

QUANTITIES			
ITEM	ESTIMATED	AS-BUILT	MATERIAL / SUPPLIER
8" x 8" TEE	4	4	AMSTEAD / A/P
8" x 6" TEE	12	12	AMSTEAD / A/P
8" VALVE	9	9	AMSTEAD / A/P
8" 1/8 BEND	4	4	AMSTEAD / A/P
8" CAP	3	3	AMSTEAD / A/P
6" VALVE	12	12	AMSTEAD / A/P
8" 1/16 BEND	2	2	AMSTEAD / A/P
8" D.I.P. W	2910 LF	2906	AMSTEAD INDUSTRY / GREEN P.P.C.
6" D.I.P. W	102 LF	180	" " " "
F.H.	7	7	MT & Mueller / A/P
SANITARY MANHOLE	2	0	ATLANTIC PROD. ATLANTIC
8" SANITARY SEWER	290 LF		CERTAINTEED / A/P
TYPE A DROP CONNECTION	1		UNIT AT PRIVATE SAN.

GENERAL NOTES

PART 1

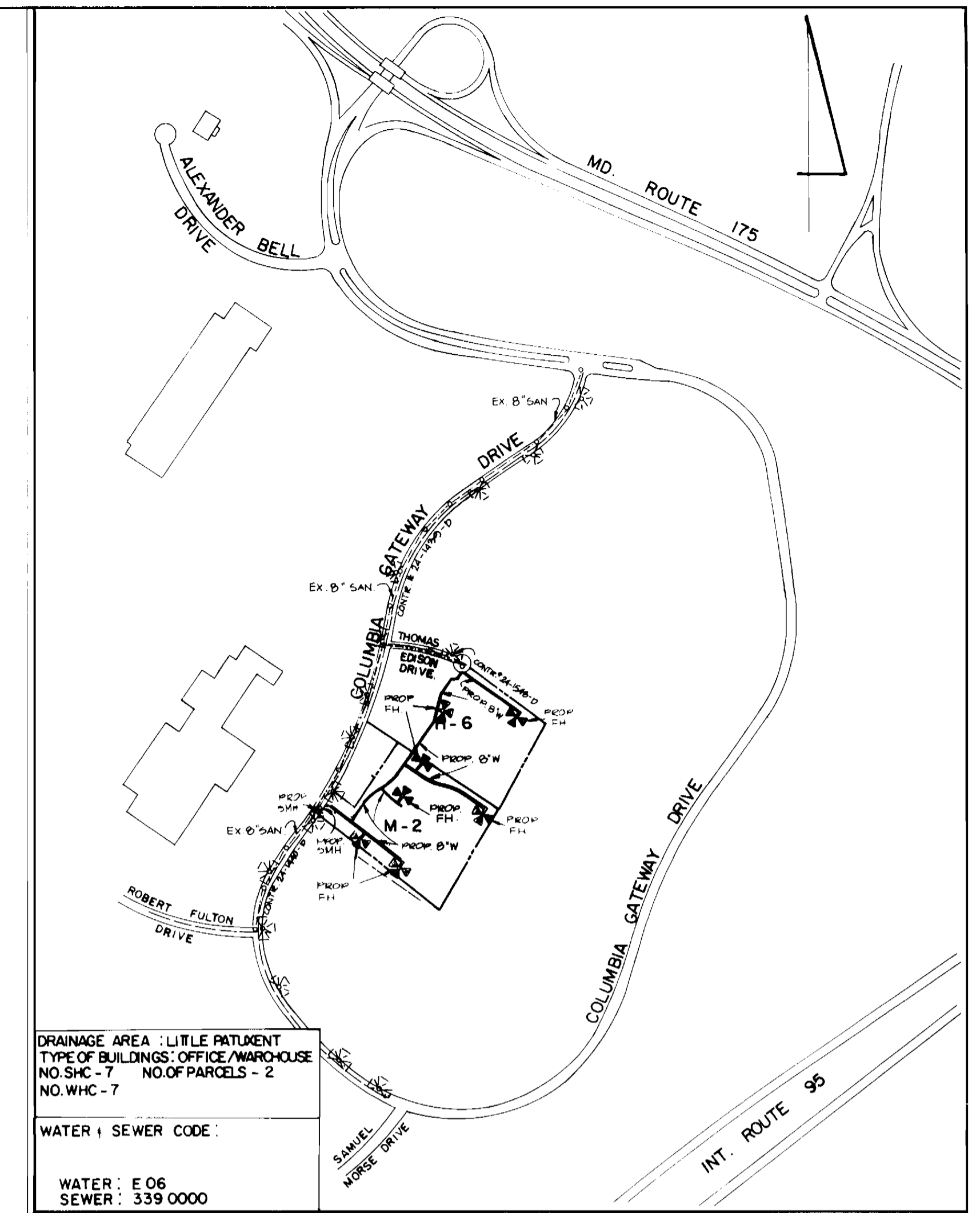
- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICE AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- ALL PIPE ELEVATIONS 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 THE BRACING OF ADDITIONAL POLES, OR DAMAGE SHALL BE DEDUCTED FROM THE MONEY OWED TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOL. IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION THE CONTRACTOR SHALL HAVE A COPY OF VOL. 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 RESULTS OF THE TEST 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 UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS: STATE HIGHWAY ADMINISTRATION 531-5533, BALTO. GAS & ELECTRIC COMPANY - CONTRACTOR SERVICES 850-4620, BALTO. GAS & ELECTRIC COMPANY - UNDERGROUND DAMAGE CONTROL 859-9004, BALTO. GAS & ELECTRIC COMPANY - TROUBLE SHOOTING 296-9001, MISS UTILITY 1-(301) 559-0100, COLONIAL PIPELINE 795-1390 BUREAU OF UTILITIES, HOWARD COUNTY DEPT. OF PUBLIC WORKS 992-2366, C & P TELEPHONE 1-(800) 257-7777.
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE DAMAGED OR REMOVED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS, AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OR THE MAIN.
- PLACE REGULATION "MEN WORKING" WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATIONS MANUAL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS.

