

WATER AND SEWER EXTENSIONS

CLARKS GLEN SECTION 1 AREA 2

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 34-3472-D

MANHOLE SCHEDULE	
MH NO.	LOCATION
25	N. 558188.80 E. 1330683.32
34	N. 557812.07 E. 1331253.54
35	N. 557790.43 E. 1330914.40
36	N. 558443.78 E. 1331655.01
37	N. 558444.50 E. 1331554.77
38	N. 558312.65 E. 1331438.32
39	N. 558292.52 E. 1331339.95
40	N. 558340.57 E. 1331200.82
41	N. 558347.41 E. 13311082.52
42	N. 558326.02 E. 1330993.25
43	N. 558289.34 E. 1330865.24
44	N. 558259.40 E. 1331455.65
45	N. 558214.72 E. 1331421.88
47	N. 557225.06 E. 1331761.87
48	N. 556950.83 E. 1331630.65

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 are based on Maryland State Coordinates.
- All vertical controls are based on U.S.G.S. data.
- 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. 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 bracing of additional poles or damages shall be deducted from money owed the contractor. The contractor shall coordinate with the utility companies to schedule the bracing of the poles.
- For details not shown on the drawings, and for materials and construction methods use Howard County Design Manual, Volume IV, Standard Specifications and Detail for Construction. (Latest Edition). The contractor shall have a copy of Volume IV on the job.
- Where test pits have been made on an existing utility, they are noted by the 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.
- 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. Underground Damage Control 787-9068
Miss Utility 1-800-257-7777
Colonial Pipeline Co. 795-1390
Bureau of Utilities, Howard County Department of Public Works 313-4990
- 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.
- 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.
- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains to have a minimum of 3-1/2' cover unless otherwise noted.
- Valves adjacent to tees shall be strapped to tees.
- All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
- Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be restrained and buttressed with concrete in accordance with Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
- The contractor shall not operate any water main valves on the existing water system.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- All sewer mains shall be D.I.P. and P.V.C. unless otherwise noted.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 16" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Detail 65.52. Where watertight manhole frame and cover is used, set top of frame 1"-6" above finished grade unless otherwise noted on the drawings.
- House(s) with the symbol "C.N.S." indicates that cellar cannot be served.
- Manholes can be either brick or precast concrete structures.
- Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		MANUFACTURER / SUPPLIER
		QUANTITIES	TYPE	
8" WATER	2894 LF	2915 L.F.	CLASS 52	ATLANTIC STATES WATER PRO
3/4" WHC	1028 LF	1209 "	TYPE "K"	CAMBRIDGE LEE WATER PRO
8" SEWER	2081 LF	2101 "	SDR 35	J-M PIPE WATER PRO
4" SHC	744 LF	1090 "	"	J-M PIPE WATER PRO
AIR RELEASE MANHOLES	2 EA.	2 EA.	PRECAST	ATLANTIC CONCRETE
8"-1/16 H.B.	5 EA.	6 "	D.I.P. - M-J	GRIFFIN PIPE WATER PRO
8" CAP & BUTTRESS	3 EA.	2 "	"	GRIFFIN PIPE WATER PRO
SEWER MANHOLES	15 EA.	15 "	PRECAST	ATLANTIC CONCRETE
8" VALVE	8 EA.	8 "	RES WEDGE GATE VALVE	MUELLER CO. WATER PRO
8" D.I.P. SEWER	390 LF	380 L.F.	CLASS 52	ATLANTIC STATES WATER PRO
FIRE HYDRANT	3 EA.	3 EA.	CENTURION RES WEDGE GATE VALVE	MUELLER CO. WATER PRO
6" VALVE	3 EA.	3 "	"	MUELLER CO. WATER PRO
12" WATER	37 LF	28 L.F.	CLASS 52	ATLANTIC STATES WATER PRO
12" CAP & BUTTRESS	1 EA.	0	"	"
8" X 8" TEE	3 EA.	3 EA.	D.I.P. - M-J	GRIFFIN PIPE WATER PRO
8" X 8" TEE	2 EA.	2 "	"	GRIFFIN PIPE WATER PRO
12" X 8" TEE	1 EA.	1 "	"	GRIFFIN PIPE WATER PRO
BLOW OFF ASSEMBLY	1 EA.	1 "	#85	ECLIPSE WATER PRO
12" VALVE	2 EA.	2 "	RES WEDGE GATE VALVE	MUELLER CO. WATER PRO
8" 1/8 HB	3 EA.	3 "	D.I.P. - M-J	GRIFFIN PIPE WATER PRO
6" WATER	60 LF	51.0 L.F.	CL 52	ATLANTIC STATES WATER PRO

NAME OF UTILITY CONTRACTOR : GRAY & SONS, INC. P.O. BOX B BUTLER, MD 21023	CHECKBOX
Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on F-95-83	AS-BUILT DATE
Review for Howard Soil Conservation District and meets technical requirements.	SURVEY AND DRAFTING DIVISION

J. H. Warfield 7/1/96
NATURAL RESOURCES CONSERVATION SERVICE DATE

John P. Roberts 7/1/96
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
DATE

RIEMER MUEGGE & ASSOCIATES, INC.
Planners Engineers Surveyors
9818 Centre Park Drive Suite 200 Columbia, MD 21046
410-997-8900 FAX: 410-997-9282
HOC0/0000 00.DWG

