

PRESSURE REDUCING VALVE CHAMBER DETAIL

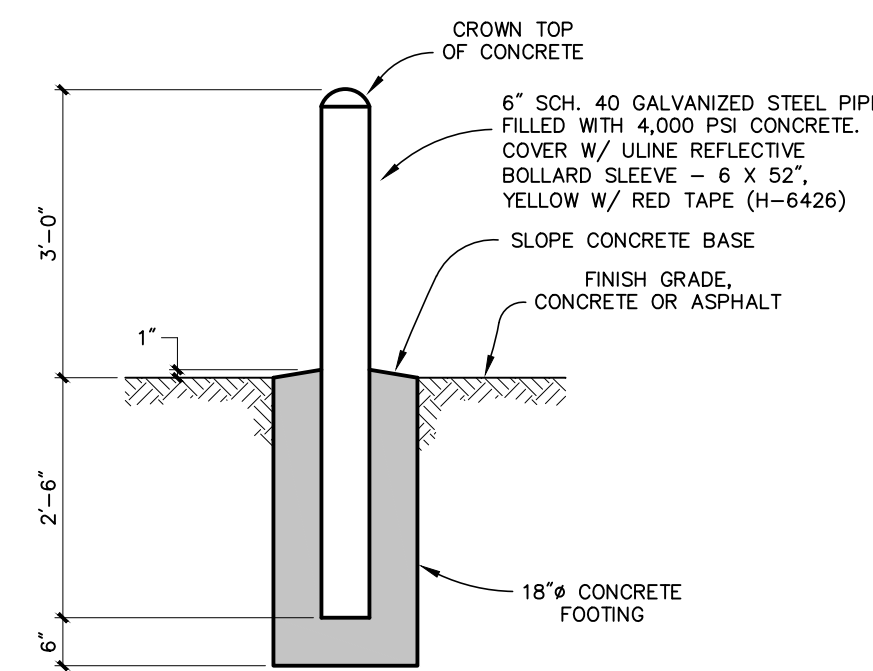
SCALE : 1/2" = 1'-0"

NOTES

1. ALL PIPING, EXCEPT 12" AND 6" D.I., SHALL BE BRASS.
2. PRV CHAMBER INSIDE DIMENSIONS TO BE 8'-0" x 6'-0" x 7'-0" HIGH.
3. 36" ACCESS HATCH TO BE E.J.W 1580 CASTING AND COMPOSITE LID, E.J. COM3800 SERIES.
4. 6" D.I. PIPING CENTERLINE TO BE 36" ABOVE FLOOR.

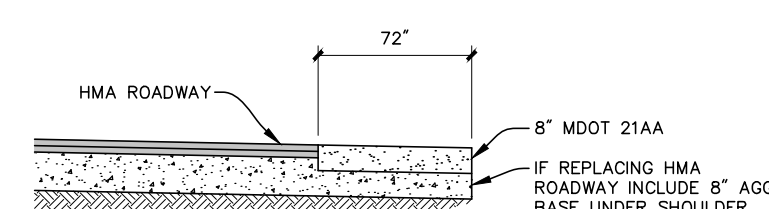
FITTING ORDER

- 6" D.I. BLIND FLANGE CAP WITH 2" TAP
- 2" x 2" LONG NIPPLE
- 2" BALL VALVE
- 2" x 2" LONG NIPPLE
- 2" GLOBE VALVE
- 2" CLOSED NIPPLE
- 2" CROSS
- 2" CLOSED NIPPLE
- 2" PRESSURE REDUCING VALVE (CRD-L 30-95 PSI RATING)
- 2" 2" METER FLANGE x MPT. A.Y. McDONALD 7610M
- 2" NEPTUNE T-10 FLOW METER WITH R 900 (PROVIDED BY CITY)
- 2" METER FLANGE x MPT
- 2" NIPPLE, LENGTH AS REQUIRED
- 2" BALL VALVE
- 2" NIPPLE, LENGTH AS REQUIRED
- 6" D.I. BLIND FLANGE CAP WITH 2" TAP



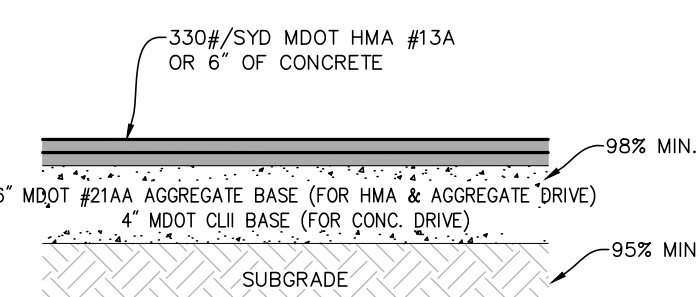
PIPE BOLLARD DETAIL

SCALE : 1/2" = 1'-0"



