
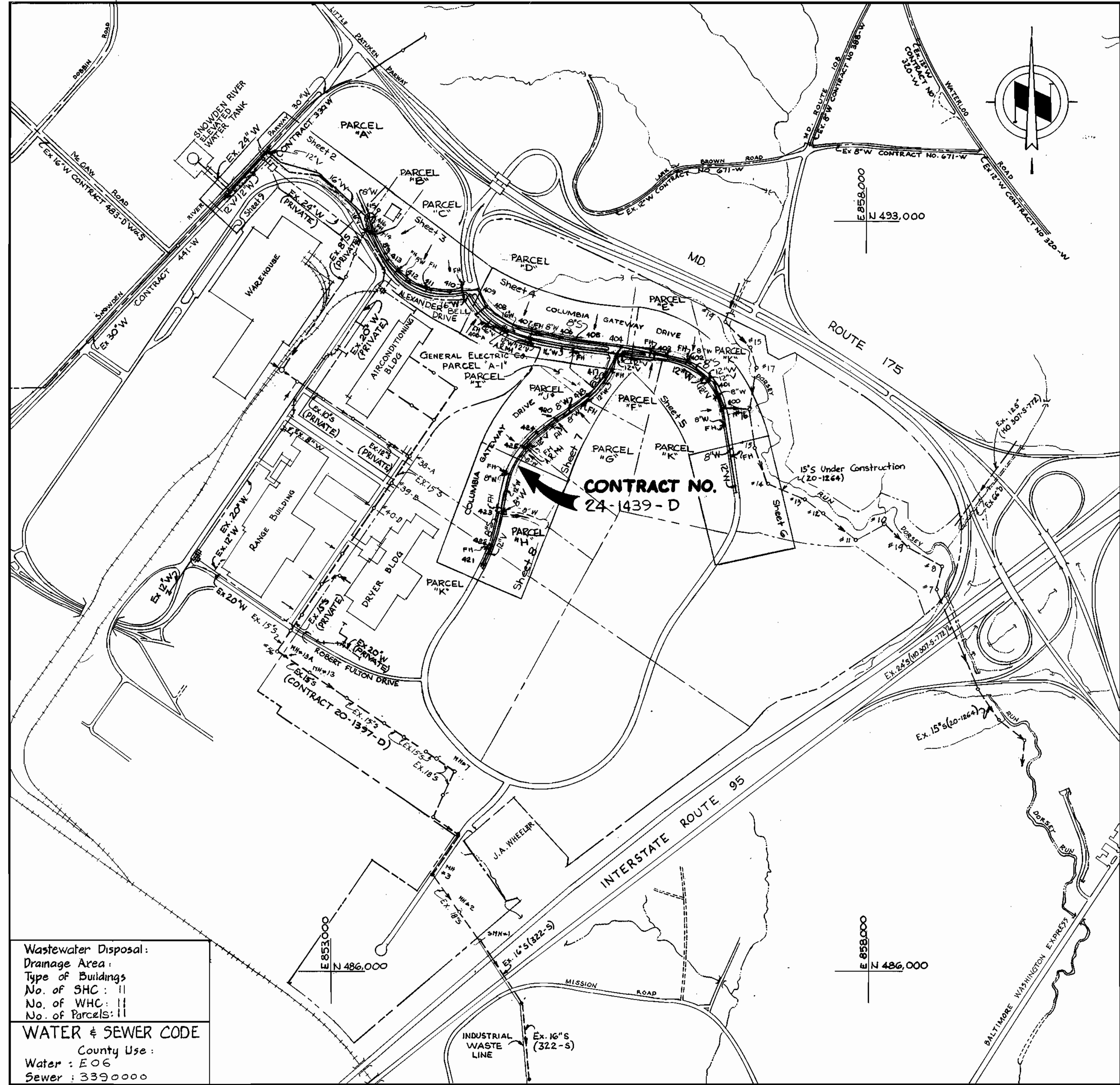


GENERAL NOTES

- 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. DATUM.
- 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.
- 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 CONSTRUCTION. 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 VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S 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
  - BALTIMORE GAS AND ELECTRIC CO. - CONTRACTOR SERVICES 561-2585
  - BALTIMORE GAS AND ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 234-5621
  - BALTIMORE GAS AND ELECTRIC CO. - TROUBLE SHOOTING - 298-9013
  - MISS UTILITY - 1 - 559-0100
  - COLONIAL PIPELINE CO. - 795-1390
  - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366
- 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.
- 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 STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1003 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 SETTINGS, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- ALL W.H.C.'S. SHALL BE 3/4" UNLESS OTHERWISE NOTED.
- ALL COPPER WATER HOUSE CONNECTIONS SHALL UTILIZE FLARED FITTINGS.
- ALL SEWER MAINS SHALL BE C.S.P.X., D.I.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" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS. STANDARD DETAIL 05-52 WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1.5' ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- STRAW BALE DIKE AND SILT FENCE ARE INTERCHANGEABLE.

ITEM	QUANTITIES		MATERIAL/SUPPLIER
	BID	AS BUILT	
16" Water L.F.	3,930	4018	A & P WATER/SEWER
12" Water L.F.	5,200	5121	" "
8" Water L.F.	500	732	" "
6" Water L.F.	600	462	" "
16" Valve & Vault Ea.	2	2	VIRGINIA PRECAST CORP.
16" Air Release M.H. Ea.	1	1	" "
12" Valve Ea.	8	17	A & P WATER/SEWER
12" Air Release M.H. Ea.	2	2	VIRGINIA PRECAST
8" Valve Ea.	12	10	A & P WATER/SEWER
6" V (Excluding FH) Ea.	-	-	" "
8" Sewer L.F.	6,850	6410	MUNICIPAL/CONTRACTOR SALES INC.
Manholes Ea.	26	26	ATLANTIC PRECAST
Fire Hydrants Ea.	20	19	A & P WATER/SEWER
30"x12" Saddle & V. Ea.	2	2	" "
2" W.H.C. L.F.	100	94	A & P WATER/SEWER
1 1/2" W.H.C. L.F.	40	-	" "



Wastewater Disposal:  
 Drainage Area:  
 Type of Buildings:  
 No. of SHC: ||  
 No. of W.H.C.: ||  
 No. of Parcels: ||

WATER & SEWER CODE  
 County Use:  
 Water: E 06  
 Sewer: 3390000

CONTRACT NO. 24-1439-D  
 COLUMBIA GATEWAY  
 HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF PUBLIC WORKS

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

*Stephen D. Fink* 3-25-86  
 SIGNATURE DATE  
 U.S. SOIL CONSERVATION SERVICE

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard County Conservation District.

APPROVED *Stephen D. Fink* 3/25/86  
 HOWARD C.O.D. DATE

Sediment Control Measures for this Contract will be implemented in accordance with Article 15 of the Standard Specifications, and Road Construction Drawings F-86-127.

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

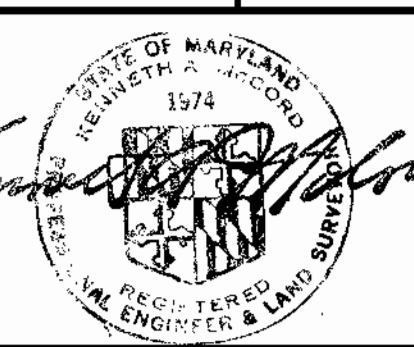
*Robert M. Baugher* 3-26-86  
 DIRECTOR OF PUBLIC WORKS - DATE

*William J. Papp* 3-26-86  
 CHIEF - BUREAU OF UTILITIES - DATE

*Robert M. Baugher* 3-26-86  
 CHIEF - BUREAU OF UTILITIES - DATE

*William J. Papp* 3-26-86  
 CHIEF - LAND DEVELOPMENT DIVISION - DATE

WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS  
 2315 ST. PAUL ST.  
 BALTIMORE, MARYLAND



DES: S.J.			
CHK: Q.D.N.			
CHK: R.B.N.			
DATE:	BY:	NO.	REVISION

VICINITY MAP AND GENERAL NOTES

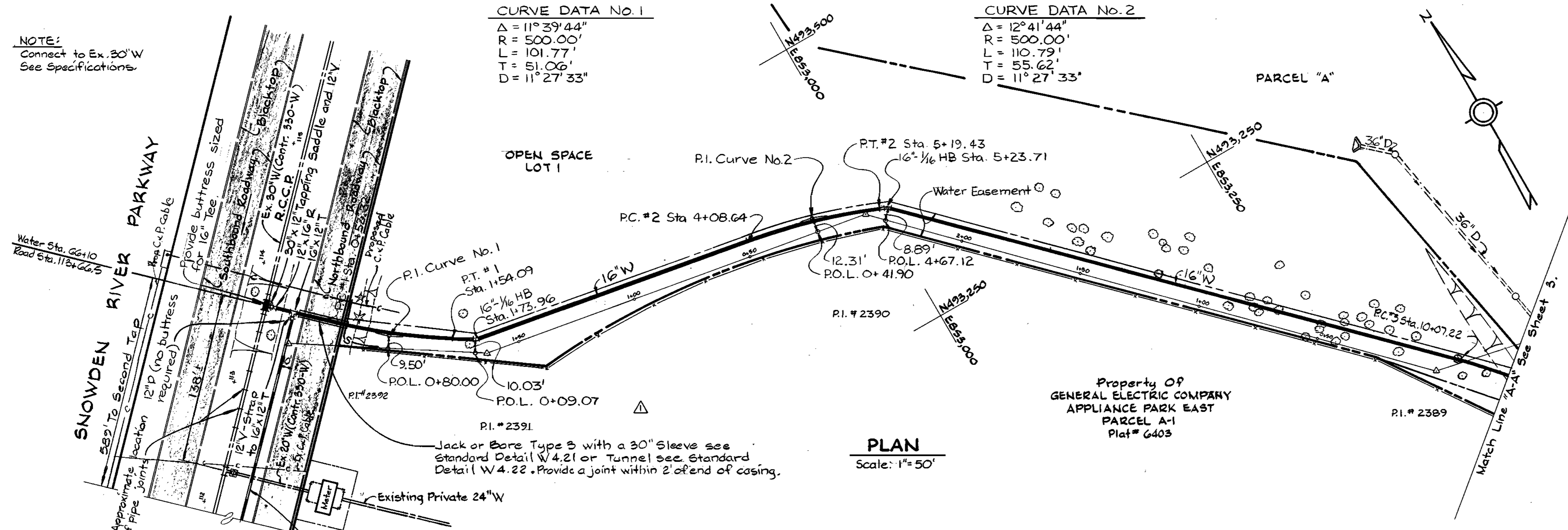
COLUMBIA GATEWAY PARCELS A THRU K  
 ELECTION DISTRICT NO. 6  
 CONTRACT NO. 24-1439-D

