

APPENDIX C-5 PROJECT PLANS

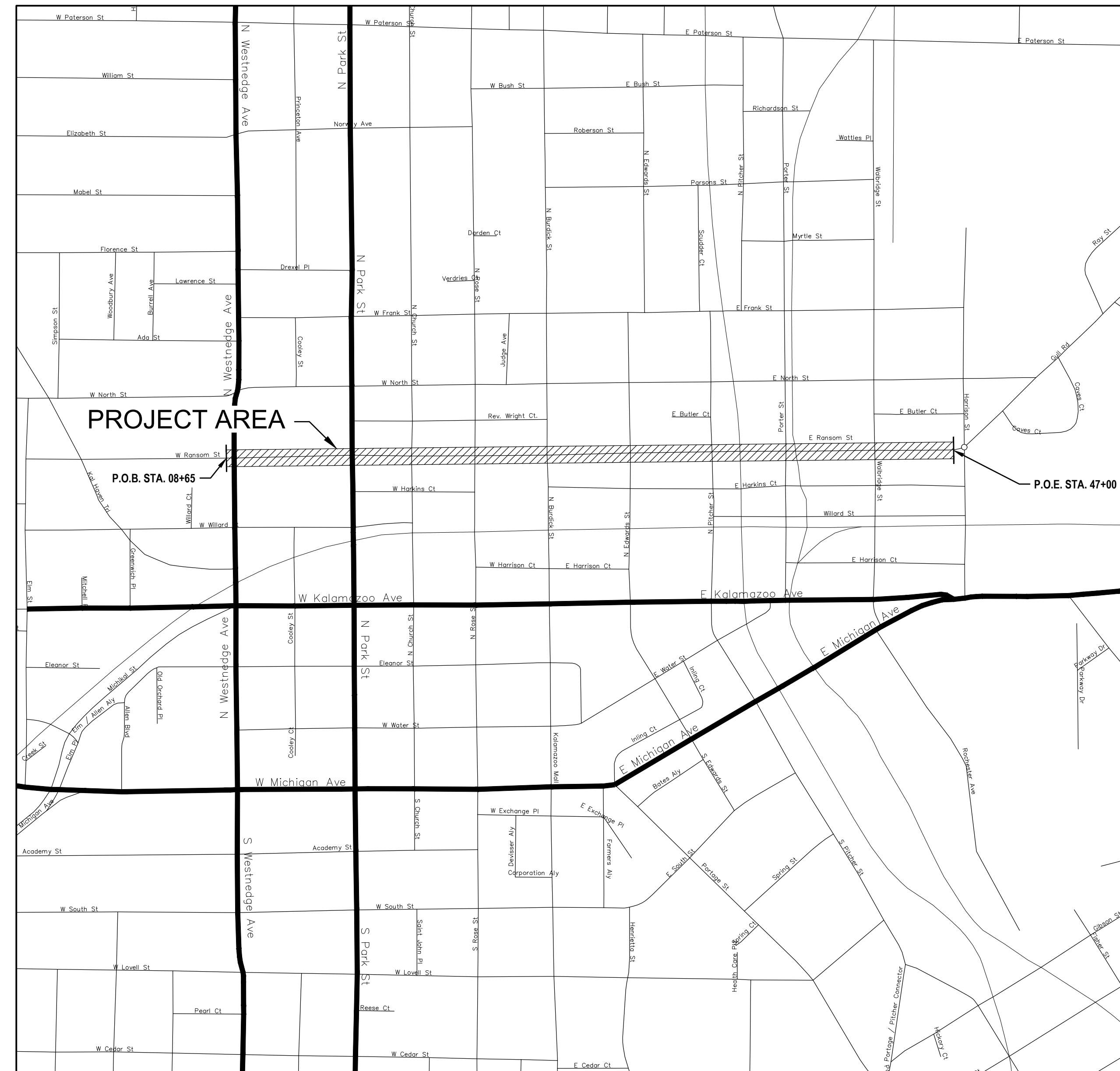
SHT NO.	INDEX OF SHEETS	DESCRIPTION
1	TITLE SHEET	
2	EXISTING ROADWAY CROSS SECTIONS	
3	PROPOSED ROADWAY CROSS SECTIONS - 1	
4	PROPOSED ROADWAY CROSS SECTIONS - 2	
5	BORING LOGS - 1	
6	BORING LOGS - 2	
7	SOIL BORING MAP	
8	STANDARD DETAILS AND NOTES	
9	SANITARY SEWER DETAILS	
10	STORM SEWER DETAILS	
11	WATER MAIN DETAILS	
12	EXISTING CONDITIONS - 1	
13	EXISTING CONDITIONS - 2	
14	REMOVAL PLAN - 1	
15	REMOVAL PLAN - 2	
16	PLAN AND PROFILE STA. 8+48 (P.O.B.) TO 12+50	
17	PLAN AND PROFILE STA. 12+50 TO 17+00	
18	PLAN AND PROFILE STA. 17+00 TO 21+50	
19	PLAN AND PROFILE STA. 21+50 TO 26+00	
20	PLAN AND PROFILE STA. 26+00 TO 30+50	
21	PLAN AND PROFILE STA. 30+50 TO 35+00	
22	PLAN AND PROFILE STA. 35+00 TO 39+50	
23	PLAN AND PROFILE STA. 39+50 TO 44+00	
24	PLAN AND PROFILE STA. 44+00 TO 46+50 (P.O.E.)	
25	PAVEMENT MARKING AND PERMANENT SIGNAGE PLAN - 1	
26	PAVEMENT MARKING AND PERMANENT SIGNAGE PLAN - 2	
27	SOIL EROSION AND SEDIMENTATION CONTROL PLAN PHASE 1	
28	SOIL EROSION AND SEDIMENTATION CONTROL PLAN PHASE 2	
29	VEHICULAR DETOUR PLAN PHASE 1	
30	VEHICULAR DETOUR PLAN PHASE 2	
31	PEDESTRIAN DETOUR PLAN PHASE 1	
32	PEDESTRIAN DETOUR PLAN PHASE 2	
33	INTERSECTION GRADING - 1	
34	INTERSECTION GRADING - 2	
35	INTERSECTION GRADING - 3	
36	INTERSECTION GRADING - 4	
37	INTERSECTION GRADING - 5	
39	GRADING PLAN - 2	
38	GRADING PLAN - 1	
40	GRADING PLAN - 3	
41	LIGHTING DETAILS	
42	CONDUIT PLAN - 1	
43	CONDUIT PLAN - 2	
44	CONDUIT PLAN - 3	
45	WATER MAIN CROSSING DETAILS - 1	
46	WATER MAIN CROSSING DETAILS - 2	
47	WATER MAIN CROSSING DETAILS - 3	
48	LANDSCAPE DETAILS	
49	LANDSCAPE PLAN STA 8+65 TO 27+27	
50	LANDSCAPE PLAN STA. 27+27 TO 47+00	
51	ALTERNATE LANDSCAPE PLAN STA 8+65 TO 27+27	
52	ALTERNATE LANDSCAPE PLAN STA. 27+27 TO 47+00	

CITY OF KALAMAZOO

RANSOM STREET IMPROVEMENTS

CWSRF PROJECT NO.: 5802-01

COUNTY	CITY	SHEET NUMBER	TOTAL SHEETS
KALAMAZOO	KALAMAZOO	1	52



CITY OF KALAMAZOO OFFICIALS

DAVID ANDERSON DON COONEY JEANNE HESS CHRIS PRAEDEL QIANNA DECKER STEPHANIE HOFFMAN ESTEVEN JUAREZ JAMES K. RITSEMA JAMES BAKER, PE	MAYOR VICE MAYOR CITY COMMISSIONER CITY COMMISSIONER CITY COMMISSIONER CITY COMMISSIONER CITY COMMISSIONER CITY MANAGER DEPT OF PUBLIC WORKS DIRECTOR
---	---

LOCAL UTILITIES

KALAMAZOO POTABLE WATER: CITY OF KALAMAZOO 415 STOCKBRIDGE AVENUE, KALAMAZOO, MI 49001 ANNA CRANDALL (269) 337-8215 crandalla@kalamazoozoo.org	ELECTRIC & STREET LIGHTS: CONSUMERS ENERGY 2500 EAST CORK ST. KALAMAZOO, MI 49001 ANDRE TAYLOR (269) 337-2245 andre.taylor@cmsenergy.com	CABLE TV: CHARTER COMMUNICATIONS 4176 COMMERCIAL AVE. PORTAGE, MI 49002 BRYAN LONGCORE (269) 459-8746 bryan.longcore2@charter.com
KALAMAZOO TRAFFIC: CITY OF KALAMAZOO 415 STOCKBRIDGE AVENUE, KALAMAZOO, MI 49001 DENNIS RANDOLPH (269) 337-8612 randolphd@kalamazoozoo.org	GAS: CONSUMERS ENERGY 2500 EAST CORK ST. KALAMAZOO, MI 49001 KYLE OAK (269) 337-2366 kyle.oak@cmsenergy.com	FIBER OPTIC: CENTURY LINK 19675 W 10 MILE ROAD SOUTHFIELD, MI 48075 DAVID HUCKFELDT (517) 812-2592 dave.huckfeldt@lumen.com
KALAMAZOO STREETS/STORM: CITY OF KALAMAZOO 415 STOCKBRIDGE AVENUE, KALAMAZOO, MI 49001 ANTHONY LADD (269) 337-8215 ladda@kalamazoozoo.org	FIBER: AT&T 2919 MILLCORK ROAD KALAMAZOO, MI 49001 PHIL BARDOCZ (269) 823-3339 pb3132@att.com	FIBER OPTIC: ZAYO BANDWIDTH JOHN LUNDELL john.lundell@zayo.com GREG BABINSKI greg.babinski@zayo.com
KALAMAZOO SANITARY: CITY OF KALAMAZOO 1415 HARRISON STREET, KALAMAZOO, MI 49001 RYAN STOUGHTON (269) 337-5883 stoughtonr@kalamazoozoo.org	TELEPHONE: METRONET 133800 E. MICHIGAN AVE. GALESBURG, MI 49053 KIRK KIMMEL (616) 239-9139 kirk.kimmel@metronet.com	

MDOT STANDARD PLANS

R-28-J SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
R-29-I DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS
R-39-K TRANSVERSE PAVEMENT JOINTS
R-40-H LOAD TRANSFER ASSEMBLIES FOR PAVEMENT JOINTS
R-42-F TYPICAL JOINT LAYOUT FOR CONCRETE PAVEMENT
R-83-C UTILITY TRENCHES
R-96-E SOIL EROSION & SEDIMENTATION CONTROL MEASURES
R-100-H SEEDING AND TREE PLANTING

TRAFFIC AND SAFETY STANDARD PLANS

WZD-100-A GROUND DRIVEN SIGN SUPPORTS FOR TEMPORARY SIGNS*
WZD-125-E TEMPORARY TRAFFIC CONTROL DEVICES*
* DENOTES SPECIAL/MODIFIED DETAIL

NOTES:

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED THEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.

THE IMPROVEMENTS COVERED BY THESE PLANS ARE DESIGNED IN ACCORDANCE WITH:

- AASHTO A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, 7TH EDITION
- PROPOSED PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES
- MDOT 4R GUIDELINES
- CITY OF KALAMAZOO STREET DESIGN MANUAL
- CITY OF KALAMAZOO STANDARD SPECIFICATION FOR WATER MAIN AND SERVICE INSTALLATION, 2021 EDITION
- CITY OF KALAMAZOO STANDARD SPECIFICATIONS FOR WASTEWATER SEWER INSTALLATION, 2016 EDITION

PROJECT BEARINGS AND HORIZONTAL CONTROL ARE RELATED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT).

ELEVATIONS ARE RELATED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, AS DERIVED FROM GPS OBSERVATIONS CONNECTED TO THE MICHIGAN CONTINUOUSLY OPERATING REFERENCE STATION REAL-TIME NETWORK.

ALL PROJECT UNITS ARE BASED IN INTERNATIONAL FEET.



COUNTY KEY
NOT TO SCALE

PROJECT LOCATION MAP

NOT TO SCALE

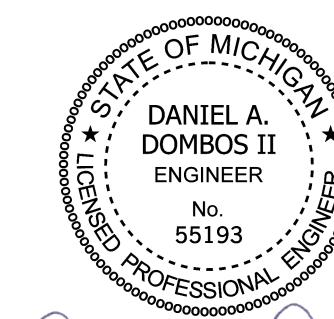
CALL MISS DIG

1-800-482-7171 OR 811

FOR PROTECTION OF THE UNDERGROUND UTILITIES, THE CONTRACTOR SHALL CALL MISS DIG A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING CONSTRUCTION OPERATIONS. MEMBERS WILL BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE "MISS DIG" ALERT SYSTEM.



Know what's below.
Call before you dig.

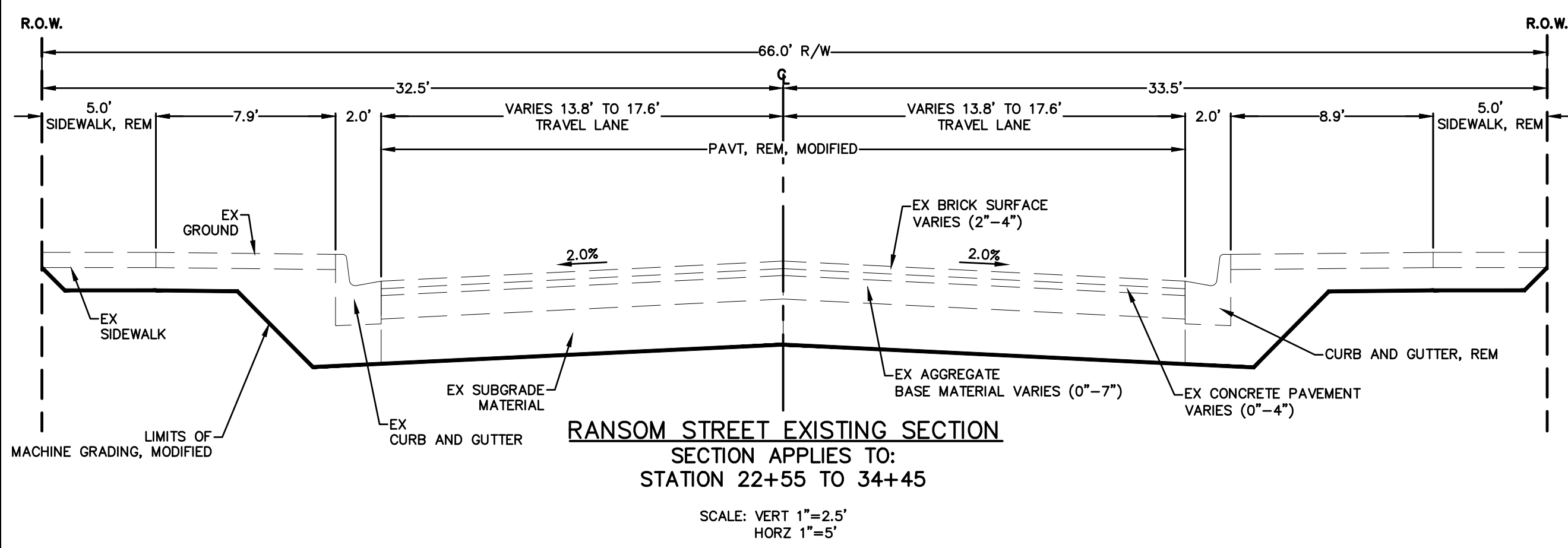
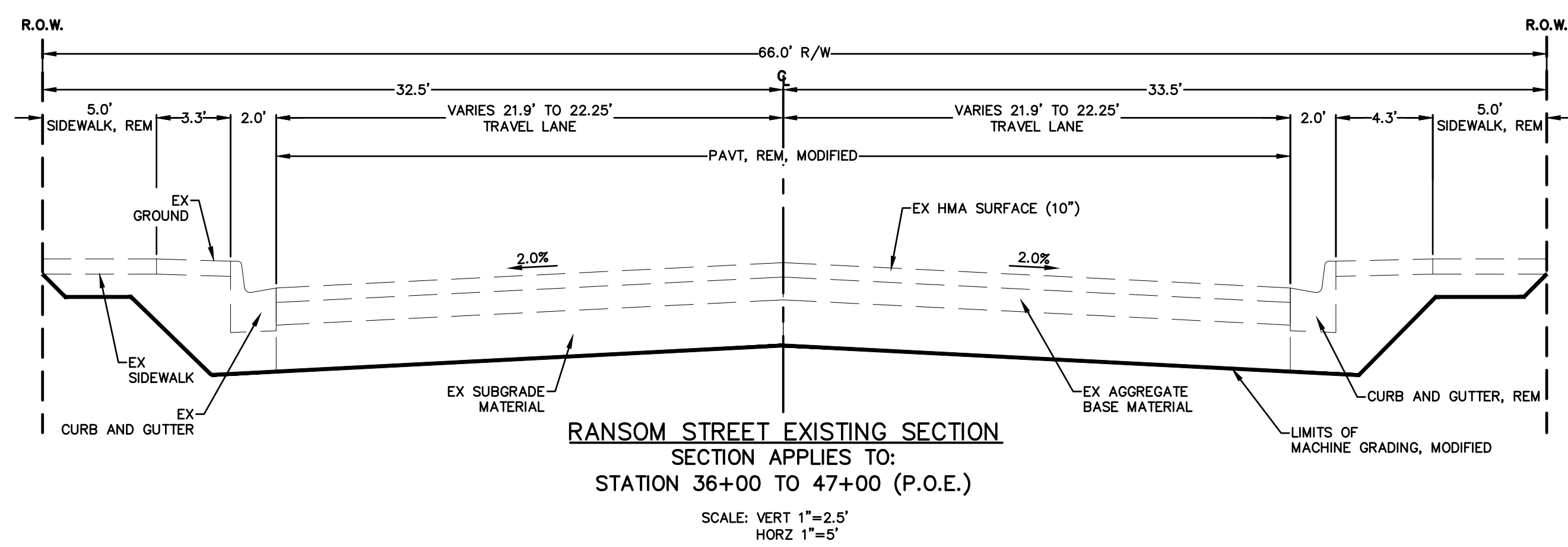
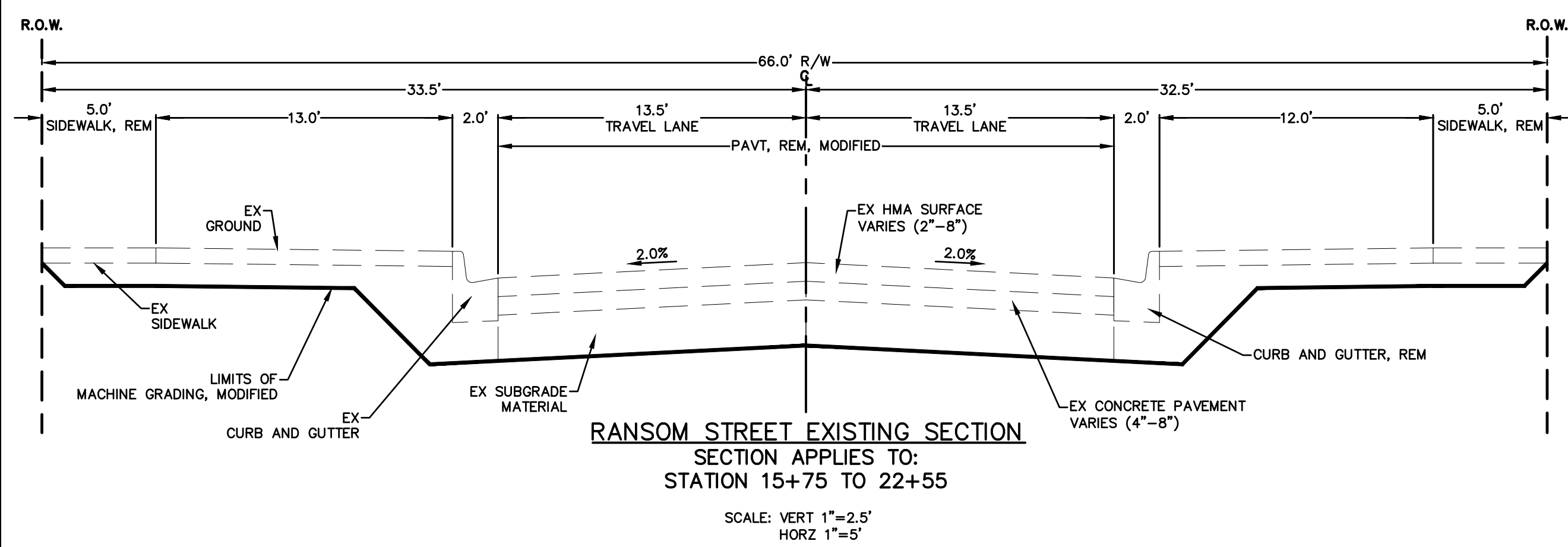
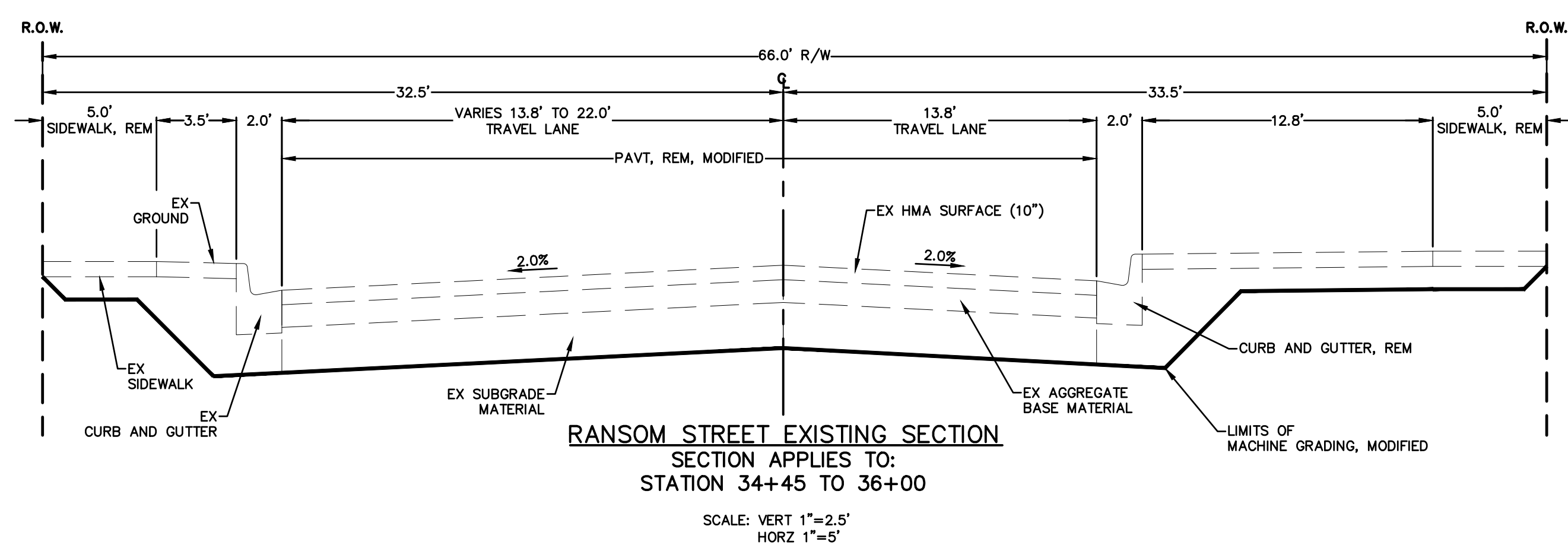
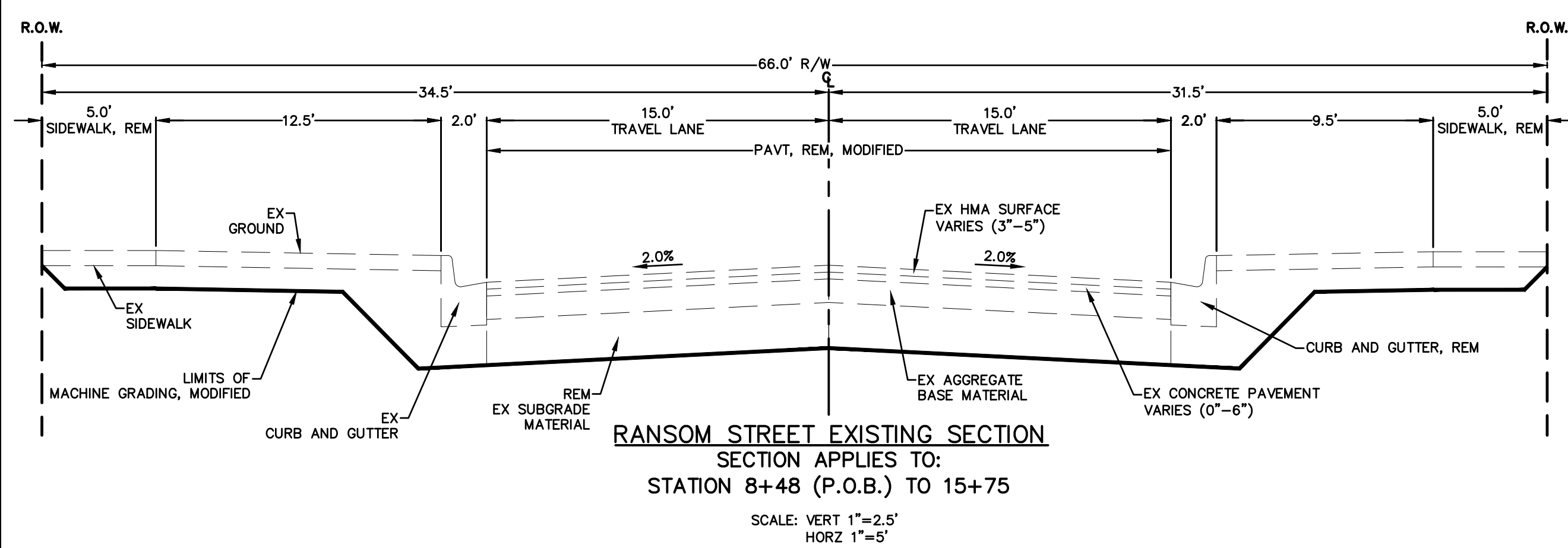


D. A. Dombos II



DATE: JANUARY 2023
COPYRIGHT 2022 - ABONMARCHE CONSULTANTS, INC.

1 OF 52 RANSOM STREET IMPROVEMENTS
CITY OF KALAMAZOO
PROJECT# 22-0031



PROJECT:

**EXISTING
ROADWAY CROSS SECTIONS**

SHEET TITLE:

DRAWN BY: DJL
DESIGNED BY: MJS/ERF
PM REVIEW: DAD
QA/QC REVIEW:
DATE: JANUARY 2023
SEAL:

SIGNATURE:

DATE:

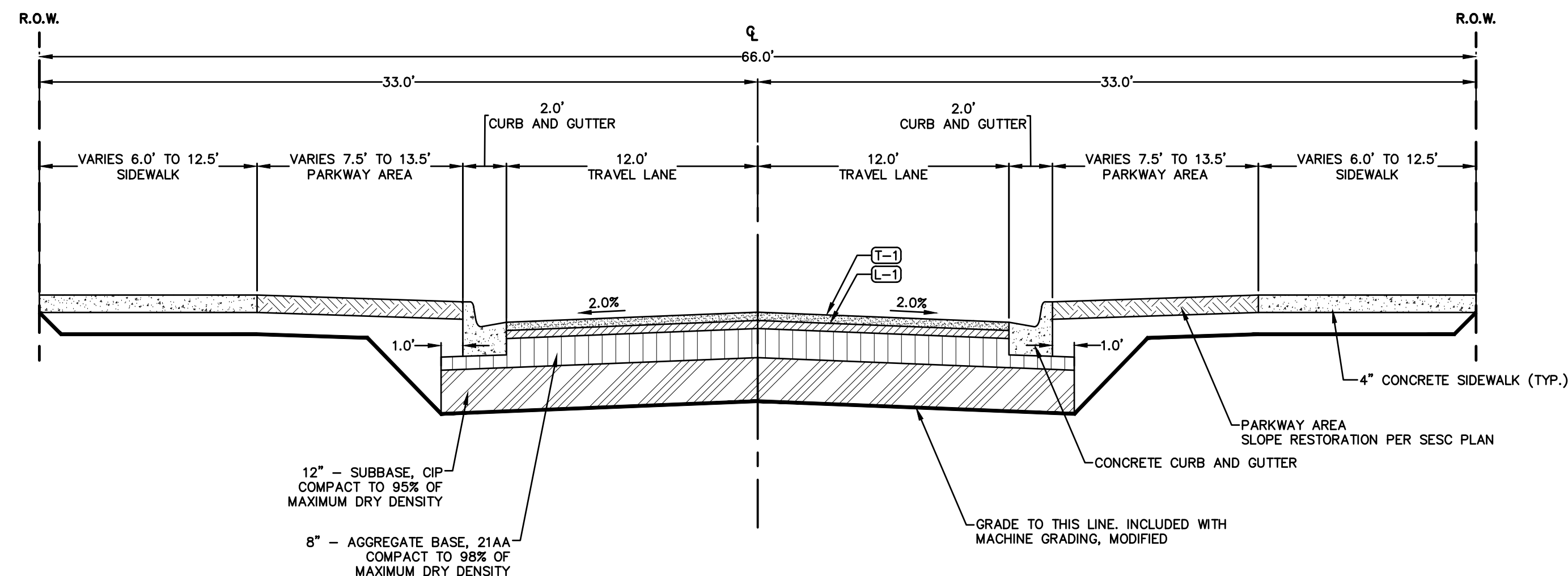
SCALE:
HORZ: 1" = 5'
VERT: 1" = 2.5'

ACI JOB #
22-0031

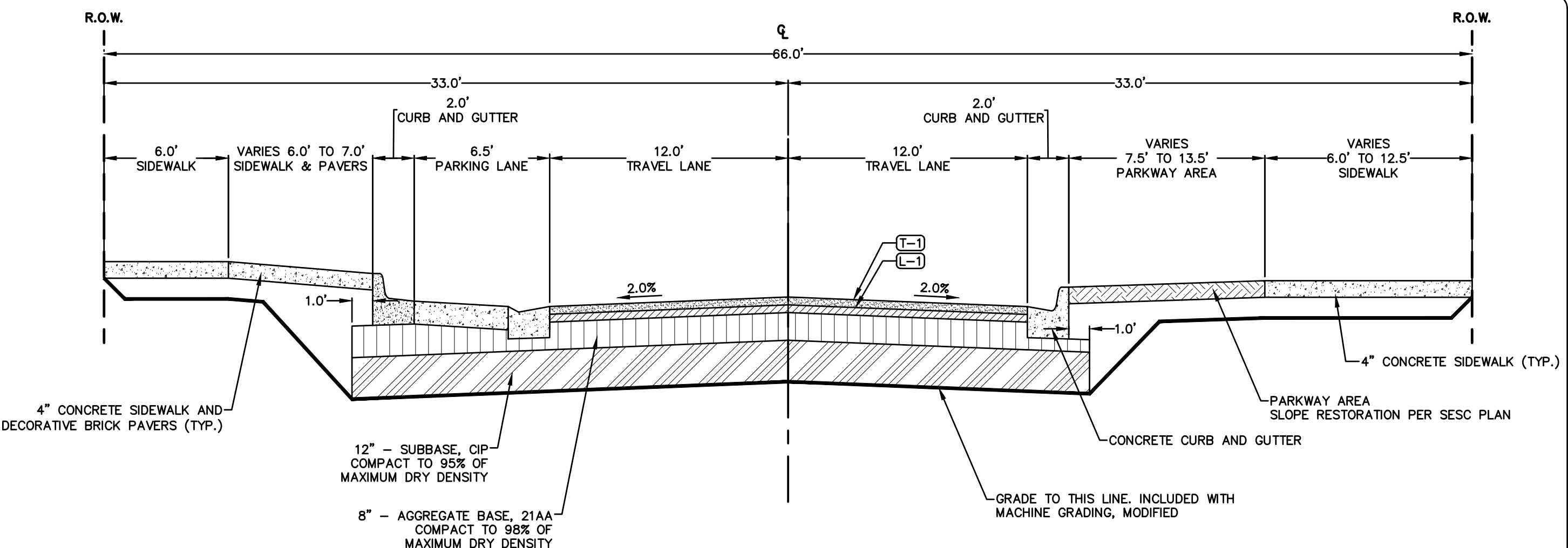
SHEET NO.
2 of 52

NO.	REVISION DESCRIPTION	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

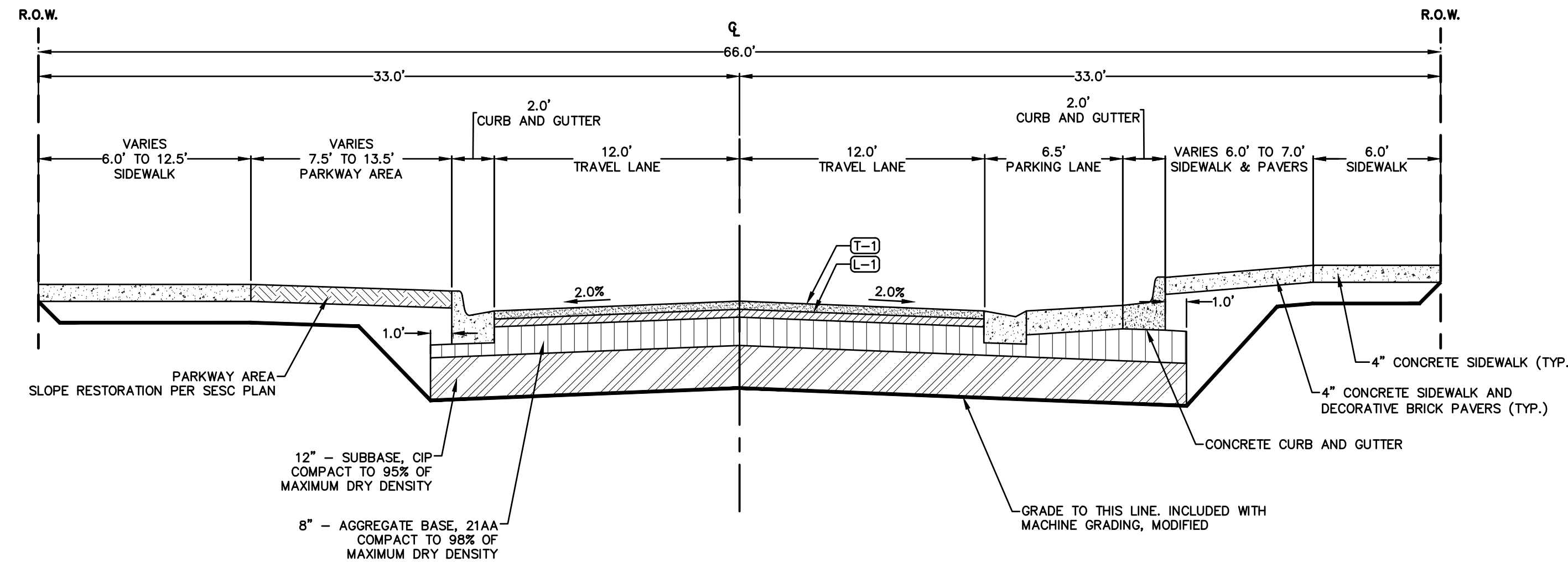
C:\p\proj\2022\220031\cdk-revision-renc-consider\CDK_CDK10\Drawings\22-0031\31.dwg, 24.1, 1/5/2023 1:45:17 PM, mmmarc.11



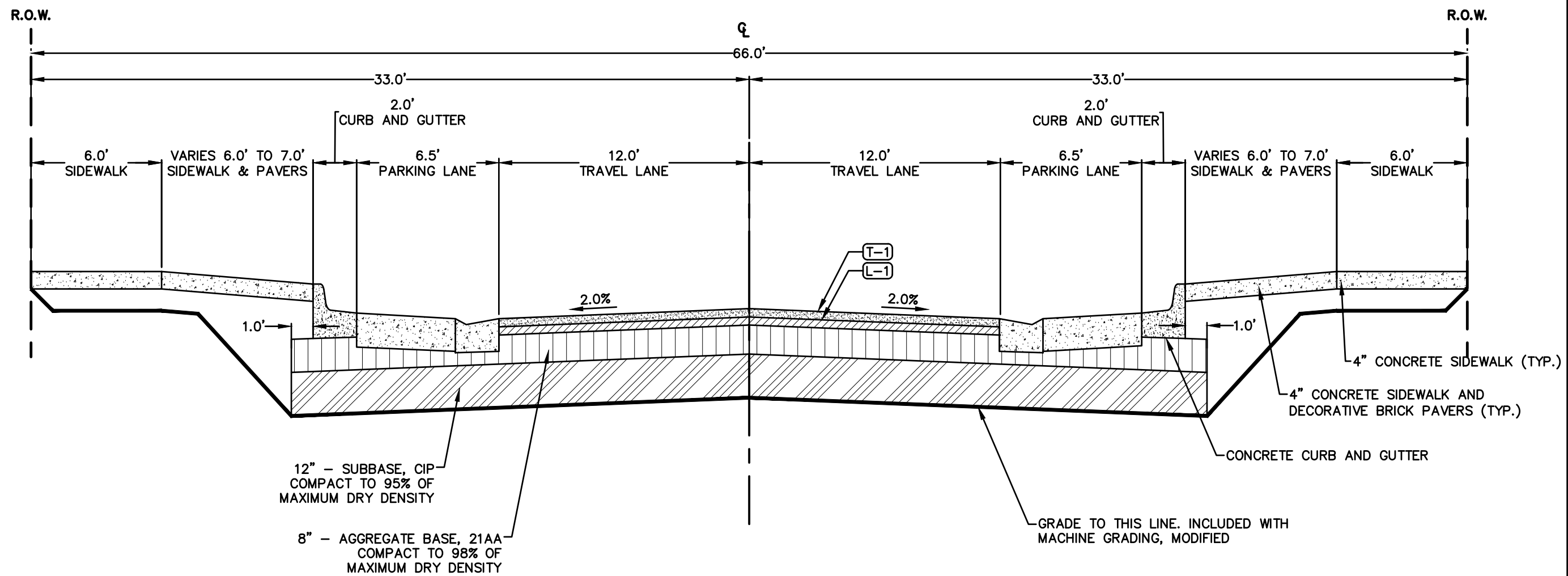
RANSOM STREET PROPOSED SECTION
 SECTION APPLIES TO:
 STATION 08+48 (P.O.B.) TO 10+15
 STATION 13+25 TO 17+50
 STATION 18+50 TO 19+60
 STATION 21+90 TO 23+25
 STATION 25+50 TO 27+25
 STATION 28+10 TO 34+50
 SCALE: VERT 1"=2.5'
 HORZ 1"=5'



RANSOM STREET PROPOSED SECTION
 SECTION APPLIES TO:
 STATION 12+60 TO 13+25
 STATION 19+60 TO 21+90
 SCALE: VERT 1"=2.5'
 HORZ 1"=5'



RANSOM STREET PROPOSED SECTION
 SECTION APPLIES TO:
 STATION 10+15 TO 12+60
 STATION 23+25 TO 25+50
 STATION 27+25 TO 28+10
 SCALE: VERT 1"=2.5'
 HORZ 1"=5'



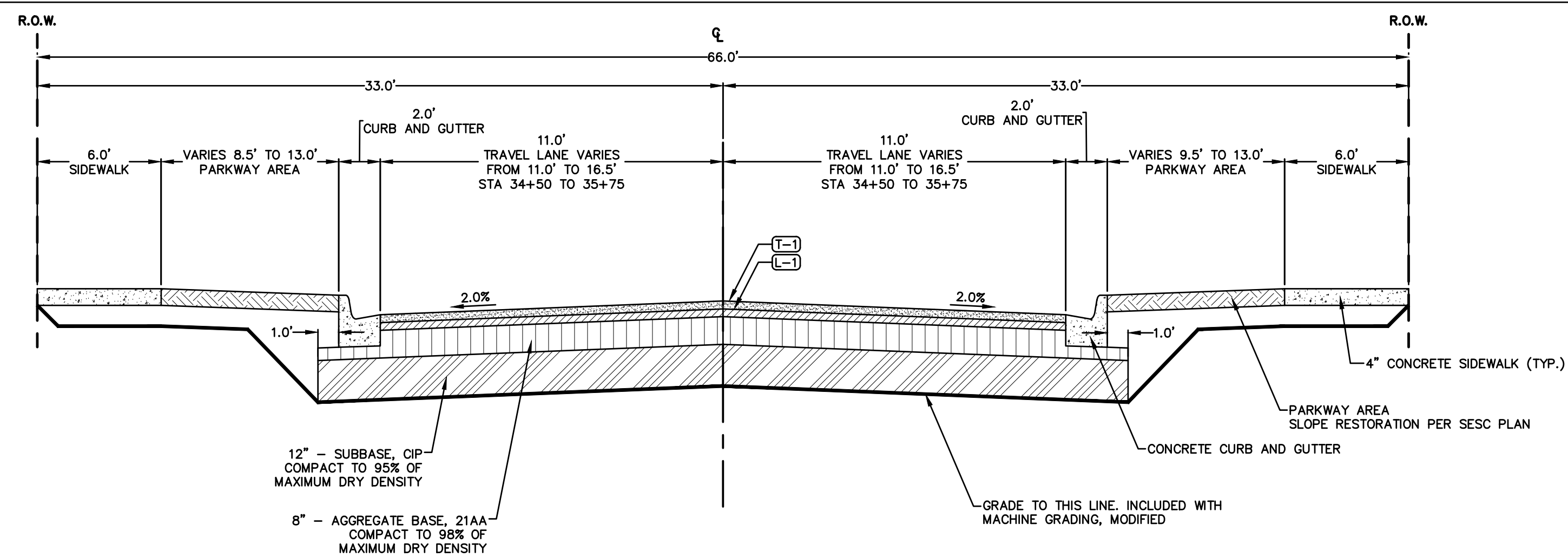
RANSOM STREET PROPOSED SECTION
 SECTION APPLIES TO:
 STATION 17+50 TO 18+50
 SCALE: VERT 1"=2.5'
 HORZ 1"=5'

HMA APPLICATION TABLE				
MIX ID	MIXTURE	RATE (LBS/SYD)	PERFORMANCE GRADE	TYPE
T-1	HMA, 5EML	220	70-28P	TOP COURSE (AW =260)
L-1	HMA, 4EML	220	70-28P	LEVELING COURSE
HA-1	HMA, 5EML	220	70-28P	HMA APPROACH TOP COURSE (AW =260)
HA-2	HMA, 4EML	220	70-28P	HMA APPROACH LEVELING COURSE
HA-3	HMA, 3EML	330	58-22	HMA APPROACH BASE COURSE
HP-1	HMA, 5EML	440 MAX	70-28P	HAND PATCHING 2 COURSES WHERE NECESSARY

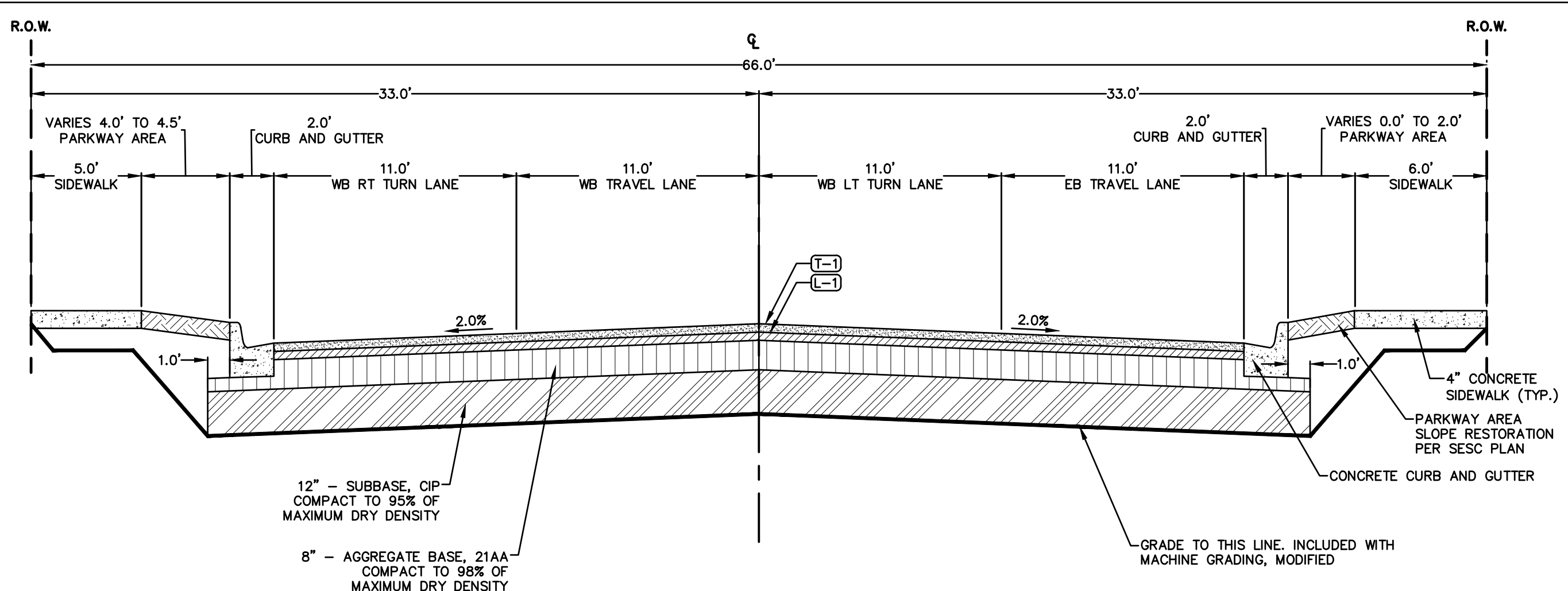
- NOTES:
- HMA BOND COAT 0.05 TO 0.15 GAL/SYD REQUIRED BETWEEN ASPHALT LIFTS. ENSURE FULL COVERAGE OF ASPHALT SURFACE WITH BOND COAT PRIOR TO PAVING. (NOT A PAY ITEM)
 - APPLY BOND COAT TO VERTICAL SURFACES OF ALL EXISTING HMA OR CONCRETE PAVEMENT, CURBS, AND GUTTERS ADJACENT TO NEW HMA PAVEMENT.
 - APPLY BOND COAT TO VERTICAL SURFACES OF PREVIOUSLY PLACED HMA PAVEMENT WITH THE TEMPERATURE OF THE PREVIOUSLY PLACED PAVEMENT FALLS BELOW 170°F OR WHEN AIR TEMPERATURE IS BELOW 50°F.
 - CHIPPING OF REMAINING ASPHALT AT BUTT JOINTS, CURB LINES, MONUMENT BOXES, WATER VALVE BOXES, AND DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE PAY ITEM: "COLD MILLING, HMA SURFACE"
 - PLACE W8-1 "BUMP" WARNING SIGNS A MINIMUM OF 50 FEET IN ADVANCE OF TRANSITION MILLING LIMITS ALL NAMED CROSS STREETS.

HATCH LEGEND	
	HMA, 5EML (TOP COURSE)
	HMA, 4EML (LEVELING COURSE)
	AGGREGATE BASE, 8 INCH
	SUBBASE, CIP
	CONCRETE
	PARKWAY SPACE

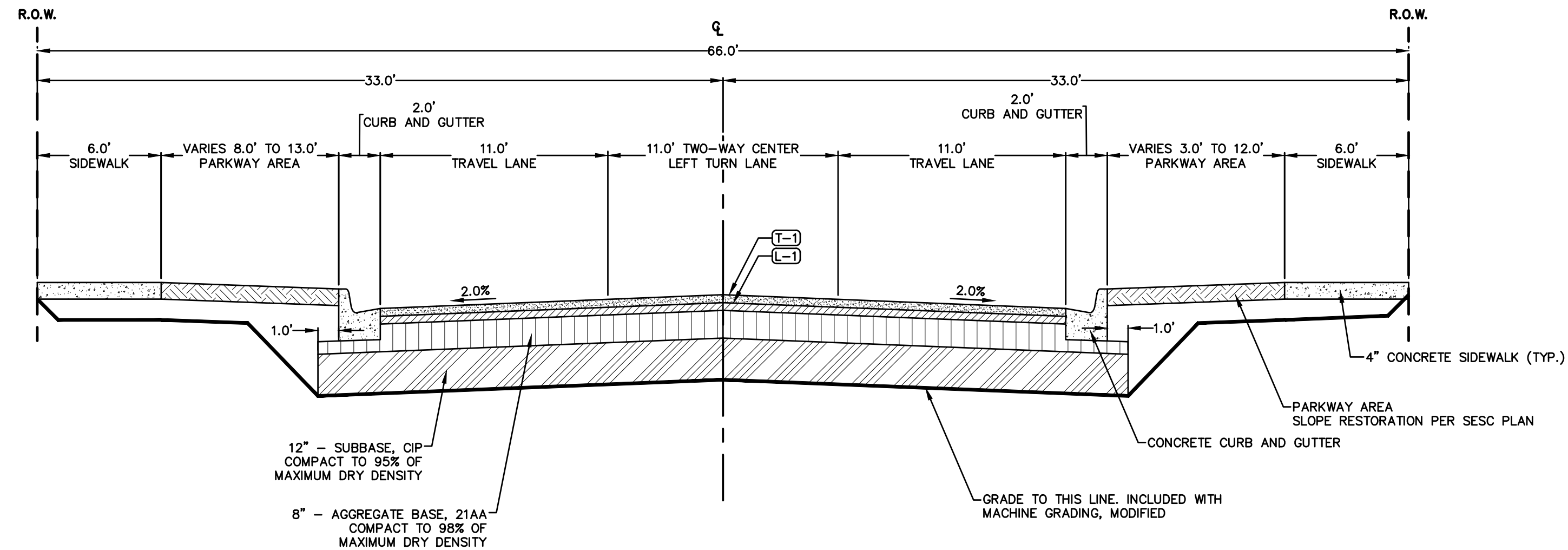
NO.	REVISION DESCRIPTION	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22



RANSOM STREET PROPOSED SECTION
SECTION APPLIES TO:
STATION 34+50 TO 35+75
SCALE: VERT 1"=2.5'
HORZ 1"=5'



RANSOM STREET PROPOSED SECTION
SECTION APPLIES TO:
STATION 45+00 TO 46+50 (P.O.E)
SCALE: VERT 1"=2.5'
HORZ 1"=5'



RANSOM STREET PROPOSED SECTION
SECTION APPLIES TO:
STATION 35+75 TO 45+00
SCALE: VERT 1"=2.5'
HORZ 1"=5'

HATCH LEGEND	
	HMA, 5EML (TOP COURSE)
	HMA, 4EML (LEVELING COURSE)
	AGGREGATE BASE, 8 INCH
	SUBBASE, CIP
	CONCRETE
	PARKWAY SPACE

NO.	REVISION DESCRIPTION	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

**RANSOM STREET
IMPROVEMENTS
CITY OF KALAMAZOO**

PROJECT:

**PROPOSED
ROADWAY CROSS SECTIONS - 2**

SHEET TITLE:

DRAWN BY: DJL
DESIGNED BY: MJS/ERF
PM REVIEW: DAD
QA/QC REVIEW:
DATE: JANUARY 2023
SEAL:

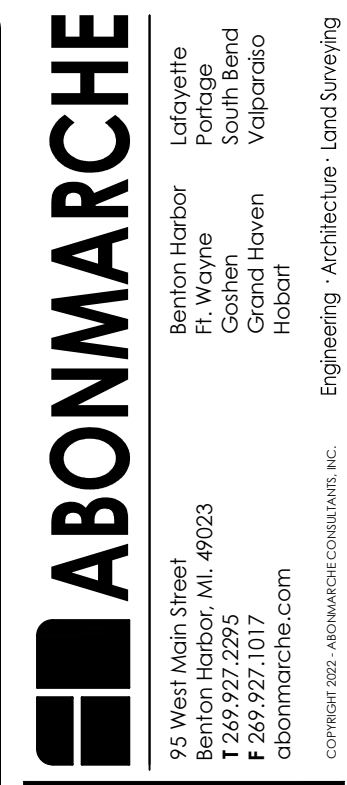
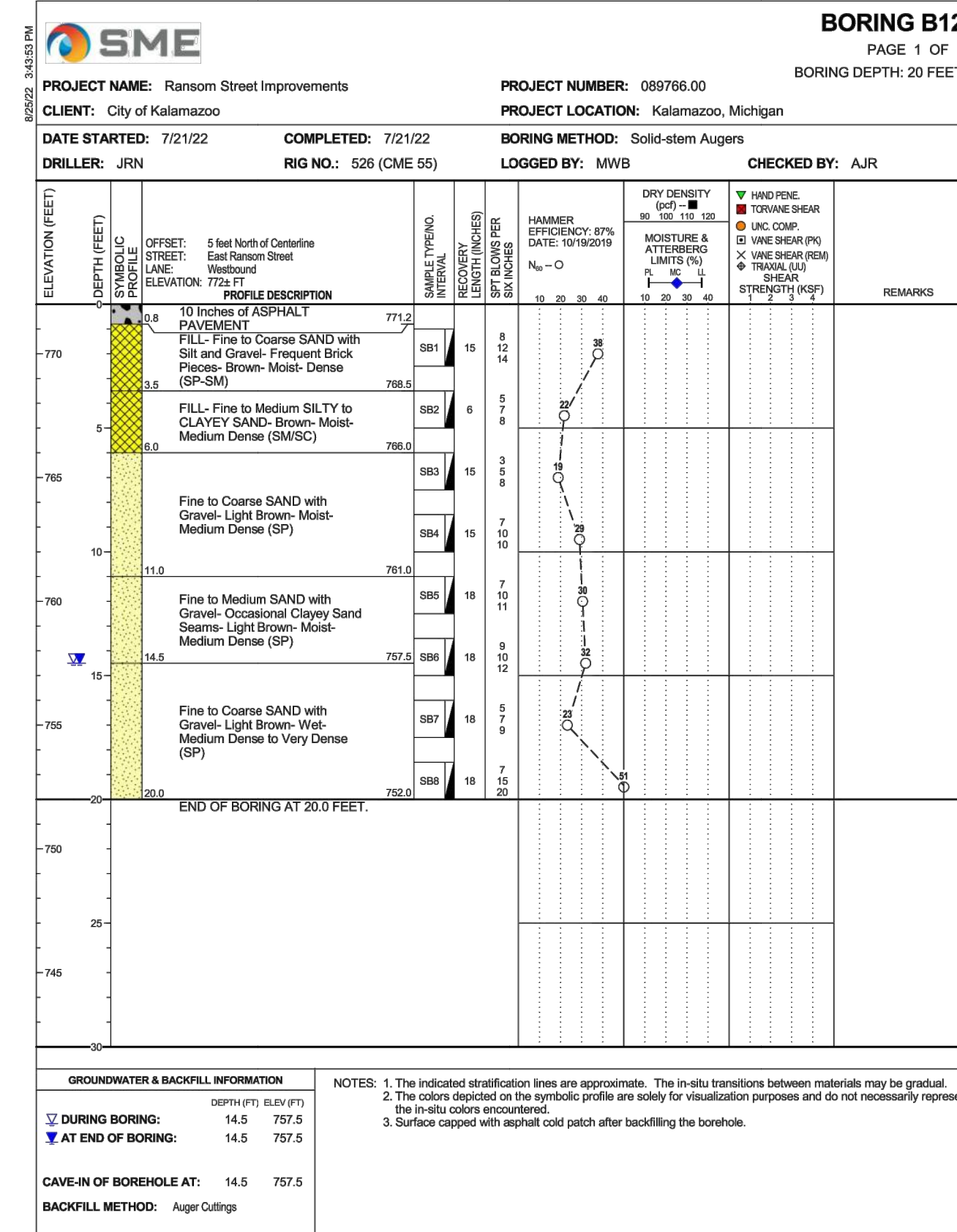
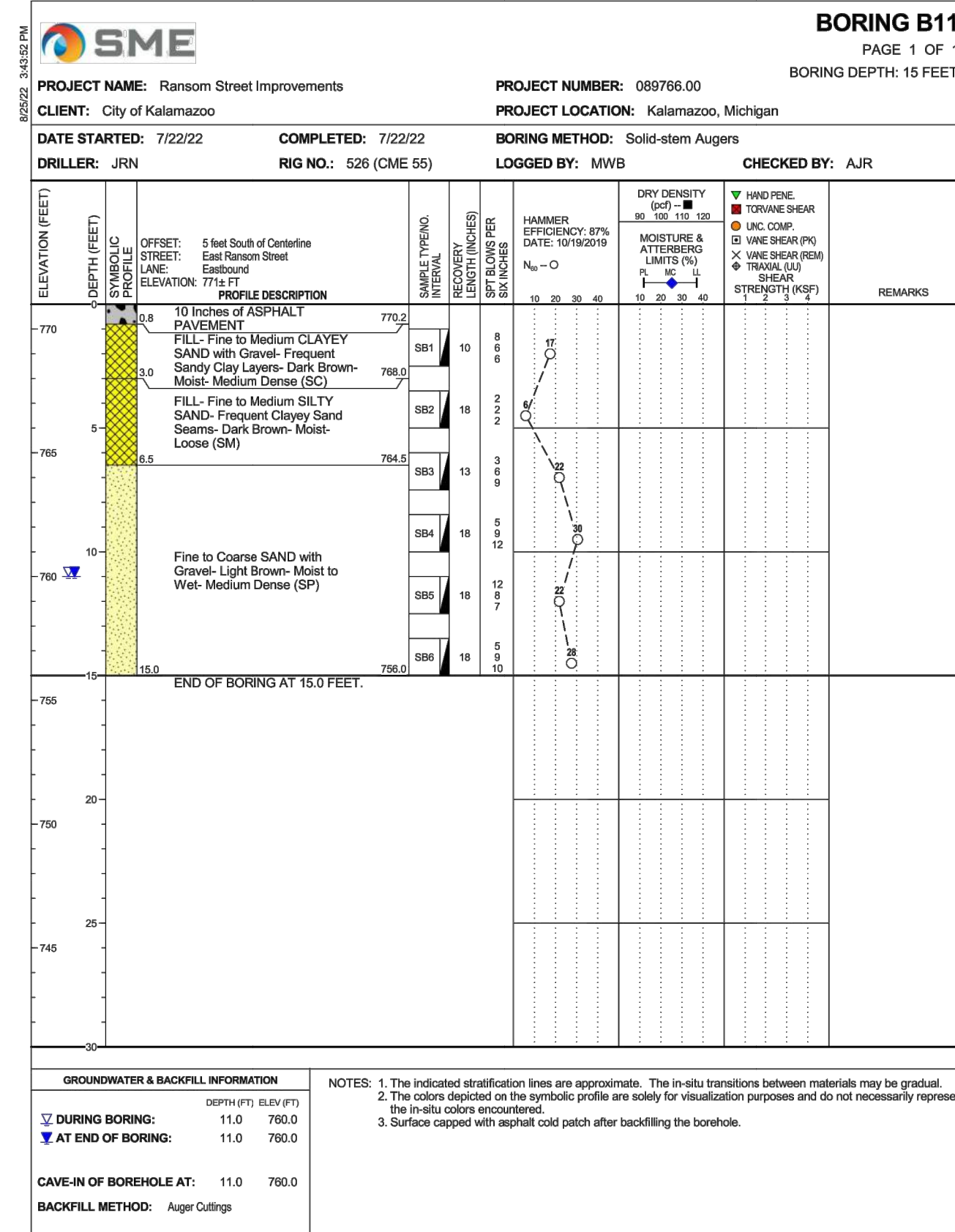
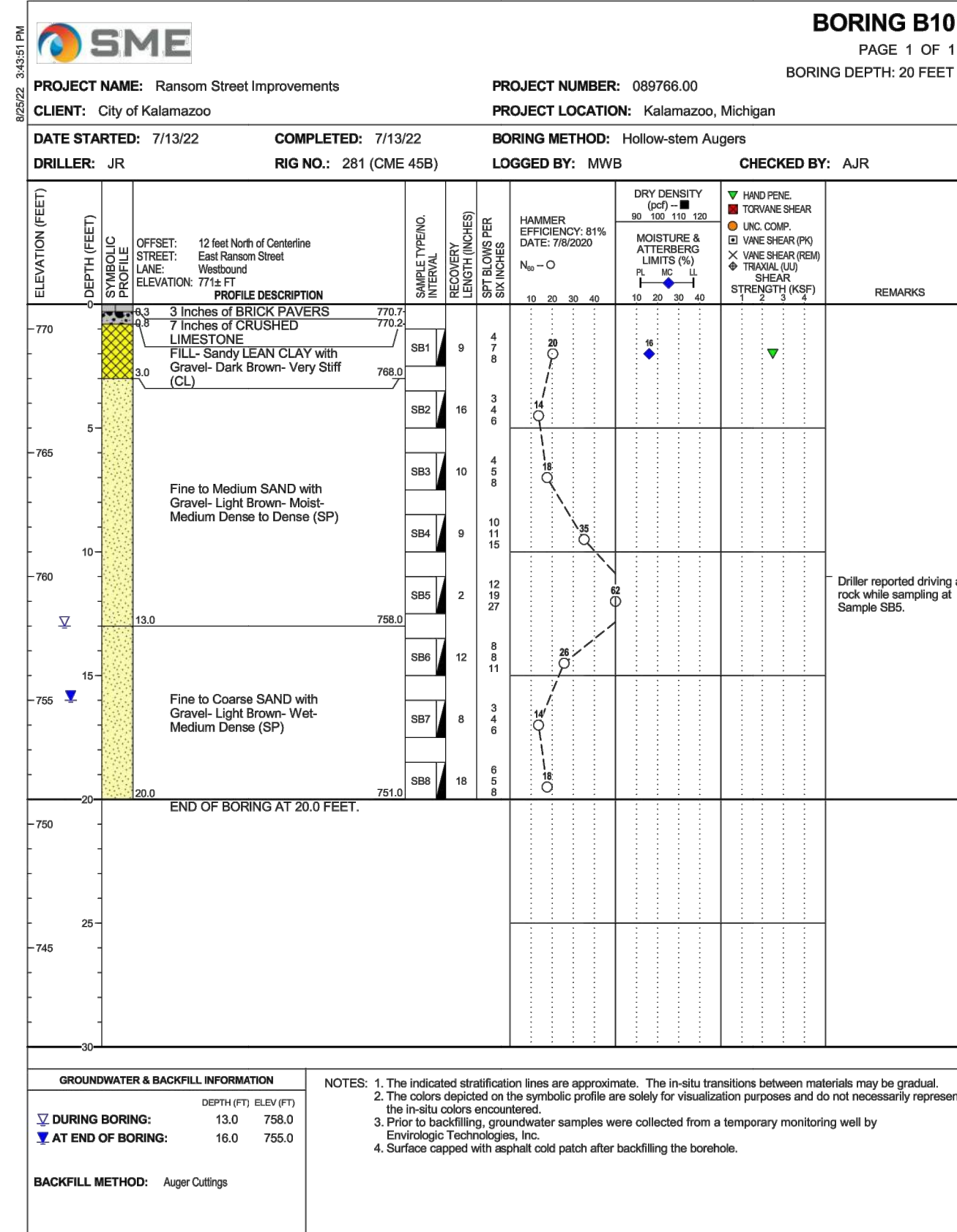
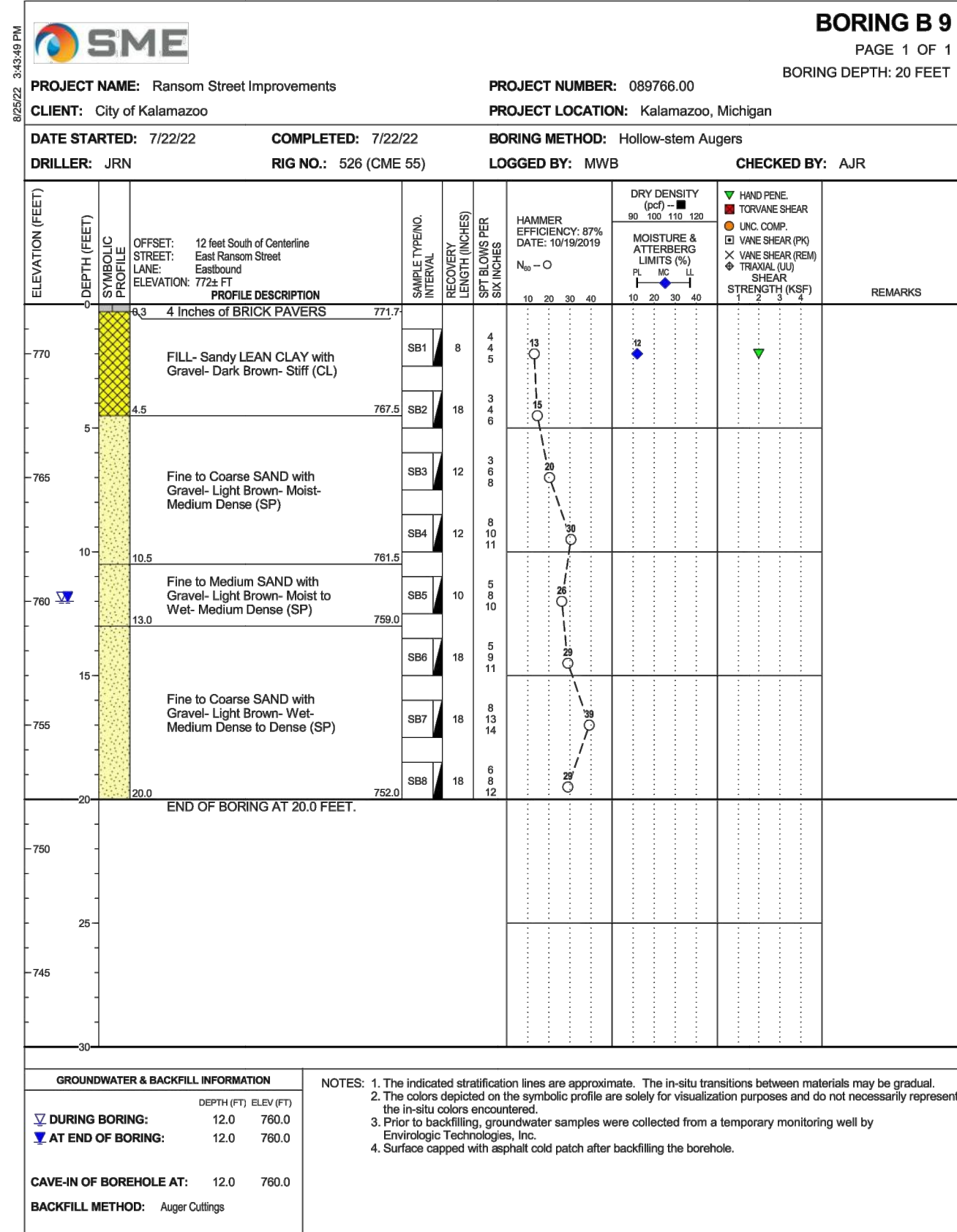
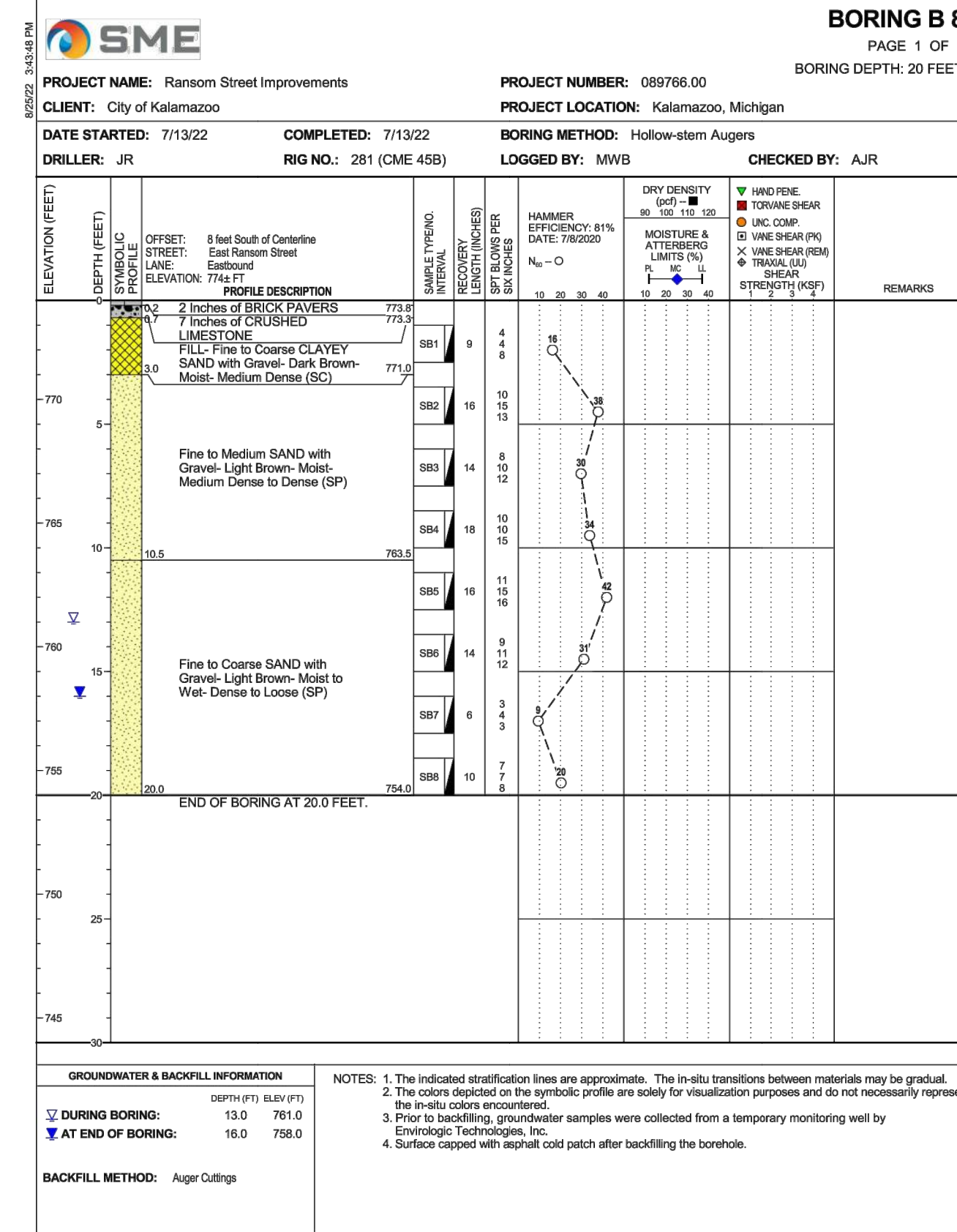
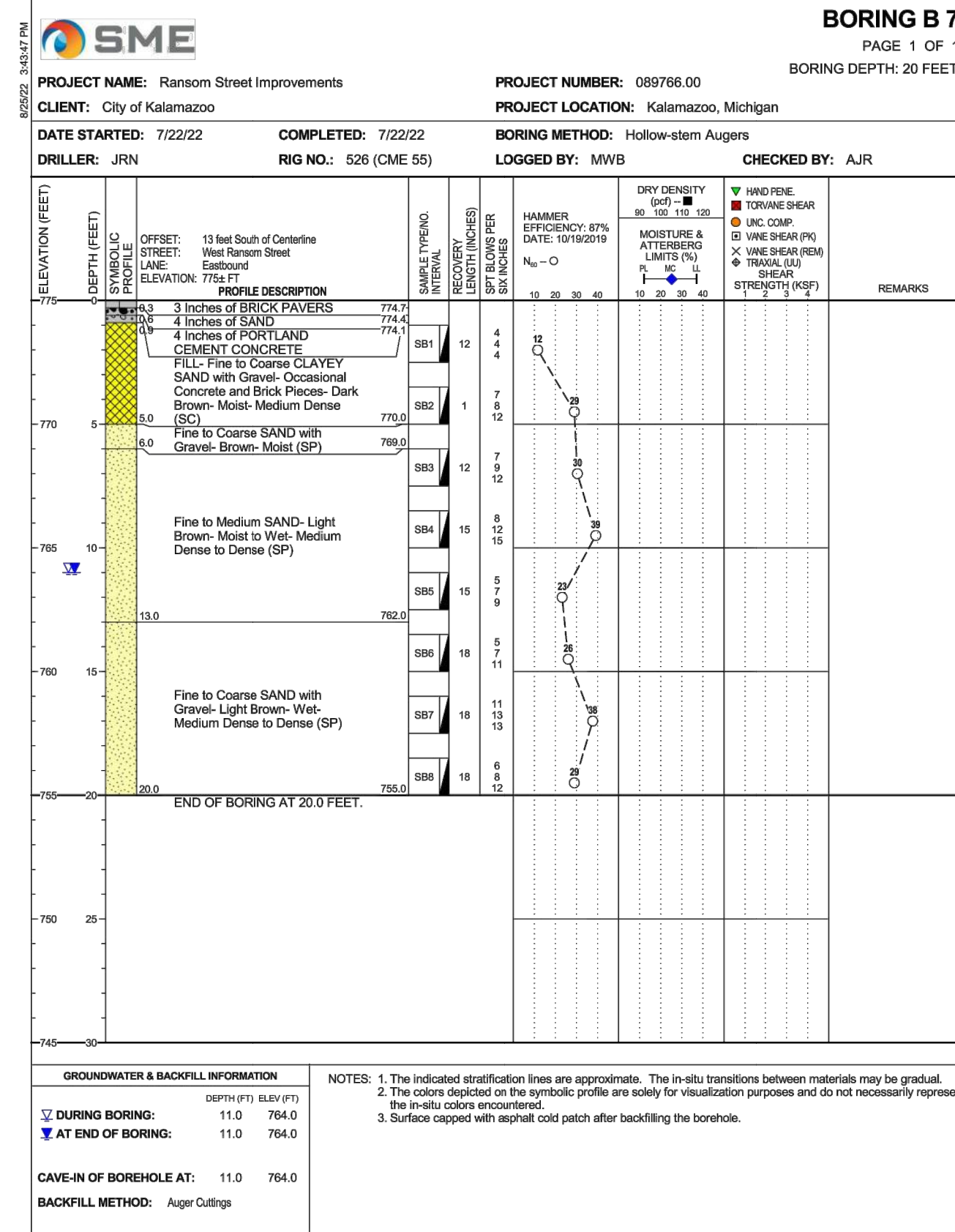
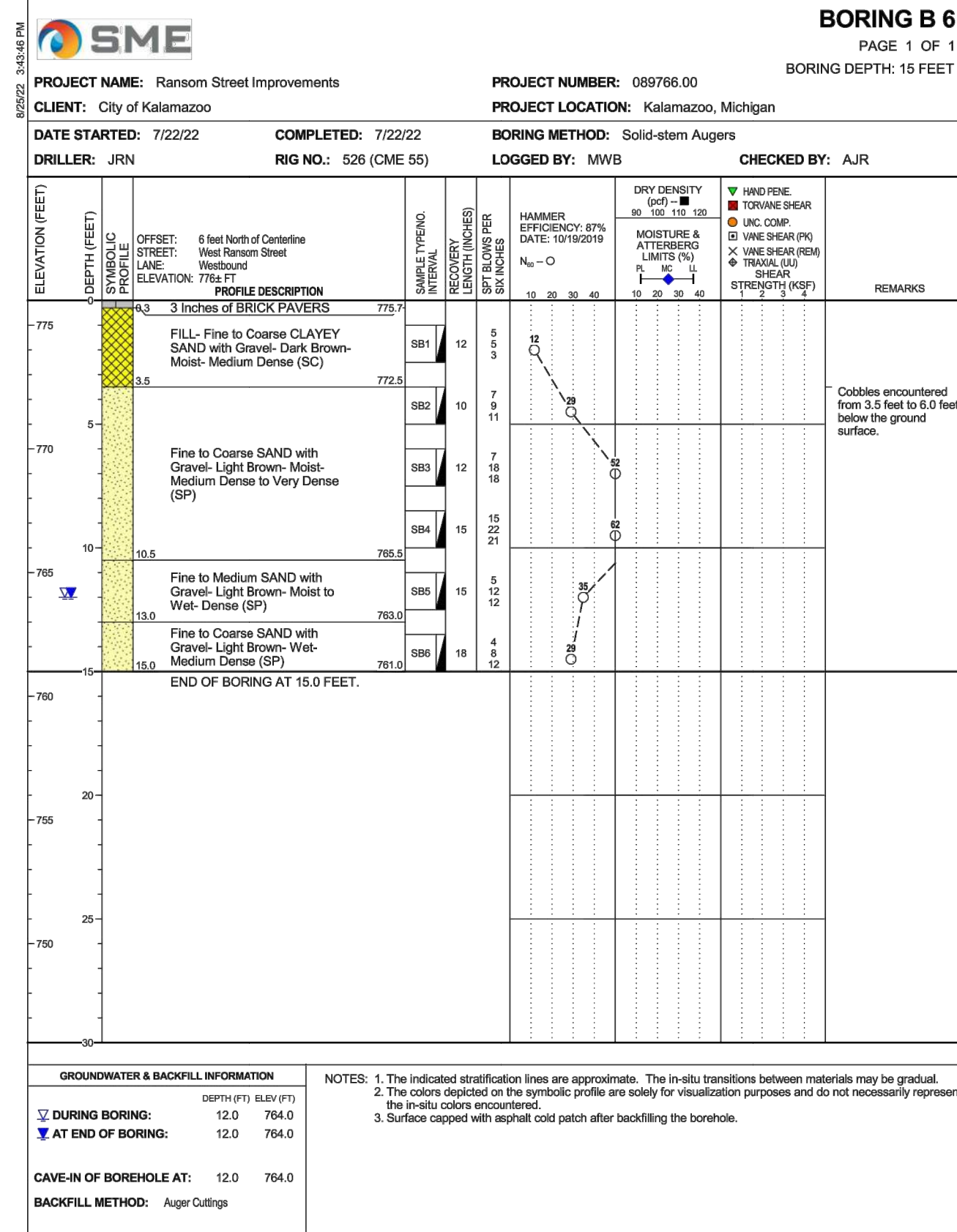
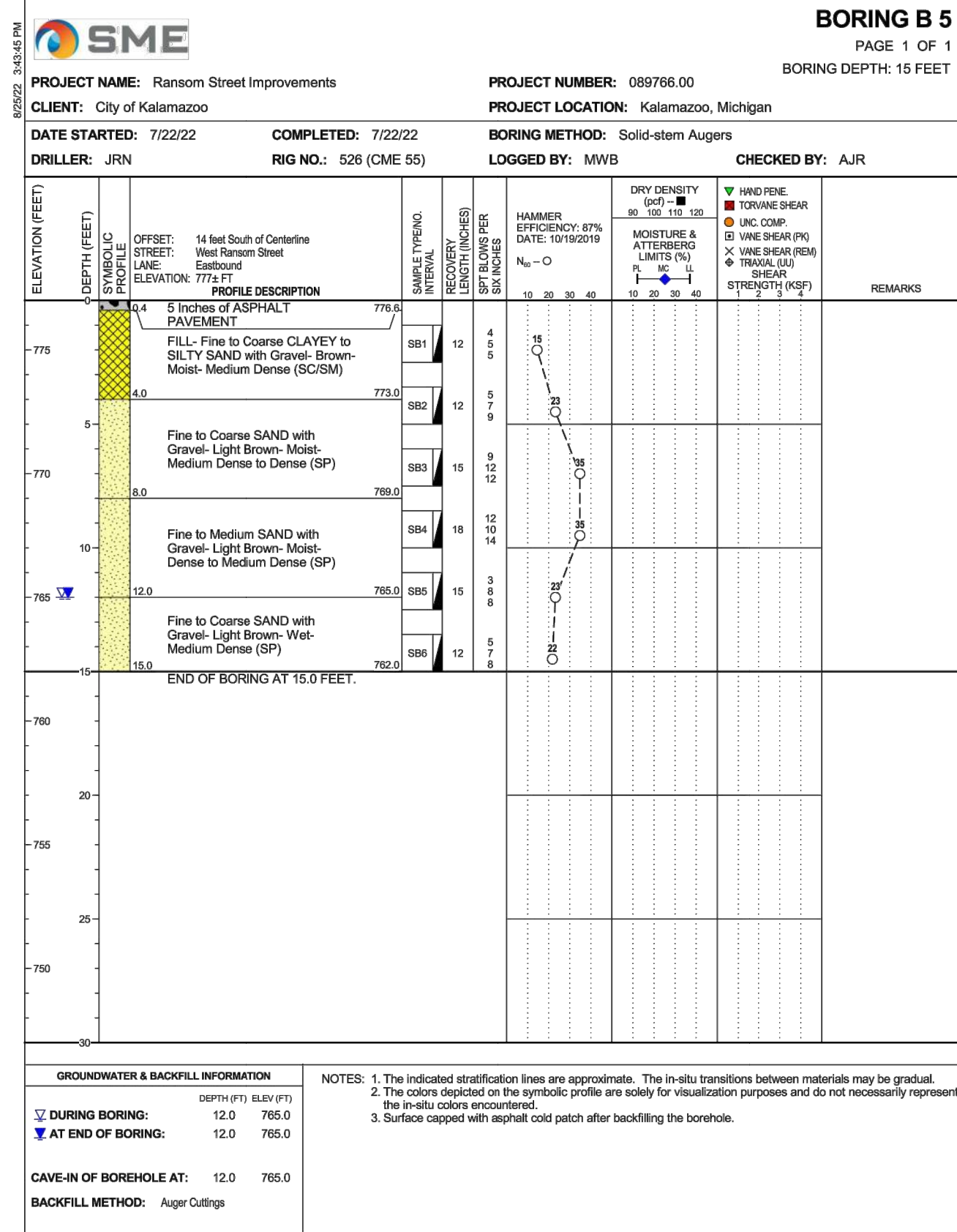
SIGNATURE:

