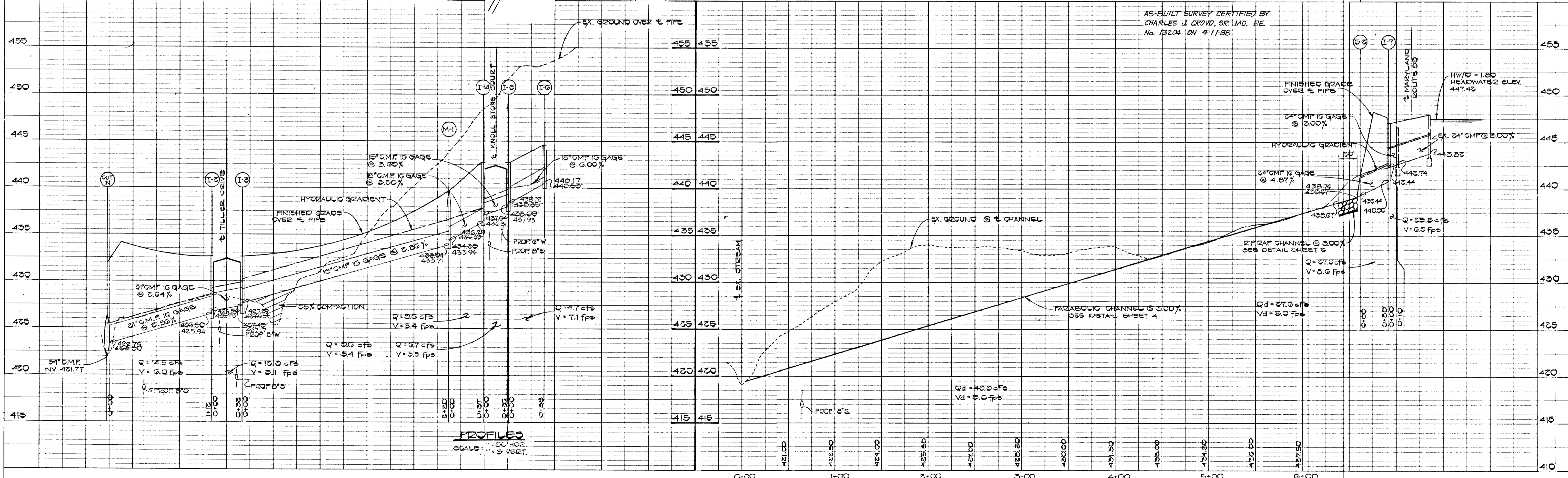
OWNER AND DEVELOPER  
MT. HEBRON INC.  
2106 MT. HEBRON DRIVE  
ELLICOTT CITY, MARYLAND 21043

SCALE AS SHOWN DATE DEC. 10, 1984 DWG. NO. 3 OF 4  
DES. C. GROVO DRN. A. BOGDAN CHK. R. CARTER

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



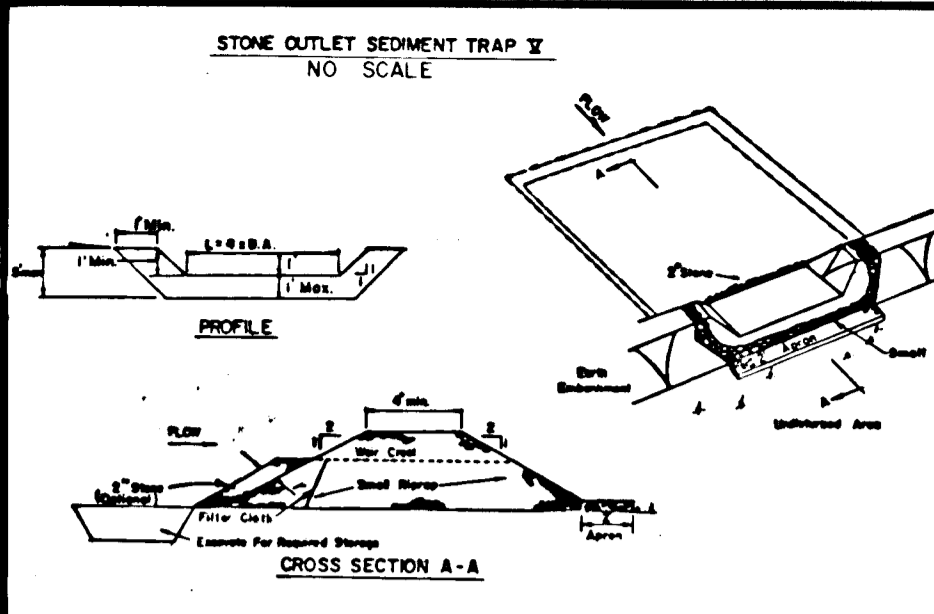
DATE	
BY	
REVISIONS	
NO.	
PROFILE	
NO.	
DATE	
BY	
REVISIONS	
NO.	



AS-BUILT SURVEY CERTIFIED BY  
CHARLES J. GROVO, SR. M.D. P.E.  
No. 13204 ON 4-11-88.

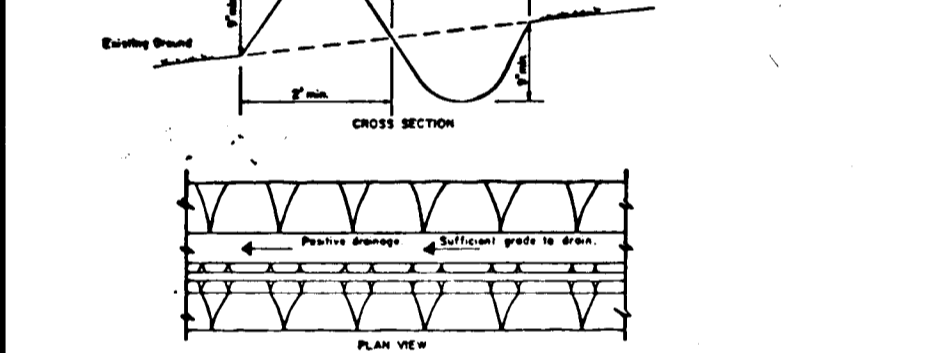
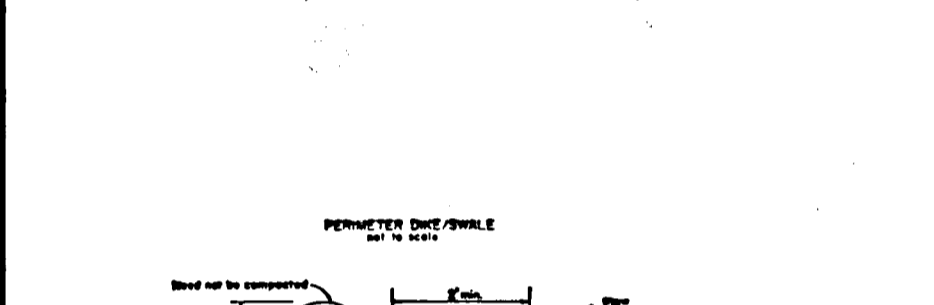
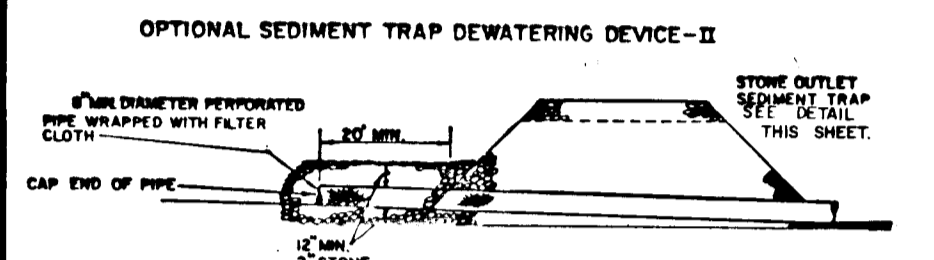
**PROFILES**  
SCALE: 1"=5' HORZ.  
1"=3' VERT.