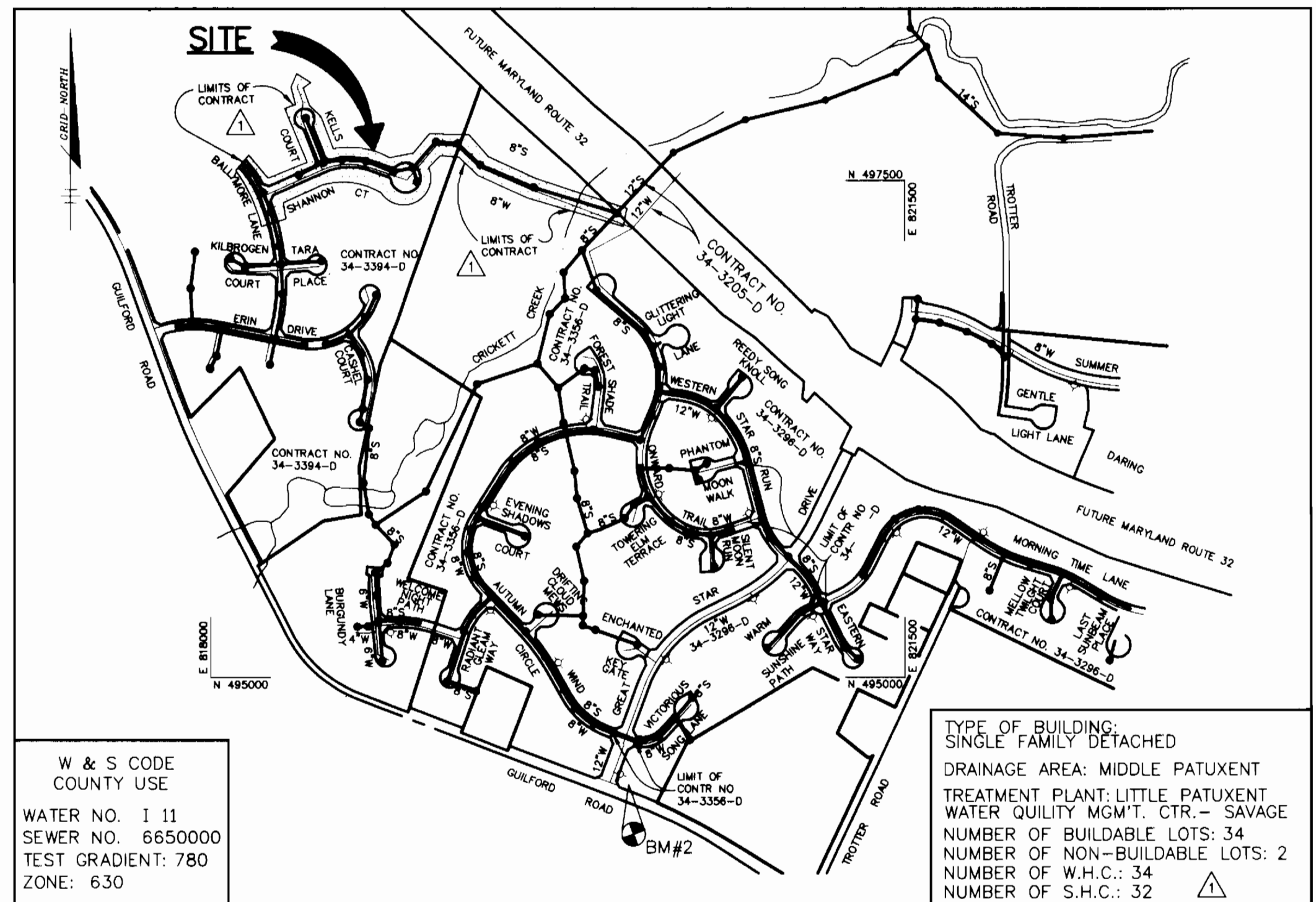
J. Parekh
JAYKANT D. PAREKH # 19148

DES: JTD	
DRN: JTD	
CHK: DRF	
DATE: 10-31-95	
BY: [Signature]	REVISED MANHOLE SCHEDULE, QUANTITIES LIST, VICINITY MAP, & TITLE BLOCK
NO. 35	REVISION
DATE	DATE
6-18%	

TITLE SHEET
600' SCALE MAP NO. 35 BLOCK NO. 13

CLARKS GLEN, SECTION 1 AREA 2
LOTS 65 - 98
TAX MAP: 35 PARCEL: 205
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 34-3472-D

SCALE AS SHOWN
SHEET 1 OF 4



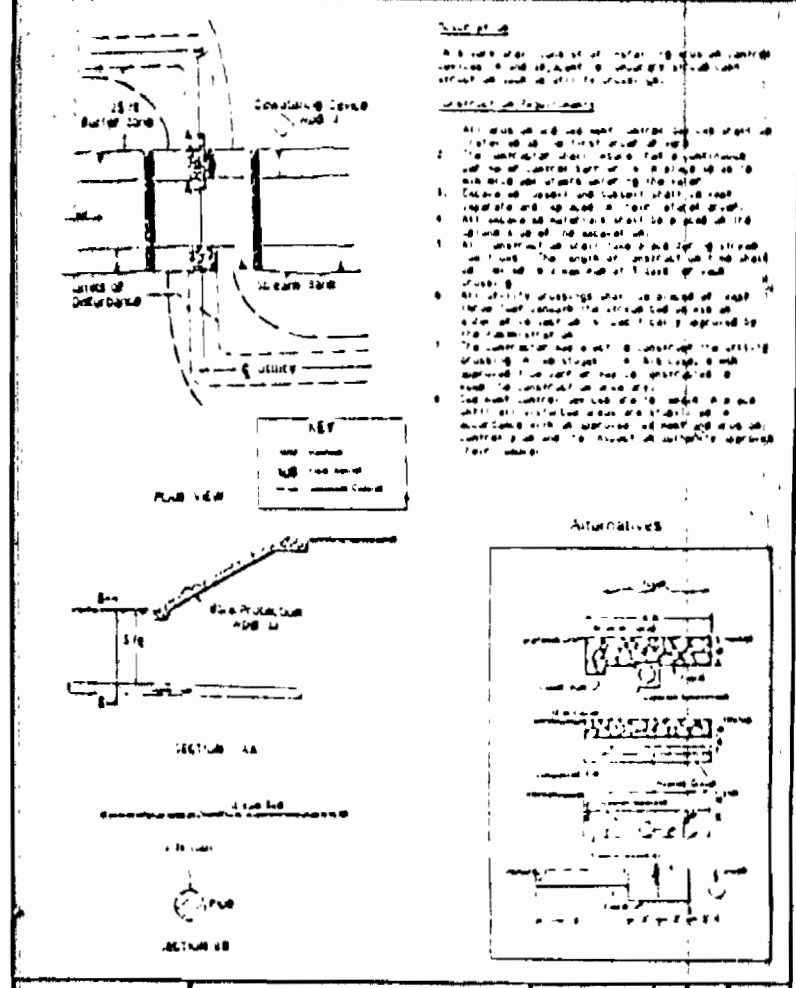
VICINITY MAP
SCALE: 1"=600'

THESE ORIGINAL CONSTRUCTION PLANS, SHEET 1 THRU 4 OF CONTRACT 34-3472-D WILL SUPERSEDE THE CONSTRUCTION PLANS, SHEET 1 THRU 3 APPROVED AND SIGNED BY CHIEF DEVELOPMENT ENGINEERING DIVISION ON 12/6/95.

