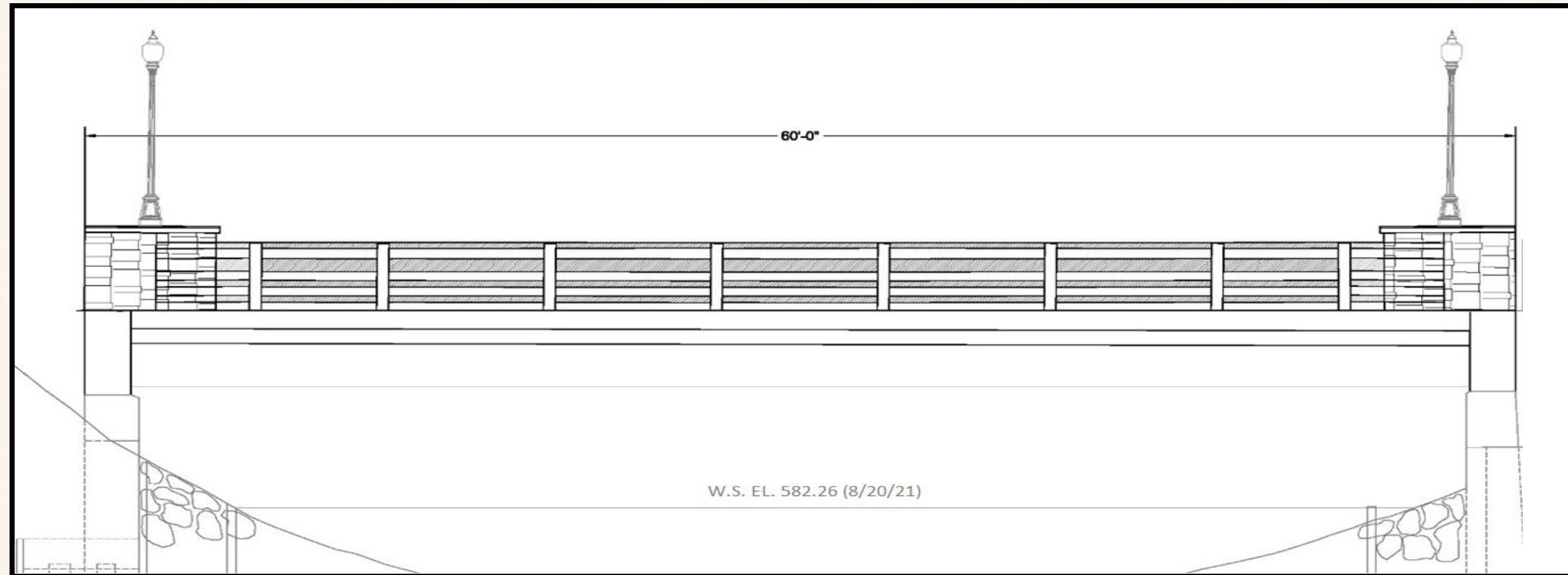


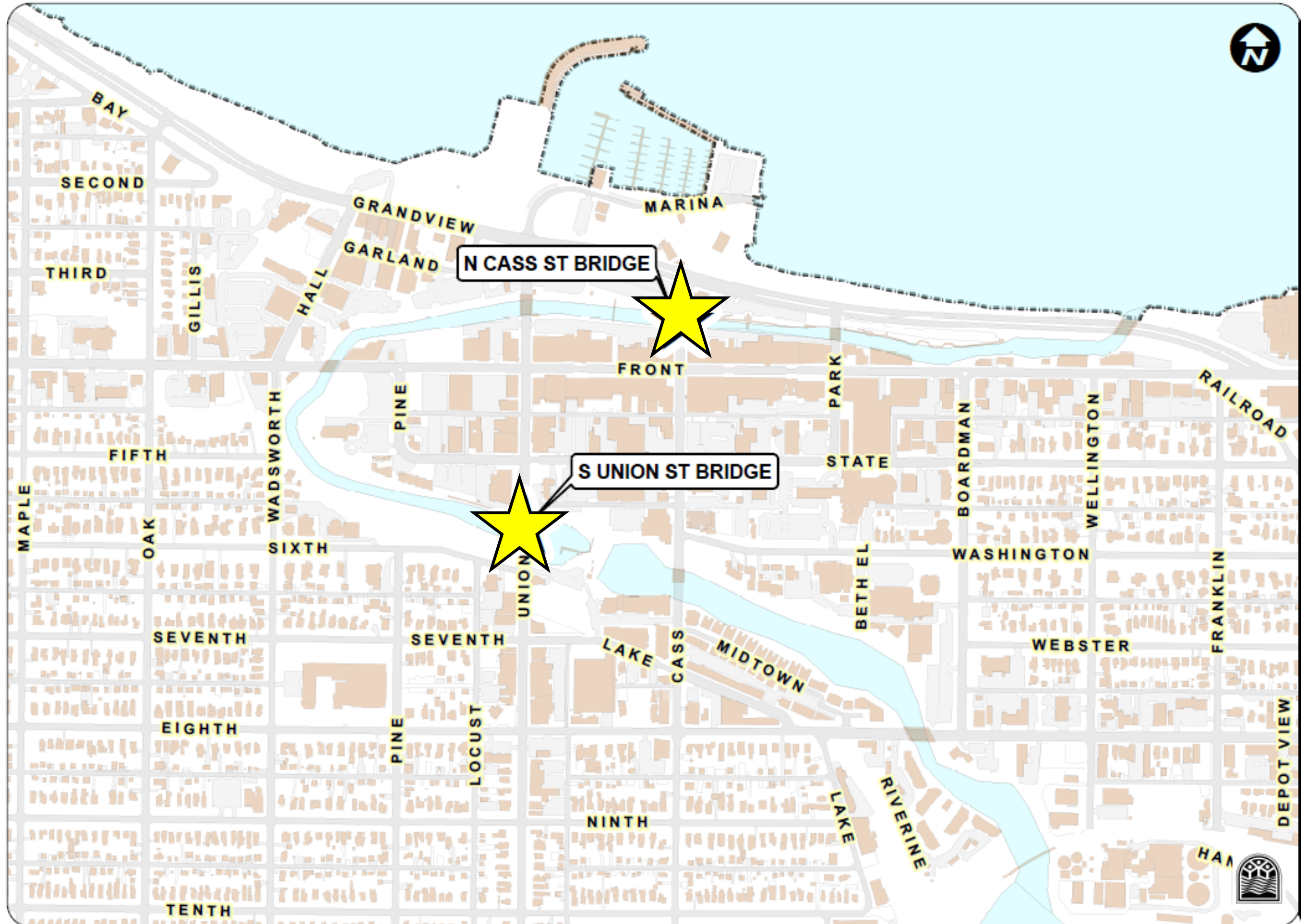
City Engineering Department



BRIDGE PROJECTS UPDATE 2022



2022 Bridge Project Locations



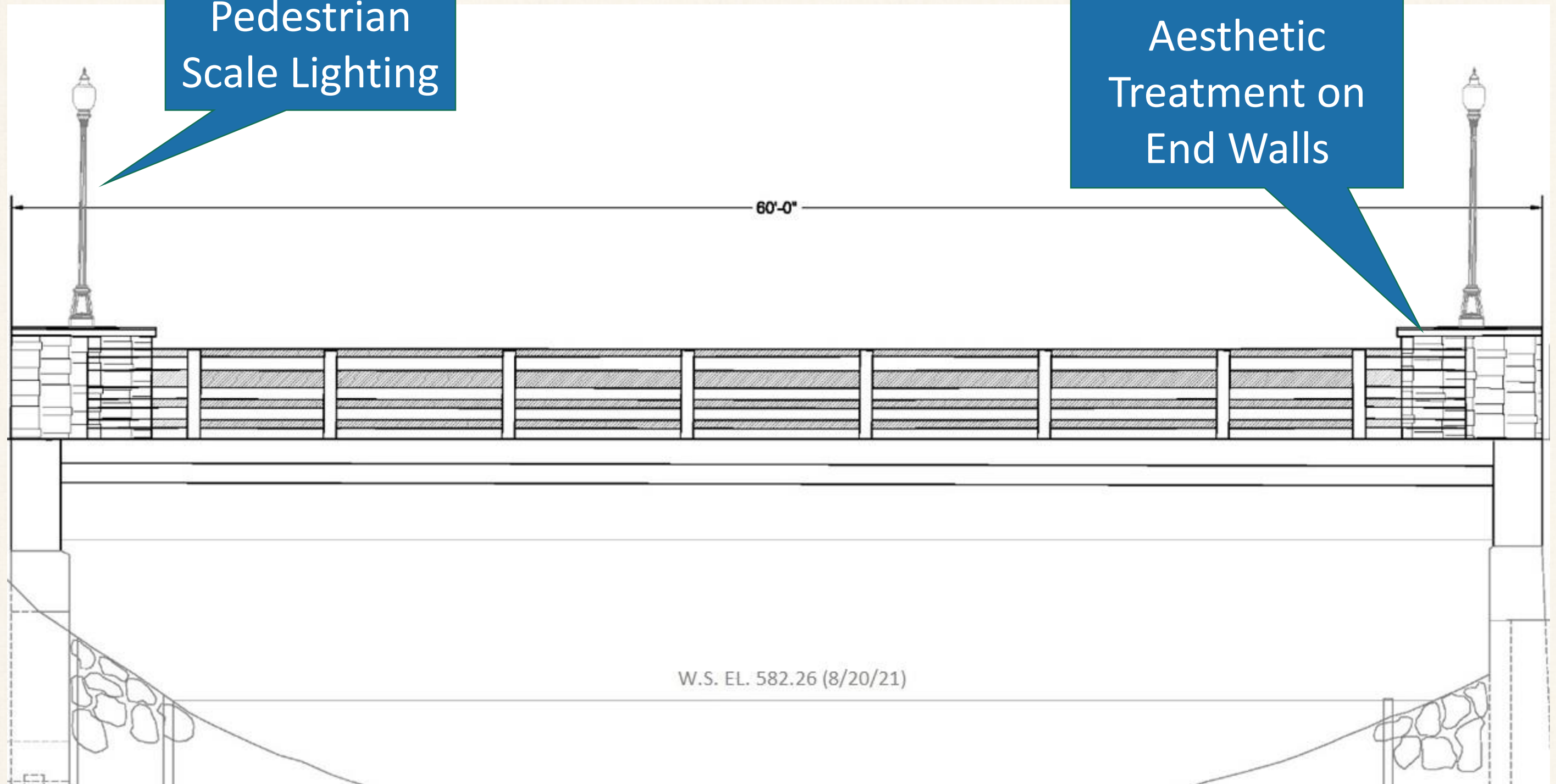
North Cass Street Bridge

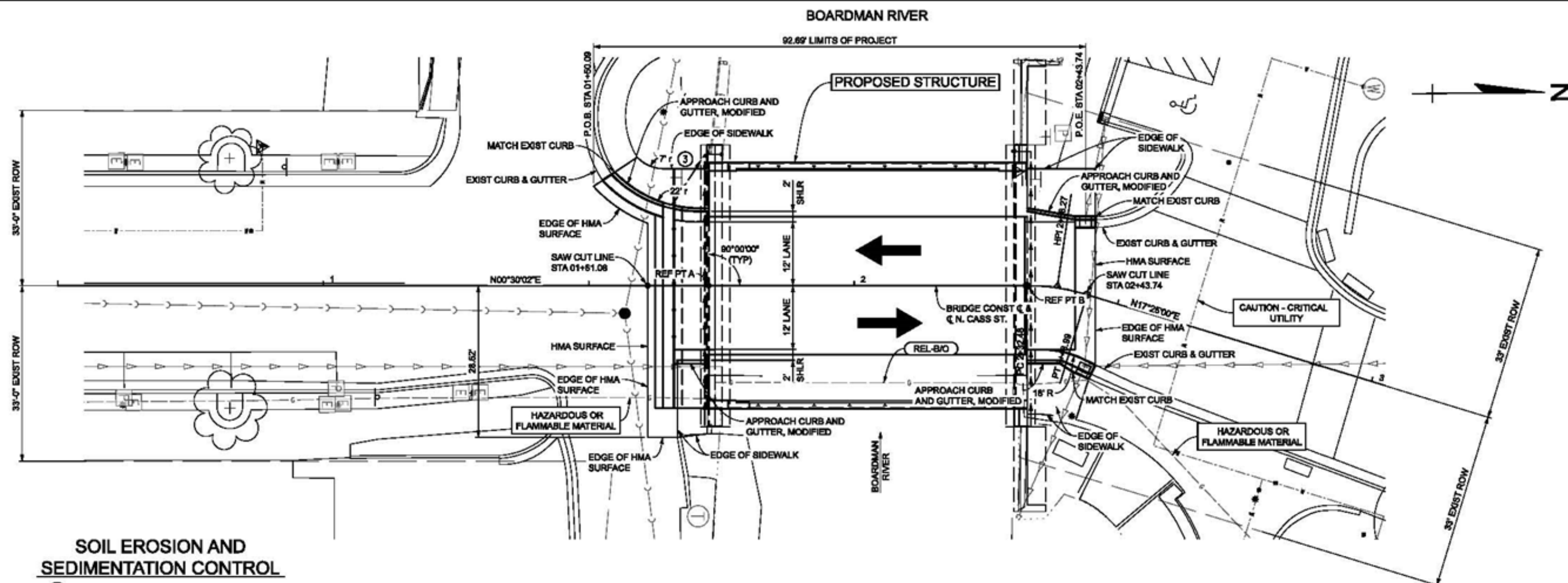
- Current cost estimate is \$800,000
- Work includes replacement of existing sidewalk, deck, concrete beams and railing
- Construct steel beam supported concrete deck and concrete sidewalk on the existing foundation
- Widen sidewalks from 5' to 8'-7.5"
- MDOT crash tested/approved bridge railing detail painted black with aesthetic treatment at ends
- Add pedestrian scale lighting

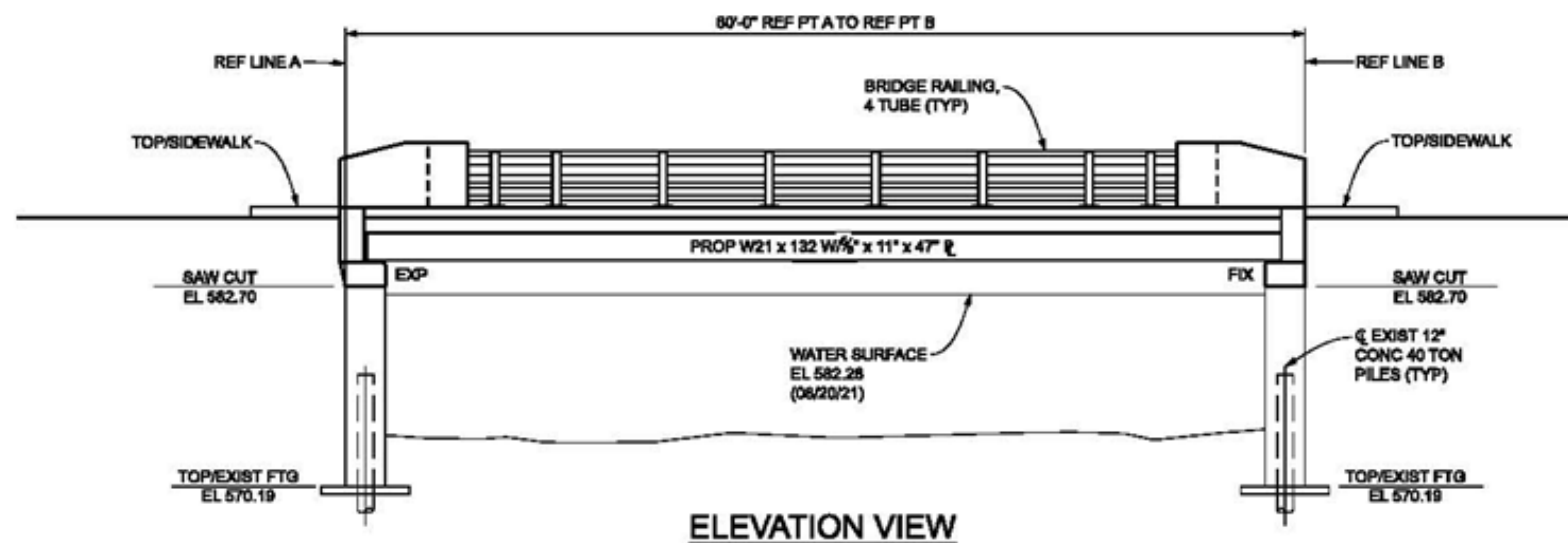
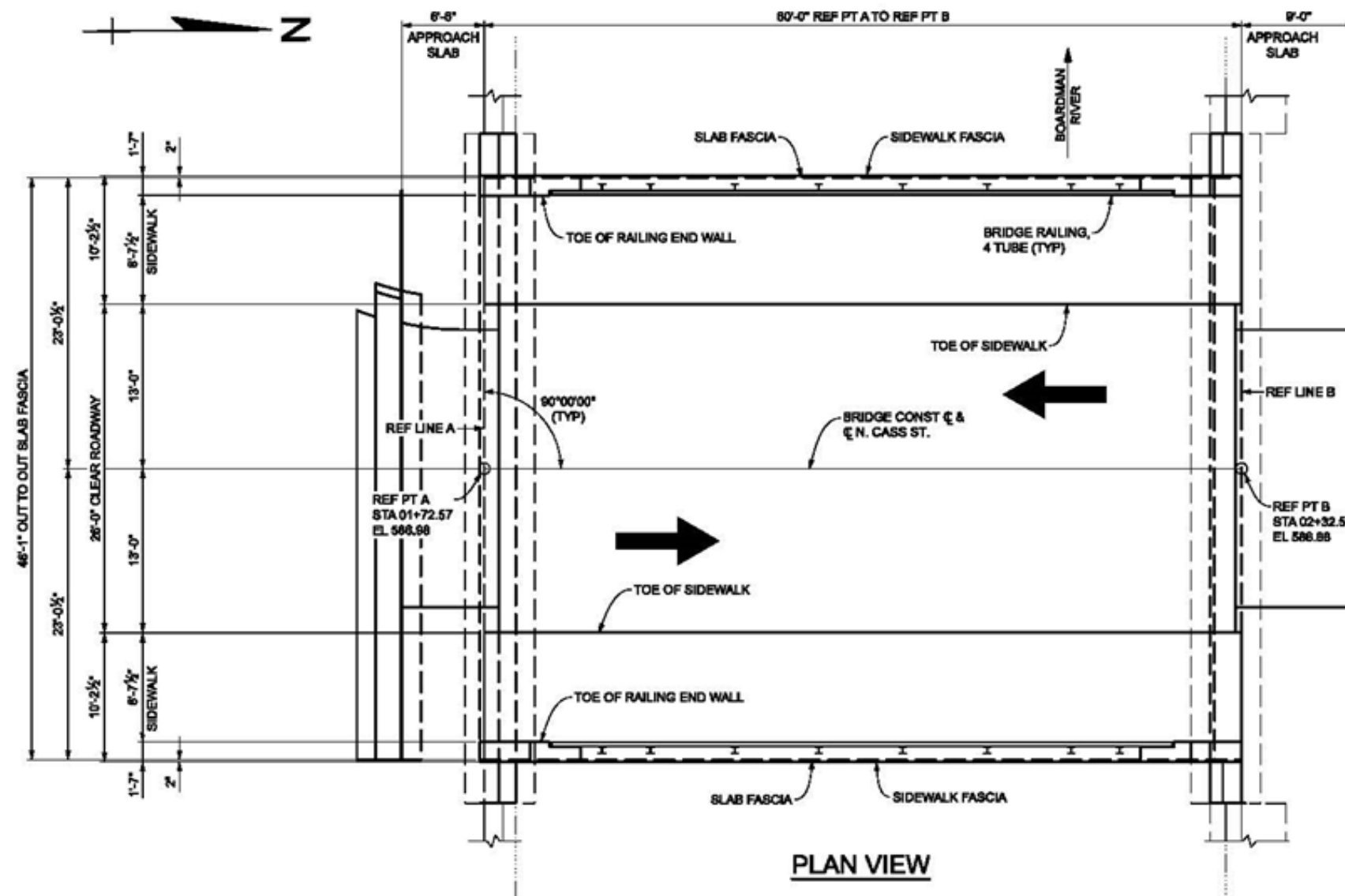
North Cass Street Bridge