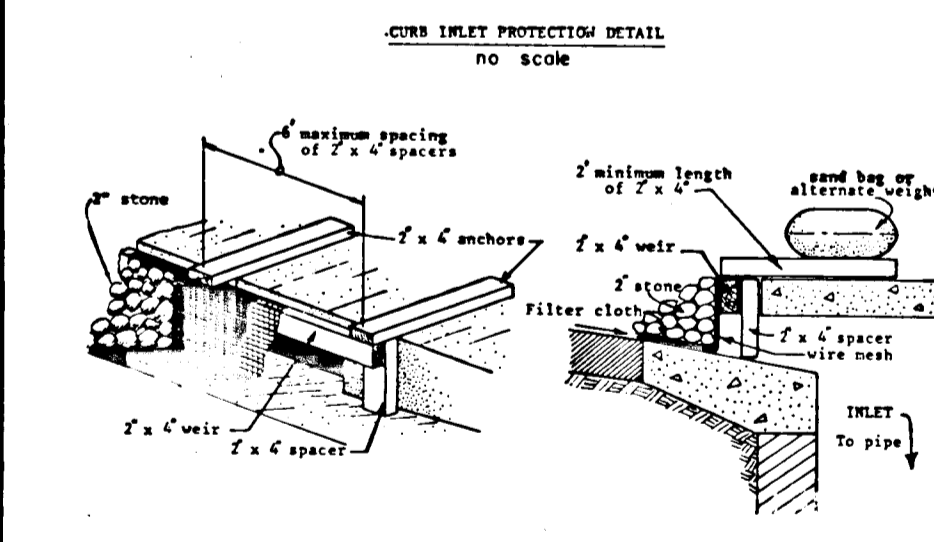


**SEDIMENT TRAP DATA**  
 DRAINAGE AREA= 4.5 Ac.,+  
 VOLUME REQUIRED= 302 CU. Yds.  
 VOLUME PROVIDED= 302 CU. Yds.  
 TOP DIMENSION= 50'x60'  
 BOTTOM DIMENSION= 36'x46'  
 SIDESLOPES= 2:1  
 DEPTH= 3.5'  
 WEIR CREST ELEVATION= 427.5  
 BOTTOM ELEVATION= 423.00  
 CLEANOUT ELEVATION= 424.75

- OPTION: A one foot layer of 2" stone may be placed on the upstream side of the trap in place of the additional filter cloth.**
- Area under embankment shall be cleared, graded and stripped of any vegetation and root mat. The pool area shall be cleared.
  - The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized 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 2:1 or flatter.
  - The stone used in the outlet shall be small riprap 4"-8" along with a 1" thickness of 2" aggregate placed on the updrain side on the small riprap 22 additional filter cloth in the riprap.
  - Sediment shall be removed and trap restored to its original condition when the sediment has accumulated to 1/2 the design depth of the trap.
  - The structure shall be inspected after each rain and repairs made as needed.
  - Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
  - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

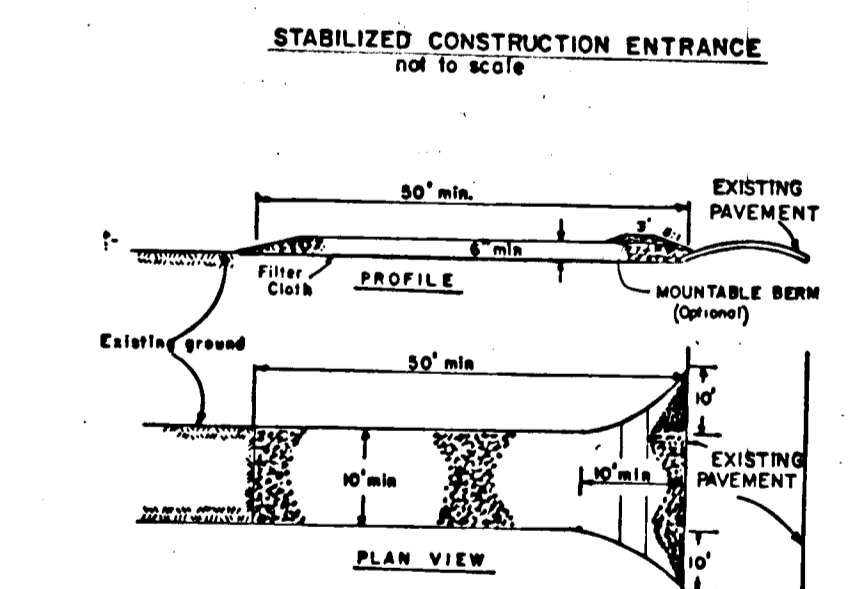


- Attach a continuous piece of wire mesh (30" min. width by throat length plus 4" to the 2" x 4" weir (ensuring throat length plus 2") as shown on the standard drawing.
- Place a piece of approved filter cloth (40-85 gals) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
- Securely nail the 2" x 4" weir to 8" long vertical supports to be located between the weir and inlet face (max. 6' apart).
- Place the assembly against the inlet throat and nail (minimum 2" length 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.
- The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
- 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.
- This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- Assure that stone flow does not bypass inlet by installing temporary earth or asphalt dike directing flow into inlet.

