

THE CITY OF ANN ARBOR

PARKS & RECREATION SERVICES 2019 PARK BRIDGE REPAIRS AND RENOVATIONS OCTOBER 2019 ITB NO. 4597

NOTES:

THE PROPOSED IMPROVEMENTS ARE BASED ON THE 17TH EDITION OF AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE CONTRACT DOCUMENTS, ALL MATERIALS AND WORKMANSHIP SHALL BE PERFORMED ACCORDING TO THE CITY OF ANN ARBOR'S PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 2012 EDITION. ALL WORK UNDER THIS CONTRACT THAT IS NOT INCLUDED IN THE CITY OR MDT STANDARD SPECIFICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE DETAILED SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS.

IN CASE OF DISCREPANCY, THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS FOR CONSTRUCTION SHALL GOVERN OVER THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.

THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIAL OF THE FOLLOWING GRADES AND STRESSES:

CONCRETE: GRADE S2	f _c = 3,000 psi
CONCRETE: GRADE D	f _c = 4,000 psi
STEEL REINFORCEMENT	f _y = 60,000 psi
STRUCTURAL STEEL:	
AASHTO M270	
GRADE 36	F _y = 36,000 psi
GRADE 50 AND 50W	F _y = 50,000 psi
STRUCTURAL STEEL TUBING (HSS):	
ASTM A847	F _y = 50,000 psi

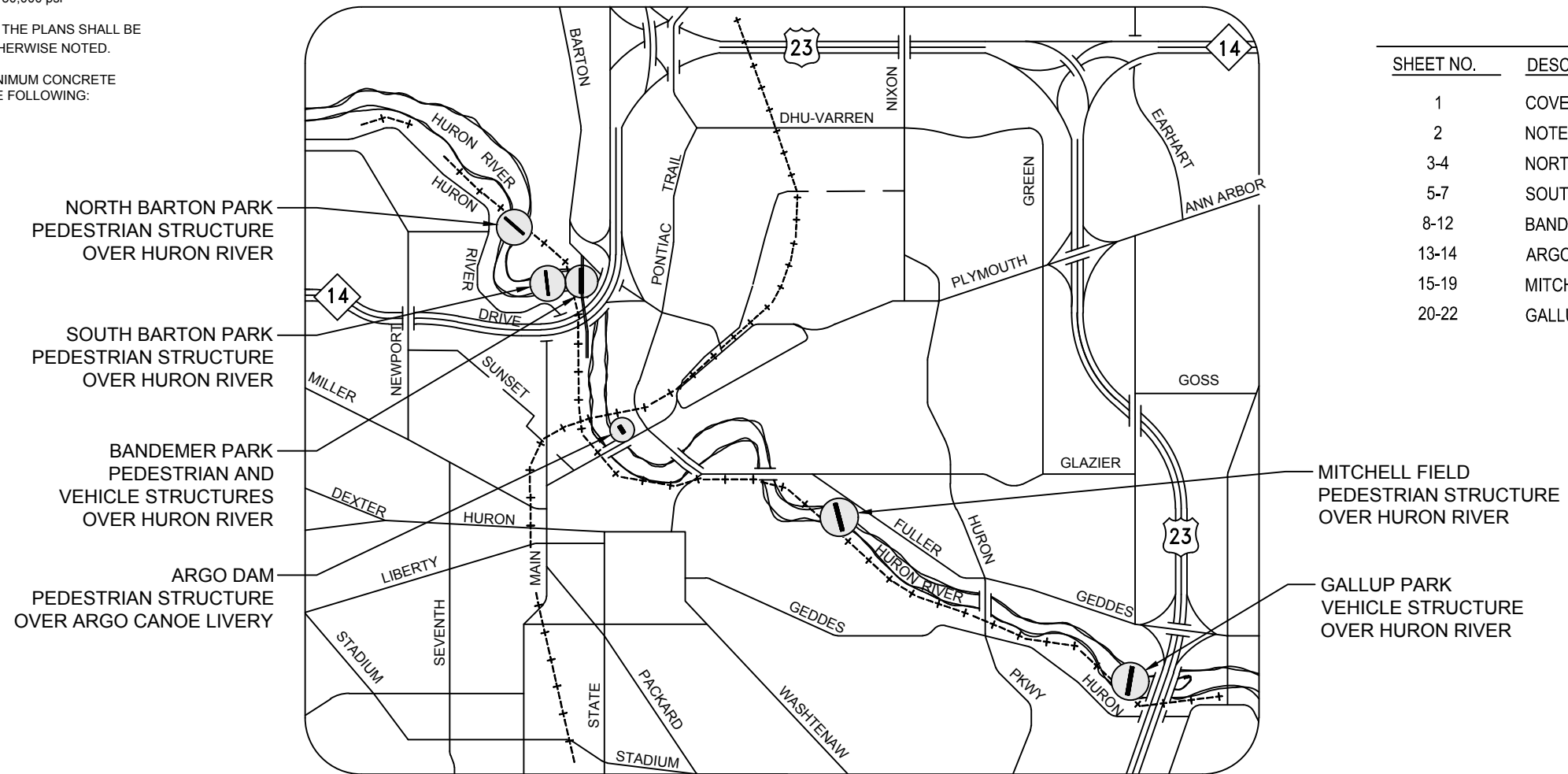
ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH 3/8" TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

UNLESS OTHERWISE SHOWN ON THE PLANS PROVIDE MINIMUM CONCRETE CLEAR COVER FOR REINFORCEMENT ACCORDING TO THE FOLLOWING:
 CONCRETE CAST AGAINST EARTH: 3 IN.
 ALL OTHER UNLESS SHOWN ON PLANS: 2 IN.

PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR THESE PERMIT FEES.	
PERMIT	ISSUING AUTHORITY
GRADING/ SOIL EROSION & SEDIMENTATION CONTROL PERMIT	CITY OF ANN ARBOR PLANNING AND DEVELOPMENT SERVICES UNIT
BUILDING PERMIT	CITY OF ANN ARBOR PLANNING AND DEVELOPMENT SERVICES UNIT
RIGHT-OF-WAY PERMIT	CITY OF ANN ARBOR PLANNING AND DEVELOPMENT SERVICES UNIT

SHEET INDEX

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20-22	GALLUP PARK VEHICLE STRUCTURE



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

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL DIAL 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 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.

THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT PUBLIC SERVICES STANDARD SPECIFICATIONS AND DETAILS.



DRAWING NO.	
MARK T. LESSENS, P.E., MICHIGAN NO. 36092	DATE
SHEET 1 OF 22	



GENERAL NOTES

UTILITIES

MISS DIG/UNDERGROUND UTILITY NOTIFICATION

For the protection of underground utilities and in conformance with MCL 460.171 et seq, the Contractor shall contact MISS DIG System, Inc. by phone at 811 or 800-482-7171 or via the web at either elocate.missdig.org for single address or rte.missdig.org, a minimum of 3 work days prior to excavating, excluding weekends and holidays.

OLD PLANS

OLD ROAD PLANS

The following old road plans were referred to in the design of this project.

91105 N Barton Pedestrian Continental Plans
 91106 S Barton Pedestrian Continental Plans
 94453 Bandemer Pedestrian Continental Plans
 94454 Bandemer Vehicular Continental Plans
 Mitchell Field Bridge Construction Plans
 Gallup Park Bridge Existing Drawings
 446931-2 Argo Pedestrian Continental Drawings

These plans may be obtained by contacting Hillary Hanzel at (734) 794-6230, ext. 42548.

EARTHWORK

EARTHWORK

Earthwork quantities are computed based upon limited survey information. These quantities are for bidding purposes only and will be adjusted by the Engineer based upon actual field measurements.

SLOPES

Slope Restoration, Type B, shall be constructed on this project, where indicated.

EARTH DISTURBANCE LIMITS

Contractor shall remedy any disturbance to any construction staging area, material storage locations, work areas, and the like with topsoil, seed, and mulch as approved by the Engineer. The Contractor shall fill in any ruts or depressions caused by the work. Depending upon the level of disturbance caused by the work, the Contractor may elect to make the existing topsoil friable by scarifying and raking, and re-seed with approved seeding mixtures, and place mulch as needed to re-establish the disturbed turf areas. This work shall not be paid for separately, but shall be included in the item of work "General Conditions, Max, \$50,000."

SOIL EROSION MEASURES

Appropriate soil erosion and sedimentation control measures shall be in place prior to earth-disturbing activities. The Engineer will not determine the precise Soil Erosion and Sedimentation Control measures to employ on this project. It is the responsibility of the Contractor to prevent and remedy any erosion, siltation, or slope disturbances by providing appropriate control measures. This work shall not be paid for separately, but shall be included in the item of work "General Conditions, Max, \$50,000."

TREE AND BRUSH CLEARING

If the Contractor determines that tree and/or brush removal is required adjacent to any structure to provide access or complete the work of this project, they shall contact Hillary Hanzel at (734) 794-6230, ext. 42548, and provide the location(s) and extent of clearing requested. The Owner will review the locations and extent of the requested removal(s) and will complete the removal(s) to the extent determined feasible and acceptable to the Owner. Allow three (3) working days after request for the Owner to complete clearing at any one structure.

SIGNS

GENERAL

All signs shall be installed, removed and/or salvaged according to the current edition of "Michigan Manual on Uniform Traffic Control Devices" and the current edition of Michigan Department of Transportation (MDOT) "Standard Specifications for Construction."

All signs on the plans or in the log that do not have a recommendation are to be retained.

EXISTING SIGN RELOCATION

Any permanent signs requiring relocation due to Contractor operations shall be salvaged and reset by the Contractor at locations designated by the Engineer. Signs and posts damaged during the removal and storage operations shall be replaced with new signs and posts. The cost of this work shall be borne by the Contractor.

PLAN SCALE

The final plans have scales, as indicated on the drawings. Where proposed on plan sheets, the signs and structures shall be fabricated in accordance to Typical Plans, Standards, and/or Details at locations described.

SIGN LAYOUT

Sign layouts shall be performed according to the current English edition of "Standard Highway Signs" manual or as detailed in plans. Legend length shall be determined using the "SignCAD" software.

SHEETING

Handling and installation of all signs shall conform to the sheeting manufacturer's specifications and guidelines.

Splice sheeting used for Type I signs with a 3" overlap.

Signs that have wrinkled or twisted sheeting may be rejected.

SIGN INSTALLATION

When attaching signs to supports, tighten the nut, not the bolt head.

Nylon washers shall be placed between the steel washer and the sign face sheeting. The nylon washers are to be considered part of the attaching devices and hardware. Nylon washers shall have a 3/8-inch inner diameter, a 7/8-inch outer diameter and a 1/16-inch thickness.

NOTES APPLYING TO MDOT STANDARD PLANS

Where the following items are called for on plans, they are to be constructed according to the MDOT standard plan given below opposite each item unless otherwise indicated.

Title	Plan No.
ROAD	
SOIL EROSION & SEDIMENTATION CONTROL MEASURES	R-96-E
SEEDING AND TREE PLANTING	R-100-H
BRIDGE	
MOLDING, BEVEL, LIGHT STANDARD ANCHOR BOLT ASSEMBLY AND NAME PLATE DETAILS	B-103-E
WORK ZONE DEVICES	
GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS	WZD-100-A*
TEMPORARY TRAFFIC CONTROL DEVICES	WZD-125-E*

*Denotes Special Detail

ITB 4597			
Category 0000 – General Conditions	Unit	Quantity	
General Conditions, Max, \$50,000	LSUM	1	
Certified Payroll Compliance and Reporting	LSUM	1	
Fence, Protective	Ft	1300	
Barricade, Type III, High Intensity, Lighted, Furn	Ea	28	
Barricade, Type III, High Intensity, Lighted, Oper	Ea	28	
Plastic Drum, High Intensity, Furn	Ea	20	
Plastic Drum, High Intensity, Oper	Ea	20	
Sign, Type B, Temp, Prismatic, Furn	Sft	299	
Sign, Type B, Temp, Prismatic, Oper	Sft	299	
Sign, Type B, Temp, Prismatic, Special, Furn	Sft	52	
Sign, Type B, Temp, Prismatic, Special, Oper	Sft	52	

ITB 4597			
Category 0001 – North Barton Pedestrian Structure	Unit	Quantity	
Reinforcement, Steel, Epoxy Coated	Lb	20	
Water Repellent Treatment, Penetrating	Syd	1	
Hand Chipping, Other Than Deck	Cft	1	
Patch, Forming	Sft	3	
Patching Conc, C-L	Cyd	0.1	
Embedded Galvanic Anode	Ea	6	

ITB 4597			
Category 0002 – South Barton Pedestrian Structure	Unit	Quantity	
_Structures, Rem Portions, Special (South Barton)	LSUM	1	
Excavation, Fdn	Cyd	15	
Erosion Control, Silt Fence	Ft	100	
Conc, Grade S2	Cyd	3	
_Timber Decking, 3 inch by 12 inch	Sft	260	
_Structure, Timber, Boardwalk (South Barton)	LSUM	1	
Topsoil Surface, 4 inch	Syd	40	
Hydroseeding	Syd	40	

ITB 4597			
Category 0003 – Bandemer Park Pedestrian Structure	Unit	Quantity	
_Structures, Rem Portions, Special (South Barton)	LSUM	1	
Structural Steel, Rolled Shape, Erect	Lb	4710	
Structural Steel, Rolled Shape, Furn and Fab	Lb	4710	
_Composite Railing, 2 inch by 8 inch	Ft	292	
_Timber Decking, 3 inch by 12 inch	Sft	1040	

ITB 4597			
Category 0003 – Bandemer Park Pedestrian Structure (Con't)	Unit	Quantity	
_Steel Structure, Coating, Partial, Special (Bandemer Ped)	LSUM	1	
_Steel Structure, Cleaning, Partial, Special (Bandemer Ped)	LSUM	1	
ITB 4597			
Category 0004 – Bandemer Park Vehicle Structure	Unit	Quantity	
_Structures, Rem Portions, Special (Bandemer Veh)	LSUM	1	
Structural Steel, Mixed, Erect	Lb	20260	
Structural Steel, Mixed, Furn and Fab	Lb	20260	
_Timber Decking, 4 inch by 12 inch	Sft	1550	
_Composite Railing, 2 inch by 8 inch	Ft	300	
_Steel Structure, Cleaning, Partial, Special (Bandemer Veh)	LSUM	1	
_Steel Structure, Coating, Partial, Special (Bandemer Veh)	LSUM	1	
_Guardrail, Type B, Modified	Ft	292	

ITB 4597			
Category 0005 – Argo Park Pedestrian Structure	Unit	Quantity	
_Timber Decking, Salv and Reinstall, 3 inch by 12 inch	Sft	360	
_Steel Structure, Cleaning, Partial, Special (Argo)	LSUM	1	
_Steel Structure, Coating, Partial, Special (Argo)	LSUM	1	

ITB 4597			
Category 0006 – Mitchell Field Pedestrian Structure	Unit	Quantity	
_Structures, Rem Portions, Special (Mitchell Truss)	LSUM	1	
_Structures, Rem Portions, Special (Mitchell Boardwalk)	LSUM	1	
Structural Steel, Rolled Shape, Erect	Lb	2800	
Structural Steel, Rolled Shape, Furn and Fab	Lb	2800	
_Composite Railing, 2 inch by 4 inch	Ft	1276	
_Composite Railing, 2 inch by 8 inch	Ft	393	
_Timber Decking, 2 inch by 10 inch	Sft	1070	
_Structure, Timber, Boardwalk (Mitchell Boardwalk)	LSUM	1	
_Steel Structure, Cleaning, Partial, Special (Mitchell Truss)	LSUM	1	
_Steel Structure, Coating, Partial, Special (Mitchell Truss)	LSUM	1	

ITB 4597			
Category 0007 – Gallup Park Vehicle Structure	Unit	Quantity	
_Structures, Rem Portions, Special (Gallup)	LSUM	1	
Structural Steel, Plate, Erect	Lb	3550	
Structural Steel, Plate, Furn and Fab	Lb	3550	



THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES

2019 PARK BRIDGE REPAIRS AND RENOVATIONS

NOTE AND QUANTITY SHEET

SCALE	NONE
DRAWING NO.	
SHEET NO.	2 OF 22

REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
	ORIGINAL ISSUE	10/01/19	DAF	CLH



AREA OF PARKING LOT FOR CONTRACTOR USE

BARTON POND

BIRD RD

EXISTING N. BARTON PEDESTRIAN STRUCTURE

PIER REPAIR LOCATION

HURON RIVER

BARTON NATURE AREA TRAIL

BARTON NATURE AREA

W. HURON RIVER DRIVE

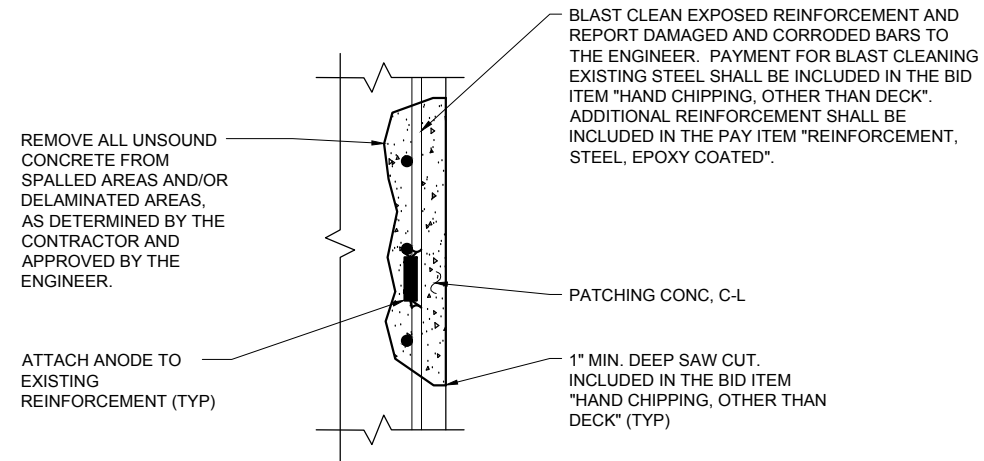
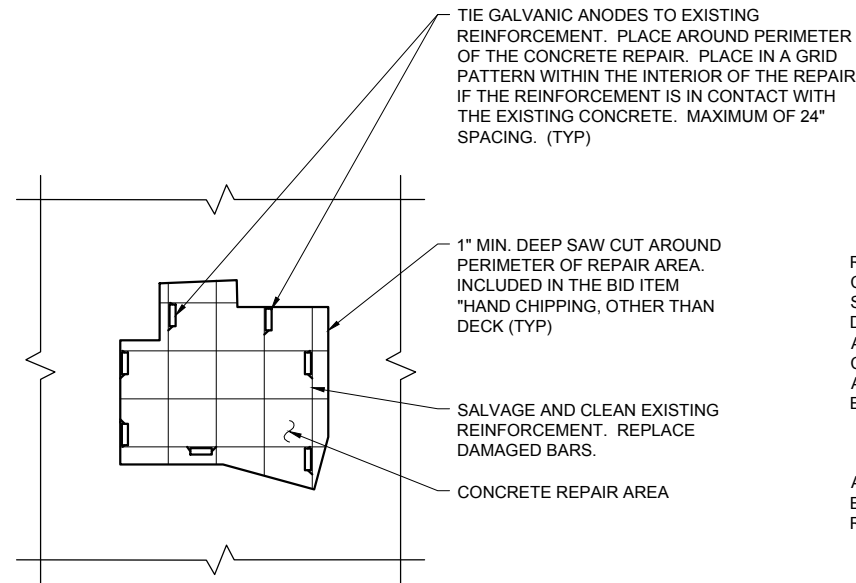
PLAN OF N. BARTON PEDESTRIAN STRUCTURE
NO SCALE



NOTES:

1. THE STRUCTURE IS LOCATED IN BARTON PARK, ON THE EAST SIDE OF W. HURON RIVER DRIVE, JUST SOUTH OF THE INTERSECTION WITH BIRD ROAD. THE BARTON POND DAM IS LOCATED APPROXIMATELY 400 FEET UPSTREAM OF THE STRUCTURE.
2. THE EXISTING STRUCTURE IS A TWO-SPAN, WEATHERING STEEL TRUSS STRUCTURE, A TOTAL OF 190'-10" IN LENGTH, WITH A CONCRETE WALL PIER AND CONCRETE ABUTMENTS. THE BRIDGE HAS A CLEAR WIDTH OF 10'-0". THE EXISTING STRUCTURE WAS DESIGNED FOR 85 PSF UNIFORM LIVE LOADING OR, 20 PSF PEDESTRIAN UNIFORM LIVE LOAD PLUS ONE 6,000 LB VEHICLE LOAD.
3. THE WORK CONSISTS OF: CHIPPING AND PATCHING THE WEST END OF THE PIER, LOCATED ON THE SOUTHEAST SIDE OF THE RIVER AND PLACING WASHERS AND NUTS ON THE ANCHOR BOLTS ON THE TRUSS BEARINGS AT THE SAME PIER.
4. ACCESS TO THE AREA SHALL BE FROM THE PARKING LOT LOCATED APPROXIMATELY 700 FEET NORTHWEST OF THE STRUCTURE. THE CONTRACTOR MAY USE AN AREA OF THE GRAVEL SURFACE PARKING LOT FOR EQUIPMENT, MATERIAL STORAGE, AND EMPLOYEE PARKING. THE AREA USED SHALL NOT EXCEED 40 FEET IN LENGTH BY APPROXIMATELY 20 FEET IN WIDTH, AND SHALL BE LOCATED ALONG THE WEST EDGE OF THE PARKING LOT. THE USE OF ANY TRAILS OR GRASS AREAS FOR THESE PURPOSES IS STRICTLY FORBIDDEN. THE CONTRACTOR SHALL NOT BLOCK THE USE OF ANY TRAIL WITHIN THE PARK, ADJACENT TO THIS STRUCTURE. THE TRAIL AND STRUCTURE SHALL REMAIN OPEN AT ALL TIMES. PEDESTRIAN USAGE OF THE TRAIL AND STRUCTURE SHALL BE MAINTAINED AT ALL TIMES.

					THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES	
					2019 PARK BRIDGE REPAIRS AND RENOVATIONS	
					SCALE NONE	
					DRAWING NO.	
					NORTH BARTON PEDESTRIAN STRUCTURE GENERAL PLAN OF SITE	
					SHEET NO. 3 OF 22	
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY		
	ORIGINAL ISSUE	10/01/19	DAF	CLH		

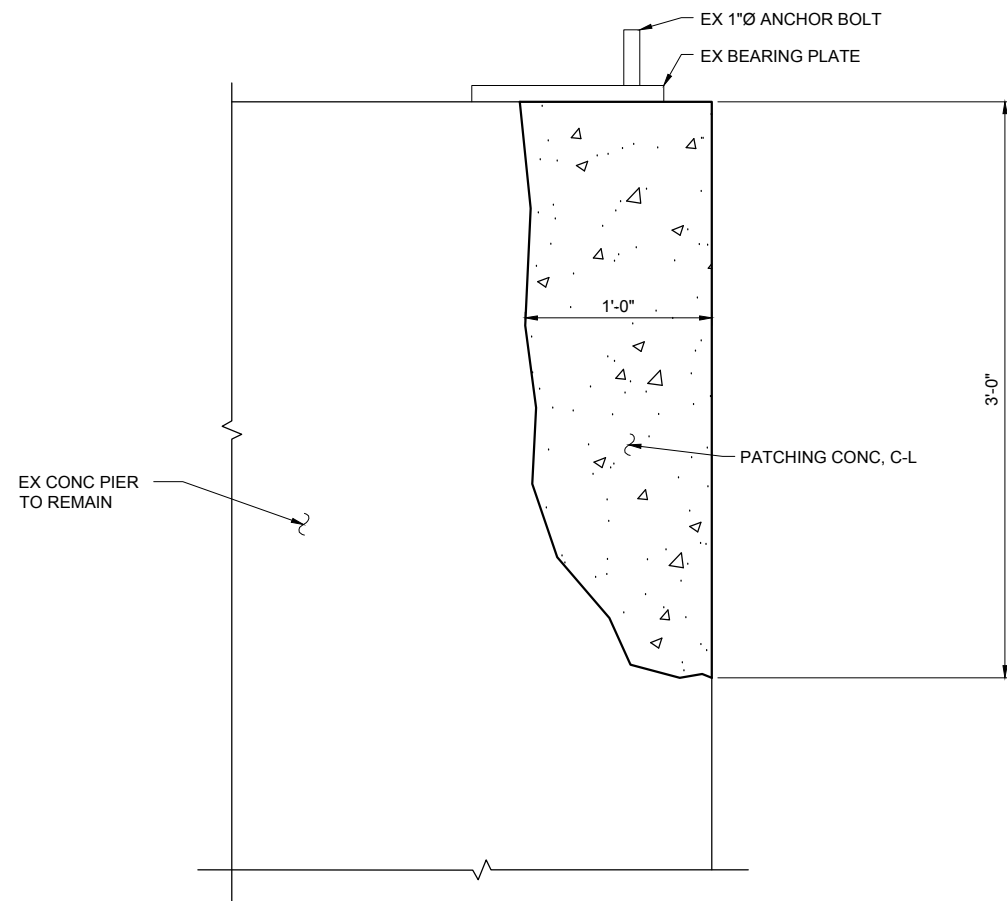


CONCRETE PATCHING DETAIL

NOTE: LIMITS OF REPAIR TO BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. TO BE USED FOR SUBSTRUCTURE REPAIRS AS DIRECTED BY THE ENGINEER. SEE NOTE 1 FOR MORE DETAILS.

SECTION AT SUBSTRUCTURE PATCHING

NO MORE THAN ONE BAR SHALL BE REPLACED AT A TIME, AS DIRECTED BY THE ENGINEER.

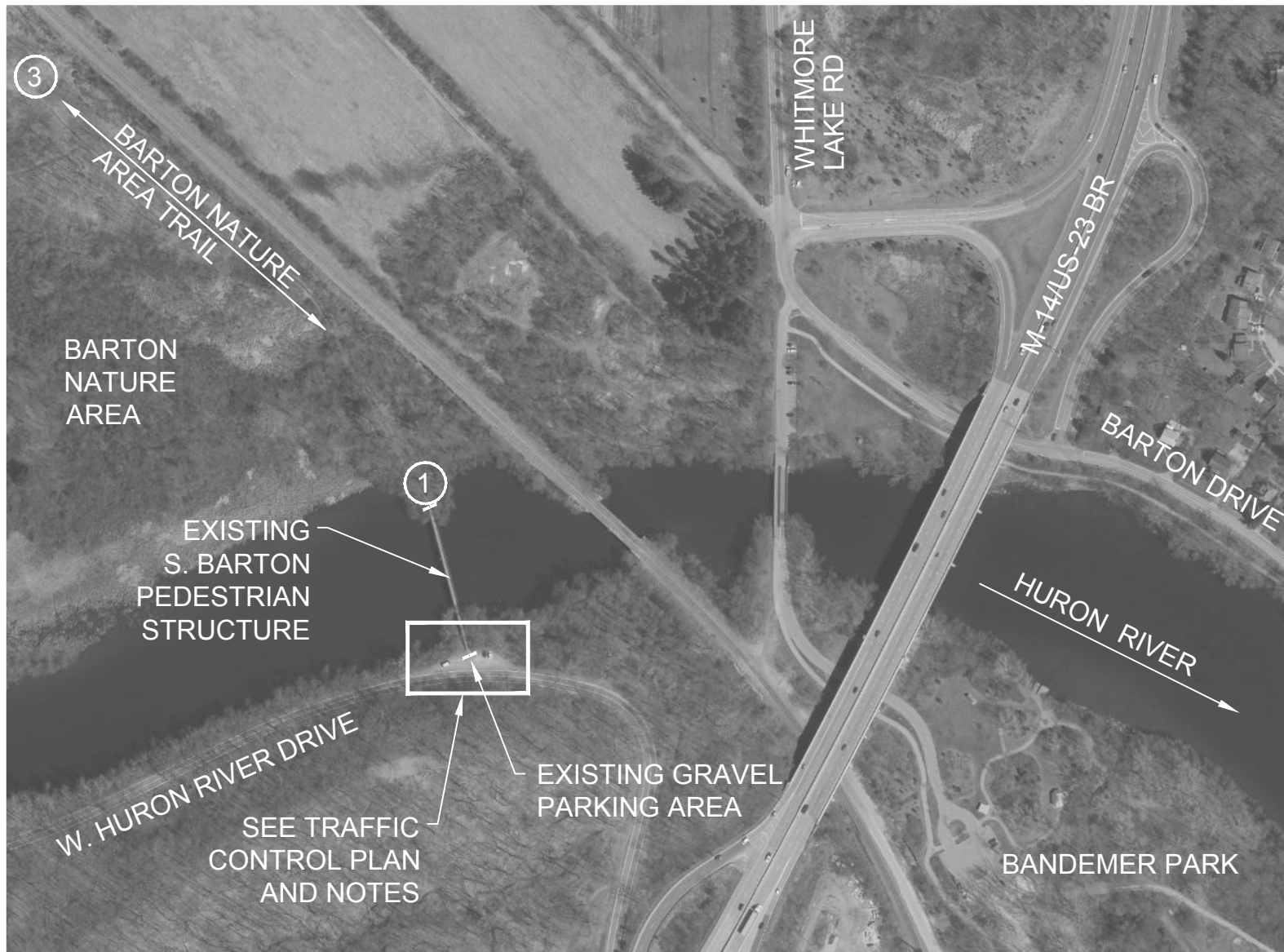


CONCRETE PIER ELEVATION

NOTES:

1. CONTRACTOR TO PREPARE AREAS FOR CONCRETE REPAIRS, FOR REVIEW BY THE ENGINEER, PRIOR TO FORMING AND PLACING PATCHING MATERIAL. PREPARATION OF REPAIR AREAS PRIOR TO FORMING AND PATCHING SHALL INCLUDE, BUT NOT BE LIMITED TO: COMPLETING THE SPECIFIED SAW CUTTING; REMOVING UNSOUND CONCRETE; BLAST CLEANING EXPOSED REINFORCING STEEL; FLUSHING AREA WITH CLEAN WATER UNDER PRESSURE AND BLOWING OUT AREA WITH OIL-FREE COMPRESSED AIR; PLACING GALVANIC ANODES; AND, REPLACING DETERIORATED REINFORCING BARS, AS REQUIRED.
2. THE CONTRACTOR SHALL PLACE TEMPORARY SUPPORT(S) AT THE TRUSS BEARING DURING CHIPPING OPERATIONS IF THE BEARING PLATE IS UNDERMINED OR UNSUPPORTED FOR OVER 50% OF ITS INTENDED BEARING AREA. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "HAND CHIPPING, OTHER THAN DECK."
3. ALL TRUSS BEARINGS SHALL BE RESTORED TO THE ORIGINAL CONDITION OF DOUBLE NUTS AND DOUBLE WASHERS AND IS NOT PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN OTHER ITEMS OF WORK.
4. PENETRATING WATER REPELLENT TREATMENT SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACE OF THE PATCHED AREA AND 6" BEYOND.
5. FORMS FOR LARGE PATCHES SHALL BE INSTALLED IN 2'-0" TO 4'-0" HIGH SECTIONS WITH THE TOP OF FORM NO MORE THAN 4'-0" ABOVE THE LEVEL OF CONCRETE AS THE POUR PROGRESSES.

					THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES												
							2019 PARK BRIDGE REPAIRS AND RENOVATIONS		SCALE NONE								
<table border="1"> <tr> <td>REV. NO.</td> <td>DESCRIPTION</td> <td>DATE</td> <td>DR. BY</td> <td>CH. BY</td> </tr> <tr> <td></td> <td>ORIGINAL ISSUE</td> <td>10/01/19</td> <td>DAF</td> <td>CLH</td> </tr> </table>					REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY		ORIGINAL ISSUE	10/01/19	DAF	CLH	NORTH BARTON PEDESTRIAN STRUCTURE SUBSTRUCTURE DETAILS		DRAWING NO.
					REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY								
	ORIGINAL ISSUE	10/01/19	DAF	CLH													
SHEET NO. 4 OF 22																	



PLAN OF S. BARTON PEDESTRIAN STRUCTURE
NO SCALE

LEGEND

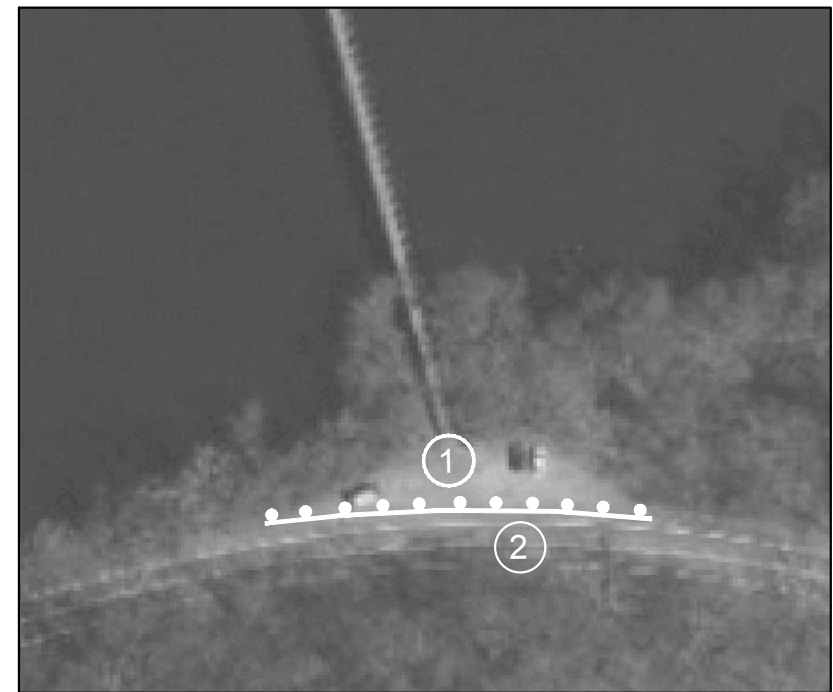
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TRAFFIC CONTROL NOTES:

- PLACE TWO (2) TYPE III BARRICADES ON THE BARTON AREA NATURE TRAIL AND IN THE GRAVEL PARKING AREA, WITH ONE (1) "BRIDGE CLOSED" (R11-2) SIGN ON SEPARATE SUPPORTS, AT EACH END OF STRUCTURE. PLACE PROTECTIVE FENCING AROUND PROJECT SITE IN ACCORDANCE WITH THE DETAILED SPECIFICATION FOR MAINTENANCE OF TRAFFIC AND CONSTRUCTION SEQUENCING.
- PLACE DRUMS ALONG THE NORTH EDGE OF W. HURON RIVER DRIVE AT 15' SPACING IN ADDITION TO PROTECTIVE FENCING.
- PLACE "TRAIL CLOSED - ½ MILE AHEAD" (SF-2) SIGN AT SOUTH END OF THE NORTH BARTON TRAIL STRUCTURE OVER THE HURON RIVER WHEN THE SOUTH BARTON TRAIL STRUCTURE OVER THE HURON RIVER IS CLOSED.

ESTIMATED QUANTITIES OF TRAFFIC CONTROL DEVICES FOR S. BARTON PARK:

PAY ITEM	UNIT	QUANTITY
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED, FURN	EACH	4
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED, OPER	EACH	4
SIGN, TYPE B, TEMP, PRISMATIC, FURN	SFT	20
SIGN, TYPE B, TEMP, PRISMATIC, OPER	SFT	20
SIGN, TYPE B, TEMP, PRISMATIC, SPECIAL, FURN	SFT	14
SIGN, TYPE B, TEMP, PRISMATIC, SPECIAL, OPER	SFT	14
PLASTIC DRUM, HIGH INTENSITY, FURN	EA	20
PLASTIC DRUM, HIGH INTENSITY, OPER	EA	20
FENCE, PROTECTIVE	FT	300



TRAFFIC CONTROL PLAN

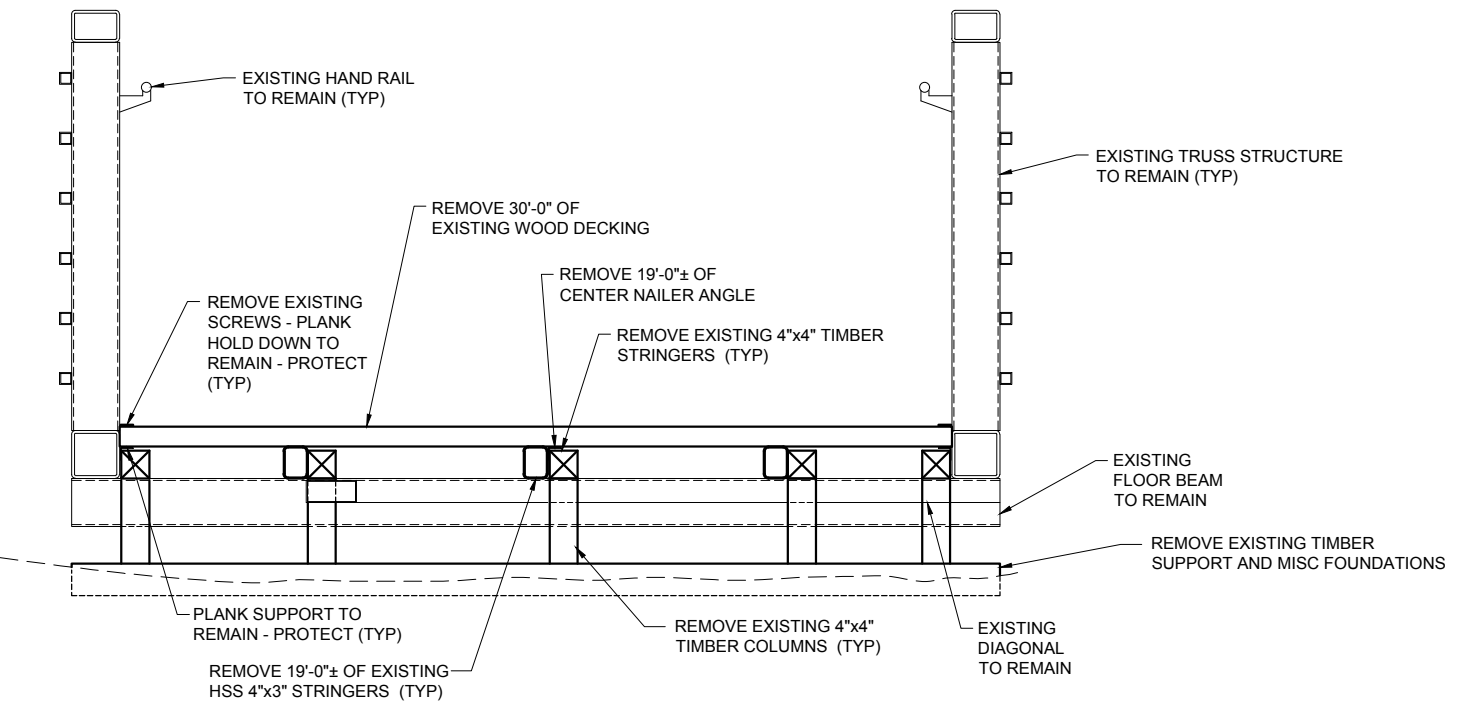
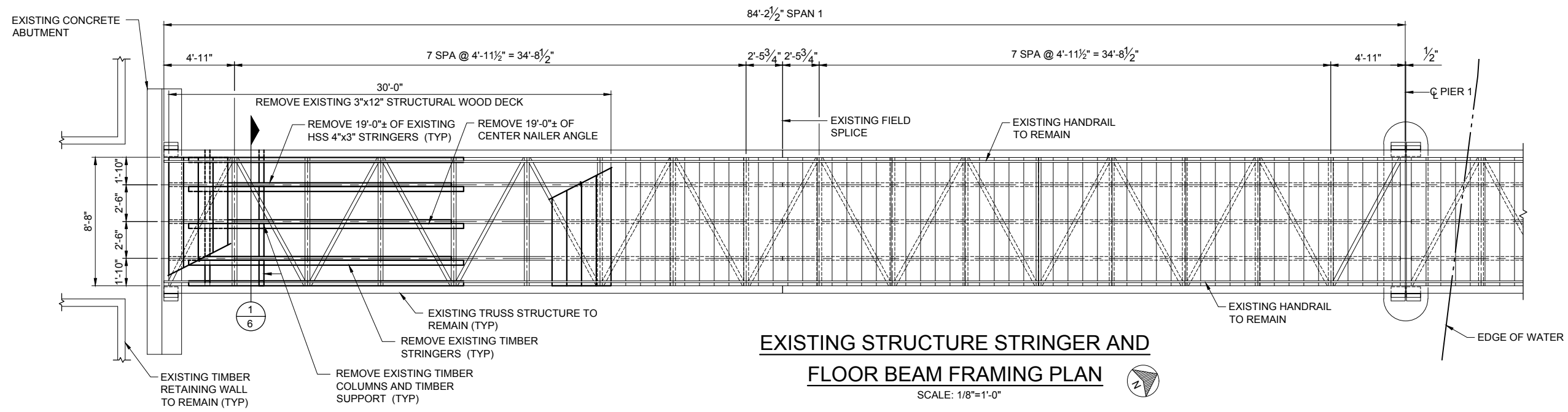
SEE TRAFFIC CONTROL QUANTITIES AND DETAILED SPECIFICATION FOR MAINTENANCE OF TRAFFIC AND CONSTRUCTION SEQUENCING FOR ADDITIONAL INFORMATION.



NOTES:

- THE STRUCTURE IS LOCATED IN BARTON PARK, APPROXIMATELY 40 FEET NORTH OF W. HURON RIVER DRIVE AND 0.20 MILES WEST OF M-14/US-23.
- THE EXISTING STRUCTURE IS A THREE-SPAN WEATHERING STEEL TRUSS STRUCTURE, 304'-10 1/2" IN LENGTH, WITH CONCRETE PIERS AND ABUTMENTS. THE SOUTH SPAN IS 84'-2 1/2" IN LENGTH. THE CLEAR WIDTH IS 8'-0".
- THE WORK CONSISTS OF: REMOVAL OF THE EXISTING TIMBER, GROUND-SUPPORTED STRUCTURE AT THE SOUTH END OF THE SOUTH TRUSS SPAN; REMOVAL OF TIMBER DECKING; EXCAVATION AND GRADING BELOW THE SOUTH TRUSS SPAN; PLACEMENT OF A TIMBER, GROUND-SUPPORTED STRUCTURE AT THE SOUTH END OF THE SOUTH TRUSS SPAN; PLACEMENT OF TIMBER DECK; PLACEMENT OF SLOPE RESTORATION; AND CLOSING STRUCTURE TO PEDESTRIAN USAGE AND THE GRAVEL PARKING LOT TO VEHICLE/PEDESTRIAN USAGE DURING CONSTRUCTION.
- THE CONTRACTOR MAY USE THE ENTIRE GRAVEL SURFACE PARKING LOT IMMEDIATELY SOUTH OF THE SOUTH END OF THE STRUCTURE FOR EQUIPMENT, MATERIAL STORAGE, AND EMPLOYEE PARKING. THE CONTRACTOR SHALL PLACE DRUMS AND TEMPORARY CONSTRUCTION FENCING ALONG THE EDGE OF W. HURON RIVER DRIVE TO BLOCK ALL ACCESS TO THE PARKING LOT DURING CONSTRUCTION. THE USE OF ANY TRAILS OR GRASS AREAS FOR THESE PURPOSES IS STRICTLY FORBIDDEN. THE CONTRACTOR SHALL NOT BLOCK THE USE OF ANY TRAIL WITHIN THE PARK, EXCEPT FOR THE STRUCTURE PORTION.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED DIMENSIONS PRIOR TO FABRICATION AND INSTALLATION OF PROPOSED WORK.

