

CITY OF BATTLE CREEK, MICHIGAN

CONSTRUCTION DRAWINGS FOR
2019 WATERMAIN REPLACEMENT PROJECT
N. 32ND ST., EASTWAY DR., E. COLUMBIA AVE.

CONTRACT NO.: 2019-044B

CITY COMMISSION:

MAYOR:

MARK BEHNKE

VICE MAYOR:

SHERRY SOFIA

COMMISSIONERS:

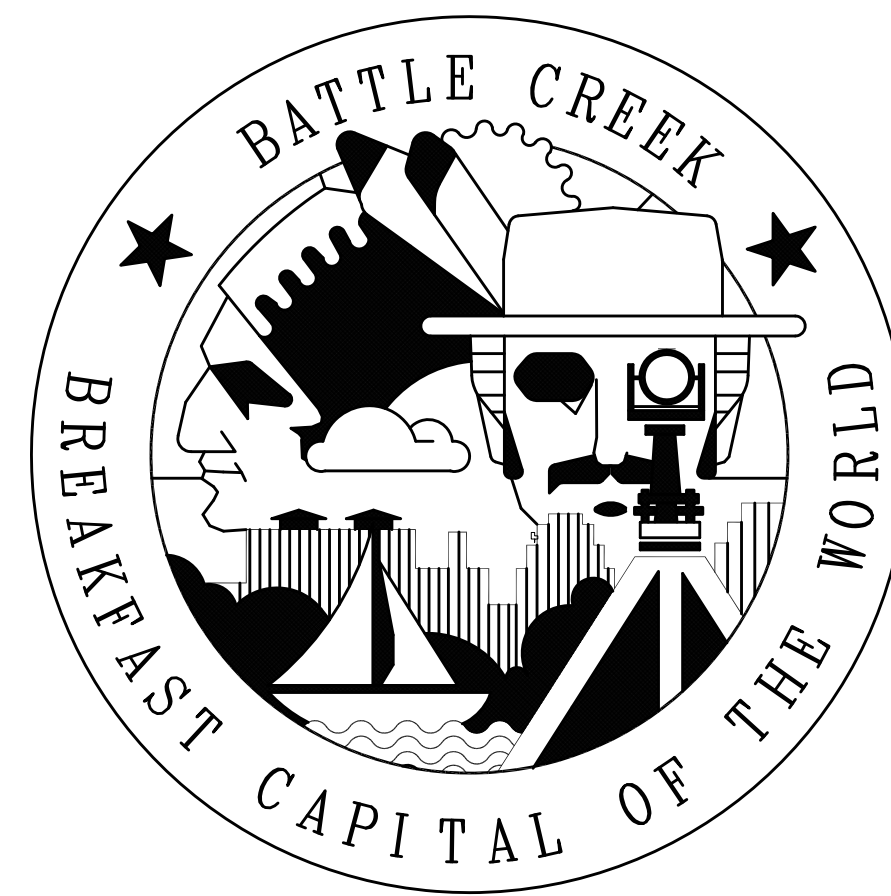
JOHN GRIFFIN
LYNN WARD GRAY
KATE FLORES
CHRISTOPHER SIMMONS
JIM LANCE
SUSAN BALDWIN
KAYTEE FARIS

PREPARED BY:
ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS

NOTE:
ALL WORK SHALL CONFORM TO THE CITY OF
BATTLE CREEK WATER MAIN STANDARDS
DATED JULY 2018

CITY MANAGER:

REBECCA FLEURY



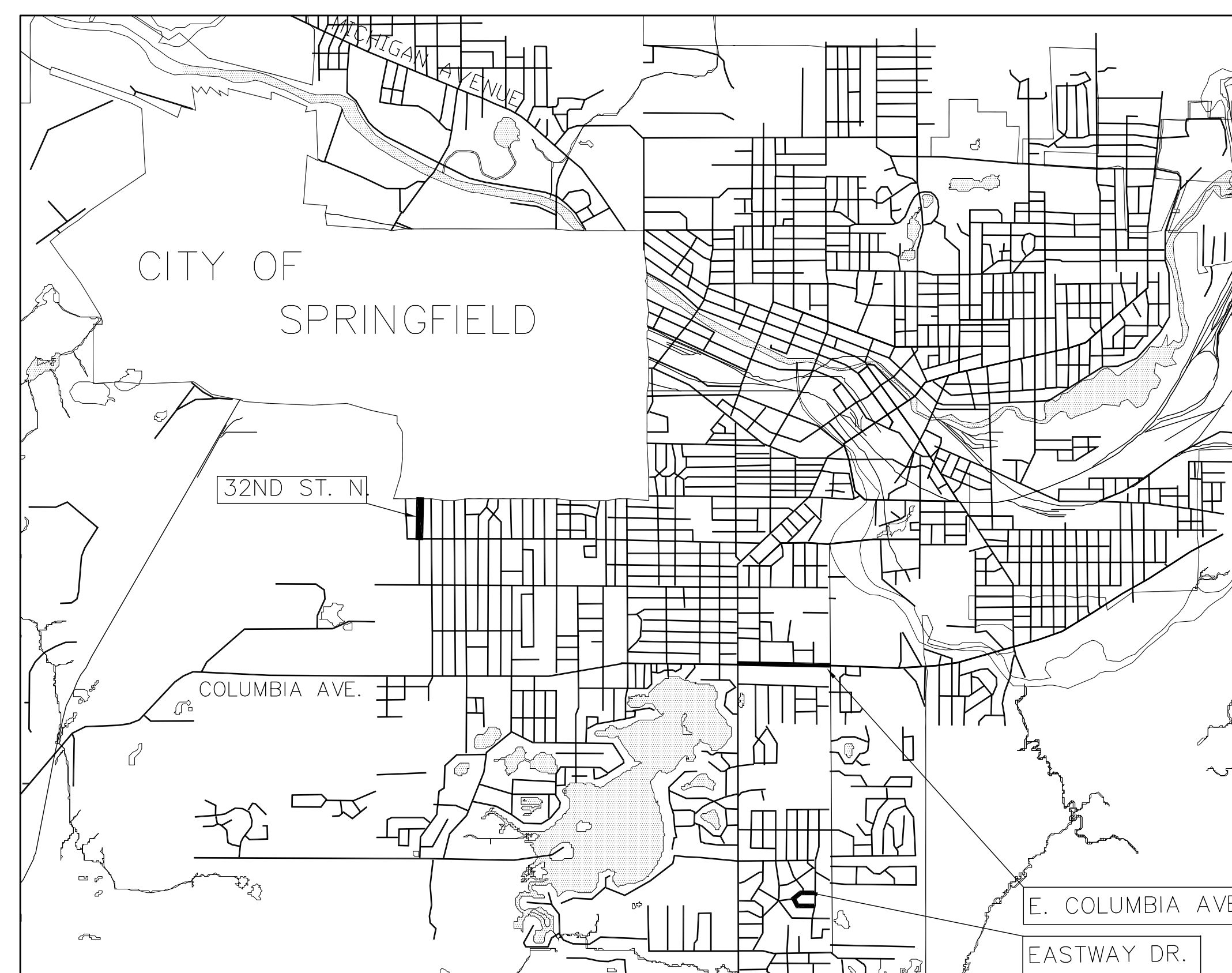
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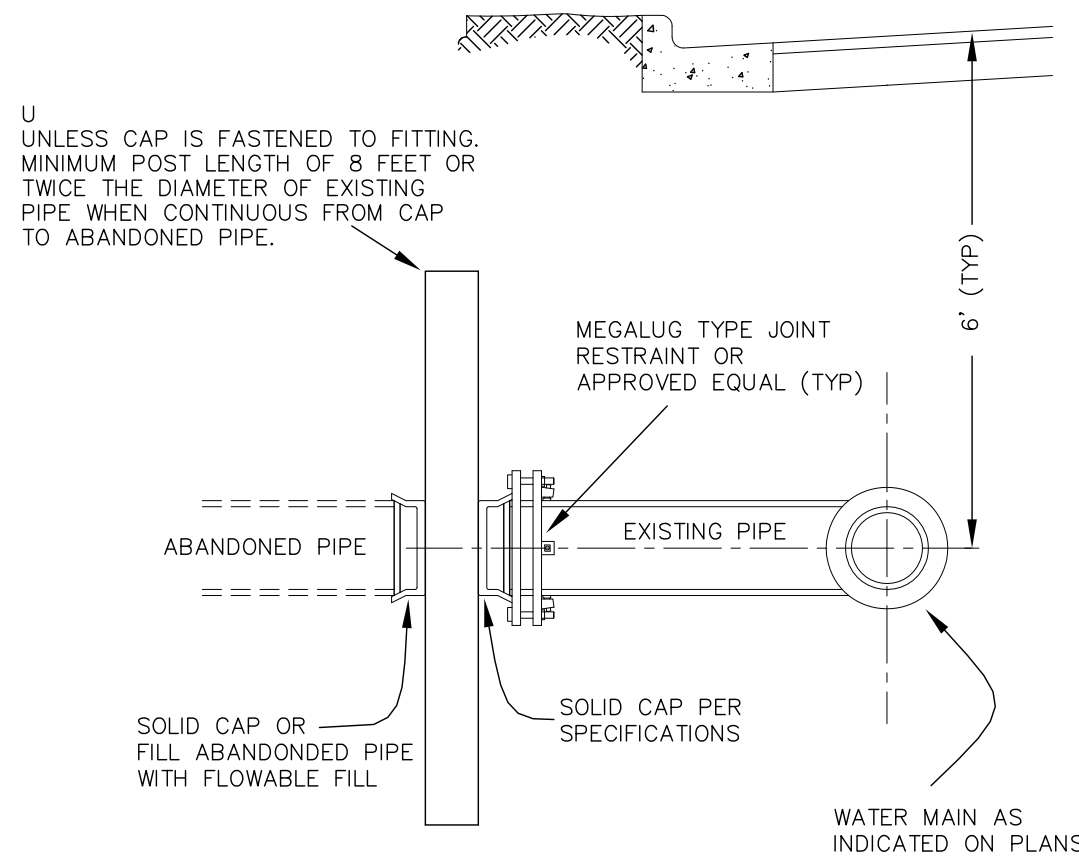
DEPARTMENT OF PUBLIC
WORKS DIRECTOR:

CHRISTOPHER DOPP, P.E.

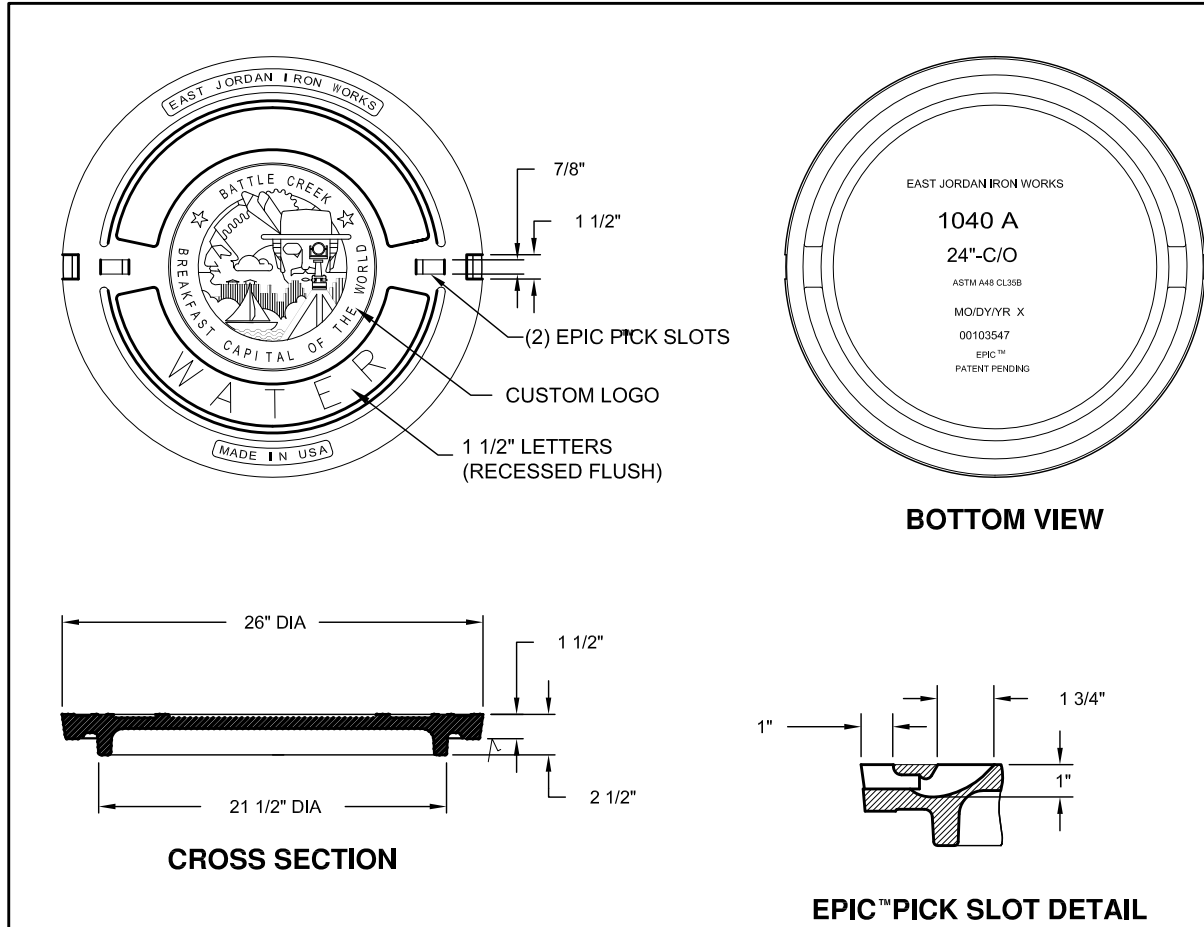
CITY ENGINEER:

CARL E. FEDDERS, P.E.

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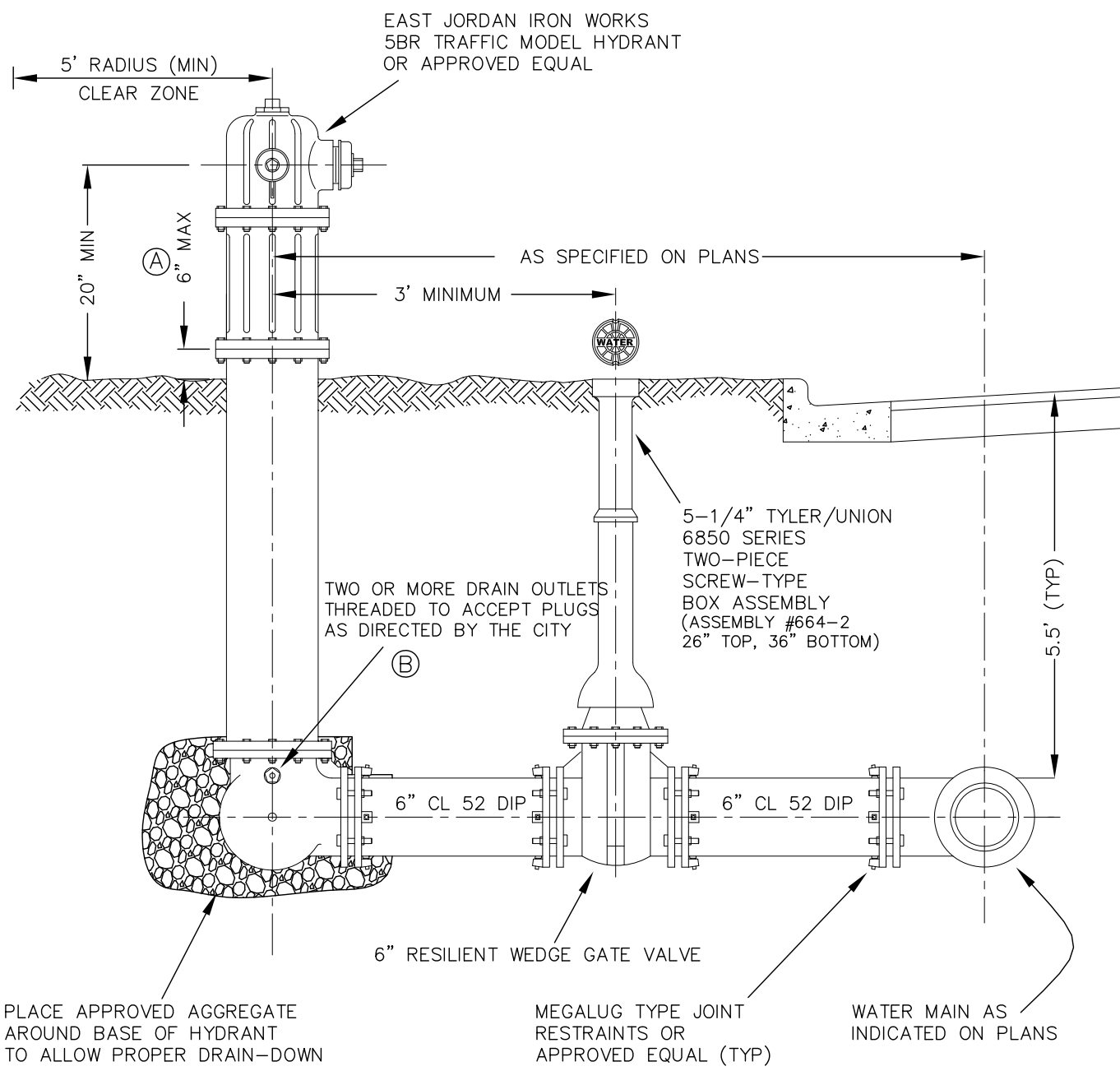


CAP AND PLUG MAIN



GENERAL WATER MAIN CONSTRUCTION NOTES

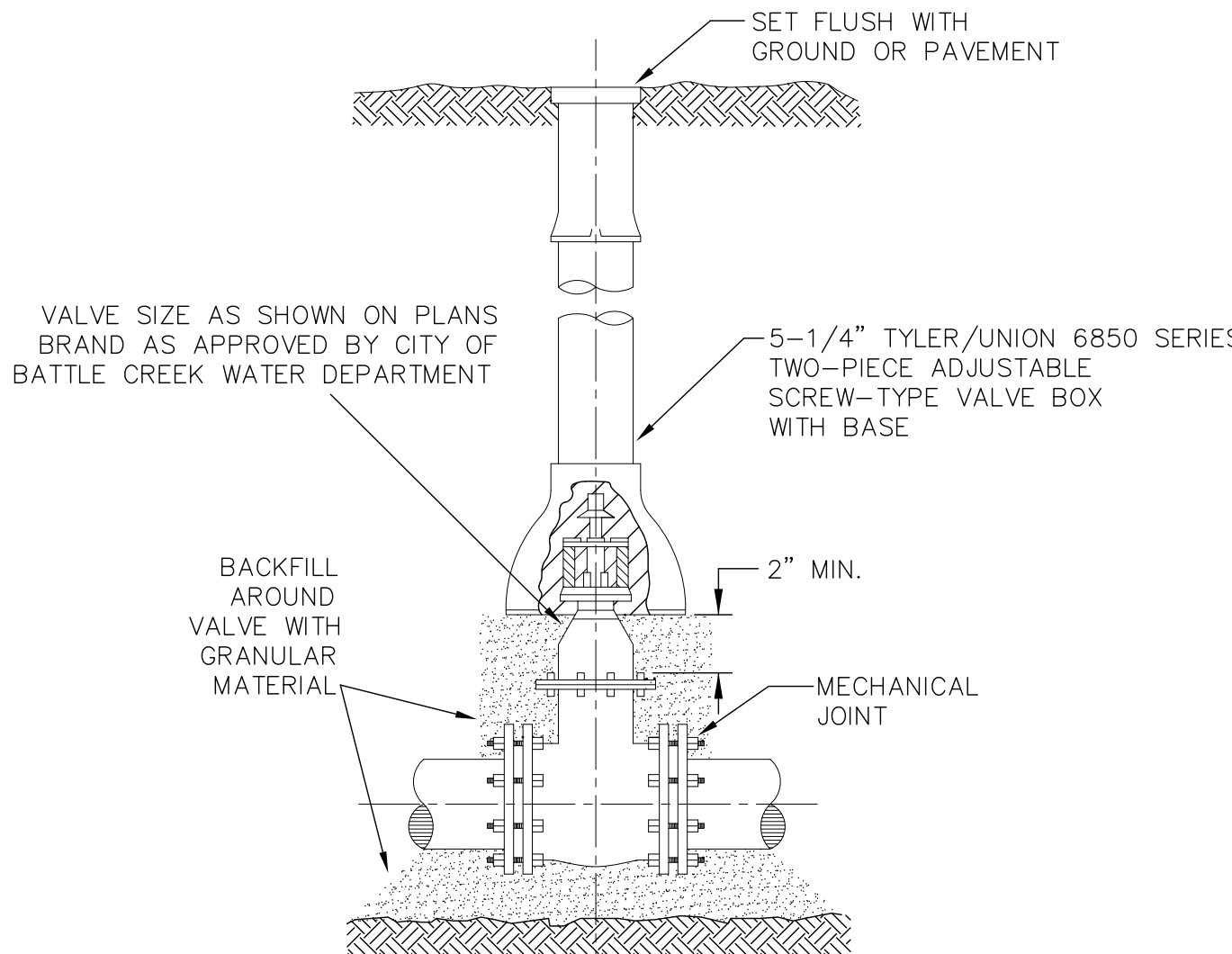
1. CONTRACTOR SHALL NOT PRESSURE TEST AGAINST A TAPPING VALVE.
2. CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVES (CONTACT CITY WATER DEPT.). ALL VALVES SHALL BE OPERATED TO OPEN POSITION AT THE FINAL INSPECTION.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING THRUST RESTRAINT DESIGN FOR TEE, VALVES AND BENDS. SHOP DRAWINGS SHALL BE SUBMITTED 3 WEEKS PRIOR TO WATER MAIN CONSTRUCTION.