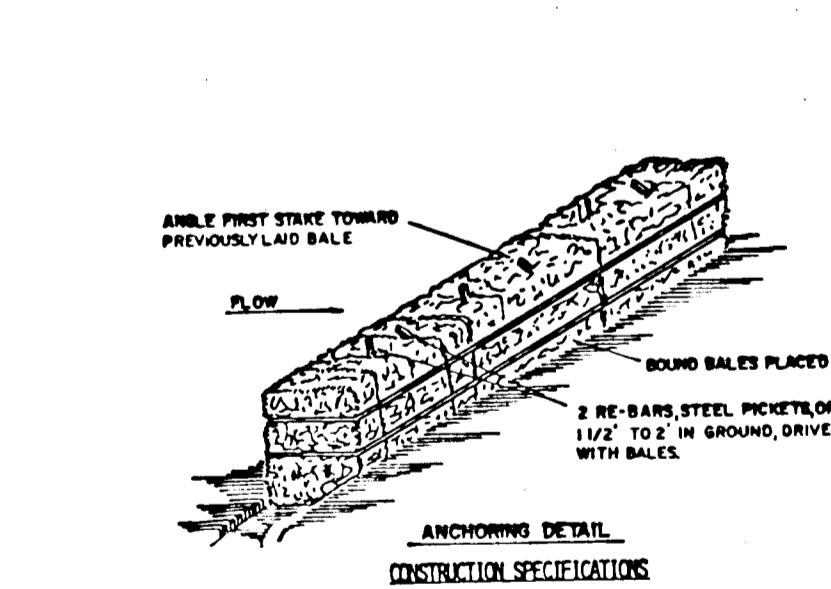
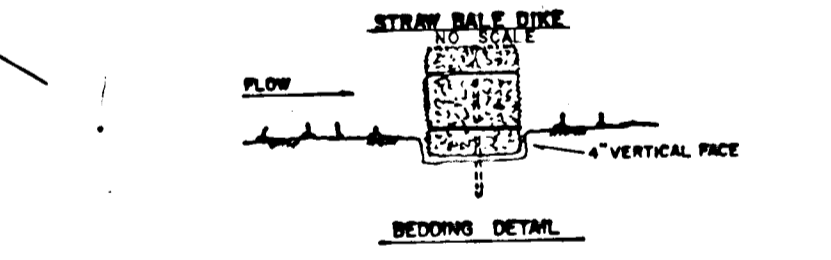
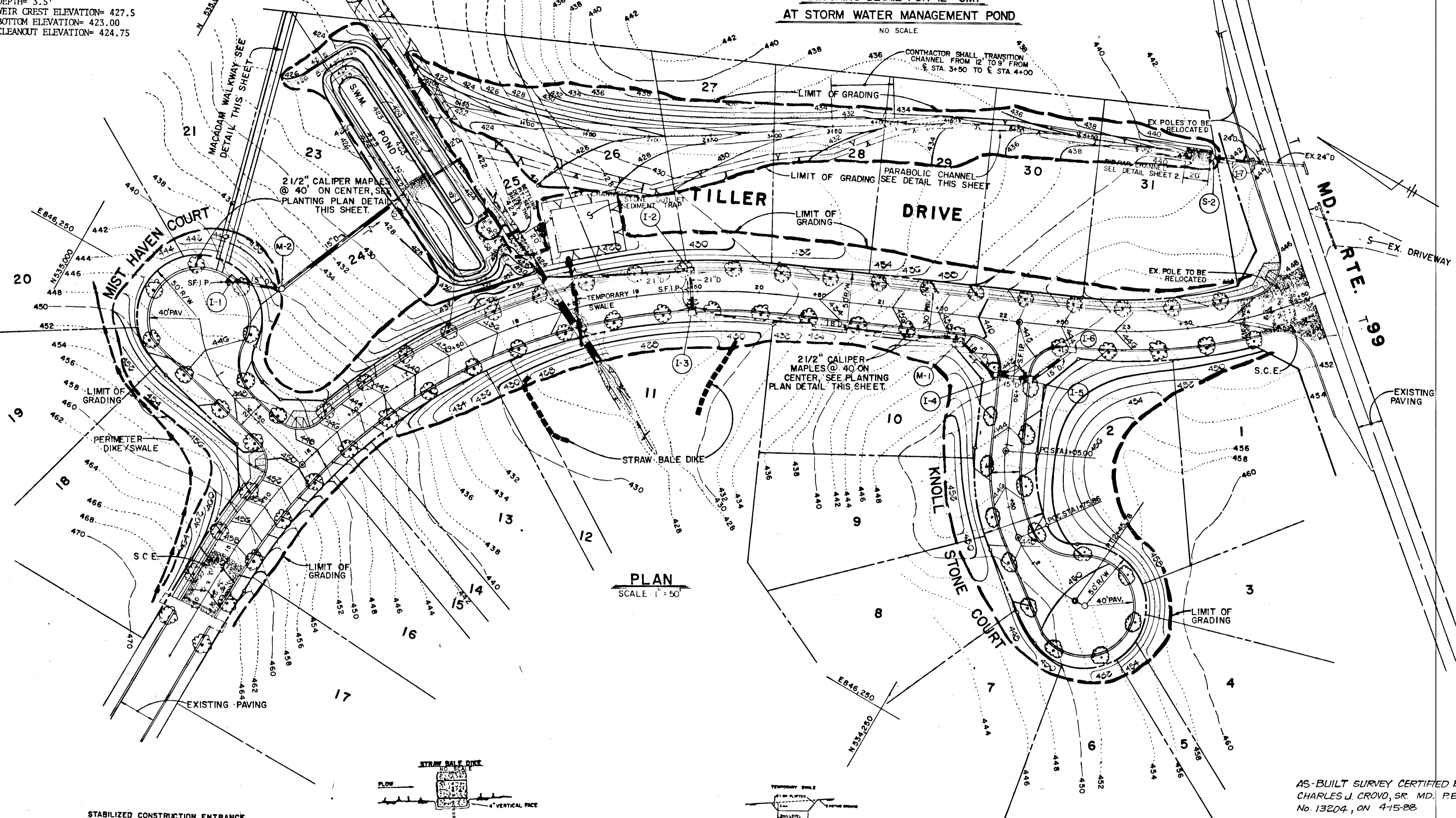
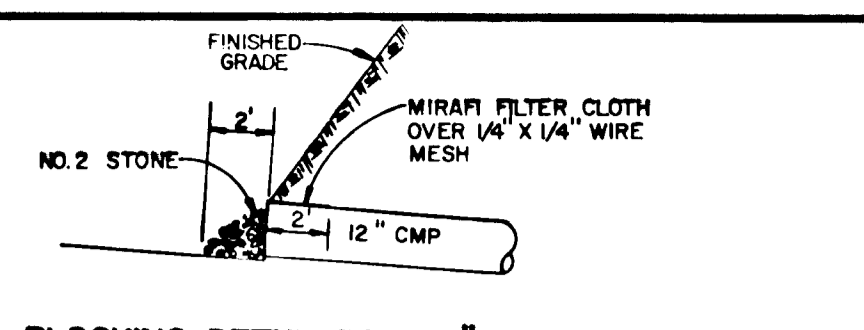
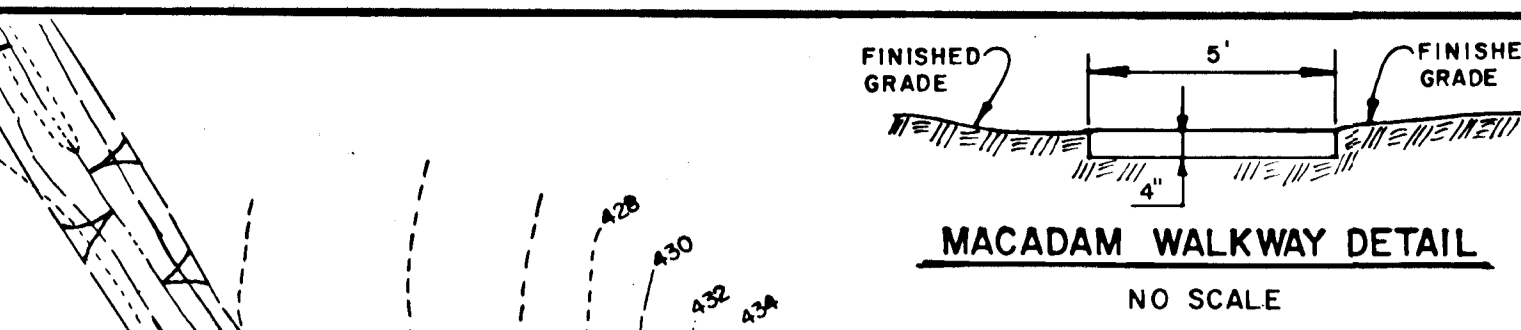
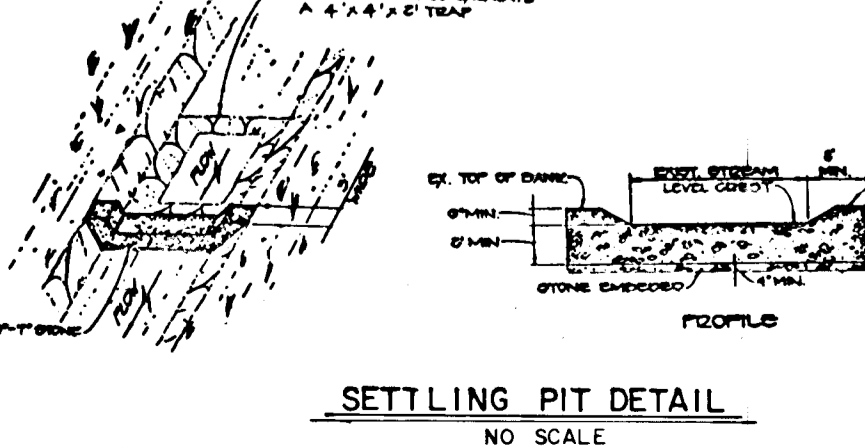