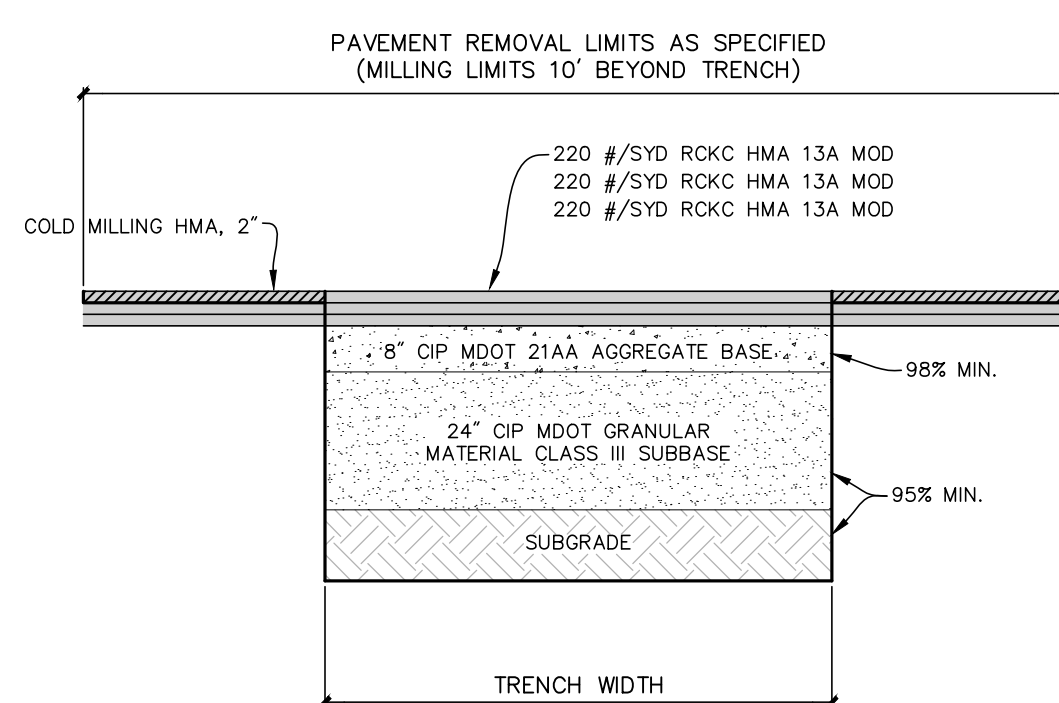
AGGREGATE SHOULDER DETAIL

SCALE : NONE



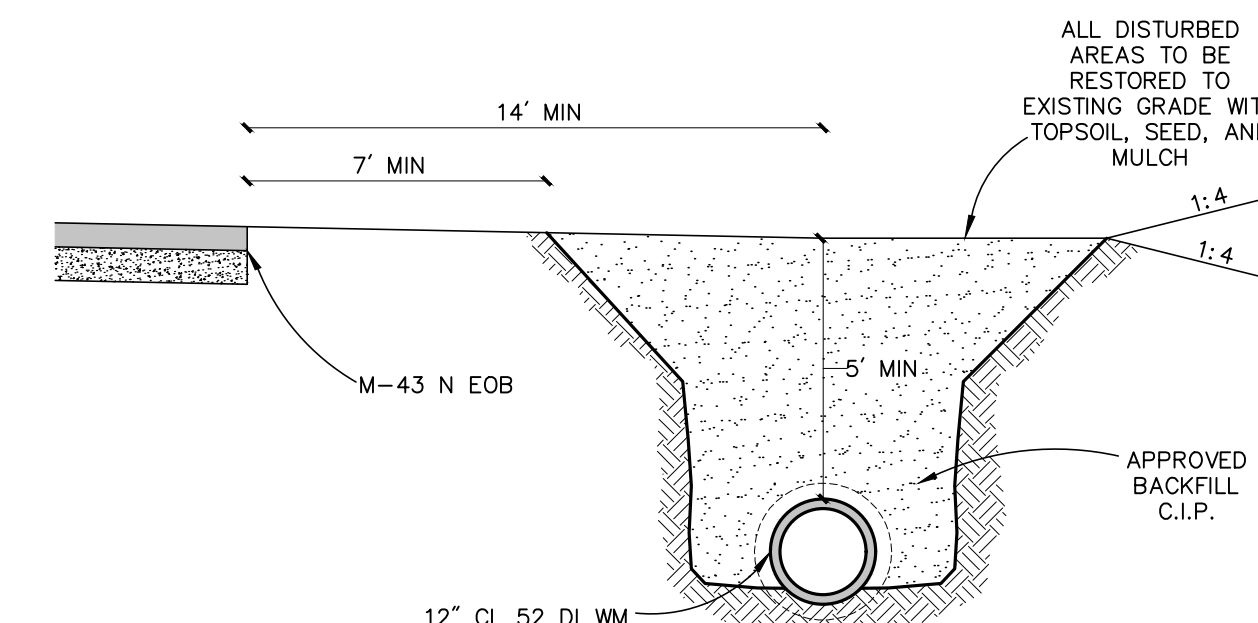
DRIVEWAY SECTION

SCALE : NONE



ROAD HMA SECTION

SCALE : NONE



M-43 TRENCH DETAIL

STA 456+50 TO 471+82

EXISTING TOPOGRAPHY LEGEND

GENERAL SYMBOLS

- AIR CONDITIONER
- BUSH/SHRUB
- DECIDUOUS TREE
- CONIFEROUS TREE
- FLAG POLE
- GUY ANCHOR
- MAILBOX
- ELECTRIC METER
- GAS METER
- WATER METER
- MONITORING WELL
- POST
- ROCK
- SATELITE DISH
- SOIL BORING
- SIGN
- SPRINKLER HEAD
- IRRIGATION CONTROL BOX
- STUMP
- PROPANE TANK
- WATER WELL
- YARD LIGHT

UTILITY RELATED SYMBOLS

- CATCH BASIN - RECTANGULAR FRAME
- CATCH BASIN - ROUND FRAME
- CLEANOUT
- FLARED END SECTION
- ROUND HANDHOLE - GENERIC
- SQUARE HANDHOLE - GENERIC
- HYDRANT
- LIGHT POLE
- MARKER - GENERIC
- MARKER - FIBER
- MARKER - GAS
- MARKER - PETROLEUM
- MARKER - RIGHT OF WAY
- MANHOLE - GENERIC
- MANHOLE - SANITARY
- MANHOLE - STORM
- MANHOLE - ELECTRIC
- MANHOLE - GAS
- MANHOLE - LIGHT
- MANHOLE - TELEPHONE
- MANHOLE - WATER (VALVE VAULT)
- MANHOLE - TRAFFIC SIGNAL
- ELEC. EQUIP./TRANSFORMER
- UTILITY POLE
- UTILITY PEDESTAL - GENERIC
- CATV PEDESTAL
- TELEPHONE PEDESTAL
- VALVE & BOX
- WATER SERVICE
- UTILITY FLAG (not in description keys)
- FIRE DEPARTMENT CONNECTION

SURVEY SYMBOLS

- FOUND PK/MAG NAIL
- FOUND NOTCH (X-CUT)
- FOUND CONCRETE MONUMENT
- FOUND IRON
- SET PK/MAG NAIL
- SET NOTCH (X-CUT)
- SET CONCRETE MONUMENT
- SET IRON
- CONTROL POINT
- CONTROL MONUMENT
- SECTION CORNER
- BENCHMARK

PAVEMENT LEGEND

- EXISTING
- ASPHALT
- GRAVEL
- HMA
- AGG.
- CONCRETE
- RIPRAP
- CONC.

T:\CALAD PROJECTS\2021\211189_KALAMAZOO_B6_RCKC_P000\211189_DET.DWG - MPRES14 - Feb. 02. 2023 - 01:17pm - P:\d\shewd

NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	M.A.P.	11/22	J.E.
2	MDOT PERMIT REVISIONS	M.A.P.	02/23	
				DATE: MAY '22
				CHECKED: M.A.P.
				DATE: OCT. '22

Prein & Newhof
Engineers • Surveyors • Environmental • Laboratory

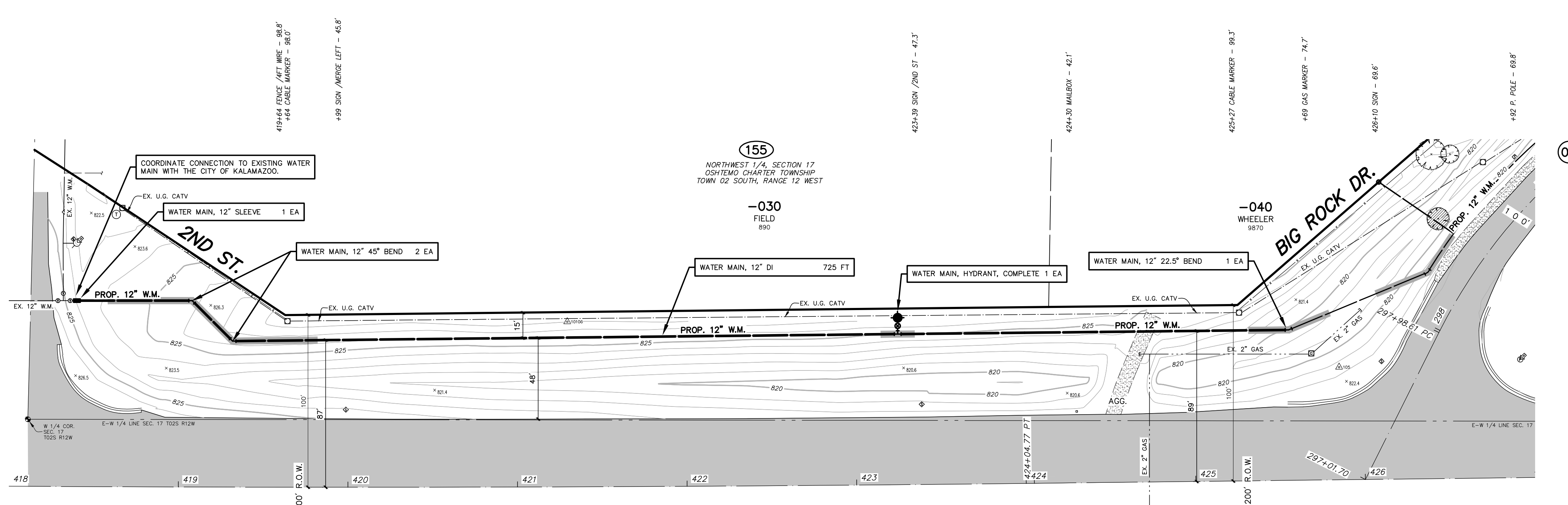
CITY OF KALAMAZOO
KALAMAZOO COUNTY, MICHIGAN
WATER MAIN EXTENSION
DETAILS

PROJECT NO.
2211189
SHEET NO.
2 OF 10

B.M. EL. 824.73
2ND ST. & M-43, 140'± N & 30'± E OF
C/L "X", BOLT WITH "BURY" TAG NE SIDE
HYD 1.8 FT AGL

B.M. EL. 823.78
BIG ROCK DR. and M-43, 70'± N & 60'± E
OF C/L "X", BENCH TIE IN W SIDE PWR
POLE 1.0 FT AGL

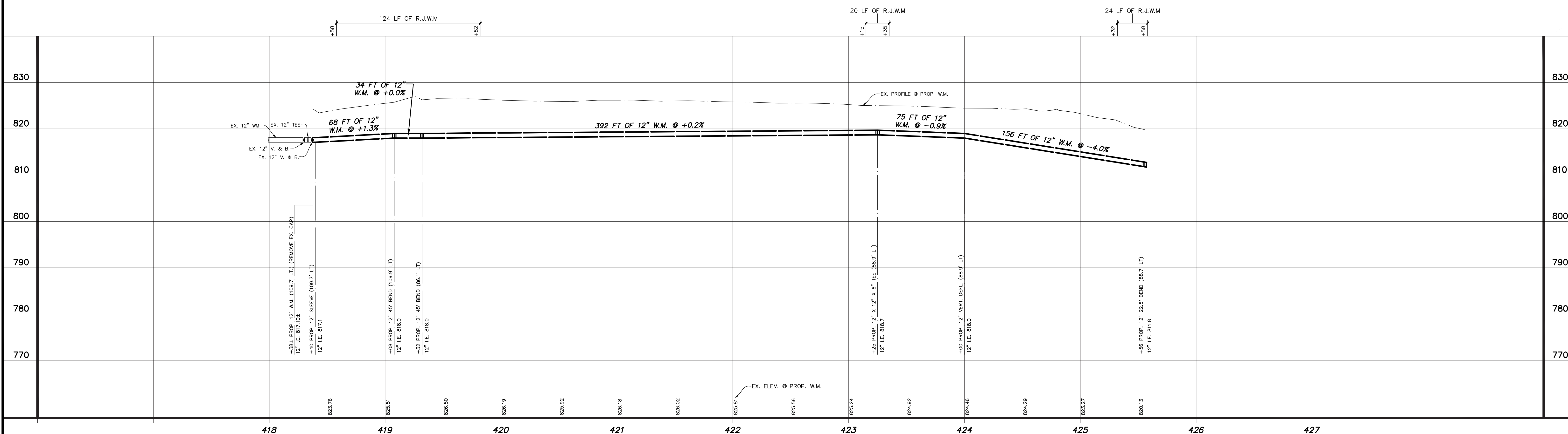
CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
4	29234.227	12751142.900	821.69
10106	292961.012	12750687.780	828.36