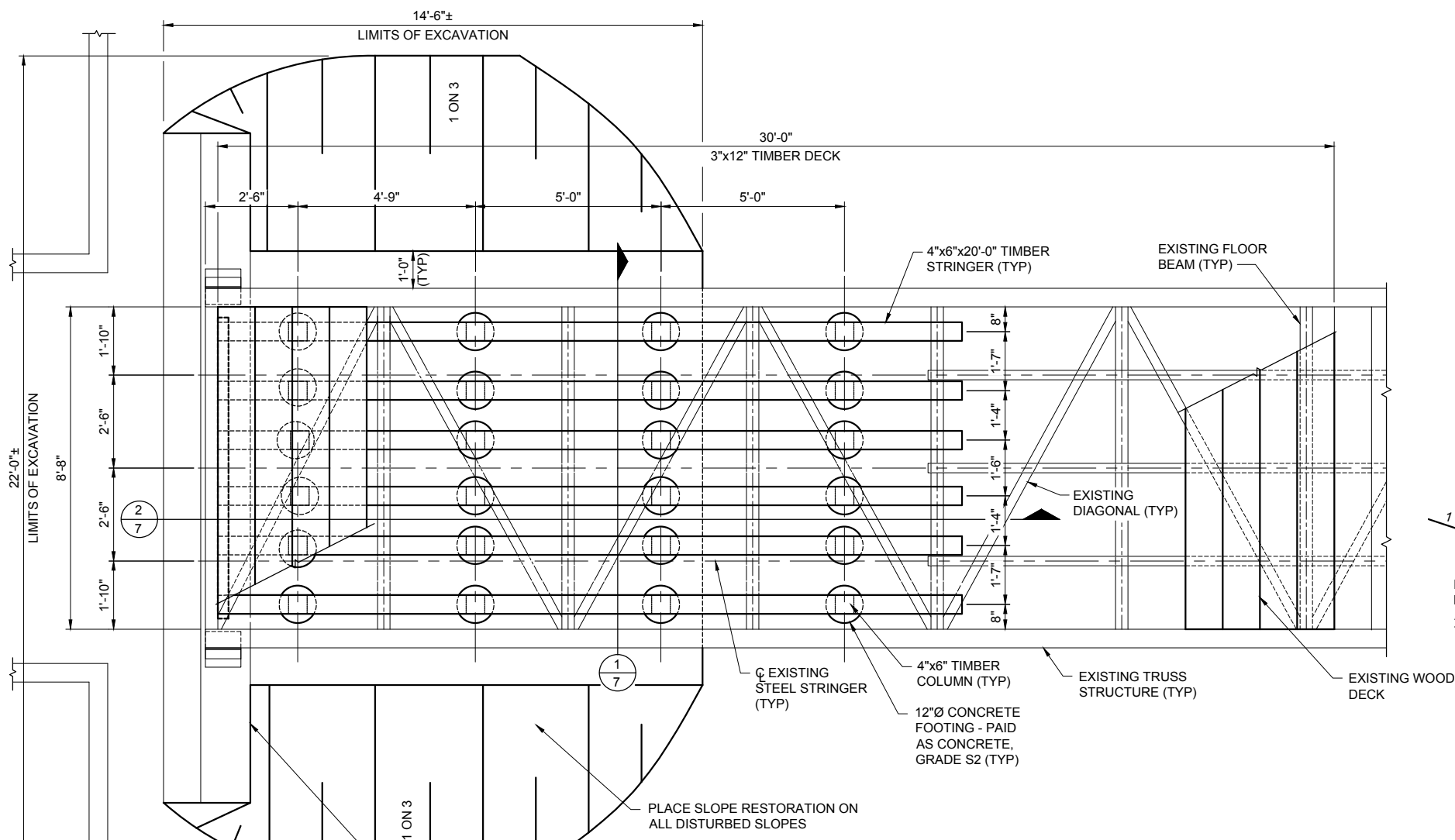
					THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES				
					2019 PARK BRIDGE REPAIRS AND RENOVATIONS				
					SOUTH BARTON PEDESTRIAN STRUCTURE GENERAL PLAN OF SITE				
					SCALE				
					NONE				
					DRAWING NO.				
					SHEET NO. <u>5</u> OF <u>22</u>				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY					
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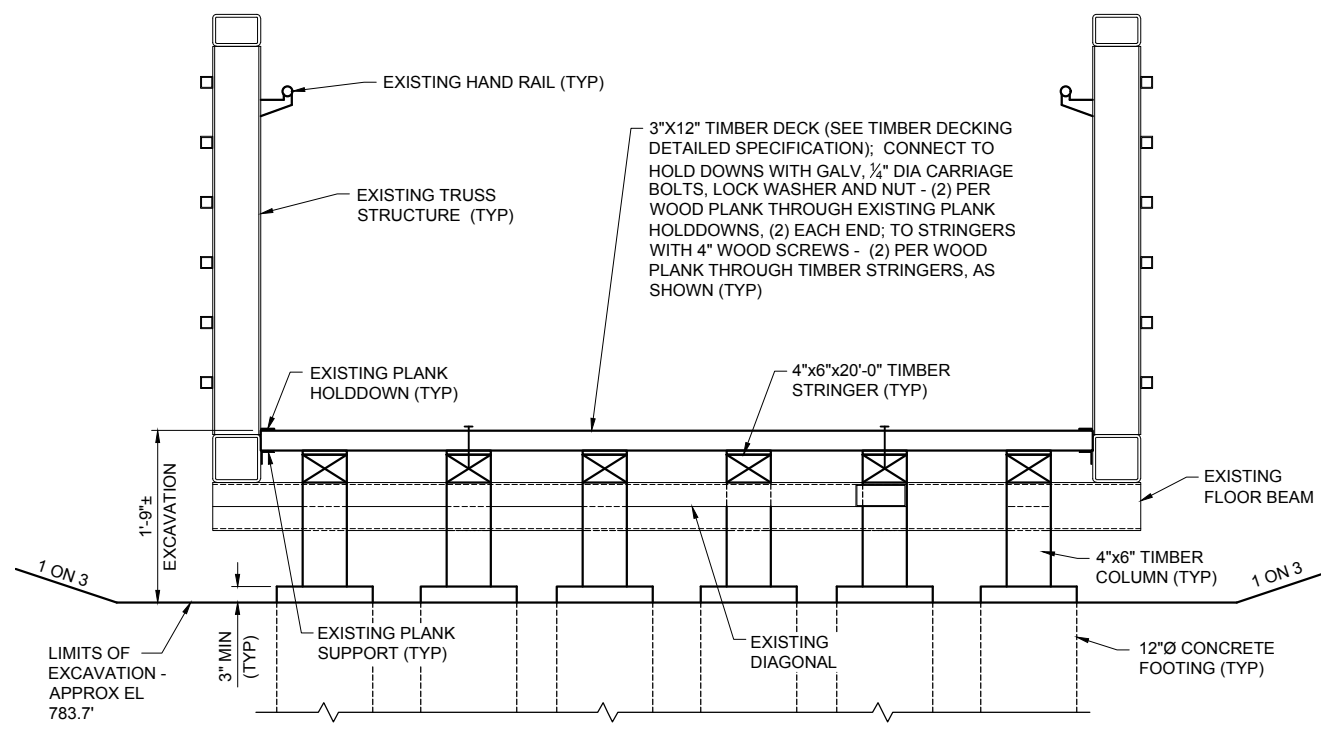
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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
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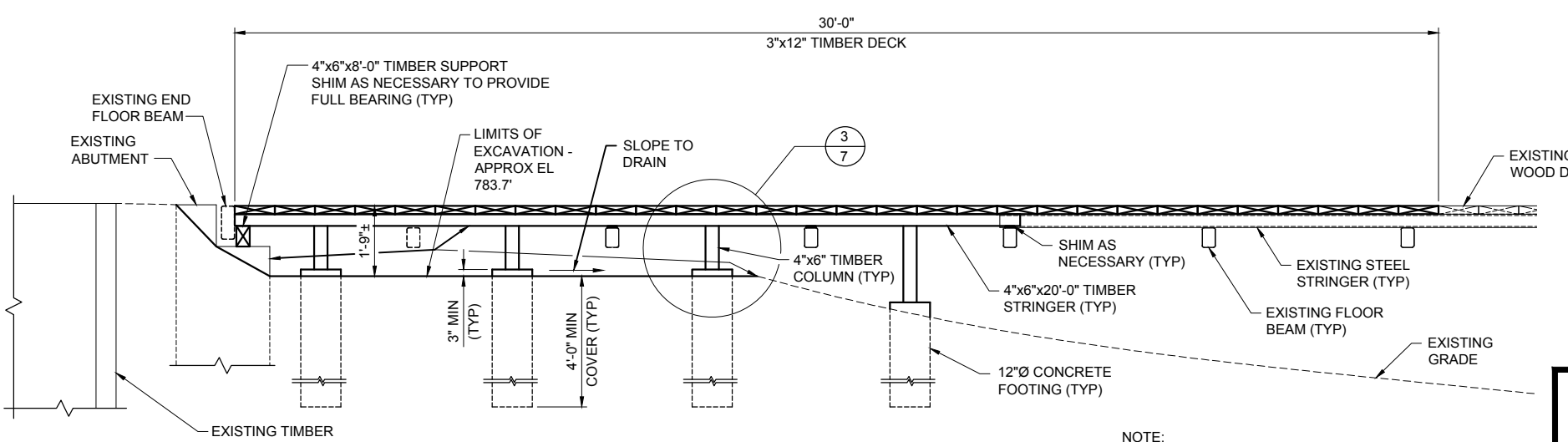
THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES	
2019 PARK BRIDGE REPAIRS AND RENOVATIONS	
SOUTH BARTON PEDESTRIAN STRUCTURE EXISTING TRUSS CONDITIONS AND REMOVALS	
SCALE AS SHOWN	
DRAWING NO.	
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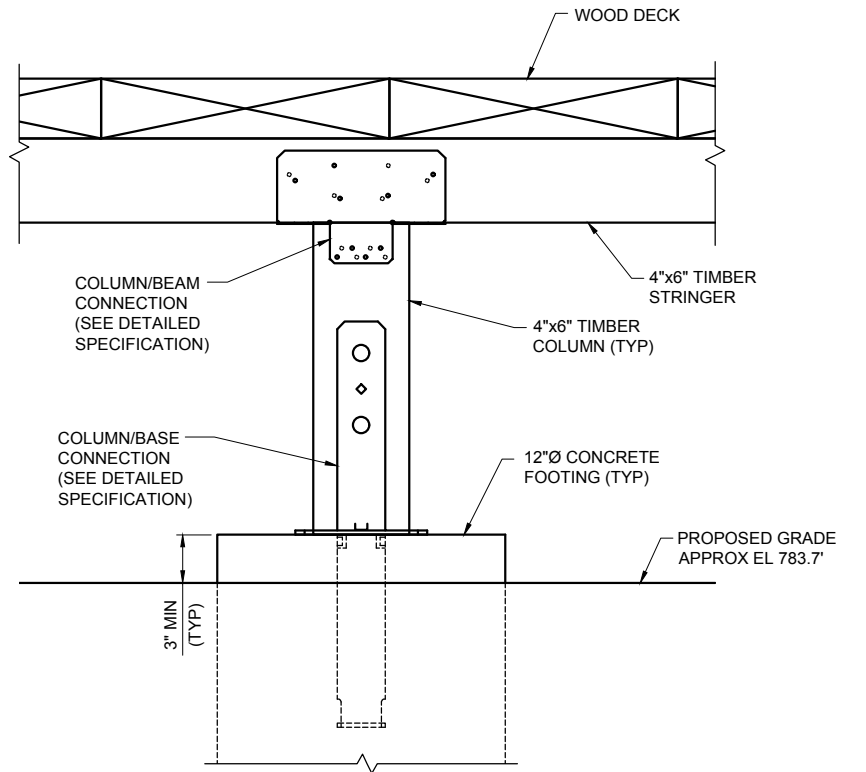
BRIDGE RENOVATION, STRINGER AND FLOOR BEAM FRAMING PLAN
SCALE: 1/4"=1'-0"



1/7 PROPOSED RENOVATION SECTION
SCALE: 1/2"=1'-0"



2/7 PROPOSED RENOVATION SECTION
SCALE: 1/4"=1'-0"



3/7 PROPOSED COLUMN DETAIL
SCALE: 1 1/2"=1'-0"

NOTE:
ALL LABOR, MATERIAL AND EQUIPMENT COSTS TO EXCAVATE AND PROPERLY DISPOSE OF EXCAVATED MATERIALS ASSOCIATED WITH THIS STRUCTURE SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE PAY ITEM "EXCAVATION, FDN."

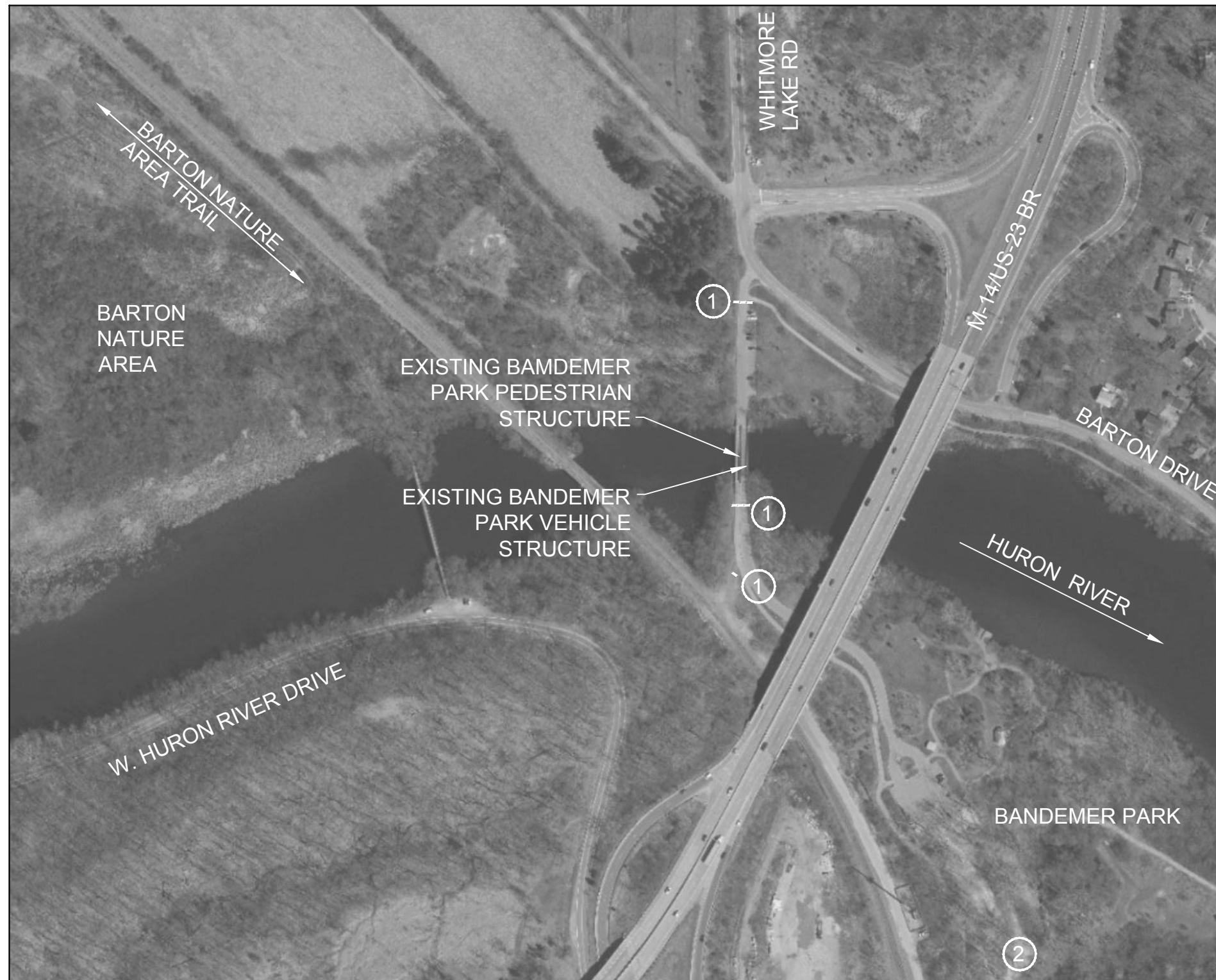
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REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
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THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES

2019 PARK BRIDGE REPAIRS AND RENOVATIONS

SOUTH BARTON PEDESTRIAN STRUCTURE BRIDGE RENOVATION DETAILS

SCALE AS SHOWN
DRAWING NO.
SHEET NO. <u>7</u> OF <u>22</u>



PLAN OF BANDEMER PARK PEDESTRIAN AND VEHICLE STRUCTURES
NO SCALE



NOTES:

- THE STRUCTURES ARE LOCATED IN BANDEMER PARK, WHICH IS SOUTH OF THE BARTON DRIVE EXIT FROM SB M-14/US-23 BUSINESS. THE INTERSECTION OF BARTON DRIVE/BARTON SHORE DRIVE/WHITMORE LAKE ROAD IS LOCATED 0.10 MILES NORTH OF THE STRUCTURE. THE ENTRANCE TO THE PARK IS LOCATED ON BARTON DRIVE, APPROXIMATELY 0.10 MILES WEST OF M-14/US-23 BUSINESS. THE PEDESTRIAN STRUCTURE AND VEHICLE STRUCTURE ARE ADJACENT TO EACH OTHER.
- THE EXISTING STRUCTURES ARE SINGLE-SPAN WEATHERING STEEL TRUSS SUPERSTRUCTURES, 118'-6" IN LENGTH, WITH CONCRETE ABUTMENTS. THE PEDESTRIAN STRUCTURE IS DESIGNED FOR 85 PSF UNIFORM LIVE LOADING OR ONE 9,000 LB VEHICLE. THE CLEAR WIDTH IS 8'-0". THE VEHICLE STRUCTURE IS DESIGNED FOR HS-20 VEHICLE LOAD. THE CLEAR ROADWAY WIDTH IS 12'-0".
- THE WORK FOR THE PEDESTRIAN STRUCTURE CONSISTS OF: REMOVAL OF THE EXISTING WOOD DECKING; REMOVAL OF PORTIONS OF THE EXISTING STRINGERS; CLEANING AND COATING THE EXISTING FLOOR BEAMS; REMOVAL OF THE EXISTING WOOD HAND RAILS; PLACEMENT OF WOOD DECKING; PLACEMENT OF GALVANIZED STRINGERS; PLACEMENT OF COMPOSITE HANDRAILS; AND, CLOSING THE STRUCTURE TO PEDESTRIAN USAGE DURING CONSTRUCTION.
- THE WORK FOR THE VEHICLE STRUCTURE CONSISTS OF: REMOVAL OF THE EXISTING WOOD DECKING; REMOVAL OF PORTIONS OF THE EXISTING STRINGERS, END STOPS AND JOINT COVER PLATE; CLEANING AND COATING THE EXISTING FLOOR BEAMS; REMOVAL OF THE EXISTING WOOD HAND RAILS; REMOVAL OF THE EXISTING GUARDRAILS AND BACKUP RAILS; PLACEMENT OF WOOD DECKING; PLACEMENT OF GALVANIZED STRINGERS, END STOPS AND JOINT COVER PLATES; PLACEMENT OF GUARDRAILS AND BACKUP RAILS; PLACEMENT OF COMPOSITE HANDRAILS; AND, CLOSING THE STRUCTURE TO VEHICLE TRAFFIC DURING CONSTRUCTION.
- THE CONTRACTOR MAY USE AN AREA OF THE PAVED SURFACE PARKING LOT IMMEDIATELY NORTH OF THE NORTH END OF THE STRUCTURES FOR EQUIPMENT, MATERIAL STORAGE, AND EMPLOYEE PARKING. THE AREA USED SHALL NOT EXCEED 100 FEET IN LENGTH ALONG THE ROADWAY BY APPROXIMATELY 15 FEET. THE USE OF ANY TRAILS OR GRASS AREAS FOR THESE PURPOSES IS STRICTLY FORBIDDEN. THE CONTRACTOR SHALL NOT BLOCK THE USE OF ANY TRAIL WITHIN THE PARK, EXCEPT FOR THE STRUCTURE PORTION.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED DIMENSIONS PRIOR TO FABRICATION AND INSTALLATION OF PROPOSED WORK.
- THE ESTIMATED AREA OF STRUCTURAL STEEL TO BE CLEANED AND COATED ON THE PEDESTRIAN STRUCTURE IS 340 SFT. THE ESTIMATED AREA OF STRUCTURAL STEEL TO BE CLEANED AND COATED ON THE VEHICLE STRUCTURE IS 1020 SFT. THIS INCLUDES THE FLOOR BEAMS OF THE TRUSS SUPERSTRUCTURES.
- THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO AVOID OVERSPRAY ON ADJACENT SUBSTRUCTURE AND SUPERSTRUCTURE CONCRETE SURFACES AND ON ADJACENT STEEL AREAS NOT TO BE CLEANED AND COATED. (INCLUDED IN THE BID ITEM "STEEL STRUCTURE, COATING, PARTIAL, SPECIAL (BANDEMER PED)" AND "STEEL STRUCTURE, COATING, PARTIAL, SPECIAL (BANDEMER VEH).")
- MEASURES SHALL BE TAKEN TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE. IF DEBRIS FALLS INTO THE WATERWAY, IT SHALL BE REMOVED IMMEDIATELY. SINCE DISTURBANCE OF THE WATERWAY BOTTOM MAY BE AS HARMFUL AS THE DEBRIS ITSELF, THE PREVENTIVE MEASURES MUST BE EFFECTIVE.

LEGEND

①

②

TRAFFIC CONTROL NOTES:

PLACE THREE (3) TYPE III BARRICADES ON BANDEMER PARK ROADWAY AND PEDESTRIAN PATH WITH ONE (1) "BRIDGE CLOSED" (R11-2) SIGN, ON SEPARATE SUPPORTS. ONE (1) SET OF BARRICADES SHALL BE PLACED AT BARTON DRIVE (PARK ENTRANCE) AND ONE (1) SET SOUTH OF STRUCTURE ACROSS THE BANDEMER PARK ROADWAY AND PATH. PLACE ONE (1) TYPE III BARRICADE ACROSS GRAVEL PATH TO DETER ILLEGAL CROSSING OF RAILROAD TRACKS. PLACE PROTECTIVE FENCING AROUND PROJECT SITE IN ACCORDANCE WITH THE DETAILED SPECIFICATION FOR MAINTENANCE OF TRAFFIC AND CONSTRUCTION SEQUENCING.

PLACE "BRIDGE CLOSED" (R11-2) SIGN AND "TRAIL CLOSED - 1/2 MILE AHEAD" (SF-2) SIGN WHEN THE STRUCTURES AT BANDEMER PARK ARE CLOSED FOR CONSTRUCTION.

ESTIMATED QUANTITIES OF TRAFFIC CONTROL DEVICES FOR BANDEMER PARK STRUCTURES:

PAY ITEM	UNIT	QUANTITY
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED, FURN	EACH	7
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED, OPER	EACH	7
SIGN, TYPE B, TEMP, PRISMATIC, FURN	SFT	20
SIGN, TYPE B, TEMP, PRISMATIC, OPER	SFT	20
SIGN, TYPE B, TEMP, PRISMATIC, SPECIAL, FURN	SFT	14
SIGN, TYPE B, TEMP, PRISMATIC, SPECIAL, OPER	SFT	14
FENCE, PROTECTIVE	FT	300

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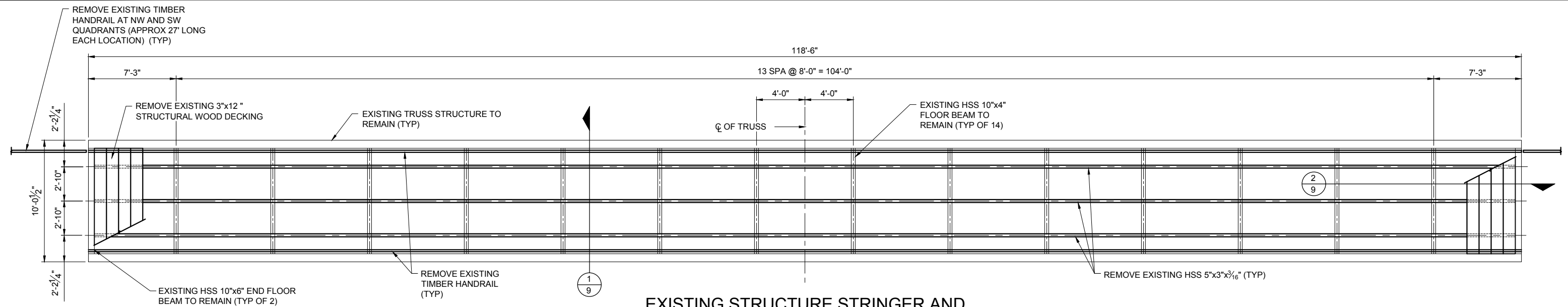
THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES

2019 PARK BRIDGE REPAIRS AND RENOVATIONS
BANDEMER PARK PEDESTRIAN AND VEHICLE STRUCTURES
GENERAL PLAN OF SITE

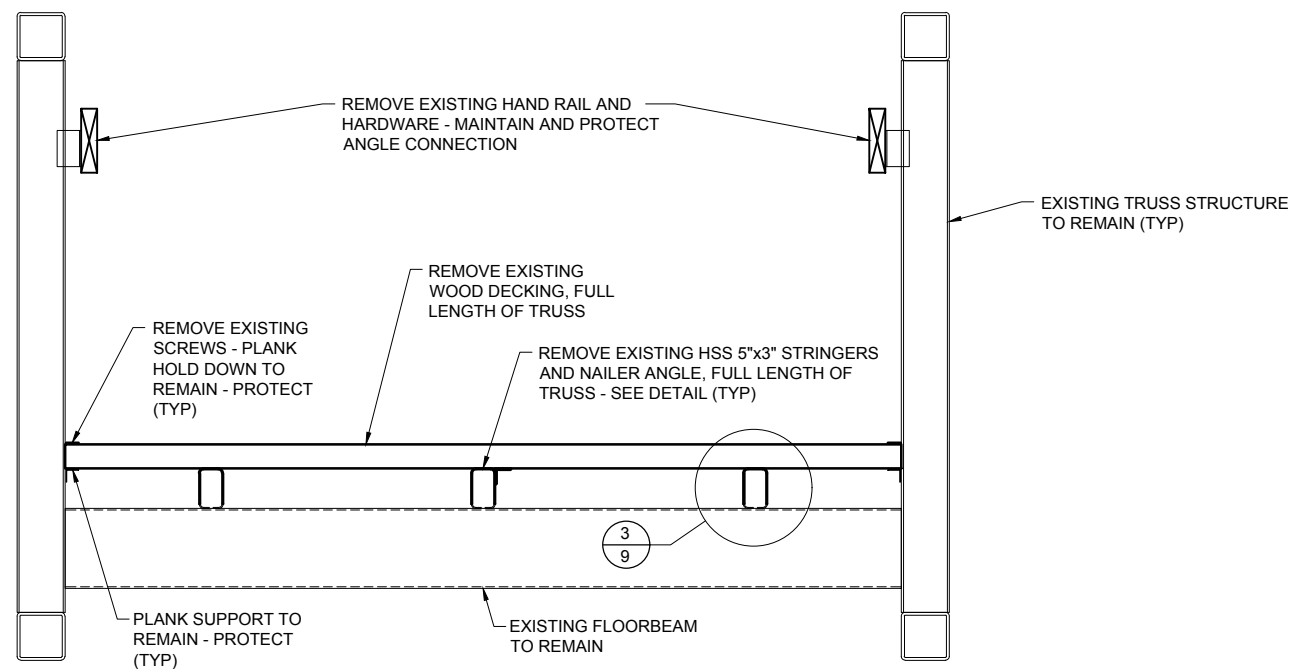
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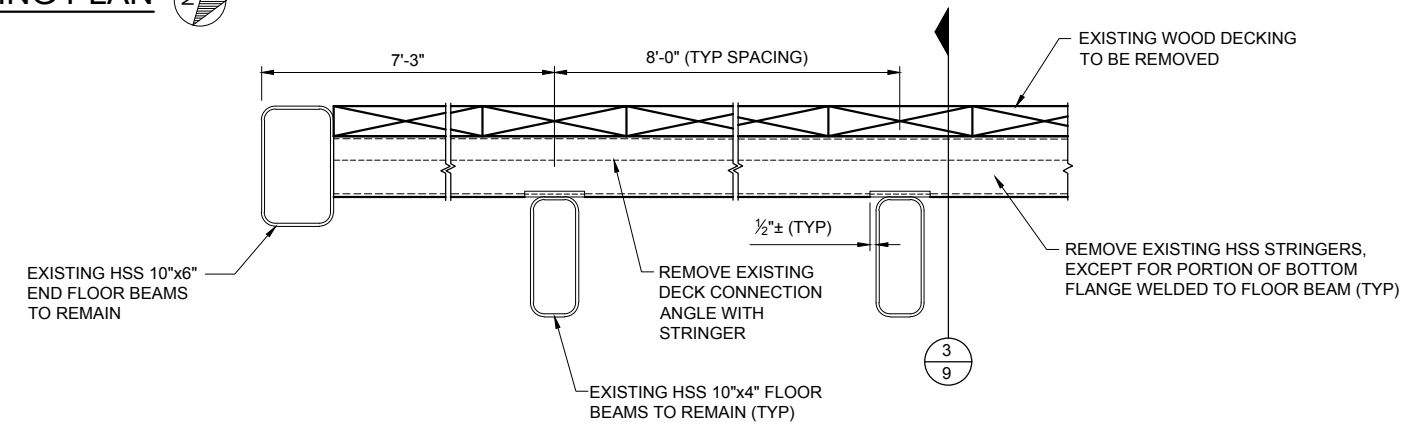
SHEET NO. 8 OF 22



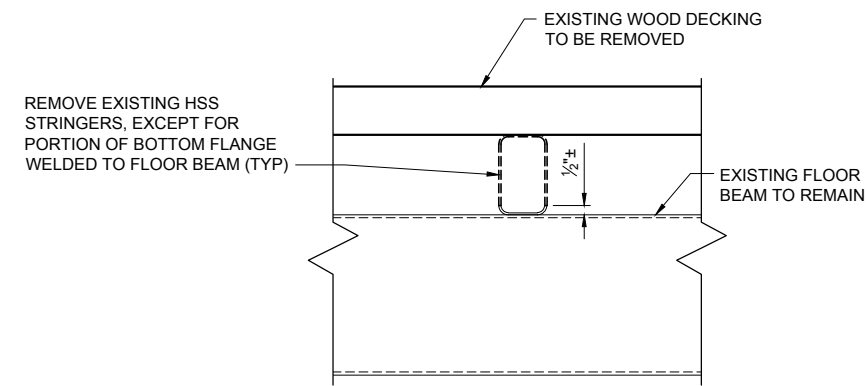
EXISTING STRUCTURE STRINGER AND FLOOR BEAM FRAMING PLAN
SCALE: 1/8"=1'-0"



1 EXISTING STRUCTURE SECTION
SCALE: 1/2"=1'-0"

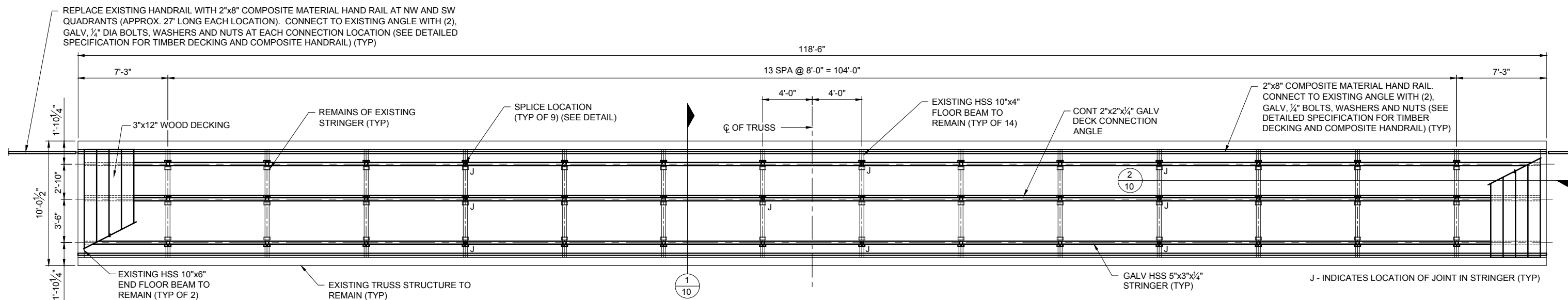


2 PARTIAL STRINGER REMOVAL SECTION
SCALE: 1"=1'-0"

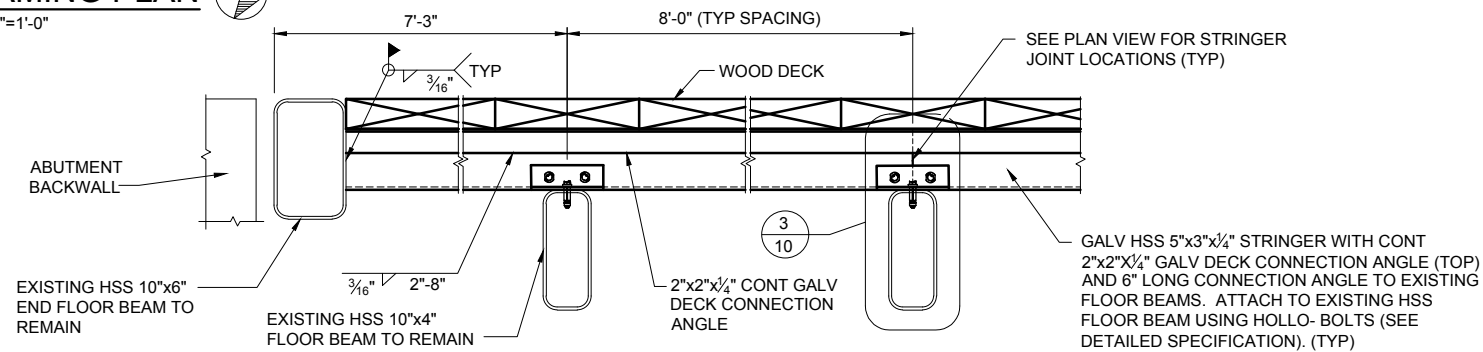


3 PARTIAL STRINGER REMOVAL DETAIL
SCALE: 1"=1'-0"

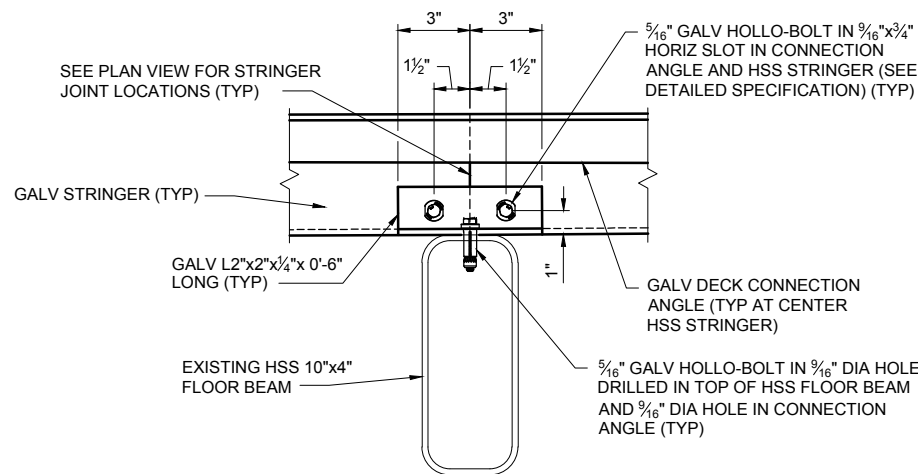
DLZ					THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES				
					2019 PARK BRIDGE REPAIRS AND RENOVATIONS				
					BANDEMERE PARK PEDESTRIAN STRUCTURE EXISTING TRUSS CONDITIONS AND REMOVALS				
					SCALE AS SHOWN				
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					SHEET NO. 9 OF 22				
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BRIDGE RENOVATION, STRINGER AND FLOOR BEAM FRAMING PLAN
 SCALE: 1/8"=1'-0"



PARTIAL STRINGER SECTION
 SCALE: 1/2"=1'-0"



PROPOSED CONNECTION DETAIL
 SCALE: 1 1/2"=1'-0"

REPLACE EXISTING HANDRAIL WITH 2"x8" COMPOSITE MATERIAL HAND RAIL AT NW AND SW QUADRANTS (APPROX. 27' LONG EACH LOCATION). CONNECT TO EXISTING ANGLE WITH (2), GALV. 1/4" DIA BOLTS, WASHERS AND NUTS AT EACH CONNECTION LOCATION (SEE DETAILED SPECIFICATION FOR TIMBER DECKING AND COMPOSITE HANDRAIL) (TYP)

2"x8" COMPOSITE MATERIAL HAND RAIL. CONNECT TO EXISTING ANGLE WITH (2), GALV. 1/4" BOLTS, WASHERS AND NUTS (SEE DETAILED SPECIFICATION FOR TIMBER DECKING AND COMPOSITE HANDRAIL) (TYP)

2"x8" COMPOSITE MATERIAL HAND RAIL. CONNECT TO EXISTING ANGLE WITH (2), GALV. 1/4" DIA BOLTS, WASHERS AND NUTS AT EACH CONNECTION LOCATION (SEE DETAILED SPECIFICATION FOR TIMBER DECKING AND COMPOSITE HANDRAIL) (TYP)

3"x12" WOOD DECKING (SEE DETAILED SPECIFICATION FOR TIMBER DECKING AND COMPOSITE HANDRAIL); CONNECT TO STRUCTURE USING GALV. 1/4" DIA CARRIAGE BOLTS, LOCK WASHER AND NUT - (2) PER WOOD PLANK THROUGH HOLES DRILLED IN 2x2 ANGLE & EXISTING PLANK HOLDDOWNS - SIX (6) LOCATIONS PER PLANK (TYP)

CLEAN AND COAT ALL EXISTING HSS 10"x4" AND 10"x6" FLOOR BEAMS, FROM FACE-TO-FACE OF TRUSSES, AFTER REMOVAL OF EXISTING WOOD DECKING AND STRINGERS, AND PRIOR TO PLACING NEW STRINGERS (SEE DETAILED SPECIFICATION FOR PARTIAL CLEANING AND COATING) (TYP)

BRIDGE RENOVATION SECTION
 SCALE: 1/2"=1'-0"



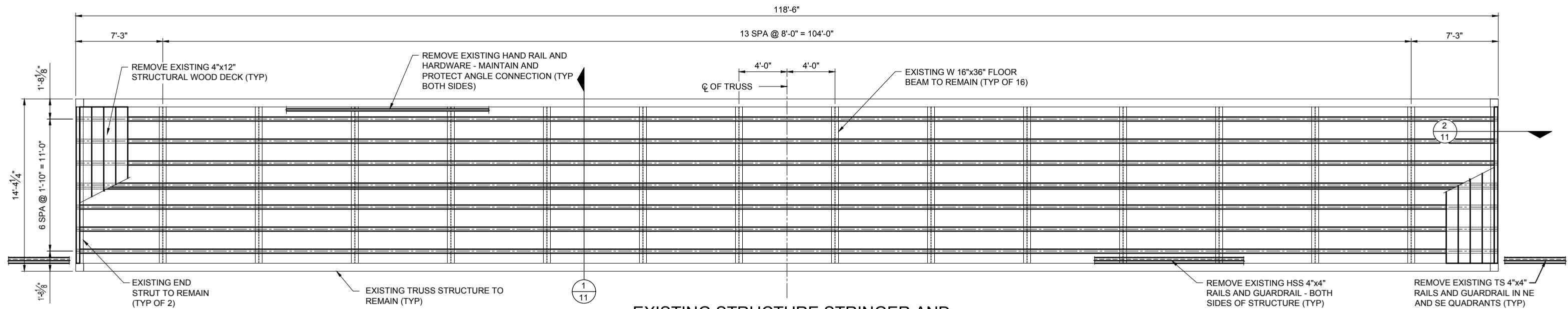
THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES

2019 PARK BRIDGE REPAIRS AND RENOVATIONS

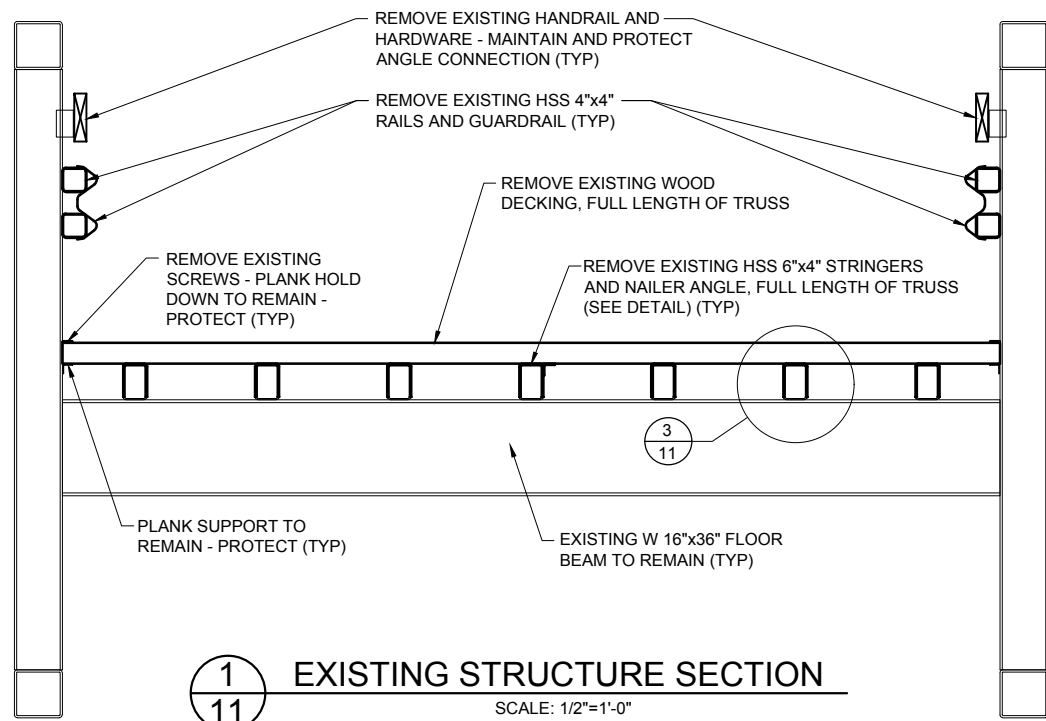
BANDEMOR PARK PEDESTRIAN STRUCTURE BRIDGE RENOVATION DETAILS

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	ORIGINAL ISSUE	10/01/19	DAF	CLH

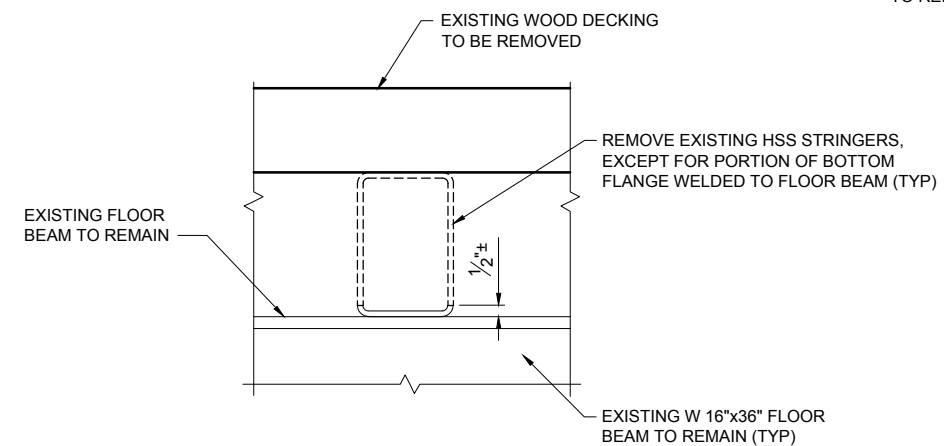
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SHEET NO.	10 OF 22



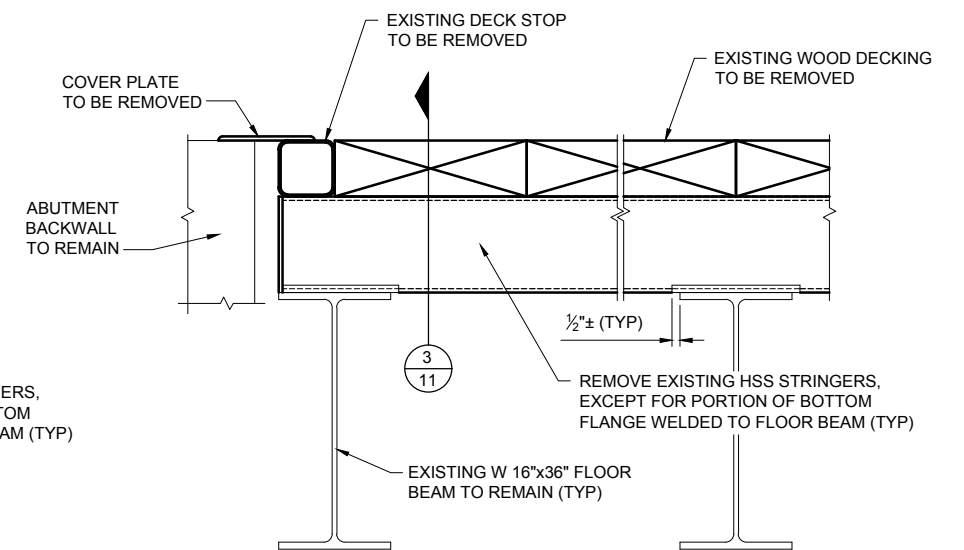
EXISTING STRUCTURE STRINGER AND FLOOR BEAM FRAMING PLAN
SCALE: 1/8"=1'-0"




1 11 EXISTING STRUCTURE SECTION
SCALE: 1/2"=1'-0"

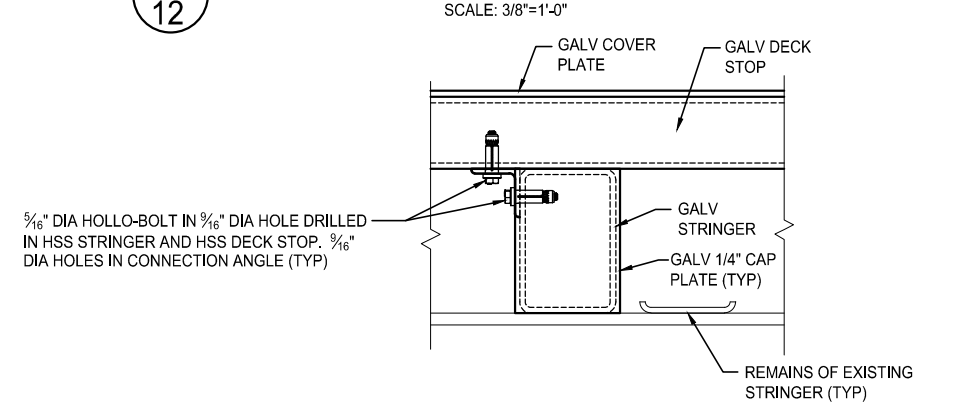
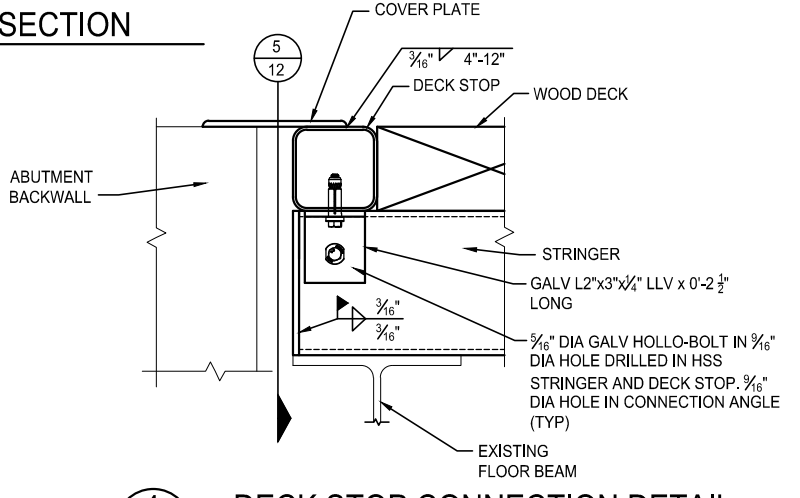
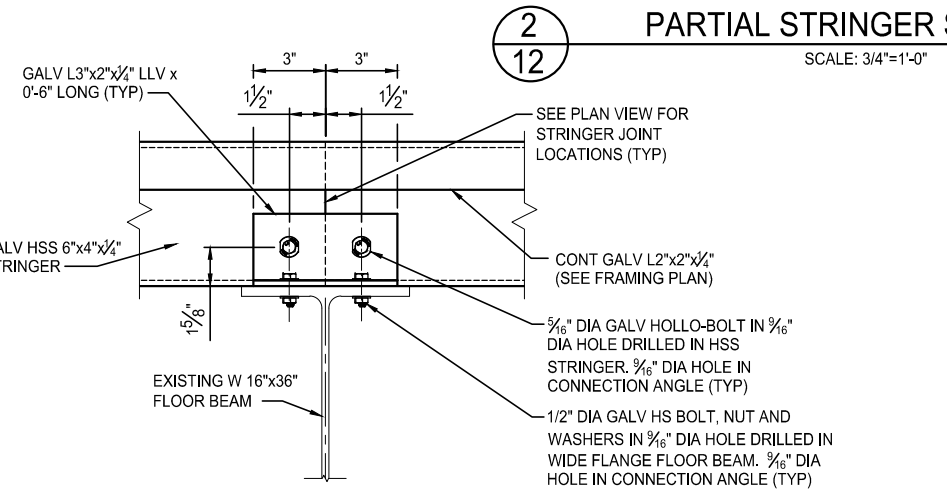
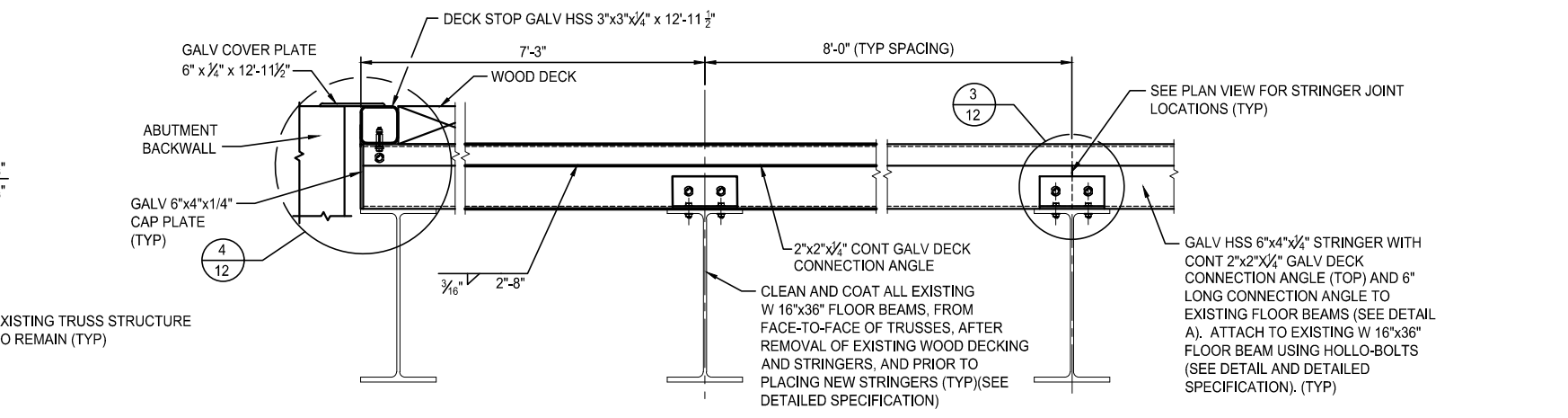
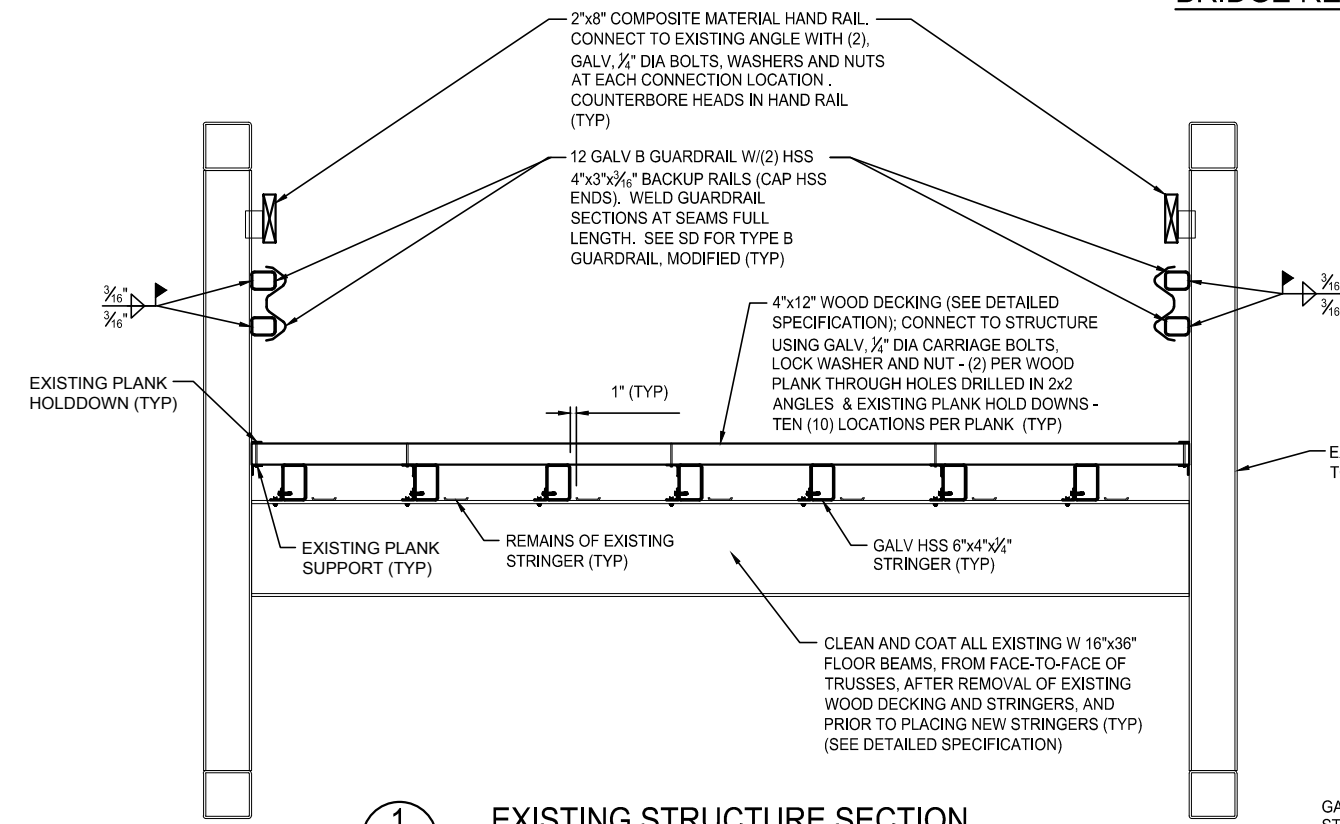
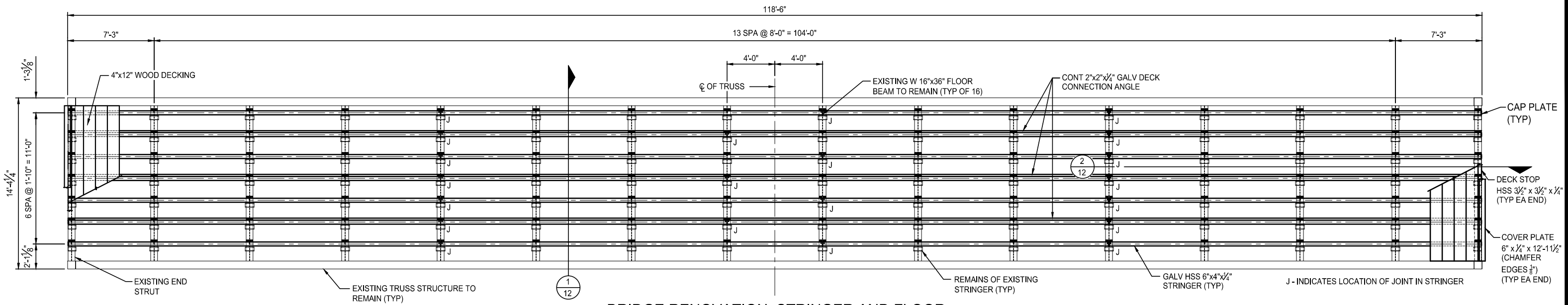


3 11 PARTIAL STRINGER REMOVAL DETAIL
SCALE: 1"=1'-0"



2 11 PARTIAL STRINGER REMOVAL SECTION
SCALE: 1"=1'-0"

				THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES			
				2019 PARK BRIDGE REPAIRS AND RENOVATIONS		SCALE AS SHOWN	
				BANDEMOR PARK VEHICLE STRUCTURE EXISTING TRUSS CONDITIONS AND REMOVALS		DRAWING NO.	
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THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES

2019 PARK BRIDGE REPAIRS AND RENOVATIONS

BANDEMOR PARK VEHICLE STRUCTURE BRIDGE RENOVATION DETAILS

SCALE	AS SHOWN
DRAWING NO.	
SHEET NO.	12 OF 22



PLAN OF ARGO PARK PEDESTRIAN STRUCTURE
NO SCALE



NOTES:

1. THE STRUCTURE IS LOCATED AT THE SOUTHEAST CORNER OF ARGO PARK, WEST OF THE INTERSECTION OF BROADWAY STREET AND SWIFT STREET. THE ENTRANCE TO THE PATH IS LOCATED ON SWIFT STREET, APPROXIMATELY 0.04 MILES NORTHWEST OF BROADWAY STREET.
2. THE EXISTING STRUCTURE IS A SINGLE-SPAN STEEL TRUSS STRUCTURE, 30'-0" IN LENGTH, WITH CONCRETE ABUTMENTS. THE DESIGN LOAD IS 85 PSF UNIFORM LIVE LOADING OR ONE 20,000 POUND VEHICLE LOAD. THE CLEAR BRIDGE WIDTH IS 12'-0".
3. THE WORK CONSISTS OF: REMOVAL AND SALVAGING THE EXISTING TIMBER DECKING; CLEANING AND COATING OF THE EXISTING FLOOR BEAMS, STRINGERS AND BRACE DIAGONALS; PLACEMENT OF SALVAGED TIMBER DECKING; AND PEDESTRIAN TRAFFIC CONTROL.
4. THE CONTRACTOR MAY USE AN AREA OF THE PAVED SURFACE DRIVE IMMEDIATELY SOUTHEAST OF THE STRUCTURE FOR EQUIPMENT, MATERIAL STORAGE, AND EMPLOYEE PARKING. THE AREA USED SHALL NOT EXCEED 40 FEET IN LENGTH BY APPROXIMATELY 15 FEET. THE USE OF ANY TRAILS OR GRASS AREAS FOR THESE PURPOSES IS STRICTLY FORBIDDEN.
5. THE ESTIMATED AREA OF STRUCTURAL STEEL TO BE CLEANED AND COATED IS 470 SFT. THIS INCLUDES THE STRINGERS, FLOOR BEAMS AND BRACING DIAGONALS OF THE TRUSS SUPERSTRUCTURE.
6. THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO AVOID OVERSPRAY ON ADJACENT SUBSTRUCTURE AND SUPERSTRUCTURE CONCRETE SURFACES AND ON ADJACENT STEEL AREAS NOT TO BE CLEANED AND COATED. (INCLUDED IN THE BID ITEM "STEEL STRUCTURE, COATING, PARTIAL, SPECIAL (ARGO).")
7. MEASURES SHALL BE TAKEN TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE. IF DEBRIS FALLS INTO THE WATERWAY, IT SHALL BE REMOVED IMMEDIATELY. SINCE DISTURBANCE OF THE WATERWAY BOTTOM MAY BE AS HARMFUL AS THE DEBRIS ITSELF, THE PREVENTIVE MEASURES MUST BE EFFECTIVE.

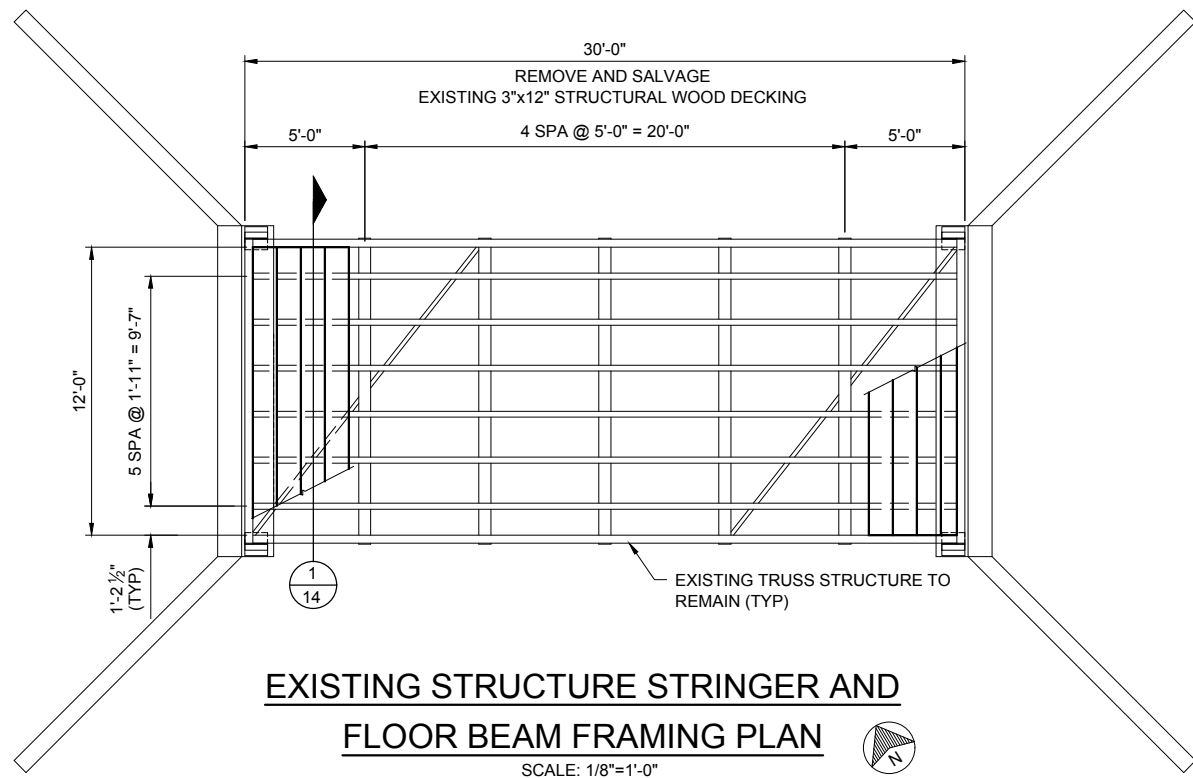
LEGEND TRAFFIC CONTROL NOTES:

- ① PLACE TWO (2) TYPE III BARRICADES ON ARGO PARK PATH WITH ONE (1) "BRIDGE CLOSED" (R11-2) SIGN ON SEPARATE SUPPORTS, AT EACH END OF STRUCTURE. PLACE PROTECTIVE FENCING AROUND PROJECT SITE. SEE THE DETAILED SPECIFICATION FOR MAINTENANCE OF TRAFFIC AND CONSTRUCTION SEQUENCING FOR ADDITIONAL INFORMATION.
- ② PLACE "BRIDGE CLOSED" (R11-2) AND "SIDEWALK CLOSED (R9-9). SEE DETAILED SPECIFICATION FOR MAINTENANCE OF TRAFFIC AND CONSTRUCTION SEQUENCING.
ALL SIGN LOCATIONS TO BE APPROVED BY ENGINEER/OWNER.
- ③ M4-9a (STRAIGHT)
- ④ M4-9a (RIGHT)
- ⑤ M4-9a (LEFT)

ESTIMATED QUANTITIES OF TRAFFIC CONTROL DEVICES FOR ARGO PARK:

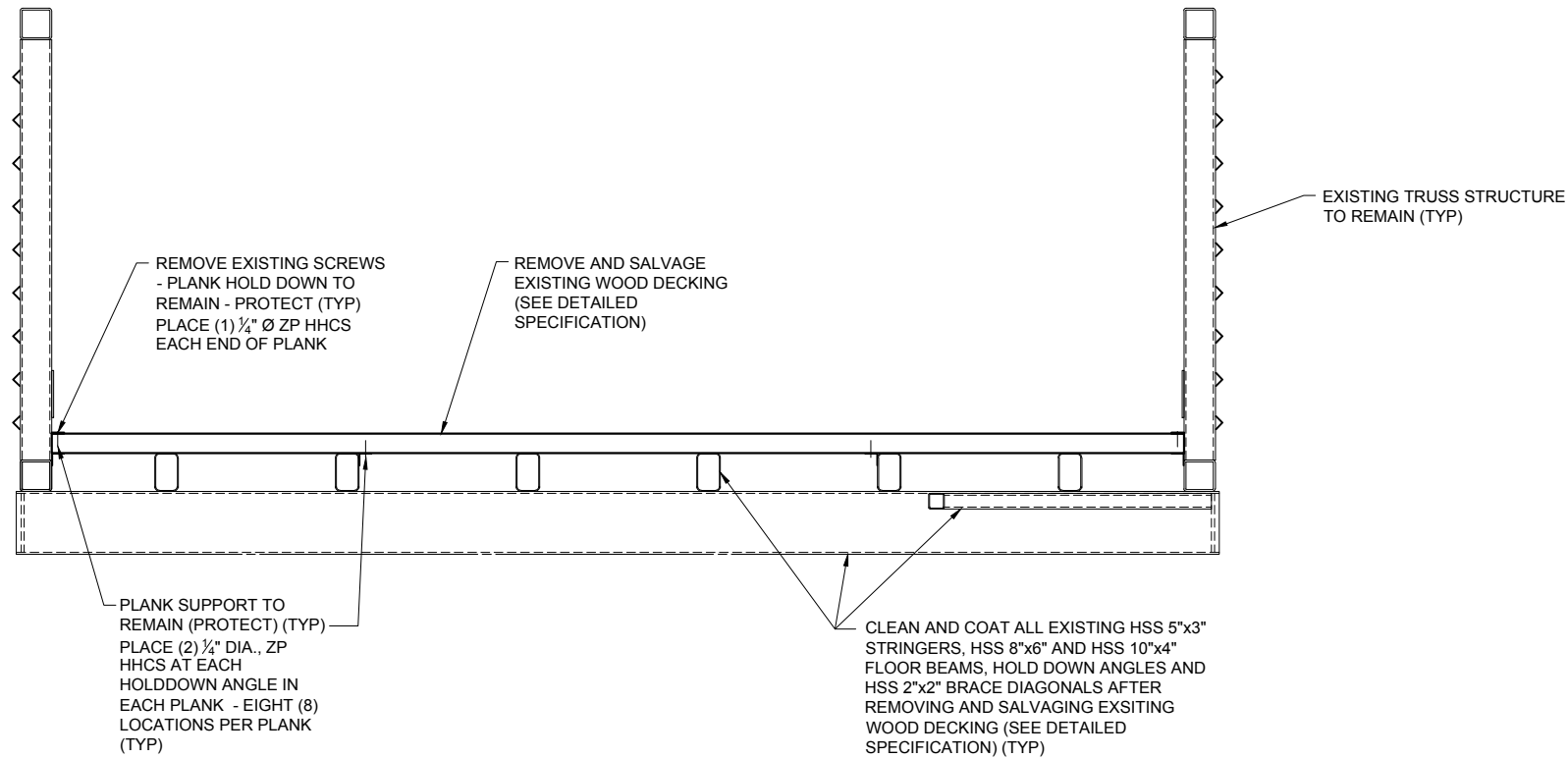
PAY ITEM	UNIT	QUANTITY
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED, FURN	EACH	6
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED, OPER	EACH	6
SIGN, TYPE B, TEMP, PRISMATIC, FURN	SFT	101
SIGN, TYPE B, TEMP, PRISMATIC, OPER	SFT	101
FENCE, PROTECTIVE	FT	200

					THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES	
2019 PARK BRIDGE REPAIRS AND RENOVATIONS					SCALE NONE	
ARGO PARK PEDESTRIAN STRUCTURE GENERAL PLAN OF SITE					DRAWING NO.	
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EXISTING STRUCTURE STRINGER AND FLOOR BEAM FRAMING PLAN

SCALE: 1/8"=1'-0"



1 EXISTING STRUCTURE SECTION

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

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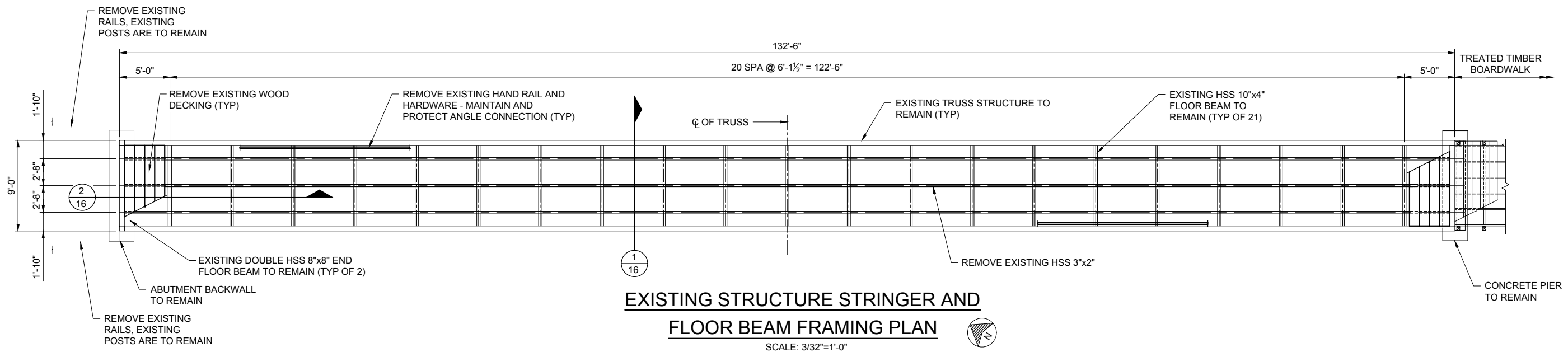
2019 PARK BRIDGE REPAIRS AND RENOVATIONS

ARGO PARK PEDESTRIAN STRUCTURE REMOVAL AND CONSTRUCTION DETAILS

SCALE AS SHOWN

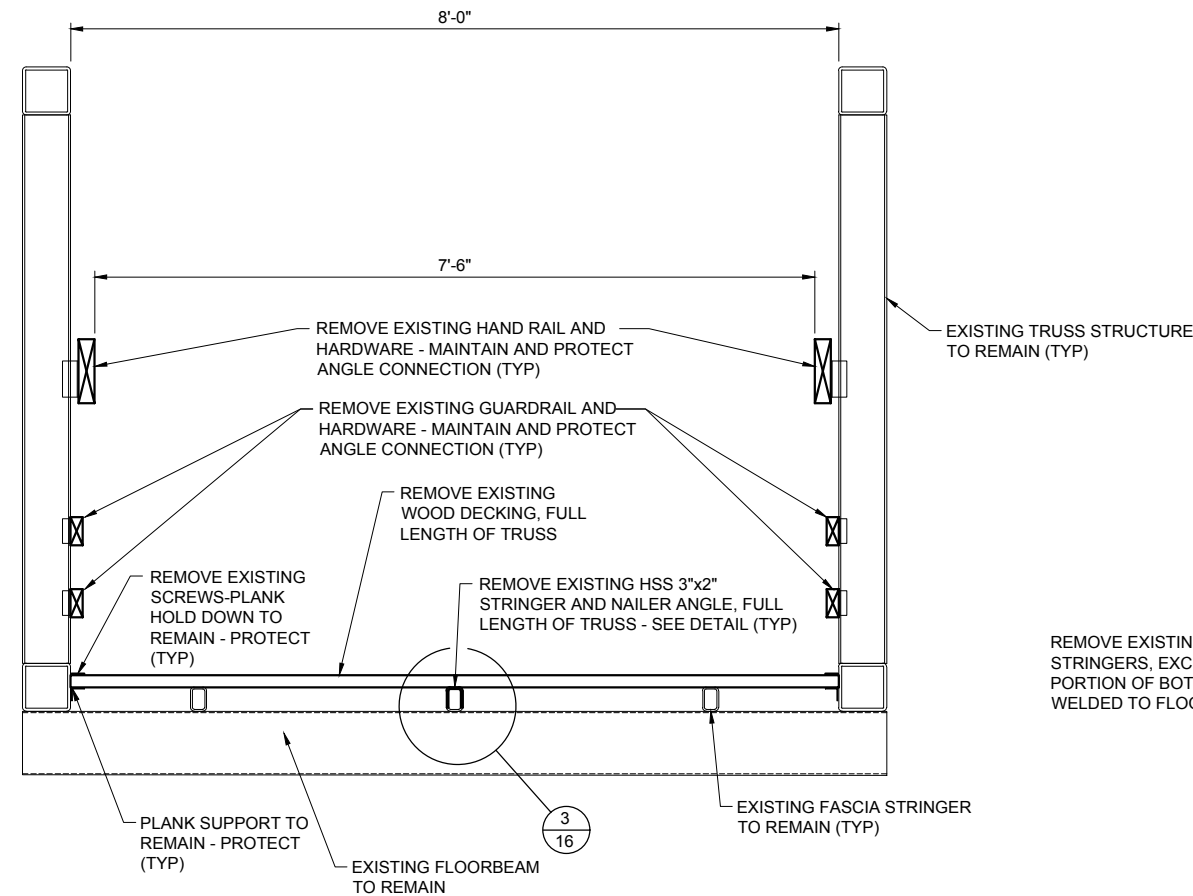
DRAWING NO.

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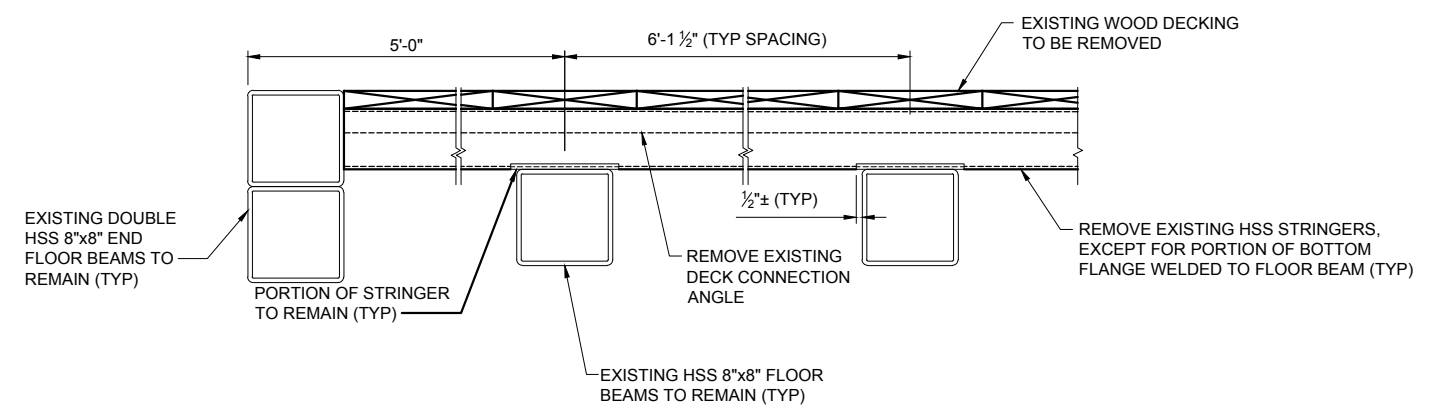
**EXISTING STRUCTURE STRINGER AND
FLOOR BEAM FRAMING PLAN**

SCALE: 3/32"=1'-0"



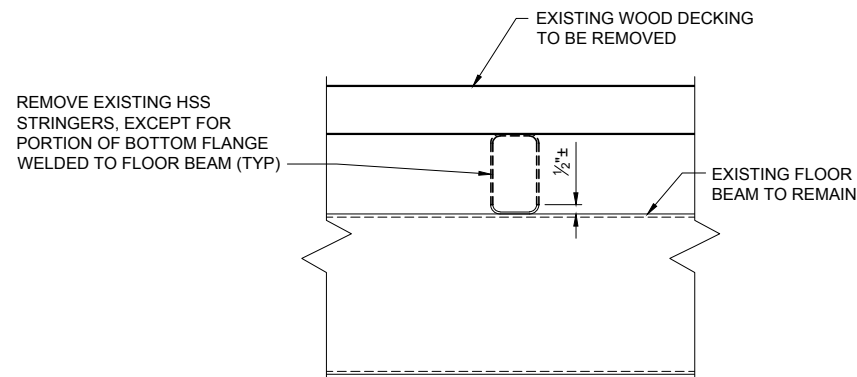
1 EXISTING STRUCTURE SECTION

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



2 PARTIAL STRINGER REMOVAL SECTION

SCALE: 3/4"=1'-0"



3 PARTIAL STRINGER REMOVAL DETAIL

SCALE: 1"=1'-0"



THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES

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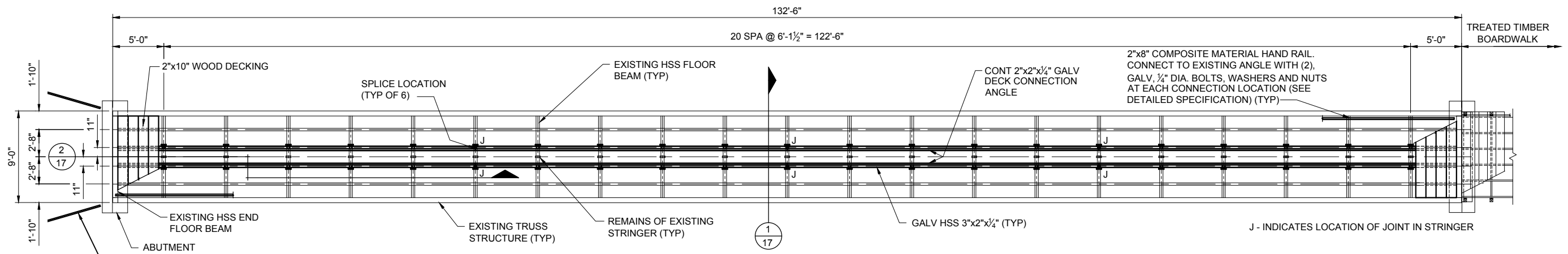
2019 PARK BRIDGE REPAIRS
AND RENOVATIONS

MITCHELL FIELD PEDESTRIAN STRUCTURE
EXISTING TRUSS CONDITIONS AND REMOVALS

SCALE
AS SHOWN

DRAWING NO.

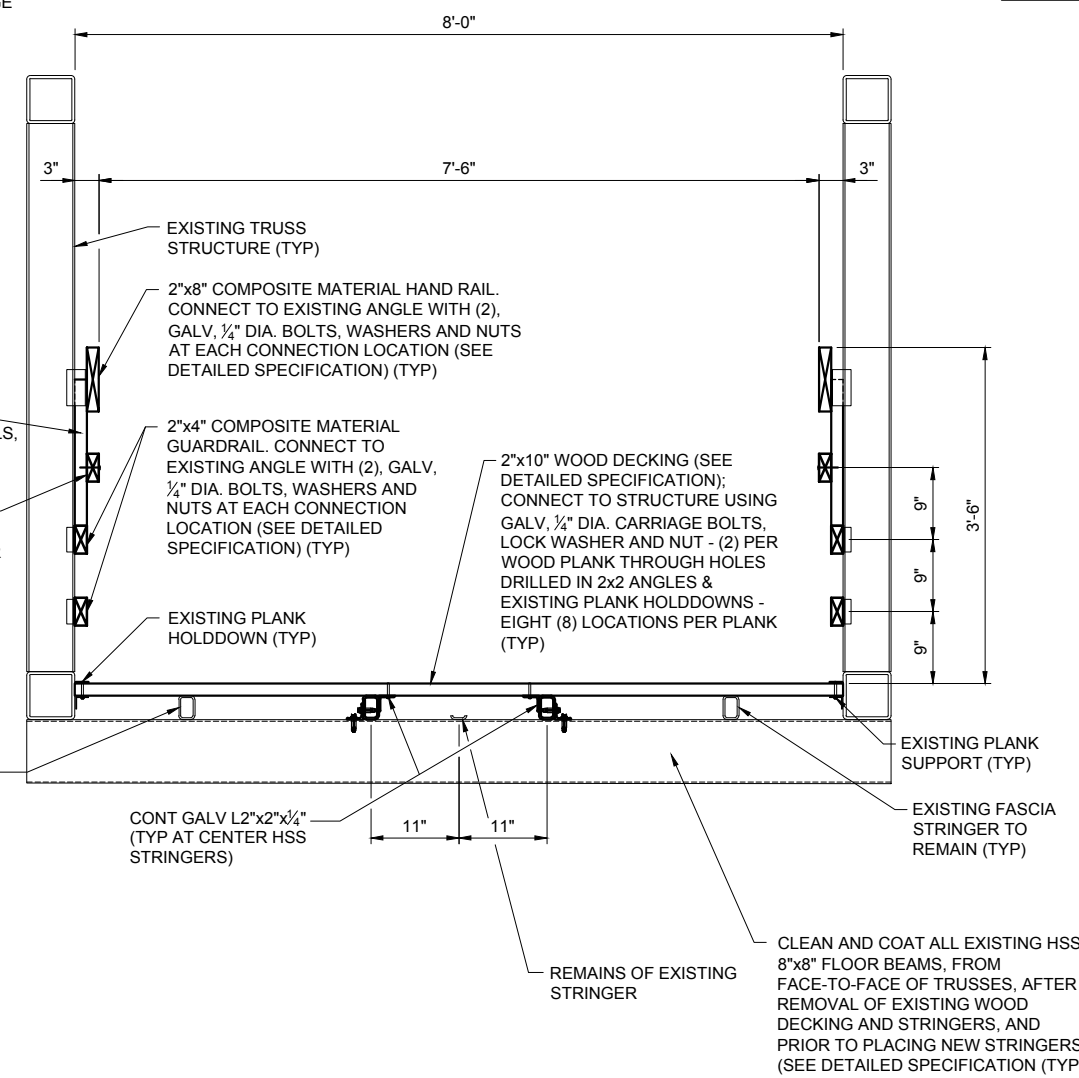
SHEET NO. 18 OF 22



BRIDGE RENOVATION, STRINGER AND FLOOR BEAM FRAMING PLAN

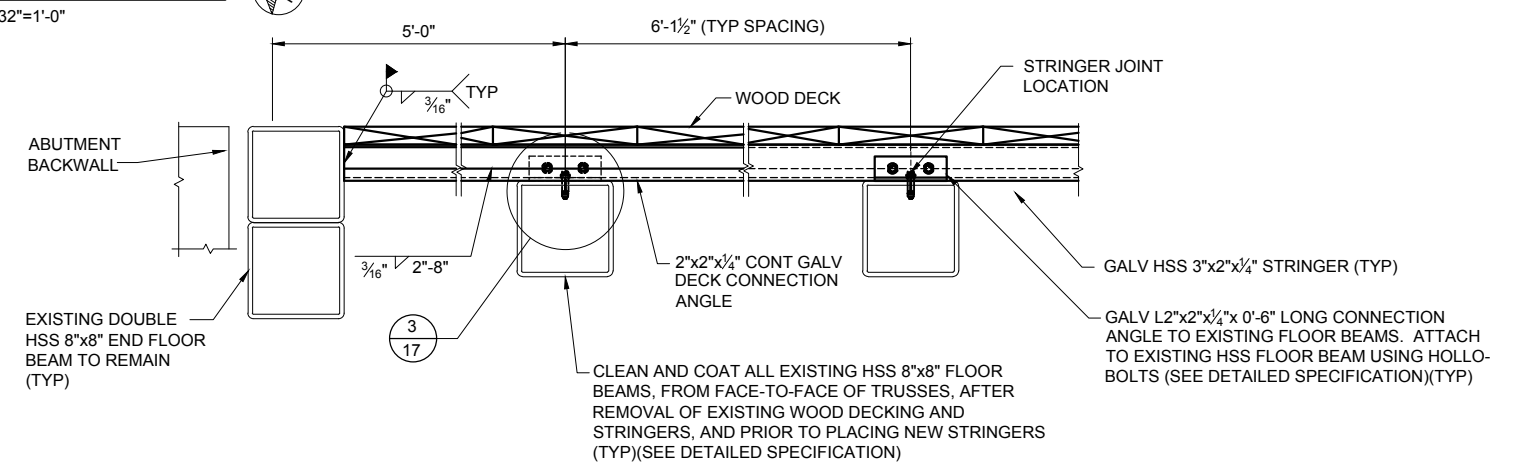
SCALE: 3/32"=1'-0"

(3) 2"x4" & (1) 2"x8" COMPOSITE GUARDRAILS (ATTACH TO EXISTING POSTS WITH 4" LAG BOLTS, COUNTERBORE HEADS) (DIMENSIONS TO MATCH BRIDGE RAILING) (TYP)



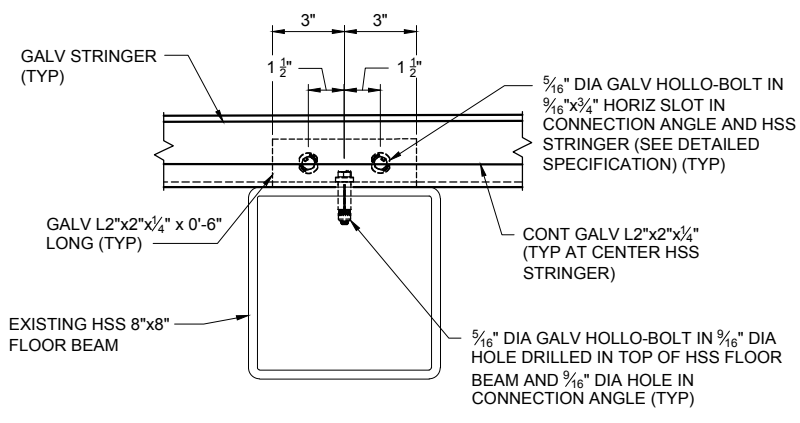
1 BRIDGE RENOVATION SECTION

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



2 PARTIAL STRINGER SECTION

SCALE: 3/4"=1'-0"

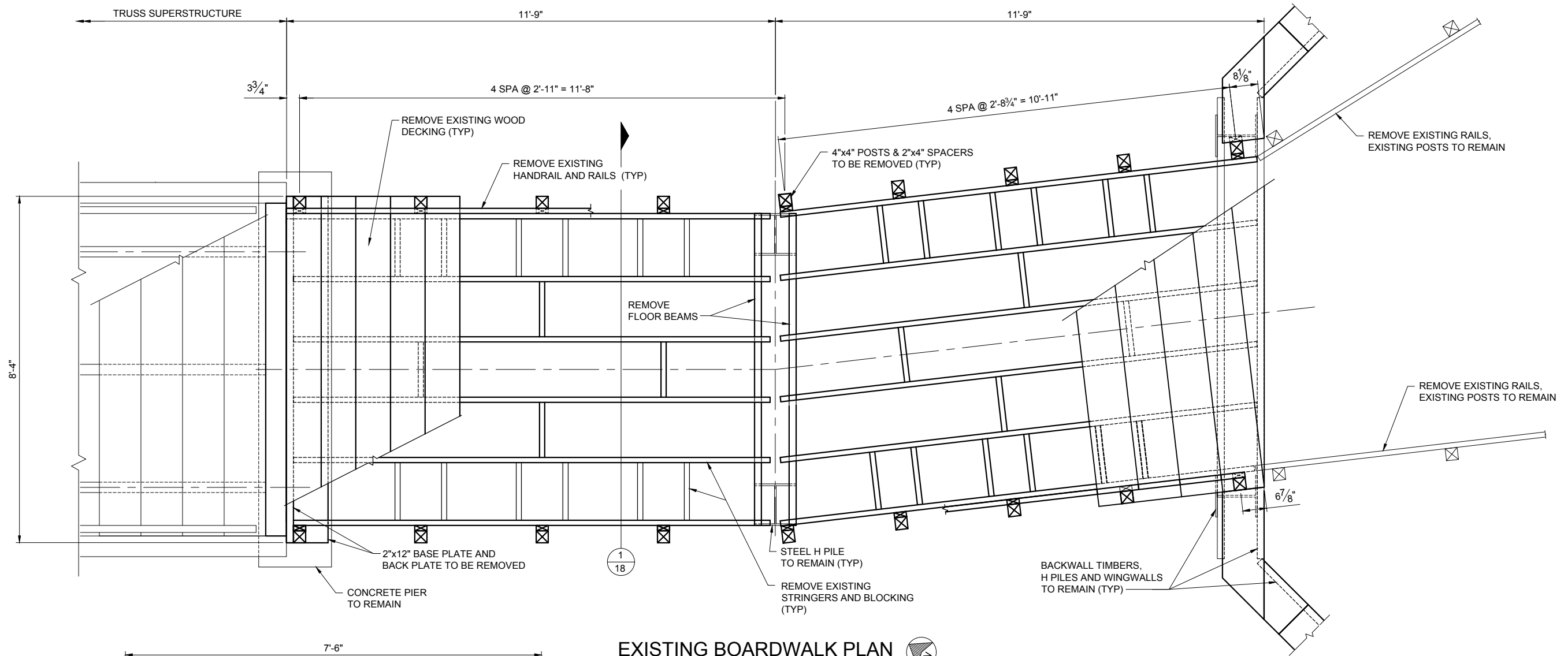


3 STRINGER CONNECTION DETAIL

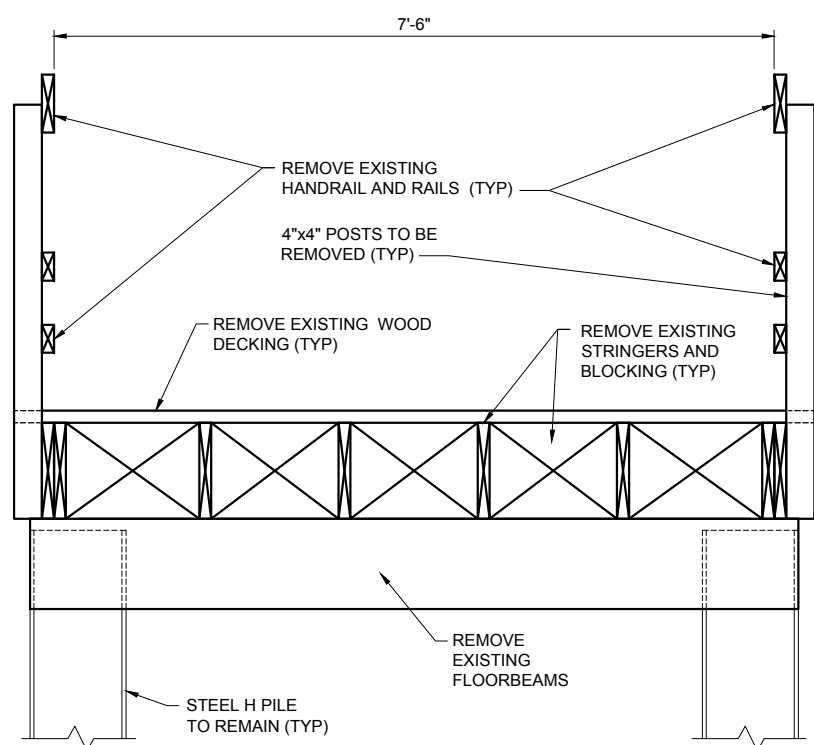
SCALE: 1 1/2"=1'-0"

DLZ				
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY

THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES	
2019 PARK BRIDGE REPAIRS AND RENOVATIONS	SCALE AS SHOWN
MITCHELL FIELD PEDESTRIAN STRUCTURE BRIDGE RENOVATION DETAILS	DRAWING NO.
	SHEET NO. <u>17</u> OF <u>22</u>



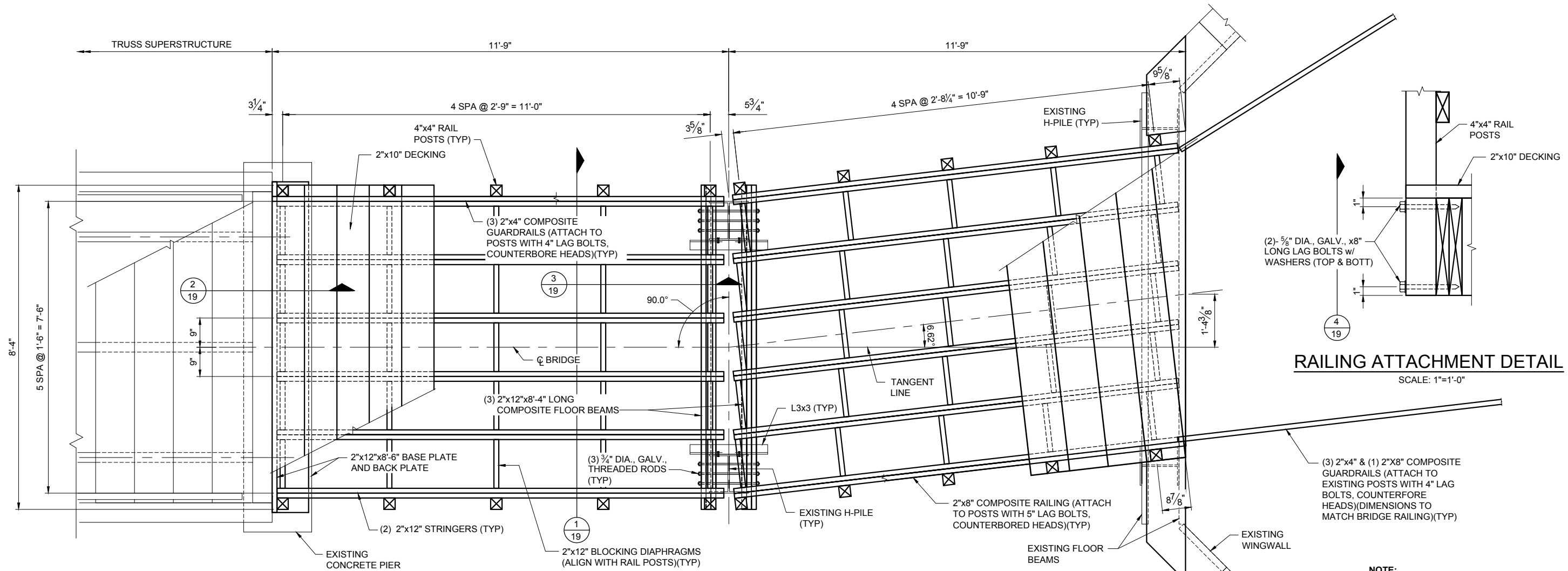
EXISTING BOARDWALK PLAN
SCALE: 3/8"=1'-0"



1
18 **EXISTING STRUCTURE SECTION**
SCALE: 1/2"=1'-0"

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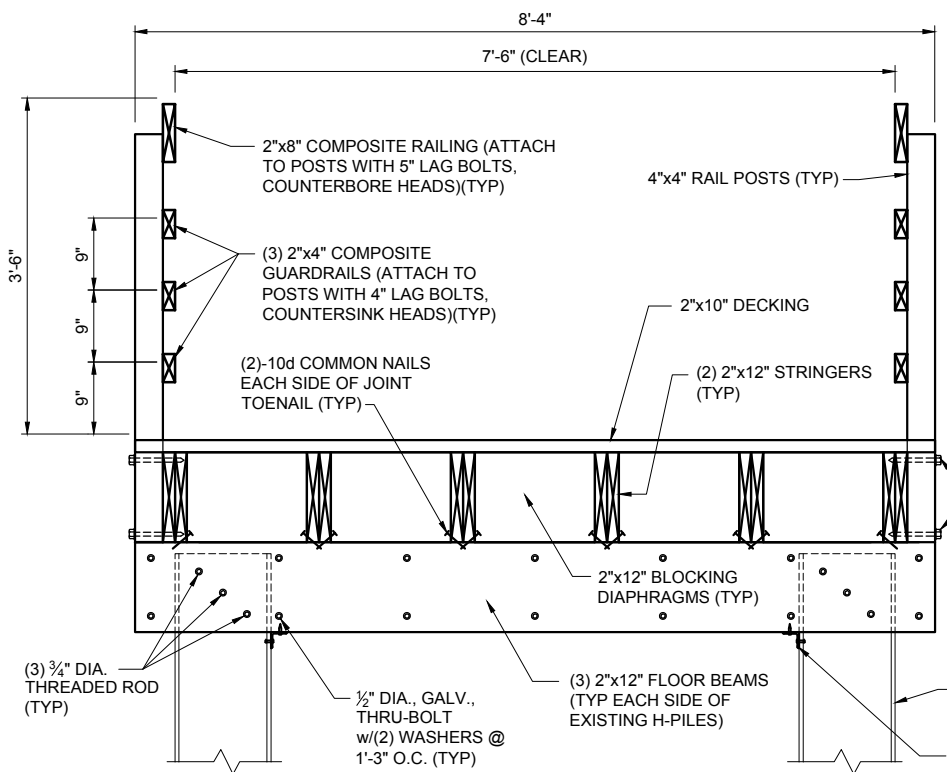
THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES		
2019 PARK BRIDGE REPAIRS AND RENOVATIONS		
MITCHELL FIELD PEDESTRIAN STRUCTURE EXISTING BOARDWALK CONDITIONS AND REMOVALS		
SCALE	AS SHOWN	
DRAWING NO.		
SHEET NO.	18 OF 22	



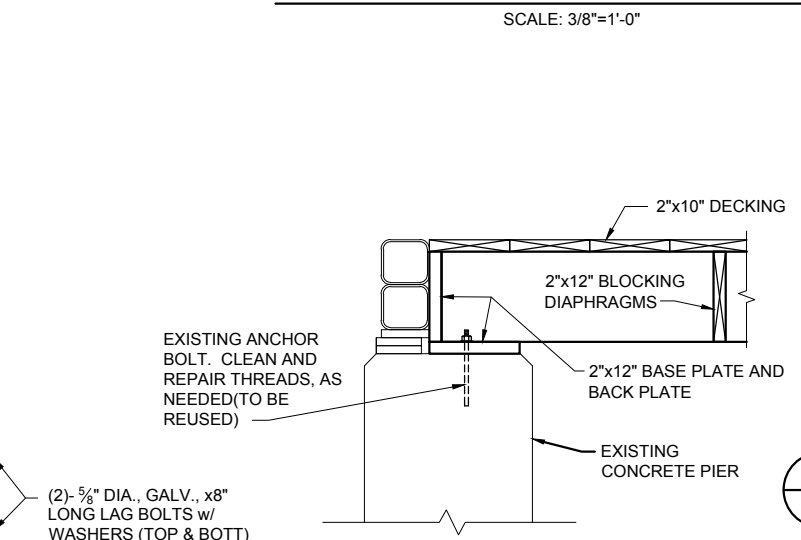
BOARDWALK CONSTRUCTION PLAN
SCALE: 3/8"=1'-0"

RAILING ATTACHMENT DETAIL
SCALE: 1"=1'-0"

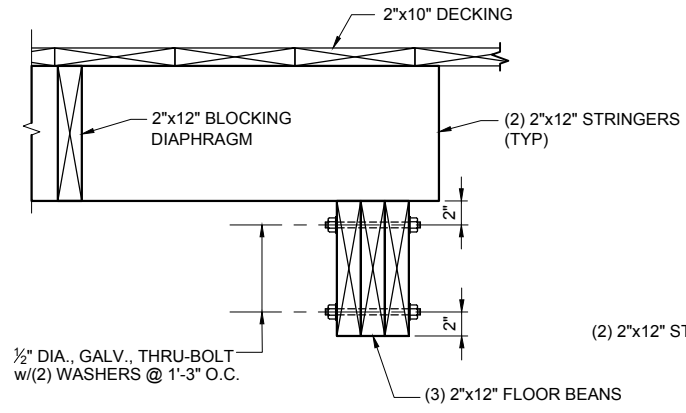
NOTE:
PRE-DRILL ALL LAG BOLT HOLES WITH APPROPRIATE BIT SIZE TO PREVENT UNNECESSARY SPLITTING OR CHECKING OF THE WOOD.



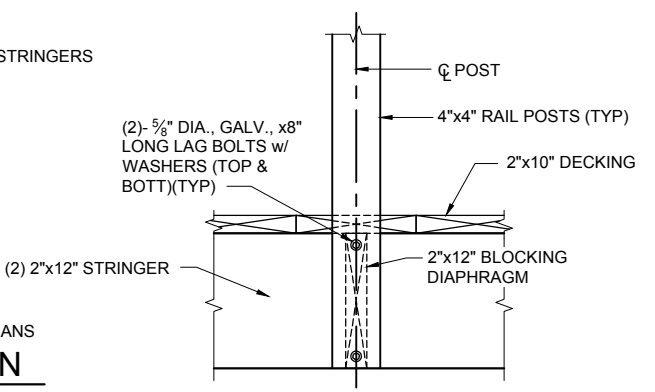
1 BOARDWALK CONSTRUCTION SECTION
SCALE: 1/2"=1'-0"



2 BASE PLATE AND BACK PLATE SECTION
SCALE: 1/2"=1'-0"



3 COMPOSITE FLOOR BEAM SECTION
SCALE: 3/4"=1'-0"



4 RAILING ATTACHMENT SECTION
SCALE: 3/4"=1'-0"

L3"x3"x1/4" x 2'-0" UNDER FLOOR BEAMS. ATTACH TO EXISTING PILE USING (3) 3/4" DIA., GALV. BOLTS IN DRILLED HOLES. ATTACH TO FLOOR BEAM USING 1/2" DIA. x 4", GALV. LAG BOLTS (TYP. OF TWO (2)). SHIM AS NEEDED TO PROVIDE FULL BEARING CONTACT.

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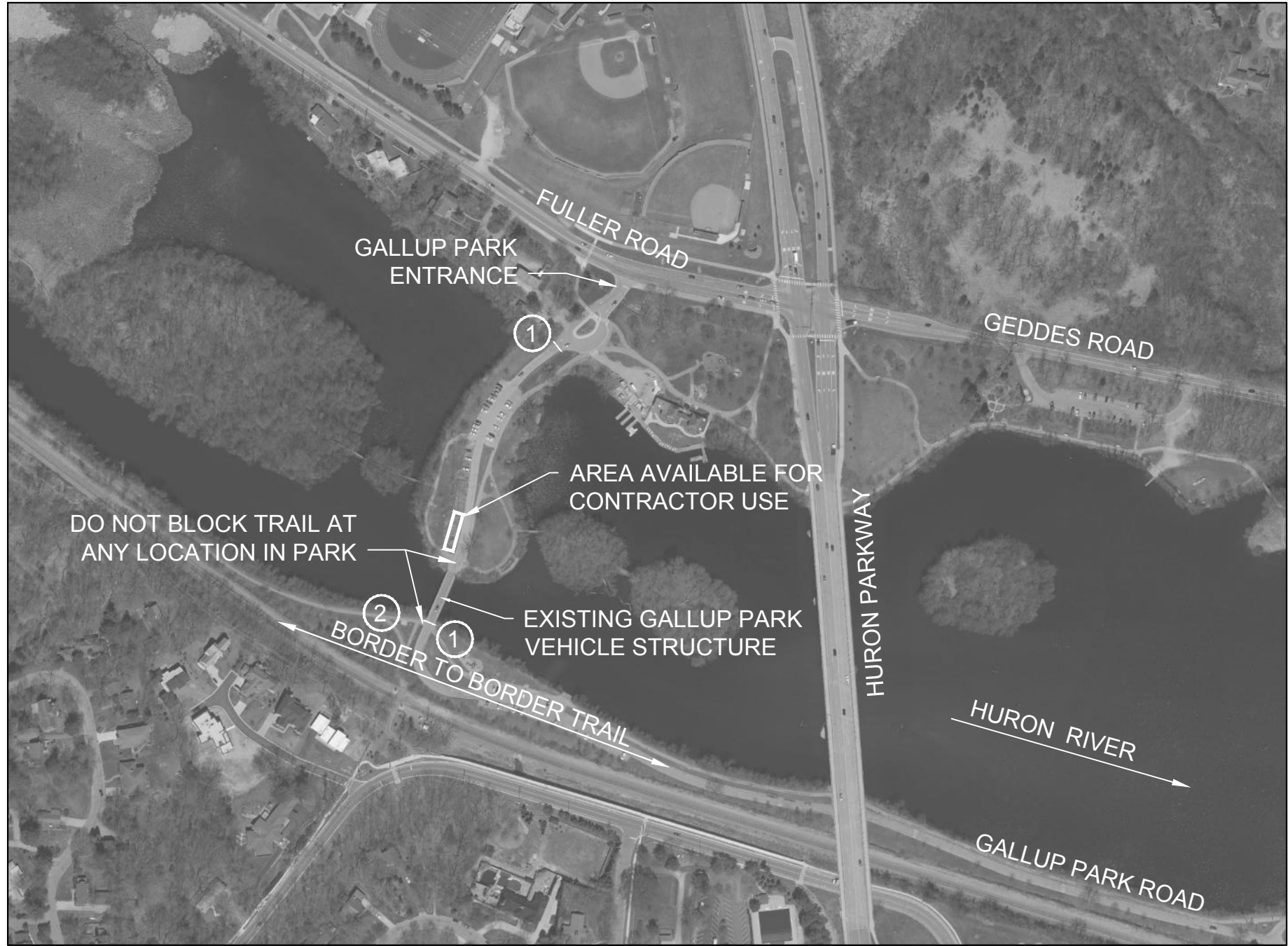
2019 PARK BRIDGE REPAIRS AND RENOVATIONS

MITCHELL FIELD PEDESTRIAN STRUCTURE BOARDWALK RENOVATION DETAILS

SCALE AS SHOWN

DRAWING NO. _____

SHEET NO. **19** OF **22**



PLAN OF GALLUP PARK STRUCTURE
NO SCALE

NOTES:

1. THE STRUCTURE IS LOCATED IN GALLUP PARK, WHICH IS SOUTHWEST OF THE INTERSECTION OF FULLER/GEDDES ROAD AND HURON PARKWAY. THE ENTRANCE TO THE PARK IS LOCATED ON FULLER ROAD, APPROXIMATELY 0.08 MILES WEST OF HURON PARKWAY. THE STRUCTURE IS LOCATED APPROXIMATELY 0.17 MILES SOUTH OF FULLER ROAD.
2. THE EXISTING STRUCTURE IS A THREE-SPAN GLUE-LAMINATED STRUCTURE, 123'-0" IN LENGTH, WITH TIMBER PILE PIERS AND GLUE-LAMINATED ABUTMENTS. THE BRIDGE IS POSTED FOR 33 TONS. THE CLEAR ROADWAY WIDTH IS 12'-0" AND THE CLEAR SIDEWALK WIDTHS ARE 5'-0".
3. THE WORK CONSISTS OF: REMOVAL OF THE EXISTING CONNECTION BRACKETS BETWEEN THE DECK PANELS AND SIDEWALK PANELS AND THE FLOOR BEAMS AND SPREADER BEAMS; PLACEMENT OF NEW GALVANIZED CONNECTION BRACKETS AT SIMILAR LOCATIONS; CLOSING THE STRUCTURE TO VEHICLE TRAFFIC; AND, PROVIDING A SAFE PASSAGE AREA FOR RIVER USERS AT LEAST 20-FEET IN WIDTH BELOW THE STRUCTURE AT ALL TIMES DURING CONSTRUCTION. PEDESTRIAN PASSAGE ACROSS THE STRUCTURE SHALL BE MAINTAINED ON AT LEAST ONE SIDEWALK AT ALL TIMES. THE CONTRACTOR SHALL APPLY SUFFICIENT DOWNWARD FORCE ON THE DECK AND SIDEWALK PANELS DURING PLACEMENT OF THE NEW CONNECTION BRACKETS TO PROVIDE FULL CONTACT BETWEEN THE DECK PANELS AND THE SPREADER BEAMS AND FLOOR BEAMS.
4. THE CONTRACTOR MAY USE AN AREA OF THE GRAVEL SURFACE PARKING LOT IMMEDIATELY NORTHWEST OF THE NORTH END OF THE STRUCTURE FOR EQUIPMENT, MATERIAL STORAGE, AND EMPLOYEE PARKING. THE AREA USED SHALL NOT EXCEED 60 FEET IN LENGTH ALONG THE PAVED ROADWAY BY APPROXIMATELY 25 FEET. THE USE OF ANY TRAILS OR GRASS AREAS FOR THESE PURPOSES IS STRICTLY FORBIDDEN. THE CONTRACTOR SHALL NOT BLOCK THE USE OF ANY TRAIL WITHIN THE PARK, EXCEPT FOR ONE SIDEWALK AT A TIME ON THE STRUCTURE.
5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED DIMENSIONS PRIOR TO FABRICATION AND INSTALLATION OF PROPOSED WORK.
6. 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.

LEGEND TRAFFIC CONTROL NOTES:

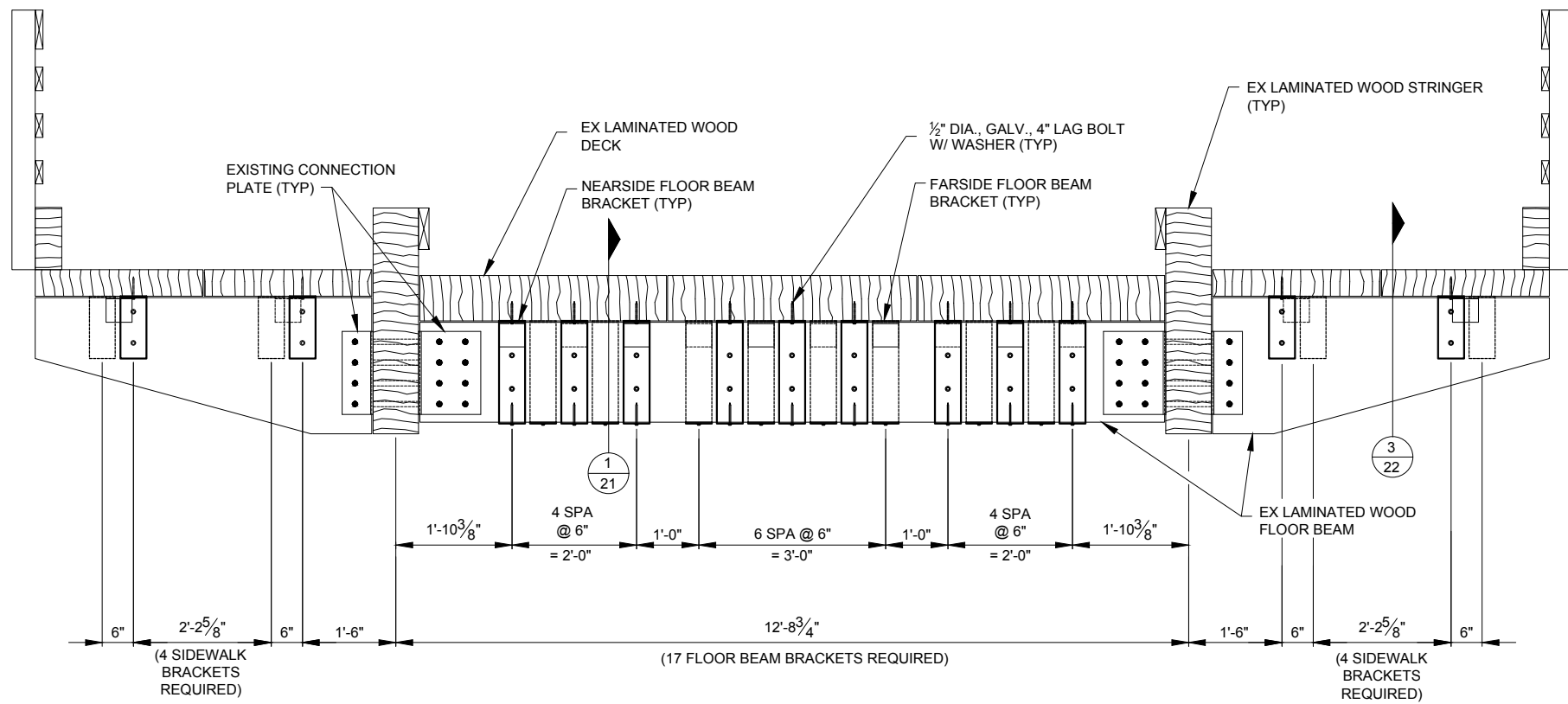
- ① PLACE THREE (3) TYPE III BARRICADES ON GALLUP PARK ROAD WITH ONE (1) "BRIDGE CLOSED" (R11-2) SIGN AND ONE (1) "TRAIL OPEN" (SF-3) SIGN ON SEPARATE SUPPORTS, AT EACH END OF THE STRUCTURE, AS NOTED ON PLAN. PLACE PROTECTIVE FENCING AROUND PROJECT SITE. ONE SIDEWALK ACROSS STRUCTURE SHALL REMAIN OPEN AT ALL TIMES IN ACCORDANCE WITH THE DETAILED SPECIFICATION FOR MAINTENANCE OF TRAFFIC AND CONSTRUCTION SEQUENCING.
- ② PLACE "BRIDGE CLOSED" (R11-2) SIGN AND "TRAIL CLOSED - 1 MILE AHEAD" (SF-1) SIGN WHEN THE STRUCTURE AT MITCHELL FIELD IS CLOSED FOR CONSTRUCTION.

ESTIMATED QUANTITIES OF TRAFFIC CONTROL DEVICES FOR GALLUP PARK:

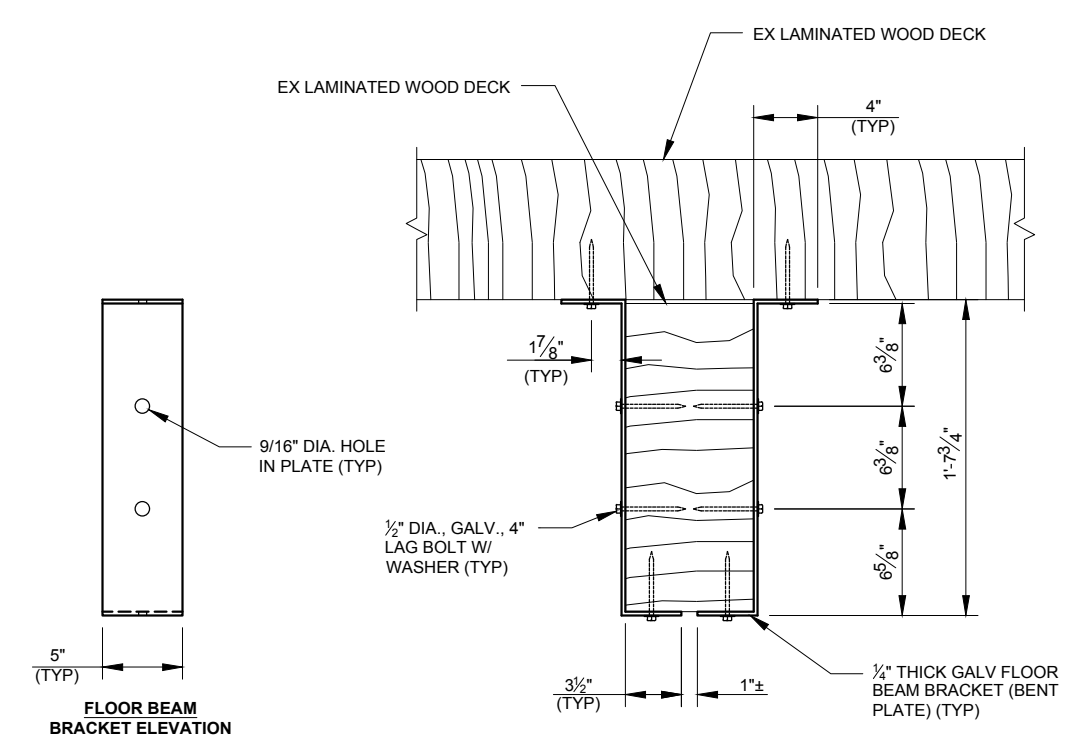
PAY ITEM	UNIT	QUANTITY
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED, FURN	EACH	6
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED, OPER	EACH	6
SIGN, TYPE B, TEMP, PRISMATIC, FURN	SFT	30
SIGN, TYPE B, TEMP, PRISMATIC, OPER	SFT	30
SIGN, TYPE B, TEMP, PRISMATIC, SPECIAL, FURN	SFT	24
SIGN, TYPE B, TEMP, PRISMATIC, SPECIAL, OPER	SFT	24
FENCE, PROTECTIVE	FT	400



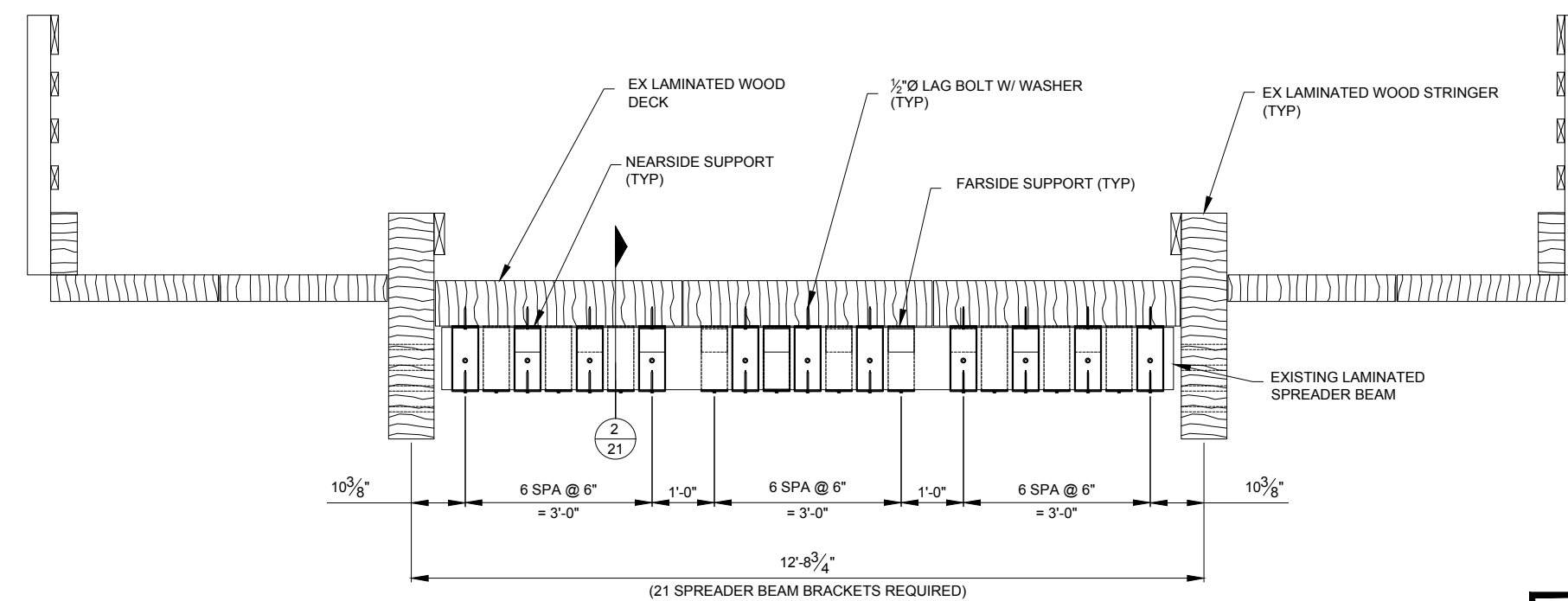
	THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES			
	2019 PARK BRIDGE REPAIRS AND RENOVATIONS GALLUP PARK VEHICLE STRUCTURE GENERAL PLAN OF SITE			
REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY
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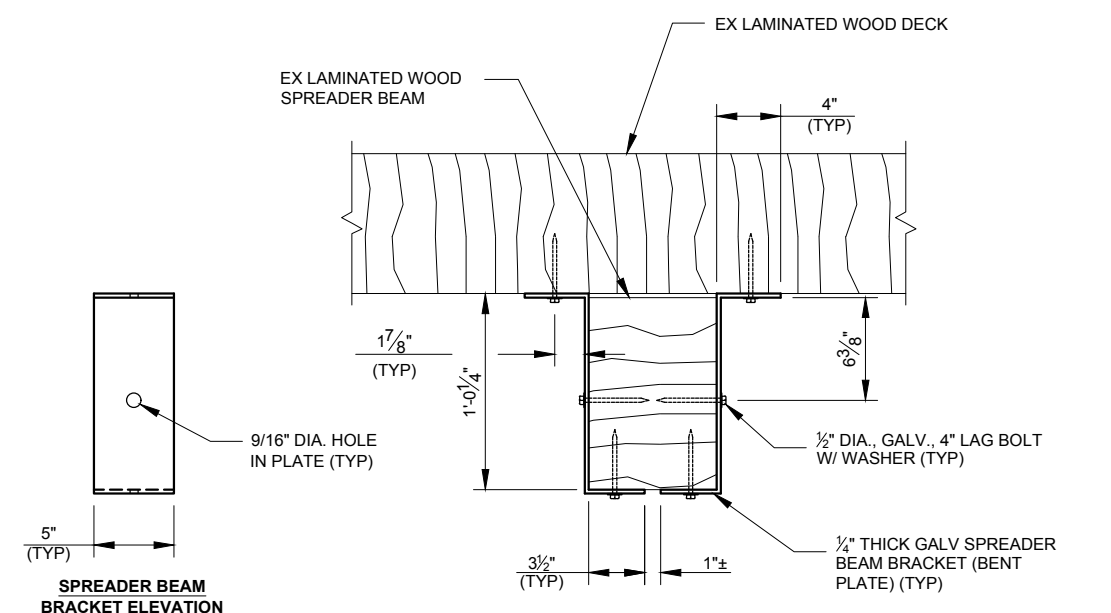
DECK SECTION AT EXISTING FLOOR BEAM SUPPORT
SCALE: 3/8" = 1'-0"



1 FLOOR BEAM SECTION
SCALE: 1"=1'-0"

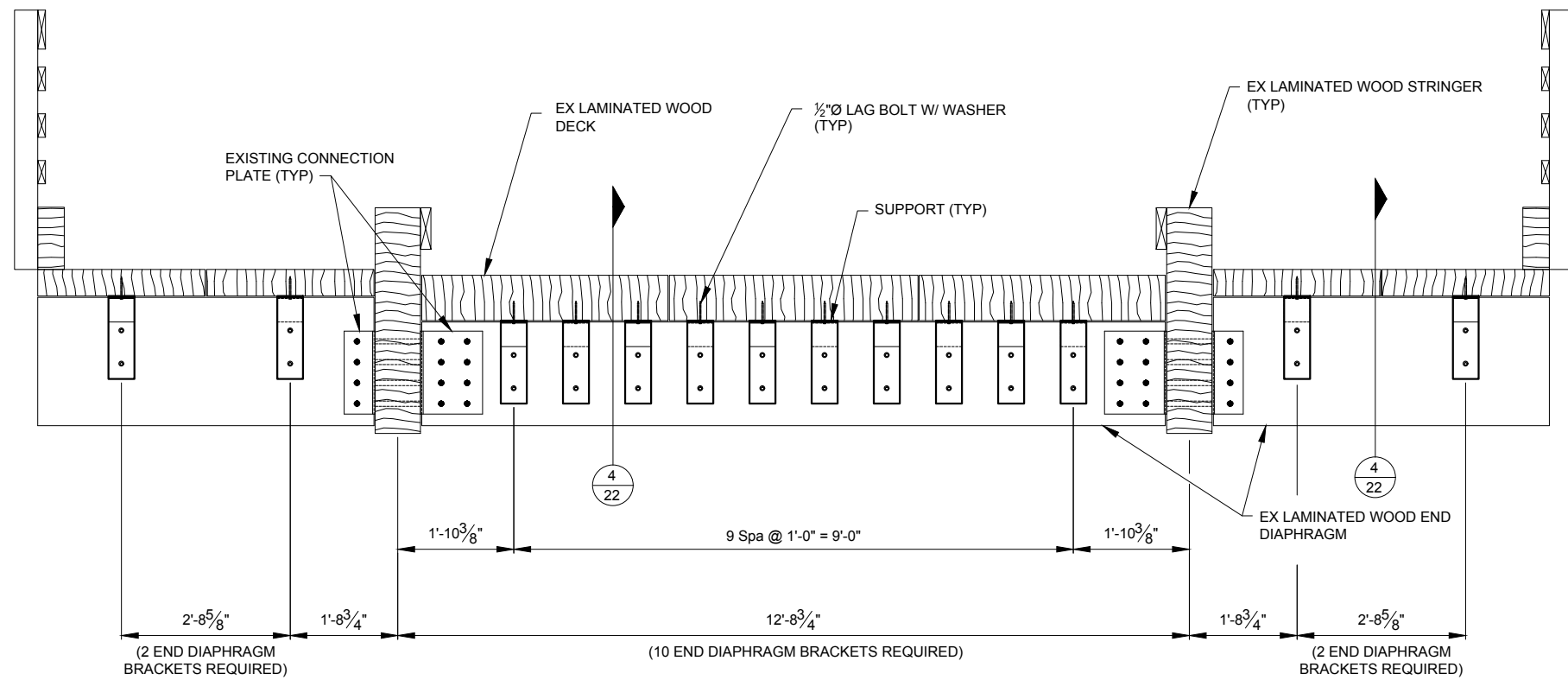


DECK SECTION AT EXISTING SPREADER BEAM SUPPORT
SCALE: 3/8" = 1'-0"

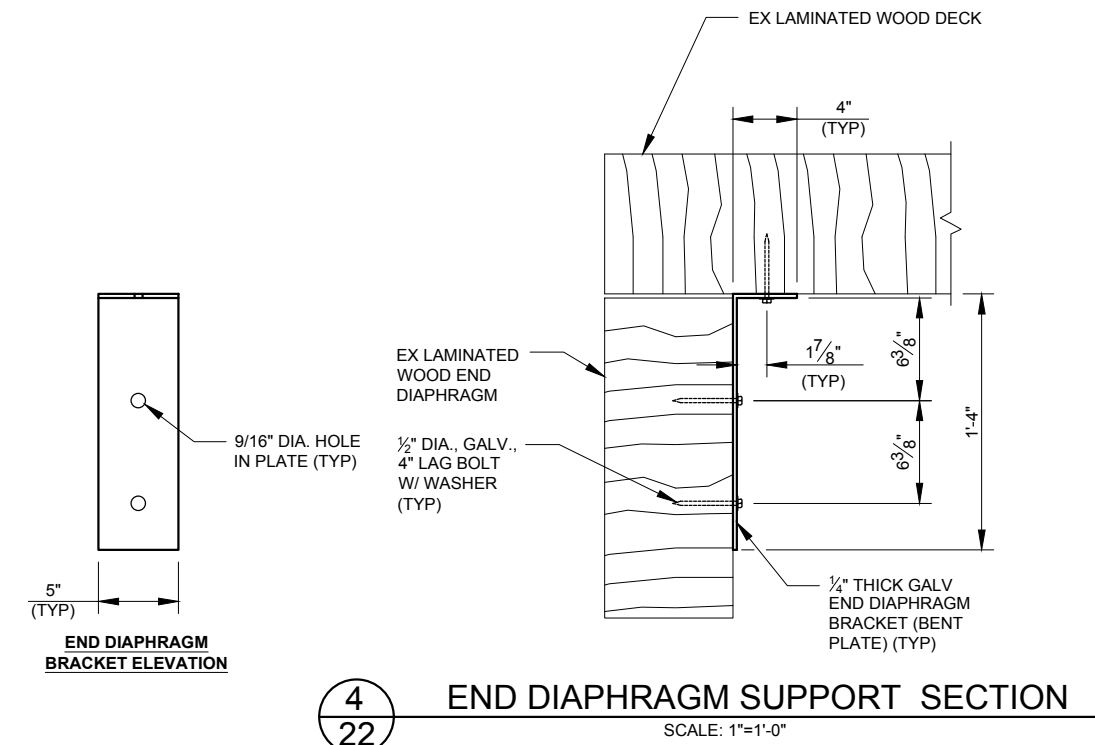


2 SPREADER BEAM SECTION
SCALE: 1"=1'-0"

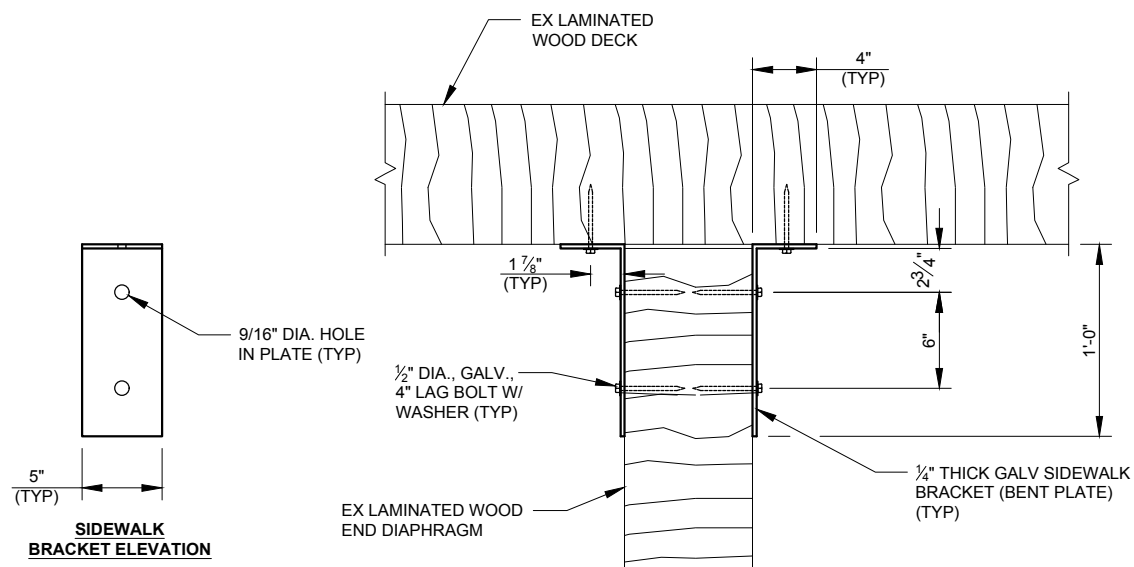
					THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES	
					2019 PARK BRIDGE REPAIRS AND RENOVATIONS	
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DECK SECTION AT EXISTING END DIAPHRAGM SUPPORT
SCALE: 3/8" = 1'-0"



4
22 **END DIAPHRAGM SUPPORT SECTION**
SCALE: 1"=1'-0"



3
21 **SIDEWALK BEAM SUPPORT SECTION**
SCALE: 1"=1'-0"

					THE CITY OF ANN ARBOR - PARKS AND RECREATION SERVICES												
							2019 PARK BRIDGE REPAIRS AND RENOVATIONS		SCALE AS SHOWN								
<table border="1"> <tr> <td>REV. NO.</td> <td>DESCRIPTION</td> <td>DATE</td> <td>DR. BY</td> <td>CH. BY</td> </tr> <tr> <td></td> <td>ORIGINAL ISSUE</td> <td>10/01/19</td> <td>DAF</td> <td>CLH</td> </tr> </table>					REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY		ORIGINAL ISSUE	10/01/19	DAF	CLH	GALLUP PARK VEHICLE STRUCTURE SUPERSTRUCTURE DETAILS		DRAWING NO.
					REV. NO.	DESCRIPTION	DATE	DR. BY	CH. BY								
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