- Stone Dike - Use 2" stone, or recycled or recycled concrete material.
- Length - As required, but not less than 50 feet (except on a single section less than 50 feet which is void apply).
- Thickness - Not less than 18" (6 inches).
- Width - Not less than 18" (6 inches).
- Filter Cloth - Will be placed over the entire area prior to placing of stone.
- 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 elements of any measure used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Warning - Warning shall be placed to ensure sediment prior to entrance into roadway with stone and which drains into an approved sediment trapping device.
- Periodic inspection and needed maintenance shall be provided after each rain.

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



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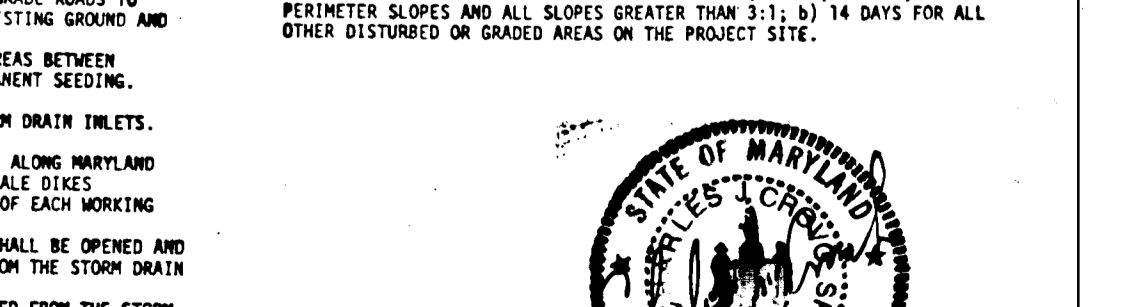
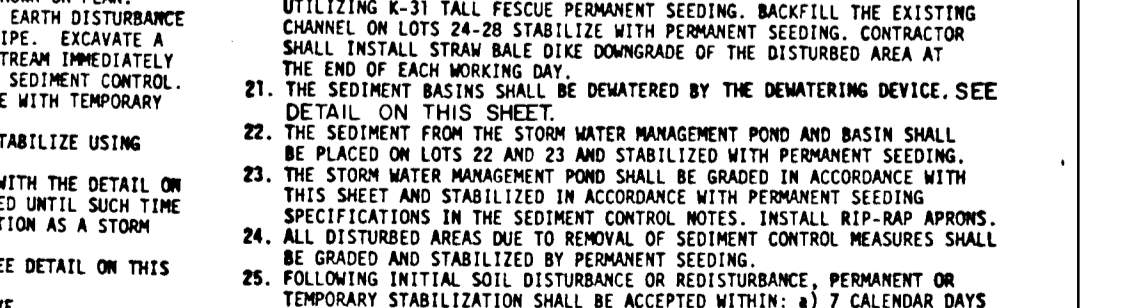
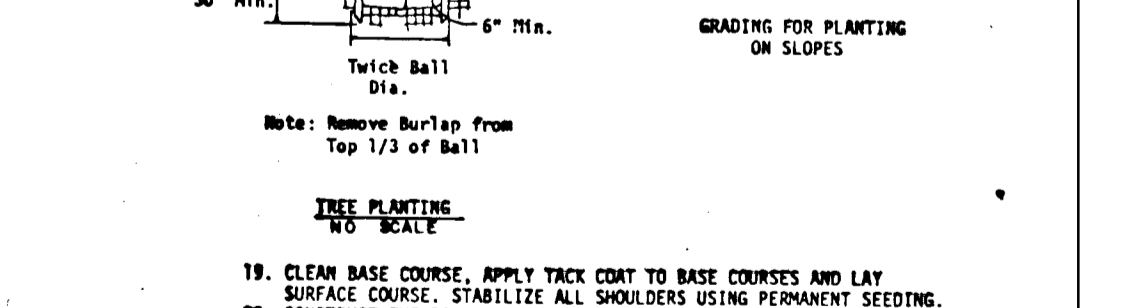
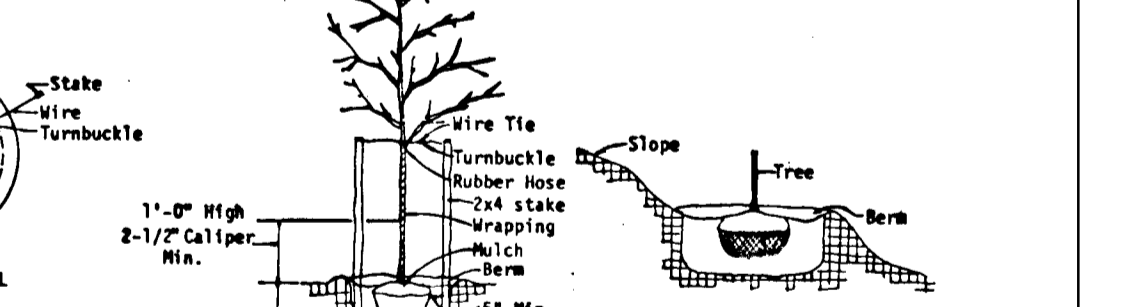
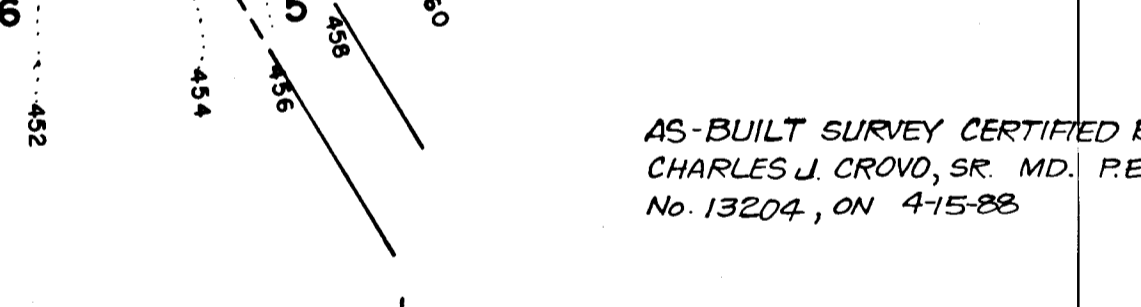
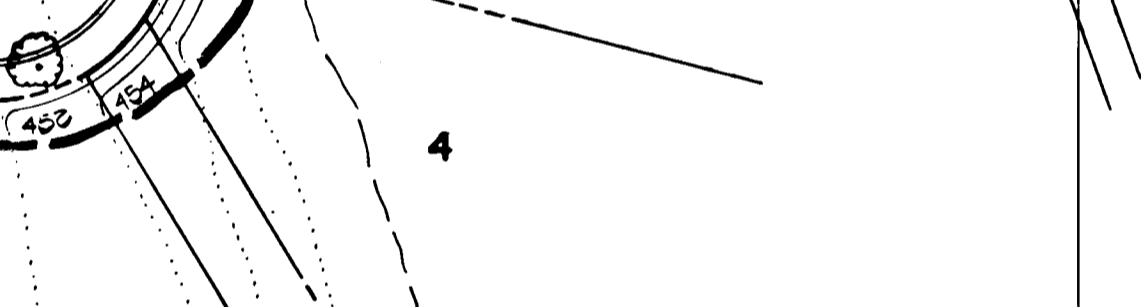
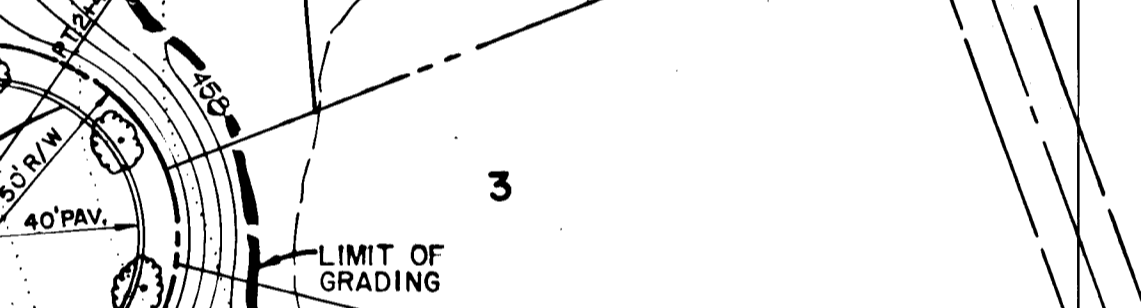
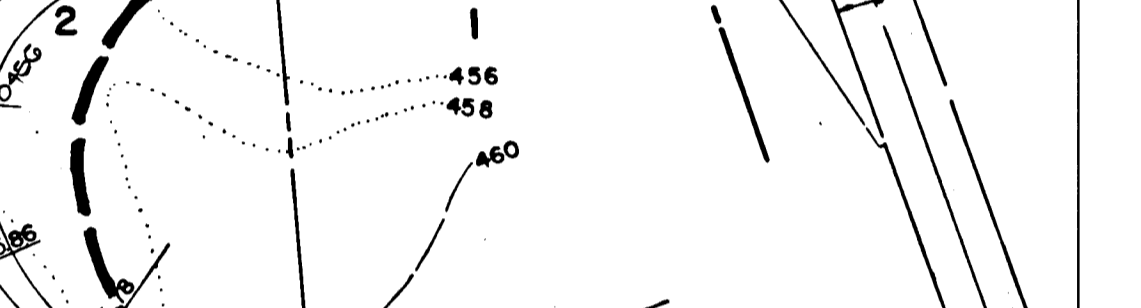
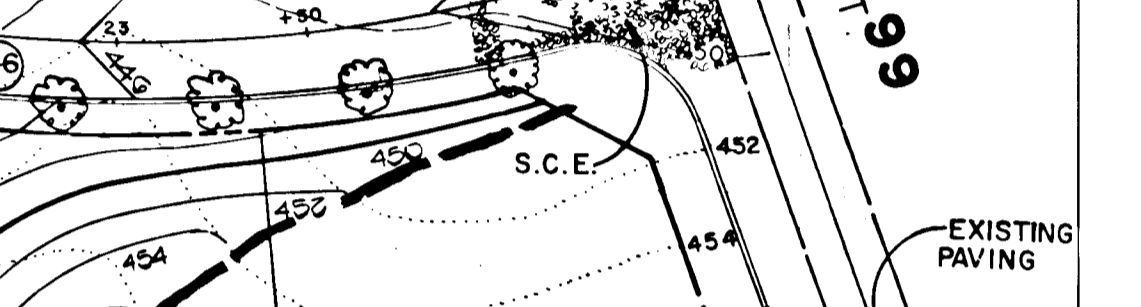
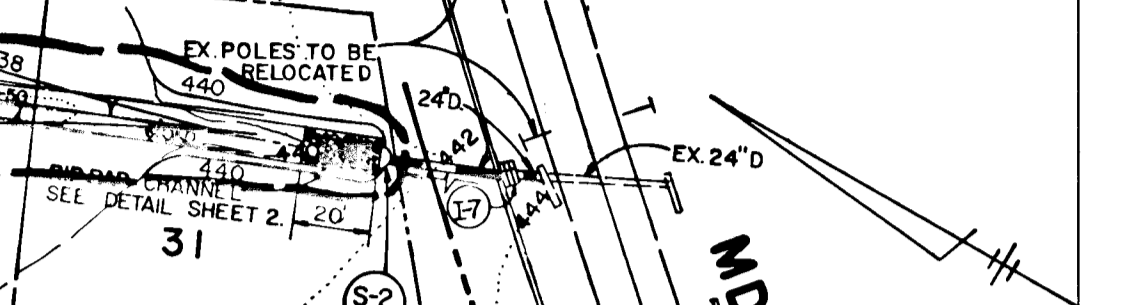
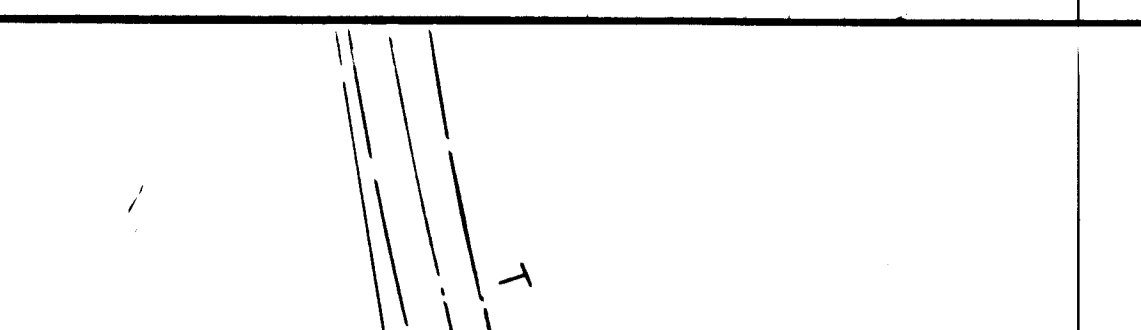
