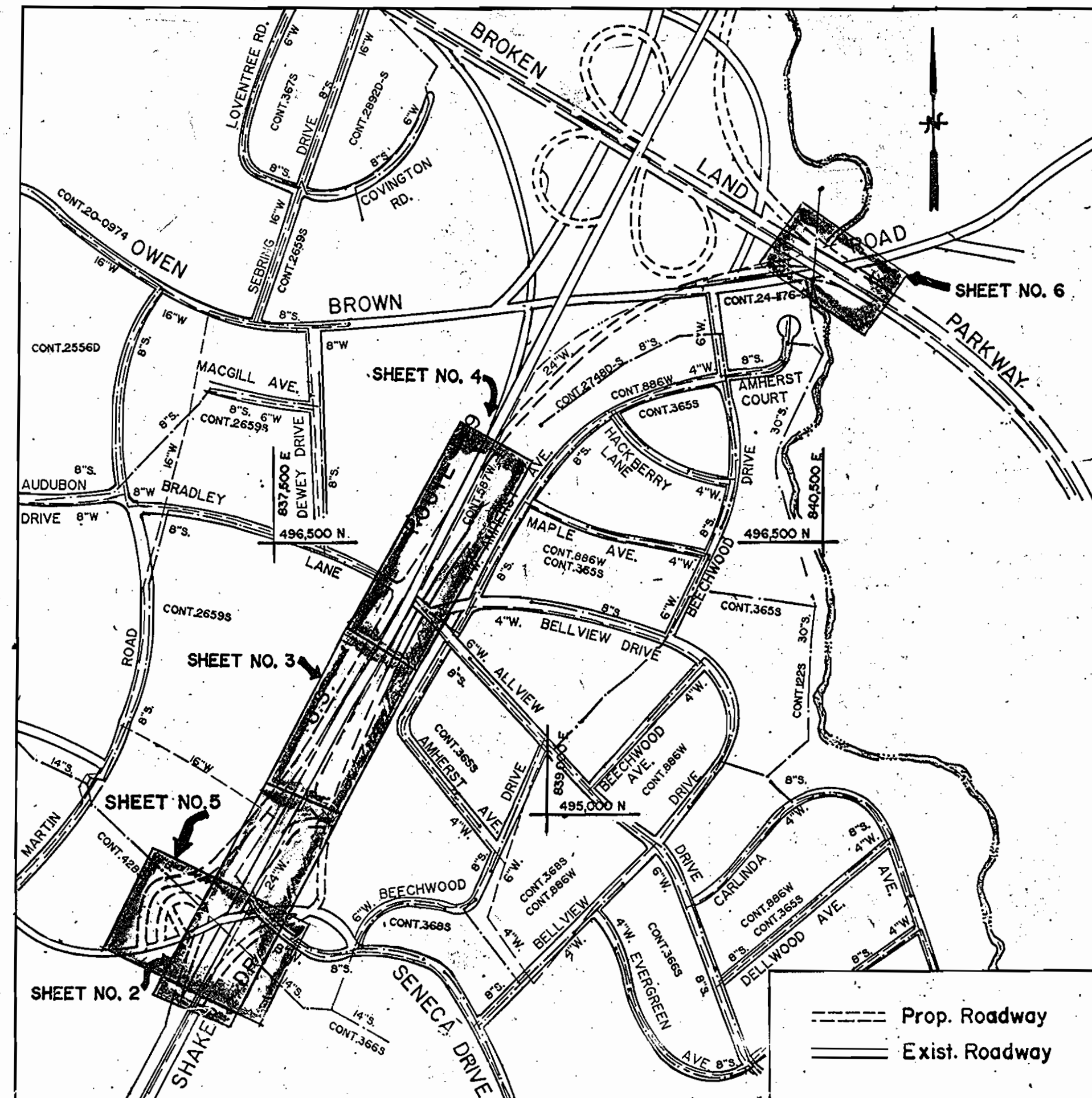


LIST OF DRAWINGS

- NO.1 COVER SHEET-VICINITY MAP AND GENERAL NOTES.
- NO.2 PLAN & PROFILE 24 INCH DIAMETER WATER MAIN SHAKER DRIVE STA.0+00-10+95.
- NO.3 PLAN & PROFILE 24 INCH DIAMETER WATER MAIN SHAKER DRIVE STA.10+95-14+58. U.S.29 STA.0+00-4+50.
- NO.4 PLAN & PROFILE 24 INCH DIAMETER WATER MAIN U.S.29 STA.4+50-11+83.
- NO.5 PLAN & PROFILE 14 INCH DIAMETER SEWER MAIN SENECA DRIVE INTERCHANGE STA.0+00-6+00 SHAKER DRIVE STA.0+00-1+34
PLAN & PROFILE 18 INCH DIAMETER SEWER MAIN SENECA DRIVE INTERCHANGE STA.0+00-2+59
- NO.6 PLAN & PROFILE 30 INCH DIAMETER SEWER MAIN BROKEN LAND PARKWAY STA.0+00-3+38
PLAN & PROFILE 8 INCH DIAMETER SEWER MAIN BROKEN LAND PARKWAY STA.0+00-2+90.



SEWER CODE FOR COUNTY USE ONLY NO. 5500000

TYPE OF BUILDINGS N/A
NUMBER OF PARCELS N/A
NO. OF SHC'S N/A
DRAINAGE AREA LITTLE PATUXENT

1. 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.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6".CLEAR ALL POLES BY 2'0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS.IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES,ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED TO THE CONTRACTOR.THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS,AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL,VOLUME IV,STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES,THEY ARE NOTED BY THE SYMBOLE [Symbol] AT THE LOCATION OF THE 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 TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

STATE HIGHWAY ADMINISTRATION - 531-5533
BALTIMORE GAS & ELECTRIC CO.- CONTRACTOR SERVICES 850-4620
BALTIMORE GAS & ELECTRIC CO.- UNDER GROUND DAMAGE CONTROL - 859-9004
BALTIMORE GAS & ELECTRIC CO.- TROUBLE SHOOTING - 298-9001
MISS UTILITY - 1-800-257-7777 C & P TELEPHONE - 1-800-257-7777
COLONIAL PIPELINE CO. - 795-1390
BUREAU OF UTILITIES,HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366
9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
10. CONTRACTOR SHALL REMOVE TREES,STUMPS AND ROOTS ALONG LINE OF EXCAVATION.PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
11. ALL WATER MAINS TO BE D.I.P. CLASS 52.
12. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE NOTED.
13. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
14. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STD.DETAILS.
15. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
16. ALL SEWER MAINS SHALL BE C.S.P.X.,R.C.S.P.,V.C.P.X., OR P.V.C. UNLESS OTHERWISE NOTED.
17. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'0" OF EXTERIOR MANHOLE WALL.
18. ALL MANHOLES SHALL BE 4'- 0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
19. FIRE HYDRANTS,SHALL BE SET,TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS.ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS.SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1003 OF THE STANDARD SPECIFICATIONS.
20. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS,STANDARD DETAILS G5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED,SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
21. PROPOSED STORM DRAINS DESIGNED BY OTHERS IN ACCORDANCE WITH SHA CONTRACT#HO-630-501-770.

ENGINEER'S CERTIFICATION

"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."

