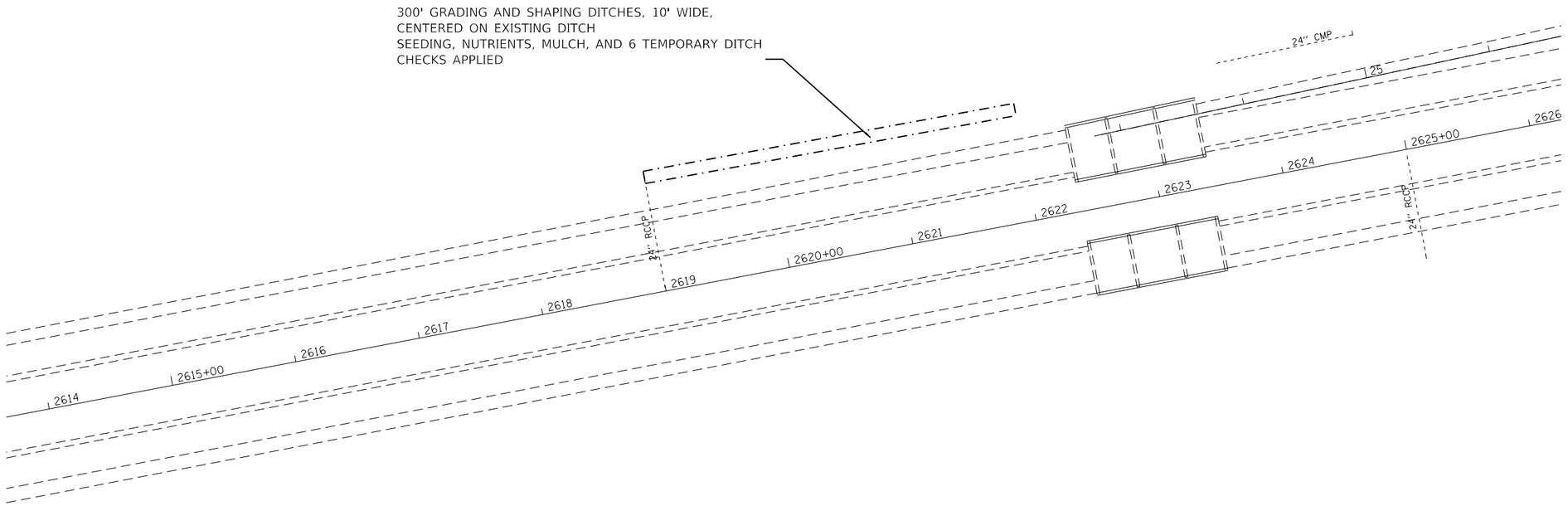

GRADING AND SHAPING DITCHES

SEEDING AND MULCH AREA DETAIL

SEE SEEDING & EROSION CONTROL SCHEDULE FOR QUANTITIES

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		DRAWN - MAM	REVISED -
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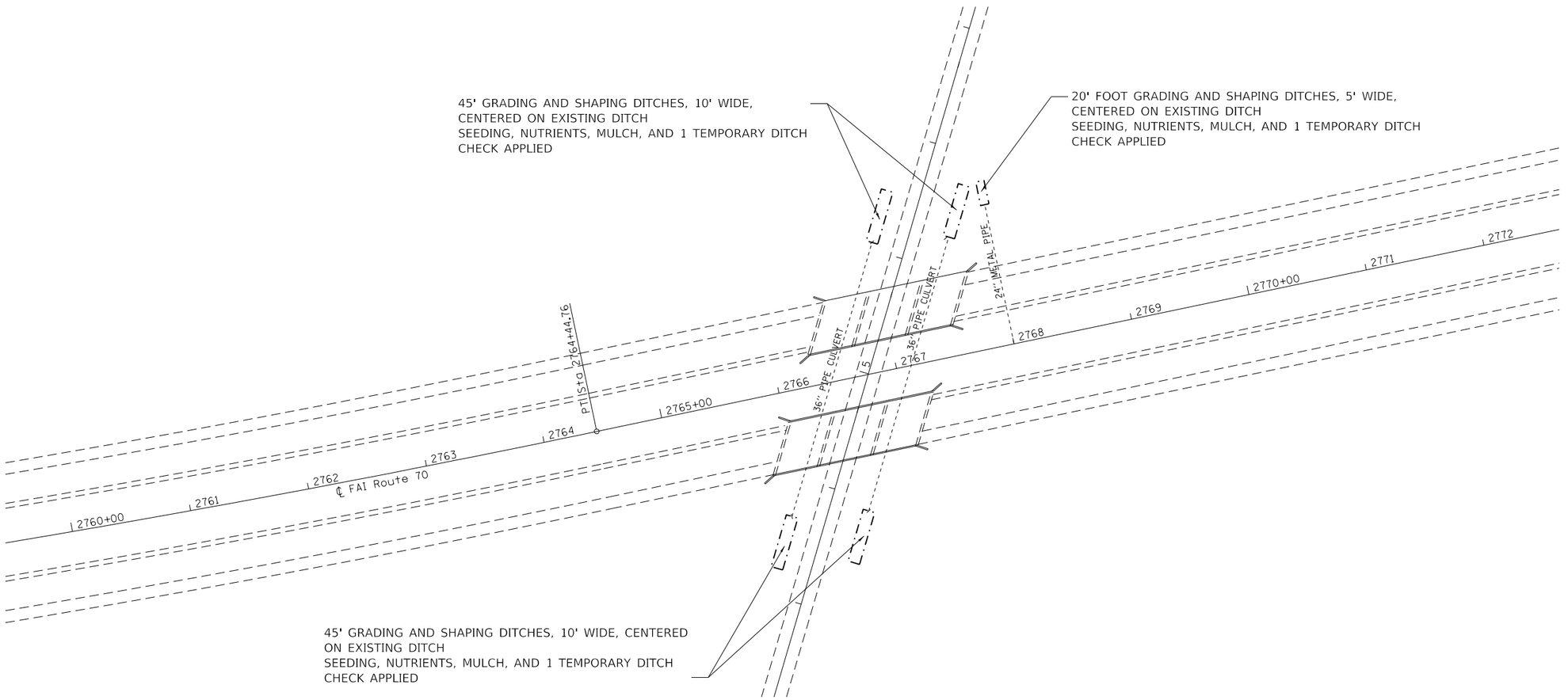
	PLOT DATE = 2/12/2018	DATE - 12/13/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL DETAIL

SCALE: | SHEET 02 OF 04 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	101
		CONTRACT NO. 76D23		
	ILLINOIS	FED. AID PROJECT		



GRADING AND SHAPING DITCHES

SEEDING AND MULCH AREA DETAIL

SEE SEEDING & EROSION CONTROL SCHEDULE FOR QUANTITIES

ch2m	USER NAME = MM027757	DESIGNED - TFN	REVISED -
		DRAWN - MAM	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - DM	REVISED -
	PLOT DATE = 2/12/2018	DATE - 12/13/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL DETAIL

SCALE: | SHEET 03 OF 04 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	102
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

℄ RAMP 1

℄ RAMP 2

℄ RAMP 3

℄ RAMP 4

EXISTING R.O.W.

PROPOSED PERIMETER EROSION BARRIER

PROPOSED PERIMETER EROSION BARRIER

PROPOSED PERIMETER EROSION BARRIER

PROPOSED PERIMETER EROSION BARRIER

PROPOSED PERIMETER EROSION BARRIER

STA. 2631+02.67 ℄ FAI RTE. 70=
STA. 966+18.30 ℄ ILL. RTE. 127

IL. RTE. 127

CURVE 12

STA. 974+55.71 ILL. RTE. 127 =
STA. 18+41.71 RAMP 1

STA. 973+59.39 ILL. RTE. 127 =
STA. 0+00 RAMP 2

STA. 957+03.91 IL. RTE. 127 =
STA. 15+16.24 RAMP 3

STA. 956+29.91 IL. RTE. 127 =
STA. 0+00 RAMP 4

LEGEND

FULL DEPTH PAVEMENT REPLACEMENT

0 50 100 200
SCALE IN FEET

MODEL: Default
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ch2m

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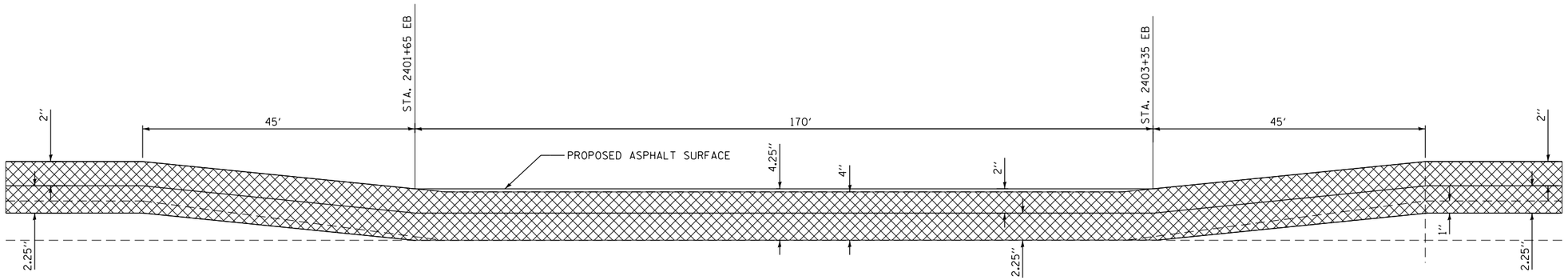
PLOT DATE = 2/12/2018	DATE - 12/13/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL DETAIL
ILLINOIS ROUTE 127

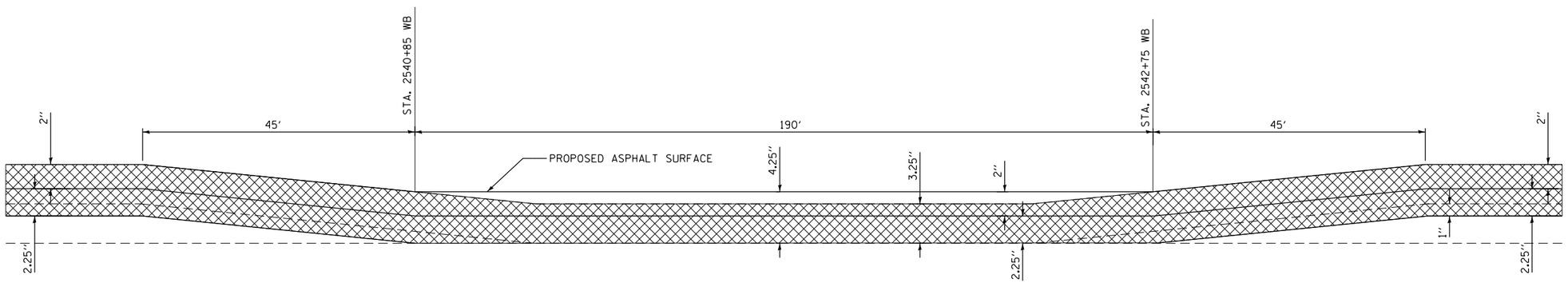
SCALE: 1" = 100' | SHEET 04 OF 04 SHEETS | STA. 959+00 | TO STA. 972+00

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	103
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



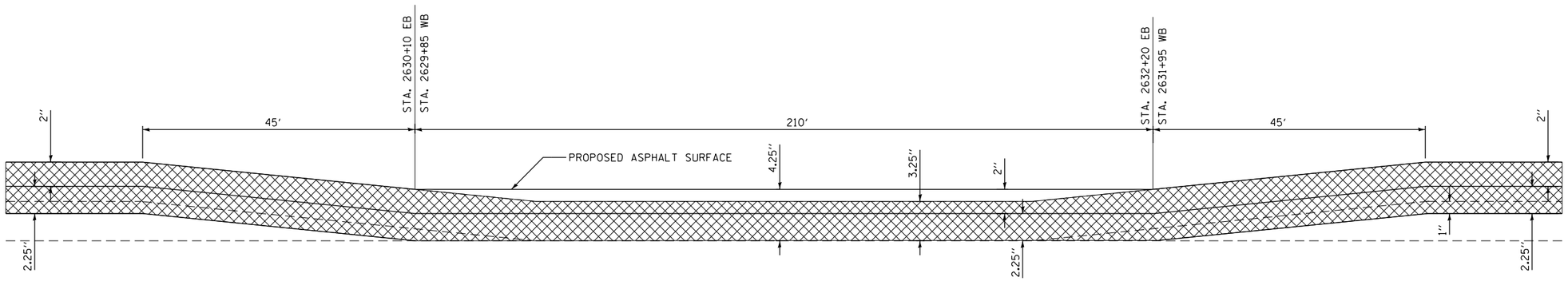
RESURFACING TRANSITION DETAIL

@ S.N. 003-0047
(UNDERPASS AT MILLERSBURG AVE)



RESURFACING TRANSITION DETAIL

@ S.N. 003-0044
(UNDERPASS AT T.R. 156)



RESURFACING TRANSITION DETAIL

@ S.N. 003-0031
(UNDERPASS AT IL 127)

NOTE
CONTRACTOR TO FIELD VERIFY CLEARANCES AND
PROVIDE DOCUMENTATION TO ENGINEER.

HMA SURFACE REMOVAL

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		DRAWN -	REVISED -		
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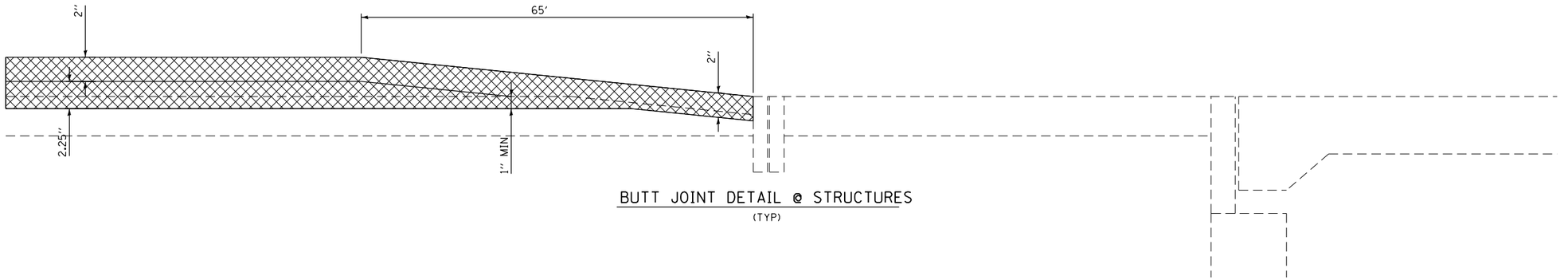
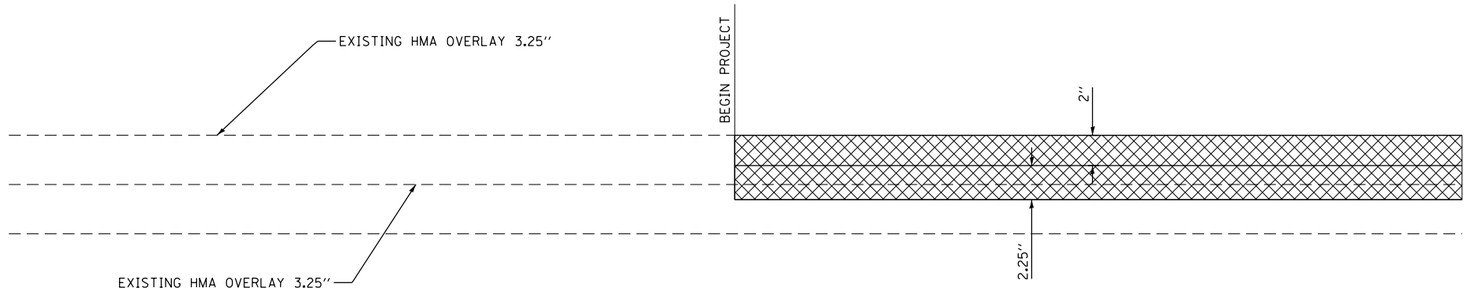
	PLOT DATE = 2/12/2018	DATE -	REVISED -		

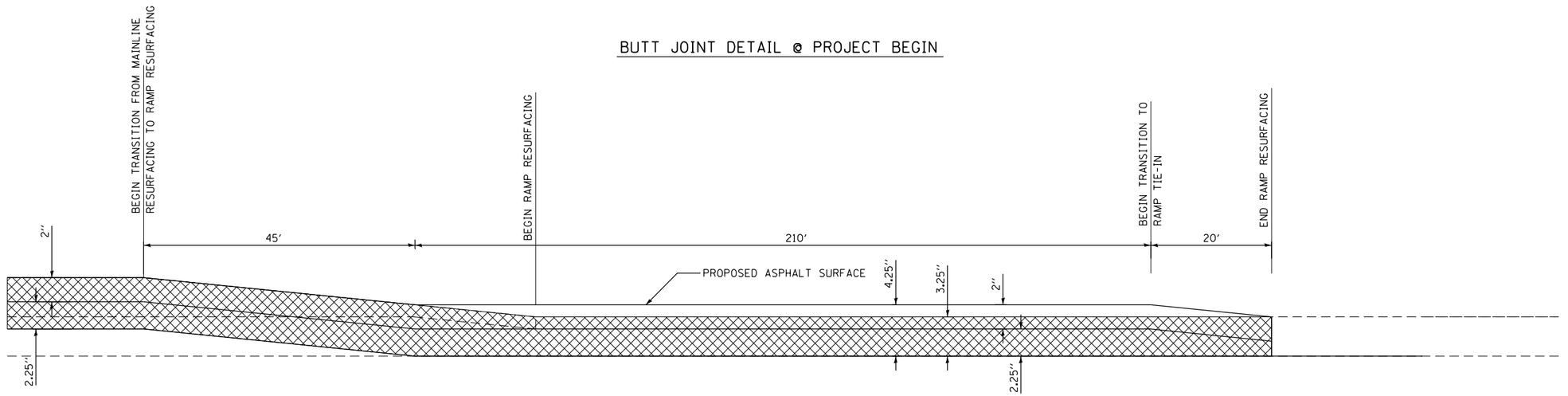
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	104
		CONTRACT NO. 76D23		
	ILLINOIS	FED. AID PROJECT		



BUTT JOINT DETAIL @ STRUCTURES
(TYP)



BUTT JOINT DETAIL @ PROJECT BEGIN



RESURFACING TRANSITION DETAIL
@ RAMPS

HMA SURFACE REMOVAL

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PLOT DATE = 2/12/2018	DATE -	REVISED -	

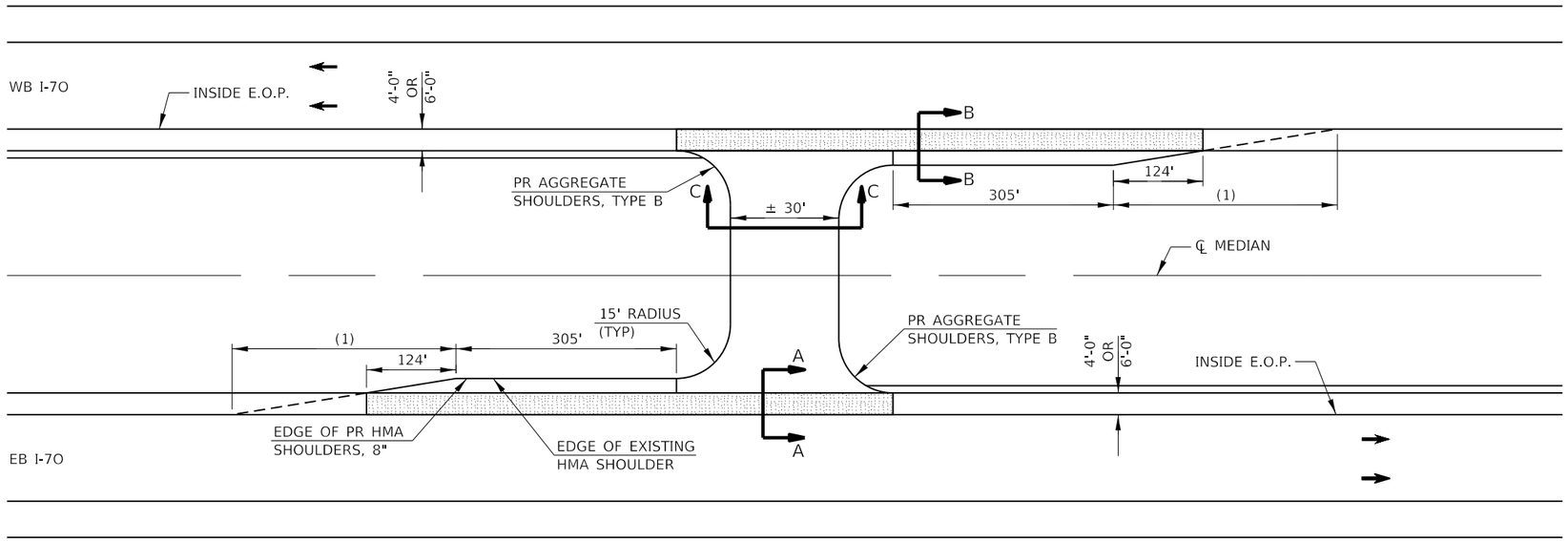
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RESURFACING DETAILS

SCALE: | SHEET 02 OF 03 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	105
		CONTRACT NO. 76D23		
	ILLINOIS	FED. AID PROJECT		

EMERGENCY MEDIAN CROSSOVERS

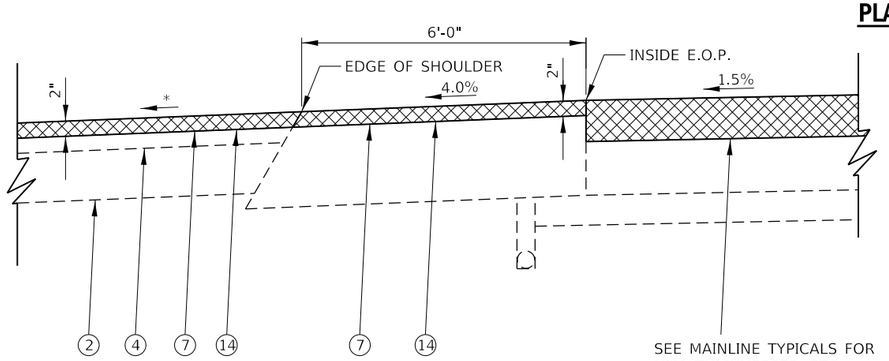


NOTES:
TWO DELINEATORS SHALL BE PLACED IN ADVANCE OF THE MEDIAN CROSSOVERS. ONE SHALL BE AT THE CROSSOVER, THE OTHER 800 FT IN ADVANCE OF THE FIRST. THE DELINEATOR AT THE CROSSOVER SHALL HAVE TWO REFLECTORS, AND THE DELINEATOR 800 FT IN ADVANCE SHALL HAVE THREE REFLECTORS

OMIT RUMBLE STRIPS IN SHADED ▨ AREAS OF SHOULDER

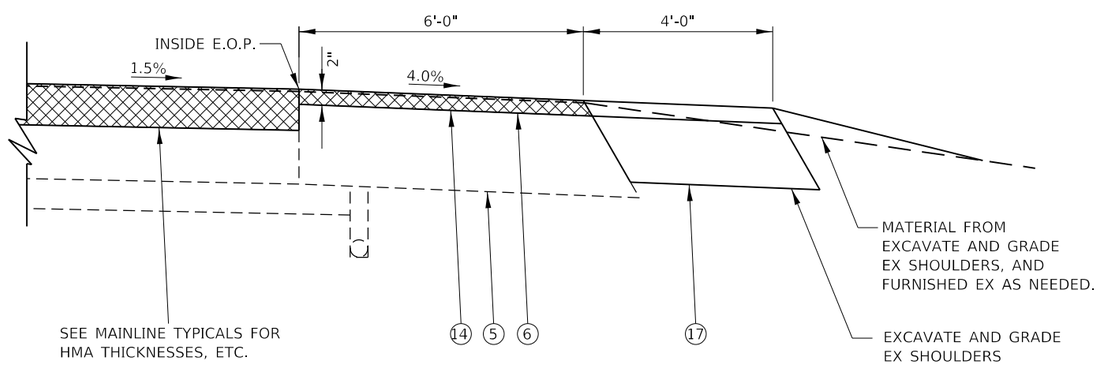
(1) 31:1 TAPER RATE
248' FOR 4' SHOULDER
310' FOR 6' SHOULDER

PLAN VIEW

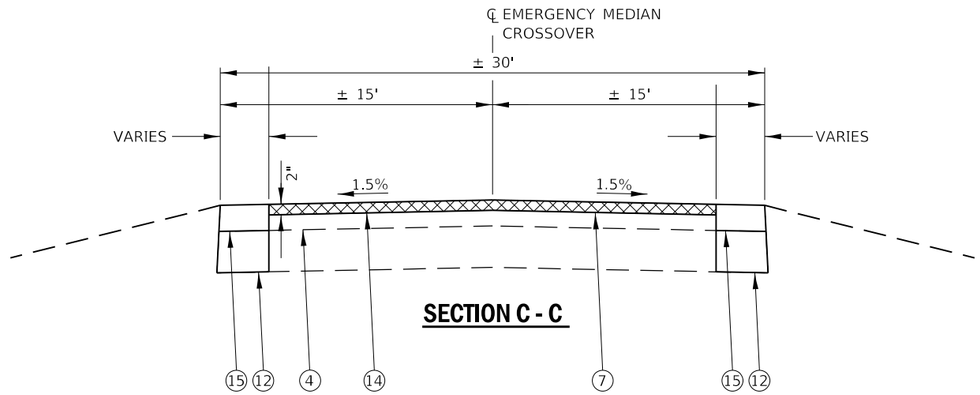


* - MAINTAIN SLOPES AWAY FROM MAINLINE PAVEMENT TO ENSURE PROPER DRAINAGE INTO MEDIAN DITCHES.

SECTION A - A



SECTION B - B



SECTION C - C

LEGEND

1. EX AGGREGATE SUB-BASE, 4"
2. EX AGGREGATE BASE COURSE
3. EX P.C.C. PAVEMENT
4. EX HOT-MIX ASPHALT OVERLAY
5. EX HOT-MIX ASPHALT SHOULDER
6. PR HOT-MIX ASPHALT SURFACE REMOVAL 1½"
7. PR HOT-MIX ASPHALT SURFACE REMOVAL 2"
8. PR HOT-MIX ASPHALT SURFACE REMOVAL 3¼"
9. PR HOT-MIX ASPHALT SURFACE REMOVAL 5"
10. PR POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, 2¼"
11. PR POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, 3½"
12. PR POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, 5¾"
13. PR POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, 1½"
14. PR HOT-MIX ASPHALT SURFACE COURSE, SMA, N80 2"
15. PR HOT-MIX ASPHALT SURFACE COURSE, SMA, N80 4¼"
16. PR AGGREGATE SHOULDERS, TYPE B
17. PR HOT-MIX ASPHALT SHOULDERS, 8"

MODEL: Sheet
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	DRAWN - MAM	REVISED -	
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PLOT DATE = 2/12/2018	DATE - 12/13/2017	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EMERGENCY MEDIAN CROSS OVER DETAIL

SCALE: | SHEET 03 OF 03 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	106
		CONTRACT NO. 76D23		
		ILLINOIS	FED. AID PROJECT	

LEGEND

PROPOSED LONGITUDINAL CONSTRUCTION JOINT WITH NO. 6 BARS AT 36" CTS.

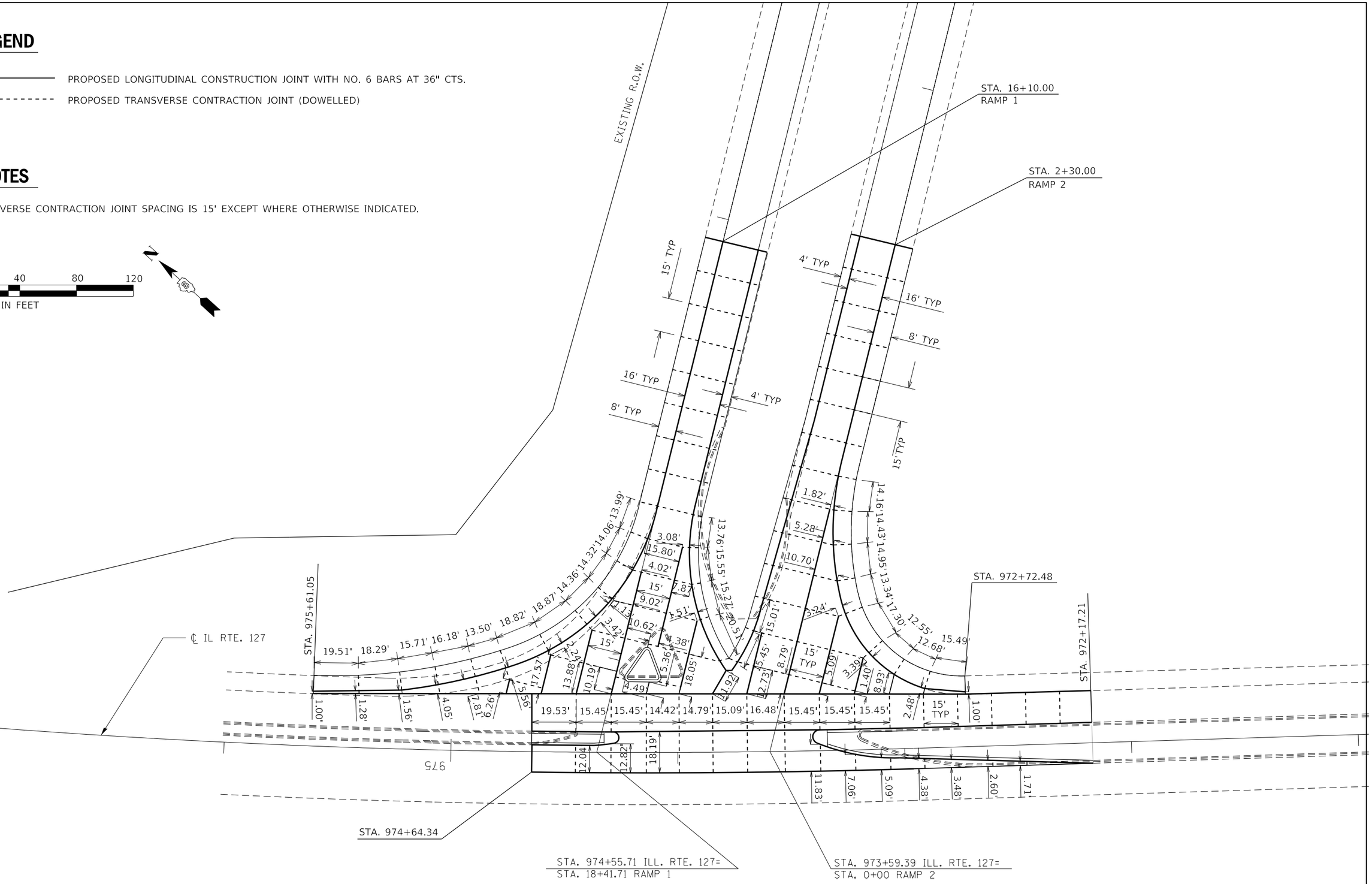
PROPOSED TRANSVERSE CONTRACTION JOINT (DOWELLED)

NOTES

1. TRAVERSE CONTRACTION JOINT SPACING IS 15' EXCEPT WHERE OTHERWISE INDICATED.

0 40 80 120

SCALE IN FEET



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PLOT DATE = 2/12/2018	DATE - 1/30/2018	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT DETAIL
IL RTE. 127 I–70 EB INTERSECTION

SCALE: | SHEET 01 OF 02 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	106A
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

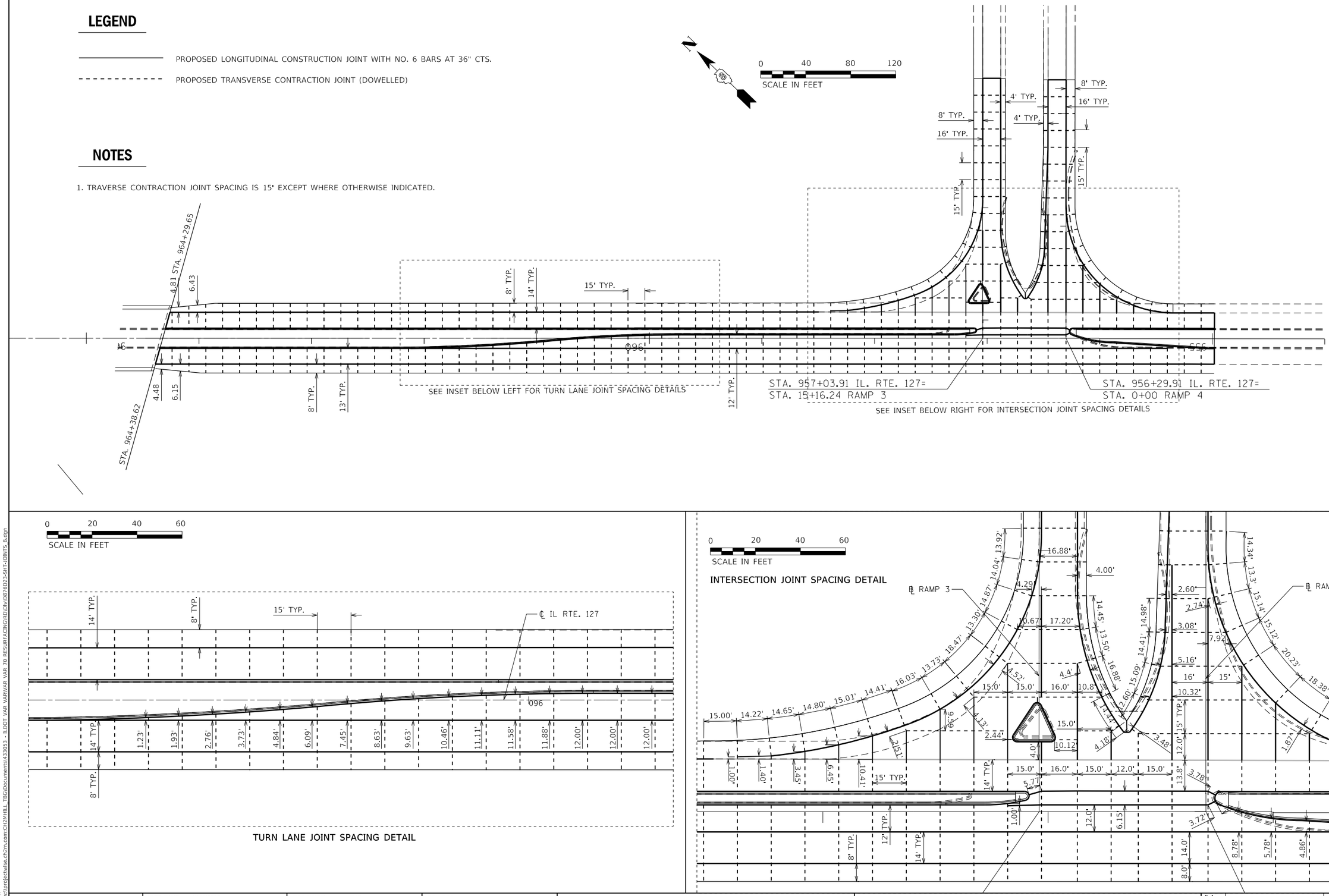
LEGEND

PROPOSED LONGITUDINAL CONSTRUCTION JOINT WITH NO. 6 BARS AT 36" CTS.

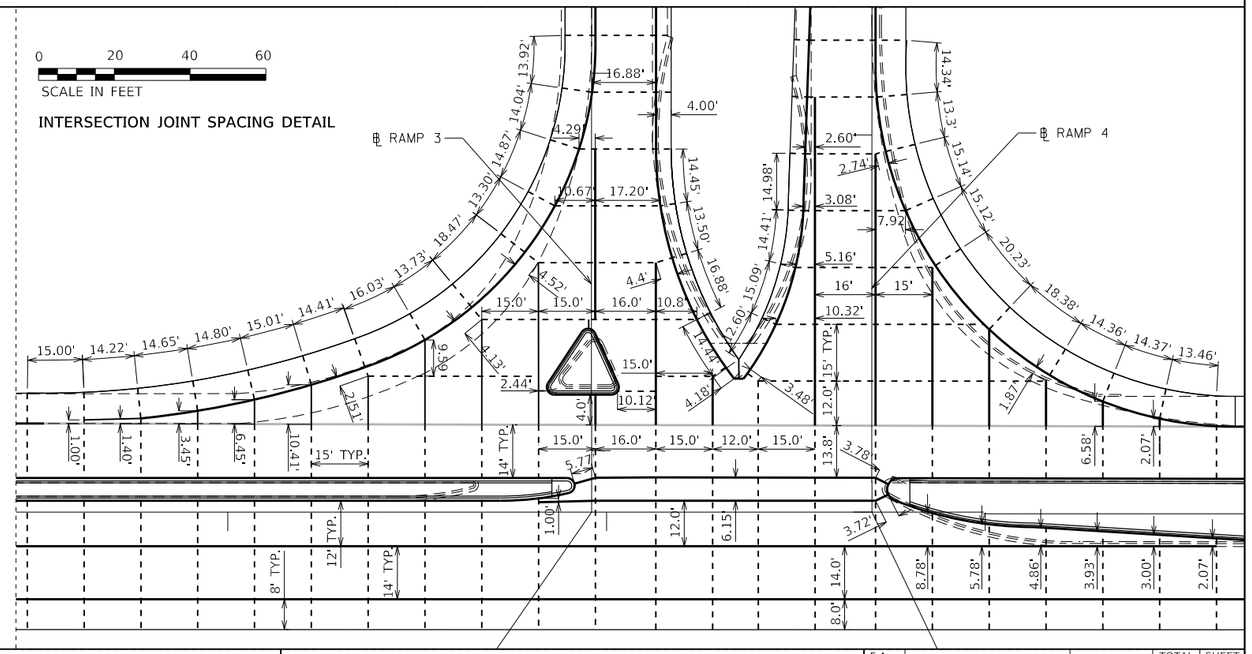
PROPOSED TRANSVERSE CONTRACTION JOINT (DOWELLED)

NOTES

1. TRAVERSE CONTRACTION JOINT SPACING IS 15' EXCEPT WHERE OTHERWISE INDICATED.



TURN LANE JOINT SPACING DETAIL



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PLOT DATE = 2/12/2018	DATE - 1/30/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT DETAIL
IL RTE. 127 AT I–70 WB INTERSECTION

SCALE: | SHEET 02 OF 02 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	106B
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

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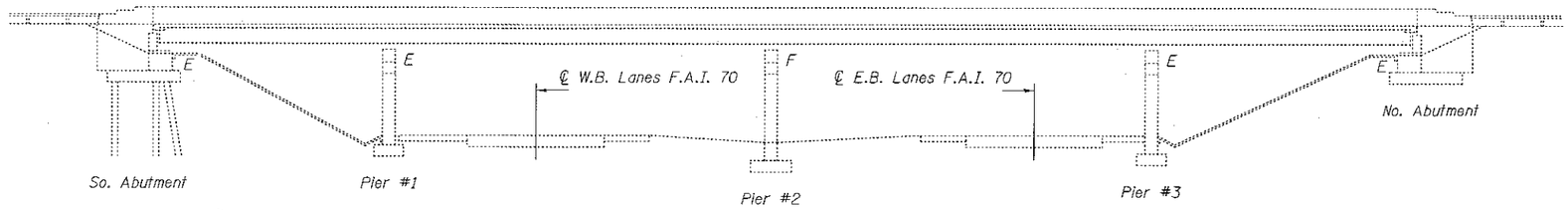
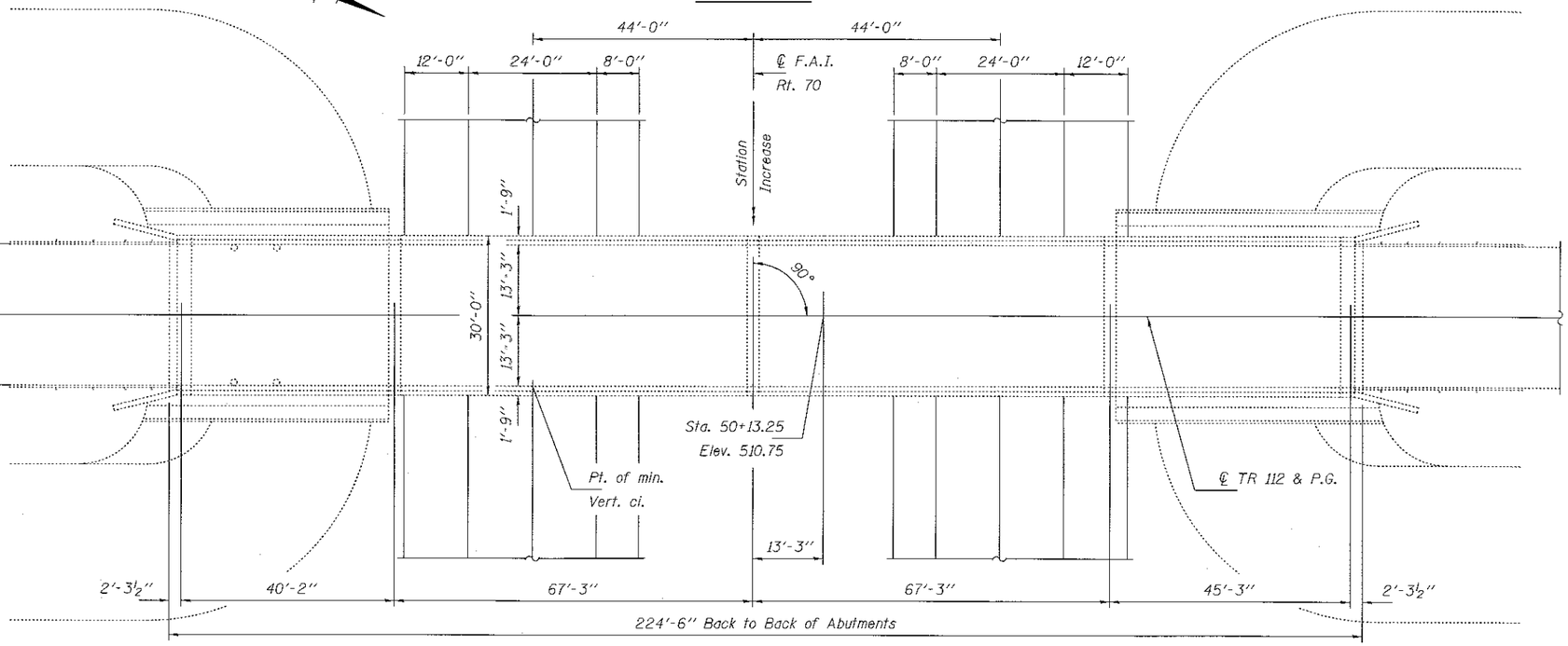
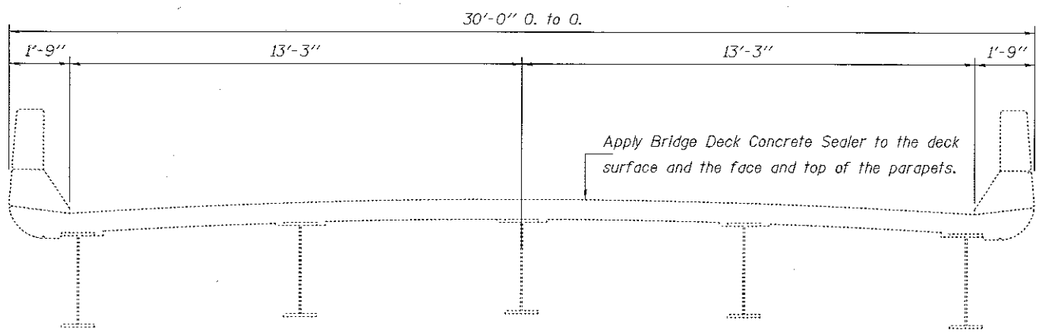


ELEVATION



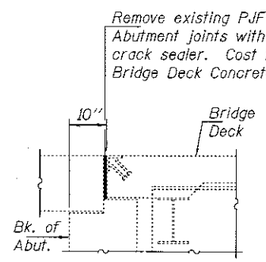
PLAN



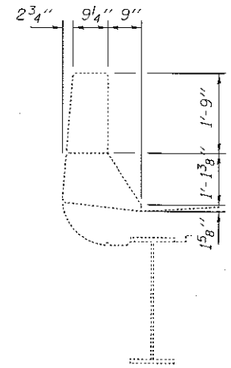
CROSS SECTION

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.



SECTION THRU ABUTMENT



SECTION THRU PARAPET

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Bridge Deck Concrete Sealer	Sq. Ft.	7688

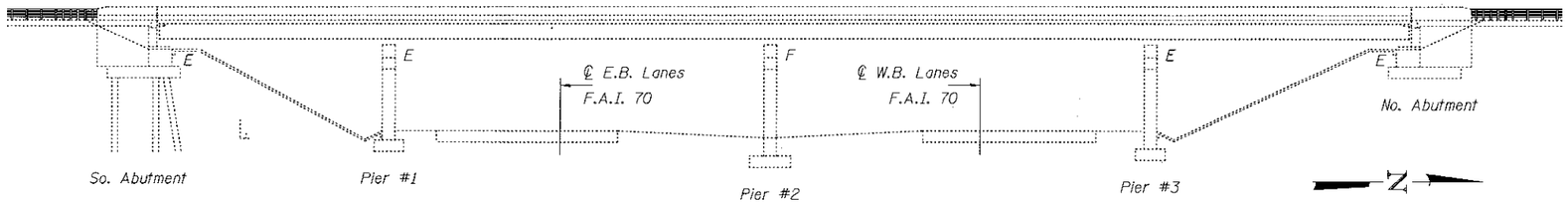
EXPIRES 11-30-2018

DESIGNED - Erwin Lopez	EXAMINED	Timothy A. Bollenbacher ENGINEER OF STRUCTURAL SERVICES	DATE JANUARY 30, 2018
CHECKED - Adriana T. Holloway	PASSED	A Carl Preuss ENGINEER OF BRIDGES AND STRUCTURES	REVISED
DRAWN J. Schneller			REVISED
CHECKED - ESC ATH			

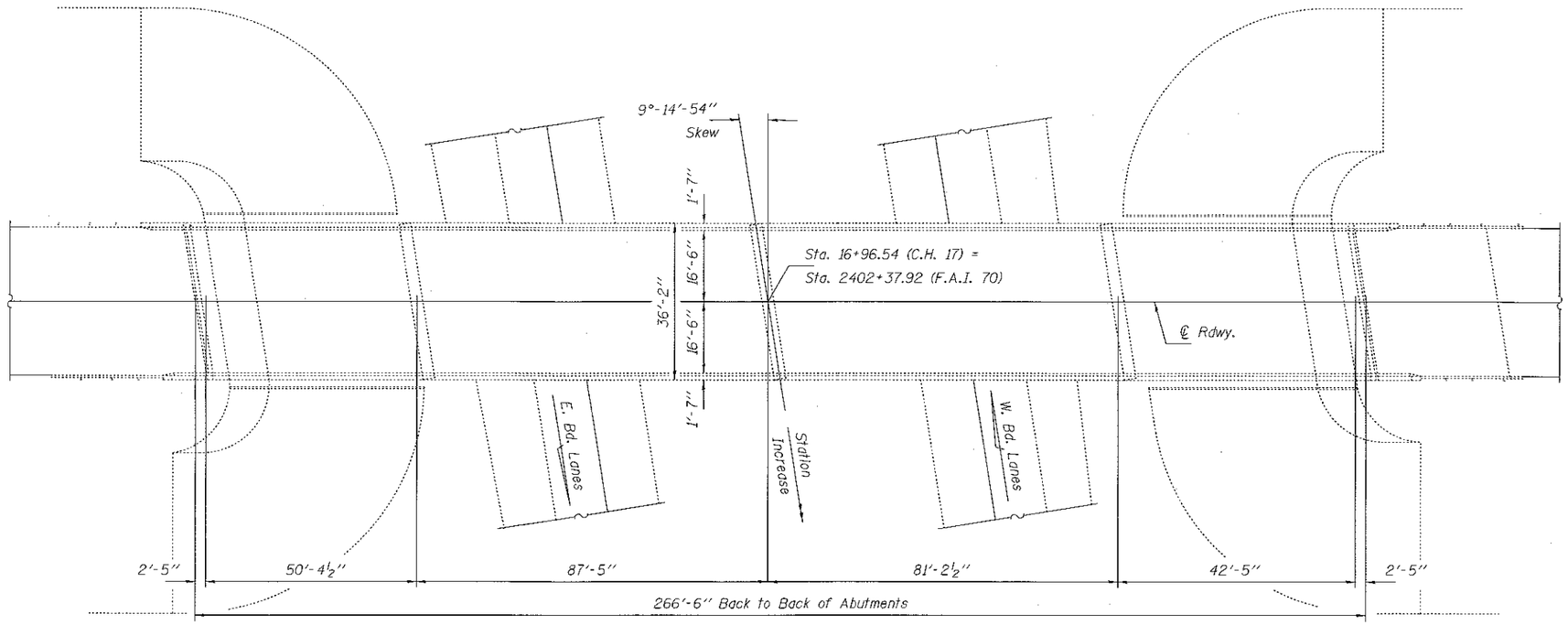
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION
T.R. RT. 112 OVER F.A.I. RT. 70
SN 003-0043
SHEET NO. 1 OF 1 SHEETS

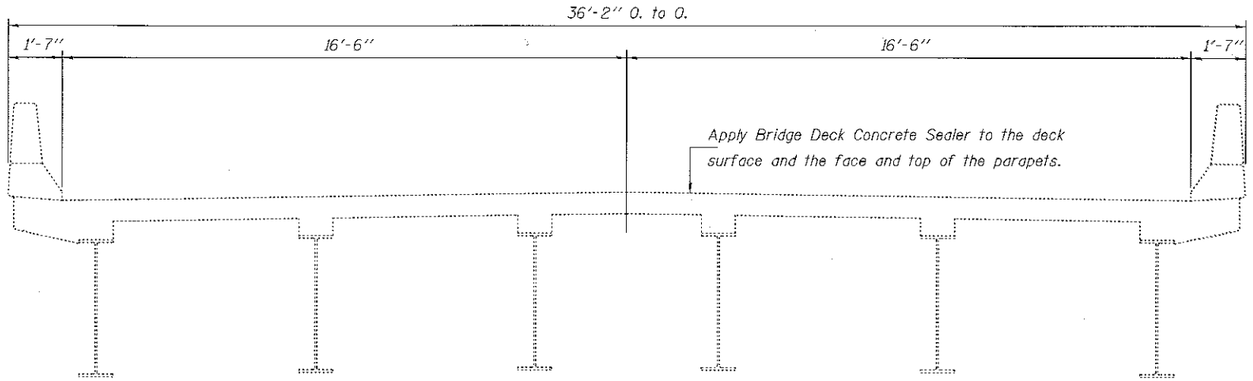
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	107
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		



ELEVATION



PLAN

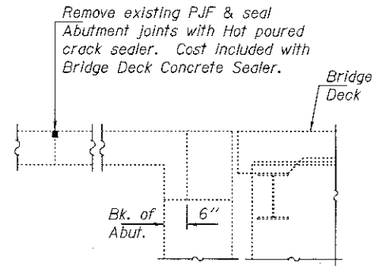


CROSS SECTION

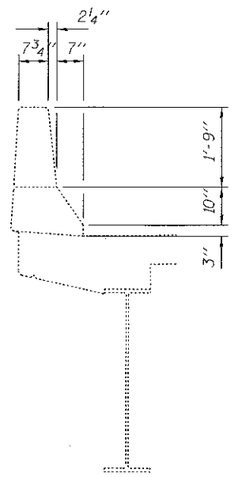
EXPIRES 11-30-2018

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.



SECTION THRU ABUTMENT



SECTION THRU PARAPET

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Bridge Deck Concrete Sealer	Sq. Ft.	10711

DESIGNED	Irwin Lopez	EXAMINED	Timothy A. Anderson	DATE	JANUARY 30, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN & ELEVATION C.H. 17 OVER F.A.I. RT. 70 SN 003-0047 SHEET NO. 1 OF 1 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED	Adriana T. Holloway		ENGINEER OF STRUCTURAL SERVICES					70	3-(2,3,4)RS-1	BOND	235	108
DRAWN	J. Schneller	PASSED	J. Carl Snyder	REVISED						CONTRACT NO. 76D23		
CHECKED	EJG ATH		ENGINEER OF BRIDGES AND STRUCTURES	REVISED						ILLINOIS FED. AID PROJECT		

Bench Mark: Cut square in the center of the lowest of three tiers of the southwest wingwall of S.N. 003-0007, Sta. ±2412+58, ±69.3' Right, Elev. 584.73.

Existing Structure: S.N. 003-0007 (E.B.) and S.N. 003-0008 (W.B.) were originally built in 1967 as F.A.I. 70, Section 3-3VB. The back-to-back abutment length is 202'-0" and the out-to-out deck width is 42'-0". Each structure consists of a three span steel 36WF superstructure supported by concrete stub abutments founded on concrete piles and concrete column piers founded on timber pile supported footings. Concrete deck to be removed and replaced.

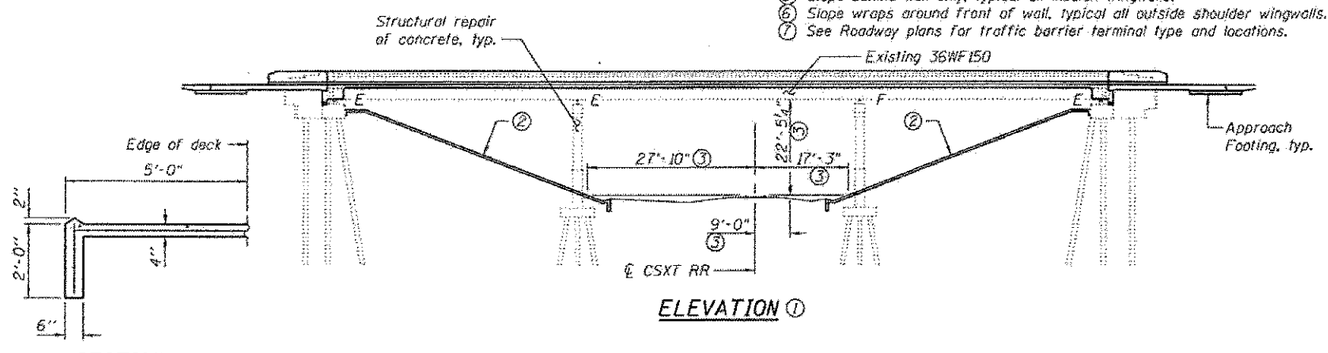
Traffic Control: One lane of traffic will be maintained in each direction by utilizing staged construction.

Salvage: None

SCOPE OF WORK

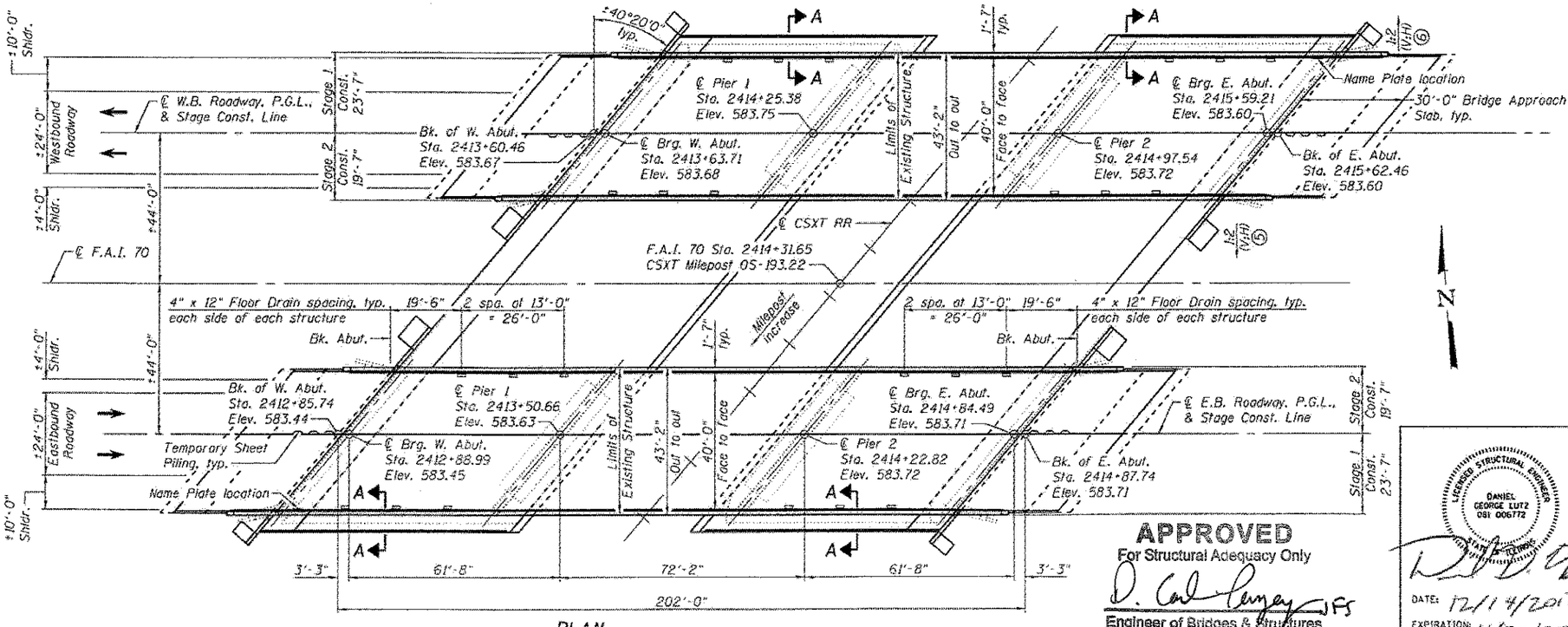
1. Remove and replace existing concrete deck.
2. Make new deck composite in positive moment regions.
3. Replace all existing expansion bearings with elastomeric bearings.
4. Reconfigure existing abutments and wingwalls to semi-integral.
5. Complete structural repair of concrete at substructure units.
6. Replace existing slopewall with new 4" slopewall.
7. Raise approach roadway to match proposed profiles.
8. Replace approach guardrails.
9. Paint steel on Paint Only contract.

Notes:
1. No free fall deck drains will be permitted in the span over the tracks or within 10 ft. of cross arms of a railroad pole line.
2. New 4" slopewall. Match existing grade.
3. Existing and proposed clearance.
4. Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.
5. Slope behind wall only, typical all median wingwalls.
6. Slope wraps around front of wall, typical all outside shoulder wingwalls.
7. See Roadway plans for traffic barrier terminal type and locations.

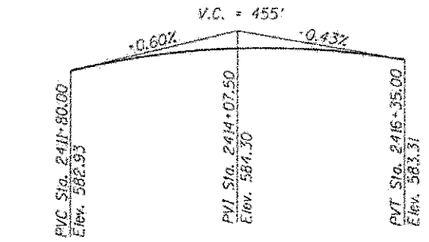


ELEVATION ①

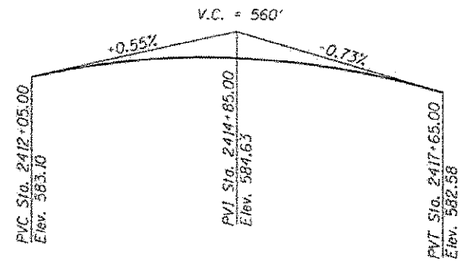
SECTION A-A



PLAN



PROFILE GRADE - E.B. ROADWAY
(along ℄ of roadway)



PROFILE GRADE - W.B. ROADWAY
(along ℄ of roadway)

DESIGN SPECIFICATIONS (New Const.)

2002 AASHTO
1995 FHWA Seismic Retrofitting Manual

DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

FIELD UNITS (Exist. Construction)
f'c = 3,500 psi
fy = 40,000 psi (Reinforcement)
fy = 36,000 psi (Structural Steel)

SEISMIC DATA

Seismic Performance Category (SPC) = B
Horizontal Bedrock Acceleration Coefficient (A) = 0.082g
Site Coefficient (S) = 1.2

LOADING HS20-44 & ALT (New Const.)

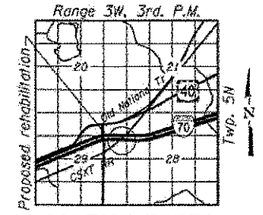
No future wearing surface allowed.

STATION 2414+24.10
RE-BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 3-(2,3,4)RS-1
LOADING HS20-44 & ALT
STR. NO. 003-0007

NAME PLATE (E.B.) ④
See Std. 515001

STATION 2414+24.10
RE-BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 3-(2,3,4)RS-1
LOADING HS20-44 & ALT
STR. NO. 003-0008

NAME PLATE (W.B.) ④
See Std. 515001



LOCATION SKETCH

DANIEL GEORGE LUTZ 081 006772 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS

DATE: 12/14/2017
EXPIRATION: 11/30/2018

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

GENERAL PLAN & ELEVATION
I-70 OVER CSXT RAILROAD
F.A.I. RTE. 70 - SEC. 3-(2,3,4)RS-1
BOND COUNTY
STATION 2414+24.10
STRUCTURE NO. 003-0007 (E.B.)
STRUCTURE NO. 003-0008 (W.B.)

FILE NAME = H:\P\11841\11841.026 - District 8 Deck Replacements\Structure\Sht 003-0007_0008+Interstate\003D0007_0008-76D23-R01-General Plan & Elevation.dgn

DATES ASSOCIATES — ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - JAD	REVISED -
		CHECKED - KBC	REVISED -
	PLOT SCALE =	DRAWN - SJN	REVISED -
	PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	109
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts.

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Cleaning and field painting of structural steel shall be done under a separate painting contract.

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

Slopewall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

Refer to the CSX Transportation Public Project Information Manual for additional requirements needed for working on/above/adjacent to CSXT. Specific sections that pertain to this project are: Special Provisions for Construction near CSXT Property, Overhead Bridge Criteria, Construction Submission Criteria, and Insurance Requirements for Public Projects.

At project completion, Agency or its Contractor shall submit a set of "As-Built" plans for the proposed bridge construction and any work performed on the CSXT right-of-way. Please forward plans to CSX's authorized Representative.

Construction Schedule-Submit a detailed construction schedule for the duration of the project clearly indicating the time periods while working on and around CSXT right-of-way. As the work progresses, this schedule shall be updated and resubmitted as necessary to reflect changes in work sequence, duration and method, etc.

Contractor access will be limited to the immediate project area only. The CSXT right-of-way outside the project area may not be used for contractor access to the project site.

CSXT may require the Contractor to install filter fabric over the track(s) and ballast to prevent any construction debris from fouling the ballast. This will be determined during actual construction activities by CSXT or its Representative. Fabric will remain in place until all construction activities are complete.

Contractor will be required to install falsework/demo shield protection to prevent any construction debris from reaching CSXT property. The falsework/demo shield protection will be installed prior to the deck being removed and will stay in place for the duration of the construction activities. The falsework/demo shield shall be designed and constructed in accordance to CSX's Construction Submission Criteria.

All waste materials generated by this project, including but not limited to washing with cleaning solvents, blasting, scraping, brushing and painting operations, shall be the responsibility of the Project Sponsor or its Contractor and shall be contained, collected and properly disposed of by the Project Sponsor or its Contractor. The Project Sponsor and its Contractor agree to fully comply with all federal, state, and local environmental laws, regulations, statutes and ordinances at all times.

Demolition Procedures and Erection Procedures are required to be submitted to CSXT, or its Representative, in accordance with the current CSXT Construction Submission Criteria. The CSXT Construction Submission Criteria should be referred to and complied with prior to the preparation of submissions, as it contains specific requirements that could impact the Contractor's material selection and methods or operations for work near the railroad. Revisions to Contractor submissions may not be field approved. Any deviation(s) from a previously accepted plan including equipment substitutions will require a formal resubmission of the procedure for review and acceptance prior to performing any work. A Structural Engineer in the State of Illinois must sign and seal the plans. Up to thirty (30) days will be required to review all construction submissions. Up to an additional thirty (30) days will be required to review any subsequent submissions returned not approved.

Means and Methods-The Contractor shall develop a detailed submission indicating the progression of work with specific times when tasks will be performed for work activities that are on or in the vicinity of the CSXT property. This submission may require a walkthrough at which time CSXT and/or the Representative will be present. Work will not be permitted to commence until the Contractor has provided CSXT with a satisfactory plan that the project will be undertaken without scheduling, performance or safety related issues. Provide a listing of the anticipated equipment to be used, the location of all equipment to be used and ensure a contingency plan of action is in place should a primary piece of equipment malfunction. All work in the vicinity of CSXT property that has the potential of affecting CSXT train operations must be submitted and approved by CSXT prior to work being performed. This submission will also include a detailed narrative discussing the coordination of project safety issues between Contractor, CSXT and the Representative. The narrative shall address project level coordination and day to day, specific work operations including crane and equipment operations, erection plans and temporary works.

Temporary Construction Clearance-Ensure all falsework, bracing or forms have a minimum horizontal clearance of 12 feet measured perpendicular to the centerline of the nearest track, and a minimum vertical clearance of 22 feet as measured from the top of rail profile.

The Contractor may not use CSXT right-of-way for storage of materials or equipment during construction without prior CSXT approval. The CSXT right-of-way must remain clear for railroad use at all times. Equipment may not be positioned to block the railroad access road, track area or any part of the CSXT right-of-way without prior CSXT approval.

The Contractor must ensure that proper erosion control is implemented on and adjacent to CSXT right-of-way during construction. The Contractor must prevent silt and debris accumulation in the railroad roadbed, ditches and other railroad facilities. The Contractor may be required to submit a detailed erosion control plan for review and acceptance by CSXT or their Representative prior to performing any work.

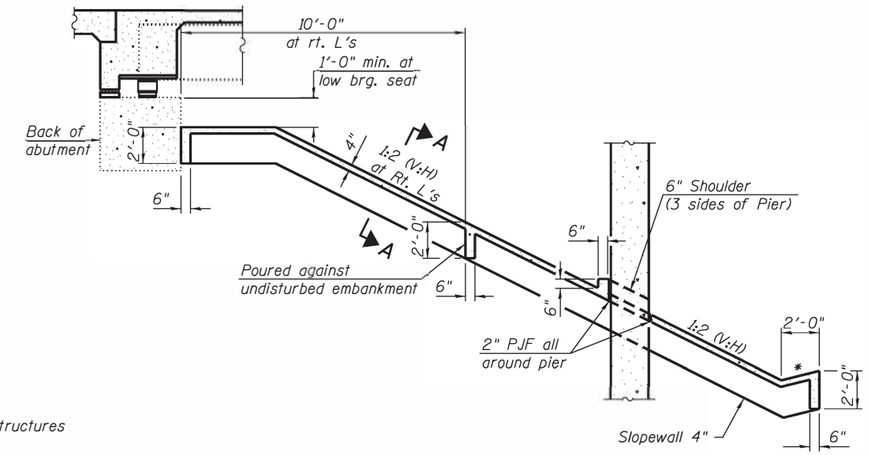
Upon completion of the work on CSXT property, the Contractor shall request the Owner to arrange a final inspection of the project with the Railroad's Project Engineer or his authorized Representative.

INDEX OF SHEETS

Sheet No.	Description
1	General Plan & Elevation
2-3	General Data
4	Stage Construction Details
5	Temporary Concrete Barrier
6-9	Top of Slab Elevations
10-11	Top of Approach Slab Elevations
12-13	Superstructure
14	Superstructure Details
15	Diaphragm Details
16-18	Bridge Approach Slab Details
19	Framing Plan & Beam Details
20-21	Bearing Replacement Details
22-23	Abutment Concrete Removal
24-27	Abutment Details
28	Wingwall Extension Details
29	Pier Concrete Repairs
30	Bar Splicer Assembly and Mechanical Splicer Details
31	Concrete Parapet Slipforming Option

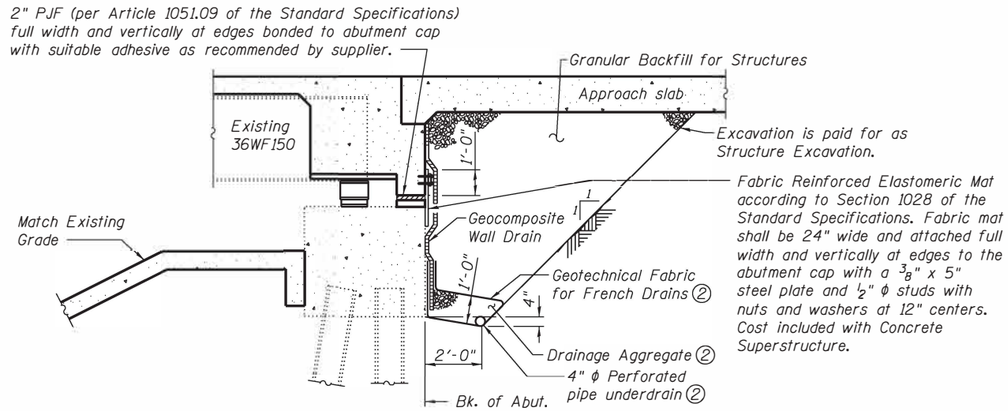
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	-	95.1	95.1
Slope Wall Removal	Sq. Yd.	-	2,282	2,282
Removal of Existing Concrete Deck No. 1	Each	2	-	2
Protective Shield	Sq. Yd.	-	-	674
Structure Excavation	Cu. Yd.	-	540	540
Floor Drains	Each	24	-	24
Concrete Structures	Cu. Yd.	-	116.3	116.3
Concrete Superstructure	Cu. Yd.	675.9	-	675.9
Bridge Deck Grooving	Sq. Yd.	2,196	-	2,196
Protective Coat	Sq. Yd.	2,762	-	2,762
Concrete Superstructure (Approach Slab)	Cu. Yd.	258.9	-	258.9
Furnishing and Erecting Structural Steel	Pound	8,240	-	8,240
Stud Shear Connectors	Each	8,022	-	8,022
Reinforcement Bars, Epoxy Coated	Pound	216,980	19,700	236,680
Bar Splicers	Each	1,424	168	1,592
Slope Wall 4 Inch	Sq. Yd.	-	2,413	2,413
Name Plates	Each	2	-	2
Elastomeric Bearing Assembly, Type I	Each	42	-	42
Anchor Bolts, $\frac{3}{4}$"	Each	112	-	112
Anchor Bolts, 1"	Each	28	-	28
Temporary Sheet Piling	Sq. Ft.	-	1,213	1,213
Geocomposite Wall Drain	Sq. Yd.	-	249	249
Jack and Remove Existing Bearings	Each	42	-	42
Cleaning Bridge Seats	Sq. Ft.	-	636	636
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)	Sq. Ft.	-	100.7	100.7
Pipe Underdrains for Structures 4"	Foot	-	449	449
Granular Backfill for Structures	Cu. Yd.	-	454	454



SECTION THRU CONCRETE SLOPEWALL

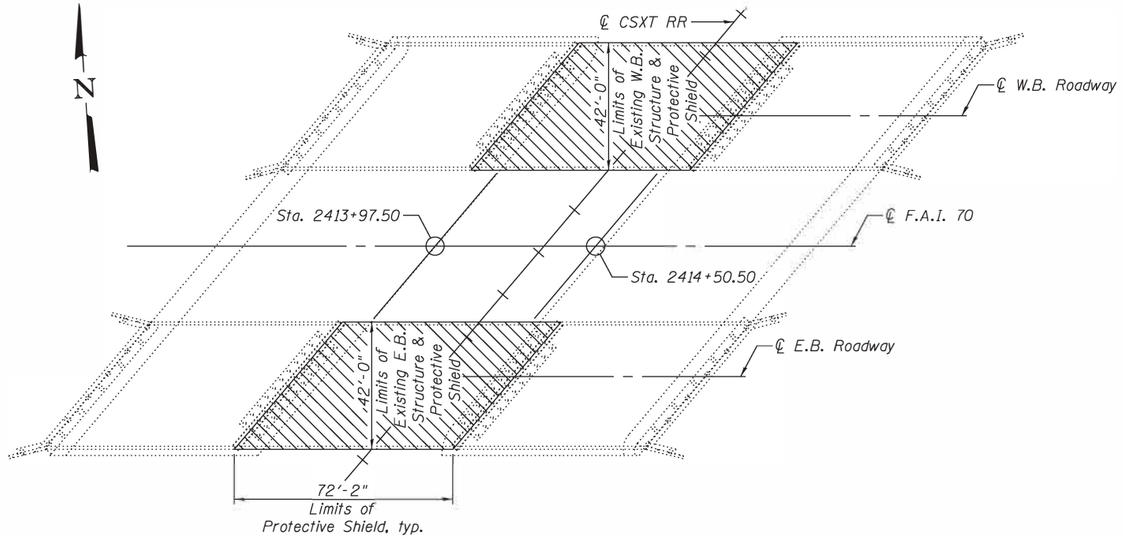
*1:4 (V:H)



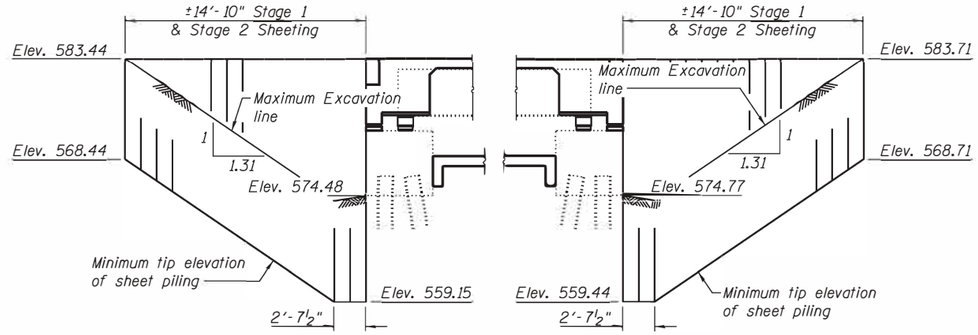
SECTION THRU SEMI-INTEGRAL ABUTMENT (1)

(Horiz. dim. at Rt. L's)

Notes:
1. All drainage system components shall extend to 2'-0" from the end of each wingwall extension 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).
2. Included in the cost of Pipe Underdrains for Structures, see Special Provisions.
3. For Section A-A, see sheet 1 of 31.



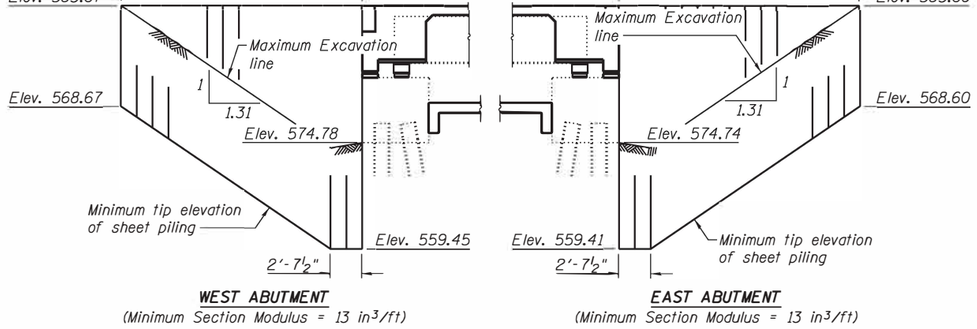
PROTECTIVE SHIELD DETAIL



WEST ABUTMENT
(Minimum Section Modulus = 13 in^3/ft)

EAST ABUTMENT
(Minimum Section Modulus = 13 in^3/ft)

TEMPORARY SHEET PILING DETAIL - E.B. STRUCTURE



WEST ABUTMENT
(Minimum Section Modulus = 13 in^3/ft)

EAST ABUTMENT
(Minimum Section Modulus = 13 in^3/ft)

TEMPORARY SHEET PILING DETAIL - W.B. STRUCTURE

Notes:
(1) If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

FILE NAME = H:\P\13841\13841.00B - District 8 Deck Replacements\Structural\SN 003-0007 & 0008\Microstation\00300007_00008-76D23-0003-General Data.dgn

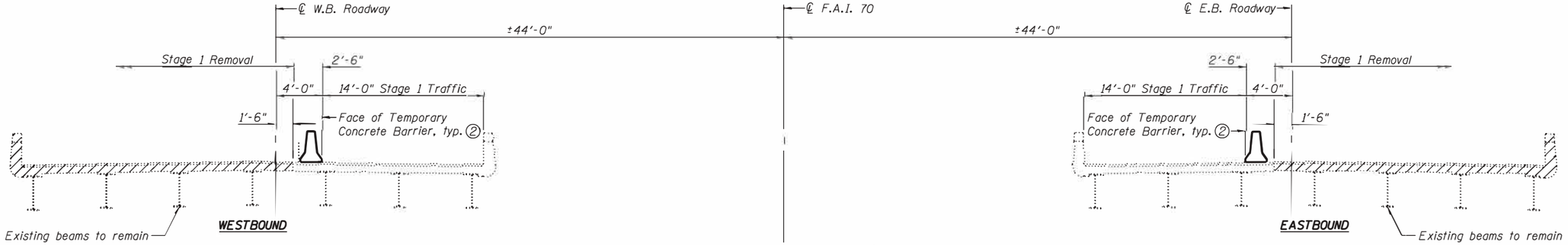
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - SJN	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - SJN	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -	

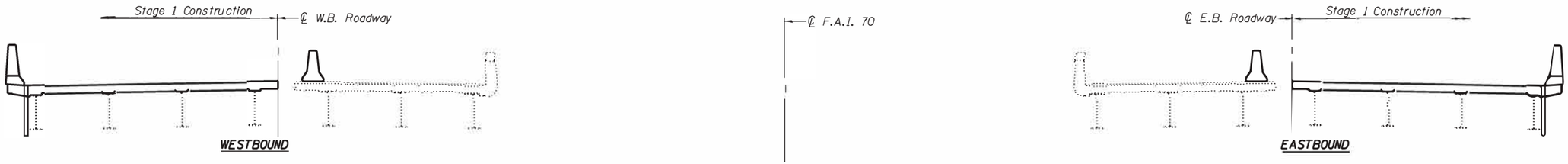
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 3 OF 31 SHEETS

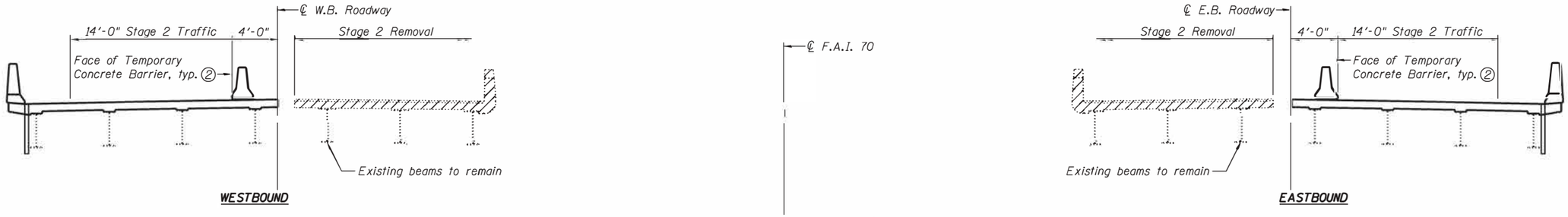
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	111
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



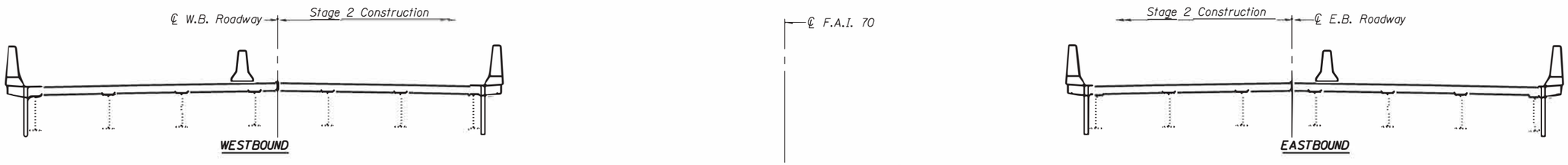
STAGE 1 REMOVAL (1)



STAGE 1 CONSTRUCTION (1)



STAGE 2 REMOVAL (1)



STAGE 2 CONSTRUCTION (1)

Notes:

1. All views shown looking East.
2. For details of Temporary Concrete Barrier, see Sheet 5 of 31. For quantity of Temporary Concrete Barrier and related traffic control, see roadway plans.
3. Hatched area indicates Removal of Existing Concrete Deck.

FILE NAME = H:\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0007 & 0008\Microstation\003x0007_0008-76D23-824-Stage Construction Details.dgn

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED -	REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**
		CHECKED -	REVISED -	
	PLOT SCALE =	DRAWN - KBC	REVISED -	
	PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 4 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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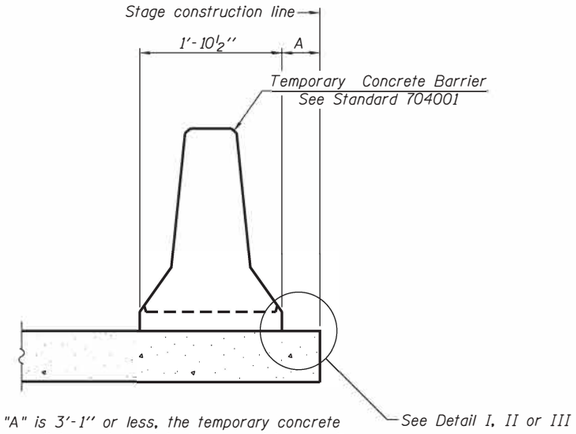
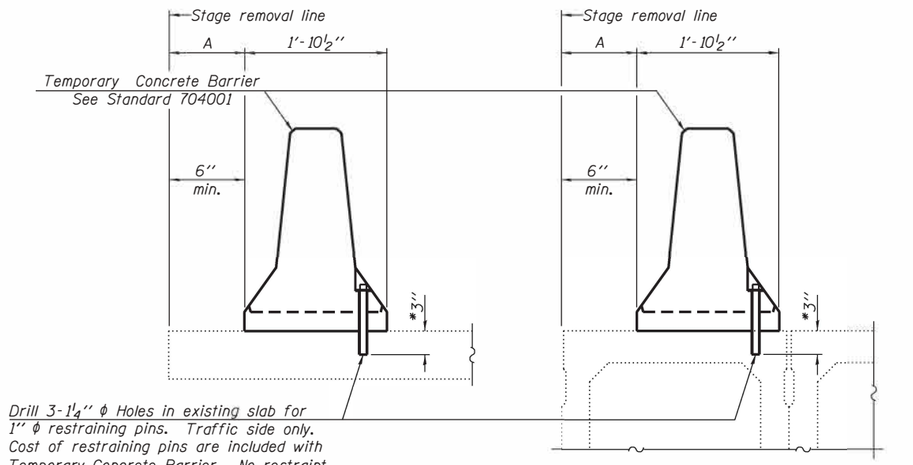
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



When "A" is 3'-1'' or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1''.

