

Bench Mark

Description

Station 2542001 (concrete monument)
Elev. 426.771 (For Vertical Control Only)
Station is located on B.G.E. Transmission
lines 1000'± SW. of Dobbin Road

Bench Mark

Description

Station 2542002 (concrete monument)
Elev. 703.696 (For Vertical Control Only)
Station is located 1000'± West of Rte. 175
on Transmission line at G.B.E. Tower 19-E
near Hanovers Restaurant entrance

Bench Mark

Description

Station 37DR (1/4" rebar)
N. 16° 08' 17.74" E. 410.500 7155 (For Horizontal Control Only)
Station is located 0.45± miles north of Rte. 175
and 40'± East of the East curb of Snowden River Pkwy.

Bench Mark

Description

Station 301A (concrete monument)
N. 16° 20' 57.23" E. 410.500 7155 (For Horizontal Control Only)
Station is located at the southeast corner of the
intersection of Snowden River Parkway and Rte. 175
2 1/2' from curb and 57'± from end of guardrail

AS-BUILTS, SANITARY

FROM:	TO:	DIST.:
4" SEWER STUB @ STA. 25+12.1	MH 211	77'
4" SEWER STUB @ STA. 25+12.1	MH 210A	57'
4" SEWER STUB @ STA. 26+50.0	G" WATER @ STA. 26+71.5	15'
8" SEWER STUB @ STA. 24+70.0	MH 205	31'
8" SEWER STUB @ STA. 24+70.0	8" WATER STUB @ STA. 24+57.7	24'
4" SEWER STUB @ STA. 21+28.6	MH 207	84'
4" SEWER STUB @ STA. 20+46.6	MH 205	68'
4" SEWER STUB @ STA. 20+46.6	SDMH M-2	44'
4" SEWER STUB FOR PARCEL "F"	MH 215	52'
4" SEWER STUB FOR PARCEL "F"	WATER STUB FOR PARCEL "F"	28'
4" SEWER C.O. FOR PARCEL "G"	MH 215	29'
4" SEWER STUB FOR PARCEL "G"	MH 215	57'
4" SEWER STUB FOR PARCEL "F"	4" SEWER STUB FOR PARCEL "G"	20'
4" SEWER STUB FOR PARCEL "G"	8" WATER STUB FOR PARCEL "G"	11'
4" SEWER STUB FOR PARCEL "H"	MH 215 B	43'
4" SEWER STUB FOR PARCEL "H"	8" WATER STUB FOR PARCEL "H"	33'
4" SEWER STUB OUT OF MH 217	MH 217	57'
4" SEWER STUB OUT OF MH 217	G" V. @ STA. 11+64	59'
4" SEWER STUB OUT OF MH 216 A	MH 216A	32'
4" SEWER STUB OUT OF MH 216 A	4" WATER STUB @ STA. 13+44	14'
4" SEWER STUB OUT OF MH 216	MH 216	32'
4" SEWER STUB OUT OF MH 215	END OF 6" WATER STUB	16'
STORM DRAIN MH M-15	TO 4" SEWER STUB	20'
4" SEWER STUB OUT OF MH 215	MH 215	12.5'
END OF 4" SEWER STUB	END OF 8" WATER STUB	24'
4" SEWER STUB OUT OF MH 215	MH 215	51'
4" SEWER STUB	4" WATER STUB	16'

AS-BUILTS - WATER

8" VALVE FOR PARCEL "F"	8" VALVE FOR PARCEL "G"	3'
8" VALVE FOR PARCEL "F"	MH 215	31'
8" VALVE FOR PARCEL "G"	MH 215	34'
8" WATER STUB FOR PARCEL "F"	MH 215	62'
8" WATER STUB FOR PARCEL "G"	MH 215	62'
8" VALVE FOR PARCEL "G"	8" WATER STUB FOR PARCEL "G"	36'
8" VALVE FOR PARCEL "H"	MH 215A	15'
8" VALVE FOR PARCEL "H"	G" FHV.	3'
G" FHV.	FH	28'
G" FHV.	MH 215A	20'
8" WATER STUB FOR PARCEL "H"	MH 215B	103'

SEE PLANS FOR ADDITIONAL PULLS

Sediment Control Measures will be implemented in accordance with Section 219 of the Specifications B with Road Construction Plan F 20-41; Drawings 24 thru 30 of 30 Sediment & Erosion Control, and GP 20-45

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT.

[Signature] 2/16/96
SIGNATURE DATE

U.S. SOIL CONSERVATION SERVICE
NATURAL RESOURCES

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

APPROVED: *[Signature]* 2/16/96
HOWARD S.C.D. DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

GW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS

3908 NATIONAL DRIVE SUITE 200 BURTONSVILLE OFFICE PARK
BURTONSVILLE, MD 20866
1901 421-4024

DES: _____

DRN: W.S.J.

CHK: *[Signature]*

DATE: Jan 27, 1996

KLP Rev Quantities Box & V. Map 1/22/96

KLP Rev Quantities Box, WNC * & V. Map 5/2/96

BY NO. REVISION DATE

Title Sheet

600' SCALE MAP NO. 300 BLOCK NO. 18

TYPE OF BUILDING	Commercial
NUMBER OF UNITS	2 Bulk Parcels
NUMBER OF SHC's	12 (4 stubs for future ext.) 1 stub for future ext.
NUMBER OF WHC's	12 (2 stubs for future ext.)
DRAINAGE AREA	Dorsey Run

Little Patuxent Water Reclamation Plant

GENERAL NOTES

PART I -

- 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 invert elevations.
- Clear all utilities by a minimum of 6". Clear all poles by a 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 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
B&E Co. Contractor Services	850-4620
B&E Co. Under Ground Damage Control	787-9068
Miss Utility	1-800-257-7777
Colonial Pipeline Co.	795-1390
Howard County Dept. of Public Works, Bur. of Utilities	313-4900

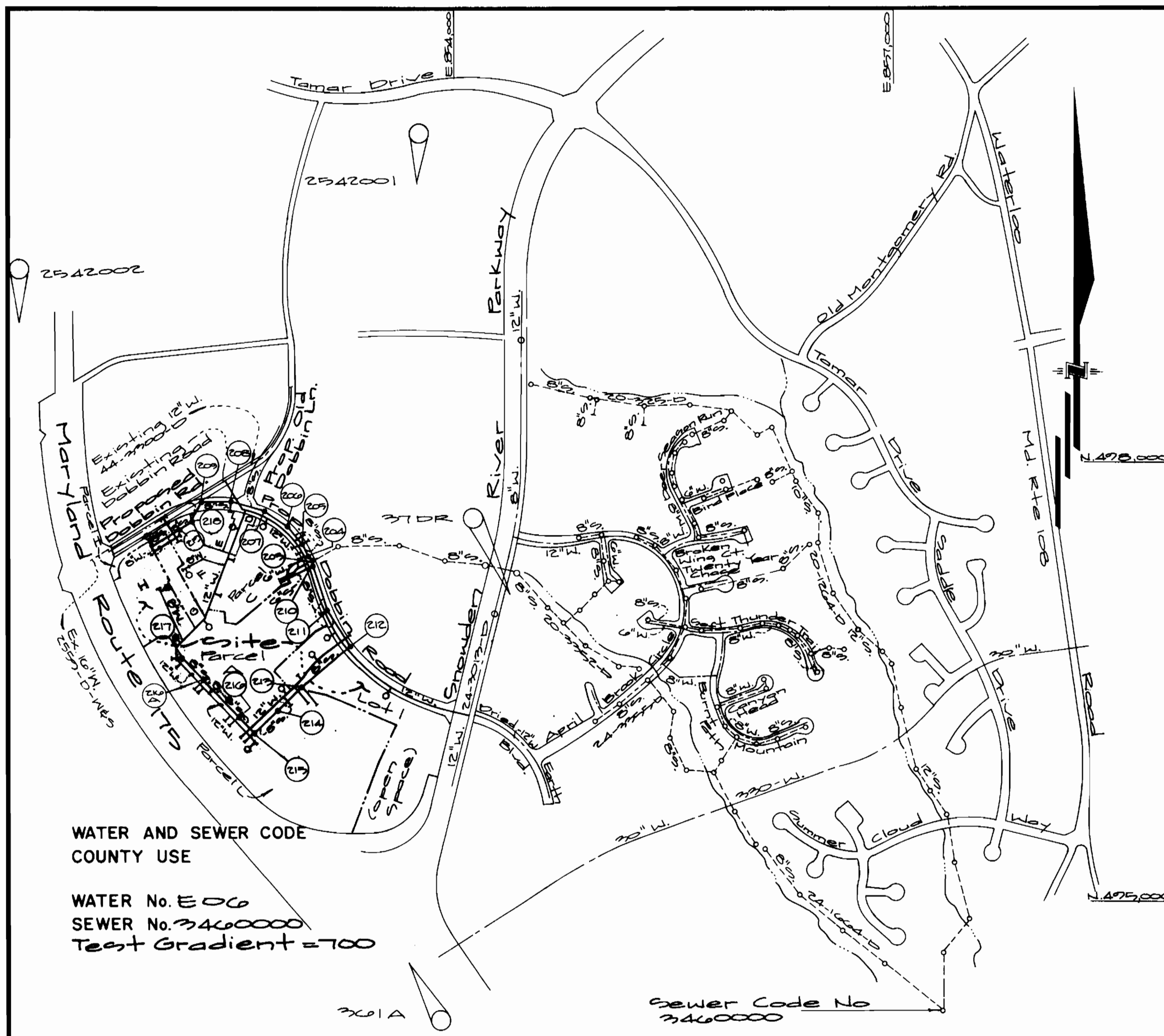
- Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs located within the construction strip are to be removed or damaged by the contractor.
- Contractor shall remove trees, stumps and roots along line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.

PART II - WATER

- 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 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.

PART III - SEWER

- All sewer mains shall be D.I.P. Class 52 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 16" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Detail G5.52. Where watertight manhole frame and cover is used, set top of frame 1'-6" above finished grade unless otherwise noted on the drawings.
- House(s) with the symbol "C.N.S." indicates that the cellar cannot be served.



