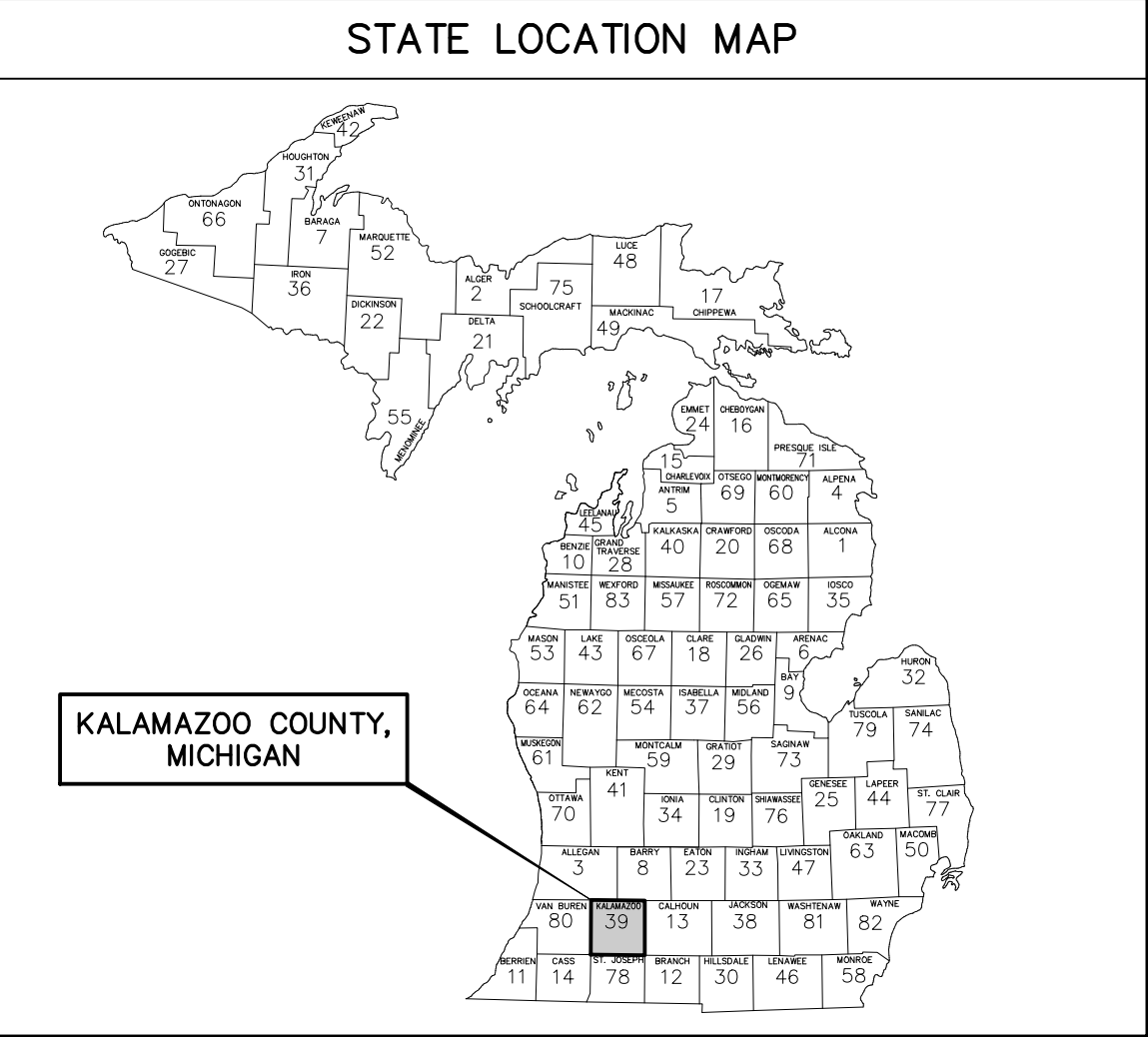
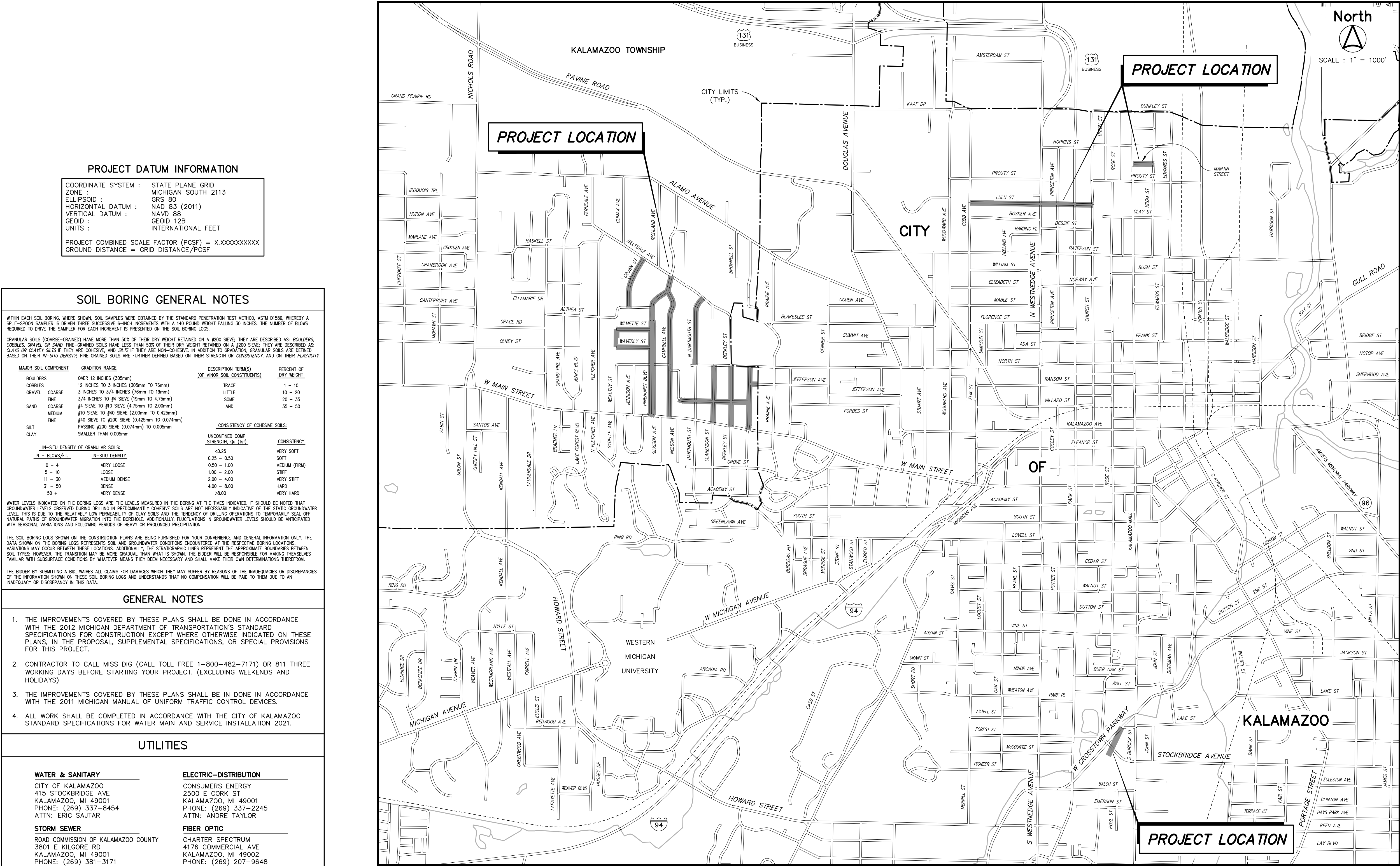


CITY OF KALAMAZOO
KALAMAZOO COUNTY, MICHIGAN

2023 WATER SUPPLY SYSTEM IMPROVEMENTS
DWSRF No. 7673-01



SHEET INDEX	
SHEET No.	DESCRIPTION
1	COVER SHEET
2	INDEX SHEET
3	CROWN STREET (LACROSS ST. TO STA. 15+00)
4	CROWN STREET (STA. 15+00 TO HILLSDALE AVE.)
5	WAVERLY STREET (STA. 9+00 TO PINEHURST BLVD.)
6	WILMETTE STREET (STA. 9+00 TO PINEHURST BLVD.)
7	CROSS COUNTRY
8	PINEHURST BOULEVARD (WEST MAIN ST. TO STA. 18+00)
9	PINEHURST BOULEVARD (STA. 18+00 TO STA. 27+00)
10	PINEHURST BOULEVARD (STA. 27+00 TO STA. 33+00)
11	PINEHURST BOULEVARD (STA. 33+00 TO HILLSDALE AVE.)
12	CAMPBELL AVENUE (WEST MAIN ST. TO STA. 18+00)
13	CAMPBELL AVENUE (STA. 18+00 TO STA. 27+00)
14	CAMPBELL AVENUE (STA. 27+00 TO PINEHURST BLVD.)
15	DARTMOUTH STREET (W NORTH ST. TO STA. 19+00)
16	DARTMOUTH STREET (STA. 19+00 TO HILLSDALE AVE.)
17	N CLARENDON STREET (WEST MAIN ST. TO STA. 15+00)
18	N CLARENDON STREET (STA. 15+00 TO W NORTH ST.)
19	N BERKLEY STREET (WEST MAIN ST. TO STA. 16+00)
20	N BERKLEY STREET (STA. 16+00 TO W NORTH ST.)
21	N ARLINGTON STREET (WEST MAIN ST. TO STA. 16+00)
22	N ARLINGTON STREET (STA. 16+00 TO W NORTH ST.)
23	COMMONWEALTH AVENUE (COMMONWEALTH PL. TO STA. 18+00)
24	COMMONWEALTH AVENUE (STA. 18+00 TO N ARLINGTON ST.)
25	JEFFERSON AVENUE (ARLINGTON ST. TO STA. 14+00)
26	LULU STREET (COBB AVE. TO STA. 17+00)
27	LULU STREET (STA. 17+00 TO STA. 25+00)
28	LULU STREET (STA. 25+00 TO N CHURCH ST.)
29	MARTIN STREET (N BURDICK ST. TO KROM AVE.)
30	CROSS COUNTRY
31	STATE DEVIATIONS
32	MAINTENANCE OF TRAFFIC PLAN
33	DETAILS
33	GRADING DETAIL



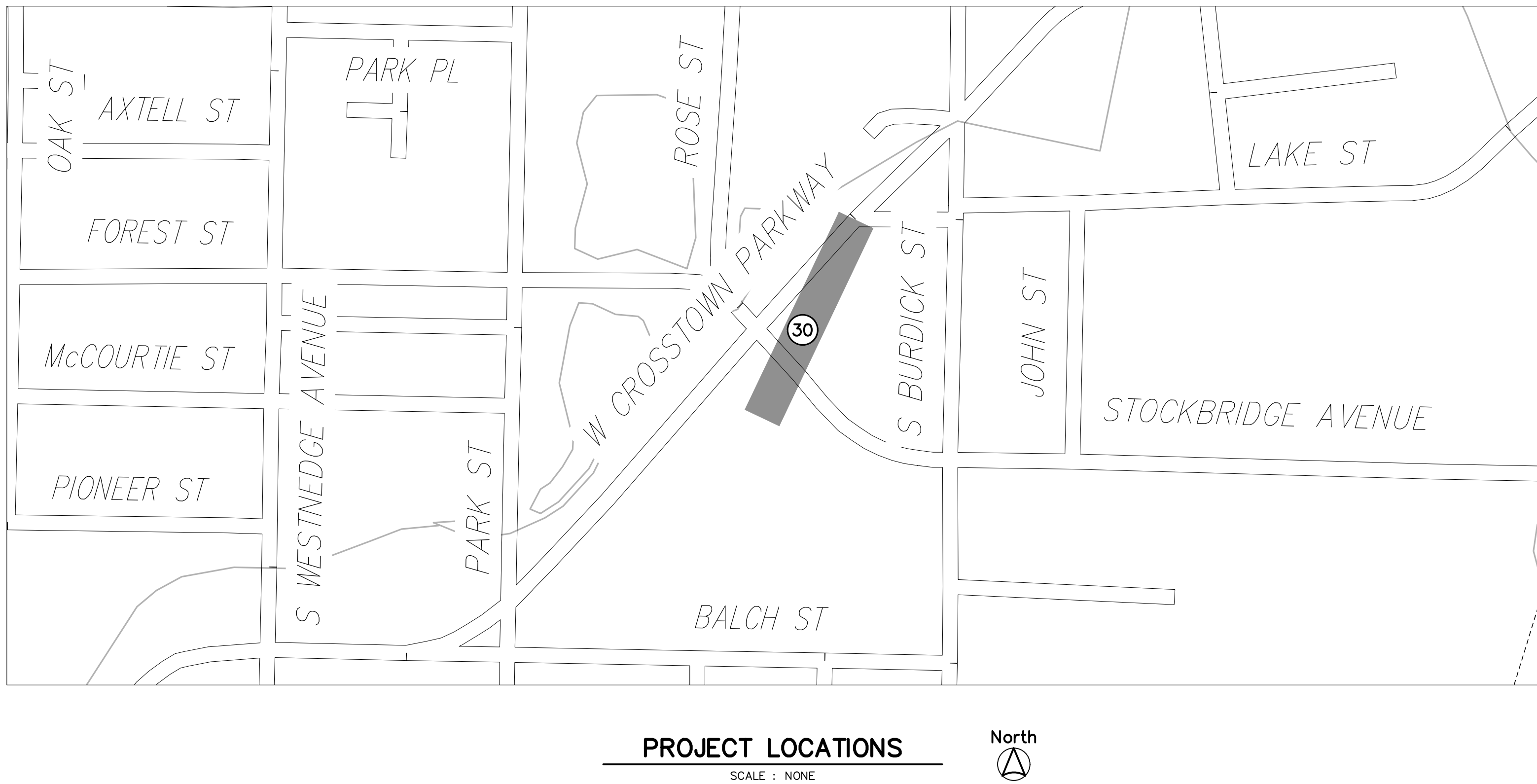
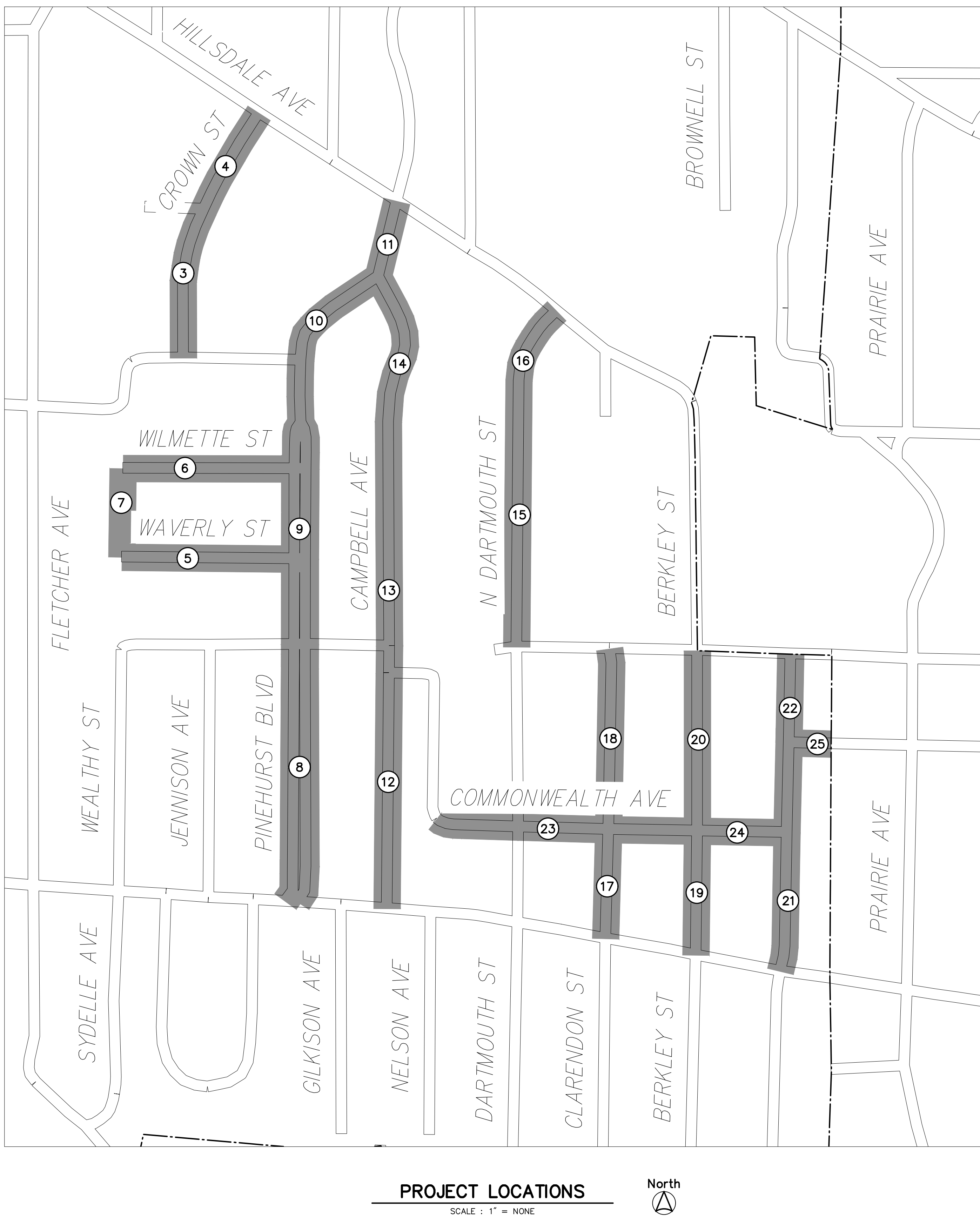
ISSUED FOR BIDS : MAY 26, 2023

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PROJECT NO.
2220555

SHEET NO.
1 OF 34

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NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF
				DATE
				NOV. '22
				CHECKED
				B.G.V.
				DATE
				MAY '23

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CITY OF KALAMAZOO DWR
KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
INDEX SHEET

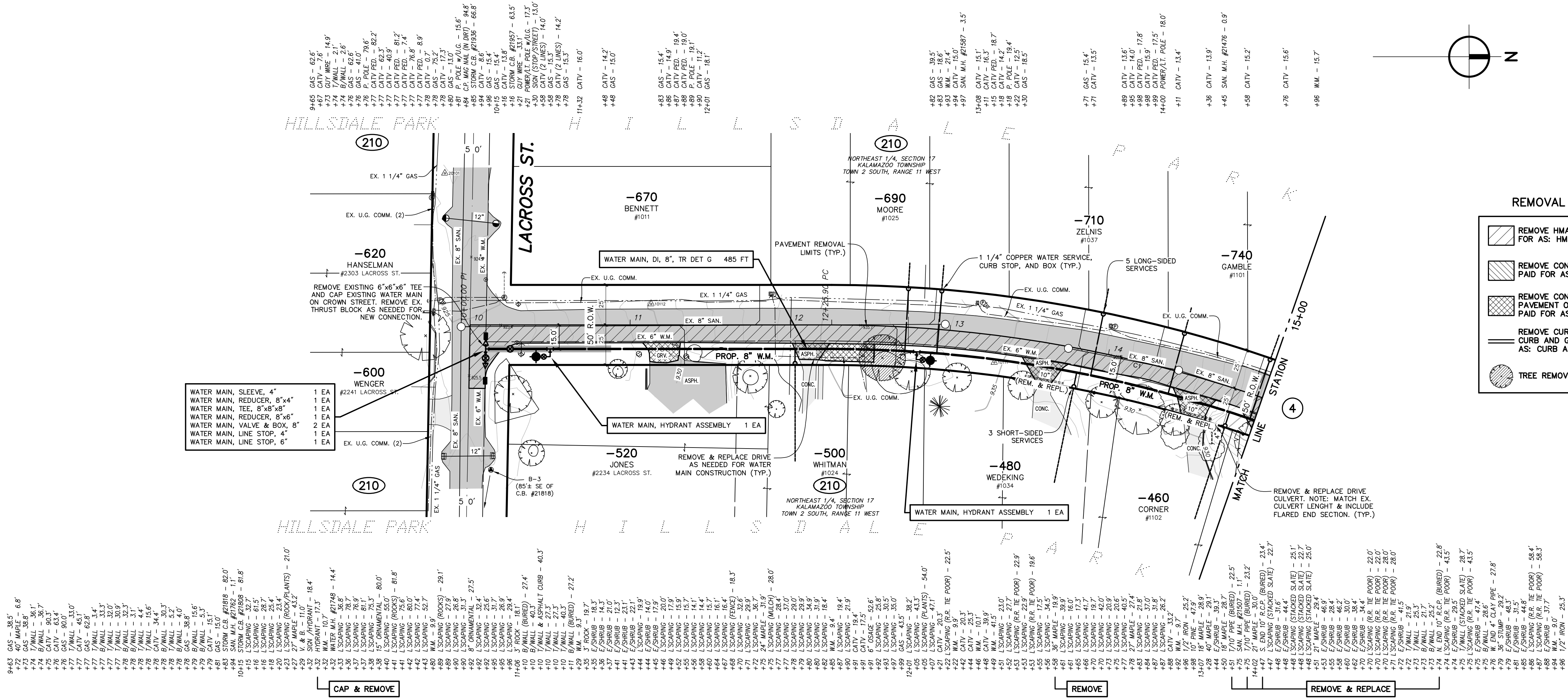
PROJECT NO.
2220555
SHEET NO.
2 OF 34

BENCHMARK
CROWN STREET & LACROSS STREET
20± S & 15± W OF C/L "X", RR TIE SET
IN NNW SIDE OF POWER POLE
(1.2' A/GROUND)

BENCHMARK
CROWN STREET & LACROSS STREET
320± N & 20± W OF C/L "X", NAIL SET
IN E SIDE OF POWER POLE
(0.9' A/GROUND)

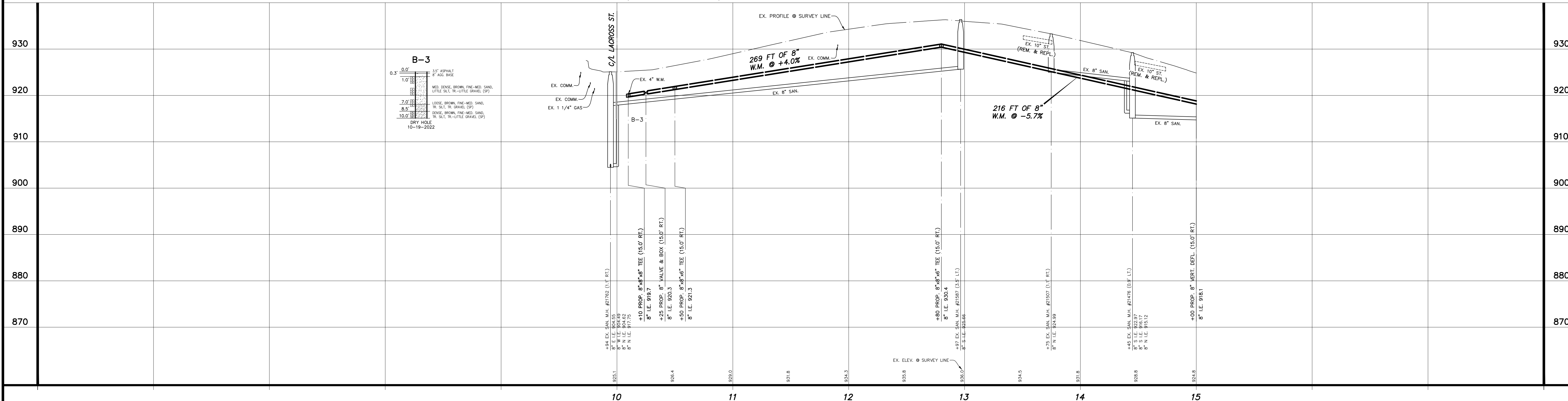
CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
1011	29493.254	127849.810	924.87
1012	294350.968	1278477.140	930.15
20101	294172.160	12784695.330	923.08

CURVE TABLE			
CURVE #	LENGTH	RADIUS	CHORD
C1	470.00'	818.51'	516'30"02"W 463.57'



CROWN STREET

(50' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETTED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

NO. 1

REVISIONS

ISSUED FOR BIDS

BY B.F.V.

DATE 5/26/23

DRAWN STAFF

DATE NOV. '22

CHECKED B.G.V.

DATE MAY '23

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CITY OF KALAMAZOO DWRP

KALAMAZOO COUNTY, MICHIGAN

WATER SUPPLY SYSTEM IMPROVEMENTS

CROWN STREET

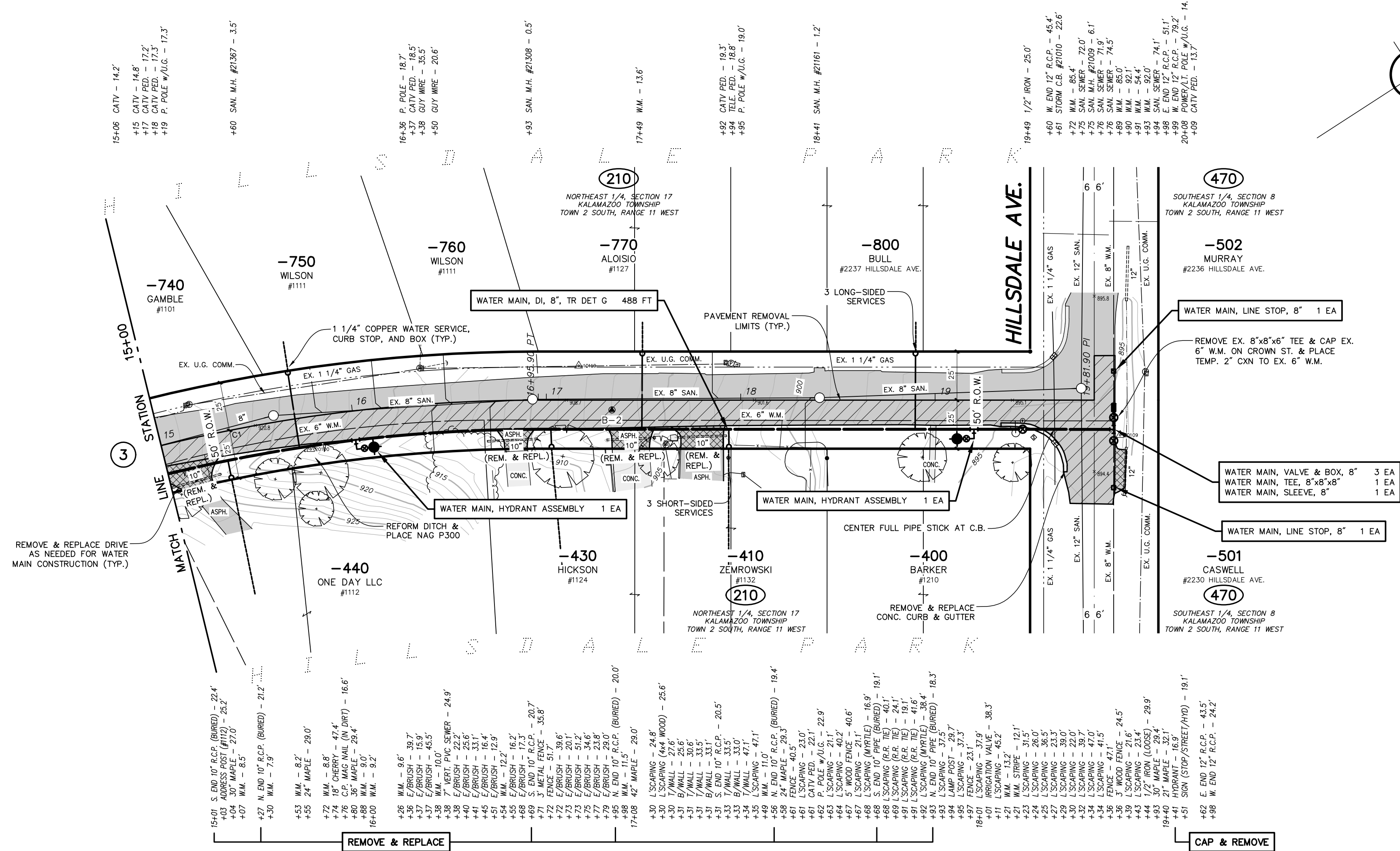
PROJECT NO. 2220555

SHEET NO. 3 OF 34

BENCHMARK
CROWN STREET & HILDALE AVENUE
190± S & 20± W OF C/L "X", RR TIE
SET IN E SIDE OF POWER POLE
(11.1' A/GROUND)

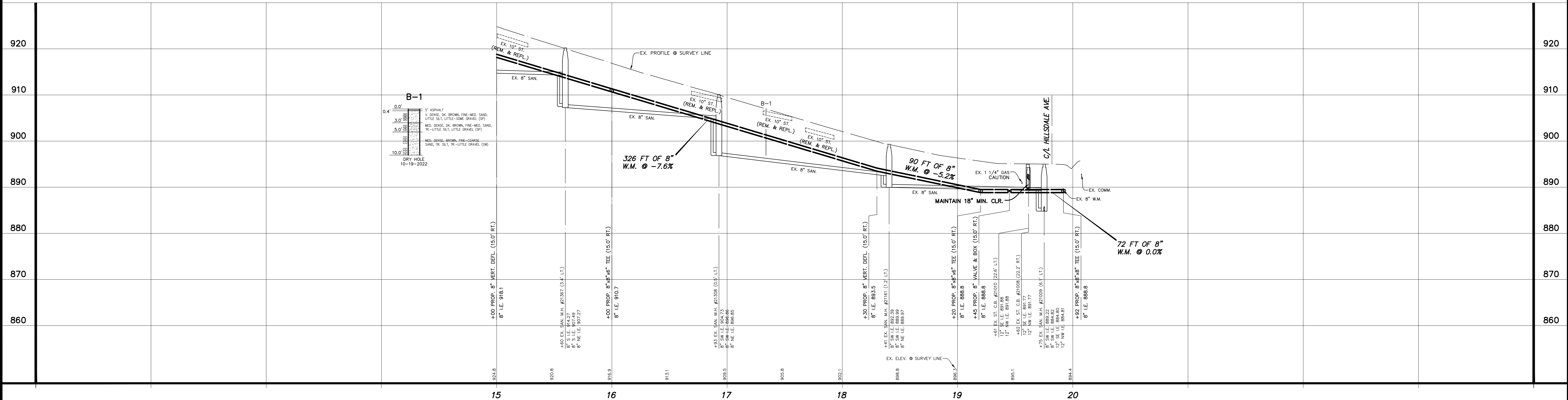
CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
10109	295099.570	12785099.870	894.41
10110	294885.275	127844918.480	908.18
20100	294746.202	127844870.500	917.88

CURVE TABLE			
CURVE #	LENGTH	RADIUS	CHORD
C1	470.00'	818.51'	516'30"02"W 463.57'