PART 2

- ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3.5 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 ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1003 AND 1008 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL WATER HOUSE CONNECTIONS SHALL BE INSIDE METER SETTINGS UNLESS OTHERWISE NOTED.
- ALL FIRE HYDRANTS TO BE SET THREE FEET BEHIND FACE OF CURB UNLESS NOTED OTHERWISE.
- ALL WATER HOUSE CONNECTIONS SHALL COMPLY WITH HOWARD CO. STD. 3.21 AS SHOWN ON ART. 40, SPECIAL PROVISIONS.
- MINIMUM CRIMP RADIUS WILL BE SPECIFIED BY PIPE MANUFACTURER.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED SO AS TO HAVE AT LEAST ONE FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- SERVICE CLAMPS ARE TO HAVE STAINLESS STRAPS.
- ALL D.I.P. FITTINGS SHALL BE ACCORDANCE WITH AWWA SPECIFICATION C-153 DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.

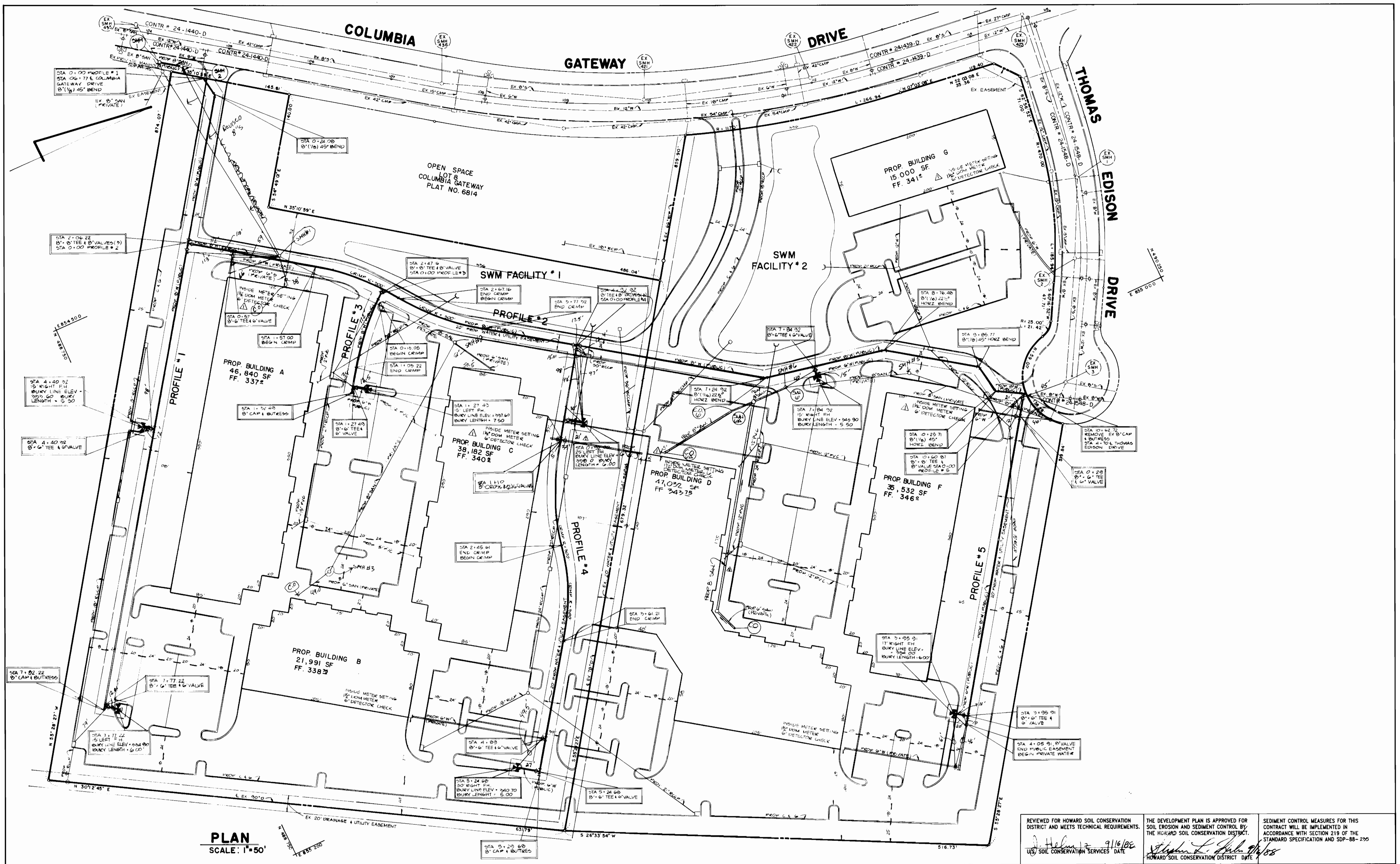
PART III - SEWER

- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., A.C.P. CLASS 2400 OR 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.
- MANHOLES SHOWN WITH 12" WALLS ARE BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN THE PLAN AND PROFILE SHALL HAVE WATER TIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52 WHERE WATER TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS NOTED ON DRAWINGS.
- MANHOLES LOCATED WITHIN PROPOSED ROADWAYS SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLES FRAMES AND COVERS, STANDARD DETAIL G 5.51.
- THE CONTRACTOR SHALL ARRANGE TO HAVE EXISTING UNDERGROUND CABLE FIELD LOCATED PRIOR TO ANY EXCAVATION FOR THE SEWER MAIN.