REMOVAL LEGEND

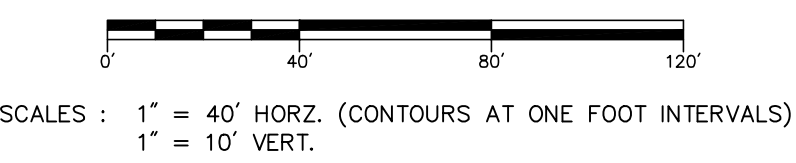
- MILL PAVEMENT
- REMOVE HMA SURFACE
- REMOVE CONCRETE PAVEMENT OR DRIVEWAY
- TREE REMOVAL

WEST MAIN STREET (M-43)
(200' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



C:\USERS\MPRESTA\WORK\LOCAL\TEMP\4202189_0109_MALDING - WPRESTA - Feb. 02.2023 - 08:18am - PrintSheet.dwg

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



NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	M.A.P.	11/22	J.E.
2	MDOT PERMIT REVISIONS	M.A.P.	02/23	J.E.

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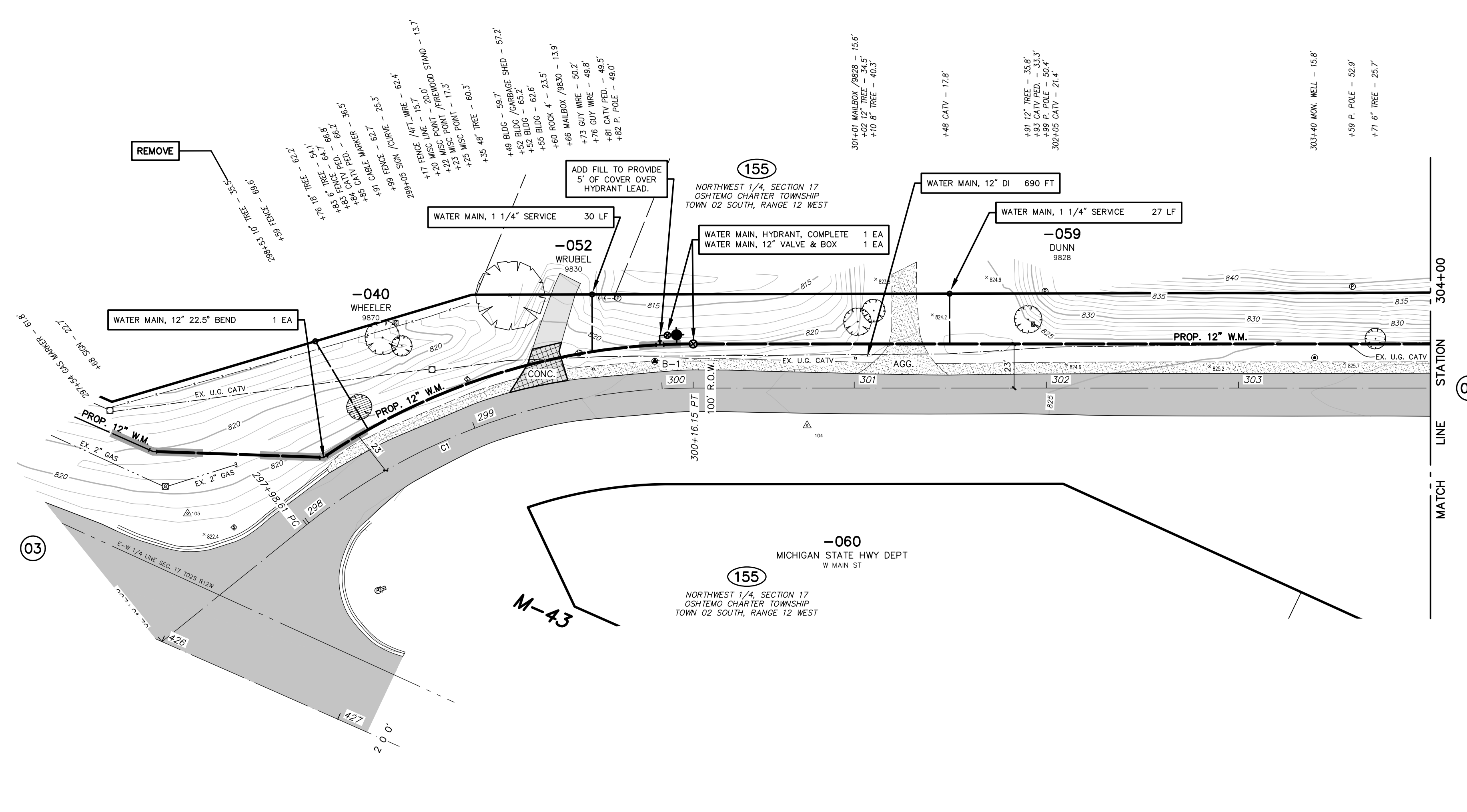
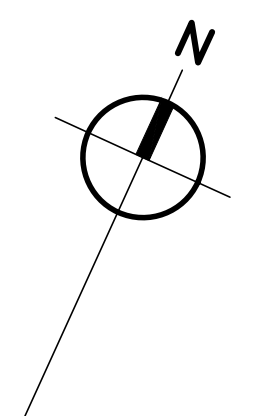
CITY OF KALAMAZOO
KALAMAZOO COUNTY, MICHIGAN
WATER MAIN EXTENSION
WEST MAIN STREET (M-43)

PROJECT NO.
2211189
SHEET NO.
3 OF 10

B.M. EL. 823.78
BIG ROCK DR. and M-43, 70± N & 60± E
OF C/L "X", BENCH TIE IN W SIDE PWR
POLE 1.0 FT AGL.

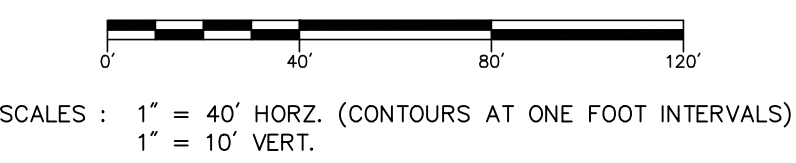
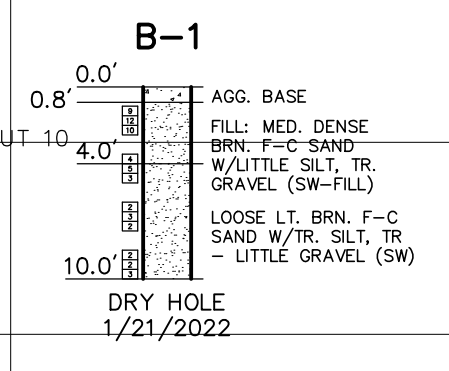
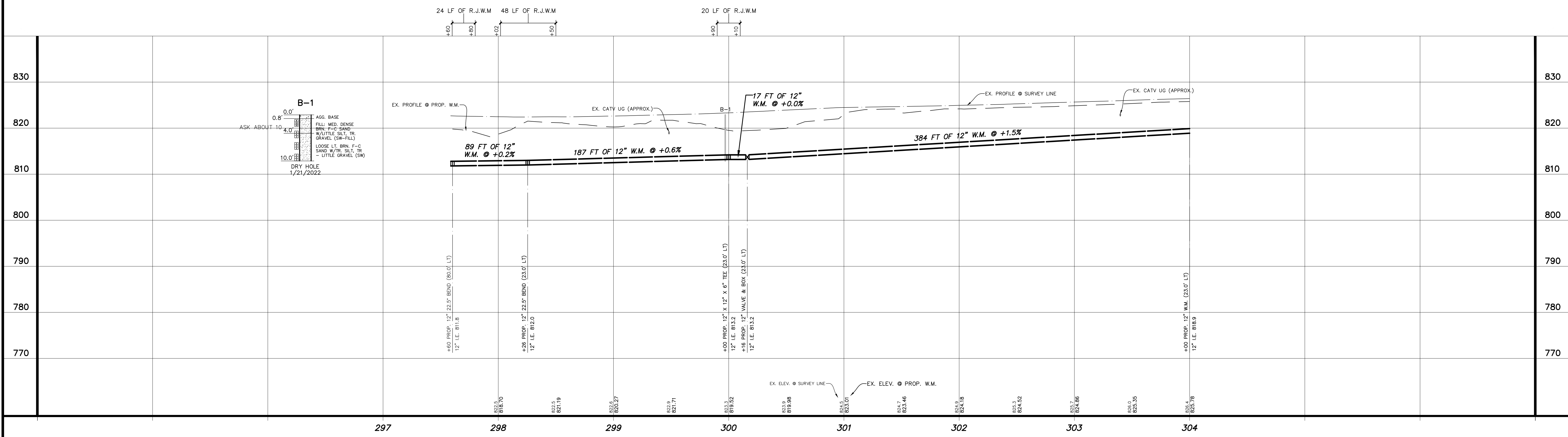
CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
3	293109.640	12751417.430	823.76
4	292934.227	12751412.900	821.89

