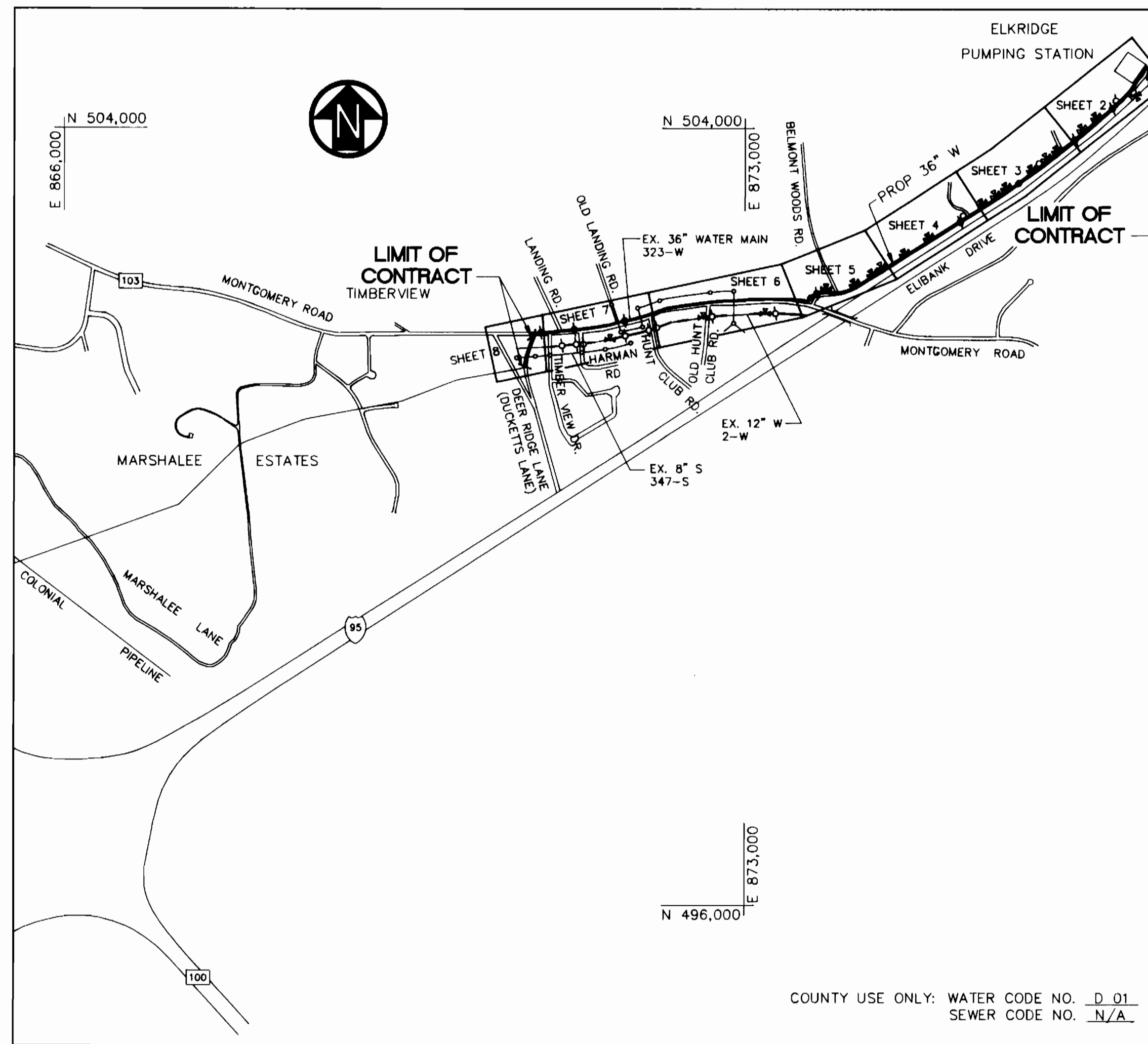


INDEX OF SHEETS

- SHEET 1 - TITLE SHEET
- SHEET 2 - PLAN AND PROFILE
- SHEET 3 - PLAN AND PROFILE
- SHEET 4 - PLAN AND PROFILE
- SHEET 5 - PLAN AND PROFILE
- SHEET 6 - PLAN AND PROFILE
- SHEET 7 - PLAN AND PROFILE
- SHEET 8 - PLAN AND PROFILE
- SHEET 9 - DETAIL SHEET
- SHEET 10 - DETAIL SHEET
- SHEET 11 - DETAIL SHEET
- SHEET 12 - TRAFFIC CONTROL
- SHEET 13 - TRAFFIC CONTROL

LEGEND

- EX FH
- EX VALVE
- EX SEWER MH
- PROP FH
- PROP VALVE / ARV/BLOWOFF



VICINITY MAP
SCALE : 1"=1000'

TYPE OF BUILDINGS N/A
NUMBER OF PARCELS N/A
DRAINAGE AREA PATAPSCO
NO. OF WATER HOUSE CONNECTIONS N/A

GENERAL NOTES

1. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES 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. DATUM.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS. \ominus , EXCEPT FOR TEST PIT INFORMATION WHICH IS INDICATED AS TOP OF PIPE.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6".
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 SYMBOL \blacksquare AT THE LOCATION OF THE TEST PIT. NOTES CONTAINING THE RESULTS OF THE TEST PITS ARE INCLUDED ON SHEET OF 11. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED AND DUG BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION 531-5533
 - BALTIMORE GAS & ELECTRIC COMPANY CONTRACTOR SERVICES 850-4620
 - BALTIMORE GAS & ELECTRIC COMPANY UNDER GROUND DAMAGE CONTROL 859-9004
 - BALTIMORE GAS & ELECTRIC COMPANY TROUBLE SHOOTING 298-9040
 - MISS. UTILITY 1-800-257-7777
 - COLONIAL PIPE LINE COMPANY 795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 313-4900
 - CHESAPEAKE & POTOMAC (C&P) TELEPHONE COMPANY 1-800-257-7777
9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT.
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 36" MAIN.
11. THE 36" WATER MAIN SHALL BE D.I.P. CLASS 54. ALL OTHER WATER MAINS TO BE D.I.P. CLASS 52, UNLESS OTHERWISE NOTED.
12. TOP 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 STANDARD DETAILS, UNLESS OTHERWISE SHOWN ON THE PLANS.
15. 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 1000 OF THE STANDARD SPECIFICATIONS.
16. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
17. CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES DURING CONSTRUCTION.
18. TRENCH, BACKFILL & ROAD REPAIR SHALL BE DONE BY CONTRACTOR AS SHOWN ON DETAIL SHEET.
19. THE CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE ANY EXISTING SEDIMENT CONTROL DEVICES ENCOUNTERED AND DISTURBED DURING CONSTRUCTION. ALL SUCH DISTURBED DEVICES SHALL BE REPAIRED OR REPLACED BEFORE LEAVING THE WORK SITE AT THE END OF EACH DAY.
20. SALVAGE MATERIAL AS SHOWN ON PLANS SHALL BE REMOVED, CLEANED & DELIVERED TO HOWARD COUNTY BUREAU OF UTILITIES YARD BY CONTRACTOR. SALVAGABLE APPURTENANCES ARE NOTED ON THE PLANS.
21. THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT CONTROL DEVICES IN ACCORDANCE WITH PLANS & SPECS.
22. THE CONTRACTOR SHALL REMOVE NO LESS THAN 20 L.F. OF THE EXISTING 36" MAIN FOR THE INSTALLATION OF HYDRANTS IN THE VICINITY OF STATIONS 6+00 TO 36+50 (10' EACH SIDE OF PROPOSED HYDRANT). THE CONTRACTOR WILL CONSTRUCT A BULKHEAD ON EACH EXPOSED END OF THE EXISTING 36" PIPE AS DETAILED.
23. WHERE RESTRAINED JOINTS ARE ON THE DRAWING FOR THE 36" D.I.P. TR FLEX RESTRAINED JOINTS SHALL BE USED. RESTRAINED JOINTS FOR FITTINGS OR CONNECTION TO EXISTING PIPE MAY BE MECHANICAL JOINT WITH MEGALUG RETAINER GLANDS.
24. ALL TRENCH CONSTRUCTION WILL BE LIMITED IN LENGTH TO THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED AND STABILIZED BY THE END OF ONE WORKDAY, WHICHEVER IS SHORTER.

BID ITEM NO.	ITEM	QUANTITIES	BID	AS-BUILT	MATERIAL	SUPPLIER
A-4	36" WATER MAIN (RESTRAINED JOINT)	579 LF				
A-3	36" WATER MAIN (TYTON JOINT-M.J.)	6863 LF				
A-4	36" x 36" TEE AND 36" PLUG	1 EA.				
A-3	36" x 8" TEE	1				
A-3	36" x 12" TEE	1				
A-3	36" x 6" F.H. TEE	9				
A-4	36"x22-1/2" BEND(RESTRAINED JOINT)	3				
A-6	36" BUTTERFLY VALVE	2				
A-3	36" CAP	2 temp.				
A-3	36" x 22.5" BEND (TYTON JOINT)	1				
A-3	36" DIP TO 36" PCCP ADAPTER	2				
A-4	36"-45" BEND (RESTRAINED JOINT)	2				
A-14,A-17	12" WATER MAIN	17 LF				
A-14	12" x 12" TEE	1				
A-14,A-17	12" - 45" BEND	2				
A-14	12" PLUG	1				
A-14	12" VALVE	1				
A-5	8" WATER MAIN	227 LF				
A-5	8" x 6" F.H. TEE	1				
A-5	8"-90 BEND	1				
A-5	8" VALVE	1				
A-5	8" CAP (TEMP)	1				
A-18	8" CAP	1				
A-11	6" WATER MAIN	80 LF				
A-11	6" VALVE	10				
A-3	6" PLUG (TEMP ● HYDRANTS)	9				
A-5	1" COPPER SERVICE	70 LF				
A-16	CONC. ENCACEMENT	90 LF				
A-8	ACC / B.O. MH	2				
A-7	ACC / ARV MH	2				
A-9	ACC MH	2				
A-11	FIRE HYDRANTS-6"	10				
A-14,5,6,11	VALVE BOXES	14				
A-12	6" MECH PLUG	9				
A-18	8" MECH PLUG	1				
A-14	12" MECH PLUG	1				
A-3	BRICK BULKHEAD	22				
A-15	36" PIPE REMOVAL	1208 LF				
	12" PIPE REMOVAL	18 LF				
A-3	8" PIPE REMOVAL	300 LF				
A-14,A-17						
A-10	REMOVE EX. ARV MH	1				
A-3	FILL - ABANDON - EX. MH & VAULT	4				

CONTRACT NO: W-8169

ELKRIDGE 36" WATER MAIN REPLACEMENT

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

SEDIMENT CONTROL NOTES

1. SEDIMENT CONTROL APPROVAL IS PREDICATED ON DAILY BACKFILLING OF ALL OPEN TRENCHES.
2. PROVISIONS SHALL BE MADE FOR DAILY CLEANUP OF ANY SEDIMENT THAT ACCUMULATES ON THE PUBLIC RIGHT-OF-WAY.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

James M. T. [Signature] 12/16/91
SOIL CONSERVATION SERVICE DATE

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

[Signature] 12/16/91
HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, AND THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

DEVELOPER'S CERTIFICATION

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT

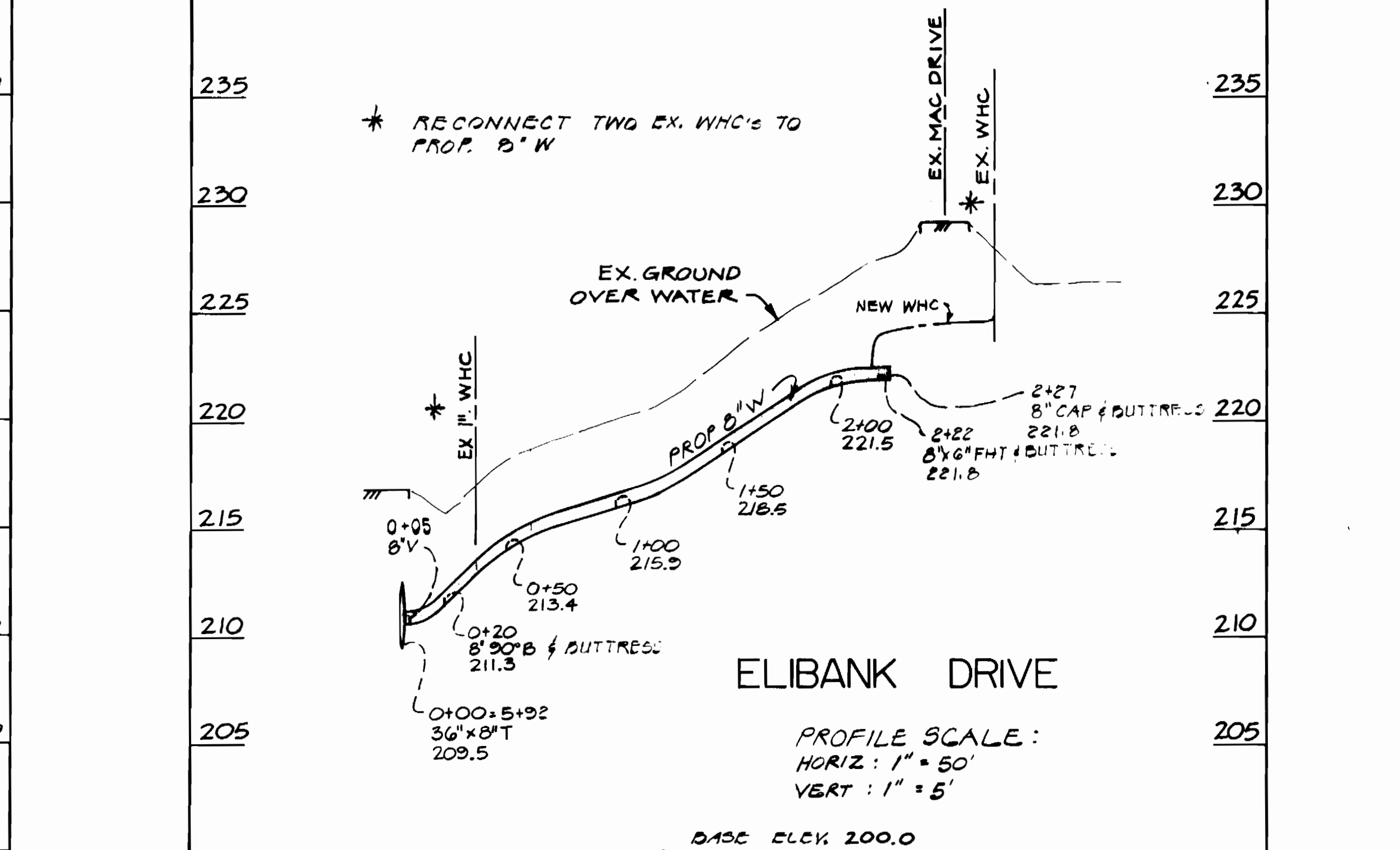
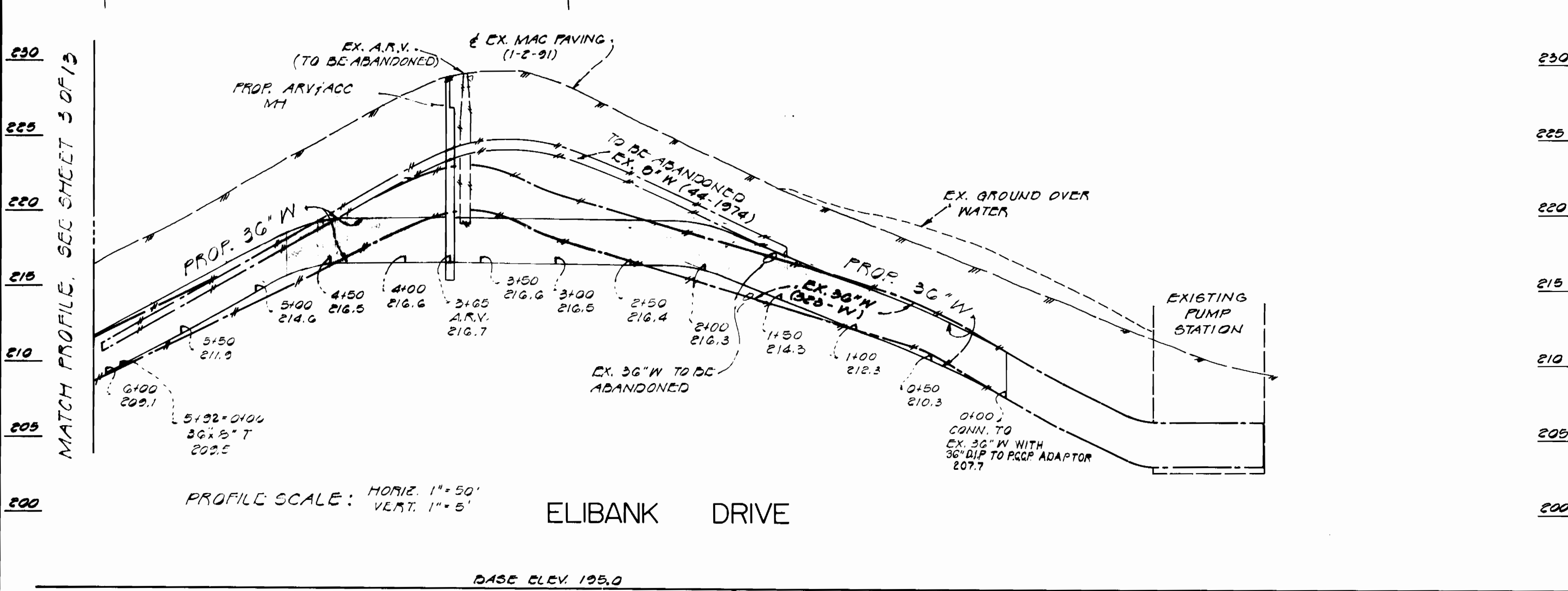
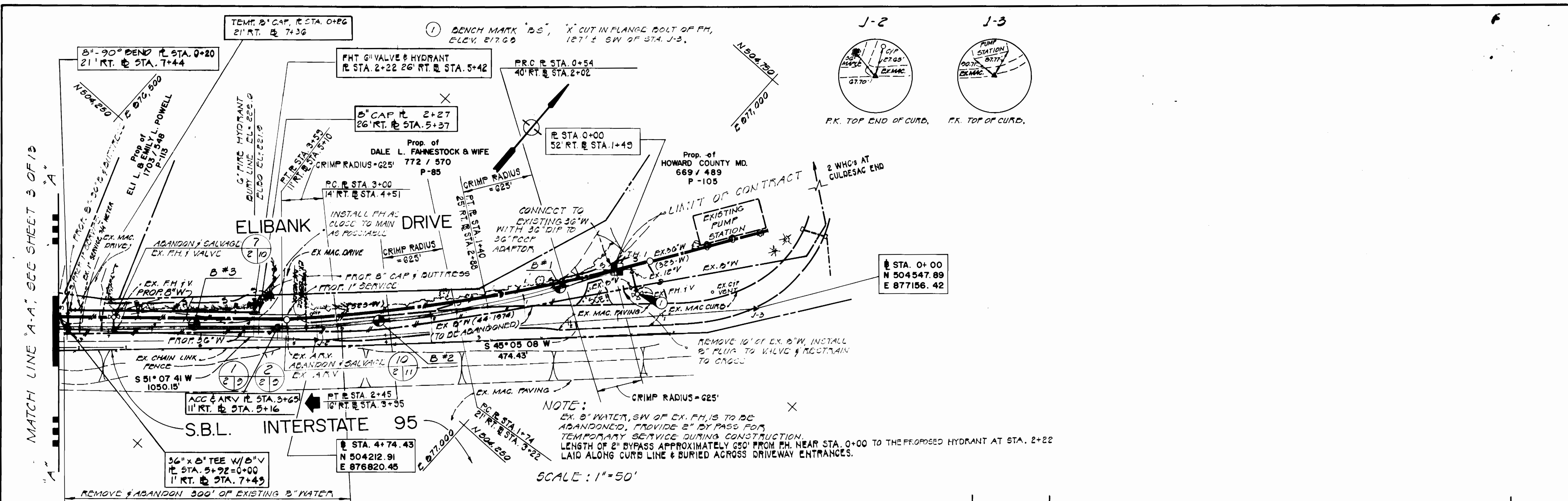
William E. Riley 12/16/91
WILLIAM E. RILEY DATE