VICINITY MAP
SCALE: 1" = 600'

CONTRACT NO. 24-3463-D

Route 175 Commercial

Section 1 Area 1

Phase 22C

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

Items	Quantities Estimated	As-Built		
		Quantities	Type	Manufacturer/Supplier
4" Water	80 L.F.	87 L.F.	CL 92.0"	UNITED STATES PIPE
4" Cap	3 Ea.	3 Ea.		
4" Valve	3 Ea.	3 Ea.		MUELLER CO./WATER PRO
8" 1/2" Bend	1 Ea.	4 Ea.		UNITED STATES PIPE
6" Water	50 L.F.	688 L.F.		" " " "
6" Cap	5 Ea.	6 Ea.		" " " "
6" Valve	18 Ea.	19 Ea.		MUELLER CO./WATER PRO
Fire Hydrants	10 Ea.*	16 Ea.		" " " "
8" 1/2" cross	1 Ea.	1 Ea.		UNITED STATES PIPE
8" Water	1452 L.F.	1622 L.F.		" " " "
8" Cap	10 Ea.	16 Ea.		" " " "
8" Valve	15 Ea.	12 Ea.		MUELLER CO./WATER PRO
8" x 6" Tee	1 Ea.	1 Ea.		UNITED STATES PIPE
8" x 6" F.H.T.	4 Ea.	5 Ea.		" " " "
12" Water	5072 L.F.	5108 L.F.		" " " "
12" Valve	5 Ea.	5 Ea.		MUELLER CO./WATER PRO
12" x 12" Tee & Valve	2 Ea.	2 Ea.		" " " "
12" x 8" Tee & Valve	1 Ea.	1 Ea.		" " " "
12" 1/2" H.B.	4 Ea.	4 Ea.		UNITED STATES PIPE
12" x 12" Tee	1 Ea.	1 Ea.		" " " "
12" x 6" Tee	9 Ea.	4 Ea.		" " " "
12" x 6" F.H.T.	10 Ea.	9 Ea.		" " " "
12" x 8" Tee	10 Ea.	10 Ea.		" " " "
12" x 12" cross	2 Ea.	2 Ea.		" " " "
12" x 8" Reducer	2 Ea.	2 Ea.		" " " "
12" x 4" Tee	3 Ea.	3 Ea.		" " " "
12" x 6" Reducer	1 Ea.	1 Ea.		" " " "
4" sewer	140 L.F.	148 L.F.		N-M MANUFACT./WATER PRO
6" sewer	470 L.F.	606 L.F.		" " " "
8" sewer	2,877 L.F.	3059 L.F.		" " " "
Manholes	18 Ea.	19 Ea.		ATLANTIC CONCR. BTE
8" S.D.I.P.	929 L.F.	924 L.F.		UNITED STATES PIPE
8" 1/2" Bend	1 Ea.	1 Ea.		" " " "

* Includes 2 fire hydrants for adjustments to existing hydrants (see note sheet 2 of 7). Survey and checkbook Drafting Div. as-built date

Name of Utility Contractor: WILSON'S INC.

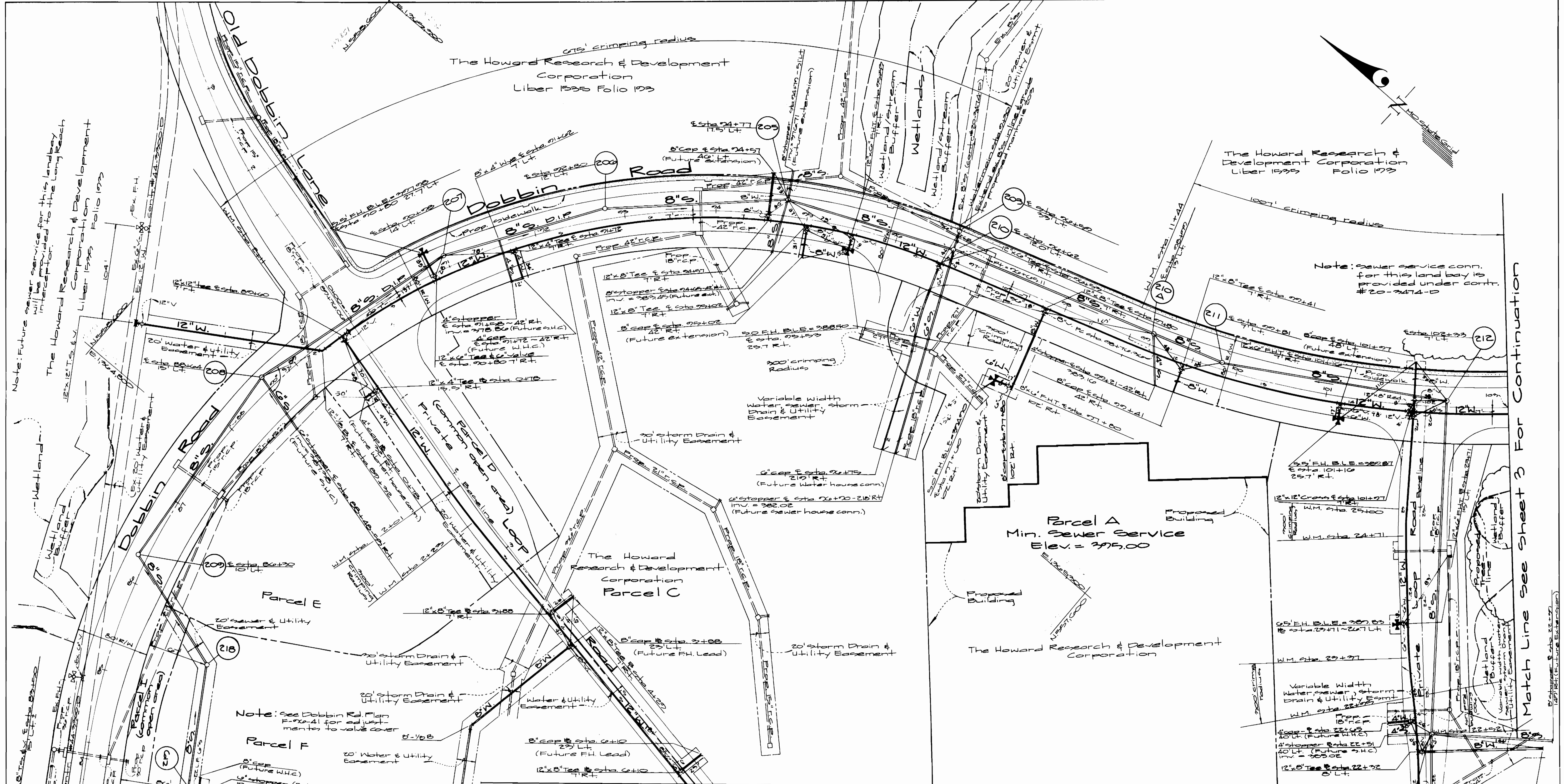
Route 175 Commercial
Section 1 Area 1

Phase 22C

Sixth Election District - Howard Co., Maryland
Contract No. 24-3463-D

SCALE AS SHOWN

SHEET 1 OF 1



Note: Future sewer service for this land bay will be provided to the long reach. The Howard Research & Development Corporation Folio 1939

The Howard Research & Development Corporation Folio 1939

Note: sewer service conn. for this land bay is provided under contr. #20-3474-0

Note: See Dobbin Rd. Plan for details for adjustments to valve cover

Match Line See Sheet 3 For Continuation

For Profiles See Sheets 4 thru 6

Plan Scale 1" = 50'

Note: Contractor shall sequence the construction of this contract to avoid any possible conflicts with sediment control measures installed under F-00-41 & GP-45

Note: Rim of manholes to be set as indicated on profiles

Note: Contractor to maintain 10' min. separation between Water & Sewer Mains

Dept. of Public Works
Howard County, Maryland
Robert J. Benner
Chief, Bureau of Utilities
2-15-92
Date

Dept. of Planning & Zoning
Howard County, Maryland
[Signature]
Chief, Development Engineering Div.
2/16/92
Date

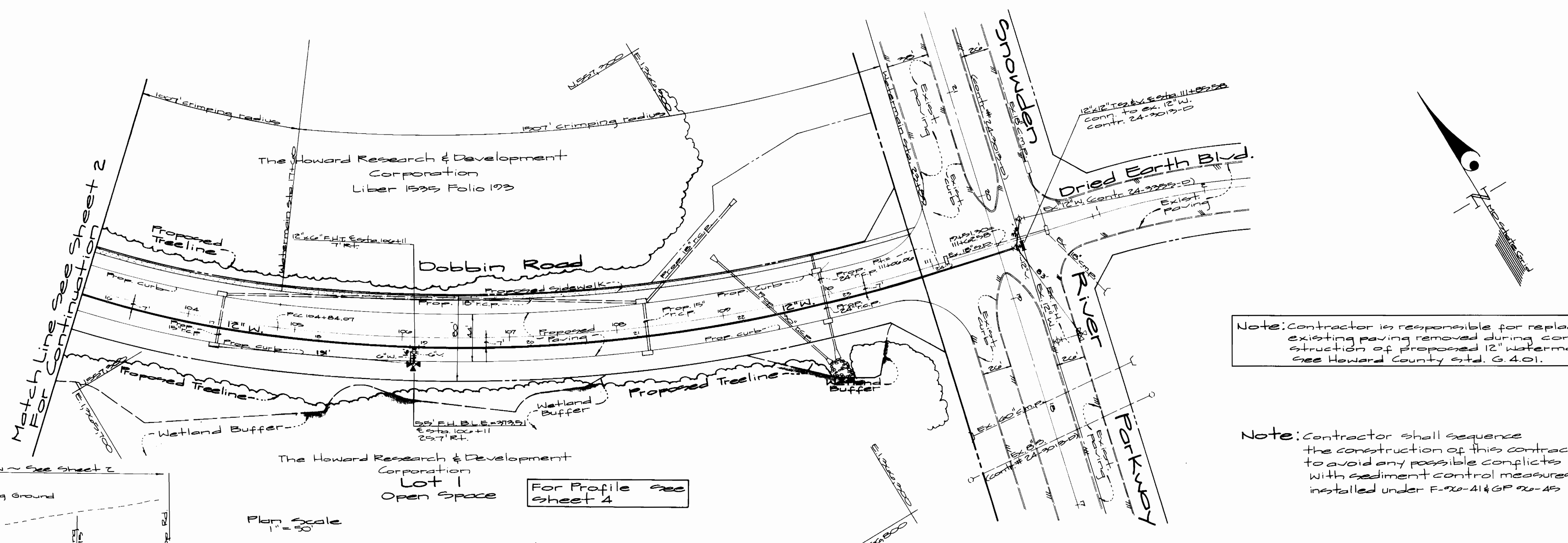
GW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
3909 NATIONAL DRIVE SUITE 250 BARTONSVILLE OFFICE PARK
BARTONSVILLE, MD 21036
1301-421-4024

