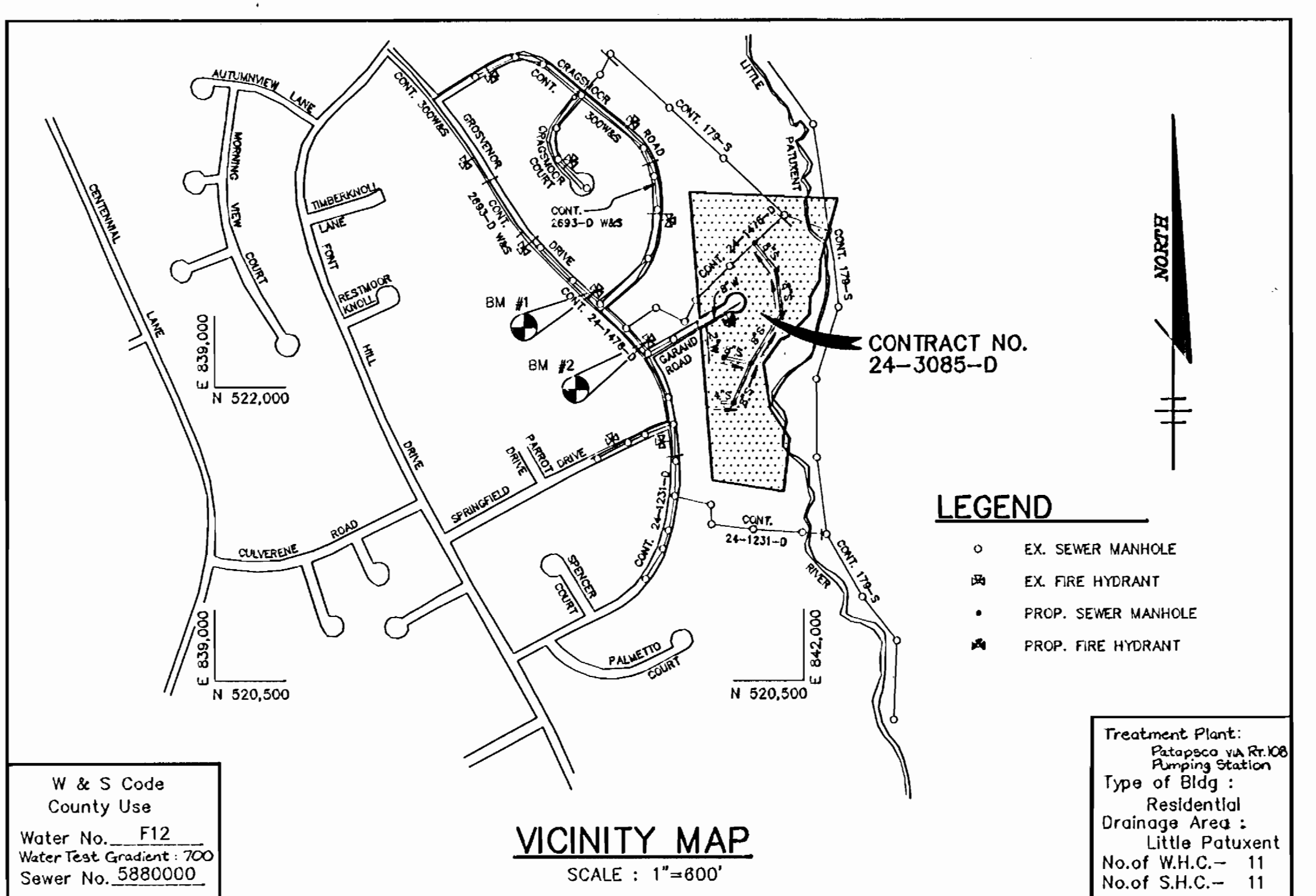


TRAVERSE PT. No.	NORTHING	EASTING
10	522,301.738	841,486.500
11	521,848.425	841,496.925
30	521,878.489	842,007.194
31	522,089.534	841,963.964