ENGINEER'S CERTIFICATION

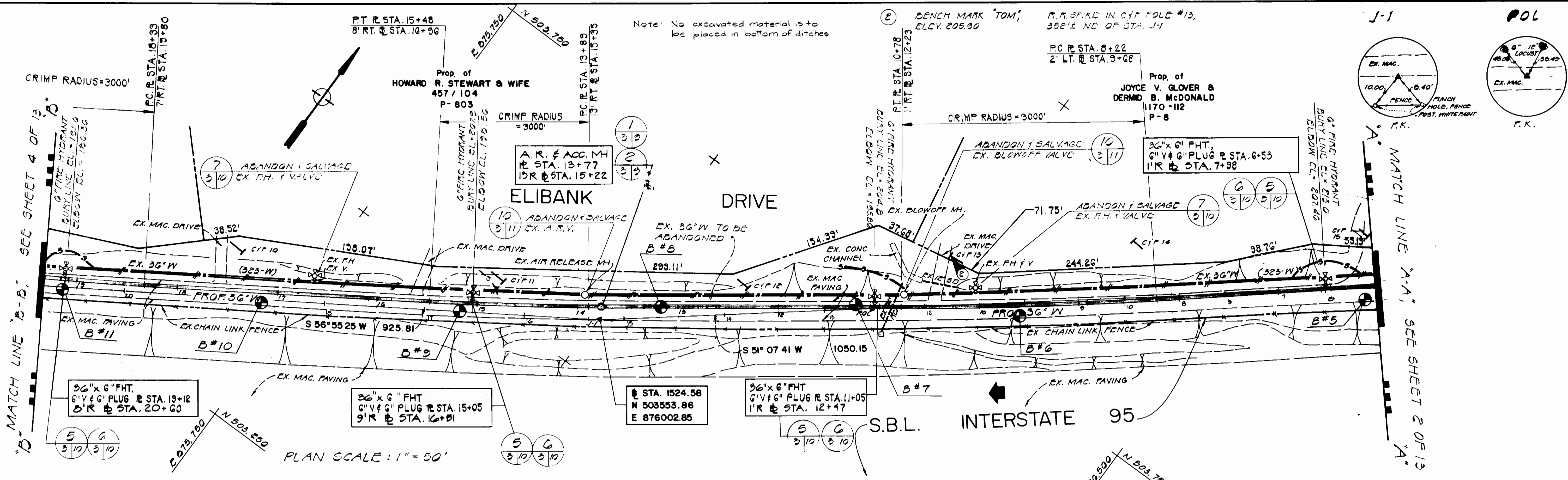
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Richard H. Berich 12/16/91
RICHARD H. BERICH, P.E. DATE

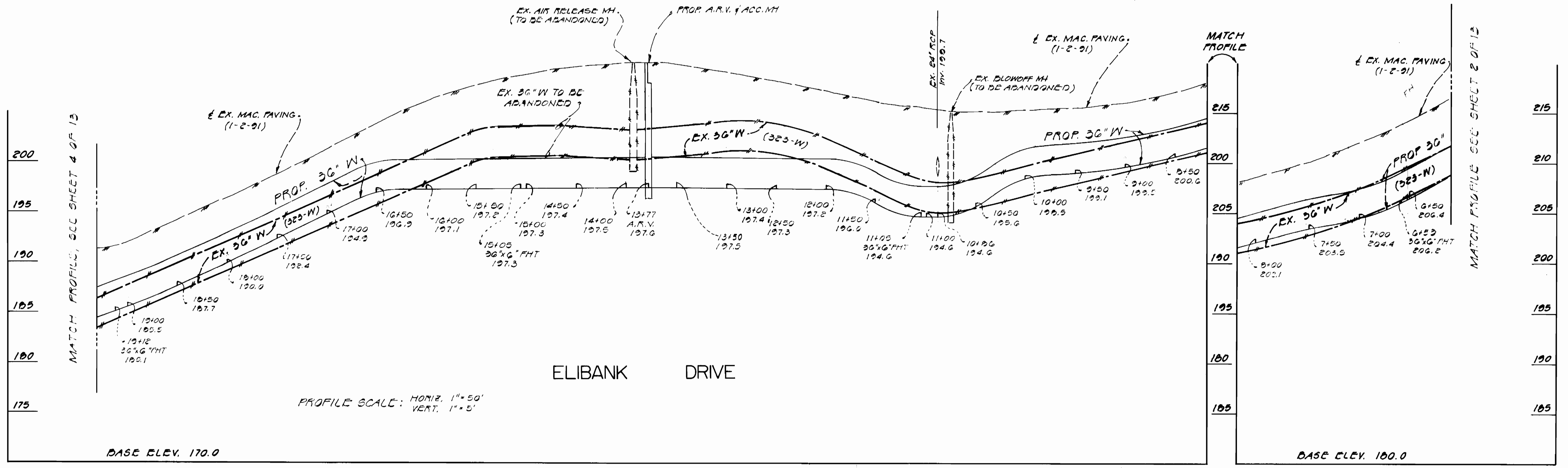
<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>[Signature]</i> 12-13-91 DIRECTOR OF PUBLIC WORKS DATE</p> <p><i>[Signature]</i> 12-13-91 CHIEF, BUREAU OF UTILITIES DATE</p>	<p>PURDUM AND JESCHKE CONSULTING ENGINEERS LAND SURVEYORS</p> <p>1029 North Calvert Street Baltimore, Maryland 21202 Tel: (301)837-0194 Fax: (301)837-3431</p>	<p>DES. RED JR</p> <p>DRN. RED JR</p> <p>CHK. WHD</p> <p>DATE: 09/91</p>	<p style="text-align: center;">TITLE SHEET</p> <p>ELKRIDGE 36" WATER MAIN REPLACEMENT MONTGOMERY ROAD / ELIBANK DRIVE CAPITAL PROJECT W-8169 CONTRACT NO. 44-3116 ELECTION DISTRICT NO. 1 HOWARD COUNTY, MARYLAND</p> <p style="text-align: right;">SCALE AS SHOWN SHEET 1 OF 13</p>
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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DIRECTOR OF PUBLIC WORKS: [Signature] DATE: 12-13-91 CHIEF, BUREAU OF UTILITIES: [Signature] DATE: 12-17-91		PURDUM & JESCHKE CONSULTING ENGINEERS LAND SURVEYORS 1029 North Calvert Street Baltimore, Maryland 21202 301/837-0194		DES: WLB DRN: BB CHK: WFN DATE: 3/91		PLAN AND PROFILE 600' SCALE MAP NO. 32.38 BLOCK NO. 20.2		36" WATER MAIN REPLACEMENT ELIBANK DRIVE Capital Project W-8169 CONTRACT NO 44-3116 ELECTION DISTRICT NO. 1 HOWARD COUNTY, MARYLAND.		SCALE AS SHOWN SHEET 2 OF 13
--	--	--	--	---	--	--	--	---	--	---------------------------------



PLAN SCALE: 1" = 50'



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

BASE ELEV. 170.0

BASE ELEV. 180.0

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 12-18-91
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 12-18-91
CHIEF, BUREAU OF UTILITIES DATE

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS

1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194



DES: WLB			
DRN: BB			
CHK: WFN			
DATE: 3/91	BY NO.	REVISION	DATE

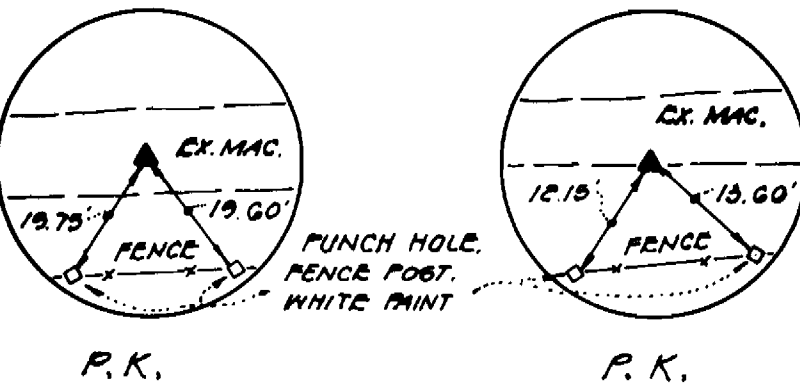
600' SCALE MAP NO. 38 BLOCK NO. 2

36" WATER MAIN REPLACEMENT
ELIBANK DRIVE
Capital Project W-8169
CONTRACT NO 44-3116
ELECTION DISTRICT NO. 1
HOWARD COUNTY, MARYLAND.

SCALE AS SHOWN
SHEET 3 OF 13

POL

2-3

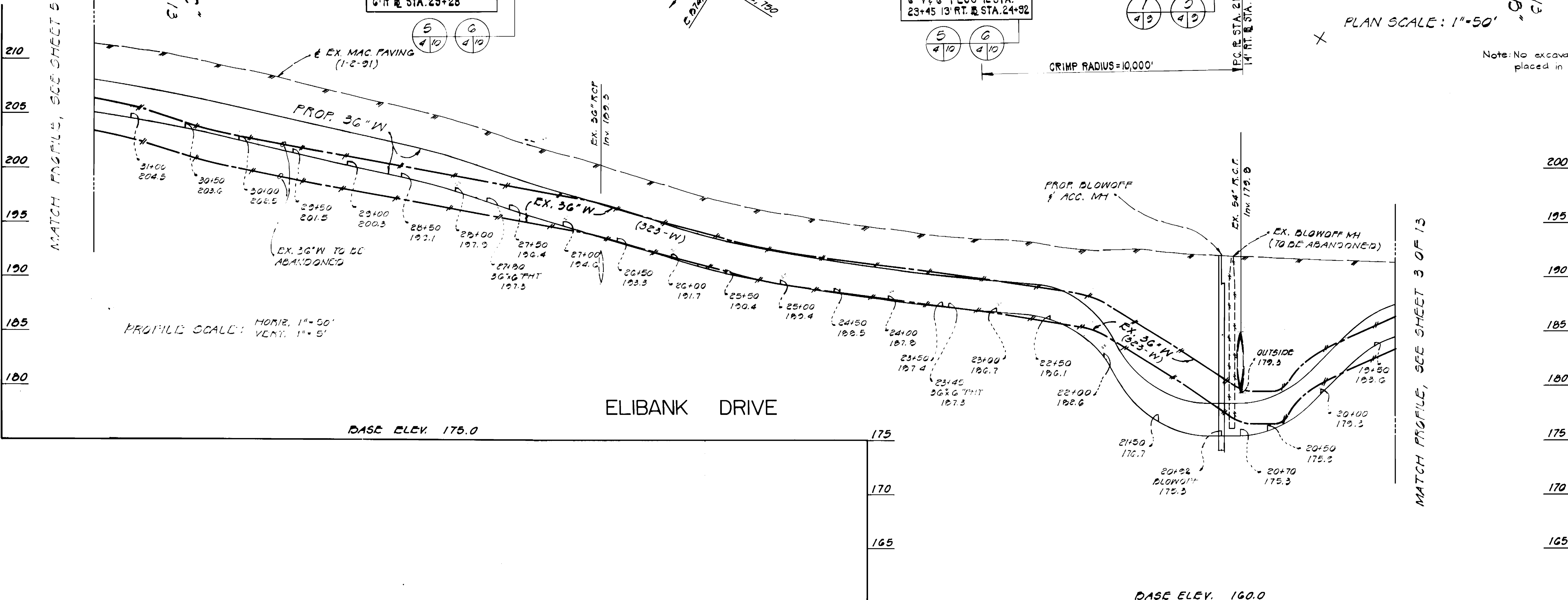
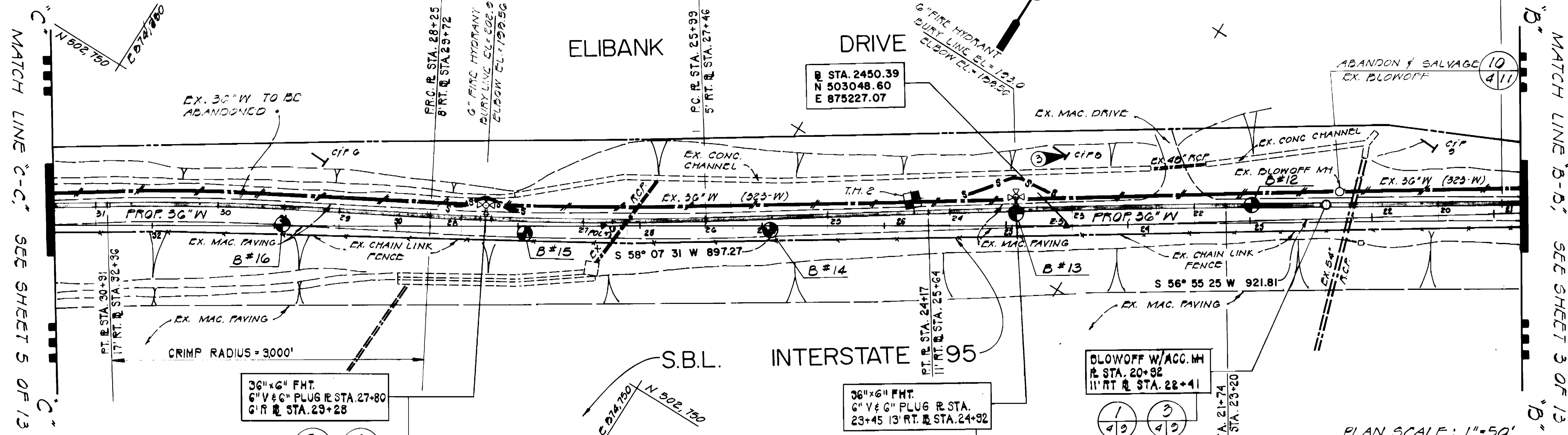


R.K.

R.K.