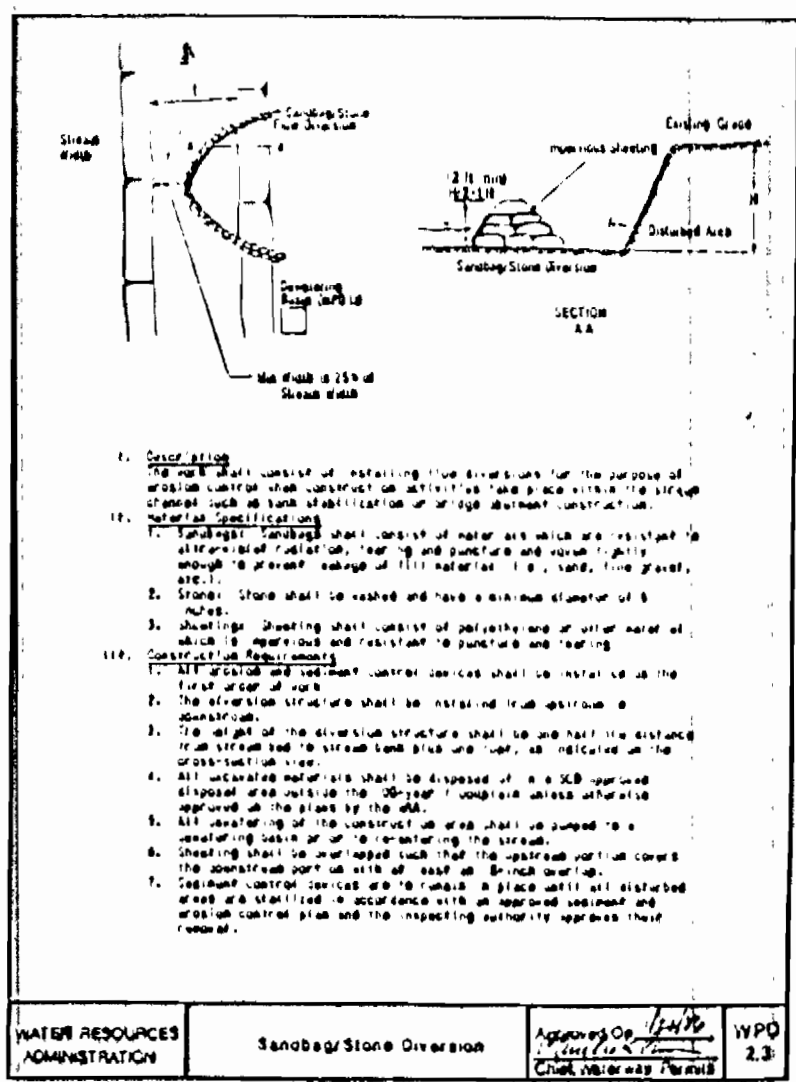
BENCHMARKS

BM1
HOWARD COUNTY MONUMENT NO. 2837003
ELEV. 481.25
CONCRETE MONUMENT

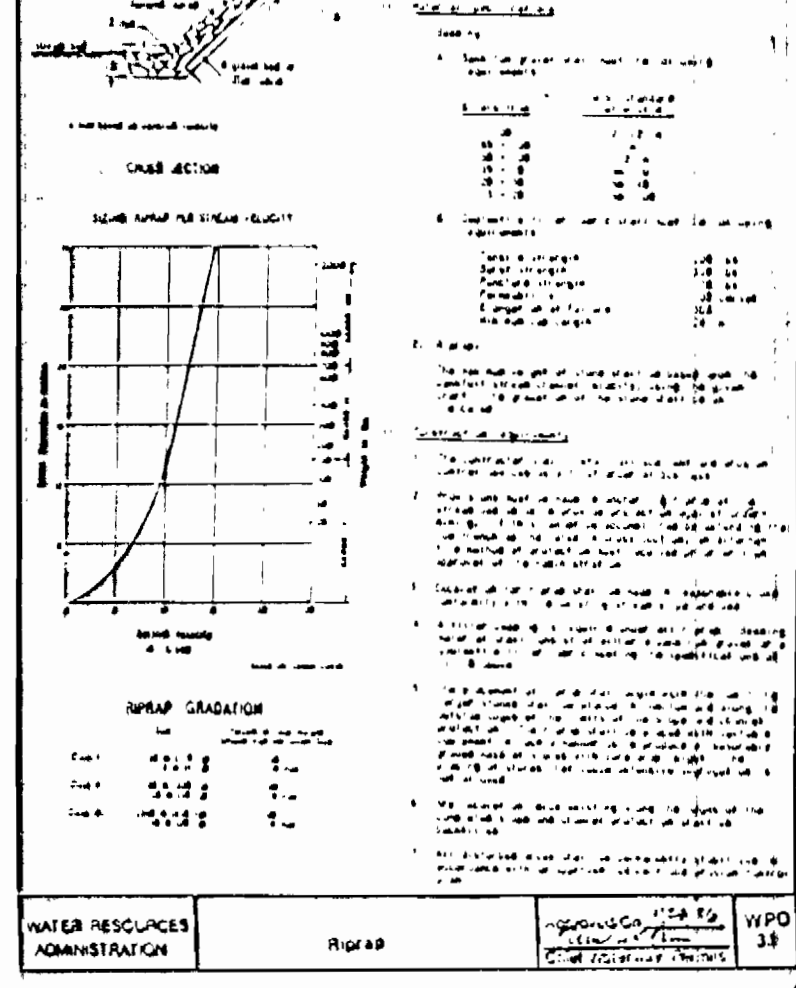
BM2
HOWARD COUNTY MONUMENT NO. 2437003
ELEV. 472.12
CONCRETE MONUMENT



WATER RESOURCES ADMINISTRATION Utility Crossings Approved On: 1/2/97 Date: 01/21/97 WPD 81

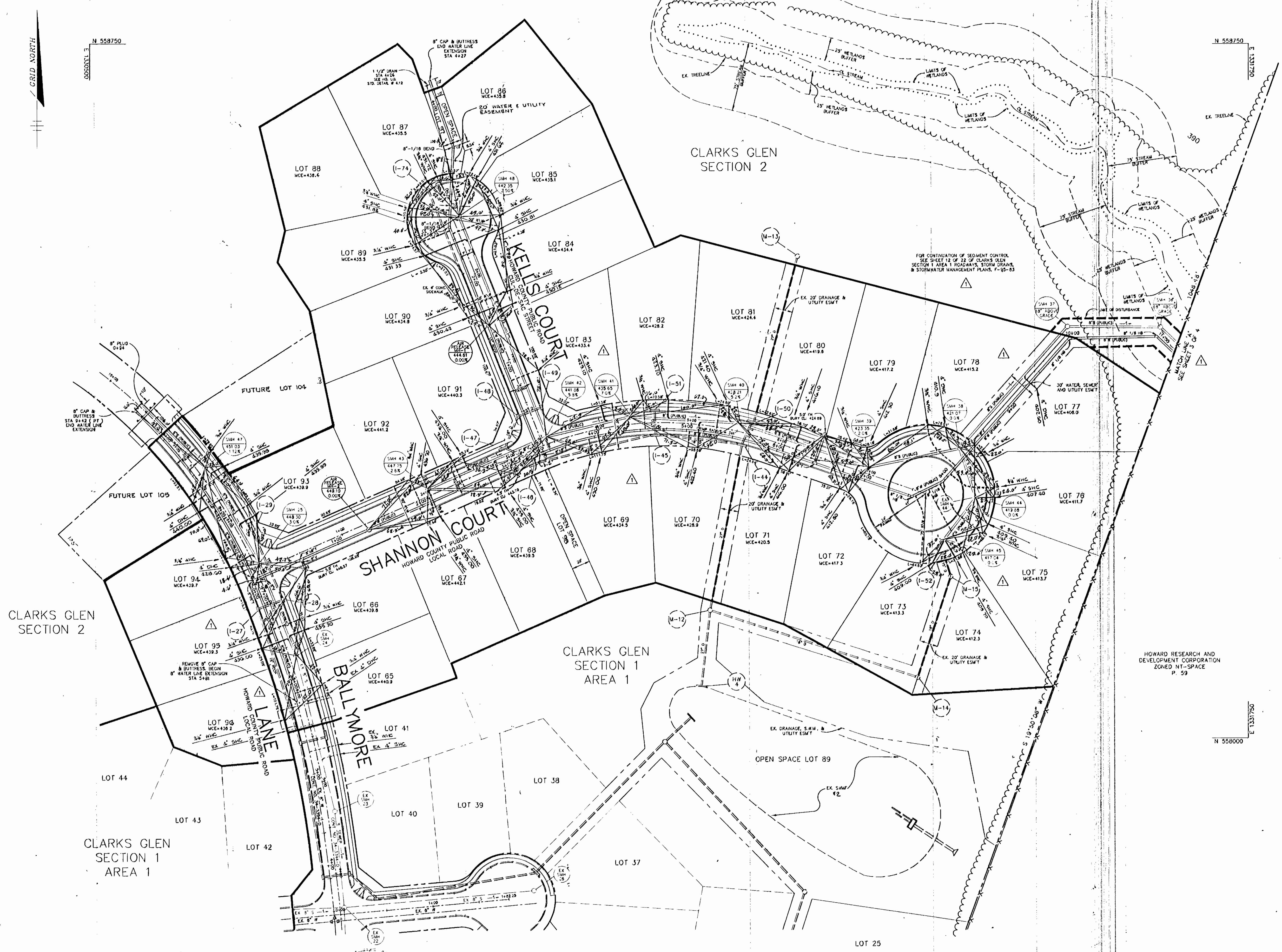


WATER RESOURCES ADMINISTRATION Sanitary Sewer Division Approved On: 1/2/97 Date: 01/21/97 WPD 82



WATER RESOURCES ADMINISTRATION Storm Drain Approved On: 1/2/97 Date: 01/21/97 WPD 83

LEGEND
 PROPOSED SEWER
 EXISTING SEWER
 PROPOSED S.H.C.
 EXISTING S.H.C.
 PROPOSED WATER
 EXISTING WATER
 PROPOSED W.H.C.
 EXISTING STORM DRAIN
 NOTE: ALL S.H.C.'S AND D.H.C.'S ARE AT 2.00% UNLESS OTHERWISE NOTED.



CLARKS GLEN SECTION 2

CLARKS GLEN SECTION 1 AREA 1

CLARKS GLEN SECTION 1 AREA 1

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Michael A. Henswelder for Chief, Bureau of Utilities Date: 1/21/97

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division Date: 1/21/97

RIEMER MUEGGE & ASSOCIATES, INC.
 Planners Engineers Surveyors
 8819 Centre Park Drive • Suite 200 • Columbia, MD 21045
 410-997-8900 FAX: 410-997-9282
 800/9200 9282