NEW SLAB OR NEW DECK BEAM

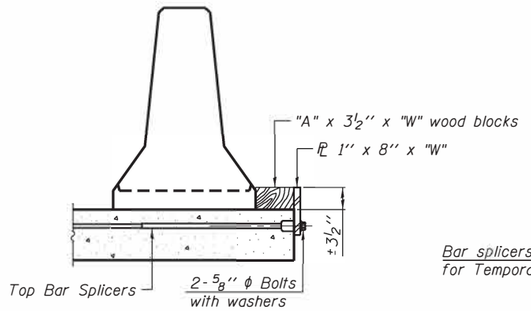


EXISTING SLAB

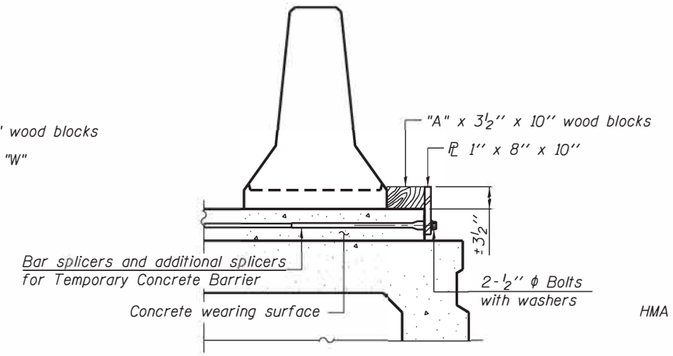
* When hot-mix asphalt wearing surface is present, embedment shall be 3'' plus the wearing surface depth.

EXISTING DECK BEAM

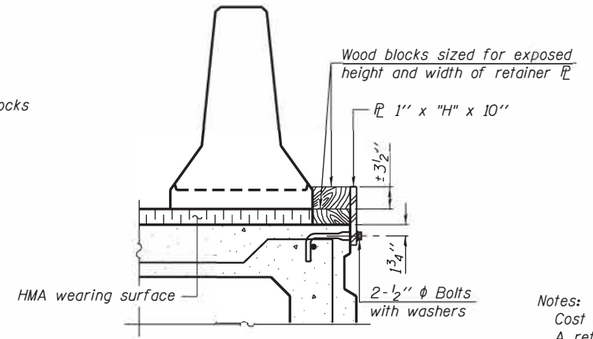
SECTIONS THRU SLAB OR DECK BEAM



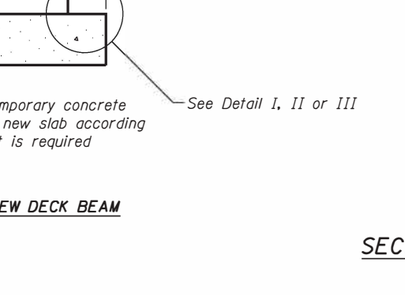
DETAIL I



DETAIL II

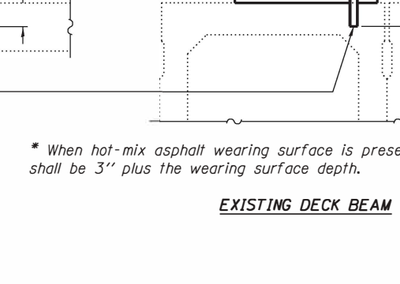


DETAIL III



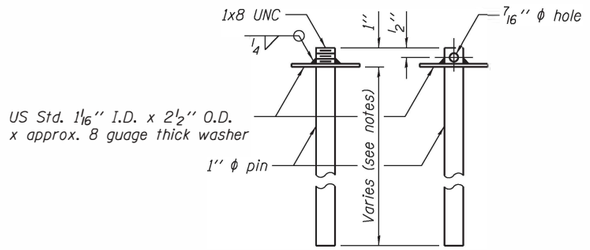
STEEL RETAINER ℄ 1'' x 8'' x "W"

(Detail I and II)

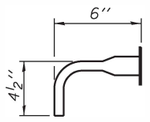


STEEL RETAINER ℄ 1'' x "H" x 10''

(Detail III)



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½'', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6'' to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0'' centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6'' apart, shall be placed at 6'-0'' centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

R-27

8-11-2017

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

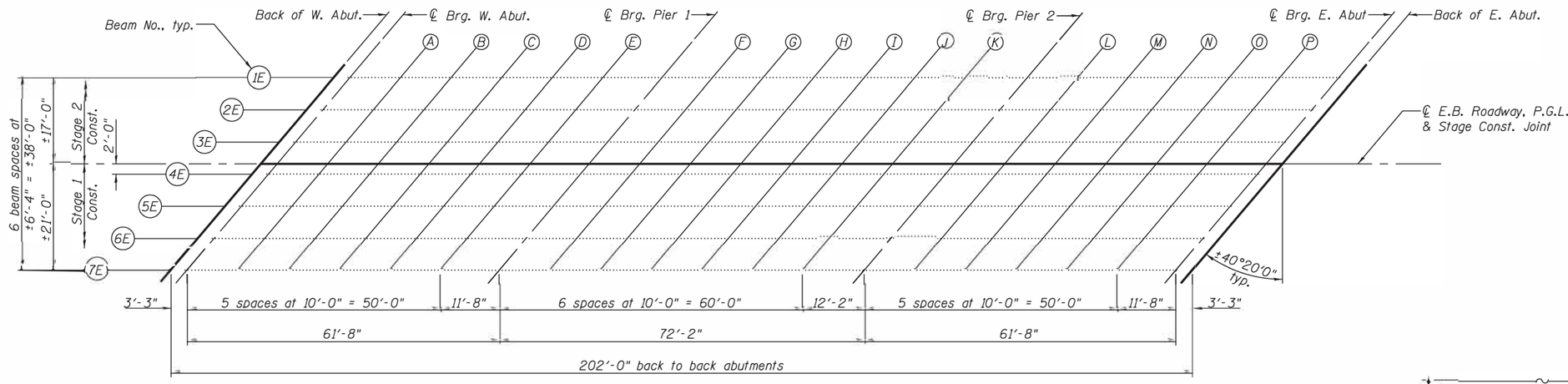
USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE = 12/13/2017	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)

SHEET NO. 5 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	113
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



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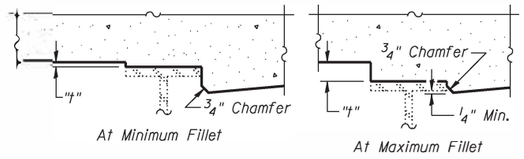


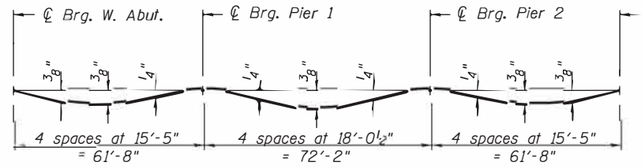
FILLET HEIGHTS ②

BEAM 1E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2413+00.17	-17.00	583.20	583.20
℄ Brg. W. Abut.	2413+03.42	-17.00	583.21	583.21
A	2413+13.42	-17.00	583.24	583.26
B	2413+23.42	-17.00	583.27	583.30
C	2413+33.42	-17.00	583.30	583.33
D	2413+43.42	-17.00	583.32	583.35
E	2413+53.42	-17.00	583.34	583.35
℄ Brg. Pier 1	2413+65.09	-17.00	583.36	583.36
F	2413+75.09	-17.00	583.38	583.39
G	2413+85.09	-17.00	583.40	583.41
H	2413+95.09	-17.00	583.41	583.43
I	2414+05.09	-17.00	583.42	583.45
J	2414+15.09	-17.00	583.43	583.45
K	2414+25.09	-17.00	583.43	583.44
℄ Brg. Pier 2	2414+37.26	-17.00	583.43	583.43
L	2414+47.26	-17.00	583.43	583.44
M	2414+57.26	-17.00	583.43	583.46
N	2414+67.26	-17.00	583.43	583.46
O	2414+77.26	-17.00	583.42	583.46
P	2414+87.26	-17.00	583.41	583.44
℄ Brg. E. Abut.	2414+98.92	-17.00	583.40	583.40
Back of E. Abut.	2415+02.17	-17.00	583.40	583.40

BEAM 2E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2412+94.80	-10.67	583.31	583.31
℄ Brg. W. Abut.	2412+98.05	-10.67	583.32	583.32
A	2413+08.05	-10.67	583.35	583.37
B	2413+18.05	-10.67	583.38	583.41
C	2413+28.05	-10.67	583.41	583.44
D	2413+38.05	-10.67	583.43	583.46
E	2413+48.05	-10.67	583.45	583.47
℄ Brg. Pier 1	2413+59.71	-10.67	583.48	583.48
F	2413+69.71	-10.67	583.50	583.50
G	2413+79.71	-10.67	583.51	583.53
H	2413+89.71	-10.67	583.53	583.55
I	2413+99.71	-10.67	583.54	583.57
J	2414+09.71	-10.67	583.55	583.57
K	2414+19.71	-10.67	583.55	583.56
℄ Brg. Pier 2	2414+31.88	-10.67	583.56	583.56
L	2414+41.88	-10.67	583.56	583.57
M	2414+51.88	-10.67	583.56	583.58
N	2414+61.88	-10.67	583.56	583.59
O	2414+71.88	-10.67	583.55	583.59
P	2414+81.88	-10.67	583.54	583.57
℄ Brg. E. Abut.	2414+93.55	-10.67	583.53	583.53
Back of E. Abut.	2414+96.80	-10.67	583.53	583.53



DEAD LOAD DEFLECTION DIAGRAM ①

(Includes weight of concrete only.)

Notes:

① The Dead Load Deflections are not to be used in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as shown on this sheet and on sheet 7 of 31.

② To determine "t": Elevations of the top flanges of the existing steel beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on this sheet and on sheet 7 of 31, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILE NAME = H:\N1184\1841.008 - District 8 Deck Replacements\Structural\SN 003-0007 2020\Microstation\003007_2020-76D23-006-Top of Slab Elevations.dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 003-0007 (E.B.)
SHEET NO. 6 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	114
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

BEAM 3E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2412+89.42	-4.33	583.39	583.39
℄ Brg. W. Abut.	2412+92.67	-4.33	583.40	583.40
A	2413+02.67	-4.33	583.43	583.45
B	2413+12.67	-4.33	583.46	583.50
C	2413+22.67	-4.33	583.49	583.53
D	2413+32.67	-4.33	583.52	583.54
E	2413+42.67	-4.33	583.54	583.55
℄ Brg. Pier 1	2413+54.34	-4.33	583.57	583.57
F	2413+64.34	-4.33	583.59	583.59
G	2413+74.34	-4.33	583.60	583.62
H	2413+84.34	-4.33	583.62	583.64
I	2413+94.34	-4.33	583.63	583.66
J	2414+04.34	-4.33	583.64	583.66
K	2414+14.34	-4.33	583.65	583.66
℄ Brg. Pier 2	2414+26.50	-4.33	583.66	583.66
L	2414+36.50	-4.33	583.66	583.67
M	2414+46.50	-4.33	583.66	583.68
N	2414+56.50	-4.33	583.66	583.69
O	2414+66.50	-4.33	583.65	583.69
P	2414+76.50	-4.33	583.65	583.67
℄ Brg. E. Abut.	2414+88.17	-4.33	583.64	583.64
Back of E. Abut.	2414+91.42	-4.33	583.63	583.63

℄ E.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2412+85.74	0.00	583.44	583.44
℄ Brg. W. Abut.	2412+88.99	0.00	583.45	583.45
A	2412+98.99	0.00	583.49	583.51
B	2413+08.99	0.00	583.52	583.55
C	2413+18.99	0.00	583.55	583.58
D	2413+28.99	0.00	583.58	583.60
E	2413+38.99	0.00	583.60	583.61
℄ Brg. Pier 1	2413+50.66	0.00	583.63	583.63
F	2413+60.66	0.00	583.65	583.65
G	2413+70.66	0.00	583.67	583.68
H	2413+80.66	0.00	583.68	583.71
I	2413+90.66	0.00	583.69	583.72
J	2414+00.66	0.00	583.71	583.73
K	2414+10.66	0.00	583.71	583.72
℄ Brg. Pier 2	2414+22.82	0.00	583.72	583.72
L	2414+32.82	0.00	583.73	583.74
M	2414+42.82	0.00	583.73	583.75
N	2414+52.82	0.00	583.73	583.76
O	2414+62.82	0.00	583.72	583.76
P	2414+72.82	0.00	583.72	583.74
℄ Brg. E. Abut.	2414+84.49	0.00	583.71	583.71
Back of E. Abut.	2414+87.74	0.00	583.71	583.71

BEAM 4E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2412+84.04	2.00	583.40	583.40
℄ Brg. W. Abut.	2412+87.29	2.00	583.42	583.42
A	2412+97.29	2.00	583.45	583.47
B	2413+07.29	2.00	583.48	583.52
C	2413+17.29	2.00	583.51	583.55
D	2413+27.29	2.00	583.54	583.57
E	2413+37.29	2.00	583.57	583.58
℄ Brg. Pier 1	2413+48.96	2.00	583.59	583.59
F	2413+58.96	2.00	583.61	583.62
G	2413+68.96	2.00	583.63	583.65
H	2413+78.96	2.00	583.65	583.67
I	2413+88.96	2.00	583.66	583.69
J	2413+98.96	2.00	583.67	583.69
K	2414+08.96	2.00	583.68	583.69
℄ Brg. Pier 2	2414+21.13	2.00	583.69	583.69
L	2414+31.13	2.00	583.69	583.70
M	2414+41.13	2.00	583.70	583.72
N	2414+51.13	2.00	583.69	583.73
O	2414+61.13	2.00	583.69	583.73
P	2414+71.13	2.00	583.69	583.71
℄ Brg. E. Abut.	2414+82.79	2.00	583.68	583.68
Back of E. Abut.	2414+86.04	2.00	583.68	583.68

BEAM 5E

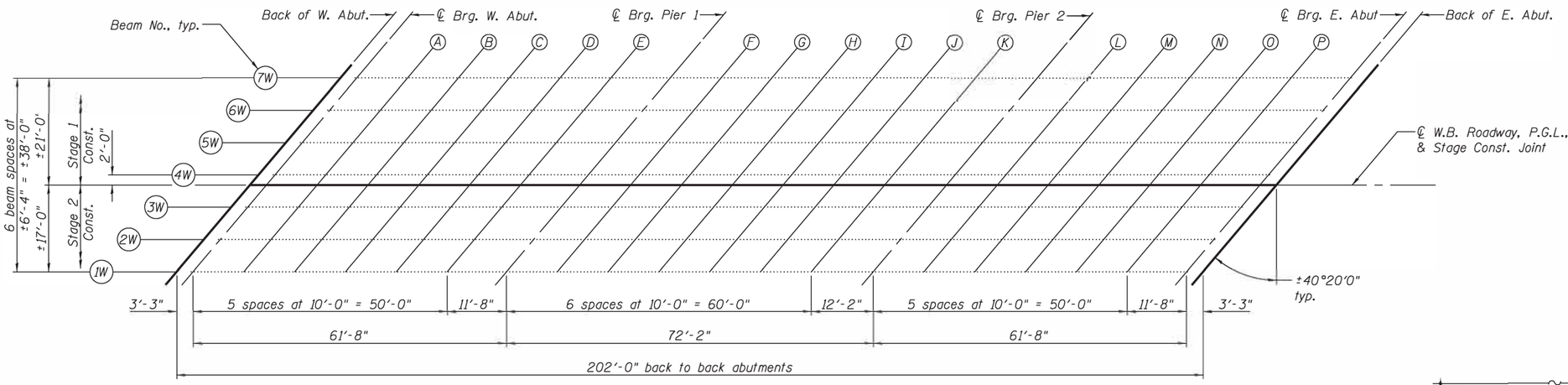
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2412+78.66	8.33	583.28	583.28
℄ Brg. W. Abut.	2412+81.91	8.33	583.30	583.30
A	2412+91.91	8.33	583.33	583.35
B	2413+01.91	8.33	583.37	583.40
C	2413+11.91	8.33	583.40	583.43
D	2413+21.91	8.33	583.43	583.45
E	2413+31.91	8.33	583.45	583.47
℄ Brg. Pier 1	2413+43.58	8.33	583.48	583.48
F	2413+53.58	8.33	583.50	583.51
G	2413+63.58	8.33	583.52	583.54
H	2413+73.58	8.33	583.54	583.57
I	2413+83.58	8.33	583.55	583.58
J	2413+93.58	8.33	583.57	583.59
K	2414+03.58	8.33	583.58	583.59
℄ Brg. Pier 2	2414+15.75	8.33	583.59	583.59
L	2414+25.75	8.33	583.59	583.60
M	2414+35.75	8.33	583.60	583.62
N	2414+45.75	8.33	583.60	583.63
O	2414+55.75	8.33	583.59	583.63
P	2414+65.75	8.33	583.59	583.61
℄ Brg. E. Abut.	2414+77.41	8.33	583.58	583.58
Back of E. Abut.	2414+80.66	8.33	583.58	583.58

BEAM 6E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2412+73.29	14.67	583.15	583.15
℄ Brg. W. Abut.	2412+76.54	14.67	583.16	583.16
A	2412+86.54	14.67	583.20	583.22
B	2412+96.54	14.67	583.24	583.27
C	2413+06.54	14.67	583.27	583.30
D	2413+16.54	14.67	583.30	583.32
E	2413+26.54	14.67	583.33	583.34
℄ Brg. Pier 1	2413+38.20	14.67	583.36	583.36
F	2413+48.20	14.67	583.38	583.39
G	2413+58.20	14.67	583.40	583.42
H	2413+68.20	14.67	583.42	583.44
I	2413+78.20	14.67	583.43	583.46
J	2413+88.20	14.67	583.45	583.47
K	2413+98.20	14.67	583.46	583.47
℄ Brg. Pier 2	2414+10.37	14.67	583.47	583.47
L	2414+20.37	14.67	583.48	583.49
M	2414+30.37	14.67	583.48	583.51
N	2414+40.37	14.67	583.48	583.52
O	2414+50.37	14.67	583.48	583.52
P	2414+60.37	14.67	583.48	583.50
℄ Brg. E. Abut.	2414+72.04	14.67	583.47	583.47
Back of E. Abut.	2414+75.29	14.67	583.47	583.47

BEAM 7E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2412+67.91	21.00	583.00	583.00
℄ Brg. W. Abut.	2412+71.16	21.00	583.01	583.01
A	2412+81.16	21.00	583.05	583.07
B	2412+91.16	21.00	583.09	583.12
C	2413+01.16	21.00	583.12	583.15
D	2413+11.16	21.00	583.15	583.18
E	2413+21.16	21.00	583.18	583.19
℄ Brg. Pier 1	2413+32.83	21.00	583.21	583.21
F	2413+42.83	21.00	583.23	583.24
G	2413+52.83	21.00	583.26	583.27
H	2413+62.83	21.00	583.28	583.30
I	2413+72.83	21.00	583.29	583.32
J	2413+82.83	21.00	583.31	583.33
K	2413+92.83	21.00	583.32	583.33
℄ Brg. Pier 2	2414+04.99	21.00	583.33	583.33
L	2414+14.99	21.00	583.34	583.35
M	2414+24.99	21.00	583.35	583.37
N	2414+34.99	21.00	583.35	583.38
O	2414+44.99	21.00	583.35	583.39
P	2414+54.99	21.00	583.35	583.37
℄ Brg. E. Abut.	2414+66.66	21.00	583.35	583.35
Back of E. Abut.	2414+69.91	21.00	583.34	583.34



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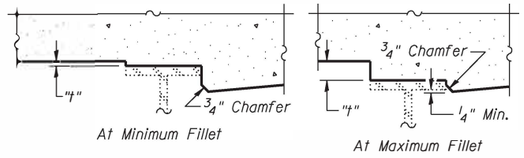


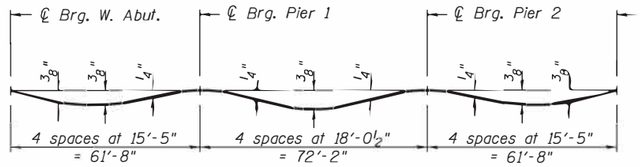
FILLET HEIGHTS ②

BEAM 7W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2413+78.29	-21.00	583.33	583.33
℄ Brg. W. Abut.	2413+81.54	-21.00	583.33	583.33
A	2413+91.54	-21.00	583.35	583.37
B	2414+01.54	-21.00	583.36	583.39
C	2414+11.54	-21.00	583.37	583.40
D	2414+21.54	-21.00	583.37	583.40
E	2414+31.54	-21.00	583.38	583.39
℄ Brg. Pier 1	2414+43.21	-21.00	583.38	583.38
F	2414+53.21	-21.00	583.38	583.38
G	2414+63.21	-21.00	583.37	583.39
H	2414+73.21	-21.00	583.37	583.40
I	2414+83.21	-21.00	583.36	583.39
J	2414+93.21	-21.00	583.35	583.37
K	2415+03.21	-21.00	583.34	583.35
℄ Brg. Pier 2	2415+15.37	-21.00	583.32	583.32
L	2415+25.37	-21.00	583.30	583.31
M	2415+35.37	-21.00	583.28	583.31
N	2415+45.37	-21.00	583.26	583.30
O	2415+55.37	-21.00	583.24	583.27
P	2415+65.37	-21.00	583.21	583.24
℄ Brg. E. Abut.	2415+77.04	-21.00	583.18	583.18
Back of E. Abut.	2415+80.29	-21.00	583.17	583.17

BEAM 6W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2413+72.91	-14.67	583.45	583.45
℄ Brg. W. Abut.	2413+76.16	-14.67	583.46	583.46
A	2413+86.16	-14.67	583.47	583.49
B	2413+96.16	-14.67	583.48	583.52
C	2414+06.16	-14.67	583.49	583.53
D	2414+16.16	-14.67	583.50	583.53
E	2414+26.16	-14.67	583.51	583.52
℄ Brg. Pier 1	2414+37.83	-14.67	583.51	583.51
F	2414+47.83	-14.67	583.51	583.52
G	2414+57.83	-14.67	583.51	583.53
H	2414+67.83	-14.67	583.50	583.53
I	2414+77.83	-14.67	583.50	583.53
J	2414+87.83	-14.67	583.49	583.51
K	2414+97.83	-14.67	583.48	583.49
℄ Brg. Pier 2	2415+10.00	-14.67	583.46	583.46
L	2415+20.00	-14.67	583.45	583.46
M	2415+30.00	-14.67	583.43	583.45
N	2415+40.00	-14.67	583.41	583.44
O	2415+50.00	-14.67	583.38	583.42
P	2415+60.00	-14.67	583.36	583.38
℄ Brg. E. Abut.	2415+71.66	-14.67	583.33	583.33
Back of E. Abut.	2415+74.91	-14.67	583.32	583.32



DEAD LOAD DEFLECTION DIAGRAM ①

(Includes weight of concrete only.)

Notes:

① The Dead Load Deflections are not to be used in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as shown on this sheet and on sheet 9 of 31.

② To determine "t": Elevations of the top flanges of the existing steel beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on this sheet and on sheet 9 of 31, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0007 0008\Microstation\003D0007_0008-76D23-008-Top of Slab Elevations.dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 003-0008 (W.B.)
SHEET NO. 8 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	116
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

BEAM 5W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2413+67.54	-8.33	583.55	583.55
℄ Brg. W. Abut.	2413+70.79	-8.33	583.56	583.56
A	2413+80.79	-8.33	583.58	583.60
B	2413+90.79	-8.33	583.59	583.62
C	2414+00.79	-8.33	583.60	583.64
D	2414+10.79	-8.33	583.61	583.64
E	2414+20.79	-8.33	583.62	583.63
℄ Brg. Pier 1	2414+32.45	-8.33	583.62	583.62
F	2414+42.45	-8.33	583.62	583.63
G	2414+52.45	-8.33	583.62	583.64
H	2414+62.45	-8.33	583.62	583.65
I	2414+72.45	-8.33	583.61	583.64
J	2414+82.45	-8.33	583.61	583.63
K	2414+92.45	-8.33	583.60	583.61
℄ Brg. Pier 2	2415+04.62	-8.33	583.58	583.58
L	2415+14.62	-8.33	583.57	583.58
M	2415+24.62	-8.33	583.55	583.57
N	2415+34.62	-8.33	583.53	583.57
O	2415+44.62	-8.33	583.51	583.54
P	2415+54.62	-8.33	583.49	583.51
℄ Brg. E. Abut.	2415+66.29	-8.33	583.45	583.45
Back of E. Abut.	2415+69.54	-8.33	583.45	583.45

BEAM 4W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2413+62.16	-2.00	583.64	583.64
℄ Brg. W. Abut.	2413+65.41	-2.00	583.65	583.65
A	2413+75.41	-2.00	583.67	583.69
B	2413+85.41	-2.00	583.68	583.71
C	2413+95.41	-2.00	583.69	583.73
D	2414+05.41	-2.00	583.70	583.73
E	2414+15.41	-2.00	583.71	583.72
℄ Brg. Pier 1	2414+27.07	-2.00	583.72	583.72
F	2414+37.07	-2.00	583.72	583.73
G	2414+47.07	-2.00	583.72	583.74
H	2414+57.07	-2.00	583.72	583.75
I	2414+67.07	-2.00	583.72	583.74
J	2414+77.07	-2.00	583.71	583.73
K	2414+87.07	-2.00	583.70	583.71
℄ Brg. Pier 2	2414+99.24	-2.00	583.69	583.69
L	2415+09.24	-2.00	583.67	583.68
M	2415+19.24	-2.00	583.66	583.68
N	2415+29.24	-2.00	583.64	583.68
O	2415+39.24	-2.00	583.62	583.65
P	2415+49.24	-2.00	583.60	583.62
℄ Brg. E. Abut.	2415+60.91	-2.00	583.57	583.57
Back of E. Abut.	2415+64.16	-2.00	583.56	583.56

℄ W.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2413+60.46	0.00	583.67	583.67
℄ Brg. W. Abut.	2413+63.71	0.00	583.68	583.68
A	2413+73.71	0.00	583.70	583.72
B	2413+83.71	0.00	583.71	583.74
C	2413+93.71	0.00	583.72	583.76
D	2414+03.71	0.00	583.73	583.76
E	2414+13.71	0.00	583.74	583.75
℄ Brg. Pier 1	2414+25.38	0.00	583.75	583.75
F	2414+35.38	0.00	583.75	583.76
G	2414+45.38	0.00	583.75	583.77
H	2414+55.38	0.00	583.75	583.78
I	2414+65.38	0.00	583.75	583.78
J	2414+75.38	0.00	583.74	583.76
K	2414+85.38	0.00	583.73	583.74
℄ Brg. Pier 2	2414+97.54	0.00	583.72	583.72
L	2415+07.54	0.00	583.71	583.72
M	2415+17.54	0.00	583.69	583.72
N	2415+27.54	0.00	583.68	583.71
O	2415+37.54	0.00	583.66	583.69
P	2415+47.54	0.00	583.63	583.66
℄ Brg. E. Abut.	2415+59.21	0.00	583.60	583.60
Back of E. Abut.	2415+62.46	0.00	583.60	583.60

BEAM 3W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2413+56.78	4.33	583.60	583.60
℄ Brg. W. Abut.	2413+60.03	4.33	583.60	583.60
A	2413+70.03	4.33	583.62	583.64
B	2413+80.03	4.33	583.64	583.67
C	2413+90.03	4.33	583.65	583.69
D	2414+00.03	4.33	583.66	583.69
E	2414+10.03	4.33	583.67	583.68
℄ Brg. Pier 1	2414+21.70	4.33	583.68	583.68
F	2414+31.70	4.33	583.68	583.69
G	2414+41.70	4.33	583.69	583.70
H	2414+51.70	4.33	583.69	583.71
I	2414+61.70	4.33	583.68	583.71
J	2414+71.70	4.33	583.68	583.70
K	2414+81.70	4.33	583.67	583.68
℄ Brg. Pier 2	2414+93.86	4.33	583.66	583.66
L	2415+03.86	4.33	583.65	583.66
M	2415+13.86	4.33	583.63	583.66
N	2415+23.86	4.33	583.61	583.65
O	2415+33.86	4.33	583.60	583.63
P	2415+43.86	4.33	583.57	583.60
℄ Brg. E. Abut.	2415+55.53	4.33	583.55	583.55
Back of E. Abut.	2415+58.78	4.33	583.54	583.54

BEAM 2W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2413+51.40	10.67	583.49	583.49
℄ Brg. W. Abut.	2413+54.65	10.67	583.49	583.49
A	2413+64.65	10.67	583.51	583.53
B	2413+74.65	10.67	583.53	583.56
C	2413+84.65	10.67	583.55	583.58
D	2413+94.65	10.67	583.56	583.58
E	2414+04.65	10.67	583.57	583.58
℄ Brg. Pier 1	2414+16.32	10.67	583.58	583.58
F	2414+26.32	10.67	583.58	583.59
G	2414+36.32	10.67	583.59	583.60
H	2414+46.32	10.67	583.59	583.61
I	2414+56.32	10.67	583.59	583.61
J	2414+66.32	10.67	583.58	583.60
K	2414+76.32	10.67	583.58	583.58
℄ Brg. Pier 2	2414+88.49	10.67	583.56	583.56
L	2414+98.49	10.67	583.55	583.56
M	2415+08.49	10.67	583.54	583.56
N	2415+18.49	10.67	583.52	583.56
O	2415+28.49	10.67	583.51	583.54
P	2415+38.49	10.67	583.49	583.51
℄ Brg. E. Abut.	2415+50.15	10.67	583.46	583.46
Back of E. Abut.	2415+53.40	10.67	583.45	583.45

BEAM 1W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2413+46.03	17.00	583.35	583.35
℄ Brg. W. Abut.	2413+49.28	17.00	583.36	583.36
A	2413+59.28	17.00	583.38	583.40
B	2413+69.28	17.00	583.40	583.43
C	2413+79.28	17.00	583.41	583.45
D	2413+89.28	17.00	583.43	583.45
E	2413+99.28	17.00	583.44	583.45
℄ Brg. Pier 1	2414+10.94	17.00	583.45	583.45
F	2414+20.94	17.00	583.46	583.46
G	2414+30.94	17.00	583.46	583.48
H	2414+40.94	17.00	583.46	583.49
I	2414+50.94	17.00	583.46	583.49
J	2414+60.94	17.00	583.46	583.48
K	2414+70.94	17.00	583.45	583.46
℄ Brg. Pier 2	2414+83.11	17.00	583.44	583.44
L	2414+93.11	17.00	583.44	583.44
M	2415+03.11	17.00	583.42	583.45
N	2415+13.11	17.00	583.41	583.44
O	2415+23.11	17.00	583.39	583.43
P	2415+33.11	17.00	583.37	583.40
℄ Brg. E. Abut.	2415+44.78	17.00	583.35	583.35
Back of E. Abut.	2415+48.03	17.00	583.34	583.34

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0007, 0008\Microstation\003x0007_0008-76D23-BDM-Top of Slab Elevations.dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 003-0008 (W.B.)
SHEET NO. 9 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	117
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2412+72.34	-18.00	583.08
A1	2412+82.34	-18.00	583.12
A2	2412+92.34	-18.00	583.15
E. End of West Appr. Slab	2413+02.34	-18.00	583.19
W. End of East Appr. Slab	2415+01.71	-18.00	583.38
A3	2415+11.71	-18.00	583.36
A4	2415+21.71	-18.00	583.35
E. End of East Appr. Slab	2415+31.71	-18.00	583.33

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2412+67.24	-12.00	583.18
A1	2412+77.24	-12.00	583.22
A2	2412+87.24	-12.00	583.26
E. End of West Appr. Slab	2412+97.24	-12.00	583.29
W. End of East Appr. Slab	2414+96.62	-12.00	583.51
A3	2415+06.62	-12.00	583.49
A4	2415+16.62	-12.00	583.48
E. End of East Appr. Slab	2415+26.62	-12.00	583.46

℄ E.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

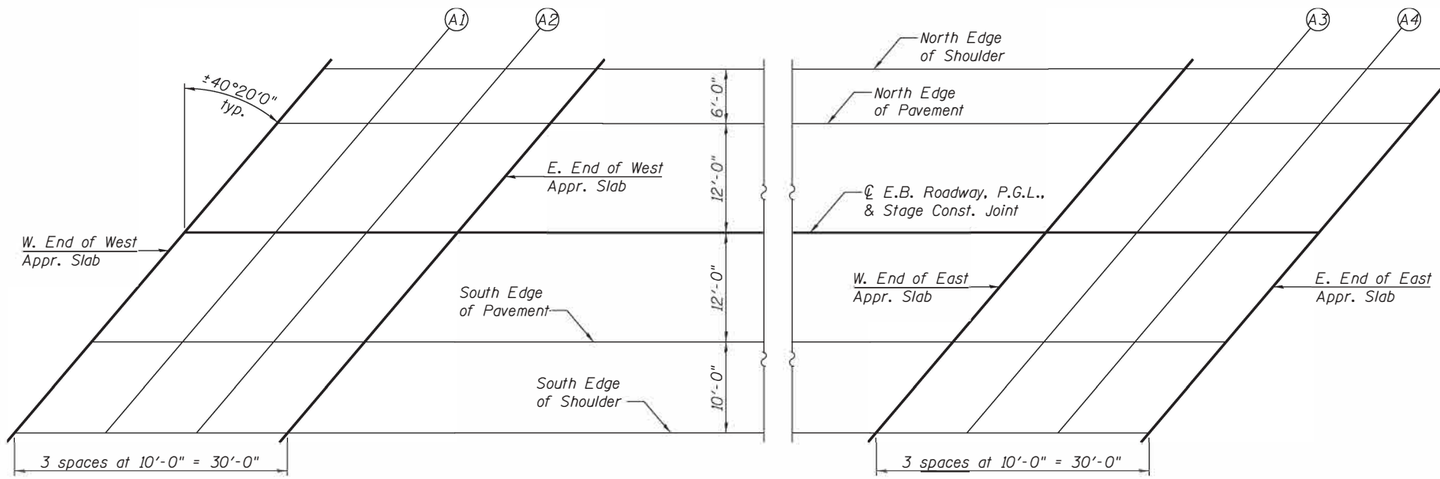
Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2412+57.05	0.00	583.33
A1	2412+67.05	0.00	583.37
A2	2412+77.05	0.00	583.41
E. End of West Appr. Slab	2412+87.05	0.00	583.45
W. End of East Appr. Slab	2414+86.43	0.00	583.71
A3	2414+96.43	0.00	583.70
A4	2415+06.43	0.00	583.68
E. End of East Appr. Slab	2415+16.43	0.00	583.67

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2412+46.86	12.00	583.10
A1	2412+56.86	12.00	583.14
A2	2412+66.86	12.00	583.18
E. End of West Appr. Slab	2412+76.86	12.00	583.22
W. End of East Appr. Slab	2414+76.24	12.00	583.53
A3	2414+86.24	12.00	583.52
A4	2414+96.24	12.00	583.51
E. End of East Appr. Slab	2415+06.24	12.00	583.50

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2412+38.37	22.00	582.85
A1	2412+48.37	22.00	582.89
A2	2412+58.37	22.00	582.94
E. End of West Appr. Slab	2412+68.37	22.00	582.98
W. End of East Appr. Slab	2414+67.75	22.00	583.32
A3	2414+77.75	22.00	583.32
A4	2414+87.75	22.00	583.31
E. End of East Appr. Slab	2414+97.75	22.00	583.30



WEST APPROACH

EAST APPROACH

PLAN

N

FILE NAME = H:\P\11841\11841.00B - District 8 Deck Replacements\Structural\SN 003-0007_00B28\Microstation\00300007_00B28-76D23-B18-Top of Approach Slab Elevations (E.B).dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 003-0007 (E.B.)
SHEET NO. 10 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	118
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2413+50.45	-22.00	583.26
A1	2413+60.45	-22.00	583.28
A2	2413+70.45	-22.00	583.29
E. End of West Appr. Slab	2413+80.45	-22.00	583.31
W. End of East Appr. Slab	2415+79.83	-22.00	583.15
A3	2415+89.83	-22.00	583.12
A4	2415+99.83	-22.00	583.08
E. End of East Appr. Slab	2416+09.83	-22.00	583.05

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2413+41.96	-12.00	583.45
A1	2413+51.96	-12.00	583.47
A2	2413+61.96	-12.00	583.49
E. End of West Appr. Slab	2413+71.96	-12.00	583.51
W. End of East Appr. Slab	2415+71.34	-12.00	583.38
A3	2415+81.34	-12.00	583.35
A4	2415+91.34	-12.00	583.32
E. End of East Appr. Slab	2416+01.34	-12.00	583.29

℄ W.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

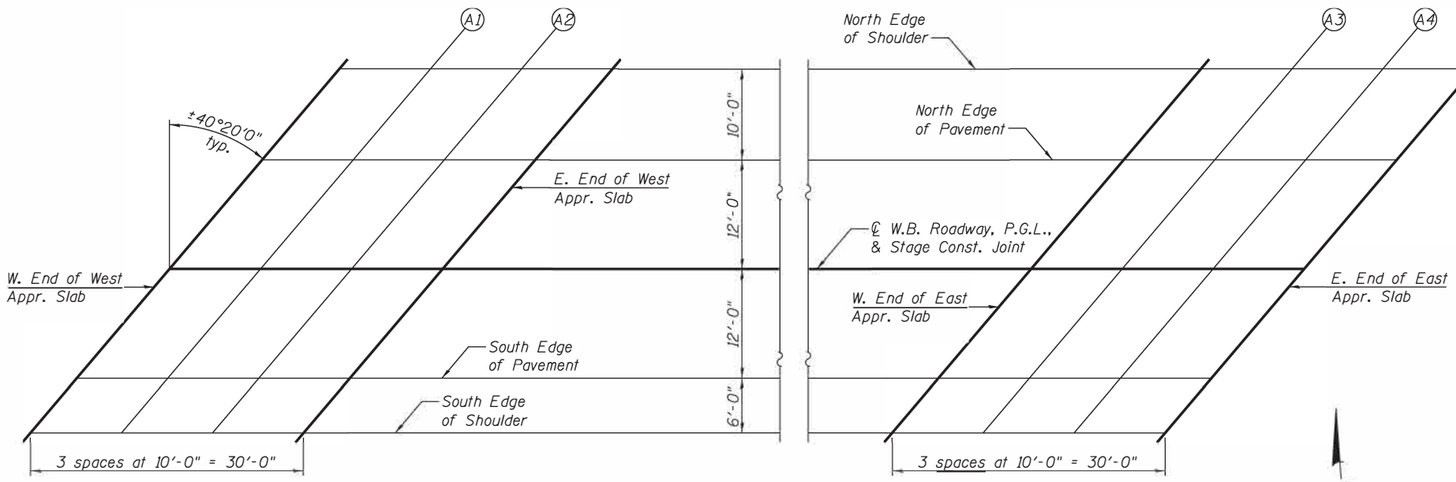
Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2413+31.77	0.00	583.61
A1	2413+41.77	0.00	583.63
A2	2413+51.77	0.00	583.65
E. End of West Appr. Slab	2413+61.77	0.00	583.67
W. End of East Appr. Slab	2415+61.15	0.00	583.60
A3	2415+71.15	0.00	583.57
A4	2415+81.15	0.00	583.54
E. End of East Appr. Slab	2415+91.15	0.00	583.51

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2413+21.58	12.00	583.39
A1	2413+31.58	12.00	583.42
A2	2413+41.58	12.00	583.44
E. End of West Appr. Slab	2413+51.58	12.00	583.47
W. End of East Appr. Slab	2415+50.96	12.00	583.44
A3	2415+60.96	12.00	583.41
A4	2415+70.96	12.00	583.38
E. End of East Appr. Slab	2415+80.96	12.00	583.35

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2413+16.49	18.00	583.25
A1	2413+26.49	18.00	583.28
A2	2413+36.49	18.00	583.31
E. End of West Appr. Slab	2413+46.49	18.00	583.33
W. End of East Appr. Slab	2415+45.87	18.00	583.32
A3	2415+55.87	18.00	583.30
A4	2415+65.87	18.00	583.27
E. End of East Appr. Slab	2415+75.87	18.00	583.24



WEST APPROACH

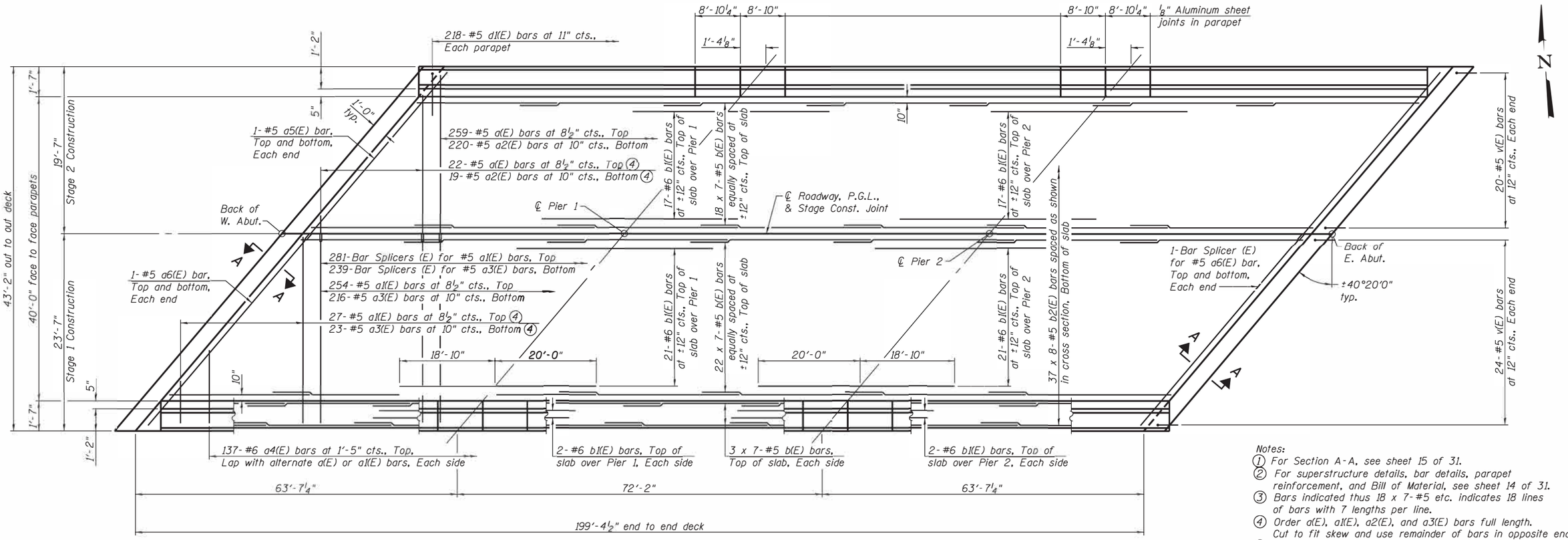
EAST APPROACH

PLAN

FILE NAME = H:\P\11841\11841.00B - District 8 Deck Replacements\Structural\SN 003-0007, 0008\Microstation\003D0007_0008-76D23-811-Top of Approach Slab Elevations (W.B.).dgn

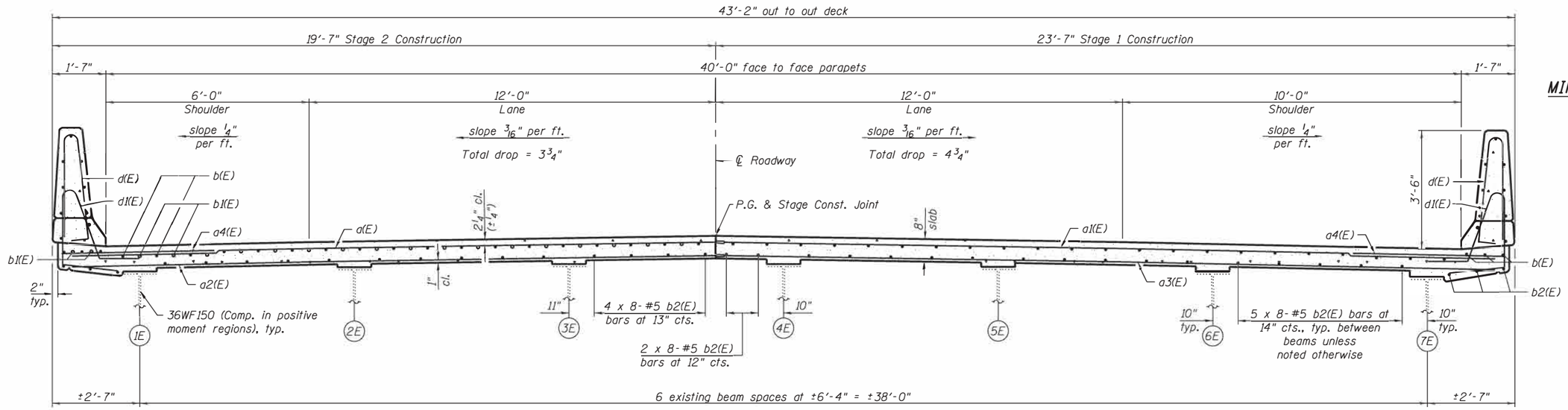
DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - JAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF APPROACH SLAB ELEVATIONS STRUCTURE NO. 003-0008 (W.B.) SHEET NO. 11 OF 31 SHEETS
		CHECKED - SJN	REVISED -		
	PLOT SCALE =	DRAWN - KBC	REVISED -		
	PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	119
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



PLAN

Notes:
1. For Section A-A, see sheet 15 of 31.
2. For superstructure details, bar details, parapet reinforcement, and Bill of Material, see sheet 14 of 31.
3. Bars indicated thus 18 x 7-#5 etc. indicates 18 lines of bars with 7 lengths per line.
4. Order a(E), a1(E), a2(E), and a3(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
5. For details of Bar Splicers, see sheet 30 of 31.
6. Floor drains not shown for clarity. For location of floor drains, see sheet 1 of 31.



NEAR PIER — NEAR MIDSPAN

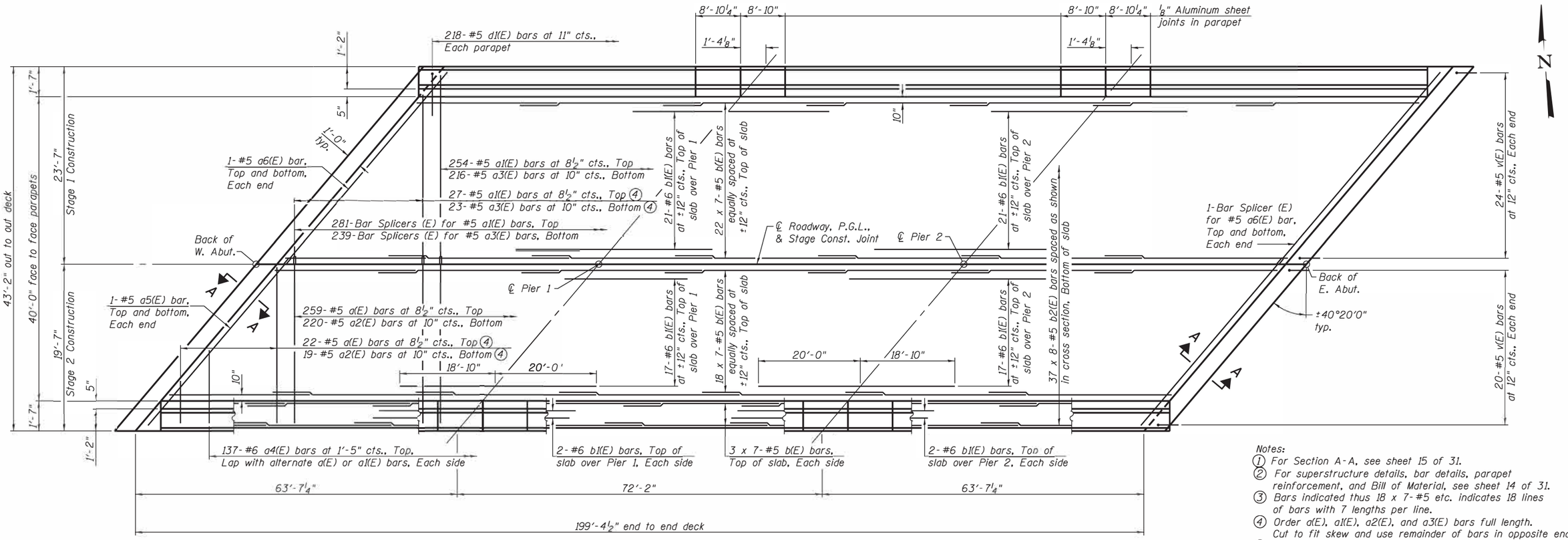
CROSS SECTION
(Looking East)

MINIMUM BAR LAP
#5 bar = 2'-7"

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - DGL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 003-0007 (E.B.) SHEET NO. 12 OF 31 SHEETS
	PLOT SCALE =	DRAWN - DGL	REVISED -		
	PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -		

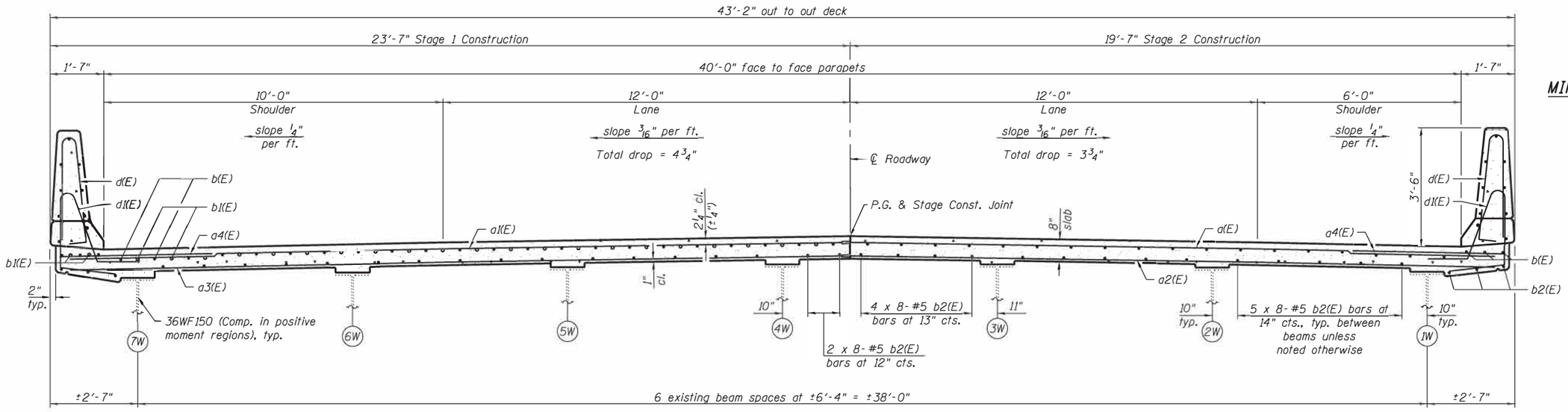
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	120
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

FILE NAME = N:\Projects\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0007.00881\Microstation\00230007_00881_76D23-812-Superstructure (E.B.).dgn



PLAN

Notes:
1. For Section A-A, see sheet 15 of 31.
2. For superstructure details, bar details, parapet reinforcement, and Bill of Material, see sheet 14 of 31.
3. Bars indicated thus 18 x 7-#5 etc. indicates 18 lines of bars with 7 lengths per line.
4. Order a(E), a1(E), a2(E), and a3(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
5. For details of Bar Splicers, see sheet 30 of 31.
6. Floor drains not shown for clarity. For location of floor drains, see sheet 1 of 31.



NEAR PIER

CROSS SECTION
(Looking East)

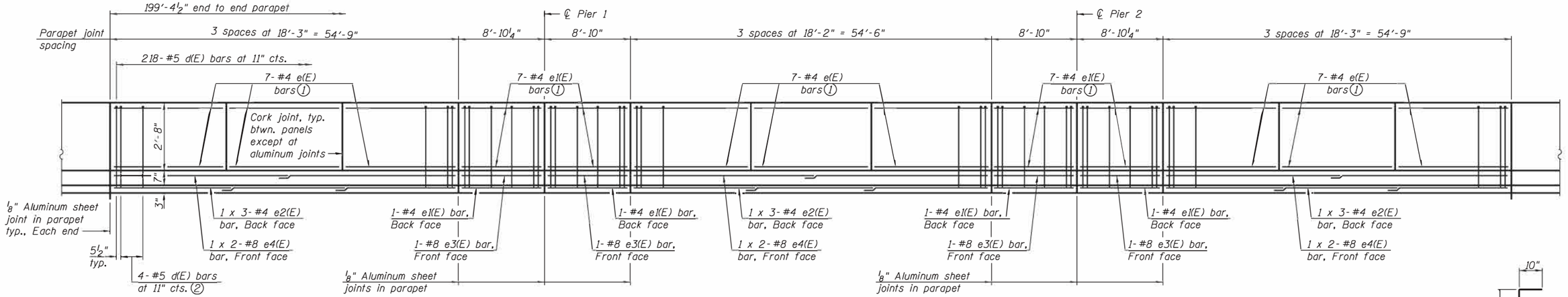
NEAR MIDSPAN

MINIMUM BAR LAP
#5 bar = 2'-7"

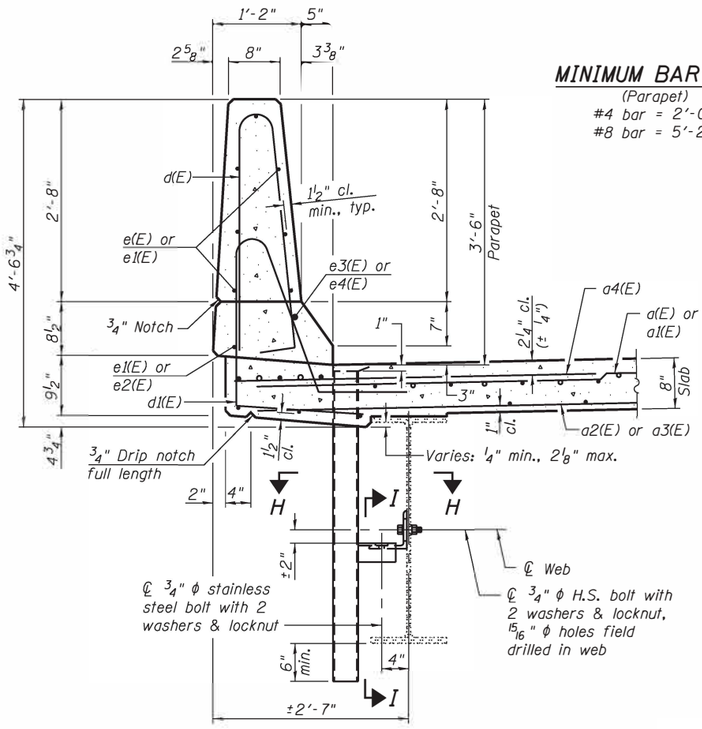
FILE NAME = N:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0007, 0008\Microstation\D0230007_00008-76D23-813-Superstructure (W.B.).dgn

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - DGL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 003-0008 (W.B.)
		CHECKED - KBC	REVISED -		
	PLOT SCALE =	DRAWN - DGL	REVISED -		SHEET NO. 13 OF 31 SHEETS
	PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	121
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



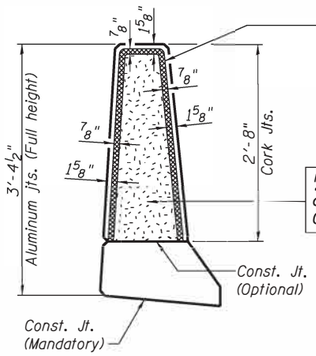
INSIDE ELEVATION OF PARAPET

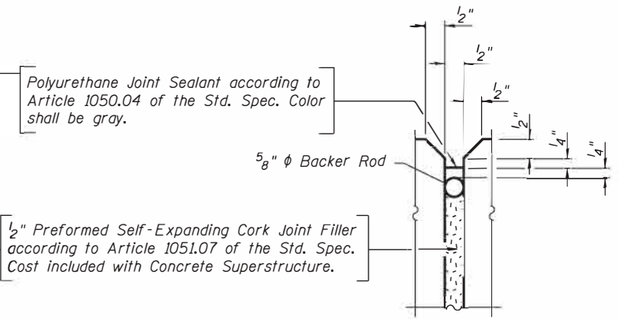


SECTION THRU PARAPET (4)

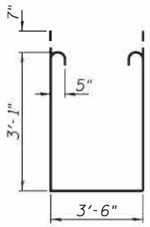
MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"

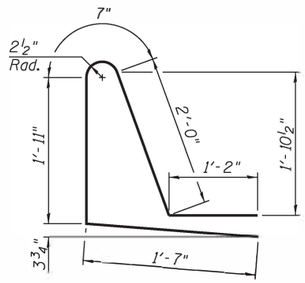




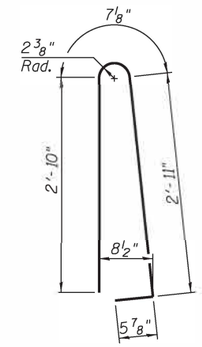
PARAPET JOINT DETAILS



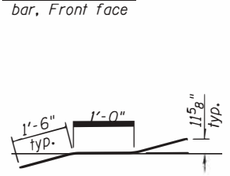
BAR s1(E)



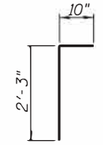
BAR d1(E)



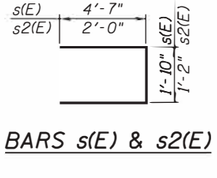
BAR d(E)



BAR m5(E)



BAR v(E)

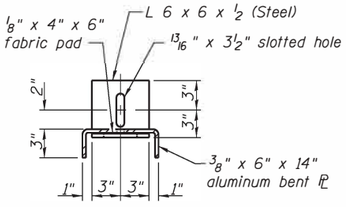


BARS s(E) & s2(E)

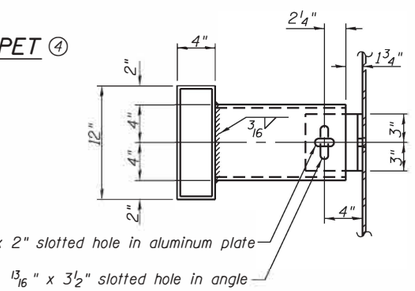
SUPERSTRUCTURE BILL OF MATERIAL

(Two Structures)

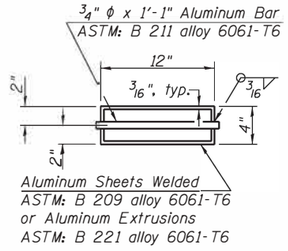
Bar	No.	Size	Length	Shape
d(E)	562	#5	19'-1"	——
d1(E)	562	#5	23'-1"	——
a2(E)	478	#5	18'-9"	——
a3(E)	478	#5	22'-9"	——
a4(E)	548	#6	6'-6"	——
a5(E)	8	#5	25'-0"	——
a6(E)	8	#5	30'-3"	——
b(E)	644	#5	30'-8"	——
b1(E)	168	#6	38'-10"	——
b2(E)	592	#5	27'-2"	——
d(E)	1096	#5	6'-10"	
d1(E)	872	#5	7'-3"	
e(E)	252	#4	17'-10"	——
e1(E)	128	#4	8'-6"	——
e2(E)	36	#4	19'-6"	——
e3(E)	16	#8	8'-6"	——
e4(E)	24	#8	29'-9"	——
m(E)	32	#6	25'-4"	——
m1(E)	32	#6	30'-7"	——
m2(E)	100	#6	7'-10"	——
m3(E)	40	#6	3'-0"	——
m4(E)	20	#6	5'-3"	——
m5(E)	84	#5	4'-0"	——
s(E)	172	#5	11'-0"	⊐
s1(E)	172	#5	10'-10"	⊔
s2(E)	232	#5	5'-2"	⊔
v(E)	176	#5	3'-1"	⌐
Concrete Superstructure		Cu. Yd.	660.5	
Reinforcement Bars, Epoxy Coated		Pound	129,550	



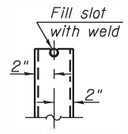
SECTION I-I



SECTION H-H



TOP PLAN



Notes:
1. See Section Thru Parapet.
2. Typical at parapet ends and each side of aluminum sheeted joints.
3. Bars indicated thus 1 x 2 - #8 etc. indicates 1 line of bars with 2 lengths per line.
4. For location of floor drains, see sheet 1 of 31. Drains shall be located clear of all diaphragms.
5. Floor drains need not be painted.
6. The 1/8" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure

FILE NAME = M:\P\11841\11841.00B - District 8 Deck Replacements\Structural\SN 003-0007, 0008\Microstation\003D0007_0008-76D23-814-Superstructure Details.dgn

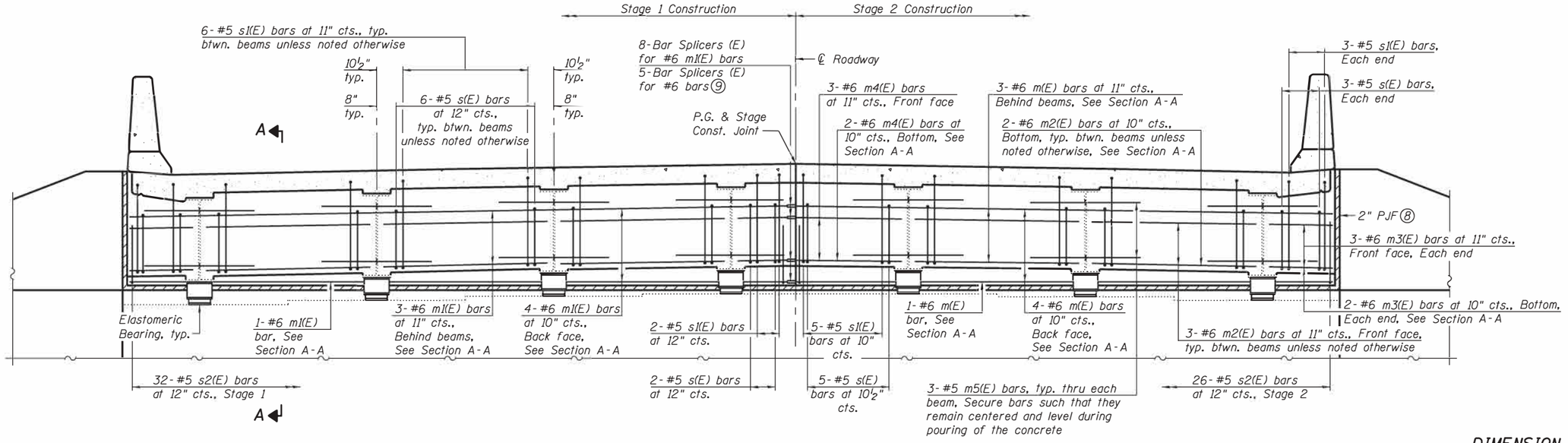
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - DGL	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - DGL	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 14 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	122
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

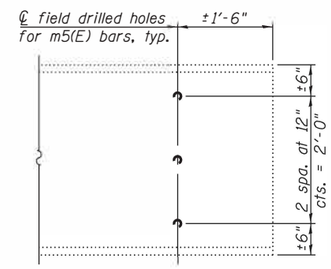


DIAPHRAGM ELEVATION AT ABUTMENT

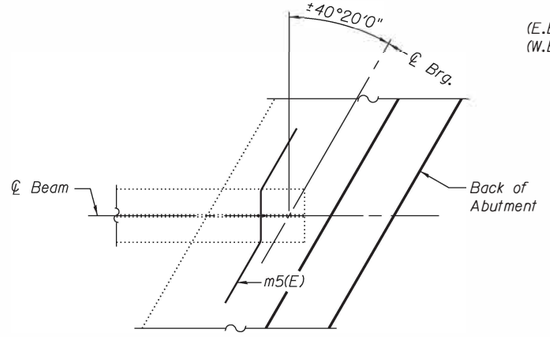
(E.B. Looking West-West diaphragm shown, East diaphragm similar)
(W.B. Looking East-East diaphragm shown, West diaphragm similar)

DIMENSION TABLE

Abutment	A	B
E.B. West	2'-6 1/8"	3'-0 1/8"
E.B. East	2'-6 5/8"	2'-11 1/2"
W.B. West	2'-6 1/2"	2'-11 1/4"
W.B. East	2'-5"	2'-10 7/8"

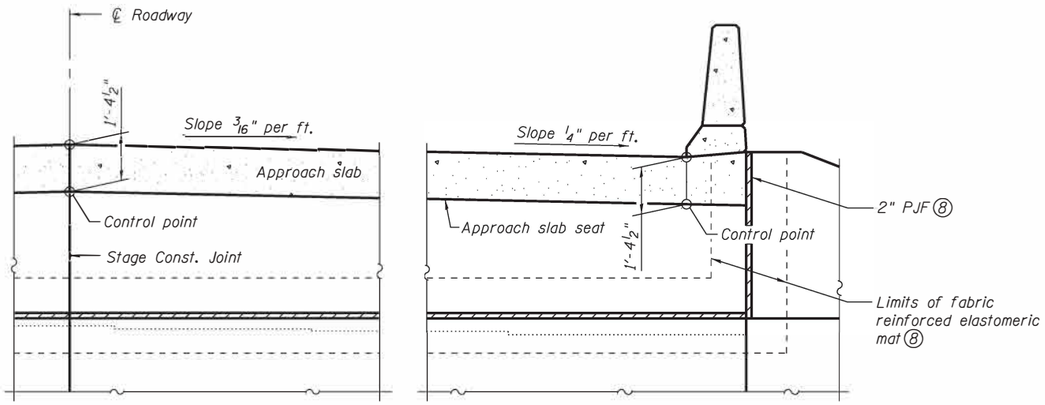


BEAM END ELEVATION



PARTIAL PLAN AT ABUTMENT

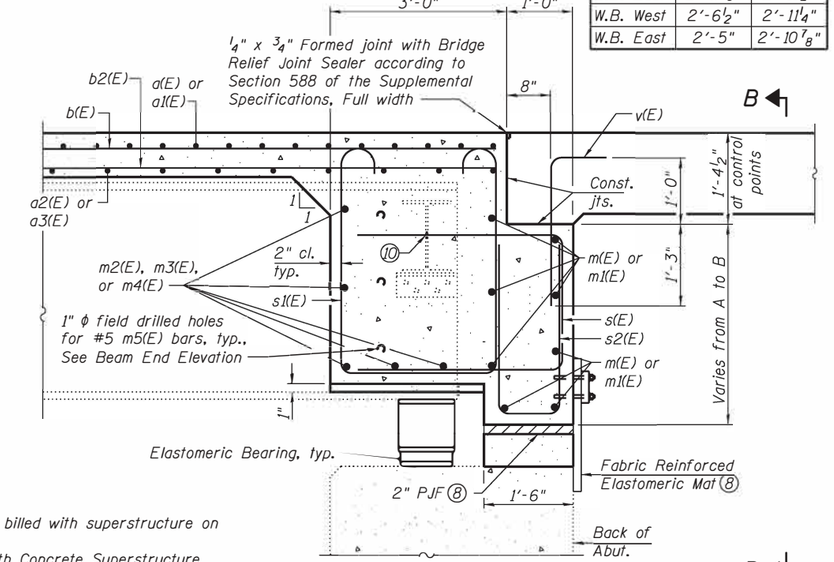
(Showing bottom flange of beam)



SECTION B-B

CONTROL POINT ELEVATIONS

Abutment	North Parapet	℄ Roadway	South Parapet
E.B. West	581.81	582.07	581.60
E.B. East	582.00	582.33	581.95
W.B. West	581.93	582.30	581.95
W.B. East	581.77	582.22	581.95



SECTION A-A

(at Rt. L's)

Notes:
1. Reinforcement bars in diaphragm are billed with superstructure on sheet 14 of 31.
2. Concrete in diaphragm is included with Concrete Superstructure on sheet 14 of 31.
3. For details of bars m5(E), s(E), s1(E), s2(E), and v(E), see sheet 14 of 31.
4. The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
5. The approach slab seat shall have a constant slope determined from the control points shown.
6. For bearing details, see sheet 20 of 31.
7. For details of Bar Splicers, see sheet 30 of 31.
8. See Section Thru Semi-Integral Abutment on sheet 2 of 31.
9. Use bar splicer in place of m2(E) bars in front face and bottom of diaphragm on Stage 1 side of construction. Cut as required to provide clearance to beam web.
10. Field drill 1 5/8" ϕ holes for s(E) bars through existing diaphragm as required, cost included with Concrete Superstructure.

FILE NAME = H:\P\11841\11841.000 - District 8 Deck Replacements\Structural\SN 003-0007 0008\Microstation\00300007_0008-76D23-015-Diaphragm Details.dgn

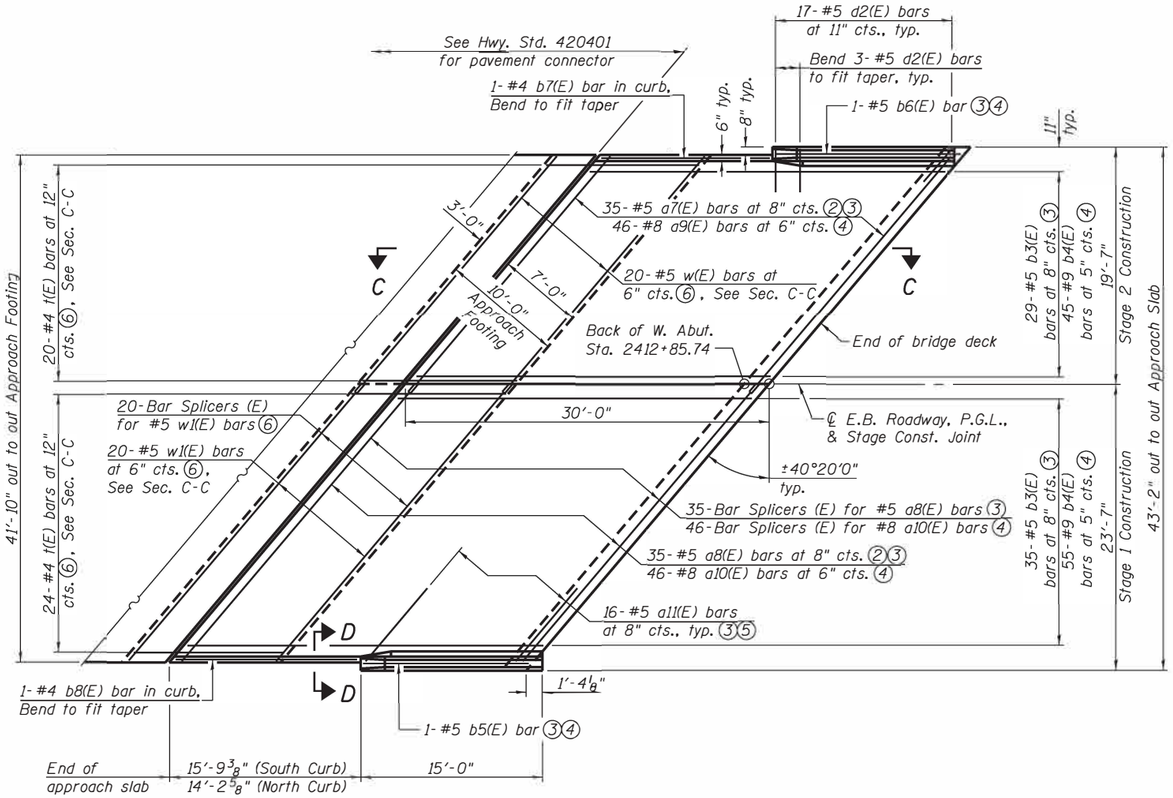
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - DGL	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - DGL	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 15 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	123
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



E.B. APPROACH SLAB PLAN

Notes:
1. For Section C-C and View D-D, see sheet 18 of 31.
2. Tilt a7(E) or a8(E) bars as necessary to fit curb.
3. Top of slab.
4. Bottom of slab.
5. Lap with each a7(E) or a8(E) bar.
6. Top and bottom of Approach Footing.
7. For details of Bar Splicers, see sheet 30 of 31.

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - KBC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 003-0007 (E.B.)
		CHECKED - JAD	REVISED -		
	PLOT SCALE =	DRAWN - KBC	REVISED -		SHEET NO. 16 OF 31 SHEETS
	PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	124
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

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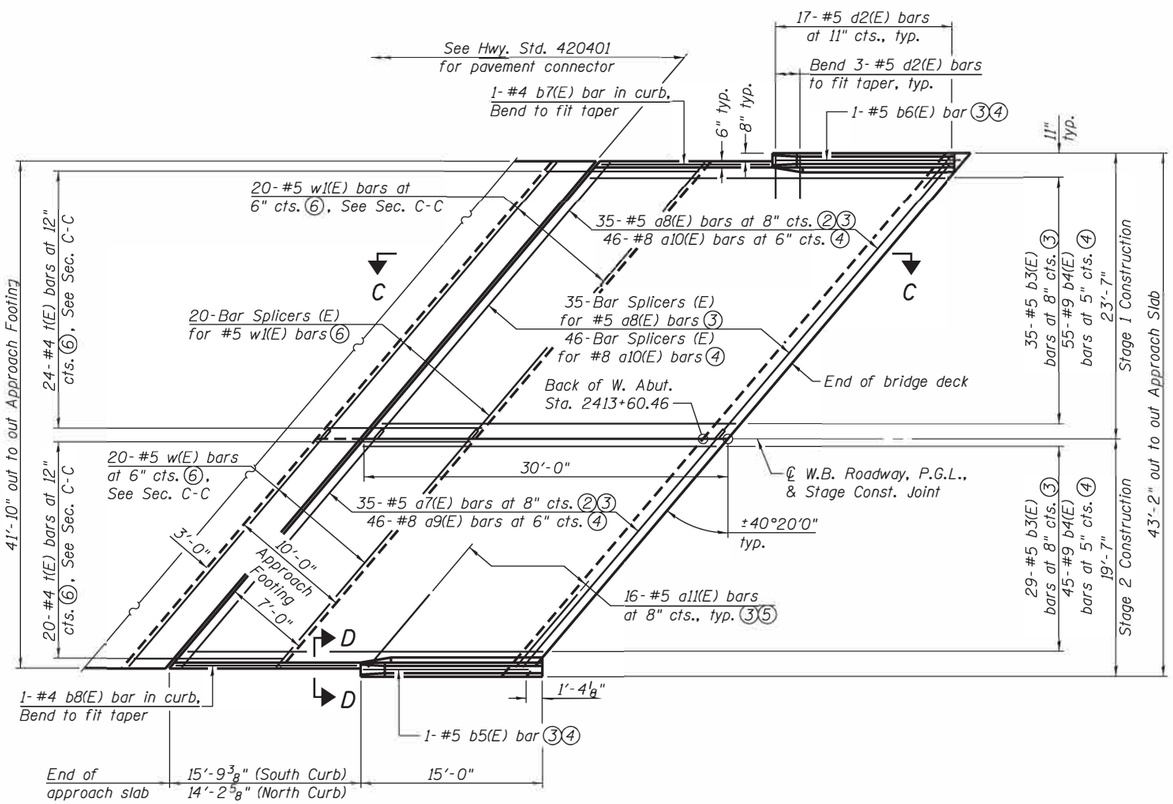

WEST APPROACH

EAST APPROACH

W.B. APPROACH SLAB PLAN

Notes:
1. For Section C-C and View D-D, see sheet 18 of 31.
2. Tilt a7(E) or a8(E) bars as necessary to fit curb.
3. Top of slab.
4. Bottom of slab.
5. Lap with each a7(E) or a8(E) bar.
6. Top and bottom of Approach Footing.
7. For details of Bar Splicers, see sheet 30 of 31.

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - KBC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 003-0008 (W.B.) SHEET NO. 17 OF 31 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - JAD	REVISED -			70	3-(2,3,4)RS-1	BOND	236	125
	PLOT SCALE =	DRAWN - KBC	REVISED -					CONTRACT NO. 76D23		
	PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -					ILLINOIS FED. AID PROJECT		

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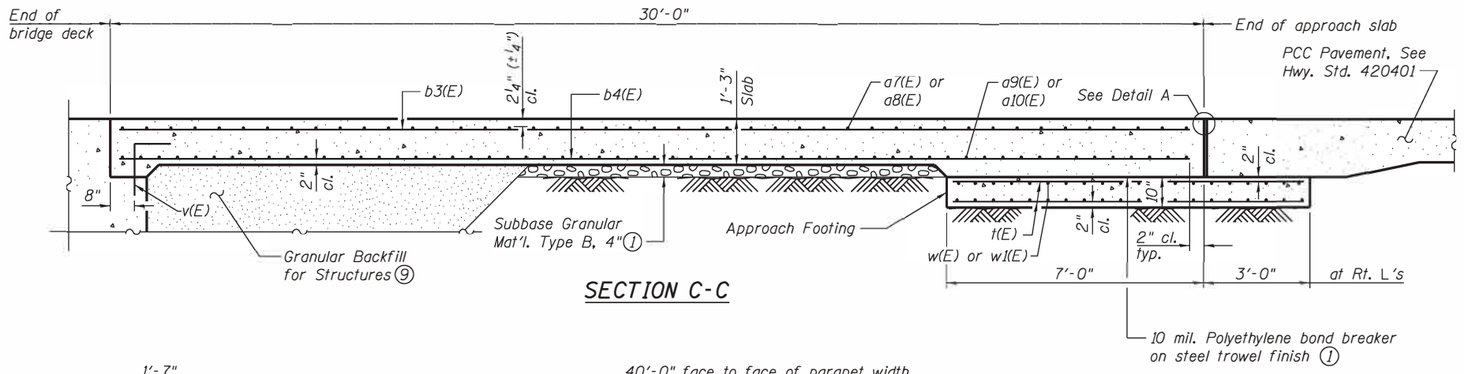
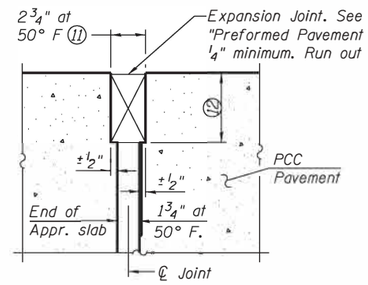
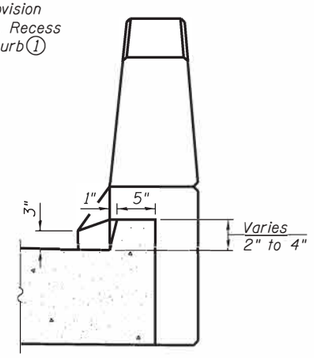


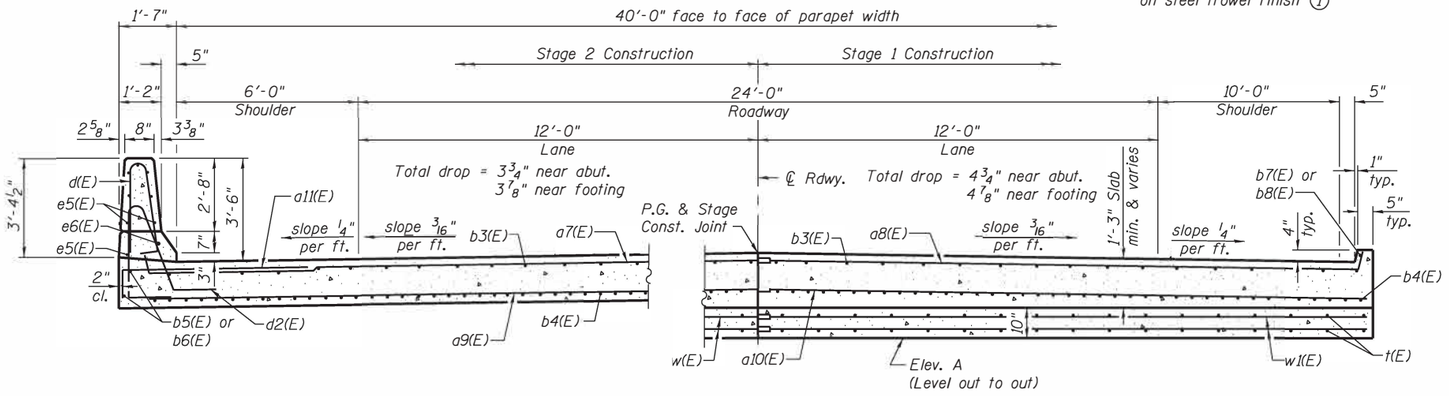
SECTION C-C



DETAIL A



VIEW D-D



NEAR ABUTMENT **AT APPROACH FOOTING**

CROSS SECTION

(See Plan for dimensions not shown)

ELEVATION TABLE

	A
E.B. West Appr.	580.66
E.B. East Appr.	581.11
W.B. West Appr.	581.06
W.B. East Appr.	580.86

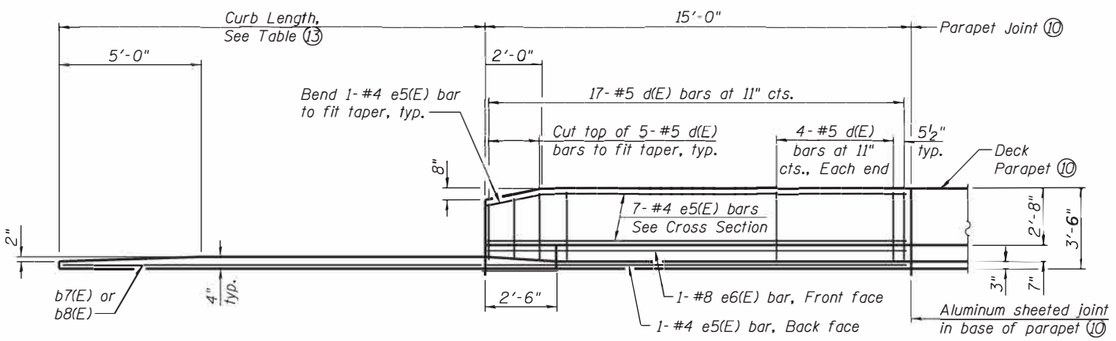
CURB LENGTH TABLE (13)

	South Curb	North Curb
E.B. West Appr.	15'-9⅜"	14'-2⅝"
E.B. East Appr.	14'-2⅝"	15'-9⅜"
W.B. West Appr.	15'-9⅜"	14'-2⅝"
W.B. East Appr.	14'-2⅝"	15'-9⅜"

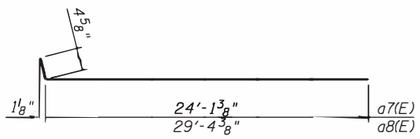
BILL OF MATERIAL

(Four Approaches)

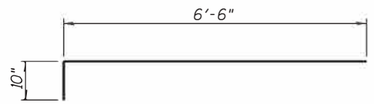
Bar	No.	Size	Length	Shape
a7(E)	140	#5	24'-6"	
a8(E)	140	#5	29'-9"	
a9(E)	184	#8	24'-4"	
a10(E)	184	#8	29'-7"	
a11(E)	128	#5	7'-4"	
b3(E)	256	#5	29'-8"	
b4(E)	400	#9	29'-8"	
b5(E)	8	#5	13'-5"	
b6(E)	8	#5	15'-10"	
b7(E)	4	#4	14'-0"	
b8(E)	4	#4	15'-2"	
d(E)	200	#5	6'-10"	
d2(E)	136	#5	7'-8"	
e5(E)	64	#4	14'-8"	
e6(E)	8	#8	14'-8"	
t(E)	352	#4	12'-8"	
w(E)	160	#5	24'-4"	
w1(E)	160	#5	29'-7"	
Concrete Structures			Cu. Yd.	67.8
Concrete Superstructure			Cu. Yd.	15.4
Concrete Superstructure (Approach Slab)			Cu. Yd.	258.9
(14) Reinforcement Bars, Epoxy Coated			Pound	99,410



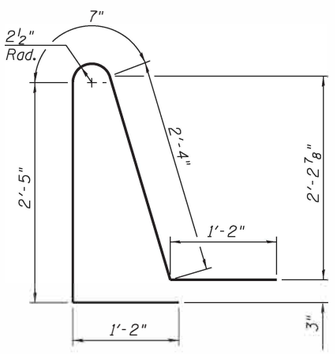
INSIDE ELEVATION OF PARAPET AND CURB



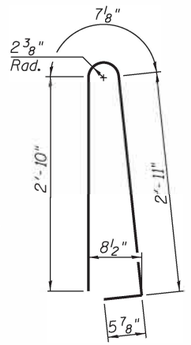
BARS a7(E) & a8(E)



BAR a11(E)



BAR d2(E)



BAR d(E)

Notes:

1. Cost included with Concrete Superstructure (Approach Slab).
2. Parapet concrete shall be paid for as Concrete Superstructure.
3. Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
4. Approach footing concrete shall be paid for as Concrete Structures.
5. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
6. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
7. For details of Bar Splicers, see sheet 30 of 31.
8. Cost of excavation for approach footing included with Concrete Structures.
9. For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 31.
10. For additional parapet details and parapet joint details, see sheet 14 of 31.
11. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.
12. Per manufacturer recommendations.
13. Measured along outside edge of curb.
14. Calculated weight of Reinforcement Bars, Epoxy Coated = 87,430 (Superstructure) 11,980 (Substructure)

FILE NAME = H:\PW\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0007 0008\Microstation\003x0007_0008-76D23-818-Approach Slab Details.dgn

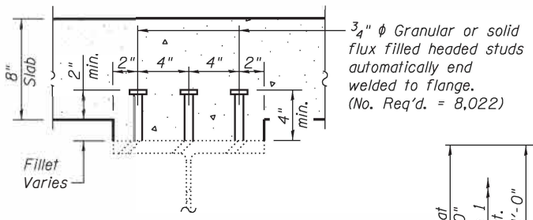
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - KBC	REVISED -	
	CHECKED - JAD	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

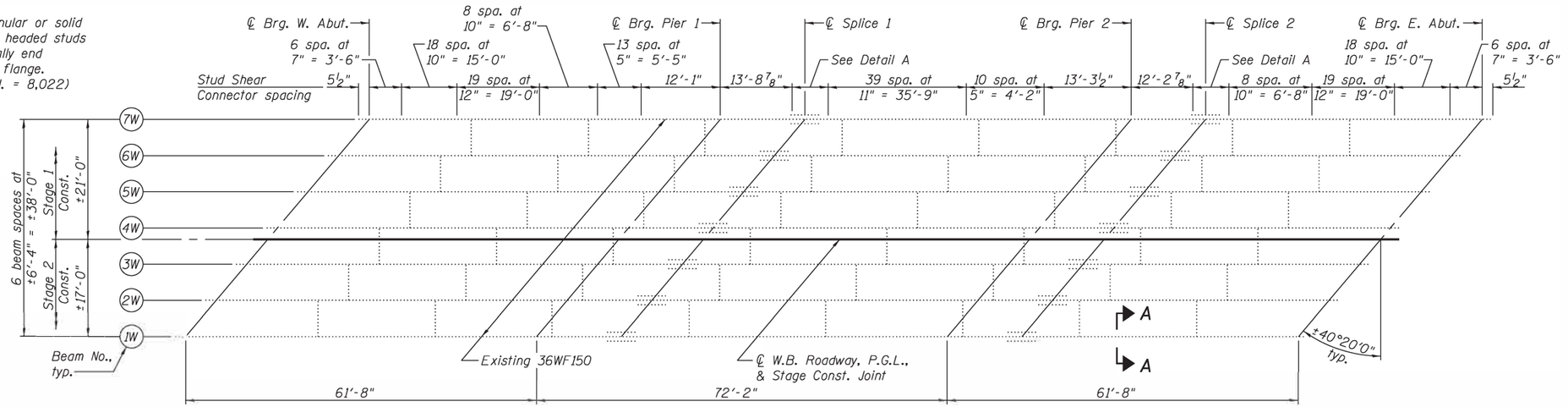
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 18 OF 31 SHEETS

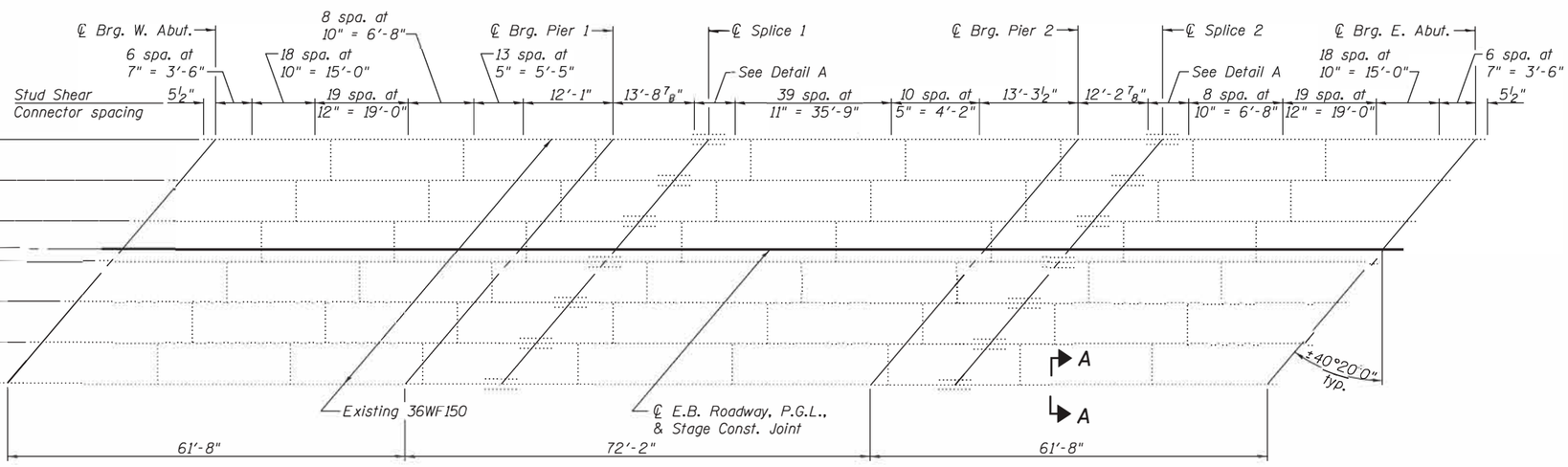
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	126
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



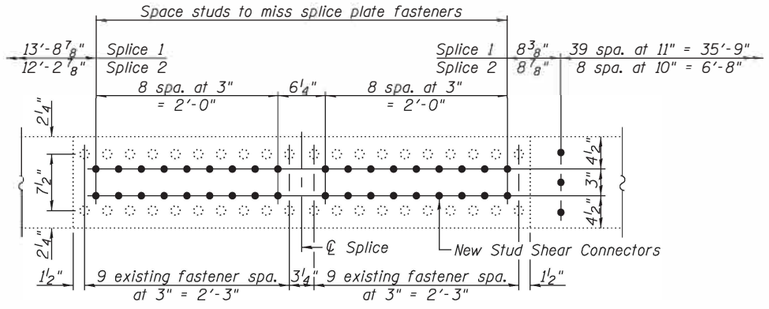
SECTION A-A

(Except as shown in Detail A)





FRAMING PLAN



DETAIL A

INTERIOR BEAM REACTION TABLE

		Abutments	Piers 1 or 2
R_{ℓ}	(k)	59.3 (3)	73.0
R_L	(k)	38.8	43.1
R_I	(k)	10.4	8.3
R_{Total}	(k)	108.5	124.4

INTERIOR BEAM MOMENT TABLE

		0.4 Span 1 or 0.6 Span 3	Pier 1 or Pier 2	0.5 Span 2
I_s	(in^4)	9,040	9,040	9,040
$I_c(n)$	(in^4)	22,273	-	22,273
$I_c(3n)$	(in^4)	16,348	-	16,348
S_s	(in^3)	504	504	504
$S_c(n)$	(in^3)	713	-	713
$S_c(3n)$	(in^3)	645	-	645
Z	(in^3)	-	-	-
ℓ	(k/')	0.839	0.987	0.839
$M\ell$	('k)	231.3	429.2	169.6
$s\ell$	(k/')	0.148	-	0.148
$M_s\ell$	('k)	46.6	-	43.7
M_L	('k)	414.2	236.2	421.1
M_{IM}	('k)	111.0	61.7	107.0
$\frac{5}{3}[M_L + I]$	('k)	875.3	496.5	880.2
M_a	('k)	1,499.0	1,203.4	1,421.6
(1) M_u	('k)	2,007.4	-	2,041.6
f_s ℓ non-comp	(ksi)	5.51	10.22	4.04
f_s ℓ (comp)	(ksi)	0.87	-	0.81
f_s $\frac{5}{3}[M_L + M_I]$	(ksi)	14.73	11.82	14.82
f_s (Overload)	(ksi)	21.11	22.04	19.67
(2) f_s (Total)	(ksi)	-	28.65	-
VR	(k)	58.2	-	40.8

Notes:
1. Compact Section.
2. Braced non-compact and partially braced section.
3. Dead load reaction includes 35.8 k for weight of concrete diaphragm and approach slab.

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total and Overload) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total and Overload) due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total and Overload) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

Z: Plastic Section Modulus of the steel section in non-composite areas ($in.^3$).

ℓ: Un-factored non-composite dead load (kips/ft.).

$M\ell$: Un-factored moment due to non-composite dead load (kip-ft.).

$s\ell$: Un-factored long-term composite (superimposed) dead load (kips/ft.)

$M_s\ell$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_L: Un-factored live load moment (kip-ft.).

M_I: Un-factored moment due to impact (kip-ft.).

M_a: Factored design moment (kip-ft.).
$1.3\ [\ M\ell + M_s\ell + \frac{5}{3}(M_L + M_I)]$

M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments above (ksi).
$M\ell + M_s\ell + \frac{5}{3}(M_L + M_I)$

f_s (Total): Sum of stresses as computed from the moments above on non-compact section (ksi).
$1.3\ [M\ell + M_s\ell + \frac{5}{3}(M_L + M_I)]$

VR: Maximum L + impact shear range within the composite portion of the span for stud shear connector design (kips).

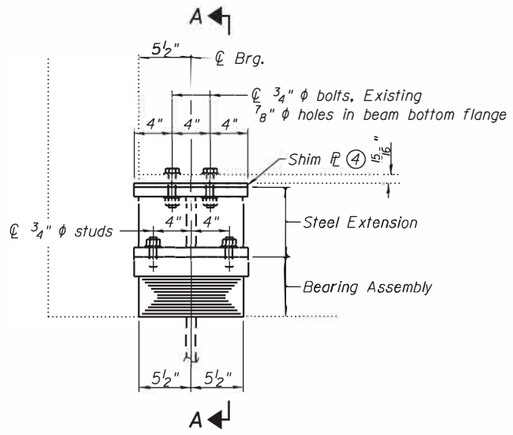
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - SJN	REVISED -	
	CHECKED - JAD	REVISED -	
PLOT SCALE =	DRAWN - SJN	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

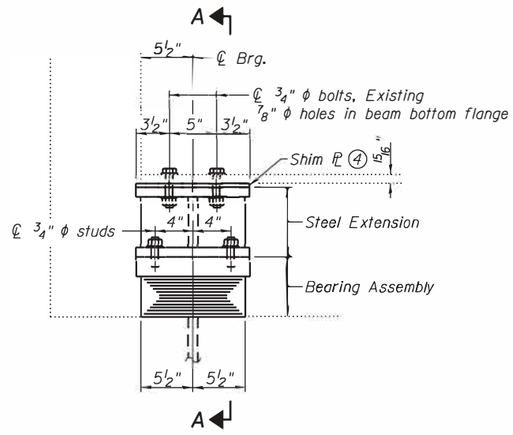
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN & BEAM DETAILS
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 19 OF 31 SHEETS

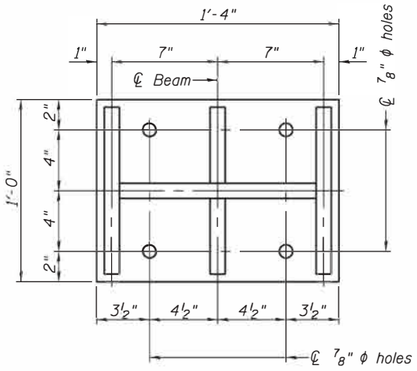
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	127
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



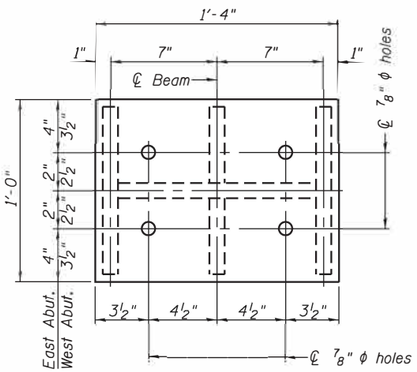
ELEVATION AT EAST ABUT.



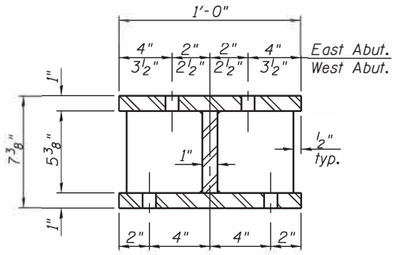
ELEVATION AT WEST ABUT.



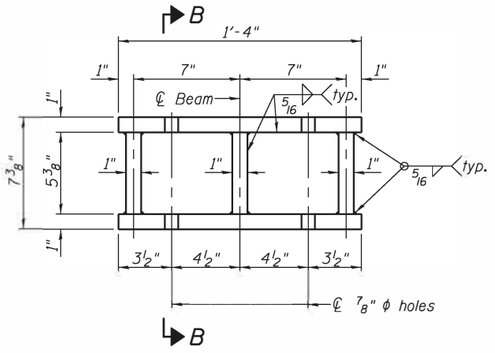
PLAN-BOTTOM PLATE



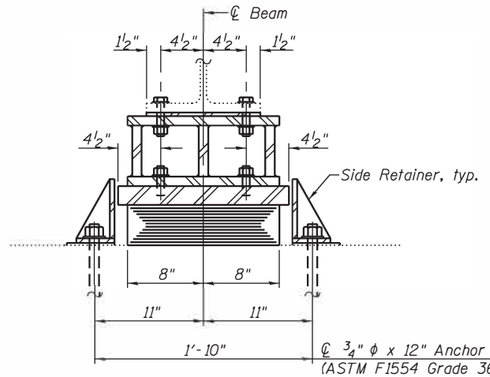
PLAN-TOP PLATE



SECTION B-B

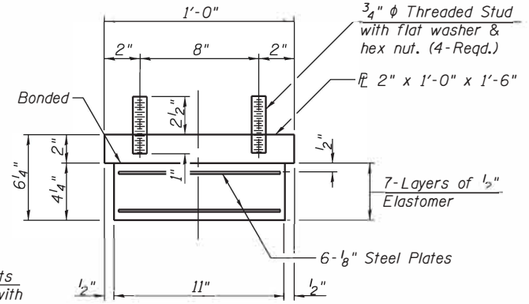


ELEVATION



SECTION A-A

℄ ¾" ϕ x 12" Anchor bolts (ASTM F1554 Grade 36) with 2" x 2" x 5/16" ℙ washer under nut



BEARING ASSEMBLY

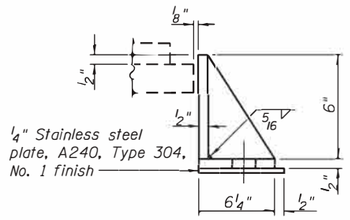
STEEL EXTENSION

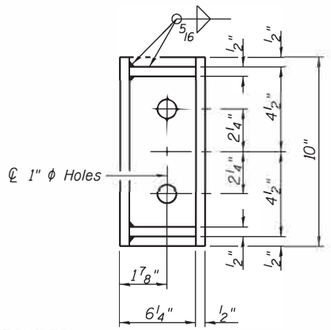
14 Required East Abut.
14 Required West Abut.

Notes:
1. Cost included with Jack and Remove Existing Bearings.
2. The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
3. Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.
4. Shim plates shall be placed on top of Steel Extension
5. Anchor bolts shall be ASTM F1554 all-thread or an Engineer-approved alternate material of the grade and diameter specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
6. Anchor bolts for side retainers shall be installed in drilled holes according to Article 521.06 of the Standard Specifications.
7. Side retainers, stainless steel plates, and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
8. Cost of Steel Extensions, shim plates, and connection bolts included with Furnishing and Erecting Structural Steel.
9. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
10. Minimum jack capacity = 4 Tons (weight of steel only).
11. The existing steel diaphragms shall not be used as load carrying members in the jacking and cribbing system.
12. If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.
13. Existing nuts and bolts to be removed with existing bearing assembly. Holes in bottom flange shall be cleaned of all heavy or loose rust and other loose foreign material, tightly adhered paint may remain. Cleaning shall be accomplished by methods that will not damage the steel.
14. Diaphragm removal and reinstallation may be required to facilitate anchor bolt installation. Cost included with Anchor Bolts, ¾".

BEARING SHIM PLATES (W.B. STRUCTURE)

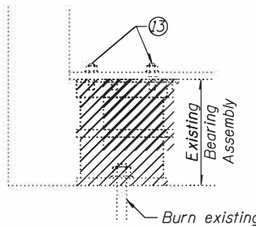
	Beam 1W	Beam 2W	Beam 3W	Beam 4W	Beam 5W	Beam 6W	Beam 7W
West Abut.	-	-	-	⅛"	-	-	-
East Abut.	-	-	-	⅛"	-	-	-





SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



To be removed

Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	5,160
Elastomeric Bearing Assembly, Type I	Each	28
Anchor Bolts, ¾"	Each	112
Jack and Remove Existing Bearings	Each	28

TYPE I ELASTOMERIC EXP. BRG.

EXISTING BEARING REMOVAL DETAIL①

FILE NAME = H:\P\13841\13841.00B - District 8 Deck Replacements\Structural\SN 003-0007 & 0008\Microstation\00300007_00008-76D23-R20-Bearing Replacement Details at Abutments.dgn

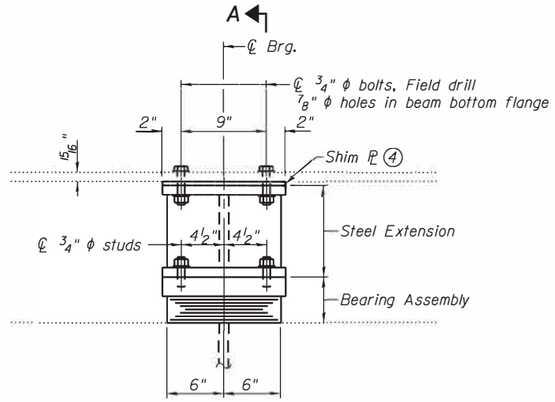
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - JAD	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - SJN	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS AT ABUTMENTS
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 20 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	128
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



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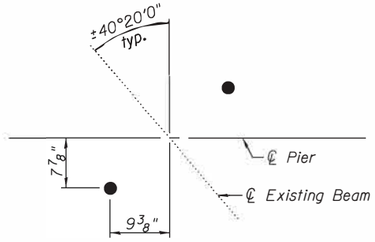
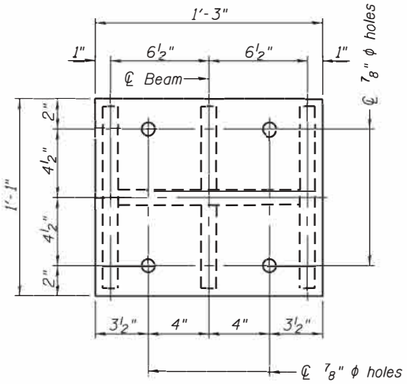
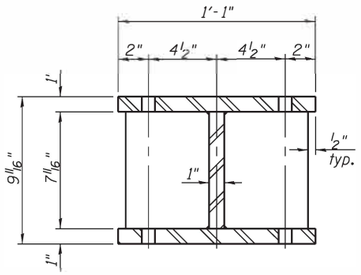


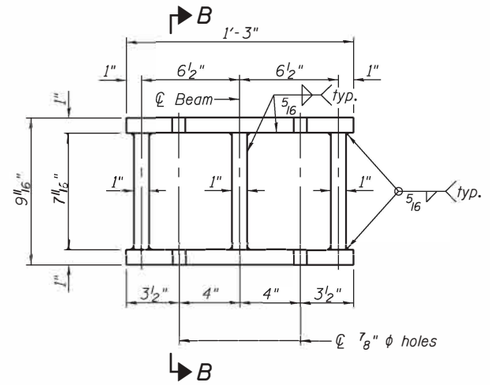
ANCHOR BOLT LAYOUT



PLAN-TOP AND BOTTOM PLATE



SECTION B-B



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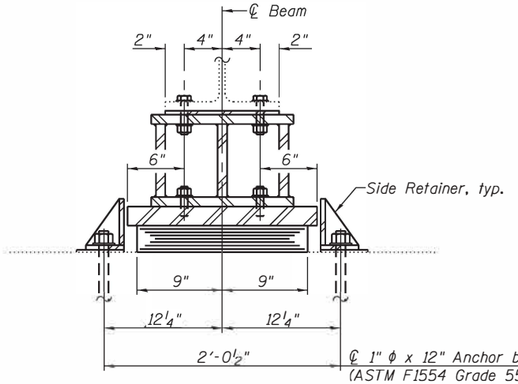
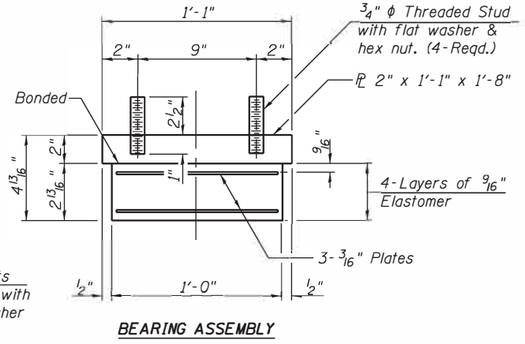


SECTION A-A



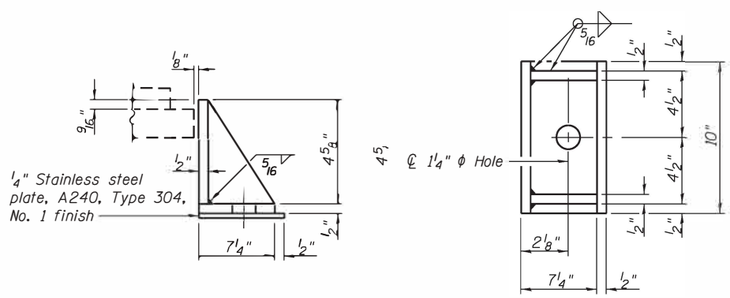
BEARING ASSEMBLY

STEEL EXTENSION

14 Required

BEARING SHIM PLATES (W.B. STRUCTURE)

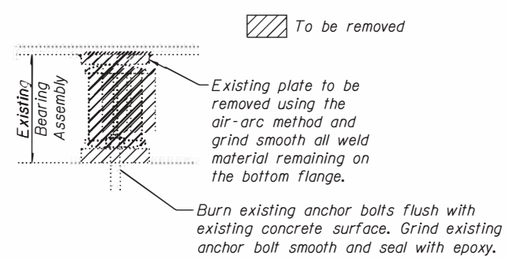
	Beam 1W	Beam 2W	Beam 3W	Beam 4W	Beam 5W	Beam 6W	Beam 7W
Pier 1	-	-	-	1/8"	-	-	-



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

TYPE I ELASTOMERIC EXP. BRG.



EXISTING BEARING REMOVAL DETAIL①

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	3,080
Elastomeric Bearing Assembly, Type I	Each	14
Anchor Bolts, 1"	Each	28
Jack and Remove Existing Bearings	Each	14

Notes:

1. Cost included with Jack and Remove Existing Bearings.
2. The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
3. Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.
4. Shim plates shall be placed on top of Steel Extension
5. Anchor bolts shall be ASTM F1554 all-thread or an Engineer-approved alternate material of the grade and diameter specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
6. Anchor bolts for side retainers shall be installed in drilled holes according to Article 521.06 of the Standard Specifications.
7. Side retainers, stainless steel plates, and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
8. Cost of Steel Extensions, shim plates, and connection bolts included with Furnishing and Erecting Structural Steel.
9. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
10. Minimum jack capacity = 10 Tons (weight of steel only).
11. The existing steel diaphragms shall not be used as load carrying members in the jacking and cribbing system.
12. If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.

FILE NAME =

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - JAD	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - SJN	REVISED -	

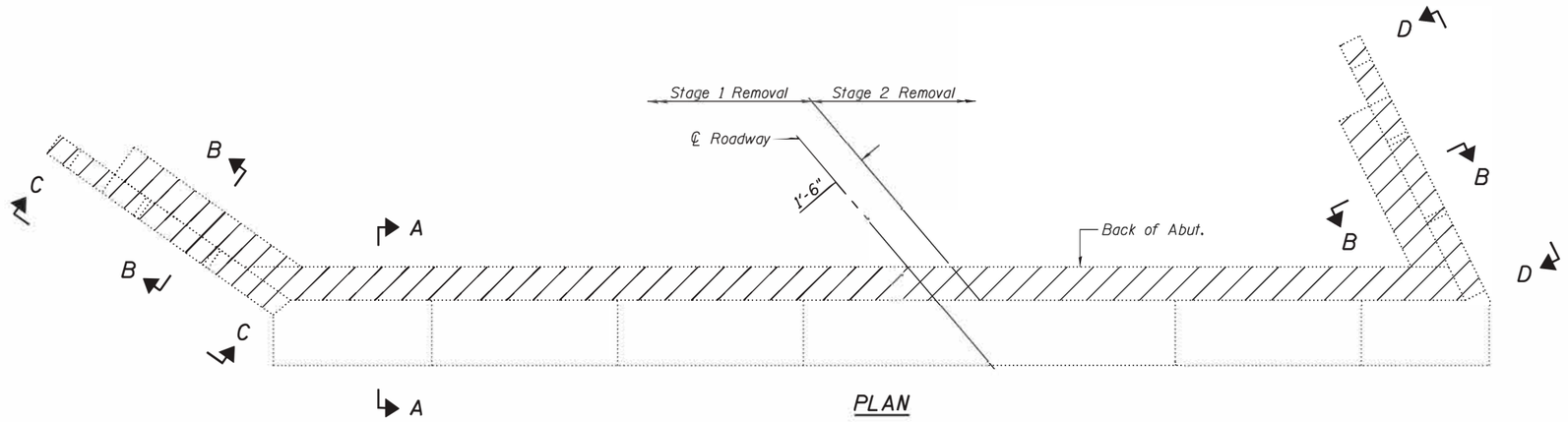
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS AT PIER 1
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 21 OF 31 SHEETS

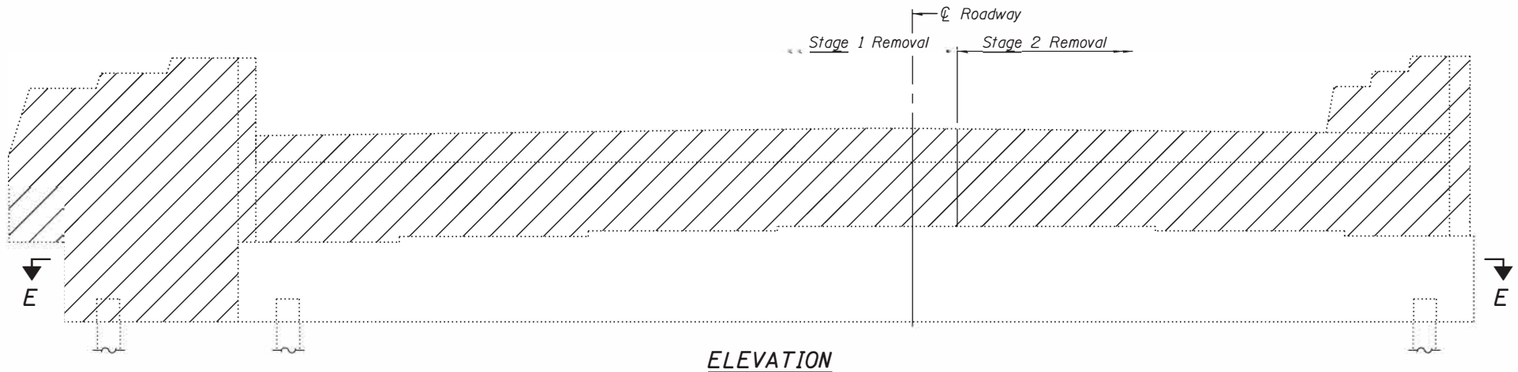
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	129
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

(E.B. West Abutment)

(W.B. East Abutment)

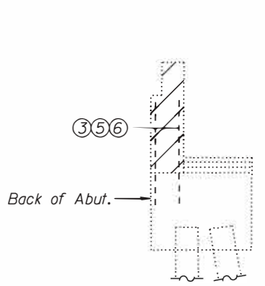


PLAN

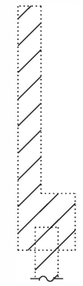


ELEVATION

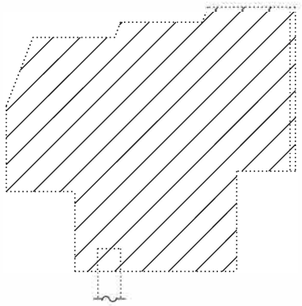
(E.B. West Abutment-Looking West)
(W.B. East Abutment-Looking East)



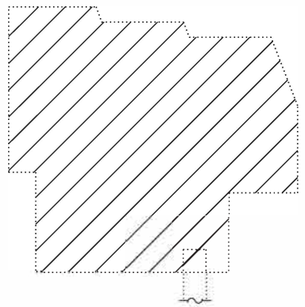
SECTION A-A



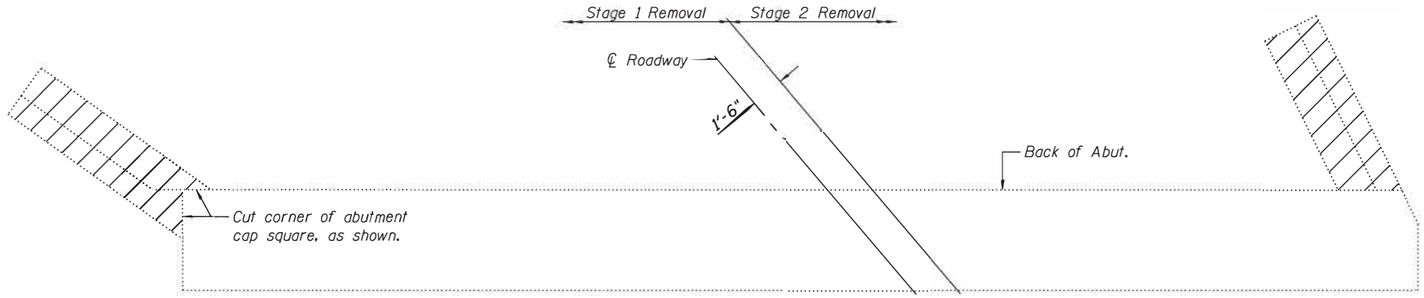
SECTION B-B



VIEW C-C ②



VIEW D-D ②



SECTION E-E

TWO ABUTMENTS
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	47.5

Notes:
1. Hatched area indicates Concrete Removal.
2. View only shows that which is to be removed.
3. Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
4. Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2 inch layer of cement grout. Cost included with Concrete Removal.
5. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
6. For details of existing reinforcement to be incorporated into new construction, see sheets 24 thru 27 of 31.

FILE NAME = H:\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0007, 0008\Microstation\003D0007_0008-76D23-022-Abutment Concrete Removal (S.W. & N.E.).dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED -	REVISED -	
	CHECKED -	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

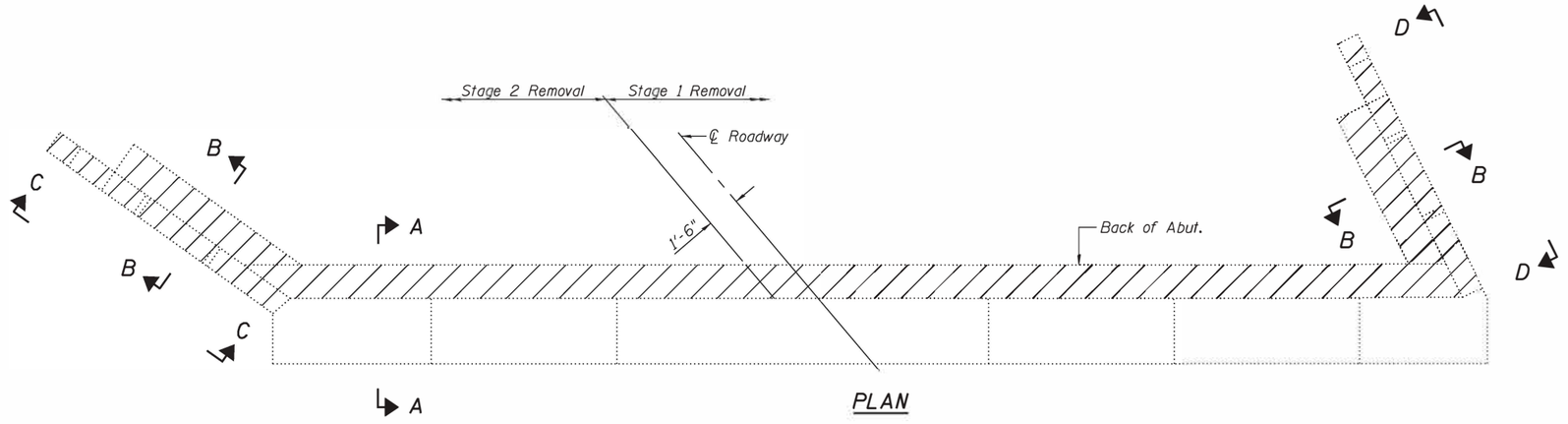
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT CONCRETE REMOVAL
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 22 OF 31 SHEETS

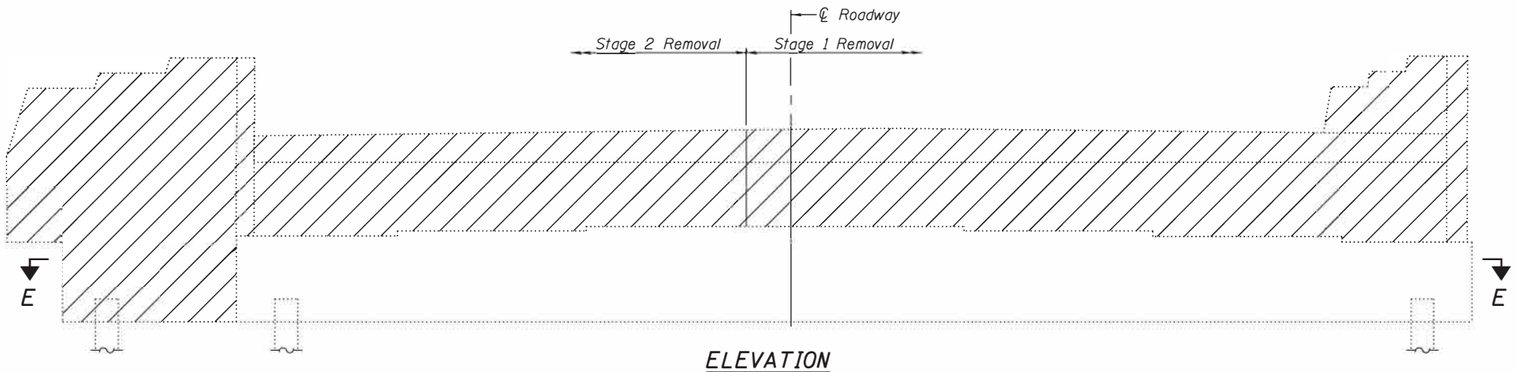
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	130
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

(E.B. East Abutment)

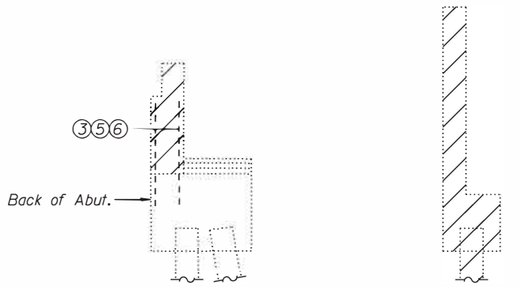
(W.B. West Abutment)



PLAN

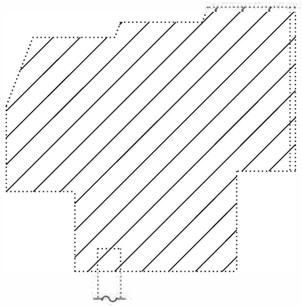


ELEVATION
(E.B. East Abutment - Looking East)
(W.B. West Abutment - Looking West)

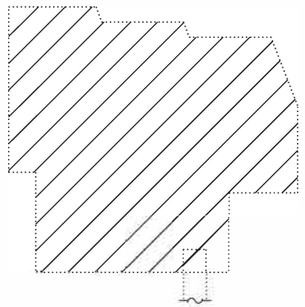


SECTION A-A

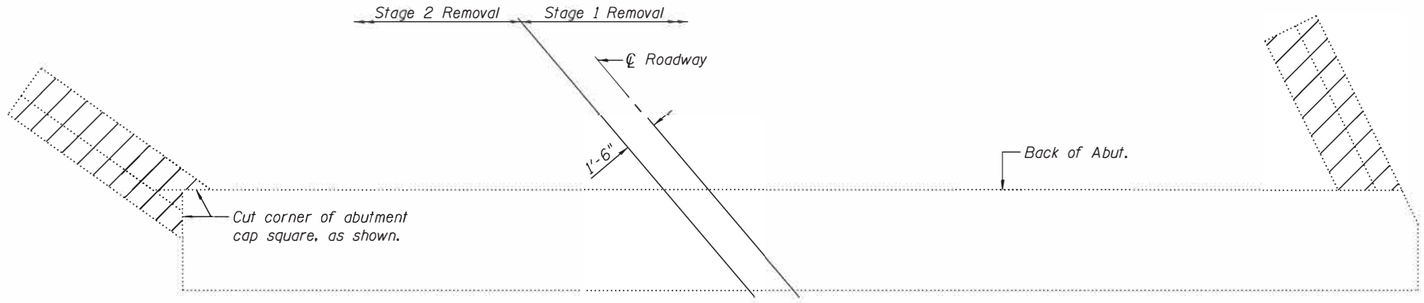
SECTION B-B



VIEW C-C ②



VIEW D-D ②



SECTION E-E

TWO ABUTMENTS
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	47.6

Notes:
1. Hatched area indicates Concrete Removal.
2. View only shows that which is to be removed.
3. Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
4. Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2 inch layer of cement grout. Cost included with Concrete Removal.
5. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
6. For details of existing reinforcement to be incorporated into new construction, see sheets 24 thru 27 of 31.

FILE NAME = H:\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0007, 0008\Microstation\003D0007_0008-76D23-023-Abutment Concrete Removal (S.E. & N.W.).dgn

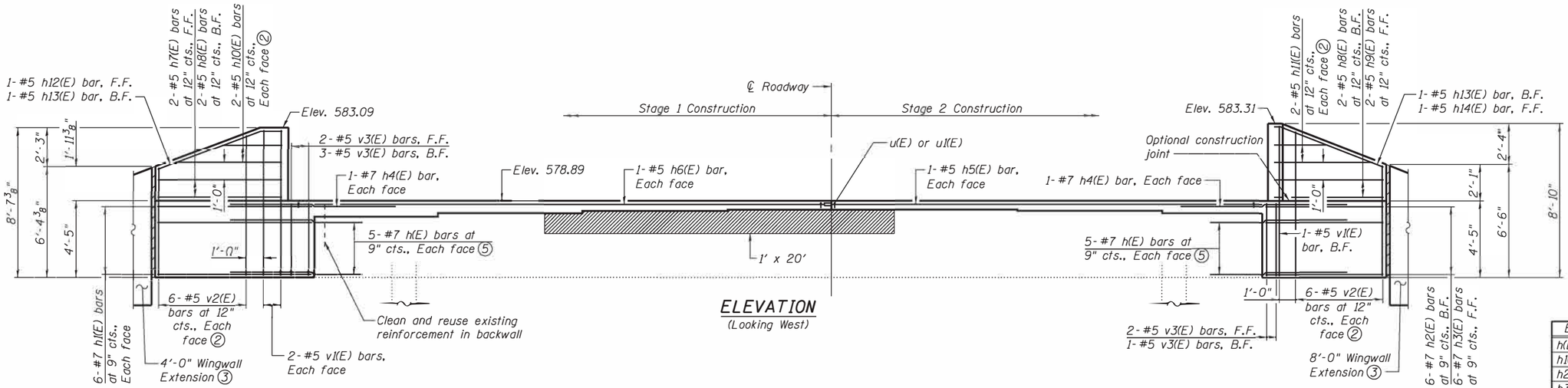
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED -	REVISED -	
	CHECKED -	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

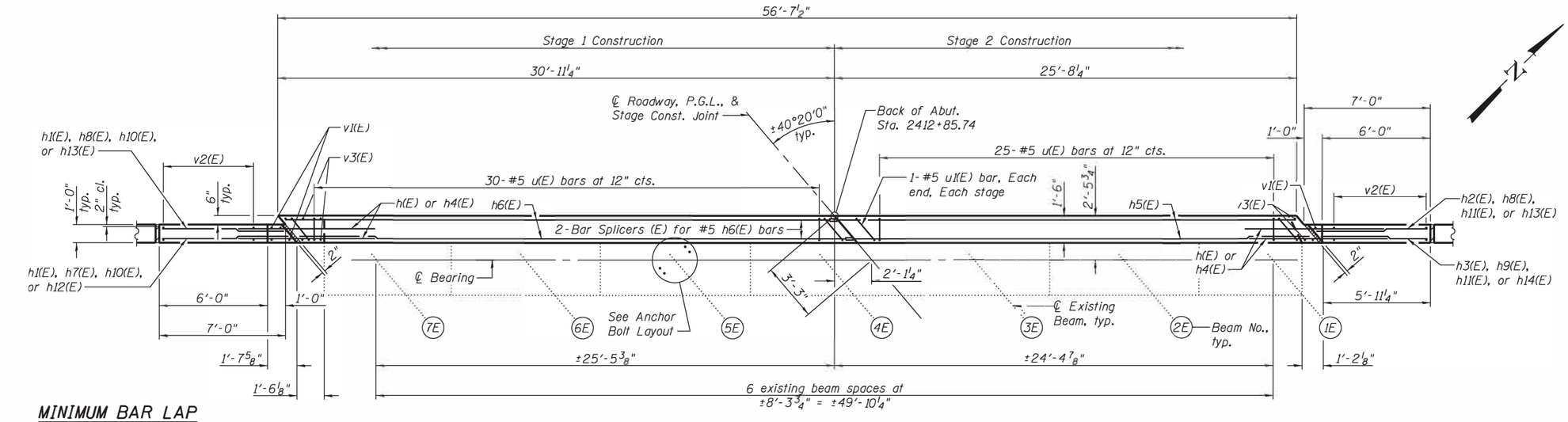
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT CONCRETE REMOVAL
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 23 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	131
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

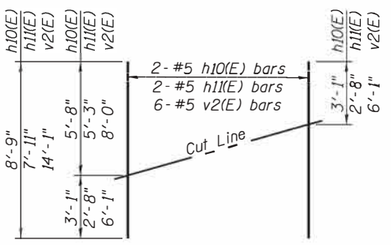


ELEVATION
(Looking West)

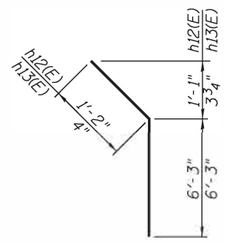


PLAN

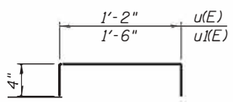
MINIMUM BAR LAP
#7 bar = 4'-8"



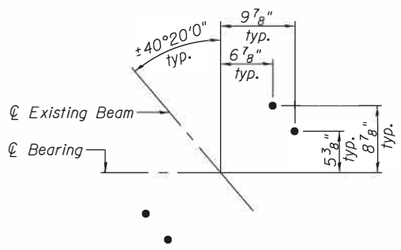
FIELD CUTTING DIAGRAM
Order h10(E), h11(E), and v2(E) bars full length. Cut as shown and use remainder of bars in opposite face.



BARS h12(E) & h13(E)

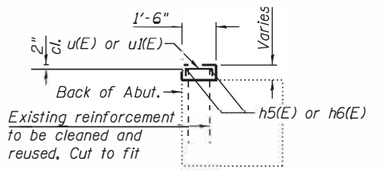


BARS u(E) & u1(E)



ANCHOR BOLT LAYOUT

Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)



SECTION THRU ABUTMENT

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#7	7'-7"	
h1(E)	12	#7	8'-10"	
h2(E)	6	#7	7'-2"	
h3(E)	6	#7	6'-10"	
h4(E)	4	#7	9'-8"	
h5(E)	2	#5	25'-3"	
h6(E)	2	#5	30'-6"	
h7(E)	2	#5	7'-1"	
h8(E)	4	#5	6'-3"	
h9(E)	2	#5	5'-9"	
h10(E)	2	#5	8'-9"	
h11(E)	2	#5	7'-11"	
h12(E)	1	#5	7'-5"	
h13(E)	2	#5	6'-7"	
h14(E)	1	#5	6'-2"	
h15(E)	14	#4	3'-8"	
h16(E)	14	#4	7'-8"	
n(E)	28	#4	4'-0"	
t1(E)	24	#4	6'-10"	
t2(E)	14	#4	6'-2"	
u(E)	55	#5	1'-10"	
u1(E)	4	#5	2'-2"	
v1(E)	5	#5	8'-3"	
v2(E)	12	#5	14'-1"	
v3(E)	8	#5	4'-1"	
v4(E)	5	#4	11'-1"	
v5(E)	9	#4	9'-7"	
w2(E)	14	#4	3'-8"	
w3(E)	14	#4	7'-8"	
Structure Excavation		Cu. Yd.	141	
Concrete Structures		Cu. Yd.	12.0	
Reinforcement Bars, Epoxy Coated		Pound	1,930	
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)		Sq. Ft.	20.0	

Notes:
1. B.F. denotes back face. F.F. denotes front face.
2. See Field Cutting Diagram.
3. For Wingwall Extension Details, see sheet 28 of 31.
4. For details of Bar Splicers, see sheet 30 of 31.
5. Epoxy grout h(E) bars according to Section 584 of the Standard Specifications. Minimum embedment is 2'-9". Embedment depth may be reduced according to the epoxy Manufacturer, if the Contractor provides to the Engineer in writing that the shallower embedment depth is capable of developing the full yield strength of the reinforcement at the surface of the existing concrete.

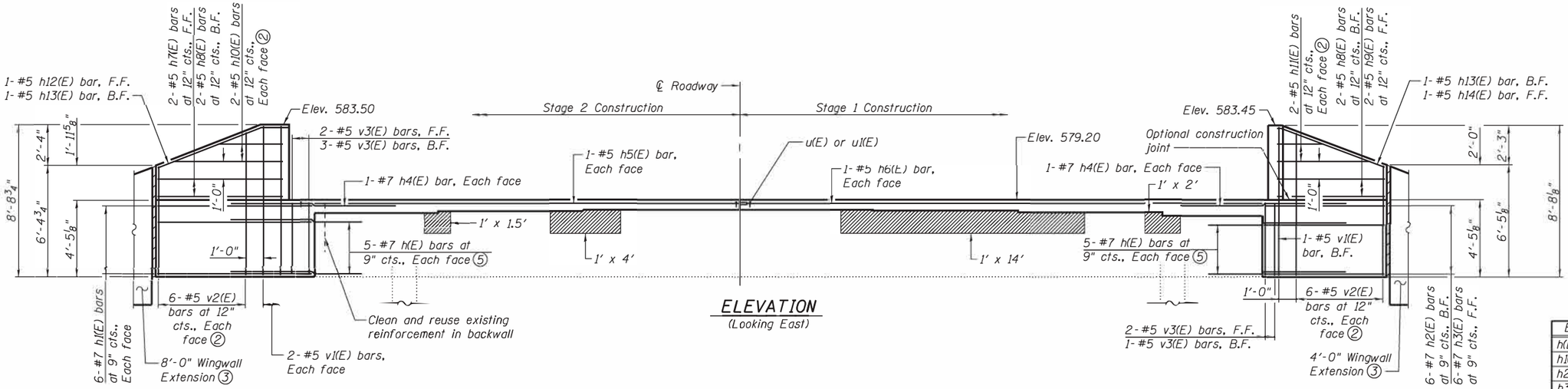
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

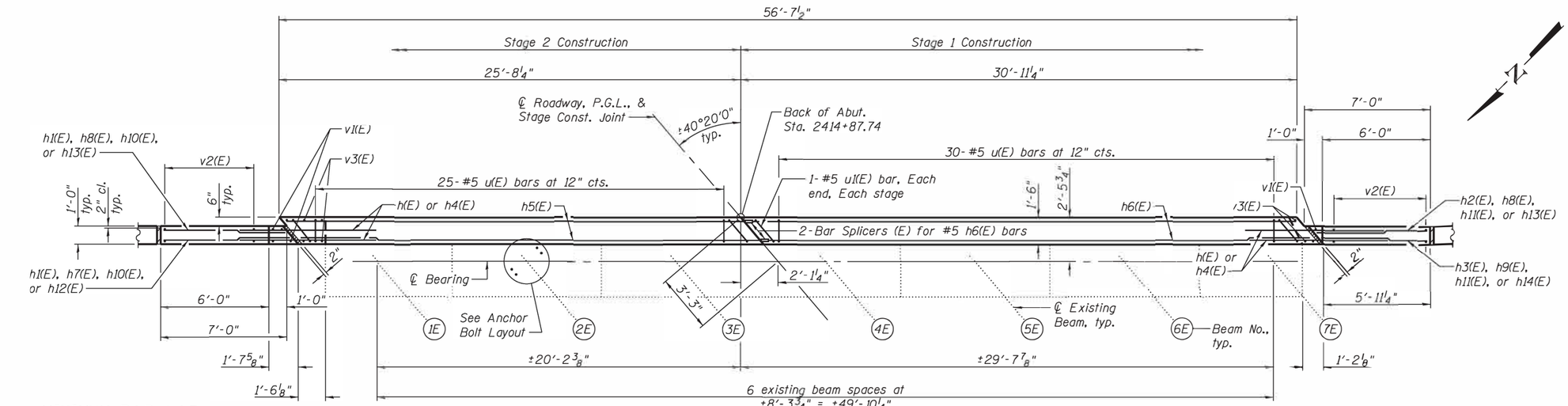
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT DETAILS
STRUCTURE NO. 003-0007 (E.B.)
SHEET NO. 24 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	132
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

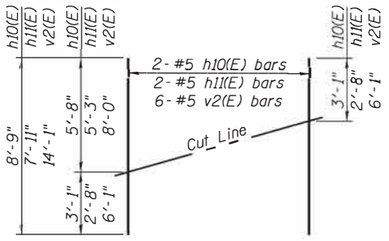


ELEVATION
(Looking East)

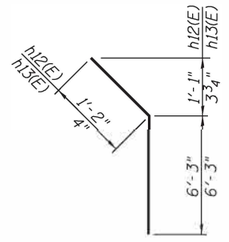


PLAN

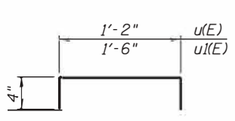
MINIMUM BAR LAP
#7 bar = 4'-8"



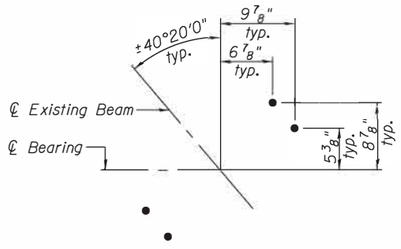
FIELD CUTTING DIAGRAM
Order h10(E), h11(E), and v2(E) bars full length. Cut as shown and use remainder of bars in opposite face.



BARS h12(E) & h13(E)

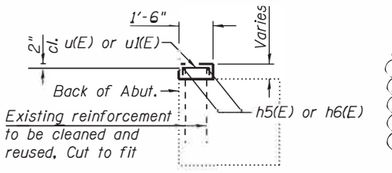


BARS u(E) & u1(E)



ANCHOR BOLT LAYOUT

Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)



SECTION THRU ABUTMENT

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#7	7'-7"	
h1(E)	12	#7	8'-10"	
h2(E)	6	#7	7'-2"	
h3(E)	6	#7	6'-10"	
h4(E)	4	#7	9'-8"	
h5(E)	2	#5	25'-3"	
h6(E)	2	#5	30'-6"	
h7(E)	2	#5	7'-1"	
h8(E)	4	#5	6'-3"	
h9(E)	2	#5	5'-9"	
h10(E)	2	#5	8'-9"	
h11(E)	2	#5	7'-11"	
h12(E)	1	#5	7'-5"	
h13(E)	2	#5	6'-7"	
h14(E)	1	#5	6'-2"	
h15(E)	14	#4	3'-8"	
h16(E)	14	#4	7'-8"	
n(E)	28	#4	4'-0"	
t1(E)	24	#4	6'-10"	
t2(E)	14	#4	6'-2"	
u(E)	55	#5	1'-10"	
u1(E)	4	#5	2'-2"	
v1(E)	5	#5	8'-3"	
v2(E)	12	#5	14'-1"	
v3(E)	8	#5	4'-1"	
v4(E)	5	#4	11'-1"	
v5(E)	9	#4	9'-7"	
w2(E)	14	#4	3'-8"	
w3(E)	14	#4	7'-8"	
Structure Excavation		Cu. Yd.	132	
Concrete Structures		Cu. Yd.	12.1	
Reinforcement Bars, Epoxy Coated		Pound	1,930	
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)		Sq. Ft.	21.5	

Notes:
1. B.F. denotes back face. F.F. denotes front face.
2. See Field Cutting Diagram.
3. For Wingwall Extension Details, see sheet 28 of 31.
4. For details of Bar Splicers, see sheet 30 of 31.
5. Epoxy grout h(E) bars according to Section 584 of the Standard Specifications. Minimum embedment is 2'-9". Embedment depth may be reduced according to the epoxy Manufacturer, if the Contractor provides to the Engineer in writing that the shallower embedment depth is capable of developing the full yield strength of the reinforcement at the surface of the existing concrete.

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

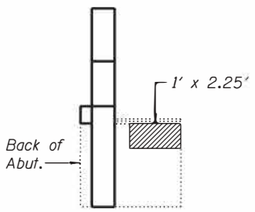
USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

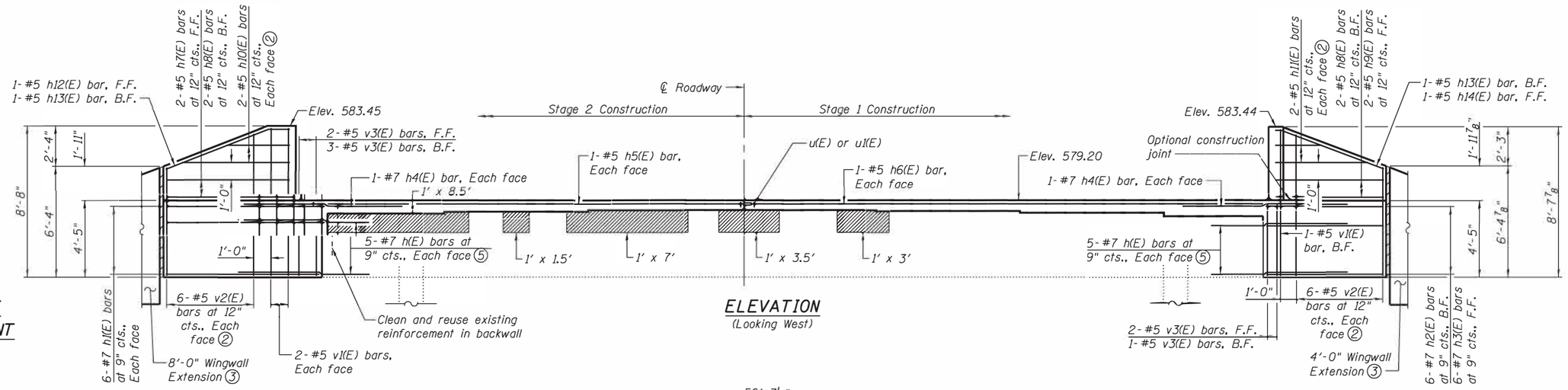
EAST ABUTMENT DETAILS
STRUCTURE NO. 003-0007 (E.B.)
SHEET NO. 25 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	133
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		

FILE NAME = H:\N1841\N1841.008 - District 8 Deck Replacements\Structural\SN 003-0007_0008\Microstation\0030007_0008-76D23-025-East Abutment Details (E.B.).dgn



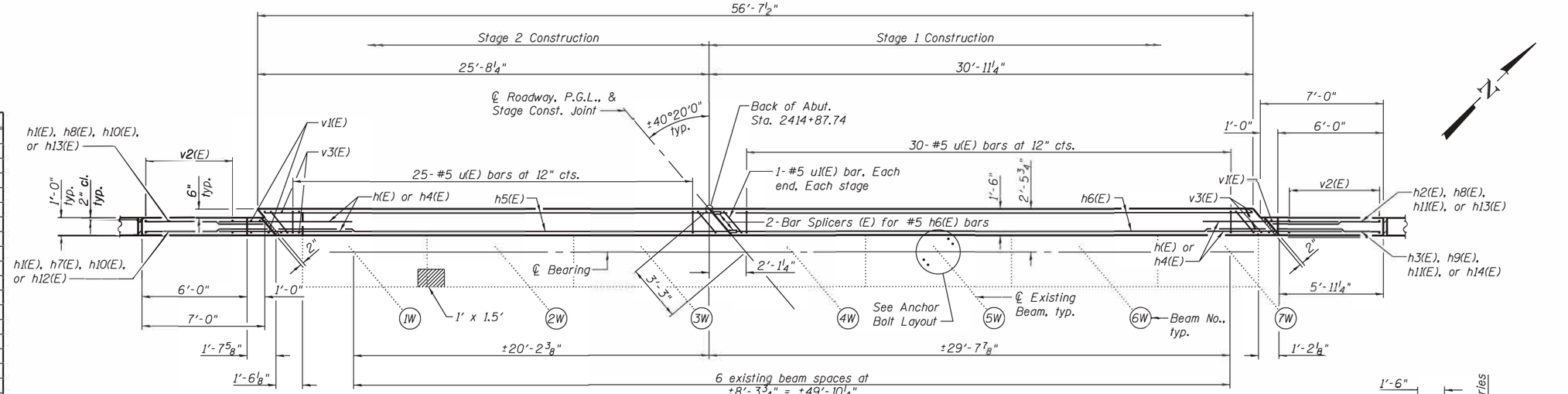
CONCRETE REPAIR AT SOUTH END OF ABUTMENT



ELEVATION
(Looking West)

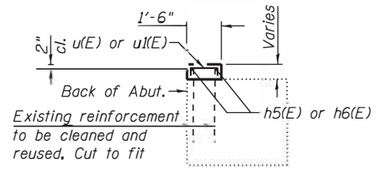
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#7	7'-7"	———
h1(E)	12	#7	8'-10"	———
h2(E)	6	#7	7'-2"	———
h3(E)	6	#7	6'-10"	———
h4(E)	4	#7	9'-8"	———
h5(E)	2	#5	25'-3"	———
h6(E)	2	#5	30'-6"	———
h7(E)	2	#5	7'-1"	———
h8(E)	4	#5	6'-3"	———
h9(E)	2	#5	5'-9"	———
h10(E)	2	#5	8'-9"	———
h11(E)	2	#5	7'-11"	———
h12(E)	1	#5	7'-5"	———
h13(E)	2	#5	6'-7"	———
h14(E)	1	#5	6'-2"	———
h15(E)	14	#4	3'-8"	———
h16(E)	14	#4	7'-8"	———
n(E)	28	#4	4'-0"	⌐
t1(E)	24	#4	6'-10"	⌐
t2(E)	14	#4	6'-2"	———
u(E)	55	#5	1'-10"	⌐ ⌐
u1(E)	4	#5	2'-2"	⌐ ⌐
v1(E)	5	#5	8'-3"	———
v2(E)	12	#5	14'-1"	———
v3(E)	8	#5	4'-1"	———
v4(E)	5	#4	11'-1"	———
v5(E)	9	#4	9'-7"	———
w2(E)	14	#4	3'-8"	———
w3(E)	14	#4	7'-8"	———
Structure Excavation		Cu. Yd.	131	
Concrete Structures		Cu. Yd.	12.2	
Reinforcement Bars, Epoxy Coated		Pound	1,930	
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)		Sq. Ft.	27.3	

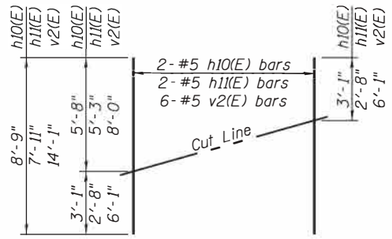


MINIMUM BAR LAP
#7 bar = 4'-8"

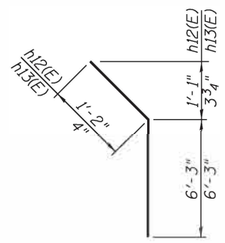
PLAN



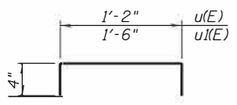
SECTION THRU ABUTMENT



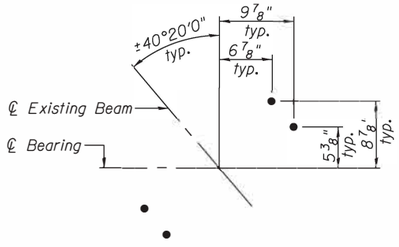
FIELD CUTTING DIAGRAM
Order h10(E), h11(E), and v2(E) bars full length. Cut as shown and use remainder of bars in opposite face.



BARS h12(E) & h13(E)



BARS u(E) & u1(E)



ANCHOR BOLT LAYOUT

Notes:
1. B.F. denotes back face. F.F. denotes front face.
2. See Field Cutting Diagram.
3. For Wingwall Extension Details, see sheet 28 of 31.
4. For details of Bar Splicers, see sheet 30 of 31.
5. Epoxy grout h(E) bars according to Section 584 of the Standard Specifications. Minimum embedment is 2'-9". Embedment depth may be reduced according to the epoxy Manufacturer, if the Contractor provides to the Engineer in writing that the shallower embedment depth is capable of developing the full yield strength of the reinforcement at the surface of the existing concrete.

Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)

FILE NAME = H:\V\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0007, 0008\Microstation\00320087_0008-76D23-826-West Abutment Details (WB).dgn

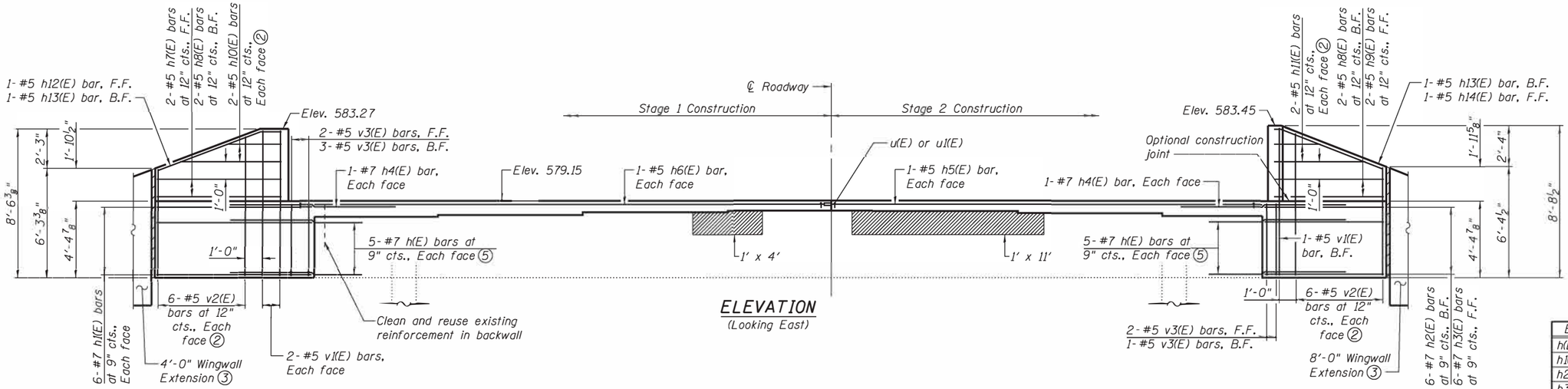
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -
	CHECKED - KBC	REVISED -
PLOT SCALE =	DRAWN - KBC	REVISED -
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -

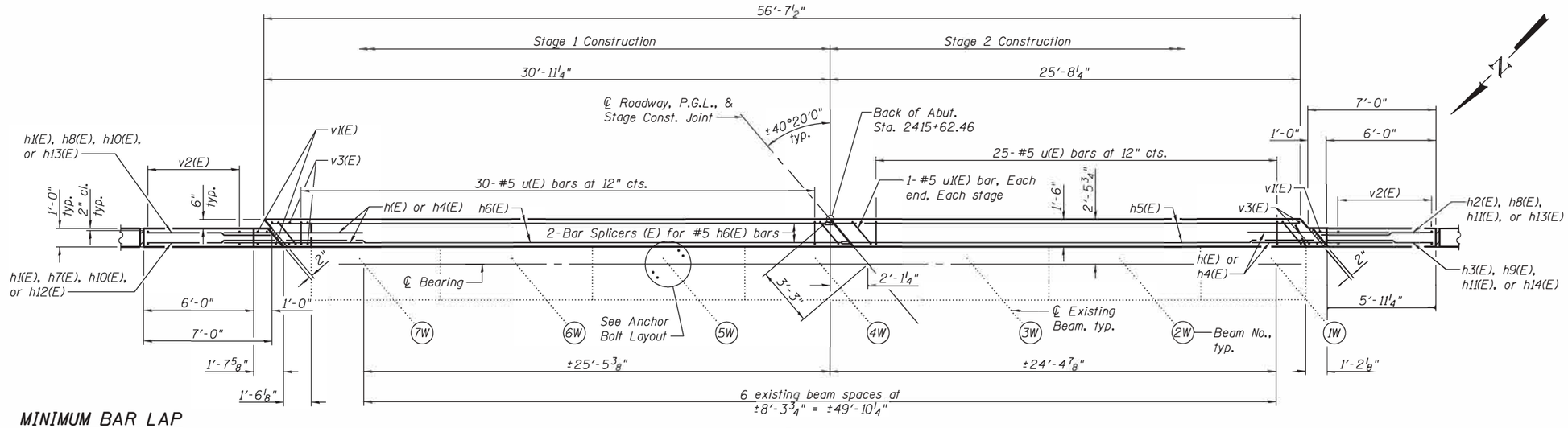
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT DETAILS
STRUCTURE NO. 003-0008 (W.B.)
SHEET NO. 26 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	134
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

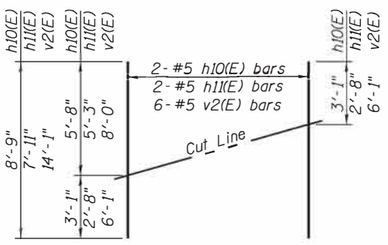


ELEVATION
(Looking East)

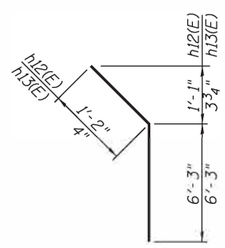


PLAN

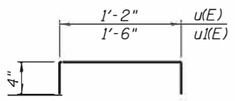
MINIMUM BAR LAP
#7 bar = 4'-8"



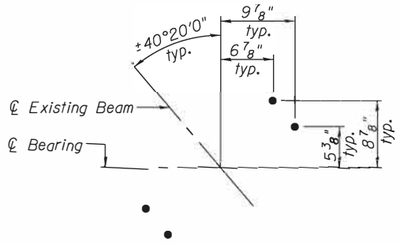
FIELD CUTTING DIAGRAM
Order h10(E), h11(E), and v2(E) bars full length. Cut as shown and use remainder of bars in opposite face.



BARS h12(E) & h13(E)

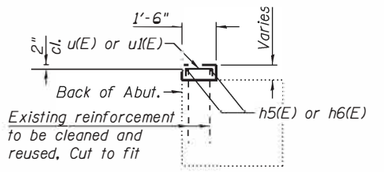


BARS u(E) & u1(E)



ANCHOR BOLT LAYOUT

Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)



SECTION THRU ABUTMENT

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#7	7'-7"	
h1(E)	12	#7	8'-10"	
h2(E)	6	#7	7'-2"	
h3(E)	6	#7	6'-10"	
h4(E)	4	#7	9'-8"	
h5(E)	2	#5	25'-3"	
h6(E)	2	#5	30'-6"	
h7(E)	2	#5	7'-1"	
h8(E)	4	#5	6'-3"	
h9(E)	2	#5	5'-9"	
h10(E)	2	#5	8'-9"	
h11(E)	2	#5	7'-11"	
h12(E)	1	#5	7'-5"	
h13(E)	2	#5	6'-7"	
h14(E)	1	#5	6'-2"	
h15(E)	14	#4	3'-8"	
h16(E)	14	#4	7'-8"	
n(E)	28	#4	4'-0"	
t1(E)	24	#4	6'-10"	
t2(E)	14	#4	6'-2"	
u(E)	55	#5	1'-10"	
u1(E)	4	#5	2'-2"	
v1(E)	5	#5	8'-3"	
v2(E)	12	#5	14'-1"	
v3(E)	8	#5	4'-1"	
v4(E)	5	#4	11'-1"	
v5(E)	9	#4	9'-7"	
w2(E)	14	#4	3'-8"	
w3(E)	14	#4	7'-8"	
Structure Excavation		Cu. Yd.	136	
Concrete Structures		Cu. Yd.	12.2	
Reinforcement Bars, Epoxy Coated		Pound	1,930	
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)		Sq. Ft.	15.0	

Notes:
1. B.F. denotes back face. F.F. denotes front face.
2. See Field Cutting Diagram.
3. For Wingwall Extension Details, see sheet 28 of 31.
4. For details of Bar Splicers, see sheet 30 of 31.
5. Epoxy grout h(E) bars according to Section 584 of the Standard Specifications. Minimum embedment is 2'-9". Embedment depth may be reduced according to the epoxy Manufacturer, if the Contractor provides to the Engineer in writing that the shallower embedment depth is capable of developing the full yield strength of the reinforcement at the surface of the existing concrete.

FILE NAME = H:\PW\1841\1841.028 - District 8 Deck Replacements\Structural\SN 003-0007, 0008\Microstation\0030007, 0008-76D23-827-East Abutment Details (W.B.).dgn

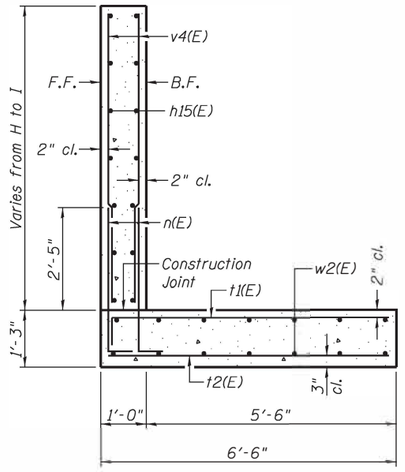
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

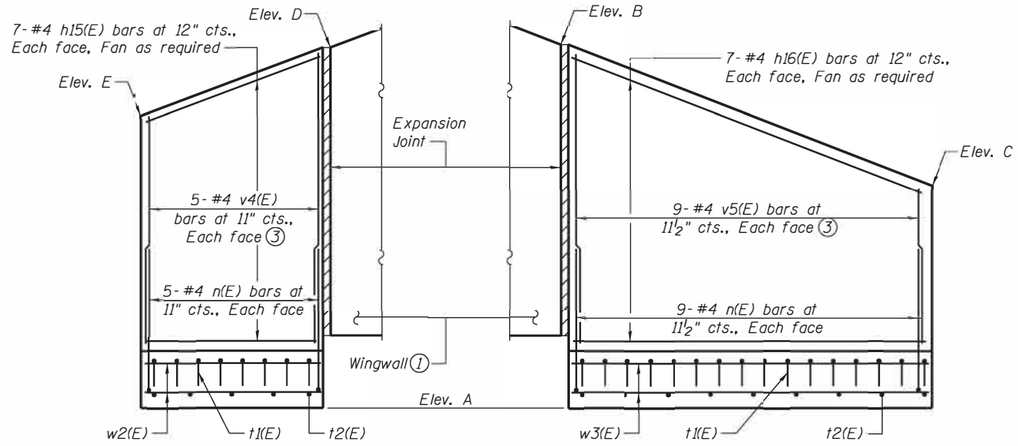
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT DETAILS
STRUCTURE NO. 003-0008 (W.B.)
SHEET NO. 27 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	135
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

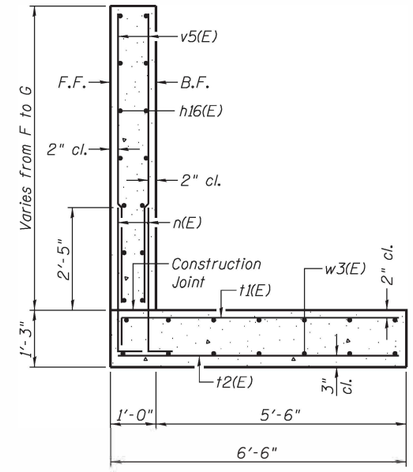


SECTION THRU 4'-0" WINGWALL EXTENSION

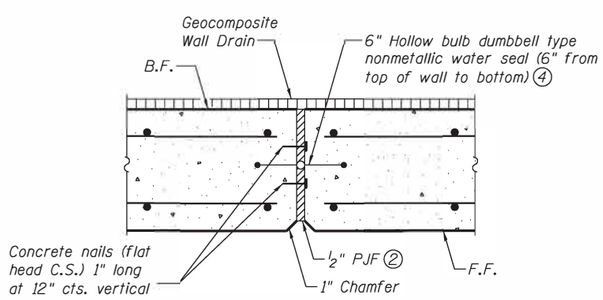


4'-0" WINGWALL EXTENSION **8'-0" WINGWALL EXTENSION**

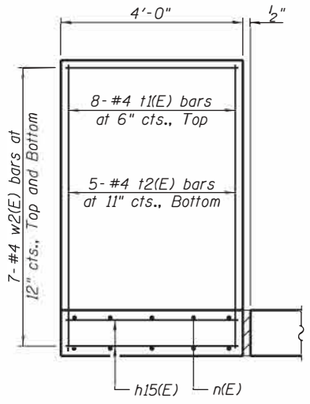
ELEVATION



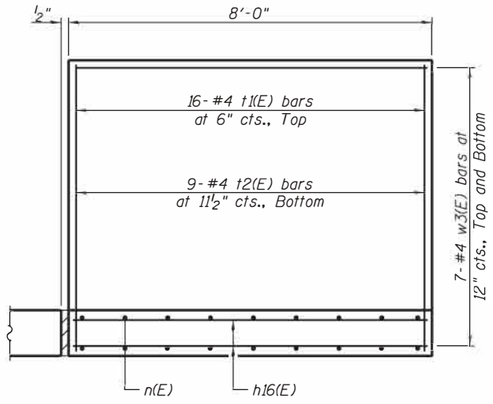
SECTION THRU 8'-0" WINGWALL EXTENSION



EXPANSION JOINT



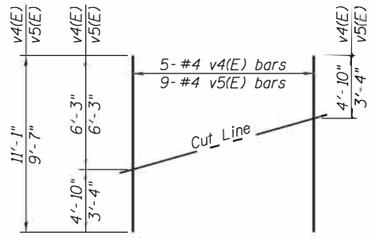
4'-0" WINGWALL EXTENSION



8'-0" WINGWALL EXTENSION

FOOTING PLAN

BARS n(E) & t1(E)



FIELD CUTTING DIAGRAM

Order v4(E) and v5(E) bars full length. Cut as shown and use remainder of bars in opposite face.

MINIMUM BAR LAP

#4 bar = 2'-1"

ELEVATION & DIMENSION TABLE

	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	F	G	H	I
E.B. W. Abut.	572.90	580.98	577.89	580.84	579.34	3'-8 7/8"	6'-10"	5'-2 1/4"	6'-8 1/4"
E.B. E. Abut.	573.19	581.17	578.08	581.20	579.70	3'-7 5/8"	6'-8 3/4"	5'-3 1/8"	6'-9 1/8"
W.B. W. Abut.	573.20	581.12	578.03	581.19	579.69	3'-7"	6'-8"	5'-2 7/8"	6'-8 7/8"
W.B. E. Abut.	573.16	581.12	578.03	581.02	579.52	3'-7 1/2"	6'-8 1/2"	5'-1 3/8"	6'-7 3/8"

Notes:
1. For Bill of Material and wingwall details, see sheets 24 thru 27 of 31.
2. Cost included with Concrete Structures.
3. See Field Cutting Diagram.
4. 6" Dumbbell type nonmetallic water seal shall be in accordance with Article 503.12 and Section 1054 of the Standard Specifications. Cost included with Concrete Structures.
5. B.F. denotes back face and F.F. denotes front face.

FILE NAME = M:\P\13841\13841.2008 - District 8 Deck Replacements\Structural\SN 003-0007, 0008\Microstation\00300007_00008-76D23-ACB-Wingwall Extension Details.dgn

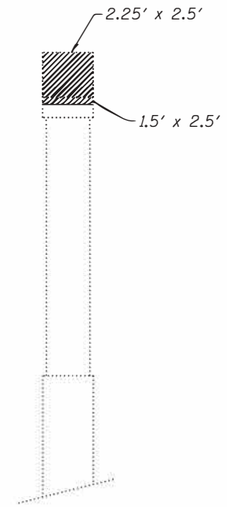
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

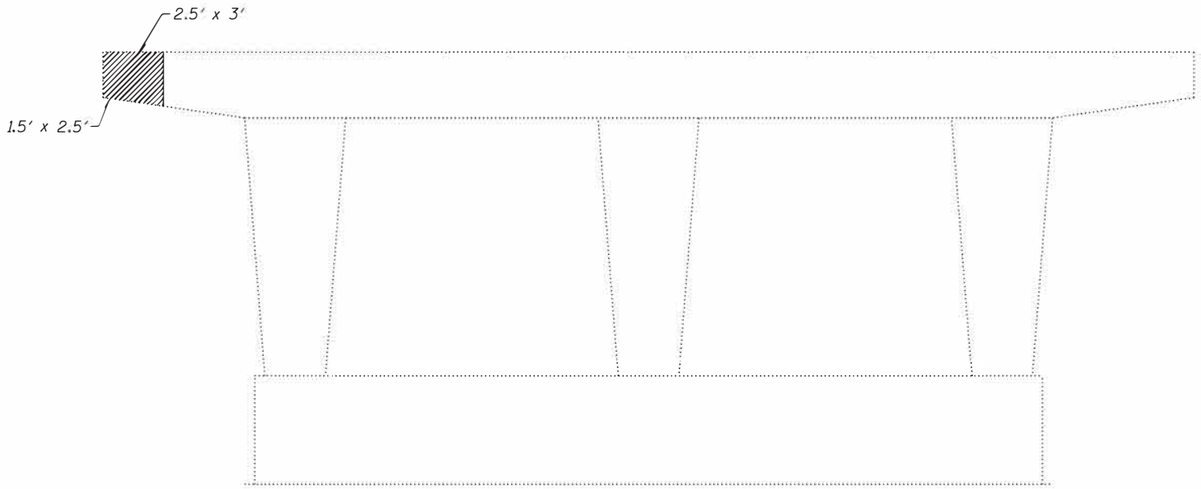
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WINGWALL EXTENSION DETAILS
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 28 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	136
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



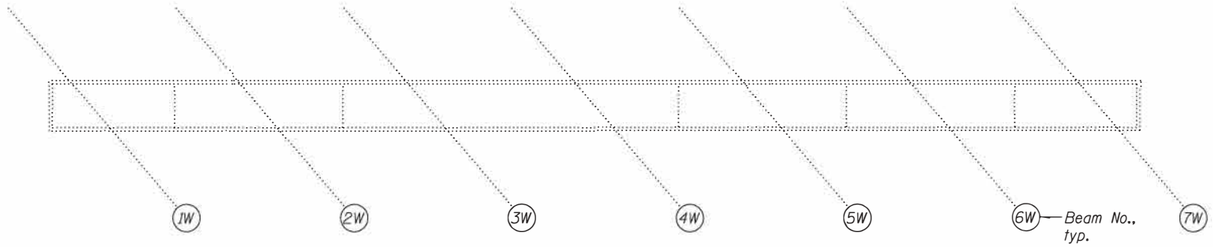
SOUTH END



EAST FACE

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)	Sq. Ft.	16.9



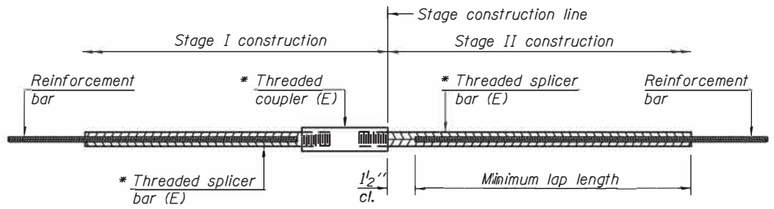
SEAT PLAN

Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)

FILE NAME = H:\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0007 .0008\Microstation\003X0007_0008-76D23-829-Pier Concrete Repairs.dgn

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER 2 CONCRETE REPAIRS STRUCTURE NO. 003-0008 (W.B.) SHEET NO. 29 OF 31 SHEETS
		CHECKED -	REVISED -		
	PLOT SCALE =	DRAWN - KBC	REVISED -		
	PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	137
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

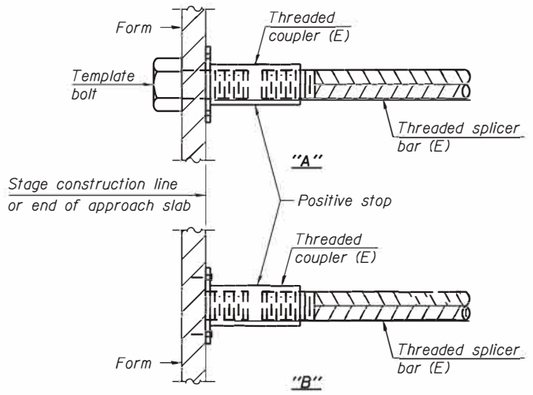


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1½" + thread length

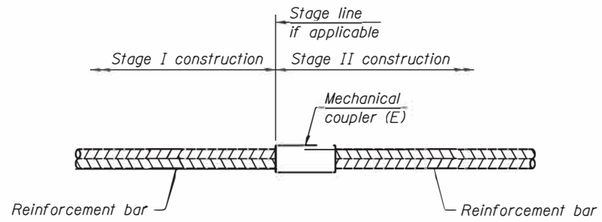
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Abutment Backwall	#5	8	2'-7"
Deck	#5	1048	2'-7"
Diaphragm	#6	52	3'-6"
Top & Bottom of Approach Footing	#5	160	2'-7"
Bottom of Approach Slab	#8	184	5'-5"
Top of Approach Slab	#5	140	2'-11"



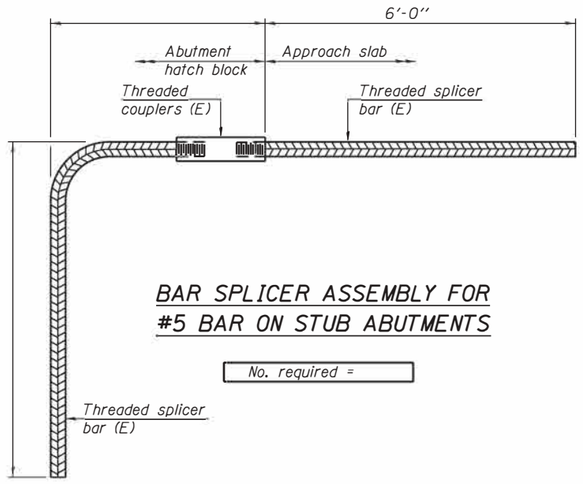
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

11-22-2016

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

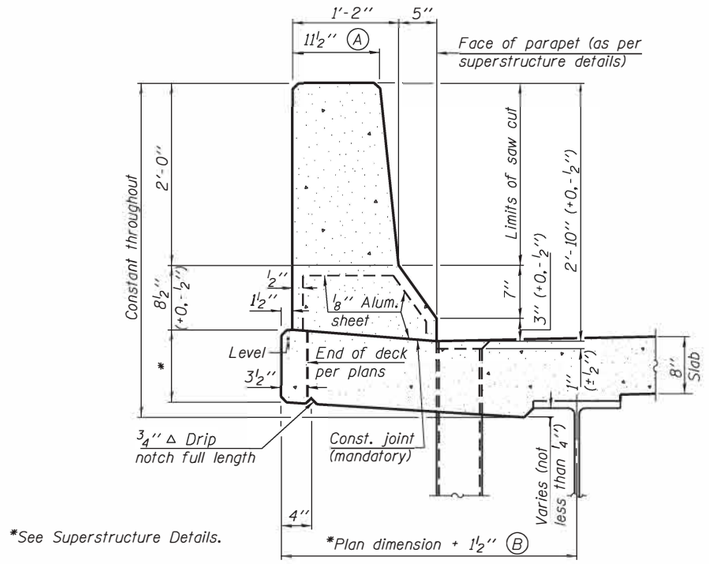
USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE = 12/13/2017	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 30 OF 31 SHEETS

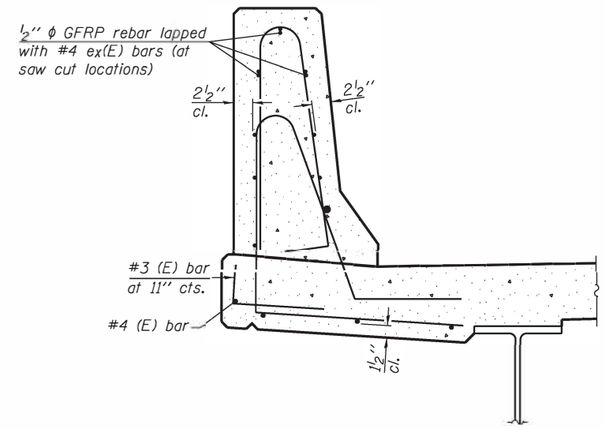
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	138
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

FILE NAME = H:\PW\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0007_0008\Microstation\0030007_0008-76D23-030 Bar Splicer Assembly and Mechanical Splicer Details.dgn



34" F SHAPE PARAPET SECTION

(Showing dimensions)



SECTION

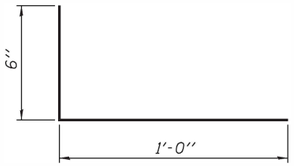
(34" parapet shown - 42" parapet similar)
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

GENERAL NOTES

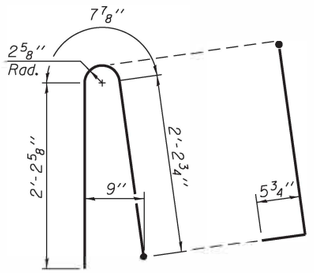
All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet.

Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.

Steel superstructure shown. Other superstructure types similar.

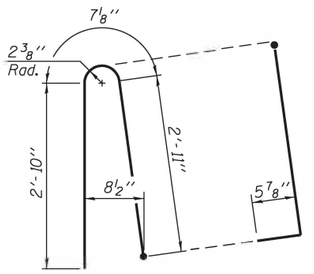


#3 (E) BAR



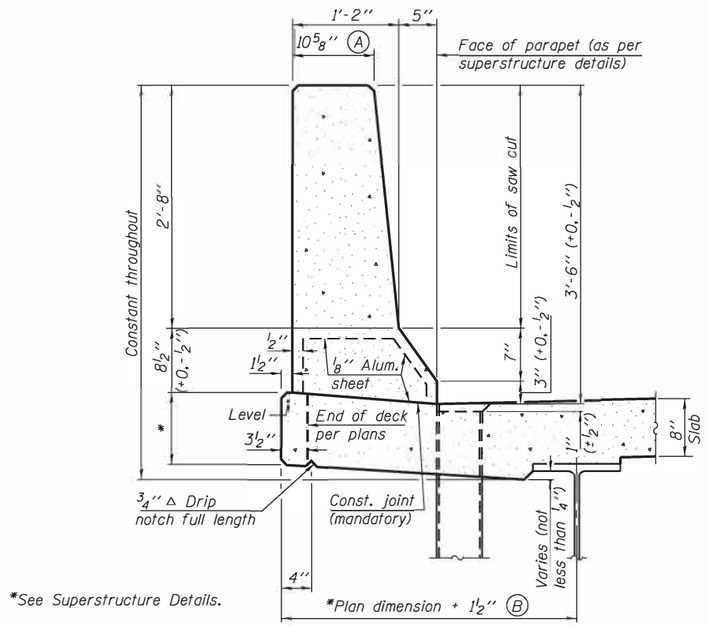
ALTERNATE BAR d(E)

(For 34" parapet when conduit is present)



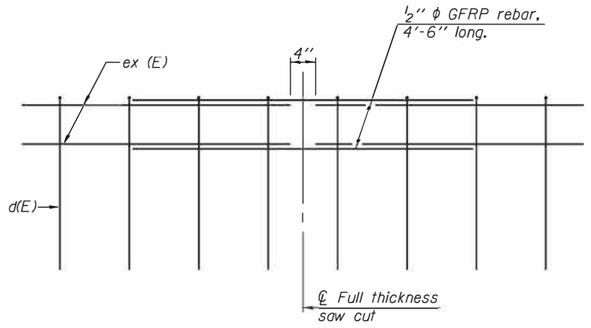
ALTERNATE BAR d(E)

(For 42" parapet when conduit is present)



42" F SHAPE PARAPET SECTION

(Showing dimensions)



GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

SFP 34-42

11-22-2016

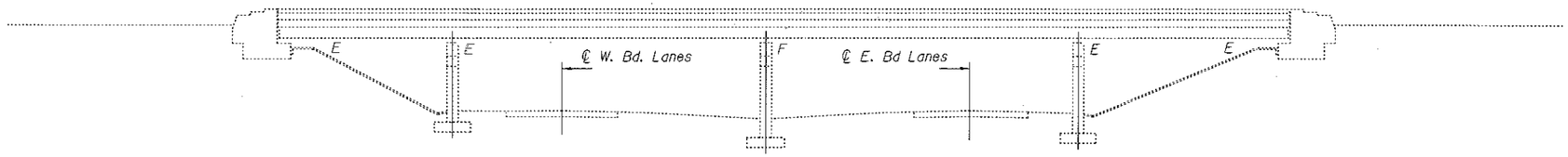
DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE = 12/13/2017	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 003-0007 (E.B.) & 003-0008 (W.B.)
SHEET NO. 31 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	139
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

FILE NAME = H:\P\13841\13841.DGN - District 8 Deck Replacements\Structural\SN 003-0007, 0008\Microstation\00300007_00008-76D23-R31-Concrete Parapet Slipforming Option.dgn



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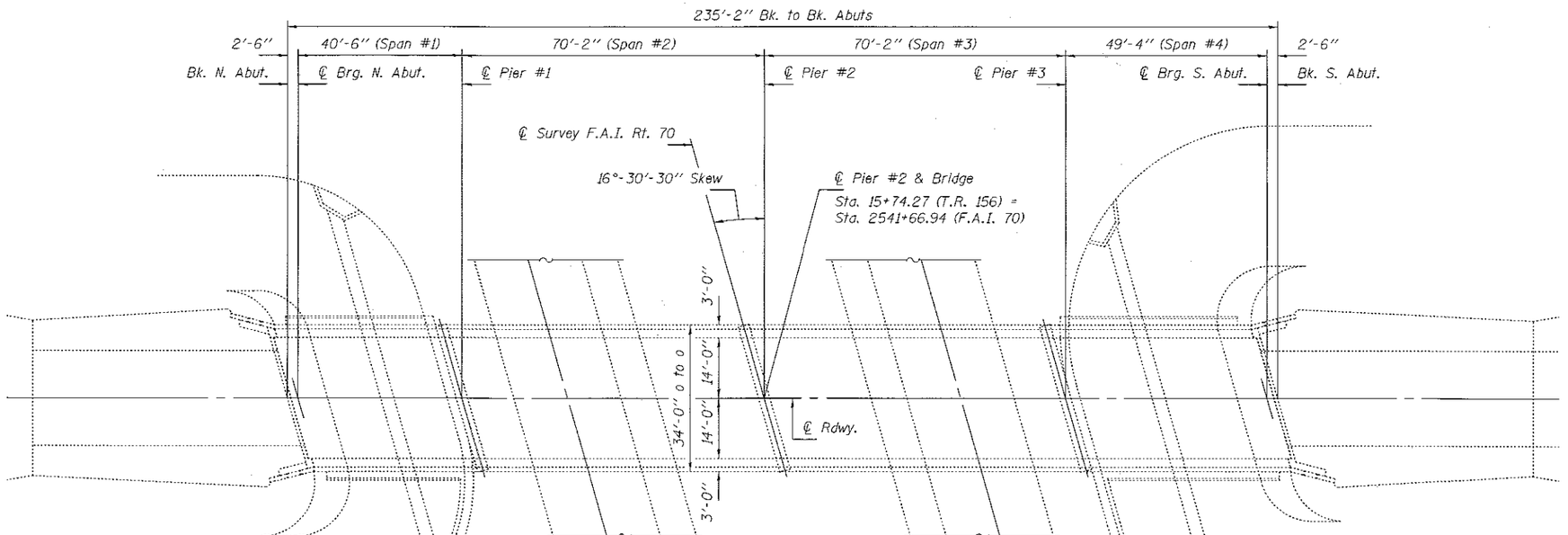
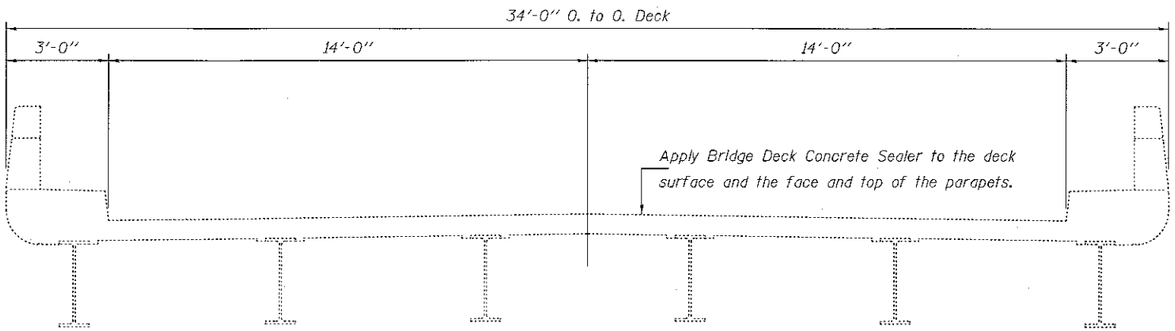
ELEVATION



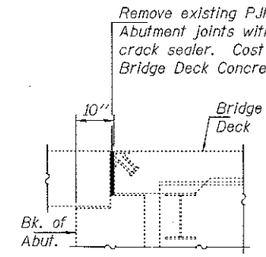
PLAN



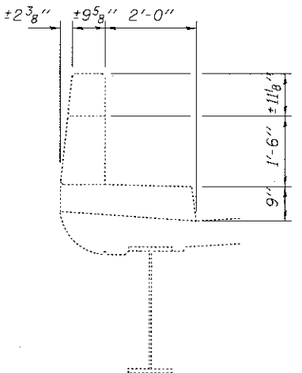
CROSS SECTION

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.



SECTION THRU ABUTMENT



SECTION THRU PARAPET

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Bridge Deck Concrete Sealer	Sq. Ft.	9284
Steel Railing, Type 2.399	Foot	464

LICENSED STRUCTURAL ENGINEER
DAVID CARL RUCH
081-003611
SPRINGFIELD
ILLINOIS
STATE OF ILLINOIS

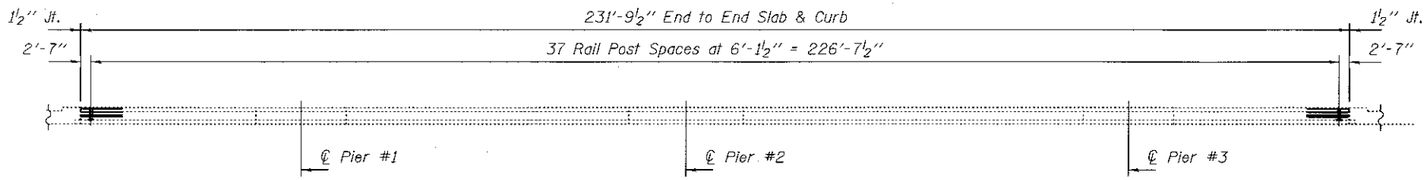
EXPIRES 11-30-2018

DESIGNED	Adrian T. Holloway	EXAMINED	Timothy A. Sheldon, ENGINEER OF STRUCTURAL SERVICES
CHECKED	Adrian T. Holloway	PASSED	David Carl Ruch, ENGINEER OF BRIDGES AND STRUCTURES
DRAWN	J. Schneller	DATE	JANUARY 30, 2018
CHECKED	FJL ATH	REVISED	
		REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION
SN 003-0044
SHEET NO. 1 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TO	3-(2,3,4)RS-1	BOND	236	140
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		



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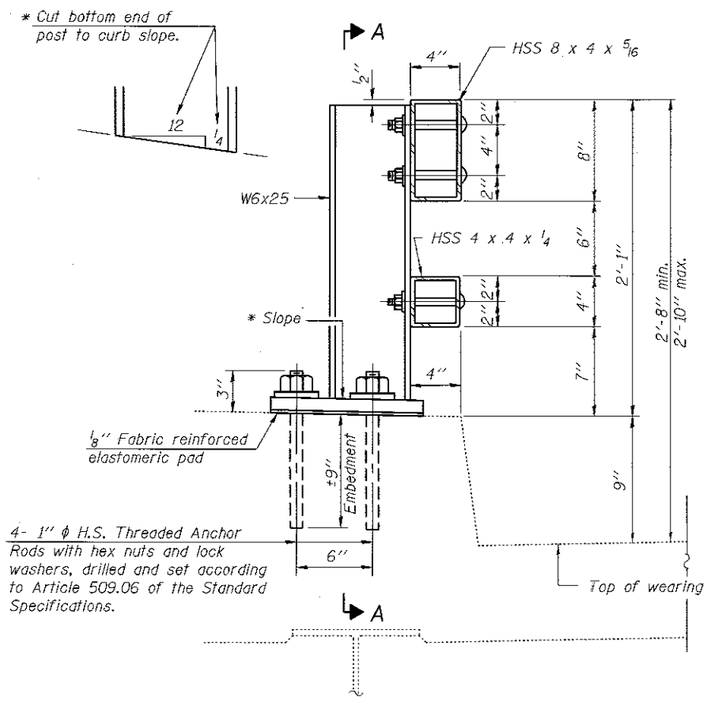
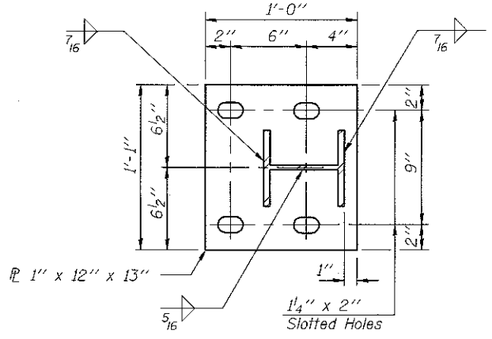
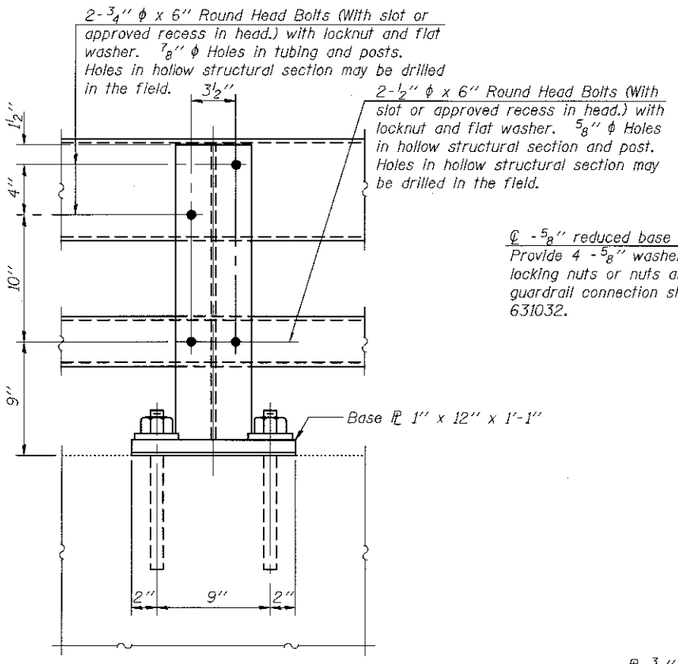


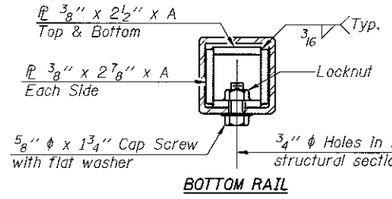
SECTION AT RAIL POST



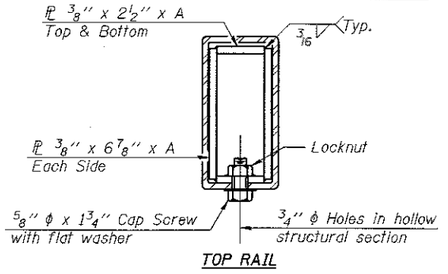
BASE PLATE DETAIL



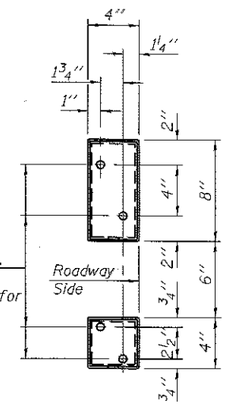
SECTION A-A



BOTTOM RAIL

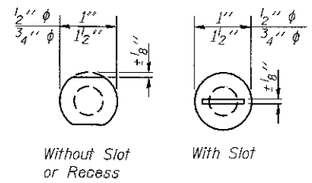


TOP RAIL

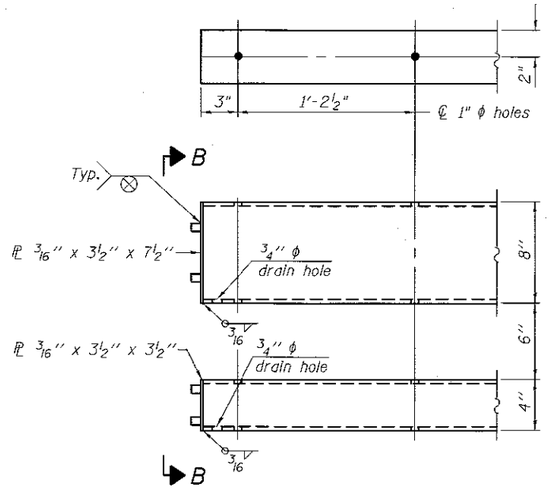


℄ - ⅝" reduced base welded studs. Provide 4 - ⅝" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.

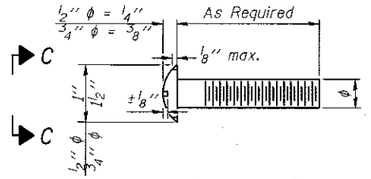
VIEW B-B



VIEW C-C



END OF RAIL DETAILS



DETAIL OF ½" ϕ & ¾" ϕ ROUND HEAD BOLTS

Notes:

All field drilled holes shall be coated with an approved zinc rich paint before erection.

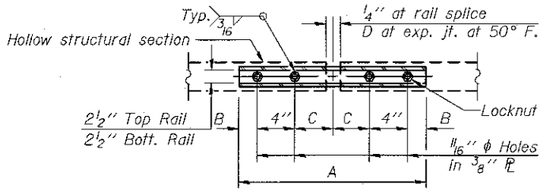
Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

Provide one ⅛" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.

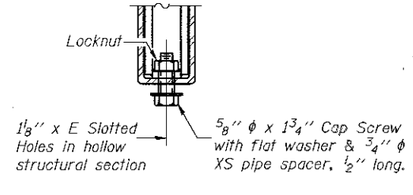
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE ℄ TYPICAL

(6'-3" Maximum Post Spacing)



RAIL SPLICE CONNECTION AT EXPANSION JT.

SPLICE DIMENSIONS

T	D	A	B	C	E
≤4"	2½"	1'-8"	2"	4"	2½"
>4" ≤6½"	3¾"	2'-0"	2½"	5½"	3½"
>6½" ≤9"	5"	2'-4"	3½"	6½"	9"
>9" ≤13"	7"	2'-10"	4½"	8½"	11"
Rail Splice	¼"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	464

R-31 7-1-10

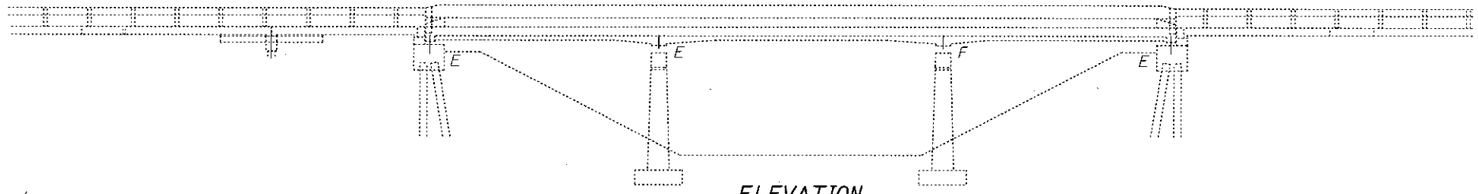
DESIGNED - Irma Lopez	EXAMINED	DATE JANUARY 30, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - Brian T. Holloway	PASSED	REVISED	
DRAWN J. Schneller	ENGINEER OF STRUCTURAL SERVICES	REVISED	
CHECKED - ISL AJH	ENGINEER OF BRIDGES AND STRUCTURES		

STEEL RAILING, TYPE 2399
SN 003-0044
SHEET NO. 2 OF 2 SHEETS

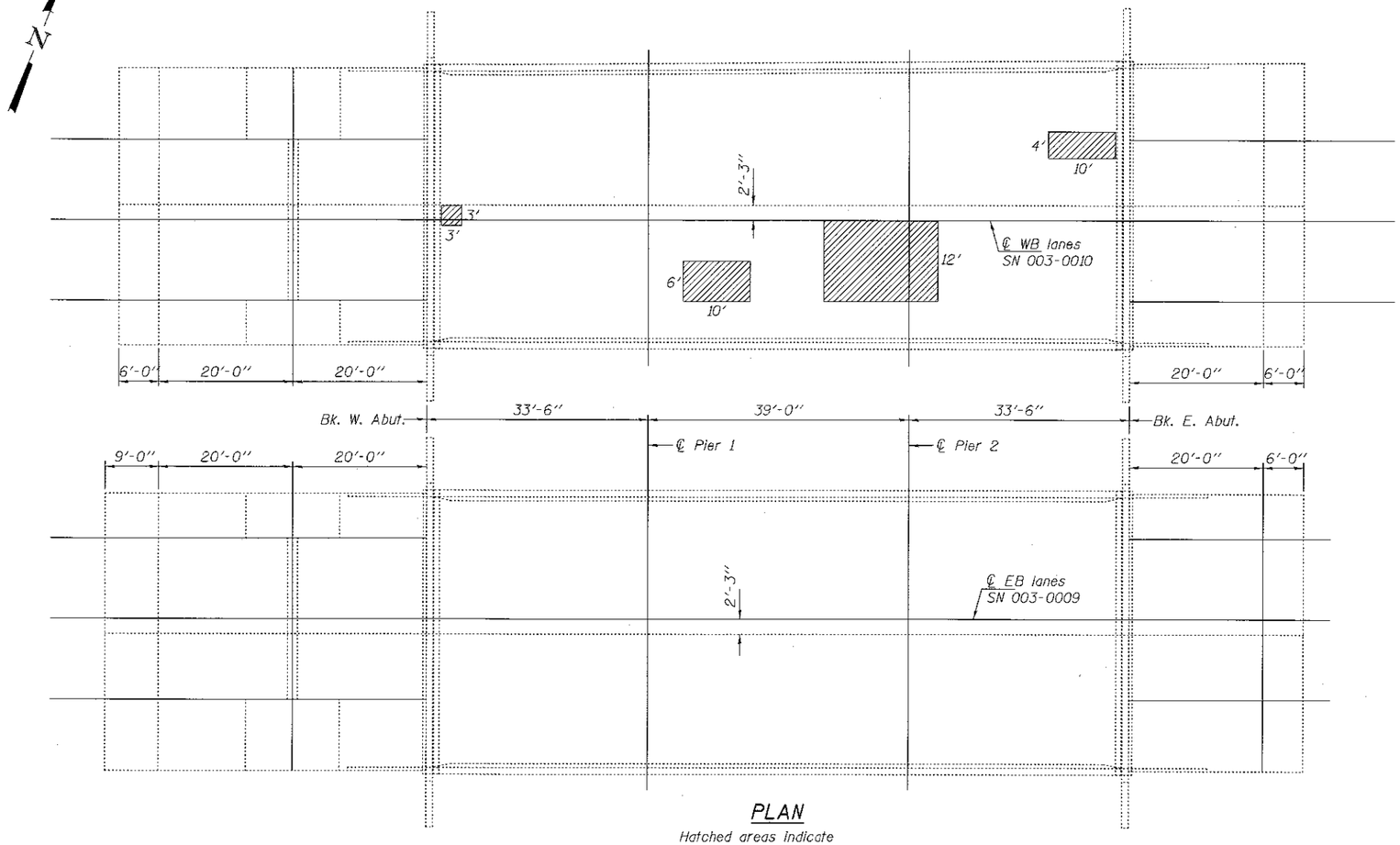
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	141
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

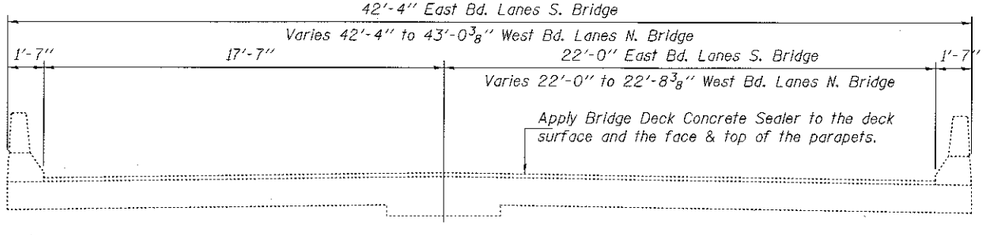


ELEVATION

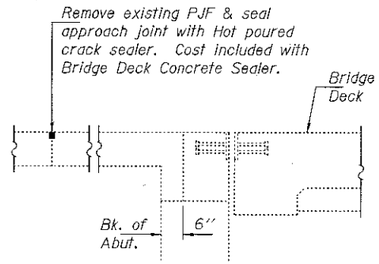


PLAN

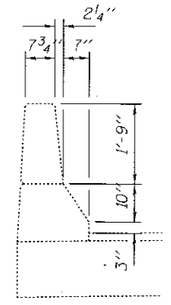
Hatched areas indicate Deck Slab Repair (Partial Depth)



CROSS SECTION



SECTION THRU ABUTMENT



SECTION THRU PARAPET

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Bridge Deck Concrete Sealer	Sq. Ft.	9804		9804
Floor Drains to be cleaned	Each	72		72
Deck Slab Repair (Partial Depth)	Sq. Yd.	34.8		34.8
Structural Repair of Concrete ≤ 5"	Sq. Yd.		22.1	22.1

REGISTERED STRUCTURAL ENGINEER
DAVID CARL ROSS
081-006481
SPRINGFIELD, ILLINOIS
STATE OF ILLINOIS

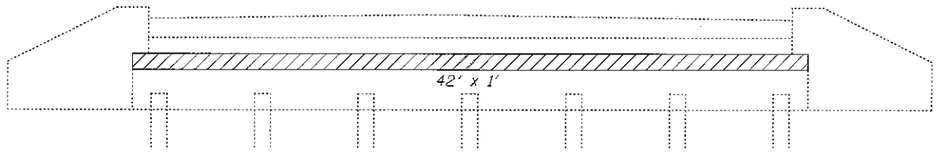
EXPIRES 11-30-2018

DESIGNED	Enrique Lugo	EXAMINED		DATE	JANUARY 30, 2018
CHECKED	Adrian I. Halloway	PASSED	ENGINEER OF STRUCTURAL SERVICES	REVISED	
DRAWN	J. Schneller		ENGINEER OF BRIDGES AND STRUCTURES	REVISED	
CHECKED	ISL ATH				

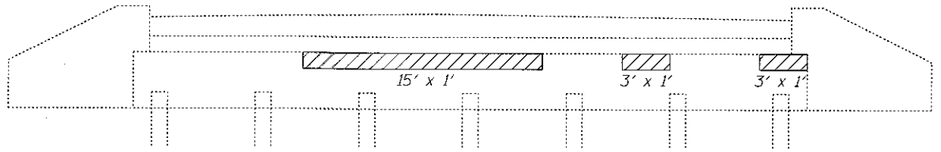
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION
FAI 70 OVER BEAVER CREEK
SN 003-0009 (EB) & 003-0010 (WB)
SHEET NO. 1 OF 2 SHEETS

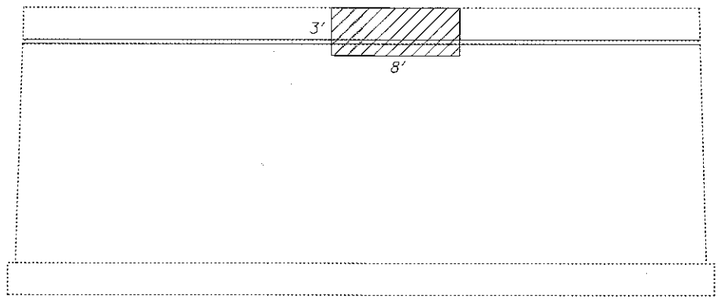
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	142
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		



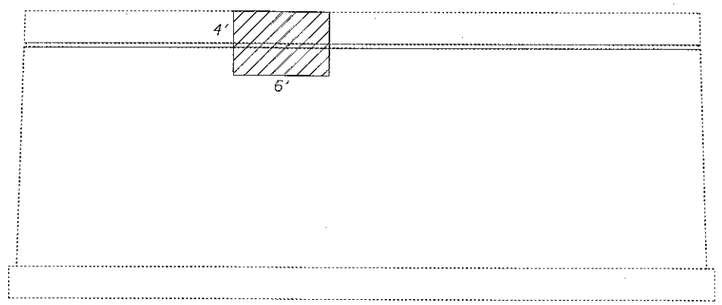
EAST ABUTMENT
(Looking East)



WEST ABUTMENT
(Looking West)

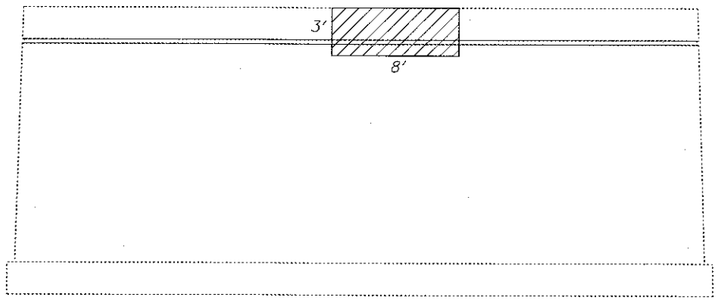


PIER 1
(East Face)



PIER 1
(West Face)

Hatched areas indicate
Structural Repair of Concrete ≤ to 5"



PIER 2
(West Face)

DESIGNED IJL	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE JANUARY 30, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUBSTRUCTURE REPAIRS SN 003-0010 (WB)
CHECKED ATH	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 2 OF 2 SHEETS
DRAWN J. Schneller			REVISED		
CHECKED IJL ATH					

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	143
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

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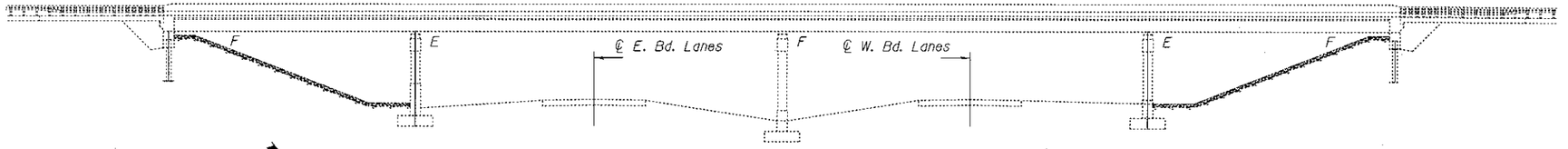
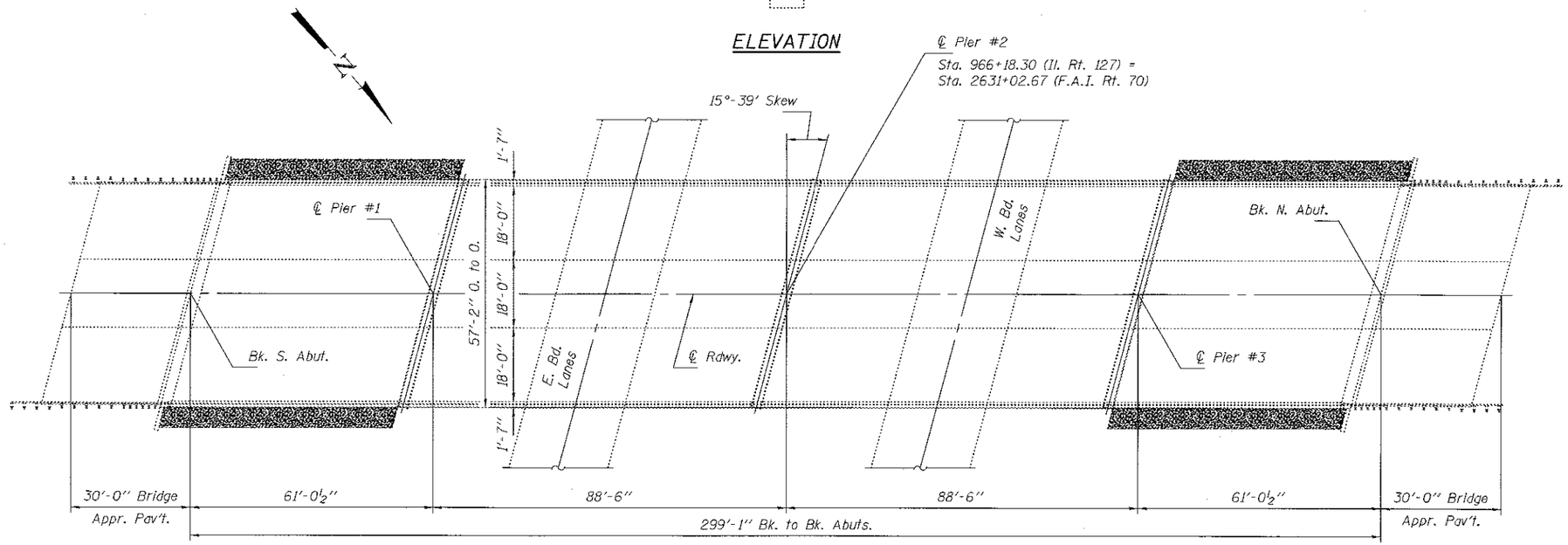
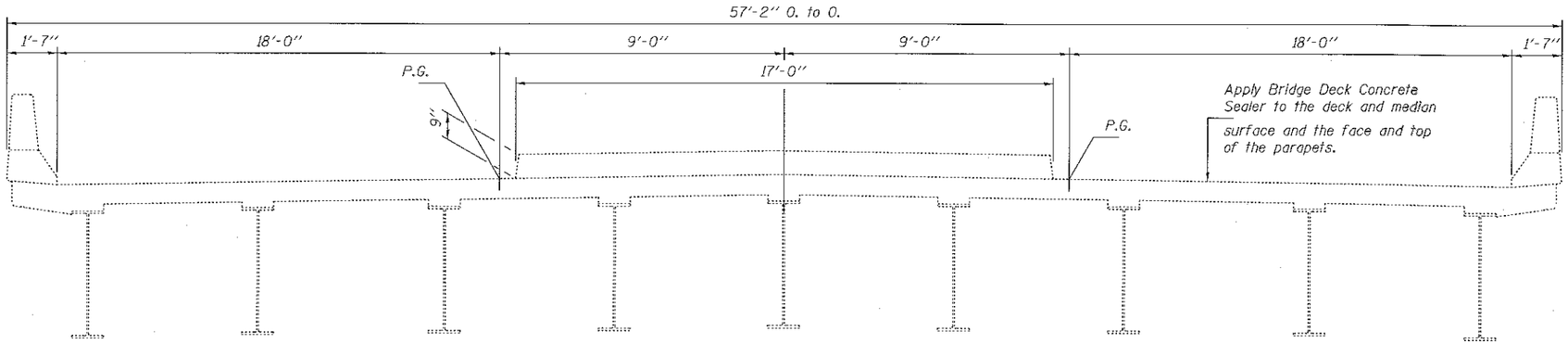


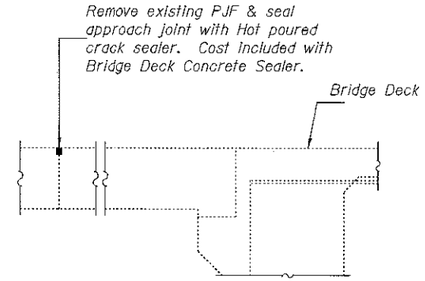
ELEVATION



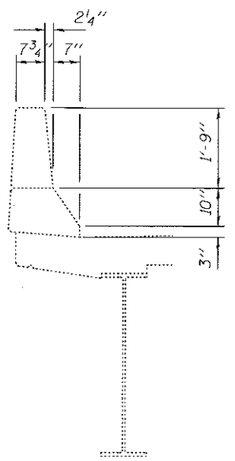
PLAN



CROSS SECTION



SECTION THRU ABUTMENT



SECTION THRU PARAPET

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Bridge Deck Concrete Sealer	Sq. Ft.	19487

DESIGNED	Jovita Lopez	EXAMINED	Timothy A. Anderson	DATE	JANUARY 30, 2018	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**PLAN & ELEVATION ILL. RT. 127 OVER F.A.I. RT. 70 SN 003-0031** SHEET NO. 1 OF 1 SHEETS	
CHECKED	Adriana T. Hallowag	PASSED	ENGINEER OF STRUCTURAL SERVICES	REVISED				
DRAWN	J. Schneller		A. Carl Preuss	REVISED				
CHECKED	E.S.L. A.T.H.		ENGINEER OF BRIDGES AND STRUCTURES					

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	144
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

Bench Mark: Cut square in the center of the lowest of three tiers of the southwest wingwall of S.N. 003-0011, Sta. 1276+74, 168.8' Right, Elev. 561.16

Existing Structure: S.N. 003-0011 (E.B.) and S.N. 003-0012 (W.B.) were originally built in 1966 as F.A.I. 70, Section 3-4HB-2. The back-to-back abutment length is 124'-0" and the out-to-out deck width is 42'-0". Each structure consists of a three span steel 27WF superstructure supported by concrete stub abutments founded on concrete piles and concrete column piers founded on timber pile supported footings. Concrete deck to be removed and replaced.

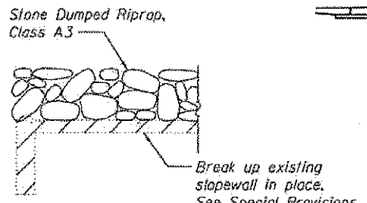
Traffic Control: One lane of traffic will be maintained in each direction by utilizing staged construction.

Salvage: None

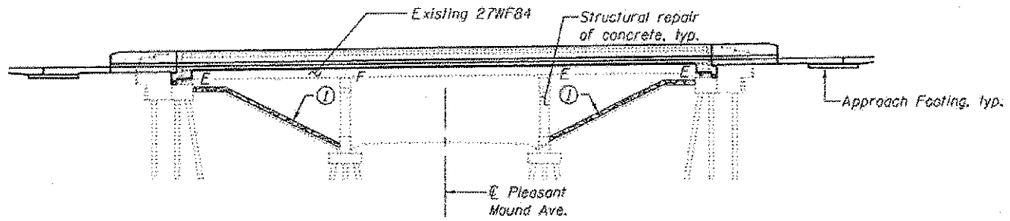
SCOPE OF WORK

1. Remove and replace existing concrete deck.
2. Make new deck composite in positive moment regions.
3. Replace all existing expansion bearings with elastomeric bearings.
4. Reconfigure existing abutments and wingwalls to semi-integral.
5. Complete structural repair of concrete at substructure units.
6. Break up existing concrete stopewall and overlay with stone dumped riprap.
7. Raise approach roadway to match proposed profiles.
8. Replace approach guardrails.
9. Paint steel on Paint Only contract

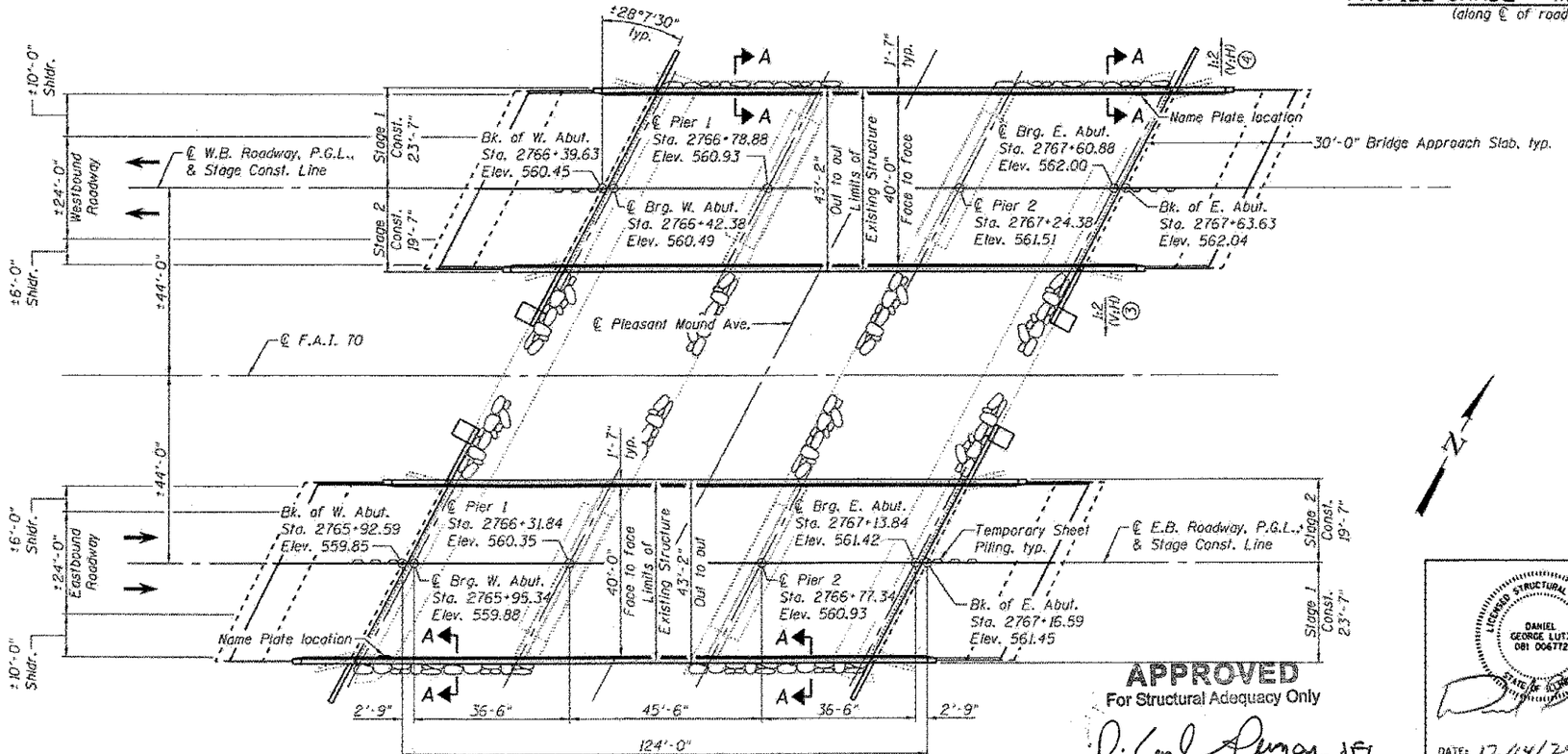
Notes:
1. Stone Dumped Riprap, Class A3. Match existing slope.
2. Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.
3. Slope behind wall only, typical all median wingwalls.
4. Slope wraps around front of wall, typical all outside shoulder wingwalls.
5. See Roadway plans for traffic barrier terminal type and locations.



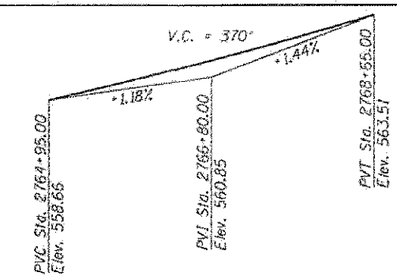
SECTION A-A



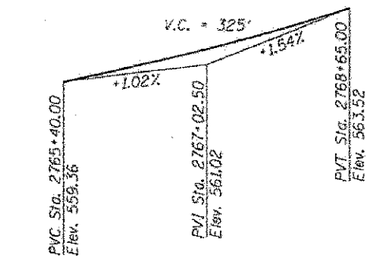
ELEVATION



PLAN



PROFILE GRADE - E.B. ROADWAY
(along ℄ of roadway)



PROFILE GRADE - W.B. ROADWAY
(along ℄ of roadway)

DESIGN SPECIFICATIONS (New Const.)

2002 AASHTO
1995 FHWA Seismic Retrofitting Manual

DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

FIELD UNITS (Exist. Construction)
f'c = 3,500 psi
fy = 40,000 psi (Reinforcement)
fy = 36,000 psi (Structural Steel)

SEISMIC DATA

Seismic Performance Category (SPC) = B
Horizontal Bedrock Acceleration Coefficient (A) = 0.082g
Site Coefficient (S) = 1.2

LOADING HS20-44 & ALT (New Const.)

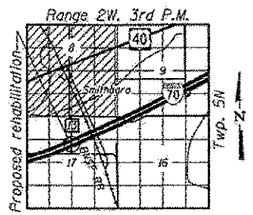
No future wearing surface allowed.

STATION 2766+78.11
RE-BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 3-(2,3,4)RS-1
LOADING HS20-44 & ALT
STR. NO. 003-0011

NAME PLATE (E.B.) ②
See Std. 515001

STATION 2766+78.11
RE-BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 3-(2,3,4)RS-1
LOADING HS20-44 & ALT
STR. NO. 003-0012

NAME PLATE (W.B.) ②
See Std. 515001



LOCATION SKETCH

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

DANIEL GEORGE LUTZ
081 006772
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS
DATE: 12/14/2017
EXPIRATION: 11/30/2019

GENERAL PLAN & ELEVATION
I-70 OVER PLEASANT MOUND AVENUE (C.H. 13)
F.A.I. RTE. 70 - SEC. 3-(2,3,4)RS-1
BOND COUNTY
STATION 2766+78.11
STRUCTURE NO. 003-0011 (E.B.)
STRUCTURE NO. 003-0012 (W.B.)

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - JAD	REVISED -
		CHECKED - KBC	REVISED -
	PLOT SCALE =	DRAWN - SJN	REVISED -
	PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	230	145
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		

FILE NAME = H:\Projects\1841\808 - Bonds & Deck Replacements\Structural\SN 003-0011, 0012-76D23-001-General Plan & Elevation.dgn

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts.

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

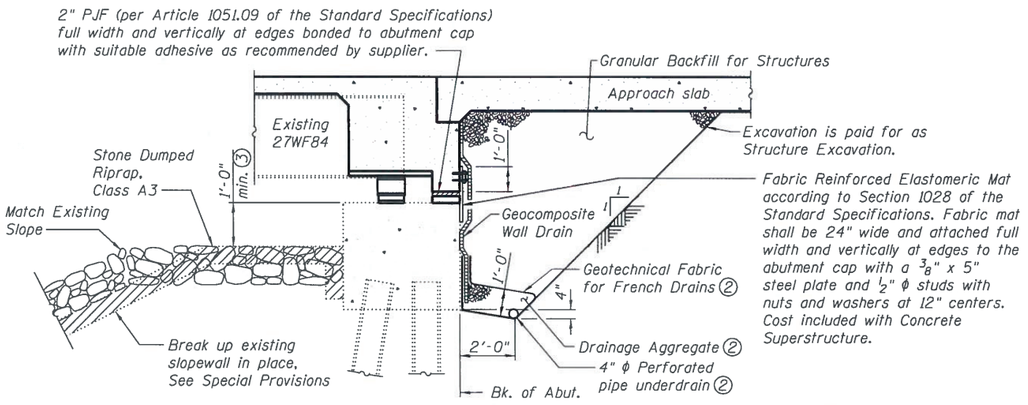
As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Cleaning and field painting of structural steel shall be done under a separate painting contract.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

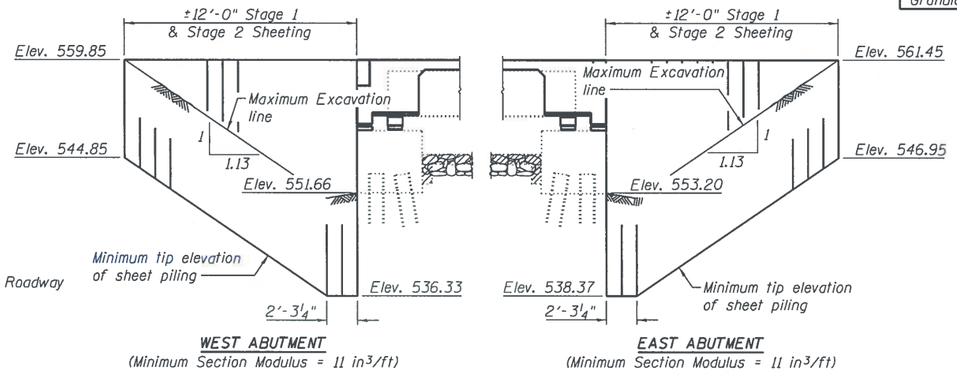


SECTION THRU SEMI-INTEGRAL ABUTMENT (1)

(Horiz. dim. at Rt. L's)

TOTAL BILL OF MATERIAL

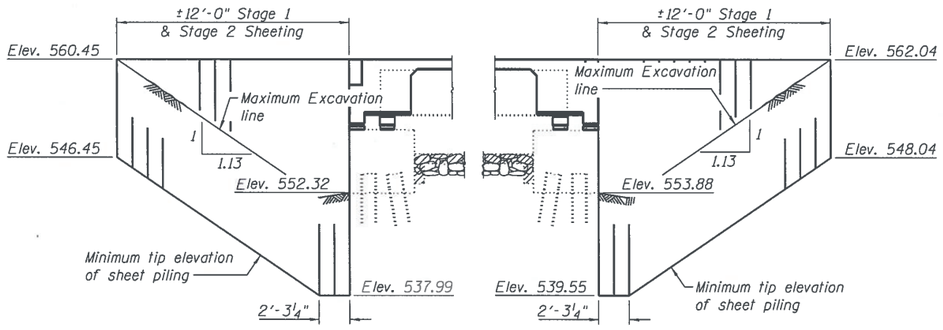
ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A3	Sq. Yd.	-	1,329	1,329
Concrete Removal	Cu. Yd.	-	70.3	70.3
Removal of Existing Concrete Deck No. 2	Each	2	-	2
Protective Shield	Sq. Yd.	-	-	327
Structure Excavation	Cu. Yd.	-	426	426
Concrete Structures	Cu. Yd.	-	111.8	111.8
Concrete Superstructure	Cu. Yd.	418.8	-	418.8
Bridge Deck Grooving	Sq. Yd.	1,541	-	1,541
Protective Coat	Sq. Yd.	1,923	-	1,923
Concrete Superstructure (Approach Slab)	Cu. Yd.	262.5	-	262.5
Furnishing and Erecting Structural Steel	Pound	6,940	-	6,940
Stud Shear Connectors	Each	6,688	-	6,688
Reinforcement Bars, Epoxy Coated	Pound	169,410	18,740	188,150
Bar Splicers	Each	1,064	168	1,232
Name Plates	Each	2	-	2
Elastomeric Bearing Assembly, Type I	Each	42	-	42
Anchor Bolts, $\frac{5}{8}$"	Each	112	-	112
Anchor Bolts, 1"	Each	28	-	28
Temporary Sheet Piling	Sq. Ft.	-	933	933
Geocomposite Wall Drain	Sq. Yd.	-	188	188
Jack and Remove Existing Bearings	Each	42	-	42
Cleaning Bridge Seats	Sq. Ft.	-	534	534
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)	Sq. Ft.	-	63.3	63.3
Pipe Underdrains for Structures 4"	Foot	-	381	381
Slope Wall Breaking	Sq. Yd.	-	1,329	1,329
Granular Backfill for Structures	Cu. Yd.	-	188	188



WEST ABUTMENT
(Minimum Section Modulus = 11 in³/ft)

EAST ABUTMENT
(Minimum Section Modulus = 11 in³/ft)

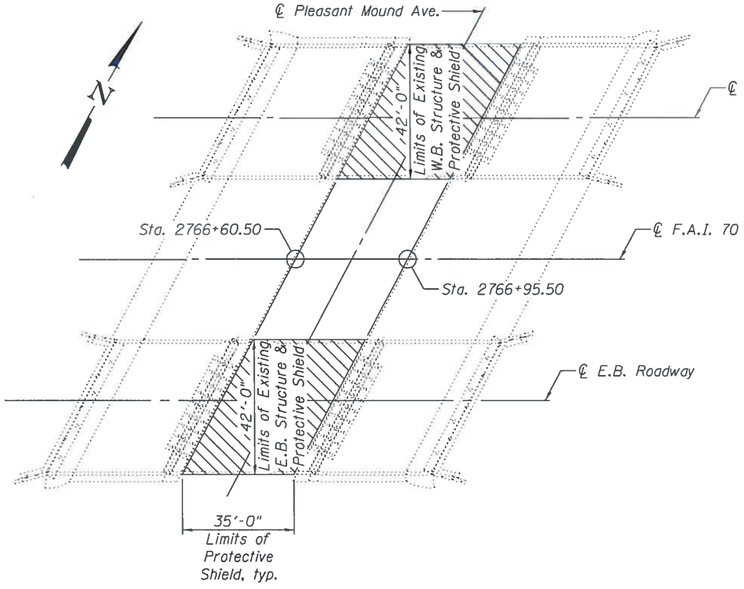
TEMPORARY SHEET PILING DETAIL - E.B. STRUCTURE



WEST ABUTMENT
(Minimum Section Modulus = 11 in³/ft)

EAST ABUTMENT
(Minimum Section Modulus = 11 in³/ft)

TEMPORARY SHEET PILING DETAIL - W.B. STRUCTURE



PROTECTIVE SHIELD DETAIL

INDEX OF SHEETS

Sheet No.	Description
1	General Plan & Elevation
2	General Data
3	Stage Construction Details
4	Temporary Concrete Barrier
5-8	Top of Slab Elevations
9-10	Top of Approach Slab Elevations
11-12	Superstructure
13	Superstructure Details
14	Diaphragm Details
15-17	Bridge Approach Slab Details
18	Framing Plan & Beam Details
19-20	Bearing Replacement Details
21-22	Abutment Concrete Removal Details
23-26	Abutment Details
27	Wingwall Extension Details
28	Pier Concrete Repairs
29	Pier Crashwall Extension
30	Bar Splicer Assembly and Mechanical Splicer Details
31	Cantilever Forming Brackets for Superstructures with W27 Beams and Smaller
32	Concrete Parapet Slipforming Option

Notes:
(1) 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).
(2) Included in the cost of Pipe Underdrains for Structures, see Special Provisions.
(3) Remove existing slopewall as required.

FILE NAME = H:\P\11841\11841.088 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\003011_0012-76D23-002-General Data.dgn

OATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - SJN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - KBC	REVISED -	
	PLOT SCALE =	DRAWN - SJN	REVISED -	
	PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -	

GENERAL DATA
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
SHEET NO. 2 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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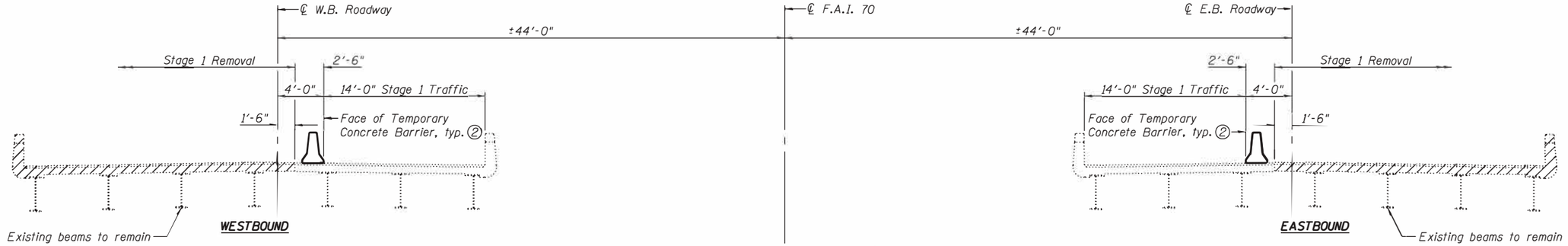
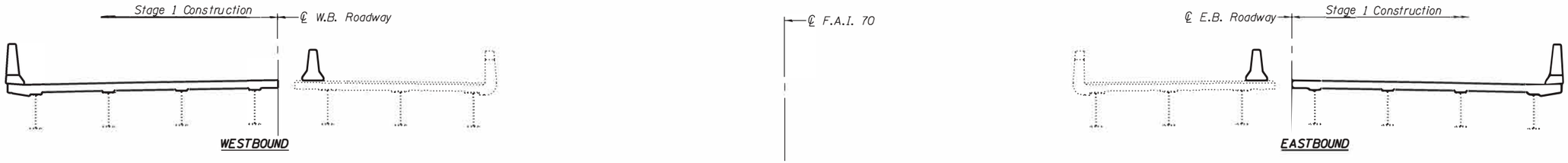
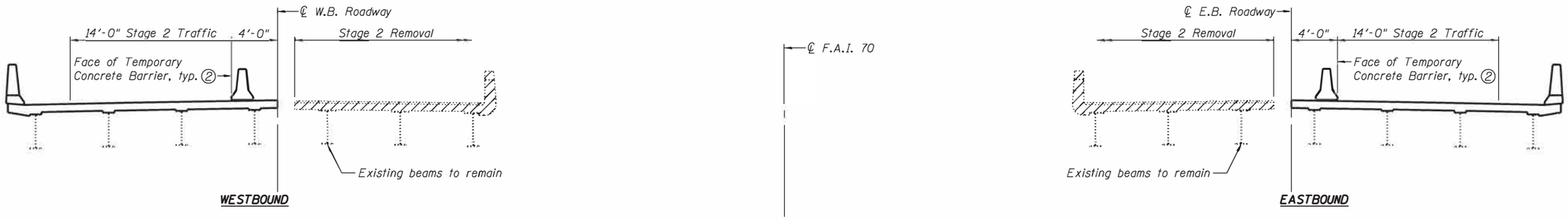
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



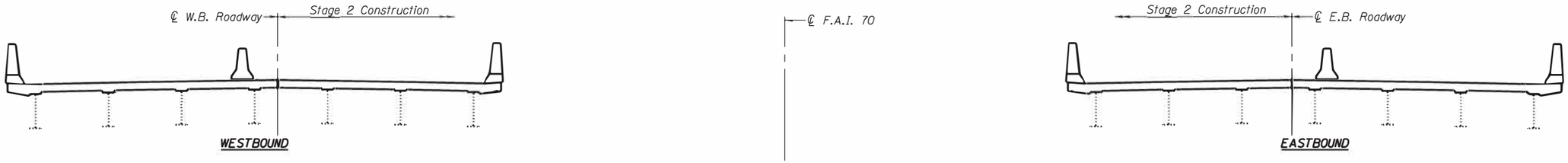
STAGE 1 REMOVAL (1)



STAGE 1 CONSTRUCTION (1)



STAGE 2 REMOVAL (1)



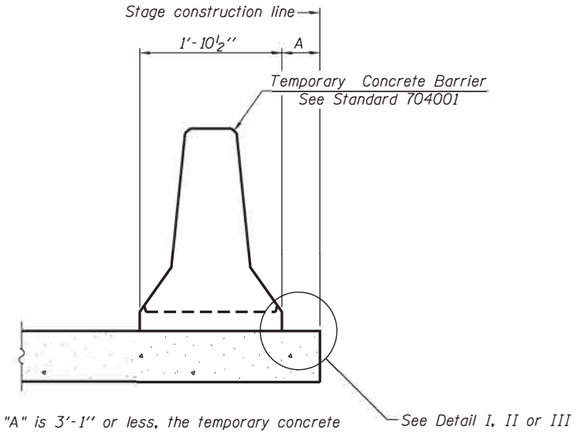
STAGE 2 CONSTRUCTION (1)

Notes:
(1) All views shown looking East.
(2) For details of Temporary Concrete Barrier, see Sheet 4 of 32. For quantity of Temporary Concrete Barrier and related traffic control, see roadway plans.
(3) Hatched area indicates Removal of Existing Concrete Deck.

FILE NAME = H:\P\11841\11841.00B - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\2023001I_0012-76D23-SB3-Stage Construction Details.dgn

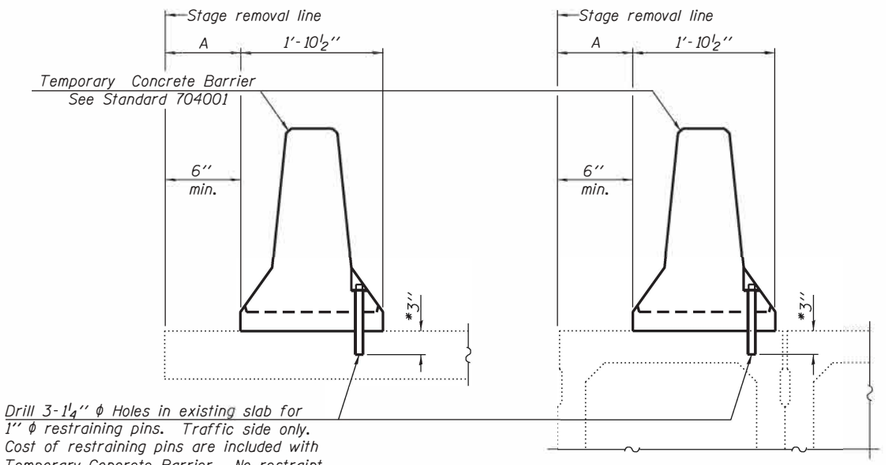
DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION DETAILS STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.) SHEET NO. 3 OF 32 SHEETS
		CHECKED -	REVISED -		
	PLOT SCALE =	DRAWN - KBC	REVISED -		
	PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	147
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



When "A" is 3'-1'' or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1''.

NEW SLAB OR NEW DECK BEAM

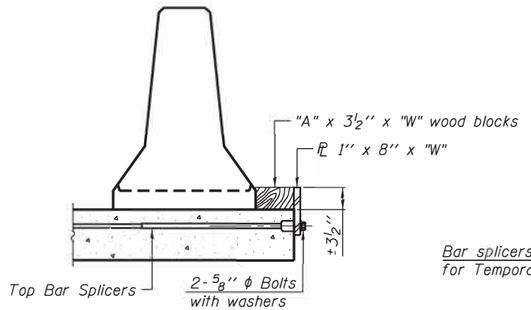


EXISTING SLAB

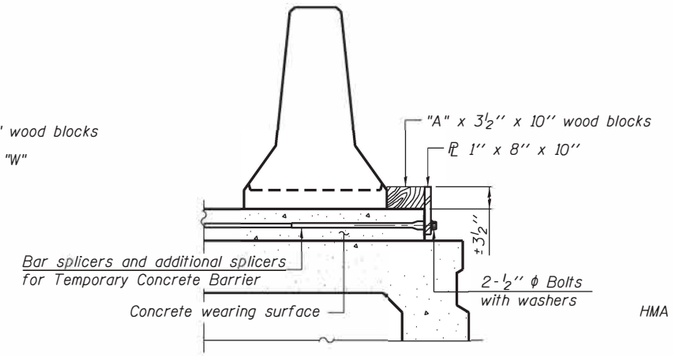
* When hot-mix asphalt wearing surface is present, embedment shall be 3'' plus the wearing surface depth.

EXISTING DECK BEAM

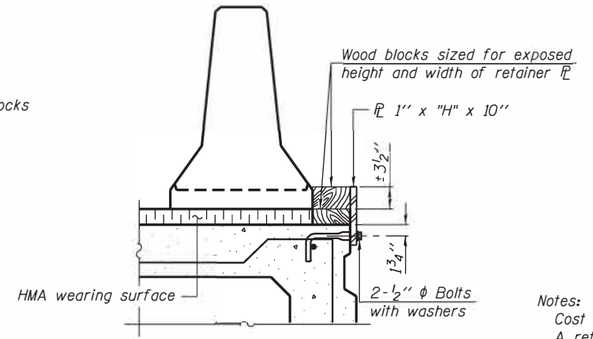
SECTIONS THRU SLAB OR DECK BEAM



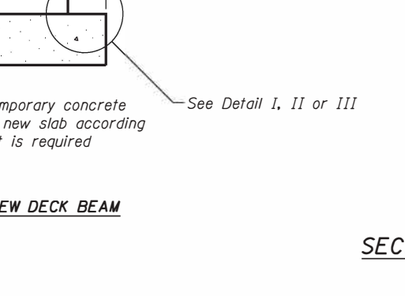
DETAIL I



DETAIL II

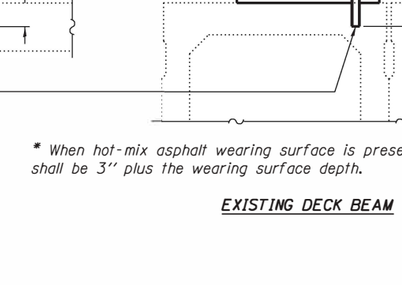


DETAIL III



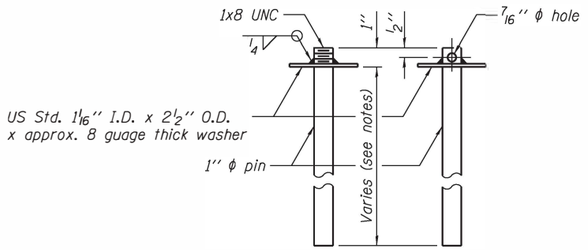
STEEL RETAINER ℄ 1'' x 8'' x "W"

(Detail I and II)

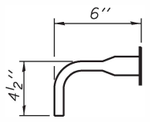


STEEL RETAINER ℄ 1'' x "H" x 10''

(Detail III)



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½'', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6'' to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0'' centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6'' apart, shall be placed at 6'-0'' centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

R-27

8-11-2017

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

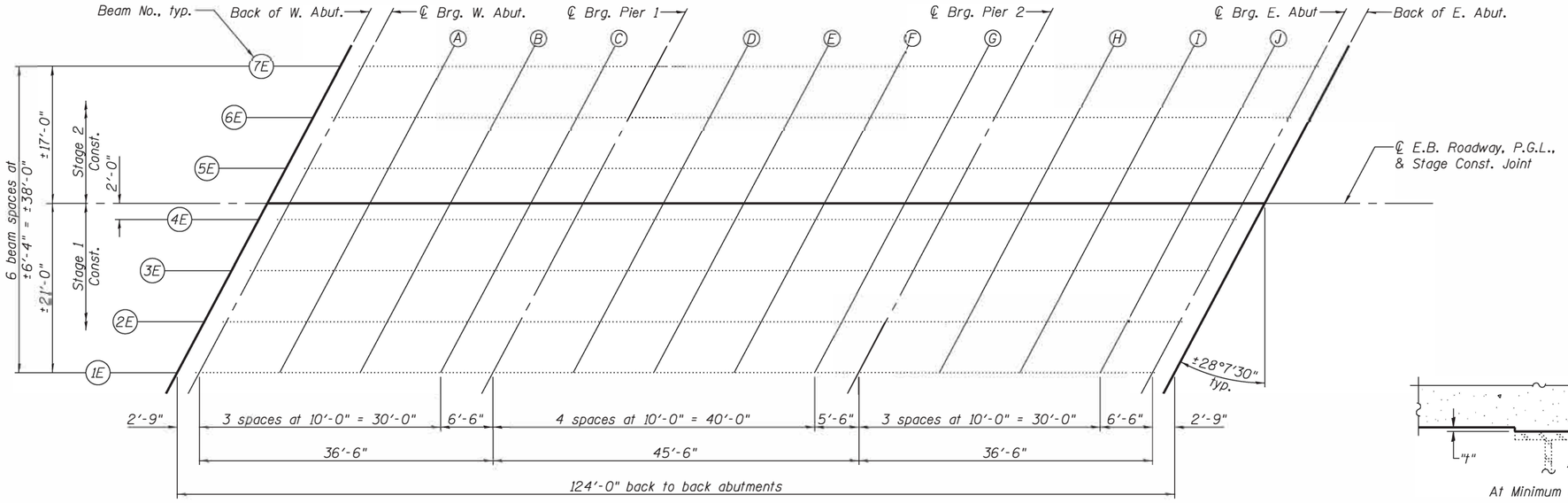
USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE = 12/13/2017	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

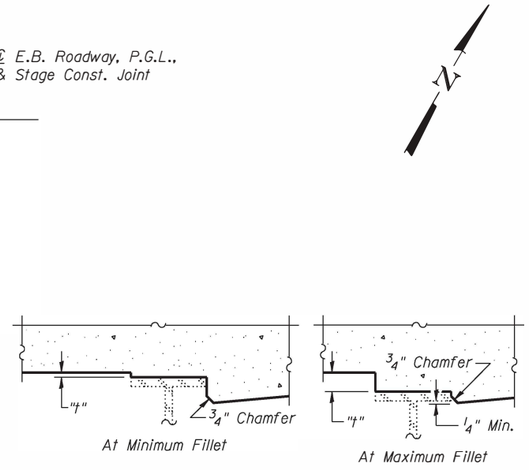
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)

SHEET NO. 4 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	148
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



PLAN



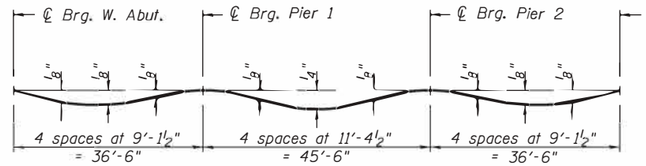
FILLET HEIGHTS ②

BEAM 7E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2766+01.68	-17.00	559.67	559.67
℄ Brg. W. Abut.	2766+04.43	-17.00	559.71	559.71
A	2766+14.43	-17.00	559.83	559.84
B	2766+24.43	-17.00	559.96	559.97
C	2766+34.43	-17.00	560.09	560.09
℄ Brg. Pier 1	2766+40.93	-17.00	560.17	560.17
D	2766+50.93	-17.00	560.30	560.31
E	2766+60.93	-17.00	560.43	560.44
F	2766+70.93	-17.00	560.56	560.57
G	2766+80.93	-17.00	560.69	560.69
℄ Brg. Pier 2	2766+86.43	-17.00	560.76	560.76
H	2766+96.43	-17.00	560.89	560.90
I	2767+06.43	-17.00	561.03	561.04
J	2767+16.43	-17.00	561.16	561.17
℄ Brg. E. Abut.	2767+22.93	-17.00	561.25	561.25
Back of E. Abut.	2767+25.68	-17.00	561.28	561.28

BEAM 6E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2765+98.29	-10.67	559.75	559.75
℄ Brg. W. Abut.	2766+01.04	-10.67	559.79	559.79
A	2766+11.04	-10.67	559.91	559.93
B	2766+21.04	-10.67	560.04	560.05
C	2766+31.04	-10.67	560.17	560.17
℄ Brg. Pier 1	2766+37.54	-10.67	560.25	560.25
D	2766+47.54	-10.67	560.38	560.39
E	2766+57.54	-10.67	560.51	560.53
F	2766+67.54	-10.67	560.64	560.65
G	2766+77.54	-10.67	560.77	560.77
℄ Brg. Pier 2	2766+83.04	-10.67	560.84	560.84
H	2766+93.04	-10.67	560.97	560.98
I	2767+03.04	-10.67	561.11	561.12
J	2767+13.04	-10.67	561.24	561.25
℄ Brg. E. Abut.	2767+19.54	-10.67	561.33	561.33
Back of E. Abut.	2767+22.29	-10.67	561.36	561.36



DEAD LOAD DEFLECTION DIAGRAM ①

(Includes weight of concrete only.)

Notes:

① The Dead Load Deflections are not to be used in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as shown on this sheet and on sheet 6 of 32.

② To determine "t": Elevations of the top flanges of the existing steel beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on this sheet and on sheet 6 of 32, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011_00812\Microstation\00380011_00812-76D23-0005-Top of Slab Elevations.dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 003-0011 (E.B.)
SHEET NO. 5 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	149
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

BEAM 5E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2765+94.91	-4.33	559.81	559.81
℄ Brg. W. Abut.	2765+97.66	-4.33	559.85	559.85
A	2766+07.66	-4.33	559.97	559.98
B	2766+17.66	-4.33	560.10	560.11
C	2766+27.66	-4.33	560.22	560.23
℄ Brg. Pier 1	2766+34.16	-4.33	560.31	560.31
D	2766+44.16	-4.33	560.44	560.44
E	2766+54.16	-4.33	560.56	560.58
F	2766+64.16	-4.33	560.69	560.71
G	2766+74.16	-4.33	560.82	560.83
℄ Brg. Pier 2	2766+79.66	-4.33	560.90	560.90
H	2766+89.66	-4.33	561.03	561.03
I	2766+99.66	-4.33	561.16	561.17
J	2767+09.66	-4.33	561.29	561.30
℄ Brg. E. Abut.	2767+16.16	-4.33	561.38	561.38
Back of E. Abut.	2767+18.91	-4.33	561.42	561.42

℄ E.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2765+92.59	0.00	559.85	559.85
℄ Brg. W. Abut.	2765+95.34	0.00	559.88	559.88
A	2766+05.34	0.00	560.01	560.02
B	2766+15.34	0.00	560.14	560.15
C	2766+25.34	0.00	560.26	560.27
℄ Brg. Pier 1	2766+31.84	0.00	560.35	560.35
D	2766+41.84	0.00	560.47	560.48
E	2766+51.84	0.00	560.60	560.62
F	2766+61.84	0.00	560.73	560.75
G	2766+71.84	0.00	560.86	560.87
℄ Brg. Pier 2	2766+77.34	0.00	560.93	560.93
H	2766+87.34	0.00	561.06	561.07
I	2766+97.34	0.00	561.20	561.21
J	2767+07.34	0.00	561.33	561.34
℄ Brg. E. Abut.	2767+13.84	0.00	561.42	561.42
Back of E. Abut.	2767+16.59	0.00	561.45	561.45

BEAM 4E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2765+91.52	2.00	559.80	559.80
℄ Brg. W. Abut.	2765+94.27	2.00	559.84	559.84
A	2766+04.27	2.00	559.96	559.98
B	2766+14.27	2.00	560.09	560.10
C	2766+24.27	2.00	560.22	560.22
℄ Brg. Pier 1	2766+30.77	2.00	560.30	560.30
D	2766+40.77	2.00	560.43	560.44
E	2766+50.77	2.00	560.56	560.57
F	2766+60.77	2.00	560.69	560.70
G	2766+70.77	2.00	560.82	560.82
℄ Brg. Pier 2	2766+76.27	2.00	560.89	560.89
H	2766+86.27	2.00	561.02	561.03
I	2766+96.27	2.00	561.15	561.16
J	2767+06.27	2.00	561.28	561.29
℄ Brg. E. Abut.	2767+12.77	2.00	561.37	561.37
Back of E. Abut.	2767+15.52	2.00	561.41	561.41

BEAM 3E

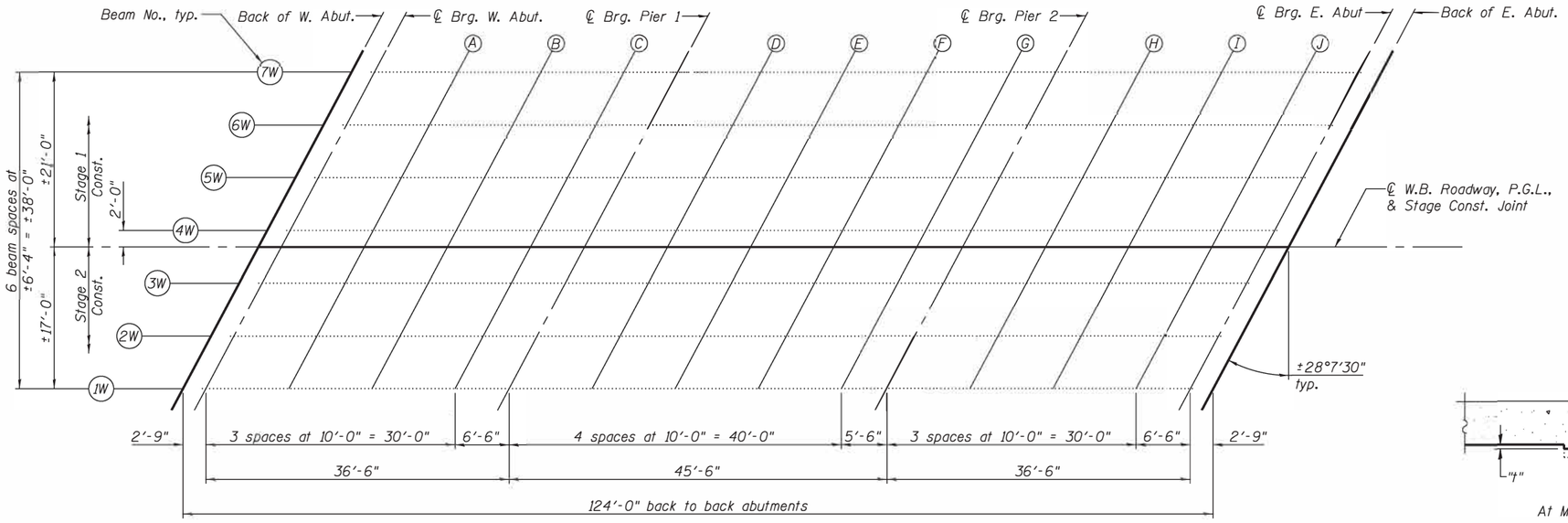
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2765+88.14	8.33	559.66	559.66
℄ Brg. W. Abut.	2765+90.89	8.33	559.70	559.70
A	2766+00.89	8.33	559.82	559.83
B	2766+10.89	8.33	559.95	559.96
C	2766+20.89	8.33	560.08	560.08
℄ Brg. Pier 1	2766+27.39	8.33	560.16	560.16
D	2766+37.39	8.33	560.29	560.29
E	2766+47.39	8.33	560.41	560.43
F	2766+57.39	8.33	560.54	560.56
G	2766+67.39	8.33	560.67	560.68
℄ Brg. Pier 2	2766+72.89	8.33	560.75	560.75
H	2766+82.89	8.33	560.88	560.88
I	2766+92.89	8.33	561.01	561.02
J	2767+02.89	8.33	561.14	561.15
℄ Brg. E. Abut.	2767+09.39	8.33	561.23	561.23
Back of E. Abut.	2767+12.14	8.33	561.26	561.26

BEAM 2E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2765+84.75	14.67	559.51	559.51
℄ Brg. W. Abut.	2765+87.50	14.67	559.54	559.54
A	2765+97.50	14.67	559.67	559.68
B	2766+07.50	14.67	559.79	559.81
C	2766+17.50	14.67	559.92	559.92
℄ Brg. Pier 1	2766+24.00	14.67	560.00	560.00
D	2766+34.00	14.67	560.13	560.14
E	2766+44.00	14.67	560.26	560.27
F	2766+54.00	14.67	560.39	560.40
G	2766+64.00	14.67	560.52	560.52
℄ Brg. Pier 2	2766+69.50	14.67	560.59	560.59
H	2766+79.50	14.67	560.72	560.73
I	2766+89.50	14.67	560.85	560.86
J	2766+99.50	14.67	560.98	560.99
℄ Brg. E. Abut.	2767+06.00	14.67	561.07	561.07
Back of E. Abut.	2767+08.75	14.67	561.11	561.11

BEAM 1E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2765+81.37	21.00	559.33	559.33
℄ Brg. W. Abut.	2765+84.12	21.00	559.37	559.37
A	2765+94.12	21.00	559.49	559.50
B	2766+04.12	21.00	559.62	559.63
C	2766+14.12	21.00	559.75	559.75
℄ Brg. Pier 1	2766+20.62	21.00	559.83	559.83
D	2766+30.62	21.00	559.95	559.96
E	2766+40.62	21.00	560.08	560.10
F	2766+50.62	21.00	560.21	560.23
G	2766+60.62	21.00	560.34	560.34
℄ Brg. Pier 2	2766+66.12	21.00	560.41	560.41
H	2766+76.12	21.00	560.54	560.55
I	2766+86.12	21.00	560.67	560.69
J	2766+96.12	21.00	560.81	560.81
℄ Brg. E. Abut.	2767+02.62	21.00	560.89	560.89
Back of E. Abut.	2767+05.37	21.00	560.93	560.93



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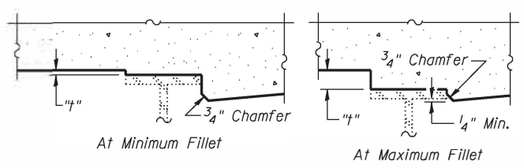


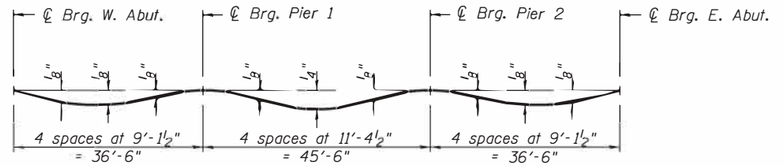
FILLET HEIGHTS ②

BEAM 7W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2766+50.85	-21.00	560.21	560.21
℄ Brg. W. Abut.	2766+53.60	-21.00	560.25	560.25
A	2766+63.60	-21.00	560.37	560.38
B	2766+73.60	-21.00	560.49	560.50
C	2766+83.60	-21.00	560.61	560.62
℄ Brg. Pier 1	2766+90.10	-21.00	560.70	560.70
D	2767+00.10	-21.00	560.82	560.83
E	2767+10.10	-21.00	560.95	560.97
F	2767+20.10	-21.00	561.08	561.10
G	2767+30.10	-21.00	561.21	561.22
℄ Brg. Pier 2	2767+35.60	-21.00	561.29	561.29
H	2767+45.60	-21.00	561.42	561.43
I	2767+55.60	-21.00	561.56	561.57
J	2767+65.60	-21.00	561.69	561.70
℄ Brg. E. Abut.	2767+72.10	-21.00	561.78	561.78
Back of E. Abut.	2767+74.85	-21.00	561.82	561.82

BEAM 6W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2766+47.47	-14.67	560.30	560.30
℄ Brg. W. Abut.	2766+50.22	-14.67	560.34	560.34
A	2766+60.22	-14.67	560.46	560.47
B	2766+70.22	-14.67	560.58	560.59
C	2766+80.22	-14.67	560.70	560.71
℄ Brg. Pier 1	2766+86.72	-14.67	560.78	560.78
D	2766+96.72	-14.67	560.91	560.92
E	2767+06.72	-14.67	561.04	561.06
F	2767+16.72	-14.67	561.17	561.18
G	2767+26.72	-14.67	561.30	561.30
℄ Brg. Pier 2	2767+32.22	-14.67	561.37	561.37
H	2767+42.22	-14.67	561.51	561.51
I	2767+52.22	-14.67	561.64	561.65
J	2767+62.22	-14.67	561.78	561.79
℄ Brg. E. Abut.	2767+68.72	-14.67	561.87	561.87
Back of E. Abut.	2767+71.47	-14.67	561.91	561.91



DEAD LOAD DEFLECTION DIAGRAM ①

(Includes weight of concrete only.)

Notes:

① The Dead Load Deflections are not to be used in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as shown on this sheet and on sheet 8 of 32.

② To determine "t": Elevations of the top flanges of the existing steel beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on this sheet and on sheet 8 of 32, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\003S011_0012-76D23-089-Top of Slab Elevations.dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 003-0012 (W.B.)
SHEET NO. 7 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	151
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

BEAM 5W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2766+44.08	-8.33	560.38	560.38
℄ Brg. W. Abut.	2766+46.83	-8.33	560.41	560.41
A	2766+56.83	-8.33	560.53	560.54
B	2766+66.83	-8.33	560.65	560.66
C	2766+76.83	-8.33	560.77	560.78
℄ Brg. Pier 1	2766+83.33	-8.33	560.86	560.86
D	2766+93.33	-8.33	560.98	560.99
E	2767+03.33	-8.33	561.11	561.13
F	2767+13.33	-8.33	561.24	561.25
G	2767+23.33	-8.33	561.37	561.37
℄ Brg. Pier 2	2767+28.83	-8.33	561.44	561.44
H	2767+38.83	-8.33	561.57	561.58
I	2767+48.83	-8.33	561.71	561.72
J	2767+58.83	-8.33	561.84	561.85
℄ Brg. E. Abut.	2767+65.33	-8.33	561.93	561.93
Back of E. Abut.	2767+68.08	-8.33	561.97	561.97

BEAM 4W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2766+40.70	-2.00	560.44	560.44
℄ Brg. W. Abut.	2766+43.45	-2.00	560.47	560.47
A	2766+53.45	-2.00	560.59	560.60
B	2766+63.45	-2.00	560.71	560.72
C	2766+73.45	-2.00	560.83	560.84
℄ Brg. Pier 1	2766+79.95	-2.00	560.91	560.91
D	2766+89.95	-2.00	561.04	561.05
E	2766+99.95	-2.00	561.16	561.18
F	2767+09.95	-2.00	561.29	561.31
G	2767+19.95	-2.00	561.42	561.43
℄ Brg. Pier 2	2767+25.45	-2.00	561.49	561.49
H	2767+35.45	-2.00	561.63	561.63
I	2767+45.45	-2.00	561.76	561.77
J	2767+55.45	-2.00	561.90	561.91
℄ Brg. E. Abut.	2767+61.95	-2.00	561.99	561.99
Back of E. Abut.	2767+64.70	-2.00	562.02	562.02

℄ W.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2766+39.63	0.00	560.45	560.45
℄ Brg. W. Abut.	2766+42.38	0.00	560.49	560.49
A	2766+52.38	0.00	560.61	560.62
B	2766+62.38	0.00	560.73	560.74
C	2766+72.38	0.00	560.85	560.85
℄ Brg. Pier 1	2766+78.88	0.00	560.93	560.93
D	2766+88.88	0.00	561.06	561.06
E	2766+98.88	0.00	561.18	561.20
F	2767+08.88	0.00	561.31	561.32
G	2767+18.88	0.00	561.44	561.44
℄ Brg. Pier 2	2767+24.38	0.00	561.51	561.51
H	2767+34.38	0.00	561.64	561.65
I	2767+44.38	0.00	561.78	561.79
J	2767+54.38	0.00	561.91	561.92
℄ Brg. E. Abut.	2767+60.88	0.00	562.00	562.00
Back of E. Abut.	2767+63.63	0.00	562.04	562.04

BEAM 3W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2766+37.31	4.33	560.36	560.36
℄ Brg. W. Abut.	2766+40.06	4.33	560.39	560.39
A	2766+50.06	4.33	560.51	560.52
B	2766+60.06	4.33	560.63	560.64
C	2766+70.06	4.33	560.75	560.76
℄ Brg. Pier 1	2766+76.56	4.33	560.83	560.83
D	2766+86.56	4.33	560.96	560.97
E	2766+96.56	4.33	561.08	561.10
F	2767+06.56	4.33	561.21	561.23
G	2767+16.56	4.33	561.34	561.35
℄ Brg. Pier 2	2767+22.06	4.33	561.41	561.41
H	2767+32.06	4.33	561.55	561.55
I	2767+42.06	4.33	561.68	561.69
J	2767+52.06	4.33	561.81	561.82
℄ Brg. E. Abut.	2767+58.56	4.33	561.90	561.90
Back of E. Abut.	2767+61.31	4.33	561.94	561.94

BEAM 2W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2766+33.93	10.67	560.22	560.22
℄ Brg. W. Abut.	2766+36.68	10.67	560.25	560.25
A	2766+46.68	10.67	560.37	560.38
B	2766+56.68	10.67	560.49	560.50
C	2766+66.68	10.67	560.61	560.62
℄ Brg. Pier 1	2766+73.18	10.67	560.69	560.69
D	2766+83.18	10.67	560.82	560.83
E	2766+93.18	10.67	560.94	560.96
F	2767+03.18	10.67	561.07	561.08
G	2767+13.18	10.67	561.20	561.20
℄ Brg. Pier 2	2767+18.68	10.67	561.27	561.27
H	2767+28.68	10.67	561.40	561.41
I	2767+38.68	10.67	561.54	561.55
J	2767+48.68	10.67	561.67	561.68
℄ Brg. E. Abut.	2767+55.18	10.67	561.76	561.76
Back of E. Abut.	2767+57.93	10.67	561.80	561.80

BEAM 1W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2766+30.54	17.00	560.06	560.06
℄ Brg. W. Abut.	2766+33.29	17.00	560.09	560.09
A	2766+43.29	17.00	560.21	560.22
B	2766+53.29	17.00	560.33	560.34
C	2766+63.29	17.00	560.45	560.45
℄ Brg. Pier 1	2766+69.79	17.00	560.53	560.53
D	2766+79.79	17.00	560.65	560.66
E	2766+89.79	17.00	560.77	560.79
F	2766+99.79	17.00	560.90	560.92
G	2767+09.79	17.00	561.03	561.03
℄ Brg. Pier 2	2767+15.29	17.00	561.10	561.10
H	2767+25.29	17.00	561.23	561.24
I	2767+35.29	17.00	561.36	561.38
J	2767+45.29	17.00	561.50	561.51
℄ Brg. E. Abut.	2767+51.79	17.00	561.59	561.59
Back of E. Abut.	2767+54.54	17.00	561.62	561.62

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DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 003-0012 (W.B.)
SHEET NO. 8 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	152
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2765+73.35	-18.00	559.30
A1	2765+83.35	-18.00	559.42
A2	2765+93.35	-18.00	559.55
E. End of West Appr. Slab	2766+03.35	-18.00	559.67
W. End of East Appr. Slab	2767+25.08	-18.00	561.25
A3	2767+35.08	-18.00	561.39
A4	2767+45.08	-18.00	561.52
E. End of East Appr. Slab	2767+55.08	-18.00	561.66

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2765+70.14	-12.00	559.38
A1	2765+80.14	-12.00	559.51
A2	2765+90.14	-12.00	559.63
E. End of West Appr. Slab	2766+00.14	-12.00	559.76
W. End of East Appr. Slab	2767+21.87	-12.00	561.34
A3	2767+31.87	-12.00	561.47
A4	2767+41.87	-12.00	561.61
E. End of East Appr. Slab	2767+51.87	-12.00	561.74

℄ E.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

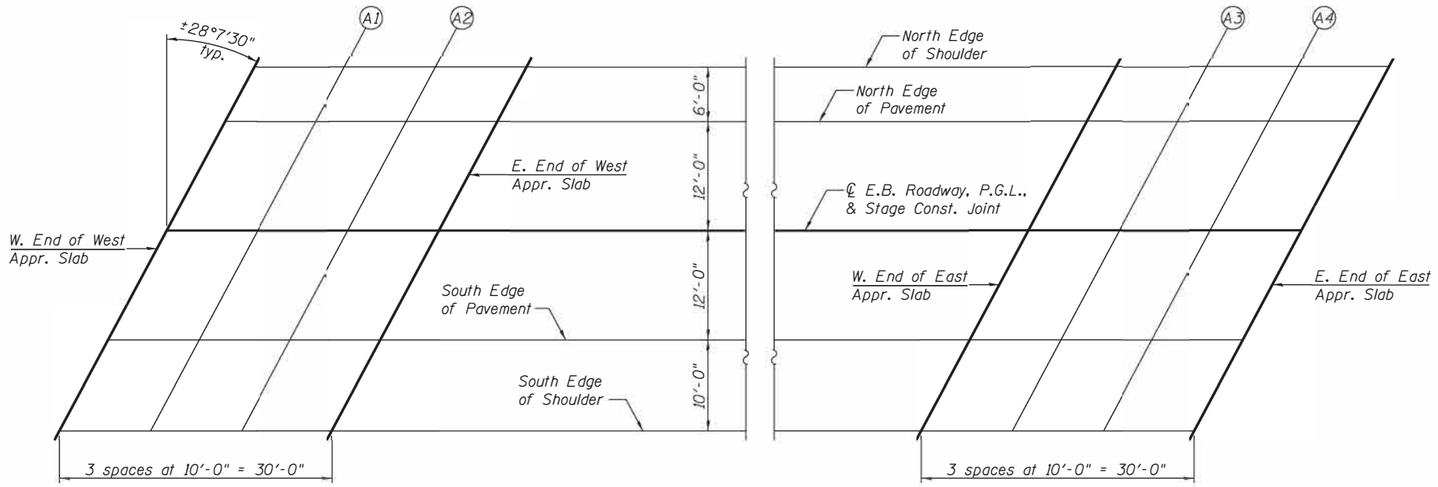
Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2765+63.73	0.00	559.49
A1	2765+73.73	0.00	559.61
A2	2765+83.73	0.00	559.74
E. End of West Appr. Slab	2765+93.73	0.00	559.86
W. End of East Appr. Slab	2767+15.46	0.00	561.44
A3	2767+25.46	0.00	561.57
A4	2767+35.46	0.00	561.71
E. End of East Appr. Slab	2767+45.46	0.00	561.84

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2765+57.31	12.00	559.23
A1	2765+67.31	12.00	559.35
A2	2765+77.31	12.00	559.47
E. End of West Appr. Slab	2765+87.31	12.00	559.60
W. End of East Appr. Slab	2767+09.05	12.00	561.16
A3	2767+19.05	12.00	561.30
A4	2767+29.05	12.00	561.43
E. End of East Appr. Slab	2767+39.05	12.00	561.57

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2765+51.97	22.00	558.95
A1	2765+61.97	22.00	559.07
A2	2765+71.97	22.00	559.20
E. End of West Appr. Slab	2765+81.97	22.00	559.32
W. End of East Appr. Slab	2767+03.70	22.00	560.89
A3	2767+13.70	22.00	561.02
A4	2767+23.70	22.00	561.15
E. End of East Appr. Slab	2767+33.70	22.00	561.29



WEST APPROACH

EAST APPROACH

PLAN

N

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011_0812\Microstation\003D0011_0812-76D23-DGN-Top of Approach Slab Elevations (E.B.).dgn

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - JAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF APPROACH SLAB ELEVATIONS STRUCTURE NO. 003-0011 (E.B.) SHEET NO. 9 OF 32 SHEETS
		CHECKED - SJN	REVISED -		
	PLOT SCALE =	DRAWN - KBC	REVISED -		
	PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	153
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2766+22.52	-22.00	559.86
A1	2766+32.52	-22.00	559.97
A2	2766+42.52	-22.00	560.09
E. End of West Appr. Slab	2766+52.52	-22.00	560.21
W. End of East Appr. Slab	2767+74.26	-22.00	561.79
A3	2767+84.26	-22.00	561.93
A4	2767+94.26	-22.00	562.07
E. End of East Appr. Slab	2768+04.26	-22.00	562.22

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2766+17.18	-12.00	560.01
A1	2766+27.18	-12.00	560.12
A2	2766+37.18	-12.00	560.24
E. End of West Appr. Slab	2766+47.18	-12.00	560.36
W. End of East Appr. Slab	2767+68.91	-12.00	561.93
A3	2767+78.91	-12.00	562.07
A4	2767+88.91	-12.00	562.21
E. End of East Appr. Slab	2767+98.91	-12.00	562.35

℄ W.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

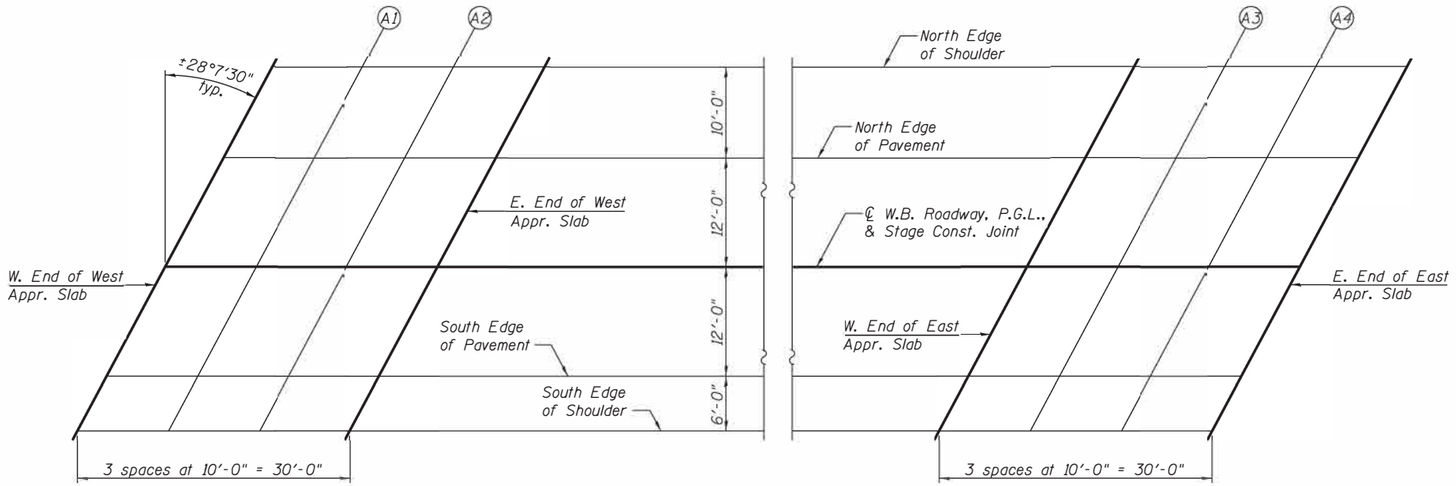
Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2766+10.76	0.00	560.12
A1	2766+20.76	0.00	560.23
A2	2766+30.76	0.00	560.35
E. End of West Appr. Slab	2766+40.76	0.00	560.47
W. End of East Appr. Slab	2767+62.50	0.00	562.02
A3	2767+72.50	0.00	562.16
A4	2767+82.50	0.00	562.30
E. End of East Appr. Slab	2767+92.50	0.00	562.44

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2766+04.35	12.00	559.86
A1	2766+14.35	12.00	559.97
A2	2766+24.35	12.00	560.09
E. End of West Appr. Slab	2766+34.35	12.00	560.20
W. End of East Appr. Slab	2767+56.08	12.00	561.75
A3	2767+66.08	12.00	561.89
A4	2767+76.08	12.00	562.03
E. End of East Appr. Slab	2767+86.08	12.00	562.17

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2766+01.14	18.00	559.70
A1	2766+11.14	18.00	559.81
A2	2766+21.14	18.00	559.93
E. End of West Appr. Slab	2766+31.14	18.00	560.04
W. End of East Appr. Slab	2767+52.87	18.00	561.58
A3	2767+62.87	18.00	561.72
A4	2767+72.87	18.00	561.86
E. End of East Appr. Slab	2767+82.87	18.00	562.00



WEST APPROACH

EAST APPROACH

PLAN

N

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\V8i\3001, 0012-76D23-018-Top of Approach Slab Elevations (W.B.).dgn

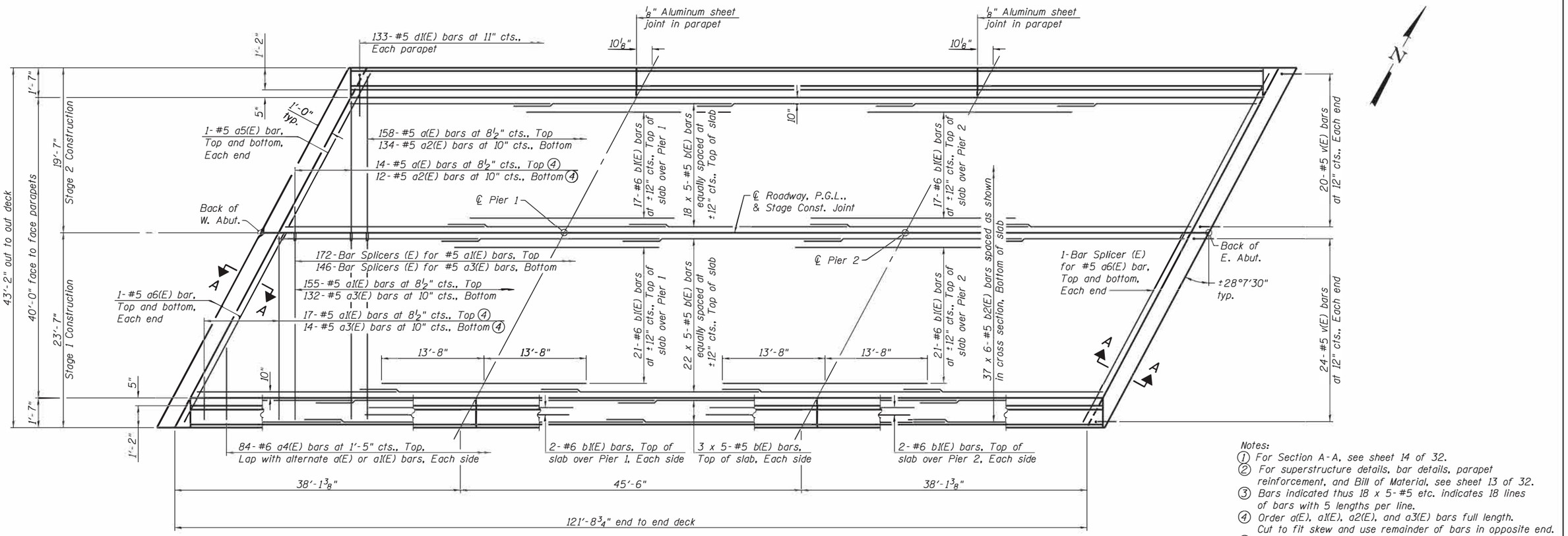
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

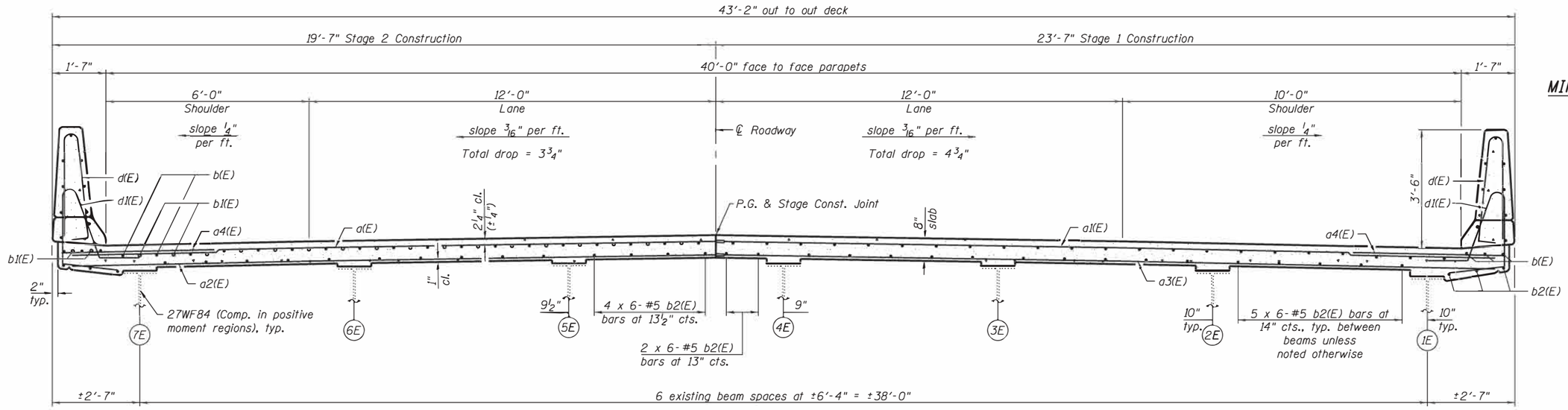
TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 003-0012 (W.B.)
SHEET NO. 10 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	154
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



PLAN

Notes:
1. For Section A-A, see sheet 14 of 32.
2. For superstructure details, bar details, parapet reinforcement, and Bill of Material, see sheet 13 of 32.
3. Bars indicated thus 18 x 5-#5 etc. indicates 18 lines of bars with 5 lengths per line.
4. Order a(E), a1(E), a2(E), and a3(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
5. For details of Bar Splicers, see sheet 30 of 32.



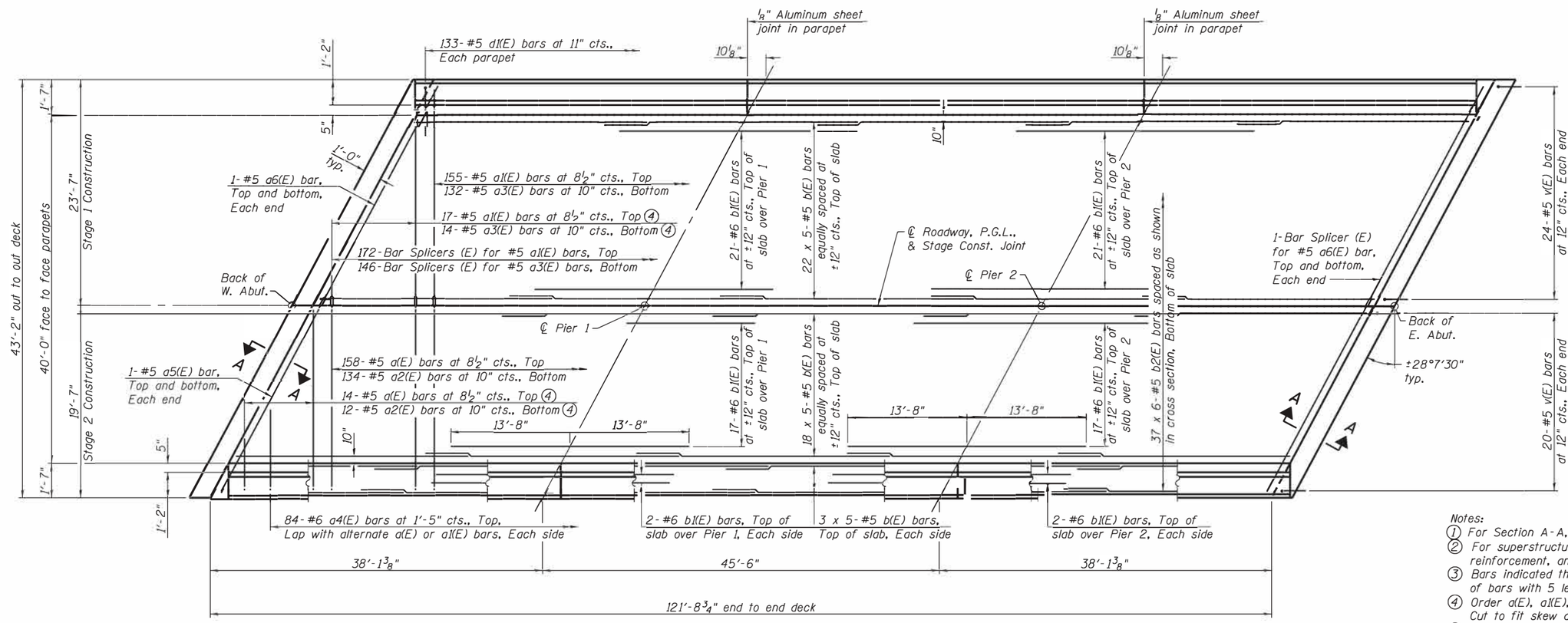
MINIMUM BAR LAP

#5 bar = 2'-7"

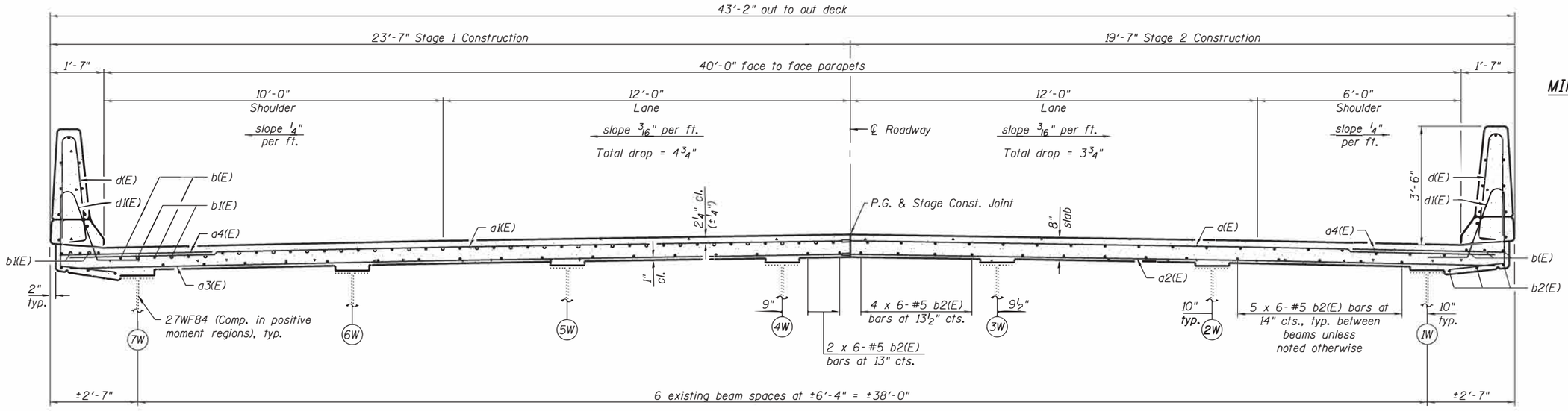
NEAR PIER — **NEAR MIDSPAN**

CROSS SECTION

(Looking East)



PLAN



NEAR PIER — NEAR MIDSPAN

CROSS SECTION
(Looking East)

MINIMUM BAR LAP
#5 bar = 2'-7"

Notes:
1. For Section A-A, see sheet 14 of 32.
2. For superstructure details, bar details, parapet reinforcement, and Bill of Material, see sheet 13 of 32.
3. Bars indicated thus 18 x 5-#5 etc. indicates 18 lines of bars with 5 lengths per line.
4. Order a(E), a1(E), a2(E), and a3(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
5. For details of Bar Splicers, see sheet 30 of 32.

FILE NAME = M:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-2011.08\2\Microstation\08230011.08\2-76D23-sht2-Superstructure (W.B.).dgn

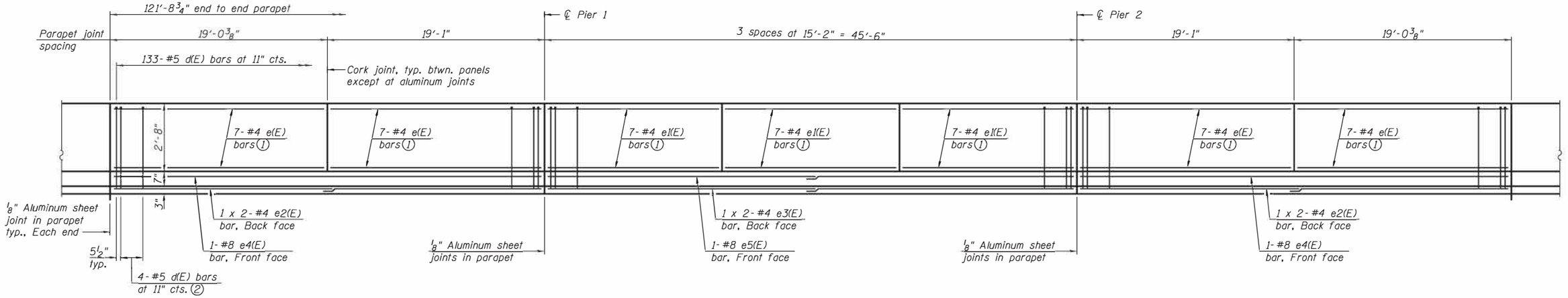
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - DGL	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - DGL	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -	

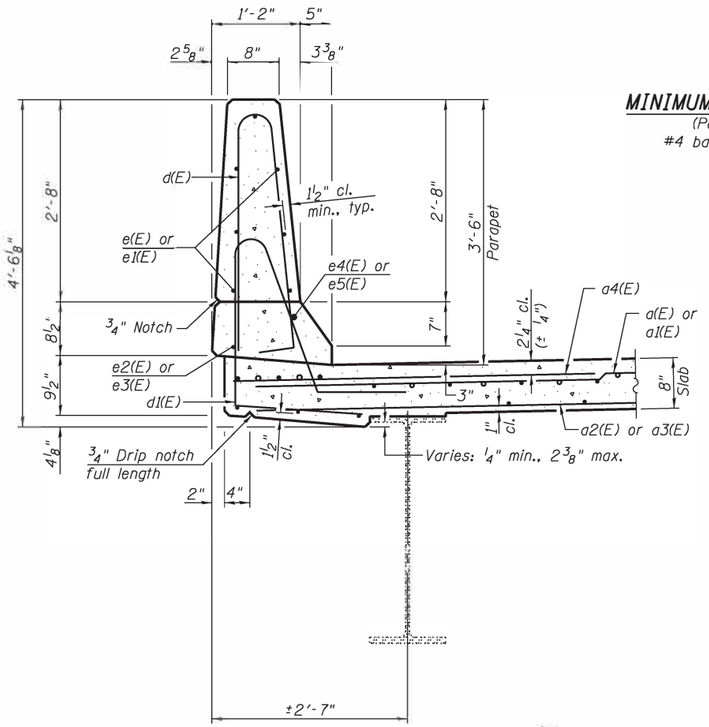
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 003-0012 (W.B.)
SHEET NO. 12 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	156
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		



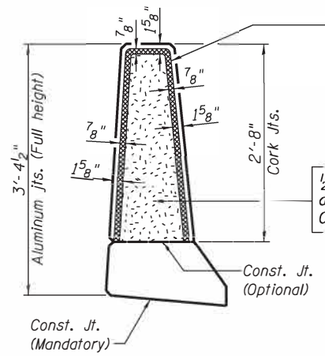
INSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET

MINIMUM BAR LAP

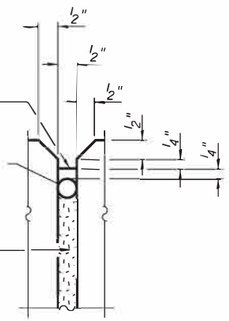
(Parapet)
#4 bar = 2'-0"



Polyurethane Joint Sealant according to Article 1050.04 of the Std. Spec. Color shall be gray.

5/8" ϕ Backer Rod

1/2" Preformed Self-Expanding Cork Joint Filler according to Article 1051.07 of the Std. Spec. Cost included with Concrete Superstructure.



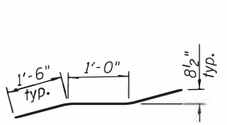
PARAPET JOINT DETAILS

SUPERSTRUCTURE BILL OF MATERIAL

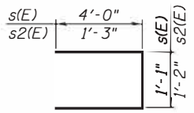
(Two Structures)

Bar	No.	Size	Length	Shape
d(E)	344	#5	19'-1"	——
d1(E)	344	#5	23'-1"	——
a2(E)	292	#5	18'-9"	——
a3(E)	292	#5	22'-9"	——
a4(E)	336	#6	6'-6"	——
a5(E)	8	#5	21'-7"	——
a6(E)	8	#5	26'-2"	——
b(E)	460	#5	26'-5"	——
b1(E)	168	#6	27'-4"	——
b2(E)	444	#5	22'-5"	——
d(E)	628	#5	6'-10"	
d1(E)	532	#5	7'-4"	
e(E)	112	#4	18'-8"	——
e1(E)	84	#4	14'-10"	——
e2(E)	16	#4	19'-11"	——
e3(E)	8	#4	23'-7"	——
e4(E)	8	#8	37'-9"	——
e5(E)	4	#8	45'-2"	——
m(E)	28	#6	21'-10"	——
m1(E)	28	#6	26'-4"	——
m2(E)	100	#6	6'-9"	——
m3(E)	40	#6	2'-6"	——
m4(E)	20	#6	4'-6"	——
m5(E)	56	#5	4'-0"	
s(E)	172	#5	9'-1"	⊐
s1(E)	172	#5	9'-0"	⊏
s2(E)	200	#5	3'-8"	⊔
v(E)	176	#5	3'-1"	⌐
Concrete Superstructure		Cu. Yd.	403.4	
Reinforcement Bars, Epoxy Coated		Pound	81,930	

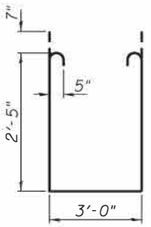
Notes:
1. See Section Thru Parapet.
2. Typical at parapet ends and each side of aluminum sheeted joints.
3. Bars indicated thus 1 x 2 -#8 etc. indicates 1 line of bars with 2 lengths per line.
4. The 1/8" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure



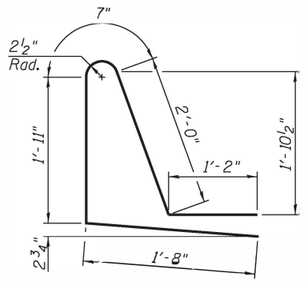
BAR m5(E)



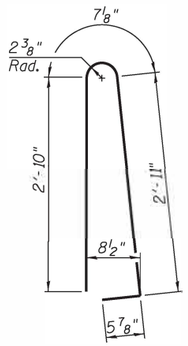
BARS s(E) & s2(E)



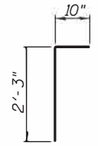
BAR s1(E)



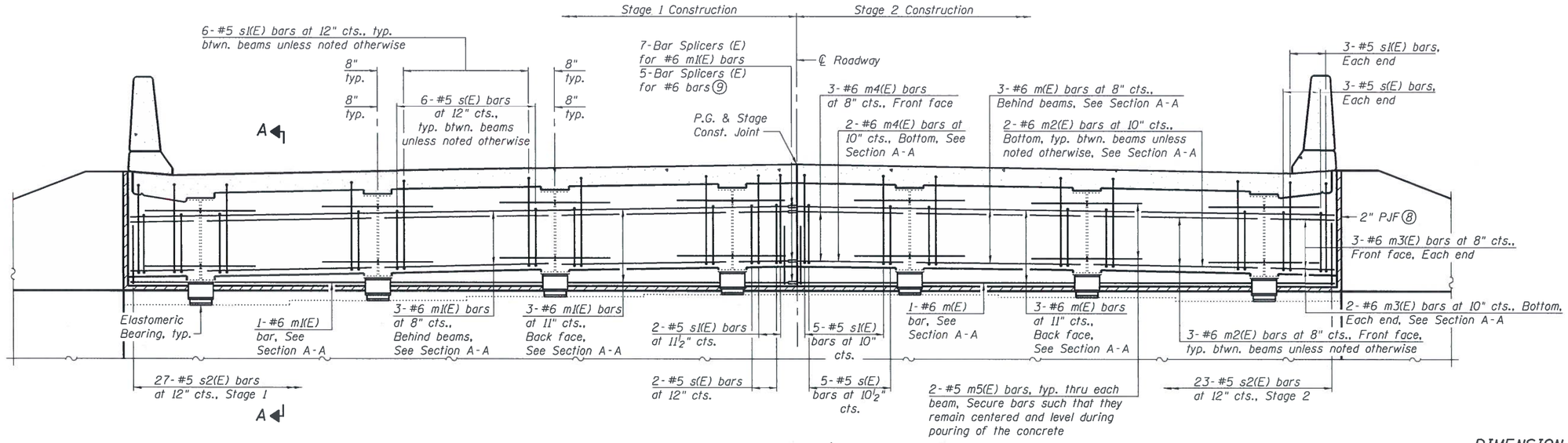
BAR d1(E)



BAR d(E)



BAR v(E)

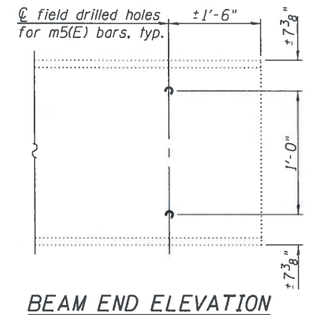


DIAPHRAGM ELEVATION AT ABUTMENT

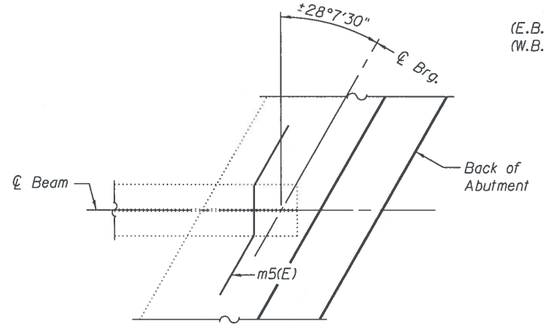
(E.B. Looking West-West diaphragm shown, East diaphragm similar)
(W.B. Looking East-East diaphragm shown, West diaphragm similar)

DIMENSION TABLE

Abutment	A	B
E.B. West	1'-7½"	2'-2⅜"
E.B. East	1'-8¾"	2'-3⅞"
W.B. West	1'-8⅜"	2'-2"
W.B. East	1'-9⅛"	2'-3"

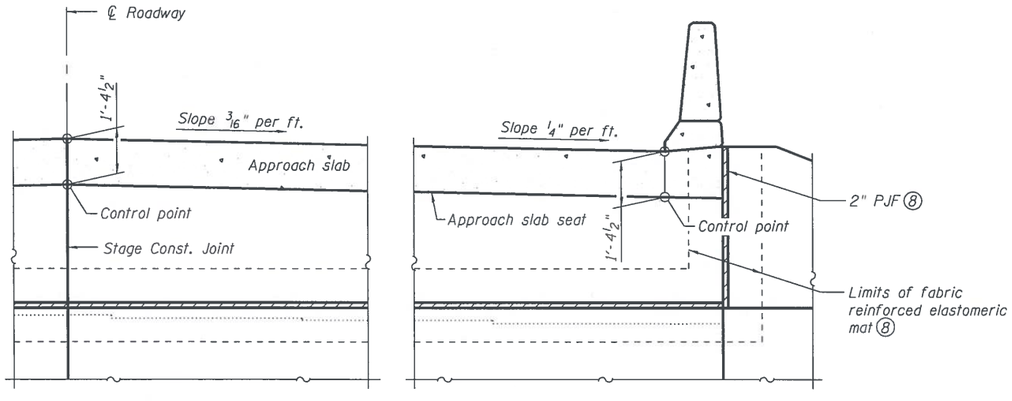


BEAM END ELEVATION



PARTIAL PLAN AT ABUTMENT

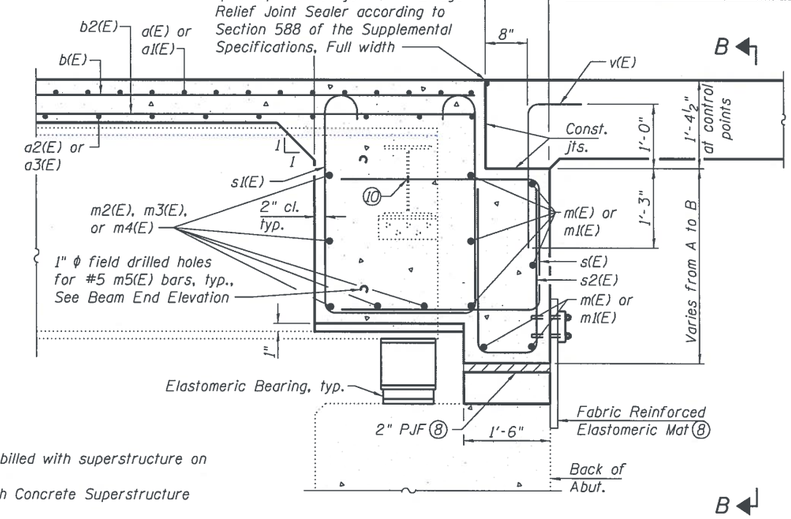
(Showing bottom flange of beam)



SECTION B-B

CONTROL POINT ELEVATIONS

Abutment	North Parapet	℄ Roadway	South Parapet
E.B. West	558.28	558.47	557.93
E.B. East	559.89	560.08	559.53
W.B. West	558.82	559.08	558.65
W.B. East	560.43	560.67	560.22



SECTION A-A

(at Rt. L's)

Notes:

1. Reinforcement bars in diaphragm are billed with superstructure on sheet 13 of 32.
2. Concrete in diaphragm is included with Concrete Superstructure on sheet 13 of 32.
3. For details of bars m5(E), s(E), s1(E), s2(E), and v(E), see sheet 13 of 32.
4. The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
5. The approach slab seat shall have a constant slope determined from the control points shown.
6. For bearing details, see sheet 19 of 32.
7. For details of Bar Splicers, see sheet 30 of 32.
8. See Section Thru Semi-Integral Abutment on sheet 2 of 32.
9. Use bar splicer in place of m2(E) bars in front face and bottom of diaphragm on Stage 1 side of construction. Cut as required to provide clearance to beam web.
10. Field drill 1⅜" ϕ holes for s(E) bars through existing diaphragm as required, cost included with Concrete Superstructure.

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011,0012\Microstation\0030011_0012-76D23-814-Diaphragm Details.dgn

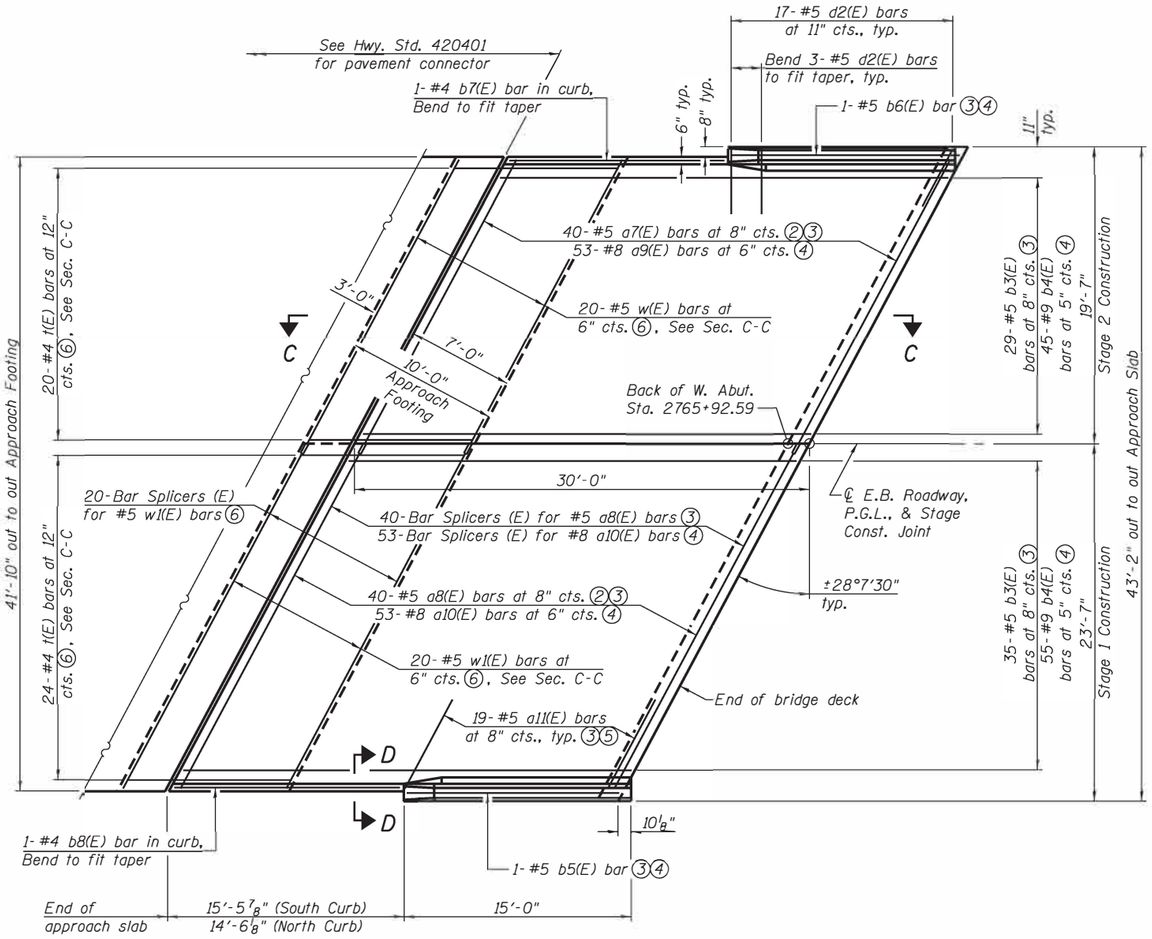
OATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - DGL	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - DGL	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -	

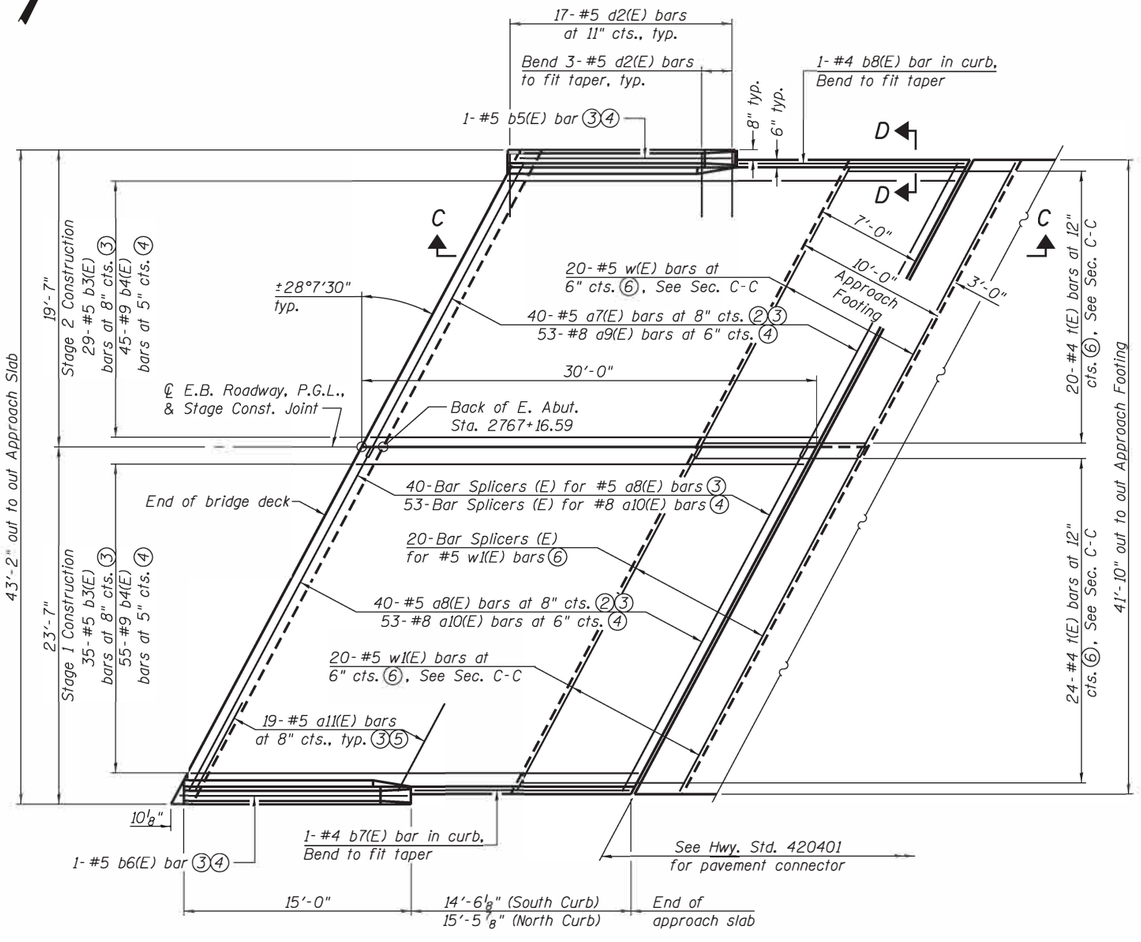
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
SHEET NO. 14 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	158
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



WEST APPROACH



EAST APPROACH

E.B. APPROACH SLAB PLAN

Notes:
1. For Section C-C and View D-D, see sheet 17 of 32.
2. Tilt a7(E) or a8(E) bars as necessary to fit curb.
3. Top of slab.
4. Bottom of slab.
5. Lap with each a7(E) or a8(E) bar.
6. Top and bottom of Approach Footing.
7. For details of Bar Splicers, see sheet 30 of 32.

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

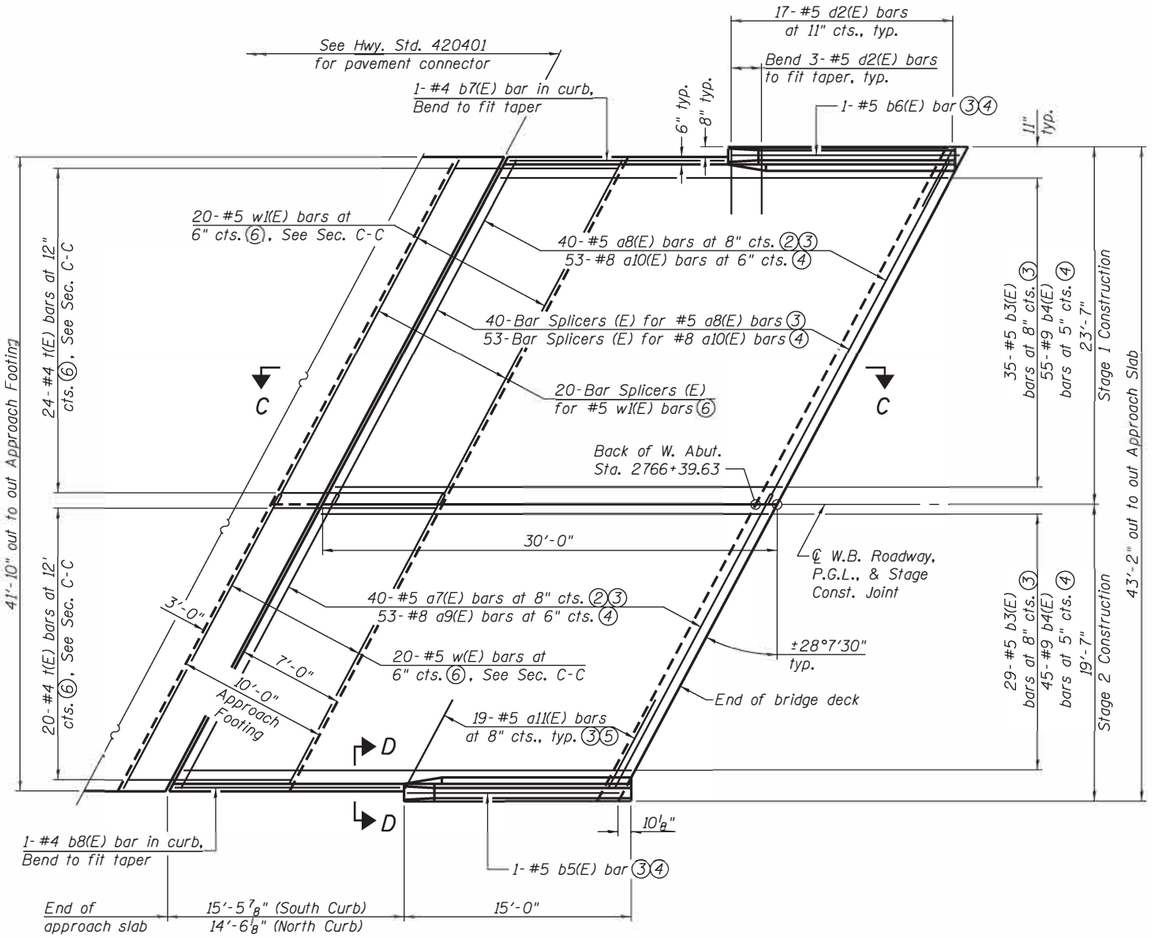
USER NAME =	DESIGNED - KBC	REVISED -	
	CHECKED - JAD	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

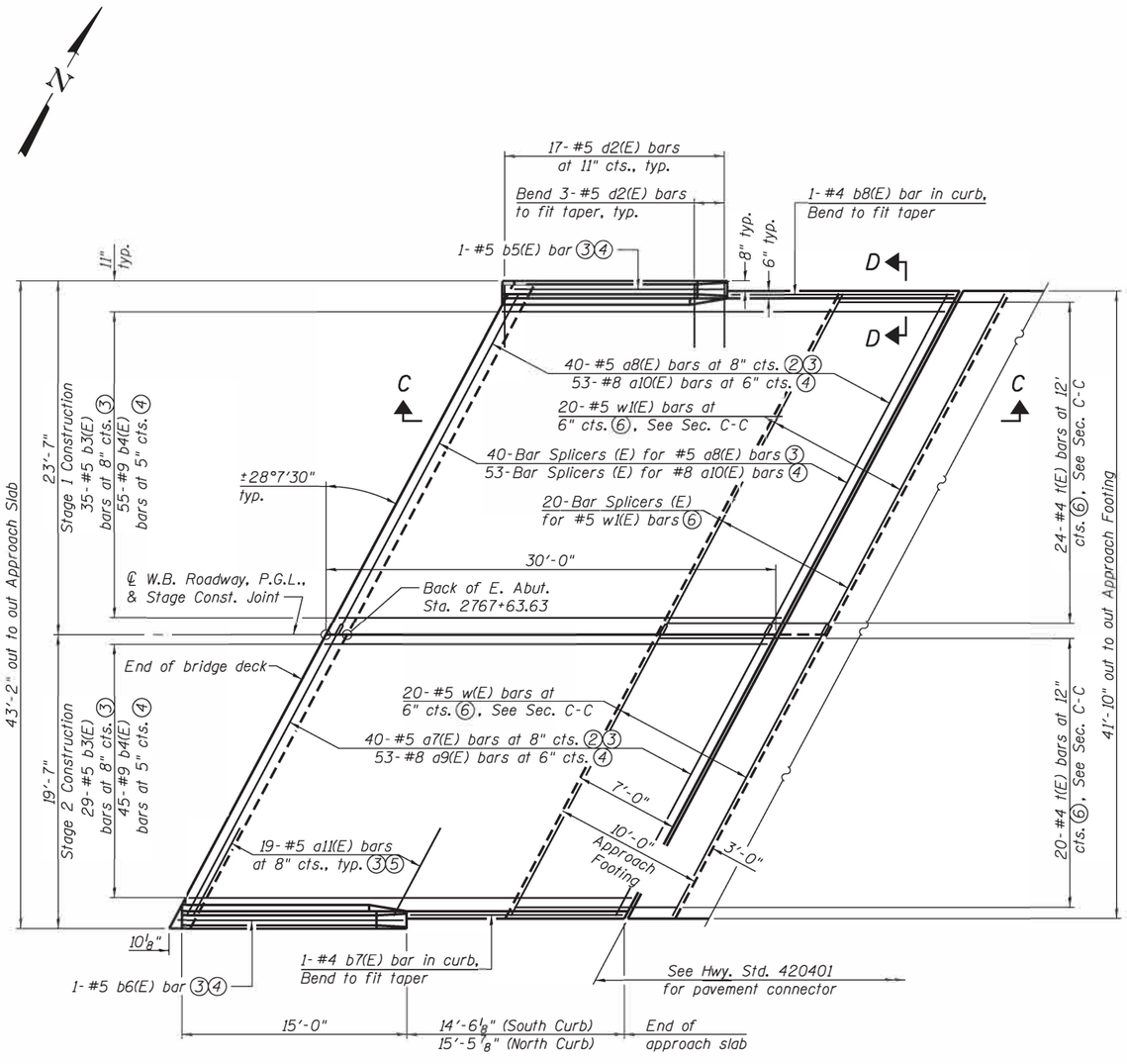
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 003-0011 (E.B.)
SHEET NO. 15 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	159
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\003D0011_0012_76D23-E15-Approach Slab Details (E.B.).dgn



WEST APPROACH



EAST APPROACH

W.B. APPROACH SLAB PLAN

Notes:
1. For Section C-C and View D-D, see sheet 17 of 32.
2. Tilt a7(E) or a8(E) bars as necessary to fit curb.
3. Top of slab.
4. Bottom of slab.
5. Lap with each a7(E) or a8(E) bar.
6. Top and bottom of Approach Footing.
7. For details of Bar Splicers, see sheet 30 of 32.

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - KBC	REVISED -
		CHECKED - JAD	REVISED -
	PLOT SCALE =	DRAWN - KBC	REVISED -
	PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 003-0012 (W.B.)
SHEET NO. 16 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	160
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

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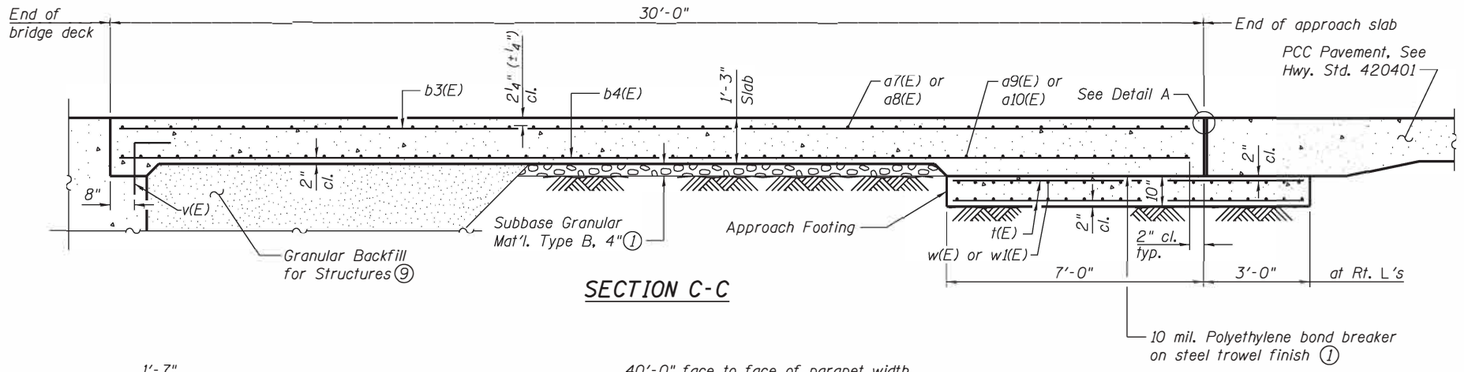
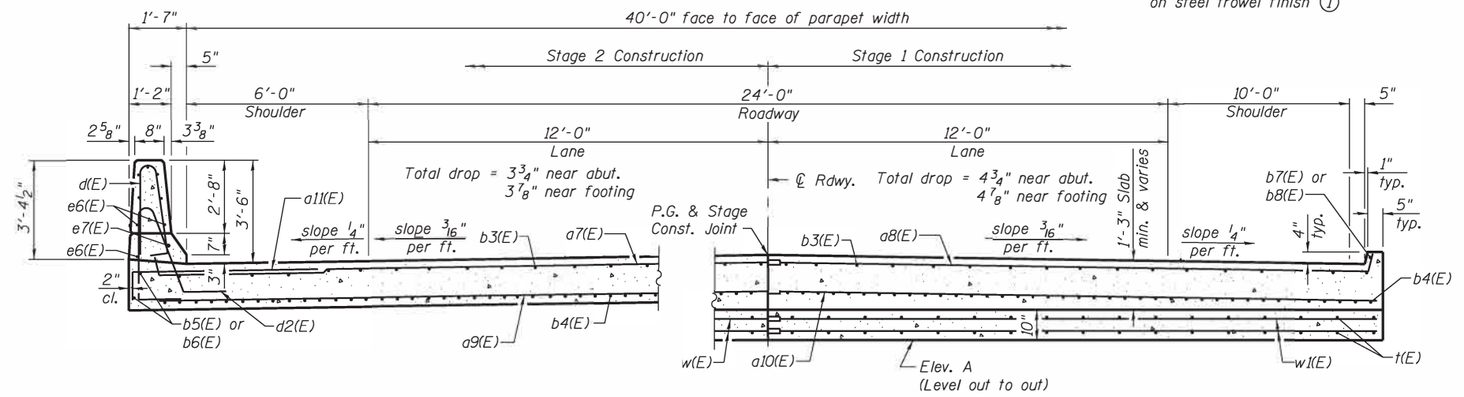


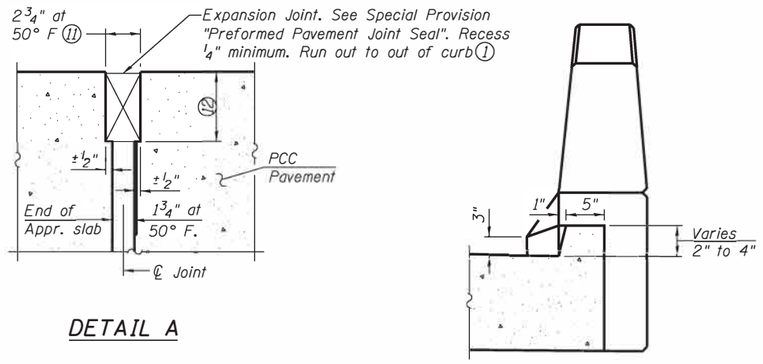
SECTION C-C



NEAR ABUTMENT **AT APPROACH FOOTING**

CROSS SECTION

(See Plan for dimensions not shown)



DETAIL A

VIEW D-D

ELEVATION TABLE

	A
E.B. West Appr.	556.76
E.B. East Appr.	558.99
W.B. West Appr.	557.51
W.B. East Appr.	559.69

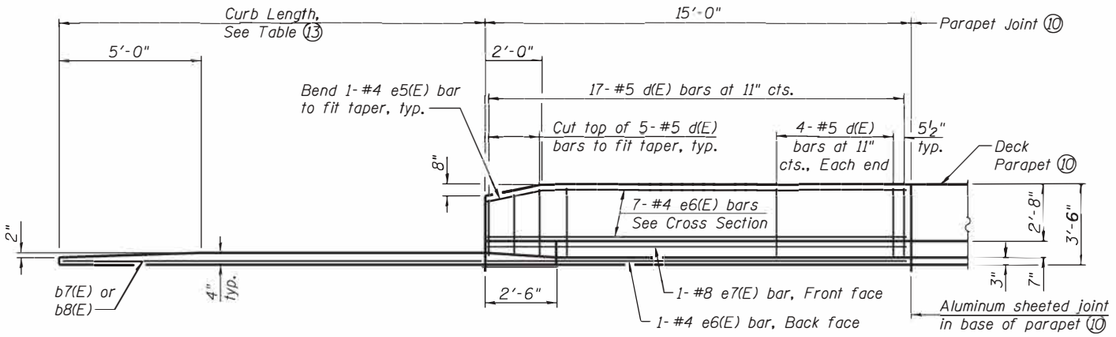
CURB LENGTH TABLE (13)

	South Curb	North Curb
E.B. West Appr.	15'-5⅞"	14'-6⅛"
E.B. East Appr.	14'-6⅛"	15'-5⅞"
W.B. West Appr.	15'-5⅞"	14'-6⅛"
W.B. East Appr.	14'-6⅛"	15'-5⅞"

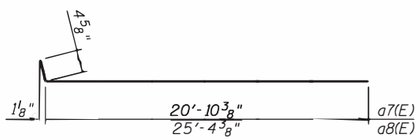
BILL OF MATERIAL

(Four Approaches)

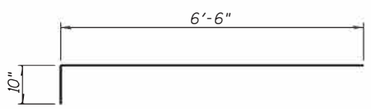
Bar	No.	Size	Length	Shape
a7(E)	160	#5	21'-3"	
a8(E)	160	#5	25'-10"	
a9(E)	212	#8	21'-1"	
a10(E)	212	#8	25'-7"	
a11(E)	152	#5	7'-4"	
b3(E)	256	#5	29'-8"	
b4(E)	400	#9	29'-8"	
b5(E)	8	#5	13'-10"	
b6(E)	8	#5	15'-4"	
b7(E)	4	#4	14'-3"	
b8(E)	4	#4	15'-0"	
d(E)	200	#5	6'-10"	
d2(E)	136	#5	7'-8"	
e6(E)	64	#4	14'-8"	
e7(E)	8	#8	14'-8"	
t(E)	352	#4	10'-11"	
w(E)	160	#5	21'-1"	
w1(E)	160	#5	25'-7"	
Concrete Structures			Cu. Yd.	58.6
Concrete Superstructure			Cu. Yd.	15.4
Concrete Superstructure (Approach Slab)			Cu. Yd.	262.5
(14) Reinforcement Bars, Epoxy Coated			Pound	97,830



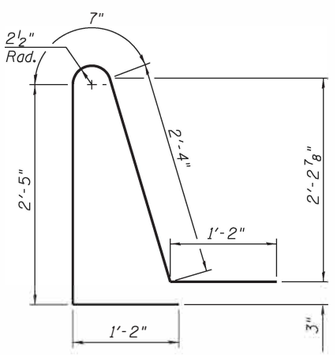
INSIDE ELEVATION OF PARAPET AND CURB



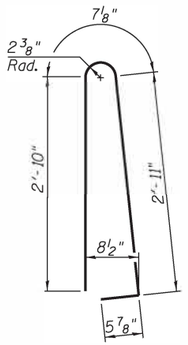
BARS a7(E) & a8(E)



BAR a11(E)



BAR d2(E)



BAR d(E)

Notes:

(1) Cost included with Concrete Superstructure (Approach Slab).
(2) Parapet concrete shall be paid for as Concrete Superstructure.
(3) Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
(4) Approach footing concrete shall be paid for as Concrete Structures.
(5) Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
(6) The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
(7) For details of Bar Splicers, see sheet 30 of 32.
(8) Cost of excavation for approach footing included with Concrete Structures.
(9) For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 32.
(10) For additional parapet details and parapet joint details, see sheet 13 of 32.
(11) The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.
(12) Per manufacturer recommendations.
(13) Measured along outside edge of curb.
(14) Calculated weight of Reinforcement Bars, Epoxy Coated = 87,480 (Superstructure) 10,350 (Substructure)

FILE NAME = H:\P\11841\11841.00BB - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\00230011_00812-76D23-817-Approach Slab Details.dgn

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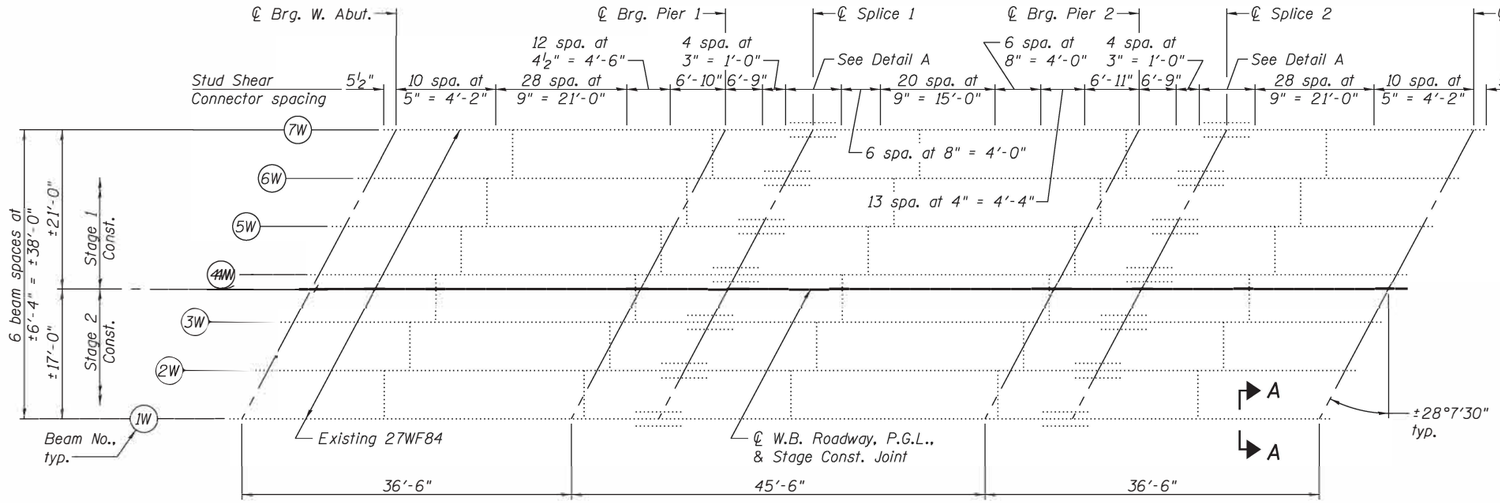
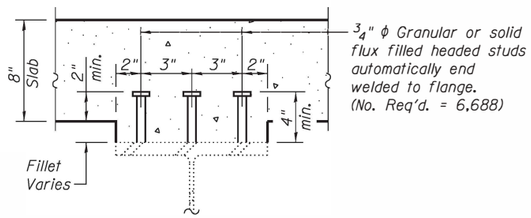
		CHECKED - JAD	REVISED -	
	PLOT SCALE =	DRAWN - KBC	REVISED -	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
	PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	SHEET NO. 17 OF 32 SHEETS

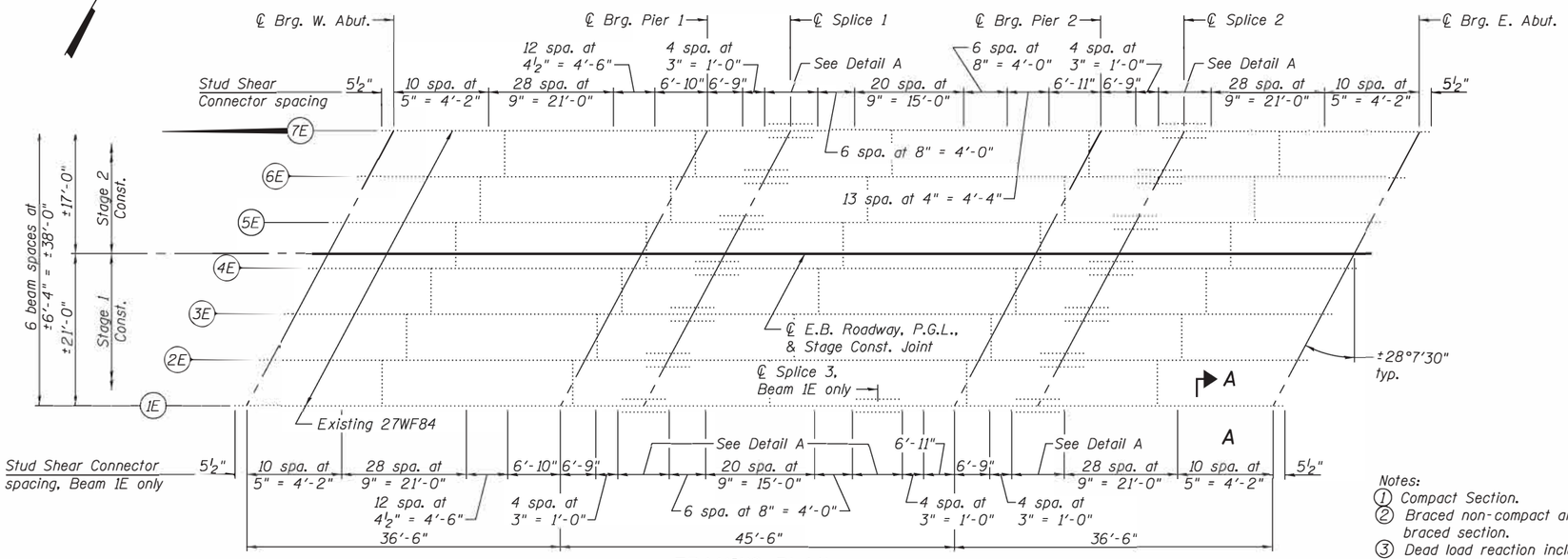
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	161
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		



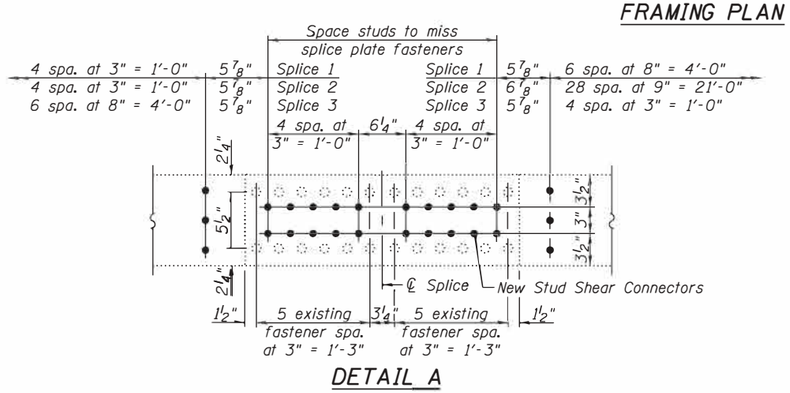


SECTION A-A

(Except as shown in Detail A)



FRAMING PLAN



DETAIL A

INTERIOR BEAM REACTION TABLE

		Abutments	Piers 1 or 2
R_Q	(k)	42.9 (3)	41.8
R_L	(k)	35.6	37.3
R_I	(k)	10.7	9.0
R_{Total}	(k)	89.2	88.1

INTERIOR BEAM MOMENT TABLE

		0.4 Span 1 or 0.6 Span 3	Pier 1 or Pier 2	0.5 Span 2
I_s	(in^4)	2,850	2,850	2,850
$I_c(n)$	(in^4)	8,670	-	8,670
$I_c(3n)$	(in^4)	6,523	-	6,523
S_s	(in^3)	213	213	213
$S_c(n)$	(in^3)	333	-	333
$S_c(3n)$	(in^3)	302	-	302
Z	(in^3)	-	-	-
Q	(k/')	0.770	0.918	0.770
M_Q	('k)	70.3	150.1	67.4
s_Q	(k/')	0.148	-	0.148
M_{sQ}	('k)	16.1	-	19.2
M_L	('k)	198.5	104.5	225.3
M_{IM}	('k)	59.6	31.3	66.0
$\frac{5}{3}[M_L + I]$	('k)	430.2	226.3	485.5
M_a	('k)	671.6	489.3	743.7
(1) M_u	('k)	945.1	-	947.1
f_s Q non-comp	(ksi)	3.97	8.45	3.80
f_s Q (comp)	(ksi)	0.64	-	0.76
f_s $\frac{5}{3}[M_L + M_I]$	(ksi)	15.50	12.75	17.50
f_s (Overload)	(ksi)	20.11	21.20	22.06
(2) f_s (Total)	(ksi)	-	27.56	-
VR	(k)	53.3	-	38.4

Notes:
(1) Compact Section.
(2) Braced non-compact and partially braced section.
(3) Dead load reaction includes 30.3 k for weight of concrete diaphragm and approach slab.

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total and Overload) due to non-composite dead loads (in.^{4} and in.^{3}).
$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total and Overload) due to short-term composite live loads (in.^{4} and in.^{3}).
$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total and Overload) due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).
Z: Plastic Section Modulus of the steel section in non-composite areas (in.^{3}).
Q: Un-factored non-composite dead load (kips/ft.).
M_Q: Un-factored moment due to non-composite dead load (kip-ft.).
s_Q: Un-factored long-term composite (superimposed) dead load (kips/ft.)
M_{sQ}: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
M_L: Un-factored live load moment (kip-ft.).
M_I: Un-factored moment due to impact (kip-ft.).
M_a: Factored design moment (kip-ft.). $1.3\ [M_Q + M_{sQ} + \frac{5}{3}(M_L + M_I)]$
M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
f_s (Overload): Sum of stresses as computed from the moments above (ksi). $M_Q + M_{sQ} + \frac{5}{3}(M_L + M_I)$
f_s (Total): Sum of stresses as computed from the moments above on non-compact section (ksi). $1.3\ [M_Q + M_{sQ} + \frac{5}{3}(M_L + M_I)]$
VR: Maximum L + impact shear range within the composite portion of the span for stud shear connector design (kips).

FILE NAME = M:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\0032D011_0012-76D23-218-Framing Plan & Beam Details.dgn

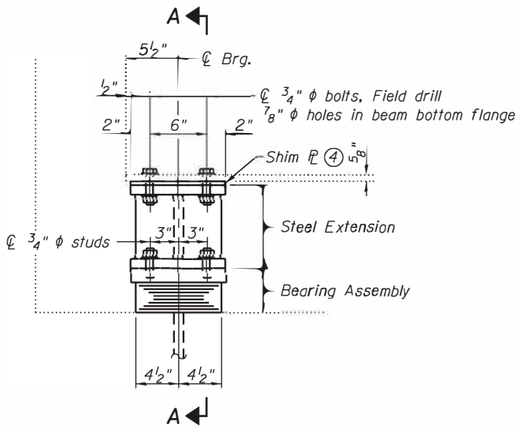
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - SJN	REVISED -	
	CHECKED - JAD	REVISED -	
PLOT SCALE =	DRAWN - SJN	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN & BEAM DETAILS
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
SHEET NO. 18 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	162
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



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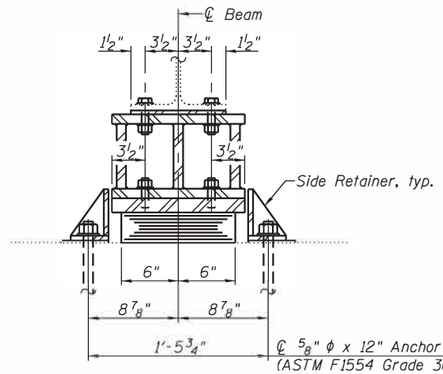
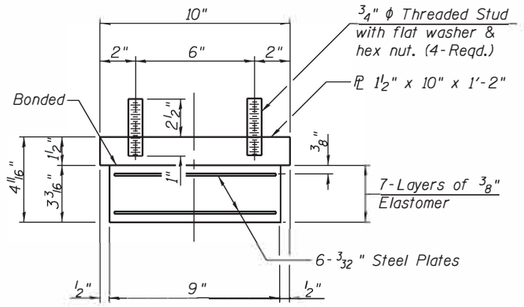
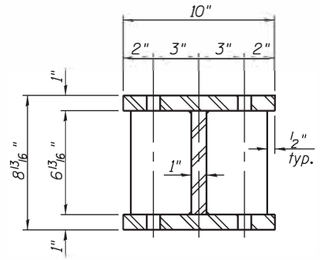


℄ ⅝" ϕ x 12" Anchor bolts (ASTM F1554 Grade 36) with 1¾" x 1¾" x 5/16" PL washer under nut

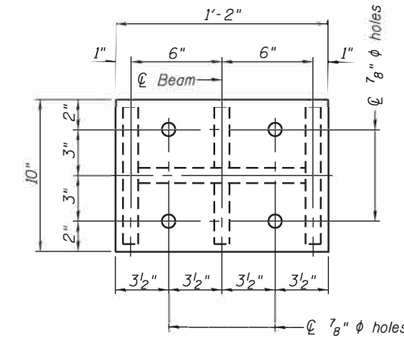
SECTION A-A



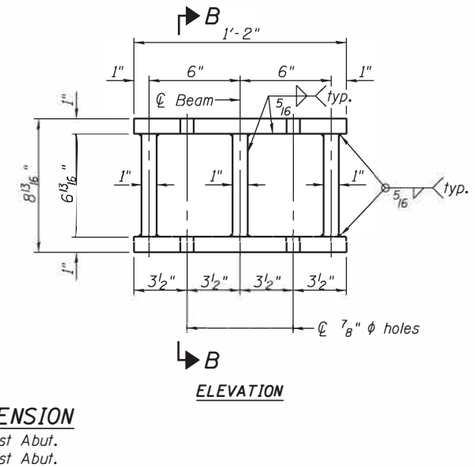
BEARING ASSEMBLY



SECTION B-B



PLAN-TOP &BOTTOM PLATE



ELEVATION

STEEL EXTENSION

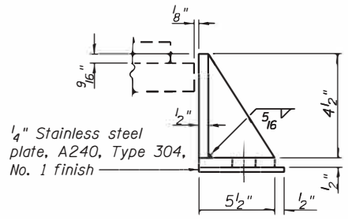
14 Required East Abut.
14 Required West Abut.

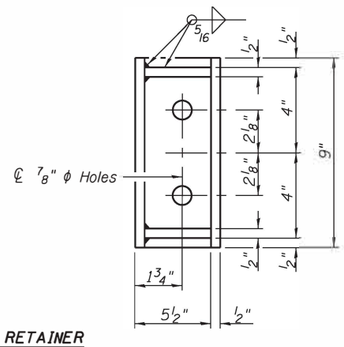
BEARING SHIM PLATES (E.B. STRUCTURE)

	Beam 1E	Beam 2E	Beam 3E	Beam 4E	Beam 5E	Beam 6E	Beam 7E
West Abut.	-	-	-	⅛"	½"	-	-
East Abut.	-	-	-	⅛"	½"	-	-

BEARING SHIM PLATES (W.B. STRUCTURE)

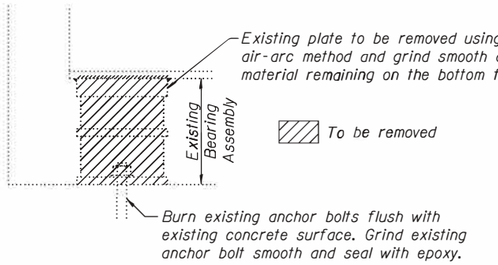
	Beam 1W	Beam 2W	Beam 3W	Beam 4W	Beam 5W	Beam 6W	Beam 7W
West Abut.	-	-	-	⅝"	½"	¼"	-
East Abut.	-	-	-	⅝"	½"	¼"	-





SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	4,550
Elastomeric Bearing Assembly, Type I	Each	28
Anchor Bolts, ⅝"	Each	112
Jack and Remove Existing Bearings	Each	28

Notes:

1. Cost included with Jack and Remove Existing Bearings.
2. The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
3. Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.
4. Shim plates shall be placed on top of Steel Extension.
5. Anchor bolts shall be ASTM F1554 all-thread or an Engineer-approved alternate material of the grade and diameter specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
6. Anchor bolts for side retainers shall be installed in drilled holes according to Article 521.06 of the Standard Specifications.
7. Side retainers, stainless steel plates, and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
8. Cost of Steel Extensions, shim plates, and connection bolts included with Furnishing and Erecting Structural Steel.
9. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
10. Minimum jack capacity = 2 Tons (weight of steel only).
11. The existing steel diaphragms shall not be used as load carrying members in the jacking and cribbing system.
12. If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.
13. Diaphragm removal and reinstallation may be required to facilitate anchor bolt installation. Cost included with Anchor Bolts, ⅝".

TYPE I ELASTOMERIC EXP. BRG.

EXISTING BEARING REMOVAL DETAIL (1)

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\003S001, 0012-76D23-819-Bearing Replacement Details at Abutments.dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

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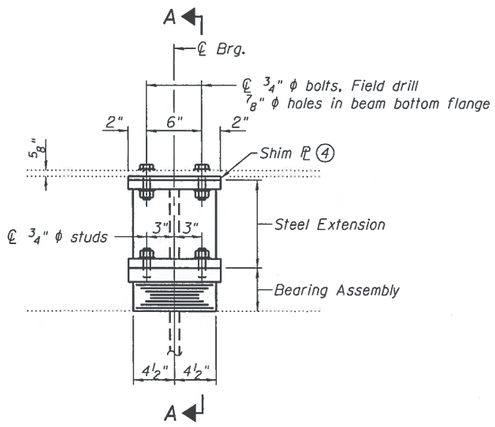
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - JAD	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - SJN	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS AT ABUTMENTS
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
SHEET NO. 19 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	163
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



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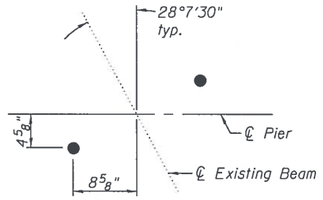
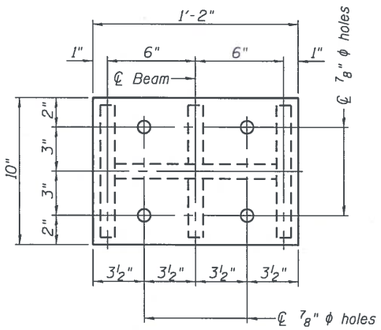
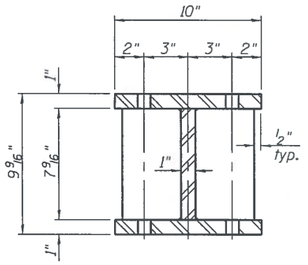


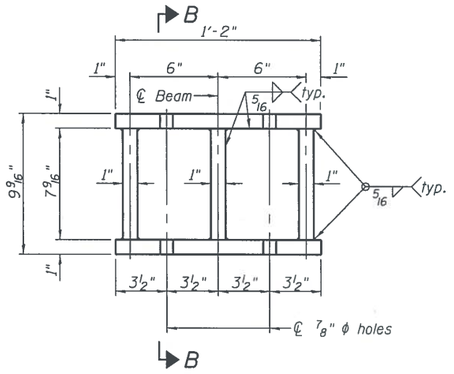
ANCHOR BOLT LAYOUT



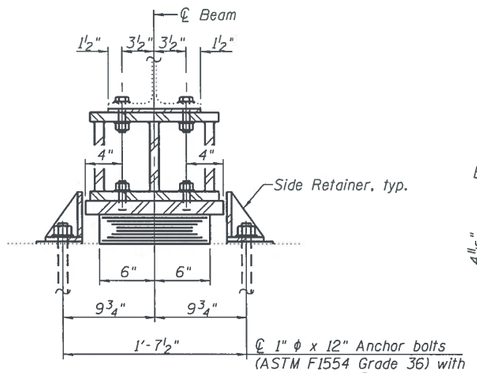
PLAN-TOP AND BOTTOM PLATE



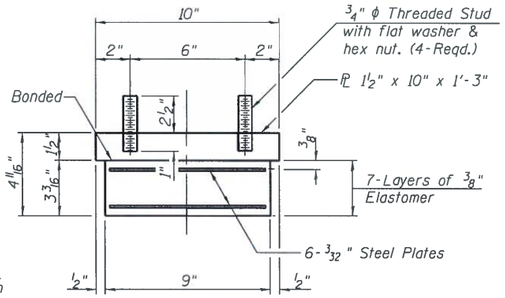
SECTION B-B



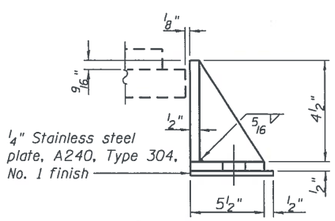
ELEVATION

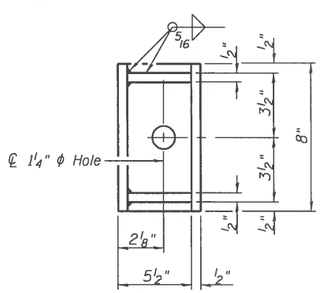


SECTION A-A



BEARING ASSEMBLY

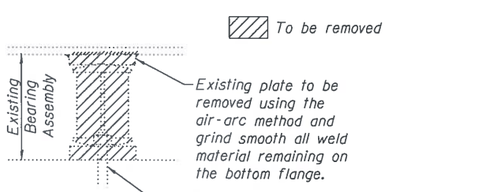




SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

TYPE I ELASTOMERIC EXP. BRG.



EXISTING BEARING REMOVAL DETAIL ①

STEEL EXTENSION

14 Required

BEARING SHIM PLATES (E.B. STRUCTURE)

	Beam 1E	Beam 2E	Beam 3E	Beam 4E	Beam 5E	Beam 6E	Beam 7E
Pier 2	-	-	-	1/8"	1/2"	-	-

BEARING SHIM PLATES (W.B. STRUCTURE)

	Beam 1W	Beam 2W	Beam 3W	Beam 4W	Beam 5W	Beam 6W	Beam 7W
Pier 2	-	-	-	5/8"	1/2"	1/4"	-

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	2,390
Elastomeric Bearing Assembly, Type I	Each	14
Anchor Bolts, 1"	Each	28
Jack and Remove Existing Bearings	Each	14

Notes:

① *Cost included with Jack and Remove Existing Bearings.*
② *The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.*
③ *Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.*
④ *Shim plates shall be placed on top of Steel Extension.*
⑤ *Anchor bolts shall be ASTM F1554 all-thread or an Engineer-approved alternate material of the grade and diameter specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.*
⑥ *Anchor bolts for side retainers shall be installed in drilled holes according to Article 521.06 of the Standard Specifications.*
⑦ *Side retainers, stainless steel plates, and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.*
⑧ *Cost of Steel Extensions, shim plates, and connection bolts included with Furnishing and Erecting Structural Steel.*
⑨ *Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.*
⑩ *Minimum jack capacity = 4 Tons (weight of steel only).*
⑪ *The existing steel diaphragms shall not be used as load carrying members in the jacking and cribbing system.*
⑫ *If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.*

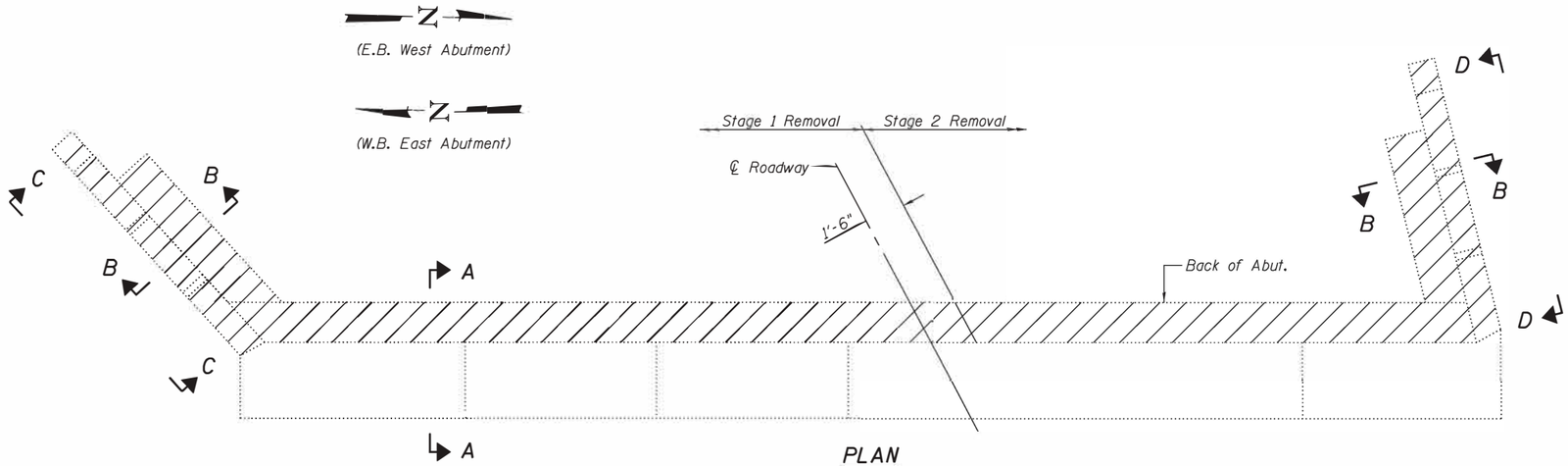
FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011_0012\Microstation\0033011_0012-76D23-020-Bearing Replacement Details at Pier 2.dgn

OATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - JAD	REVISED -
		CHECKED - SJN	REVISED -
	PLOT SCALE =	DRAWN - JAD	REVISED -
	PLOT DATE = 12/13/2017	CHECKED - SJN	REVISED -

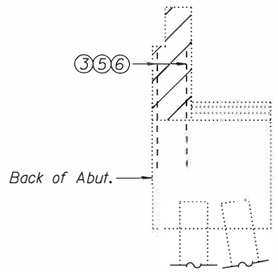
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS AT PIER 2
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
SHEET NO. 20 OF 32 SHEETS

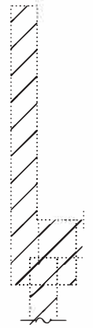
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,2,4)RS-1	BOND	236	164
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



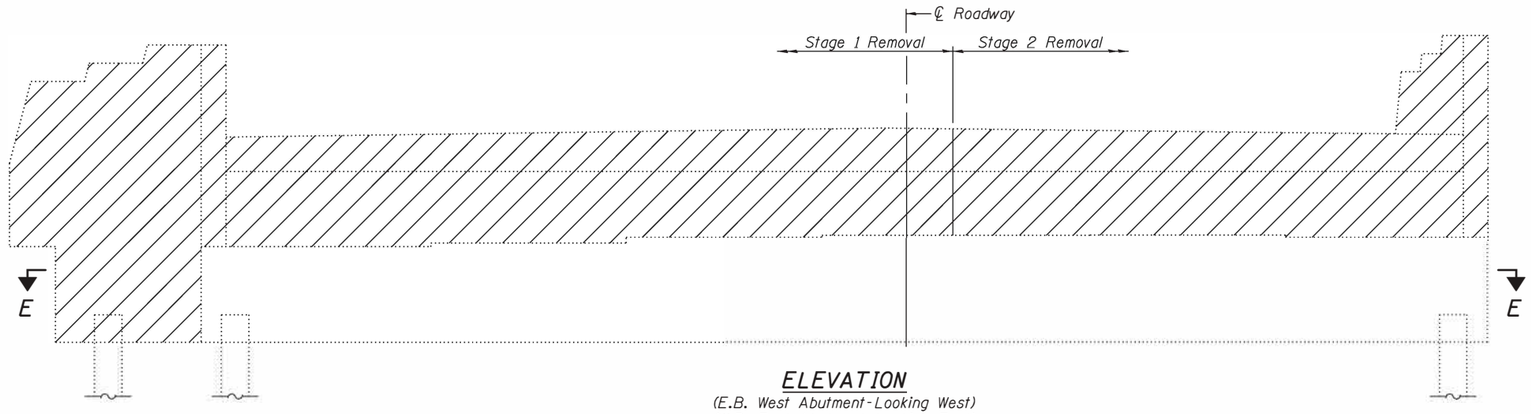
PLAN
(Showing E.B. West Abutment Steps)



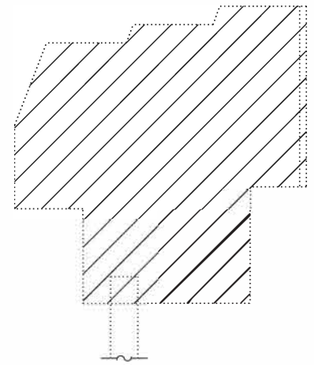
SECTION A-A



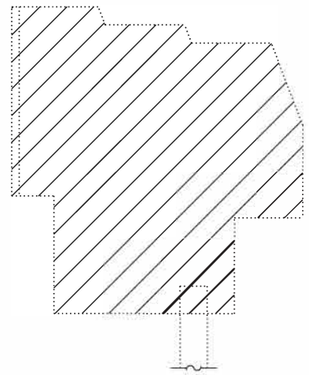
SECTION B-B



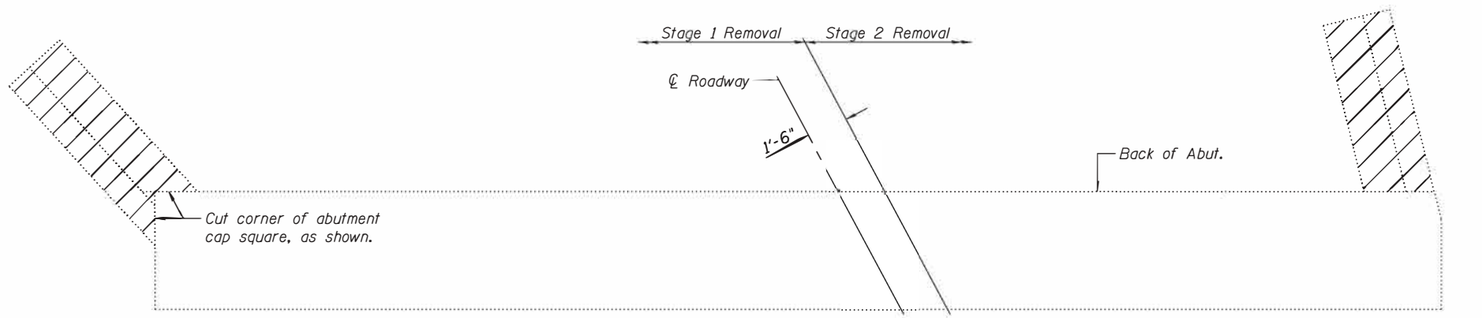
ELEVATION
(E.B. West Abutment-Looking West)
(W.B. East Abutment-Looking East)
(Showing E.B. West Abutment Steps)



VIEW C-C ②



VIEW D-D ②



SECTION E-E

TWO ABUTMENTS
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	35.3

Notes:
1. Hatched area indicates Concrete Removal.
2. View only shows that which is to be removed.
3. Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
4. Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2 inch layer of cement grout. Cost included with Concrete Removal.
5. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
6. For details of existing reinforcement to be incorporated into new construction, see sheets 23 thru 26 of 32.

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\003@11, 0012-76D23-021-Abutment Concrete Removal (S.W. & N.E.).dgn

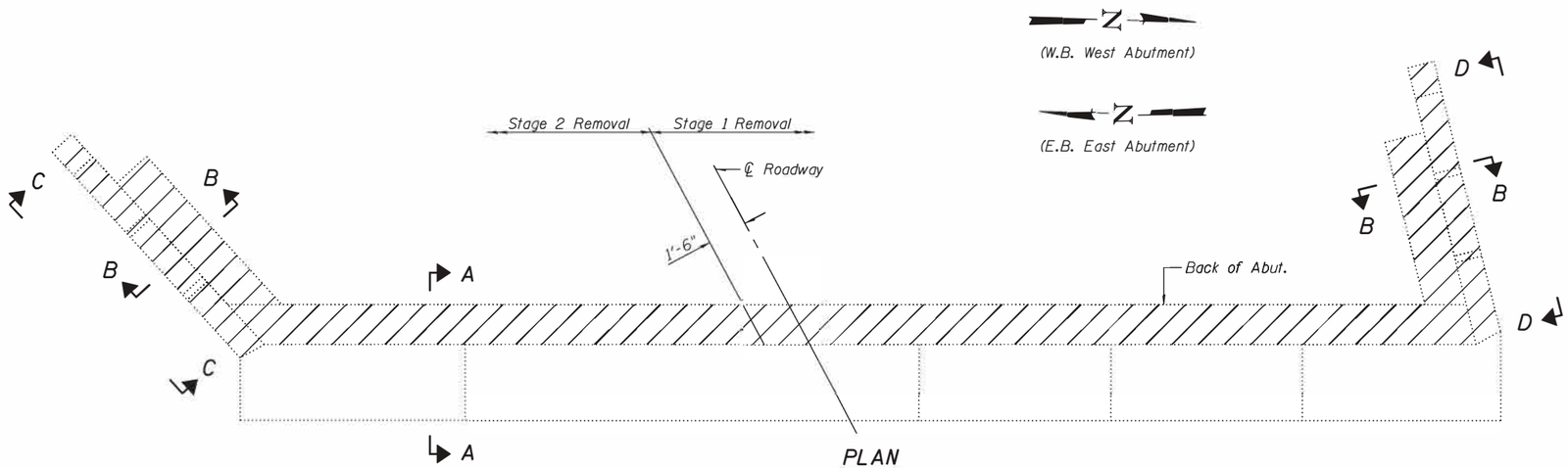
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED -	REVISED -	
	CHECKED -	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

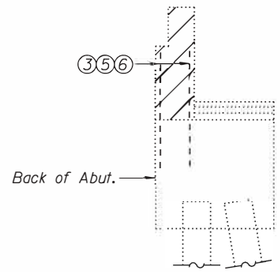
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT CONCRETE REMOVAL
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
SHEET NO. 21 OF 32 SHEETS

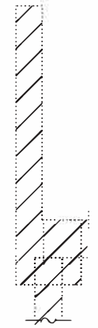
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	165
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



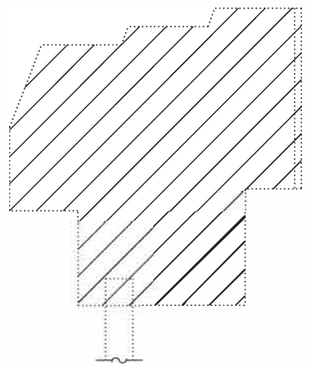
PLAN
(Showing E.B. East Abutment Steps)



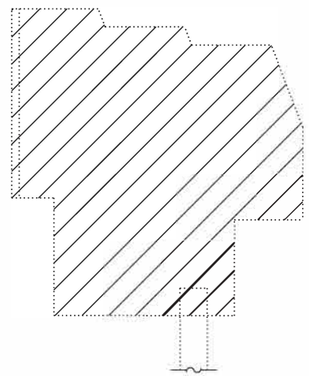
SECTION A-A



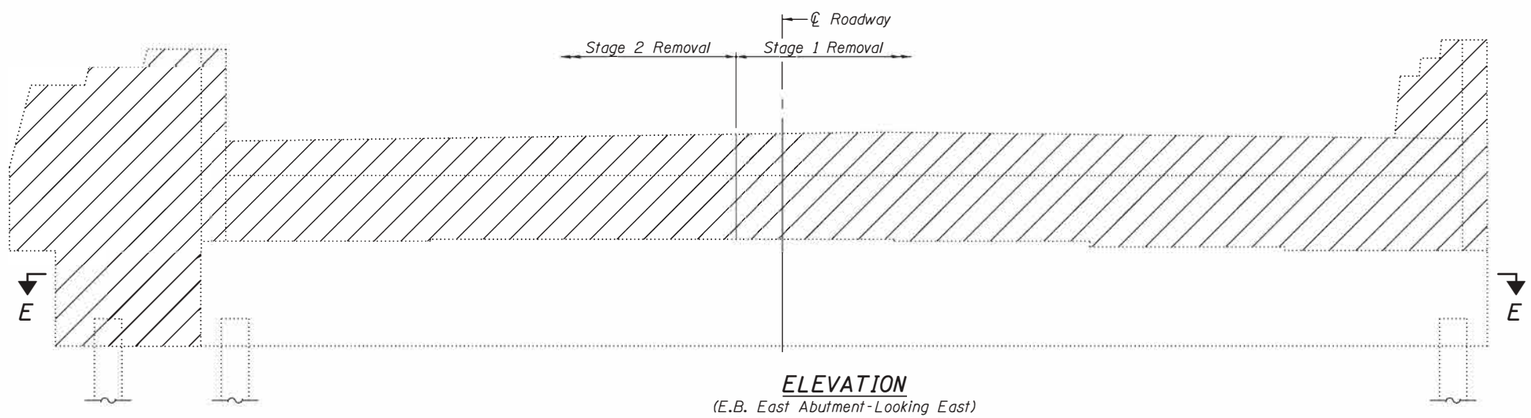
SECTION B-B



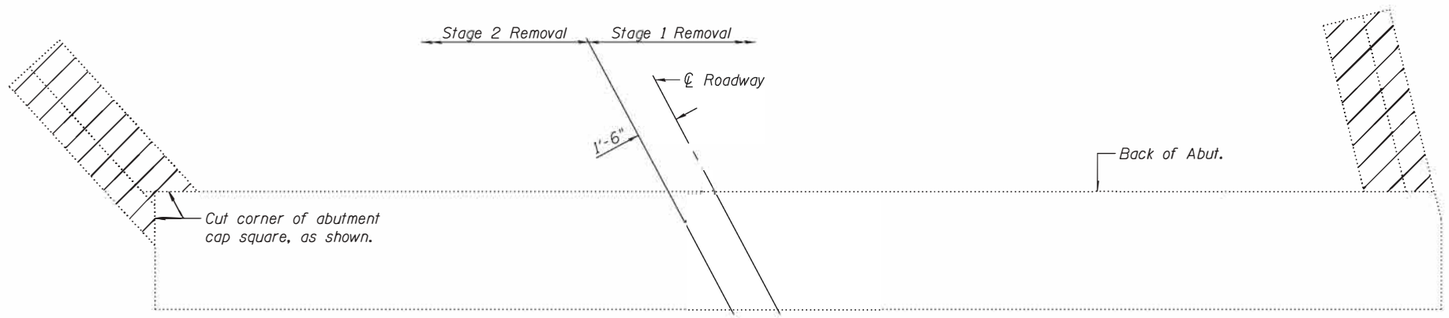
VIEW C-C ②



VIEW D-D ②



ELEVATION
(E.B. East Abutment-Looking East)
(W.B. West Abutment-Looking West)
(Showing E.B. East Abutment Steps)



SECTION E-E

TWO ABUTMENTS
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	35.0

Notes:
1. Hatched area indicates Concrete Removal.
2. View only shows that which is to be removed.
3. Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
4. Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2 inch layer of cement grout. Cost included with Concrete Removal.
5. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
6. For details of existing reinforcement to be incorporated into new construction, see sheets 23 thru 26 of 32.

FILE NAME = N:\P\11841\11841.000 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\0030011, 0012-76D23-ATT-Abutment Concrete Removal (S.E. & N.W.).dgn

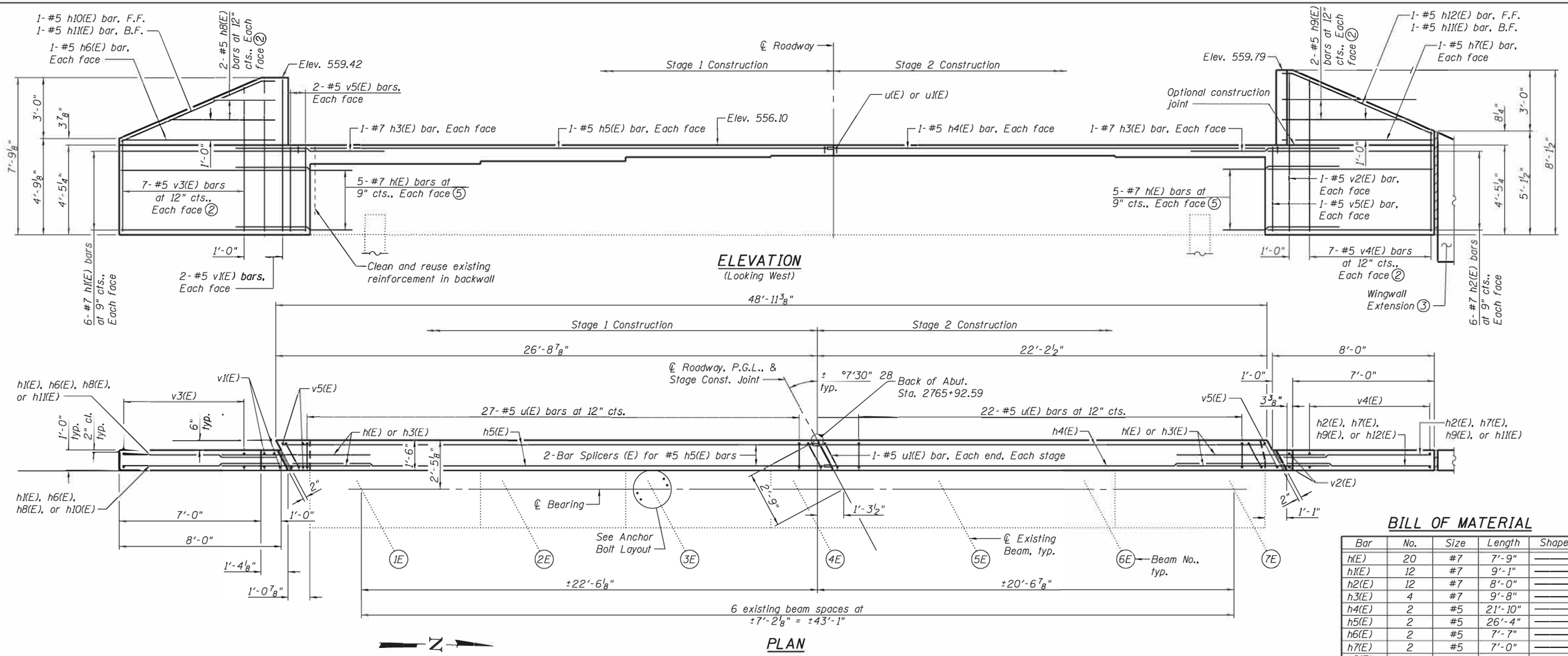
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED -	REVISED -	
	CHECKED -	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT CONCRETE REMOVAL
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
SHEET NO. 22 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	166
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

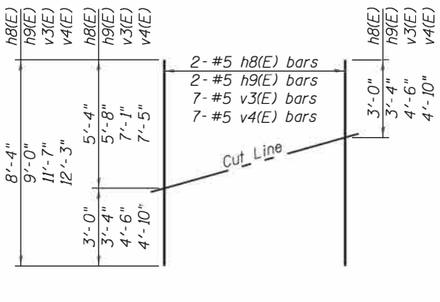


ELEVATION
(Looking West)

PLAN

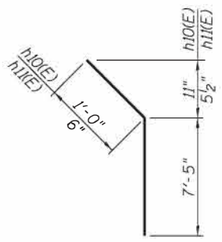
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#7	7'-9"	
h1(E)	12	#7	9'-1"	
h2(E)	12	#7	8'-0"	
h3(E)	4	#7	9'-8"	
h4(E)	2	#5	21'-10"	
h5(E)	2	#5	26'-4"	
h6(E)	2	#5	7'-7"	
h7(E)	2	#5	7'-0"	
h8(E)	2	#5	8'-4"	
h9(E)	2	#5	9'-0"	
h10(E)	1	#5	8'-5"	
h11(E)	2	#5	7'-11"	
h12(E)	1	#5	7'-6"	
h16(E)	12	#4	3'-8"	
n(E)	10	#4	4'-1"	
t1(E)	5	#4	5'-4"	
t2(E)	5	#4	4'-8"	
u(E)	49	#5	1'-10"	
u1(E)	4	#5	2'-0"	
v1(E)	4	#5	7'-5"	
v2(E)	2	#5	7'-10"	
v3(E)	7	#5	11'-7"	
v4(E)	7	#5	12'-3"	
v5(E)	6	#5	4'-1"	
v9(E)	5	#4	8'-3"	
w2(E)	12	#4	3'-8"	
Structure Excavation			Cu. Yd.	110
Concrete Structures			Cu. Yd.	7.6
Reinforcement Bars, Epoxy Coated			Pound	1,510

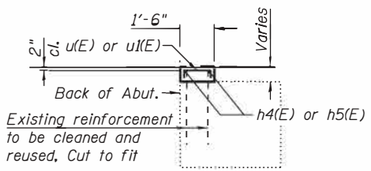


FIELD CUTTING DIAGRAM

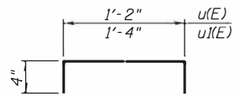
Order h8(E), h9(E), v3(E), and v4(E) bars full length. Cut as shown and use remainder of bars in opposite face.



BARS h10(E) & h11(E)

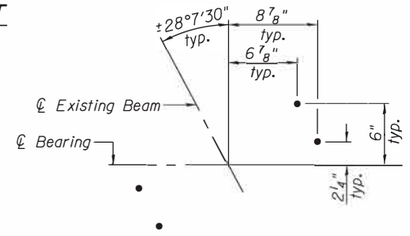


SECTION THRU ABUTMENT



BARS u(E) & u1(E)

MINIMUM BAR LAP
#7 bar = 4'-8"



ANCHOR BOLT LAYOUT

Notes:
1. B.F. denotes back face. F.F. denotes front face.
2. See Field Cutting Diagram.
3. For Wingwall Extension Details, see sheet 27 of 32.
4. For details of Bar Splicers, see sheet 30 of 32.
5. Epoxy grout h(E) bars according to Section 584 of the Standard Specifications. Minimum embedment is 2'-9". Embedment depth may be reduced according to the epoxy Manufacturer, if the Contractor provides to the Engineer in writing that the shallower embedment depth is capable of developing the full yield strength of the reinforcement at the surface of the existing concrete.

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

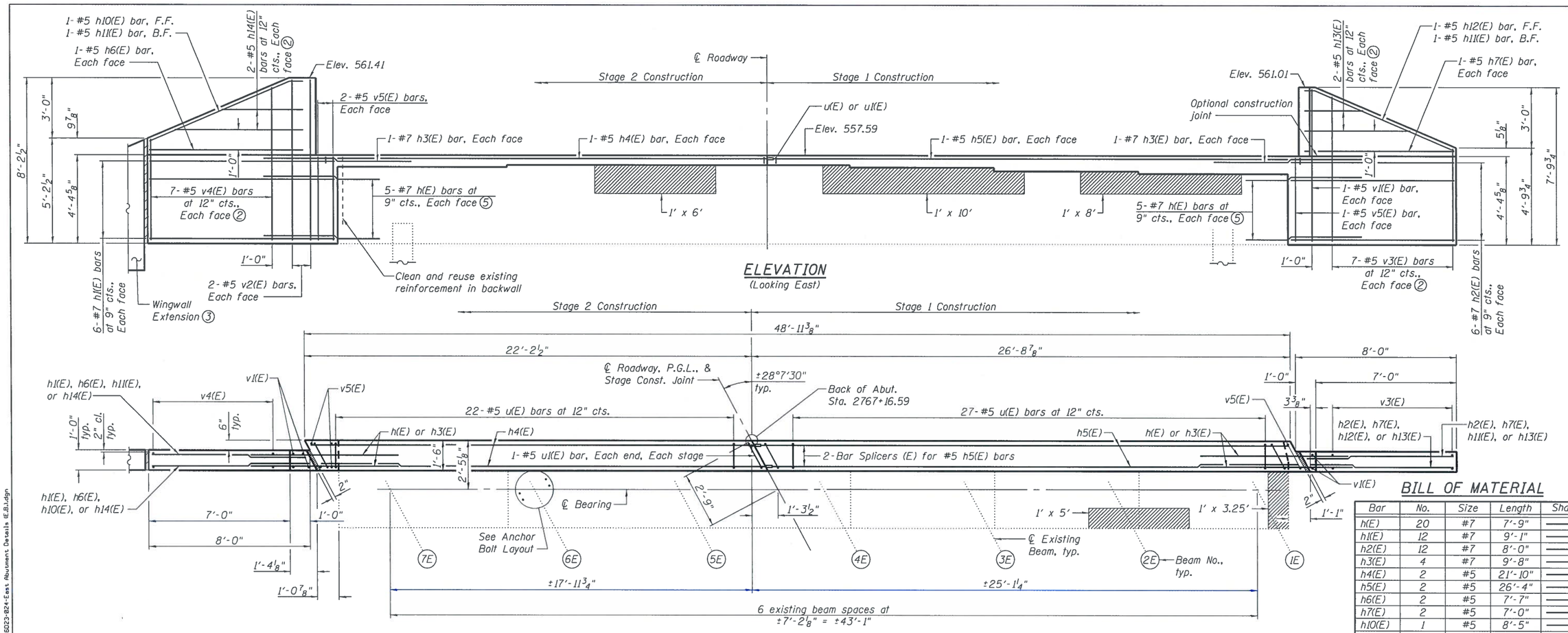
USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT DETAILS
STRUCTURE NO. 003-0011 (E.B.)
SHEET NO. 23 OF 32 SHEETS

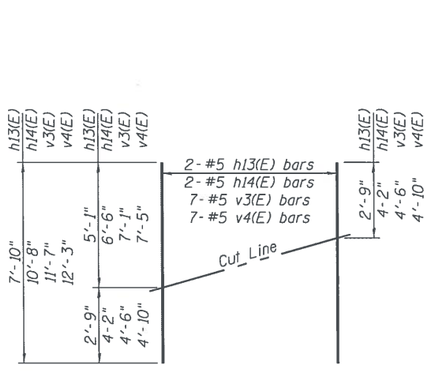
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	167
		CONTRACT NO. 76D23		
ILLINOIS FED. AID PROJECT				

FILE NAME = H:\P\1841\1841.008 - District 8 Deck Replacements\Structural\SN 003-0011.0012\Microstation\0030011.0012-76D23-023-West Abutment Details (E.B.).dgn



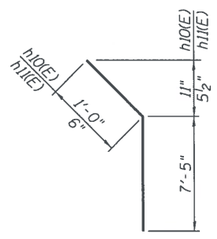
ELEVATION
(Looking East)

PLAN

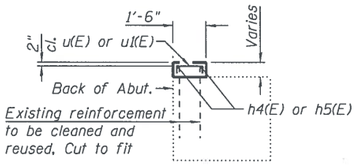


FIELD CUTTING DIAGRAM

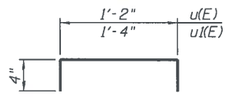
Order h13(E), h14(E), v3(E), and v4(E) bars full length. Cut as shown and use remainder of bars in opposite face.



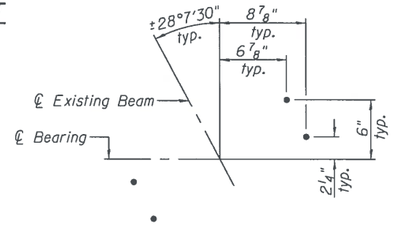
BARS h10(E) & h11(E)



SECTION THRU ABUTMENT



BARS u(E) & u1(E)



ANCHOR BOLT LAYOUT

MINIMUM BAR LAP

#7 bar = 4'-8"

Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)

Notes:
1. B.F. denotes back face. F.F. denotes front face.
2. See Field Cutting Diagram.
3. For Wingwall Extension Details, see sheet 27 of 32.
4. For details of Bar Splicers, see sheet 30 of 32.
5. Epoxy grout h(E) bars according to Section 584 of the Standard Specifications. Minimum embedment is 2'-9". Embedment depth may be reduced according to the epoxy Manufacturer, if the Contractor provides to the Engineer in writing that the shallower embedment depth is capable of developing the full yield strength of the reinforcement at the surface of the existing concrete.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#7	7'-9"	
h1(E)	12	#7	9'-1"	
h2(E)	12	#7	8'-0"	
h3(E)	4	#7	9'-8"	
h4(E)	2	#5	21'-10"	
h5(E)	2	#5	26'-4"	
h6(E)	2	#5	7'-7"	
h7(E)	2	#5	7'-0"	
h10(E)	1	#5	8'-5"	
h11(E)	2	#5	7'-11"	
h12(E)	1	#5	7'-6"	
h13(E)	2	#5	7'-10"	
h14(E)	2	#5	10'-8"	
h16(E)	12	#4	3'-8"	
n(E)	10	#4	4'-1"	
t1(E)	5	#4	5'-4"	
t2(E)	5	#4	4'-8"	
u(E)	49	#5	1'-10"	
u1(E)	4	#5	2'-0"	
v1(E)	2	#5	7'-5"	
v2(E)	4	#5	7'-10"	
v3(E)	7	#5	11'-7"	
v4(E)	7	#5	12'-3"	
v5(E)	6	#5	4'-1"	
v9(E)	5	#4	8'-3"	
w2(E)	12	#4	3'-8"	
Structure Excavation		Cu. Yd.	105	
Concrete Structures		Cu. Yd.	7.6	
Reinforcement Bars, Epoxy Coated		Pound	1,510	
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)		Sq. Ft.	32.3	

FILE NAME = H:\P\11841\11841.808 - District 8 Deck Replacements\Structural\SN 003-0011.0012\Microstation\0030011.0012-76D23-024-East Abutment Details (E.B.).dgn

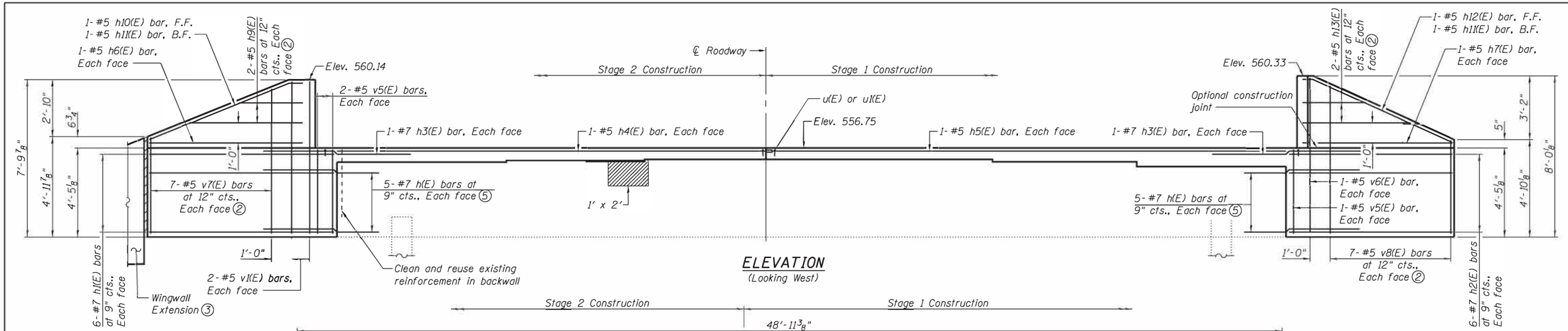
OATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

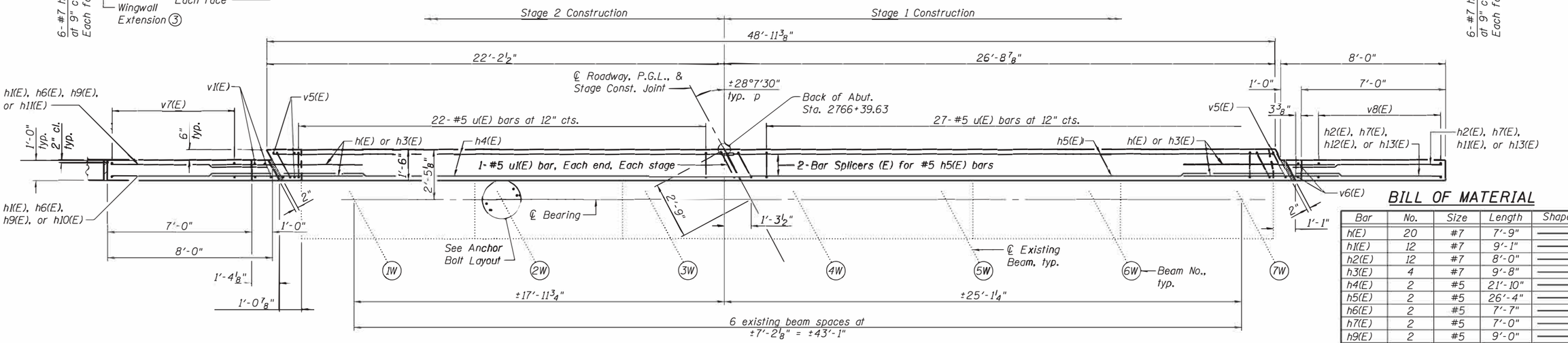
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT DETAILS
STRUCTURE NO. 003-0011 (E.B.)
SHEET NO. 24 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	168
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		



ELEVATION
(Looking West)

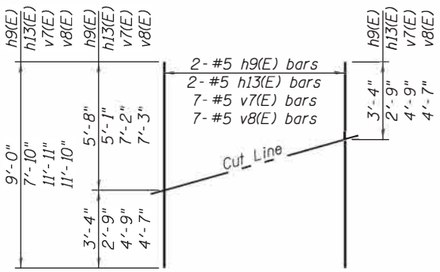


PLAN

BILL OF MATERIAL

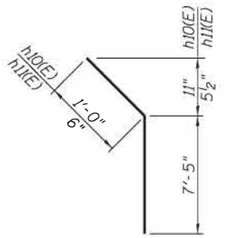
Bar	No.	Size	Length	Shape
h(E)	20	#7	7'-9"	
h1(E)	12	#7	9'-1"	
h2(E)	12	#7	8'-0"	
h3(E)	4	#7	9'-8"	
h4(E)	2	#5	21'-10"	
h5(E)	2	#5	26'-4"	
h6(E)	2	#5	7'-7"	
h7(E)	2	#5	7'-0"	
h9(E)	2	#5	9'-0"	
h10(E)	1	#5	8'-5"	
h11(E)	2	#5	7'-11"	
h12(E)	1	#5	7'-6"	
h13(E)	2	#5	7'-10"	
h16(E)	12	#4	3'-8"	
n(E)	10	#4	4'-1"	
t1(E)	5	#4	5'-4"	
t2(E)	5	#4	4'-8"	
u(E)	49	#5	1'-10"	
u1(E)	4	#5	2'-0"	
v1(E)	4	#5	7'-5"	
v5(E)	6	#5	4'-1"	
v6(E)	2	#5	7'-8"	
v7(E)	7	#5	11'-11"	
v8(E)	7	#5	11'-10"	
v9(E)	5	#4	8'-3"	
w2(E)	12	#4	3'-8"	

Structure Excavation	Cu. Yd.	107
Concrete Structures	Cu. Yd.	7.7
Reinforcement Bars, Epoxy Coated	Pound	1,510
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)	Sq. Ft.	2.0

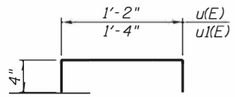


FIELD CUTTING DIAGRAM

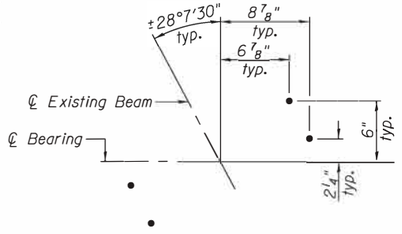
Order h9(E), h13(E), v7(E), and v8(E) bars full length. Cut as shown and use remainder of bars in opposite face.



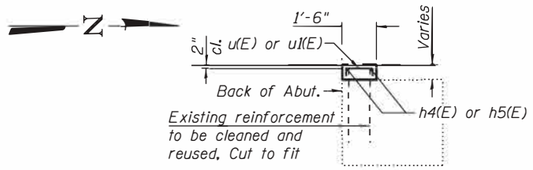
BARS h10(E) & h11(E)



BARS u(E) & u1(E)



ANCHOR BOLT LAYOUT



SECTION THRU ABUTMENT

MINIMUM BAR LAP

#7 bar = 4'-8"

Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)

Notes:
1. B.F. denotes back face. F.F. denotes front face.
2. See Field Cutting Diagram.
3. For Wingwall Extension Details, see sheet 27 of 32.
4. For details of Bar Splicers, see sheet 30 of 32.
5. Epoxy grout h(E) bars according to Section 584 of the Standard Specifications. Minimum embedment is 2'-9". Embedment depth may be reduced according to the epoxy Manufacturer, if the Contractor provides to the Engineer in writing that the shallower embedment depth is capable of developing the full yield strength of the reinforcement at the surface of the existing concrete.

FILE NAME = H:\PW\1841\1841.008 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\003001l_0012-76D23-025-West Abutment Details (W.B.).dgn

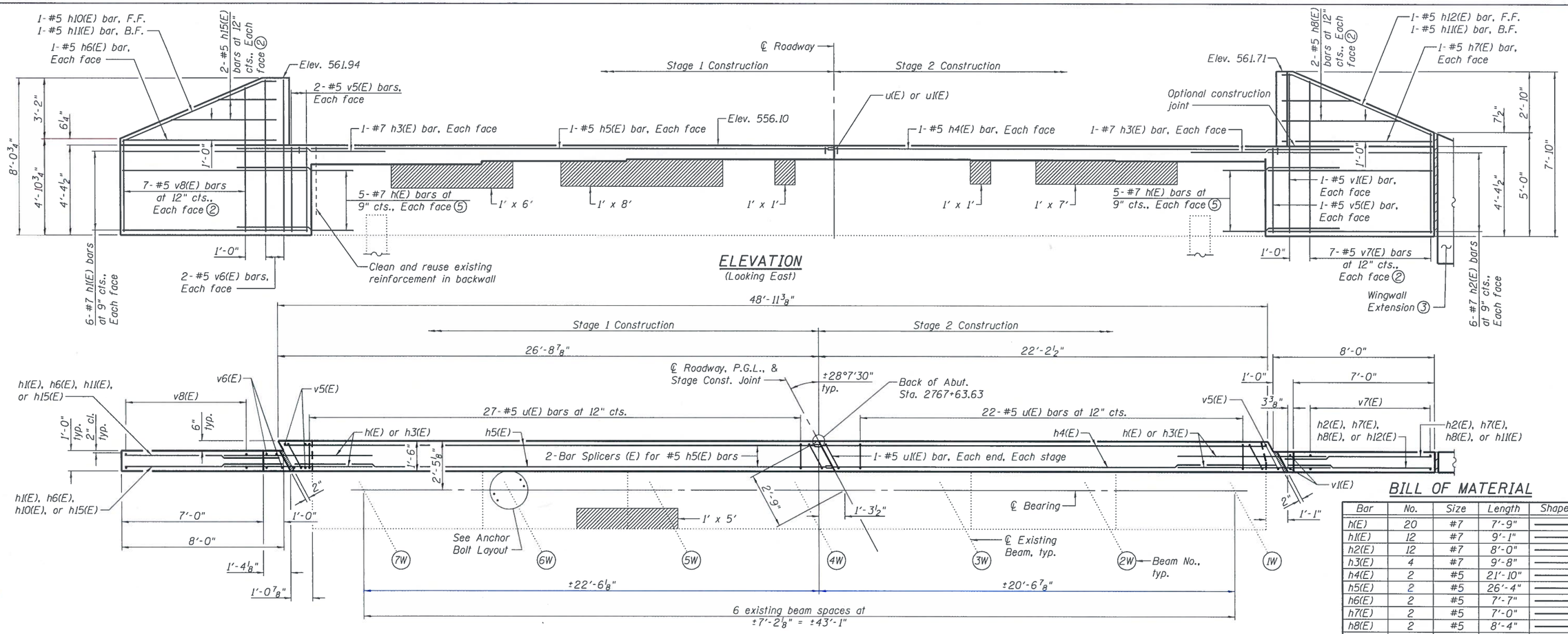
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT DETAILS
STRUCTURE NO. 003-0012 (W.B.)
SHEET NO. 25 OF 32 SHEETS

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
70	3-(2,3,4)RS-1	BOND	236	169
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		



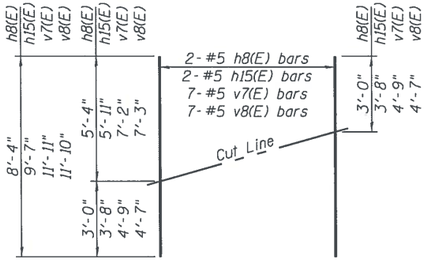
ELEVATION
(Looking East)

PLAN

BILL OF MATERIAL

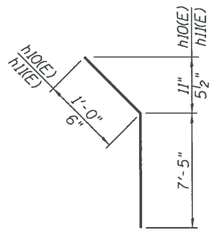
Bar	No.	Size	Length	Shape
h(E)	20	#7	7'-9"	
h1(E)	12	#7	9'-1"	
h2(E)	12	#7	8'-0"	
h3(E)	4	#7	9'-8"	
h4(E)	2	#5	21'-10"	
h5(E)	2	#5	26'-4"	
h6(E)	2	#5	7'-7"	
h7(E)	2	#5	7'-0"	
h8(E)	2	#5	8'-4"	
h10(E)	1	#5	8'-5"	
h11(E)	2	#5	7'-11"	
h12(E)	1	#5	7'-6"	
h15(E)	2	#5	9'-7"	
h16(E)	12	#4	3'-8"	
n(E)	10	#4	4'-1"	
t1(E)	5	#4	5'-4"	
t2(E)	5	#4	4'-8"	
u(E)	49	#5	1'-10"	
u1(E)	4	#5	2'-0"	
v1(E)	2	#5	7'-5"	
v5(E)	6	#5	4'-1"	
v6(E)	4	#5	7'-8"	
v7(E)	7	#5	11'-11"	
v8(E)	7	#5	11'-10"	
v9(E)	5	#4	8'-3"	
w2(E)	12	#4	3'-8"	

Structure Excavation	Cu. Yd.	104
Concrete Structures	Cu. Yd.	7.7
Reinforcement Bars, Epoxy Coated	Pound	1,510
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)	Sq. Ft.	28.0

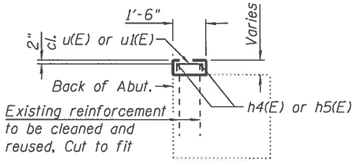


FIELD CUTTING DIAGRAM

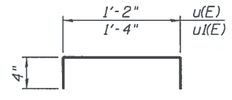
Order h8(E), h15(E), v7(E), and v8(E) bars full length. Cut as shown and use remainder of bars in opposite face.



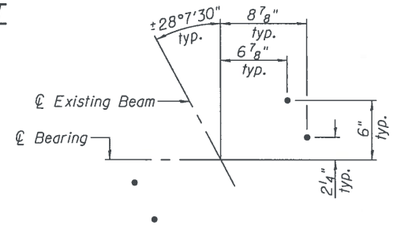
BARS h10(E) & h11(E)



SECTION THRU ABUTMENT



BARS u(E) & u1(E)



ANCHOR BOLT LAYOUT

MINIMUM BAR LAP

#7 bar = 4'-8"

Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)

Notes:
1. B.F. denotes back face. F.F. denotes front face.
2. See Field Cutting Diagram.
3. For Wingwall Extension Details, see sheet 27 of 32.
4. For details of Bar Splicers, see sheet 30 of 32.
5. Epoxy grout h(E) bars according to Section 584 of the Standard Specifications. Minimum embedment is 2'-9". Embedment depth may be reduced according to the epoxy Manufacturer, if the Contractor provides to the Engineer in writing that the shallower embedment depth is capable of developing the full yield strength of the reinforcement at the surface of the existing concrete.

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\00320011_0012-76D23-026-East Abutment Details IWB.dgn

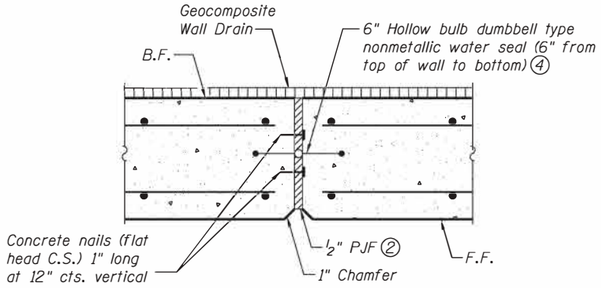
OATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

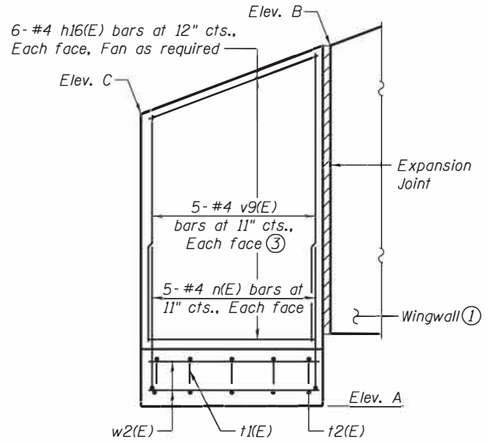
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT DETAILS
STRUCTURE NO. 003-0012 (W.B.)
SHEET NO. 26 OF 32 SHEETS

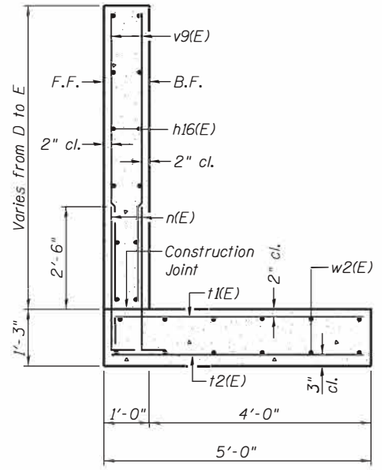
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	170
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		



EXPANSION JOINT



ELEVATION

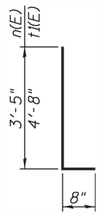


SECTION THRU EXTENSION

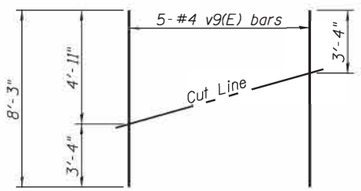
FOOTING PLAN

ELEVATION & DIMENSION TABLE

	Elev. A	Elev. B	Elev. C	D	E
E.B. W. Abut.	550.08	556.79	555.04	3'-8½"	5'-5½"
E.B. E. Abut.	551.62	558.41	556.66	3'-9½"	5'-6½"
W.B. W. Abut.	550.74	557.31	555.64	3'-7¾"	5'-3⅞"
W.B. E. Abut.	552.30	558.88	557.21	3'-7⅞"	5'-4"



BARS n(E) & t1(E)



FIELD CUTTING DIAGRAM

Order v9(E) bars full length. Cut as shown and use remainder of bars in opposite face.

MINIMUM BAR LAP

#4 bar = 2'-1"

Notes:
1. For Bill of Material and wingwall details, see sheets 23 thru 26 of 32.
2. Cost included with Concrete Structures.
3. See Field Cutting Diagram.
4. 6" Dumbbell type nonmetallic water seal shall be in accordance with Article 503.12 and Section 1054 of the Standard Specifications. Cost included with Concrete Structures.
5. B.F. denotes back face and F.F. denotes front face.

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\003S0011, 0012-76D23-027-Wingwall Extension Details.dgn

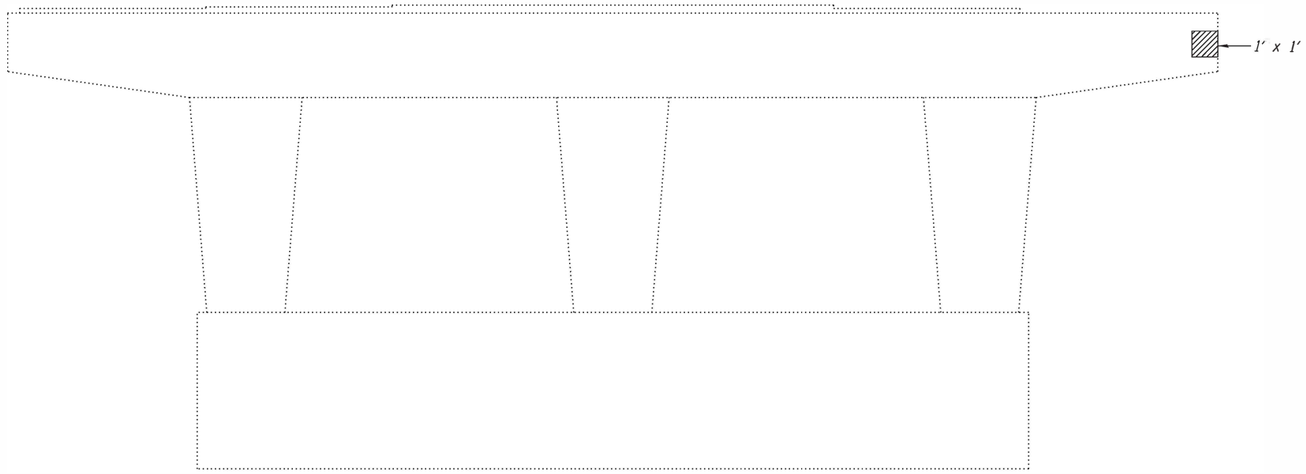
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

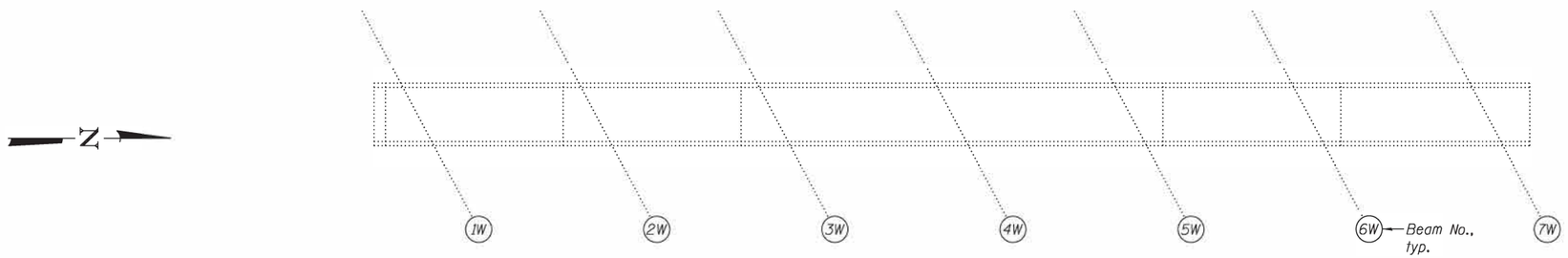
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WINGWALL EXTENSION DETAILS
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
SHEET NO. 27 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	171
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



EAST FACE



SEAT PLAN

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)	Sq. Ft.	1.0

Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)

FILE NAME = H:\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\003S0011, 0012-76D23-828-Pier Concrete Repairs.dgn

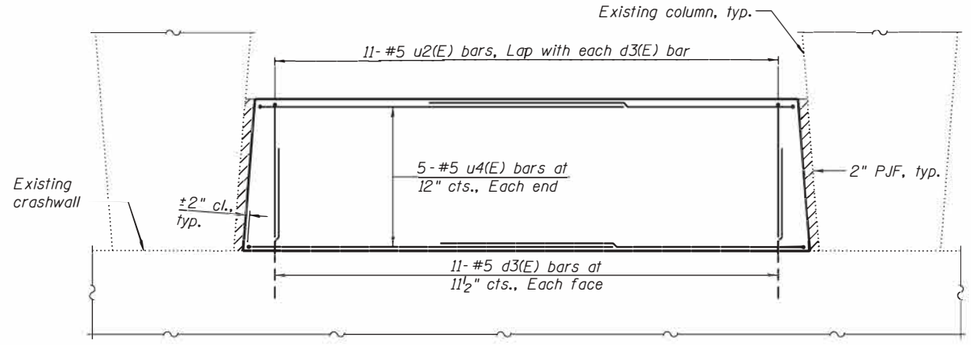
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN - KBC	REVISED -
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -

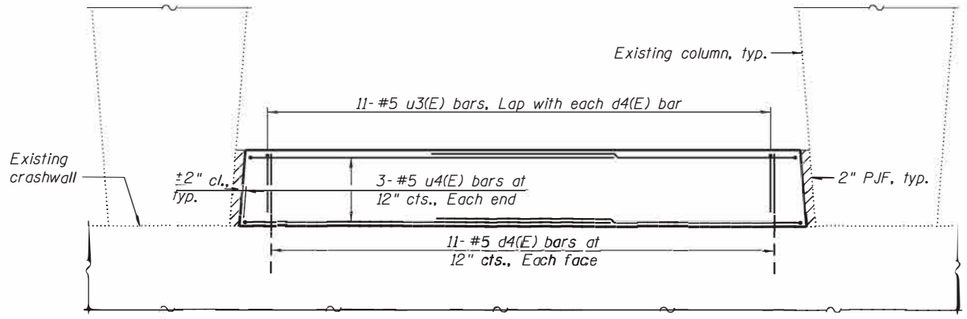
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 CONCRETE REPAIRS
STRUCTURE NO. 003-0012 (W.B.)
SHEET NO. 28 OF 32 SHEETS

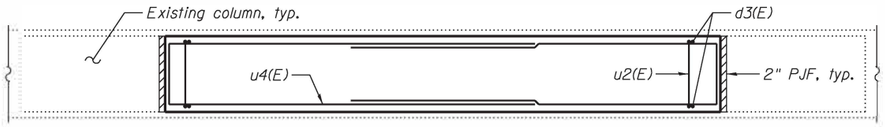
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	172
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



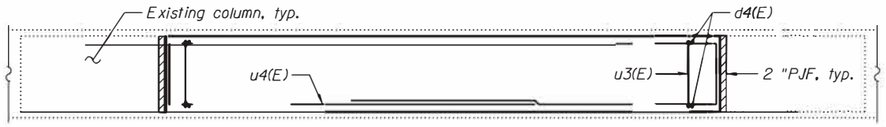
PARTIAL ELEVATION-PIER 1
(Typical between columns)



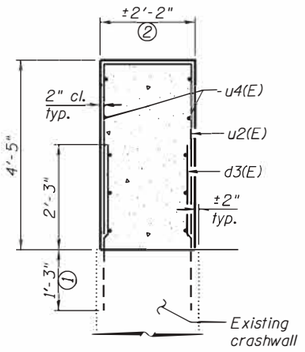
PARTIAL ELEVATION-PIER 2
(Typical between columns)



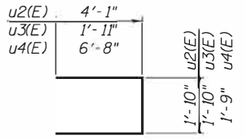
PARTIAL PLAN-PIER 1
(Typical between columns)



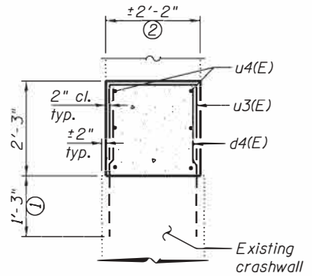
PARTIAL PLAN-PIER 2
(Typical between columns)



SECTION THRU CRASHWALL EXTENSION-PIER 1



BARS u2(E), u3(E) & u4(E)



SECTION THRU CRASHWALL EXTENSION-PIER 2

CRASHWALL EXTENSION BILL OF MATERIAL
(Four Extensions)

Bar	No.	Size	Length	Shape
d3(E)	88	#5	3'-6"	———
d4(E)	88	#5	3'-4"	———
u2(E)	44	#5	10'-0"	⊐
u3(E)	44	#5	5'-8"	⊐
u4(E)	64	#5	15'-1"	⊐
Concrete Structures			Cu. Yd.	22.6
Reinforcement Bars, Epoxy Coated			Pound	2,350

Notes:
① Epoxy grout h(E) bars according to Section 584 of the Standard Specifications. Minimum embedment is 1'-3". Embedment depth may be reduced according to the epoxy Manufacturer, if the Contractor provides to the Engineer in writing that the shallower embedment depth is capable of developing the full yield strength of the reinforcement at the surface of the existing concrete.
② Width of crashwall extension shall match the width of the existing pier columns.

FILE NAME = H:\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011 0012\Microstation\003001l 0012-76D23-829-Pier Crashwall Extension.dgn

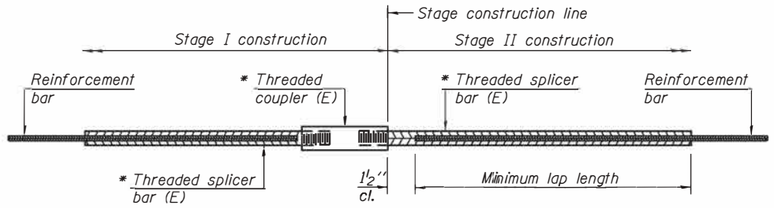
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - KBC	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - SJN	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER CRASHWALL EXTENSION DETAILS
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
SHEET NO. 29 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	173
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

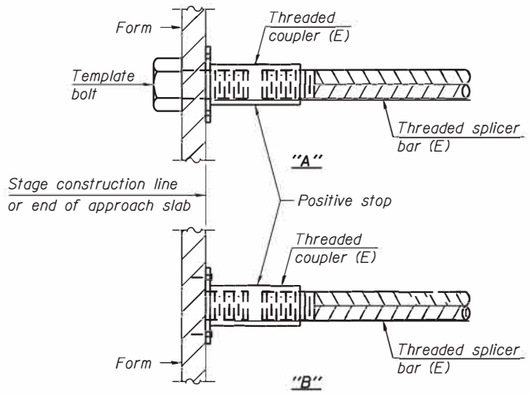


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1½" + thread length

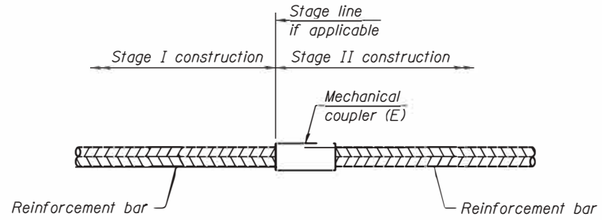
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Abutment Backwall	#5	8	2'-7"
Deck	#5	644	2'-7"
Diaphragm	#6	48	3'-6"
Top & Bottom of Approach Footing	#5	160	2'-7"
Bottom of Approach Slab	#8	212	5'-5"
Top of Approach Slab	#5	160	2'-11"



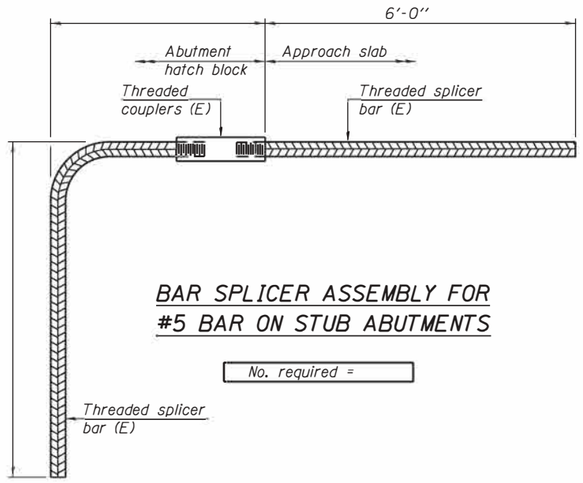
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

11-22-2016

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE = 12/13/2017	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
SHEET NO. 30 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	174
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

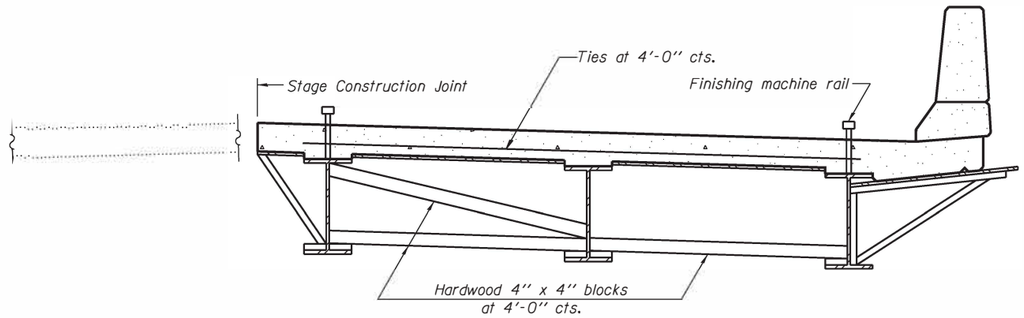
FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011_0012\Microstation\0030011_0012-76D23-B30 Bar Splicer Assembly and Mechanical Splicer Details.dgn

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

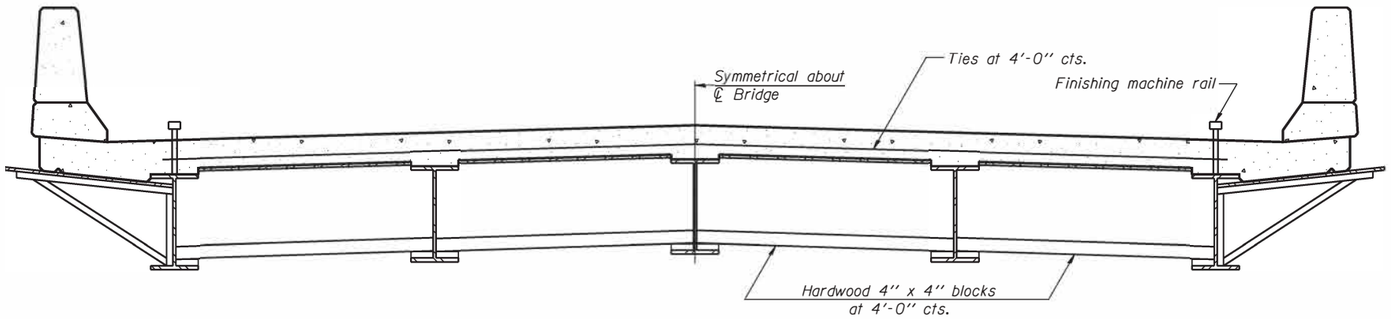
The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



FORM BRACES FOR
STAGE CONSTRUCTION



FORM BRACES FOR
STANDARD CONSTRUCTION

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0011, 0012\Microstation\0030011, 0012-76D23-031-Cantilever Forming Brackets for Superstructures with W27 Beams and Smaller.dgn

SB-1

11-22-2016

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

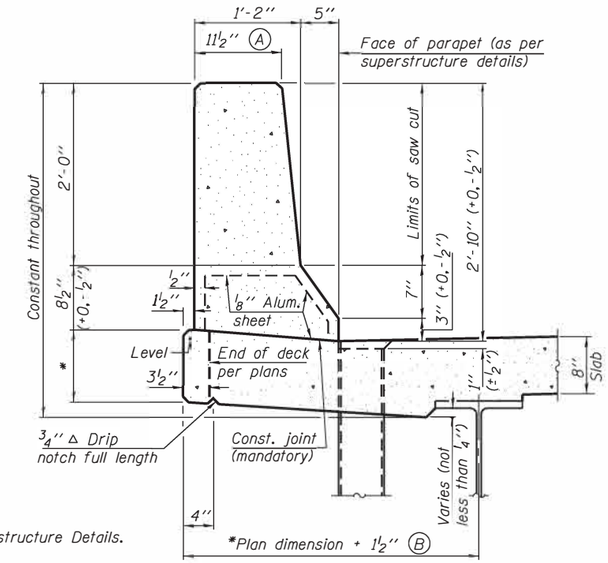
USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE = 12/13/2017	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES WITH W27 BEAMS AND SMALLER STRUCTURE NO. 003-0011 (E.B) & 003-0012 (W.B.)

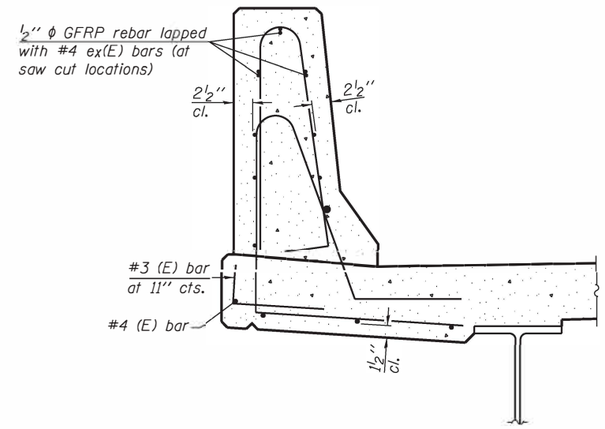
SHEET NO. 31 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	175
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



34" F SHAPE PARAPET SECTION

(Showing dimensions)



SECTION

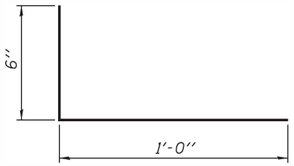
(34" parapet shown - 42" parapet similar)
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

GENERAL NOTES

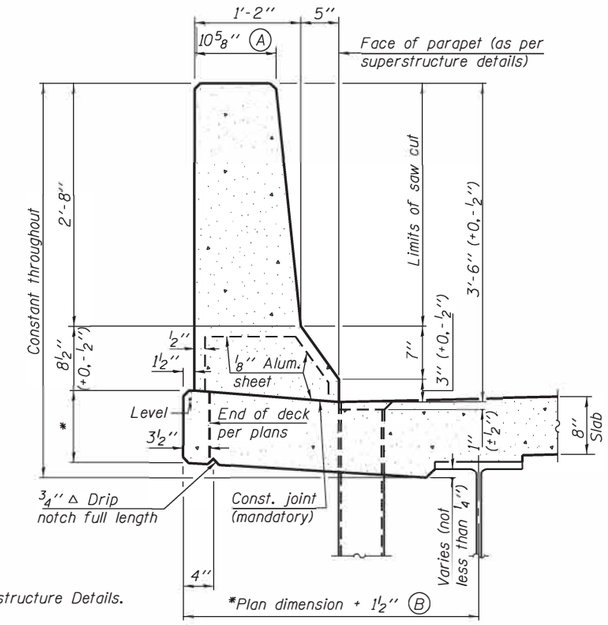
All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet.

Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.

Steel superstructure shown. Other superstructure types similar.

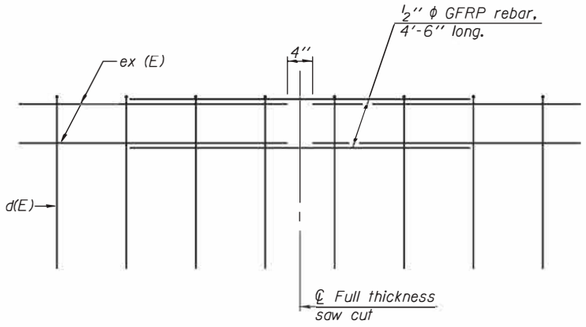


#3 (E) BAR



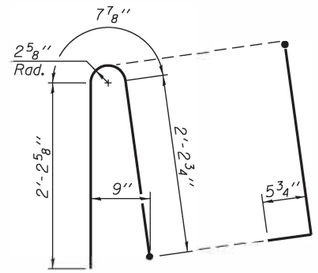
42" F SHAPE PARAPET SECTION

(Showing dimensions)



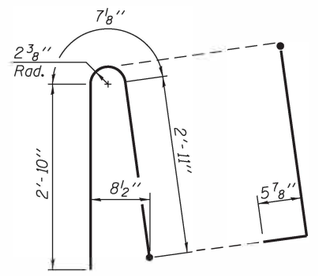
GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)



ALTERNATE BAR d(E)

(For 34" parapet when conduit is present)



ALTERNATE BAR d(E)

(For 42" parapet when conduit is present)

SFP 34-42 11-22-2016

FILE NAME = H:\P\13841\13841.00B - District 8 Deck Replacements\Structural\SN 003-0011 &0012\Microstation\003S0011_0012-76D23-032-Concrete Parapet Slipforming Option.dgn

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED -	REVISED -	
	PLOT SCALE =	DRAWN -	REVISED -	
	PLOT DATE = 12/13/2017	CHECKED -	REVISED -	

CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 003-0011 (E.B.) & 003-0012 (W.B.)
SHEET NO. 32 OF 32 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	176
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

Bench Mark: Cut square in the center of the lowest of three tiers of the northeast wingwall of S.N. 003-0014. Sta. ±2779+02, ±68.5' Left, Elev. 572.29.

Existing Structure: S.N. 003-0013 (E.B.) and S.N. 003-0014 (W.B.) were originally built in 1966 as F.A.I. 70, Section 3-5VB. The back-to-back abutment length is 158'-0" and the out-to-out deck width is 42'-0". Each structure consists of a three span steel 30WF superstructure supported by concrete stub abutments founded on concrete piles and concrete column piers founded on timber pile supported footings. Concrete deck to be removed and replaced.

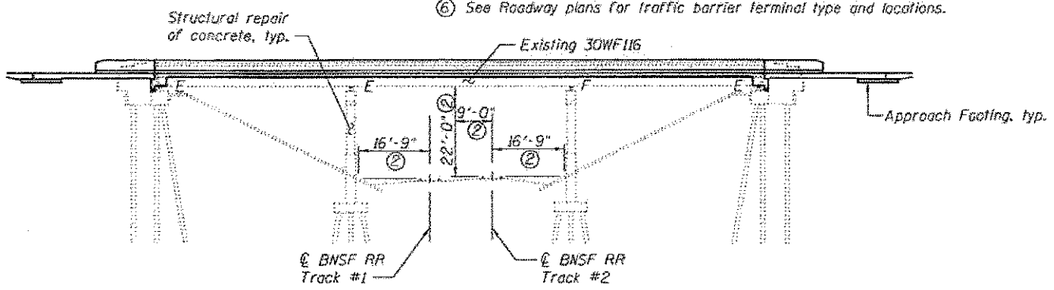
Traffic Control: One lane of traffic will be maintained in each direction by utilizing staged construction.

Salvage: None

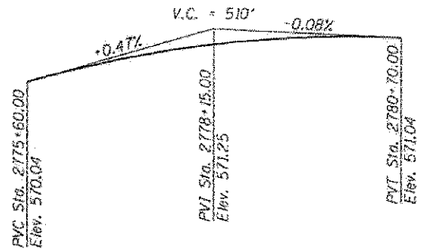
SCOPE OF WORK

1. Remove and replace existing concrete deck.
2. Make new deck composite in positive moment regions.
3. Replace all existing expansion bearings with elastomeric bearings.
4. Reconfigure existing abutments and wingwalls to semi-integral.
5. Complete structural repair of concrete at substructure units.
6. Raise approach roadway to match proposed profiles.
7. Replace approach guardrails.
8. Paint steel on Paint Only contract.

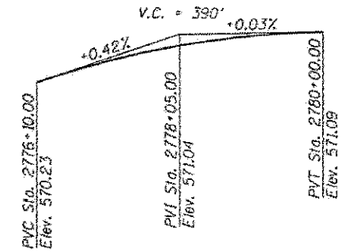
Notes:
1. No free fall deck drains will be permitted in the span over the tracks or within 10 ft. of cross arms of a railroad pole line.
2. Existing and proposed clearance.
3. Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.
4. Slope behind wall only, typical all median wingwalls.
5. Slope wraps around front of wall, typical all outside shoulder wingwalls.
6. See Roadway plans for traffic barrier terminal type and locations.



ELEVATION ①



PROFILE GRADE - E.B. ROADWAY
(along ℄ of roadway)



PROFILE GRADE - W.B. ROADWAY
(along ℄ of roadway)

DESIGN SPECIFICATIONS (New Const.)

2002 AASHTO
1995 FHWA Seismic Retrofitting Manual

DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

FIELD UNITS (Exist. Construction)
f'c = 3,500 psi
fy = 40,000 psi (Reinforcement)
fy = 36,000 psi (Structural Steel)

SEISMIC DATA

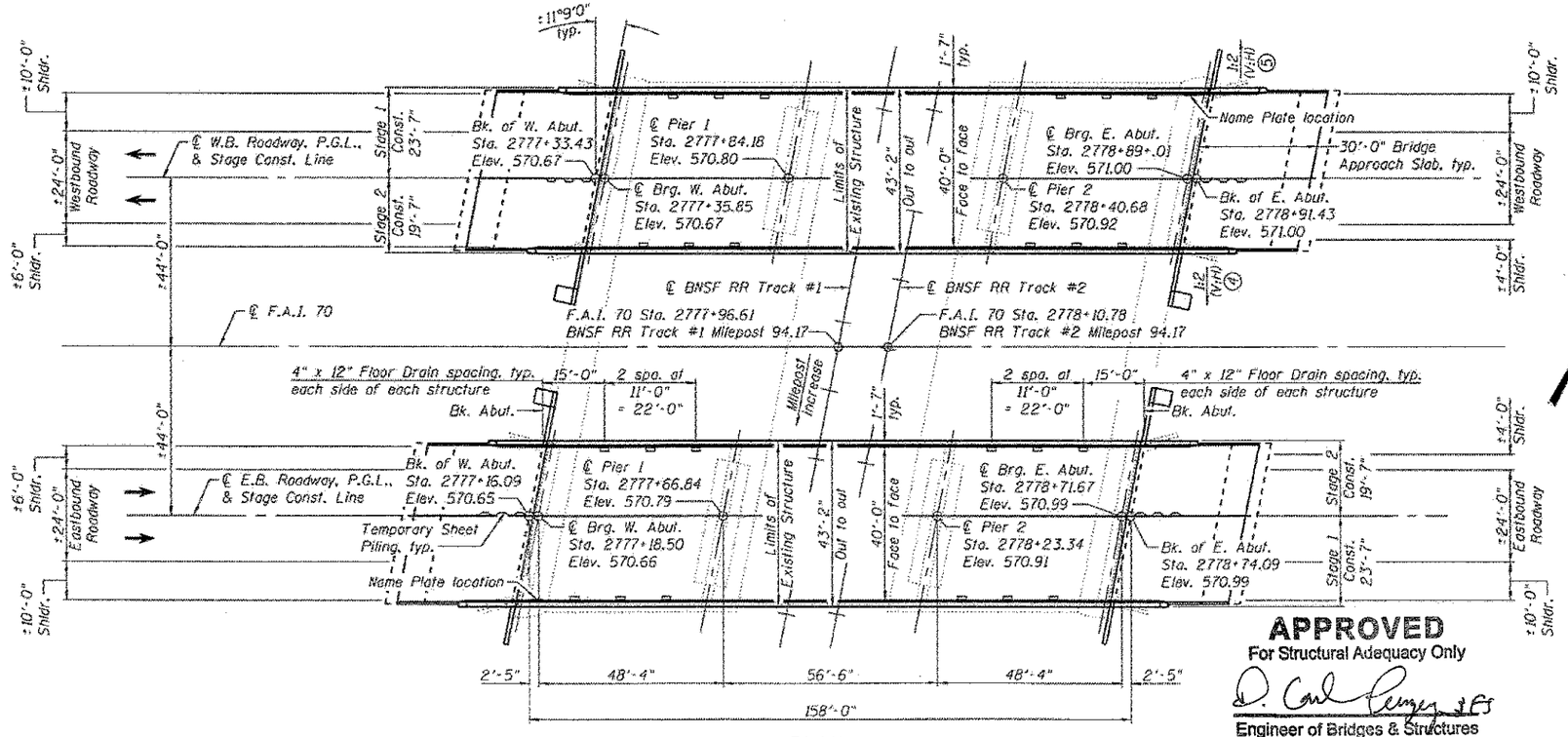
Seismic Performance Category (SPC) = B
Horizontal Bedrock Acceleration Coefficient (A) = 0.082g
Site Coefficient (S) = 1.2

LOADING HS20-44 & ALT (New Const.)

No future wearing surface allowed.

STATION 2778+03.76
RE-BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 3-(2,3,4)RS-1
LOADING HS20-44 & ALT
STR. NO. 003-0013

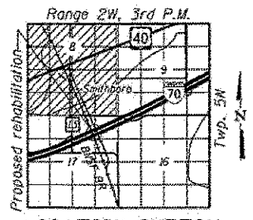
NAME PLATE (E.B.) ③
See Std. 515001



PLAN

STATION 2778+03.76
RE-BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 70 SEC. 3-(2,3,4)RS-1
LOADING HS20-44 & ALT
STR. NO. 003-0014

NAME PLATE (W.B.) ③
See Std. 515001



LOCATION SKETCH

APPROVED
For Structural Adequacy Only
D. Carl Lenzen 2/5
Engineer of Bridges & Structures

LICENSED STRUCTURAL ENGINEER
DANIEL GEORGE LUTZ
081 006712
STATE OF ILLINOIS

DATE: 12/14/2017
EXPIRATION: 11/30/2018

GENERAL PLAN & ELEVATION
I-70 OVER BNSF RAILROAD
F.A.I. RTE. 70 - SEC. 3-(2,3,4)RS-1
BOND COUNTY
STATION 2778+03.76
STRUCTURE NO. 003-0013 (E.B.)
STRUCTURE NO. 003-0014 (W.B.)

FILE NAME = H:\PW\191\01\941.898 - District 8 Deck Replacements\Structural\SN #003-0013, 0014\Microstation\003B13_0014-T6023-001-General Plan & Elevation.dgn

OATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - SJN	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	230	177
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts.

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

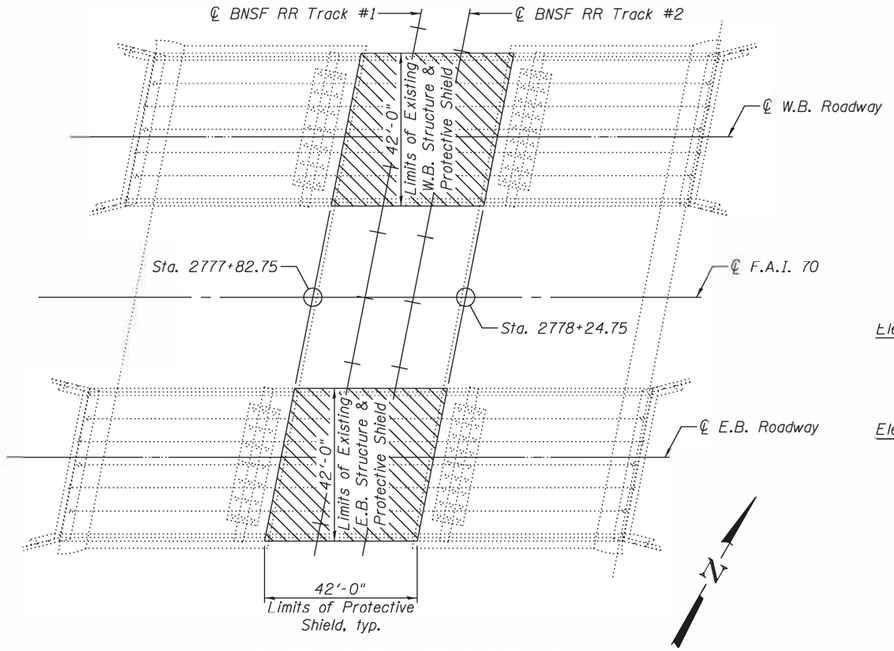
Any cracks that cannot be removed by grinding $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Cleaning and field painting of structural steel shall be done under a separate painting contract.

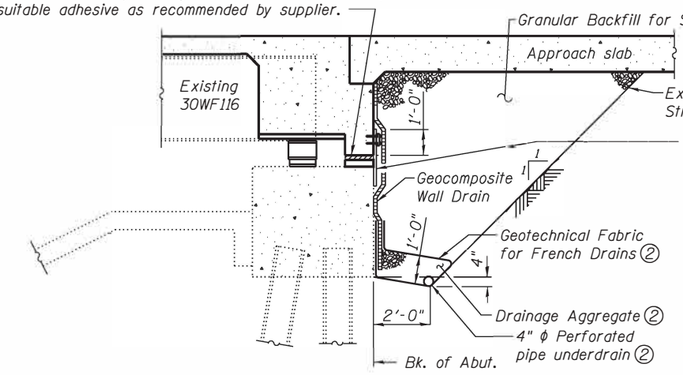
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.



PROTECTIVE SHIELD DETAIL

2" PJF (per Article 1051.09 of the Standard Specifications) full width and vertically at edges bonded to abutment cap with suitable adhesive as recommended by supplier.



Excavation is paid for as Structure Excavation.

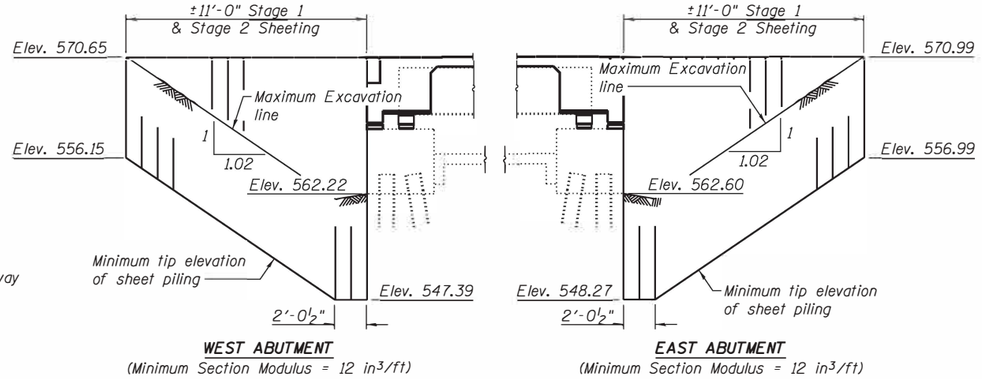
Fabric Reinforced Elastomeric Mat according to Section 1028 of the Standard Specifications. Fabric mat shall be 24" wide and attached full width and vertically at edges to the abutment cap with a $\frac{3}{8}$" x 5" steel plate and $\frac{1}{2}$" ϕ studs with nuts and washers at 12" centers. Cost included with Concrete Superstructure.

SECTION THRU SEMI-INTEGRAL ABUTMENT (1)

(Horiz. dim. at Rt. L's)

TOTAL BILL OF MATERIAL

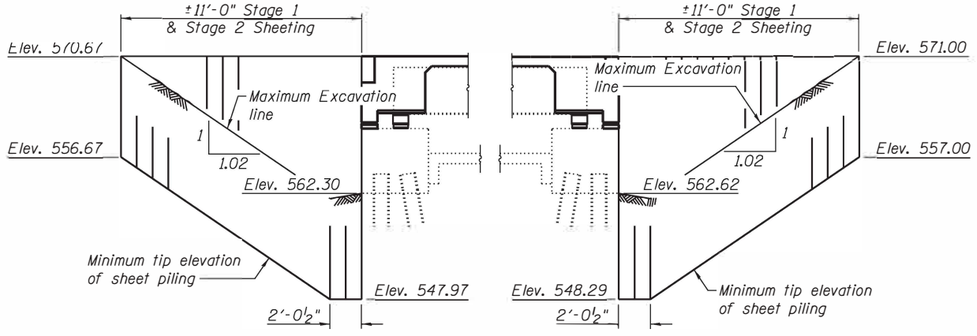
ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	-	69.0	69.0
Removal of Existing Concrete Deck No. 3	Each	2	-	2
Protective Shield	Sq. Yd.	-	-	392
Structure Excavation	Cu. Yd.	-	387	387
Floor Drains	Each	24	-	24
Concrete Structures	Cu. Yd.	-	82.1	82.1
Concrete Superstructure	Cu. Yd.	514.2	-	514.2
Bridge Deck Grooving	Sq. Yd.	1,830	-	1,830
Protective Coat	Sq. Yd.	2,293	-	2,293
Concrete Superstructure (Approach Slab)	Cu. Yd.	252.9	-	252.9
Furnishing and Erecting Structural Steel	Pound	7,370	-	7,370
Stud Shear Connectors	Each	7,840	-	7,840
Reinforcement Bars, Epoxy Coated	Pound	190,040	13,170	203,210
Bar Splicers	Each	1,286	168	1,454
Name Plates	Each	2	-	2
Elastomeric Bearing Assembly, Type I	Each	42	-	42
Anchor Bolts, $\frac{5}{8}$"	Each	112	-	112
Anchor Bolts, 1"	Each	28	-	28
Temporary Sheet Piling	Sq. Ft.	-	849	849
Geocomposite Wall Drain	Sq. Yd.	-	176	176
Jack and Remove Existing Bearings	Each	42	-	42
Cleaning Bridge Seats	Sq. Ft.	-	468	468
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)	Sq. Ft.	-	6.5	6.5
Pipe Underdrains for Structures 4"	Foot	-	256	256
Granular Backfill for Structures	Cu. Yd.	-	308	308



WEST ABUTMENT
(Minimum Section Modulus = 12 in³/ft)

EAST ABUTMENT
(Minimum Section Modulus = 12 in³/ft)

TEMPORARY SHEET PILING DETAIL - E.B. STRUCTURE



WEST ABUTMENT
(Minimum Section Modulus = 12 in³/ft)

EAST ABUTMENT
(Minimum Section Modulus = 12 in³/ft)

TEMPORARY SHEET PILING DETAIL - W.B. STRUCTURE

INDEX OF SHEETS

Sheet No.	Description
1	General Plan & Elevation
2	General Data
3	Stage Construction Details
4	Temporary Concrete Barrier
5-8	Top of Slab Elevations
9-10	Top of Approach Slab Elevations
11-12	Superstructure
13	Superstructure Details
14	Diaphragm Details
15-17	Bridge Approach Slab Details
18	Framing Plan & Beam Details
19-20	Bearing Replacement Details
21-22	Abutment Concrete Removal Details
23-26	Abutment Details
27	Wingwall Extension Details
28	Pier Concrete Repairs
29	Bar Splicer Assembly and Mechanical Splicer Details
30	Concrete Parapet Slipforming Option

Notes:
(1) 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).
(2) Included in the cost of Pipe Underdrains for Structures, see Special Provisions.

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0013,0014\Microstation\003013,0014-76D23-002-General Data.dgn

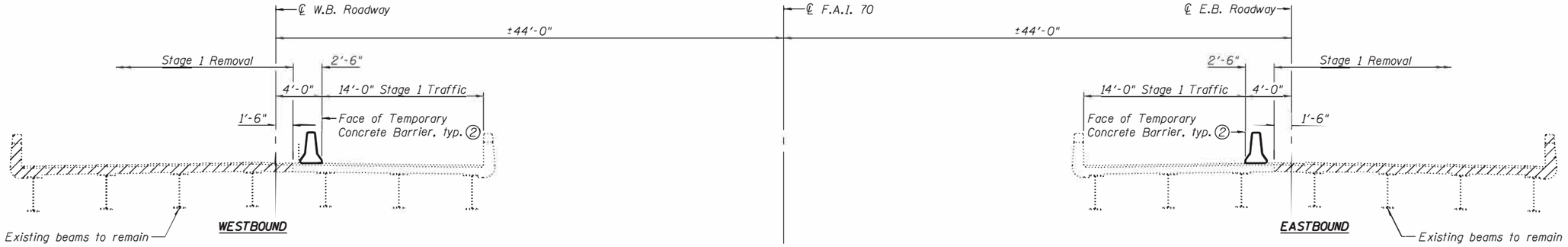
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - SJN	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - SJN	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -	

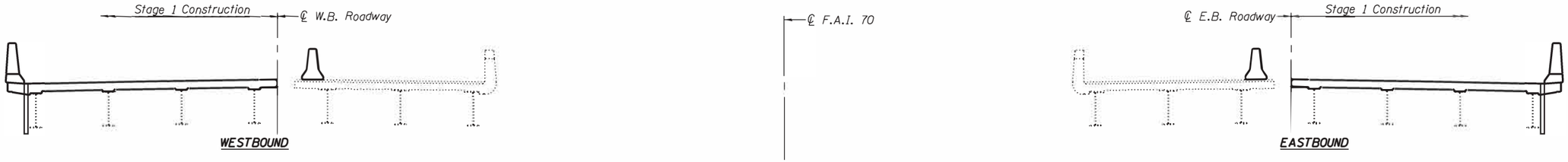
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 003-0013 (E.B.) & 003-0014 (W.B.)
SHEET NO. 2 OF 30 SHEETS

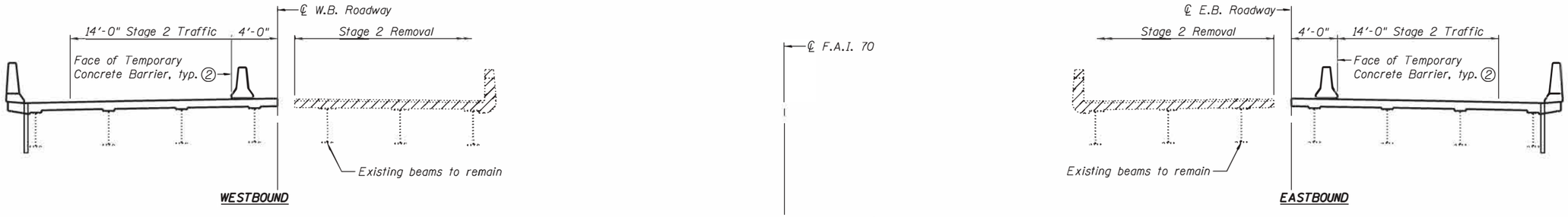
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	178
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



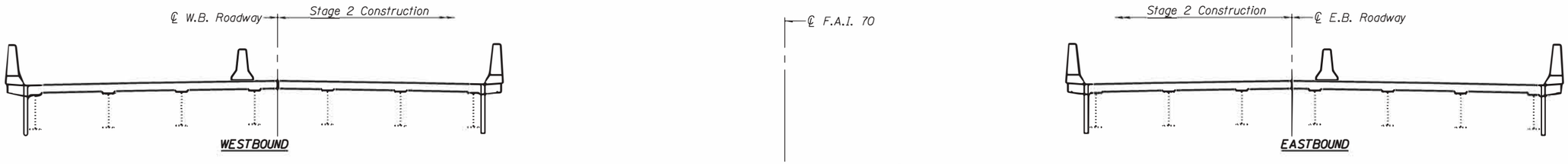
STAGE 1 REMOVAL ①



STAGE 1 CONSTRUCTION ①



STAGE 2 REMOVAL ①



STAGE 2 CONSTRUCTION ①

Notes:
① All views shown looking East.
② For details of Temporary Concrete Barrier, see Sheet 4 of 30. For quantity of Temporary Concrete Barrier and related traffic control, see roadway plans.
③ Hatched area indicates Removal of Existing Concrete Deck.

FILE NAME = H:\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0013, 0014\Microstation\003013_0014-76D23-003-Stage Construction Details.dgn

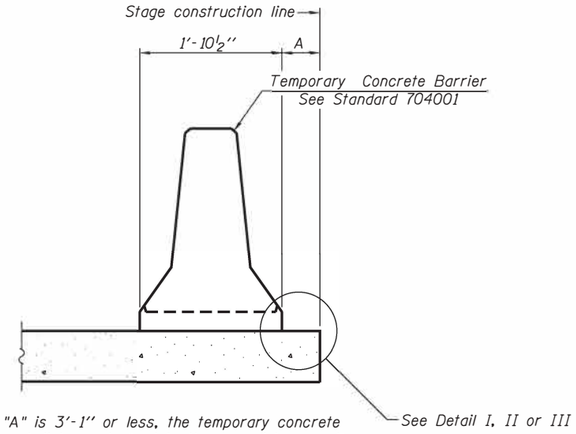
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN - KBC	REVISED -
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

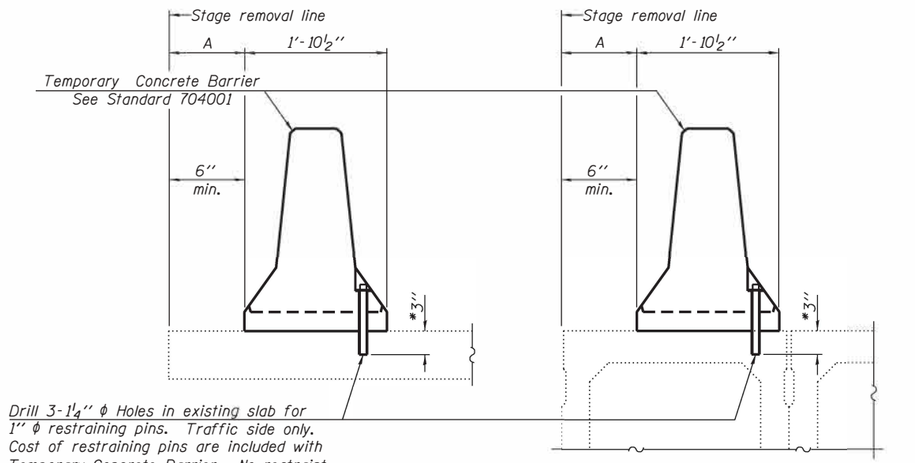
STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 003-0013 (E.B.) & 003-0014 (W.B.)
SHEET NO. 3 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	179
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



When "A" is 3'-1'' or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



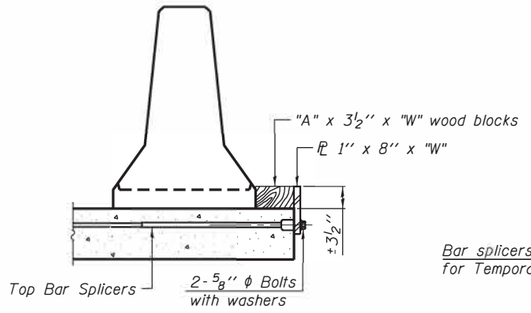
Drill 3-1¼'' ϕ Holes in existing slab for 1'' ϕ restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

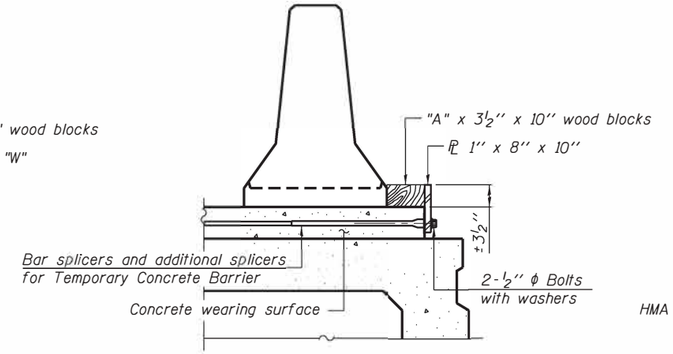
* When hot-mix asphalt wearing surface is present, embedment shall be 3'' plus the wearing surface depth.

EXISTING DECK BEAM

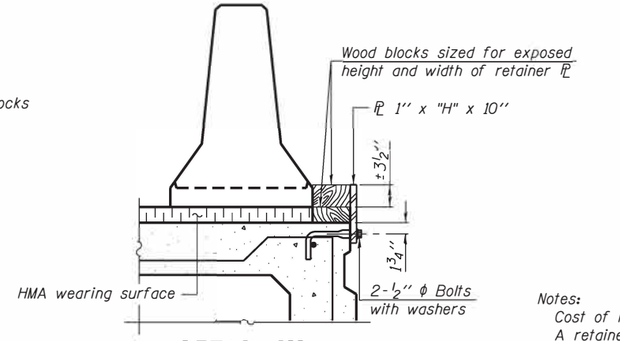
SECTIONS THRU SLAB OR DECK BEAM



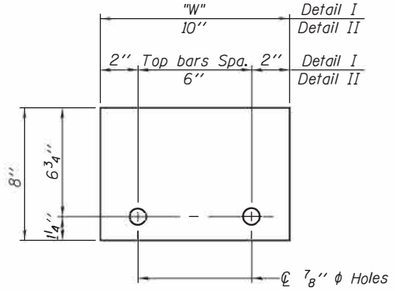
DETAIL I



DETAIL II

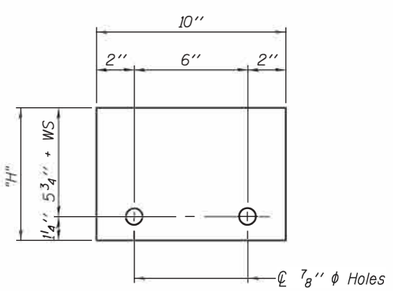


DETAIL III



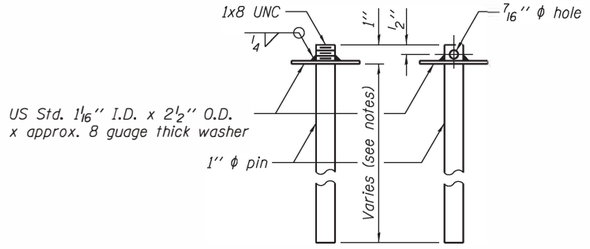
STEEL RETAINER ℄ 1'' x 8'' x "W"

(Detail I and II)

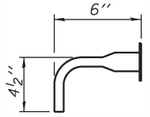


STEEL RETAINER ℄ 1'' x "H" x 10''

(Detail III)



RESTRAINING PIN



BAR SPLICER FOR #4 BAR - DETAIL III

Notes:

Cost of retainer assembly is included with Temporary Concrete Barrier.

A retainer assembly shall be located at the approximate ℄ of each temporary concrete barrier.

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1½'', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6'' to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0'' centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6'' apart, shall be placed at 6'-0'' centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

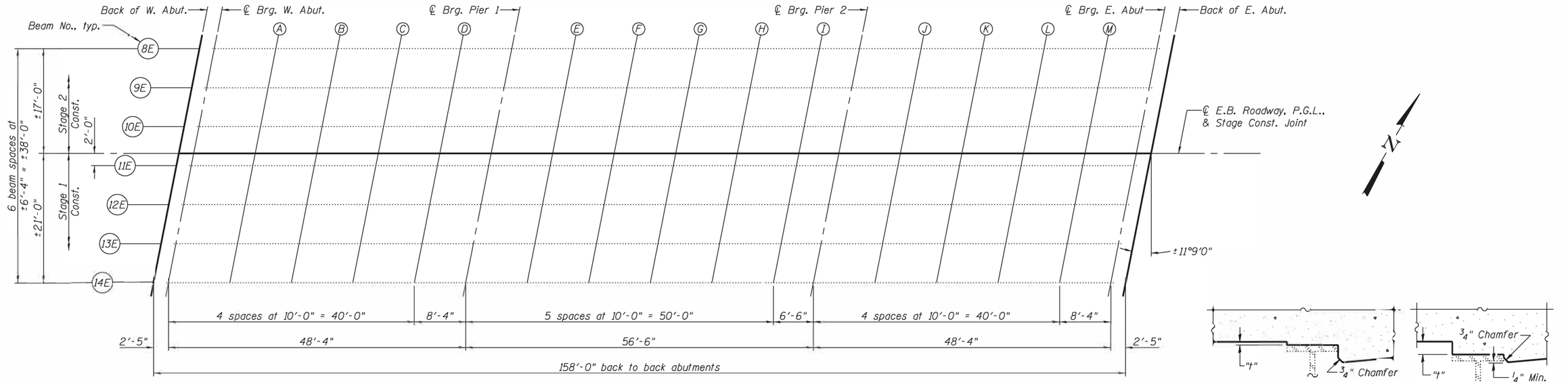
R-27

8-11-2017

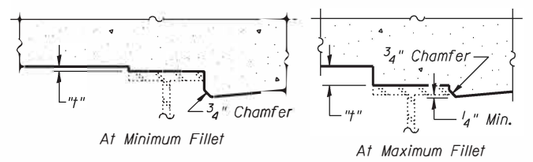
FILE NAME = M:\P\18141\18141.008 - District 8 Deck Replacements\Structural\SN 003-0013, 0014\Microstation\0030013 0014-76D23-B04-Temporary Concrete Barrier.dgn

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 003-0013 (E.B.) & 003-0014 (W.B.) SHEET NO. 4 OF 30 SHEETS
		CHECKED -	REVISED -		
	PLOT SCALE =	DRAWN -	REVISED -		
	PLOT DATE = 12/13/2017	CHECKED -	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	180
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		



PLAN



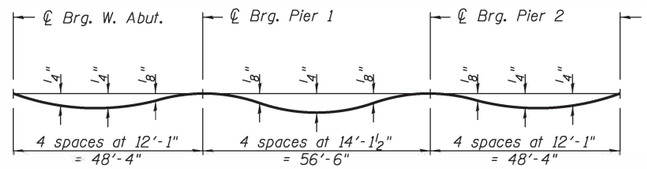
FILLET HEIGHTS ②

BEAM 8E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+19.44	-17.00	570.37	570.37
℄ Brg. W. Abut.	2777+21.85	-17.00	570.37	570.37
A	2777+31.85	-17.00	570.40	570.42
B	2777+41.85	-17.00	570.43	570.46
C	2777+51.85	-17.00	570.46	570.48
D	2777+61.85	-17.00	570.48	570.49
℄ Brg. Pier 1	2777+70.19	-17.00	570.51	570.51
E	2777+80.19	-17.00	570.53	570.54
F	2777+90.19	-17.00	570.55	570.57
G	2778+00.19	-17.00	570.57	570.59
H	2778+10.19	-17.00	570.59	570.61
I	2778+20.19	-17.00	570.61	570.62
℄ Brg. Pier 2	2778+26.69	-17.00	570.63	570.63
J	2778+36.69	-17.00	570.64	570.65
K	2778+46.69	-17.00	570.66	570.68
L	2778+56.69	-17.00	570.68	570.70
M	2778+66.69	-17.00	570.69	570.71
℄ Brg. E. Abut.	2778+75.02	-17.00	570.70	570.70
Back of E. Abut.	2778+77.44	-17.00	570.71	570.71

BEAM 9E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+18.19	-10.67	570.49	570.49
℄ Brg. W. Abut.	2777+20.60	-10.67	570.50	570.50
A	2777+30.60	-10.67	570.52	570.54
B	2777+40.60	-10.67	570.55	570.58
C	2777+50.60	-10.67	570.58	570.60
D	2777+60.60	-10.67	570.61	570.61
℄ Brg. Pier 1	2777+68.94	-10.67	570.63	570.63
E	2777+78.94	-10.67	570.65	570.66
F	2777+88.94	-10.67	570.67	570.69
G	2777+98.94	-10.67	570.70	570.72
H	2778+08.94	-10.67	570.72	570.73
I	2778+18.94	-10.67	570.74	570.74
℄ Brg. Pier 2	2778+25.44	-10.67	570.75	570.75
J	2778+35.44	-10.67	570.77	570.78
K	2778+45.44	-10.67	570.78	570.81
L	2778+55.44	-10.67	570.80	570.82
M	2778+65.44	-10.67	570.81	570.83
℄ Brg. E. Abut.	2778+73.77	-10.67	570.83	570.83
Back of E. Abut.	2778+76.19	-10.67	570.83	570.83



DEAD LOAD DEFLECTION DIAGRAM ①

(Includes weight of concrete only.)

Notes:
① The Dead Load Deflections are not to be used in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as shown on this sheet and on sheet 6 of 30.
② To determine "t": Elevations of the top flanges of the existing steel beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on this sheet and on sheet 6 of 30, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILE NAME = H:\P\1841\1841.028 - District 8 Deck Replacements\Structural\SN 003-0013.0814\Microstation\003013.0814-76D23-205-Top of Slab Elevations.dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 003-0013 (E.B.)
SHEET NO. 5 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	181
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

BEAM 10E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+16.94	-4.33	570.58	570.58
℄ Brg. W. Abut.	2777+19.36	-4.33	570.59	570.59
A	2777+29.36	-4.33	570.62	570.64
B	2777+39.36	-4.33	570.65	570.67
C	2777+49.36	-4.33	570.68	570.70
D	2777+59.36	-4.33	570.70	570.71
℄ Brg. Pier 1	2777+67.69	-4.33	570.72	570.72
E	2777+77.69	-4.33	570.75	570.75
F	2777+87.69	-4.33	570.77	570.79
G	2777+97.69	-4.33	570.79	570.81
H	2778+07.69	-4.33	570.81	570.83
I	2778+17.69	-4.33	570.83	570.84
℄ Brg. Pier 2	2778+24.19	-4.33	570.85	570.85
J	2778+34.19	-4.33	570.86	570.87
K	2778+44.19	-4.33	570.88	570.90
L	2778+54.19	-4.33	570.90	570.92
M	2778+64.19	-4.33	570.91	570.93
℄ Brg. E. Abut.	2778+72.52	-4.33	570.92	570.92
Back of E. Abut.	2778+74.94	-4.33	570.93	570.93

℄ E.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+16.09	0.00	570.65	570.65
℄ Brg. W. Abut.	2777+18.50	0.00	570.66	570.66
A	2777+28.50	0.00	570.69	570.70
B	2777+38.50	0.00	570.71	570.74
C	2777+48.50	0.00	570.74	570.76
D	2777+58.50	0.00	570.77	570.78
℄ Brg. Pier 1	2777+66.84	0.00	570.79	570.79
E	2777+76.84	0.00	570.81	570.82
F	2777+86.84	0.00	570.84	570.85
G	2777+96.84	0.00	570.86	570.88
H	2778+06.84	0.00	570.88	570.89
I	2778+16.84	0.00	570.90	570.90
℄ Brg. Pier 2	2778+23.34	0.00	570.91	570.91
J	2778+33.34	0.00	570.93	570.94
K	2778+43.34	0.00	570.95	570.97
L	2778+53.34	0.00	570.96	570.99
M	2778+63.34	0.00	570.98	570.99
℄ Brg. E. Abut.	2778+71.67	0.00	570.99	570.99
Back of E. Abut.	2778+74.09	0.00	570.99	570.99

BEAM 11E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+15.69	2.00	570.62	570.62
℄ Brg. W. Abut.	2777+18.11	2.00	570.62	570.62
A	2777+28.11	2.00	570.65	570.67
B	2777+38.11	2.00	570.68	570.71
C	2777+48.11	2.00	570.71	570.73
D	2777+58.11	2.00	570.74	570.74
℄ Brg. Pier 1	2777+66.44	2.00	570.76	570.76
E	2777+76.44	2.00	570.78	570.79
F	2777+86.44	2.00	570.80	570.82
G	2777+96.44	2.00	570.83	570.85
H	2778+06.44	2.00	570.85	570.86
I	2778+16.44	2.00	570.87	570.87
℄ Brg. Pier 2	2778+22.94	2.00	570.88	570.88
J	2778+32.94	2.00	570.90	570.91
K	2778+42.94	2.00	570.92	570.94
L	2778+52.94	2.00	570.93	570.96
M	2778+62.94	2.00	570.95	570.96
℄ Brg. E. Abut.	2778+71.27	2.00	570.96	570.96
Back of E. Abut.	2778+73.69	2.00	570.96	570.96

BEAM 12E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+14.44	8.33	570.51	570.51
℄ Brg. W. Abut.	2777+16.86	8.33	570.52	570.52
A	2777+26.86	8.33	570.55	570.57
B	2777+36.86	8.33	570.58	570.60
C	2777+46.86	8.33	570.61	570.63
D	2777+56.86	8.33	570.63	570.64
℄ Brg. Pier 1	2777+65.19	8.33	570.65	570.65
E	2777+75.19	8.33	570.68	570.69
F	2777+85.19	8.33	570.70	570.72
G	2777+95.19	8.33	570.72	570.74
H	2778+05.19	8.33	570.75	570.76
I	2778+15.19	8.33	570.77	570.77
℄ Brg. Pier 2	2778+21.69	8.33	570.78	570.78
J	2778+31.69	8.33	570.80	570.81
K	2778+41.69	8.33	570.81	570.84
L	2778+51.69	8.33	570.83	570.85
M	2778+61.69	8.33	570.85	570.86
℄ Brg. E. Abut.	2778+70.03	8.33	570.86	570.86
Back of E. Abut.	2778+72.44	8.33	570.86	570.86

BEAM 13E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+13.19	14.67	570.40	570.40
℄ Brg. W. Abut.	2777+15.61	14.67	570.40	570.40
A	2777+25.61	14.67	570.43	570.45
B	2777+35.61	14.67	570.46	570.49
C	2777+45.61	14.67	570.49	570.51
D	2777+55.61	14.67	570.52	570.52
℄ Brg. Pier 1	2777+63.94	14.67	570.54	570.54
E	2777+73.94	14.67	570.56	570.57
F	2777+83.94	14.67	570.59	570.60
G	2777+93.94	14.67	570.61	570.63
H	2778+03.94	14.67	570.63	570.64
I	2778+13.94	14.67	570.65	570.65
℄ Brg. Pier 2	2778+20.44	14.67	570.66	570.66
J	2778+30.44	14.67	570.68	570.69
K	2778+40.44	14.67	570.70	570.72
L	2778+50.44	14.67	570.72	570.74
M	2778+60.44	14.67	570.73	570.75
℄ Brg. E. Abut.	2778+68.78	14.67	570.74	570.74
Back of E. Abut.	2778+71.19	14.67	570.75	570.75

BEAM 14E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+11.95	21.00	570.26	570.26
℄ Brg. W. Abut.	2777+14.36	21.00	570.27	570.27
A	2777+24.36	21.00	570.30	570.32
B	2777+34.36	21.00	570.33	570.35
C	2777+44.36	21.00	570.36	570.38
D	2777+54.36	21.00	570.38	570.39
℄ Brg. Pier 1	2777+62.70	21.00	570.40	570.40
E	2777+72.70	21.00	570.43	570.43
F	2777+82.70	21.00	570.45	570.47
G	2777+92.70	21.00	570.47	570.49
H	2778+02.70	21.00	570.50	570.51
I	2778+12.70	21.00	570.52	570.52
℄ Brg. Pier 2	2778+19.20	21.00	570.53	570.53
J	2778+29.20	21.00	570.55	570.56
K	2778+39.20	21.00	570.57	570.59
L	2778+49.20	21.00	570.58	570.61
M	2778+59.20	21.00	570.60	570.61
℄ Brg. E. Abut.	2778+67.53	21.00	570.61	570.61
Back of E. Abut.	2778+69.95	21.00	570.61	570.61

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0013, 00814\Microstation\003003013_00814-76D23-005-Top of Slab Elevations.dgn

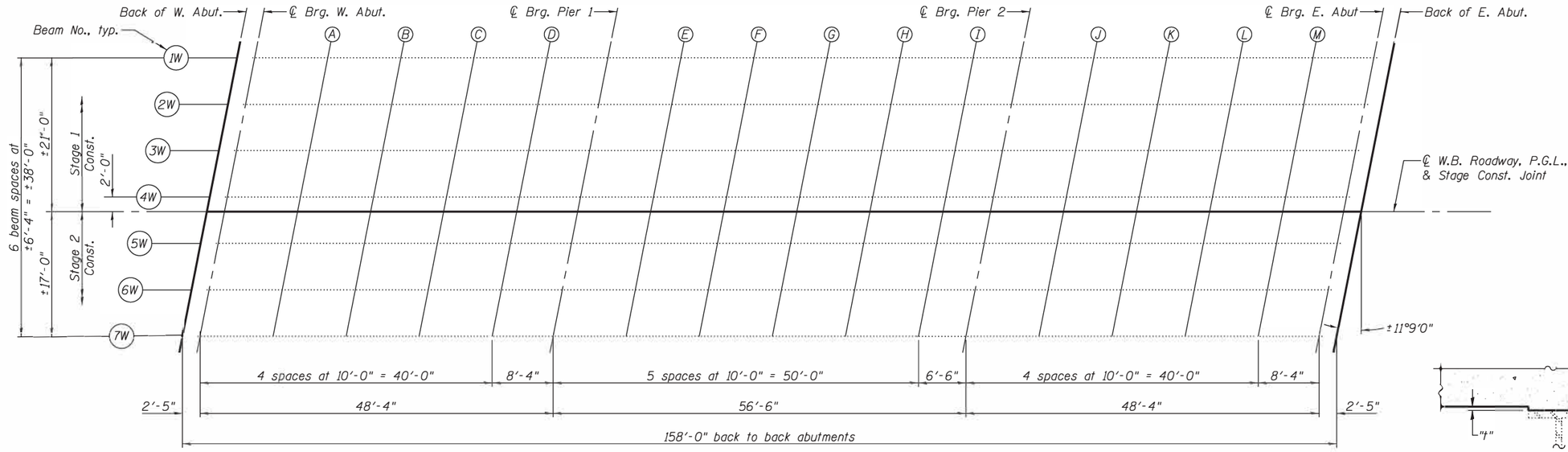
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

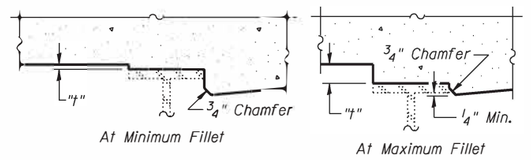
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 003-0013 (E.B.)
SHEET NO. 6 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	182
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



PLAN



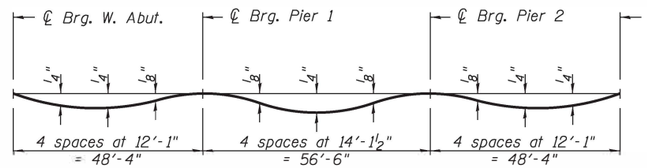
FILLET HEIGHTS ②

BEAM 1W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+37.57	-21.00	570.30	570.30
℄ Brg. W. Abut.	2777+39.99	-21.00	570.31	570.31
A	2777+49.99	-21.00	570.34	570.36
B	2777+59.99	-21.00	570.37	570.39
C	2777+69.99	-21.00	570.39	570.41
D	2777+79.99	-21.00	570.42	570.42
℄ Brg. Pier 1	2777+88.32	-21.00	570.44	570.44
E	2777+98.32	-21.00	570.46	570.47
F	2778+08.32	-21.00	570.48	570.50
G	2778+18.32	-21.00	570.50	570.52
H	2778+28.32	-21.00	570.52	570.54
I	2778+38.32	-21.00	570.54	570.55
℄ Brg. Pier 2	2778+44.82	-21.00	570.56	570.56
J	2778+54.82	-21.00	570.57	570.58
K	2778+64.82	-21.00	570.59	570.61
L	2778+74.82	-21.00	570.61	570.63
M	2778+84.82	-21.00	570.62	570.63
℄ Brg. E. Abut.	2778+93.15	-21.00	570.63	570.63
Back of E. Abut.	2778+95.57	-21.00	570.63	570.63

BEAM 2W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+36.32	-14.67	570.43	570.43
℄ Brg. W. Abut.	2777+38.74	-14.67	570.44	570.44
A	2777+48.74	-14.67	570.47	570.48
B	2777+58.74	-14.67	570.49	570.52
C	2777+68.74	-14.67	570.52	570.54
D	2777+78.74	-14.67	570.55	570.55
℄ Brg. Pier 1	2777+87.07	-14.67	570.57	570.57
E	2777+97.07	-14.67	570.59	570.60
F	2778+07.07	-14.67	570.61	570.63
G	2778+17.07	-14.67	570.63	570.65
H	2778+27.07	-14.67	570.65	570.67
I	2778+37.07	-14.67	570.67	570.68
℄ Brg. Pier 2	2778+43.57	-14.67	570.68	570.68
J	2778+53.57	-14.67	570.70	570.71
K	2778+63.57	-14.67	570.72	570.74
L	2778+73.57	-14.67	570.74	570.76
M	2778+83.57	-14.67	570.75	570.76
℄ Brg. E. Abut.	2778+91.90	-14.67	570.76	570.76
Back of E. Abut.	2778+94.32	-14.67	570.76	570.76



DEAD LOAD DEFLECTION DIAGRAM ①

(Includes weight of concrete only.)

Notes:

① The Dead Load Deflections are not to be used in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as shown on this sheet and on sheet 8 of 30.

② To determine "t": Elevations of the top flanges of the existing steel beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on this sheet and on sheet 8 of 30, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILE NAME = H:\P\1841\1841.028 - District 8 Deck Replacements\Structural\SN 003-0013,0014\Microstation\003D013,0014-76D23-207-Top of Slab Elevations.dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 003-0014 (W.B.)
SHEET NO. 7 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	183
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

BEAM 3W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+35.07	-8.33	570.54	570.54
℄ Brg. W. Abut.	2777+37.49	-8.33	570.55	570.55
A	2777+47.49	-8.33	570.58	570.59
B	2777+57.49	-8.33	570.60	570.63
C	2777+67.49	-8.33	570.63	570.65
D	2777+77.49	-8.33	570.66	570.66
℄ Brg. Pier 1	2777+85.82	-8.33	570.68	570.68
E	2777+95.82	-8.33	570.70	570.71
F	2778+05.82	-8.33	570.72	570.74
G	2778+15.82	-8.33	570.74	570.76
H	2778+25.82	-8.33	570.76	570.78
I	2778+35.82	-8.33	570.78	570.79
℄ Brg. Pier 2	2778+42.32	-8.33	570.80	570.80
J	2778+52.32	-8.33	570.81	570.82
K	2778+62.32	-8.33	570.83	570.85
L	2778+72.32	-8.33	570.85	570.87
M	2778+82.32	-8.33	570.86	570.88
℄ Brg. E. Abut.	2778+90.66	-8.33	570.87	570.87
Back of E. Abut.	2778+93.07	-8.33	570.88	570.88

BEAM 4W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+33.82	-2.00	570.64	570.64
℄ Brg. W. Abut.	2777+36.24	-2.00	570.64	570.64
A	2777+46.24	-2.00	570.67	570.69
B	2777+56.24	-2.00	570.70	570.72
C	2777+66.24	-2.00	570.73	570.75
D	2777+76.24	-2.00	570.75	570.76
℄ Brg. Pier 1	2777+84.57	-2.00	570.77	570.77
E	2777+94.57	-2.00	570.80	570.80
F	2778+04.57	-2.00	570.82	570.83
G	2778+14.57	-2.00	570.84	570.86
H	2778+24.57	-2.00	570.86	570.87
I	2778+34.57	-2.00	570.88	570.88
℄ Brg. Pier 2	2778+41.07	-2.00	570.89	570.89
J	2778+51.07	-2.00	570.91	570.92
K	2778+61.07	-2.00	570.93	570.95
L	2778+71.07	-2.00	570.94	570.97
M	2778+81.07	-2.00	570.96	570.97
℄ Brg. E. Abut.	2778+89.41	-2.00	570.97	570.97
Back of E. Abut.	2778+91.82	-2.00	570.97	570.97

℄ W.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+33.43	0.00	570.67	570.67
℄ Brg. W. Abut.	2777+35.85	0.00	570.67	570.67
A	2777+45.85	0.00	570.70	570.72
B	2777+55.85	0.00	570.73	570.75
C	2777+65.85	0.00	570.76	570.78
D	2777+75.85	0.00	570.78	570.79
℄ Brg. Pier 1	2777+84.18	0.00	570.80	570.80
E	2777+94.18	0.00	570.83	570.83
F	2778+04.18	0.00	570.85	570.86
G	2778+14.18	0.00	570.87	570.89
H	2778+24.18	0.00	570.89	570.90
I	2778+34.18	0.00	570.91	570.91
℄ Brg. Pier 2	2778+40.68	0.00	570.92	570.92
J	2778+50.68	0.00	570.94	570.95
K	2778+60.68	0.00	570.96	570.98
L	2778+70.68	0.00	570.97	571.00
M	2778+80.68	0.00	570.99	571.00
℄ Brg. E. Abut.	2778+89.01	0.00	571.00	571.00
Back of E. Abut.	2778+91.43	0.00	571.00	571.00

BEAM 5W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+32.58	4.33	570.60	570.60
℄ Brg. W. Abut.	2777+34.99	4.33	570.60	570.60
A	2777+44.99	4.33	570.63	570.65
B	2777+54.99	4.33	570.66	570.68
C	2777+64.99	4.33	570.69	570.71
D	2777+74.99	4.33	570.71	570.72
℄ Brg. Pier 1	2777+83.33	4.33	570.73	570.73
E	2777+93.33	4.33	570.76	570.76
F	2778+03.33	4.33	570.78	570.80
G	2778+13.33	4.33	570.80	570.82
H	2778+23.33	4.33	570.82	570.83
I	2778+33.33	4.33	570.84	570.84
℄ Brg. Pier 2	2778+39.83	4.33	570.85	570.85
J	2778+49.83	4.33	570.87	570.88
K	2778+59.83	4.33	570.89	570.91
L	2778+69.83	4.33	570.90	570.93
M	2778+79.83	4.33	570.92	570.93
℄ Brg. E. Abut.	2778+88.16	4.33	570.93	570.93
Back of E. Abut.	2778+90.58	4.33	570.94	570.94

BEAM 6W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+31.33	10.67	570.49	570.49
℄ Brg. W. Abut.	2777+33.74	10.67	570.50	570.50
A	2777+43.74	10.67	570.53	570.55
B	2777+53.74	10.67	570.56	570.58
C	2777+63.74	10.67	570.58	570.60
D	2777+73.74	10.67	570.61	570.62
℄ Brg. Pier 1	2777+82.08	10.67	570.63	570.63
E	2777+92.08	10.67	570.65	570.66
F	2778+02.08	10.67	570.68	570.69
G	2778+12.08	10.67	570.70	570.72
H	2778+22.08	10.67	570.72	570.73
I	2778+32.08	10.67	570.74	570.74
℄ Brg. Pier 2	2778+38.58	10.67	570.75	570.75
J	2778+48.58	10.67	570.77	570.78
K	2778+58.58	10.67	570.79	570.81
L	2778+68.58	10.67	570.80	570.83
M	2778+78.58	10.67	570.82	570.83
℄ Brg. E. Abut.	2778+86.91	10.67	570.83	570.83
Back of E. Abut.	2778+89.33	10.67	570.83	570.83

BEAM 7W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	2777+30.08	17.00	570.37	570.37
℄ Brg. W. Abut.	2777+32.50	17.00	570.37	570.37
A	2777+42.50	17.00	570.40	570.42
B	2777+52.50	17.00	570.43	570.45
C	2777+62.50	17.00	570.46	570.48
D	2777+72.50	17.00	570.48	570.49
℄ Brg. Pier 1	2777+80.83	17.00	570.50	570.50
E	2777+90.83	17.00	570.53	570.53
F	2778+00.83	17.00	570.55	570.57
G	2778+10.83	17.00	570.57	570.59
H	2778+20.83	17.00	570.59	570.61
I	2778+30.83	17.00	570.61	570.62
℄ Brg. Pier 2	2778+37.33	17.00	570.62	570.62
J	2778+47.33	17.00	570.64	570.65
K	2778+57.33	17.00	570.66	570.68
L	2778+67.33	17.00	570.68	570.70
M	2778+77.33	17.00	570.69	570.71
℄ Brg. E. Abut.	2778+85.66	17.00	570.70	570.70
Back of E. Abut.	2778+88.08	17.00	570.71	570.71

FILE NAME = H:\P\11841\11841.00BB - District 8 Deck Replacements\Structural\SN 003-0013, 0014\Microstation\003003013_00814-76D23-00BB-Top of Slab Elevations.dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 003-0014 (W.B.)
SHEET NO. 8 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	184
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2776+90.65	-18.00	570.26
A1	2777+00.65	-18.00	570.29
A2	2777+10.65	-18.00	570.32
E. End of West Appr. Slab	2777+20.65	-18.00	570.35
W. End of East Appr. Slab	2778+76.61	-18.00	570.68
A3	2778+86.61	-18.00	570.70
A4	2778+96.61	-18.00	570.71
E. End of East Appr. Slab	2779+06.61	-18.00	570.72

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2776+89.47	-12.00	570.38
A1	2776+99.47	-12.00	570.41
A2	2777+09.47	-12.00	570.44
E. End of West Appr. Slab	2777+19.47	-12.00	570.47
W. End of East Appr. Slab	2778+75.43	-12.00	570.81
A3	2778+85.43	-12.00	570.82
A4	2778+95.43	-12.00	570.83
E. End of East Appr. Slab	2779+05.43	-12.00	570.84

℄ E.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

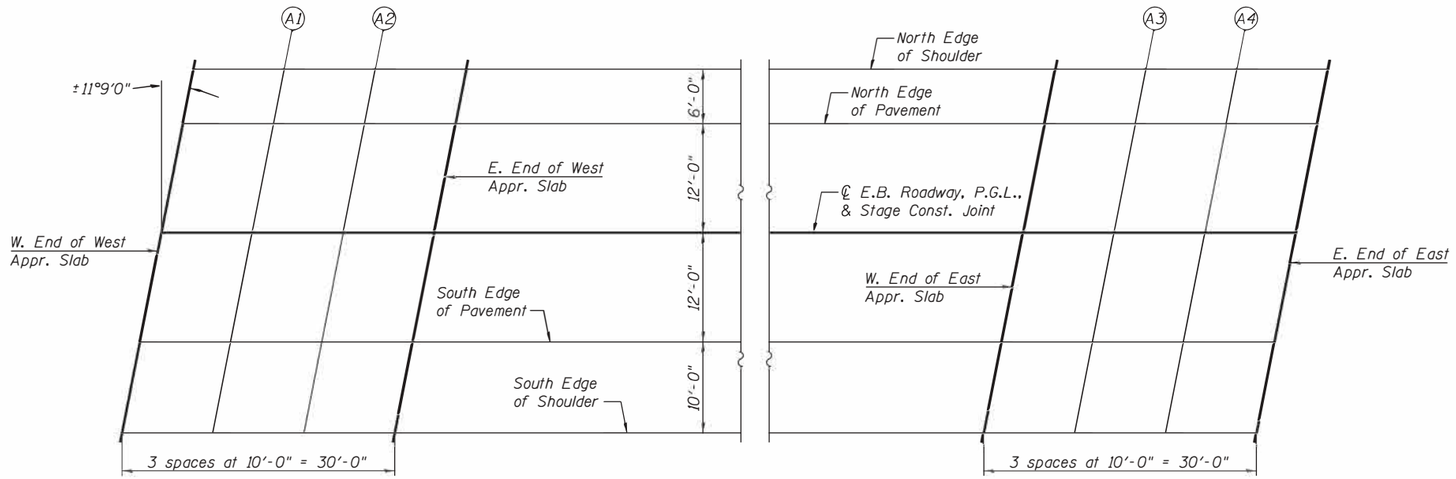
Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2776+87.10	0.00	570.56
A1	2776+97.10	0.00	570.59
A2	2777+07.10	0.00	570.62
E. End of West Appr. Slab	2777+17.10	0.00	570.65
W. End of East Appr. Slab	2778+73.07	0.00	570.99
A3	2778+83.07	0.00	571.00
A4	2778+93.07	0.00	571.02
E. End of East Appr. Slab	2779+03.07	0.00	571.03

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2776+84.74	12.00	570.36
A1	2776+94.74	12.00	570.39
A2	2777+04.74	12.00	570.43
E. End of West Appr. Slab	2777+14.74	12.00	570.46
W. End of East Appr. Slab	2778+70.70	12.00	570.80
A3	2778+80.70	12.00	570.81
A4	2778+90.70	12.00	570.83
E. End of East Appr. Slab	2779+00.70	12.00	570.84

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2776+82.77	22.00	570.15
A1	2776+92.77	22.00	570.18
A2	2777+02.77	22.00	570.21
E. End of West Appr. Slab	2777+12.77	22.00	570.24
W. End of East Appr. Slab	2778+68.73	22.00	570.59
A3	2778+78.73	22.00	570.60
A4	2778+88.73	22.00	570.61
E. End of East Appr. Slab	2778+98.73	22.00	570.63



WEST APPROACH

EAST APPROACH

PLAN

N

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0013, 0014\Microstation\0030013, 0014-76D23-BRPL-Top of Approach Slab Elevations (E.B.).dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 003-0013 (E.B.)
SHEET NO. 9 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	185
		CONTRACT NO. 76D23		
	ILLINOIS	FED. AID PROJECT		

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2777+08.79	-22.00	570.20
A1	2777+18.79	-22.00	570.23
A2	2777+28.79	-22.00	570.26
E. End of West Appr. Slab	2777+38.79	-22.00	570.29
W. End of East Appr. Slab	2778+94.75	-22.00	570.61
A3	2779+04.75	-22.00	570.63
A4	2779+14.75	-22.00	570.64
E. End of East Appr. Slab	2779+24.75	-22.00	570.65

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2777+06.81	-12.00	570.40
A1	2777+16.81	-12.00	570.43
A2	2777+26.81	-12.00	570.46
E. End of West Appr. Slab	2777+36.81	-12.00	570.49
W. End of East Appr. Slab	2778+92.78	-12.00	570.82
A3	2779+02.78	-12.00	570.83
A4	2779+12.78	-12.00	570.84
E. End of East Appr. Slab	2779+22.78	-12.00	570.85

℄ W.B. ROADWAY, P.G.L., & STAGE CONST. JOINT

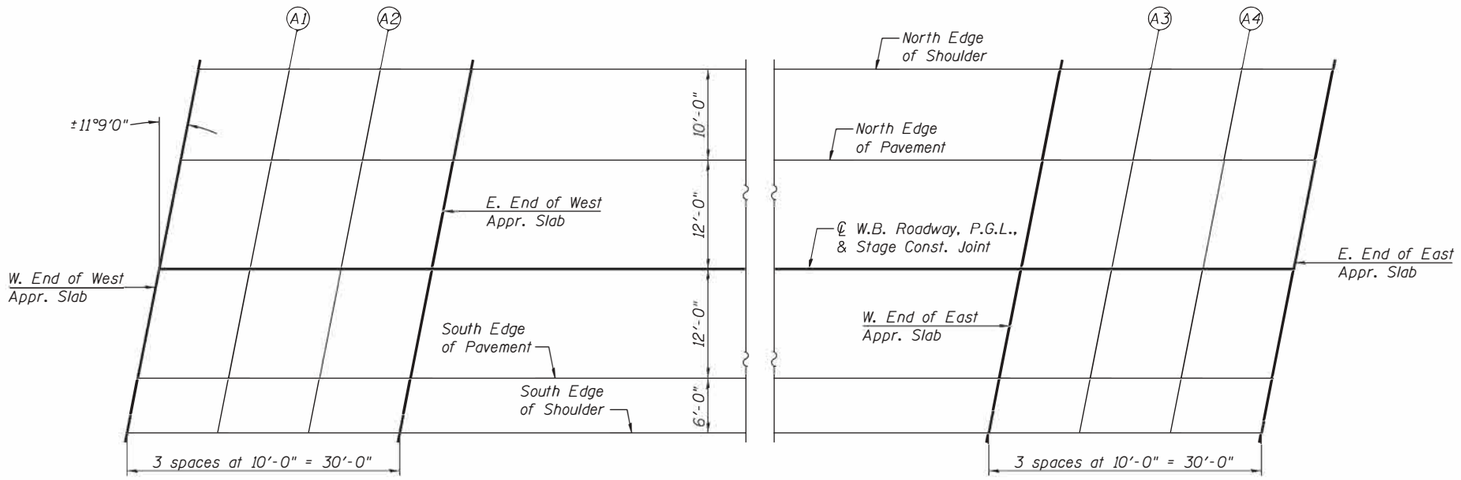
Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2777+04.45	0.00	570.58
A1	2777+14.45	0.00	570.61
A2	2777+24.45	0.00	570.64
E. End of West Appr. Slab	2777+34.45	0.00	570.67
W. End of East Appr. Slab	2778+90.41	0.00	571.00
A3	2779+00.41	0.00	571.02
A4	2779+10.41	0.00	571.03
E. End of East Appr. Slab	2779+20.41	0.00	571.04

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2777+02.08	12.00	570.38
A1	2777+12.08	12.00	570.41
A2	2777+22.08	12.00	570.45
E. End of West Appr. Slab	2777+32.08	12.00	570.48
W. End of East Appr. Slab	2778+88.05	12.00	570.81
A3	2778+98.05	12.00	570.83
A4	2779+08.05	12.00	570.84
E. End of East Appr. Slab	2779+18.05	12.00	570.85

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	2777+00.90	18.00	570.25
A1	2777+10.90	18.00	570.29
A2	2777+20.90	18.00	570.32
E. End of West Appr. Slab	2777+30.90	18.00	570.35
W. End of East Appr. Slab	2778+86.86	18.00	570.69
A3	2778+96.86	18.00	570.70
A4	2779+06.86	18.00	570.71
E. End of East Appr. Slab	2779+16.86	18.00	570.72



WEST APPROACH

EAST APPROACH

PLAN

N

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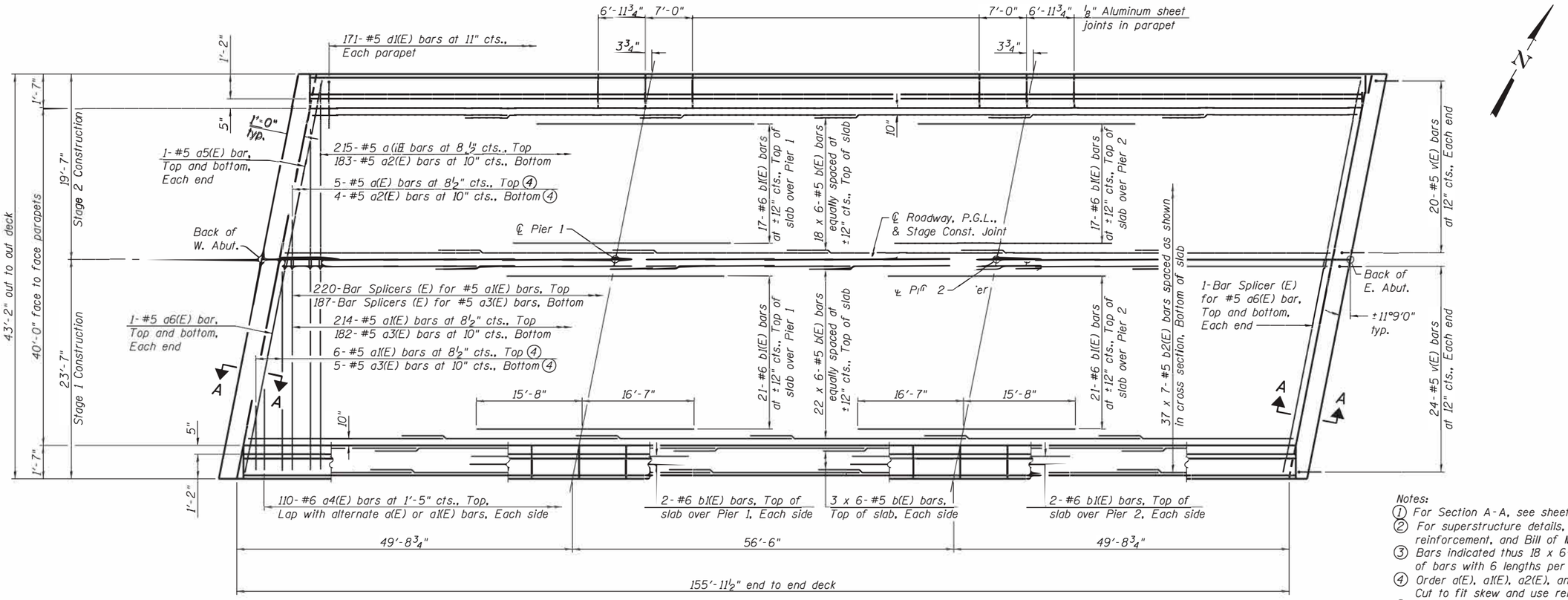
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

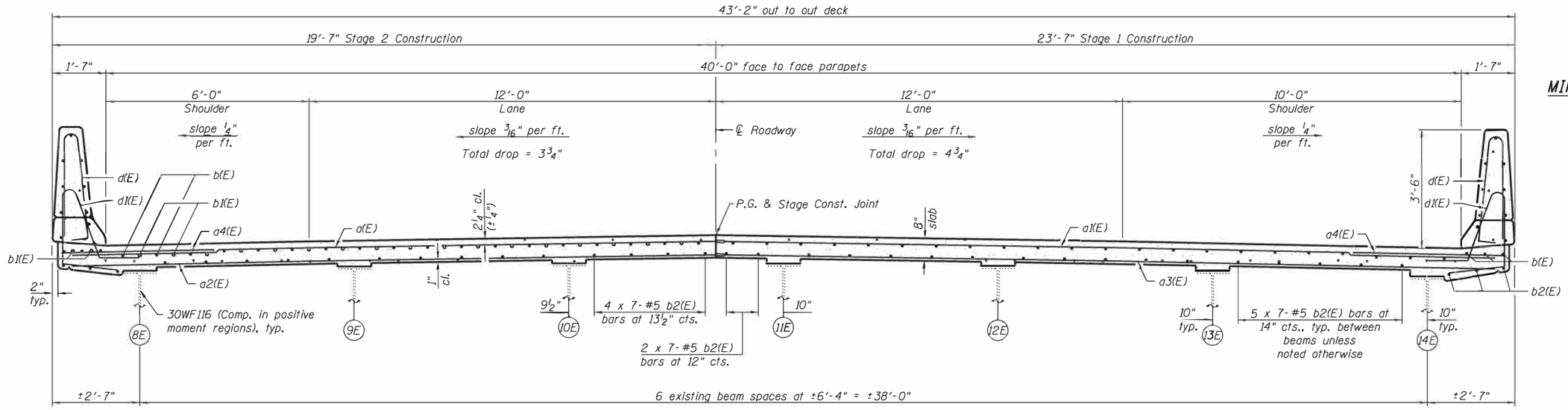
TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 003-0014 (W.B.)
SHEET NO. 10 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	186
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



PLAN

Notes:
1. For Section A-A, see sheet 14 of 30.
2. For superstructure details, bar details, parapet reinforcement, and Bill of Material, see sheet 13 of 30.
3. Bars indicated thus 18 x 6-#5 etc. indicates 18 lines of bars with 6 lengths per line.
4. Order a(E), a1(E), a2(E), and a3(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
5. For details of Bar Splicers, see sheet 29 of 30.
6. Floor drains not shown for clarity. For location of floor drains, see sheet 1 of 30.



NEAR PIER

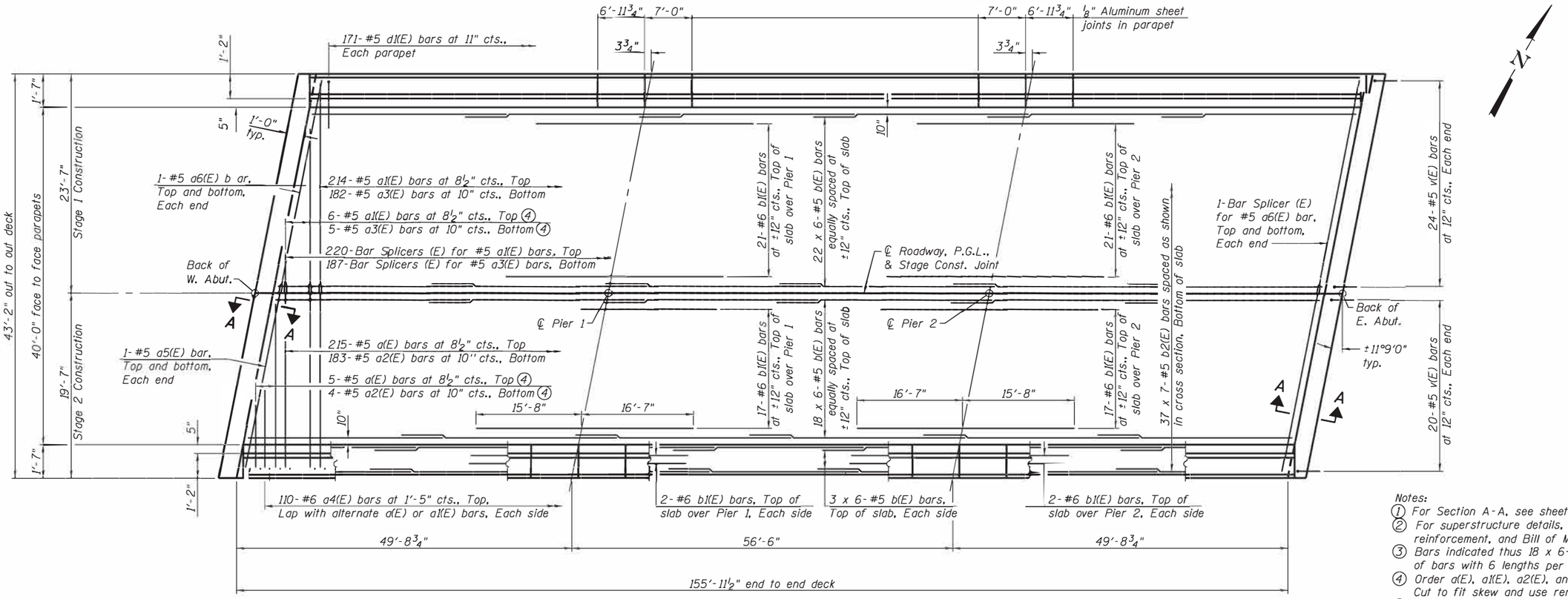
NEAR MIDSPAN

CROSS SECTION
(Looking East)

MINIMUM BAR LAP
#5 bar = 2'-7"

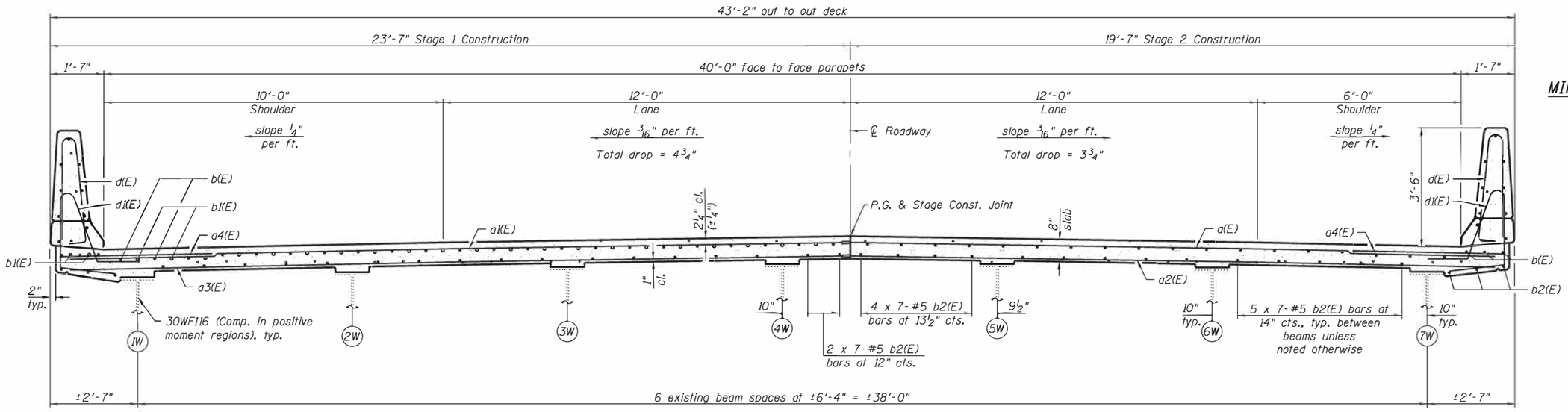
DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - DGL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 003-0013 (E.B.) SHEET NO. 11 OF 30 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - KBC	REVISED -			70	3-(2,3,4)RS-1	BOND	236	187
	PLOT SCALE =	DRAWN - DGL	REVISED -					CONTRACT NO. 76D23		
	PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -					ILLINOIS FED. AID PROJECT		

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0013, 0814\Microstation\003D013_0814-76D23-211-Superstructure (E.B.).dgn



PLAN

Notes:
1. For Section A-A, see sheet 14 of 30.
2. For superstructure details, bar details, parapet reinforcement, and Bill of Material, see sheet 13 of 30.
3. Bars indicated thus 18 x 6-#5 etc. indicates 18 lines of bars with 6 lengths per line.
4. Order a(E), a1(E), a2(E), and a3(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
5. For details of Bar Splicers, see sheet 29 of 30.
6. Floor drains not shown for clarity. For location of floor drains, see sheet 1 of 30.



NEAR PIER

CROSS SECTION
(Looking East)

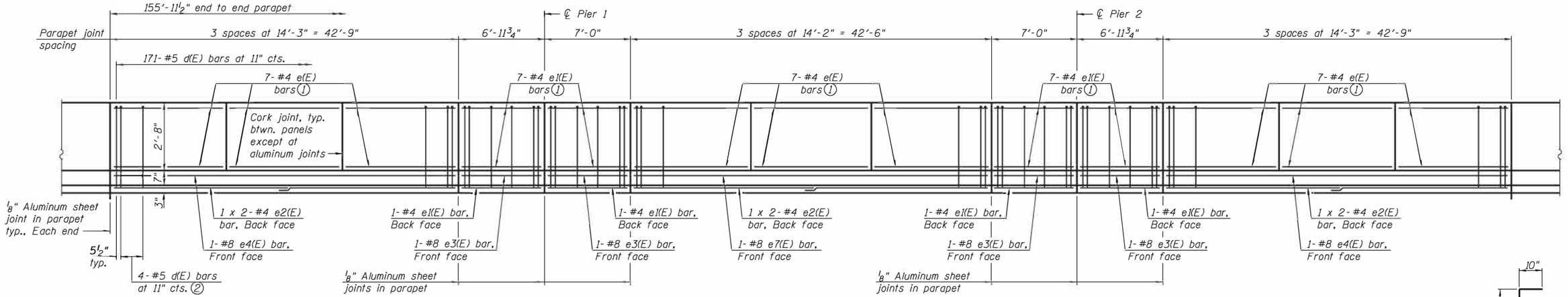
NEAR MIDSPAN

MINIMUM BAR LAP
#5 bar = 2'-7"

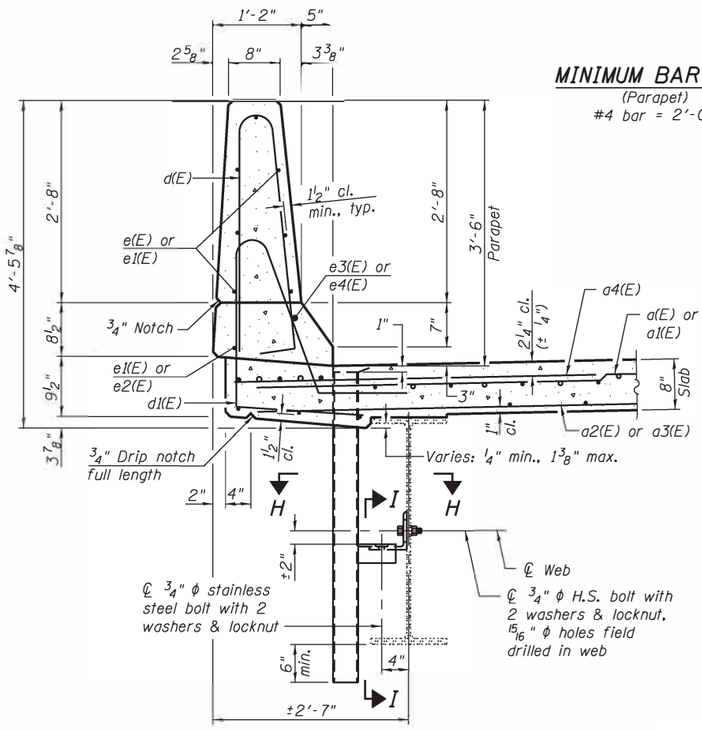
DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - DGL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 003-0014 (W.B.) SHEET NO. 12 OF 30 SHEETS
	PLOT SCALE =	DRAWN - DGL	REVISED -		
	PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -		
		CHECKED - KBC	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	188
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

FILE NAME = N:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0013, 0014\Microstation\003003013.0014-76D23-B12-Superstructure (W.B.).dgn



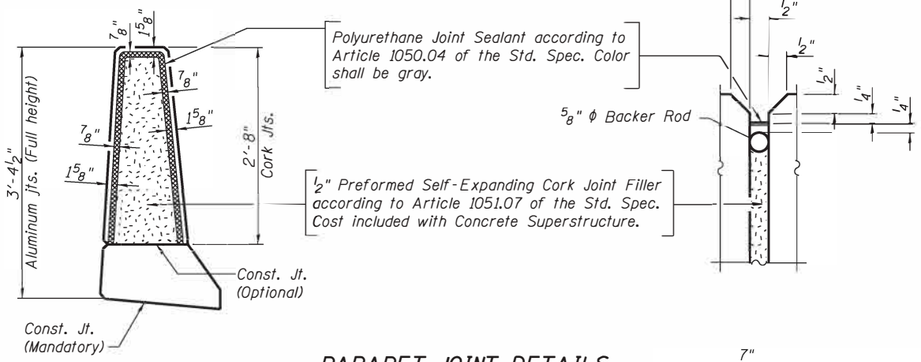
INSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET (4)

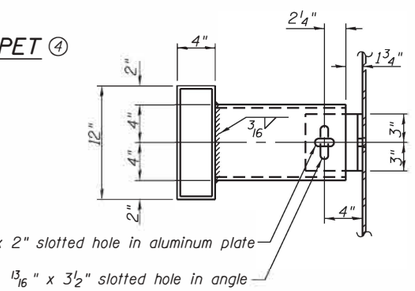
MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0"

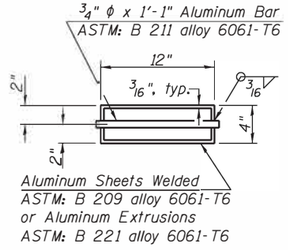


PARAPET JOINT DETAILS

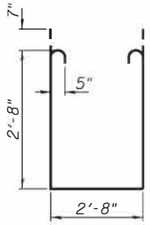
SECTION I-I



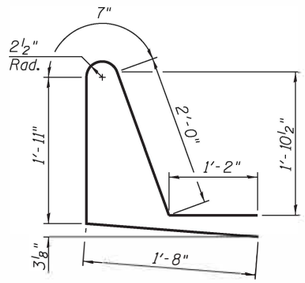
SECTION H-H



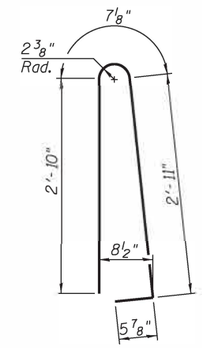
TOP PLAN



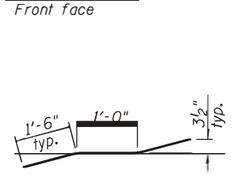
BAR s1(E)



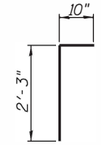
BAR d1(E)



BAR d(E)



BAR m5(E)



BAR v(E)

BARS s(E) & s2(E)

SUPERSTRUCTURE BILL OF MATERIAL

(Two Structures)

Bar	No.	Size	Length	Shape
d(E)	440	#5	19'-1"	——
d1(E)	440	#5	23'-1"	——
d2(E)	374	#5	18'-9"	——
d3(E)	374	#5	22'-9"	——
d4(E)	440	#6	6'-6"	——
d5(E)	8	#5	19'-5"	——
d6(E)	8	#5	23'-6"	——
b(E)	552	#5	28'-2"	——
b1(E)	168	#6	32'-3"	——
b2(E)	518	#5	24'-6"	——
d(E)	908	#5	6'-10"	
d1(E)	684	#5	7'-4"	
e(E)	252	#4	13'-10"	——
e1(E)	128	#4	6'-7"	——
e2(E)	24	#4	22'-3"	——
e3(E)	16	#8	6'-7"	——
e4(E)	8	#8	42'-5"	——
e7(E)	4	#8	42'-2"	——
m(E)	28	#6	19'-7"	——
m1(E)	28	#6	23'-8"	——
m2(E)	100	#6	6'-0"	——
m3(E)	40	#6	2'-3"	——
m4(E)	20	#6	4'-0"	——
m5(E)	84	#5	4'-0"	~
s(E)	172	#5	8'-7"	⊐
s1(E)	172	#5	9'-2"	⊔
s2(E)	184	#5	4'-4"	⊔
v(E)	176	#5	3'-1"	⌐
Concrete Superstructure		Cu. Yd.	498.8	
Reinforcement Bars, Epoxy Coated		Pound	102,280	

Notes:
1. See Section Thru Parapet.
2. Typical at parapet ends and each side of aluminum sheeted joints.
3. Bars indicated thus 1 x 2 - #8 etc. indicates 1 line of bars with 2 lengths per line.
4. For location of floor drains, see sheet 1 of 30. Drains shall be located clear of all diaphragms.
5. Floor drains need not be painted.
6. The ⅛" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure

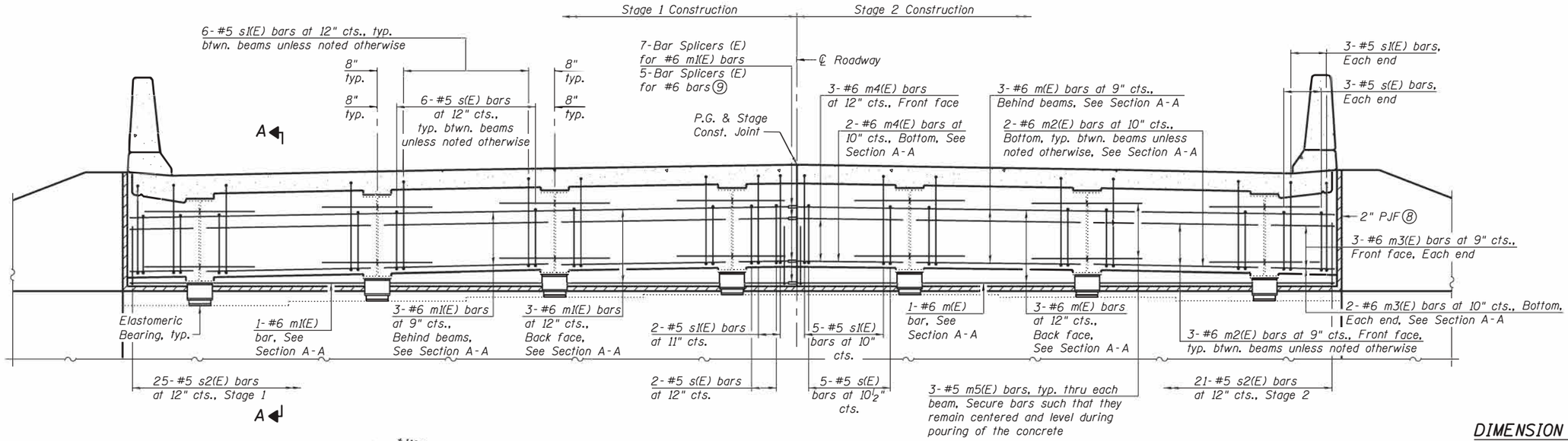
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - DGL	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - DGL	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 003-0013 (E.B.) & 003-0014 (W.B.)
SHEET NO. 13 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	189
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

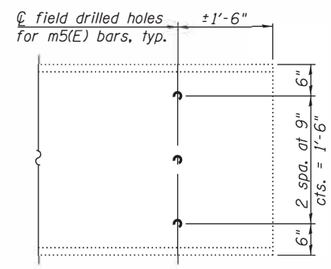


DIAPHRAGM ELEVATION AT ABUTMENT

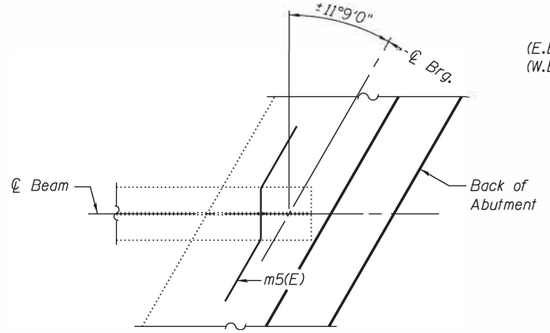
(E.B. Looking West-West diaphragm shown, East diaphragm similar)
(W.B. Looking East-East diaphragm shown, West diaphragm similar)

DIMENSION TABLE

Abutment	A	B
E.B. West	2'-0 3/4"	2'-6"
E.B. East	2'-0 1/4"	2'-5 3/8"
W.B. West	1'-11 5/8"	2'-4 1/2"
W.B. East	2'-0 1/2"	2'-5 1/2"

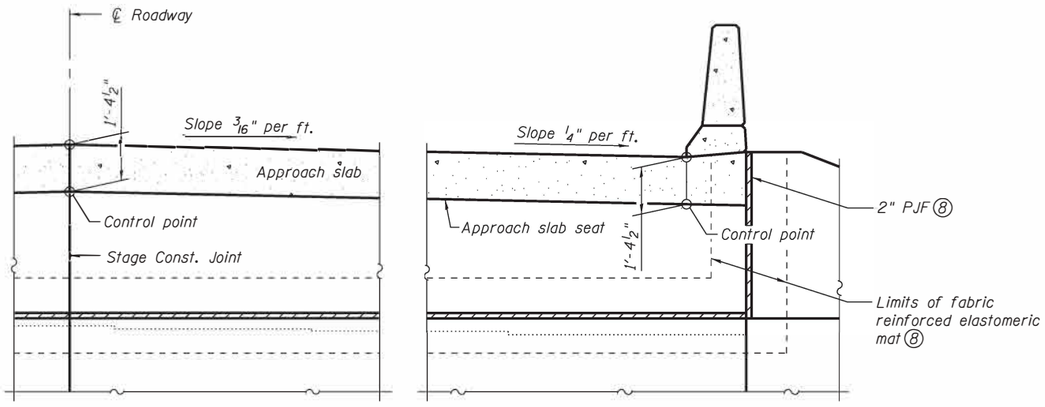


BEAM END ELEVATION



PARTIAL PLAN AT ABUTMENT

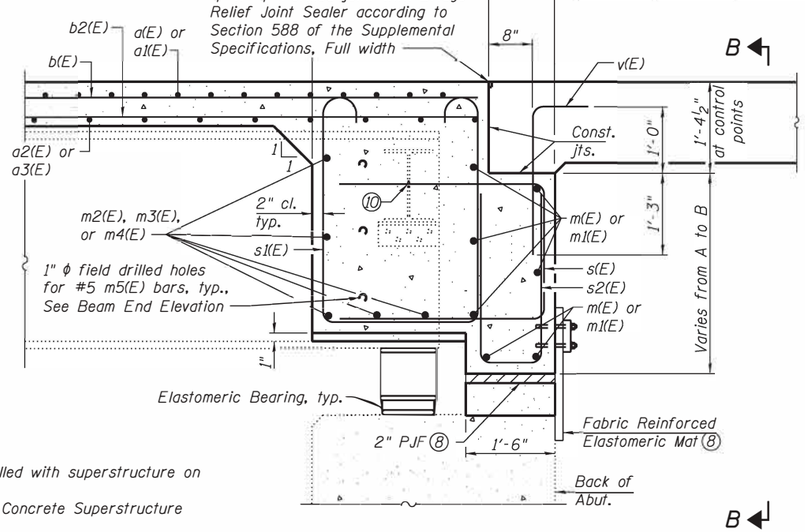
(Showing bottom flange of beam)



SECTION B-B

CONTROL POINT ELEVATIONS

Abutment	North Parapet	℄ Roadway	South Parapet
E.B. West	568.97	569.27	568.86
E.B. East	569.31	569.62	569.22
W.B. West	568.91	569.29	568.97
W.B. East	569.24	569.63	569.31



SECTION A-A

(at Rt. L's)

Notes:
1. Reinforcement bars in diaphragm are billed with superstructure on sheet 13 of 30.
2. Concrete in diaphragm is included with Concrete Superstructure on sheet 13 of 30.
3. For details of bars m5(E), s(E), s1(E), s2(E), and v(E), see sheet 13 of 30.
4. The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
5. The approach slab seat shall have a constant slope determined from the control points shown.
6. For bearing details, see sheet 19 of 30.
7. For details of Bar Splicers, see sheet 29 of 30.
8. See Section Thru Semi-Integral Abutment on sheet 2 of 30.
9. Use bar splicer in place of m2(E) bars in front face and bottom of diaphragm on Stage 1 side of construction. Cut as required to provide clearance to beam web.
10. Field drill 1 1/4" ϕ holes for s(E) bars through existing diaphragm as required, cost included with Concrete Superstructure.