Prop. of
 HOLY TRINITY CHURCH
 199 / 543
 P-765

3 BENCH MARK "D-52"
 ELEV. 191.50
 R.R. SPIKE IN CIP POLE #9
 27' E NW OF STA. 2-3



Note: No excavated material is to be placed in bottom of ditches

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Director of Public Works
 DATE 12-12-91

Chief, Bureau of Engineering
 DATE 12-12-91

Chief, Bureau of Utilities
 DATE 12-13-91

PURDUM & JESCHKE
 CONSULTING ENGINEERS
 LAND SURVEYORS

1029 North Calvert Street
 Baltimore, Maryland 21202 301/837-0194



DES: WLB			
DRN: BB			
CHK: WFN			
DATE: 3/91	BY	NO.	REVISION

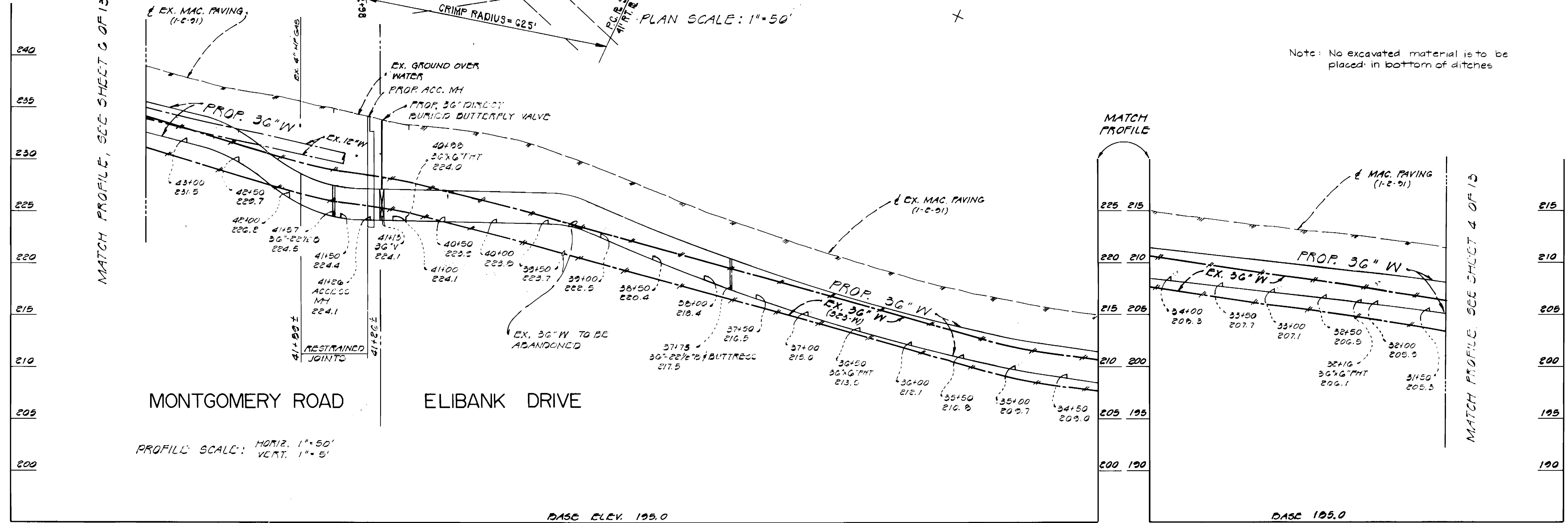
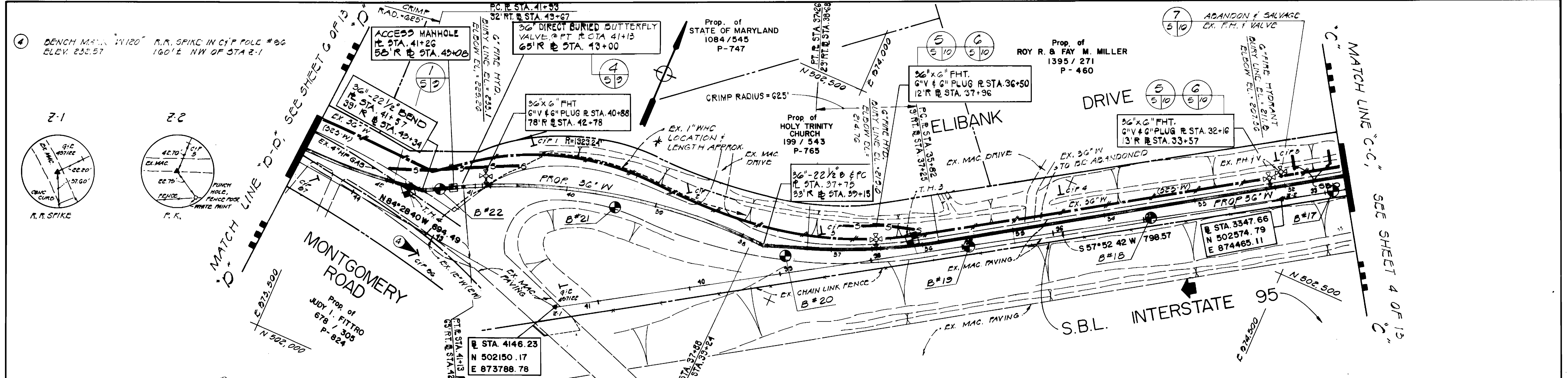
PLAN AND PROFILE

DATE 600' SCALE MAP NO. 38 BLOCK NO. 1,2

36" WATER MAIN REPLACEMENT
 ELIBANK DRIVE
 Capital Project W-8169
 CONTRACT NO. 44-3116
 ELECTION DISTRICT NO. 1
 HOWARD COUNTY, MARYLAND.

SCALE AS SHOWN

SHEET 4 OF 13



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: [Signature] DATE: 12-13-91
 Chief, Bureau of Engineering: [Signature] DATE: 12-12-91
 Chief, Bureau of Utilities: [Signature] DATE: 12-12-91
 Chief, Utility Design Division: [Signature] DATE: 12-12-91

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS

1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194



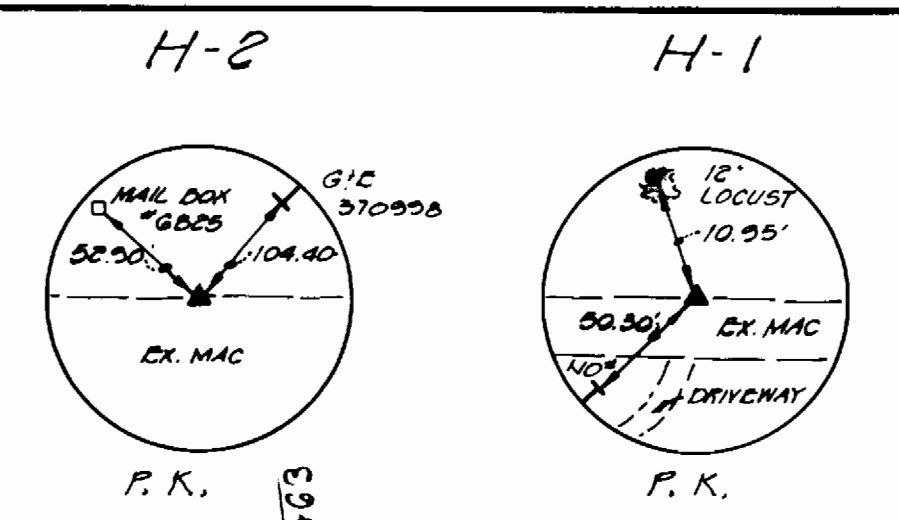
DES: WLB			
DRN: BB			
CHK: WFN			
DATE: 3/91	BY NO.	REVISION	DATE

PLAN AND PROFILE

600' SCALE MAP NO. 38 BLOCK NO. 1

36" WATER MAIN REPLACEMENT
ELIBANK DRIVE
Capital Project W-8169
CONTRACT NO. 44-3116
ELECTION DISTRICT NO. 1
HOWARD COUNTY, MARYLAND.

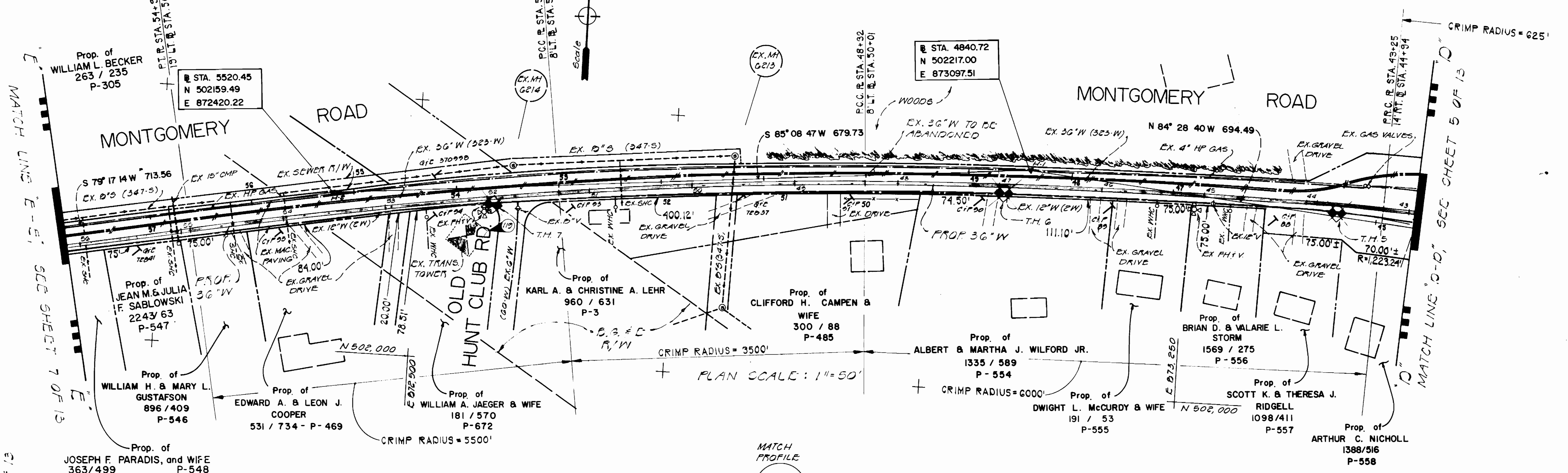
SCALE AS SHOWN
SHEET 5 OF 13



⑩ BENCH MARK WYSA 113
ELEV. 218.07
PUNCH MARK & TOP BOLT,
NE CORNER, G.I.E. TOWER #300-A

Prop of
WILLIAM H. SERVARY & WIFE
656 / 138
P-291

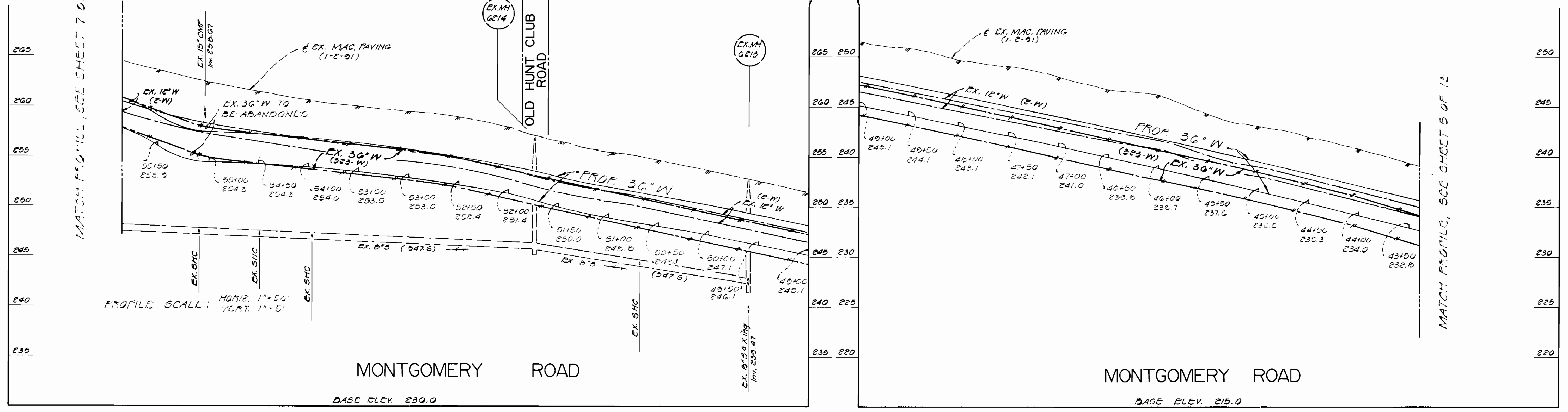
N 502.500
E 873.250



PLAN SCALE: 1"=50'

MATCH PROFILE, SEE SHEET 7 OF 13

MATCH PROFILE, SEE SHEET 5 OF 13



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

BASE ELEV. 230.0

BASE ELEV. 215.0

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Lee 12-13-91
DIRECTOR OF PUBLIC WORKS DATE

Robert B. ... 12-13-91
CHIEF, BUREAU OF UTILITIES DATE

... 12-12-91
CHIEF, UTILITY DESIGN DIVISION DATE

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS

1029 North Calvert Street
Baltimore, Maryland 21202 301/837-0194



DES: WLB				
DRN: BB				
CHK: WFN				
DATE: 3/91	BY NO.	REVISION	DATE	

PLAN AND PROFILE

600' SCALE MAP NO. 38 BLOCK NO. 1

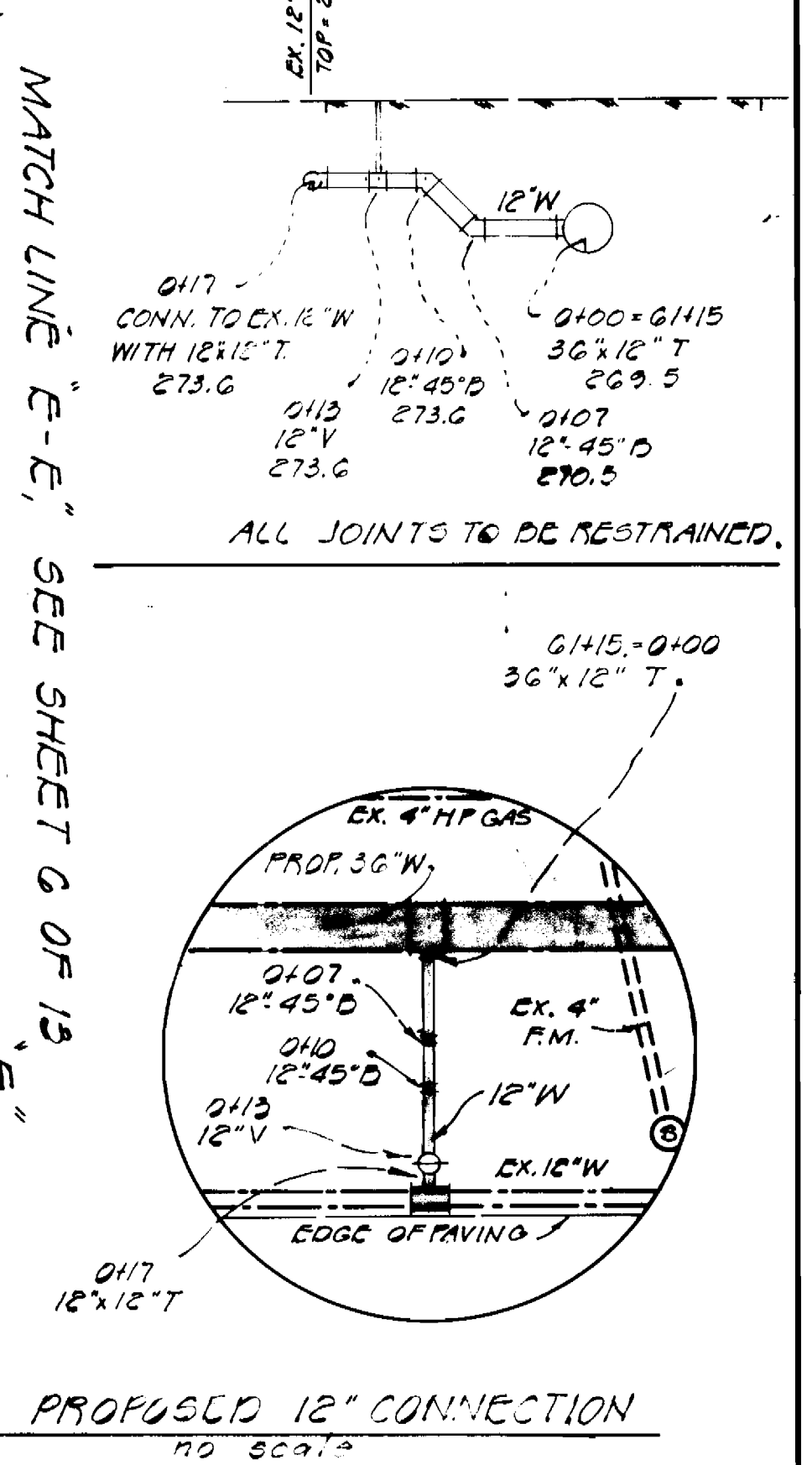
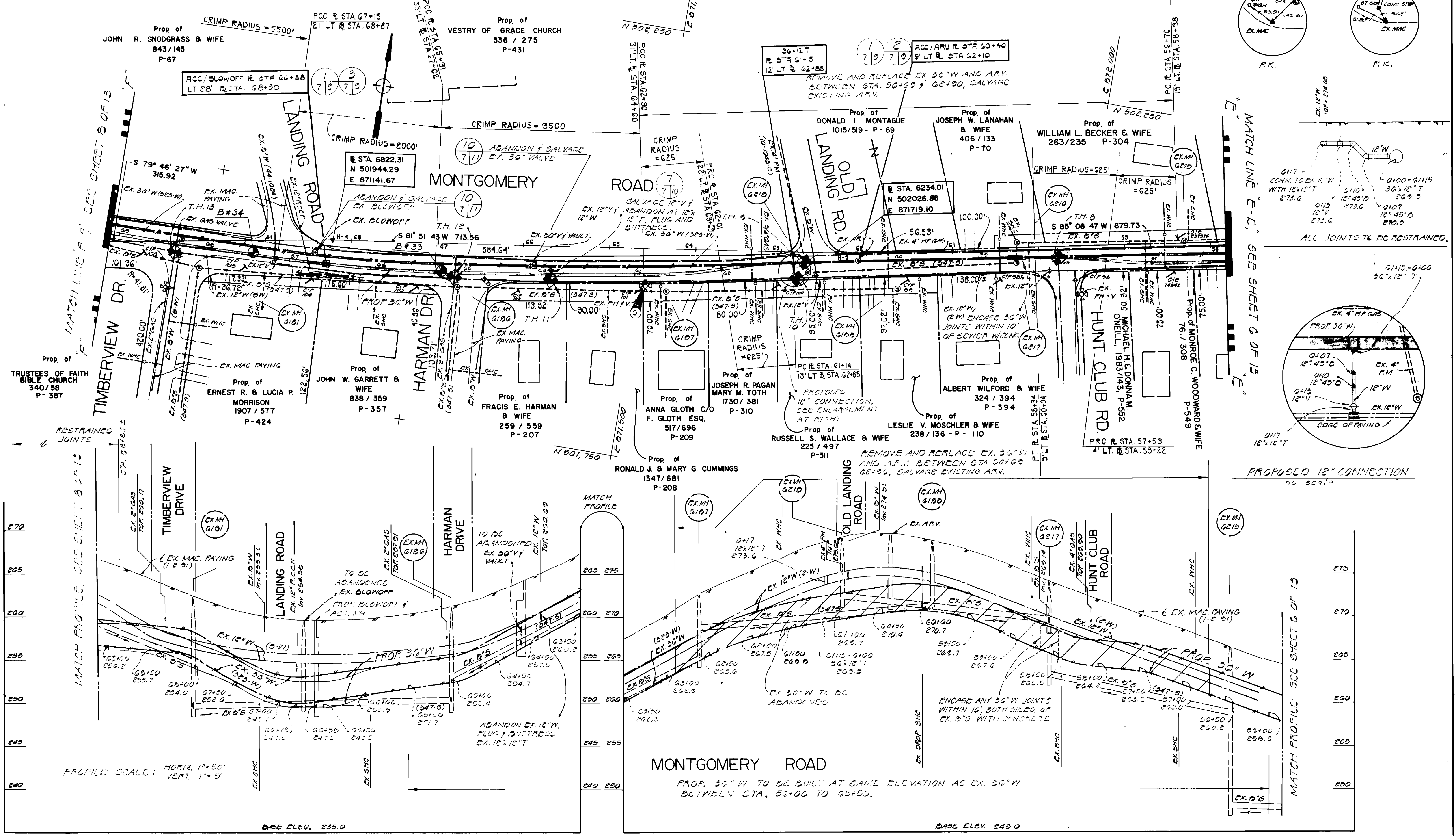
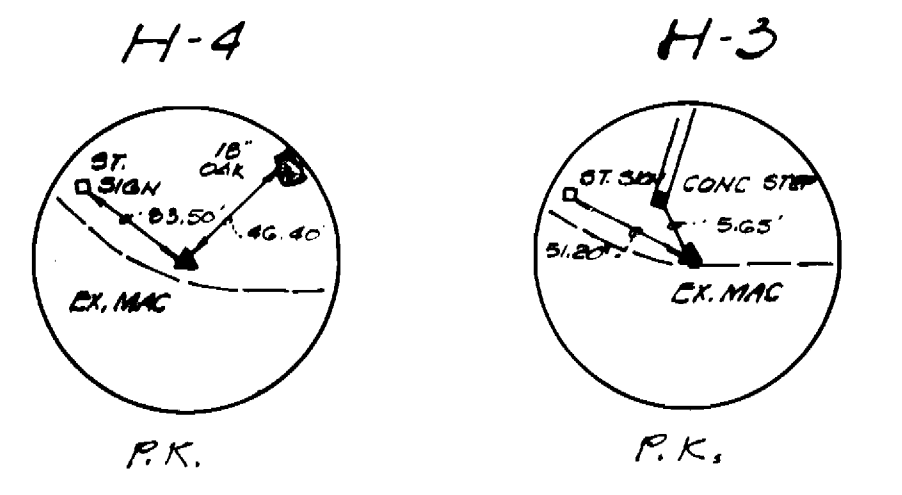
36" WATER MAIN REPLACEMENT
MONTGOMERY ROAD

