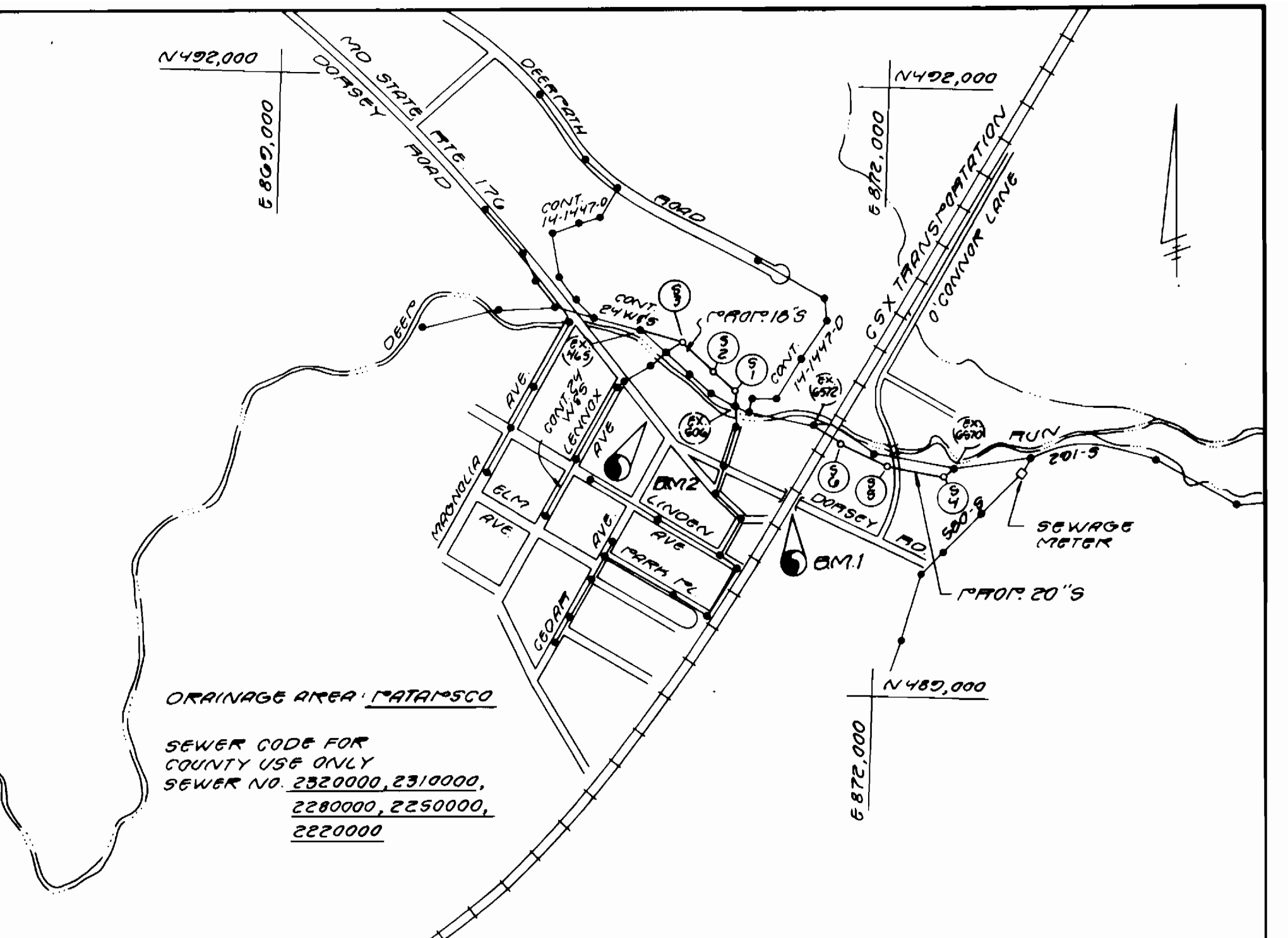
