City of Madison Landmarks Commission — APPLICATION

City of Madison Planning Division, 126 S Hamilton Street, P.O. Box 2985, Madison, WI 53701-2985

1. LOCATION

Project Address: Vilas (Henry) Park, 1602 Vilas Drive **Aldermanic District:** 13

2. PROJECT

Project Title / Description: Vilas Park- Lagoon Bridge Replacements

This is an application for: *(check all that apply)*

- ☒ **Alteration / Addition to a Designated Landmark**
- ☐ **Land Division/Combination of Designated Landmark site**
- ☐ **Alteration / Addition to a building adjacent to a Designated Landmark**
- ☐ **Alteration / Addition to a building in a Local Historic District** *(specify)*:
  - ☐ Mansion Hill ☐ Third Lake Ridge ☐ First Settlement
  - ☐ University Heights ☐ Marquette Bungalows
- ☐ **Land Division/Combination in a Local Historic District** *(specify)*:
  - ☐ Mansion Hill ☐ Third Lake Ridge ☐ First Settlement
  - ☐ University Heights ☐ Marquette Bungalows
- ☐ **New Construction in a Local Historic District** *(specify)*:
  - ☐ Mansion Hill ☐ Third Lake Ridge ☐ First Settlement
  - ☐ University Heights ☐ Marquette Bungalows
- ☐ **Demolition**
- ☐ **Variance from the Historic Preservation Ordinance (Chapter 41)**
- ☐ **Referral from Common Council, Plan Commission, or other referral**
- ☐ **Landmark Nomination/Rescission or Historic District Nomination/Amendment**
  (*Please contact the Historic Preservation Planner for specific submission requirements.*)
- ☐ **Other** *(specify)*: _____

PLANNING DIVISION USE ONLY

Legistar #

3. APPLICANT

Applicant's Name: Mike Sturm **Company:** City of Madison Parks Division
Address: 210 Martin Luther King, Jr. Blvd, Room 104
Telephone: 608-267-4921 **E-mail:** msturm@cityofmadison.com

Property Owner *(if not applicant)*: City of Madison Parks Division
Address: 210 Martin Luther King, Jr. Blvd, Room 104

Property Owner's Signature: _____ **Date:** 09/05/17

NOTICE REGARDING LOBBYING ORDINANCE: If you are seeking approval of a development that has over 40,000 square feet of non-residential space, or a residential development of over 10 dwelling units, or if you are seeking assistance from the City with a value of $10,000 (including grants, loans, TIF or similar assistance), then you likely are subject to Madison's lobbying ordinance (Sec. 2.40, MGO). You are required to register and report your lobbying. Please consult the City Clerk's Office for more information. Failure to comply with the lobbying ordinance may result in fines.

4. APPLICATION SUBMISSION REQUIREMENTS *(see checklist on reverse)*

All applications must be filed by 4:30 p.m. on the submission date with the Preservation Planner, the Department of Planning & Community & Economic Development, Planning Division, located at 126 S Hamilton Street. Applications submitted after the submittal date or incomplete applications will be postponed to the next scheduled filing time.

APPLICATION SUBMISSION REQUIREMENTS CHECKLIST:

In order to be considered complete, every application submission shall include at least the following information unless otherwise waived by the Preservation Planner.

☒ Landmarks Commission Application w/signature of the property owner (1 copy only).

☒ Twelve (12) collated paper copies 11" x 17" or smaller (via mail or drop-off) of submission materials (see below).

☒ Electronic files (via email) of submission materials (see below).

☒ Narrative Description/Letter of Intent addressed to the Landmarks Commission, describing the location of the property and the scope of the proposed project.

☒ Architectural drawings reduced to 11" x 17" or smaller pages which may include:

- ☒ Dimensioned site plans showing siting of structures, grading, landscaping, pedestrian and vehicular access, lighting, signage, and other features;
- ☒ Elevations of all sides showing exterior features and finishes, subsurface construction, floor and roof;

n/a☐ Floor Plan views of levels and roof;

n/a☐ For proposals of more than two (2) commercial or residential or combination thereof units, a minimum of two (2) accurate street-view normal perspectives shown from a viewpoint of no more than five (5) feet above existing grade.

☒ Any other information requested by the Preservation Planner to convey the aspects of the project which may include:

- ☒ Photographs of existing conditions;
- ☒ Photographs of existing context;
- ☒ Manufacturer's product information showing dimensions and materials;
- ☐ Other bridge perspectives

CONTACT THE PRESERVATION PLANNER:

Please contact the Preservation Planner with any questions.

Amy Scanlon, Registered Architect
City of Madison Planning Division
P.O. Box 2985 (mailing address)
Madison, WI 53701-2985
ascanlon@cityofmadison.com
608 266 6552

Madison Parks Division

210 Martin Luther King, Jr. Blvd., Room 104
Madison, WI 53703
608-266-4711 • cityofmadison.com/parks

play MADISON PARKS

Amy Scanlon, Registered Architect
City of Madison Planning Division
P.O. Box 2985
Madison, WI 53701-2985

September 5, 2017

Dear Amy,

The Vilas Park – Lagoon Bridges project includes the removal and replacement of two existing pedestrian bridges located near center of the park at the Vilas lagoon. Both bridges are scheduled for replacement in 2018 due to their deteriorating condition.