Capital Project W-8169
CONTRACT NO. 44-3116
ELECTION DISTRICT NO. 1
HOWARD COUNTY, MARYLAND.

SCALE AS SHOWN

SHEET 6 OF 13

5 BENCH MARK "JIM" CUT IN BONNET BOLT OF F.H., ELEV. 272.16, 225'± W OF STA. H-3
 SCALE: 1"=50'



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works
 Chief, Bureau of Engineering
 Chief, Bureau of Utilities

PURDUM & JESCHKE
 CONSULTING ENGINEERS
 LAND SURVEYORS
 1029 North Calvert Street
 Baltimore, Maryland 21202 301/837-0194



DES: WLB	DATE: 3/91
DRN: BB	BY: NO.
CHK: WFN	REVISION
DATE: 3/91	DATE

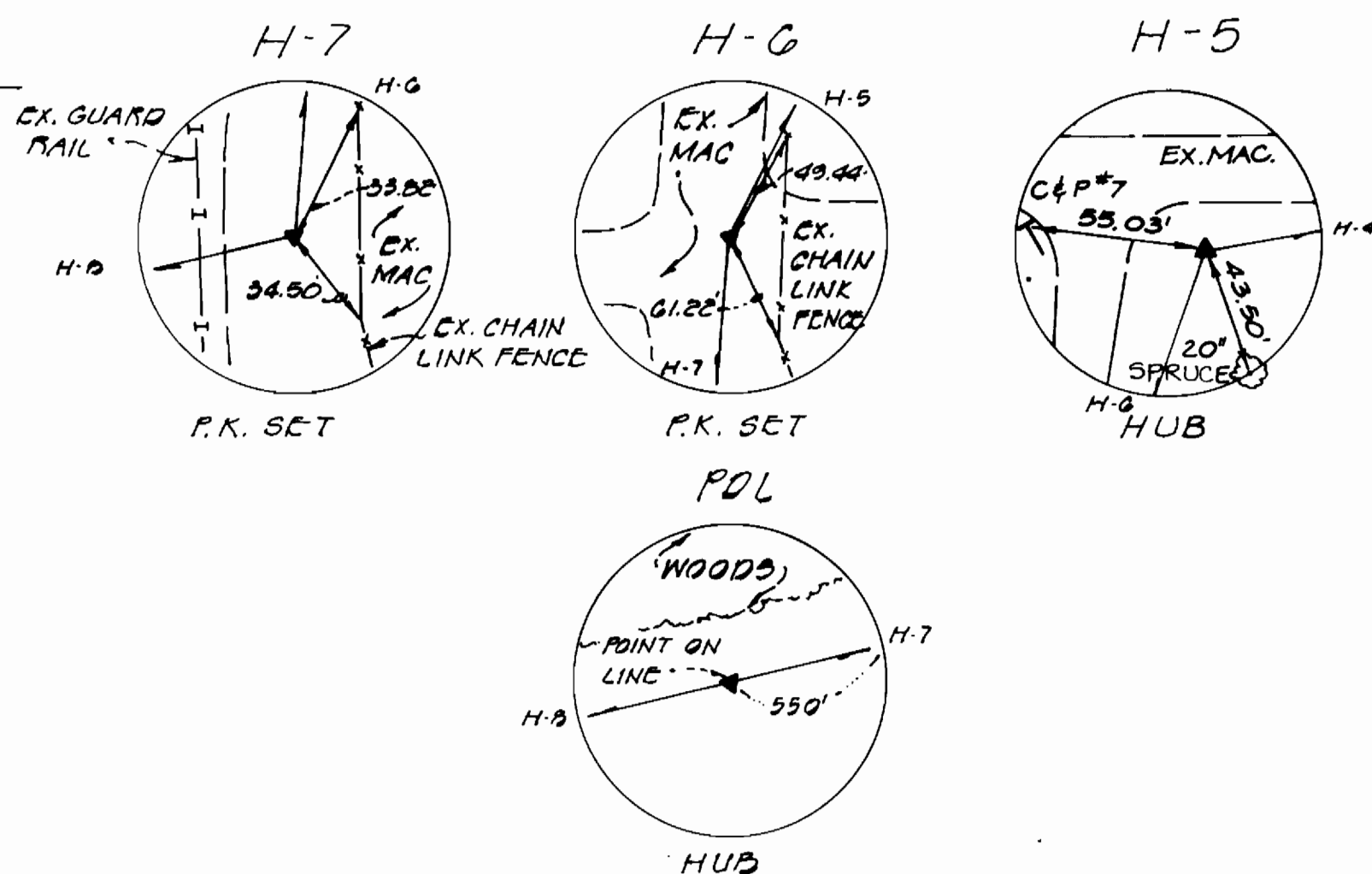
PLAN AND PROFILE

36" WATER MAIN REPLACEMENT
 MONTGOMERY ROAD
 Capital Project W-8169
 CONTRACT NO 44-316
 ELECTION DISTRICT NO. 1
 HOWARD COUNTY, MARYLAND.

SCALE AS SHOWN
 SHEET 7 OF 13

SEQUENCE OF CONSTRUCTION

1. OBTAIN PROPER PERMITS.
2. PLACE STONE CONSTRUCTION ENTRANCE AS SHOWN ON PLAN.
3. INSTALL SILT FENCE.
4. ALL UNSTABILIZED DISTURBED AREAS, INCLUDING TRENCH MATERIAL, SPOIL, ETC., MUST RECEIVE SILT FENCE ALONG THE CONTOUR ON DOWNSLOPE.
5. BEGIN CONSTRUCTION OF 36" WATER MAIN, 12" AND 8" WATER MAINS.
6. THE LENGTH OF OPEN TRENCH WILL BE LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED AND STABILIZED BY THE END OF ONE WORKDAY, WHICHEVER IS SHORTER.
7. REFER TO SPECIAL PROVISIONS, SECTION 1010 FOR DETAILED PIPE INSTALLATION SEQUENCE.
8. INSTALL FIRE HYDRANTS AND COMPLETE ABANDONMENT OF EXISTING APPURTENANCE TO THE 36" WATER MAIN.
9. UPON APPROVAL OF SEDIMENT CONTROL INSPECTION, REMOVE ALL SEDIMENT CONTROL DEVICES AND STABILIZE PER PERMANENT SEEDING NOTES.
10. FINE GRADE AREAS WHERE SEDIMENT CONTROL WERE REMOVED AND STABILIZE AS SPECIFIED BY THE APPROVED SEDIMENT CONTROL PLAN.



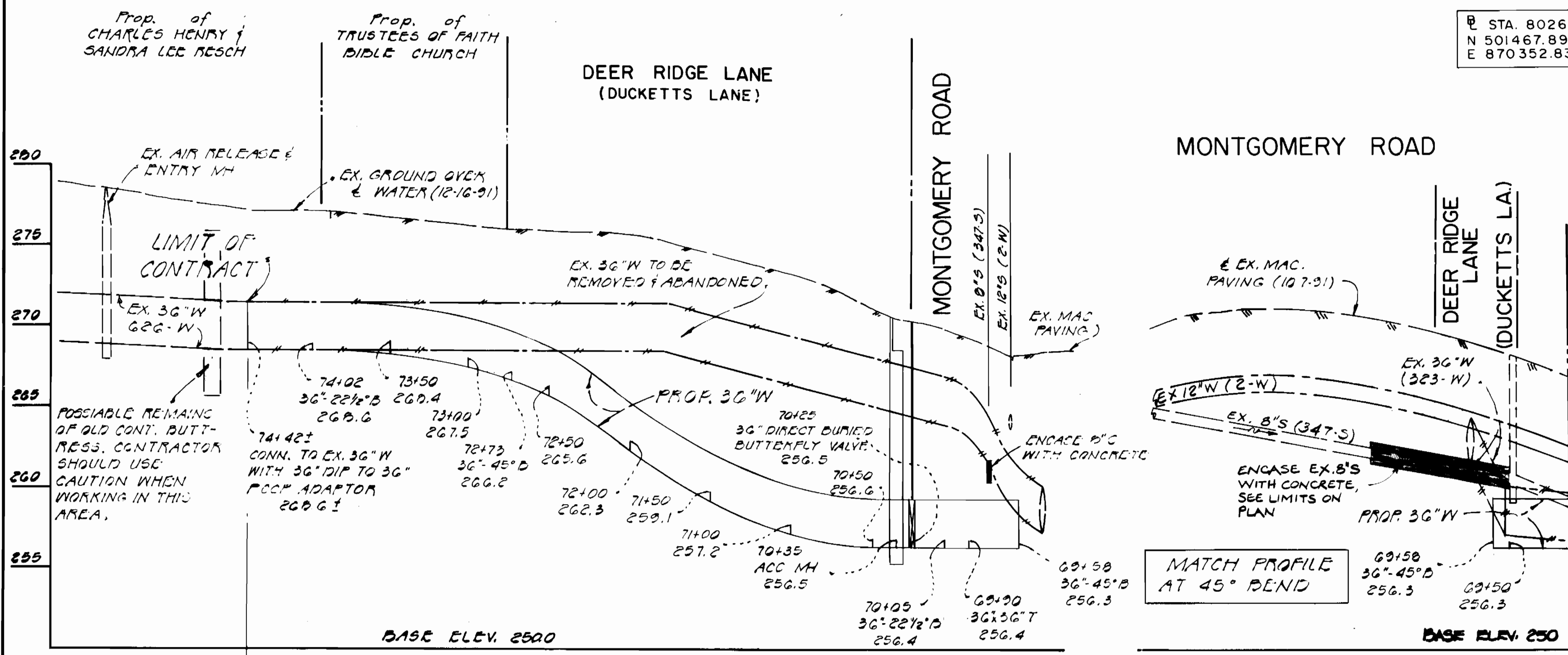
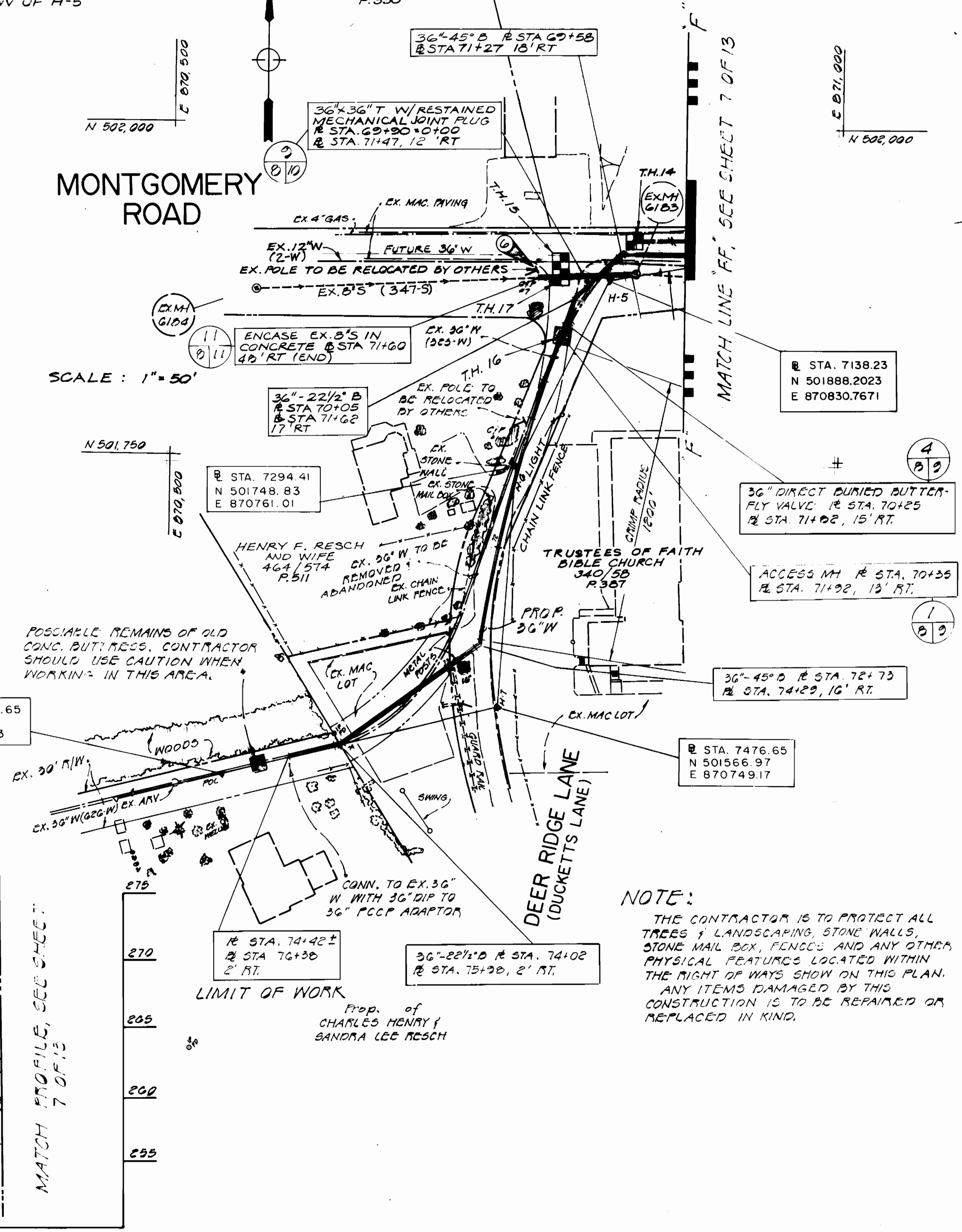
⑥ BENCH MARK "RR SPIKE"
ELEV. 217.68
RAILROAD SPIKE SET IN C&P #7
55'± NW OF H-5

ROBERT W. STOUFFER AND WIFE
288/101 P.330

JOHN R. SNODGRASS AND WIFE
843/145 P.67

MONTGOMERY ROAD

SCALE: 1" = 50'



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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

PURDUM AND JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel: (301)837-0194 Fax: (301)837-3431

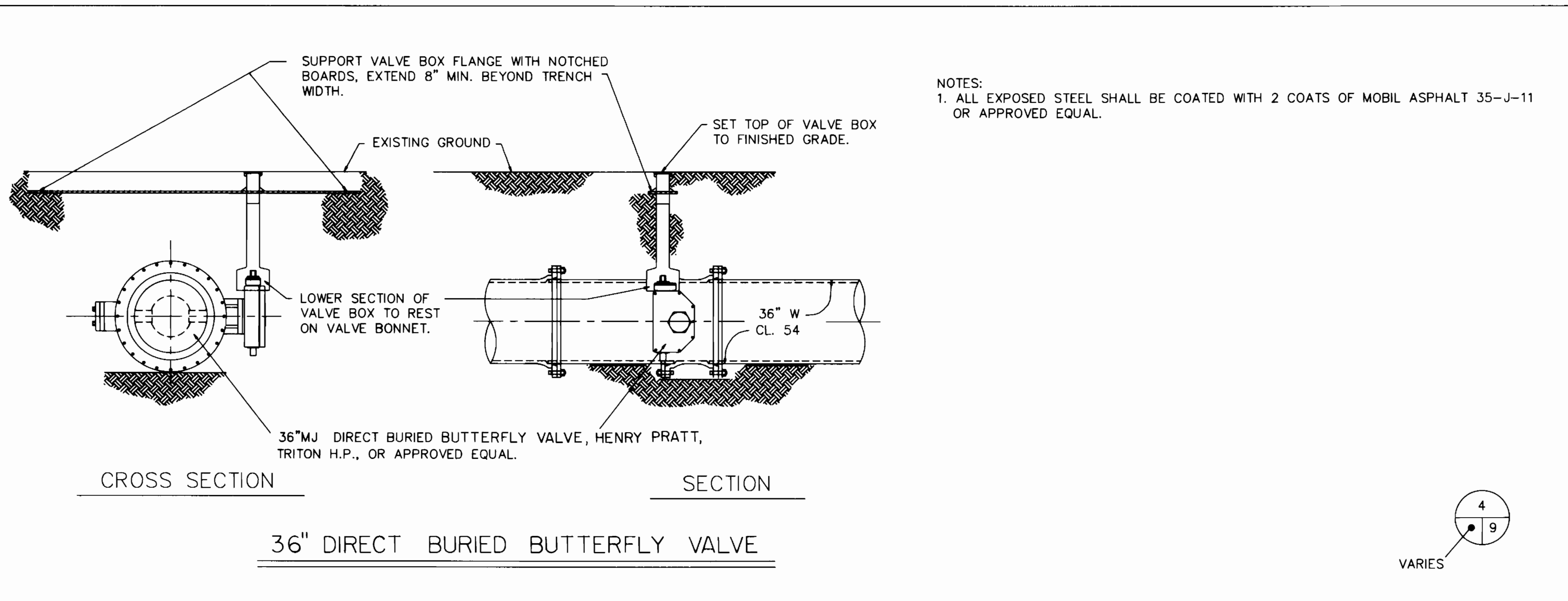
Richard H. Beach

DES: WLB			
DRN: BB			
CHK: WFN			
DATE: 11/91	BY	NO.	REVISION

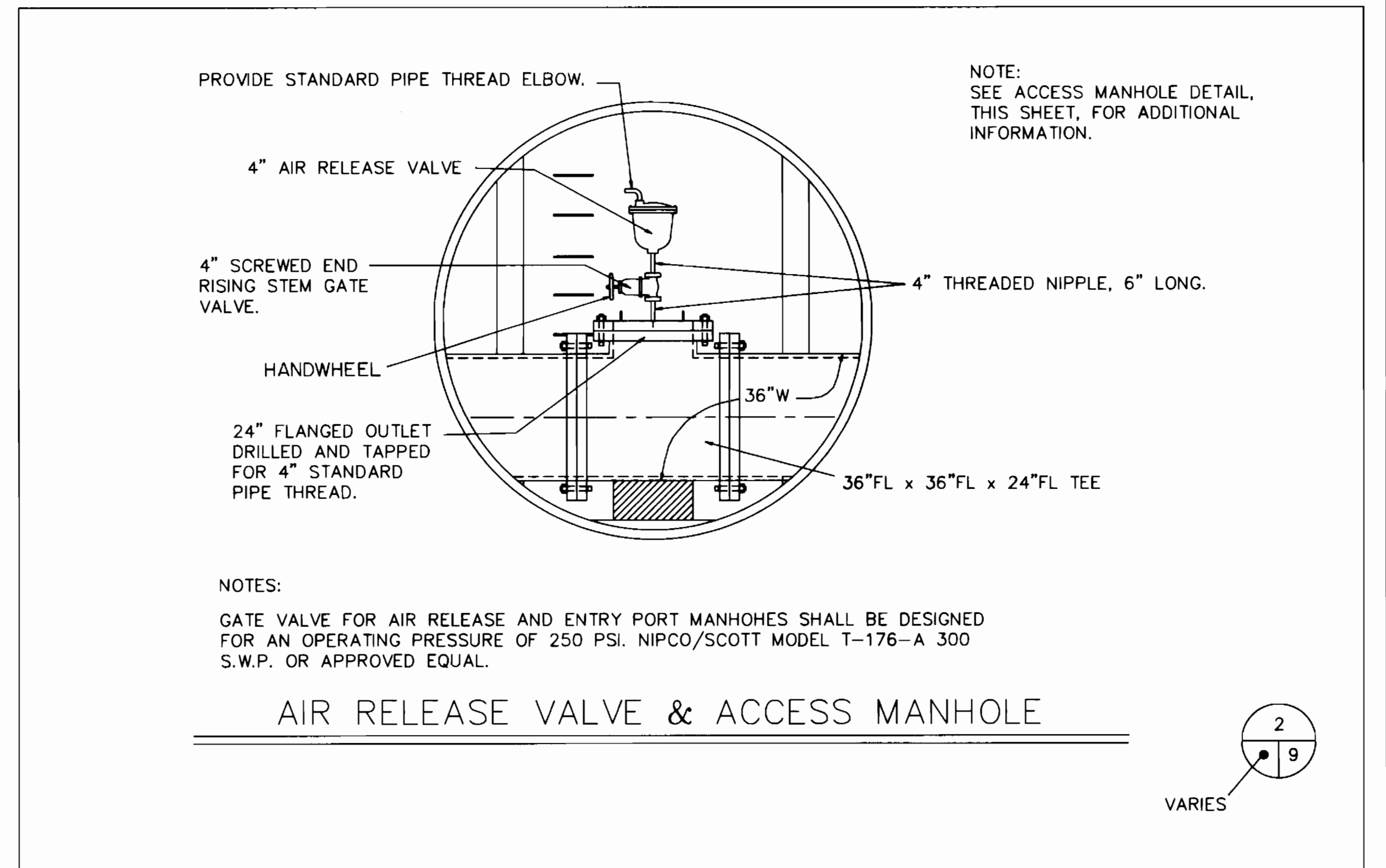
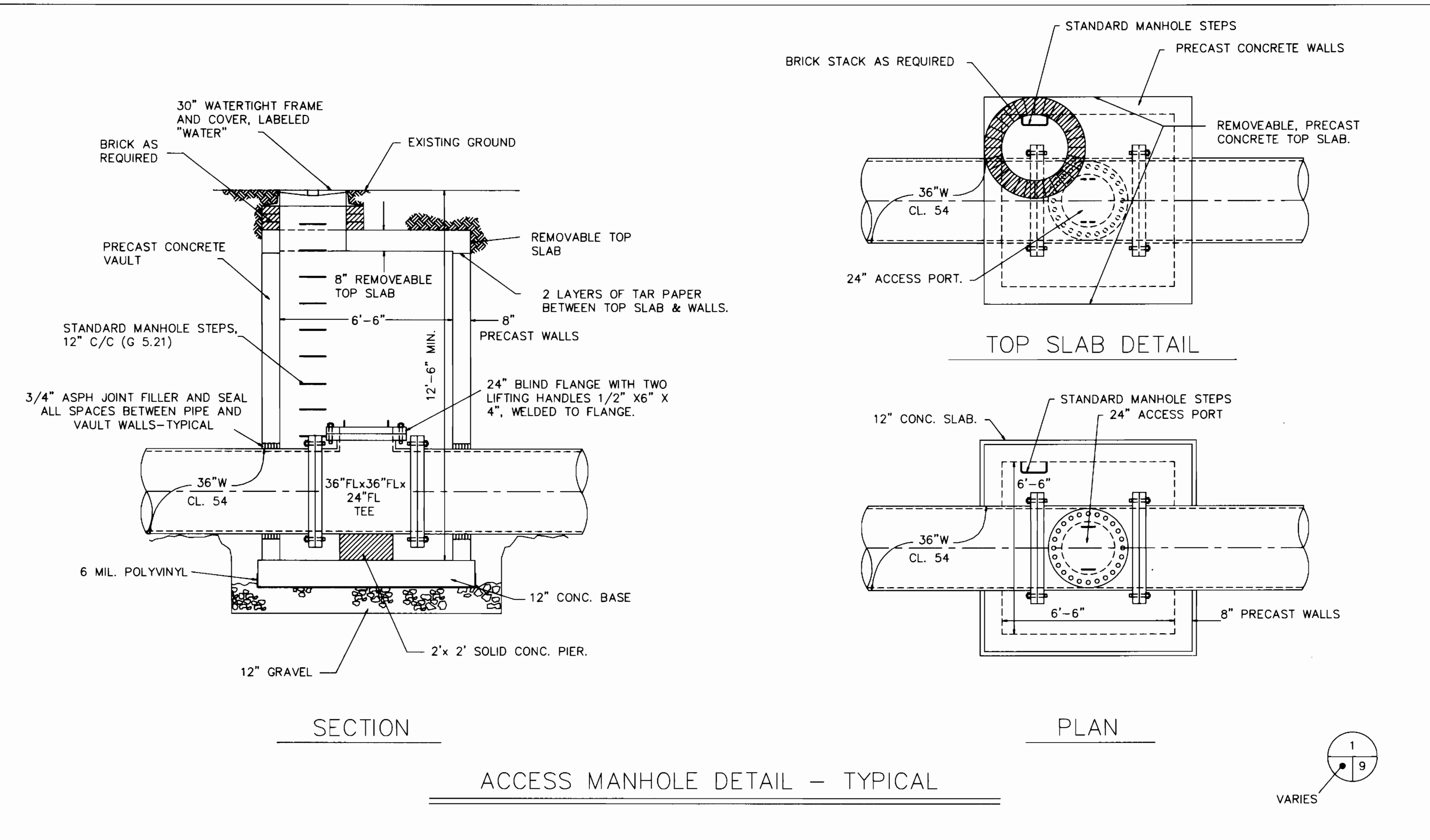
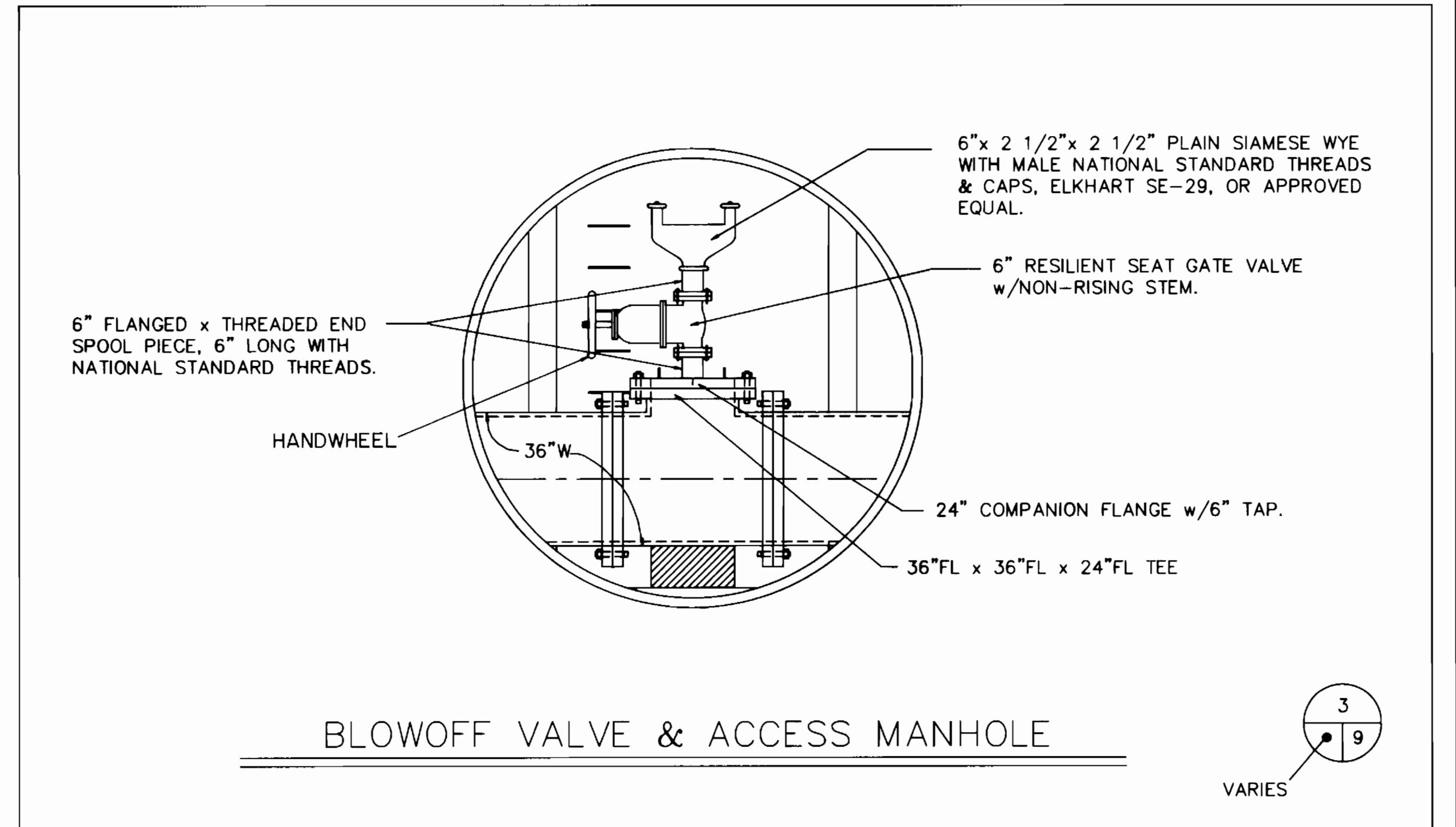
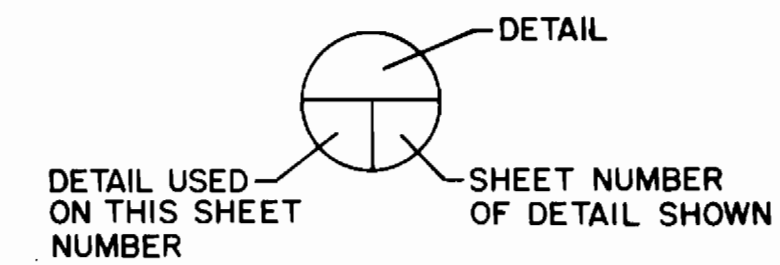
PLAN AND PROFILE

ELKRIDGE 36" WATER MAIN REPLACEMENT
MONTGOMERY ROAD / DEER RIDGE LANE
CAPITAL PROJECT W-8169
CONTRACT NO. 44-3116
ELECTION DISTRICT NO. 1
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 8 OF 13