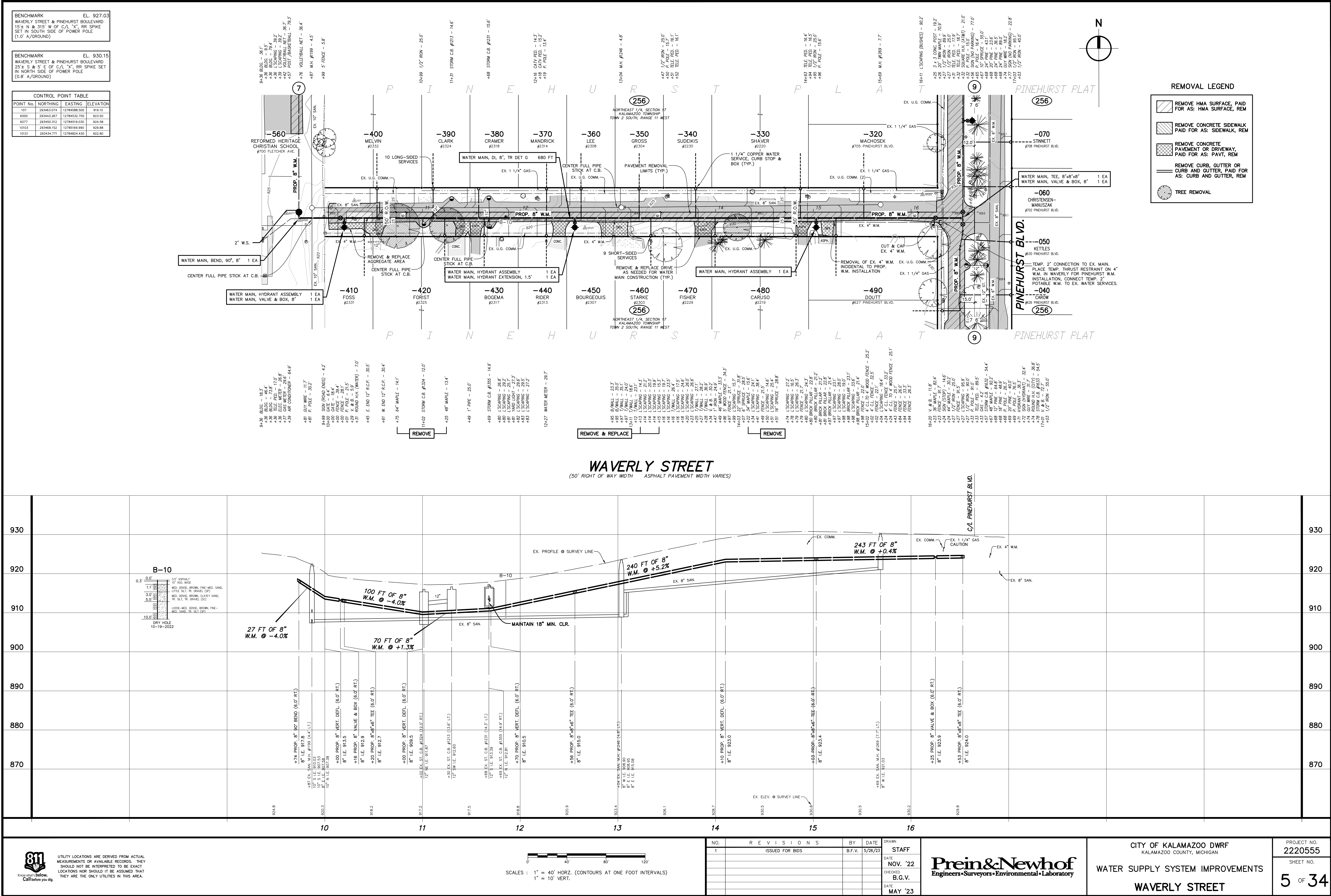


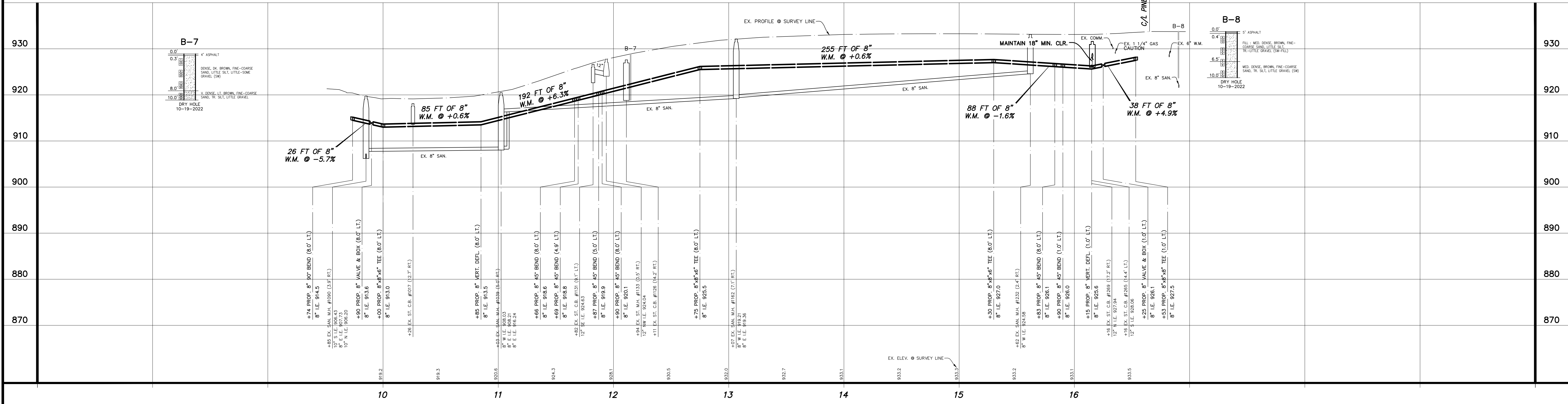
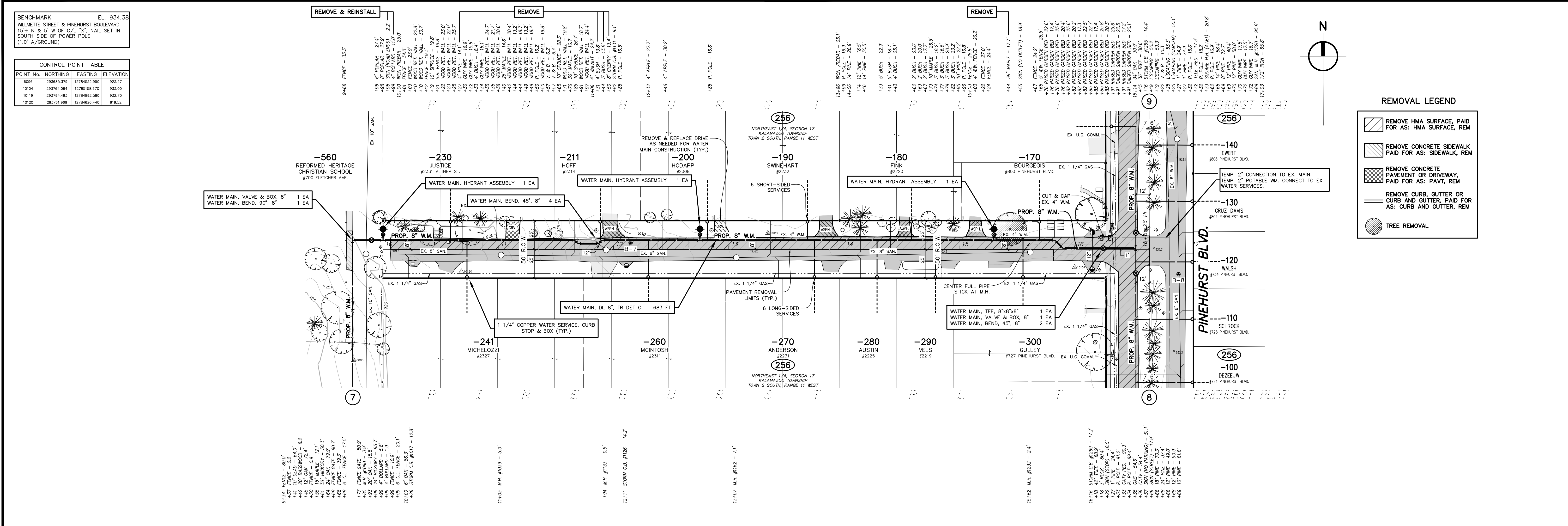
- REMOVAL LEGEND
- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
 - REMOVE CONCRETE SIDEWALK PAID FOR AS: SIDEWALK, REM
 - REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
 - REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
 - TREE REMOVAL

CROWN STREET
(50' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



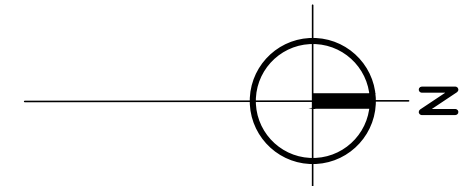
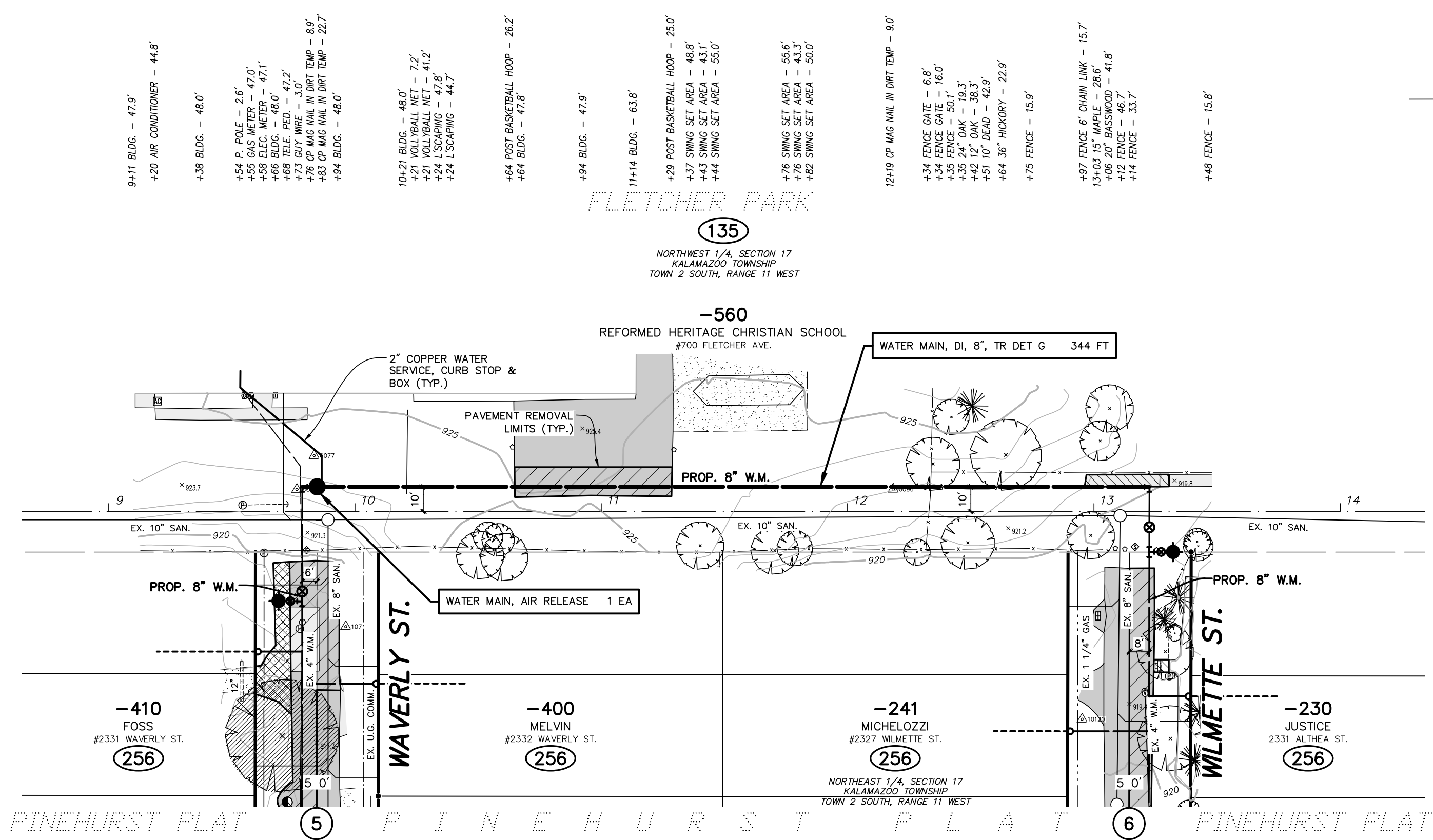
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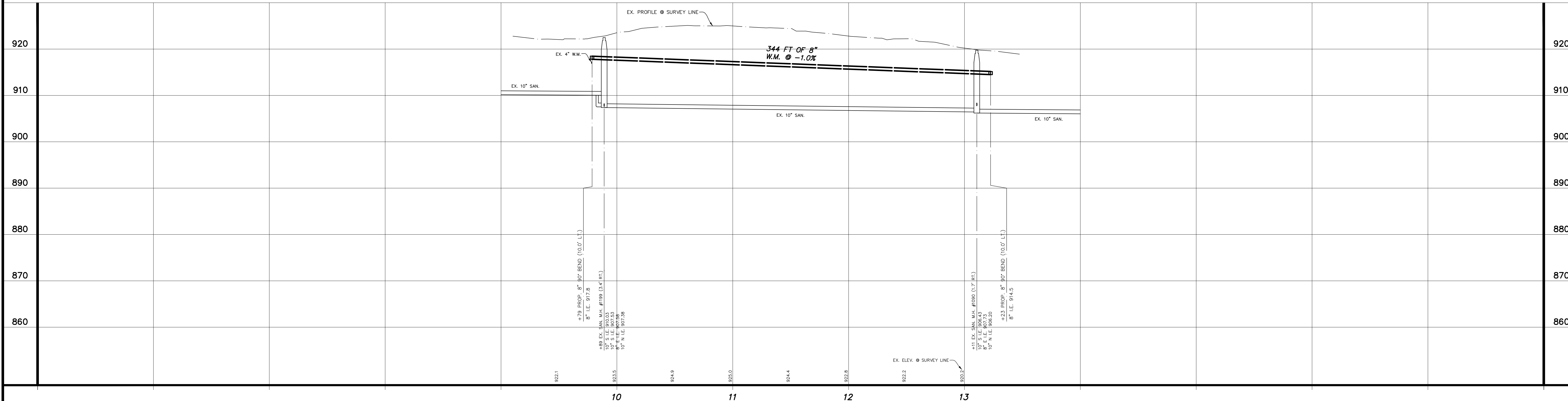
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CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
107	293443.074	12784986.500	918.10
6000	293443.267	12784532.750	923.50
6077	293450.312	12784519.030	924.58
6096	293685.379	12784532.950	923.27
10120	293761.969	12784626.440	919.52



- REMOVAL LEGEND
- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
 - REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
 - REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
 - REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
 - TREE REMOVAL

CROSS COUNTRY



SCALES : 1" = 40' HORIZ. (CONTOURS AT ONE FOOT INTERVALS)
1" = 10' VERT.

NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF
				DATE
				NOV. '22
				CHECKED
				B.G.V.
				DATE
				MAY '23

Prein&Newhof
Engineers-Surveyors-Environmental-Laboratory

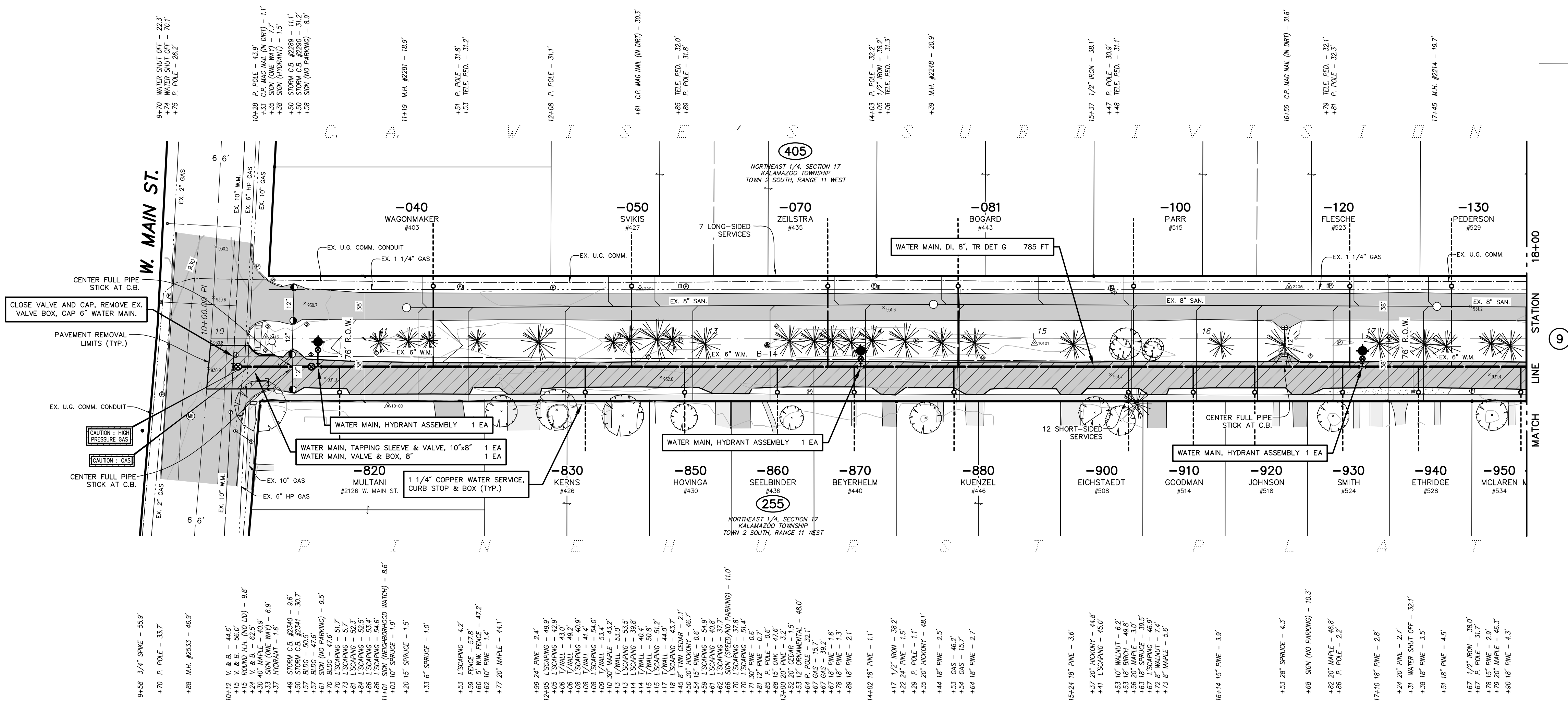
CITY OF KALAMAZOO DWRP KALAMAZOO COUNTY, MICHIGAN		PROJECT NO. 2220555
WATER SUPPLY SYSTEM IMPROVEMENTS		SHEET NO.
CROSS COUNTRY		7 OF 34

811
Know what's below.
Call before you dig.

UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETTED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

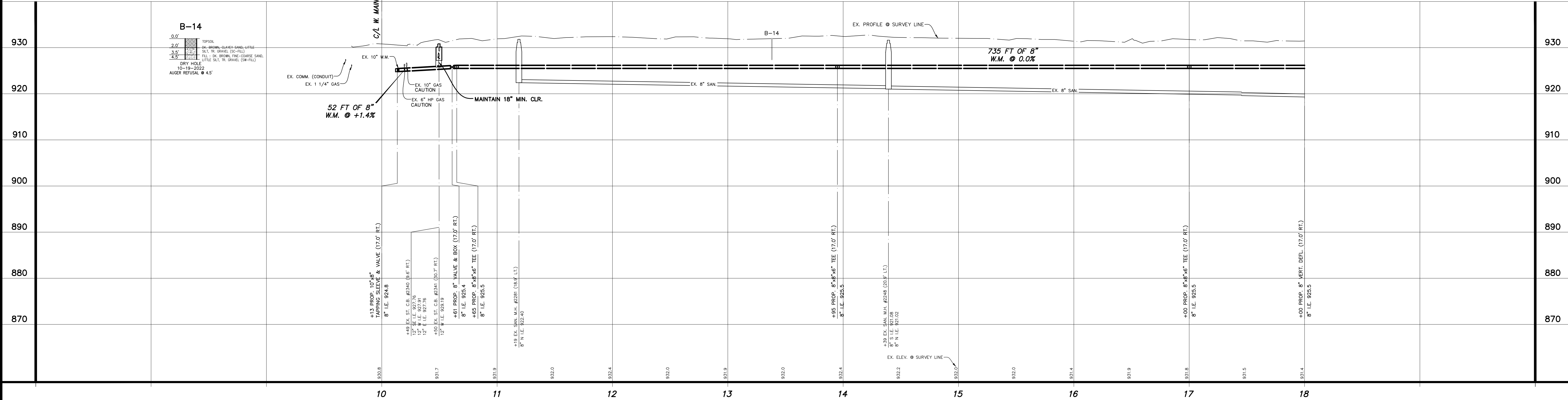
BENCHMARK
PINEHURST BOULEVARD & WAVERLY STREET
405± S & 30' W OF C/L "X", RR SPIKE
SET IN EAST SIDE OF POWER POLE
(1.0' A/GROUND)

CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
2204	292429.626	12785190.930	931.81
2205	292424.119	12785190.380	931.37
2413	292201.995	12785219.740	931.10
10100	292276.125	12785261.810	932.38
10101	292669.543	12785224.420	932.11



- REMOVAL LEGEND
- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
 - REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
 - REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
 - REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
 - TREE REMOVAL

PINEHURST BOULEVARD
(76' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETTED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

SCALES: 1" = 40' HORIZ. (CONTOURS AT ONE FOOT INTERVALS)
1" = 10' VERT.

NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF
				DATE: NOV. '22
				CHECKED: B.G.V.
				DATE: MAY '23

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CITY OF KALAMAZOO DWRP
KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
PINEHURST BOULEVARD

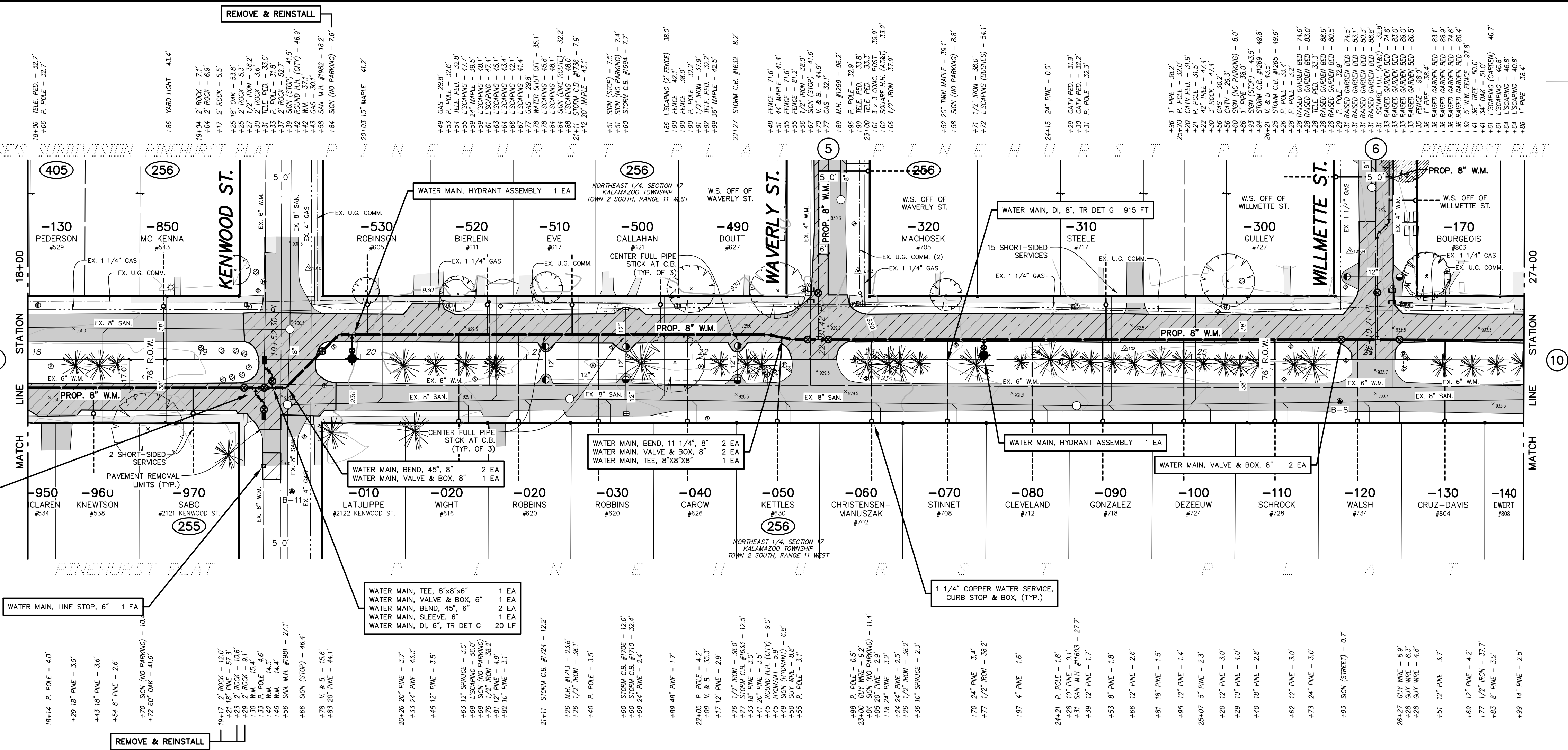
PROJECT NO.
2220555
SHEET NO.
8 OF 34

BENCHMARK
EL. 930.15
PINEHURST BOULEVARD & WAVERLY STREET
25' ± S & 5' ± E OF C/L "X", RR SPIKE SET
IN NORTH SIDE OF POWER POLE
(0.8' A/GROUND)

BENCHMARK
EL. 934.38
PINEHURST BOULEVARD & WILLMETTE STREET
15' ± N & 5' ± W OF C/L "X", NAIL SET IN
SOUTH SIDE OF POWER POLE
(1.0' A/GROUND)

POINT NO.	NORTHING	EASTING	ELEVATION
108	293628.581	1278516.960	932.46
10102	293137.563	12785167.750	930.35
10103	293468.152	12785169.990	929.88
10104	293764.964	12785156.670	933.00

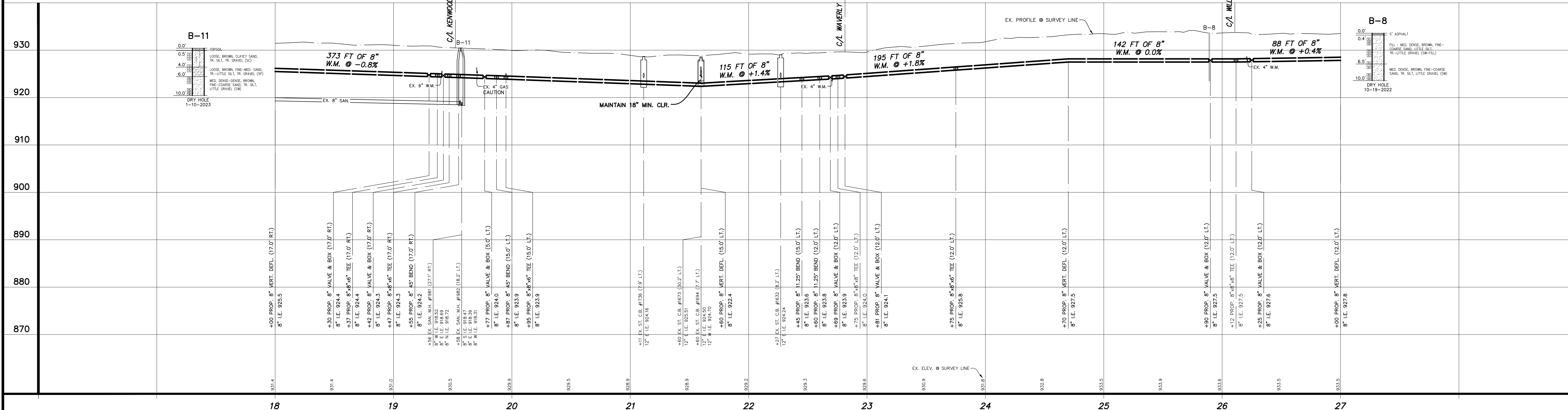
WATER MAIN, VALVE & BOX, 8" 2 EA
WATER MAIN, TEE, 8"x8"x6" 1 EA
WATER MAIN, BEND, 45°, 6" 2 EA
WATER MAIN, VALVE & BOX, 6" 1 EA
WATER MAIN, SLEEVE, 6" 1 EA
WATER MAIN, LINE STOP, 6" 1 EA
WATER MAIN, DI, 6", TR DET G 20 LF



- REMOVAL LEGEND
- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
 - REMOVE CONCRETE SIDEWALK PAID FOR AS: SIDEWALK, REM
 - REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
 - REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
 - TREE REMOVAL

PINEHURST BOULEVARD

(76' RIGHT OF WAY WIDTH) ASPHALT PAVEMENT WIDTH VARIES



UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETTED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

NO. 1

REVISIONS

ISSUED FOR BIDS

BY B.F.V.

DATE 5/26/23

DRAWN STAFF

CHECKED B.G.V.

