LETTING DATE
05/04/2023

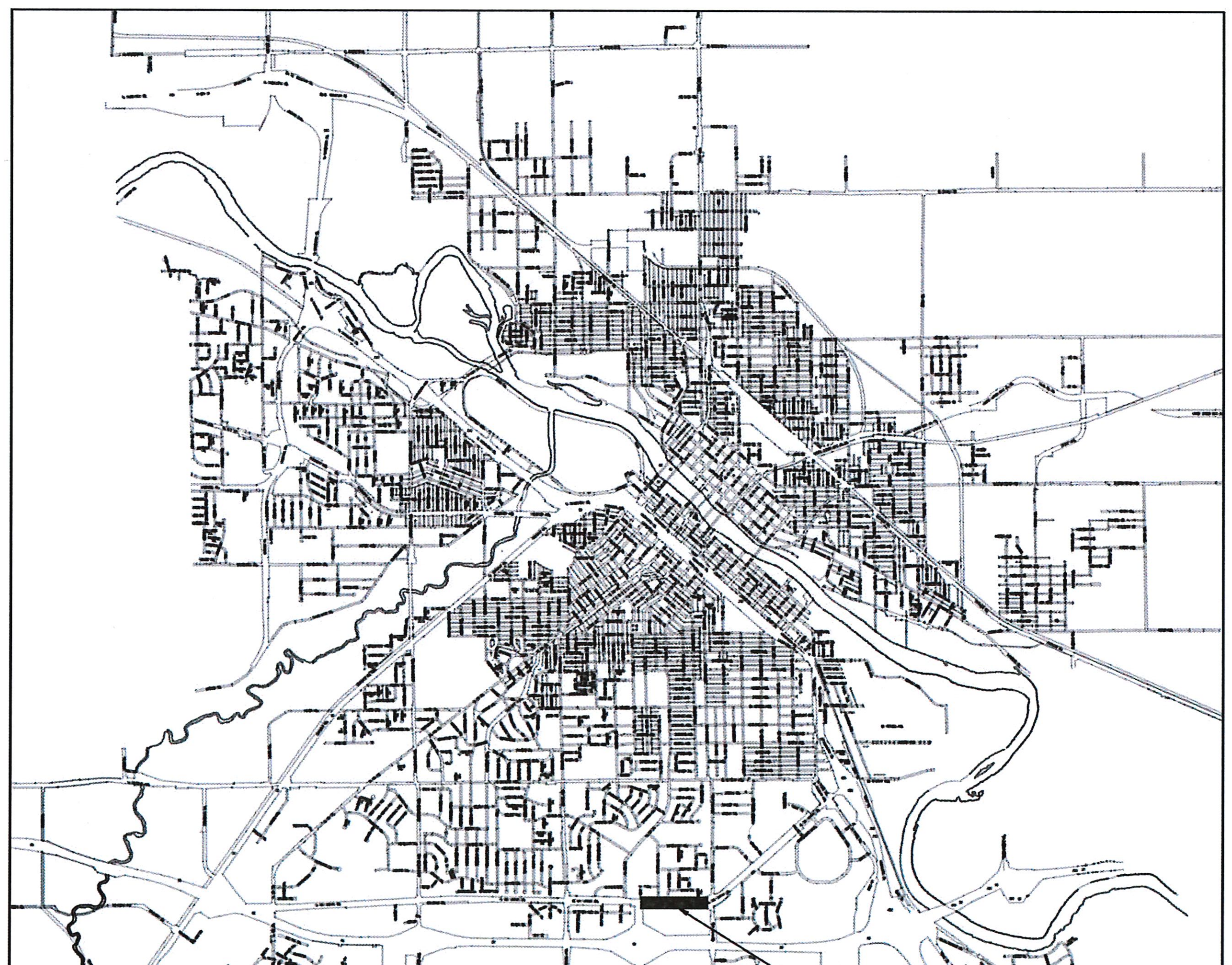
F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION
PROJECT CONTRACT NO. 1084

CITY OF
WATERLOO, IA

PLANS FOR

CITY OF WATERLOO, IA

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT CONTRACT NO. 1084



E. SAN MARNAN DR

PROJECT LOCATION

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ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE IOWA SUDAS STANDARD SPECIFICATIONS EXCEPT WHERE NOTED IN THE SUDAS SUPPLEMENTAL SPECIFICATION, SPECIAL PROVISIONS, AND OR ESTIMATE REFERENCE NOTES.

LICENSED PROFESSIONAL ENGINEER
DENNIS J. GENTZ
9662
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

4/17/2023

DENNIS J. GENTZ, P.E.
License Number 9662
My License Renewal Date is December 31, 2024.
Pages or sheets covered by this seal :

LICENSED PROFESSIONAL ENGINEER
JAMIE A. KNUTSON
16025
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

4/17/23

JAMIE A. KNUTSON, P.E.
License Number 16025
My License Renewal Date is December 31, 2023.
Pages or sheets covered by this seal :

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH IOWA SUDAS STANDARD SPECIFICATIONS EXCEPT WHERE NOTED IN THE SPECIAL PROVISIONS, SUPPLEMENTAL SUDAS SPECIFICATIONS AND OR ESTIMATE REFERENCE NOTES.

2. THE LOCATION OF ALL EXISTING UTILITIES AND SEWERS INDICATED ON THESE PLANS ARE TAKEN FROM EXISTING RECORDS AND ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. THE CONTRACTOR SHALL CONFIRM THE EXACT LOCATIONS AND ELEVATIONS OF THESE AND OTHER FACILITIES THAT MAY EXIST BUT ARE NOT SHOWN ON THE PLANS PRIOR TO SUBMITTING BIDS. THE CONTRACTOR SHALL EXPOSE THOSE UTILITIES AND SEWERS AS DIRECTED IN THE FIELD BY THE ENGINEER PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS SO THE EXACT LOCATIONS AND ELEVATIONS MAY BE DETERMINED. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK AND IT SHALL BE CONSIDERED INCIDENTAL TO OTHER APPLICABLE WORK, EXCEPT AS NOTED.

3. THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE UTILITIES AND/OR CITY DEPARTMENTS PRIOR TO COMMENCING WORK ON THE PROJECT AND TO THEREAFTER COORDINATE NECESSARY ADJUSTMENT AND/OR RELOCATIONS SO AS TO ELIMINATE DELAYS AND SERVICE INTERRUPTIONS. THE CONTRACTOR SHALL NOT BE COMPENSATED FOR DELAYS AND/OR EXTRA COSTS DUE TO CONFLICTS WITH ANY UNDERGROUND UTILITY OR SEWER FACILITY UNLESS OTHERWISE NOTED. IF THE CONTRACTOR BELIEVES THAT ADDITIONAL COSTS HAVE BEEN INCURRED DUE TO A UTILITY BEING IMPROPERLY LOCATED, THE RESOLUTION OF THE ADDITIONAL COSTS INCURRED SHALL BE MADE BETWEEN THE CONTRACTOR AND THE RESPECTIVE UTILITY COMPANY.

4. CONTRACTORS WISHING TO MAKE SUBSURFACE EXPLORATIONS PRIOR TO SUBMITTING BIDS ON THE PROJECT SHALL CONTACT ENGINEERING TO MAKE THE NECESSARY ARRANGEMENTS PRIOR TO CONDUCTING SAID INVESTIGATIONS.

5. CONSTRUCTION STAKING WILL BE REQUIRED FOR THIS CONTRACT AND WILL BE A BID ITEM.

6. UTILITY COMPANIES/CITY DEPARTMENTS MAY BE CONTACTED AT THE FOLLOWING PHONE NUMBERS DURING THE CONSTRUCTION OF THIS PROJECT:

ONE-CALL--FIELD LOCATES 1-800-292-8989 OR 811

A. MIDAMERICAN ENERGY	
GAS	291-4728
ELECTRIC	291-4669
B. CENTURY LINK COMMUNICATIONS	291-9899
C. MEDIACOM	232-8800
D. WATERLOO WATER WORKS	232-6280
E. CITY ENGINEER'S OFFICE	291-4312
F. CITY WASTE MGMT. DEPT.	291-4553
G. CITY TRAFFIC OPERATIONS	291-4440

7. CONSTRUCTION SCHEDULING: THE CONTRACTOR SHALL PREPARE A DETAILED SCHEDULE OF WORK WHICH SHALL BE SUBMITTED ONE DAY BEFORE THE PRE-CONSTRUCTION CONFERENCE. THE SCHEDULE SHALL SHOW ANTICIPATED EQUIPMENT AND MATERIAL DELIVERIES, STAGING AND COMPLETION OF MAJOR TASKS IN THE PROJECT. THE ENGINEER SHALL APPROVE CONTRACTOR'S WORK SCHEDULE PRIOR TO STARTING. ALL REVISIONS SHALL ALSO BE APPROVED THE ENGINEER. THE ENGINEER MAY CHANGE THE SCHEDULE TO FACILITATE CHANGING CONDITIONS OR TO ACCOMMODATE EVENTS. THE CONTRACTOR SHALL COMMENCE WORK WITHIN TEN (10) DAYS AFTER RECEIPT OF "NOTICE TO PROCEED" AND DILIGENTLY EXECUTE THE WORK OF THE CONTRACT TOWARD COMPLETION. SHOULD WINTER WEATHER CONDITIONS OCCUR PRIOR TO THE COMPLETION OF THE CONTRACT WORK, A TEMPORARY STOP WORK ORDER WITH A DATE AGREED UPON BY BOTH THE CONTRACTOR AND THE CITY OF WATERLOO WILL BE ISSUED. DAYS DURING WHICH THE TEMPORARY STOP WORK ORDER IS IN EFFECT SHALL NOT BE COUNTED AS CONTRACT WORKING DAYS. CONSTRUCTION SHALL NOT BE INITIATED WITHOUT ASSURING THE COMPLETION OF WORK IN THAT AREA WITHIN THE SAME CONSTRUCTION SEASON.

8. THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND TREES OUTSIDE THE CONSTRUCTION LIMITS. ALL STORAGE, PARKING AND SERVICE AREA(S) WILL BE SUBJECT TO APPROVAL BY THE ENGINEER.

9. THIS DESIGN ASSUMES TEMPORARY STOCKPILING OF MATERIALS CAN BE ACCOMPLISHED WITHIN THE CONSTRUCTION AREA PROVIDED FOR THIS IMPROVEMENT. THE CONTRACTOR MAY ELECT TO PROCURE STOCKPILE LOCATIONS OUTSIDE THE CONSTRUCTION AREA AT HIS OWN EXPENSE, TO FACILITATE HIS CONSTRUCTION STAGING SEQUENCE.

10. ALL WASTE AREAS OR DISPOSAL SITES PROVIDED BY CONTRACTOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO DISPOSAL OF ANY EXCESS MATERIAL. NO PAYMENT FOR OVERHAUL WILL BE MADE FOR THE AFOREMENTIONED ITEMS.

11. THE PRIME CONTRACTOR SHALL APPLY, OR ENSURE ALL NECESSARY MOISTURE HAS BEEN APPLIED TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST. THE PRIME CONTRACTOR SHALL ENSURE THAT ANY MATERIAL TRACKED OR DEPOSITED ONTO CITY STREETS SHALL BE REMOVED AT THE END OF THE WORKING, OR SOONER, IF NECESSARY, OR AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS WORK, AND IT SHALL BE CONSIDERED INCIDENTAL TO APPLICABLE ITEMS.

12. REMOVED MATERIALS:
ALL MATERIALS REMOVED AS PART OF THIS CONTRACT SHALL REMAIN THE PROPERTY OF THE CITY UNLESS THE CITY DETERMINES THAT THE MATERIALS ARE NOT SALVAGEABLE AND THE CITY DOES NOT WANT TO RETAIN OWNERSHIP OF THE MATERIALS. MATERIALS DESIGNATED IN THE FIELD BY THE ENGINEER AS NON-SALVAGEABLE SHALL BE HAULED AND DISPOSED OF BY THE CONTRACTOR AT NO COST TO THE CITY. ALL OTHER MATERIALS SHALL BE TRANSPORTED TO LOCATIONS AS DIRECTED BY THE ENGINEER. NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR HAULING OR DISPOSING OF REMOVED MATERIALS, AND IT SHALL BE CONSIDERED INCIDENTAL TO APPLICABLE ITEMS.

13. CONSTRUCTION STAGING -- ACCESS TO PROPERTIES:
THE STAGING PLAN ALLOWS FOR BOTH STREETS TO BE UNDER CONSTRUCTION AT THE SAME TIME. ONLY ONE STAGE PER STREET MAY BE CLOSED AT THE SAME TIME. THE INTENT OF CONSTRUCTION STAGING IS TO MAINTAIN ACCESS TO ALL PROPERTIES WITHIN THE PROJECT AREA. OTHER STAGING PROPOSALS SUBMITTED BY THE CONTRACTOR WILL BE CONSIDERED AS LONG AS ADEQUATE ACCESS IS MAINTAINED. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE THE AMOUNT OF TIME THAT ACCESS TO AN INDIVIDUAL PROPERTY IS BLOCKED. WHERE REPAIR WORK WILL AFFECT DRIVEWAY ACCESS, THE CONTRACTOR SHALL INFORM THE PROPERTY OWNERS OF THE IMPENDING WORK A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF THE ANTICIPATED CONSTRUCTION COMMENCEMENT.

14. TRAFFIC SIGNS AND STREET SIGNS:
THE CONTRACTOR SHALL CONTACT THE CITY OF WATERLOO TRAFFIC OPERATIONS DEPARTMENT TO HAVE ANY STREET SIGN THAT WILL BE AFFECTED BY CONSTRUCTION REMOVED AND REPLACED WHEN THE WORK HAS BEEN COMPLETED.

15. TRAFFIC CONTROL DURING CONSTRUCTION:
THE CONTRACTOR SHALL, AT HIS OWN EXPENSE AND WITHOUT FURTHER OR OTHER ORDER, PROVIDE, ERECT, AND MAINTAIN, AT ALL TIMES DURING THE PROGRESS AND SUSPENSION OF THE WORK AND UNTIL COMPLETION AND FINAL ACCEPTANCE THEREOF, SUITABLE AND REQUISITE BARRICADES, SIGNS, OR OTHER ADEQUATE PROTECTION, AS REQUIRED BY THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES - MUTCD", LATEST EDITION, AND SHALL PROVIDE, KEEP, AND MAINTAIN SUCH BARRICADES, SIGNS, ETC., AS MAY BE REQUIRED OR AS MAY BE ORDERED BY THE ENGINEER, TO ENSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED ON THE WORK. ALL BARRICADING PLANS SHALL BE REVIEWED BY THE ENGINEER. WHEN USED FOR TRAFFIC CONTROL OR PROTECTION OF THE WORK SITE. FENCING MUST BE FIRMLY SUPPORTED IN AN UPRIGHT POSITION. THE ENGINEER MAY DIRECT THE USE OF ADDITIONAL SUPPORTS, OR OTHER SUPPLEMENTS TO ENSURE PROPER PLACEMENT AND DURABILITY OF THE INSTALLATION. THESE SUPPLEMENTS SHALL BE INCIDENTAL TO THE TRAFFIC CONTROL BID ITEM.

16. CARE IN CONSTRUCTION AREA:
SPECIAL CARE SHALL BE TAKEN TO PREVENT DAMAGE TO ANY EXISTING VEGETATION, LANDSCAPING MATERIALS, SIDEWALKS, AND DRIVEWAYS LOCATED IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY SIDEWALK, CURB OR DRIVEWAYS NOT DESIGNATED FOR REPAIR BY THE ENGINEER. THE CONTRACTOR SHALL RESTRICT HIS OPERATIONS TO THE DESIGNATED CONSTRUCTION AREA UNLESS PRIOR APPROVAL IS OBTAINED FROM THE ENGINEER IN WRITING.

17. EXCESS DIRT:
EXCESS DIRT RESULTING FROM CONSTRUCTION OPERATIONS AND WHICH IS NOT TO BE INCORPORATED INTO THE PROJECT AT LOCATIONS INDICATED IN THE PLANS OR SPECIFICATIONS SHALL BE HAULED TO APPROVED RUBBLE SITES OR OTHER LOCATIONS APPROVED BY THE CITY. RUBBLE, RUBBISH AND OTHER UNSUITABLE BACKFILL MATERIALS, AS DESIGNATED BY THE CITY ENGINEER, SHALL BE HAULED TO THE COUNTY LANDFILL OR OTHER APPROVED RUBBLE SITE. ALL LANDFILL CHARGES ARE TO BE CONSIDERED INCIDENTAL TO THE CONTRACT AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.

18. OVERHAUL:
OVERHAUL WILL NOT BE PAID FOR "SURPLUS MATERIAL" OBTAINED FROM ANY OF THE ITEMS OF CONSTRUCTION UNDER THIS CONTRACT. THE COST OF OVERHAUL WILL BE CONSIDERED AS INCIDENTAL TO THE ITEMS TO WHICH IT APPLIES.

19. CONTRACT REQUIREMENTS:
THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE CONTRACT REQUIREMENTS FOR AFFIRMATIVE ACTION PROGRAM AND WORKER RESIDENCY CONTAINED IN THE CONTRACT DOCUMENTS.

20. QUANTITY ADJUSTMENT EXEMPTION:
CERTAIN BID ITEMS HAVE BEEN EXEMPTED FROM THE 20 PERCENT VARIANCE PROVISION. REFER TO SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

21. MANHOLE/BOXOUT ADJUSTMENTS:
MANHOLE AND INLET BOXOUT AND ADJUSTMENT IS INCIDENTAL TO PAVING, UNLESS OTHERWISE NOTED.

22. WEEKEND/HOLIDAY WORK:
THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING FORTY-EIGHT (48) HOURS IN ADVANCE IF WORK ON SATURDAY IS PLANNED. WORK ON SUNDAY REQUIRES PRIOR APPROVAL OF THE ENGINEER IN ACCORDANCE WITH THE WATERLOO STANDARD SPECIFICATIONS. NO WORK WILL BE ALLOWED ON LEGAL HOLIDAYS OR THE SATURDAY AND SUNDAY PRECEDING A MONDAY HOLIDAY OR THE SATURDAY AND SUNDAY FOLLOWING A FRIDAY HOLIDAY.

23. PROGRESSIVE WORK AND LIQUIDATED DAMAGES:
AFTER CONSTRUCTION IS STARTED ON ANY PHASE, MEANINGFUL PROGRESSIVE WORK SHALL CONTINUE EACH WORKING DAY THAT IS NOT AFFECTED BY ADVERSE WEATHER CONDITIONS OR CONCRETE CURING REQUIREMENTS. LIQUIDATED DAMAGES IN THE AMOUNT OF $1,000.00 PER DAY SHALL BE ASSESSED FOR NON-COMPLIANCE WITH THIS REQUIREMENT.

24. LIQUIDATED DAMAGES:
TIME IS AN ESSENTIAL ELEMENT OF THIS CONTRACT. IT IS IMPORTANT THAT THE WORK BE DILIGENTLY PURSUED TO COMPLETION WITHIN THE ALLOTTED TIME PERIOD. IF THE WORK IS NOT COMPLETED WITHIN THE SPECIFIED CONTACT PERIOD (PLUS AUTHORIZED EXTENSIONS), THE CONTRACTOR SHALL PAY TO THE CITY LIQUIDATED DAMAGES IN THE AMOUNT OF ONE-THOUSAND DOLLARS ($1,000.00) PER DAY FOR EACH DAY IN EXCESS OF THE AUTHORIZED TIME, AS FURTHER DESCRIBED IN THE NOTICE TO BIDDERS.

25. INCENTIVES:
INCENTIVES WILL BE PAID TO THE CONTRACTOR FOR SUBSTANTIAL COMPLETION OF THIS CONTRACT PER THE FOLLOWING SCHEDULE:

SUBSTANTIAL COMPLETION OF CONTRACT ON OR BEFORE OCTOBER 13, 2023	INCENTIVE OF $50,000
SUBSTANTIAL COMPLETION OF CONTRACT AFTER OCTOBER 13 BUT BY OCTOBER 20, 2023	INCENTIVE OF $40,000
SUBSTANTIAL COMPLETION OF CONTRACT AFTER OCTOBER 20 BUT BY OCTOBER 27, 2023	INCENTIVE OF $30,000
SUBSTANTIAL COMPLETION OF CONTRACT AFTER OCTOBER 27 BUT BY NOVEMBER 3, 2023	INCENTIVE OF $20,000
SUBSTANTIAL COMPLETION OF CONTRACT AFTER NOVEMBER 3 BUT BY NOVEMBER 10, 2023	INCENTIVE OF $10,000
SUBSTANTIAL COMPLETION OF CONTRACT AFTER NOVEMBER 10, 2023	INCENTIVE OF $0

SUBSTANTIAL COMPLETION IS DEFINED AS ALL WORK COMPLETED EXCEPT GRADING ASSOCIATED WITH FINAL GRADING AND FINAL SEEDING.