- NOTES:
- ALL MATERIALS MUST MEET THE CITY OF BATTLE CREEK WATER DIVISION STANDARDS.
- IF THE HYDRANT ASSEMBLY IS LOCATED WITHIN A PRIVATE ROAD, A PUBLIC UTILITY EASEMENT MUST COMPLETELY ENCOMPASS THE HYDRANT ASSEMBLY.
- FIRE HYDRANT ASSEMBLY INCLUDES TEE, 6" RESILIENT WEDGE VALVE AND BOX, RESTRAINTS, AND UP TO 10'-6" OF CL 52, CEMENT LINED, DUCTILE IRON PIPE.
- Ⓐ 6" D.I.P. VERTICAL EXTENSIONS SHALL BE INSTALLED AS NECESSARY TO MAINTAIN PROPER HYDRANT HEIGHT.
- Ⓑ DRAIN PLUGS MUST BE REMOVED UNLESS OTHERWISE DIRECTED BY THE CITY.

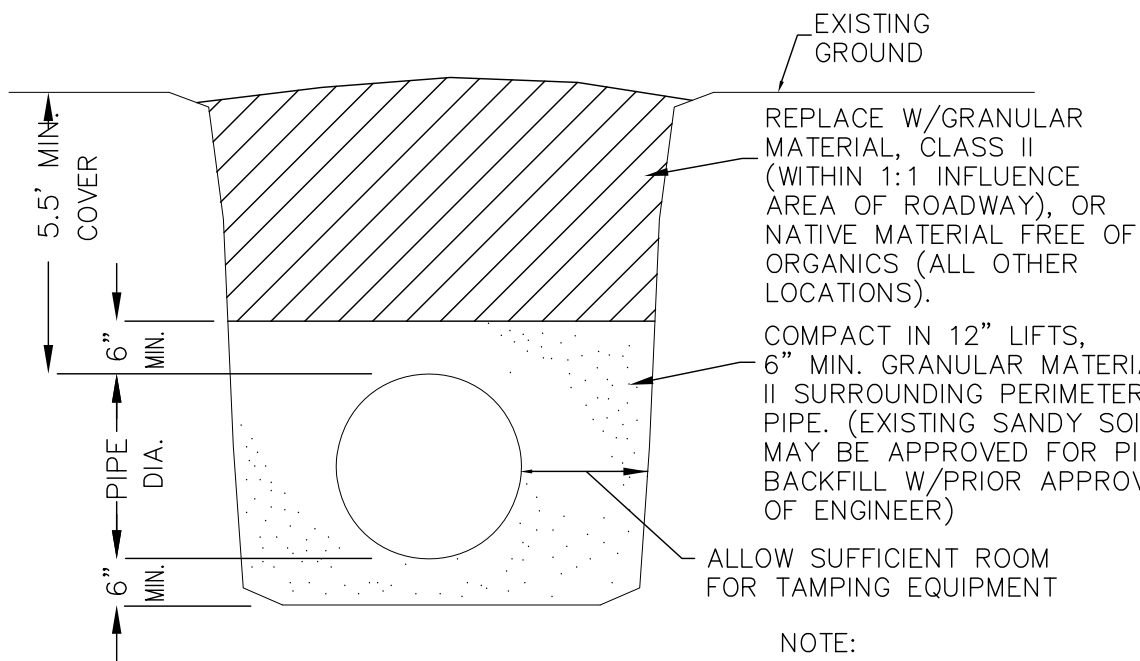
TYPICAL HYDRANT AND VALVE DETAIL

REV: 2/24/2005

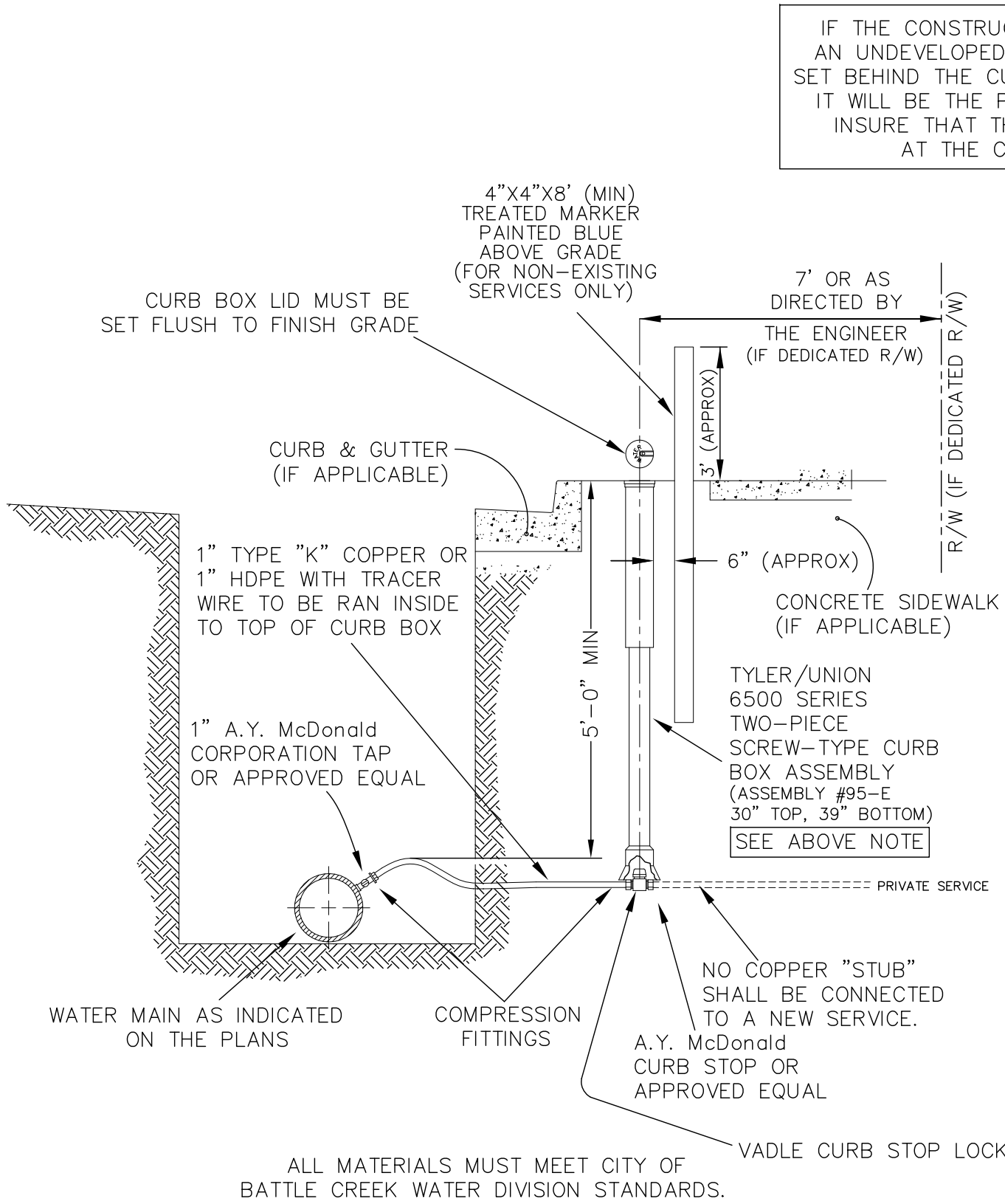


TYPICAL VALVE BOX DETAIL

NOT TO SCALE

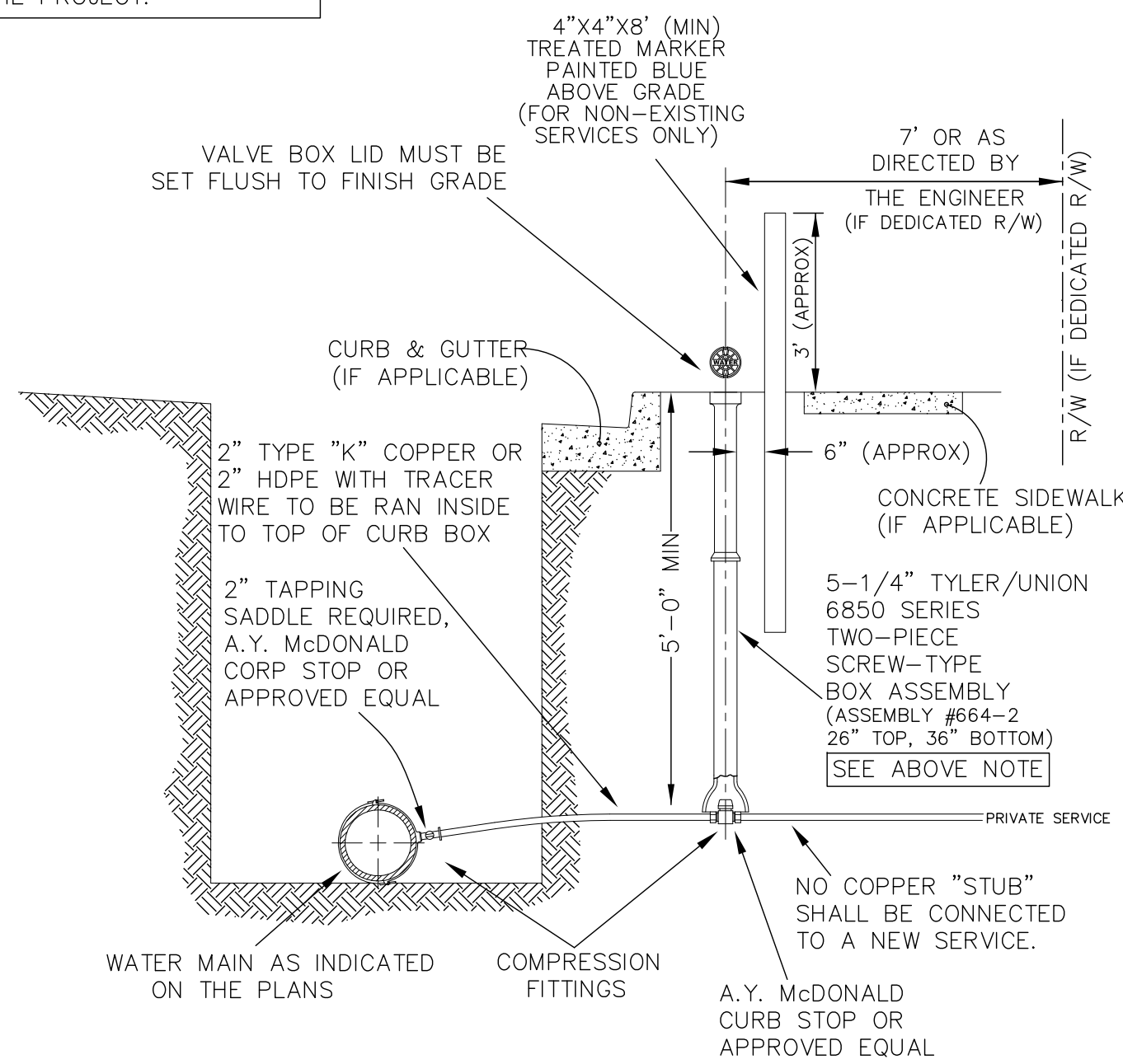


TYPICAL PIPE BEDDING DETAIL



TYPICAL 1" WATER SERVICE DETAIL

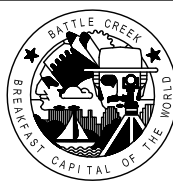
REV : 07/27/005



TYPICAL 2" WATER SERVICE DETAIL

REV: 07/27/2005

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY
DETAILS REVISED	7/28/2005	TJG	DETAILS REVISED	3/13/2017	CLA
NOTES ADDED	4/9/2009	DLW			
CAP ADDED — HYD REVISED	10/29/2015	KRT			

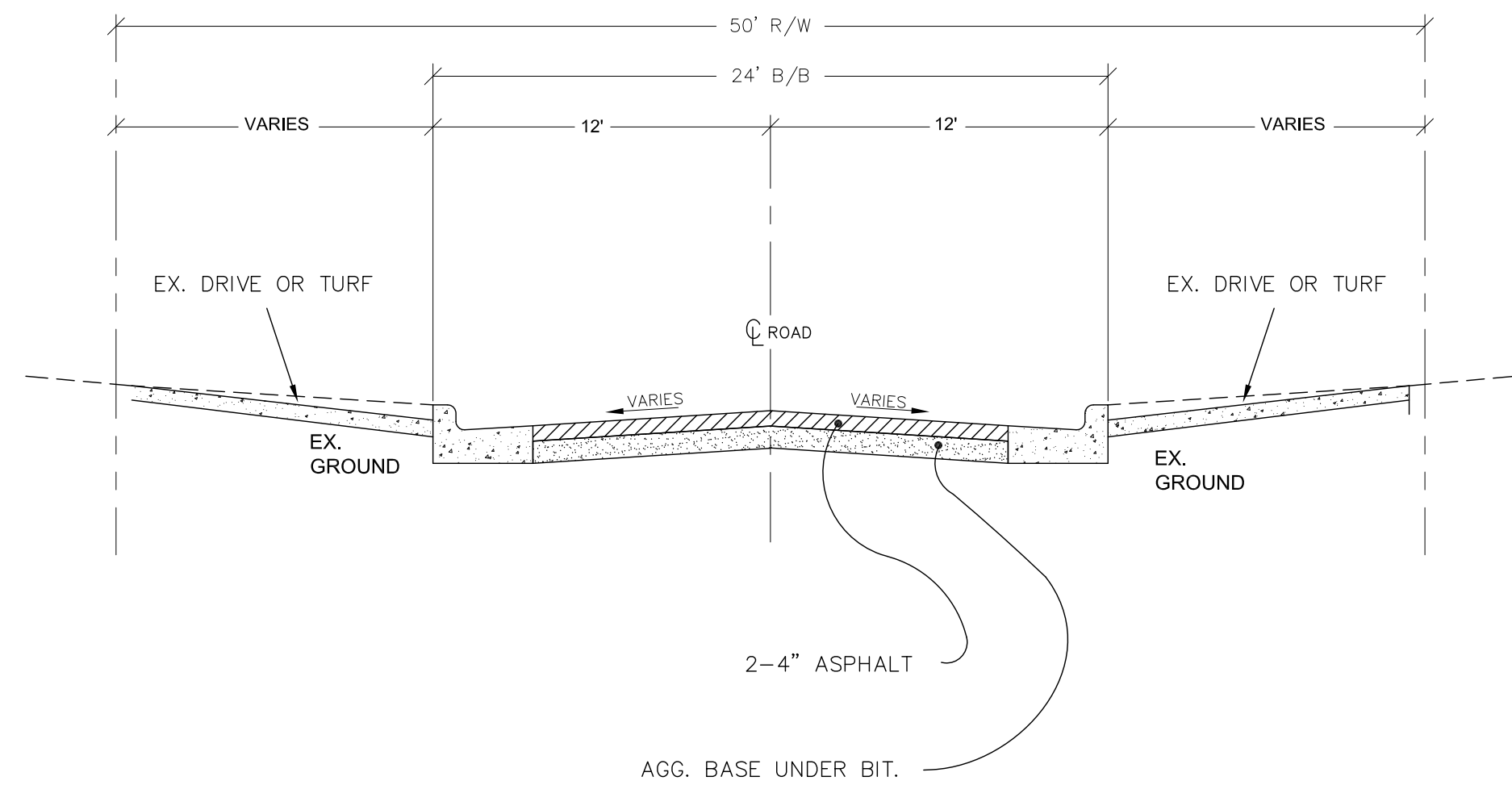


CITY OF BATTLE CREEK, MICHIGAN
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