CURVE DATA TABLE			
CURVE #	LENGTH	RADIUS	CHORD
C1	162.82	320.00	58754.26' W 141.07'



REMOVAL LEGEND	
	MILL PAVEMENT
	REMOVE HMA SURFACE
	REMOVE CONCRETE PAVEMENT OR DRIVEWAY
	TREE REMOVAL

BIG ROCK DRIVE
(100' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



NO.	REVISIONS	BY	DATE	DRAWN
1	50% REVIEW SET	M.P.	6/22	J.E.
2	REVISIONS FOR CITY OF KALAMAZOO	M.P.	8/22	
3	90% REVIEW SET	M.P.	8/22	
4	PERMIT SET	B.V.	8/22	

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CITY OF KALAMAZOO
KALAMAZOO COUNTY, MICHIGAN
WATER MAIN EXTENSION
BIG ROCK DRIVE

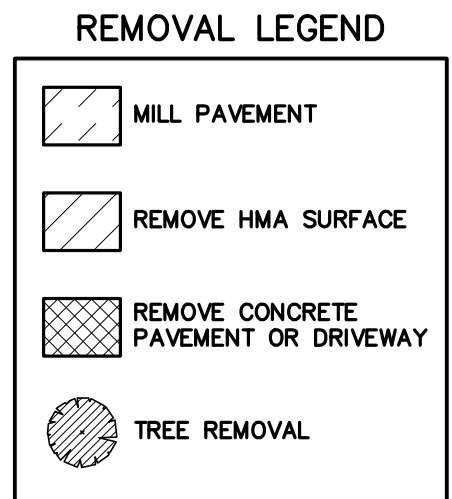
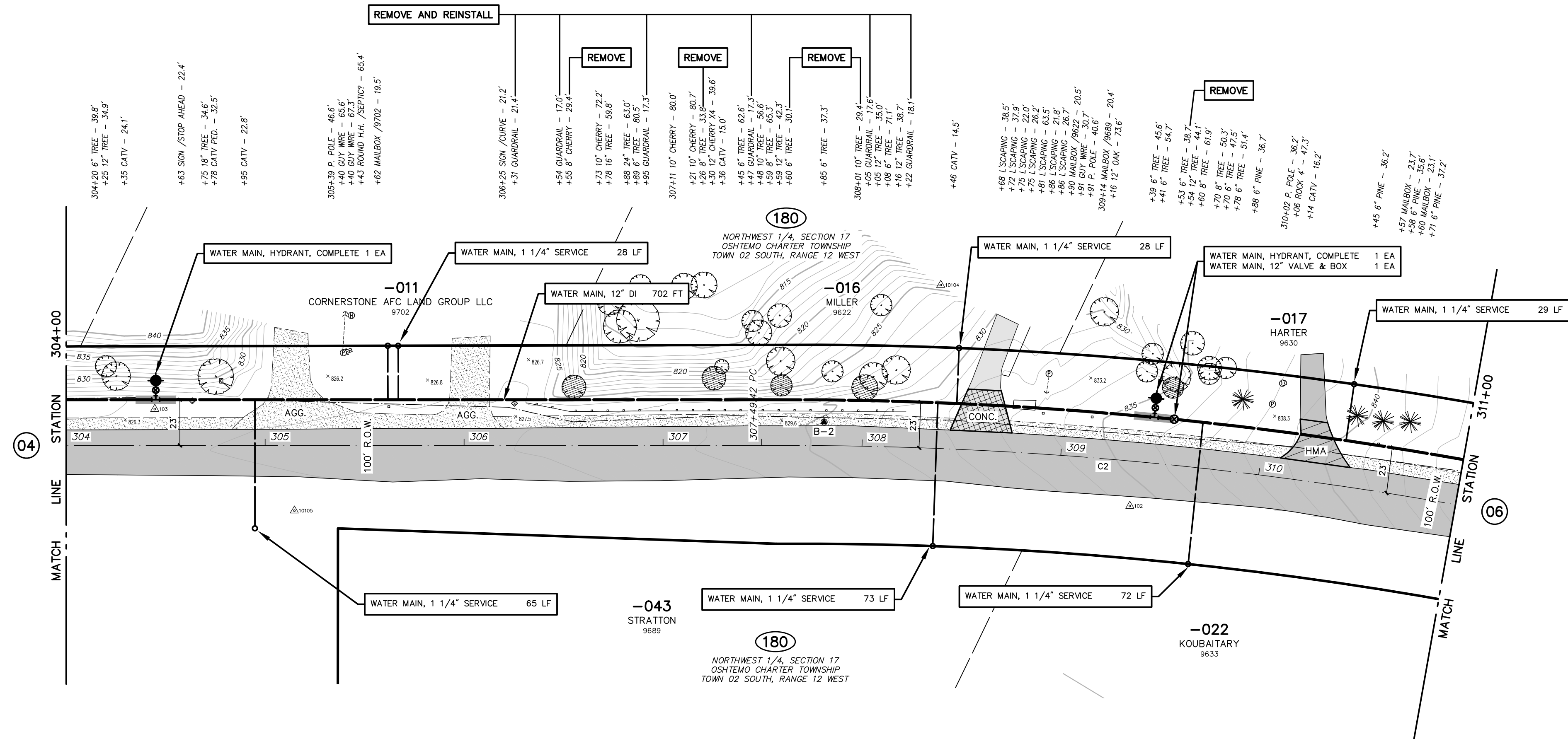
PROJECT NO.
2211189
SHEET NO.
4 OF 10

T:\QA\30 PROJECTS\2021\2211189_BIG ROCK\PROJ\2211189_P1_R1_BIGROCK.DWG - ELZJGCA - Aug. 29 2022 - 09:28am - ProdsMkMod

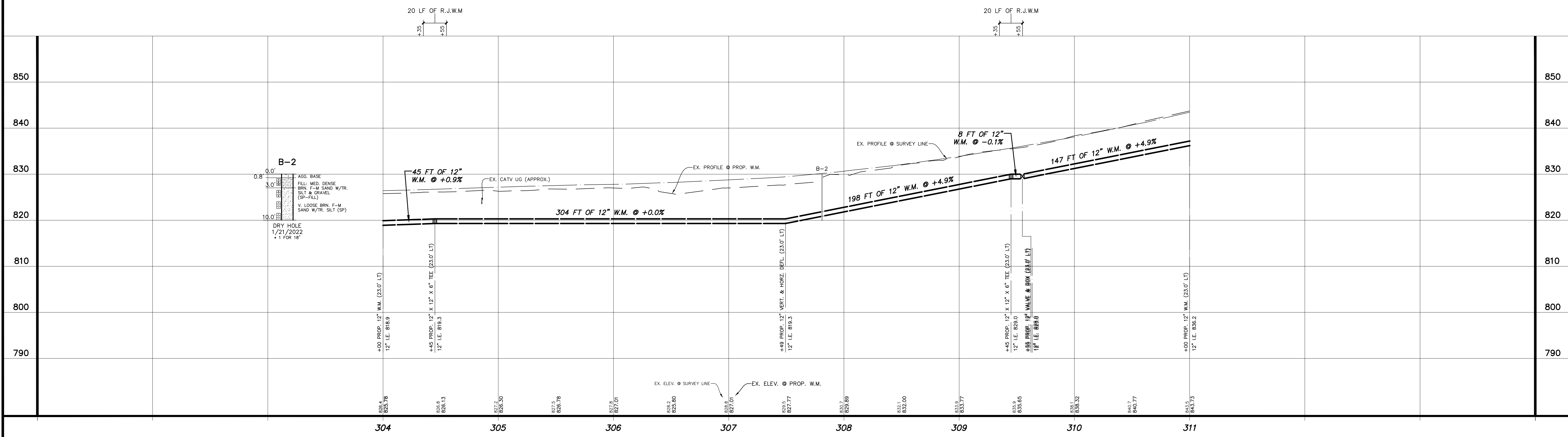
B.M. EL. 827.40
305+40.2 BENCH TIE IN S SIDE PWR POLE
1.1 FT AGL

