A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: June 20, 2017
Date of Addendum: May 25, 2017

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
011	78-0293-069	BRIDGE REPLACEMENT - STEEL GIRDER	POTTAWATTAMIE	IM-NHS-029-3(69)53--03-78	20JUN011A02

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Add Proposal Line No. 0864 2523-0000200 ELECTRICAL CIRCUIT, 1043.000 LF

Add Proposal Line No. 0865 2523-0000310 HANDHOLE+JUNCTION BOX, 4.000 EACH

Add Proposal Line No. 0866 2599-9999005 UNDERDECK LIGHTING, PIER MOUNTED, 12.000 EACH

If the above changes are not made, they will be made as shown here.

Estimate Reference information for added items:

2523-0000200 ELECTRICAL CIRCUIT, 1043.000 LF

Add Estimate Reference note:
Bid to include 600 volt fuses at 5 amperes for luminaire supply (L-1 connectors) and 20 amperes for tap circuit protection (Y-1 connectors) located in the junction boxes or handholes. Included are 6 type L-1 connectors, 16 Y-1 connectors, 2 type Y-3 connectors, and 0 type L-2 connectors. Electrical circuit length is calculated from plan dimensions as the linear, one-way length of both new and existing embedded conduits. No allowance has been added to this quantity. Allowances have been added to all wire and cable quantities listed in Tab 108-12.
Embedded conduit shall not be included as part of ELECTRICAL CIRCUITS. This conduit shall be included as part of the Structural Concrete (Bridge). All cabling within the embedded conduit shall be paid for under ELECTRICAL CIRCUITS.
Refer to P Sheets.

2523-0000310 HANDHOLE+JUNCTION BOX, 4.000 EACH

- Add Estimate Reference note:
  - The following estimate reference information is for junction boxes called for in the lighting plans (P.sheets).Junction boxes shall be mounted on the surface of a structure or embedded in a structure as shown on the plans. The junction box shall be furnished with a cover, gasket, and hardware. Hardware furnished for the cover shall be stainless steel.
  - A grounding lug shall be provided in every junction box. A stainless steel conduit fitting shall be used to connect to a stainless steel junction box.

- Junction box covers shall have a continuous formed, seamless, urethane, oil-resistant gasket. The gasket shall be placed directly onto the junction box cover. The gasket shall adhere to the cover without the use of adhesives. Junction box covers shall be attached to the box with un-slotted hex head screws. For boxes mounted on bridge structures, the cover shall be furnished with a retaining chain and captive screws.
- All junction boxes to be sized according to LI-104 and shall be made of stainless steel. The stainless steel junction box shall be made of Type 304 stainless steel, not less than 14 gauge with all seams continuously welded with a stainless steel weld wire and ground smooth. Exterior surfaces shall have a smooth polished finish. The box shall be according to NEMA Type 4X and be UL 50 "Junction and Pull Box", "Junction Box", or "Pull Box."
- When specified for attachment to a structure, the box shall be suitable for surface mounting, complete with external stainless steel mounting lugs or brackets welded to the box. The box shall have an overlapping stainless steel cover that is secured to the box with a continuous stainless steel hinge and a minimum of four captive stainless steel clamps utilizing captive stainless steel hex-head bolts or deep slotted stainless steel screws.
- Refer to P Sheets.

2599-9999005 UNDERDECK LIGHTING, PIER MOUNTED, 12.000 EACH

- Add Estimate Reference note:
  - See P sheets for locations, details, and additional tabulations On Sheet C.3:
  - DESCRIPTION
    This work shall consist of furnishing and installing an Underdeck Luminaire as shown on the plans. All work shall conform to Section 2523 of the Standard Specifications, except as specified in the Special Provisions.
  - CONSTRUCTION
    Refer to the Section 2523.03(K) of the Standard Specifications.
  - MATERIALS
    Luminaires shall be Cooper model VAL-E03-LED-E-U-GL4-AP-RTMB, Holophane model TNLED_3_4K_7_AS_WCR_DGRA_L, Kenall DLD1220-1 108L40K-DCC-DV, or approved equal.
  - METHOD OF MEASUREMENT
    The Underdeck Luminaire will be measured by the unit “Each”, complete. All related apparatus shall be included.
  - BASIS OF PAYMENT
    This work will be paid for at the contract unit price per each for UNDERDECK LUMINAIRE, PIER MOUNTED, which price shall include all material, hardware, storage, and labor required for complete installation of the Underdeck Luminaires, as shown on the contract plans and as specified herein.