DATE:

SCALE:
HORZ: 1" = 20'
VERT: 1" = 5'

ACI JOB #
22-0031

SHEET NO.
4 of 52



RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

PROJECT:

BORING LOGS - 2

SHEET TITLE:

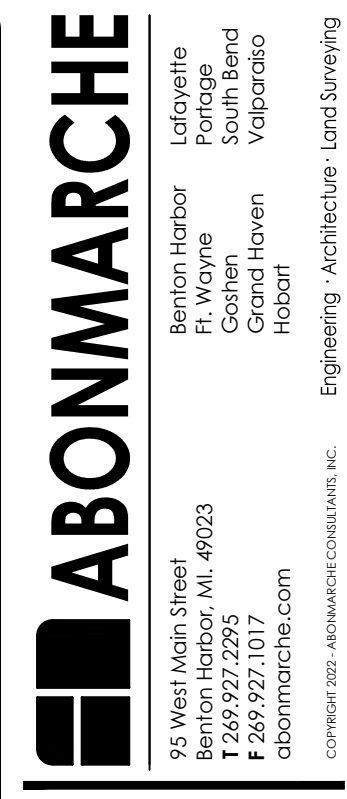
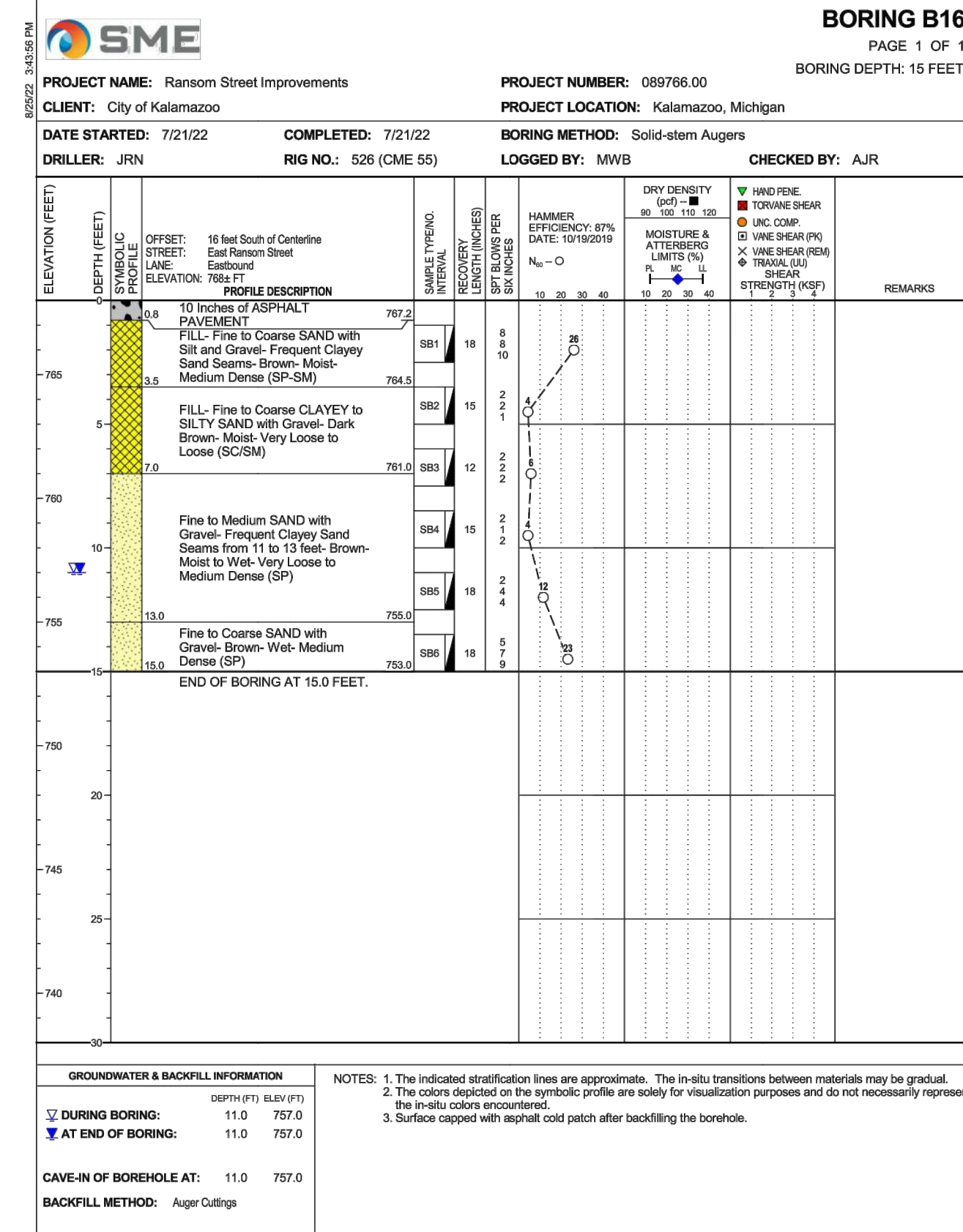
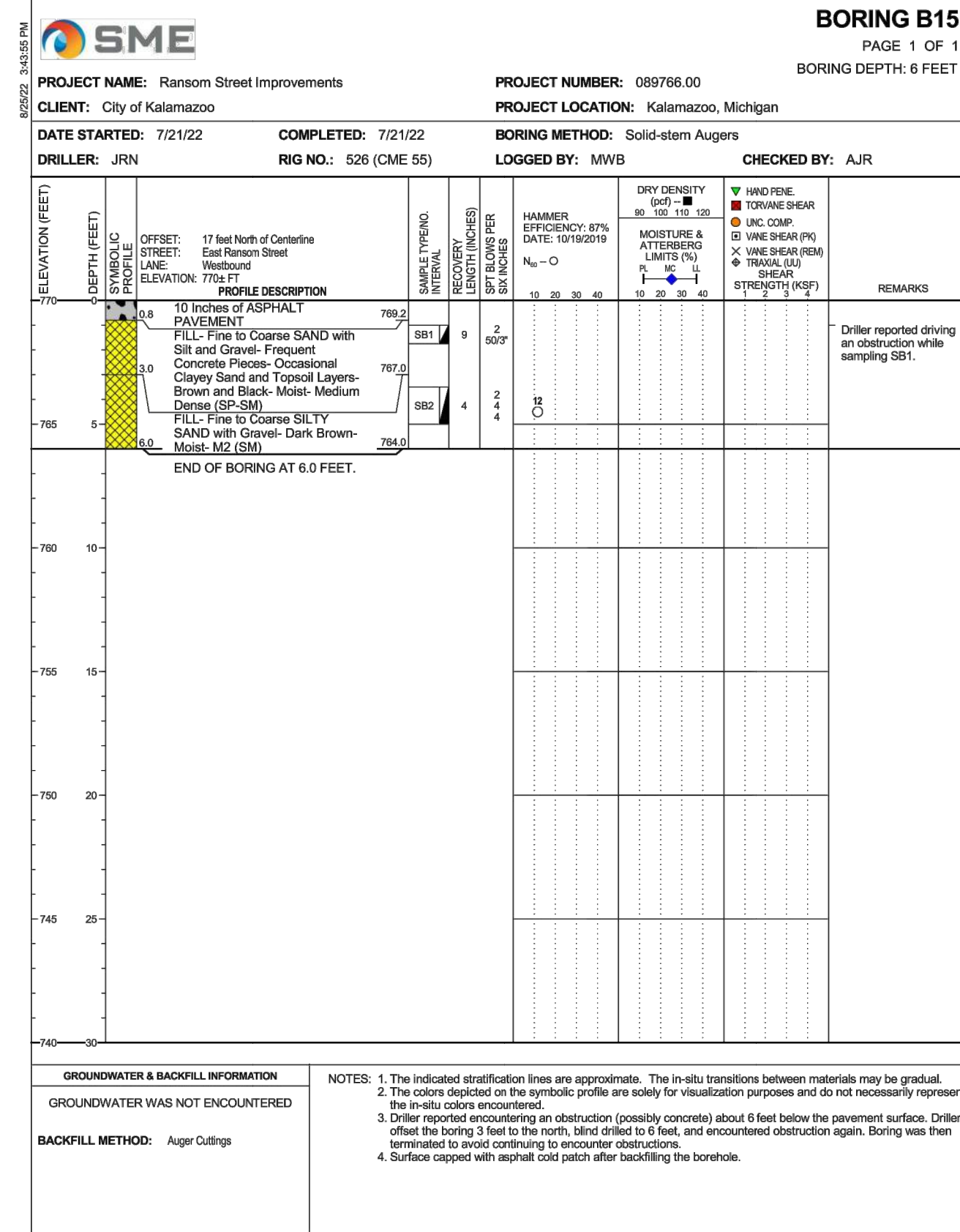
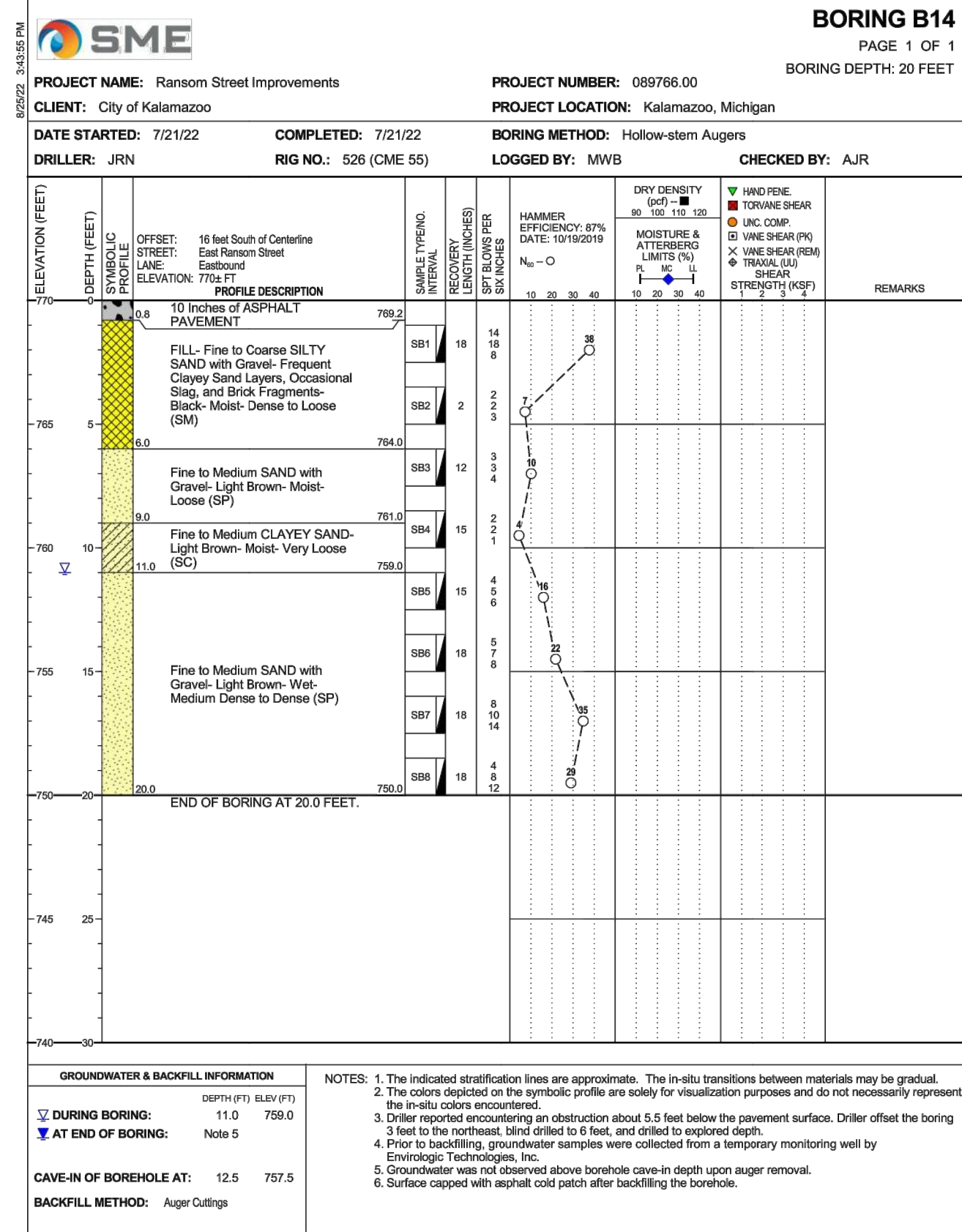
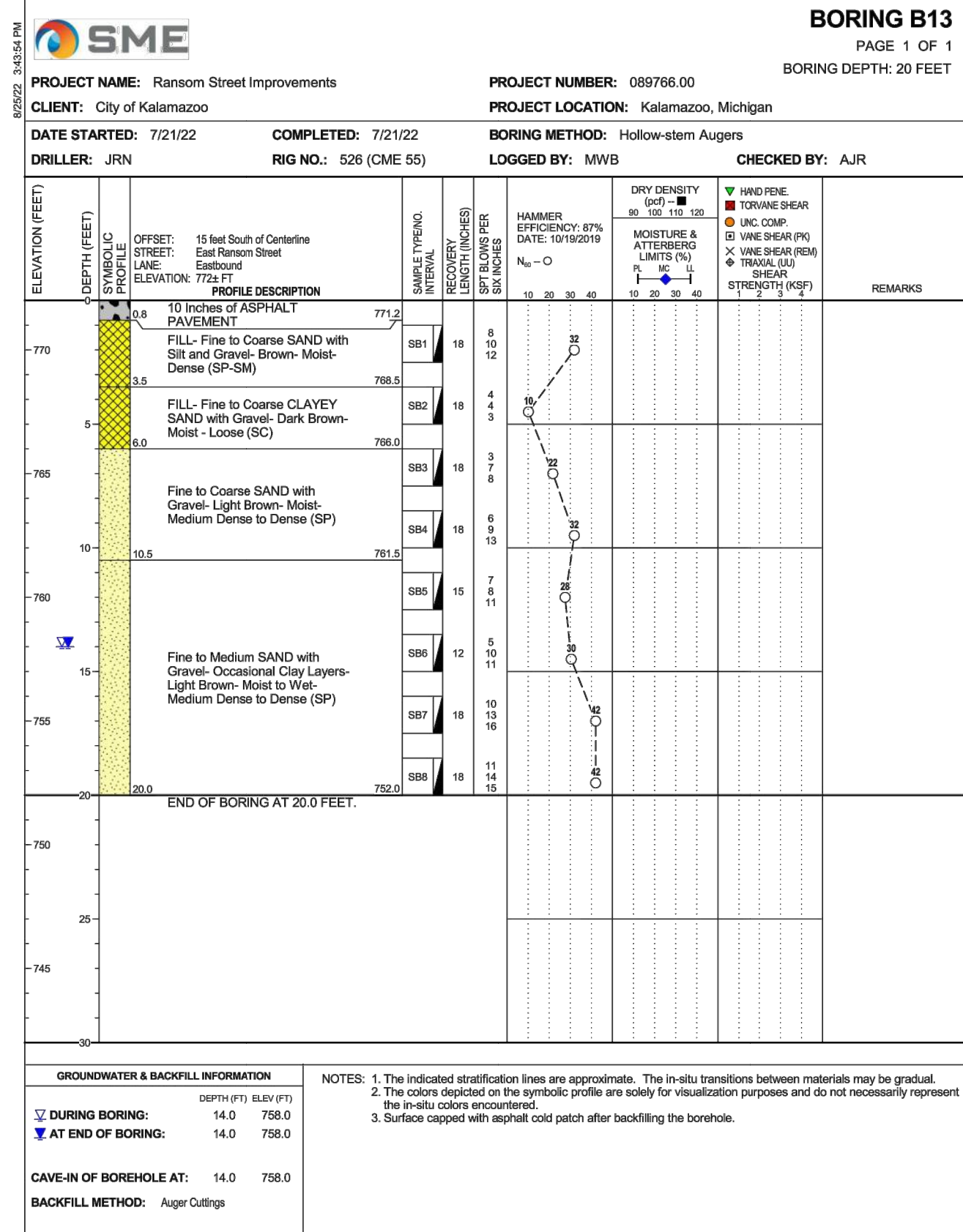
DRAWN BY: DJL
DESIGNED BY: MJS/ERF
PM REVIEW: DAD
QA/QC REVIEW:
DATE: JANUARY 2023
SEAL:

SIGNATURE:
DATE:
SCALE:
HORIZ: N/A
VERT: N/A
ACI JOB #

22-0031

SHEET NO. **6 of 52**

3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:



**RANSOM STREET
IMPROVEMENTS
CITY OF KALAMAZOO**

PROJECT:

SOIL BORING MAP

SHEET TITLE:

DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:

SIGNATURE:

DATE:

SCALE:
 HORIZ: N/A
 VERT: N/A

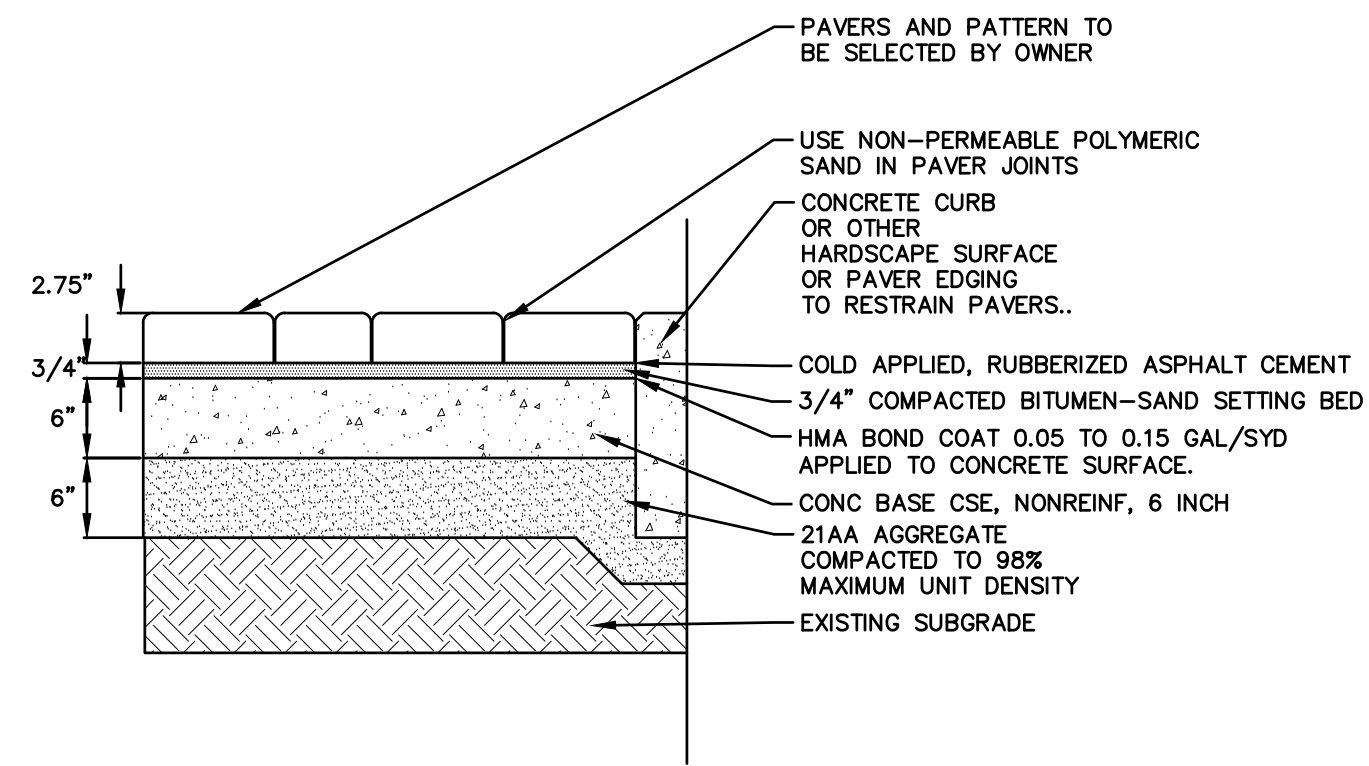
ACI JOB #

22-0031

SHEET NO.

7 of 52

3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:

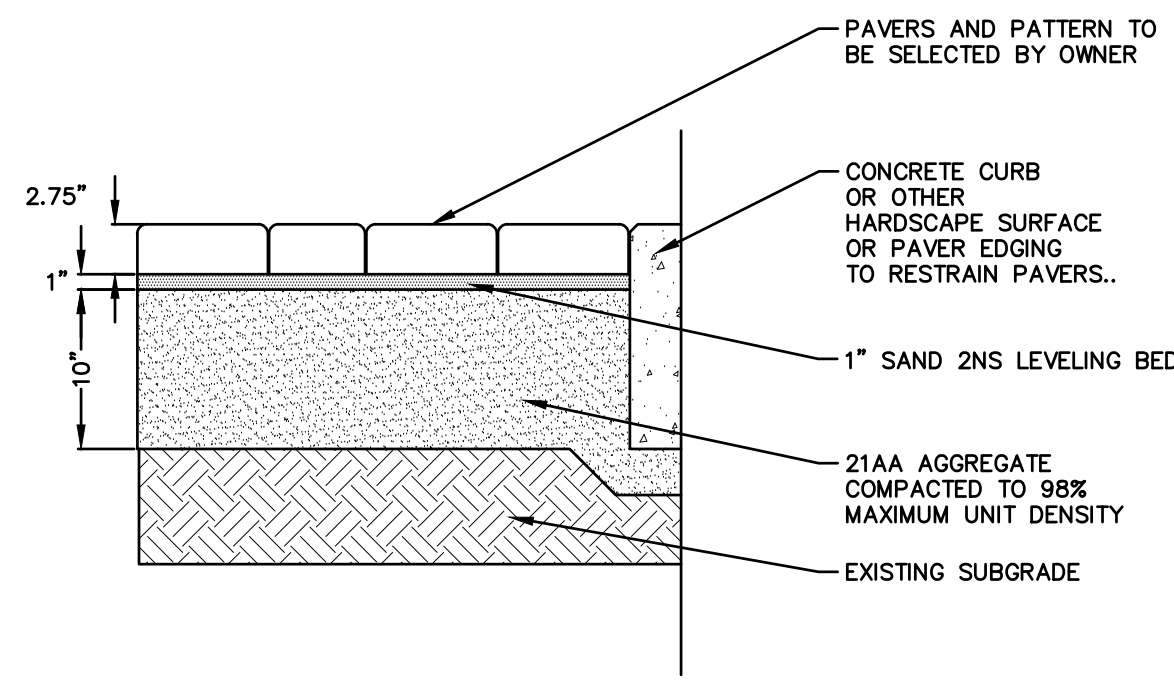


- NOTE:**
- DETAIL B SHALL BE USED IN AREAS WITHOUT ADJACENT FULL HEIGHT CURBS, SUSCEPTIBLE TO VEHICULAR OFF-TRACKING, AS CALLED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
 - BOND COAT, BITUMEN-SAND BED, RUBBERIZED ASPHALT CEMENT, AND POLYMERIC JOINTING SAND ARE INCLUDED IN PAYMENT FOR ITEM "BRICK PAVERS, ASPHALT BED, SALVAGED"

BRICK PAVERS, ASPHALT BED, SALVAGED DETAIL
NOT TO SCALE

The following quantities are paid per square yard of "Brick Pavers, Asphalt Bed, Salvaged" as called on the plans.

Item Description	Unit	QTY
Aggregate Base, 6 inch	Syd	1
Conc Base Cse, Nonreinf, 6 inch	Syd	1
Brick Pavers, Asphalt Bed, Salvaged	Sft	9

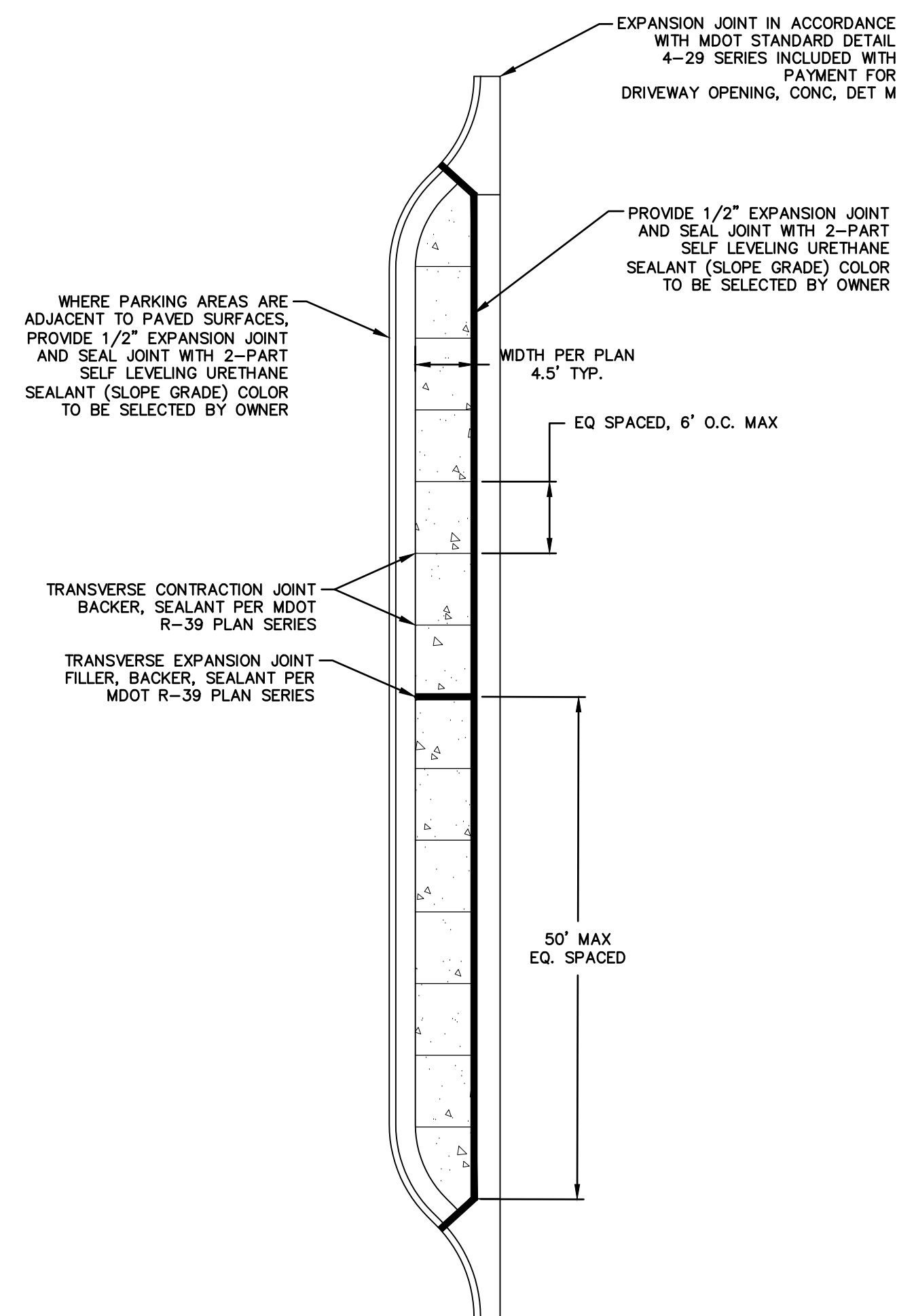


- NOTE:**
- DETAIL A SHALL BE USED IN AREAS WITH ADJACENT FULL HEIGHT CURBS, THAT ARE NOT SUSCEPTIBLE TO VEHICULAR OFF-TRACKING, AS CALLED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
 - LEVELING SAND BED, GEOTEXTILE SEPARATOR, AND POLYMERIC JOINTING SAND ARE INCLUDED IN PAYMENT FOR ITEM "BRICK PAVERS, SAND BED, SALVAGED"

BRICK PAVERS, SAND BED, SALVAGED DETAIL
NOT TO SCALE

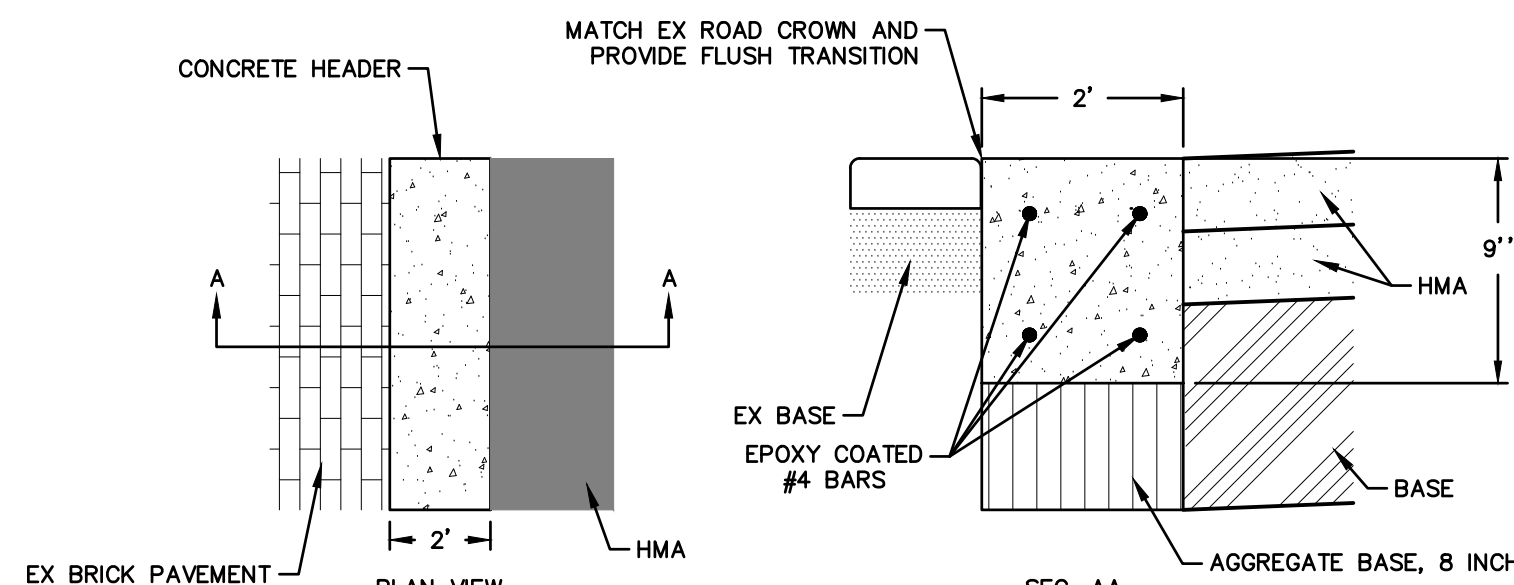
The following quantities are paid per square yard of "Brick Pavers, Sand Bed, Salvaged" as called on the plans.

Item Description	Unit	QTY
Aggregate Base, 10 inch	Syd	1
Brick Pavers, Sand Bed, Salvaged	Sft	9

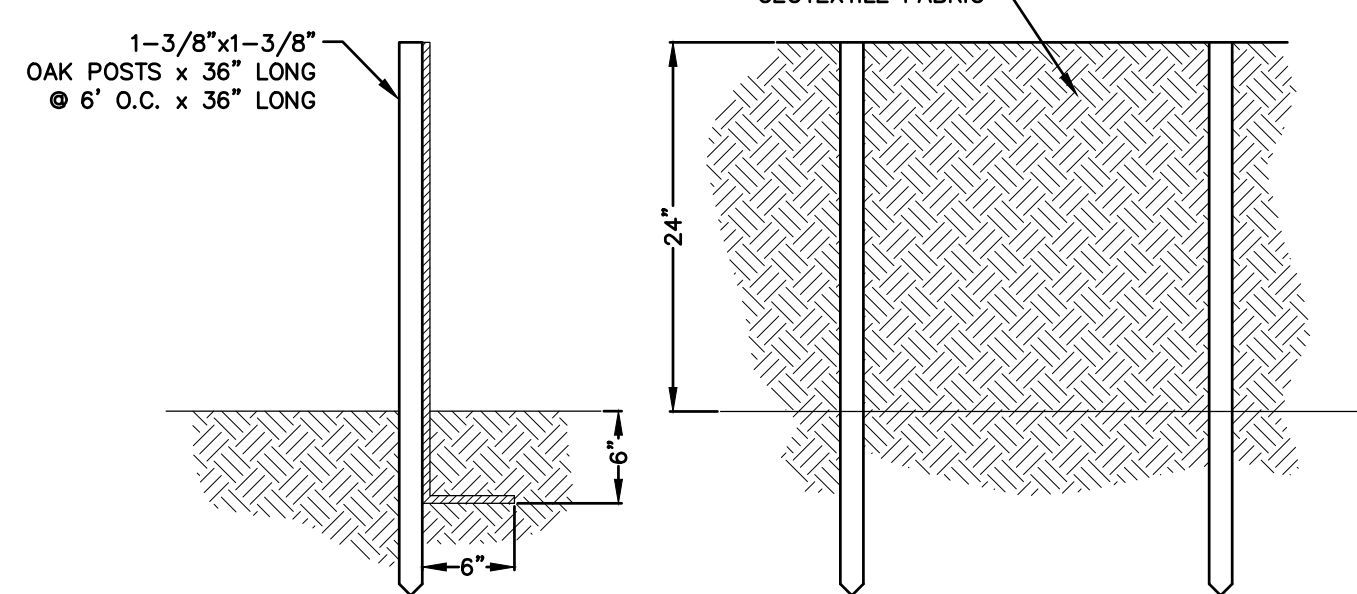


CONCRETE PAVT, NONREINF, INCH JOINTING
NOT TO SCALE

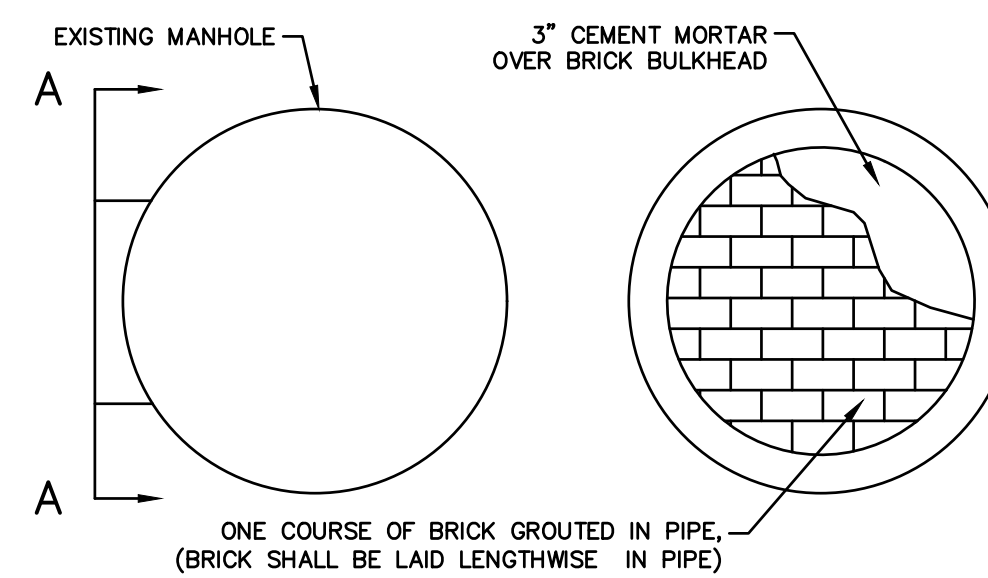
- NOTE:**
- CONTRACTION JOINTS MAY BE TOOLED DURING FINISHING, ENSURE 1/4 SLAB THICKNESS IS ACHIEVED IN THE GROOVE DEPTH.
 - EXPANSION JOINTS SHALL BE INTEGRALLY CAST WITH THE SLAB.



BRICK HEADER, CONC DETAIL
NOT TO SCALE



SILT FENCE
NOT TO SCALE



BULKHEAD DETAIL
NOT TO SCALE

STANDARD LEGEND

- = CATCH BASIN
- = CURB CATCH BASIN
- ⊕ = ELECTRIC LOCATION
- _{EMH} = ELECTRIC MANHOLE
- ⊕_{EM} = ELECTRIC METER
- ⊕_{FL} = FLAG POLE
- ⊕_{FMON} = FOUND MONUMENT
- ⊕_{FIP} = FOUND IRON PIPE
- ⊕_{FIR} = FOUND IRON ROD
- ⊕_F = FOUND X
- ⊕ = GAS LOCATION
- _{GMH} = GAS MANHOLE
- ⊕_G = GAS METER
- ⊕_G = GAS VALVE
- _{GMH} = GENERAL MANHOLE
- = GUARD POST
- + = GUARDRAIL
- ⊕_{GUY} = GUY POLE
- ⊕_{GUY} = GUY WIRE
- ⊕_{LP} = LIGHT POLE
- ⊕_{MP} = MAIL BOX
- ⊕_{PP} = POWER POLE
- ⊕_{PP/D} = POWER POLE W/DROP
- ⊕_{SC} = SANITARY CLEANOUT
- _{SMH} = SANITARY MANHOLE
- ⊕_{SIR} = SET IRON ROD
- ⊕ = SIGN POST
- _{SOIL} = SOIL BORING LOCATION
- _{STMH} = STORM MANHOLE
- + = STREET SIGN
- ⊕ = TELEPHONE LOCATION
- _{TMH} = TELEPHONE MANHOLE
- ⊕_{TP} = TELEPHONE PEDESTAL
- ⊕_{TP} = TELEPHONE POLE
- ⊕ = TRAFFIC SIGN
- ⊕_{UP} = UTILITY POLE
- ⊕_{UP/D} = UTILITY POLE W/DROP
- ⊕_{UP/L} = UTILITY POLE W/STREET LIGHT
- ⊕_{CS} = WATER CURB STOP
- ⊕ = EXISTING WATER MAIN
- ⊕ = EXISTING SANITARY SEWER
- ⊕ = EXISTING STORM SEWER
- ⊕ = OVERHEAD UTILITIES
- ⊕ = GAS MAIN/LINE
- ⊕ = BURIED TELEPHONE
- ⊕ = BURIED FIBER OPTIC
- ⊕ = ELECTRICAL
- ⊕ = BURIED ELECTRICAL
- ⊕ = CHAINLINK FENCE
- ⊕ = WIRE FENCE
- ⊕ = WOOD FENCE
- ⊕_{PW} = PROP WATER MAIN
- ⊕_{WS} = PROP WATER SERVICE
- ⊕_{SS} = PROP SANITARY SERVICE
- ⊕_{STS} = PROP STORM SERVICE
- ⊕_{R/W} = RIGHT OF WAY
- ⊕ = UTILITY REMOVAL

GENERAL NOTES:

- MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2020 EDITION SHALL PREVAIL, UNLESS INDICATED OTHERWISE.
- THREE WORKING DAYS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL REQUEST THE LOCATIONS OF ALL UTILITIES BY CALLING MISS DIG. NO EXCAVATION IS TO BE PERFORMED UNTIL CLEARED.
- A MINIMUM OF 18" VERTICAL CLEARANCE IS REQUIRED WHERE:
 - WATER MAIN AND SANITARY SEWER CROSS
 - WATER MAIN AND STORM SEWER CROSS
- A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN THE OUTSIDE OF PIPES OR MANHOLE STRUCTURES SHALL BE MAINTAINED WHERE WATER MAINS AND SEWERS.
- ALL TRENCH AND BEDDING SPECIFIED SHALL BE PER MDOT STANDARD PLAN R-83-C, DETAIL B OR G.
- ANY EXCESS/UNUSABLE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND THEY SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF THIS MATERIAL.
- DEWATERING, IF REQUIRED, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA PAYMENT SHALL BE MADE THEREFORE.
- THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH "AS-RECORDED" DRAWINGS OF THE SEWERS UPON COMPLETION OF THE PROJECT.
- THE ENGINEER SHALL PROVIDE CONSTRUCTION STAKING AS DEFINED IN THE SPECIFICATIONS.
- WHEN LOWERING OF ROADWAY RESULTS IN INSUFFICIENT COVER (LESS THAN 4') OVER EXISTING WATER MAIN, INSULATION SHALL BE UTILIZED AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE INCLUDED WITH SEWER CONSTRUCTION.
- TREES NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED BY THE CONTRACTOR. DAMAGED TREES SHALL BE RESTORED TO THE ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE. ALL TREES DAMAGED BEYOND SAVING AS DETERMINED BY THE ENGINEER SHALL BE REMOVED AND REPLACED WITH A NURSERY GROWN TREE AS SPECIFIED BY THE ENGINEER.
- REMOVED MANHOLE COVERS AND RIMS SHALL BECOME THE PROPERTY OF THE CITY OF KALAMAZOO AND SHALL BE DELIVERED TO THE CITY DEPT. OF PUBLIC WORKS AREA.
- REMOVAL OF ABANDONED CONFLICTING UTILITIES SHALL BE CONSIDERED INCLUDED WITH THE ITEM BEING CONSTRUCTED, INCLUDING BULKHEADING ALL PIPES 12" DIA. OR LESS (PIPES IN EXCESS OF 12" DIA. SHALL BE PAID FOR AS A SEWER BULKHEAD).
- FITTINGS, PIPE EXTENSIONS AND APPURTENANCES NECESSARY TO CONNECT EXISTING PIPES TO PROPOSED MANHOLES, SHALL BE INCLUDED IN THE UNIT PRICE FOR THE PROPOSED STRUCTURE.
- FITTINGS AND APPURTENANCES NECESSARY TO CONNECT EXISTING PIPES TO PROPOSED PIPES, SHALL BE INCLUDED IN THE UNIT PRICE FOR THE PROPOSED PIPE.
- PIPES DESIGNATED FOR REMOVAL MAY BE FILLED WITH FLOWABLE FILL AND REMAIN IN PLACE.
- WHERE PAVED SURFACES ARE ADJACENT TO THE BACK OF CURB, A 1/2" EXPANSION JOINT SHALL BE PLACED BETWEEN THE CURB AND SIDEWALK. PAYMENT IS INCLUDED IN CONCRETE SIDEWALK.
- CONCRETE WALKS, STEPS, ETC. REQUIRING REPLACEMENT SHALL BE PAID AS CONCRETE SIDEWALK.

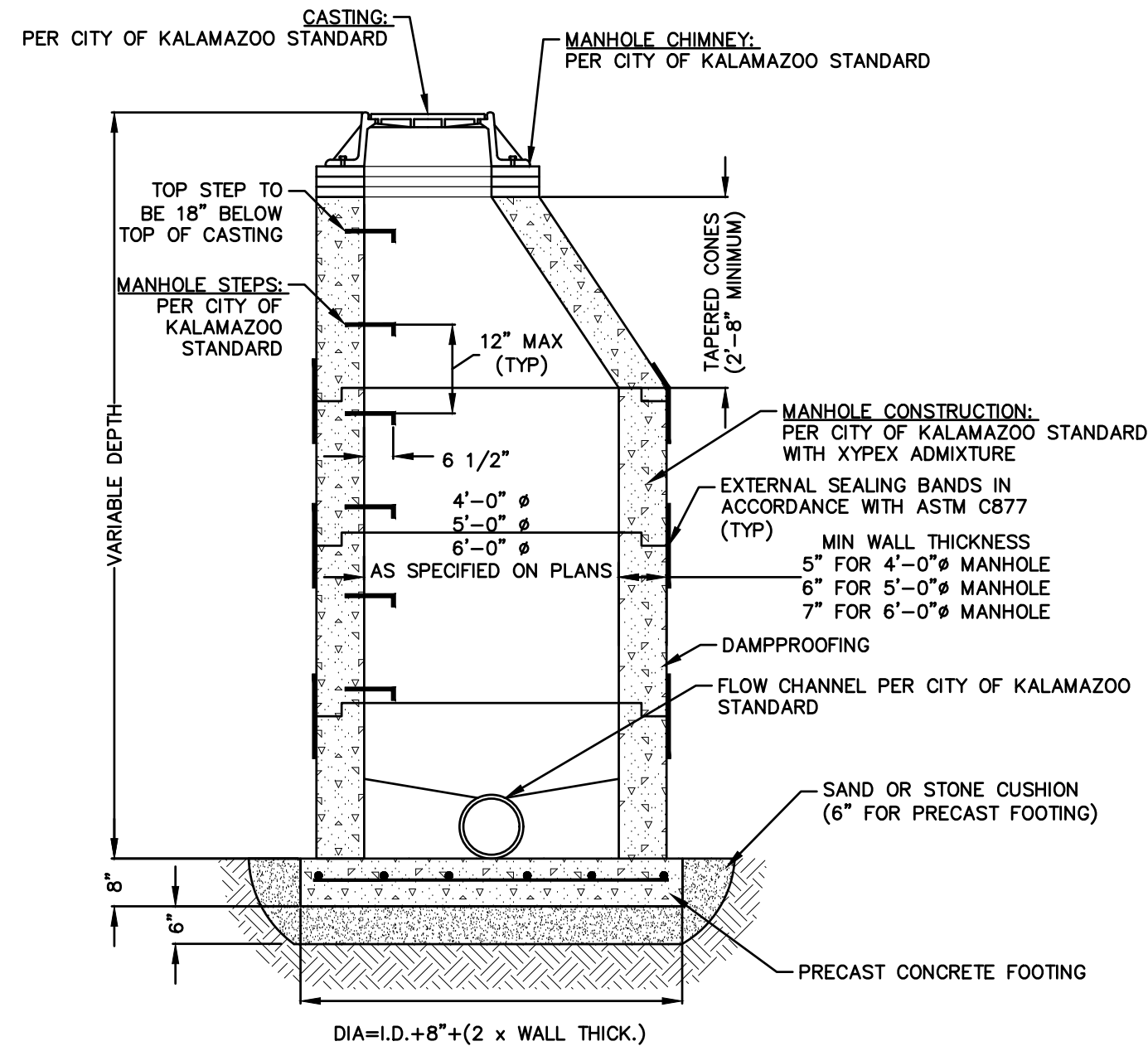
ROADWAY:

- BACKFILL MATERIAL WITHIN THE ZONE OF INFLUENCE OF A ROADWAY SHALL BE CLASS II SAND COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY IN 12" MAXIMUM LIFTS.
- DRIVEWAY OPENINGS SHALL BE MDOT TYPE L OR M PER STANDARD PLAN R-29-D.
- PAVEMENT DESIGNATED FOR REMOVAL SHALL BE SAWCUT FULL DEPTH AT REMOVAL LIMITS PRIOR TO REMOVAL.

MISCELLANEOUS QUANTITIES
THE FOLLOWING ITEMS SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT AS DIRECTED BY THE ENGINEER. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN SHEETS.

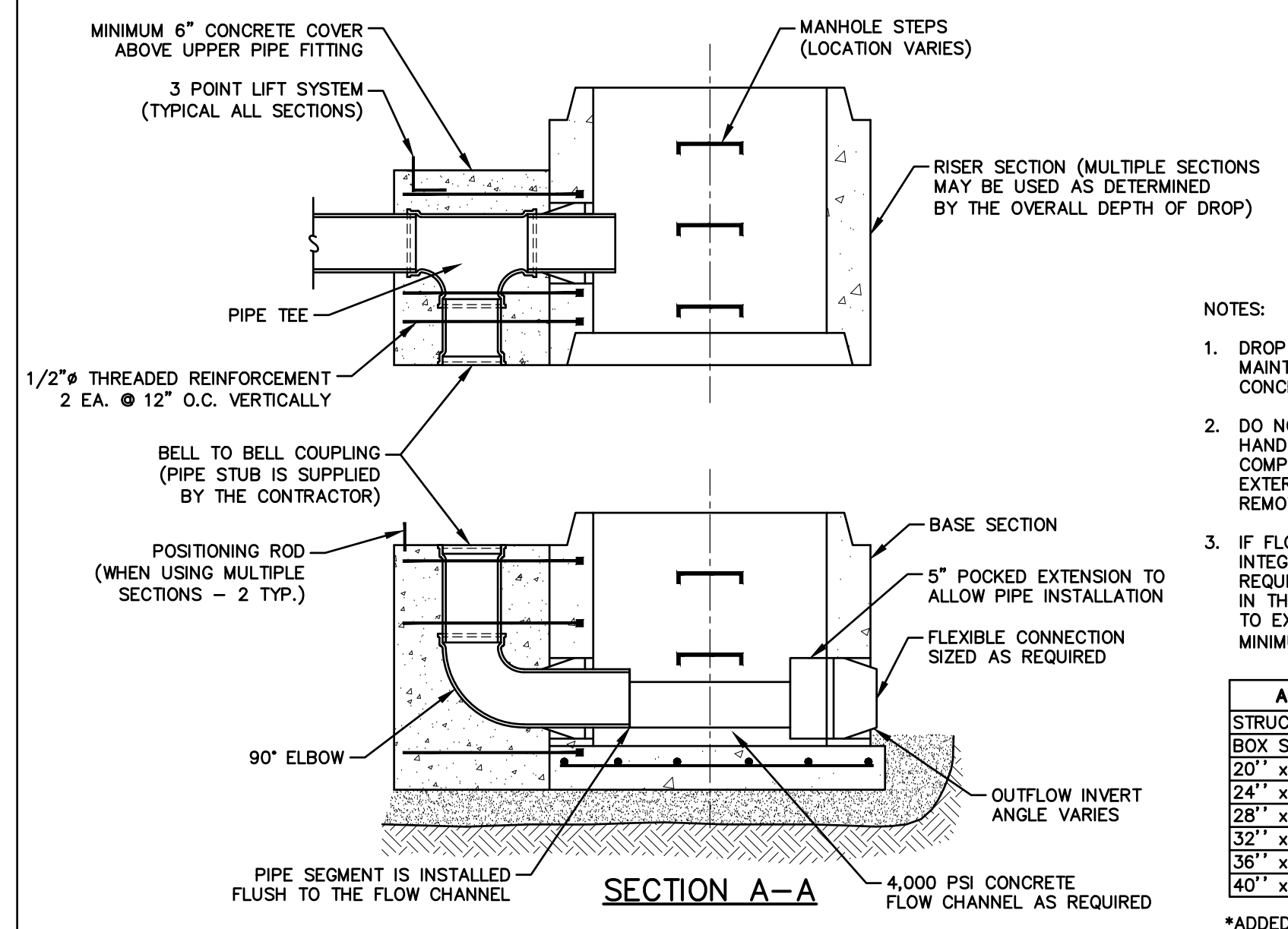
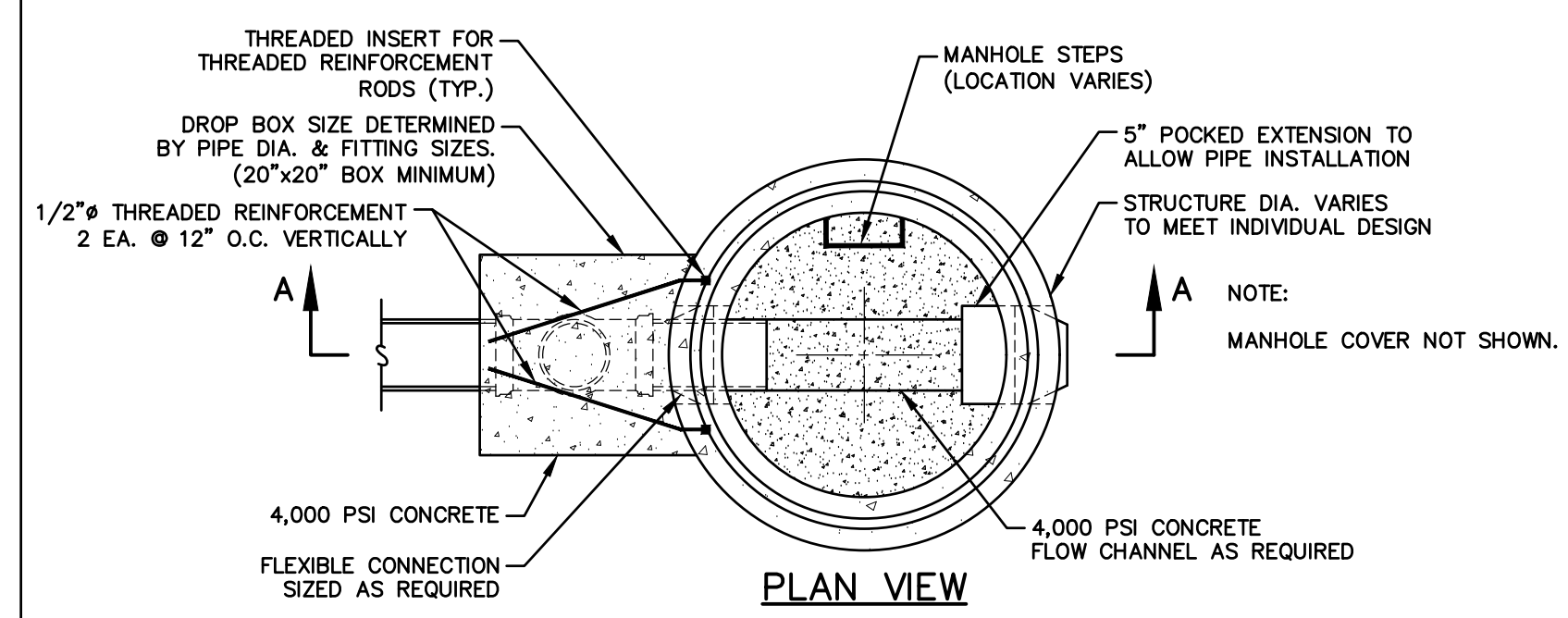
Description	Units	Quantity
Railroad Est. Cost to Contractor	Dir	230000
Mobilization, Max \$1,000,000	LSUM	1
Exploratory Investigation, Vertical	Ft	100
Subgrade Undercutting, Type II	Cyd	100
Pipe Cradle, Flowable Fill	Cyd	15
Trench Undercut and Backfill	Cyd	50
Video Taping Sewer and Culv Pipe	Ft	2876
Joint, Contraction, C3p	Ft	1000
Joint, Expansion, E4	Ft	2000
Cement	Ton	5
Pedestrian Path, Temp	Ft	8000
Pedestrian Ramp, Temp	Ea	72
Water Main, 8 inch, Cut and Plug	Ea	7
Water Main, 10 inch, Cut and Plug	Ea	2
Water Main, 12 inch, Cut and Plug	Ea	2
Water Main, Insulate	Ft	160
Curb Stop and Box, Install	Ea	18
Inline Water Valve, Temp, 10 inch	Ea	6
Inline Water Valve, Temp, 12 inch	Ea	3
Inline Water Valve, Temp, 4 inch	Ea	4
Inline Water Valve, Temp, 6 inch	Ea	10
Inline Water Valve, Temp, 8 inch	Ea	12
Meter Vault, 1.25 inch	Ea	18
Water Serv, 1.25 inch, Install	Ea	9
Water Serv, Long, 1.25 inch, Install	Ea	9
Sanitary Sewer, Serv Lead, Building Inspection	Ea	15

NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22



- MANHOLE NOTES:**
- STEPS SHALL BE OF AN APPROVED DESIGN, MADE OF CAST IRON, ALUMINUM, OR PLASTIC COATED STEEL. RUNGS SHALL BE A MINIMUM OF 10" CLEAR LENGTH, DESIGNED TO PREVENT THE FOOT FROM SLIPPING OFF THE END AND CAPABLE OF SUPPORTING 300 POUNDS.
 - THE TOP PORTION OF THE PRECAST REINFORCED UNITS SHALL BE ECCENTRIC.
 - RESILIENT CONNECTIONS PER ASTM C923 SHALL BE USED FOR ALL PIPE ENTERING/EXITING THE MANHOLE.

STANDARD SANITARY MANHOLE
NOT TO SCALE

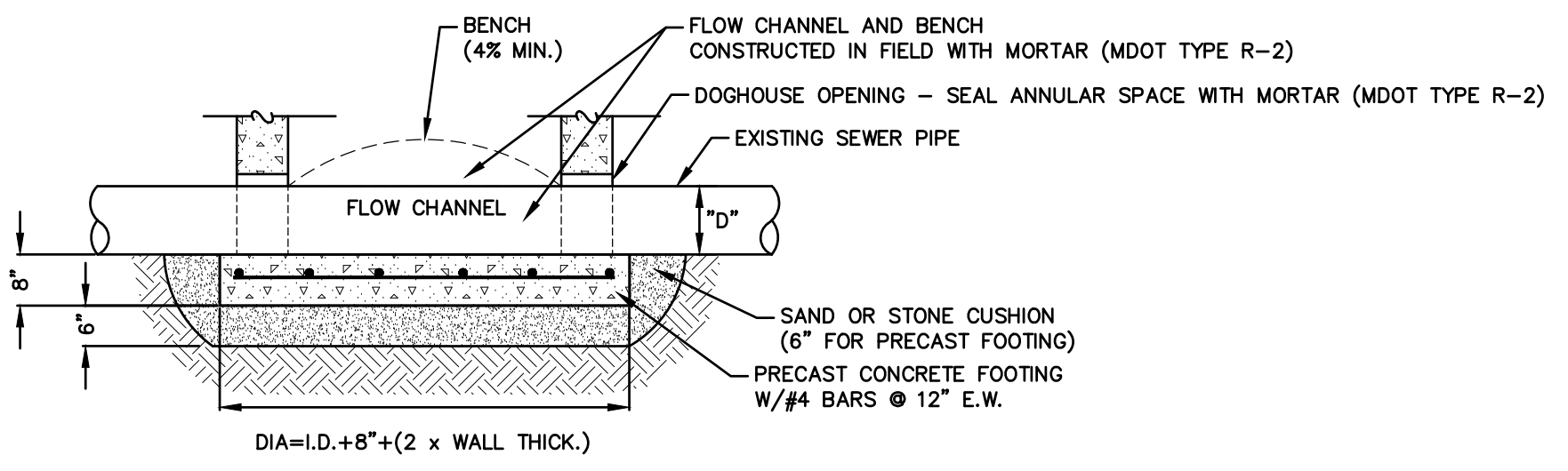


PRECAST EXTERNAL DROP MANHOLE
NOT TO SCALE

- NOTES:**
- DROP PIPE IS TIED TO REINFORCING RODS TO MAINTAIN PROPER PIPE ALIGNMENT WHEN THE CONCRETE BOX IS POURED.
 - DO NOT VIBRATE BOX. CONCRETE IS TO BE HAND TAMPED DURING POUR TO INSURE PROPER COMPRESSIVE STRENGTH. HAND TROWEL EXTERNAL SURFACES AFTER BOX FORM IS REMOVED.
 - IF FLOW CHANNEL IS NOT INDICATED, AN INTEGRAL BASE BOTTOM SECTION IS NOT REQUIRED FOR A PRECAST DROP CONNECTION; IN THE CASE, THE LOOSE BASE DIA. WOULD NEED TO EXTEND BEYOND THE DROP BOX BY A MINIMUM OF 4".

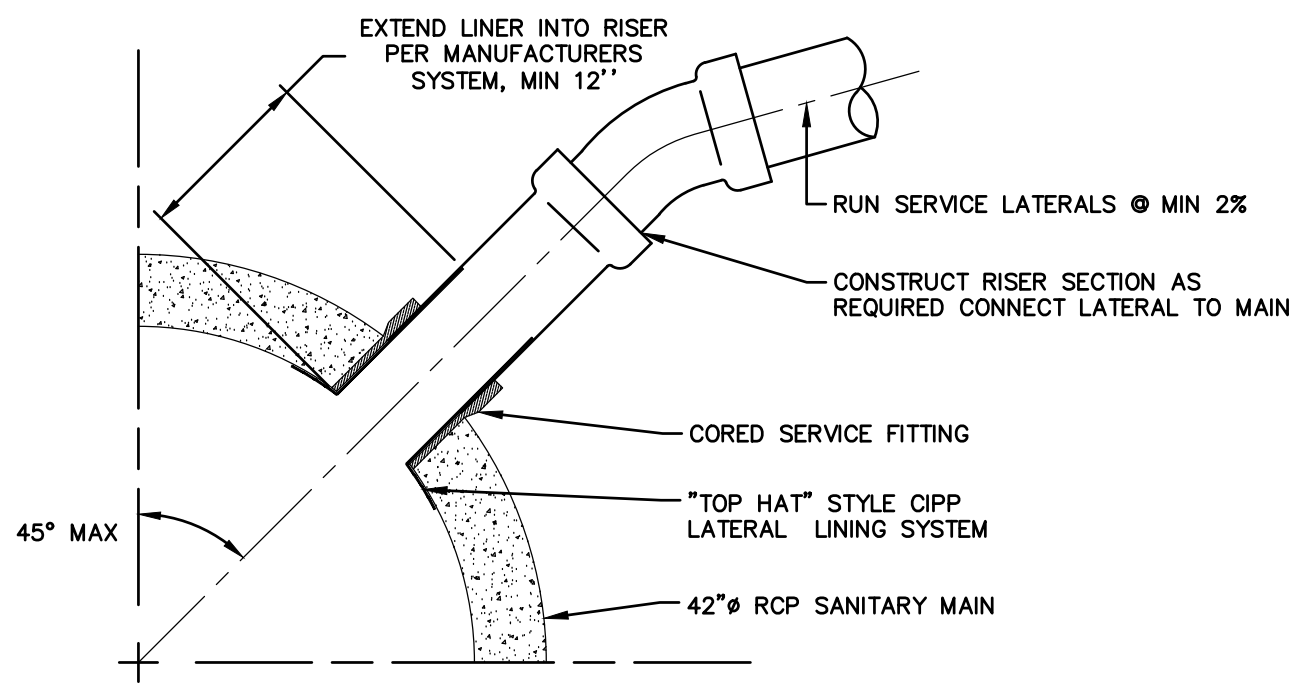
APPROX. BOX WEIGHTS (PER LINEAR FOOT)*						
STRUCTURE DIA.	48"	60"	72"	84"	96"	
BOX SIZE **						
20" x 20"	410#	415#	420#	425#	425#	
24" x 24"	575#	590#	595#	600#	605#	
28" x 28"	770#	790#	805#	810#	820#	
32" x 32"	1,020#	1,055#	1,075#	1,090#	1,100#	
36" x 36"	N/A	1,260#	1,295#	1,315#	1,330#	
40" x 40"	N/A	1,525#	1,575#	1,605#	1,630#	

*ADDED TO INITIAL BASE AND/OR RISER WEIGHTS
**DROP BOX SIZE DETERMINED BY PIPE DIA. AND FITTING SIZES

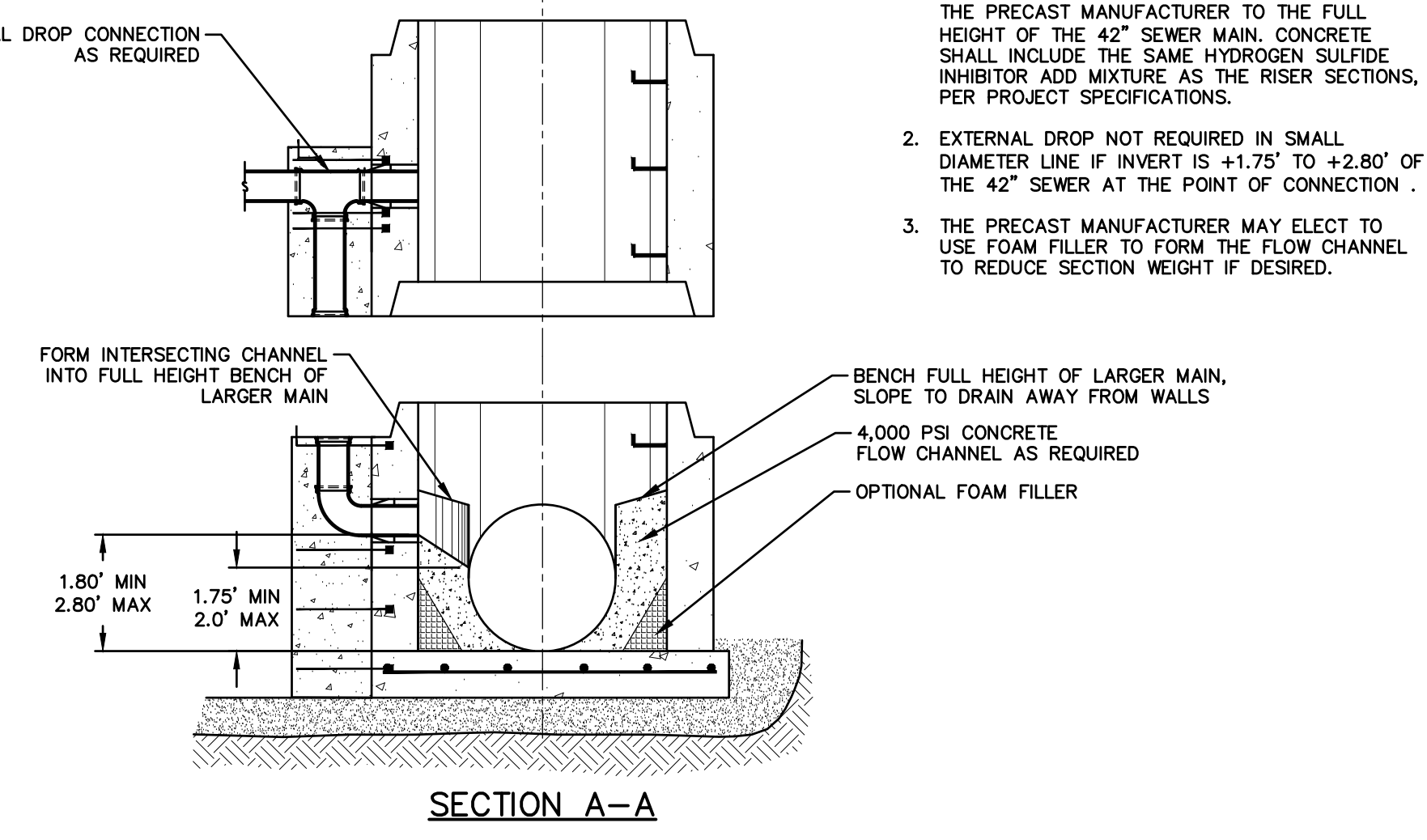
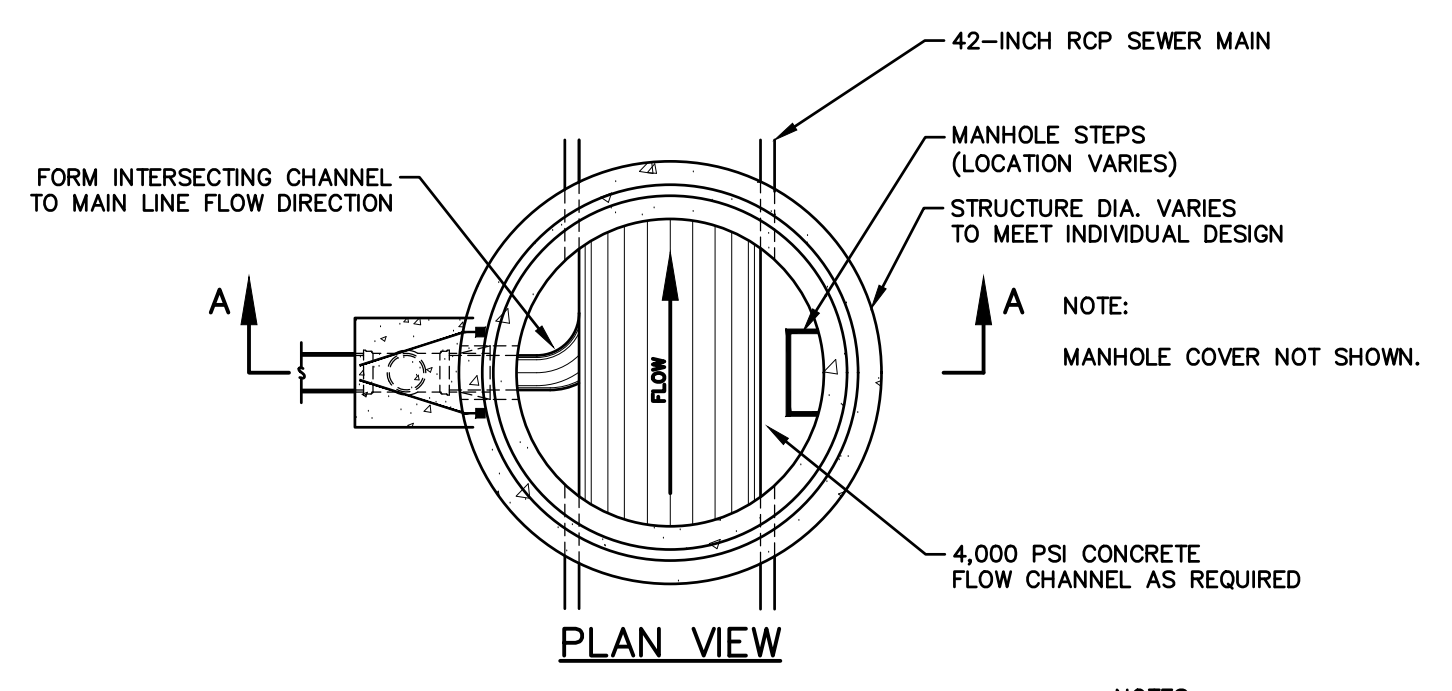


- MANHOLE NOTES:**
- STEPS SHALL BE OF AN APPROVED DESIGN, MADE OF CAST IRON, ALUMINUM, OR PLASTIC COATED STEEL. RUNGS SHALL BE A MINIMUM OF 10" CLEAR LENGTH, DESIGNED TO PREVENT THE FOOT FROM SLIPPING OFF THE END AND CAPABLE OF SUPPORTING 300 POUNDS.
 - THE TOP PORTION OF THE PRECAST REINFORCED UNITS SHALL BE ECCENTRIC.
 - RESILIENT CONNECTIONS PER ASTM C923 SHALL BE USED FOR ALL PIPE ENTERING/EXITING THE MANHOLE.

DOGHOUSE SANITARY MANHOLE
NOT TO SCALE



SANITARY SEWER SERVICE TAP TO 42-INCH MAIN
NOT TO SCALE



8-12" SANITARY CONNECTION TO 42" DIAMETER MAIN
NOT TO SCALE

SANITARY SEWER:

THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE TO THE CITY TO REQUEST A SEWER TAP. THE CITY SHALL DETERMINE THE TIME & DURATION OF THE SHUTOFF.

SANITARY MANHOLE COVERS SHALL BE PAID AS SANITARY STRUCTURE COVER. MANHOLE CASTINGS SHALL DENOTE STORM SEWER, SANITARY SEWER OR WATER.

SANITARY LATERAL CONNECTIONS TO EXISTING OR ABANDONED SEWERS SHALL BE LOCATED BY THE CONTRACTOR AND CONNECTED TO THE SEWER AS DIRECTED BY THE ENGINEER. ANY LATERALS NOT SCHEDULED FOR REPLACEMENT OR RECONNECTION, DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

SANITARY MANHOLE COVERS SHALL BE MDOT COVER O, AS MODIFIED IN THE SPECIAL PROVISIONS.

EXTERIOR DROP CONNECTION SHALL BE UTILIZED WHEN DIFFERENCE BETWEEN SANITARY SEWER INVERTS IS 2' OR GREATER. THE ABOVE WORK WILL BE INCLUDED WITH SEWER CONSTRUCTION.

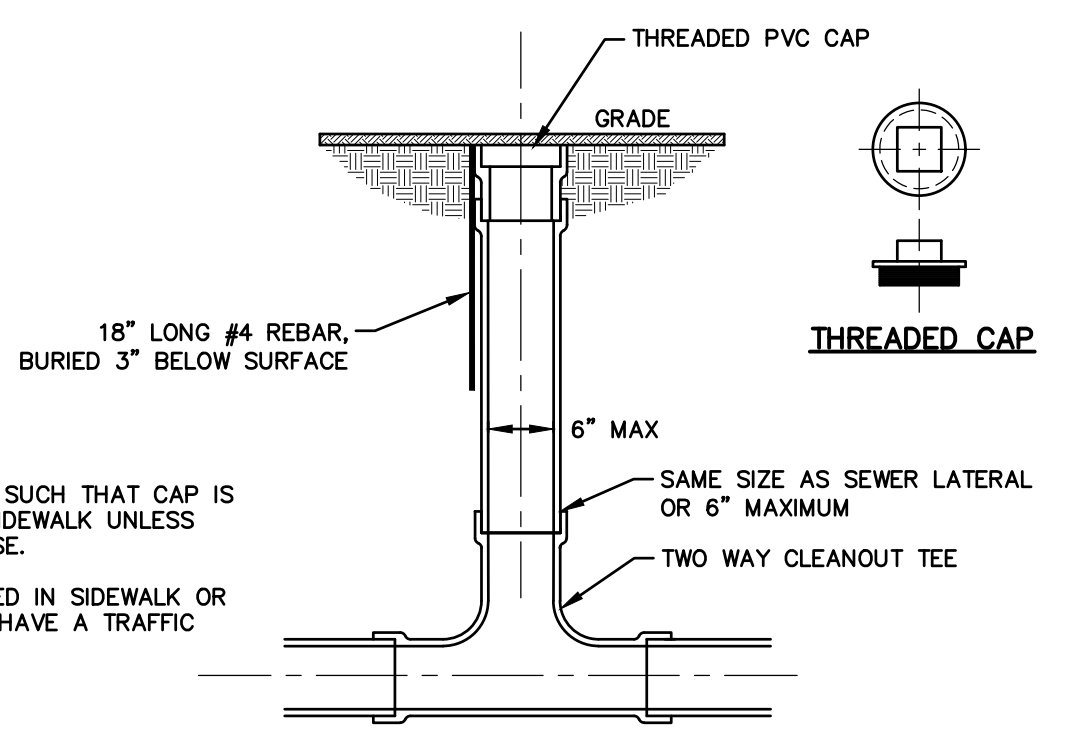
PROPOSED SANITARY MANHOLES SHALL BE 4 FEET IN DIAMETER UNLESS NOTED OTHERWISE.

SANITARY SERVICE CLEANOUTS SHALL BE INSTALLED WHERE NEW SERVICE LINES MEET EXISTING SERVICES AND AT BENDS/ GRADE CHANGES AS DIRECTED BY THE ENGINEER.

WHERE NEW SEWER IS TO REPLACE EXISTING SEWER IN THE SAME TRENCH REMOVAL OF EXISTING SEWER SHALL BE INCLUDED AS PART OF NEW SEWER ITEM.

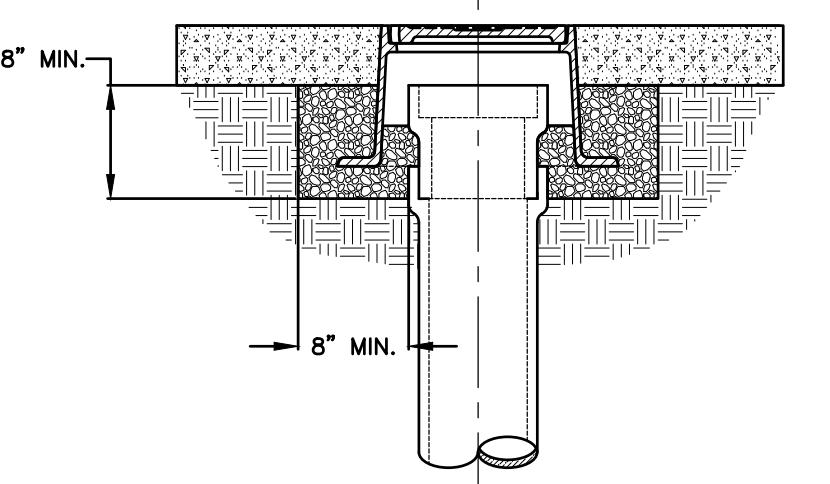
SANITARY SERVICE LATERALS INDICATED ON PLANS ARE BASED ON RECORD DRAWINGS AND AVAILABLE TELEVISIONING DATA. COORDINATE WITH CITY OF KALAMAZOO AND PROPERTY OWNER TO CONFIRM ACTIVITY OF SERVICE LATERALS DURING SEWER MAIN INSTALLATION. LATERAL INVESTIGATIONS WITHIN TRENCH ARE INCLUDED WITH PAYMENT FOR: "SANITARY SEWER, SERV LEAD, PVC, 6 INCH".

PERFORM INTERNAL BUILDING INSPECTION AND DYE TESTING AS DIRECTED BY THE ENGINEER. SANITARY SERVICE INVESTIGATIONS WITHIN BUILDINGS, INCLUDING DYE TESTING, WILL BE PAID FOR AS: "SANITARY SEWER, SERV LEAD, BUILDING INSPECTION".