DATE MAY '23

CITY OF KALAMAZOO DWRP

KALAMAZOO COUNTY, MICHIGAN

WATER SUPPLY SYSTEM IMPROVEMENTS

PINEHURST BOULEVARD

PROJECT NO. 2220555

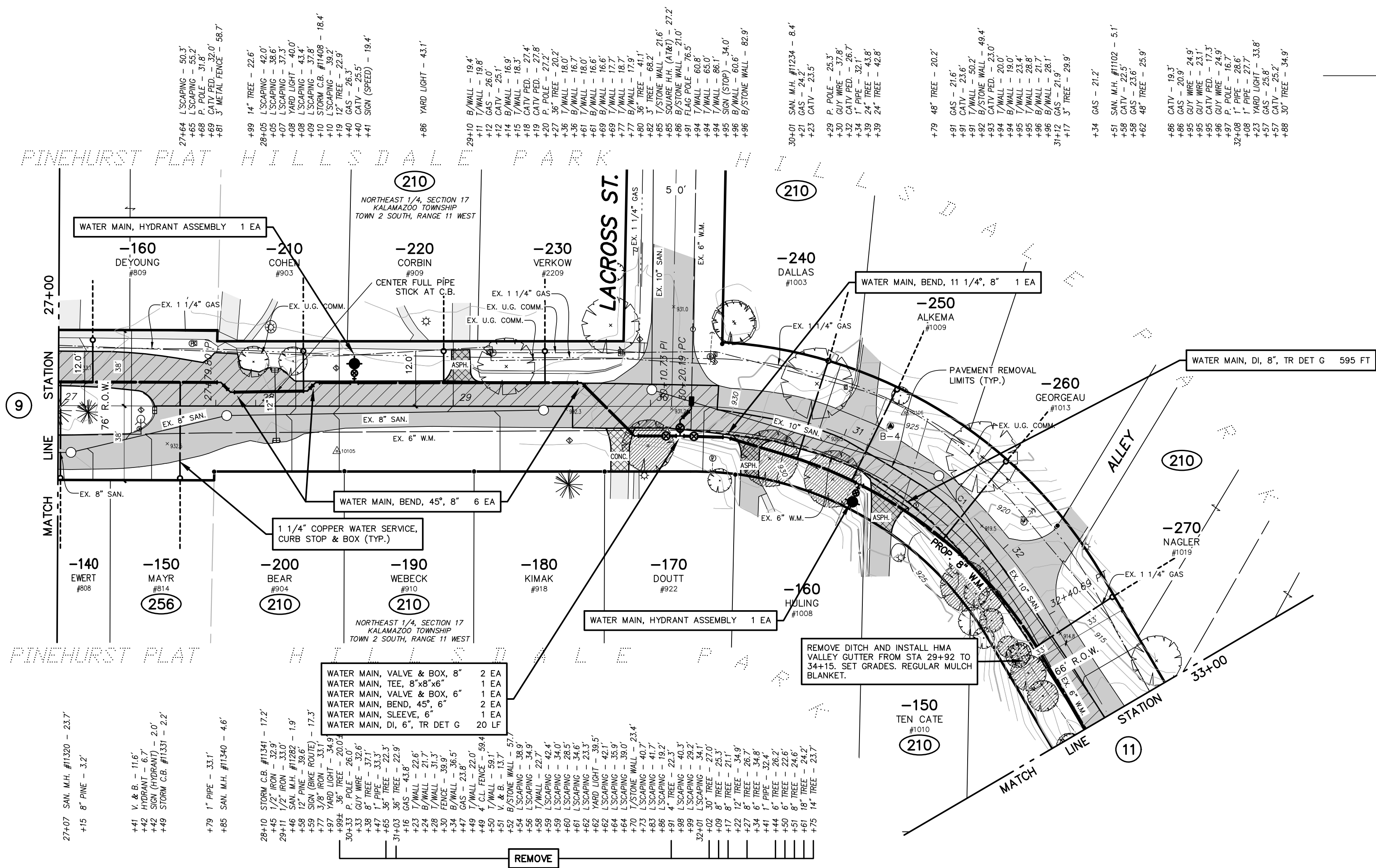
SHEET NO. 9 OF 34

T:\04\10 PROJECTS\2022\2220555.DWG - PINEHURST.DWG - RSTRONG - May, 24, 2023 - 04:27pm - Prein&Newhof

BENCHMARK
PINEHURST BOULEVARD & LACROSS STREET
20'± N & 25' W OF C/L "X", RR SPIKE
SET IN SOUTH SIDE OF POWER POLE
(1.0' A/GROUND)

CONTROL POINT TABLE		
POINT No.	NORTHING	EASTING
10105	294009.855	12785247.370
10106	294297.738	12785227.780

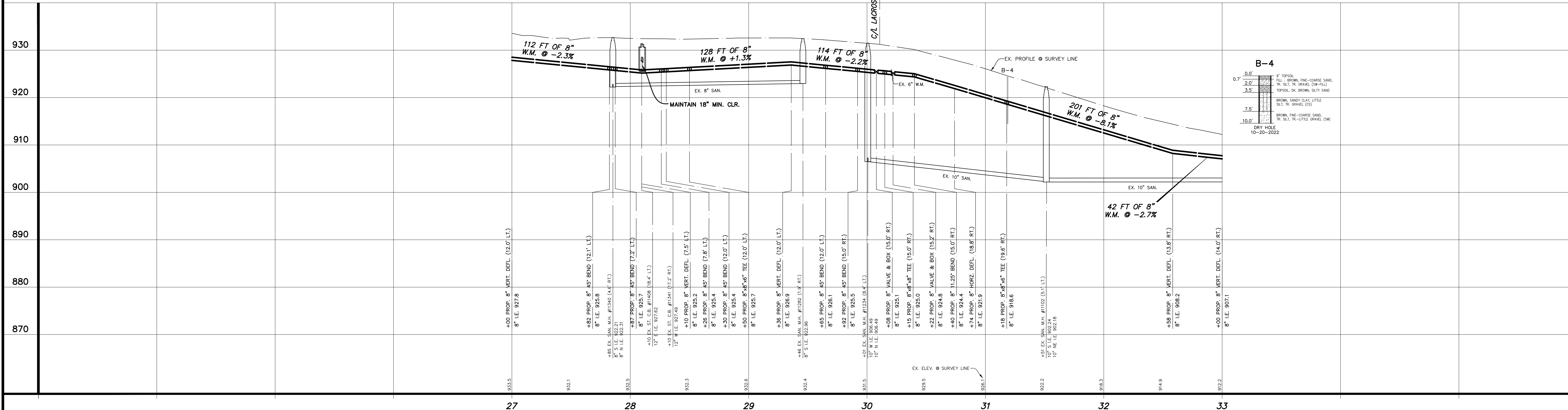
CURVE TABLE			
CURVE #	LENGTH	RADIUS	CHORD
C1	220.49'	206.76'	N30°05'18"E 210.19'




REMOVAL LEGEND

- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
- REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
- REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
- REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
- TREE REMOVAL

PINEHURST BOULEVARD
(RIGHT OF WAY WIDTH VARIES ASPHALT PAVEMENT WIDTH VARIES)





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NO. 1

REVISIONS

ISSUED FOR BIDS

BY B.F.V.


DATE 5/26/23

DRAWN STAFF

DATE NOV. '22

CHECKED B.G.V.

DATE MAY '23



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CITY OF KALAMAZOO DWRP
KALAMAZOO COUNTY, MICHIGAN

WATER SUPPLY SYSTEM IMPROVEMENTS

PINEHURST BOULEVARD

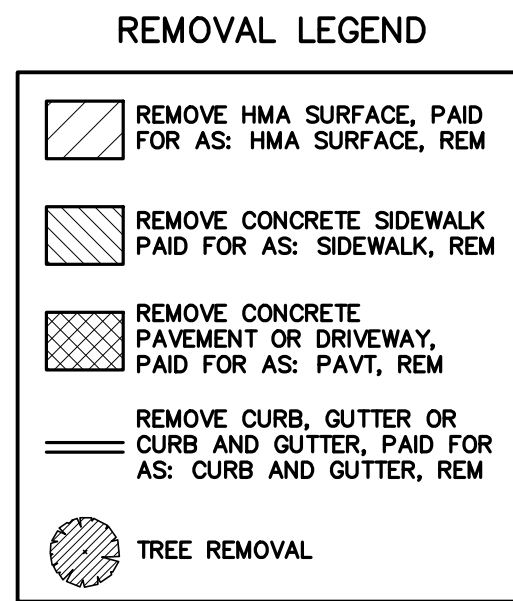
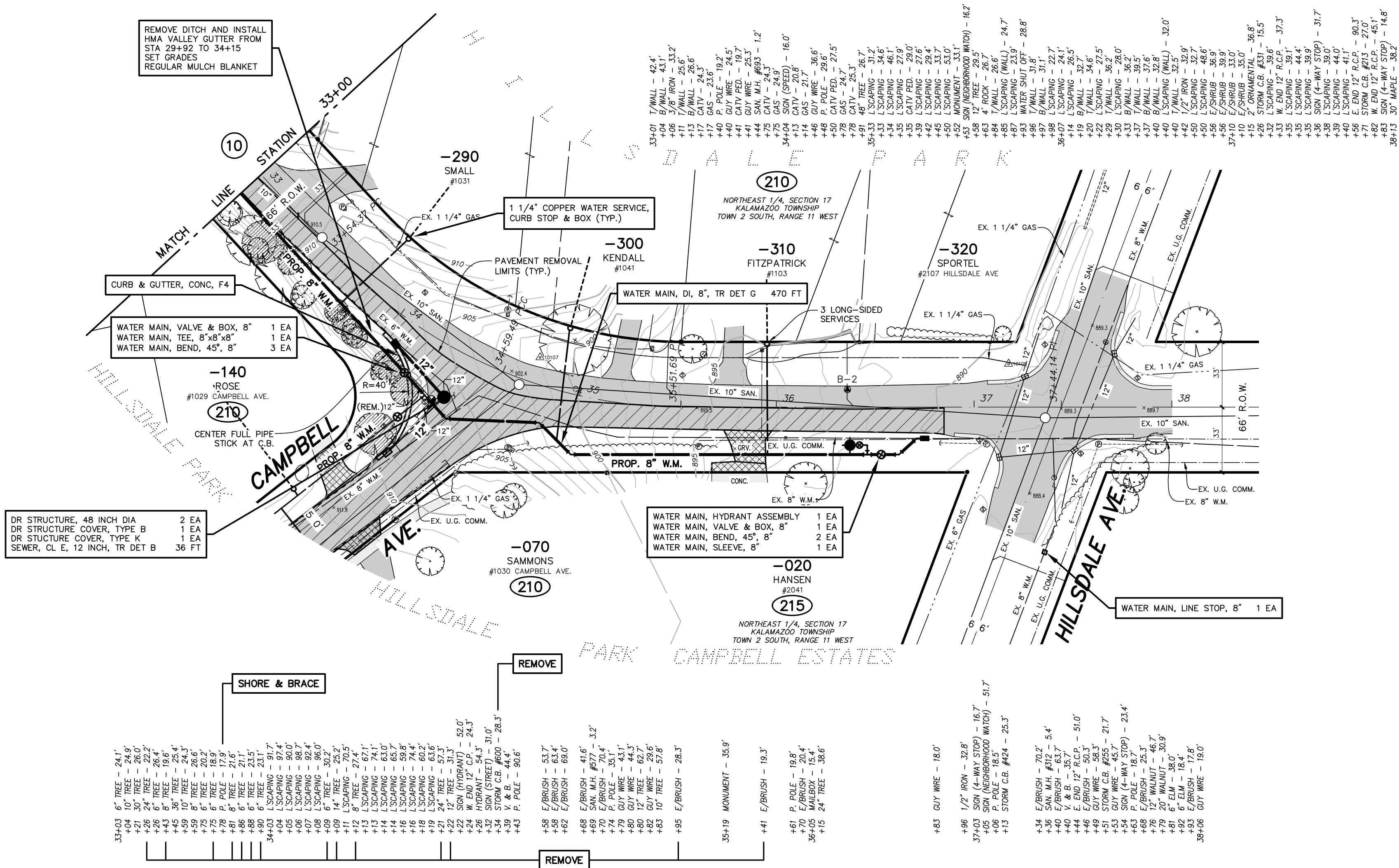
PROJECT NO. 2220555

SHEET NO. 10 OF 34

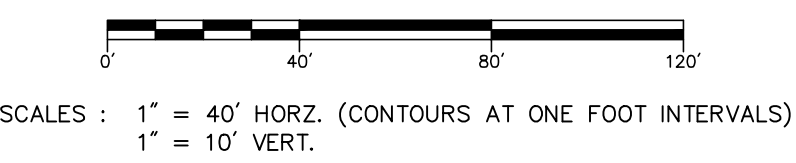
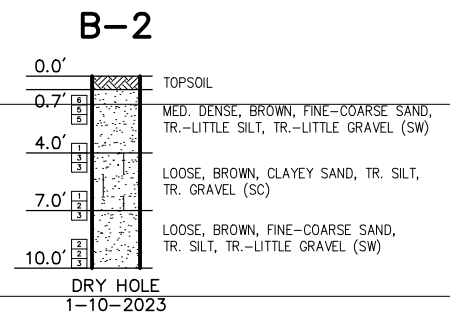
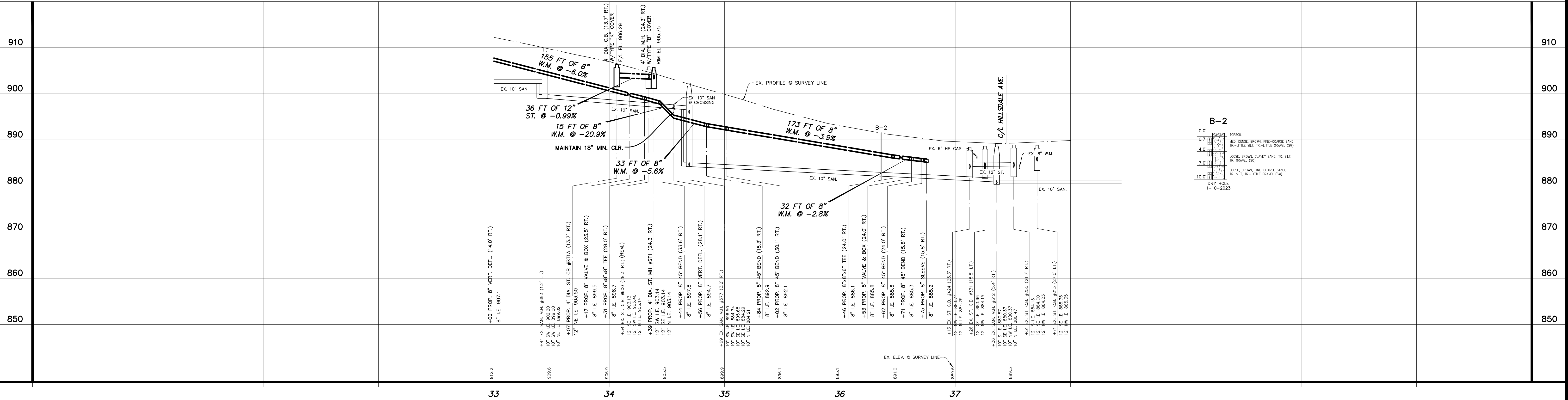
BENCHMARK
PINEHURST BOULEVARD & CAMPBELL AVENUE
30± N & 35° E OF C/L "X", RR SPIKE
SET IN WEST SIDE OF POWER POLE
(1.0' A/GROUND)

CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
10107	294518.994	12785501.470	901.24
10108	294749.817	12785554.850	889.53

CURVE TABLE			
CURVE #	LENGTH	RADIUS	CHORD
C2	197.33'	240.13'	N36°05'31"E 191.82'



PINEHURST BOULEVARD
(76' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



REVISIONS			
NO.	REVISIONS	BY	DATE
1	ISSUED FOR BIDS	B.F.V.	5/26/23

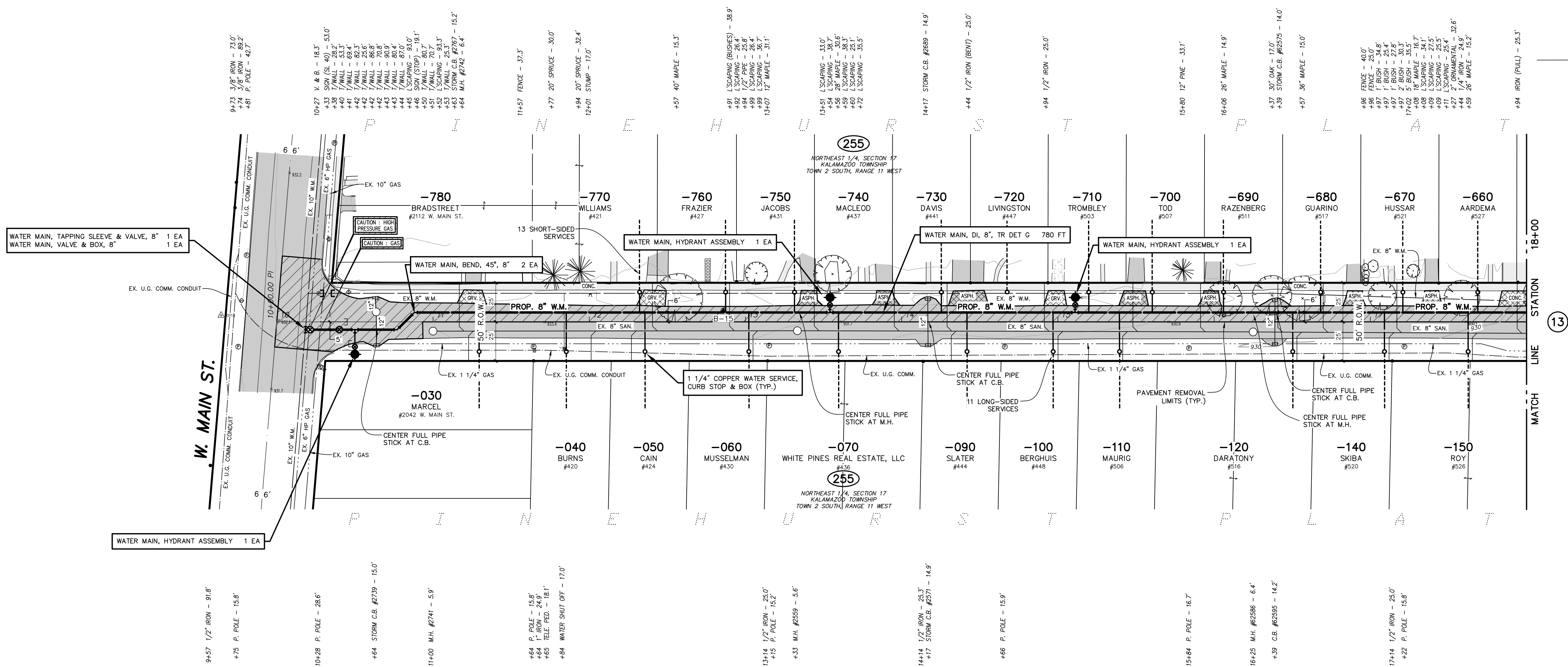
STAFF	
DATE	NOV. '22
CHECKED	B.G.V.
DATE	MAY '23

CITY OF KALAMAZOO DWRP
KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
PINEHURST BOULEVARD

PROJECT NO.
2220555
SHEET NO.
11 OF 34

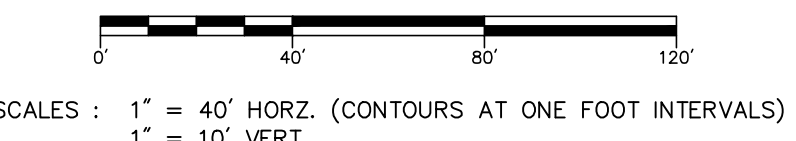
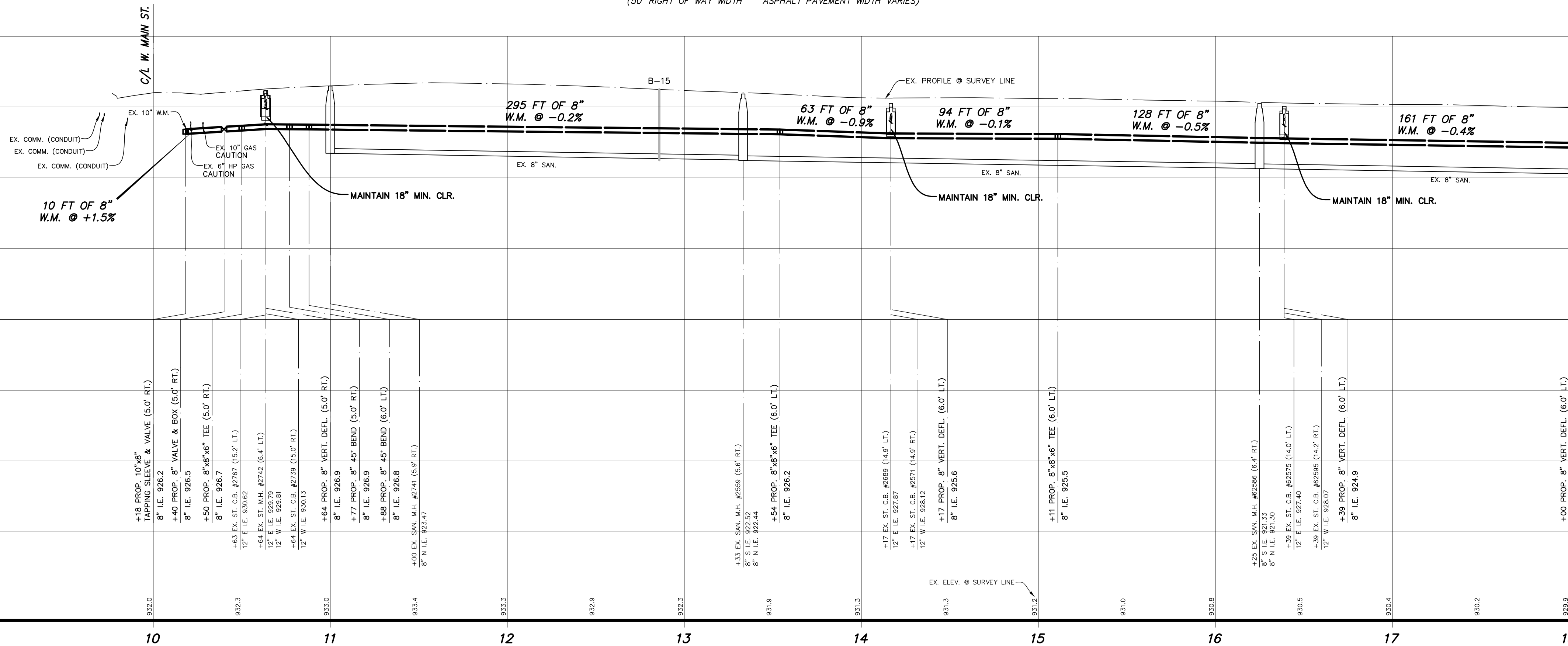
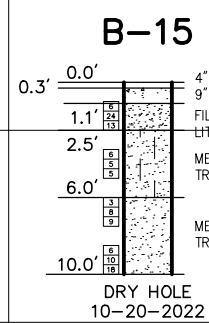
BENCHMARK
CAMPBELL AVENUE & WEST MAIN STREET
30'± N & 30' E OF C/L "X", RR SPIKE
SET IN SOUTHWEST SIDE OF POWER POLE
(1.0' A/GROUND)

CONTROL POINT TABLE		
POINT NO.	NORTHING	EASTING
10117	292651.803	12785532.930
10118	292105.021	12785543.200



- REMOVAL LEGEND
- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
 - REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
 - REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
 - REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
 - TREE REMOVAL

CAMPBELL AVENUE
(50' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



NO.		REVISIONS		BY	DATE	DRAWN
1		ISSUED FOR BIDS		B.F.V.	5/26/23	STAFF

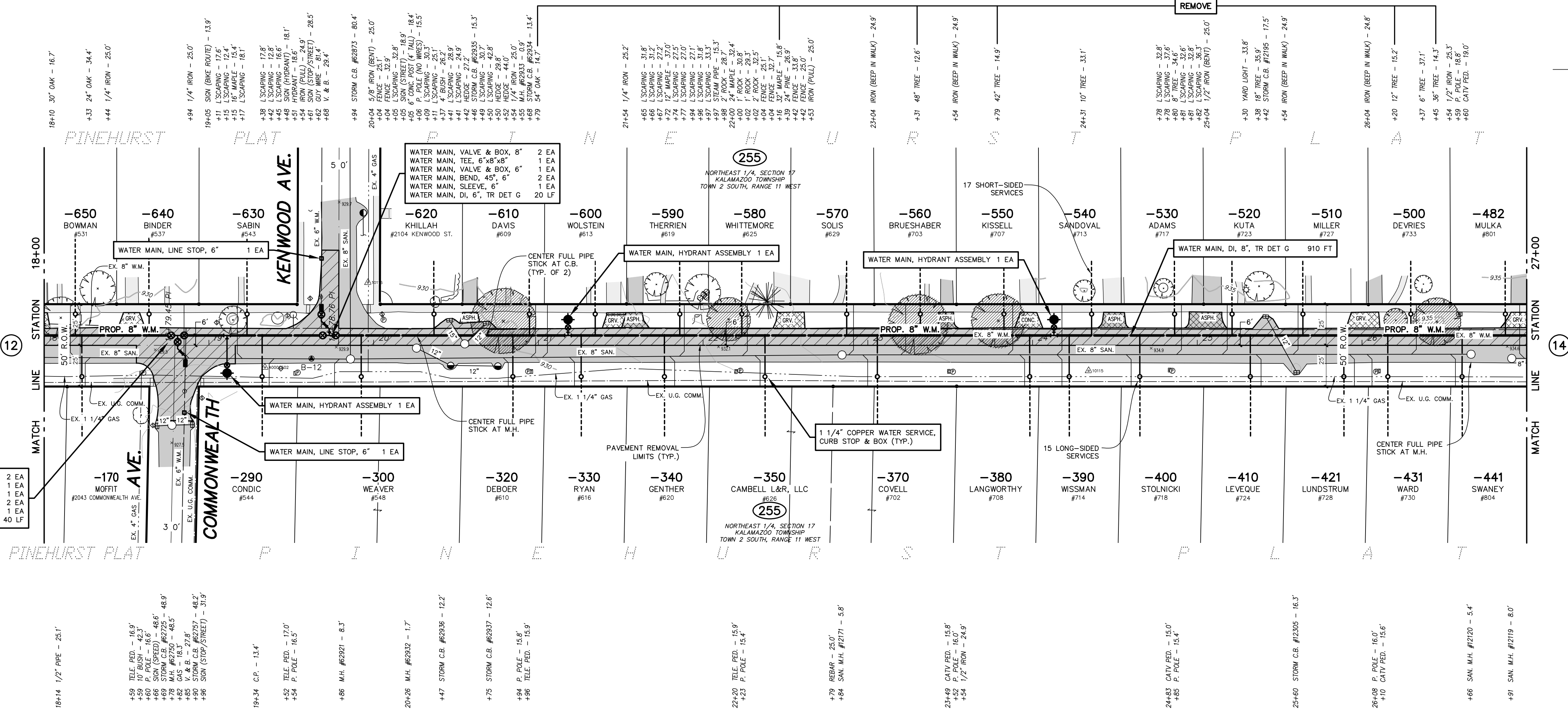
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CITY OF KALAMAZOO DWR
KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
CAMPBELL AVENUE

PROJECT NO.
2220555
SHEET NO.
12 OF 34

CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
10115	283374.623	1278551.740	924.78
10116	283377.285	1278551.330	925.85
4000502	293074.636	1278552.710	929.43

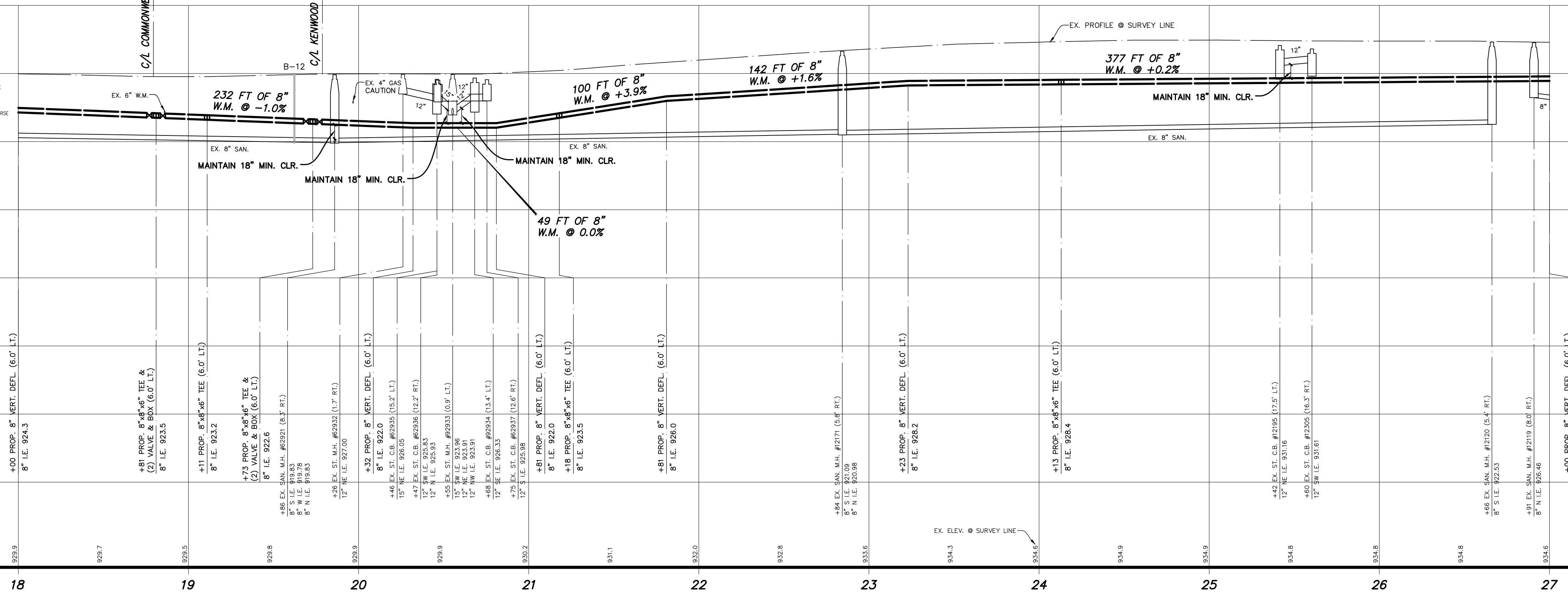
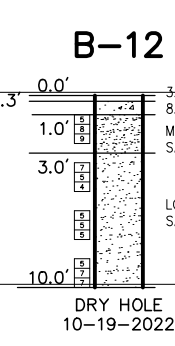
WATER MAIN, VALVE & BOX, 8" 2 EA
WATER MAIN, TEE, 8"x8"x6" 1 EA
WATER MAIN, VALVE, 6" 1 EA
WATER MAIN, BEND, 45°, 6" 2 EA
WATER MAIN, SLEEVE, 6" 1 EA
WATER MAIN, DI 6" 40 LF



- REMOVAL LEGEND**
- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
 - REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
 - REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
 - REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
 - TREE REMOVAL

CAMPBELL AVENUE

(50' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF
				DATE
				CHECKED
				B.G.V.
				DATE
				MAY '23

Prein&Newhof
Engineers-Surveyors-Environmental-Laboratory

CITY OF KALAMAZOO DWR
KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
CAMPBELL AVENUE

PROJECT NO.
2220555
SHEET NO.
13 OF 34

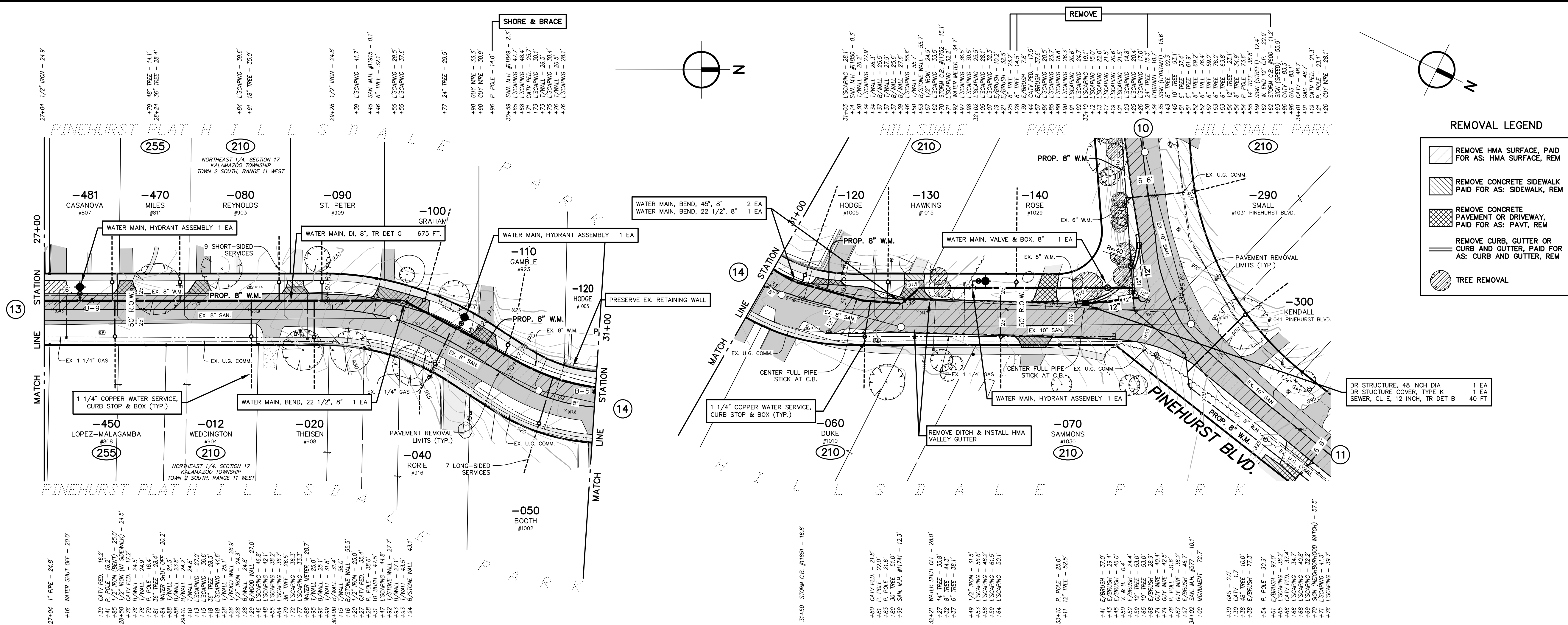
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BENCHMARK				EL. 931.26
CAMPBELL AVENUE & WEST MAIN STREET				
480± S & 15' E OF C/L "X", RR SPIKE				
SET IN SOUTHWEST SIDE OF POWER POLE,				
20' N OF C/L GRAV. DRIVE TO HSE. #908				
(0.8' A/GROUND)				

BENCHMARK				EL. 905.15
CAMPBELL AVENUE & PINEHURST BOULEVARD				
30'± N & 35' E OF C/L "X", RR SPIKE				
SET IN WEST SIDE OF POWER POLE				
(1.0' A/GROUND)				

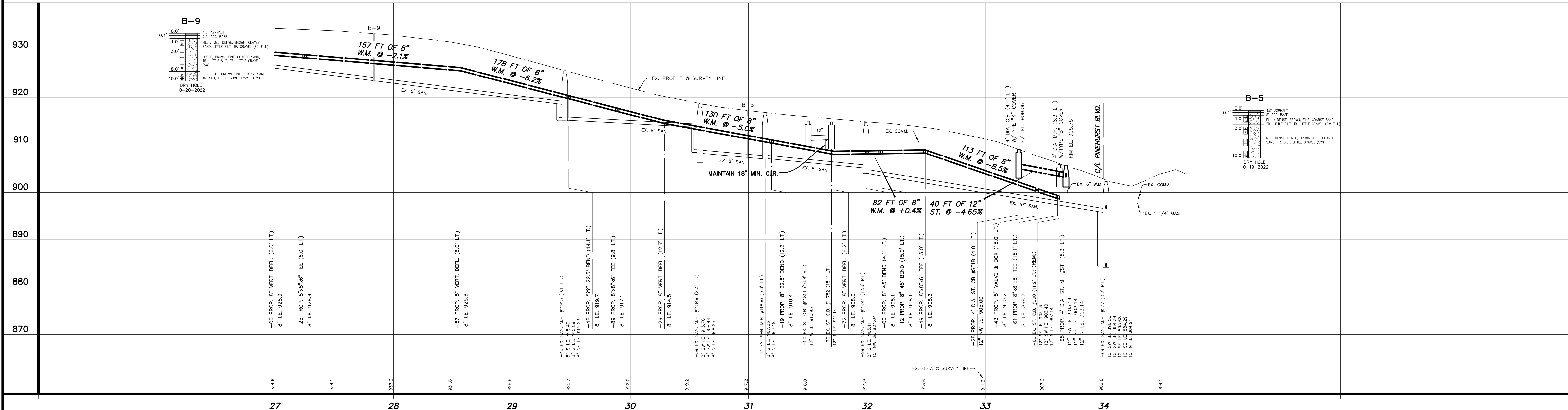
CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
10107	294518.994	12785501.470	901.24
10113	294265.458	12785632.760	916.28
10114	293984.580	12785535.470	932.06


CURVE TABLE			
CURVE #	LENGTH	RADIUS	CHORD
C1	102.63'	190.99'	N17°43'12"E 101.40'
C2	124.87'	121.91'	N3°46'17"E 119.48'




CAMPBELL AVENUE

(50' RIGHT OF WAY WIDTH) ASPHALT PAVEMENT WIDTH VARIES



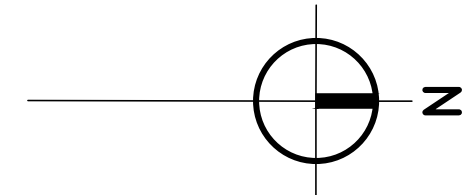
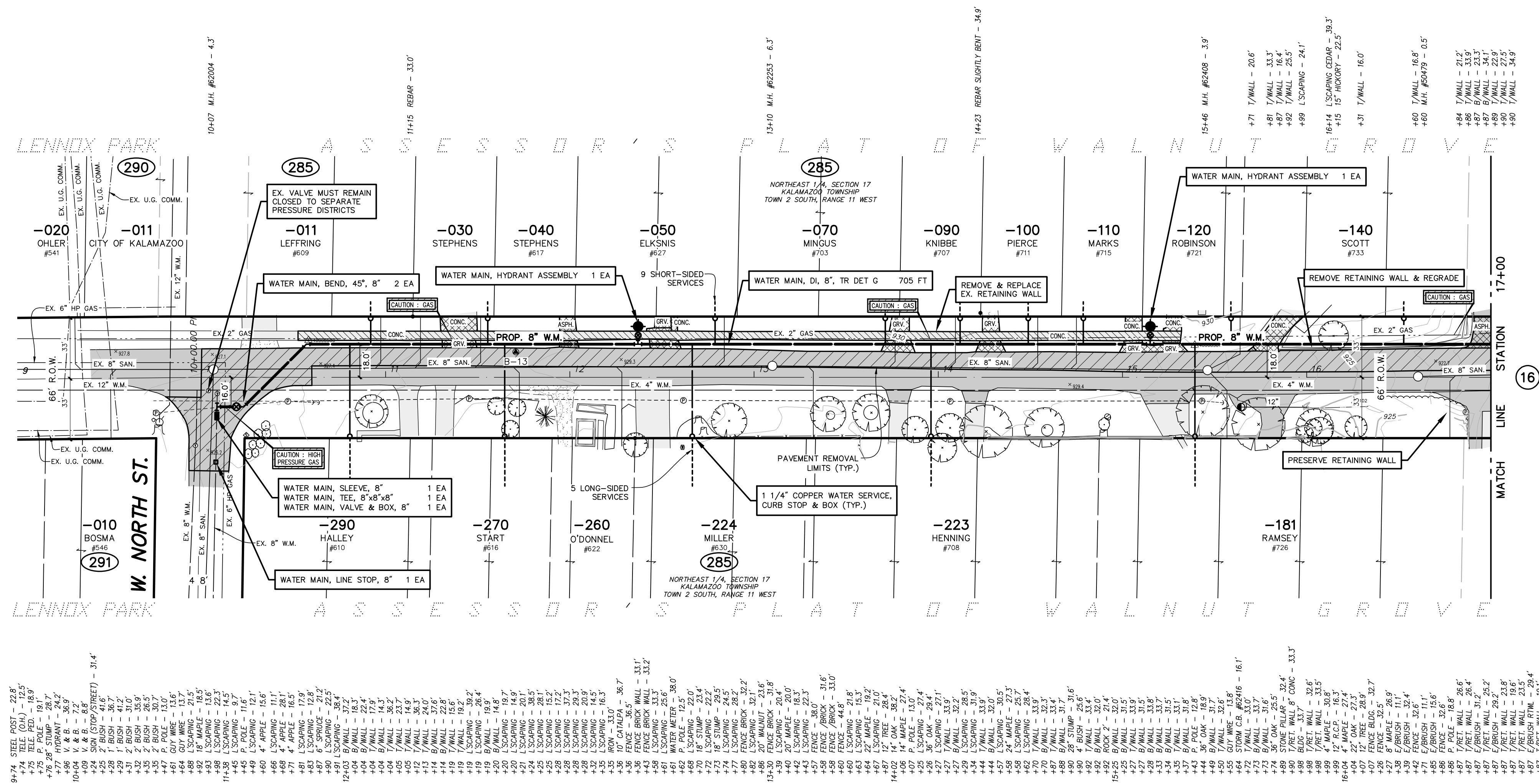
 <p>UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.</p>	NO.		REVISIONS		BY	DATE	DRAWN
	1		ISSUED FOR BIDS		B.F.V.	5/26/23	STAFF
DATE		NOV. '22		CHECKED		B.G.V.	
DATE		MAY '23					








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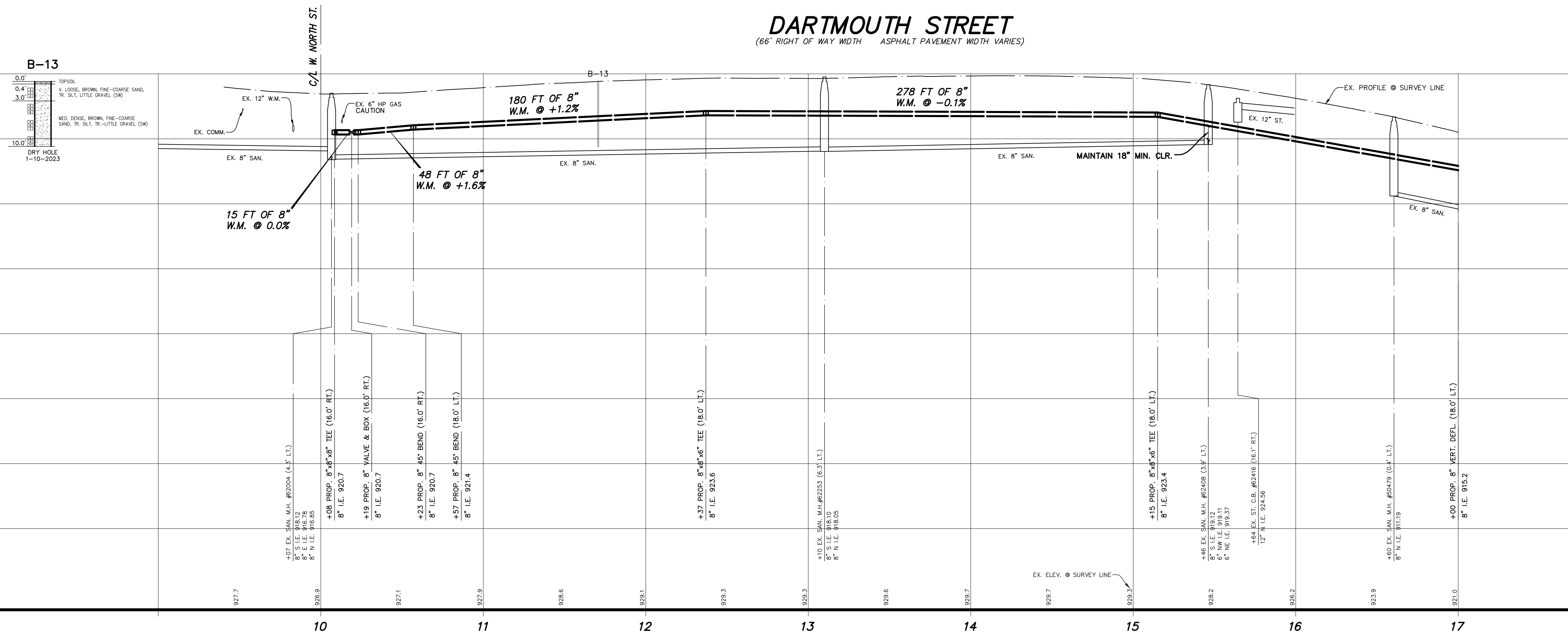
CITY OF KALAMAZOO DWRP		PROJECT NO.
KALAMAZOO COUNTY, MICHIGAN		2220555
WATER SUPPLY SYSTEM IMPROVEMENTS		SHEET NO.
CAMPBELL AVENUE		14 OF 34

POINT No.	NORTHING	EASTING	ELEVATION
102	293737.952	12786050.220	924.64
40000500	293169.758	12786018.310	927.50
40000501	293650.854	12786020.240	928.70



REMOVAL LEGEND

- | | |
|---|---|
|  | REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM |
|  | REMOVE CONCRETE SIDEWALK PAID FOR AS: SIDEWALK, REM |
|  | REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM |
|  | REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM |
|  | TREE REMOVAL |



NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF
				DATE NOV. '22
				CHECKED B.G.V.
				DATE MAY '23

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CITY OF KALAMAZOO DWRF
KALAMAZOO COUNTY, MICHIGAN

WATER SUPPLY SYSTEM IMPROVEMENTS

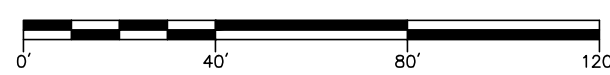
DARTMOUTH STREET

PROJECT NO.
2220555
SHEET NO.

15 OF 34



UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

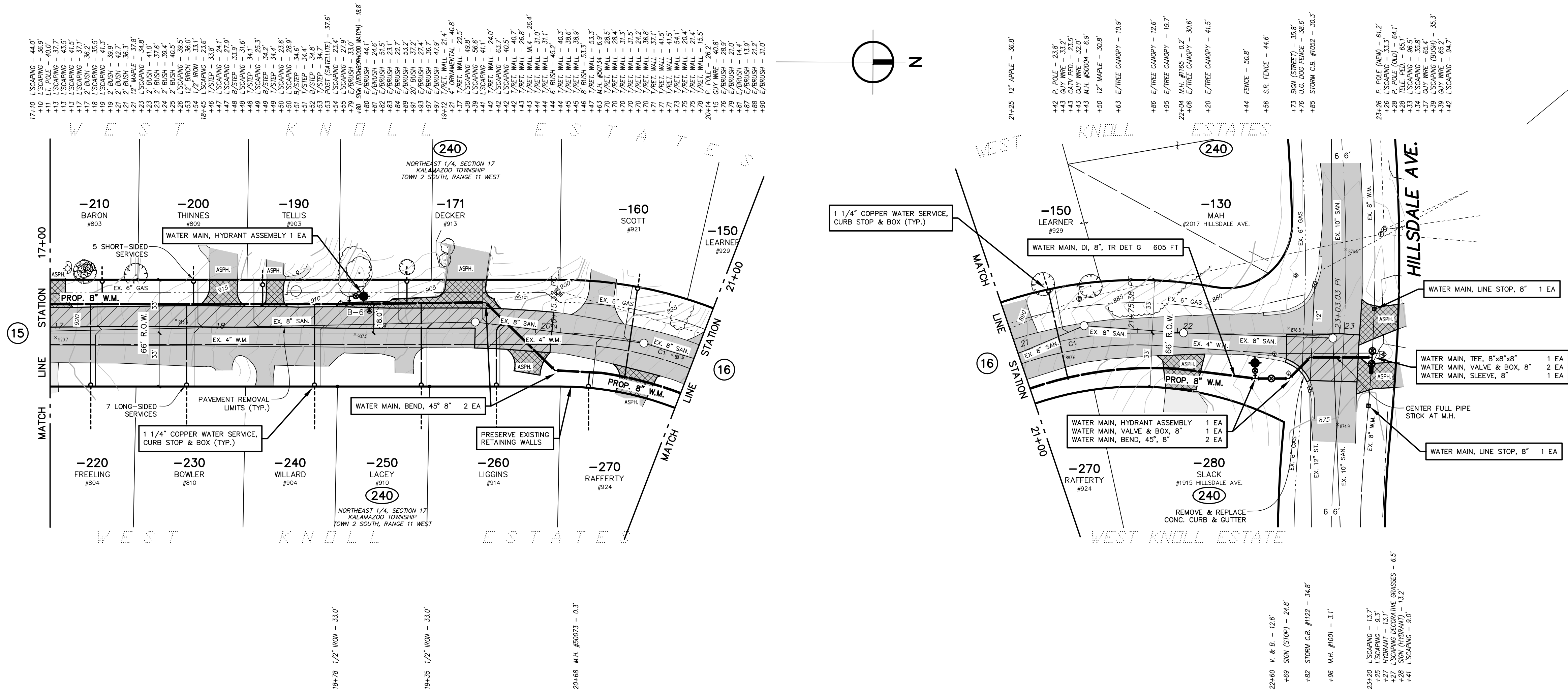


SCALES : 1" = 40' HORZ. (CONTOURS AT ONE FOOT INTERVALS)
1" = 10' VERT.

BENCHMARK
DARTMOUTH STREET & HILLSDALE AVENUE
295± S & 25' W OF C/L "X", RR SPIKE
SET IN SOUTHWEST SIDE OF POWER POLE,
55' N OF DRIVE TO HSE. #913
(1.7' A/GROUND)

CONTROL POINT TABLE			
POINT NO.	NORTHING	EASTING	ELEVATION
101	284100.878	12786014.890	800.83

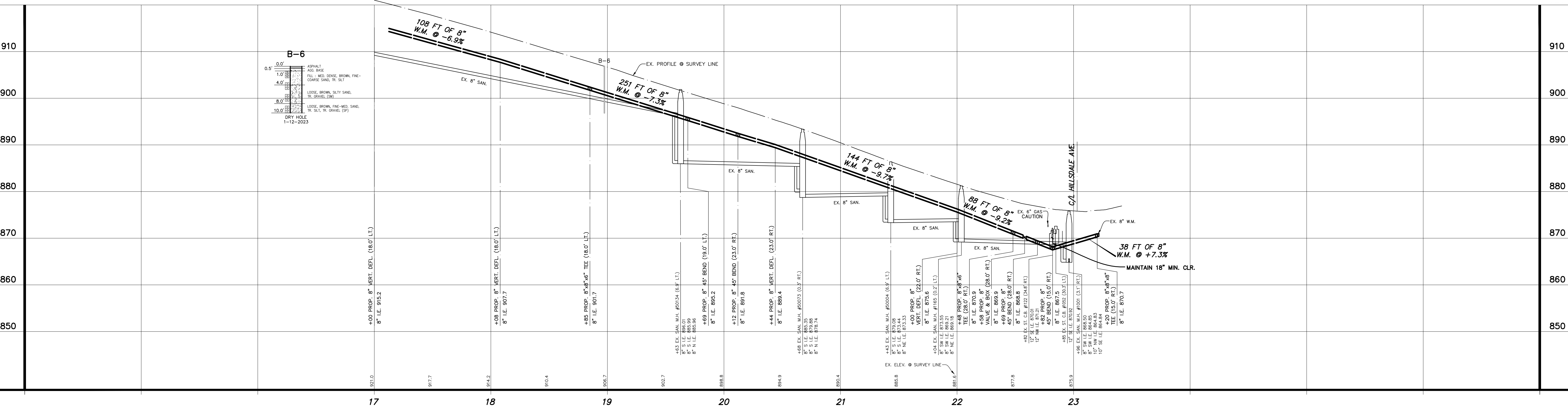
CURVE TABLE			
CURVE #	LENGTH	RADIUS	CHORD
C1	160.06'	230.46'	519°48'57"W 156.86'



- REMOVAL LEGEND
- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
 - REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
 - REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
 - REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
 - TREE REMOVAL

DARTMOUTH STREET

(66' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



811
Know what's below.
Call before you dig.

UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

SCALES: 1" = 40' HORIZ. (CONTOURS AT ONE FOOT INTERVALS)
1" = 10' VERT.

NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF
				DATE
				CHECKED
				B.G.V.
				DATE
				MAY '23

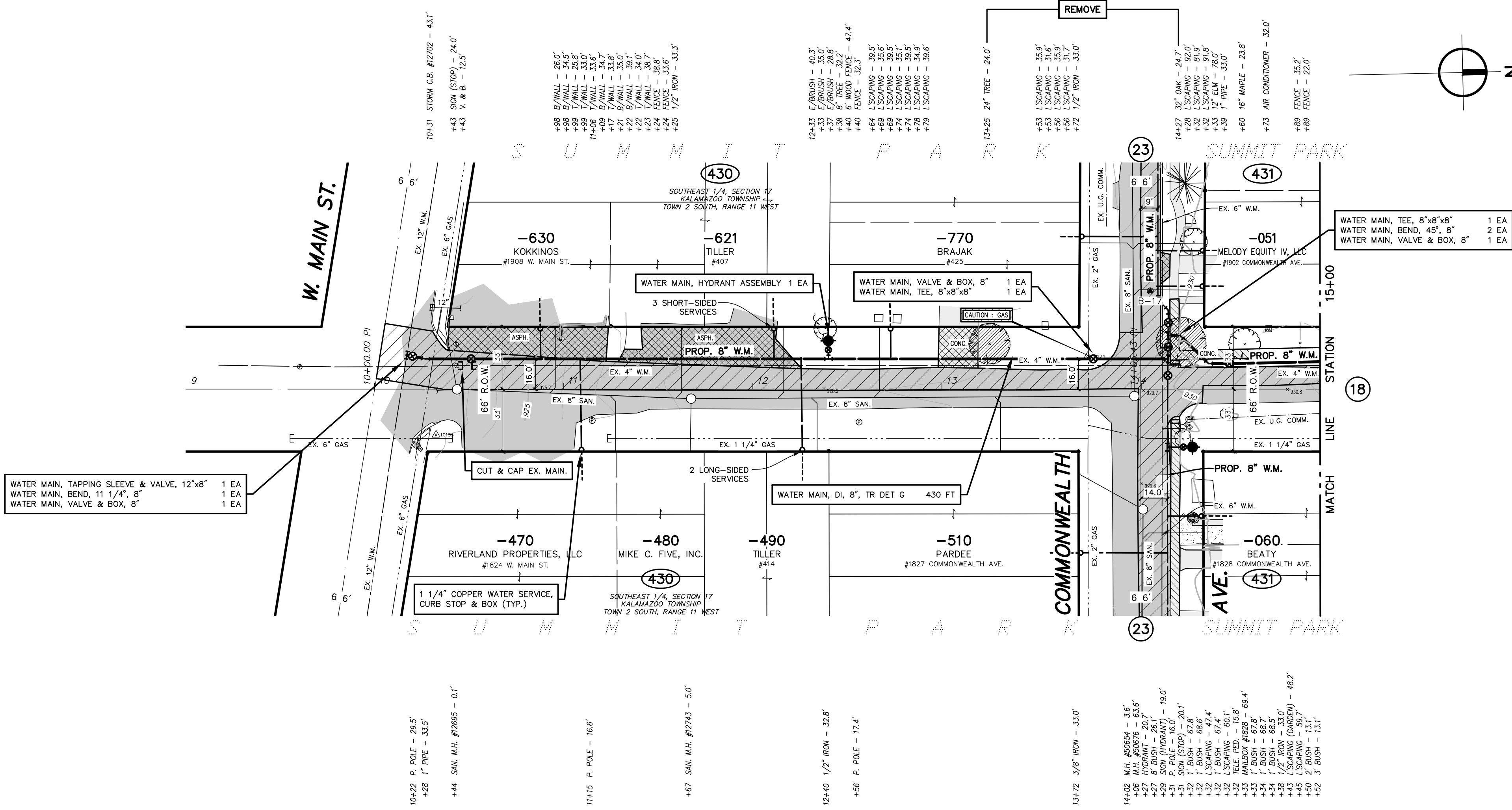
Prein & Newhof
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CITY OF KALAMAZOO DWRP
KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
DARTMOUTH STREET

PROJECT NO.
2220555
SHEET NO.
16 OF 34

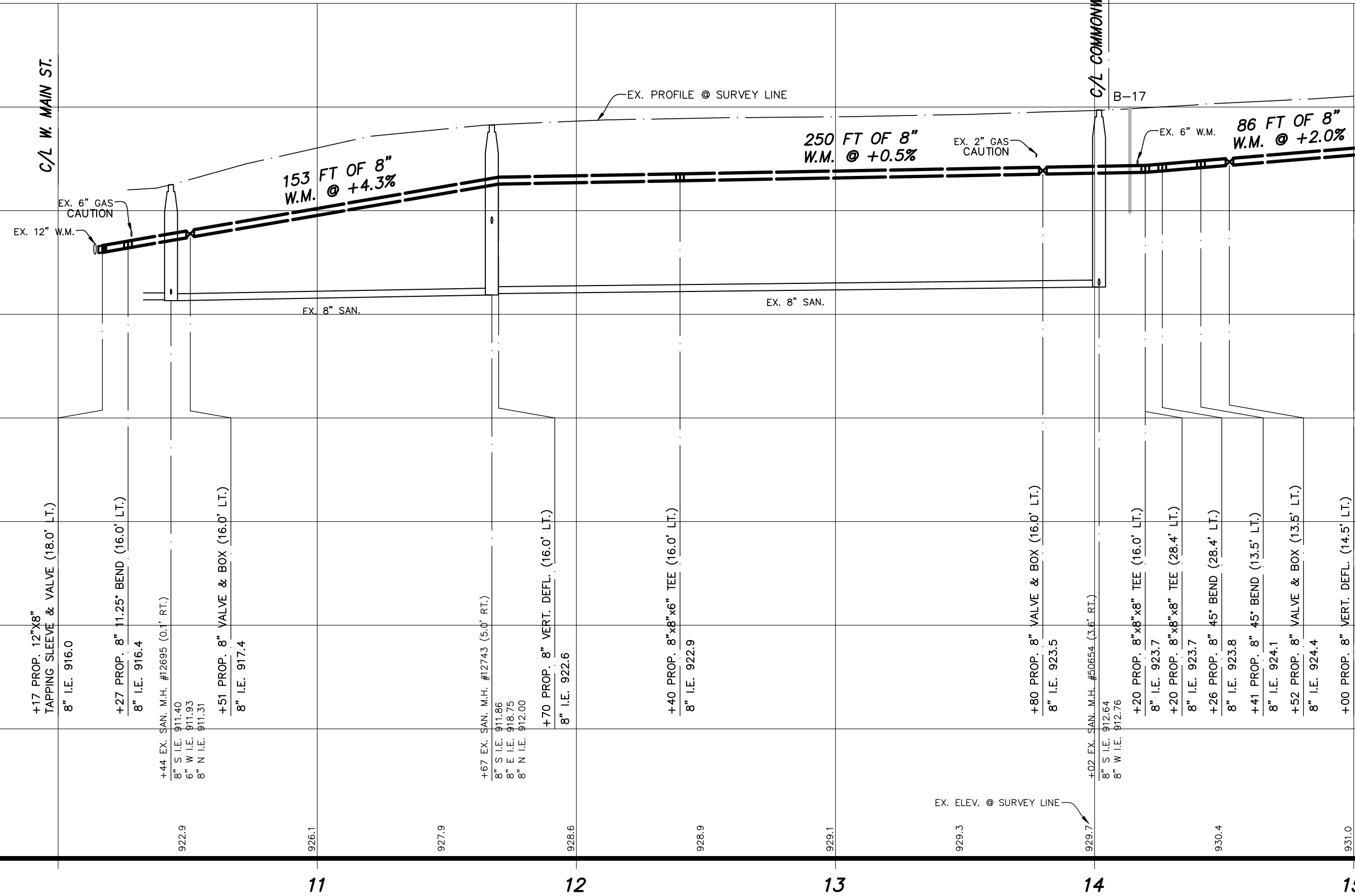
BENCHMARK
CLARENDON STREET & WEST MAIN STREET
25± N & 35° E OF C/L "X", RR SPIKE
SET IN WEST SIDE OF POWER POLE
(1.0' A/GROUND)

CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
10124	292409.295	12786352.120	929.72
10133	292406.919	12786385.950	923.19



REMOVAL LEGEND	
	REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
	REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
	REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
	REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
	TREE REMOVAL

CLARENDON STREET
(66' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



B-17	
0.0'	TOPSOIL
0.7'	LOOSE, BROWN, CLAYEY SAND, LITTLE SILT, TR. GRAVEL (SC)
4.0'	Y. LOOSE, BROWN, FINE-COARSE SAND, TR. SILT, TR. LITTLE GRAVEL (CW)
6.0'	MED. DENSE, BROWN, FINE-COARSE SAND, TR. SILT, TR. GRAVEL (CW)
8.0'	DENSE, BROWN, FINE-MED. SAND, TR. SILT, LITTLE GRAVEL
10.0'	DRY HOLE 1-10-2023



REVISIONS			
NO.	REVISIONS	BY	DATE
1	ISSUED FOR BIDS	B.F.V.	5/26/23

Prein&Newhof
Engineers-Surveyors-Environmental-Laboratory

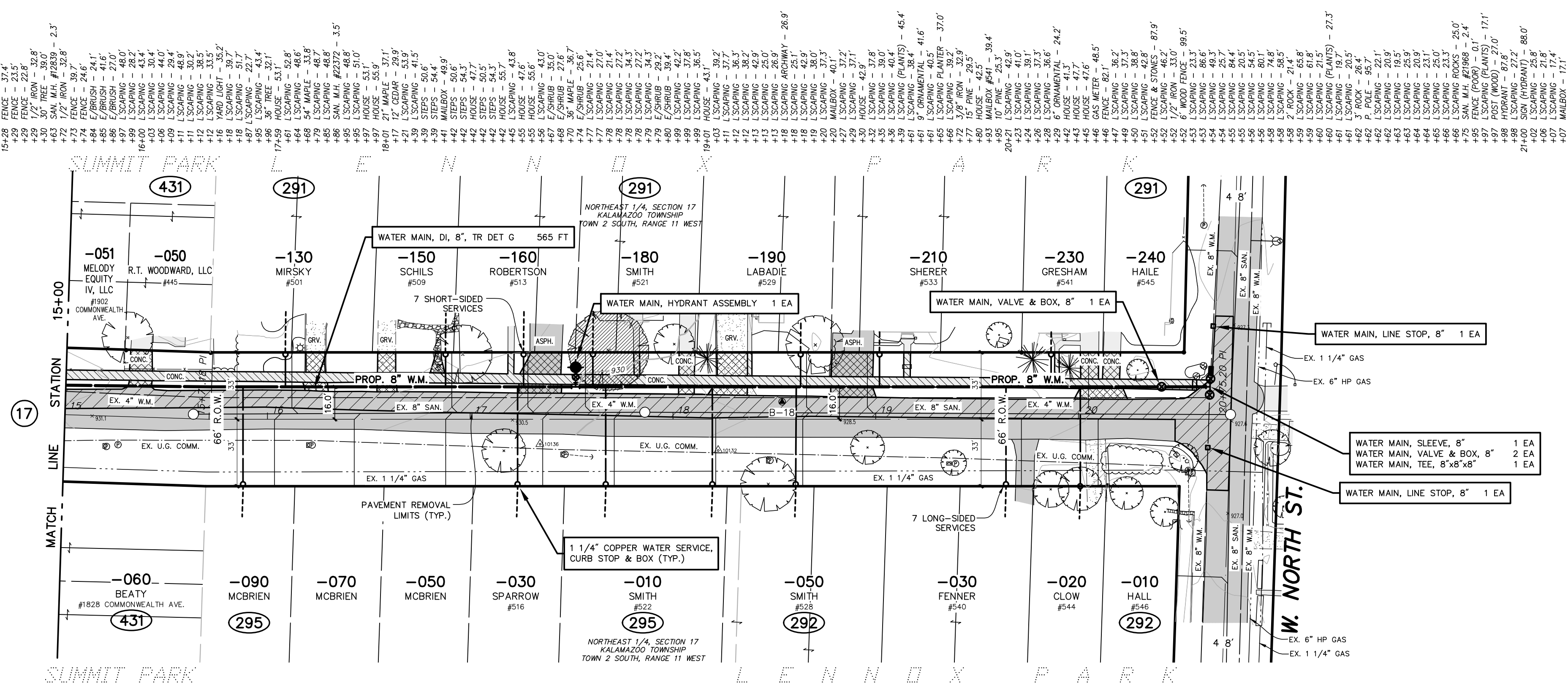
CITY OF KALAMAZOO DWR
KALAMAZOO COUNTY, MICHIGAN

WATER SUPPLY SYSTEM IMPROVEMENTS
CLARENDON STREET

PROJECT NO.
2220555

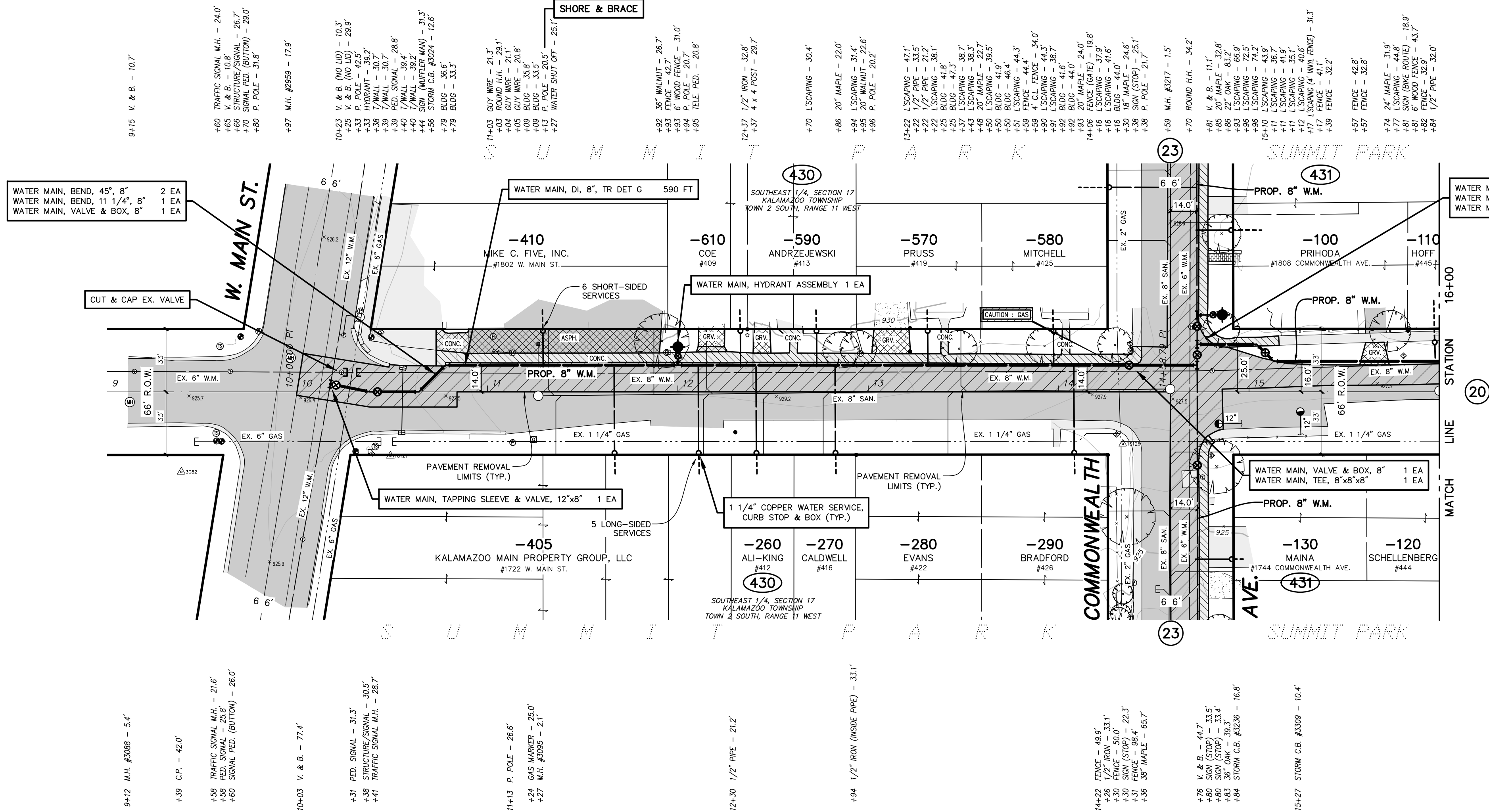
SHEET NO.
17 OF 34

POINT No.	NORTHING	EASTING	ELEVATION
10152	282854.269	12786386.890	928.98
10156	282766.376	12786384.450	930.19



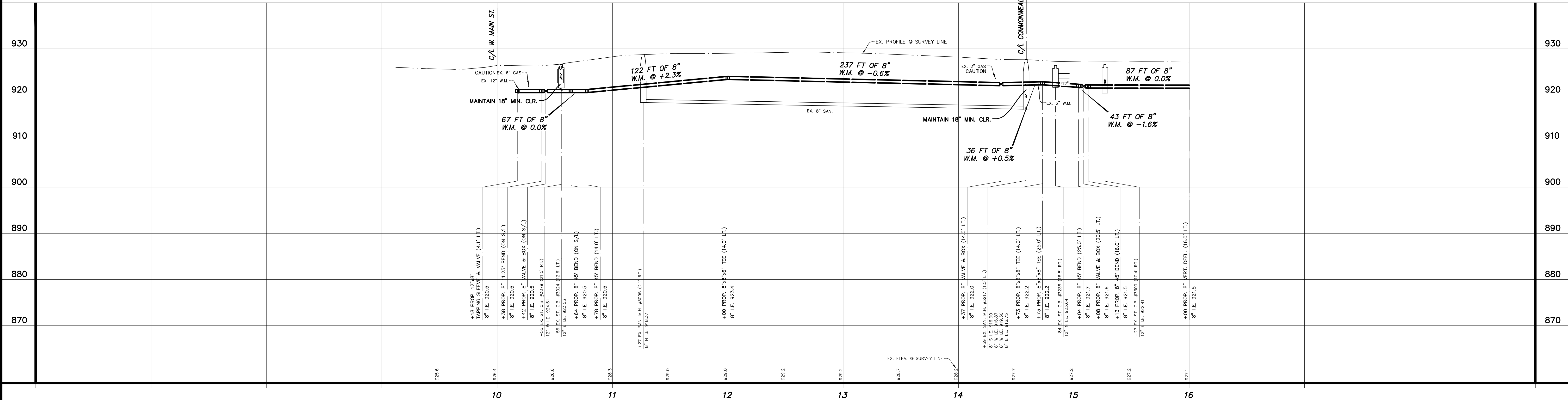
BENCHMARK
EL. 927.88
BERKLEY STREET & WEST MAIN STREET
40° ± N & 30° E OF C/L "X", WEST BOLT
OF SIGNAL POLE
(1.4" A/GROUND)


CONTROL POINT TABLE			
POINT NO.	NORTHING	EASTING	ELEVATION
3082	291909.953	12786730.790	925.92
10126	292404.688	12786726.890	927.54
10127	292019.926	12786724.790	927.61



- REMOVAL LEGEND
- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
 - REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
 - REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
 - REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
 - TREE REMOVAL

BERKLEY STREET
(66' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)





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NO. 1

REVISIONS

ISSUED FOR BIDS

BY B.F.V.

DATE 5/26/23

DRAWN STAFF

DATE NOV. '22

CHECKED B.G.V.

DATE MAY '23

CITY OF KALAMAZOO DWRP
KALAMAZOO COUNTY, MICHIGAN

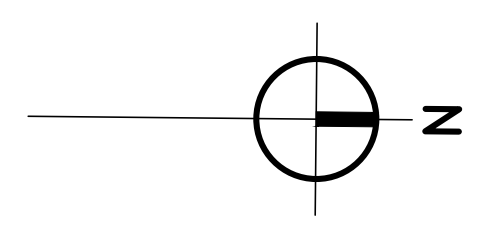
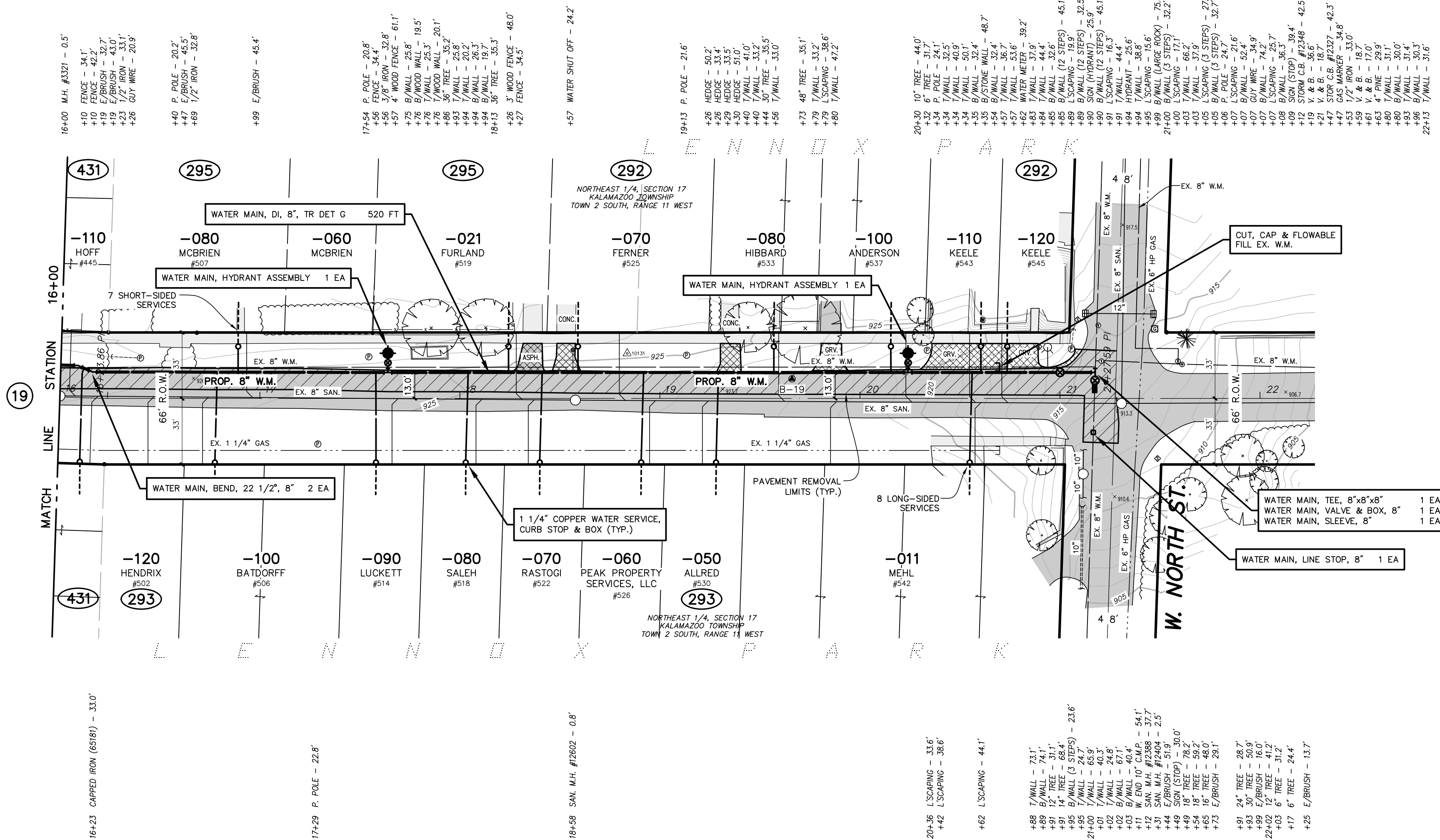
WATER SUPPLY SYSTEM IMPROVEMENTS

BERKLEY STREET

PROJECT NO. 2220555

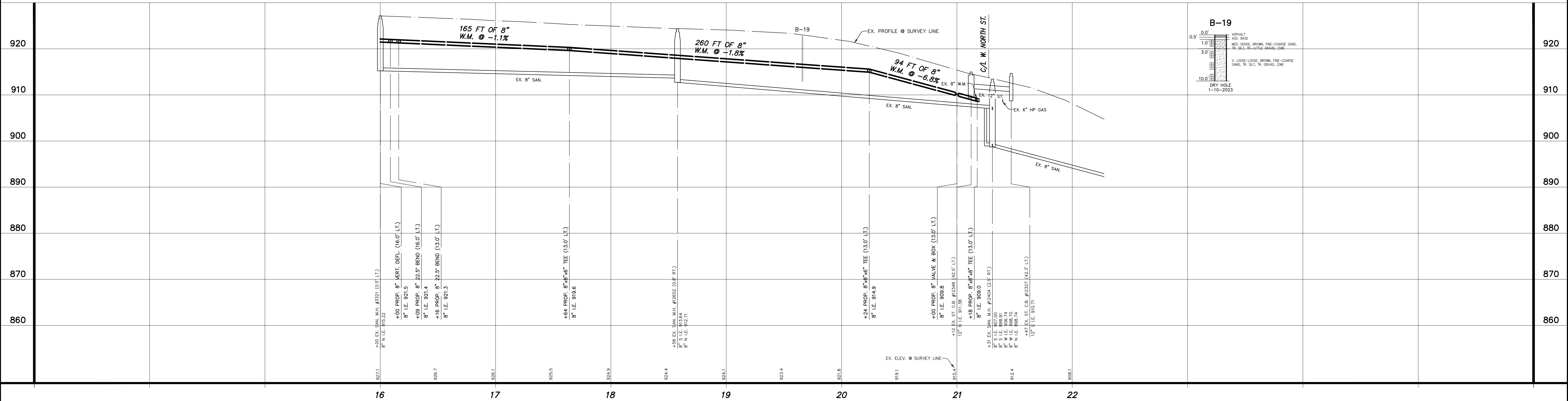
SHEET NO. 19 OF 34


CONTROL POINT TABLE		
POINT NO.	NORTHING	EASTING
10131	292854.944	12786676.770
		925.84



- REMOVAL LEGEND**
- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
 - REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
 - REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
 - REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
 - TREE REMOVAL

BERKLEY STREET
(66' RIGHT OF WAY WIDTH) ASPHALT PAVEMENT WIDTH VARIES





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NO. 1

REVISIONS

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BY B.F.V.

DATE 5/26/23

DRAWN STAFF

CHECKED B.G.V.

DATE MAY '23



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CITY OF KALAMAZOO DWR
KALAMAZOO COUNTY, MICHIGAN

WATER SUPPLY SYSTEM IMPROVEMENTS

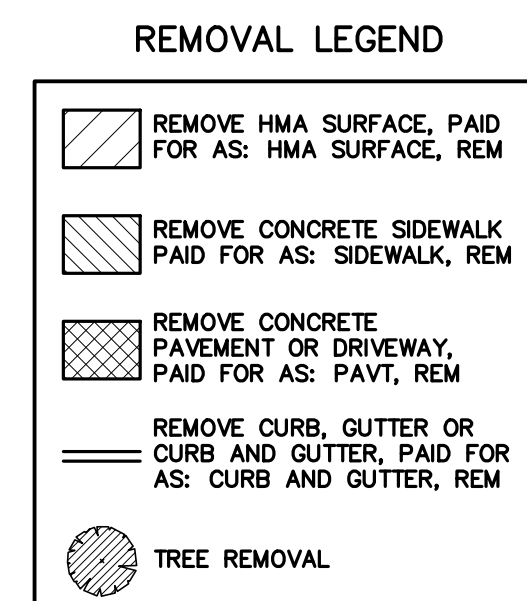
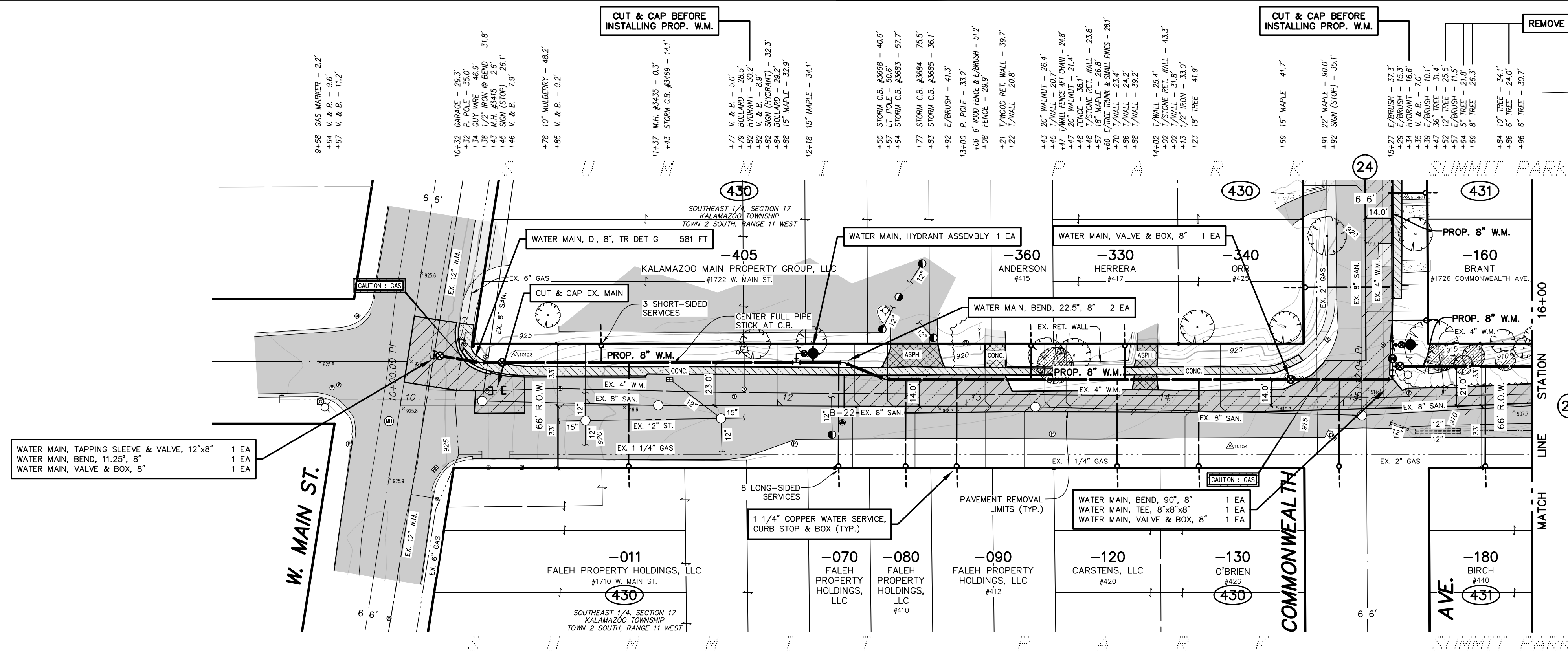
BERKLEY STREET

PROJECT NO. 2220555

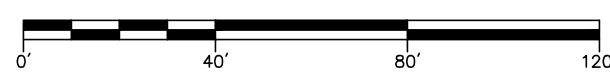
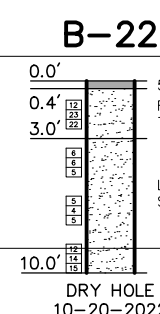
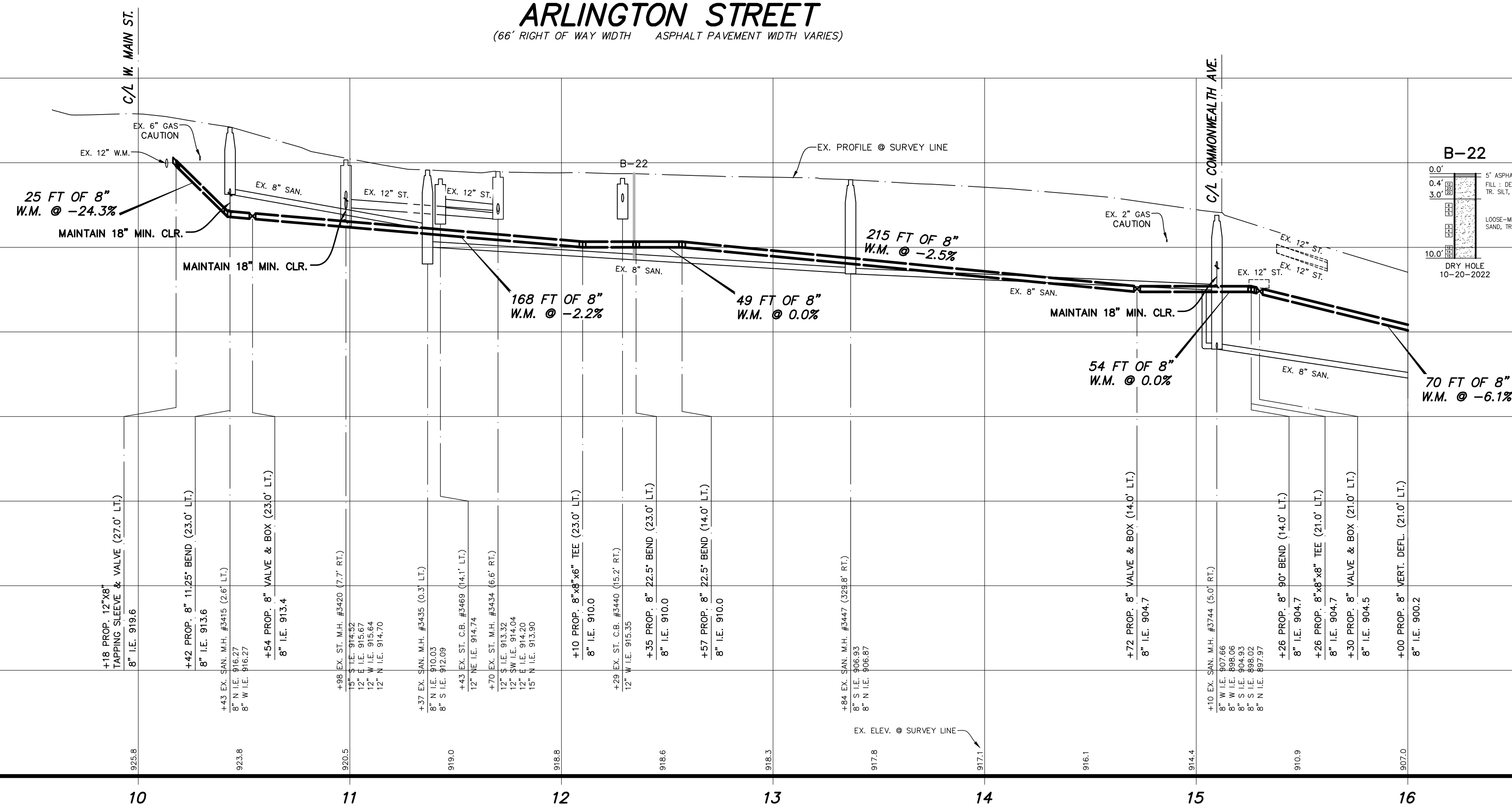
SHEET NO. 20 OF 34

BENCHMARK EL. 915.73
ARLINGTON STREET & COMMONWEALTH AVENUE
20'± S & 15' E OF C/L "X", NAIL SET IN
WEST SIDE OF POWER POLE
(1.3' A/GROUND)

POINT No.	NORTHING	EASTING	ELEVATION
10128	291973.303	12786991.190	924.16
10129	292381.726	12787014.110	916.15
10154	292350.949	12787049.560	916.32
50869	292447.708	12786920.050	920.87



(66' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



SCALES : 1" = 40' HORIZ. (CONTOURS AT ONE FOOT INTERVALS)
1" = 10' VERT.

NO.	R E V I S I O N S	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF
				DATE NOV. '22
				CHECKED B.G.V.
				DATE MAY '23

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CITY OF KALAMAZOO DWRF
KALAMAZOO COUNTY, MICHIGAN

WATER SUPPLY SYSTEM IMPROVEMENTS

ARLINGTON STREET

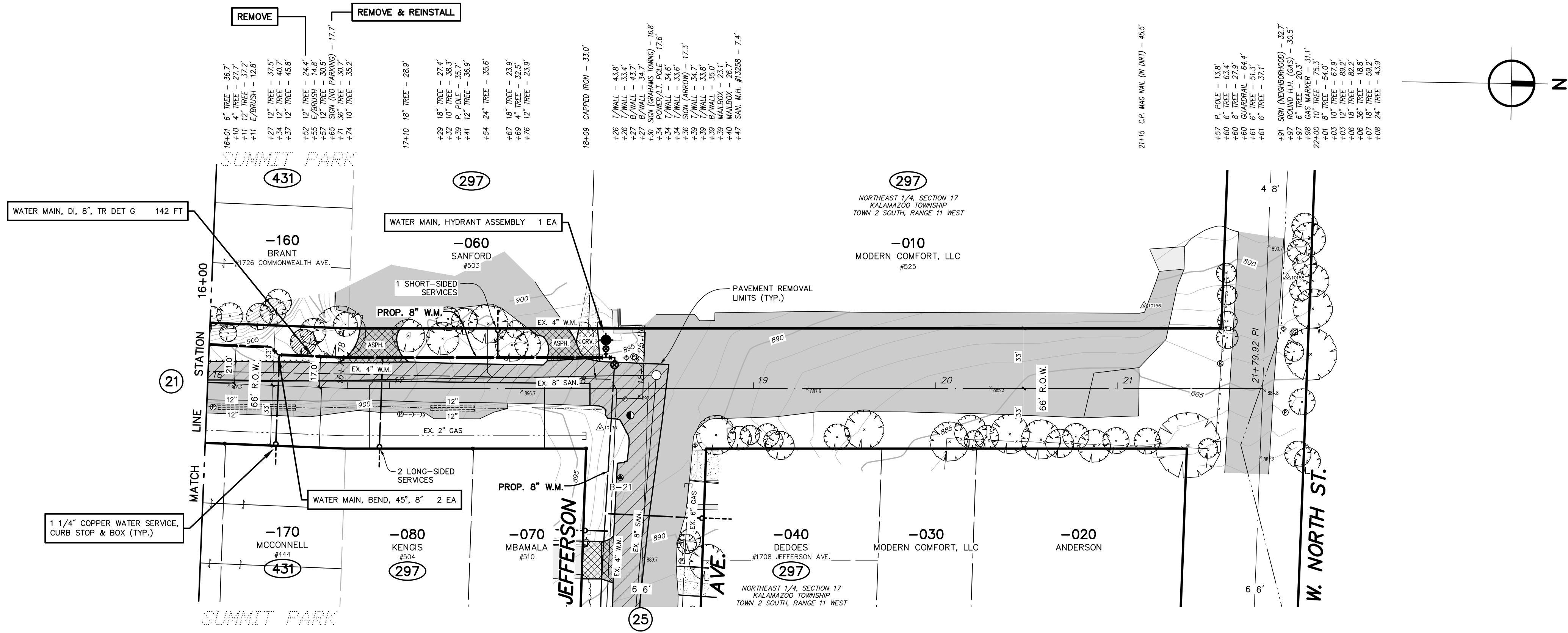
PROJECT NO.
2220555
SHEET NO.

21 OF 34

T:\CIVIL\PROJECTS\2022\2220555_CITY OF KALAMAZOO\DWG\4-PROJ\2220555_PUPR_ARLINGTON.DWG - RSTRONG - May, 24, 2023 - 04:17pm - Prein&Newhof

BENCHMARK			EL. 895.20
ARLINGTON STREET & JEFFERSON AVENUE			
10'± S & 20' W OF C/L "X", NAIL SET IN			
SOUTH SIDE OF POWER POLE			
(11.0' A/GROUND)			

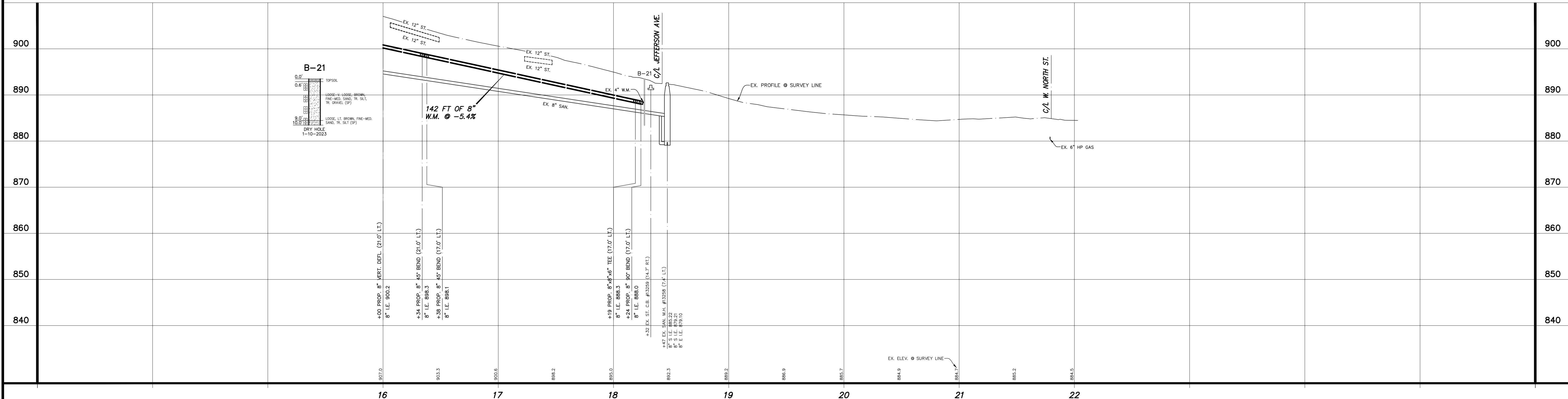
CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
10130	292727.654	12787053.660	893.90
10155	293104.134	12786965.590	888.86
10156	293025.600	12786982.130	888.81



REMOVAL LEGEND	
	REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
	REMOVE CONCRETE SIDEWALK PAID FOR AS: SIDEWALK, REM
	REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
	REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
	TREE REMOVAL

ARLINGTON STREET

(66' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



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SCALES: 1" = 40' HORIZ. (CONTOURS AT ONE FOOT INTERVALS)
1" = 10' VERT.

NO.		R E V I S I O N S		BY	DATE	DRAWN
1		ISSUED FOR BIDS		B.F.V.	5/26/23	STAFF
						DATE
						CHECKED
						B.G.V.
						DATE
						MAY '23

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Engineers-Surveyors-Environmental-Laboratory

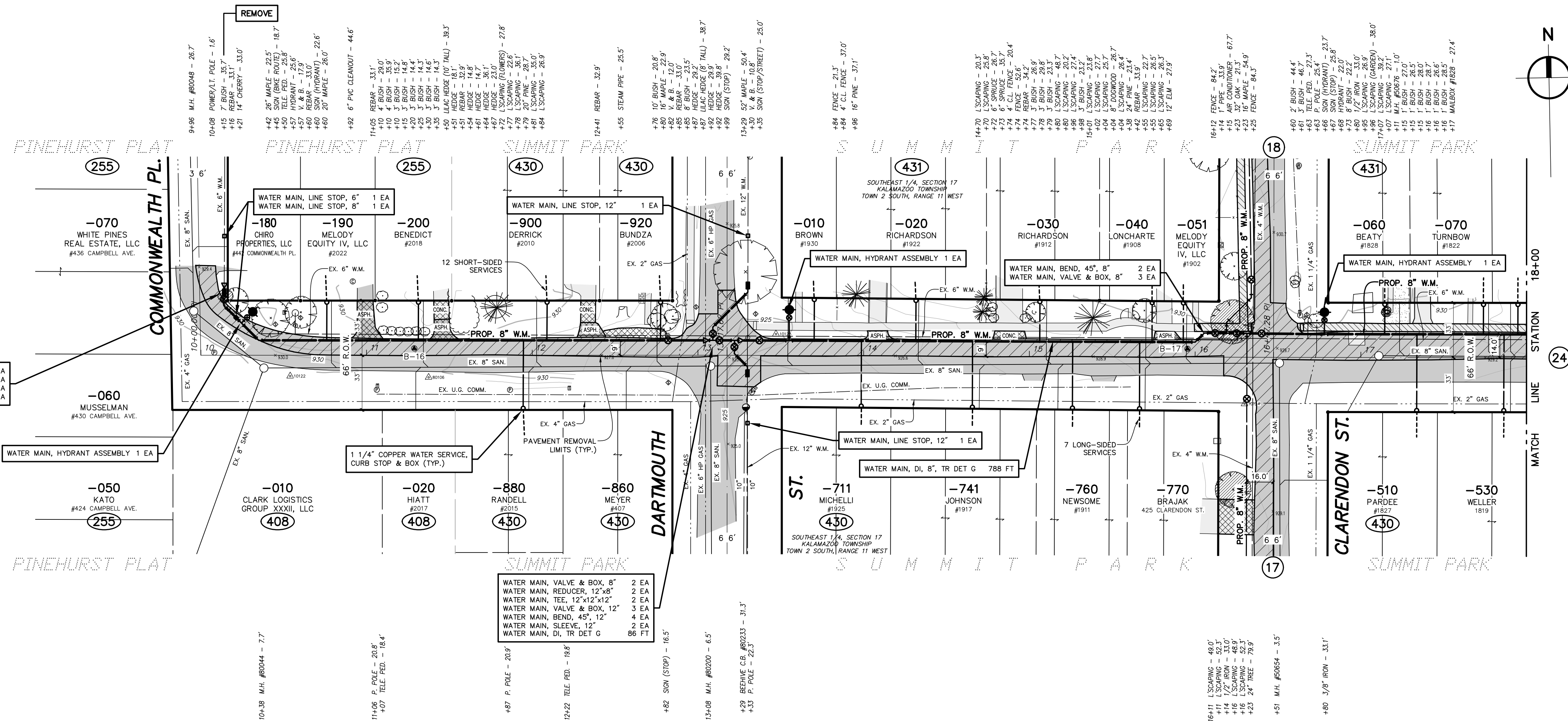
CITY OF KALAMAZOO DWR
KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
ARLINGTON STREET

PROJECT NO.
2220555
SHEET NO.
22 OF 34

BENCHMARK
COMMONWEALTH AVENUE & DARTMOUTH STREET
20' ± S & 15' E OF C/L "X", RR SPIKE
SET IN NORTH SIDE OF POWER POLE W/LIGHT
(0.9' A/GROUND)

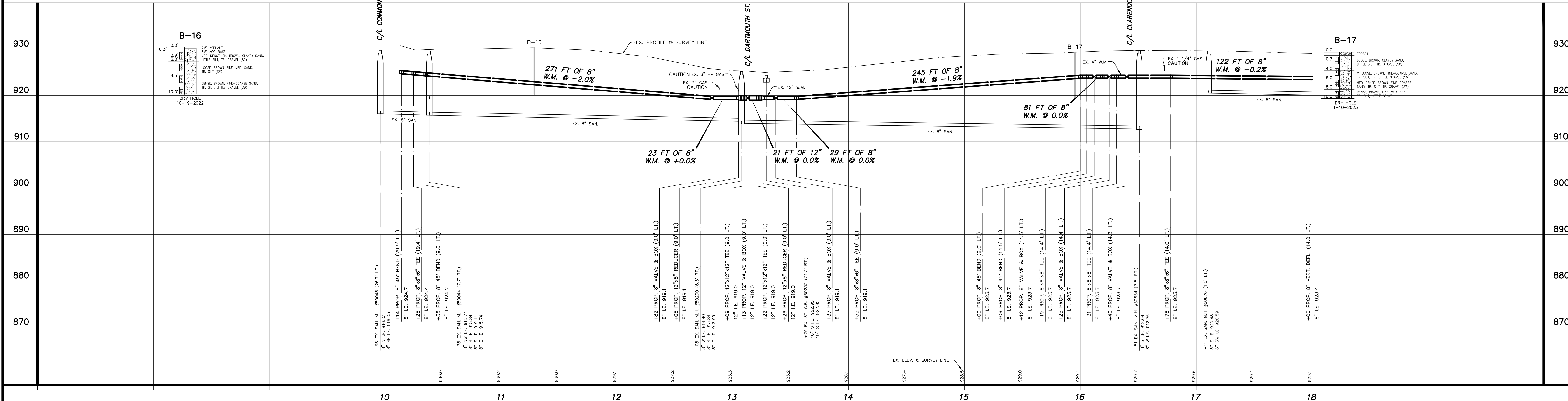
CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
10122	292437.118	12785776.650	930.54
10123	292456.858	12786070.220	925.20
10124	292459.295	12786352.120	929.72
80106	292454.721	12785860.170	930.56


WATER MAIN REDUCER, 8"x6" 1 EA
WATER MAIN, SLEEVE, 8" 1 EA
WATER MAIN, VALVE & BOX, 8" 1 EA
WATER MAIN, BEND, 45°, 8" 2 EA



- REMOVAL LEGEND
- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
 - REMOVE CONCRETE SIDEWALK PAID FOR AS: SIDEWALK, REM
 - REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
 - REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
 - TREE REMOVAL

COMMONWEALTH AVENUE
(66' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)





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NO. 1

REVISIONS

ISSUED FOR BIDS

BY B.F.V.

DATE 5/26/23

DRAWN STAFF

CHECKED B.G.V.

DATE MAY '23

CITY OF KALAMAZOO DWRP

KALAMAZOO COUNTY, MICHIGAN

WATER SUPPLY SYSTEM IMPROVEMENTS

COMMONWEALTH AVENUE

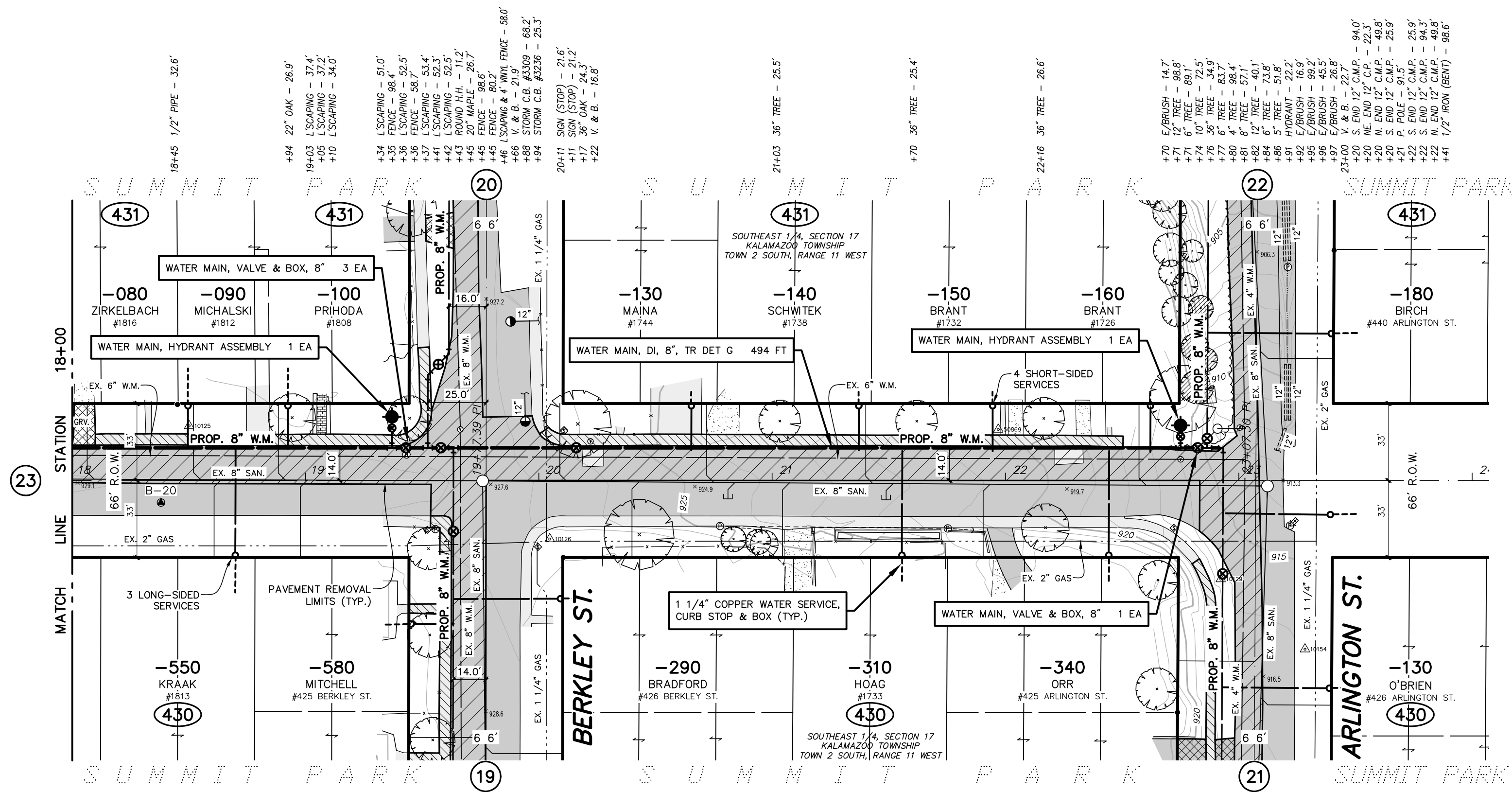
PROJECT NO. 2220555

SHEET NO. 23 OF 34

BENCHMARK
COMMONWEALTH AVENUE & ARLINGTON STREET
20± S & 15' E OF C/L "X", NAIL SET IN
WEST SIDE OF POWER POLE
(1.3' A/GROUND)

EL. 915.73

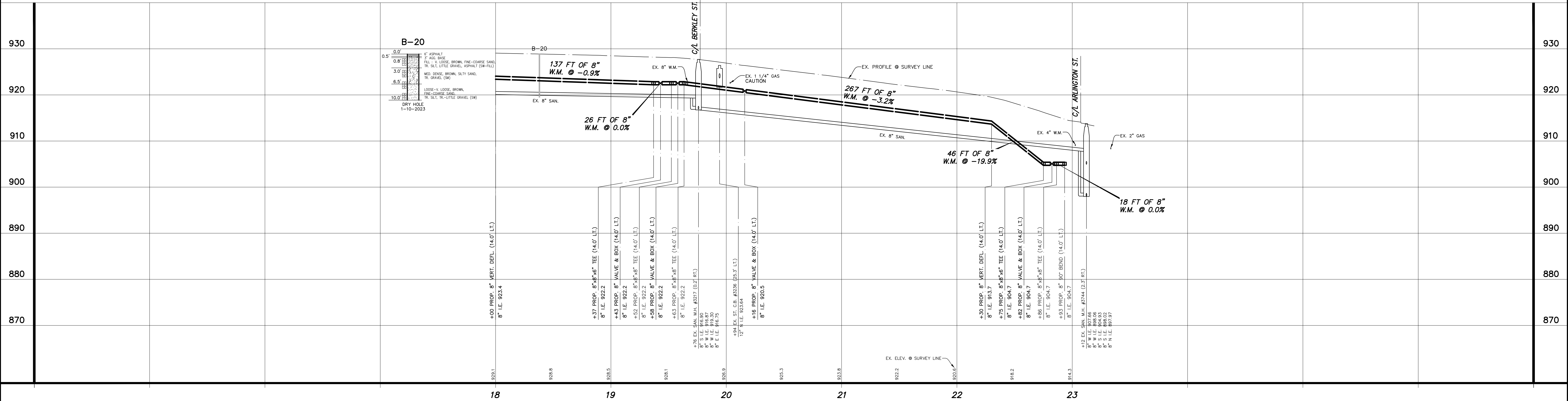
CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
10125	292456.283	12786573.350	928.54
10126	292404.688	12786726.890	927.54
10129	292381.726	12787074.110	916.15
10134	292355.949	12787045.960	916.32
50869	292447.708	12786920.050	920.87



REMOVAL LEGEND	
	REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
	REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
	REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
	REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
	TREE REMOVAL

COMMONWEALTH AVENUE

(66' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



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SCALES : 1" = 40' HORIZ. (CONTOURS AT ONE FOOT INTERVALS)
1" = 10' VERT.

NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF
				DATE
				CHECKED
				B.G.V.
				DATE
				MAY '23

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CITY OF KALAMAZOO DWR
KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
COMMONWEALTH AVENUE

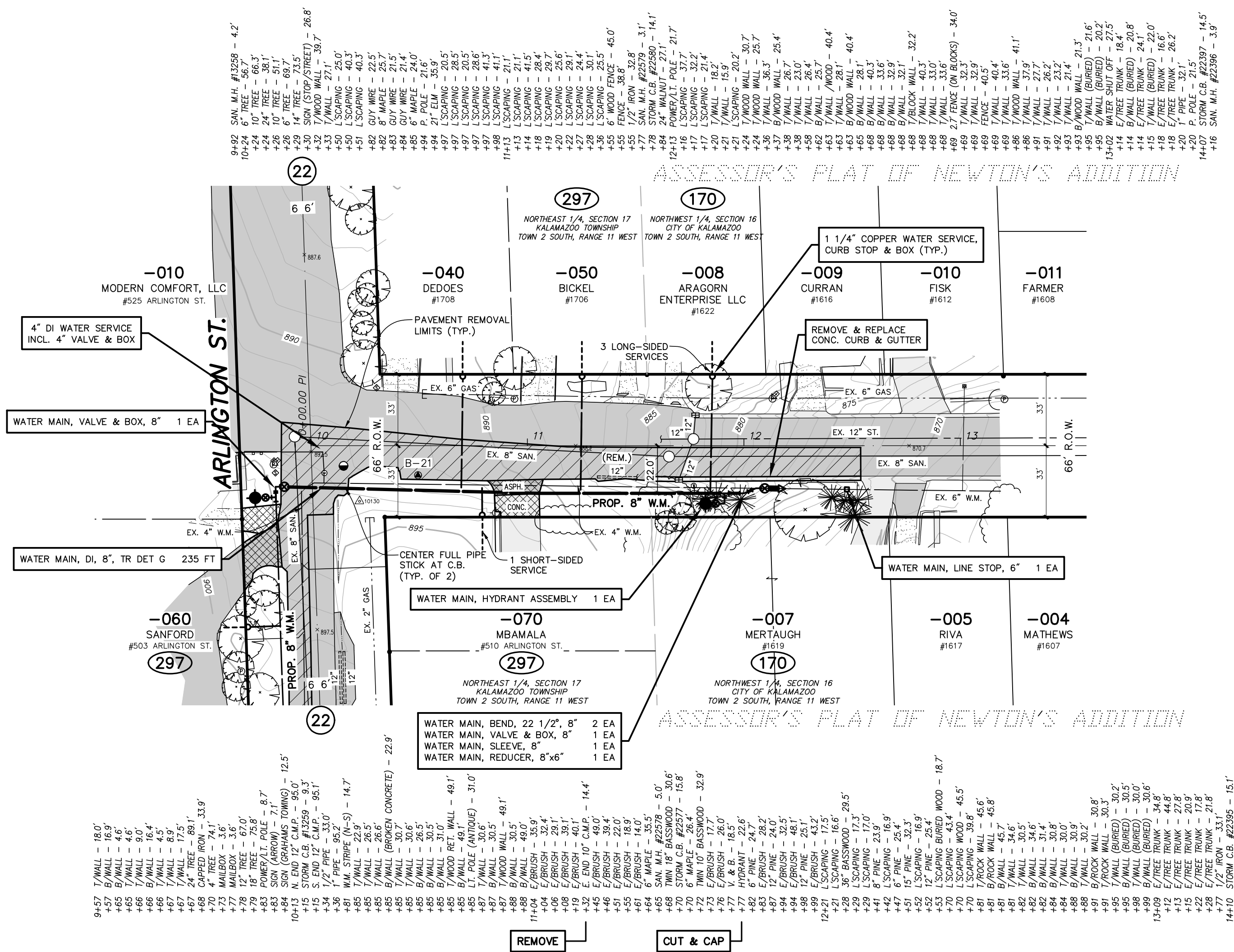
PROJECT NO.
2220555
SHEET NO.
24 OF 34

T:\CADD\PROJECTS\2022\2220555_CITY OF KALAMAZOO\DWG\4-PROJ\2220555-DWP_JEFFERSON.DWG - ESTENG - May, 24 2023 - 04:49pm - Prein&Newhof

BENCHMARK
JEFFERSON AVENUE & ARLINGTON STREET
10'± S & 20' W OF C/L "X", NAIL SET IN
SOUTH SIDE OF POWER POLE
(1.0' A/GROUND)

BENCHMARK
JEFFERSON AVENUE & ARLINGTON STREET
20'± N & 215' E OF C/L "X", NAIL SET IN
SOUTH SIDE OF POWER POLE
(1.0' A/GROUND)

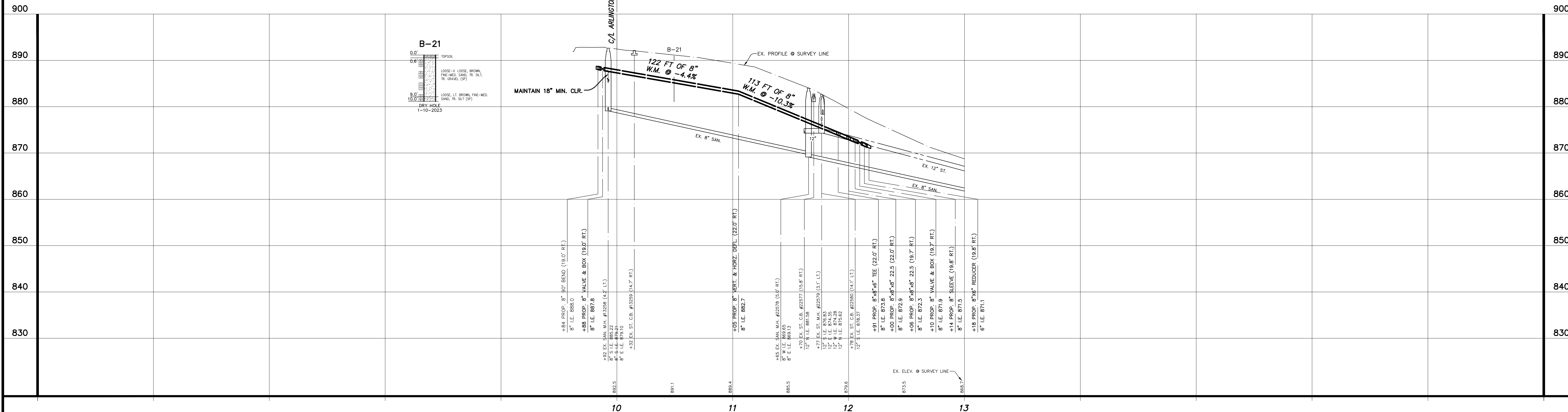
CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
10130	292727.654	12787053.660	893.90



REMOVAL LEGEND	
	REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
	REMOVE CONCRETE SIDEWALK PAID FOR AS: SIDEWALK, REM
	REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
	REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
	TREE REMOVAL

JEFFERSON STREET

(66' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETTED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

811
Know what's below.
Call before you dig.

NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF

DATE	NOV. '22
CHECKED	B.G.V.
DATE	MAY '23

Prein&Newhof
Engineers-Surveyors-Environmental-Laboratory

CITY OF KALAMAZOO DWRP
KALAMAZOO COUNTY, MICHIGAN

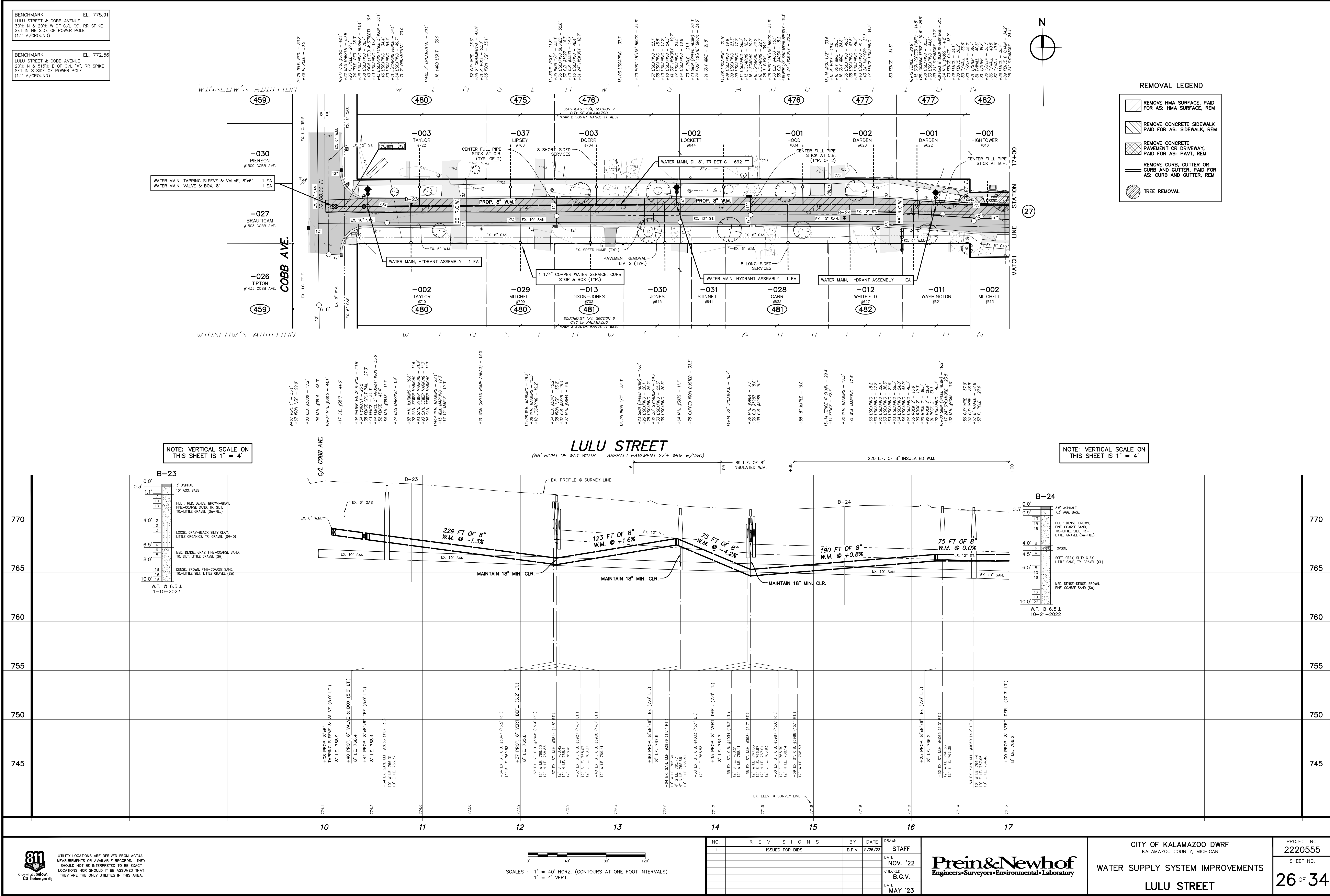
WATER SUPPLY SYSTEM IMPROVEMENTS


JEFFERSON STREET

PROJECT NO.
2220555

SHEET NO.
25 OF 34

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UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

NO. 1

REVISIONS

ISSUED FOR BIDS

BY B.F.V.


DATE 5/26/23

DRAWN STAFF

DATE NOV. '22

CHECKED B.G.V.

DATE MAY '23



Engineers-Surveyors-Environmental-Laboratory

CITY OF KALAMAZOO DWRP

KALAMAZOO COUNTY, MICHIGAN

WATER SUPPLY SYSTEM IMPROVEMENTS

LULU STREET

PROJECT NO. 2220555

SHEET NO. 26 OF 34

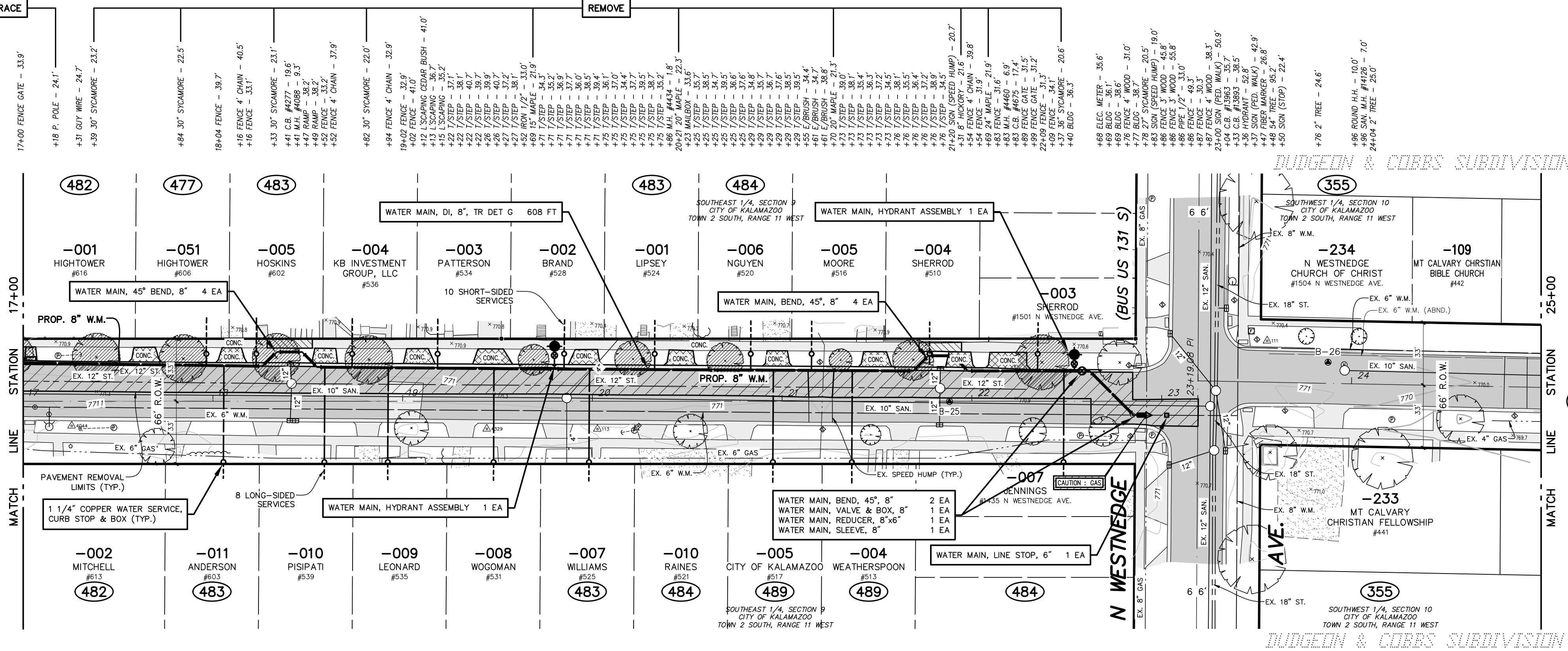
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BENCHMARK			EL. 772.44
LULU STREET & N WESTNEDGE AVENUE			
15' ± S & 295' ± W OF C/L "X", RR SPIKE			
SET IN N SIDE OF POWER POLE			
(1.1' A/GROUND)			

CONTROL POINT TABLE			
POINT NO.	NORTHING	EASTING	ELEVATION
4044	286008.318	12791860.810	770.82
4329	286005.213	12792076.550	771.04

SHORE & BRACE

REMOVE



REMOVAL LEGEND

- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
- REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
- REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
- REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
- TREE REMOVAL

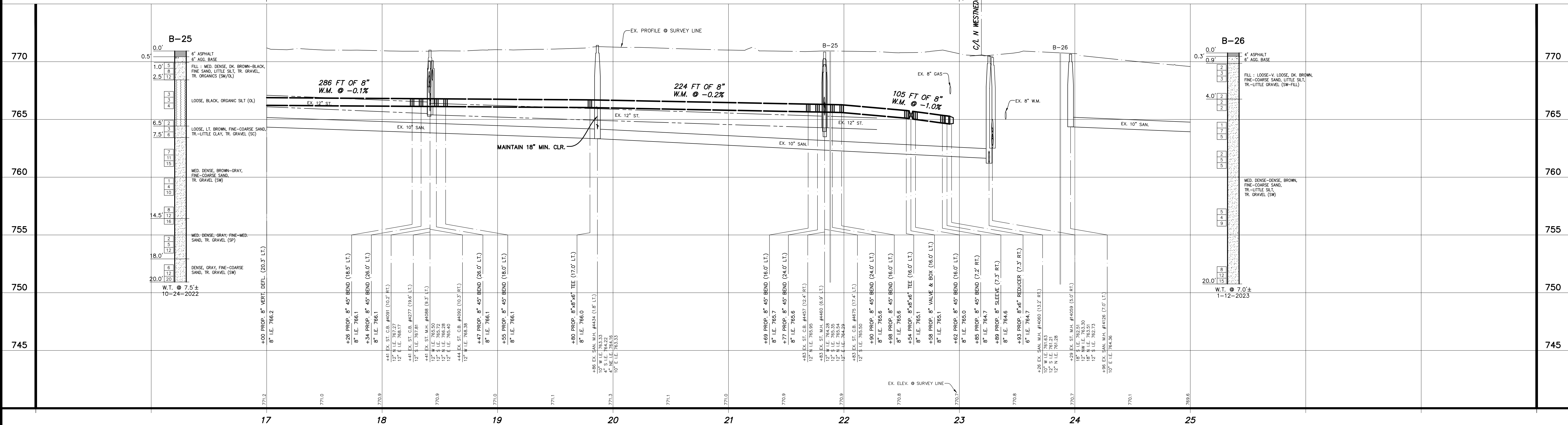
NOTE: VERTICAL SCALE ON THIS SHEET IS 1" = 4'

NOTE: VERTICAL SCALE ON THIS SHEET IS 1" = 4'

LULU STREET

(66' RIGHT OF WAY WIDTH) ASPHALT PAVEMENT 27' ± WIDE w/C&G

600 L.F. OF 8" INSULATED W.M.



SCALES: 1" = 40' HORZ. (CONTOURS AT ONE FOOT INTERVALS)
1" = 4' VERT.

NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF
				DATE
				NOV. '22
				CHECKED
				B.G.V.
				DATE
				MAY '23

Prein&Newhof
Engineers-Surveyors-Environmental-Laboratory

CITY OF KALAMAZOO DWRP
KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
LULU STREET

PROJECT NO.
2220555
SHEET NO.
27 OF 34

BENCHMARK
LULU STREET & N PRINCETON AVENUE
20'± S & 20'± E OF C/L "X", NAIL SET
IN N SIDE OF POWER POLE
(1.1' A/GROUND)

BENCHMARK
LULU STREET & N PARK STREET
30'± S & 30'± W OF C/L "X", RR SPIKE
SET IN NW SIDE OF POWER POLE
(0.7' A/GROUND)

BENCHMARK
LULU STREET & N CHURCH STREET
20'± S & 20'± E OF C/L "X", RR SPIKE
SET IN NW SIDE OF POWER POLE
(1.0' A/GROUND)

CONTROL POINT TABLE
POINT NO. NORTHING EASTING ELEVATION
10172 286120.861 12783392.880 767.20

WATER MAIN, 8"x6"x8", TEE 1 EA
WATER MAIN, BEND, 45", 8" 5 EA
WATER MAIN, VALVE & BOX, 8" 1 EA
WATER MAIN, SLEEVE, 8" 1 EA
WATER MAIN, REDUCER, 8"x6" 1 EA
WATER MAIN, DI, 8", TR DET G 34 LF

WATER MAIN, LINE STOP, 6" 1 EA

WATER MAIN, REDUCER, 8"x6" 1 EA
WATER MAIN, SLEEVE, 8" 1 EA
WATER MAIN, VALVE & BOX, 8" 1 EA
WATER MAIN, DI, 8", TR DET G 50 LF

WATER MAIN, LINE STOP, 6" 1 EA

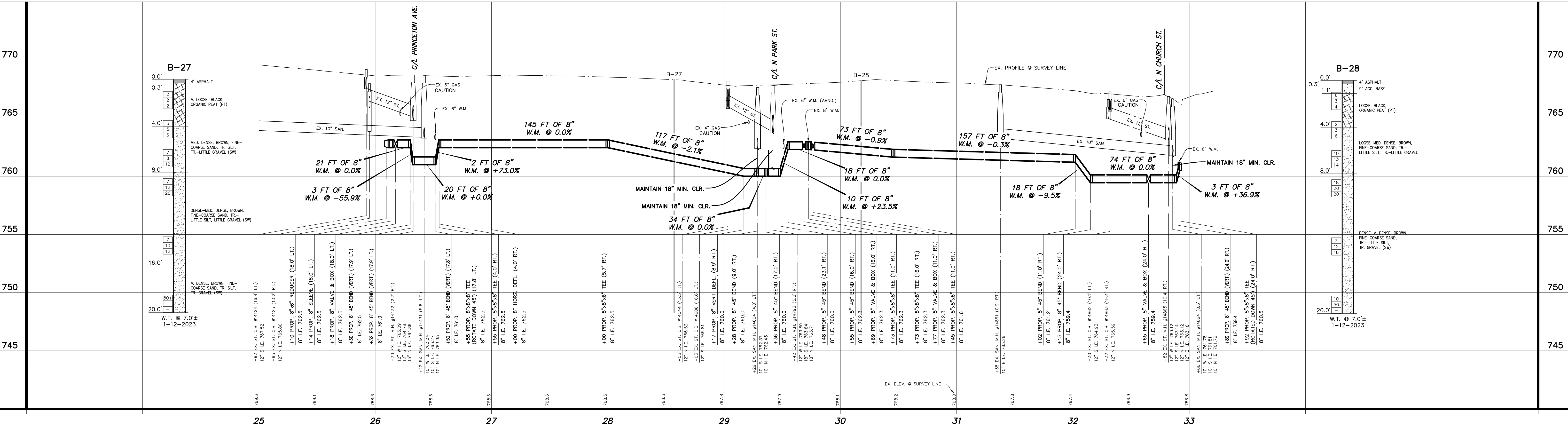
NOTE: VERTICAL SCALE ON
THIS SHEET IS 1" = 4'

NOTE: VERTICAL SCALE ON
THIS SHEET IS 1" = 4'

- REMOVAL LEGEND
- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
 - REMOVE CONCRETE SIDEWALK PAID FOR AS: SIDEWALK, REM
 - REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
 - REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
 - TREE REMOVAL

LULU STREET

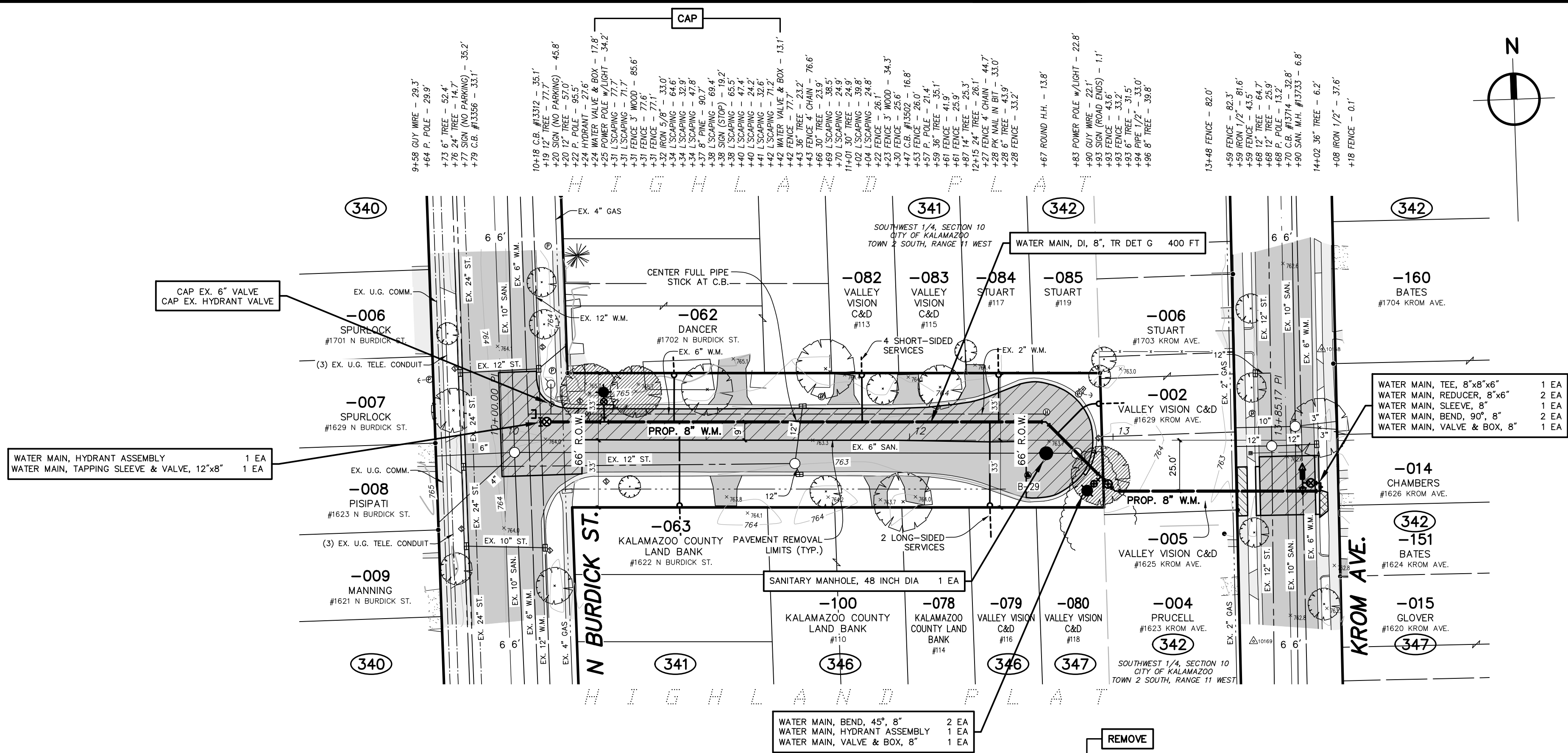
(66' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



T:\CIVIL\PROJECTS\2023\2220555_CITY OF KALAMAZOO\DWG\4-PROJ\2220555_P10P-MARTIN.DWG - ISTENG - May, 24 2023 - 04:53pm - Prein&Newhof

BENCHMARK
MARTIN STREET & KROM STREET
20'± N & 100'± W OF C/L "X", NAIL SET
IN S SIDE OF POWER POLE
(1.3' A/GROUND)

CONTROL POINT TABLE			
POINT NO.	NORTHING	EASTING	ELEVATION
10168	296895.019	12784572.700	762.76
10169	296752.781	12784534.380	762.85



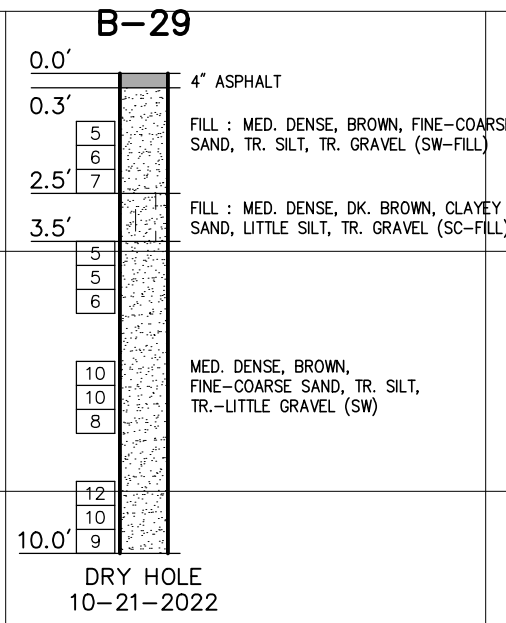
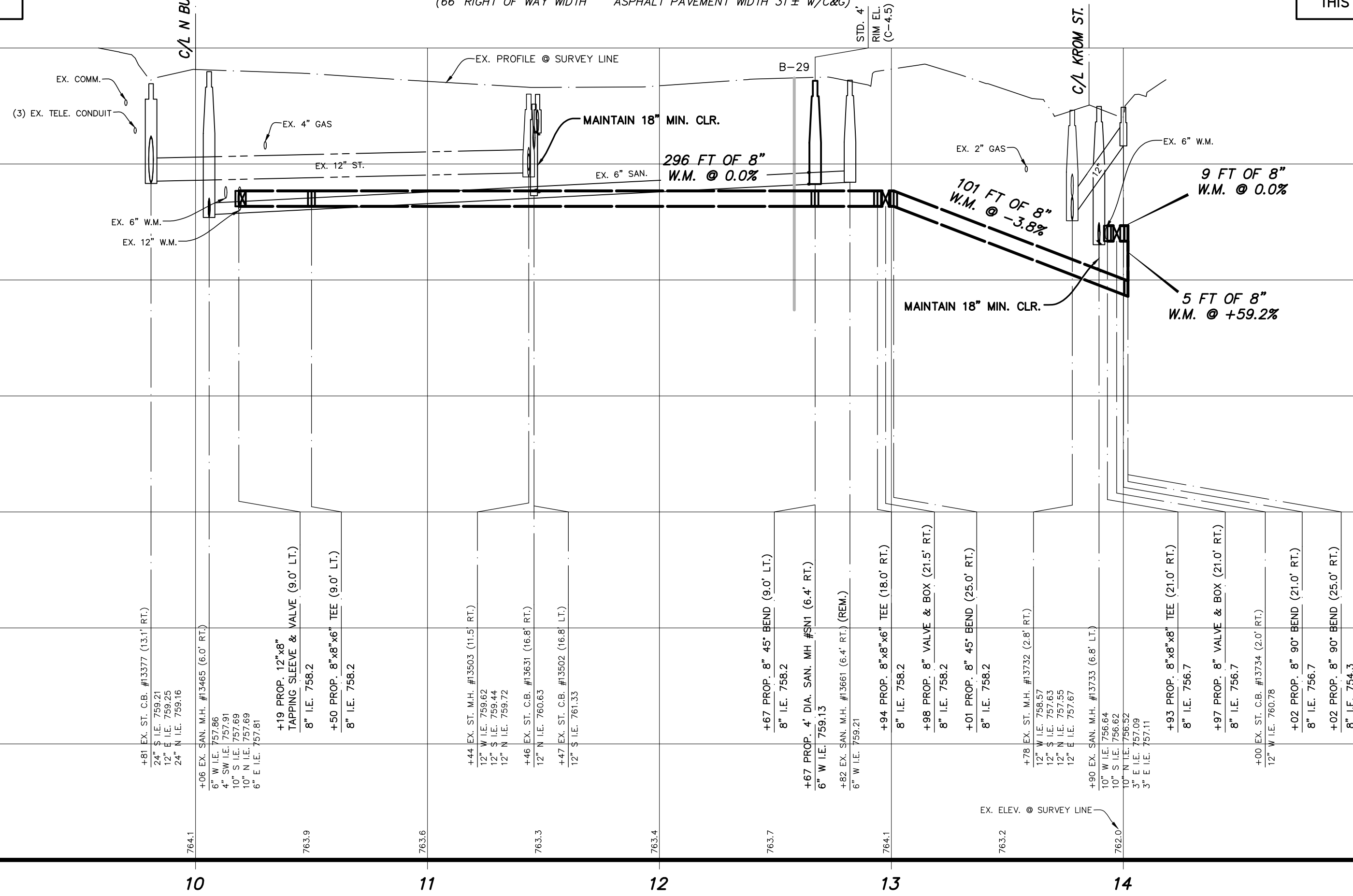
REMOVAL LEGEND	
	REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
	REMOVE CONCRETE SIDEWALK, PAID FOR AS: SIDEWALK, REM
	REMOVE CONCRETE PAVEMENT OR DRIVEWAY, PAID FOR AS: PAVT, REM
	REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM
	TREE REMOVAL

NOTE: VERTICAL SCALE ON THIS SHEET IS 1" = 4'

NOTE: VERTICAL SCALE ON THIS SHEET IS 1" = 4'

MARTIN STREET

(66' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH 31'± w/C&G)



0' 40' 80' 120'
1" = 40' HORZ. (CONTOURS AT ONE FOOT INTERVALS)
1" = 4' VERT.



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NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF
				DATE
				NOV. '22
				CHECKED
				B.G.V.
				DATE
				MAY '23

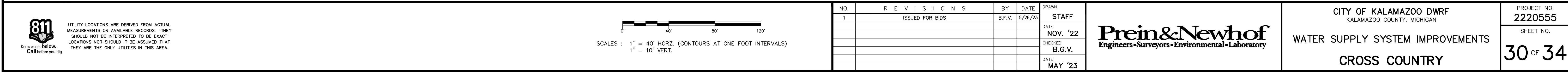
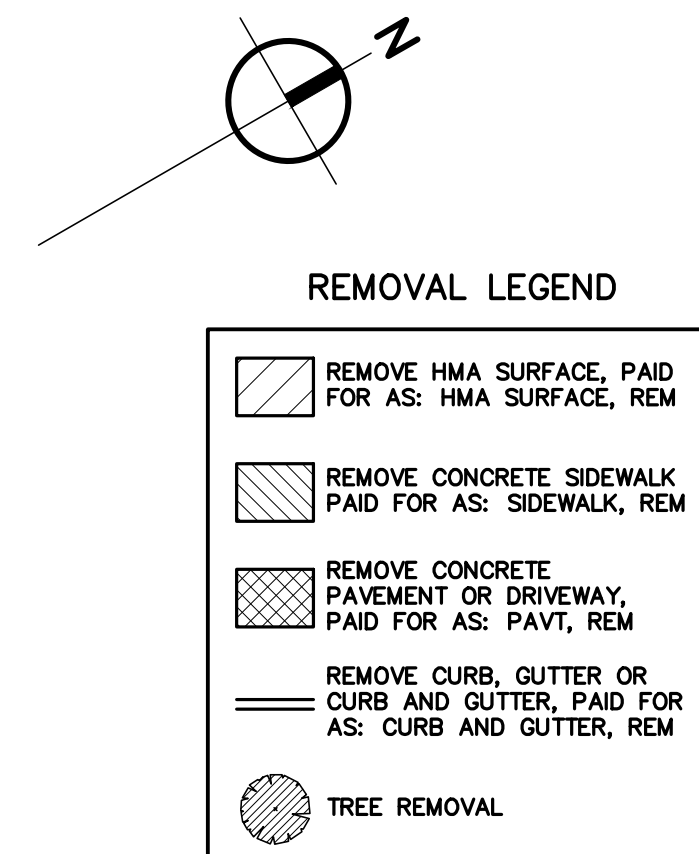
Prein&Newhof
Engineers-Surveyors-Environmental-Laboratory

CITY OF KALAMAZOO DWRP
KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
MARTIN STREET

PROJECT NO.
2220555
SHEET NO.

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CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
10173	286148.757	12793700.600	763.54
10175	286359.318	12793983.570	761.34



Water Main Separation Conflicts (<10' H/18" V Separation from Sewers)					
Street	Sheet	STA	Offset	Conflict	Proposed Mitigation
Crown	4	19+60	22R	WM is 7' from catch basin	Existing WM is 10' from the CB and 3' of separation from the existing WM is needed for constructability. The existing sanitary sewer on the west side of the existing WM does not allow placement of the new WM on the west side of the existing WM.
Waverly	5	9+87	6R	WM is 8.4' from sanitary manhole	Installing WM within an existing 20' utility easement, so area is limited. Vertical separation is approximatley 7.5'
Waverly	5	11+02	6R	WM is 3.9' from catch basin	Due to corridor limitations WM is located <10' from catch basins at multiple locations. No alternative alignment within the right-of-way will eliminate a deviation. Water main joints will be located as far from te catch basin as possible.
Waverly	5	11+68	6R	WM is 6.9' from catch basin	Due to corridor limitations WM is located <10' from catch basins at multiple locations. No alternative alignment within the right-of-way will eliminate a deviation. Water main joints will be located as far from the catch basin as possible.
Waverly	5	13+04	6R	WM is 8.2' from sanitary manhole	Due to corridor limitations, the WM is located within 10' of the sanitary sewer to maintain straight water main alignment and avoiding repeated deflection and/or bends, and maintain at least a 10' offset from the storm sewer.
Willmette	6	11+82	8L	WM is 7' from catch basin	Due to corridor limitations WM is located <10' from catch basins at multiple locations. No alternative alignment within the right-of-way will eliminate a deviation. Water main joints will be located as far from the catch basin as possible.
Willmette	6	11+94	8L	WM is 7' from storm manhole	Water main is located between catch basin and storm manhole to create equal offsets. No alternative alignment within the right-of-way will eliminate a deviation. Water main joints will be located as far from the structures as possible.
Willmette	6	15+62	8L	WM is 8' from sanitary manhole	Due to corridor limitations, the WM is located within 10' of the sanitary sewer to maintain straight water main alignment and avoiding repeated deflection and/or bends, and maintain at least a 10' offset from the storm sewer. Water main joints will be located as far from the structures as possible.
Pinehurst	8	10+50	17R	WM is 5' from catch basin	Due to corridor limitations, water main was placed closer to the west catch basin to maintain spacing with the east catch basin. Vertical separation will be 1.75' from the storm sewer. Water main joints will be located as far from the structures as possible.
Pinehurst	8	16+54	17R	WM is 6.2' from catch basin	Due to corridor limitations and the goal of a straight WM alignment to avoid deflections/bends, the water main is located <10' from the catch basin. Water main joints will be located as far from the structures as possible.
Pinehurst	9	19+57	17R	WM is 7.5' from sanitary manhole	To maintain separation from the sanitary sewer, a crossover to the west boulevard lane is required. Limited intersection space and connection requiremets with the existing water main create a setback deviation from the sanitary manhole. Water main joints will be located as far from the structures as possible.
Pinehurst	9	21+11	15L	WM is 5' from catch basin	Due to corridor limitations and the goal of a straight alignment, the water main is located <10ft from the catch basin. There is no vertical separation, since we will not be crossing over storm sewer at this location.
Pinehurst	9	21+60	15L	WM is 5' from catch basin	Due to corridor limitations and the goal of a straight alignment, the water main is located <10ft from the catch basin. There is no vertical separation, since we will not be crossing over storm sewer at this location.
Pinehurst	9	22+27	15L	WM is 4.5' from catch basin	Due to corridor limitations and the goal of a straight alignment, the water main is located <10ft from the catch basin. There is no vertical separation, since we will not be crossing over storm sewer at this location.
Pinehurst	10	28+10	7.5L	WM is 9.5' from catch basin	Due to corridor limitations WM is located <10' from catch basins at multiple locations. No alternative alignment within the right-of-way will eliminate a deviation. Water main joints will be located as far from the catch basin as possible.
Pinehurst	10	34+00 & 34+36	Right	WM is <10' from catch basin and storm manhole	To maintain separation from existing utilites and sanitary sewer, watermain is located <10' from proposed catch basin and proposed storm manhole. No alternative alignment within the right-of-way will eliminate a deviation.
Campbell	12	10+64	5R	WM is 8' from storm manhole	Due to limited distance between the manhole and the catch basin, WM is located <10 feet from stormwater manhole. Water main joints will be located as far from the structures as possible. Vertical separation will be minimum of 18".
Campbell	12	13+33	6L	WM is 9.1' from sanitary manhole	Water main alignment balanced offsets from sanitary manholes and catch basins while working to avoid repeated deflection and/or bends. No alternative alignment within the right-of-way will eliminate a deviation without increasing joint deflections or adding bends. Water main joints will be located as far from the structures as possible.
Campbell	12	14+16	6L	WM is 7.4' from catch basin	Water main alignment balanced offsets from sanitary manholes and catch basins while working to avoid repeated deflection and/or bends. No alternative alignment within the right-of-way will eliminate a deviation without increasing joint deflections or adding bends. Water main joints will be located as far from the structures as possible.
Campbell	12	16+25	6L	WM is 9.9' from sanitary manhole	Water main alignment balanced offsets from sanitary manholes and catch basins while working to avoid repeated deflection and/or bends. No alternative alignment within the right-of-way will eliminate a deviation without increasing joint deflections or adding bends. Water main joints will be located as far from the structures as possible.
Campbell	12	16+39	6L	WM is 6.7' from catch basin	Water main alignment balanced offsets from sanitary manholes and catch basins while working to avoid repeated deflection and/or bends. No alternative alignment within the right-of-way will eliminate a deviation without increasing joint deflections or adding bends. Water main joints will be located as far from the structures as possible.
Campbell	13	20+26, 20+47, 20+55, 20+68	6L	WM is <10' from storm manholes and catch basins	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. Vertical separation will be minimum of 18".
Campbell	13	26+66	6L	WM is 8.9' from manhole	Water main alignment balanced offsets from sanitary manholes and catch basins while working to avoid repeated deflection and/or bends. No alternative alignment within the right-of-way will eliminate a deviation without increasing joint deflections or adding bends. Water main joints will be located as far from the structures as possible. Vertical separation will be minimum of 18".
Campbell	14	31+67	8L	WM is 5.5' from catch basin	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. Vertical separation will be minimum of 18".
Campbell	14	33+28 & 33+68	4L & 8L	WM <10' from storm structures	To maintain separation from existing utilites and sanitary sewer, watermain is located <10' from proposed catch basin and proposed storm manhole. No alternative alignment within the right-of-way will eliminate a deviation.
Arlington	21	11+43	23.5L	WM is 8' from catch basin	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. No vertical crossings are anticipated.
Jefferson	25	10+15	18.5R	WM is 6.5' from catch basin	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. No vertical crossings are anticipated.
Jefferson	25	11+68	20 R	WM is 4' from catch basin	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. No vertical crossings are anticipated.
Lulu	26	12+37	6L	WM is 7.5' from catch basin	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. Vertical separation will be minimum of 18".
Lulu	26	12+37	6L	WM is 8.2' from manhole	Due to limited distance between the manhole and the catch basin, WM is located <10 feet from stormwater manhole. Water main joints will be located as far from the structures as possible. Vertical separation will be 1.8'.
Lulu	26	14+35	7L	WM is 6.5' from catch basin	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. Vertical separation will be minimum of 18".
Lulu	26	14+35	7L	WM is 8' from manhole	Due to limited distance between the manhole and the catch basin, WM is located <10 feet from stormwater manhole. Water main joints will be located as far from the structures as possible. Vertical separation will be minimum of 18".
Lulu	26	16+32	6L	WM is 6.5' from manhole	Due to limited distance between the manhole and the catch basin, WM is located <10 feet from stormwater manhole. Water main joints will be located as far from the structures as possible. No vertical crossings are anticipated.
Lulu	27	18+41	26L	WM is 5' from catch basin	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. Vertical separation will be minimum of 18".
Lulu	27	21+84	23L	WM is 5' from catch basin	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. Vertical separation will be minimum of 18".
Lulu	28	29+03	9R	WM is 3.5' from catch basin	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. Vertical separation will be minimum of 18".
Lulu	28	29+24	54R	WM is 8' from catch basin	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. Vertical separation will be minimum of 18".
Lulu	28	29+03 - 29+39	9R	WM is 4' from this stretch of stormwater pipe	Due to locations of existing structures and utilities, no alternative alignment within the right-of-way will eliminate a deviation.
Lulu	28	32+30	24R	WM is 3.5' from catch basin	Due to corridor limitations, WM is located <10 feet from storm catch basins at multiple locations. Water main joints will be located as far from the structures as possible. No verticla crossing is anticipated.
Martin	29	12+82	6R		Manhole will be relocated 12' away from WM to eliminate the existing conditions deviation.

NO.	R E V I S I O N S	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/28/23	STAFF
				DATE
				NOV. '22
				CHECKED
				B.G.V.
				DATE
				MAY '23



CITY OF KALAMAZOO DWRF KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
STATE DEVIATIONS

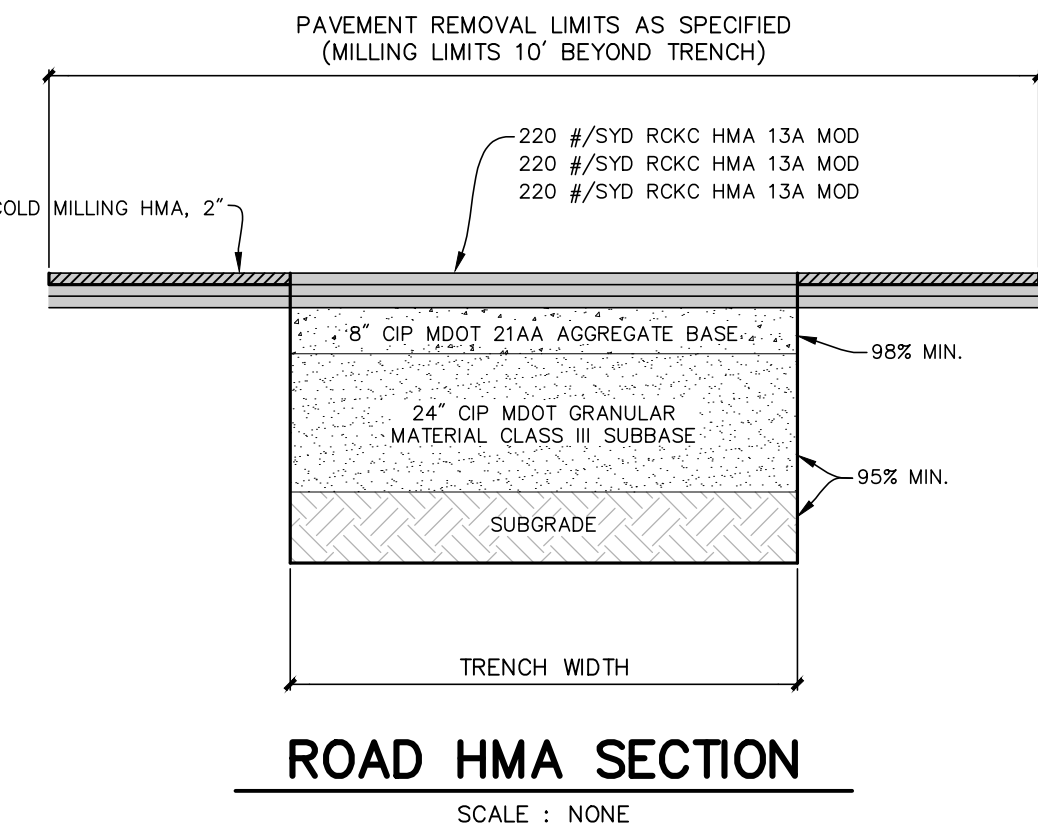
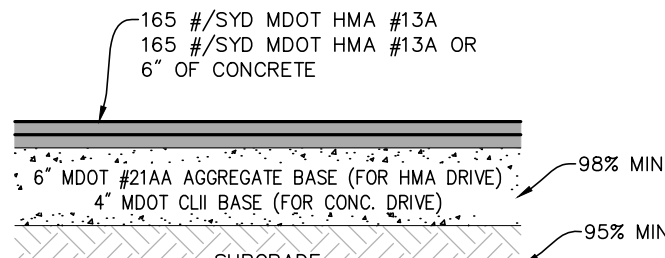
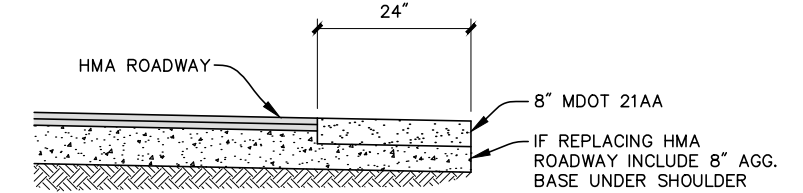
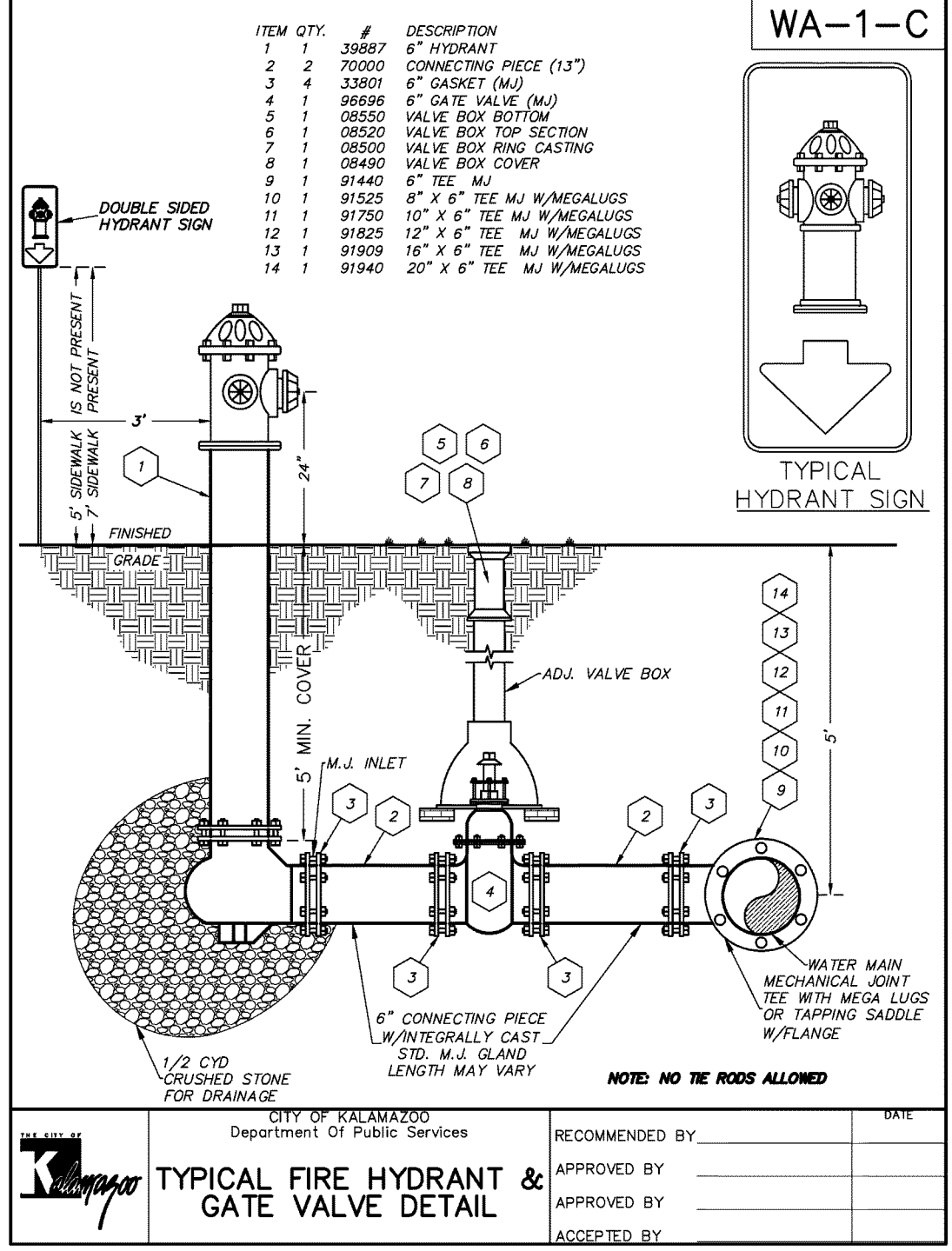
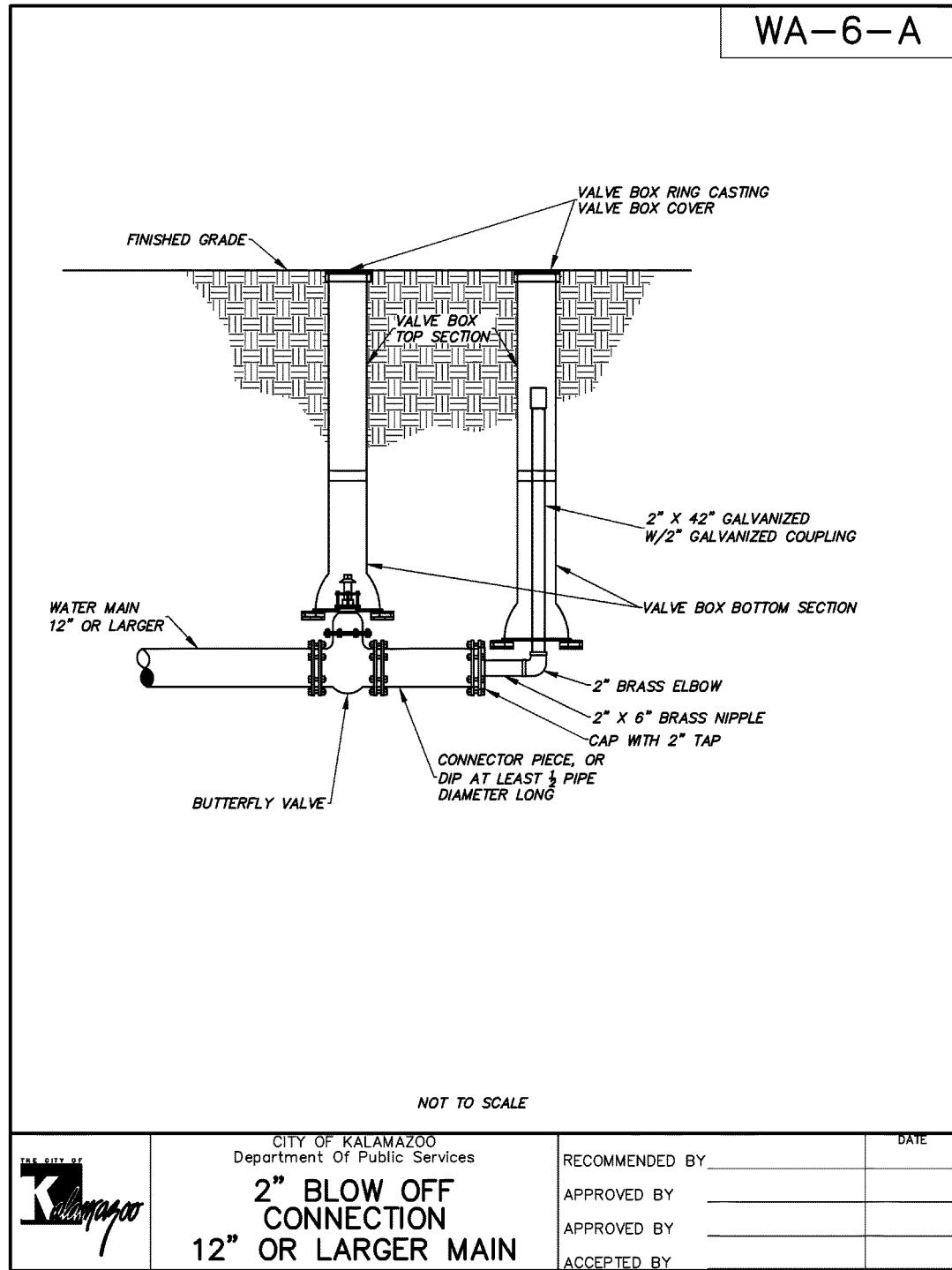
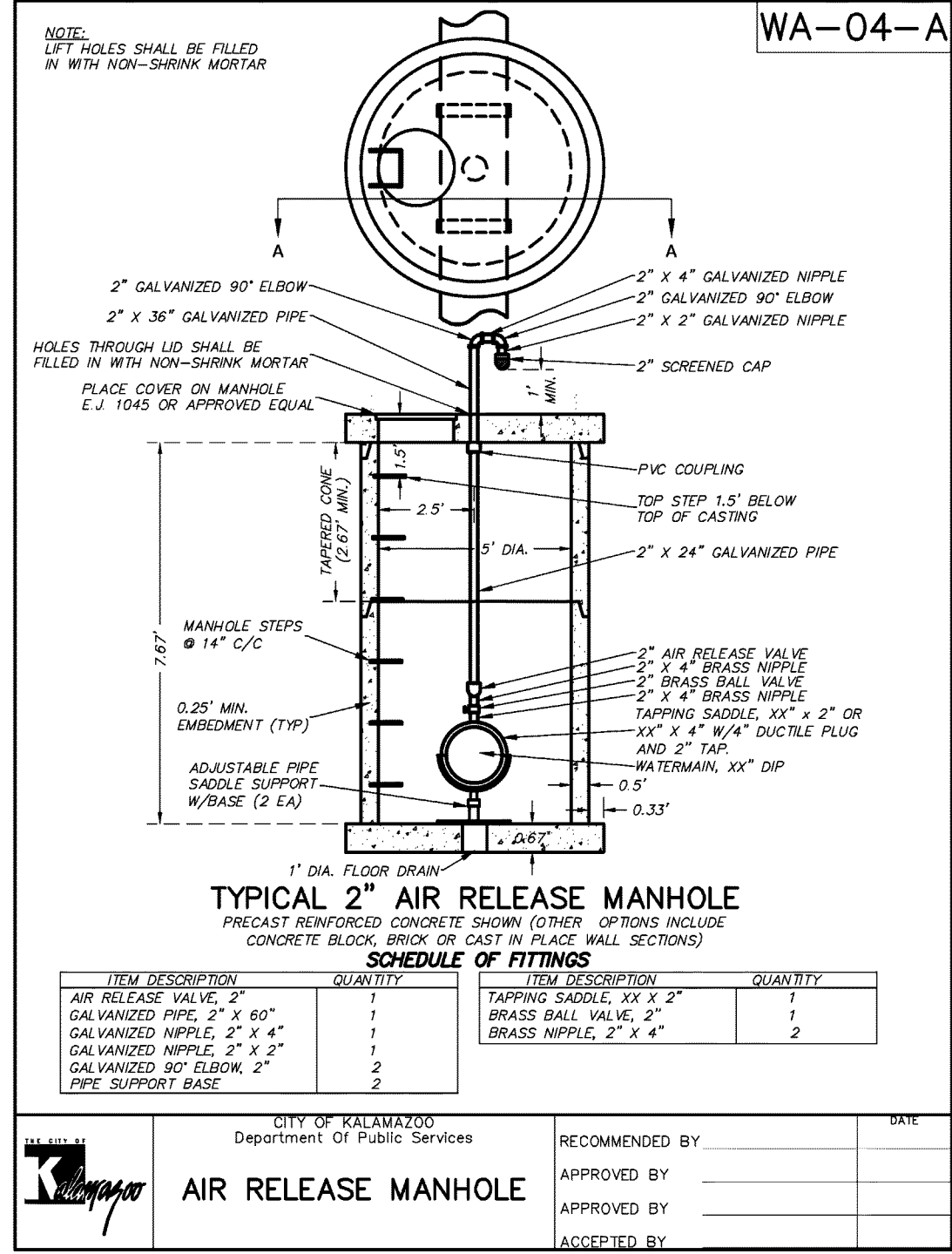
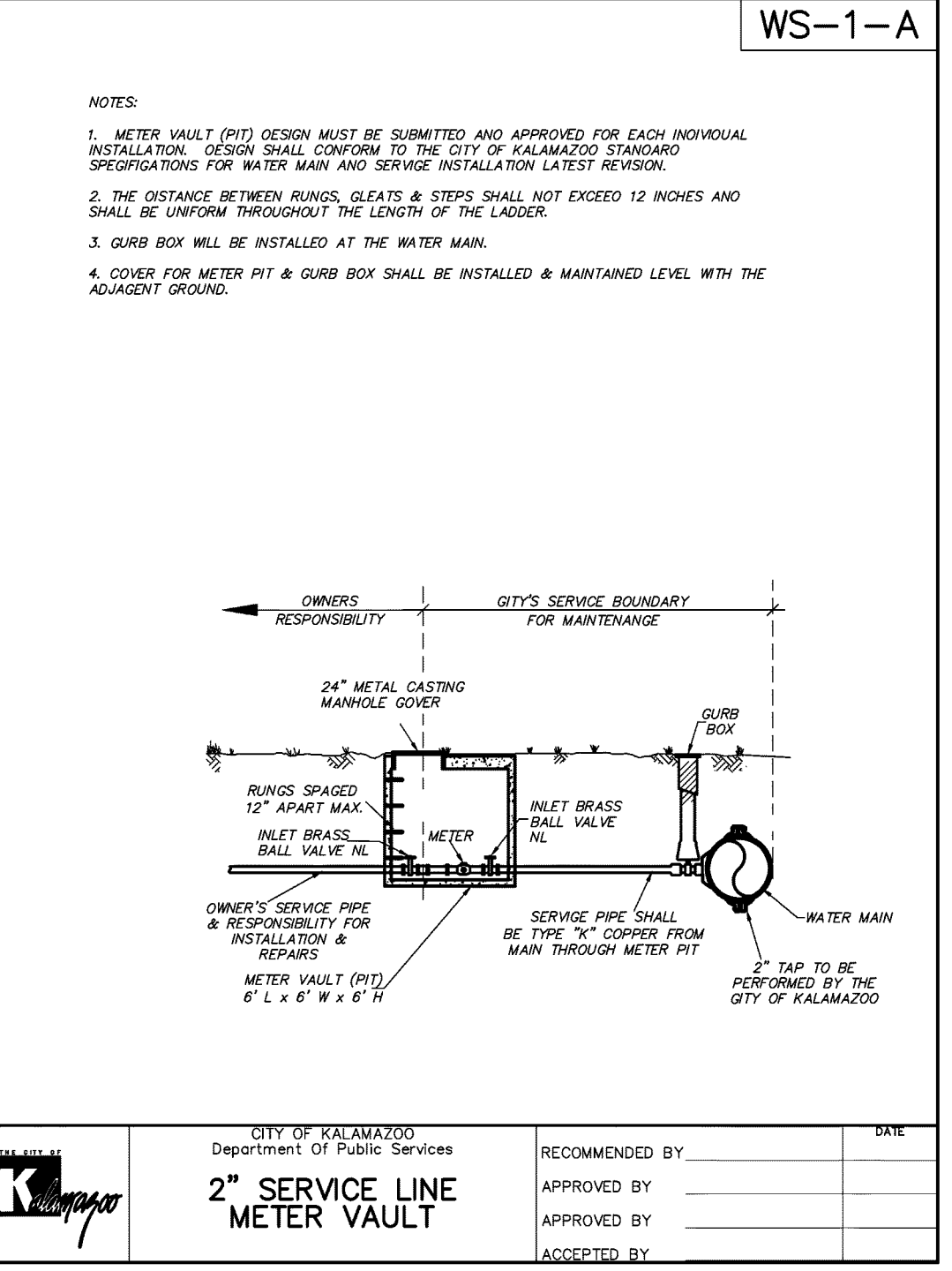
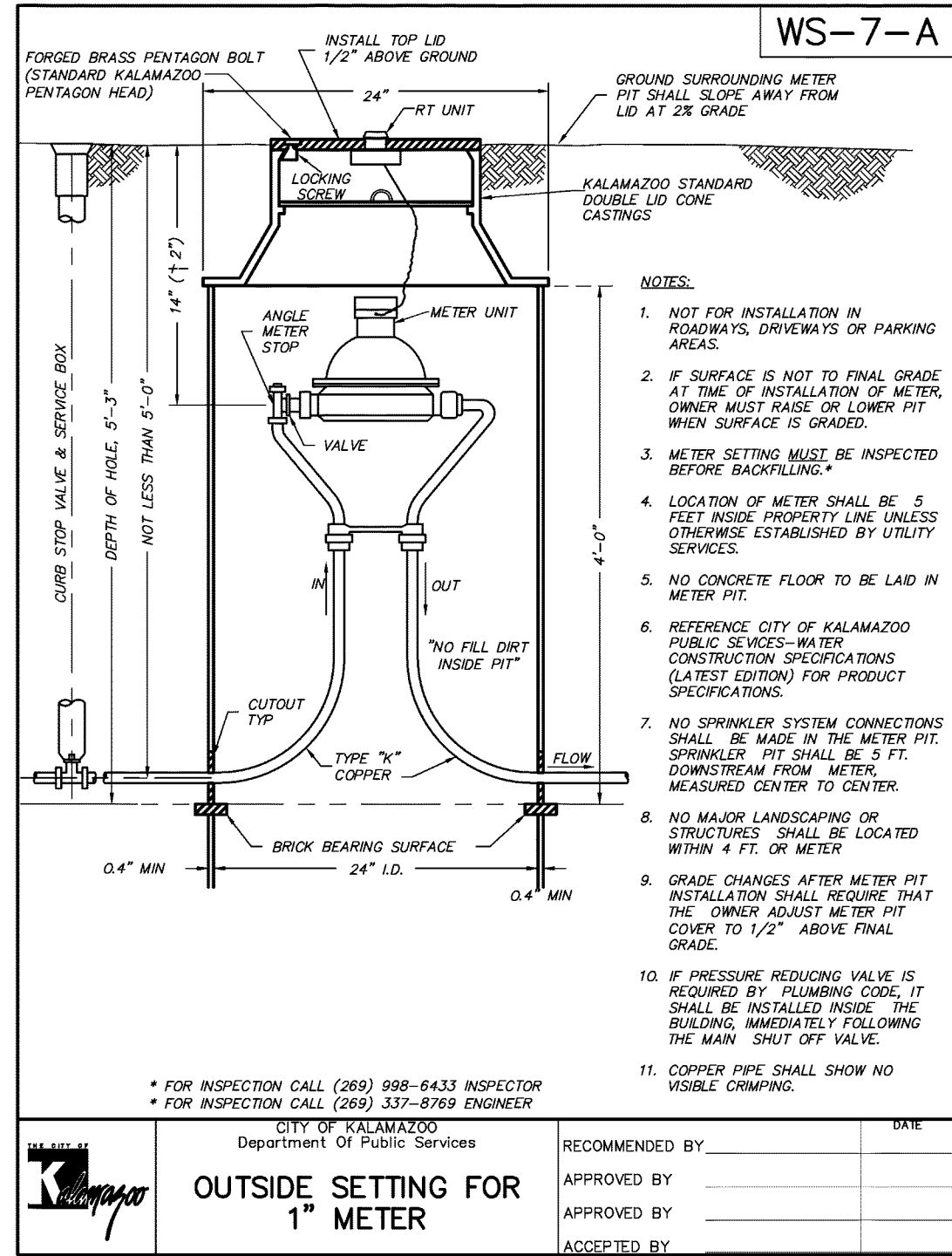
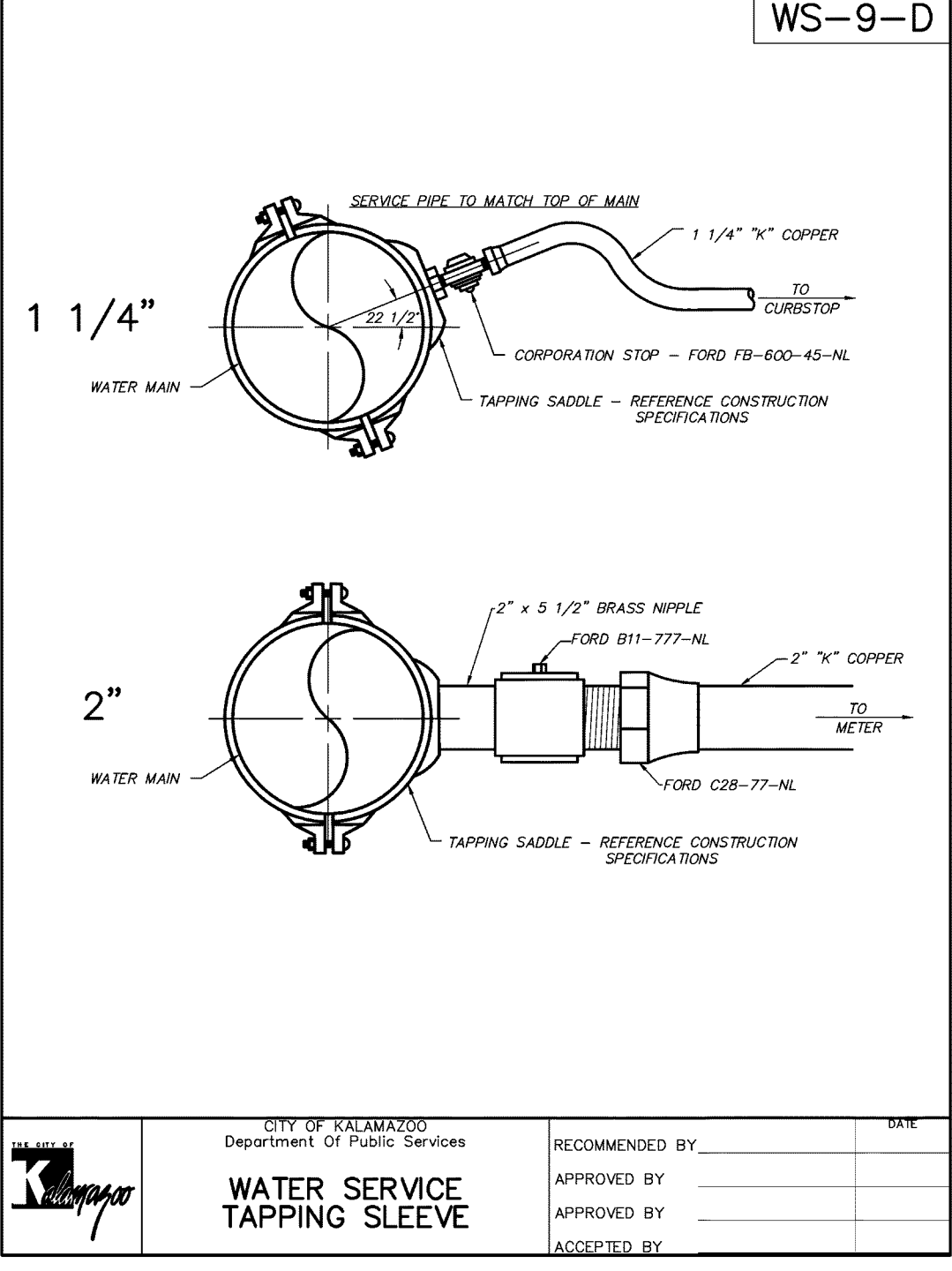
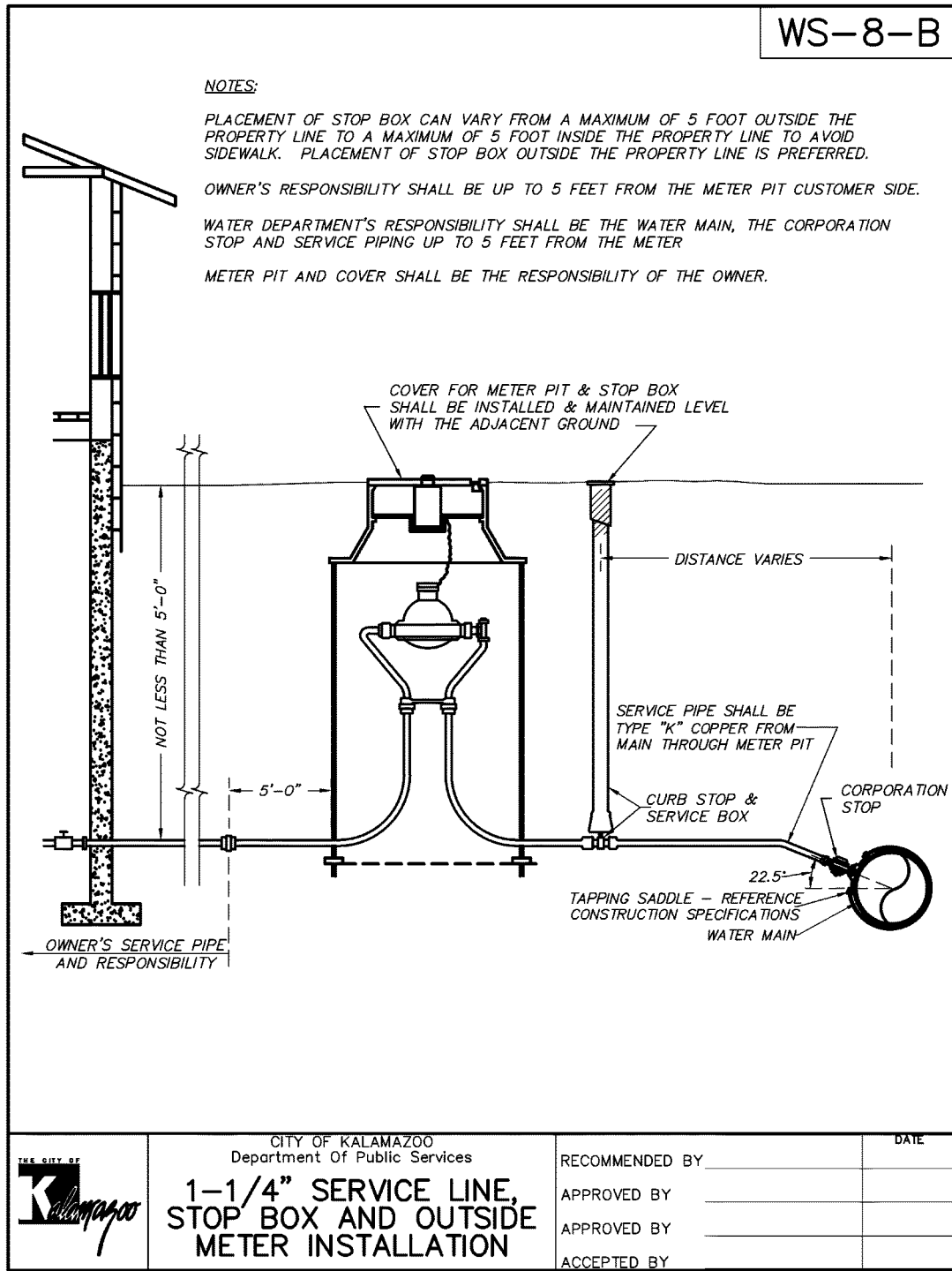
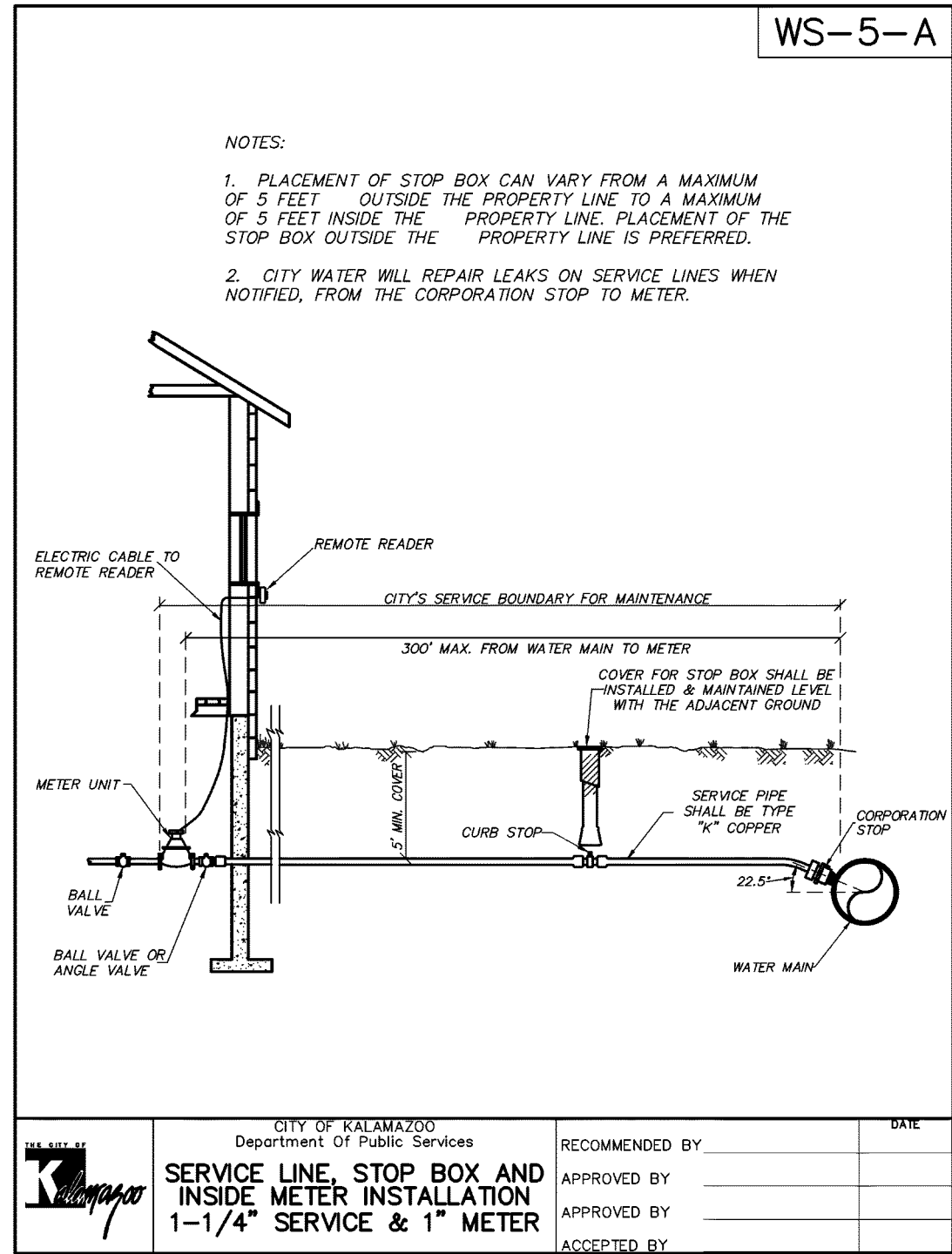
PROJECT NO. 2220555
SHEET NO. 31 OF 34

T:\CIVIL\PROJECTS\2023\2220555_CITY OF KALAMAZOO_DWG\4_PROJ\2220555_MOTING - RESTRICTION - May 24, 2023 - 04:00pm - Prein&Newhof

CONTRACTOR TO FURNISH AND INSTALL TRAFFIC CONTROL SIGNAGE FOR CONNECTIONS ON WEST MAIN IN ACCORDANCE WITH ROAD COMMISSION OF KALAMAZOO COUNTY REQUIREMENTS AND BASED ON CONTRACTOR MEANS/METHODS.

CONTRACTOR TO FURNISH AND INSTALL TRAFFIC CONTROL SIGNAGE FOR CROSSING OF PARK STREET IN ACCORDANCE WITH MMUTCD TO FACILITATE HALF WIDTH CONSTRUCTION AND MAINTAINING ONE LANE OF TRAFFIC ON PARK STREET.

NO.	R E V I S I O N S	BY	DATE	DRAWN	CITY OF KALAMAZOO DWRP KALAMAZOO COUNTY, MICHIGAN		PROJECT NO.
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF			2220555
				DATE	Prein&Newhof Engineers • Surveyors • Environmental • Laboratory		SHEET NO.
				NOV. '22			
				CHECKED B.G.V.			
				DATE	WATER SUPPLY SYSTEM IMPROVEMENTS MAINTENANCE OF TRAFFIC PLAN		32 OF 34
				MAY '23			



NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	B.F.V.	5/26/23	STAFF
				DATE: NOV. '22
				CHECKED: B.G.V.
				DATE: MAY '23

Prein&Newhof
Engineers • Surveyors • Environmental • Laboratory

CITY OF KALAMAZOO DWRP
KALAMAZOO COUNTY, MICHIGAN
WATER SUPPLY SYSTEM IMPROVEMENTS
DETAILS

PROJECT NO.
2220555
SHEET NO.
33 OF 34

