

October 12, 2016

EATON COUNTY ROAD COMMISSION
REQUEST FOR BRIDGE ENGINEERING SERVICES PROPOSAL

I. PROJECT DESCRIPTION

The Eaton County Road Commission was awarded Local Bridge Program funding to replace the Whittum Road bridge over the Spring Brook (Struct. #2402) in Sections 4 and 5, Hamlin Township during fiscal year 2017. This bridge will be funded with state or federal bridge funds administered by the Michigan Department of Transportation (MDOT), as well as local matching funds.

The existing Whittum Road bridge has a span of 40 feet and a width of 24.6 feet. Funding for the Whittum Road bridge has been approved at \$642,200 Federal and State, and \$33,800 Local match.

II. SCOPE OF SERVICES

The Engineering Consultant selected will be required to prepare plans and submittals in accordance with the "Instructions to Local Agencies for Preparing Federal Aid Projects to Bid through MDOT" and as necessary for approval by MDOT and funding obligation. The Consultant WILL NOT serve as the project engineer for this project.

The Consultant will be required to provide the following to the Eaton County Road Commission:

1. Complete the technical portions of the Program Application for Bridge Projects as necessary for submittal to MDOT
2. Prepare and submit an acceptable grade inspection (G.I.) package
3. Attend a grade inspection meeting
4. Modify the plans and proposal in accordance with the grade inspection meeting and provide final plans, proposal, and estimate for final submittal to MDOT.
5. Prepare and submit the load rating calculations for the Whittum bridge design, and update the MiBridge site accordingly.
6. Update the scour portion of the MiBridge site for the Whittum bridge.

The Eaton County Road Commission will provide the following:

1. Geotechnical soil boring logs
2. Flood and Low Flow Discharge
3. Full topographical survey
4. Prepare and submit the TS&L
5. Prepare and submit the MDEQ permit application.
6. Non-technical portions of the Program Application
7. Submit all documents to MDOT
8. Although not anticipated, any additional right of way necessary.

The bridge shall be designed in accordance with the MDOT Bridge Design Manual. No Special Interests were identified for either bridge during the Threatened and Endangered review.

Two (2) copies of the G.I. documents shall be submitted to the Eaton County Road Commission. G.I. plans shall be on 11x17 paper and the proposal on 8.5x11 paper. Final submittals to the

Eaton County Road Commission will be 11x17 plans in Adobe Acrobat format, special provisions in Adobe Acrobat format, and a final estimate in MERL and Adobe Acrobat format. Paper copies of these shall also be submitted.

No state or federal funds will be used to pay for design or construction engineering.

III. QUALIFICATIONS

Please include the following information in your proposal to provide Bridge Engineering Services:

- 1.) Names and brief resumes of personnel who will actually perform design are required. List all sub-consultants that will be used on the project.
- 2.) Similar projects completed and years completed.
- 3.) Detailed proposed Schedule, outlining the proposed dates for completion of each task.

IV. ECRC CONTACT

Mathew Hannahs, P.E. – Assistant County Engineer
MHannahs@EatonCountyRoad.com
517-543-1630 Ext. 207

V. SCHEDULE

Proposals will be received until 10:00 AM, November 7, 2016. Award will be made at the November 8, 2016 Board Meeting. A preliminary review submittal shall be made to the Eaton County Road Commission by December 24, 2016. The GI submittal shall be made on or before January 9, 2017. Final plans, proposal, and estimate shall be submitted to the Eaton County Road Commission within 10 days of the G.I. meeting.

VI. PROPOSAL EVALUATION:

The Eaton County Road Commission will select a consultant based on a not to exceed price, proposed schedule, proposed coordination and cooperation efforts, experience and qualification of firm, project manager, staff, familiarity with federal, state and local regulations, capacity and ability to meet the proposed schedule, and recent successful completion of similar projects.

The Eaton County Road Commission reserves the right to request additional information regarding Consultant qualifications and clarification of pricing information. Failure to provide all information requested shall be sufficient reason for the Road Commission to eliminate a Consultant from further consideration in the selection process.

The Eaton County Road Commission reserves the right to accept or reject any or all proposals, to waive irregularities in any proposal, and to make the award in any manner deemed in the best interest of the County of Eaton.



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

KIRK T. STEUDLE
DIRECTOR

October 11, 2016

Mr. Mathew Hannahs
Eaton County Road Commission
1112 Reynolds Road
Charlotte, Michigan 48813

Dear Mr. Hannahs:

23045, 126691A
Whittum Road over Branch Grand River, STR 2402, Eaton County

Based on our review and discussions with the Type, Size, and Location (TS&L) plans as submitted by Eaton County Road Commission on October 10, 2016 are acceptable.

However the following items must be addressed on the preliminary plans before a grade inspection will be scheduled:

- The soil boring information needs to be placed on the plans.
- A scour analysis is required for this structure. Place the scour elevations on the soil borings.

- Proposed design loading should be HL-93 or HL-93 Modified.

- Update ADT information to present ADT of 2016 and future ADT of 2036.

Obtain all clearances and permits, including SHPO, that are required for using federal funds. If a situation exists where obtaining a permit of clearance would delay the project, please contact me at your earliest convenience to explore other options.

All bridge projects are required to be designed per the current edition of the AASHTO LRFD Bridge Design Specifications. Pile foundations may run deeper using the LRFD specifications therefore, take this into account when having the soil borings completed. Borings shallower than the estimate pile tip elevation may necessitate additional borings prior to the project being let to contract.

All projects let after October 7, 2011 letting are required to be designed per the Michigan Department of Transportation 2012 Standard Specifications for Construction.

Please prepare and submit paper copies of the preliminary plans, engineers estimate, special provisions, and programming for a grade inspection, and submit them to this office and the mdt TSC.

Prior to submitting preliminary plans and specifications, refer to the checklist, "Items Required for Grade Inspection". This can be downloaded at <http://www.michigan.gov/mdot> : doing business, Local Agency Programs, Bridge Program, Design, Items Required for Local Agency Bridge Grade Inspections.

MURRAY D. VAN WAGONER BUILDING · P.O.BOX 30050 · LANSING, MICHIGAN 48909
www.michigan.gov · (517) 373-2090

Mr. Mathew Hannahs
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Acceptance of the TS&L plans does not guarantee approval of the preliminary plans, or final plans. Acceptance of preliminary plans is contingent upon the review of the geotechnical information, and any other information which may become available.

If you have any questions about this project, please feel free to contact me at 517-373-2346 or Pablo Rojas at 517-373-2232.

Sincerely,

A handwritten signature in black ink, appearing to read "Keith Cooper". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Keith Cooper, P.E.
Bridge Program Manager
Local Agency Programs

cc: Pablo Rojas, P.E.
Mathew Hannahs, P.E., Eaton County Road Commission

UTILITIES
 SBC
 337 NORTH ABBOTT ROAD
 EAST LANSING, MI 48823
 MR. DALE STEVENS
 PH. 517-337-3607
 CONSUMERS ENERGY
 530 W. WILLOW STREET
 LANSING, MI 48909
 MR. DAVE BARNHILL
 PH. 517-374-2368

BENCHMARK DATA
 BM #1
 SPIKE IN MAPLE TREE
 STA 26+66, 50' NORTH
 ELEV = 99.06

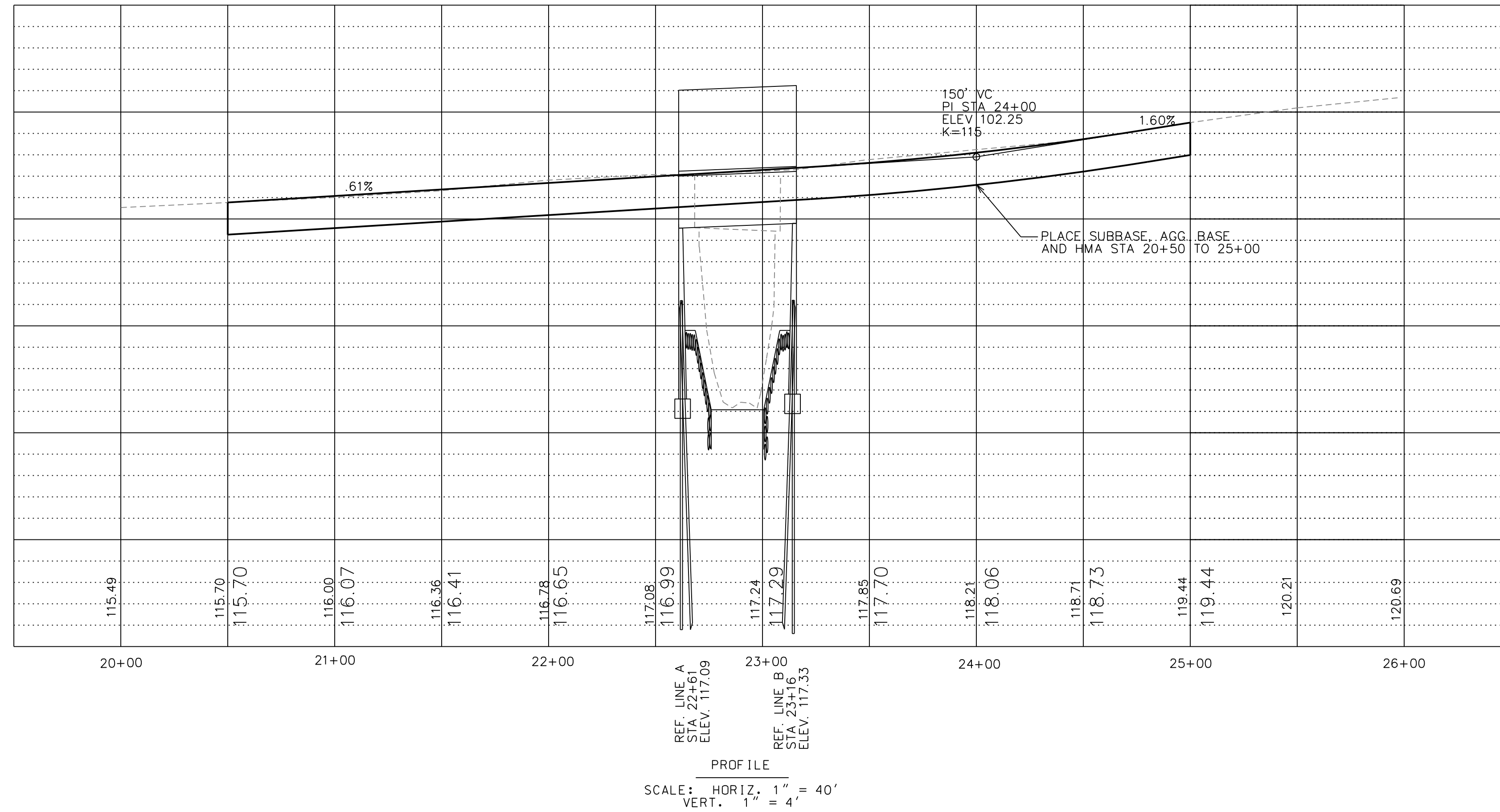
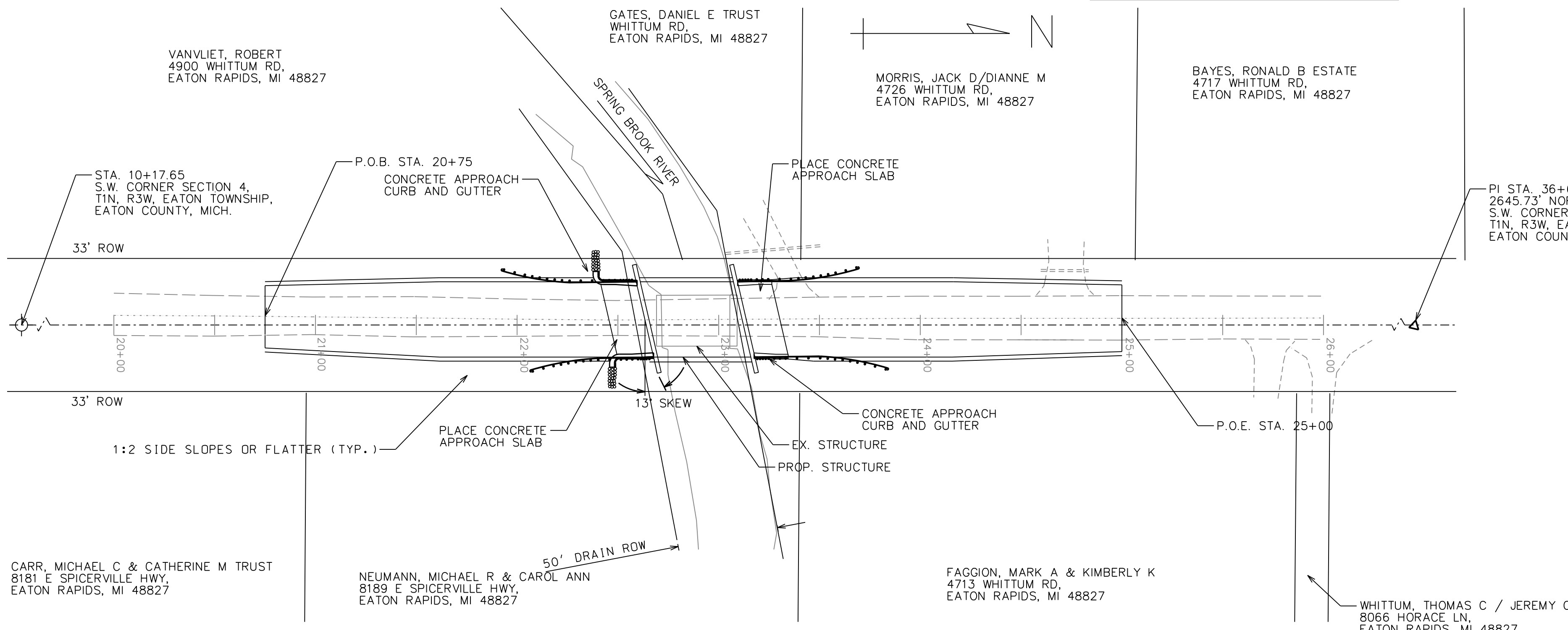
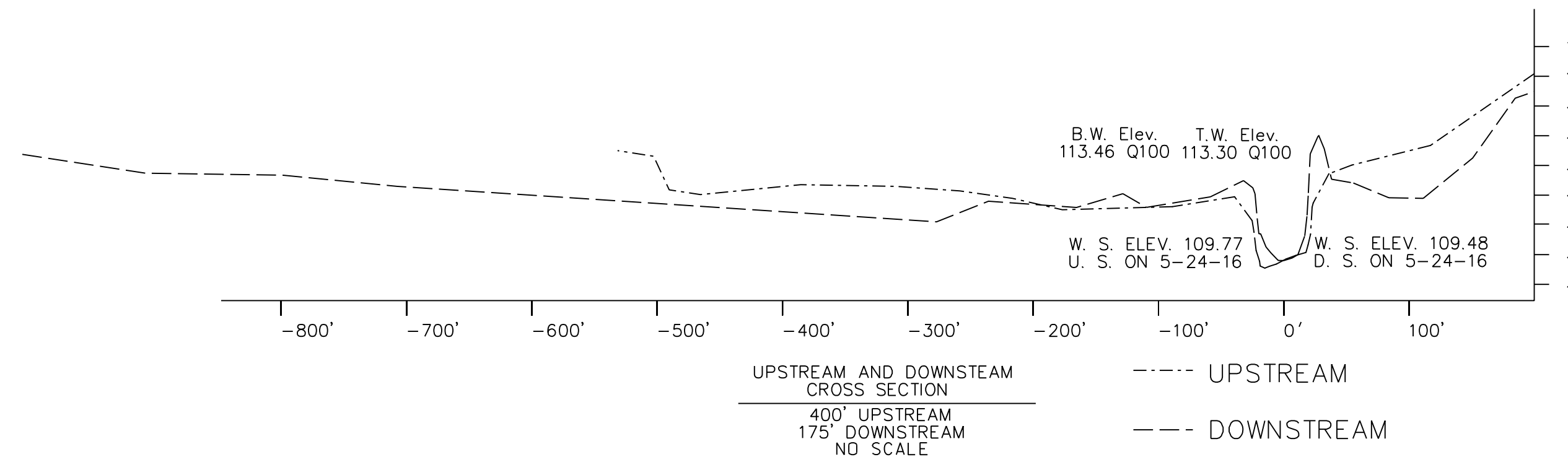
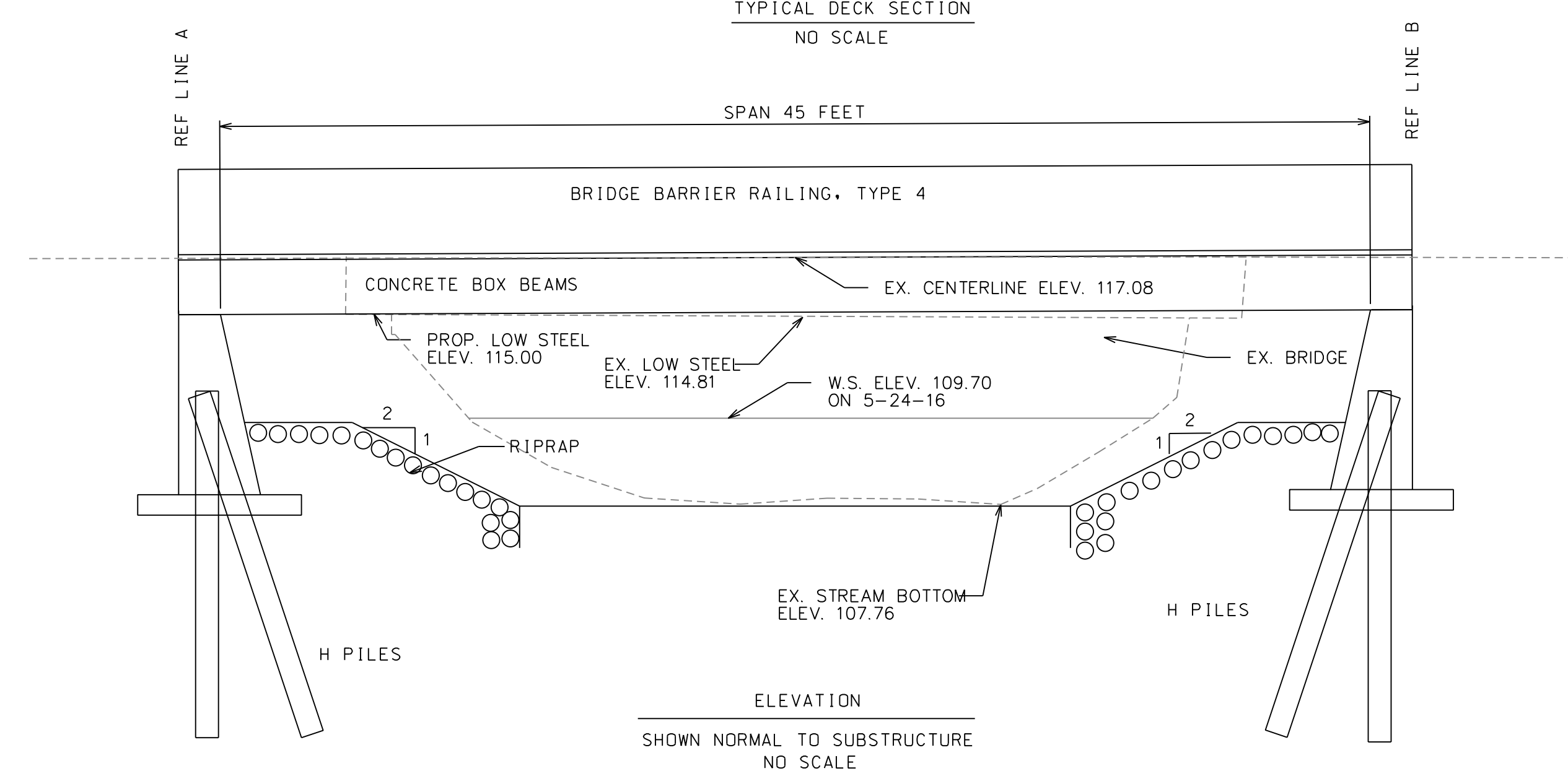
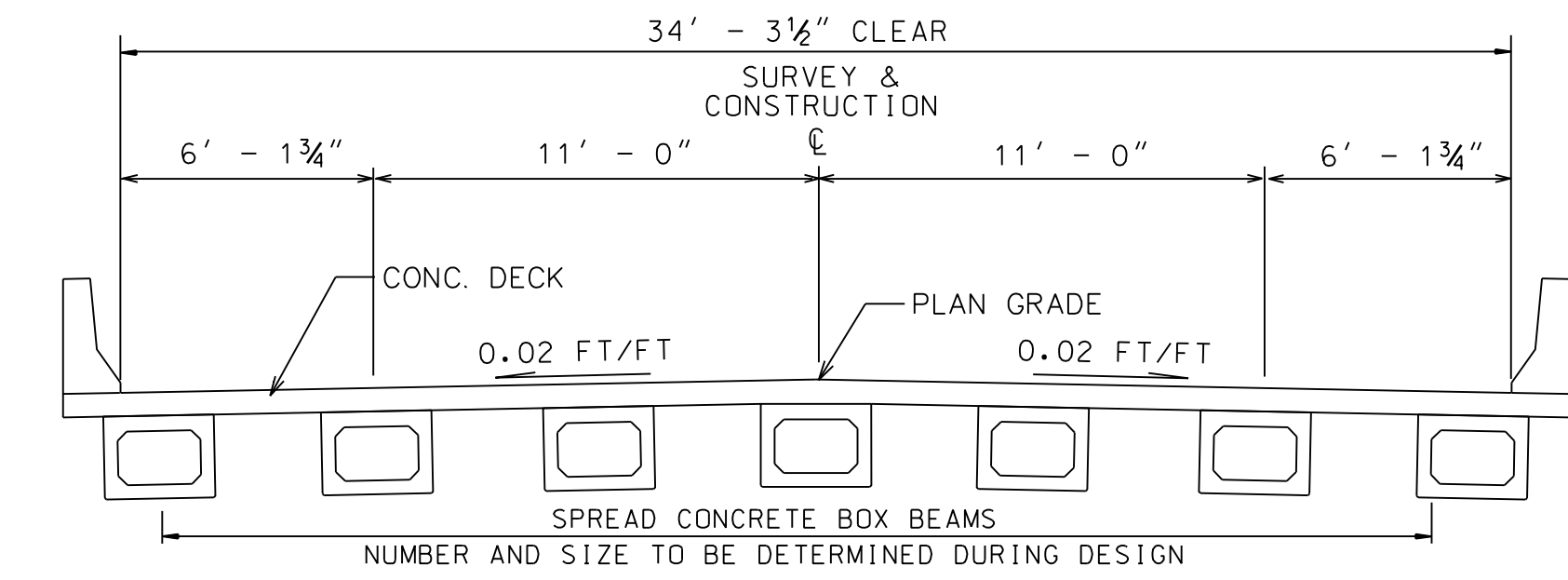
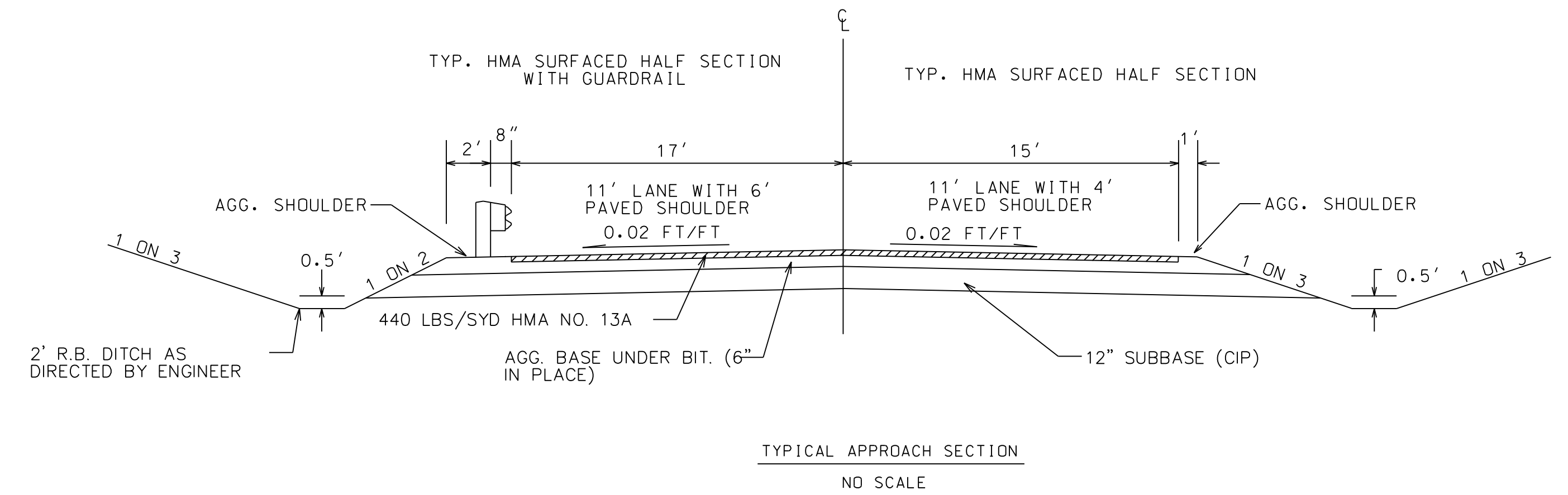
DESIGN SPEED: 55 MPH
 POSTED SPEED: NONE
 ADT PRESENT: 607
 ADT FUTURE (2031): 700

SUMMARY OF HYDRAULIC ANALYSIS							
EXISTING				PROPOSED			
FLOOD DATA	DIS-CHARGE (cfs)	WATER SURFACE ELEV. AT U/S FACE OF STRUCTURE	VELOCITY AT D/S FACE (ft/s)	WATER SURFACE ELEV. AT U/S FACE OF STRUCTURE	VELOCITY AT D/S FACE (ft/s)	WATERWAY AREA (sq. ft.) AT D/S FACE	CHANGE IN WSEL U/S OF PROPOSED STRUCTURE
100 YEAR	1200	113.48	7.08	113.46	5.67	281.78	0.02
50 YEAR	1000	113.28	6.09	113.26	4.89	281.78	0.02

EXISTING STRUCTURE
 THE EXISTING STRUCTURE IS A SINGLE SPAN STEEL BEAM BRIDGE WITH CONCRETE DECK ON CONCRETE ABUTMENTS, 34' SPAN, 7.05' RISE, 25' WIDTH.

PROPOSED STRUCTURE
 THE PROPOSED STRUCTURE IS 45 FOOT LONG SINGLE SPAN CONCRETE BOX BEAM STRUCTURE, 7.05' RISE, 37'4 1/2" WIDTH.
 THE DESIGN IS BASED ON THE CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES H520 LOADING.

HYDRAULICS INFORMATION
 SPRING BROOK RIVER AT WHITTUM ROAD, SECTIONS 4 AND 5, T1N, R3W, HAMLIN TOWNSHIP, EATON COUNTY, HAS A DRAINAGE AREA OF 74.4 SQUARE MILES. THE 10%, 2% AND 1% CHANCE PEAK FLOWS ARE ESTIMATED TO BE 600 CFS, 1000 CFS AND 1200 CFS, RESPECTIVELY. SEE MI-DEQ FLOOD AND FREQUENCY DISCHARGES ON WWW.DEQ.STATE.MI.US/FLOW/HFLOWQRY.ASP



LOCATION
HAMLIN TOWNSHIP, SECTIONS 4 & 5, T1N, R3W

EATON COUNTY ROAD COMMISSION
 1112 REYNOLDS ROAD, CHARLOTTE, MI 48813

WHITTUM ROAD BRIDGE
 TYPE, SIZE, AND LOCATION PLAN

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD		
DRAWN BY	JTC	6-28-16
REVISED BY	MMH	8-22-16
CHECKED BY		
STRUCTURE #2402		

CONTROL SECTION

FILE NAME: Whittum.tbl DGN