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS. J. H. [Signature] 9/16/88 U.S. SOIL CONSERVATION SERVICES DATE	THE DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. [Signature] 9/16/88 HOWARD SOIL CONSERVATION DISTRICT DATE	SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS AND SDP-88-255
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DEPARTMENT OF PUBLIC WORKS [Signature] 9/20/88 DIRECTOR OF PUBLIC WORKS DATE [Signature] 9/20/88 CHIEF, BUREAU OF UTILITIES DATE [Signature] 9/20/88 CHIEF, BUREAU OF ENGINEERING DATE [Signature] 9/20/88 CHIEF, LAND DEVELOPMENT DIV. DATE	GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC. CIVIL ENGINEERS & LAND SURVEYORS 303 ALLEGHENY AVENUE TOWSON, MARYLAND 21284 (301) 825-8120	DESIGNED: N.B. DRAWN: J.W. CHECKED: N.B.	BY NO REVISIONS DATE	PLAN FOR PROPOSED WATER MAIN & SANITARY SEWER CONTRACT NO. 24 - 1842-D 600' SCALE MAP 43 BLOCK NO. 1-2	GATEWAY 51 COLUMBIA GATEWAY PARCELS M-2 AND H-6 HOWARD COUNTY, MD JUNE 20, 1988	SCALE AS SHOWN SHEET 1 OF 3



PLAN
SCALE: 1"=50'

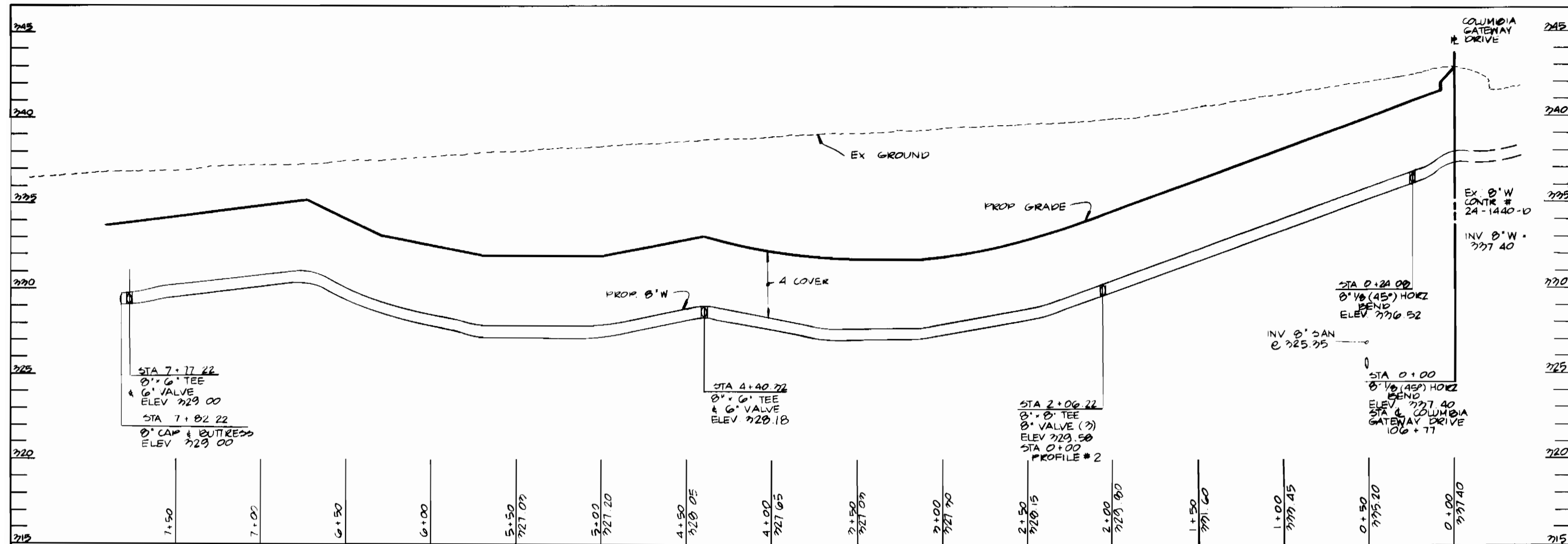
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
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J. Helms 9/16/88
 U.S. SOIL CONSERVATION SERVICES DATE