The bridges were originally installed in the mid 1970's and are part of the park's main north-south path connection. The path provides access between the athletic fields north of the lagoon to the park shelter and beach area further south. The bridges have glulam beam support structures with timber decking and handrails with an average walkway width of less than 7 ft. Their width limits emergency and maintenance vehicle access through the park and to the island. It also creates use conflicts between pedestrians and bicyclists at both locations.

The proposed replacement bridges have steel truss construction to meet long-term maintenance and load rating requirements. The proposed bridges will be 12 ft. wide with naturally weathering steel trusses and concrete deck surfaces. The new concrete abutments will have existing limestone boulders placed around their perimeter to restore the overall appearance of both bridge sites. All disturbed areas will be restored with native vegetation to complement the existing wildlife habitat at the lagoon.

The attached plans include images of the existing bridges that illustrate their current condition. The plans also include elevations, plans and perspectives of the proposed bridge improvements for review.

I look forward to discussing the project with Landmarks Commission members.

Regards,

Mike Sturm
Project Manager,
City of Madison Parks Division

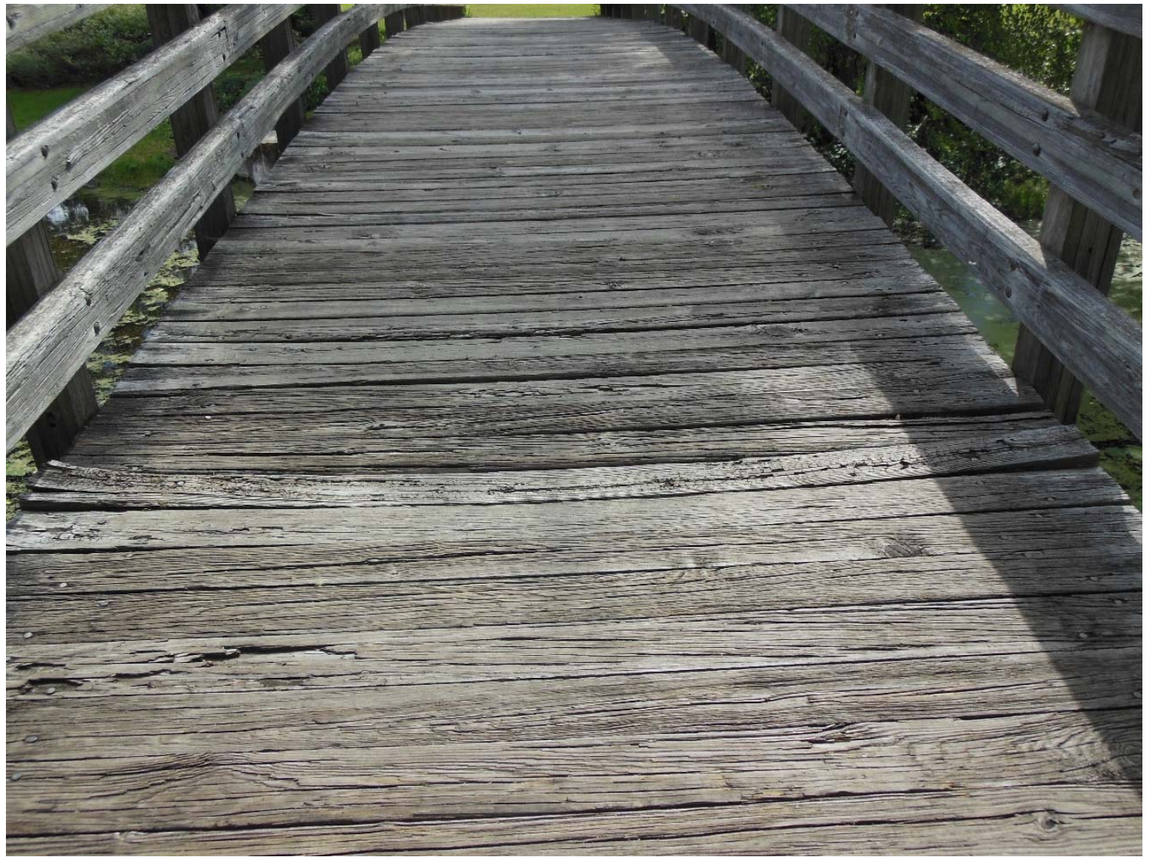
Vilas Park – Lagoon Bridges Replacement Project