SCALE 1"=600'  
 SHEET 1 OF 9

NOTE:  
Connect to Ex. 30" W  
See Specifications

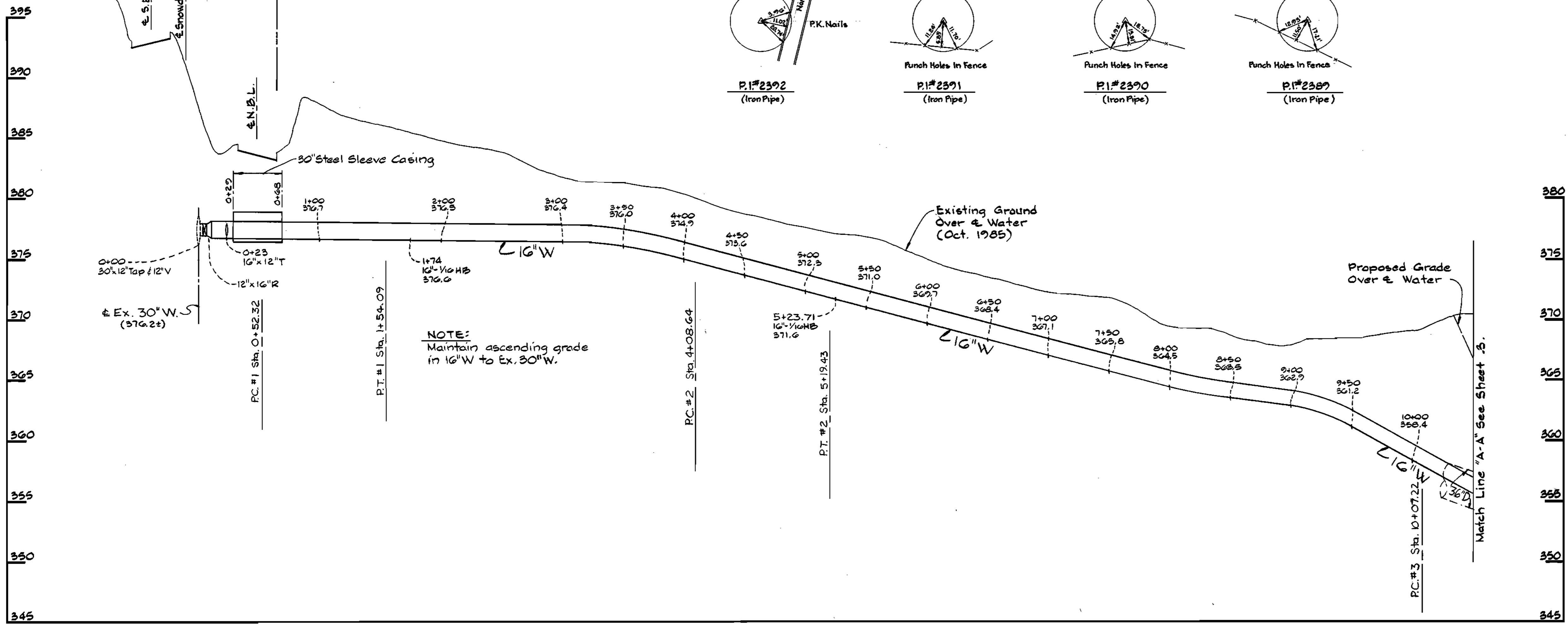
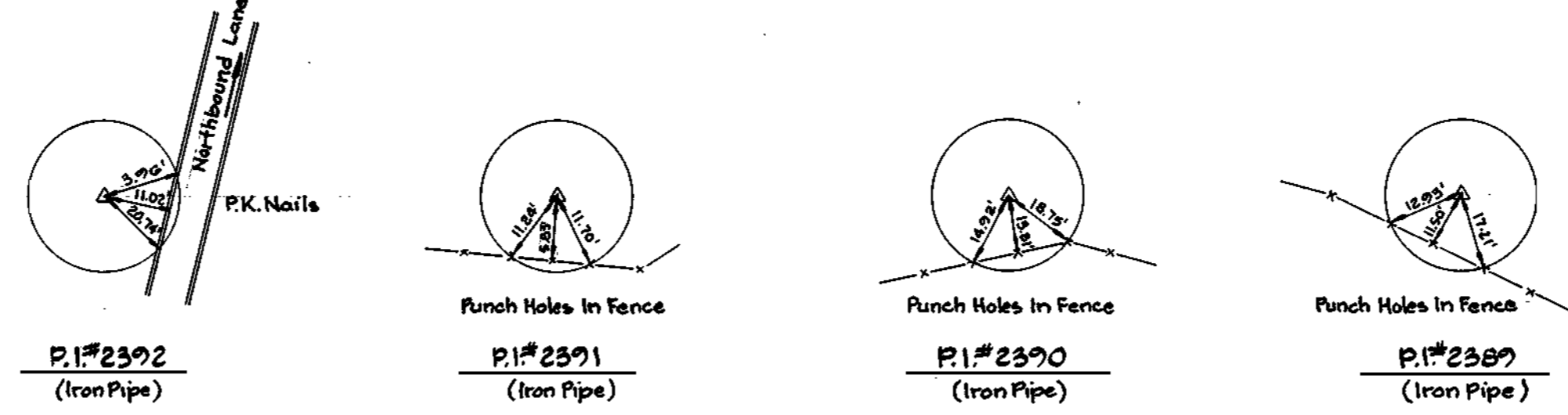
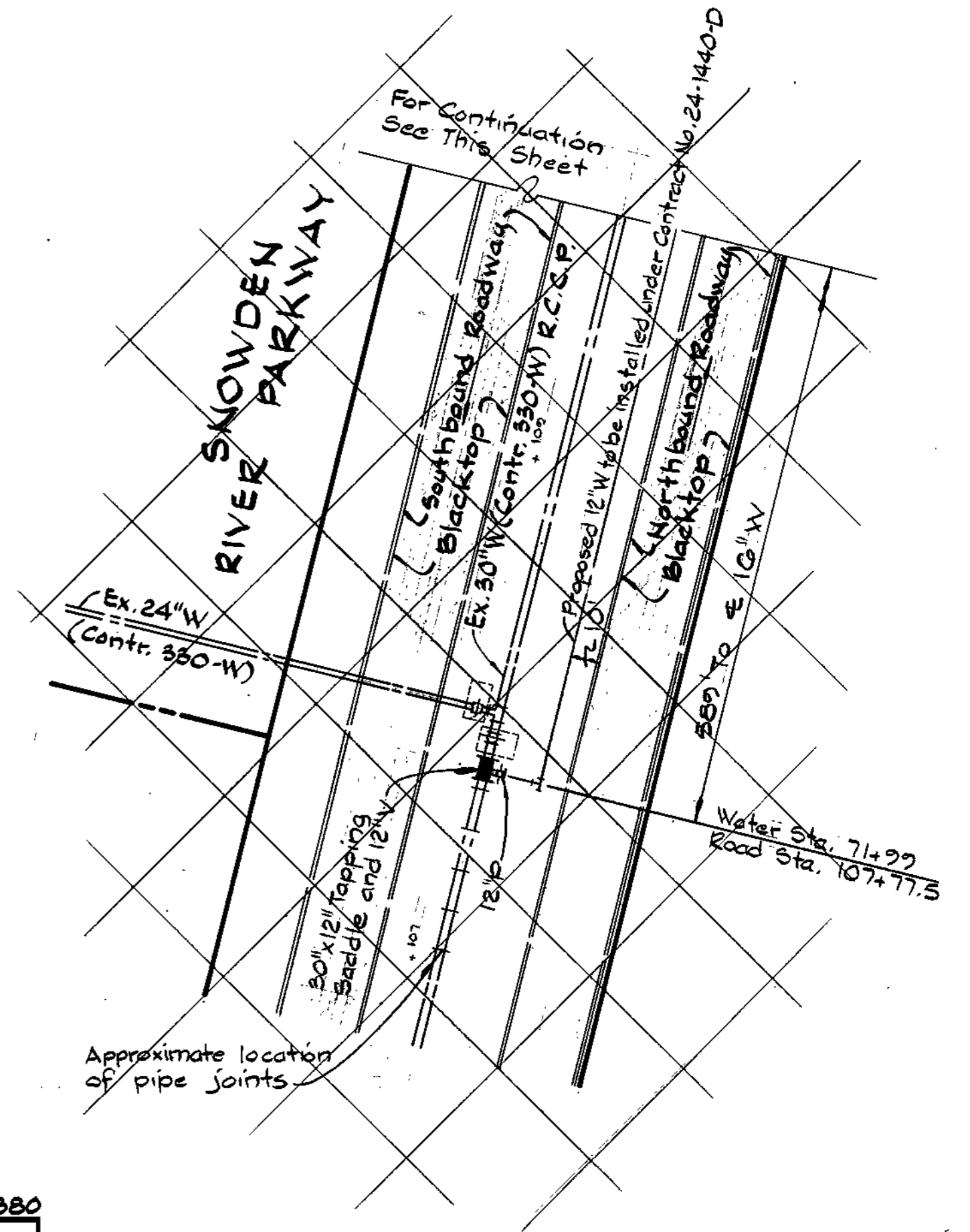
CURVE DATA No. 1  
Δ = 11° 39' 44"  
R = 500.00'  
L = 101.77'  
T = 51.06'  
D = 11° 27' 33"

CURVE DATA No. 2  
Δ = 12° 41' 44"  
R = 500.00'  
L = 110.79'  
T = 55.62'  
D = 11° 27' 33"



PLAN  
Scale: 1" = 50'

BENCH MARKS  
W.R. # A.B.M. #1 Elev. 368.62  
R.R. Spike in Base of 8" Oak, 100' (±)  
ahead of P.I. # 2391, 15' left.  
W.R. # A.B.M. #2 Elev. 365.28  
R.R. Spike in Base of 14" Poplar, 90' (±)  
Right of & Alexander Bell Drive  
P.T. Sta. 11+23.93