Pedestrian
Scale Lighting

Aesthetic
Treatment on
End Walls







MISCELLANEOUS QUANTITIES		
1	LS	Structures, Rem Portions (SN 3077)
39	Cyd	Backfill, Structure, CIP
117	Cyd	Excavation, Fdn
2	Ea	Erosion Control, Filter Bag
156	Fl	Underdrain, Fdn, 4 inch
20	Fl	Underdrain Outlet, 4 inch
2	Ea	Underdrain, Outlet Ending, 4 inch
4926	Sft	Fasle Decking


NOTES:

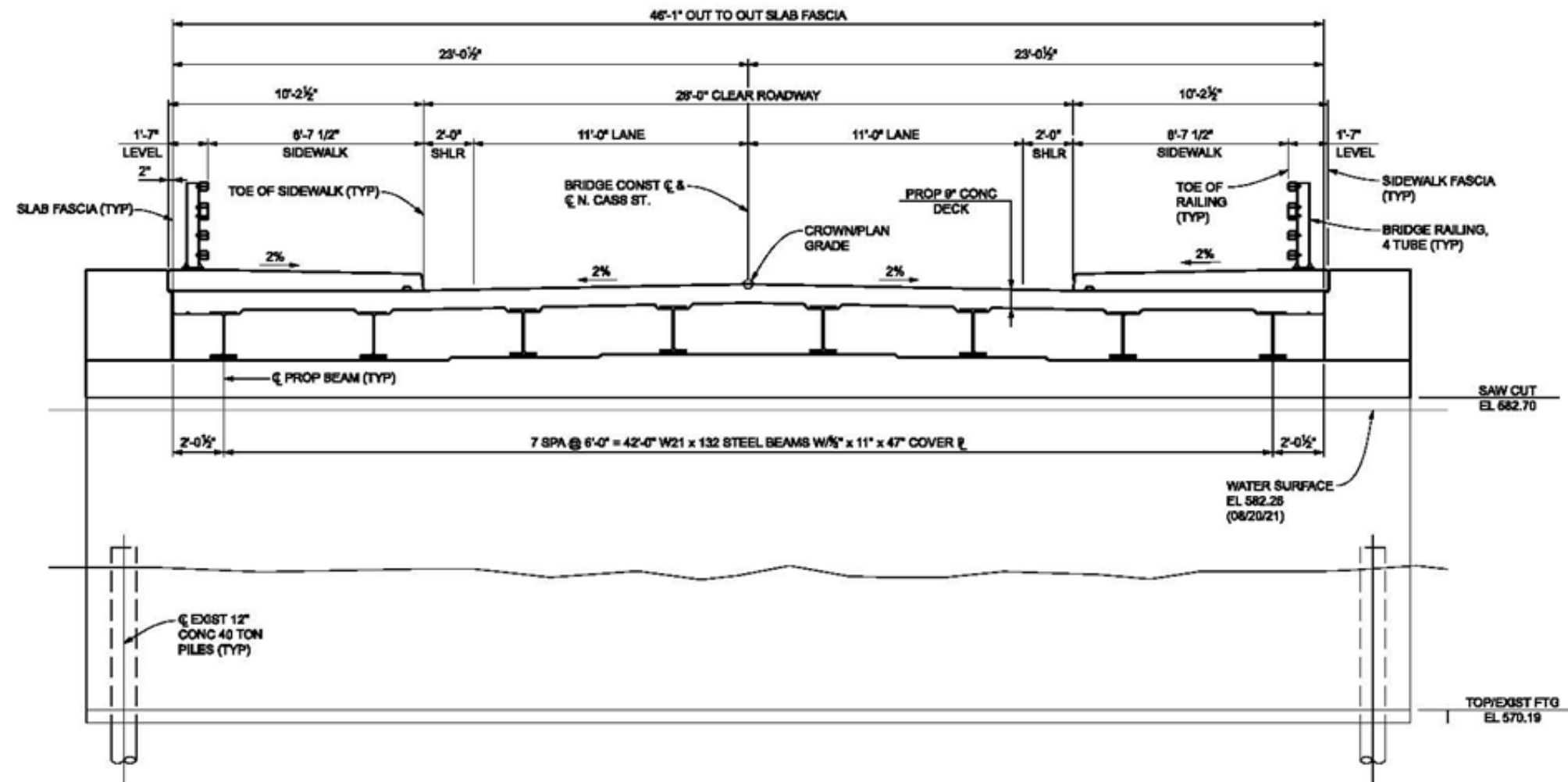
THE DESIGN OF THE DECK SLAB IS BASED UPON THE STRIP METHOD AS DEFINED IN THE CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATION.

MEASURES SHALL BE TAKEN TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE. IF DEBRIS FALLS INTO THE WATERWAY, IT SHALL BE REMOVED WITHIN 24 HOURS. SINCE DISTURBANCE OF THE WATERWAY BOTTOM MAY BE AS HARMFUL AS THE DEBRIS ITSELF, THE PREVENTIVE MEASURES MUST BE EFFECTIVE.


DO NOT USE WHEELED, ROLLER BASED OR MACHINE MOUNTED COMPACTION EQUIPMENT TO COMPACT THE SUBGRADE, SUBBASE, AND BASE WITHIN 10' OF THE SLEEPER SLAB AFTER IT IS BUILT. USE ONLY HAND/PLATE COMPACTORS. CONTACT PRESSURE OF COMPACTION EQUIPMENT SHALL NOT EXCEED 10 PSL.

FALSE DECKING SHALL INCLUDE THE AREA BOUNDED BY REFERENCE LINES A & B AND OUTSIDE FLANGE FASCIA OF BEAMS A & J. THE ESTIMATED AREA IS 2160 SQUARE FEET DURING REMOVAL AND 2785 SQUARE FEET DURING PROPOSED CONSTRUCTION.

FINAL ROW PLAN REVISIONS								SUBMITTAL DATE:		 GREAT LAKES ENGINEERING GROUP, LLC	NO SCALE	DRAWN BY: JLS		DATE:	REVISIONS: 12/14/21	CS:	GENERAL PLAN OF STRUCTURE		DRAWING	SHEET
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION	CHECKED BY: CJC	DESIGN UNIT: GLEG			JN:	1021-2-769	NORTH CASS STREET OVER BOARDMAN RIVER	CITY OF TRAVERSE CITY, MICHIGAN		SECT 1			
																			22	



TYPICAL DECK SECTION

FINAL ROW PLAN REVISIONS										SUBMITTAL DATE:										 GREAT LAKES ENGINEERING GROUP, LLC										NO SCALE										DRAWN BY: JLS										DATE:										REVISIONS: 12/14/21										CS:										GENERAL PLAN OF STRUCTURE																				DRAWING										SHEET																													
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NO SCALE

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FILE: 760 st.dgn

DATE:
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TSC: TRAVERSE CITY

REVISIONS: 12/14/21

CS:
JN:
1021-2-769

GENERAL PLAN OF STRUCTURE
NORTH CASS STREET OVER BOARDMAN RIVER
CITY OF TRAVERSE CITY, MICHIGAN

SECT 1
23

South Union Street Bridge

- Current cost estimate is \$1,700,000
- Work includes replacement of existing concrete deck and steel beams on the existing foundation
- Widen sidewalks from 8'-1" to 9'-10"
- MDOT crash tested/approved bridge railing detail painted black along sidewalk edge with historic balustrade pedestrian railing to replicate original aesthetic treatment
- Add down lighting into railing to illuminate walk
- Pedestrian railing approaching bridge