POINT No.	NORTHING	EASTING	ELEVATION
1	293455.651	12752203.840	834.46
2	293294.925	12751737.670	825.99
10104	293517.356	12752071.350	826.03
10105	293279.516	12751822.700	826.21

CURVE #	LENGTH	RADIUS	CHORD
C2	1890.77	1921.46'	1880'39"55"W 1815.40'



BIG ROCK DRIVE
(100' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



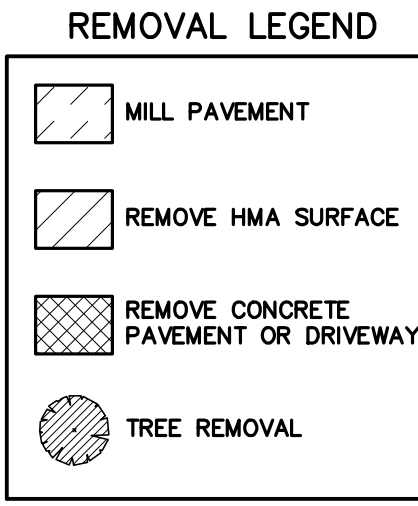
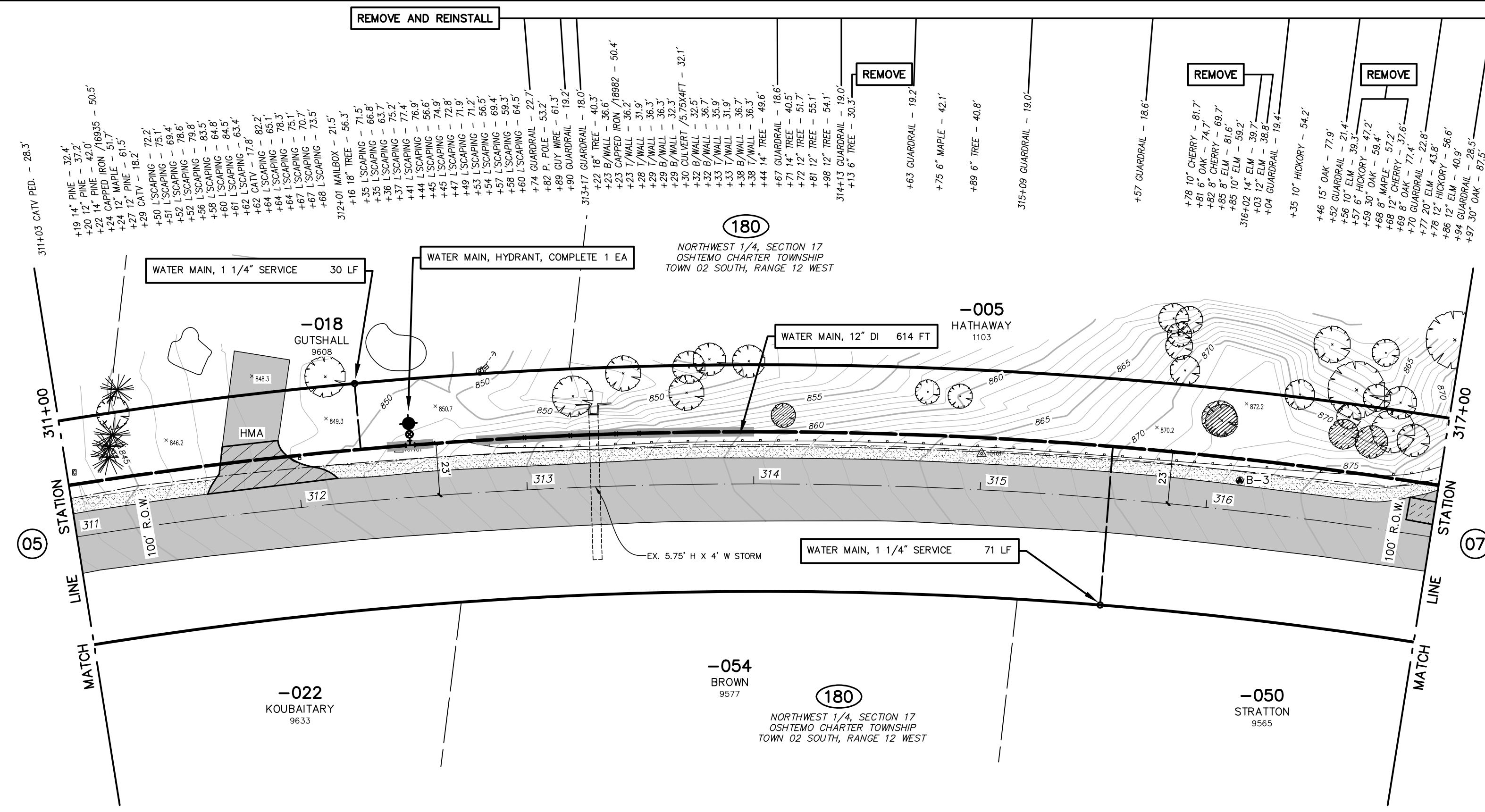
T:\04\10\PROJECTS\2021\2211189_KALAMAZOO_BIG ROCK\PROJ\2211189_P1R_BROCK.DWG - ELZJGCA - Aug. 24, 2022 - 01:58pm - Prein&Newhof

<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>	<p>SCALES: 1" = 40' HORIZ. (CONTOURS AT ONE FOOT INTERVALS) 1" = 10' VERT.</p>	<table border="1"> <thead> <tr> <th>NO.</th> <th>REVISIONS</th> <th>BY</th> <th>DATE</th> <th>DRAWN</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>50% REVIEW SET</td> <td>M.P.</td> <td>6/22</td> <td>J.E.</td> </tr> <tr> <td>2</td> <td>REVISIONS FOR CITY OF KALAMAZOO</td> <td>M.P.</td> <td>8/22</td> <td></td> </tr> <tr> <td>3</td> <td>90% REVIEW SET</td> <td>M.P.</td> <td>8/22</td> <td></td> </tr> <tr> <td>4</td> <td>PERMIT SET</td> <td>B.V.</td> <td>8/22</td> <td></td> </tr> </tbody> </table>	NO.	REVISIONS	BY	DATE	DRAWN	1	50% REVIEW SET	M.P.	6/22	J.E.	2	REVISIONS FOR CITY OF KALAMAZOO	M.P.	8/22		3	90% REVIEW SET	M.P.	8/22		4	PERMIT SET	B.V.	8/22		<p>Prein&Newhof Engineers • Surveyors • Environmental • Laboratory</p>	<p>CITY OF KALAMAZOO KALAMAZOO COUNTY, MICHIGAN</p> <p>WATER MAIN EXTENSION BIG ROCK DRIVE</p>	<p>PROJECT NO. 2211189</p>
		NO.	REVISIONS	BY	DATE	DRAWN																								
		1	50% REVIEW SET	M.P.	6/22	J.E.																								
		2	REVISIONS FOR CITY OF KALAMAZOO	M.P.	8/22																									
3	90% REVIEW SET	M.P.	8/22																											
4	PERMIT SET	B.V.	8/22																											
<p>SHEET NO. 5 OF 10</p>																														
<p>DATE MAY '22</p>																														
<p>CHECKED DATE</p>																														