PROFILE  
Scale: Horizontal 1" = 50'  
Vertical 1" = 5'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
Director of Public Works - DATE 3-26-86  
Chief - Bureau of Engineering - DATE  
Chief - Bureau of Utilities - DATE 3-26-86  
Chief - Land Development Division - DATE

WHITMAN, REQUARDT  
AND ASSOCIATES  
ENGINEERS  
2315 ST. PAUL ST.  
BALTIMORE, MARYLAND

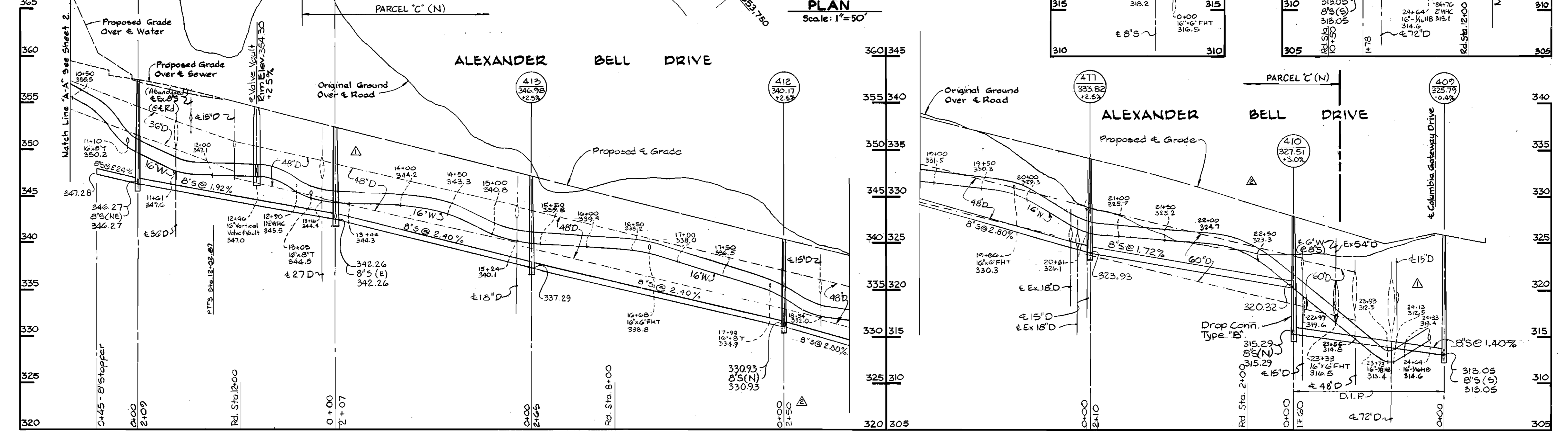
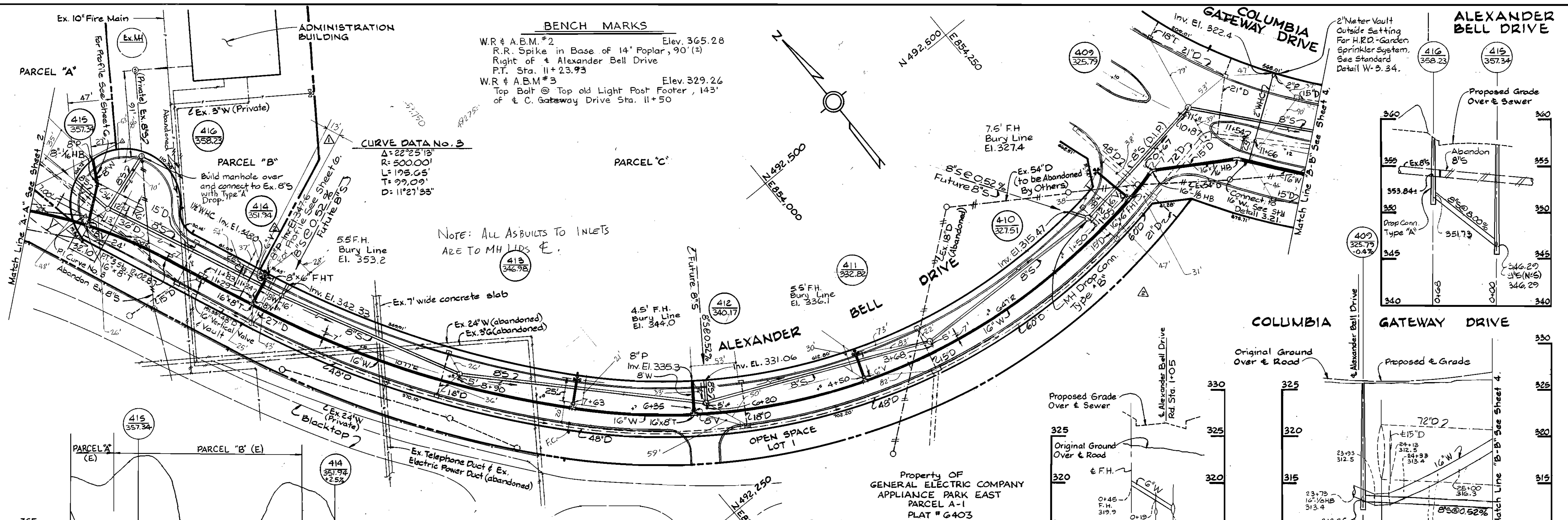
DES: S.J.  
DRN: J.R.K.  
BY: R.B.N.  
DATE: 4/18/86  
General Revisions

PLAN & PROFILE OF  
WATER MAIN  
600' SCALE MAP NO. BLOCK NO.

36-493/854  
36-492/854

COLUMBIA  
COLUMBIA GATEWAY  
PARCELS A THRU K  
ELECTION DISTRICT NO 6  
CONTRACT NO. 24-1439-D

SCALE  
AS SHOWN  
SHEET  
2 OF 9



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

**PROFILE**  
Scale: Horizontal 1" = 50'  
Vertical 1" = 5'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Robert M. Bauman* 3-26-86  
DIRECTOR OF PUBLIC WORKS - DATE

*Robert M. Bauman* 3-26-86  
CHIEF - BUREAU OF UTILITIES - DATE

WHITMAN, REQUARDT  
AND ASSOCIATES  
ENGINEERS

2315 ST. PAUL ST.  
BALTIMORE, MARYLAND

*Whitman Requardt*  
REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR

DES: S.J.			
DRN: J.R.K.			
CHK: R.B.N.			
DATE:	D.M.D.	General Revisions	5/16/86
	D.M.D.	General Revisions	4/18/86
	BY NO.	REVISION	DATE