PLAN LEGEND

- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING PAVING
- PROPOSED PAVING
- S — EXISTING SANITARY SEWER
- ST — EXISTING STORM SEWER
- PROPOSED SEWER
- EXISTING DRAIN TILE
- CURB AND GUTTER REMOVE & REPLACE
- MISCELLANEOUS PATCH
- 4" PCC SIDEWALK
- 5" PCC SIDEWALK/DRIVEWAY REMOVAL & REPLACE
- 6" PCC SIDEWALK/DRIVEWAY REMOVAL & REPLACE
- 6" PCC SIDEWALK
- SIDEWALK OR DRIVEWAY REMOVAL ONLY
- DETECTABLE WARNING PANELS
- HMA DRIVEWAY REMOVAL & REPLACE
- ROCK DRIVEWAY REMOVAL & REPLACE
- SIDEWALK REMOVAL
- PROPOSED DRAIN TILE
- EXISTING SIDEWALK
- EXISTING MANHOLE
- PROPOSED MANHOLE
- EXISTING INLET
- PROPOSED INLET
- GUY WIRE
- UTILITY POLE
- WV — WATER VALVE
- MILL WEDGE
- W — WATER LINE
- G — GAS LINE
- T — TELEPHONE LINE
- E — ELECTRIC LINE
- TV — CABLE TV LINE
- HYDRANT
- TREE
- GV — GAS VALVE

E. SAN MARNAN DR BENCHMARKS				
POINT #	**EASTING**	**NORTHING**	**ELEVATION**	**DESCRIPTION**
503	5231759.471	3631883.542	925.43	REBAR @ LOWE'S BLVD
504	5232492.663	3631868.099	934.26	REBAR @ HAWKEYE RD
505	5233142.578	3631861.920	929.67	REBAR
506	5233792.640	3631856.870	912.63	REBAR
507	5234442.302	3631840.665	890.65	REBAR
508	5235046.064	3631897.707	882.15	REBAR @ HAMMOND

CITY OF WATERLOO OFFICIAL SEAL

GENERAL NOTES AND PLAN LEGEND

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/17/2023

FY 2023 E. SAN MARNAN DR RECONSTRUCTION PROJECT — CONTRACT NO.1084

DIVISION I - E. SAN MARNAN DR RECONSTRUCTION

BID ITEM	SUDAS SPECIFICATION * SEE SUPPLEMENTAL SP = SPCL PROV	DESCRIPTION	UNIT	E. SAN MARNAN DR QTY	ESTIMATE REFERENCE NOTES
		DIVISION 2 - EARTHWORK			
1.01	2010-108-D *	TOPSOIL, 4 INCHES, ON OR OFF SITE	SY	5,141.00	TO BE USED ON AREAS OUTSIDE OF THE SHOULDER
1.02	2010-108-D *	TOPSOIL, 4 INCHES, OFF SITE	SY	3,787.00	TO BE USED IN ALL MEDIAN/ISLAND AREAS
1.03	2010-108-E *	EXCAVATION, CLASS 10	CY	2,900.00	2900 CY OF CUT MATERIAL; 1588 CY OF FILL MATERIAL; NET OF 1312 CY OF CUT; 1.25 FILL FACTOR WAS USED BASED ON CLAY SOILS. PLAN QUANTITY TO BE USED.
1.04	2010-108-E *	EXCAVATION, CLASS 10, WASTE	CY	1,312.00	EXCESS CUT MATERIAL TO BE HAULED AND STOCKPILED BY THE EXISTING STOCKPILE AREA ALONG ANSBOROUGH AND HWY 20. PLAN QUANTITY TO BE USED.
1.05	2010-108-F *	EXCAVATION, CLASS 10, BELOW GRADE	CY	1,500.00	DETERMINED BY FIELD CONDITIONS, AS DIRECTED BY ENGINEER
1.06	2010-108-G	SUBGRADE PREPARATION, 6 INCH DEPTH	SY	23,567.00	AREAS NOT PASSING THE PROOF ROLL WILL BE HANDLED UNDER ITEM 1.05 OR 1.07
1.07	2010-108-I *	SUBGRADE TREATMENT, WOVEN GEOTEXTILE OR GEOGRID	SY	4,500.00	DETERMINED BY FIELD CONDITIONS, AS DIRECTED BY ENGINEER
1.08	2010-108-J *	SUBBASE, MODIFIED, 10 INCH	SY	23,567.00	RECYCLED MATERIAL WILL BE ALLOWED IF MATERIAL PASSES THE IA DOT GRADATION. GRADATION/CERTIFICATION TO BE SUMBITTED TO CITY OF WATERLOO ENGINEERING DEPARTMENT.
1.09	IADOT 2121	GRANULAR SHOULDER TYPE B, 4 INCH DEPTH	SY	4,700.00	STRIP EXISTING SHOULDER MATERICAL AS NEEDED TO ALLOW FOR 4 INCHES OF NEW SHOULDER MATERIAL EXISTING SHOULDER MATERIAL CAN BE USED AS BACKFILL ON EDGE OF PAVING.
		DIVISION 4 - SEWERS AND DRAINS - STORM			
1.10	4020-108-D *	REMOVAL OF STORM SEWER, RCP, LESS THAN OR EQUAL TO 36 INCH	LF	32.00	SEE TABULATIONS IN PLANS
1.11	2010-108-L-1	STORM SEWER ABANDONMENT, FILL AND PLUG, R.C.P., 18 INCH	LF	236.00	SEE TABULATIONS IN PLANS
1.12	SP # 9	REMOVAL OF EXISTING DRAIN TILE	LF	1,700.00	SEE PLANS FOR APPROXIMATE LOCATIONS. BACKFILLING OF EXISTING TRENCH WITH SOIL IS INCIDENTAL TO THIS ITEM.
1.13	4040-108-A	SUBDRAIN, TYPE SP, 6 INCH	LF	5,961.00	SEE TABULATIONS IN PLANS
1.14	4040-108-D	SUBDRAIN OUTLET TO STRUCTURE, 6 INCH	EACH	2.00	SEE TABULATIONS IN PLANS
1.15	4040-108-D	SUBDRAIN OUTLET TO DITCH, 6 INCH	EACH	34.00	SEE TABULATIONS IN PLANS
		DIVISION 6 - STRUCTURES FOR STORM SEWERS			
1.16	6010-108-B	INTAKE, SW-510, DOUBLE OPEN THROAT	EACH	1.00	CASTING TO BE EJ 1040 A AND FRAME TO BE EJ 2450 OR APPROVED EQUAL
1.17	6010-108-G	CONNECTION TO EXISTING INTAKE, PIPE OR STRUCTURE, SUBDRAIN	EACH	2.00	SEE TABULATIONS IN PLANS
1.18	6010-108-H *	REMOVE MANHOLE, INTAKE, AND FLARED END SECTIONS, STORM	EACH	9.00	SEE TABULATIONS IN PLANS
1.19	SP # 17	MINOR ADJUSTMENT, INTAKE, SW-501	EACH	1.00	SW-603 TYPE R CASTINGS FOR GRATES. SALVAGE CASTING TO CITY OF WATERLOO WASTE MANAGEMENT YARD
1.20	6010-108-E *	MINOR ADJUSTMENT, MANHOLE, SW-401 W/ SW-602 TYPE E CASTING & CITY OF WATERLOO COVER	EACH	1.00	SEE TABULATIONS IN PLANS. SALVAGE CASTING TO CITY OF WATERLOO WASTE MANAGEMENT YARD
		DIVISION 7 - STEETS AND RELATED WORK			
1.21	7010-108-A	PAVEMENT, PCC, 9 INCH, C-SUD, CL 3 AGG	SY	21,169.00	PV-102 - 6 INCH SLOPED CURB; PV-102 6 INCH STANDARD CURB AROUND SLIP RAMP ISLAND
1.22	7010-108-I	PCC PAVEMENT SAMPLES AND TESTING	LS	1.00	COMPLY WITH IADOT 2316 SCHEDULE A FOR SMOOTHNESS
1.23	11,050-108-A	CONCRETE WASHOUT	LS	1.00	TO BE PROVIDED ON SITE FOR ALL PCC CONSTRUCTION ACTIVITIES
		SIDEWALKS, SHARED USE PATHS AND DRIVEWAYS			
1.24	7030-108-H-1	DRIVEWAY, PAVED, PCC, 6 INCH, C-4	SY	182.60	SEE TABULATIONS IN PLANS
		PAVEMENT REHABILITATION			
1.25	7040-108-H *	PAVEMENT REMOVAL, CONCRETE	SY	21,320.00	AREA INCLUDES COMPOSITE PAVING, CURB AND GUTTER, MEDIAN AREAS, AND DRIVEWAYS. SAW CUTTING AND SLURRY CONTAINMENT/DISPOSAL INCIDENTAL TO THIS ITEM. ASPHALT MATERIAL TO BE DELIVERED TO CITY OF WATERLOO PUBLIC WORKS DEPARTMENT, 2300 BLOCK OF COMMERCIAL STREET. IF CONTRACTOR CHOOSES TO CRUSH ON-SITE, NO MATERIAL IS REQUIRED TO BE DELIVERED TO PUBLIC WORKS DEPARTMENT.
1.26	7040-108-I	CURB AND GUTTER REMOVAL	LF	350.00	SAW CUTTING INCIDENTAL TO THIS ITEM
1.27	7010-108-E	CURB AND GUTTER, 24 IN WIDE, 6 IN THICK, M-4, CL 3 AGG	LF	350.00	PV-102 - 6 INCH STANDARD CURB
		DIVISION 8 - PAVEMENT MARKINGS AND TRAFFIC CONTROL			
		TRAFFIC SIGNALS			
1.28	IA-DOT 2523-0000310	TYPE 1 HANDHOLE, REMOVE, SALVAGE, AND REPLACE	EACH	3.00	HANDHOLE TO BE PRECAST CONCRETE AND 36 INCHES DEEP. REFER TO SUDAS FIGURE 8010.103. SALVAGE TO CITY OF WATERLOO TRAFFIC DEPARTMENT
		PAVEMENT MARKINGS			
1.29	8020-108-B	PAINTED PAVEMENT MARKINGS, SOLVENT/WATERBOURNE	STA	82.82	GRINDING/SEALING OF PAVING SURFACE REQUIRED BEFORE PLACING
1.30	IA-DOT 2528-9109020	TEMPORARY LANE SEPARATOR SYSTEM	LF	1,360.00	LOCATION AS NOTED ON TRAFFIC CONTROL PLANS. ITEM TO INCLUDE INSTALLATION, MAINTENANCE, AND REMOVAL
1.31	8020-108-K	PAVEMENT MARKING REMOVED	STA	1.40	DASHED WHITE LINE AT THE T.L.S.S. LOCATION
1.32	8020-108-F	RETROFLECTIVE REMOVABLE TAPE MARKINGS	STA	63.00	SEE TRAFFIC CONTROL SHEETS. TO BE USED IN PLACE OF TEMPORARY PAINTING
1.33	8020-108-H	PRECUT SYMBOLS AND LEGENDS, THERMOPLASTIC	EACH	14.00	SEE STRIPING SHEETS. GRINDING/SEALING OF PAVING SURFACE REQUIRED BEFORE PLACING
		TEMPORARY TRAFFIC CONTROL			
1.34	8030-108-A	TEMPORARY TRAFFIC CONTROL	LS	1.00	AS PER PLANS AS WELL AS THE TRAFFIC CONTORL DETAILS LISTED FROM THE IADOT SPECIFICATIONS. EXISTING HOSPITAL SIGNS CONFLICTING WITH DETOUR SHALL BE COVERED.
1.35	8030-2.02/PLANS	DIRECTIONAL SIGNS, PER DETAILS	EACH	45.00	SEE DETOUR PLAN FOR SIGN DETAILS AND LOCATIONS
1.36	IA DOT - 4188.07	PORTABLE DYNAMIC MESSAGE SIGN	DAY	220.00	TWO SIGNS REQUIRED. SEE PLANS FOR MESSAGES TO BE DISPLAYED. CELLULAR MODEM NOT REQUIRED
1.37	IA DOT - 2518	SAFETY CLOSURE	EACH	8.00	
		DIVISION 9 - SITE WORK AND LANDSCAPING			
		SEEDING			
1.38	9010-108-B *	HYDRAULIC SEEDING, SEEDING, FERTILIZING AND MULCHING - TYPE 1	SY	8,928.00	
1.39	9010-108-B *	HYDRAULIC SEEDING, SEEDING, FERTILIZING AND MULCHING - TYPE 2	SY	800.00	TO BE USED FOR STOCKPILE LOCATION ANSBOROUGH AVE AND HWY 20.
1.40	9010-108-E *	WARRANTY	SY	2,232.00	RESEEDING AREAS TO BE DETERMINED BY ENGINEER. ESTIMATED AT 25%
		EROSION AND SEDIMENT CONTROL			
1.41	9040-108-Q-2	EROSION CONTROL MULCHING, HYDROMULCHING	SY	6,000.00	FOR OUT OF SEEDING WINDOW EROSION CONTROL
1.42	9040-108-T-1 *	INLET PROTECTION DEVICE, INTERMEDIATE AND DROP IN	EACH	2.00	INTERMEDIATE IS PROTECTION PRIOR TO PAVING, DROP IN AFTER PAVING
1.43	9040-108-T-2 *	INLET PROTECTION DEVICE, MAINTENANCE	EACH	2.00	CLEAN OUT OF INLET PROTECTION DEVICE BEFORE FINAL REMOVAL
1.44	9040-108-T-2 *	INLET PROTECTION DEVICE, REMOVAL	EACH	2.00	CLEAN OUT OF INLET PROTECTION DEVICE AND REMOVE
1.45	9040-108-M-1	SILT FENCE INSTALLATION	LF	500.00	TO BE USED FOR CULVERTS UNDER E. SAN MARNAN SLIP RAMP AND STOCKPILE AT ANSBOROUGH AVE AND HWY 20.
1.46	9040-108-M-2	SILT FENCE MAINTENANCE	LF	500.00	TO BE USED FOR CULVERTS UNDER E. SAN MARNAN SLIP RAMP AND STOCKPILE AT ANSBOROUGH AVE AND HWY 20.
1.47	9040-108-M-3	SILT FENCE REMOVAL	LF	500.00	TO BE USED FOR CULVERTS UNDER E. SAN MARNAN SLIP RAMP AND STOCKPILE AT ANSBOROUGH AVE AND HWY 20.
1.48	9040-108-F-1	WATTLE, 8 INCH INSTALLATION	LF	200.00	20' SECTIONS IN 16.5 FOOT GRASS ISLAND TO SLOW WATER ON ISLAND RUNNING DOWN HILL.
1.49	9040-108-F	WATTLE, 8 INCH MAINTENANCE	LF	200.00	20' SECTIONS IN 16.5 FOOT GRASS ISLAND TO SLOW WATER ON ISLAND RUNNING DOWN HILL.
1.50	9040-108-F-2	WATTLE, 8 INCH REMOVAL	LF	200.00	20' SECTIONS IN 16.5 FOOT GRASS ISLAND TO SLOW WATER ON ISLAND RUNNING DOWN HILL.
		DIVISION 11 - MISCELLANEOUS			
1.51	11010-108-A	CONSTRUCTION SURVEY	LS	1.00	
1.52	SEE EST REF	TEMPORARY PAVING, 6" HMA OR 6" PCC,EXCAVATE, PLACE, MAINTAIN, REMOVE & RESTORE	SY	400.00	LOCATION SHOWN IN PLANS, ESTIMATED EXCAVATION 62 CY, SEEDING ESTIMATED AT 400 SY

CITY OF WATERLOO • OFFICIAL SEAL

ESTIMATED QUANITIES AND ESTIMATED REFERENCE INFORMATION 1 of 2

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/17/2023

		FY 2023 E. SAN MARNAN DR RECONSTRUCTION PROJECT			CONTRACT NO.1084
					DIVISION II - E. SAN MARNAN DR WATER MAIN RELOCATION
BID ITEM	SUDAS SPECIFICATION * SEE SUPPLEMENTAL	DESCRIPTION		E. SAN MARNAN DR	ESTIMATE REFERENCE NOTES
		DIVISION 2 - EARTHWORK			
2.01	2010-108-D *	TOPSOIL, 4 INCHES, OFF SITE	SY	258.00	TO BE USED IN ALL MEDIAN/ISLAND AREAS
2.02	2010-108-E *	EXCAVATION, CLASS 10	CY	64.00	64 CY OF CUT MATERIAL; 0 CY OF FILL MATERIAL; NET OF 64 CY OF CUT. PLANNED QUANTITY TO BE USED.
2.03	2010-108-G	SUBGRADE PREPARATION, 6 INCH DEPTH	SY	247.00	AREAS NOT PASSING THE PROOF ROLL WILL BE HANDLED UNDER ITEM 1.05 OR 1.07
2.04	2010-108-J *	SUBBASE, MODIFIED, 10 INCH	SY	247.00	RECYCLED MATERIAL WILL BE ALLOWED IF MATERIAL PASSES THE IA DOT GRADATION. GRADATION/CERTIFICATION TO BE SUMBITTED TO CITY OF WATERLOO ENGINEERING DEPARTMENT.
		DIVISION 5 - WATER MAINS AND APPURTENANCES			
		PIPES AND FITTINGS			
2.05	5010-108-A-1	WATER MAIN, TRENCHED, DUCTILE IRON, 16 INCH	LF	213.00	SEE PLANS FOR LOCATION. TRACER SYSTEM REQUIRED.
2.06	5010-108-C-1	FITTING, DUCTILE IRON, 90 DEGREE, MJ, 16 INCH	EA	1.00	SEE PLANS FOR LOCATION
2.07	5010-108-C-1	FITTING, DUCTILE IRON, 45 DEGREE, MJ, 16 INCH	EA	2.00	SEE PLANS FOR LOCATION
2.08	5010-108-C-1	FITTING, DUCTILE IRON, 22.5 DEGREE, MJ, 16 INCH	EA	4.00	SEE PLANS FOR LOCATION
2.09	5010-108-C-1	FITTING, DUCTILE IRON, TEE, MJ, 16 INCH X 16 INCH	EA	1.00	SEE PLANS FOR LOCATION
2.10	5010-108-C-1	GATE VALVE, MJ, 16 INCH, INSTALL ONLY	EA	1.00	SEE PLANS FOR LOCATION. WATERLOO WATER WORKS TO SUPPLY VALVE WITH ACCESSORIES
2.11	5010-108-C-1	FITTING, CAST IRON TO DUCTILE IRON COUPLING, MJ,16 INCH	EA	3.00	SEE PLANS FOR LOCATION
2.12	5010-108-C-1	FITTING,WATER SERVICE TAP, 3/4 INCH CORPORATION INTO 16 INCH MAIN	EA	2.00	SEE PLANS FOR LOCATION
2.13	5010-108-E-2	WATER SERVICE CORPORATION, COMPRESSION, 3/4 INCH	EA	2.00	SEE PLANS FOR LOCATION CONNECTION TO EXISTING COPPER SERVICE IS INCIDENTAL
2.14	5010-108-E-1	WATER SERVICE PIPE, COPPER, 3/4 INCH	LF	24.00	SEE PLANS FOR LOCATION
2.15	5010-108-G	WATER MAIN ABANDONMENT, FILL AND PLUG, D.I.P., 16 INCH	LF	160.00	SEE PLANS FOR LOCATION. CUTTING AND CAPPING OF WATER MAIN INCIDENTAL TO THIS ITEM.
		DIVISION 7 - STEETS AND RELATED WORK			
2.16	7010-108-A	PAVEMENT, PCC, 9 INCH, C-SUD, CL 3 AGG	SY	222.00	PV-102 - 6 INCH SLOPED CURB; PV-102 6 INCH STANDARD CURB AROUND SLIP RAMP ISLAND
2.17	11,050-108-A	CONCRETE WASHOUT	LS	1.00	TO BE PROVIDED ON SITE FOR ALL PCC CONSTRUCTION ACTIVITIES
		PAVEMENT REHABILITATION			
2.18	7040-108-H *	PAVEMENT REMOVAL, CONCRETE	SY	260.00	AREA INCLUDES COMPOSITE PAVING, CURB AND GUTTER, MEDIAN AREAS, AND DRIVEWAYS. SAW CUTTING AND SLURRY CONTAINMENT/DISPOSAL INCIDENTAL TO THIS ITEM. ASPHALT MATERIAL TO BE DELIVERED TO CITY OF WATERLOO PUBLIC WORKS DEPARTMENT, 2300 BLOCK OF COMMERCIAL STREET. IF CONTRACTOR CHOOSES TO CRUSH ON-SITE, NO MATERIAL IS REQUIRED TO BE DELIVERED TO PUBLIC WORKS DEPARTMENT.
		DIVISION 9 - SITE WORK AND LANDSCAPING			
		SEEDING			
2.19	9010-108-B *	HYDRAULIC SEEDING, SEEDING, FERTILIZING AND MULCHING - TYPE 1	SY	258.00	

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ESTIMATED QUANTITIES AND ESTIMATED REFERENCE INFORMATION 2 of 2

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
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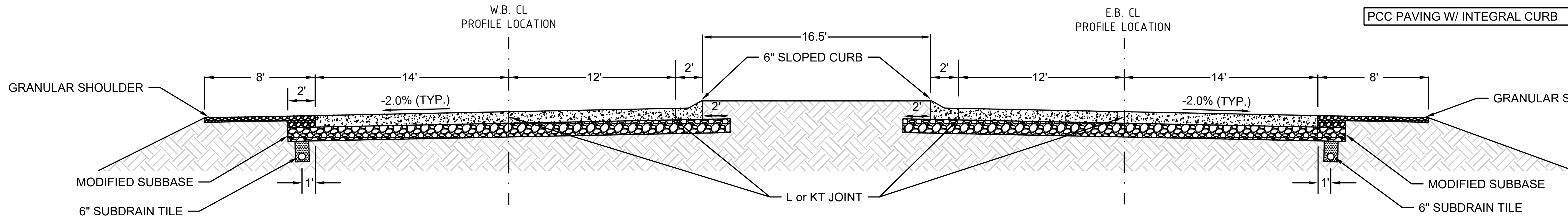
DATE: 4/17/2023