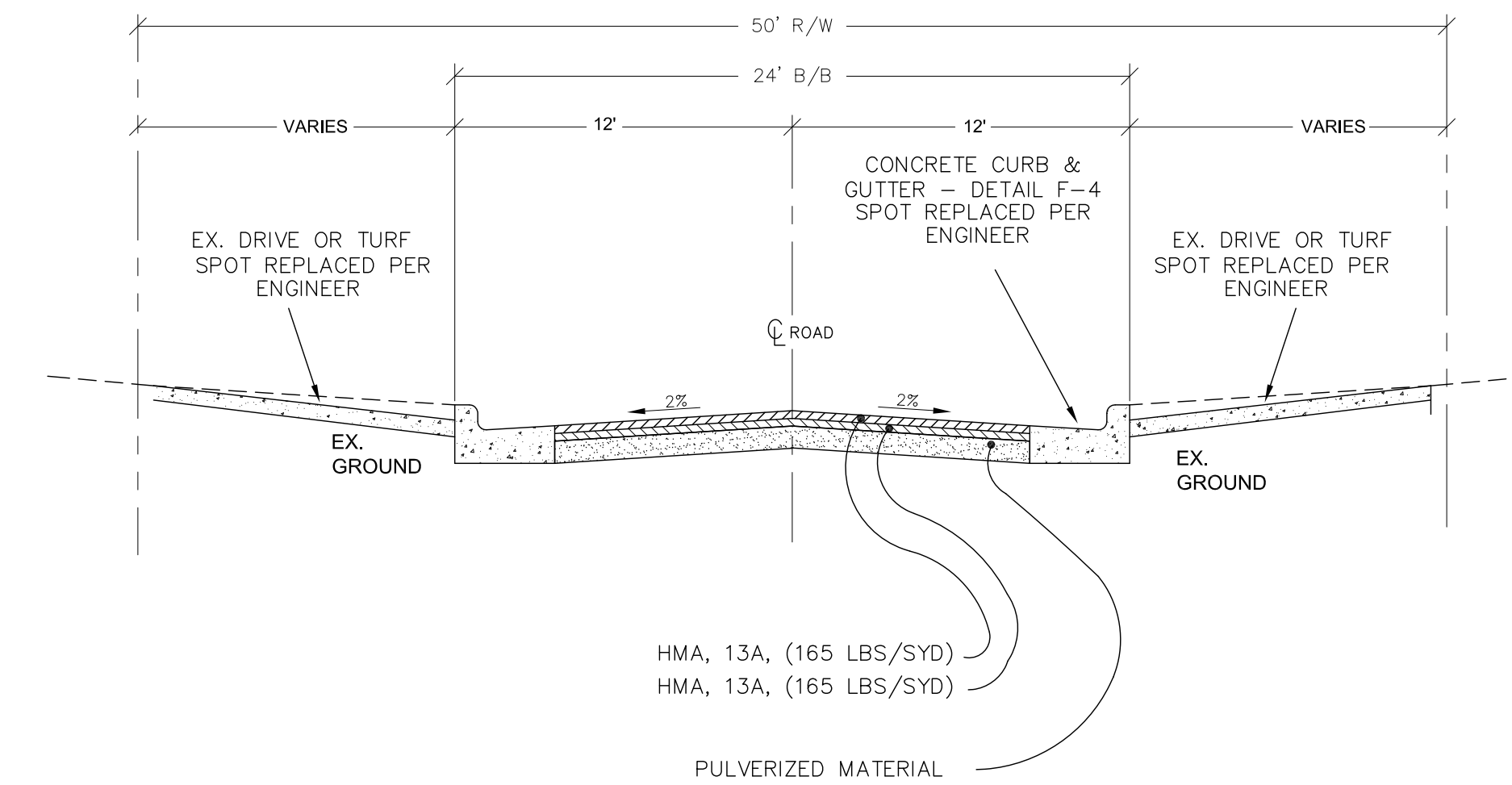
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SCALE: NOTED	DATE: 2/99 REVISED 3/2017
FILE NAME: STANDARD WATER DETAILS.DWG	

STANDARD WATER MAIN DETAILS

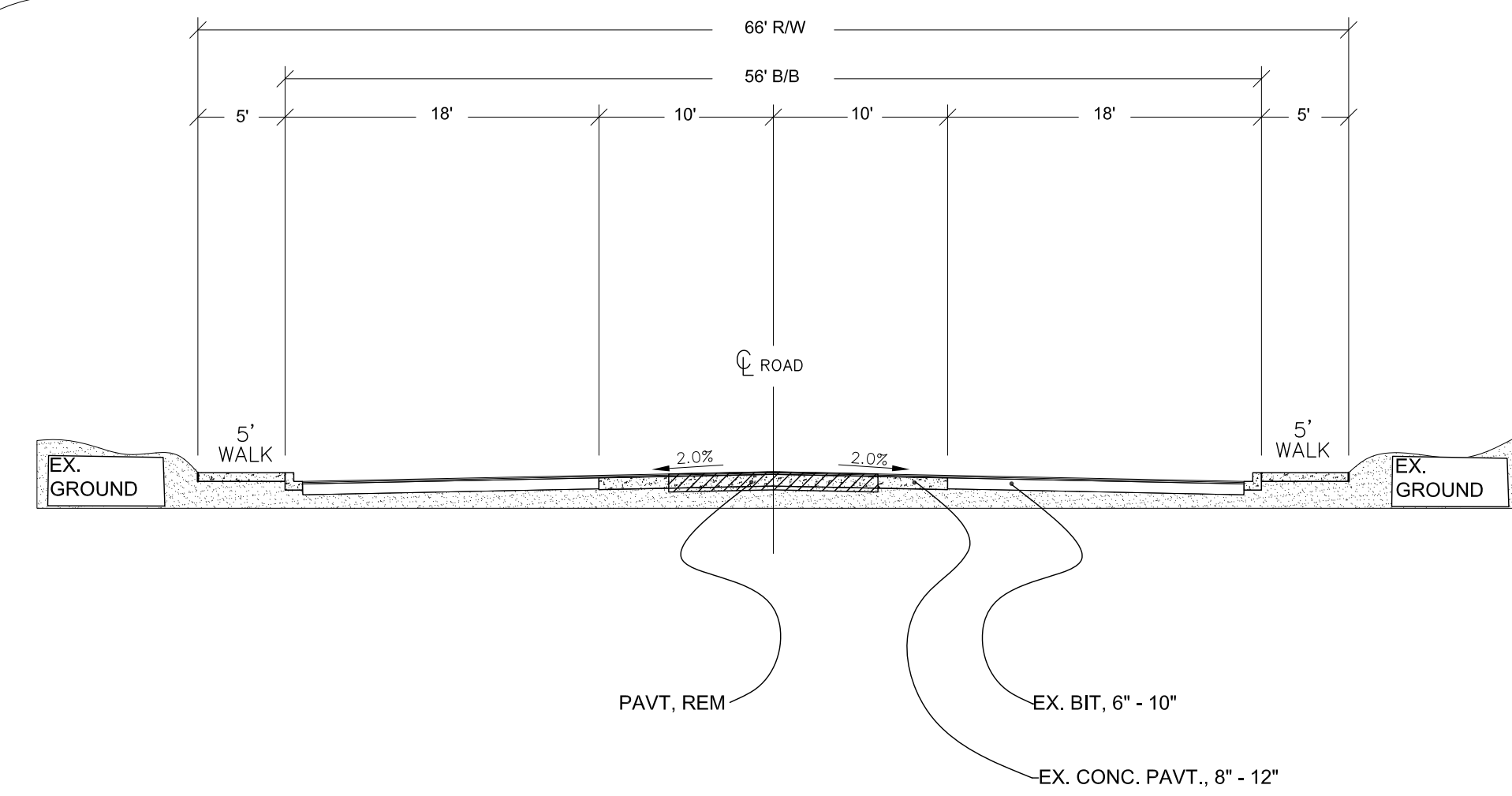
JOB NO.:	STREET SHEET NO.:	CONTRACT SHEET NO.:
	1 OF 1	2 OF 20