PLAN & PROFILE OF  
WATER & SEWER MAINS

COLUMBIA  
COLUMBIA GATEWAY  
PARCELS A THRU K  
ELECTION DISTRICT NO 6  
CONTRACT NO. 24-1439-D

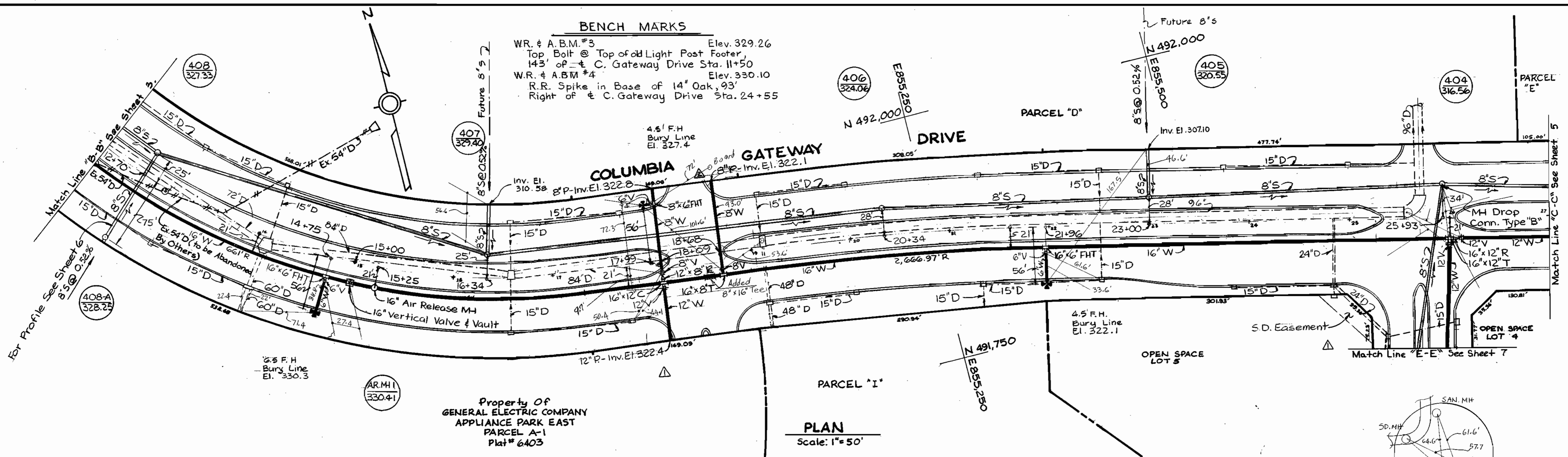
SCALE  
AS SHOWN

SHEET  
3 OF 9

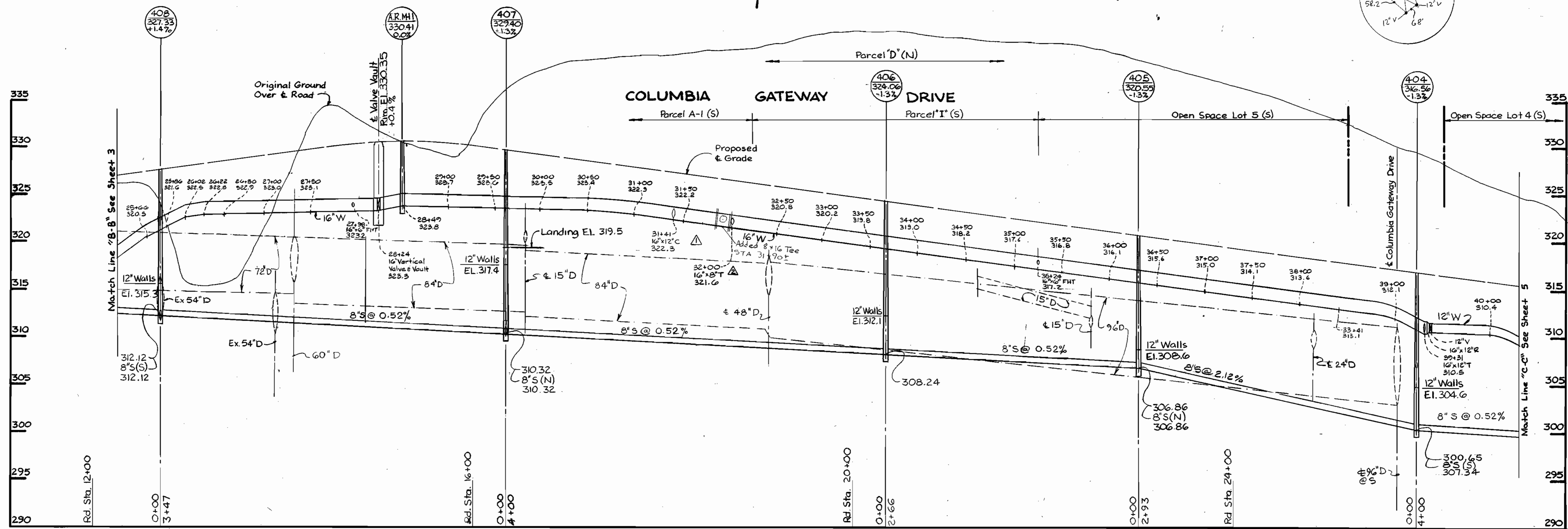
AS-BUILT  
7 OCT 1986  
March 20, 1986

**BENCH MARKS**

WR. & A.B.M. #3 Elev. 329.26  
 Top Bolt @ Top of Light Post Footer,  
 143' of C. Gateway Drive Sta. 11+50  
 WR. & A.B.M. #4 Elev. 330.10  
 R.R. Spike in Base of 14" Oak, 93'  
 Right of C. Gateway Drive Sta. 24+55



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



**PROFILE**  
 Scale: Horizontal 1" = 50'  
 Vertical 1" = 5'

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND

*Robert H. Benjamin* 3-26-86  
 DIRECTOR OF PUBLIC WORKS - DATE

*William S. Reilly* 3-26-86  
 CHIEF - BUREAU OF ENGINEERS - DATE

*William S. Reilly* 3-26-86  
 CHIEF - BUREAU OF UTILITIES - DATE

*William S. Reilly* 3-26-86  
 CHIEF - LAND DEVELOPMENT DIVISION - DATE

**WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS**  
 2315 ST. PAUL ST.  
 BALTIMORE, MARYLAND



DES: S.J.			
CHK: R.B.N.			
D.M.D.	General Revisions (8\"/>		
D.M.D.	General Revisions		
DATE:	BY:	NO.	REVISION

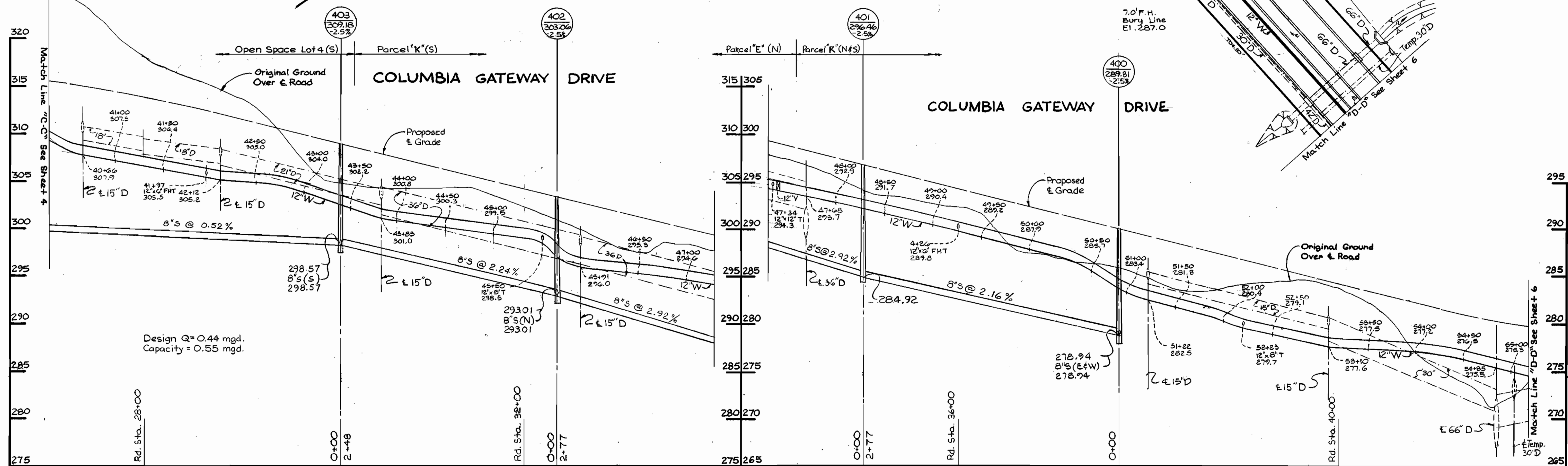
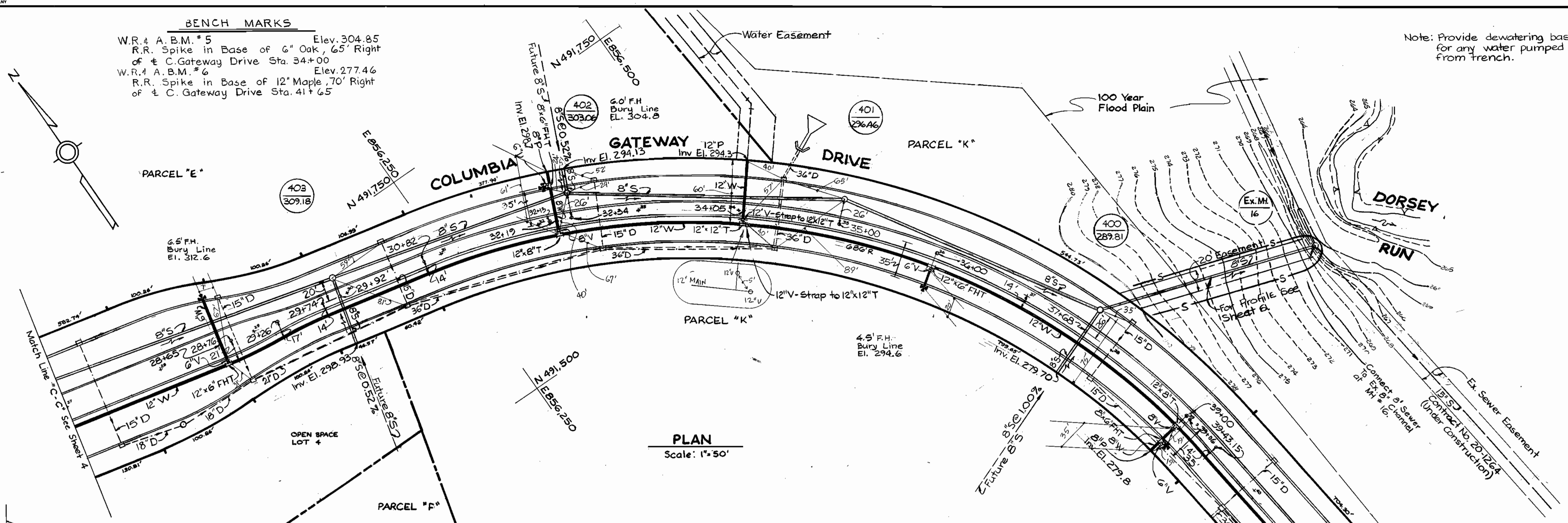
**PLAN & PROFILE OF WATER & SEWER MAINS**

**COLUMBIA GATEWAY**  
 PARCELS A THRU K  
 ELECTION DISTRICT NO. 6  
 CONTRACT NO. 24-1439-D

SCALE AS SHOWN  
 SHEET 4 OF 9

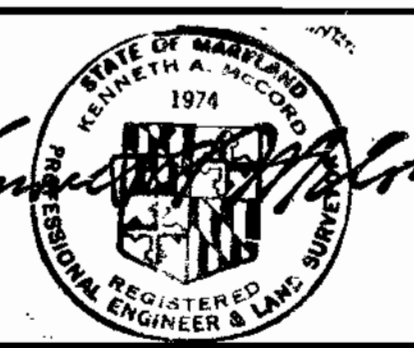
**BENCH MARKS**  
 W.R.# A.B.M.# 5 Elev. 304.85  
 R.R. Spike in Base of 6" Oak, 65' Right of C. Gateway Drive Sta. 34+00  
 W.R.# A.B.M.# 6 Elev. 277.46  
 R.R. Spike in Base of 12" Maple, 70' Right of C. Gateway Drive Sta. 41+65

Note: Provide dewatering basin for any water pumped from trench.



DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Director of Public Works - DATE  
 Chief - Bureau of Engineering - DATE  
 Chief - Bureau of Utilities - DATE  
 Chief - Land Development Division - DATE

WHITMAN, REQUARDT  
 AND ASSOCIATES  
 ENGINEERS  
 2315 ST. PAUL ST.  
 BALTIMORE, MARYLAND



DES. S.J.	
CHK. D.M.D.	
CHK. R.B.N.	
DATE:	
BY NO.	
REVISION	
DATE	

PLAN & PROFILE OF  
 WATER & SEWER MAINS

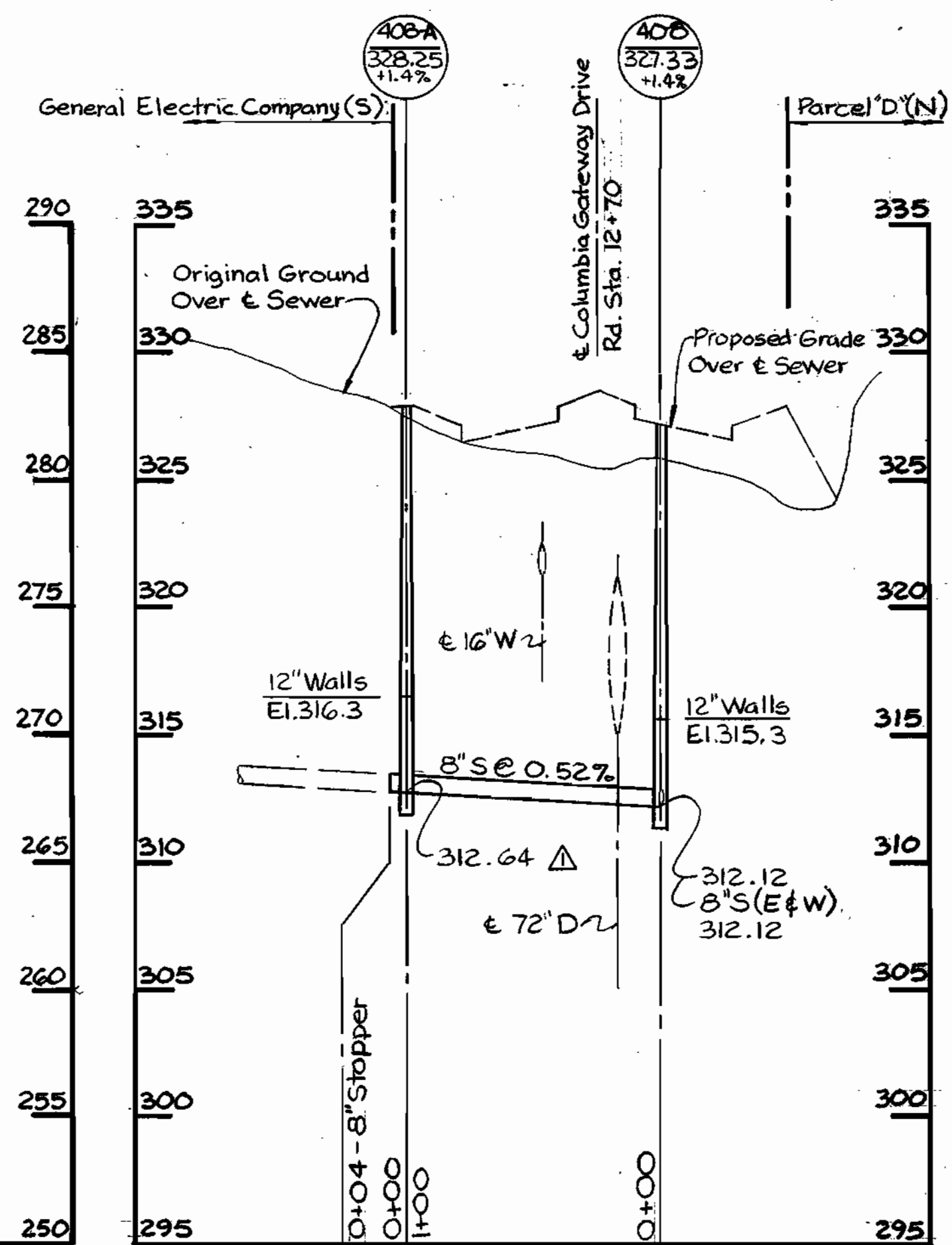
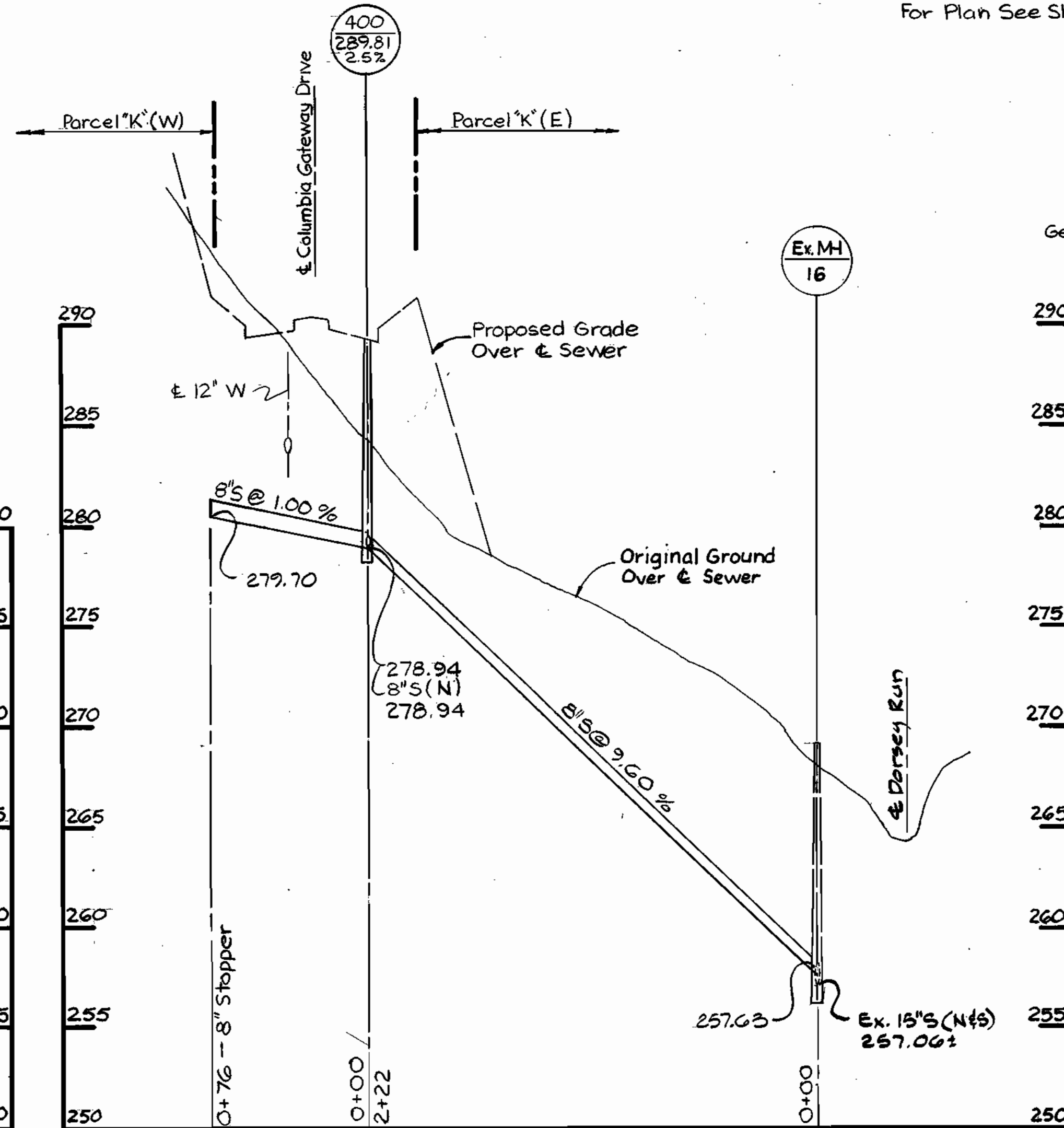
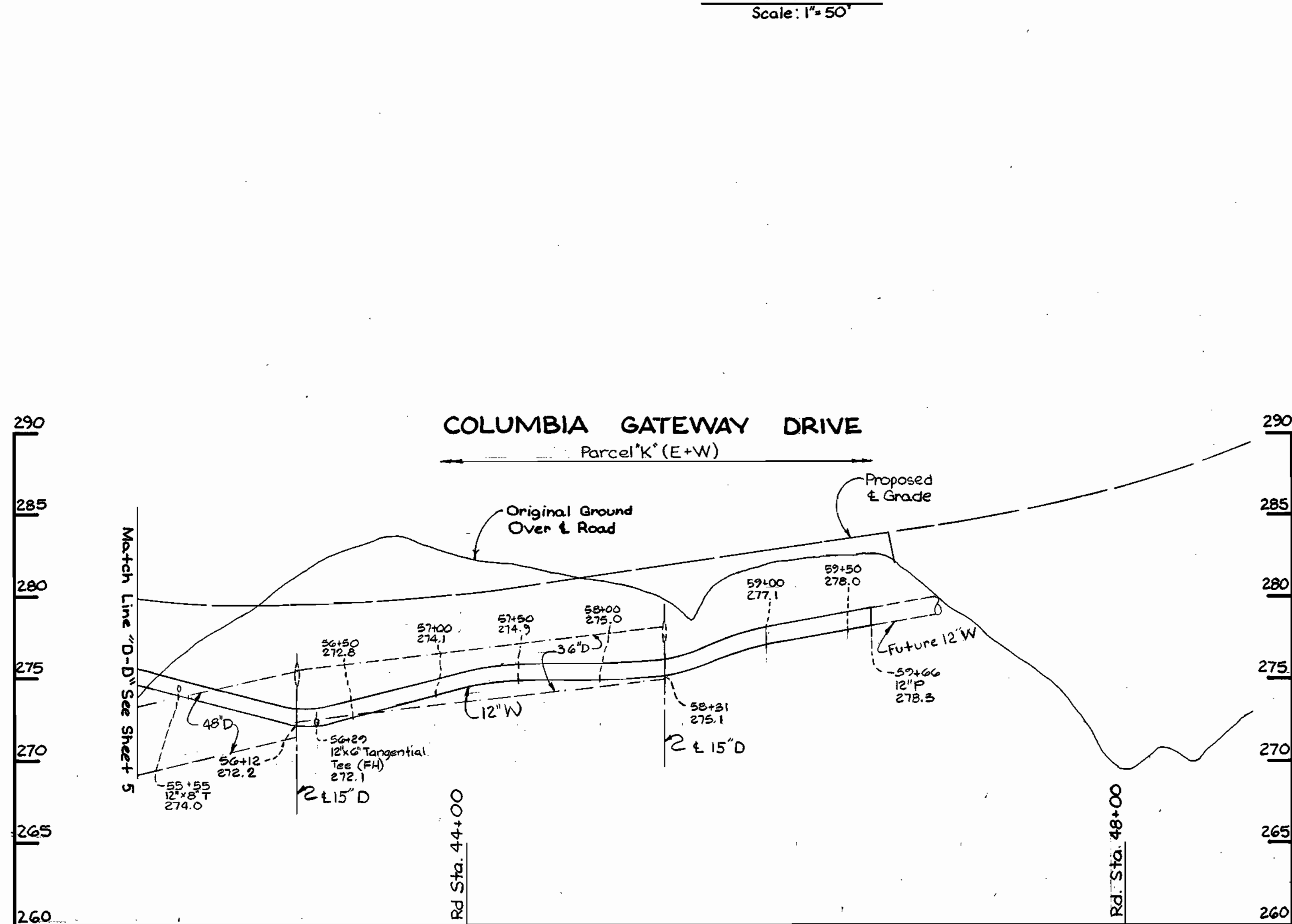
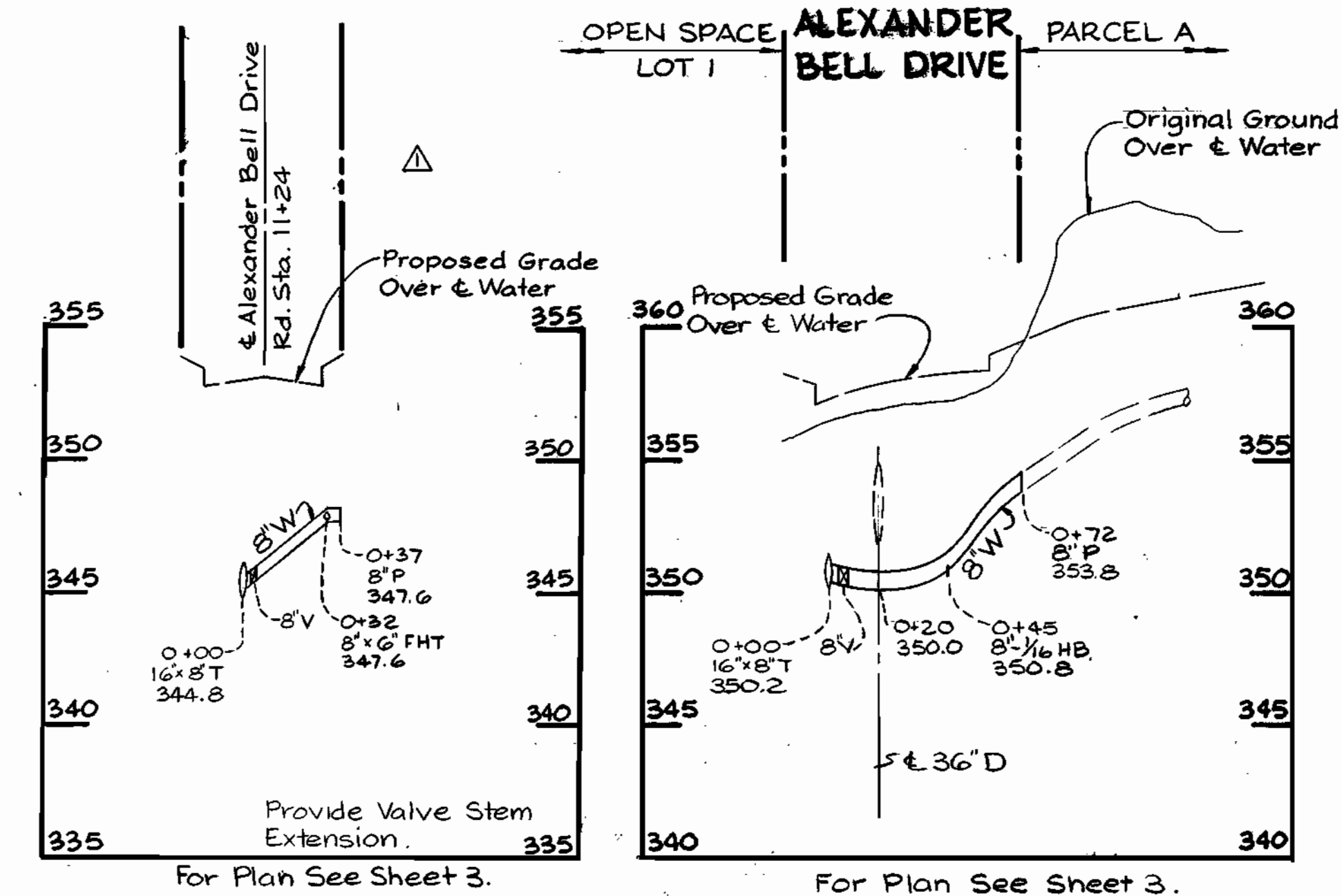
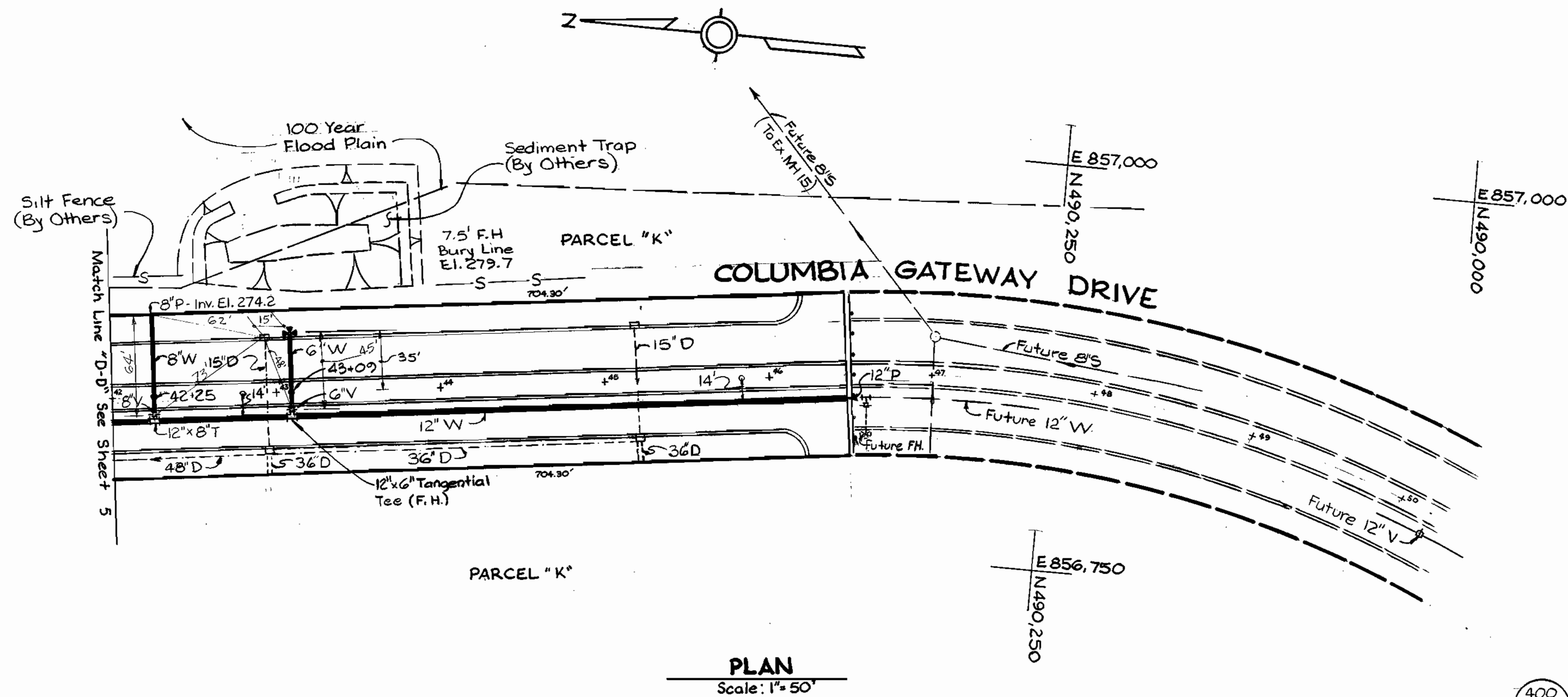
43-491/857  
 43-490/857