DES: W.S.J./rpt.					
DRN: W.S.J.					
CHK: rpt.	KLP	Rev M420, 210 (New 200A) Loop Rd. W. Elev.	7/92		
	KLP	Added F.H. & conn. to main @ sta. 4+25	5/92		
DATE: 1/29/92	BY: NO.	REVISION	DATE	600' SCALE MAP NO. 92	BLOCK NO. 1B

Water & Sewer Construction Plans
Scale: 1" = 50'

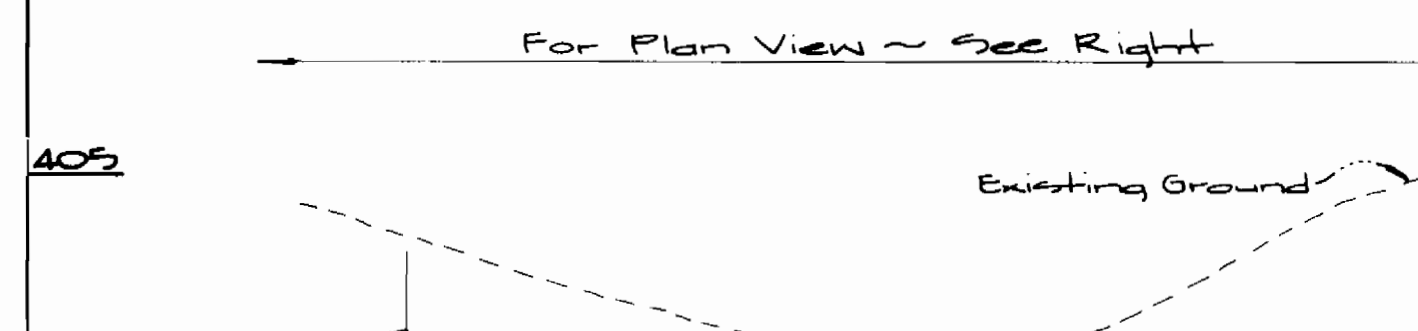
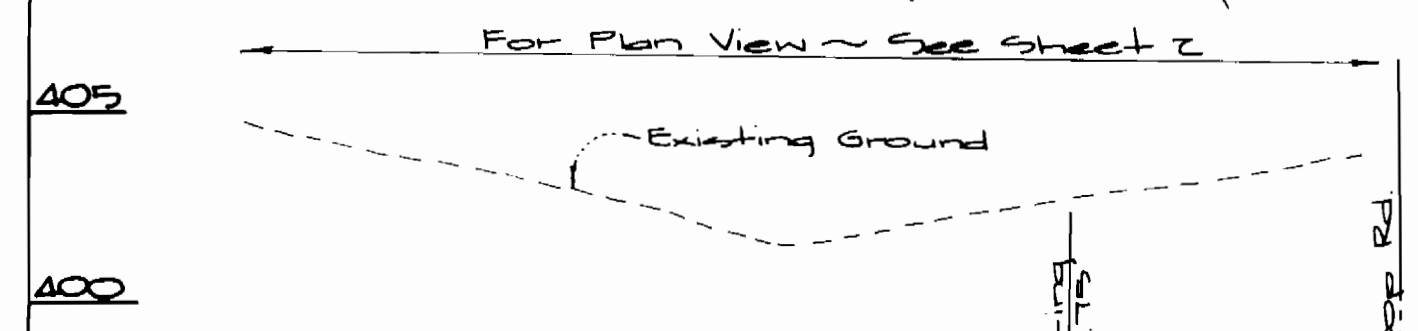
Route 175 Commercial
Section 1 Area 1
Phase 220
Sixth Election District - Howard Co., Maryland
Contract No.: 24-3463-D

SCALE AS SHOWN
SHEET 2 OF 7

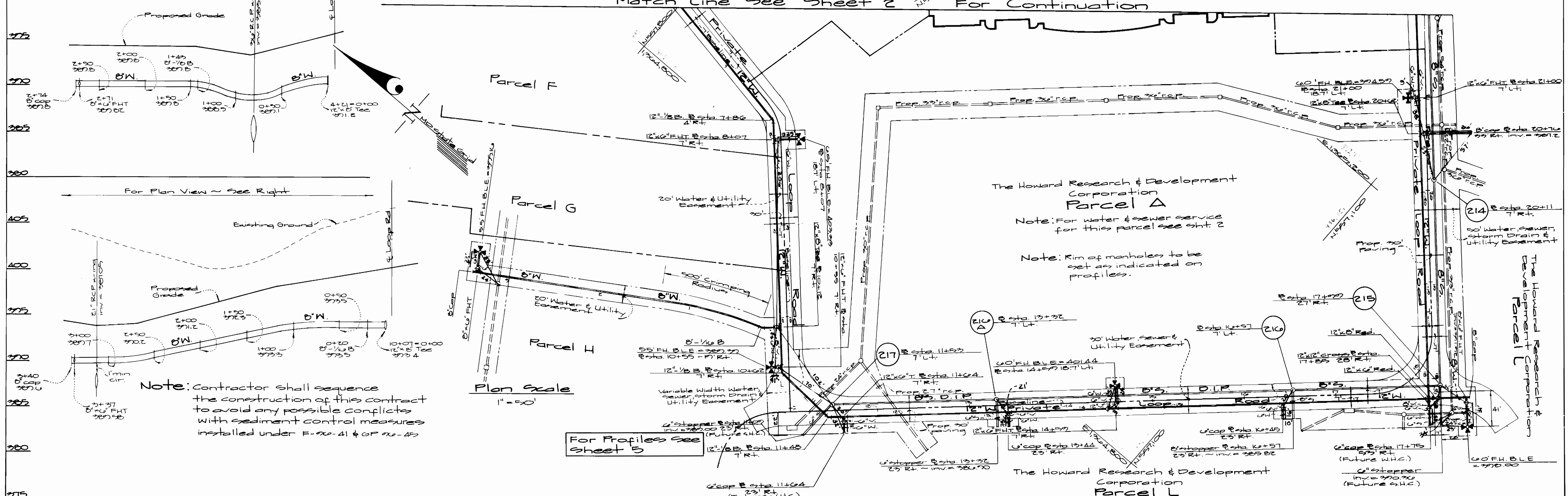


Note: Contractor is responsible for replacing existing paving removed during construction of proposed 12" watermain. See Howard County std. G.4.01.

Note: Contractor shall sequence the construction of this contract to avoid any possible conflicts with sediment control measures installed under F-90-41 & GP 90-45



Note: Contractor shall sequence the construction of this contract to avoid any possible conflicts with sediment control measures installed under F-90-41 & GP 90-45



Dept. of Public Works
Howard County, Maryland
Ruth Rieger 2-15-96
Chief, Bureau of Utilities Date

Dept. of Planning & Zoning
Howard County, Maryland
[Signature] 2/16/96
Chief, Development Engineering Div. Date

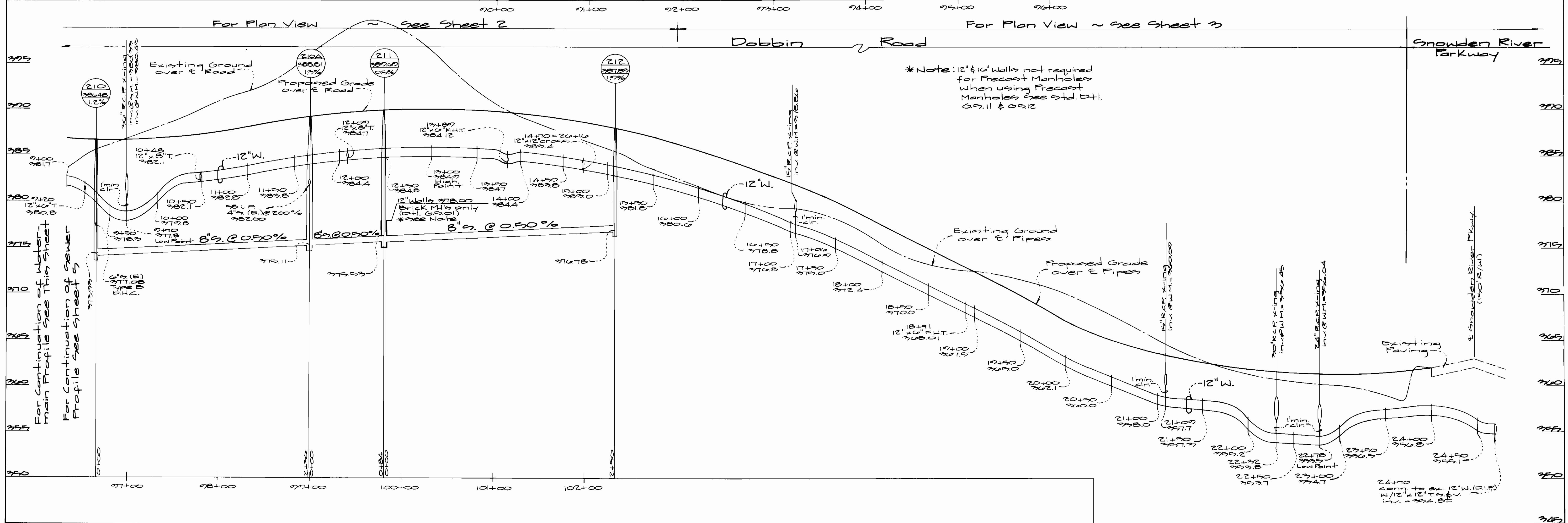
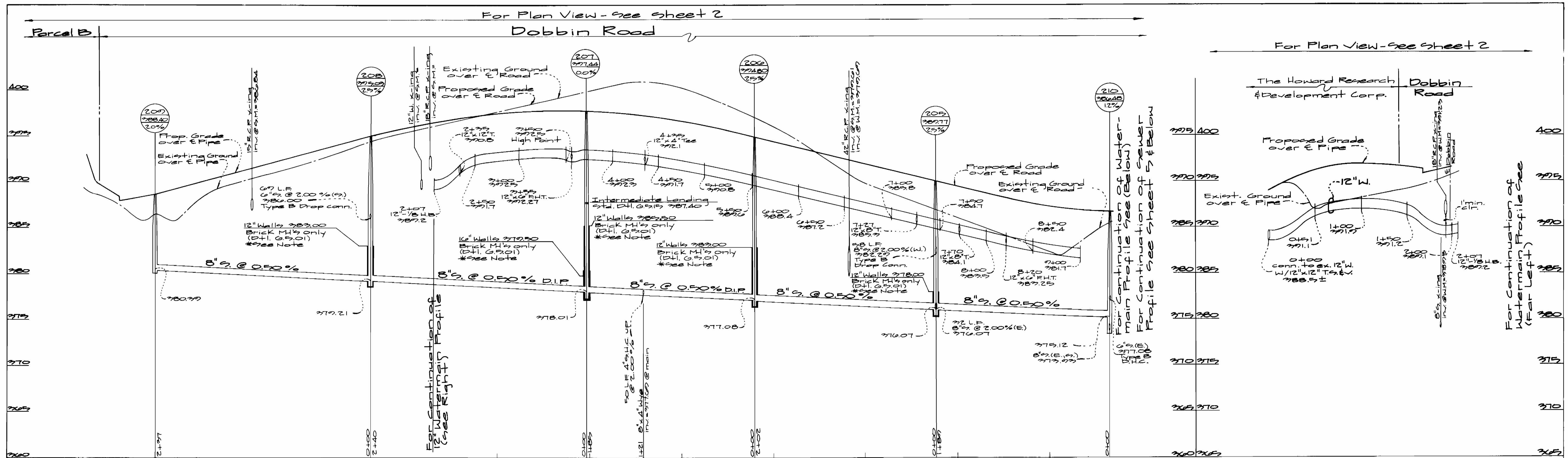
GW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
1509 NATIONAL DRIVE SUITE 250 BURTONSVILLE OFFICE PARK
BURTONSVILLE, MD 20866
(301) 421-4204