FILE NAME = H:\P\11841\11841.0009 - District 8 Deck Replacements\Structural\SN 003-0013, 0014\Microstation\00300013_0014-76D23-814-Diaphragm Details.dgn

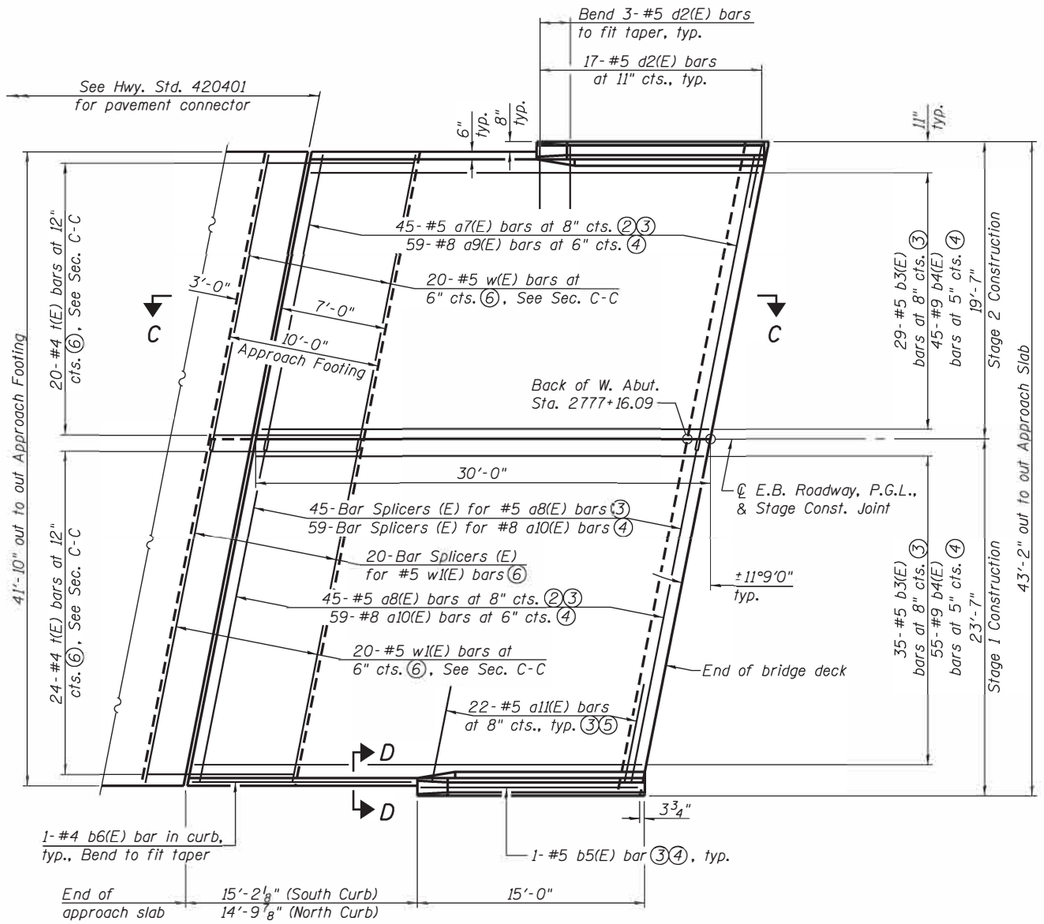
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - DGL	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - DGL	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - KBC	REVISED -	

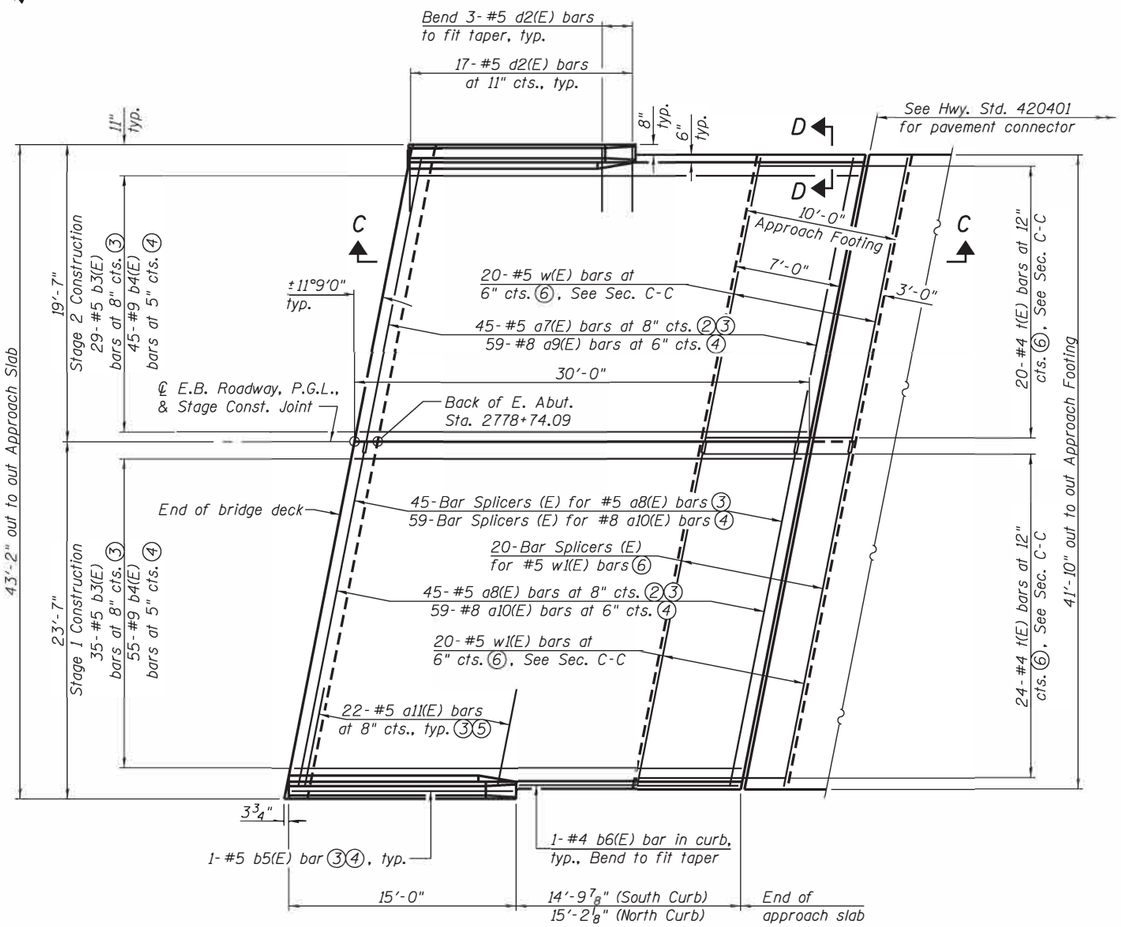
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 003-0013 (E.B.) & 003-0014 (W.B.)
SHEET NO. 14 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	190
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



WEST APPROACH



EAST APPROACH

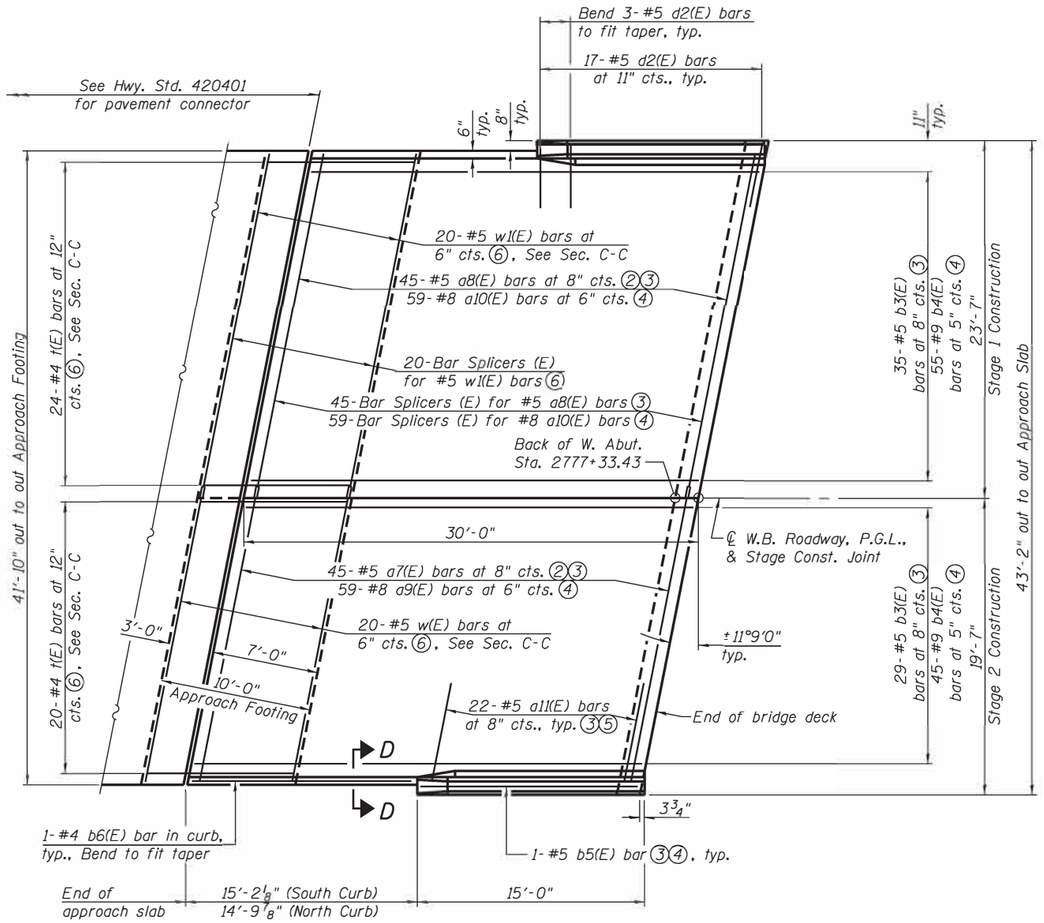
E.B. APPROACH SLAB PLAN

Notes:
1. For Section C-C and View D-D, see sheet 17 of 30.
2. Tilt a7(E) or a8(E) bars as necessary to fit curb.
3. Top of slab.
4. Bottom of slab.
5. Lap with each a7(E) or a8(E) bar.
6. Top and bottom of Approach Footing.
7. For details of Bar Splicers, see sheet 29 of 30.

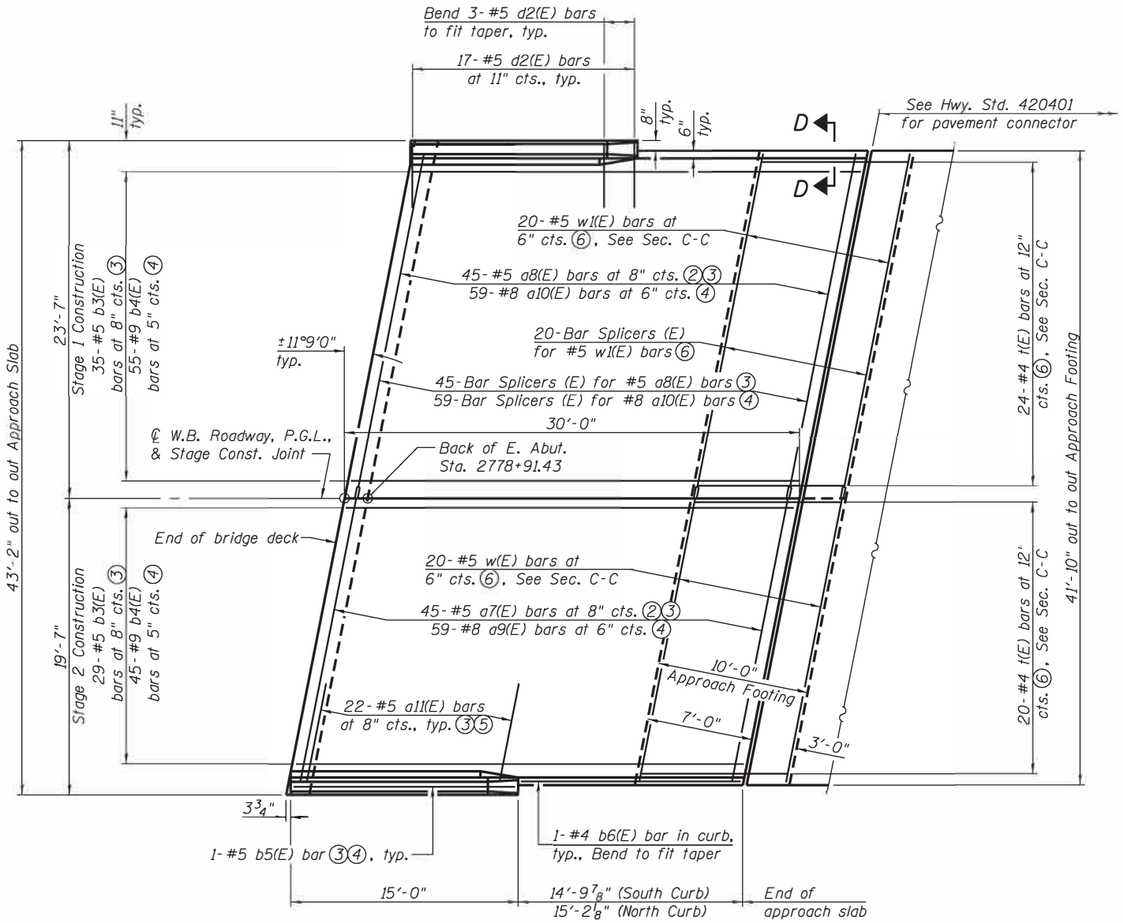
FILE NAME = N:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0013, 0814\Microstation\003013_0814-76D23-215-Approach Slab Details (E.B.).dgn

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - KBC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 003-0013 (E.B.) SHEET NO. 15 OF 30 SHEETS
		CHECKED - JAD	REVISED -		
	PLOT SCALE =	DRAWN - KBC	REVISED -		
	PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	191
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



WEST APPROACH



EAST APPROACH

W.B. APPROACH SLAB PLAN

Notes:
1. For Section C-C and View D-D, see sheet 17 of 30.
2. Tilt a7(E) or a8(E) bars as necessary to fit curb.
3. Top of slab.
4. Bottom of slab.
5. Lap with each a7(E) or a8(E) bar.
6. Top and bottom of Approach Footing.
7. For details of Bar Splicers, see sheet 29 of 30.

FILE NAME = M:\P\13841\13841.00B - District 8 Deck Replacements\Structural\SN 003-0013, 0014\Microstation\00300013, 0014-76D23-816-Approach Slab Details (W.B.).dgn

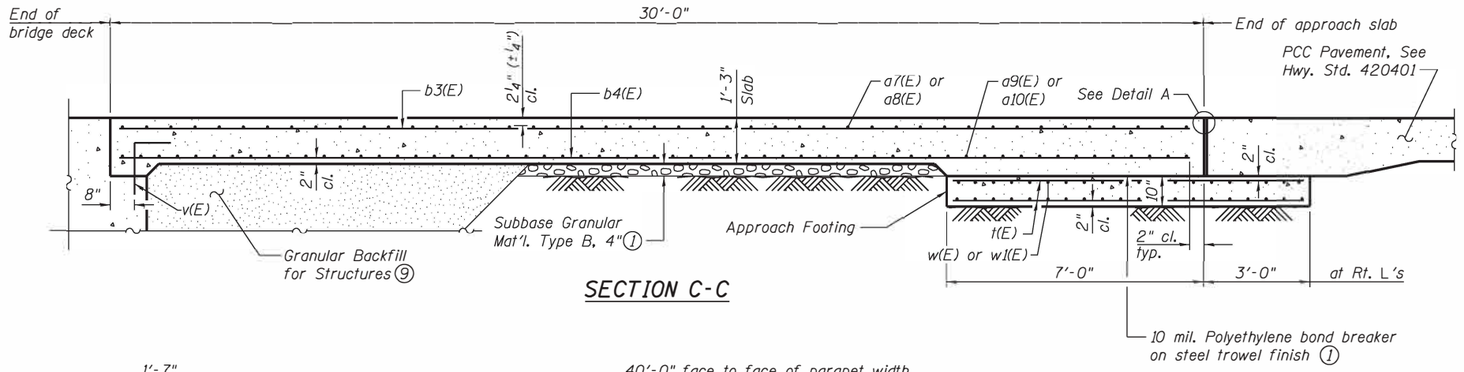
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - KBC	REVISED -	
	CHECKED - JAD	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

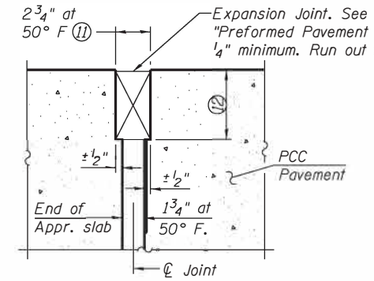
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 003-0014 (W.B.)
SHEET NO. 16 OF 30 SHEETS

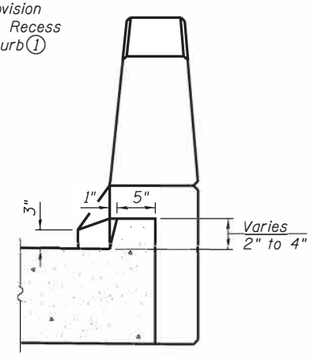
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	192
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



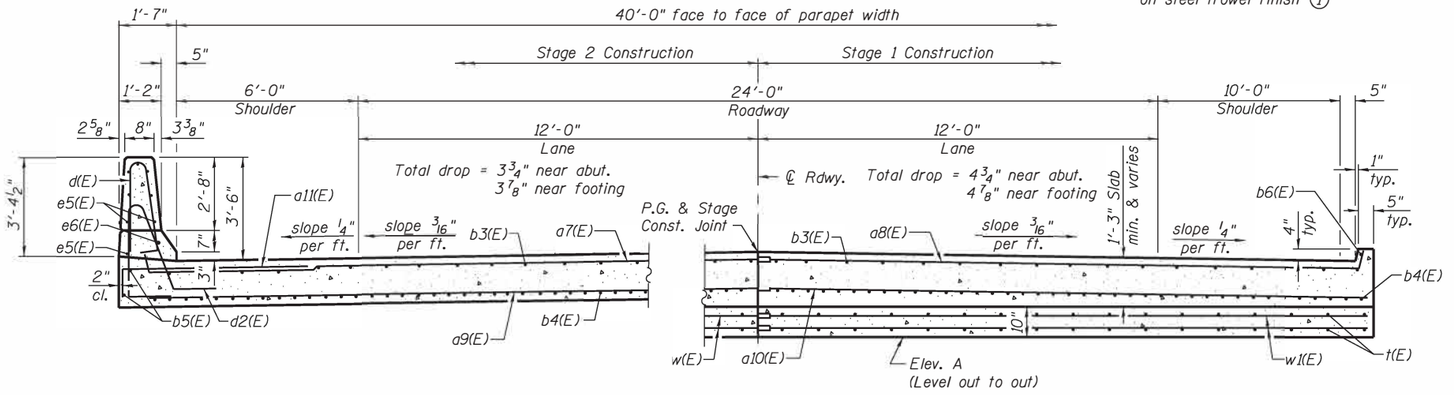
SECTION C-C



DETAIL A



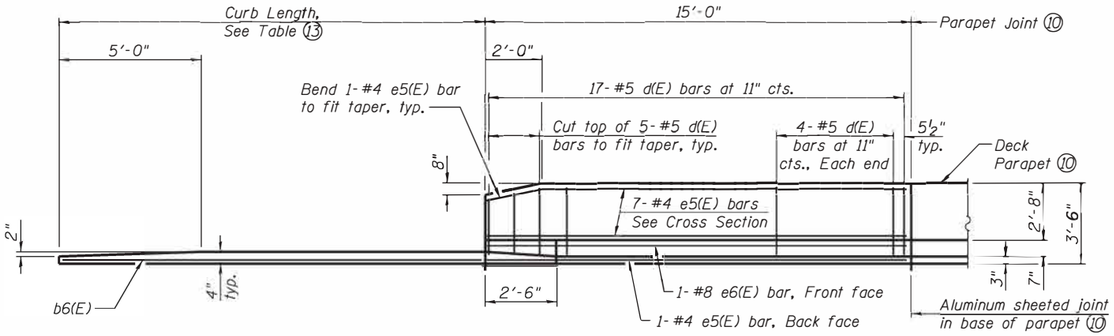
VIEW D-D



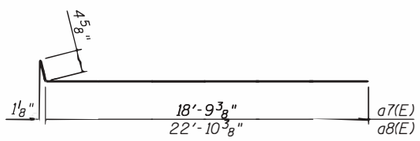
NEAR ABUTMENT **AT APPROACH FOOTING**

CROSS SECTION

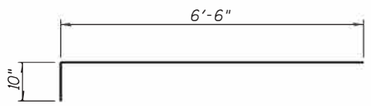
(See Plan for dimensions not shown)



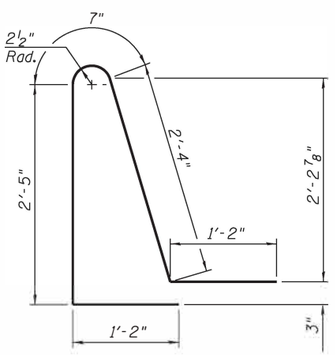
INSIDE ELEVATION OF PARAPET AND CURB



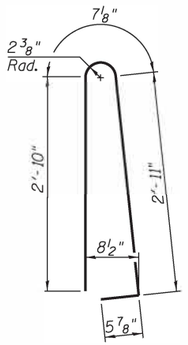
BARS a7(E) & a8(E)



BAR a11(E)



BAR d2(E)



BAR d(E)

ELEVATION TABLE

	A
E.B. West Appr.	567.96
E.B. East Appr.	568.43
W.B. West Appr.	568.01
W.B. East Appr.	568.45

CURB LENGTH TABLE (13)

	South Curb	North Curb
E.B. West Appr.	15'-2⅛"	14'-9⅞"
E.B. East Appr.	14'-9⅞"	15'-2⅛"
W.B. West Appr.	15'-2⅛"	14'-9⅞"
W.B. East Appr.	14'-9⅞"	15'-2⅛"

BILL OF MATERIAL

(Four Approaches)

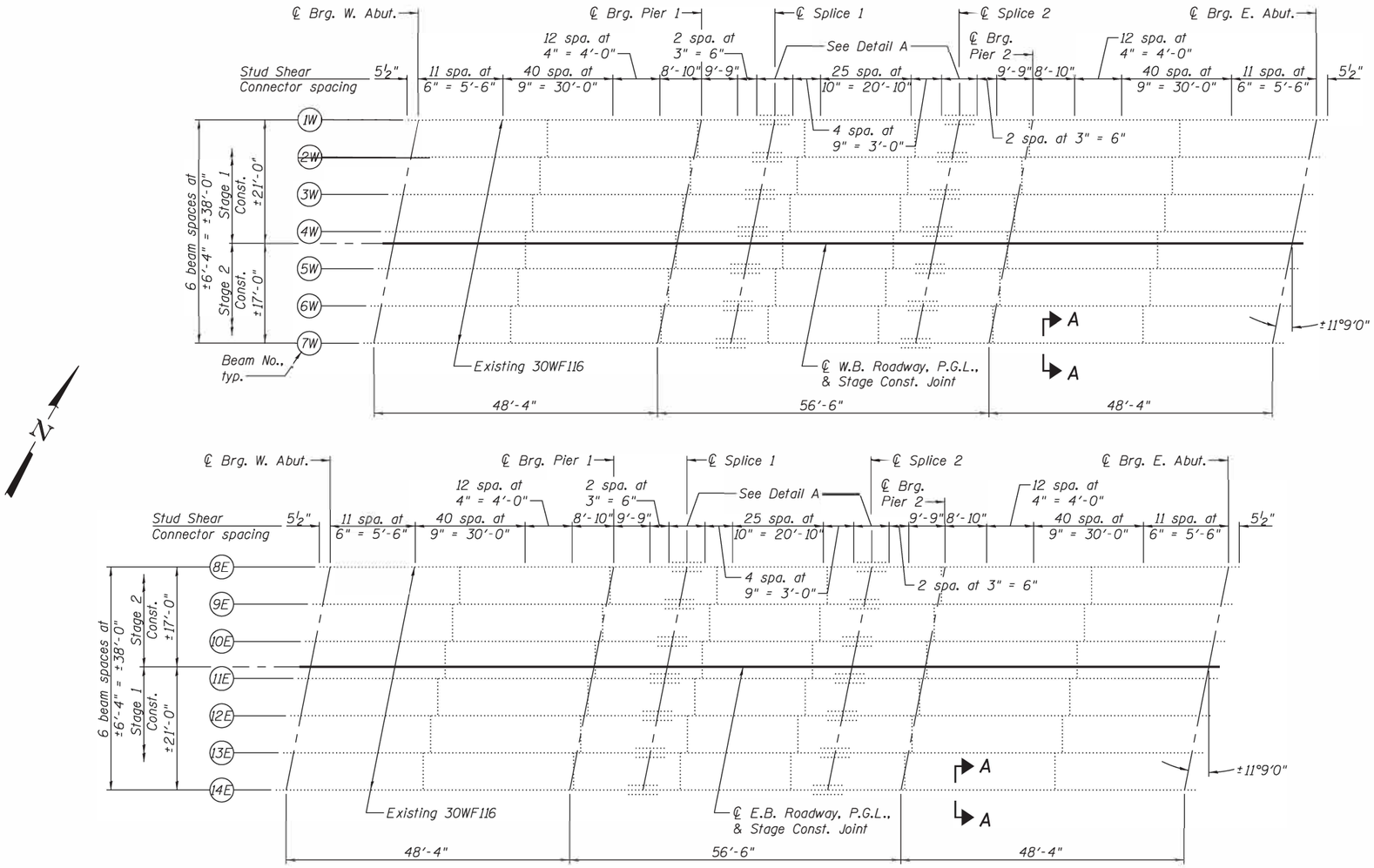
Bar	No.	Size	Length	Shape
a7(E)	180	#5	19'-2"	
a8(E)	180	#5	23'-3"	
a9(E)	236	#8	18'-11"	
a10(E)	236	#8	23'-0"	
a11(E)	176	#5	7'-4"	
b3(E)	256	#5	29'-8"	
b4(E)	400	#9	29'-8"	
b5(E)	16	#5	14'-4"	
b6(E)	8	#4	14'-6"	
d(E)	200	#5	6'-10"	
d2(E)	136	#5	7'-8"	
e5(E)	64	#4	14'-8"	
e6(E)	8	#8	14'-8"	
t(E)	352	#4	9'-10"	
w(E)	160	#5	18'-11"	
w1(E)	160	#5	23'-0"	
Concrete Structures			Cu. Yd.	52.6
Concrete Superstructure			Cu. Yd.	15.4
Concrete Superstructure (Approach Slab)			Cu. Yd.	252.9
(14) Reinforcement Bars, Epoxy Coated			Pound	97,070

Notes:

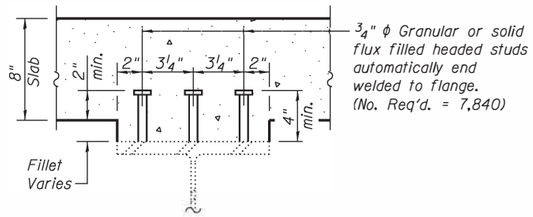
1. Cost included with Concrete Superstructure (Approach Slab).
2. Parapet concrete shall be paid for as Concrete Superstructure.
3. Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
4. Approach footing concrete shall be paid for as Concrete Structures.
5. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
6. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
7. For details of Bar Splicers, see sheet 29 of 30.
8. Cost of excavation for approach footing included with Concrete Structures.
9. For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 30.
10. For additional parapet details and parapet joint details, see sheet 13 of 30.
11. The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.
12. Per manufacturer recommendations.
13. Measured along outside edge of curb.
14. Calculated weight of Reinforcement Bars, Epoxy Coated = 87,760 (Superstructure) 9,310 (Substructure)

DATES ASSOCIATES ILLINOIS DESIGN FIRM LICENSE NO: 184.001115	USER NAME =	DESIGNED - KBC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 003-0013 (E.B.) & 003-0014 (W.B.)
		CHECKED - JAD	REVISED -		
	PLOT SCALE =	DRAWN - KBC	REVISED -		SHEET NO. 17 OF 30 SHEETS
	PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	193
		CONTRACT NO. 76D23		
		ILLINOIS FED. AID PROJECT		



FRAMING PLAN



SECTION A-A

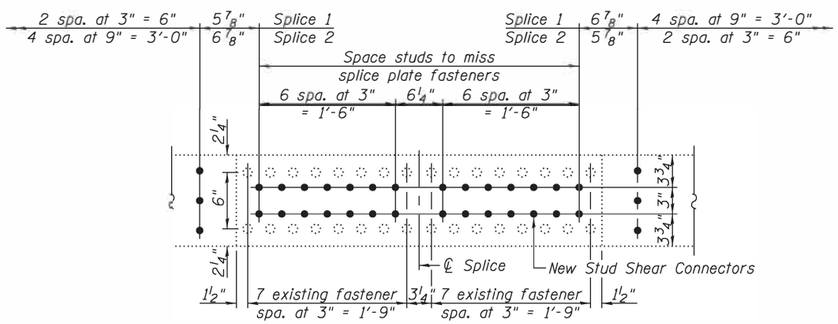
(Except as shown in Detail A)

INTERIOR BEAM REACTION TABLE

		Abutments	Piers 1 or 2
R_{ℓ}	(k)	47.8 (3)	54.8
R_L	(k)	37.5	38.7
R_I	(k)	10.8	8.4
R_{Total}	(k)	96.1	101.9

INTERIOR BEAM MOMENT TABLE

		0.4 Span 1 or 0.6 Span 3	Pier 1 or Pier 2	0.5 Span 2
I_s	(in^4)	4,930	4,930	4,930
$I_c(n)$	(in^4)	13,487	-	13,487
$I_c(3n)$	(in^4)	9,952	-	9,952
S_s	(in^3)	329	329	329
$S_c(n)$	(in^3)	488	-	488
$S_c(3n)$	(in^3)	441	-	441
Z	(in^3)	-	-	-
ℓ	(k/')	0.798	0.946	0.798
$M\ell$	('k)	136.0	251.2	98.7
$s\ell$	(k/')	0.148	-	0.148
$M_s\ell$	('k)	29.0	-	27.6
M_L	('k)	296.5	155.3	304.1
M_{IM}	('k)	85.4	43.8	83.6
$\frac{5}{3}[M_L + I]$	('k)	636.5	331.8	646.2
M_a	('k)	1,042.0	757.9	1,004.3
(1) M_u	('k)	1,374.4	-	1,398.3
f_s ℓ non-comp	(ksi)	4.96	9.17	3.60
f_s ℓ (comp)	(ksi)	0.79	-	0.75
f_s $\frac{5}{3}[M_L + M_I]$	(ksi)	15.65	12.10	15.88
f_s (Overload)	(ksi)	21.40	21.27	20.23
(2) f_s (Total)	(ksi)	-	27.65	-
VR	(k)	56.5	-	39.0



DETAIL A

Notes:
(1) Compact Section.
(2) Braced non-compact and partially braced section.
(3) Dead load reaction includes 30.1 k for weight of concrete diaphragm and approach slab.

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total and Overload) due to non-composite dead loads (in.^{4} and in.^{3}).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total and Overload) due to short-term composite live loads (in.^{4} and in.^{3}).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total and Overload) due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

Z: Plastic Section Modulus of the steel section in non-composite areas (in.^{3}).

ℓ: Un-factored non-composite dead load (kips/ft.).

$M\ell$: Un-factored moment due to non-composite dead load (kip-ft.).

$s\ell$: Un-factored long-term composite (superimposed) dead load (kips/ft.)

$M_s\ell$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_L: Un-factored live load moment (kip-ft.).

M_I: Un-factored moment due to impact (kip-ft.).

M_a: Factored design moment (kip-ft.).
$1.3\ [\ M\ell + M_s\ell + \frac{5}{3}\ (M_L + M_I)]$

M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments above (ksi).
$M\ell + M_s\ell + \frac{5}{3}\ (M_L + M_I)$

f_s (Total): Sum of stresses as computed from the moments above on non-compact section (ksi).
$1.3\ [M\ell + M_s\ell + \frac{5}{3}\ (M_L + M_I)]$

VR: Maximum$_L$ + impact shear range within the composite portion of the span for stud shear connector design (kips).

FILE NAME = H:\Pi1841\Il841.008 - District 8 Deck Replacements\Structural\SN 003-0013, 0014\Microstation\003003013_00814-76D23-818-Framing Plan & Beam Details.dgn

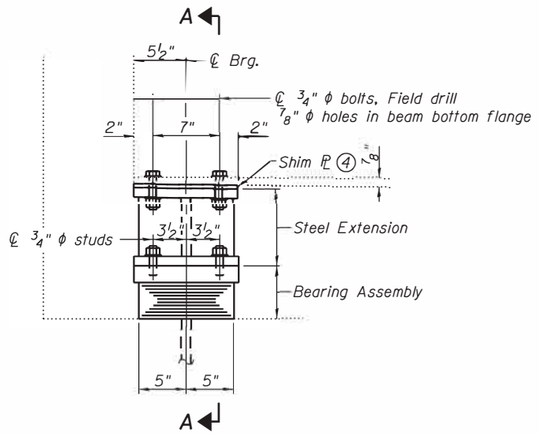
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - SJN	REVISED -	
	CHECKED - JAD	REVISED -	
PLOT SCALE =	DRAWN - SJN	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

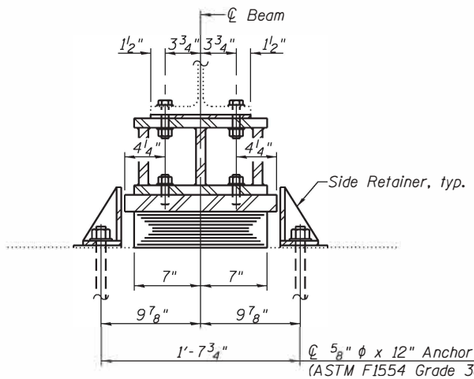
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN & BEAM DETAILS
STRUCTURE NO. 003-0013 (E.B.) & 003-0014 (W.B.)
SHEET NO. 18 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	194
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

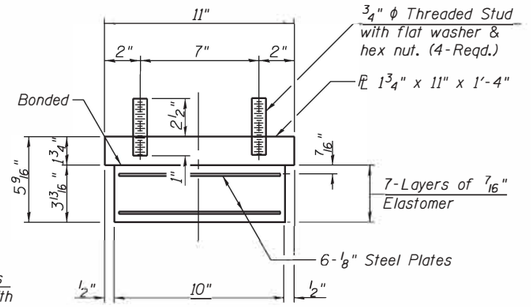


ELEVATION AT ABUT.

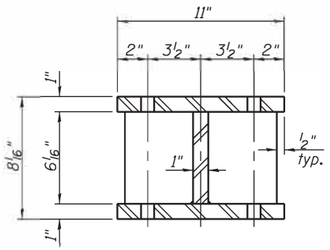


SECTION A-A

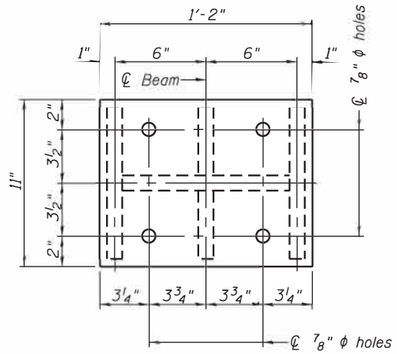
℄ ⅝" ϕ x 12" Anchor bolts (ASTM F1554 Grade 36) with 1¾" x 1¾" x ⅝" PL washer under nut



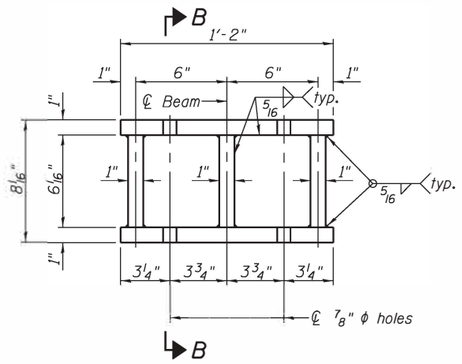
BEARING ASSEMBLY



SECTION B-B



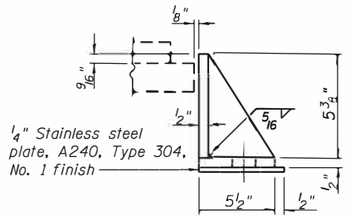
PLAN-TOP & BOTTOM PLATE

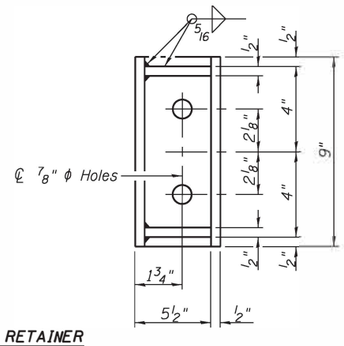


ELEVATION

STEEL EXTENSION

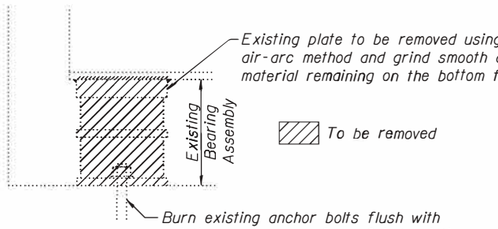
14 Required East Abut.
14 Required West Abut.





SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BEARING SHIM PLATES (E.B. STRUCTURE)

	Beam 8E	Beam 9E	Beam 10E	Beam 11E	Beam 12E	Beam 13E	Beam 14E
West Abut.	-	-	-	⅛"	¼"	-	-
East Abut.	-	-	-	⅛"	¼"	-	-

BEARING SHIM PLATES (W.B. STRUCTURE)

	Beam 1W	Beam 2W	Beam 3W	Beam 4W	Beam 5W	Beam 6W	Beam 7W
West Abut.	-	-	⅜"	¼"	-	-	-
East Abut.	-	-	⅜"	¼"	-	-	-

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	4,630
Elastomeric Bearing Assembly, Type I	Each	28
Anchor Bolts, ⅝"	Each	112
Jack and Remove Existing Bearings	Each	28

Notes:

1. Cost included with Jack and Remove Existing Bearings.
2. The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
3. Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.
4. Shim plates shall be placed on top of Steel Extension.
5. Anchor bolts shall be ASTM F1554 all-thread or an Engineer-approved alternate material of the grade and diameter specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
6. Anchor bolts for side retainers shall be installed in drilled holes according to Article 521.06 of the Standard Specifications.
7. Side retainers, stainless steel plates, and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
8. Cost of Steel Extensions, shim plates, and connection bolts included with Furnishing and Erecting Structural Steel.
9. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
10. Minimum jack capacity = 2 Tons (weight of steel only).
11. The existing steel diaphragms shall not be used as load carrying members in the jacking and cribbing system.
12. If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.
13. Diaphragm removal and reinstallation may be required to facilitate anchor bolt installation. Cost included with Anchor Bolt, ⅝".

TYPE I ELASTOMERIC EXP. BRG.

EXISTING BEARING REMOVAL DETAIL①

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0013, 0014\Microstation\003I0013, 0014-76D23-B19-Bearing Replacement Details at Abutments.dgn

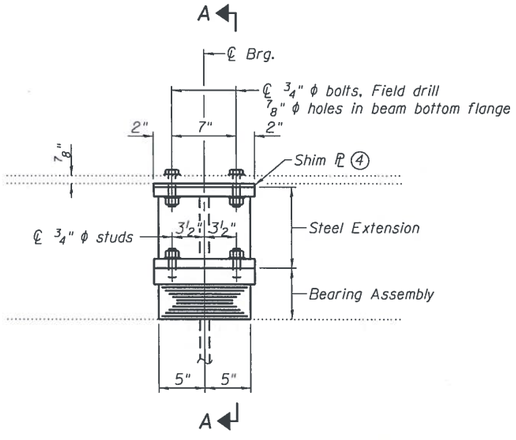
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - SJN	REVISED -	
PLOT SCALE =	DRAWN - JAD	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - SJN	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS AT ABUTMENTS
STRUCTURE NO. 003-0013 (E.B.) & 003-0014 (W.B.)
SHEET NO. 19 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	195
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



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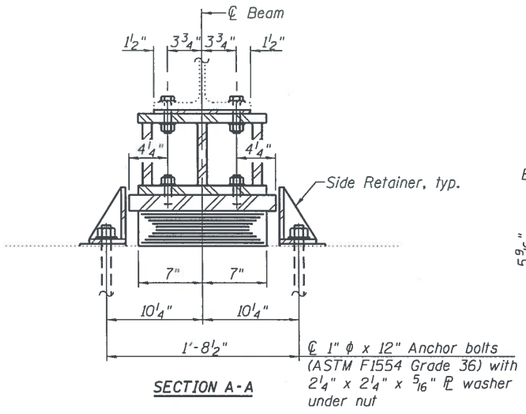
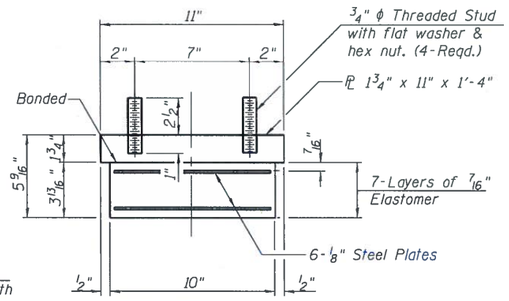
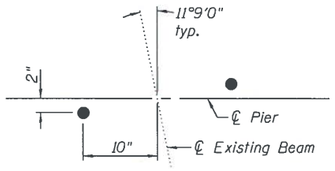


SECTION A-A

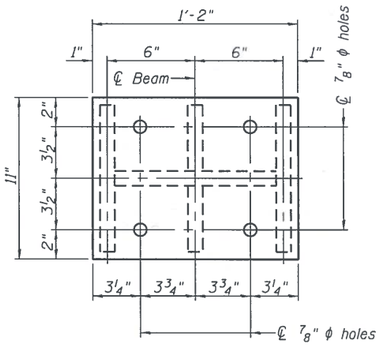
℄ 1" ϕ x 12" Anchor bolts (ASTM F1554 Grade 36) with 2 1/4" x 2 1/4" x 5/16" PL washer under nut



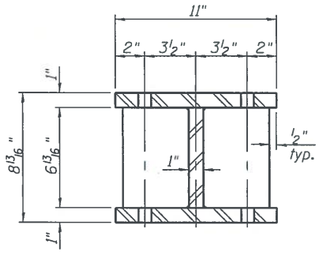
BEARING ASSEMBLY



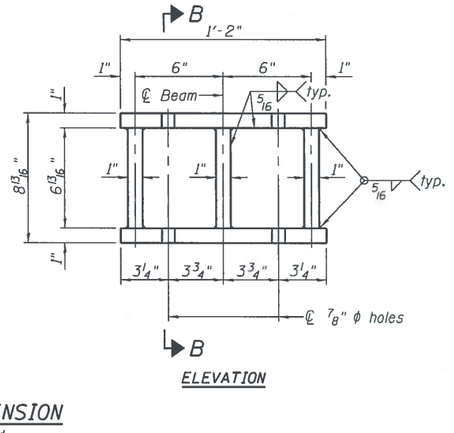
ANCHOR BOLT LAYOUT



PLAN-TOP AND BOTTOM PLATE



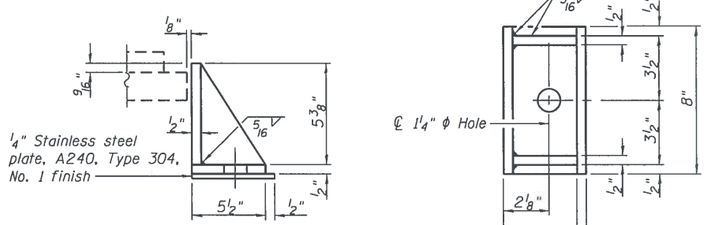
SECTION B-B



ELEVATION

STEEL EXTENSION

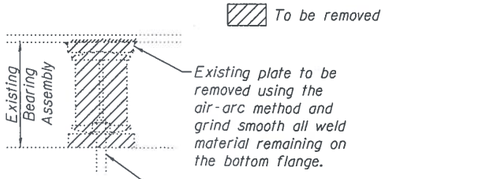
14 Required



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

TYPE I ELASTOMERIC EXP. BRG.



EXISTING BEARING REMOVAL DETAIL ①

BEARING SHIM PLATES (E.B. STRUCTURE)

	Beam 8E	Beam 9E	Beam 10E	Beam 11E	Beam 12E	Beam 13E	Beam 14E
Pier 1	1 1/4"	1 1/4"	7/8"	1"	1/4"	-	-

BEARING SHIM PLATES (W.B. STRUCTURE)

	Beam 1W	Beam 2W	Beam 3W	Beam 4W	Beam 5W	Beam 6W	Beam 7W
Pier 1	-	-	1/8"	7/8"	5/8"	7/8"	3/4"

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	2,740
Elastomeric Bearing Assembly, Type I	Each	14
Anchor Bolts, 1"	Each	28
Jack and Remove Existing Bearings	Each	14

Notes:

1. Cost included with Jack and Remove Existing Bearings.
2. The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
3. Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.
4. Shim plates shall be placed on top of Steel Extension.
5. Anchor bolts shall be ASTM F1554 all-thread or an Engineer-approved alternate material of the grade and diameter specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
6. Anchor bolts for side retainers shall be installed in drilled holes according to Article 521.06 of the Standard Specifications.
7. Side retainers, stainless steel plates, and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
8. Cost of Steel Extension, shim plates, and connection bolts included with Furnishing and Erecting Structural Steel.
9. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
10. Minimum jack capacity = 7 Tons (weight of steel only).
11. The existing steel diaphragms shall not be used as load carrying members in the jacking and cribbing system.
12. If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.

FILE NAME = H:\PV11041\11041.008 - District 8 Deck Replacements\Structural\SN 003-0013_0014\Microstation\0030013_0014-76023-028-Bearing Replacement Details at Pier 1.dgn

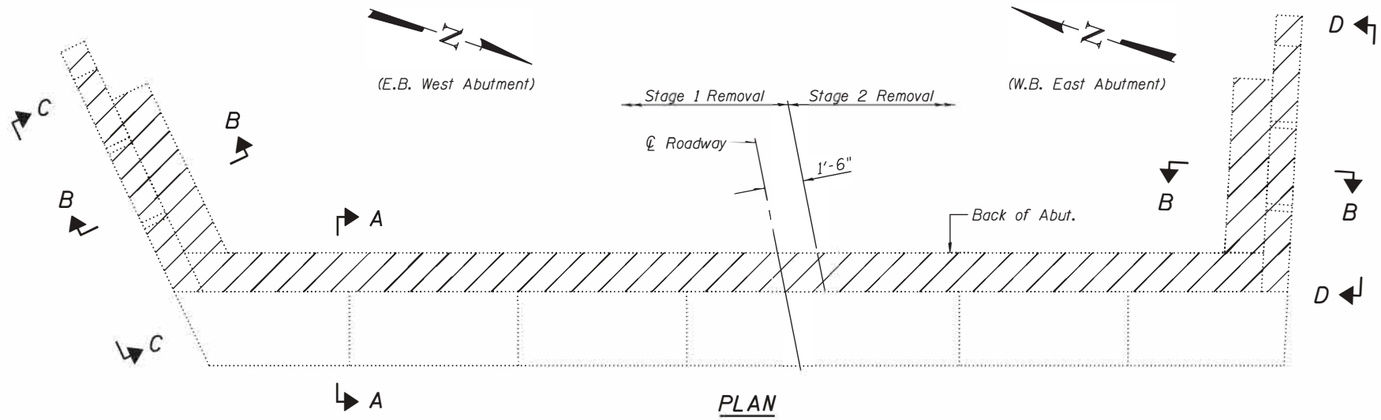
OATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =		DESIGNED - JAD	REVISED -
		CHECKED - SJN	REVISED -
PLOT SCALE =		DRAWN - JAD	REVISED -
PLOT DATE =	12/13/2017	CHECKED - SJN	REVISED -

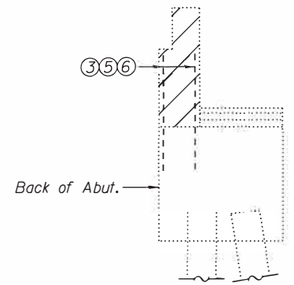
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS AT PIER 1
STRUCTURE NO. 003-0013 (E.B.) & 003-0014 (W.B.)
SHEET NO. 20 OF 30 SHEETS

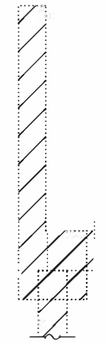
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	196
		CONTRACT NO. 76D23		
	ILLINOIS	FED. AID PROJECT		



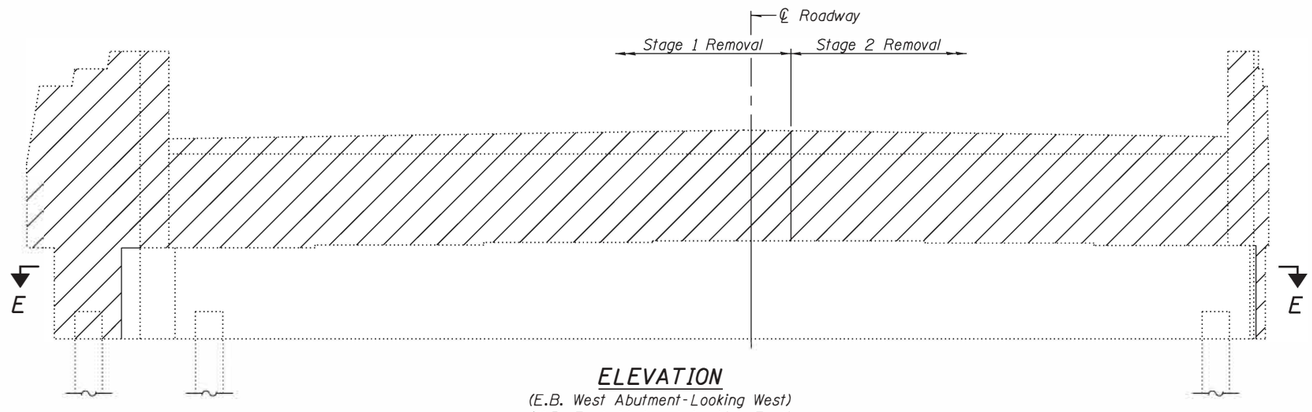
PLAN



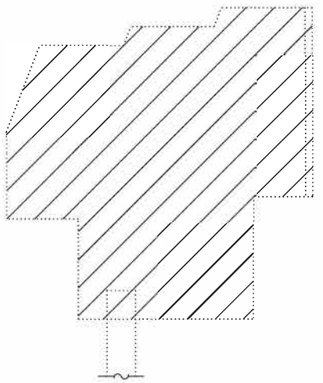
SECTION A-A



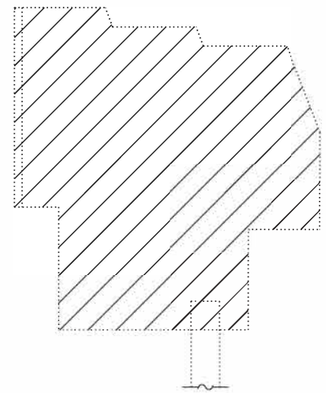
SECTION B-B



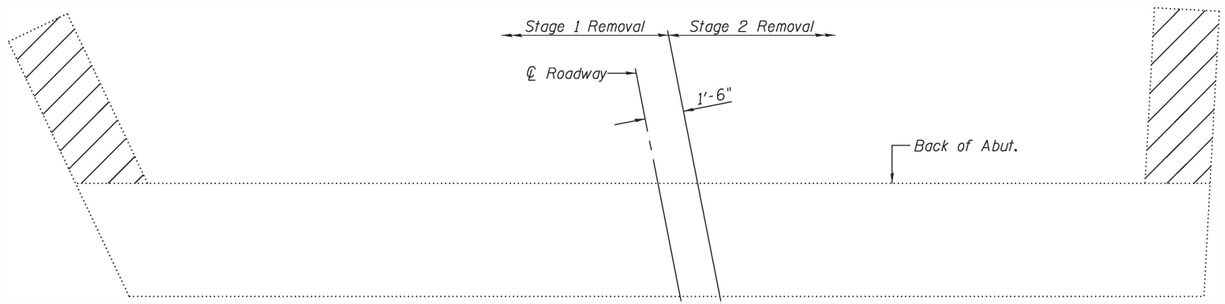
ELEVATION
(E.B. West Abutment - Looking West)
(W.B. East Abutment - Looking East)



VIEW C-C ②



VIEW D-D ②



SECTION E-E

TWO ABUTMENTS
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	34.6

Notes:
1. Hatched area indicates Concrete Removal.
2. View only shows that which is to be removed.
3. Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
4. Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2 inch layer of cement grout. Cost included with Concrete Removal.
5. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
6. For details of existing reinforcement to be incorporated into new construction, see sheets 23 thru 26 of 30.

FILE NAME = H:\P\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0013, 0014\Microstation\003013_0014-76D23-021-Abutment Concrete Removal (S.W. & N.E.).dgn

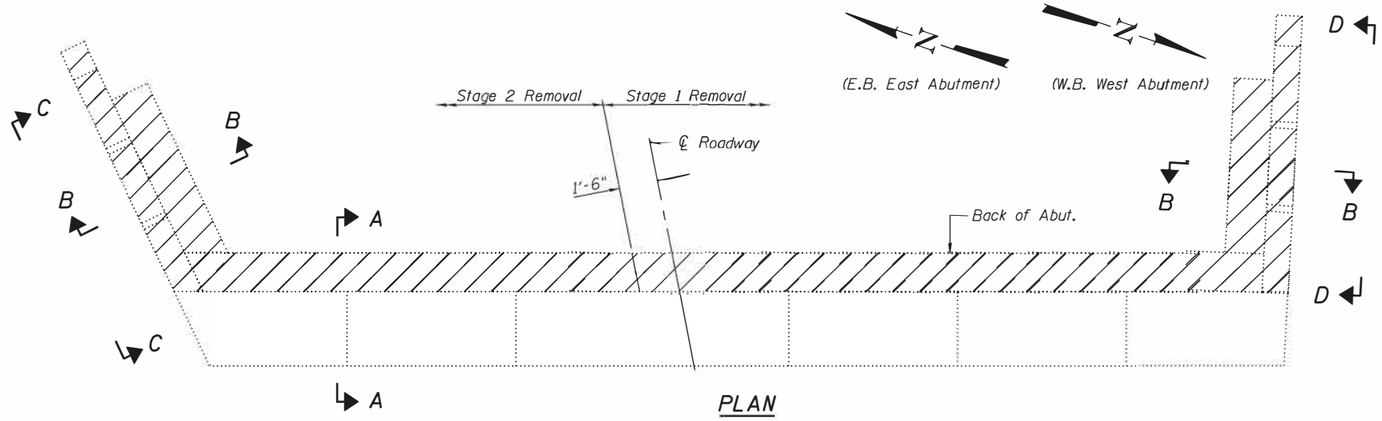
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN - KBC	REVISED -
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -

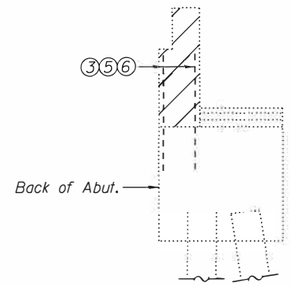
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT CONCRETE REMOVAL
STRUCTURE NO. 003-0013 (E.B.) & 003-0014 (W.B.)
SHEET NO. 21 OF 30 SHEETS

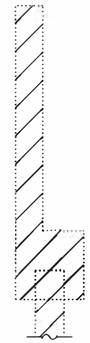
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	197
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



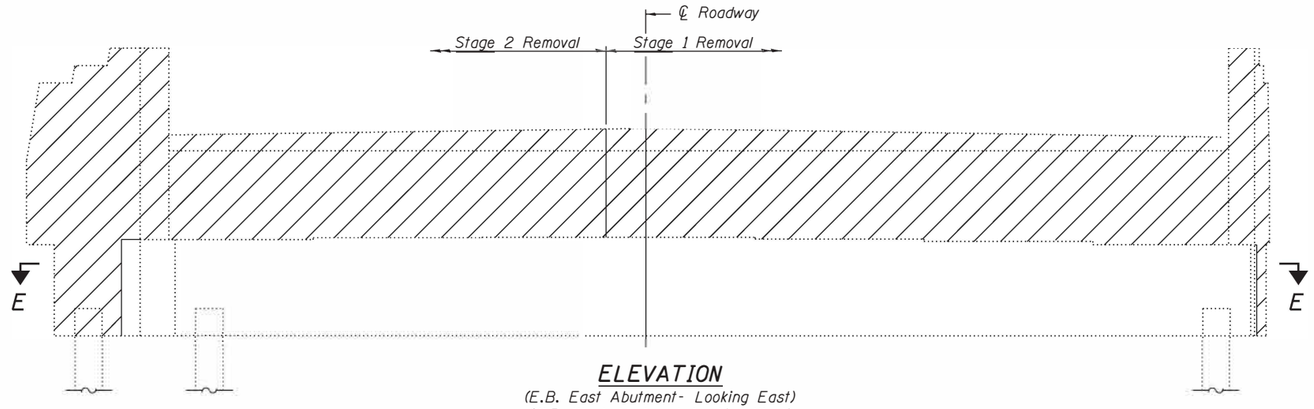
PLAN



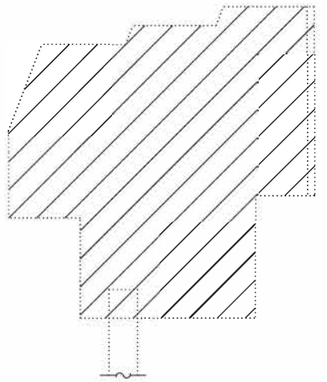
SECTION A-A



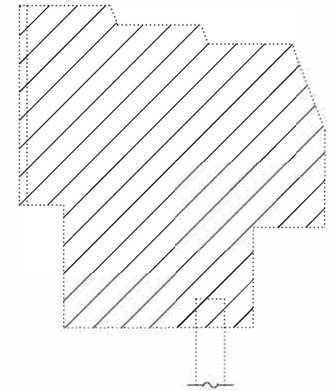
SECTION B-B



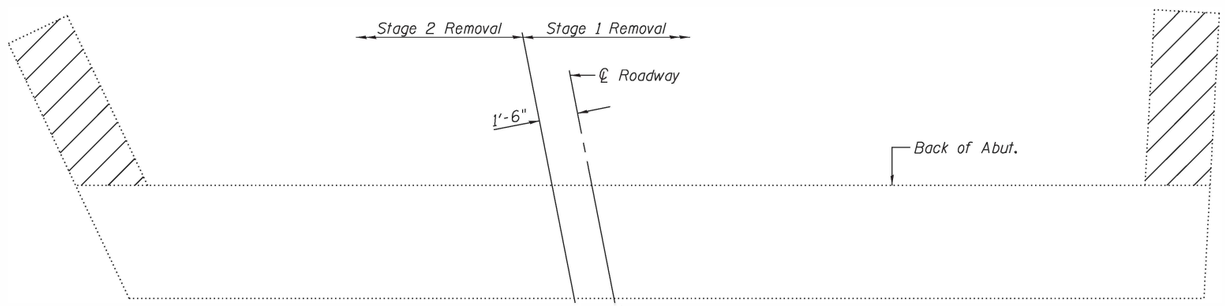
ELEVATION
(E.B. East Abutment- Looking East)
(W.B. West Abutment-Looking West)



VIEW C-C ②



VIEW D-D ②



SECTION E-E

TWO ABUTMENTS
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	34.4

Notes:
1. Hatched area indicates Concrete Removal.
2. View only shows that which is to be removed.
3. Existing reinforcement extending into new construction shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
4. Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2 inch layer of cement grout. Cost included with Concrete Removal.
5. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
6. For details of existing reinforcement to be incorporated into new construction, see sheets 23 thru 26 of 30.

FILE NAME = H:\P\11841\11841.00B - District 8 Deck Replacements\Structural\SN 003-0013, 0014\Microstation\003D013.0014-76D23-822 Abutment Concrete Removal (S.E. & N.W.).dgn

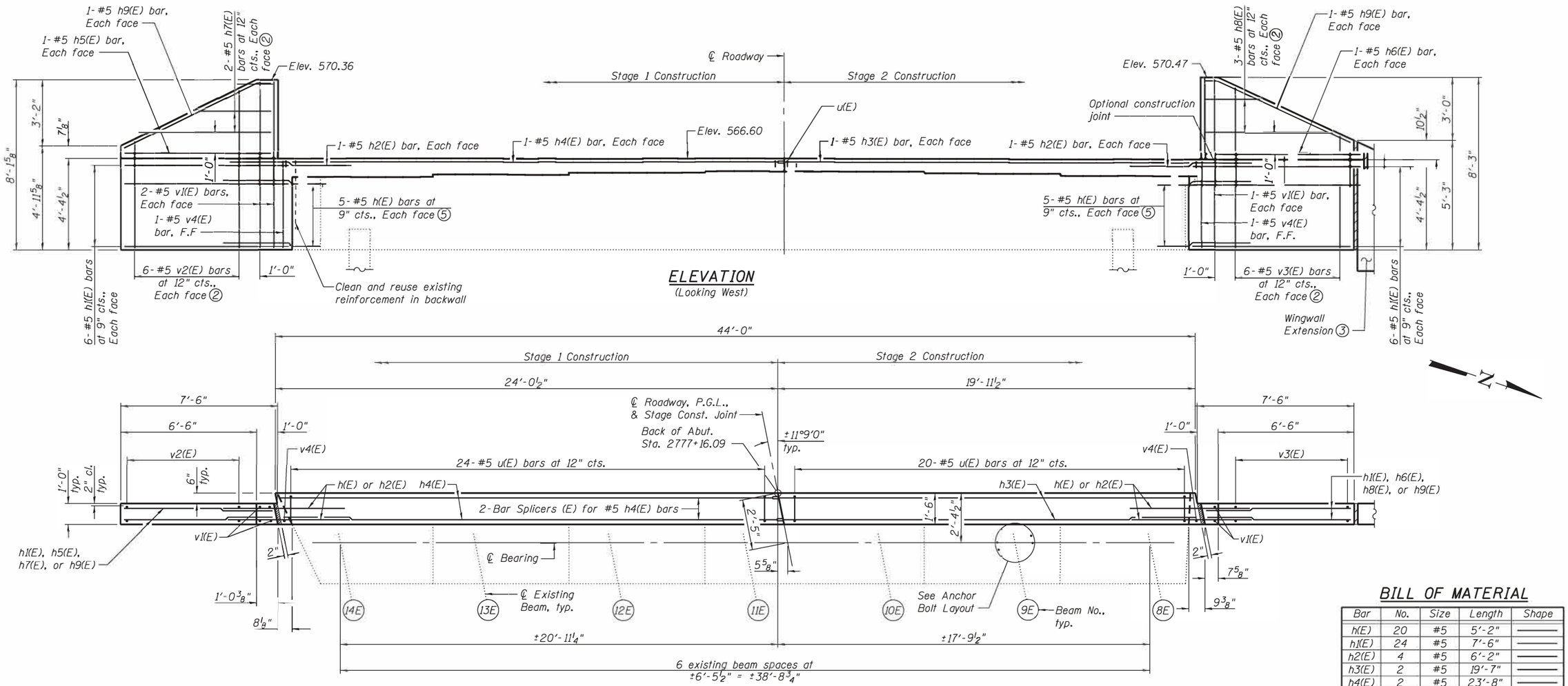
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED -	REVISED -	
	CHECKED -	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT CONCRETE REMOVAL
STRUCTURE NO. 003-0013 (E.B.) & 003-0014 (W.B.)
SHEET NO. 22 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	B OND	236	198
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			

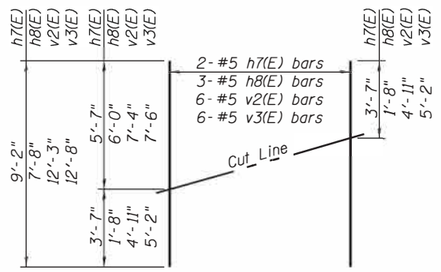


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#5	5'-2"	
h1(E)	24	#5	7'-6"	
h2(E)	4	#5	6'-2"	
h3(E)	2	#5	19'-7"	
h4(E)	2	#5	23'-8"	
h5(E)	2	#5	7'-0"	
h6(E)	2	#5	6'-10"	
h7(E)	2	#5	9'-2"	
h8(E)	3	#5	7'-8"	
h9(E)	4	#5	7'-6"	
h12(E)	12	#4	3'-8"	
n(E)	10	#4	3'-11"	
t1(E)	5	#4	5'-10"	
t2(E)	5	#4	5'-2"	
u(E)	44	#5	2'-0"	
v1(E)	6	#5	7'-10"	
v2(E)	6	#5	12'-3"	
v3(E)	6	#5	12'-8"	
v4(E)	2	#5	4'-1"	
v5(E)	5	#4	8'-6"	
w2(E)	12	#4	3'-8"	
Structure Excavation		Cu. Yd.	95	
Concrete Structures		Cu. Yd.	7.4	
Reinforcement Bars, Epoxy Coated		Pound	970	

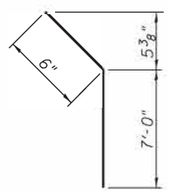
MINIMUM BAR LAP

#5 bar = 2'-11"

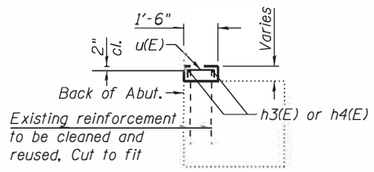


FIELD CUTTING DIAGRAM

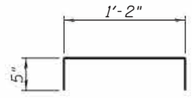
Order h7(E), h8(E), v2(E), and v3(E) bars full length. Cut as shown and use remainder of bars in opposite face.



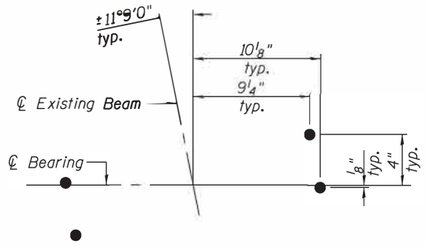
BAR h9(E)



SECTION THRU ABUTMENT



BAR u(E)



ANCHOR BOLT LAYOUT

Notes:
1. B.F. denotes back face. F.F. denotes front face.
2. See Field Cutting Diagram.
3. For Wingwall Extension Details, see sheet 27 of 30.
4. For details of Bar Splicers, see sheet 29 of 30.
5. Epoxy grout h(E) bars according to Section 584 of the Standard Specifications. Minimum embedment is 1'-9". Embedment depth may be reduced according to the epoxy Manufacturer, if the Contractor provides to the Engineer in writing that the shallower embedment depth is capable of developing the full yield strength of the reinforcement at the surface of the existing concrete.

FILE NAME = N:\PW\11841\11841.008 - District 8 Deck Replacements\Structural\SN 003-0013, 0814\Microstation\003003.0814-76D23-B23-West Abutment Details (E.B.).dgn

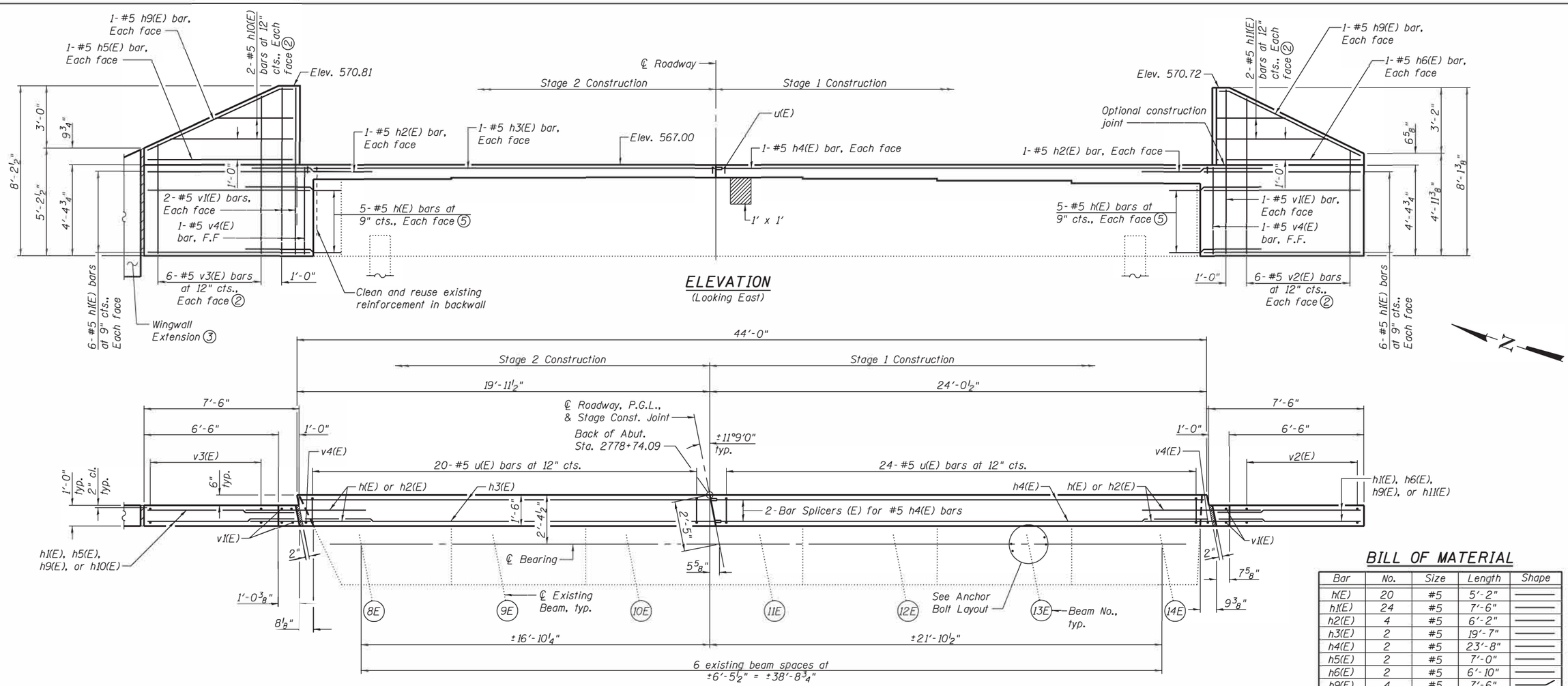
DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

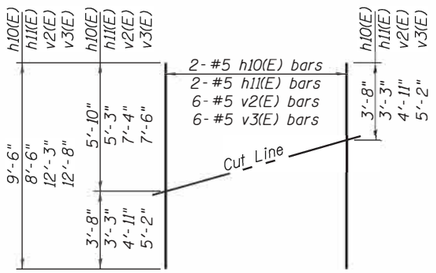
WEST ABUTMENT DETAILS
STRUCTURE NO. 003-0013 (E.B.)
SHEET NO. 23 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	199
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			



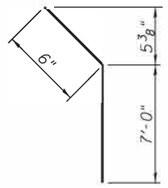
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#5	5'-2"	
h1(E)	24	#5	7'-6"	
h2(E)	4	#5	6'-2"	
h3(E)	2	#5	19'-7"	
h4(E)	2	#5	23'-8"	
h5(E)	2	#5	7'-0"	
h6(E)	2	#5	6'-10"	
h9(E)	4	#5	7'-6"	
h10(E)	2	#5	9'-6"	
h11(E)	2	#5	8'-6"	
h12(E)	12	#4	3'-8"	
n(E)	10	#4	3'-11"	
t1(E)	5	#4	5'-10"	
t2(E)	5	#4	5'-2"	
u(E)	44	#5	2'-0"	
v1(E)	6	#5	7'-10"	
v2(E)	6	#5	12'-3"	
v3(E)	6	#5	12'-8"	
v4(E)	2	#5	4'-1"	
v5(E)	5	#4	8'-6"	
w2(E)	12	#4	3'-8"	
Structure Excavation			Cu. Yd.	100
Concrete Structures			Cu. Yd.	7.3
Reinforcement Bars, Epoxy Coated			Pound	960
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)			Sq. Ft.	1.0

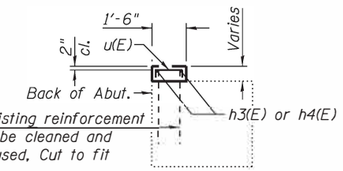


FIELD CUTTING DIAGRAM

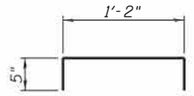
Order h10(E), h11(E), v2(E), and v3(E) bars full length. Cut as shown and use remainder of bars in opposite face.



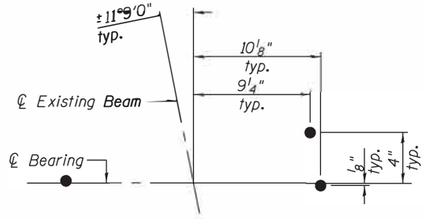
BAR h9(E)



SECTION THRU ABUTMENT



BAR u(E)



ANCHOR BOLT LAYOUT

MINIMUM BAR LAP

#5 bar = 2'-11"

Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)

Notes:
1. B.F. denotes back face. F.F. denotes front face.
2. See Field Cutting Diagram.
3. For Wingwall Extension Details, see sheet 27 of 30.
4. For details of Bar Splicers, see sheet 29 of 30.
5. Epoxy grout h(E) bars according to Section 584 of the Standard Specifications. Minimum embedment is 1'-9". Embedment depth may be reduced according to the epoxy Manufacturer, if the Contractor provides to the Engineer in writing that the shallower embedment depth is capable of developing the full yield strength of the reinforcement at the surface of the existing concrete.

FILE NAME = H:\P\11841\11841.DGN - District 8 Deck Replacements\Structural\SN 003-0013, 20814\Microstation\00320013_20814-76D23-024-East Abutment Details (E.B.).dgn

DATES ASSOCIATES
ILLINOIS DESIGN FIRM LICENSE NO: 184.001115

USER NAME =	DESIGNED - JAD	REVISED -	
	CHECKED - KBC	REVISED -	
PLOT SCALE =	DRAWN - KBC	REVISED -	
PLOT DATE = 12/13/2017	CHECKED - JAD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT DETAILS
STRUCTURE NO. 003-0013 (E.B.)
SHEET NO. 24 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	3-(2,3,4)RS-1	BOND	236	200
		CONTRACT NO. 76D23		
	ILLINOIS FED. AID PROJECT			