VICINITY MAP
SCALE: 1"=600'

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.O.S. data.
- All pipe elevations shown are invert elevations.
- Clear all utilities by a minimum of 8'. 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 existing utilities, 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 787-9088
 - Miss Utility 1-800-257-7777
 - Colonial Pipeline Co. 795-1390
 - Bureau of Utilities, Howard County Department of Public Works 313-4900
- 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.
- Top 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 as per details W.11 and W.211. 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 DIP, RCP, VCPX, CSPX, RCP and P.V.C. unless otherwise noted.
- The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 18" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Detail G5.32. Where watertight manhole frame and cover is used, set top of frame 1'-0" above finished grade unless otherwise noted on the drawings.
- House(s) with the symbol "C.H.S." indicates that cellar cannot be served.

BENCH MARKS

B.M. #1 ELEV. 381.02
TOP STEM OF FIRE HYDRANT AT INTERSECTION OF GROSVENOR DRIVE AND CRAGSMOOR ROAD.

B.M. #2 ELEV. 379.87
TOP STEM OF FIRE HYDRANT AT INTERSECTION OF GROSVENOR DRIVE AND GARAND ROAD.

PLAN
SCALE: 1"=50'

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" WATER	144 LF.	140 LF	DIP CLASS-52 S.I.	ATLANTIC STATES
6" WATER	103 LF.	103 LF	DIP CLASS-52 S.I.	ATLANTIC STATES
2" WATER	192 LF.	192 LF	TYPK-K COPPER	CAMBRIDGE LEE
3-WAY WHC	1 EACH	2x3/4 4WAY BRCF	H-15350	MUELLER
8" SEWER	1060 LF.	1042 LF	SDR-35	J.M. MPX.
4" SEWER	84 LF.	214 LF	SDR-35	J.M. MPX.
4" MANHOLE	45 LF.	45 LF	PRE-CAST CONC.	ATLANTIC CONC.
FIRE HYDRANT	1 EACH	1 EACH	5" NST	MUELLER
3/4" WHC	100 LF.	100 LF	3/4" K-COPPER	CAMBRIDGE LEE
1" WHC	115 LF.	115 LF	1" K-COPPER	CAMBRIDGE LEE
3/8" OUTSIDE METER	2 EACH	2 EACH	RHMC-1BLCI	VESTAL
8"x6"x6" T	1 EACH	1 EACH	H.J. SHORT BODY	TYLER

NAME OF UTILITY CONTRACTOR: _____

CHECKBOX _____

AS-BUILT DATE _____

SURVEY AND DRAFTING DIVISION _____

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on F-92-18, and these drawings.

Reviewed for Howard Soil Conservation District and meets technical requirements.
James H. H. [Signature] 3/27/92 DATE
SOIL CONSERVATION SERVICE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
John L. Robertson [Signature] 3/27/92 DATE
HOWARD SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. [Signature] 3/28/92 DATE
DIRECTOR OF PUBLIC WORKS

Robert [Signature] 3-23-92 DATE
CHIEF, BUREAU OF UTILITIES

[Signature] 3-23-92 DATE
CHIEF, LAND DEVELOPMENT

RIEMER MUEGGE & ASSOCIATES, INC.
A Land Planning, Engineering and Consulting Firm
8818 Centre Park Drive Suite 200 Columbia, Md. 21045
301-997-8900 FAX: 301-997-9282