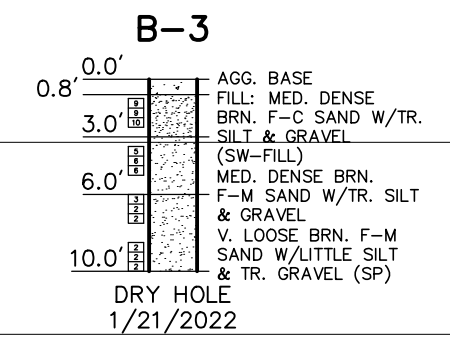
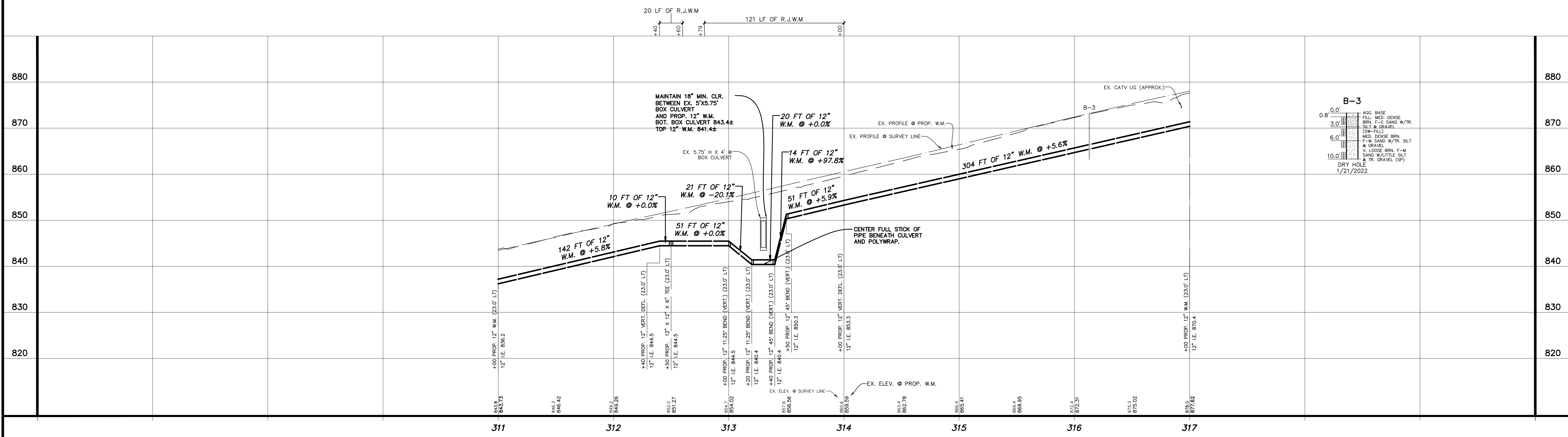
B.M. EL. 852.00
312+84.4 BENCH TIE IN S SIDE PWR POLE
1 FT AGL

CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
10101	393598.488	12752746.600	866.36
10101	393575.973	12752490.440	851.48

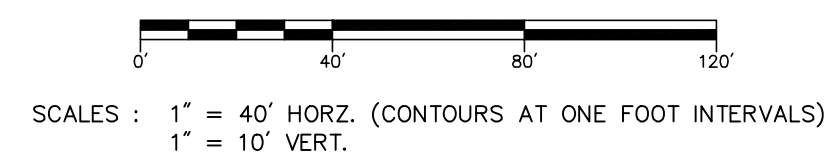
CURVE DATA TABLE			
CURVE #	LENGTH	RADIUS	CHORD
C2	1660.77	1921.40	4883.38 35° 18' 18.15" 40°



BIG ROCK DRIVE
(100' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



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1	50% REVIEW SET	M.P.	6/22	J.E.
2	REVISIONS FOR CITY OF KALAMAZOO	M.P.	8/22	
3	90% REVIEW SET	M.P.	8/22	
4	PERMIT SET	B.V.	8/22	

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CITY OF KALAMAZOO KALAMAZOO COUNTY, MICHIGAN WATER MAIN EXTENSION BIG ROCK DRIVE	PROJECT NO. 2211189
	SHEET NO. 6 OF 10

B.M. EL. 908.37
324+85± BENCH TIE IN S SIDE PWR POLE
1 FT AGL

B.M. EL. 938.33
330+85± BENCH TIE IN SW SIDE PWR
POLE 0.8 FT AGL

CONTROL POINT TABLE

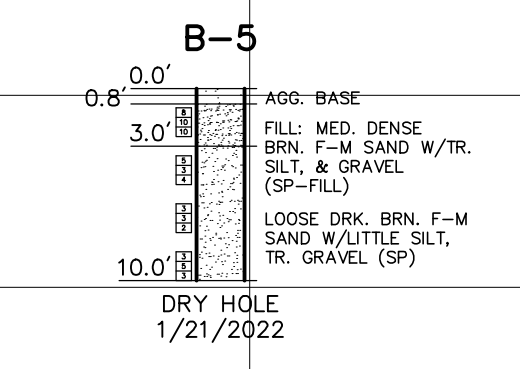
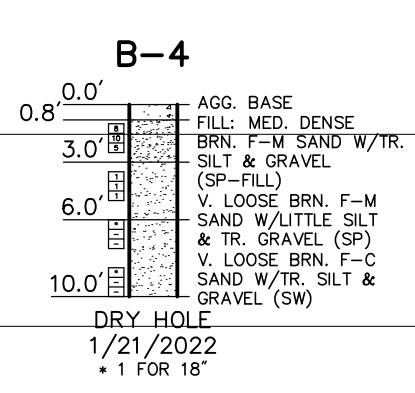
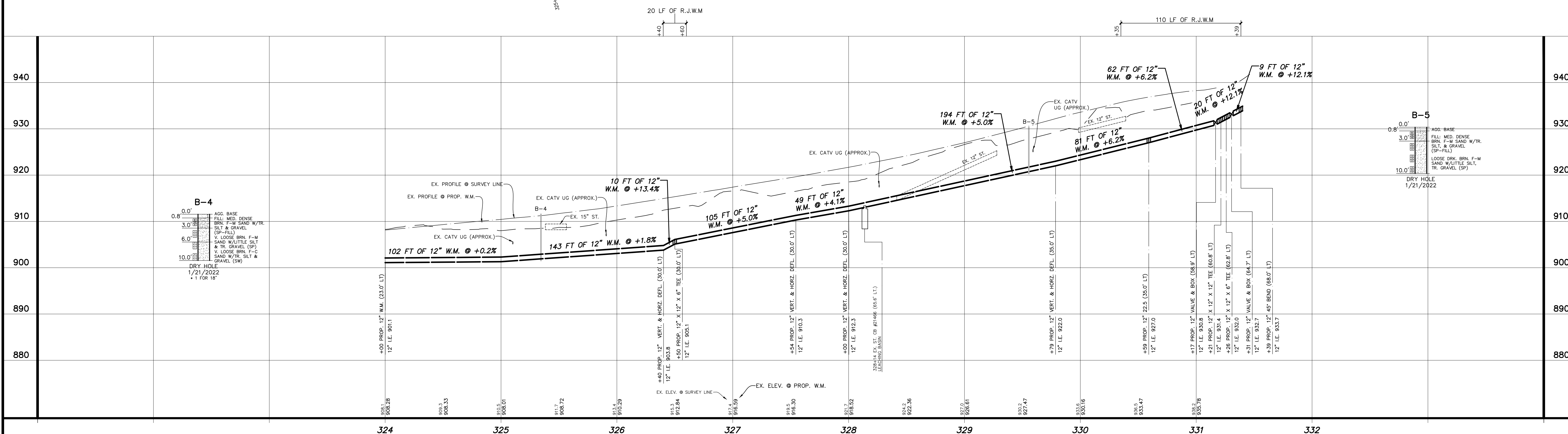
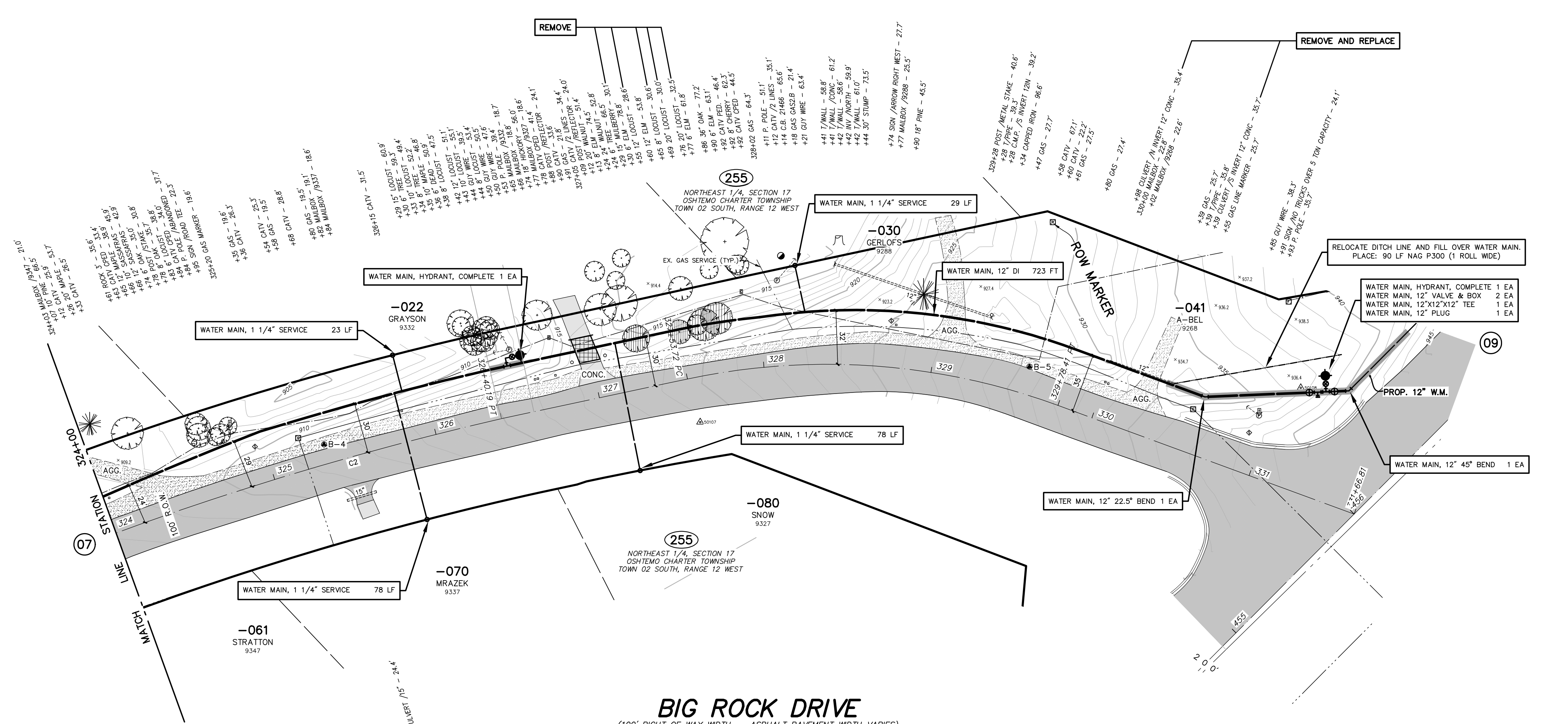
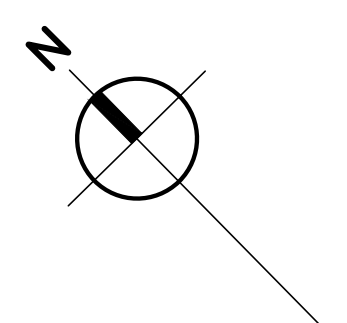
POINT No.	NORTHING	EASTING	ELEVATION
5	293470.842	1275357.400	906.36
2100	293542.374	12753033.040	883.09
10000	293660.837	12752976.780	877.25