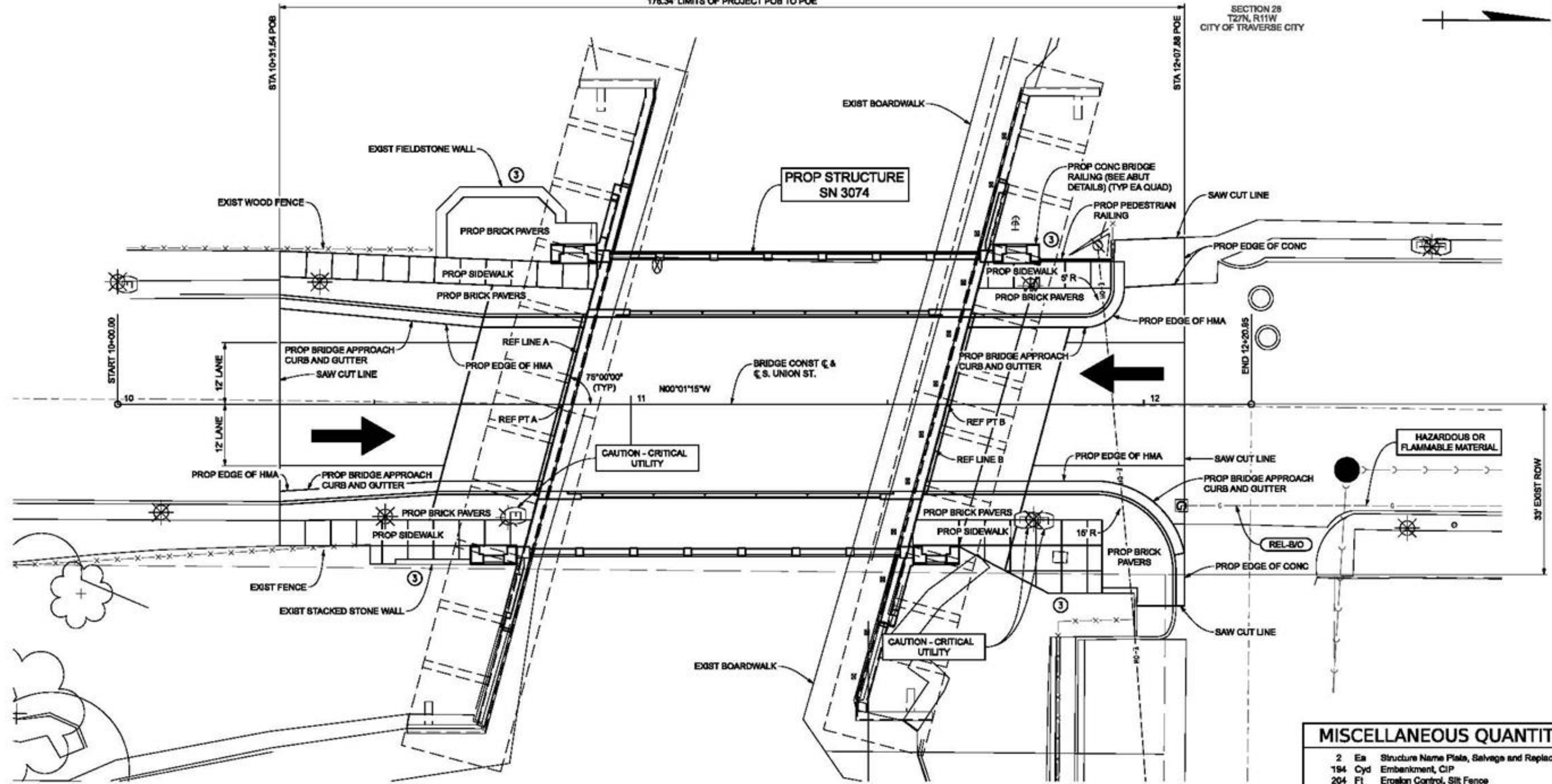
BOARDMAN RIVER

178.34' LIMITS OF PROJECT POB TO POE

SECTION 28
T27N, R11W
CITY OF TRAVERSE CITY

SOUTH UNION STREET

SOUTH UNION STREET

SOIL EROSION AND
SEDIMENTATION CONTROL

③ - PERMANENT SEEDING

MISCELLANEOUS QUANTITIES

2	Ea	Structure Name Plate, Salvage and Replace
194	Cyd	Embankment, CIP
204	Ft	Erosion Control, Silt Fence
126	Cyd	Subbase, CIP
330	Syd	Aggregate Base, 5 inch
118	Syd	Aggregate Base, 24 inch, Modified
111	Ton	HMA, 4EL
19	Syd	Conc Pavt, Misc, Nonreinf, 10 inch
187	Syd	Conc Pavt, Bridge Approach, Rainf
227	Ft	Curb and Gutter, Bridge Approach, Modified
1157	Sft	Sidewalk, Conc, 6 inch
20	Ft	Pedestrian Railing
1006	Sft	Sidewalk, Clay Brick Pavers, Modified
100	Syd	Turf Establishment

BOARDMAN RIVER

FINAL ROW PLAN REVISIONS SUBMITTAL DATE:

NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



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HORZ. (FT)

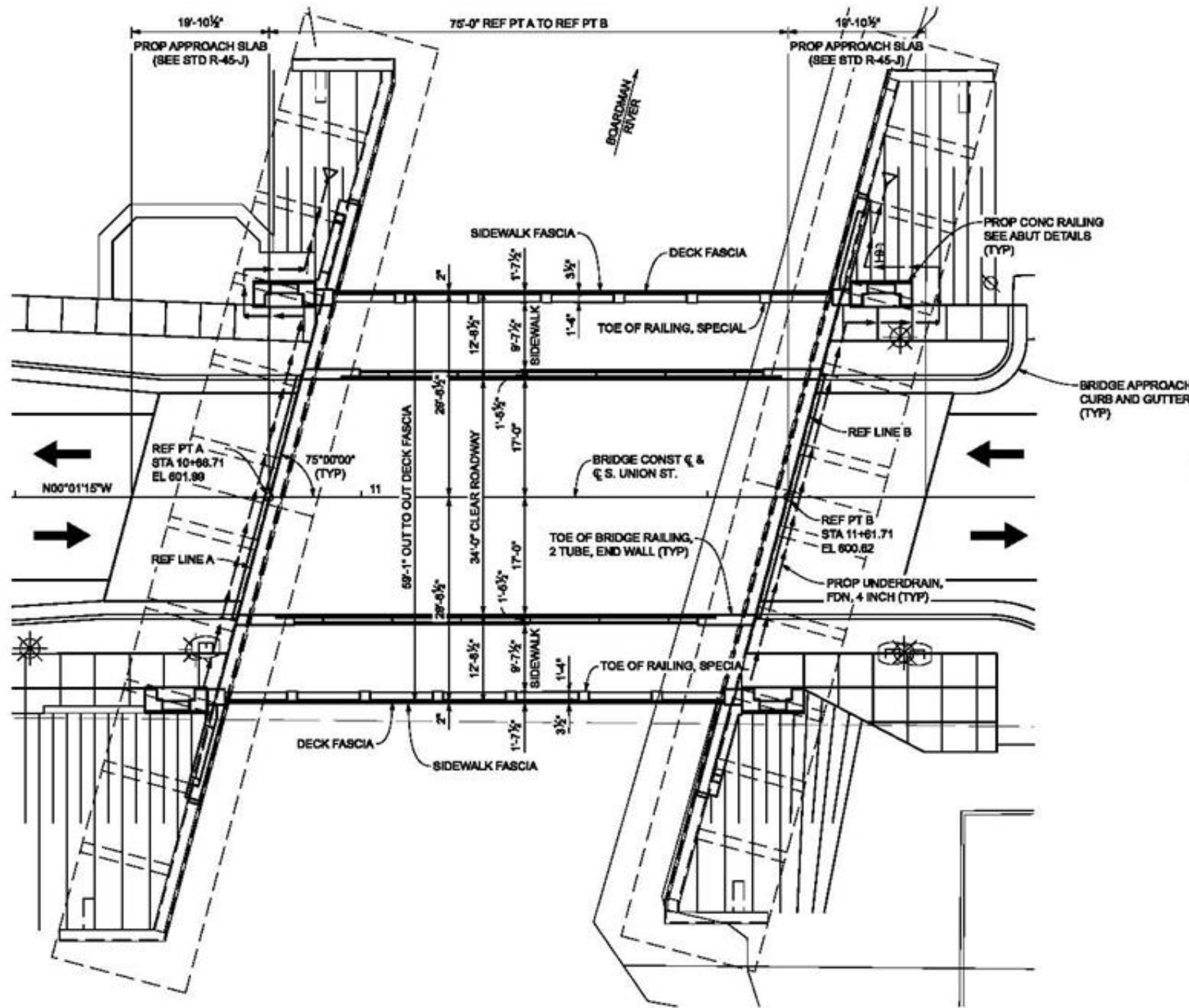
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FILE: 760 cd.dgn