Arthur E. Muegge [Signature] #8107
ARTHUR E. MUEGGE



DES: CB					
DRN: CB					
CHK: DRF					
DATE: 2-17-92	BY	NO.	REVISION	DATE	

PLAN OF A WATER MAIN AND A SEWER MAIN

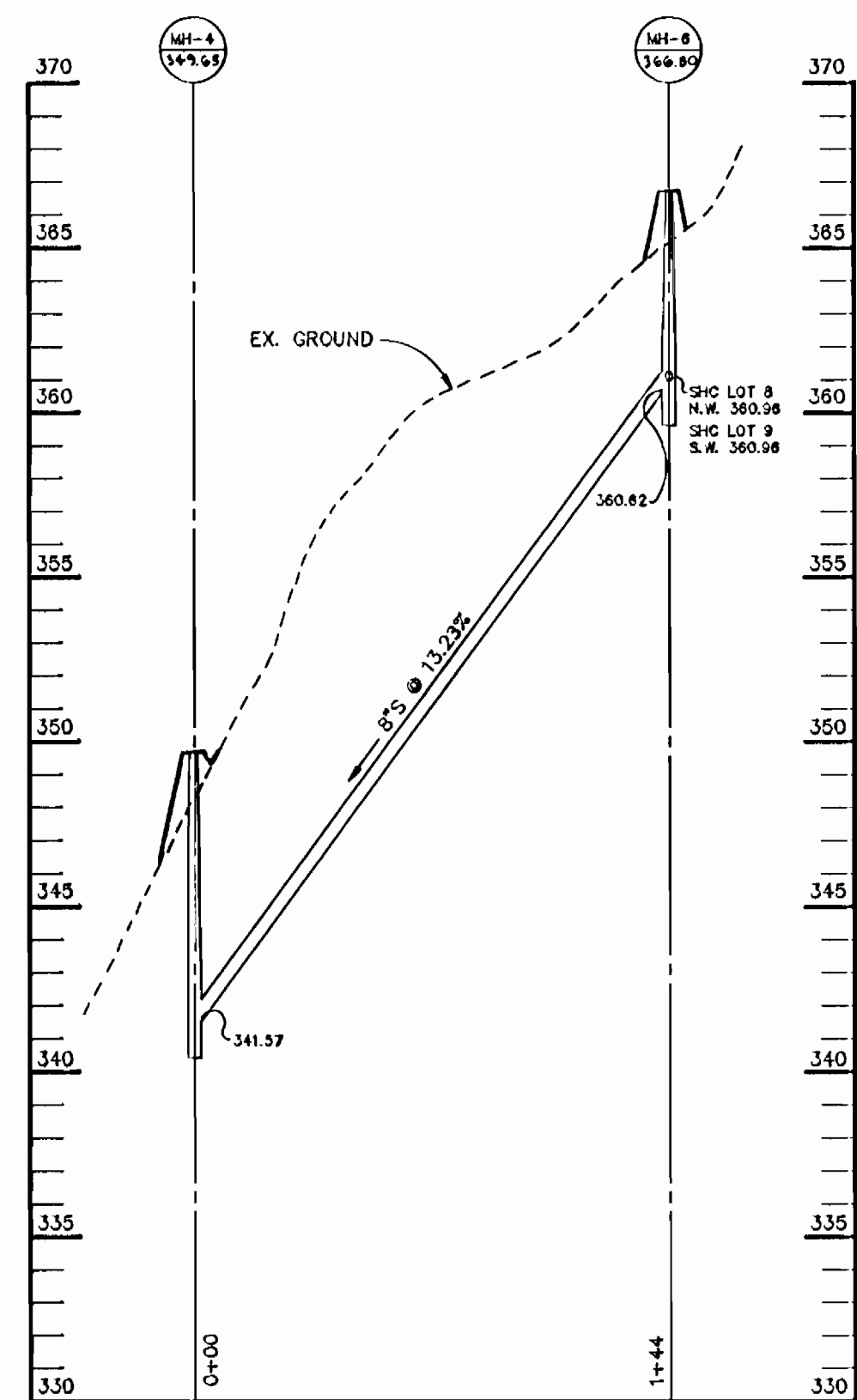
600' SCALE MAP NO. 24 BLOCK NO. 8

LITTLE PATUXENT RIDGE SECTION ONE
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 24-3085-D

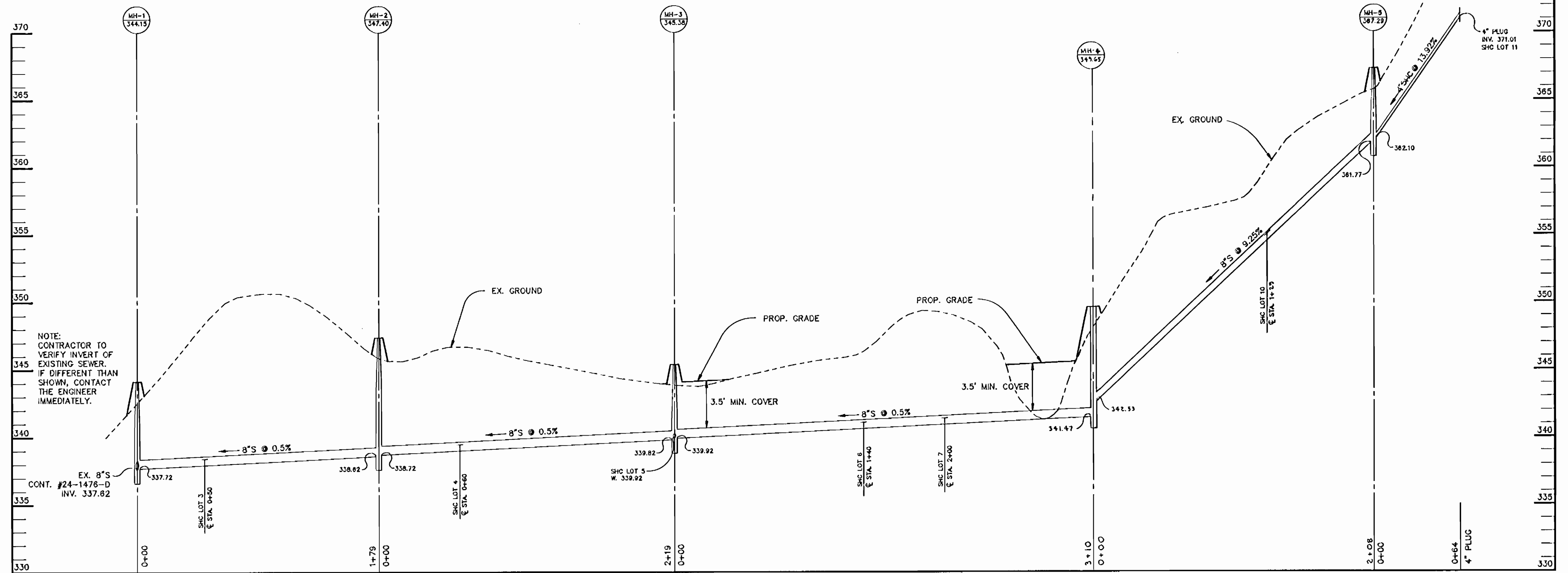
SCALE AS SHOWN

SHEET 1 OF 2

AS-BUILT 2/12/93

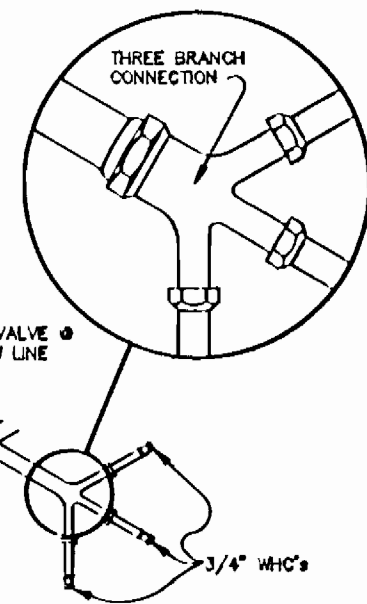


SEWER PROFILE
SCALE: HOR.: 1"=50'
VER.: 1"=5'

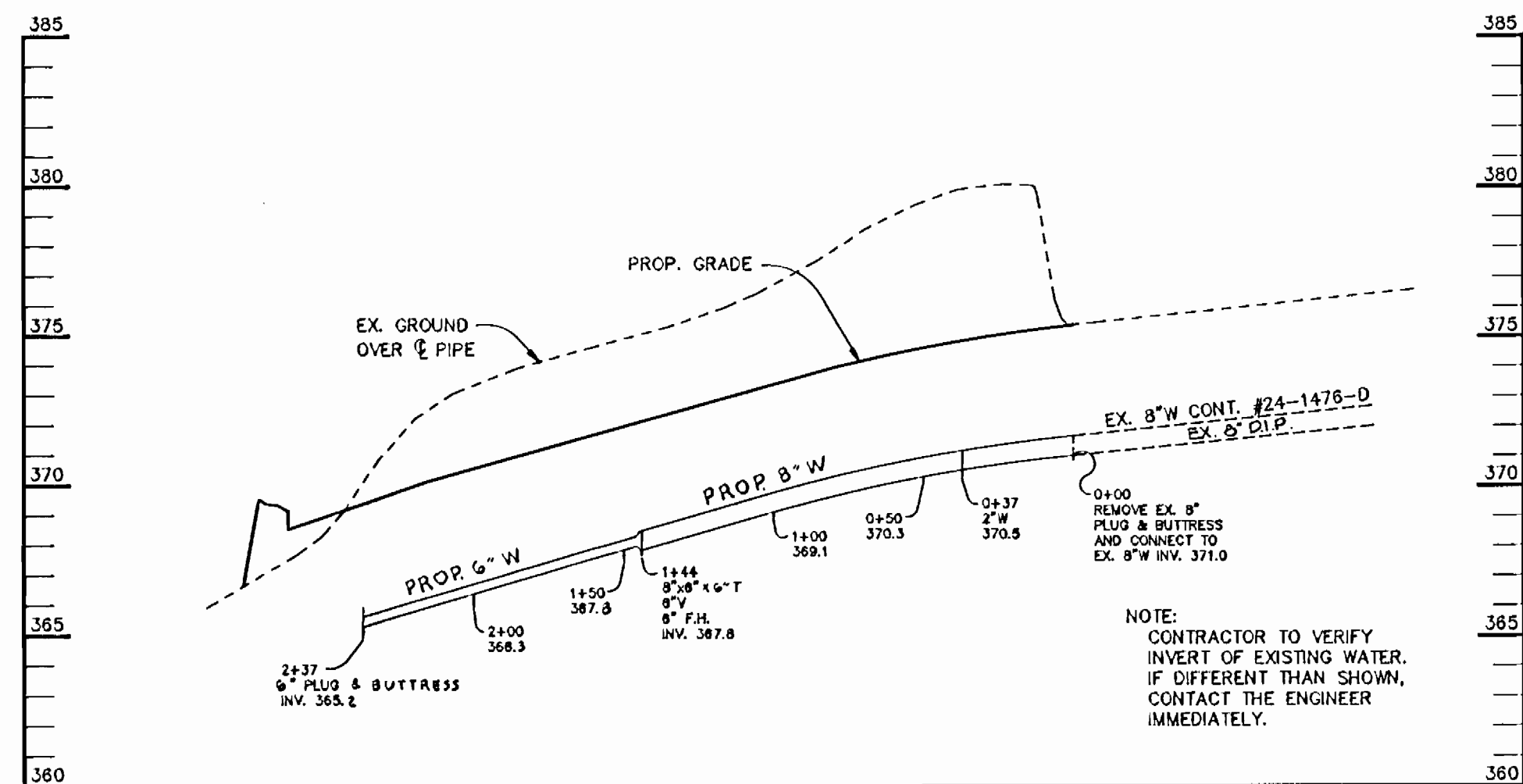


SEWER PROFILE
SCALE: HOR.: 1"=50'
VER.: 1"=5'