Landmarks Commission Submittal 09/05/2017

Project Location

North Bridge – Existing Conditions

North Bridge – Existing Conditions

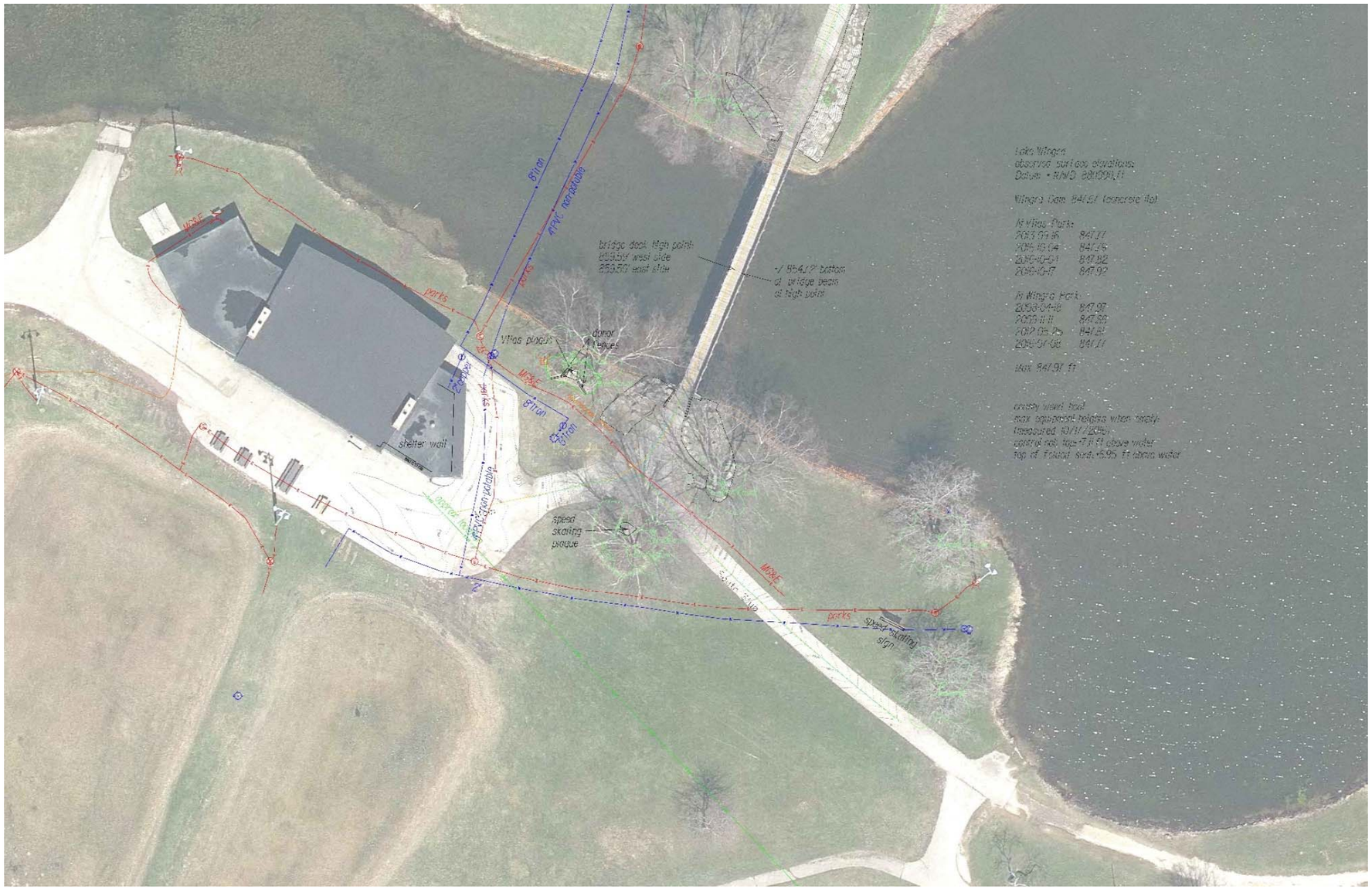


North Bridge – Existing Conditions

North Bridge – Existing Conditions

North Bridge – Existing Conditions

South Bridge – Existing Conditions



South Bridge – Existing Conditions