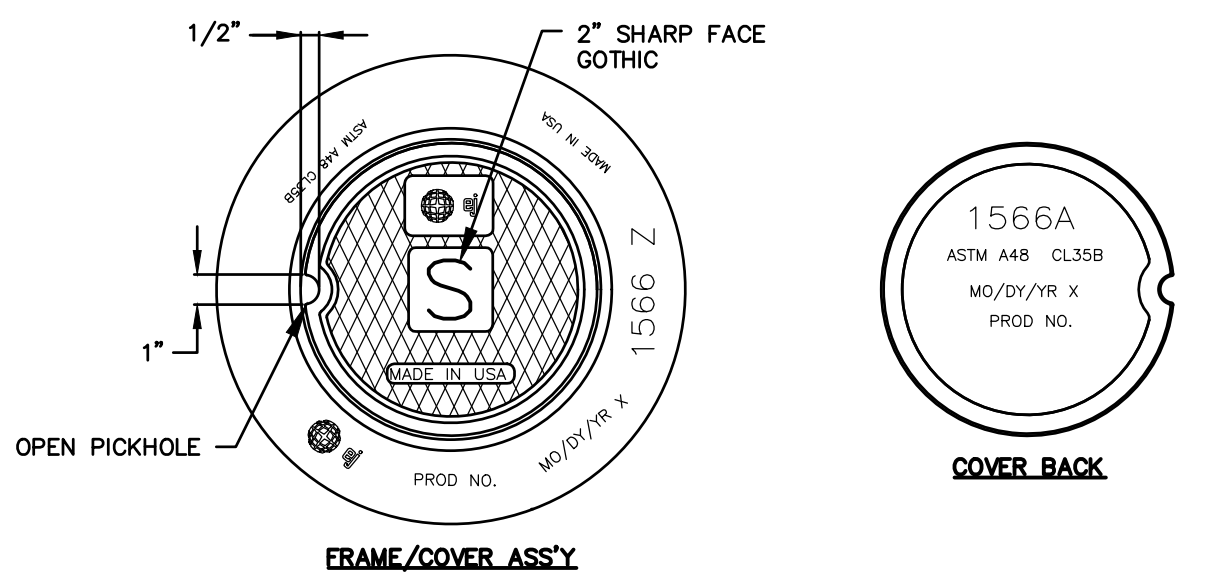


- NOTES:**
- LOCATE CLEANOUT SUCH THAT CAP IS NOT LOCATED IN SIDEWALK UNLESS DIRECTED OTHERWISE.
 - CLEANOUTS LOCATED IN SIDEWALK OR DRIVEWAYS SHALL HAVE A TRAFFIC BEARING CAP.

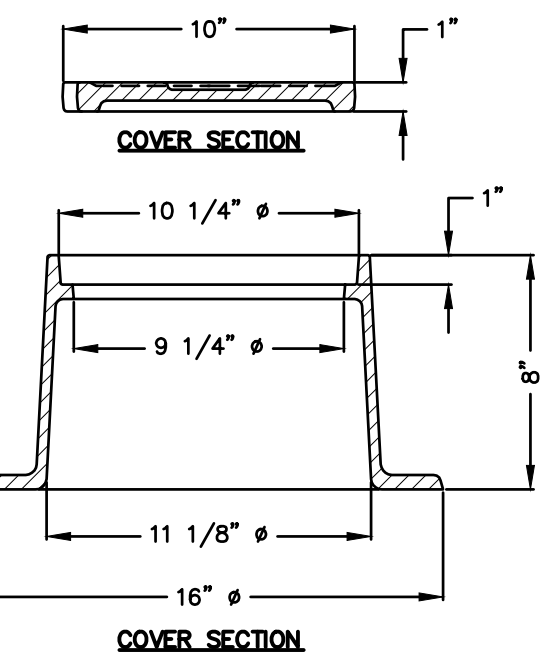
TYPICAL CLEANOUT DETAIL (TWO WAY)
NOT TO SCALE



SANITARY CLEANOUT COVER
NOT TO SCALE



- NOTES:**
- FLOW CHANNEL SHALL BE FACTORY FORMED BY THE PRECAST MANUFACTURER TO THE FULL HEIGHT OF THE 42" SEWER MAIN. CONCRETE SHALL INCLUDE THE SAME HYDROGEN SULFIDE INHIBITOR ADD MIXTURE AS THE RISER SECTIONS, PER PROJECT SPECIFICATIONS.
 - EXTERNAL DROP NOT REQUIRED IN SMALL DIAMETER LINE IF INVERT IS +1.75' TO +2.80' OF THE 42" SEWER AT THE POINT OF CONNECTION.
 - THE PRECAST MANUFACTURER MAY ELECT TO USE FOAM FILLER TO FORM THE FLOW CHANNEL TO REDUCE SECTION WEIGHT IF DESIRED.



3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PER 3RD PERMIT SUBMITTAL	MJS	12/14/2022
1	REVISED PER 2ND PERMIT SUBMITTAL	MJS	11/8/22
0	NOT REVISION DESCRIPTION:	BY:	DATE:

ABONMARCHÉ

195 West Main Street
Benton Harbor, MI 49023
T 269.927.2295
F 269.927.2295
abonmarche.com

LaGrange
Portage
South Bend
Hobart
Huron
Valparaiso

Engineering - Architecture - Land Surveying

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

SANITARY SEWER DETAILS

DRAWN BY: DJL
DESIGNED BY: MJS/ERF
PM REVIEW: DAD
QA/QC REVIEW: DAD
DATE: JANUARY 2023
SCALE:

SIGNATURE:
DATE:
SCALE: HORIZ: AS NOTED VERT: N/A
ACI JOB #

22-0031

SHEET NO. 9 of 52

STORM SEWER:

DRAINAGE STRUCTURE COVERS SHALL BE PAID AS DRAINAGE STRUCTURE COVER. MANHOLE CASTINGS SHALL HAVE STORM SEWER CAST ON STRUCTURE COVER AS APPLICABLE.

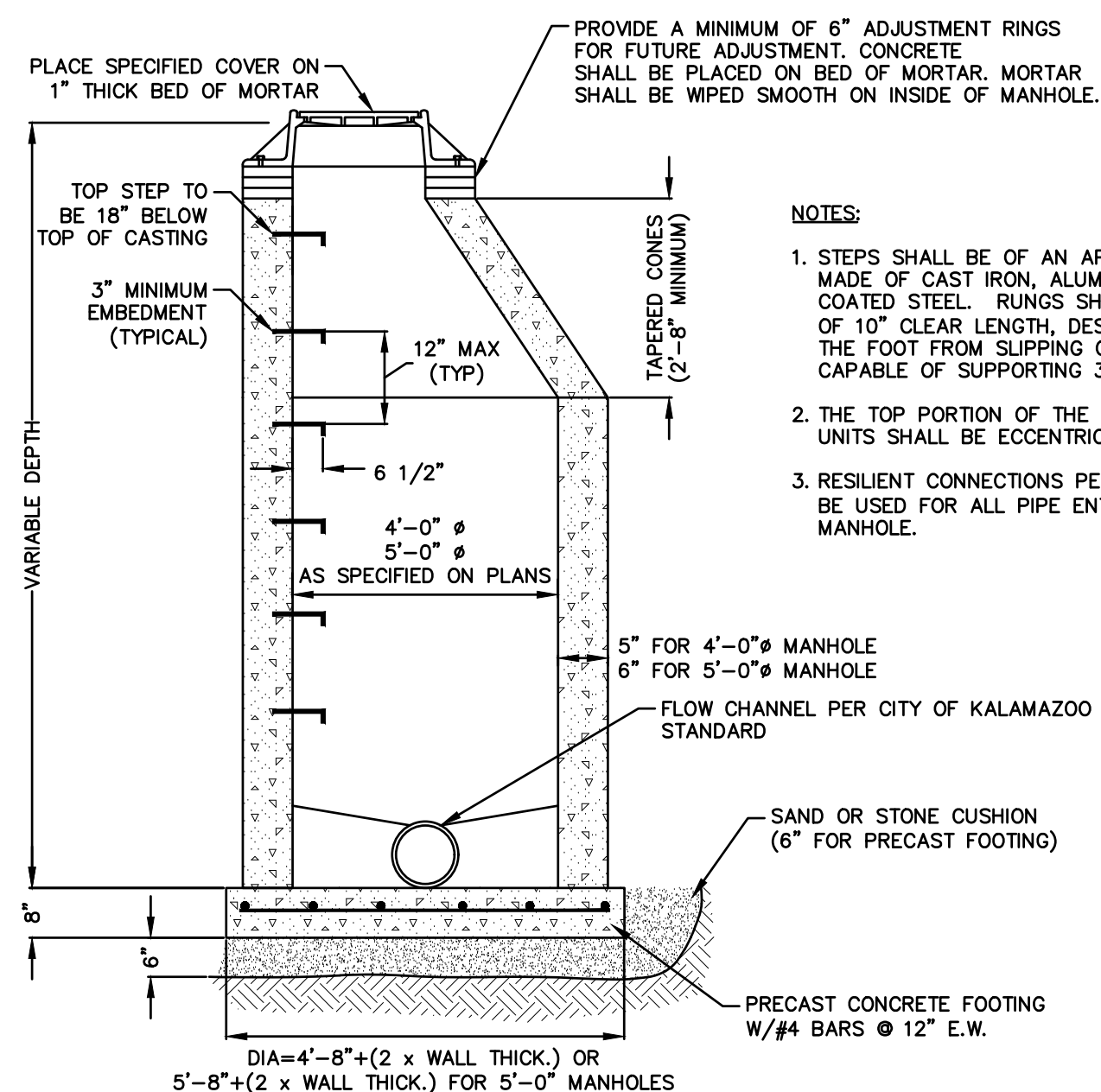
STORM MANHOLE COVERS SHALL BE MDOT COVER B, CATCH BASIN COVERS SHALL BE MDOT COVER K UNLESS NOTED OTHERWISE.

PROPOSED STORM MANHOLES SHALL BE 4 FEET IN DIAMETER UNLESS NOTED OTHERWISE.

WHERE NEW SEWER IS TO REPLACE EXISTING SEWER IN THE SAME TRENCH REMOVAL OF EXISTING SEWER SHALL BE INCLUDED AS PART OF NEW SEWER ITEM.

4' DIA. CATCH BASIN WITH EUJW 7030 (DOUBLE-WIDE) CASTINGS SHALL BE FABRICATED TO PROVIDED INCREASED INLET AREA AT NO ADDITIONAL COST.

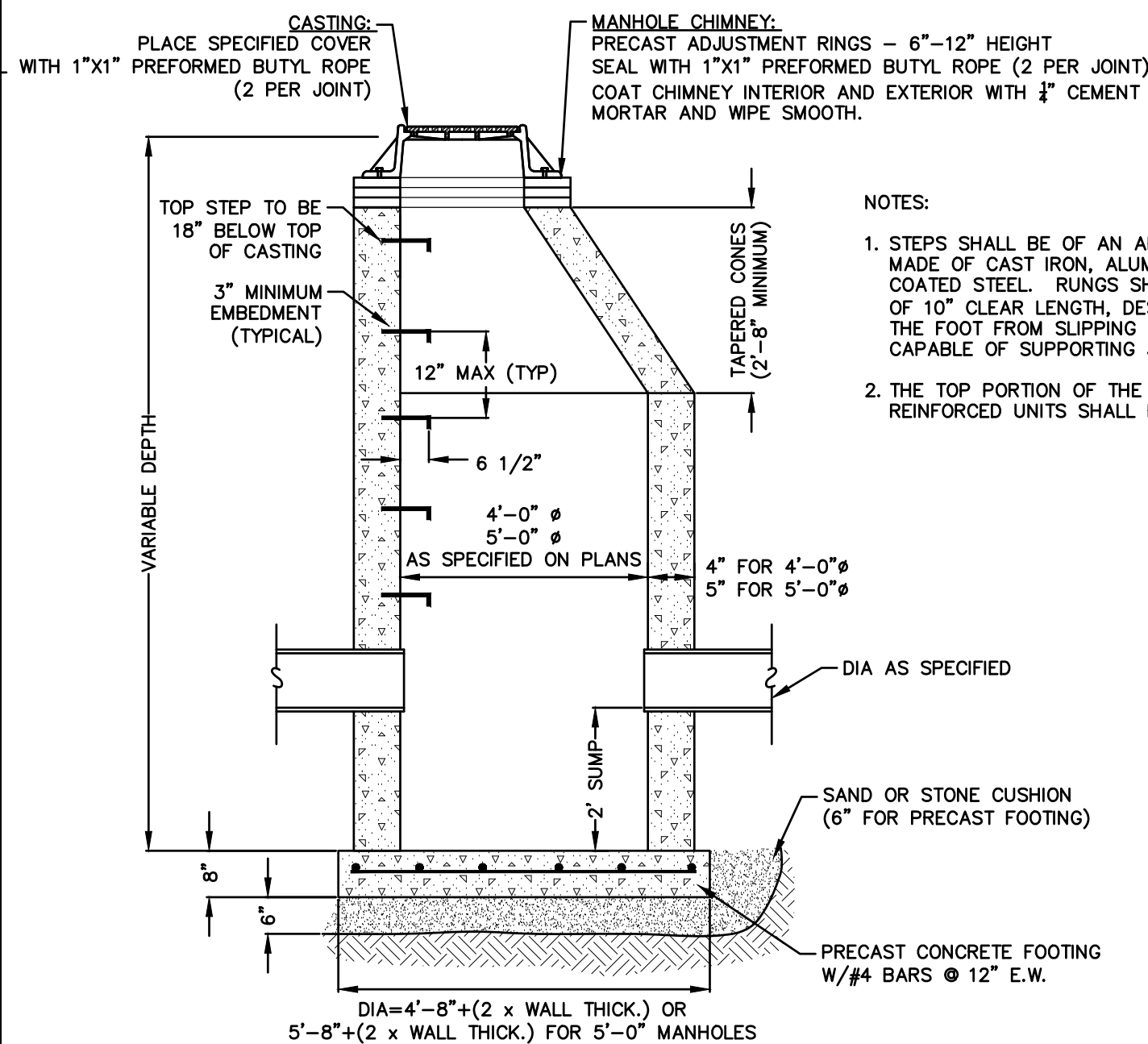
EUJW 7030 CASTINGS SHALL HAVE T1 BACK AND M2 GATES, WEIGHT FOR PAYMENT PURPOSES SHALL BE 560 LBS.



NOTES:

1. STEPS SHALL BE OF AN APPROVED DESIGN, MADE OF CAST IRON, ALUMINUM, OR PLASTIC COATED STEEL. RUNGS SHALL BE A MINIMUM OF 10" CLEAR LENGTH, DESIGNED TO PREVENT THE FOOT FROM SLIPPING OFF THE END AND CAPABLE OF SUPPORTING 300 POUNDS.
2. THE TOP PORTION OF THE PRECAST REINFORCED UNITS SHALL BE ECCENTRIC.
3. RESILIENT CONNECTIONS PER ASTM C923 SHALL BE USED FOR ALL PIPE ENTERING/EXITING THE MANHOLE.

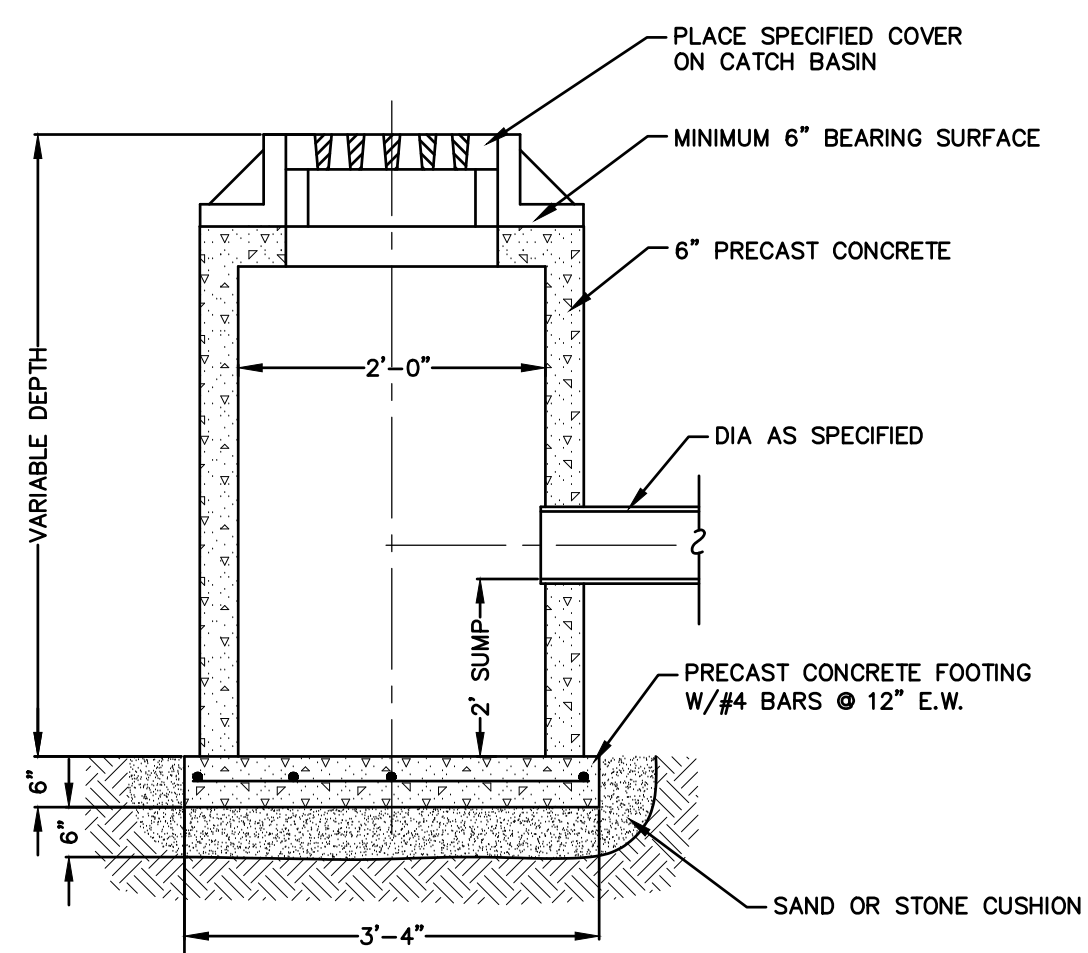
STANDARD STORM MANHOLE - 4' OR 5'
 NOT TO SCALE



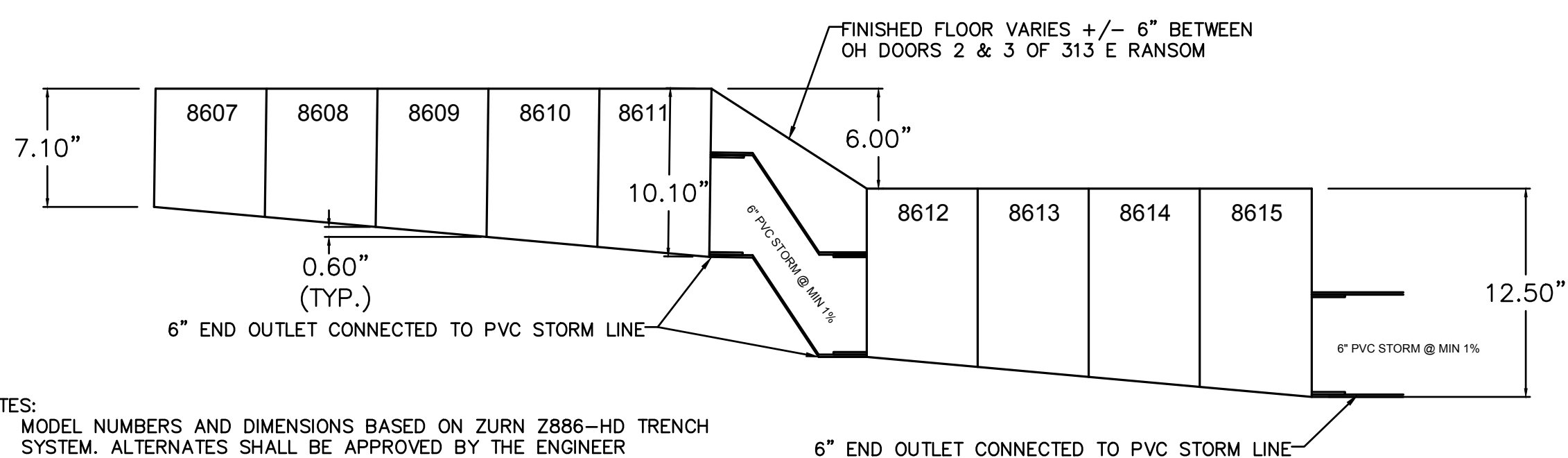
NOTES:

1. STEPS SHALL BE OF AN APPROVED DESIGN, MADE OF CAST IRON, ALUMINUM, OR PLASTIC COATED STEEL. RUNGS SHALL BE A MINIMUM OF 10" CLEAR LENGTH, DESIGNED TO PREVENT THE FOOT FROM SLIPPING OFF THE END AND CAPABLE OF SUPPORTING 300 POUNDS.
2. THE TOP PORTION OF THE PRECAST REINFORCED UNITS SHALL BE ECCENTRIC.

STANDARD STORM CATCH BASIN WITH SUMP - 4' OR 5'
 NOT TO SCALE



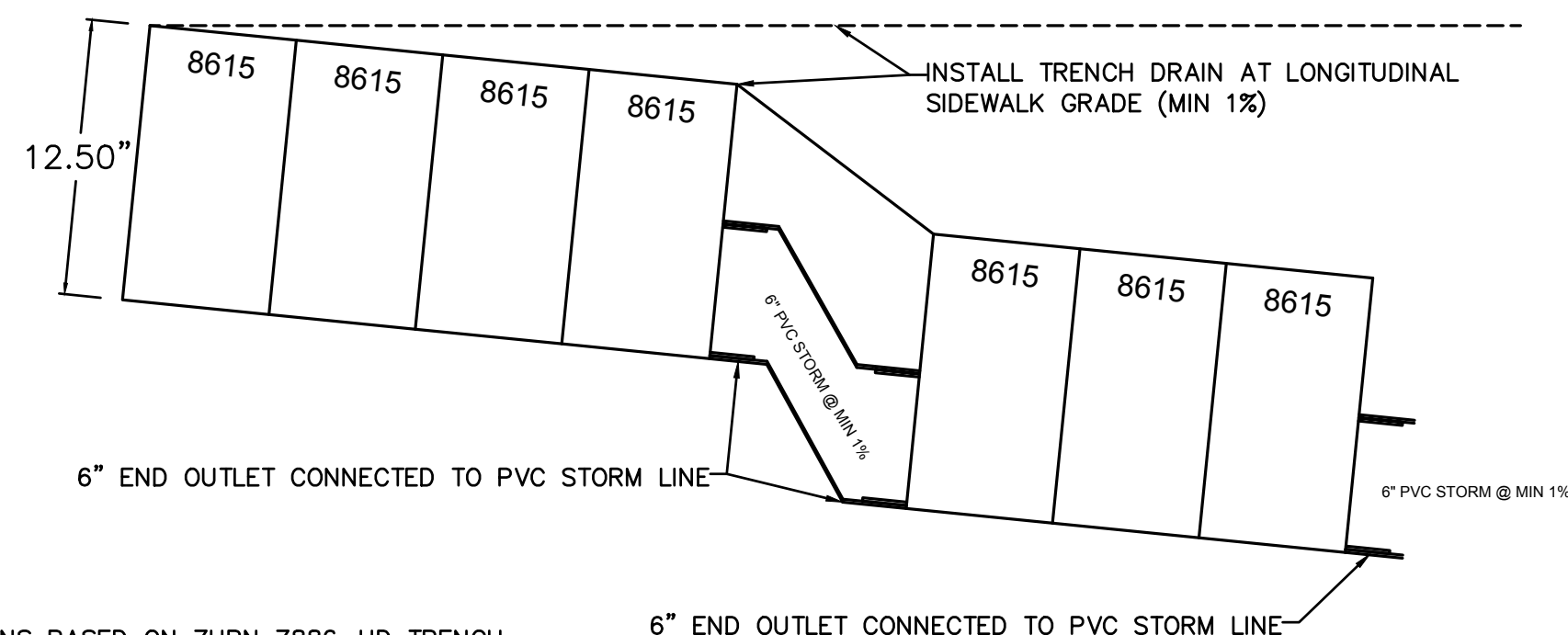
STANDARD CATCH BASIN - 2'
 NOT TO SCALE



NOTES:

1. MODEL NUMBERS AND DIMENSIONS BASED ON ZURN Z886-HD TRENCH SYSTEM. ALTERNATES SHALL BE APPROVED BY THE ENGINEER
2. GRATES SHALL BE "HEEL PROOF" DUCTILE IRON, CLASS E, MANUFACTURED IN THE USA MEETING AIS REQUIREMENTS

313 E. RANSOM STREET - TRENCH DRAIN DETAIL
 NOT TO SCALE



NOTES:

1. MODEL NUMBERS AND DIMENSIONS BASED ON ZURN Z886-HD TRENCH SYSTEM. ALTERNATES SHALL BE APPROVED BY THE ENGINEER
2. GRATES SHALL BE "HEEL PROOF" DUCTILE IRON, CLASS E, MANUFACTURED IN THE USA MEETING AIS REQUIREMENTS

320 E. RANSOM STREET - TRENCH DRAIN DETAIL
 NOT TO SCALE

NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

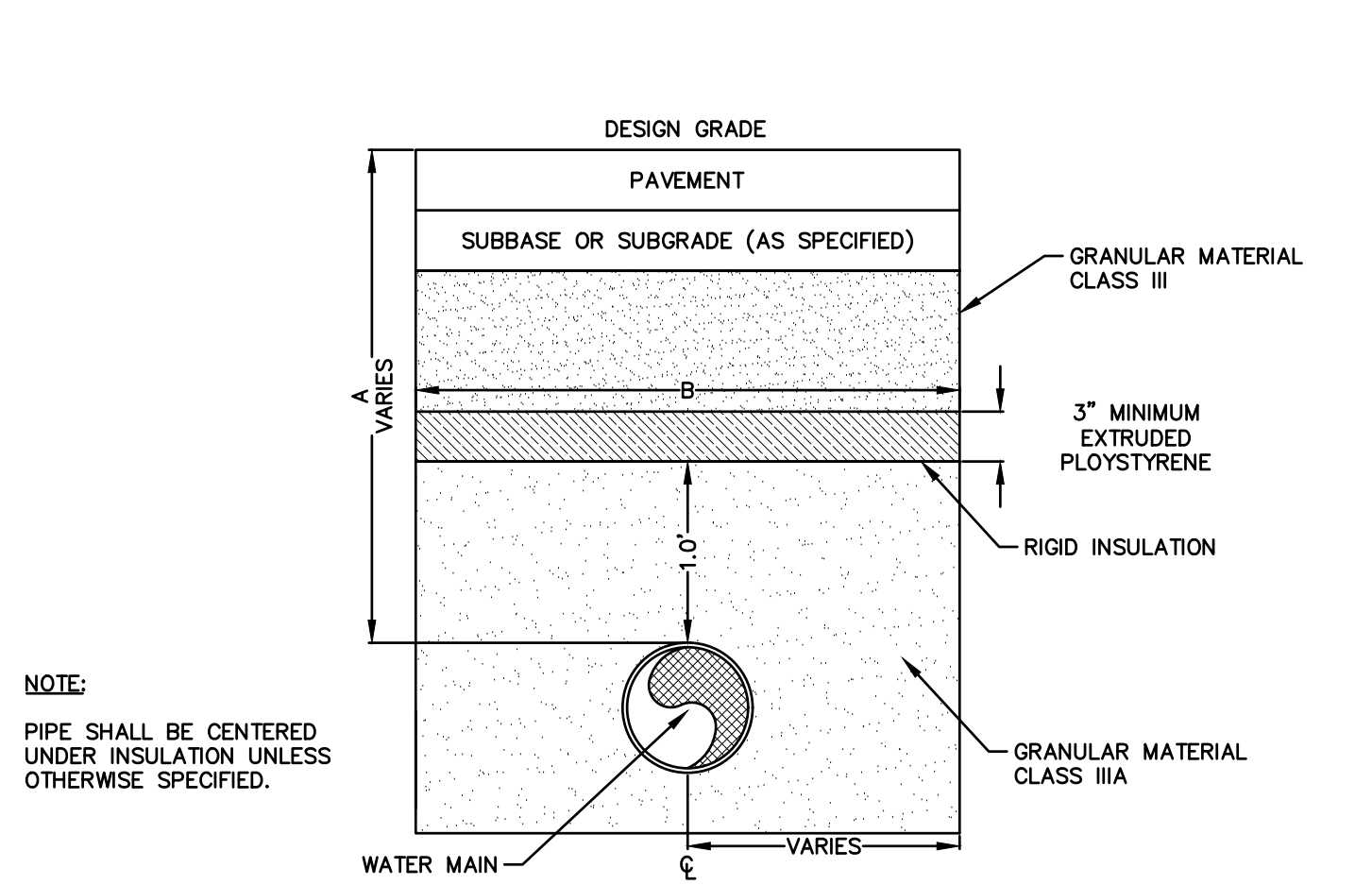
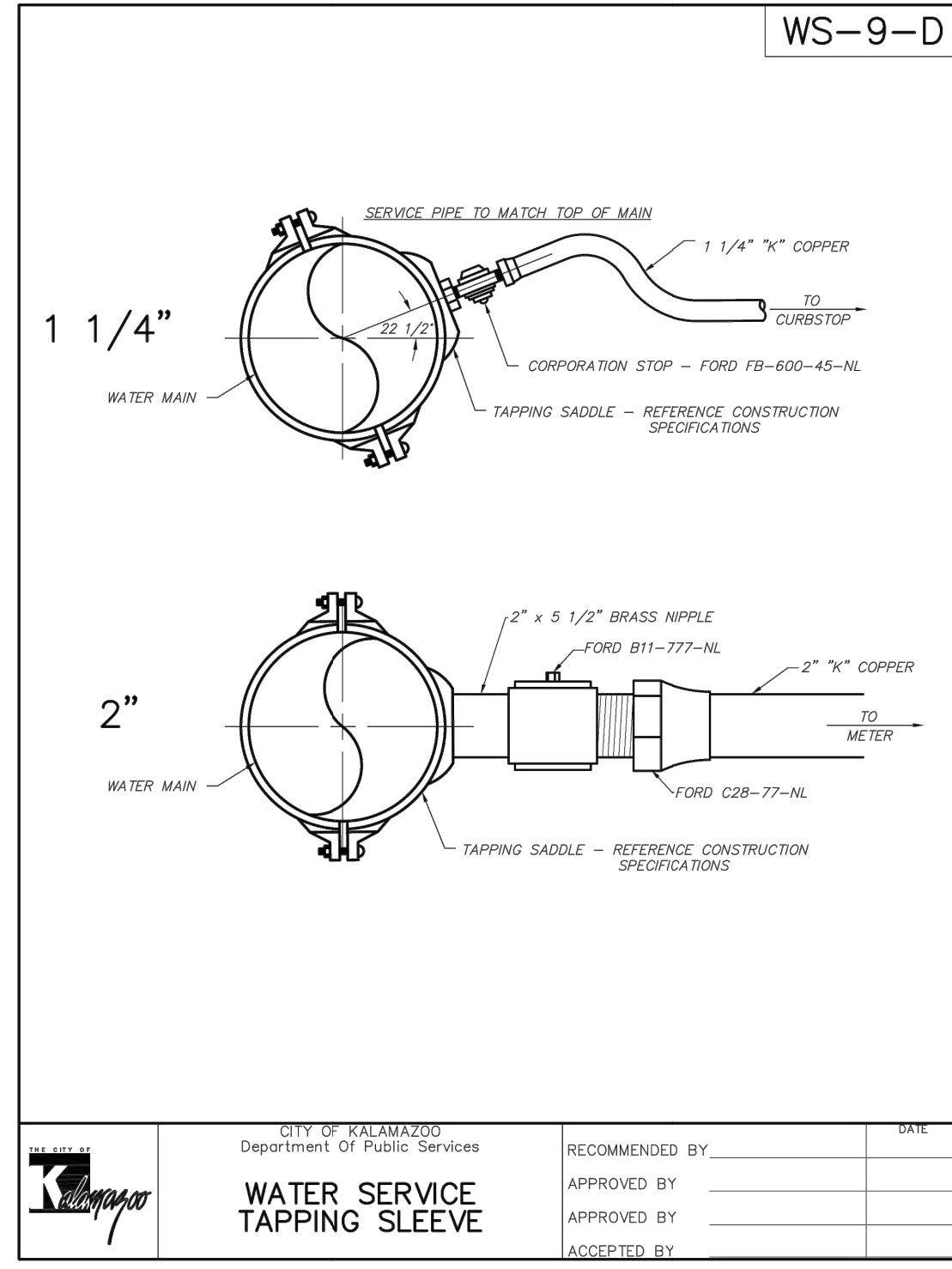
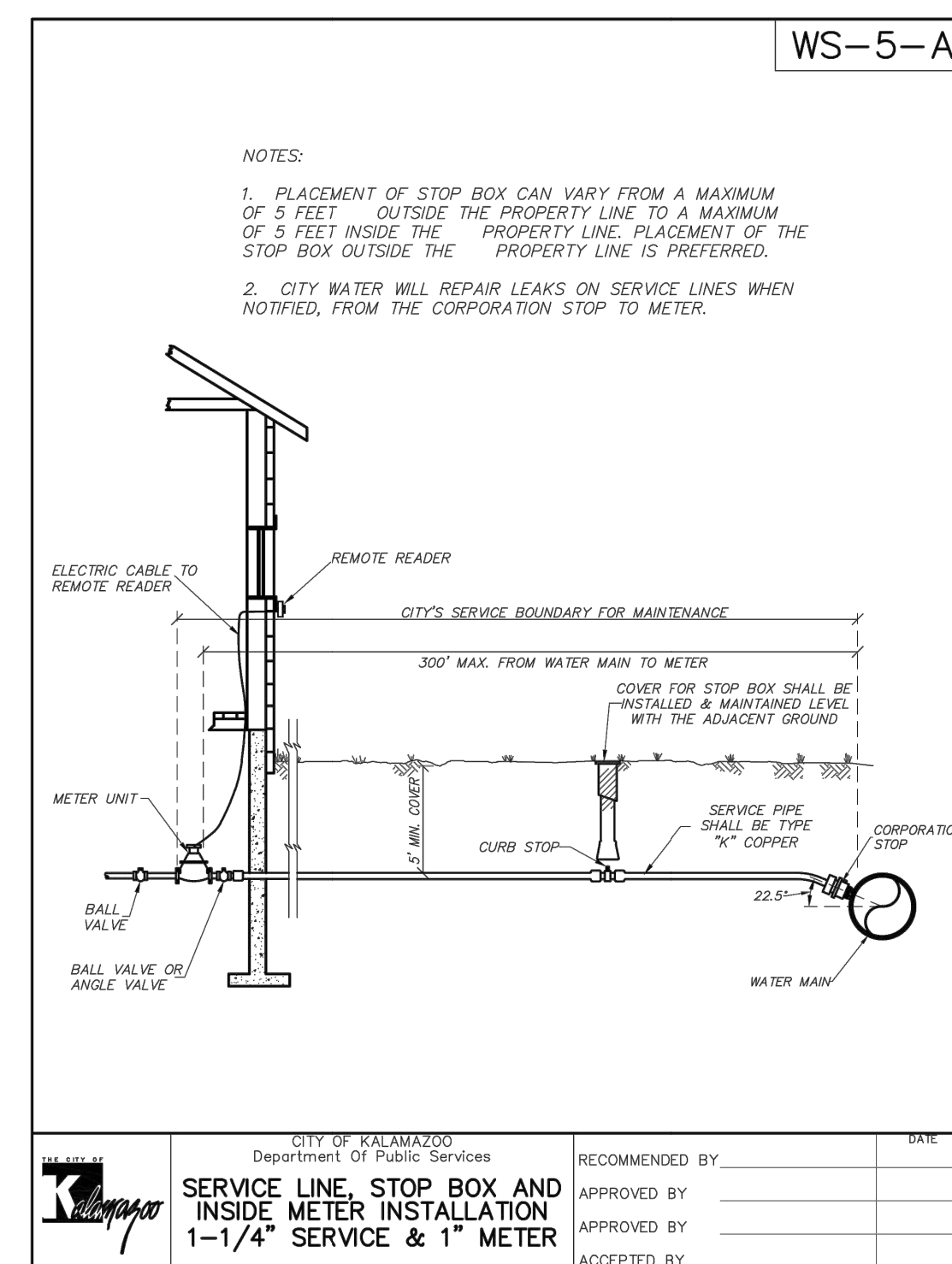
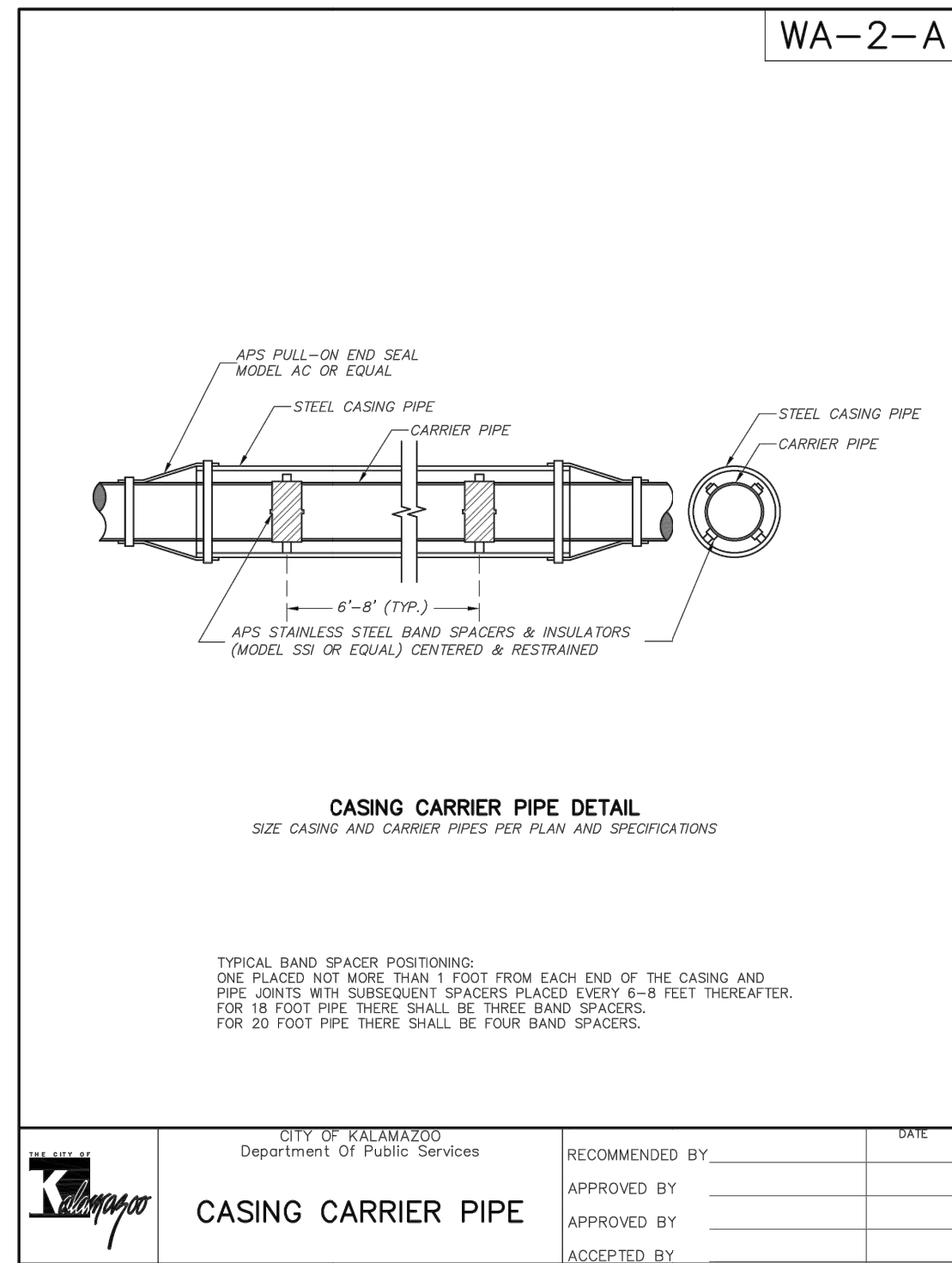
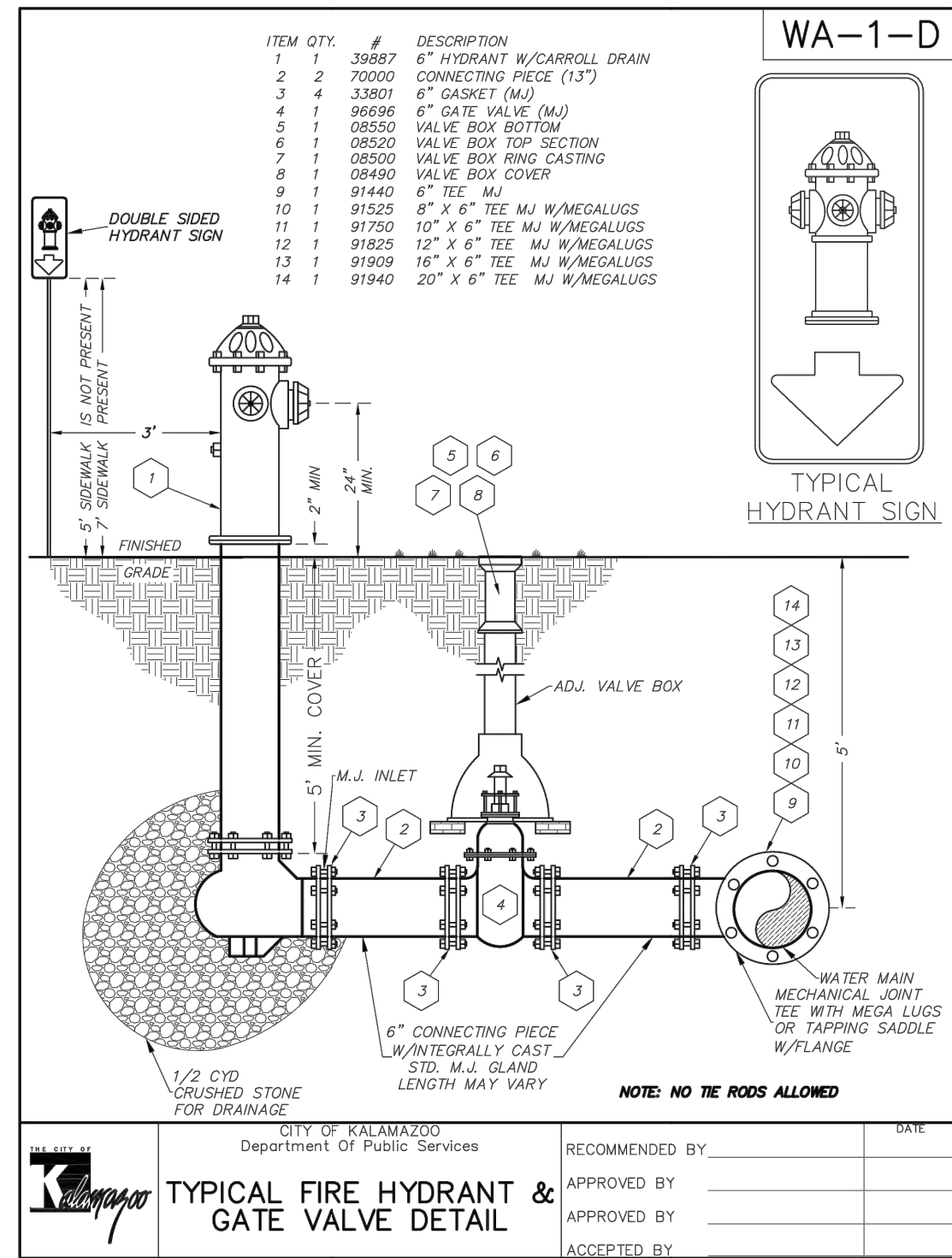
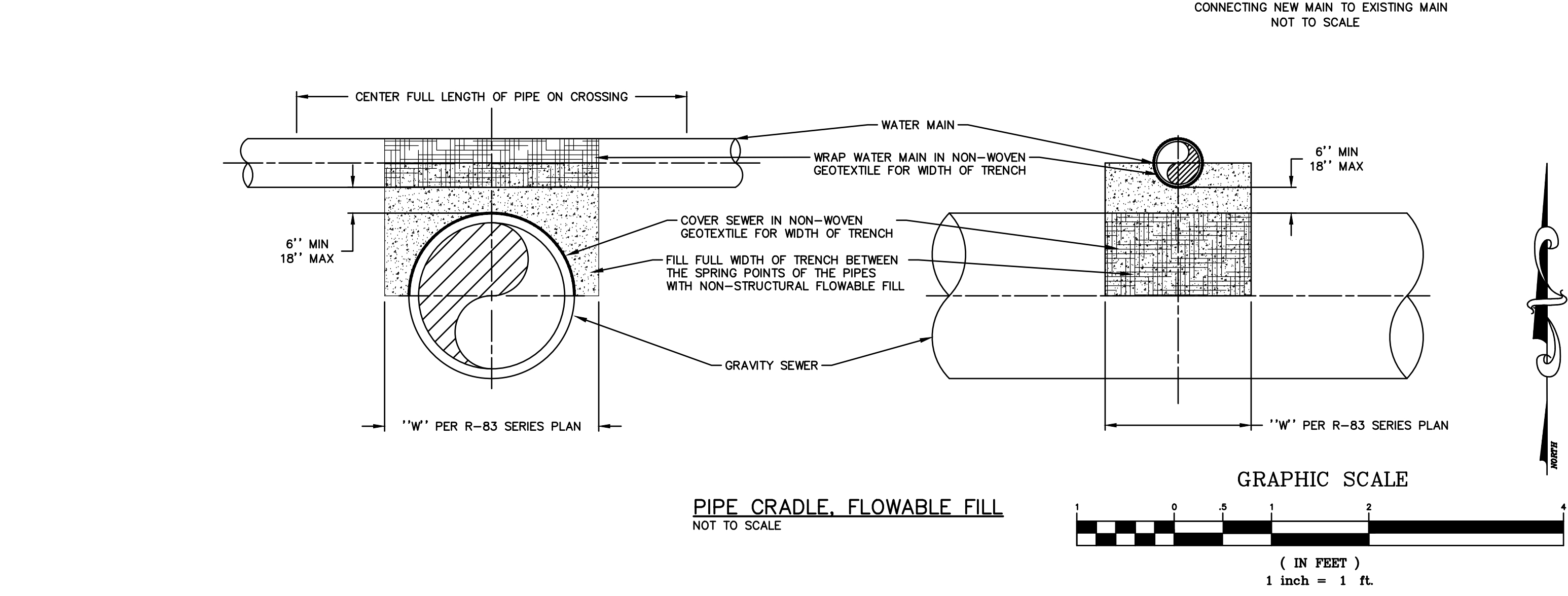
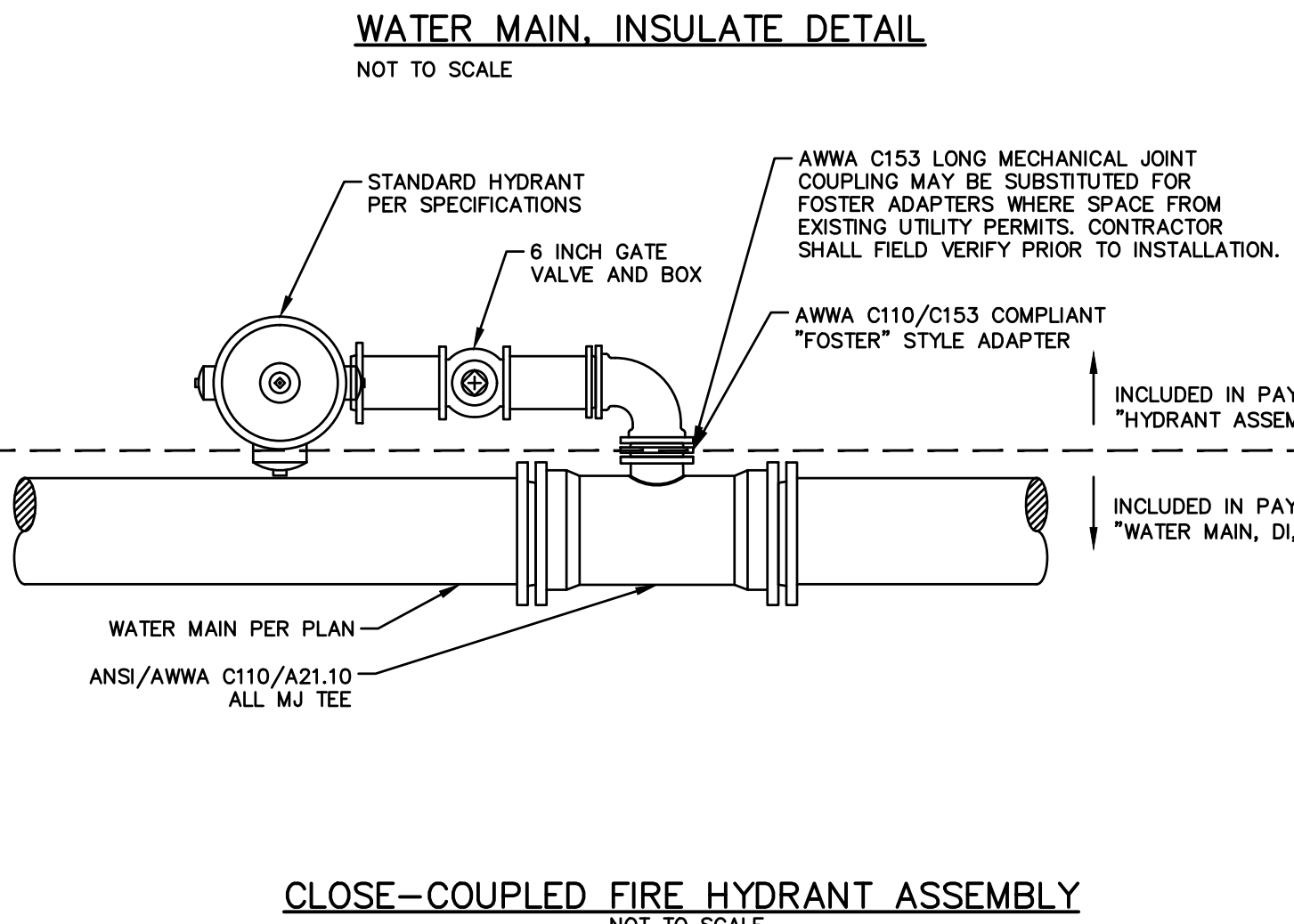
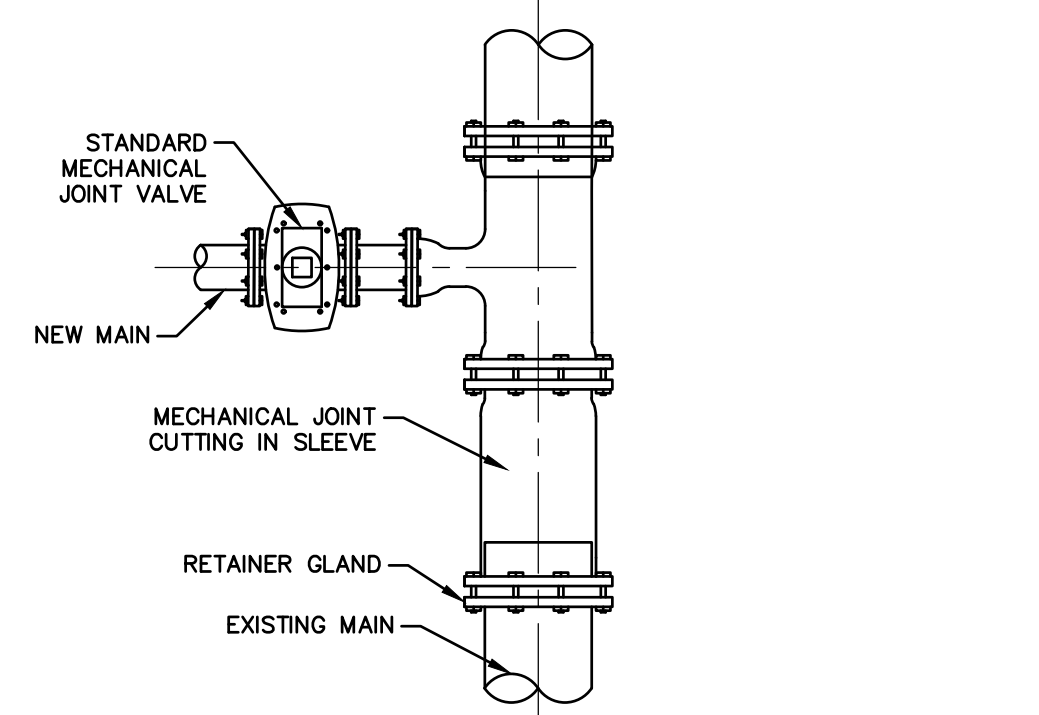


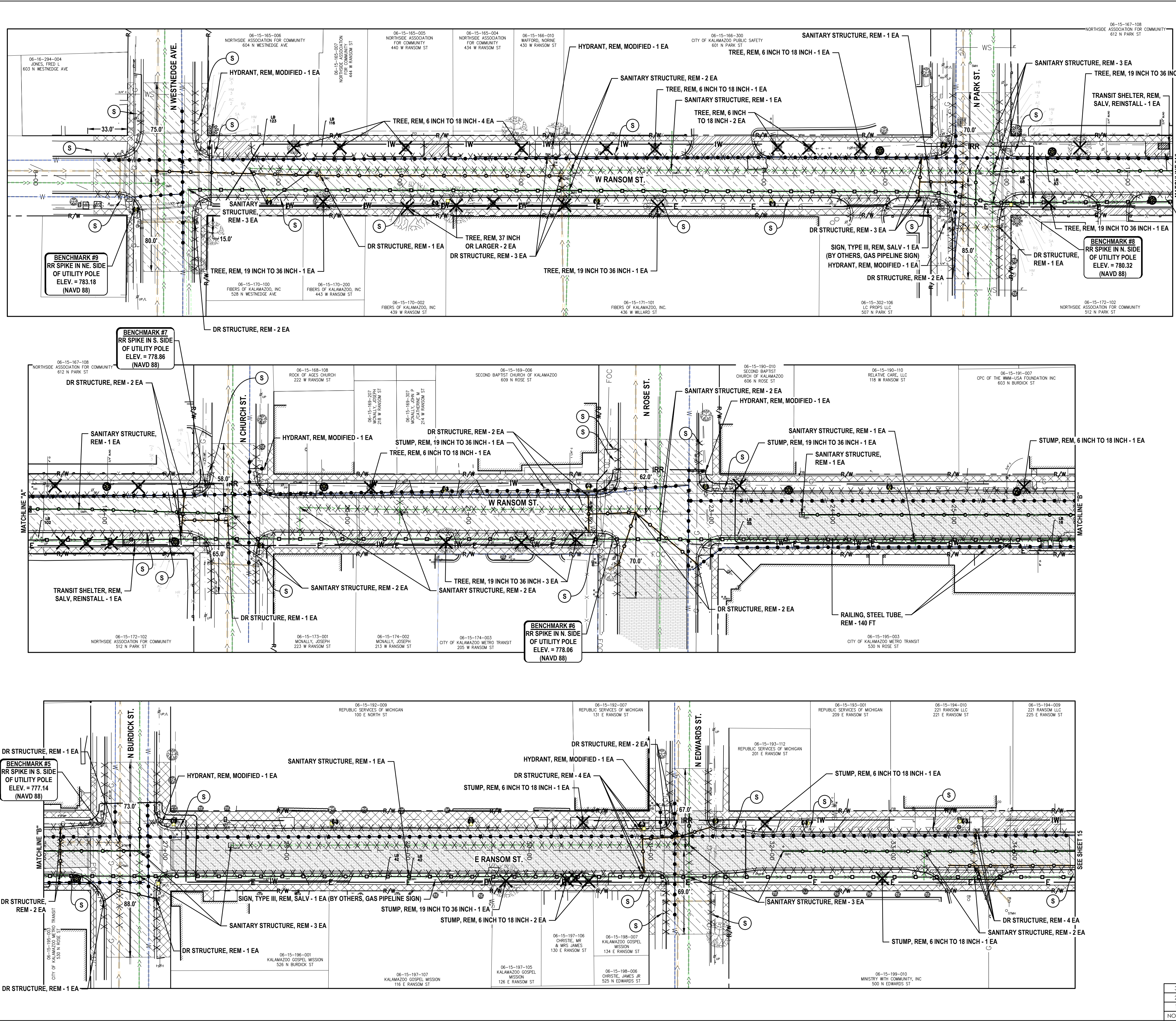
TABLE 1: WIDTH OF INSULATION BY PIPE COVER		TABLE 2: WIDTH OF INSULATION BY PIPE SIZE	
PIPE COVER, A (INCHES)	WIDTH OF INSULATION, B (INCHES)	PIPE SIZE, INCHES	WIDTH OF INSULATION, B (INCHES)
18"	84"	6"	18"
24"	72"	8"	20"
30"	60"	10"	22"
36"	48"	12"	24"
37"+	USE TABLE 2	16"	28"
		18"	30"
		24"	36"



- WATER MAIN:**
- ALL WATER MAINS AND SERVICES SHALL HAVE A MINIMUM OF 5 FEET OF COVER. WHERE 5 FEET OF COVER CANNOT BE MAINTAINED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING. INSULATION OF THE WATER MAIN SHALL BE PERFORMED AT THE DIRECTION OF THE ENGINEER.
 - WATER MAIN SHALL NOT BE PLACED INTO SERVICE UNTIL THE APPROPRIATE TESTING AND DISINFECTION IS COMPLETE AND APPROVED BY THE CITY.
 - THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE TO THE CITY TO REQUEST A WATER SERVICE SHUTOFF OR SEWER TAP. THE CITY SHALL DETERMINE THE TIME & DURATION OF THE SHUTOFF.
 - NO EXISTING VALVE SHALL BE CLOSED WITHOUT CITY APPROVAL.
 - ABANDONING OF EXISTING WATER MAIN AND REMOVAL OF APPURTENANCES SHALL BE INCLUDED WITH NEW WATER MAIN ITEM. ABANDONING WATER MAIN SHALL INCLUDE REMOVAL OF EXISTING PIPE, BULKHEADING ENDS OF PIPE OR FILLING PIPE WITH FLOWABLE FILL.
 - WORK SHALL CONFORM TO THE CITY OF KALAMAZOO STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE INSTALLATION, 2021.
 - MAXIMUM FEASIBLE VERTICAL AND HORIZONTAL SEPARATION SHALL BE PROVIDED WHERE WATER MAIN CROSSES SEWERS. INSTALL WATER MAIN AND FITTINGS TO MAXIMIZE LATERAL SEPARATION OF JOINTS/FITTINGS FROM THE CROSSING UTILITY. WHERE APPROPRIATE SEPARATION CANNOT BE MAINTAINED, THE CONTRACTOR SHALL MITIGATE WITH FLOWABLE FILL PIPE CRADLE, OR INSULATION OF THE WATER MAIN WITH LESS THAN 4.0' OF COVER, AS DIRECTED BY THE ENGINEER.
 - WHERE GRAVITY SEWER CROSSING PROPOSED WATER MAIN IS SPECIFIED TO MEET THE MATERIAL REQUIREMENTS OF AWWA C-900 PVC PIPE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ISOLATING AND PRESSURE TESTING THE PIPE IN ACCORDANCE WITH THE STANDARDS OF AWWA-C605 AND THE 10 STATE STANDARDS FOR WATERWORKS AND WASTEWATER FACILITIES PRIOR TO CONNECTION TO EXISTING FACILITIES.

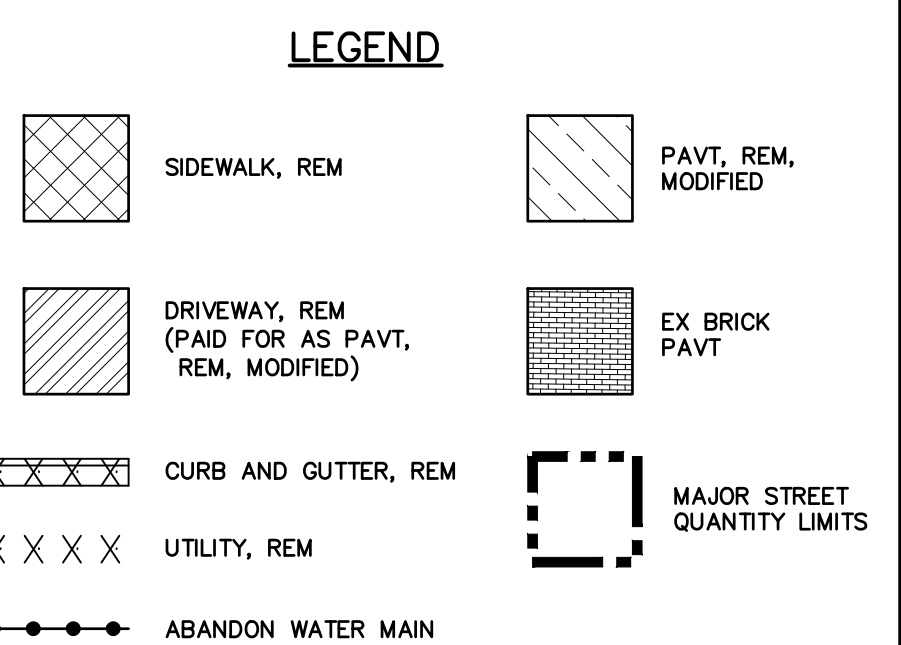


NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22



Description	Units	Quantity	Major Street Share
Tree, Rem, 19 inch to 36 inch	Ea	7	0
Tree, Rem, 37 inch or Larger	Ea	2	0
Tree, Rem, 6 inch to 18 inch	Ea	9	0
Stump, Rem, 19 inch to 36 inch	Ea	3	1
Stump, Rem, 6 inch to 18 inch	Ea	6	5
Dr Structure, Rem	Ea	32	20
Sewer, Rem, Less than 24 inch	Ft	2725	1065
Sewer, Abandon, Greater than 24 inch	Ft	2655	0
Sewer, Abandon, Less than 24 inch	Ft	1795	855
Curb and Gutter, Rem	Ft	6830	3150
Sidewalk, Rem	Syd	3860	1830
Railing, Steel Tube, Rem	Ft	140	0
Pavt, Rem, Modified	Syd	12625	6435
Salvage Existing Street Bricks	Syd	500	0
Sign, Type III, Rem	Ea	32	12
Transit Shelter, Rem, Salv, Reinstall	Ea	2	0
Hydrant, Rem, Modified	Ea	7	0
Sanitary Structure, Rem	Ea	24	0

Description	Units	Quantity	Major Street Share
Tree, Rem, 19 inch to 36 inch	Ea	7	0
Tree, Rem, 37 inch or Larger	Ea	2	0
Tree, Rem, 6 inch to 18 inch	Ea	9	0
Stump, Rem, 19 inch to 36 inch	Ea	3	1
Stump, Rem, 6 inch to 18 inch	Ea	6	5
Dr Structure, Rem	Ea	32	20
Sewer, Rem, Less than 24 inch	Ft	2725	1065
Sewer, Abandon, Greater than 24 inch	Ft	2655	0
Sewer, Abandon, Less than 24 inch	Ft	1795	855
Curb and Gutter, Rem	Ft	6830	3150
Sidewalk, Rem	Syd	3860	1830
Railing, Steel Tube, Rem	Ft	140	0
Pavt, Rem, Modified	Syd	12625	6435
Salvage Existing Street Bricks	Syd	500	0
Sign, Type III, Rem	Ea	32	12
Transit Shelter, Rem, Salv, Reinstall	Ea	2	0
Hydrant, Rem, Modified	Ea	7	0
Sanitary Structure, Rem	Ea	24	0



3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:

ABONMARCHÉ
 95 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 abonmarche.com

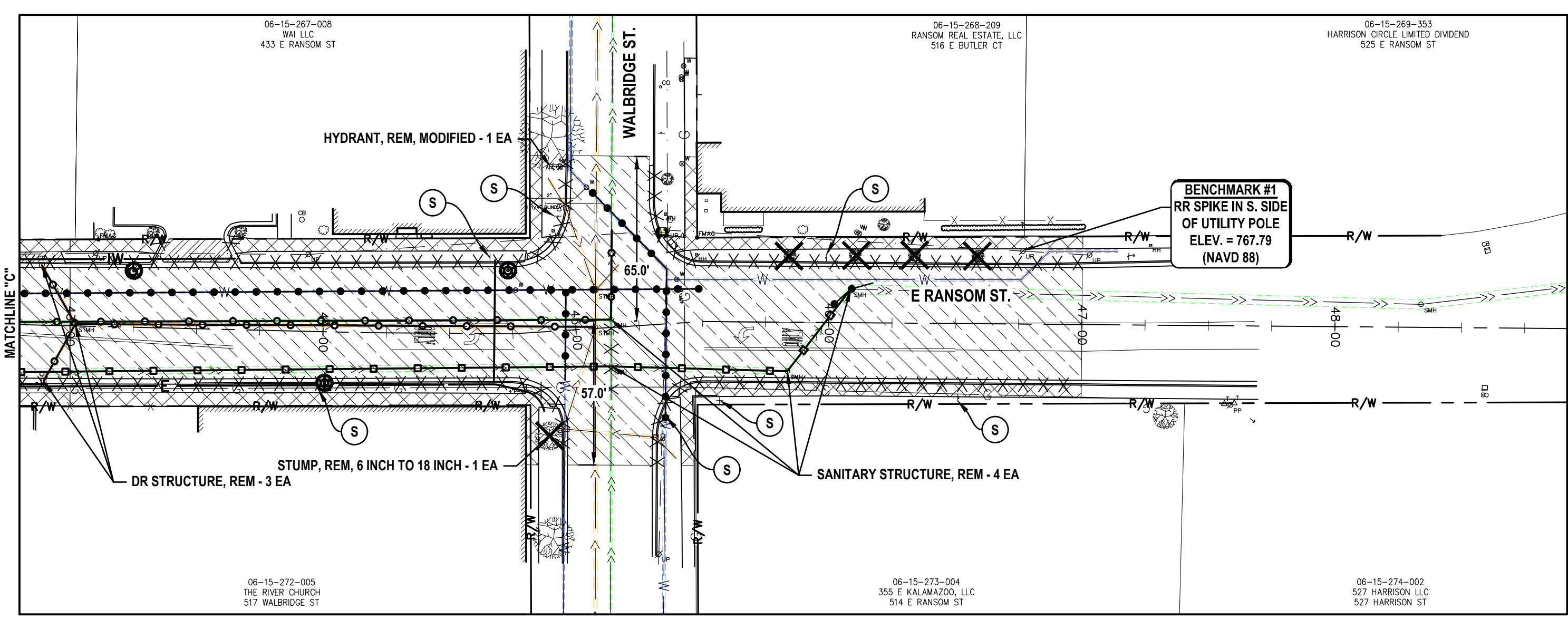
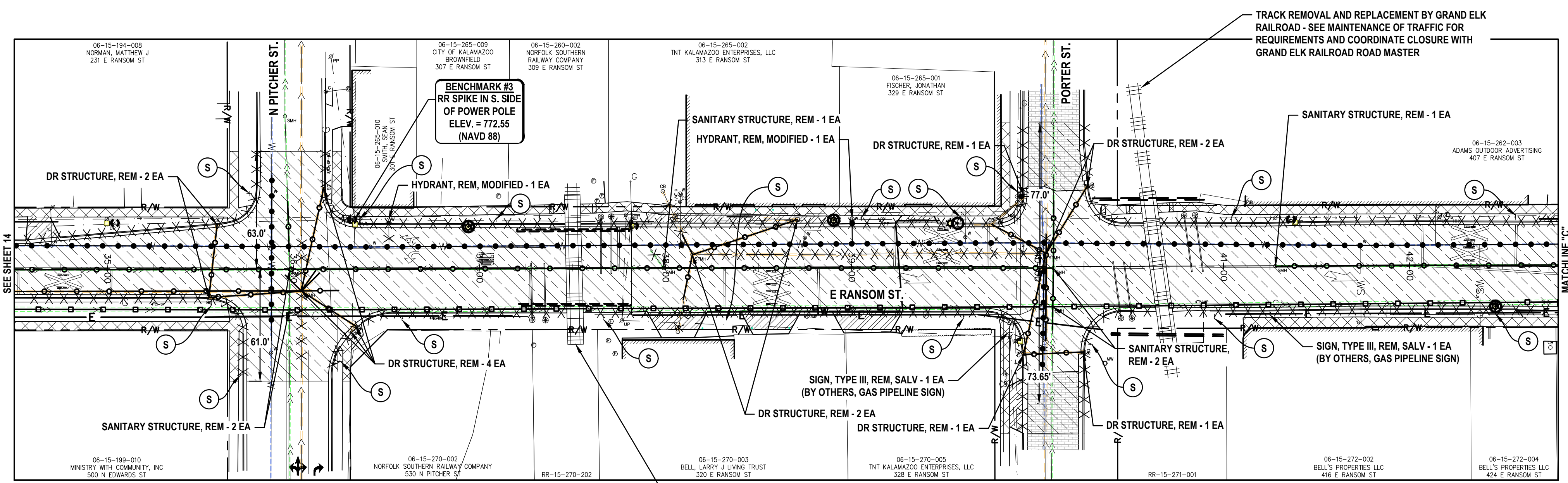
RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

REMOVAL PLAN - 1

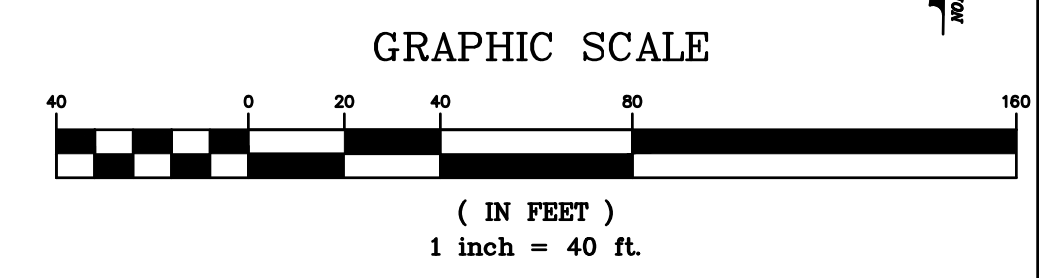
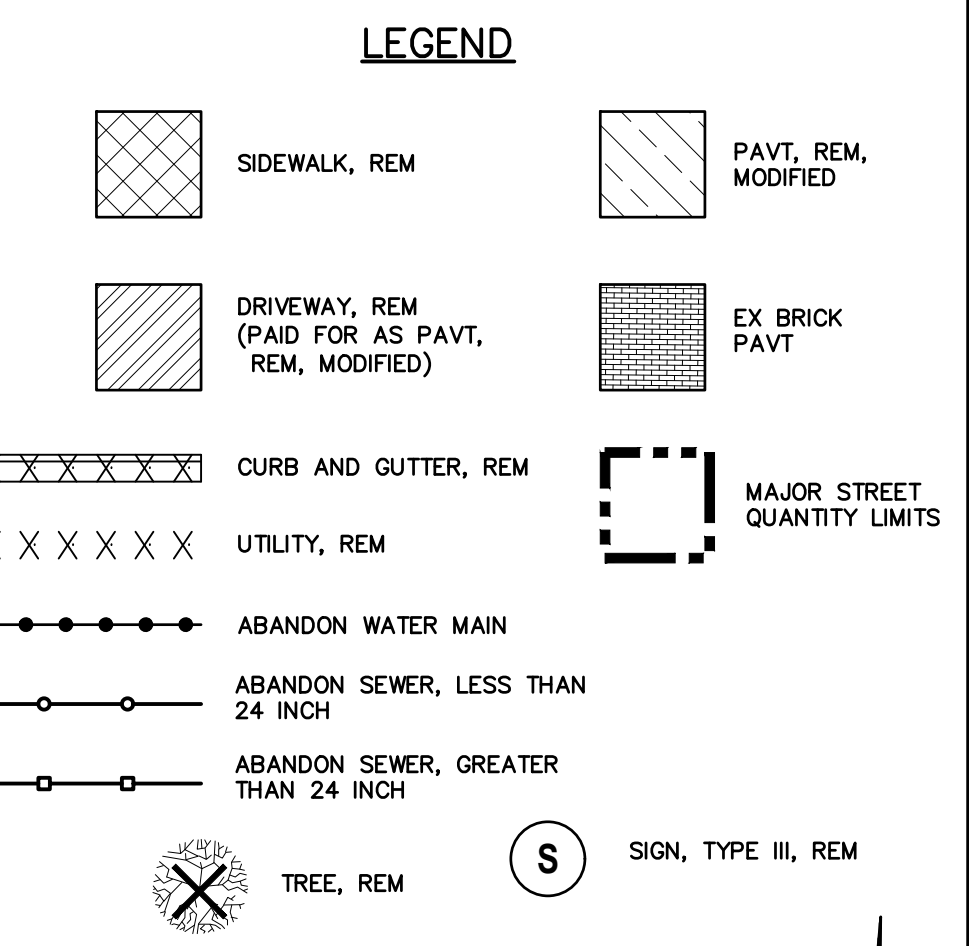
DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW: [Signature]
 DATE: JANUARY 2023
 SEAL: [Signature]

SIGNATURE: [Signature]
 DATE: [Blank]
 SCALE: HORIZ: 1" = 40'
 VERT: N/A

ACI JOB # **22-0031**
 SHEET NO. **14 of 52**



Description	Units	Quantity	Major Street Share
Stump, Rem, 6 inch to 18 inch	Ea	1	1
Dr Structure, Rem	Ea	13	13
Sewer, Rem, Less than 24 inch	Ft	400	400
Sewer, Abandon, Greater than 24 inch	Ft	1235	1235
Sewer, Abandon, Less than 24 inch	Ft	2050	2050
Curb and Gutter, Rem	Ft	2840	2840
Sidewalk, Rem	Syd	1230	1230
Pav, Rem, Modified	Syd	7615	7615
Salvage Existing Street Bricks	Syd	300	300
Sign, Type III, Rem	Ea	25	25
Hydrant, Rem, Modified	Ea	3	3
Sanitary Structure, Rem	Ea	10	10



NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

ABONMARCHÉ
 795 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 F 269.927.2295
 abonmarche.com

Benjamin L. Wayne
 Project Manager
 South Bend
 Valparaiso
 Hobart

Engineering - Architecture - Land Surveying
 Copyright 2023 - ABONMARCHÉ CONSULTANTS, INC.

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

REMOVAL PLAN - 2

PROJECT: RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

SHEET TITLE: REMOVAL PLAN - 2

DRAWN BY: DJL

DESIGNED BY: MJS/ERF

PM REVIEW: DAD

QA/QC REVIEW:

DATE: JANUARY 2023

SEAL:

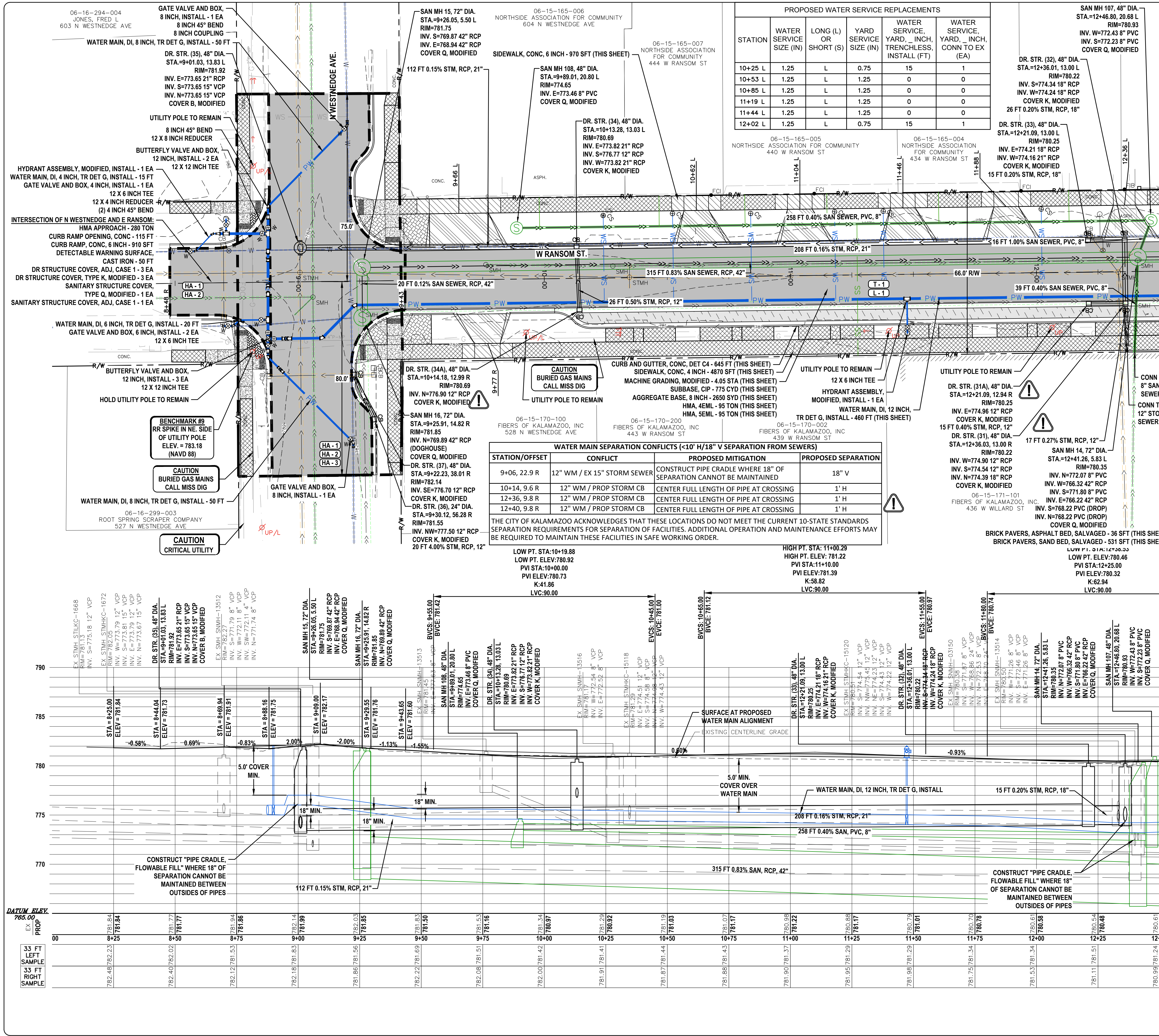
SIGNATURE:

DATE:

SCALE: HORIZ: 1" = 40' VERT: N/A

ACI JOB # 22-0031

SHEET NO. 15 of 52



STATION	WATER SERVICE SIZE (IN)	LONG (L) SHORT (S)	YARD SERVICE SIZE (IN)	WATER SERVICE, YARD, INCH, TRENCHLESS, INSTALL (FT)	WATER SERVICE, YARD, INCH, CONN TO EX (EA)
10+25 L	1.25	L	0.75	15	1
10+53 L	1.25	L	1.25	0	0
10+85 L	1.25	L	1.25	0	0
11+19 L	1.25	L	1.25	0	0
11+44 L	1.25	L	1.25	0	0
12+02 L	1.25	L	0.75	15	1

STATION/OFFSET	CONFLICT	PROPOSED MITIGATION	PROPOSED SEPARATION
9+06, 22.9 R	12" WM / EX 15" STORM SEWER	CONSTRUCT PIPE CRADLE WHERE 18" OF SEPARATION CANNOT BE MAINTAINED	18" V
10+14, 9.6 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CROSSING	1' H
12+36, 9.8 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CROSSING	1' H
12+40, 9.8 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CROSSING	1' H

THE CITY OF KALAMAZOO ACKNOWLEDGES THAT THESE LOCATIONS DO NOT MEET THE CURRENT 10-STATE STANDARDS SEPARATION REQUIREMENTS FOR SEPARATION OF FACILITIES. ADDITIONAL OPERATION AND MAINTENANCE EFFORTS MAY BE REQUIRED TO MAINTAIN THESE FACILITIES IN SAFE WORKING ORDER.

