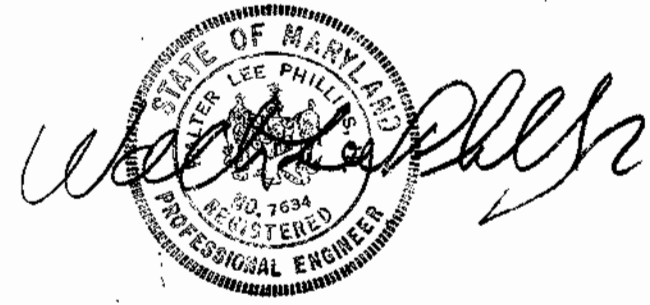


QUANTITIES	
ITEMS	QUANTITY
8" WATER	1729'
6" WATER	1748'
6" SEWER	2663'

CONTRACT NO 432-D-W&S
 WATER AND SEWER MAIN EXTENSIONS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 ELLICOTT CITY, MARYLAND

NOTE: FOR REALIGNMENT OF SEWER MAIN AND WATER, SEWER HOUSE CONNECTIONS AND FIRE HYDRANT LOCATIONS, REFER TO THE PLANS 1A, 2A AND 4A OF CONTRACT 432-D-W&S-A WHICH ARE PART OF CONTRACT NO. 432-D-W&S.



WALTER L. PHILLIPS
 INCORPORATED
 CERTIFIED CIVIL ENGINEERS & LAND SURVEYORS
 901 W. BROAD ST. FALLS CHURCH, VA.

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 1-21-72
 Date *W. L. Phillips*
 Chief, Bureau of Engineering

CONTRACT NO. 432-D-W&S

LOCATION MAP OF
 WATER & SEWER MAIN EXTENSIONS

COLUMBIA
 VILLAGE OF LONGREACH
 SECTION I AREA 5

DRAWING NO. <u>1</u> OF <u>5</u>	SCALE AS SHOWN	DES. DRW. CHK.
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REV. OCT. 15, 1971
 REV. JAN. 6, 1972
 REV. MAR. 29, 1972

WATER AND SEWER EXTENSIONS

LONG REACH VILLAGE CENTER EXPANSION

PARCELS B-1, D-1, & E-1

6th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

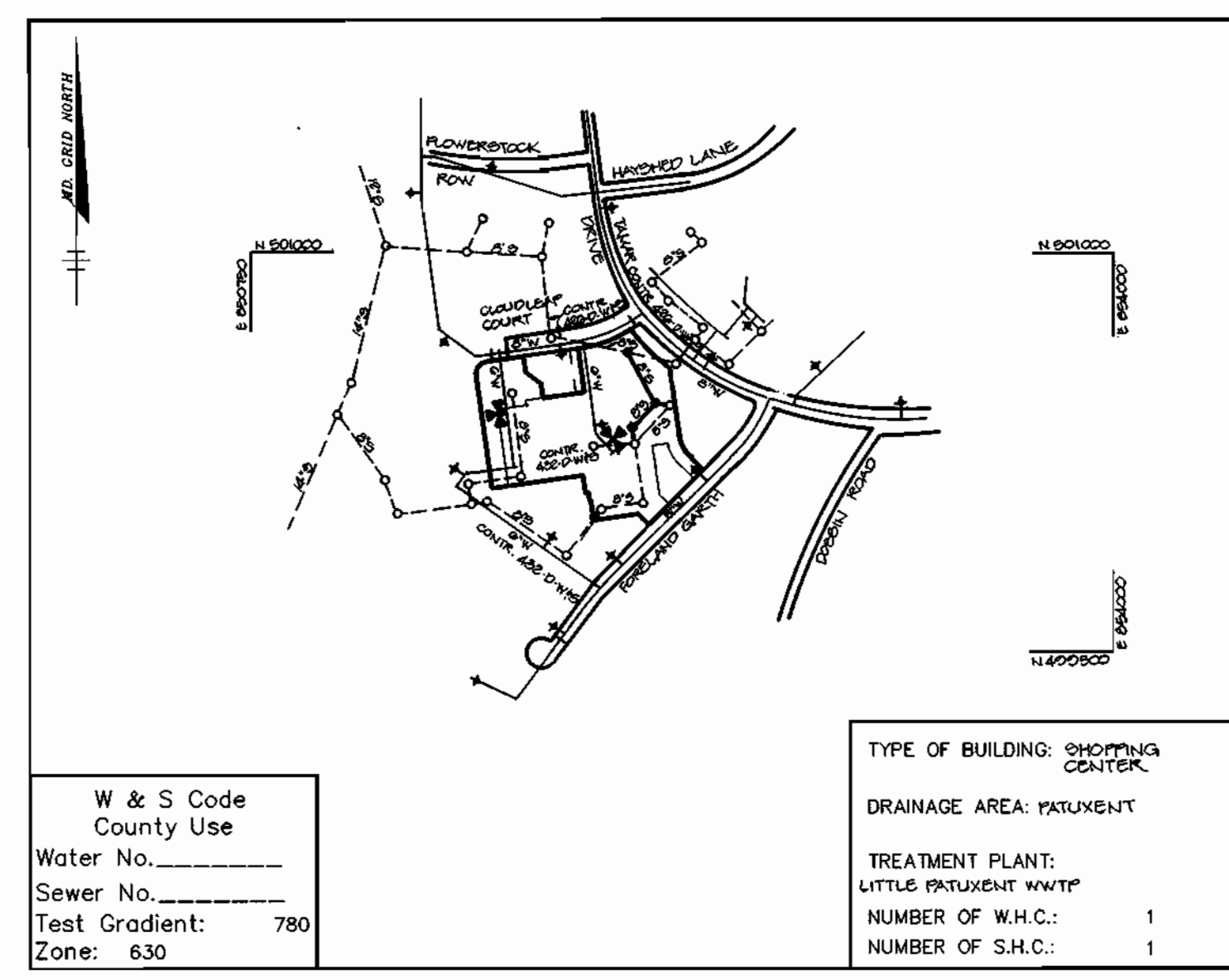
CONTRACT NO. 432 - D - W & S - A

GENERAL NOTES

1. 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.
2. All horizontal controls are based on Maryland State Coordinates.
3. All vertical controls are based on U.S.G.S. data.
4. All pipe elevations shown are invert elevations.
5. 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.
6. 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.
7. 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.
8. Contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:

State Highway Administration	531-5553
Baltimore Gas & Electric Co. Contractor Services	850-4620
Baltimore Gas & Electric Co. Underground Damage Control	387-4068
Miss Utility	1-800-251-TTTT
Colonial Pipeline Co.	745-1340
Bureau of Utilities, Howard County Department of Public Works	313-4400
9. 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.
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 main.
11. All water mains to be D.I.P. Class 52 unless otherwise noted.
12. Tops of all water mains to have a minimum of 3'-1/2' cover unless otherwise noted.
13. Valves adjacent to trees shall be strapped to trees.
14. All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
15. 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.
16. The contractor shall not operate any water main valves on the existing water system.
17. All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
18. All sewer mains shall be D.I.P. and P.V.C. unless otherwise noted.
19. All manholes shall be 4'-0" inside diameter unless otherwise noted.
20. Force mains shall be D.I.P. only.
21. Manholes shown with 12" and 16" walls are for brick manholes only.
22. Manholes designated M.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.
23. House(s) with the symbol "C.N.S." indicates that cellar cannot be served.
24. Manholes can be either brick or precast concrete structures.
25. Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.
26. The fire hydrant shall be installed as per standard detail M.1.11.
27. Fire hydrants will be located 3' FROM BACK OF CURB unless otherwise noted.
28. For sprinkler systems, all townhomes or multi-family dwelling units should have a minimum of 1" connection with a 3/4" meter.
29. The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-7450 at least five (5) working days before any open cut or any county road or boring/jacking operation in County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPM requirements per Section 18.114(a) of the Howard County Code.

1. THE APPROVED AND SIGNED ORIGINAL SHEETS 1A, 2A AND 4A OF CONTRACT 432-D-W&S-A ARE PART OF CONTRACT 432-D-W&S APPROVED AND SIGNED ON JANUARY 21, 1972, BY CHIEF, BUREAU OF ENGINEERING.
2. FOR REALIGNMENT OF SEWER MAIN AND WATER, SEWER HOUSE CONNECTIONS AND FIRE HYDRANT LOCATIONS, REFER TO THESE PLANS: 1A, 2A AND 4A.



VICINITY MAP
SCALE: 1"=600'

QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" SEWER	464 LF	472 C.F.	SDR 35	J.M. MANUFACTUR
6" SEWER	10 LF	25 C.F.	SDR 35	"
SEWER MANHOLES	4 EA	4 EACH	ASTM C478 ATLANTIC CONC.	ATLANTIC CONC.
6" WATER	22 LF			

NAME OF UTILITY CONTRACTOR :

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on SDP-97-18

Review for Howard Soil Conservation District and meets technical requirements.