COLUMBIA  
 COLUMBIA GATEWAY  
 PARCELS A THRU K  
 ELECTION DISTRICT NO. 6  
 CONTRACT NO. 24-1439-D

SCALE  
 AS SHOWN  
 SHEET  
 5 OF 9

BENCH MARKS

W.R. & A.B.M. #6 Elev. 277.46  
 R.R. Spike in Base of 12' Maple,  
 70' Right of & C. Gateway Drive Sta. 41+65  
 W.R. & A.B.M. #7 Elev. 286.06  
 R.R. Spike in Base of 6' Oak,  
 60' Right of & C. Gateway Drive Sta. 46+10

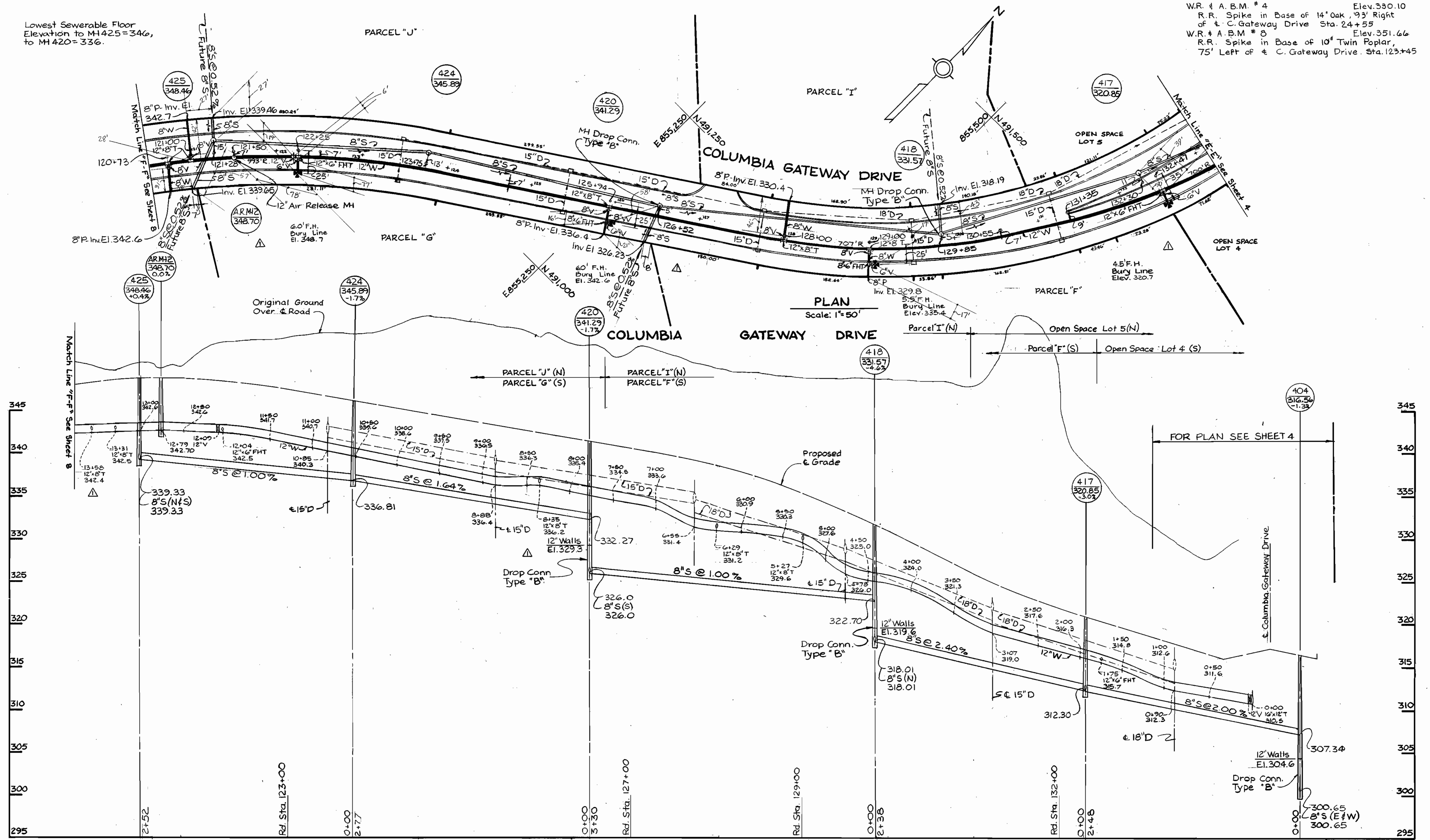


<p>DEPARTMENT OF PUBLIC WORKS                  HOWARD COUNTY, MARYLAND</p> <p><i>Robert M. Berger</i>                  DIRECTOR OF PUBLIC WORKS - DATE 3-26-86                  CHIEF - BUREAU OF UTILITIES - DATE 3-26-86</p>	<p>WHITMAN, REQUARDT                  AND ASSOCIATES                  ENGINEERS</p> <p>2315 ST. PAUL ST.                  BALTIMORE, MARYLAND</p>		<p>DES. S.J.                  D.M.D.                  R.B.N.</p> <p>DATE: 4/18/86</p>	<p>PLAN &amp; PROFILE OF                  WATER &amp; SEWER MAINS</p> <p>600' SCALE MAP NO. BLOCK NO.</p>	<p>COLUMBIA                  GATEWAY                  PARCELS A THRU K                  ELECTION DISTRICT NO. 6                  CONTRACT NO. 24 - 1439 - D</p> <p>SCALE AS SHOWN                  SHEET 6 OF 9</p>
--	---	--	---	---	---

BENCH MARKS

W.R. & A.B.M. # 4 Elev. 330.10  
R.R. Spike in Base of 14' Oak, 93' Right  
of & C. Gateway Drive Sta. 24+55  
W.R. & A.B.M. # 8 Elev. 351.66  
R.R. Spike in Base of 10' Twin Poplar,  
75' Left of & C. Gateway Drive. Sta. 123+45

Lowest Sewerable Floor  
Elevation to MH 425=346,  
to MH 420=336.



PROFILE  
Horizontal 1"=50'  
Vertical 1"=5'

43-491/857  
43-491/855.5  
43-490/855.5

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Robert F. Neuma* 3-26-86  
DIRECTOR OF PUBLIC WORKS - DATE

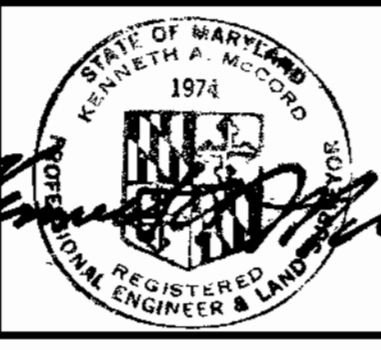
*Robert H. Senior* 3-26-86  
CHIEF - BUREAU OF UTILITIES - DATE

*W. C. ...* 3-26-86  
CHIEF - BUREAU OF ENGINEERING - DATE

*Val ...* 3-26-86  
CHIEF - LAND DEVELOPMENT DIVISION - DATE

WHITMAN, REQUARDT  
AND ASSOCIATES  
ENGINEERS

2315 ST. PAUL ST.  
BALTIMORE, MARYLAND



DES. S.J.	
DRN. D.M.D.	
CHECKED BY R.B.N.	
DATE:	
BY NO.	
REVISIONS	
DATE	

PLAN & PROFILE OF  
WATER & SEWER MAINS

600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

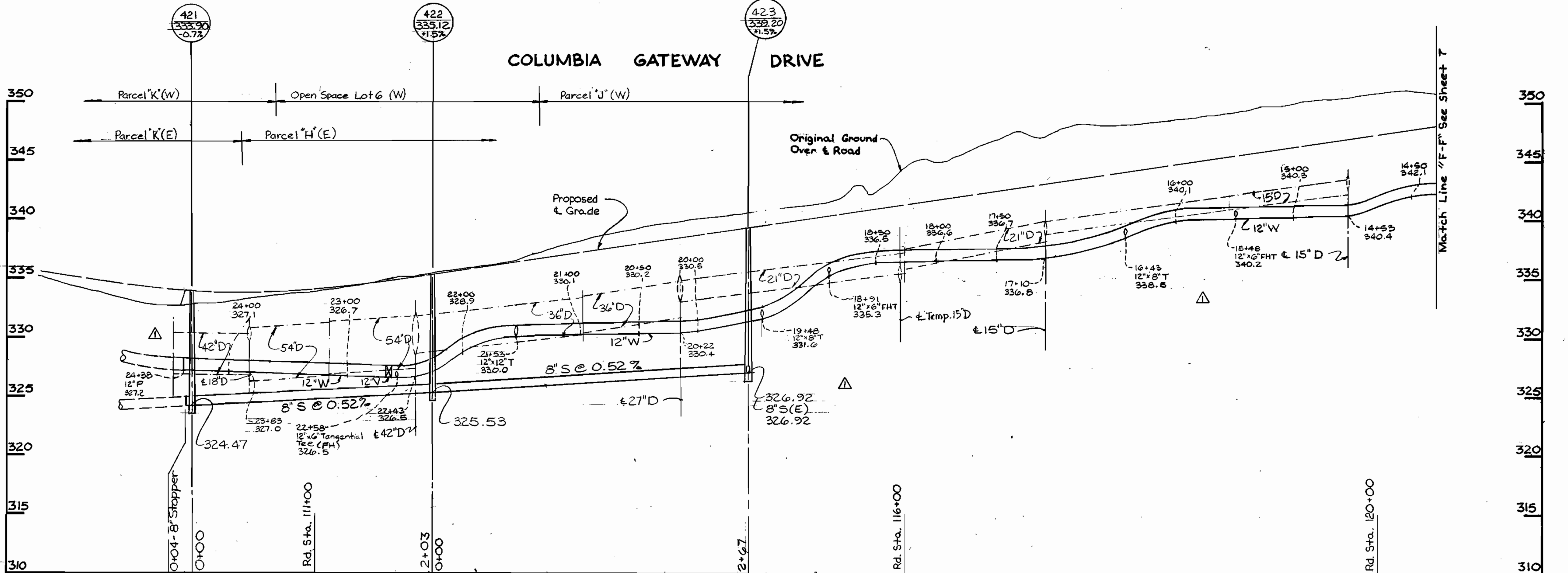
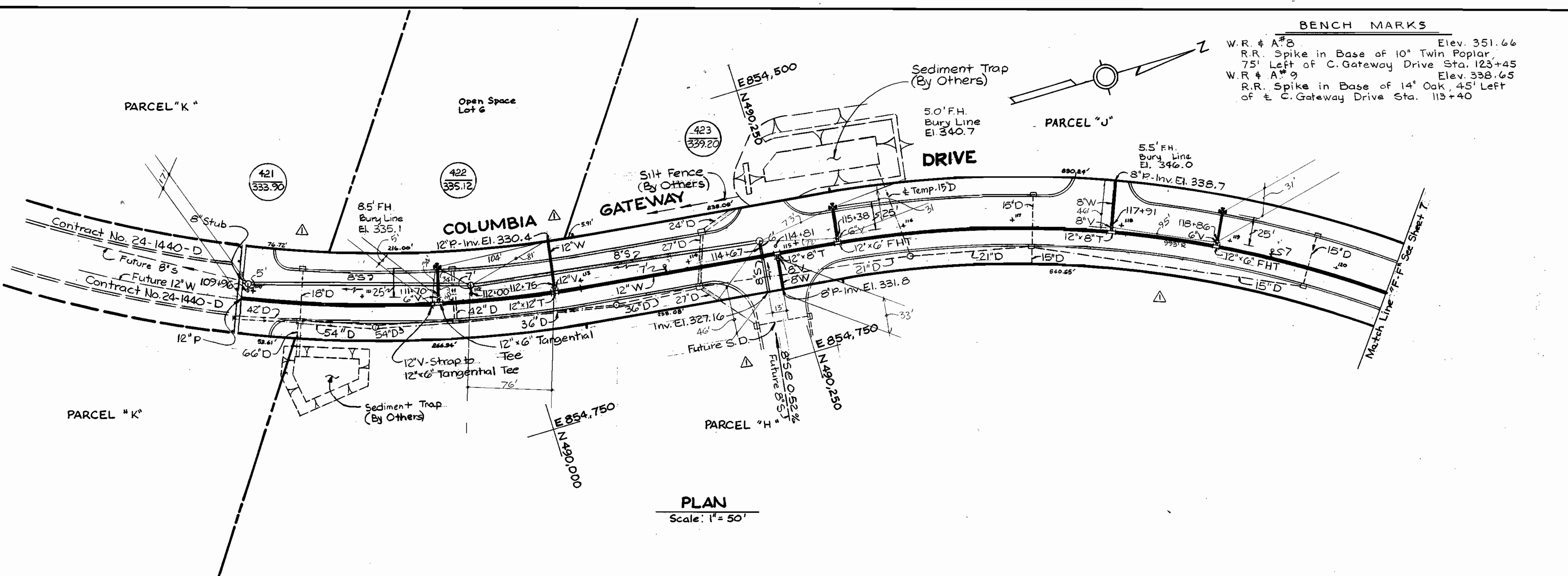
COLUMBIA  
GATEWAY  
PARCELS A THRU K  
ELECTION DISTRICT NO. 6  
CONTRACT NO. 24-1439-D

AS BUILT 7 Oct 1986

SCALE  
AS SHOWN

SHEET  
7 OF 9

**BENCH MARKS**  
W.R. # A#8 Elev. 351.66  
R.R. Spike in Base of 10' Twin Poplar,  
75' Left of C. Gateway Drive Sta. 123+45  
W.R. # A#9 Elev. 358.65  
R.R. Spike in Base of 14' Oak, 45' Left  
of C. Gateway Drive Sta. 113+40

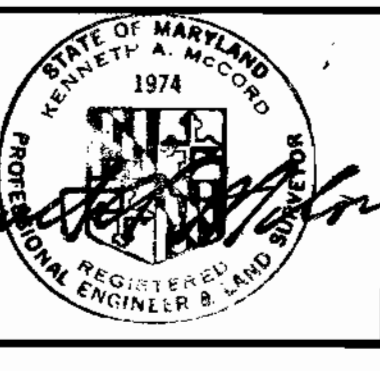


DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Robert B. ...* 3-26-86  
DIRECTOR OF PUBLIC WORKS - DATE

*Michael ...* 3-26-86  
CHIEF BUREAU OF UTILITIES - DATE

WHITMAN, REQUARDT  
AND ASSOCIATES  
ENGINEERS  
2315 ST. PAUL ST.  
BALTIMORE, MARYLAND



DES: S.J. ...  
DRN: D.M.D.  
CHK: R.B.N.

