

SUMMARY OF QUANTITIES

CODE NO.	ITEM	RURAL		90% FEDERAL 10% STATE ROADWAY	90% FEDERAL 10% STATE STRUCTURE	90% FEDERAL 10% STATE STRUCTURE	90% FEDERAL 10% STATE STRUCTURE
		UNIT	TOTAL QUANTITY	0004	0010	0010	0010
				S.N. 041-0115	S.N. 041-0116	S.N. 041-0117	S.N. 041-0118
50105220	PIPE CULVERT REMOVAL	FOOT	105				
50157300	PROTECTIVE SHIELD	SQ YD	1801	550	501	375	375
50200100	STRUCTURE EXCAVATION	CU YD	2763	795	709	629	630
50300100	FLOOR DRAINS	EACH	12			6	6
50300225	CONCRETE STRUCTURES	CU YD	1738	372.5	329.2	518.4	517.9
50300255	CONCRETE SUPERSTRUCTURE	CU YD	1476.6	365	336.6	387	386.8
50300300	PROTECTIVE COAT	SQ YD	6271	1631	1496	1573	1571
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	594	180.6	164.2	124.6	124.6
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	0.25	0.25	0.25	0.25
50500505	STUD SHEAR CONNECTORS	EACH	26118	5670	5040	7704	7704
50800105	REINFORCEMENT BARS	POUND	436	436			
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	949720	214590	198950	263730	272450
51100100	SLOPE WALL 4 INCH	SQ YD	3738	889	805	1022	1022
51201600	FURNISHING STEEL PILES HP12X53	FOOT	2345	1214	1131		

△ REVISED 7-19-2021

REV. - MS



USER NAME = skm
 ESCA PROJECT NO. 1295.11
 PLOT SCALE = 0.1667' / in.
 PLOT DATE = 1/26/2021

DESIGNED - JMK
 DRAWN - JMK
 CHECKED - ELH
 DATE - 01/21

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCALE: NONE SHEET NO. 4 OF 13 SHEETS STA. TO STA.
 SUMMARY OF QUANTITIES
 SECTION (41-4)B-1(41-4)B-2
 COUNTY JEFFERSON
 TOTAL SHEETS 257
 CONTRACT NO. 78550
 ILLINOIS FED. AID PROJECT

INDEX OF SHEETS

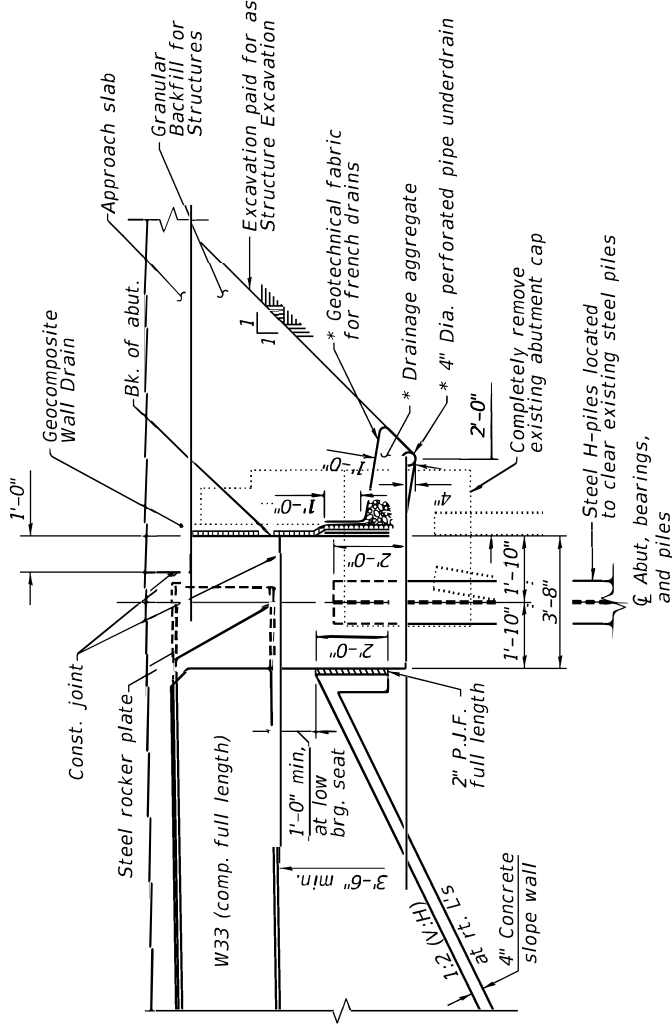
SHEET NO.	TITLE
1	General Plan & Elevation
2	General Data
3	Sloped Wall Details
4	Footing Layout (N.B.)
5	Footing Layout (S.B.)
6	Deck Elevations 1
7	Deck Elevations 2
8	Deck Elevations 3
9	Approach Slab Elevations 1
10	Approach Slab Elevations 2
11	Superstructure (N.B.)
12	Superstructure Details (N.B.)
13	Superstructure (S.B.)
14	Superstructure Details (S.B.)
15	Diaphragm Details (N.B.)
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17	Approach Slab Details 1 (N.B.)
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21	Framing Plan & Elevation (N.B.)
22	Framing Plan & Elevation (S.B.)
23	Framing Details (N.B. & S.B.)
24	Bearing Details
25	Abutment Details 1 (N.B.)
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STATION 1239+70.64
BUILT BY
STATE OF ILLINOIS
LOADING HL-93
STRUCTURE NO. 041-0115