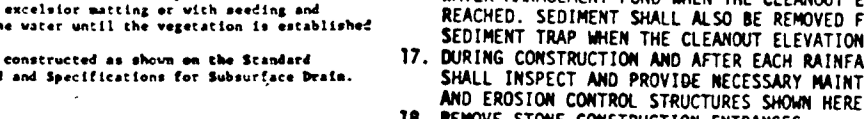
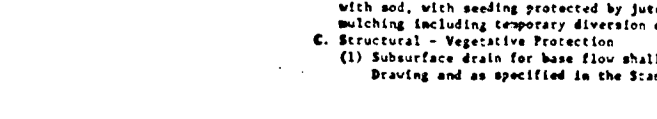
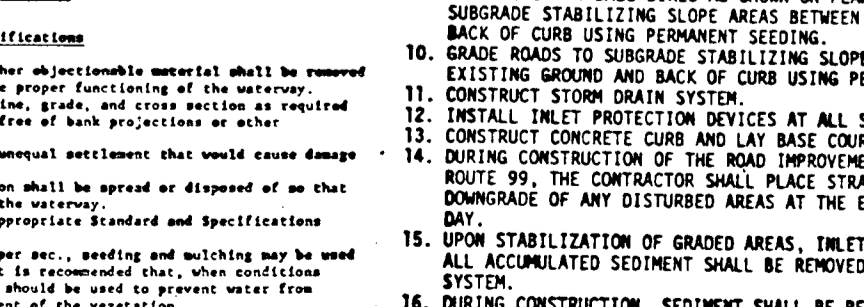
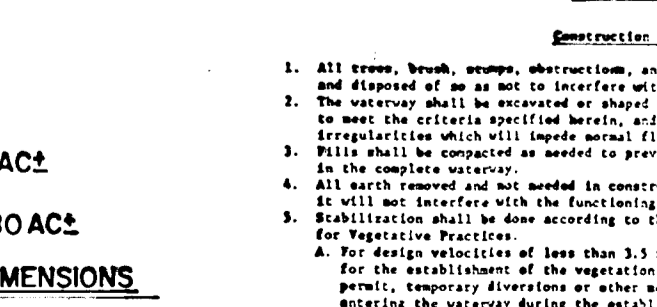
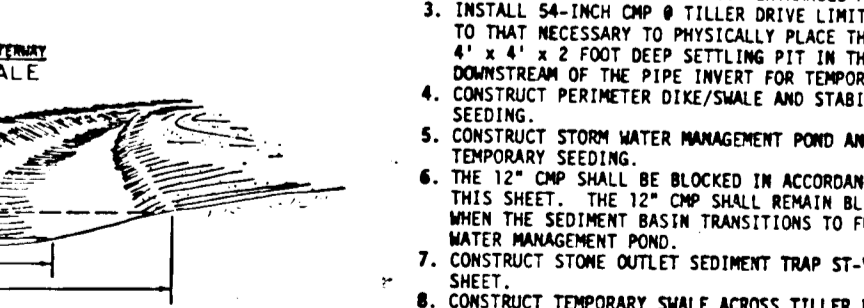
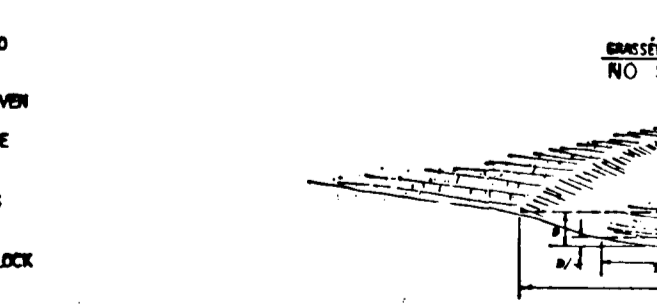
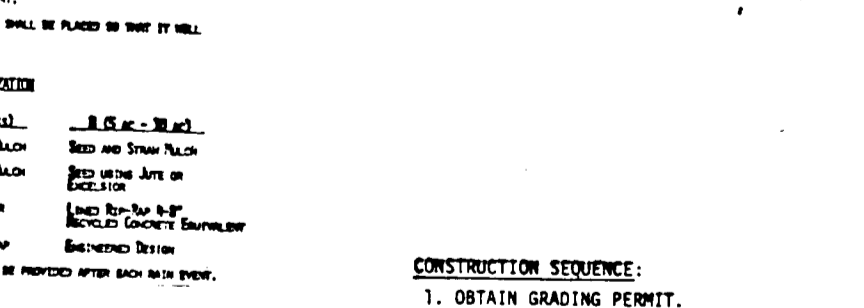
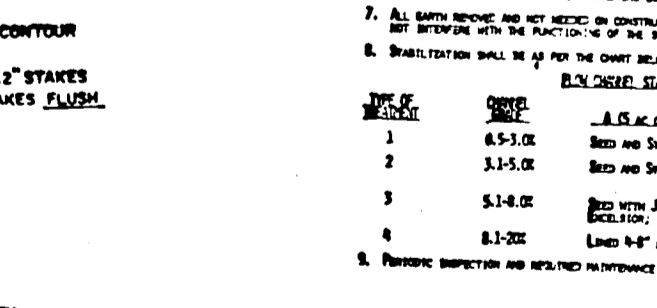
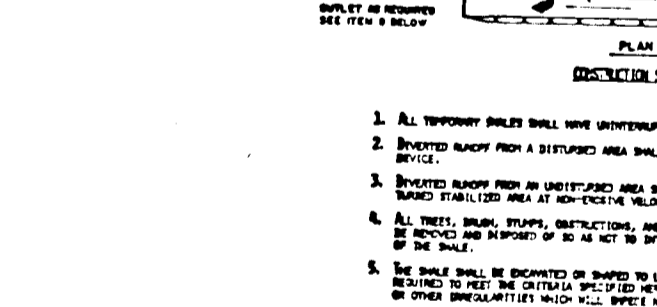
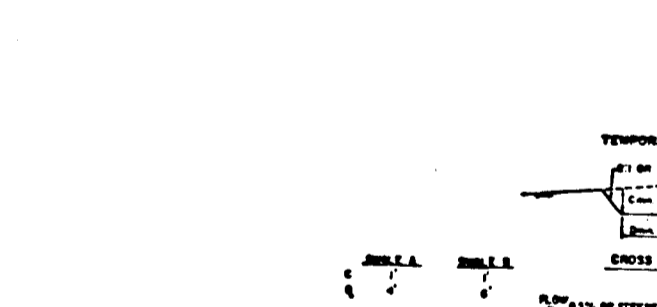
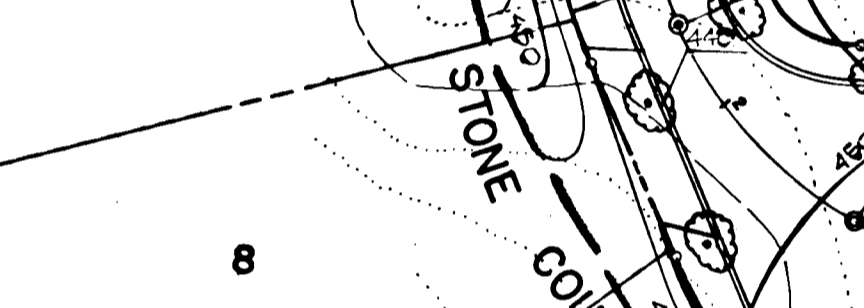
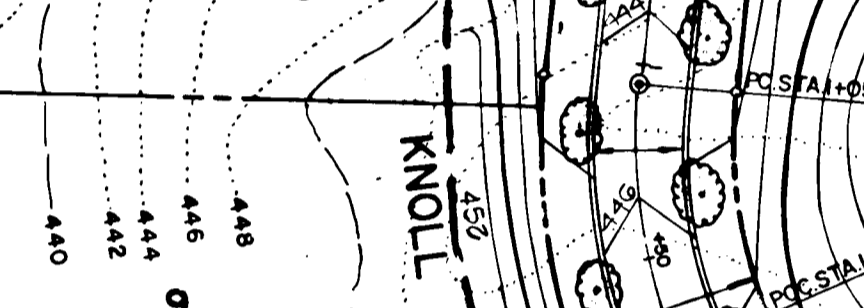
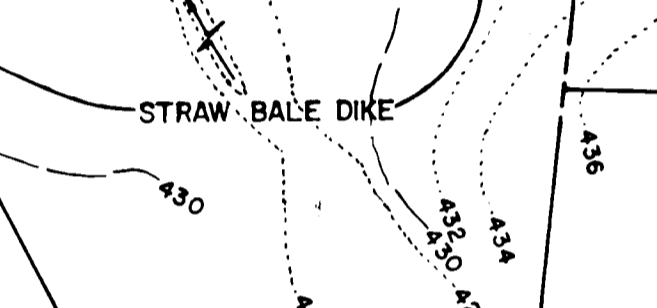
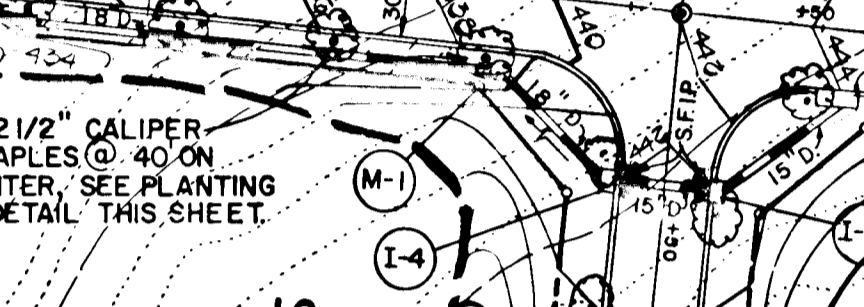
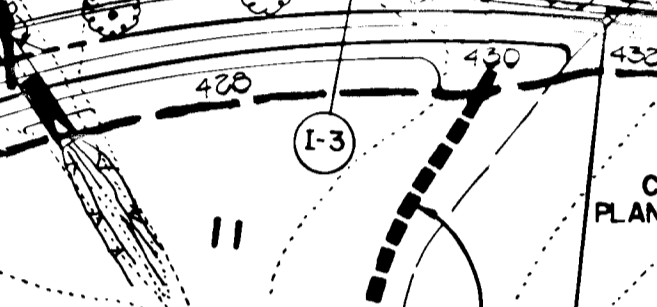
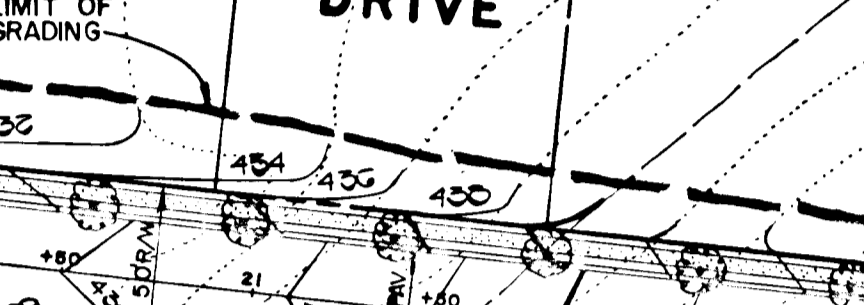