Replace Sheet C.1 C.2, C.5 with the attached:

Sheet C.1 & C.2

Add items & Estimate Reference Information.

Sheet C.5:

Add Standard Road Plan LI-104, Junction Box (Cast Iron)

100-1D
10-18-05

PROJECT DESCRIPTION

This project involves staged reconstruction of the U.P.R.R. Bridge over I-29 0.5 miles north of Nebraska Avenue in Council Bluffs, IA. The existing I-29 roadway will be U.A.C. with the exception of some shoulder replacement below the overhead bridge.

100-1A
07-15-97

ESTIMATED PROJECT QUANTITIES
(1 DIVISION PROJECT)

Item No.	Item Code	Item	Unit	Total	As Built Qty.
1	2101-0850001	CLEARING AND GRUBBING	ACRE	2.2	
2	2102-0425070	SPECIAL BACKFILL	TON	690.1	
3	2102-2710090	EXCAVATION, CLASS 10, WASTE	CY	26403	
4	2105-8425005	TOPSOIL, FURNISH AND SPREAD	CY	131	
5	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	932	
6	2122-5190115	PAVED SHOULDER, P.C. CONCRETE, 11.5 IN.	SY	882.8	
7	2123-7450000	SHOULDER CONSTRUCTION EARTH	STA	9.9	
8	2401-6750001	REMOVALS, AS PER PLAN	LS	1	
9	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.	LF	337	
10	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	375	
11	2505-4008300	STEEL BEAM GUARDRAIL	LF	75	
12	2505-4021020	STEEL BEAM GUARDRAIL END ANCHOR, W-BEAM	EACH	2	
13	2510-6745850	REMOVAL OF PAVEMENT	SY	924.2	
14	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES	EACH	4	
15	2518-6910000	SAFETY CLOSURE	EACH	156	
16	2519-1001000	FENCE, CHAIN LINK, VINYL COATED	LF	512.8	
17	2519-4200120	REMOVAL OF FENCE, CHAIN LINK	LF	484	
18	2523-0000200	ELECTRICAL CIRCUIT	LF	1043	
19	2523-0000310	HANDHOLE+JUNCTION BOX	EACH	4	
20	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	LF	2450	
21	2528-8445110	TRAFFIC CONTROL	LS	1	
22	2528-8445113	FLAGGER	EACH	20	
23	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN	CDAY	400	
24	2551-0000130	TEMP CRASH CUSHION, SEVERE USE (SU)	EACH	4	
25	2551-0000210	PERMANENT CRASH CUSHION	EACH	2	
26	2555-0000010	DELIVER AND STOCKPILE SALVAGED MATERIALS	LS	1	
27	2595-0450079	RAILROAD SUBBALLAST, FURNISH & PLACE	TON	2447.6	
28	2595-7400200	REMOVAL OF RAILROAD TRACK	TLF	7452.9	
29	2599-9999005	REMOVE OVERHEAD TRUSS AND DMS	EACH	1	
30	2599-9999005	REMOVAL OF RAILROAD TURNOUT	EACH	2	
31	2599-9999005	INSTALL RAILROAD CROSSING SIGN ASSEMBLY	EACH	4	
32	2599-9999005	UNDERDECK LIGHTING, PIER MOUNTED	EACH	12	
33	2599-9999010	REMOVAL OF ABANDONED TRACK MATERIALS	LS	1	
34	2599-9999018	HMA UNDERLAYMENT	SY	1165	
35	2599-9999018	SUBGRADE PREPARATION FOR RAILROADS	SY	4000	
36	2599-9999019	TRACK CONSTRUCTION	TLF	5043.6	
37	2599-9999019	TRACK PANEL ASSEMBLY	TLF	1522	
38	2599-9999019	REMOVE CROSSING PANELS	TLF	128	
39	2599-9999019	INSTALL CROSSING PANELS	TLF	162.5	
40	2599-9999019	REMOVE AND STOCKPILE TRACK	TLF	1111	
41	2601-2634100	MULCH	ACRE	2.1	
42	2601-2636043	SEED+FERTILIZE (RURAL)	ACRE	2.1	
43	2601-2642100	STABILIZE CROP - SEED+FERTILIZE	ACRE	2.1	
44	2602-0000020	SILT FENCE	LF	1557.5	
45	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	1030	
46	2602-0000050	SILT BASIN	EACH	6	
47	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	687	
48	2602-0000080	RMVL OF SILT BASIN	EACH	3	
49	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	155.8	
50	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	200	
51	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	200	
52	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE	LF	400	
53	2602-0010010	MOBILIZATION EROSION CONTROL	LS	1	
54	2602-0010020	MOBILIZATION EMERGENCY EROSION CONTROL	LS	1	