NAME PLATE
See Std. 515001

STATION 1239+94.08
BUILT BY
STATE OF ILLINOIS
LOADING HL-93
STRUCTURE NO. 041-0116

NAME PLATE
See Std. 515001



SECTION THROUGH ABUTMENT
(Horizontal dimensions at rt. L's)

* Included in the cost of Pipe Underdrains for Structures.
(See Special Provisions.)
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101.)

TOTAL BILL OF MATERIAL (S.N. 041-0115)

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 1	Each	1		1
Protective Shield	Sq. Yd.	550		550
Structure Excavation	Cu. Yd.	795		795
Concrete Structures	Cu. Yd.		372.5	372.5
Concrete Superstructure	Cu. Yd.	365.0		365.0
Protective Coat	Sq. Yd.	1615	16	1631
Concrete Superstructure (Approach Slab)	Cu. Yd.	180.6		180.6
Furnishing and Erecting Structural Steel	L. Sum	0.25		0.25
Stud Shear Connectors	Each	5670		5670
Reinforcement Bars, Epoxy Coated	Pound	157180	57410	214590
Slope Wall, 4 Inch	Sq. Yd.		889	889
Furnishing Steel Piles HP 12x53	Foot		1214	1214
Driving Piles	Foot		1214	1214
Test Pile Steel HP 12x53	Each		3	3
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		54	54
Temporary Sheet Piling	Sq. Ft.		2314	2314
Granular Backfill for Structures	Cu. Yd.		239	239
Concrete Sealer	Sq. Ft.		615	615
Geocomposite Wall Drain	Sq. Yd.		132	132
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	555		555
Construction Layout	L. Sum	0.25		0.25
Diamond Grinding (Bridge Section)	Sq. Yd.	1669		1669
Pipe Underdrains for Structures 4"	Foot		182	182

TOTAL BILL OF MATERIAL (S.N. 041-0116)

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 2	Each	1		1
Protective Shield	Sq. Yd.	501		501
Structure Excavation	Cu. Yd.	709		709
Concrete Structures	Cu. Yd.		329.2	329.2
Concrete Superstructure	Cu. Yd.	336.6		336.6
Protective Coat	Sq. Yd.	1480	16	1496
Concrete Superstructure (Approach Slab)	Cu. Yd.	164.2		164.2
Furnishing and Erecting Structural Steel	L. Sum	0.25		0.25
Stud Shear Connectors	Each	5040		5040
Reinforcement Bars, Epoxy Coated	Pound	147000	51950	198950
Slope Wall, 4 Inch	Sq. Yd.		805	805
Furnishing Steel Piles HP 12x53	Foot		1131	1131
Driving Piles	Foot		1131	1131
Test Pile Steel HP 12x53	Each		3	3
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		48	48
Temporary Sheet Piling	Sq. Ft.		2158	2158
Granular Backfill for Structures	Cu. Yd.		194	194
Concrete Sealer	Sq. Ft.		555	555
Geocomposite Wall Drain	Sq. Yd.		113	113
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	555		555
Construction Layout	L. Sum	0.25		0.25
Diamond Grinding (Bridge Section)	Sq. Yd.	1445		1445
Pipe Underdrains for Structures 4"	Foot		170	170