CURVE DATA TABLE

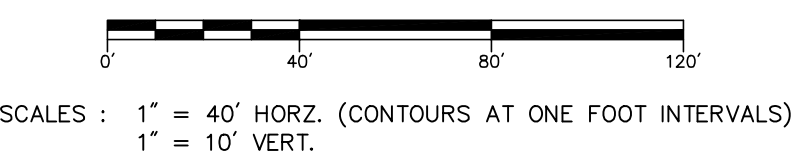
CURVE #	LENGTH	RADIUS	CHORD
C2	1860.77'	1921.46'	1880.38'±57"W 1812.40'

CURVE DATA TABLE

CURVE #	LENGTH	RADIUS	CHORD
C3	324.69'	400.00'	141°36'27"W 221.70'



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REVISIONS

NO.	REVISIONS	BY	DATE	DRAWN
1	50% REVIEW SET	M.P.	6/22	J.E.
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3	90% REVIEW SET	M.P.	8/22	
4	PERMIT SET	B.V.	8/22	

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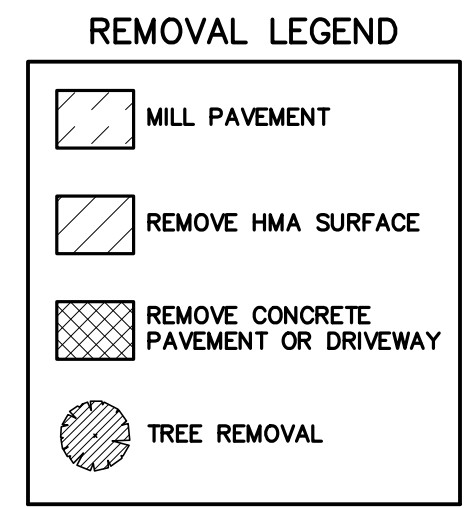
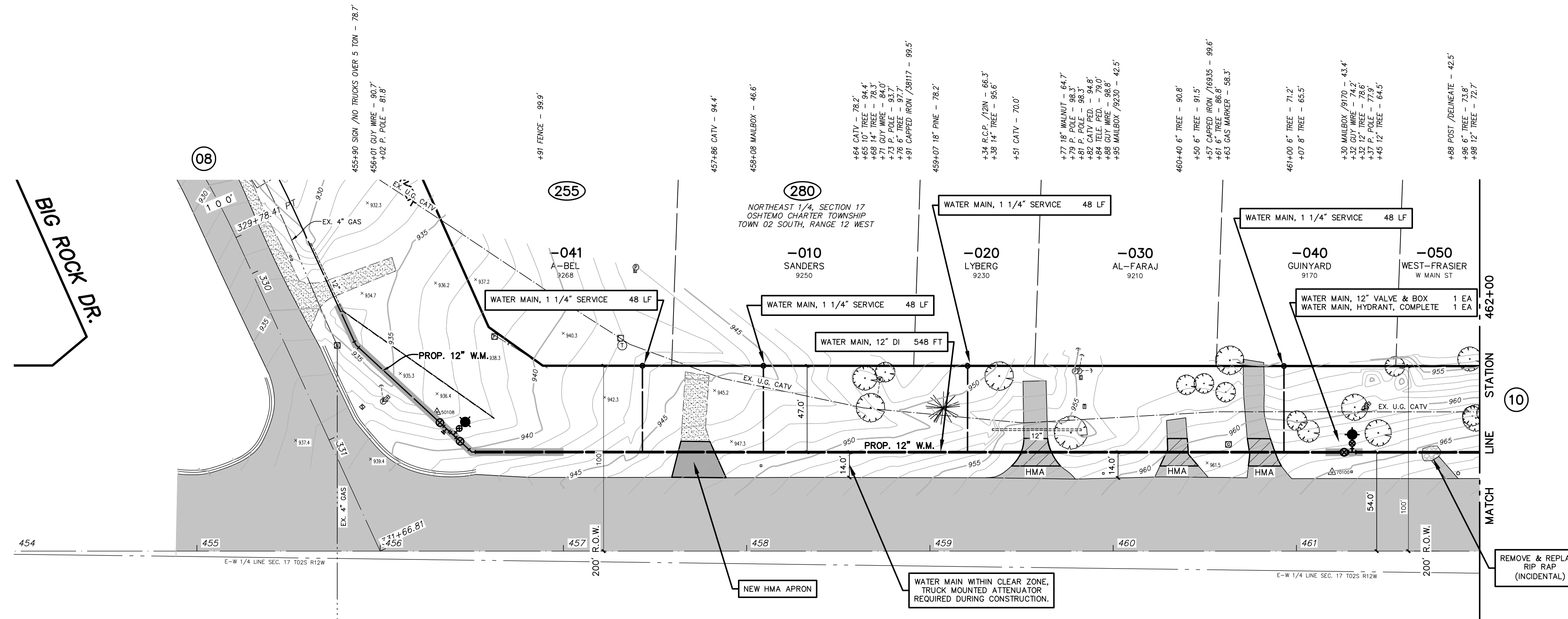
CITY OF KALAMAZOO
KALAMAZOO COUNTY, MICHIGAN
WATER MAIN EXTENSION
BIG ROCK DRIVE