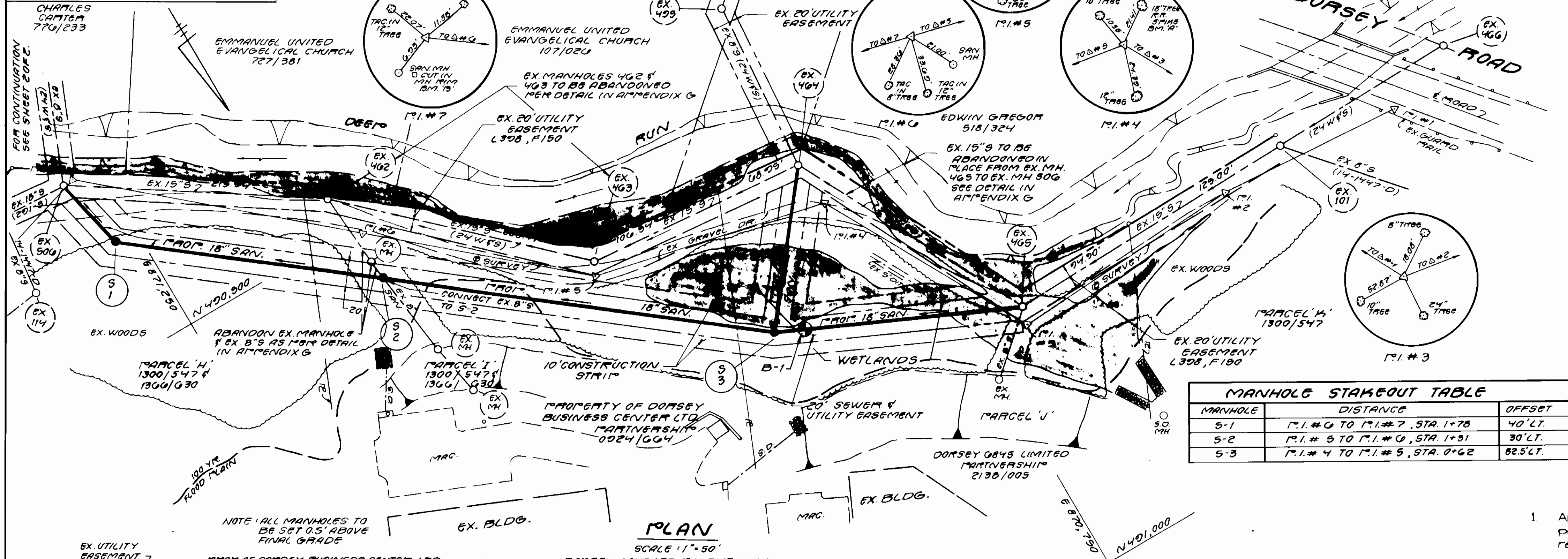