GENERAL NOTES

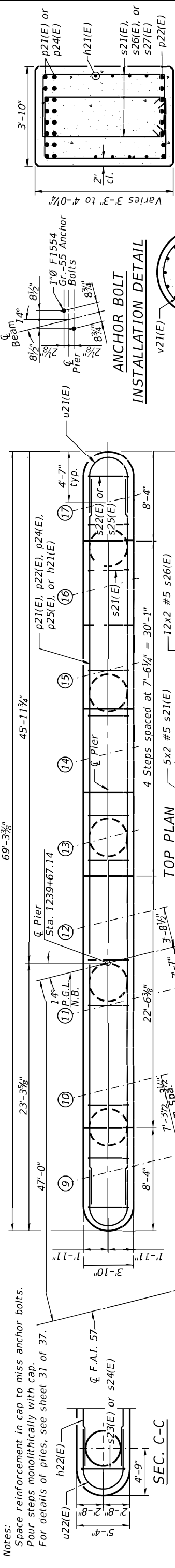
- Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized bolts. Bolts 7/8" dia., holes 1 1/16" dia., unless otherwise noted.
- Calculated weight of Structural Steel (M270 Grade 50) = 257,400 lbs. (041-0115)
Calculated weight of Structural Steel (M270 Grade 36) = 31,680 lbs. (041-0115)
Calculated weight of Structural Steel (M270 Grade 50) = 228,800 lbs. (041-0116)
Calculated weight of Structural Steel (M270 Grade 36) = 28,160 lbs. (041-0116)
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars designated (E) shall be epoxy coated.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8" (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

6. Concrete Sealer shall be applied to all exposed surfaces of piers.

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

8. The Organic Zinc Rich Primer/Epoxy/Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that the exterior surfaces and bottom of the bottom flange of the fascia beams, masked off connection surfaces, and field installed fasteners. All of which shall be touched up and finish coated in the field. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6. See Special Provision for "Cleaning and Painting New Metal Structures."

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 31 of 37.



MIN. BAR LAP
 #6(E) Bar = 4'-4"
 #7(E) Bar = 5'-0"
 #8(E) Bar = 6'-3"

PILE DATA
 Type: HP12x53
 Nominal Required Bearing: 419 kips
 Factored Resistance Available: 230 kips
 Est. Length: 19 Ft.
 No. Piles: 27 Including (1) Test Pile

Note:
 See Sht. 31 of 37 for
 Seismic Pile Detail

BILL OF MATERIAL

Bar No.	Size	Length	Shape
h21(E)	24 #6	24'-10"	—
h22(E)	38 #6	30'-2"	—
n21(E)	10 #6	7'-9"	—
p21(E)	16 #8	20'-6"	—
p22(E)	24 #8	23'-0"	—
p23(E)	16 #8	13'-7"	—
p24(E)	48 #8	21'-6"	—
s21(E)	126 #5	13'-3"	□
s22(E)	60 #5	7'-10"	□
s23(E)	114 #5	18'-8"	□
s24(E)	126 #6	18'-4"	□
s25(E)	60 #5	9'-4"	□
s26(E)	72 #5	12'-9"	□
s27(E)	34 #5	11'-9"	□
sp21(E)	5 #5	12'-0"	AAA
t21(E)	63 #6	12'-6"	—
t22(E)	92 #7	20'-6"	—
u21(E)	14 #6	14'-2"	—
u22(E)	16 #6	16'-6"	—
v21(E)	80 #9	15'-6"	—
v22(E)	10 #6	7'-4"	—
w21(E)	40 #7	33'-4"	—
w22(E)	24 #6	32'-7"	—
Structure Excavation	Cu. Yd.	296	
Concrete Structures	Cu. Yd.	245.5	
Reinforcement Bars,	Pound	34350	
Epoxy Coated			
Furnishing Steel	Foot	494	
Piles, HP 12x53	Foot	494	
Driving Piles	Foot	494	
Test Pile, HP 12x53	Each	1	
Concrete Sealer	Sq. Ft.	615	

** Length is height of spiral.

REVISED 7-19-2021

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PIER DETAILS
 STRUCTURE NO. 041-0115 (NB)

DESIGNED - AI
 CHECKED -
 DRAWN - GLD
 CHECKED -

USER NAME = Derek Cochran
 CHECKED -
 DRAWN -
 CHECKED -

REVISIONS

FILE NAME: L:\I0071908610\W0_6\Draw\Structures\028-Pier Details (NB) 041-0115.dgn
 SHEET 29 OF 37 SHEETS
 CONTRACT NO. 78560
 ILLINOIS FED. AID PROJECT

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 31 of 37.