J. Farrell
 JAYKANT D. PAREKH # 19148

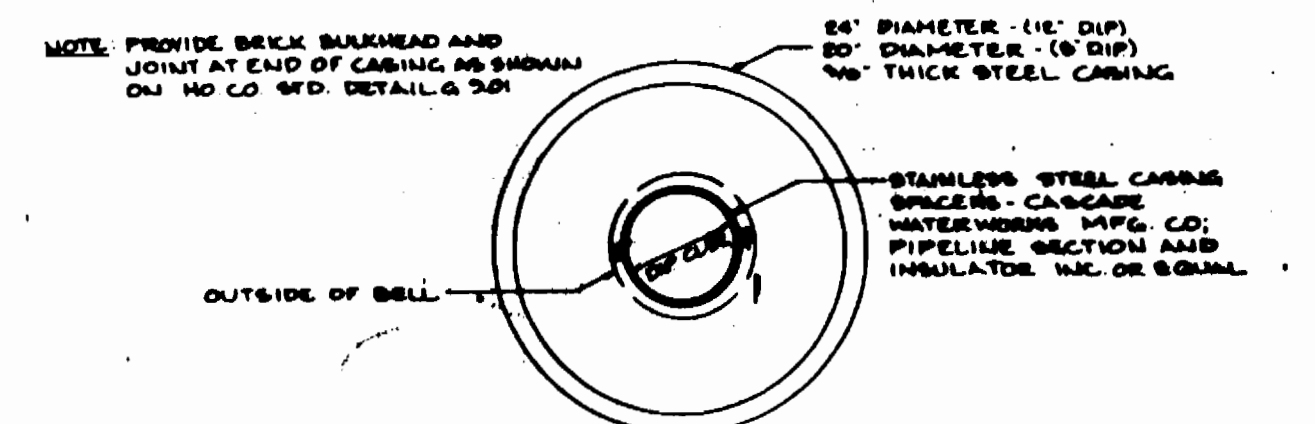
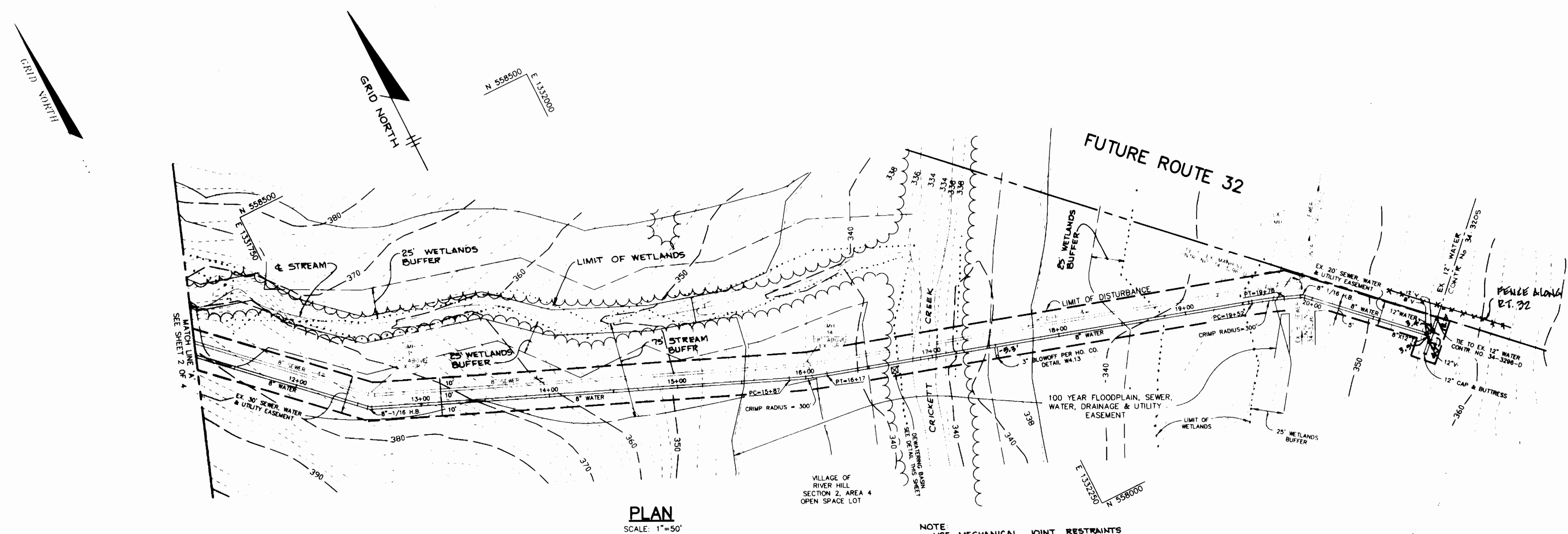
DES: JTD	BY: NO.	REVISION	DATE
DRN: JTD			
CHK: DRF			
DATE: 10-31-95			

Plans of water and sewer mains
 TITLE SHEET
 600' SCALE MAP NO. 35 BLOCK NO. 13

CLARKS GLEN, SECTION 1 AREA 2
 LOTS 65 - 98
 TAX MAP: 35 PARCEL: 205
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT NO. 34-3472-D

SCALE AS SHOWN
 SHEET 2 OF 4

AS-BUILT 4/7/97



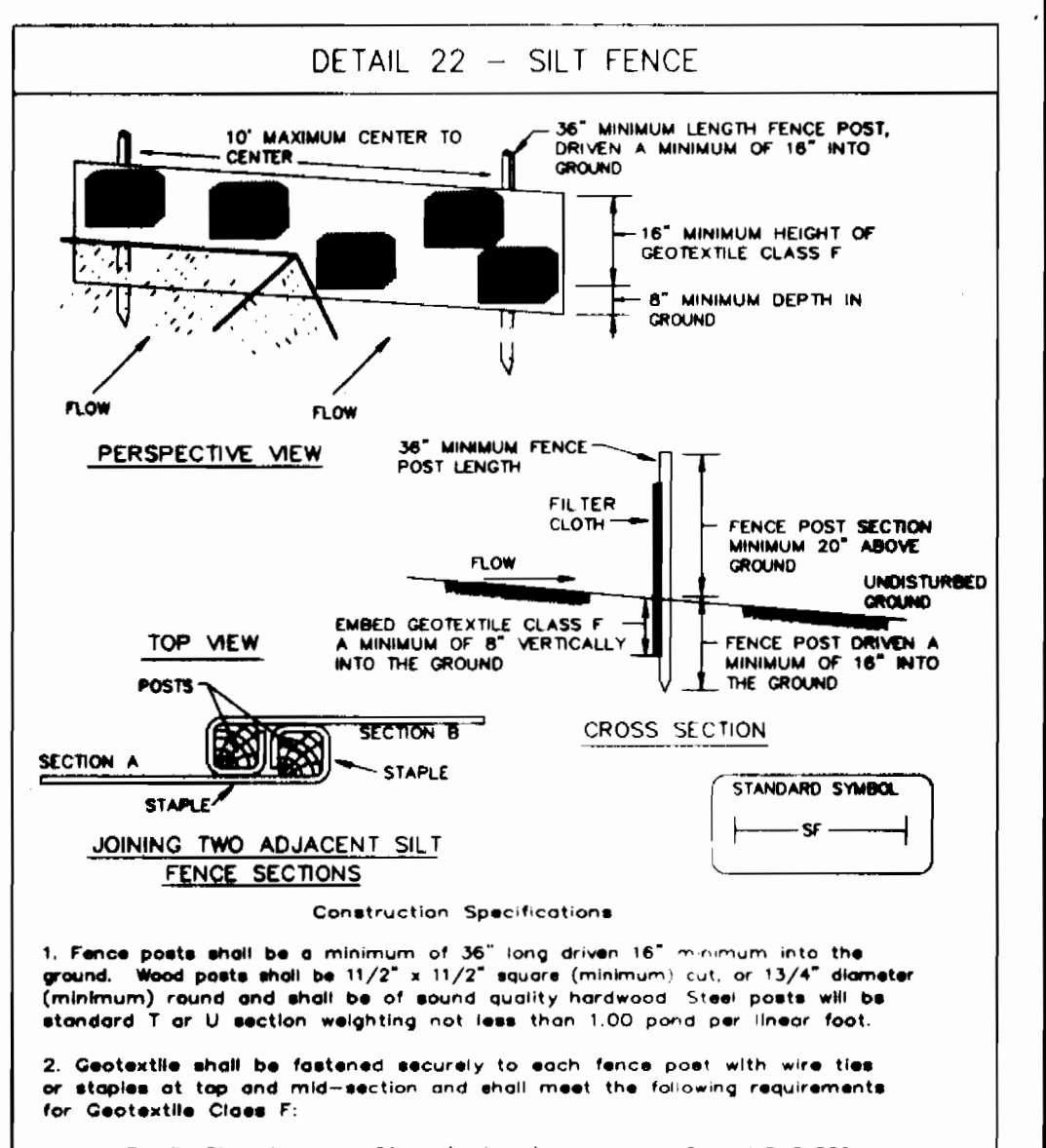
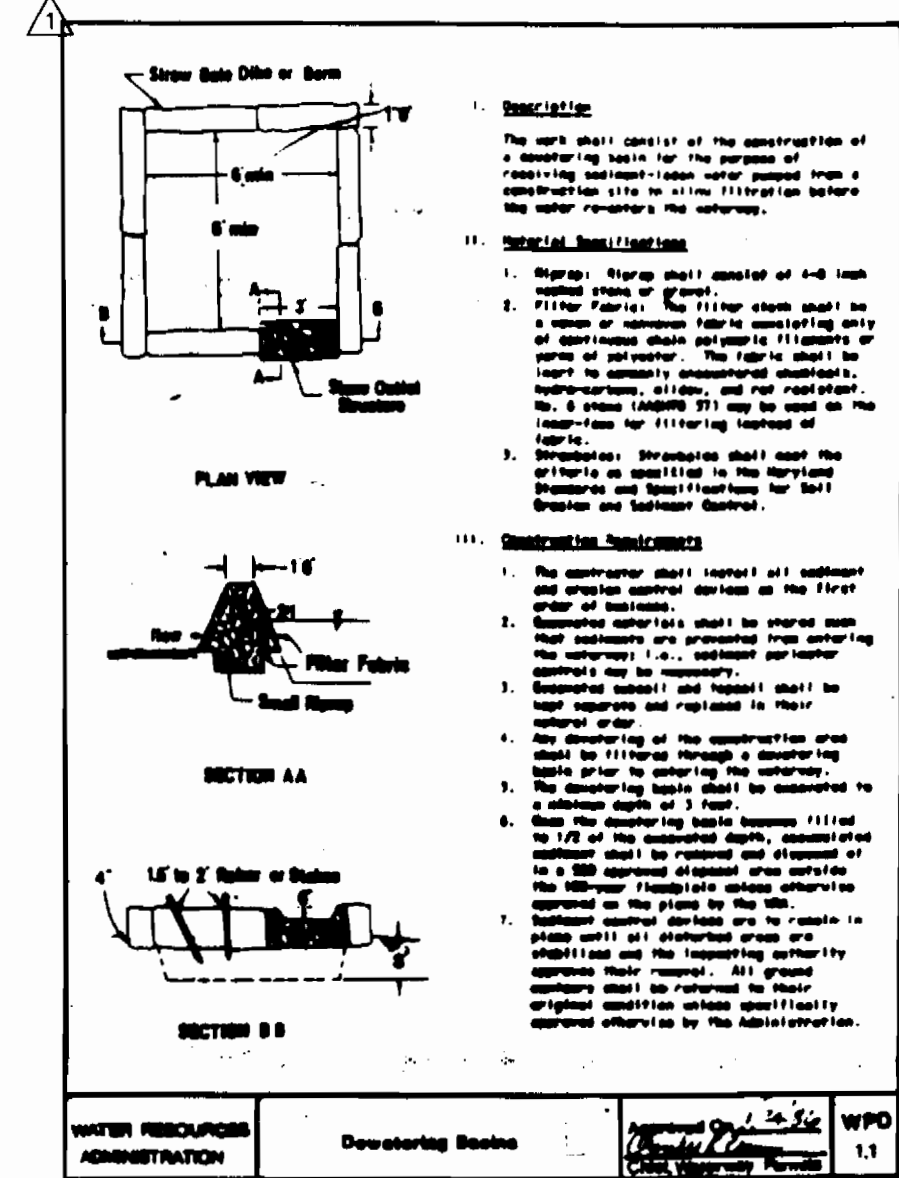
NOTE: PROVIDE BRICK BULKHEAD AND JOINT AT END OF CASING AS SHOWN ON NO. CO. W.P.D. DETAIL G. 301