Description	Units	Quantity	Major Street Share
Machine Grading, Modified	Sta	4.05	0.7
Subbase, CIP	Cyd	755	270
Aggregate Base, 6 inch	Syd	4	0
Aggregate Base, 8 inch	Syd	2650	800
Aggregate Base, 10 inch	Syd	59	0
Sewer, CI IV, 12 inch, Tr Det B	Ft	78	26
Sewer, CI IV, 18 inch, Tr Det B	Ft	47	0
Sewer, CI IV, 21 inch, Tr Det B	Ft	320	47
Dr Structure Cover, Adj, Case 1	Ea	3	3
Dr Structure, 24 inch dia	Ea	1	1
Dr Structure, 48 inch dia	Ea	8	4
Dr Structure, Add Depth of 48 inch dia, 8 foot to 15 foot	Ft	1	1
Dr Structure Cover, Type B, Modified	Ea	1	1
Dr Structure Cover, Type K, Modified	Ea	11	6
HMA Approach	Ton	280	250
HMA, 4EML	Ton	95	0
HMA, 5EML	Ton	95	0
Conc Base Cse, Nonreinf, 6 inch	Syd	4	0
Conc Pavt, Nonreinf, 6 inch	Syd	125	0
Driveway, Nonreinf, Conc, 6 inch	Syd	195	0
Curb and Gutter, Conc, Det C4	Ft	780	100
Driveway Opening, Conc, Det M	Ft	285	0
Curb Ramp Opening, Conc	Ft	115	115
Sidewalk, Conc, 4 inch	Sft	4870	1035
Sidewalk, Conc, 6 inch	Sft	970	0
Curb Ramp, Conc, 6 inch	Sft	910	910
Detectable Warning Surface, Cast Iron	Sft	50	50
Brick Pavers, Asphalt Bed, Salvaged	Sft	36	0
Water Main, DI, 12 inch, Tr Det G, Install	Ft	460	0
Water Main, DI, 4 inch, Tr Det G, Install	Ft	15	0
Water Main, DI, 6 inch, Tr Det G, Install	Ft	20	0
Water Main, DI, 8 inch, Tr Det G, Install	Ft	100	0
Water Service, Yard, 0.75 inch, Trenchless, Install	Ft	30	0
Butterfly Valve and Box, 12 inch, Install	Ea	6	0
Curb Stop and Box, Install	Ea	6	0
Gate Valve and Box, 4 inch, Install	Ea	1	0
Gate Valve and Box, 6 inch, Install	Ea	2	0
Gate Valve and Box, 8 inch, Install	Ea	2	0
Hydrant Assembly, Modified, Install	Ea	2	0
Water Serv, Long, 1.25 inch, Install	Ea	6	0
Water Service, Yard, 0.75 inch, Conn to Ex	Ea	2	0
Sanitary Sewer, PVC, 8 inch, Tr Det B2	Ft	313	0
Sanitary Sewer, Serv Lead, PVC, 6 inch	Ft	152	0
Sanitary Structure Cover, Adj, Case 1	Ea	1	0
Sanitary Structure, 42 inch, Tr Det B, Modified	Ft	332	0
Sanitary Structure, Add Depth of 48 inch dia, 8 ft to 15 ft, Mod	Ft	1	0
Sanitary Structure, Add Depth of 72 inch dia, 8 ft to 15 ft, Mod	Ft	14	0
Sanitary Structure, Add Depth of 72 inch dia, more than 15 ft, Mod	Ft	5	0
Sanitary Sewer Cleanout Cover	Ea	7	0
Sanitary Sewer Cleanout, 6 inch, Modified	Ea	7	0
Sanitary Structure Cover, Type Q, Modified	Ea	6	0
Sanitary Structure, 48 inch dia, Modified	Ea	2	0
Sanitary Structure, 72 inch dia, Modified	Ea	3	0

STATION	DRIVEWAY, NONREINF CONC, 6 INCH (SYD)	DRIVEWAY OPENING, CONC, DET M (FT)
9+66 L	45	0
9+77 R	25	0
10+62 L	25	0
11+04 L	25	0
11+46 L	25	0
11+88 L	25	0
12+36 L	25	0

STATION	SERVICE LENGTH (FT)
11+70 L	17
12+17 L	17
12+53 L	17
12+98 L	50
13+31 L	17
13+84 L	17

LEGEND

- HMA PAVEMENT
- DRIVEWAY, NONREINF CONC, 6 INCH
- DRIVEWAY, NONREINF CONC, 8 INCH
- CONC PAVT, NONREINF, 8 INCH
- SIDEWALK RAMP, ADA
- BRICK PAVERS, ASPHALT BED, SALVAGED
- MAJOR STREET QUANTITY LIMITS
- CRITICAL TOLERANCE, ENSURE PROPER STRUCTURE CONFIGURATION/ROTATION
- CONC PAVT, NONREINF, 6 INCH
- SIDEWALK, CONC, 6 INCH
- SIDEWALK, CONC, 8 INCH
- SIDEWALK, CONC, 4 INCH
- BRICK PAVERS, SAND BED, SALVAGED
- HMA APPROACH PAVING LIMITS
- PROPOSED ADA TACTILE WARNING AREA

GRAPHIC SCALE
1 inch = 20 ft

NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

ABONMARCHÉ
 925 West Main Street
 Benton Harbor, MI 49023
 269.927.2295
 abonmarche.com

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

PLAN AND PROFILE STA. 8+48 (P.O.B.) TO 12+50

SHEET TITLE: PLAN AND PROFILE STA. 8+48 (P.O.B.) TO 12+50

DRAWN BY: DJL

DESIGNED BY: MJS/ERF

PM REVIEW: DAD

QA/QC REVIEW:

DATE: JANUARY 2023

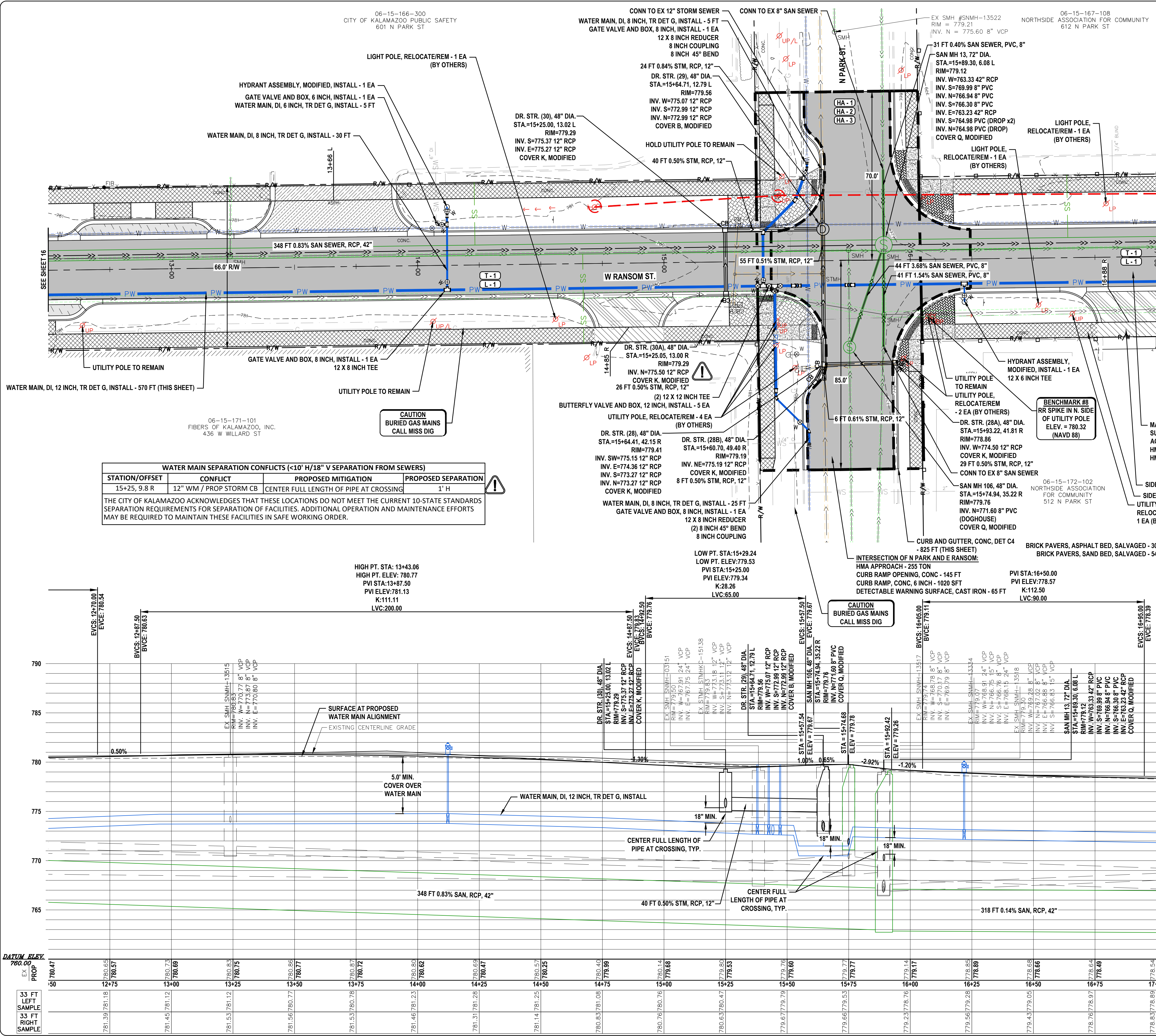
SCALE:

DATE:

SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

ACI JOB #: 22-0031

SHEET NO.: 16 of 52



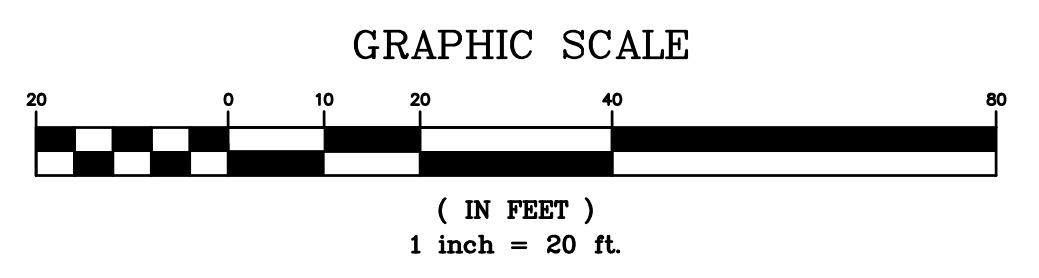
Description	Units	Quantity	Major Street Share
Machine Grading, Modified	Sta	4.5	0.7
Subbase, CIP	Cyd	810	270
Aggregate Base, 6 inch	Syd	34	0
Aggregate Base, 8 inch	Syd	2845	810
Aggregate Base, 10 inch	Syd	60	0
Sewer, CI IV, 12 inch, Tr Det B	Ft	188	83
Dr Structure, 48 inch dia	Ea	6	4
Dr Structure Cover, Type B, Modified	Ea	1	1
Dr Structure Cover, Type K, Modified	Ea	5	3
HMA Approach	Ton	255	255
HMA, 4EML	Ton	115	0
HMA, SEMI	Ton	115	0
Conc Base Cse, Nonrein, 6 inch	Syd	34	0
Conc Pavi, Nonrein, 6 inch	Syd	35	0
Driveway, Nonrein Conc, 6 inch	Syd	85	0
Driveway, Nonrein Conc, 8 inch	Syd	85	0
Curb and Gutter, Conc, Det C4	Ft	825	95
Driveway Opening, Conc, Det M	Ft	290	0
Curb Ramp Opening, Conc	Ft	145	145
Sidewalk, Conc, 4 inch	Sft	5140	905
Sidewalk, Conc, 6 inch	Sft	340	0
Sidewalk, Conc, 8 inch	Sft	300	0
Curb Ramp, Conc, 6 inch	Sft	1020	1020
Detectable Warning Surface, Cast Iron	Ft	65	65
Brick Pavers, Asphalt Bed, Salvaged	Sft	306	0
Brick Pavers, Sand Bed, Salvaged	Sft	540	0
Water Main, DI, 12 inch, Tr Det G, Install	Ft	570	0
Water Main, DI, 8 inch, Tr Det G, Install	Ft	5	0
Water Main, DI, 8 inch, Tr Det G, Install	Ft	60	0
Butterfly Valve and Box, 12 inch, Install	Ea	6	0
Gate Valve and Box, 6 inch, Install	Ea	1	0
Gate Valve and Box, 8 inch, Install	Ea	3	0
Hydrant Assembly, Modified, Install	Ea	2	0
Sanitary Sewer, PVC, 8 inch, Tr Det B2	Ft	116	0
Sanitary Sewer, Serv Lead, PVC, 6 inch	Ft	87	0
Sanitary Sewer, Conc, 42 inch, Tr Det B, Modified	Ft	456	0
Sanitary Structure, Add Depth of 48 inch dia, 8 ft to 15 ft, Mod	Ft	1	0
Sanitary Structure, Add Depth of 72 inch dia, 8 ft to 15 ft, Mod	Ft	7	0
Sanitary Structure, Add Depth of 72 inch dia, more than 15 ft, Mod	Ft	2	0
Sanitary Sewer Cleanout Cover	Ea	3	0
Sanitary Sewer Cleanout, 6 inch, Modified	Ea	3	0
Sanitary Structure Cover, Type Q, Modified	Ea	2	0
Sanitary Structure, 48 inch dia, Modified	Ea	1	0
Sanitary Structure, 72 inch dia, Modified	Ea	1	0

PROPOSED SANITARY SERVICE REPLACEMENTS		
STATION	SERVICE LENGTH (FT)	42" TAP
14+25 L	25	0
14+66 R	37	0
16+65 L	25	0

PROPOSED DRIVEWAYS			
STATION	DRIVEWAY, NONREIN CONC, 6 INCH (SYD)	DRIVEWAY, NONREIN CONC, 8 INCH (SYD)	DRIVEWAY OPENING, CONC, DET M (FT)
13+86 L		85	85
14+85 R	45		60
16+88 R	40		60

LEGEND

- HMA PAVEMENT
- DRIVEWAY, NONREIN CONC, 6 INCH
- DRIVEWAY, NONREIN CONC, 8 INCH
- CONC PAVT, NONREIN, 8 INCH
- SIDEWALK RAMP, ADA
- BRICK PAVERS, ASPHALT BED, SALVAGED
- MAJOR STREET QUANTITY LIMITS
- CRITICAL TOLERANCE, ENSURE PROPER STRUCTURE CONFIGURATION/ROTATION
- CONC PAVT, NONREIN, 6 INCH
- SIDEWALK, CONC, 6 INCH
- SIDEWALK, CONC, 8 INCH
- SIDEWALK, CONC, 4 INCH
- BRICK PAVERS, SAND BED, SALVAGED
- HMA APPROACH PAVING LIMITS
- PROPOSED ADA TACTILE WARNING AREA



NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

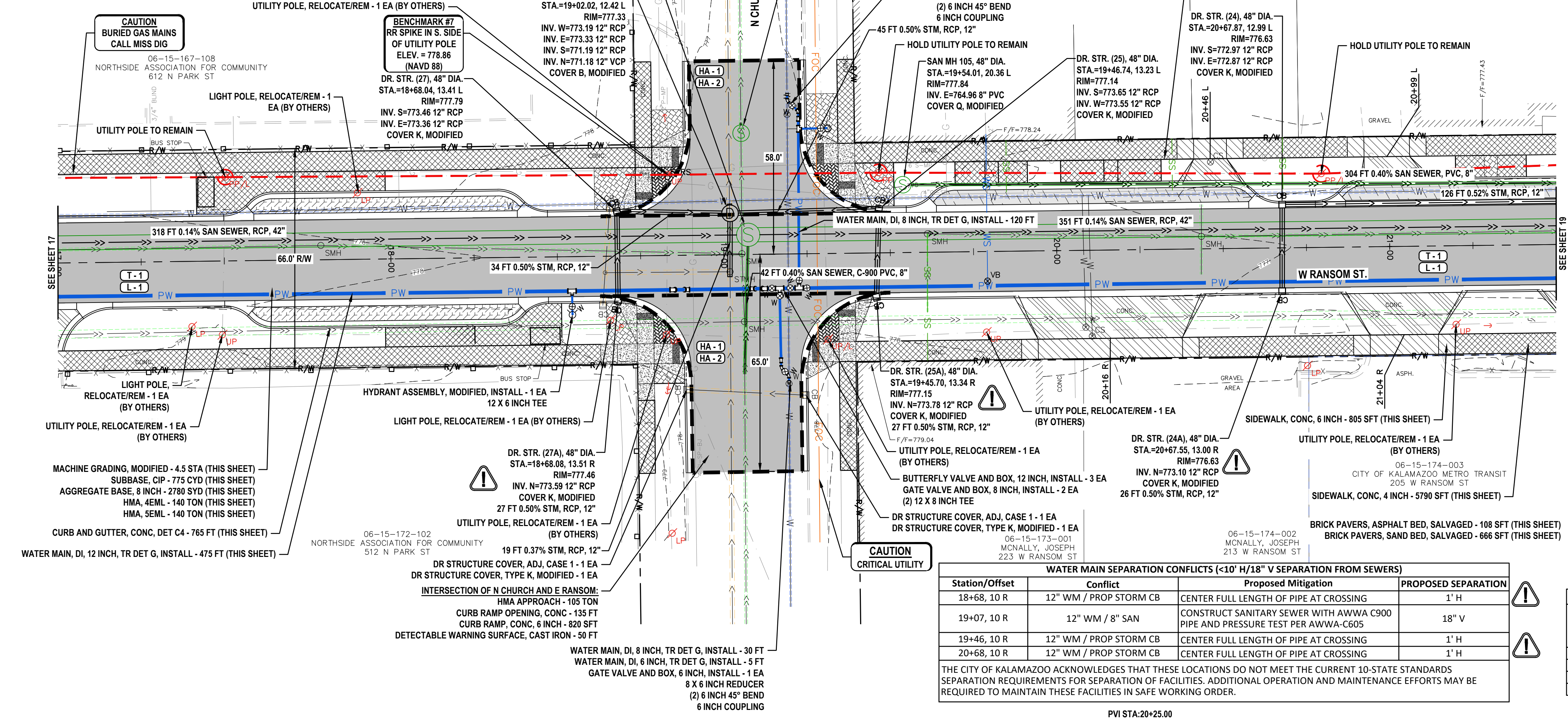
ABONMARCHÉ
 Engineering Architecture Land Surveying
 295 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 F 269.927.2295
 abonmarche.com

RANSOM STREET IMPROVEMENTS
 CITY OF KALAMAZOO

PLAN AND PROFILE
 STA. 12+50 TO 17+00

SHEET TITLE: RANSOM STREET IMPROVEMENTS
 DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:
 SIGNATURE:
 DATE:
 SCALE:
 HORIZ: 1" = 20'
 VERT: 1" = 5'
 ACI JOB #
22-0031
 SHEET NO.
17 of 52

PROPOSED WATER SERVICE REPLACEMENTS				
STATION	WATER SERVICE SIZE (IN)	LONG (L) OR SHORT (S)	YARD SERVICE SIZE (IN)	WATER SERVICE YARD, INCH, TRENCHLESS, INSTALL (FT)
19+79 L	2.00	L	2.00	10



WATER MAIN SEPARATION CONFLICTS (<10' H/18" V SEPARATION FROM SEWERS)			
Station/Offset	Conflict	Proposed Mitigation	PROPOSED SEPARATION
18+68, 10 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CROSSING	1' H
19+07, 10 R	12" WM / 8" SAN	CONSTRUCT SANITARY SEWER WITH ANWVA C900 PIPE AND PRESSURE TEST PER ANWVA-C605	18" V
19+46, 10 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CROSSING	1' H
20+68, 10 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CROSSING	1' H

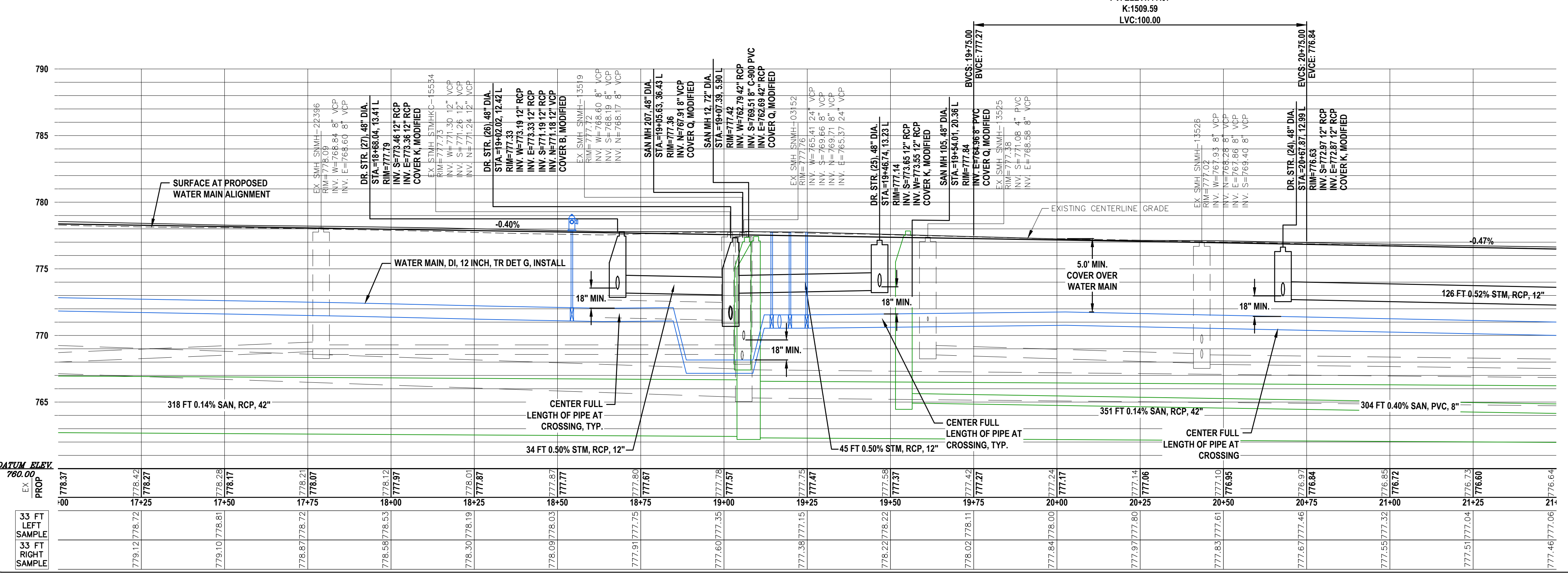
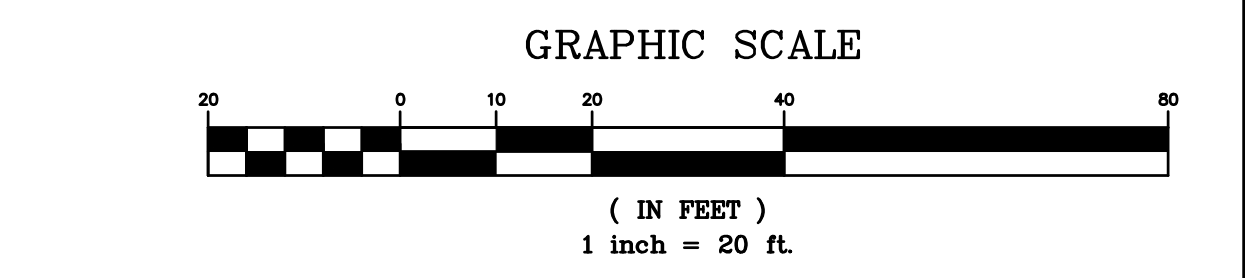
THE CITY OF KALAMAZOO ACKNOWLEDGES THAT THESE LOCATIONS DO NOT MEET THE CURRENT 10-STATE STANDARDS SEPARATION REQUIREMENTS FOR SEPARATION OF FACILITIES. ADDITIONAL OPERATION AND MAINTENANCE EFFORTS MAY BE REQUIRED TO MAINTAIN THESE FACILITIES IN SAFE WORKING ORDER.

Description	Units	Quantity
Machine Grading, Modified	Sft	4.5
Subbase, CIP	Cyd	775
Aggregate Base, 6 inch	Syd	12
Aggregate Base, 8 inch	Syd	2780
Aggregate Base, 10 inch	Syd	74
Sewer, CI V, 12 inch, Tr Det B	Ft	276
Dr Structure Cover, Adj, Case 1	Ea	2
Dr Structure, 48 inch dia	Ea	7
Dr Structure Cover, Type B, Modified	Ea	1
Dr Structure Cover, Type K, Modified	Ea	9
HMA Approach	Ton	105
HMA, 4EML	Ton	140
HMA, 5EML	Ton	140
Conc Base Cse, Nonreinf, 6 inch	Syd	12
Conc Pavt, Nonreinf, 6 inch	Syd	85
Conc Pavt, Nonreinf, 8 inch	Syd	85
Driveway, Nonreinf Conc, 6 inch	Syd	145
Curb and Gutter, Conc, Det C4	Ft	840
Driveway Opening, Conc, Det M	Ft	420
Curb Ramp Opening, Conc	Ft	135
Sidewalk, Conc, 4 inch	Sft	5790
Sidewalk, Conc, 6 inch	Sft	805
Curb Ramp, Conc, 6 inch	Sft	820
Defectable Warning Surface, Cast Iron	Ft	50
Brick Pavers, Asphalt Bed, Salvaged	Sft	108
Brick Pavers, Sand Bed, Salvaged	Sft	666
Water Main, DI, 12 inch, Tr Det G, Install	Ft	475
Water Main, DI, 6 inch, Tr Det G, Install	Ft	10
Water Main, DI, 8 inch, Tr Det G, Install	Ft	75
Water Service, Yard, 2 inch, Trenchless, Install	Ft	10
Butterfly Valve and Box, 12 inch, Install	Ea	3
Gate Valve and Box, 6 inch, Install	Ea	2
Gate Valve and Box, 8 inch, Install	Ea	2
Hydrant Assembly, Modified, Install	Ea	1
Valve Box, Install	Ea	1
Water Serv, Long, 2 inch, Install	Ea	1
Water Service, Yard, 2 inch, Conn to Ex	Ea	1
Sanitary Sewer, PVC, 8 inch, Tr Det B2	Ft	197
Sanitary Sewer, Serv Lead, PVC, 6 inch	Ft	55
Sanitary Sewer, C-900 PVC, 8 inch, Tr Det B2	Ft	42
Sanitary Sewer, Conc, 42 inch, Tr Det B, Modified	Ft	450
Sanitary Structure, Add Depth of 48 inch dia, 8 ft to 15 ft, Mod	Ft	7
Sanitary Structure, Add Depth of 72 inch dia, 8 ft to 15 ft, Mod	Ft	1
Sanitary Structure, Add Depth of 72 inch dia, more than 15 ft, Mod	Ft	1
Sanitary Sewer Cleanout Cover	Ea	3
Sanitary Sewer Cleanout, 6 inch, Modified	Ea	3
Sanitary Structure Cover, Type Q, Modified	Ea	3
Sanitary Structure, 48 inch dia, Modified	Ea	2
Sanitary Structure, 72 inch dia, Modified	Ea	1

PROPOSED DRIVEWAYS			PROPOSED SANITARY SERVICE REPLACEMENTS		
STATION	DRIVEWAY, NONREINF CONC, 6 INCH (SYD)	DRIVEWAY OPENING, CONC, DET M (FT)	STATION	SERVICE LENGTH (FT)	42" TAP
20+16 R	75	0.0	19+85 L	18	0
20+46 L	15	0.0	20+35 L	18	0
20+99 L	15	0.0	20+68 L	19	0
21+04 R	40	0.0			

LEGEND

- HMA PAVEMENT
- DRIVEWAY, NONREINF CONC, 6 INCH
- DRIVEWAY, NONREINF CONC, 8 INCH
- CONC PAVT, NONREINF, 8 INCH
- CONC PAVT, NONREINF, 6 INCH
- SIDEWALK RAMP, ADA
- BRICK PAVERS, ASPHALT BED, SALVAGED
- MAJOR STREET QUANTITY LIMITS
- CRITICAL TOLERANCE, ENSURE PROPER STRUCTURE CONFIGURATION/ROTATION
- CONC PAVT, NONREINF, 6 INCH
- SIDEWALK, CONC, 6 INCH
- SIDEWALK, CONC, 8 INCH
- SIDEWALK, CONC, 4 INCH
- BRICK PAVERS, SAND BED, SALVAGED
- HMA APPROACH PAVING LIMITS
- PROPOSED ADA TACTILE WARNING AREA



ABONMARCHÉ

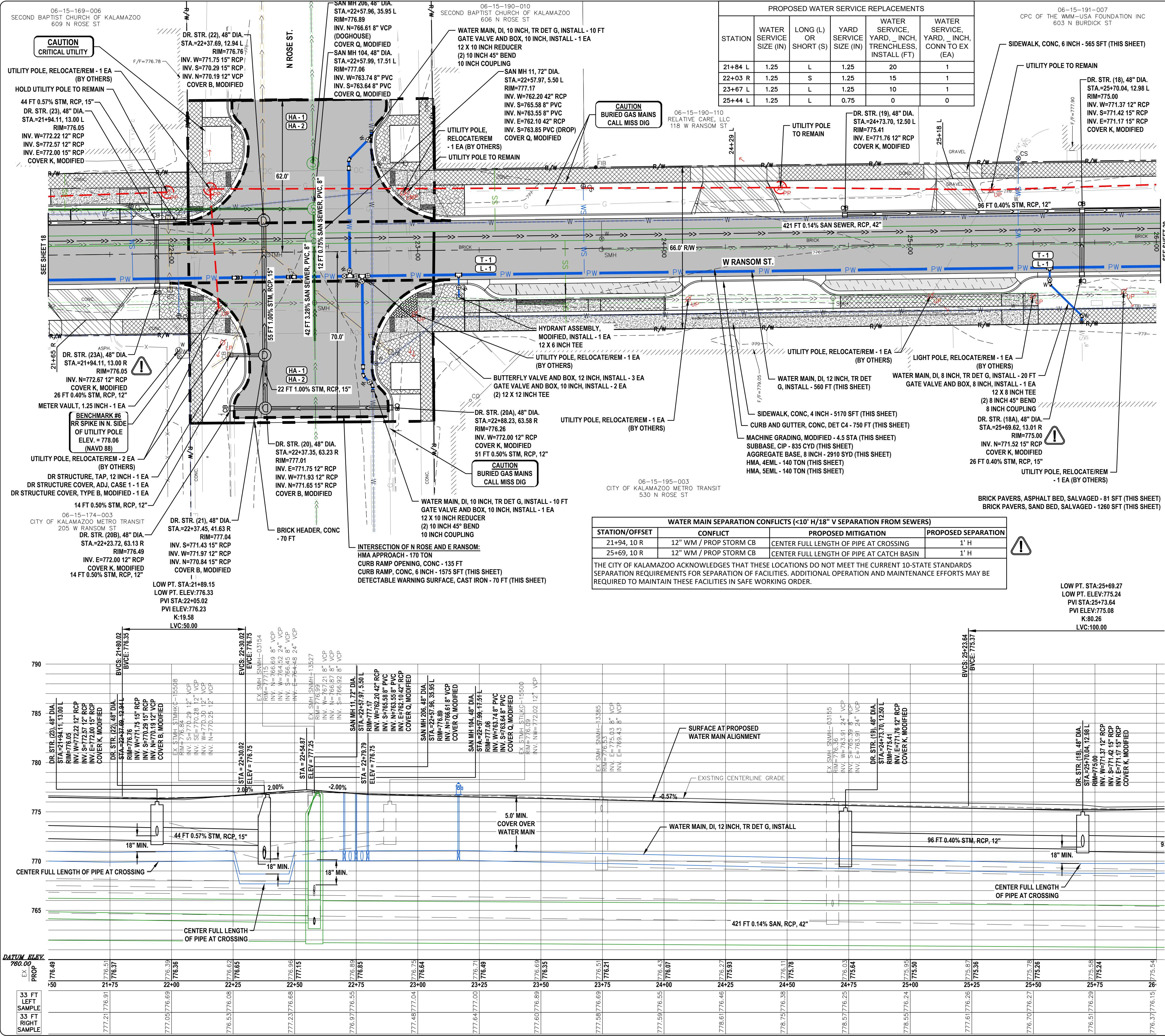
Engineering - Architecture - Land Surveying

205 West Main Street
Benton Harbor, MI 49023
T 269.927.2295
F 269.927.2295
abonmarche.com

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

PLAN AND PROFILE STA. 17+00 TO 21+50

SHEET NO. **22-0031**
18 of 52

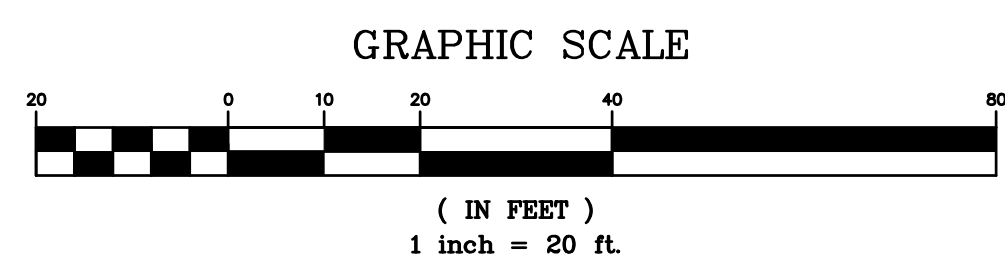
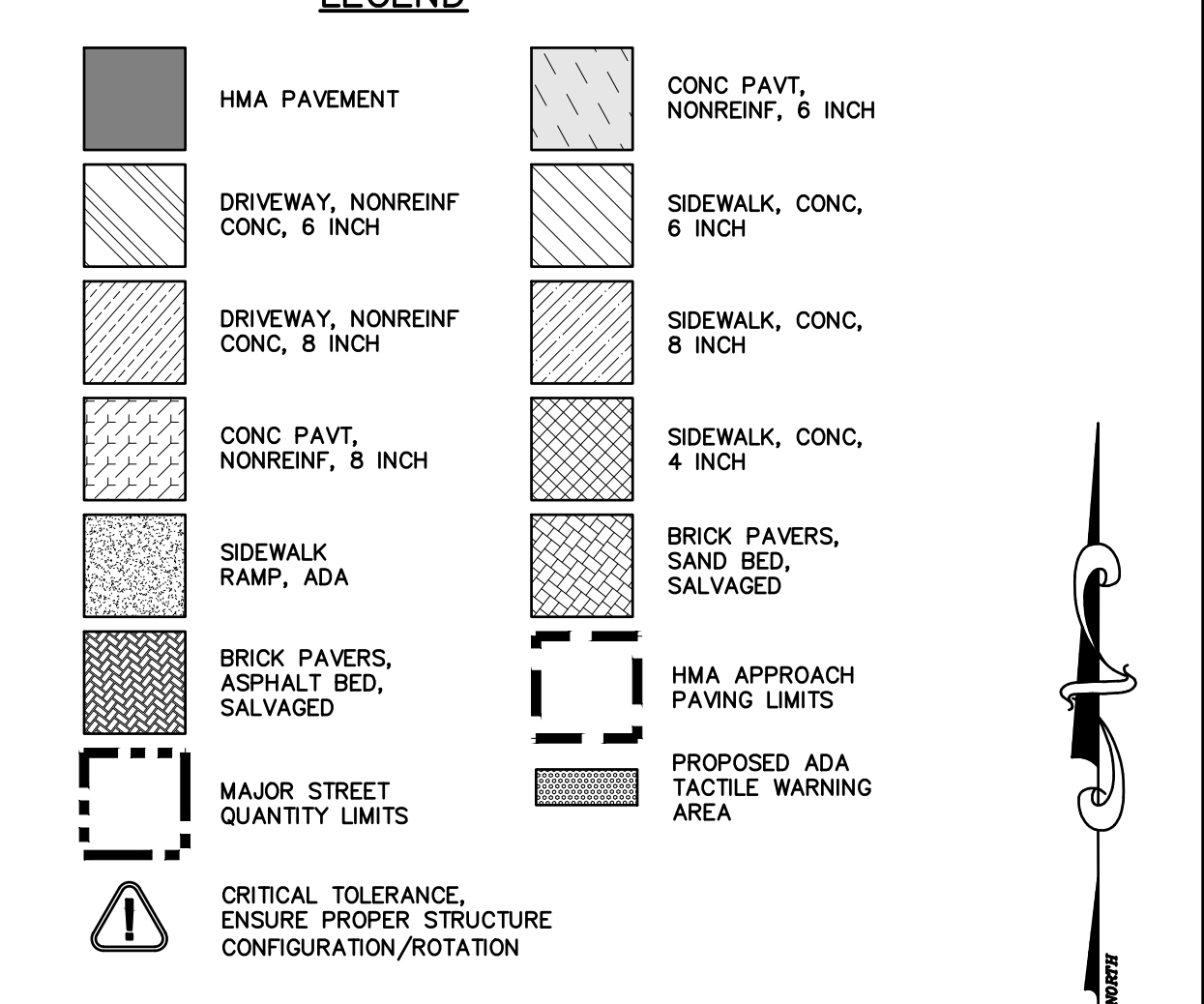


STATION	WATER SERVICE SIZE (IN)	LONG (L) OR SHORT (S)	YARD SERVICE SIZE (IN)	WATER SERVICE YARD, INCH, TRENCHLESS, INSTALL (FT)	WATER SERVICE YARD, INCH, CONN TO EX (EA)
21+84 L	1.25	L	1.25	20	1
22+03 R	1.25	S	1.25	15	1
23+67 L	1.25	L	1.25	10	1
25+44 L	1.25	L	0.75	0	0

STATION/OFFSET	CONFLICT	PROPOSED MITIGATION	PROPOSED SEPARATION
21+94, 10 R	12\"/>		

Description	Units	Quantity	Major Street Share
Machine Grading, Modified	Sta	4.5	1.0
Subbase, CIP	Cyd	835	370
Aggregate Base, 6 inch	Syd	9	0
Aggregate Base, 8 inch	Syd	2935	1100
Aggregate Base, 10 inch	Syd	140	0
Sewer, CI IV, 12 inch, Tr Det B	Ft	302	79
Sewer, CI IV, 15 inch, Tr Det B	Ft	120	99
Dr Structure Cover, Adj, Case 1	Ea	1	1
Dr Structure, 48 inch dia	Ea	10	5
Dr Structure, Tap, 12 inch	Ea	1	1
Dr Structure Cover, Type B, Modified	Ea	4	4
Dr Structure Cover, Type K, Modified	Ea	7	2
HMA Approach	Ton	170	170
HMA, 4EML	Ton	140	30
HMA, 5EML	Ton	140	30
Conc Base Cse, Nonreinf, 6 inch	Syd	9	0
Conc Pavt, Nonreinf, 6 inch	Syd	100	0
Retaining Wall, Poured Concrete	Syd	170	0
Driveway, Nonreinf Conc, 6 inch	Syd	120	0
Curb and Gutter, Conc, Det C4	Ft	810	155
Driveway Opening, Conc, Det M	Ft	250	0
Brick Header, Conc	Ft	70	70
Curb Ramp Opening, Conc	Ft	175	135
Sidewalk, Conc, 4 inch	Sf	3620	750
Sidewalk, Conc, 6 inch	Sf	565	0
Curb Ramp, Conc, 6 inch	Sf	3185	1010
Detectable Warning Surface, Cast Iron	Ft	70	50
Brick Pavers, Asphalt Bed, Salvaged	Sf	81	0
Brick Pavers, Sand Bed, Salvaged	Sf	1260	0
Water Main, DI, 10 inch, Tr Det G, Install	Ft	25	0
Water Main, DI, 12 inch, Tr Det G, Install	Ft	560	0
Water Main, DI, 8 inch, Tr Det G, Install	Ft	30	0
Water Service, Yard, 1.25 inch, Trenchless, Install	Ft	45	0
Butterfly Valve and Box, 12 inch, Install	Ea	5	0
Curb Stop and Box, Install	Ea	4	0
Gate Valve and Box, 10 inch, Install	Ea	2	0
Gate Valve and Box, 8 inch, Install	Ea	1	0
Hydrant Assembly, Modified, Install	Ea	1	0
Meter Vault, 1.25 inch	Ea	1	0
Water Serv, 1.25 inch, Install	Ea	1	0
Water Serv, Long, 1.25 inch, Install	Ea	3	0
Water Service, Yard, 1.25 inch, Conn to Ex	Ea	3	0
Sanitary Sewer, PVC, 8 inch, Tr Det B2	Ft	161	0
Sanitary Sewer, Serv Lead, PVC, 6 inch	Ft	80	0
Sanitary Sewer, Conc, 42 inch, Tr Det B, Modified	Ft	450	0
Sanitary Structure, Add Depth of 48 inch dia, 8 ft to 15 ft, Mod	Ft	9	0
Sanitary Structure, Add Depth of 72 inch dia, 8 ft to 15 ft, Mod	Ft	7	0
Sanitary Sewer Cleanout Cover	Ea	3	0
Sanitary Sewer Cleanout, 6 inch, Modified	Ea	3	0
Sanitary Sewer, Service Tap, 42 inch main	Ea	2	0
Sanitary Structure Cover, Type Q, Modified	Ea	3	0
Sanitary Structure, 48 inch dia, Modified	Ea	2	0
Sanitary Structure, 72 inch dia, Modified	Ea	1	0

STATION	PROPOSED DRIVEWAYS		PROPOSED SANITARY SERVICE REPLACEMENTS	
	DRIVEWAY, NONREINF CONC, 6 INCH (SYD)	DRIVEWAY OPENING, CONC, DET M (FT)	STATION	SERVICE LENGTH (FT) 42\"/>
21+65 R	45	0	21+57 L	20
24+29 L	45	0	23+32 L	20
25+18 L	30	0	23+60 R	40



NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGLE PERMIT SUBMITTAL	MJS	11/8/22

ABONMARCHÉ
 Bentley Harbor, Portage, South Bend, Valparaiso, Hobart
 925 West Main Street, Benton Harbor, MI 49023
 T 269.927.2295, F 269.927.2295, abonmarche.com
 Engineering - Architecture - Land Surveying

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

PLAN AND PROFILE STA. 21+50 TO 26+00

SHEET TITLE: _____
 DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW: _____
 DATE: JANUARY 2023
 SEAL: _____

SIGNATURE: _____
 DATE: _____

SCALE: HORIZ: 1" = 20'
 VERT: 1" = 5'

ACI JOB # **22-0031**
 SHEET NO. **19 of 52**

C:\Project\2022\21001\cd\main\erc\conf\cd\CD_CityOfKalamazoo\21001_RdImp_R14_123023\18\19\PM_ransomc11

06-15-191-007
CPC OF THE WMM-USA
FOUNDATION, INC.
603 N BURDICK ST

DR. STR. (17), 48" DIA.
STA.=26+62.98, 12.78 L
RIM=775.63
INV. W=770.80 15" RCP
INV. S=769.13 15" RCP
INV. N=769.13 12" VCP
COVER B, MODIFIED

BENCHMARK #5
RR SPIKE IN S. SIDE
OF UTILITY POLE
ELEV. = 777.14
(NAVD 88)

UTILITY POLE, RELOCATE/REM - 1 EA
(BY OTHERS)

HYDRANT ASSEMBLY,
MODIFIED, INSTALL - 1 EA
12 X 6 INCH TEE

CAUTION
CRITICAL UTILITY

CAUTION
BURIED GAS MAINS
CALL MISS DIG

DR. STR. (16B), 48" DIA.
STA.=26+50.69, 62.93 R
RIM=775.78
INV. E=771.90 12" RCP
COVER K, MODIFIED

DR. STR. (16A), 48" DIA.
STA.=26+91.99, 44.71 R
RIM=775.55
INV. SW=771.50 12" RCP
COVER K, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16A), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

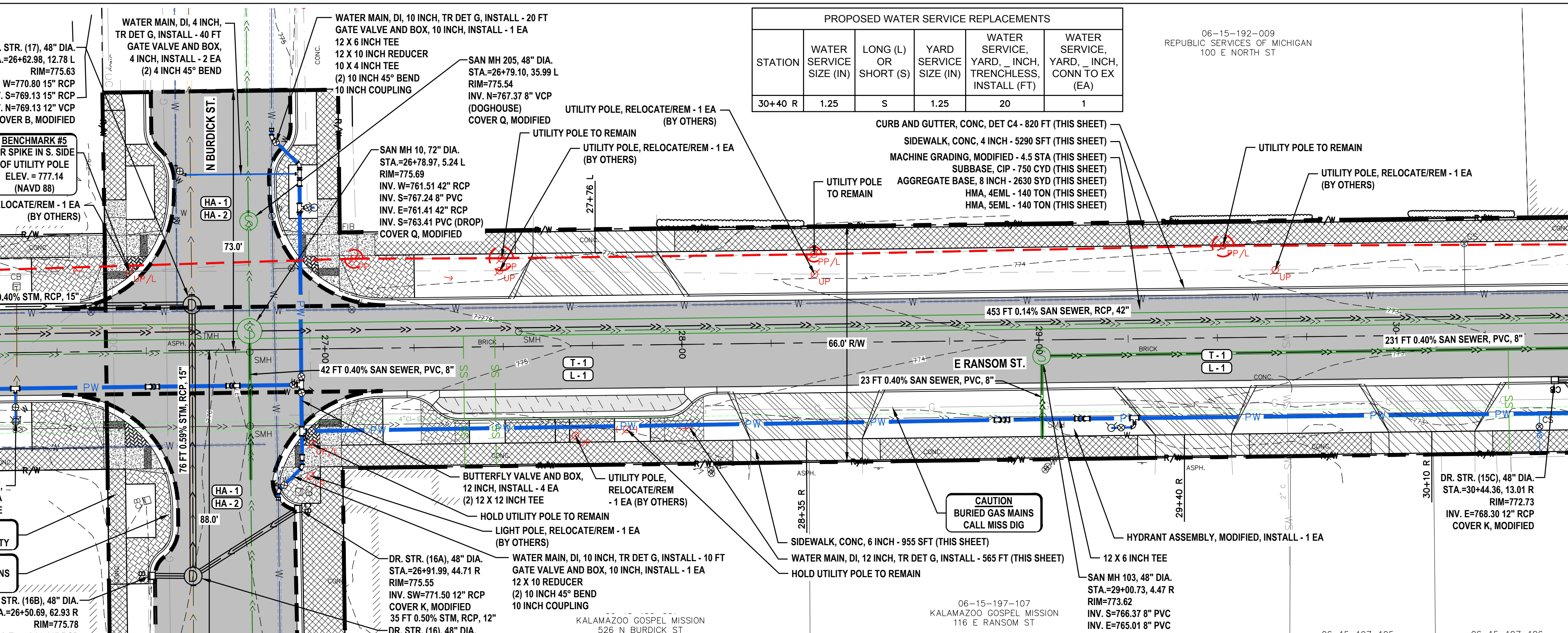
DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED



PROPOSED WATER SERVICE REPLACEMENTS				
STATION	WATER SERVICE SIZE (IN)	LONG (L) OR SHORT (S)	YARD SERVICE SIZE (IN)	WATER SERVICE, YARD, INCH, TRENCHLESS, INSTALL (FT)
30+40 R	1.25	S	1.25	20

06-15-192-008
REPUBLIC SERVICES OF MICHIGAN
100 E NORTH ST

WATER MAIN SEPARATION CONFLICTS (<10" H/18" V SEPARATION FROM SEWERS)				
STATION/OFFSET	CONFLICT	PROPOSED MITIGATION	PROPOSED SEPARATION	
26+79, 10 R	12" WM / PROP 8" SANITARY SEWER	INSULATE WATER MAIN WHERE 4" OF COVER CANNOT BE MAINTAINED	18" V	
30+45, 22 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CATCH BASIN	5' H	

THE CITY OF KALAMAZOO ACKNOWLEDGES THAT THESE LOCATIONS DO NOT MEET THE CURRENT 10-STATE STANDARDS SEPARATION REQUIREMENTS FOR SEPARATION OF FACILITIES. ADDITIONAL OPERATION AND MAINTENANCE EFFORTS MAY BE REQUIRED TO MAINTAIN THESE FACILITIES IN SAFE WORKING ORDER.

06-15-195-003
CITY OF KALAMAZOO METRO TRANSIT
530 N ROSE ST

INTERSECTION OF N BURDICK AND E RANSOM:
HMA APPROACH - 135 TON
CURB RAMP OPENING, CONC. - 130 FT
CURB RAMP, CONC. 6 INCH - 975 SFT
DETECTABLE WARNING SURFACE, CAST IRON - 55 FT

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

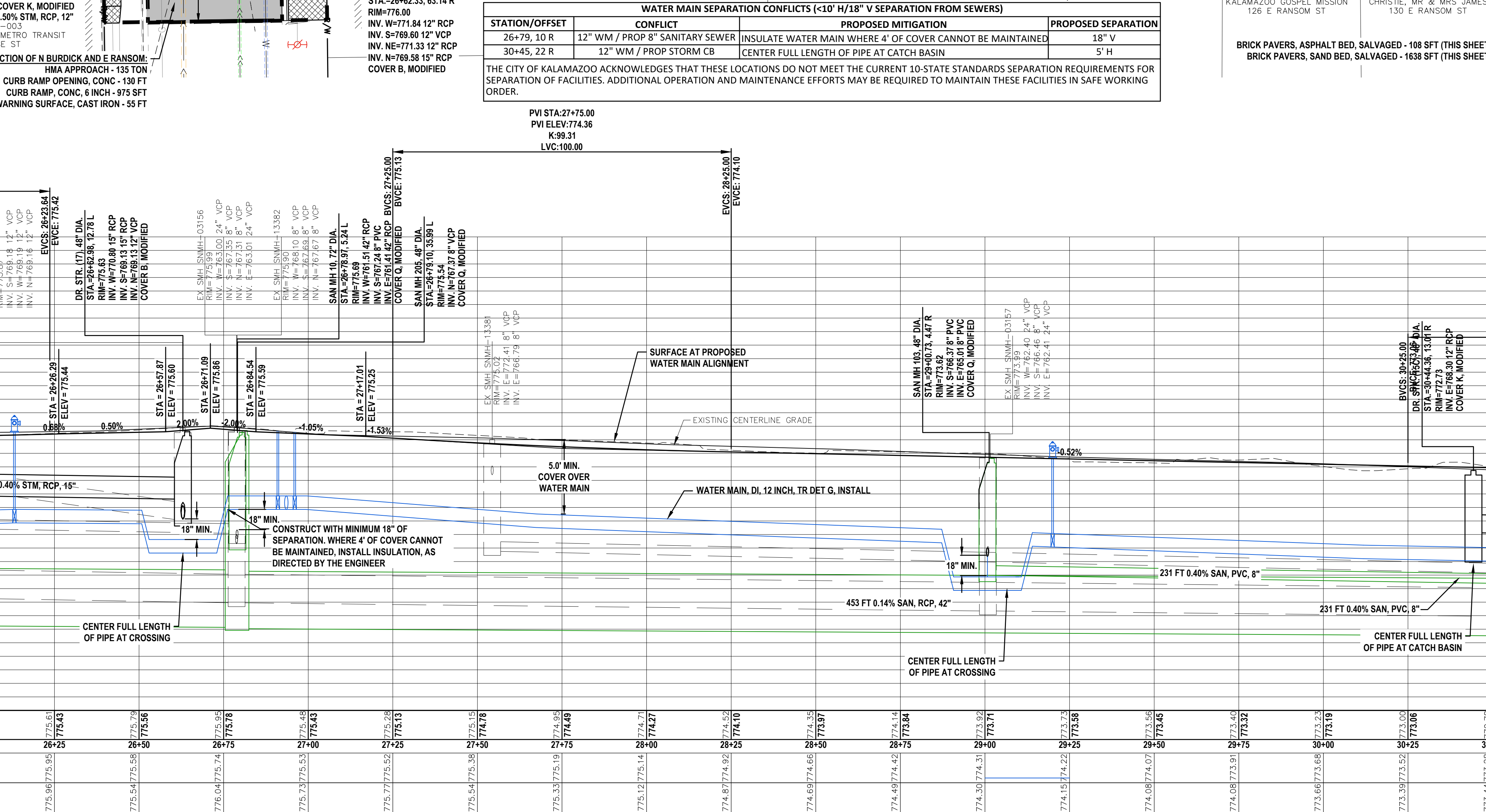
DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

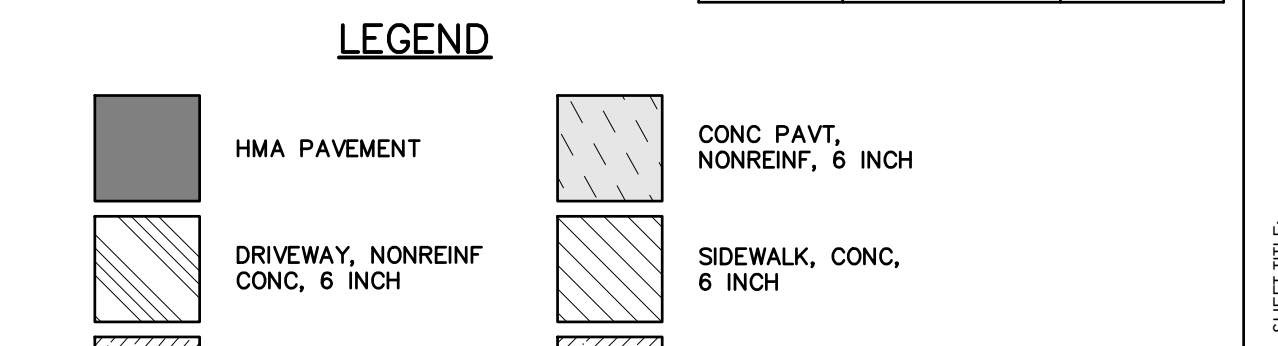
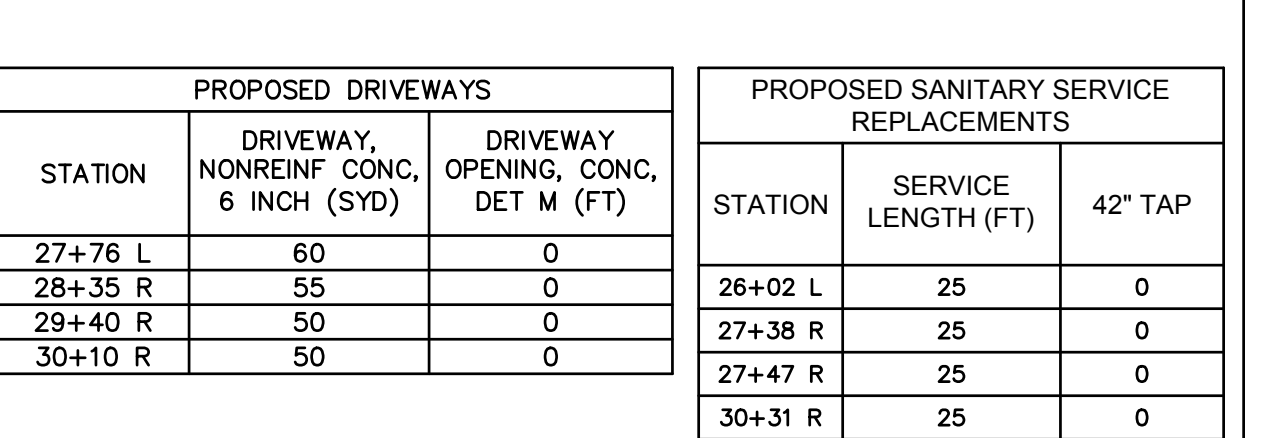
DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

DR. STR. (16), 48" DIA.
STA.=26+62.33, 63.14 R
RIM=776.00
INV. S=769.60 12" VCP
INV. N=771.33 12" RCP
COVER B, MODIFIED

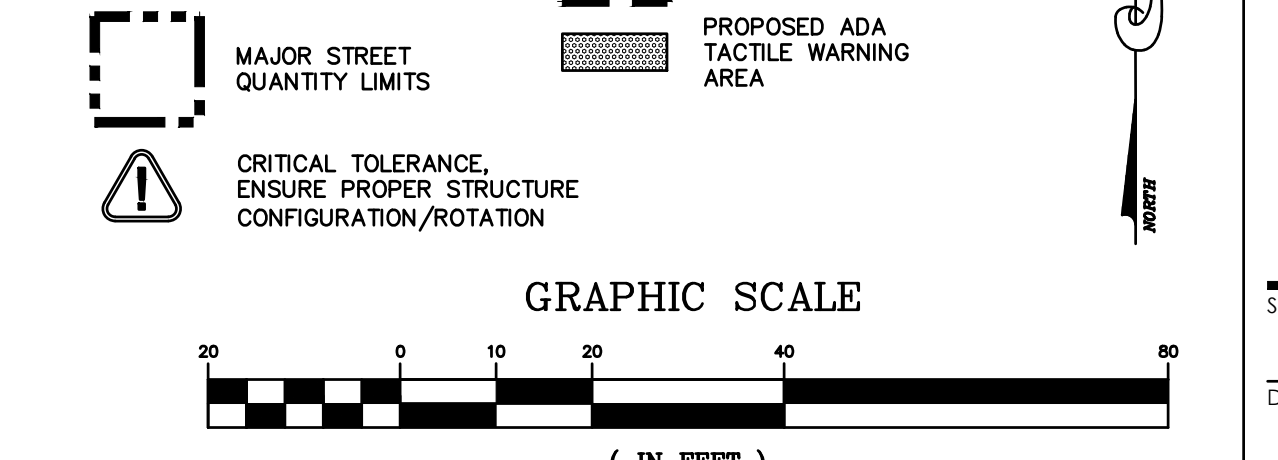


Description	Units	Quantity	Major Street Share
Machine Grading, Modified	Syd	4.5	4.1
Subbase, CIP	Cyd	750	735
Aggregate Base, 6 inch	Syd	12	11
Aggregate Base, 8 inch	Syd	2630	2105
Aggregate Base, 10 inch	Syd	182	129
Sewer, CI IV, 12 inch, Tr Det B	Ft	53	47
Sewer, CI IV, 15 inch, Tr Det B	Ft	139	139
Dr Structure, 48 inch dia	Ea	5	5
Dr Structure Cover, Type B, Modified	Ea	2	2
Dr Structure Cover, Type K, Modified	Ea	3	3
HMA Approach	Ton	135	135
HMA, 4EML	Ton	140	120
HMA, 5EML	Ton	140	120
Conc Base, Nonreinf, 6 inch	Syd	12	11
Conc Pavt, Nonreinf, 6 inch	Syd	40	40
Driveway, Nonreinf Conc, 6 inch	Syd	215	215
Curb and Gutter, Conc, Det C4	Ft	955	880
Driveway Opening, Conc, Det M	Ft	95	95
Curb Ramp Opening, Conc	Ft	130	130
Sidewalk, Conc, 4 inch	Sft	5290	4880
Sidewalk, Conc, 6 inch	Sft	955	955
Curb Ramp, Conc, 6 inch	Sft	975	975
Detectable Warning Surface, Cast Iron	Ft	55	55
Brick Pavers, Asphalt Bed, Salvaged	Sft	108	99
Brick Pavers, Sand Bed, Salvaged	Sft	1638	1161
Water Main, DI, 10 inch, Tr Det G, Install	Ft	30	0
Water Main, DI, 12 inch, Tr Det G, Install	Ft	565	0
Water Main, DI, 4 inch, Tr Det G, Install	Ft	40	0
Water Service, Yard, 1.25 inch, Trenchless, Install	Ft	20	0
Butterfly Valve and Box, 12 inch, Install	Ea	4	0
Curb Stop and Box, Install	Ea	1	0
Gate Valve and Box, 10 inch, Install	Ea	2	0
Gate Valve and Box, 4 inch, Install	Ea	1	0
Hydrant Assembly, Modified, Install	Ea	2	0
Water Serv, 1.25 inch, Install	Ea	1	0
Water Service, Yard, 1.25 inch, Conn to Ex	Ea	1	0
Sanitary Sewer, PVC, 8 inch, Tr Det B2	Ft	215	0
Sanitary Sewer, Serv Lead, PVC, 6 inch	Ft	100	0
Sanitary Sewer, Conc, 42 inch, Tr Det B, Modified	Ft	450	0
Sanitary Structure, Add Depth of 48 inch dia, 8 ft to 15 ft, Mod	Ft	2	0
Sanitary Structure, Add Depth of 72 inch dia, 8 ft to 15 ft, Mod	Ft	7	0
Sanitary Sewer Cleanout Cover	Ea	4	0
Sanitary Sewer Cleanout, 6 inch, Modified	Ea	4	0
Sanitary Structure Cover, Type Q, Modified	Ea	3	0
Sanitary Structure, 48 inch dia, Modified	Ea	2	0
Sanitary Structure, 72 inch dia, Modified	Ea	1	0

PROPOSED DRIVEWAYS			PROPOSED SANITARY SERVICE REPLACEMENTS		
STATION	DRIVEWAY, NONREINF CONC, 6 INCH (SYD)	DRIVEWAY OPENING, CONC, DET M (FT)	STATION	SERVICE LENGTH (FT)	42" TAP
27+76 L	60	0	26+02 L	25	0
28+35 R	55	0	27+38 R	25	0
29+40 R	50	0	27+47 R	25	0
30+10 R	50	0	30+31 R	25	0



PROPOSED DRIVEWAYS			PROPOSED SANITARY SERVICE REPLACEMENTS		
STATION	DRIVEWAY, NONREINF CONC, 6 INCH (SYD)	DRIVEWAY OPENING, CONC, DET M (FT)	STATION	SERVICE LENGTH (FT)	42" TAP
27+76 L	60	0	26+02 L	25	0
28+35 R	55	0	27+38 R	25	0
29+40 R	50	0	27+47 R	25	0
30+10 R	50	0	30+31 R	25	0



PROPOSED DRIVEWAYS			PROPOSED SANITARY SERVICE REPLACEMENTS		
STATION	DRIVEWAY, NONREINF CONC, 6 INCH (SYD)	DRIVEWAY OPENING, CONC, DET M (FT)	STATION	SERVICE LENGTH (FT)	42" TAP
27+76 L	60	0	26+02 L	25	0
28+35 R	55	0	27+38 R	25	0
29+40 R	50	0	27+47 R	25	0
30+10 R	50	0	30+31 R	25	0

PROPOSED DRIVEWAYS			PROPOSED SANITARY SERVICE REPLACEMENTS		
STATION	DRIVEWAY, NONREINF CONC, 6 INCH (SYD)	DRIVEWAY OPENING, CONC, DET M (FT)	STATION	SERVICE LENGTH (FT)	42" TAP
27+76 L	60	0	26+02 L	25	0
28+35 R	55	0	27+38 R	25	0
29+40 R	50	0	27+47 R	25	0
30+10 R	50	0	30+31 R	25	0

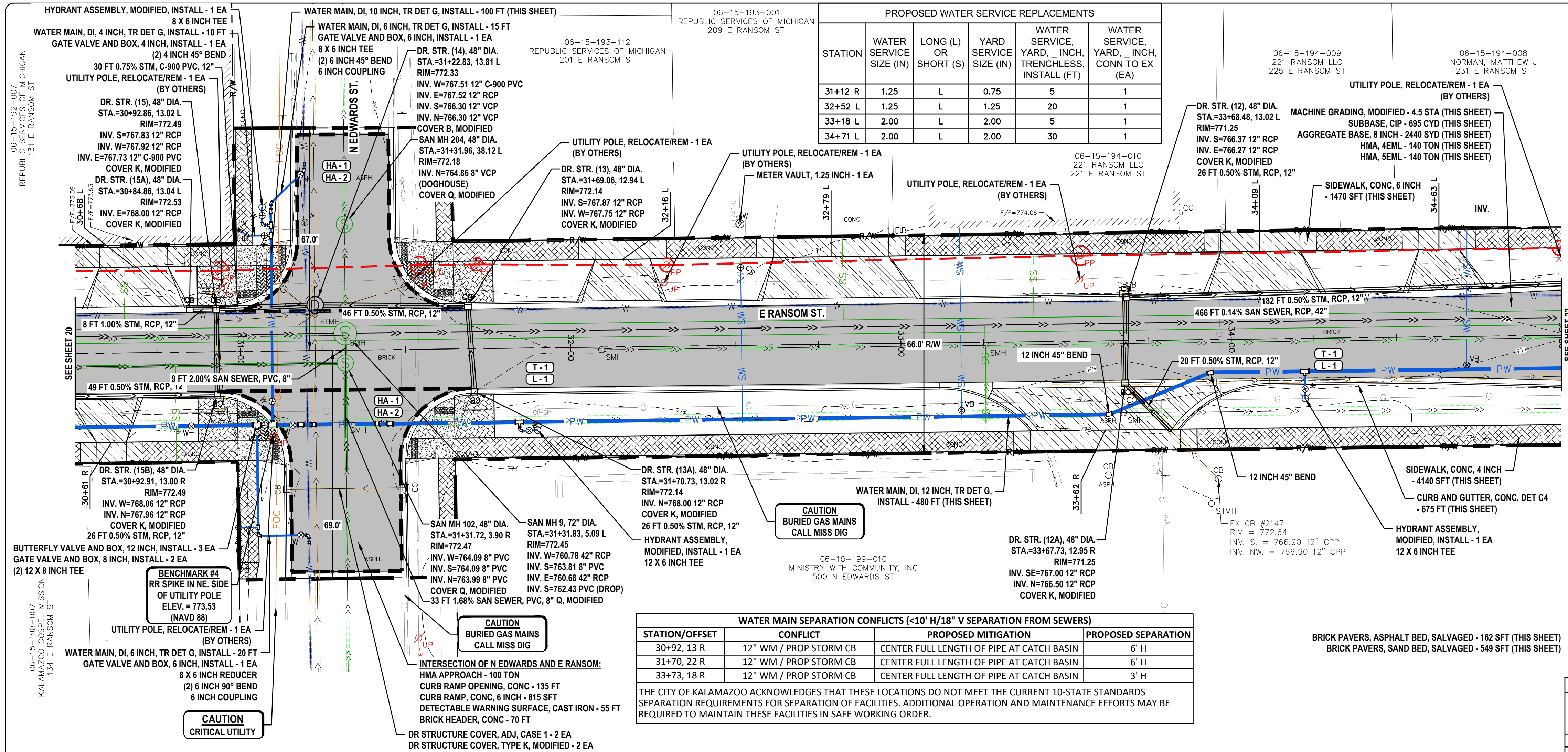
ABONMACHE
Lafayette
Benton Harbor, MI 49023
313.927.2295
abonmache.com

RANSOM STREET IMPROVEMENTS
CITY OF KALAMAZOO

PLAN AND PROFILE
STA. 26+00 TO 30+50

DRAWN BY: DJL
DESIGNED BY: MJS/ERF
PM REVIEW: DAD
QA/QC REVIEW: []
DATE: JANUARY 2023
SCALE: 1" = 20'
VERT: 1" = 5'

22-0031
20 of 52



PROPOSED WATER SERVICE REPLACEMENTS					
STATION	WATER SERVICE SIZE (IN)	LONG (L) OR SHORT (S)	YARD SERVICE SIZE (IN)	WATER SERVICE YARD, INCH, TRENCHLESS, INSTALL (FT)	WATER SERVICE YARD, INCH, CONN TO EX (EA)
31+12 R	1.25	L	0.75	5	1
32+52 L	1.25	L	1.25	20	1
33+18 L	2.00	L	2.00	5	1
34+71 L	2.00	L	2.00	30	1

WATER MAIN SEPARATION CONFLICTS (<10' H/18" V SEPARATION FROM SEWERS)			
STATION/OFFSET	CONFLICT	PROPOSED MITIGATION	PROPOSED SEPARATION
30+92, 13 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CATCH BASIN	6' H
31+70, 22 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CATCH BASIN	6' H
33+73, 18 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CATCH BASIN	3' H

THE CITY OF KALAMAZOO ACKNOWLEDGES THAT THESE LOCATIONS DO NOT MEET THE CURRENT 10-STATE STANDARDS SEPARATION REQUIREMENTS FOR SEPARATION OF FACILITIES. ADDITIONAL OPERATION AND MAINTENANCE EFFORTS MAY BE REQUIRED TO MAINTAIN THESE FACILITIES IN SAFE WORKING ORDER.

Description	Units	Quantity	Major Street Share
Machine Grading, Modified	Sta	4.5	4.5
Subbase, CIP	Cyd	695	695
Aggregate Base, 6 inch	Syd	18	0
Aggregate Base, 8 inch	Syd	2460	2460
Aggregate Base, 10 inch	Syd	61	0
Sewer, CI W, 12 inch, Tr Det B	Ft	339	339
Sewer, C-900 PVC, 12 inch, Tr Det B	Ft	30	30
Dr Structure Cover, Adj, Case 1	Ea	2	2
Dr Structure, 48 inch dia	Ea	8	8
Dr Structure Cover, Type B, Modified	Ea	1	1
Dr Structure Cover, Type K, Modified	Ea	9	9
HMA Approach	Ton	100	100
HMA, 4EML	Ton	140	140
HMA, 5EML	Ton	140	140
Conc Base Cse, Nonreinf, 6 inch	Syd	18	0
Driveway, Nonreinf Conc, 6 inch	Syd	310	310
Curb and Gutter, Conc, Det C4	Ft	860	860
Driveway Opening, Conc, Det M	Ft	105	105
Brick Header, Conc	Ft	70	70
Curb Ramp Opening, Conc	Ft	135	135
Sidewalk, Conc, 4 inch	Sft	4140	4140
Sidewalk, Conc, 6 inch	Sft	1470	1470
Curb Ramp, Conc, 6 inch	Sft	815	815
Detectable Warning Surface, Cast Iron	Ft	55	55
Brick Pavers, Asphalt Bed, Salvaged	Sft	549	0
Brick Pavers, Sand Bed, Salvaged	Sft	480	0
Water Main, DI, 12 inch, Tr Det G, Install	Ft	10	0
Water Main, DI, 6 inch, Tr Det G, Install	Ft	35	0
Water Main, DI, 8 inch, Tr Det G, Install	Ft	100	0
Water Service, Yard, 1.25 inch, Trenchless, Install	Ft	25	0
Water Service, Yard, 2 inch, Trenchless, Install	Ft	35	0
Butterfly Valve and Box, 12 inch, Install	Ea	3	0
Curb Stop and Box, Install	Ea	2	0
Gate Valve and Box, 4 inch, Install	Ea	1	0
Gate Valve and Box, 6 inch, Install	Ea	2	0
Gate Valve and Box, 8 inch, Install	Ea	2	0
Hydrant Assembly, Modified, Install	Ea	2	0
Meter Vault, 1.25 inch	Ea	1	1
Valve Box, Install	Ea	2	0
Water Serv, Long, 1.25 inch, Install	Ea	2	0
Water Serv, Long, 2 inch, Install	Ea	2	0
Water Service, Yard, 1.25 inch, Conn to Ex	Ea	2	0
Water Service, Yard, 2 inch, Conn to Ex	Ea	2	0
Sanitary Sewer, PVC, 8 inch, Tr Det B2	Ft	129	0
Sanitary Sewer, Serv Lead, PVC, 6 inch	Ft	145	0
Sanitary Sewer, Cover, 42 inch, Tr Det B, Modified	Ft	450	0
Sanitary Structure, Add Depth of 48 inch dia, 8 ft to 15 ft, Mod	Ft	1	0
Sanitary Structure, Add Depth of 72 inch dia, 8 ft to 15 ft, Mod	Ft	4	0
Sanitary Sewer Cleanout Cover	Ea	5	0
Sanitary Sewer Cleanout, 6 inch, Modified	Ea	5	0
Sanitary Sewer, Service Tap, 42 inch main	Ea	4	0
Sanitary Structure Cover, Type Q, Modified	Ea	3	0
Sanitary Structure, 48 inch dia, Modified	Ea	2	0
Sanitary Structure, 72 inch dia, Modified	Ea	1	0

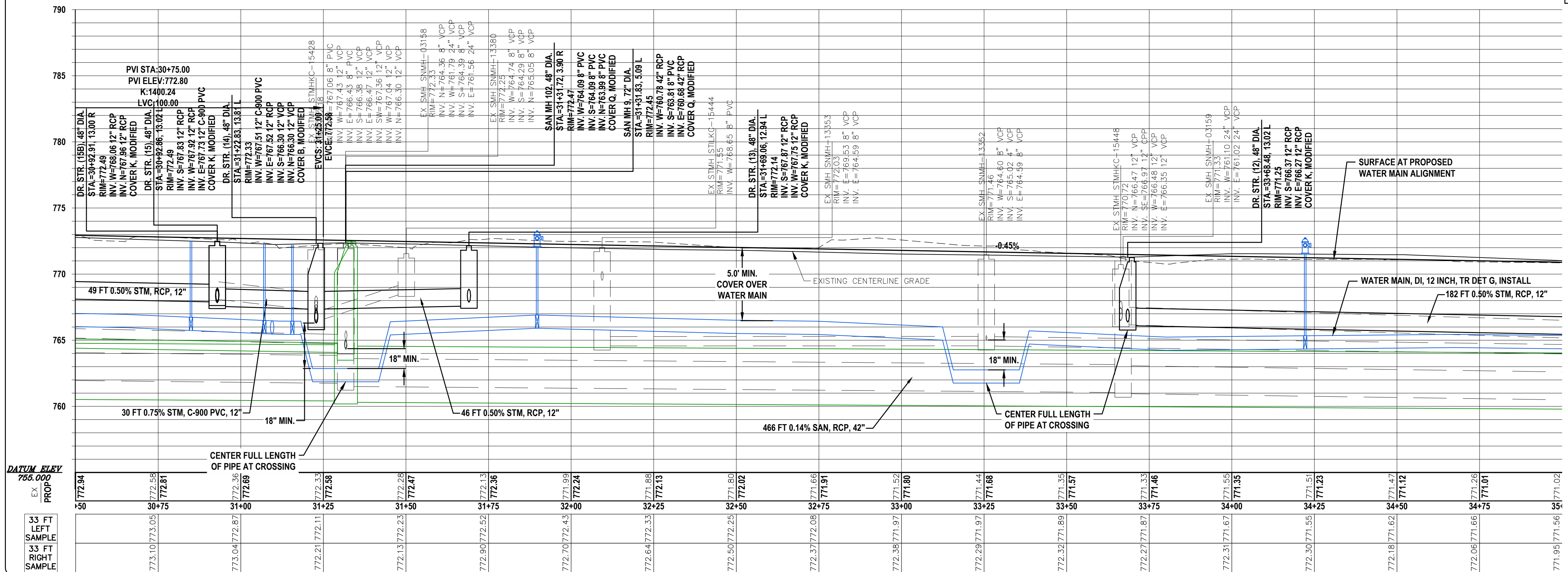
PROPOSED DRIVEWAYS			PROPOSED SANITARY SERVICE REPLACEMENTS		
STATION	DRIVEWAY, NONREINF CONC, 6 INCH (SYD)	DRIVEWAY OPENING, CONC, DET M (FT)	STATION	SERVICE LENGTH (FT)	42" TAP
30+61 R	25	0	30+65 L	25	1
30+68 L	35	0	30+81 R	30	0
32+16 L	35	0	32+83 L	25	1
32+79 L	60	0	33+41 L	25	1
33+62 R	85	105	34+17 R	40	1
34+09 L	40	0			
34+63 L	30	0			

LEGEND

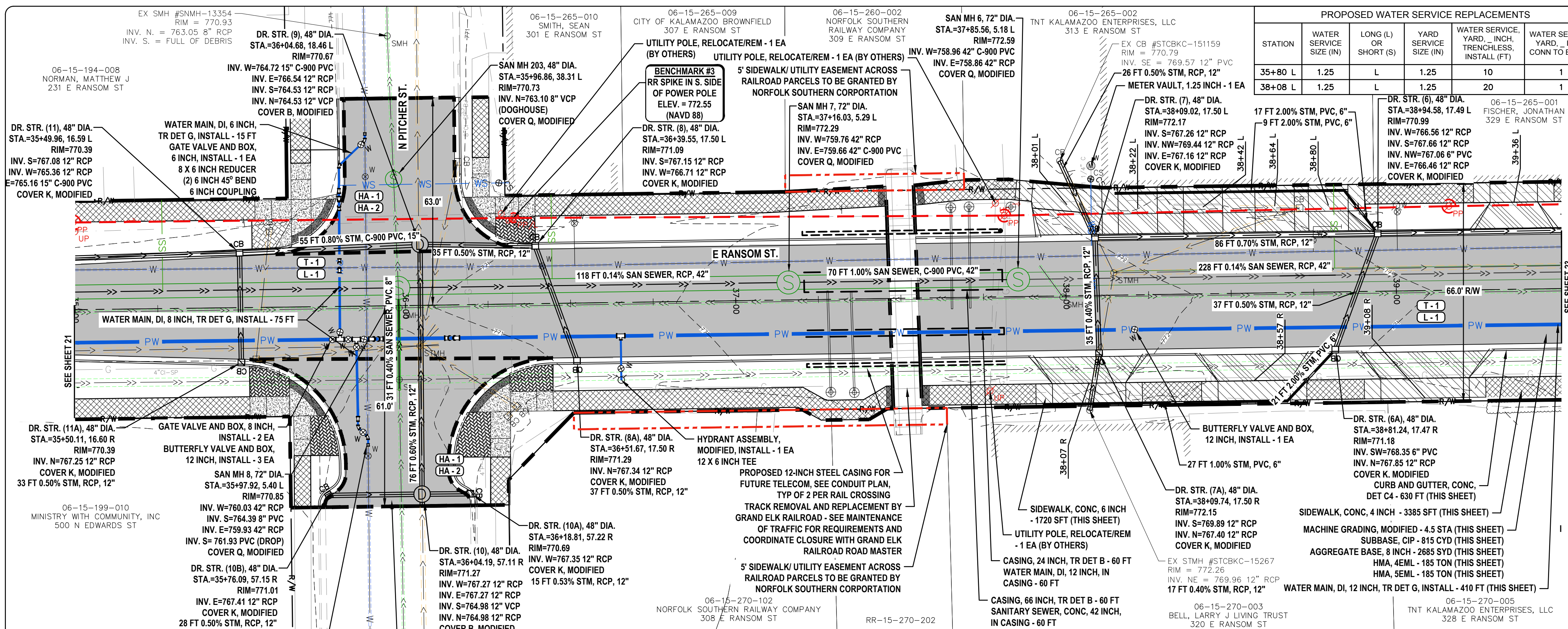
- HMA PAVEMENT
- DRIVEWAY, NONREINF CONC, 6 INCH
- DRIVEWAY, NONREINF CONC, 8 INCH
- CONC PAVT, NONREINF, 8 INCH
- SIDEWALK RAMP, ADA
- BRICK PAVERS, ASPHALT BED, SALVAGED
- MAJOR STREET QUANTITY LIMITS
- CRITICAL TOLERANCE, ENSURE PROPER STRUCTURE CONFIGURATION/ROTATION
- CONC PAVT, NONREINF, 6 INCH
- SIDEWALK, CONC, 6 INCH
- SIDEWALK, CONC, 8 INCH
- SIDEWALK, CONC, 4 INCH
- BRICK PAVERS, SAND BED, SALVAGED
- HMA APPROACH PAVING LIMITS
- PROPOSED ADA TACTILE WARNING AREA

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.