**BENCH MARKS**  
 BM1 HOWARD CO. NO. 2340004  
 COORDINATES: N 482840.515  
 E 871505.088  
 ELEV. 123.405  
 BM2 HOWARD CO. NO. 2340005  
 COORDINATES: N 490243.300  
 E 870834.614  
 ELEV. 125.560

RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
EX. MH 463 TO EX. MH 506	73 G'	5880 # MULCH
EX. MH 464 TO S-3	120'	8850 # MULCH

QUANTITIES				
ITEM	UNIT	ESTIMATE	AS-BUILT	SUMMER
18" SEWER	L.F.	720		
8" SEWER	L.F.	122		
STD. 4' MH	EA.	2		
DRAPING, TYPED	EA.	1		

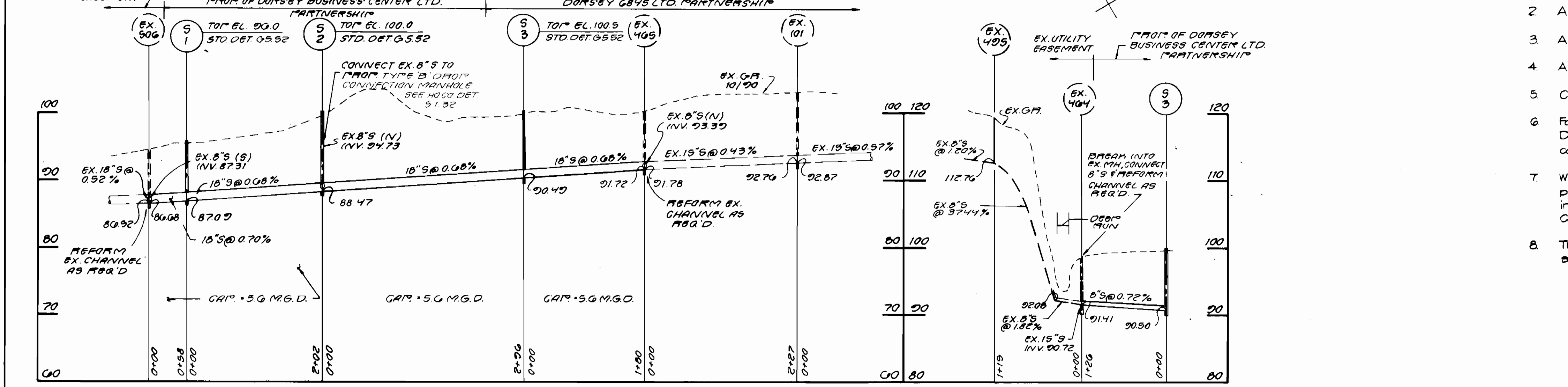


MANHOLE STAKEOUT TABLE		
MANHOLE	DISTANCE	OFFSET
S-1	M.I. # 6 TO M.I. # 7, STA. 1+78	40' LT.
S-2	M.I. # 5 TO M.I. # 6, STA. 1+51	30' LT.
S-3	M.I. # 4 TO M.I. # 5, STA. 0+62	82.5' LT.

**GENERAL NOTES**

- Approximate location of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
- All Horizontal Controls shown are based on Maryland State Coordinates.
- All Vertical Controls are based on U.S.G.S. Datum.
- All pipe elevations shown are invert elevations.
- Clear all utilities by a minimum of 6". Clear all poles by 2'-0" minimum or tunnel as required.
- For details not shown on the Drawings, and for materials and construction methods, use Howard County Design Manual, Volume IX, Standard Specification and Details for Construction. The Contractor shall have a copy of Volume IX on the job.
- Where test pits have been made on existing utilities, they are noted by the symbol at location of test pit. A note or notes containing the results of the test pit or pits is included on the drawings. Existing utilities in the vicinity of the proposed work for which tests have not been dug shall be located by the Contractor two weeks in advance of Construction Operations at the Contractor's expense.
- The Contractor shall notify the following utility companies or agencies at least five working days prior to starting work shown on this plan:
 

CAP Telephone Company	597-8585
State Highway Administration	531-5533
Baltimore Gas & Electric Co. Contractor Service	650-4620
Baltimore Gas & Electric Co. Underground Damage Control	659-9074
Baltimore Gas & Electric Co. Trouble Shooting	258-9001
MISS UTILITY	1-800-257-7777
Colonial Pipeline	755-1390
Bureau of Utilities, Howard County Dept. of Public Works	313-4900
- Trees and shrubs are to be protected from damage to the maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the Contractor.
- Contractor shall remove trees, stumps and roots along line of excavation. Payment for such removal shall be included in the unit price for construction of the main and service connections.
- All Sewer mains shall be C.S.P.X., R.C.S.P., V.C.P.X., or P.V.C. unless otherwise noted.
- The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Trench repair to be in accordance with Howard County Standard Details.
- All work will be in accordance with Howard County Standards and Specifications for Soil Erosion and Sediment Control Section 219.
- Length of open trench will be limited to that which can be filled and stabilized within one working day.
- Contractor shall coordinate any requirement for flow diversion with Bureau of Utilities at least five (5) working days prior to commencing his work effort.



- Sequence of Construction (S.O.C.)**
- Contact Howard County Bureau of Construction Inspection (792-7272), PRIOR TO STARTING DATE.
  - Install erosion and sediment control devices as per Section 219 of the Howard County Design Manual Vol. IV.
  - Excavate and install proposed sewer main. Contractor to notify Howard County Bureau of Utilities prior to connecting proposed sewer to existing manholes.
  - Abandon existing sewer main and manholes as per details in Appendix G of Specifications.
  - Restore paving and earth trenches to their original condition as per Howard County Standards.
  - Upon permission from Howard County Sediment Control Inspector, remove Sediment Control Devices.
  - Final grade all disturbed areas and stabilize with permanent seeding.

**PROFILE**  
 SCALE: VERT. 1"=100'  
 HORIZ. 1"=10'

By the Developer:  
 "I certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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."  
 Signature of Developer: *K. Reilly* Date: 7.1.91

By the Engineer:  
 "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."  
 Signature of Engineer: *W. Williams* Date: 6/7/91

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS  
 Signature: *Robert M. Nelson* Date: 7/5/91  
 U.S. SOIL CONSERVATION SERVICE

This Construction Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
 APPROVED: *John W. Ad...* Date: 7/6/91  
 HOWARD S.C.D.

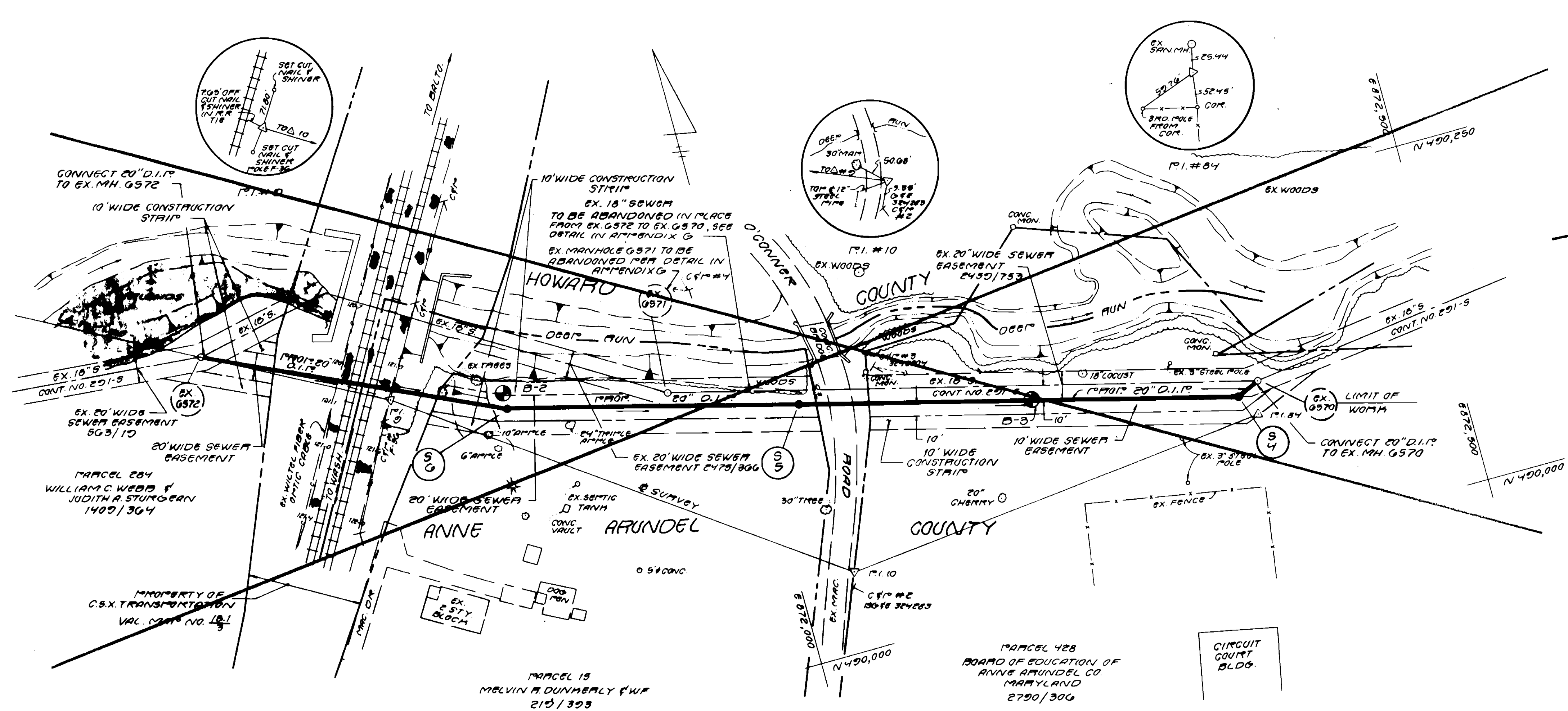
DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Signature: *Robert M. Nelson* Date: 7-12-91  
 CHIEF, BUREAU OF UTILITIES