NOTE: CASING SHALL CONFORM TO ANNA C. 300, WALL THICKNESS ON SIZES THRU 10\"/>

CASING FOR D.I.P SEWER MAIN DETAIL
N.T.S.

SEDIMENT AND EROSION CONTROL
NOTES FOR UTILITY CONSTRUCTION

- CONTRACTOR WILL OPEN ONLY THAT LENGTH OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN ONE (1) DAY, SILT FENCE SHALL BE PLACED DOWN SLOPE OF THE TRENCH.
- PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
- ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.



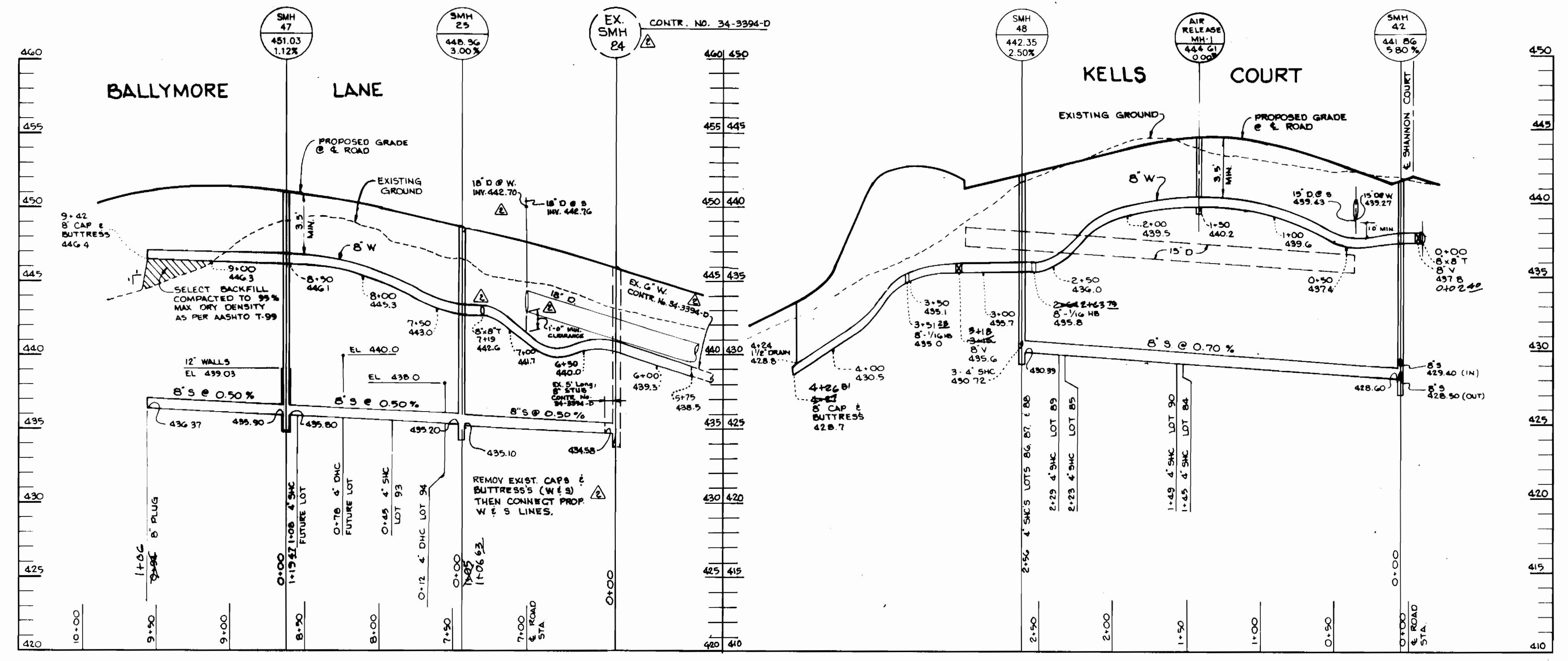
Construction Specifications

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Flood posts shall be 11/2" x 11/2" square (minimum) cut or 1 1/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
Tensile Strength: 50 lbs./in. (min.) Test: MSMT 508
Tensile Modulus: 20 lbs./in. (min.) Test: MSMT 508
Flow Rate: 0.3 gal./ft²/minute (max.) Test: MSMT 322
Filtering Efficiency: 75% (min.) Test: MSMT 322
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 1-13-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Silt Fence Design Criteria		
Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.