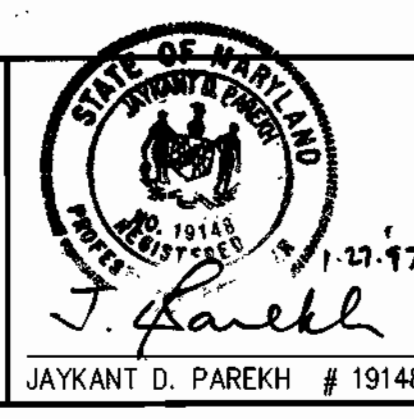
Clayton Scimmon 2/10/97
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Roberts 2/10/97
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Rutha Sauer</i> 2-5-97 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Clayton Scimmon</i> 2/13/97 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
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RIEMER MUEGGE & ASSOCIATES, INC.
 ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
 8818 Centre Park Drive, Columbia, Maryland 21045
 tel 410.997.8900 fax 410.997.9282



DES: WAD				
DRN: WAD				
CHK: CUR	K.C.I.	AS-BUILT CONDITIONS ADDED TO PLAN	04/26/98	
	R.J.C.	REMOVED 2' FR 4" 2'-0" G' T.S. 1'V FROM QUANT. LIST	8-24-98	
	WAD	ADDED SHEET TO SHOW REVISED QUANTITIES PER NEW WATER FEEDER SERVICES FOR SUPERMARKET EXPANSION	1-27-07	
DATE: 1-27-07	BY NO.	REVISION	DATE	

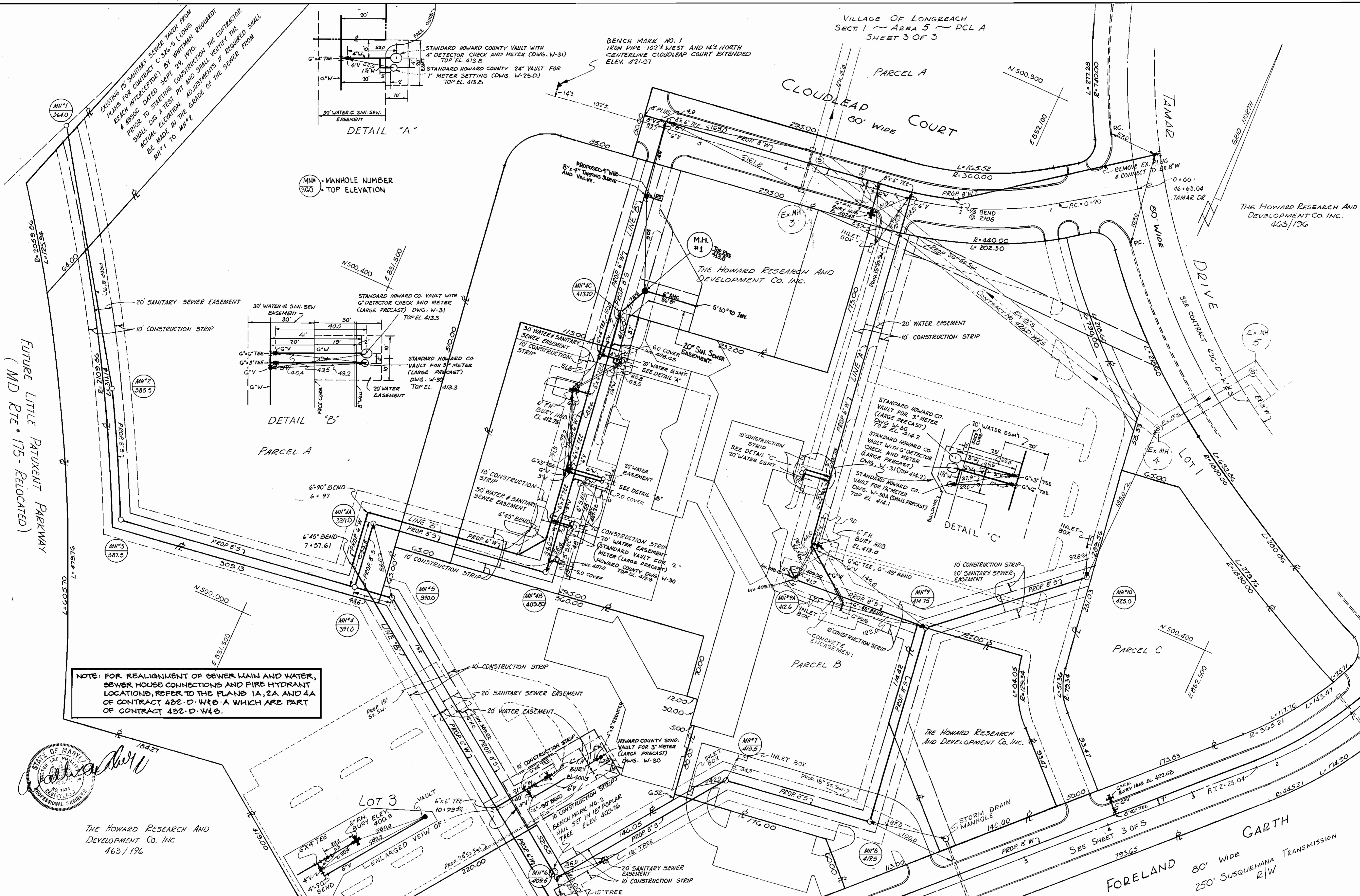
TITLE SHEET

600' SCALE MAP NO. 36 BLOCK NO. 12

LONG REACH VILLAGE CENTER EXPANSION
 VILLAGE OF LONG REACH
 SECTION 1, AREA 5
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT NO. 432-D-W&S-A

SCALE AS SHOWN
SHEET 1A OF 9

VILLAGE OF LONGREACH
SECT. 1 - AREA 5 - DCL A
SHEET 3 OF 3



FUTURE LITTLE PATUXENT PARKWAY
(MD RTE 175 - RELOCATED)



THE HOWARD RESEARCH AND DEVELOPMENT CO. INC.
463/196

WALTER L. PHILLIPS
INCORPORATED
CERTIFIED CIVIL ENGINEERS & LAND SURVEYORS
901 W. BROAD ST. FALLS CHURCH, VA.

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Date: 1-21-72
Chief, Bureau of Engineering

CONTRACT NO. 432-D-W-6-S

LOCATION MAP OF
WATER & SEWER MAIN EXTENSIONS

COLUMBIA
VILLAGE OF LONGREACH
SECTION I AREA 5

DRAWING NO. 2 OF 5
SCALE: 1" = 50'

REV. SEPT. 15, 1971
REV. OCT. 6, 1971
REV. JAN. 6, 1972
REV. MAR. 29, 1972

AS-BUILT
3-12-91

AS-BUILT NOV. 15, 1972

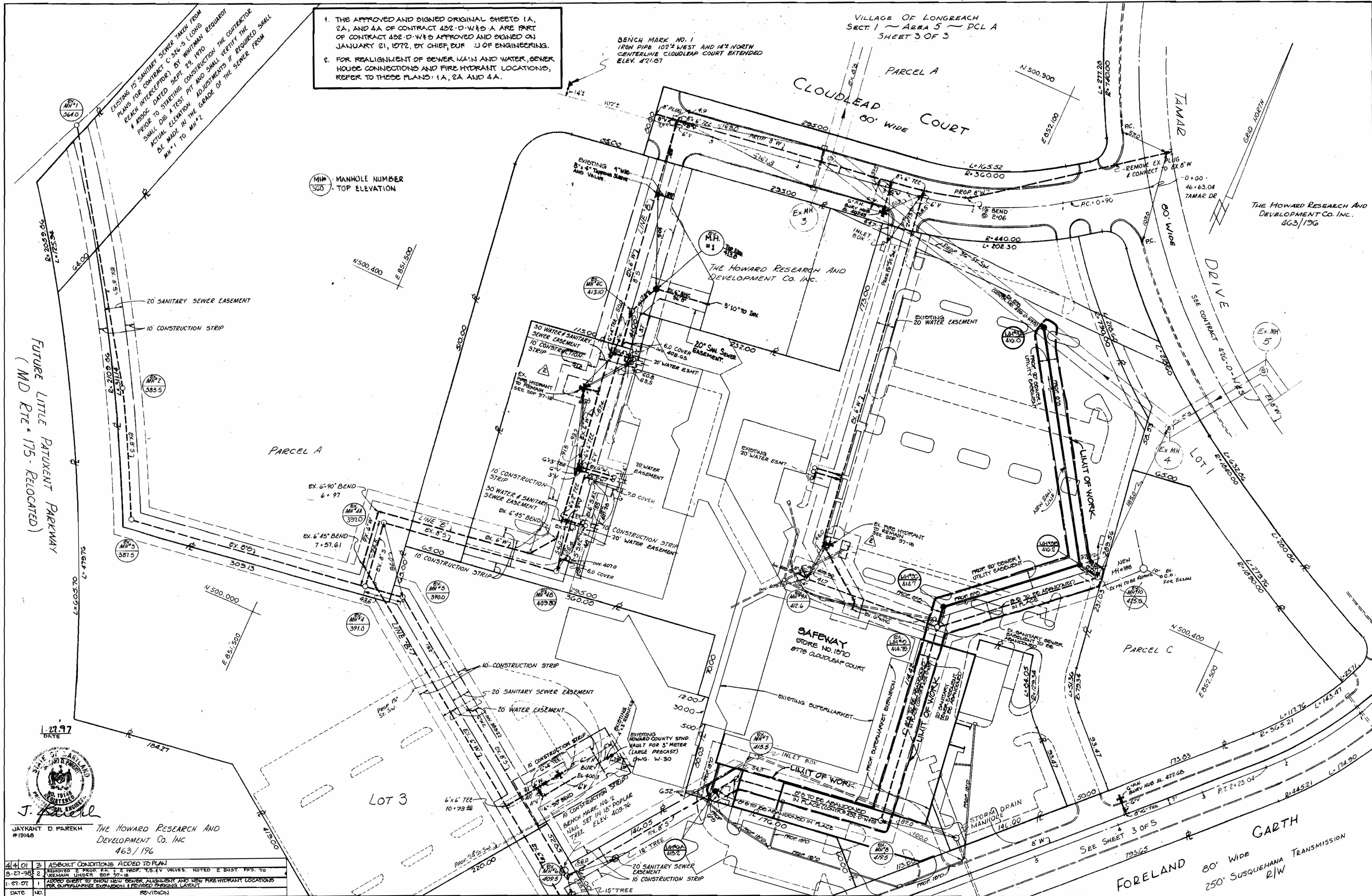
1. THE APPROVED AND SIGNED ORIGINAL SHEETS 1A, 2A, AND 4A OF CONTRACT 432-D-W&S-A ARE PART OF CONTRACT 432-D-W&S-A APPROVED AND SIGNED ON JANUARY 21, 1972, BY CHIEF, BUREAU OF ENGINEERING.