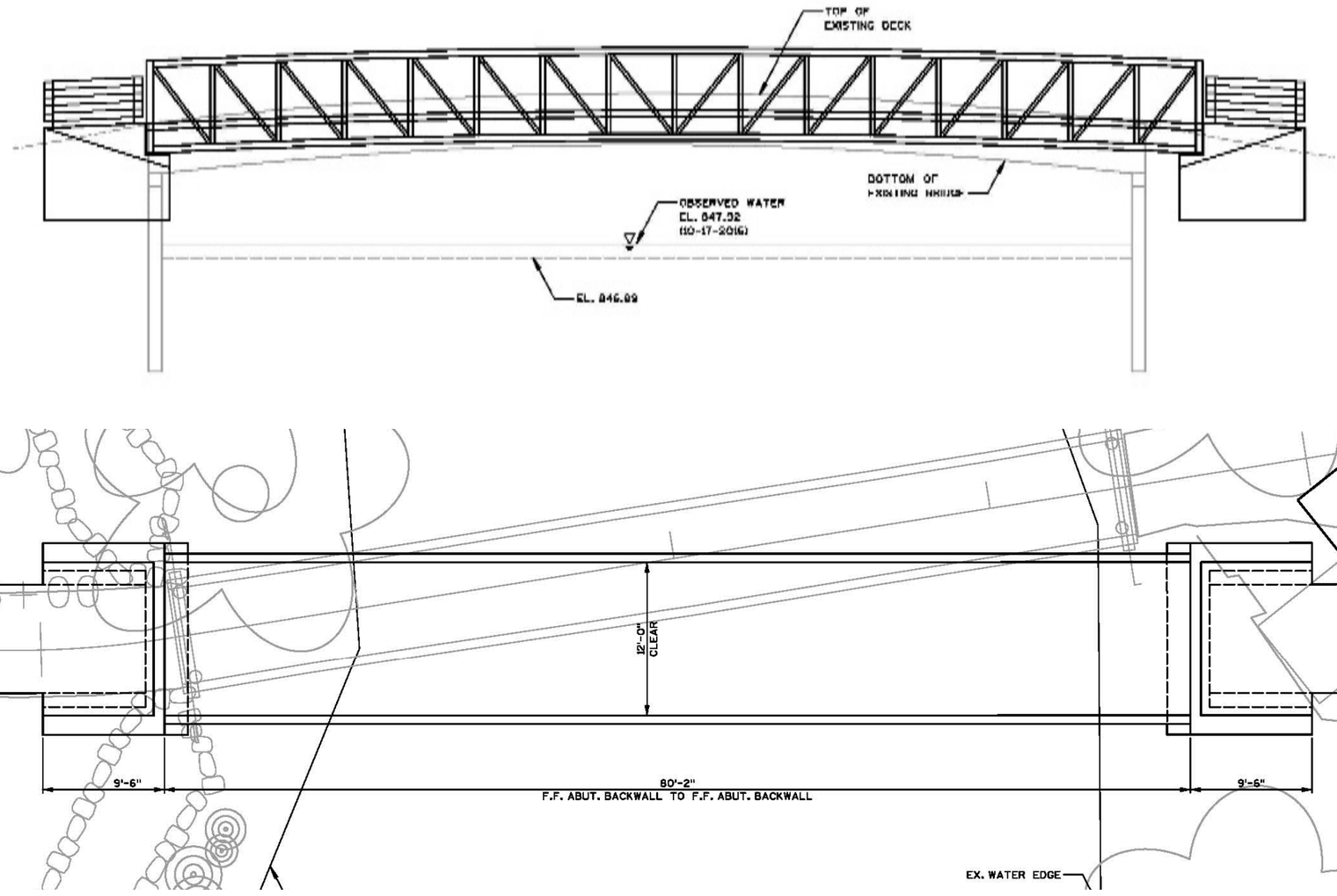
South Bridge – Existing Conditions

South Bridge – Existing Conditions

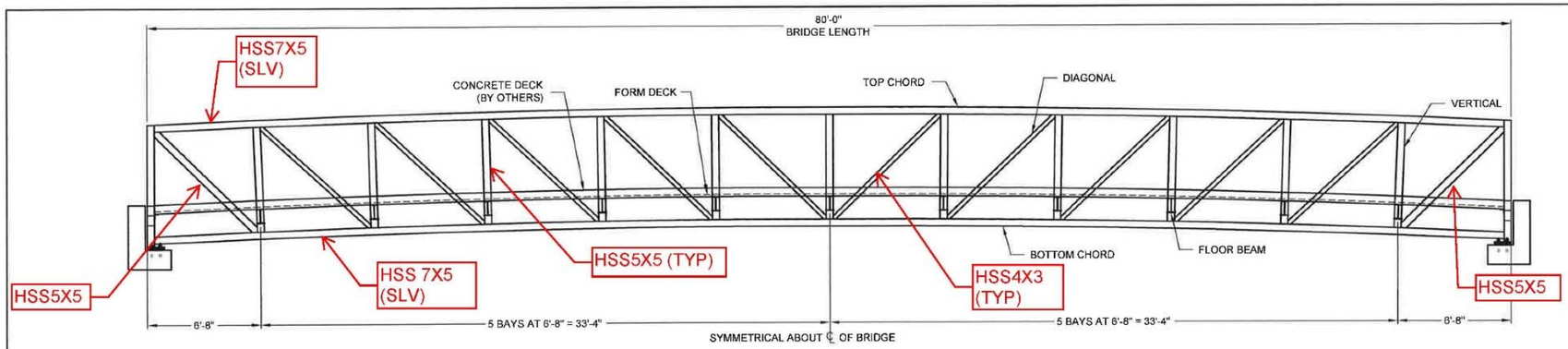
South Bridge – Existing Conditions

South Bridge – Existing Conditions

North Bridge – Proposed Bridge Structure



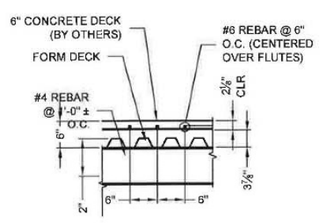
North Bridge – Proposed Bridge Structure



BRIDGE ELEVATION

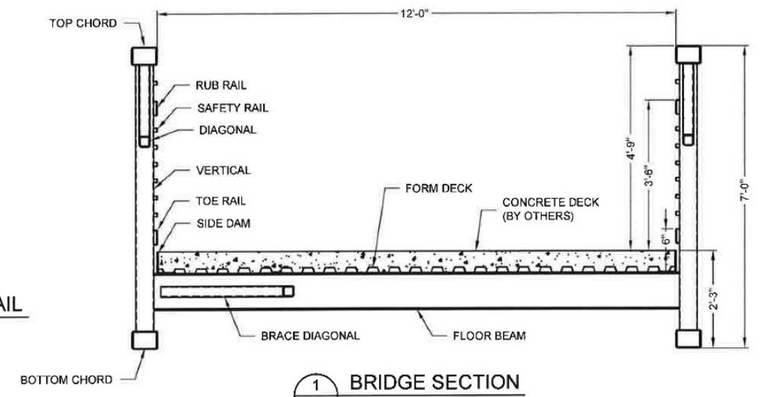
GENERAL NOTES

1. DESIGN STRESSES ARE IN ACCORDANCE WITH "STANDARD SPECIFICATION FOR HIGHWAY BRIDGES" & "GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES" BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).
2. BRIDGE MEMBERS ARE FABRICATED FROM HIGH STRENGTH, LOW ALLOY, ENHANCED ATMOSPHERIC CORROSION RESISTANT ASTM A847 COLD-FORMED WELDED SQUARE AND RECTANGULAR TUBING, AND ASTM A588, ASTM A606, OR ASTM A242 PLATE AND STRUCTURAL SHAPES (Fy=50,000 PSI).
3. CONCRETE DECK: GALVANIZED FORM DECK SUPPLIED BY CONTECH. CONCRETE, REINFORCING, AND EXPANSION MATERIAL SUPPLIED BY OTHERS. SEE CONCRETE DECK SHEET.
4. THE GAS METAL ARC WELDING PROCESS OR FLUX CORED ARC WELDING PROCESS WILL BE USED. WELDING TO BE IN ACCORDANCE WITH AWS D1.1.
5. ALL TOP AND BOTTOM CHORD SHOP SPLICES TO BE COMPLETE PENETRATION TYPE WELDS. WELD BETWEEN TOP CHORD AND END VERTICAL SHALL BE AS DETAILED.
6. UNLESS OTHERWISE NOTED, WELDED CONNECTIONS SHALL BE FILLET WELDS (OR HAVE THE EFFECTIVE THROAT OF A FILLET WELD) OF A SIZE EQUAL TO THE THICKNESS OF THE LIGHTEST GAGE MEMBER IN THE CONNECTION. WELDS SHALL BE APPLIED AS FOLLOWS.
   A. BOTH ENDS OF VERTICALS, DIAGONALS, AND FLOOR BEAMS SHALL BE WELDED ALL AROUND.
   B. BRACE DIAGONALS WILL BE WELDED ALL AROUND.
   C. MISCELLANEOUS NON-STRUCTURAL MEMBERS WILL BE STITCH WELDED TO THEIR SUPPORTING MEMBERS.
7. BRIDGE DESIGN WAS ONLY BASED ON COMBINATIONS OF THE FOLLOWING LOADS WHICH WILL PRODUCE MAXIMUM CRITICAL MEMBER STRESSES.
   A. 90 PSF UNIFORM LIVE LOADING ON THE FULL DECK AREA OR ONE 20,000 LB VEHICLE LOAD. THE LOAD SHALL BE DISTRIBUTED AS A FOUR-WHEEL VEHICLE WITH 80% OF THE LOAD ON THE REAR WHEELS. THE WHEEL TRACK WIDTH OF THE VEHICLE SHALL BE 6'-0" AND THE WHEEL BASE SHALL BE 14'-0". THE VEHICLE SHALL BE POSITIONED SO AS TO PRODUCE THE MAXIMUM STRESSES IN EACH MEMBER, INCLUDING DECKING.
   B. 35 PSF WIND LOAD ON THE FULL HEIGHT OF THE BRIDGE, AS IF ENCLOSED.
   C. 20 PSF UPWARD FORCE APPLIED AT THE WINDWARD QUARTER POINT OF THE TRANVERSE BRIDGE WIDTH (AASHTO 3.15.3).
8. CLEANING: ALL EXPOSED SURFACES OF STEEL SHALL BE CLEANED IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL SURFACES PREPARATION SPECIFICATIONS NO. 7 BRUSH-OFF BLAST CLEANING. SSPC-SP7-LATEST EDITION.
9. MINIMUM MATERIAL THICKNESS OF 1/4" ON ALL STRUCTURAL MEMBERS.



2/1 TYP SLAB REINFORCEMENT DETAIL

f'c = 3,500 PSI (MINIMUM 28 DAY STRENGTH)
GRADE 60 REINFORCING (fy = 60,000 PSI)



1/1 BRIDGE SECTION

COMBINE REACTIONS AS PER LOCAL OR GOVERNING BUILDING CODES AS REQUIRED

BRIDGE REACTIONS		+ DOWNWARD LOAD - UPWARD LOAD	
	P (LBS)	H (LBS)	L (LBS)
DEAD LOAD ②	20,500		
UNIFORM LIVE LOAD	21,800		
VEHICLE LOAD	10,000		
WIND UPLIFT 30 PSF WINDWARD / LEEWARD	-7,900 / -2,834		
WIND	±3,250	9,800	
THERMAL ②			3,075

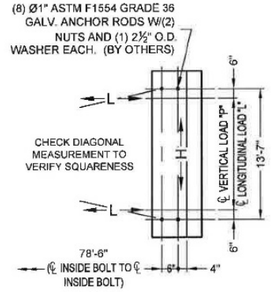
"P" - VERTICAL LOAD EACH BASE PLATE (4 PER BRIDGE)
"H" - HORIZONTAL LOAD EACH FOOTING (2 PER BRIDGE)
"L" - LONGITUDINAL LOAD EACH BASE PLATE (4 PER BRIDGE)

① BRIDGE LIFTING WEIGHT: 23,400 LBS

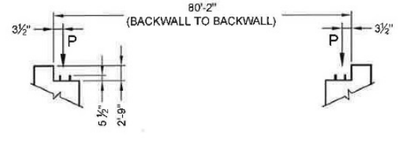
② BRIDGE FINAL WEIGHT: 82,000 LBS

① DOES NOT INCLUDE WEIGHT OF CONCRETE DECK

② INCLUDES WEIGHT OF CONCRETE DECK



PLAN



ANCHOR BOLT ELEVATION

CONTECH
FABRICATION
DRAWING

AISC CERTIFIED FABRICATOR

MARK	DATE	REVISION DESCRIPTION	BY

80'-0" x 12'-0"
AASHTO EXPRESS
PEDESTRIAN BRIDGE
STANDARD CONCRETE DECK

CONTECH®
ENGINEERED SOLUTIONS LLC
www.ContechES.com
800-338-1122 513-645-7000 513-645-7993 FAX
EXPRESS