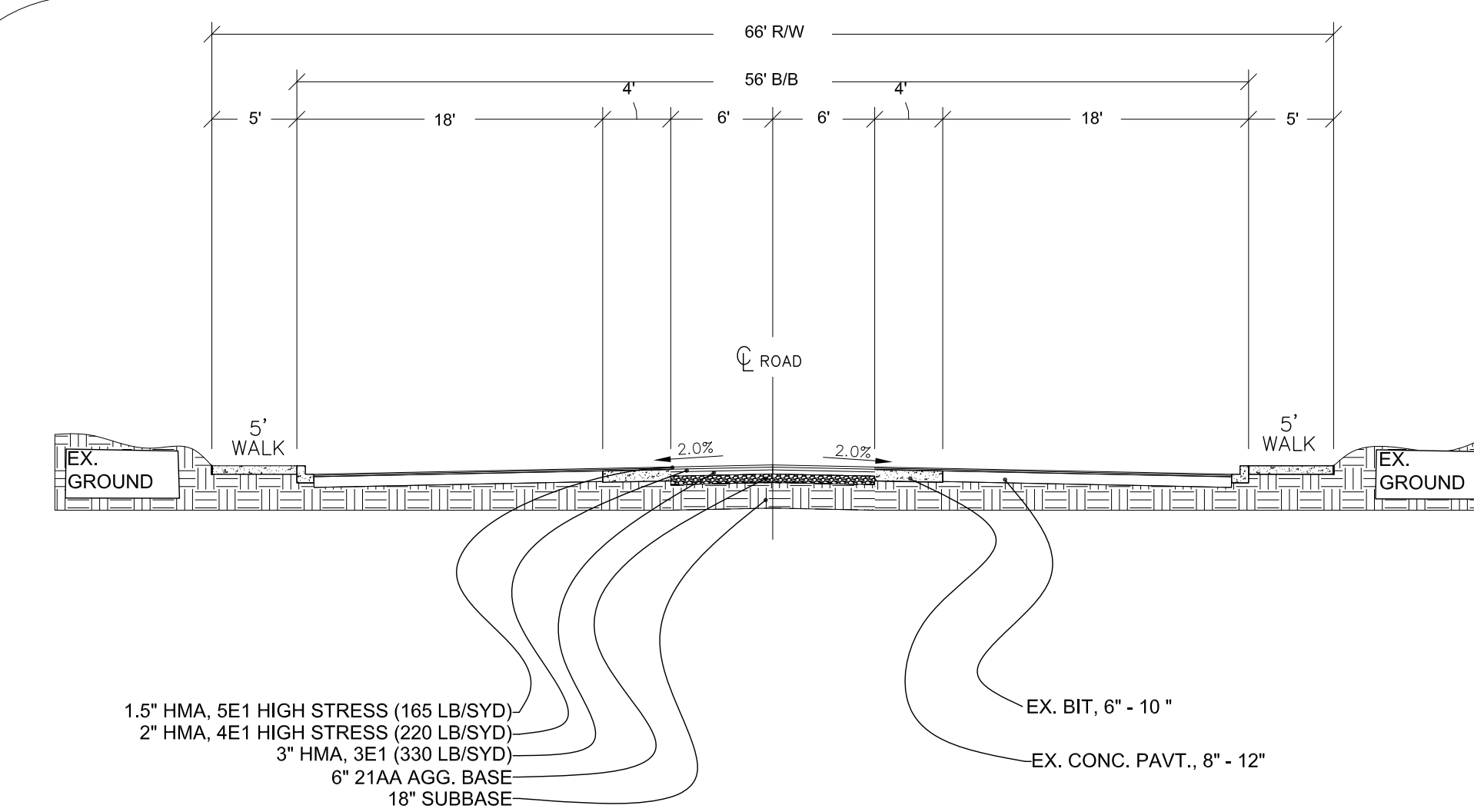
EASTWAY DRIVE N&S EXISTING CROSS SECTION
STA. 0+00 – STA. 13+77



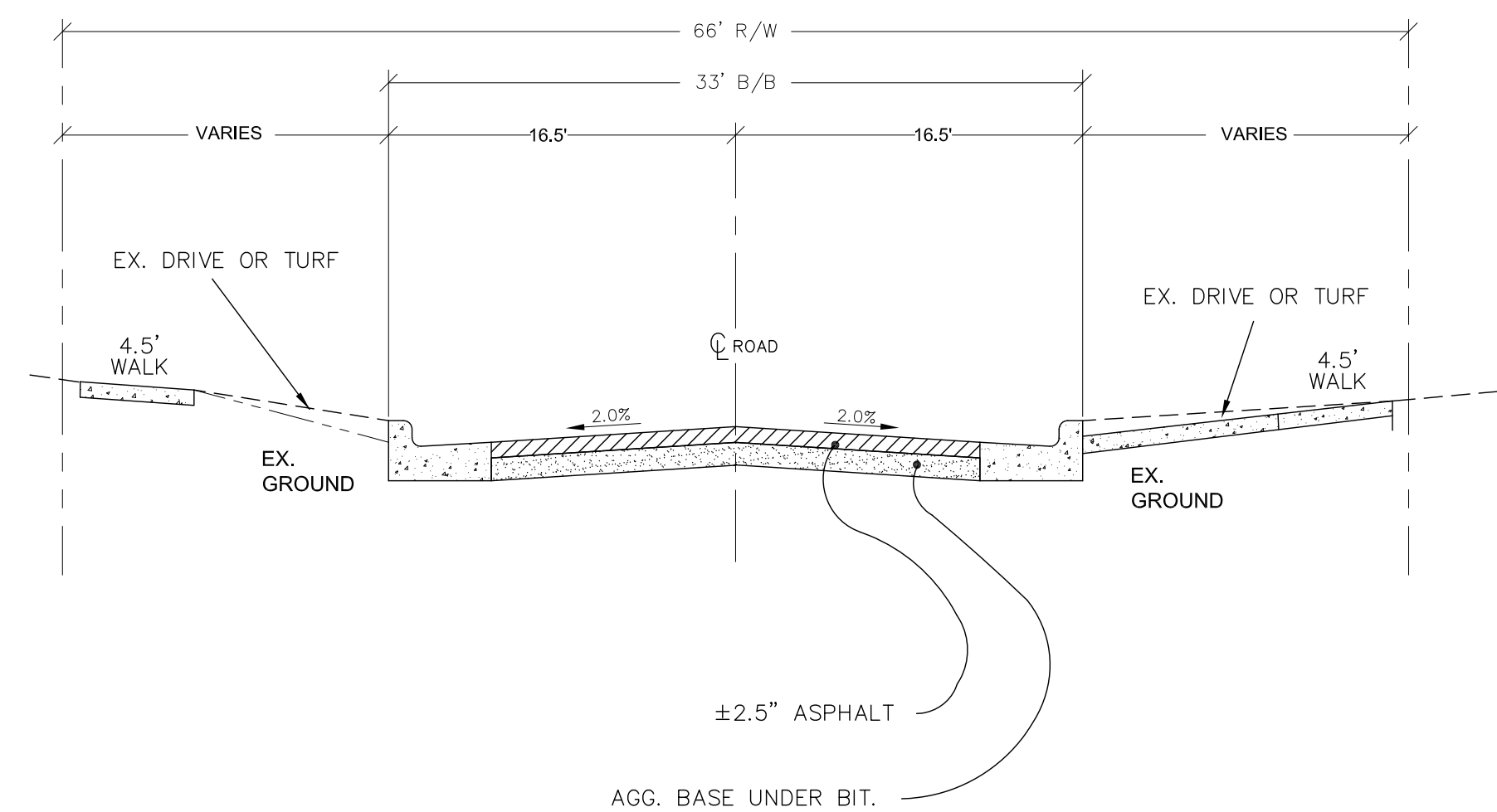
EASTWAY DRIVE N&S PROPOSED CROSS SECTION
STA. 0+00 – STA. 13+77



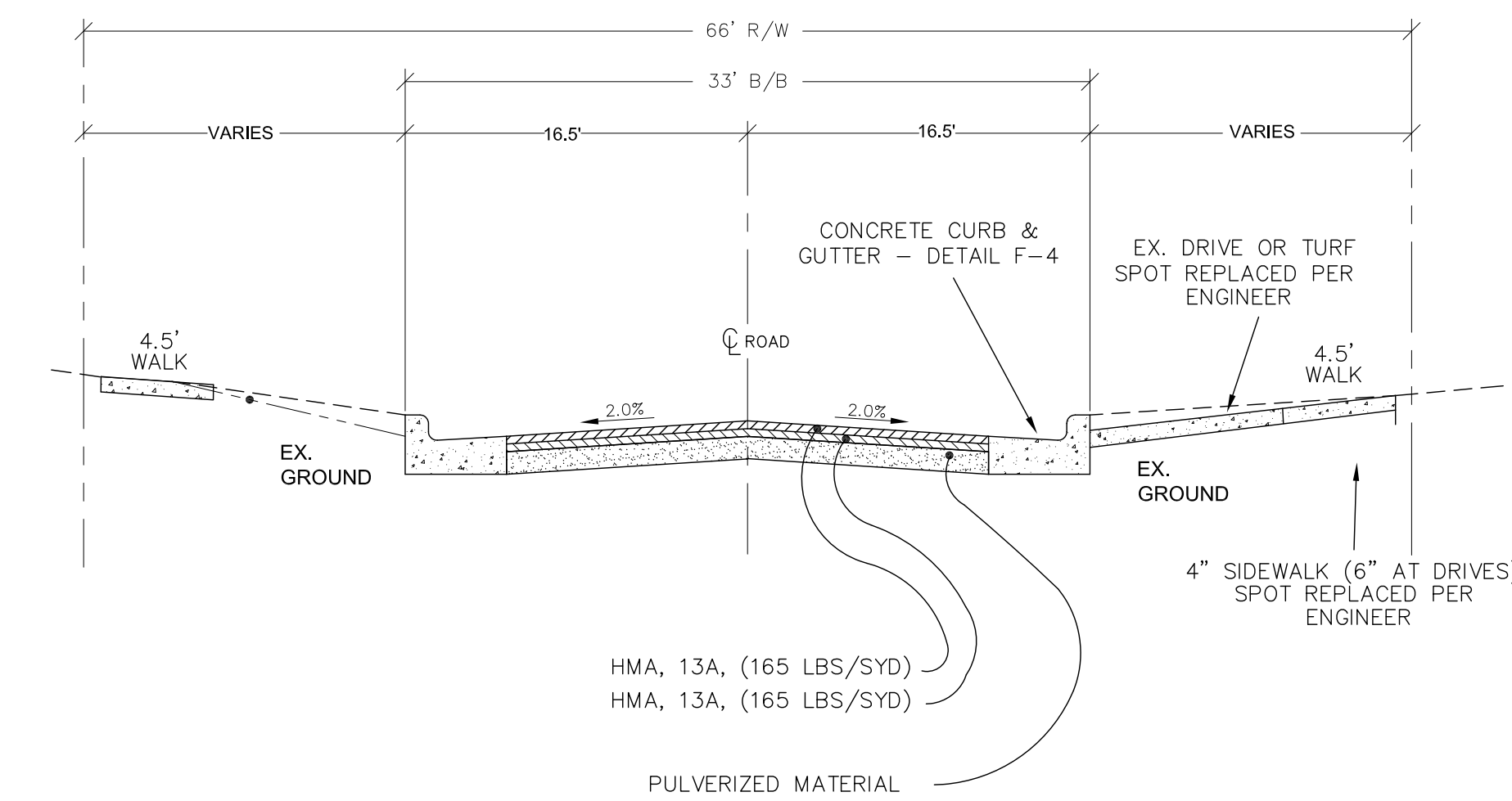
COLUMBIA AVENUE EXISTING CROSS SECTION
STA. 0+00 – STA. 27+50



COLUMBIA AVENUE PROPOSED CROSS SECTION
STA. 0+00 – STA. 27+50

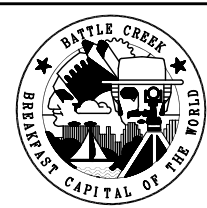


32nd STREET EXISTING CROSS SECTION
STA. 0+00 – STA. 13+13



32nd STREET PROPOSED CROSS SECTION
STA. 0+00 – STA. 13+13

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY



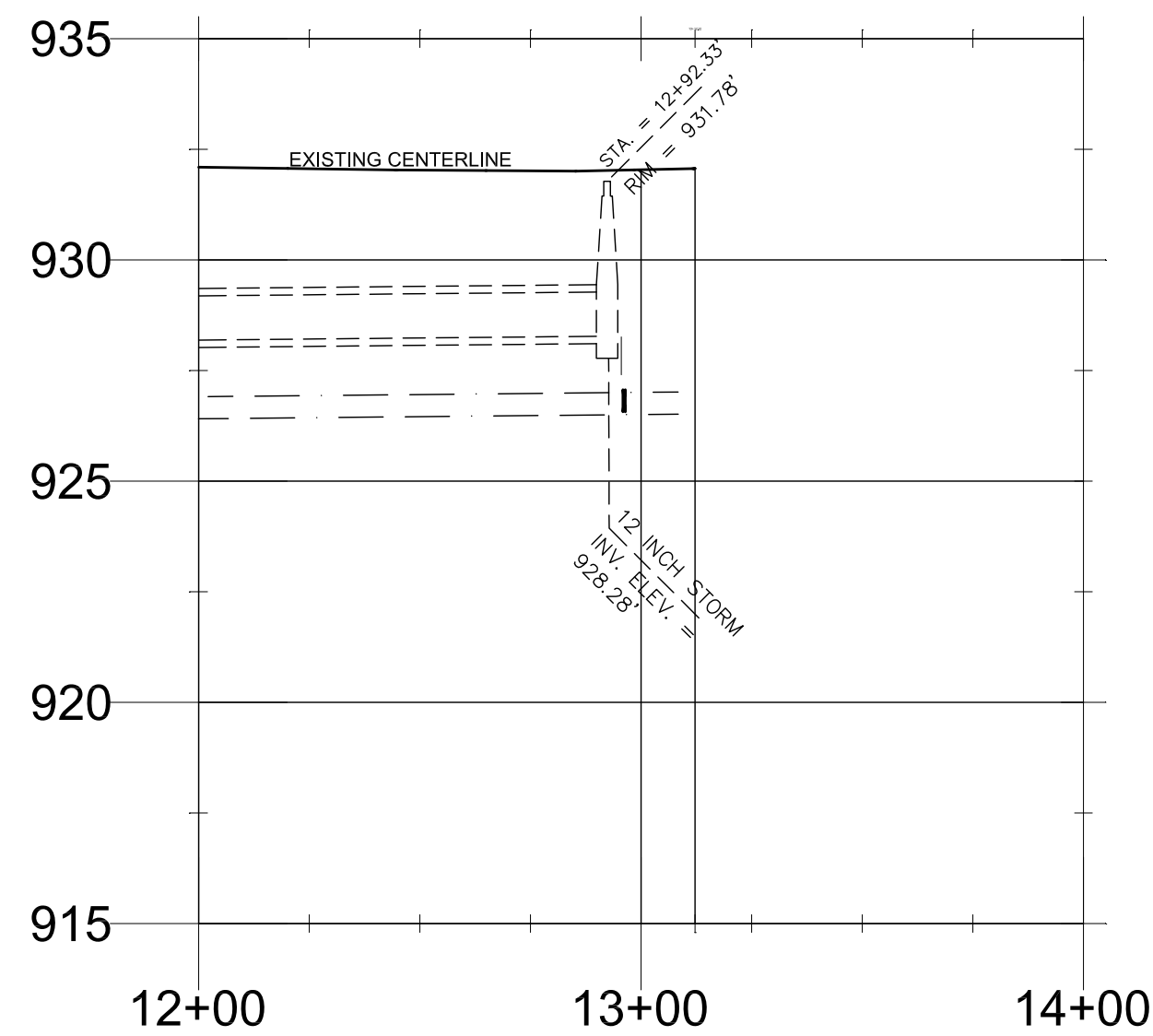
CITY OF BATTLE CREEK, MICHIGAN
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

DRAWN BY: CLA
SCALE: N./A.
DATE: MARCH 2019
FILE NAME:

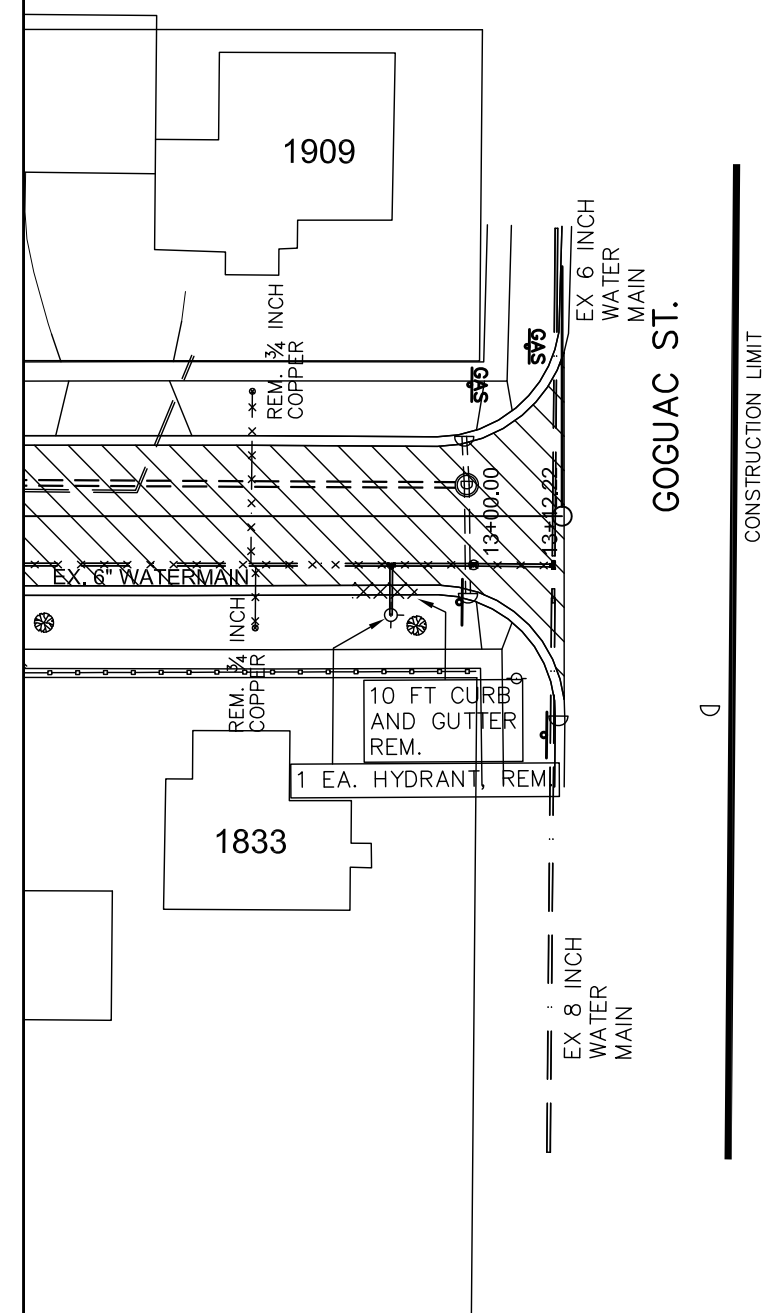
APPROVED BY: DJC

2019 WATERMAIN PROJECT
STANDARD CROSS SECTIONS
32ND, COLUMBIA, EASTWAY

CONTRACT NO.: 2019-044B
R.O.W. SHEET NO.: 1 OF 1
CONTRACT SHEET NO.: 3 OF 20



- = BENCHMARK
- = TRAVERSE POINT
- = PROPERTY CORNER
- = SECTION CORNER
- = STORM SEWER MANHOLE
- = INLET/CATCH BASIN
- = SANITARY SEWER MANHOLE
- = SANITARY SEWER CLEANOUT
- = ELECTRIC MANHOLE
- = UTILITY POLE
- = LIGHT POLE
- = YARD LIGHT
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- = TRANSFORMER
- = ELECTRIC HANDHOLE
- = TELEPHONE MANHOLE
- = TELEPHONE BOX
- = TELEPHONE VAULT
- = WATER MANHOLE
- = HYDRANT
- = WATER VALVE
- = WATER CURB BOX
- = WATER WELL
- = WELL
- = GAS VALVE
- = GAS LINE MARKER
- = GAS METER
- = CONIFEROUS TREE
- = DECIDUOUS TREE
- = SHRUB/BUSH
- = STUMP
- = SIGN
- = BUS STOP
- = MAILBOX
- = BOLLARD
- = MONITOR WELL
- = LANDSCAPE ROCK



xxxxx

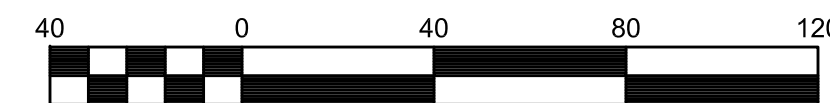
CURB & WATER
MAIN REMOVALS

XXXXXX

CONC. REMOVALS

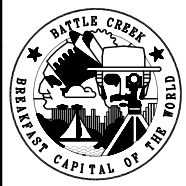
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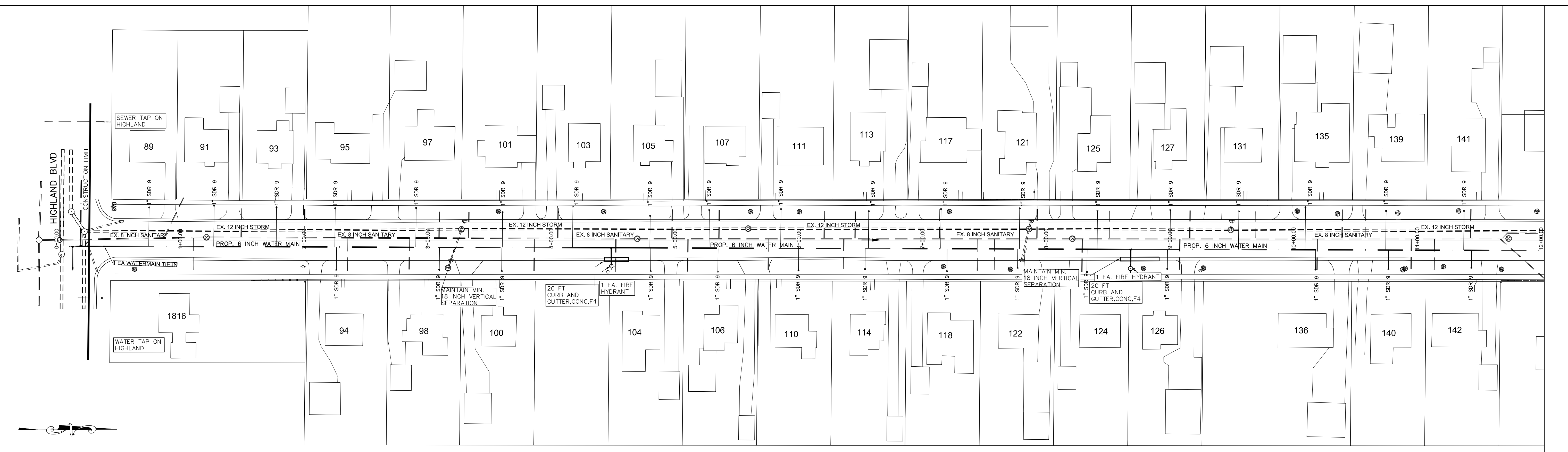
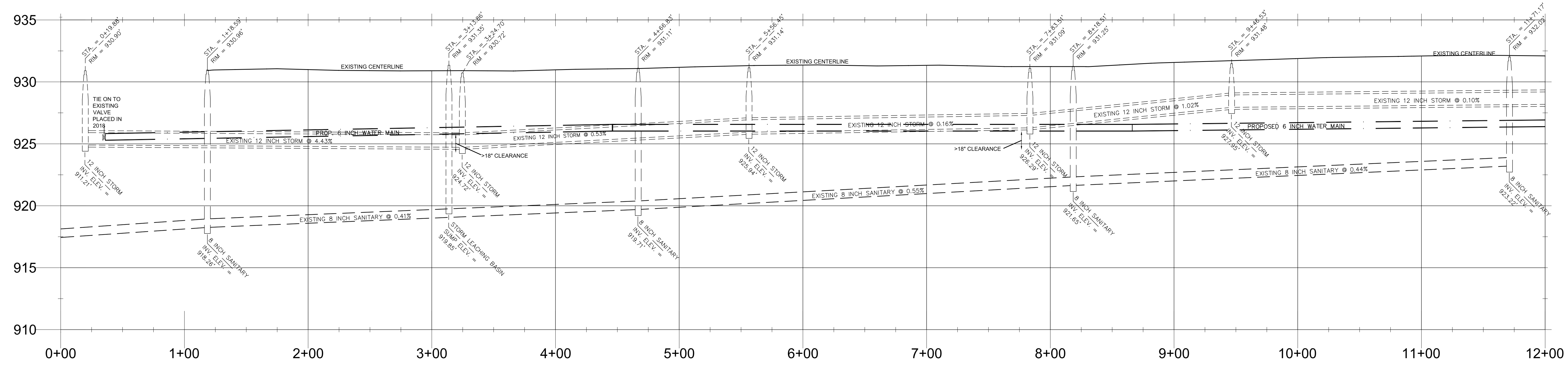
CRUSH AND
SHAPE

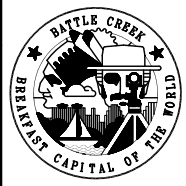


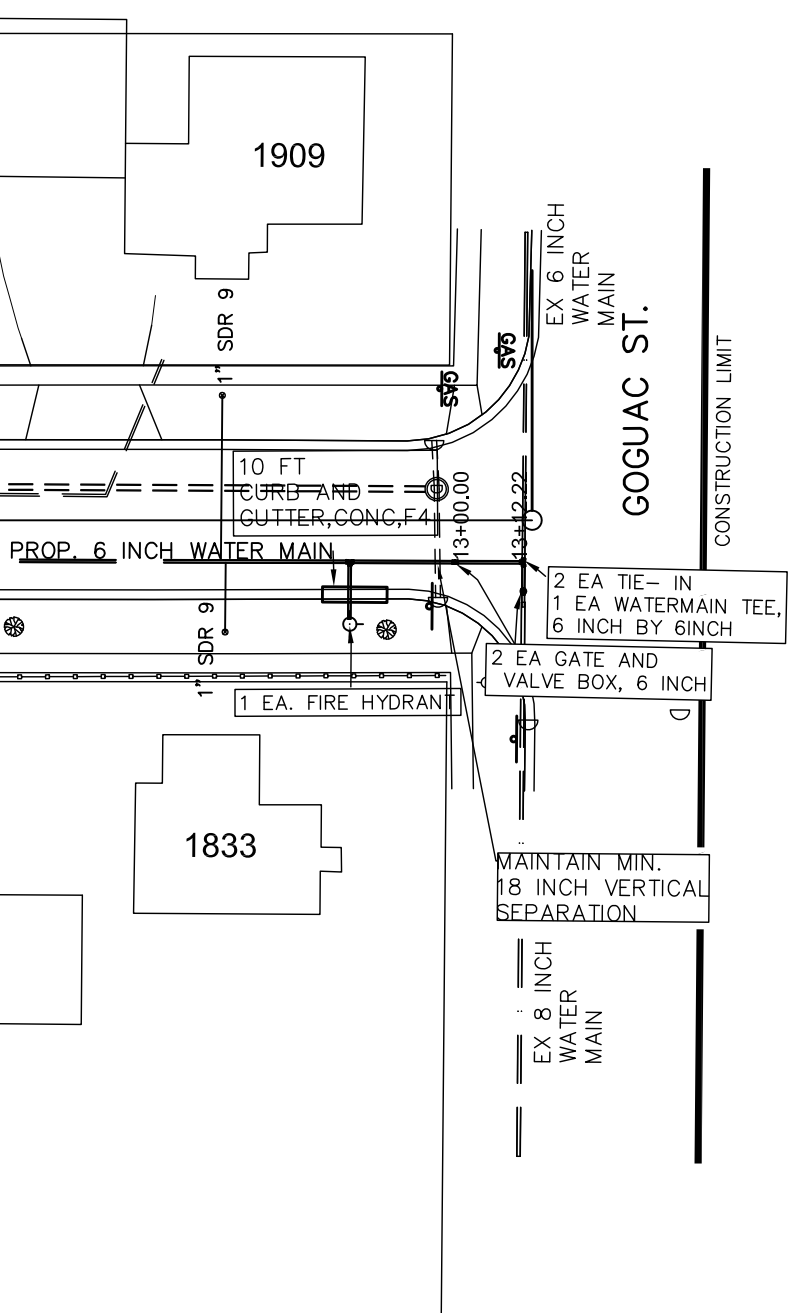
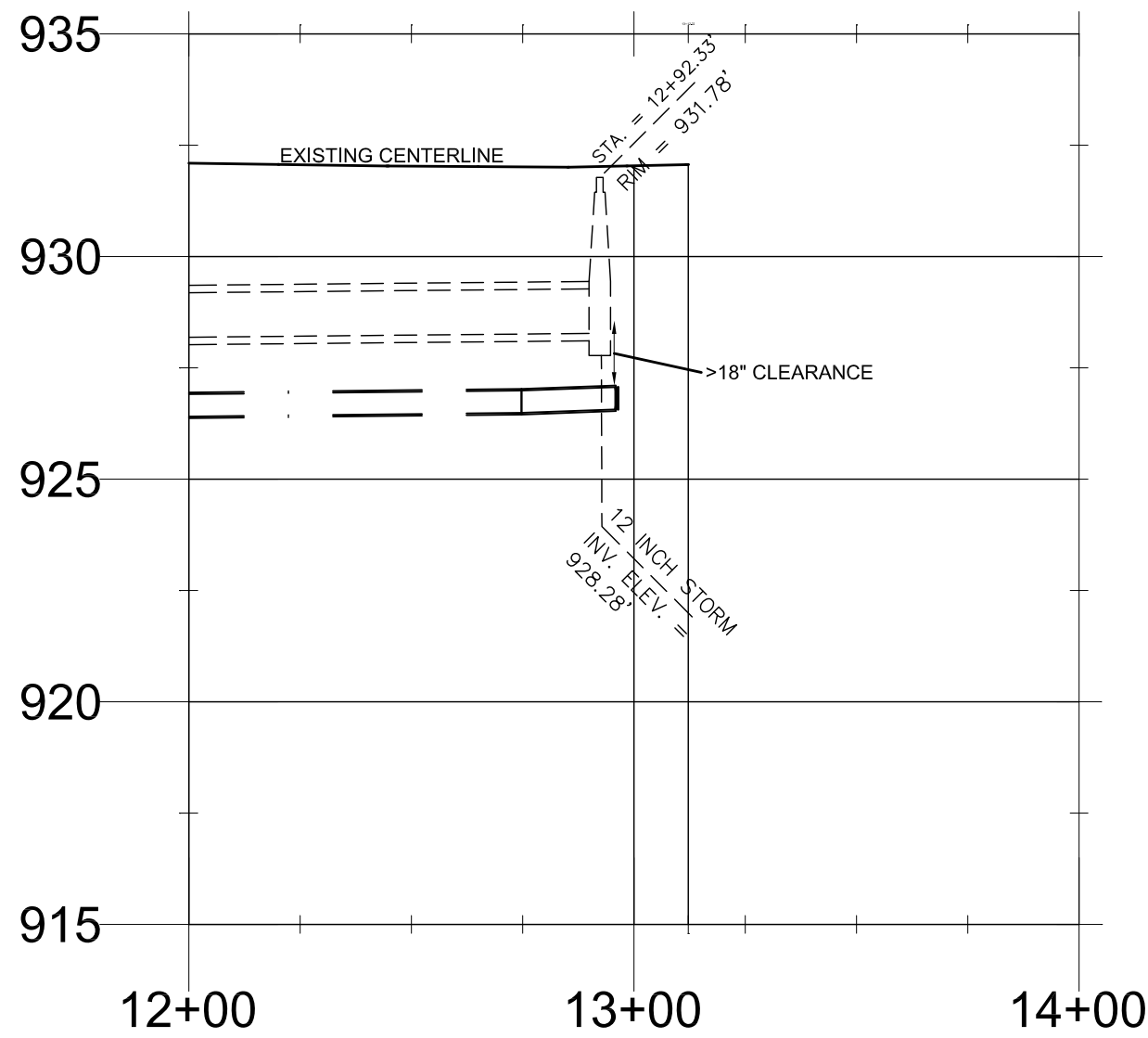
Scale 1" = 40'

