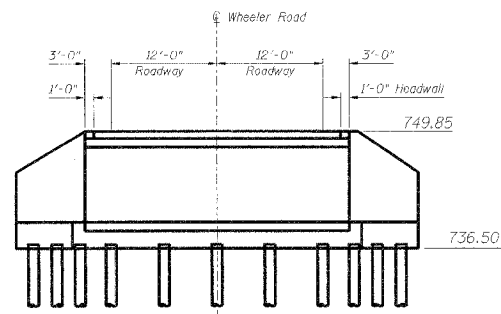
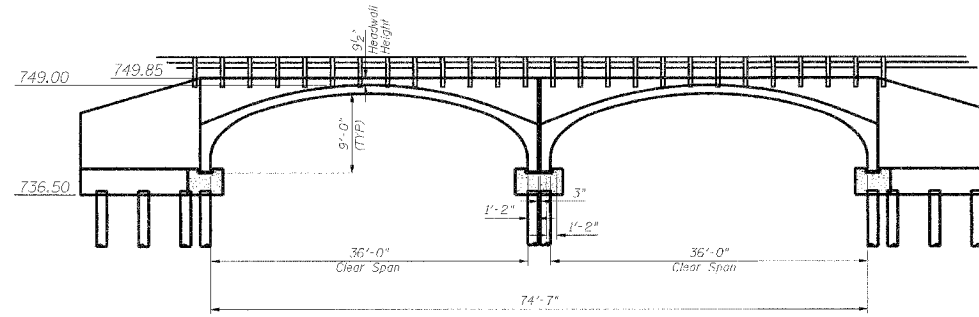


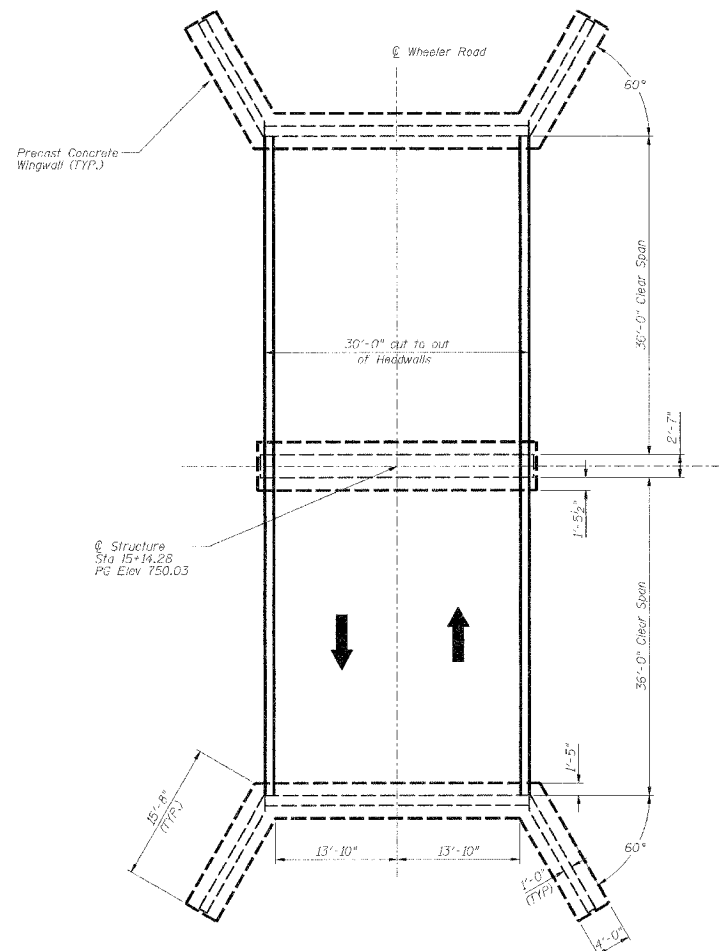
C.N.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
23	06-0084-00-08	WINNEBAGO	10	6
FEDERAL DIST. NO.		ILLINOIS	PROJECT	