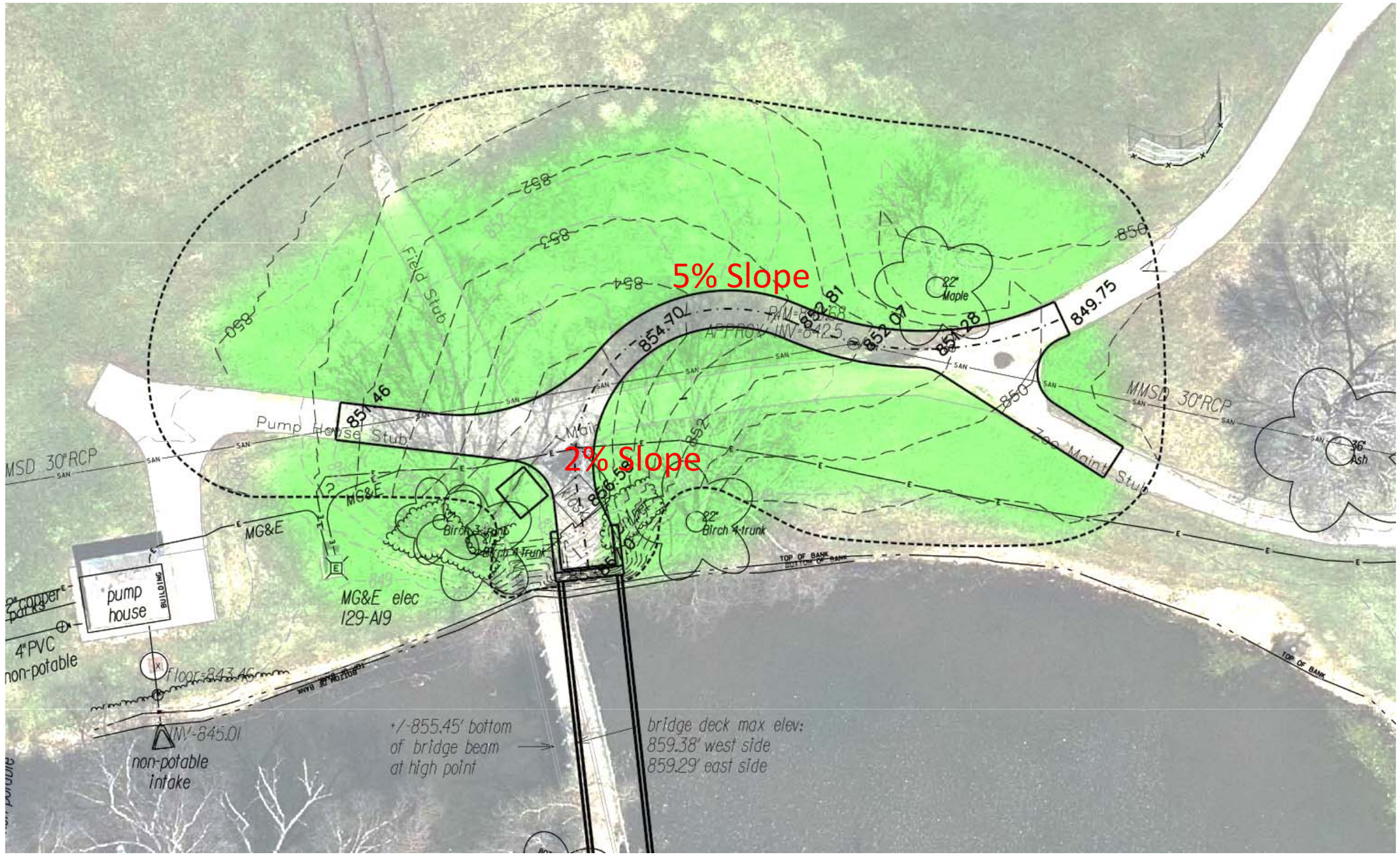
DATE:	11/4/2015	
DESIGNED:		DRAWN:
CHECKED:		APPROVED:
PROJECT No.:		SQUENCE No.:
SHEET:	1 OF 1	

F:\ENGINEERING\AASHTO EXPRESS\##BRIDGE\#NOT SPLICED\12-0\CONCRETE DECK\80' X 12' CONC SALES.DWG 11/4/2015 8:46 AM

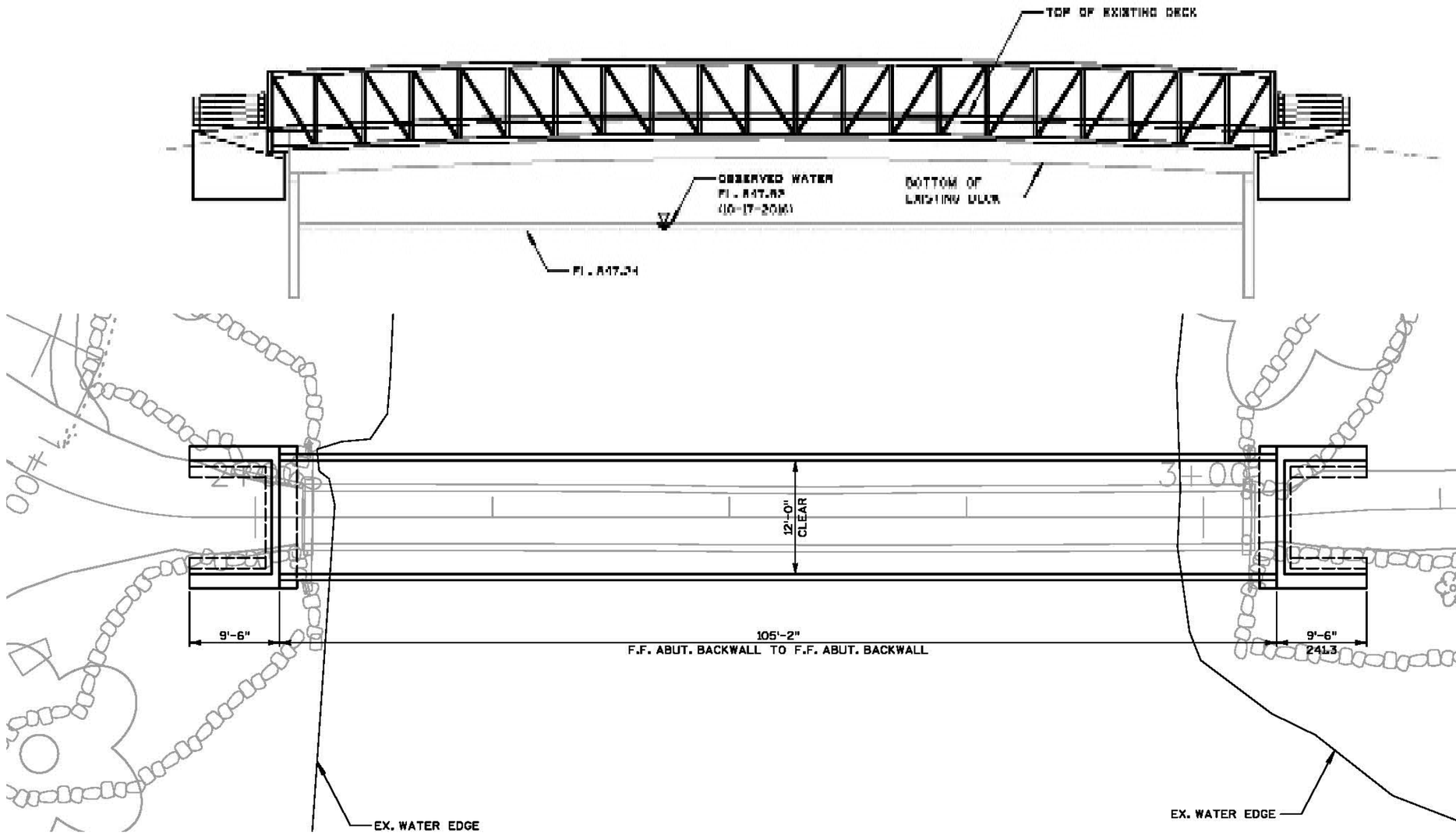
North Bridge – Proposed Angle-Braced Bridge Structure

North Bridge – Proposed Angle-Braced Bridge Structure

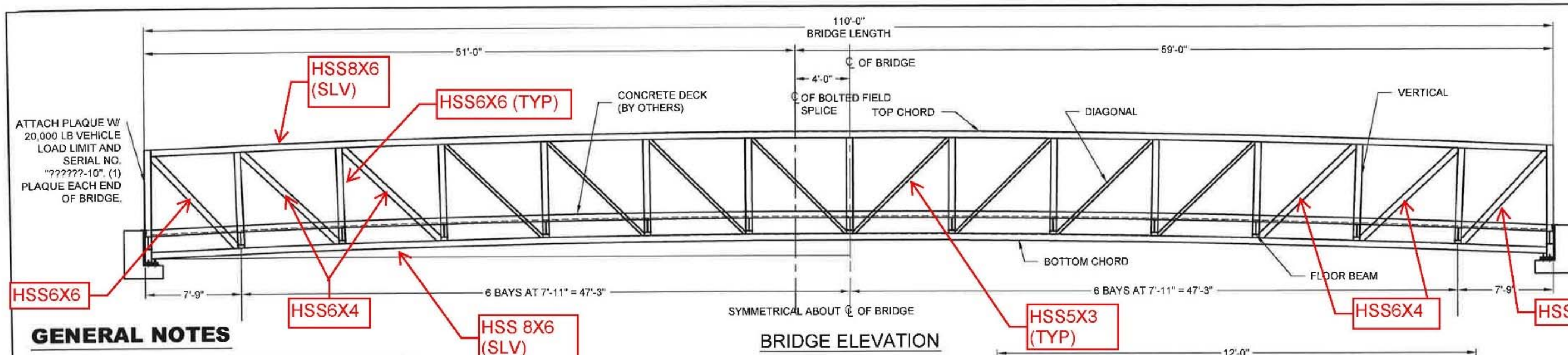
North Bridge – Proposed Bridge Alignment and Path Approach