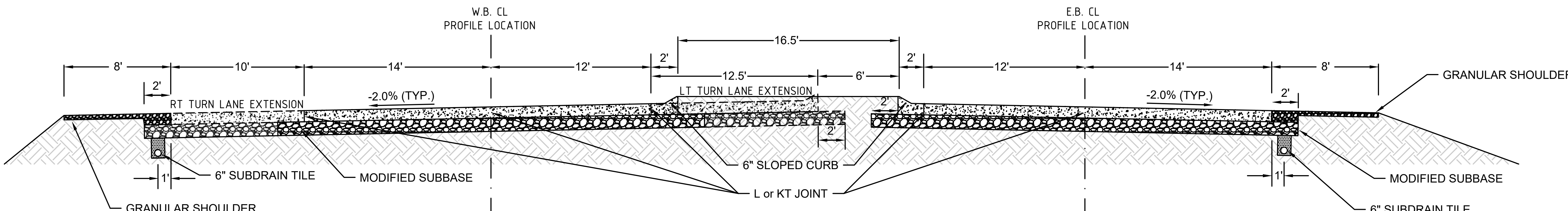
PAVEMENT THICKNESS	
PCC	9"
SUBBASE THICKNESS	
10"	
GRANULAR SHOULDER THICKNESS	
4"	

PCC PAVING W/ INTEGRAL CURB

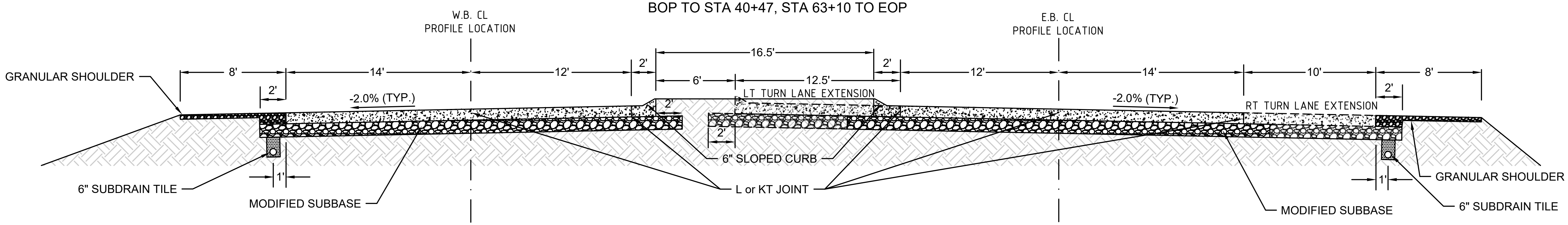
E. SAN MARNAN DR.
(TYPICAL ROADWAY W/ MEDIAN)
STA 61+12 TO STA 63+10



E. SAN MARNAN DR.
(TYPICAL ROADWAY W/ LEFT TURN OR RIGHT TURN
LANE W.B. W/ MEDIAN)
STA 41+78 TO STA 61+12



E. SAN MARNAN DR.
(TYPICAL ROADWAY W/ LEFT TURN OR RIGHT TURN
LANE E.B. W/ MEDIAN)
BOP TO STA 40+47, STA 63+10 TO EOP



E. SAN MARNAN DR. TYPICAL SECTIONS

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
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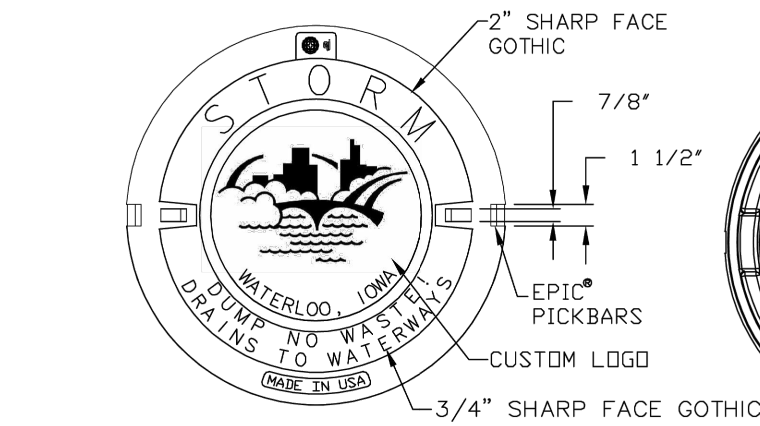
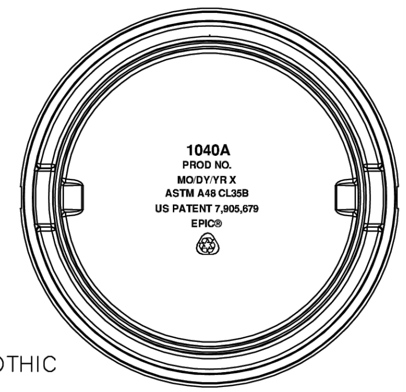
DATE: 4/10/2023

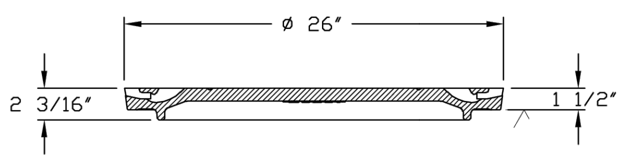
SHEET
5

1040A Cover

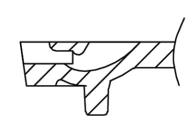




BOTTOM VIEW OF COVER



COVER SECTION



EPIC® DETAIL

Product Number
001040568

Design Features
- -Materials
  Gray Iron (CL35B)
- -Load Rating
  Heavy Duty
- -Open Area
  n/a
- -Coating
  Undipped
- -√ Designates Machined Surface

Certification
- ASTM A48
-
-
-Country of Origin: USA

Drawing Revision
8/12/2020 Designer: MAH
12/14/2020 Revised By: MAH

Disclaimer
Weights (lbs./kg) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

Contact
800 626 4653
ejco.com

DETAIL REFERENCE	
4020.211	STORM SEWER PIPE CONNECTIONS
4030.221	RCP APRON SECTION FOOTING
4030.222	CIRCULAR CONCRETE APRONS
4030.224	CONCRETE PIPE APRON GUARD
4040.231	SUBDRAINS
4040.233	SUBDRAIN OUTLETS
6010.510	DOUBLE OPEN-THROAT CURB INTAKE, LARGE BOX
6010.512	CIRCULAR AREA INTAKE
6010.514	BOXOUTS FOR GRATE INTAKES
6010.602	CASTINGS FOR STORM SEWER MANHOLES
6010.603	CASTINGS FOR GRATE INTAKES
6010.604	CASTINGS FOR AREA INTAKES
7010.101	JOINTS
7010.102	PCC CURB DETAILS
7010.104	RAMPED MEDIAN NOSE
7010.901	PCC PAVEMENT JOINTING
7010.904	TYPICAL JOINTING LAYOUT
7010.906	MEDIANS
8010.103	CONDUIT AND PRECAST HANDHOLES
TC-61	TWO-LANE, TWO-WAY OPERATION
TC-216	LANE CLOSURE WITH SIGNALS
TC-252	ROUTES CLOSED TO TRAFFIC
TC-418	LANE CLOSURE ON DIVIDED HIGHWAY
TC-419	LANE CLOSURE ON UNDIVIDED HIGHWAY

DETAIL REFRENECE & WATERLOO MANHOLE COVERS

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT CONTRACT #1084

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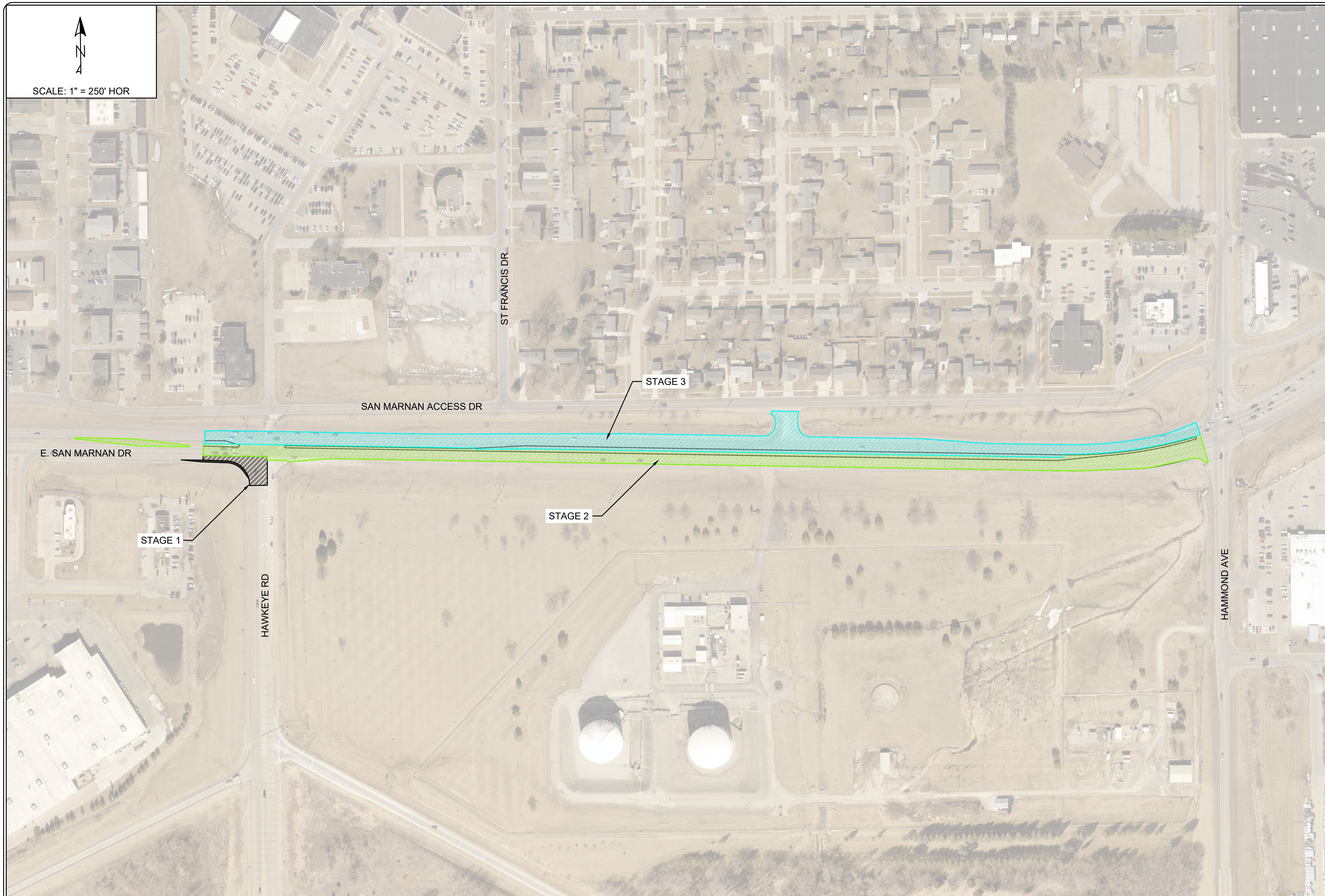
SHEET 6



E. SAN MARNAN DR
OVERALL STAGING MAP

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT
CONTRACT #1084

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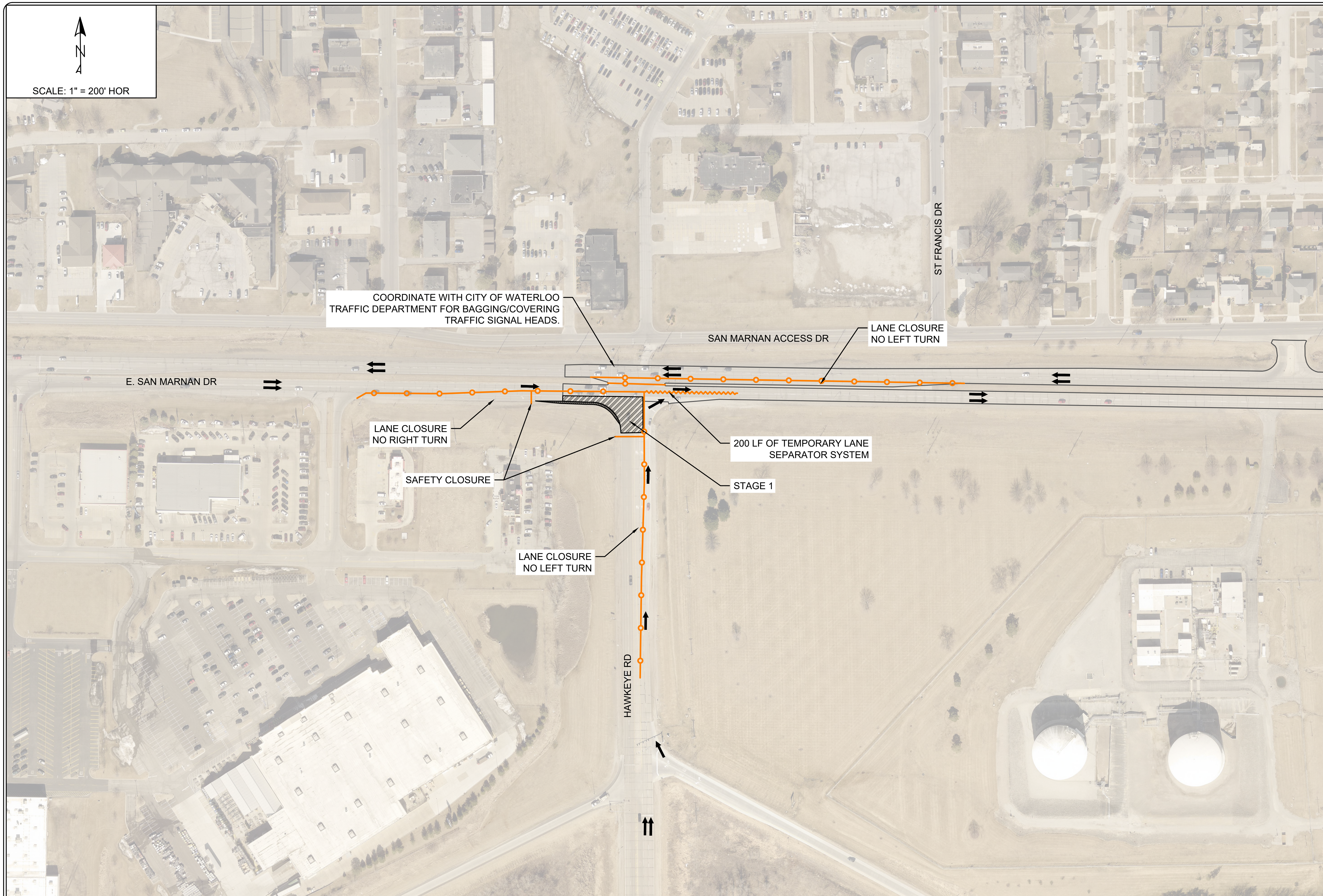

E. SAN MARNAN DR
STAGE 1 TRAFFIC CONTROL

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
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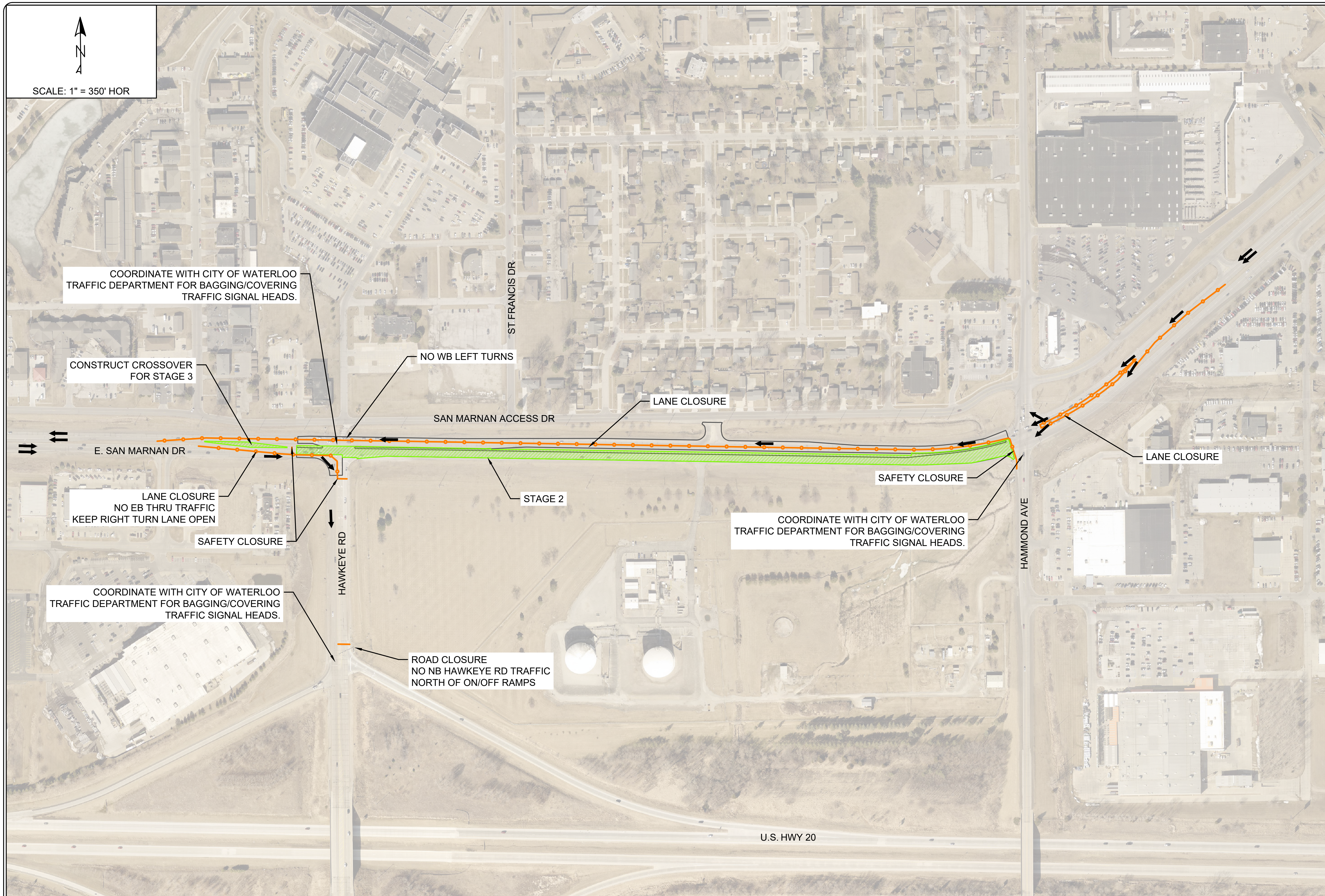

E. SAN MARNAN DR
STAGE 2 TRAFFIC CONTROL

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT
CONTRACT #1084

CITY OF WATERLOO, IOWA
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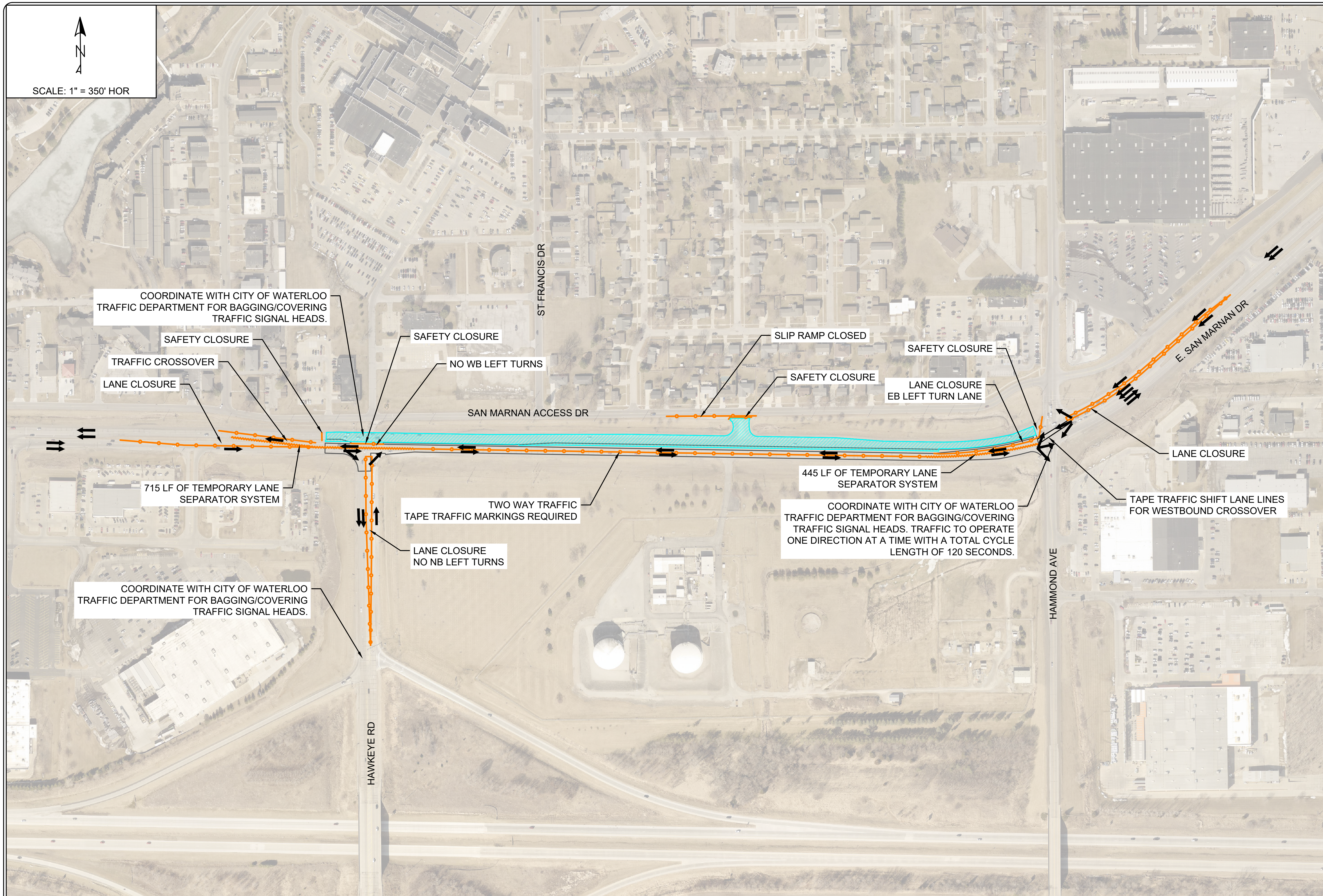

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CITY OF WATERLOO · OFFICIAL SEAL

E. SAN MARNAN DR

STAGE 3 TRAFFIC CONTROL

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT CONTRACT #1084

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ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
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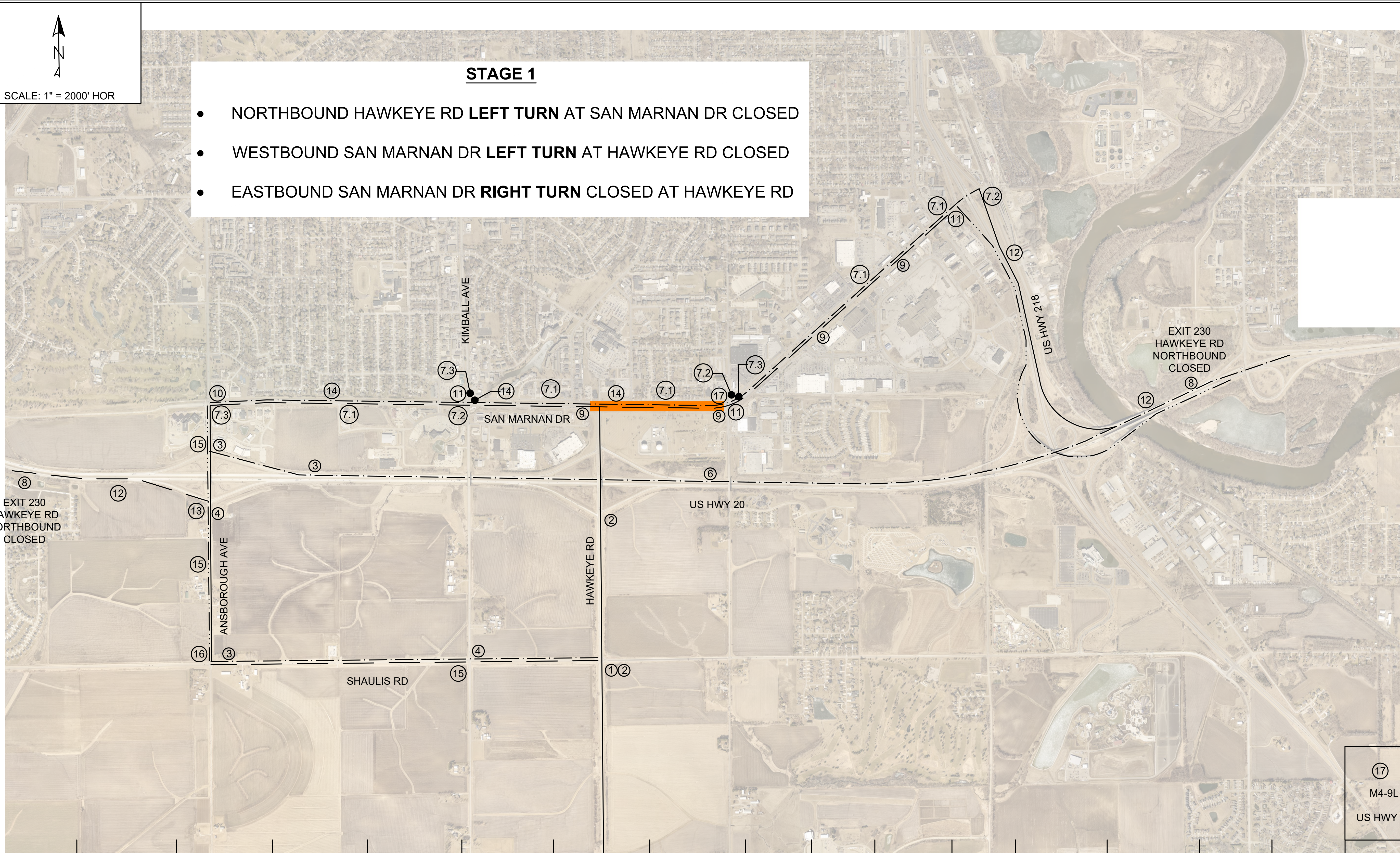
DATE: 4/10/2023

STAGE 1

- NORTHBOUND HAWKEYE RD **LEFT TURN** AT SAN MARNAN DR CLOSED
- WESTBOUND SAN MARNAN DR **LEFT TURN** AT HAWKEYE RD CLOSED
- EASTBOUND SAN MARNAN DR **RIGHT TURN** CLOSED AT HAWKEYE RD



SIGN TYPE / STREET NAME	①	②	③	④	⑤	⑥	7.1 / 7.2 / 7.3	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	⑰
SIGN TYPE	M4-9L	M4-9S	M4-9R	M4-9S	M4-9L	M4-9S	7.1 M4-9S, 7.2 M4-9L, 7.3 M4-9R	PORTABLE DYNAMIC MESSAGE SIGN	M4-9S	M4-9L	M4-9R	M4-9R	M4-9L	M4-9S	M4-9S	M4-9L	M4-9L
STREET NAME	SAN MARNAN DR WESTBOUND	SAN MARNAN DR EASTBOUND	SAN MARNAN DR	SAN MARNAN DR	SAN MARNAN DR	SAN MARNAN DR WESTBOUND	MERCY ONE HOSPITAL 28" x 36"		US HWY 20	US HWY 20 HAWKEYE RD	US HWY 20	SAN MARNAN DR MERCY ONE HOSPITAL	SAN MARNAN DR MERCY ONE HOSPITAL	US HWY 20 HAWKEYE RD	HAWKEYE RD	HAWKEYE RD	US HWY 20

CITY OF WATERLOO OFFICIAL SEAL

E. SAN MARNAN DR
DETOUR PLAN - STAGE 1

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT
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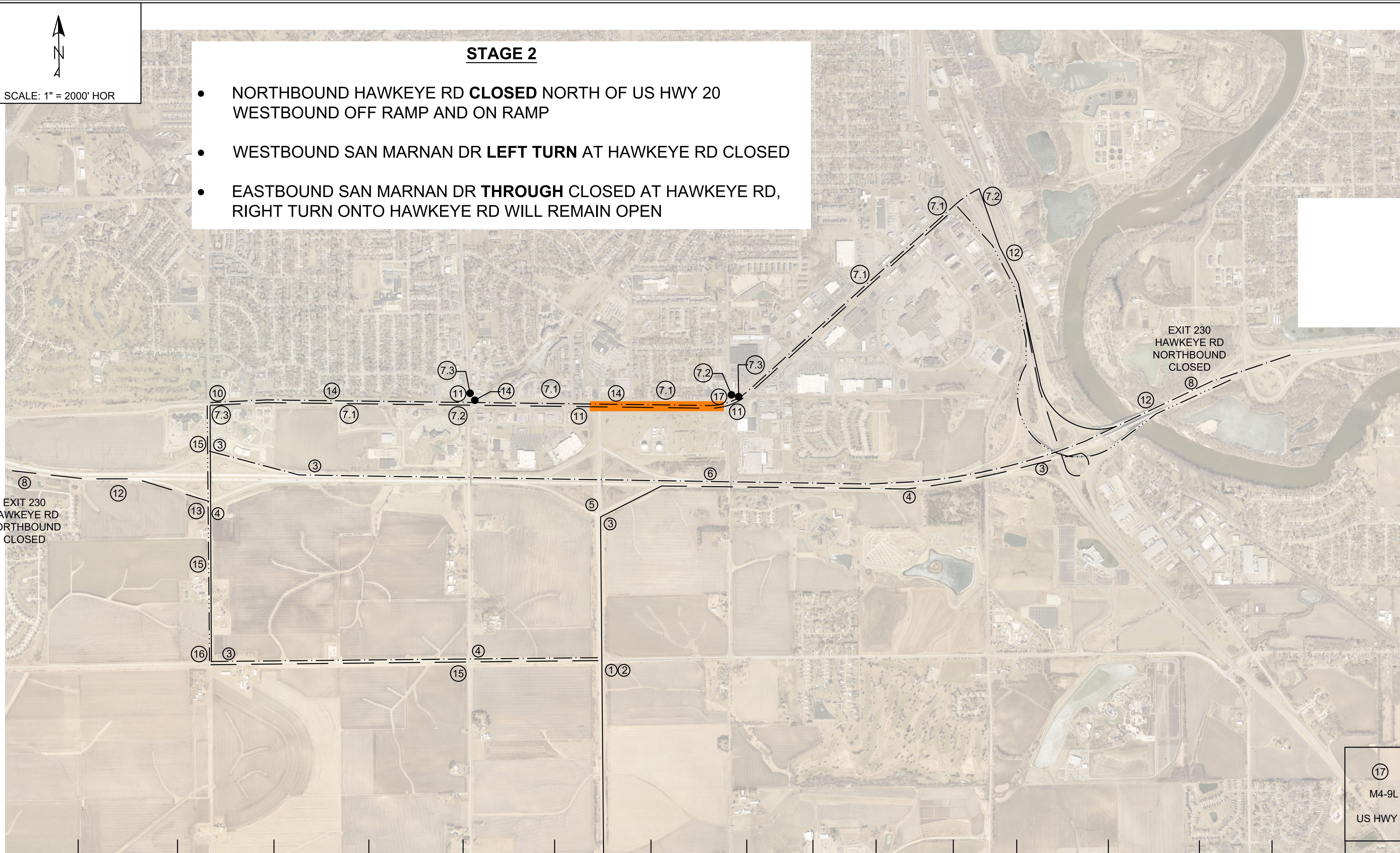

STAGE 2

- NORTHBOUND HAWKEYE RD **CLOSED** NORTH OF US HWY 20 WESTBOUND OFF RAMP AND ON RAMP
- WESTBOUND SAN MARNAN DR **LEFT TURN** AT HAWKEYE RD CLOSED
- EASTBOUND SAN MARNAN DR **THROUGH** CLOSED AT HAWKEYE RD, RIGHT TURN ONTO HAWKEYE RD WILL REMAIN OPEN

SIGN TYPE STREET NAME	1 M4-9L SAN MARNAN DR WESTBOUND	2 M4-9S SAN MARNAN DR EASTBOUND	3 M4-9R SAN MARNAN DR	4 M4-9S SAN MARNAN DR	5 M4-9L SAN MARNAN DR	6 M4-9S SAN MARNAN DR WESTBOUND	7.1 M4-9S 7.2 M4-9L 7.3 M4-9R MERCY ONE HOSPITAL 28" x 36"	8 PORTABLE DYNAMIC MESSAGE SIGN	9 M4-9S US HWY 20	10 M4-9L US HWY 20 HAWKEYE RD	11 M4-9R US HWY 20	12 M4-9R SAN MARNAN DR MERCY ONE HOSPITAL	13 M4-9L SAN MARNAN DR MERCY ONE HOSPITAL	14 M4-9S US HWY 20 HAWKEYE RD	15 M4-9S HAWKEYE RD	16 M4-9L HAWKEYE RD

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CITY OF WATERLOO OFFICIAL SEAL

E. SAN MARNAN DR
DETOUR PLAN - STAGE 2

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
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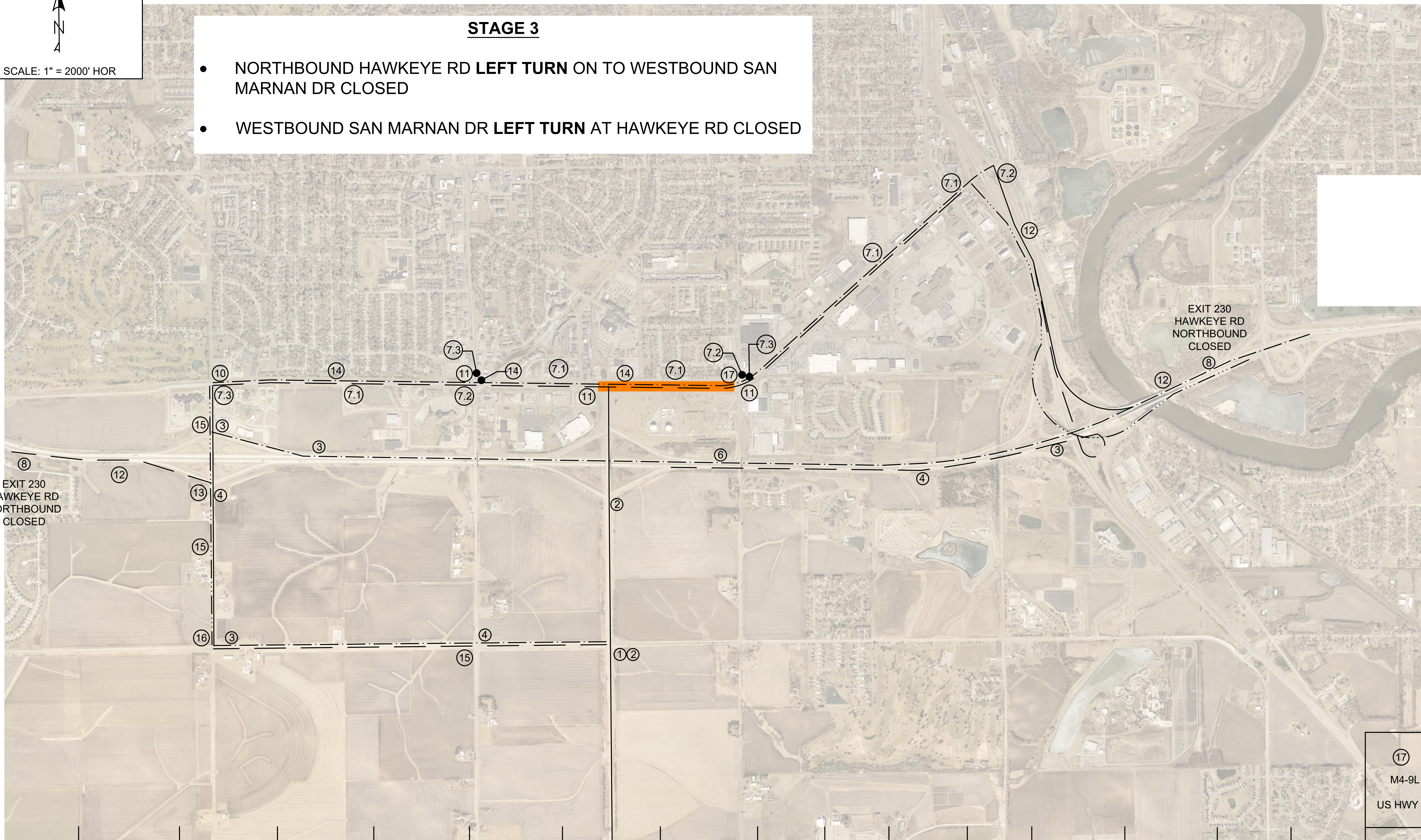
STAGE 3

- NORTHBOUND HAWKEYE RD **LEFT TURN** ON TO WESTBOUND SAN MARNAN DR CLOSED
- WESTBOUND SAN MARNAN DR **LEFT TURN** AT HAWKEYE RD CLOSED

SCALE: 1" = 2000' HOR



SIGN TYPE	M4-9L	M4-9S	M4-9R	M4-9S	M4-9L	M4-9S	7.1 M4-9S 7.2 M4-9L 7.3 M4-9R	PORTABLE DYNAMIC MESSAGE SIGN	M4-9S	M4-9L	M4-9R	M4-9R	M4-9L	M4-9S	M4-9S	M4-9L	M4-9L
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
STREET NAME	SAN MARNAN DR WESTBOUND	SAN MARNAN DR EASTBOUND	SAN MARNAN DR	SAN MARNAN DR	SAN MARNAN DR	SAN MARNAN DR WESTBOUND	MERCY ONE HOSPITAL 28" x 36"		US HWY 20	US HWY 20 HAWKEYE RD	US HWY 20	SAN MARNAN DR MERCY ONE HOSPITAL	SAN MARNAN DR MERCY ONE HOSPITAL	US HWY 20 HAWKEYE RD	HAWKEYE RD	HAWKEYE RD	US HWY 20

CITY OF WATERLOO OFFICIAL SEAL

E. SAN MARNAN DR
DETOUR PLAN - STAGE 3

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT CONTRACT #1084

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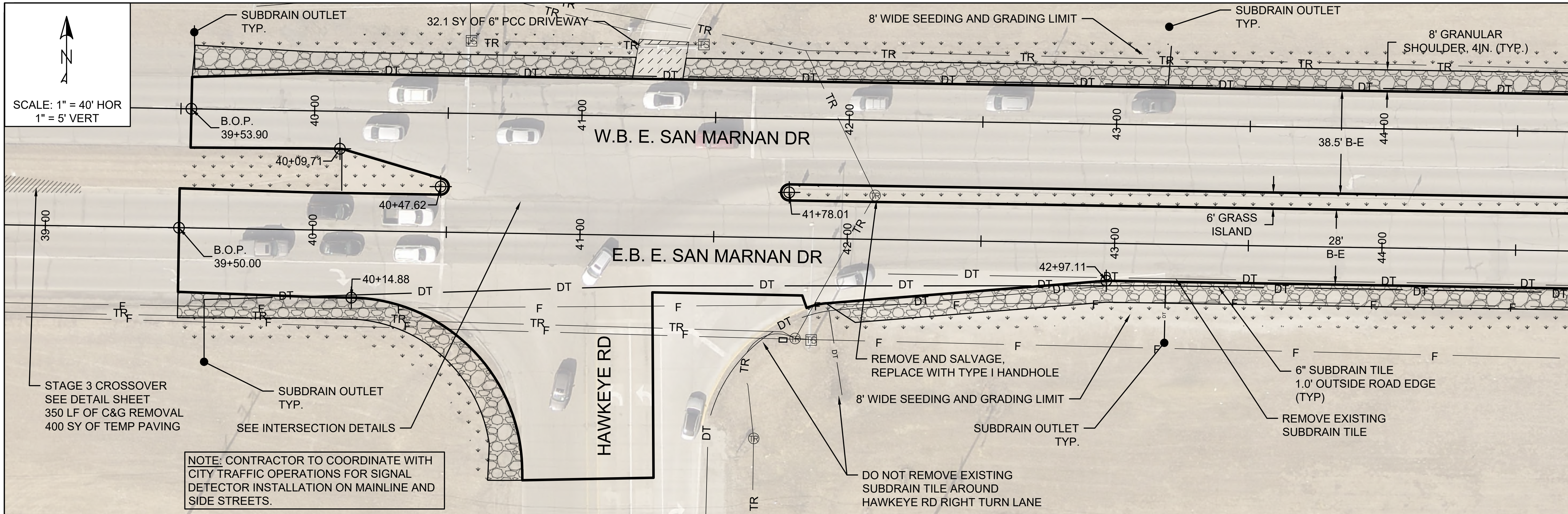

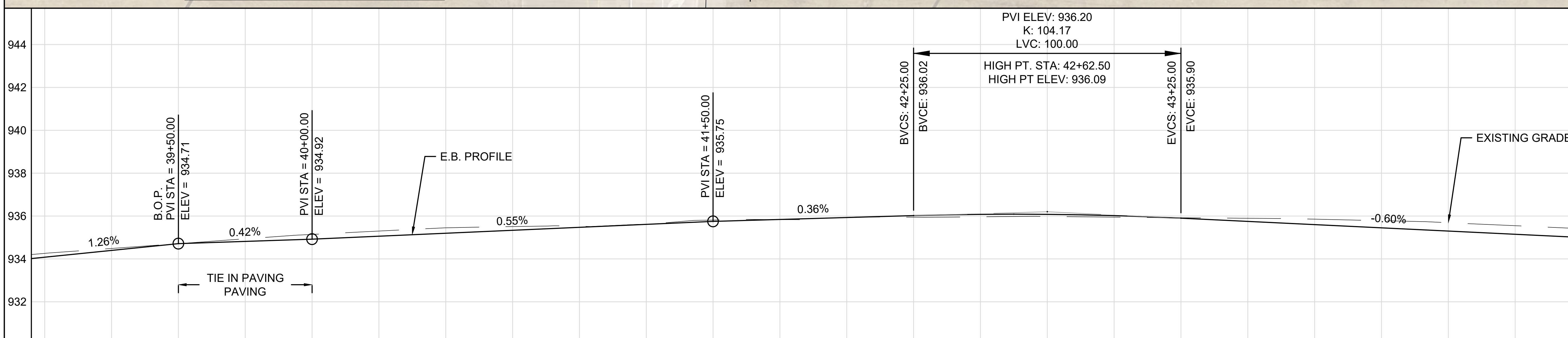

LT Gutter: TRAVEL LANE 2.00% SEE INTERSECTION DETAILS (39+50.00 to 43+25.00); 2.00% FROM CL (43+25.00 to 44+75.00)