DATE: 01/04/22
DESIGN UNIT: GLEG
TSC: TRAVERSE CITY

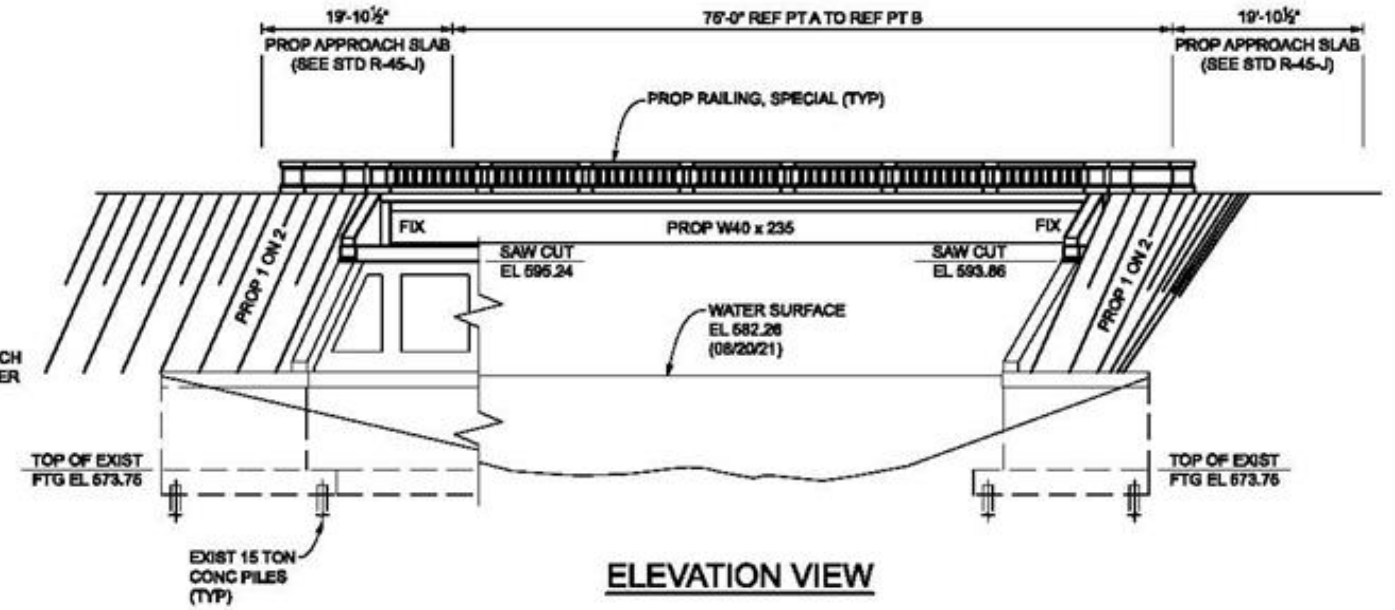
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CS:
JN:
1021-2-769

CONSTRUCTION SHEET P.O.B. TO P.O.E.
SOUTH UNION STREET OVER BOARDMAN RIVER
CITY OF TRAVERSE CITY

DRAWING SHEET
SECT 1
47



PLAN VIEW



MISCELLANEOUS QUANTITIES

1	LSUM	Structures, Ram Portions (SN 3074)
184	Cyd	Backfill, Structure, CIP
382	Cyd	Excavation, Fdn
2	Es	Erosion Control, Filter Bag
209	Ft	Underdrain, Fdn, 4 inch
20	Ft	Underdrain Outlet, 4 inch
2	Es	Underdrain, Outlet Ending, 4 inch
9750	Sft	False Decking

NOTES:

THE DESIGN OF THE DECK SLAB IS BASED UPON THE STRIP METHOD AS DEFINED IN THE CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATION.

MEASURES SHALL BE TAKEN TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE. IF DEBRIS FALLS INTO THE WATERWAY, IT SHALL BE REMOVED WITHIN 24 HOURS. SINCE DISTURBANCE OF THE WATERWAY BOTTOM MAY BE AS HARMFUL AS THE DEBRIS ITSELF, THE PREVENTIVE MEASURES MUST BE EFFECTIVE.

THE RECONSTRUCTION DESIGN IS BASED ON 1.2 TIMES THE CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATION HL-93 LOADING WITH THE EXCEPTION THAT THE DESIGN TANDEM PORTION OF THE HL-93 LOAD DEFINITION IS REPLACED BY A SINGLE 60 KIP AXLE LOAD BEFORE APPLICATION OF THIS 1.2 FACTOR. THE RESULTING LOAD IS DESIGNATED HL-93 MOD. LIVE LOAD PLUS DYNAMIC LOAD ALLOWANCE DEFLECTION DOES NOT EXCEED 1/800.

FALSE DECKING INCLUDES THE AREA BOUNDED BY REFERENCE LINES A & B AND OUTSIDE FLANGE FASCIA OF FASCIA BEAMS. THE ESTIMATED AREA IS 4875 SQUARE FEET DURING REMOVAL AND 4875 SQUARE FEET DURING PROPOSED CONSTRUCTION.

SHOP AND FIELD COATING SHALL BE ACCORDING TO SUBSECTION 716 & 715 OF THE STANDARD SPECIFICATIONS.

POSITION DOWELS MAY BE ADHESIVE ANCHORED IN HOLES DRILLED IN THE CONCRETE AT ABUTMENTS.

FINAL ROW PLAN REVISIONS				SUBMITTAL DATE:			
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



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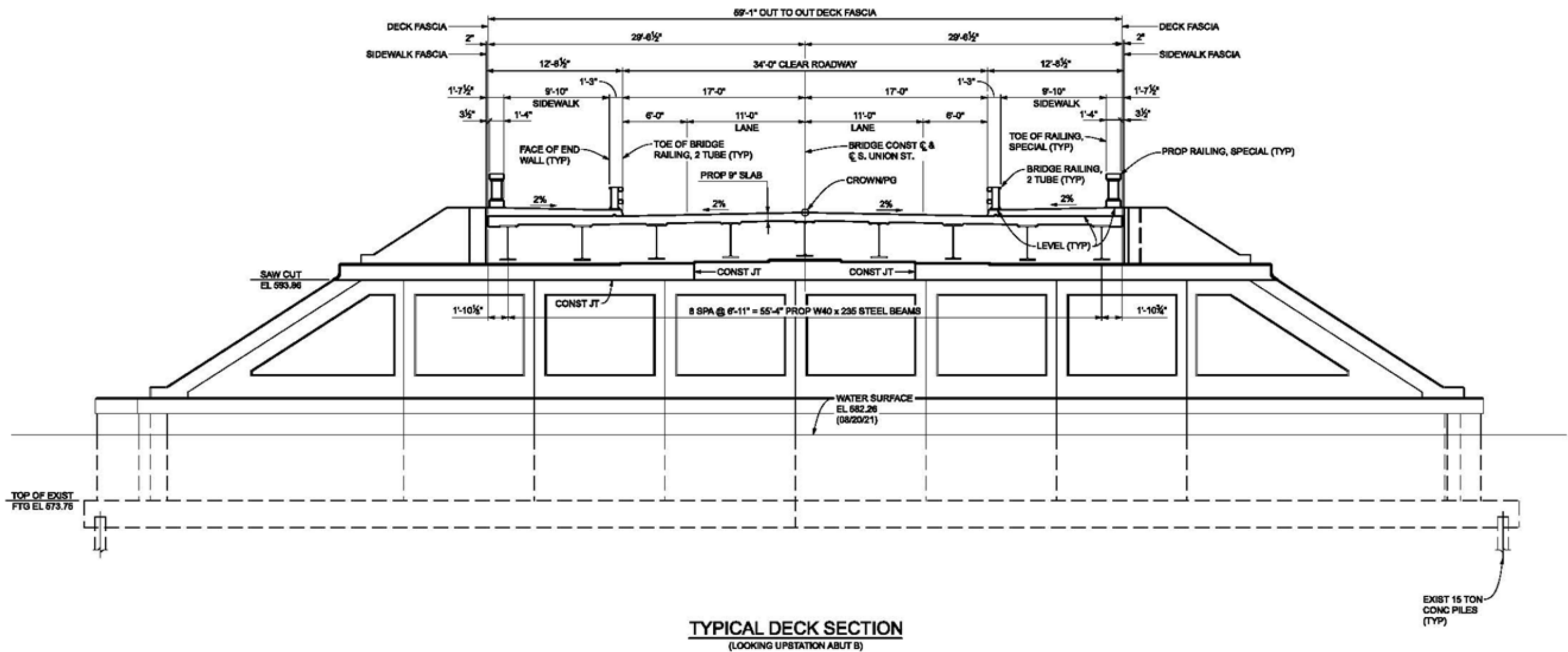
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DATE: 01/05/22
DESIGN UNIT: GLEG
TSC: TRAVERSE CITY

REVISIONS: 01/05/22
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1021-2-769

GENERAL PLAN OF STRUCTURE		DRAWING	SHEET
SOUTH UNION STREET OVER BOARDMAN RIVER			SECT 2
CITY OF TRAVERSE CITY			58



FINAL ROW PLAN REVISIONS				SUBMITTAL DATE:				DRAWING				SHEET	
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION	GENERAL PLAN OF STRUCTURE				SECT 2	
								SOUTH UNION STREET OVER BOARDMAN RIVER					
								CITY OF TRAVERSE CITY				58	



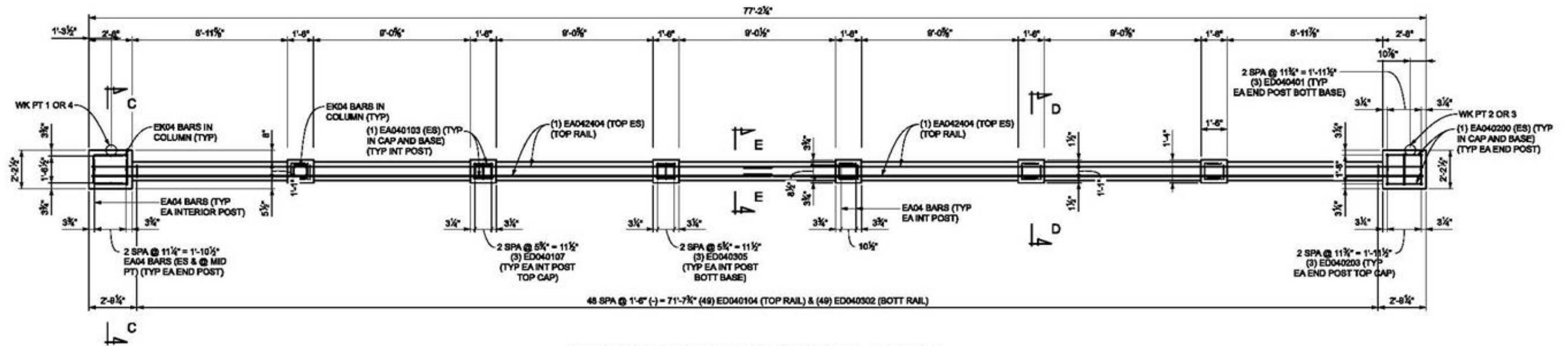
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DRAWN BY: JLS
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FILE: 760 st.dgn

DATE:
DESIGN UNIT: GLEG
TSC: TRAVERSE CITY

REVISIONS: 01/05/22
CS:
JN:

1021-2-769



FINAL ROW PLAN REVISIONS SUBMITTAL DATE:								 GREAT LAKES ENGINEERING GROUP, LLC	DRAWN BY: JLS		DATE:	REVISIONS: 01/06/22	CS:	SUPERSTRUCTURE DETAILS		DRAWING	SHEET
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION		CHECKED BY: CJC		DESIGN UNIT: GLEG		JN: 1021-2-769	SOUTH UNION STREET OVER BOARDMAN RIVER			SECT 2
									FILE: 760 dk.dgn		TSC: TRAVERSE CITY			CITY OF TRAVERSE CITY			

Anticipated Timeline

- Bundle the two projects together into one MDOT construction contract
- Plan preparation in 2021/22
- Construction in 2022/23
- *Keep waterway open during weekends and Holidays from Memorial Day to October 20*

Questions?