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
1	2101-0850001	CLEARING AND GRUBBING
		Refer to Tab 110-17 and sheet U.3 for location and details.
2	2102-0425070	SPECIAL BACKFILL
		Refer to Tab 112-9 for location and details.
3	2102-2710090	EXCAVATION, CLASS 10, WASTE
		Item includes 19 CY of fill that will be incidental.

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
4	2105-8425005	TOPSOIL, FURNISH AND SPREAD
		Refer to Tab 103-10 for location and details.
5	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD
		Refer to Tab 103-10 for location and details. Overhaul will not be measure or paid for, but shall be considered incidental to topsoil, strip, salvage, and spread on this project.
6	2122-5190115	PAVED SHOULDER, P.C. CONCRETE, 11.5 IN.
		Refer to Tab 112-9 and roadway typicals for location and details.
7	2123-7450000	SHOULDER CONSTRUCTION EARTH
		Refer to Tab 112-9 and roadway typicals for location and details.
8	2401-6750001	REMOVALS, AS PER PLAN
		Includes the removal of 2 sand barrel crash cushions near the bridge.
9	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.
		Refer to Tab 110-14 for location and details. Includes removal of Aprons.
10	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL
		Refer to Tab 110-7A and J sheets for details.
11	2505-4008300	STEEL BEAM GUARDRAIL
		Refer to Tab 108-8B Refer to J sheets for locations and details.
12	2505-4021020	STEEL BEAM GUARDRAIL END ANCHOR, W-BEAM
		Refer to Tab 108-8B Refer to J sheets for locations and details.
13	2510-6745850	REMOVAL OF PAVEMENT
		Refer to Tab 110-1 and U sheets for location and details.
14	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES
		Refer to Tab. 110-15 for details.
15	2518-6910000	SAFETY CLOSURE
		Refer to Tab 108-13A for location and details.
16	2519-1001000	FENCE, CHAIN LINK, VINYL COATED
		Refer to Tab 100-7 and J sheets for location and details. All permanent fence shall be black vinyl coated.
17	2519-4200120	REMOVAL OF FENCE, CHAIN LINK
		Refer to U sheets for location and details. All permanent fence shall be black vinyl coated.
18	2523-0000200	ELECTRICAL CIRCUIT
		Bid to include 600 volt fuses at 5 amperes for luminaire supply (L-1 connectors) and 20 amperes for tap circuit protection (Y-1 connectors) located in the junction boxes or handholes. Included are 6 type L-1 connectors, 16 Y-1 connectors, 2 type Y-3 connectors, and 0 type L-2 connectors. Electrical circuit length is calculated from plan dimensions as the linear, one-way length of both new and existing embedded conduits. No allowance has been added to this quantity. Allowances have been added to all wire and cable quantities listed in Tab 108-12.
19	2523-0000310	HANDHOLE+JUNCTION BOX
		The following estimate reference information is for junction boxes called for in the lighting plans (P.sheets). Junction boxes shall be mounted on the surface of a structure or embedded in a structure as shown on the plans. The junction box shall be furnished with a cover, gasket, and hardware. Hardware furnished for the cover shall be stainless steel. A grounding lug shall be provided in every junction box. A stainless steel counduit fitting shall be used to connect to a stainless steel junction box. Junction box covers shall have a continuous formed, seamless, urethane, oil-resistant gasket. The gasket shall be placed directly onto the junction box cover. The gasket shall adhere to the cover without the use of adhesives. Junction box covers shall be attached to the box with un-slotted hex head screws. For boxes mounted on bridge structures, the cover shall be furnished with a retaining chain and captive screws. All junction boxes to be sized according to LI-104 and shall be made of stainless steel. The stainless steel junction box shall be made of Type 304 stainless steel, not less than 14 gauge with all seams continuously welded with a stainless steel weld wire and ground smooth. Exterior surfaces shall have a smooth polished finish. The box shall be according to NEMA Type 4X and be UL 50 "Junction and Pull Box", "Junction Box", or "Pull Box." When specified for attachment to a structure, the box shall be suitable for surface mounting, complete with external stainless steel mounting lugs or brackets welded to the box. The box shall have an overlapping stainless steel cover that is secured to the box with a continuous stainless steel hinge and a minimum of four captive stainless steel clamps utilizing captive stainless steel hex-head bolts or deep slotted stainless steel screws.
20	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE
		Refer to Tab 108-33 and the j sheets for location and details.

Changed By Addenda

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
21	2528-8445110	TRAFFIC CONTROL
		Refer to the Traffic Control Plans located in the J sheets.
22	2528-8445113	FLAGGER
		Refer to TC-451
23	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN
		Refer to TC-451 and Detour Sheets J.51-J.68 for location and details.
24	2551-0000130	TEMP CRASH CUSHION, SEVERE USE (SU)
		Refer to Tab 108-30 and the J sheets for location and details.
25	2551-0000210	PERMANENT CRASH CUSHION
		Refer to Tab 108-30, BA-500 and the J sheets for location and details.
26	2555-0000010	DELIVER AND STOCKPILE SALVAGED MATERIALS
		Refer to Tabulation 110-13 for details.
27	2595-0450079	RAILROAD SUBBALLAST, FURNISH & PLACE
		Refer to Tab 199-03.
		Refer to special provision for Railroad Track.
		Refer to UPRR Std Dwg No. 0010E.
		Assumed factor of 1.9 TN/CY
28	2595-7400200	REMOVAL OF RAILROAD TRACK
		Refer to Tab 199-04.
		Quantity does not include Turnout Tracks.
		Refer to special provision for Railroad Track.
		Refer to J sheets for locations and details.
29	2599-9999005	REMOVE OVERHEAD TRUSS AND DMS
		Refer to Sheets N.01 and N.02 for location and details.
		This item shall consist of the removal of the existing overhead sign support structure, existing concrete
		foundations, dynamic message sign (DMS), two attenuators with footings and the existing pad mounted cabinet,
		footing and power conductors (ancillary items) located at Station 1523+90 as shown on Sheets N.01 and N.02.
		The existing meter pedestal will remain in place for future use.
		The existing sign support structure and DMS shall be match marked, dismantled and stored as designated in the
		plans. Dismantling and handling shall be done in such a way as to not impair the strengh or usefulness of the
		material. All loose parts shall be wired to adjacent members or packed in suitable containers. Dismantled
		members shall be stored in neat piles at locations specified in the plans or within right-of-way in the
		vicinity of the work at points designated by the Engineer.
		Any damage to the existing sign support structure (steel truss) or DMS that is incurred during the removal
		or transport shall be the responsibility of the Contractor.
		Unless otherwise provided or ordered, concrete footings for sign support structures shall be removed entirely.
		Holes remaining from the removal of the concrete footings for sign support structures shall be backfilled
		with suitable earth to the original level or to the natural ground surface in accordance with Article 2402.09.
		The Contractor shall coordinate with the Engineer at least two weeks prior to removal. The Contractor shall
		coordinate schedule of the removal of the existing DMS to allow the Engineer to coordinate the deployment of
		Portable DMS by others prior to disconnecting the existing DMS. The Engineer shall coordinate with the Iowa
		DOT ITS Maintenance Contractor to disconnect the existing communication and controller from the existing DMS.
		Measurement: The Engineer shall count each overhead sign support structure, DMS and ancillary items removed.
		Payment: For each overhead sign support structure, DMS and ancillary items removed, the Contractor shall be
		paid the contract unit price. This payment shall be full compensation for furnishing all material, equipment
		and labor and for the perfomance for all work necessary for complete removal of the existing overhead sign
		support structure, DMS and ancillary items and for any backfilling made necessary by these operations.
30	2599-9999005	REMOVAL OF RAILROAD TURNOUT
		Refer to Tab 199-05.
		Refer to special provision for Railroad Track.
		Refer to J sheets for locations and details.
31	2599-9999005	INSTALL RAILROAD CROSSING SIGN ASSEMBLY
		Refer to UPRR Standard Drawings.
		Refer to special provision for Railroad Track.
		Refer to UPRR Standard Drawings 0501, 0530E, 0531E, 0547E, and 0599G.
32	2599-9999005	UNDERDECK LIGHTING, PIER MOUNTED
		See P sheets for locations, details, and additional tabulations
		DESCRIPTION
		This work shall consist of furnishing and installing an Underdeck Luminaire as shown
		on the plans. All work shall conform to Section 2523 of the Standard Specifications, except
		as specified in the Special Provisions.

100-4A
10-29-02

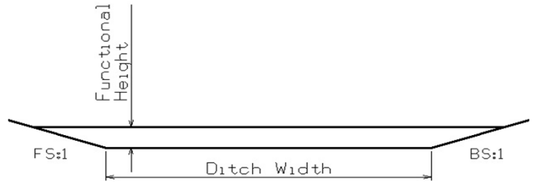
ESTIMATE REFERENCE INFORMATION

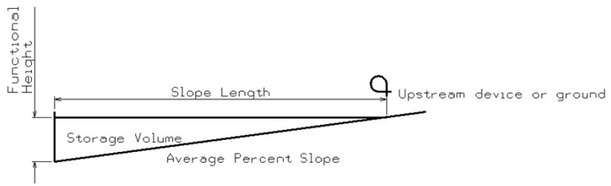
Item No.	Item Code	Description
		CONSTRUCTION
		Refer to the Section 2523.03(K) of the Standard Specifications .
		MATERIALS
		Luminaires shall be Cooper model VAL-E03-LED-E-U-GL4-AP-RTMB, Holophane model
		TNLED_3_4K_7_AS_WCR_DGRA_L, Kenall DLD1220-1-108L40K-DCC-DV, or
		approved equal.
		METHOD OF MEASUREMENT
		The Underdeck Luminaire will be measured by the unit “Each”, complete. All related apparatus shall be included.
		BASIS OF PAYMENT
		This work will be paid for at the contract unit price per each for UNDERDECK LUMINAIRE, PIER MOUNTED,
		which price shall include all material, hardware, storage, and labor required for complete
		installation of the Underdeck Luminaires, as shown on the contract plans and as specified herein.
33	2599-9999010	REMOVAL OF ABANDONED TRACK MATERIALS
		Refer to special provision for Railroad Track.
		Refer to J sheets for locations and details.
34	2599-9999018	HMA UNDERLAYMENT
		Refer to Tab 199-15.
		Refer to special provision for Railroad Track.
		Refer to J sheets for locations and details.
35	2599-9999018	SUBGRADE PREPARATION FOR RAILROADS
		Refer to the special provision for Railroad Track.
36	2599-9999019	TRACK CONSTRUCTION
		Refer to Tab 199-02.
		Refer to special provision for Railroad Track.
		Refer to J sheets for locations and details.
37	2599-9999019	TRACK PANEL ASSEMBLY
		Refer to Tab 199-02.
		Refer to special provision for Railroad Track.
		Refer to J sheets for locations and details.
38	2599-9999019	REMOVE CROSSING PANELS
		Refer to Tab 199-06.
		Refer to special provision for Railroad Track.
		Refer to J sheets for locations and details.
39	2599-9999019	INSTALL CROSSING PANELS
		Refer to Tab 199-07.
		Refer to special provision for Railroad Track.
		Refer to UPRR Standard Drawings 0304H, 200100, and 200200.
		Refer to J sheets for locations and details.
40	2599-9999019	REMOVE AND STOCKPILE TRACK
		Refer to Tab 199-04.
		Refer to special provision for Railraod Track.
		Refer to J sheets for locations and details.
41	2601-2634100	MULCH
		Mulching per Article 2601.03, E, 2.
		Anchor mulch into the soil using anchoring equipment with a minimum of two passes.
		Included for areas requiring reshaping and seedbed preparation. Mulch shall be Certified Noxious Weed
		Seed Free Mulch as certified by the Iowa Crop Improvement Association or adjacent states Crop
		Improvement Associations.
42	2601-2636043	SEED+FERTILIZE (RURAL)
		Areas shall be seeded and fertilized per Article 2601.03, C, 3.
		Verify locations with the Engineer prior to seeding.
43	2601-2642100	STABILIZE CROP - SEED+FERTILIZE
		Included for seeding disturbed areas as directed by the Engineer.
		All disturbed areas shall be seeded and fertilized per Article 2601.03, C, 1.
44	2602-0000020	SILT FENCE
		Refer to Tab. 100-17
		The tabulation includes estimated locations for placement of "Silt Fence" to address erosion to be encountered
		during construction. Verify the specific locations with the Engineer prior to beginning placement.
		Bid item includes 25% additional quantity for field adjustments and replacements.
45	2602-0000030	SILT FENCE FOR DITCH CHECKS
		Refer to Tab. 100-18
		The tabulation includes estimated locations for placement of "Silt Fence for Ditch Checks" to address erosion