PROFILE SCALE: HOR - 1" = 50' VERT - 1" = 5'

PROFILE SCALE: HOR - 1" = 50' VERT - 1" = 5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Michael A. Stovall
CHIEF, BUREAU OF UTILITIES
DATE: 6/20/96

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
Chief, Development Engineering Division
DATE: 7/2/96

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410-997-8900 FAX: 410-997-9282
800/80000 00.DWG

J. Farrell
JAYKANT D. PAREKH # 19148

DES: JTD			
DRN: BLW			
CHK: DRF	RJC	ADDED EX. SMH-24 TO PROFILE, BALLYMORE LANE, ADDED PROP. 18" D. & PROP. W.S. CONNECTIONS TO EX. CAPPED W.S.	12-16-96
	RJC	ADDED PLAN VIEW AND SEDIMENT AND EROSION CONTROL NOTES.	6-18-96
DATE: 10/31/95	BY NO.	REVISION	DATE

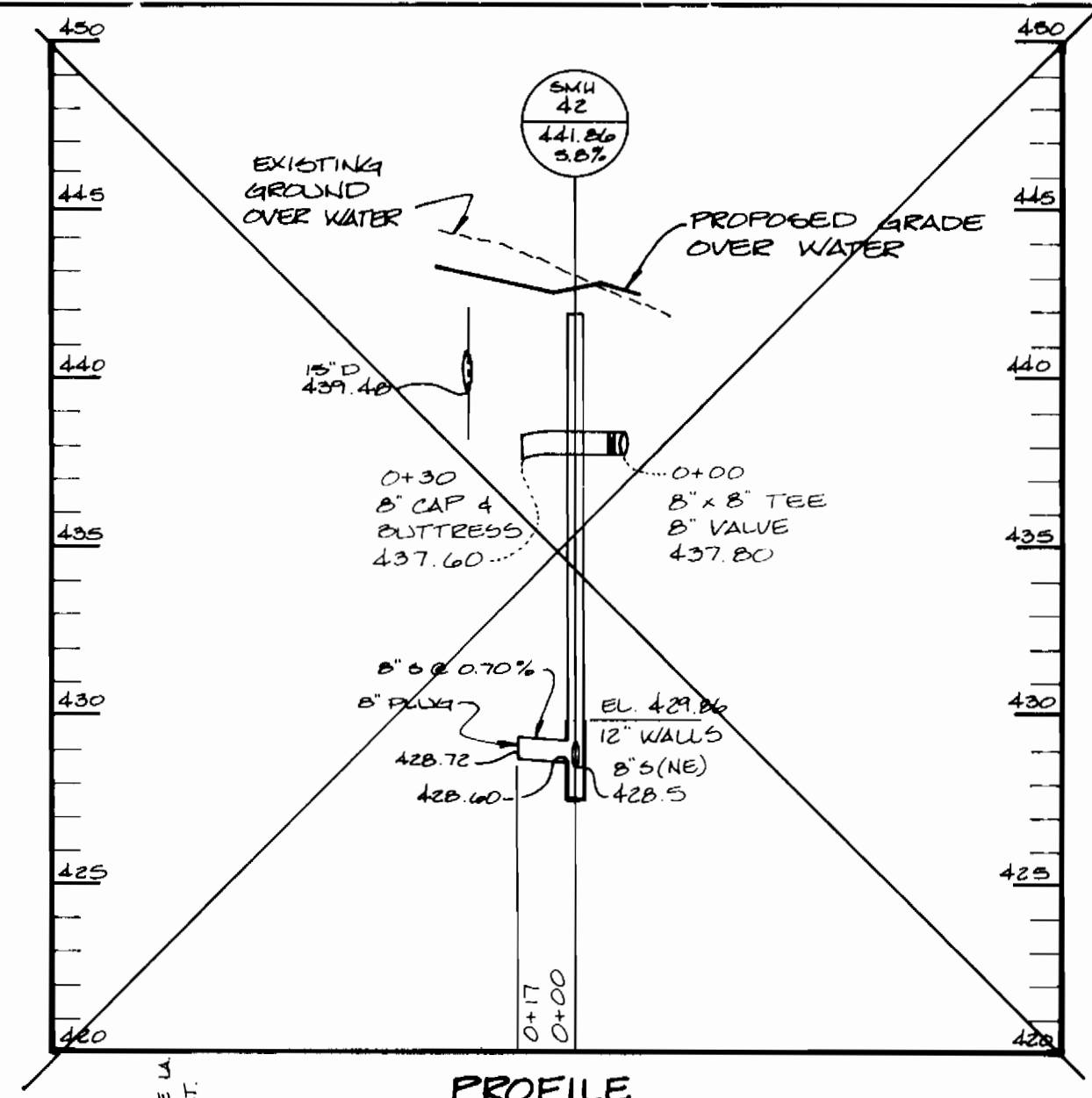
PROFILES OF WATER AND SEWER MAINS
600' SCALE MAP NO. 35 BLOCK NO. 13

CLARKS GLEN
SECTION 1 AREA 2
LOTS 65 THRU 98
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 34-3472-D