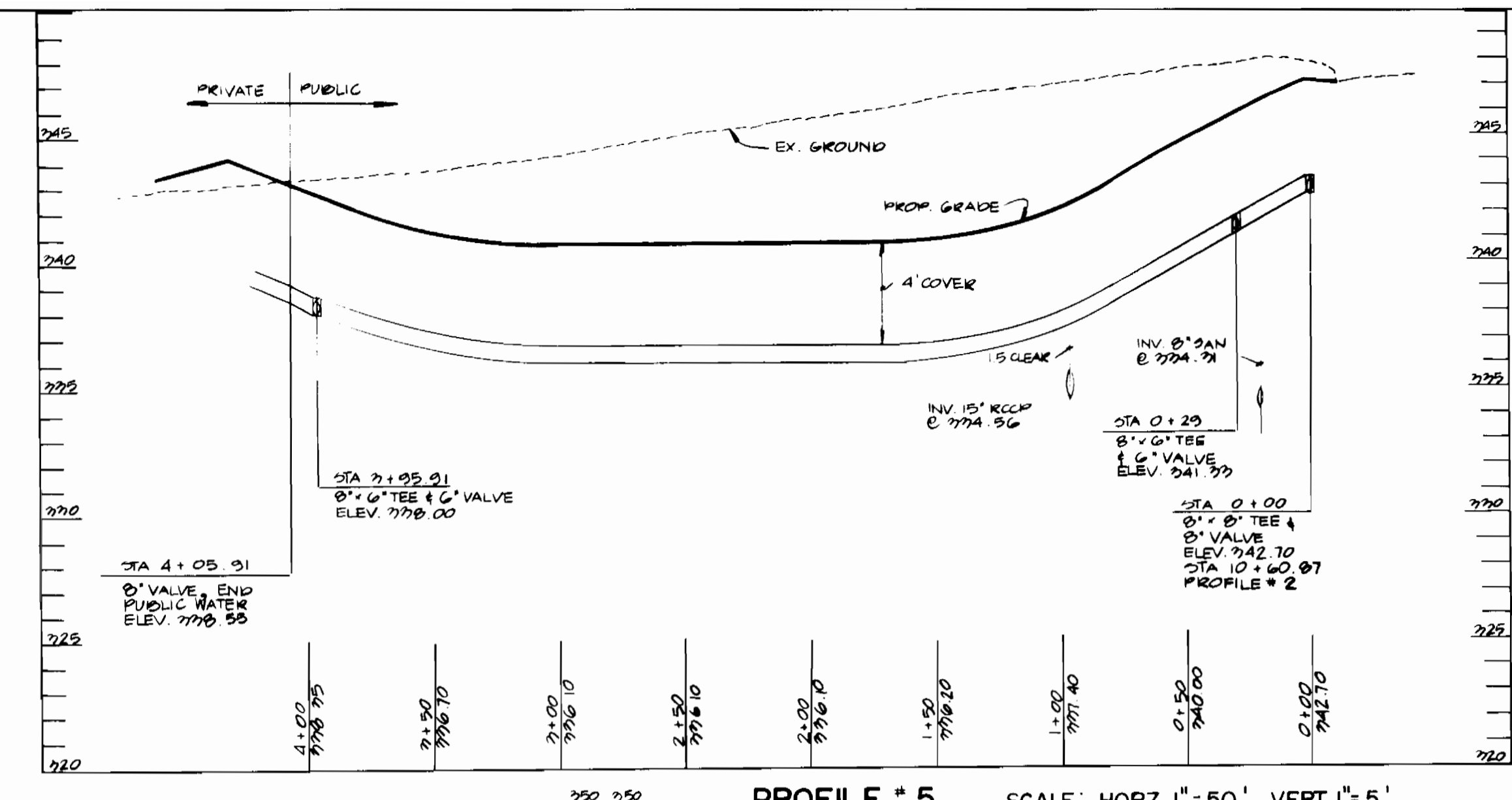
Stephen L. John 9/16/88
 HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS <i>James J. Kelly</i> 9/16/88 DIRECTOR OF PUBLIC WORKS DATE <i>John J. Kelly</i> 9/16/88 CHIEF, BUREAU OF UTILITIES DATE <i>John J. Kelly</i> 9/16/88 CHIEF, BUREAU OF ENGINEERING DATE <i>John J. Kelly</i> 9/16/88 CHIEF, LAND/DEVELOPMENT DIV. DATE	GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC. CIVIL ENGINEERS & LAND SURVEYORS 303 ALLEGHENY AVENUE TOWSON, MARYLAND 21204 (301) 825-8120 <i>John J. Kelly</i> 9/20/88	DESIGNED: N.B. DRAWN: J.W. CHECKED: N.B.	BY NO GWS 1	REVISIONS CHANGED SITE OF SAN. WATER METER TO ELEM.	DATE 1-30-88	PLAN FOR PROPOSED WATER MAIN & SANITARY SEWER CONTRACT NO. 24 - 1842 - D 600' SCALE MAP 43 BLOCK NO. 1-2	GATEWAY 51 COLUMBIA GATEWAY PARCELS M-2 AND H-6 HOWARD COUNTY, MD JUNE 20, 1988	SCALE AS SHOWN SHEET 2 OF 3
			BY NO GWS 2	REVISIONS REMOVE WATER MAIN TO BLDG. C AND BLOWER CAIN TO BLDG. D REVISE RECEPTOR RECORDS.	DATE 4/18/84			