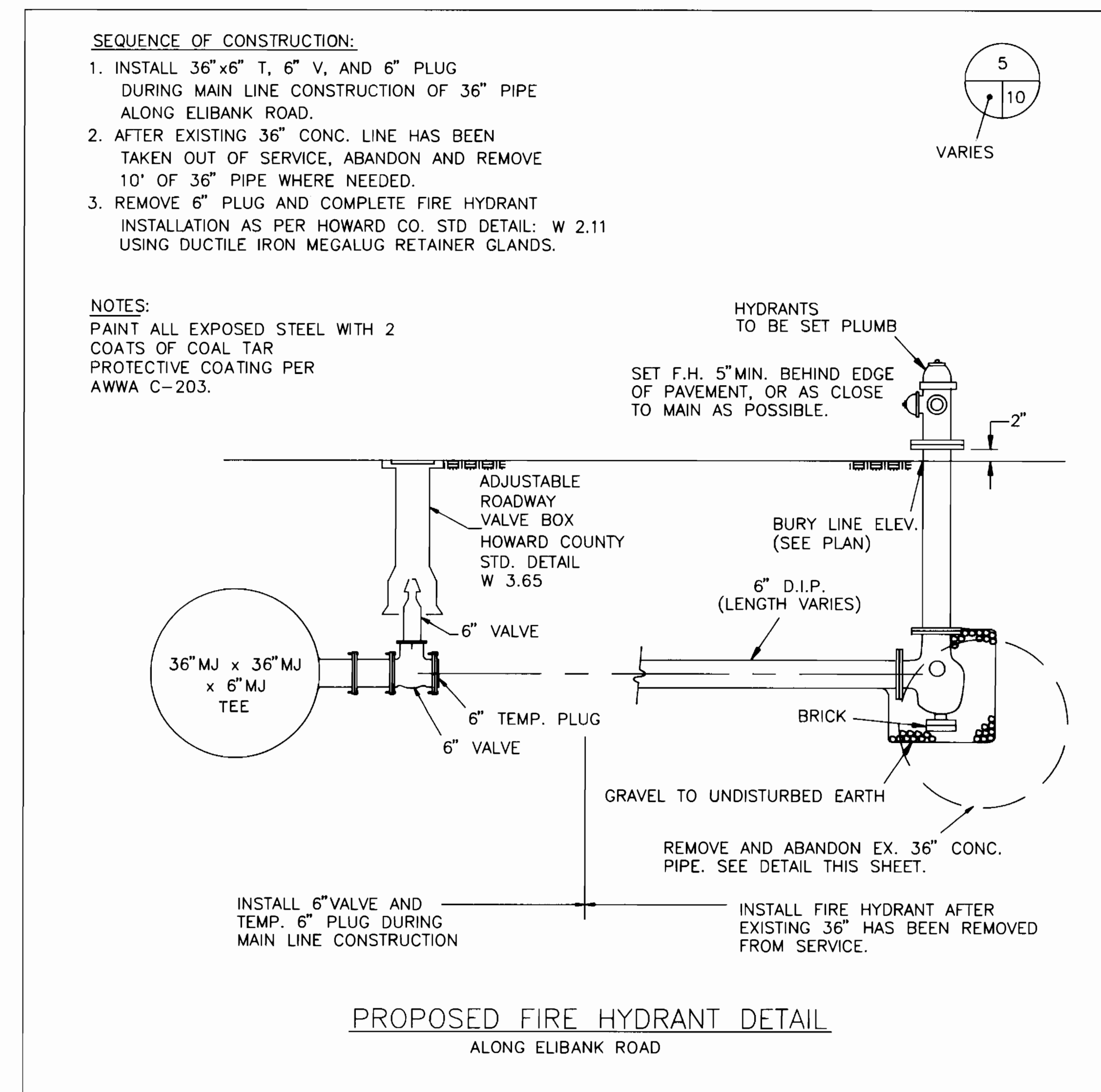
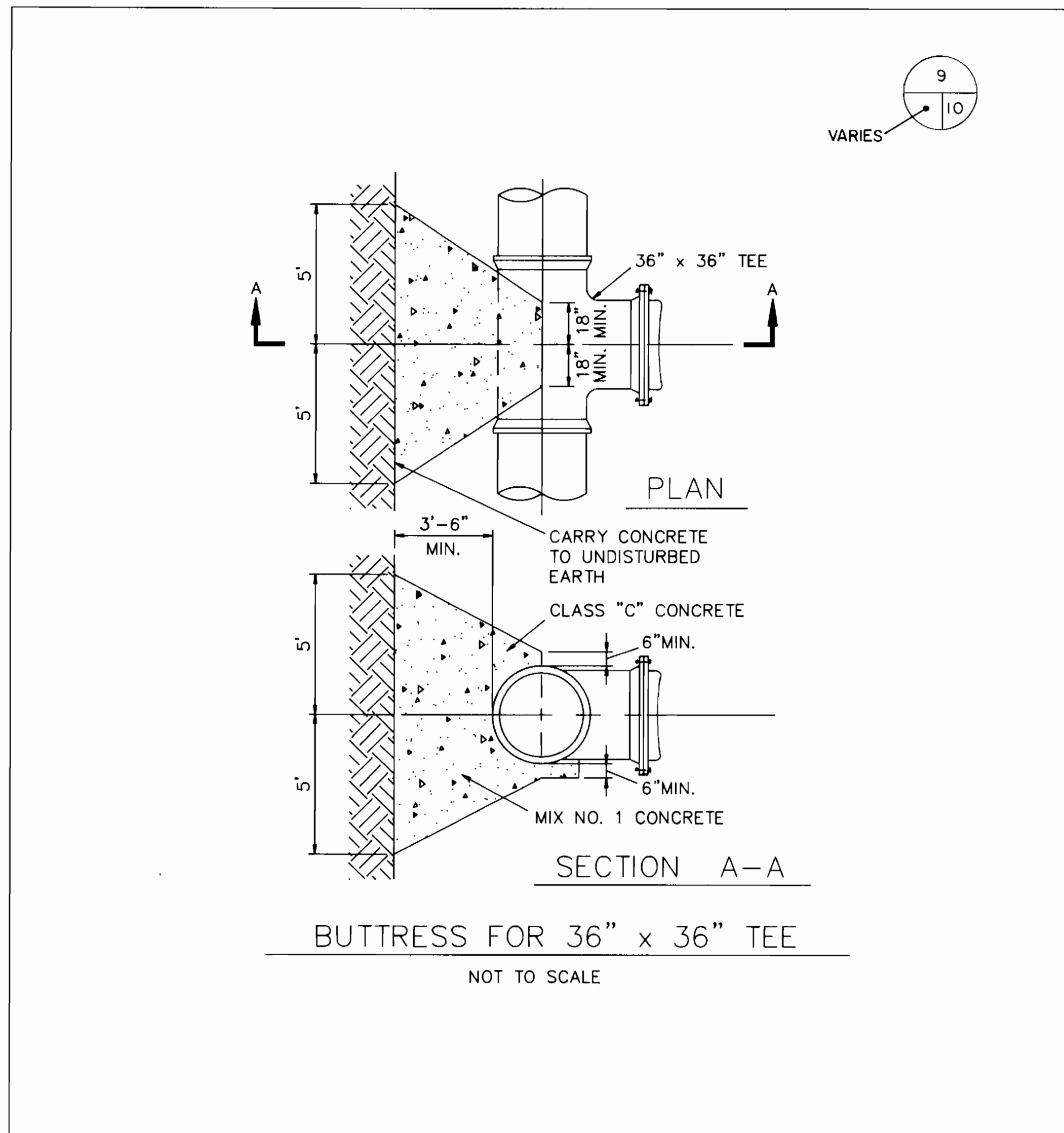
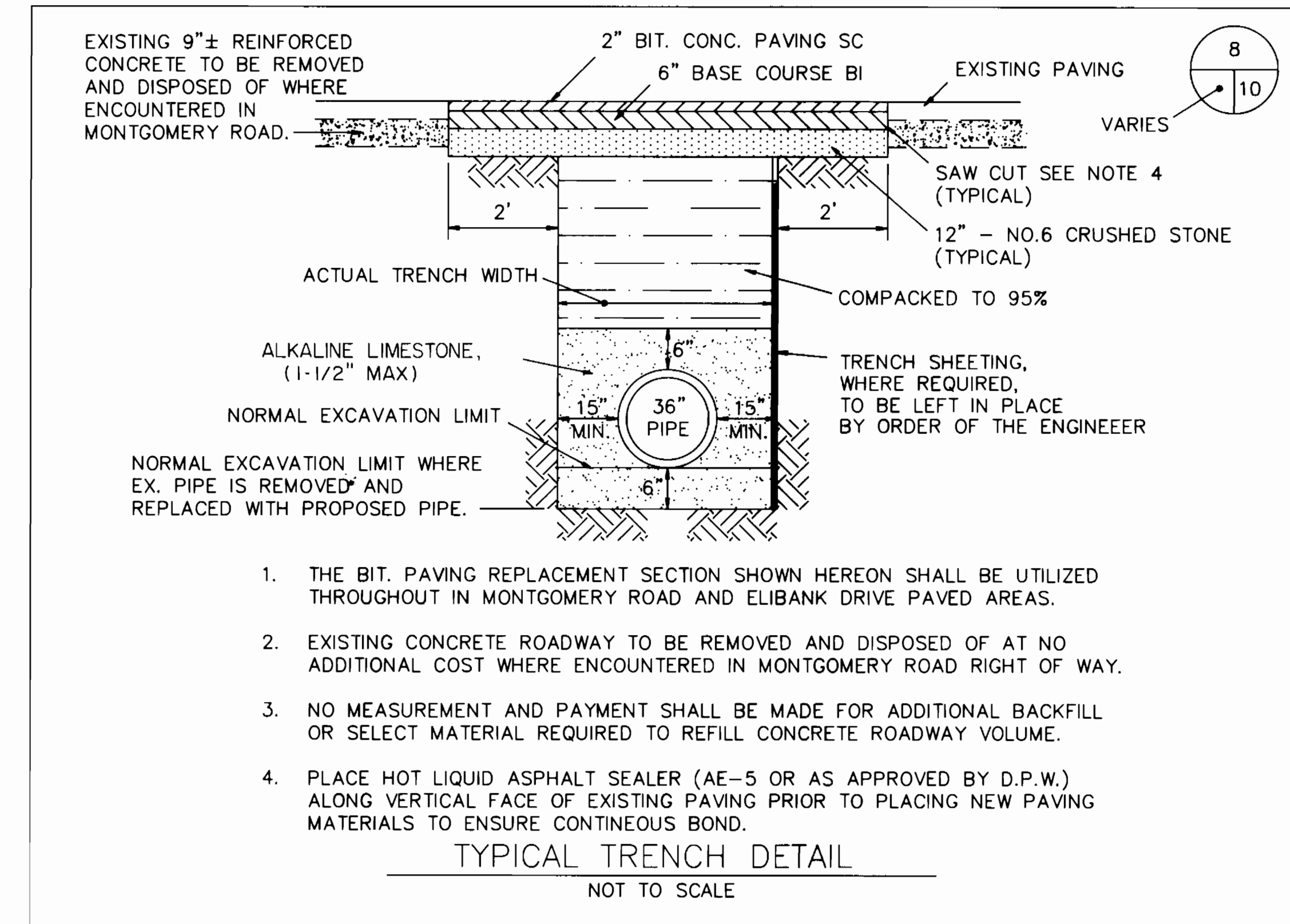
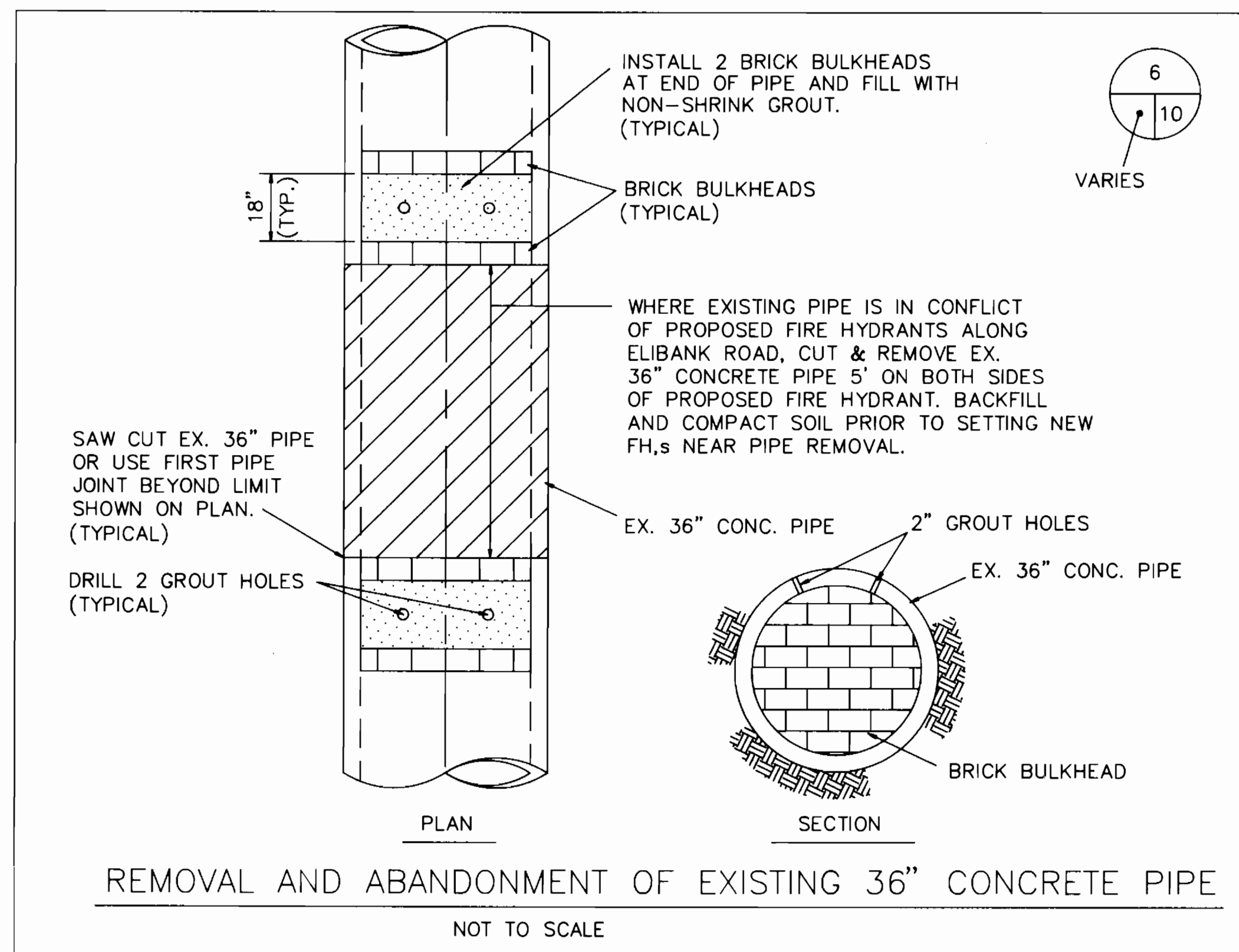
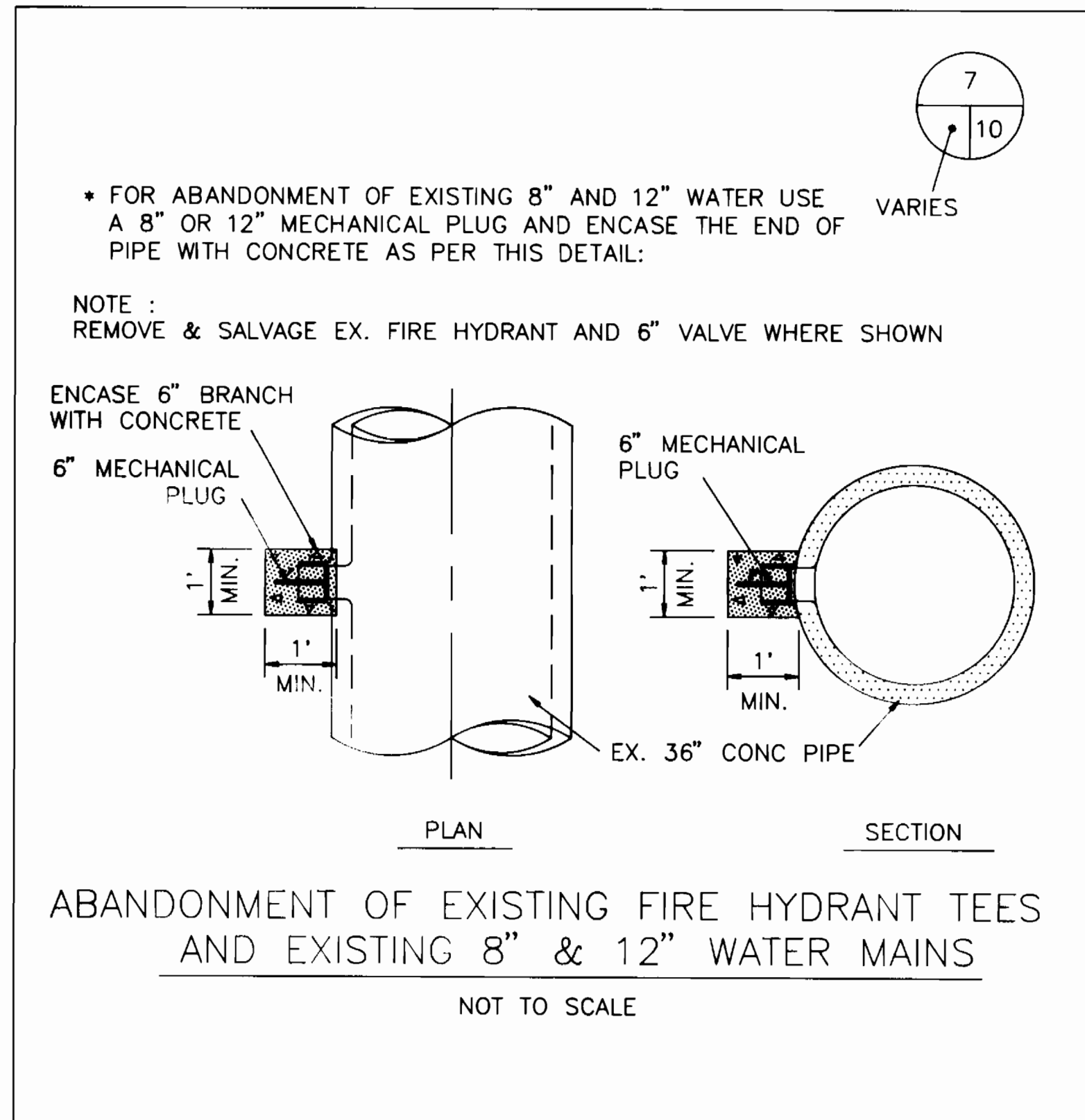


NOTE: EXPLANATION OF DETAIL REFERENCE



SCALE: 3/8" = 1'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: <i>Robert M. Berry</i> 12-13-91 Chief, Bureau of Utilities: <i>Robert M. Berry</i> 12-13-91	PURDUM AND JESCHKE CONSULTING ENGINEERS LAND SURVEYORS 1029 North Calvert Street Baltimore, Maryland 21202 Tel: (301)837-0194 Fax: (301)837-3431	<i>Richard H. Berry</i> DES. WLB DRN. BB CHK. WHD DATE: 10-11-91.	600' SCALE MAP NO. _____ BLOCK NO. _____	DETAIL SHEET	ELKRIDGE 36" WATER MAIN REPLACEMENT ELIBANK DRIVE AND MONTGOMERY ROAD CAPITAL PROJECT W-8169 CONTRACT NO. 44-3116 ELECTION DISTRICT NO. 1 HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 9 OF 13



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. ... 12-13-91
DIRECTOR OF PUBLIC WORKS DATE