REMOVAL SHEET

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY		CITY OF BATTLE CREEK, MICHIGAN DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING	DRAWN BY: MLM	APPROVED BY: DJC	N 32ND ST 2019 WATER MAIN PROJECT	CONTRACT NO.: 2019-044B	
								SCALE: 1"=40' HOR., 1" = 4' VERT.	CONTOUR INTERVAL:		R.O.W. SHEET NO.: 2 OF 2	CONTRACT SHEET NO.: 5 OF 20
								DATE: FEBRUARY, 2019				
								FILE NAME:				



DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY		CITY OF BATTLE CREEK, MICHIGAN DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING		DRAWN BY: MLM	APPROVED BY: DJC	N 32ND ST 2019 WATERMAIN IMPROVEMENTS		CONTRACT NO.: 2019-044B
									SCALE: 1"=40' HOR., 1"= 4' VERT.	CONTOUR INTERVAL:			R.O.W. SHEET NO.: 1 OF 2
									DATE: FEBRUARY, 2019				CONTRACT SHEET NO.: 6 OF 20
									FILE NAME:				



205	MACHINE GRADING	14	STA
306	MAINTENANCE GRAVEL, LM	50	CYD
402	SEWER, CL A, 12 INCH, TR DET B	100	FT
403	DR STRUCTURE COVER, ADJ.	9	EA
501	HMA, 13A	596	TON
803	SIDEWALK, REM, MODIFIED	58	SYD
803	SIDEWALK, CONC, 4 INCH	520	SFT
802	CURB AND GUTTER, CONC, DET, F4	50	FT
811	PAVT MRKG, WATERBORNE, 24 INCH, STOP BAR	16	FT
823	_WATER MAIN TIE-IN	3	EA
823	FIRE HYDRANT	3	EA
823	WATER SERV	15	EA
823	WATER SERV, LONG	20	EA
823	_WATER MAIN, 6 INCH, TR DET G	1293	FT
823	GATE VALVE AND BOX, 6 INCH	2	EA
823	_WATER MAIN TEE, 6 INCH BY 6 INCH	1	EA
823	_PRESSURE TEST AND DISINFECT	1	EA
823	WATER MAIN REDUCER, 8 INCH BY 6 INCH	1	EA
204	CURB AND GUTTER, REM.	50	FT
208	EROSION CONTROL, INLET PROTECTION, FABRIC DROP	9	EA
305	HOT MIX ASPHALT BASE CRUSHING AND SHAPING, MODIFIED	3311	SYD
823	HYDRANT, REM.	3	EA
823	_WATER MAIN, REM.	1275	FT
823	_WATER SERVICE, REM.	35	EA
816	TURF ESTABLISHMENT, SPECIAL, HYDROSEED	450	SYD
823	GATE BOX, ADJ, CASE 1	3	EA
403	DR STRUCTURE COVER, TYPE B	5	EA
403	DR STRUCTURE COVER, TYPE Q	4	EA

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY

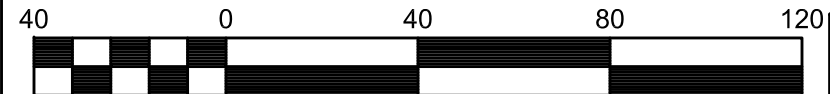
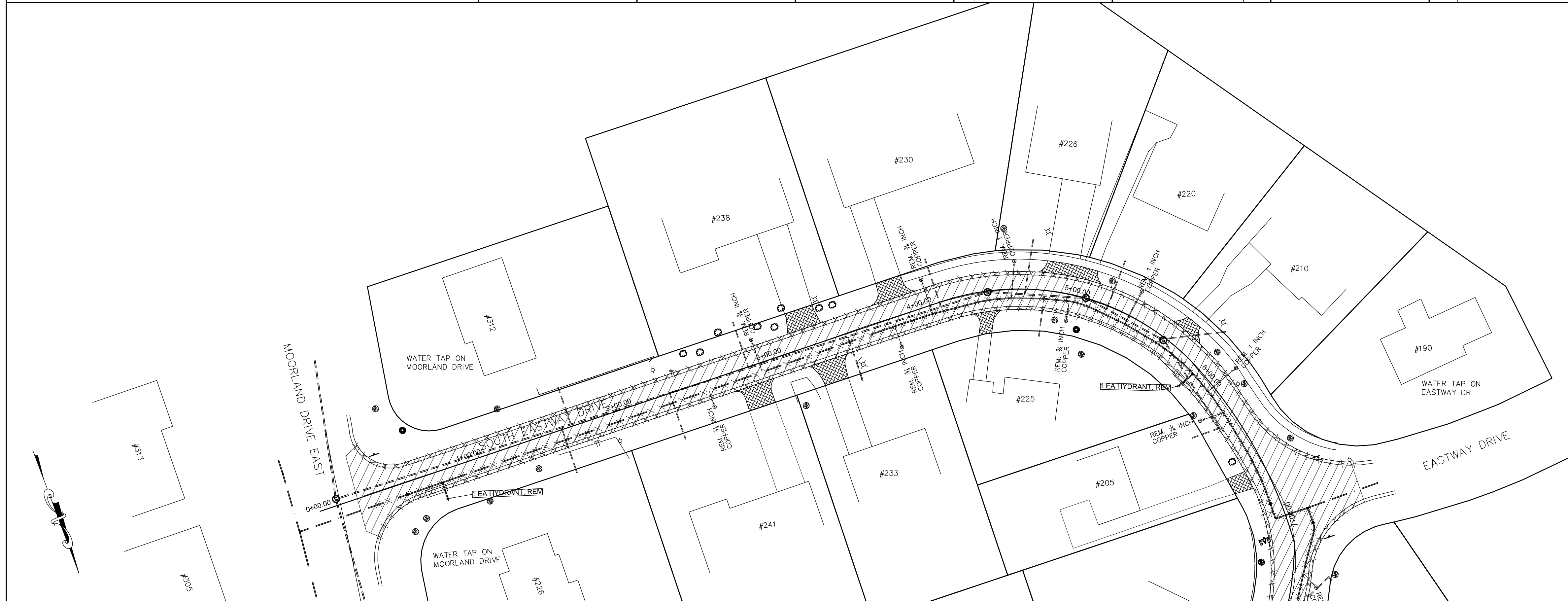
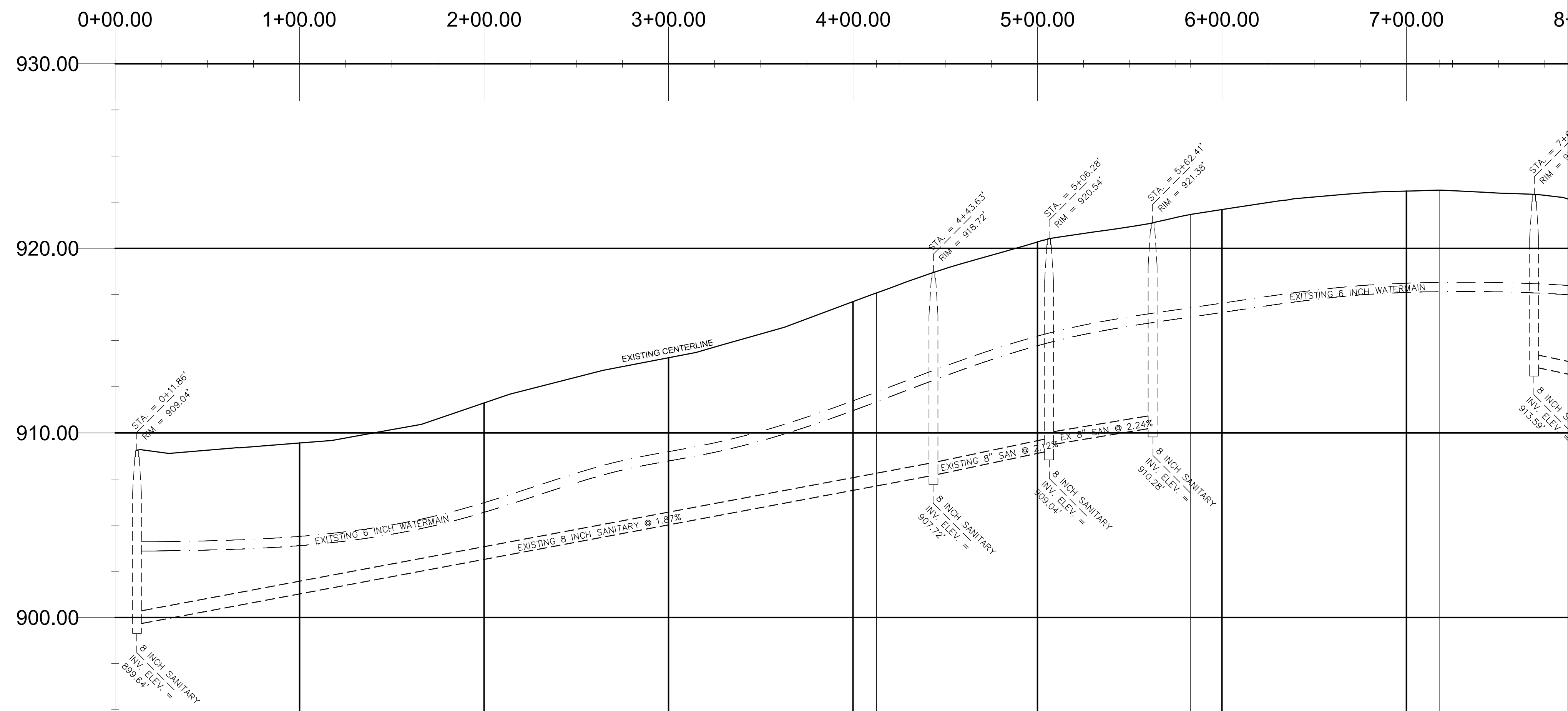


CITY OF BATTLE CREEK, MICHIGAN
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

DRAWN BY: MLM	APPROVED BY: DJC
SCALE: 1"=40' HOR., 1" = 4' VERT.	CONTOUR INTERVAL: 1'
DATE: FEBRUARY, 2019	
FILE NAME:	

N 32ND ST
2019 WATER MAIN IMPROVEMENTS

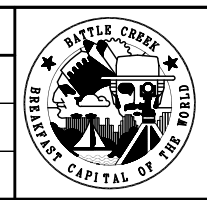
CONTRACT NO.: 2019-044B	
R.O.W. SHEET NO.: 2 OF 2	CONTRACT SHEET NO.: 7 OF 20



Scale 1" = 40'
REMOVAL SHEET

xxxxx	CURB & WATER MAIN REMOVALS
XXXXXX	CONC. REMOVALS
XXXXXX	CRUSH AND SHAPE

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY

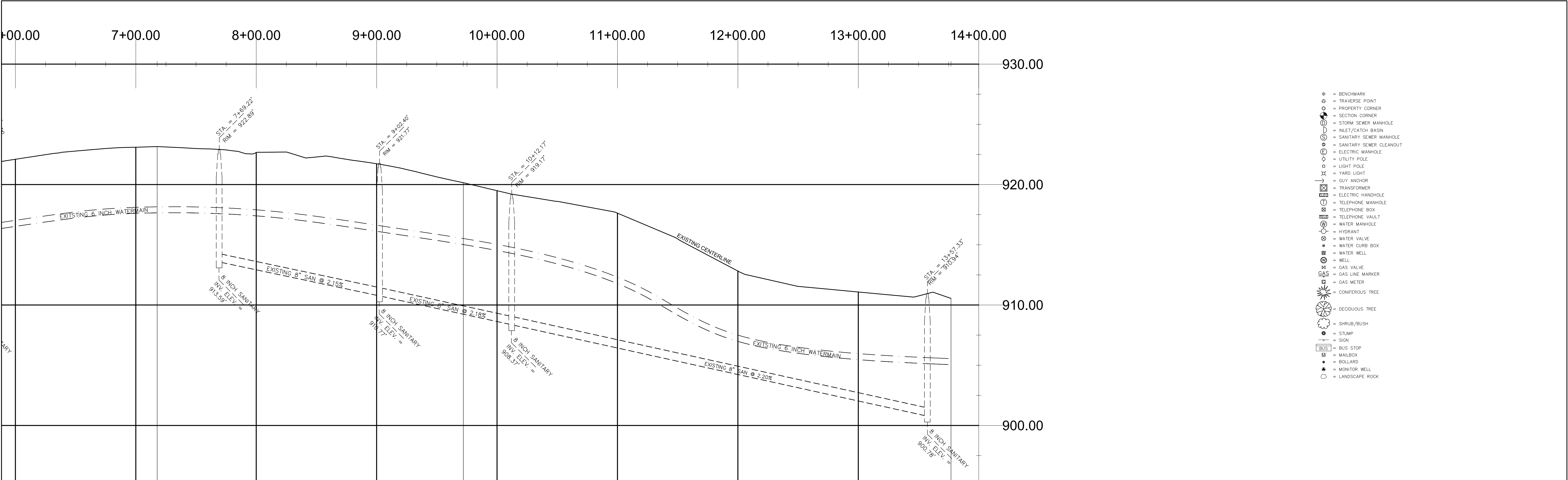


CITY OF BATTLE CREEK, MICHIGAN
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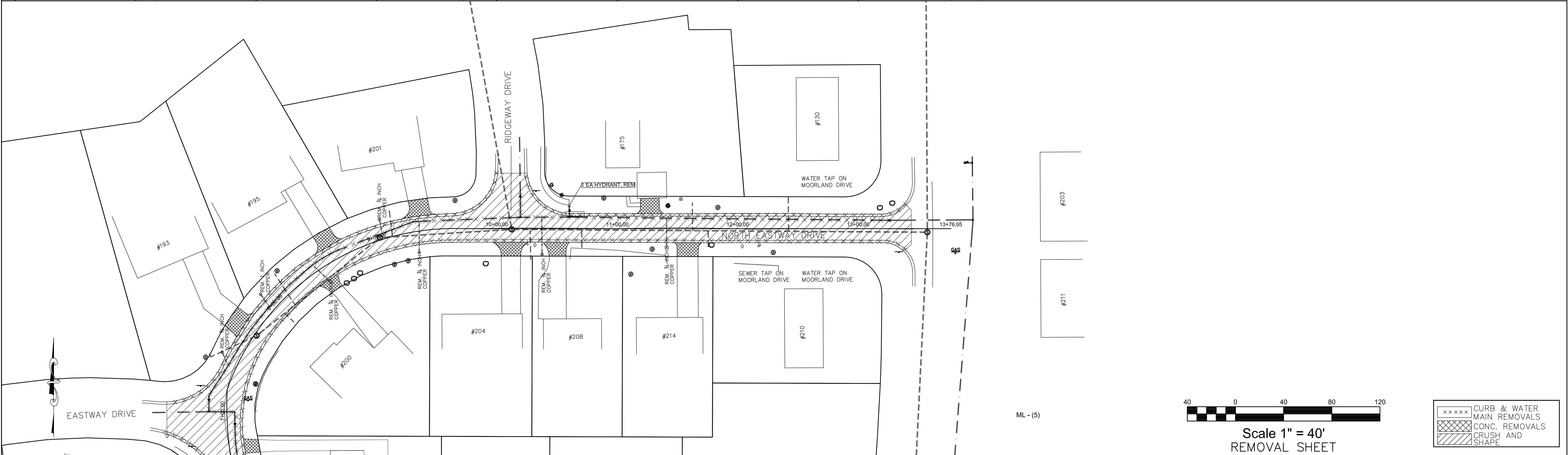
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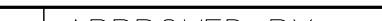
SOUTH EASTWAY DR
2019 WATER MAIN PROJECT

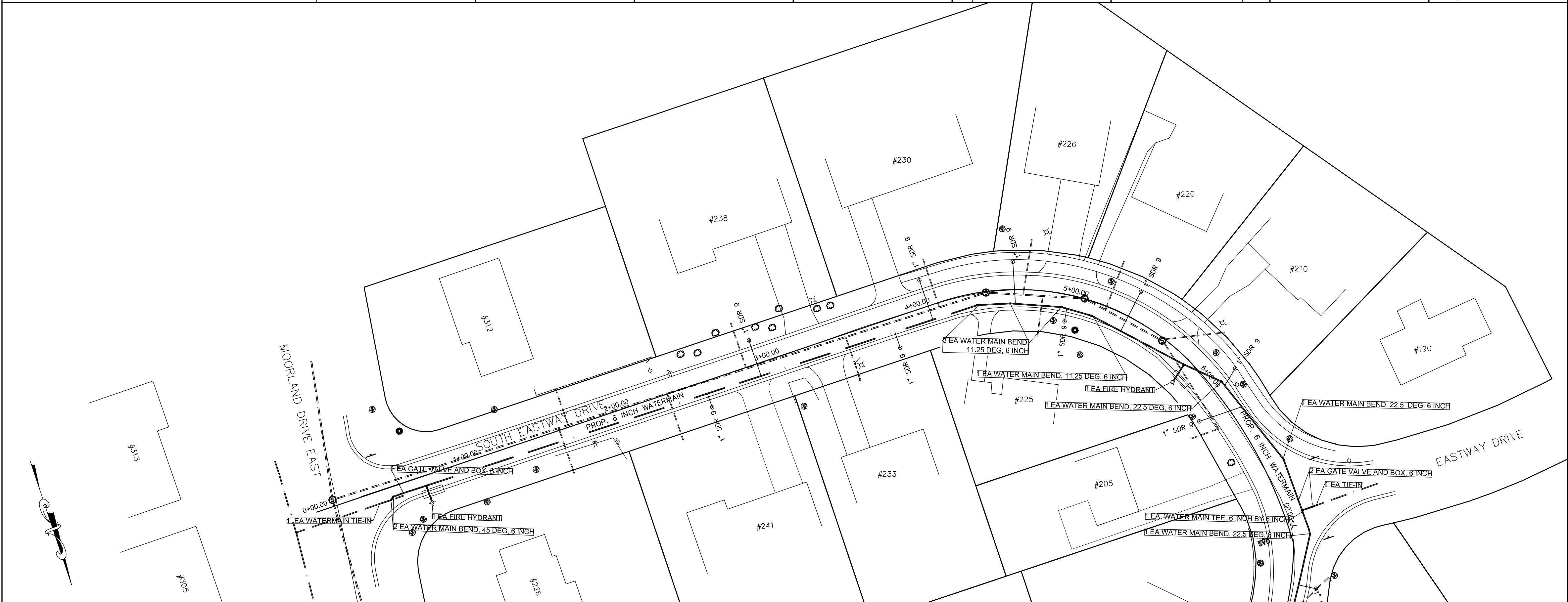
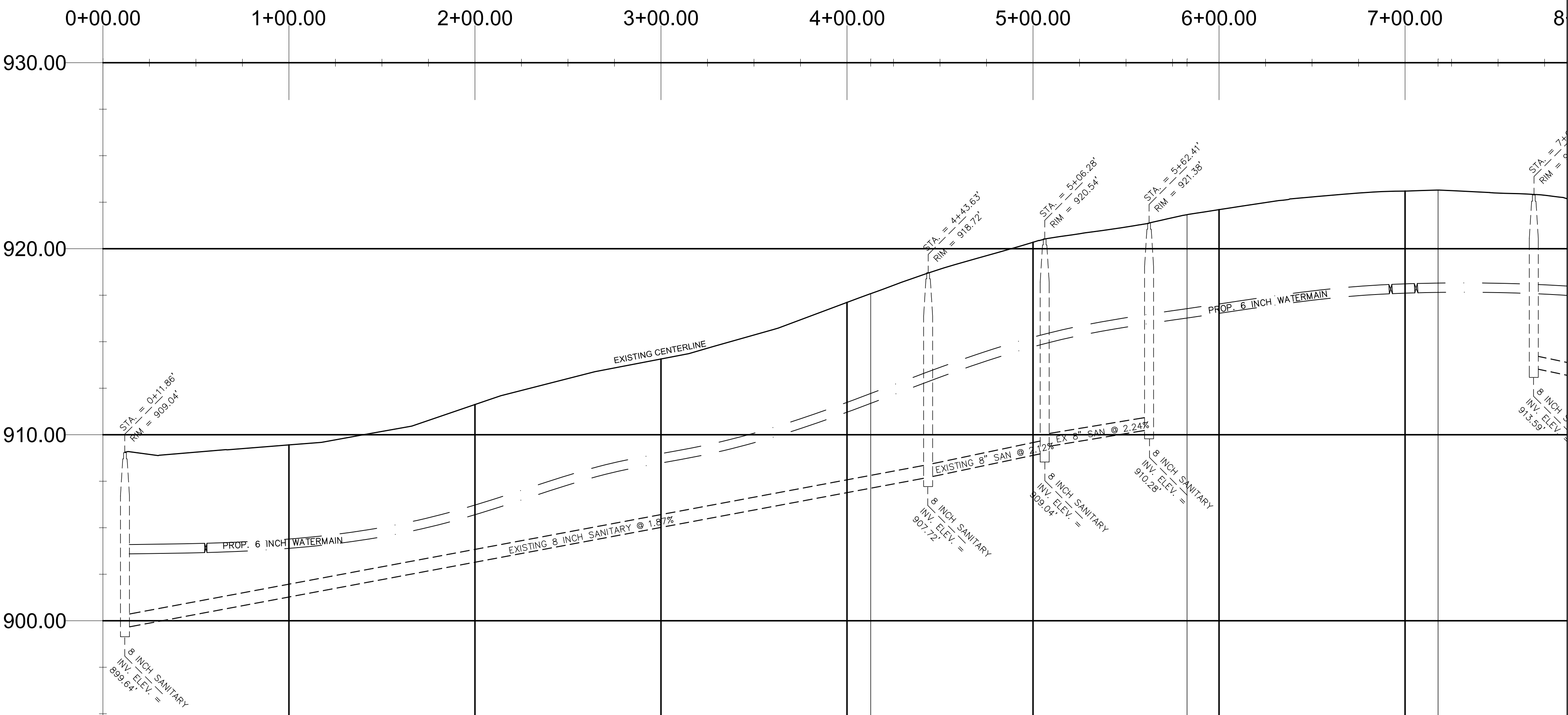
CONTRACT NO.: 2019-044B	CONTRACT SHEET NO.: 8 OF 20
R.O.W. SHEET NO.: 1 OF 2	