2. FOR REALIGNMENT OF SEWER MAIN AND WATER, SEWER HOUSE CONNECTIONS AND FIRE HYDRANT LOCATIONS, REFER TO THESE PLANS 1A, 2A AND 4A.

EXISTING 15" SANITARY SEWER TAKING FROM PLANS FOR CONTRACT C-342-S LONG REACH INTERCEPTOR) BY WHITMAN REQUIRED PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR SHALL DIG TEST PIT AND SHALL VERIFY THE ACTUAL ELEVATION ADJUSTMENTS IF REQUIRED SHALL BE MADE IN THE GRADE OF THE SEWER FROM MH#1 TO MH#2

BENCH MARK NO. 1
IRON PIPE 102" WEST AND 14" NORTH
CENTERLINE CLOUDLEAP COURT EXTENDED
ELEV. 401.67

VILLAGE OF LONGREACH
SECT. 1 - AREA 5 - PCL A
SHEET 3 OF 3



DATE: 12.97

J. Parekh
 JAYKANT D. PAREKH #19148
 THE HOWARD RESEARCH AND DEVELOPMENT CO. INC.
 463/196

4/4/01	3	AS-BUILT CONDITIONS ADDED TO PLAN
3-27-98	2	REMOVED & PROP. EX. 1 & 2 PROP. 1/8" VALVES. NOTED & BUSH. PINS TO REMAIN UNDER SOP 97-18
1-07-97	1	ADDED SHEET TO SHOW NEW SEWER ALIGNMENT AND NEW FIRE HYDRANT LOCATIONS FOR SUPERMARKET EXPANSION & RELOCATED PARKING LAYOUT
DATE	NO.	REVISION

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
Robert D. Dwyer 2-5-97
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
Michael J. Cannon 2/13/97
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

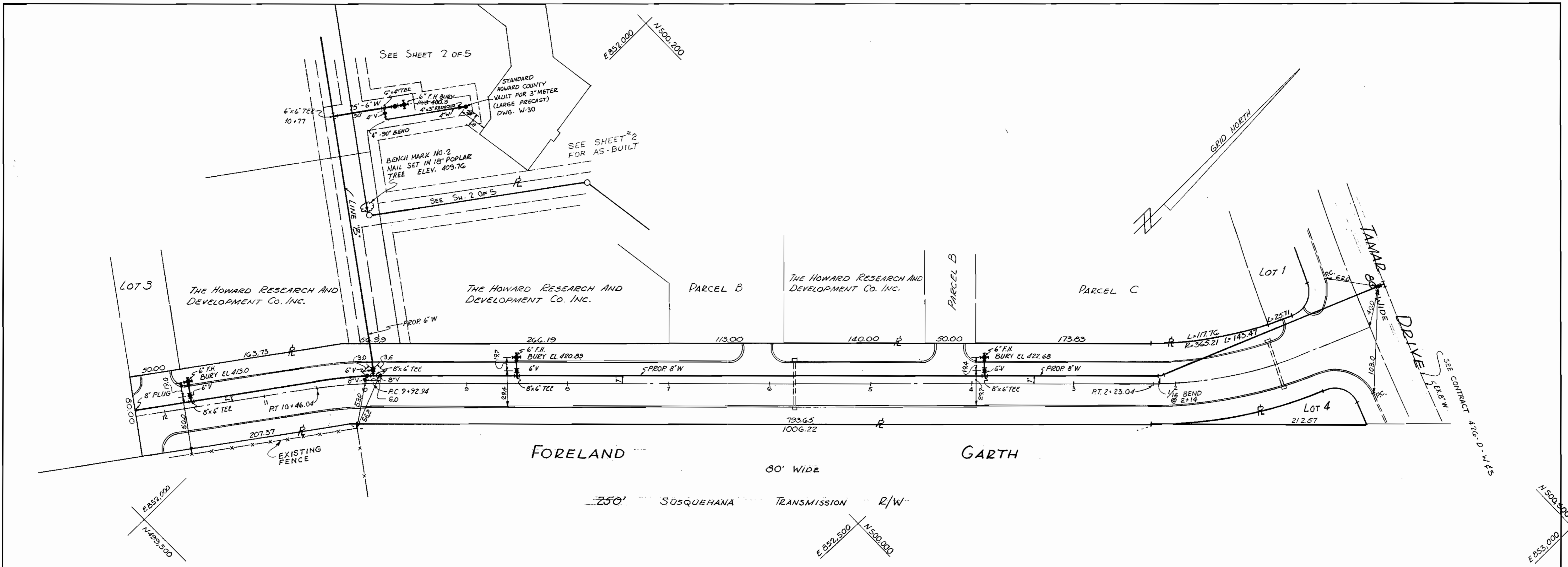
RIEMER WUEGGE & ASSOCIATES, INC.
 ENGINEERING & ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
 6010 CENTRE PARK DRIVE, COLUMBIA, MARYLAND 21046
 TEL. 410-507-0000 FAX 410-507-0282

CONTRACT NO. 432-D-W&S-A

LOCATION MAP OF
 WATER & SEWER MAIN EXTENSIONS

COLUMBIA
 VILLAGE OF LONGREACH
 SECTION 1 AREA 5

DRAWING NO. 2A OF 5 SCALE: 1" = 50'



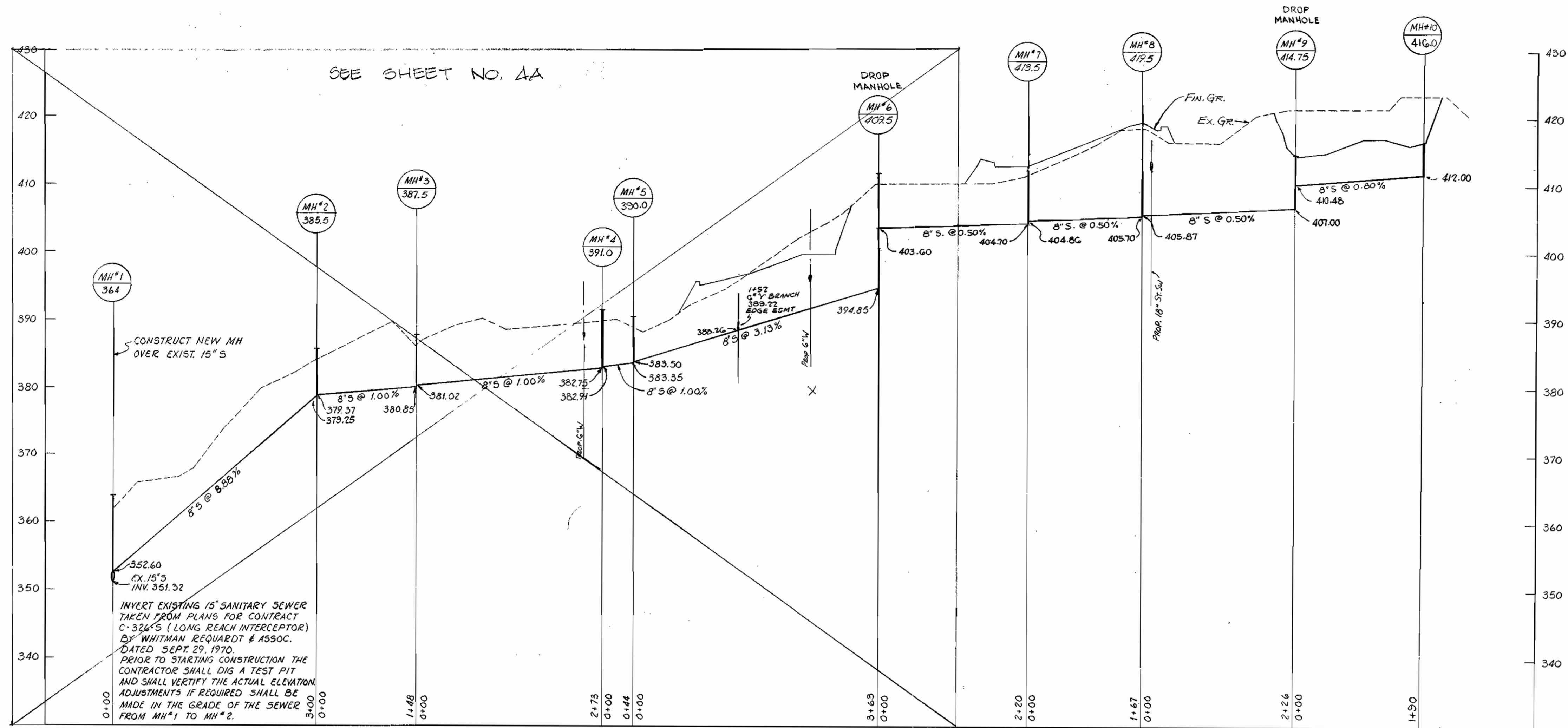
GENERAL NOTES

1. APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTORS' OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS' EXPENSE.
2. ALL PIPE ELEVATIONS SHOWN ARE INVERT- \ominus ELEVATIONS.
3. THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN THE VICINITY OF UTILITIES.
4. FOR ALL STANDARD DETAILS SEE STANDARD BOUND IN SPECIFICATIONS.
5. BLOCK ALL WATER MAIN FITTINGS WITH CONCRETE, SEE STANDARD BOUND IN SPECIFICATIONS.
6. CLEAR ALL UTILITIES BY A MINIMUM OF 6'; CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED.
7. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
8. ALL MANHOLES TO BE 4'-0" INSIDE DIAMETER.
9. ALL SEWER BUILDING CONNECTIONS TO BE AS SHOWN.
10. ALL HORIZONTAL & VERTICAL CONTROL IS BASED ON MD STATE B.C.S. SYSTEM.

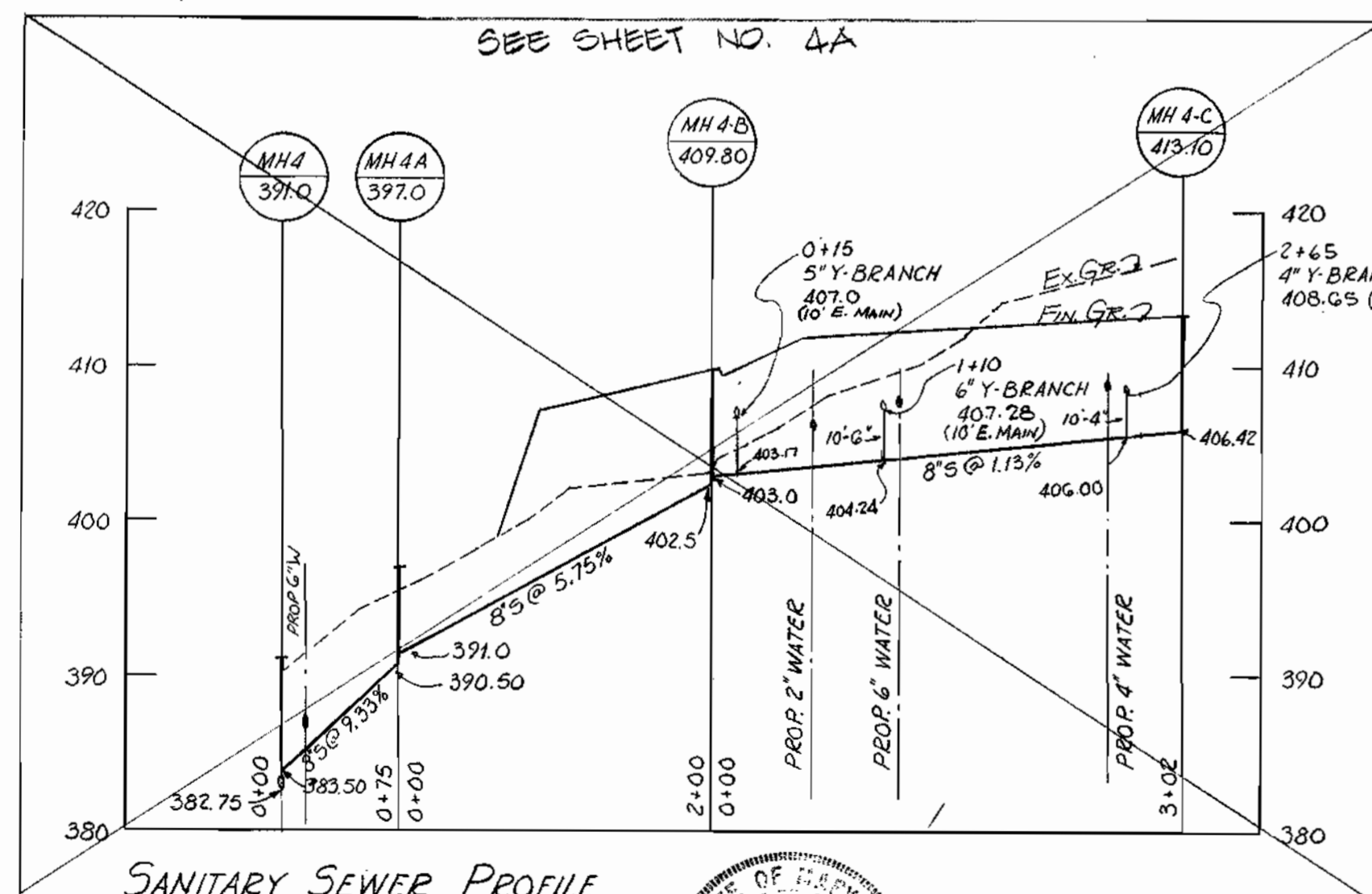
Walter L. Phillips
 STATE OF MARYLAND
 REGISTERED PROFESSIONAL ENGINEER
 No. 10484

WALTER L. PHILLIPS INCORPORATED CERTIFIED CIVIL ENGINEERS & LAND SURVEYORS 901 W. BROAD ST. FALLS CHURCH, VA.	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 1-31-72 <i>W. O. Filbert</i> Date Chief, Bureau of Engineering	CONTRACT NO. 432-D-W & S	LOCATION MAP OF WATER MAIN EXTENSIONS	COLUMBIA VILLAGE OF LONGREACH SECTION I AREA 5	DRAWING NO. <u>3</u> OF <u>5</u> SCALE 1" = 50' <small>DES. GJM CHK. GJM</small>
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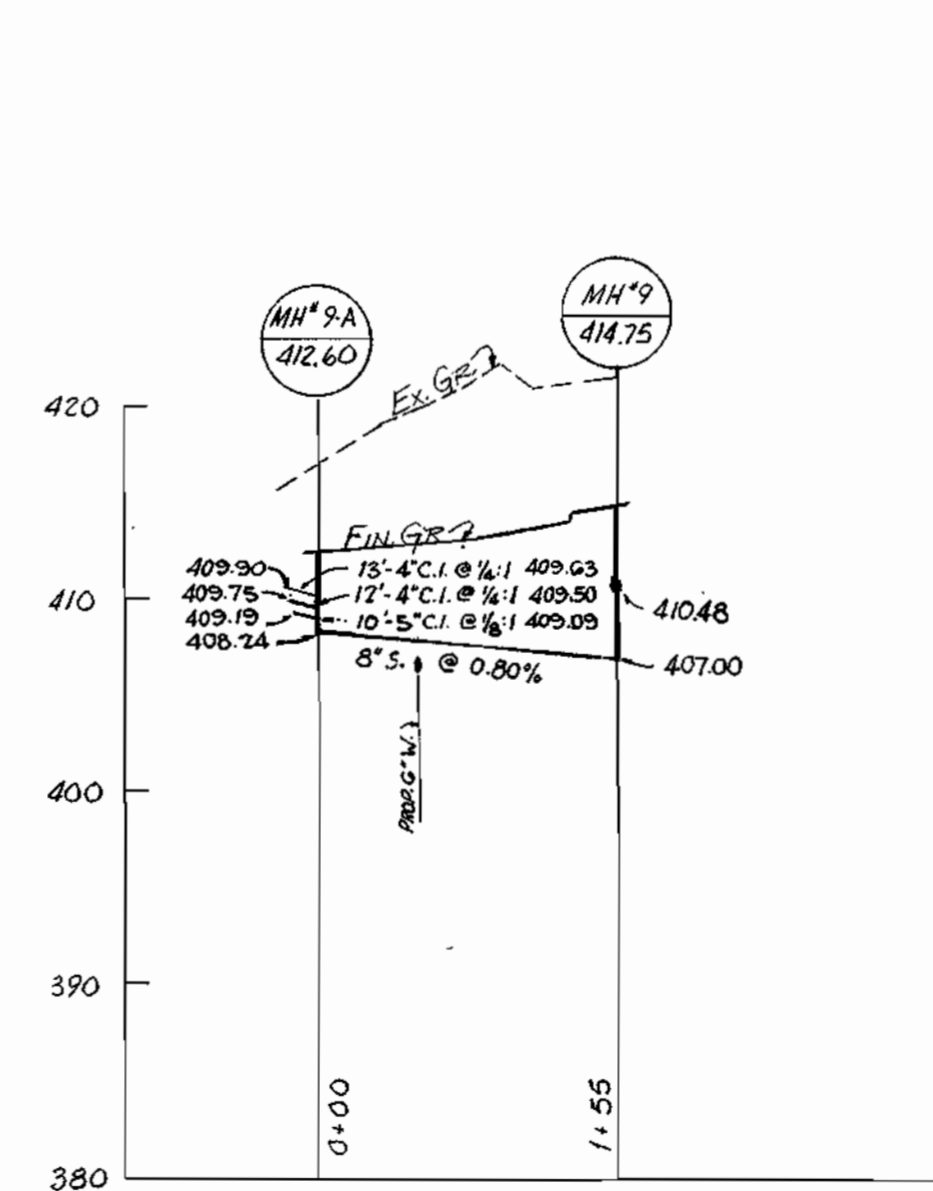
SEPT. 15, 1971 REV. OCT. 5, 1971
 JAN. 6, 1972 REV. MAR. 29, 1972



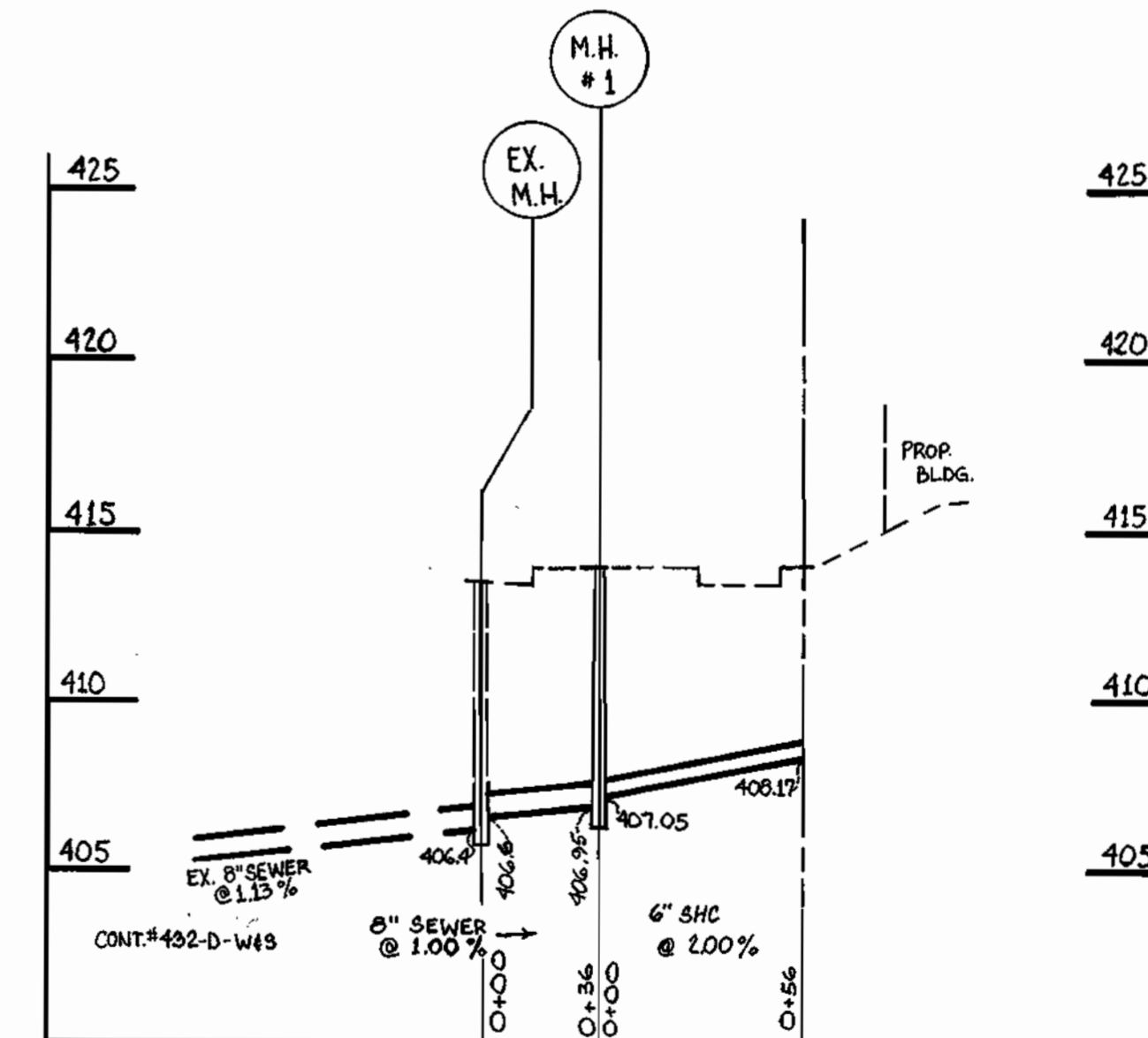
SANITARY SEWER PROFILE



SANITARY SEWER PROFILE



SANITARY SEWER PROFILE



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

NOTE: FOR REALIGNMENT OF SEWER MAIN AND WATER, SEWER HOUSE CONNECTIONS AND FIRE HYDRANT LOCATIONS, REFER TO THE PLANS 1A, 2A AND 4A OF CONTRACT 432-D-W&S WHICH ARE PART OF CONTRACT 432-D-W&S.