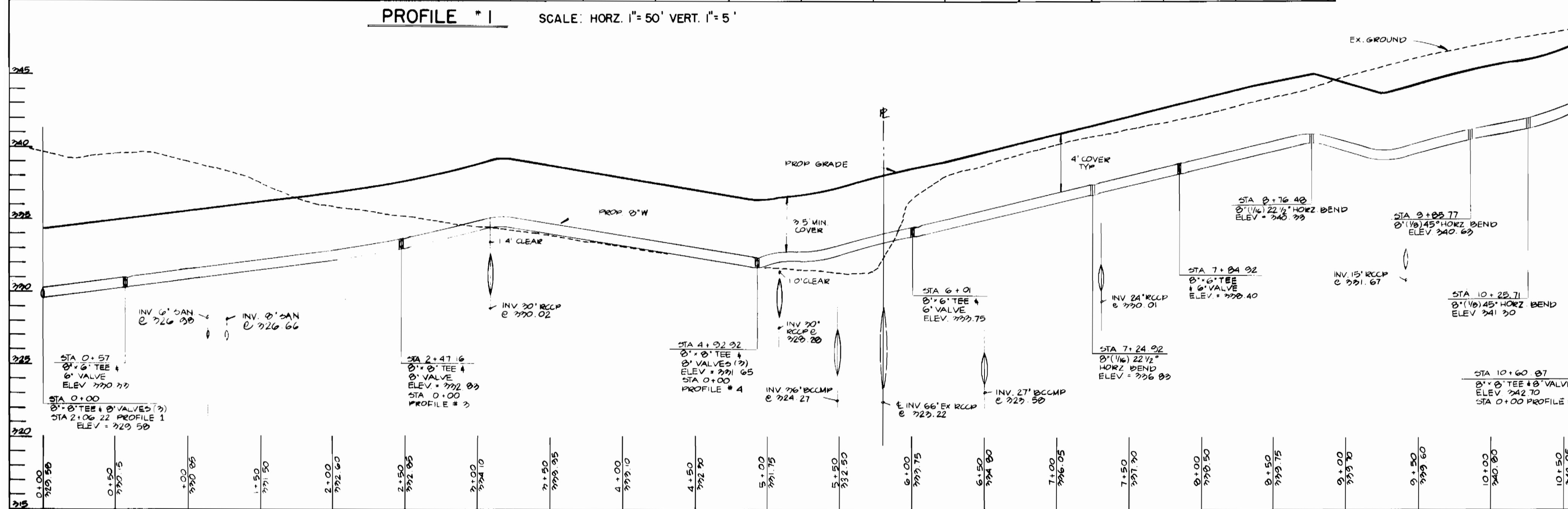
AS-BUILT 2/22/90