LONGITUDINAL SECTION
Looking north at center of Clear Span



ELEVATION



PLAN

DESIGN SPECIFICATIONS

2002 AASHTO Bridge Design Specifications

LOADING HS-20

Allow 25#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST UNITS

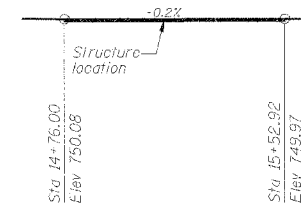
$f'_c = 5,000$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 65,000$ psi (welded wire fabric)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04
Site Coefficient (S) = 1.5

PILES

Metal Shell Concrete Pile
Nominal required Bearing: 330 kips
Allowable Resistance Available: 110 kips
Estimated Length: 45 ft



PROFILE GRADE

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Structures	Cu Yd	74.0
Reinforcement Bars, Epoxy Coated	Found	3320
Three Sided Precast Concrete Structure 36' Span	Foot	60
Precast Concrete Substructure	1 Sum	1
Furnishing Metal Shell Piles 14"	Foot	1260
Driving Piles	Foot	1260
Test Pile Metal Shells	Each	3
Removal of Existing Structures	Each	1
Steel Plate Beam Guard Rail, Attached to Structure	Foot	152

WATERWAY INFORMATION TABLE

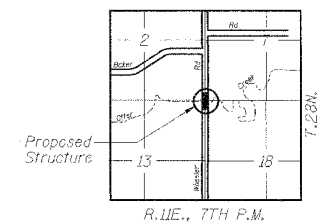
Drainage Area - 34.8 sq mi

Flood Yr.	Q C.F.S.	Opening Sq. Ft. Prop.	Wat. H.W.E.	Head - Ft. Prop.	Headwater E.L. Prop.	
Design	20	2641	377.8	746.57	0.37	746.94



Thomas E. Szkolnik 4-10-08
DATE: 4-10-08
EXP: 4/30/08

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS BRIDGE DESIGN IS STRUCTURALLY ADEQUATE FOR THE DESIGN LOADING SHOWN ON THE PLANS. THE DESIGN IS AN ECONOMICAL ONE FOR THE STYLE OF STRUCTURE AND COMPLIES WITH THE REQUIREMENTS OF THE CURRENT "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."



LOCATION SKETCH

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.

All Construction joints shall be bonded.

The footing design for the precast structure is based on the following maximum service load reactions applied at the top of the footing:

Exterior Footing:
Vertical: 12.6 kips/ft @ + 3.5 kips/ft
Horizontal: 5.5 kips/ft @ + 1.5 kips/ft

Interior Footing:
Vertical: 25.2 kips/ft @ + 3.8 kips/ft
Horizontal: 0.0 kips/ft @ + 0.0 kips/ft

The Contractor shall verify that the selected structure meets these design parameters. If the design parameters are exceeded, a complete footing design with calculations, details and the required seals shall be submitted for review and approval.

After the keyways have been grouted and cured, the joints on all three sides of the structure shall be externally sealed using 12" wide external sealing bands conforming to Article 1057.01. Cost included with Three Sided Precast Concrete Structures.

The option of using precast footings is not allowed.

After the precast units are in place and the backfill has been placed to mid-height on each exterior side of the barrel, the space between adjacent units shall be filled with Class 51 Concrete. Cost included with Three Sided Precast Concrete Structures.

All details shown were developed assuming the use of precast wingwalls placed as shown. The Contractor has the option of using cast-in-place wingwalls. If the cast-in-place option is used, details for the wingwalls and revised footing details including calculations shall be submitted to the Engineer for approval.

GENERAL PLAN AND ELEVATION

REVISIONS		WHEELER ROAD OVER OTTER CREEK		DRAWN BY DATE
NO.	DATE	INITIALS		DMN 08/07
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

WINNEBAGO	COUNTY	PROJECT NO.
		5219
		SHEET NO.

HOMER L. CHASTAIN & ASSOCIATES, LLP CONSULTING ENGINEERS 184-001297	DECATUR CHICAGO (617) 422-8544 (773) 714-0050	ROCKFORD (815) 489-0050
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