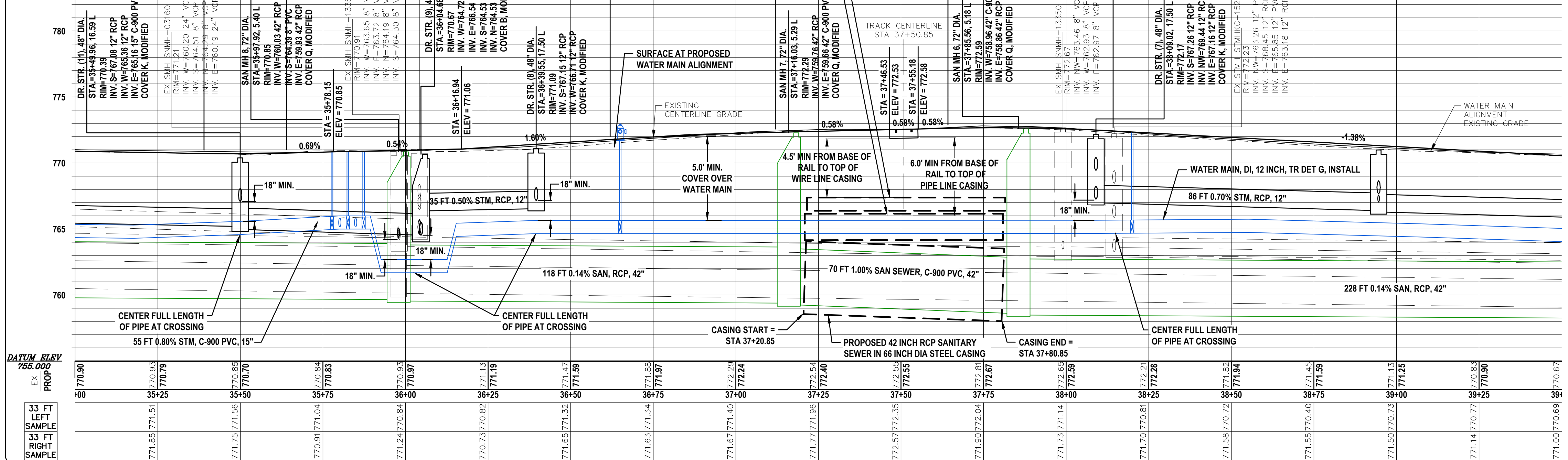
NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22



STATION	WATER SERVICE SIZE (IN)	LONG (L) OR SHORT (S)	YARD SERVICE SIZE (IN)	WATER SERVICE YARD, INCH, TRENCHLESS, INSTALL (FT)	WATER SERVICE YARD, INCH, CONN TO EX (EA)
35+80 L	1.25	L	1.25	10	1
38+08 L	1.25	L	1.25	20	1

STATION/OFFSET	CONFLICT	PROPOSED MITIGATION	PROPOSED SEPARATION
35+50, 10 R	12" WM / PROP CATCH BASIN	CENTER FULL LENGTH OF PIPE AT CATCH BASIN	3' H
35+85, 35 R	6" WM / EX 8" SANITARY SEWER	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	9' H
36+52, 13 R	12" WM / PROP CATCH BASIN	CENTER FULL LENGTH OF PIPE AT CATCH BASIN	3' H
38+10, 14 R	12" WM / PROP CATCH BASIN	CENTER FULL LENGTH OF PIPE AT CATCH BASIN	3' H

THE CITY OF KALAMAZOO ACKNOWLEDGES THAT THESE LOCATIONS DO NOT MEET THE CURRENT 10-STATE STANDARDS SEPARATION REQUIREMENTS FOR SEPARATION OF FACILITIES. ADDITIONAL OPERATION AND MAINTENANCE EFFORTS MAY BE REQUIRED TO MAINTAIN THESE FACILITIES IN SAFE WORKING ORDER.



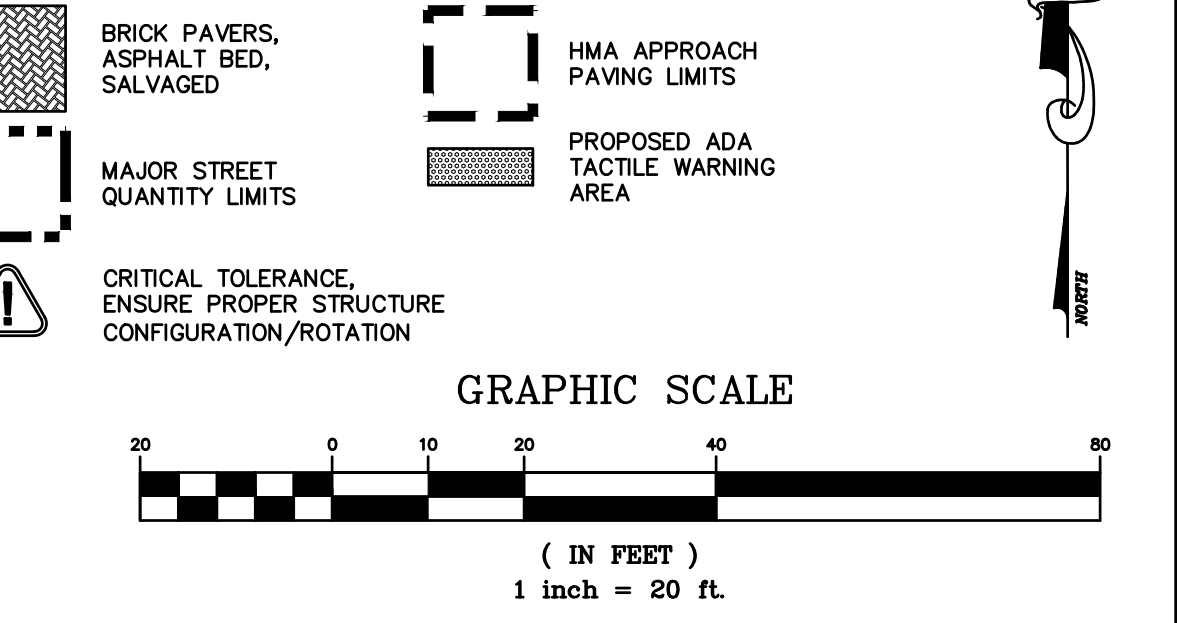
Description	Units	Quantity	Major Street Share
Machine Grading, Modified	Sta	4.5	4.5
Subbase, CIP	Cyd	815	815
Aggregate Base, 6 inch	Syd	33	0
Aggregate Base, 8 inch	Syd	2685	2685
Aggregate Base, 10 inch	Syd	10	0
Sever, CI IV, 12 inch, Tr Det B	Ft	538	538
Sever, C-900 PVC, 15 inch, Tr Det B	Ft	55	55
Sever, PVC, 6 inch, Tr Det B	Ft	74	74
Dr Structure, 48 inch dia	Ea	10	10
Dr Structure, Add Depth of 48 inch dia, 8 foot to 15 foot	Ft	6	6
Trench Drain	Ft	110	110
Dr Structure Cover, Type B, Modified	Ea	2	2
Dr Structure Cover, Type K, Modified	Ea	8	8
HMA Approach	Ton	95	95
HMA, 4EML	Ton	185	185
HMA, 5EML	Ton	185	185
Conc Base Cse, Nonreinf, 6 inch	Syd	33	0
Driveway, Nonreinf, Conc, 6 inch	Syd	180	180
Curb and Gutter, Conc, Det C4	Ft	870	870
Curb Ramp Opening, Conc	Ft	130	130
Sidewalk, Conc, 4 inch	Sft	3385	3385
Sidewalk, Conc, 6 inch	Sft	1720	1720
Curb Ramp, Conc, 6 inch	Sft	975	975
Detectable Warning Surface, Cast Iron	Ft	90	90
Brick Pavers, Asphalt Bed, Salvaged	Sft	297	0
Brick Pavers, Sand Bed, Salvaged	Sft	90	0
Casing, 24 inch, Tr Det B	Ft	60	0
Water Main, DI, 12 inch, in casing	Ft	60	0
Water Main, DI, 12 inch, Tr Det G, Install	Ft	410	0
Water Main, DI, 6 inch, Tr Det G, Install	Ft	25	0
Water Main, DI, 8 inch, Tr Det G, Install	Ft	75	0
Water Service, Yard, 1.25 inch, Trenchless, Install	Ft	30	0
Butterfly Valve and Box, 12 inch, Install	Ea	3	0
Curb Stop and Box, Install	Ea	2	0
Gate Valve and Box, 6 inch, Install	Ea	2	0
Gate Valve and Box, 8 inch, Install	Ea	2	0
Hydrant Assembly, Modified, Install	Ea	1	0
Meter Vault, 1.25 inch	Ea	1	0
Water Serv, Long, 1.25 inch, Install	Ea	2	0
Water Service, Yard, 1.25 inch, Conn to Ex	Ea	2	0
Sanitary Sewer, PVC, 8 inch, Tr Det B2	Ft	31	0
Sanitary Sewer, Serv Lead, PVC, 6 inch	Ft	80	0
Casing, 66 inch, Tr Det B	Ft	70	0
Sanitary Sewer, C-900 PVC, 42 inch, in casing	Ft	70	0
Sanitary Sewer, Conc, 42 inch, Tr Det B, Modified	Ft	380	0
Sanitary Sewer Cleanout Cover	Ea	14	0
Sanitary Sewer Cleanout, 6 inch, Modified	Ea	3	0
Sanitary Sewer, Serv Tap, 42 inch main	Ea	3	0
Sanitary Structure Cover, Type Q, Modified	Ea	4	0
Sanitary Structure, 48 inch dia, Modified	Ea	1	0
Sanitary Structure, 72 inch dia, Modified	Ea	3	0

STATION	DRIVEWAY, NONREINF CONC, 6 INCH (SYD)	DRIVEWAY OPENING, CONC, DET M (FT)
38+01 L	25	0
38+07 R	15	0
38+22 L	15	0
38+42 L	10	0
38+57 R	30	0
38+64 L	15	0
38+80 L	10	0
39+08 R	35	0
39+36 L	25	0

STATION	SERVICE LENGTH (FT)	42" TAP (EA)
35+27 L	25	1
36+45 L	25	1
38+81 L	30	1

LEGEND

- HMA PAVEMENT
- DRIVEWAY, NONREINF CONC, 6 INCH
- DRIVEWAY, NONREINF CONC, 8 INCH
- CONC PAVT, NONREINF, 8 INCH
- SIDEWALK RAMP, ADA
- BRICK PAVERS, ASPHALT BED, SALVAGED
- MAJOR STREET QUANTITY LIMITS
- CRITICAL TOLERANCE, ENSURE PROPER STRUCTURE CONFIGURATION/ROTATION
- CONC PAVT, NONREINF, 6 INCH
- SIDEWALK, CONC, 6 INCH
- SIDEWALK, CONC, 8 INCH
- SIDEWALK, CONC, 4 INCH
- BRICK PAVERS, SAND BED, SALVAGED
- HMA APPROACH PAVING LIMITS
- PROPOSED ADA FACILITY WARNING AREA



ABONMARCHÉ
 Engineering - Architecture - Land Surveying
 295 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 F 269.927.2295
 abonmarche.com

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

PLAN AND PROFILE STA. 35+00 TO 39+50

SHEET TITLE: RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

DRAWN BY: DJL

DESIGNED BY: MJS/ERF

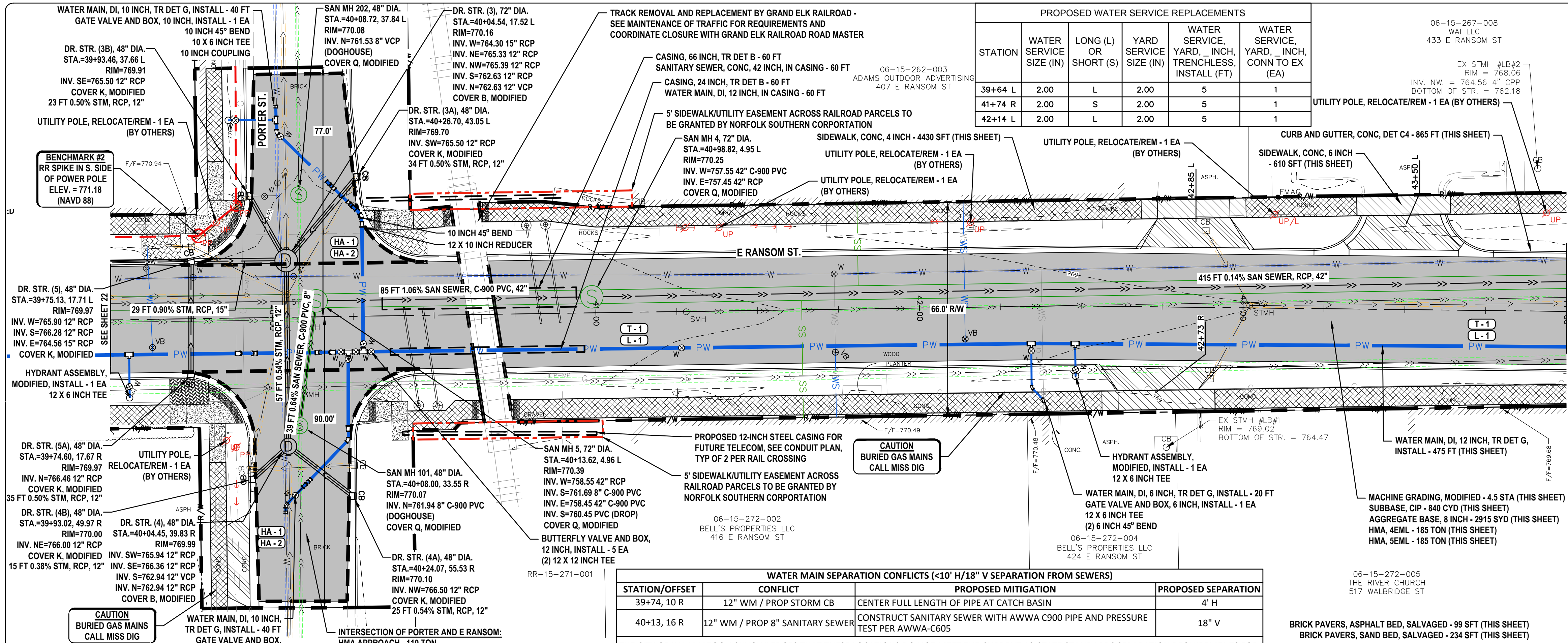
PM REVIEW: DAD

QA/QC REVIEW: DATE: JANUARY 2023

SCALE: HORIZ: 1" = 20' VERT: 1" = 5'

ACI JOB #: 22-0031

SHEET NO.: 22 of 52



PROPOSED WATER SERVICE REPLACEMENTS					
STATION	WATER SERVICE SIZE (IN)	LONG (L) OR SHORT (S)	YARD SERVICE SIZE (IN)	WATER SERVICE YARD, TRENCHLESS, INSTALL (FT)	WATER SERVICE YARD, INCH, CONN TO EX (EA)
39+64 L	2.00	L	2.00	5	1
41+74 R	2.00	S	2.00	5	1
42+14 L	2.00	L	2.00	5	1

WATER MAIN SEPARATION CONFLICTS (<10" H/18" V SEPARATION FROM SEWERS)			
STATION/OFFSET	CONFLICT	PROPOSED MITIGATION	PROPOSED SEPARATION
39+74, 10 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CATCH BASIN	4" H
40+13, 16 R	12" WM / PROP 8" SANITARY SEWER	CONSTRUCT SANITARY SEWER WITH AWWA C900 PIPE AND PRESSURE TEST PER AWWA-C605	18" V

THE CITY OF KALAMAZOO ACKNOWLEDGES THAT THESE LOCATIONS DO NOT MEET THE CURRENT 10-STATE STANDARDS SEPARATION REQUIREMENTS FOR SEPARATION OF FACILITIES. ADDITIONAL OPERATION AND MAINTENANCE EFFORTS MAY BE REQUIRED TO MAINTAIN THESE FACILITIES IN SAFE WORKING ORDER.

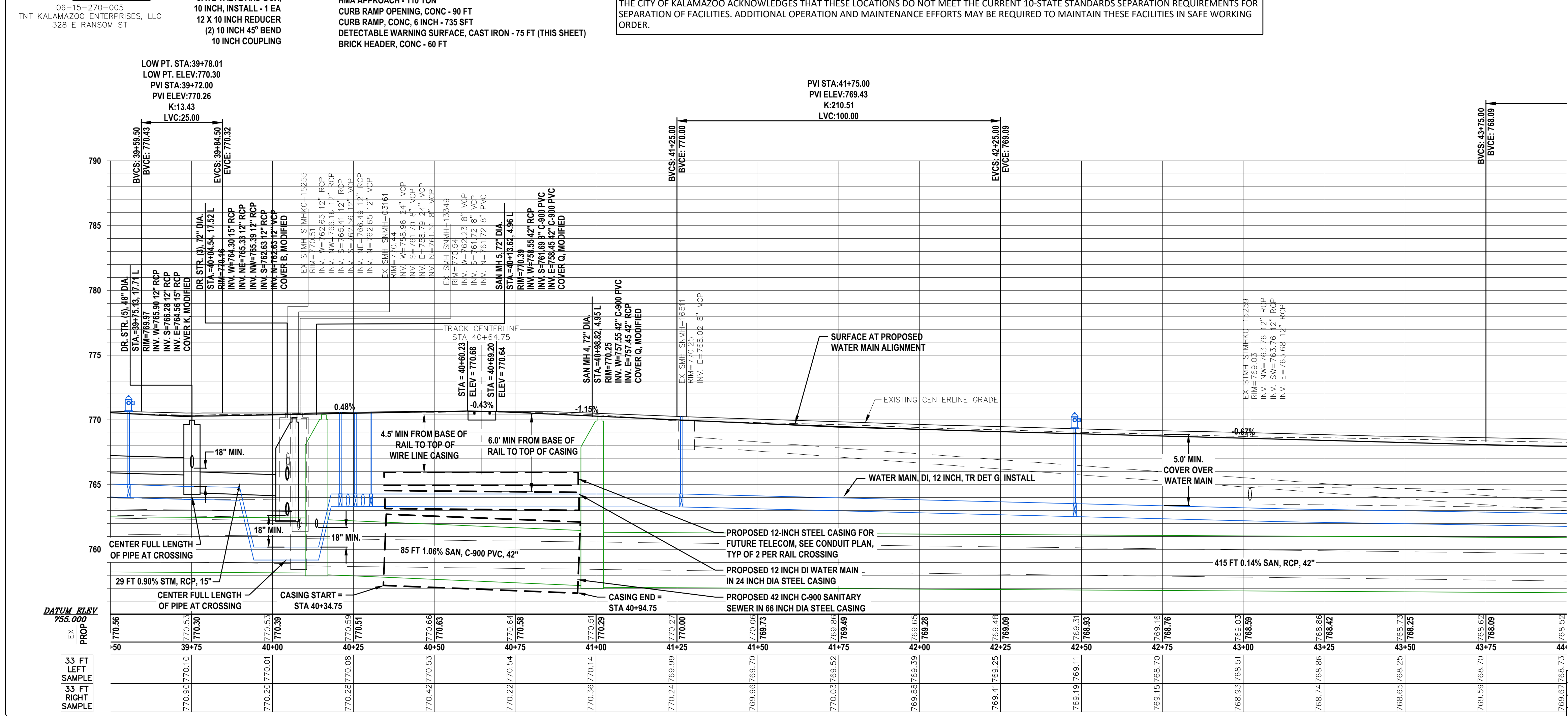
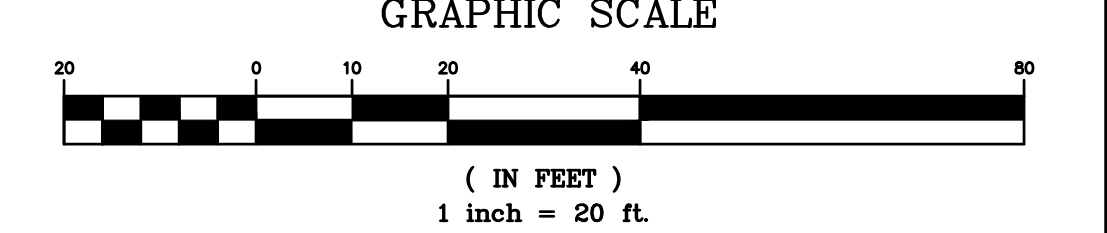
Description	Units	Quantity	Major Street Share
Machine Grading, Modified	Sta	4.5	4.5
Subbase, CIP	Cyd	840	840
Aggregate Base, 6 inch	Syd	11	0
Aggregate Base, 8 inch	Syd	2915	2915
Aggregate Base, 10 inch	Syd	26	0
Sewer, CI IV, 12 inch, Tr Det B	Ft	215	215
Sewer, CI IV, 15 inch, Tr Det B	Ft	29	29
Dr Structure, 48 inch dia	Ea	7	7
Dr Structure, 72 inch dia	Ea	1	1
Dr Structure Cover, Type B, Modified	Ea	2	2
Dr Structure Cover, Type K, Modified	Ea	6	6
HMA Approach	Ton	110	110
HMA, 4EML	Ton	185	185
HMA, 5EML	Ton	185	185
Conc Base Cse, Nonreinf, 6 inch	Syd	11	0
Driveway, Nonreinf Conc, 6 inch	Syd	115	115
Curb and Gutter, Conc, Det C4	Ft	965	965
Driveway Opening, Conc, Det M	Ft	80	80
Brick Header, Conc	Ft	60	60
Curb Ramp Opening, Conc	Ft	90	90
Sidewalk, Conc, 4 inch	Sft	4430	4430
Sidewalk, Conc, 6 inch	Sft	610	610
Curb Ramp, Conc, 6 inch	Sft	735	735
Detectable Warning Surface, Cast Iron	Ft	75	75
Brick Pavers, Asphalt Bed, Salvaged	Sft	99	0
Brick Pavers, Sand Bed, Salvaged	Sft	234	0
Casing, 24 inch, Tr Det B	Ft	60	0
Water Main, DI, 10 inch, Tr Det G, Install	Ft	80	0
Water Main, DI, 12 inch, in casing	Ft	60	0
Water Main, DI, 12 inch, Tr Det G, Install	Ft	475	0
Water Main, DI, 6 inch, Tr Det G, Install	Ft	20	0
Water Service, Yard, 2 inch, Trenchless, Install	Ft	15	0
Butterfly Valve and Box, 12 inch, Install	Ea	5	0
Gate Valve and Box, 10 inch, Install	Ea	2	0
Gate Valve and Box, 6 inch, Install	Ea	1	0
Hydrant Assembly, Modified, Install	Ea	2	0
Valve Box, Install	Ea	3	0
Water Serv, 2 inch, Install	Ea	1	0
Water Serv, Long, 2 inch, Install	Ea	2	0
Water Service, Yard, 2 inch, Conn to Ex	Ea	3	0
Sanitary Sewer, Serv Lead, PVC, 6 inch	Ft	70	0
Casing, 66 inch, Tr Det B	Ft	85	0
Sanitary Sewer, C-900 PVC, 42 inch, in casing	Ft	85	0
Sanitary Sewer, C-900 PVC, 6 inch, Tr Det B2	Ft	39	0
Sanitary Sewer, Conc, 42 inch, Tr Det B, Modified	Ft	365	0
Sanitary Structure, Add Depth of 48 inch dia, 8 ft to 15 ft, Mod	Ft	1	0
Sanitary Structure, Add Depth of 72 inch dia, 8 ft to 15 ft, Mod	Ft	10	0
Sanitary Sewer Cleanout Cover	Ea	2	0
Sanitary Sewer Cleanout, 6 inch, Modified	Ea	2	0
Sanitary Sewer, Service Tap, 42 inch main	Ea	2	0
Sanitary Structure Cover, Type Q, Modified	Ea	4	0
Sanitary Structure, 48 inch dia, Modified	Ea	2	0
Sanitary Structure, 72 inch dia, Modified	Ea	2	0

PROPOSED DRIVEWAYS		
STATION	DRIVEWAY NONREINF CONC, 6 INCH (SYD)	DRIVEWAY OPENING, CONC, DET M (FT)
39+85 R	20	0
42+73 R	30	0
42+85 L	30	0
43+50 L	35	80

PROPOSED SANITARY SERVICE REPLACEMENTS		
STATION	SERVICE LENGTH (FT)	42" TAP (EA)
41+64 R	35	1
41+82 L	35	1

LEGEND

- HMA PAVEMENT
- DRIVEWAY, NONREINF CONC, 6 INCH
- DRIVEWAY, NONREINF CONC, 8 INCH
- CONC PAVT, NONREINF, 8 INCH
- SIDEWALK RAMP, ADA
- BRICK PAVERS, ASPHALT BED, SALVAGED
- MAJOR STREET QUANTITY LIMITS
- CRITICAL TOLERANCE, ENSURE PROPER STRUCTURE CONFIGURATION/ROTATION
- CONC PAVT, NONREINF, 6 INCH
- SIDEWALK, CONC, 6 INCH
- SIDEWALK, CONC, 8 INCH
- SIDEWALK, CONC, 4 INCH
- BRICK PAVERS, SAND BED, SALVAGED
- HMA APPROACH PAVING LIMITS
- PROPOSED ADA TACTILE WARNING AREA



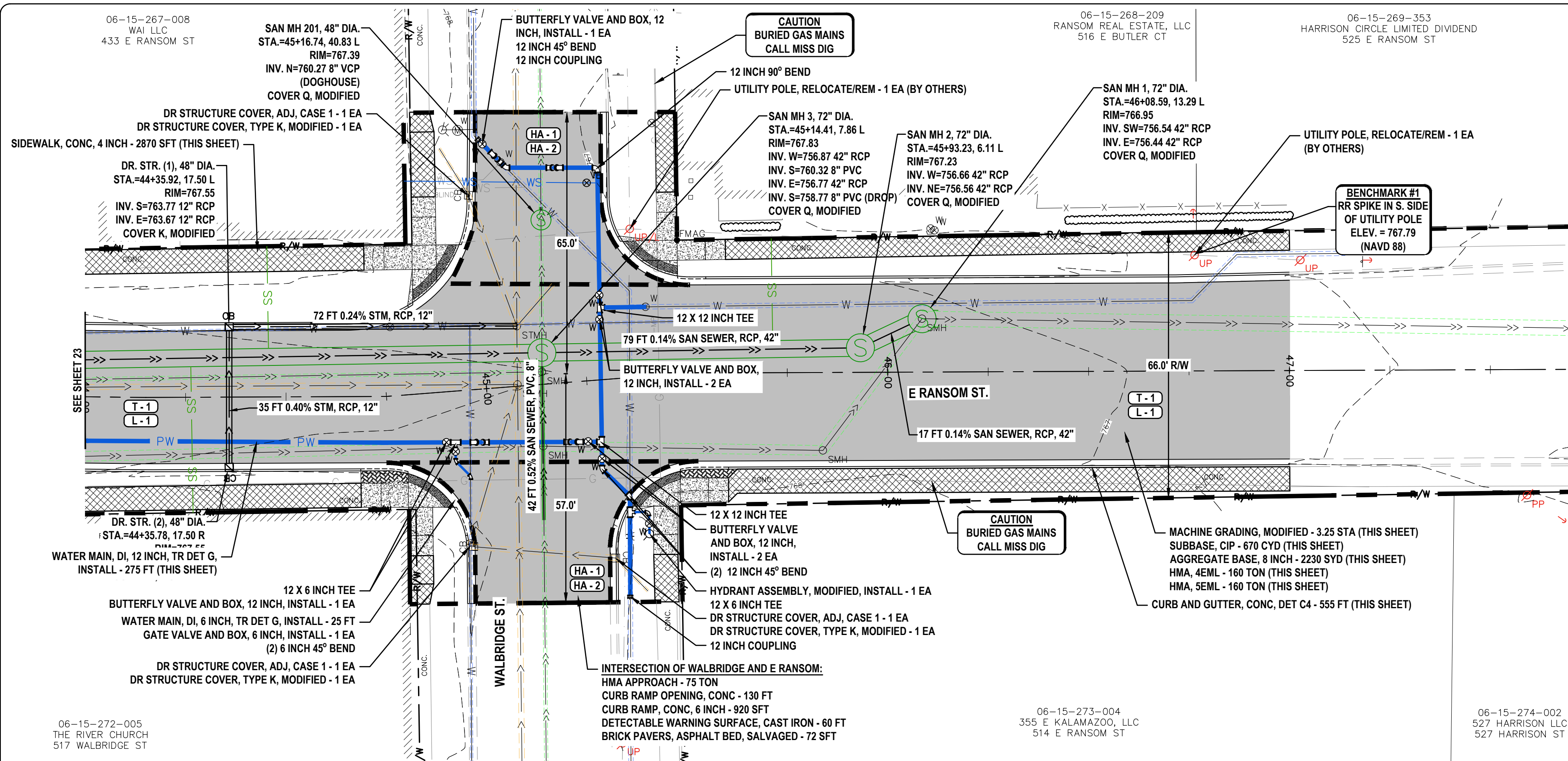
NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGLE PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:		

ABONMARCHÉ
 Engineering - Architecture - Land Surveying
 795 West Main Street
 Benton Harbor, MI 49023
 Phone: 269.927.2295
 Fax: 269.927.2295
 abonmarche.com

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

PLAN AND PROFILE STA. 39+50 TO 44+00

SHEET TITLE:
DRAWN BY: DJL
DESIGNED BY: MJS/ERF
PM REVIEW: DAD
QA/QC REVIEW:
DATE: JANUARY 2023
SCALE:
SIGNATURE:
DATE:
SCALE:
 HORIZ: 1" = 20'
 VERT: 1" = 5'
ACI JOB #: 22-0031
SHEET NO.: 23 of 52



WATER MAIN SEPARATION CONFLICTS (<10' H/18" V SEPARATION FROM SEWERS)			
STATION/OFFSET	CONFLICT	PROPOSED MITIGATION	PROPOSED SEPARATION
44+74, 16 R	12" WM / PROP STORM CB	CENTER FULL LENGTH OF PIPE AT CATCH BASIN	2' H

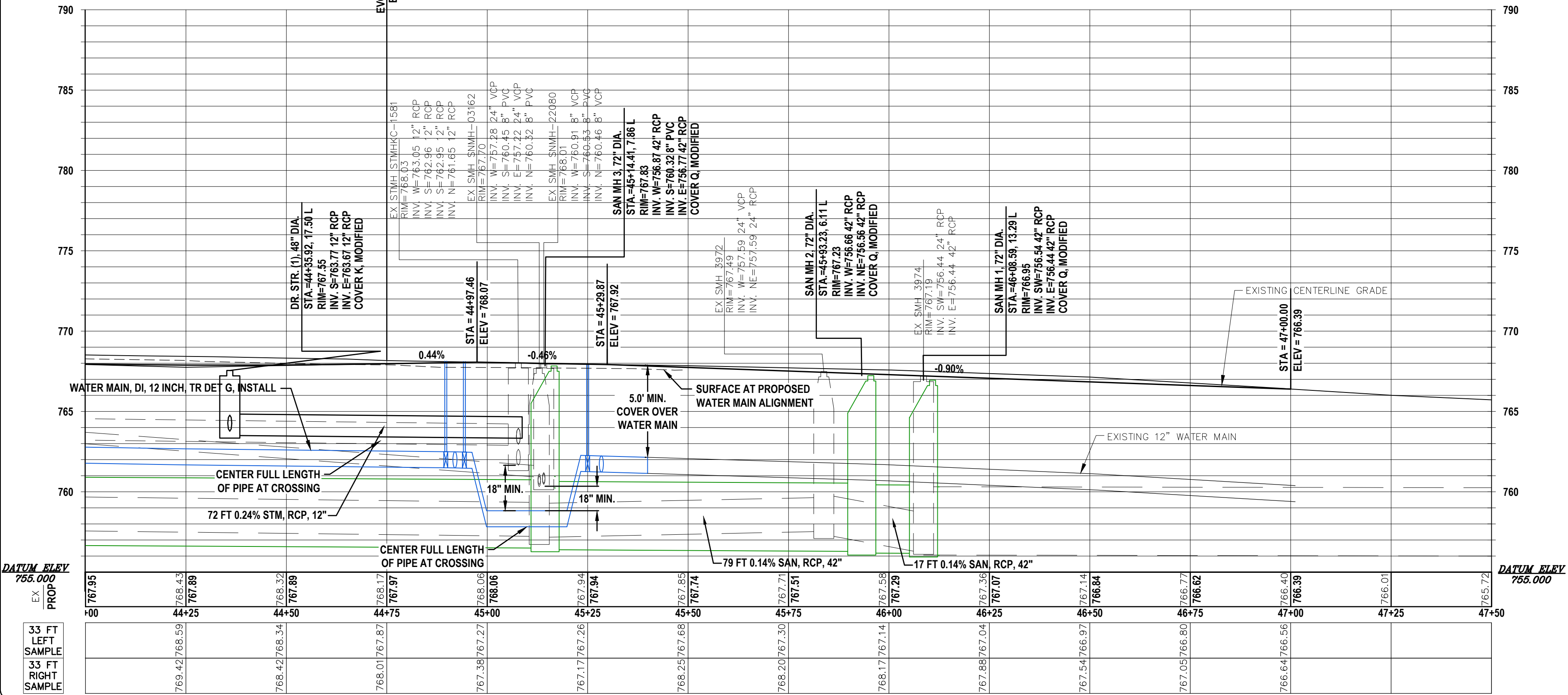
THE CITY OF KALAMAZOO ACKNOWLEDGES THAT THESE LOCATIONS DO NOT MEET THE CURRENT 10-STATE STANDARDS SEPARATION REQUIREMENTS FOR SEPARATION OF FACILITIES. ADDITIONAL OPERATION AND MAINTENANCE EFFORTS MAY BE REQUIRED TO MAINTAIN THESE FACILITIES IN SAFE WORKING ORDER.

LOW PT. STA:44+35.58
 LOW PT. ELEV:767.88
 PVI STA:44+25.00
 PVI ELEV:767.75
 K=90.14
 LVC=100.00

Description	Units	Quantity	Major Street Share
Machine Grading, Modified	Sta	2.75	2.75
Subbase, CIP	Cyd	670	670
Aggregate Base, 8 inch	Syd	8	0
Aggregate Base, 6 inch	Syd	2230	2230
Sewer, CI IV, 12 inch, Tr Det B	Ft	107	107
Dr Structure Cover, Adj, Case 1	Ea	3	3
Dr Structure, 48 inch dia	Ea	2	2
Dr Structure Cover, Type K, Modified	Ea	5	5
HMA Approach	Ton	75	75
HMA, 4SEML	Ton	160	160
HMA, 5EML	Ton	160	160
Conc Base Cas. Nonreinf. 6 inch	Syd	8	0
Curb and Gutter, Conc, Det C4	Ft	555	555
Curb Ramp Opening, Conc	Ft	130	130
Sidewalk, Conc, 4 inch	Sft	2870	2870
Curb Ramp, Conc, 6 inch	Sft	920	920
Detectable Warning Surface, Cast Iron	Ft	60	60
Brick Pavers, Asphalt Bed, Salvaged	Sft	72	0
Water Main, DI, 12 inch, Tr Det G, Install	Ft	300	0
Water Main, DI, 6 inch, Tr Det G, Install	Ft	15	0
Butterfly Valve and Box, 12 inch, Install	Ea	6	0
Gate Valve and Box, 6 inch, Install	Ea	1	0
Hydrant Assembly, Modified, Install	Ea	1	0
Valve Box, Install	Ea	1	0
Water Serv, Long, 2 inch, Install	Ea	1	0
Sanitary Sewer, PVC, 8 inch, Tr Det B2	Ft	42	0
Sanitary Sewer, Serv Lead, PVC, 6 inch	Ft	100	0
Sanitary Sewer, Conc, 42 inch, Tr Det B, Modified	Ft	213	0
Sanitary Structure, Add Depth of 72 inch dia, 8 ft to 15 ft, Mod	Ft	10	0
Sanitary Sewer Cleanout Cover	Ea	3	0
Sanitary Sewer Cleanout, 6 inch, Modified	Ea	3	0
Sanitary Sewer, Service Tap, 42 inch main	Ea	3	0
Sanitary Structure Cover, Type Q, Modified	Ea	4	0
Sanitary Structure, 48 inch dia, Modified	Ea	1	0
Sanitary Structure, 72 inch dia, Modified	Ea	3	0

PROPOSED WATER SERVICE REPLACEMENTS					
STATION	WATER SERVICE SIZE (IN)	LONG (L) OR SHORT (S)	YARD SERVICE SIZE (IN)	WATER SERVICE, YARD, TRENCHLESS, INSTALL (FT)	WATER SERVICE, YARD, CONN TO EX (EA)
45+03 L	2.00	L	2.00	0	0

PROPOSED SANITARY SERVICE REPLACEMENTS		
STATION	SERVICE LENGTH (FT)	42" TAP (EA)
44+27 R	38	1
44+46 L	31	1
45+71 L	31	1



LEGEND

- HMA PAVEMENT
- DRIVEWAY, NONREINF CONC, 6 INCH
- DRIVEWAY, NONREINF CONC, 8 INCH
- CONC PAVT, NONREINF, 8 INCH
- SIDEWALK RAMP, ADA
- BRICK PAVERS, ASPHALT BED, SALVAGED
- MAJOR STREET QUANTITY LIMITS
- CONC PAVT, NONREINF, 6 INCH
- SIDEWALK, CONC, 6 INCH
- SIDEWALK, CONC, 8 INCH
- SIDEWALK, CONC, 4 INCH
- BRICK PAVERS, SAND BED, SALVAGED
- HMA APPROACH PAVING LIMITS
- PROPOSED ADA TACTILE WARNING AREA

GRAPHIC SCALE
 1 inch = 20 ft.

ABONMARCHÉ
 Engineering - Architecture - Land Surveying
 795 West Main Street
 Benton Harbor, MI 49023
 269.927.2295
 abonmarche.com

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

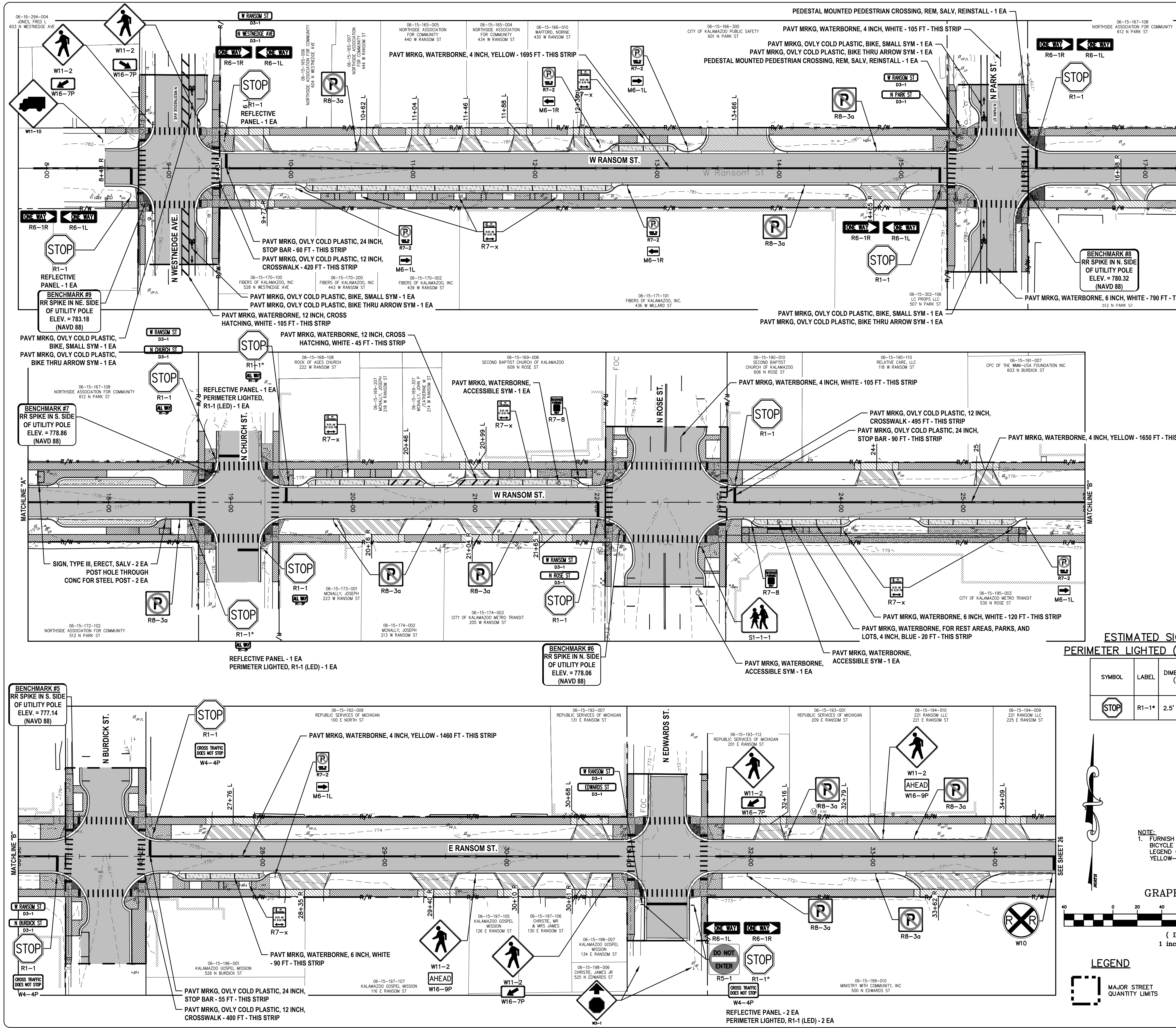
PLAN AND PROFILE STA. 44+00 TO 46+50 (P.O.E.)

DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW: DATE: JANUARY 2023
 SEAL:

SCALE: HORIZ: 1" = 20'
 VERT: 1" = 5'

NO.	REVISION DESCRIPTION	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGLE PERMIT SUBMITTAL	MJS	11/8/22

22-0031
 SHEET NO. 24 of 52



Description	Units	Quantity	Major Street Share
Post Hole Through Conc for Steel Post	Ea	11	4
Post, Steel, 3 pound	Ft	770	364
Sign, Type III, Erect, Salv	Ea	2	0
Sign, Type IIIA	Sft	162	125
Sign, Type IIIB	Sft	217	142
Reflective Panel for Permanent Sign Support, 6 foot	Ea	4	2
Pedestal Mounted Pedestrian Crossing Sign, Rem. Salv. Reinstall	Ea	2	2
Sign, Type III, Perimeter Lighted, R1-1 (LED)	Ea	4	2
Pav't Mrkg, Ovl'y Cold Plastic, 12 inch, Crosswalk	Ft	1315	1090
Pav't Mrkg, Ovl'y Cold Plastic, 24 inch, Stop Bar	Ft	205	145
Pav't Mrkg, Ovl'y Cold Plastic, Bike, Small Sym	Ea	4	4
Pav't Mrkg, Waterborne, 4 inch, White	Ft	210	210
Pav't Mrkg, Waterborne, 4 inch, Yellow	Ft	4805	1580
Pav't Mrkg, Waterborne, 6 inch, White	Ft	990	855
Pav't Mrkg, Waterborne, for Rest Areas, Parks, and Lots, 4 inch, Blue	Ft	20	0
Pav't Mrkg, Ovl'y Cold Plastic, Bike Thru Arrow Sym	Ea	4	4
Pav't Mrkg, Waterborne, 12 inch, Cross hatching, White	Ft	150	105
Pav't Mrkg, Waterborne, Accessible Sym	Ea	3	1

ESTIMATED SIGN TYPE IIIA QUANTITIES

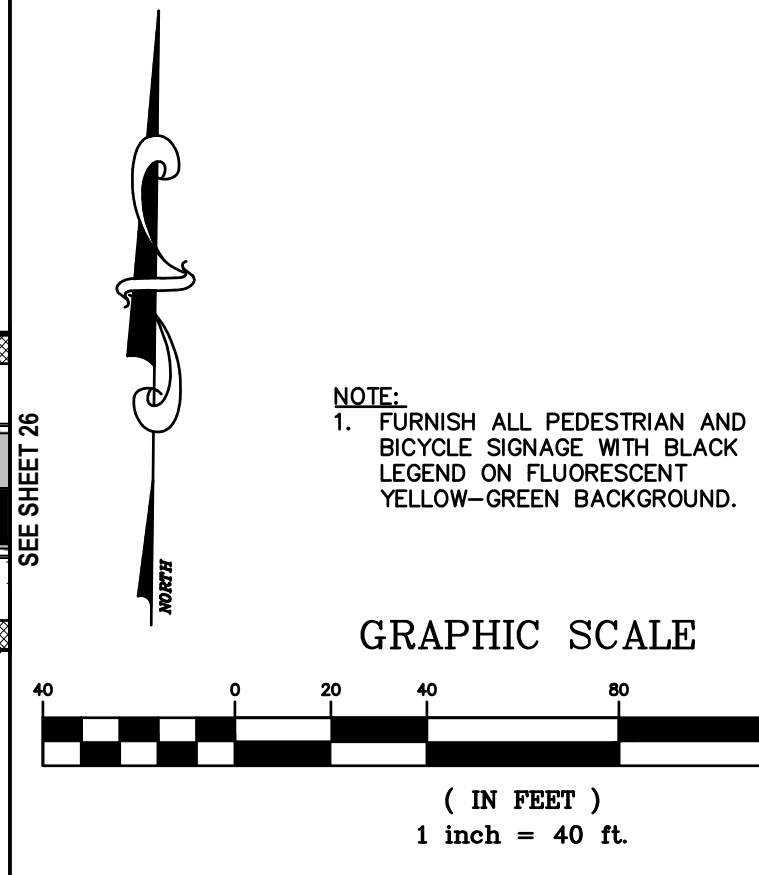
SYMBOL	LABEL	DIMENSION (FT)	AREA (SFT)	COUNT (EA)	QUANTITY (SFT)
W RANSOM ST	D3-1	2.5' x 1.0' DBL SIDED	5.00	6	30
N WESTNEDGE AVE	D3-1	2.5' x 1.0' DBL SIDED	5.00	1	5
N PARK ST	D3-1	2.5' x 1.0' DBL SIDED	5.00	1	5
N CHURCH ST	D3-1	2.5' x 1.0' DBL SIDED	5.00	1	5
N ROSE ST	D3-1	2.5' x 1.0' DBL SIDED	5.00	1	5
N BURDICK ST	D3-1	2.5' x 1.0' DBL SIDED	5.00	1	5
EDWARDS ST	D3-1	2.5' x 1.0' DBL SIDED	5.00	1	5
STOP	R1-1	2.5' x 2.5'	6.25	10	62.50
ALL WAY	R5-1	2.5' x 2.5'	6.25	2	12.50
ALL WAY	R1-3P	1.0' x 0.5'	0.50	4	2.00
TOTAL SIGNAGE (SFT)					137.00

ESTIMATED SIGN TYPE IIIB QUANTITIES

SYMBOL	LABEL	DIMENSION (FT)	AREA (SFT)	COUNT (EA)	QUANTITY (SFT)
P	R8-3	2.0' x 2.0'	4.0	13	52.00
ONE WAY	R6-1L	3.0' x 1.0'	3.0	6	18.00
ONE WAY	R6-1R	3.0' x 1.0'	3.0	6	18.00
WALK	W11-10	3.0' x 3.0'	9	1	9
WALK	S1-1	3.0' x 3.0'	9	1	9
WALK	W11-2	2.5' x 2.5'	6.25	2	12.50
WALK	W11-2 (GREEN)	3.0' x 3.0'	9.00	4	36
WALK	W16-7P	2.0' x 1.0'	2.00	1	2.00
WALK	W16-7P	2.0' x 1.0'	2.00	3	6
WALK	W16-7P	2.0' x 1.0'	2.00	2	4
P	R7-2	1' x 1.5'	1.50	6	9.00
M	M1-6L	1' x 0.75'	0.75	4	3.00
M	M1-6R	1' x 0.75'	0.75	2	1.50
M	R7-8	1' x 1.5'	1.50	2	3.00
M	R7-X	1' x 1.5'	1.50	9	13.50
M	W4-4P	1.0' x 1.5'	1.50	4	6.00
M	W10-1	1.5'	1.50	1	1.50
M	W3-1	2.5' x 2.5'	6.25	2	12.50
TOTAL SIGNAGE (SFT)					216.50

ESTIMATED SIGN TYPE III PERIMETER LIGHTED (LED) QUANTITIES

SYMBOL	LABEL	DIMENSION (FT)	AREA (SFT)	COUNT (EA)
STOP	R1-1*	2.5' x 2.5'	6.25	4



NOTE:
1. FURNISH ALL PEDESTRIAN AND BICYCLE SIGNS WITH BLACK LEGEND ON FLUORESCENT YELLOW-GREEN BACKGROUND.

NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:		

ABONMARCHÉ
 25 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 F 269.927.2295
 abonmarche.com
 Copyright 2023 - abonmarche.com, LLC
 Engineering - Architecture - Land Surveying
 Benton Harbor
 Ft. Wayne
 Coalinga
 South Bend
 Hobart
 Valparaiso

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

PAVEMENT MARKING AND PERMANENT SIGNAGE PLAN - 1

PROJECT TITLE: **PAVEMENT MARKING AND PERMANENT SIGNAGE PLAN - 1**

SHEET TITLE: **PAVEMENT MARKING AND PERMANENT SIGNAGE PLAN - 1**

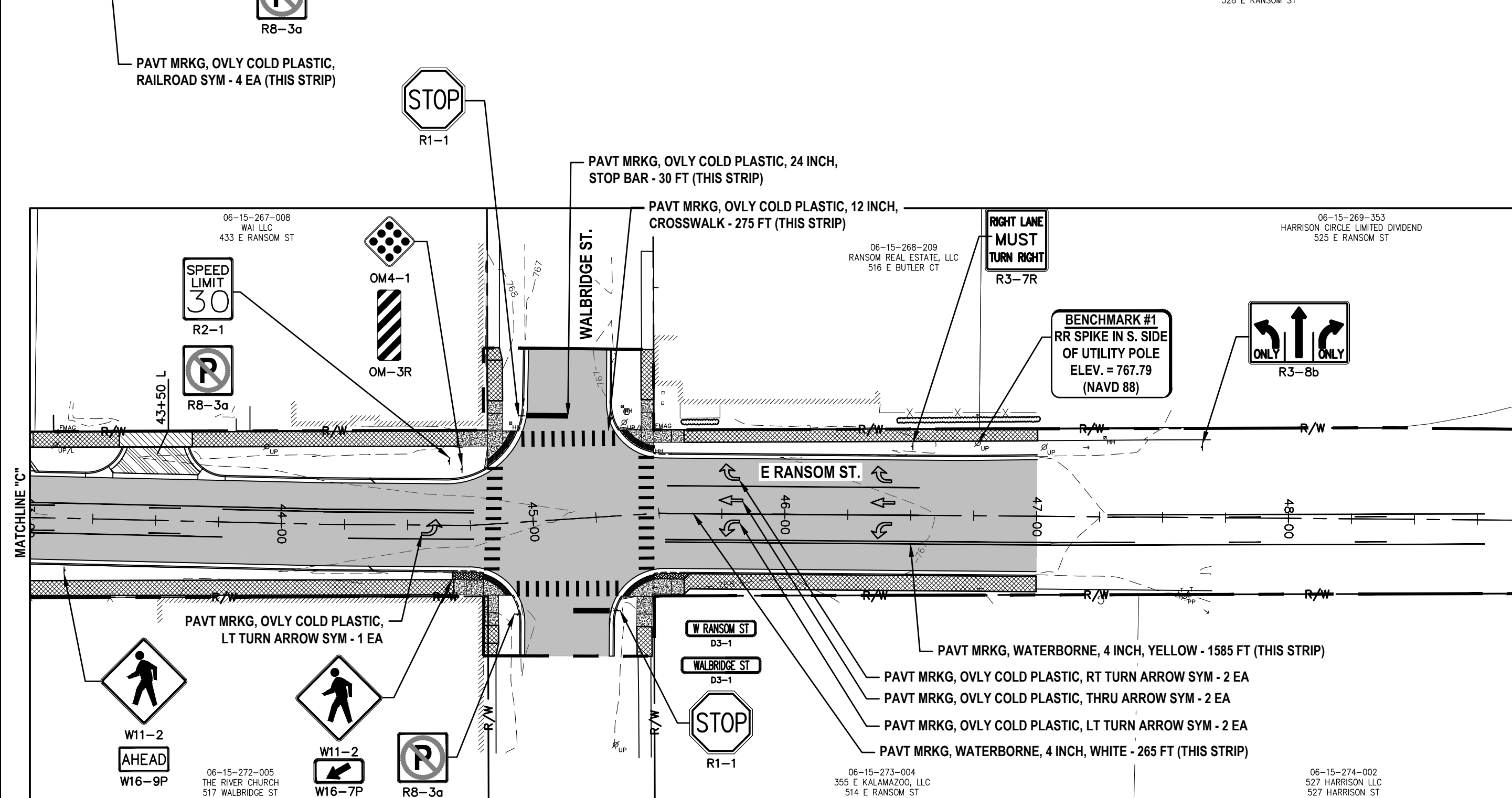
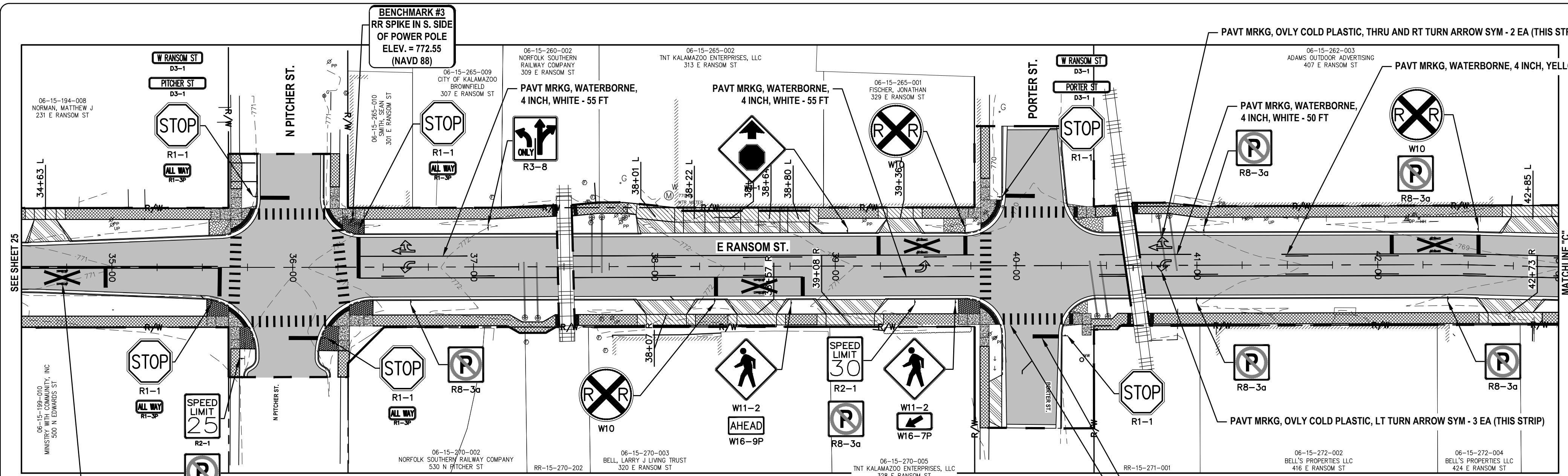
DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW: []

DATE: **JANUARY 2023**

SCALE: HORIZ: 1" = 40'
 VERT: N/A

ACI JOB #: **22-0031**

SHEET NO.: **25 of 52**



Description	Units	Quantity	Major Street Share
Post Hole Through Conc for Steel Post	Ea	3	3
Post, Steel, 3 pound	Ft	380	380
Sign, Type IIIA	Sft	86	86
Sign, Type IIIB	Sft	133	133
Pav't Mrkg, Ovly Cold Plastic, 12 inch, Crosswalk	Ft	720	720
Pav't Mrkg, Ovly Cold Plastic, 24 inch, Stop Bar	Ft	215	215
Pav't Mrkg, Ovly Cold Plastic, Lt Turn Arrow Sym	Ea	6	6
Pav't Mrkg, Ovly Cold Plastic, Railroad Sym	Ea	4	4
Pav't Mrkg, Ovly Cold Plastic, Rt Turn Arrow Sym	Ea	2	2
Pav't Mrkg, Ovly Cold Plastic, Thru and Rt Turn Arrow Sym	Ea	2	2
Pav't Mrkg, Ovly Cold Plastic, Thru Arrow Sym	Ea	2	2
Pav't Mrkg, Waterborne, 4 inch, White	Ft	425	425
Pav't Mrkg, Waterborne, 4 inch, Yellow	Ft	3400	3400

NOTE:
1. FURNISH ALL PEDESTRIAN AND BICYCLE SIGNAGE WITH BLACK LEGEND ON FLUORESCENT YELLOW-GREEN BACKGROUND.

ESTIMATED SIGN TYPE IIIB QUANTITIES

SYMBOL	LABEL	DIMENSION (FT)	AREA (SFT)	QUANTITY (EA)	QUANTITY (SFT)
	R2-1	2.0' x 2.5'	5.0	1	5.00
	R2-1	2.0' x 2.5'	5.0	2	10.00
	R8-3	2.0' x 2.0'	4.0	9	36.00
	W10-1	1.5'	1.50	3	4.50
	R3-8	2.5' x 2.5'	6.25	1	6.25
	W11-2 (GREEN)	3.0' x 3.0'	9.00	4	36
	W16-7P	2.0' x 1.0'	2.00	2	4
	W16-7P	2.0' x 1.0'	2.00	2	4
	OM-3R	1.0' x 2.0'	2.00	1	2
	R3-7R	3.0' x 3.0'	9.00	1	9
	R3-8b	2.5' x 4.0'	10.00	1	10
				TOTAL SIGNAGE (SFT)	133.00

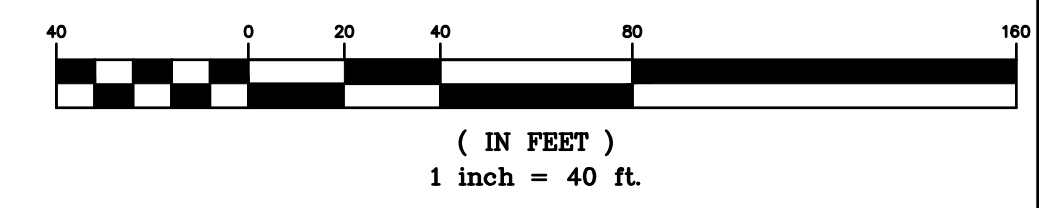
ESTIMATED SIGN TYPE IIIA QUANTITIES

SYMBOL	LABEL	DIMENSION (FT)	AREA (SFT)	COUNT (EA)	QUANTITY (SFT)
	D3-1	2.5' x 1.0' DBL SIDED	5.00	3	15
	D3-1	2.5' x 1.0' DBL SIDED	5.00	1	5
	D3-1	2.5' x 1.0' DBL SIDED	5.00	1	5
	D3-1	2.5' x 1.0' DBL SIDED	5.00	1	5
	R1-1	2.5' x 2.5'	6.25	8	50.00
	R1-3P	1.0' x 0.5'	0.50	4	2.00
	OM4-1	2.0' x 2.0'	4.00	1	4.00
				TOTAL SIGNAGE (SFT)	86.00

LEGEND



GRAPHIC SCALE



ABONMARCHÉ
 795 West Main Street
 Portland, ME 04102
 Tel: 207.797.2295
 Fax: 207.797.2296
 abonmarche.com

Benjamin Hobbes
 Ft. Wayne
 Portland
 South Bend
 Hobart

Engineering - Architecture - Land Surveying

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

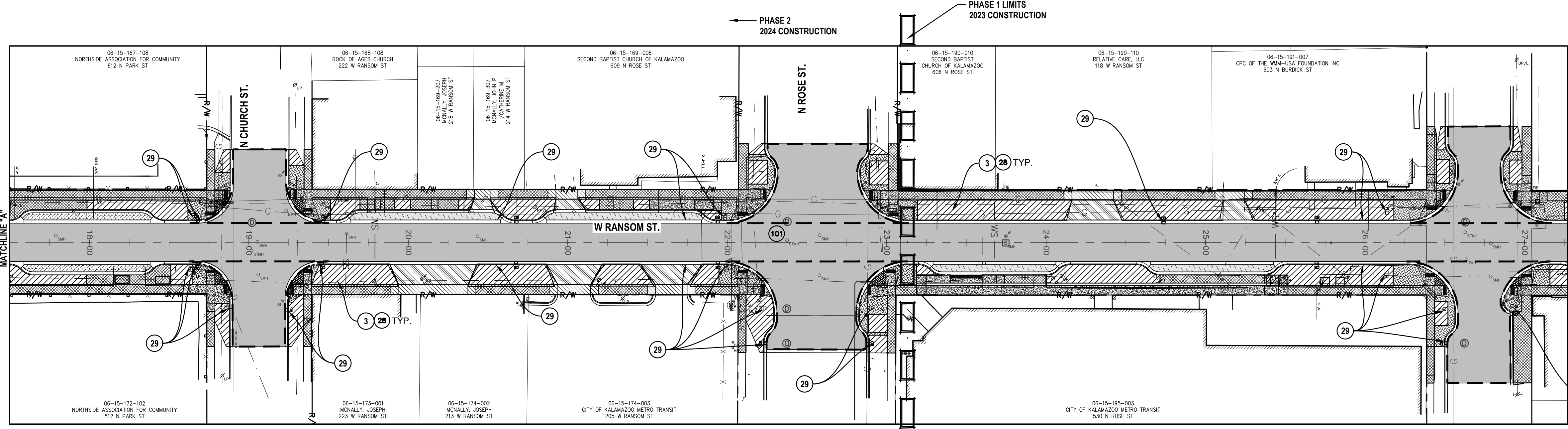
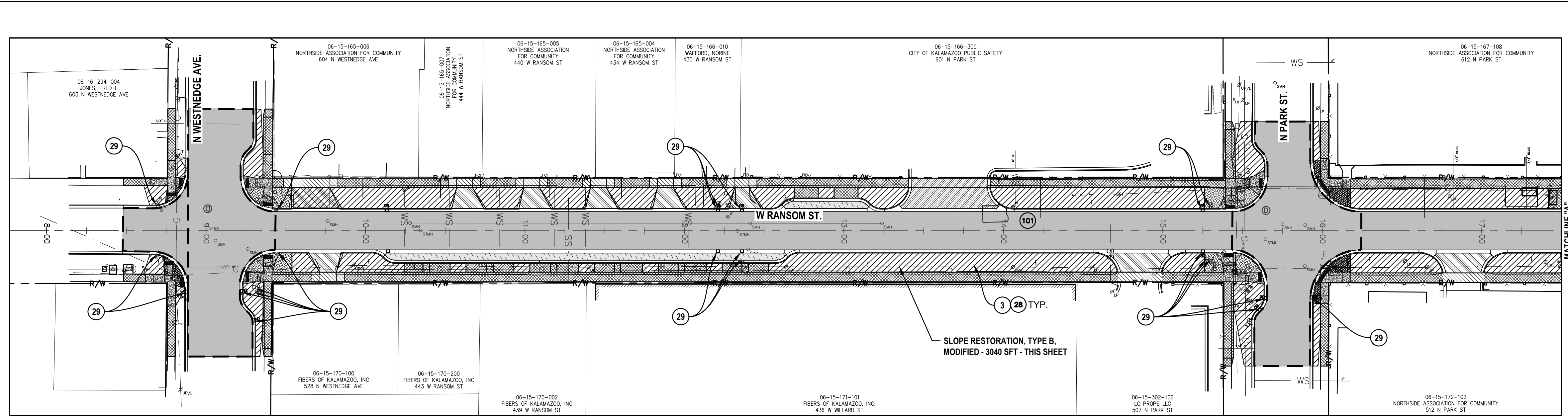
PAVEMENT MARKING AND PERMANENT SIGNAGE PLAN - 2

PROJECT TITLE:
 SHEET TITLE:
 DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:

SIGNATURE:
 DATE:
 SCALE:
 HORIZ: 1" = 40'
 VERT: N/A
 ACI JOB #

22-0031
 SHEET NO. **26 of 52**

NO.	REVISION DESCRIPTION:	MJS	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22



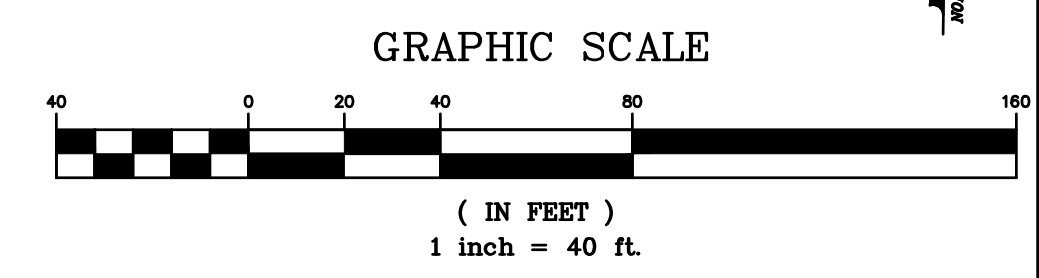
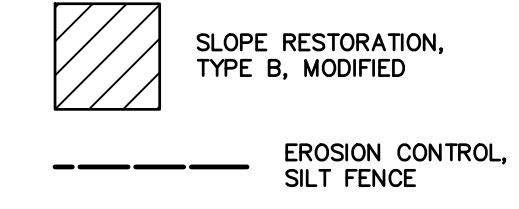
Description	Units	Quantity
Erosion Control, Inlet Protection, Fabric Drop	Ea	49
Water, Sodding/Seeding	Unit	214
Slope Restoration, Type B, Modified	Syd	2935

- NOTE:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR APPLYING FOR AND OBTAINING AN SESC PERMIT FROM THE CITY OF KALAMAZOO
 - ALL APPLICABLE SESC MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBANCE
 - ALL AREAS SHALL BE PERMANENTLY RESTORED WITH SATISFACTORY VEGETATION ESTABLISHED, PRIOR TO THE REMOVAL OF ANY TEMPORARY SESC MEASURES
 - CONTRACTOR SHALL INSPECT SESC MEASURES ON A WEEKLY BASIS, OR WITHIN 24-HOURS OF ANY RAIN EVENT TO ENSURE THEY ARE IN PROPER WORKING ORDER
 - CONTRACTOR SHALL REPAIR/MAINTAIN ALL SESC MEASURES, INCLUDING REMOVAL OF ACCUMULATED SEDIMENTS, TO ENSURE THEY ARE IN PROPER WORKING ORDER

TOTAL AREA OF DISTURBANCE	
PHASE	QUANTITY (ACRES)
1	4.20
2	2.73

APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES	
KEY	DESCRIPTION
3	PERMANENT/ TEMPORARY SEEDING
28	EROSION CONTROL, SILT FENCE
28	MULCHING AND MULCH ANCHORING
28	EROSION CONTROL, INLET PROTECTION, FABRIC DROP
101	PAVEMENT

LEGEND



3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:

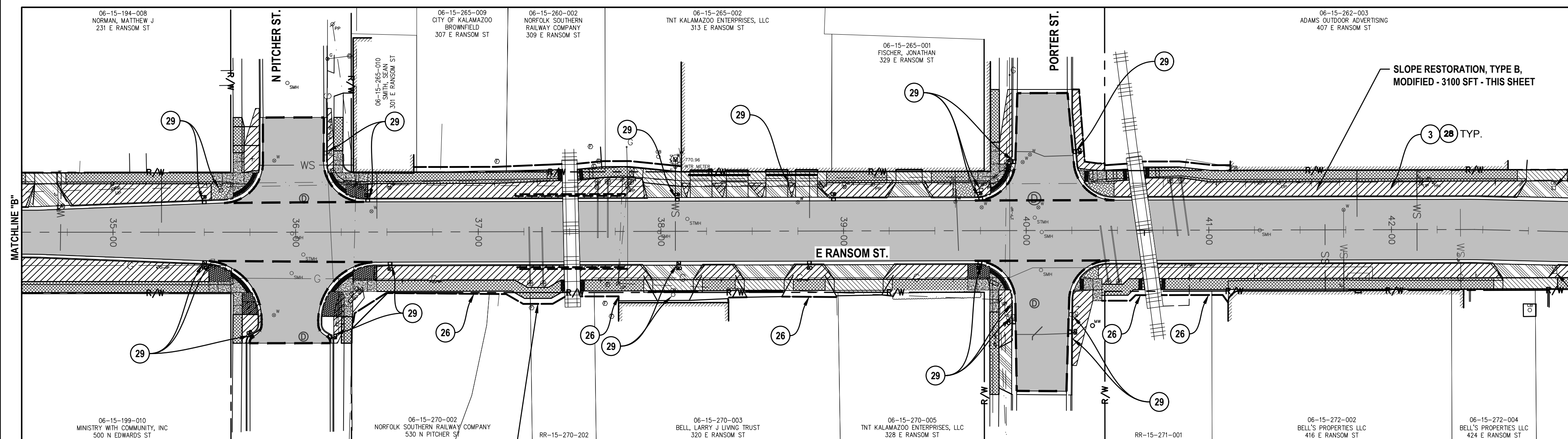
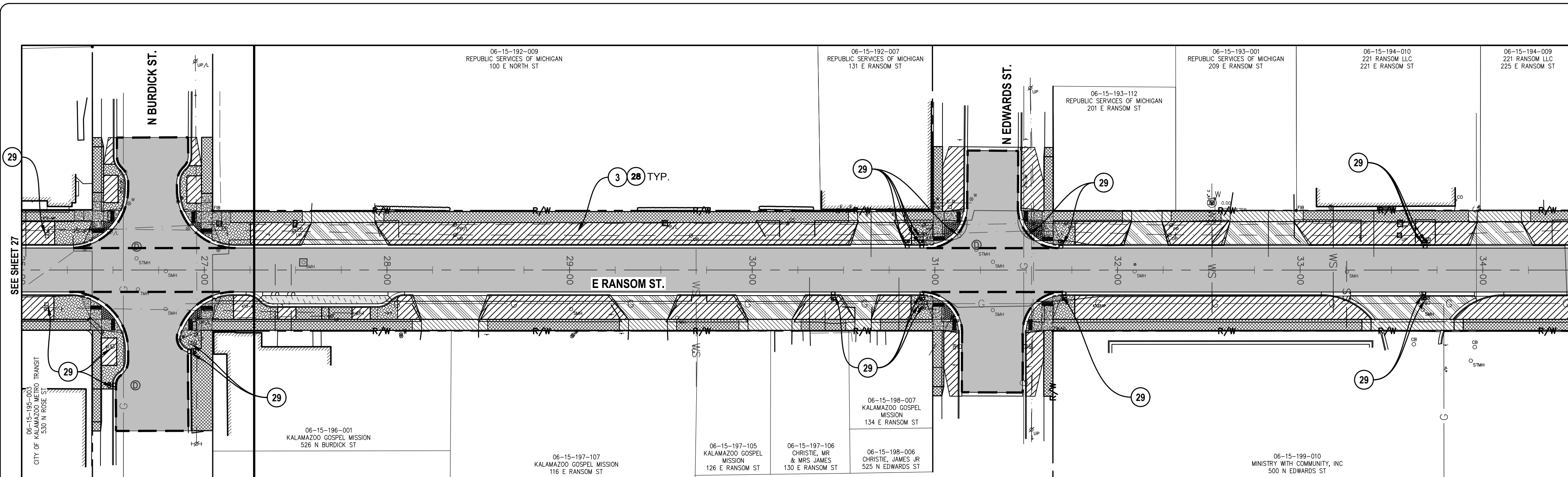
ABONMARCHÉ
 795 West Main Street
 Benton Harbor, MI 49703
 T 269.927.2295
 F 269.927.2295
 abonmarche.com
 Engineering - Architecture - Land Surveying

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

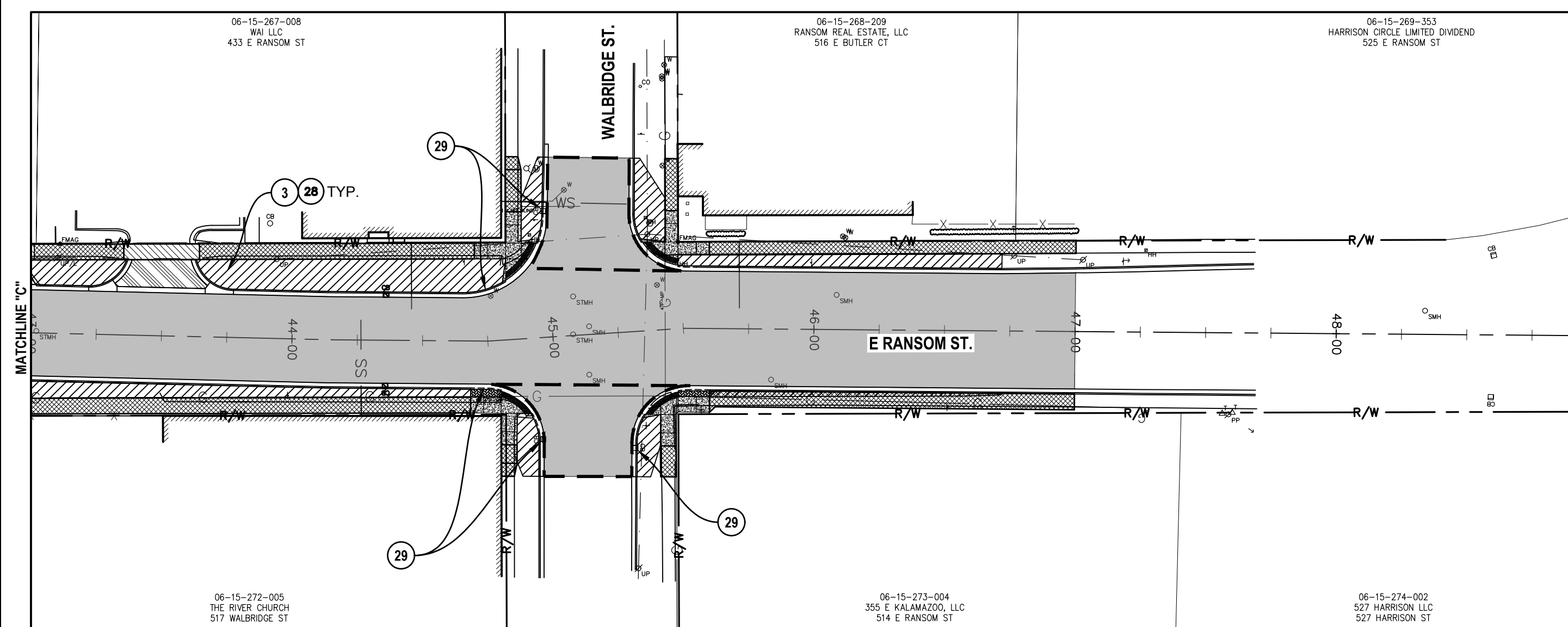
SOIL EROSION AND SEDIMENTATION PLAN PHASE 2

SHEET TITLE:
 DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:
 SIGNATURE:
 DATE:
 SCALE:
 HORZ: 1" = 40'
 VERT: N/A
 ACI JOB #
22-0031
 SHEET NO. **27 of 52**

C:\Project\2022\220031\220031.dwg, 01/06/2023 10:14:14 AM, 1:1



EROSION CONTROL, SILT FENCE - 1460 SFT - THIS SHEET



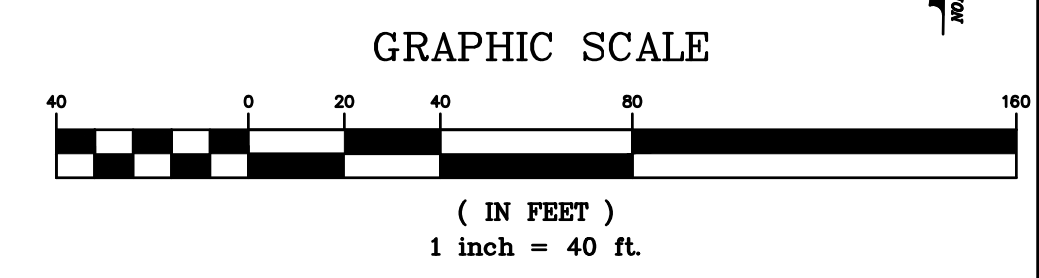
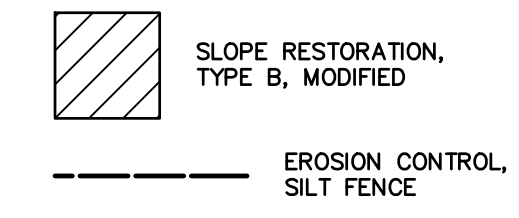
Description	Units	Quantity
Erosion Control, Inlet Protection, Fabric Drop	Ea	52
Erosion Control, Silt Fence	Ft	535
Slope Restoration, Type B, Modified	Syd	3155

- NOTE:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR APPLYING FOR AND OBTAINING AN SESC PERMIT FROM THE CITY OF KALAMAZOO
 - ALL APPLICABLE SESC MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBANCE
 - ALL AREAS SHALL BE PERMANENTLY RESTORED WITH SATISFACTORY VEGETATION ESTABLISHED, PRIOR TO THE REMOVAL OF ANY TEMPORARY SESC MEASURES
 - CONTRACTOR SHALL INSPECT SESC MEASURES ON A WEEKLY BASIS, OR WITHIN 24-HOURS OF ANY RAIN EVENT TO ENSURE THEY ARE IN PROPER WORKING ORDER
 - CONTRACTOR SHALL REPAIR/MAINTAIN ALL SESC MEASURES, INCLUDING REMOVAL OF ACCUMULATED SEDIMENTS, TO ENSURE THEY ARE IN PROPER WORKING ORDER

TOTAL AREA OF DISTURBANCE	
PHASE	QUANTITY (ACRES)
1	4.20
2	2.73

APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES	
KEY	DESCRIPTION
3	PERMANENT/ TEMPORARY SEEDING
26	EROSION CONTROL, SILT FENCE
28	MULCHING AND MULCH ANCHORING
29	EROSION CONTROL, INLET PROTECTION, FABRIC DROP
101	PAVEMENT

LEGEND



3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:

ABONMARCHÉ
 785 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 F 269.927.2295
 abonmarche.com
 Copyright 2023 - abonmarche.com, LLC
 Engineering - Architecture - Land Surveying
 Lori Goyette
 Portage
 South Bend
 Valparaiso
 Hobart

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

SOIL EROSION AND SEDIMENTATION PLAN PHASE 1

PROJECT: RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO
 SHEET TITLE: SOIL EROSION AND SEDIMENTATION PLAN PHASE 1
 DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:
 SIGNATURE:
 DATE:
 SCALE:
 HORIZ: 1" = 40'
 VERT: N/A
 ACI JOB #

22-0031
 SHEET NO. **28** of **52**



LOCATION MAP
NOT TO SCALE

MAINTAINING TRAFFIC NOTES:

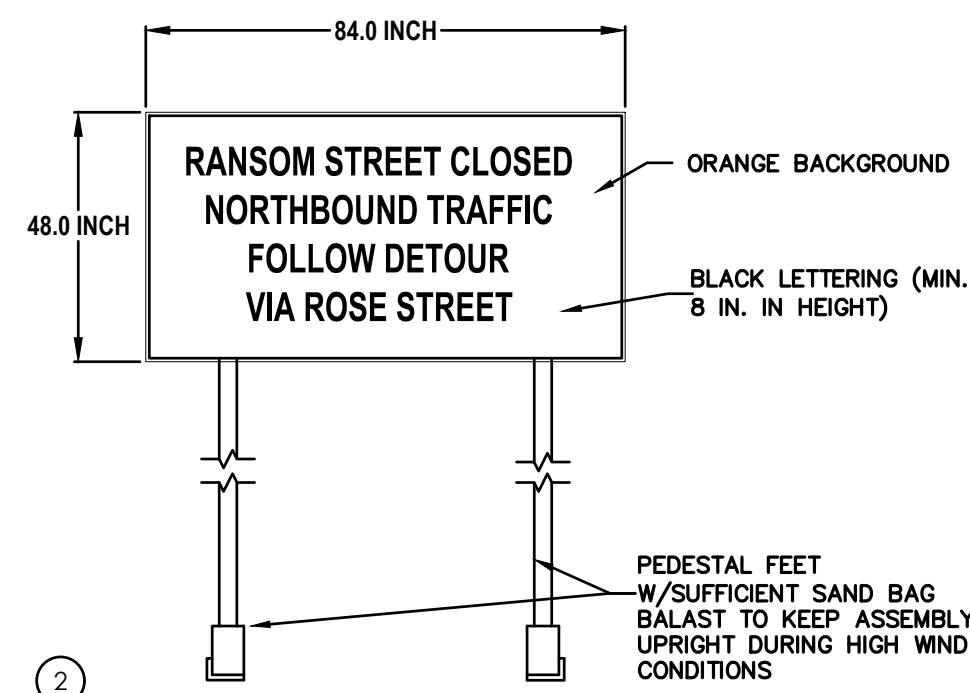
- THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS AND OTHER NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE MUTCD 2011 AND THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- TRAFFIC SHALL BE MAINTAINED TO ALL LOCAL RESIDENCES.
- ALL WARNING SIGNS SHALL BE TYPE B, PRISMATIC.
- SIGNS WHICH ARE NO LONGER NEEDED SHALL BE COLLECTED AND STOCKPILED AT A LOCATION DESIGNATED BY THE ENGINEER WITHIN TWO WORKING DAYS.
- MDOT TYPICAL DETAIL 101-GEN-SPACING-CHARTS, 102-GEN-NOTES SHALL BE USED DURING CONSTRUCTION FOR TEMPORARY LANE CLOSURES ON CITY STREETS.
- "MAINTENANCE GRAVEL, LM, MODIFIED" HAS BEEN PROVIDED TO FACILITATE THE MAINTENANCE OF TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR SHALL CONSIDER THIS QUANTITY TO BE A MAXIMUM ALLOWANCE FOR THIS ITEM. ANY ADDITIONAL MATERIAL BEYOND THE STATED QUANTITY SHALL BE CONSIDERED TO BE PROVIDED AT THE CONTRACTORS EXPENSE AND NO ADDITIONAL PAYMENT BY THE CITY SHALL BE MADE.
- THE PROJECT SHALL BE PHASED BY THE CONTRACTOR TO ENSURE THAT ACCESS TO DRIVEWAYS AND SIDE STREETS IS PROVIDED AT ALL TIMES DURING CONSTRUCTION EXCEPT FOR WHEN WORK IS BEING COMPLETED IMMEDIATELY IN FRONT OF THE AFOREMENTIONED ITEMS. CONTRACTOR SHALL ENSURE ACCESS TO RESIDENCES TO RESTORED AT THE END OF EACH WORKING DAY.
- WHERE TEMPORARY TWO-WAY TRAFFIC PATTERNS ARE IN EFFECT, PLACE TWO-WAY (W6-3) AT P.O.B. ALL SIGNALIZED INTERSECTIONS, AND AS DIRECTED BY THE ENGINEER TO ALLOW TWO-WAY TRAFFIC.
- WHERE TEMPORARY TWO-WAY TRAFFIC PATTERNS ARE IN EFFECT, BAG ALL EXISTING ONE-WAY (R6-1) SIGNS UNTIL THE ONE-WAY TRAFFIC PATTERN IS RESTORED.
- PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE IN PLACE AND OPERATIONAL A MINIMUM OF 2-WEEKS PRIOR TO THE START OF ANY NEW DETOUR OR TRAFFIC PATTERN.
- ONLY INSTALL TYPE III BARRICADES TO CLOSE ROAD IN ACTIVE WORK ZONES. REFER TO THE MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR LIMITATIONS ON ACTIVE WORK ZONE LIMITS IN A GIVEN PHASE.

