

COORDINATE TABLE

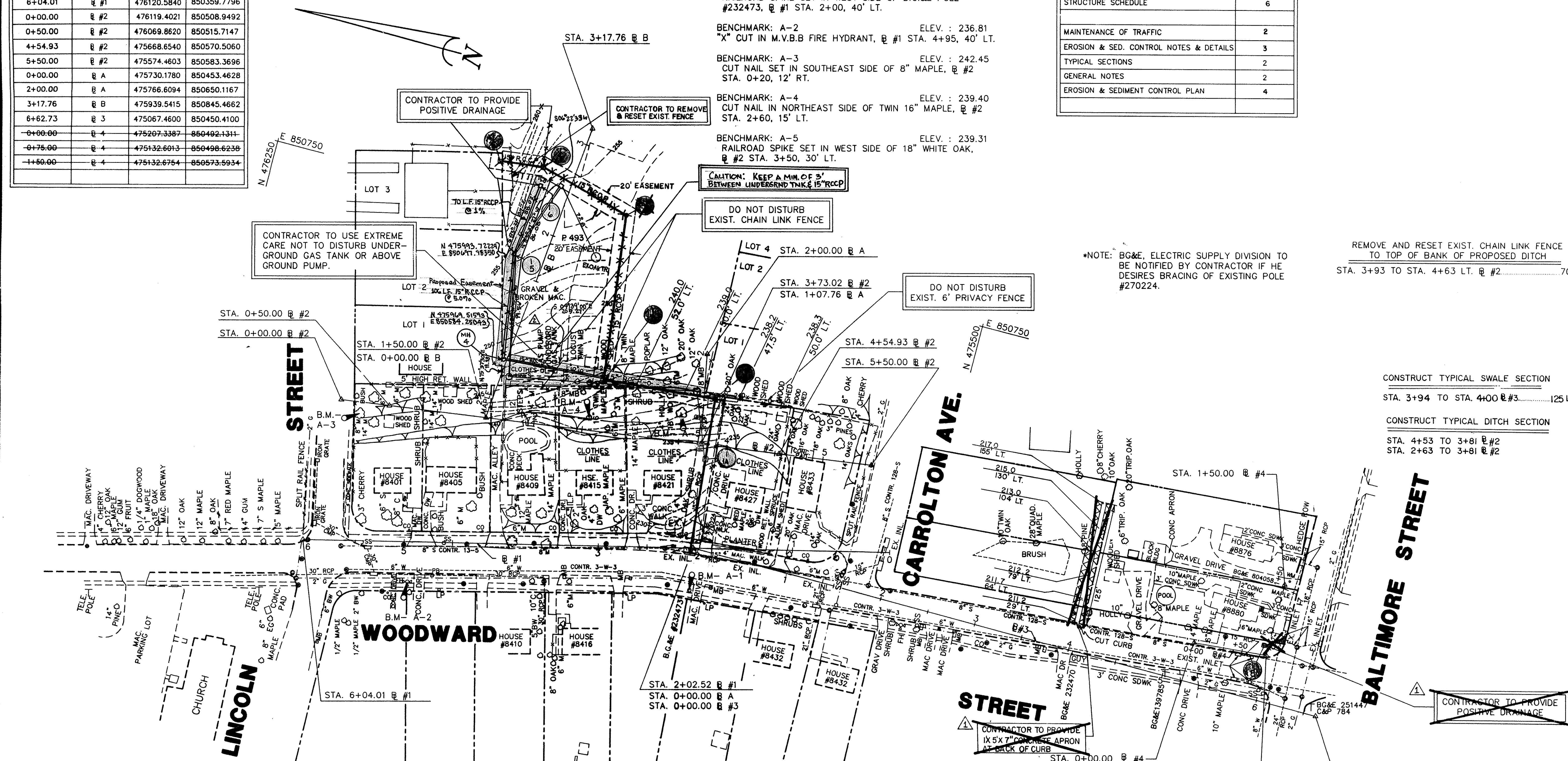
STATION	BASELINE	NORTH	EAST
0+00.00	B #1	475533.2485	850500.7187
2+02.52	B #1	475730.1780	850453.4628
6+04.01	B #1	476120.5840	850359.7796
0+00.00	B #2	476119.4021	850508.9492
0+50.00	B #2	476069.8620	850515.7147
4+54.93	B #2	475668.6540	850570.5060
5+50.00	B #2	475574.4603	850583.3696
0+00.00	B A	475730.1780	850453.4628
2+00.00	B A	475766.6094	850650.1167
3+17.76	B B	475939.5415	850845.4662
6+62.73	B 3	475067.3387	850450.4100
0+00.00	B 4	475207.3387	850492.1311
0+75.00	B 4	475132.6013	850498.6238
1+50.00	B 4	475132.6754	850573.5934

REFERENCES

DESCRIPTION	SHT. NO.
STORM DRAIN PROFILES	6
PIPE SCHEDULE	6
STRUCTURE SCHEDULE	6
MAINTENANCE OF TRAFFIC	2
EROSION & SED. CONTROL NOTES & DETAILS	3
TYPICAL SECTIONS	2
GENERAL NOTES	2
EROSION & SEDIMENT CONTROL PLAN	4

BENCHMARKS

- BENCHMARK: A-1 ELEV.: 226.00
RAILROAD SPIKE SET IN WEST SIDE OF B.G.&E POLE #232473, B #1 STA. 2+00, 40' LT.
- BENCHMARK: A-2 ELEV.: 236.81
"X" CUT IN M.V.B.B FIRE HYDRANT, B #1 STA. 4+95, 40' LT.
- BENCHMARK: A-3 ELEV.: 242.45
CUT NAIL SET IN SOUTHEAST SIDE OF 8" MAPLE, B #2 STA. 0+20, 12' RT.
- BENCHMARK: A-4 ELEV.: 239.40
CUT NAIL IN NORTHEAST SIDE OF TWIN 16" MAPLE, B #2 STA. 2+60, 15' LT.
- BENCHMARK: A-5 ELEV.: 239.31
RAILROAD SPIKE SET IN WEST SIDE OF 18" WHITE OAK, B #2 STA. 3+50, 30' LT.



*NOTE: B.G.&E. ELECTRIC SUPPLY DIVISION TO BE NOTIFIED BY CONTRACTOR IF HE DESIRES BRACING OF EXISTING POLE #270224.

REMOVE AND RESET EXIST. CHAIN LINK FENCE TO TOP OF BANK OF PROPOSED DITCH STA. 3+93 TO STA. 4+63 LT. B #2.....70 LF

CONSTRUCT TYPICAL SWALE SECTION

STA. 3+94 TO STA. 4+00 B #3.....125 LF.

CONSTRUCT TYPICAL DITCH SECTION

STA. 4+53 TO 3+81 B #2
STA. 2+63 TO 3+81 B #2

REFERENCES

STA. 2+02.52 B #1
N.T.S.

STA. 6+04.01 B #1
N.T.S.

STA. 0+50.00 B #2
N.T.S.

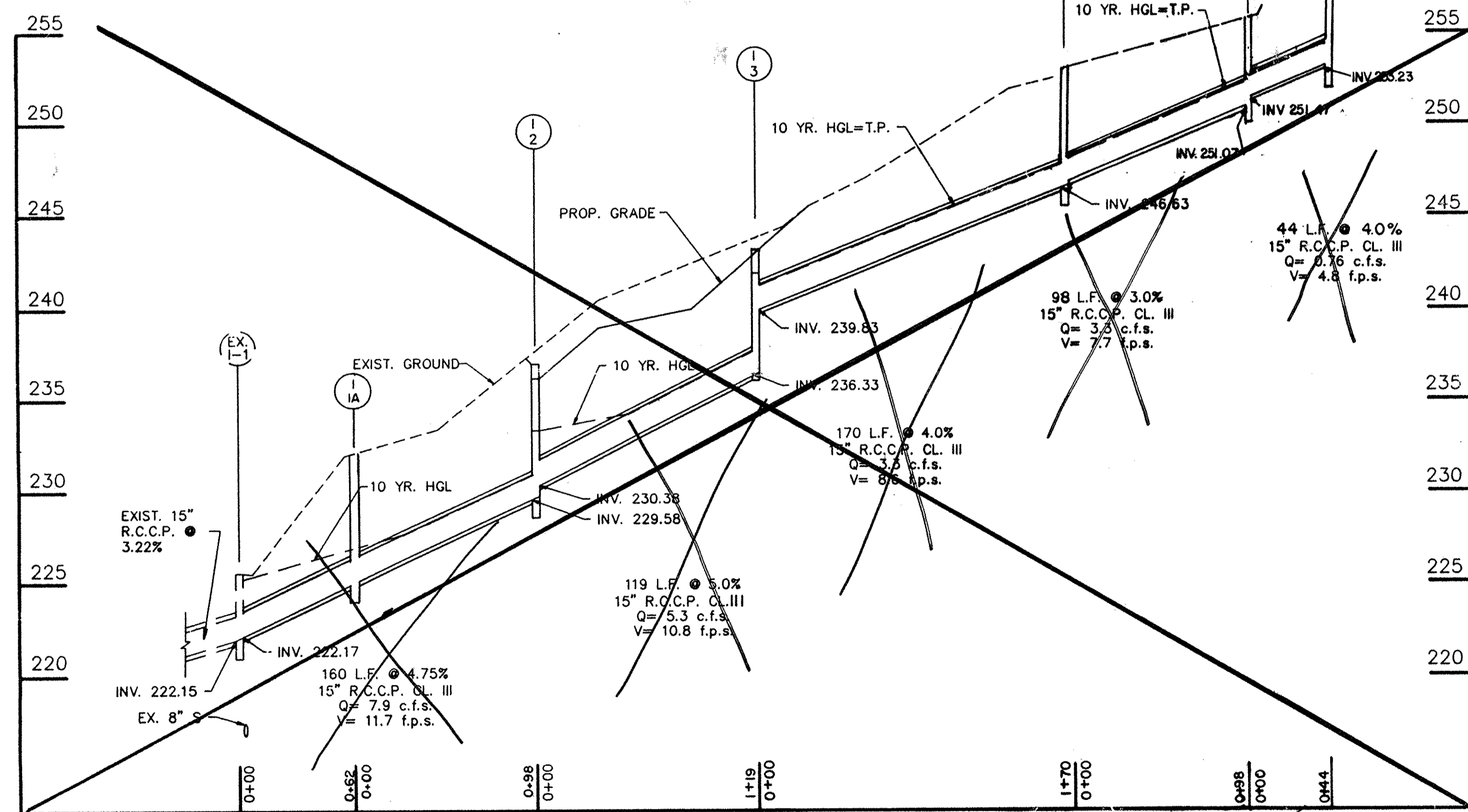
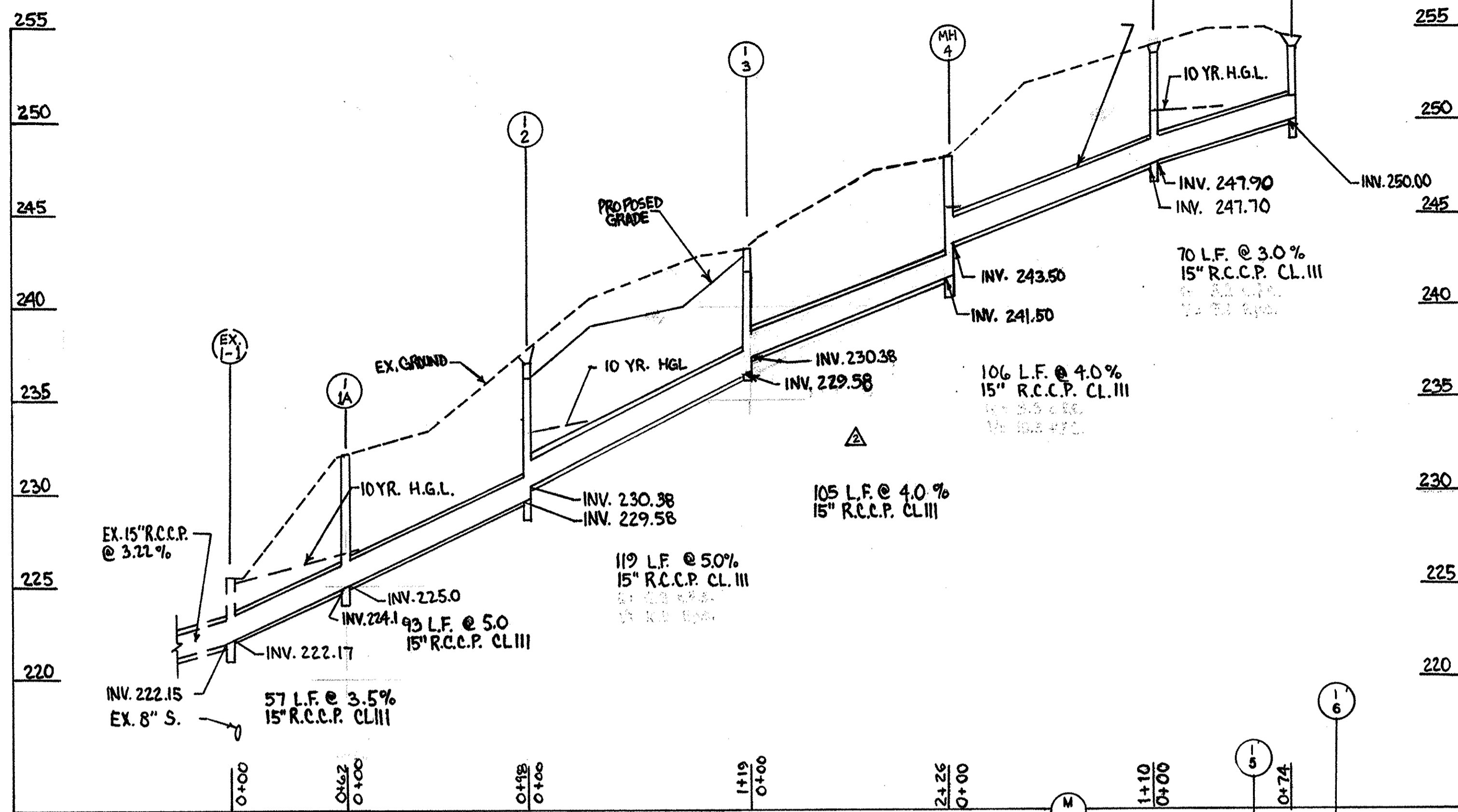
STA. 4+54.93 B #2
N.T.S.

PLAN

Scale: 1"=50'

AS-BUILT 7-6-98

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 3/24/98 CHIEF, BUREAU OF HIGHWAYS	JOHN E. HARMS, JR. & ASSOCIATES, INC. CONSULTING ENGINEERS 90 GOV. RITCHIE HIGHWAY PASADENA, MARYLAND 301-847-6000	S.A.G. A.J.M. REMOVAL OF UNNECESSARY SEDIMENT CONTROLS AND STORM DRAIN REVISION ALIGNMENT DATE: 1/94	DES: D.M.D. DRN: J.R.R. CHK: S.G.Z. DATE: 1/94
PLAN Cap. Proj. # D-1078 A WOODWARD STREET		SCALE AS SHOWN SHEET 1 OF 2	

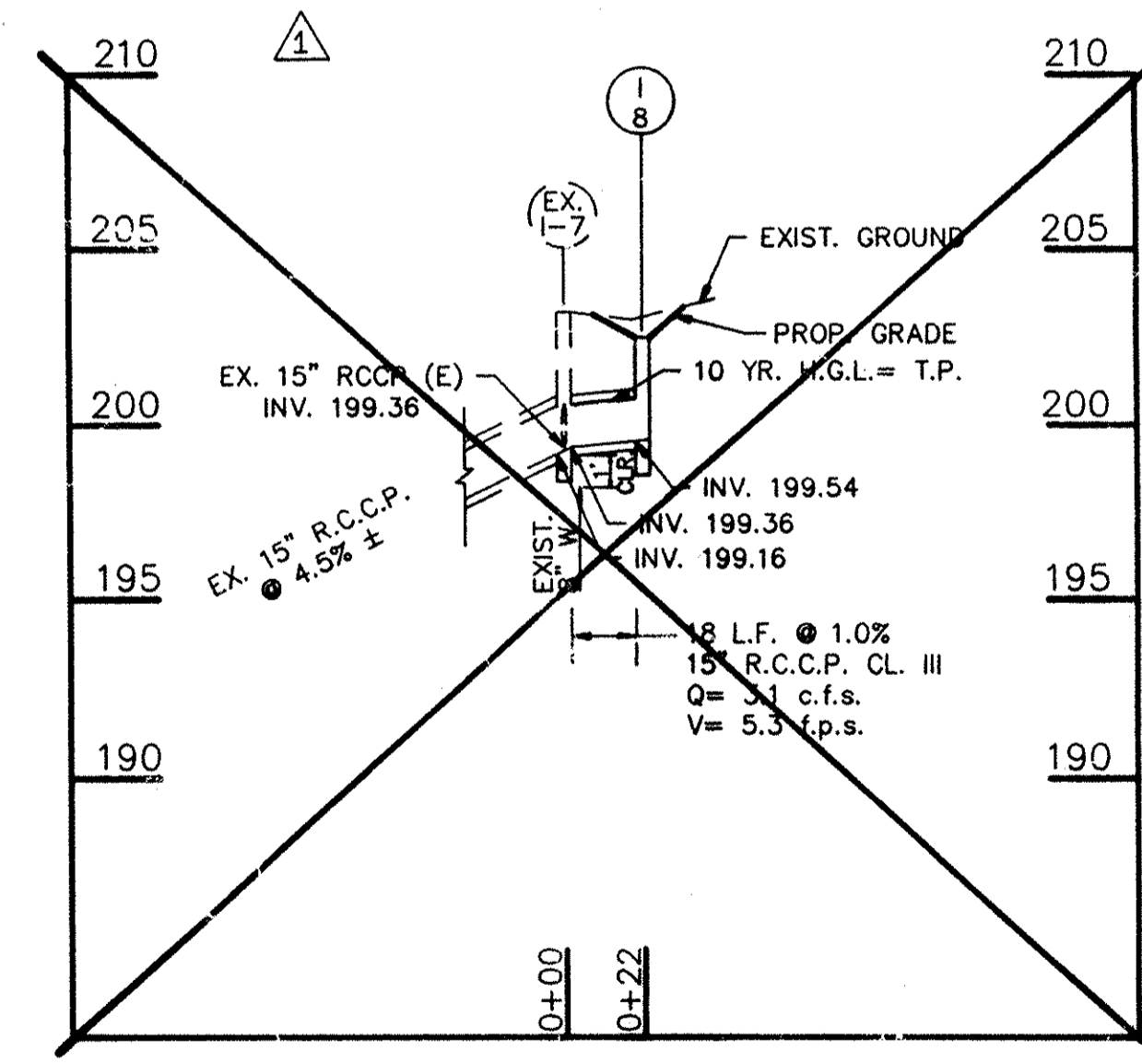


STORM DRAIN PROFILES
SCALE: 1"=50' HORIZ.
1"=5' VERT.

STRUCTURE SCHEDULE								
NO.	TYPE	BASELINE	STATION	OFFSET	TOP OF STRUCT.	INV. OUT	STANDARD	REMARKS
I-2	OPEN END GRATE INLET	#2	3+82	48' LT.	236.60	229.58	HO. CO. SD. 4.36	DOUBLE OPENING
I-3	'D' INLET	#2	2+70	53' LT.	242.40	236.33	HO. CO. SD. 4.11	
MH-4	BRICK MH	#B	2+42	64' RT.	254.00	246.63	HO. CO. G 5.01	HO. CO. G-5.12 OPTIONAL
I-5	'S' INLET	#B	2+64	33' LT.	255.40	251.07	HO. CO. SD. 4.22	'S' GRATE
I-6	YARD INLET	#B	2+55	77' LT.	259.00	253.23	HO. CO. SD. 4.14	
I-8	'S' INLET	#4	0+86	5' LT.	202.60	199.54	HO. CO. SD. 4.22	'S' GRATE
I-1A	'S' INLET	#2	3+78	14' RT.	232.30	225.00	HO. CO. SD. 4.93	'S' GRATE

NOTE: HO. CO. SD. 4.37 PRECAST INLET MAY BE USED AS OPTION TO HO. CO. SD. 4.22

PIPE SCHEDULE				
FROM	TO	SIZE	TYPE	LENGTH
I-1A	I-2	15"	RCCP CL. III	98'
I-2	I-3	15"	RCCP CL. III	119'
I-3	MH-4	15"	RCCP CL. III	170'
MH-4	I-5	15"	RCCP CL. III	98'
I-5	I-6	15"	RCCP CL. III	44'
EX. I-7	I-8	15"	RCCP CL. III	18'
EX. I-1	I-1A	15"	RCCP CL. III	62'



WOODWARD STREET (STORM DRAIN SYSTEM TO EX. INLET 2)

- EX. INLET 2**
- TIE 1 TO BGE POLE # 270224 19.0'
 - TIE 2 TO SAN. SEWER MH 26.3'
 - TIE 3 TO BGE POLE # 23247 41.3'
 - DISTANCE TO INLET I 1A 98.6'
- INLET I 1A**
- TIE 4 TO CORNER OF HOUSE # 8421 27.0'
 - TIE 5 TO CORNER OF FENCE @ HOUSE # 8427 9.0'
 - DISTANCE TO INLET 2 69.5'
- INLET 2**
- TIE 6 TO FRONT RIGHT CORNER OF SHED 18.8'
 - TIE 7 TO END OF WOOD FENCE @ HOUSE # 8421 7.0'
 - DISTANCE TO INLET 3 72.3'
- INLET 3**
- TIE 8 TO CORNER OF FENCE @ HOUSE # 8415 4.6'
 - TIE 9 TO BACK RIGHT CORNER OF SHED 35.4'
 - DISTANCE TO MH 4 122.0'
- MH 4**
- TIE 10 TO FENCE CORNER @ HOUSE # 8409 11.8'
 - TIE 11 TO RET. WALL BEHIND HOUSE # 8405 23.3'
 - DISTANCE TO INLET 5 125.3'
- INLET 5**
- TIE 12 TO FENCE CORNER BETWEEN LOT 2 & 3 @ PL. 31.6'
 - TIE 13 TO FENCE ON ANGLE TO LFT. REAR OF SHED LOT 2 11.8'
 - DISTANCE TO INLET 6 86.0'
- INLET 6**
- TIE 14 TO FENCE CORNER BETWEEN LOT 2 & 3 @ PL. 68.5'
 - TIE 15 TO LGE. OAK TREE BETWEEN PARKING AREA AND GAZEBO 79.8'

AS-BUILT 7-6-98

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 3/24/98 DATE: 3/23/98	JOHN E. HARMS, JR. & ASSOCIATES, INC. CONSULTING ENGINEERS 90 GOV. RITCHIE HIGHWAY PASADENA, MARYLAND 301-647-6000		DES: D.M.D.	S.A.Q.	REVISION	3/18/98	STORM DRAIN PROFILES SCHEDULES	Cap. Proj. # D-1078 A WOODWARD STREET	SCALE AS SHOWN SHEET 12 OF 12
			DRN: J.R.R.	A.J.M.	REMOVED UNNECESSARY SEDIMENT CONTROLS AND STORM DRAIN REVISED PROFILE	5/1/98			
DATE: 1/24/99			CHK: SGZ.	BY NO.	REVISION	DATE: 5/1/98	600' SCALE MAP NO. 47	BLOCK NO. 11	

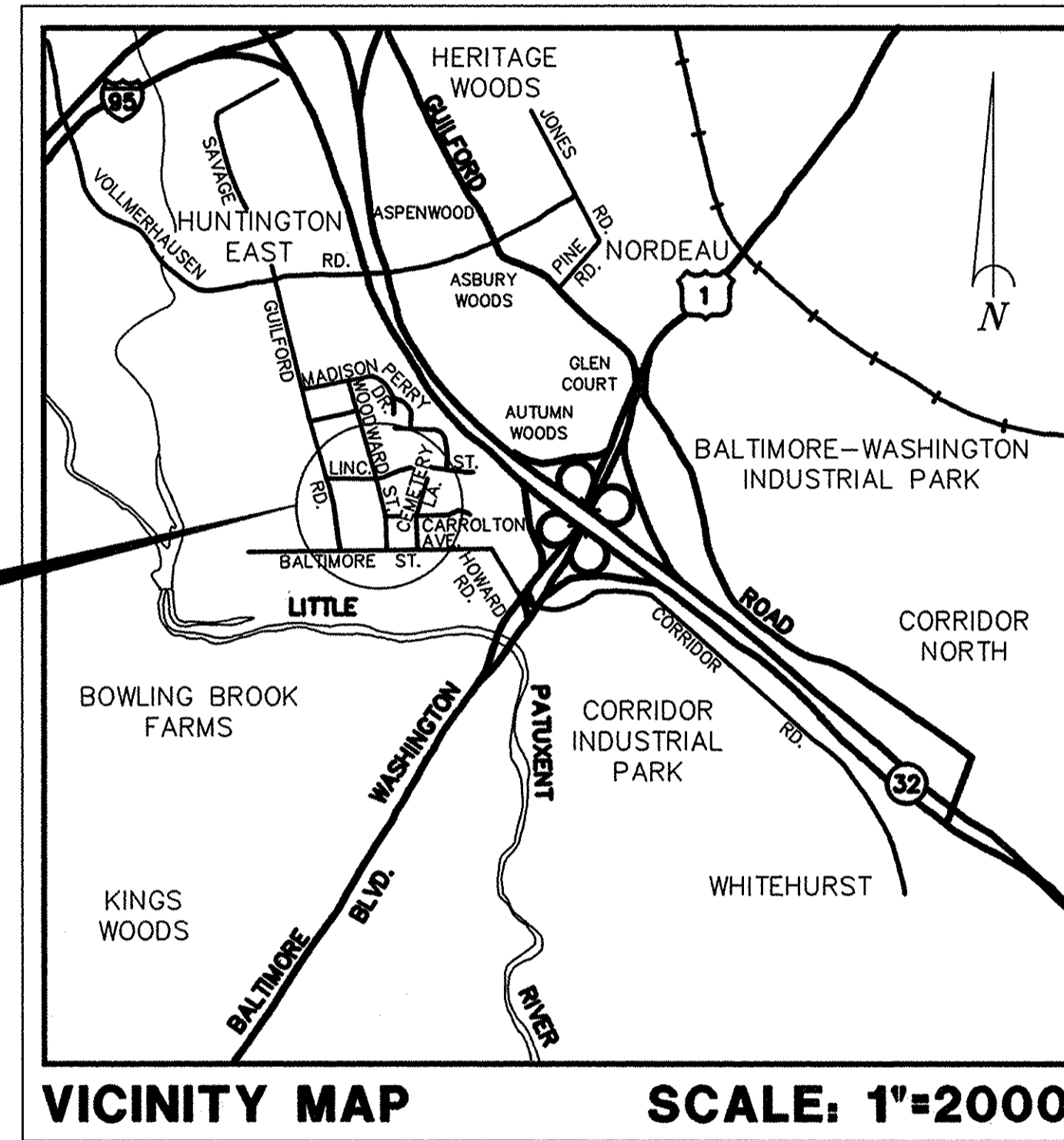
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

INDEX TO SHEETS

1. COVER SHEET
2. GENERAL NOTES, MISCELLANEOUS DETAILS, AND MAINTENANCE OF TRAFFIC
3. EROSION AND SEDIMENT CONTROL NOTES & DETAILS
4. EROSION AND SEDIMENT CONTROL PLAN
5. PLAN
6. STORM DRAIN PROFILES AND SCHEDULES

PROJECT SITE



WOODWARD STREET DRAINAGE IMPROVEMENTS

CAPITAL PROJECT NO. D-1078A

CERTIFICATION BY DEVELOPER

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THIS 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 COUNTY SOIL CONSERVATION DISTRICT."

Robert J. Seaman
SIGNATURE OF DEVELOPER

3/24/98
DATE

CERTIFICATION 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 COUNTY SOIL CONSERVATION DISTRICT."

John E. Harms, Jr.
SIGNATURE - JOHN E. HARMS, JR. & ASSOC., INC.

1/24/98
DATE

REVIEW FOR Howard S.C.D.
NAME

AND MEETS TECHNICAL REQUIREMENTS

Clay Simman 3/31/98
SIGNATURE

JR
U.S. SOIL CONSERVATION SERVICE

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

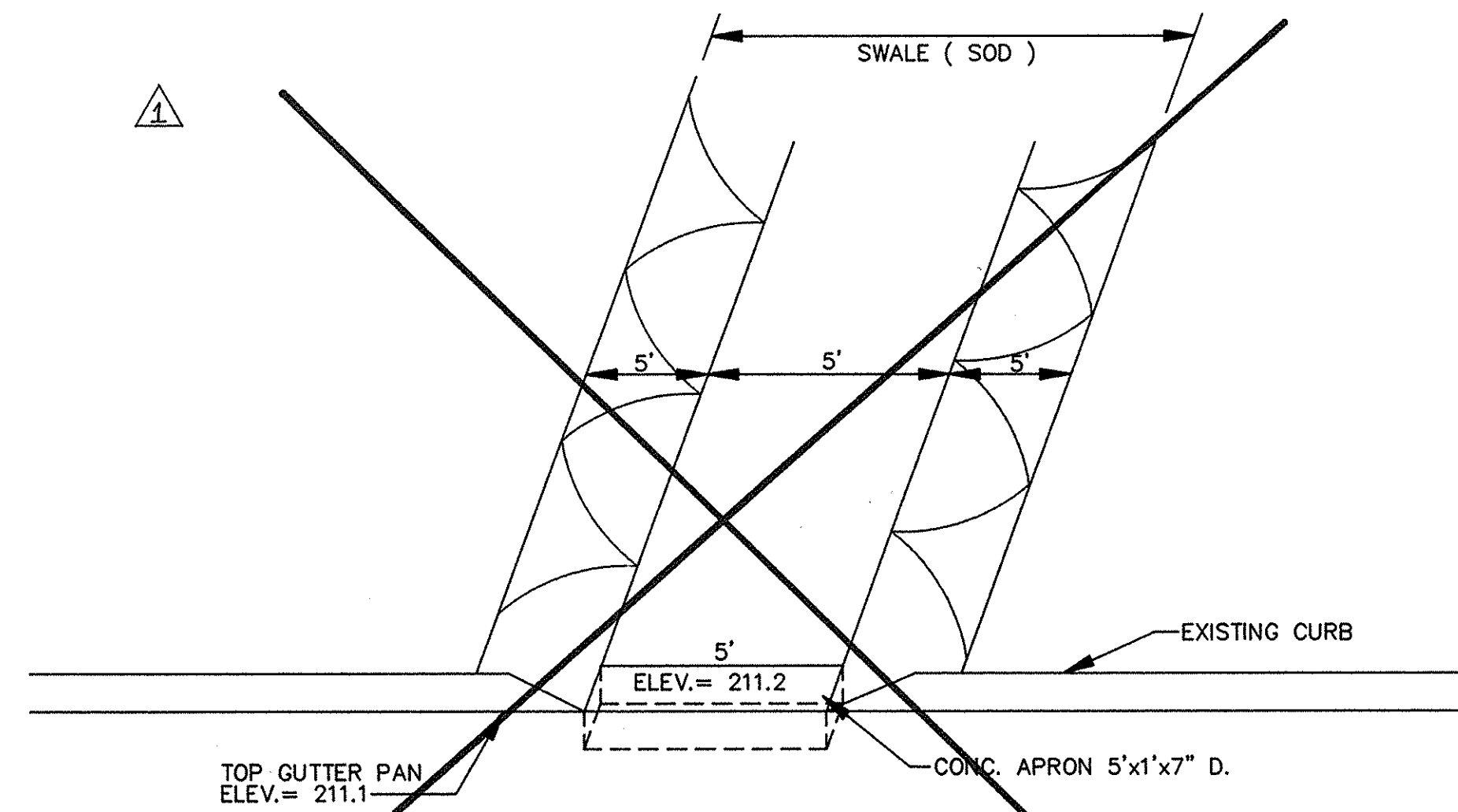
APPROVED: *John R. P. [Signature]* 3/31/98
DATE

HOWARD S.C.D.

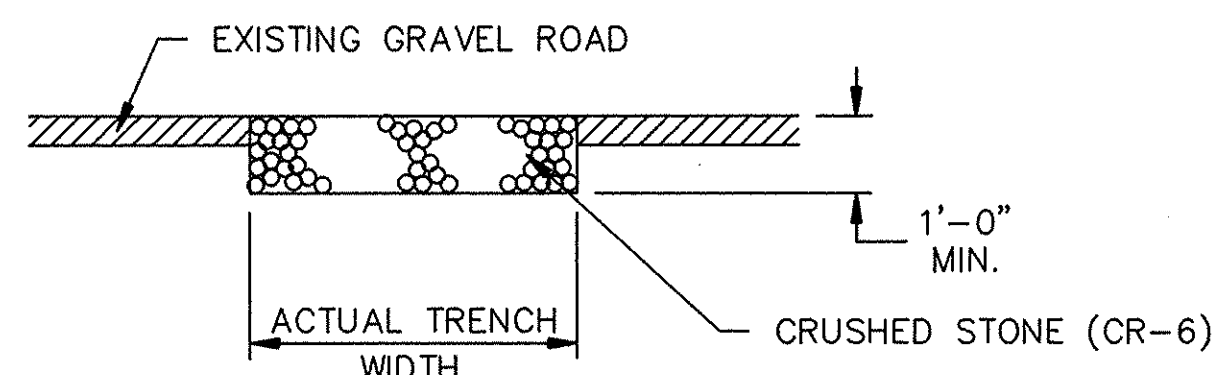
LOCATION OF EXISTING UTILITIES HAS BEEN SHOWN ON THE PLANS FOR THE CONTRACTOR'S CONVENIENCE ONLY. NO WARRANTY OF COMPLETENESS OR ACCURACY OF SAID LOCATIONS IS MADE BY THE OWNER OR ENGINEER. THE CONTRACTOR SHALL MAKE HIS OWN INVESTIGATIONS PRIOR TO THE START OF CONSTRUCTION.

RIGHT-OF-WAY LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THESE LINES DO NOT REPRESENT THE OFFICIAL PROPERTY ACQUISITION LINES. FOR OFFICIAL FEE RIGHT-OF-WAY AND EASEMENT INFORMATION REFER TO THE APPROPRIATE RIGHT-OF-WAY PLATS.

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>James J. [Signature]</i> 3/24/98 DIRECTOR OF PUBLIC WORKS DATE</p> <p><i>Robert J. Seaman</i> 3/24/98 CHIEF, BUREAU OF ENGINEERING DATE</p> <p><i>Charles M. [Signature]</i> 3/24/98 CHIEF, BUREAU OF HIGHWAYS DATE</p>	<p>JOHN E. HARMS, JR. & ASSOCIATES, INC. CONSULTING ENGINEERS 90 GOV. RITCHIE HIGHWAY PASADENA, MARYLAND 301-647-6000</p>		<p>DES: D.M.D.</p> <p>DRN: J.R.R.</p> <p>CHK: S.G.Z.</p> <p>DATE: 1/94</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>BY</th> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	BY	NO.	REVISION	DATE					<p>COVER SHEET</p> <p>600' SCALE MAP NO. <u>47</u> BLOCK NO. <u>11</u></p>	<p>WOODWARD STREET</p> <p>SHEET 1 OF 6</p>
BY	NO.	REVISION	DATE											

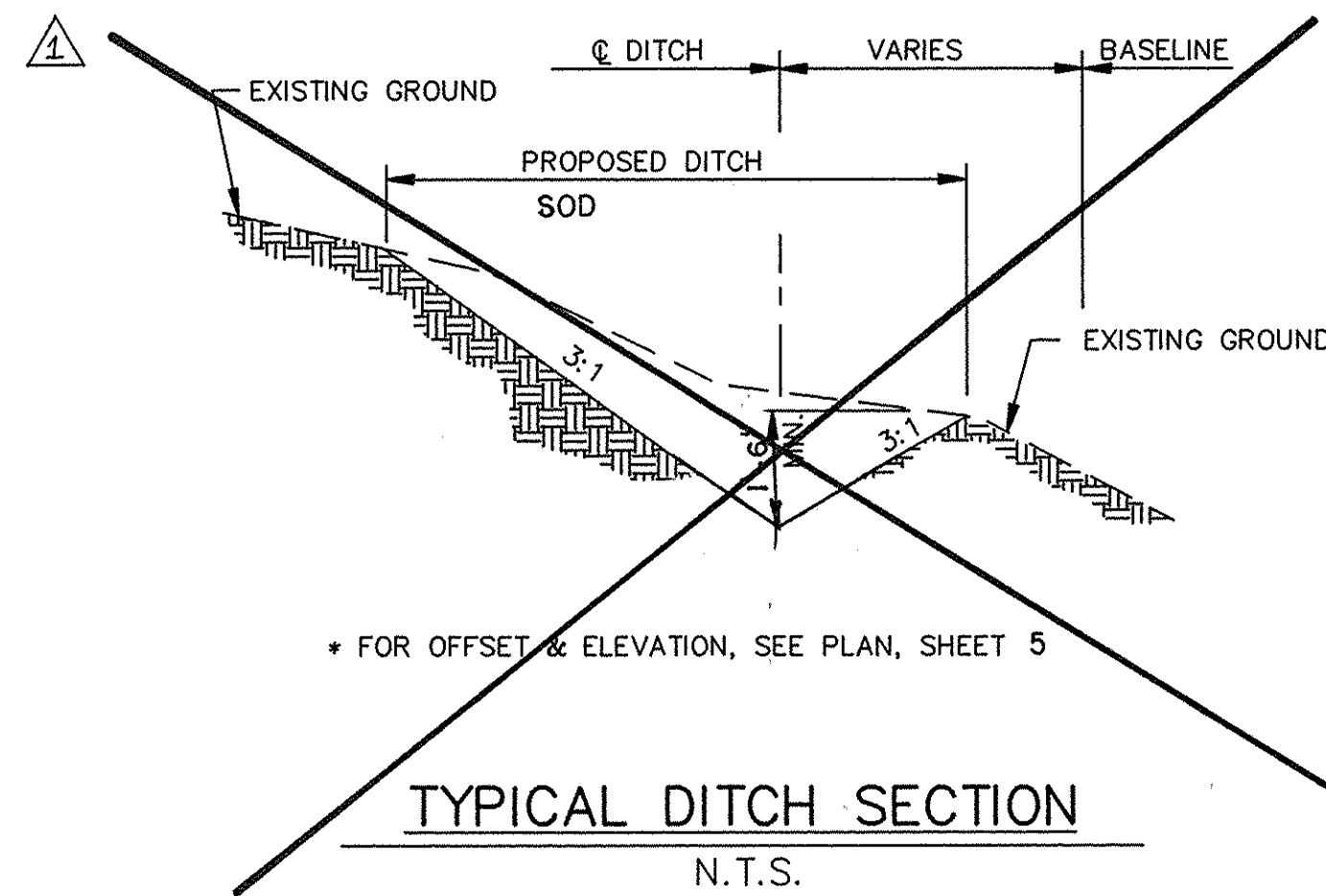


TYPICAL DETAIL, CURB CUT
N.T.S.
(STA. 4+00 LT. #3)



1. ALL COSTS FOR TRENCH EXCAVATION, BACKFILL MATERIALS, TOOLS, LABOR, AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE OF THE VARIOUS DRAINAGE ITEMS AND WILL NOT BE MEASURED OR PAID SEPARATELY.

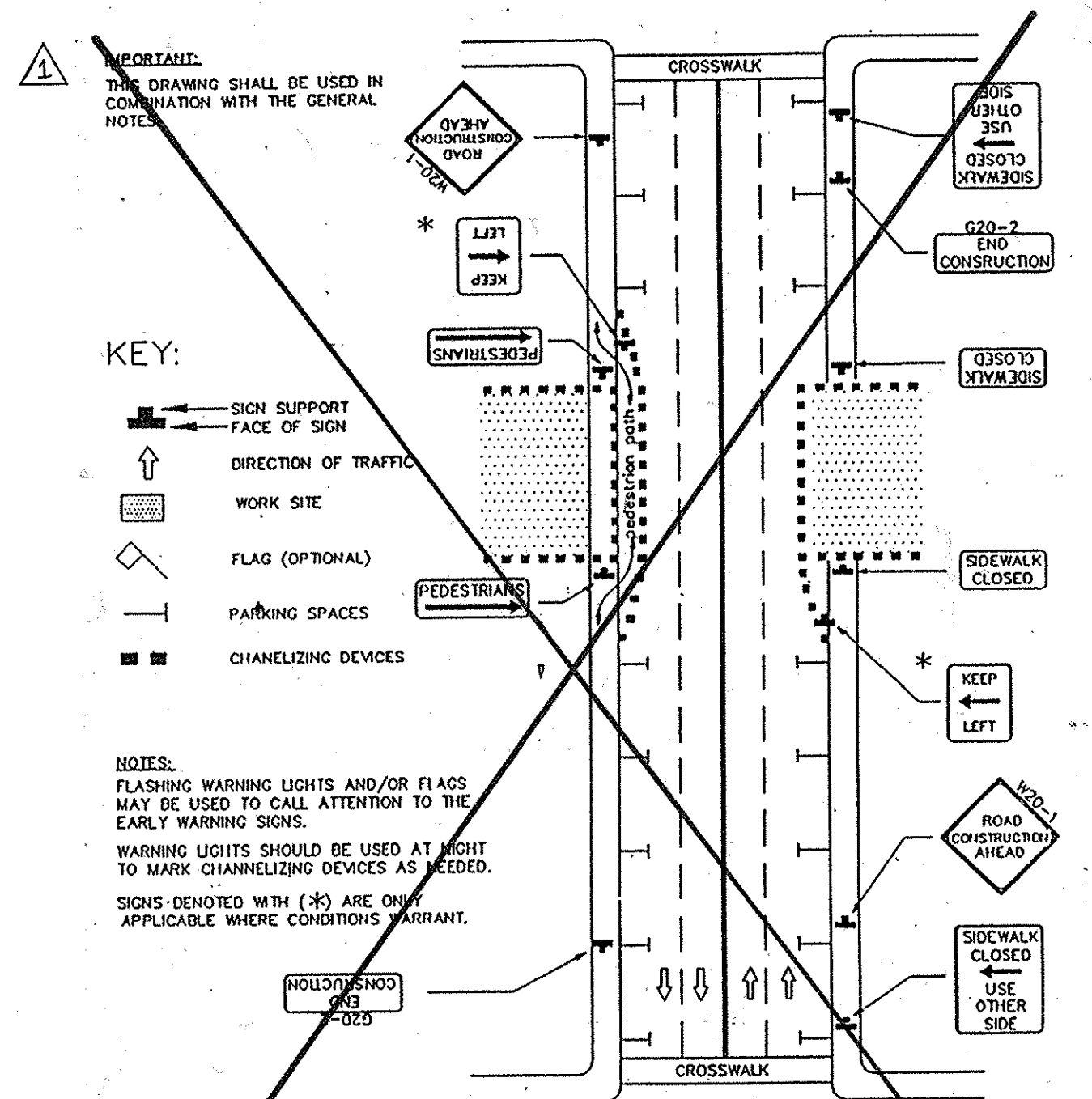
PARKING LOT PAVEMENT REPAIR
N.T.S.



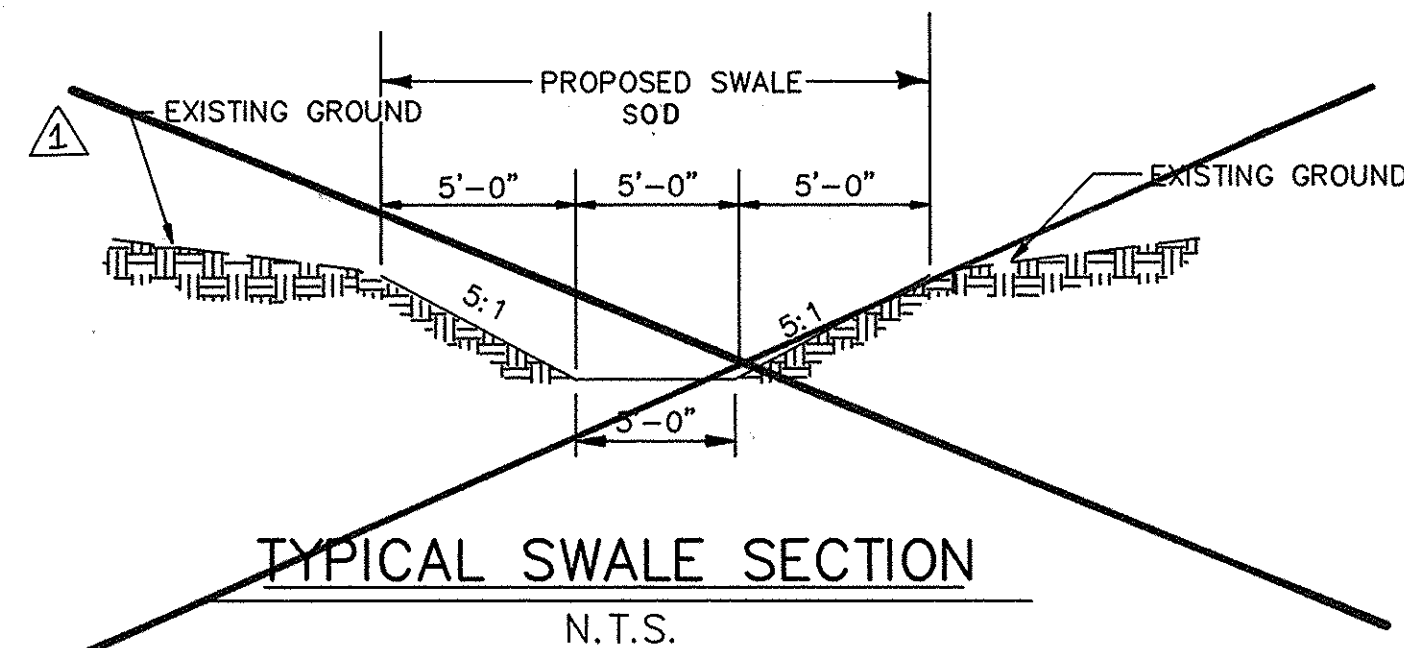
TYPICAL DITCH SECTION
N.T.S.

MAINTENANCE OF TRAFFIC GENERAL NOTES

- 1.) ALL CONSTRUCTION AND MATERIALS FOR THE TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE STANDARDS CONTAINED IN THE 1988 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND ANY SUBSEQUENT ADDENDA.
- 2.) ACCESS TO ALL PRIVATE DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES BETWEEN THE HOURS OF 3:00 PM AND 9:00 AM. BETWEEN THE HOURS OF 9:00 AM AND 3:00 PM, ACCESS SHALL BE MAINTAINED EXCEPT WHEN PROHIBITED BY AN OPEN TRENCH. ALL AFFECTED RESIDENTS SHALL BE NOTIFIED AT LEAST ONE (1) HOUR PRIOR TO CLOSING OF ANY DRIVEWAY.
- 3.) TRAVEL LANES SHALL BE A MINIMUM OF TEN FEET IN WIDTH. WHEN ONLY ONE LANE IS OPEN, FLAGMEN AND THE APPROPRIATE SIGNING SHALL BE PROVIDED. THE ROADWAY SHOULD BE REOPENED TO TWO LANES AT NIGHT.
- 4.) IF A DROPOFF MEASURES GREATER THAN 4", A BARRIER OR 2:1 SLOPE OF COMPACTED CRUSHER-RUN GRAVEL WILL BE REQUIRED.
- 5.) ALL OPEN TRENCHES SHALL BE CLOSED AT THE END OF EACH DAY. IF STEEL PLATES ARE TO BE USED, APPROPRIATE SIGNING IS REQUIRED.
- 6.) ALL SIGNS THAT DO NOT APPLY SHALL BE COVERED.
- 7.) ALL CONES AND FLAGMEN SHALL BE MOVED ACCORDINGLY AS CONSTRUCTION PROGRESSES.
- 8.) ALL CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE TYPICAL SIGN PLACEMENT SHOWN ON THESE PLANS AND SHALL NOT OBSTRUCT EXISTING TRAFFIC CONTROL DEVICES.
- 9.) CONSTRUCTION AND WORKMENS VEHICLES SHALL NOT BE PARKED IN A MANNER THAT WILL IMPEDE TRAFFIC OR IMPAIR SIGHT DISTANCE.
- 10.) WHERE TRAFFIC IS BEING MAINTAINED ON ONE SIDE OF THE ROAD WHILE CONSTRUCTION TAKES PLACE ON THE OTHER, APPROPRIATE BARRIERS, BARRICADES OR DRUMS SHALL BE PLACED BETWEEN THE TRAVEL WAY AND THE CONSTRUCTION AREA. APPROVED TYPE A LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE USED DURING HOURS OF DARKNESS. BOTH TRAVEL DIRECTIONS WILL BE POSTED WITH A SEQUENCE OF TRAFFIC CONTROL SIGNS AS INDICATED ON THE TRAFFIC CONTROL TYPICALS. ANY CROSSOVERS SHALL BE MARKED WITH APPROVED CHANNELIZATION DEVICES AND SIGNS.



APPROVED	2-1-85	Maryland Department of Transportation
DEPUTY CHIEF ENGINEER - TRAFFIC	DATE	STATE HIGHWAY ADMINISTRATION
REVISIONS	FEDERAL HIGHWAY ADMINISTRATION	WORK ZONE TRAFFIC CONTROL TYPICAL
DATE	APPROVAL	ADMINISTRATION
		PEDESTRIAN AND CURB-LANE CONTROL
		OVER 24 HRS. [ADJ. ROAD] ALL SPEEDS
		MULTILANE UNCOIL. STANDARD NO: MD-107.005



TYPICAL SWALE SECTION
N.T.S.

GENERAL NOTES

1. Right of Way lines shown on these plans are shown for the assistance in interpreting the Plans. For any Fee Right of Way and Easement information, see Right of Way Plats.
2. All pipe elevations are invert elevations.
3. All disturbed areas shall receive seeding & mulching except where otherwise indicated on plans or as directed by the Engineer.
4. The Contractor shall install and maintain all Temporary Sediment Control Measures as shown on the drawings. However, any Sediment Control Measures, not specifically indicated in the Contract Documents, but required as a result of the Contractor's excavations or activities shall not be cause for Extra Payment.
5. Location Points for Inlets, Manholes, and Structures

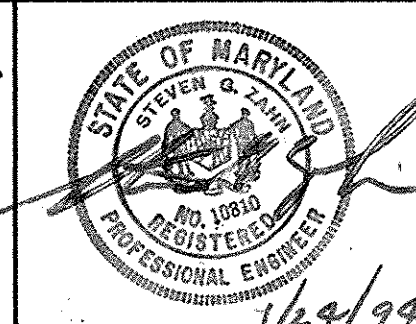
Item	Horizontal Location	Vertical Location
Curb Type Inlets	Center Face of Curb	Top of Curb
Grate Type Inlets	Center of Grate	Top of Grate
Manholes	Center of Structure	Top of Structure
Structures w/Stack	Center of Structure	Top of Structure
Endwalls	Center of Wall	Pipe Invert
6. Approximate location of existing utilities are shown. The Contractor shall take all necessary precautions to protect existing utilities and to maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer by the Contractor at the Contractor's expense. Existing utilities have been located from available as-built drawings and field surveys.
7. The Contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in the vicinity of utilities. Costs for locating existing utilities and for adjusting utility appurtenances to meet finished grades will not be measured or paid for by the Engineer.
8. Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans.

Howard County Division of Sediment Control 880-3450
Miss Utility 1-800-257-7777
Balt. Gas & Electric Company- Underground Electric Distribution Eng. "Damage Control" 787-9068
Balt. Gas & Electric Company- Underground Gas Distribution Eng. "Damage Control" 787-9068
Chesapeake and Potomac Telephone Company Repair Service 954-2222
Howard County Bureau of Utilities 313-4900
Howard Cable TV 461-1156
Howard County Division of Traffic Engineering 313-2430
Howard County Surveying and Drafting Division 313-2417
Howard County Bureau of Construction Inspection 313-1870
9. All manholes shall be 4'-0" inside diameter
10. Standard details for this contract shall be the Howard County Standard Details as supplemented by the Maryland State Highway Administration Standard Details, Maryland State Standards & Specifications for Soil Erosion & Sediment Control, and Manual on Uniform Traffic Control Devices of the U.S. Department of Transportation.
11. Trees are to be protected from damage to the maximum extent. Trees located outside the construction strip are not to be removed or damaged by the contractor
12. Contractor shall remove trees, stumps and roots, along line of excavation as directed by the Engineer. Payment for such removal shall be included in the lump sum price bid for Clearing and Grubbing.
13. Place regulation and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
14. Top elevations of structures shall be adjusted in the field to meeting existing conditions as directed by the Engineer.
15. Grading shall be done in such a manner so as to insure positive drainage to the proposed Inlet Structures.
16. Horizontal and vertical Controls are based on the Maryland State Grid Coordinate System as projected by Howard County - Geodetic Control Point Numbers 1942005 & 1942006, NAD27 (Vertical Control NAD29).
17. Surveys performed by Loiderman Associates, 1990, updated by Harms & Associates, 1993.
18. For Details not shown on the drawings, and for Materials and Construction Methods, the Contractor shall abide by the Howard County Design Manual, Volume IV, "Standard Specifications and Details for Construction" and the Special Provisions. In the event of any discrepancy between these two sources, the latter shall govern.
19. Existing fences, mailboxes, signs and shrubs disturbed by the work shall be reconstructed or replaced in kind.
20. Clearance between existing and proposed utilities shall be a minimum of 1'-0" . clearance between all utility poles and proposed utilities shall be a minimum of 5'-0". Cost of bracing at poles shall be included in the unit price bid for storm drain structures except where specified otherwise.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. ... 3/26/98
DIRECTOR OF PUBLIC WORKS DATE
Charles M. ... 3-26-98
CHIEF, BUREAU OF HIGHWAYS DATE

JOHN E. HARMS, JR. & ASSOCIATES, INC.
CONSULTING ENGINEERS
90 GOV. RITCHIE HIGHWAY
PASADENA, MARYLAND
301-647-6000



DES: D.M.D.	S.A.Q.	REMOVAL OF UNNECESSARY SEDIMENT CONTROLS AND STORM DRAIN	3/18/98
DRN: J.R.R.			
CHK: S.G.Z.			
DATE: 1/94	BY NO.	REVISION	DATE

**GENERAL NOTES,
MISCELLANEOUS DETAILS**

WOODWARD STREET

600' SCALE MAP NO. 47 BLOCK NO. 11

SCALE AS SHOWN
SHEET 2 OF 6

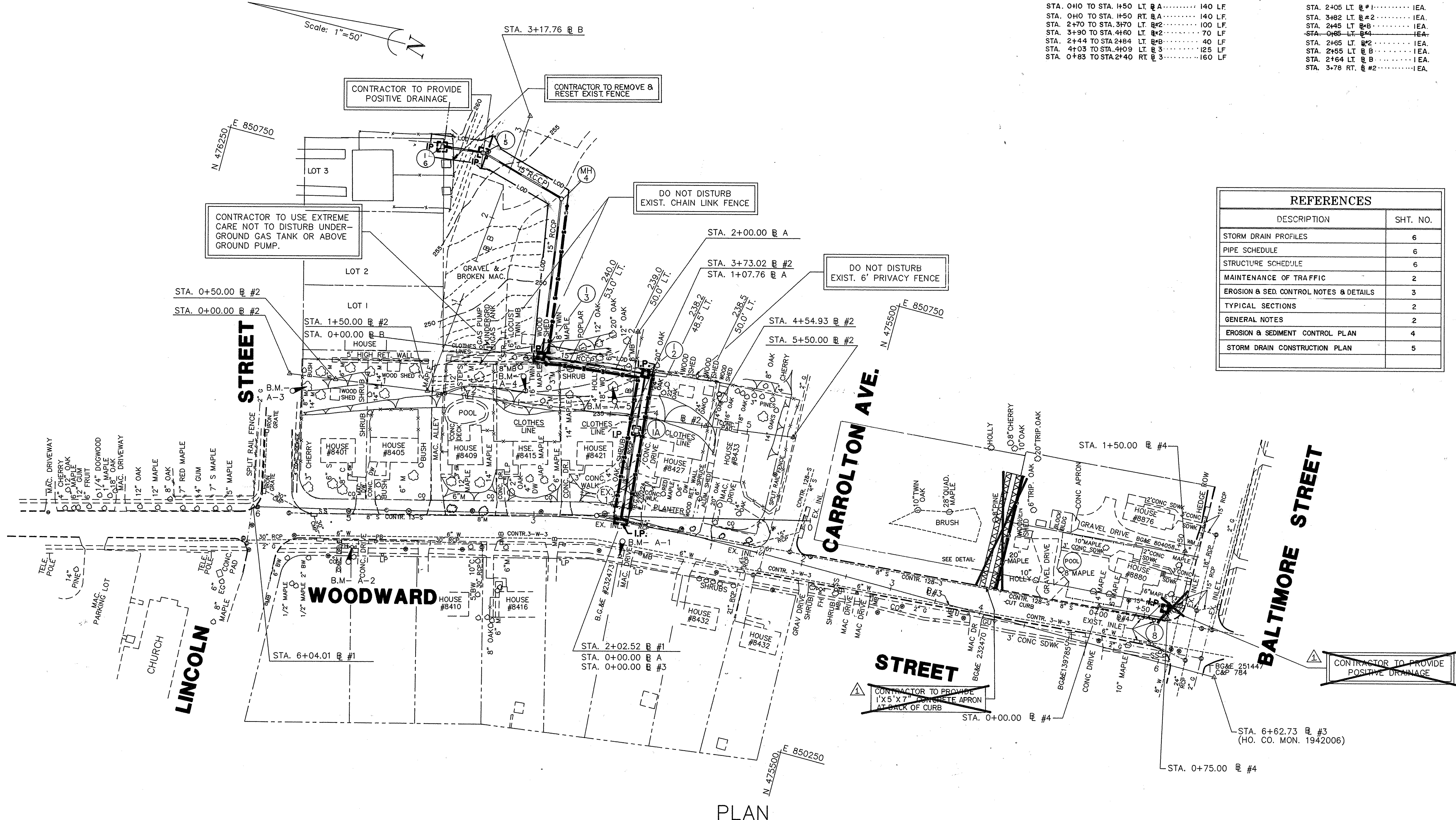
CONSTRUCT SILT FENCE

CONSTRUCT INLET PROTECTION

STA. 0+10 TO STA. 1+50 LT. @ A 140 LF.
 STA. 0+10 TO STA. 1+50 RT. @ A 140 LF.
 STA. 2+70 TO STA. 3+70 LT. @ #2 100 LF.
 STA. 3+90 TO STA. 4+60 LT. @ #2 70 LF.
 STA. 2+44 TO STA. 2+84 LT. @ B 40 LF.
 STA. 4+03 TO STA. 4+09 RT. @ 3 125 LF.
 STA. 0+83 TO STA. 2+40 RT. @ 3 160 LF.

STA. 2+05 LT. @ #1 IEA.
 STA. 3+82 LT. @ #2 IEA.
 STA. 2+45 LT. @ B IEA.
 STA. 0+65 LT. @ #4 IEA.
 STA. 2+65 LT. @ #2 IEA.
 STA. 2+55 LT. @ B IEA.
 STA. 2+64 LT. @ B IEA.
 STA. 3+78 RT. @ #2 IEA.

Scale: 1"=50'



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EROSION & SEDIMENT CONTROL PLAN	4
STORM DRAIN CONSTRUCTION PLAN	5

FOR EROSION & SEDIMENT CONTROL USE ONLY

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 3/24/98 DATE	JOHN E. HARMS, JR. & ASSOCIATES, INC. CONSULTING ENGINEERS 90 GOV. RITCHIE HIGHWAY PASADENA, MARYLAND 301-647-6000		DES: D.M.D.	S.A.Q.	REMOVAL OF UNNECESSARY SEDIMENT CONTROLS AND STORM DRAIN	3/18/98	EROSION AND SEDIMENT CONTROL PLAN	SCALE AS SHOWN
			DRN: J.R.R.	CHK: S.G.Z.	DATE: 1/94	BY NO.		

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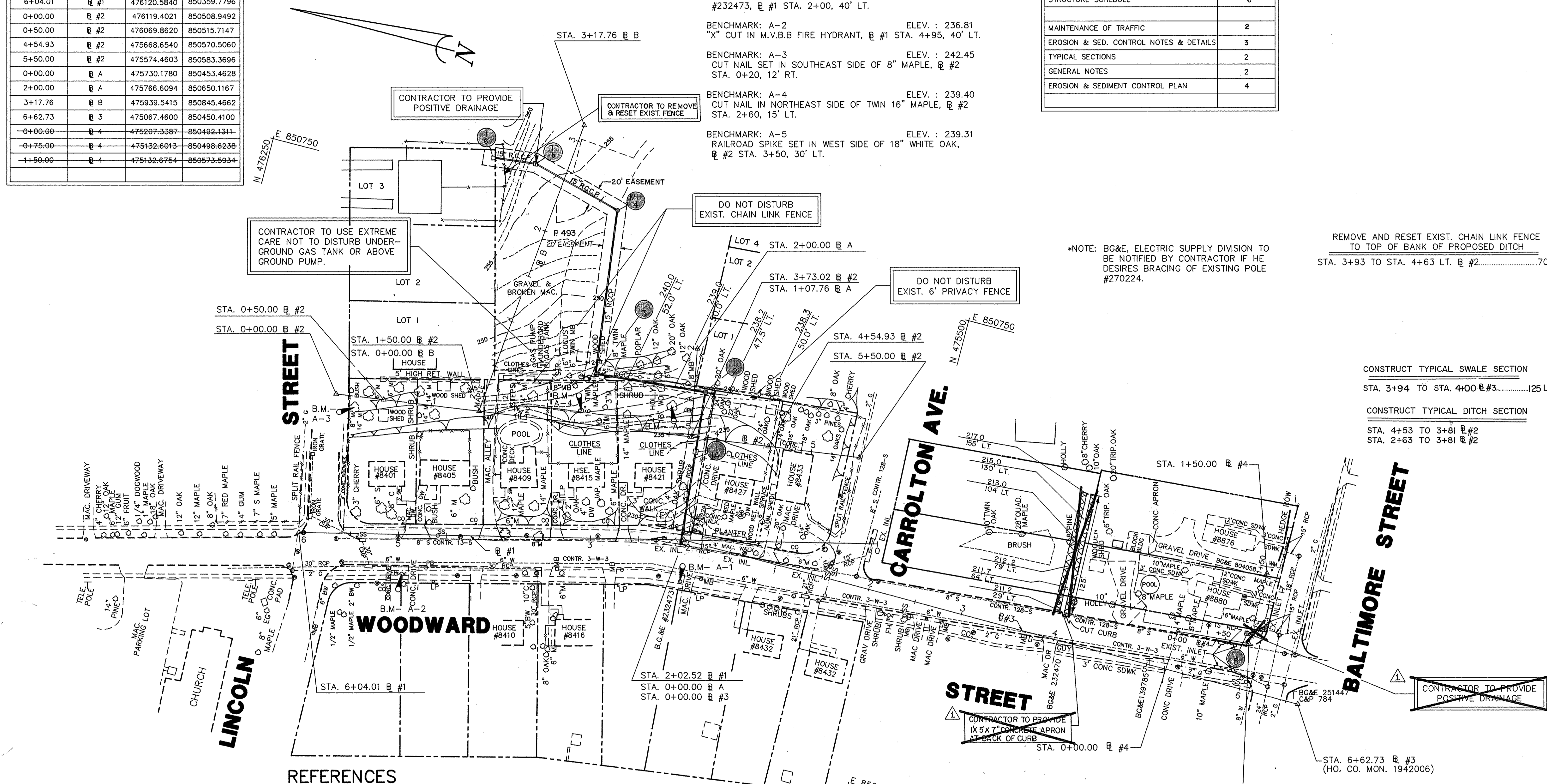
BENCHMARK: A-1 ELEV. : 226.00
RAILROAD SPIKE SET IN WEST SIDE OF B.G.&E POLE #232473, B #1 STA. 2+00, 40' LT.

BENCHMARK: A-2 ELEV. : 236.81
"X" CUT IN M.V.B.B FIRE HYDRANT, B #1 STA. 4+95, 40' LT.

BENCHMARK: A-3 ELEV. : 242.45
CUT NAIL SET IN SOUTHEAST SIDE OF 8" MAPLE, B #2 STA. 0+20, 12' RT.

BENCHMARK: A-4 ELEV. : 239.40
CUT NAIL IN NORTHEAST SIDE OF TWIN 16" MAPLE, B #2 STA. 2+60, 15' LT.

BENCHMARK: A-5 ELEV. : 239.31
RAILROAD SPIKE SET IN WEST SIDE OF 18" WHITE OAK, B #2 STA. 3+50, 30' LT.

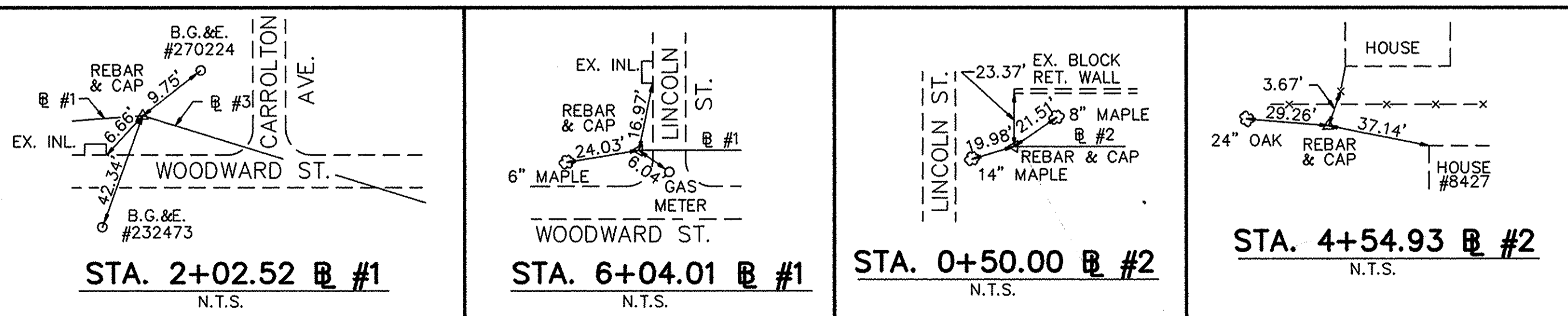


*NOTE: BG&E, ELECTRIC SUPPLY DIVISION TO BE NOTIFIED BY CONTRACTOR IF HE DESIRES BRACING OF EXISTING POLE #270224.

REMOVE AND RESET EXIST. CHAIN LINK FENCE TO TOP OF BANK OF PROPOSED DITCH STA. 3+93 TO STA. 4+63 LT. B #2.....70 LF

CONSTRUCT TYPICAL SWALE SECTION STA. 3+94 TO STA. 4+00 B #3.....125 L.F.

CONSTRUCT TYPICAL DITCH SECTION STA. 4+53 TO 3+81 B #2 STA. 2+63 TO 3+81 B #2



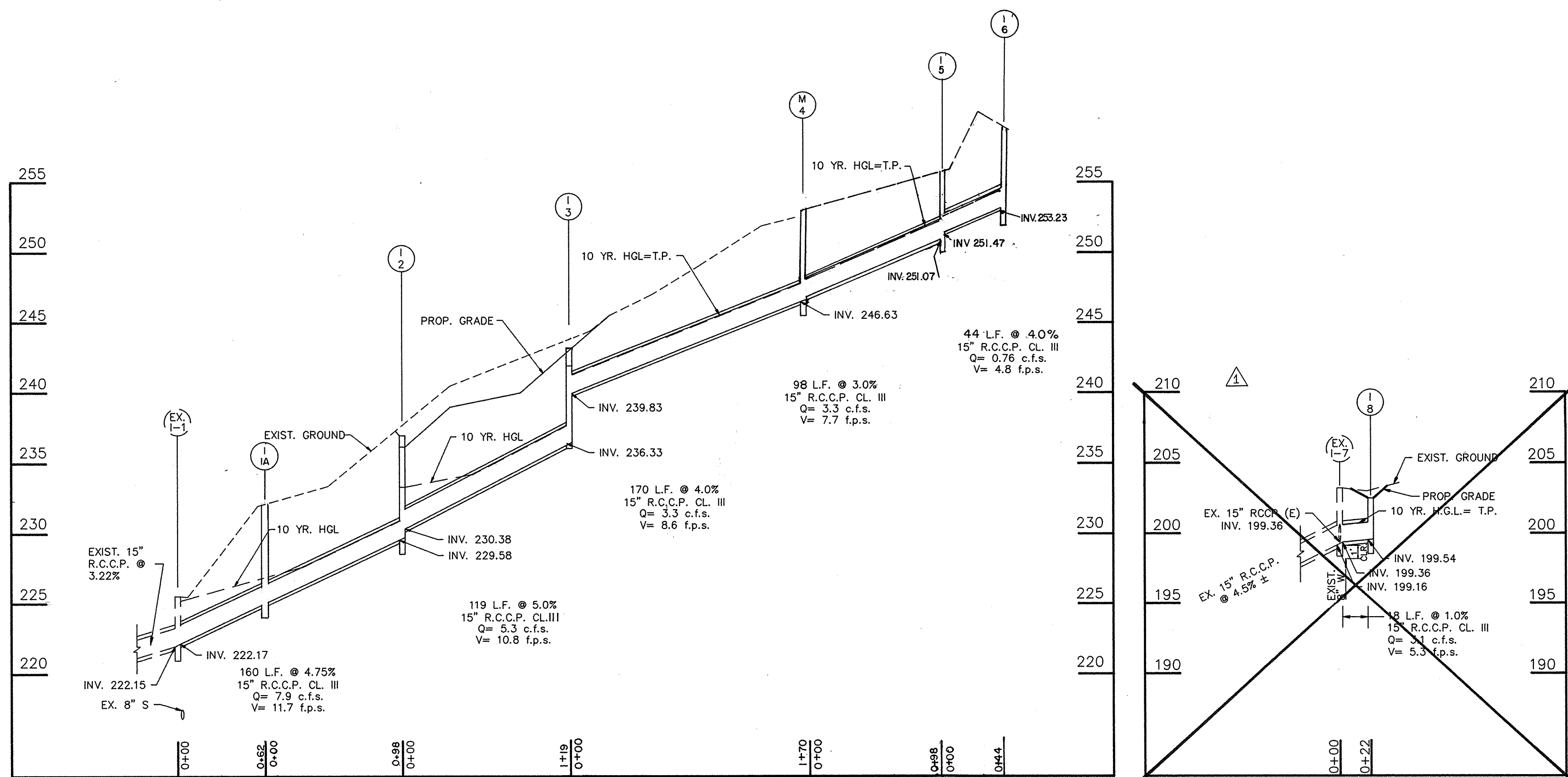
PLAN
Scale: 1"=50'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 3/24/98 CHIEF, BUREAU OF HIGHWAYS		JOHN E. HARMS, JR. & ASSOCIATES, INC. CONSULTING ENGINEERS 90 GOV. RITCHIE HIGHWAY PASADENA, MARYLAND 301-647-6000		DES: D.M.D. DRN: J.R.R. CHK: S.G.Z. DATE: 1/94		S.A.Q. REMOVAL OF UNNECESSARY SEDIMENT CONTROLS AND STORM DRAIN 3/8/98		PLAN 600' SCALE MAP NO. 47 BLOCK NO. 11		WOODWARD STREET SCALE AS SHOWN SHEET 5 OF 6	
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STRUCTURE SCHEDULE								
NO.	TYPE	BASELINE	STATION	OFFSET	TOP OF STRUCT.	INV. OUT	STANDARD	REMARKS
I-2	OPEN END GRATE INLET	#2	3+82	48' LT.	236.60	229.58	HO. CO. SD. 4.36	DOUBLE OPENING
I-3	'D' INLET	#2	2+70	53' LT.	242.40	236.33	HO. CO. SD. 4.11	
MH-4	4'-0" BRICK MH	#B	2+42	64' RT.	254.00	246.63	HO. CO. G 5.01	HO. CO. G-5.12 OPTIONAL
I-5	'S' INLET	#B	2+64	33' LT.	255.40	251.07	HO. CO. SD. 4.22	"S" GRATE
I-6	YARD INLET	#B	2+55	77' LT.	259.00	253.23	HO. CO. SD. 4.14	
I-8	'S' INLET	#4	0+85	5' LT.	202.50	199.54	HO. CO. SD. 4.22	"S" GRATE
I-IA	'S' INLET	#2	3+78	14' RT.	232.30	225.00	HO. CO. SD. 4.93	"S" GRATE

NOTE: HO.CO.SD. 4.37 PRECAST INLET MAY BE USED AS OPTION TO HO.CO.SD. 4.22

PIPE SCHEDULE				
FROM	TO	SIZE	TYPE	LENGTH
I-IA	I-2	15"	RCCP CL. III	98'
I-2	I-3	15"	RCCP CL. III	119'
I-3	MH-4	15"	RCCP CL. III	170'
MH-4	I-5	15"	RCCP CL. III	98'
I-5	I-6	15"	RCCP CL. III	44'
EX. I-7	I-8	15"	RCCP CL. III	18'
EX. I-1	I-IA	15"	RCCP CL. III	62'



STORM DRAIN PROFILES

SCALE: 1"=50' HORIZ.
1"=5' VERT.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director: <i>[Signature]</i> 3/26/94 Chief, Bureau of Engineering: <i>[Signature]</i> 3/24/98 Chief, Bureau of Highways: <i>[Signature]</i> 3-26-94 Chief, Division of Transportation Projects and Watershed Management: <i>[Signature]</i> 3/23/99	JOHN E. HARMS, JR. & ASSOCIATES, INC. CONSULTING ENGINEERS 90 GOV. RITCHIE HIGHWAY PASADENA, MARYLAND 301-647-6000		DES: D.M.D.	S.A.Q.	REMOVAL OF UNNECESSARY SEDIMENT CONTROLS AND STORM DRAIN	3/19/98	STORM DRAIN PROFILES SCHEDULES	WOODWARD STREET	SCALE AS SHOWN
			DRN: J.R.R.	CHK: SG.Z.	DATE: 1/94	BY: NO.			REVISION