HICKS ENGINEERING CO., INC.  
 ENGINEERS - SURVEYORS - PLANNERS  
 200 E. JOPPA ROAD - SUITE 402  
 TOWSON MARYLAND 21204  
 (301) 494-0001  
 Signature: *K. Reilly* Date: 7-1-91  
 CHIEF, BUREAU OF ENGINEERING

DES.	DATE	REVISION
EAS	1	REVISED PER STATE OF MD COMMENTS
EAS	2	REVISED PER HOWARD COUNTY
CHK.	DEH	
DATE:	11/29/90	

CONTRACT NO. 10-3053  
 600' SCALE MAP NO. 48.44 BLOCK NO.

DEEP RUN INTERCEPTOR SEWER  
 1 ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 CAPITAL PROJECT S-6124  
 SCALE AS SHOWN  
 SHEET 1 OF 2



PLAN  
SCALE: 1" = 50'

RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
EX G570 TO EX G572	714'	SEED & MULCH
EX G572	17'	MULCHING

MANHOLE STAKEOUT TABLE		
MANHOLE	DISTANCE	OFFSET
5-4	11.10 TO 11.10, STA. 2+00	10' LT.
5-5	11.10 TO 11.10, STA. 2+00	10' LT.
5-6	11.10 TO 11.10, STA. 0+83	22' LT.

TRANSVERSE DATA				
TRAV. PT.	BEARING	DISTANCE	NORTH	EAST
HOCO.2346008			N490243.30	6870834.91
TRAV. 1	N37°20'13.0"W	721.740	N490010.48	6870395.77
TRAV. 2	S85°55'50.8"E	140.570	N490080.50	6870535.00
TRAV. 3	N80°32'05.0"E	170.253	N490017.34	6870714.92
TRAV. 4	S27°52'53.8"E	174.491	N490063.10	6870796.52
TRAV. 5	S70°51'43.3"E	181.877	N490062.76	6870773.04
TRAV. 6	S40°09'40.1"E	175.202	N490050.90	6871105.00
TRAV. 7	S40°46'54.8"E	210.807	N490030.12	6871271.33
TRAV. 8	N73°10'12.5"E	190.533	N490412.30	6871402.47
TRAV. 9	S02°03'41.0"E	324.441	N490207.30	6871740.10
TRAV. 10	S54°17'31.0"E	398.465	N490058.17	6872040.17
TRAV. 84	N84°13'38.1"E	314.950	N490080.88	6872393.53
TRAV. 85	S02°10'33.0"W	480.558	N490000.00	6872334.03
HOCO.2340004	N73°52'51.0"W	802.783	N490840.23	6871905.10
HOCO.2346005	N50°33'18.5"W	777.907	N490243.40	6870834.91

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS 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.

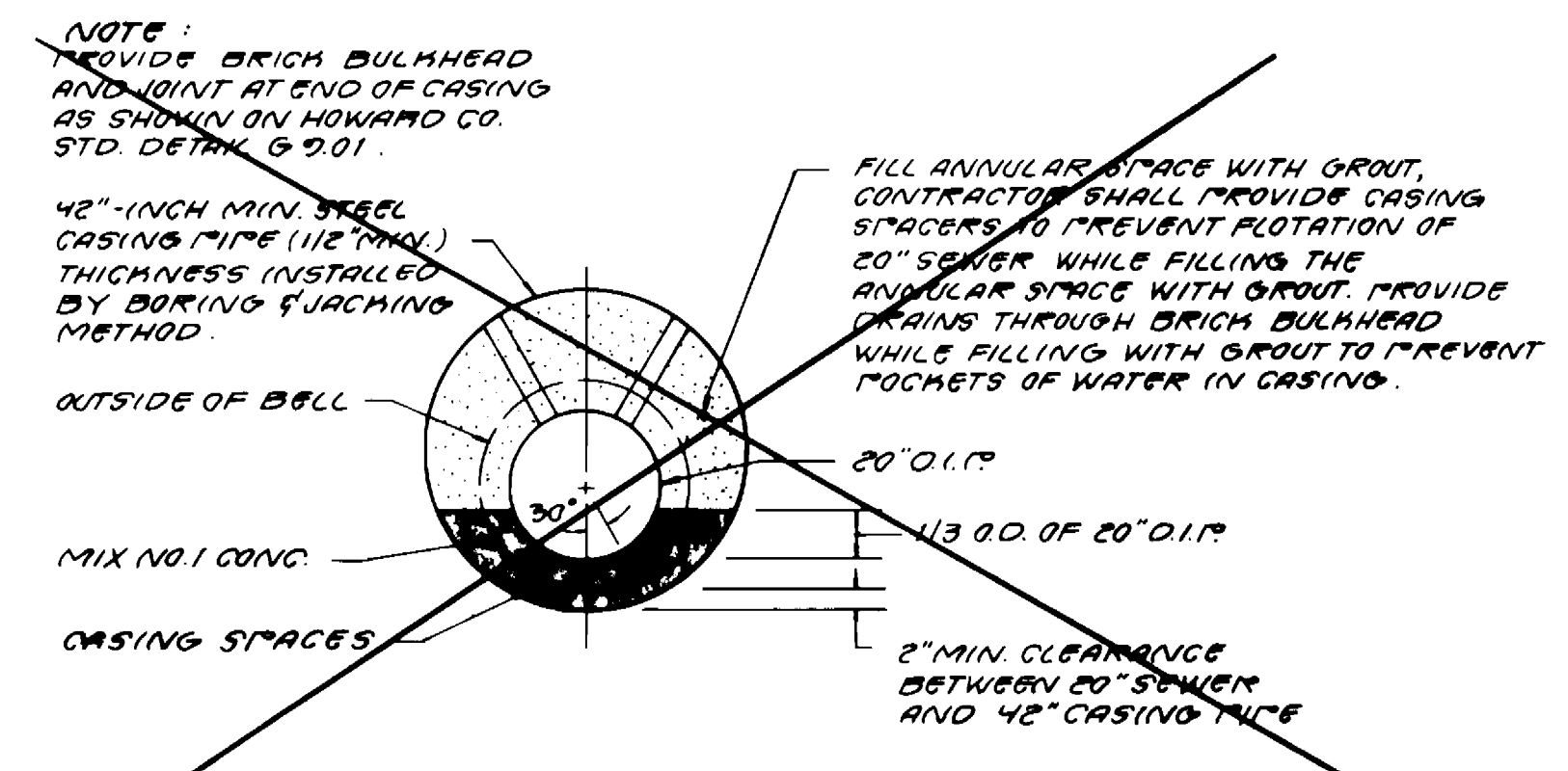
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- 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. 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.).
- 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.

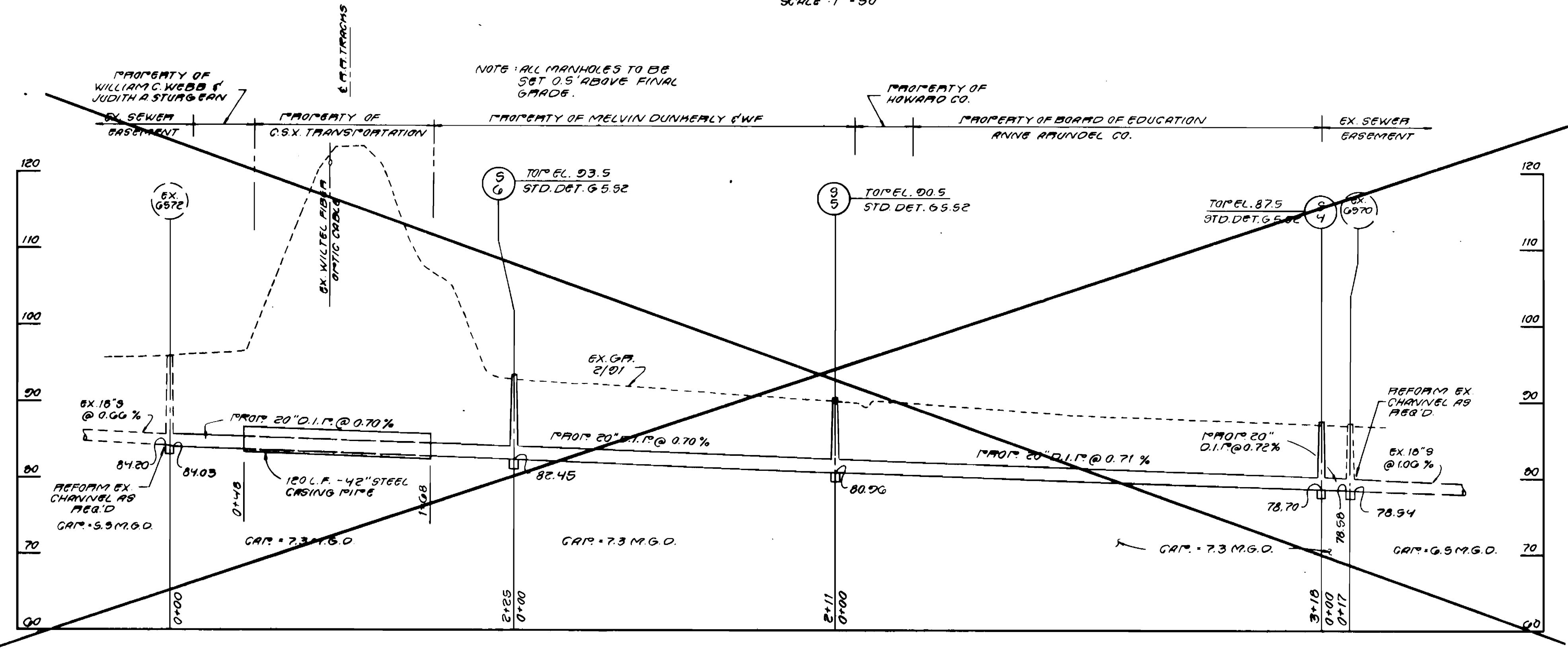
SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE (.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD 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 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL BRAIN 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 340 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.



CASING DETAIL  
SCALE: 1/2" = 1'-0"



PROFILE  
SCALE: HORIZ. 1" = 50'  
VERT. 1" = 10'

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
DATE: 7/8/91

This Construction Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
APPROVED: [Signature] DATE: 7/8/91

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DIRECTOR OF PUBLIC WORKS: [Signature] DATE: 7/6/91  
CHIEF, BUREAU OF ENGINEERING: [Signature] DATE: 7-12-91  
CHIEF, BUREAU OF UTILITIES: [Signature] DATE: 7-12-91

HICKS ENGINEERING CO., INC.  
ENGINEERS - SURVEYORS - PLANNERS  
200 E. JOPPA ROAD SUITE 402  
TOWSON MARYLAND 21204  
(301) 494-0001



DES: E.A.S.	E.A.S.	1	REVISED PER HOWARD COUNTY	4-20-91
DRN: E.A.S.				
CHK: D.B.H.				
DATE: 9/25/91	BY: NO.		REVISION	DATE

CONTRACT NO. 10-3053  
600' SCALE MAP NO. 42-44 BLOCK NO.

DEEP RUN INTERCEPTOR SEWER  
1 ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CAPITAL PROJECT S-6124  
SCALE AS SHOWN  
SHEET 2 OF 2