ESTIMATED SIGN, TYPE B, TEMP, PRISMATIC, SPECIAL BLACK LEGEND ON ORANGE BACKGROUND QUANTITIES

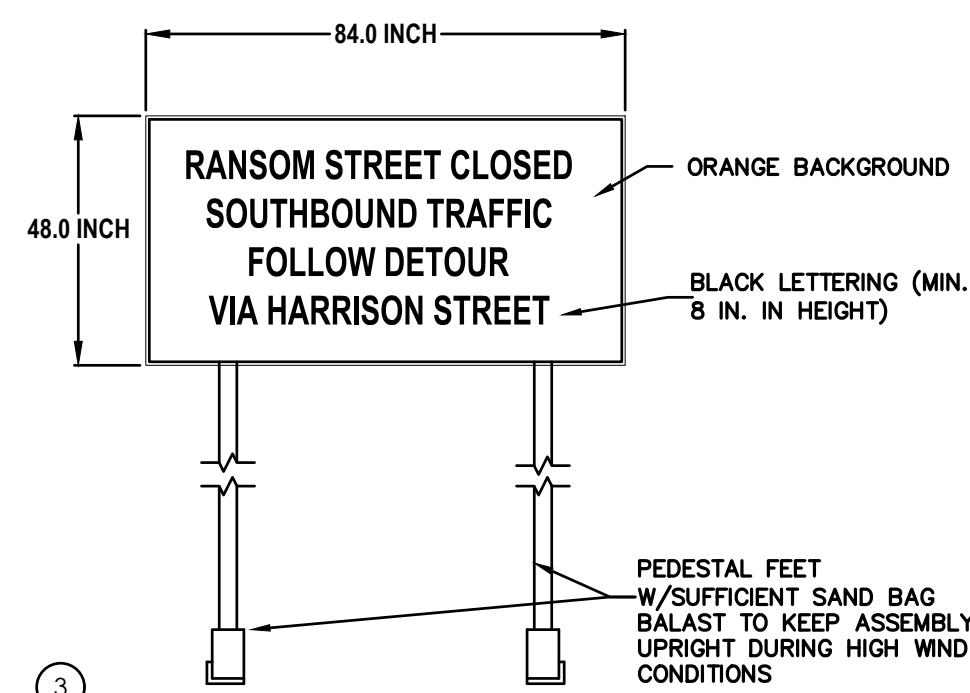
SYMBOL	LABEL	DIMENSION (FT)	AREA (SFT)	DETOUR 1 QUANTITY (EA)	DETOUR 2 QUANTITY (EA)	QUANTITY (SFT)	
1	RANSOM ST	D3-1	2' x 0.5'	1.0	35	28	35.00
2	SPECIAL	2.0' x 0.5'	28.0	1	0	0	28.00
3	SPECIAL	2.0' x 0.5'	28.0	1	0	0	28.00
TOTAL SIGNAGE (SFT)						91.00	

ESTIMATED SIGN, TYPE B, TEMP, PRISMATIC BLACK LEGEND ON ORANGE BACKGROUND QUANTITIES

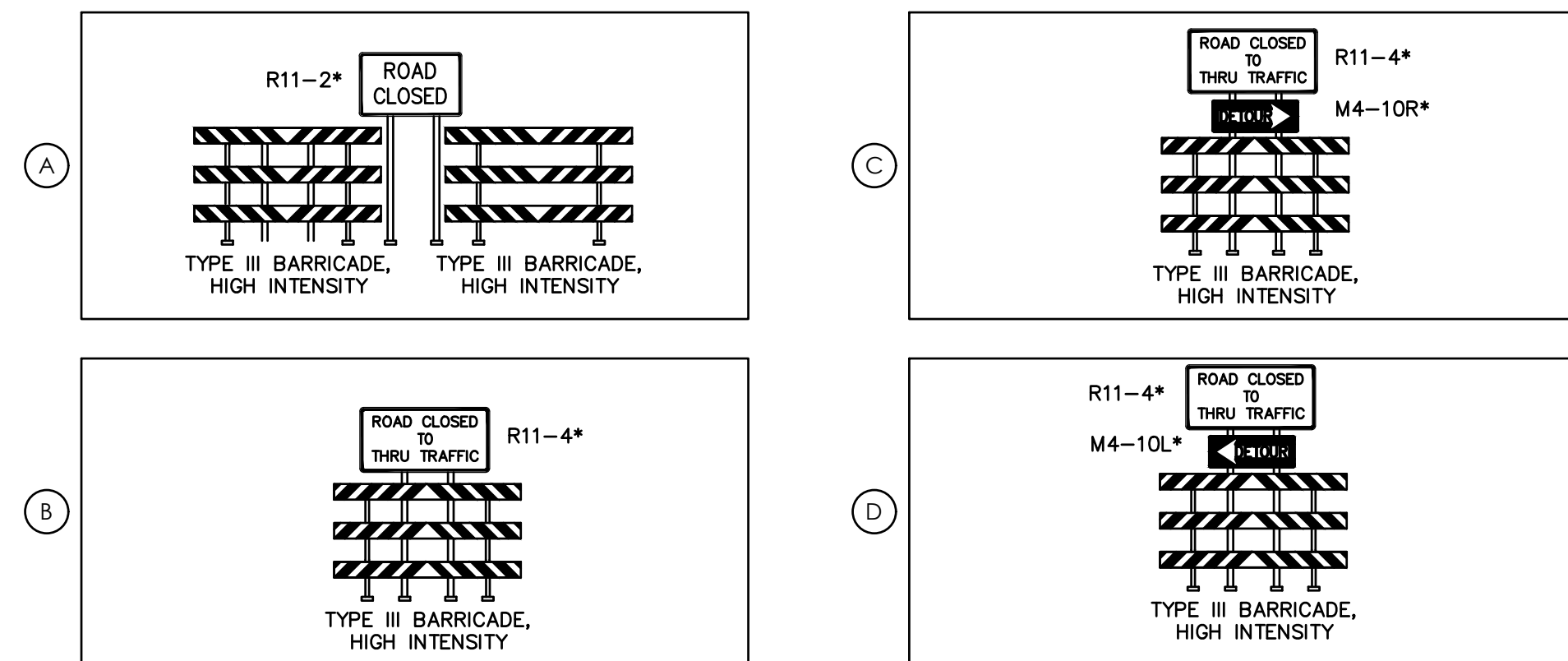
SYMBOL	LABEL	DIMENSION (FT)	AREA (SFT)	DETOUR 1 QUANTITY (EA)	DETOUR 2 QUANTITY (EA)	QUANTITY (SFT)
4	ROAD CLOSED	R11-2*	4' x 2.5'	12	10	120.00
5	ROAD CLOSED THRU TRAFFIC	R11-4*	5' x 2.5'	1	1	12.50
6	END DETOUR	M4-8a	2' x 1.5'	3	2	9.00
7	DETOUR AHEAD	W20-2	4' x 4'	11	5	176.00
8	DETOUR	M4-9	2.5' x 2'	7	14	70.00
9	DETOUR	M4-9L	2.5' x 2'	7	4	35.00
10	DETOUR	M4-9R	2.5' x 2'	8	5	40.00
11	DETOUR	M4-10L	4.0' x 1.5'	2	1	12.00
12	DETOUR	W6-3	3.0' x 3.0'	2	0	18.00
13	DETOUR	R3-2	2.0' x 2.0'	0	0	0.00
14	ONE WAY	R6-1R	3.0' x 1.0'	0	0	0.00
15	ONE WAY	R6-1L	3.0' x 1.0'	0	0	0.00
16	DETOUR	M4-9KR	2.5' x 2.5'	0	0	0.00
17	DETOUR	M4-10L	4.0' x 1.5'	0	1	6.00
TOTAL SIGNAGE (SFT)						498.50



2. TEMPORARY ROAD CLOSURE SIGNAGE DETAIL
NOT TO SCALE

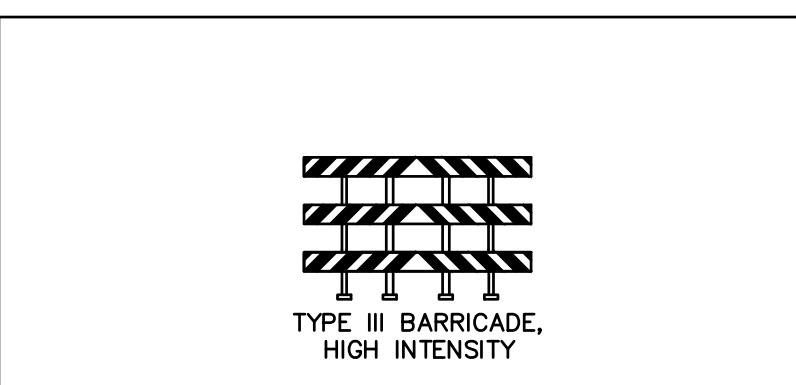


3. TEMPORARY ROAD CLOSURE SIGNAGE DETAIL
NOT TO SCALE



LEGEND

- BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED
- SIGN, TYPE B, TEMP
- PLASTIC DRUM, HIGH INTENSITY
- PRIMARY DETOUR ROUTE



*NOTE: MOUNT SIGNS ON SEPARATE SUPPORTS

NO.	REVISION DESCRIPTION:	MJS	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

PROJECT:

**VEHICULAR DETOUR PLAN
PHASE 1**

SHEET TITLE:

DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:

SIGNATURE:

DATE:

SCALE:
 HORIZ: NTS
 VERT: N/A

ACI JOB #

22-0031

SHEET NO.

29 of 52



LOCATION MAP
NOT TO SCALE

LEGEND

- PEDESTRIAN, TYPE II BARRICADE, TEMP
- SIGN, TYPE B, TEMP
- PLASTIC DRUM, HIGH INTENSITY
- PRIMARY DETOUR ROUTE

MAINTAINING TRAFFIC NOTES:

1. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS AND OTHER NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE MMUTCD 2011 AND THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. TRAFFIC SHALL BE MAINTAINED TO ALL LOCAL RESIDENCES.
3. ALL WARNING SIGNS SHALL BE TYPE B, PRISMATIC.
4. SIGNS WHICH ARE NO LONGER NEEDED SHALL BE COLLECTED AND STOCKPILED AT A LOCATION DESIGNATED BY THE ENGINEER WITHIN TWO WORKING DAYS.
5. THE PROJECT SHALL BE PHASED BY THE CONTRACTOR TO ENSURE THAT ACCESS TO DRIVEWAYS AND SIDE STREETS IS PROVIDED AT ALL TIMES DURING CONSTRUCTION EXCEPT FOR WHEN WORK IS BEING COMPLETED IMMEDIATELY IN FRONT OF THE AFOREMENTIONED ITEMS. CONTRACTOR SHALL ENSURE ACCESS TO RESIDENCES TO RESTORED AT THE END OF EACH WORKING DAY.

Description	Units	Quantity
Sign, Type B, Temp, Prismatic, Furn	SF	60
Sign, Type B, Temp, Prismatic, Oper	SF	60
Sign, Type B, Temp, Prismatic, Spec, Furn	SF	11
Sign, Type B, Temp, Prismatic, Spec, Oper	SF	11

ESTIMATED SIGN, TYPE B, TEMP, PRISMATIC, SPECIAL BLACK LEGEND ON ORANGE BACKGROUND QUANTITIES

SYMBOL	LABEL	DIMENSION (FT)	AREA (SFT)	DETOUR 1 QUANTITY (EA)	DETOUR 2 QUANTITY (EA)	QUANTITY (SFT)
①	RANSOM ST	D3-1	2' x 0.5'	1.0	11	11.00
②	SPECIAL	2.0' x 0.5'	28.0	0	0	0.00
③	SPECIAL	2.0' x 0.5'	28.0	0	0	0.00
TOTAL SIGNAGE (SFT)						11.00

ESTIMATED SIGN, TYPE B, TEMP, PRISMATIC, BLACK LEGEND ON ORANGE BACKGROUND QUANTITIES

SYMBOL	LABEL	DIMENSION (FT)	AREA (SFT)	DETOUR 1 QUANTITY (EA)	DETOUR 2 QUANTITY (EA)	QUANTITY (SFT)
④	M4-9b	2.5' x 2.0'	5.0	4	3	20.00
⑤	M4-9b	2.5' x 2.0'	5.0	2	3	15.00
⑥	M4-9b	2.5' x 2.0'	5.0	5	5	25.00
TOTAL SIGNAGE (SFT)						60.00
	PEDESTRIAN BARRICADE			120	120	

ABONMARCHÉ
 795 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 F 269.927.2295
 abonmarche.com
 Copyright 2023 Abonmarche Consulting, Inc.
 Engineering - Architecture - Land Surveying
 Lorraine
 Portage
 Ft. Wayne
 South Bend
 Valparaiso
 Hobart

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

PROJECT:

PEDESTRIAN DETOUR PLAN PHASE 1

SHEET TITLE:

DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:

DATE: JANUARY 2023
 SEAL:

SIGNATURE:

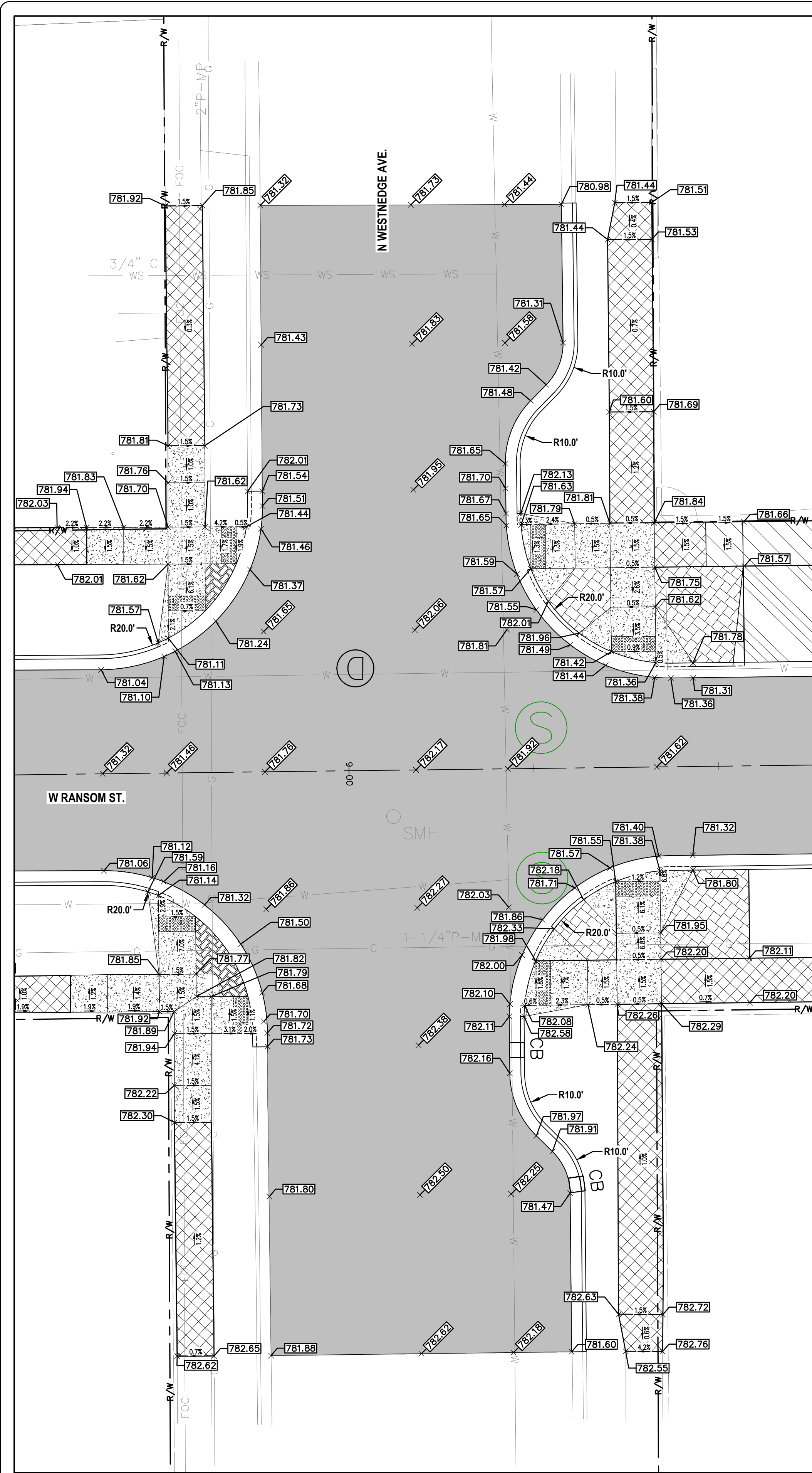
DATE:

SCALE:
 HORIZ: NTS
 VERT: N/A

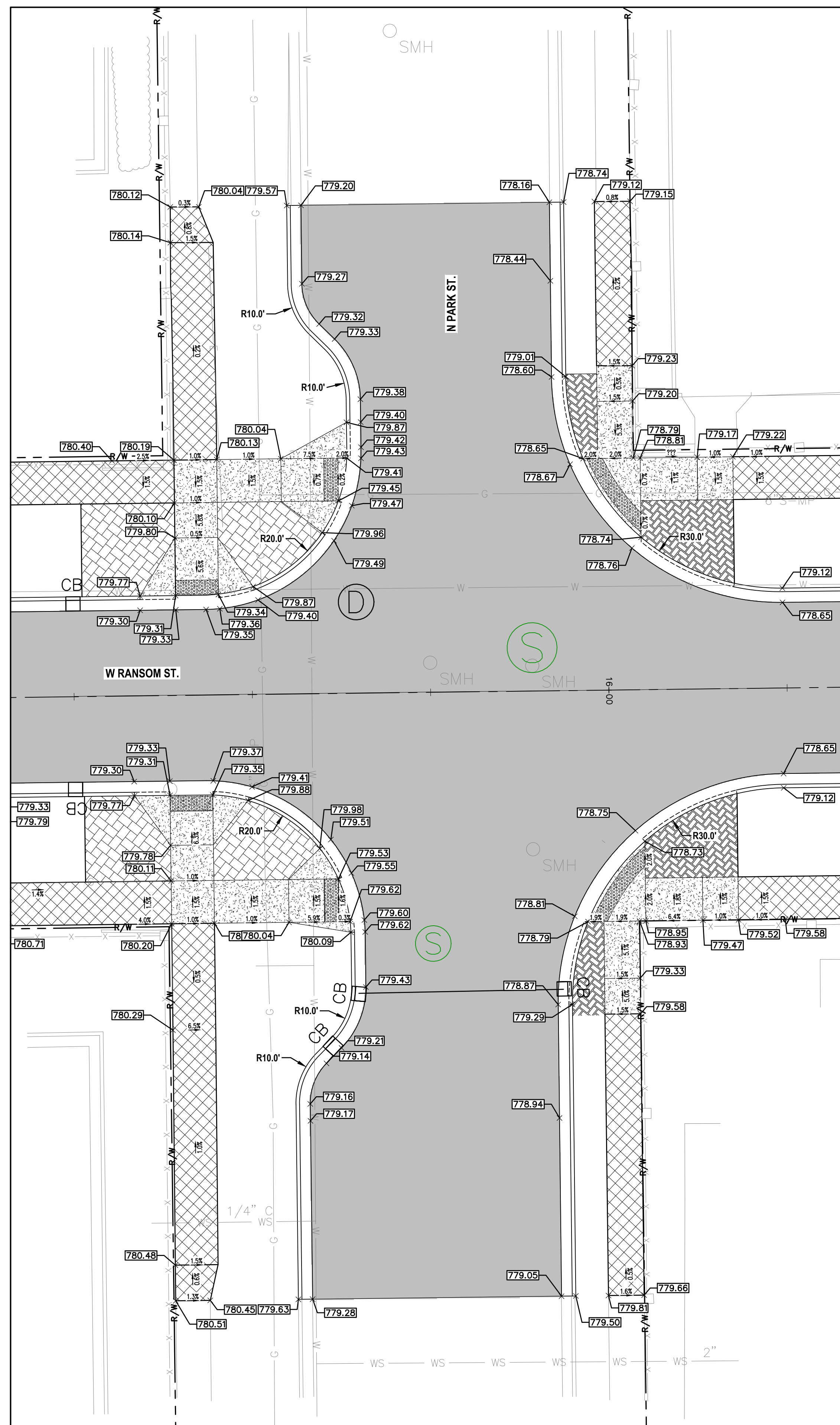
ACI JOB #
22-0031

SHEET NO.
31 of 52

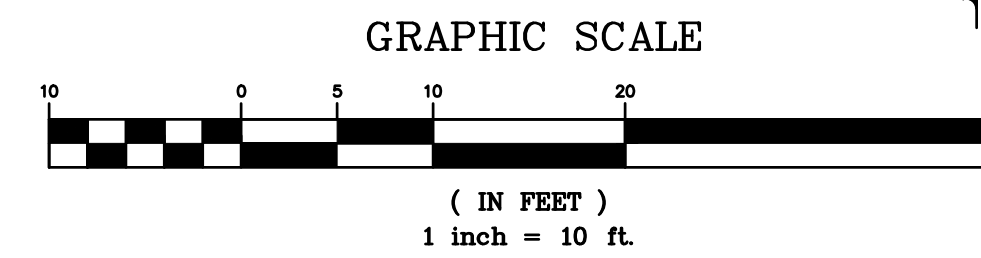
NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22



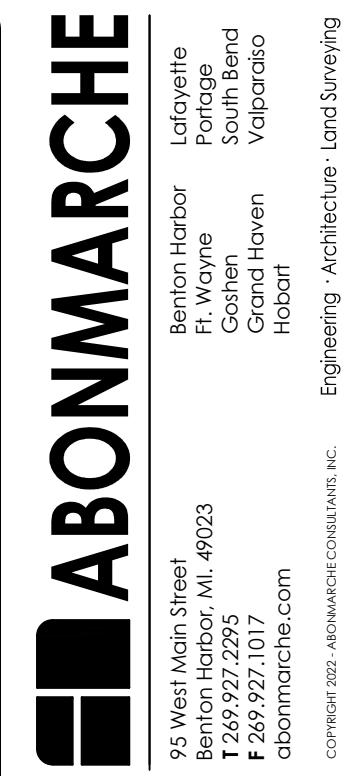
INTERSECTION GRADING DETAILS
RANSOM ST. AND N WESTNEDGE AVE.
SCALE: 1" = 10'



INTERSECTION GRADING DETAILS
RANSOM ST. AND N PARK ST.
SCALE: 1" = 10'



3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:



**RANSOM STREET
IMPROVEMENTS
CITY OF KALAMAZOO**

PROJECT:

INTERSECTION GRADING - 1

SHEET TITLE:

DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:

SIGNATURE:

DATE:

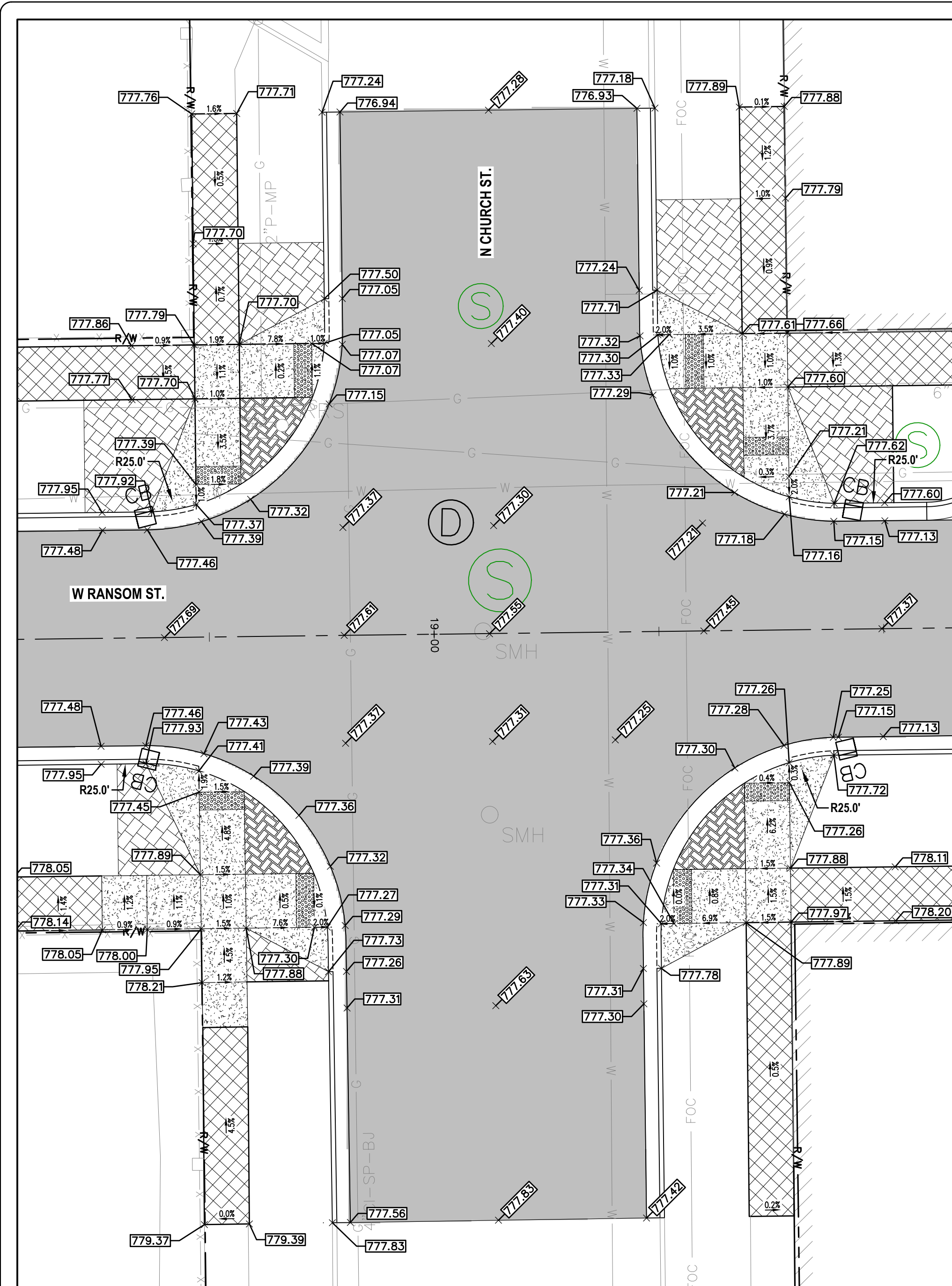
SCALE:
 HORIZ: 1" = 10'
 VERT: N/A

ACI JOB #

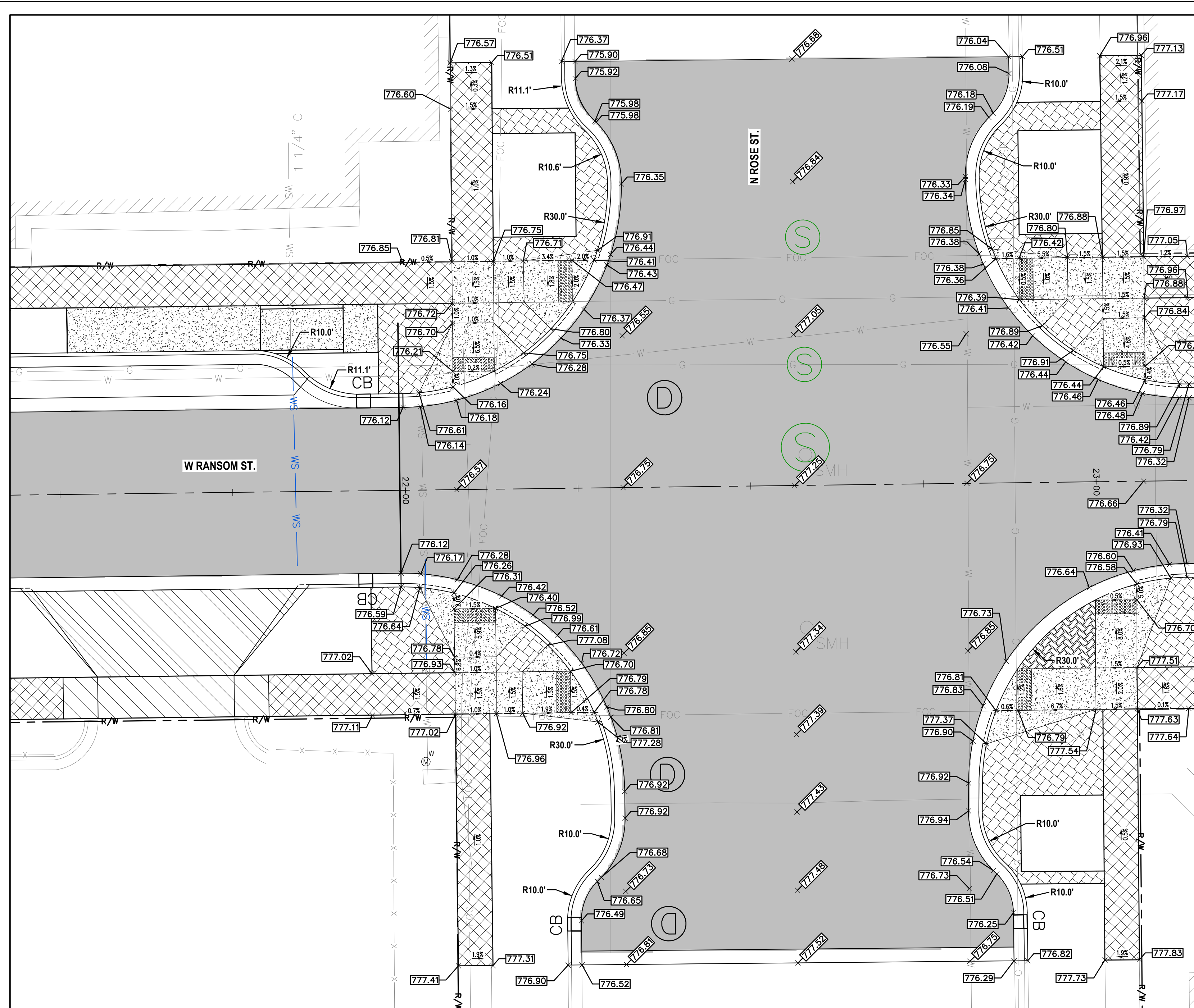
22-0031

SHEET NO.

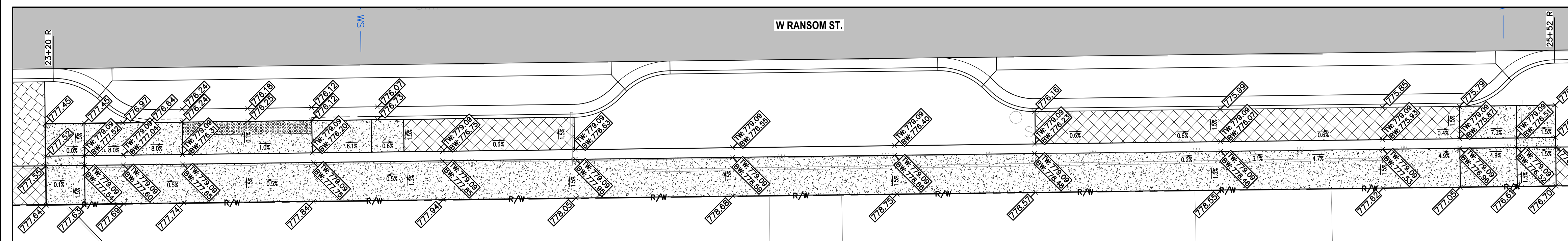
33 of 52



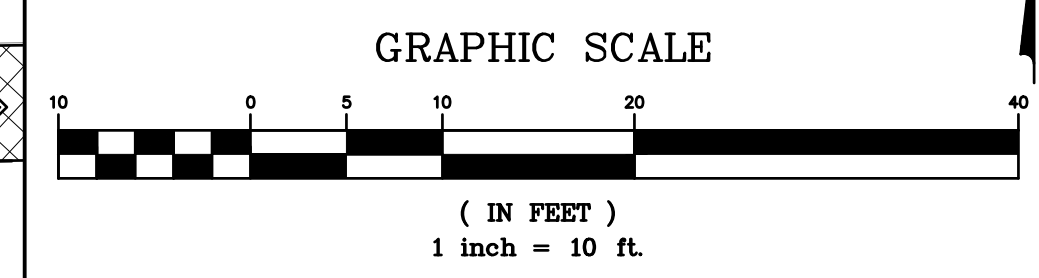
**INTERSECTION GRADING DETAILS
RANSOM ST. AND N CHURCH ST.**
SCALE: 1" = 10'



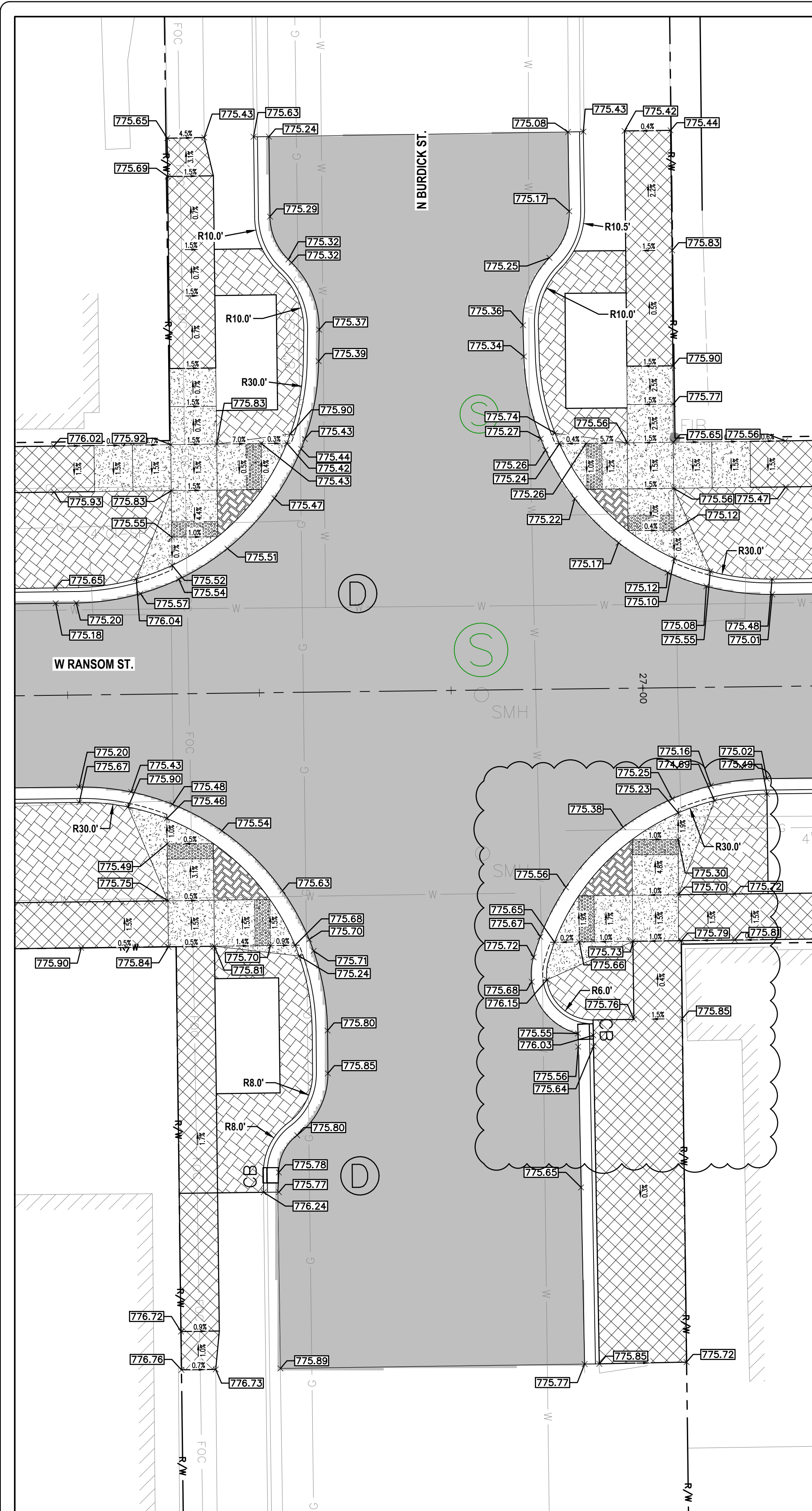
**INTERSECTION GRADING DETAILS
RANSOM ST. AND N ROSE ST.**
SCALE: 1" = 10'



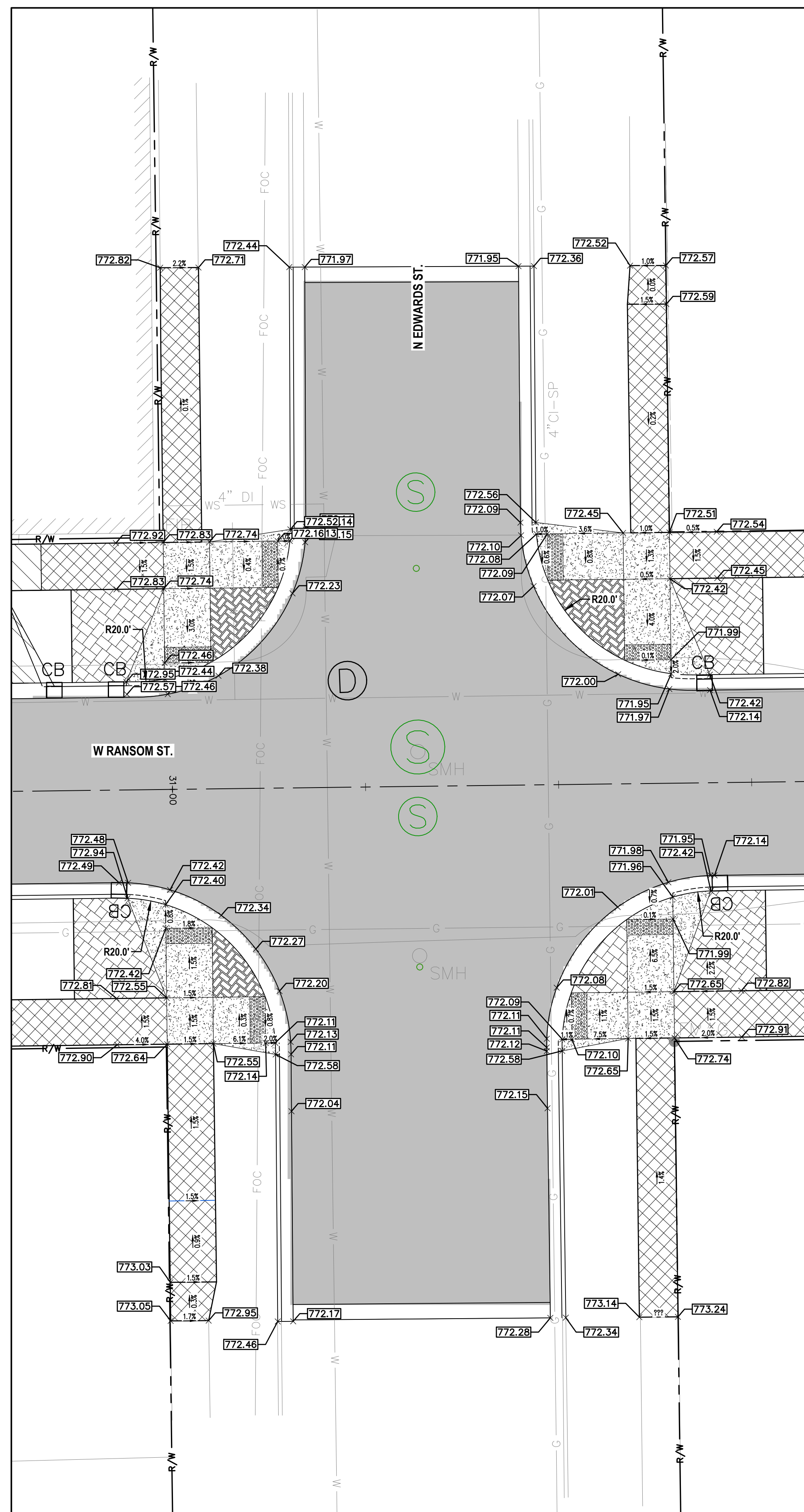
**INTERSECTION GRADING DETAILS
STA. 23+20 TO 25+52**
SCALE: 1" = 10'



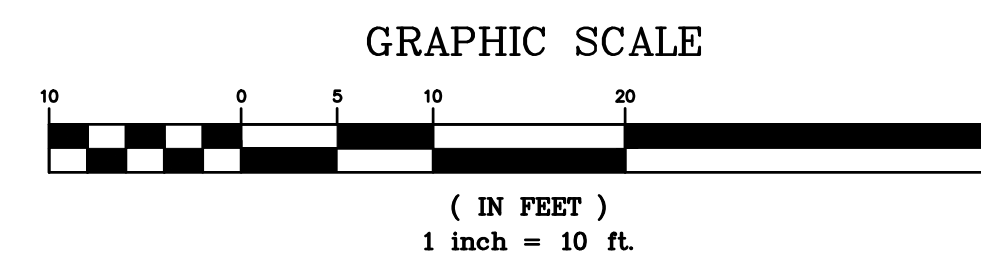
NO.	REVISION DESCRIPTION	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22



INTERSECTION GRADING DETAILS
RANSOM ST. AND N BURDICK ST.
 SCALE: 1" = 10'



INTERSECTION GRADING DETAILS
RANSOM ST. AND N EDWARDS ST.
 SCALE: 1" = 10'



3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:

PROJECT:

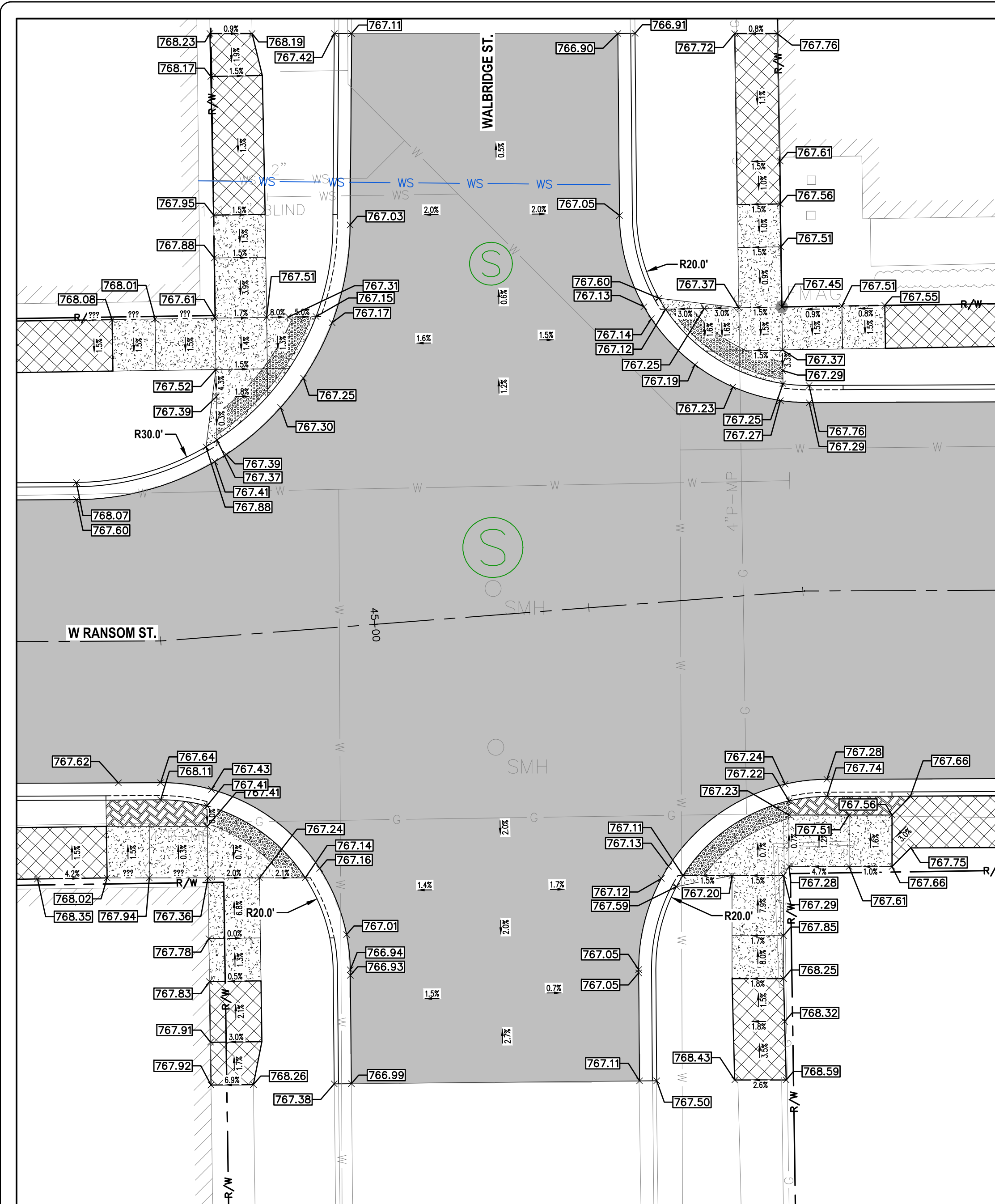
INTERSECTION GRADING - 3

SHEET TITLE:

DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:

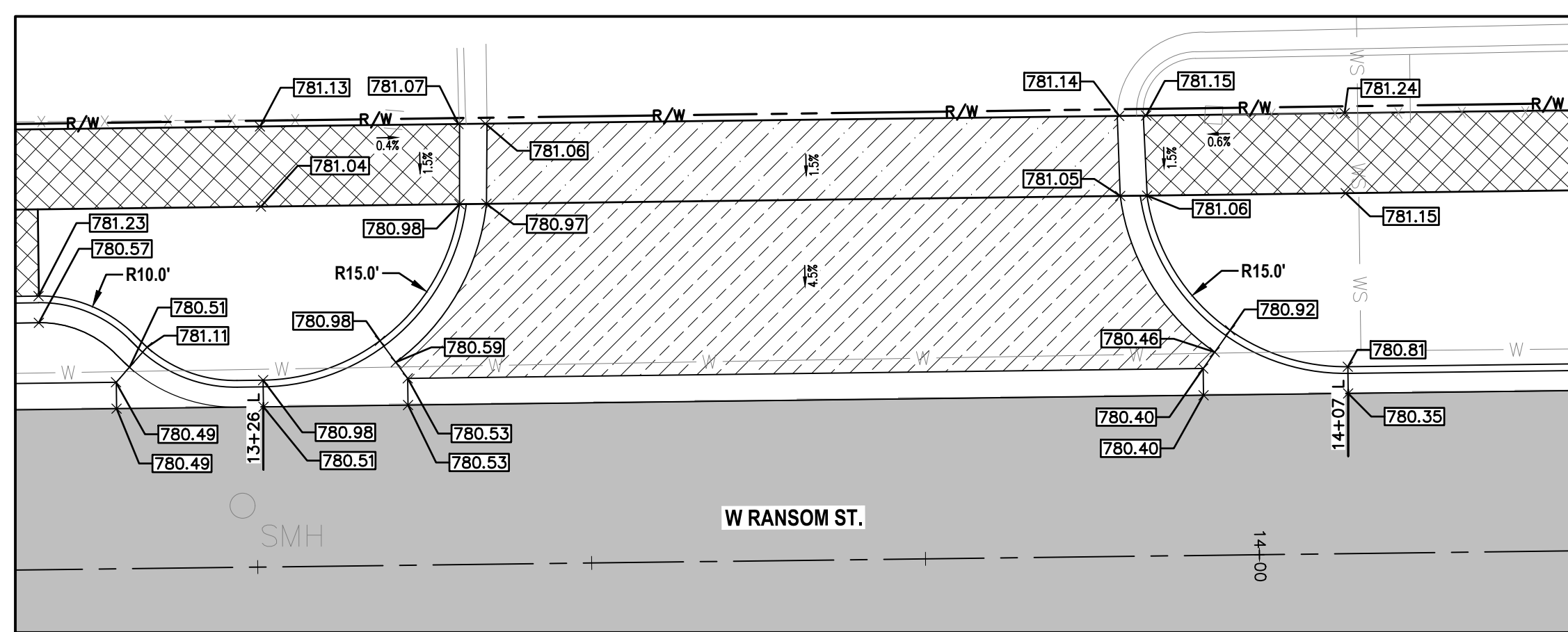
SIGNATURE:
 DATE:
 SCALE:
 HORIZ: 1" = 10'
 VERT: N/A
 ACI JOB #

C:\Project\2022\220031\220031.dwg - 01/06/2023 9:40:54 AM - mjs - sheet 11



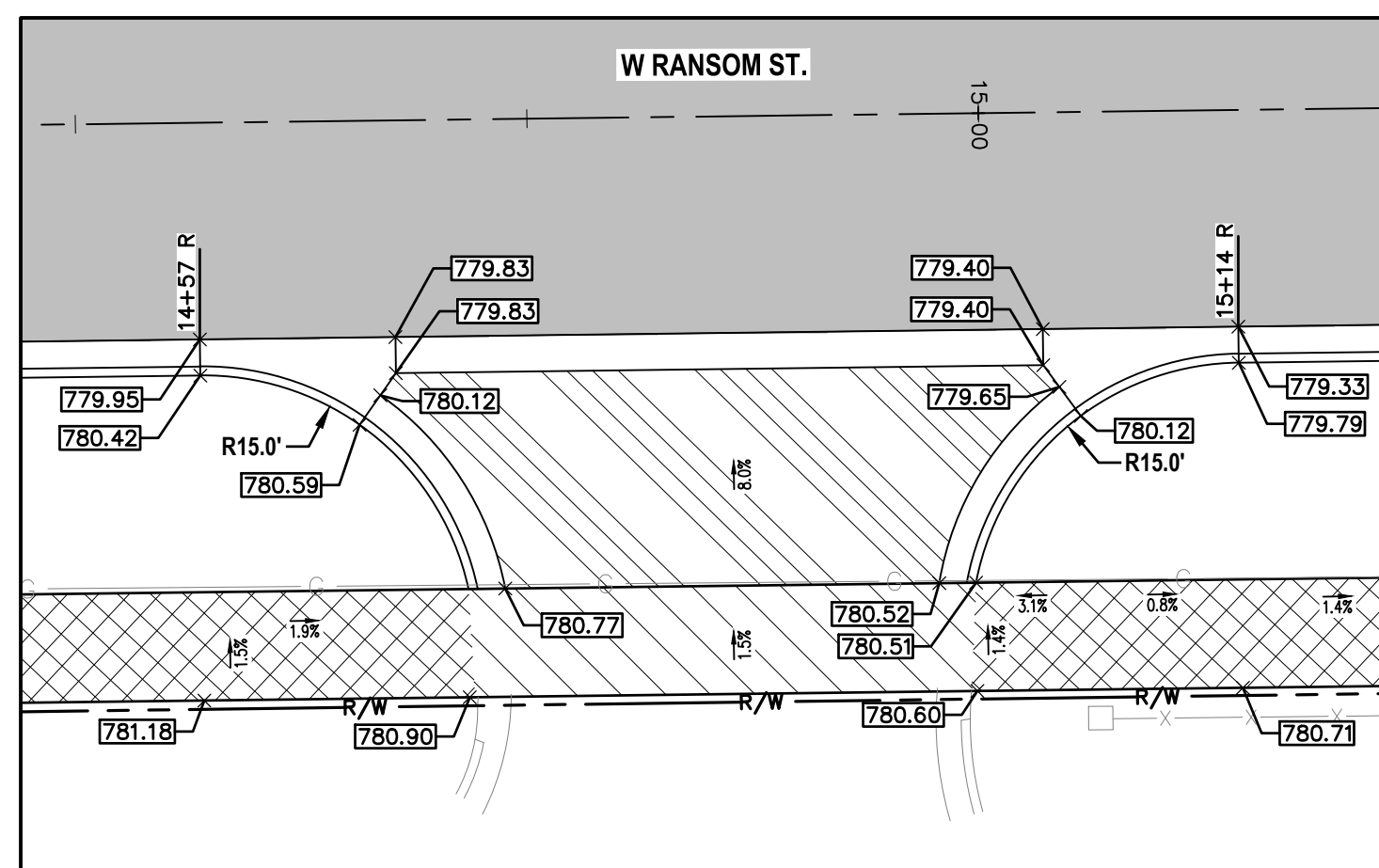
**INTERSECTION GRADING DETAILS
RANSOM ST. AND WALBRIDGE ST.**

SCALE: 1" = 10'



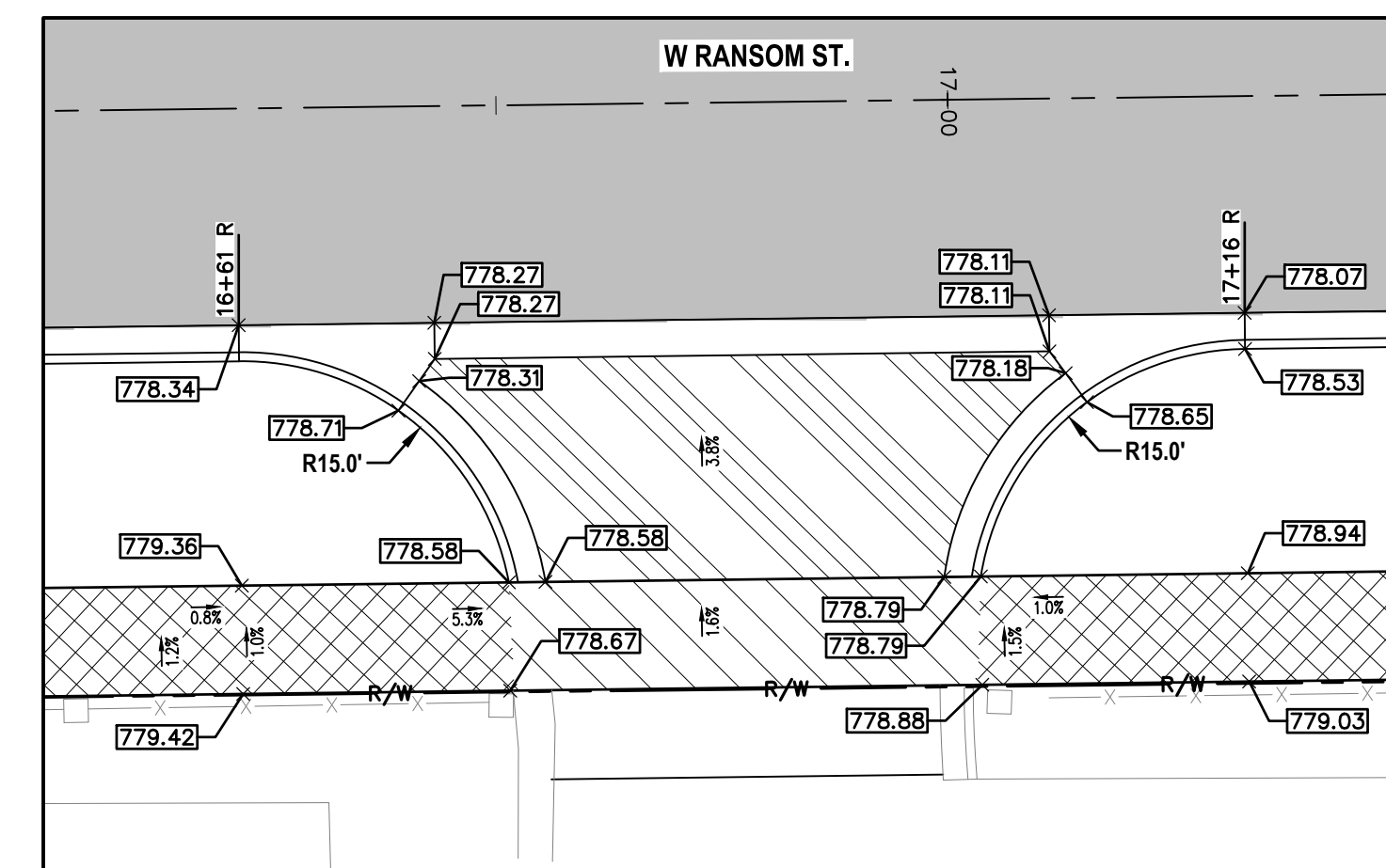
**INTERSECTION GRADING DETAILS
STA. 13+26 TO 14+07**

SCALE: 1" = 10'



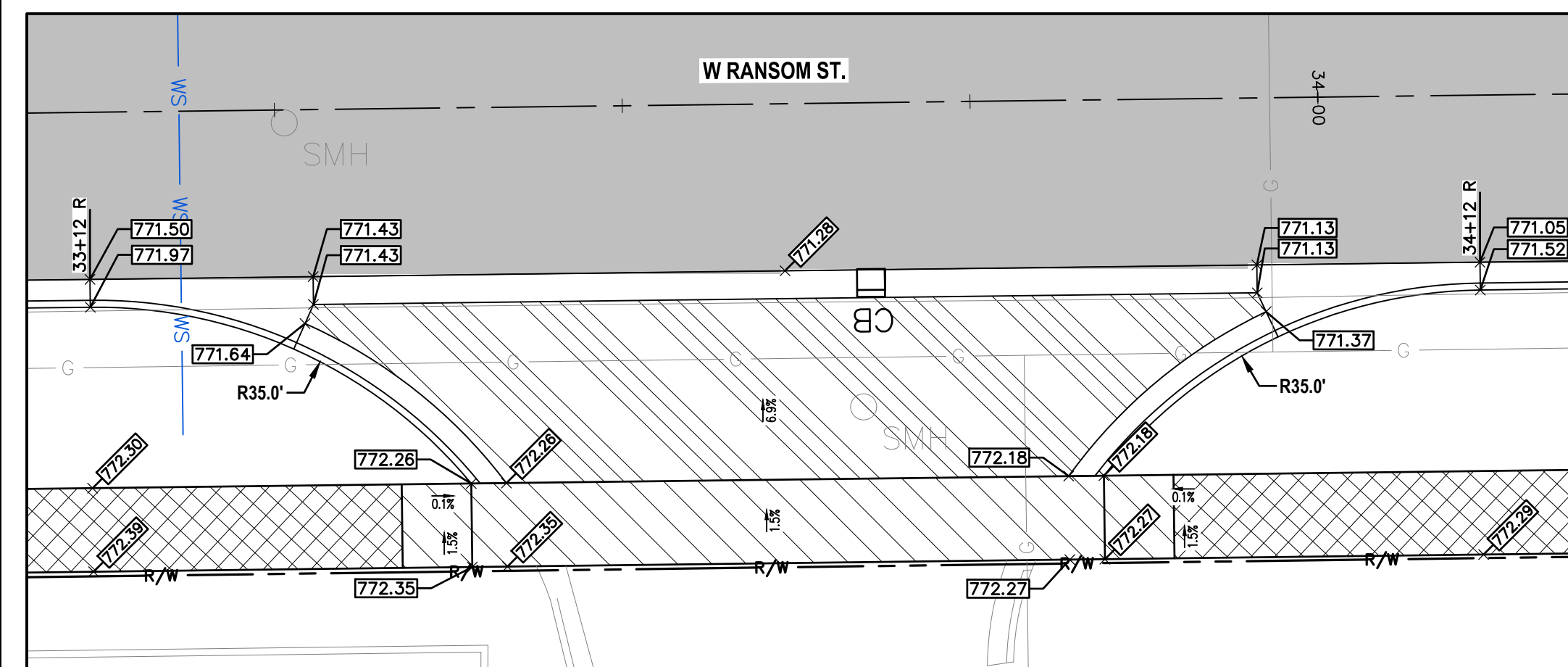
**INTERSECTION GRADING DETAILS
STA. 14+57 TO 15+14**

SCALE: 1" = 10'



**INTERSECTION GRADING DETAILS
STA. 16+61 TO 17+16**

SCALE: 1" = 10'



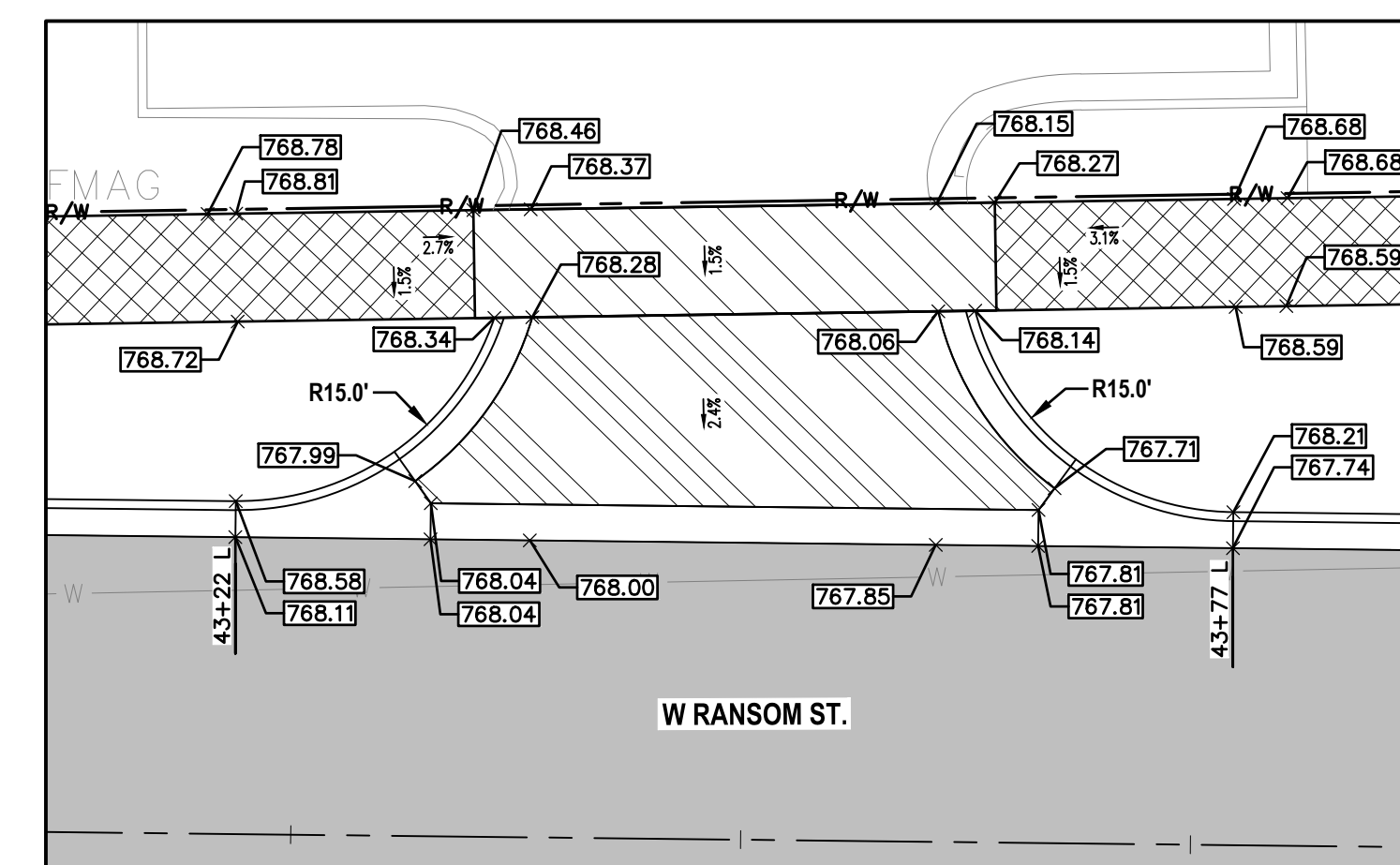
**INTERSECTION GRADING DETAILS
STA. 33+12 TO 34+12**

SCALE: 1" = 10'



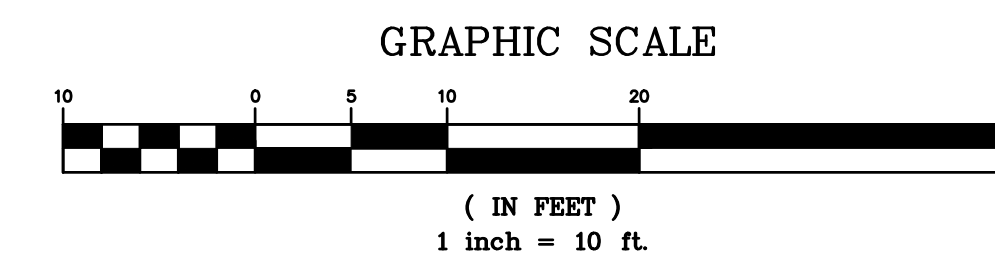
**INTERSECTION GRADING DETAILS
RAILROAD CROSSING AT STA. 37+50**

SCALE: 1" = 10'

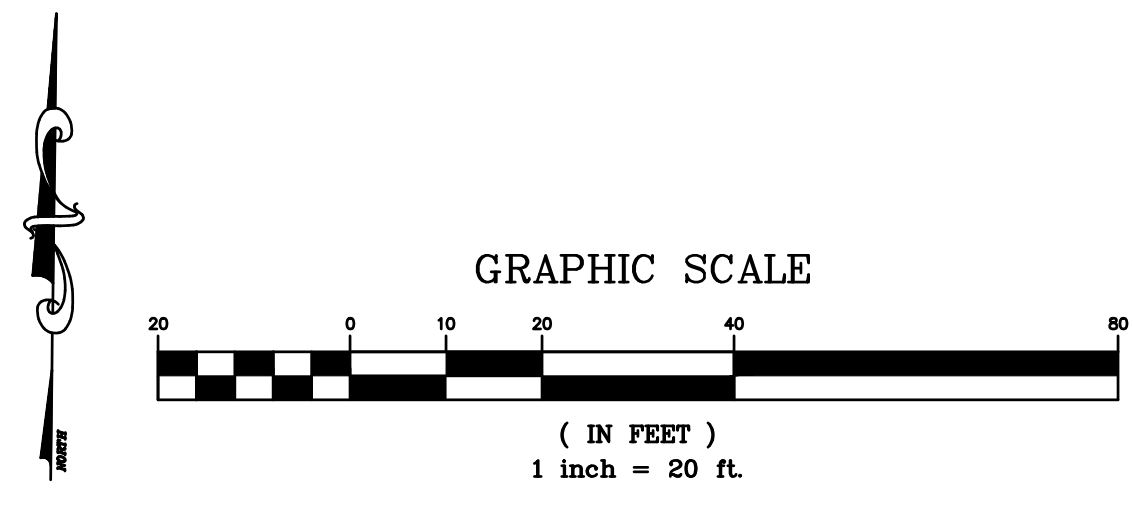
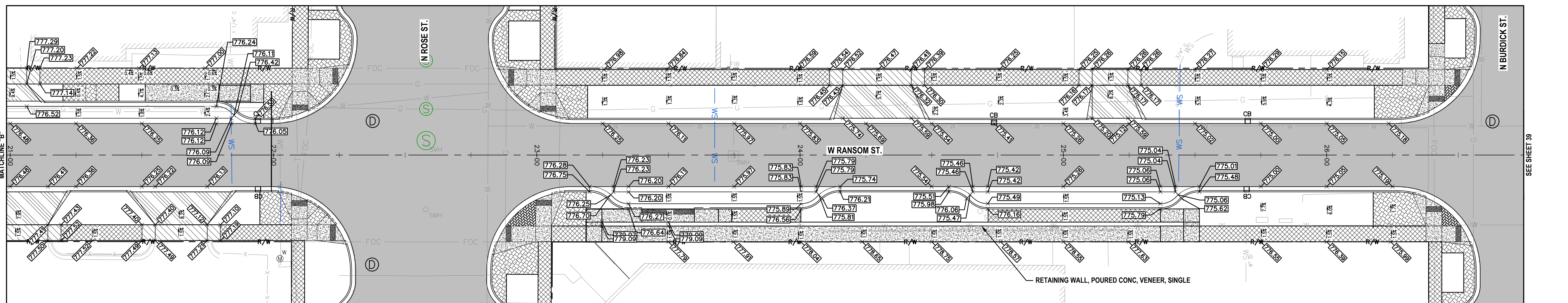
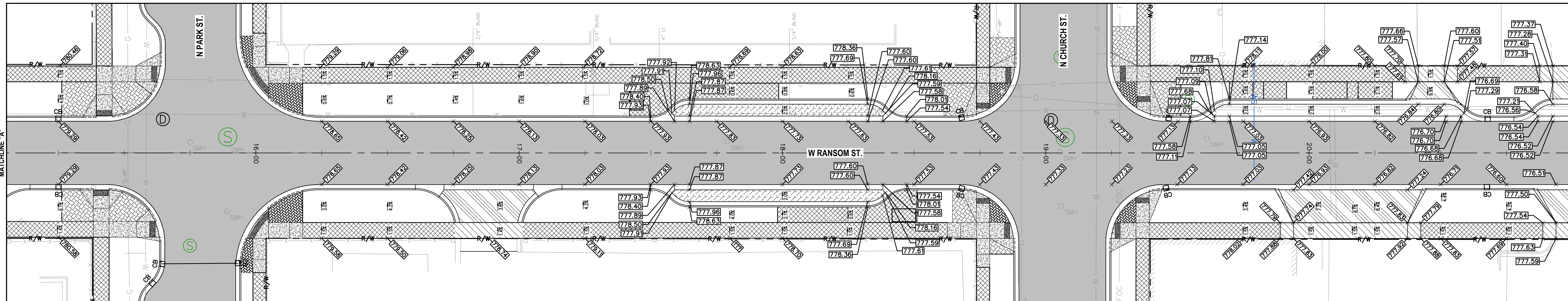
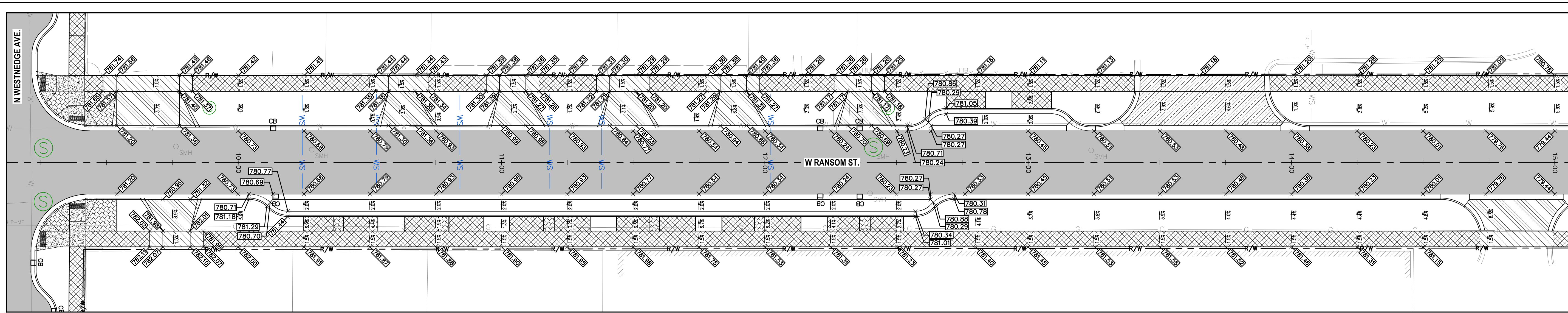


**INTERSECTION GRADING DETAILS
STA. 43+22 TO 43+78**

SCALE: 1" = 10'



3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:



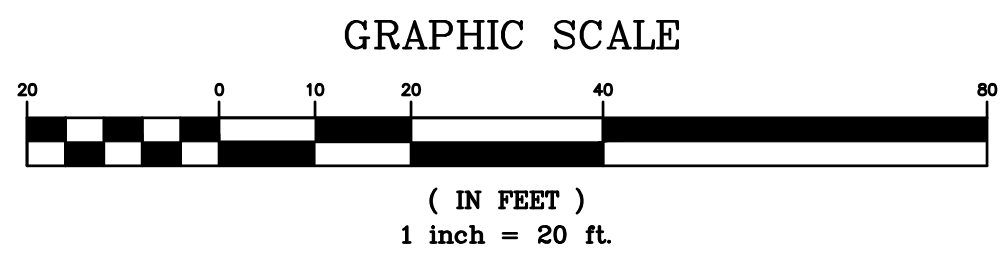
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGLE PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:

SHEET TITLE:
 DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:

SIGNATURE:
 DATE:
 SCALE:
 HORIZ: 1" = 20'
 VERT: N/A
 ACI JOB #



SEE SHEET 38



NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

ABONMARCHÉ
 95 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 abonmarche.com
 abonmarche.com

Benton Harbor
 LaGrange
 Portage
 South Bend
 Valparaiso
 Hobart

Engineering - Architecture - Land Surveying

**RANSOM STREET
 IMPROVEMENTS
 CITY OF KALAMAZOO**

GRADING PLAN - 3

PROJECT:

SHEET TITLE:

DRAWN BY: **DJL**
 DESIGNED BY: **MJS/ERF**
 PM REVIEW: **DAD**
 QA/QC REVIEW:
 DATE: **JANUARY 2023**
 SEAL:

SIGNATURE:

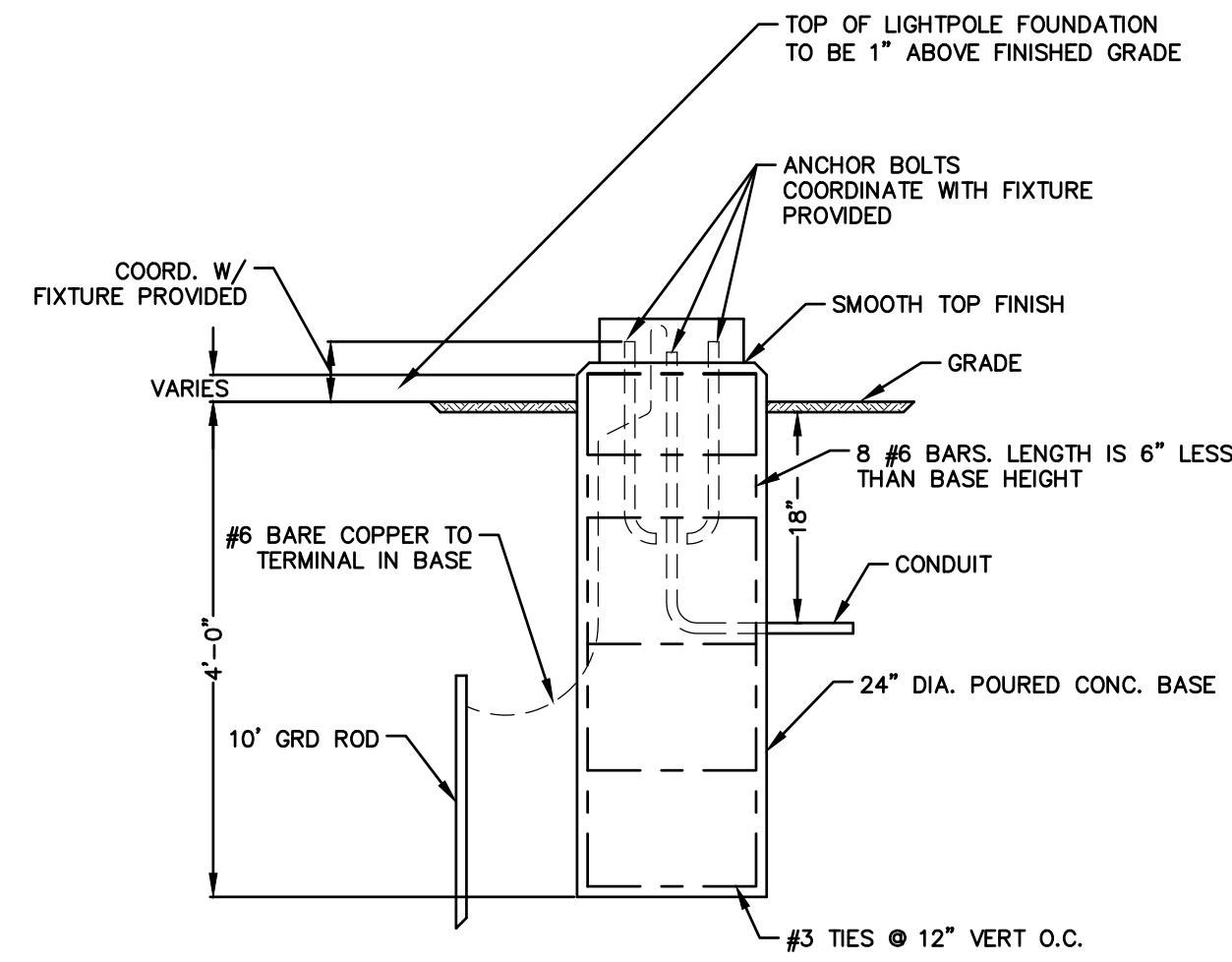
DATE:

SCALE:
 HORIZ: **1" = 20'**
 VERT: **N/A**

ACI JOB # **22-0031**

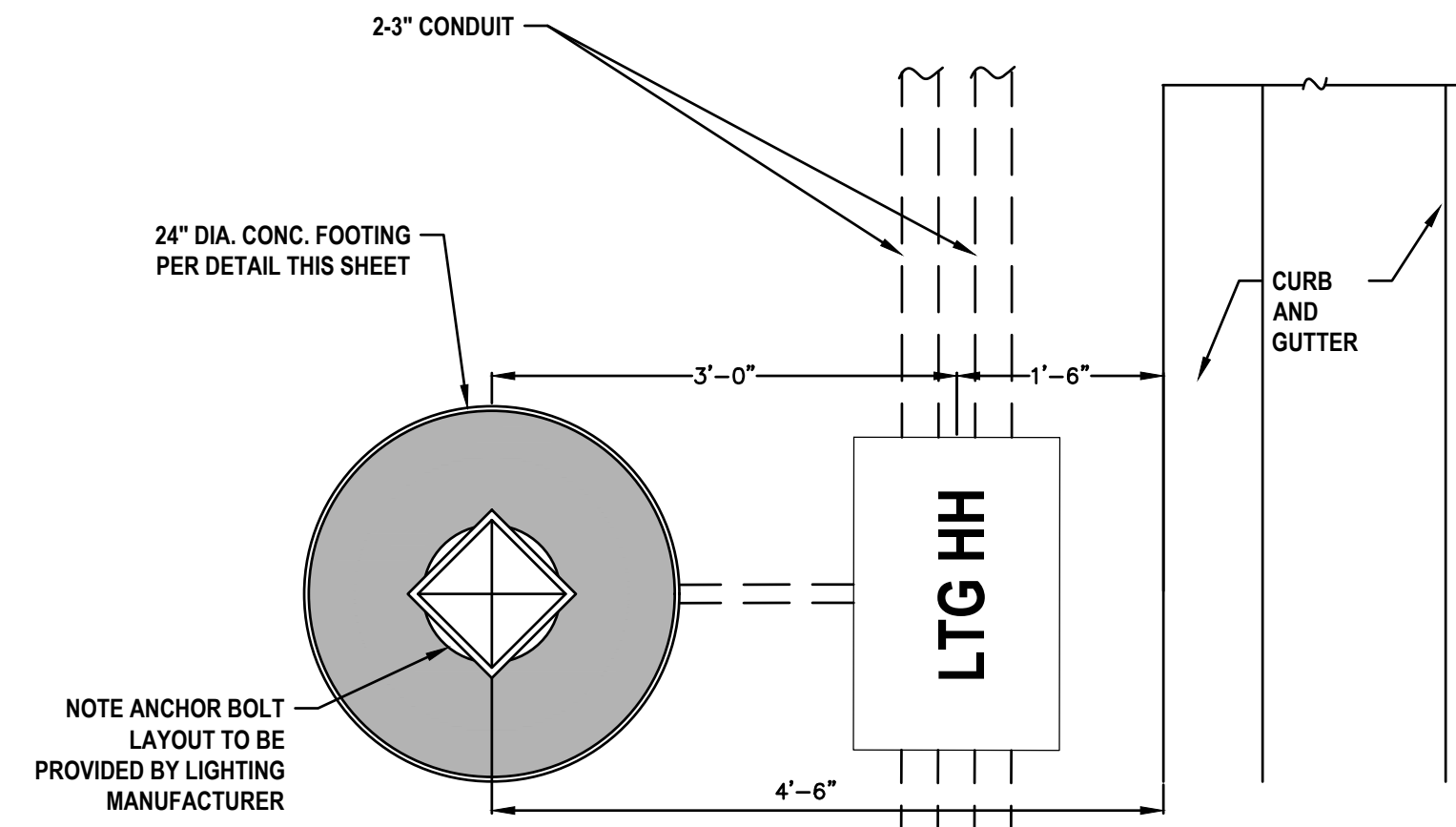
SHEET NO. **40** of **52**

C:\Project\2022\220031\ak-drawings\erf\civil\drawing\22-0031\INT_Plan_3_Scale.dwg, 15:20:53 01/06/2023, 11

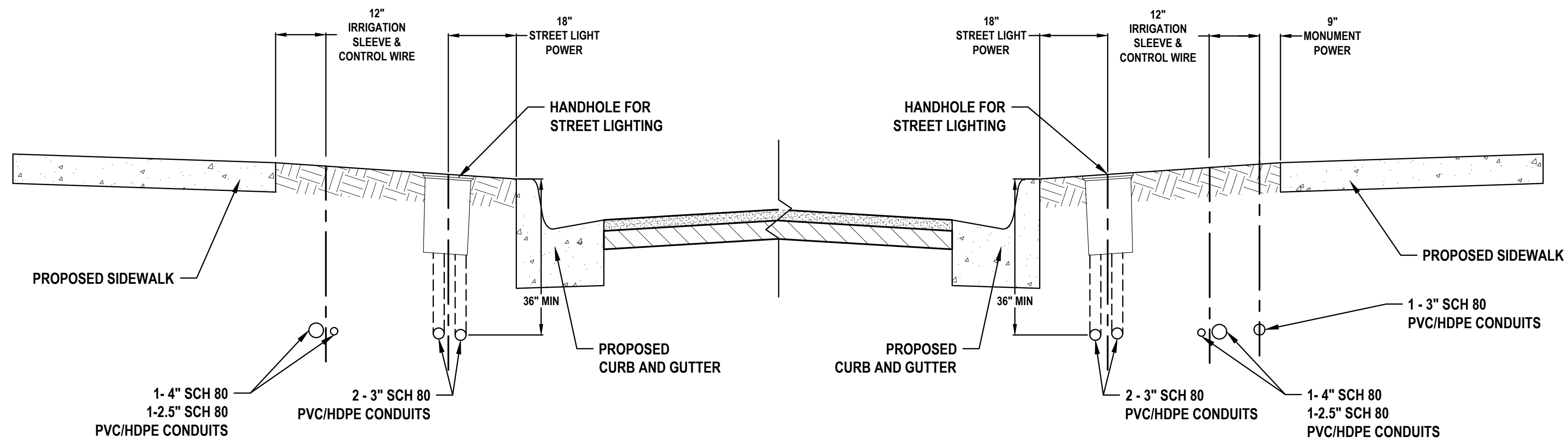


NOTE: FOUNDATION DETAIL TO BE APPROVED BY CONSUMERS ENERGY PRIOR TO FURNISHING

LIGHT BASE DETAIL
NOT TO SCALE



LIGHT POLE BASE PLAN VIEW
NOT TO SCALE



TYPICAL CONDUIT SECTION DETAIL (LOOKING EAST)

NOT TO SCALE

NOTE: CONDUIT SPACING & LOCATION IS TYPICAL FOR LENGTH OF STREETScape UNLESS OTHERWISE NOTED.