DES: W.S.J./ rgt.					
DRN: W.S.J.					
CHK: rgt./ KLP	Rev. M.H. 2/15/96 (new 210A) Loop Rd 4' elev	7/7/96			
	Add FH. & conn. to main @ sta. 10+12	5/3/96			
DATE: Jan 1972	BY NO	REVISION	DATE		

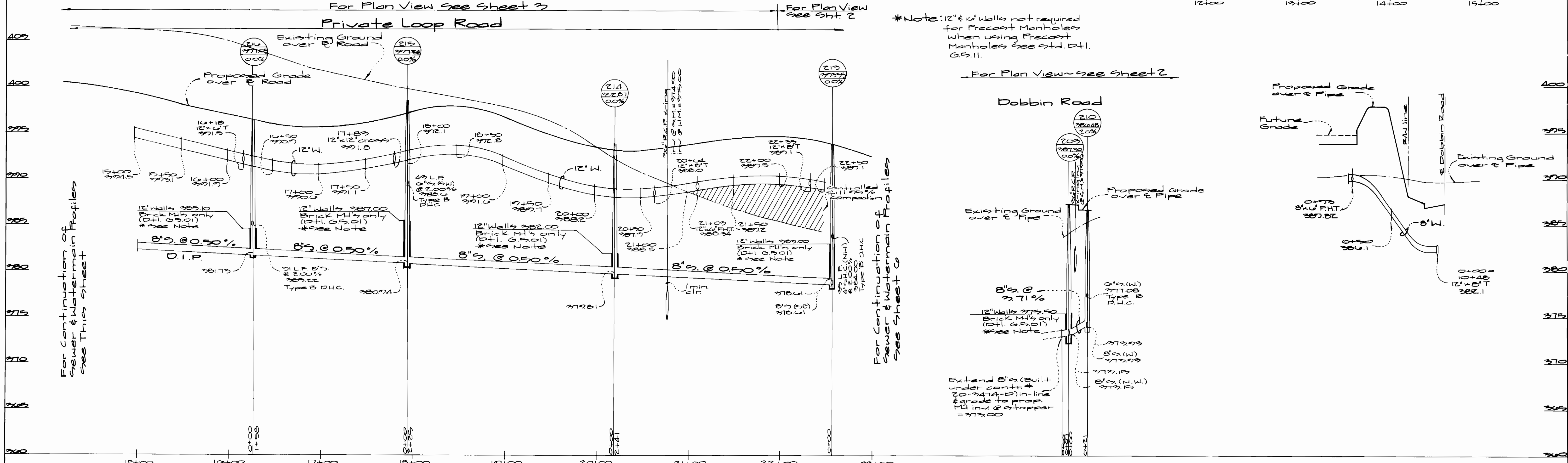
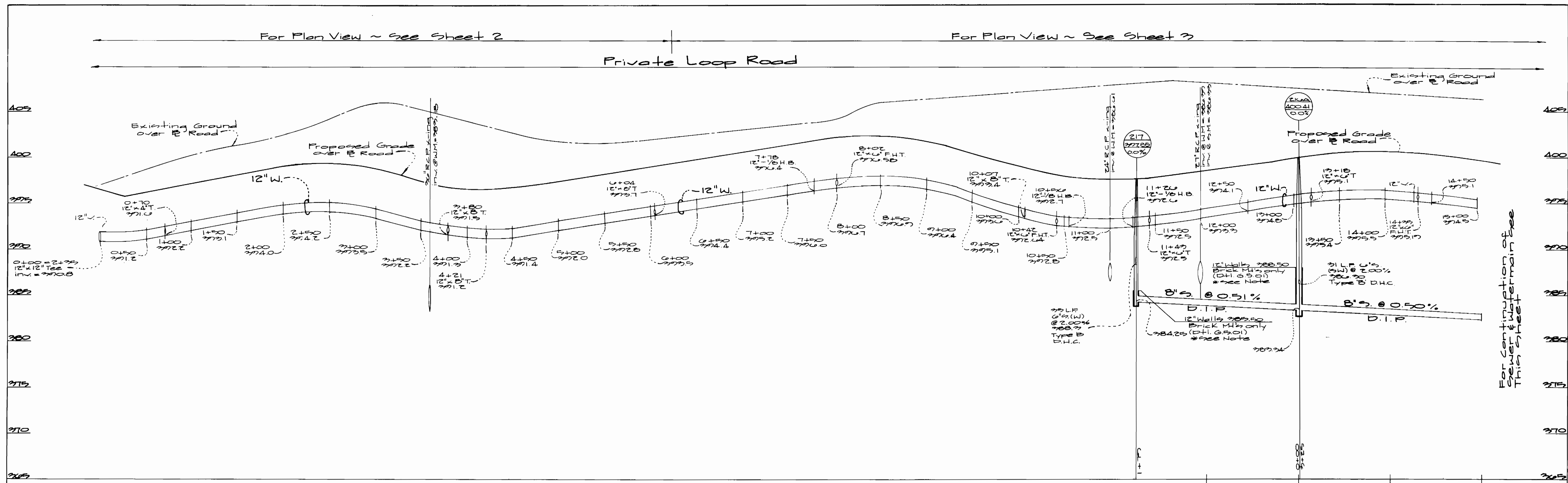
Water & Sewer Construction Plans
Scale: 1"=50'
600' SCALE MAP NO. 30 BLOCK NO. 15

Route 175 Commercial
Section 1 Area 1
Phase 220
Sixth Election District - Howard Co., Maryland
Contract No. 24-3463-D

SCALE AS SHOWN
SHEET 2 OF 7



Dept. of Public Works Howard County, Maryland Chief, Bureau of Utilities Date: 2-15-96	Dept. of Planning & Zoning Howard County, Maryland Chief, Development Engineering Div Date: 2/16/96	GW GUTSCHICK LITTLE & WEBER, P.A. ENGINEERS, PLANNERS, SURVEYORS 2909 NATIONAL DRIVE SUITE 250 BURTONSVILLE OFFICE PARK BURTONSVILLE, MD 20886 (301) 421-4024	DES: W.S.J. DRN: W.S.J. CHK: W.S.J. DATE: Jan 1996	KLP REMOVE D.I.P. FROM M420 TO M420S (SEE SHEET 1)	Water & Sewer Profiles Scale: Horiz. 1"=50' Vert. 1"=5'	Route 175 Commercial Section 1 Area 1 Phase 220 Sixth Election District - Howard Co., Maryland Contract No. 24-3463-D	SCALE AS SHOWN SHEET 4 OF 7
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Dept. of Public Works
Howard County, Maryland

Chief, Bureau of Utilities Date

2/15/96

Dept. of Planning & Zoning
Howard County, Maryland

Chief, Development Engineering Div. Date

2/16/96

GLW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS

3949 NATIONAL DRIVE SUITE 250 HURTONSVILLE OFFICE PARK
BURTONSVILLE, MD 20886
(301) 421-4024

DATE: Jan 1996

BY: KLP

NO: 20

REVISION

DES: W.S.J./mt

DRN: W.S.J.

CHK: mt

DATE: Jan 1996

BY: KLP

NO: 20

REVISION

Rev. M.H.E.B. (new) (K.A.) Loop Rd. H Elev's

DATE: 7/96

600' SCALE MAP NO. 20 BLOCK NO. 16

Water & Sewer Profiles

Scales: Horiz. 1"=50'

Vert. 1"=5'

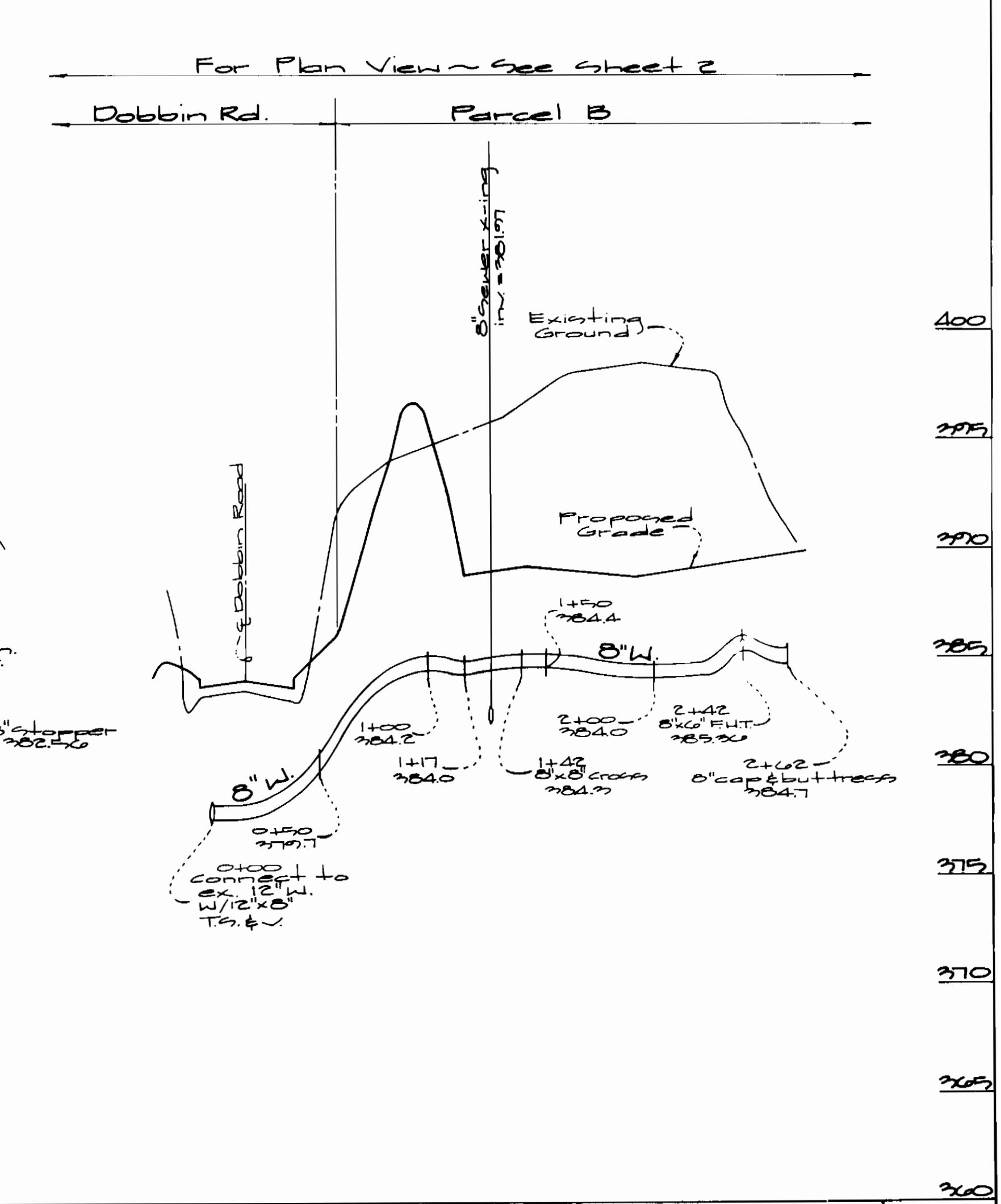
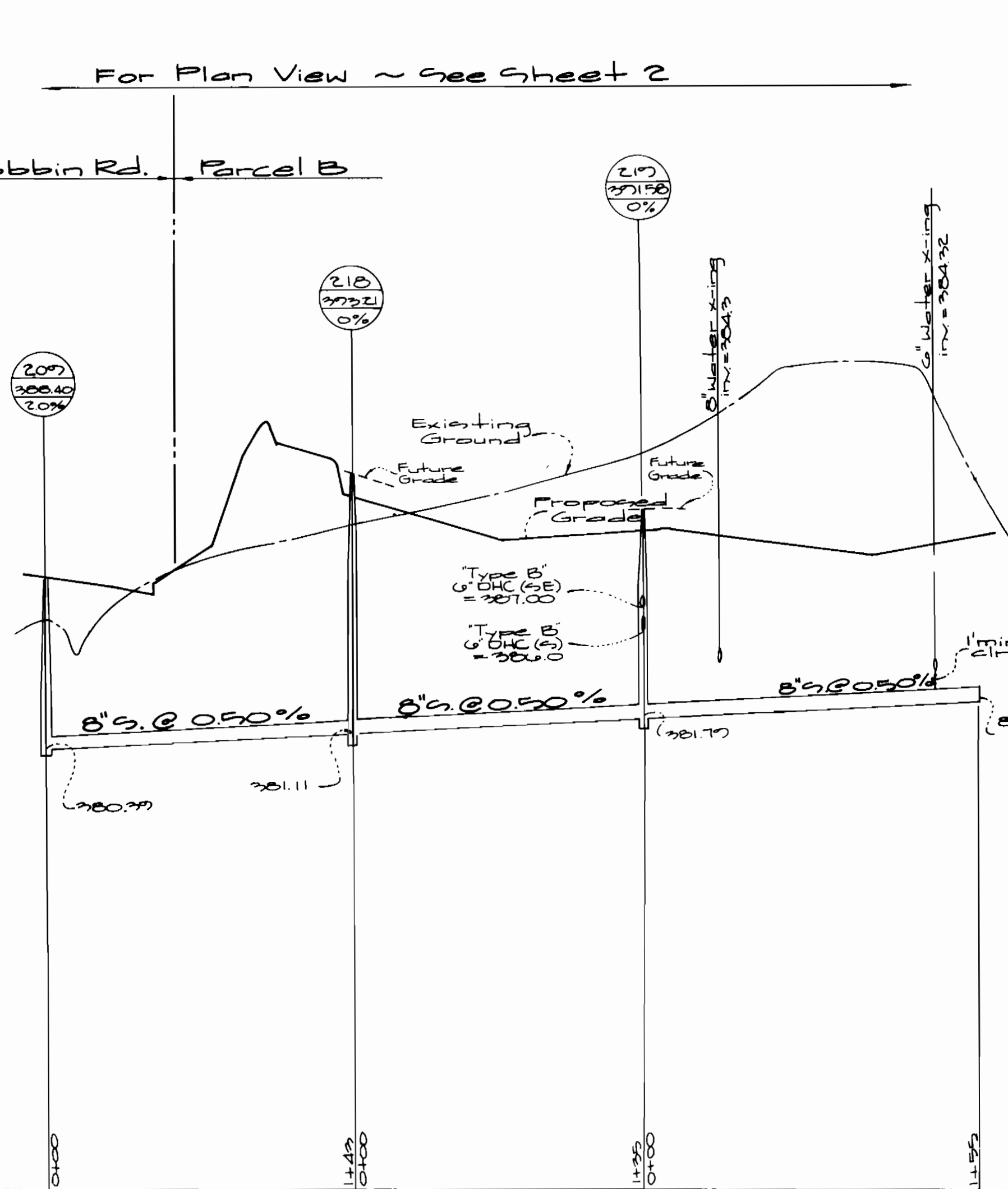