Richard H. ... 12-12-91
CHIEF, BUREAU OF UTILITIES DATE

William S. ... 12-12-91
CHIEF, BUREAU OF ENGINEERING DATE

Richard H. ... 12-12-91
CHIEF, UTILITY DESIGN DIVISION DATE

PURDUM AND JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS

1029 North Calvert Street
Baltimore, Maryland 21202
Tel: (301)837-0194 Fax: (301)837-3431

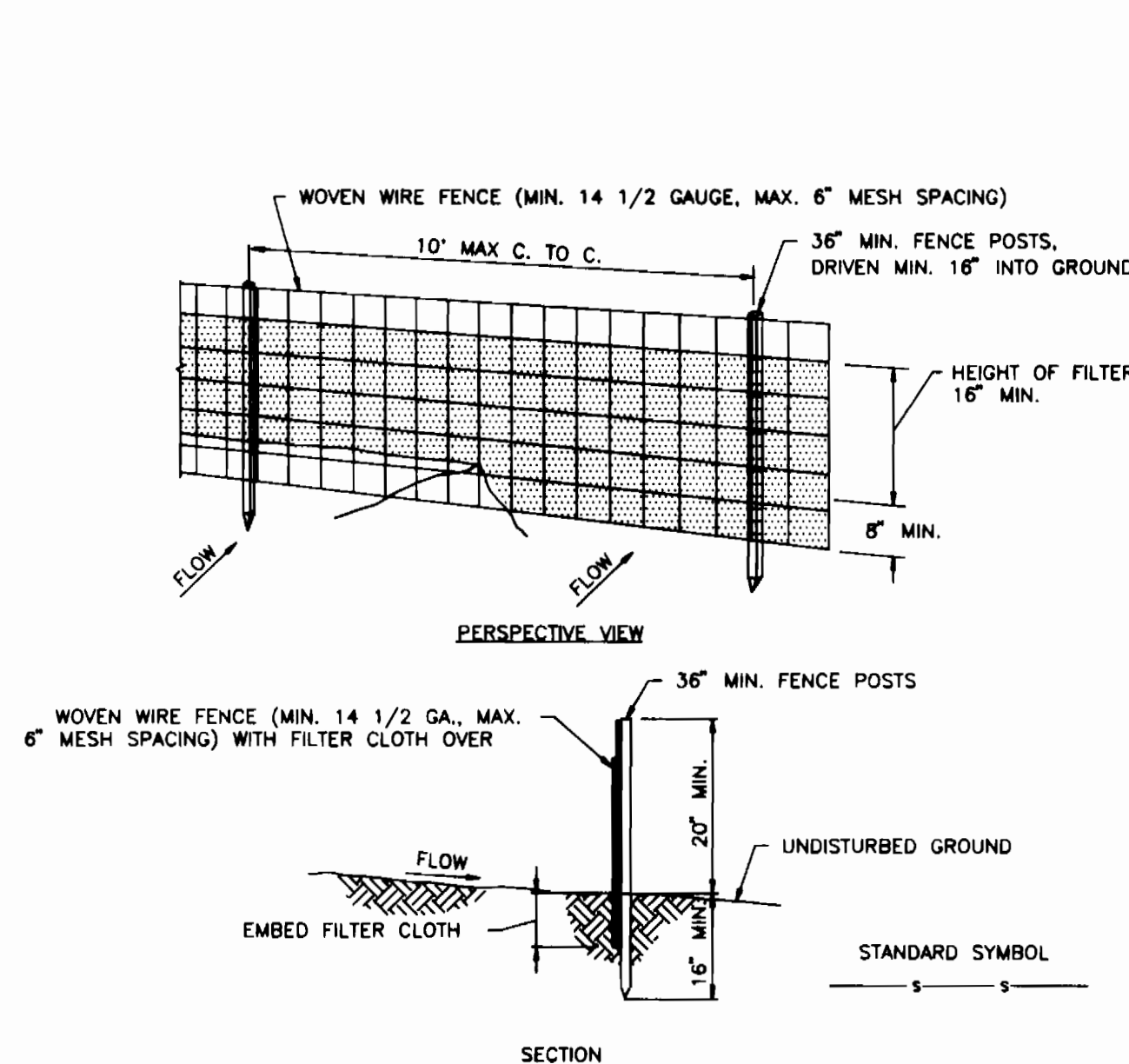
DES. ALL					
DRN/JDM					
CHK: WHD					
DATE: 10-11-91	BY	NO.	REVISION	DATE	600' SCALE MAP NO. _____ BLOCK NO. _____

DETAIL SHEET

ELKRIDGE 36" WATER MAIN REPLACEMENT
ELIBANK DRIVE AND MONTGOMERY ROAD

CAPITAL PROJECT W-8169
CONTRACT NO. 44-3116
ELECTION DISTRICT NO. 1
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 10 OF 13



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FABRIC WITH TIES SPACED EVERY 24\"/>
- POSTS: STEEL EITHER T OR U TYPE OR 2\"/>

FENCE: WOVEN WIRE, 14 GA. MIN., 6\"/>

FILTER CLOTH: MIRAFI 100X, STABI-LINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

SILT FENCE

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- Prepared:** Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) and 500 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/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/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk 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/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/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 grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gals/acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gals/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.

Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Apply 60 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.)

Seeding: For Periods March 1 thru April 30 and August 15 thru October 15, seed with 2-1/2 bushels/acre of annual rye (3.2 lbs/1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the Spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons/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 gals/acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 ft. or higher, use 348 gal/acre (8 gal/1000 sq. ft.) for anchoring.

EROSION AND SEDIMENT CONTROL SECTION NOTES

The Contractor will comply with all requirements of Sediment and Erosion Control as set forth in the Howard County Sediment Control Manual.

All sediment controls and critical slopes must be stabilized within seven calendar days. All other disturbed areas on the project site must be stabilized within 14 calendar days.

All utilities to be constructed first, prior to any construction on the site.

No pumping from foundation excavations will be allowed into County system unless it is filtered by way of sediment traps or filter.

All excavated material shall be placed on the high side whenever possible and confined to an area where it will not obstruct the normal flow of drainage courses.

Continuous inspection and maintenance of all sediment control devices will be required.

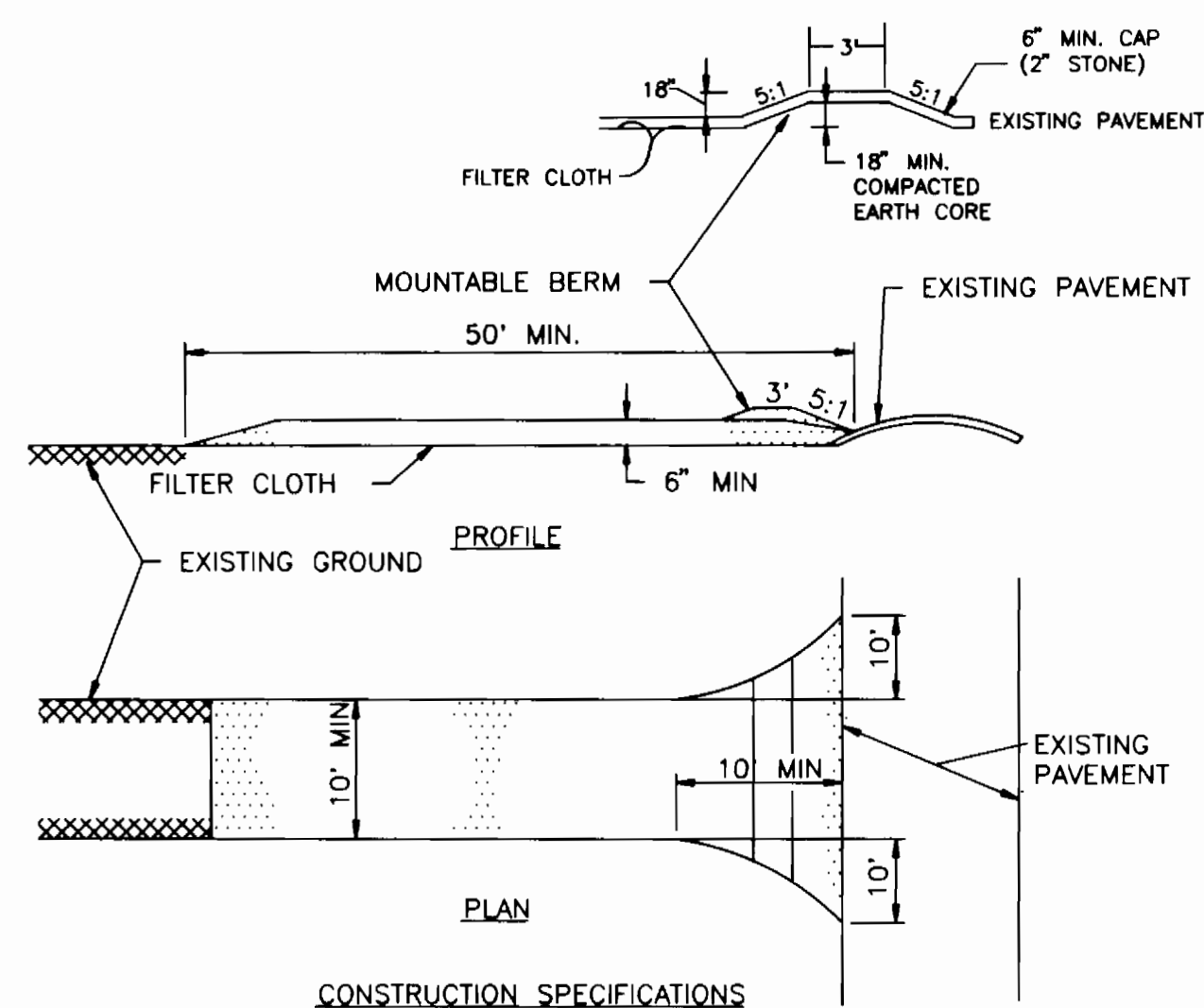
The Contractor shall notify in writing the Howard County Sediment Control Representative at least three working days prior to starting any work.

On all sites with disturbed areas in excess of 2 acres, the permittee shall request that a Howard County Erosion and Sediment Control Inspector inspect and approve the work, completed at the stages of construction specified below to ensure accordance with the approved erosion and sediment control plan, the grading or building permit, and this Manual:

- Upon completion of installation of perimeter erosion and sediment controls, prior to proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until initial approval by the inspection agency is made, and
- Upon final stabilization be fore removal of sediment controls.

Howard County Sediment Control Section must be notified in writing whenever any excess material will be disposed of or where any borrowed material will come from.

The Owner/Contractor shall not deviate from the approved sediment and erosion control plans without prior approval of the Howard County Sediment Control Representative. Variations to the plan must be submitted in writing, accompanied by a copy of the originally approved plan modified to show the requested changes, for his approval. Substantial changes will necessitate amending the building and/or grading permit if applicable.



CONSTRUCTION SPECIFICATIONS

- STONE SIZE- USE 2\"/>
- LENGTH- AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS- NOT LESS THAN SIX (6) INCHES.
- WIDTH- TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- 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.
- 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.
- 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.
- 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.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE

SEDIMENT CONTROL NOTES

1. 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. (392-2437)

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 redistribution, 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 116.96 Acres
 Area Disturbed 69 Acres
 Area to be roofed or paved 60 Acres
 Area to be vegetatively stabilized 9 Acres
 Total Cut 206120 Cu. yds.
 Total Fill 92895 Cu. yds.
 Offsite waste/borrow area location N/A

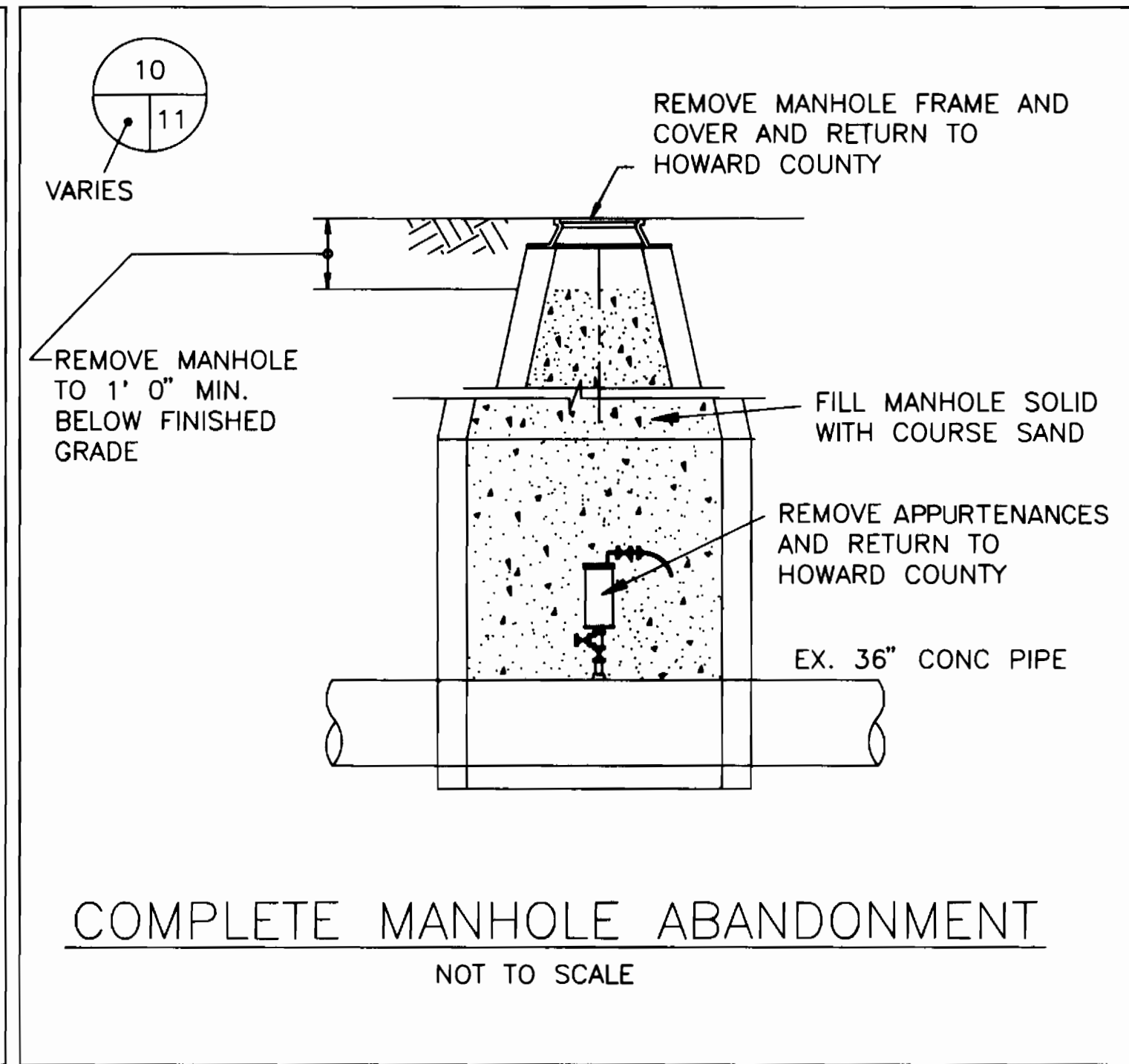
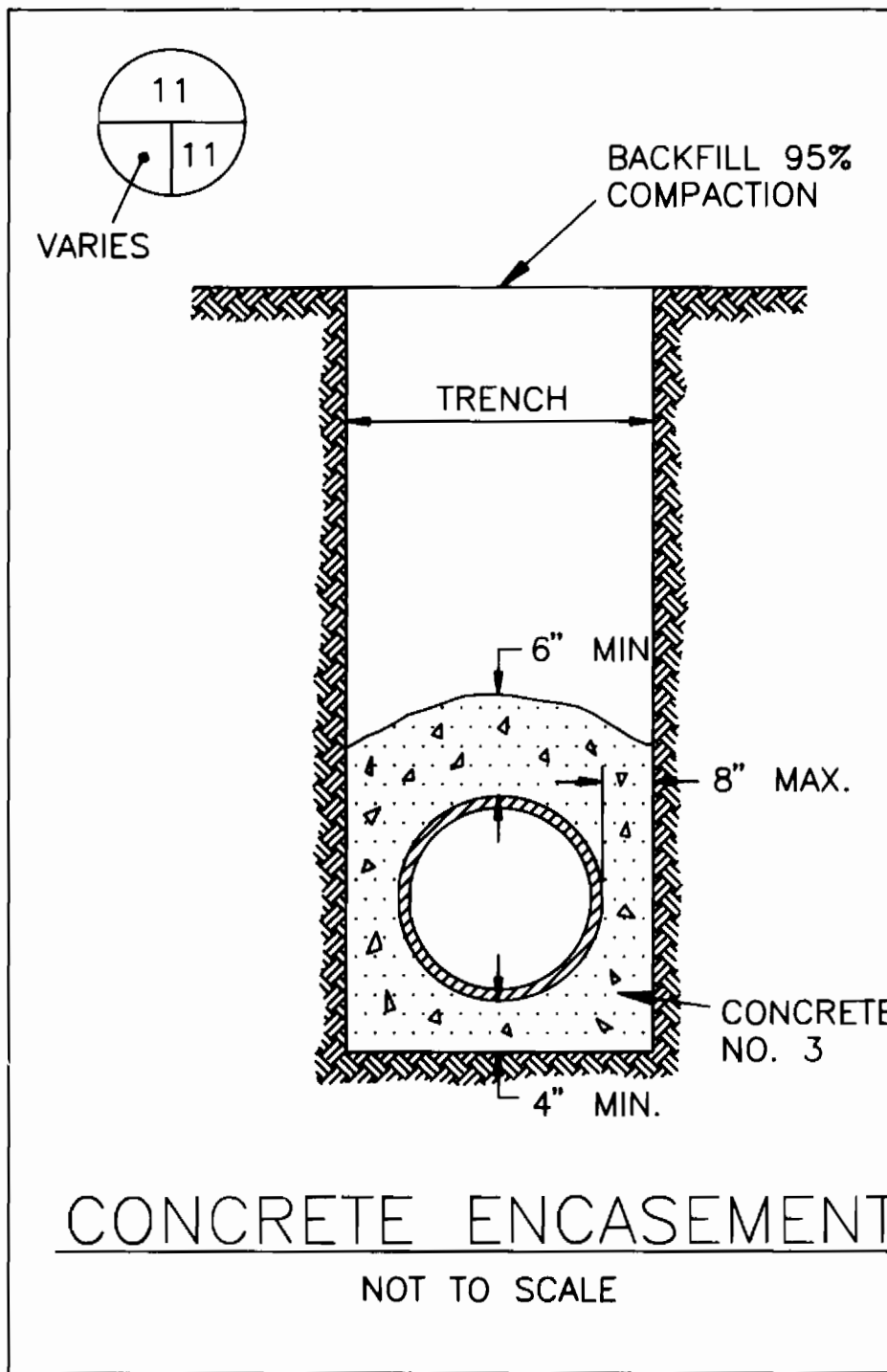
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

9. Additional sediment controls must be provided, if deemed necessary by the Howard County DPW sediment control inspector.