John E. Harms Jr. DATE: 12/21/89
JOHN E. HARMS JR.& ASSOCIATES
90 GOVERNOR RITCHIE HWY.
PASADENA,MARYLAND 21122

VICINITY MAP

SCALE: 1" = 600'

U.S. 29 WATER & SEWER RELOCATIONS

CAPITAL PROJECT S-6149

CONTRACT NO. 24-1947

ELECTION DISTRICT 6

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

WATER QUANTITIES			
ITEM	ESTIMATE	AS-BUILT	MATERIAL/SUPPLIER
24"DIP CL.52	2639'	2668.9	US PIPE
1" W.H.C.	33'		
DEWATERING VALVE	2	2	US PIPE
16" RSG VALVE	2	2	US PIPE
FIRE HYDRANT	5	5	US PIPE

SEWER QUANTITIES			
ITEM	ESTIMATE	AS-BUILT	MATERIAL/SUPPLIER
30"DIP CL.52	338'	340	US PIPE
18"DIP CL.54	1043'	936.5	US PIPE
8"DIP CL.52	290'	256	US PIPE
5'DIA. M.H.	2	2	ATLANTIC
4'DIA. M.H.	7 Δ	7	ATLANTIC

Δ NUMBER OF 4' DIA. M.H. INCREASED FROM 6 TO 7

AS-BUILT

REVIEWED FOR HOWARD CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

James M. Helm 1/2/90
SIGNATURE U.S. SOIL CONSERVATION SERVICE DATE

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

APPROVED *John R. Robertson* 1/2/90
HOWARD C.D. DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS.

SHA SHEET NO. 386 OF 435
SHA CONTRACT NO. HO-630-501-770

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Helm 12/21/89
DIRECTOR OF PUBLIC WORKS DATE
John R. Robertson 12/21/89
CHIEF, BUREAU OF UTILITIES DATE



DES: A.K.	Δ	ADDENDUM #1 3-6-90
DRN: J.R.N.		
CHK: W.R.G.		
DATE: 12/22/89	BY: NO	REVISION

DATE 600' SCALE MAP NO. 36 BLOCK NO. 8,13,14,19

U.S. 29 WATER & SEWER RELOCATIONS

CAPITAL PROJECT S-6149
CONTRACT 24-1947
ELECTION DISTRICT 6
HOWARD COUNTY, MARYLAND

AS-BUILT

SCALE AS SHOWN
SHEET 1 OF 6

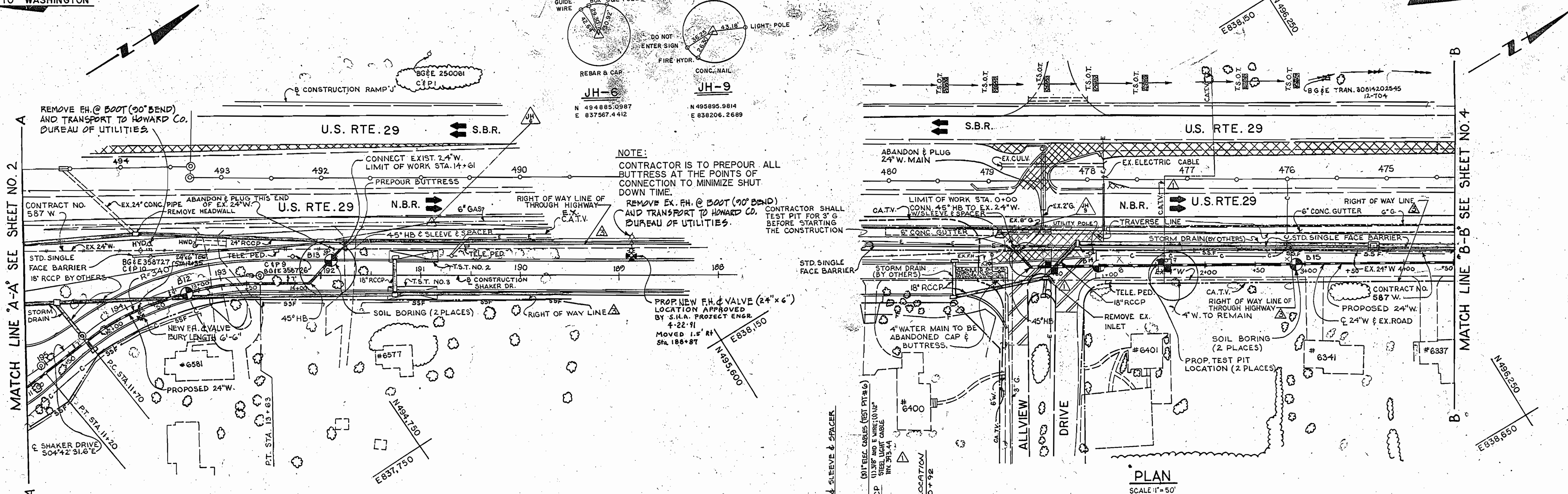
SHA CONTRACT NO. HO-630-501-770

TO WASHINGTON

TO BALTIMORE

MATCH LINE 'A-A' SEE SHEET NO. 2

MATCH LINE 'B-B' SEE SHEET NO. 4

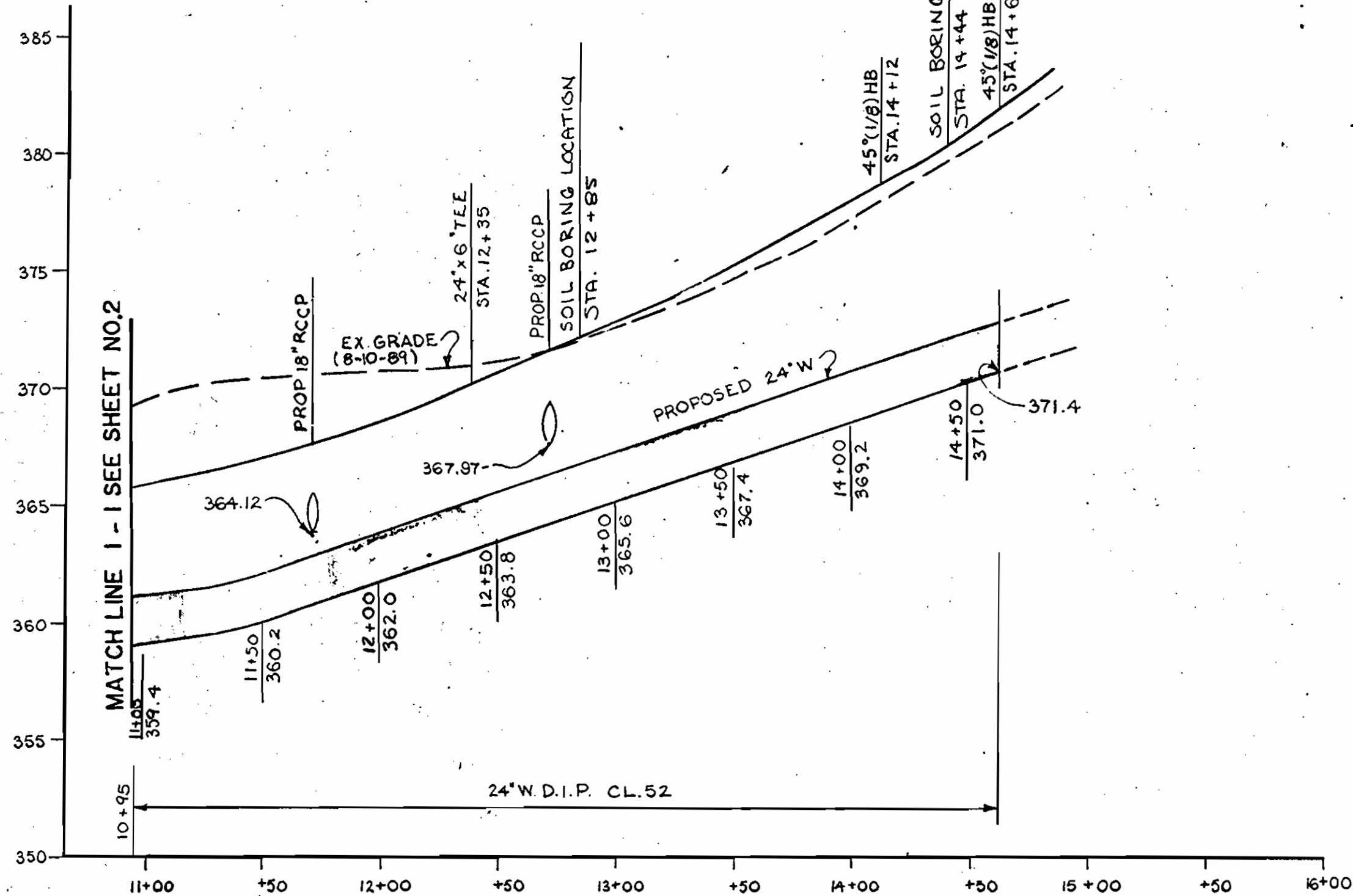


NOTE:
 CONTRACTOR IS TO PREPOUR ALL BUTTRESS AT THE POINTS OF CONNECTION TO MINIMIZE SHUT DOWN TIME.
 REMOVE EX. FH @ 500' (90' BEND) AND TRANSPORT TO HOWARD CO. BUREAU OF UTILITIES.
 CONTRACTOR SHALL TEST PIT FOR 3' G BEFORE STARTING THE CONSTRUCTION