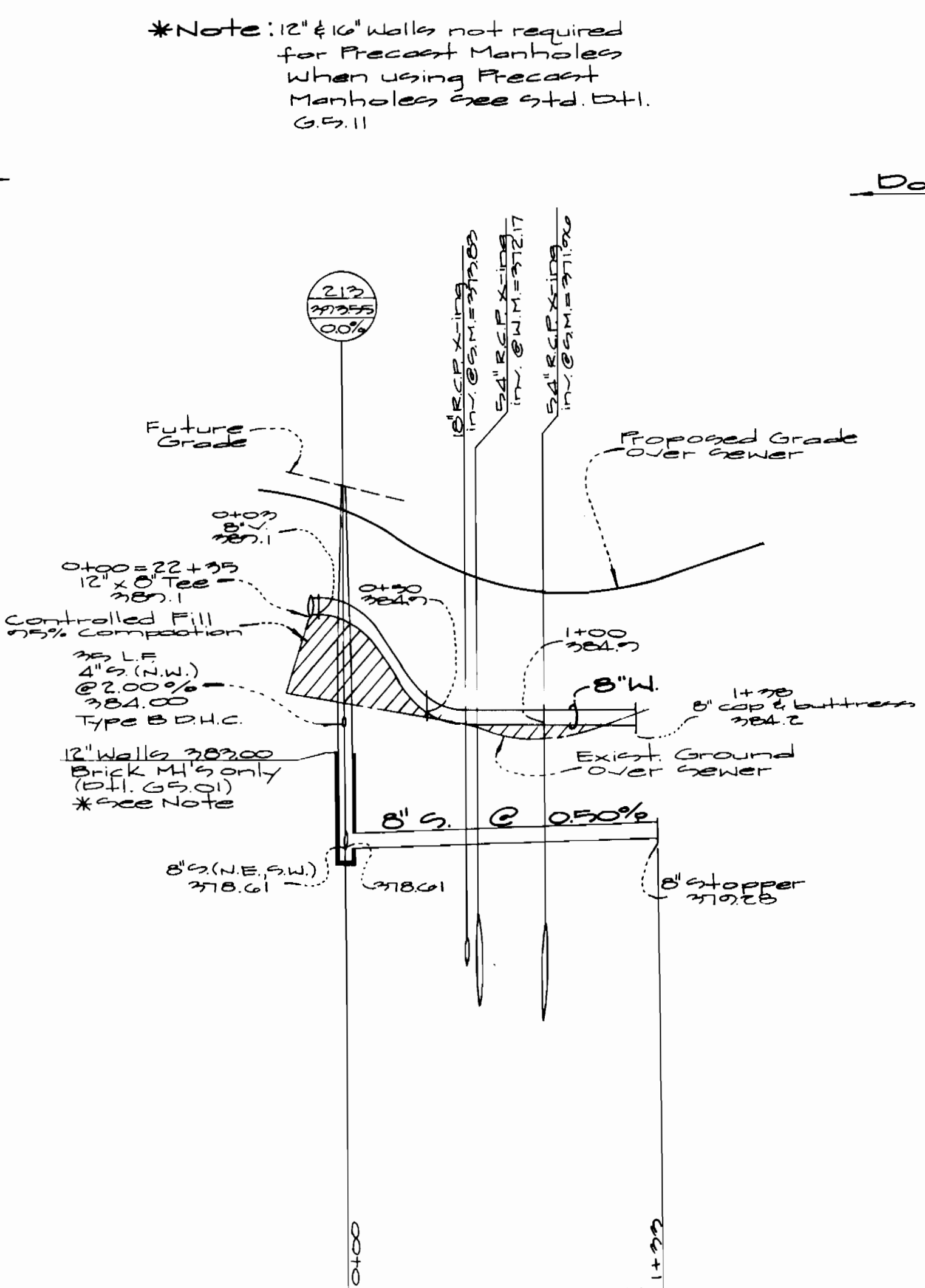
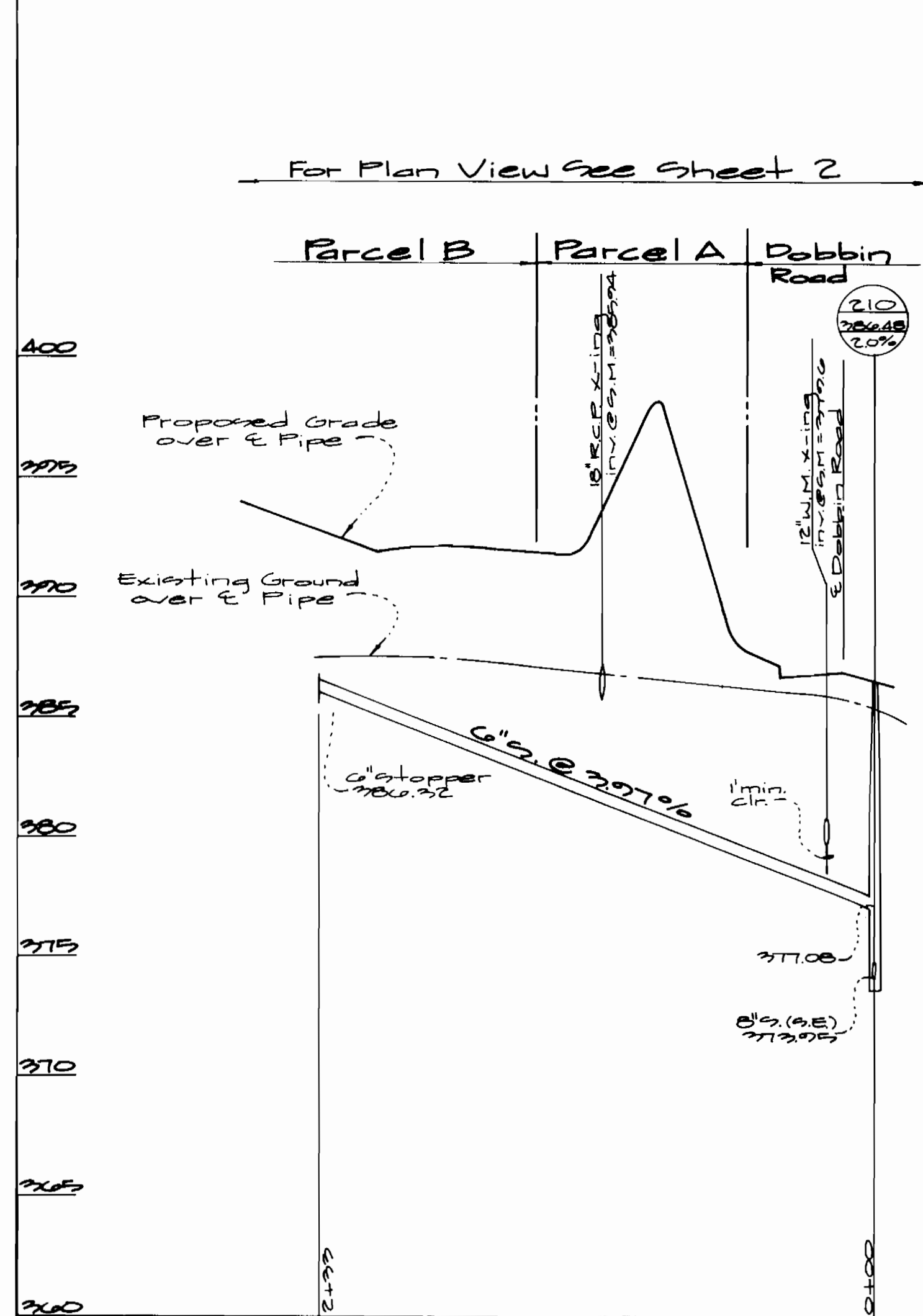
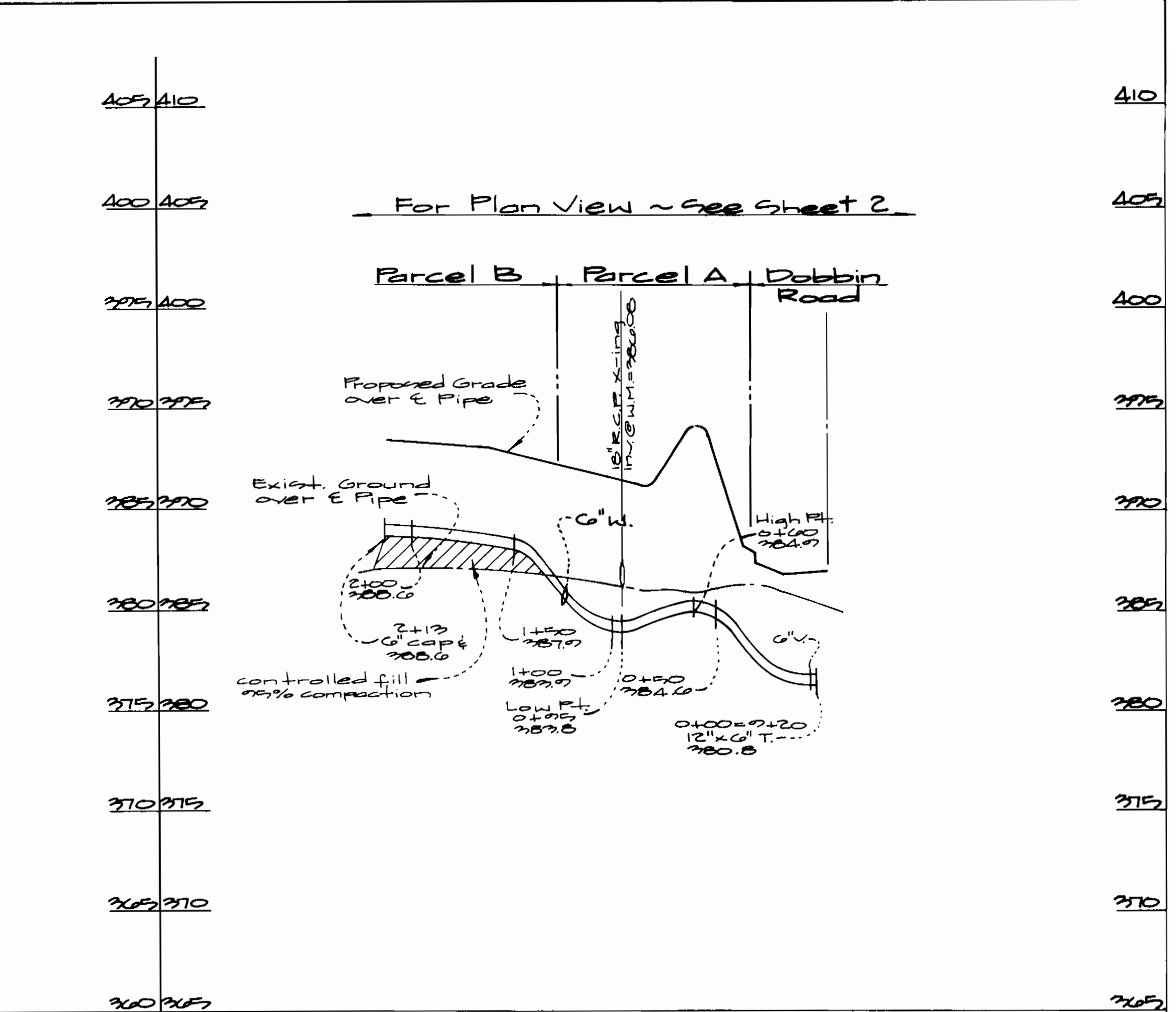
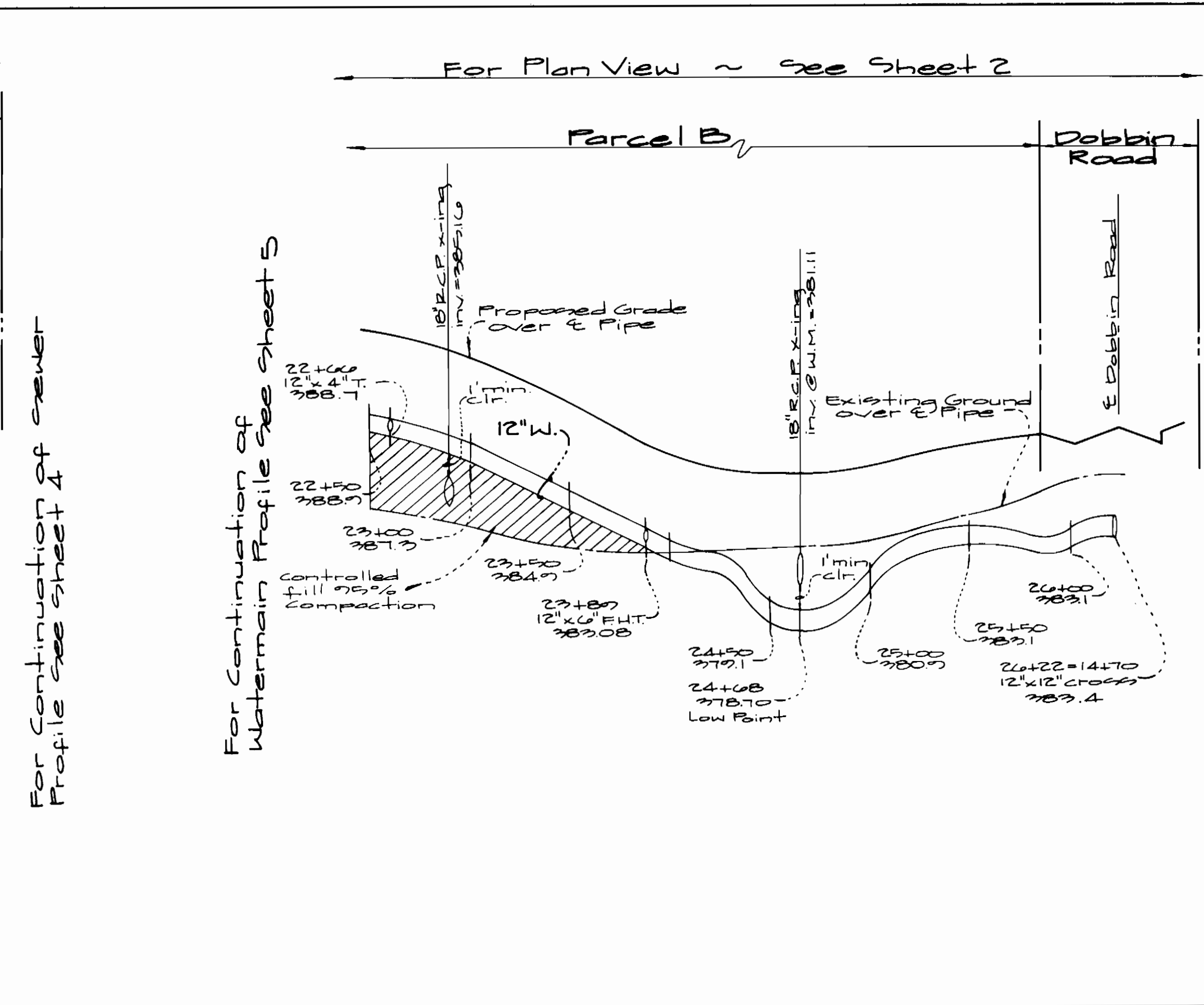
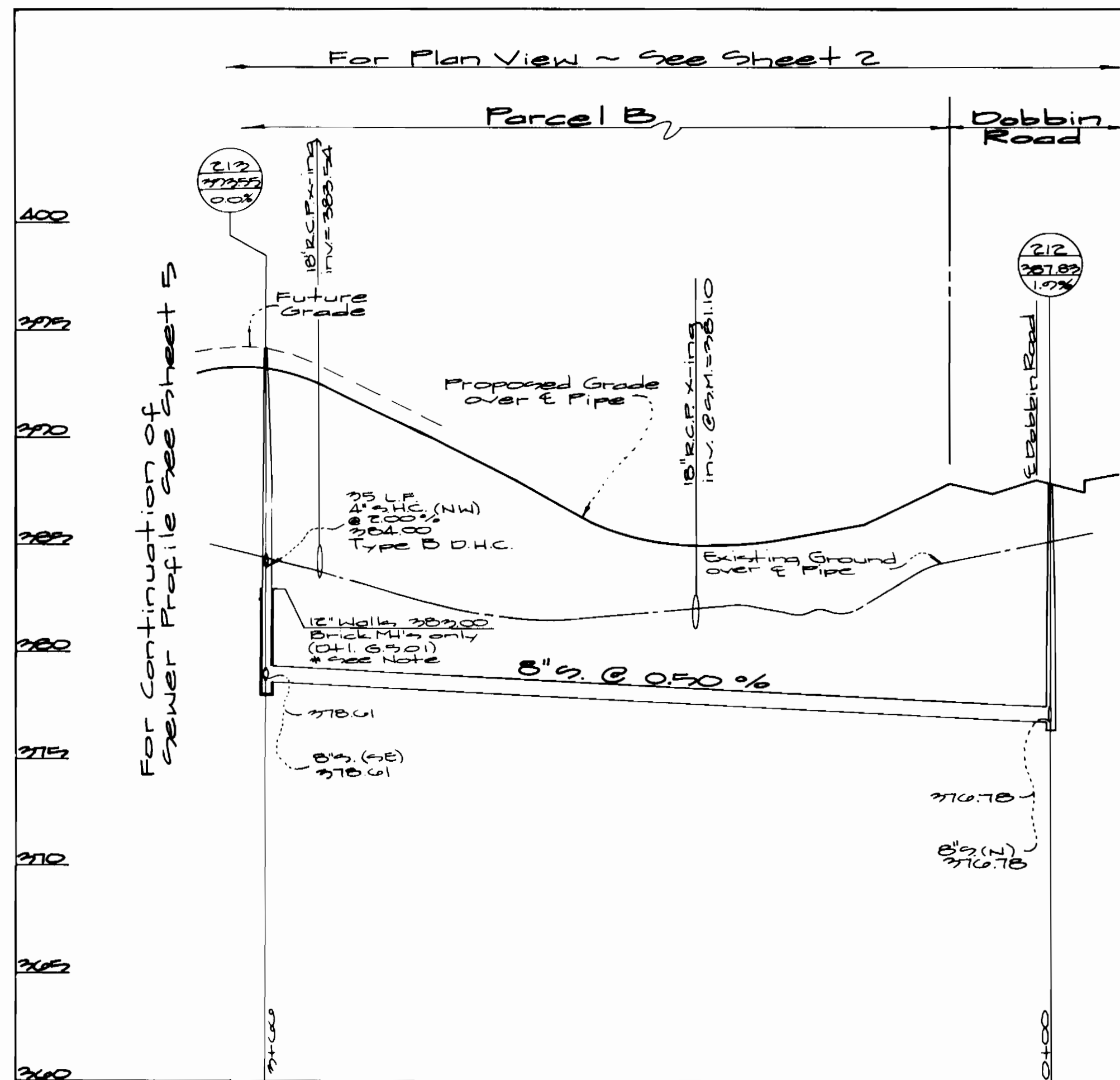
Route 175 Commercial
Section 1 Area 1
Phase 22c