Description	Units	Quantity
Conduit, DB, 1.2 1/2 inch	Ft	3640
Conduit, DB, 1.3 inch	Ft	3765
Conduit, DB, 1.4 inch	Ft	2650
Conduit, DB, 2.3 inch	Ft	2775
Wood Pole, Fit Up, Sec Serv Pole	Ea	6
Light Std Fdn	Ea	26
HH, Irrigation, Modified	Ea	58
HH, Lighting, Modified	Ea	26
HH, Polymer Conc	Ea	51
Casing, 12 inch, Tr Det B	Ft	240

LIGHTING ELECTRICAL PLAN NOTES

- IT IS THE INTENT OF THIS CONTRACT TO PROVIDE CONDUIT, HANDHOLES, AND FOUNDATIONS COMPLETE AND READY FOR USE BY THE ELECTRIC UTILITY (CONSUMERS ENERGY) TO INSTALL, WIRE, AND COMMISSION INTO SERVICE THE STREET LIGHTING SYSTEM AS SHOWN ON THE PLANS.
- IN ACCORDANCE WITH SECTION 819 OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, PROVIDE PERSONNEL WHO ARE QUALIFIED AND EXPERIENCED IN PERFORMING THE WORK. ALL WORK SHALL BE PERFORMED WITH AN ON-SITE LICENSED JOURNEYPERMAN ELECTRICIAN FOR SUPERVISION OF THE WORK.
- PERFORM ALL WORK IN ACCORDANCE WITH THE CURRENT (ADOPTED) NATIONAL ELECTRICAL CODE (2017), PER SECTION 110-3(A) AND (B); THE WIRING, GROUNDING, AND BONDING METHODS USED SHALL BE SUITABLE FOR THE INSTALLATION AND USE IN CONFORMANCE WITH PROVISIONS OF THE NEC, AND LISTED OR LABELED EQUIPMENT SHALL BE USED OR INSTALLED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING.
- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AS SPECIFIED ON THE ELECTRICAL DRAWINGS.
- ALL PVC CONDUITS 1" THROUGH 3" SHALL BE SCHEDULE 80 PVC OR COILED HDPE. ALL PVC HOME RUNS SHALL UTILIZE LONG SWEEPS, WHILE RUNS 100' AND LESS BETWEEN HAND HOLES CAN USE STANDARD SWEEPS. USE 1/2" PVC SCHEDULE 40 OR 80 FROM HAND HOLES TO AND UP EACH POLE BASE. INSTALL A PULL LINE IN ALL PVC CONDUITS.
- FURNISH AND INSTALL CONCRETE POLE BASES AS CALLED FOR ON THE LIGHTING PLANS.
- COORDINATE WITH THE CITY OF KALAMAZOO AND ELECTRICAL UTILITY FOR INSPECTION OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH INSPECTION OF THE ELECTRICAL WORK.

ABONMARCHÉ
 795 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 F 269.927.2297
 abonmarche.com
 Engineering - Architecture - Land Surveying

**RANSOM STREET
IMPROVEMENTS
CITY OF KALAMAZOO**

PROJECT:

LIGHTING DETAILS

SHEET TITLE:

DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:

DATE: JANUARY 2023

SEAL:

SIGNATURE:

DATE:

SCALE:

HORZ: AS NOTED
 VERT: AS NOTED

ACT JOB #

22-0031

SHEET NO.

41 of 52

NO.	REVISION DESCRIPTION	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

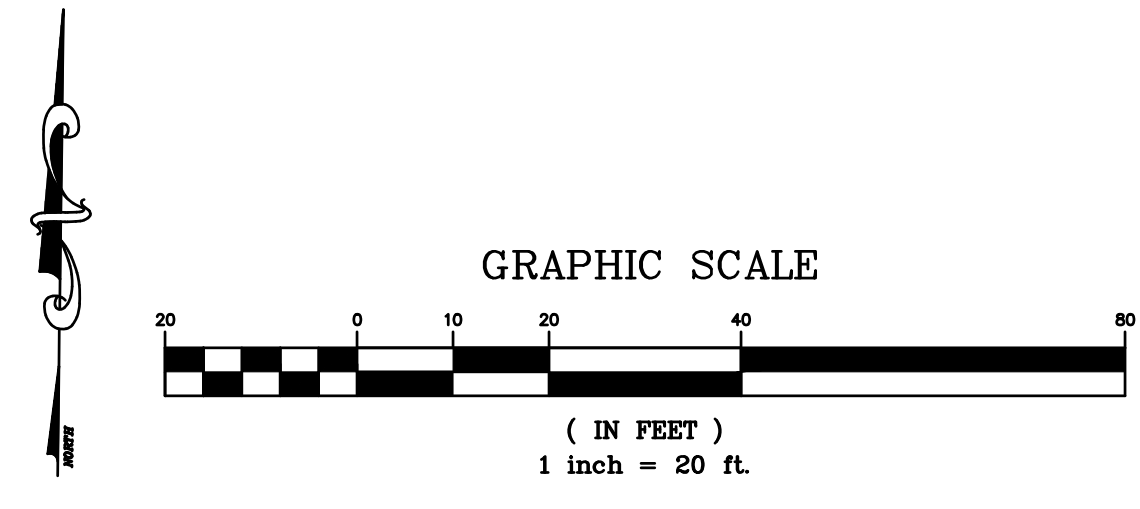
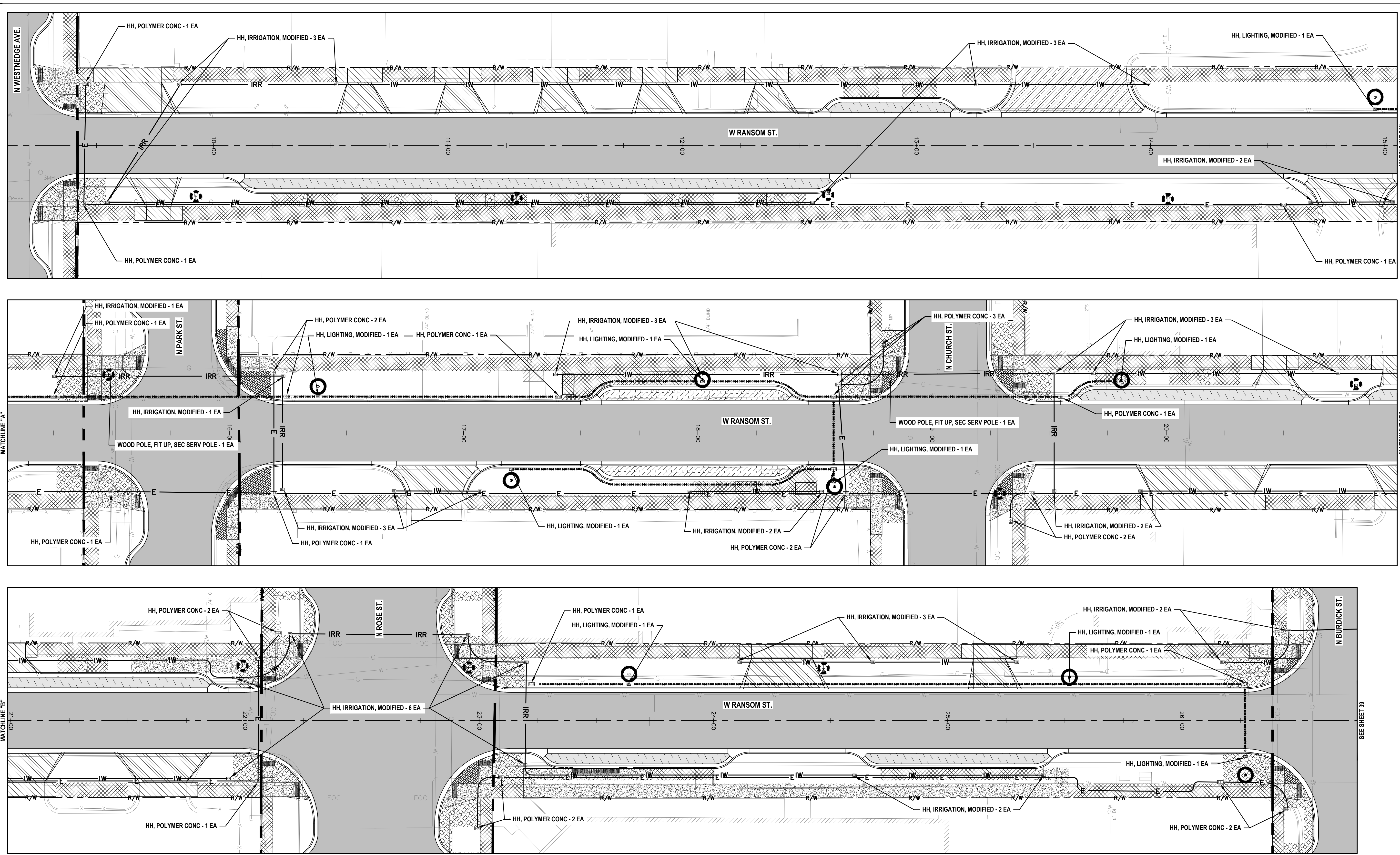
**RANSOM STREET
 IMPROVEMENTS
 CITY OF KALAMAZOO**

CONDUIT PLAN - 1

PROJECT: RANSOM STREET IMPROVEMENTS
 SHEET TITLE: CONDUIT PLAN - 1
 DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:

SIGNATURE:
 DATE:
 SCALE:
 HORIZ: 1" = 20'
 VERT: N/A
 ACI JOB #
22-0031

SHEET NO. **42** OF **52**

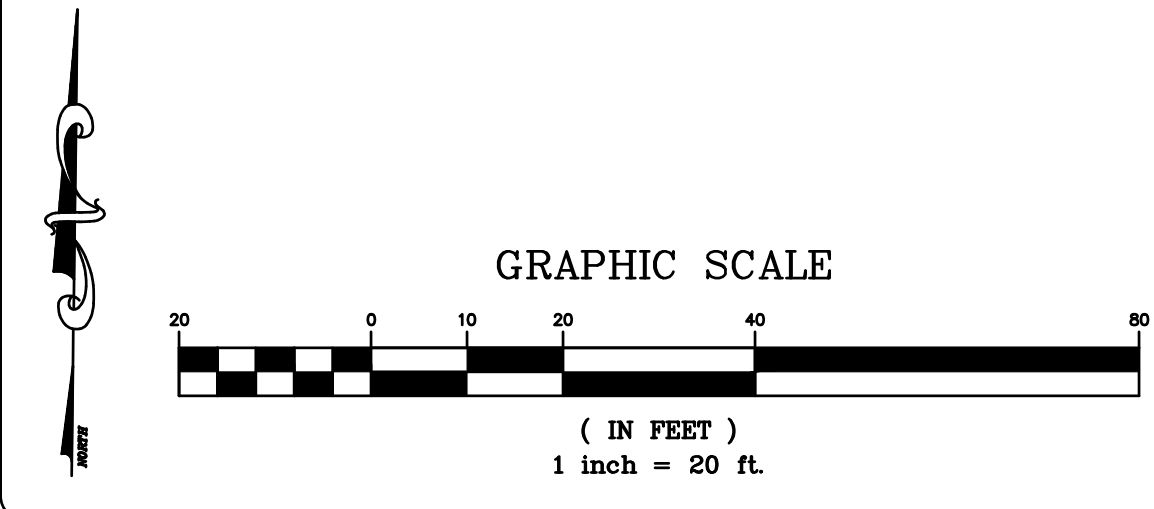
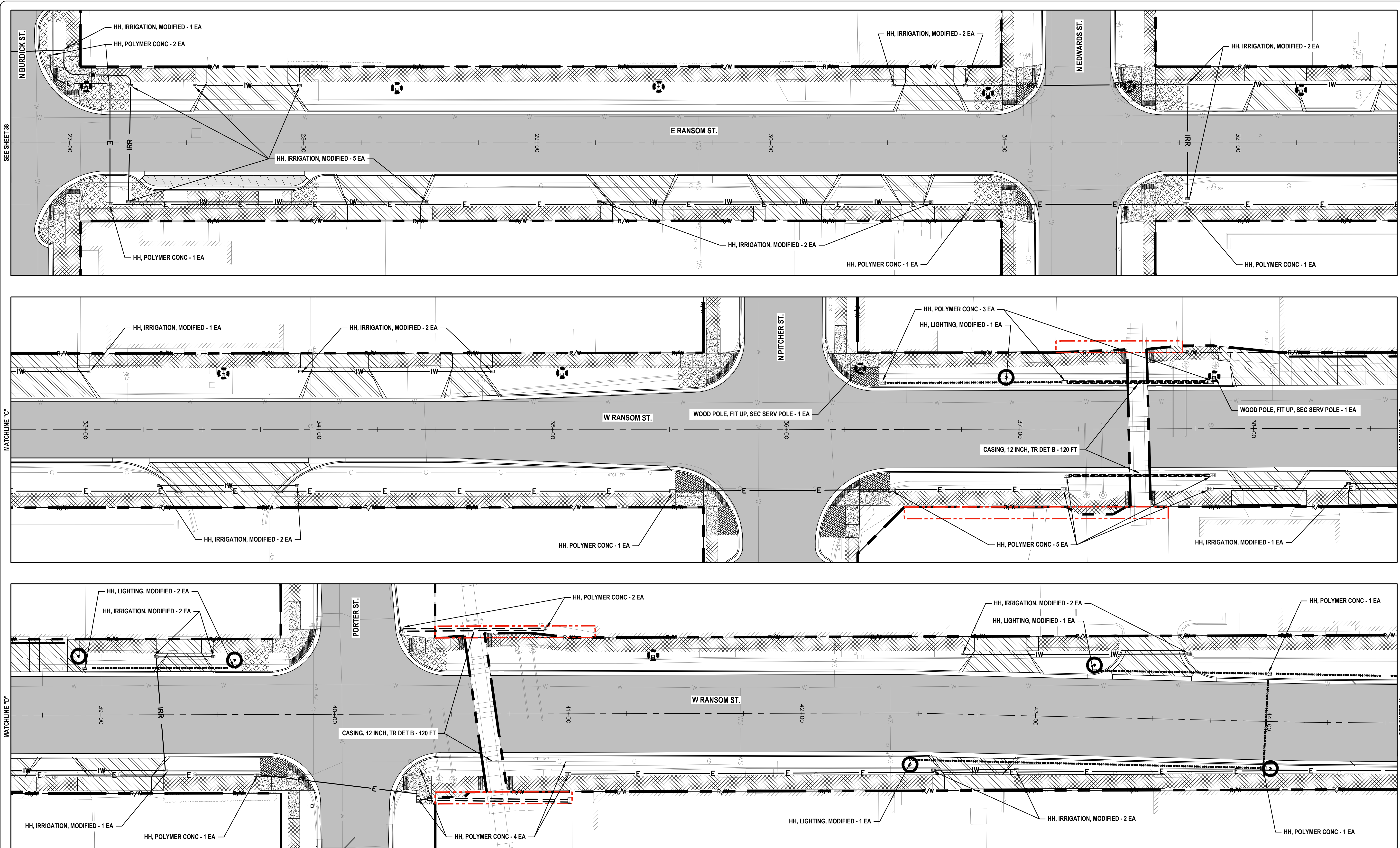


LEGEND

.....	LIGHTING POWER - CONDUIT, DB, 2, 3 INCH
—— IW ———	IRRIGATION CONTROLLER/SUPPLY SLEEVE - CONDUIT, DB, 1, 2 1/2 INCH/CONDUIT, DB, 1, 4 INCH
—— IRR ———	IRRIGATION CONTROLLER - CONDUIT, DB, 1, 2 1/2 INCH
—— E ———	FUTURE MONUMENT/STREET FEATURE POWER - CONDUIT, DB, 1, 3 INCH
HH	HH, POLYMER CONC
LTG	HH, LIGHTING, MODIFIED
IRR	HH, IRRIGATION, MODIFIED

NO.	REVISION DESCRIPTION	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

C:\Projects\2022\220031\220031.dwg, 01/06/2023 10:10:10 AM, MJS



LEGEND

.....	LIGHTING POWER - CONDUIT, DB. 2, 3 INCH
— IW —	IRRIGATION CONTROLLER/SUPPLY SLEEVE - CONDUIT, DB. 1, 2 1/2 INCH/CONDUIT, DB. 1, 4 INCH
— IRR —	IRRIGATION CONTROLLER - CONDUIT, DB. 1, 2 1/2 INCH
— E —	FUTURE MONUMENT/STREET FEATURE POWER - CONDUIT, DB. 1, 3 INCH
[HH]	HH, POLYMER CONC
[LTG]	HH, LIGHTING, MODIFIED
[IRR]	HH, IRRIGATION, MODIFIED

3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:

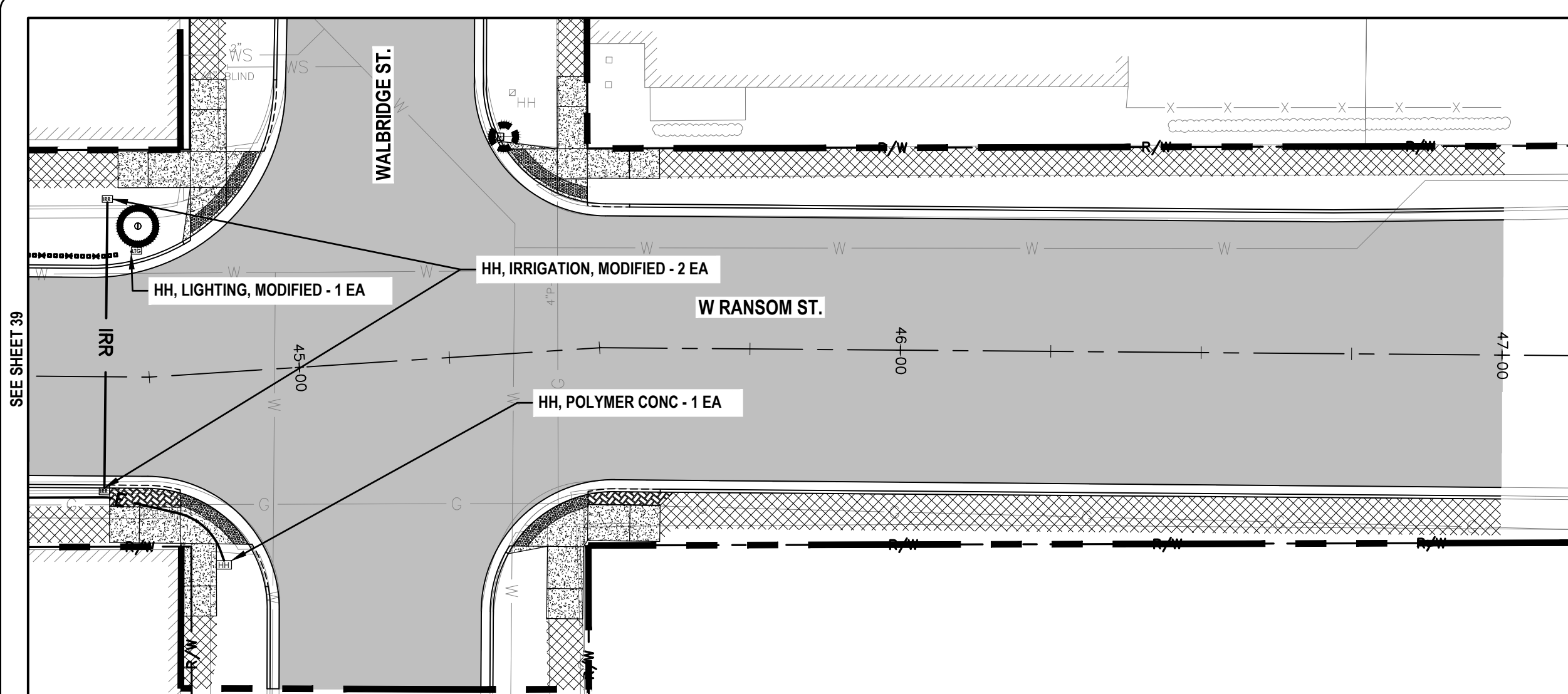
ABONMARCHÉ
 95 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 F 269.927.2295
 abonmarche.com
 Engineering - Architecture - Land Surveying

**RANSOM STREET
 IMPROVEMENTS
 CITY OF KALAMAZOO**

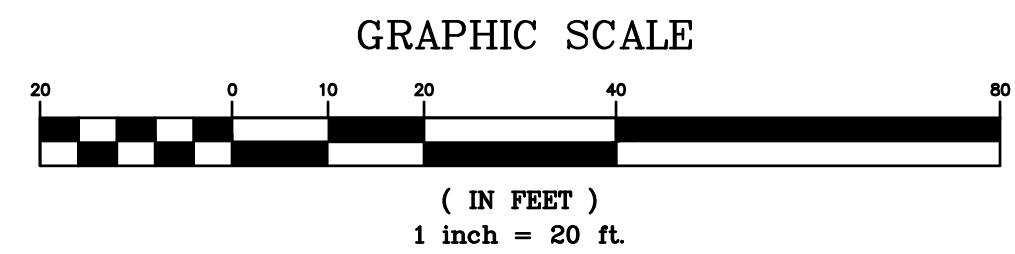
CONDUIT PLAN - 2

SHEET TITLE:
 DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:

SIGNATURE:
 DATE:
 SCALE:
 HORIZ: 1" = 20'
 VERT: N/A
 ACI JOB #
22-0031
 SHEET NO. **43** of **52**



SEE SHEET 39



LEGEND

- LIGHTING POWER - CONDUIT, DB, 2, 3 INCH
- IW ----- IRRIGATION CONTROLLER/SUPPLY SLEEVE - CONDUIT, DB, 1, 2 1/2 INCH/CONDUIT, DB, 1, 4 INCH
- IRR ----- IRRIGATION CONTROLLER - CONDUIT, DB, 1, 2 1/2 INCH
- E ----- FUTURE MONUMENT/STREET FEATURE POWER - CONDUIT, DB, 1, 3 INCH
- HH, POLYMER CONC
- LTG, HH, LIGHTING, MODIFIED
- IRR, HH, IRRIGATION, MODIFIED

NO.	REVISION DESCRIPTION:	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

ABONMARCHÉ
 95 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 abonmarche.com
 abonmarche.com

Benton Harbor
 LaGrange
 Portage
 South Bend
 Valparaiso
 Hobart

Engineering - Architecture - Land Surveying

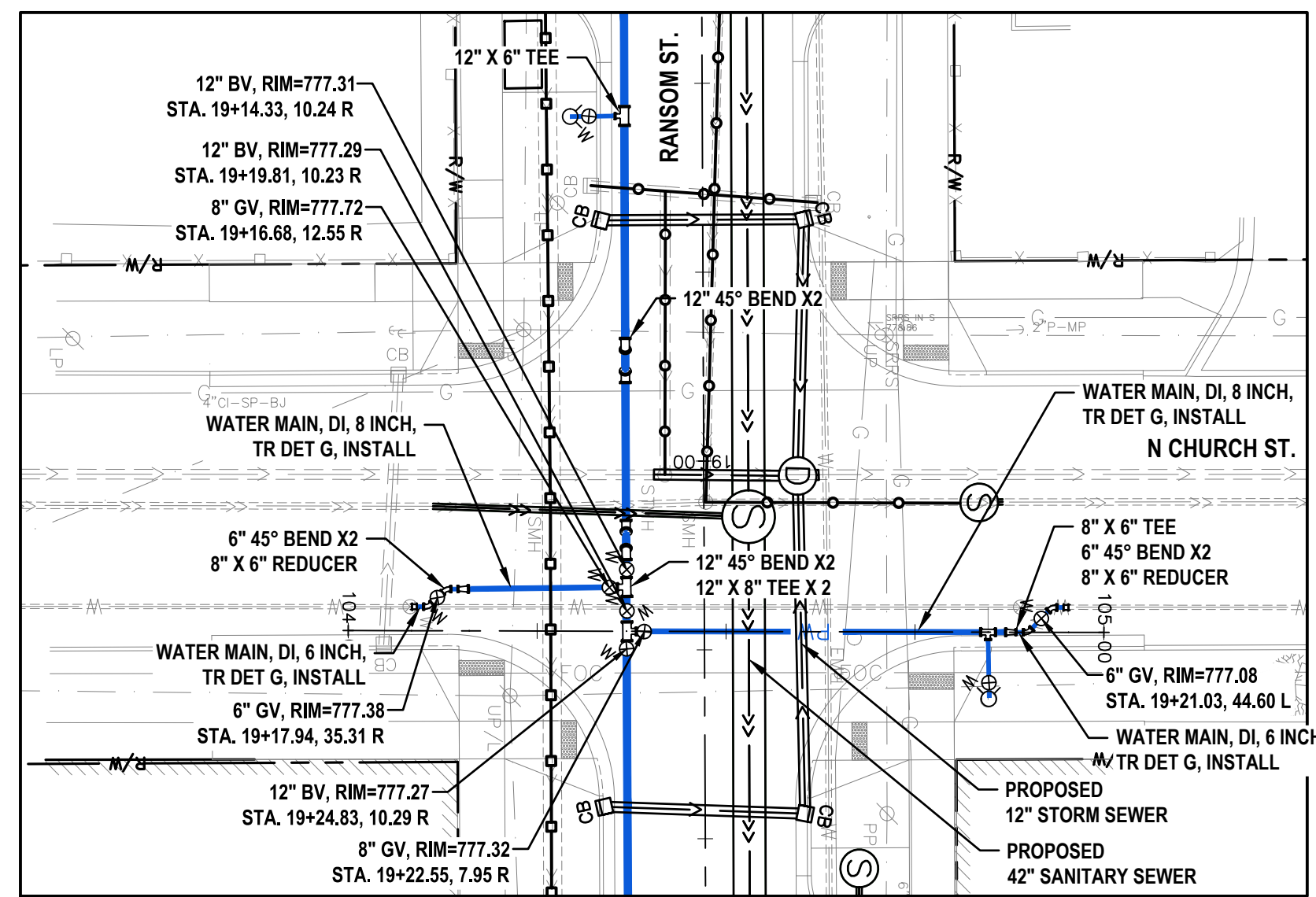
**RANSOM STREET
 IMPROVEMENTS
 CITY OF KALAMAZOO**

PROJECT: **CONDUIT PLAN - 3**

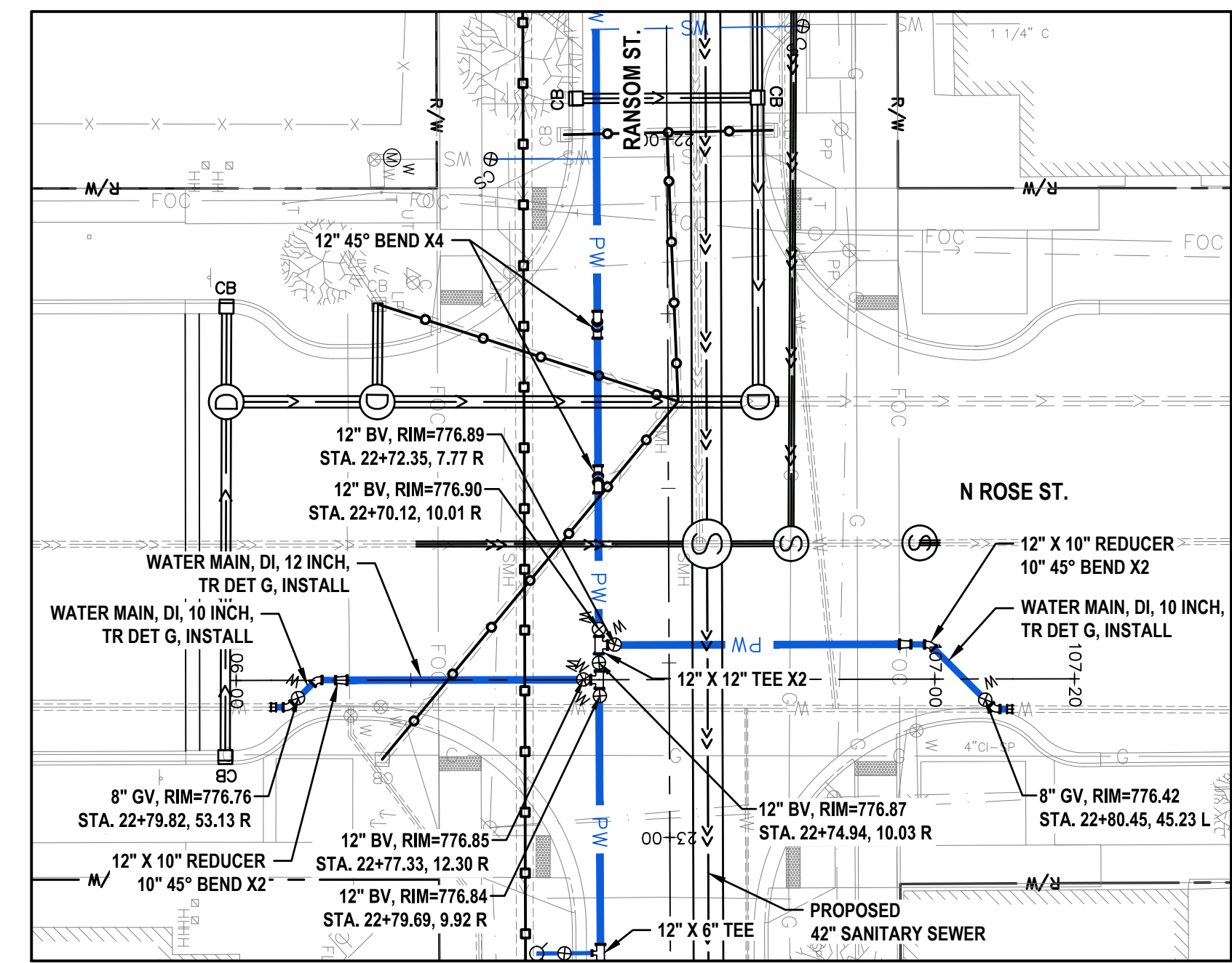
SHEET TITLE:
 DRAWN BY: **DJL**
 DESIGNED BY: **MJS/ERF**
 PM REVIEW: **DAD**
 QA/QC REVIEW:
 DATE: **JANUARY 2023**
 SEAL:

SIGNATURE:
 DATE:
 SCALE:
 HORIZ: 1" = 20'
 VERT: N/A
 ACI JOB #

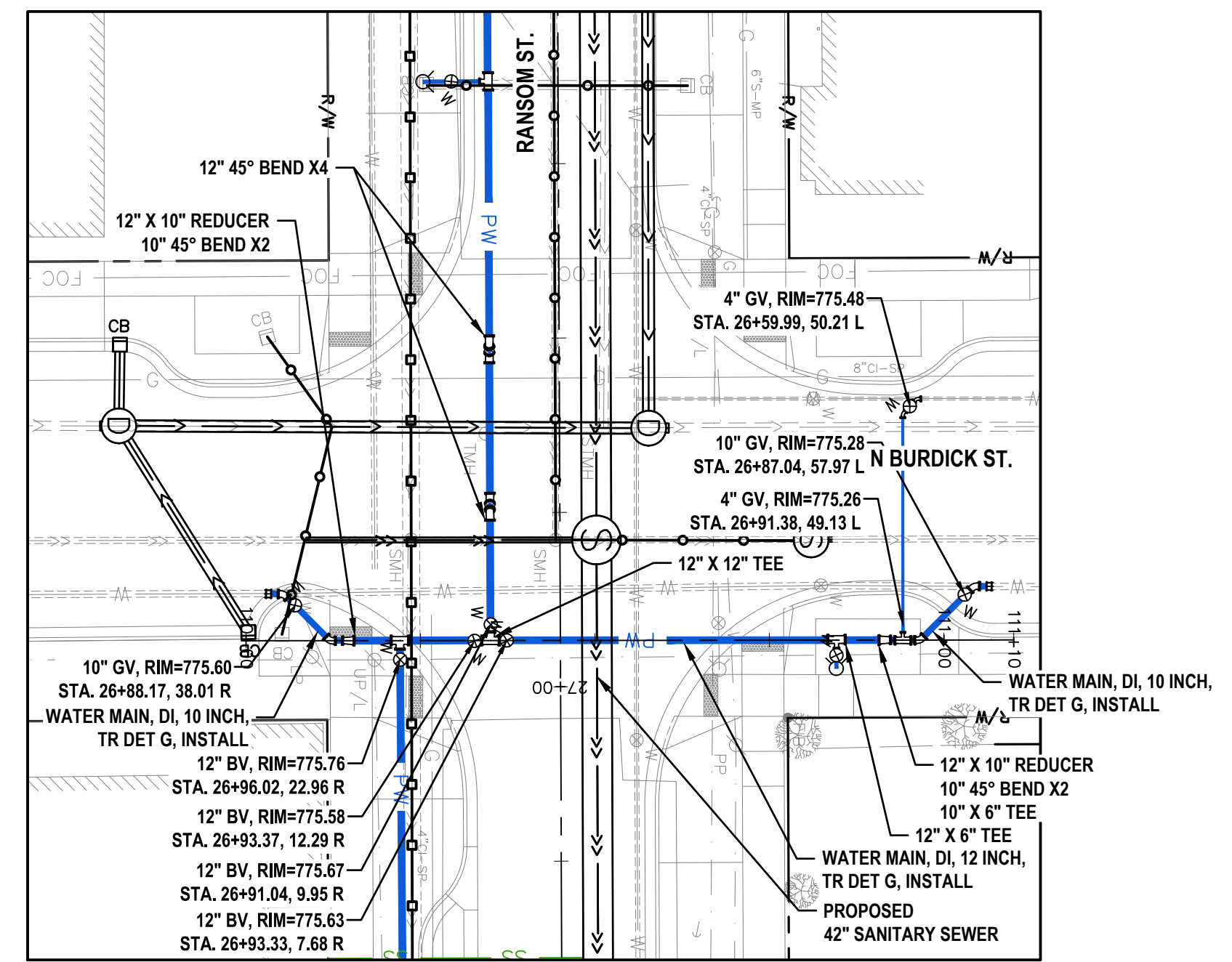
22-0031
 SHEET NO. **44** of **52**



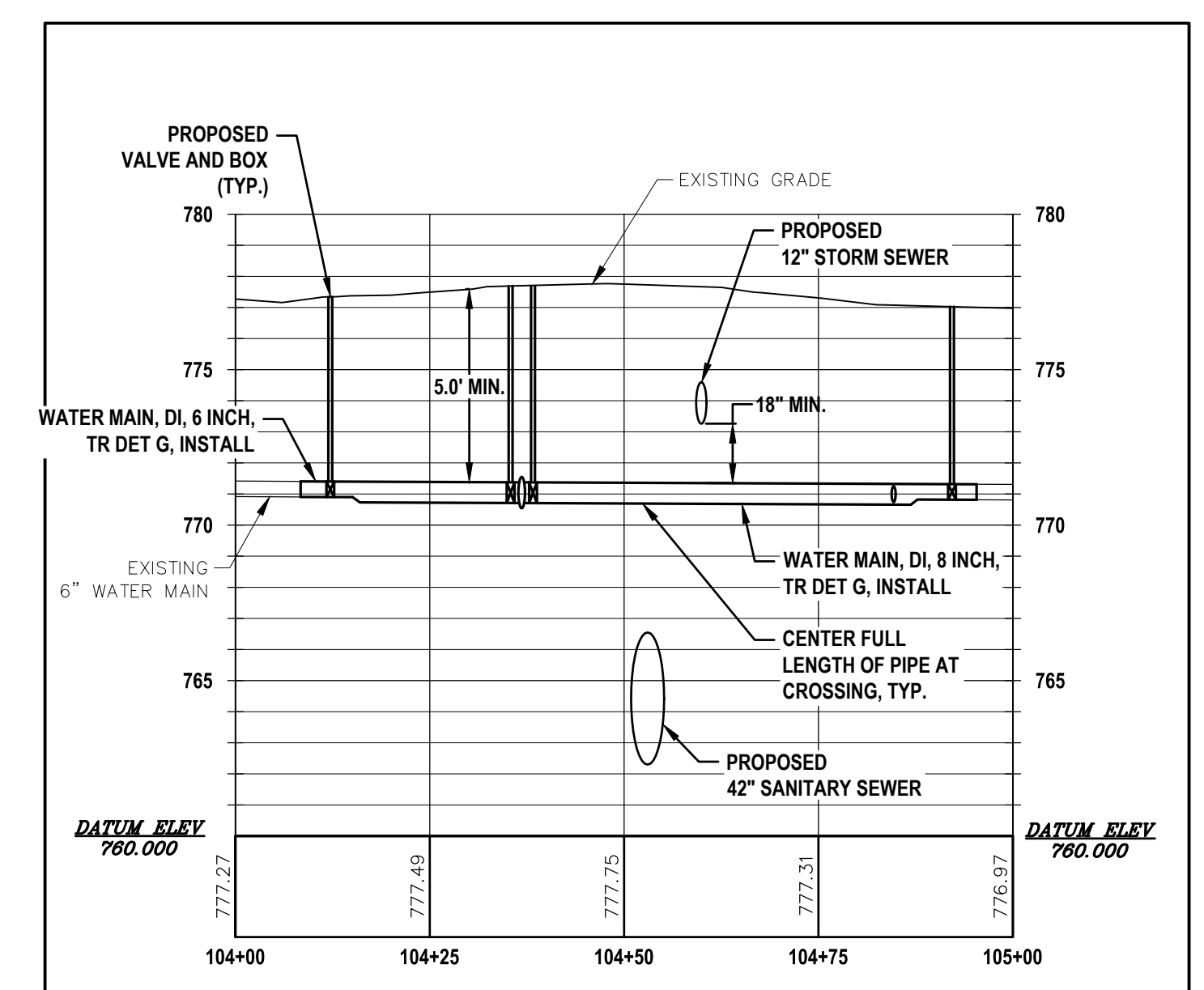
CHURCH ST. WATER MAIN, PLAN



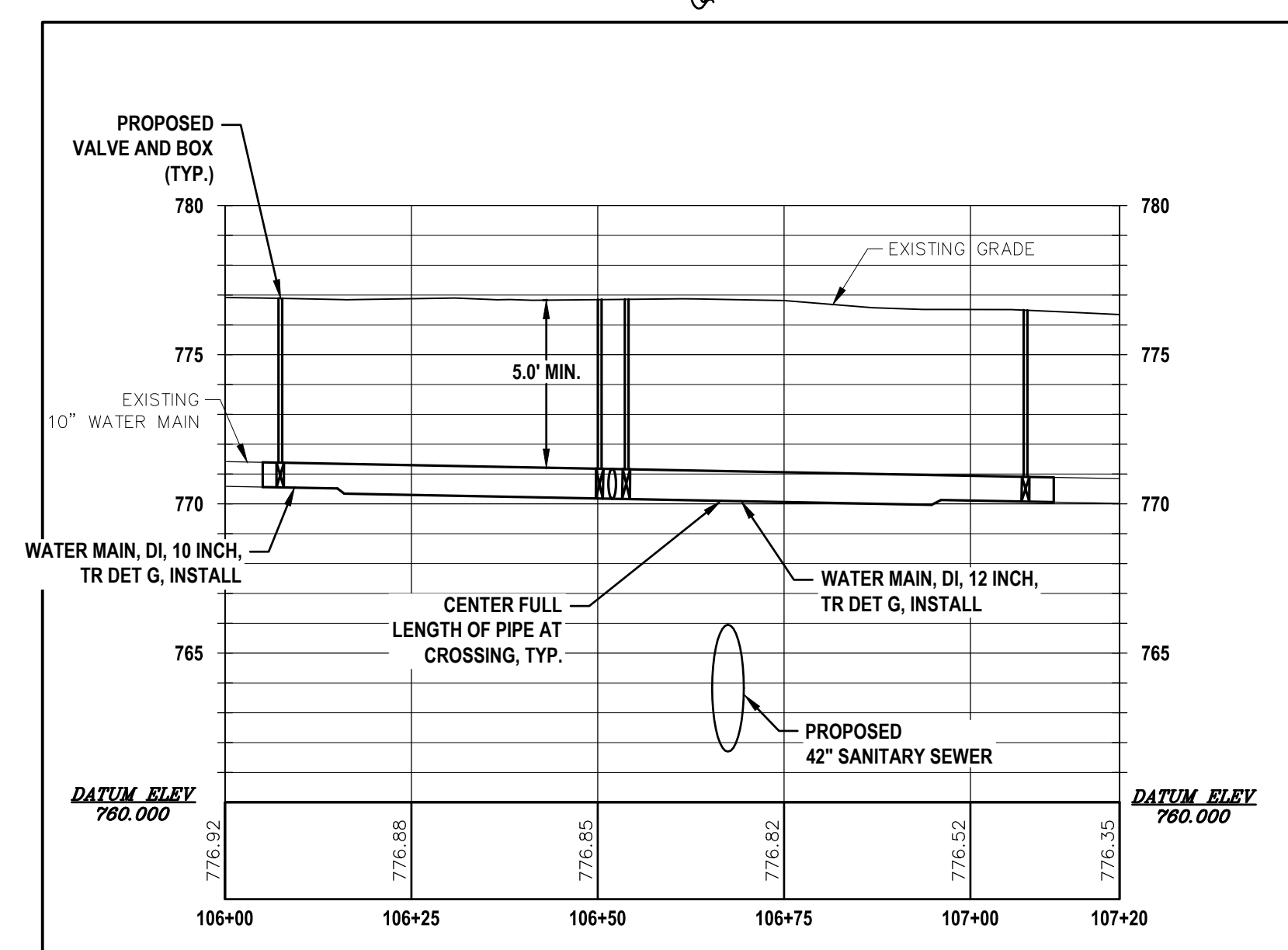
ROSE ST. WATER MAIN, PLAN



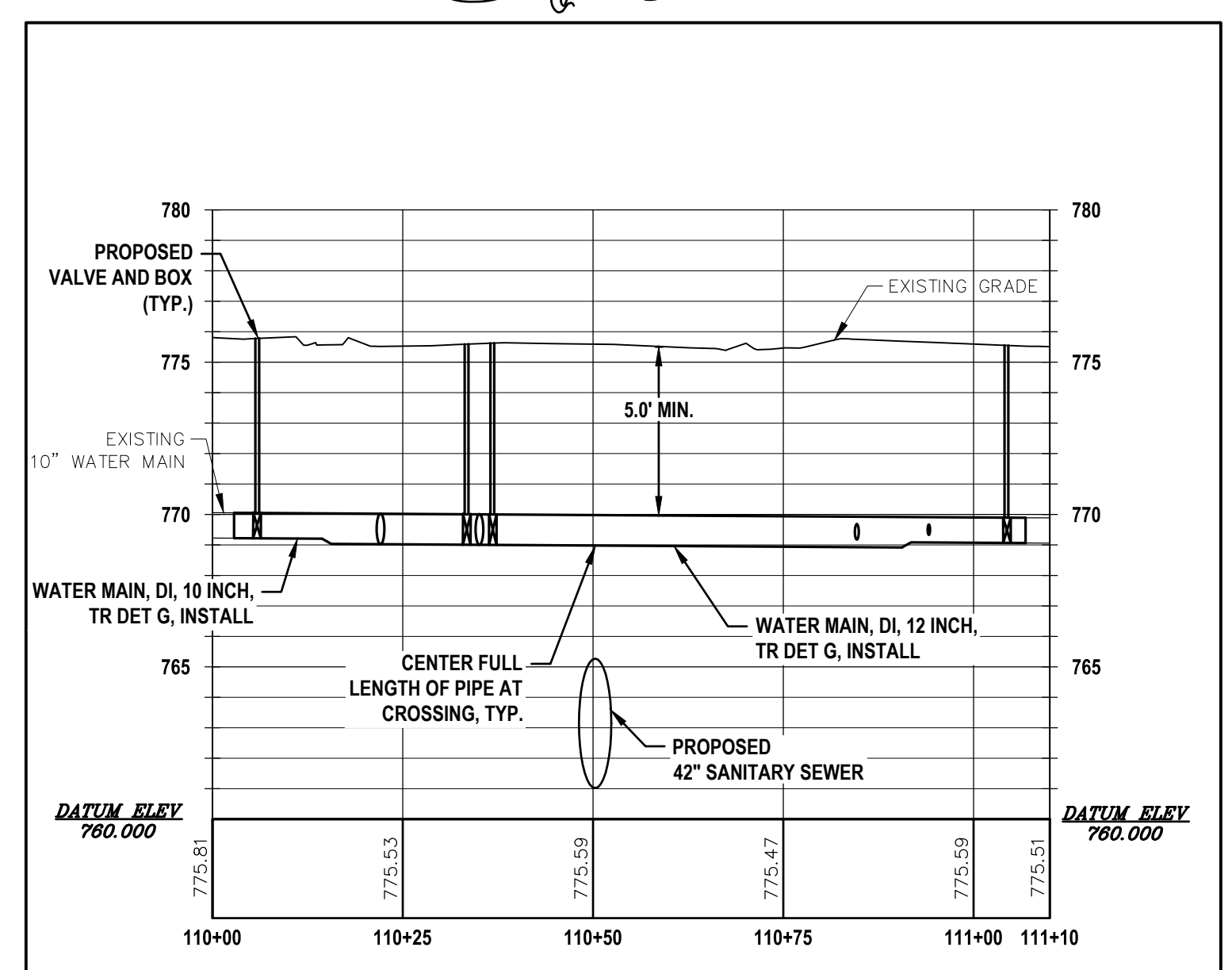
BURDICK ST. WATER MAIN, PLAN



CHURCH ST. WATER MAIN, PROFILE



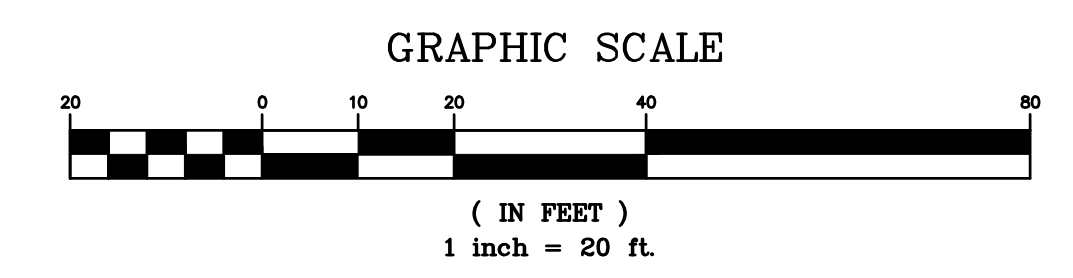
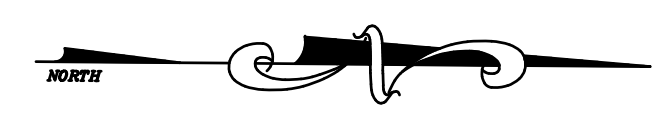
ROSE ST. WATER MAIN, PROFILE



BURDICK ST. WATER MAIN, PROFILE

- LEGEND**
- ○ ABANDON SEWER, LESS THAN 24 INCH
 - ○ ABANDON SEWER, GREATER THAN 24 INCH

NOTE: STATION AND OFFSET OF UTILITY FEATURES REFERENCE RANSOM STREET ALIGNMENT

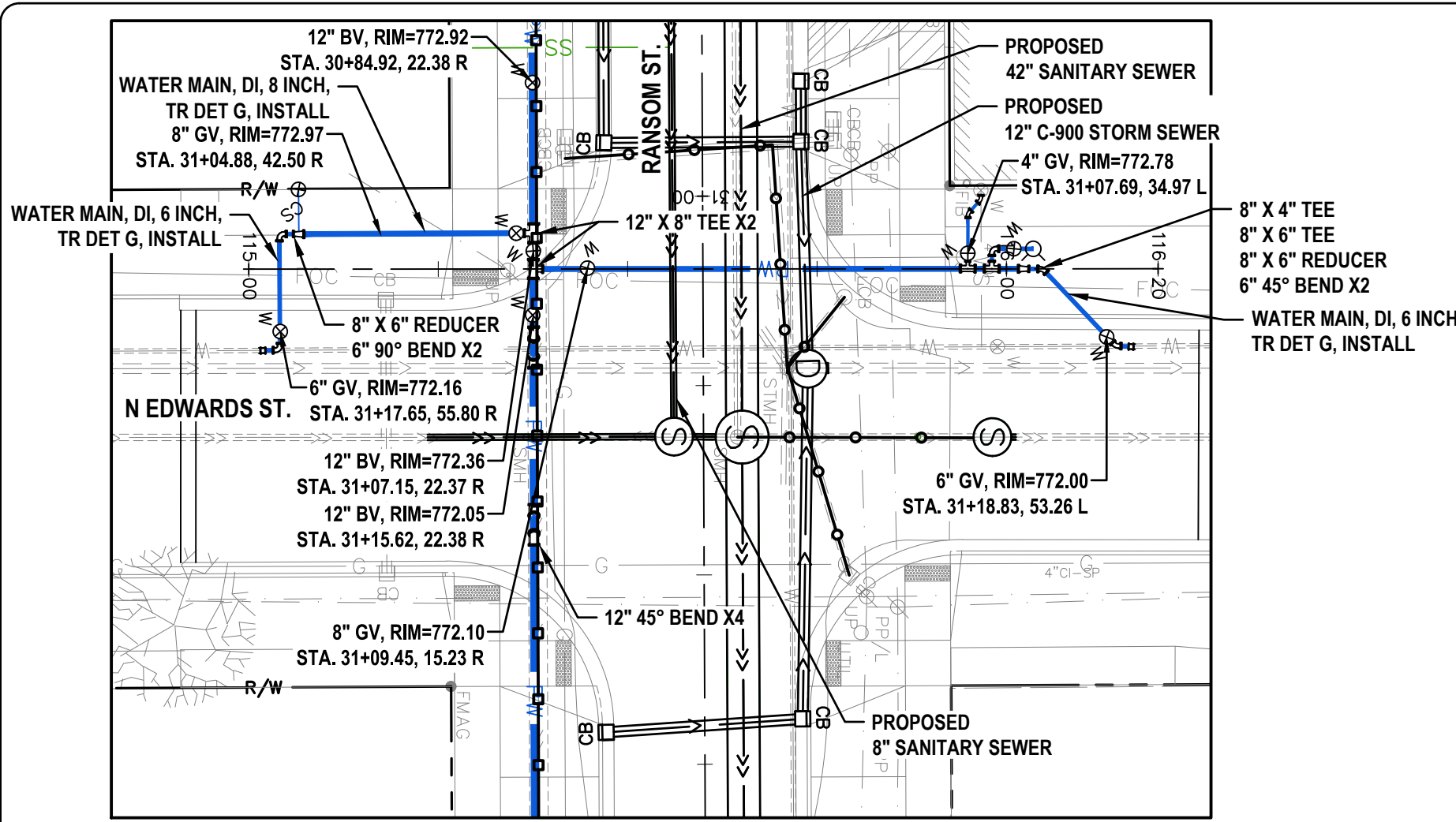


WATER MAIN SEPARATION CONFLICTS (<10' H/18" V SEPARATION FROM SEWERS)			
STATION/OFFSET	CONFLICT	PROPOSED MITIGATION	PROPOSED SEPARATION
104+07, 2.5 L	6" WM / EX STORM CB	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	2' H
106+06, 3.0 R	8" WM / PROP STORM CB	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	3' H
110+05, 5.8 L	10" WM / EX CB / EX 8" SANITARY SEWER	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	4' H
111+06, 6.8 L	10" WM / EX 8" SANITARY SEWER	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	4' H

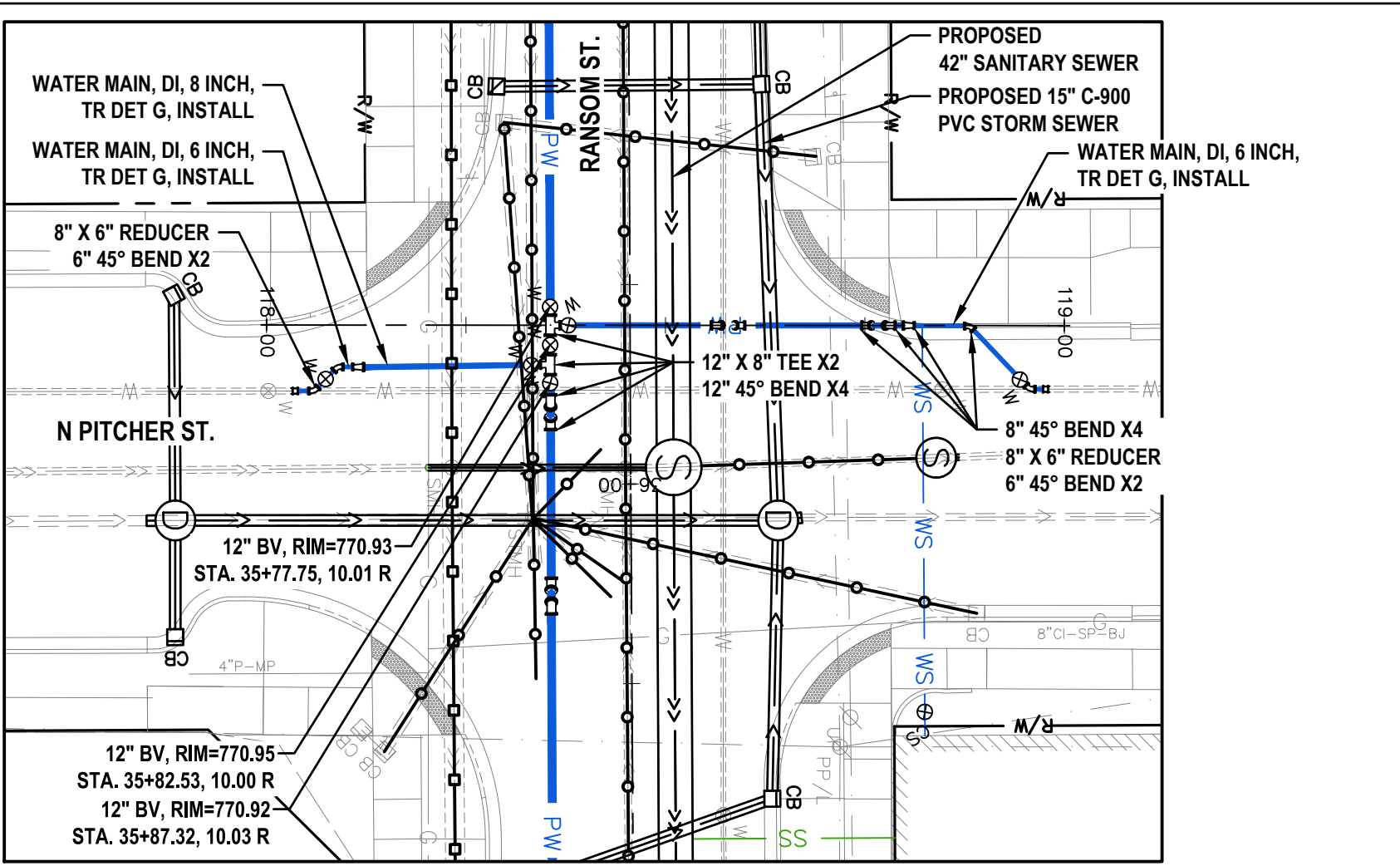
THE CITY OF KALAMAZOO ACKNOWLEDGES THAT THESE LOCATIONS DO NOT MEET THE CURRENT 10-STATE STANDARDS SEPARATION REQUIREMENTS FOR SEPARATION OF FACILITIES. ADDITIONAL OPERATION AND MAINTENANCE EFFORTS MAY BE REQUIRED TO MAINTAIN THESE FACILITIES IN SAFE WORKING ORDER.

NO.	REVISION DESCRIPTION	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

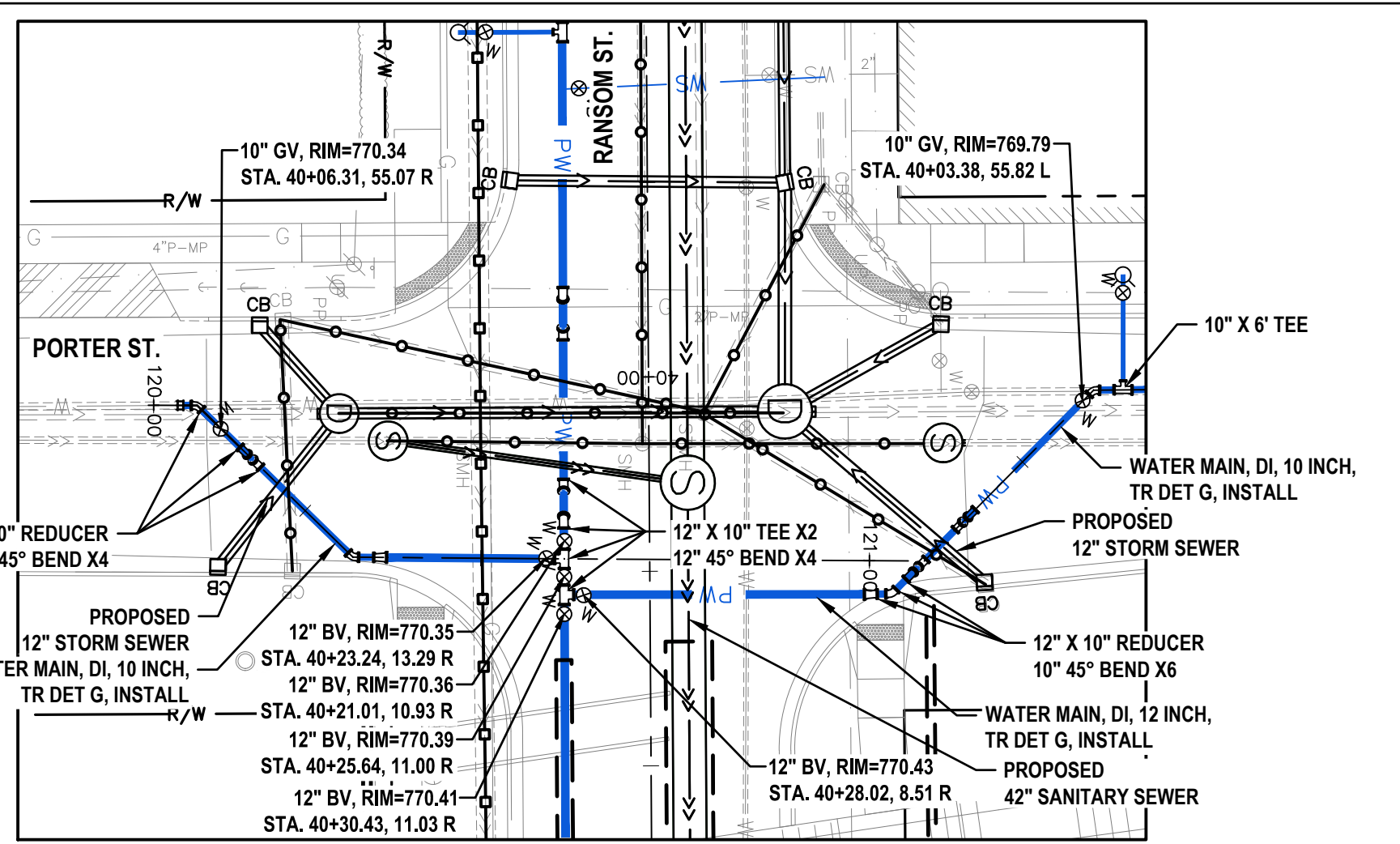
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:



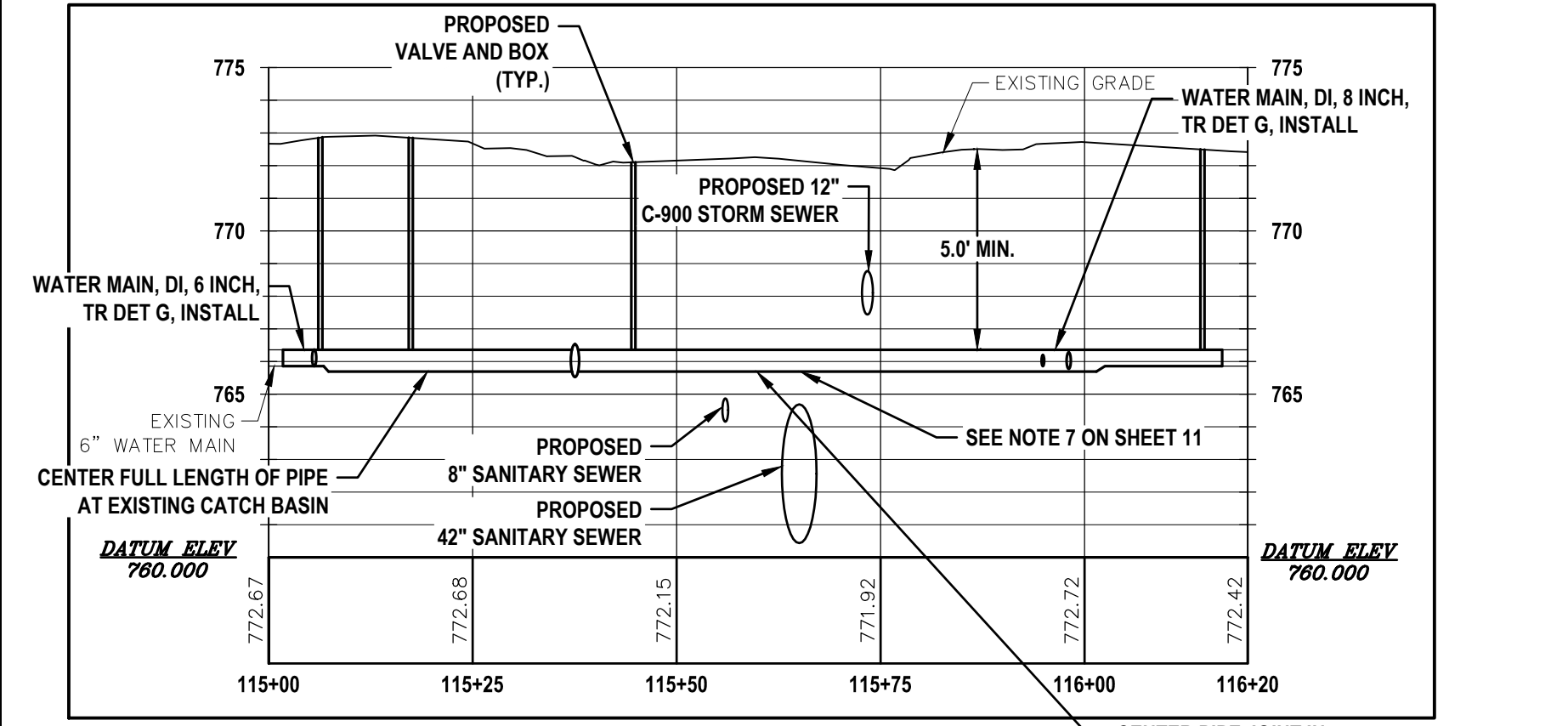
EDWARDS ST. WATER MAIN, PLAN



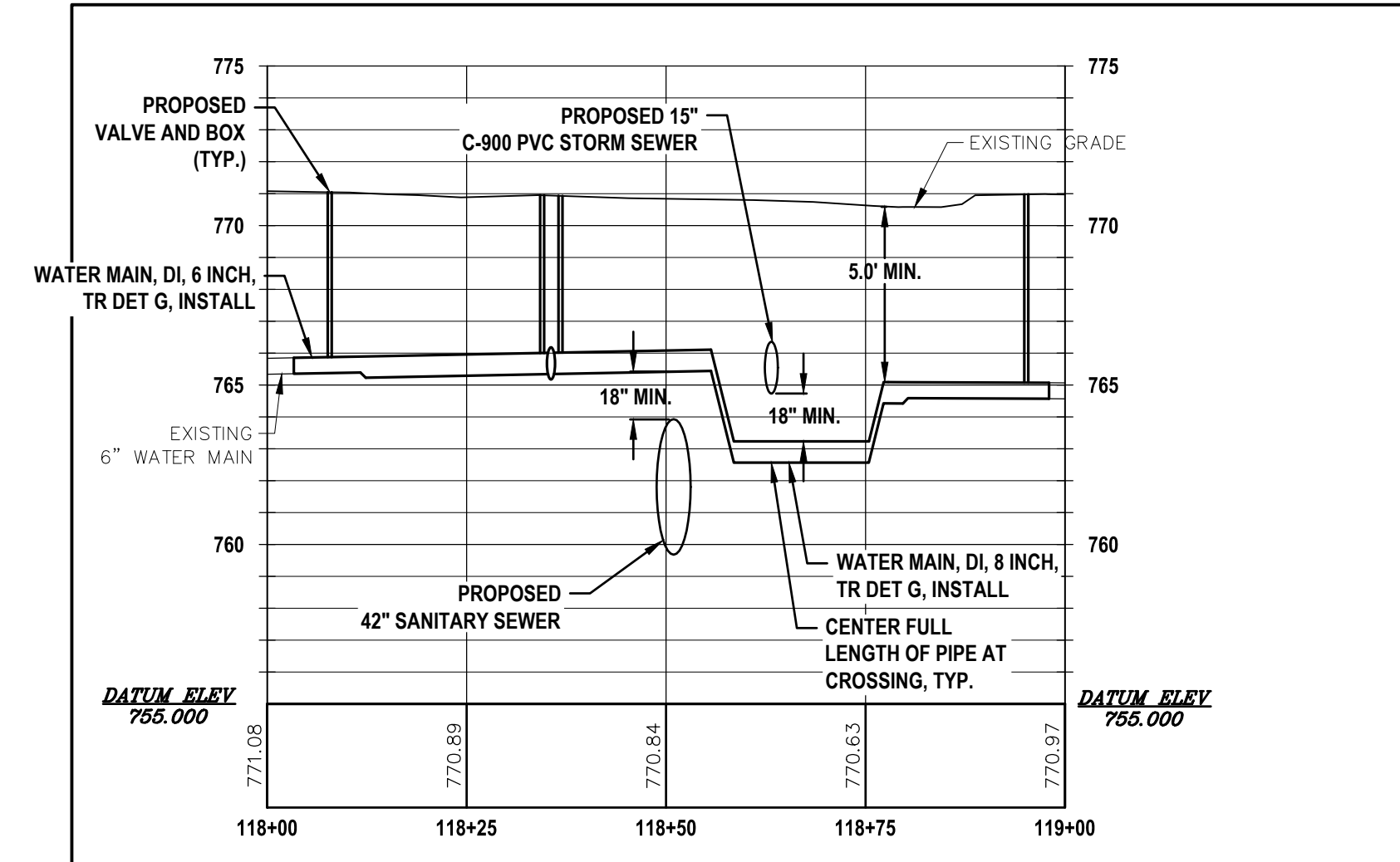
PITCHER ST. WATER MAIN, PLAN



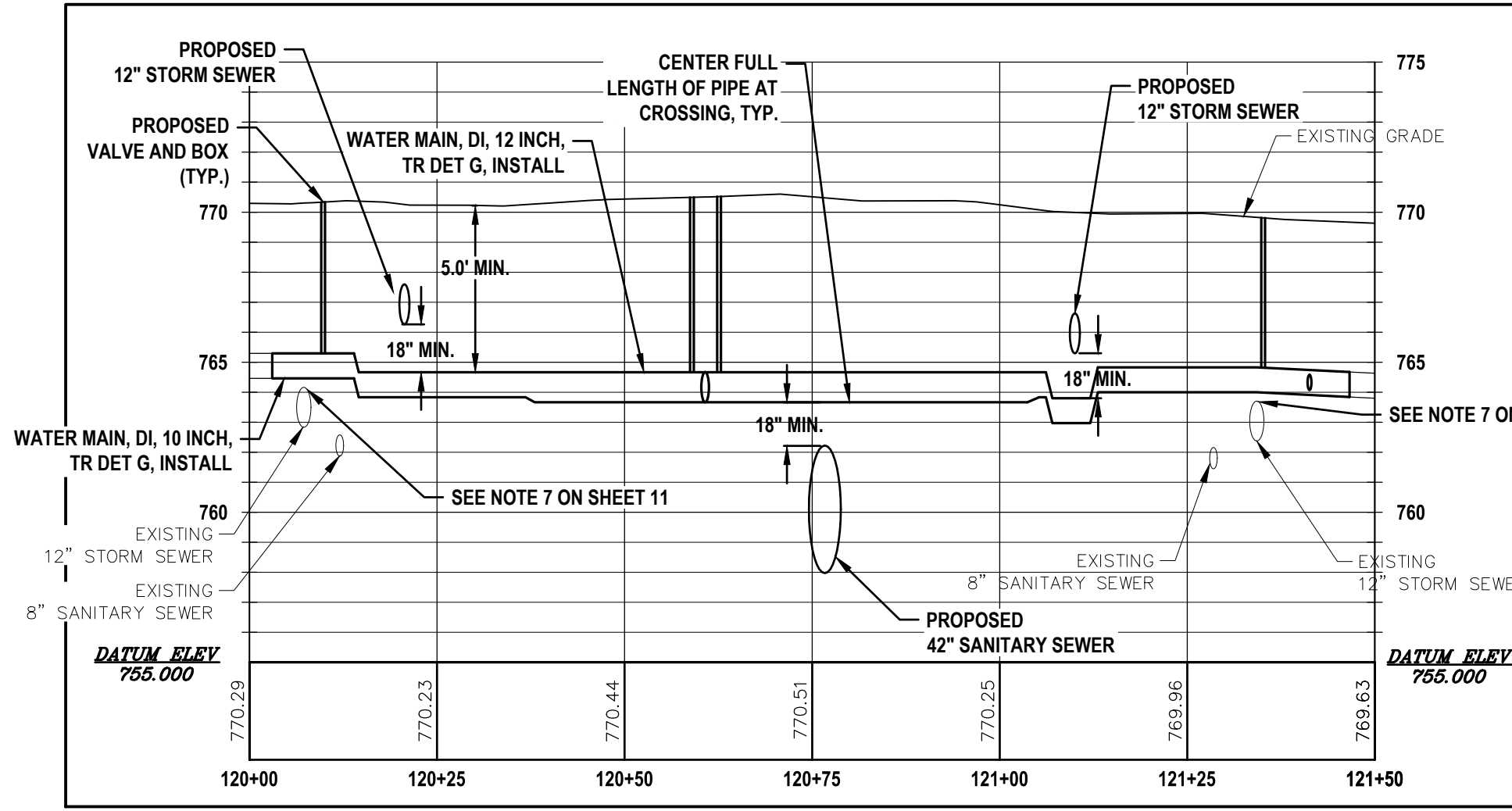
PORTER ST. WATER MAIN, PLAN



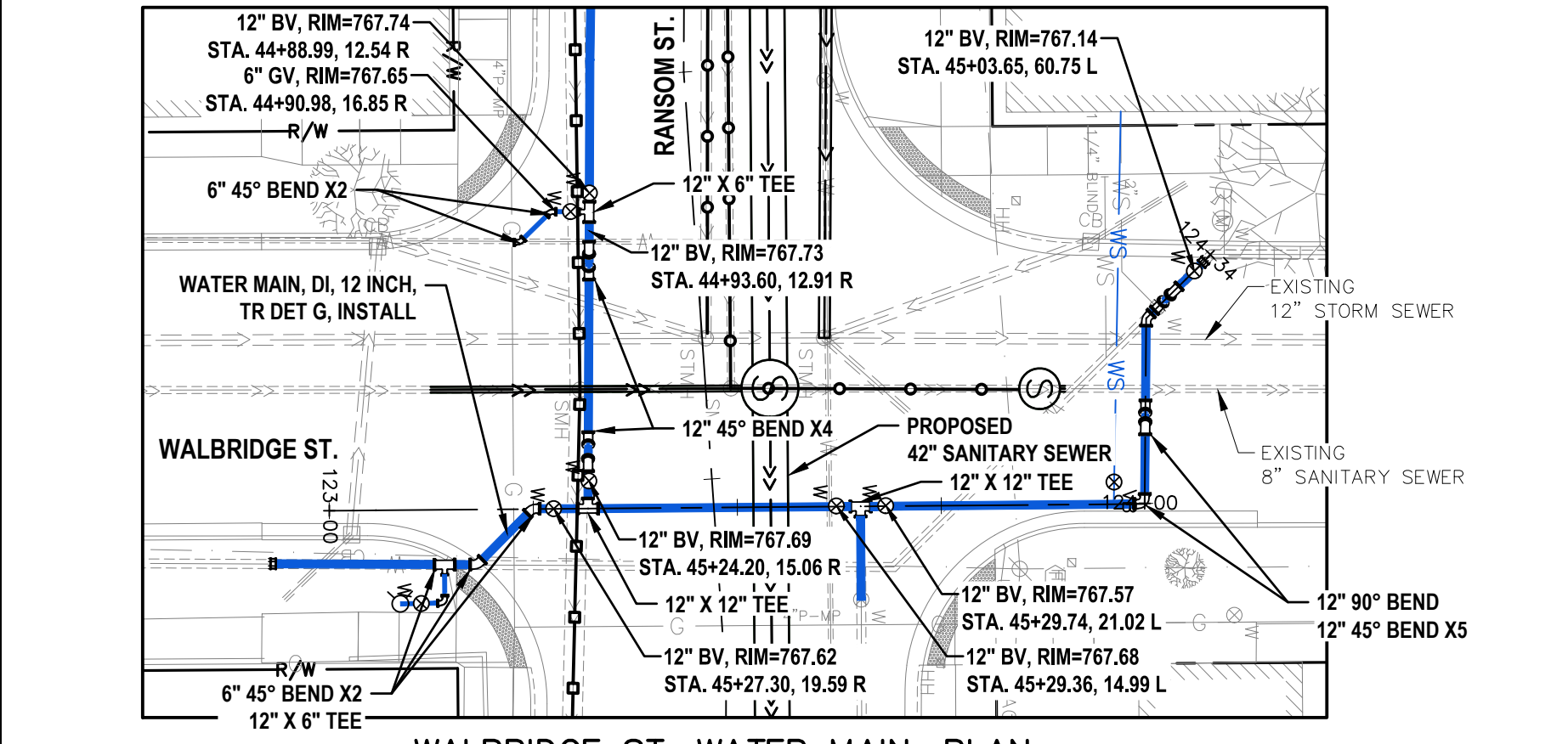
EDWARDS ST. WATER MAIN, PROFILE



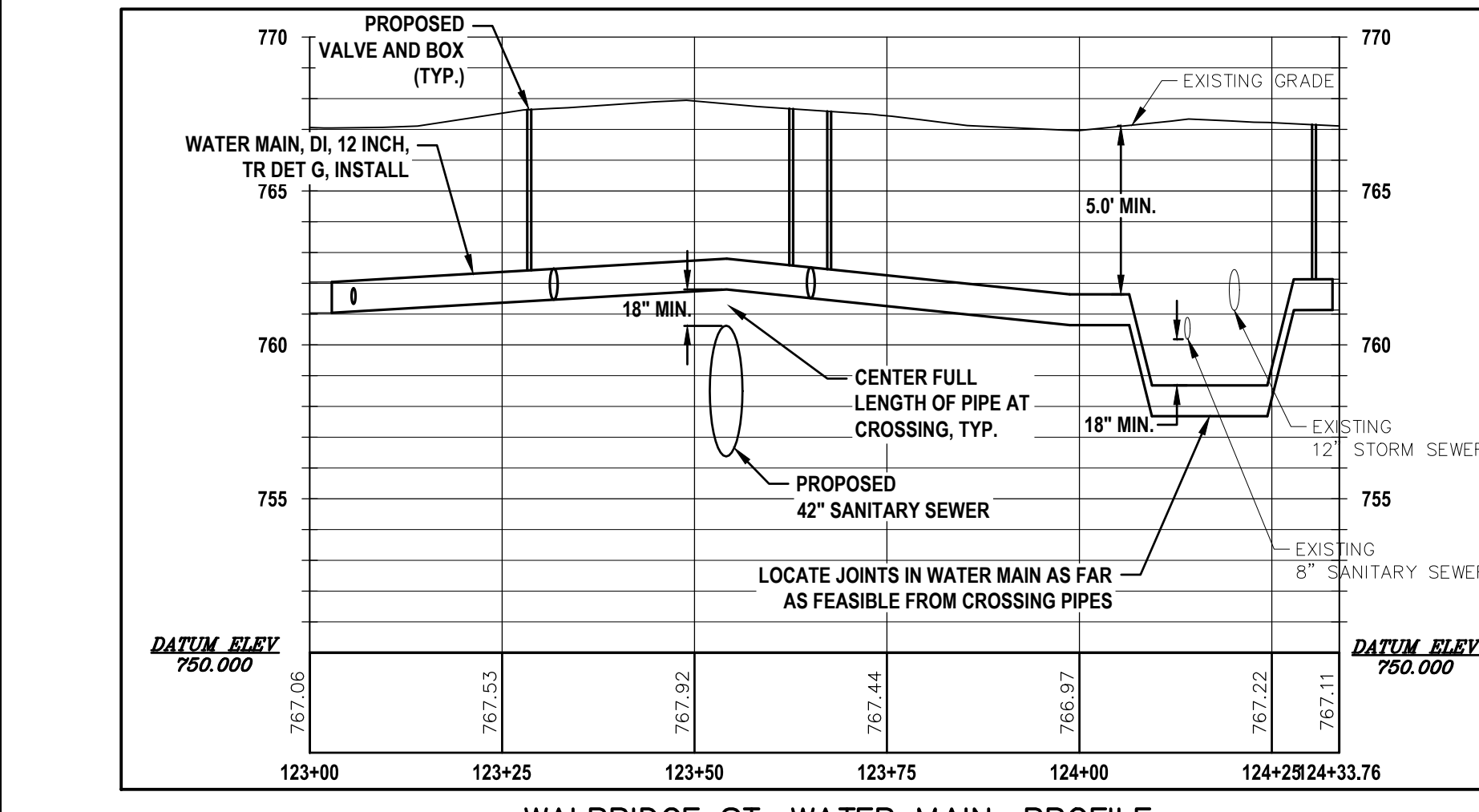
PITCHER ST. WATER MAIN, PROFILE



PORTER ST. WATER MAIN, PROFILE



WALBRIDGE ST. WATER MAIN, PLAN



WALBRIDGE ST. WATER MAIN, PROFILE

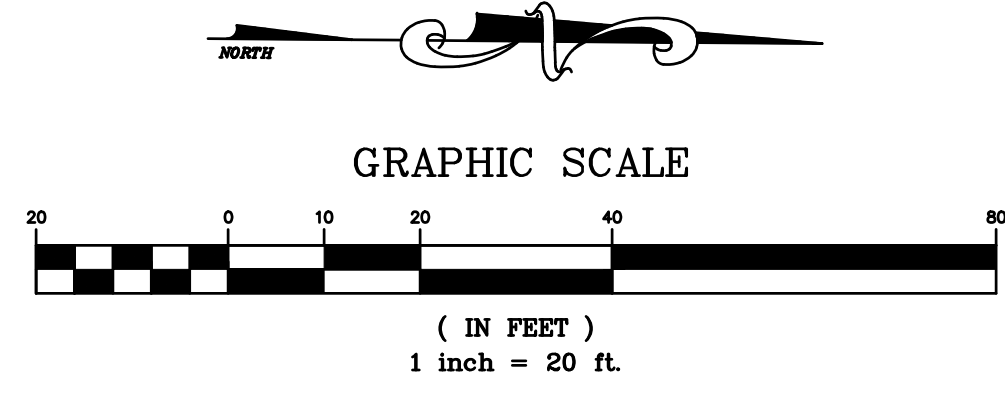
LEGEND

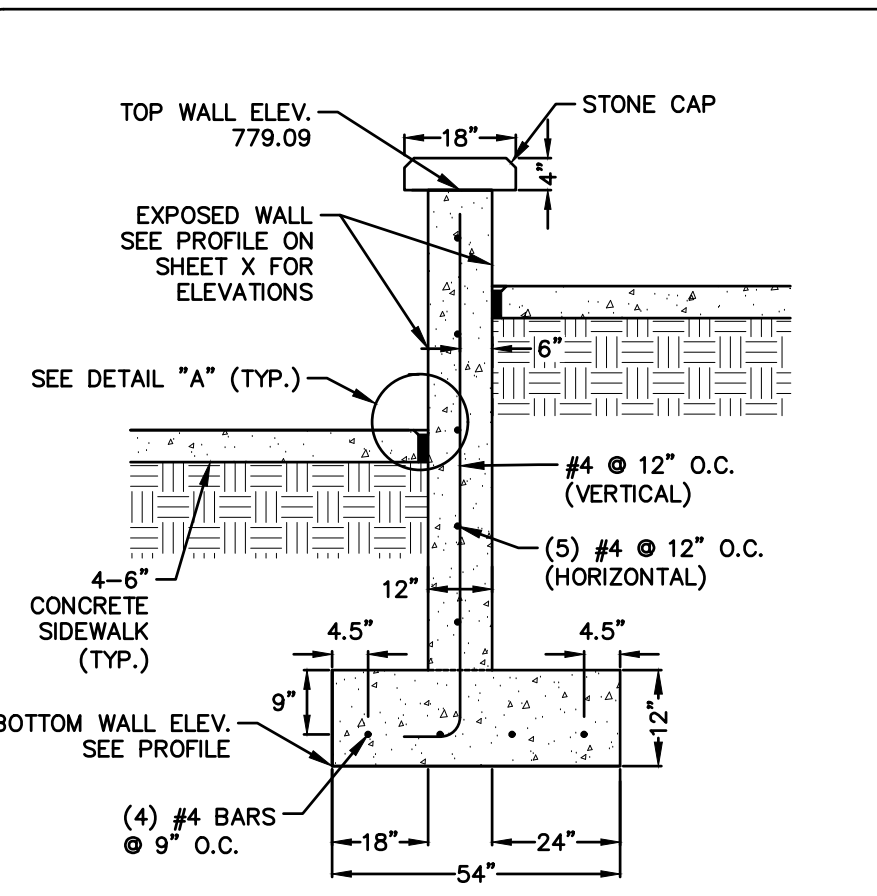
- ○ ○ ABANDON SEWER, LESS THAN 24 INCH
- ○ ○ ABANDON SEWER, GREATER THAN 24 INCH

NOTE: STATION AND OFFSET OF UTILITY FEATURES REFERENCE RANSOM STREET ALIGNMENT

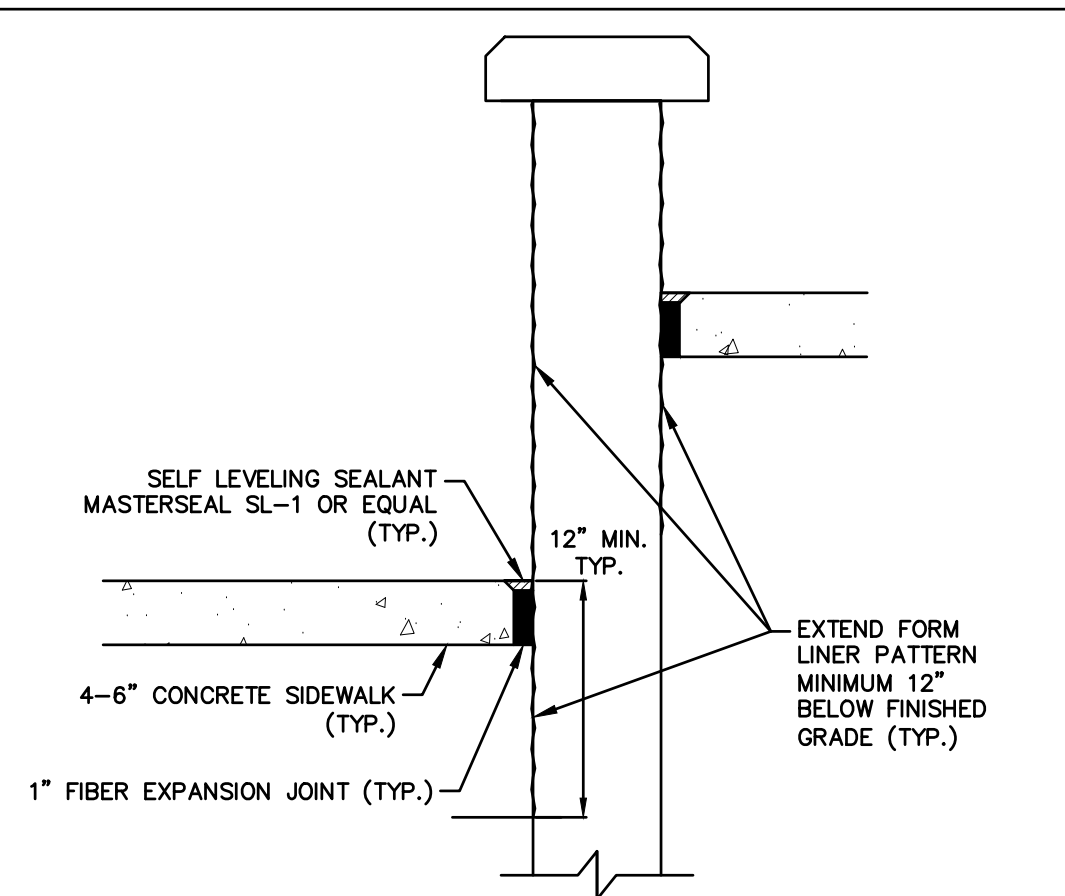
WATER MAIN SEPARATION CONFLICTS (<10' H/18" V SEPARATION FROM SEWERS)			
STATION/OFFSET	CONFLICT	PROPOSED MITIGATION	PROPOSED SEPARATION
115+02, 10.0 R	6" WM / EX 12" STORM SEWER	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	2' H
115+17, 4.0 L	8" WM / EX STORM CB	CENTER FULL LENGTH OF PIPE AT CROSSING	5.5' H
115+56	8" WM / PROP 8" SANITARY SEWER	CONSTRUCT PIPE CRADLE WHERE 18" OF SEPARATION CANNOT BE MAINTAINED, CENTER WATER MAIN JOINT BETWEEN SEWER LINES	9" V
115+65	8" WM / PROP 42" SANITARY SEWER	CONSTRUCT PIPE CRADLE WHERE 18" OF SEPARATION CANNOT BE MAINTAINED, CENTER WATER MAIN JOINT BETWEEN SEWER LINES	12" V
115+73	8" WM / PROP 12" STORM SEWER	CONSTRUCT PIPE CRADLE WHERE 18" OF SEPARATION CANNOT BE MAINTAINED, CONSTRUCT STORM SEWER WITH AWWA C900 PIPE & PRESSURE TEST PER AWWA-C605	15" V
116+16, 9.3 R	6" WM / EX 12" STORM SEWER	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	2' H
118+04, 7.5 R	8" WM / EX 8" SANITARY SEWER	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	9" H
118+51	8" WM / PROP 42" SANITARY SEWER	MAXIMUM FEASIBLE JOINT SPACING PROVIDED WITH MINIMUM 18" OF SEPARATION	18" V
118+63	8" WM / PROP 15" STORM SEWER	CONSTRUCT SANITARY SEWER WITH AWWA C900 PIPE AND PRESSURE TEST PER AWWA-C605	18" V
118+97, 7.0 R	8" WM / EX 8" SANITARY SEWER	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	8" H
120+04	10" WM / EX 12" STORM SEWER	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT, CONSTRUCT PIPE CRADLE WHERE 18" SEPARATION CANNOT BE MAINTAINED	1' H / 3" V
120+04	10" WM / EX 8" SANITARY SEWER	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	3'
121+34	10" WM / EX 12" STORM SEWER	MAXIMUM FEASIBLE JOINT SPACING PROVIDED WITH MINIMUM 18" OF SEPARATION	3" V
121+40	10" WM / EX 8" SANITARY SEWER	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	4' H
123+04, 7.4 R	12" WM / EX STORM CB	CONNECTION TO EXISTING AT LIMITS, CORRECT WITH FUTURE PROJECT	1' H
124+14	12" WM / EX 8" SANITARY SEWER	MAXIMUM FEASIBLE JOINT SPACING PROVIDED WITH MINIMUM 18" OF SEPARATION	18" V
124+20	12" WM / EX 12" STORM SEWER	MAXIMUM FEASIBLE JOINT SPACING PROVIDED WITH MINIMUM 18" OF SEPARATION	18" V

THE CITY OF KALAMAZOO ACKNOWLEDGES THAT THESE LOCATIONS DO NOT MEET THE CURRENT 10-STATE STANDARDS SEPARATION REQUIREMENTS FOR SEPARATION OF FACILITIES. ADDITIONAL OPERATION AND MAINTENANCE EFFORTS MAY BE REQUIRED TO MAINTAIN THESE FACILITIES IN SAFE WORKING ORDER.

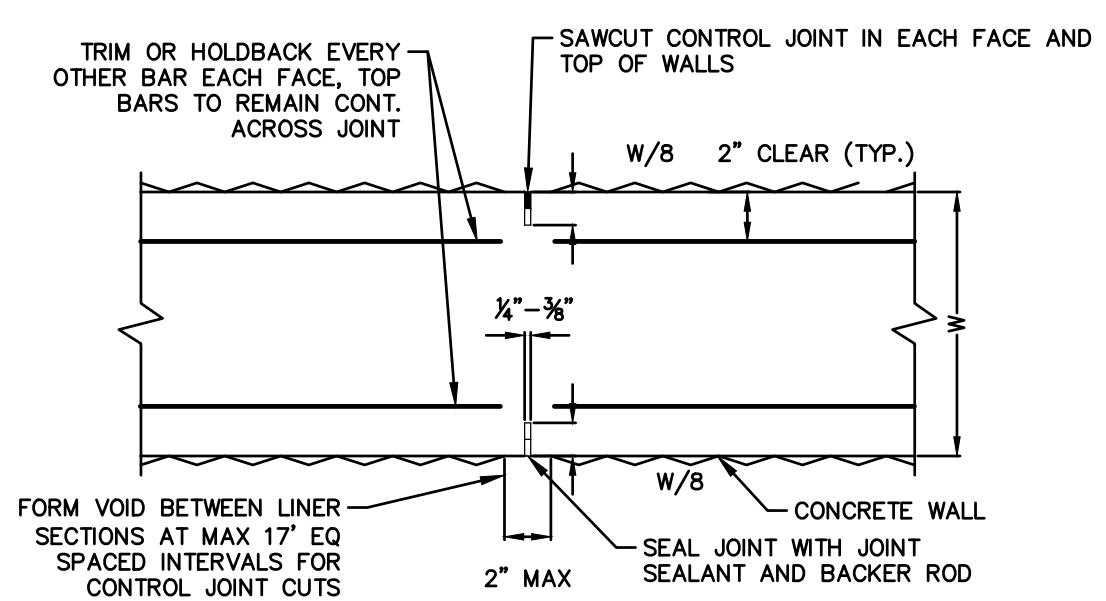




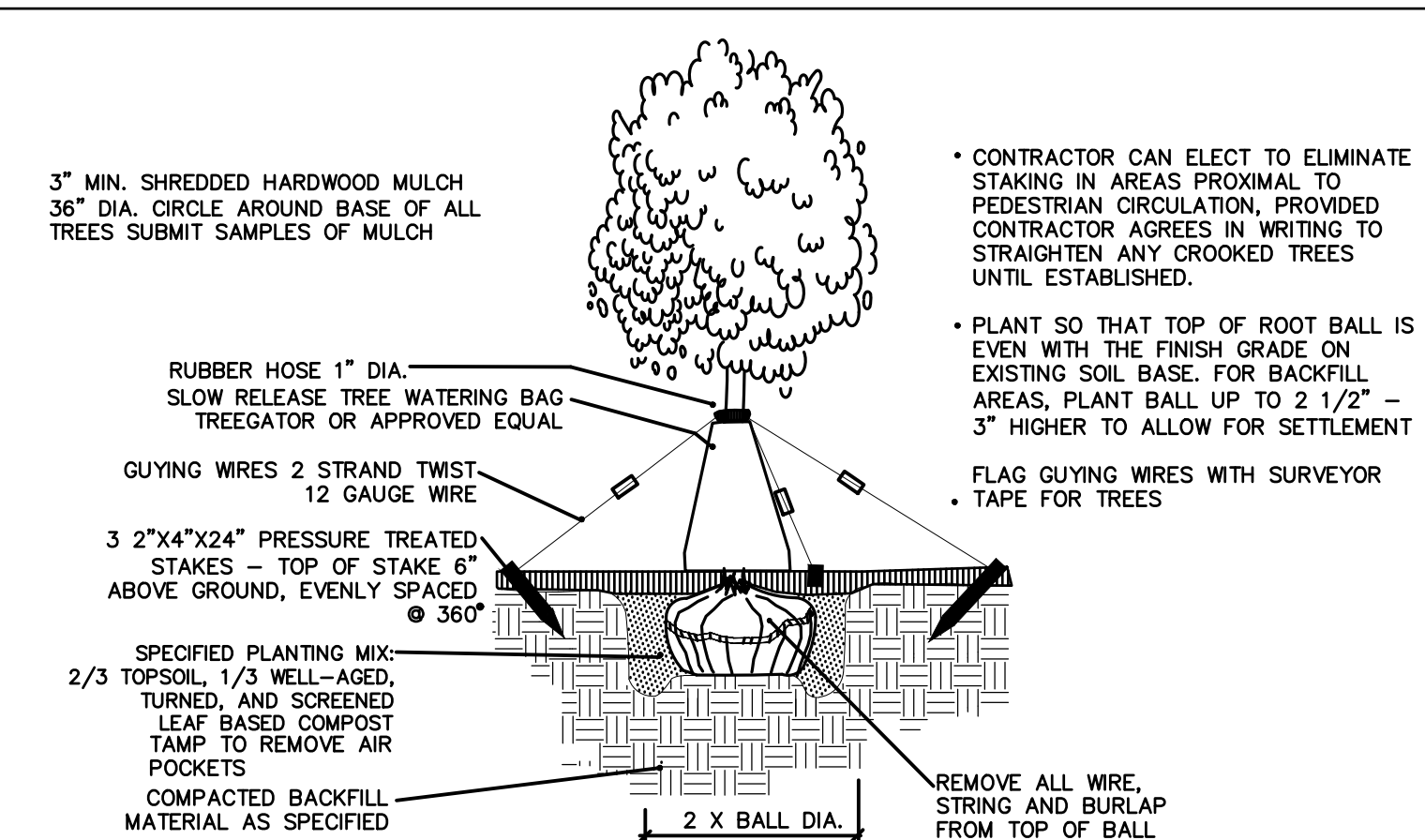
RETAINING WALL, POURED CONCRETE
NOT TO SCALE



RETAINING WALL, POURED CONCRETE (DETAIL A)
NOT TO SCALE



TYPICAL WALL CONTROL JOINT DETAIL - PLAN VIEW
NOT TO SCALE



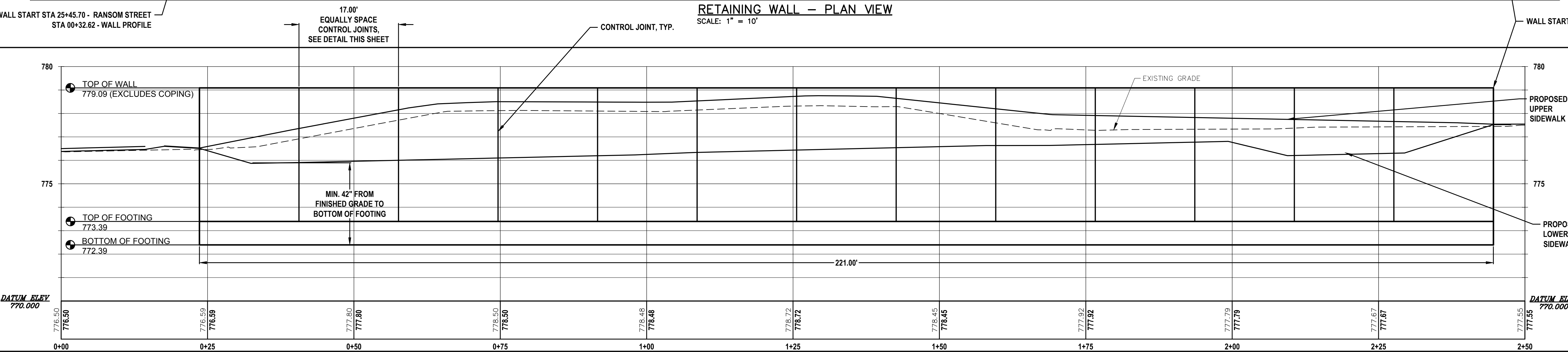
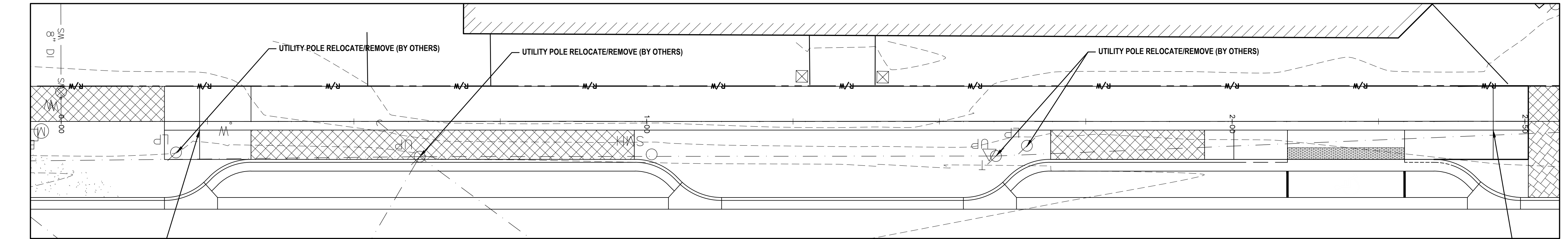
SHADE/ORNAMENTAL TREE PLANTING DETAIL

PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
AA	10	Acer rubrum 'Armstrong'	Armstrong Red Maple	2.5' BB	6' Min. Lowest Branches
AG	5	Acer rubrum 'JFS-KW78' PP 25301	Armstrong Gold Maple	2.5' BB	6' Min. Lowest Branches
AS	10	Acer saccharum 'Apollo'	Apollo Sugar Maple	2'BB	6' Min. Lowest Branches
AB	11	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Apple Serviceberry	2'BB	5' Min. Lowest Branches
AAB	2	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Apple Serviceberry	8-10' HT	
GP	6	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	2'BB	6' Min. Lowest Branches Certified Male Only!
GA	7	Ginkgo biloba 'Autumn Gold' TM	Autumn Gold Maidenhair Tree	2'BB	6' Min. Lowest Branches Certified Male Only!
MA	8	Malus x 'Adirondack'	Adirondack Crabapple	2'BB	6' Min. Lowest Branches
MR	10	Malus x 'Royal Raindrops'	Royal Raindrops Crabapple	2'BB	6' Min. Lowest Branches
MS	8	Malus x 'Sutyazam'	Sugar Tyme® Crabapple	2'BB	6' Min. Lowest Branches
SI	4	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	2'BB	6' Min. Lowest Branches
SE	6	Syringa reticulata pekinensis 'DTR 124'	Summer Charm® Peking Lilac	2'BB	6' Min. Lowest Branches
UF	8	Ulmus 'Frontier'	Frontier Elm	2'BB	6' min. lowest branches
ZC	8	Zelkova serrata 'JFS-KW1' TM	City Sprite Zelkova	2'BB	6' Min. Lowest Branches

Description	Units	Quantity
Watering and Cultivating, First Season, Min. \$8,000	LSUM	1
Watering and Cultivating, 2nd Season, Min. \$5,000	LSUM	1
Acer rubrum 'Armstrong', 2.5 inch	Ea	10
Acer rubrum 'JFS-KW78' PP25301, 2.5 inch	Ea	5
Acer saccharum 'Apollo', 2 inch	Ea	10
Amelanchier x grandiflora 'Autumn Brilliance', 2 inch	Ea	11
Amelanchier x grandiflora 'Autumn Brilliance', 8-10 Ft.Ht.	Ea	2
Carpinus betulus 'Fastigiata', 2 inch	Ea	2
Ginkgo biloba 'Autumn Gold' TM, 2 inch	Ea	7
Ginkgo biloba 'Princeton Sentry', 2 inch	Ea	6
Malus x 'Adirondack', 2 inch	Ea	8
Malus x 'Royal Raindrops', 2 inch	Ea	10
Malus x 'Sutyazam', 2 inch	Ea	8
Syringa reticulata 'Ivory Silk', 2 inch	Ea	4
Syringa reticulata pekinensis 'DTR 124', 2 inch	Ea	6
Ulmus 'Frontier', 2 inch	Ea	8
Zelkova serrata 'JFS-KW1' TM, 2 inch	Ea	8
Site Preparation, Max \$22,000, Base	LSUM	1

- GENERAL NOTES:**
- LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO UTILITIES. CONTRACTOR MUST CALL 1-800-382-5544 FOR UTILITY LOCATIONS TWO DAYS PRIOR TO DIGGING.
 - LANDSCAPE BEDS TO RECEIVE 3" SHREDDED HARDWOOD BARK.
 - APPLY PER-EMERGENT HERBICIDE TO ALL LANDSCAPE BEDS.
 - CONDUCT SOIL TEST TO VERIFY FERTILITY OF TOPSOIL. AMEND SOIL IF PH IS LESS THAN 5.0 OR GREATER THAN 7.5. MAKE OTHER ADJUSTMENTS AS SOIL ANALYSIS INDICATES.
 - TOPSOIL TO BE A 12" MINIMUM DEPTH IN ALL PLANTING BEDS. TOPSOIL TO BE CLEAN FRIABLE LOAM FROM LOCAL SOURCE, FREE FROM STONES OR DEBRIS OVER 1/2" IN DIA., AND FREE FROM HERBICIDE OR OTHER TOXINS.
 - ALL LANDSCAPE BEDS SHALL BE EXCAVATED TO A DEPTH OF 30" TO REMOVE ALL COMPACTED DEBRIS REMAINING AS A RESULT OF PARKING GARAGE DEMOLITION. REPLACE DEBRIS WITH HIGH QUALITY FILL WITH GOOD DRAINAGE CHARACTERISTICS. ALLOW 12" DEPTH FROM PROPOSED FINISHED GRADE TO TOP OF FILL FOR TOPSOIL PLACEMENT.
 - CONTRACTOR SHALL PROVIDE A TWO YEAR STRAIGHTENING GUARANTEE IN LIEU OF STAKING TREES.



RETAINING WALL - PROFILE VIEW
SCALE: 1" = 10'

ABONMARCHÉ
Landscape Architecture
295 West Main Street
Burlington, Vermont 05401
Tel: 802.249.7295
Fax: 802.249.7296
www.abonmarche.com

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

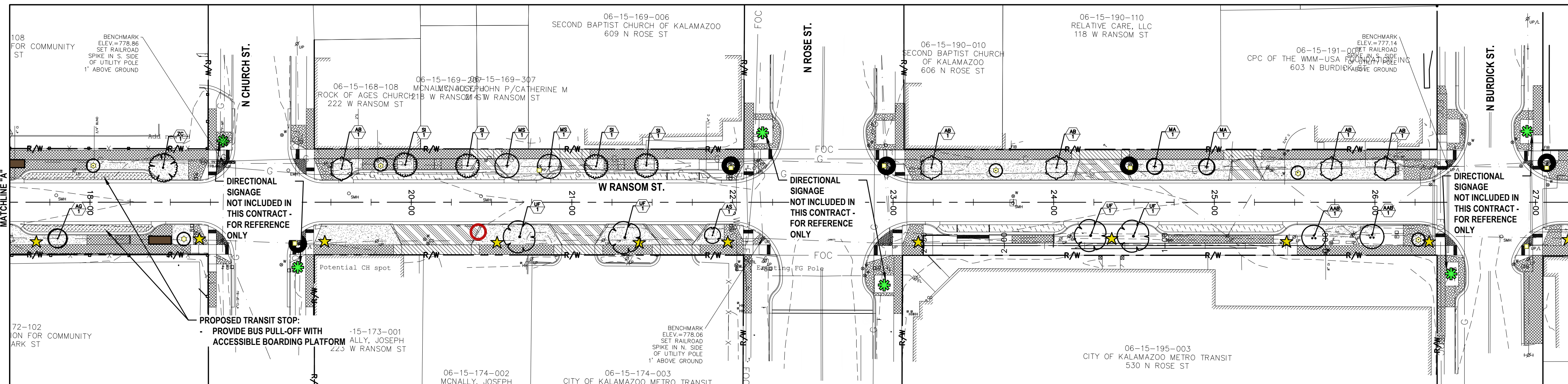
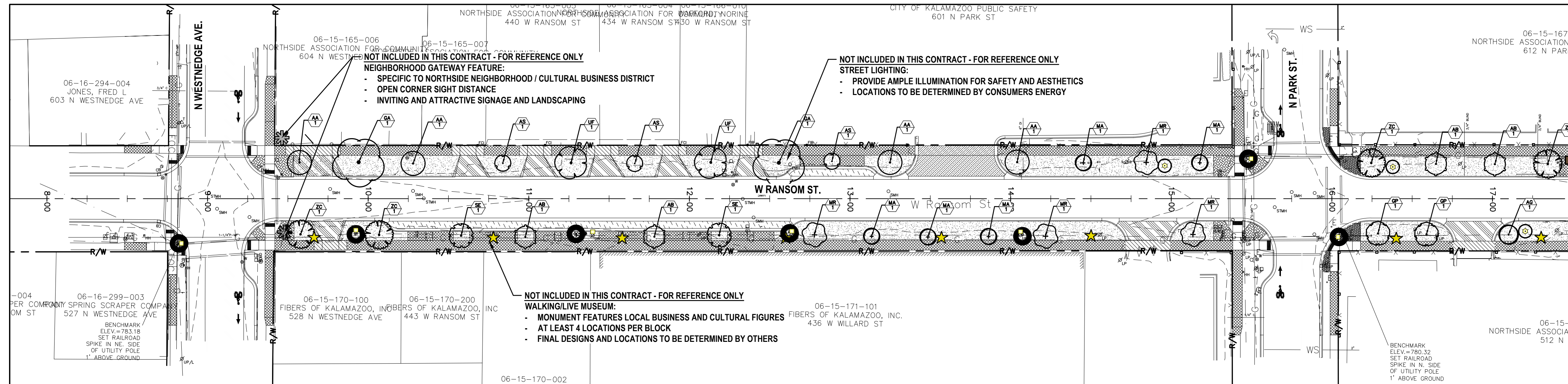
LANDSCAPE DETAILS

PROJECT: RANSOM STREET IMPROVEMENTS
SHEET TITLE: LANDSCAPE DETAILS
DRAWN BY: DJL
DESIGNED BY: MJS/ERF
PM REVIEW: DAD
QA/QC REVIEW:
DATE: JANUARY 2023
SEAL:







SIGNATURE:
DATE:
SCALE: HORIZ: AS SHOWN VERT: N/A
ACI JOB #

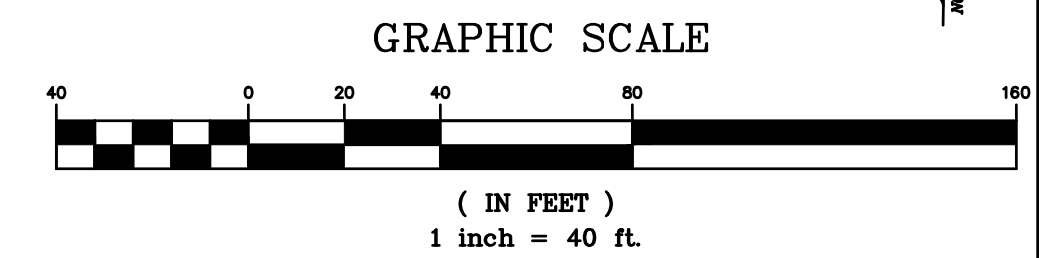
22-0031
SHEET NO. 48 of 52

NO.	REVISION DESCRIPTION	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION	BY:	DATE:



LEGEND

-  COBRAHEAD LIGHT
-  ORNAMENTAL STREET LIGHT
-  WALKING/LIVE MUSEUM CULTURAL MONUMENT
-  NEIGHBORHOOD GATEWAY FEATURE
-  DIRECTIONAL SIGNAGE
-  PROPOSED LAWN AREA



NO.	REVISION DESCRIPTION	BY:	DATE:
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22

**RANSOM STREET
 IMPROVEMENTS
 CITY OF KALAMAZOO**

**LANDSCAPE PLAN
 STA 8+65 TO 27+27**

SHEET TITLE: LANDSCAPE PLAN STA 8+65 TO 27+27

PROJECT: RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

DRAWN BY: DJL

DESIGNED BY: MJS/ERF

PM REVIEW: DAD

QA/QC REVIEW:

DATE: JANUARY 2023

SEAL:

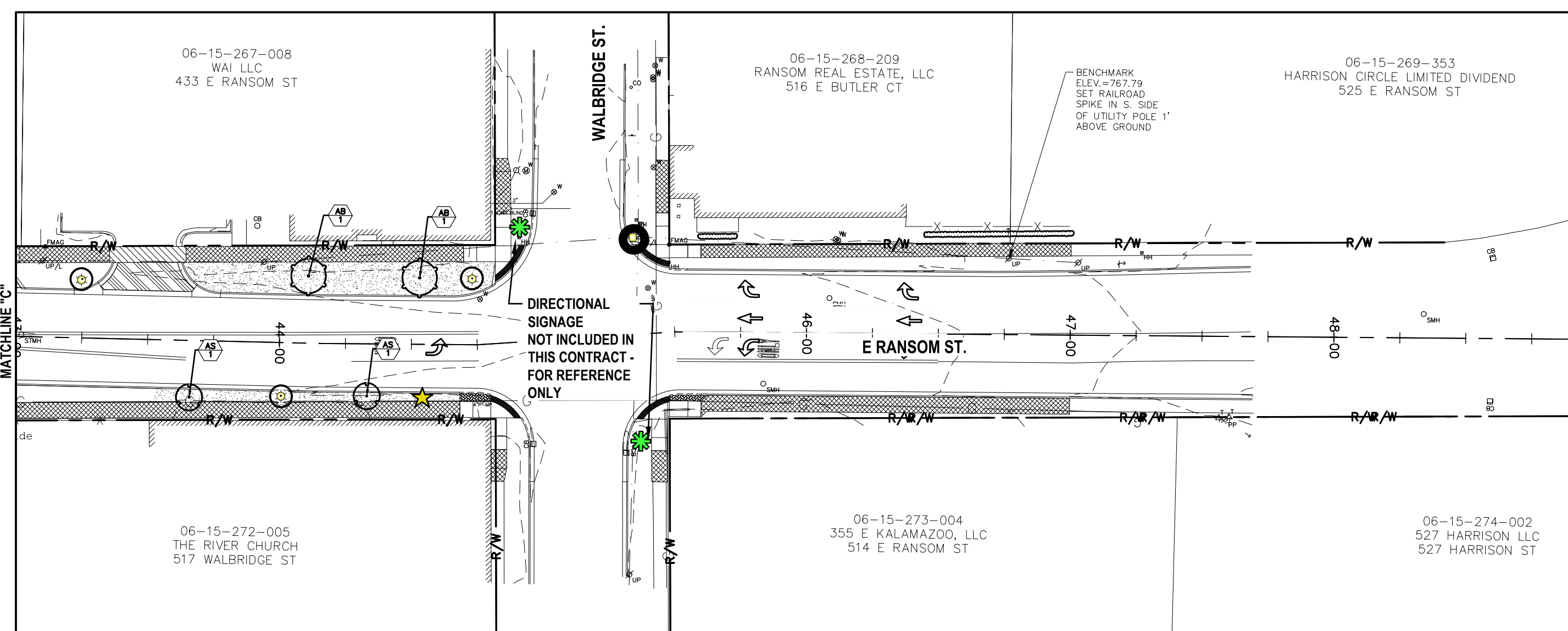
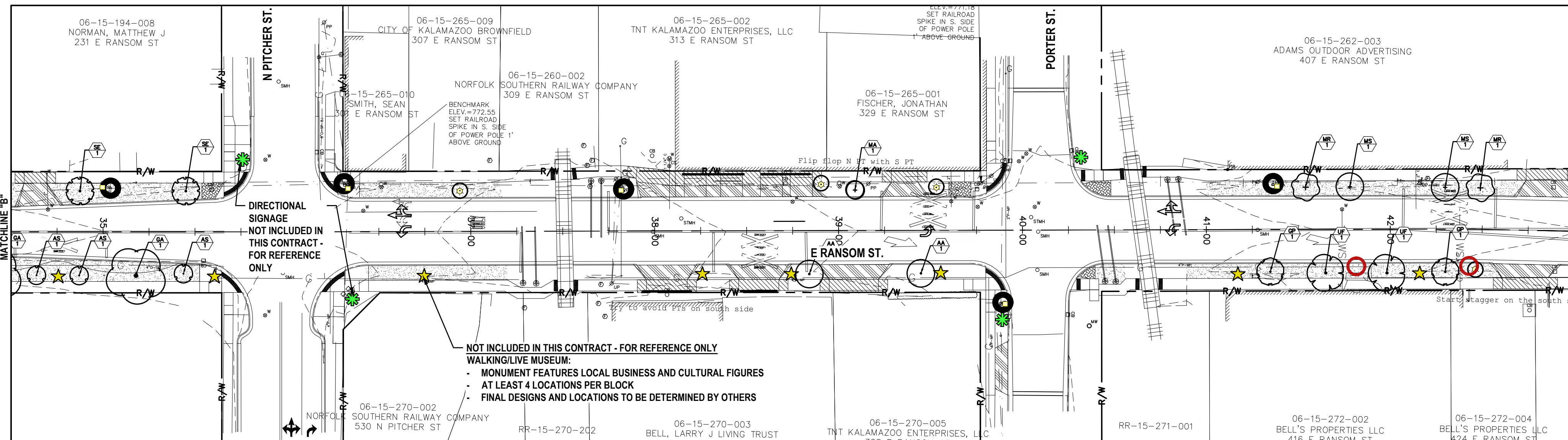
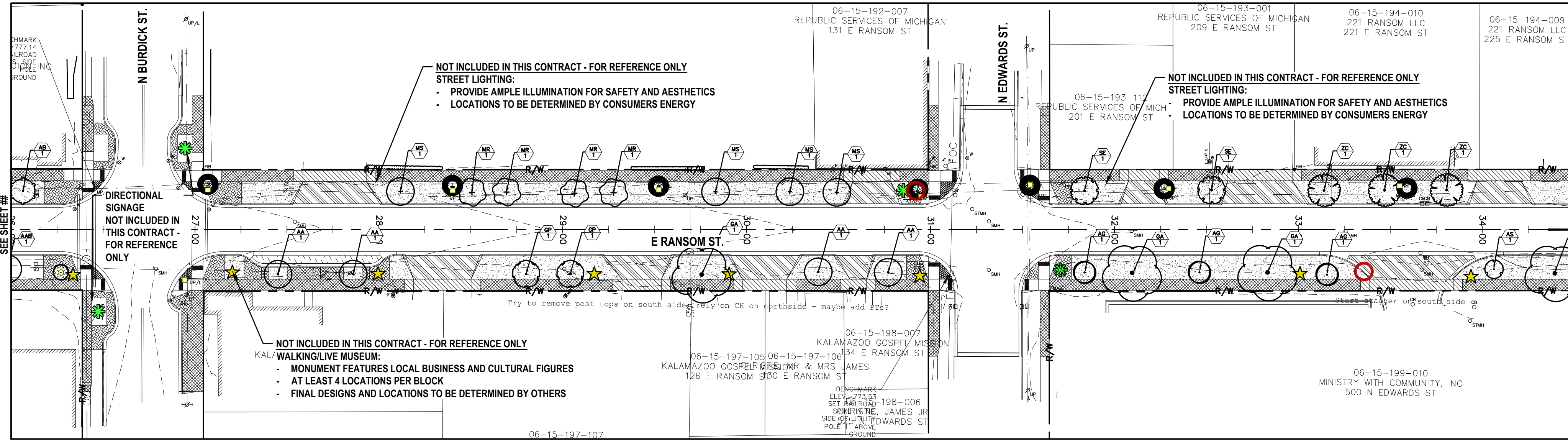
SIGNATURE:

DATE:

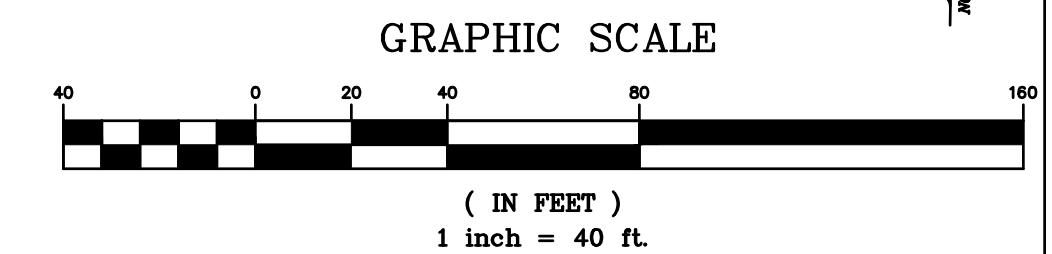
SCALE:
 HORIZ: 1" = 40'
 VERT: N/A

ACI JOB #
22-0031

SHEET NO.
49 of 52



- LEGEND**
- COBRAHEAD LIGHT
 - ORNAMENTAL STREET LIGHT
 - WALKING/LIVE MUSEUM CULTURAL MONUMENT
 - NEIGHBORHOOD GATEWAY FEATURE
 - DIRECTIONAL SIGNAGE
 - PROPOSED LAWN AREA



**RANSOM STREET
 IMPROVEMENTS
 CITY OF KALAMAZOO**

**LANDSCAPE PLAN
 STA. 27+27 TO 47+00**

SHEET TITLE: LANDSCAPE PLAN STA. 27+27 TO 47+00

PROJECT: RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

DRAWN BY: DJL

DESIGNED BY: MJS/ERF

PM REVIEW: DAD

QA/QC REVIEW:

DATE: JANUARY 2023

SEAL:

SIGNATURE:

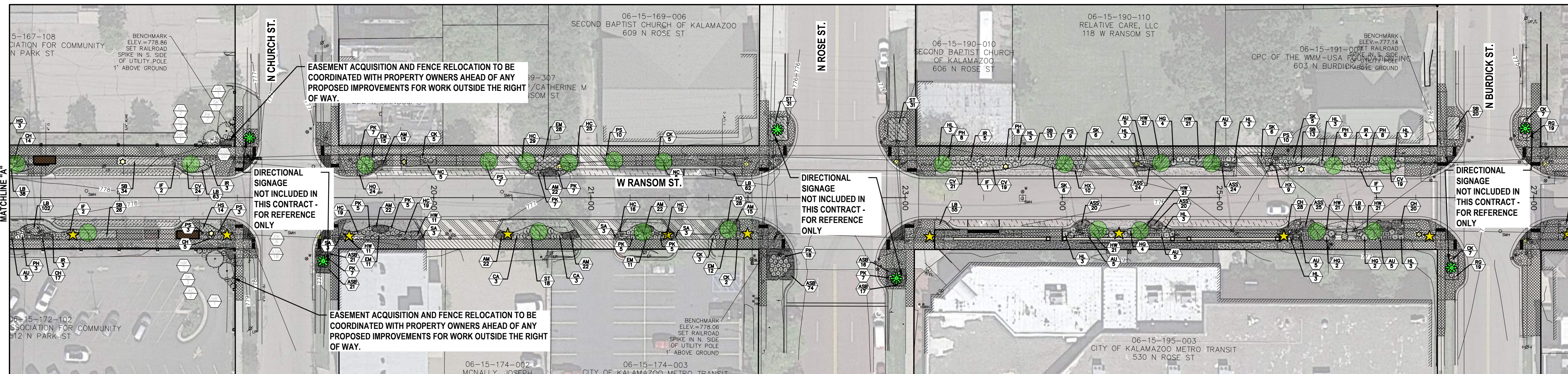
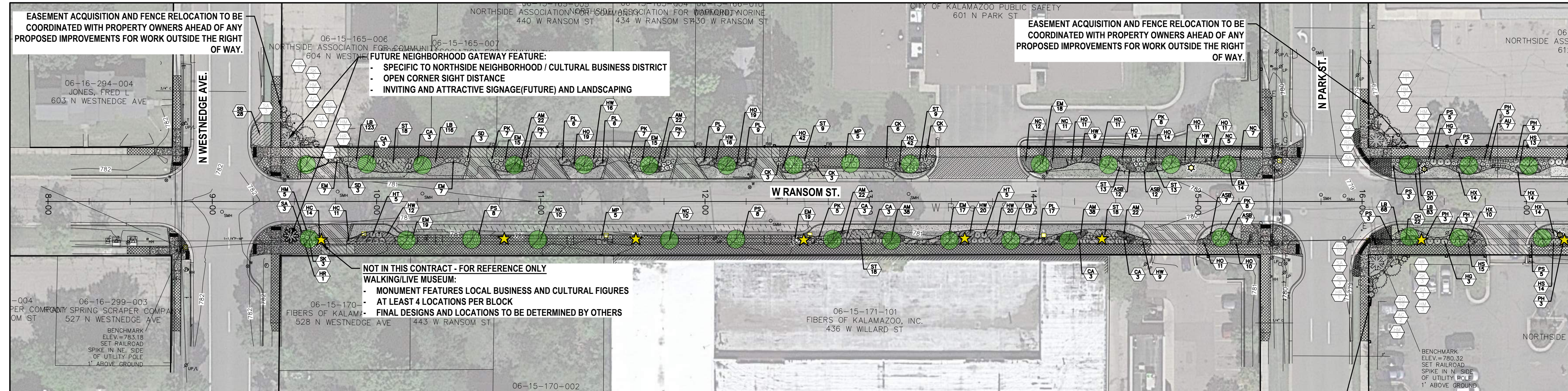
DATE:

SCALE: HORIZ: 1" = 40' VERT: N/A

ACI JOB # 22-0031

SHEET NO. 50 of 52

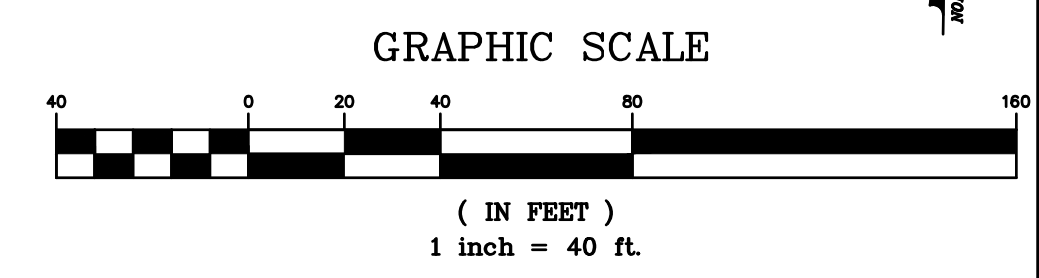
3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGLE PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:



Description	Units	Quantity
Watering and Cultivating, First Season, Min. \$30,000, Alternate	LSUM	1
Watering and Cultivating, 2nd Season, Min. \$20,000, Alternate	LSUM	1
Aluminum Edging	Ft	2820
Hardwood Mulch, 3 inch	Syd	2690
Abies concolor 'Candicans', 8 ft	Ea	10
Achillea millefolium 'Strawberry Seduction', 1 Gal	Ea	259
Allium x 'Millenium', 1 Gal	Ea	472
Allium x 'Summer Beauty', 1 Gal	Ea	225
Aronia melanocarpa 'UCONNAM166' TM, 3 Gal	Ea	42
Calamagrostis x acutiflora 'Karl Foerster', 1 Gal	Ea	71
Coreopsis verticillata 'Hot Paprika', 1 Gal	Ea	231
Coreopsis verticillata 'Moonbeam', 1 Gal	Ea	224
Cornus sericea 'Arctic Fire', 3 Gal	Ea	35
Cornus sericea 'Bailey', 3 Gal	Ea	1
Cornus sericea 'SMNCSBD', 3 Gal	Ea	16
Echinacea purpurea 'Magnum', 1 Gal	Ea	373
Fothergilla gardenii, 3 Gal	Ea	1
Hakonechloa macra 'Albo-striata', 1 Gal	Ea	473
Hakonechloa macra 'Aureola', 1 Gal	Ea	23
Hemerocallis x 'Stella de Oro', 1 Gal	Ea	140
Heuchera x 'Caramel', 1 Gal	Ea	327
Heuchera x 'Cherry Truffles', 1 Gal	Ea	142
Heuchera x 'Wildberry' TM, 1 Gal	Ea	438
Hibiscus moscheutos 'Big Red', 3 Gal	Ea	1
Hibiscus moscheutos 'Kopper King', 3 Gal	Ea	1
Hibiscus x 'Holy Grail', 2 Gal	Ea	21
Hydrangea arborescens 'NCH48' TM, 3 Gal	Ea	12
Hydrangea paniculata 'SMNH48', 3 Gal	Ea	57
Hydrangea serrata 'SMNHSDD', 3 Gal	Ea	39
Ilex verticillata 'FarrowBPop', 3 Gal	Ea	33
Ilex verticillata 'FarrowMFP', 3 Gal	Ea	10
Itea virginica 'Sprich' TM, 2 Gal	Ea	1
Juniperus chinensis 'SMNJCHM' TM, 2 Gal	Ea	1
Juniperus communis 'Tortuga', 2 Gal	Ea	1
Juniperus conferta 'Blue Pacific', 2 Gal	Ea	1
Liriope Muscan 'Big Blue', 3.25 inch	Ea	812
Miscanthus purpurascens, 1 Gal	Ea	26
Nepeta x faassenii 'Cat's Pajamas', 1 Gal	Ea	97
Panicum virgatum 'Heavy Metal', 1 Gal	Ea	128
Panicum virgatum 'Shenandoah', 1 Gal	Ea	151
Pennisetum orientale 'Karley Rose', 1 Gal	Ea	167
Peroovskia atriplicifolia 'Lissitt', 1 Gal	Ea	106
Rudbeckia fulgida sultivantii 'Goldstrum', 1 Gal	Ea	154
Schizachyrium scoparium 'The Blues', 1 Gal	Ea	321
Sedum x 'Autumn Joy', 1 Gal	Ea	59
Spiraea media 'SMSMBK' TM, 3 Gal	Ea	82
Spiraea x 'Tracy' TM, 3 Gal	Ea	35
Sporobolus heterolepis 'Tara', 1 Gal	Ea	395
Thuja occidentalis 'Smaragd', 5 Gal	Ea	1
Viburnum carlesii 'Spice Baby', 3 Gal	Ea	1
Site Preparation, Max \$55,000, Alternate	LSUM	1
Automated Irrigation System	LSUM	1

LEGEND

- STREET LIGHT
- WALKING/LIVE MUSEUM CULTURAL MONUMENT
- NEIGHBORHOOD GATEWAY FEATURE
- DIRECTIONAL SIGNAGE
- PROPOSED LAWN AREA
- PROPOSED PLANTING BED WITH ALUMINUM EDGING



3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGL PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE:

ABONMARCHÉ
 795 West Main Street
 Benton Harbor, MI 49023
 T 269.927.2295
 F 269.927.2295
 abonmarche.com
 © copyright 2023 abonmarche.com, inc.
 Engineering - Architecture - Land Surveying
 Lori G. Sweezy
 Valeriano
 Hobart
 Haven
 South Bend
 Portage
 Ft. Wayne
 Lagayette

RANSOM STREET IMPROVEMENTS CITY OF KALAMAZOO

ALTERNATE LANDSCAPE PLAN STA 8+65 TO 27+27

SHEET TITLE:
 DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:
 DATE: JANUARY 2023
 SEAL:

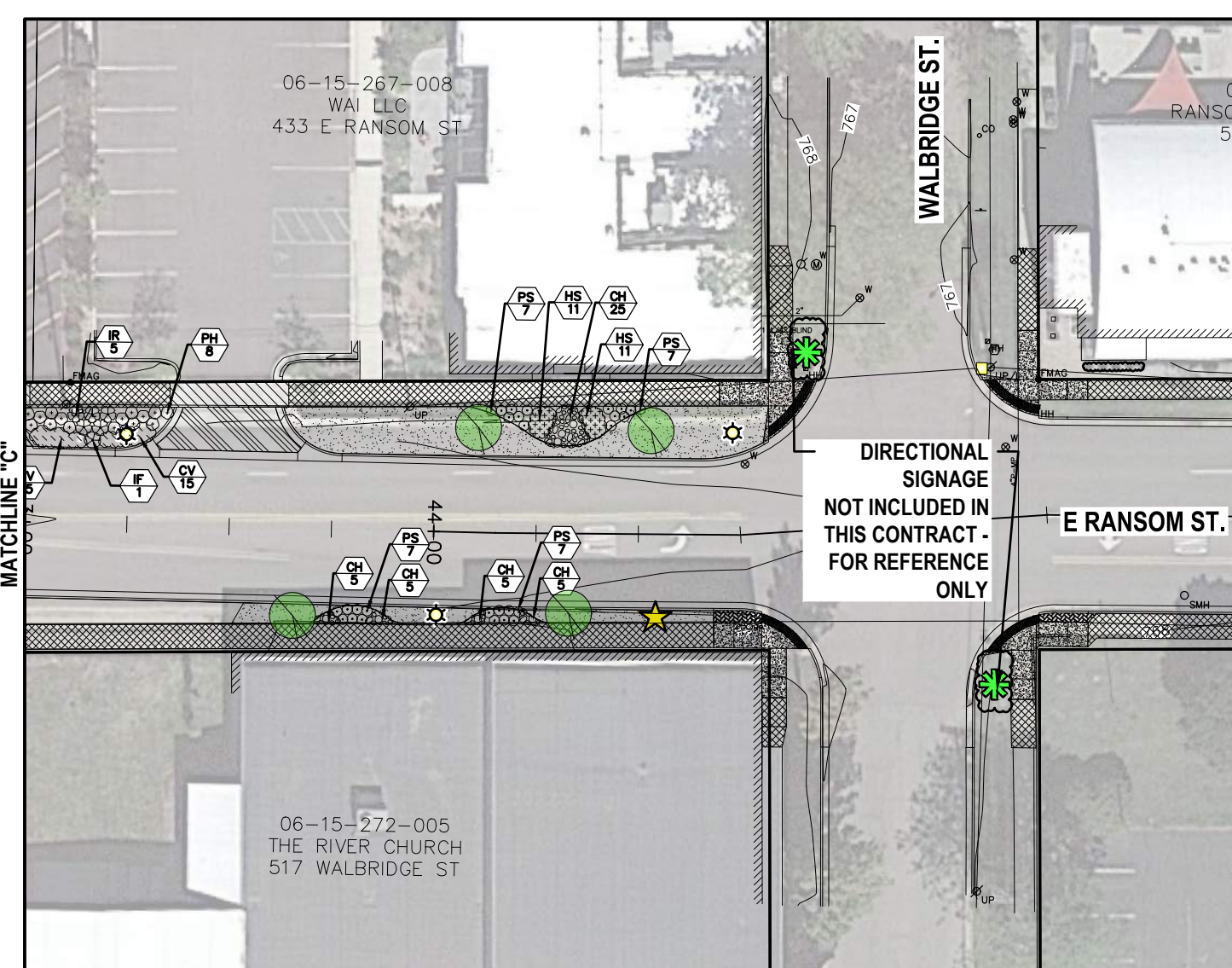
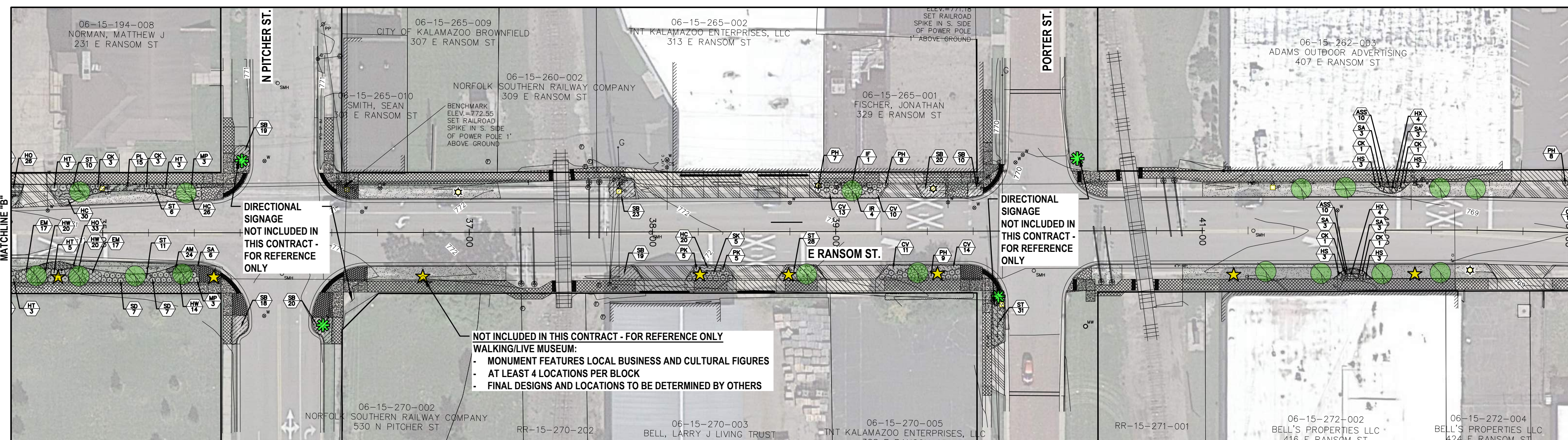
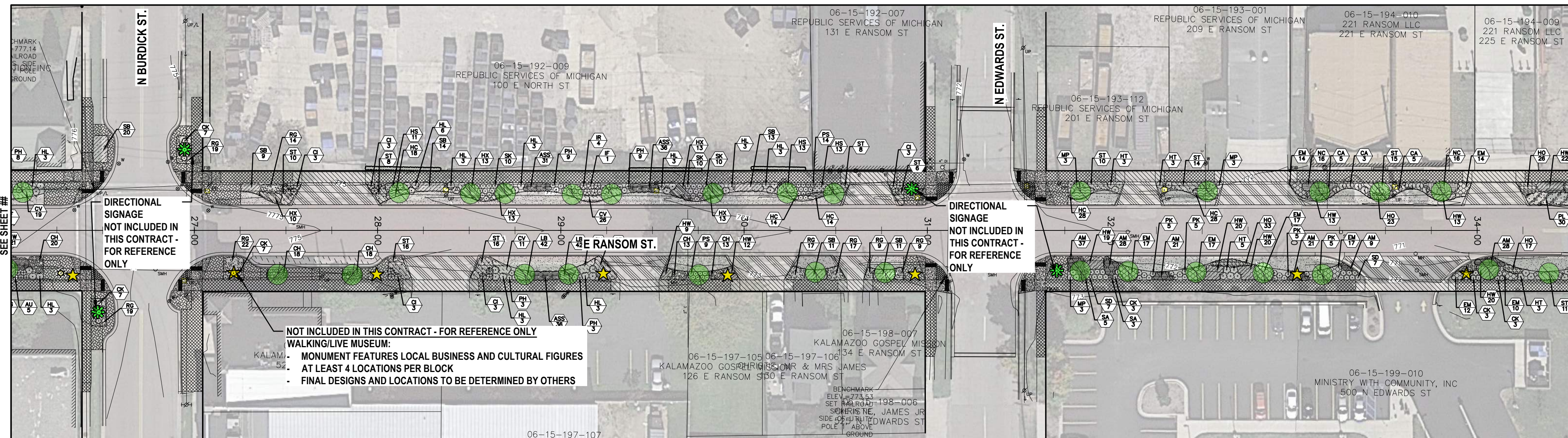
SIGNATURE:
 DATE:

SCALE:
 HORIZ: 1" = 20'
 VERT: 1" = 5'

ACI JOB #
22-0031

SHEET NO.
51 of 52

C:\Projects\2022\220031\220031.dwg: cad.dwg: mrc: c:\d:\img\p22-0031\220031.dwg: L1: BDD: 1/6/2023 10:10:00 PM: mrc: 1:1



LEGEND

- STREET LIGHT
- WALKING/LIVE MUSEUM CULTURAL MONUMENT
- NEIGHBORHOOD GATEWAY FEATURE
- DIRECTIONAL SIGNAGE
- PROPOSED LAWN AREA
- PROPOSED PLANTING BED WITH ALUMINUM EDGING

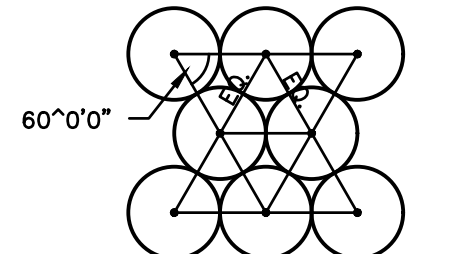
COMMERCIAL GRADE ALUMINUM EDGING OR HARDSCAPE EDGE FOR ALL PLANT BEDS

SPECIFIED PLANTING MIX: 2/3 TOPSOIL, 1/3 WELL-AGED, TURNED, AND SCREENED LEAF BASED COMPOST TAMP TO REMOVE AIR POCKETS

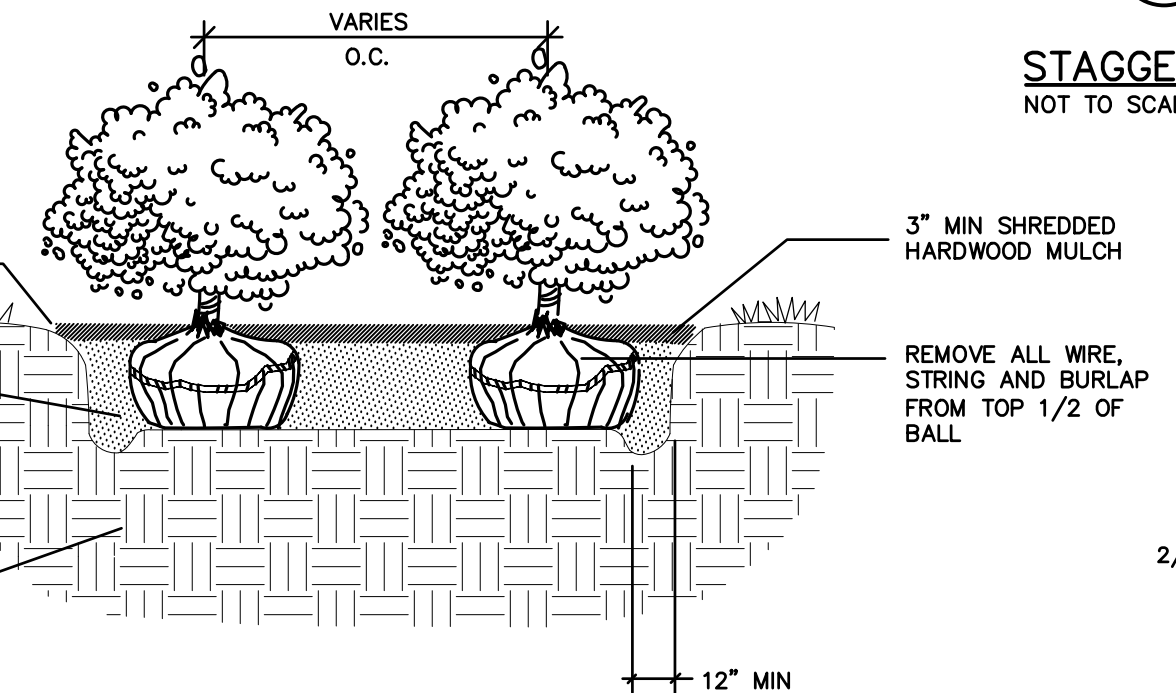
COMPACTED BACKFILL MATERIAL, AS SPECIFIED, OR EXISTING SUB-GRADE

SHRUB BED PLANTING DETAIL
NOT TO SCALE

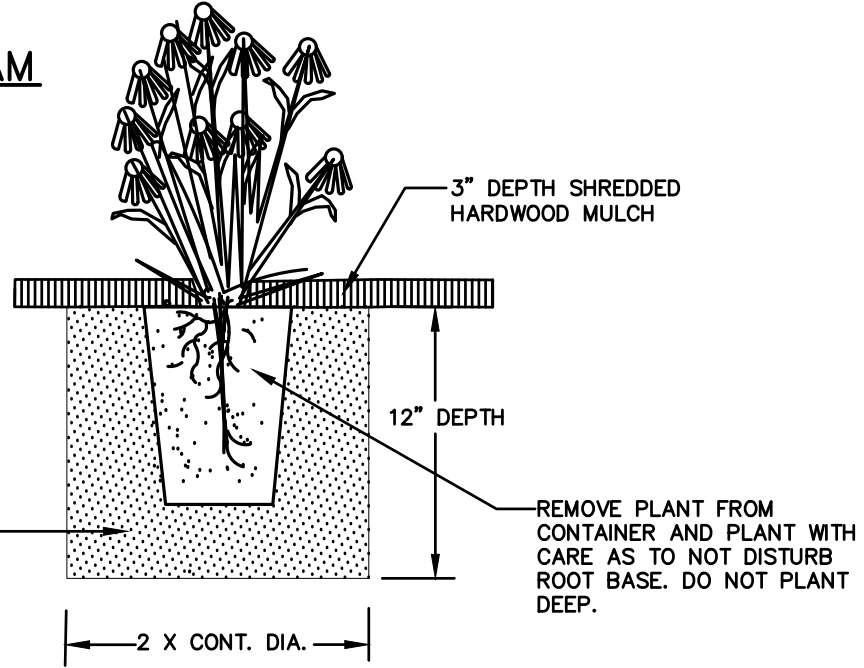
PLANT SPACING CENTER TO CENTER



STAGGER PLANT DIAGRAM
NOT TO SCALE



PERENNIAL/ORNAMENTAL PLANTING DETAIL
NOT TO SCALE



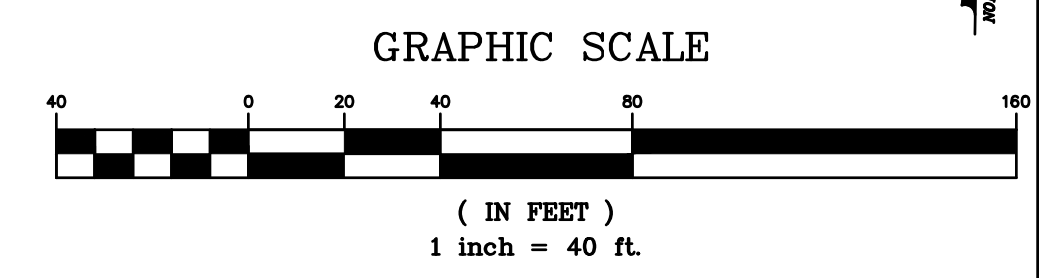
ALTERNATE 1 - LANDSCAPE BIDDING QUANTITIES:

1. COMMERCIAL GRADE ALUMINUM EDGING = 2,820 LFT
2. LAWN AREAS = 18,260 SFT
3. SHREDDED HARDWOOD MULCH FOR PLANTING BEDS = 30,070 SFT

ALL PLANTING SOILS FOR PLANTS AS SHOWN ON THE DETAILS AND BED PREPARATION TO BE PAID FOR AS SITE PREPARATION, MAX

PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	
AC	10	Abies concolor 'Candicans'	Candicans White Fir	8' HT		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
AJ	42	Aronia melanocarpa 'UNCOMMON166'	Low Scape Hedge Black Chokeberry	3 Gal	36" o.c.	
CA	42	Cornus sericea 'Arctic Fire'	Arctic Fire Dogwood	3 Gal	48" o.c.	
CS	35	Cornus sericea 'Saiyai'	Redtwig Dogwood	3 Gal	60" o.c.	
CI	16	Cornus sericea 'SMNCSBD'	Arctic Fire Yellow Dogwood	3 Gal	48" o.c.	
FG	1	Fothergilla gardenii	Dwarf Fothergilla	3 Gal	36" o.c.	
HM2	1	Hibiscus moscheutos 'Big Red'	Big Red Rose Mallow	3 Gal	48" o.c.	
HK	1	Hibiscus moscheutos 'Kopper King'	Kopper King Rose Mallow	3 Gal	48" o.c.	
HG	1	Hibiscus x 'Holy Grail'	Summerflor® Holy Grail Hibiscus	2 Gal	54" o.c.	
HR	12	Hibiscus x 'Holly Grail'	Little Henry Sweetspire	3 Gal	48" o.c.	
HL	57	Hydrangea arborescens 'NCHA8'	Little Lime Punch Hydrangea	3 Gal	48" o.c.	
HT	39	Hydrangea serrata 'SMNHSD'	Truff Stuff Ah-ha Hydrangea	3 Gal	48" o.c.	
IF	33	Ilex verticillata 'FarrowPop'	Berry Poppins® Winterberry	3 Gal	48" o.c.	
IL	10	Ilex verticillata 'FarrowWIP'	Mr. Poppins® Winterberry	3 Gal	48" o.c.	
IF	1	Ilex virginica 'Sprich'	Little Henry Sweetspire	2 Gal	36" o.c.	
JM	1	Juniperus chinensis 'SMNUCHM'	Montana Moss Juniper	2 Gal	48" o.c.	
JT	1	Juniperus communis 'Tortuga'	Tortuga Common Juniper	2 Gal	48" o.c.	
JB	1	Juniperus conferta 'Blue Pacific'	Blue Pacific Juniper	2 Gal	48" o.c.	
SD	82	Spiraea media 'SMMSBK'	Blue Kazoo Double Play Spirea	3 Gal	36" o.c.	
SK	35	Spiraea x 'Tracy'	Double Play Big Bang Spirea	3 Gal	36" o.c.	
TS	1	Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	5 Gal	48" o.c.	
VSB	1	Viburnum carlesii 'Spice Baby'	Korean Spice Viburnum	3 Gal	60" o.c.	
ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
CK	71	Calamagrostis x acutiflora 'Karl Foerster'	Feather Reed Grass	1 Gal	36" o.c.	
MP	26	Miscanthus purpurascens	Flame Grass	1 Gal	42" o.c.	
PH	128	Panicum virgatum 'Heavy Metal'	Blue Switch Grass	1 Gal	36" o.c.	
PS	151	Panicum virgatum 'Shenandoah'	Switch Grass	1 Gal	30" o.c.	
PK	167	Pennisetum orientale 'Karley Rose'	Karley Rose Fountain Grass	1 Gal	36" o.c.	
PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
SA	59	Sedum x 'Autumn Joy'	Autumn Joy Sedum	1 Gal	18" o.c.	
ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
HW	473	Hakonechloa macra 'Alostrata'	White Stripe Japanese Forest Grass	1 Gal	24" o.c.	
HM	23	Hakonechloa macra 'Aureola'	Colden Variegated Forest Grass	1 Gal	30" o.c.	
SB	321	Schizachyrium scoparium 'The Blues'	The Blues Little Bluestem	1 Gal	30" o.c.	
ST	395	Sporobolus heterolepis 'Tara'	Tara Prairie Dropseed	1 Gal	30" o.c.	
PERENNIAL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
ASS	259	Achillea millefolium 'Strawberry Seduction'	Strawberry Seduction Common Yarrow	1 Gal	18" o.c.	
ASB	225	Allium x 'Summer Beauty'	Summer Beauty Allium	1 Gal	18" o.c.	
AM	472	Allium x 'Millenium'	Millenium Ornamental Onion	1 Gal	18" o.c.	
CH	231	Coreopsis verticillata 'Hot Paprika'	Hot Paprika Sizzle & Spice® Tickseed	1 Gal	22" o.c.	
CY	224	Coreopsis verticillata 'Moonbeam'	Moonbeam Tickseed	1 Gal	24" o.c.	
EM	373	Echinacea purpurea 'Magnus'	Magnus Purple Coneflower	1 Gal	24" o.c.	
HS	140	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily	1 Gal	24" o.c.	
HX	142	Heuchera x 'Cherry Truffles'	Dolce® Cherry Truffles Coral Bells	1 Gal	28" o.c.	
HO	438	Heuchera x 'Wildberry'	Dolce Wildberry Coral Bells	1 Gal	18" o.c.	
HC	327	Heuchera x 'Caramel'	Caramel Coral Bells	1 Gal	18" o.c.	
NC	97	Nepeta x 'Jassemis' 'Cat's Pajamas'	Cat's Pajamas Catmint	1 Gal	30" o.c.	
PL	106	Perovskia atriplicifolia 'Lissit'	Lacy Blue Russian Sage	1 Gal	30" o.c.	
RG	154	Rudbeckia fulgida sultivanti 'Goldsturm'	Goldsturm Coneflower	1 Gal	24" o.c.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
LB	612	Liriope muscari 'Big Blue'	Big Blue Lilyturf	3.25"	12" o.c.	



DRAWN BY: DJL
 DESIGNED BY: MJS/ERF
 PM REVIEW: DAD
 QA/QC REVIEW:

DATE: JANUARY 2023

SIGNATURE:

DATE:

SCALE:

HORIZ: 1" = 20'

VERT: 1" = 5'

ACI JOB #

22-0031

SHEET NO.

52 of 52

3	ISSUED FOR BID	MJS	01/06/2023
2	REVISED PART 399 PERMIT SUBMITTAL	MJS	12/14/2022
1	EGLE PERMIT SUBMITTAL	MJS	11/8/22
NO.	REVISION DESCRIPTION:	BY:	DATE: