



CITY OF ANN ARBOR ENGINEERING

2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS MAIDEN LANE OVER HURON RIVER ISLAND DRIVE OVER TRAVER CREEK BROADWAY OVER DEPOT STREET & MDOT RAILROAD BROADWAY OVER HURON RIVER WB & EB FULLER ROAD OVER HURON RIVER

NOTES:

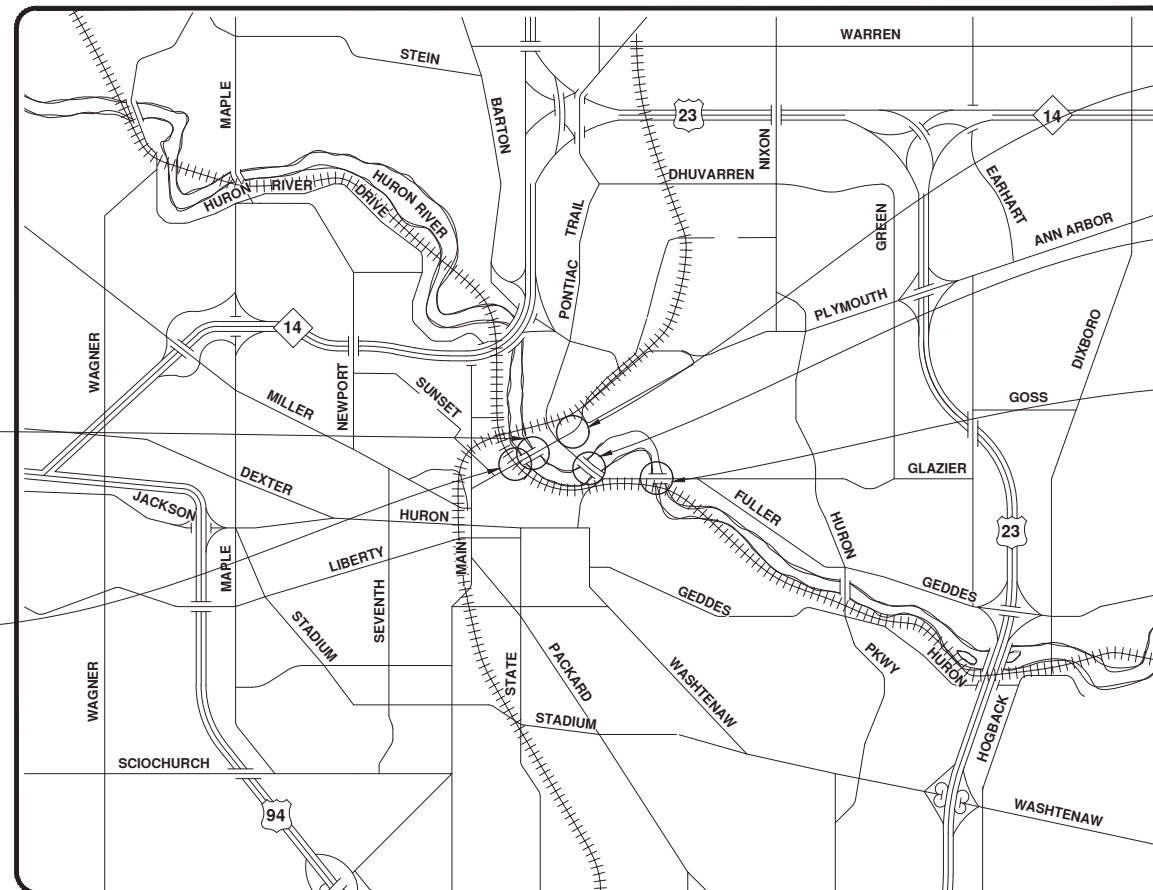
EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS, OR IN THE CONTRACT DOCUMENTS AND DETAILED SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE ACCORDING TO THE LATEST REVISIONS OF THE CITY OF ANN ARBOR PUBLIC SERVICE DEPARTMENT STANDARD SPECIFICATIONS AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION 2012 EDITION AS APPLICABLE.

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

811	Know what's below. Call before you dig.
	REV.
	DATE
	X-XX-20
	BSM
	DRAWN
	JED
	CHECKED
	DESCRIPTION
	ORIGINAL ISSUE

ANN ARBOR STANDARD PLANS		
CONSTRUCTION OF THE FOLLOWING ITEMS, WHERE CALLED FOR ON THE PLANS, WILL BE CONSTRUCTED ACCORDING TO CITY OF ANN ARBOR STANDARD PLANS AS INDICATED.		
REQUIRED ON THIS PROJECT	ITEM OF WORK	STANDARD PLAN NUMBERS
X	INLET-JUNCTION CHAMBER	SD-S-9
X	SINGLE INLET STRUCTURE	SD-S-10
X	CHAIN LINK FENCE	SD-S-11
MDOT STANDARD PLANS		
CONSTRUCTION OF THE FOLLOWING ITEMS, WHERE CALLED FOR ON THE PLANS, WILL BE CONSTRUCTED ACCORDING TO MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD PLANS AS INDICATED.		
X	CURB RAMP AND DETECTABLE WARNING SURFACE	R-28-J
X	PRECAST CONCRETE END SECTION FOR PIPE CULVERT	R-86-F
X	GUARDRAIL, TYPE MGS-8	R-60-J
X	GUARDRAIL, ANCHORAGE, BRIDGE DETAILS	R-67-G
X	BRIDGE RAILING, AESTHETIC PARAPET TUBE	B-25-K
X	MOLDING, BEVEL, LIGHT STD. ANCHOR BOLT ASSEMBLY AND NAME PLATE DETAILS	B-103-E
TRAFFIC AND SAFETY STANDARD PLANS		
X	TEMPORARY TRAFFIC CONTROL DEVICES	WZD-125-E

CITY OF ANN ARBOR FILE NO. 2020-025



STR 11075
BROADWAY OVER HURON RIVER

STR 11076
BROADWAY OVER DEPOT ST & MDOT RAILROAD

STR 11081
ISLAND DRIVE OVER TRAVER CREEK

STR 11072
MAIDEN LANE OVER HURON RIVER

STR 11070 & 11071
WB & EB FULLER ROAD OVER HURON RIVER



ENGINEERING

MICHAEL G. NEARING, P.E. - MI LICENSE No. 38748
SENIOR PROJECT MANAGER

DATE

PREPARED UNDER THE SUPERVISION OF

J.D.

JONATHAN DRUMMOND, P.E. - MI LICENSE No. 50042

10-02-2020

DATE



ENGINEER'S SEAL

SCALE: NONE

PROFILE: NA

DATE

SHEET No.

1 of 70

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
TITLE SHEET
DRAWING No. 2020-025

CITY OF ANN ARBOR
PUBLIC SERVICE
301 EAST HURON STREET
ANN ARBOR, MI 48106
734-794-6410
www.a2gov.org





REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICE
301 EAST HURON STREET
ANN ARBOR MI 48106-1647
www.a2gov.org

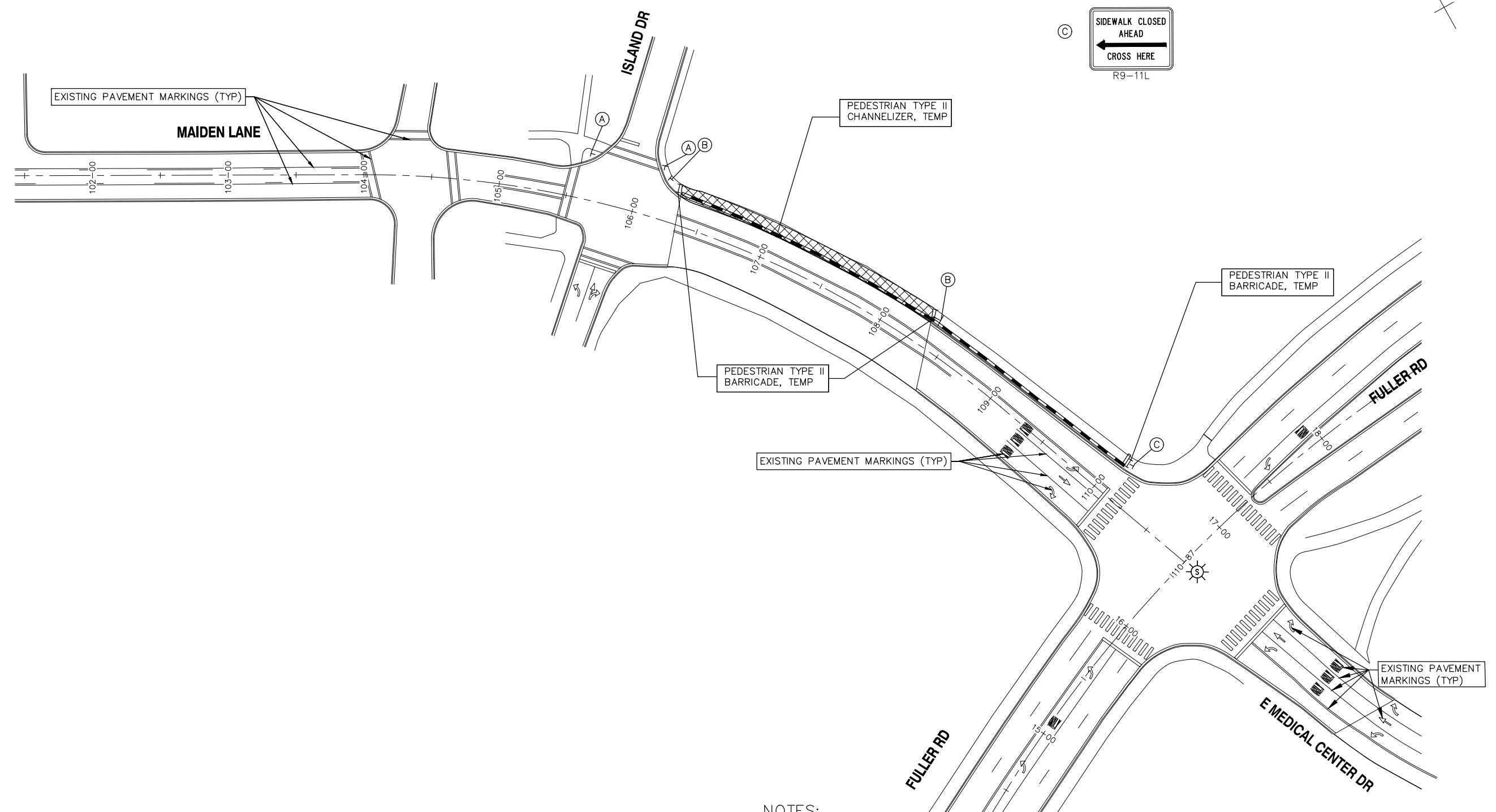
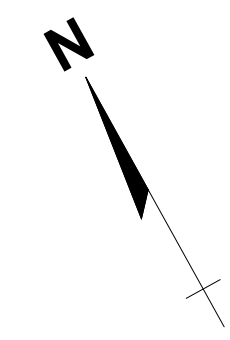


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
MAINTAINING PEDESTRIAN TRAFFIC SHEET - STAGE 1

SCALE: 1"=40'
PROFILE: N/A
DRAWING No. 2020-025
SHEET No. 4 of 70

- LEGEND**
- +— TEMPORARY SIGN
 - |— PEDESTRIAN TYPE II BARRICADE, TEMP
 - EXISTING PVMT MRKG
 - ▨ WORK ZONE
 - ⊙ SIGNALIZED INTERSECTION
 - ▬ PEDESTRIAN TYPE II CHANNELIZER, TEMP

- (A) R9-11R
- (B) R9-9
- (C) R9-11L



NOTES:

DAILY LANE CLOSURES MAY BE UTILIZED IF ADDITIONAL SPACE IS NEEDED. IF UTILIZED, THE CONTRACTOR SHALL APPLY FOR THE NECESSARY LANE CLOSURE PERMITS FROM THE CITY OF ANN ARBOR, ENGINEERING, AND COMPLY WITH THE ALLOWABLE LANE CLOSURE TIME RESTRICTIONS. ALL LABOR, MATERIAL, AND EQUIPMENT COSTS SHALL BE INCLUDED IN THE PAY ITEM "MINOR TRAFFIC DEVICES, MAX" AND WILL NOT BE PAID SEPARATELY.

MAINTAINING TRAFFIC
(MAIDEN LANE OVER HURON RIVER)



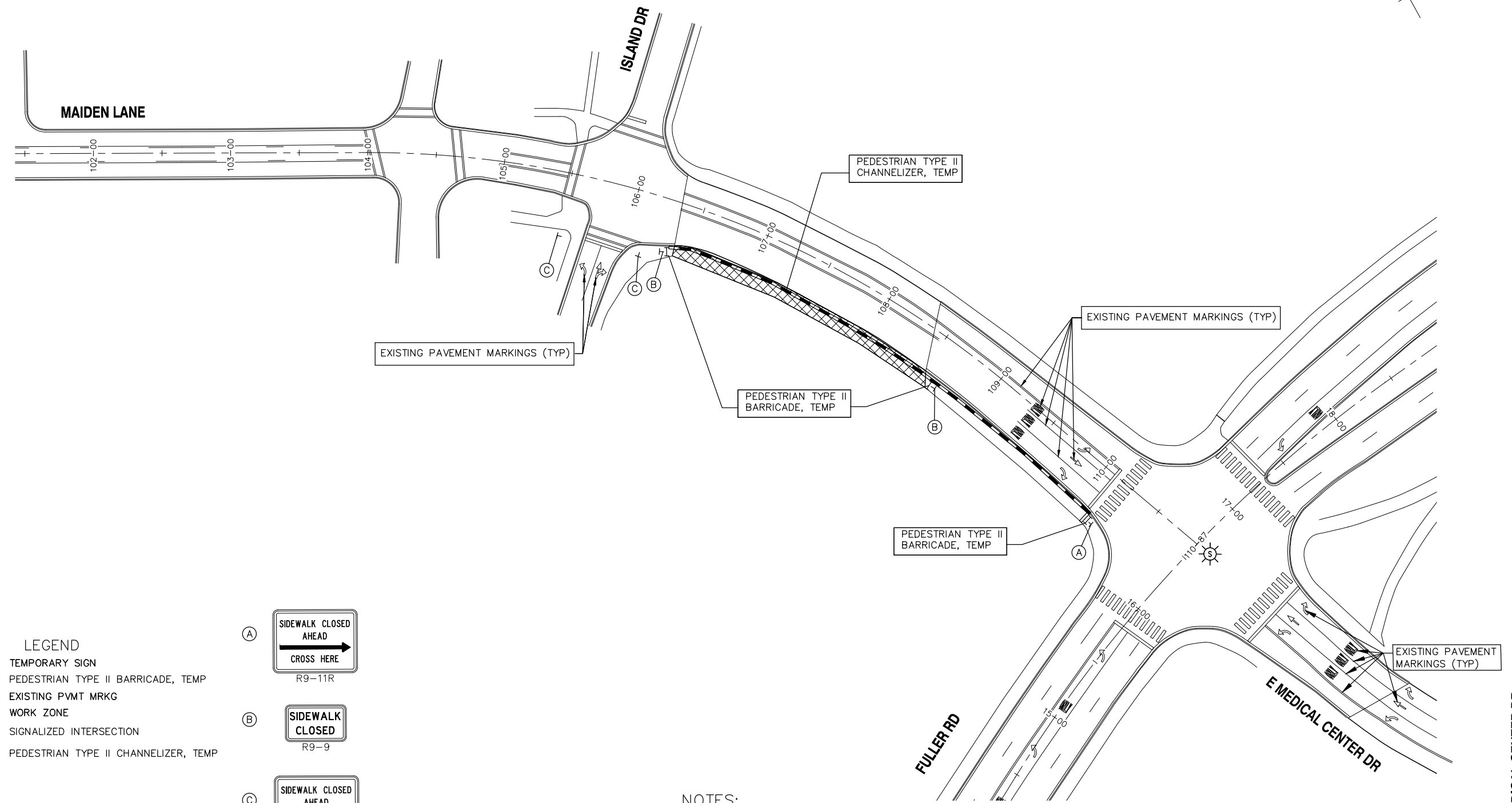
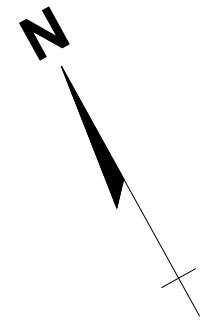
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
MAINTAINING PEDESTRIAN TRAFFIC SHEET - STAGE 2

SCALE 1"=40'
PROFILE: N/A
DRAWING No. 2020-025
SHEET No.



- LEGEND**
- TEMPORARY SIGN
 - PEDESTRIAN TYPE II BARRICADE, TEMP
 - EXISTING PVMT MRKG
 - WORK ZONE
 - SIGNALIZED INTERSECTION
 - PEDESTRIAN TYPE II CHANNELIZER, TEMP

- (A) R9-11R
- (B) R9-9
- (C) R9-11L

NOTES:

DAILY LANE CLOSURES MAY BE UTILIZED IF ADDITIONAL SPACE IS NEEDED. IF UTILIZED, THE CONTRACTOR SHALL APPLY FOR THE NECESSARY LANE CLOSURE PERMITS FROM THE CITY OF ANN ARBOR, ENGINEERING, AND COMPLY WITH THE ALLOWABLE LANE CLOSURE TIME RESTRICTIONS. ALL LABOR, MATERIAL, AND EQUIPMENT COSTS SHALL BE INCLUDED IN THE PAY ITEM "MINOR TRAFFIC DEVICES, MAX" AND WILL NOT BE PAID SEPARATELY.

MAINTAINING TRAFFIC
(MAIDEN LANE OVER HURON RIVER)

E MEDICAL CENTER DR

THIS SHEET IS PROVIDED TO AID THE CONTRACTOR IN UNDERSTANDING THE EXISTING CONDITIONS OF THE PROPOSED WORK. THE CONTRACTOR SHALL THOROUGHLY REVIEW AND FAMILIARIZE THEMSELVES WITH THIS SHEET AND ALL ITS CONTENTS. CONTRACT PAY ITEMS MAY, OR MAY NOT, BE SHOWN ON THIS SHEET. REGARDLESS, THE CONTRACTOR SHALL FULLY FAMILIARIZE THEMSELVES WITH ALL CONDITIONS OF THE WORK AND THE EXISTING STRUCTURE AND SHALL ACCOUNT FOR ANY AND ALL NEEDED COSTS TO PERFORM THE WORK OF THIS PROJECT ARISING FROM THE EXISTING CONDITIONS OF THE EXISTING BRIDGE STRUCTURE AND ITS APPURTENANCES.



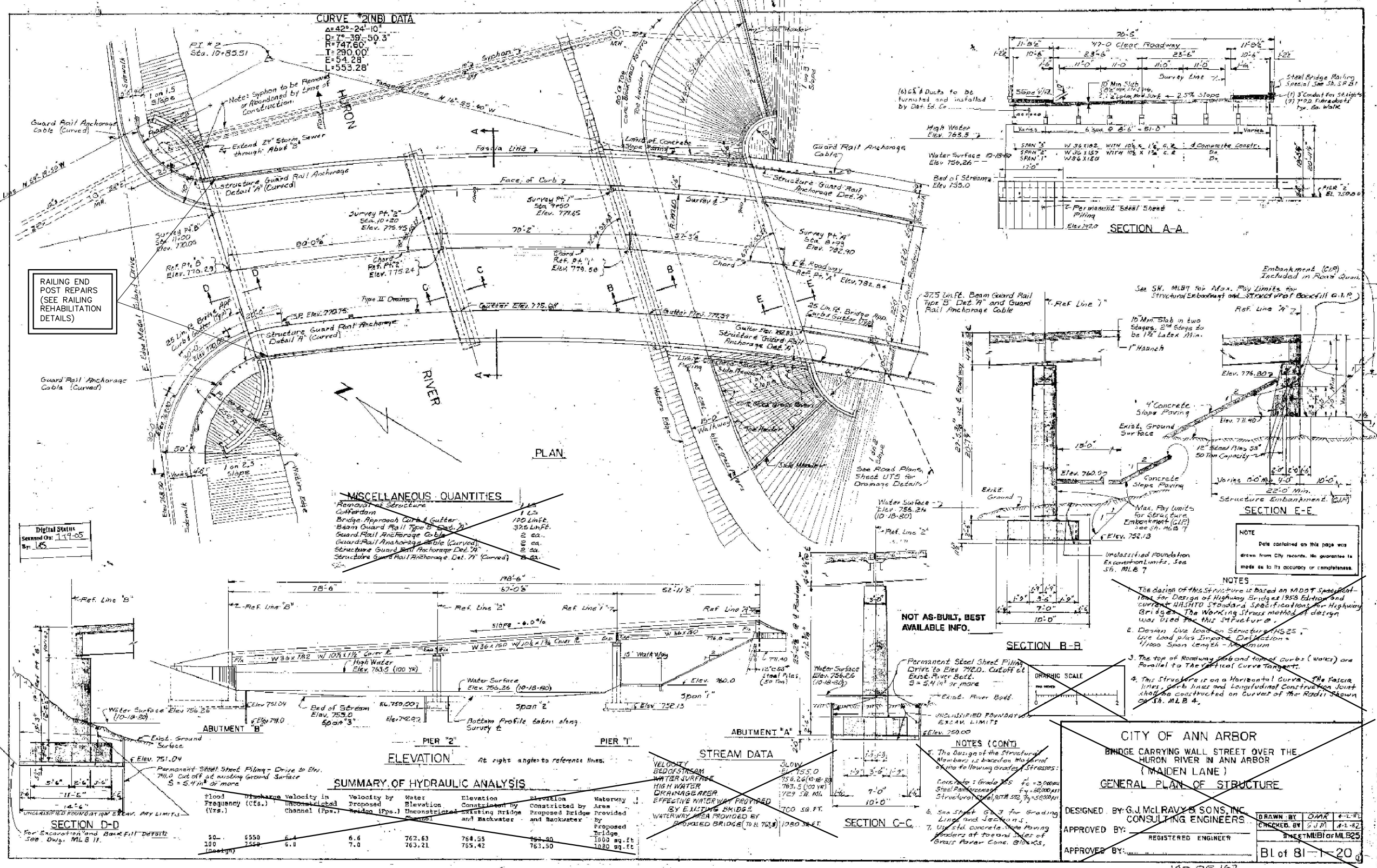
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CITY OF ANN ARBOR
 PUBLIC SERVICE
 301 EAST HURON STREET
 P.O. BOX 866
 ANN ARBOR, MI 48107-0867
 WWW.A2gov.org

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 CITY OF ANN ARBOR 2020 BRIDGE
 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 EXISTING GENERAL PLAN OF STRUCTURE

DESIGNED BY: G.J. McRAVY & SONS, INC.
 CONSULTING ENGINEERS
 APPROVED BY: [Signature]
 REGISTERED ENGINEER
 APPROVED BY: [Signature]
 REGISTERED ENGINEER

SCALE NONE
 PROFILE: NA
 SHEET NO. 81-1-20
 DRAWING NO. 80023-BR64
 2020-025
 SHEET NO. 6 of 70



RAILING END POST REPAIRS (SEE RAILING REHABILITATION DETAILS)

Digital Status
 Sealed On: 11-17-05
 By: [Signature]

SN 11072

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED WITH THE LEGEND BOX BELOW LABELED WITH THIS STRUCTURE'S NUMBER

	PROPOSED WORK
	DENOTES REMOVED PORTIONS

CITY OF ANN ARBOR
 BRIDGE CARRYING WALL STREET OVER THE HURON RIVER IN ANN ARBOR (MAIDEN LANE)
 GENERAL PLAN OF STRUCTURE

DESIGNED BY: G.J. McRAVY & SONS, INC.
 CONSULTING ENGINEERS
 APPROVED BY: [Signature]
 REGISTERED ENGINEER
 APPROVED BY: [Signature]
 REGISTERED ENGINEER

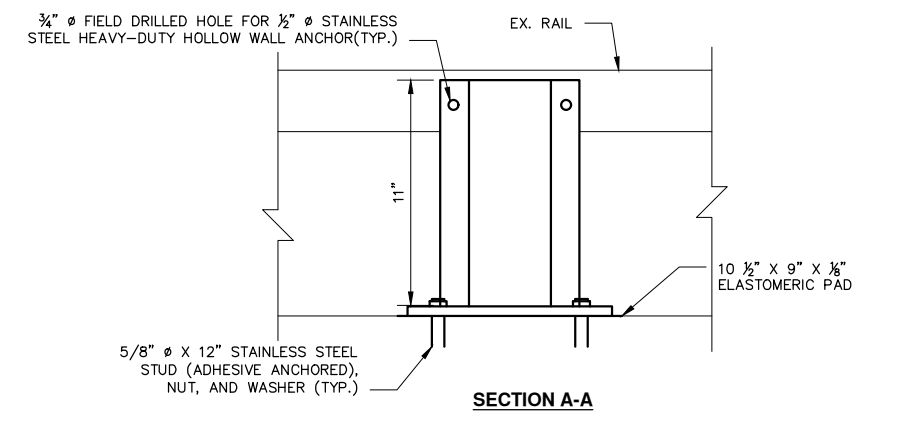
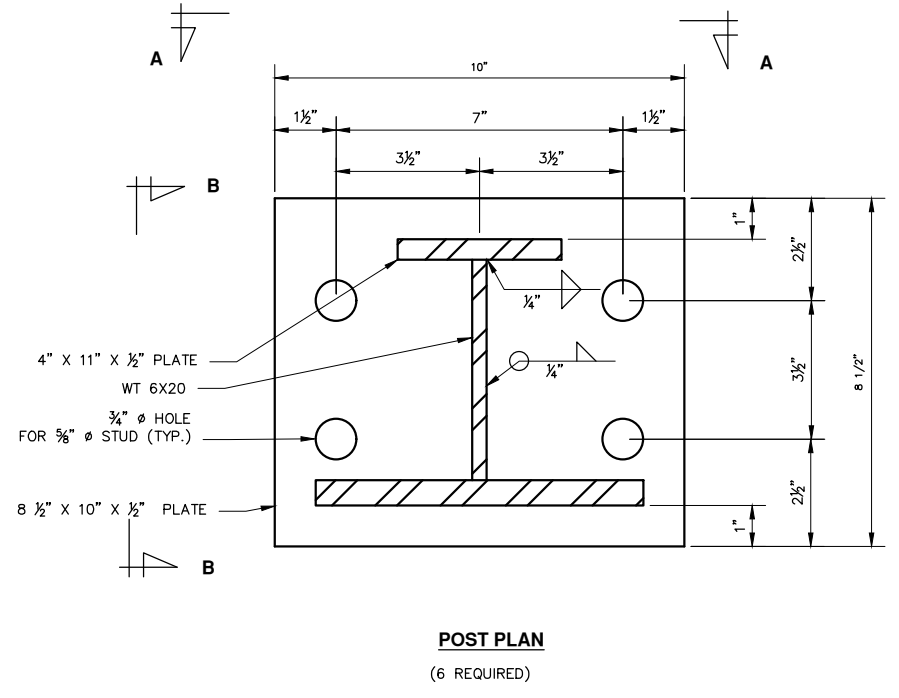
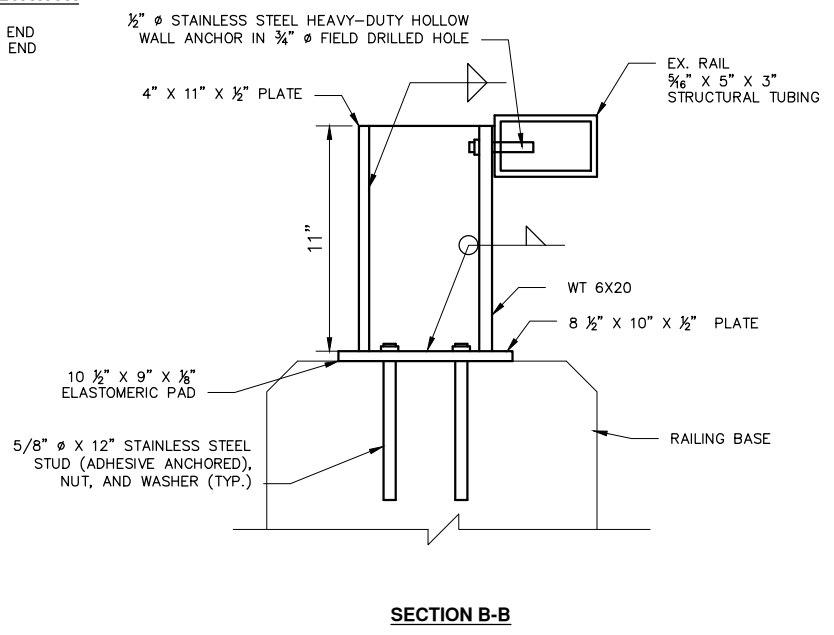
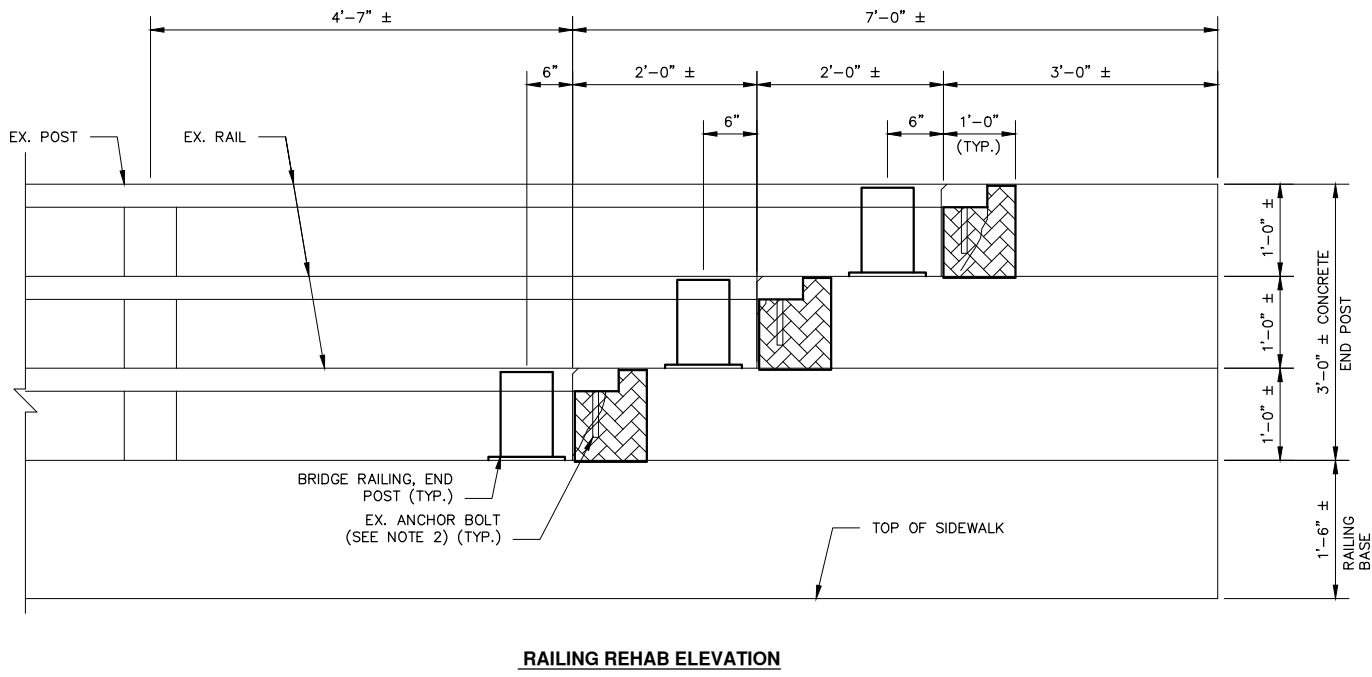
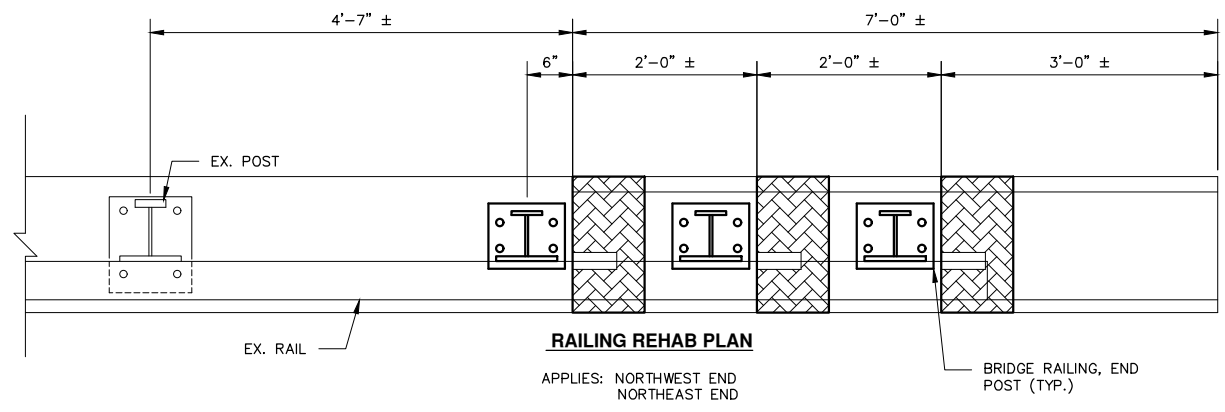
140 OF 167
 80023 - BR64

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR MI 48106-0667
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
RAILING REHABILITATION DETAILS

SCALE NONE
PROFILE: NA
DRAWING No. 2020-025
SHEET No.

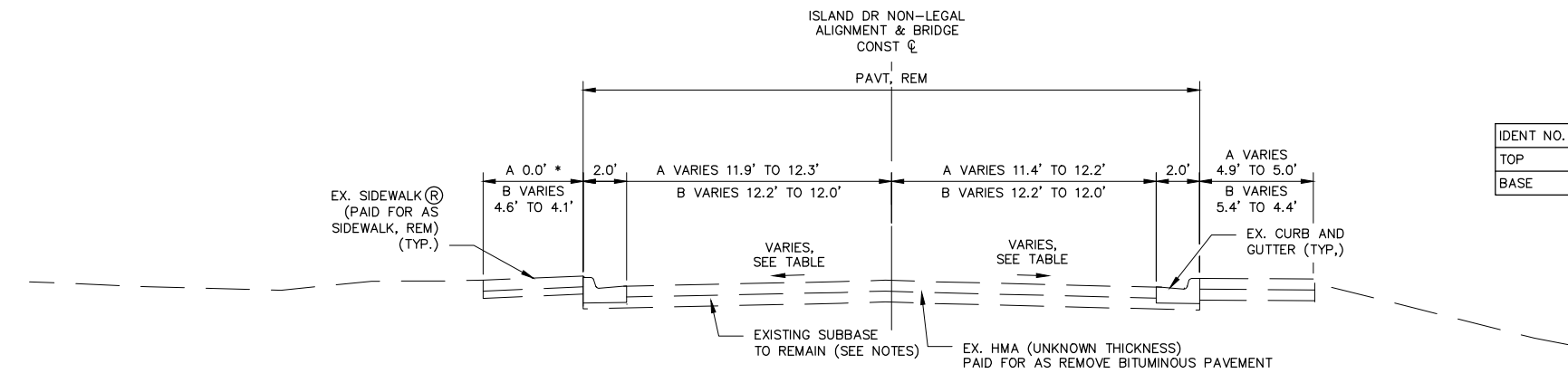


- NOTES:**
- 1. EXISTING REINFORCEMENT SHALL BE LEFT INTACT AND BLAST CLEANED OR REPLACED AT THE DIRECTION OF THE ENGINEER.
 - 2. EXISTING RAILING ANCHOR BOLTS ARE TO BE REMOVED PRIOR TO PATCHING CONCRETE END BLOCKS.
 - 3. SEE SPECIAL PROVISION FOR MORE INFORMATION, INCLUDING FINISHING REQUIREMENTS.



HMA APPLICATION ESTIMATE

IDENT NO.	ITEM	RATE LBS PER SYD	PERFORMANCE GRADE	REMARKS
TOP	HMA, LVSP	226	58-28	TOP COURSE
BASE	HMA, LVSP	339	58-28	BASE COURSE

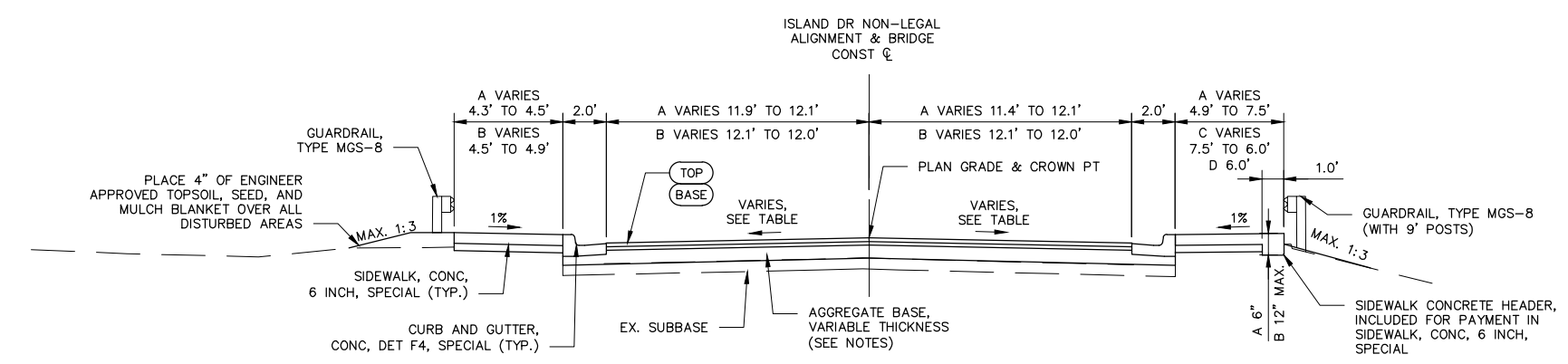


EXISTING NORMAL SECTION

SECTION APPLIES TO:
 A STA. 10+50.00 TO STA. 11+23.00
 B STA. 11+47.00 TO STA. 12+05.00
 * NO EXISTING SIDEWALK IN SOUTHWEST QUADRANT

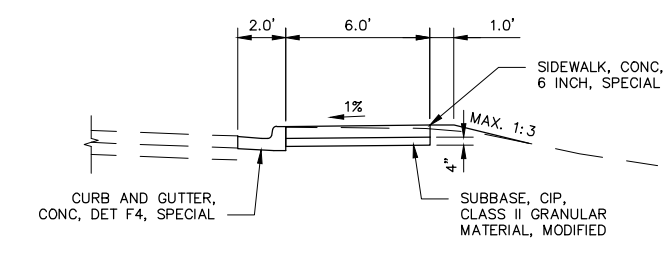
CROSS SLOPE TABLE		
STATION	LEFT (%)	RIGHT (%)
10+50	2.8±	2.5±
11+00	2.0	2.0
11+50	2.0	2.0
12+00	2.0	4.5
12+05	2.0±	4.3±

CROSS SLOPE VARIES LINEARLY BETWEEN THE STATIONS PROVIDED IN THE TABLE.



PROPOSED NORMAL SECTION

SECTION APPLIES TO:
 A STA. 10+50.00 TO STA. 11+20.00
 B STA. 11+50.00 TO STA. 12+05.00
 C STA. 11+50.00 TO STA. 11+60.00
 D STA. 11+60.00 TO STA. 12+05.00



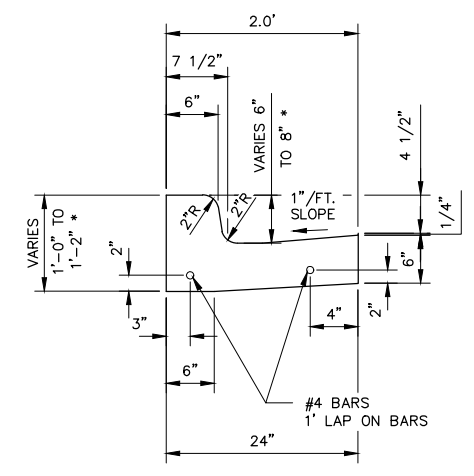
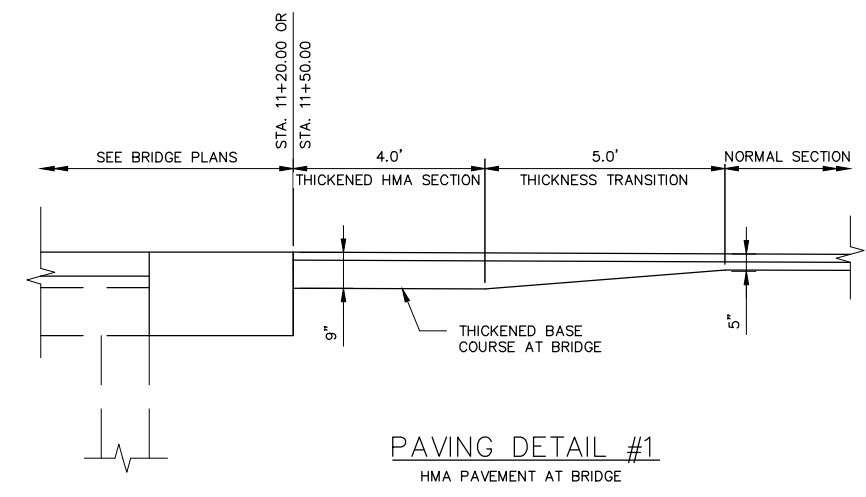
PROPOSED PARTIAL SECTION

SECTION APPLIES TO:
 STA. 12+05.00 TO STA. 12+30.00 **
 ** SIDEWALK RAMP AT STATION 12+15.00 (SEE CONSTRUCTION SHEET)

NOTES:

AGGREGATE BASE THICKNESS SHALL BE ADJUSTED TO ACHIEVE THE DESIRED PROFILE GRADE. AGGREGATE BASE MATERIAL SHALL BE COMPACTED TO 98% OF THE MATERIAL MAX. DRY DENSITY.

SAND SUB-BASE MATERIALS SHALL BE COMPACTED TO 95% OF THE MATERIAL MAX. DRY DENSITY.



PAVING DETAIL #2

(MODIFIED MDOT F4 CURB SHAPE ACCORDING TO CITY OF ANN ARBOR CURB AND GUTTER DETAIL, PAID FOR AS CURB AND GUTTER, CONC, DET F4, SPECIAL)

* DIMENSION VARIES IN ORDER TO TIE INTO SIDEWALK ON BRIDGE - SEE CONSTRUCTION SHEET

ISLAND DRIVE OVER TRAVER CREEK

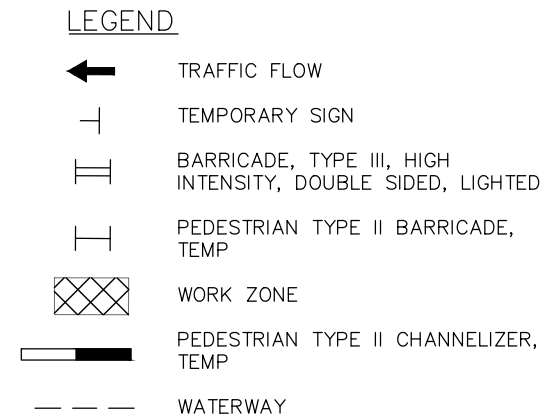
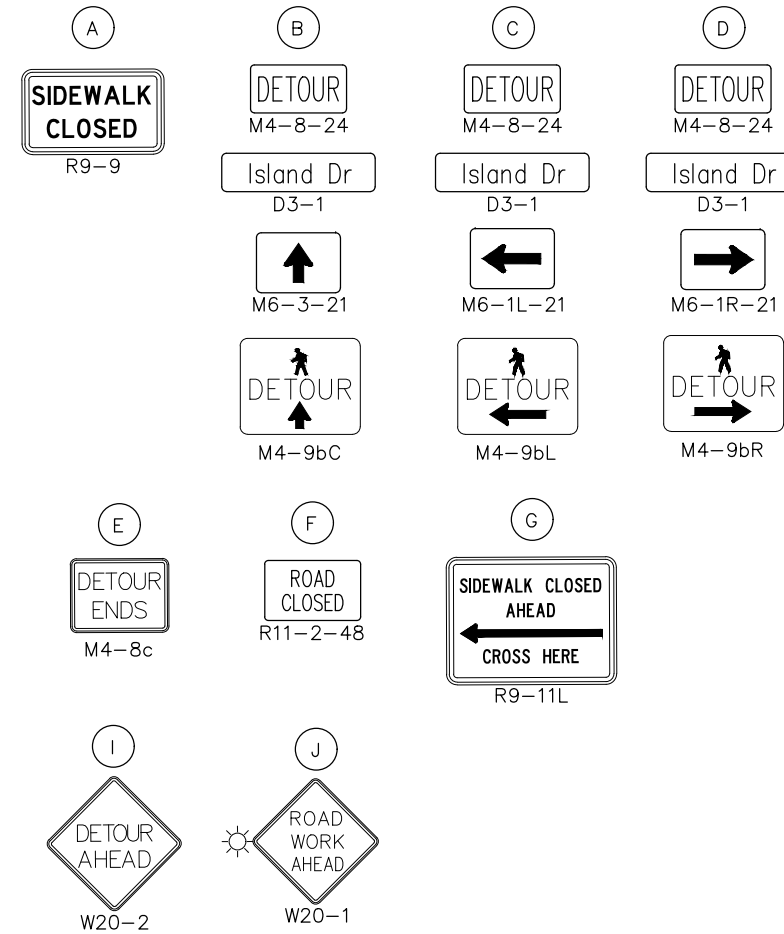
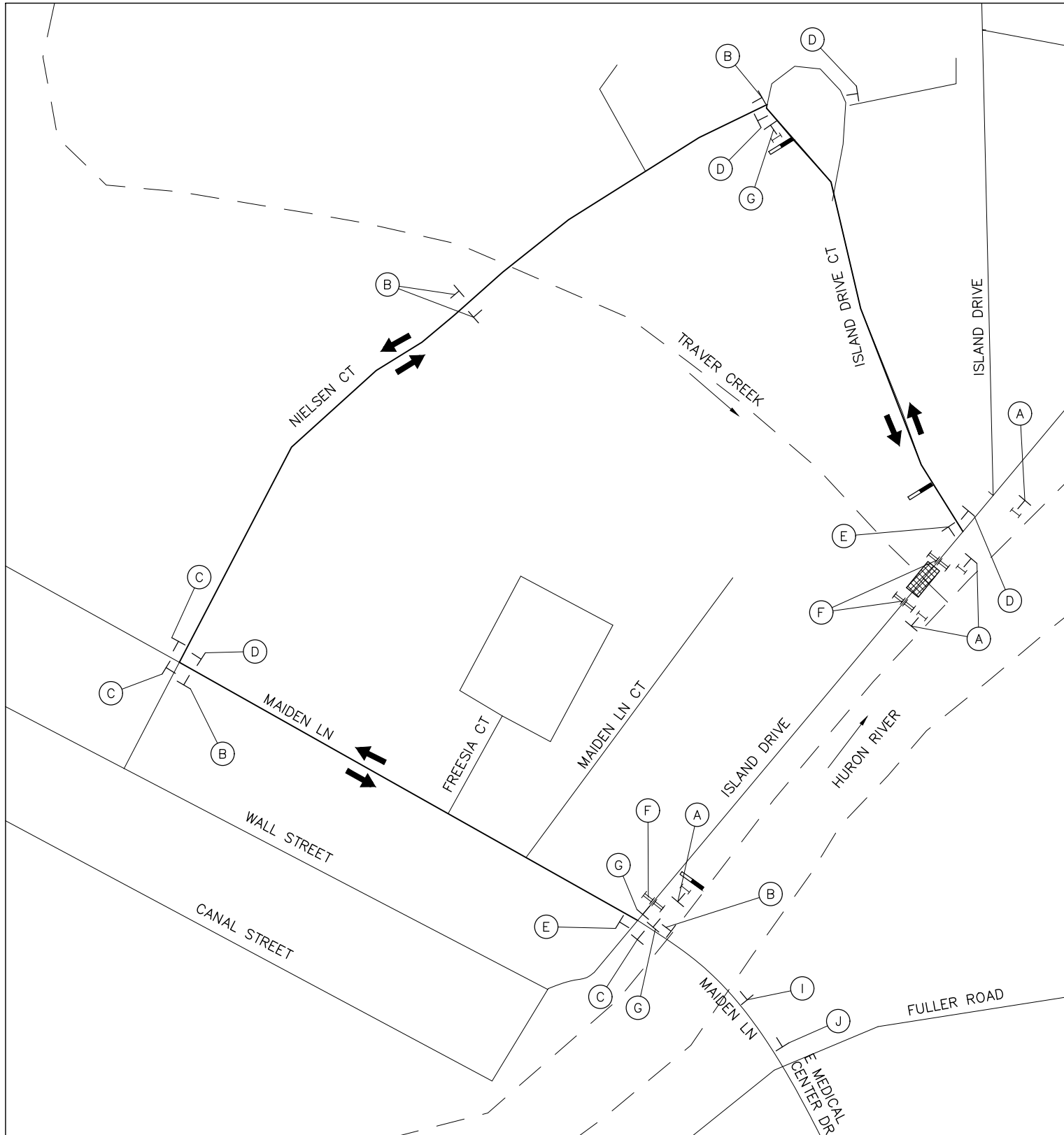
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 PROPOSED TYPICAL SECTIONS & PAVING DETAILS

SCALE NONE
 PROFILE: N/A
 DRAWING No. 2020-025
 SHEET No. 8 of 70

CITY OF ANN ARBOR PUBLIC SERVICE 301 EAST HURON STREET ANN ARBOR MI 48106-1667 www.a2gov.org

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

DESCRIPTION
 REV.
 DATE
 DRAWN
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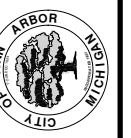


ISLAND DRIVE OVER TRAVER CREEK



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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301 EAST HURON STREET
ANN ARBOR, MI 48106-1647
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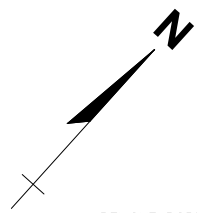
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
DETOUR PLAN

SCALE: 1"=40'
PROFILE: N/A
DRAWING No. 2020-025
SHEET No. 9 of 70

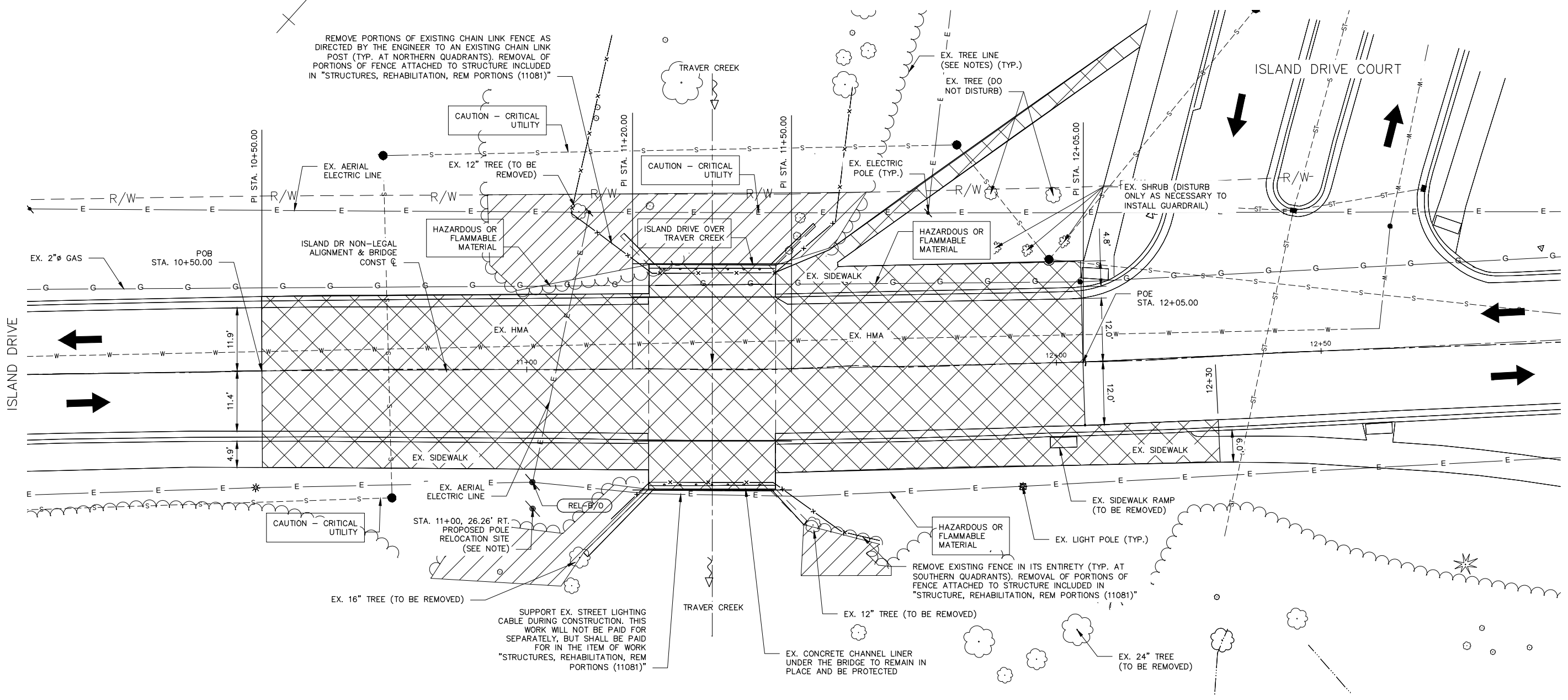
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PUBLIC SERVICE
301 EAST HURON STREET
ANN ARBOR MI 48106-1667
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
REMOVAL SHEET



REMOVE PORTIONS OF EXISTING CHAIN LINK FENCE AS DIRECTED BY THE ENGINEER TO AN EXISTING CHAIN LINK POST (TYP. AT NORTHERN QUADRANTS). REMOVAL OF PORTIONS OF FENCE ATTACHED TO STRUCTURE INCLUDED IN "STRUCTURES, REHABILITATION, REM PORTIONS (11081)"



STA	POINT	NORTHING	EASTING
8+95.00	BEGIN €	288016.43	13295021.55
10+50.00	PI	288134.53	13295121.93
11+20.00	PI	288187.39	13295167.82
11+50.00	PI	288209.94	13295187.60
12+05.00	PI	288252.15	13295222.87
13+15.00	END €	288338.09	13295291.52

CONTROL PT 1	DESCRIPTION : IRON PIN SET
	COORDINATES : 288331.35, 13295263.72
	ELEVATION : 762.44
CONTROL PT 2	DESCRIPTION : IRON PIN SET
	COORDINATES : 288050.12, 13295079.38
	ELEVATION : 761.39

BENCHMARK	ELEVATION	STATION	OFFSET	DESCRIPTION
BENCHMARK A	763.26	13+11.78	23.49' LT	RR SPIKE IN SOUTH SIDE OF UTILITY POLE, NE QUADRANT OF ISLAND DR AND ISLAND COURT DR.
BENCHMARK B	764.57	8+99.33	34.53' LT	SPIKE IN SE SIDE OF UTILITY POLE, ON NORTH SIDE OF ISLAND DR, IN FRONT OF BUILDING #1110

LEGEND:

- DENOTES REMOVED PORTIONS OF PAVEMENT, SIDEWALK, AND CURB AND GUTTER
- DENOTES EXISTING FENCE (PORTIONS TO BE REMOVED)
- DENOTES LIMITS OF CLEARING (SEE NOTES)

NOTES:

POLE IS TO BE RELOCATED BY DTE PRIOR TO CONSTRUCTION. CONTRACTOR TO CONFIRM AND COORDINATE WITH DTE IF NECESSARY TO COMPLETE RELOCATION.

REMOVE TREES AND BRUSH WITHIN 20 FEET OF THE STRUCTURE TO FACILITATE CONSTRUCTION. REMOVE TREES SPECIFICALLY MARKED FOR REMOVAL. REMOVE OTHER TREES, IF NECESSARY, AS DIRECTED BY THE ENGINEER.

DO NOT REMOVE THE TREES LABELED AS "DO NOT DISTURB" IN THE NORTH QUADRANT, AND ONLY DISTURB THE SHRUBS AS NECESSARY TO INSTALL THE GUARDRAIL.

REMOVE TREES AND BRUSH AS NECESSARY TO INSTALL THE PROPOSED STORM SEWER IN THE EAST QUADRANT TO FACILITATE CONSTRUCTION, AS DIRECTED BY THE ENGINEER. ONE 24 INCH TREE WHICH IS DIRECTLY IN CONFLICT WITH THE PROPOSED STORM SEWER HAS BEEN SPECIFICALLY MARKED FOR REMOVAL. REMOVE OTHER TREES, IF NECESSARY, AS DIRECTED BY THE ENGINEER.

TREE REMOVAL SCHEDULE

ALL TREES (8" AND LARGER) SHALL BE REMOVED PRIOR TO MARCH 30, 2021 IN ORDER TO COMPLY WITH FEDERAL REGULATIONS REGARDING ENDANGERED BAT ROOSTING AND NESTING AREAS. THE OTHER CLEARING ACTIVITIES MAY BE PERFORMED CONCURRENTLY AS LONG AS NO SOIL EROSION OR SEDIMENTATION ISSUES ARE CREATED BY THE REMOVAL OF THE REQUIRED TREES AND BRUSH.

ISLAND DRIVE OVER TRAVER CREEK



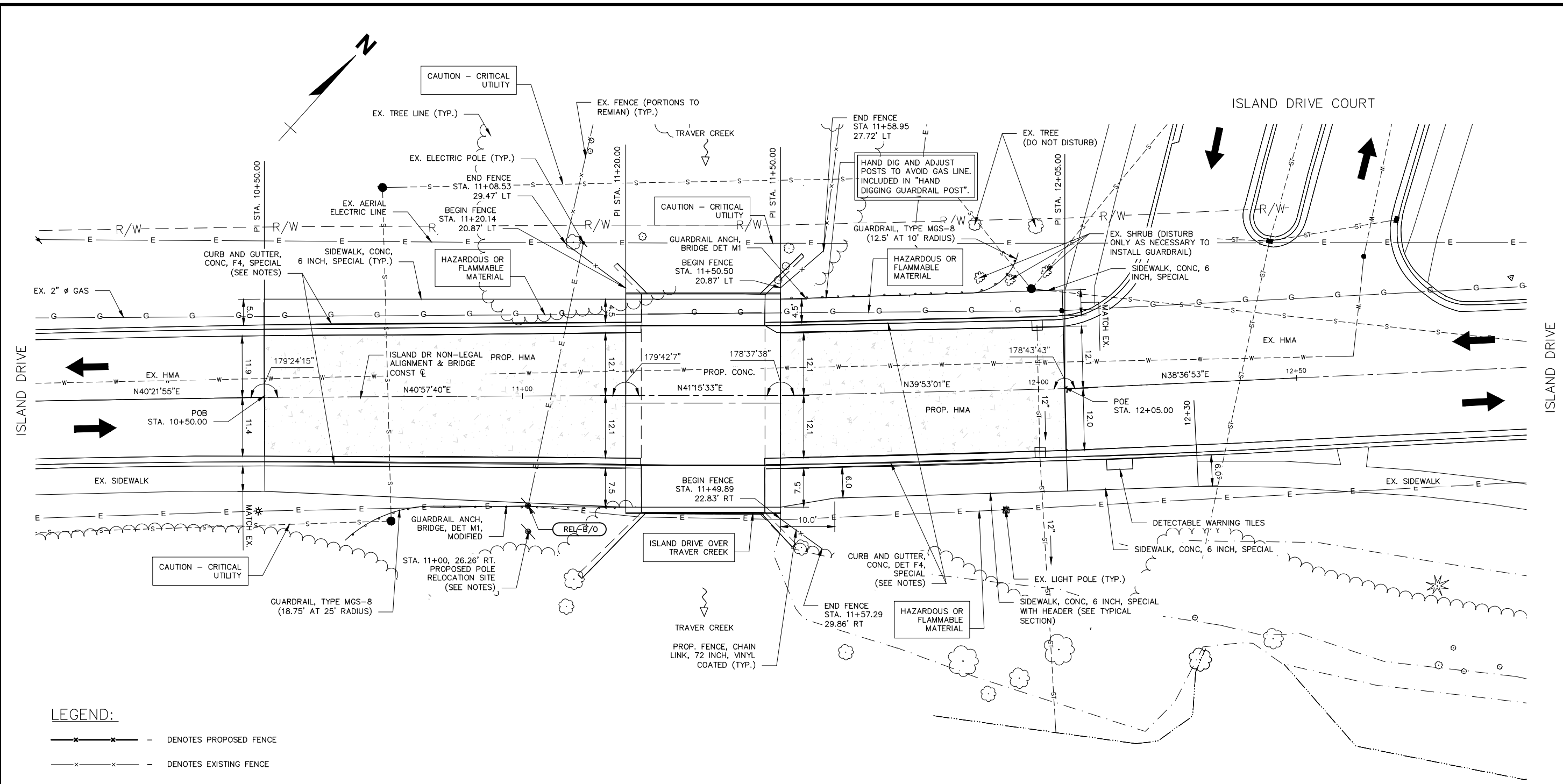
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PUBLIC SERVICES
301 EAST HURON STREET
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
CONSTRUCTION SHEET

SCALE NONE
PROFILE: N/A
DRAWING NO. 2020-025
SHEET NO.



LEGEND:
 -x-x- denotes PROPOSED FENCE
 -x-x- denotes EXISTING FENCE

HORIZONTAL CONTROL POINTS

CONTROL PT 1	DESCRIPTION	IRON PIN SET
	COORDINATES	288331.35, 13295263.72
	ELEVATION	762.44
CONTROL PT 2	DESCRIPTION	IRON PIN SET
	COORDINATES	288050.12, 13295079.38
	ELEVATION	761.39

CENTERLINE OF CONSTRUCTION CONTROL

STA	POINT	NORTHING	EASTING
8+95.00	BEGIN	288016.43	13295021.55
10+50.00	PI	288134.53	13295121.93
11+20.00	PI	288187.39	13295167.82
11+50.00	PI	288209.94	13295187.60
12+05.00	PI	288252.15	13295222.87
13+15.00	END	288338.09	13295291.52

BENCHMARKS

BENCHMARK	ELEVATION	STATION	OFFSET	DESCRIPTION
BENCHMARK A	763.26	13+11.78	23.49' LT	RR SPIKE IN SOUTH SIDE OF UTILITY POLE, NE QUADRANT OF ISLAND DR AND ISLAND COURT DR.
BENCHMARK B	764.57	8+99.33	34.53' LT	SPIKE IN SE SIDE OF UTILITY POLE, ON NORTH SIDE OF ISLAND DR, IN FRONT OF BUILDING #1110

NOTES:

POLE IS TO BE RELOCATED BY DTE PRIOR TO CONSTRUCTION. CONTRACTOR TO CONFIRM AND COORDINATE WITH DTE IF NECESSARY TO COMPLETE RELOCATION.

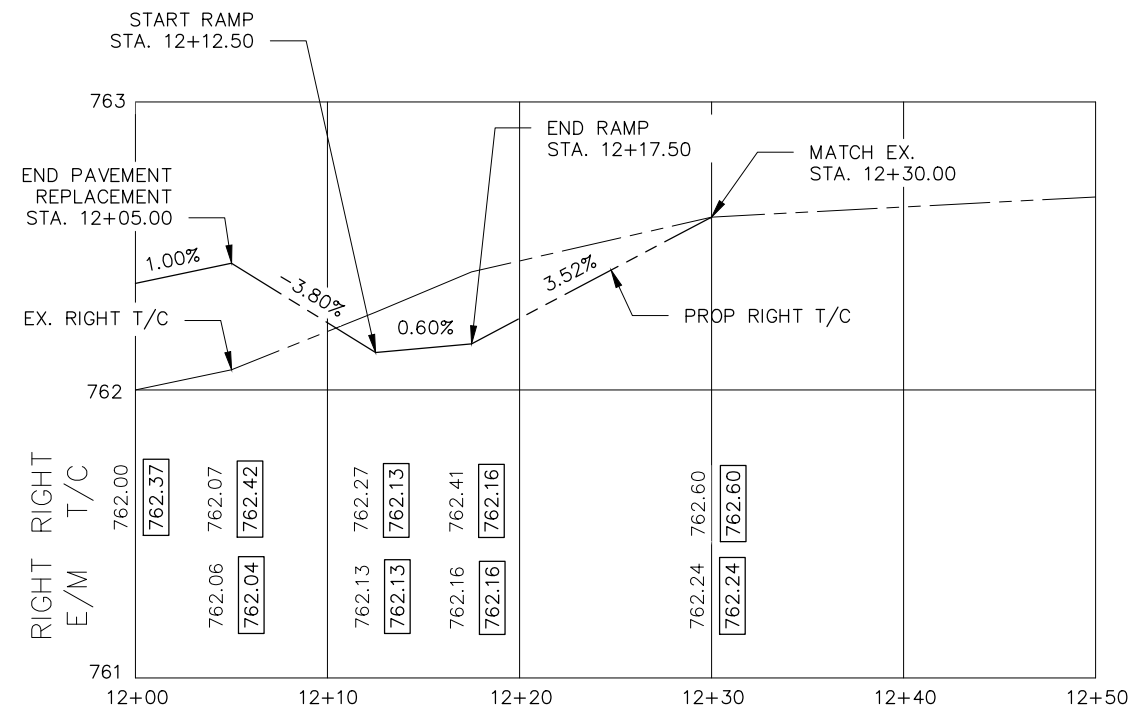
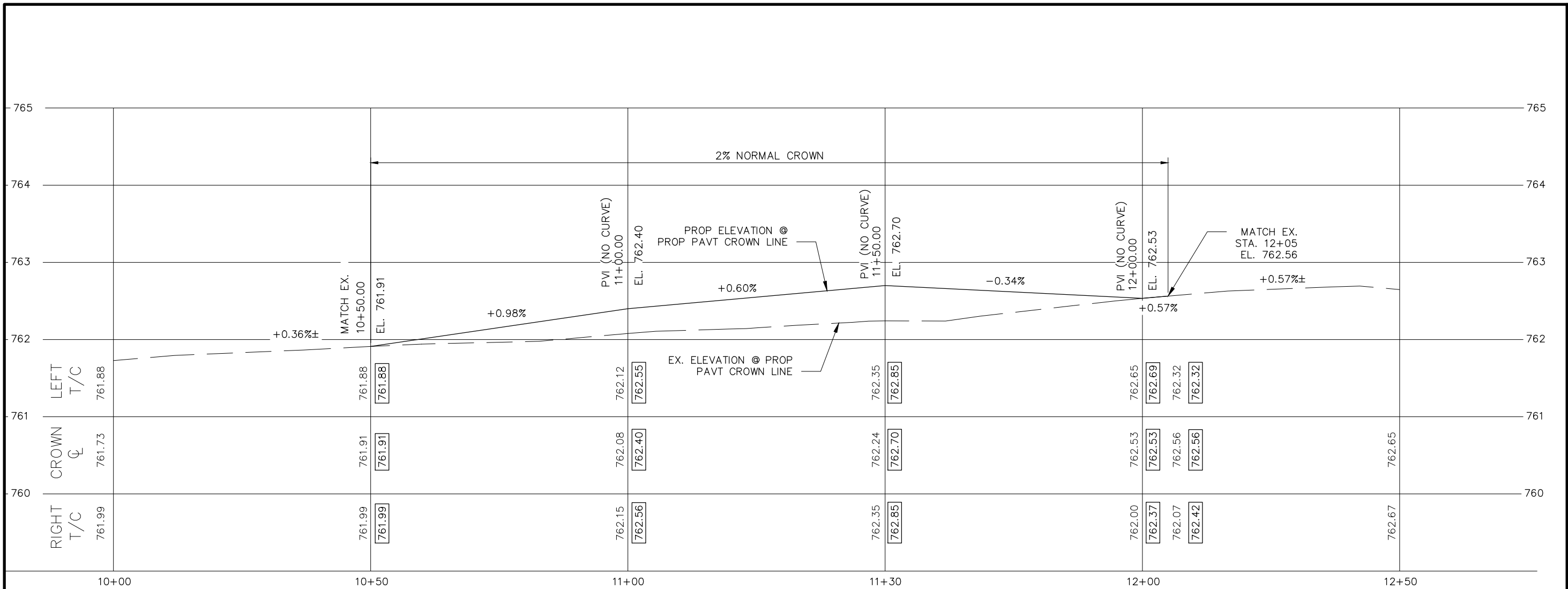
CURB AND GUTTER HEIGHT SHALL TRANSITION FROM 8" AT THE BRIDGE LIMITS (STATIONS 11+20 AND 11+50) DOWN TO 6" OVER 10 FEET OF LATERAL DISTANCE ALONG THE CURB (FROM STATION 11+10 TO STA. 11+20 AND FROM STATION 11+50 TO 11+60). PAYMENT FOR THIS TRANSITION IS INCLUDED IN PAY ITEM "CURB AND GUTTER, CONC, DET F4, SPECIAL"

THE CONTRACTOR SHALL INSTALL PROPOSED VINYL-CLAD FENCING SUCH THAT IT IS LOCATED DIRECTLY ADJACENT TO THE EDGE OF THE BRIDGE WITHOUT A GAP IN EXCESS OF 3". FENCE STATIONING PROVIDED IS APPROXIMATE AND FINAL FENCE PLACEMENT SHALL BE DIRECTED BY THE ENGINEER.

NO PROPOSED FENCE SHALL BE INSTALLED IN THE SOUTHWEST QUADRANT. APPROXIMATELY 10 FEET OF FENCE SHALL BE INSTALLED IN THE SOUTHEAST QUADRANT. THE FENCE IN THE SOUTHEAST QUADRANT SHALL TERMINATE WITHOUT TYING INTO ANY EXISTING FENCE.

PROPOSED FENCE SHALL BE INSTALLED IN THE NORTHEAST AND NORTHWEST QUADRANTS AS SHOWN. TIE THE REMAINING END OF THE PROPOSED FENCE INTO EXISTING CHAIN LINK FENCE AS DIRECTED BY THE ENGINEER AT AN EXISTING POST. INSTALL A TERMINAL FENCE POST IN THIS LOCATION SUCH THAT BOTH THE OLD AND NEW FENCING CAN BE REATTACHED TO IT AND STRETCHED TIGHT. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "FENCE, CHAIN-LINK, 72 INCH, VINYL COATED".

ISLAND DRIVE OVER TRAVER CREEK



SIDEWALK RAMP DETAIL
(APPLIES RIGHT SIDE ONLY)

ISLAND DRIVE OVER TRAVER CREEK



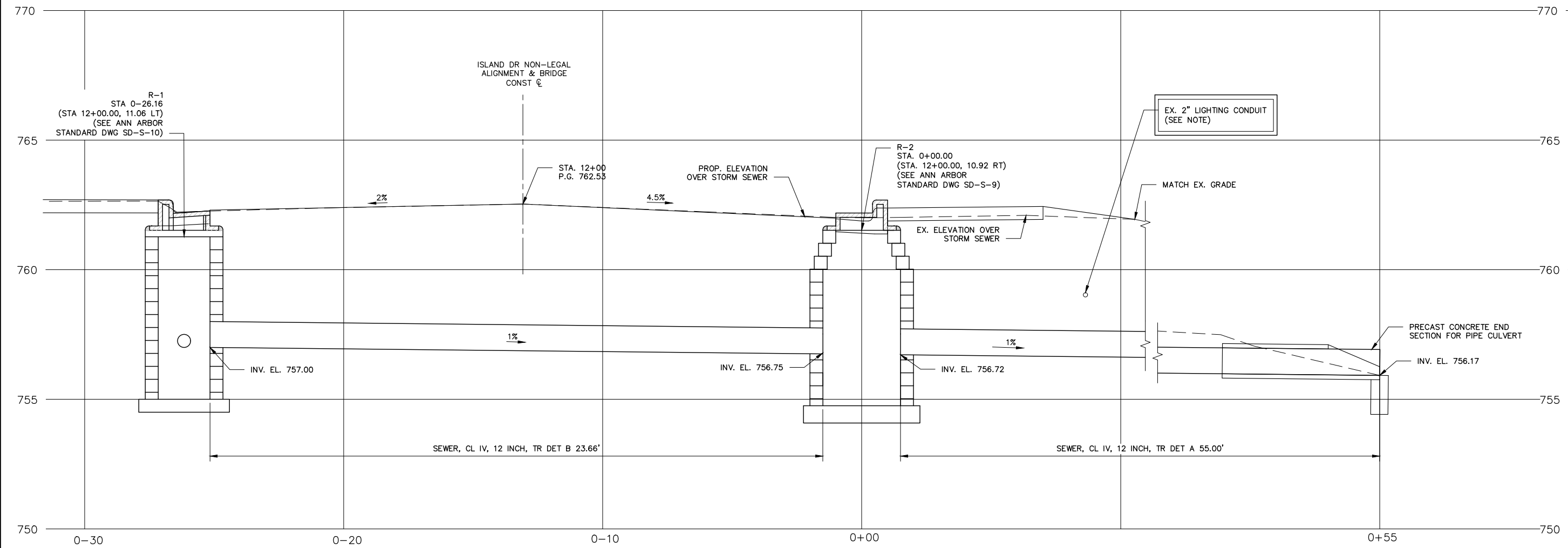
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICE
301 EAST HURON STREET
ANN ARBOR, MI 48106-0647
www.a2gov.org



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
PROFILE SHEET

SCALE NONE
PROFILE: NA
DRAWING No. 2020-025



STRUCTURE/ STATION, OFFSET	TOP-OF-CASTING ELEVATION	E/M ELEVATION	INVERT ELEV. SIZE DIRECTION	DEPTH (FEET)	SIZE	APPLICATION/ CONSTRUCTION
R-1/ 12+00.00, 11.06' LT	762.69	762.28	757.50 6" UD 757.00 12" S	7.73'	SINGLE INLET	SINGLE INLET/NEW (COVER K)
R-2/ 12+00.00, 10.92' RT	762.37	761.96	757.25 6" UD 756.75 12" S	8.10'	3' DIA.	INLET JUNCTION - NEW (COVER K)

NOTES:

LOCATION OF EXISTING 2" LIGHTING CONDUIT IS APPROXIMATE. TAKE CARE WHEN EXCAVATING TO AVOID DAMAGING THIS CONDUIT, AND SUPPORT IT THROUGHOUT CONSTRUCTION TO AVOID DAMAGE. ANY DAMAGE TO THE EXISTING 2" LIGHTING CONDUIT WILL BE REPAIRED BY THE CONTRACTOR. SUPPORTING THE CONDUIT DURING CONSTRUCTION SHALL BE INCLUDED FOR PAYMENT IN "SEWER, CL IV, 12 INCH, TR DET A". NO ADDITIONAL PAYMENT WILL BE MADE TO REPAIR ANY DAMAGE TO THE EXISTING 2" LIGHTING CONDUIT.

ISLAND DRIVE OVER TRAVER CREEK

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 CITY OF ANN ARBOR 2020 BRIDGE
 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 STORM SEWER PROFILE

SCALE NONE
 DRAWING No. 2020-025
 PROFILE: NA

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
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 301 EAST HURON STREET
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 ANN ARBOR 734-774-4410
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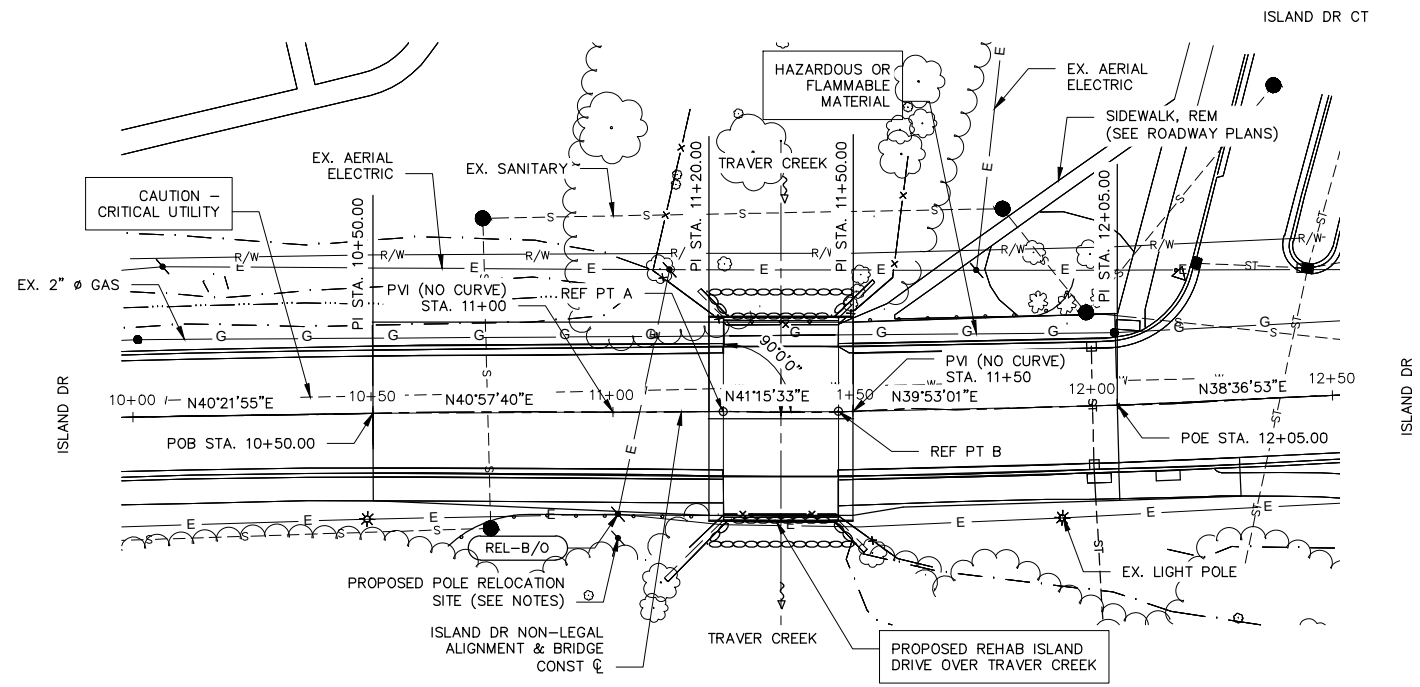
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICES
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ANN ARBOR MI 48106-1667
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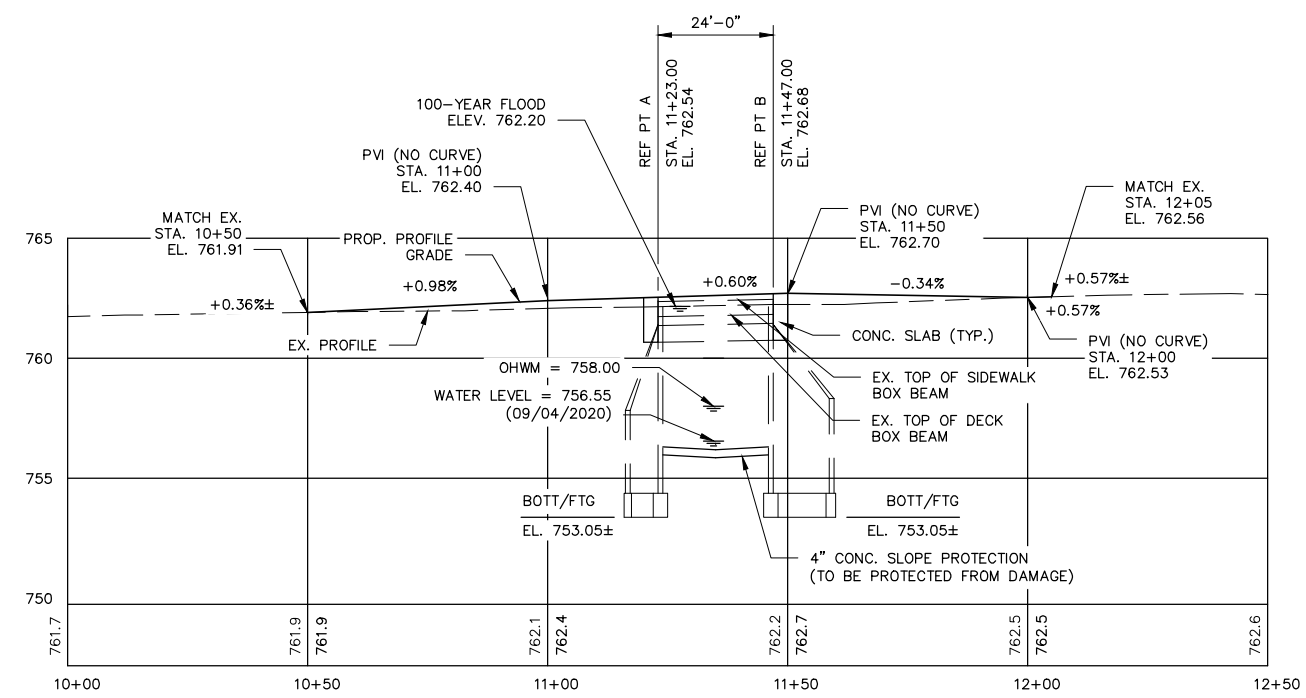


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
GENERAL PLAN OF SITE

SCALE NONE
PROFILE: NA
DRAWING No. 2020-025
SHEET No.



SITUATION PLAN



PROFILE ALONG ISLAND DRIVE NON-LEGAL ALIGNMENT

VERTICAL SCALE 1" = 4'

EXISTING STRUCTURE

THE EXISTING STRUCTURE IS A SINGLE SPAN BOX BEAM SUPERSTRUCTURE ON SPREAD FOOTINGS AND WAS BUILT IN 1962. IT HAS AN OVERALL LENGTH OF 24'-0" WITH AN OUT TO OUT WIDTH 42'-3", CLEAR ROADWAY IS 27'-2" AND WAS DESIGNED FOR HS 20 LIVE LOAD.

BENCHMARKS

SEE ROADWAY SHEETS FOR BENCHMARKS

UTILITIES

SEE PROJECT INFORMATION SHEET FOR UTILITIES

NOTES:

THE WORK COVERED BY THESE PLANS INCLUDES REMOVAL OF THE ASPHALT WEARING SURFACE, THE INSTALLATION OF A NEW CONCRETE WEARING SURFACE, BARRIER REPLACEMENT, FENCE REPLACEMENT AND SLOPE PROTECTION REPAIRS. ALL OTHER WORK IS INCLUDED IN THE ROADWAY PLANS THAT ARE A PART OF THIS CONTRACT.

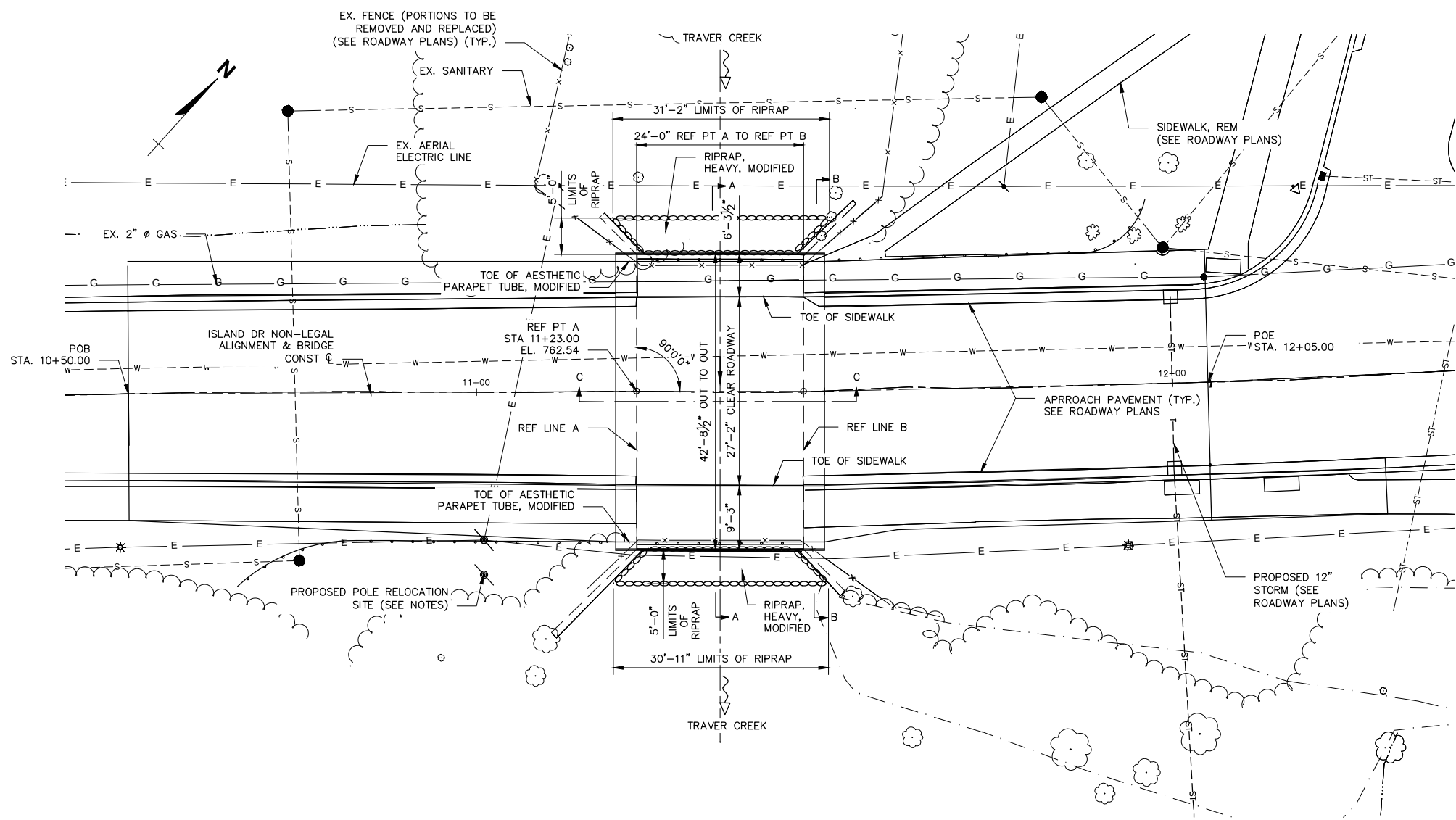
THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.

ISLAND DRIVE VEHICULAR AND PEDESTRIAN TRAFFIC IS TO BE DETOURED UTILIZING EXISTING ROADS.

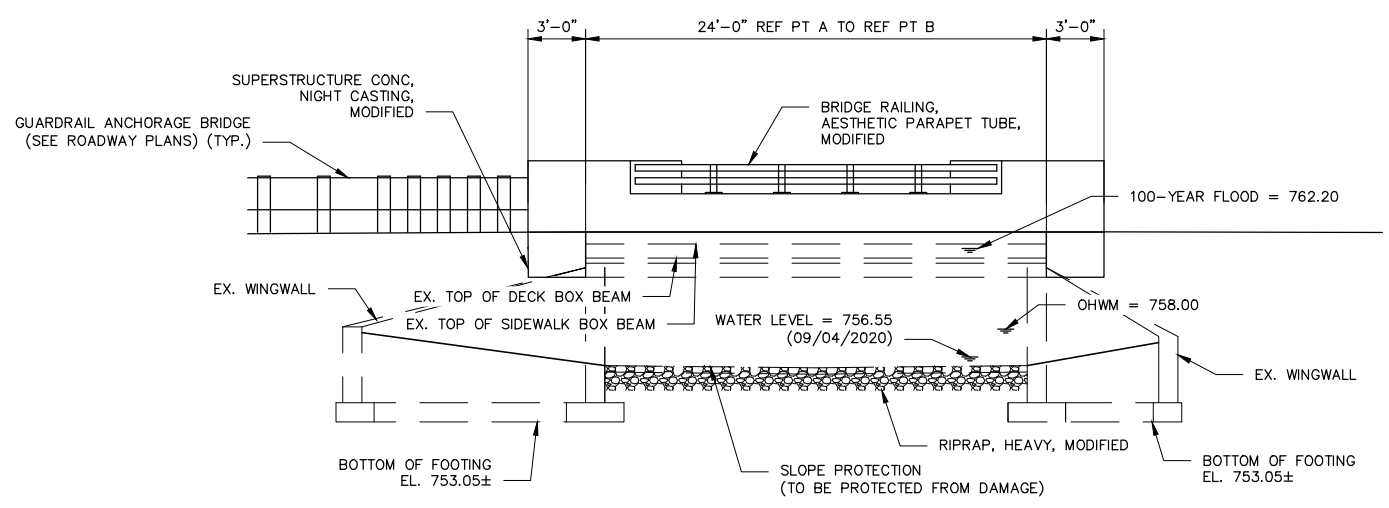
PLAN ELEVATIONS REFER TO NAVD 88 DATUM.

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. REMOVAL OF DEBRIS WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS".

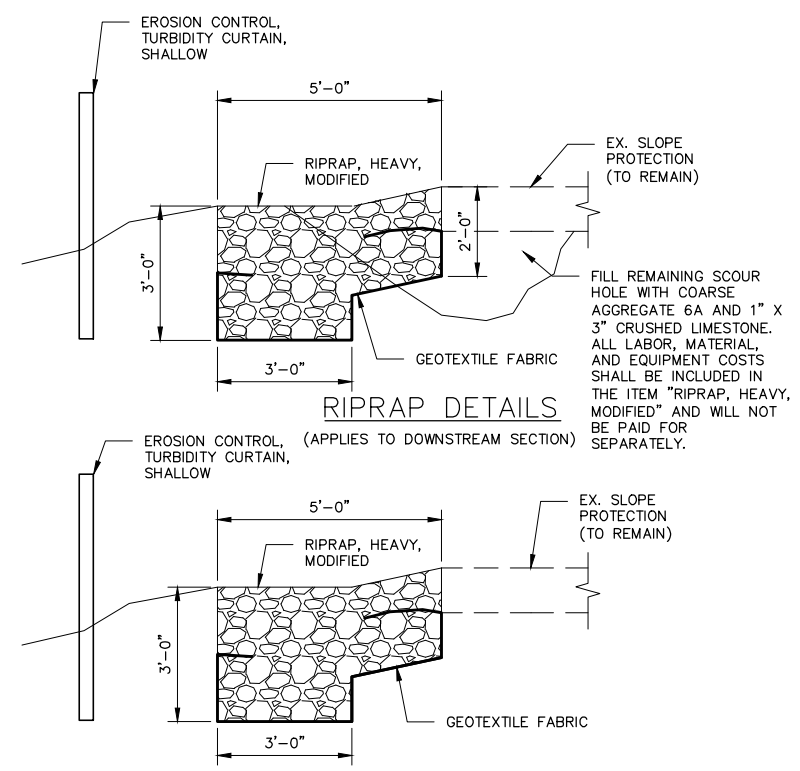
POLE IS TO BE RELOCATED BY DTE PRIOR TO CONSTRUCTION. CONTRACTOR TO CONFIRM AND COORDINATE WITH DTE IF NECESSARY TO COMPLETE RELOCATION.



PLAN



ELEVATION



RIPRAP DETAILS
(APPLIES TO DOWNSTREAM SECTION)

RIPRAP DETAILS
(APPLIES TO UPSTREAM SECTION)

NOTES:

- THE WORK COVERED BY THESE PLANS INCLUDES REMOVAL OF THE EXISTING ASPHALT WEARING SURFACE, THE INSTALLATION OF A NEW CONCRETE WEARING SURFACE, BARRIER REPLACEMENT, SLOPE PROTECTION REPAIRS, AND MAINTAINING TRAFFIC.
- THE REHABILITATION DESIGN OF THIS STRUCTURE IS BASED ON THE CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES HS20-44. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/1000 OF SPAN LENGTH. THE ORIGINAL STRUCTURE WAS DESIGNED FOR H-20 LOADING.
- FOR DETAILS OF SLOPE PROTECTION, SEE STANDARD PLAN B-102-SERIES.
- THE RIPRAP QUANTITY IS BASED ON THE LATERAL DIMENSIONS OF THE AREA TO BE PROTECTED, REGARDLESS OF THE NUMBER OF LAYERS REQUIRED. THE ESTIMATED WEIGHT OF RIPRAP IS 48 TONS.
- POLE IS TO BE RELOCATED BY DTE PRIOR TO CONSTRUCTION. CONTRACTOR TO CONFIRM AND COORDINATE WITH DTE IF NECESSARY TO COMPLETE RELOCATION.

ISLAND DRIVE OVER TRAVER CREEK

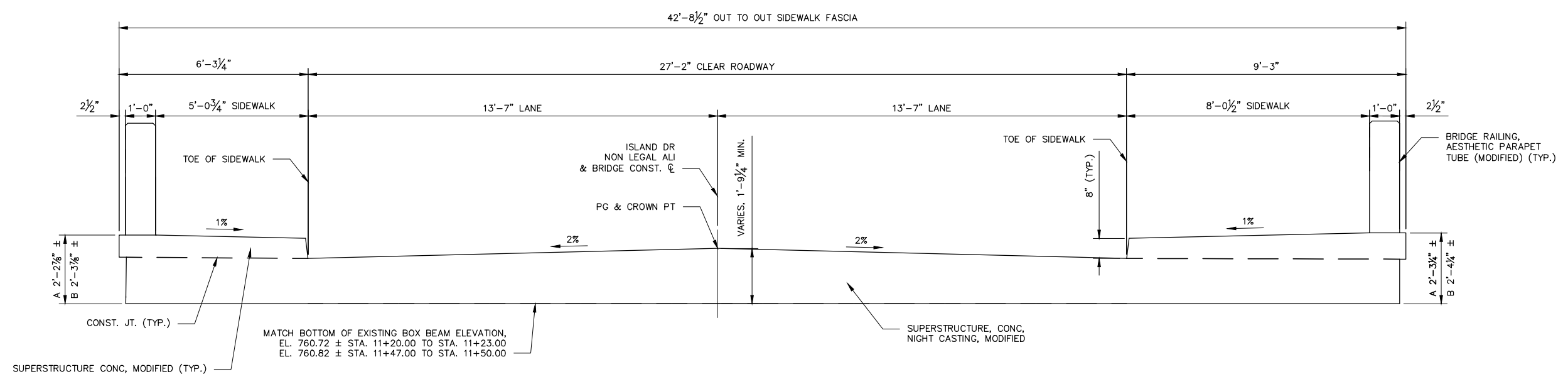
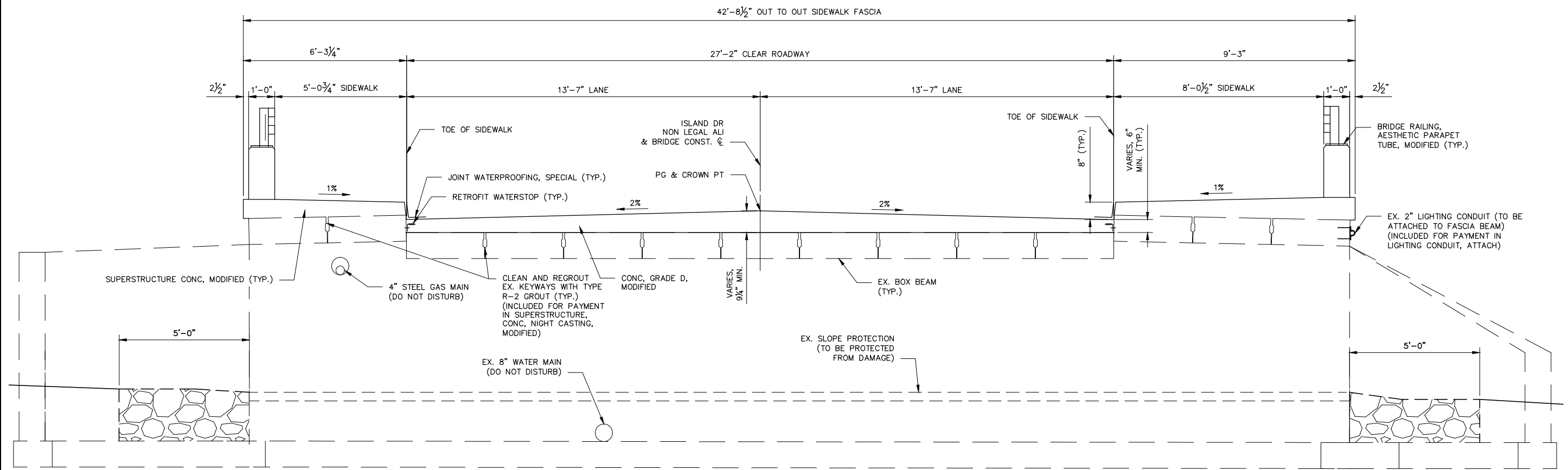
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR	PROFILE: N/A	SCALE: NONE
CITY OF ANN ARBOR 301 EAST HURON STREET ANN ARBOR, MI 48106-0667 www.a2gov.org		
CITY OF ANN ARBOR CAPITAL PREVENTIVE MAINTENANCE REPAIRS		
GENERAL PLAN OF STRUCTURE		
DRAWING No. 2020-025		
SHEET No. 15 of 70		

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

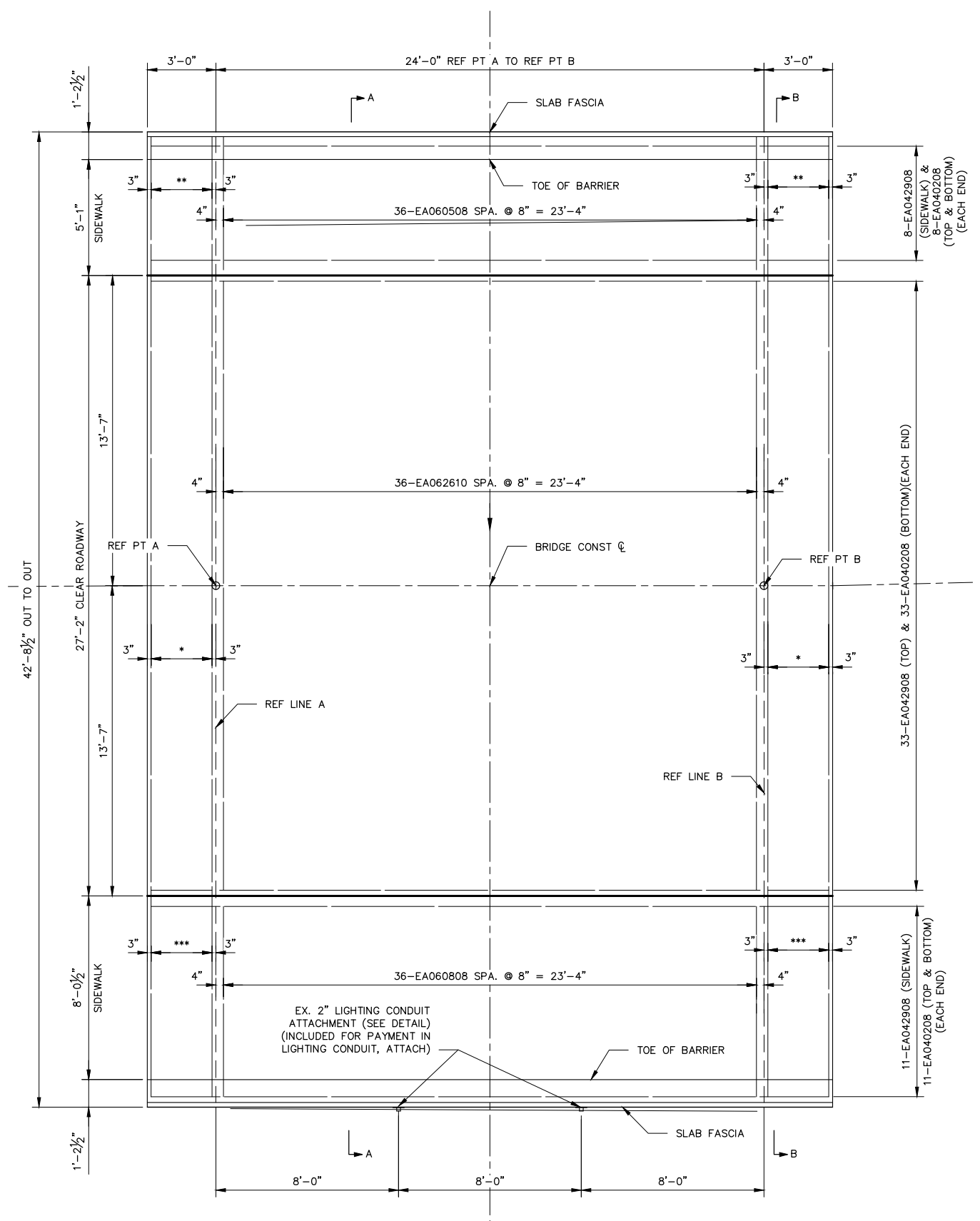
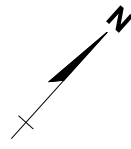
CITY OF ANN ARBOR
 PUBLIC SERVICES
 301 EAST HURON STREET
 ANN ARBOR, MI 48106-1667
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 CITY OF ANN ARBOR 2020 BRIDGE
 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 GENERAL PLAN OF STRUCTURE
 SCALE NONE
 PROFILE: N/A
 DRAWING No. 2020-025

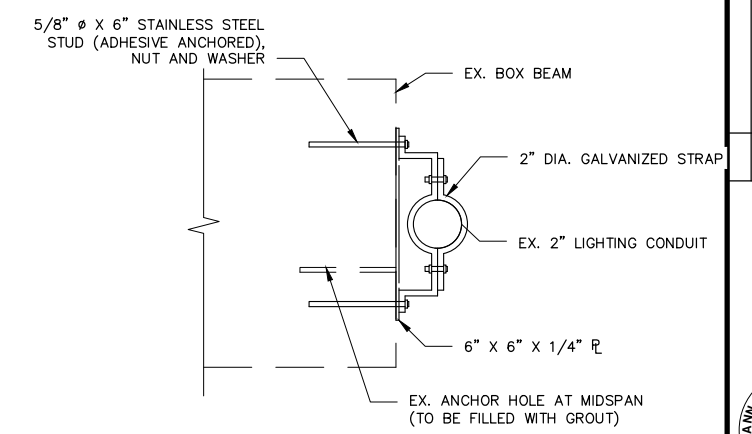


ISLAND DRIVE OVER TRAVER CREEK

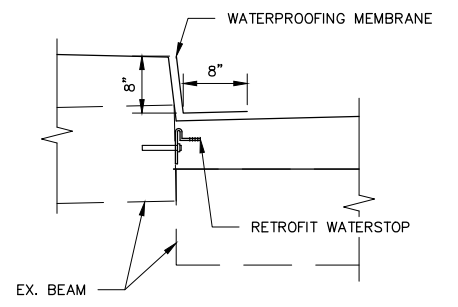


PLAN

EL04 BARS CAST WITH SIDEWALK. SEE PLAN OF BARRIER



LIGHTING CONDUIT ATTACHMENT DETAIL



JOINT WATERPROOFING DETAIL

LEGEND

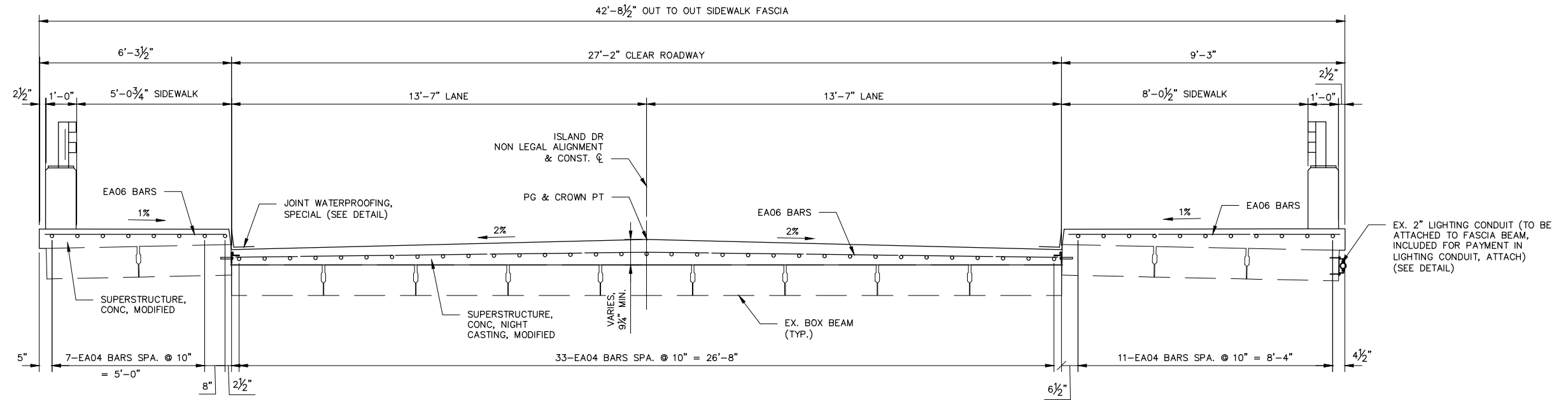
- * - 6-EA064204 SPA. @ 6" = 2'-6" (TOP & BOTTOM)
- ** - 6-ED060906 SPA. @ 6" = 2'-6"
- *** - 6-ED061206 SPA. @ 6" = 2'-6"

REV.	DATE	DRAWN	CHECKED	DESCRIPTION

CITY OF ANN ARBOR
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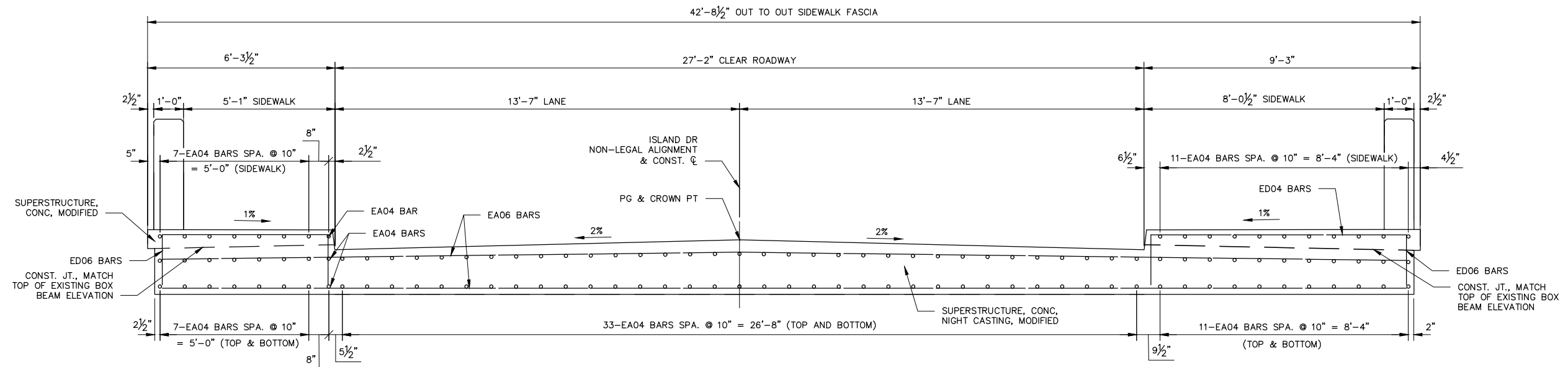
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS

PROFILE: NA
 SCALE: NONE
 DRAWING No. **2020-025**
 SHEET No. **18 of 70**



SECTION A-A

APPLIES STA. 11+23.00 TO STA. 11+47.00
(LOOKING EASTERLY)



SECTION B-B

APPLIES STA. 11+20.00 TO STA. 11+23.00
APPLIES STA. 11+47.00 TO STA. 11+50.00
(LOOKING EASTERLY)

ISLAND DRIVE OVER TRAVER CREEK

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
SLAB DETAIL

SCALE NONE
PROFILE: NA
DRAWING No. 2020-025
SHEET No.



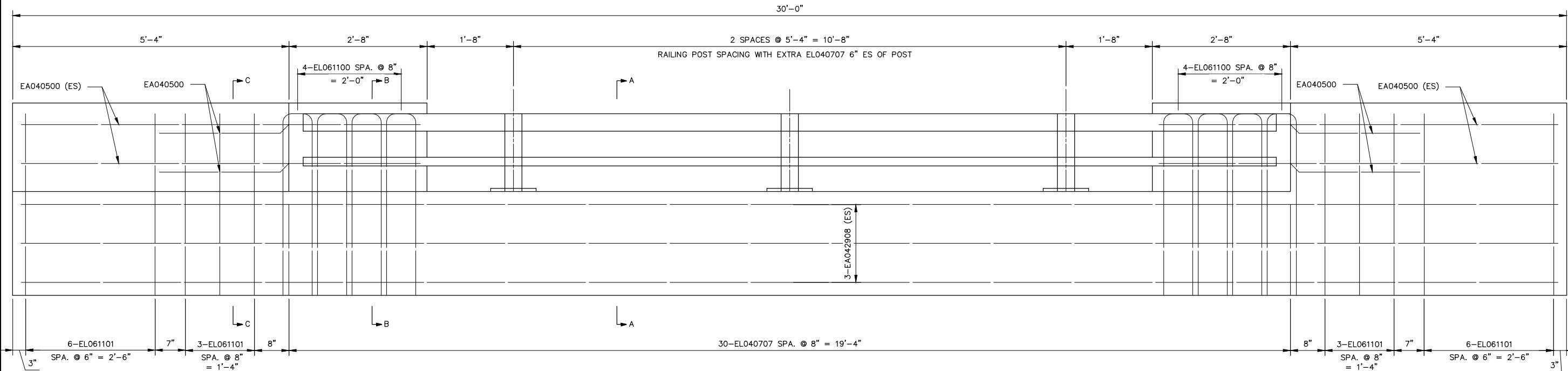
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICES
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www.a3gov.org

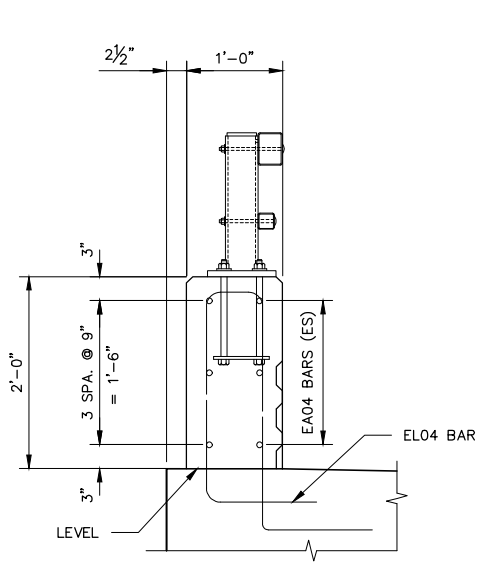


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
BARRIER DETAILS

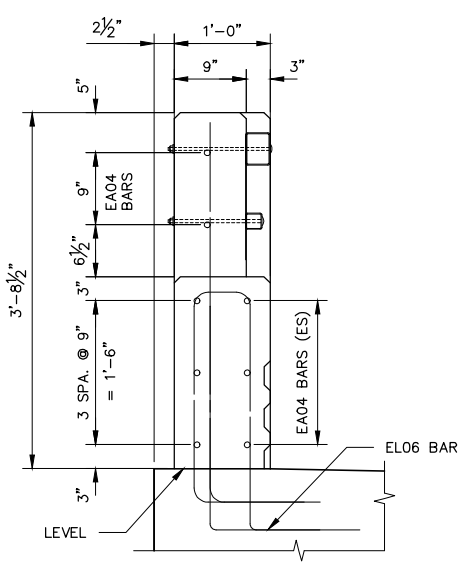
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SCALE: NONE
DRAWING No. 2020-025
SHEET No.



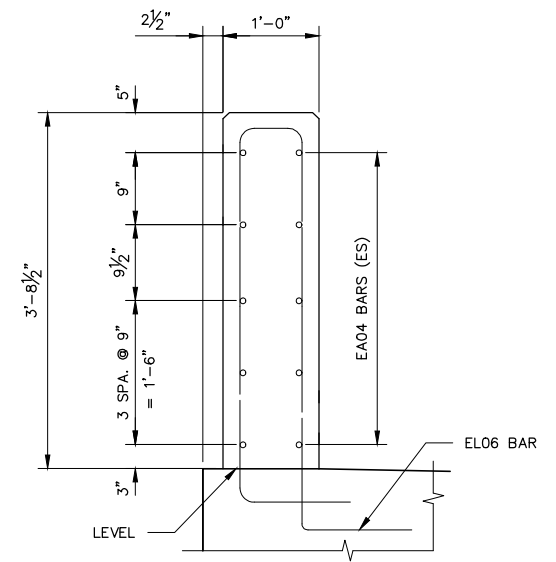
BARRIER ELEVATION



SECTION A-A



SECTION B-B

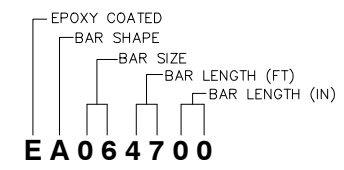
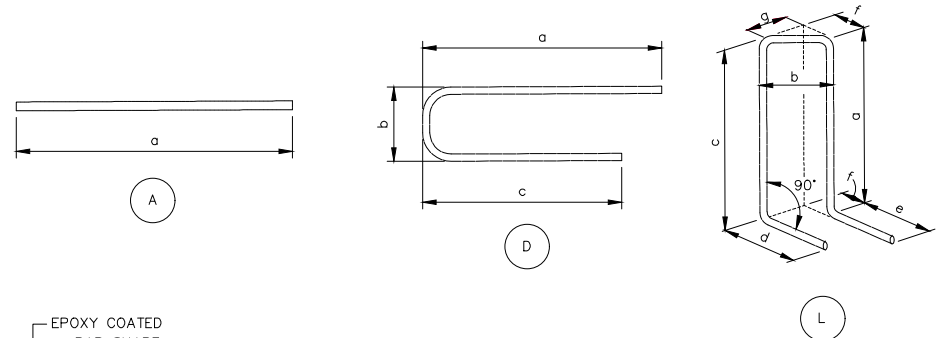


SECTION C-C

ISLAND DRIVE OVER TRAVER CREEK

SLAB REINFORCING STEEL LIST												
MARK	DIMENSIONS									NUMBER	WEIGHT	
	A	B	C	D	E	F	G	H	J			
EA040208	2'-8"										142.00	253
EA042908	29'-8"										52.00	1031
EA062610	26'-10"										36.00	1451
EA064204	42'-4"										24.00	1520
EA060508	5'-8"										36.00	306
EA060808	8'-8"										36.00	469
ED060906	1'-11"	5'-8"	1'-11"								12.00	171
ED061206	1'-11"	8'-8"	1'-11"								12.00	225
SLAB TOTAL											5426	

RAILING REINFORCING STEEL LIST												
MARK	DIMENSIONS									NUMBER	WEIGHT	
	A	B	C	D	E	F	G	H	J			
EA040500	5'-0"										24.00	80
EA042908	29'-8"										12.00	238
EL040707	2'-2"	7"	2'-6"	1'-2"	1'-2"	7"	0"				72.00	365
EL061100	3'-10 1/2"	6 3/4"	4'-2 1/2"	1'-2 1/8"	1'-2 1/8"	0"	6 3/4"				16.00	264
EL061101	4'-2 1/2"	7 1/4"	3'-10 1/2"	1'-2 3/8"	1'-2 3/8"	7 1/4"	0"				36.00	599
RAILING TOTAL											1546	



EA064700
BAR LEGEND

NOTES
REINFORCEMENT SHALL BE BUNDLED AND TAGGED AS TO THE LOCATION AS SHOWN ON THIS SHEET.

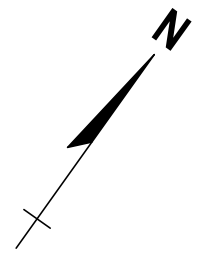
ISLAND DRIVE OVER TRAVER CREEK

	<p>CITY OF ANN ARBOR PUBLIC SERVICE 301 EAST HURON STREET ANN ARBOR MI 48106-0667 www.a2gov.org</p>	<p>REINFORCEMENT LIST</p>	<p>PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS</p>
<p>SCALE NONE</p>	<p>PROFILE: NA</p>	<p>DRAWING No. 2020-025</p>	<p>SHEET No. 21 of 70</p>

E SUMMIT ST

DEPOT ST

NORFOLK SOUTHERN RAILWAY



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CITY OF ANN ARBOR
PUBLIC SERVICE
301 EAST HURON STREET
ANN ARBOR, MI 48106-1647
ANN ARBOR 734-774-4810
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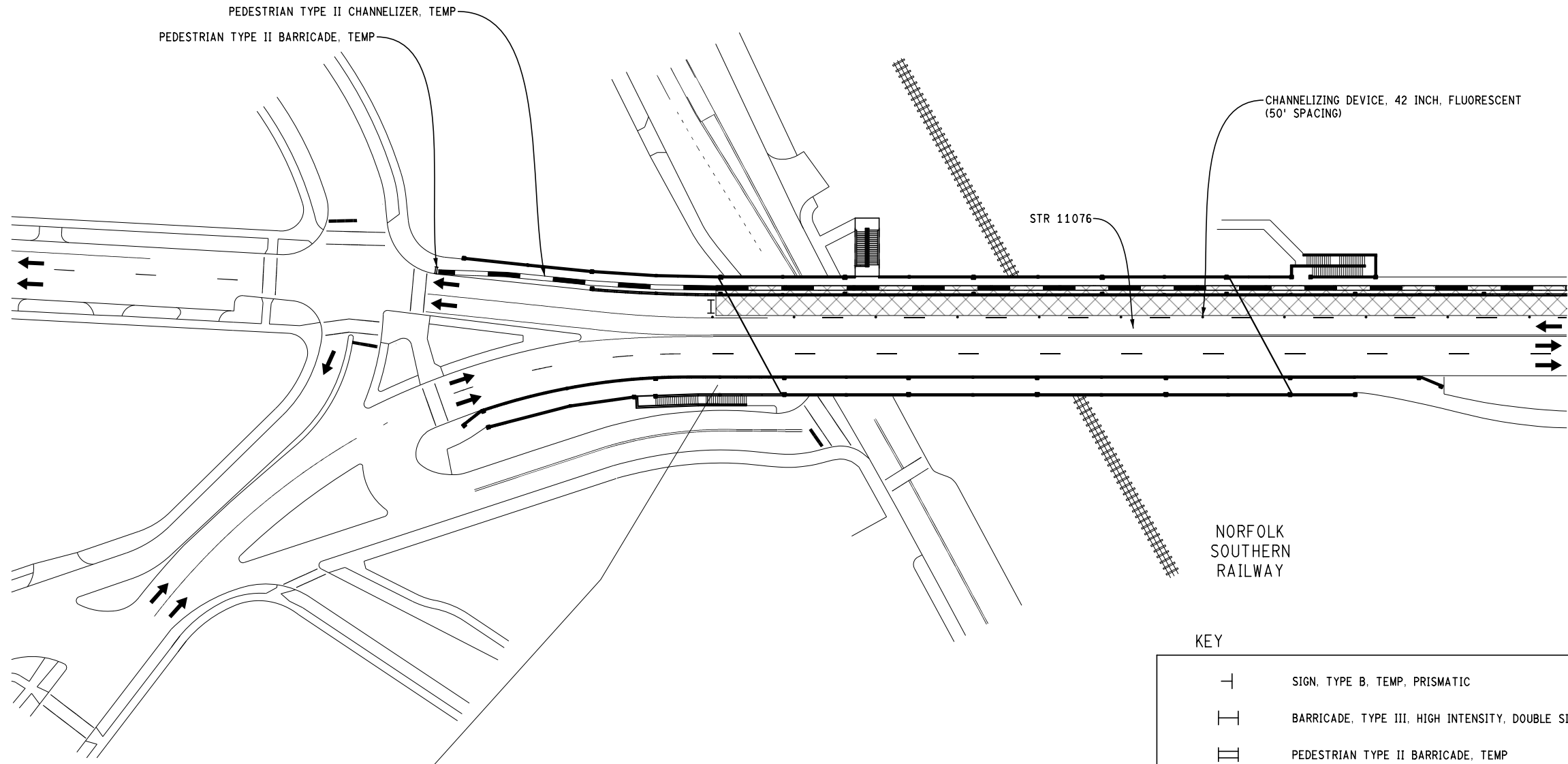
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
MAINTAINING TRAFFIC

SCALE: 0 80 PLAN (FT)
DRAWING No. 2020-025

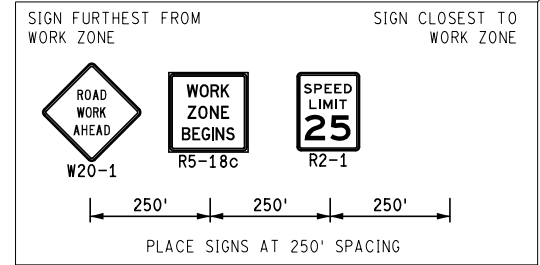
BEAKES ST

DETROIT ST

BROADWAY



STAGE 1
APPLIES: CLOSE WB OUTSIDE LANE



KEY

	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH

N DIVISION ST

HIGH ST

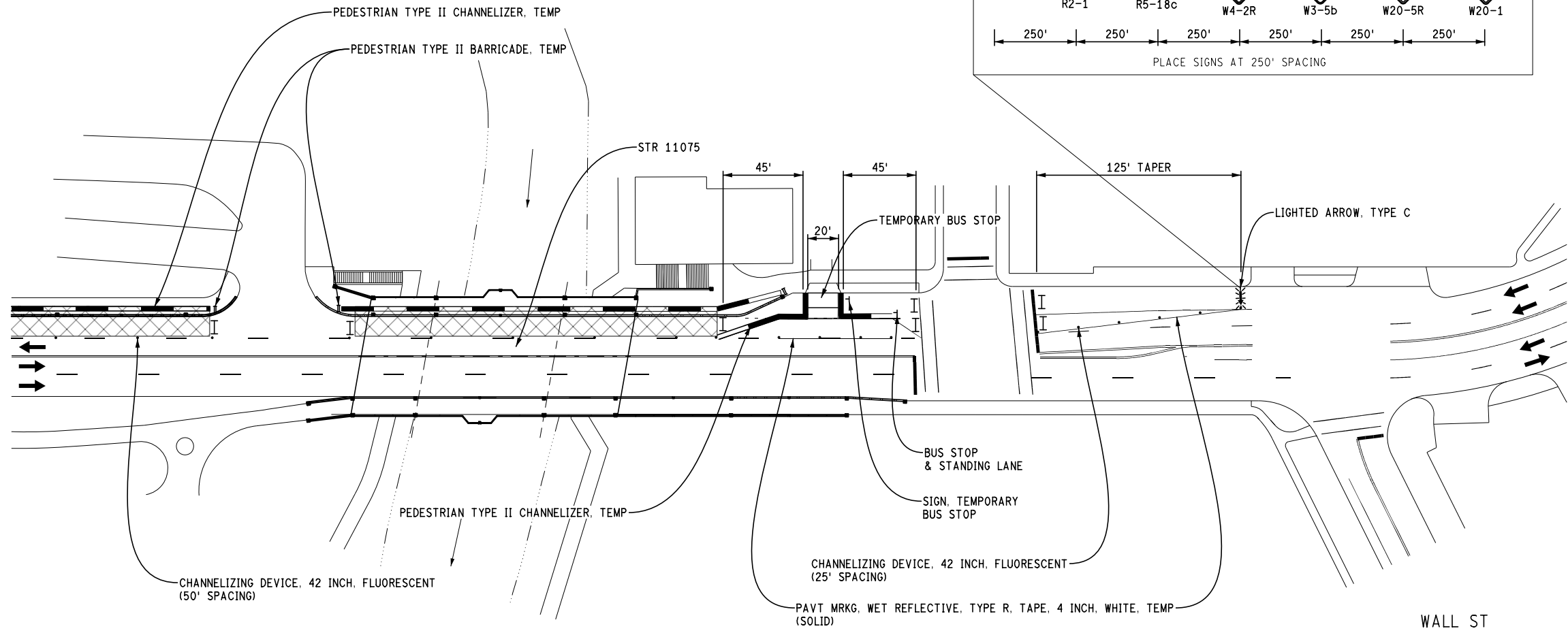
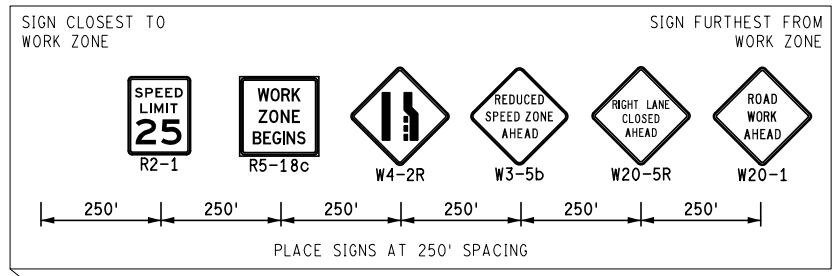
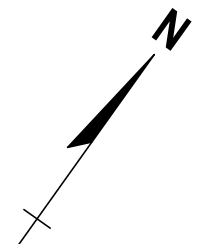
DEPOT ST

MAINTAINING TRAFFIC
(BROADWAY OVER DEPOT STREET AND MDOT RAILROAD & BROADWAY OVER HURON RIVER)

FILE NAME: Z:\2019\80381\CAD\CIVIL\BROADWAY\101_MOT_STAGE1.DGN

HURON RIVER

SWIFT ST

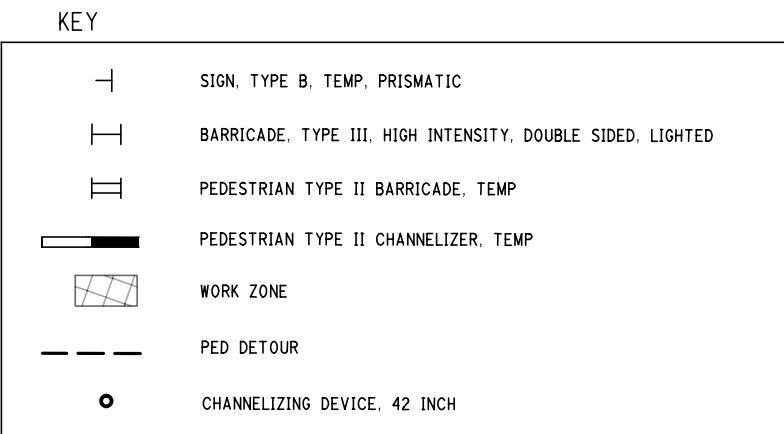


BROADWAY

BROADWAY

WALL ST

STAGE 1
APPLIES: CLOSE WB OUTSIDE LANE



HURON RIVER

MAINTAINING TRAFFIC
(BROADWAY OVER DEPOT STREET AND MDOT RAILROAD & BROADWAY OVER HURON RIVER)

FILE NAME: Z:\2019\80381\CAD\CAD\MOT\BROADWAY\1002_MOT_STAGE1.DGN

811
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CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106
734-794-6477
www.a2gov.org

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
MAINTAINING TRAFFIC

SCALE: 0 80 PLAN (FT)

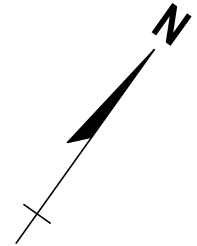
DRAWING No. 2020-025

SHEET No. 23 of 70

E SUMMIT ST

DEPOT ST

NORFOLK SOUTHERN RAILWAY



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICE
301 EAST HURON STREET
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www.a2gov.org



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
MAINTAINING TRAFFIC

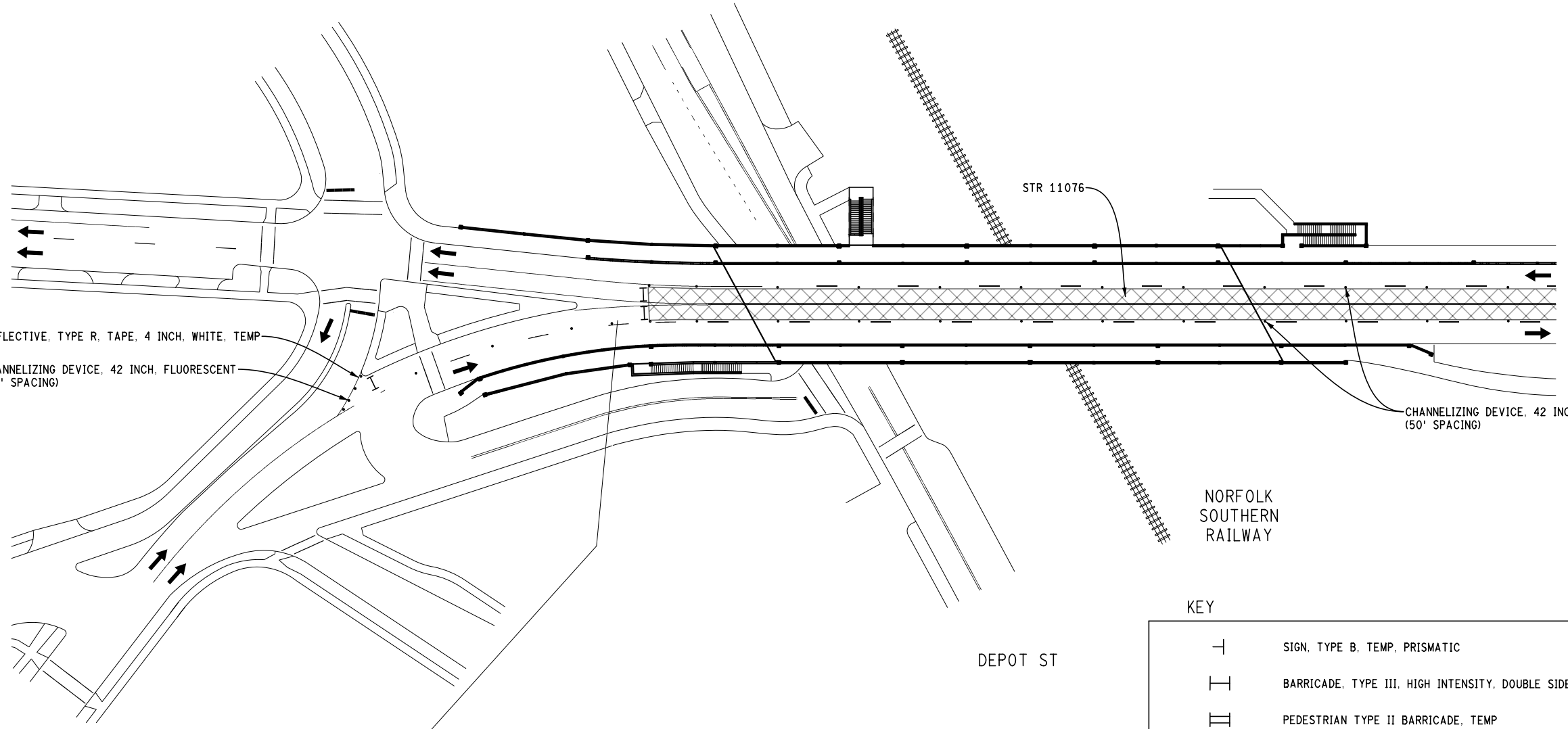
SCALE: 0 80 PLAN (FT)
DRAWING No. 2020-025

SHEET No. 24 of 70

BEAKES ST

DETROIT ST

BROADWAY



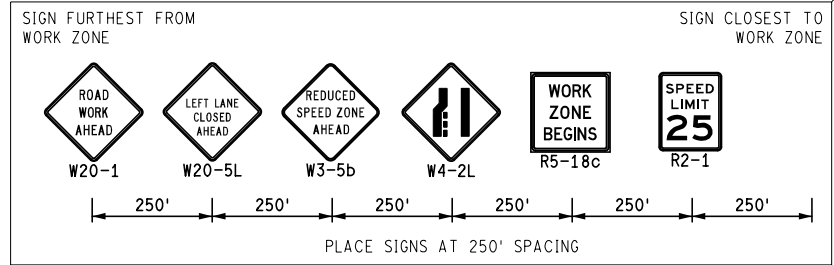
PAVT MRKG, WET REFLECTIVE, TYPE R, TAPE, 4 INCH, WHITE, TEMP (SOLID)
CHANNELIZING DEVICE, 42 INCH, FLUORESCENT (10' SPACING)

CHANNELIZING DEVICE, 42 INCH, FLUORESCENT (50' SPACING)

KEY

	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH

STAGE 2
APPLIES: CLOSE WB AND EB INSIDE LANES



N DIVISION ST

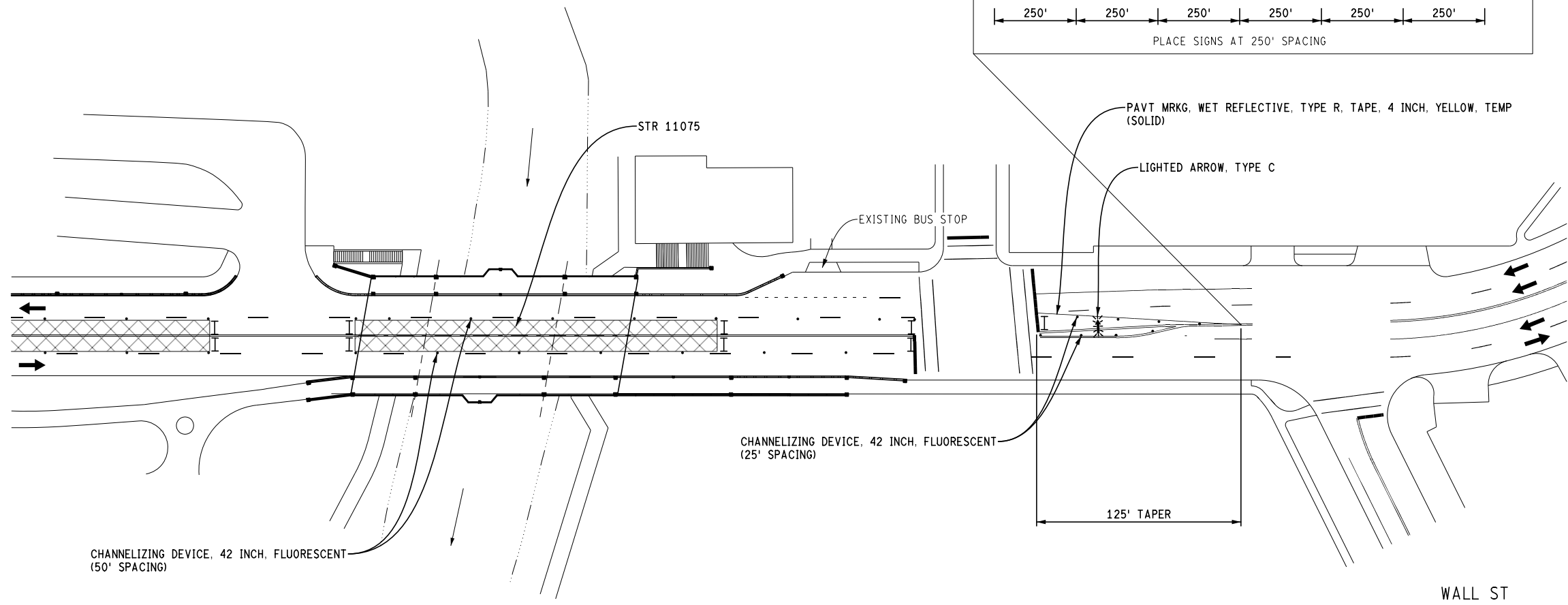
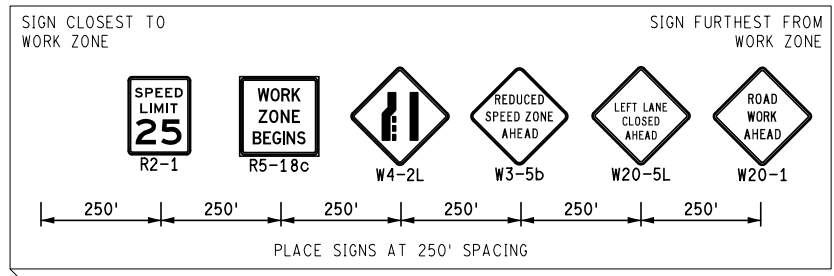
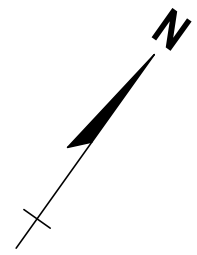
HIGH ST

MAINTAINING TRAFFIC
(BROADWAY OVER DEPOT STREET AND MDOT RAILROAD & BROADWAY OVER HURON RIVER)

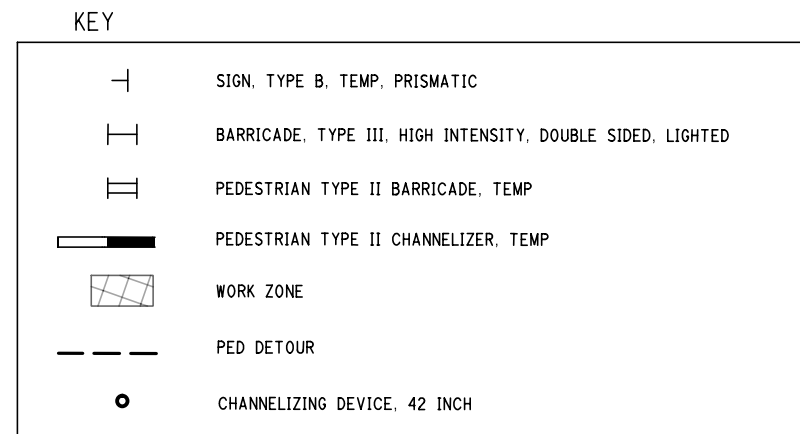
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HURON RIVER

SWIFT ST



STAGE 2
 APPLIES: CLOSE WB AND EB INSIDE LANES



MAINTAINING TRAFFIC
 (BROADWAY OVER DEPOT STREET AND MDOT RAILROAD & BROADWAY OVER HURON RIVER)

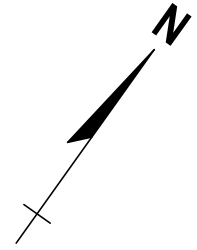
FILE NAME: Z:\2019\80381\CAD\CAD\MOT\BROADWAY2020_MOT_STAGE2.DGN

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DESCRIPTION	DATE
REV.	CHECKED
CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48106-1500 734-794-4810 www.a2gov.org	
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS MAINTAINING TRAFFIC	
SCALE: 0 80 PLAN (FT)	DRAWING No. 2020-025
SHEET No. 25 of 70	

E SUMMIT ST

DEPOT ST

NORFOLK SOUTHERN RAILWAY



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
MAINTAINING TRAFFIC

SCALE: 0 80 PLAN (FT)

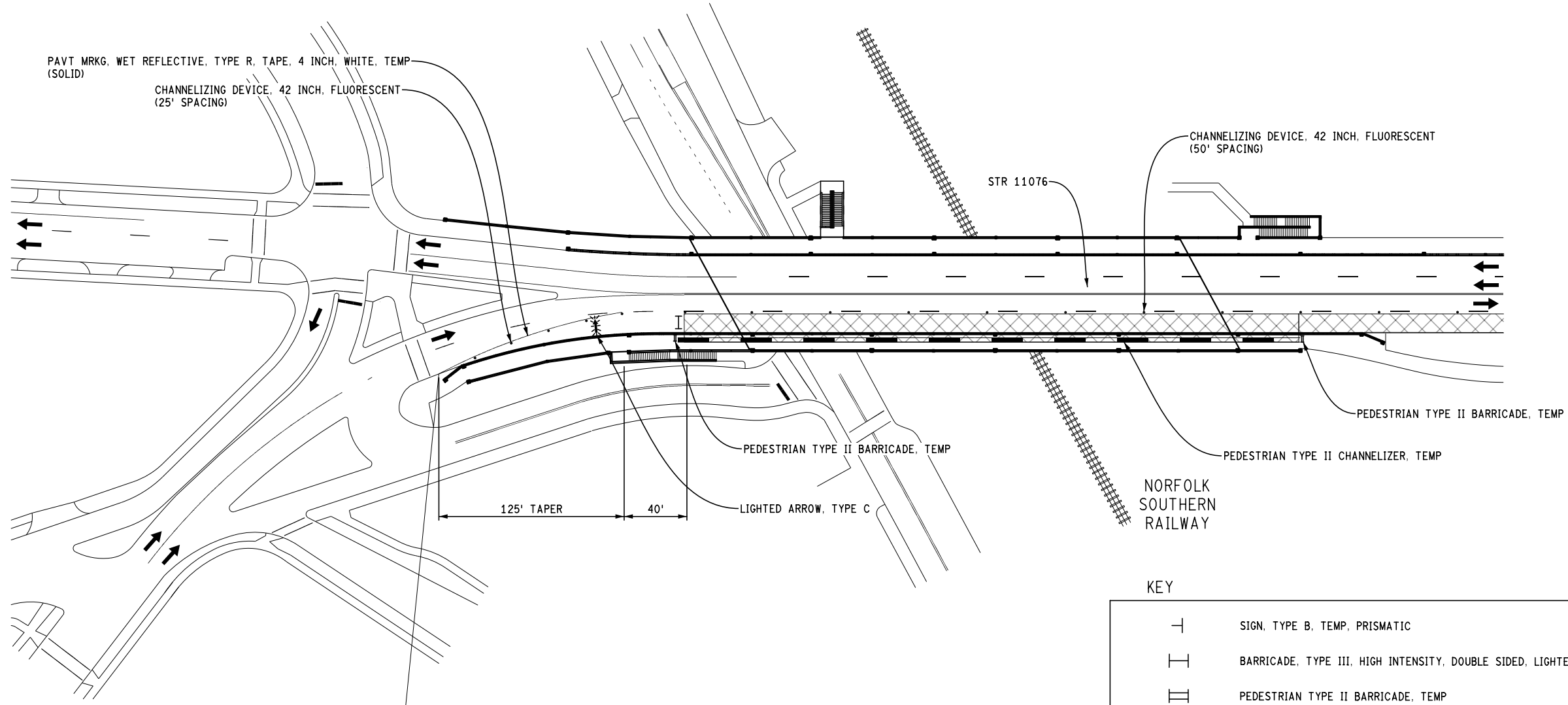
DRAWING No. 2020-025

SHEET No. 26 of 70

BEAKES ST

DETROIT ST

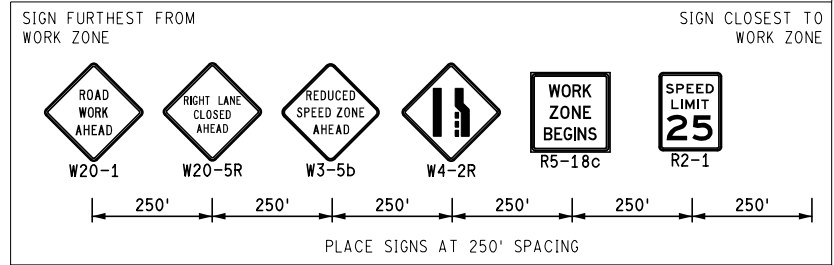
BROADWAY



STAGE 3
APPLIES: CLOSE EB OUTSIDE LANE

KEY

	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH



N DIVISION ST

HIGH ST

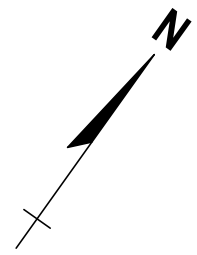
DEPOT ST

MAINTAINING TRAFFIC
(BROADWAY OVER DEPOT STREET AND MDOT RAILROAD & BROADWAY OVER HURON RIVER)

FILE NAME: Z:\2019\80381\CAD\DMOT\BRDWAY\001_MOT_STAGE3.DGN

HURON RIVER

SWIFT ST



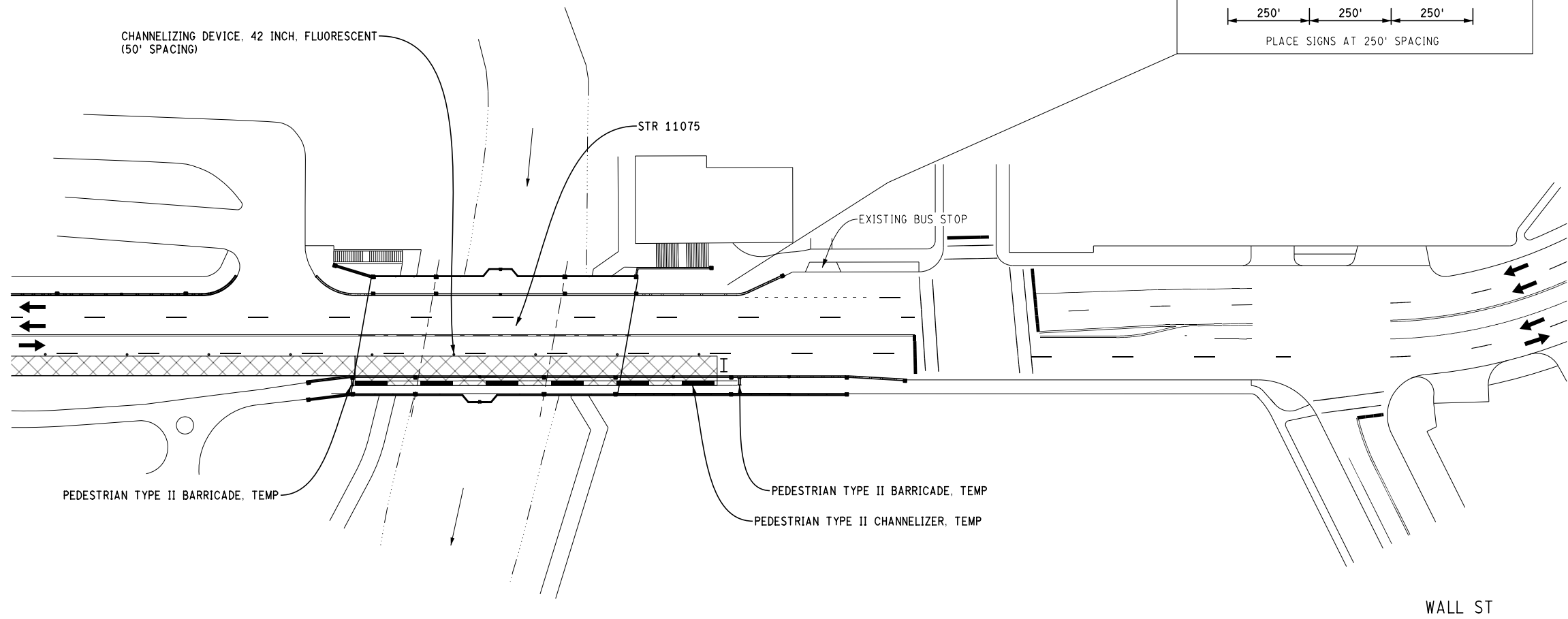
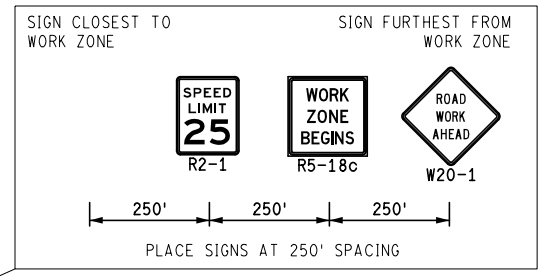
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
MAINTAINING TRAFFIC

SCALE: 0 80 PLAN (FT)

DRAWING No. 2020-025



STAGE 3
APPLIES: CLOSE EB OUTSIDE LANE

KEY

	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH

MAINTAINING TRAFFIC
(BROADWAY OVER DEPOT STREET AND MDOT RAILROAD & BROADWAY OVER HURON RIVER)

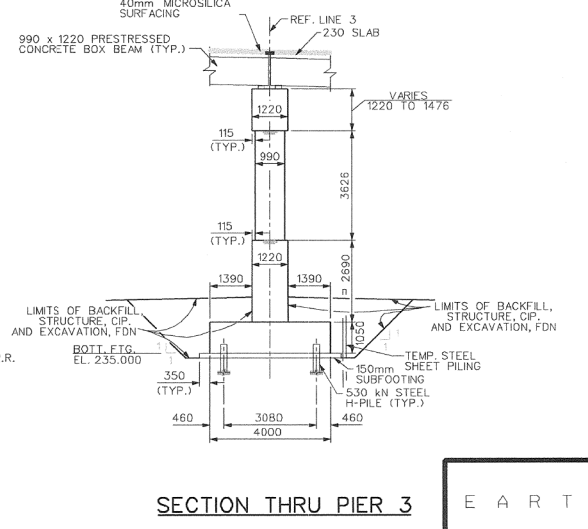
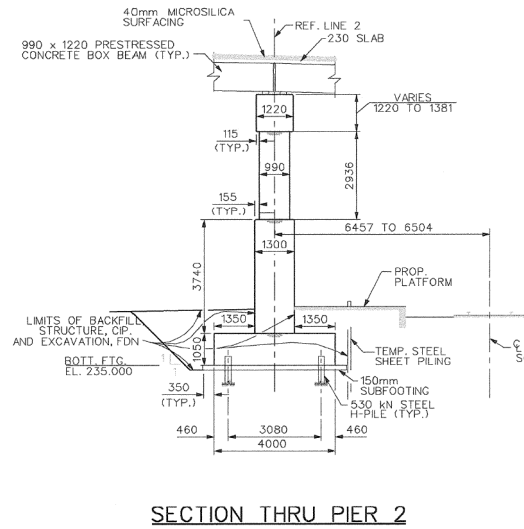
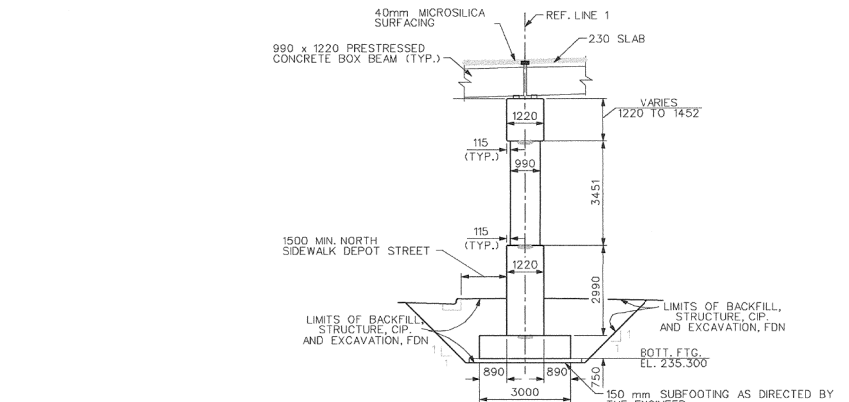
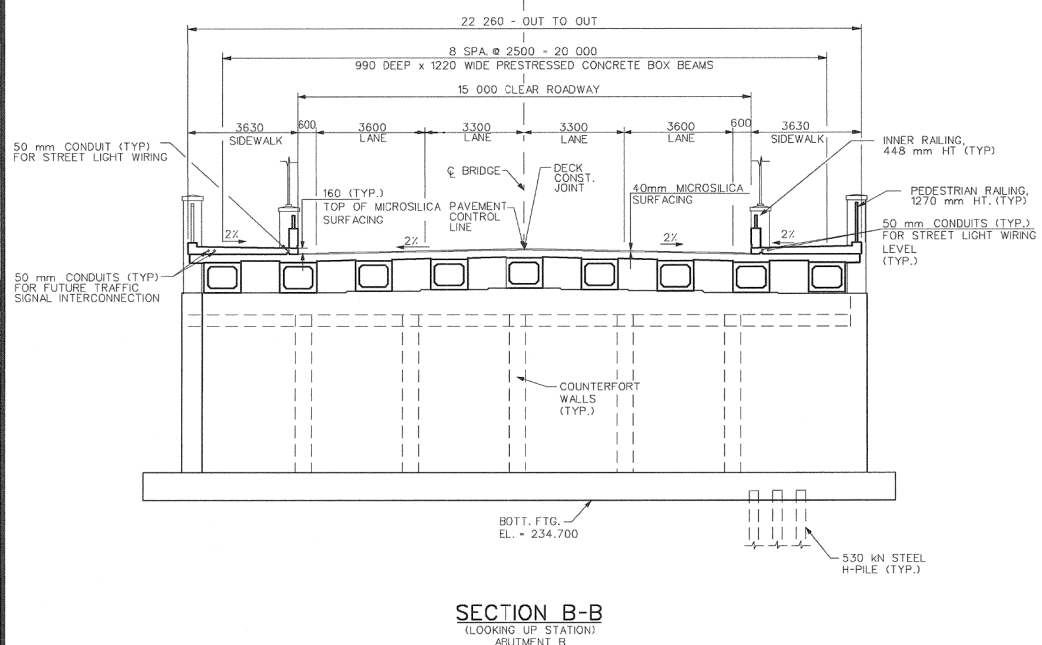
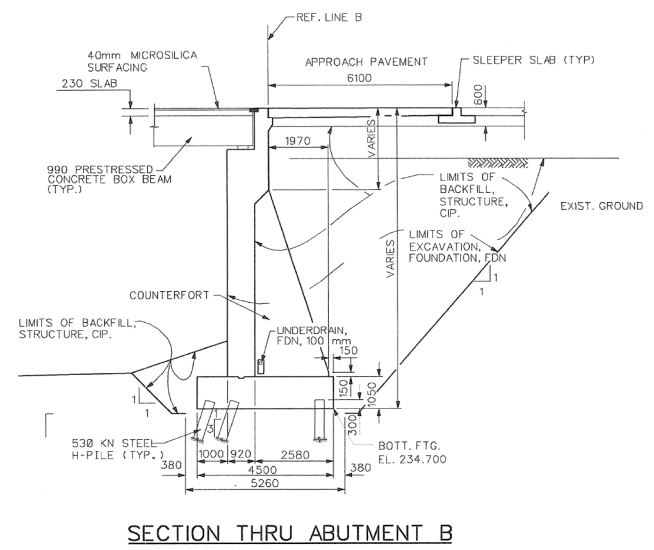
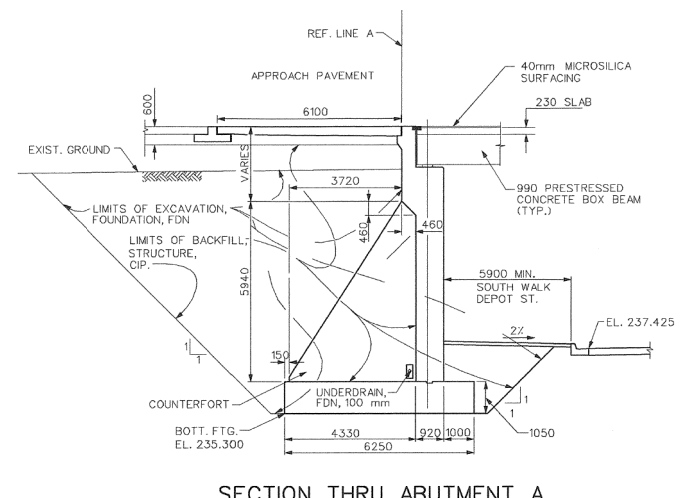
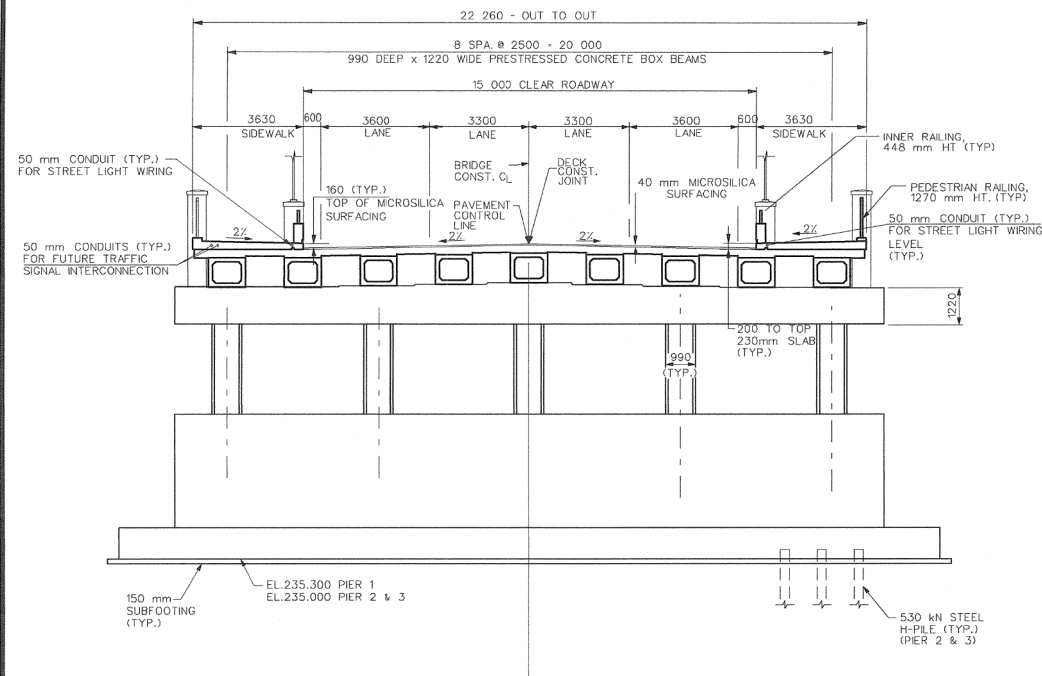
BROADWAY

BROADWAY

HURON RIVER

FILE NAME: Z:\2019\80381\CAD\CAD\MOT\BROADWAY\2002_MOT_STAGE3.DGN

FILE NAME: Z:\2019\180381\CAD\BROADWAY_OVER_DEPOT_EXIST_002.DSN



EXISTING FENCE		EXISTING SANITARY SEWER & MANHOLE		EXISTING TELEPHONE		EXISTING RD. & GRADE		PROPOSED SANITARY SEWER & MANHOLE		PROPOSED CURB & GUTTER	
---	CONTOUR	---	UTILITY POLE & OUT	---	GAS LINE	---	LEFT EDGE/RO. GRADE	---	STORM SEWER & CAT. BAS.	---	---
---	STORM SEWER & CAT. BAS.	---	FIRE HYDRANT ASSEMBLY	---	CABLE T.V.	---	RIGHT EDGE/RO. GRADE	---	WATER MAIN W/P.H. ASSEM.	---	---
---	WATER MAIN & VALVE-IN-WELL	---	LIGHT POLE	---	ELECTRIC	---	CURB & GUTTER	---	CONTOUR	---	---
---	WATER MAIN & VALVE-IN-BOX	---	END SECTION	---	SIGN	---	EDGE/GRAVEL	---	ROAD & GRADE	---	---

BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CHK. BY
		4	AS-BUILT	2/23/05	KV	JLF
		3	FINAL MDOT REVIEW	05/03/02	K.B.	CLR
			FINAL REVIEW SUBMITTAL	11/21/01		
			G.I. SUBMITTAL	01/01		

ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

BROADWAY BRIDGES RECONSTRUCTION PROJECT
BROADWAY OVER NORFOLK SOUTHERN RR AND DEPOT STREET (R01 OF 81102A)
GENERAL PLAN OF STRUCTURE

SCALE: 1:100

DRAWING NO. **98044-R01-6**

SHEET NO. 217 OF 334

APPROVED BY: _____

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BROADWAY OVER DEPOT STREET AND MDOT RAILROAD

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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
 PUBLIC SERVICES
 301 EAST HURON STREET
 ANN ARBOR, MI 48106
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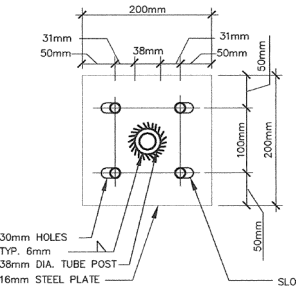
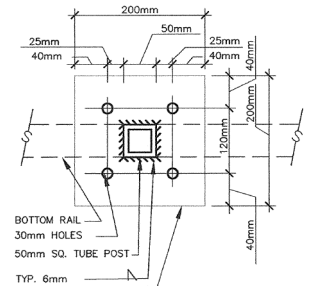
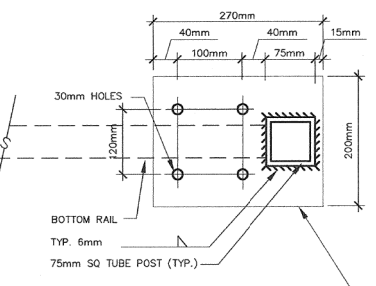
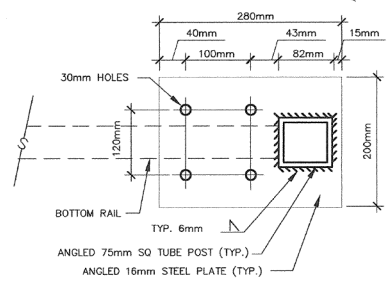
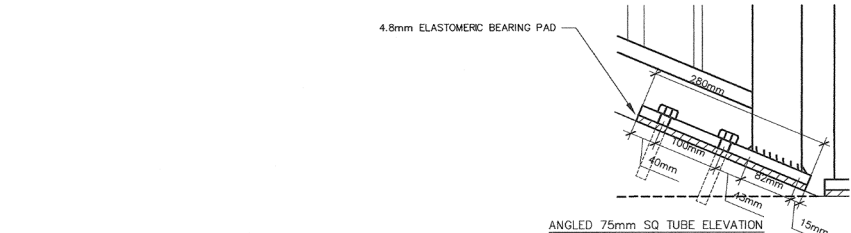
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS
EXISTING GENERAL PLAN OF STRUCTURE

SCALE: NO SCALE

DRAWING No. **2020-025**

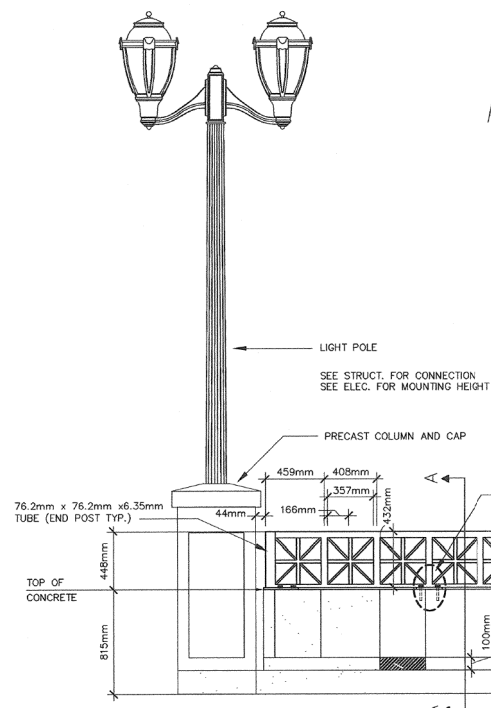
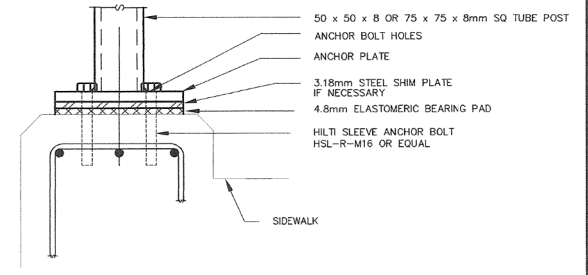
SHEET No. 29 of 70

FILE NAME: Z:\2019\98044\CD\BROADWAY_OVER_DEPOT_EXIST_003.DSN



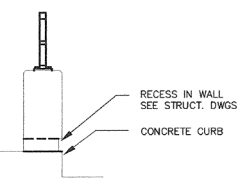
SLOTTED HOLES ARE NECESSARY AT SOME STAIRS. SEE STAIR PLANS FOR LOCATIONS.

2 MOUNTING ENLARGEMENT A21 SCALE: 1:5

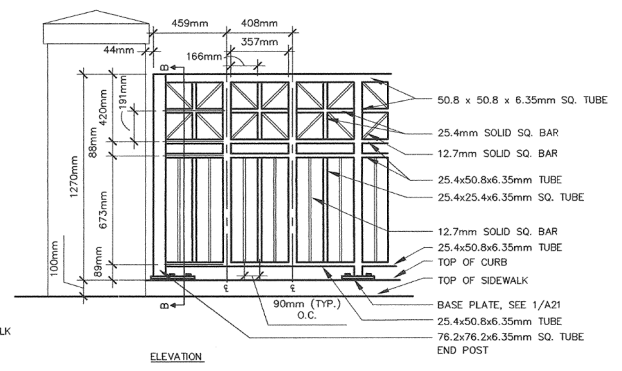


1 ANCHOR PLATES A21 SCALE: 1:5

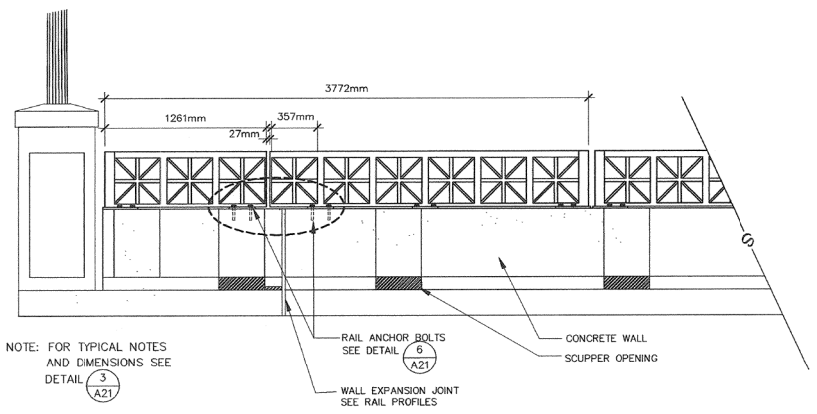
NOTES:
INSIDE BRIDGE BARRIER STEEL TO MATCH THE TOP (43.3mm) PORTION OF THE OUTSIDE BRIDGE RAIL.
FOR PRECAST COLUMNS AND CAST-IN-PLACE CONCRETE INFORMATION, SEE STRUCTURAL DWGS.



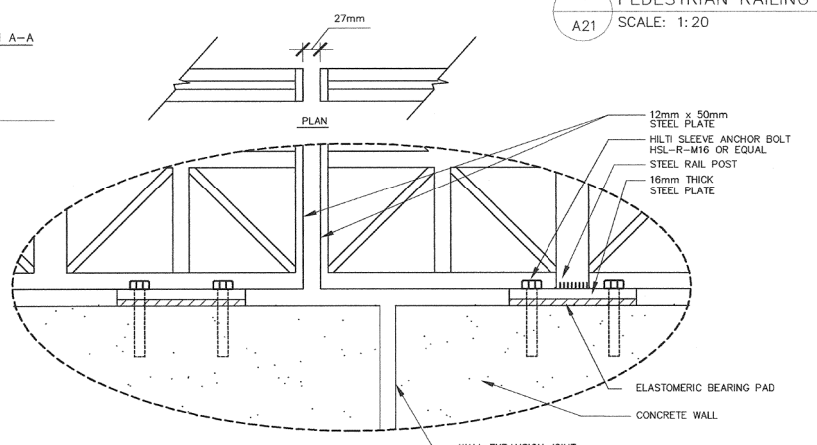
4 PEDESTRIAN RAILING A21 SCALE: 1:20



3 CRASH WALL WITH INNER RAILING A21 SCALE: 1:25



5 CRASH WALL WITH INNER RAILING EXPANSION RAIL A21 SCALE: 1:25



6 EXPANSION RAIL ENLARGEMENT A21 SCALE: 1:5

NOTES
ALL HORIZONTAL RAILS SHALL FOLLOW THE PROFILE GIVEN BY THE ROAD AND BRIDGE.
IT IS ADVISED THAT BEFORE PRODUCTION OF THE RAIL BEGINS ALL DIMENSIONS AND ELEVATIONS SHOULD BE FIELD VERIFIED. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE PAY ITEM FOR "ORNAMENTAL STEEL RAILING".
STEEL SHIM PLATES 3.18mm THICK MAY BE USED AT POSTS TO HELP PLUMB THE RAIL. NO MORE THAN THREE PLATES PER POST SHALL BE USED. SEE SPECIFICATIONS.
FIELD WELDING WILL NOT BE ALLOWED. ALL FIELD CONNECTIONS ARE TO BE MECHANICAL.

Beckett & Raeder
Landscape Architecture
Planning & Engineering
36133 Schoolcraft Road • Livonia, MI 48150 • (734) 779-2800

ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

BROADWAY BRIDGES RECONSTRUCTION PROJECT
TYPICAL RAILING DETAILS

SCALE AS SHOWN 0 10 20

DRAWING NO. 98044-A21
SHEET NO. 210 OF 334

BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
		4	NO AS-BUILT CHANGES	3/24/05	KV	REL
		3	FINAL MDOT REVIEW	11/21/01		
			FINAL REVIEW/SUBMITTAL	11/21/01		
			REVIEW	08/01		
			Q.I. SUBMITTAL	01/01	SBR	

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BROADWAY OVER DEPOT STREET AND MDOT RAILROAD

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

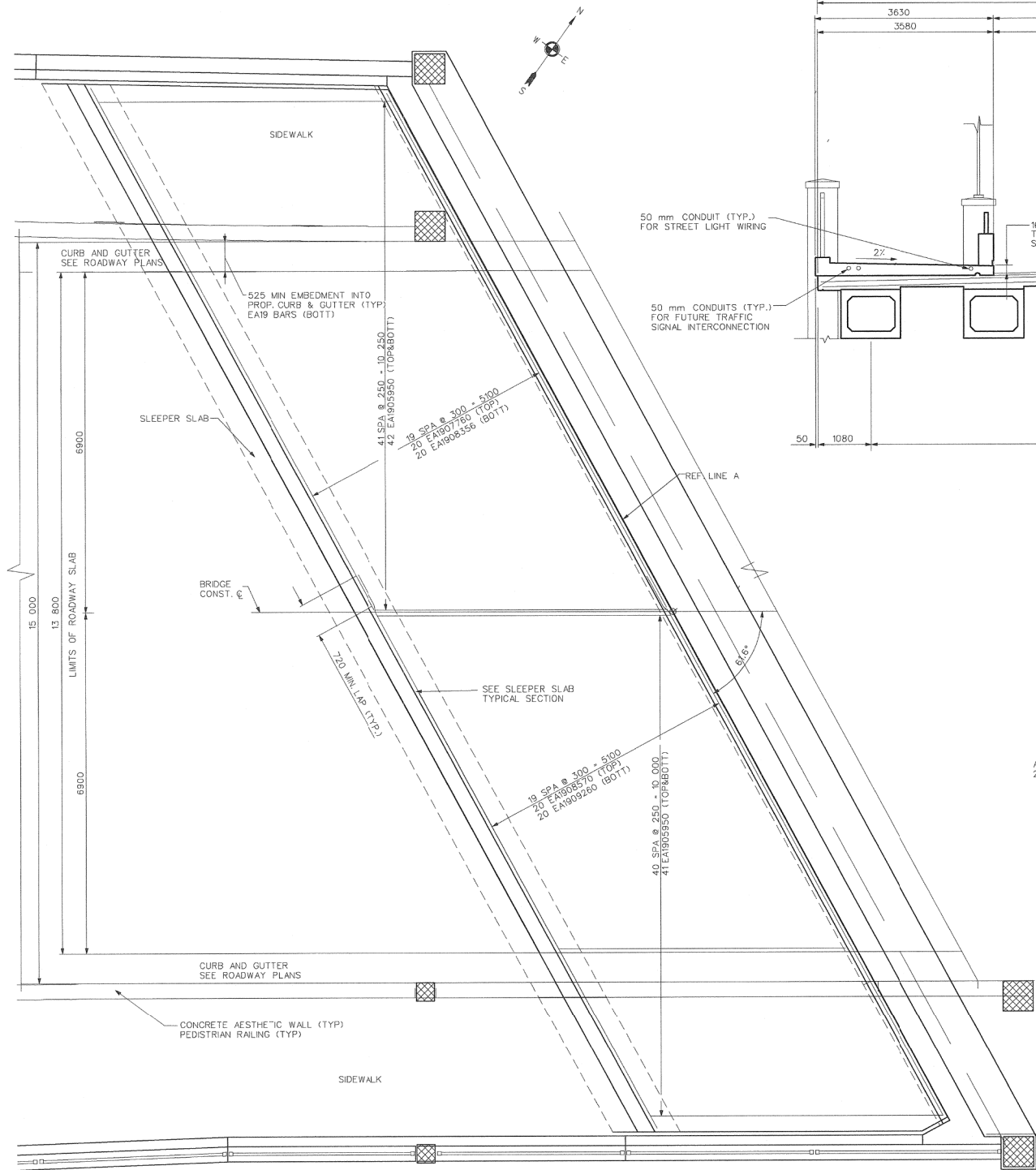
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PUBLIC SERVICES
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ANN ARBOR, MI 48106
ANN ARBOR PUBLIC WORKS DEPARTMENT
734-779-4810
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS
EXISTING TYPICAL RAILING DETAILS

SCALE: NO SCALE
DRAWING No. 2020-025
SHEET No. 30 of 70

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

FILE NAME: Z:\2019\80081\CAD\CAD\BROADWAY_OVER_DEPOT_EXIST_04.DSN



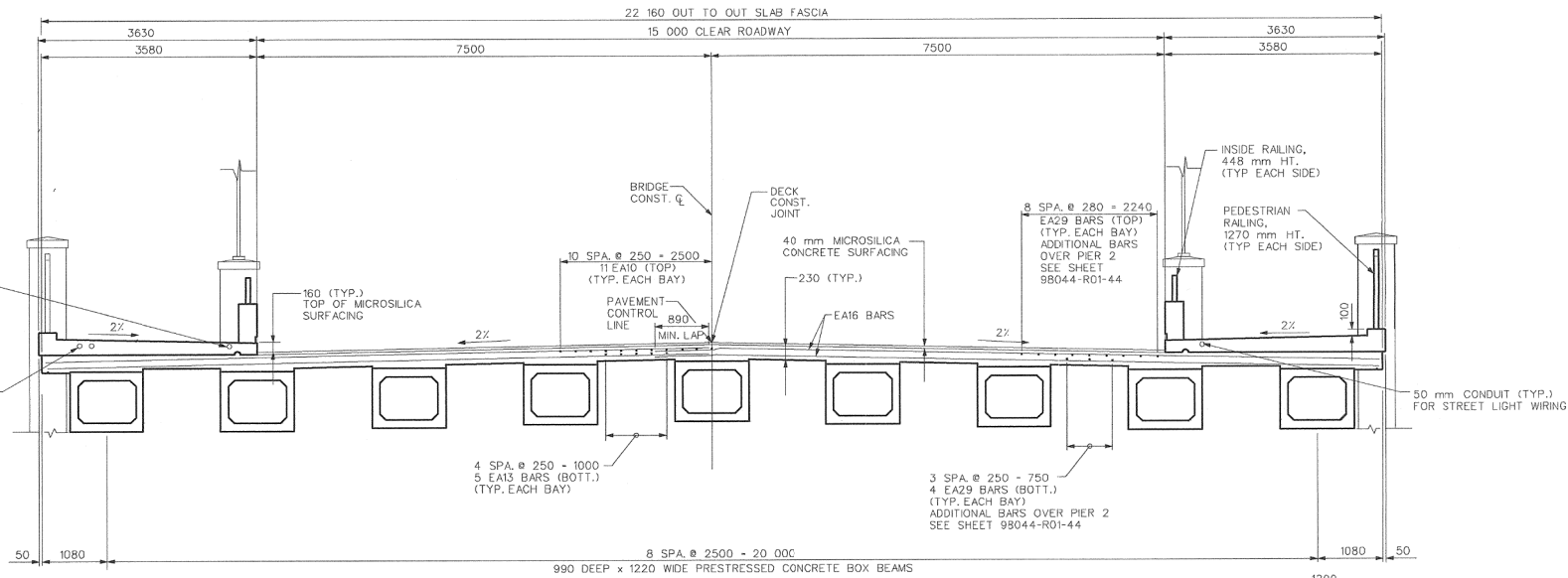
PLAN OF APPROACH SLAB

TYP WEST SIDE SHOWN, EAST SIDE IDENTICAL

R01 Sleeper Slab, Sidewalk and Road Approach Slab (North Half)

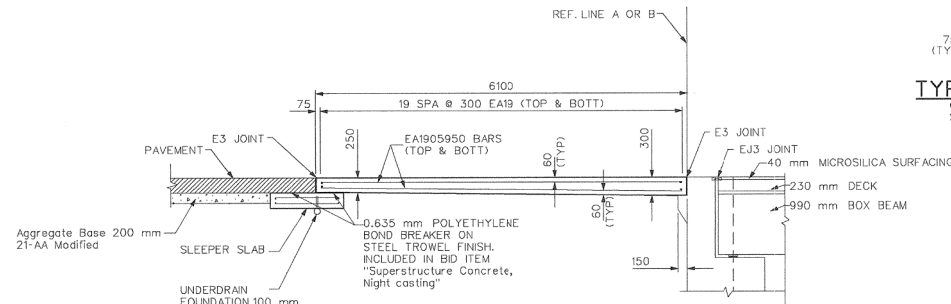
Bar	Dimension (mm)	Qty	Notes
EA1301050	1050	74	long. Reinf. in sleeper slab, plan calls for 108, Bar sheet shows 34
EA1911935	11935	16	transverse reinf in sleeper slab, see bar sheet
EA1902180	2180	40	lap onto EA1907780 trans reinf in road approach slab to extend reinf to full width of slab
EA1901465	1465	40	lap onto EA1908356 trans reinf in road approach slab to extend reinf to full width of slab
EA1905049	5049	84	long Reinf. need 80 in the sidewalk approach slabs + 136 in the road approach slabs - 196, bar sheet shows 112

Notes:
 Work Order #38
 Transverse reinforcement was ordered for the sidewalk approach slabs. EA1902925 were ordered and will have to be cut in the field to fit the width of the sidewalk approach slab.
 Top and bottom mats of reinforcement in the road approach slab will extend into the curb.

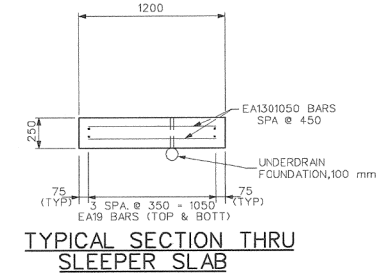


TYPICAL DECK SECTION

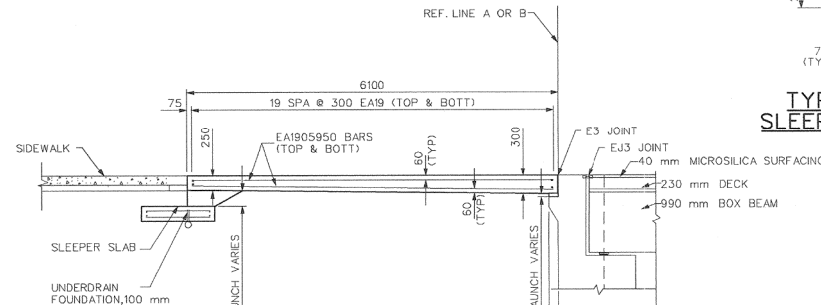
LOOKING UP STATION



APPROACH ROADWAY SECTION



TYPICAL SECTION THRU SLEEPER SLAB



TYPICAL SECTION THRU SLEEPER SLAB AT SIDEWALK

SIDEWALK SECTION

EXISTING FENCE		EXISTING TELEPHONE		EXISTING RD. & GRADE		PROPOSED SANITARY SEWER & MANHOLE		PROPOSED CURB & GUTTER	
---	---	---	---	---	---	---	---	---	---
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ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

BROADWAY BRIDGES RECONSTRUCTION PROJECT
 BROADWAY OVER NORFOLK SOUTHERN RR AND DEPOT STREET (R01 OF 81102A)
 SUPERSTRUCTURE DETAILS

SCALE: 1:50

DRAWING NO. **98044-R01-47**

SHEET NO. 258 OF 334

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BROADWAY OVER DEPOT STREET AND MDOT RAILROAD

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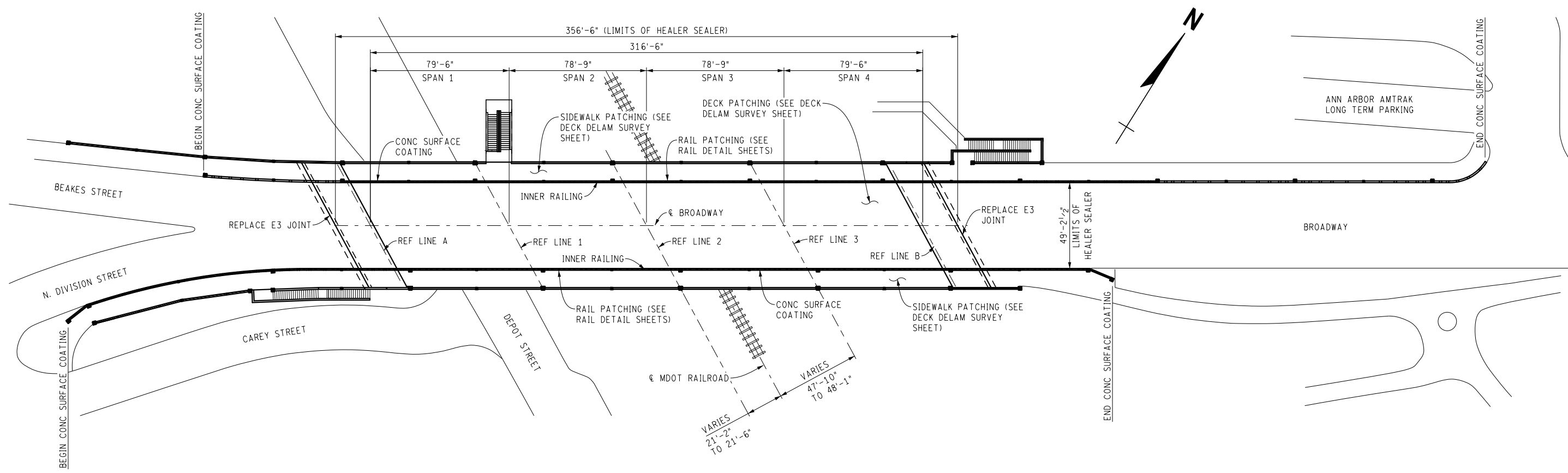
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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 ANN ARBOR, MI 48106
 ANN ARBOR PUBLIC SERVICES DEPARTMENT
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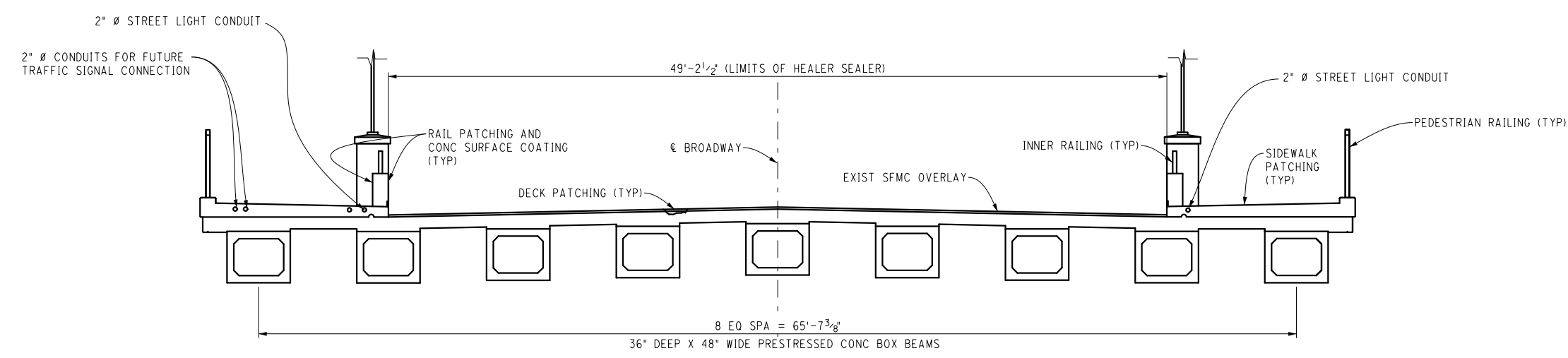
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 CITY OF ANN ARBOR 2020 BRIDGE
 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 EXISTING SUPERSTRUCTURE DETAILS

SCALE: NO SCALE
 DRAWING NO. 2020-025
 SHEET No. 31 of 70

FILE NAME: Z:\2019\80081\CAD\CAD\BROADWAY_OVER_DEPOT_001.DGN



PLAN



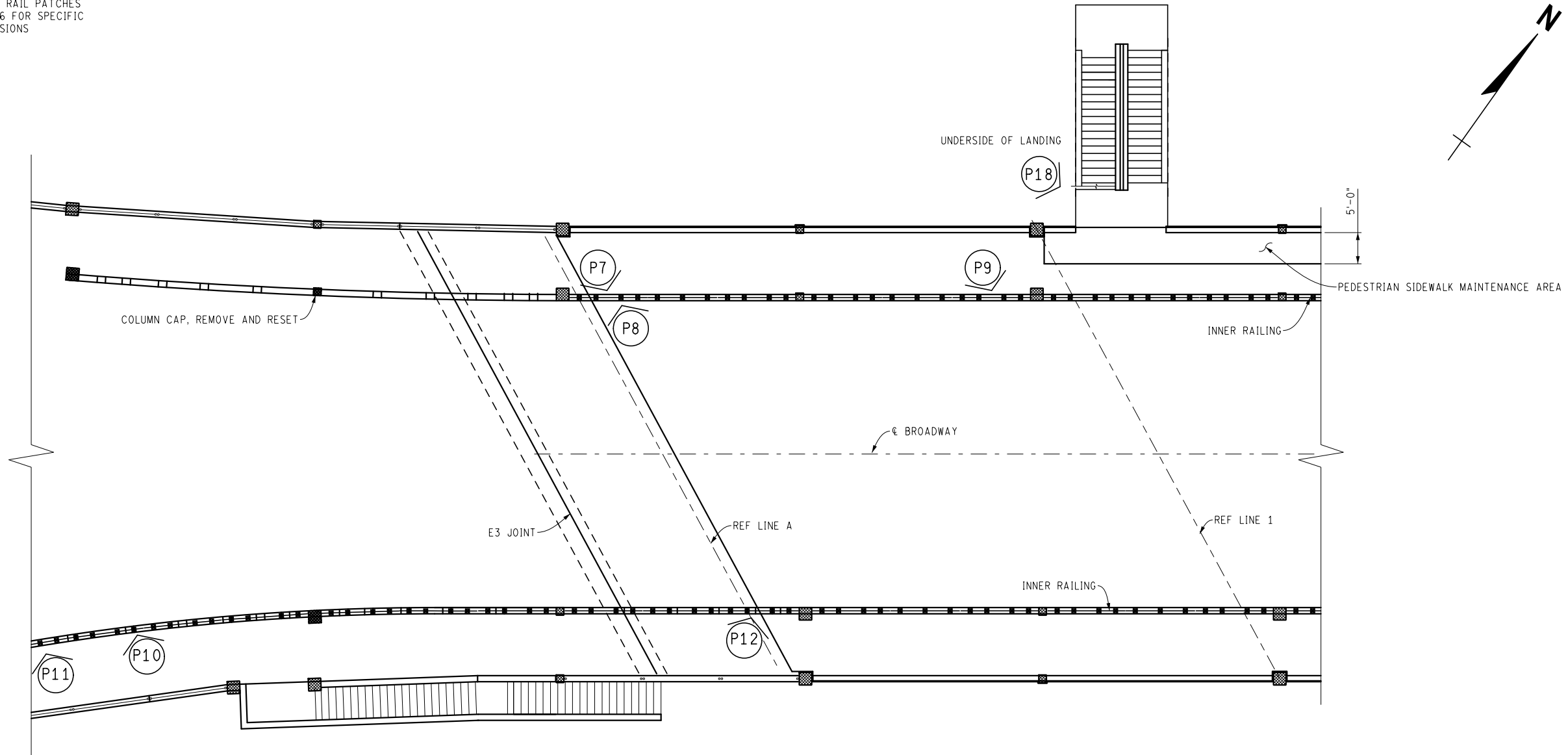
DECK SECTION

BROADWAY OVER DEPOT STREET AND MDOT RAILROAD

<p>ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48106 734-794-4810 www.a2gov.org</p>	<p>ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48106 734-794-4810 www.a2gov.org</p>
<p>PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS GENERAL PLAN OF STRUCTURE</p>	<p>SCALE: NO SCALE DRAWING No. 2020-025</p>
<p>REV. DESCRIPTION DATE DRAWN CHECKED</p>	<p>SHEET No. 32 of 70</p>

LEGEND

(P##) = LOCATION OF RAIL PATCHES
SEE SHEET 26 FOR SPECIFIC
PATCH DIMENSIONS



PLAN - WEST

NOTES:

A RAILROAD PERMIT IS NOT REQUIRED UNDER THE CONDITION THAT THE CONTRACTOR KEEPS ALL WORKERS, MATERIALS, VEHICLES AND EQUIPMENT ON THE PARKING LOT SIDE OF THE PIER BETWEEN THE AREA TO BE PATCHED AND THE RAILROAD TRACKS, AND IN NO CIRCUMSTANCE SHALL THE CONTRACTOR ACCESS THE TRACK SIDE OF THE PIER.

IN ORDER TO PERFORM THE BARRIER RAIL REPAIRS, THE CONTRACTOR SHALL REMOVE, STORE, PROTECT, AND REPLACE WHEN THE PATCHES HAVE BEEN PROPERLY CURED, THE NEEDED METAL RAILING SEGMENTS. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ASSOCIATED ITEMS OF WORK.

BROADWAY OVER DEPOT STREET AND MDOT RAILROAD

FILE NAME: Z:\2019\80381\CAD\CIBROADWAY_OVER_DEPOT_RAIL_001.DGN



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

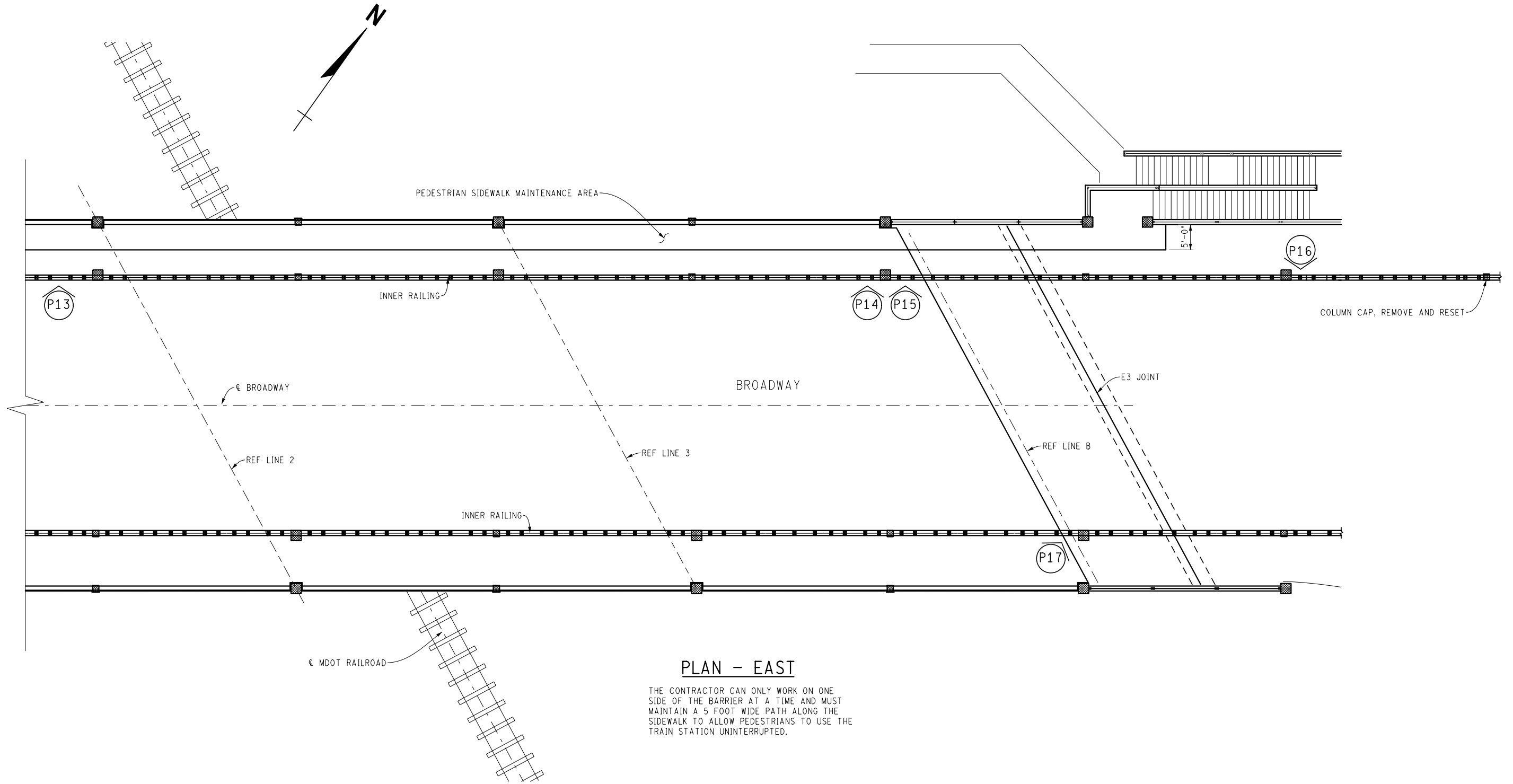
CITY OF ANN ARBOR
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ANN ARBOR, MI 48107-6647
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
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CAPITAL PREVENTIVE MAINTENANCE REPAIRS
CONCRETE RAIL PATCHING LOCATIONS

SCALE: NO SCALE
DRAWING No. 2020-025

FILE NAME: Z:\2019\80381\CAD\CIBROADWAY_OVER_DEPOT_RAIL_002.DGN



PLAN - EAST

THE CONTRACTOR CAN ONLY WORK ON ONE SIDE OF THE BARRIER AT A TIME AND MUST MAINTAIN A 5 FOOT WIDE PATH ALONG THE SIDEWALK TO ALLOW PEDESTRIANS TO USE THE TRAIN STATION UNINTERRUPTED.

BROADWAY OVER DEPOT STREET AND MDOT RAILROAD



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

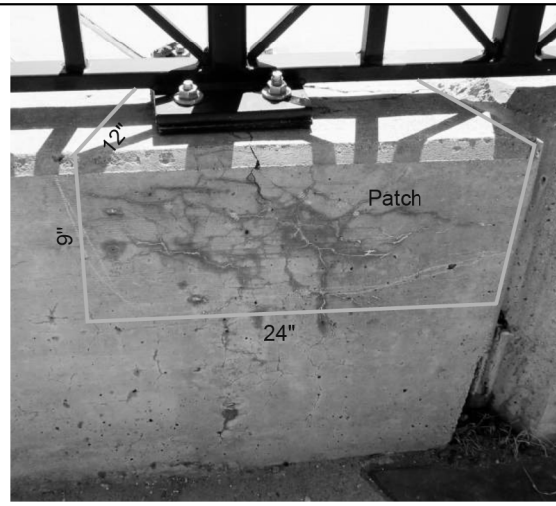
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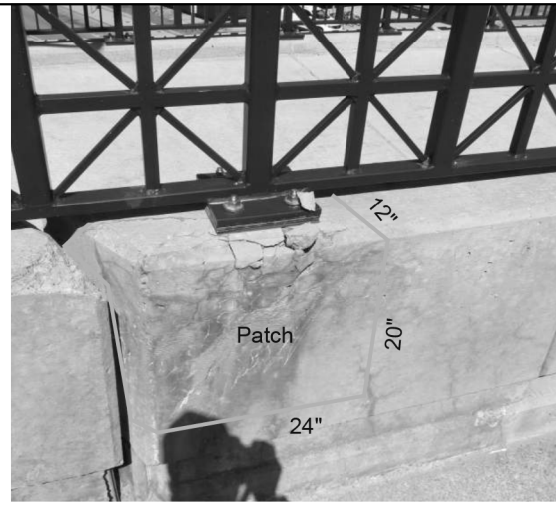
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
CONCRETE RAIL PATCHING LOCATIONS

SCALE: NO SCALE
DRAWING No. 2020-025

FILE NAME: Z:\2019\190381\CA01\BROADWAY_OVER_DEPOT_STREET_RAIL_001.DGN



P7



P8



P9



P10



P11



P12



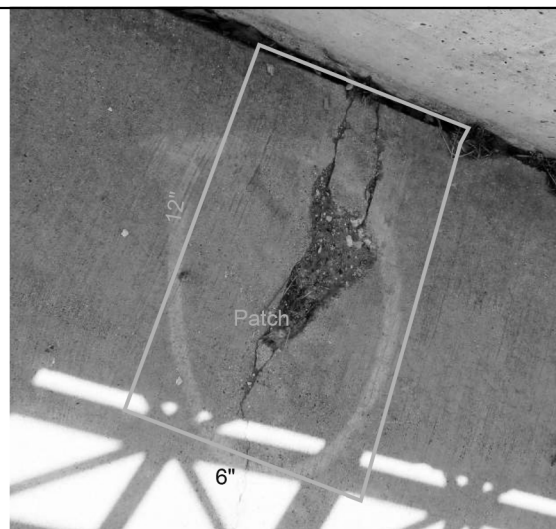
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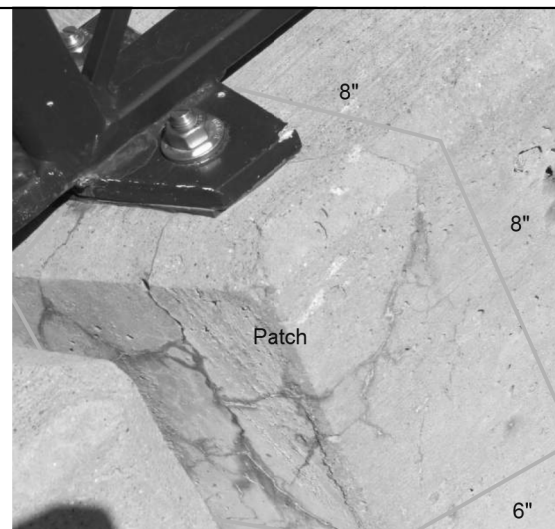
P14



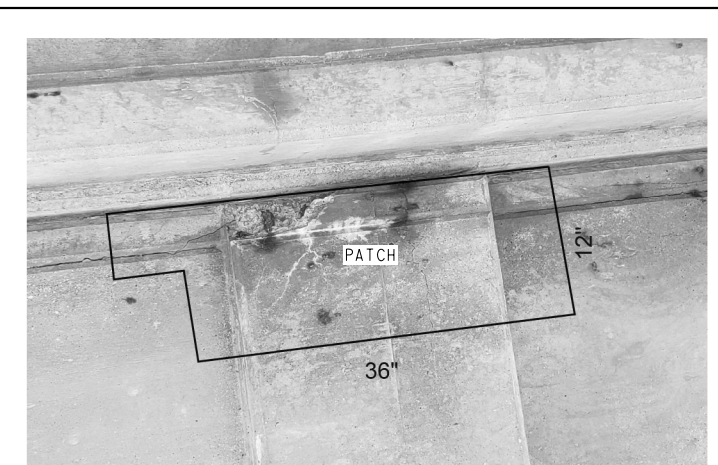
P15



P16



P17



P18

BROADWAY OVER DEPOT STREET AND MDOT RAILROAD



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

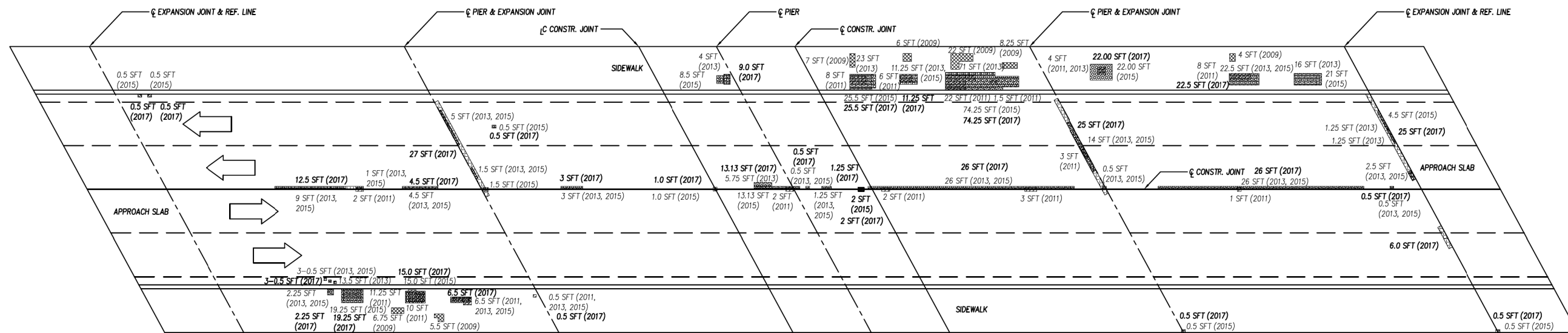
CITY OF ANN ARBOR
 PUBLIC SERVICE
 301 EAST HURON STREET
 ANN ARBOR, MI 48106-1500
 TEL: 734-769-6847
 FAX: 734-769-6810
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 CITY OF ANN ARBOR 2019 BRIDGE
 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 CONCRETE RAIL PATCHING LOCATIONS

SCALE: NO SCALE
 DRAWING No. 2019-030

FILE NAME: Z:\2019\80381\CAD\CAD\BROADWAY_OVER_DEPOT_DECK_DELAM_SURVEY_001.DGN



PLAN OF DECK DEFICIENCIES

LEGEND:

- | | | |
|--|--------------------------|-------------------------------------------|
| | - 2009 DECK DELAMINATION | 2009 TOTAL DECK DELAMINATION = 61.50 SFT |
| | - 2011 DECK DELAMINATION | 2011 TOTAL DECK DELAMINATION = 79.50 SFT |
| | - 2013 DECK DELAMINATION | 2013 TOTAL DECK DELAMINATION = 290.0 SFT |
| | - 2015 DECK DELAMINATION | 2015 TOTAL DECK DELAMINATION = 347.15 SFT |
| | - 2017 DECK DELAMINATION | 2017 TOTAL DECK DELAMINATION = 402.65 SFT |

NOTES:

THE CONTRACTOR IS RESPONSIBLE TO WET CURE ALL LATEX MODIFIED PATCHES PLACED ON THIS PROJECT FOR A PERIOD OF SEVEN CALENDAR DAYS IN ACCORDANCE WITH SECTION 712.03.P AND AS DETAILED HEREIN. THE CONTRACTOR SHALL ENSURE THAT THE BURLAP REMAINS WET FOR THE ENTIRE DURATION OF THE CURING PERIOD. THE POLYETHYLENE FILM COVERING THE PATCHES SHALL BE SECURELY AFFIXED TO EACH PATCH. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "PATCHING CONC, C-L".

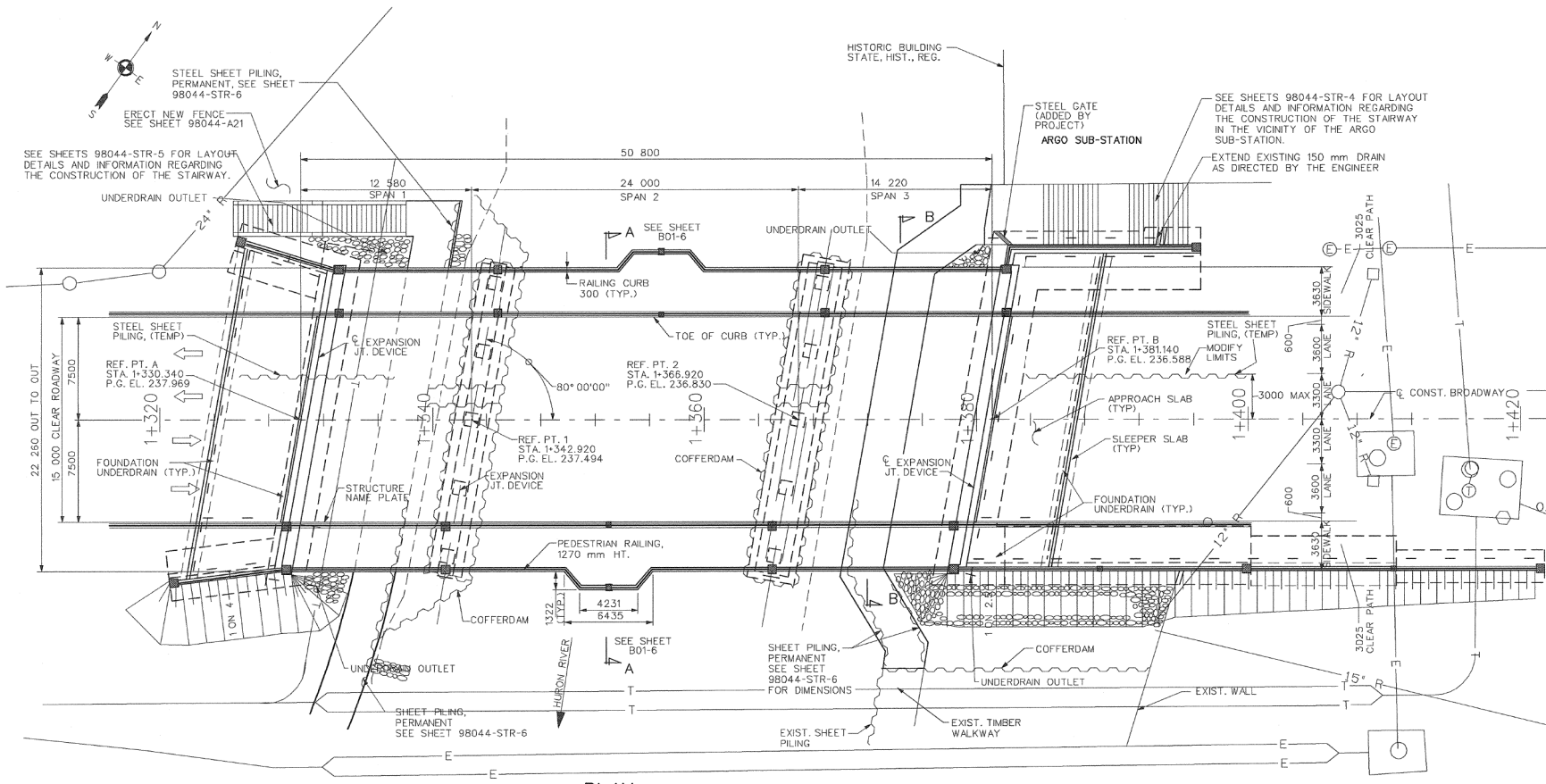


BROADWAY BRIDGE OVER DEPOT ST AND NS RR DECK DELAMINATION SURVEY

BROADWAY OVER DEPOT STREET AND MDOT RAILROAD

<p>Know what's below. Call before you dig.</p>	
REV.	CHECKED
DATE	DRAWN
DESCRIPTION	
<p>CITY OF ANN ARBOR PUBLIC SERVICE 301 EAST HURON STREET ANN ARBOR, MI 48106-1647 ANN ARBOR PHONE: 734-769-6647 WWW.A2gov.org</p>	
<p>PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS DECK DELAMINATION AND PATCHING PLAN</p>	
SCALE:	NO SCALE
DRAWING No.	2020-025
SHEET No.	
36 of 70	

FLOOD DATA	EXISTING				PROPOSED		
	DISCHARGE (m ³ /s)	WATER SURFACE ELEV @ U/S FACE OF STRUCTURE (m)	VELOCITY IN D/S CHANNEL (m/s)	WATER SURFACE ELEV @ U/S FACE OF STRUCTURE (m)	VELOCITY IN D/S CHANNEL (m/s)	WATERWAY AREA @ D/S FACE (m ²)	CHANGE IN WSEL 45 m U/S OF PROPOSED STRUCTURE (m)
50-YEAR	184.66	233.26	3.05	233.28	2.94	67.60	-0.05
100-YEAR	212.38	233.44	3.21	233.47	3.05	69.63	-0.02

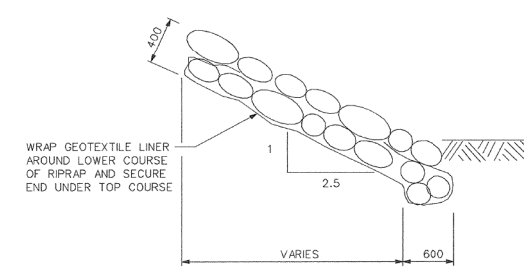
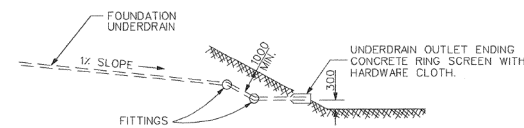
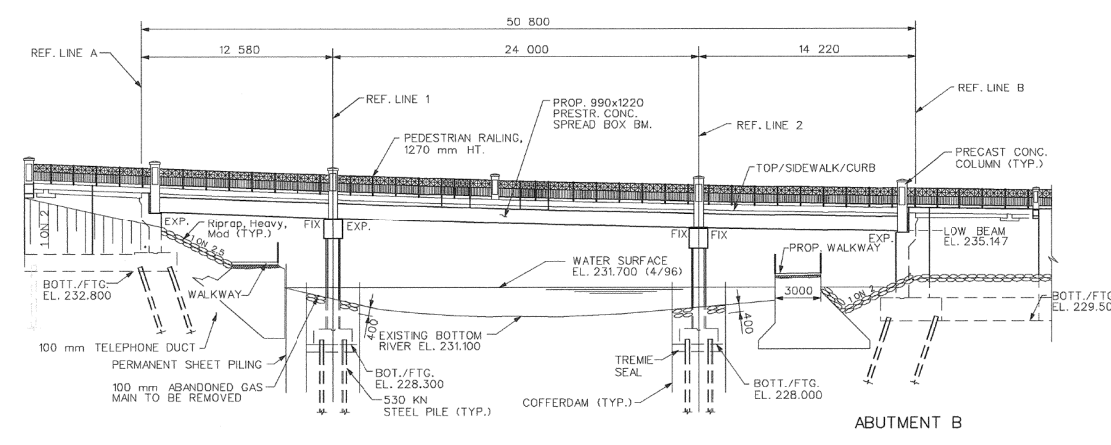


MISCELLANEOUS QUANTITIES	
3961	m ³ Backfill, Structure, C/P
1	LS Structures, Rem, Porting, B01
1	LS Cofferdams
3308	m ³ Excavation, Fdn
380	m ² Riprap, Heavy, Modified
438	m ³ Excavation, Channel
117	m Underdrain, Fdn, 90 mm
4	ea Underdrain, Outlet, 100 mm
735	m ² Steel Sheet Piling, Temp
1	LS Dewatering, Abutment B
124	m ² Steel Sheet Piling, Temp, Left in Place
50000	grs Removal and Disposal of Asbestos Materials
1078	m ² False Decking
1	ea Structure Name Plate

THE RIPRAP QUANTITY IS BASED ON THE LATERAL DIMENSIONS OF THE AREA REQUIRED, REGARDLESS OF NUMBER OF LAYERS REQUIRED.

WHERE POSSIBLE CONTRACTOR TO REUSE PROTECTIVE SHIELD FROM DEMOLITION PHASE DURING CONSTRUCTION OF NEW SUPERSTRUCTURE. NO ADDITIONAL PAYMENT SHALL BE MADE FOR REUSE OF PROTECTIVE SHIELD. IF NECESSARY, CONTRACTOR MAY, WITH APPROVAL OF THE ENGINEER, ERECT FALSE DECKING. CONTRACTOR WILL BE PAID FOR FALSE DECKING WHERE APPROVED.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE SPECIAL LAYOUTS OF THE TEMP SHEET PILING TO FACILITATE THE CONSTRUCTION AS DETAILED HEREIN. ALL COSTS ASSOCIATED WITH ADDITIONAL JACKING, NEEDED TIEBACKS, ETC., SHALL BE DEEMED TO BE INCLUDED IN THE COST OF "Steel Sheet Piling, Temp." AND WILL NOT BE PAID FOR SEPARATELY. THE CONTRACTOR SHALL NOT RESTRICT THE EXISTING LANE OF INSOUND TRAFFIC ALONG BROADWAY IN ANY MANNER DURING THE CONSTRUCTION OF THE BRIDGE.



NOTES

THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES MS23. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/800 OF SPAN LENGTH. THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.

THE TOP OF ROADWAY SLAB AND TOPS OF SIDEWALKS AND BRIDGE RAILINGS ARE PARALLEL TO THE VERTICAL CURVE.

THE WATER SURFACE AND/OR ENERGY GRADE ELEVATIONS SHOWN ON THE ABOVE HYDRAULIC TABLE ARE TO BE USED FOR COMPARISON PURPOSES ONLY AND ARE NOT TO BE USED FOR ESTABLISHING A REGULATORY FLOODPLAIN. THE ELEVATIONS MAY BE USED PROVIDED THEY ARE VERIFIED WITH THE LAND AND WATER MANAGEMENT DIVISION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY.

WITHOUT THE PREVENTIVE MEASURES SHOWN ON THESE PLANS, THERE IS A POSSIBILITY THAT STREAM BED SCOUR MAY OCCUR. THE ESTIMATED TOTAL SCOUR DEPTH IS CALCULATED TO BE 1 METER AT ABUTMENTS A & B, 4 METERS AT PIERS 1 & 2, AND 1 METERS AT PIER 2. THESE DEPTHS ARE BASED ON A 100 YEAR RUNOFF EVENT.

THE RIPRAP QUANTITY IS BASED ON THE LATERAL DIMENSIONS OF THE AREA TO BE PROTECTED, REGARDLESS OF THE NUMBER OF LAYERS REQUIRED. THE ESTIMATED MASS OF RIPRAP IS 456 METRIC TONS.

THE DRAINAGE AREA CONTRIBUTORY TO THIS CROSSING IS 1933 SQUARE KILOMETERS.

GEOTEXTILE LINER SHALL BE PLACED ON ALL SLOPES PRIOR TO PLACING RIPRAP. PAYMENT FOR GEOTEXTILE LINER SHALL BE INCLUDED IN PAYMENT FOR RIPRAP.

THE TREMIE SEAL DESIGN WAS BASED ON A WATER SURFACE ELEVATION OF 231.700.

FALSE DECKING SHALL BE USED IN ALL SPANS OVER THE RIVER AND AS DIRECTED BY THE ENGINEER.

SEE SPECIAL PROVISION ENTITLED "ASBESTOS" FOR ADDITIONAL INFORMATION RELATED TO ASBESTOS CONTAINING CONDUITS AND THE LINE.

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800-482-7171
(TOLL FREE)

36133 SCHOOLCRAFT ROAD • LIVONIA, MICHIGAN 48150 • (734) 779-2800

LEGEND	
EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE
CONTOUR	UTILITY POLE & GUT
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY
WATER MAIN & VALVE-IN-WELL	LIGHT POLE
WATER MAIN & VALVE-IN-BOX	END SECTION
EXISTING TELEPHONE	EXISTING HD. & GRADE
GAS LINE	LEFT EDGE/RO. GRADE
CABLE T.V.	RIGHT EDGE/RO. GRADE
ELECTRIC	CURB & GUTTER
SIGN	EDGE/GRAVEL
PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
STORM SEWER & CAT. BAS.	WATER MAIN W/F.R. ASSEM.
CONTOUR	ROAD & GRADE

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
4	AS-BUILT	3/24/05	KV	REL
3	FINAL MDT REVIEW	05/03/02	K.B.	CLR
	FINAL REVIEW SUBMITTAL	11/21/01		
	G.I. SUBMITTAL	01/01		

ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

BROADWAY BRIDGES RECONSTRUCTION PROJECT
BROADWAY OVER HURON RIVER
(B01 OF 81102A)

GENERAL PLAN OF STRUCTURE

SCALE: 1"=200'

DRAWING NO. **98044-B01-5**

SHEET NO. 279 OF 334

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BROADWAY OVER HURON RIVER

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

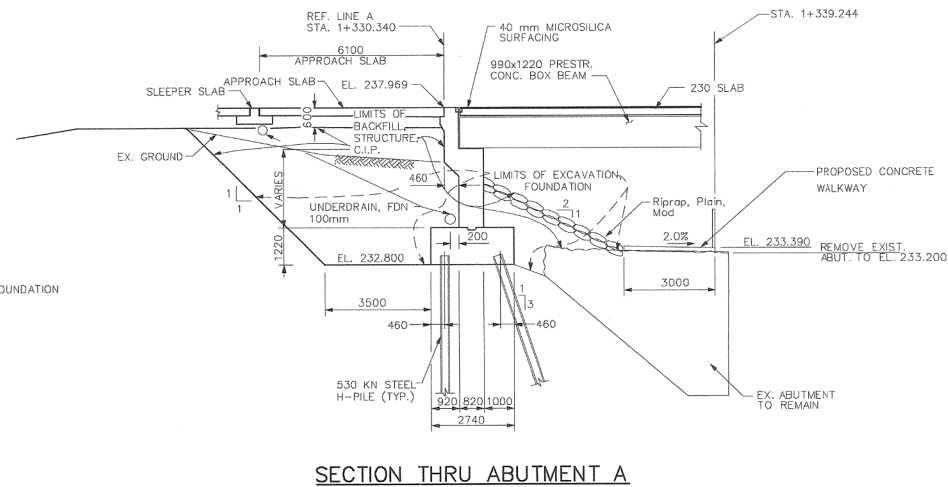
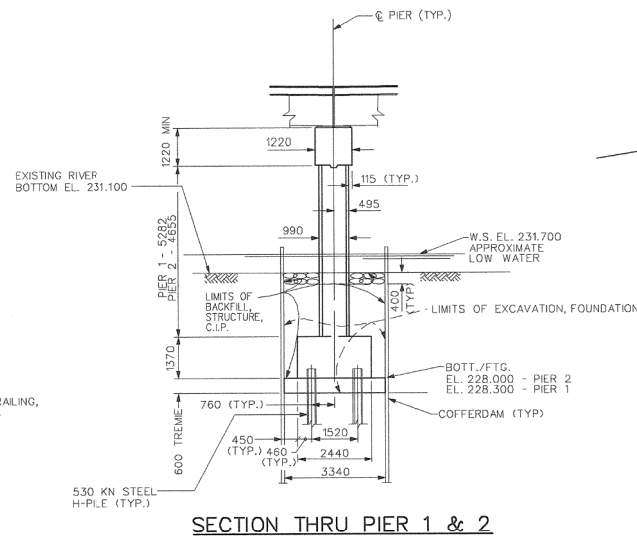
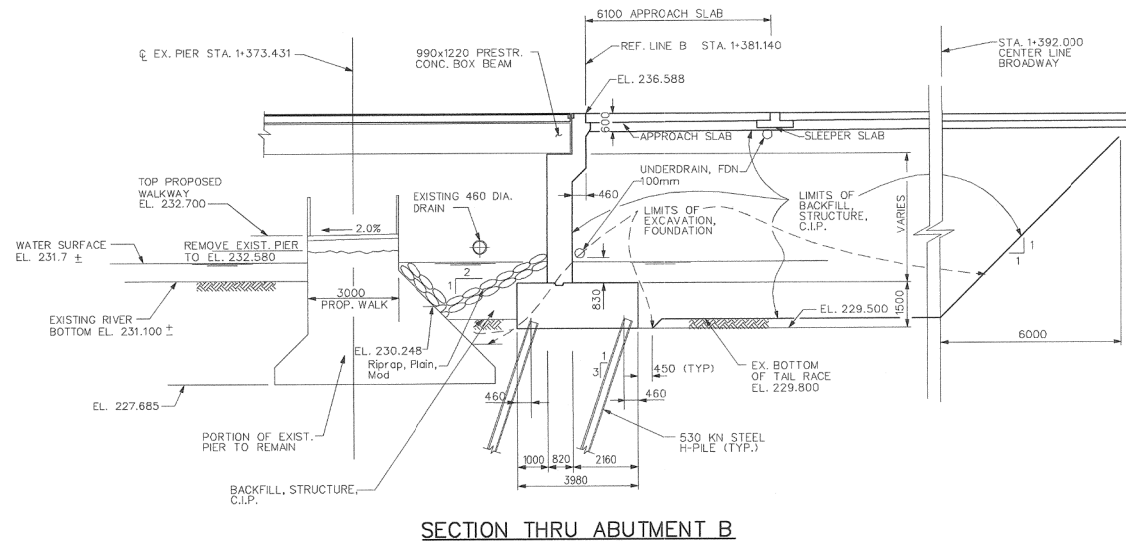
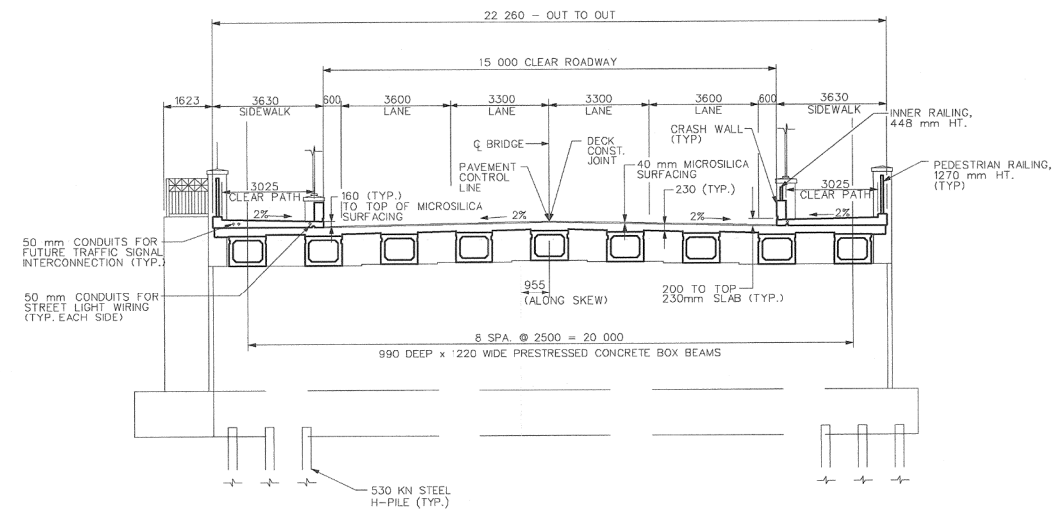
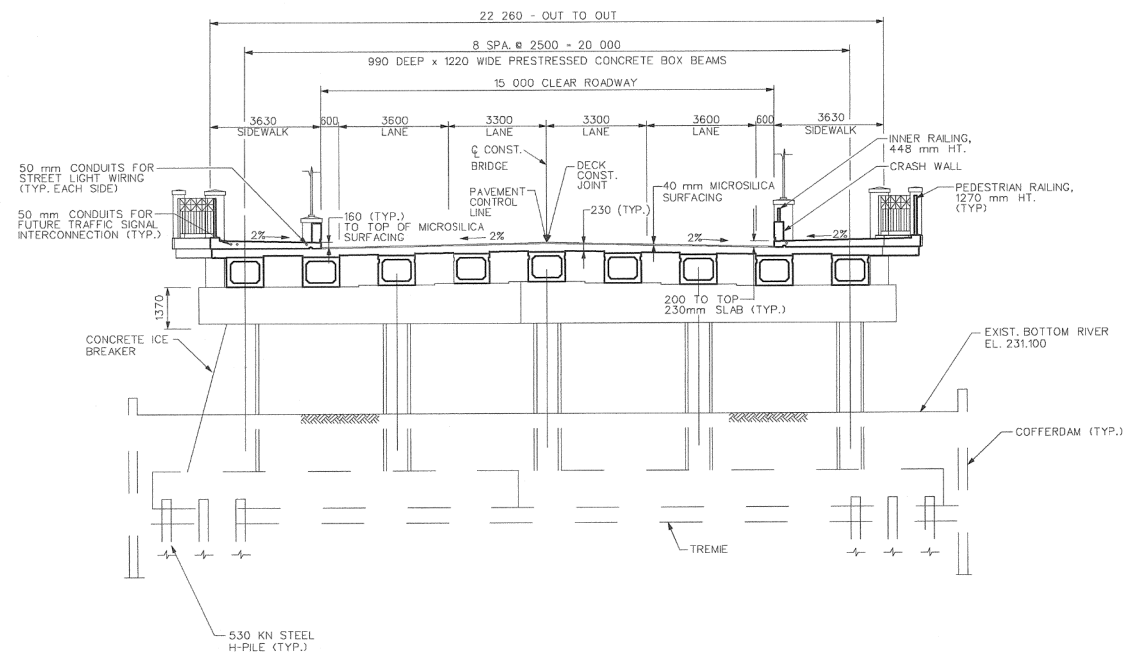
CITY OF ANN ARBOR
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
EXISTING GENERAL PLAN OF STRUCTURE

SCALE: NO SCALE

DRAWING No. 2020-025

SHEET No. 37 of 70

FILE NAME: Z:\2019\80081\CAD\CDD\BROADWAY_OVER_HURON_DECK_EXST_002.DGN



NOTE: Backfill, Structure, OP is paid for on Sheet 98044-B01-5

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ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

**BROADWAY BRIDGES
RECONSTRUCTION PROJECT
BROADWAY OVER HURON RIVER
(801 OF 81102A)
GENERAL PLAN OF STRUCTURE**

SCALE: 1:100
DRAWING NO. 98044-B01-6
SHEET No. 280 OF 334

LEGEND		EXISTING TELEPHONE		EXISTING RD. & GRADE		PROPOSED SANITARY SEWER & MANHOLE		PROPOSED CURB & GUTTER	
EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER	PROPOSED CURB & GUTTER	PROPOSED CURB & GUTTER	PROPOSED CURB & GUTTER	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	STORM SEWER & CAT. BAS.	STORM SEWER & CAT. BAS.	STORM SEWER & CAT. BAS.	STORM SEWER & CAT. BAS.	STORM SEWER & CAT. BAS.
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN & VALVE-IN-BELL	WATER MAIN & VALVE-IN-BELL	WATER MAIN & VALVE-IN-BELL	WATER MAIN & VALVE-IN-BELL	WATER MAIN & VALVE-IN-BELL	WATER MAIN & VALVE-IN-BELL
WATER MAIN & VALVE-IN-BELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	CONTOUR	CONTOUR	CONTOUR	CONTOUR	CONTOUR
WATER MAIN & VALVE-IN-BELL	END SECTION	SIGN	EDGE/GRAVEL	ROAD & GRADE	ROAD & GRADE	ROAD & GRADE	ROAD & GRADE	ROAD & GRADE	ROAD & GRADE

BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
		4	AS-BUILT	3/24/05	KV	REL
		3	FINAL MDT REVIEW	05/03/02	K.B.	CLR
			FINAL REVIEW SUBMITTAL	11/21/01		
			G.I. SUBMITTAL	01/01		

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BROADWAY OVER HURON RIVER

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PUBLIC SERVICES
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ANN ARBOR, MI 48106
ANN ARBOR PUBLIC SERVICES
734-794-4810
www.a2gov.org

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

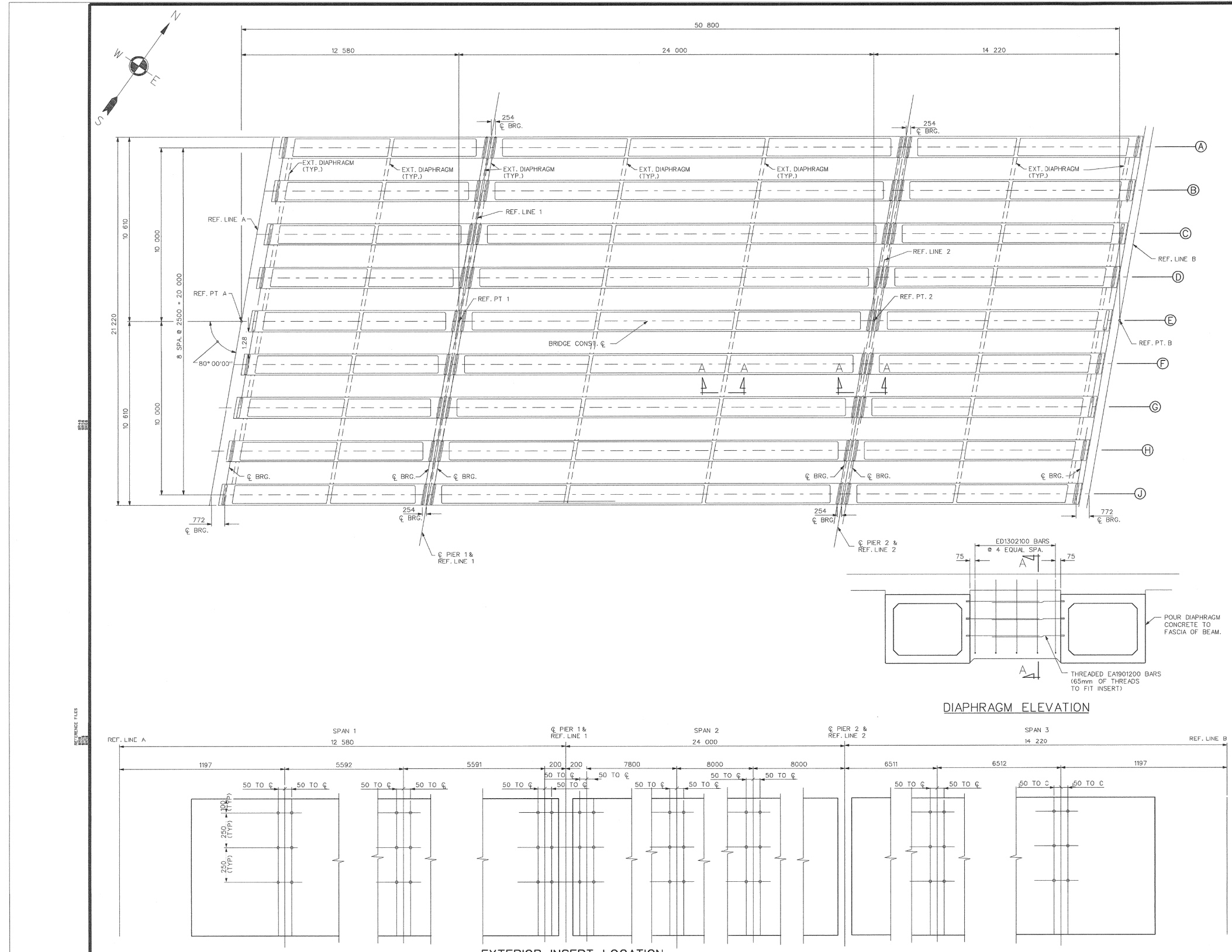
**CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS**

EXISTING GENERAL PLAN OF STRUCTURE

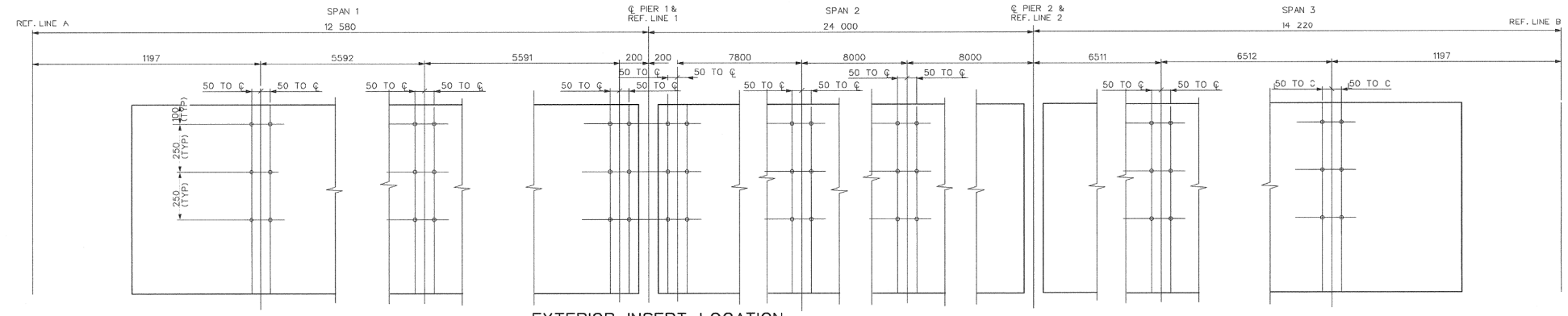
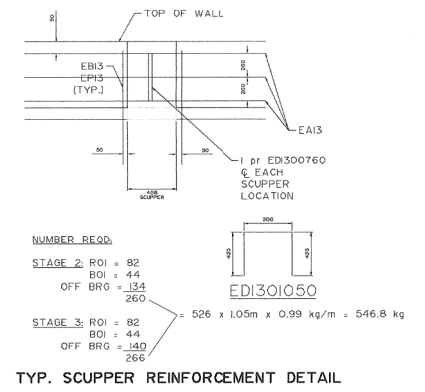
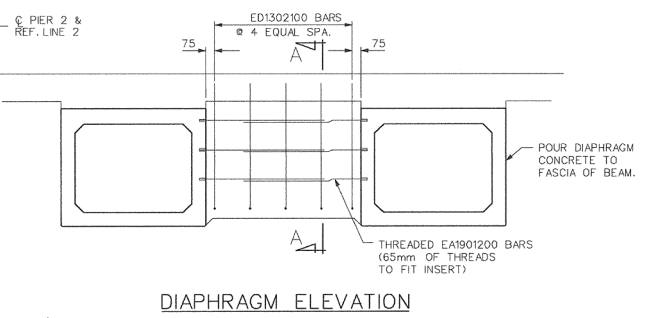
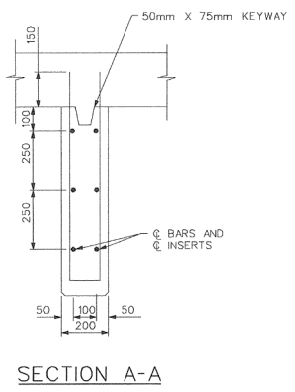
SCALE: NO SCALE
DRAWING No. 2020-025

SHEET No. 38 of 70

FILE NAME: Z:\2019\180381\CAD\CIBROADWAY_OVER_HURON_DECK_EXST_003.DGN



NOTES:
 PRESTRESSING STRANDS SHALL BE GIVEN AN INITIAL PRESTRESS AS FOLLOWS:
 1 - 24 mm DIA. - 195 kN PRESTRESS
 CONCRETE INSERTS SHALL BE PARALLEL TO REF. LINE AND 19mm DIAMETER RICHMOND, TYPE T2 OR TYPE TL2F; DAYTON SUPERIOR, TYPE B-1 HEAVY OR TYPE B-18; WILLIAMS, TYPE C-12 OR TYPE C-19; MEADOW STEEL, TYPE C1-2 OR TYPE C1-4 OR EQUAL.
 TOTAL ESTIMATED CHANGE OF LENGTH OF BOTTOM FLANGE AT TRANSFER OF PRESTRESS FORCE IS SPAN 1 - 2 mm, SPAN 2 - 14mm, SPAN 3 - 3mm.
 THE ESTIMATED BEAM CAMBER AT RELEASE IS SPAN 1 - 3 mm, SPAN 2 - 44 mm, SPAN 3 - 0 mm. THIS CAMBER IS DUE TO PRESTRESS AND DEAD LOAD OF THE BEAM ONLY AND IS MEASURED IN THE ERECTED POSITION.
 THREADING OF REINFORCEMENT AND INSTALLATION INTO CONCRETE INSERTS IS INCLUDED IN THE BID ITEM "PRESTRESSED CONCRETE BOX BEAM, FURNISHED, 990mm".
 LIFTING DEVICES SHALL BE REMOVED AFTER BEAMS ARE ERECTED. REMOVAL IS INCLUDED IN THE BID ITEM "PRESTRESSED CONCRETE BOX BEAM, ERECTED, 990mm".
 POSITION DWELLS SHALL BE HOT-DIP GALVANIZED ACCORDING TO AASHTO M 232. POSITION DWELLS ARE INCLUDED IN PAYMENT FOR "PRESTRESSED CONCRETE BOX BEAMS, FURNISHED, 990mm".
 PRESTRESSED STRAND SHALL BE 15.24mm NOMINAL DIAMETER MEETING THE REQUIREMENTS OF ASTM A416M, GRADE 1860, LOW RELAXATION STRAND.



LEGEND

EXISTING FENCE	EXISTING SANITARY SEWER & MANHOLE	EXISTING TELEPHONE	EXISTING RD. & GRADE	PROPOSED SANITARY SEWER & MANHOLE	PROPOSED CURB & GUTTER
CONTOUR	UTILITY POLE & GUY	GAS LINE	LEFT EDGE/RD. GRADE	STORM SEWER & CAT. BAS.	BENCH MARK
STORM SEWER & CAT. BAS.	FIRE HYDRANT ASSEMBLY	CABLE T.V.	RIGHT EDGE/RD. GRADE	WATER MAIN W/F.H. ASSEM.	SURVEY BOOK
WATER MAIN & VALVE-IN-WELL	LIGHT POLE	ELECTRIC	CURB & GUTTER	CONTOUR	REV. NO.
WATER MAIN & VALVE-IN-BOX	END SECTION	SIGN	EDGE/DRAWEL	ROAD & GRADE	DESCRIPTION

4	NO AS-BUILT NEEDED	3/24/05	KV	REL
3	FINAL MDOT REVIEW	05/03/02	K.B.	CLR
	FINAL REVIEW SUBMITTAL	11/21/01		
	G.I. SUBMITTAL	01/01		

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ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

BROADWAY BRIDGES RECONSTRUCTION PROJECT
 BROADWAY OVER HURON RIVER (801 OF 81102A)
 BOX BEAM DETAILS

SCALE: 1:100
 DRAWING NO. 98044-B01-34
 SHEET NO. 30B OF 334

APPROVED BY: _____

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BROADWAY OVER HURON RIVER

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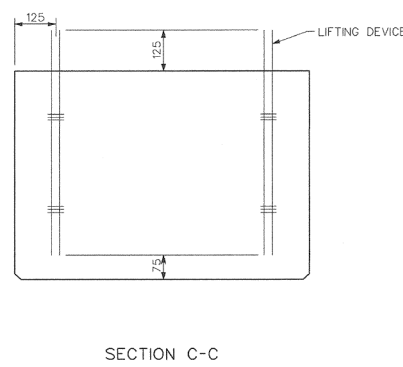
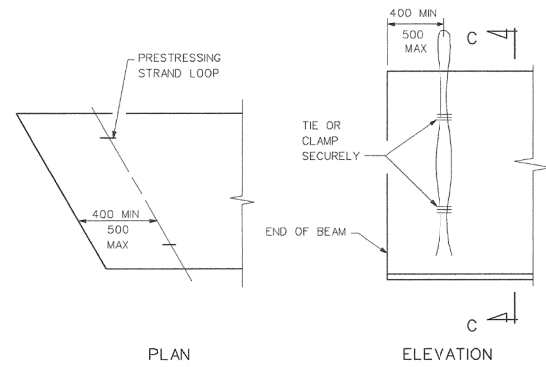
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 EXISTING BOX BEAM DETAILS

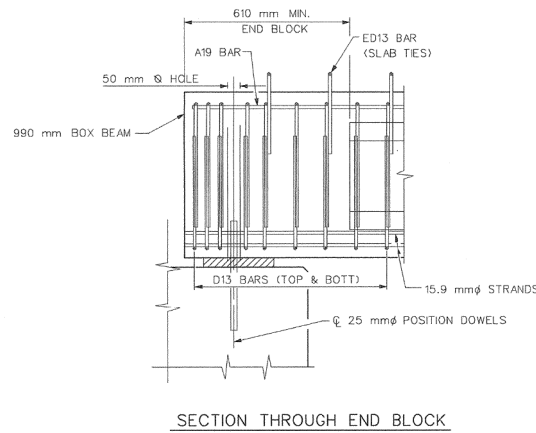
SCALE: NO SCALE
 DRAWING No. 2020-025

SHEET No. 39 of 70

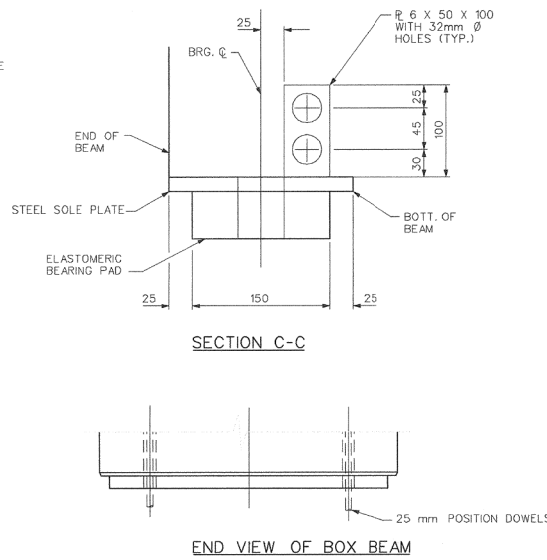


DETAILS OF LIFTING DEVICE

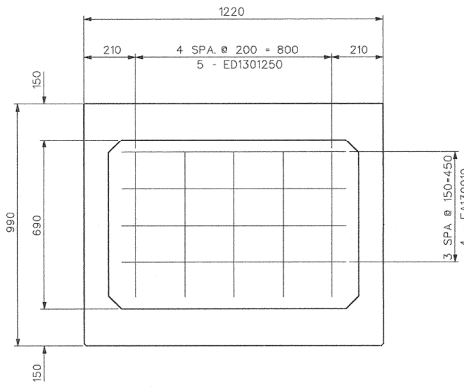
NOTE: LIFTING OF BEAM SHALL BE BY EQUAL LOADS TO EACH PAIR OF LIFTING DEVICES. OTHER TYPES OF LIFTING DEVICES MAY BE USED SUBJECT TO APPROVAL BY THE ENGINEER.



SECTION THROUGH END BLOCK



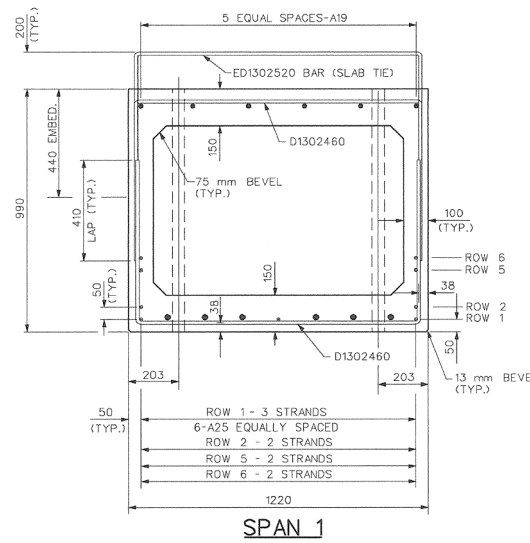
END VIEW OF BOX BEAM



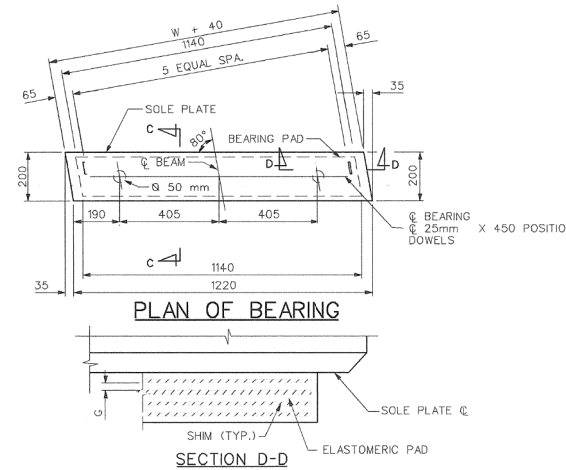
INTERIOR DIAPHRAGM DETAILS

GIRDER	TILT OF SOLE PLATE IN %					
	ABUT A	PIER 1		PIER 2		ABUT B
	SPAN 1	SPAN 1	SPAN 2	SPAN 2	SPAN 3	SPAN 3
A	3.67	3.67	2.67	2.67	1.62	1.62
B	3.69	3.69	2.69	2.69	1.64	1.64
C	3.71	3.71	2.71	2.71	1.67	1.67
D	3.74	3.74	2.74	2.74	1.69	1.69
E	3.76	3.76	2.76	2.76	1.72	1.72
F	3.79	3.79	2.79	2.79	1.74	1.74
G	3.81	3.81	2.81	2.81	1.77	1.77
H	3.84	3.84	2.84	2.84	1.79	1.79
J	3.86	3.86	2.86	2.86	1.82	1.82

	ELASTOMERIC PAD & SOLE PLATE DIMENSIONS					
	ABUT A	PIER 1	PIER 2	PIER 2	PIER 3	ABUT B
	SPAN 1	SPAN 1	SPAN 2	SPAN 2	SPAN 3	SPAN 3
L	150	150	150	150	150	150
W	1140	1140	1140	1140	1140	1140
THICKNESS	51	51	51	51	51	51
NO. OF INT. LAYERS	3	3	3	3	3	3
MIN. STEEL SOLE PL THICKNESS	20	20	20	20	20	20
STEEL SOLE PL LENGTH	1239	1239	1239	1239	1239	1239
STEEL SOLE PL WIDTH	200	200	200	200	200	200
COVER LAYER THICKNESS	6	6	6	6	6	6
INT. LAYER THICKNESS, G	9	9	9	9	9	9
SHIM THICKNESS	3	3	3	3	3	3



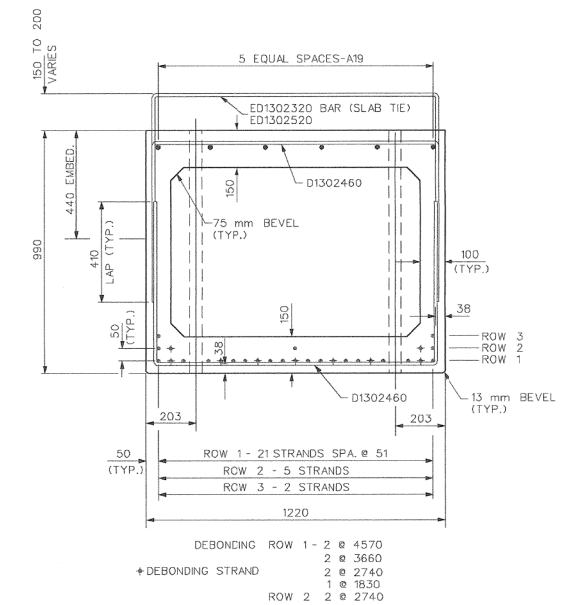
SPAN 1



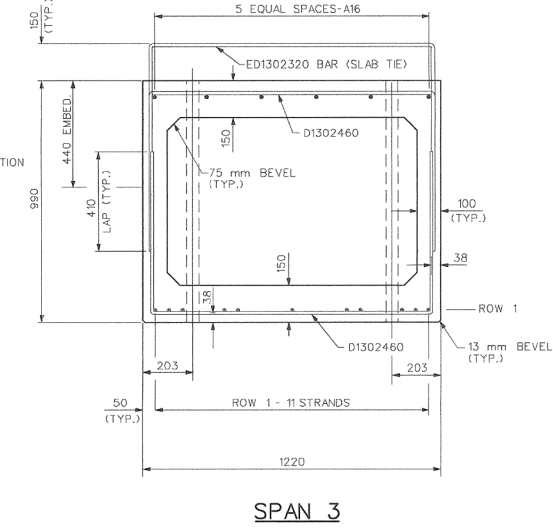
PLAN OF BEARING

SECTION D-D

NOTE: STEEL SOLE PLATE AND APPURTENANCES SHALL BE FABRICATED FROM A572 M270 M GRADE 250 STRUCTURAL STEEL AND HOT-DIP GALVANIZED ACCORDING TO ASTM A252.



SPAN 2



SPAN 3

PRESTRESSING STRAND LIFTING DEVICES

BEAM MASS (METRIC TONS)	STRAND SIZE (mm)	NO. OF STRANDS
18	9.53	2
24	11.11	2
33	12.7	2
27	9.53	3
37	11.11	3
49	12.7	3

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ENGINEERING DIVISION • PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR
BROADWAY BRIDGES RECONSTRUCTION PROJECT
BROADWAY OVER HURON RIVER (B01 OF 81102A)
BOX BEAMS DETAILS

SCALE: mm NTS
DRAWING No. 98044-B01-36
SHEET No. 310 OF 334

BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY	APPROVED BY:
		4	NO AS-BUILT NEEDED	3/24/05	KV	REL	
		3	FINAL MDT REVIEW	05/03/02	K.B.	CLR	
			FINAL REVIEW SUBMITTAL	11/21/01			
			G.I. SUBMITTAL	01/01			

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BROADWAY OVER HURON RIVER

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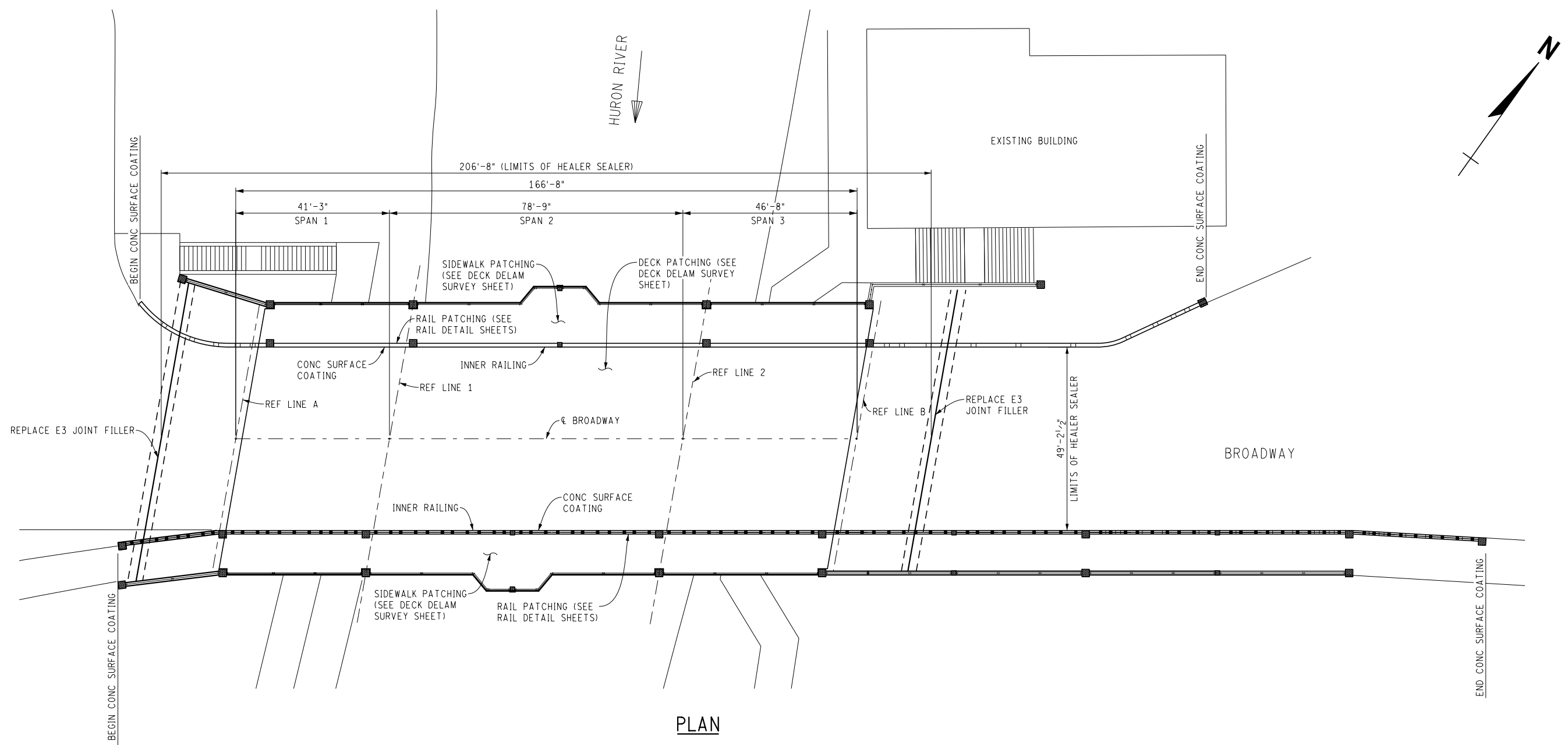
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
EXISTING BOX BEAM DETAILS

SCALE: NO SCALE
DRAWING No. 98044-B01-36
SHEET No. 40 of 70

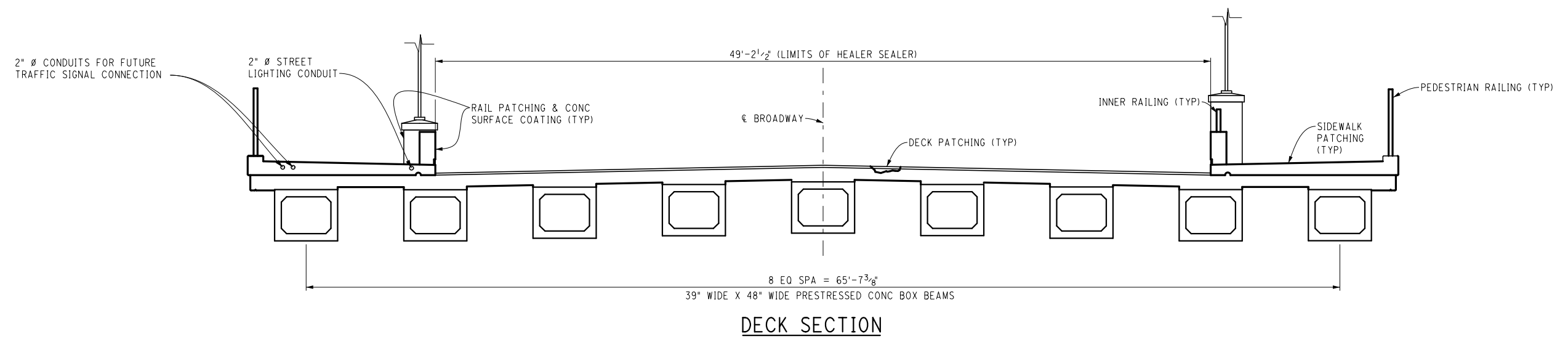
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED

FILE NAME: Z:\2019\80381\CAD\BROADWAY_COVER_HURON_GPSTR_001.DGN



PLAN



DECK SECTION

BROADWAY OVER HURON RIVER



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 301 EAST HURON STREET
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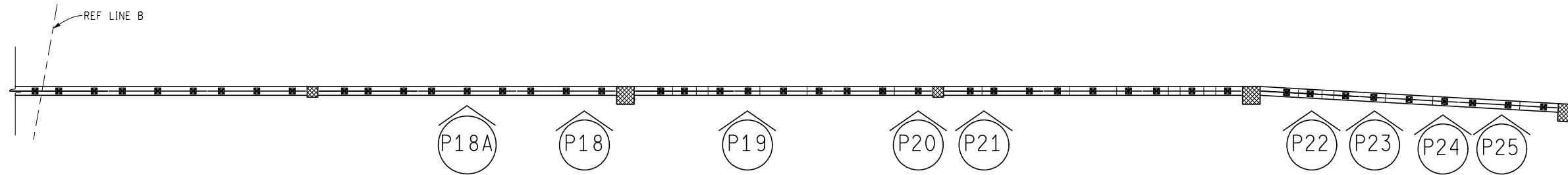


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 CITY OF ANN ARBOR 2020 BRIDGE
 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 GENERAL PLAN OF STRUCTURE

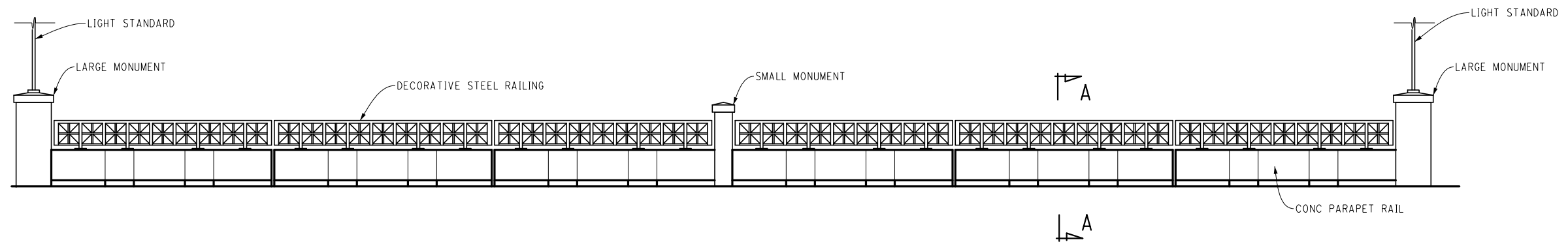
SCALE: NO SCALE
 DRAWING No. 2020-025

LEGEND

P## = LOCATION OF RAIL PATCHES
SEE SHEET 34 FOR SPECIFIC
PATCH DIMENSIONS

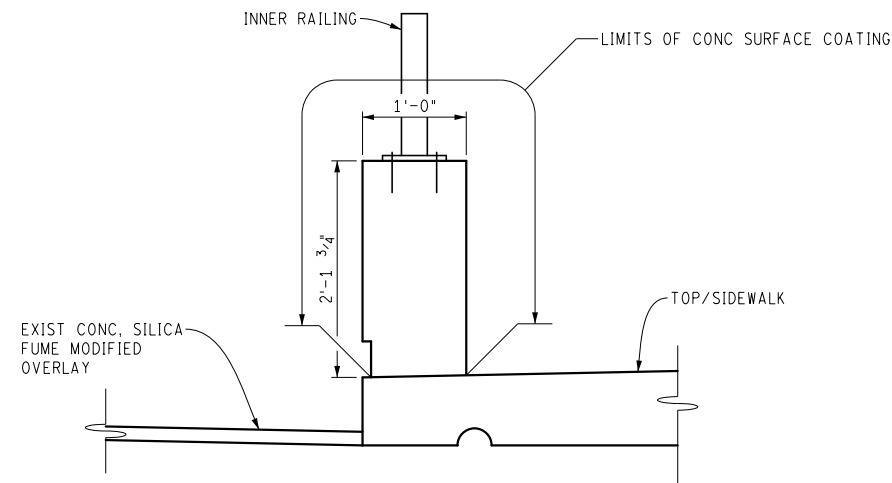


PLAN - SOUTH RAIL PATCHING LOCATIONS



ELEVATION - INNER RAIL

PROTECT EXIST MONUMENTS FROM APPLICATION OF CONC SURFACE COATING RAILING. ALL MEANS OF PROTECTION SHALL BE COMPLETELY EFFECTIVE (TYP ALL MONUMENTS).



SECTION A-A

NOTE:

IN ORDER TO PERFORM THE BARRIER RAIL REPAIRS, THE CONTRACTOR SHALL REMOVE, STORE, PROTECT, AND REPLACE WHEN THE PATCHES HAVE BEEN PROPERLY CURED, THE NEEDED METAL RAILING SEGMENTS. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ASSOCIATED ITEMS OF WORK.

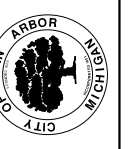
BROADWAY OVER HURON RIVER

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED

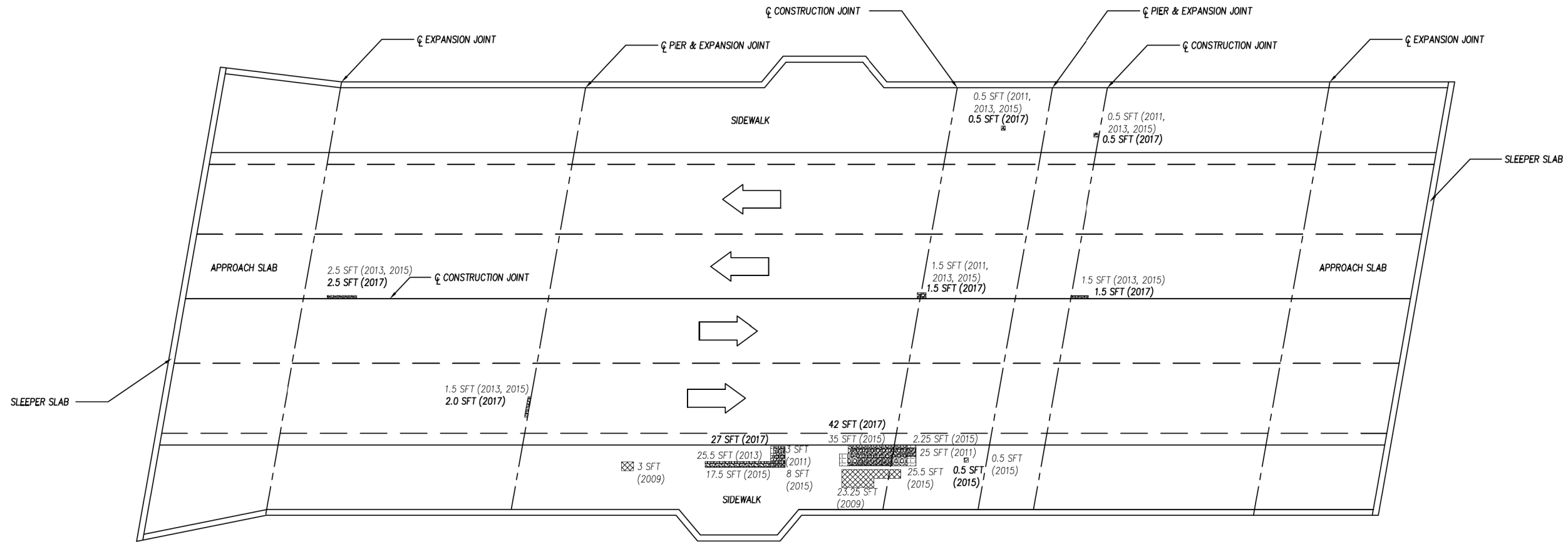
CITY OF ANN ARBOR
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
CONC RAIL PATCHING LOCATIONS

SCALE: NO SCALE
DRAWING No. 2020-025

FILE NAME: Z:\2019\90381\CAD\BROADWAY_OVER_HURON_DECK_DELAM_SURVEY_001.DGN



PLAN OF DECK DEFICIENCIES

SIZES AND LOCATIONS OF DEFICIENCIES SHOWN ON THIS SHEET ARE APPROXIMATED FROM PREVIOUS DECK EVALUATION. CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF DEFICIENCIES AND PATCH AS DIRECTED BY THE ENGINEER. CONTRACTOR TO GIVE ENGINEER 36 HOURS TO VERIFY LIMITS OF PATCHING PRIOR TO PLACING PATCHING MATERIAL.

LEGEND:

- 2009 DECK DELAMINATION
- 2011 DECK DELAMINATIONS AND SPALLS
- 2013 DECK DELAMINATIONS AND SPALLS
- 2015 DECK DELAMINATIONS AND SPALLS
- 2017 DECK DELAMINATIONS AND SPALLS

2009 TOTAL DECK DELAMINATION = 26.25 SFT
 2011 TOTAL DECK DELAMINATION = 30.50 SFT
 2013 TOTAL DECK DELAMINATION = 51.0 SFT
 2015 TOTAL DECK DELAMINATION = 64.73 SFT
 2017 TOTAL DECK DELAMINATION = 73.73 SFT

NOTES:

THE CONTRACTOR IS RESPONSIBLE TO WET CURE ALL LATEX MODIFIED PATCHES PLACED ON THIS PROJECT FOR A PERIOD OF SEVEN CALENDAR DAYS IN ACCORDANCE WITH SECTION 712.03.P AND AS DETAILED HEREIN. THE CONTRACTOR SHALL ENSURE THAT THE BURLAP REMAINS WET FOR THE ENTIRE DURATION OF THE CURING PERIOD. THE POLYETHYLENE FILM COVERING THE PATCHES SHALL BE SECURELY AFFIXED TO EACH PATCH. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "PATCHING CONC, C-L".



BROADWAY BRIDGE OVER THE HURON RIVER
 DECK DELAMINATION SURVEY



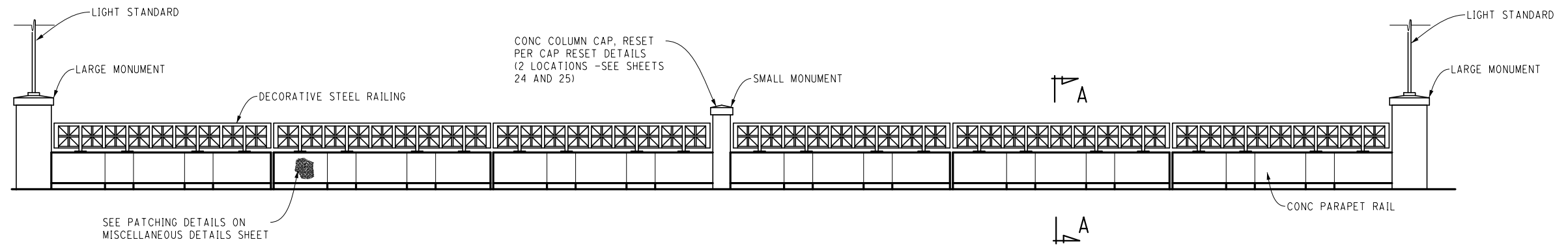
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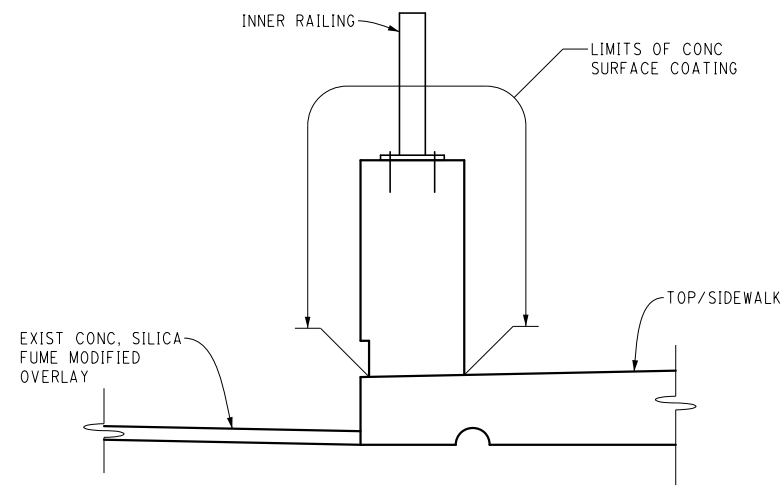
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 CITY OF ANN ARBOR 2020 BRIDGE
 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 DECK DELAMINATION AND PATCHING PLAN

SCALE: NO SCALE
 DRAWING No. 2020-025

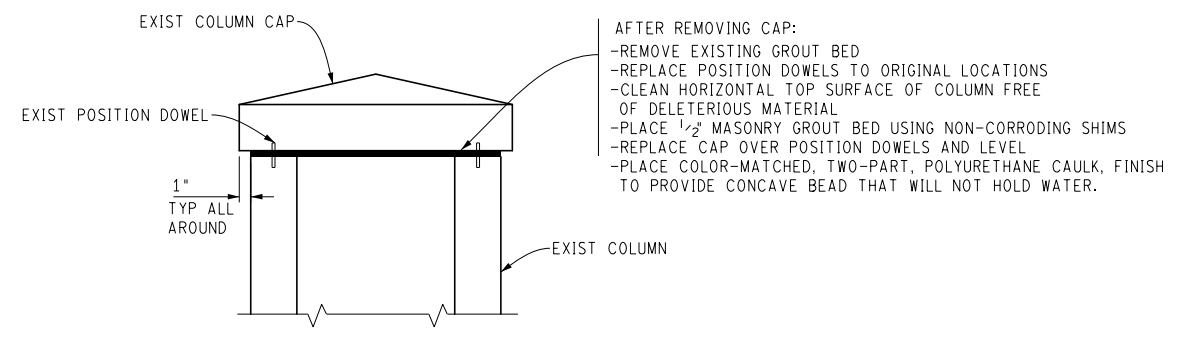


TYPICAL ELEVATION - INNER RAIL

PROTECT EXIST MONUMENTS FROM APPLICATION OF CONC SURFACE COATING RAILING. ALL MEANS OF PROTECTION SHOULD BE COMPLETELY EFFECTIVE (TYP ALL MONUMENTS).



SECTION A-A



CAP RESET DETAIL

CONCRETE RAIL REPAIR DETAILS
 (BROADWAY OVER DEPOT STREET AND MDOT RAILROAD & BROADWAY OVER HURON RIVER)

FILE NAME: 2/20/19/190381/CAD/CAD/BROADWAY_OVER_DEPOT_RAIL_04L.DGN



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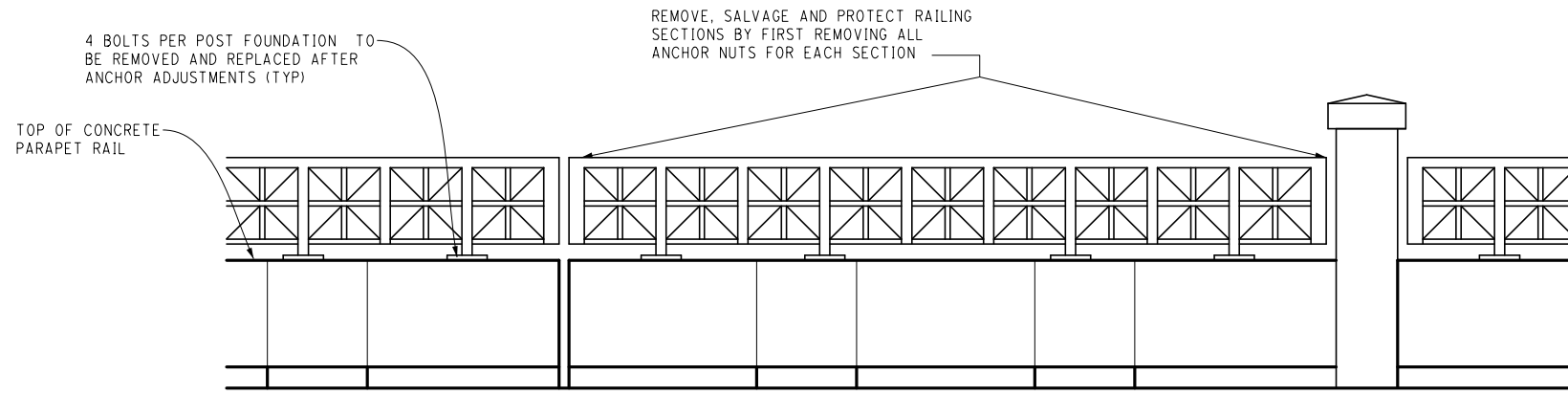
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 ANN ARBOR, MI 48106-1700
 ANN ARBOR 734-764-6477
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 CITY OF ANN ARBOR 2020 BRIDGE
 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 CONCRETE RAIL REPAIR DETAILS

SCALE: NO SCALE
 DRAWING No. 2020-025

FILE NAME: Z:\2019\190381\CAD\CD\BROADWAY_OVER_DEPOT_RAIL_005.DGN



RAILING ELEVATION

TOP OF CONCRETE PARAPET RAIL



AFTER REMOVING METAL RAILING AND 1/8" BEARING PAD:
 -REMOVE THREADED RODS
 -REMOVE SLEEVES
 -BLOW OUT HOLES WITH HIGH-PRESSURE AIR
 -CLEAN THREADED RODS WITH WIRE BRUSH





PRIOR TO REINSTALLING METAL RAILING AND 1/8" BEARING PAD:
 -REINSTALL THREADED RODS TO 2" PROJECTION ABOVE TOP OF CONCRETE
 -DO NOT REINSTALL SLEEVES
 -INJECT HILTI HIT-RE 100 ADHESIVE, FILLING VOID TO TOP OF CONCRETE
 -TOOL ADHESIVE TO LEAVE SMOOTH SURFACE AT TOP OF CONCRETE FREE OF SURFACE VOIDS

ANCHOR ADJUSTMENT DETAILS

NOTES:

THE ENGINEER SHALL DIRECT THE REMOVAL AND REPLACEMENT OF INDIVIDUAL RAILING SECTIONS FOR REPAIR. IT IS THE INTENT OF THE PROJECT TO REPAIR RAILING SECTIONS WITH LOOSE ANCHORS UP TO THE CONTRACT QUANTITY.

RAILING ANCHOR ADJUSTMENT DETAILS
 (BROADWAY OVER DEPOT STREET AND MDOT RAILROAD & BROADWAY OVER HURON RIVER)

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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS RAILING ANCHOR ADJUSTMENT DETAILS	
SCALE: NO SCALE	DRAWING No. 2020-025
SHEET No. 46 of 70	

FULLER
LOT M-78



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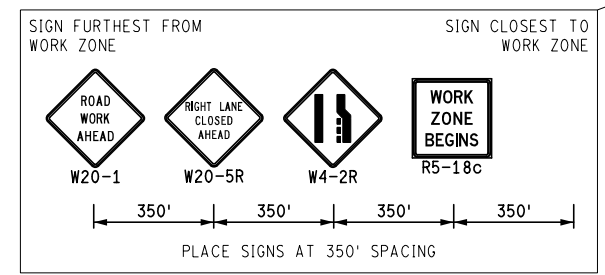
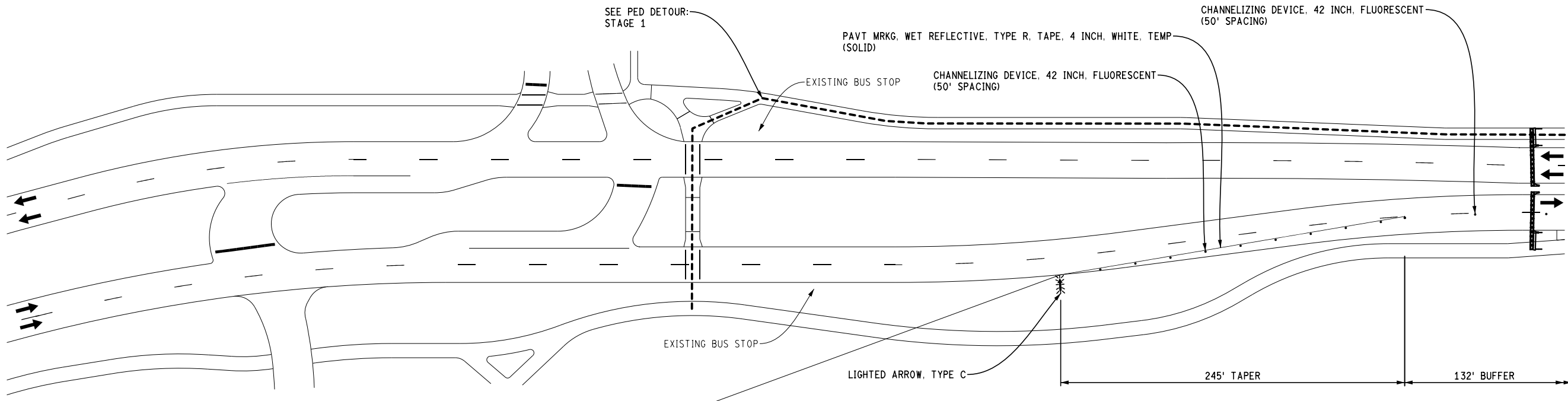


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
MAINTAINING TRAFFIC

SCALE: 0 80 PLAN (FT)
DRAWING No. 2020-025

FULLER RD

FULLER RD



STAGE 1
APPLIES: CLOSE EB OUTSIDE LANE AND SIDEWALK
DETOUR PEDS TO WB SIDE

KEY

	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH

U OF M PARKING
YELLOW LOT

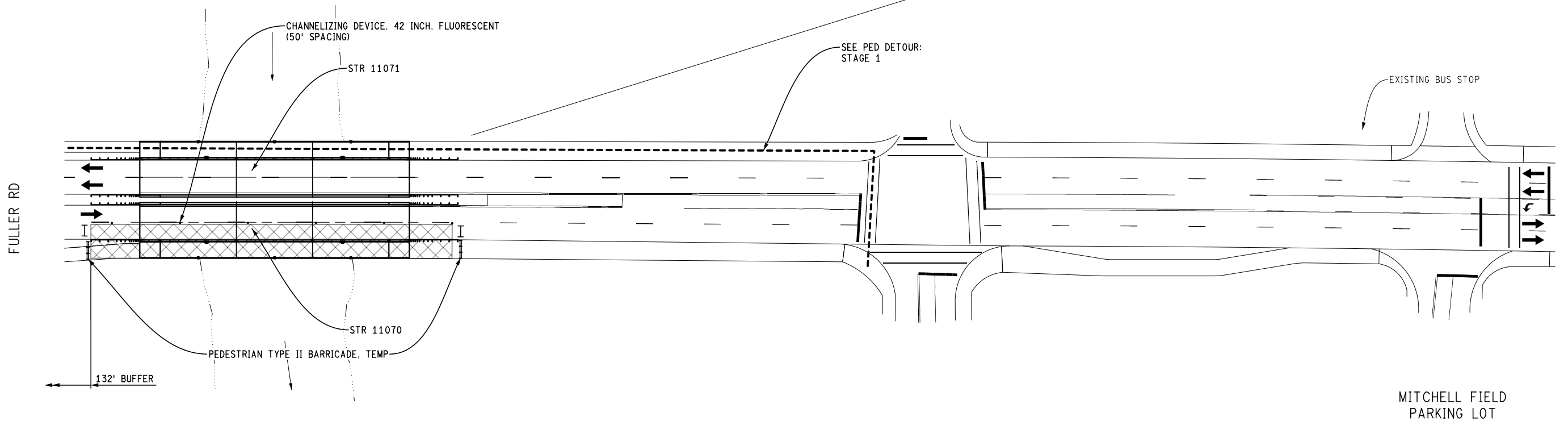
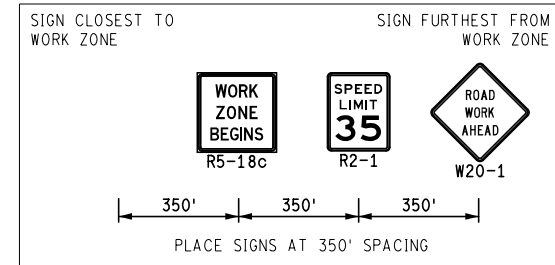
MAINTAINING TRAFFIC
(FULLER ROAD OVER HURON RIVER)

FILE NAME: Z:\2019\80081\CAD\CAD\MOT\FULLER001_MOT_STAGE1.DGN

HURON RIVER

CEDAR BEND DR

NC78 PARKING LOT



STAGE 1
 APPLIES: CLOSE EB OUTSIDE LANE AND SIDEWALK
 DETOUR PEDS TO WB SIDE

KEY

	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH

MAINTAINING TRAFFIC
 (FULLER ROAD OVER HURON RIVER)

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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 CITY OF ANN ARBOR 2020 BRIDGE
 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 MAINTAINING TRAFFIC

SCALE: 0 80 PLAN (FT)
 DRAWING No. 2020-025

FULLER
LOT M-78



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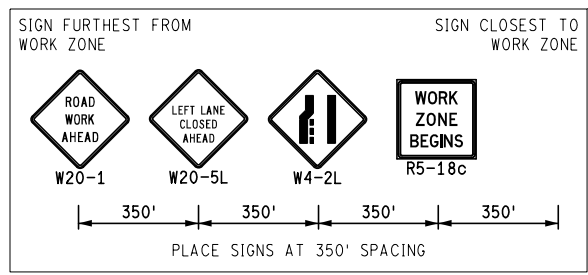
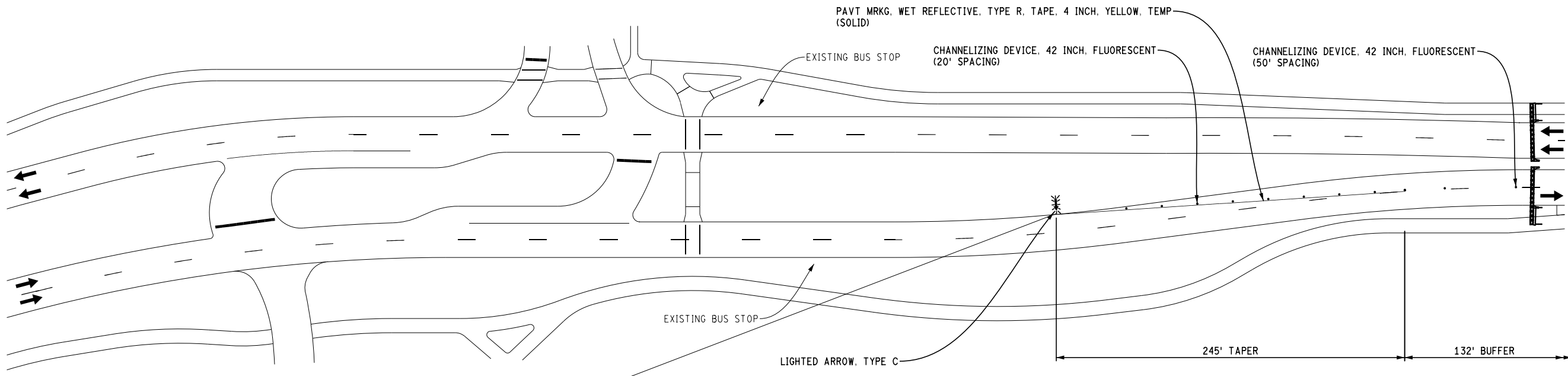


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
MAINTAINING TRAFFIC

SCALE: 0 80 PLAN (FT)
DRAWING No. 2020-025

FULLER RD

FULLER RD



STAGE 2
APPLIES: CLOSE EB AND WB INSIDE LANES

KEY

	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH

U OF M PARKING
YELLOW LOT

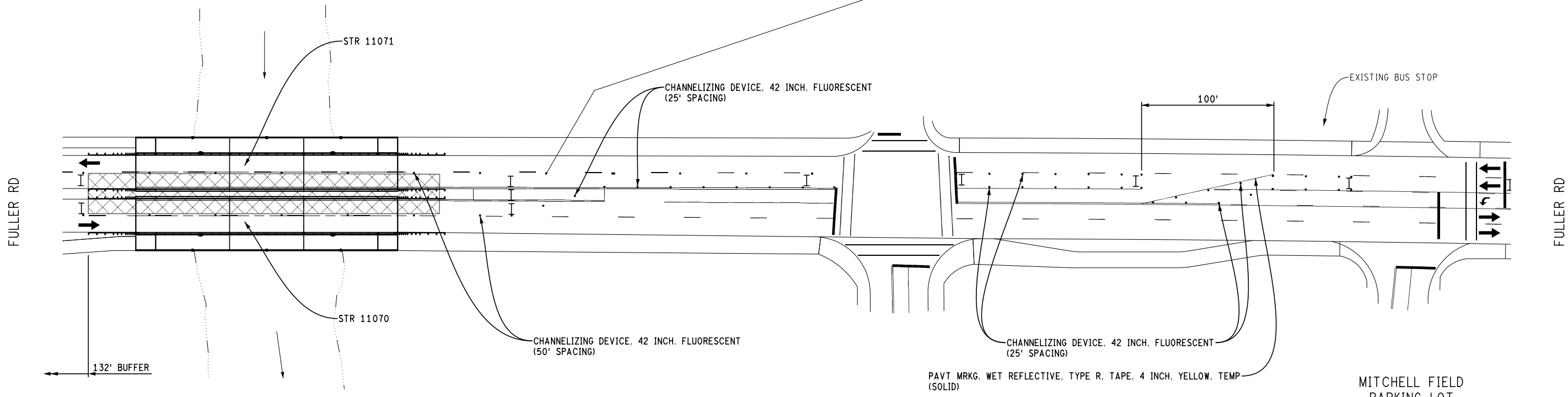
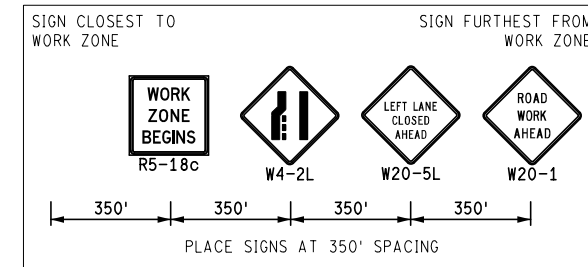
MAINTAINING TRAFFIC
(FULLER ROAD OVER HURON RIVER)

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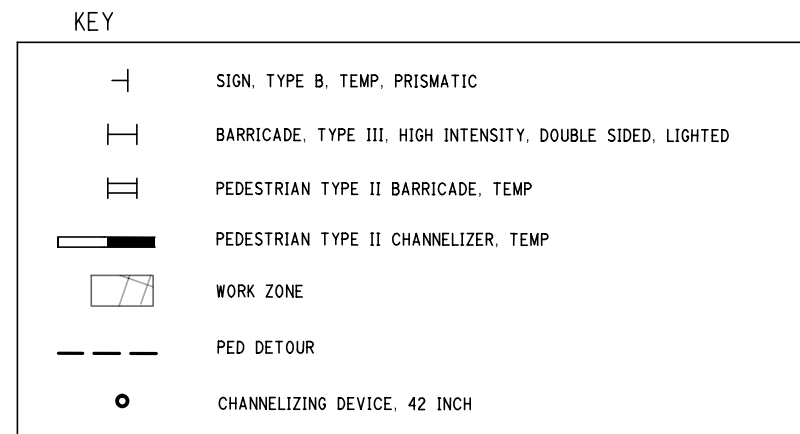
HURON RIVER

CEDAR BEND DR

NC78 PARKING LOT



STAGE 2
 APPLIES: CLOSE EB and WB INSIDE LANES



MAINTAINING TRAFFIC
 (FULLER ROAD OVER HURON RIVER)

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 CITY OF ANN ARBOR 2020 BRIDGE
 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 MAINTAINING TRAFFIC

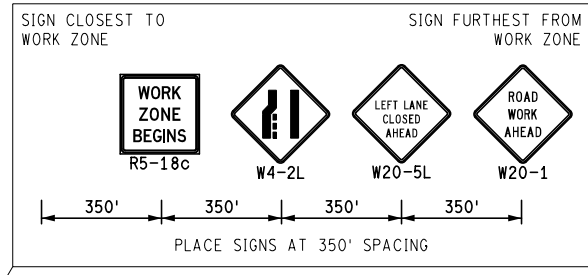
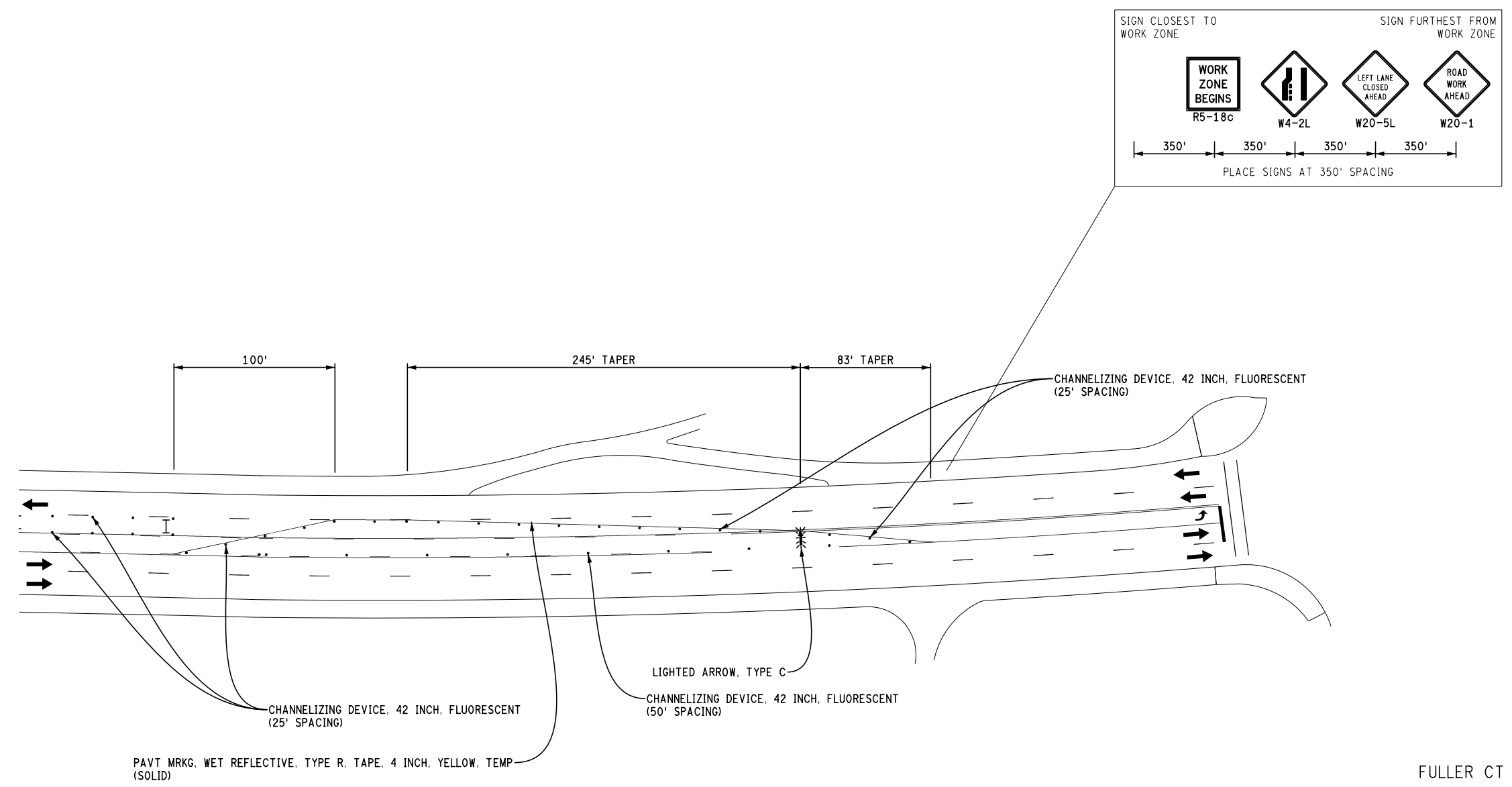
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 DRAWING No. 2020-025

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FULLER RD

BORDER TO
BORDER TRAIL

BONISTEEL BLVD



PAVT MRKG, WET REFLECTIVE, TYPE R, TAPE, 4 INCH, YELLOW, TEMP (SOLID)

CHANNELIZING DEVICE, 42 INCH, FLUORESCENT (25' SPACING)

LIGHTED ARROW, TYPE C

CHANNELIZING DEVICE, 42 INCH, FLUORESCENT (50' SPACING)

KEY

	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH

STAGE 2
APPLIES: CLOSE EB and WB INSIDE LANES

FULLER CT

FULLER RD

BORDER TO
BORDER TRAIL

MAINTAINING TRAFFIC
(FULLER ROAD OVER HURON RIVER)

811
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DESCRIPTION

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CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS

MAINTAINING TRAFFIC

SCALE: 0 80
PLAN (FT)

DRAWING No.
2020-025

SHEET No.
51 of 70

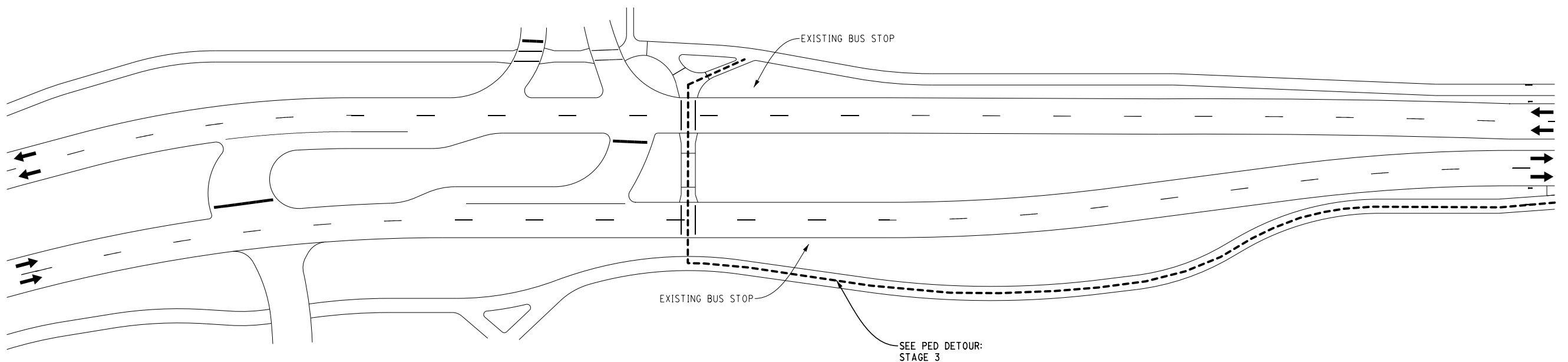
51 of 70

FILE NAME: Z:\2019\80081\CAD\CAD\MOT\FULLER01_MOT_STAGE3.DGN

FULLER
LOT M-78

FULLER RD

FULLER RD



STAGE 3
 APPLIES: CLOSE WB OUTSIDE LANE AND SIDEWALK
 DETOUR PEDS TO EB SIDE

KEY	
	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH

U OF M PARKING
YELLOW LOT

MAINTAINING TRAFFIC
(FULLER ROAD OVER HURON RIVER)



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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS MAINTAINING TRAFFIC	SCALE: 0 80 PLAN (FT)
SHEET No.	DRAWING No. 2020-025
52 of 70	

HURON RIVER

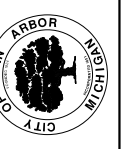
CEDAR BEND DR

NC78 PARKING LOT



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

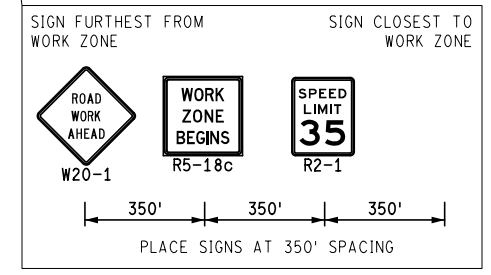
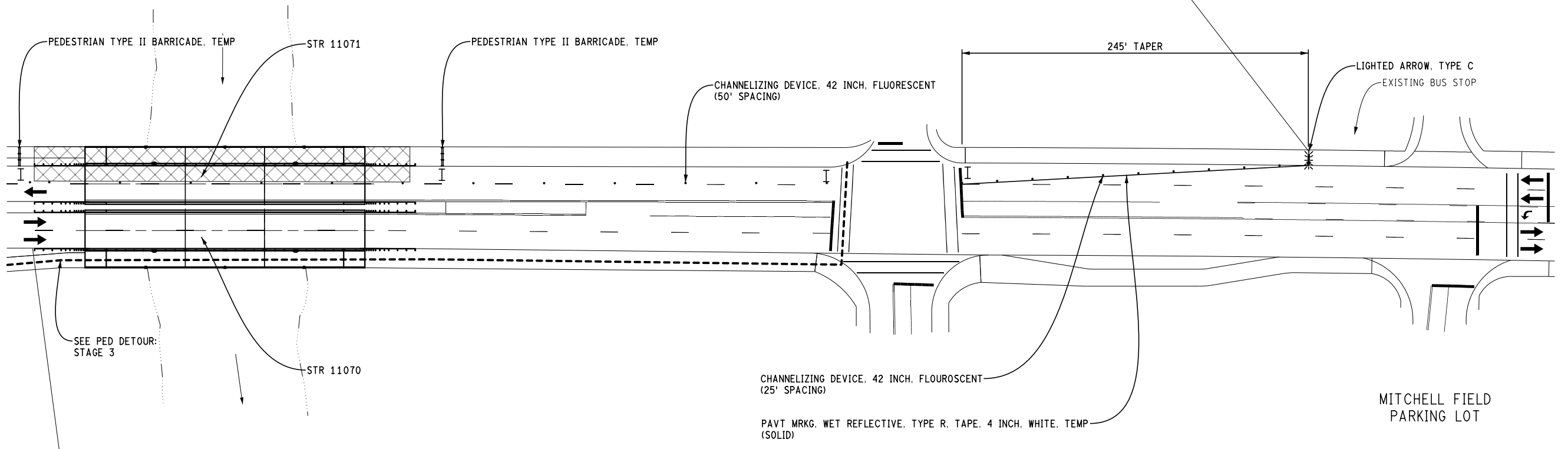
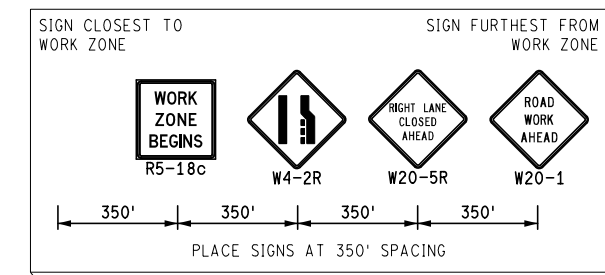
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
MAINTAINING TRAFFIC

SCALE: 0 80 PLAN (FT)
DRAWING No. 2020-025

SHEET No. 53 of 70



STAGE 3
APPLIES: CLOSE WB OUTSIDE LANE AND SIDEWALK
DETOUR PEDS TO EB SIDE

KEY

	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH

MAINTAINING TRAFFIC
(FULLER ROAD OVER HURON RIVER)

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HURON RIVER

CEDAR BEND DR

HURON RIVER

CEDAR BEND DR

NC78 PARKING LOT



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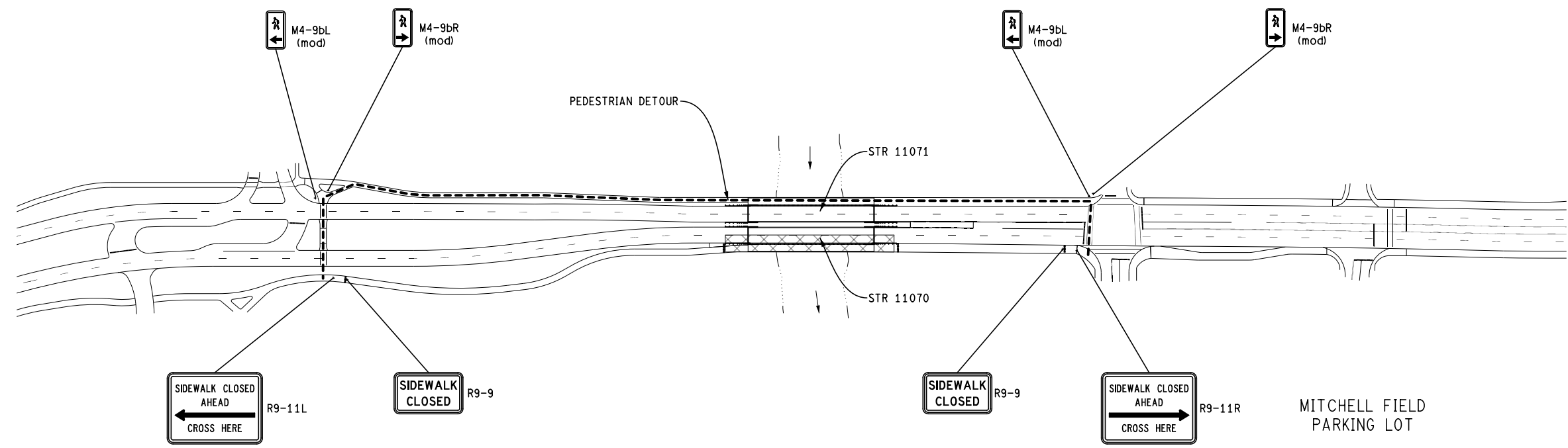
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
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 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 MAINTAINING TRAFFIC

SCALE: 0 100 200
 PLAN (FT)
 DRAWING No.
 2020-025

SHEET No.
 54 of 70

FULLER RD

FULLER RD



PEDESTRIAN DETOUR

STR 11071

STR 11070

SIDEWALK CLOSED
 AHEAD
 ← CROSS HERE
 R9-11L

SIDEWALK
 CLOSED
 R9-9

SIDEWALK
 CLOSED
 R9-9

SIDEWALK CLOSED
 AHEAD
 → CROSS HERE
 R9-11R

MITCHELL FIELD
PARKING LOT

PED DETOUR: STAGE 1
 APPLIES: CLOSE EB OUTSIDE LANE AND SIDEWALK
 DETOUR PEDS TO NORTH SIDE

KEY

	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH

U OF M PARKING
YELLOW LOT

HURON RIVER

CEDAR BEND DR

MAINTAINING TRAFFIC
 (FULLER ROAD OVER HURON RIVER)

FILE NAME: Z:\2019\80081\CAD\DMOT\FULLER001_PED-DETOUR_STAGE-1.DGN

HURON RIVER

CEDAR BEND DR

NC78 PARKING LOT



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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
 CITY OF ANN ARBOR 2020 BRIDGE
 CAPITAL PREVENTIVE MAINTENANCE REPAIRS
 MAINTAINING TRAFFIC

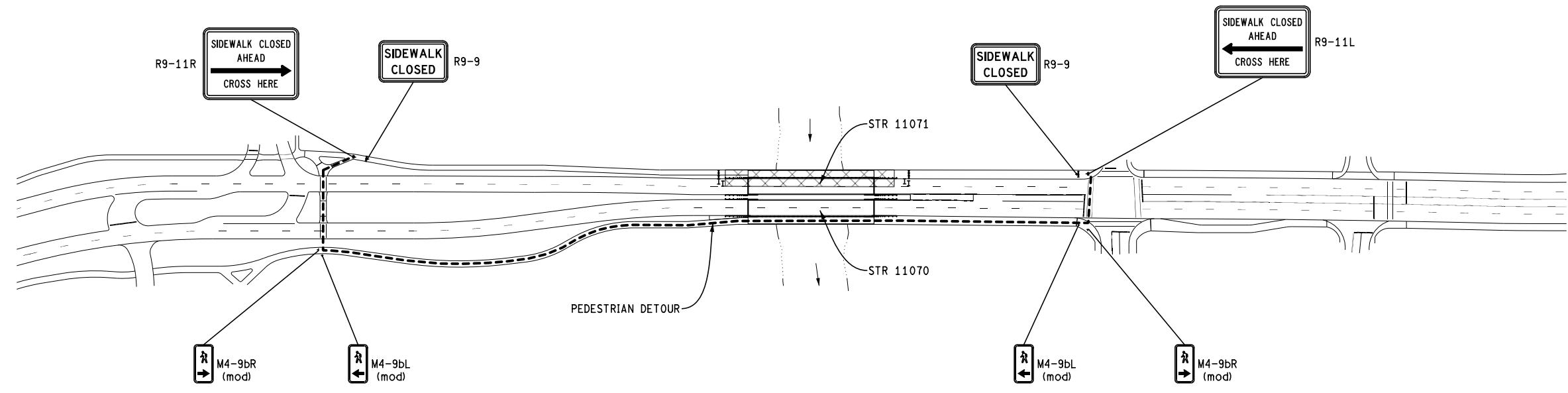
SCALE: 0 200
 PLAN (FT)
 DRAWING No.
 2020-025

SHEET No.
 55 of 70



FULLER RD

FULLER RD



PED DETOUR: STAGE 3
 APPLIES: CLOSE WB OUTSIDE LANE AND SIDEWALK
 DETOUR PEDS TO SOUTH SIDE

KEY

	SIGN, TYPE B, TEMP, PRISMATIC
	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
	PEDESTRIAN TYPE II BARRICADE, TEMP
	PEDESTRIAN TYPE II CHANNELIZER, TEMP
	WORK ZONE
	PED DETOUR
	CHANNELIZING DEVICE, 42 INCH

U OF M PARKING
YELLOW LOT

HURON RIVER

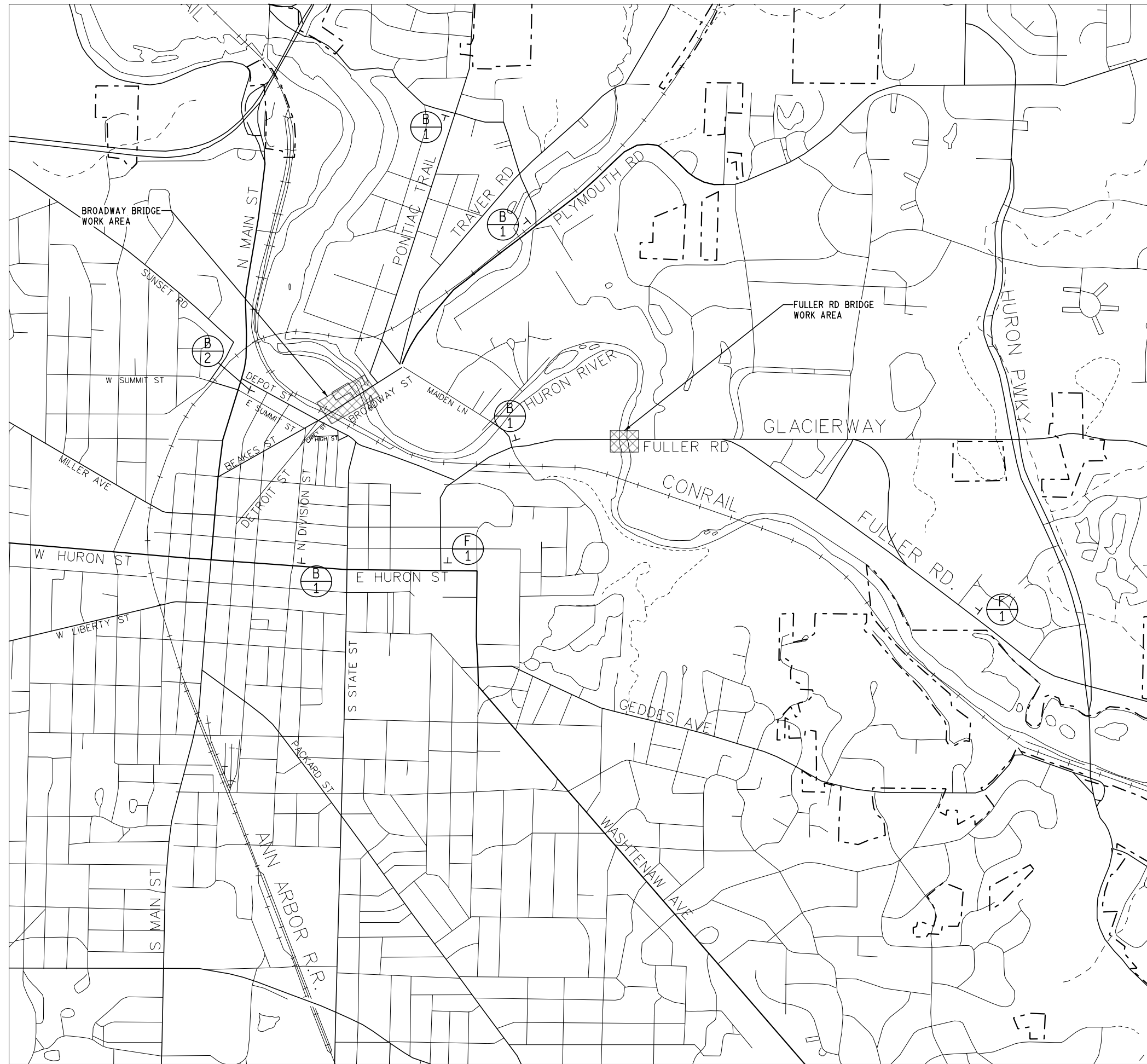
CEDAR BEND DR

MITCHELL FIELD
PARKING LOT

MAINTAINING TRAFFIC
(FULLER ROAD OVER HURON RIVER)

FILE NAME: Z:\2019\80081\CAD\DMOT\FULLER003_PED-DETOUR_STAGE-3.DGN

FILE NAME: Z:\2019\190381\CAD\CAD\MOT\MOT - GLOBAL SIGNING.DWG



W20-1

SPECIAL SIGN #1

B1

W20-1

SPECIAL SIGN #1

SPECIAL SIGN #2

B2

W20-1

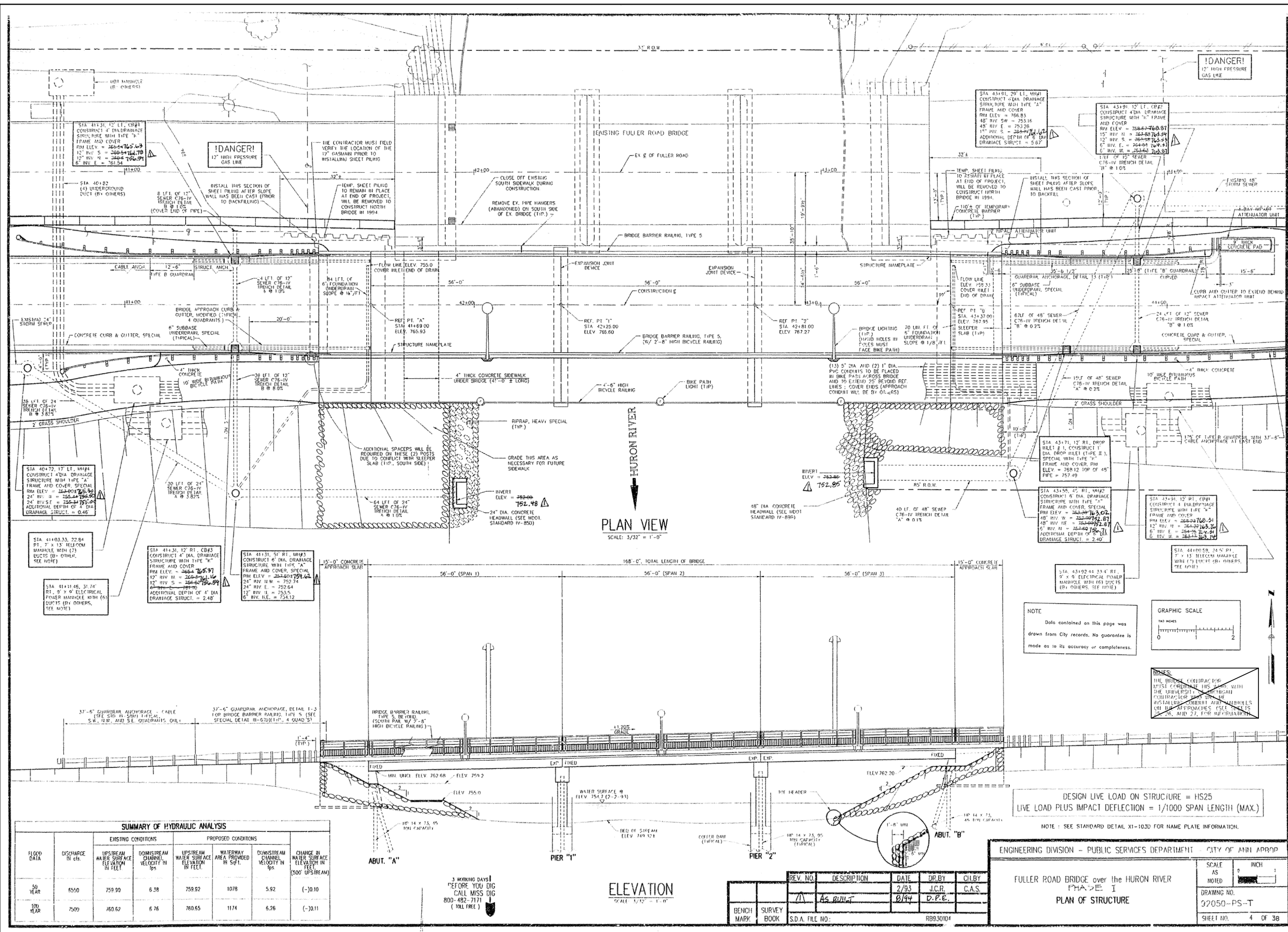
SPECIAL SIGN #2

F1

MAINTAINING TRAFFIC

	Know what's below. Call before you dig.	DATE DRAWN CHECKED			
CITY OF ANN ARBOR PUBLIC SERVICE 301 EAST HURON STREET ANN ARBOR, MI 48106-1687 ANN ARBOR 734-794-4810 www.a2gov.org					
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS MAINTAINING TRAFFIC DETOUR MAP					
SCALE: NO SCALE		DRAWING No. 2020-025			
SHEET No.					
56 of 70					

FILE NAME: Z:\2019\190381\CADD\FULLER_EXIST_001.DGN



SUMMARY OF HYDRAULIC ANALYSIS

FLOOD DATA	DISCHARGE (CFS)	EXISTING CONDITIONS		PROPOSED CONDITIONS		CHANGE IN WATER SURFACE ELEVATION IN FEET (500' UPSTREAM)	
		UPSTREAM WATER SURFACE ELEVATION IN FEET	DOWNSTREAM CHANNEL VELOCITY IN FPS	UPSTREAM WATER SURFACE ELEVATION IN FEET	DOWNSTREAM CHANNEL VELOCITY IN FPS		
50 YEAR	6550	759.90	6.38	759.62	1078	5.92	(-10.10)
100 YEAR	7500	760.62	6.76	760.65	1174	6.26	(-10.11)

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)

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

REV. NO.	DESCRIPTION	DATE	DR. BY	CHECKED BY
1	As BUILT	8/94	J.C.R.	C.A.S.

S.D.A. FILE NO: RBS3004

ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT CITY OF ANN ARBOR

FULLER ROAD BRIDGE over the HURON RIVER
PAGE 1
PLAN OF STRUCTURE

SCALE AS SHOWN

DRAWING NO. 32050-PS-T
SHEET NO. 4 OF 38

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FULLER ROAD OVER HURON RIVER (EASTBOUND)

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

NO.	DATE	DRAWN	CHECKED

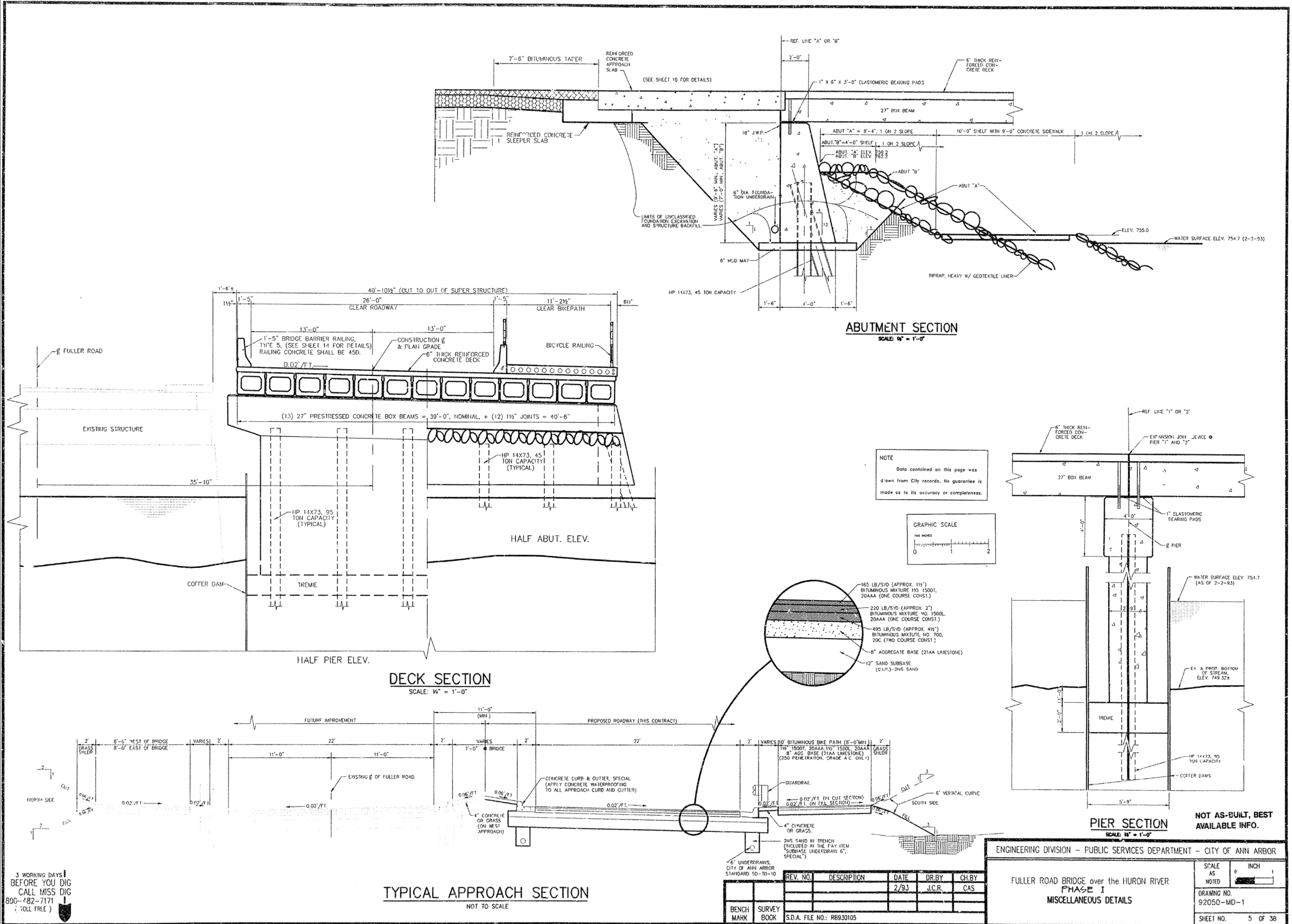
CITY OF ANN ARBOR
PUBLIC SERVICES DEPARTMENT
301 EAST HURON STREET
ANN ARBOR, MI 48106
ANN ARBOR 311: 734-764-6847
WWW.A2gov.org

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS
EXISTING GENERAL PLAN OF STRUCTURE

SCALE: NO SCALE
DRAWING No. 2020-025
SHEET No. 57 of 70

FILE NAME: Z:\2019\180381\CAD\CD\FULLER_EAST_002.DGN

3 WORKING DAYS
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CALL MISS DIG
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**FULLER ROAD OVER HURON RIVER
(EASTBOUND)**

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

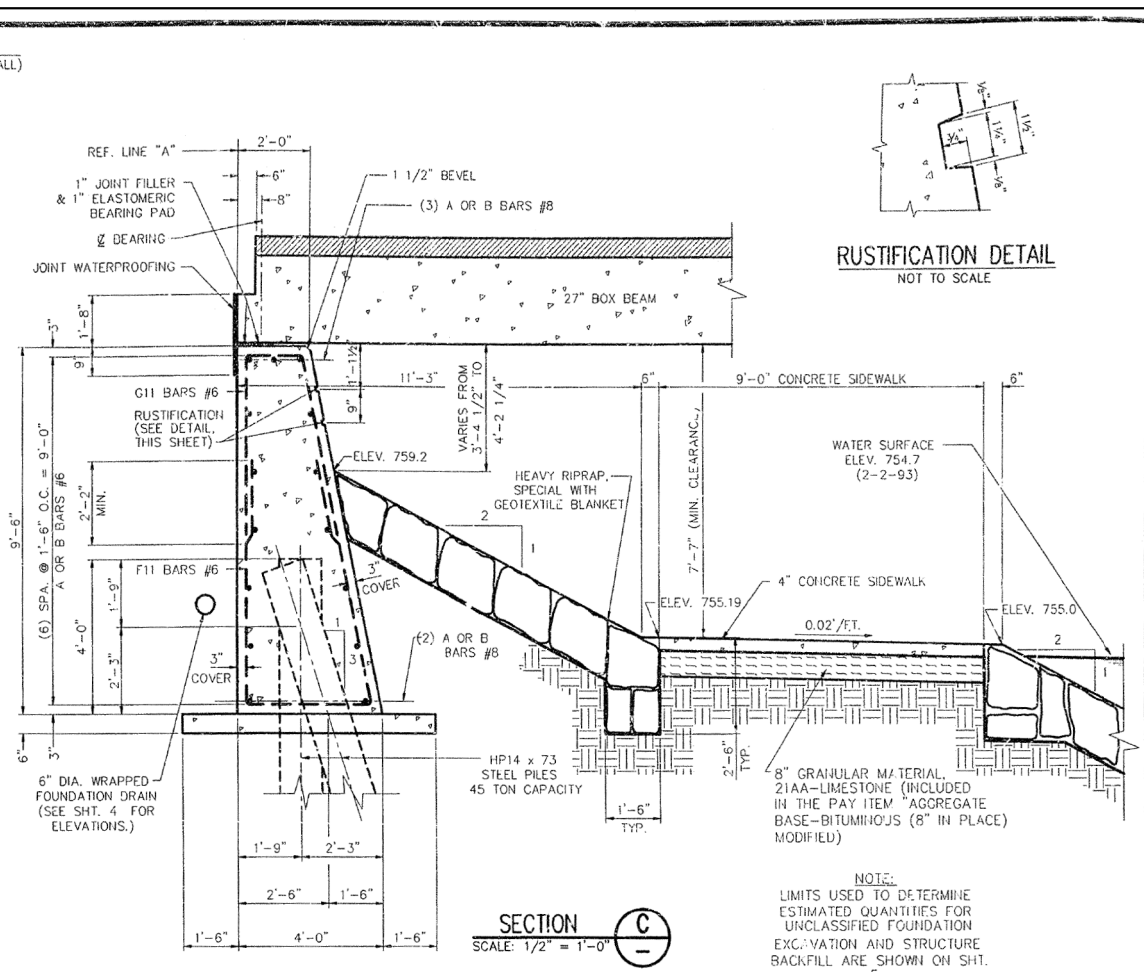
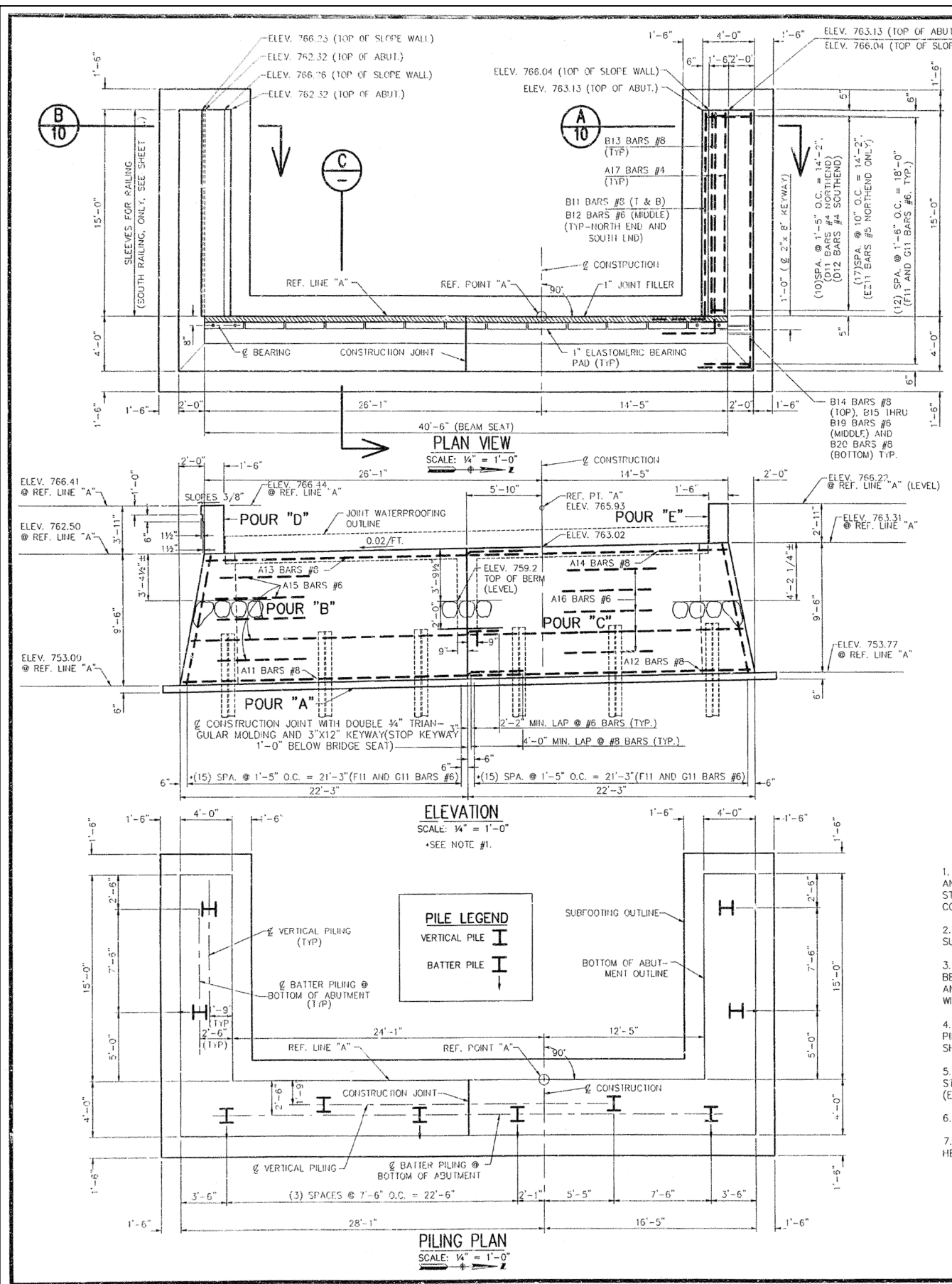
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-1687
ANN ARBOR TEL: 734-769-6847
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
EXISTING GENERAL PLAN OF STRUCTURE

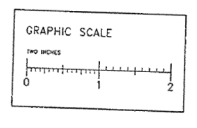
SCALE: NO SCALE
DRAWING No. 2020-025
SHEET No. 58 of 70

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

FILE NAME: Z:\2019\903081\CAD\CD\FULLER_EXST_003.DGN



NOTE:
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- NOTES:**
- ADJUST SPACING OF REINFORCING STEEL AS REQUIRED TO CLEAR PILING AND LOCATION OF POSITION DOWELS WHEN DRILLED. (FURNISHING AND INSTALLING POSITION DOWELS IS INCLUDED IN THE PAY ITEM "27" PRESTRESSED CONCRETE DECK").
 - BRIDGE SEATS SHALL BE FINISHED TO PROVIDE TRUE AND EVEN SLOPING SURFACES AS SHOWN AND CALLED FOR ON THIS DRAWING.
 - AFTER THE STEEL PILES ARE DRIVEN AND CUT OFF, PORTIONS TO BE EMBEDDED IN CONCRETE SHALL BE THOROUGHLY CLEANED OF ALL SCALE, DIRT AND GREASE SO THAT A SATISFACTORY BOND BETWEEN STEEL AND CONCRETE WILL BE OBTAINED.
 - PILES SHALL BE DRIVEN WITH SUCH ACCURACY THAT THE ENDS OF THE PILES TO BE EMBEDDED IN THE CONCRETE ARE WITHIN 3" OF THE LOCATIONS SHOWN ON THE PLANS. (MIN. 6" OF CONCRETE COVER.)
 - THE 1" JOINT FILLER SHALL BE INCLUDED IN THE PAY ITEM "27" PRESTRESSED CONCRETE DECK" AND SHALL NOT BE PAID FOR SEPARATELY. (EST. QUANTITY FOR BOTH ABUTMENTS = 34 SF1.)
 - SEE PILE SPLICE DETAIL ON "PIER "1" AND "2" DETAILS" SHEET.
 - TOE HEADERS SHALL BE INCLUDED IN THE PAY ITEM "RIPRAP, HEAVY SPECIAL".

HP 14 X 73 STEEL PILES, 45 TON CAPACITY			
NUMBER REQUIRED	EST. LENGTH - L.F. FURNISHED AND DRIVEN		SPICES EACH
	EACH	TOTAL	
(4) VERTICAL	19	76	2
(6) BATTER	20	120	3
TOTAL - ABUTMENT "A"		196	5

ABUTMENT "A" CONCRETE QUANTITIES (CYD)			
POUR	LOCATION	SUBFOOTING CONCRETE (355)	SUBSTRUCTURE CONCRETE
"A"	SUBFOOTING	10.0	30.3
"B"	WALL		38.3
"C"	SLOPEWALL		3.3
"E"	SLOPEWALL		2.4
TOTAL		10.0	82.3

ABUTMENT "A" MISCELLANEOUS QUANTITIES		
UNIT	UNIT	AMOUNT
UNCLASSIFIED FOUNDATION EXCAVATION	C.YD	320
STRUCTURE BACKFILL (C.I.P.)	C.YD	250
JOINT WATERPROOFING	SFT.	120
RIPRAP, HEAVY SPECIAL	S.YD	250
FOUNDATION DRAIN, 6"	L.F.T.	84
CONCRETE SIDEWALK, 4"	S.F.T.	369
PILE POINTS, STEEL PILES	EACH	10
FOUNDATION PILING PREBORING	L.F.T.	126
COFFERDAM	L.SUM	1

NOT AS-BUILT, BEST AVAILABLE INFO.

BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
				4-93	L.C.H.	C.S.
			S.D.A. FILE NO: RB930109			

ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

FULLER ROAD BRIDGE over the HURON RIVER
PHASE 1
ABUTMENT "A" DETAILS

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

DRAWING NO. 92050-AA-1
SHEET NO. 9 OF 38

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FULLER ROAD OVER HURON RIVER
(EASTBOUND)

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

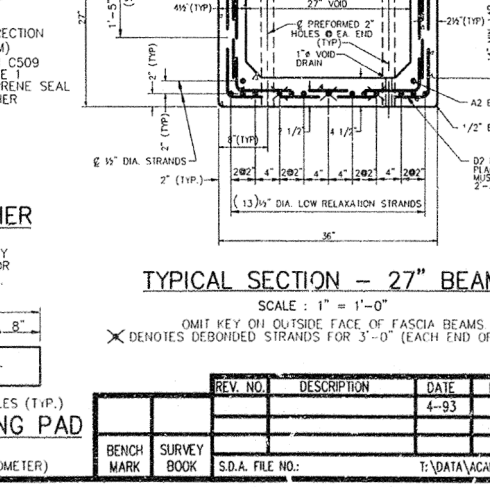
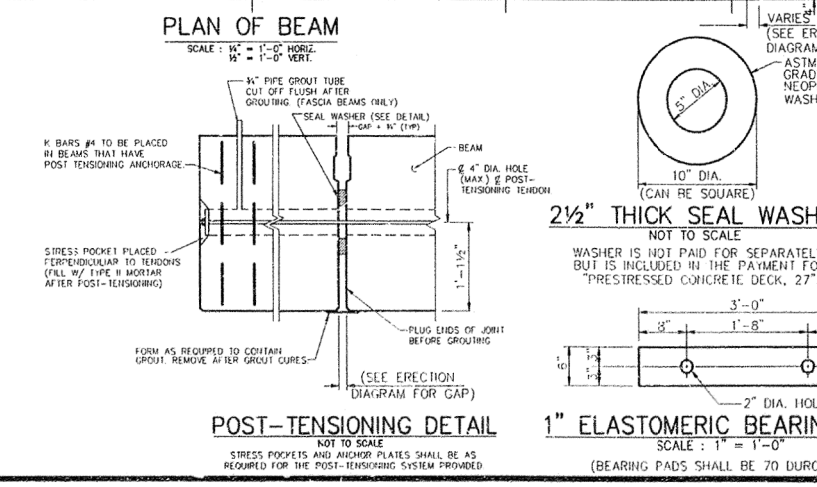
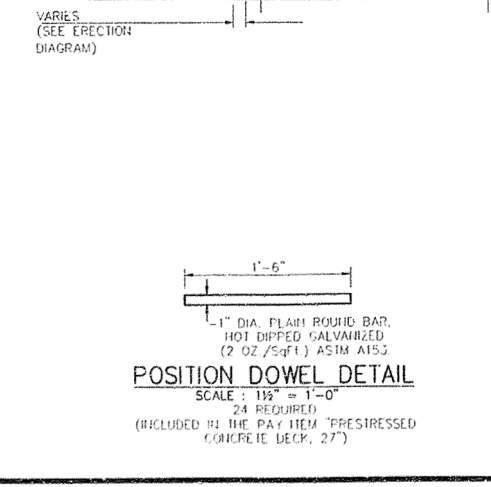
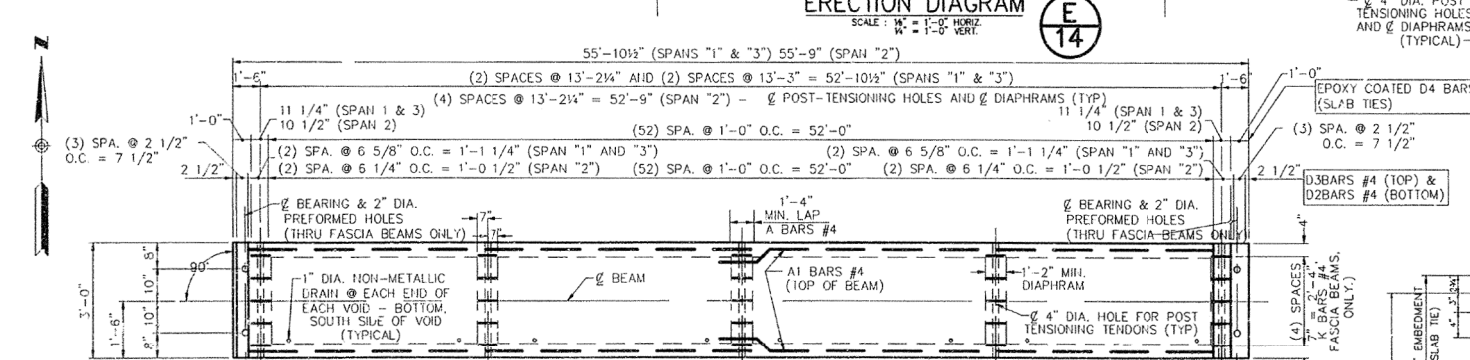
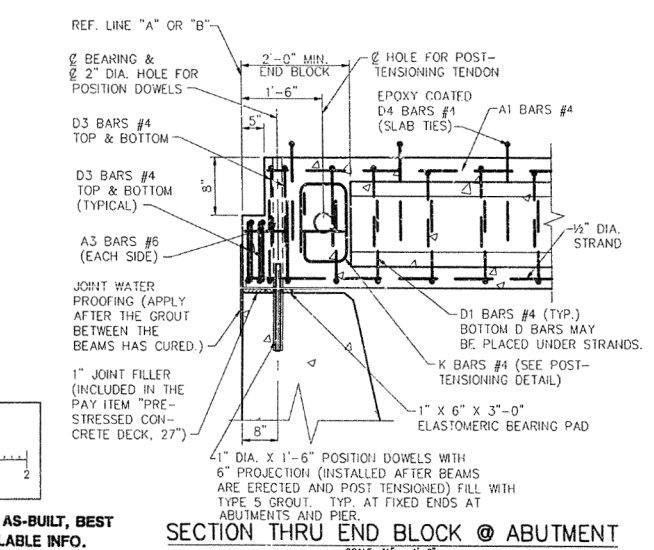
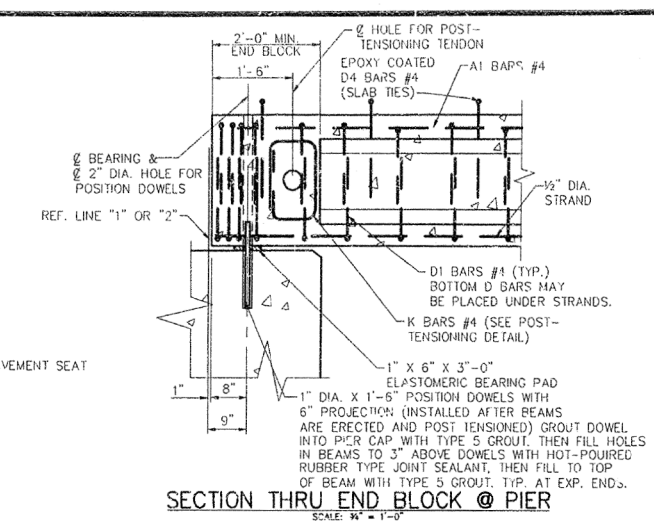
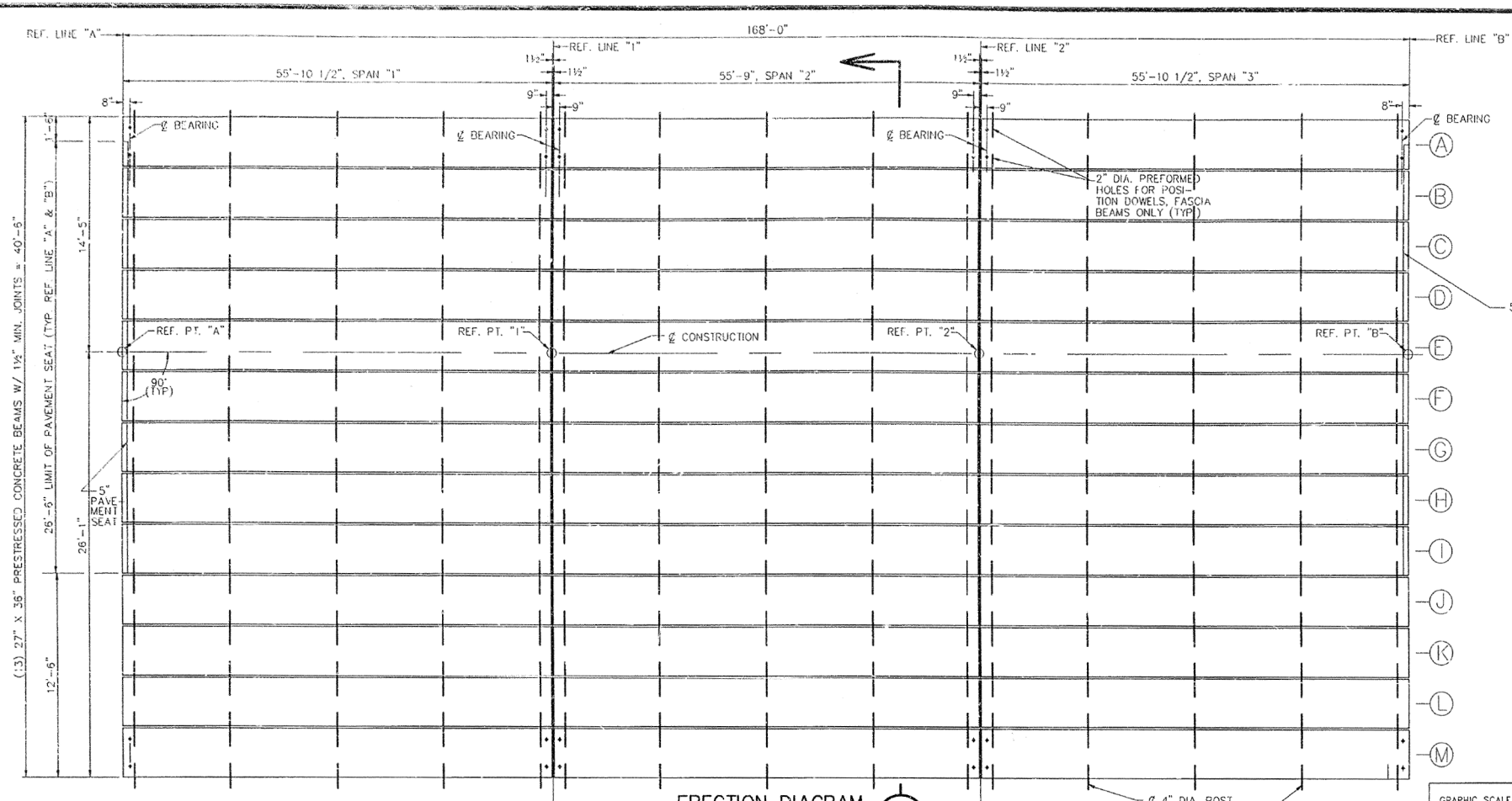
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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ANN ARBOR, MI 48106
ANN ARBOR PUBLIC SERVICES DEPARTMENT
734-764-6847
734-764-6810
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
EXISTING ABUTMENT A DETAILS

SCALE: NO SCALE
DRAWING No. 2020-025

SHEET No. 59 of 70



NOTE
Data contained on this page was drawn from City records. No guarantee is made as to its accuracy or completeness.

NOT AS-BUILT, BEST AVAILABLE INFO.

NOTES
1. PRECAST, PRESTRESSED CONCRETE BOX BEAMS SHALL BE MANUFACTURED AND ERECTED IN ACCORDANCE WITH THE MICHIGAN DEPT. OF STATE HIGHWAYS AND TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION 1990 EDITION, AND THE SPECIAL PROVISIONS FOR THIS JOB.
2. PRESTRESSING STRANDS SHALL BE 1/2\"/>

REV. NO.	DESCRIPTION	DATE	DR BY	CH BY

ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

FULLER ROAD BRIDGE over the HURON RIVER
Phase 1
BEAM DETAILS

SCALE AS NOTED

DRAWING NO. 92050-BD-1

SHEET NO. 12 OF 38

BENCH MARK	SURVEY BOOK	S.D.A. FILE NO.	DATE	DR BY	CH BY

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FULLER ROAD OVER HURON RIVER
(EASTBOUND)

811
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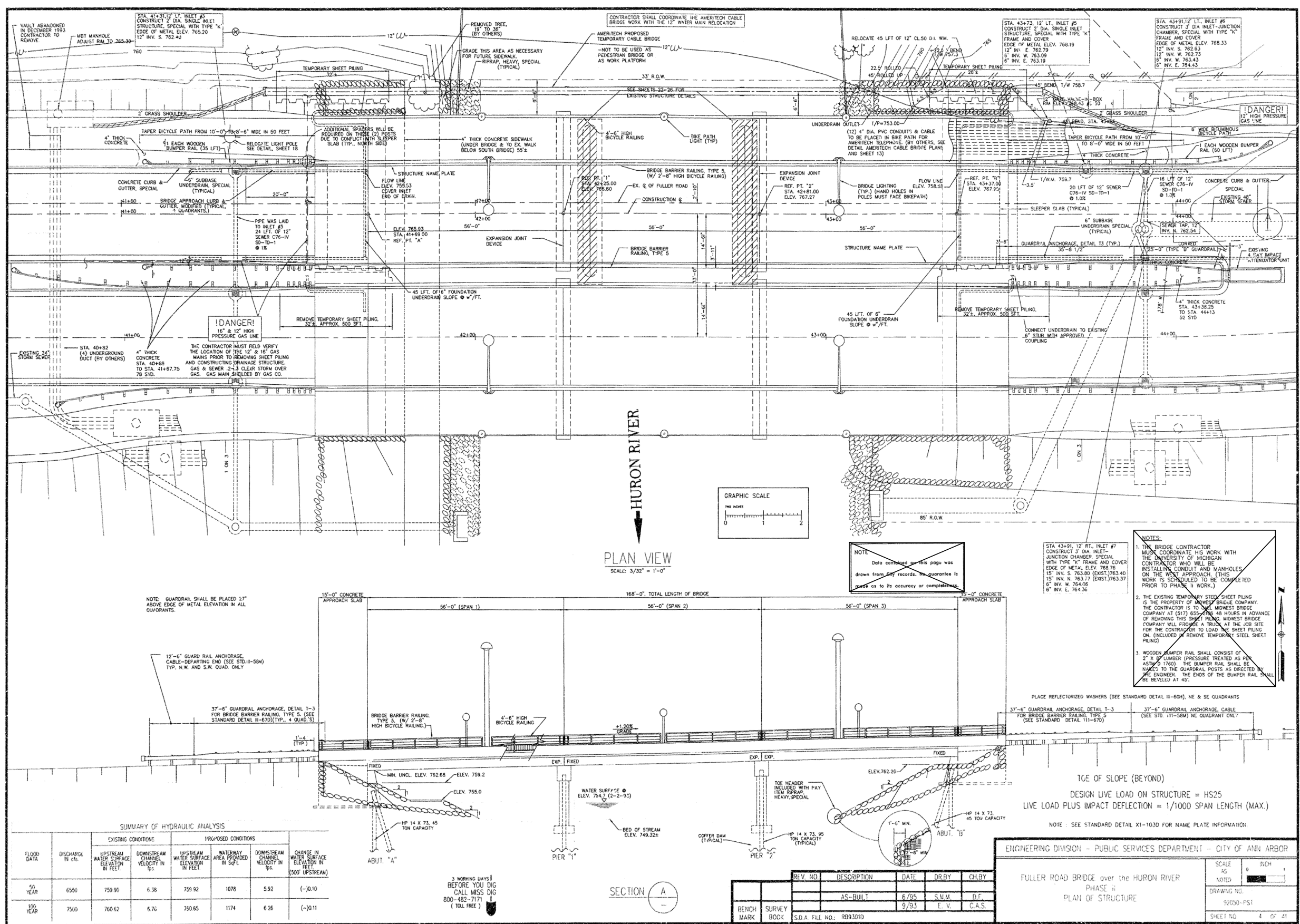
CITY OF ANN ARBOR
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
EXISTING BEAM DETAILS

SCALE: NO SCALE

DRAWING No. 2020-025

SHEET No. 60 of 70

FILE NAME: Z:\2019\190381\CAD\CD\FULLER.EVIST_005.DGN



SUMMARY OF HYDRAULIC ANALYSIS

FLOOD DATA	DISCHARGE IN CFS	EXISTING CONDITIONS		PROPOSED CONDITIONS		CHANGE IN WATER SURFACE ELEVATION IN FEET (500' UPSTREAM)
		UPSTREAM WATER SURFACE ELEVATION IN FEET	DOWNSWAMP CHANNEL VELOCITY IN FPS	UPSTREAM WATER SURFACE ELEVATION IN FEET	WATERWAY AREA PROVIDED IN SQ FT	
50 YEAR	6550	759.90	6.38	759.92	1078	(-0.10)
100 YEAR	7500	760.62	6.76	760.65	1174	(-0.11)

REVISIONS

REV. NO.	DESCRIPTION	DATE	DR BY	CHK BY
1	AS-BUILT	6/95	S.V.M.	D.F.
2		9/93	E.V.	C.A.S.

BENCH SURVEY BOOK S.D.A. FILE NO.: R893010

ENGINEERING DIVISION - PUBLIC SERVICES DEPARTMENT - CITY OF ANN ARBOR

FULLER ROAD BRIDGE over the HURON RIVER
PHASE II
PLAN OF STRUCTURE

SCALE: 0 INCH = 35 FEET
NOTED: 9/2020-PSI
DRAWING NO.: 92020-PSI
SHEET NO.: 4 OF 41

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**FULLER ROAD OVER HURON RIVER
(WESTBOUND)**

811
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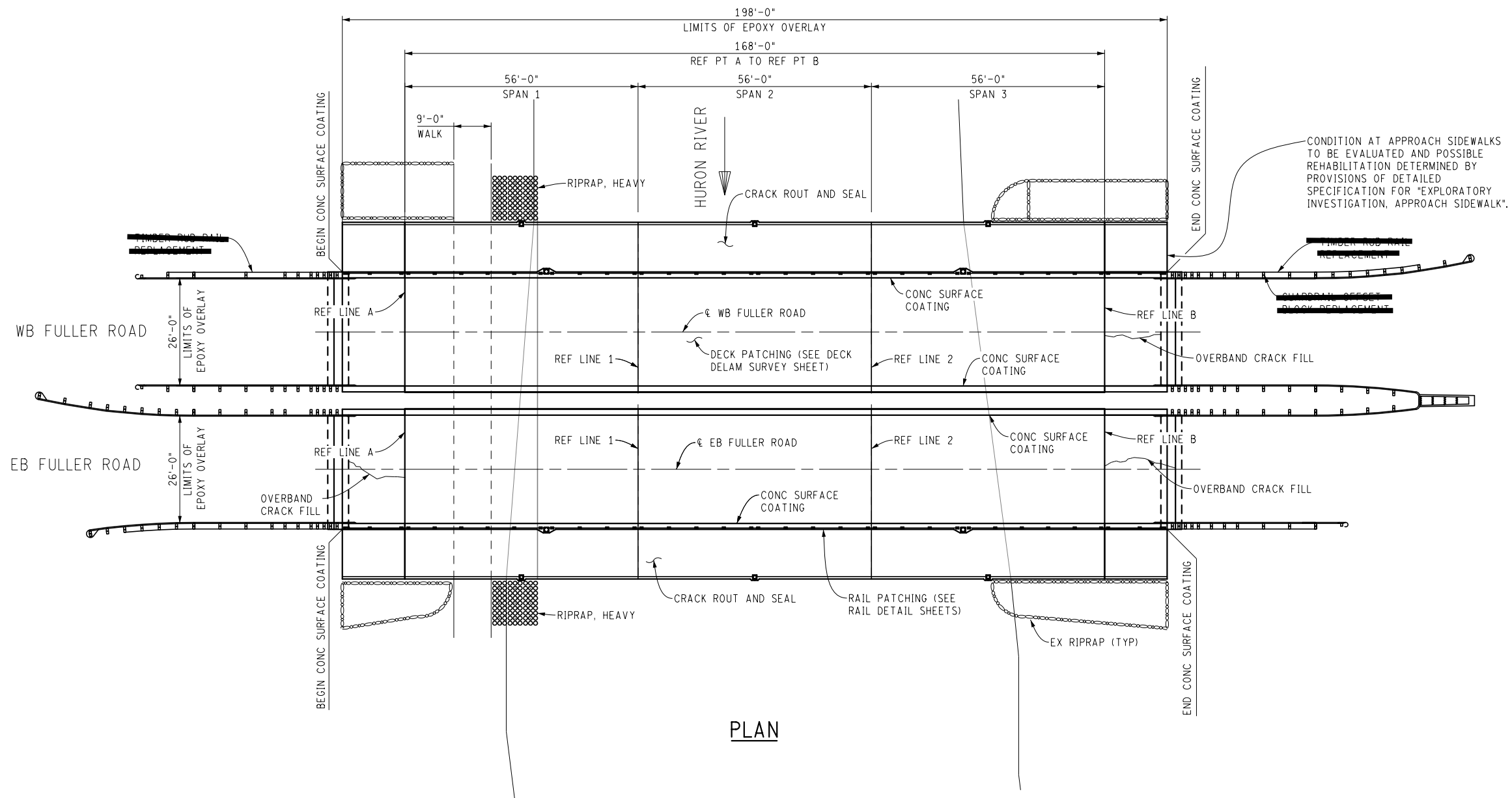
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106
ANN ARBOR 734-764-6847
WWW.A290V.ORG

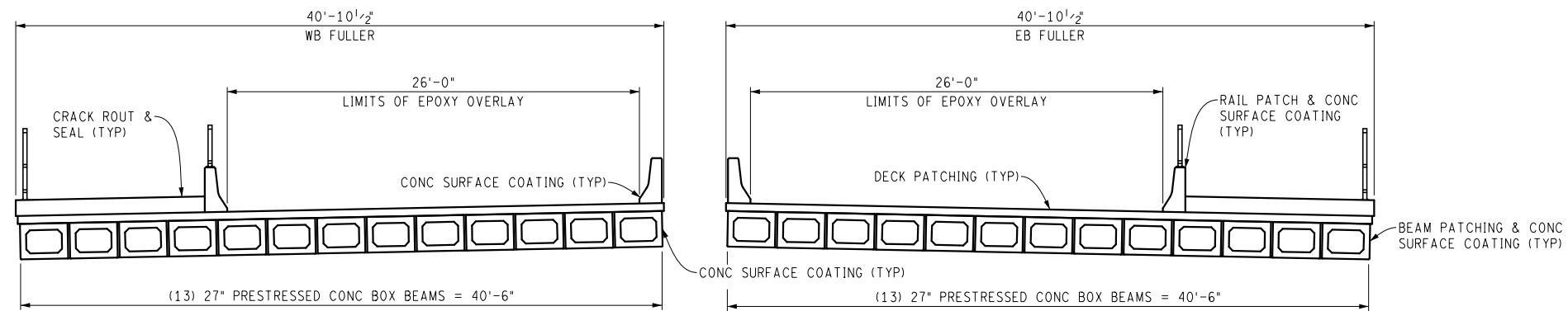
CITY OF ANN ARBOR
MICHIGAN

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
EXISTING GENERAL PLAN OF STRUCTURE

SCALE: NO SCALE
DRAWING No.: 2020-025
SHEET No.: 61 of 70



PLAN



DECK SECTION
(LOOKING EAST)

FULLER ROAD OVER HURON RIVER

FILE NAME: Z:\2019\190381\CAD\CAD\FULLER_GPSTR_001.DGN



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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PUBLIC SERVICE
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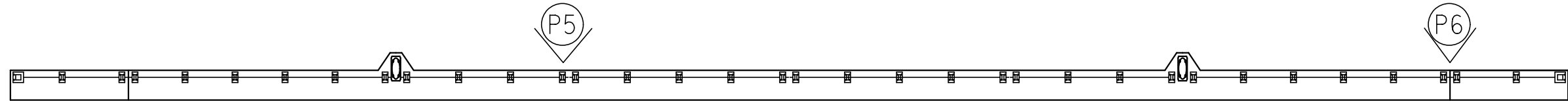
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
GENERAL PLAN OF STRUCTURE

SCALE: NO SCALE
DRAWING No. 2020-025

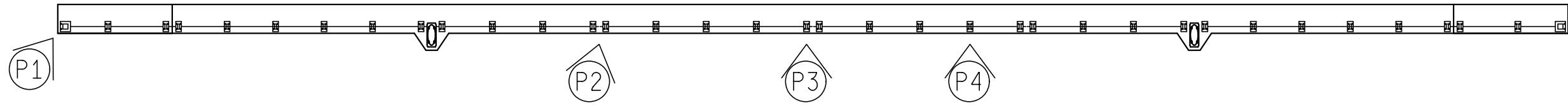
FILE NAME: Z:\2019\80081\CAD\CDFULLER_RAIL_001.DSN

LEGEND

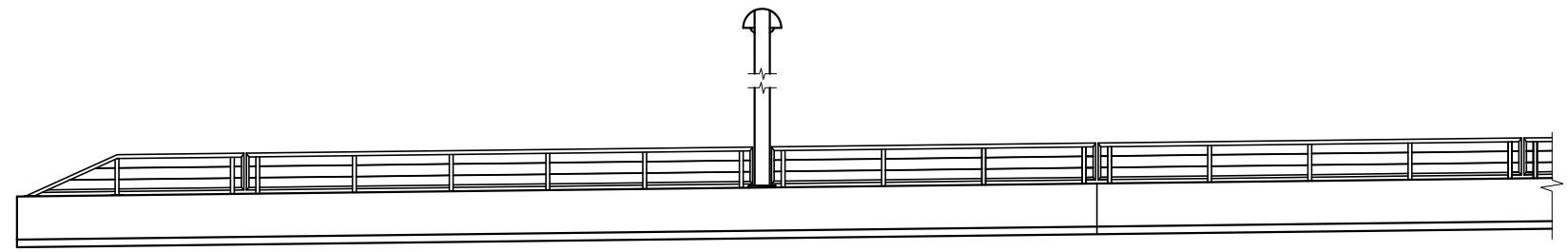
(P#) = LOCATION OF RAIL PATCHES
SEE SHEET 44 FOR SPECIFIC
PATCH DIMENSIONS



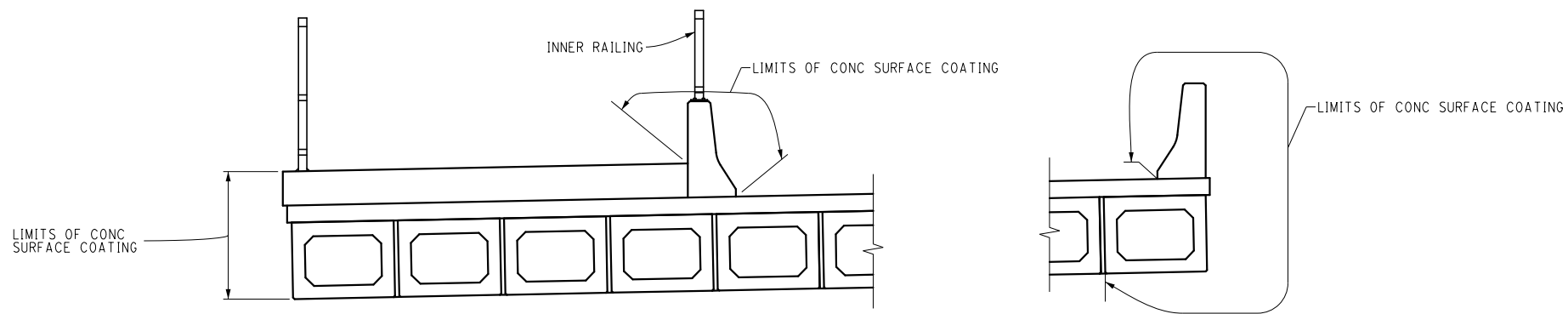
WESTBOUND INNER RAIL - NORTH



EASTBOUND INNER RAIL - SOUTH





ELEVATION - INNER RAIL

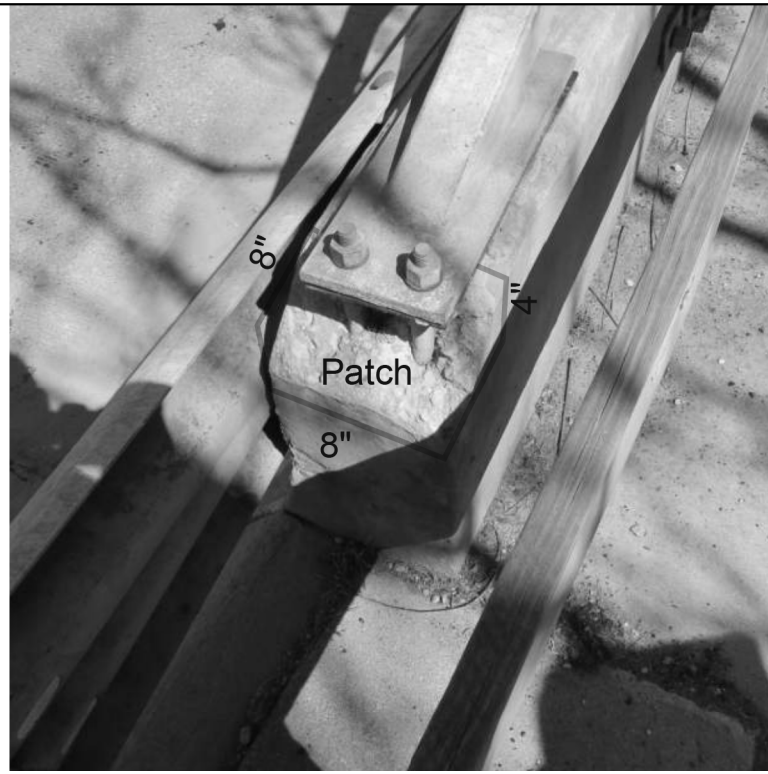


PARTIAL DECK SECTION

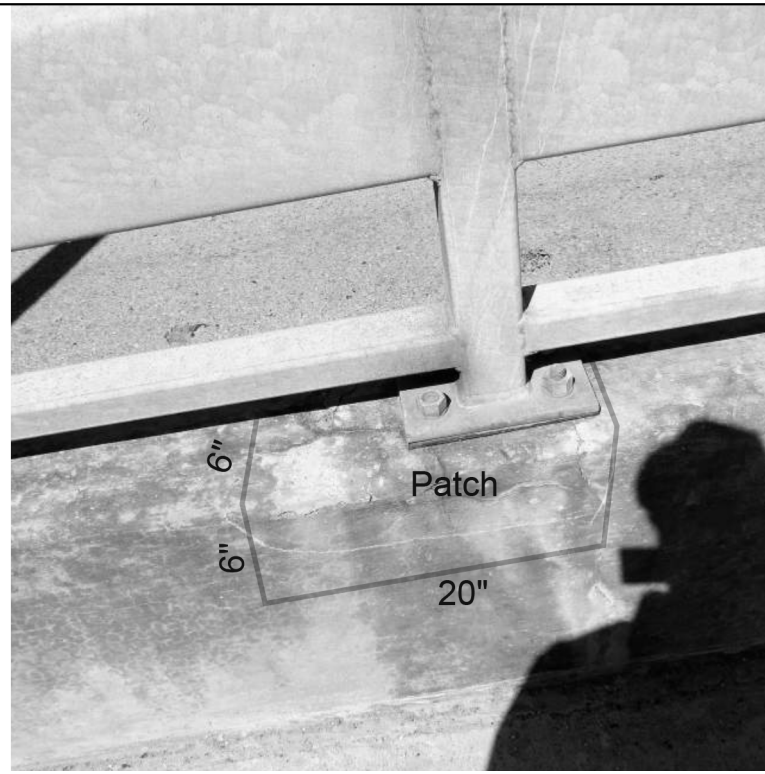
NOTE:
IN ORDER TO PERFORM THE BARRIER RAIL REPAIRS, THE CONTRACTOR SHALL REMOVE, STORE, PROTECT, AND REPLACE WHEN THE PATCHES HAVE BEEN PROPERLY CURED, THE NEEDED METAL RAILING SEGMENTS. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ASSOCIATED ITEMS OF WORK.

FULLER ROAD OVER HURON RIVER

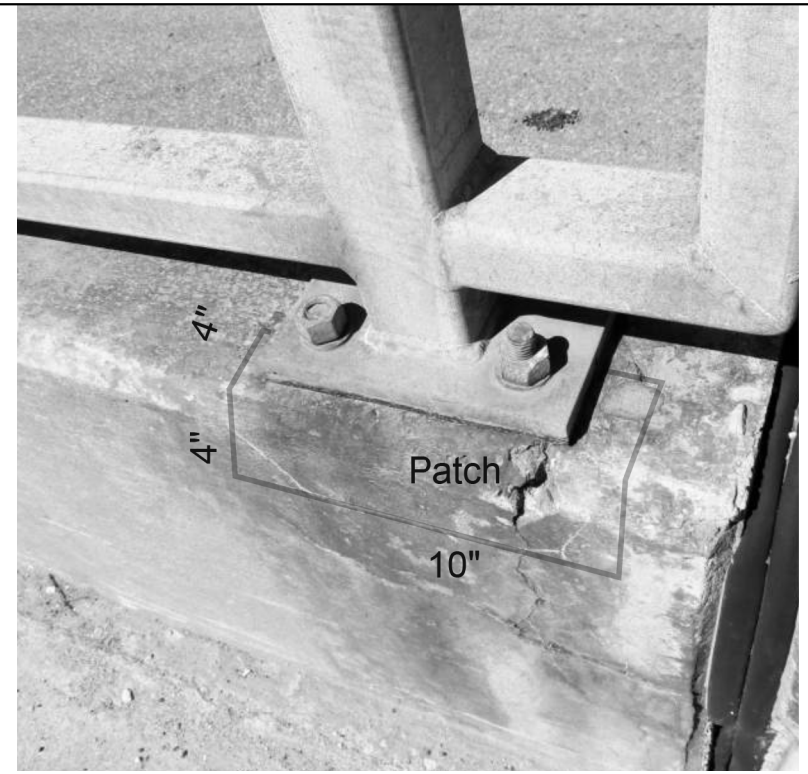
 Know what's below. Call before you dig.	
REV.	DESCRIPTION
DATE	DRAWN
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CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48106 734-794-6410 www.a2gov.org	
	
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS CONCRETE RAIL PATCHING LOCATIONS	
SCALE:	NO SCALE
DRAWING No.	2020-025
SHEET No.	
64 of 70	



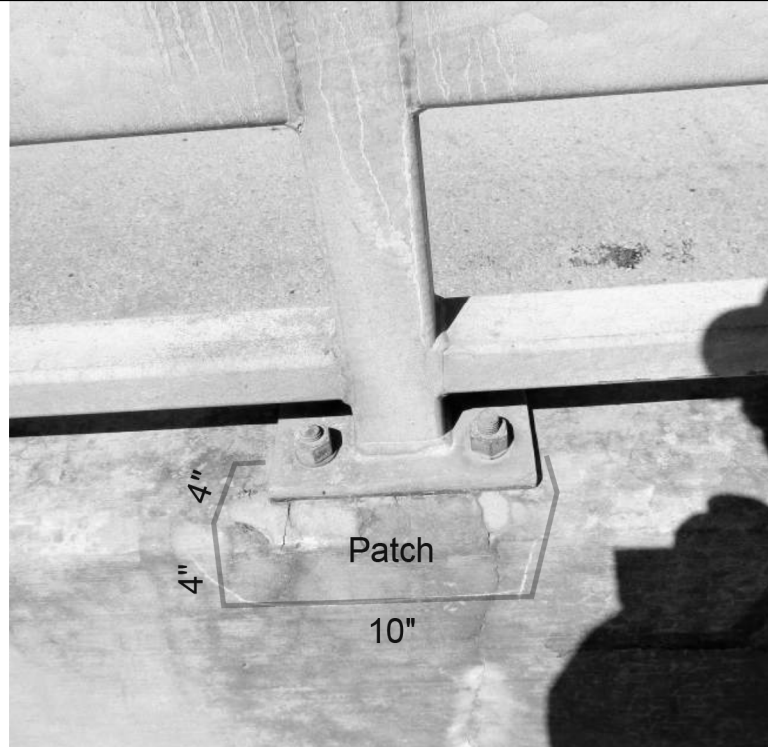
P1



P2



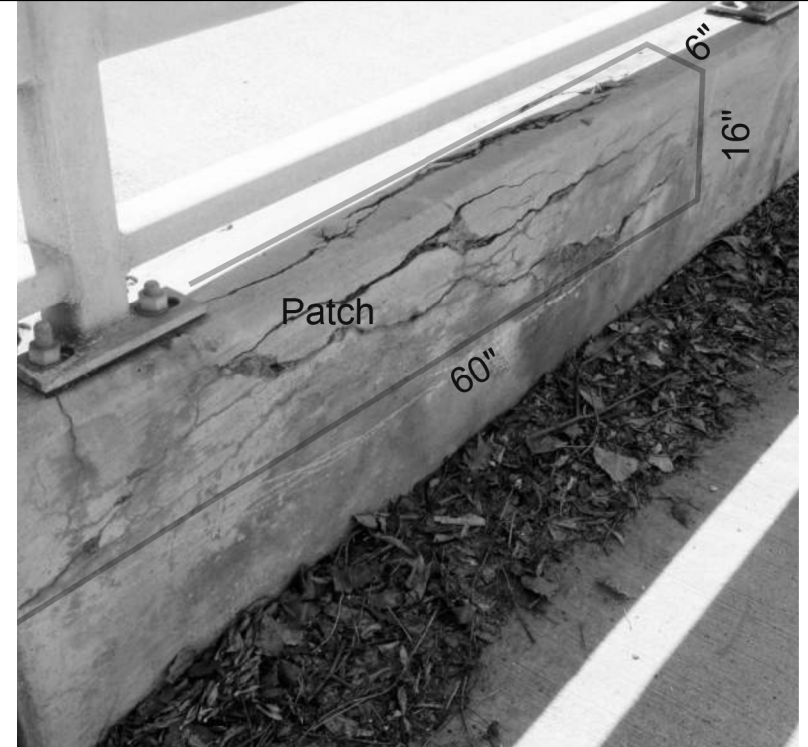
P3



P4



P5



P6

FULLER ROAD OVER
HURON RIVER

FILE NAME: Z:\2019\80081\CAD\CDFULLER_RAIL_002.DSN

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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
CONCRETE RAIL PATCHING LOCATIONS

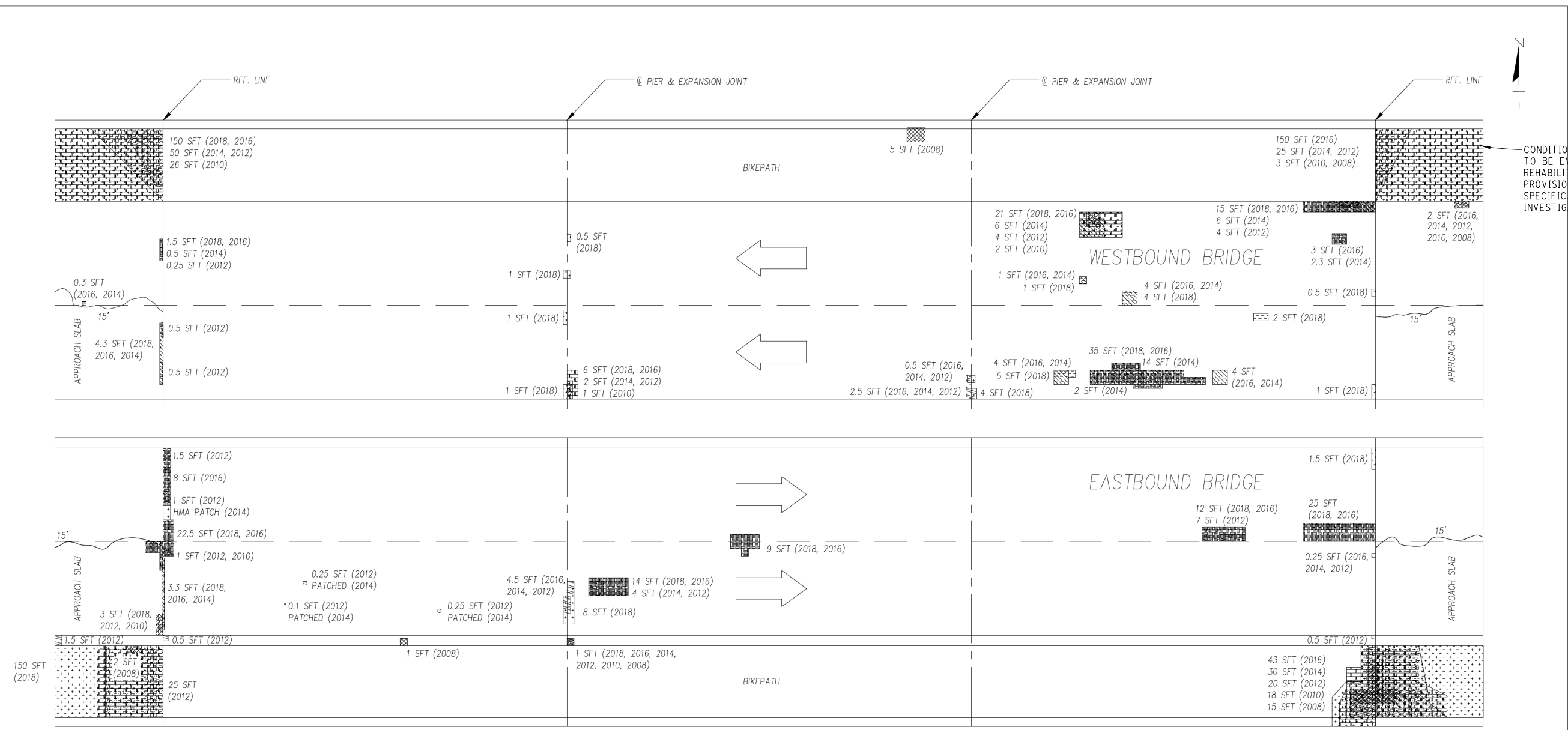
SCALE: NO SCALE
DRAWING No. 2020-025

SHEET No. 65 of 70

REV.	DESCRIPTION	DATE	DRAWN	CHECKED



FILE NAME: Z:\2019\190381\CAD\CD\FULLER_DECK_DELAM_SURVEY_001.DGN



CONDITION AT APPROACH SIDEWALKS TO BE EVALUATED AND POSSIBLE REHABILITATION DETERMINED BY PROVISIONS OF DETAILED SPECIFICATION FOR "EXPLORATORY INVESTIGATION, APPROACH SIDEWALK".

PLAN OF DECK DEFICIENCIES

SIZES AND LOCATIONS OF DEFICIENCIES SHOWN ON THIS SHEET ARE APPROXIMATED FROM PREVIOUS DECK EVALUATION. CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF DEFICIENCIES AND PATCH AS DIRECTED BY THE ENGINEER. CONTRACTOR TO GIVE ENGINEER 36 HOURS TO VERIFY LIMITS OF PATCHING PRIOR TO PLACING PATCHING MATERIAL.

- 2008 DECK DELAMINATION
- 2010 DECK DELAMINATION
- 2010 SPALLING
- 2010 HOLLOW SOUNDING CONCRETE
- 2012 DECK DELAMINATION
- 2012 SPALLING
- 2012 HOLLOW SOUNDING CONCRETE
- 2014 DECK DELAMINATION
- 2014 SPALLING
- 2014 HOLLOW SOUNDING CONCRETE
- 2016 DECK DELAMINATION
- 2016 SPALLING
- 2016 HOLLOW SOUNDING CONCRETE
- DECK CRACK
- 2018 DECK DELAMINATION
- 2018 SPALLING

NOTES:

THE CONTRACTOR IS RESPONSIBLE TO WET CURE ALL LATEX MODIFIED PATCHES PLACED ON THIS PROJECT FOR A PERIOD OF SEVEN CALENDAR DAYS IN ACCORDANCE WITH SECTION 712.03.P AND AS DETAILED HEREIN. THE CONTRACTOR SHALL ENSURE THAT THE BURLAP REMAINS WET FOR THE ENTIRE DURATION OF THE CURING PERIOD. THE POLYETHYLENE FILM COVERING THE PATCHES SHALL BE SECURELY AFFIXED TO EACH PATCH. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "PATCHING CONC, C-L".



FULLER ROAD DECK DELAMINATION SURVEY

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

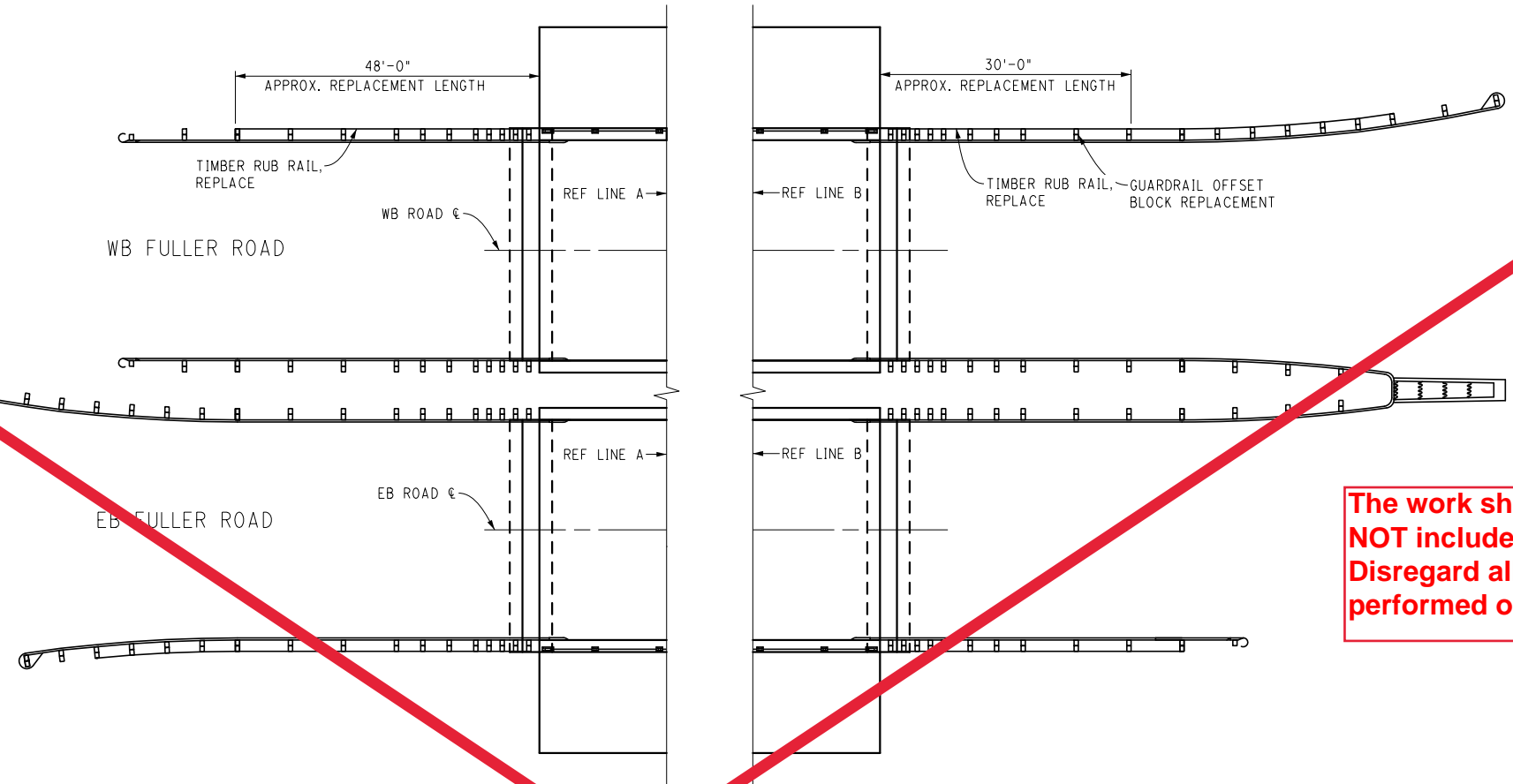
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
DECK DELAMINATION AND PATCHING PLAN

SCALE: NO SCALE
DRAWING No. 2020-025

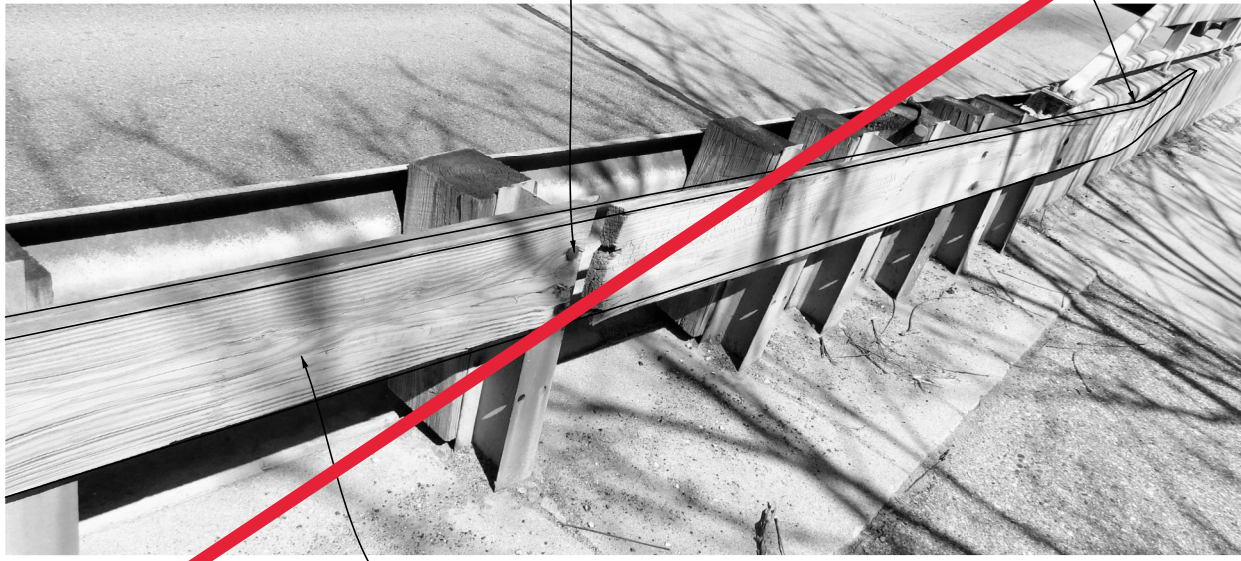
SHEET No. 66 of 70



The work shown on this sheet is NOT included in the contract. Disregard all work shown to be performed on this plan sheet.

GUARDRAIL REPAIR LOCATIONS PLAN

REMOVE EXIST CONNECTION HARDWARE. SALVAGE AND REUSE AS CONDITION ALLOWS. REPLACE HARDWARE ELEMENTS THAT ARE BENT, BROKEN OR HEAVILY CORRODED, AS DIRECTED BY THE ENGINEER.



RUB RAIL REPLACEMENT DETAIL

FIELD BEND AS NEEDED

REPLACE MISSING AND BROKEN TIMBER OFFSET BLOCKS PER MDT STD. PLAN R-60-J. SALVAGE AND REUSE CONNECTION HARDWARE AS CONDITION ALLOWS. REPLACE HARDWARE ELEMENTS THAT ARE BENT, BROKEN OR HEAVILY CORRODED, AS DIRECTED BY THE ENGINEER.



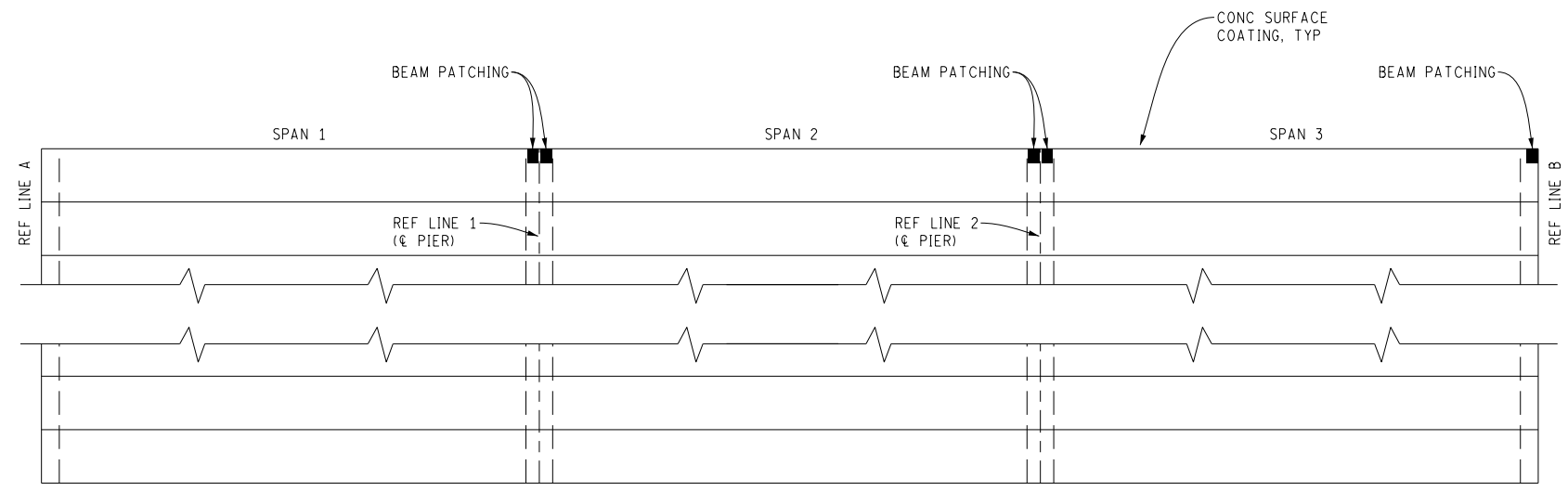
OFFSET BLOCK REPLACEMENT DETAIL

GUARDRAIL AND RUB RAIL REPAIR DETAILS

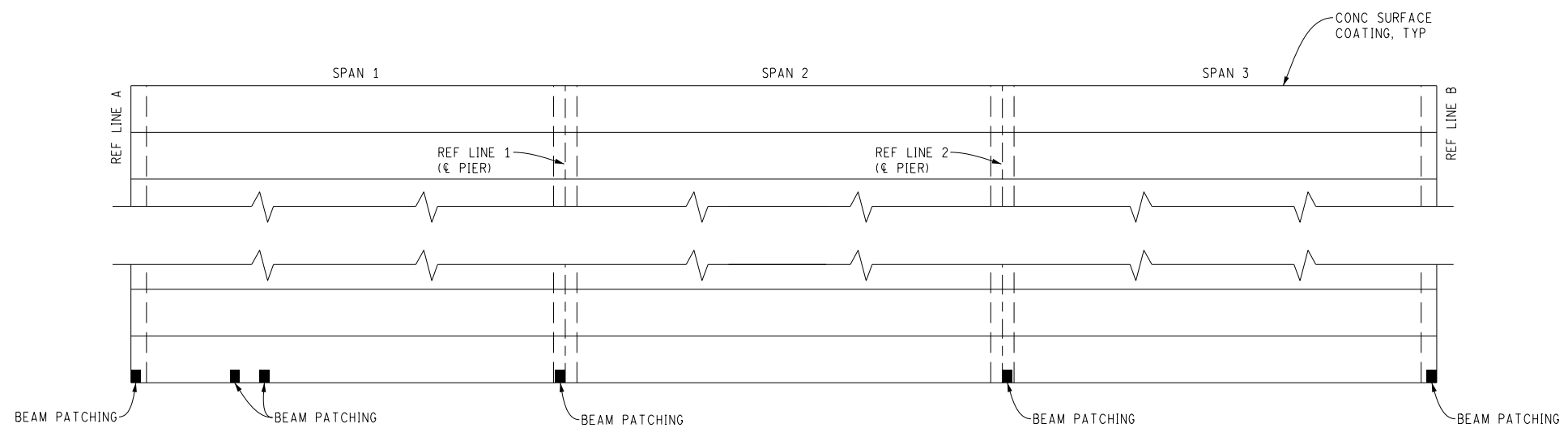
(FULLER ROAD OVER HURON RIVER)

FILE NAME: Z:\2019\80081\CAD\CAD\FULLER_RUBRAIL_001.DGN

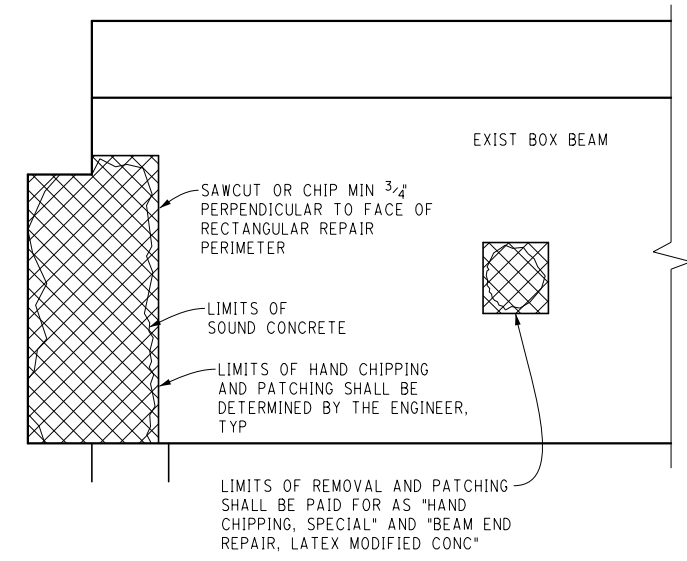
<p>CITY OF ANN ARBOR PUBLIC SERVICE 301 EAST HURON STREET ANN ARBOR, MI 48106 734-794-6410 www.a2gov.org</p>	<p>PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS GUARDRAIL AND RUB RAIL REPAIR DETAILS</p>										
<p>SCALE: NO SCALE</p>	<p>DRAWING No. 2020-025</p>										
<p>SHEET No. 67 of 70</p>	<table border="1"> <thead> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECKED</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV.	DESCRIPTION	DATE	DRAWN	CHECKED					
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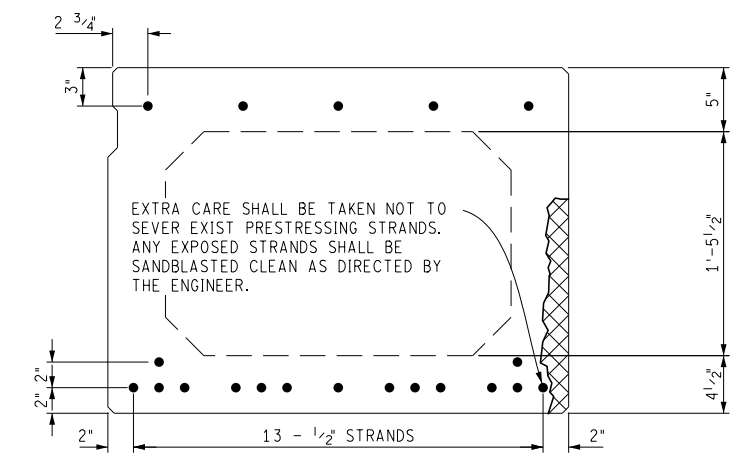
FRAMING PLAN - FULLER ROAD WB



FRAMING PLAN - FULLER ROAD EB



BEAM END ELEVATION



BEAM SECTION

ANCHOR HOLES NEEDED FOR PATCH FORMING SHALL BE LOCATED BETWEEN BOTTOM OF TOP FLANGE AND TOP OF BOTTOM FLANGE.

PRESTRESSED CONCRETE BEAM REPAIR DETAILS
(FULLER ROAD OVER HURON RIVER)

FILE NAME: Z:\2019\80381\CAD\CIB\BEAM_DETAILS_001.DSN



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

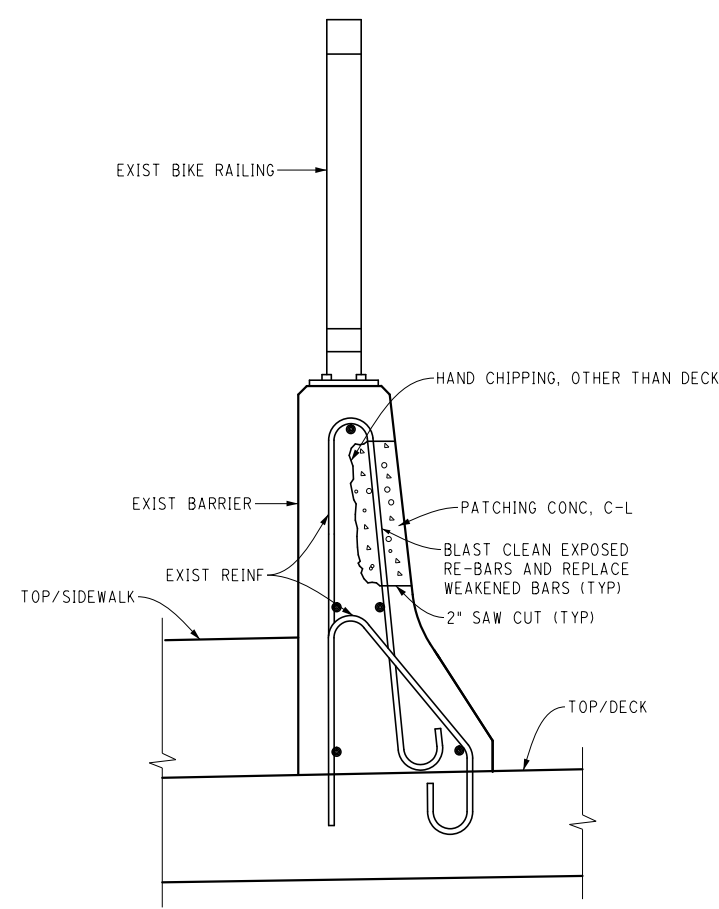
CITY OF ANN ARBOR
PUBLIC SERVICE
301 EAST HURON STREET
ANN ARBOR, MI 48106-1647
734-794-4810
www.a2gov.org



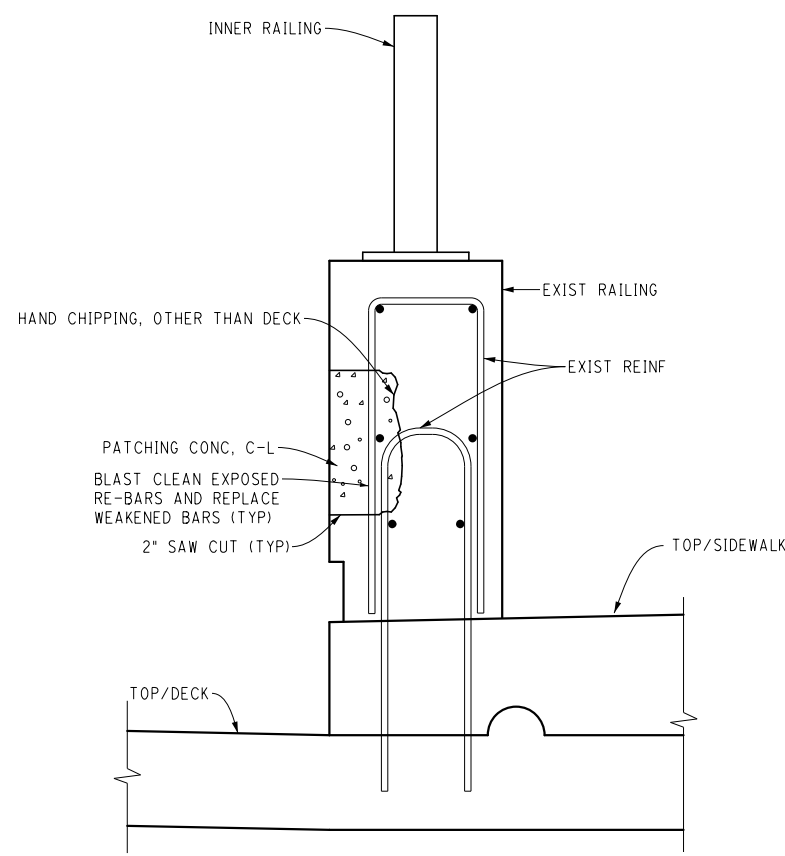
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
CITY OF ANN ARBOR 2020 BRIDGE
CAPITAL PREVENTIVE MAINTENANCE REPAIRS
PRESTRESSED CONCRETE BEAM REPAIR DETAILS

SCALE: NO SCALE
DRAWING No. 2020-025

FILE NAME: Z:\2019\80381\CAD\MISC_DETAILS_001.DGN



FULLER ROAD RAILING

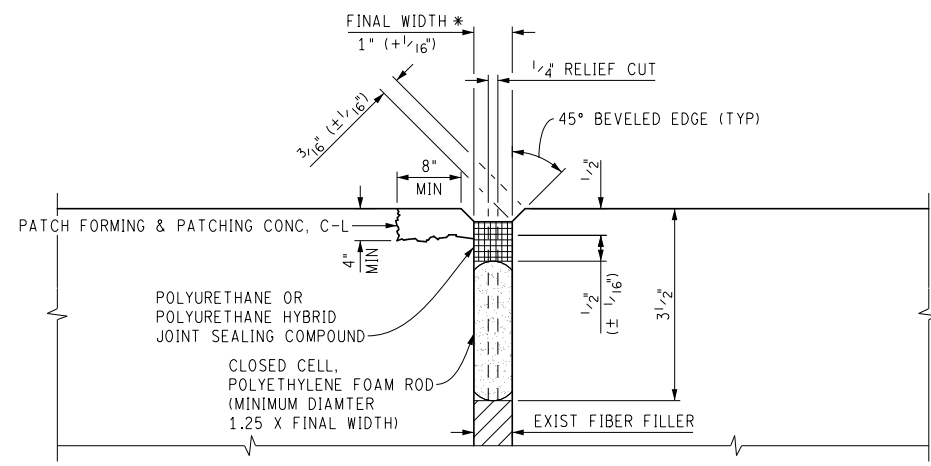


BROADWAY RAILING
(APPLIES TO BOTH BRIDGES)

TYPICAL RAILING PATCH DETAILS

(DECK REINFORCEMENT NOT SHOWN FOR CLARITY)

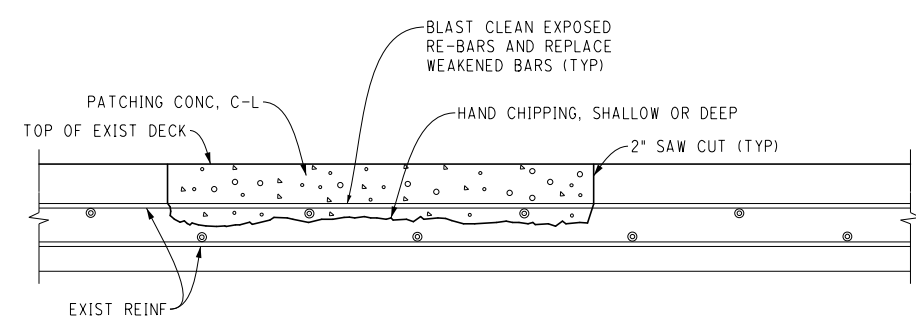
SALVAGE AND BLAST CLEAN EXPOSED REINFORCEMENT. INCLUDED IN THE BID ITEM "HAND CHIPPING, OTHER THAN DECK".
ENGINEER MUST VERIFY PREPARATION OF CAVITY AT EACH LOCATION PRIOR TO PLACING PATCH MATERIAL.



E3 JOINT REPLACEMENT DETAIL

(APPLIES TO BOTH BROADWAY BRIDGES)

* AT LOCATION OF JOINT EDGE SPALLS, LIMITS TO BE APPROVED BY ENGINEER. ADDITIONAL WIDTH SAW-CUTTING MAY BE REQUIRED. ALL COSTS ASSOCIATED WITH ADDITIONAL SAW-CUTTING SHALL BE INCLUDED IN THE ITEM OF WORK "E3 JOINT SEALANT" AND WILL NOT BE PAID FOR SEPARATELY.



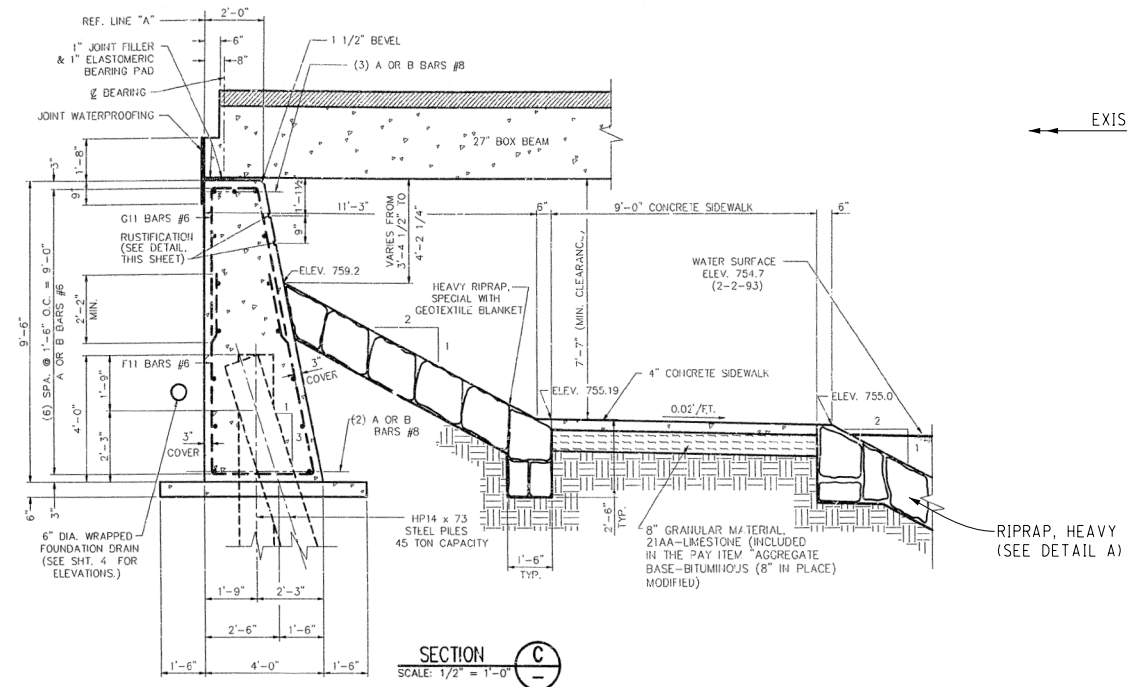
TYPICAL DECK PATCH

(APPLIES TO ALL THREE BRIDGES)

SALVAGE, BLAST CLEAN, AND REUSE ALL EXPOSED REINFORCEMENT. INCLUDED IN THE BID ITEM "HAND CHIPPING, OTHER THAN DECK".
ENGINEER MUST VERIFY PREPARATION OF CAVITY AT EACH LOCATION PRIOR TO PLACING PATCH MATERIAL.

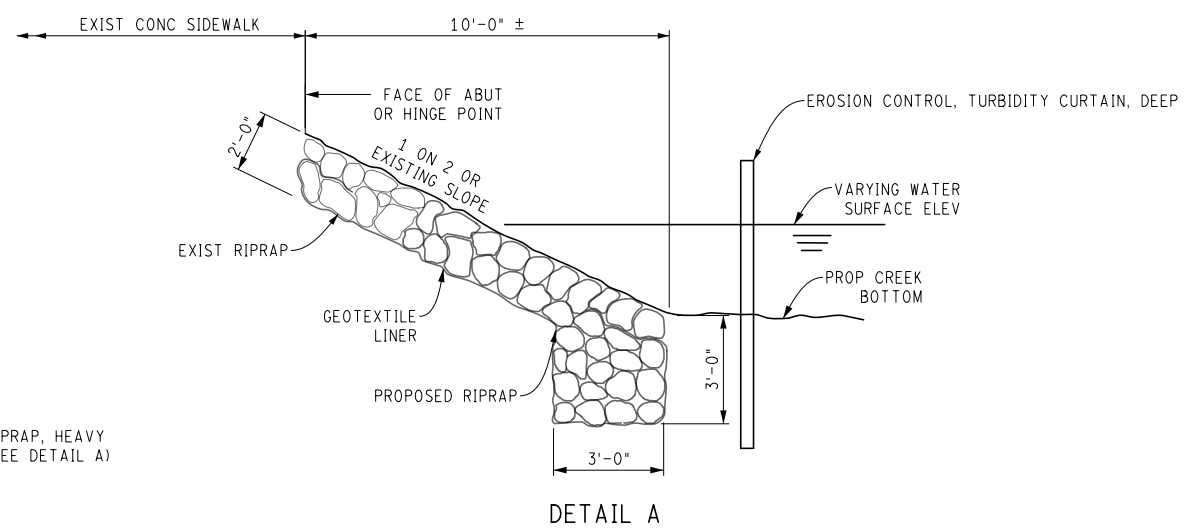
MISCELLANEOUS DETAILS
(BROADWAY AND FULLER ROAD OVER HURON RIVER)

		REV.	DESCRIPTION	DATE	DRAWN	CHECKED
<p>CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48106-0647 734-769-4810 www.a2gov.org</p>						
<p>PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS MISCELLANEOUS DETAILS</p>						
SCALE:	NO SCALE	DRAWING No.				
SHEET No.		2020-025				
69 of 70						



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

(AS-BUILT DRAWING)



DETAIL A

RIPRAP DETAILS



(FULLER ROAD WEST ABUTMENT)

TOE OF RIPRAP SHALL BE AT OR BELOW EXISTING STREAMBED/SLOPE ELEVATION.
 THE RIPRAP SCHEME SHOWN IS A MINIMUM REQUIREMENT FOR SCOUR. BROKEN CONCRETE SHALL NOT BE USED FOR RIPRAP. ONLY NATURAL, ROUNDED STONES SHALL BE USED.

FILE NAME: Z:\2019\190381\CAD\MISC_DETAILS_012.DGN

RIPRAP DETAILS

(FULLER ROAD OVER HURON RIVER)

 Know what's below. Call before you dig.				
REV.	DESCRIPTION	DATE	DRAWN	CHECKED
CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48106 TEL: 734-769-6847 FAX: 734-769-6810 WWW.A290V.ORG				
				
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR CITY OF ANN ARBOR 2020 BRIDGE CAPITAL PREVENTIVE MAINTENANCE REPAIRS RIPRAP DETAILS				
SCALE:	NO SCALE			
DRAWING No.	2020-025			
SHEET No.	70 of 70			