Sixth Election District - Howard Co., Maryland

Contract No. 24-2463-D

SCALE AS SHOWN

SHEET 5 OF 1



*Note: 12" & 16" Walls not required for Precast Manholes when using Precast Manholes free std. D.I. G.S. 11

Dept. of Public Works
Howard County, Maryland
R. J. ...
Chief, Bureau of Utilities Date

Dept. of Planning & Zoning
Howard County, Maryland
...
Chief, Development Engineering Div. Date

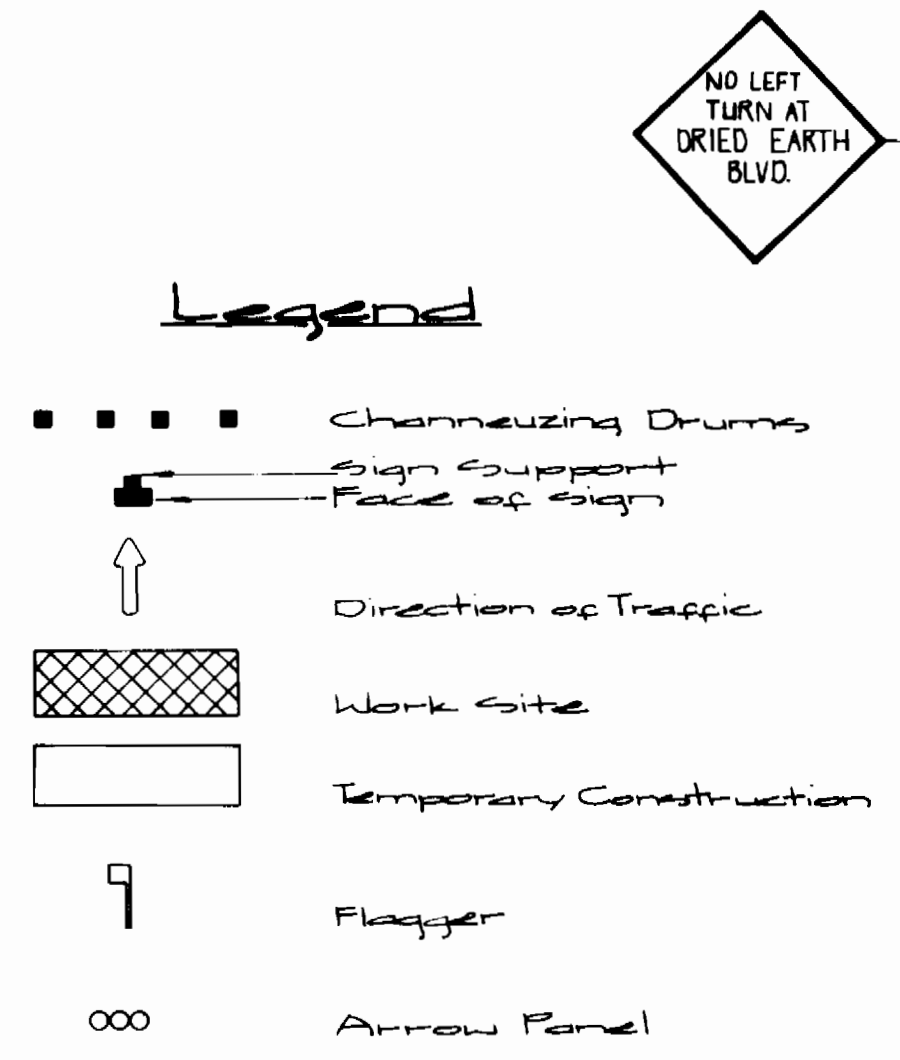
GW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
3309 NATIONAL DRIVE SUITE 250 WASHINGTONVILLE OFFICE PARK
WASHINGTONVILLE, MD 20886
(301) 421-4024

DES: W.S.J.					
DRN: W.S.J.					
CHK: KLP	KLP	Rev. MHEB, EIC (new EIC) Loop Rd. elev. 7' 7"			
DATE: 1/17/20	BY: NO.	Rev. MHEB location & rim el. 210 & 211	5/20		
		REVISION	DATE		