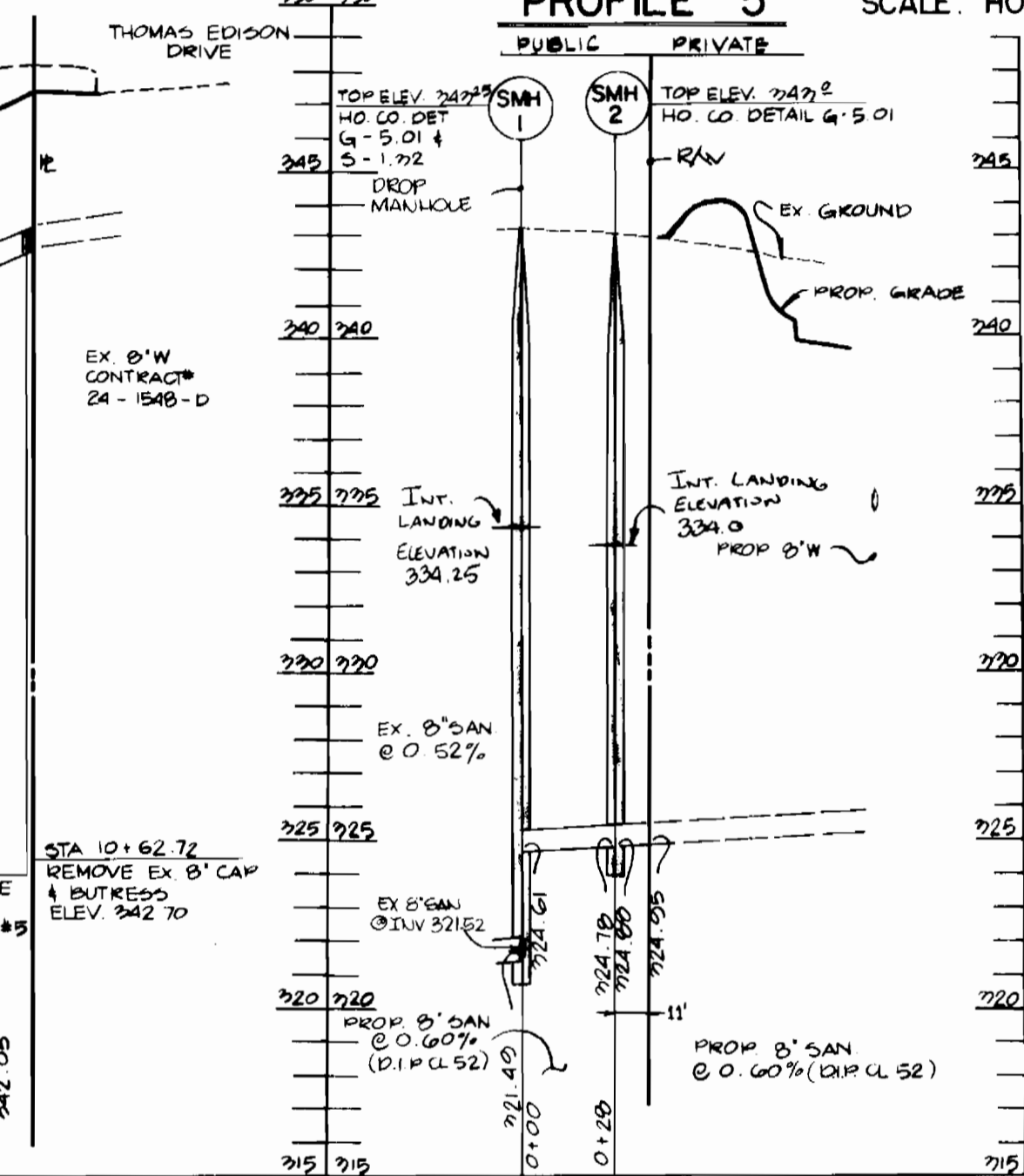
PROFILE # 1 SCALE: HORZ. 1"=50' VERT. 1"=5'