100-18
10-18-16

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201 Possible Detail: 570-4





* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H²*FS+DW*H+0.5*H²*BS)]

Basin No.	Type	Location		Bid Items			Stormwater Storage Volume Summary					Remarks
		Station	Side	Installation	Maintenance	Removal	Foreslope	Backslope	Ditch Width	Avg. % Slope	Volume*	
				LF	LF	LF	FS:1	BS:1	FT		CF	
1	1	1524+42.00	Lt	70.1	35.1	70.1	6.0	4.0	45.1	13.7%	347.9	
1	1	1524+60.00	Lt	30.0	15.0	30.0	6.0	6.0	6.0	13.7%	94.4	
1	1	1524+75.00	Lt	36.5	18.3	36.5	6.0	6.0	12.5	9.8%	207.1	
1	1	1525+25.00	LT	30.6	15.3	30.6	6.0	2.5	13.6	7.9%	259.3	
1	1	1524+35.00	Rt	68.5	34.3	68.5	6.0	2.5	53.4	8.4%	714.4	
1	1	1524+75.00	Rt	21.6	10.8	21.6	6.0	3.0	3.6	10.8%	71.2	
1	1	1525+00.00	Rt	22.5	11.3	22.5	6.0	3.0	4.5	8.1%	141.6	
1	1	1525+25.00	Rt	22.9	11.5	22.9	6.0	3.0	4.9	3.9%	293.9	
2	1	1526+80.00	Rt	26.8	13.4	26.8	6.0	3.0	8.8	4.2%	348.9	
2	1	1527+00.00	Rt	22.7	11.4	22.7	6.0	3.0	4.7	6.0%	180.4	
2	1	1527+25.00	Rt	22.6	11.3	22.6	6.0	3.0	4.6	6.4%	171.5	
2	1	1527+45.00	Rt	21.8	10.9	21.8	6.0	3.0	3.8	10.9%	72.7	
2	1	1527+75.00	Rt	22.7	11.4	22.7	6.0	3.0	4.7	4.8%	252.5	
2	1	1528+20.00	Rt	62.9	31.5	62.9	6.0	2.5	48.5	12.5%	364.0	
3	1	1527+00.00	Lt	28.7	14.4	28.7	6.0	2.5	11.7	6.7%	350.7	
3	1	1527+50.00	Lt	28.8	14.4	28.8	6.0	2.5	11.8	11.2%	129.3	
3	1	1527+80.00	Lt	48.0	24.0	48.0	6.0	8.0	20.0	9.6%	296.1	
3	1	1528+00.00	Lt	98.4	49.2	98.4	6.0	8.0	46.5	9.3%	563.1	
				686.1	343.1	686.1						
			Totals	1029.2		686.1						

100-35
04-19-16

SUMMARY OF STORMWATER STORAGE

Basin No.	Item	Total Storage Volume Provided	Total Storage Volume Required	Remarks
		CF	CF	
1	Silt Fence Ditch Checks/Silt Basins	3492.0	6480.0	
2	Silt Fence Ditch Checks/Silt Basins	2627.0	2880.0	
3	Silt Fence Ditch Checks/Silt Basins	2576.0	2880.0	

100-34
04-19-16

STORMWATER DRAINAGE BASIN

Basin No.	Station to Station		Side	Disturbed Area	Discharge Point		Required Storage Volume	Remarks
				Acres	Station	Side	CF	
1	1524+40.00	1526+75.00	Both	1.8	1523+85.00	Rt	6480.0	
2	1526+75.00	1527+90.00	Rt	0.8	1529+00.00	Rt	2880.0	
3	1526+15.00	1527+90.00	Lt	0.8	1529+00.00	Lt	2880.0	

110-13
04-20-10

DELIVERY AND STOCKPILING

Item Description	Quantity	Units	Delivery Location	Contact Name & Number	Remarks
DMS AND OVERHEAD STRUCTURE	1	LUMP SUM	2501 North 25th Street	Tony Arrick	
			Council Bluffs, IA	712-366-0332	
			51501		

105-4
10-18-11

STANDARD ROAD PLANS

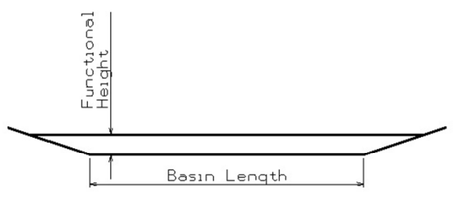
The following Standard Road Plans apply to construction work on this project.