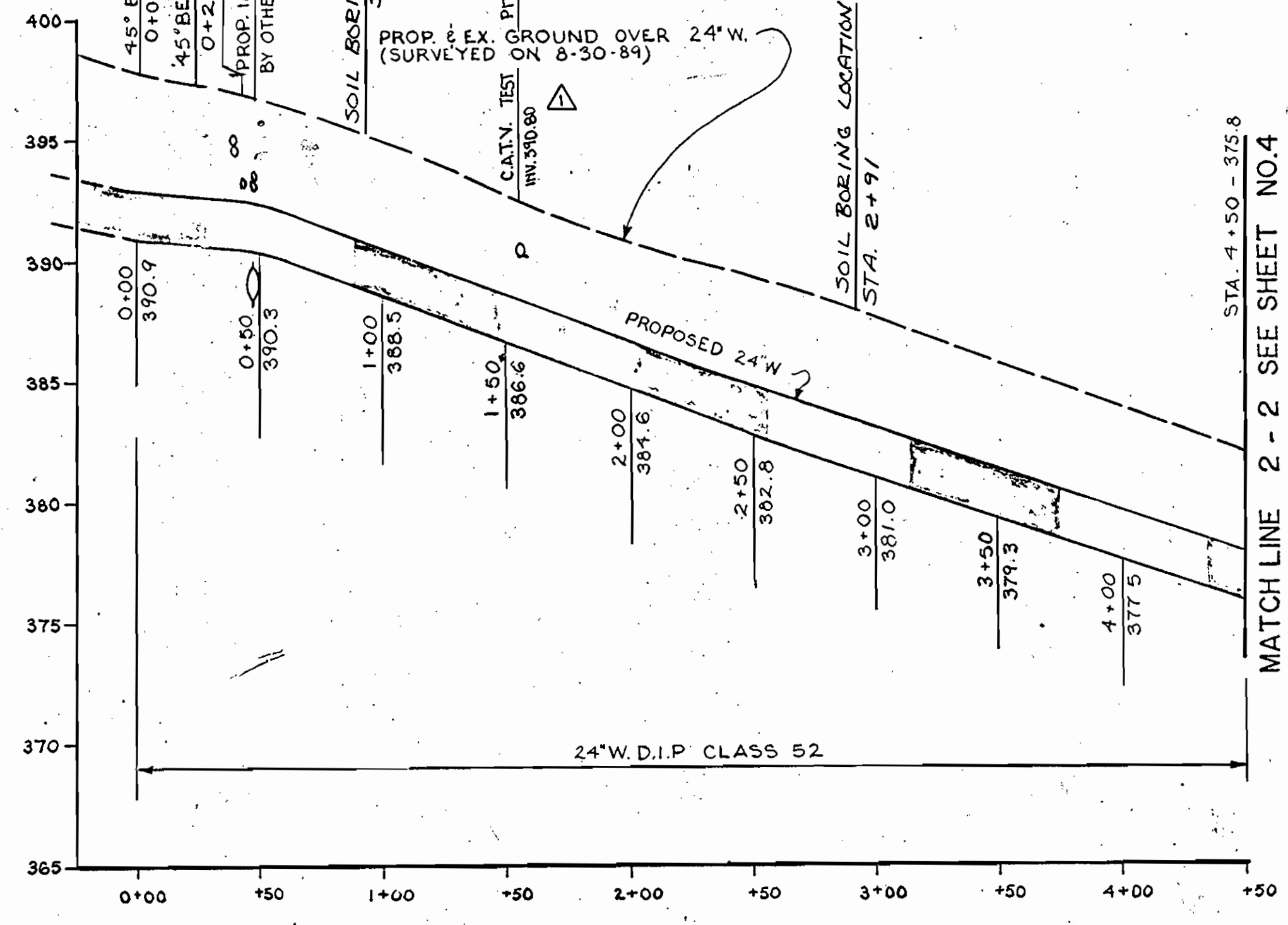
PROP NEW FH & VALVE (24\"/>

PLAN SCALE: 1\"/>

PLAN SCALE: 1\"/>



PROFILE SCALE: VERT. 1\"/>



PROFILE

SCALE: VERT. 1\"/>

POINT	BEARING	DISTANCE
JH 1	N 25° 40' 42.64\"/>	407.26
JH 2	N 53° 22' 16.66\"/>	705.82
JH 3	N 9° 40' 46.34\"/>	213.89
JH 4	N 21° 16' 54.42\"/>	158.42
JH 5	N 23° 42' 56.66\"/>	431.83
JH 6		
JH 9	N 31° 54' 23.64\"/>	673.78
JH 10	N 24° 32' 19.36\"/>	511.12
JH 11		
JH 12		

SHA SHEET NO. 388 OF 435
SHA CONTRACT NO. HO-630- 501-770

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

JOHN E. HARMS JR. & ASSOCIATES INC.
90 GOVERNOR RITCHIE HIGHWAY
PASADENA MD 21122

DES: A. K.	ADDENDUM #1 3-6-90
DRN: J.R.N.	ADDENDUM NO3 3/20/90
CHK: W.R.G.	
DATE: 12/22/89	BY: NO. REVISION

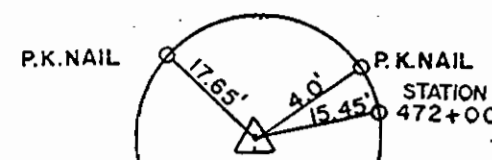
U.S. 29 WATER & SEWER RELOCATIONS
CAPITAL PROJECT S-6149
CONTRACT 24-1947
ELECTION DISTRICT 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 6

James W. [Signature] 12/22/89
DIRECTOR OF PUBLIC WORKS DATE

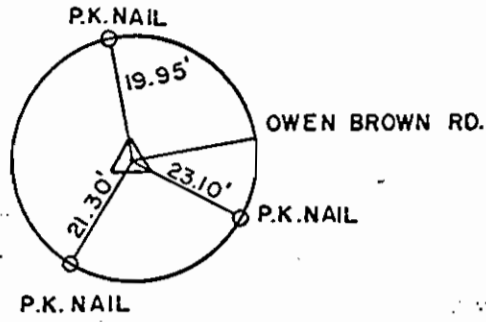
[Signature] 12/22/89
CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 12/22/89
CHIEF, UTILITY DIVISION DATE