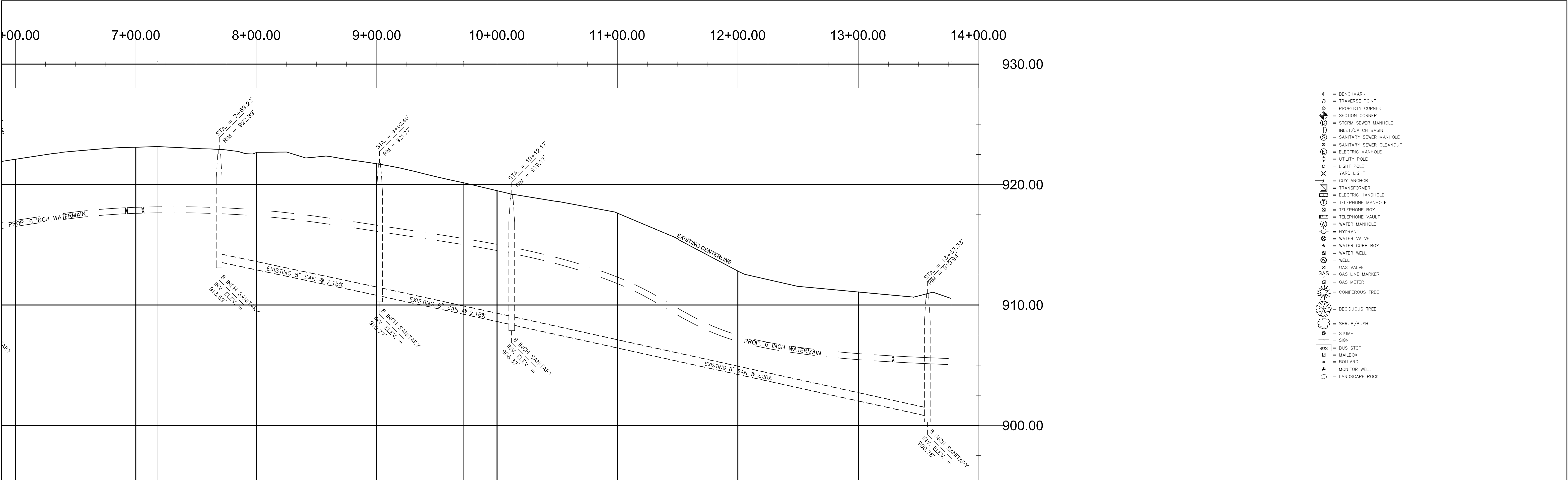
- ⊕ = BENCHMARK
- ⊙ = TRAVERSE POINT
- ⊙ = PROPERTY CORNER
- ⊙ = SECTION CORNER
- ⊙ = STORM SEWER MANHOLE
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- ⊙ = TELEPHONE BOX
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- ⊙ = WATER MANHOLE
- ⊙ = HYDRANT
- ⊙ = WATER VALVE
- ⊙ = WATER CURB BOX
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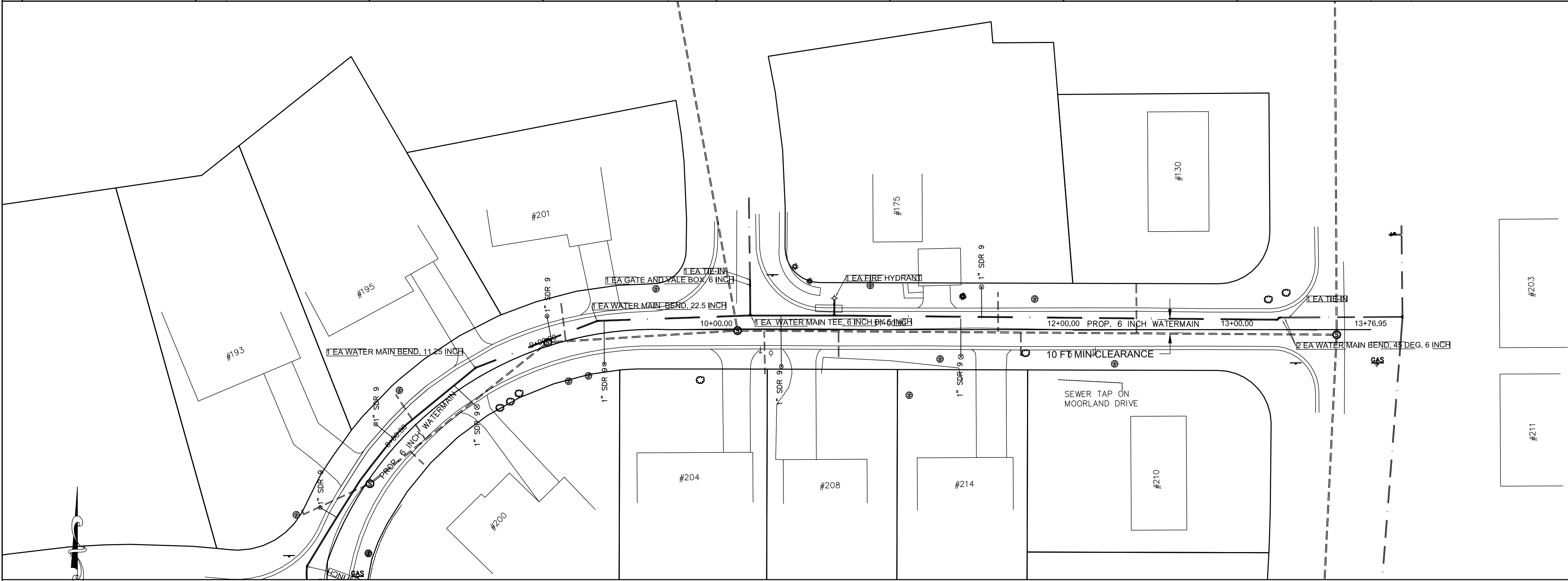
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								SCALE: 1"=40' HOR., 1" = 4' VERT.	CONTOUR INTERVAL:		R.O.W. SHEET NO.:	CONTRACT SHEET NO.:
								DATE: FEBRUARY, 2019				
								FILE NAME:				



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								SCALE: 1"=40' HOR., 1" = 4' VERT.	CONTOUR INTERVAL:		R.O.W. SHEET NO.:	CONTRACT SHEET NO.:
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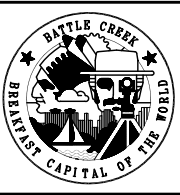


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- ⊙ = WELL
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- ⊙ = LANDSCAPE ROCK



205	MACHINE GRADING	13.8	STA
306	MAINTENANCE GRAVEL, LM	50	CYD
403	DR STRUCTURE COVER, ADJ	8	EA
501	HMA, 13A	665	TON
803	SIDEWALK, CONC, 6 INCH	160	SFT
802	CURB AND GUTTER, CONC, DET, F4	2691	FT
823	WATER MAIN, 6 INCH, TR, DET G	1400	FT
823	WATER MAIN TIE-IN	4	EA
823	WATER MAIN BEND, 45 DEG, 6 INCH	4	EA
823	FIRE HYDRANT	3	EA
823	WATER SERV	8	EA
823	WATER SERV, LONG	9	EA
823	GATE VALVE AND BOX, 6 INCH	5	EA
823	WATER MAIN BEND, 22.5 DEG, 6 INCH	4	EA
823	WATER MAIN BEND, 11.25 DEG, 6 INCH	5	EA
823	PRESSURE TEST AND DISINFECT	1	EA
204	CURB AND GUTTER, REM	2691	FT
305	HOT MIX ASPHALT BASE CRUSHING AND SHAPING, MODIFIED	4030	SYD
823	HYDRANT, REM	2	EA
823	WATER MAIN , REM	1400	FT
823	WATER SERVICE, REM	27	EA
816	TURF ESTABLISHMENT, SPECIAL, HYDROSEED	250	SYD
823	GATE BOX, ADJ, CASE 1	5	EA
403	DR STRUCTURE COVER, TYPE Q	8	EA
801	DRIVEWAY, NONREINF, 6 INCH	380	SYD
204	SIDEWALK REM, MODIFIED	410	SYD

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY



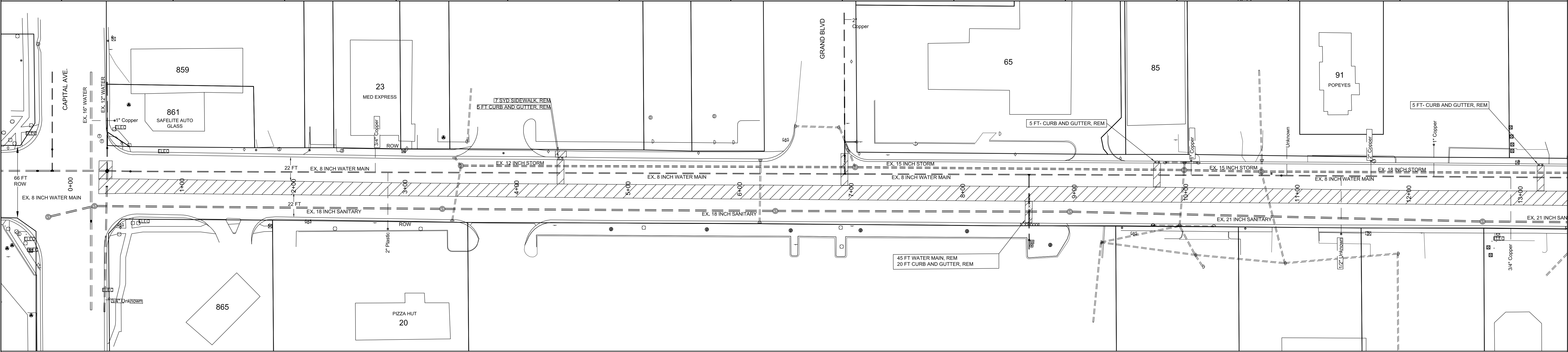
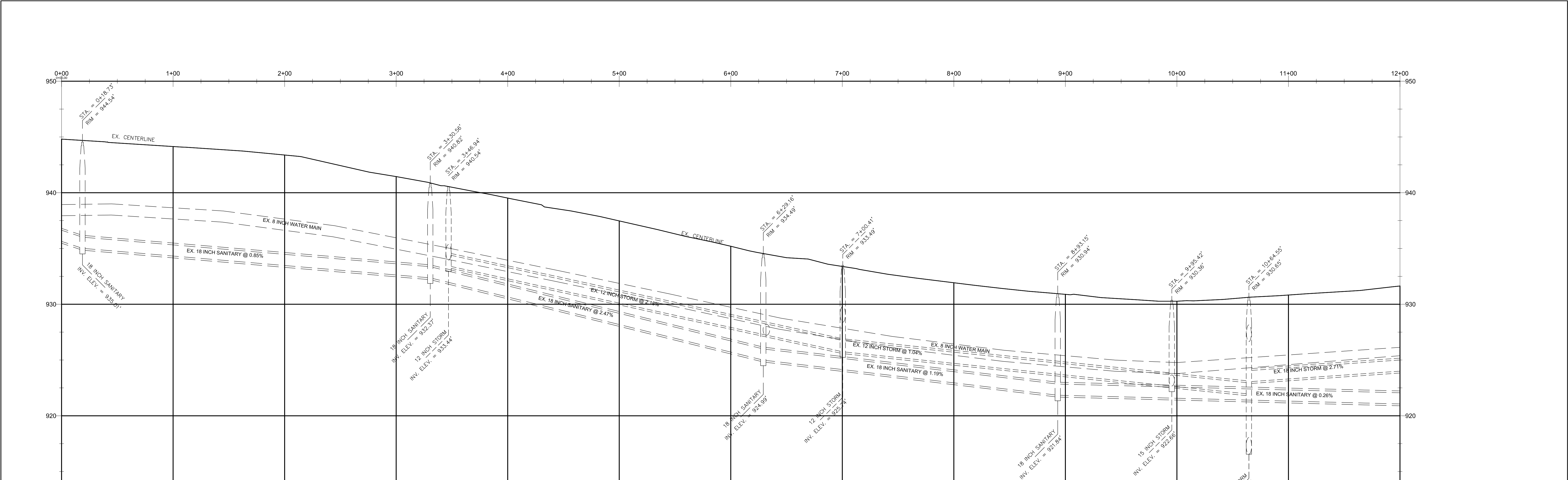
CITY OF BATTLE CREEK, MICHIGAN
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

DRAWN BY: MLM	APPROVED BY: DJC
SCALE: 1"=40' HOR., 1" = 4' VERT.	CONTOUR INTERVAL:
DATE: FEBRUARY, 2019	
FILE NAME:	

NORTH EASTWAY DR

2019 WATER MAIN IMPROVEMENTS

CONTRACT NO.: 2019-044B	
R.O.W. SHEET NO.: 2 OF 2	CONTRACT SHEET NO.: 11 OF 20

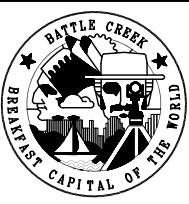


- × × × CURB & WATER MAIN REMOVALS
- ▨ CONC. REM.
- ▨ PAVT REM., MOD.



REMOVAL SHEET

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY

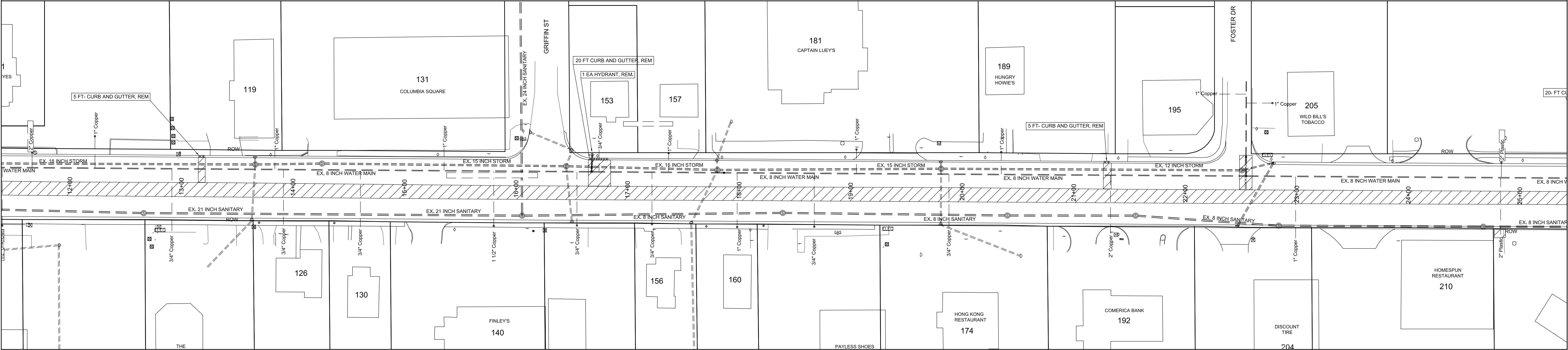
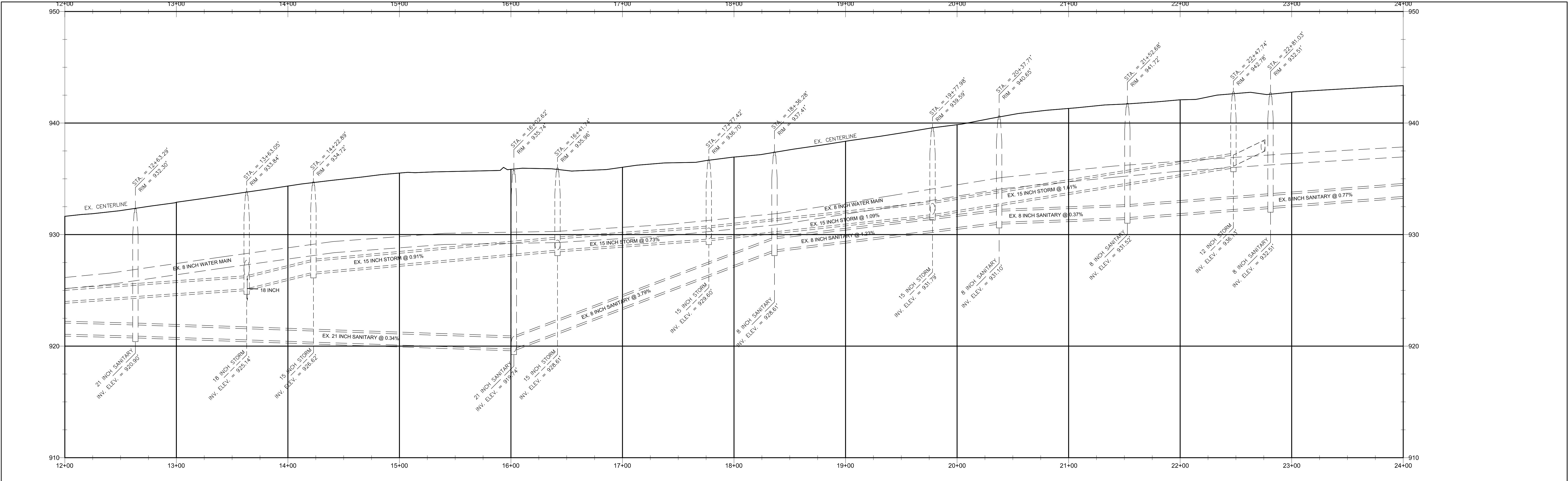


CITY OF BATTLE CREEK, MICHIGAN
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

DRAWN BY: CLA	APPROVED BY: DJC
SCALE: 1"=40' HOR., 1" = 20' VERT	CONTOUR INTERVAL:
DATE: FEBRUARY, 2019	
FILE NAME:	

E. COLUMBIA AVE.
2019 WATER MAIN PROJECT

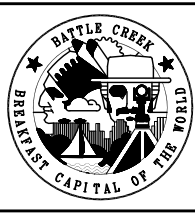
CONTRACT NO.: 2019-044B	CONTRACT SHEET NO.: 12 OF 20
R.O.W. SHEET NO.: 1 OF 3	



- CURB & WATER MAIN REMOVALS
- CONC. REM.
- PAVT REM.