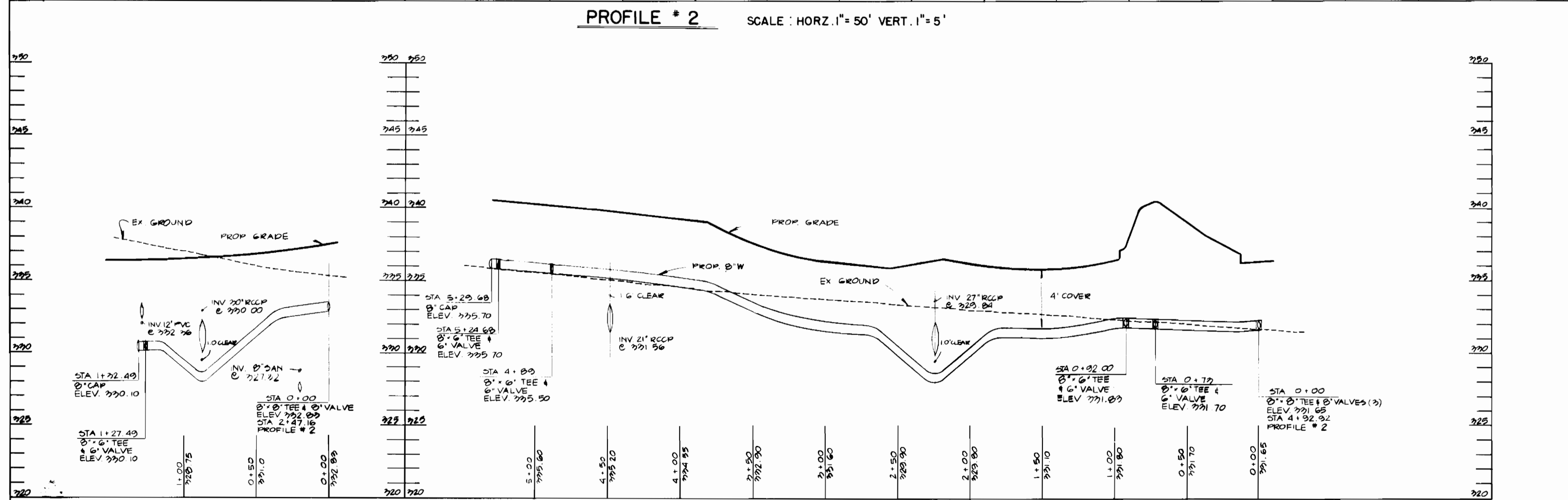
PROFILE # 5 SCALE: HORZ. 1"=50' VERT. 1"=5'



PROFILE # 2 SCALE: HORZ. 1"=50' VERT. 1"=5'



SANITARY SEWER - PROFILE SCALE: HORZ. 1"=50' VERT. 1"=5'



PROFILE # 3 SCALE: HORZ. 1"=50' VERT. 1"=5'

PROFILE # 4 SCALE: HORZ. 1"=50' VERT. 1"=5'

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS. THE DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND SDP-88-295

J. Helms 9/16/88 U.S. SOIL CONSERVATION SERVICES DATE
Howard Soil Conservation District DATE

DEPARTMENT OF PUBLIC WORKS
 DIRECTOR OF PUBLIC WORKS DATE
 CHIEF, BUREAU OF UTILITIES DATE
 CHIEF, BUREAU OF ENGINEERING DATE
 CHIEF, LAND DEVELOPMENT DIV. DATE

GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC.
 CIVIL ENGINEERS & LAND SURVEYORS
 303 ALLEGHENY AVENUE
 TOWSON, MARYLAND 21204
 (301) 825-8120

DESIGNED: N.B.
 DRAWN: J.W.
 CHECKED: N.B.

BY	NO.	REVISIONS	DATE

PLAN FOR PROPOSED WATER MAIN AND SANITARY SEWER CONTRACT NO. 24-1842-D

GATEWAY 51
 COLUMBIA GATEWAY PARCELS M-2 AND H-6
 HOWARD COUNTY, MD
 JUNE 20, 1988

SCALE AS SHOWN
 SHEET 3 OF 3