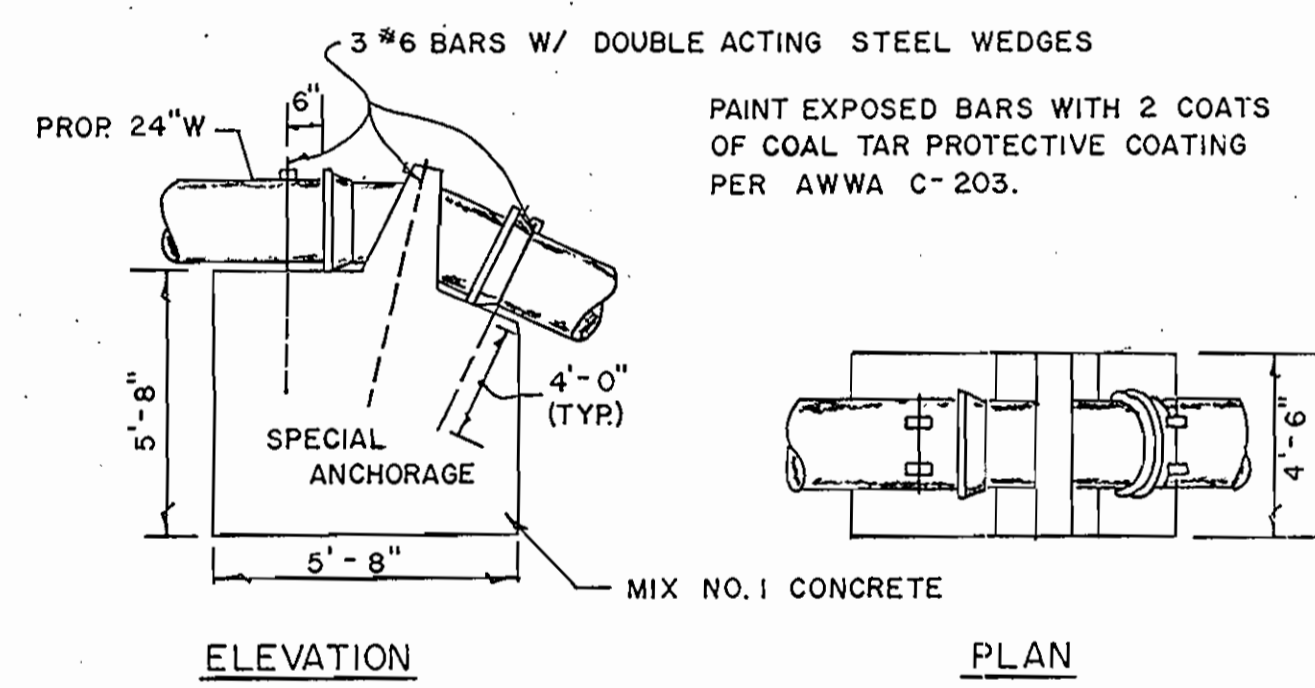
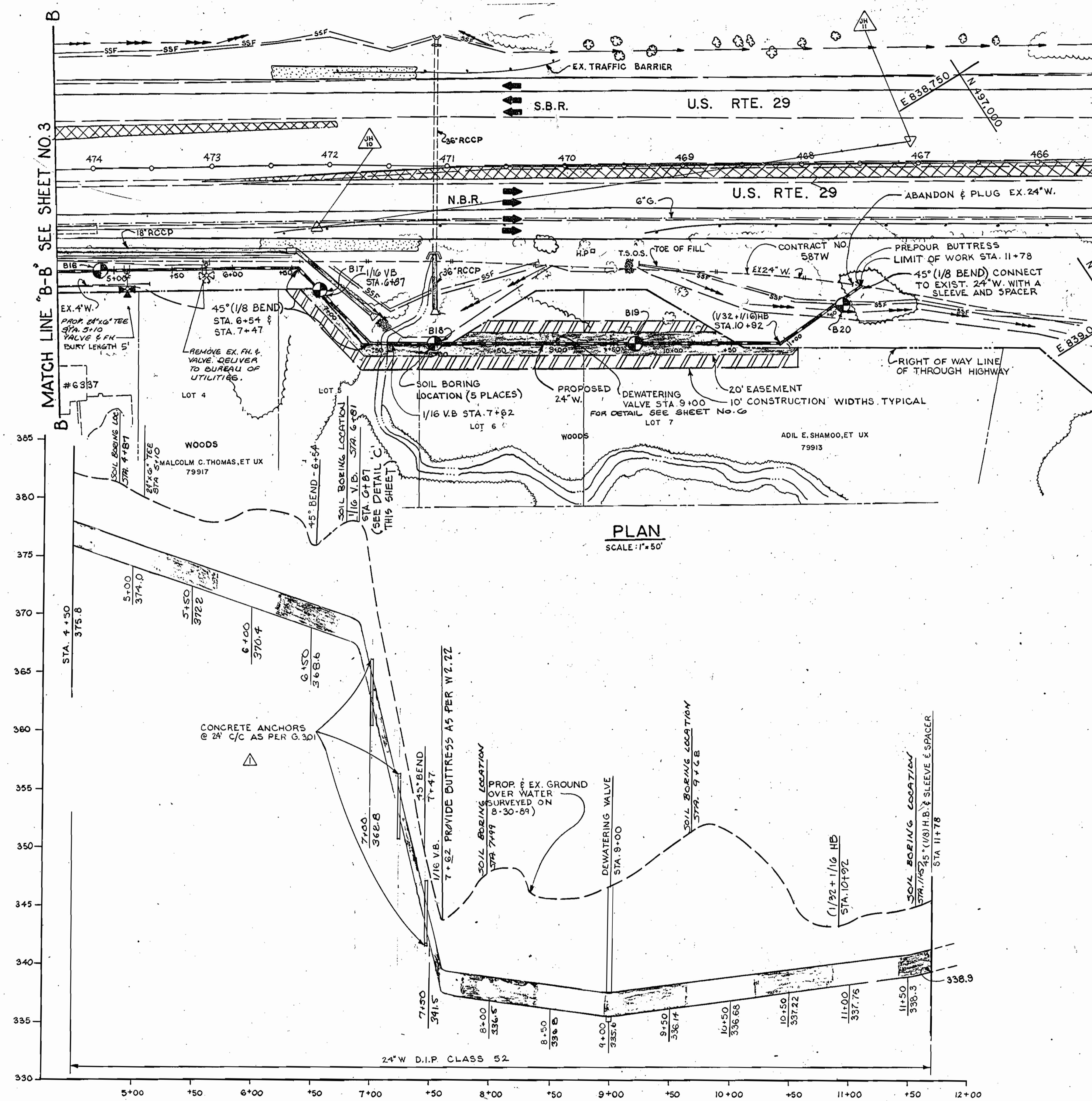
REBAR & CAP
JH-10

N 496467.9650
E 838562.3883



JH-11

N 496932.8981
E 838774.7107



DETAIL "C"
NOT TO SCALE
▲ CONG. ANCHORS 3 IN NOS. NOW PLACED AT 24" C/C INSTEAD OF 35" C/C

STAKEOUT TABLE 24" W.		
POINT ON 24" W.	TRAVERSE ANGLE OFFSET	RIGHT ANGLE OFFSET
STA. 0+00 45° H.B. CON. TO EX. 24" W.	JH-9 TO JH-10 17'	17' RT.
STA. 0+22 45° H.B.	JH-9 TO JH-10 32'	34' RT.
STA. 6+54 45° H.B.	JH-9 TO JH-10 65'	35' RT.
STA. 7+47 45° H.B.	JH-10 TO JH-11 32'	104' RT.
STA. 10+92 45° H.B. CON. TO EX. 24" W.	JH-10 TO JH-11 377'	155' RT.
STA. 11+78 45° H.B. CON. TO EX. 24" W.	JH-10 TO JH-11 453'	117' RT.