Walter L. Phillips
Professional Engineer

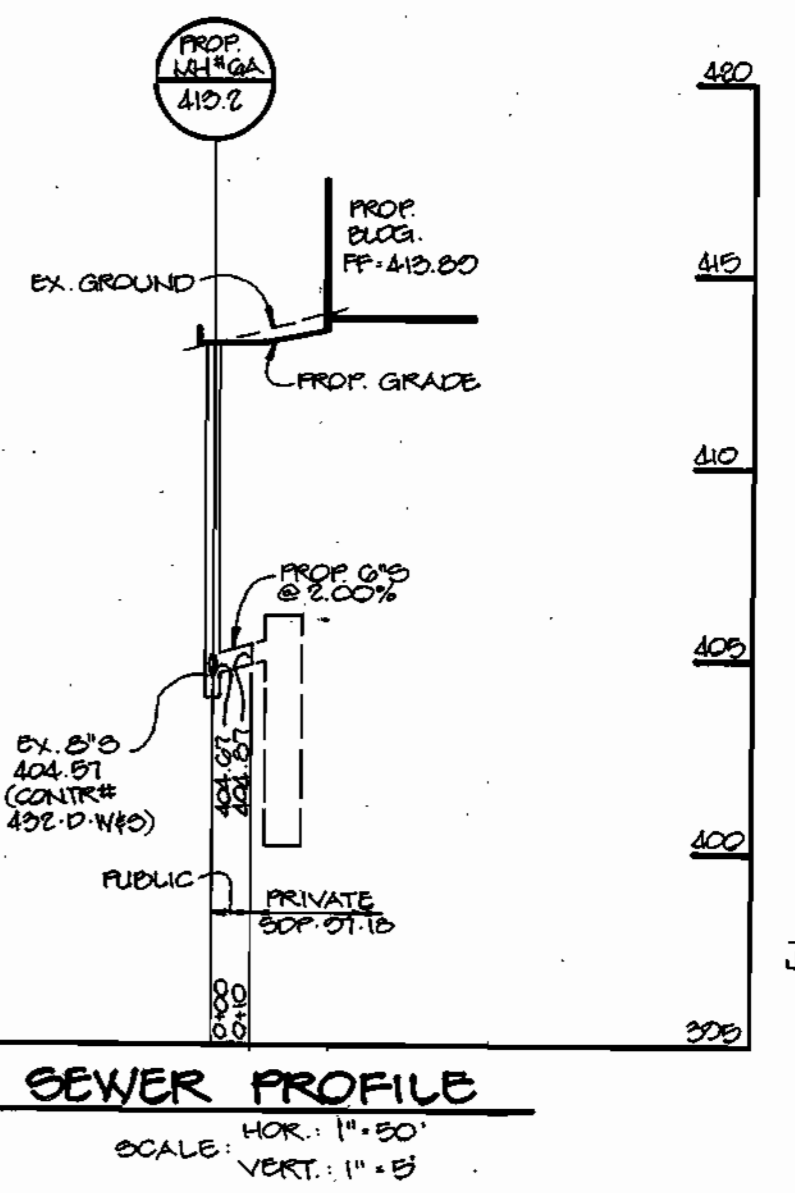
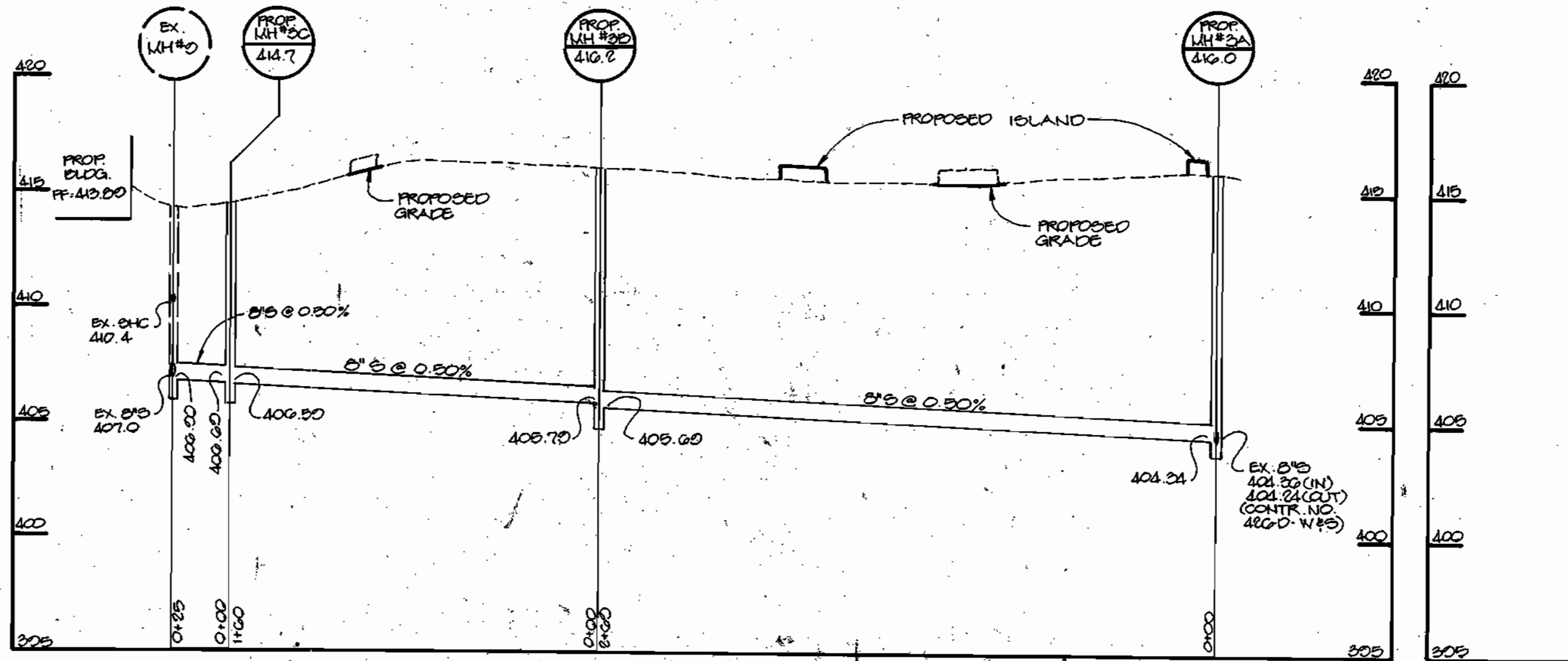
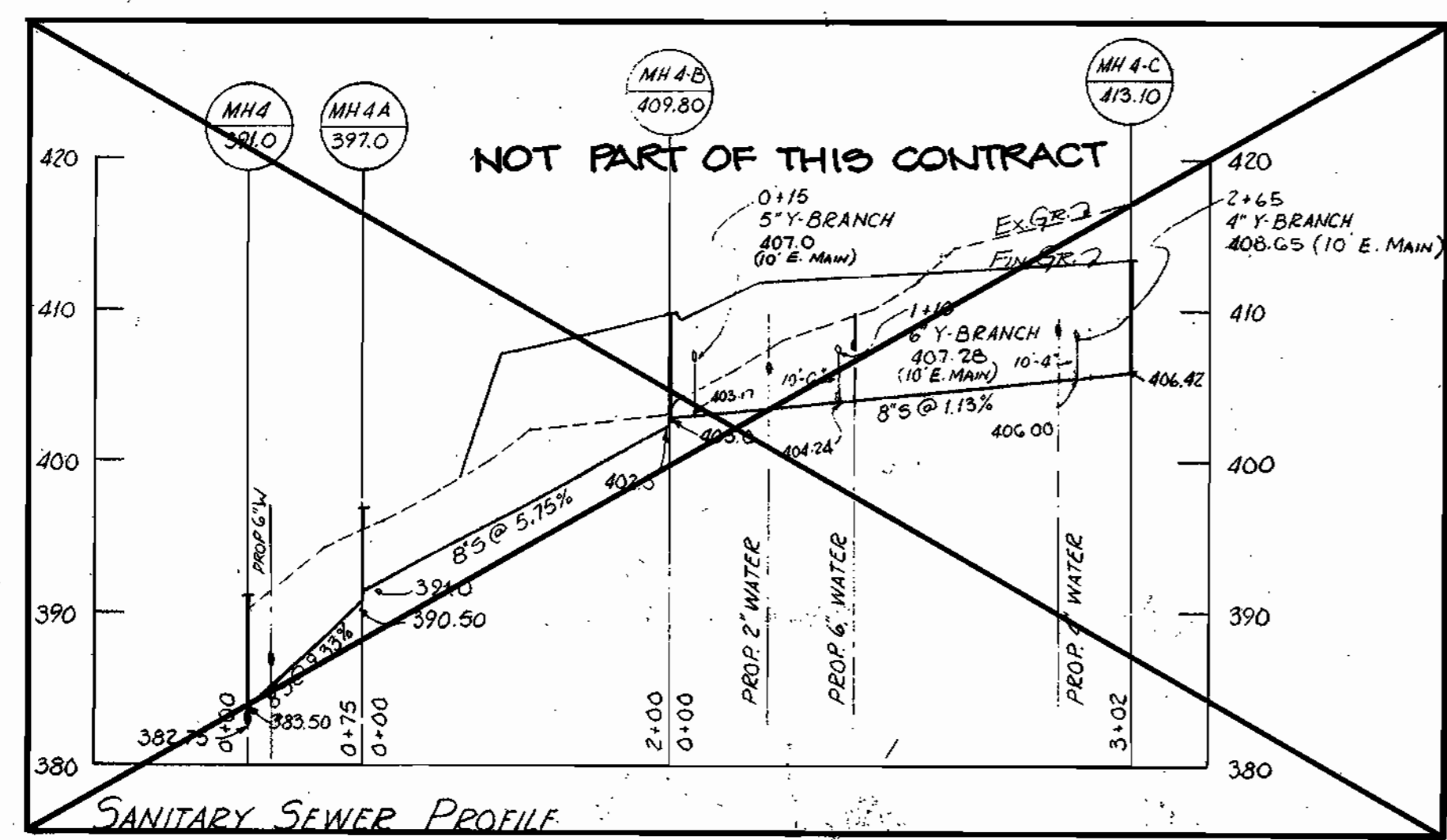
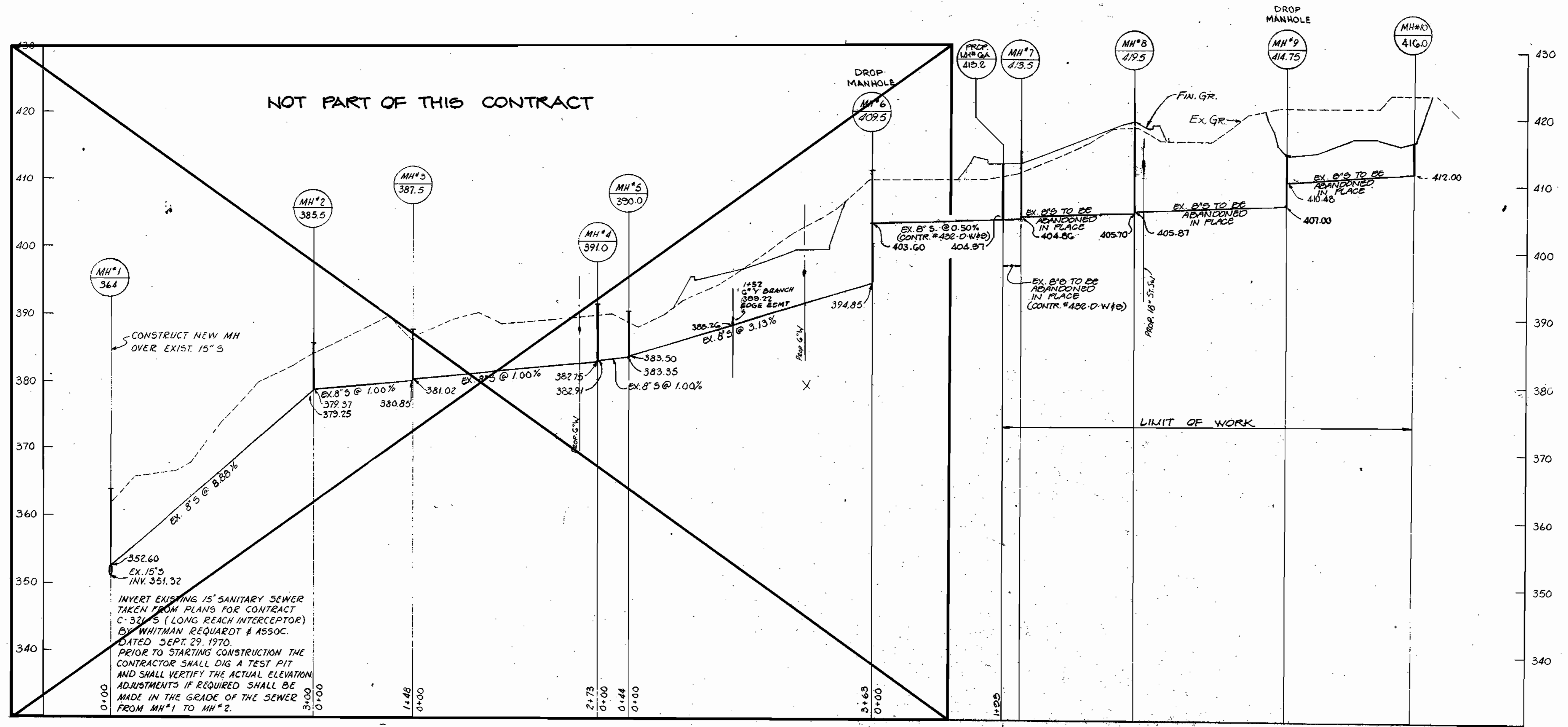
WALTER L. PHILLIPS INCORPORATED CERTIFIED CIVIL ENGINEERS & LAND SURVEYORS 901 W. BROAD ST. FALLS CHURCH, VA.	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS Date: 1-21-72 <i>W. O. Albert</i> Chief, Bureau of Engineering	CONTRACT NO. 432-D-W&S	PROFILES SEWER MAIN EXTENSIONS	COLUMBIA VILLAGE OF LONGREACH SECTION I AREA 5	DRAWING NO. 4 OF 5	SCALE 1"=10' VER. 1"=100' HOR.	DES. DRW. CHK.
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SEPT. 15, 1971
OCT. 6, 1971
REV. JAN. 6, 1972
REV. MAR. 29, 1972