NO.	REVISION	DATE
1	Revisions	5/9/86

DATE: \_\_\_\_\_

PLAN & PROFILE OF  
WATER & SEWER MAINS

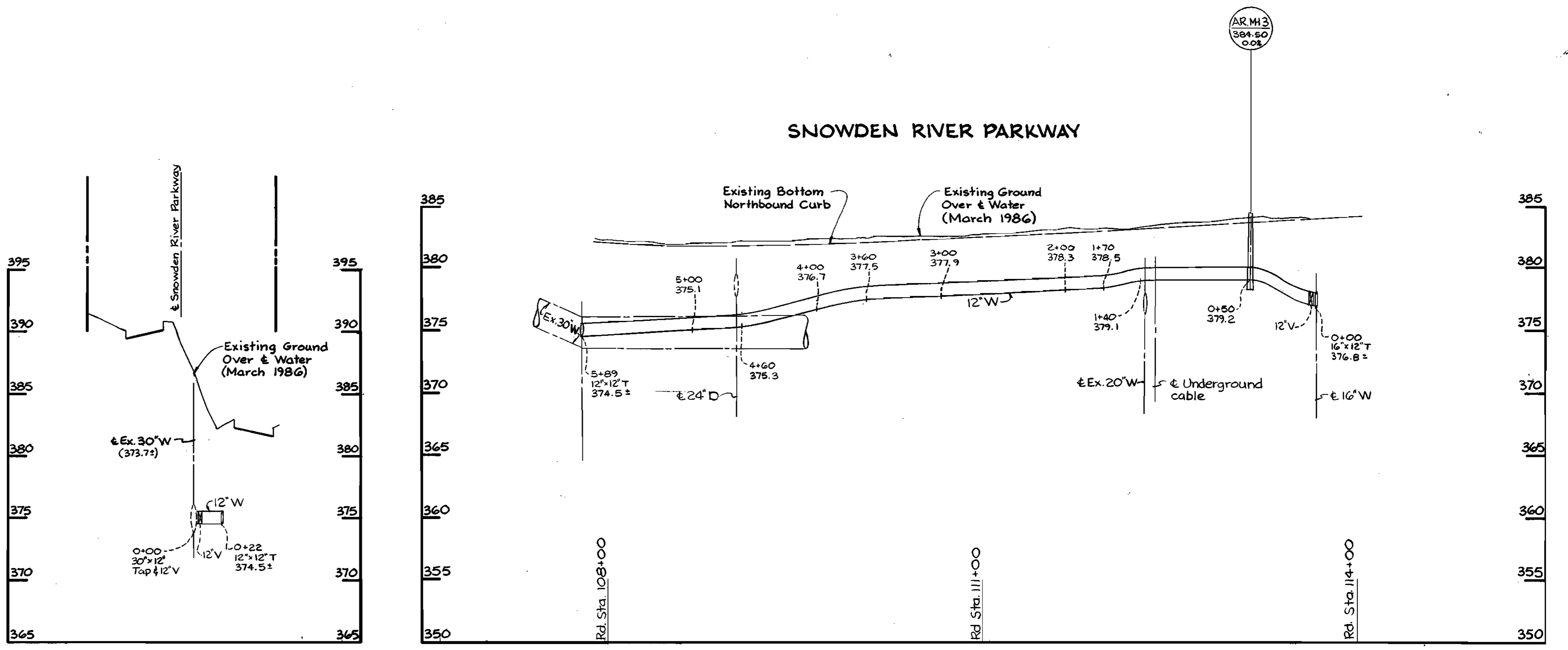
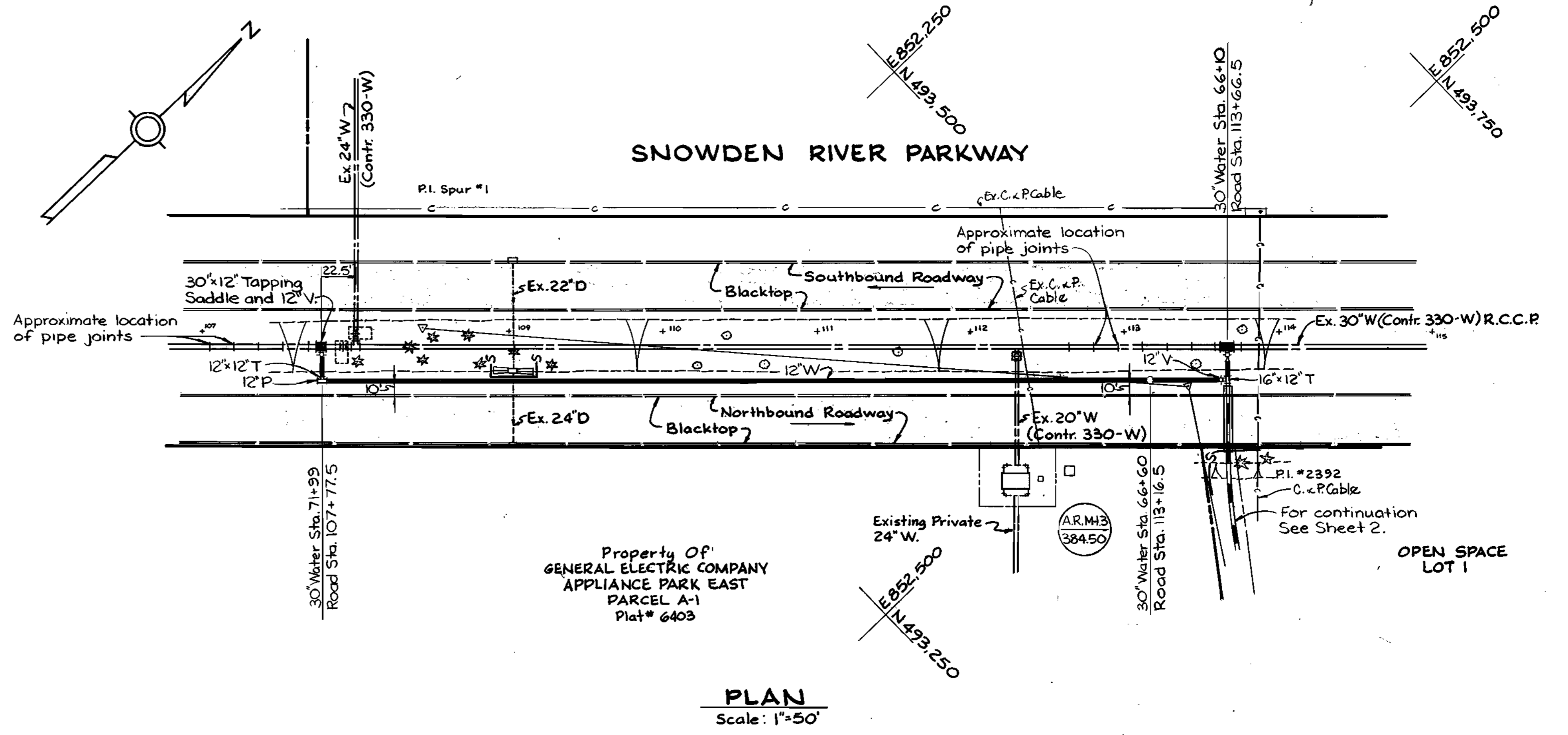
43-490/855.5  
43-489/855.5

COLUMBIA  
COLUMBIA GATEWAY  
PARCELS A THRU K  
ELECTION DISTRICT NO. 6  
CONTRACT NO. 24-1439-D

SCALE  
AS SHOWN

SHEET  
8 OF 9





**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

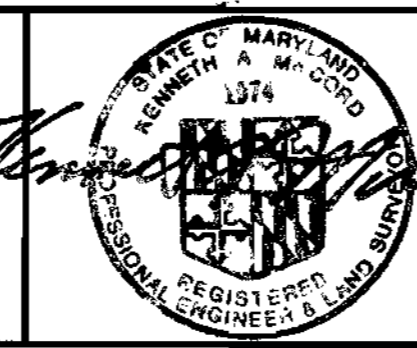
*David N. ...* 3-26-86  
DIRECTOR OF PUBLIC WORKS - DATE

*Robert M. ...* 3-26-86  
CHIEF - BUREAU OF UTILITIES - DATE

*Richard A. ...* 3-26-86  
CHIEF - BUREAU OF ENGINEERS - DATE

*Michael L. ...* 3-26-86  
CHIEF - LAND DEVELOPMENT DIVISION - DATE

**WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS**  
2315 ST. PAUL ST.  
BALTIMORE, MARYLAND



DES. R.B.N.			
DRY. D.M.D.			
CHK. R.B.N.			
DATE:	BY	NO.	REVISION

PLAN & PROFILE OF  
WATER & SEWER MAINS

600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

COLUMBIA GATEWAY  
PARCELS A THRU K  
ELECTION DISTRICT NO. 6  
CONTRACT NO. 24-1439-D

SCALE AS SHOWN  
SHEET 9 OF 9