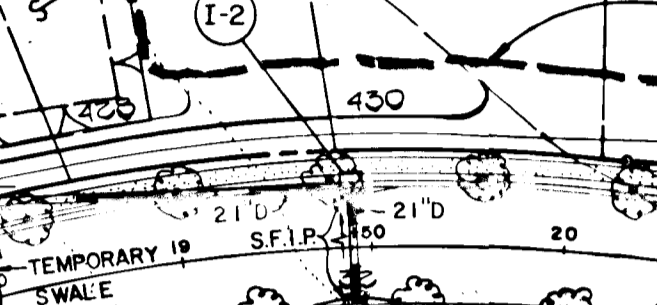
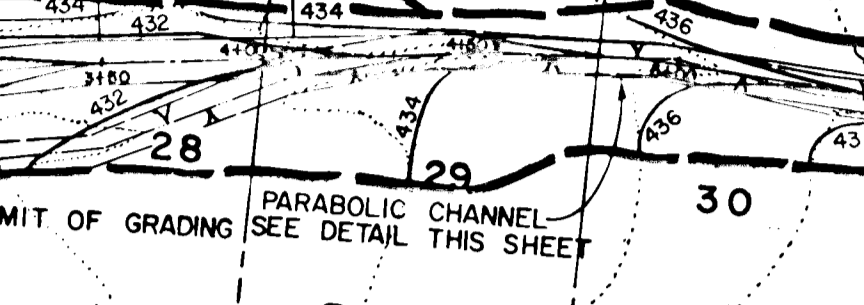
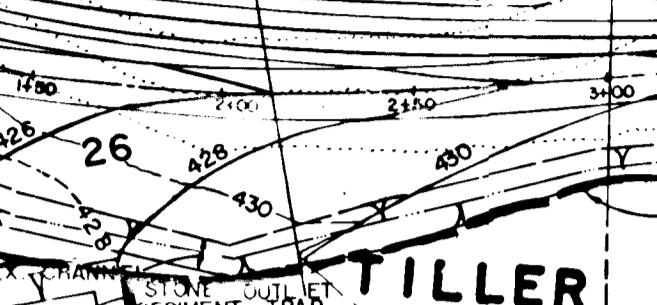
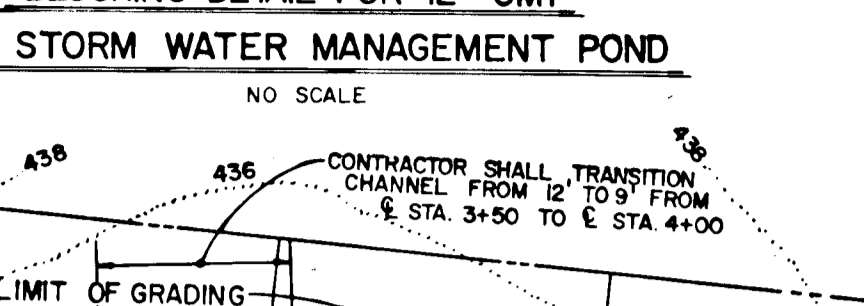
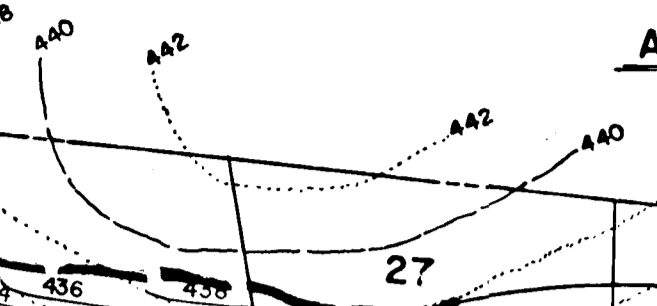
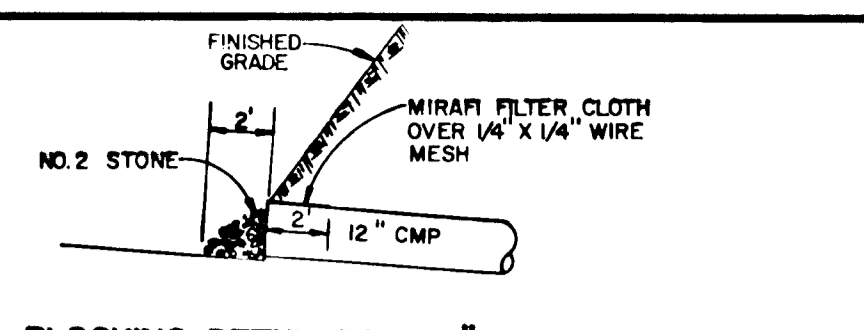
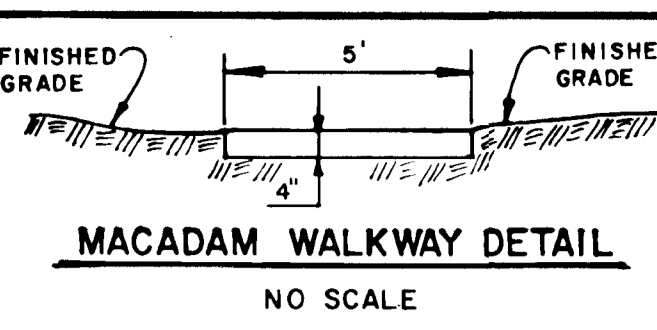
- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ADJUTING THE ADJACENT BALES.
- EACH BALE SHALL BE IMPERVED IN THE SOIL A MINIMUM OF (4) THICK, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO PLACE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- INSPECTION SHALL BE PRESENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPED STORM FLOW OR DRAINAGE.