REMOVAL SHEET

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY



CITY OF BATTLE CREEK, MICHIGAN
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

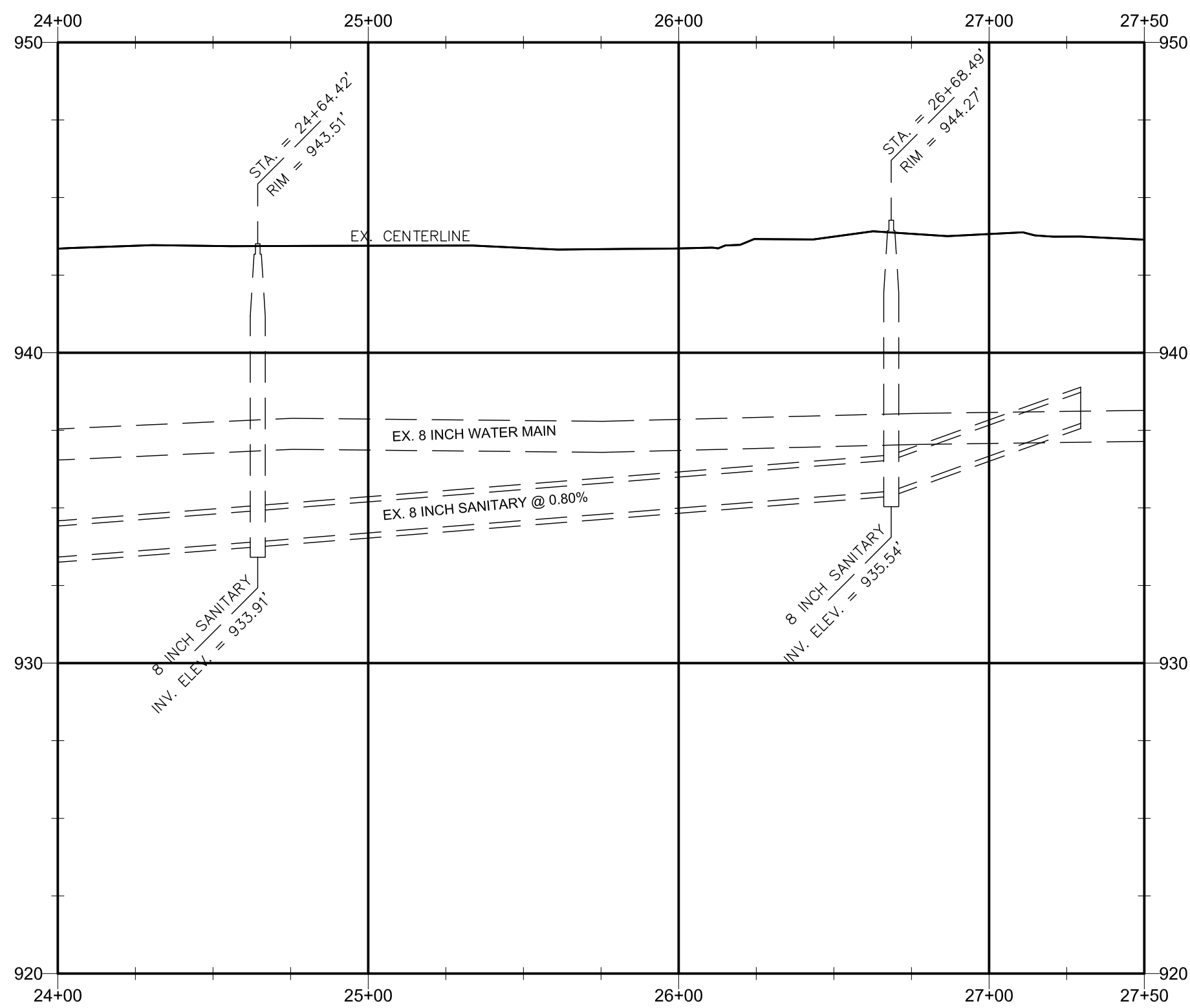
DRAWN BY: CLA
SCALE: 1"=40' HOR., 1" = 20' VERT
DATE: FEBRUARY, 2019
FILE NAME:

APPROVED BY: DJC

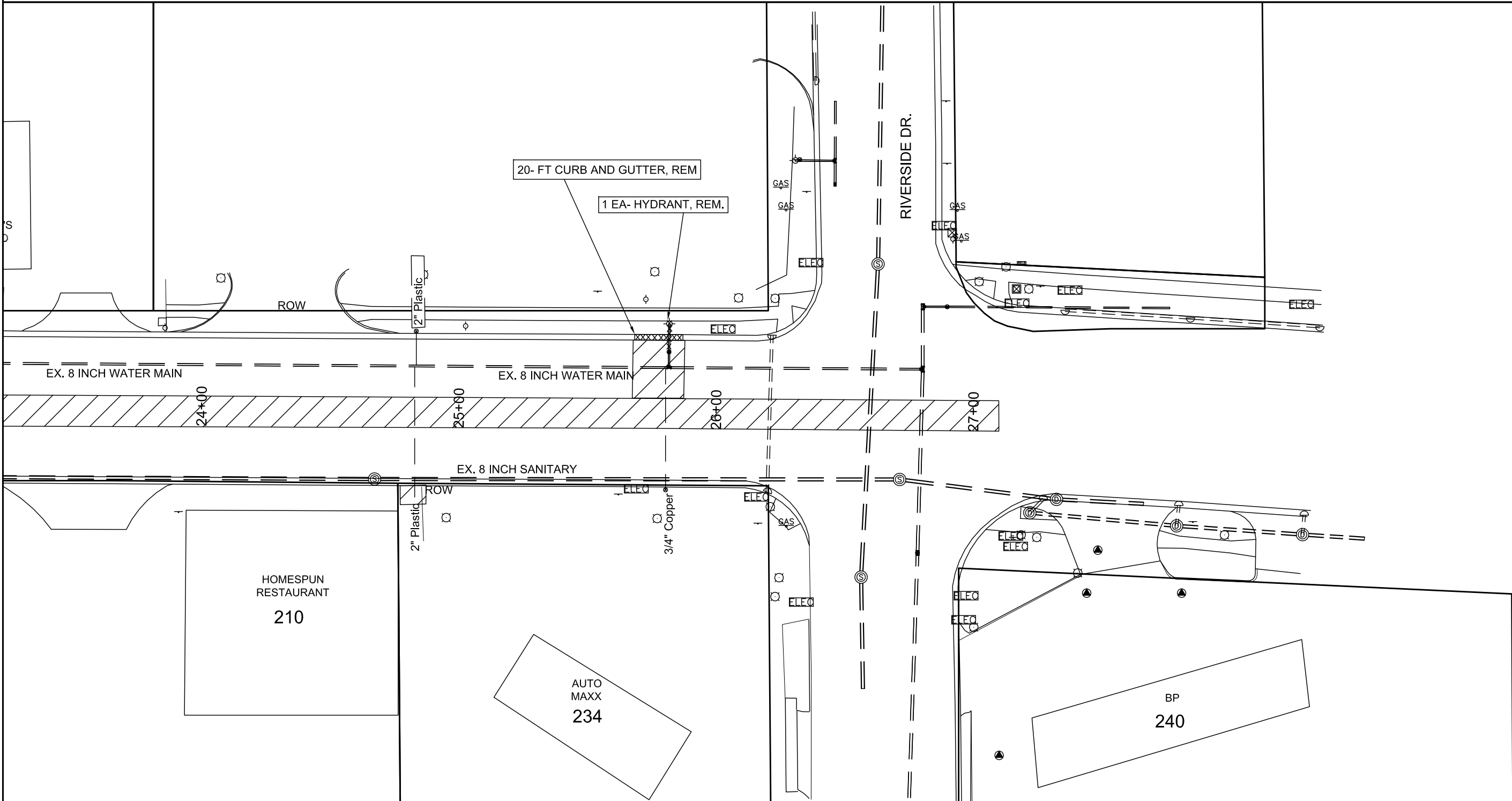
CONTOUR INTERVAL:

E. COLUMBIA AVE.
2019 WATER MAIN PROJECT

CONTRACT NO.: 2019-044B
R.O.W. SHEET NO.: 2 OF 3
CONTRACT SHEET NO.: 13 OF 20



- ⊕ = BENCHMARK
- ⊙ = TRAVERSE POINT
- ◉ = PROPERTY CORNER
- ◉ = SECTION CORNER
- ⊙ = STORM SEWER MANHOLE
- ⊙ = INLET/CATCH BASIN
- ⊙ = SANITARY SEWER MANHOLE
- ⊙ = SANITARY SEWER CLEANOUT
- ⊙ = ELECTRIC MANHOLE
- ⊙ = UTILITY POLE
- ⊙ = LIGHT POLE
- ⊙ = YARD LIGHT
- ⊙ = GUY ANCHOR
- ⊙ = TRANSFORMER
- ⊙ = ELECTRIC HANDHOLE
- ⊙ = TELEPHONE MANHOLE
- ⊙ = TELEPHONE BOX
- ⊙ = TELEPHONE VAULT
- ⊙ = WATER MANHOLE
- ⊙ = HYDRANT
- ⊙ = WATER VALVE
- ⊙ = WATER CURB BOX
- ⊙ = WATER WELL
- ⊙ = WELL
- ⊙ = GAS VALVE
- ⊙ = GAS LINE MARKER
- ⊙ = GAS METER
- ⊙ = CONIFEROUS TREE
- ⊙ = DECIDUOUS TREE
- ⊙ = SHRUB/BUSH
- ⊙ = STUMP
- ⊙ = SIGN
- ⊙ = BUS STOP
- ⊙ = MAILBOX
- ⊙ = BOLLARD
- ⊙ = MONITOR WELL
- ⊙ = LANDSCAPE ROCK



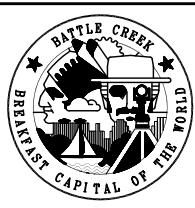
CURB AND GUTTER, REM	60	FT
_ PAVT, REM, MOD.	4200	SYD
SIDEWALK, REM, MODIFIED	7	SYD
EROSION CONTROL, INLET PROTECTION, FABRIC DROP	22	EA



REMOVAL SHEET

- × × × CURB & WATER MAIN REMOVALS
- × × × CONC. REM.
- × × × PAVT REM.

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY

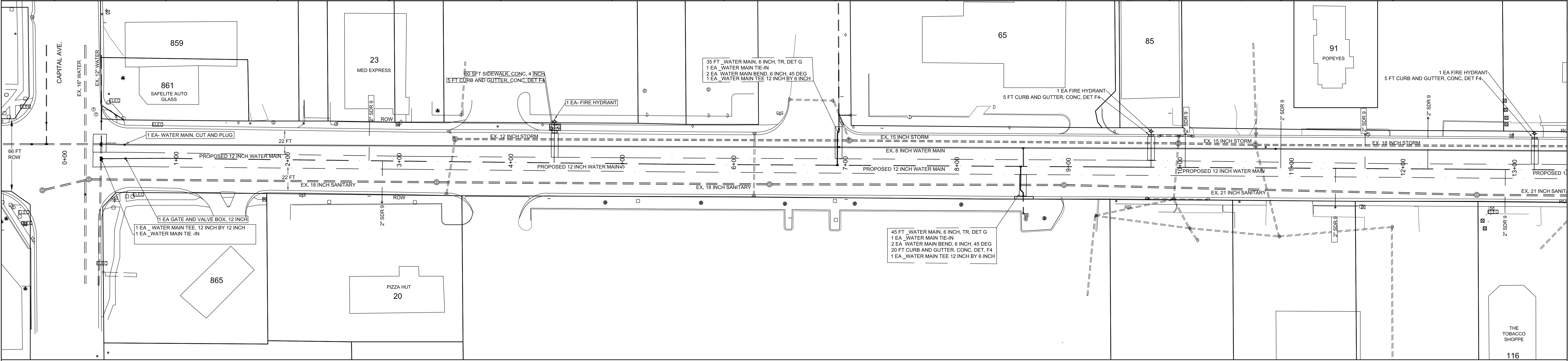
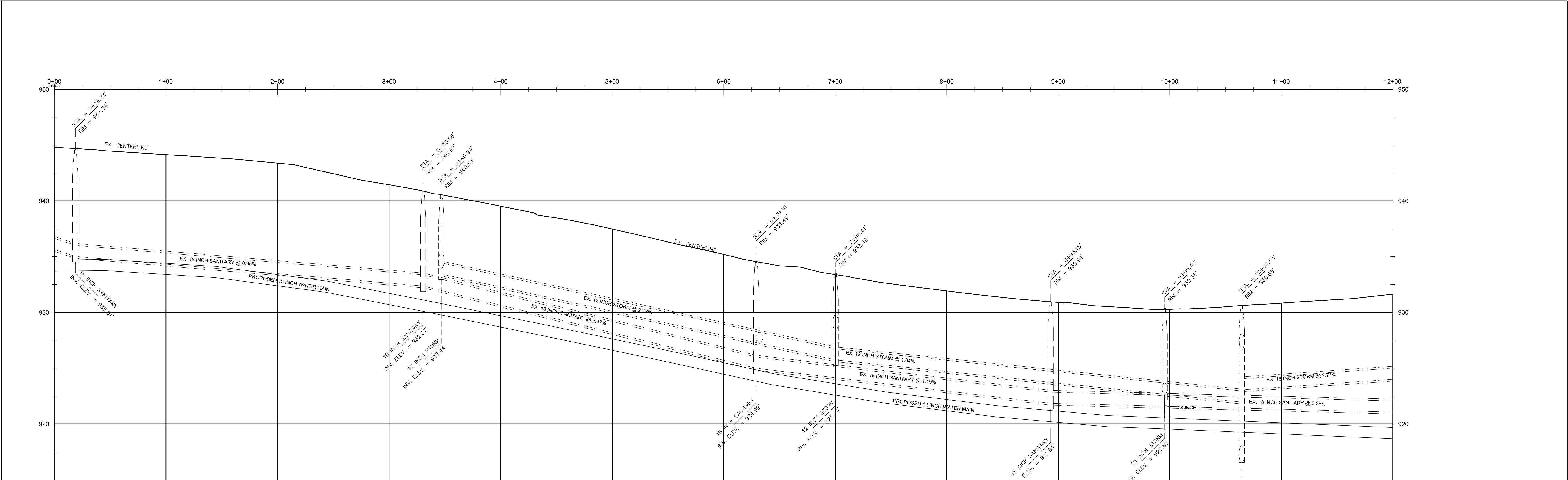


CITY OF BATTLE CREEK, MICHIGAN
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

DRAWN BY: CLA	APPROVED BY: DJC
SCALE: 1"=40' HOR., 1" = 20' VERT	CONTOUR INTERVAL:
DATE: FEBRUARY, 2019	
FILE NAME:	

E. COLUMBIA AVE.
2019 WATER MAIN PROJECT

CONTRACT NO.: 2019-044B	
R.O.W. SHEET NO.: 3 OF 3	CONTRACT SHEET NO.: 14 OF 20



DESCRIPTION OF REVISION

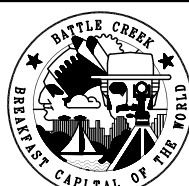
DATE

BY

DESCRIPTION OF REVISION

DATE

BY



CITY OF BATTLE CREEK, MICHIGAN

DEPARTMENT OF PUBLIC WORKS

DIVISION OF ENGINEERING

DRAWN BY: CLA

SCALE: 1"=40' HOR., 1" = 20' VERT

DATE: FEBRUARY, 2019

FILE NAME:

APPROVED BY: DJC

CONTOUR INTERVAL:

CONSTRUCTION SHEET

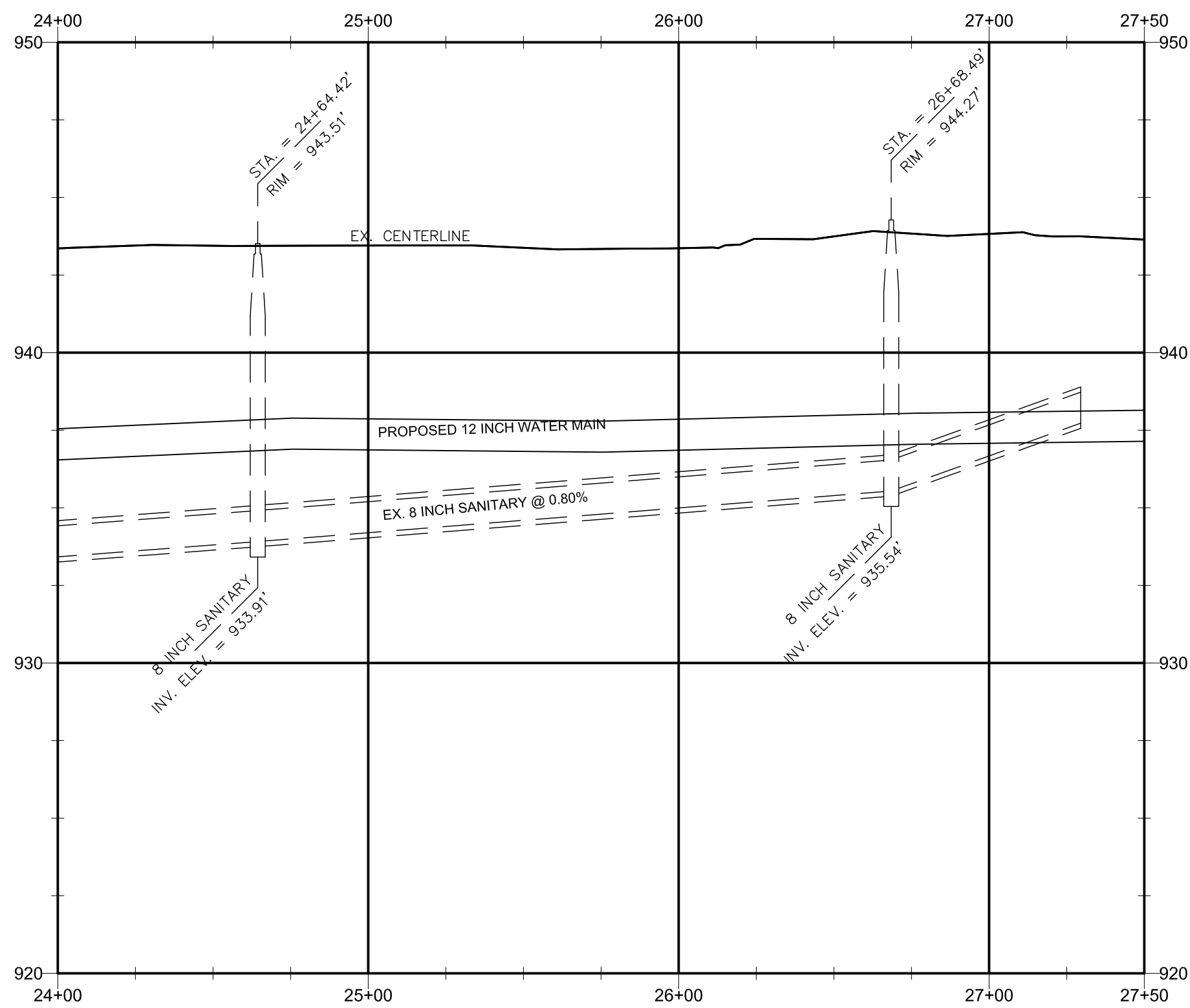
E. COLUMBIA AVE.