PROJECT NO. 2211189
SHEET NO. 8 OF 10

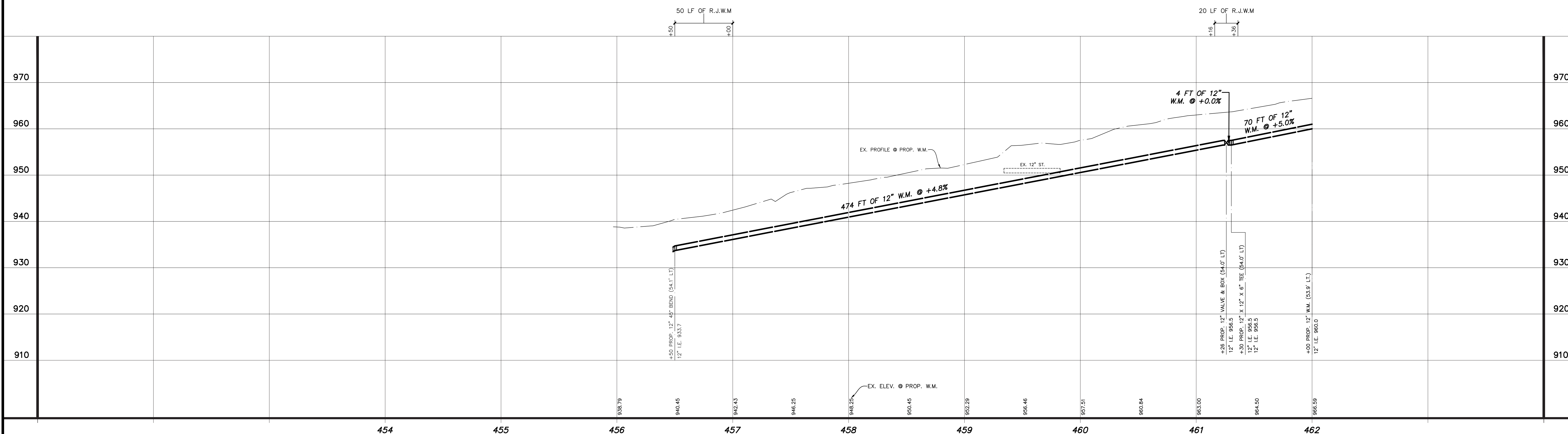
B.M. EL. 938.33
3304854 BENCH TIE IN SW SIDE PWR
POLE 0.8FT AGL

B.M. EL. 960.59
BIG ROCK DR. & M-43, 570± E & 70± N
OF C/L "X" BENCH TIE IN SW SIDE OF
PWR POLE

CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
50108	292979.016	12754186.320	936.41
70100	292951.961	127544677.100	965.04



WEST MAIN STREET (M-43)
(200' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



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NO. REVISIONS BY DATE DRAWN

1	ISSUED FOR BIDS	M.A.P.	11/22	J.E.
2	MDOT PERMIT REVISIONS	M.A.P.	02/23	

DATE: MAY '22
CHECKED: M.A.P.
DATE: OCT. '22

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

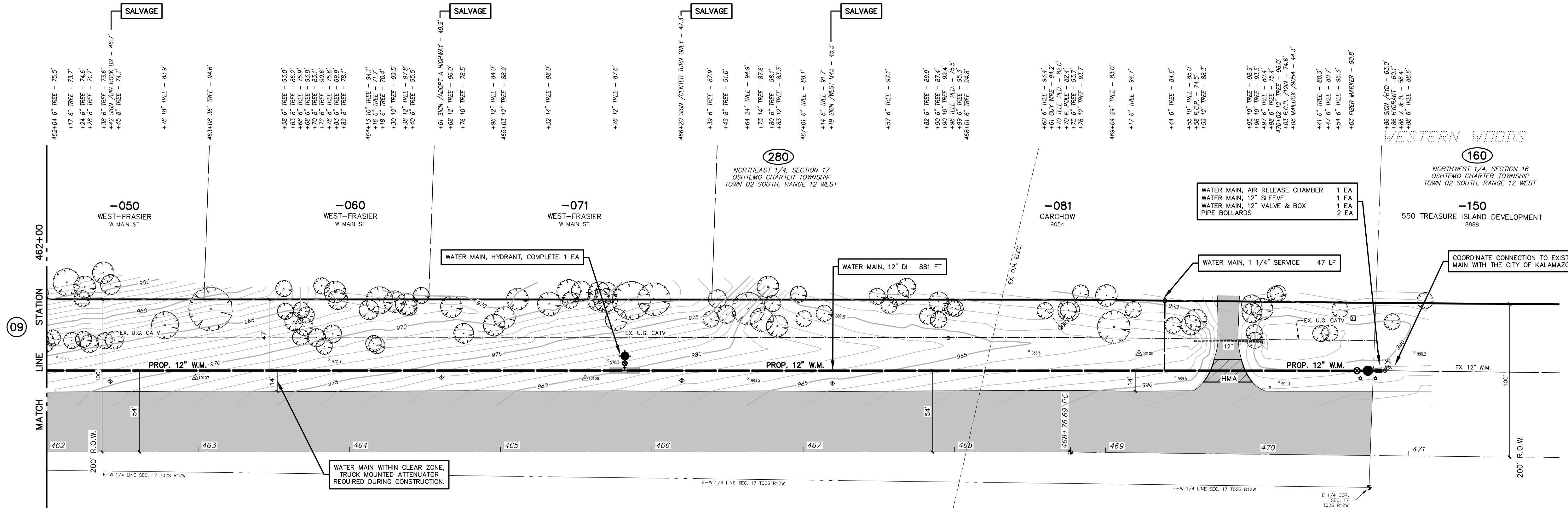
CITY OF KALAMAZOO
KALAMAZOO COUNTY, MICHIGAN

PROJECT NO. 2211189
SHEET NO. 9 OF 10

WATER MAIN EXTENSION
WEST MAIN STREET (M-43)

B.M. EL. 987.33
 M-43 & 4TH ST., 75'± N R 50'± W OF
 C/L X, BENCH TIE IN SE SIDE OF PWR
 POLE

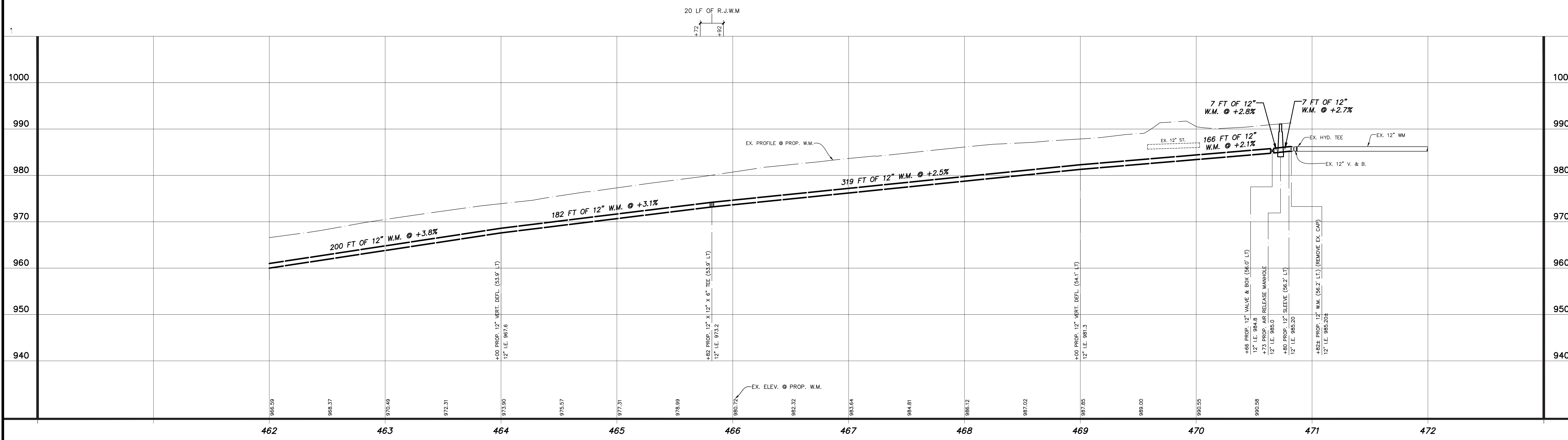
POINT No.	NORTHING	EASTING	ELEVATION
110	292973.689	12755766.950	992.51
10107	292960.147	12754855.730	971.09
10108	292962.690	12755113.490	980.00
50109	292983.401	12755479.360	986.54



REMOVAL LEGEND

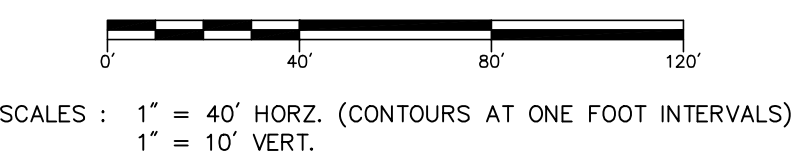
- MILL PAVEMENT
- REMOVE HMA SURFACE
- REMOVE CONCRETE PAVEMENT OR DRIVEWAY
- TREE REMOVAL

WEST MAIN STREET (M-43)
 (200' RIGHT OF WAY WIDTH ASPHALT PAVEMENT WIDTH VARIES)



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NO.	REVISIONS	BY	DATE	DRAWN
1	ISSUED FOR BIDS	M.A.P.	11/22	J.E.
2	MDOT PERMIT REVISIONS	M.A.P.	02/23	MAY '22
				M.A.P.
				OCT. '22

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CITY OF KALAMAZOO
 KALAMAZOO COUNTY, MICHIGAN
 WATER MAIN EXTENSION
 WEST MAIN STREET (M-43)

PROJECT NO.
 2211189
 SHEET NO.
 10 OF 10