

## PROJECT CONCEPT STATEMENT

Abutment Scour Repair on US 61 MP30.0 over Wapsipinicon Bayou  
Located approximately 1.8 miles north of F33.  
FHWA No. 604630 & 604635, Maint. No. 8234.0L/R061  
T80N, R3W, Sections 11 and 12  
Scott County, MB-061-6(508)134--77-82

Highway Division  
Bridges and Structures Bureau

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June 10<sup>th</sup>, 2020

### Project Description

The bridge abutment berms have started to erode. The project site is located approximately 1.8 miles north of F33.

### Need for Project

If left unchecked the abutments will continue to be undermined and material behind the abutment will be lost. The current scheduled letting date is 07-20-2021.

### Concept

#### Abutment Scour Repair with Revetment (See Attachment)

Install 2 foot thick class E revetment along the abutment berms as shown on attachment. A key will be installed at the northwest corner of the bank lining. The key will be approximately 30 feet in length and will have a diamond cross section. The purpose of the keys is to prevent flow from flanking the end of the bank lining. Flanking of the bank lining could result in loss of rock material and could cause erosion to occur behind the lined bank.

#### Revetment Estimate:

ITEM	QTY.	UNIT	UNIT COST	COST EST.
Revetment, Class E	1350	TON	\$50	\$67,500
Excavation	200	SY	\$15	\$3,000
Engineering Fabric	1325	SY	\$5	\$6,625
Traffic Control			5%	\$3,856
Mobilization			10%	\$8,098
Contingency			15%	\$13,362
Total Cost				\$102,441

NOTE: Easement and/or right of way costs are not included in the above cost estimate.

**Recommendation**

Install revetment as described above and on attached drawing.

**Special Considerations**

We are anticipating temporary easements will not be needed during construction. Permanent easements and/or right of way acquisition will not be required for future maintenance needs.

The project is not located within a FEMA flood hazard area. Base flood elevations have not been established in this zone.

Since the basin is less than 100 square miles in area a DNR Floodplain Development Permit will not be required.

The river is not a protected stream.

A ground survey will be required. A drawing that shows the limits of survey will be provided.

Extant of existing utilities unknown.

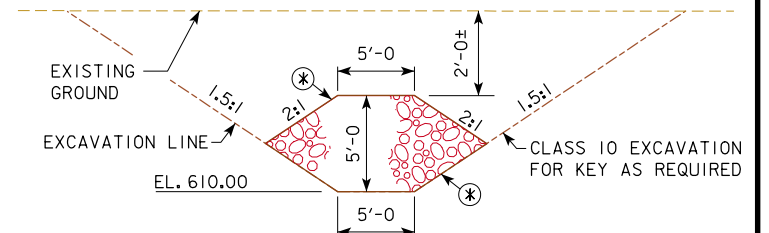
Railroads are not present in the project area and railroad expansion is not expected.

It is anticipated the work for the primary project would be awarded to one prime contractor. The Bridges and Structures Bureau will coordinate the plan preparation with assistance from the Design Bureau.

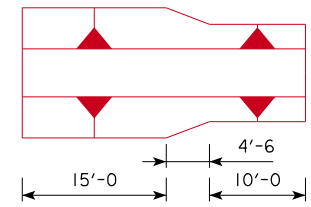
Trails are not present within the immediate project area and trail expansion is not expected in this area.

BENCH MARK NO.							
630	☐ S. ABUT. BRG. ELEV. 621.0	☐ PIER NO. 1 ELEV. 621.0	☐ PIER NO. 2 ELEV. 621.0	☐ PIER NO. 3 ELEV. 621.0	☐ PIER NO. 4 ELEV. 621.0	☐ PIER NO. 5 ELEV. 621.0	☐ N. ABUT. BRG. ELEV. 621.0
620							
610							
600							

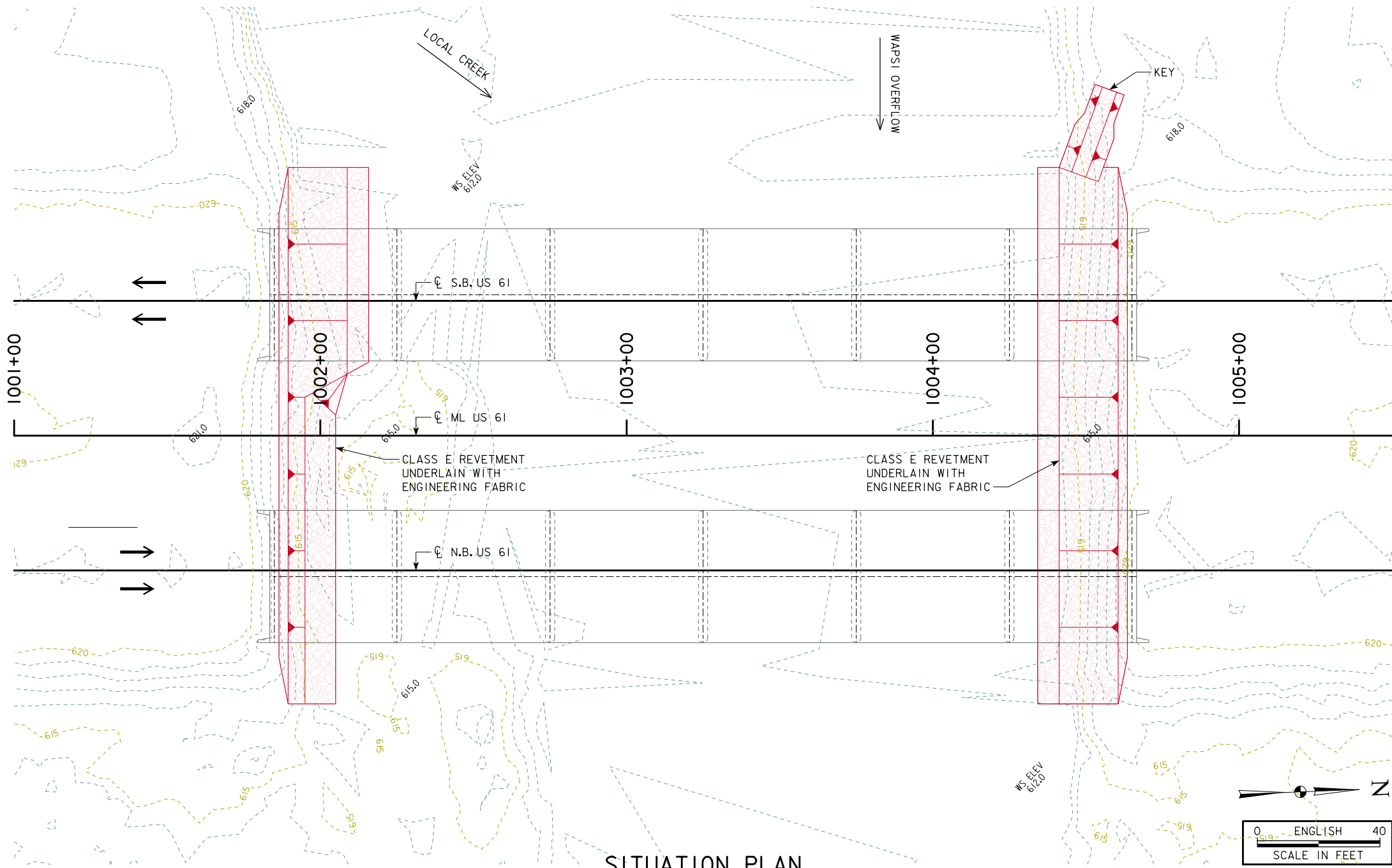
LONGITUDINAL SECTION ALONG ☐ SB APPROACH ROADWAY



KEY CROSS SECTION



KEY - PLAN VIEW



SITUATION PLAN

BENCH MARK NO.							
630	☐ S. ABUT. BRG. ELEV. 621.0	☐ PIER NO. 1 ELEV. 621.0	☐ PIER NO. 2 ELEV. 621.0	☐ PIER NO. 3 ELEV. 621.0	☐ PIER NO. 4 ELEV. 621.0	☐ PIER NO. 5 ELEV. 621.0	☐ N. ABUT. BRG. ELEV. 621.0
620							
610							
600							

LONGITUDINAL SECTION ALONG ☐ NB APPROACH ROADWAY

**UTILITIES LEGEND:**

UTILITY SURVEY NOT CONDUCTED

**LOCATION**

US 61 OVER WAPSIPINICON RIVER OVERFLOW  
T-80N R-3E  
SECTIONS 11 AND 12 WINFIELD TOWNSHIP  
SCOTT COUNTY  
FHWA NO. 604630 (NB)  
FHWA NO. 604635 (SB)  
BRIDGE MAINT. NO. 8234.0L061  
BRIDGE MAINT. NO. 8234.0R061  
LATITUDE 41.753998°  
LONGITUDE -90.568597°

PRELIMINARY - CONCEPT  
DESIGN FOR REPAIRS TO A 0° SKEW  
**DUAL 280'-0 X 40'-0 CONTINUOUS PRESTRESSED CONCRETE BEAM BRIDGE**  
40'-0 END SPANS 4-50'-0 INTERIOR SPANS  
**SITUATION PLAN - CONCEPT**  
STATION 1003+25.00 (☐ US 61) JUNE, 2020  
**SCOTT COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION  
DESIGN SHEET NO. \_ OF ? FILE NO. ? DESIGN NO. ?