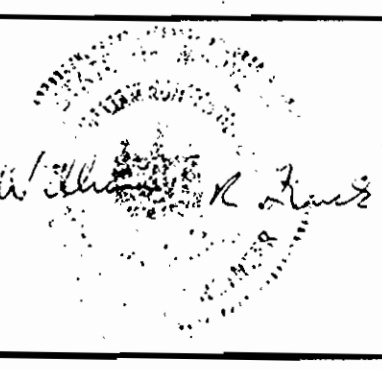
SHA SHEET NO. 389 OF 435
SHA CONTRACT NO. HO-630-501-770

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. [Signature] 12/29/89
DIRECTOR OF PUBLIC WORKS DATE

William [Signature] 12/26/89
CHIEF, BUREAU OF UTILITIES DATE

JOHN E. HARMS JR.
& ASSOCIATES INC.
90 GOVERNOR RITCHIE HIGHWAY
PASADENA, MD 21122

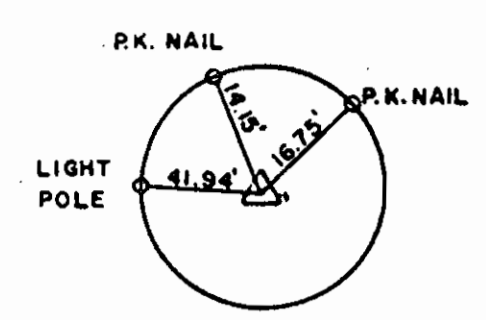


DES: A.K.	ADDENDUM #1 3-6-90
DRN: J.R.N.	
CHK: W.R.G.	
DATE: 12/29/89	
BY NO.	REVISION
DATE	

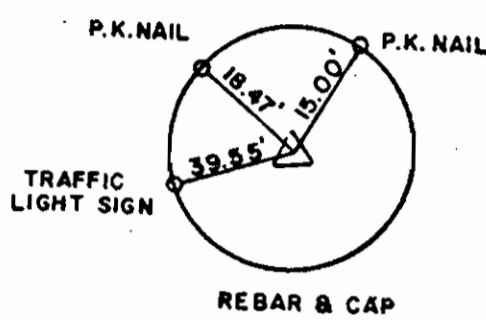
600' SCALE MAP NO. 36 BLOCK NO. 13

U.S. 29 WATER & SEWER RELOCATIONS
CAPITAL PROJECT S-6149
CONTRACT 24-1947
ELECTION DISTRICT 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 4R OF 6

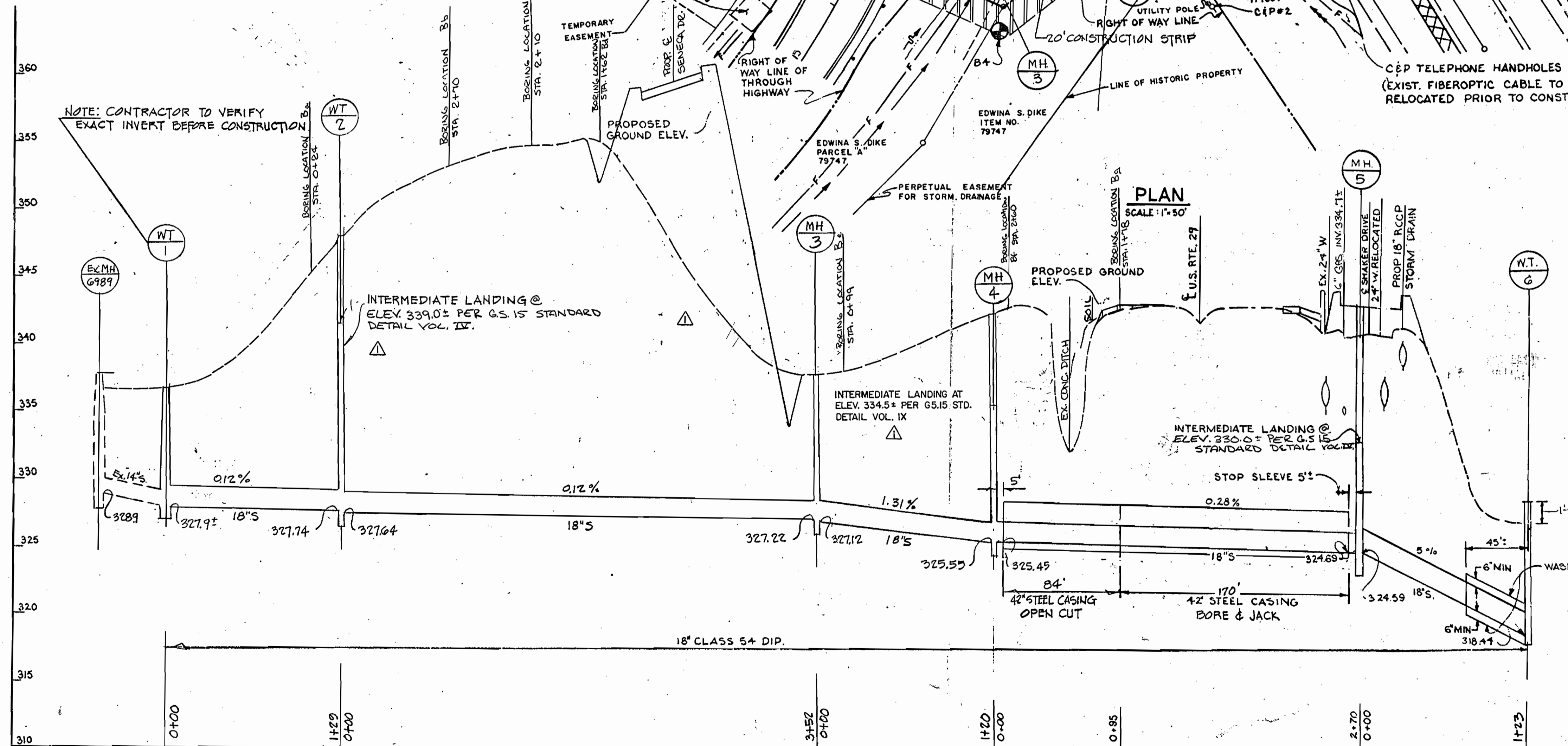


JH-1
N 493343.1363
E 836744.3139



JH-2
N 493710.1796
E 836920.7904

BM 1 CUT IN TOP CURB NUMBER 29-6 YELLOW PAINT ELEV 345.58



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

M.H.	STATION	OFFSET
3	JH-1 TOWARD JH-2 365'	345' LT.
4	JH-1 TOWARD JH-2 378'	226' LT.
5	JH-1 TOWARD JH-2 353'	43' RT.
6	JH-1 TOWARD JH-2 350'	169' RT.

* FOR M.H. #1 & #2 SEE COORDINATES IN PLAN.

EX. GRADE OVER PROP. SEWER MAIN CHANGED FROM EX. M.H. 6989 TO THE BEGINNING OF U.S. 29 AND DEPTH OF MHS ADJUSTED ACCORDINGLY.

EX. CONC. DITCH SHOWN IN PROFILE REMOVED

INTERMEDIATE LANDING CHANGED IN FOLLOWING MHS

M.H.	INT. LANDING ELEV.	NEW	OLD
WT 2		339.0±	341.5
MH 4		334.5±	0

COORDINATE TICK N494,250 E836,250

SHA SHEET NO. 390 OF 435
SHA CONTRACT NO. HO-630-501-770

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Jana P. ... 12-29-89
DIRECTOR OF PUBLIC WORKS DATE

... 12-28-89
CHIEF, BUREAU OF ENGINEERING DATE

... 12-28-89
CHIEF, UTILITY DIVISION DATE

JOHN E. HARMS JR.
& ASSOCIATES INC.
90 GOVERNOR RITCHIE HIGHWAY
PASADENA MD 21122

DES: A.K.	ADDENDUM #1 3-6-90
DRN: J.R.N.	
CHK: W.R.G.	
DATE: 1/16/90	
BY NO.	REVISION
DATE	600' SCALE MAP NO. 36 BLOCK NO. 19

U.S. 29 WATER & SEWER RELOCATIONS
CAPITAL PROJECT S-6149
CONTRACT 24-1947
ELECTION DISTRICT 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

