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DESIGN SPECIFICATIONS
2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi (Substructure)
f'c = 4,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Gr. 50W)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.101
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.168
Soil Site Class = D

GENERAL NOTES:

Fasteners shall be ASTM F3125 Grade A325 to size specified on Structural sheet 14 of 31. Calculated weight of Structural Steel (L. Sum) = 467,771 lbs. (Grade 50W), and 4,299 (Bolts, Nuts & Washers)

All bearings and cross frames shall be AASHTO M 270 Grade 50W.

All plate girder flanges, webs, splicer plates and bearing stiffeners shall be AASHTO M 270 Grade 50W.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 18 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

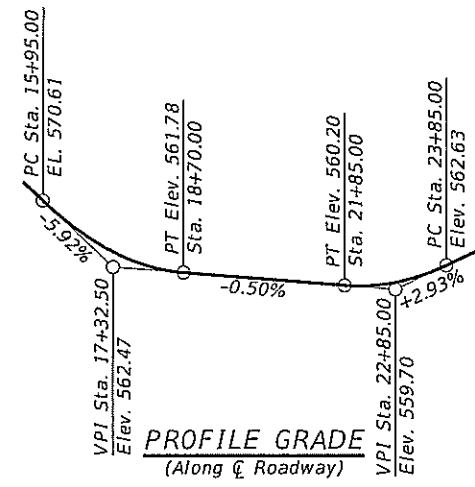
Splicer bolts shall be as specified per Framing Pan sheet.

Surface preparation and blast-cleaning of weathering steel shall be as specified per Article 506.07 and the Framing Plan sheet.

Slipforming Parapet is not allowed.

To minimize or avoid potential adverse impacts, the Department recommends the measures described below be included as commitments in the NRR.

Recommendation 1: Records and suitable habitat for the state listed Greater Redhorse (*Moxostoma valenciennesi*) and River Redhorse (*Moxostoma carinatum*) occur in this stream. To avoid impacts to this species and disturbance during the primary spawning season, the Department recommends no instream work occur from April 1st through May 31st.



VERMILION RIVER
BUILT 2023 BY
LASALLE COUNTY
SECTION 15-00760-00-BR
F.A.S. RT. 1275 STA. 20+00
STR. NO. 050-3627 LOADING HL-93

NAME PLATE LETTERING

BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu Yd		3,962	3,962
* Removal of Existing Structures No. 1	Each			1
* Removal of Existing Structures No. 2	Each			1
Structure Excavation	Cu Yd		475	475
Floor Drains	Each	34		34
Concrete Structures	Cu Yd	19.2	362.2	381.4
Concrete Superstructure	Cu Yd	406.4		406.4
Bridge Deck Grooving	Sq Yd	1,156		1,156
Protective Coat	Sq Yd	1,578		1,578
Concrete Superstructure (Approach Slab)	Cu Yd	88.9		88.9
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	8,980		8,980
Reinforcement Bars, Epoxy Coated	Pound	110,520	142,550	253,070
Bar Splicers	Each		492	492
Aluminum Railing, Type L	Foot	623		623
Furnishing Metal Shell Piles 14"x0.250"	Each		880	880
Driving Piles	Each		848	848
Test Pile Metal Shells	Each		2	2
Name Plates	Each	1		1
Permanent Casing	Foot		372	372
* Drilled Shaft In Soil	Cu Yd		326.8	326.8
* Drilled Shaft In Rock	Cu Yd		64	64
Anchor Bolts, 1"	Each		20	20
Anchor Bolts, 1 1/4"	Each		40	40
Granular Backfill For Structures	Cu Yd		172	172
Geocomposite Wall Drain	Sq Yd		55	55
Concrete Headwalls for Pipe Drains	Each		4	4
Pipe Underdrains For Structures 4"	Foot		122	122
Crosshole Sonic Logging Access Ducts	Foot		1,838	1,838
Crosshole Sonic Logging Testing	Each		8	8
* Stream Gauge	Each		1	1
* Stone Riprap, Class A5 (Special)	Ton		557	557
* Stone Riprap, Class A6 (Special)	Ton		2,816	2,816
* Multi-Rotational Bearings, Disk, Fixed, 700K	Each		5	5
* Multi-Rotational Bearings, Disk, Guided Expansion, 700K	Each		5	5

* See Special Provisions

GENERAL DATA
F.A.S. 1275 (C.H. 57) OVER VERMILION RIVER
SECTION 15-00760-00-BR
LASALLE COUNTY
STATION 20+00.00
STRUCTURE NO. 050-3627

FILE = S:\PROJECTS\2013\1247013.LCH67\DESIGN\CAD SHEETS\1247013.DPE.dgn

REVISION	DATE	BY	REMARKS	DESIGNED	DCB
1	1-3-2023	FDL	GENERAL NOTE ADDED		
				DRAWN	FDL
				REVIEWED	BKC
				APPROVED	DCB

LASALLE COUNTY
F.A.S. 1275 (C.H. 57) OVER VERMILION RIVER
STATION 20+00.00

WILLET HOFMANN & ASSOCIATES INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DODON, IL 61021-0267
T: 815-284-3381 DESIGN FIRM #184-000918

STRUCTURAL SHEET 2 OF 31 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1275	15-00760-00-BR	LASALLE	59	21
WHA# 1247013			CONTRACT NO. 87673	
[ILLINOIS] FED. AID PROJECT				

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