2019 WATER MAIN PROJECT

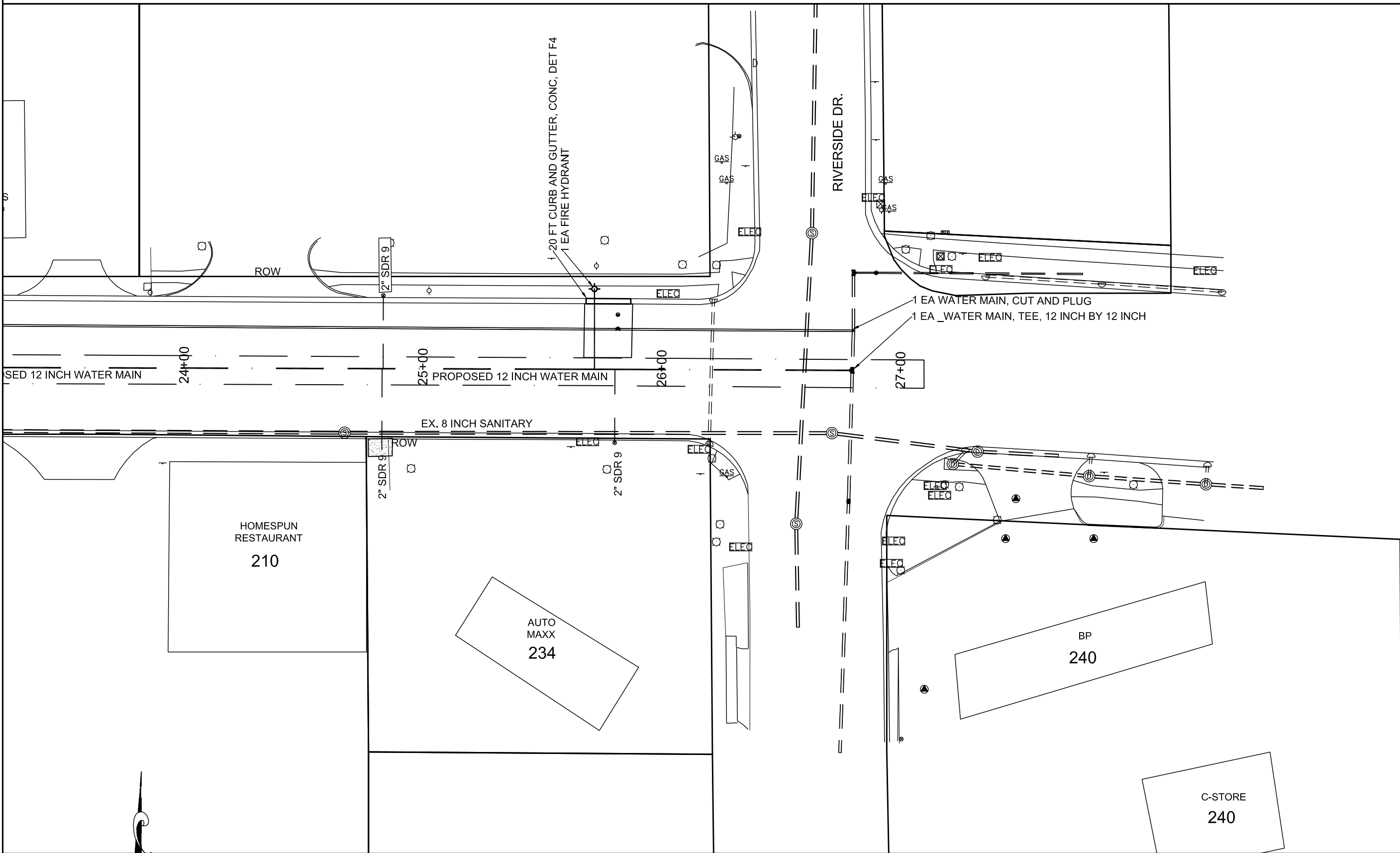
CONTRACT NO.: 2019-044B

R.O.W. SHEET NO.: 1 OF 3

CONTRACT SHEET NO.: 15 OF 20

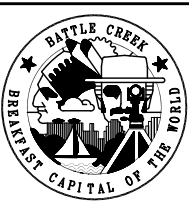


- ⊕ = BENCHMARK
- ⊙ = TRAVERSE POINT
- ◉ = PROPERTY CORNER
- ◉ = SECTION CORNER
- ⊙ = STORM SEWER MANHOLE
- ⊙ = INLET/CATCH BASIN
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- ⊙ = SIGN
- ⊙ = BUS STOP
- ⊙ = MAILBOX
- ⊙ = BOLLARD
- ⊙ = MONITOR WELL
- ⊙ = LANDSCAPE ROCK



MACHINE GRADING	28	STA
AGGREGATE BASE, 6 INCH	4200	SYD
MAINTENANCE GRAVEL, LM	40	CYD
SEWER, CL A, 15 INCH, TR DET B	100	FT
HAND PATCHING	55	TON
HMA, 4E1, HIGH STRESS	330	TON
HMA, 5E1, HIGH STRESS	430	TON
HMA, 5E1, HIGH STRESS	650	TON
CURB AND GUTTER, CONC, DET, F4	80	FT
SIDEWALK, CONC, 4 INCH	80	SFT
PAVT MRKG, 6 INCH, WATERBORNE, WHITE	100	FT
PAVT MRKG, 6 INCH, WATERBORNE, YELLOW	6360	FT
PAVT MRKG, WATERBORNE, LH ARROW	4	EA
PAVT MRKG, WATERBORNE, 24 INCH, STOP BAR	70	FT
PAVT MRKG, WATERBORNE, 6 INCH, CROSSWALK	250	FT
WATER MAIN, 8 INCH, CUT AND PLUG	3	EA
WATER MAIN, REM	75	FT
_WATER MAIN, 6 INCH, TR, DET, G	200	FT
_WATER MAIN TIE-IN	4	EA
WATER MAIN BEND, 45 DEG, 6 INCH	6	EA
FIRE HYDRANT	6	EA
WATER SERV, LONG	27	EA
WATER SERV, 2 INCH	900	FT
_WATER MAIN, 12 INCH, TR DET G	2650	FT
GATE VALVE AND BOX, 12 INCH	2	EA
_WATER MAIN TEE, 12 INCH BY 6 INCH	3	EA
_WATER MAIN TEE, 12 INCH BY 12 INCH	2	EA
_WATER MAIN TEE, 14 INCH BY 14 INCH	1	EA
_PRESSURE TEST AND DISINFECT	2	EA

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY



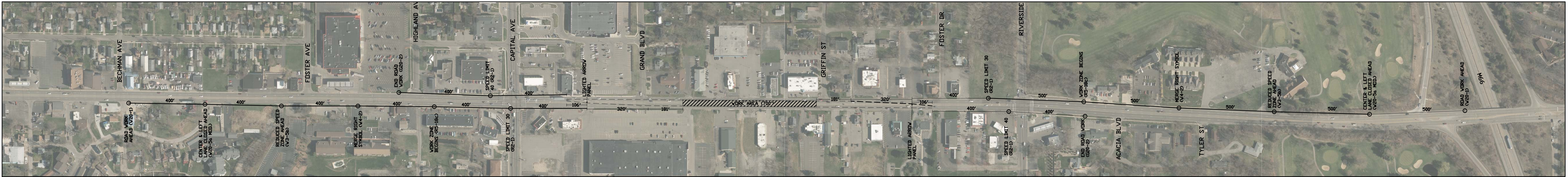
CITY OF BATTLE CREEK, MICHIGAN
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

DRAWN BY: CLA	APPROVED BY: DJC
SCALE: 1"=40' HOR., 1" = 20' VERT	CONTOUR INTERVAL:
DATE: FEBRUARY, 2019	
FILE NAME:	

CONSTRUCTION SHEET
E. COLUMBIA AVE.
2019 WATER MAIN PROJECT

CONTRACT NO.: 2019-044B	
R.O.W. SHEET NO.: 3 OF 3	CONTRACT SHEET NO.: 17 OF 20

CENTER LANE CLOSURE



EASTBOUND LANE CLOSURE



WESTBOUND LANE CLOSURE



*WORK ZONE SIZE MAY VARY AND WILL MOVE TO DIFFERENT LOCATIONS THROUGHOUT STAGES OF THE PROJECT.

*SIGN SPACING ARE APPROXIMATE DISTANCES BASED OFF MDOT DOCUMENT M0020a AND WILL NEED ADJUSTING IN FIELD.

*EXISTING SPEED LIMIT SIGNS WILL NEED TO BE COVERED TO REFLECT THE SPEEDS SHOWN IN THE PLAN.

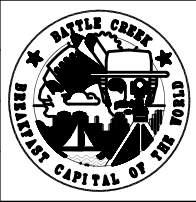
*W20-1, W20-5a MOD, W20-5, W3-5b, W1-4, & W4-2 SIGNS IN THE EASTBOUND AND WESTBOUND LANE CLOSURES ARE REQUIRED TO HAVE A "TYPE A" WARNING FLASHER POSITIONED ON THE SIDE OF THE SIGN NEAREST THE ROADWAY.

*CHANNELIZING DEVICES TO BE BARRELS.

Legend		
---	Channelizing Devices	
○ or ⊥	Sign	

SIGN SIZES	
DIAMOND WARNING	-48" x 48"
W1-6 WARNING	-48" x 24"
RECTANGULAR REGULATORY	-48" x 60"
R5-18c REGULATORY	-48" x 48"

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY

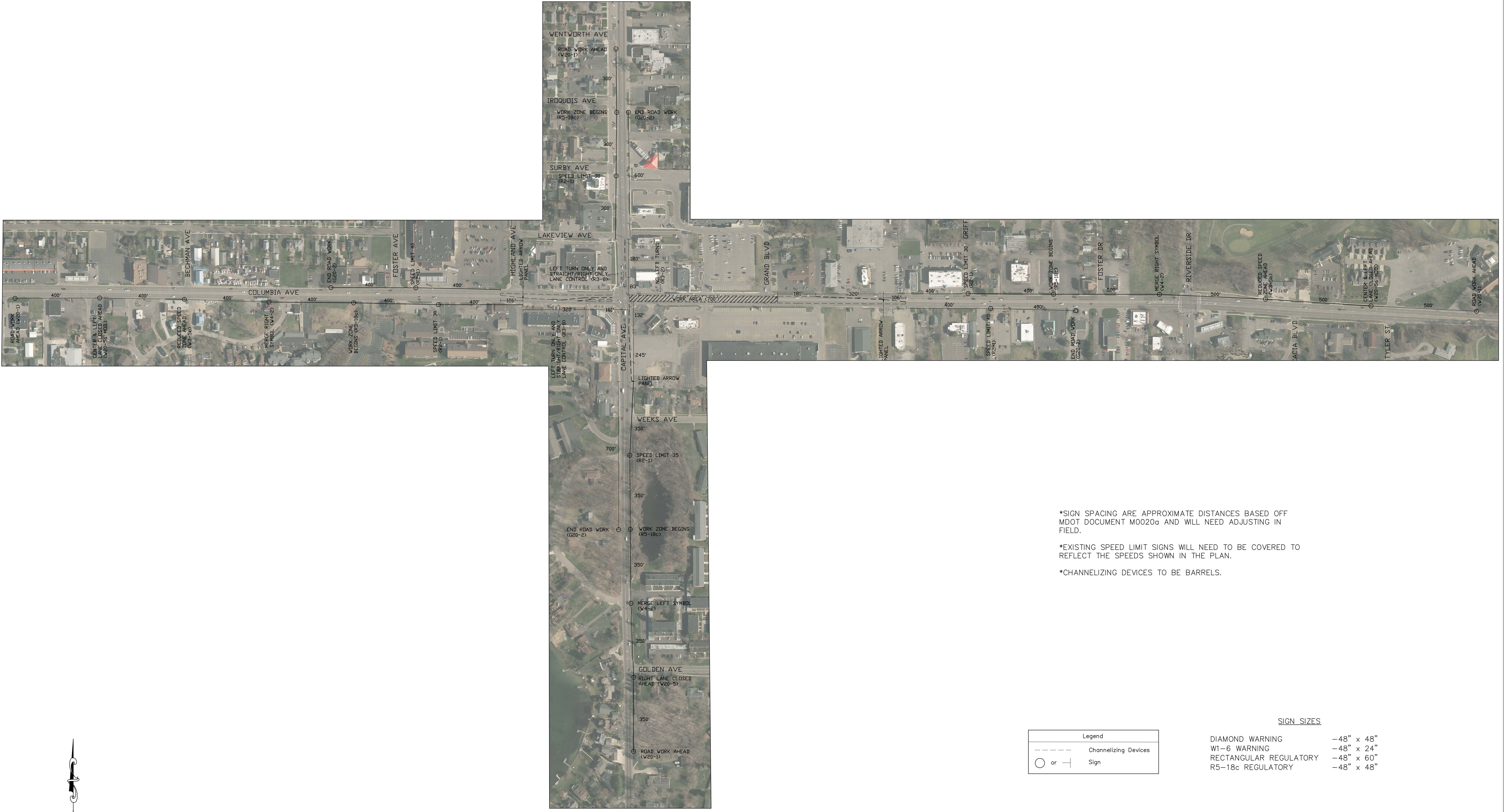


CITY OF BATTLE CREEK, MICHIGAN
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

DRAWN BY:	BGH	APPROVED BY:	DJC
SCALE			
DATE:	MARCH, 2019		
FILE NAME:			

COLUMBIA AVE WATERMAIN
TEMPORARY TRAFFIC CONTROL PLAN

CONTRACT NO.: 2019-044B	
R.O.W. SHEET NO.:	CONTRACT SHEET NO.:
	18 OF 20



*SIGN SPACING ARE APPROXIMATE DISTANCES BASED OFF MDOT DOCUMENT M0020a AND WILL NEED ADJUSTING IN FIELD.

*EXISTING SPEED LIMIT SIGNS WILL NEED TO BE COVERED TO REFLECT THE SPEEDS SHOWN IN THE PLAN.

*CHANNELIZING DEVICES TO BE BARRELS.

SIGN SIZES		
DIAMOND WARNING		-48" x 48"
W1-6 WARNING		-48" x 24"
RECTANGULAR REGULATORY		-48" x 60"
R5-18c REGULATORY		-48" x 48"

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY	 <div>CITY OF BATTLE CREEK, MICHIGAN DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING</div>	DRAWN BY: BGH		APPROVED BY: DJC		COLUMBIA AVE WATERMAIN TEMPORARY TRAFFIC CONTROL PLAN		CONTRACT NO.: 2019-044B	
							SCALE						R.O.W. SHEET NO.:	CONTRACT SHEET NO.:
							DATE: MARCH, 2019							
							FILE NAME:							

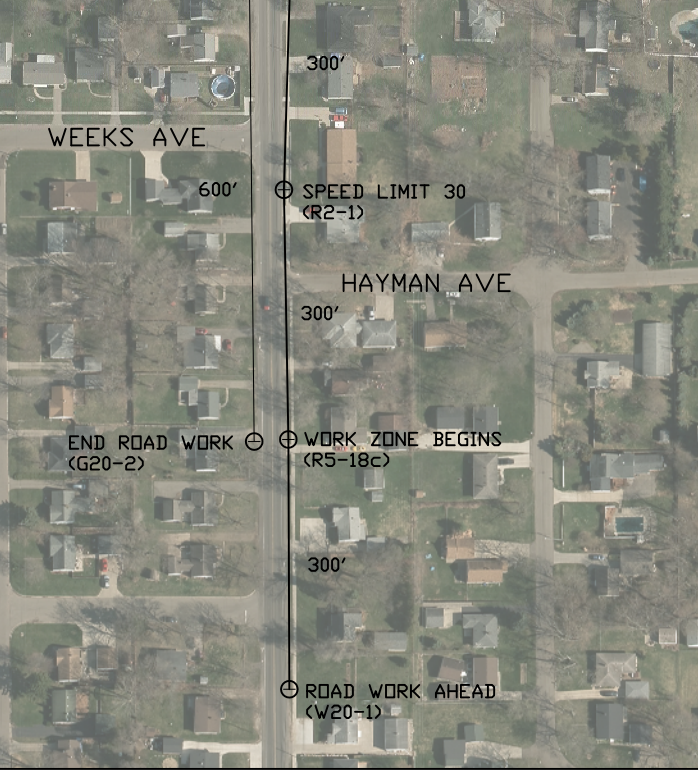
WEST SIDE OF INTERSECTION CLOSURE



EAST SIDE OF INTERSECTION CLOSURE



- *SIGN SPACING ARE APPROXIMATE DISTANCES BASED OFF MDOT DOCUMENT M0020a AND WILL NEED ADJUSTING IN FIELD.
- *EXISTING SPEED LIMIT SIGNS WILL NEED TO BE COVERED TO REFLECT THE SPEEDS SHOWN IN THE PLAN.
- *LANES TO BE MADE 10' IN WIDTH FOR RIVERSIDE DR.
- *CHANNELIZING DEVICES TO BE BARRELS.



SIGN SIZES		
DIAMOND WARNING	W1-6 WARNING	-48" x 48"
RECTANGULAR REGULATORY	R5-18c REGULATORY	-48" x 24"
		-48" x 60"
		-48" x 48"

RIVERSIDE/COLUMBIA TIE-IN TRAFFIC CONTROL

COLUMBIA AVE WATERMAIN

TEMPORARY TRAFFIC CONTROL PLAN

DESCRIPTION OF REVISION	DATE	BY	DESCRIPTION OF REVISION	DATE	BY	CITY OF BATTLE CREEK, MICHIGAN DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING	DRAWN BY: BGH	APPROVED BY: DJC	CONTRACT NO.: 2019-0448
							SCALE		R.O.W.
							DATE: MARCH, 2019		SHEET NO.:
							FILE NAME:		CONTRACT SHEET NO.: 20 OF 20