South Bridge – Proposed Angle-Braced Structure



South Bridge – Proposed Angle-Braced Structure



BRIDGE ELEVATION

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   - A. 90 PSF UNIFORM LIVE LOADING ON THE FULL DECK AREA OR ONE 20,000 LB VEHICLE LOAD. THE LOAD SHALL BE DISTRIBUTED AS A FOUR-WHEEL VEHICLE WITH 80% OF THE LOAD ON THE REAR WHEELS. THE WHEEL TRACK WIDTH OF THE VEHICLE SHALL BE 6'-0" AND THE WHEEL BASE SHALL BE 14'-0". THE VEHICLE SHALL BE POSITIONED SO AS TO PRODUCE THE MAXIMUM STRESSES IN EACH MEMBER, INCLUDING DECKING.
   - B. 35 PSF WIND LOAD ON THE FULL HEIGHT OF THE BRIDGE, AS IF ENCLOSED.
   - C. 20 PSF UPWARD FORCE APPLIED AT THE WINDWARD QUARTER POINT OF THE TRANSVERSE BRIDGE WIDTH (AASHTO 3.8.2).
8. CLEANING: ALL EXPOSED SURFACES OF STEEL SHALL BE CLEANED IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL SURFACES PREPARATION SPECIFICATIONS NO. 7 BRUSH-OFF BLAST CLEANING. SSPC-SP7-LATEST EDITION.
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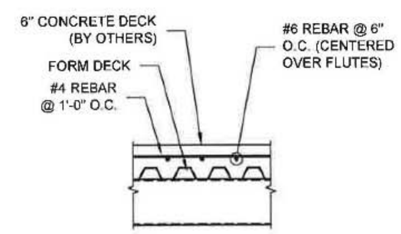
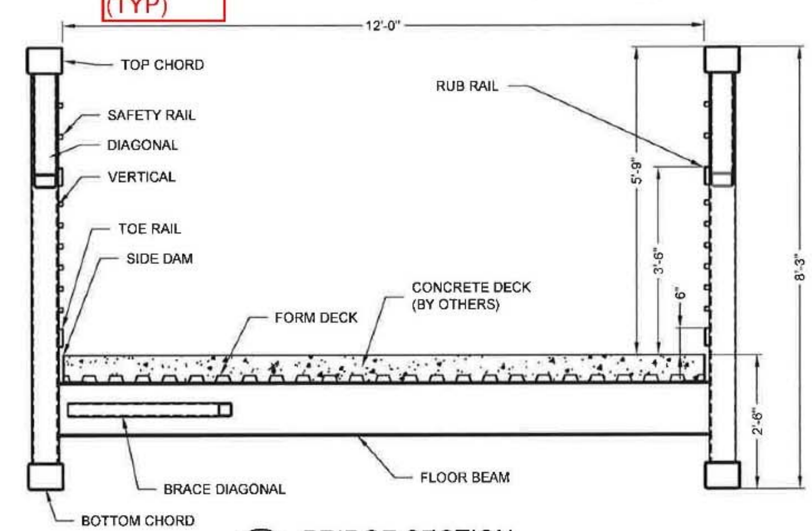


(2/1) TYP SLAB REINFORCEMENT DETAIL

f'c = 4,000 PSI (MINIMUM 28 DAY STRENGTH)
GRADE 60 REINFORCING (fy = 60,000 PSI)



(1/1) BRIDGE SECTION

COMBINE REACTIONS AS PER LOCAL OR GOVERNING BUILDING CODES AS REQUIRED

BRIDGE REACTIONS (+ DOWNWARD LOAD, - UPWARD LOAD)	P (LBS)	H (LBS)	L (LBS)
DEAD LOAD (2)	36,400		
UNIFORM LIVE LOAD	29,700		
VEHICLE LOAD	10,000		
WIND UPLIFT 20 PSF — WINDWARD / LEEWARD	-11,000 / -3,666		
WIND	±6,305	15,895	
THERMAL (2)			4,560

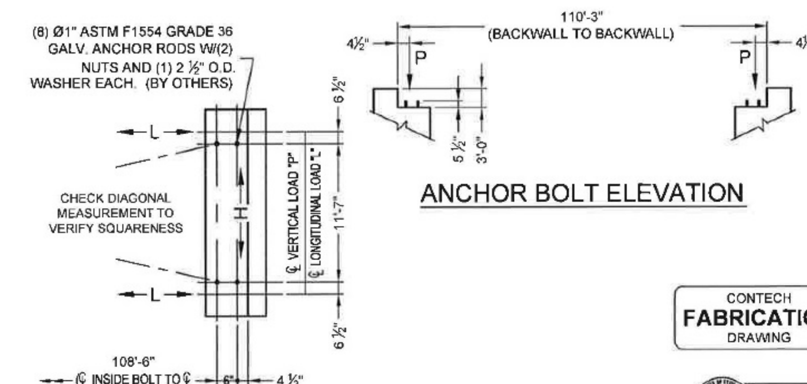
"P" - VERTICAL LOAD EACH BASE PLATE (4 PER BRIDGE)
"H" - HORIZONTAL LOAD EACH FOOTING (2 PER BRIDGE)
"L" - LONGITUDINAL LOAD EACH BASE PLATE (4 PER BRIDGE)

(1) BRIDGE LIFTING WEIGHT: 41,000 LBS

(2) BRIDGE FINAL WEIGHT: 121,500 LBS

(1) DOES NOT INCLUDE WEIGHT OF CONCRETE DECK

(2) INCLUDES WEIGHT OF CONCRETE DECK



ANCHOR BOLT ELEVATION

CONTECH FABRICATION DRAWING

110'-0" x 12'-0"
AASHTO EXPRESS
STANDARD CONCRETE DECK
PEDESTRIAN BRIDGE

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
EXPRESS

DATE: 9/1/2015	
DESIGNED: XXX	DRAWN: XXX
CHECKED: XXX	APPROVED: XXX
PROJECT No.: 400562	SEQUENCE No.: 001
SHEET: 1 OF 1	

AISC CERTIFIED FABRICATOR

MARK	DATE	REVISION DESCRIPTION	BY

South Bridge – Proposed Angle-Braced Structure

South Bridge – Proposed Angle-Braced Structure

South Bridge – Proposed Bridge Alignment and Path Approach