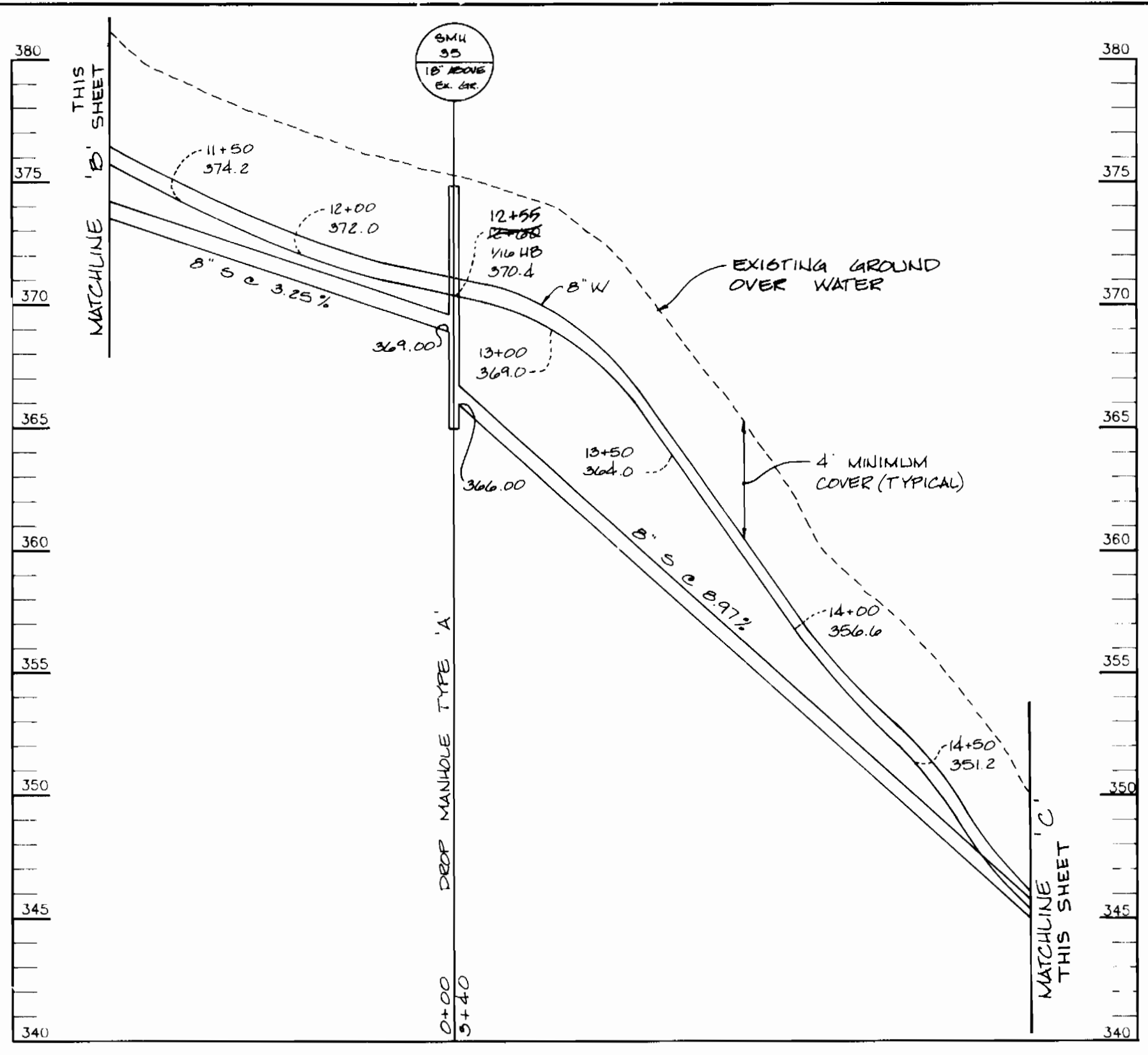
SCALE AS SHOWN
SHEET 3 OF 4

AS-BUILT 4/7/97

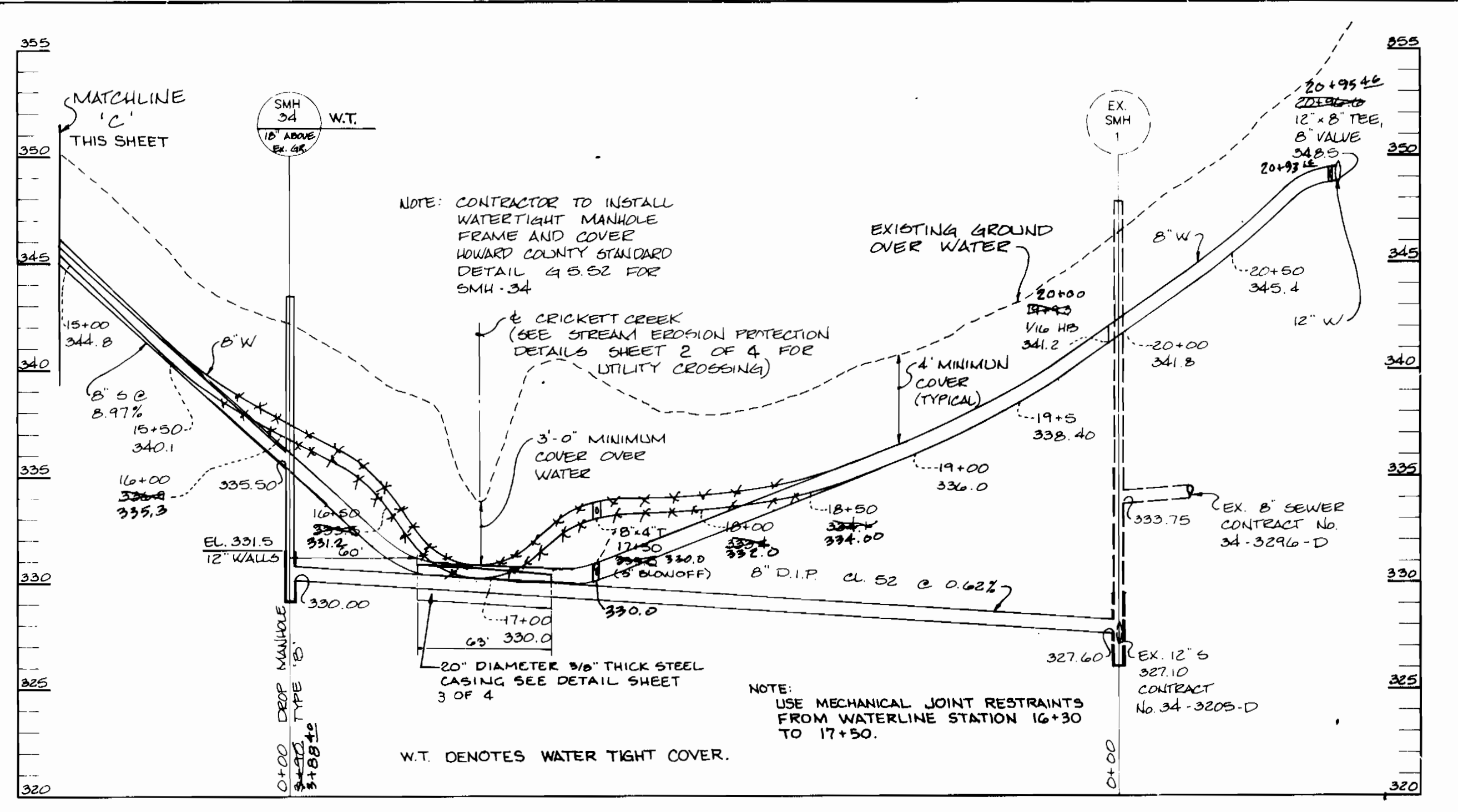
WS Clark's Glen, MD



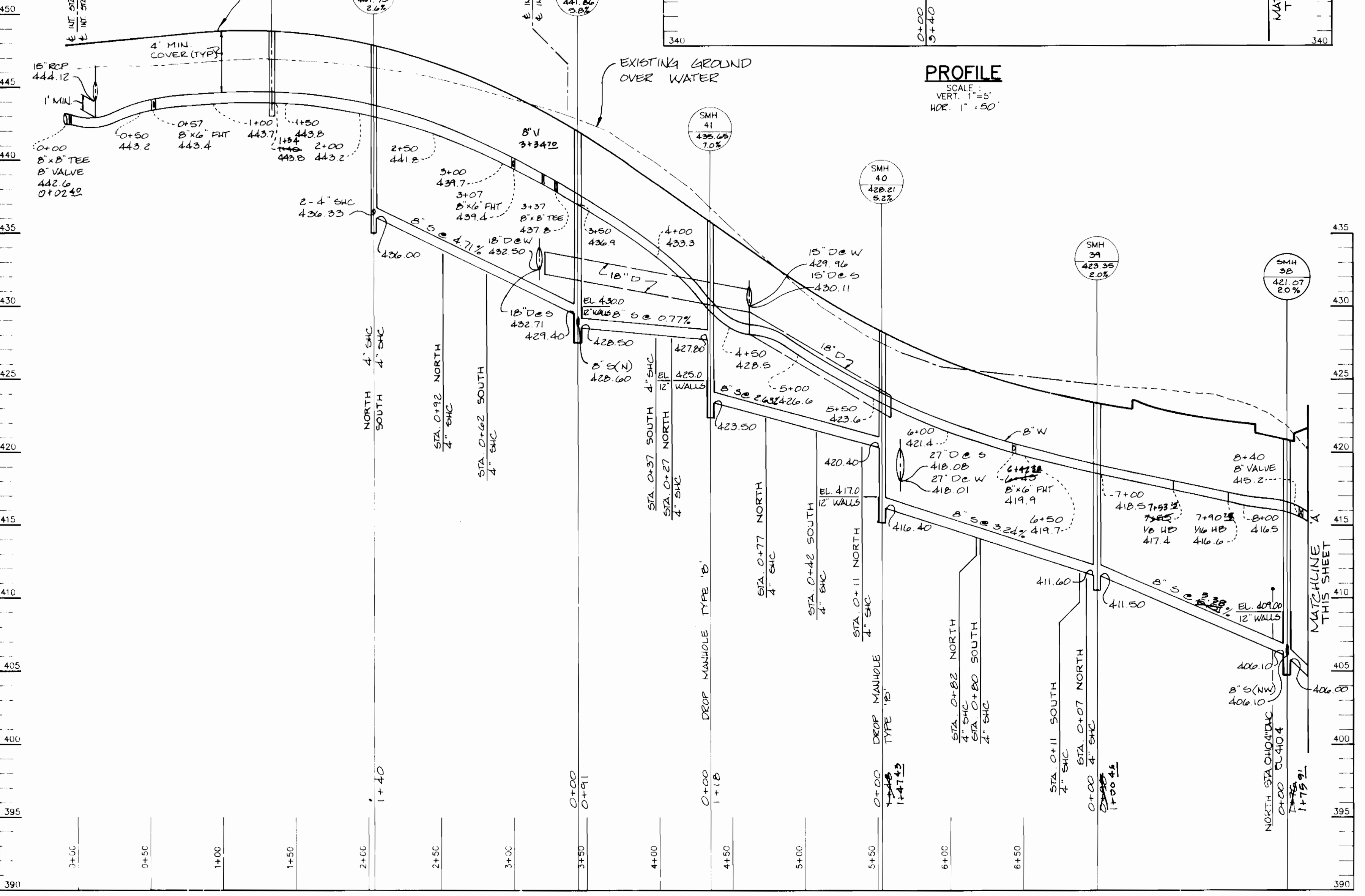
PROFILE
SCALE:
VERT. 1" = 5'
HOR. 1" = 50'



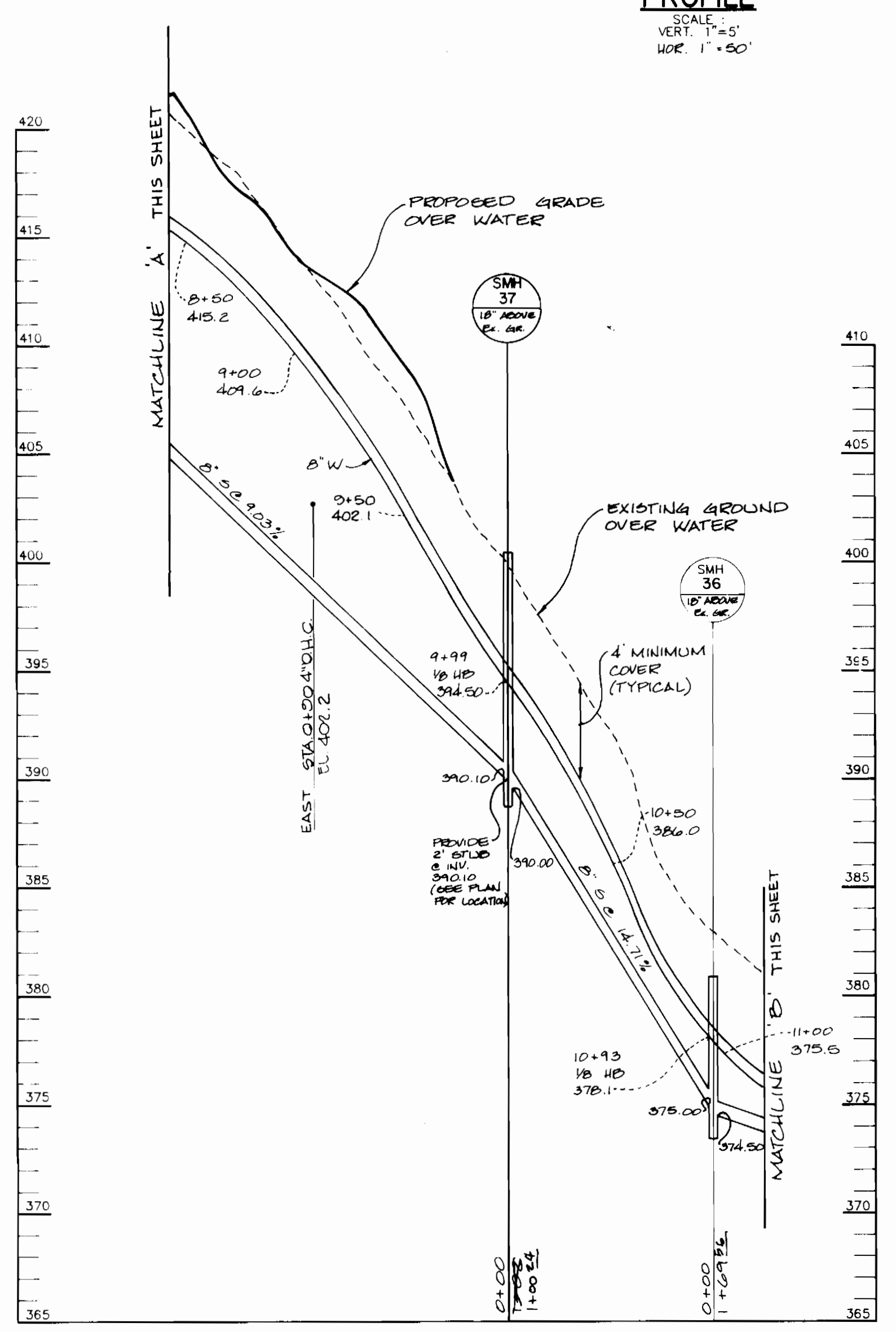
PROFILE
SCALE:
VERT. 1" = 5'
HOR. 1" = 50'



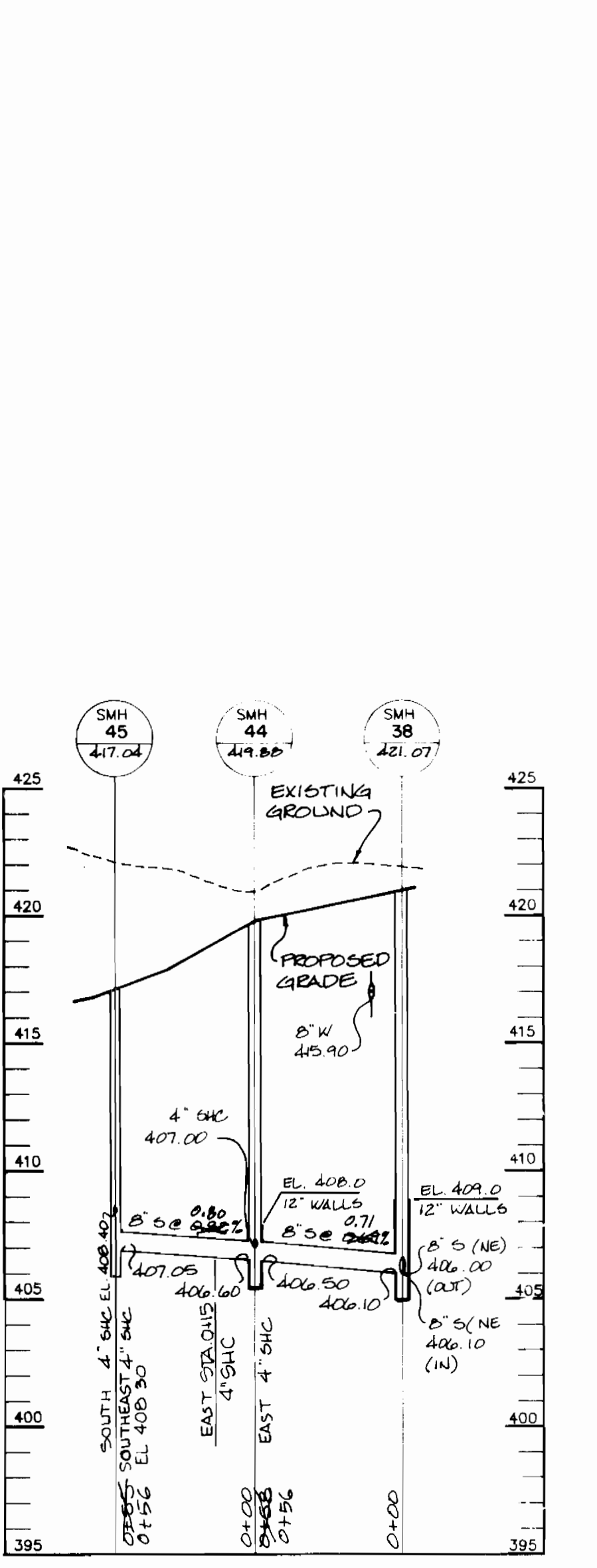
PROFILE
SCALE:
VERT. 1" = 5'
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PROFILE
SCALE:
VERT. 1" = 5'
HOR. 1" = 50'



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



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

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 7/2/95 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND DATE: 7/2/95 CHIEF, DEVELOPMENT ENGINEERING DIVISION	RIEMER MUEGGE & ASSOCIATES, INC. Planners • Engineers • Surveyors 8815 Centre Park Drive • Suite 200 • Columbia, MD 21045 410-997-8900 FAX: 410-997-9282	DES: A.A.P. DRN: C.M. CHK: AAP DATE: 6/18/96 RUC BY: NO.	ENTIRE SHEET REMOVED FROM CONTR 34-3394 ADDED TO THIS CONTR., 34-3472 REVISION	DATE: 6-18-96 SCALE: 600' SCALE MAP NO. 95 BLOCK NO. 15	CLARKS GLEN, SECTION 1 AREA 2 LOTS 1 - 98 TAX MAP: 35 PARCEL: 205 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 34-3472-D	SCALE AS SHOWN SHEET 4 OF 4
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AS-BUILTS 4/1/07