10. 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.

TEST HOLE INFORMATION:

TEST HOLE NO.	SURFACE PAVING DEPTH AND MATERIAL	SURFACE ELEV. (FEET)	UTILITY	ELEVATION @ TOP OF UTILITY
1	SOIL	216.77	36" CONC WATER	210.86
2	SOIL	194.02	36" CONC WATER	191.41
3	SOIL	218.09	36" CONC WATER	215.05
4	4" ASPHALT	235.51	4.5" GAS	229.94
5	4" ASPHALT	239.26	12.75" MET. WATER	235.37
6	6" ASPHALT	247.53	12.75" MET. WATER	243.38
7	6" ASPHALT	256.97	12.75" MET. WATER	253.10
8	4" ASPHALT ON 6" CONC	272.62	3.5" GAS 36" CONC WATER	269.80 267.32
9	12" ASPHALT	279.14	4.75" MET. SFM 36" CONC WATER	275.62 273.77
10	2" ASPHALT	278.83	12.75" MET. WATER	274.65
11	3" ASPHALT	265.28	12.75" MET. WATER	260.69
12	6" ASPHALT	261.24	2.5" GAS 12.75" MET. WATER	257.91 256.75
13	6" ASPHALT	262.78	2.5" GAS 12.75" MET. WATER	260.17 258.26
14	4" ASPHALT ON 6" CONC	267.93	36" CONC WATER	261.77
15	4" ASPHALT	269.39	12.75" MET. WATER	265.28
16	5" ASPHALT	270.65	36" CONC WATER	267.63
17	4" ASPHALT	269.35	8.75" SANITARY VC	261.27



This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Reviewed for Howard Soil Conservation District and meets technical requirements.

[Signature] 12/16/91
 Howard Soil Conservation District

[Signature] 12/16/91
 U.S. Soil Conservation Service (65)

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signature] 12-13-91
 DIRECTOR OF PUBLIC WORKS

[Signature] 12-13-91
 CHIEF, BUREAU OF UTILITIES

[Signature] 12-12-91
 CHIEF, UTILITY DESIGN DIVISION

PURDUM AND JESCHKE
 CONSULTING ENGINEERS
 LAND SURVEYORS

1029 North Calvert Street
 Baltimore, Maryland 21202
 Tel: (301)837-0194 Fax: (301)837-3431

[Signature]

DES. JDM	
DRN. JDM	
CHK. WHD	
DATE 10-11-91.	
BY NO.	
REVISION	
DATE	

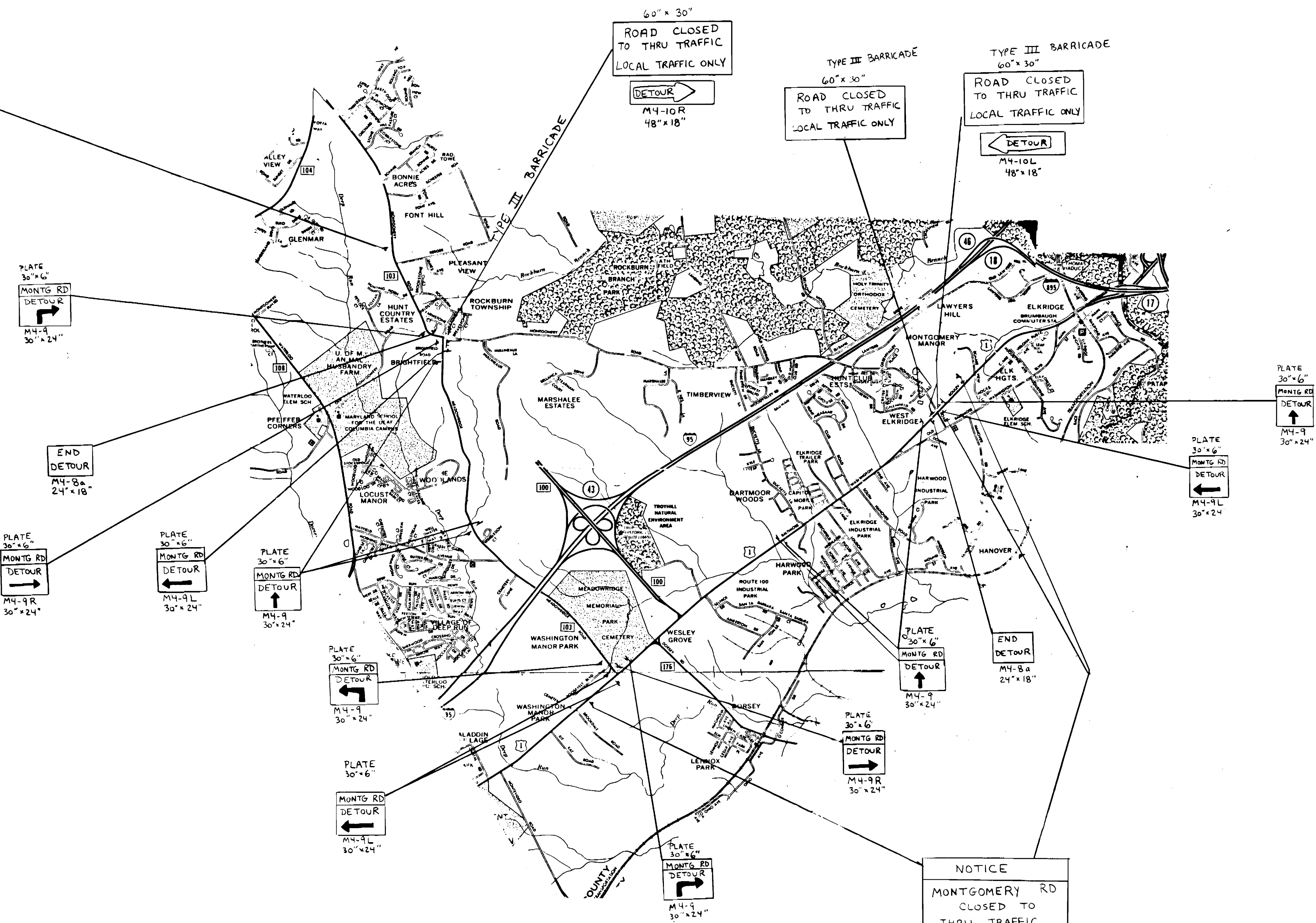
DETAIL SHEET

600' SCALE MAP NO. _____ BLOCK NO. _____

ELKRIDGE 36" WATER MAIN REPLACEMENT
 ELIBANK DRIVE AND MONTGOMERY ROAD
 CAPITAL PROJECT W-8169
 CONTRACT NO. 44-3116
 ELECTION DISTRICT NO. 1
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 11 OF 13

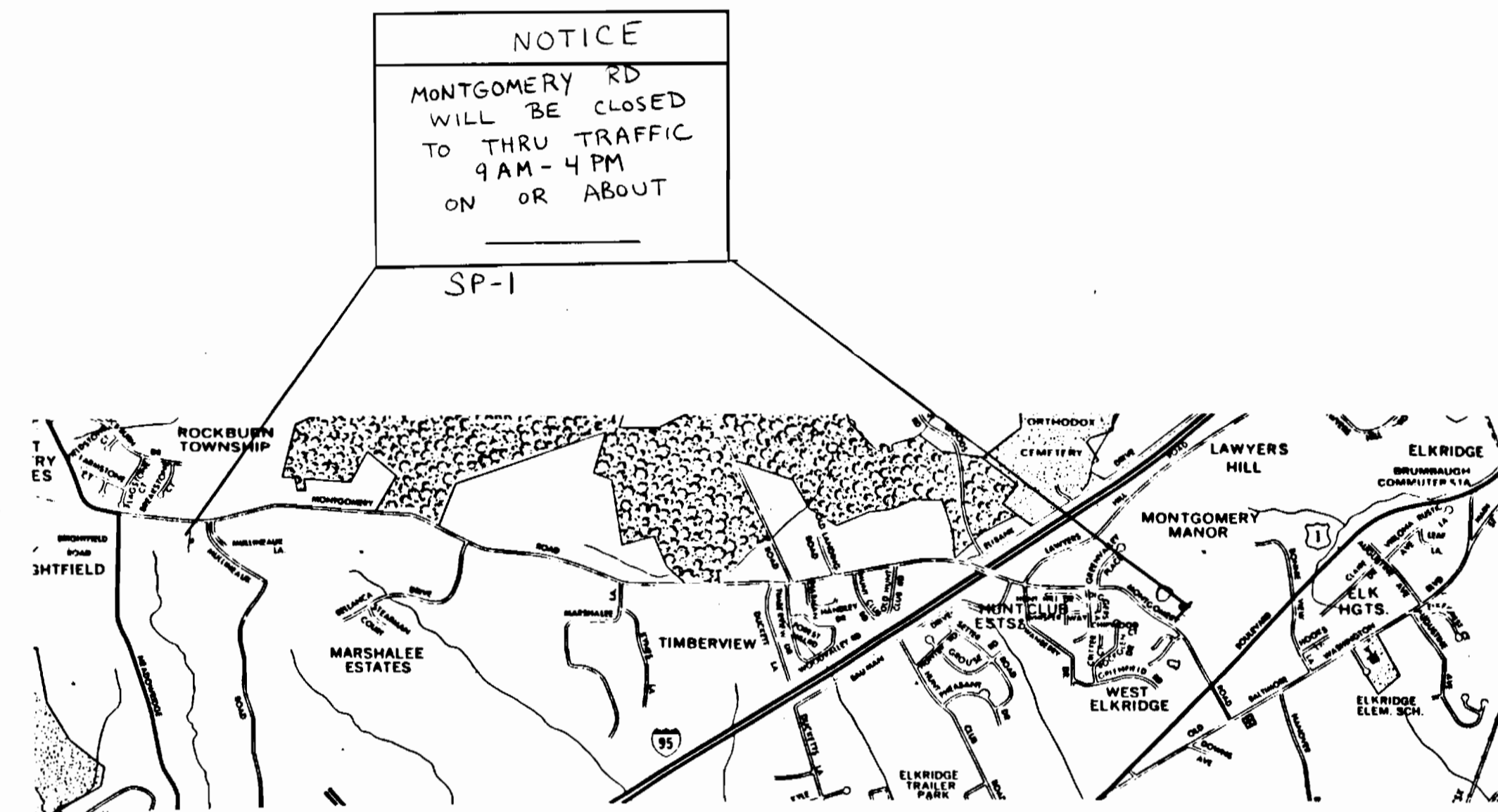
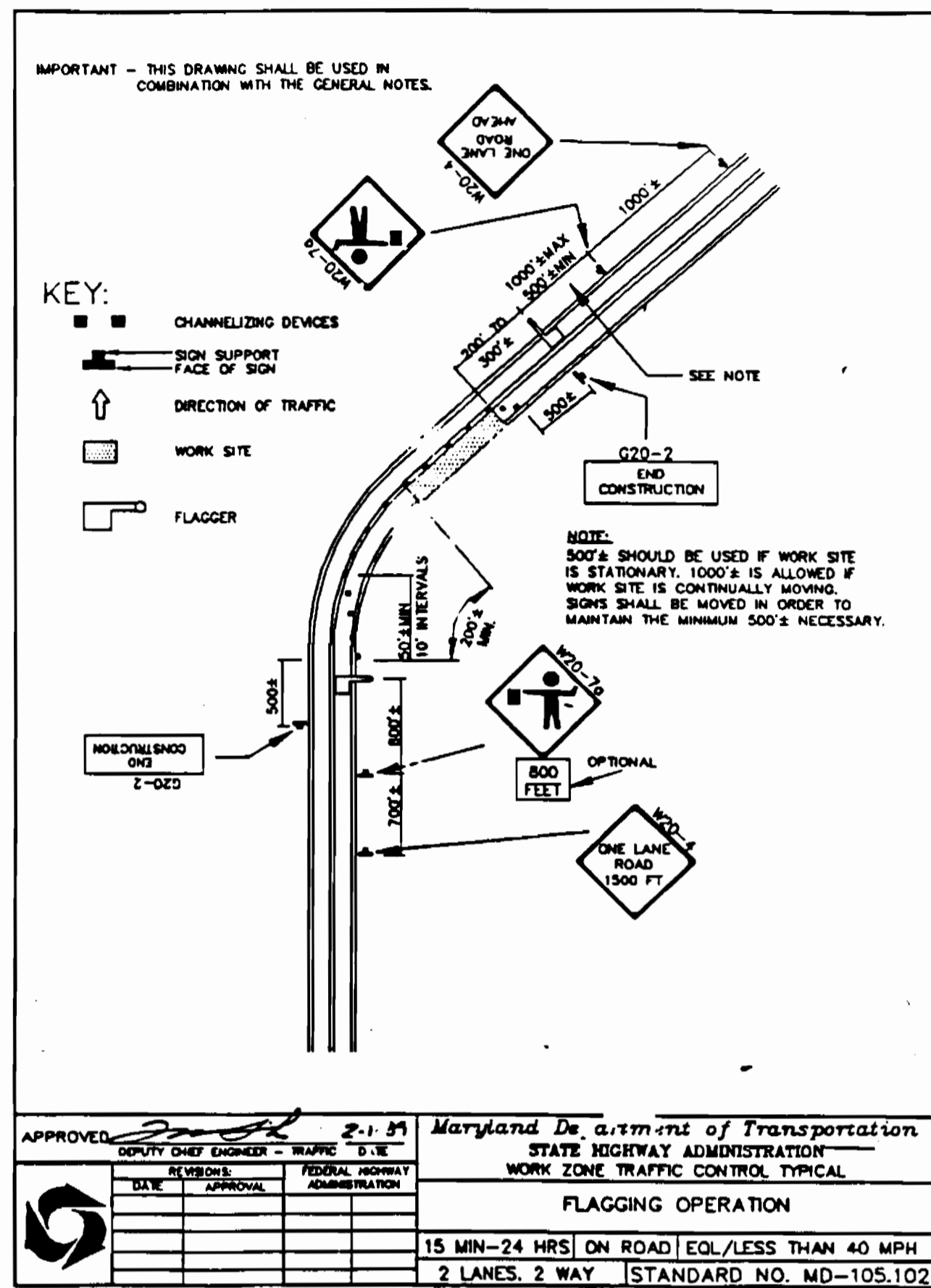
NOTICE
 MONTGOMERY RD
 CLOSED TO
 THRU TRAFFIC
 MON - SAT
 9AM - 4PM
 SP-2



- NOTES
1. STREET NAME PLATES ABOVE M4-9 SIGNS SHALL BE BLACK ON WHITE WITH 4" LETTERS.
 2. SP-2 SIGNS-TOP PANEL SHALL BE BLACK ON YELLOW. REMAINDER OF SIGN SHALL BE BLACK ON WHITE.

NOTICE
 MONTGOMERY RD
 CLOSED TO
 THRU TRAFFIC
 MON - SAT
 9AM - 4PM
 SP-2

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 12-12-91 DIRECTOR OF PUBLIC WORKS 12-13-91 CHIEF, BUREAU OF UTILITIES		HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS TRAFFIC ENGINEERING 3450 COURT HOUSE DRIVE ELLICOTT CITY, MD. 21043 12-12-91 CHIEF, BUREAU OF ENGINEERING 12-13-91 CHIEF, UTILITY DESIGN DIVISION		DES: DLS ORN: DLS CHK: CEW DATE: 11-22-91	BY NO. _____ REVISION _____ DATE _____	MONTGOMERY ROAD WORK ZONE TRAFFIC CONTROL PLANS DETOUR 600' SCALE MAP NO. _____ BLOCK NO. _____	ELKRIDGE 36" WATER MAIN REPLACEMENT CAPITAL PROJECT W-8169 CONTRACT NO. 44-3116 ELECTION DISTRICT NO. 1 HOWARD COUNTY MARYLAND	SCALE AS SHOWN SHEET 12 OF 13
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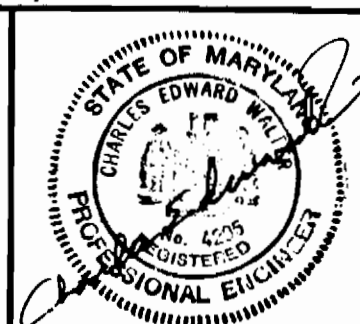
MAINTENANCE OF TRAFFIC NOTES

- 1) Work on Montgomery Road may only be performed Monday through Saturday between the hours of 9 a.m. and 4 p.m. During these hours through traffic will be detoured around the site.
- 2) All detour route signs (type M4-9) must be covered during the hours that the detour is not in effect.
- 3) When working in Montgomery Road, local traffic must be controlled by a flagman through the work zone.
- 4) Access must be provided for school buses, trash pick-up and emergency vehicles. Alternative arrangements for trash collection can be found on page D1010-19 in the contract specifications.
- 5) Montgomery Road must be opened to two-way traffic by 4 p.m. If necessary, the excavation must be backfilled or covered with steel plates.
- 6) Install SP-1 signs two weeks before the closure of Montgomery Road to provide advance public notice.
- 7) All traffic control devices must comply with The Manual On Uniform Traffic Control Devices.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

HOWARD COUNTY
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING

3450 COURT HOUSE DRIVE
ELLCOTT CITY, MD. 21043



DES: DLS

DRN: DLS

CHK: CEW

DATE: 11-22-91

MONTGOMERY ROAD WORK ZONE
TRAFFIC CONTROL PLANS

ELKRIDGE 36" WATER MAIN REPLACEMENT

CAPITAL PROJECT W-8169
CONTRACT NO. 44-3116
ELECTION DISTRICT NO. 1
HOWARD COUNTY MARYLAND

SCALE
AS
SHOWN

SHEET
12 OF 13