RT Road Edge: TRAVEL LANE -2.00% SEE INTERSECTION DETAILS (39+50.00 to 43+25.00); -2.00% FROM CL (43+25.00 to 44+75.00)

Stations	CL Elev
39+00.00	934.08
39+25.00	934.39
39+50.00	934.71
39+75.00	934.82
40+00.00	934.92
40+25.00	935.06
40+50.00	935.20
40+75.00	935.34
41+00.00	935.47
41+25.00	935.61
41+50.00	935.75
41+75.00	935.84
42+00.00	935.93
42+25.00	936.02
42+50.00	936.08
42+75.00	936.08
43+00.00	936.02
43+25.00	935.90
43+50.00	935.75
43+75.00	935.60
44+00.00	935.45
44+25.00	935.30
44+50.00	935.15
44+75.00	935.00

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CITY OF WATERLOO OFFICIAL SEAL

E. SAN MARNAN DR.

EASTBOUND FROM STA 39+00 TO STA 44+50

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
CONTRACT #1084

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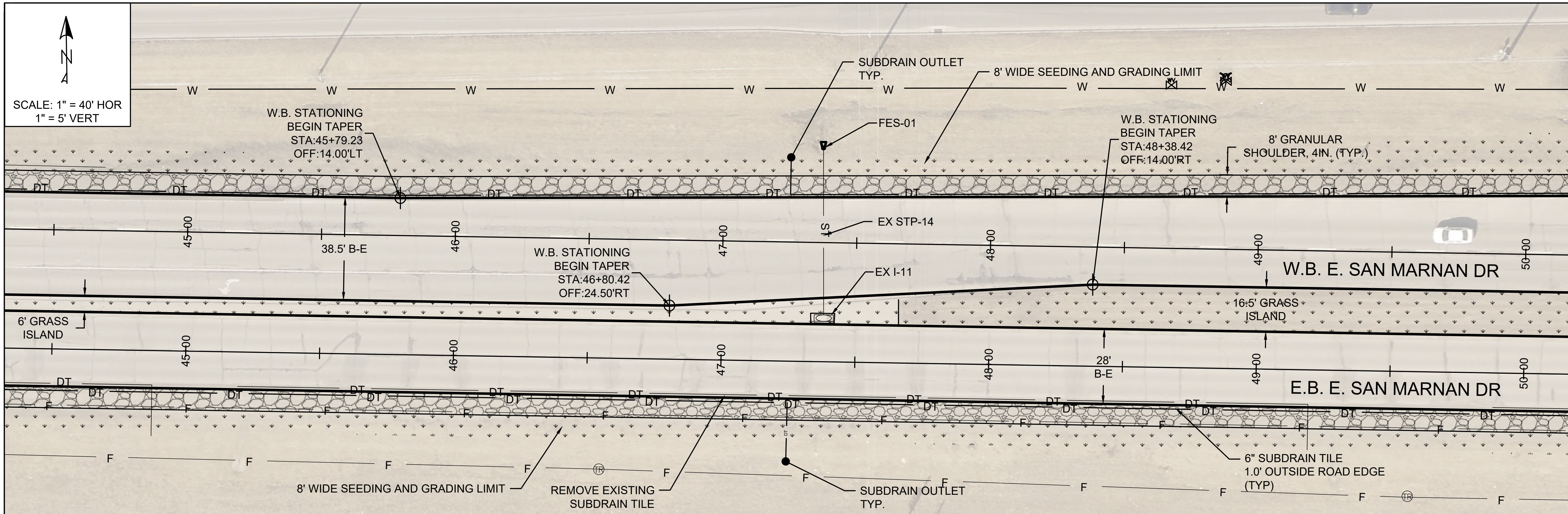
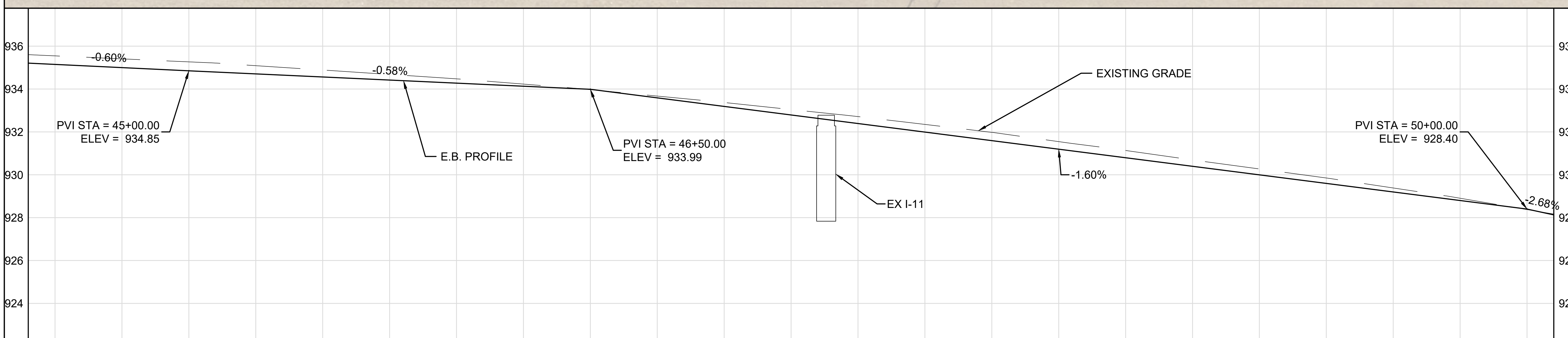
SHEET
14





LT Gutter	2.00% FROM CL																						
CL Elev	935.15	935.00	934.85	934.71	934.56	934.42	934.28	934.13	933.99	933.59	933.19	932.79	932.39	931.99	931.59	931.19	930.79	930.40	930.00	929.60	929.20	928.80	928.40
RT Road Edge	-2.00% FROM CL																						
Stations	44+50.00	44+75.00	45+00.00	45+25.00	45+50.00	45+75.00	46+00.00	46+25.00	46+50.00	46+75.00	47+00.00	47+25.00	47+50.00	47+75.00	48+00.00	48+25.00	48+50.00	48+75.00	49+00.00	49+25.00	49+50.00	49+75.00	50+00.00

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CITY OF WATERLOO OFFICIAL SEAL

E. SAN MARNAN DR.

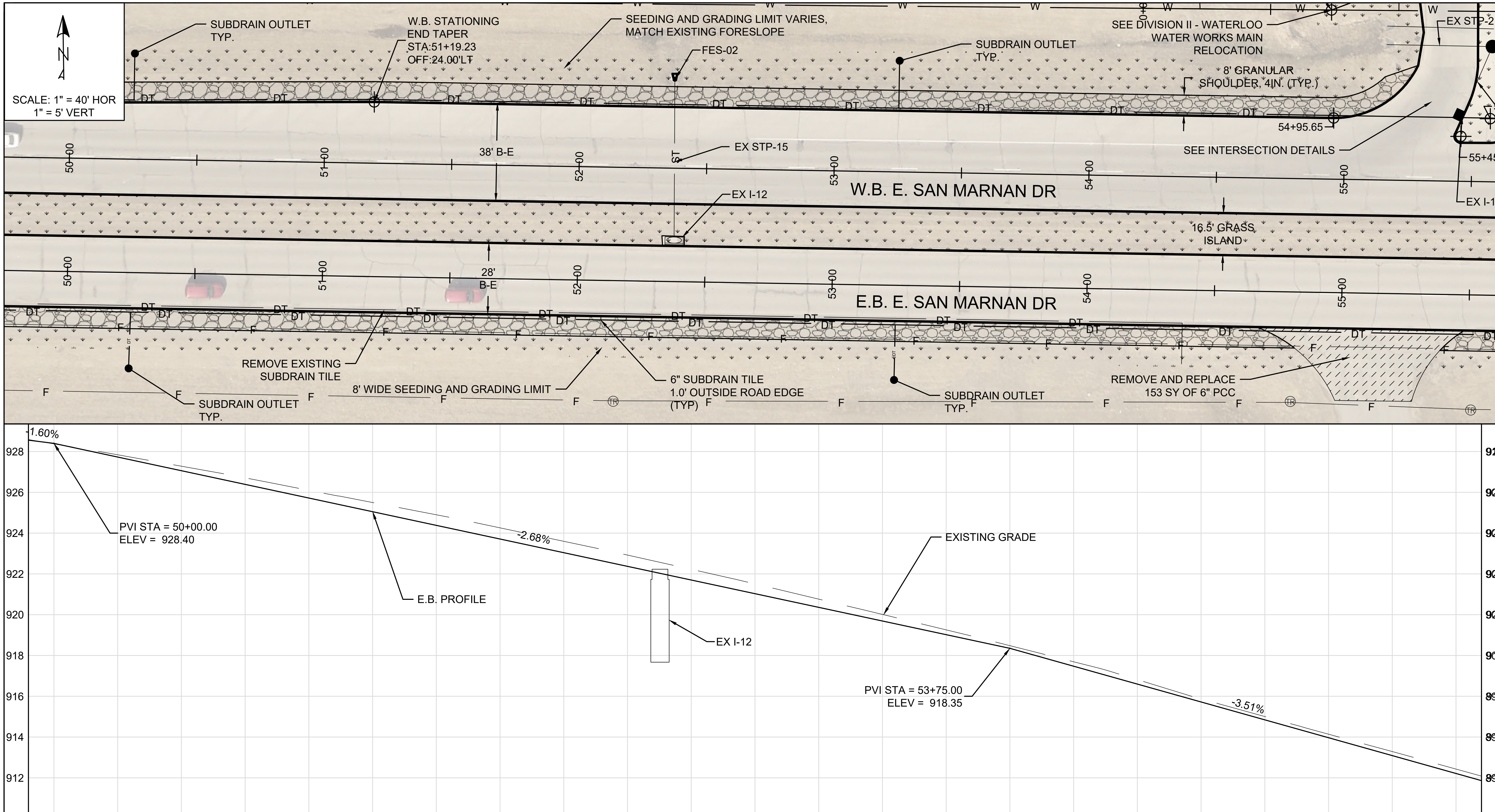
EASTBOUND FROM STA 44+50 TO STA 50+00

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/10/2023

SHEET 15



LT Gutter: 2.00% FROM CL

RT Road Edge: -2.00% FROM CL

Stations	CL Elev
50+00.00	928.40
50+25.00	927.73
50+50.00	927.06
50+75.00	926.39
51+00.00	925.72
51+25.00	925.05
51+50.00	924.38
51+75.00	923.71
52+00.00	923.04
52+25.00	922.37
52+50.00	921.70
52+75.00	921.03
53+00.00	920.36
53+25.00	919.69
53+50.00	919.02
53+75.00	918.35
54+00.00	917.47
54+25.00	916.60
54+50.00	915.72
54+75.00	914.84
55+00.00	913.97
55+25.00	913.09
55+50.00	912.21

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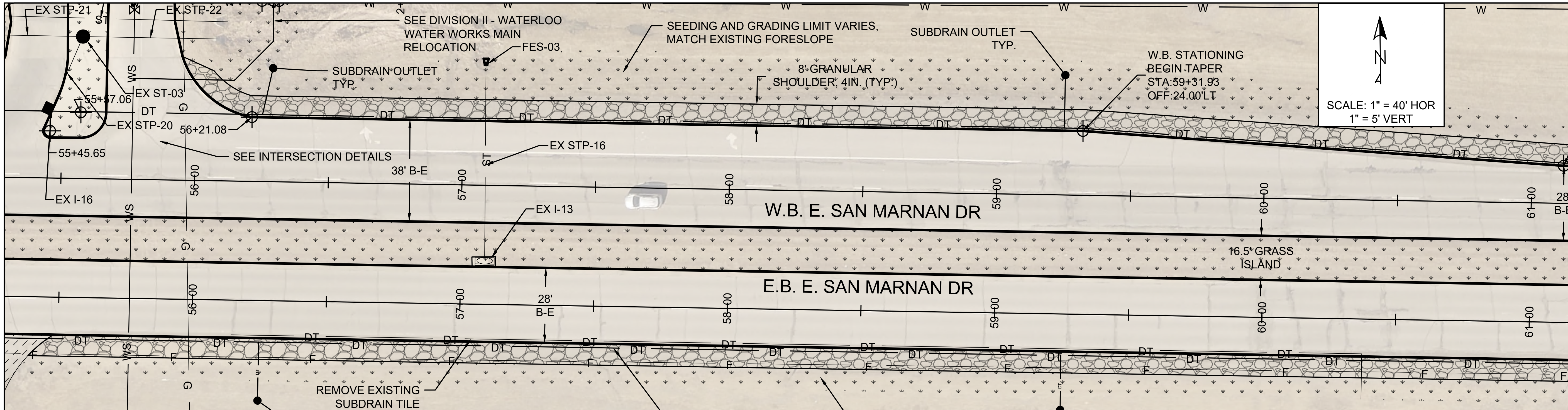
E. SAN MARNAN DR.

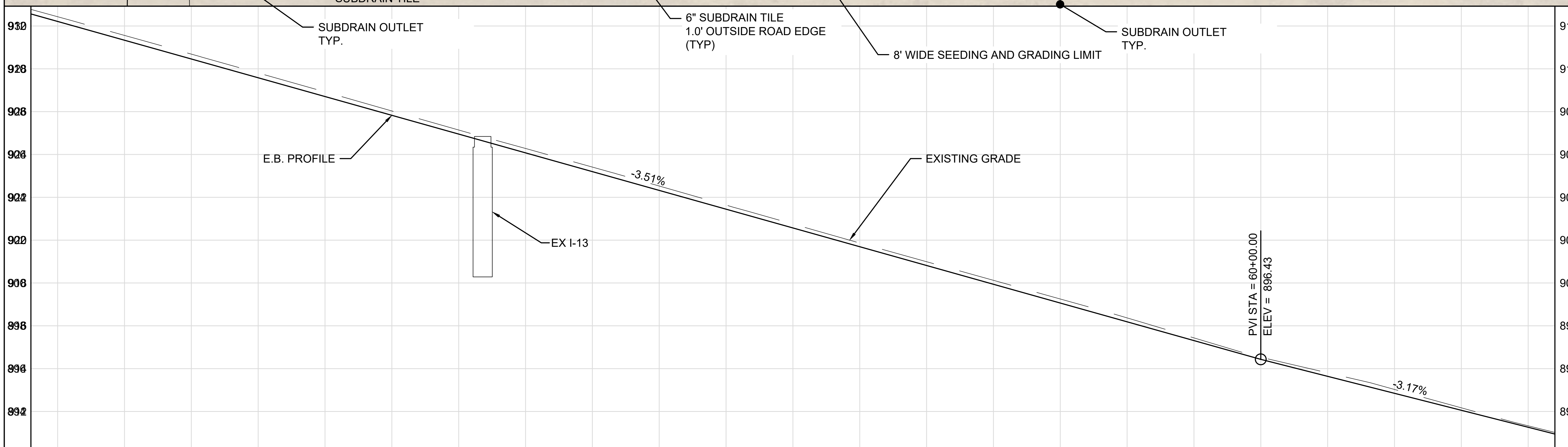
EASTBOUND FROM STA 50+00 TO STA 55+50

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/10/2023





LT Gutter: 2.00% FROM CL

RT Road Edge: -2.00% FROM CL

Stations	CL Elev
55+50.00	912.21
55+75.00	911.34
56+00.00	910.46
56+25.00	909.58
56+50.00	908.71
56+75.00	907.83
57+00.00	906.95
57+25.00	906.08
57+50.00	905.20
57+75.00	904.32
58+00.00	903.45
58+25.00	902.57
58+50.00	901.69
58+75.00	900.82
59+00.00	899.94
59+25.00	899.06
59+50.00	898.19
59+75.00	897.31
60+00.00	896.43
60+25.00	895.64
60+50.00	894.85
60+75.00	894.06
61+00.00	893.26

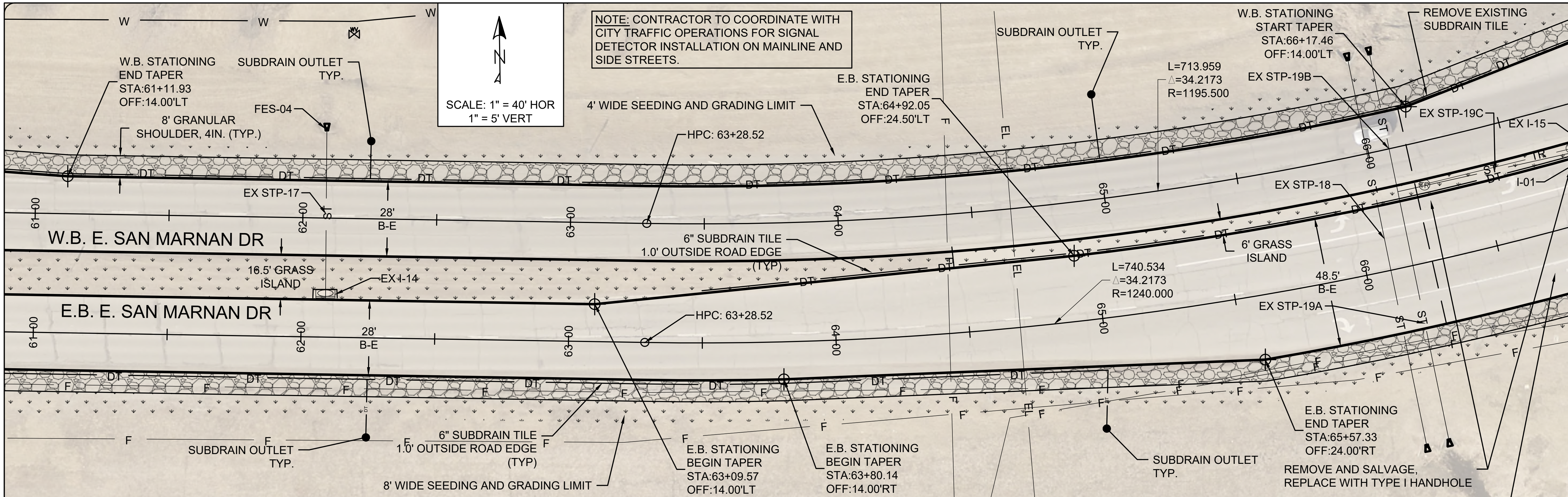
E. SAN MARNAN DR.

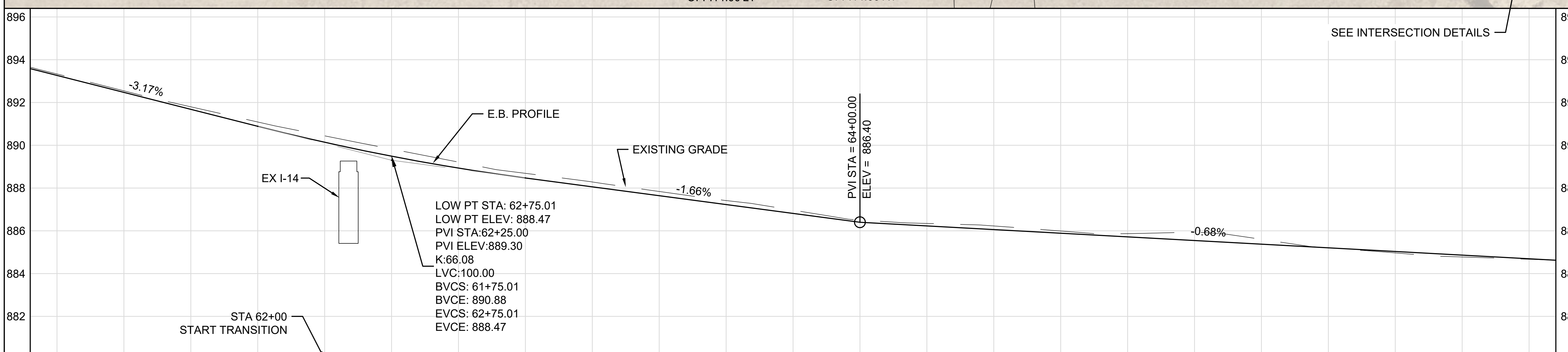
EASTBOUND FROM STA 55+50 TO STA 61+00

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/10/2023





Stations	61+00.00	61+25.00	61+50.00	61+75.00	62+00.00	62+25.00	62+50.00	62+75.00	63+00.00	63+25.00	63+50.00
LT Gutter	2.00% FROM CL				890.40	889.72	889.13	888.63	888.19	887.75	887.32
CL Elev	893.26	892.47	891.68	890.89	890.14	889.49	888.93	888.47	888.06	887.64	887.23
RT Road Edge	-2.00% FROM CL				889.90	889.28	888.75	888.32	887.94	887.55	887.17

Stations	63+75.00	64+00.00	64+25.00	64+50.00	64+75.00	65+00.00	65+25.00	65+50.00	65+75.00	66+00.00	66+25.00	66+50.00
LT Gutter	886.86	886.40	886.17	885.94	885.71	885.48	885.25	885.02	884.80	884.57	884.40	
CL Elev	886.81	886.40	886.23	886.06	885.89	885.72	885.55	885.38	885.21	885.04	884.87	SEE INTERSECTION DETAILS
RT Road Edge	886.78	886.40	886.26	886.12	885.98	885.84	885.70	885.56	885.42	885.28	885.11	

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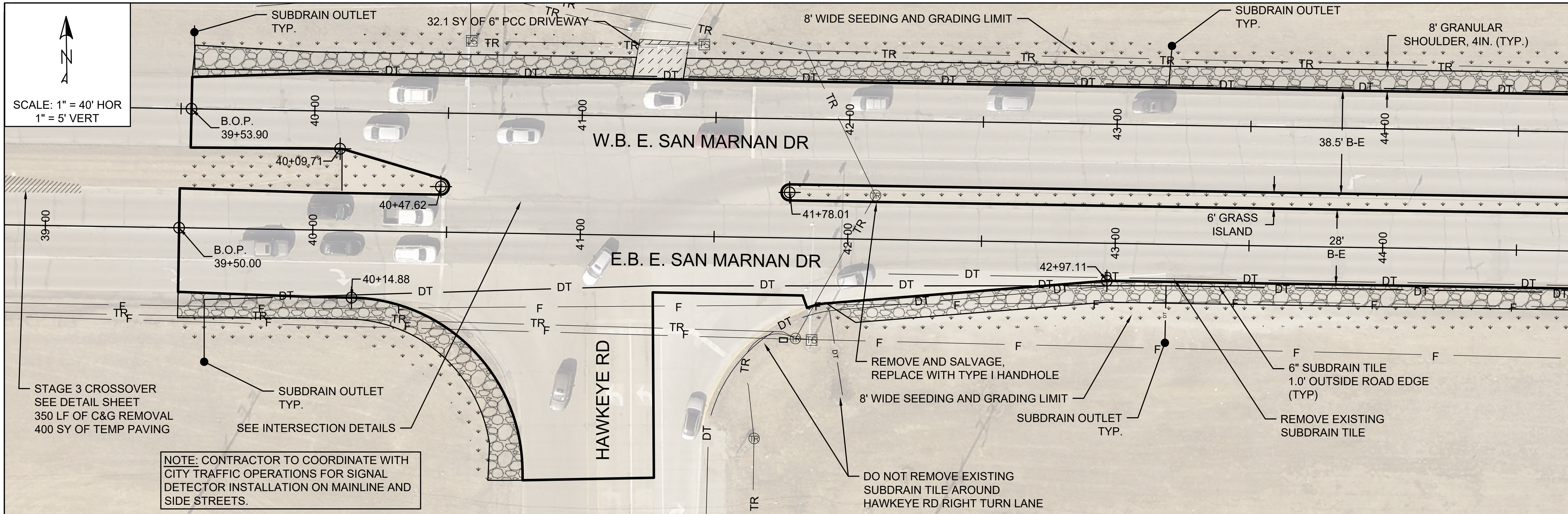
E. SAN MARNAN DR.

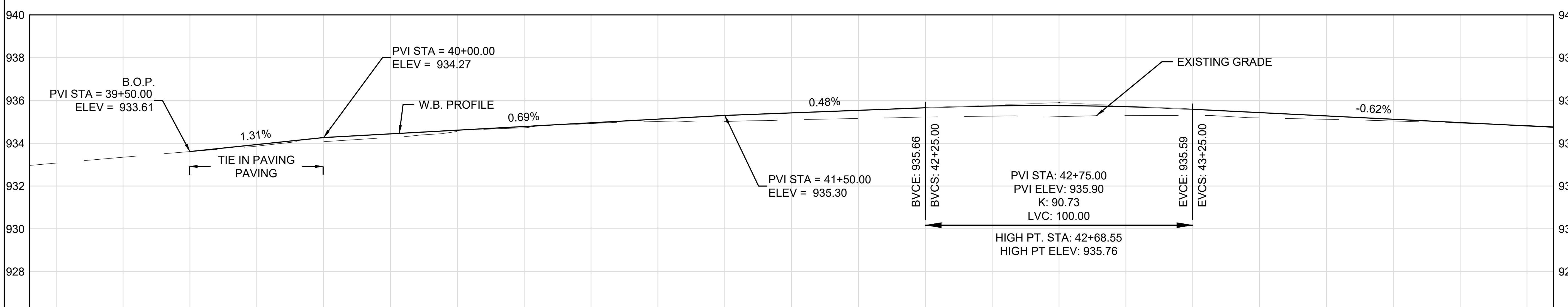
EASTBOUND FROM STA 61+00 TO STA 66+50

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/10/2023





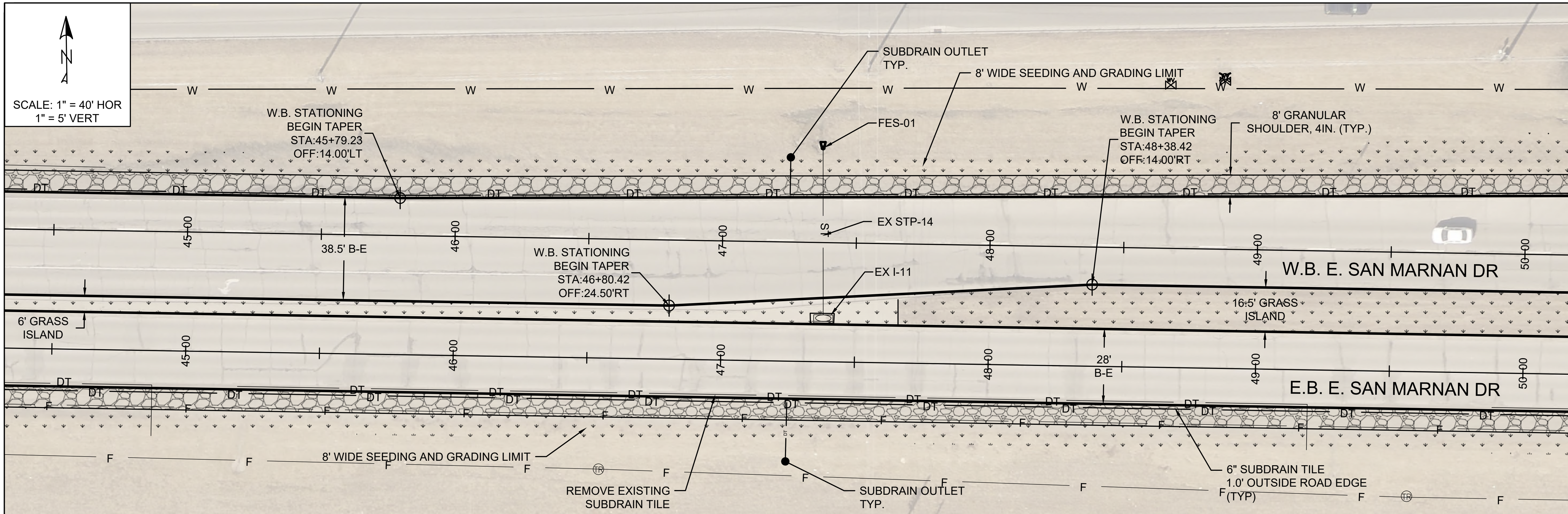
Stations	LT Road Edge	CL Elev	RT Gutter
39+00.00			
39+25.00			
39+50.00	TRAVEL LANE -2.00% SEE INTERSECTION DETAILS	933.61	TRAVEL LANE 2.00% SEE INTERSECTION DETAILS
39+75.00		TIE IN PAVING PAVING	
40+00.00		934.27	
40+25.00		934.44	
40+50.00		934.61	
40+75.00		934.78	
41+00.00		934.96	
41+25.00		935.13	
41+50.00		935.30	
41+75.00		935.42	
42+00.00		935.54	
42+25.00		935.66	
42+50.00		935.75	
42+75.00		935.76	
43+00.00		935.71	
43+25.00	2.00% FROM CL	935.59	-2.00% FROM CL
43+50.00		935.43	
43+75.00		935.28	
44+00.00		935.12	
44+25.00		934.97	
44+50.00		934.81	

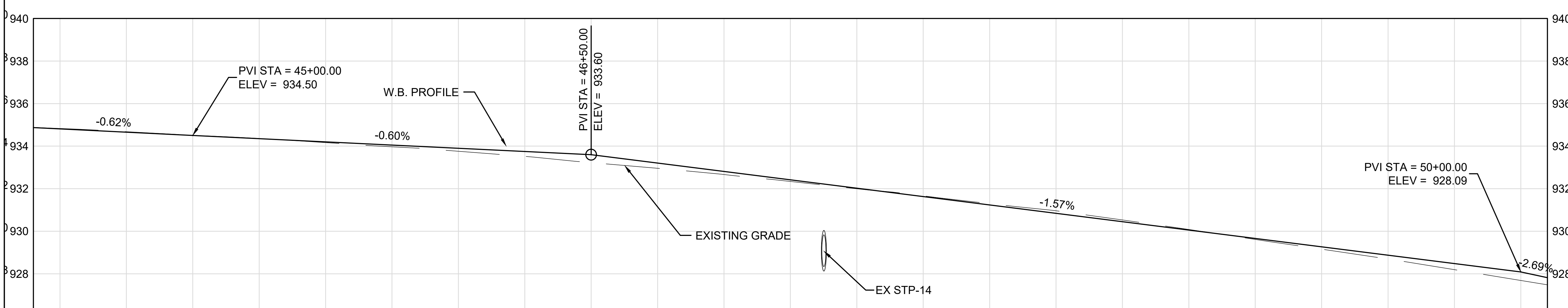
E. SAN MARNAN DR.
WESTBOUND FROM STA 39+00 TO STA 44+50

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/10/2023





Stations	44+50.00	44+75.00	45+00.00	45+25.00	45+50.00	45+75.00	46+00.00	46+25.00	46+50.00	46+75.00	47+00.00	47+25.00	47+50.00	47+75.00	48+00.00	48+25.00	48+50.00	48+75.00	49+00.00	49+25.00	49+50.00	49+75.00	50+00.00
LT Road Edge	-2.00% FROM CL																						
CL Elev	934.81	934.66	934.50	934.35	934.20	934.05	933.90	933.75	933.60	933.21	932.81	932.42	932.03	931.63	931.24	930.84	930.45	930.06	929.66	929.27	928.88	928.48	928.09
RT Gutter	2.00% FROM CL																						

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CITY OF WATERLOO • OFFICIAL SEAL

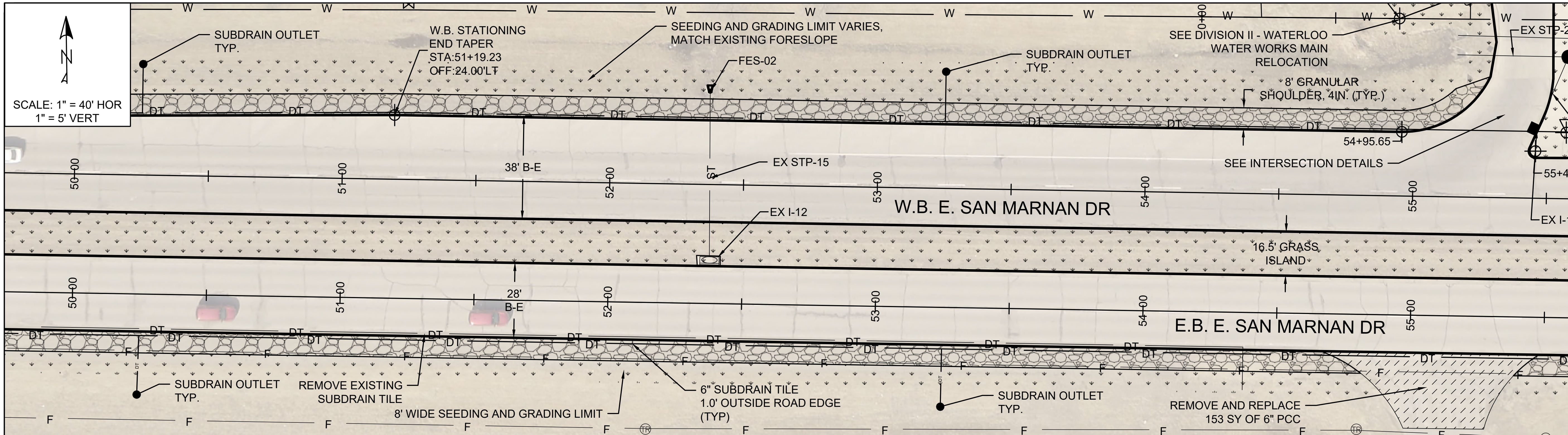
E. SAN MARNAN DR.
WESTBOUND FROM STA 44+50 TO STA 50+00

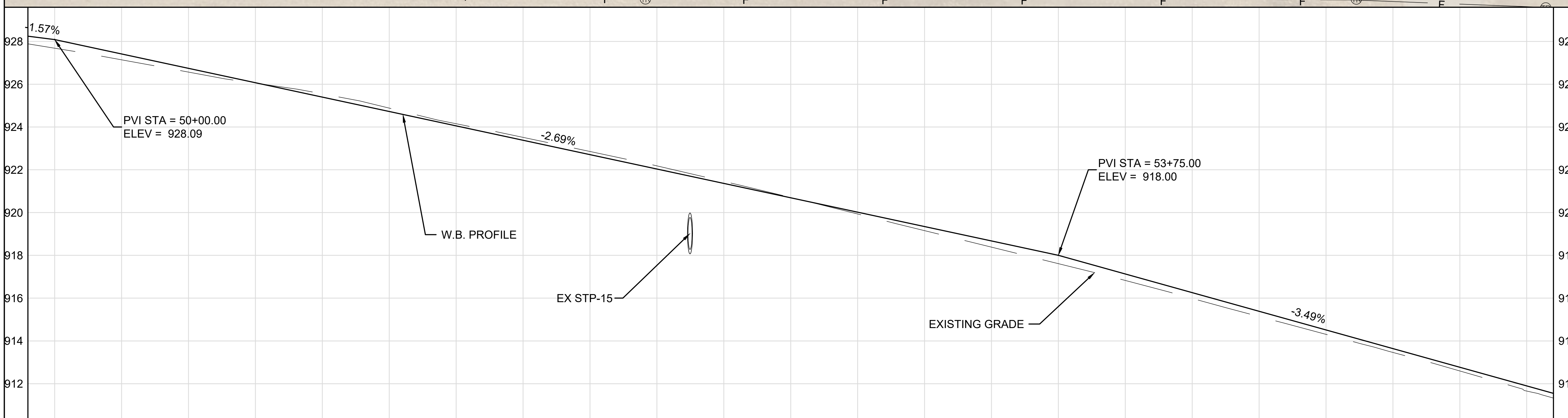
F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT
CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/10/2023

SHEET
20





Stations	LT Road Edge	CL Elev	RT Gutter
50+00.00	-2.00% FROM CL	928.09	2.00% FROM CL
50+25.00		927.42	
50+50.00		926.74	
50+75.00		926.07	
51+00.00		925.40	
51+25.00		924.73	
51+50.00		924.05	
51+75.00		923.38	
52+00.00		922.71	
52+25.00		922.04	
52+50.00		921.36	
52+75.00		920.69	
53+00.00		920.02	
53+25.00		919.35	
53+50.00		918.67	
53+75.00		918.00	
54+00.00		917.13	
54+25.00		916.26	
54+50.00		915.39	
54+75.00		914.51	
55+00.00		913.64	
55+25.00		912.77	
55+50.00		911.90	

CITY OF WATERLOO OFFICIAL SEAL

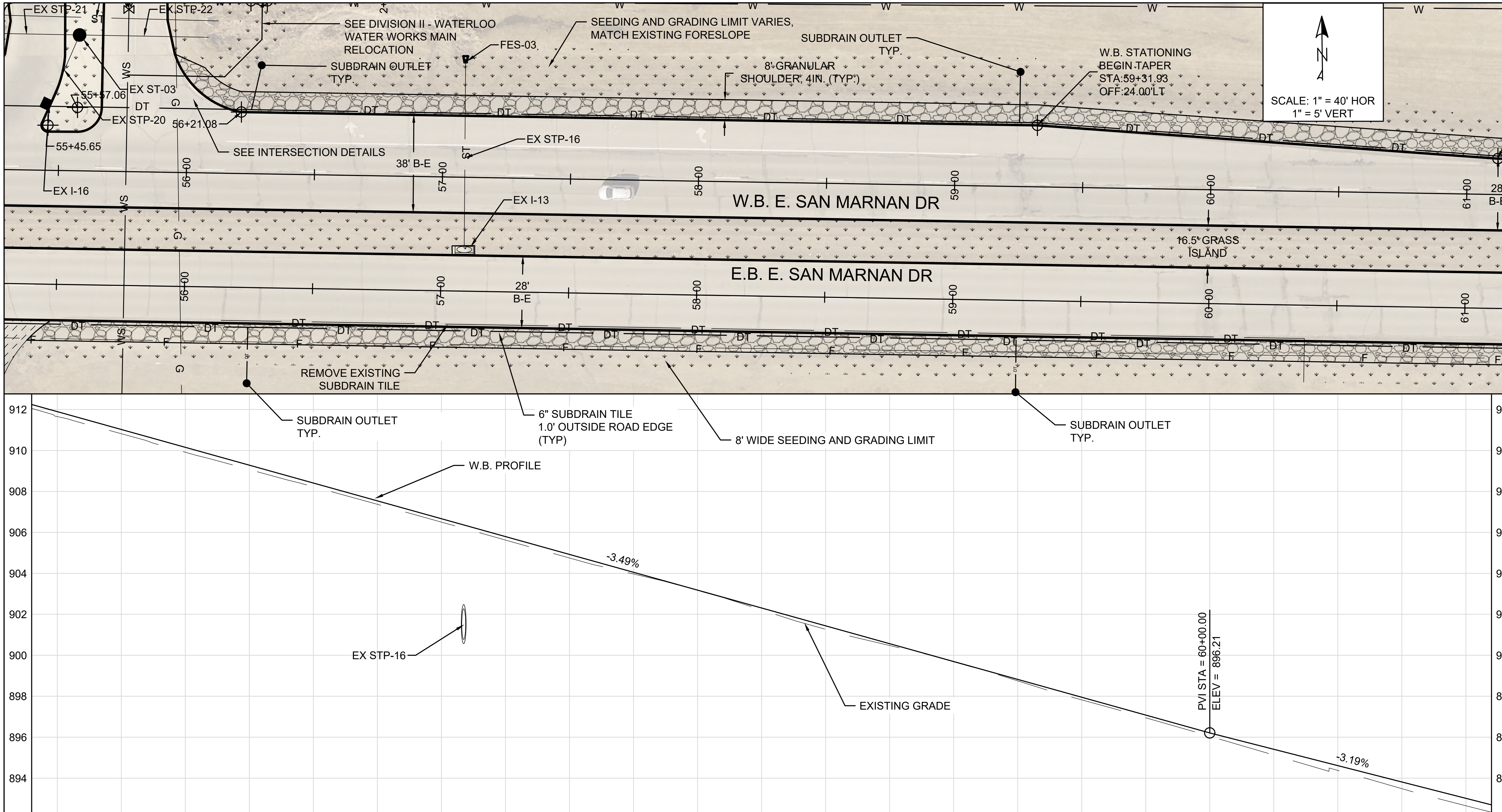
E. SAN MARNAN DR.

WESTBOUND FROM STA 50+00 TO STA 55+50

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/10/2023



Stations	55+50.00	55+75.00	56+00.00	56+25.00	56+50.00	56+75.00	57+00.00	57+25.00	57+50.00	57+75.00	58+00.00	58+25.00
LT Road Edge	-2.00% FROM CL											
CL Elev	911.90	911.03	910.16	909.28	908.41	907.54	906.67	905.80	904.93	904.05	903.18	902.31
RT Gutter	2.00% FROM CL											

Stations	58+50.00	58+75.00	59+00.00	59+25.00	59+50.00	59+75.00	60+00.00	60+25.00	60+50.00	60+75.00	61+00.00
CL Elev	901.44	900.57	899.70	898.82	897.95	897.08	896.21	895.41	894.61	893.81	893.02

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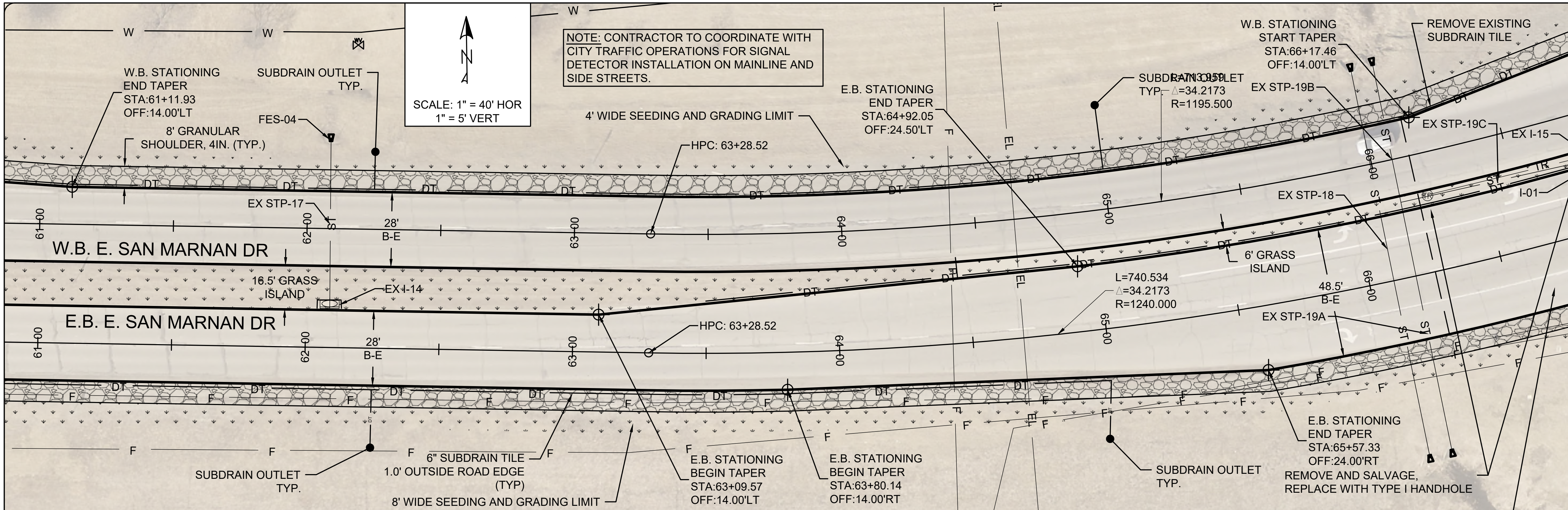
E. SAN MARNAN DR.

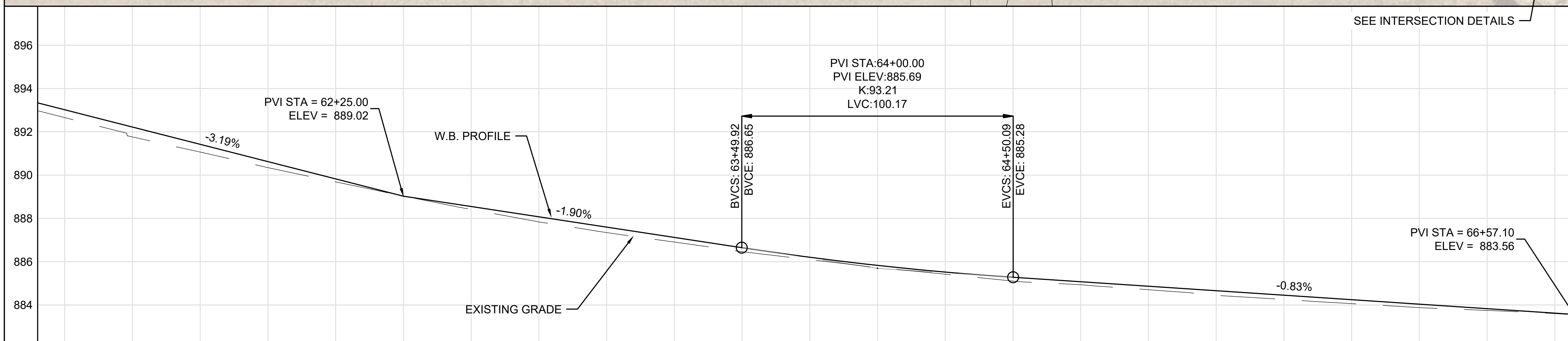
WESTBOUND FROM STA 55+50 TO STA 61+00

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/10/2023





LT Road Edge: -2.00% FROM CL

RT Gutter: 2.00% FROM CL

Stations	CL Elev
61+00.00	893.02
61+25.00	892.22
61+50.00	891.42
61+75.00	890.62
62+00.00	889.82
62+25.00	889.02
62+50.00	888.55
62+75.00	888.07
63+00.00	887.60
63+25.00	887.12
63+28.52	887.05
63+50.00	886.64
63+75.00	886.20
64+00.00	885.83
64+25.00	885.52
64+50.00	885.28
64+75.00	885.07
65+00.00	884.87
65+25.00	884.66
65+50.00	884.45
65+75.00	884.24
66+00.00	884.04
66+25.00	883.83
66+50.00	SEE INTERSECTION DETAILS
66+57.10	

E. SAN MARNAN DR.
WESTBOUND FROM STA 61+00 TO STA 66+50

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
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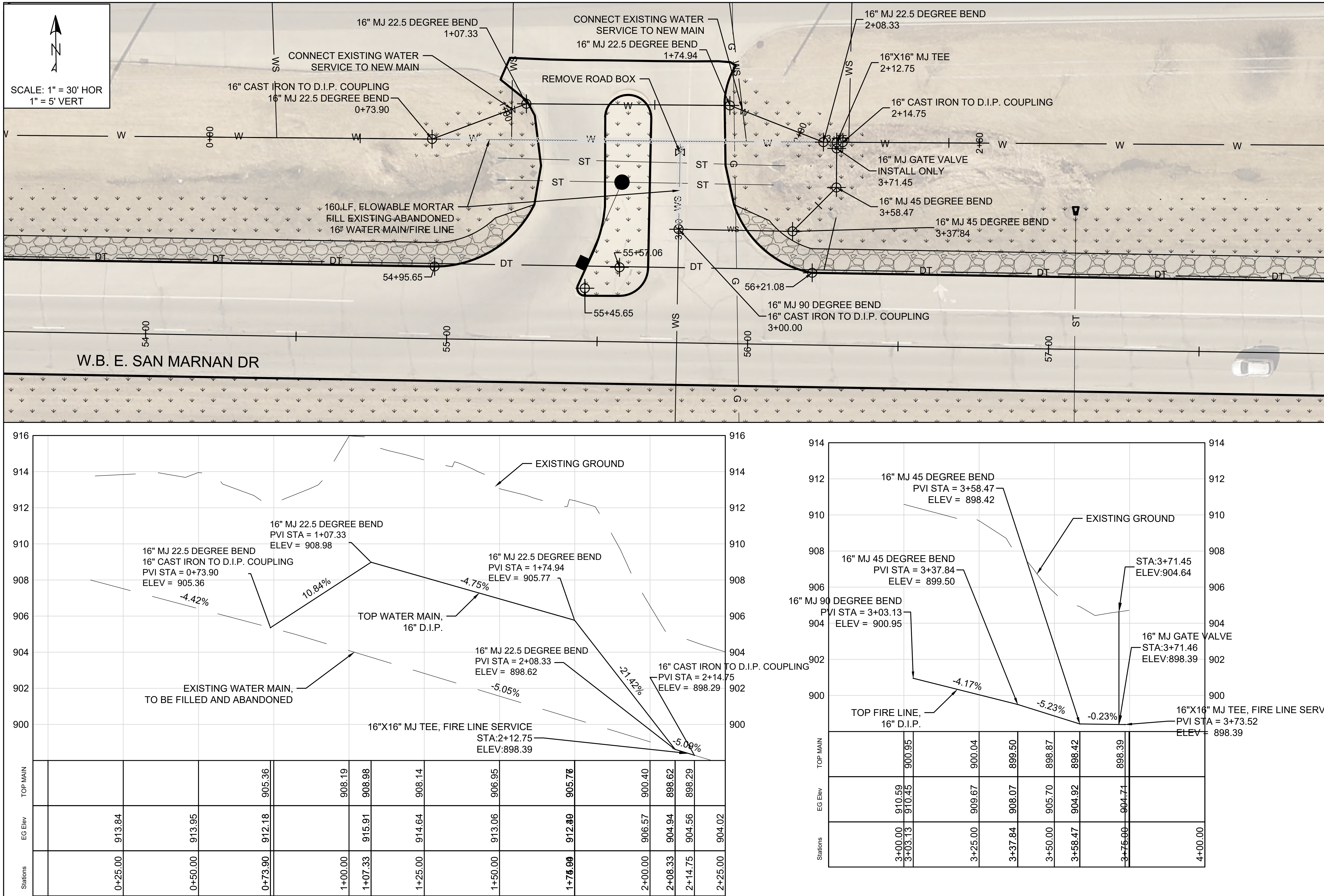
DATE: 4/10/2023



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CITY OF WATERLOO · OFFICIAL SEAL

E. SAN MARNAN DR.
DIV II - WATER MAIN RELOCATOIN

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/10/2023

STORM SEWER PIPES				
PIPE	SIZE	LENGTH	SLOPE	WORK DESCRIPTION
EX STP-14	18"	65.30'	0.55%	REMOVE 8' OF PIPE FROM FES-01 FILL REMAINING PIPE WITH FLOWABLE MORTAR
EX STP-15	18"	64.80'	0.22%	REMOVE 8' OF PIPE FROM FES-02 FILL REMAINING PIPE WITH FLOWABLE MORTAR
EX STP-16	18"	75.07'	0.59%	REMOVE 8' OF PIPE FROM FES-03 FILL REMAINING PIPE WITH FLOWABLE MORTAR
EX STP-17	18"	63.00'	0.25%	REMOVE 8' OF PIPE FROM FES-04 FILL REMAINING PIPE WITH FLOWABLE MORTAR
EX STP-18	36"	147.25'	0.46%	U.A.C.
EX STP-19B	36"	52.72'	0.35%	U.A.C.
EX STP-19C	15"	74.48'	2.71%	U.A.C. CONNECT TO I-01
EX STP-20	18"	29.85'	1.98%	U.A.C.
EX STP-21	24"	41.42'	5.26%	U.A.C.
EX STP-22	24"	50.33'	2.58%	U.A.C.

STORM SEWER STRUCTURE TABLE			
STRUCTURE	WORK DESCRIPTION	LOCATION	TOP ELEVATION
EX I-11	REMOVE STRUCTURE	47+38.12 -14.50 LT	RIM = 932.78 INV OUT = 928.50 N
EX I-12	REMOVE STRUCTURE	52+37.72 -14.50 LT	RIM = 922.23 INV OUT = 918.34 N
EX I-13	REMOVE STRUCTURE	57+08.98 -14.50 LT	RIM = 906.84 INV OUT = 900.95 N
EX I-14	REMOVE STRUCTURE	62+08.92 -14.65 LT	RIM = 889.26 INV OUT = 886.08 N
EX I-15	REMOVE STRUCTURE	66+94.15 -26.11 LT	RIM = 883.49 INV OUT = 878.79 W
EX I-16	SW-501 MIN ADJ FROM ELEV 911.01' D.T. CON (EXISTING WALLS) = 2	55+45.99 -69.99 LT	RIM = 911.50 INV OUT = 907.59 NE
EX ST-03	MIN ADJ FROM ELEV 912.50' CITY OF WATERLOO MH COVER REQUIRED	55+57.43 -97.55 LT	RIM = 912.88 INV IN = 907.00 W INV IN = 907.00 SW INV OUT = 907.00 E
FES-01	REMOVE FLARED END SECTION	47+36.99 -79.79 LT	RIM = 929.46
FES-02	REMOVE FLARED END SECTION	52+36.98 -79.30 LT	RIM = 919.72
FES-03	REMOVE FLARED END SECTION	57+08.29 -89.57 LT	RIM = 901.46 INV IN = 900.51 S
FES-04	REMOVE FLARED END SECTION	62+08.42 -77.50 LT	RIM = 886.89 INV IN = 885.92 S

E.B. SAN MARNAN SUBDRAIN			
FROM	TO	LENGTH (FT)	WORK DESCRIPTION
39+60	43+19	372	1' OUTSIDE EDGE OF ROAD
43+19	47+25	430	1' OUTSIDE EDGE OF ROAD
47+25	50+25	324	1' OUTSIDE EDGE OF ROAD
50+25	53+25	323	1' OUTSIDE EDGE OF ROAD
53+25	56+25	323	1' OUTSIDE EDGE OF ROAD
56+25	59+25	323	1' OUTSIDE EDGE OF ROAD
59+25	62+25	323	1' OUTSIDE EDGE OF ROAD
62+25	65+00	300	1' OUTSIDE EDGE OF ROAD
63+50	I-01	337	1' OUTSIDE BACK OF CURB
I-01	E.O.P.	23	1' OUTSIDE BACK OF CURB

E.B. SAN MARNAN SUBDRAIN OUTLET		
STATION	OFFSET	OUTLET TYPE
39+60	49.9 RT	SINGLE OUTLET TO DITCH
43+19	36.8 RT	DOUBLE OUTLET TO DTICH
47+25	37.5 RT	DOUBLE OUTLET TO DTICH
50+25	37.5 RT	DOUBLE OUTLET TO DTICH
53+25	37.5 RT	DOUBLE OUTLET TO DTICH
56+25	37.5 RT	DOUBLE OUTLET TO DTICH
59+25	37.5 RT	DOUBLE OUTLET TO DTICH
62+25	37.5 RT	DOUBLE OUTLET TO DTICH
65+00	41.0 RT	SINGLE OUTLET TO DITCH
I-01		DOUBLE OUTLET INTO STRUCTURE

STORM SEWER STRUCTURE TABLE			
STRUCTURE	WORK DESCRIPTION	LOCATION	TOP ELEVATION
I-01	E.B. STATIONING INSTALL SW-510 D.T. CON = 2 TIE IN EX STP-19C	66+95.04 -24.50 LT	RIM = 883.88 INV OUT = 878.79 W

DRIVEWAY STA	ADDRESS	WIDTH AT EDGE OF ROAD (FT)	WIDTH AT MEET EXIST.(FT)	EDGE OF ROAD TO TIE IN (FT)	REMOVAL (SY)	PLACEMENT (SY)	PAVEMENT TYPE
E.B. 55+13	626 E. SAN MARNAN	81.5	30.1	28.2	168.4	152.7	6" PCC
W.B. 41+29	EMERGENCY ACCESS	18.9	18.5	14.5	32.2	29.9	6" PCC

W.B. SAN MARNAN SUBDRAIN			
FROM	TO	LENGTH (FT)	WORK DESCRIPTION
39+55	43+19	375	1' OUTSIDE EDGE OF ROAD
43+19	47+25	413	1' OUTSIDE EDGE OF ROAD
47+25	50+25	312	1' OUTSIDE EDGE OF ROAD
50+25	53+25	316	1' OUTSIDE EDGE OF ROAD
53+25	EX I-16	229	1' OUTSIDE EDGE OF ROAD
EX I-16	56+29	87	1' OUTSIDE EDGE OF ROAD
56+29	59+25	317	1' OUTSIDE EDGE OF ROAD
59+25	62+25	314	1' OUTSIDE EDGE OF ROAD
62+25	65+00	291	1' OUTSIDE EDGE OF ROAD
65+00	66+85	229	1' OUTSIDE EDGE OF ROAD

W.B. SAN MARNAN SUBDRAIN OUTLET		
STATION	OFFSET	OUTLET TYPE
39+55	31.0' LT	SINGLE OUTLET TO DITCH
43+19	29.0' LT	DOUBLE OUTLET TO DTICH
47+25	32.0' LT	DOUBLE OUTLET TO DTICH
50+25	42.0' LT	DOUBLE OUTLET TO DTICH
53+25	44.0' LT	DOUBLE OUTLET TO DTICH
EX I-16		DOUBLE OUTLET INTO STRUCTURE
56+29	42.5' LT	DOUBLE OUTLET TO DTICH
59+25	45.0' LT	DOUBLE OUTLET TO DTICH
62+25	29.0' LT	DOUBLE OUTLET TO DTICH
65+00	39.0' LT	DOUBLE OUTLET TO DTICH
66+85	48.5' LT	SINGLE OUTLET TO DITCH

E.B. TRAVEL LANES SUPERELEVATION TABLE		
STATION	LEFT LANE	RIGHT LANE
40+00	2.00%	-2.00%
62+00	2.00%	-2.00%
66+00	-2.00%	2.00%
66+25	-2.00%	2.00%

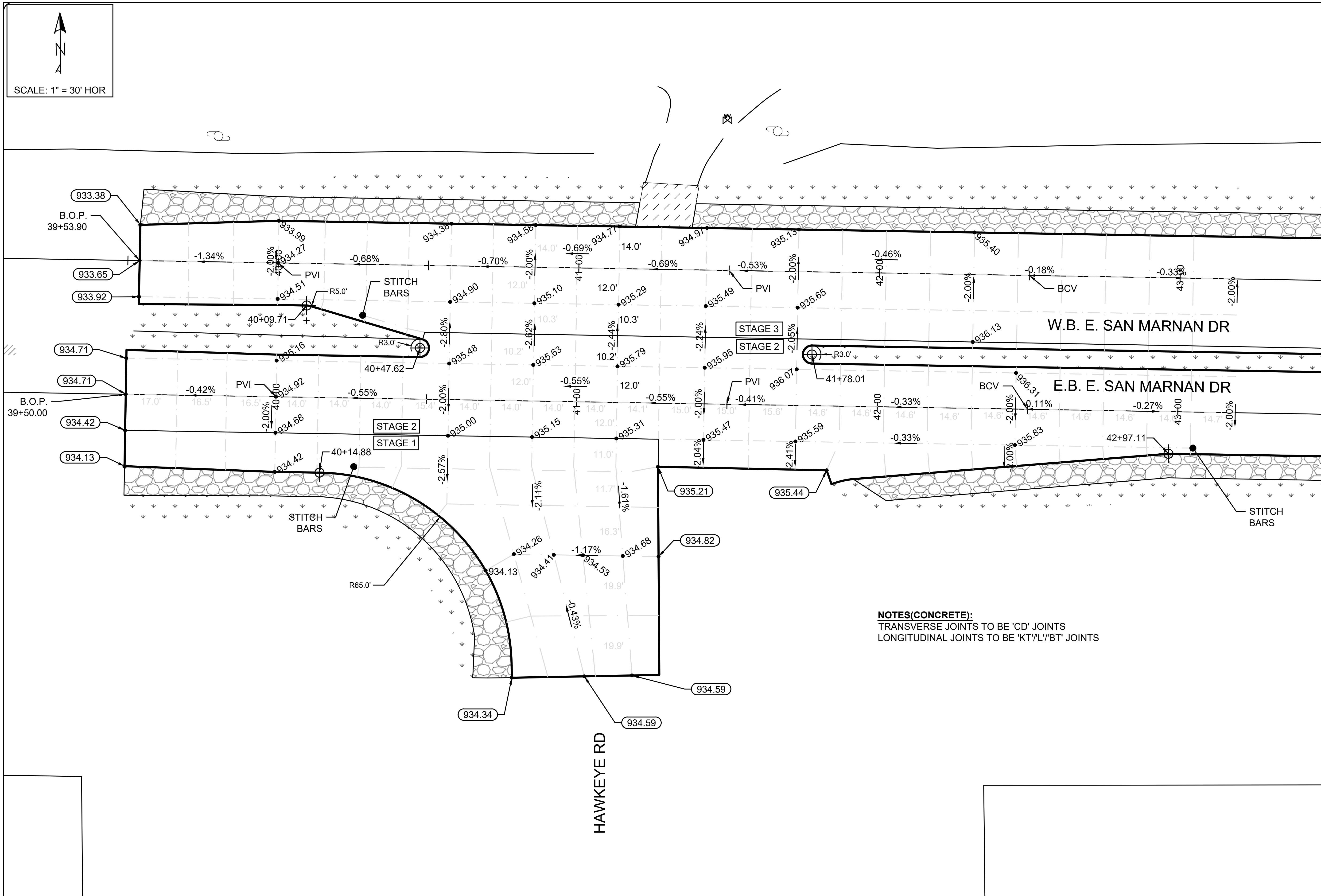
W.B. TRAVEL LANES SUPERELEVATION TABLE		
STATION	LEFT LANE	RIGHT LANE
40+00	-2.00%	2.00%
66+14	-2.00%	2.00%

E. SAN MARNAN DR.
TABULATIONS-SAN MARNAN

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
CONTRACT #1084

CITY OF WATERLOO, IOWA
ENGINEERING DEPARTMENT
715 MULBERRY STREET
WATERLOO, IOWA 50703
(319) 291-4312 PHONE
(319) 291-4262 FAX

DATE: 4/10/2023



NOTES(CONCRETE):
TRANSVERSE JOINTS TO BE 'CD' JOINTS
LONGITUDINAL JOINTS TO BE 'KT'/'L'/'BT' JOINTS

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CITY OF WATERLOO OFFICIAL SEAL

E. SAN MARNAN DR.
HAWKEYE RD. INT. DETAIL

F.Y. 2023 E. SAN MARNAN DR.
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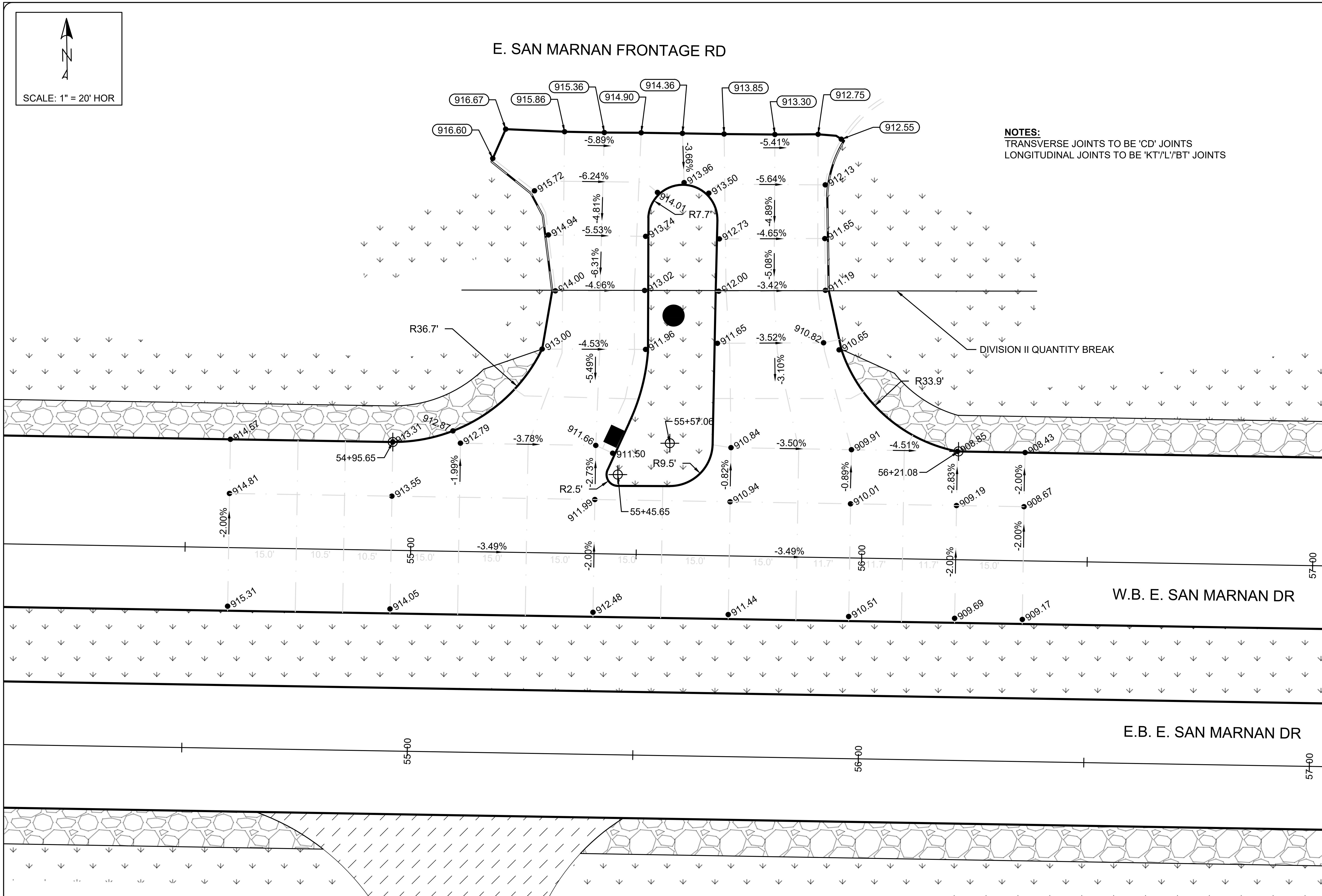

E. SAN MARNAN DR.
E. SAN MARNAN SLIP RAMP DETAIL

F.Y. 2023 E. SAN MARNAN DR. RECONSTRUCTION PROJECT CONTRACT #1084

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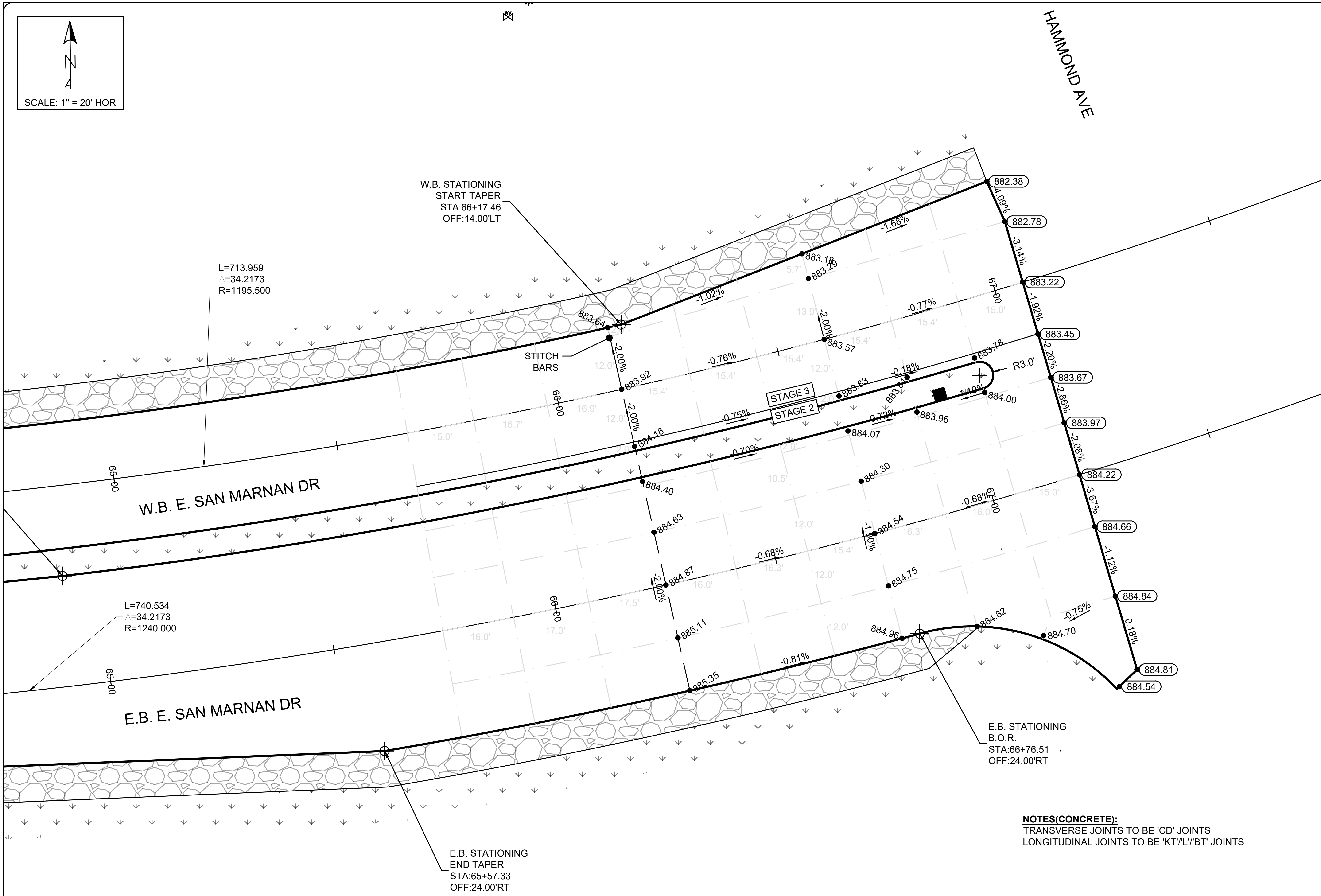
DATE: 4/10/2023



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CITY OF WATERLOO OFFICIAL SEAL

E. SAN MARNAN DR.
HAMMOND AVE INT. DETAIL

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RECONSTRUCTION PROJECT
CONTRACT #1084

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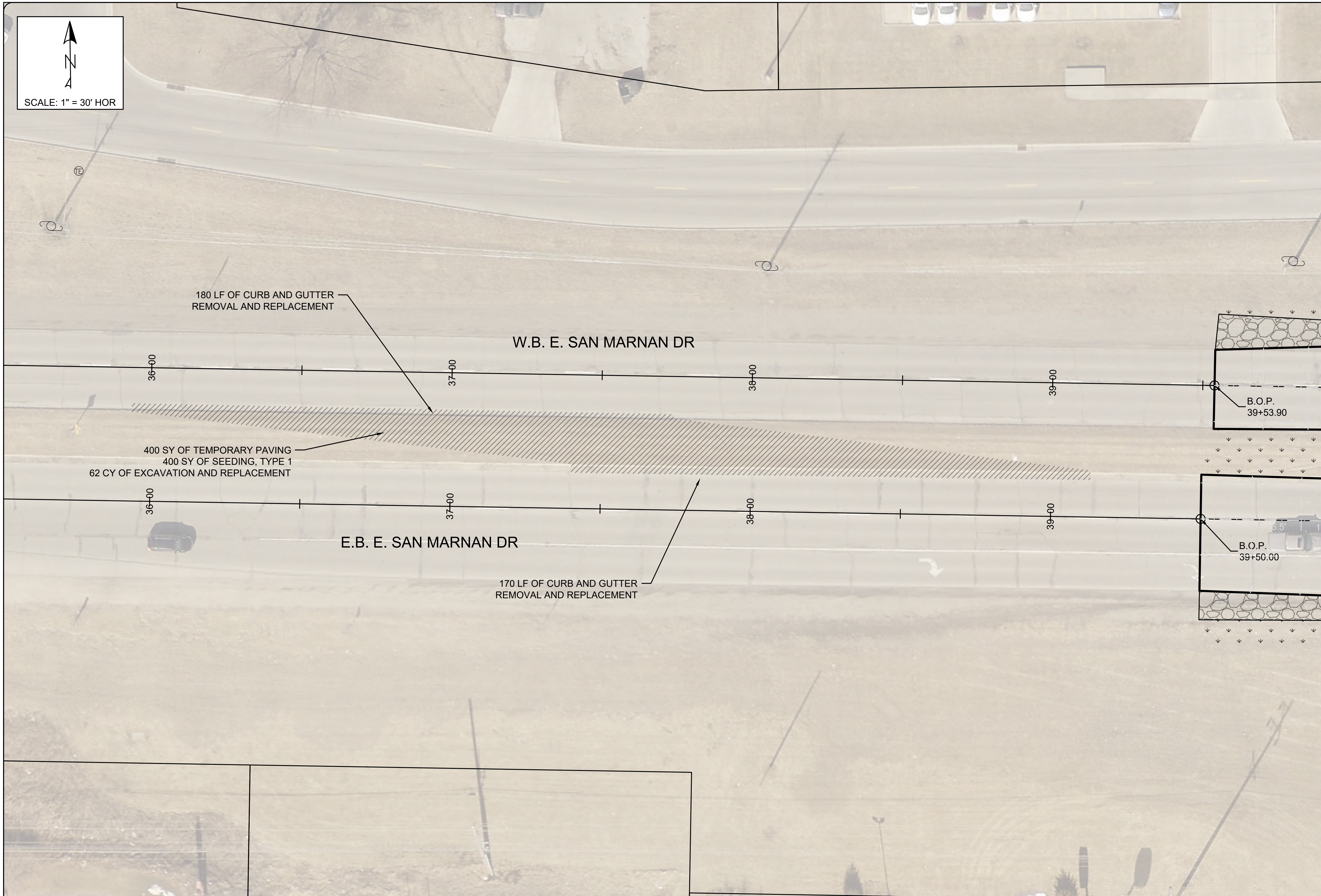
DATE: 4/10/2023



E. SAN MARNAN DR.
STAGE 3 CROSSOVER DETAIL

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RECONSTRUCTION PROJECT
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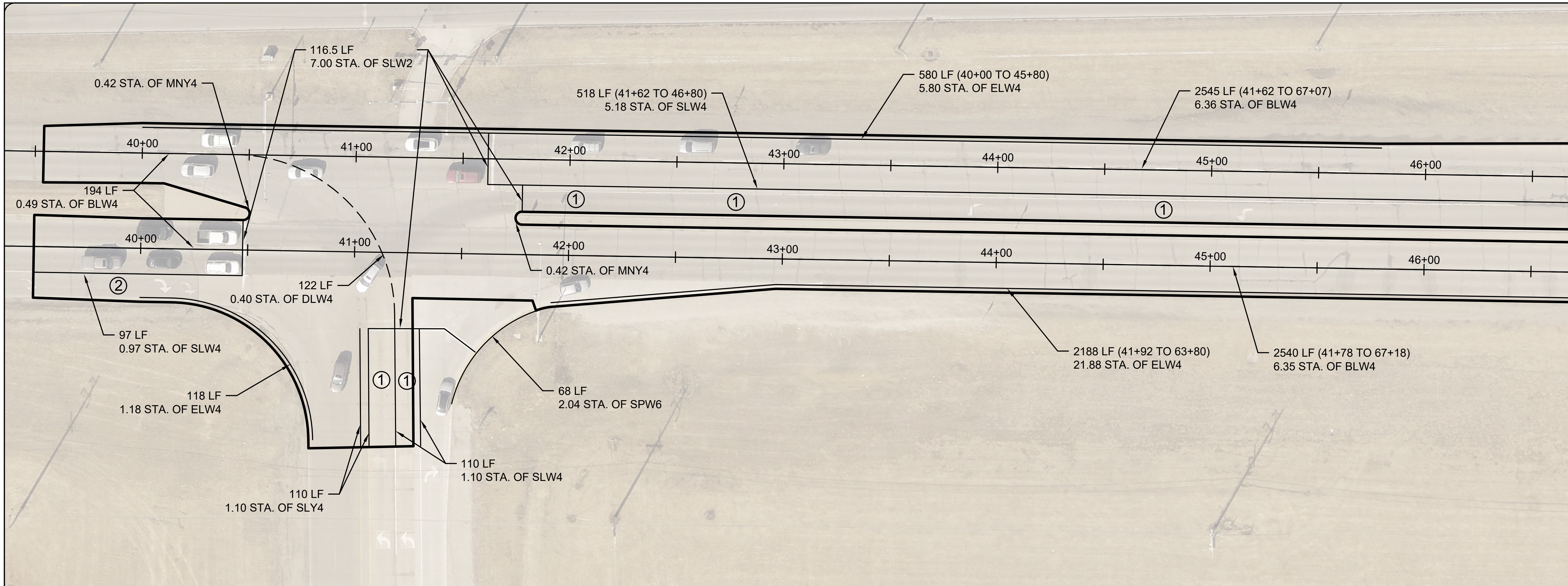
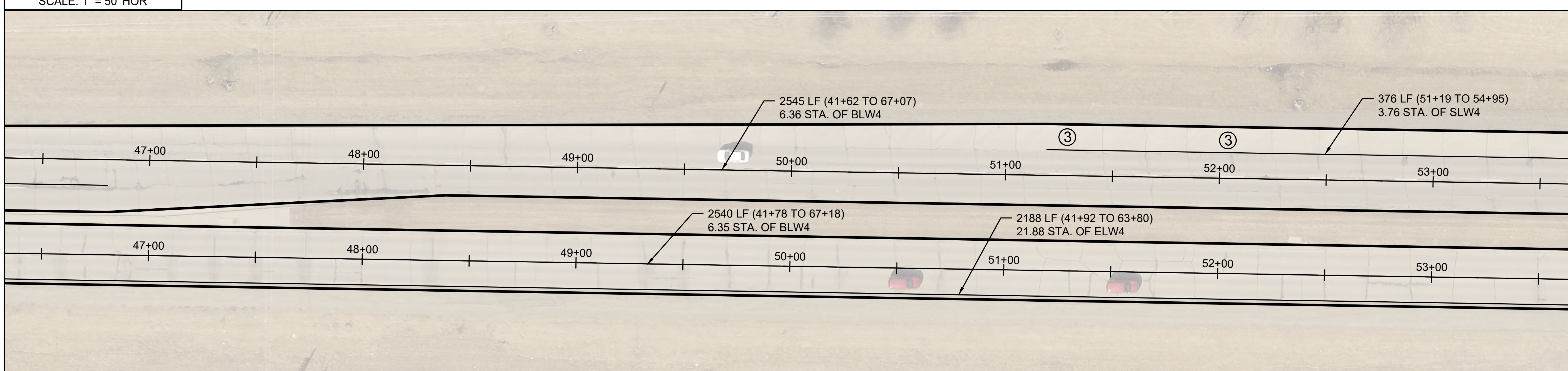


N

SCALE: 1" = 50' HOR

① LTAW
② RTAW
③ RLRW



E. SAN MARNAN DR.
STRIPING 1

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RECONSTRUCTION PROJECT
CONTRACT #1084

CITY OF WATERLOO, IOWA
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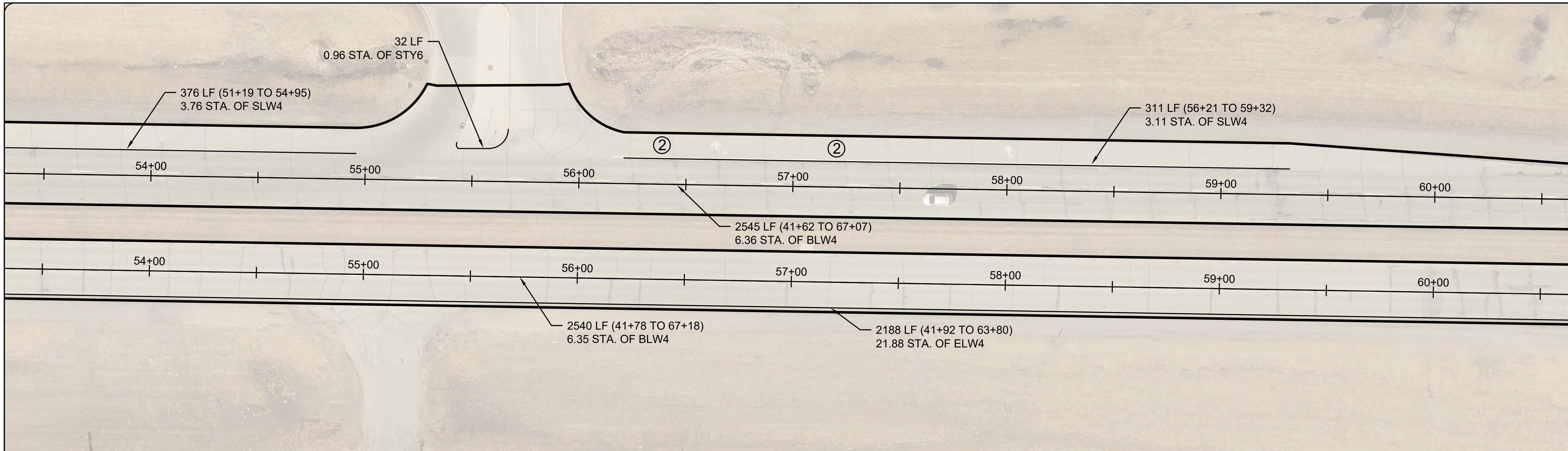
DATE: 4/10/2023

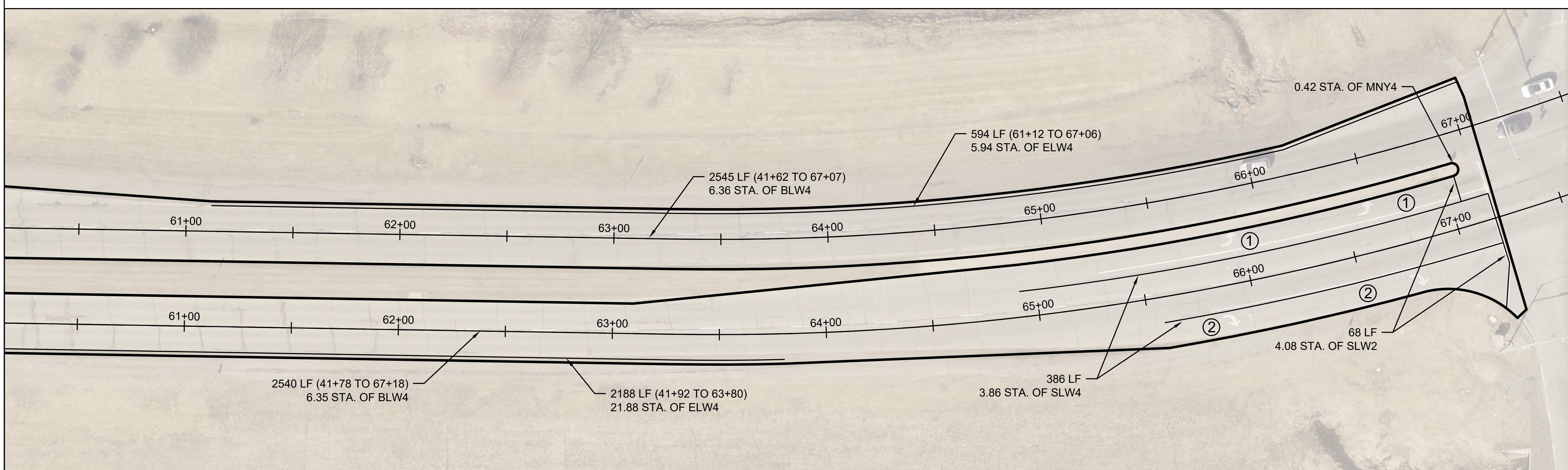
SHEET
30



N

SCALE: 1" = 50' HOR

1 LTAW
2 RTAW



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CITY OF WATERLOO · OFFICIAL SEAL

E. SAN MARNAN DR.

STRIPING 2

F.Y. 2023 E. SAN MARNAN DR.
RECONSTRUCTION PROJECT
CONTRACT #1084

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DATE: 4/10/2023

SHEET
31