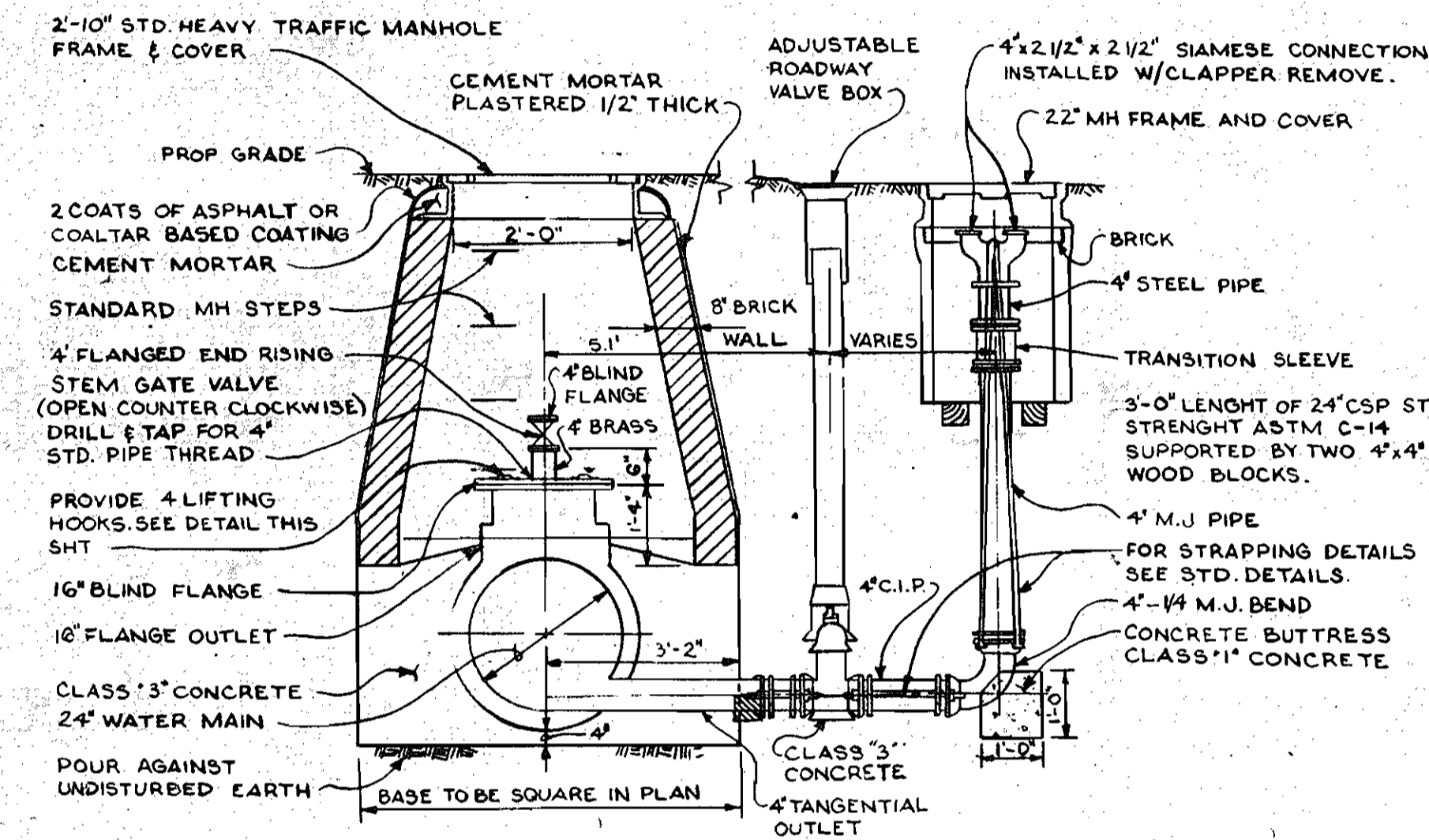
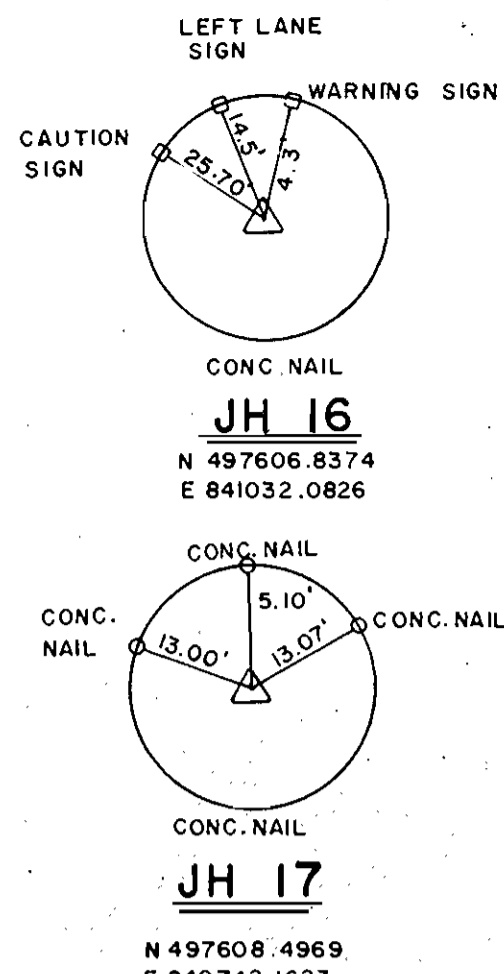
AS-BUILT

SHEET 5R OF 6

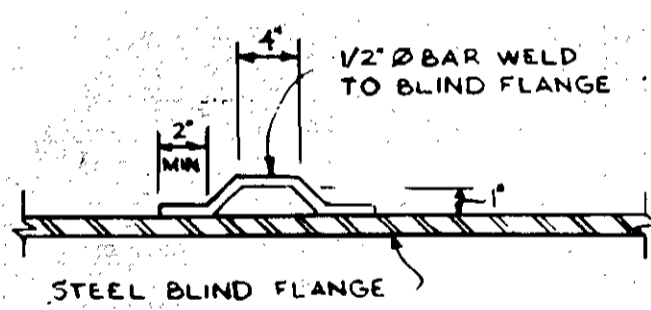
SEQUENCE OF CONSTRUCTION FOR
RELOCATED 30" & 8" SEWER MAINS

- Kor-N-Seal M.H. #1360 and M.H. #4098, plug the incoming 30" S and install the prop. 30" S. Plug the new outlet 30" S and unplug the inlet. Follow same procedure for the 8" S at the ex. M.H. #4098. Contractor is to submit method to divert flow during Kor-N-Seal connection.
- Extend the prop. 30" S & 8" S to new MH #1 and test.
- From new MH #1, extend the prop. 30" S to the vicinity of the ex. 30" S.
- Install a submersible pump at new MH #1 and discharge to ex. MH #A by a temporary force main routed beneath the ex. Broken Land Parkway Bridge.
- Plug the outlets to the ex. 30" S and 8" S at ex. MH's 1360 & 4098, and the 30" S at new MH #1. Unplug the new 30" S & 8" S at ex. MH's 1360 & 4098 and start pumping.
- Remove the interfering section of ex. 30" S and construct the remaining portion of the prop. 30" S. Install a new MH #2 on the ex. 30" S.
- Unplug the outlet at new MH #1 and remove the pump and temporary force main. Abandon the ex. 30" S & 8" S and ex. MH's as shown on the plan.

POINT	BEARING	DISTANCE
JH # 16		
JH 17	N 89° 40' 19.36" W	289.93

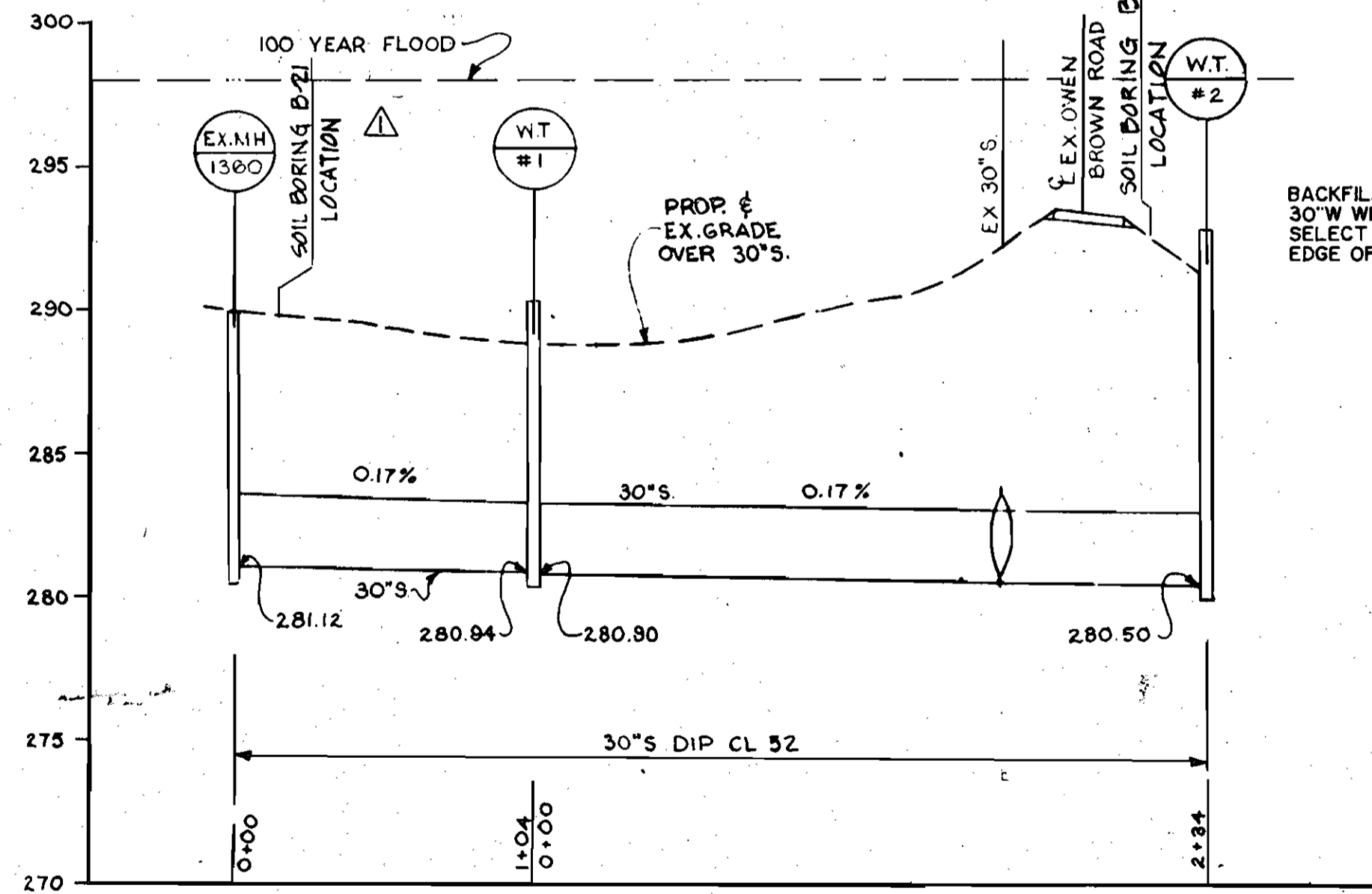


DEWATERING DETAIL
NOT TO SCALE



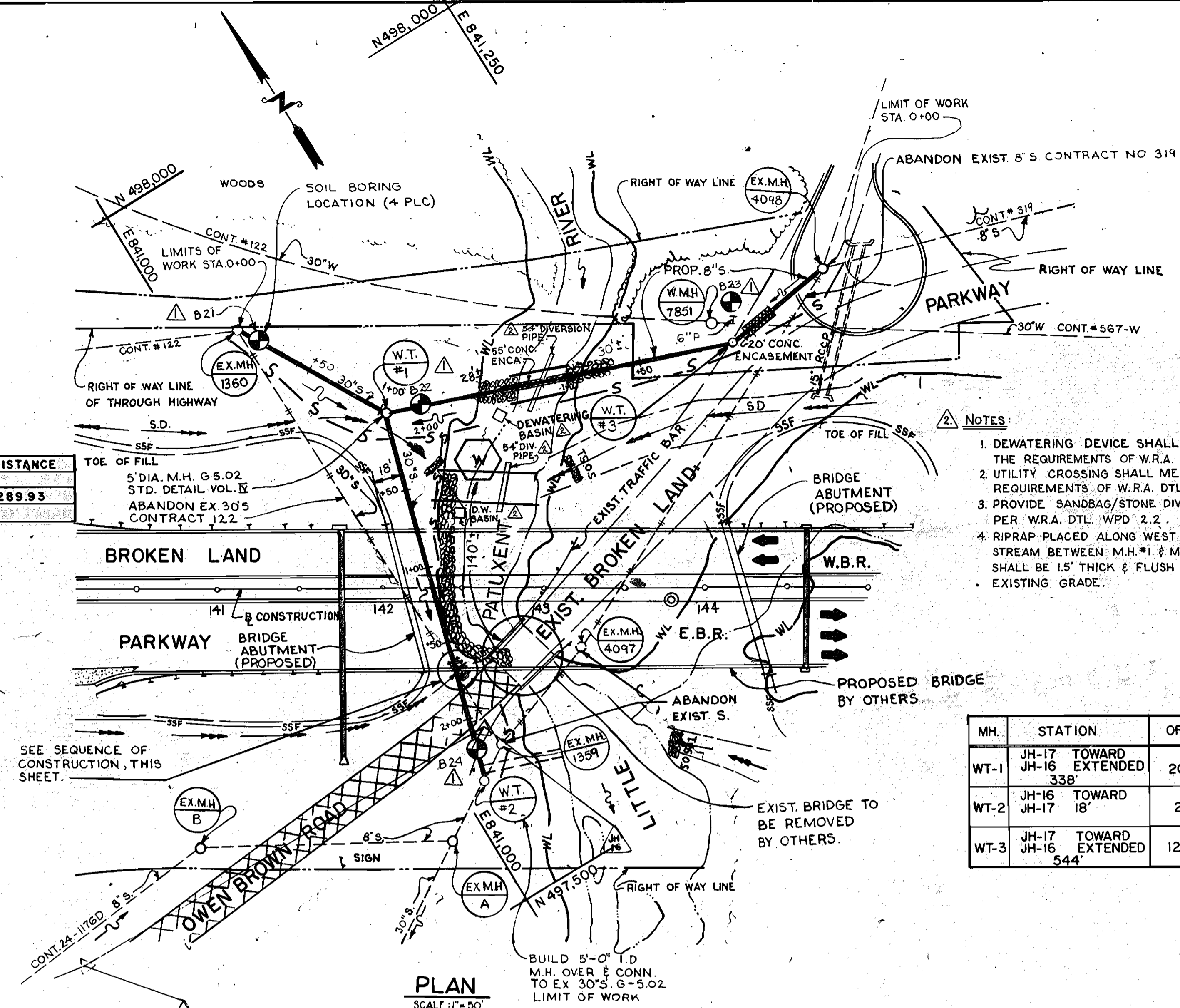
LIFTING HOOK DETAIL
SCALE 1/2" = 1'-0"

- SEQUENCE OF CONSTRUCTION FOR STREAM CROSSING
- Obtain all required permits, approvals, licenses from the appropriate agencies.
 - Notify the Enforcement Division at least 5 days prior to initiation of construction and 5 days after work ends at (301) 974-2641.
 - Install perimeter controls. The perimeter controls shall consist of silt fences as per the detail this sheet.
 - Divert Little Patuxent River (Ref. WRA Dtl. WPD 2.2)
 - Dewater the construction area. All dewatering discharges shall be diverted to a dewatering basin per WPD 1.1. before re-entering stream.
 - Complete construction in Little Patuxent River.
 - Stabilize the disturbed banks using filter fabric and class II rip rap per WPD 3.1.
 - Remove stream diversion.
 - Stabilize all disturbed areas.
- SEQUENCE OF CONSTRUCTION FOR RIP RAP PLACEMENT ON WEST BANK
- See Steps 1, 2 and 3 of sequence of construction for Stream Crossing.
 - Divert Little Patuxent River (Ref. WRA Dtl. WPD 2.2) approximately 20 feet, beginning upstream.
 - Dewater construction area. All dewatering discharges shall be diverted to a dewatering basin per WPD 1.1 before re-entering stream.
 - Place rip rap on west bank.
 - Remove upstream diversion approximately 20 feet downstream.
 - Continue Steps 2 thru 5 until all rip rap is placed.
 - Stabilize all disturbed areas.



