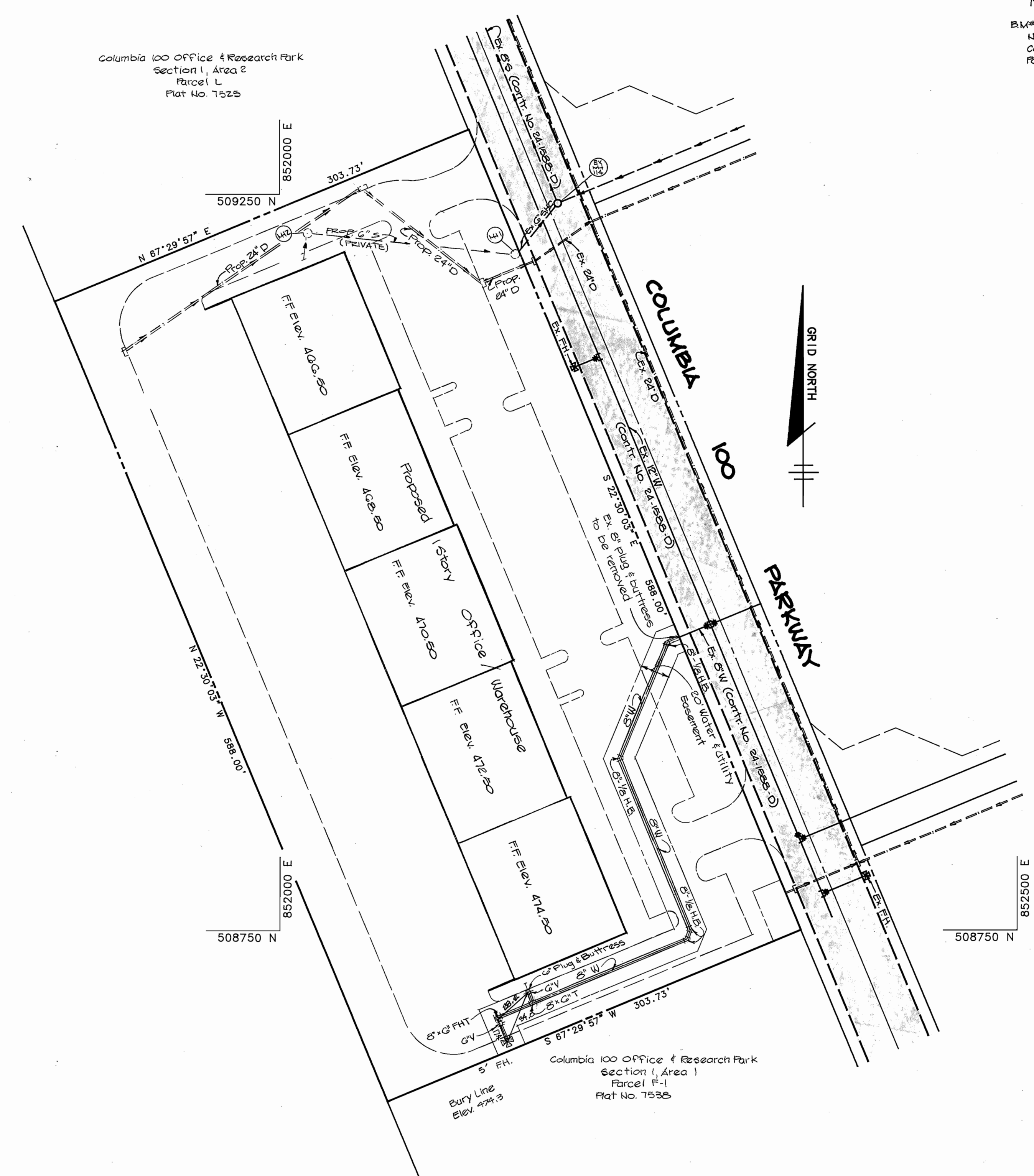
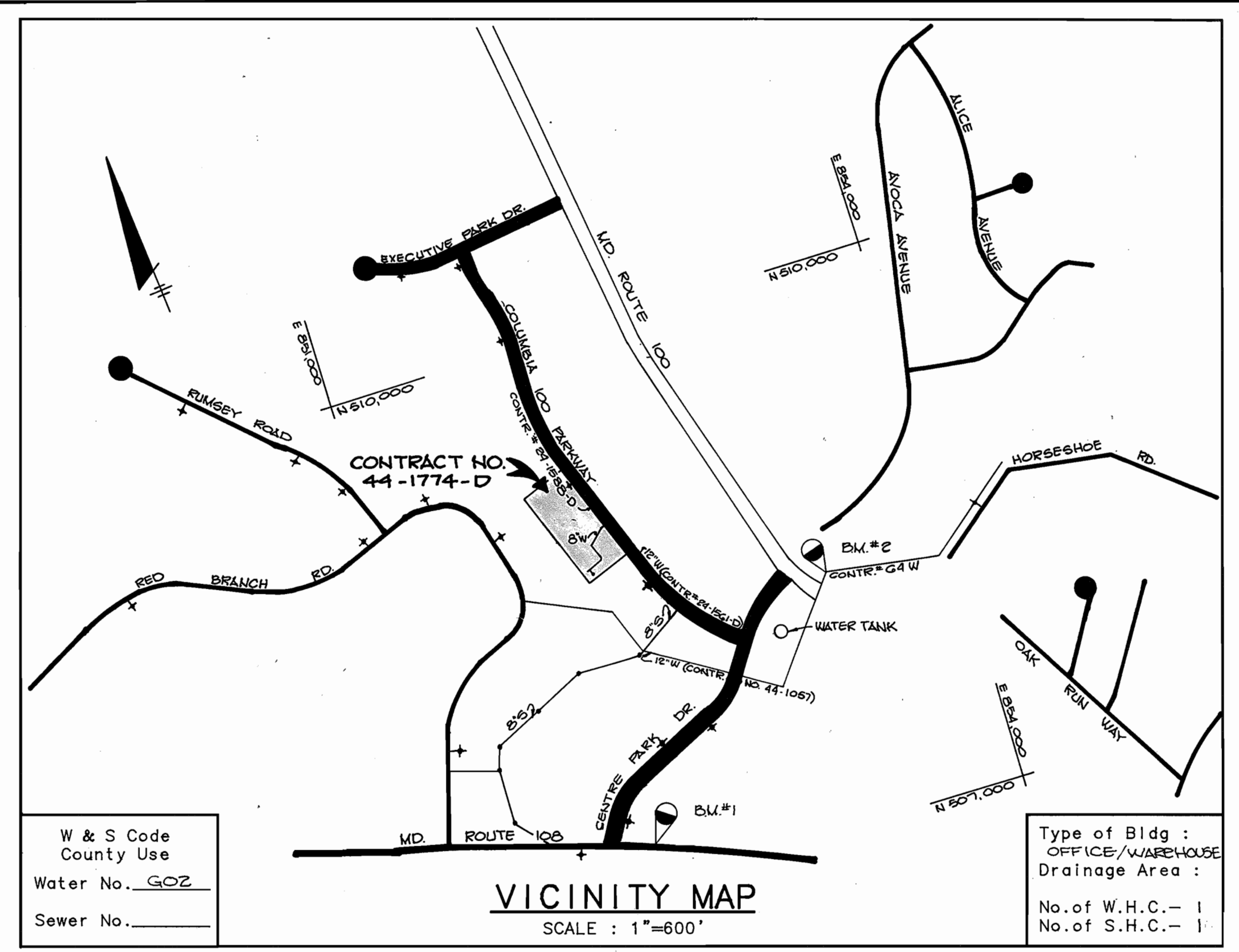


**BENCH MARKS**  
 BM#1  
 Ho. Co. 274-6010-R Elev. 482.20  
 3/4" Rebar 0.4' below surface, 24.7'  
 south of curb on Maryland Rte. 106  
 175' east of E. Phelps Luck Drive.  
 BM#2  
 Nail in stone @ property corner  
 Columbia 100-Office Research  
 Park.



**PLAN**  
 SCALE : 1" = 50'



**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  $\circ$  INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 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 CONSTRUCTIONS. 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  $\square$  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 VERIFIED BY THE CONTRACTOR TO HIS OWN PERSONAL SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE 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 AND ELECTRIC CO. - CONTRACTOR SERVICES	850-4620
BALTIMORE GAS AND ELECTRIC CO. - UNDERGROUND DAMAGE CONTROL	859-9004
BALTIMORE GAS AND ELECTRIC CO. - TROUBLE SHOOTING	298-9001
MISS UTILITY	1-559-0100
COLONIAL PIPELINE CO.	795-1390
BUREAU OF UTILITIES, HO.CO. DEPARTMENT OF PUBLIC WORKS	992-2366
C & P TELEPHONE CO.	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 REMOVED OR DAMAGED BY THE CONTRACTOR.
- THE 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 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 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 ON THE PLANS OR IN THE SPECIFICATIONS.
- SERVICE CLAMPS ARE TO HAVE STAINLESS STRAPS.

Item	Quantities		Material Supplier
	Estimated	As Built	
8" W	370 L.F.	389.0	Shuffo Products Below S&S
8" X 6" FHT	1 EA.	1.0	Shuffo Products Below S&S
8" 1/2" H.B.	4 EA.	4.0	Shuffo Products Below S&S
8" X 6" T	1 EA.	1.0	Shuffo Products Below S&S
6" W	25 L.F.	17.0	Shuffo Products / Below S&S
6" F.H.	1 EA.	1.0	Hullman Co. Below S&S
6" V	2 EA.	2.0	Hullman Co. Below S&S

20. ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATION C-153 DUCTILE IRON COMPACT FITTINGS 3" THROUGH 12" FOR WATER AND OTHER LIQUIDS.

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND AS SHOWN ON SDP-22-118

HOWARD SOIL CONSERVATION DISTRICT :

REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*James M. Helms* 4-27-88  
 U.S. SOIL CONSERVATION SERVICE DATE

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

*Stephen L. Spuler* 4/27/88  
 HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

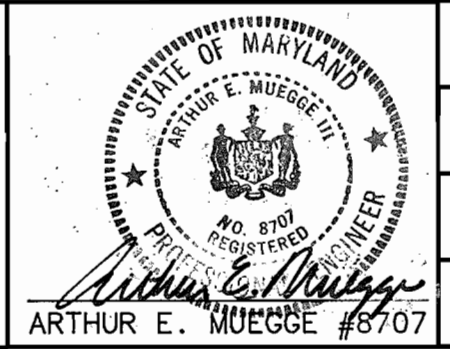
*James M. Helms* 4/28/88  
 DIRECTOR OF PUBLIC WORKS DATE

*Robert M. Berger* 4-22-88  
 CHIEF, BUREAU OF UTILITIES DATE

*Kevin J. Ray* 4-28-88  
 CHIEF, BUREAU OF ENGINEERING DATE

*Arthur E. Muesse* 4/27/88  
 CHIEF, LAND DEVELOPMENT DATE

THE RIEMER GROUP INC.  
 3105 NORTH RIDGE ROAD  
 ELLICOTT CITY, MARYLAND  
 (301) 461-2690



DES: W.C.W.					
DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

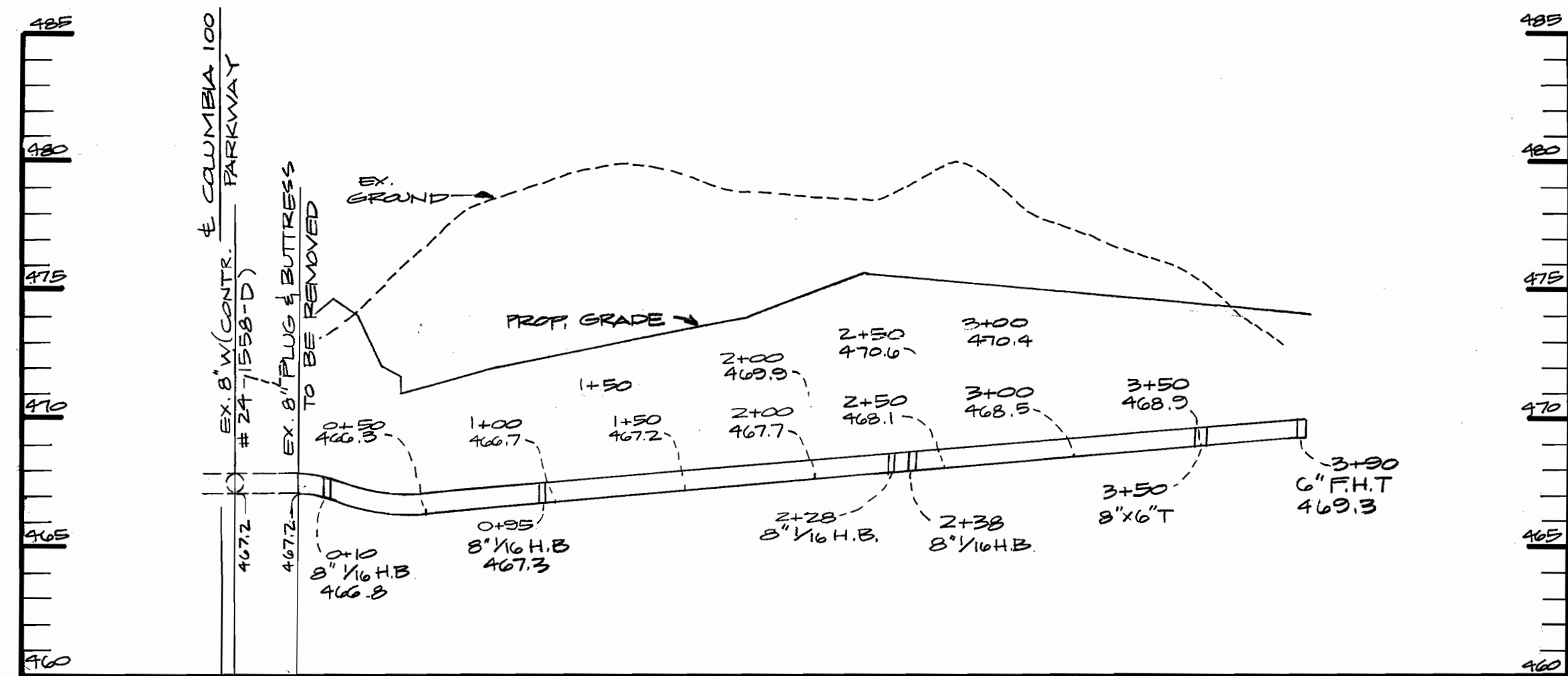
PLAN OF A WATER MAIN

600' SCALE MAP NO. 30 BLOCK NO.

COLUMBIA 100 BUSINESS CENTER  
 COLUMBIA 100 - OFFICE RESEARCH PARK  
 6th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 CONTRACT NO. 44-1774-D

SCALE AS SHOWN

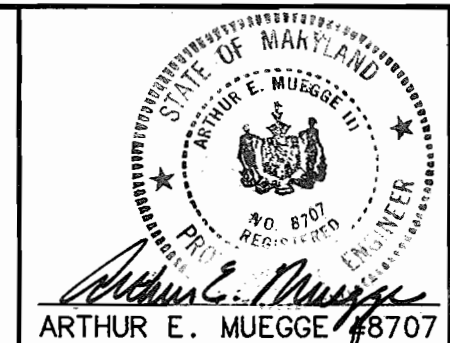
SHEET 1 OF 2



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

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Director of Public Works  
 Robert M. Bennett  
 Chief, Bureau of Utilities  
 DATE: 4-22-88

THE RIEMER GROUP INC.  
 3105 NORTH RIDGE ROAD  
 ELLICOTT CITY, MARYLAND  
 (301) 461-2690  
 Chief, Bureau of Engineering  
 Arthur E. Muegge  
 Chief, Land Development  
 DATE: 4-28-88



DES. WSW					
DRN: J.L.B.					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

PLAN OF A WATER MAIN  
 600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

COLUMBIA 100 BUSINESS CENTER  
 COLUMBIA 100 - OFFICE RESEARCH PARK  
 6th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 CONTRACT NO. 44-1774-D

SCALE AS SHOWN  
 SHEET 2 OF 2