AS-BUILT
3-12-91
AS-BUILT NOV 15, 1972

1. THE APPROVED AND SIGNED ORIGINAL SHEETS 1A, 2A AND 4A OF CONTRACT 492-D-W#B-A ARE PART OF CONTRACT 492-D-W#B APPROVED AND SIGNED ON JANUARY 21, 1972, BY CHIEF, BUREAU OF ENGINEERING.

2. FOR REALIGNMENT OF SEWER MAIN AND WATER, SEWER HOUSE CONNECTIONS AND FIRE HYDRANT LOCATIONS, REFER TO THESE PLANS: 1A, 2A AND 4A.

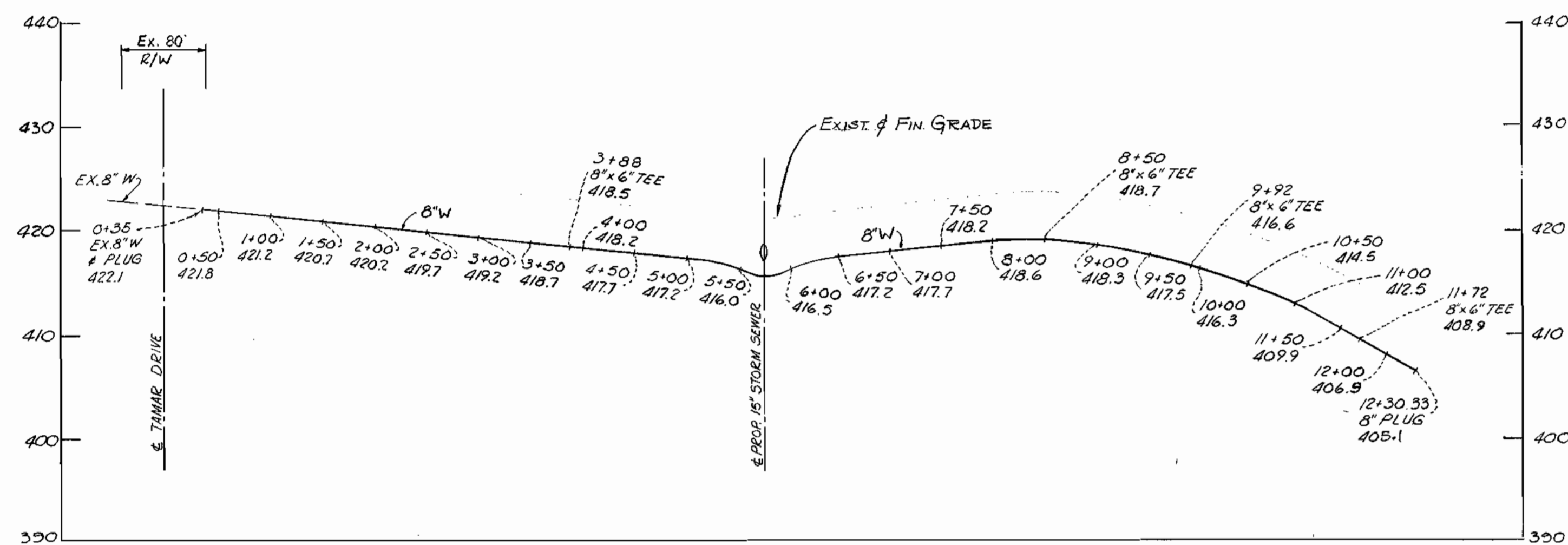


1.27.97
DATE

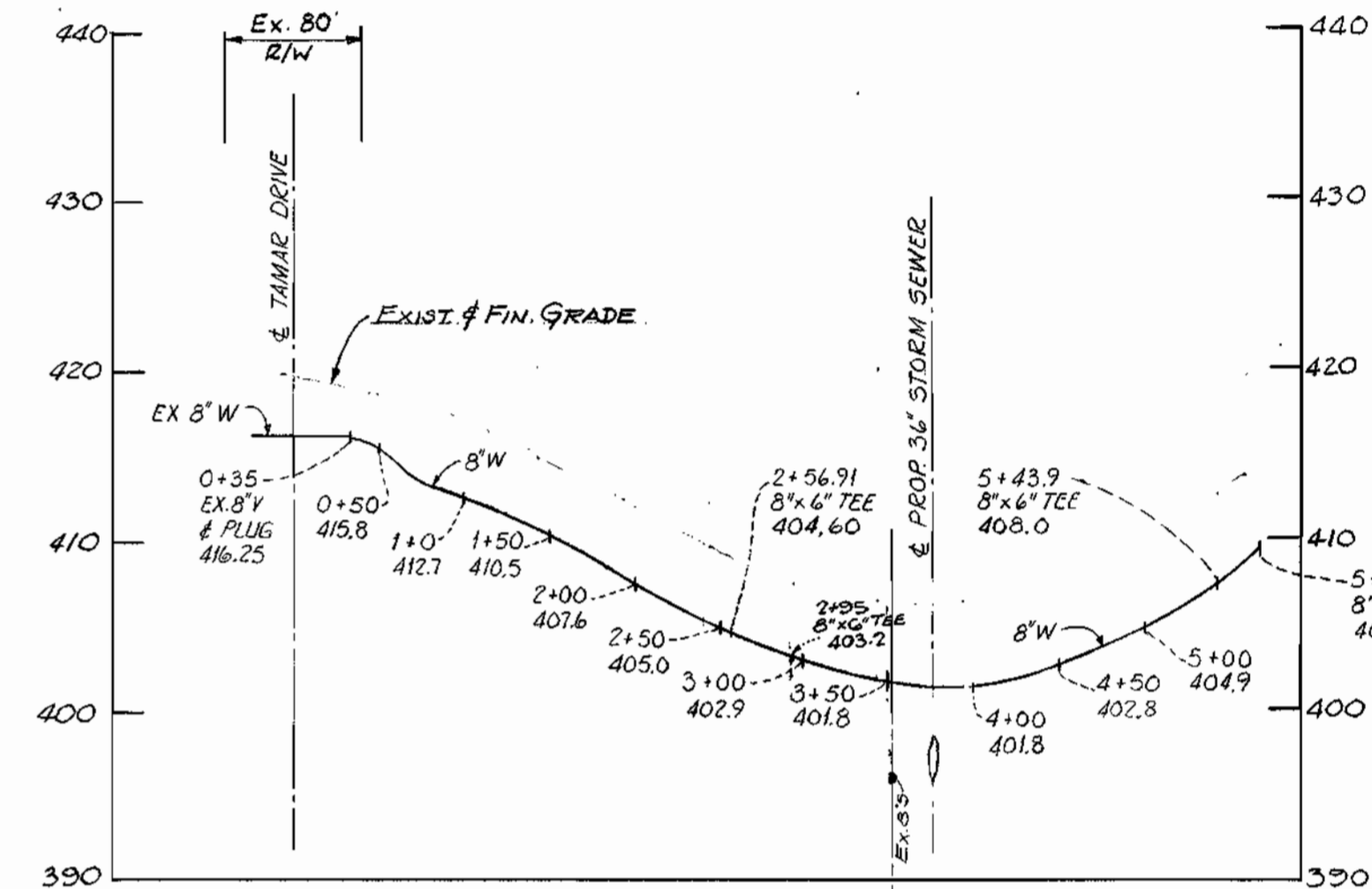
JAYKANT O. PAREKH *19148

1	27-07	1	ADD SHEET TO SHOW NEW SEWER PROFILES FOR NEW SEWER ALIGNMENT DUE TO SUBSTANTIAL EXPANSION
DATE	NO.	REVISION	

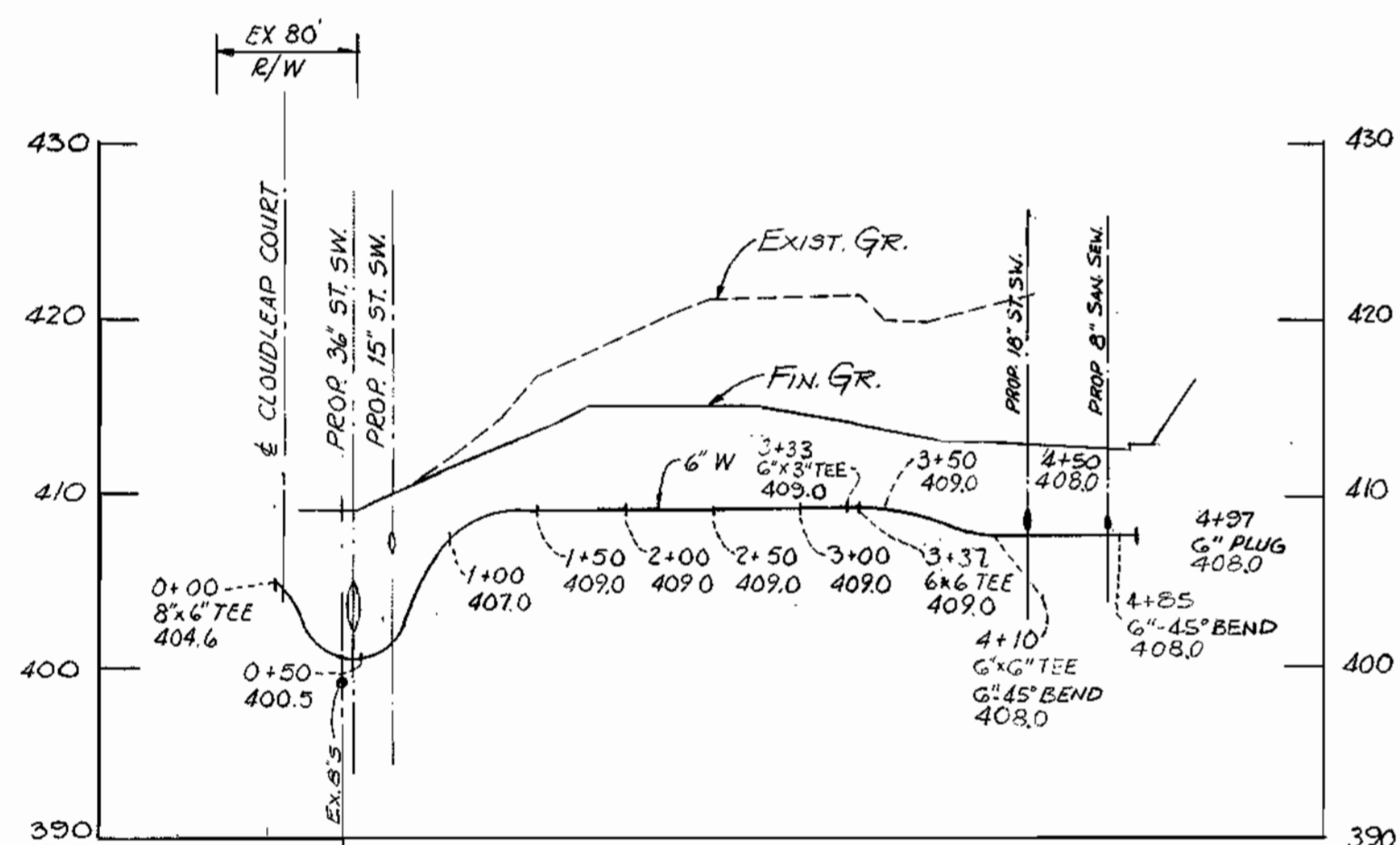
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert Bennett</i> 2-5-97 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Michael J. ...</i> 2/13/97 CHIEF, DEVELOPMENT ENGINEERING DIVISION	RIEMER MUEGGE & ASSOCIATES, INC. ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 2015 CENTRE PARK DRIVE, COLUMBIA, MARYLAND 21046 TEL. 410-507-8000 FAX 410-997-0282	CONTRACT NO. 492-D-W#B-A	PROFILES SEWER MAIN EXTENSIONS	COLUMBIA VILLAGE OF LONGREACH SECTION I AREA 5	DRAWING NO. 4A OF 5 SCALE AS SHOWN DES. DRW. CHK. DATE: 1-27-97
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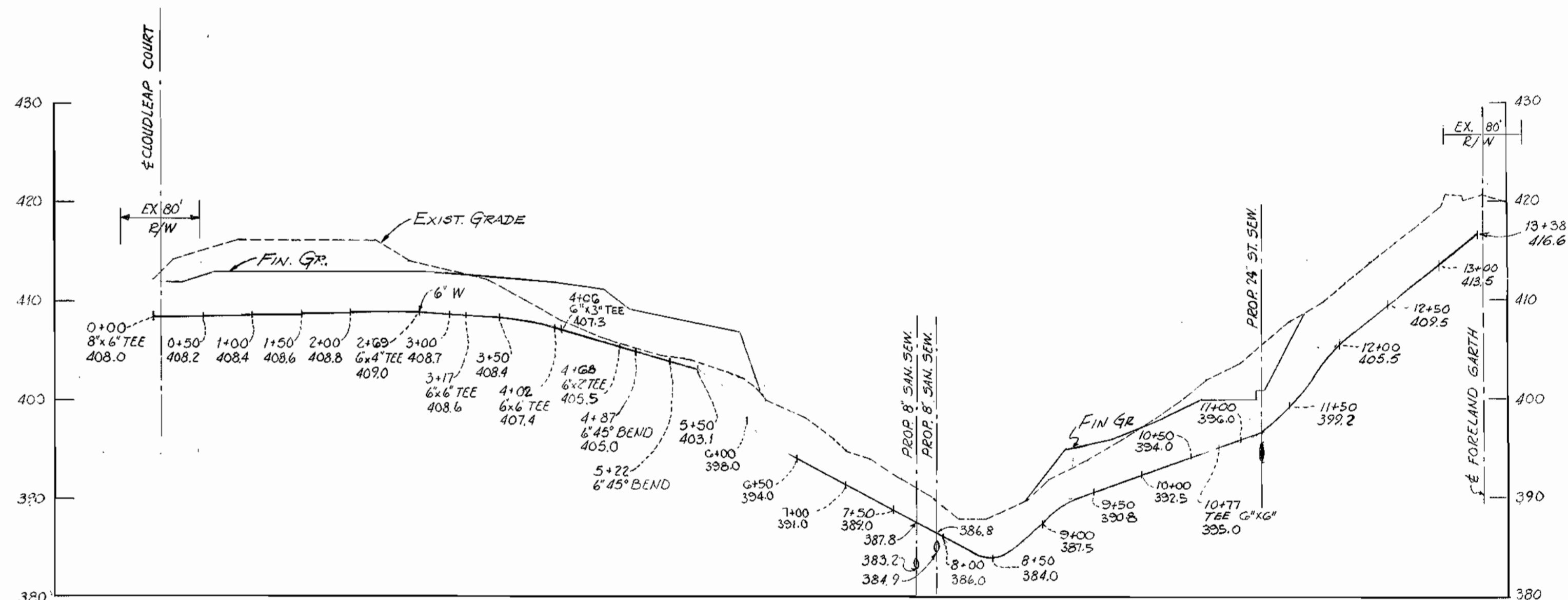
WATER MAIN PROFILE - FORELAND GARTH



WATER MAIN PROFILE - CLOUDLEAP COURT



WATER MAIN PROFILE - LINE "A"



WATER MAIN PROFILE - LINE "B"



WALTER L. PHILLIPS
 INCORPORATED
 CERTIFIED CIVIL ENGINEERS & LAND SURVEYORS
 901 W. BROAD ST. FALLS CHURCH, VA.

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DATE 1-21-72 *W. O. Gilbert*
 CHIEF, BUREAU OF ENGINEERING

CONTRACT NO. 432-D-W & S

PROFILES
WATER MAIN EXTENSIONS

COLUMBIA
VILLAGE OF LONGREACH
SECTION 1 AREA 5

DRAWING NO. 5 OF 5
 SCALE: 1" = 10' VER. 1" = 100' HOR.

DES. DRW. CHK.

SEPT. 15, 1971 REV. OCT. 1, 1971
 JAN. 6, 1972 REV. MAR. 29, 1972

AS-BUILT NOV. 15, 1972