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

PLAN
SCALE 1" = 50'



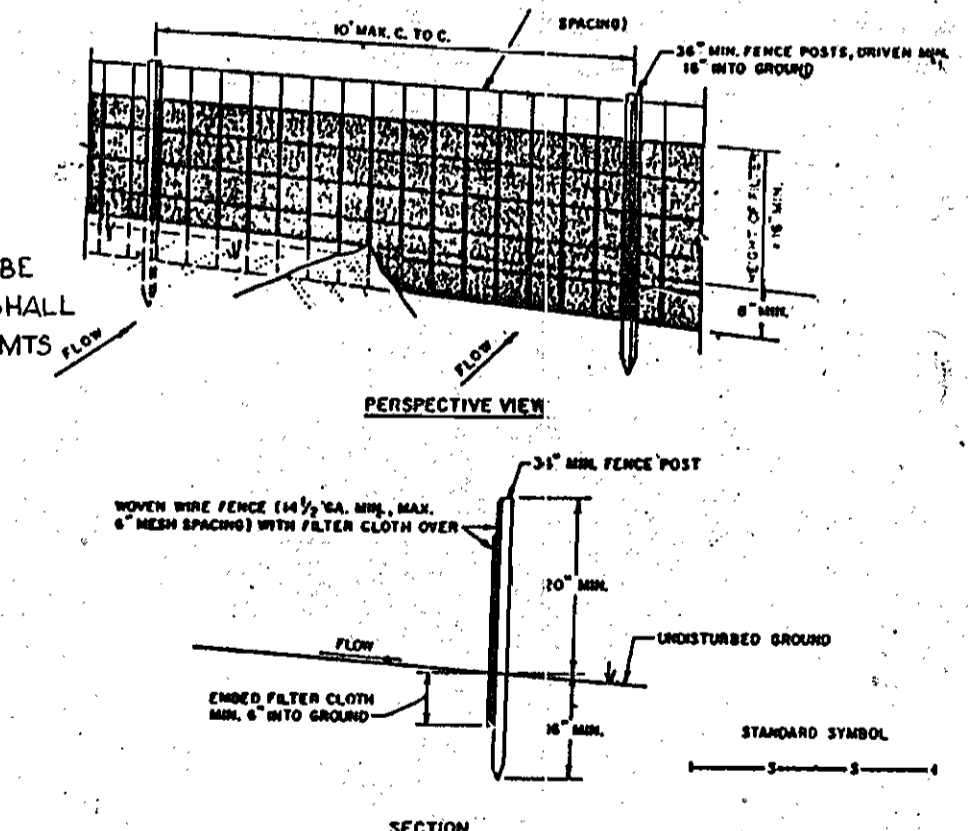
- NOTES:
- DEWATERING DEVICE SHALL MEET THE REQUIREMENTS OF W.R.A. DTL WPD 1.1.
 - UTILITY CROSSING SHALL MEET THE REQUIREMENTS OF W.R.A. DTL WPD 3.1.
 - PROVIDE SANDBAG/STONE DIVERSION PER W.R.A. DTL WPD 2.2.
 - RIPRAP PLACED ALONG WEST BANK OF STREAM BETWEEN M.H. #1 & M.H. #2 SHALL BE 15" THICK & FLUSH WITH THE EXISTING GRADE.

MH.	STATION	OFFSET
WT-1	JH-17 TOWARD JH-16 EXTENDED 338'	20' LT.
WT-2	JH-16 TOWARD JH-17 18'	26' LT.
WT-3	JH-17 TOWARD JH-16 EXTENDED 544'	127' LT.

SOIL EROSION AND SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1 and 14 days for all other disturbed or graded areas on the project site.
- 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 seedings do not allow for proper germination and establishment of grasses.
- 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.
- Site Analysis:

Total Area of Site	3.96 Acres
Area Disturbed	3.82 Acres
Area to be roofed or paved	1.06 Acres
Area to be vegetatively stabilized	2.76 Acres
- Any sediment control practice which is disturbed by grading activity or placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County DWS sediment control inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- All excavated material will be placed on the high side of the trench.
- Erosion control measures will include sandbag filters, gravel filters, straw mulch, or any other applicable devices which will prevent erosion and sediment damage to adjacent properties, in accordance with the contract documents.
- Restoration shall proceed on each section of the right of way after each 1,000 linear feet of pipe installation. If it is not the proper seeding season then a straw mulch shall be placed over the disturbed area until final restoration can be performed. If as a result of limited access a portion of the right of way must be used as an access road then the disturbed areas on either side of the access road should be restored. The maximum width of an access road shall be 15 feet. The contractor shall regrade at completion of project all such areas to conform to natural topography of the area so as to avoid trapping of water. The access road shall be vegetated when it is no longer used.
- A buffer strip of undisturbed ground shall be left between the stream bank and the construction area in those areas where construction comes extremely close to the stream and a straw bale or sandbag filter berm shall be placed along the top of the stream bank.
- Sediment Removal - All trapped sediment is to be removed and disposed of at the authorized landfills prior to removal of sediment control structures.
- All tree removal and repair work shall be conducted in accordance with the State of Maryland, Department of Forest and Parks.
- Roadside ditches and drainage pipes to be returned to original condition following completion of construction.



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- NOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO NOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 - WELD TWO SECTIONS OF FILTER CLOTH TOGETHER AT EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 - MAINTENANCE SHALL BE PERFORMED AS RECOMMENDED BY THE SUPPLIER TO PREVENT 'BAGS' DEVELOPING IN THE SILT FENCE.
- POSTS: STEEL EITHER T OR U TYPE OR 2" PINEWOOD
FENCE: NOVEN WIRE, 14" GA. 2x4" PAX. FISH DRYING
FILTER CLOTH: FILTER X, 18" X 10' UNITS OR APPROVED EQUAL
PREPARED UNIT: GEOMAT, DIVERSION, OR APPROVED EQUAL
- SILT FENCE
NTS

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

- BOHRING NUMBERS CHANGED IN THE FOLLOWING WAY
- | | | |
|-----|------------|-----|
| B22 | CHANGED TO | B21 |
| B23 | " | B22 |
| B24 | " | B23 |
| B21 | " | B24 |

SHA SHEET NO. HO-630-501-770

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director: <i>James J. ...</i> DATE: 12-22-89 Chief, Bureau of Engineering: <i>...</i> DATE: 12-22-89 Chief, Bureau of Utilities: <i>...</i> DATE: 12-26-89 Chief, Utility Division: <i>...</i> DATE: 12-26-89		JOHN E. HARMS JR. & ASSOCIATES INC. 90 GOVERNOR RITCHIE HIGHWAY PASADENA MD 21122 Professional Engineer Seal		DES: A.K. JEH DRN: J.R.N. CHK: W.R.G. DATE: 12/22/89		BORING NUMBERS CHANGED STREAM DIVERSION, ADDED TO PLAN & PROFILE AND SEQUENCE OF CONSTRUCTION ADDED. 3/90 3/90		U.S. 29 WATER & SEWER RELOCATIONS CAPITAL PROJECT S-6149 CONTRACT 24-1947 ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND		SCALE AS SHOWN SHEET 6R OF 6	
---	--	---	--	---	--	---	--	---	--	---------------------------------	--