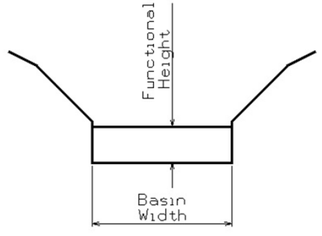
Number	Date	Title
BA-201	04-18-17	Steel Beam Guardrail Barrier Transition Section (MASH TL-3)
BA-203	10-18-11	Steel Beam Guardrail W-Beam End Anchor
BA-401	04-16-13	Temporary Barrier Rail (Precast Concrete)
BA-500	04-19-16	Temporary Crash Cushions Sand Barrel
EC-201	10-18-16	Silt Fence
EW-105	04-21-15	Reshaping Slopes and Ditches
LI-104	10-21-14	Junction box (cast Iron)
MI-101	10-20-15	Fencing Layout
MI-102	10-20-15	Chain Link Fence Construction
PV-101	04-19-16	Joints
TC-1	04-16-13	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-402	04-21-15	Work Within 15 ft of Traveled Way
TC-418	10-15-13	Lane Closure on Divided Highway
TC-420	04-21-15	Lane Closure at Ramps
TC-451	04-21-15	Temporary Road Closure on Divided Highway
	JPRR Std Dwg No.	**Drawing Description**
	0001B	Roadbed Section for Wood Tie Track Construction
	0010E	Ballast & Subballast Gradation
	0015B	Curve Marking
	0019A	Superelevation of Curves General
	0021E	Superelevation of Curves 1” Unbalance
	0026A	Clearance Point Marking
	0038I	Standard Minimum Operating Clearances
	0211I	Preplating Dimensions for Wood Ties
	130800	Rectangular Head Timber Coach Screw
	132500	e2055 Clip
	263000	Tie Plate for e-Clips
	176500	136JK Rail Section
	0943A	Compromise Transition Rail
	0904F	Joint Bars
	0950H	Track Bolts
	0304H	Installation of Road Crossings
	T2447xt	Layout for Concrete Panels on 10’ Wood Ties
	T2448xt	Layout for Concrete Panels on 9’ Wood Ties
	2005E	Derail
	0050C	Design Data for Turnout Layout
	343000	No 11 Turnout Panel 1
	343001	No 11 Turnout Panel 2
	343002	No 11 Turnout Panel 3
	343003	No 11 Turnout Panel 4
	343100	No 11 Turnout Geometry
	343200	No 11 Turnout Bill of Materials
	345000	No 15 Turnout Panel 1
	345001	No 15 Turnout Panels 1 & 2
	345002	No 15 Turnout Panel 4
	345003	No 15 Turnout Panel 5
	345100	No 15 Turnout Geometry
	345200	No 15 Turnout Bill of Materials
	5006	No 15 Crossover
	0501	Letters and Numerals for Signs
	0530E	Emergency Phone Number Sign
	0531E	Private Crossing Sign
	0547E	Stop Sign
	0599G	Sign Posts and Installation
	6010I	Approved Trackwork Suppliers

100-14
10-18-16

SILT BASINS

Possible Standard: EW-403





* The functional height used in the volume equation is 95% of effective height. Effective height is 3 feet as shown in EW-403.
* Volume equation: (0.5*Length*(Width*Height+Width*(Height-Length*Avg%Slope))

Basin No.	Location		Bid Items		Stormwater Storage Volume Summary					Remarks
	Station	Side	Installation	Removal	Basin Width	Basin Length	Height	Avg. % Slope	Volume*	
			EACH	EACH	FT	FT	FT		CF	
1	1524+30.00	Rt	1	1	10.0	50.0	2.85	0.5%	1362.5	
2	1528+15.00	Rt	1	1	10.0	50.0	2.85	1.5%	1237.5	
3	1528+05.00	Lt	1	1	10.0	50.0	2.85	1.5%	1237.5	

Changed By Addenda