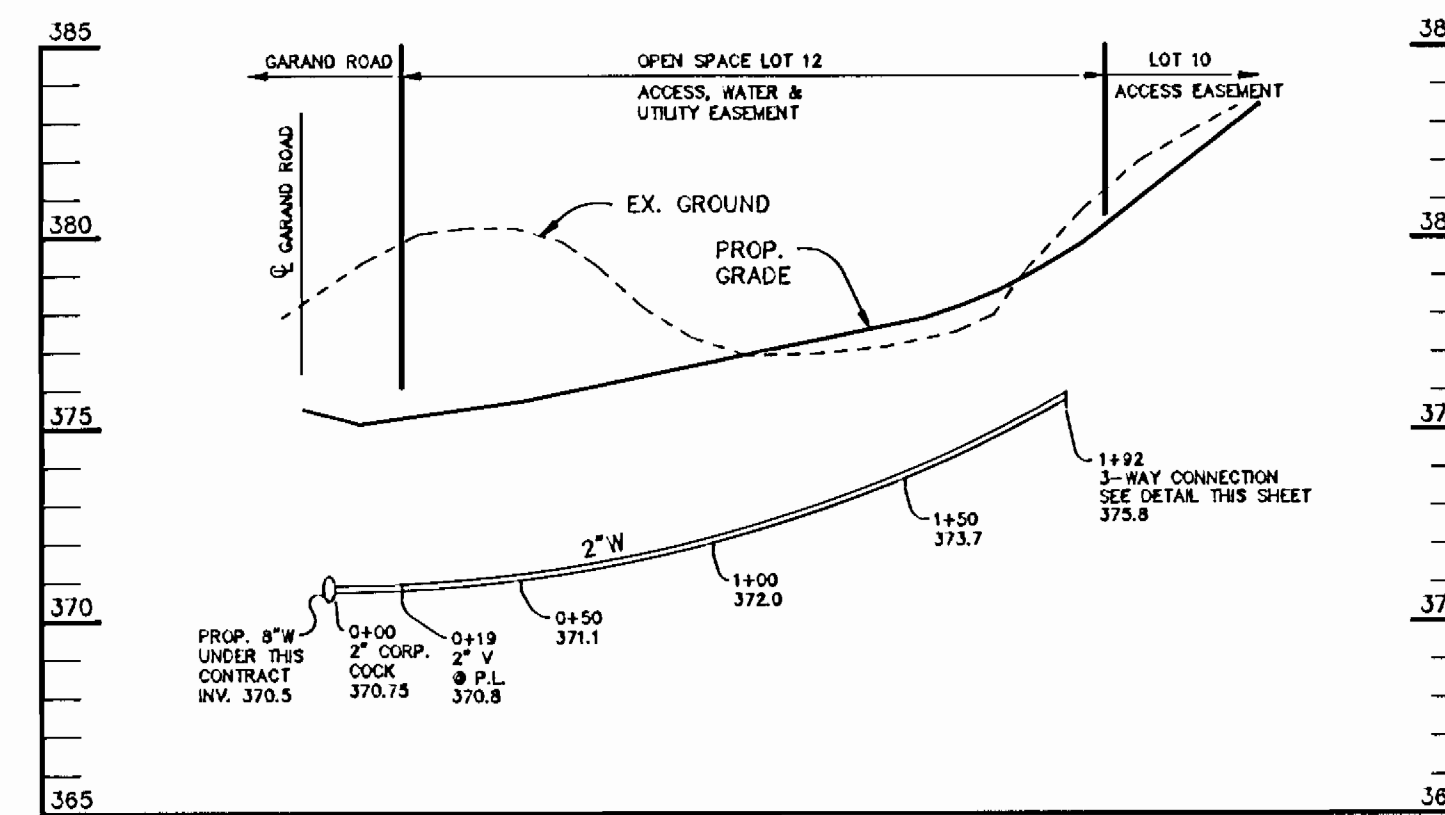
NOTE:
IF DOUBLE STRAP
SERVICE CLAMP IS
USED, STRAPS
SHALL BE STAINLESS
STEEL.



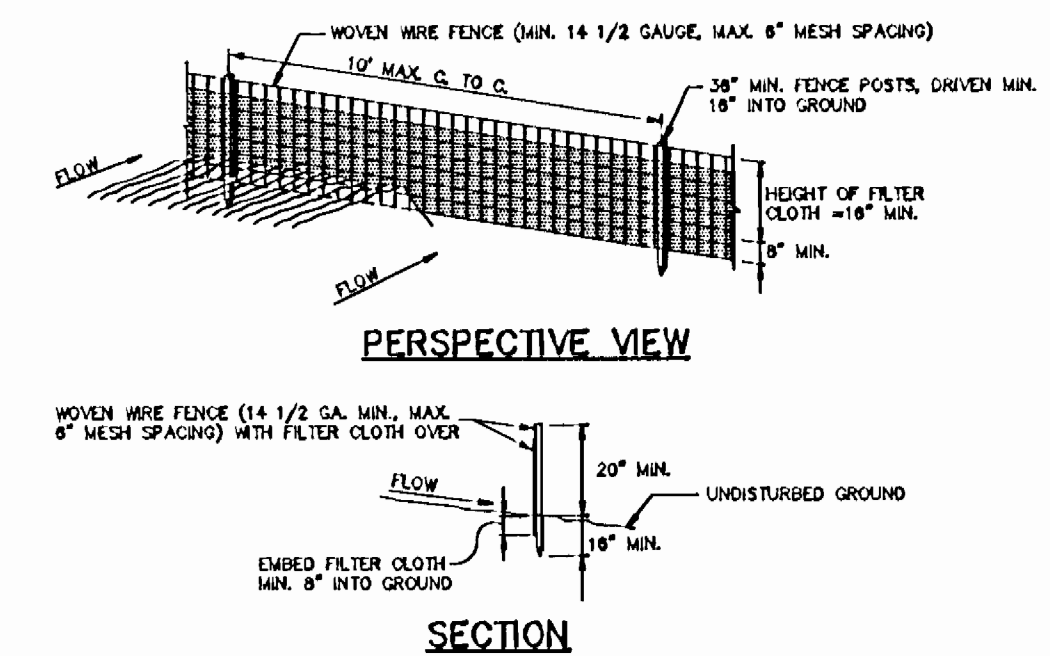
3-WAY WHC DETAIL
LOTS 9, 10 & 11
NO SCALE



WATER PROFILE
SCALE: HOR.: 1"=50'
VER.: 1"=5'



WATER PROFILE
SCALE: HOR.: 1"=50'
VER.: 1"=5'



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. Woven wire fence to be fastened securely to fence posts with wire or staples.
2. Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
3. When two sections of filter cloth adjoin each other they shall be overlapped by the trough and folded.
4. Maintenance shall be performed as needed and material removed when "bldges" develop in the silt fence.

POSTS: Steel, either T or U type or 2" hardwood.
FENCE: Woven wire, 14 GA., 6" max. mesh opening.
FILTER CLOTH: Filter Cloth 100% Stibbina T100 or approved equal.
PREFABRICATED UNIT: Geofab, Envirofence or approved equal.

SILT FENCE DETAIL
NO SCALE

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on F-92-18, and these drawings.

Reviewed for Howard Soil Conservation District and meets technical requirements.

U.S. SOIL CONSERVATION SERVICE DATE

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

John L. Robertson 1/27/92
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Clark 3/20/92
DIRECTOR OF PUBLIC WORKS DATE
Robert J. Brown 3-23-92
CHIEF, BUREAU OF UTILITIES DATE
Arthur Muegge 3/23/92
CHIEF, LAND DEVELOPMENT DATE

RIEMER MUEGGE & ASSOCIATES, INC.
A Land Planning, Engineering and Consulting Firm
8818 Centre Park Drive Suite 200 Columbia, Md. 21045
301-997-8900 FAX: 301-997-9282



DES:	CB				
DRN:	CB				
CHK:	DRF				
DATE:	2-17-92	BY	NO.	REVISION	DATE

PROFILE OF A WATER MAIN
AND A SEWER MAIN

600' SCALE MAP NO. 24 BLOCK NO. 8

LITTLE PATUXENT RIDGE
SECTION ONE
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 24-3085-D

SCALE
AS
SHOWN

SHEET
2 OF 2

AS-BUILT 1/21/95