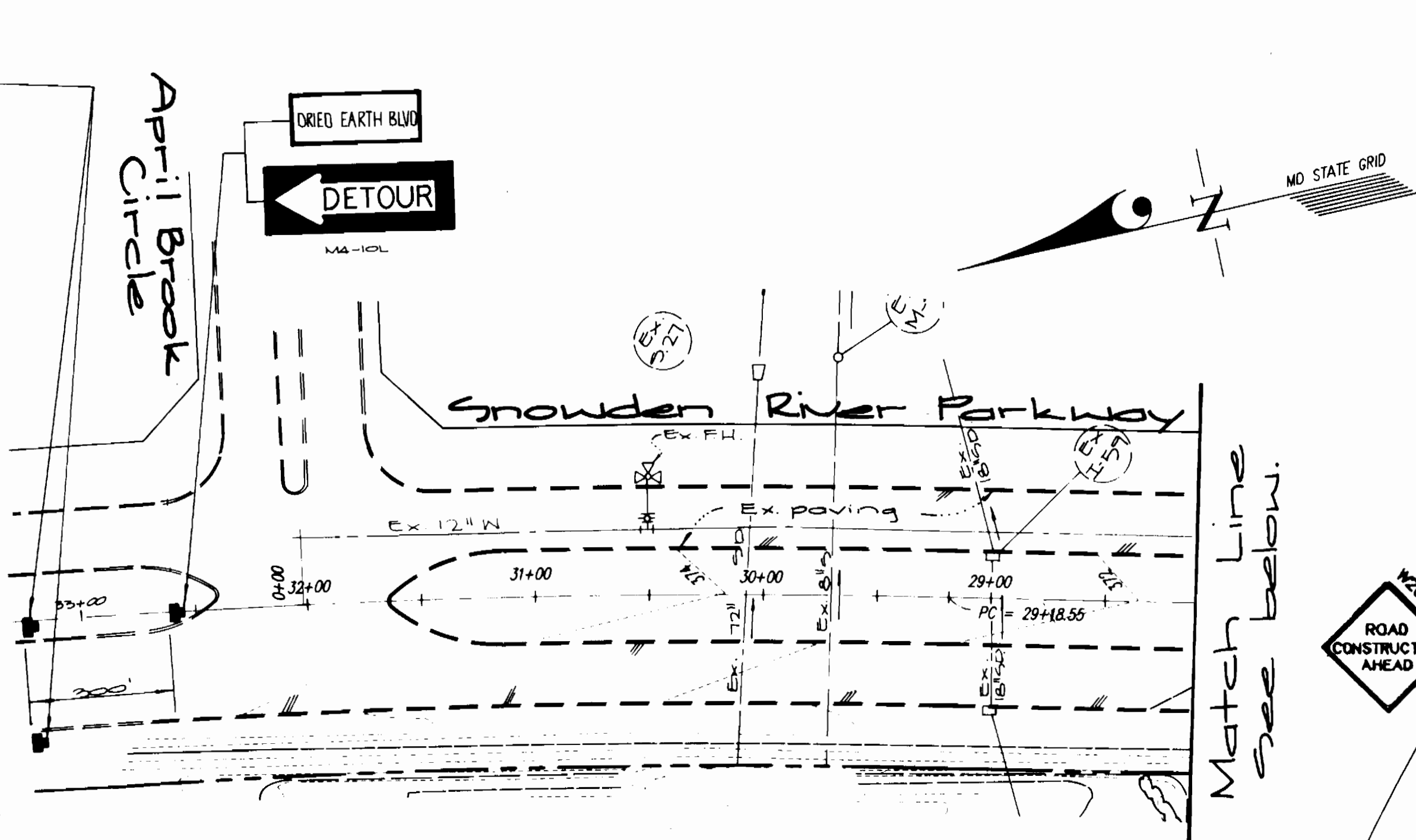
Water & Sewer Profiles
Scales: Horiz. 1"=50'
Vert. 1"=5'

Route 175 Commercial
Section 1 Area 1
Phase 220
Sixth Election District - Howard Co., Maryland
Contract No. 24-3463-D

SCALE AS SHOWN
SHEET 12 OF 17



Note
 The temporary construction zone shall have 20 minute maximum closure time.
 The temporary construction zone shall be controlled by a properly dressed flagger (i.e. orange hat, orange vest, etc.)
 For work in temporary construction zone (after construction is completed in construction zone) install right lane closure signs & barrels (similar to shown).



An arrow panel in the flashing arrow mode shall be used anytime there is a lane closure on a multi-lane highway. Arrow panels shall not be used along low lane two-way roadways unless they display MS18-A, Four Corner Loop Array.

Vehicles should not occupy or be stopped in a lane beyond a horizontal curve or a vertical curve (VCL). Trained vehicles stopping are to be pulled as far off the road as possible or be otherwise parked in a manner as to inhibit the movement of traffic as little as possible. If stopping is necessary and no backup vehicle is available place channelizing device in accordance with general note #1 along with the appropriate lighting.

Varying signs mounted on wood posts for the over 24 hour operations shall be installed as shown in Figure 6-1, Part VI of the MUTCD. The bottom of the sign mounted on portable supports shall be not less than one foot above the pavement elevation. All signs shall be installed in such a manner as to provide adequate visibility of these signs and all other existing signs on the highway to the driver.

In urban areas along streets where the prevailing speed is 35 MPH or less, and along secondary roads where the Average Daily Traffic (ADT) is less than 1000 vehicles, the minimum size of "M" is 36" may be used.

For utility operations, advance warning signs may utilize the word "AHEAD" in lieu of distances up to and including 1500 feet. At greater distances, such as 1/2 mile or 1 mile; however, the correct distance value is to be used on such warning signs. Also the UTILITY WORK AHEAD sign may be used in lieu of ROAD CONSTRUCTION, ROAD WORK, or SHOULDER WORK signs only.

No work operations which interfere with the flow of traffic may take place during the peak hours 6 A.M. - 5 A.M. and 3 P.M. - 7 P.M. unless they have been approved in accordance with the MD Statewide Construction and Maintenance Manual, January 1987 and subsequent editions.

All signs, channelizing devices, etc. shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

APPROVED: [Signature] Maryland Department of Transportation
 STATE HIGHWAY ADMINISTRATION
 WORK ZONE TRAFFIC CONTROL TYPICAL
 GENERAL NOTES
 STANDARD NO. MD-105.0

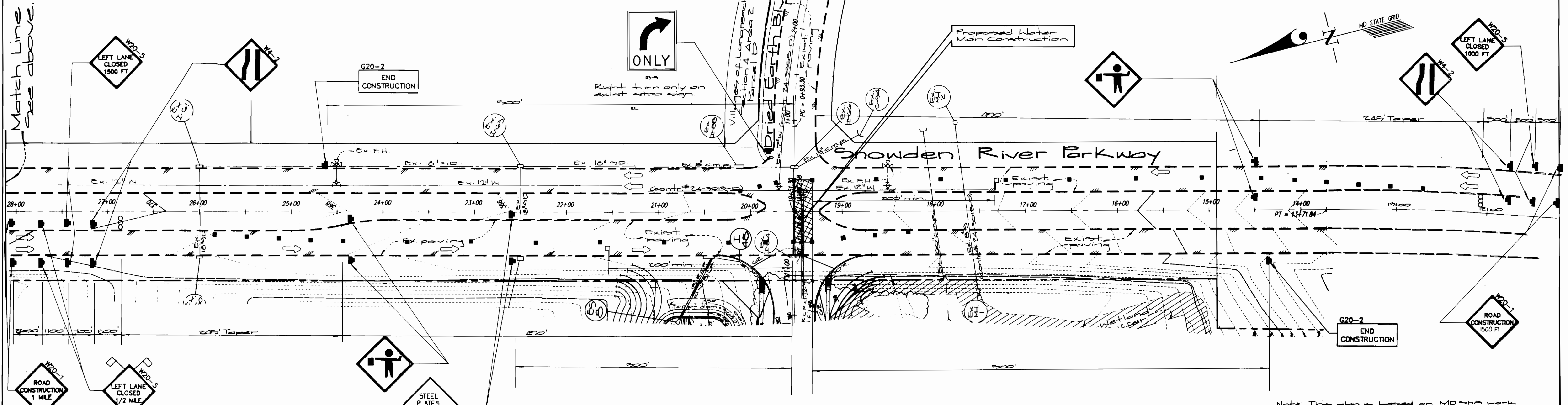
TWO LANE, TWO-WAY MULTI-LANE UNDIVIDED DIVIDED UNCONTROLLED CONVENTIONAL EXPRESSWAY/FREEWAY

- Flashing warning lights and/or flags may be used to call attention to early warning signs.
- Warning lights may be used to mark channelizing devices as needed.
- Channelizing devices are to be extended to a point where they are visible to approaching traffic. A full taper length (on two-lane, two-way roadways) shall always be provided in advance of curves.
- Taper formula: $L = \frac{S^2}{200}$ for speeds greater than 35 mph
 $L = \frac{S^2}{100}$ for speeds equal to or less than 35 mph
 Where: L = minimum length of taper
 S = numerical value of vehicle speed
 W = width of offset
- Maximum spacing between channelizing devices:
 a. Taper - approximately equal to the speed limit.
 b. Tangent - twice the above taper value.
- Flood lights should be provided to mark flagger stations at night.
- If flaggers are not able to see each other, two-way radio communications shall be used.
- If a work area is visible from one station, a single flagger may be used.
- Forward markings no longer applicable shall be removed or obliterated as soon as practicable. Temporary markings shall be used as necessary.

Advance notice control plans may be approved by the MD Statewide Office for approval in accordance with Section 214.02 of the MD Statewide Construction and Maintenance Manual, January 1987 and subsequent editions.

For emergency repair operations, a minimum number of traffic control devices (TCD's) may be used. This generally will consist of one sign per direction, flashing lights on the vehicle, a minimum number of channelizing devices, and flags or high level devices. Additional TCD's such as arrow panels, work signs, etc., will be placed as soon as possible to present an array of devices which are consistent with the standard work zone traffic control typical.

APPROVED: [Signature] Maryland Department of Transportation
 STATE HIGHWAY ADMINISTRATION
 WORK ZONE TRAFFIC CONTROL TYPICAL
 GENERAL NOTES
 STANDARD NO. MD-105.00



Important: This drawing shall be used in combination with the general notes.

Note: This plan is based on MD SHA work zone traffic control typical standards: MD 107.000, MD 105.502