**SITE ANALYSIS**

TOTAL NUMBER OF BUILDABLE LOTS-30  
 TOTAL AREA OF LOTS-15.85 AC.  
 TOTAL AREA TO BE DISTURBED-3.92AC.  
 TOTAL IMPERVIOUS AREA-1.12 AC.  
 TOTAL AREA TO BE REVEGETATED-2.80AC.

**PARABOLIC CHANNEL DIMENSIONS**

± STA 0+00 TO ± STA 3+50'  
 T=14' D=11'  
 ± STA 4+00 TO ± STA 6+39'  
 T=9' D=12'



- SEDIMENT CONTROL NOTES**
- SPECIFICATIONS FOR THE SEDIMENT CONTROL DETAILS INCLUDED IN THE U.S.D.A. SOIL CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS.
  - THE DEVELOPER SHALL NOTIFY THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS AT LEAST 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION SHOWN HEREON (992-2433).
  - SEDIMENT CONTROL STRUCTURES TO BE CONSTRUCTED PRIOR TO ANY ON-SITE GRADING OR DISTURBANCE TO ANY EXISTING SURFACE MATERIAL, AND ARE TO BE STABILIZED AS SOON AS CONSTRUCTED.
  - ALL SEDIMENT CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS (992-2433).
  - ALL GRADED AREAS NOT TO BE SOILED SHALL BE STABILIZED BY SEEDING AND MULCHING IN ACCORDANCE WITH THE FOLLOWING:
    - SITE PREPARATION
      - HARROW OR DISC IN AREAS PROPOSED TO BE SEEDING THE FOLLOWING MATERIALS
        - PULVERIZED LIMESTONE AT 2 TONS/ACRE.
        - COMMERCIAL FERTILIZER 10-10-10 AT 3/4 TONS/ACRE.
        - SUPER PHOSPHATE AT 600 LBS./ACRE.
    - SEEDING
      - SOW THE FOLLOWING SEED MIXTURE AT THE RATE OF 200 LBS./ACRE WITH A MECHANICAL SPREADER.
        - TEMPORARY: ITALIAN OR PERENNIAL RYE GRASS.
        - PERMANENT: 40% MARION BLUE GRASS, 40% DAKOTA BLUE GRASS AND 20% PENN LAWN CREEPING FESCUE.
      - THE SEEDING AREA SHALL THEN BE RAKED WITH A YORK RATE (A MINIMUM OF 2 PASSES) COVERED AND COMPACTED WITH CULTIPACKER OR OTHER APPROVED METHOD.
    - MULCHING
      - SEEDING AREAS SHALL BE UNIFORMLY MULCHED IMMEDIATELY AFTER SEEDING WITH UNWEATHERED SMALL GRAIN STRAW AT THE RATE OF 1 1/2-2 TONS/ACRE.
      - TIE MULCH DOWN WITH LIQUID ASPHALT AT 0.1 GAL./S.Y. OR EMULSIFIED ASPHALT AT 0.04 GAL./S.Y. OR MULCH NETTING.
  - A GRADING PLAN MUST BE DEVELOPED BY THE BUILDER AND APPROVED BEFORE BEGINNING CONSTRUCTION OF DWELLINGS.

**ENGINEER'S CERTIFICATE**  
 I, Charles J. Crovo, Sr., P.E., CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL IS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
 SIGNATURE: Charles J. Crovo, Sr. DATE: 12/12/84

**DEVELOPER'S CERTIFICATE**  
 I, John Baker, 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 COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.  
 SIGNATURE OF DEVELOPER: John Baker DATE: 12/12/84

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
John M. Smith 5-20-85 DATE  
 U.S. SOIL CONSERVATION SERVICE  
 THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
 APPROVED: John M. Smith 5-20-85 DATE  
 DISTRICT CHIEF, HOWARD COUNTY SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PUBLIC WORKS.  
William B. Ray 5-22-85 DATE  
 CHIEF, BUREAU OF ENGINEERING  
 APPROVED: OFFICE OF PLANNING AND ZONING  
John M. Smith 5-28-85 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

**OWNER AND DEVELOPER**  
 MT. HEBRON INC.  
 2106 MT. HEBRON DRIVE  
 ELLICOTT CITY, MARYLAND 21043

**STREET TREE, GRADING, SEDIMENT CONTROL AND STORM WATER MANAGEMENT PLAN**

**MT. HEBRON**  
 SECTION 17, LOTS 1-34  
 2ND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN SHEET 4 OF 4 DECEMBER 10, 1984

